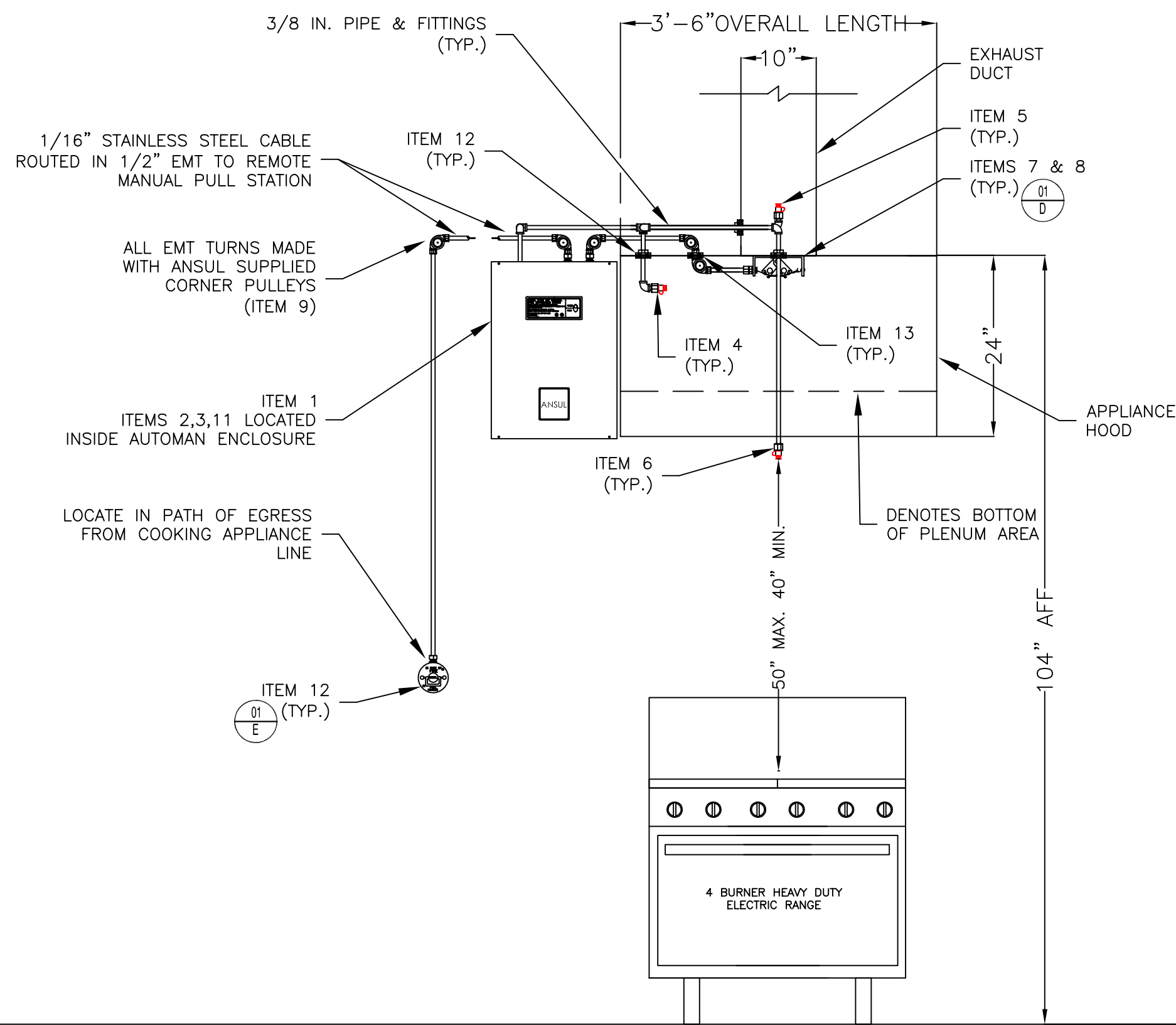


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**EQUIPMENT LAYOUT - ELEVATION VIEW**

SCALE: 3/4 INCH = 1 FOOT

**DUCT & PLENUM NOZZLE AIMING DETAIL**

SCALE: 3/4 INCH = 1 FOOT

**LEGEND - ANSUL BILL OF MATERIALS**

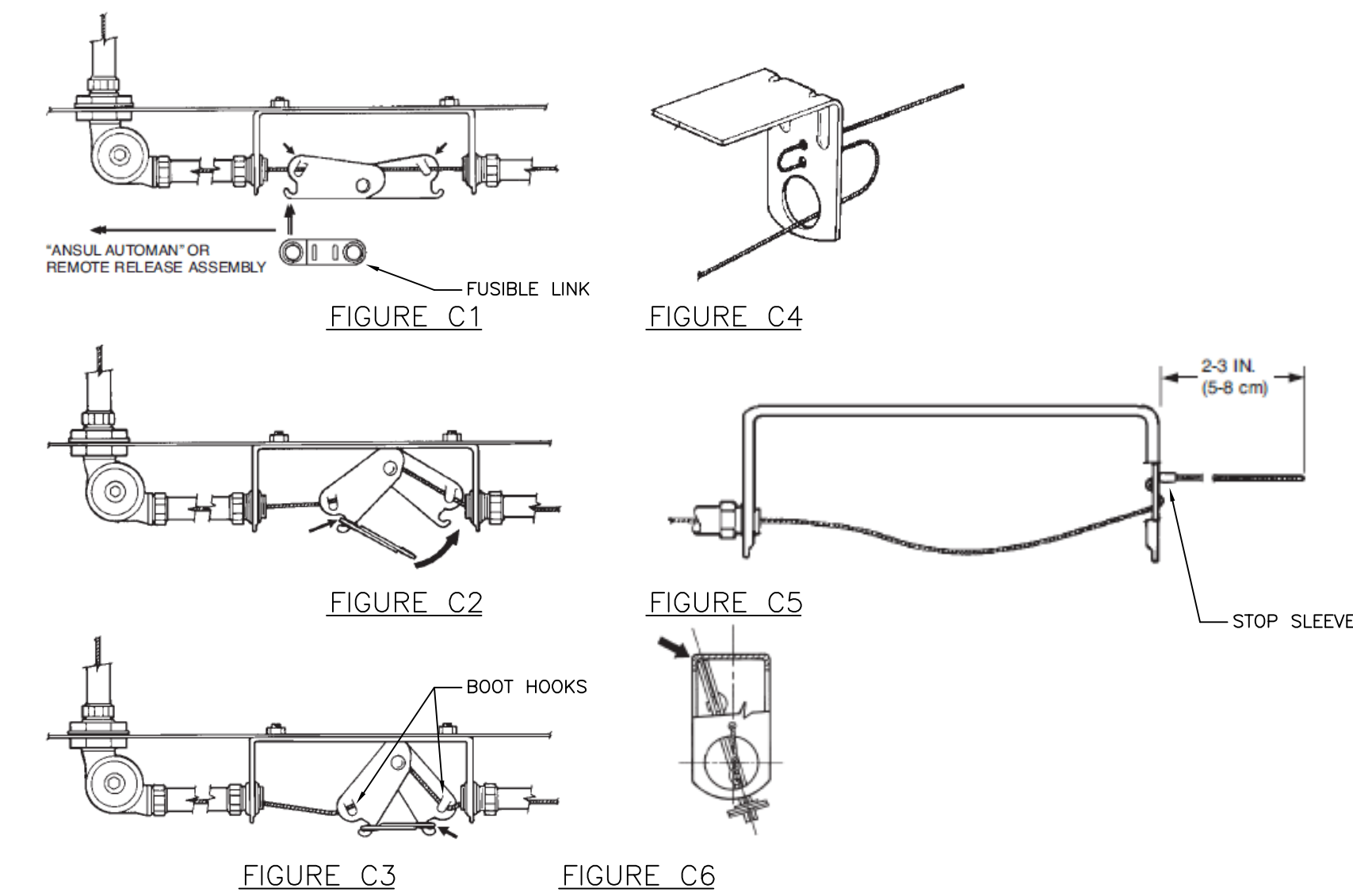
ITEM	QTY	PART NO.	DESCRIPTION
1	1	430300	1.5 Gallon Tank w/ANSUL AUTOMAN Mechanical Reg. Release
2	1	79694	ANSULEX Low pH Wet Chemical Agent
3	1	428440	Cartridge, LT-20-R
4	1	439838	1N Nozzle
5	1	439839	1W Nozzle
6	1	439843	245 Nozzle
7	1	435546	Detector, Terminal (Scissor Linkage)
8	1	439088	360 deg F Fusible Link
9	8	423251	Corner Pulley, Compression
10	1	434618	Remote Pull Station, (without wire rope)
11	1	423879	Alarm Initiating Switch DPDT
12	1	77285	Adaptor, 3/8 in. Quik-Seal
13	1	79153	Adaptor, 1/2 in. EMT Compression-Seal

**SYSTEM DESCRIPTION**

- THE SYSTEM SHALL BE AN ANSUL R102 RESTAURANT FIRE SUPPRESSION SYSTEM AS MANUFACTURED BY ANSUL, INC., 1 STANTON STREET, MARINETTE, WI 54143-2542A. THE SYSTEM SHALL BE PRE-ENGINEERED.
- THE INSTALLATION SHALL COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
  - NFPA 17A, "STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS", LATEST EDITION,
  - NFPA 96, "STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS", LATEST EDITION,
  - THE EQUIPMENT MANUFACTURER'S PUBLISHED INSTRUCTIONS,
  - STATE FIRE PREVENTION CODES,
  - THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- THE SYSTEM SHALL PROVIDE FIRE PROTECTION FOR RESTAURANT COOKING APPLIANCES, EXHAUST HOODS AND CONNECTED DUCTS.
- DETECTION AND AUTOMATIC SYSTEM ACTUATION SHALL BE ACHIEVED WITH FUSIBLE LINK HEAT DETECTORS INSTALLED IN THE HOOD PLENUM AREA, OVER THE PROTECTED COOKING APPLIANCES AND ACROSS THE HOOD-DUCT OPENING
- MANUAL RELEASE SHALL BE ACHIEVED BY A LOCAL MANUAL RELEASE CONTROL BY A CABLE OPERATED MANUAL RELEASE STATION INSTALLED NEAR AN EGRESS FROM THE AREA COOKING APPLIANCES ARE LOCATED.
- WHEN EITHER A FUSIBLE LINK SEPARATES DUE TO FIRE OR A MANUAL RELEASE IS OPERATED, THE R102 AUTOMAN SHALL CAUSE THE FOLLOWING EVENTS TO OCCUR:
  - THE R102 AUTOMAN GOES INTO THE "RELEASED" POSITION.
  - THE SYSTEM ACTUATION NITROGEN OR CARBON DIOXIDE CARTRIDGE RELEASES PRESSURIZED NITROGEN OR CARBON DIOXIDE THROUGH A HIGH PRESSURE HOSE TO A REGULATOR AND INTO THE AGENT STORAGE TANK. THE ACTUATION MEDIUM PRESSURIZES THE CONTENTS OF THE AGENT SUPPLY TANK, RELEASING THE WET CHEMICAL AGENT INTO THE DISCHARGE PIPING NETWORK TO THE DISCHARGE NOZZLES
  - A SNAP-ACTION MICROSWITCH SHALL CHANGE STATE AND CAUSE THE THE PROTECTED COOKING APPLIANCES TO DE-ENERGIZE.
  - A SNAP-ACTION, TERMINAL TYPE MICROSWITCH SHALL CHANGE STATE, SENDING A SIGNAL TO THE BUILDING LIFE-SAFETY SYSTEM.

**DESIGN FLOW SUMMARY**

Coverage	Overall Dimensions	Nozzle	Flow Points
Hood	42 x 39 in.	1N	1
Duct: Square	10 x 7 in.	1W	1
Cooktop - 4 burner	35.5 x 32 in.	245	2
<b>TOTAL FLOW POINTS</b>			<b>4</b>

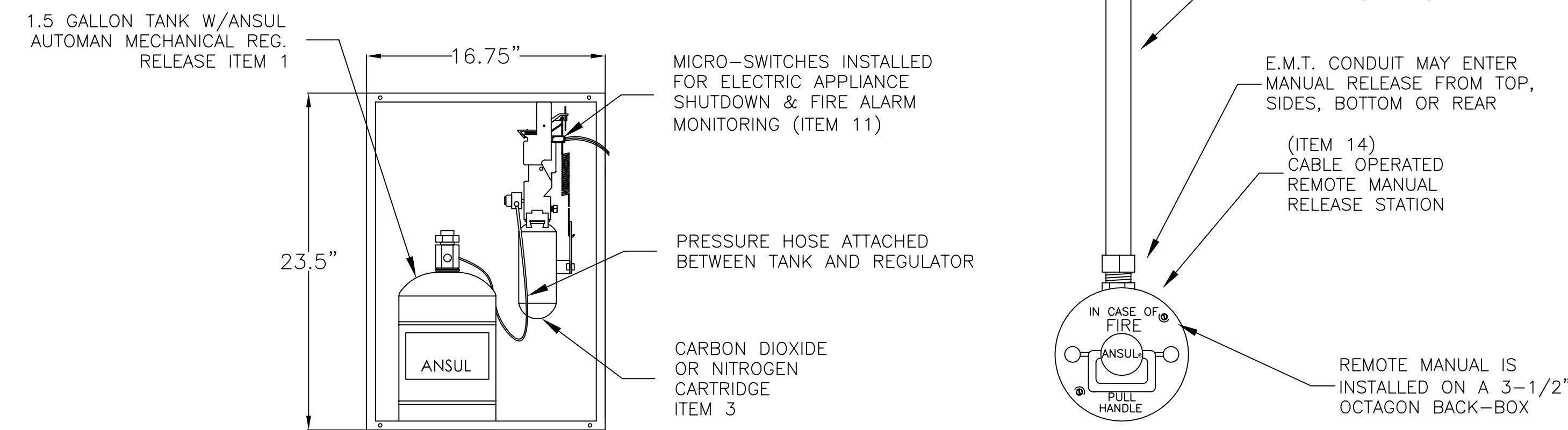


**SCISSOR LINKAGE DETAIL**

SCALE: NOT TO SCALE

**SCISSOR LINKAGE INSTRUCTIONS**

- FROM THE AUTOMAN ENCLOSURE, RUN 1/16 IN. STAINLESS STEEL WIRE ROPE THROUGH THE 1/2 IN. EMT, CORNER PULLEYS, AND DETECTOR BRACKETS TO THE TERMINAL DETECTOR. DO NOT ATTACH THE WIRE ROPE TO THE LOCKING CLAMP IN THE AUTOMAN AT THIS TIME.
- FEED THE WIRE ROPE THROUGH THE TERMINAL DETECTOR BRACKET AS SHOWN IN FIGURE C4 AND INSTALL AND CRIMP A STOP SLEEVE APPROXIMATELY 2-3 INCHES FROM THE END OF THE WIRE ROPE (FIGURE C5).
- APPLY TENSION TO THE END OF THE WIRE ROPE INSTALLED IN THE AUTOMAN ENCLOSURE BY HANGING A VICE GRIP ON THE EXCESS DURING INSTALLATION OF THE DETECTOR LINKAGE.
- INSTALL THE DETECTOR SCISSOR ASSEMBLY AS SHOWN IN FIGURE C1. SLIGHTLY CRIMP THE TWO ASSEMBLY BOOT HOOKS OVER THE CABLE WITH PLIERS SO THAT THE CABLE IS CAPTURED UNDER EACH HOOK, BUT THE WHOLE ASSEMBLY CAN MOVE FROM SIDE TO SIDE. CENTER THE ASSEMBLY IN THE BRACKET.
- HOOK THE FUSIBLE LINK ON THE AUTOMAN SIDE OF THE HOOK ASSEMBLY, THEN PULL UP THE FUSIBLE LINK TO THE OTHER SIDE AS SHOWN IN FIGURES C2 AND C3. THE SCISSOR HOOK ASSEMBLY WITH THE FUSIBLE LINK IN PLACE MUST BE LOCATED TOWARD THE TERMINAL DETECTOR SIDE OF THE BRACKET.
- INSTALL THE LINKAGE AND FUSIBLE LINK IN THE REMAINDER OF THE DETECTOR BRACKETS. MAKE CERTAIN ALL DETECTOR LINKAGES ARE POSITIONED EITHER AGAINST THE FRONT OR BACK UPPER LIP OF THE FORMED DETECTOR BRACKET AS SHOWN IN FIGURE C6.



**AUTOMAN RELEASE DETAIL**

SCALE: NOT TO SCALE

**REMOTE MANUAL RELEASE DETAIL**

SCALE: NOT TO SCALE

**NOTES:** THE INFORMATION AND GRAPHIC DEPICTIONS ON THIS SHEET ARE DERIVED FROM INFORMATION OBTAINED IN A PUBLICATION TITLED "ANSUL DESIGN, INSTALLATION, RECHARGE AND MAINTENANCE MANUAL R-102 RESTAURANT FIRE SUPPRESSION SYSTEM (STANDARD UL 300 LISTED)" ANSUL PART NUMBER 418087-11.

IF ADDITIONAL TECHNICAL ASSISTANCE IS NEEDED CONTACT ANSUL, INC. 1 STANTON STREET, MARINETTE, WI 54143-2542 USA. TELEPHONE NUMBER: 1-715-735-7415 TECHNICAL ASSISTANCE PRESS 4.

**System Information:**

ANSUL MODEL R102 - 1.5G "WET"  
CHEMICAL KITCHEN FIRE SUPPRESSION  
SYSTEM PROTECTING AN EXHAUST  
HOOD & COOKING APPLIANCES

**Client:**

BUCKLEY ASSOCIATES, INC.  
ACADEMY OF ACTIVE LEARNERS  
134 WARREN AVENUE  
PORTLAND, ME 04104



P.O. BOX 1005  
NORTH CONWAY, NH 03860

P.O. BOX 187  
GARDINER, ME 04345

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Drawn By: M. STEWARD	Created on: 10/13/2016	II	10/13/2016
Designed by: M. STEWARD	Checked by:		
Approved by:	Project Lead: J. MOONEY		
Scale: AS NOTED			

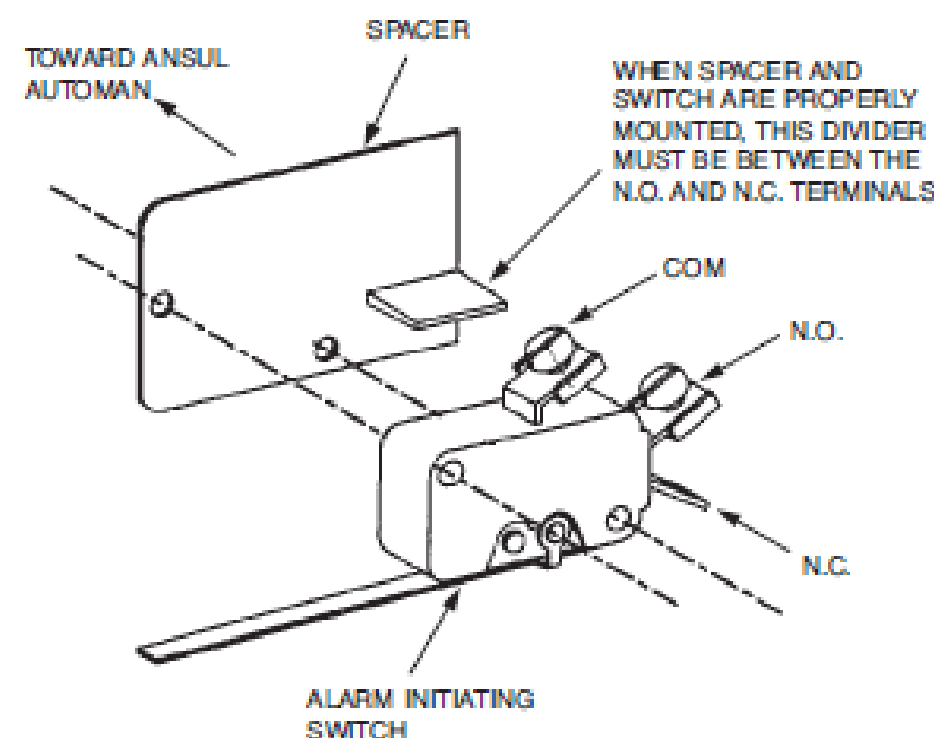
SHEET :

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**PIPING NOTES**

1. INSTALL THE AGENT DISTRIBUTION PIPING AS DICTATED BY THESE DRAWINGS.
2. ALL PIPING MUST BE SCHEDULE 40, BLACK IRON, CHROME-PLATED OR STAINLESS STEEL PIPE AND FITTINGS. DO NOT USE HOT-DIPPED GALVANIZED IRON PIPE OR FITTINGS IN THE AGENT DISTRIBUTION PIPING.
3. BEFORE ASSEMBLING THE PIPE AND FITTINGS, MAKE CERTAIN ALL ENDS ARE CAREFULLY REAMED AND BLOWN CLEAR OF CHIPS AND SCALE. THE INSIDE OF THE PIPE AND FITTINGS MUST BE FREE OF OIL AND DIRT.
4. THE DISTRIBUTION PIPING AND FITTING CONNECTIONS LOCATED IN OR ABOVE THE HOOD OR PROTECTED AREA, MUST BE SEALED WITH PIPE TAPE. WHEN APPLYING THE PIPE TAPE, START AT THE SECOND MALE THREAD AND WRAP THE TAPE (TWO TURNS MAXIMUM) CLOCKWISE AROUND THE THREADS, AWAY FROM THE PIPE OPENING. DO NOT ALLOW THE TAPE TO OVERLAP THE PIPE OPENING AS THE PIPE AND NOZZLES COULD BECOME PLUGGED. THREAD SEALANT OR COMPOUND MUST NOT BE USED AS IT COULD PLUG THE NOZZLES.
5. BRANCH TEES CAN BE USED TO CREATE MORE THAN ONE BRANCH AND CAN BE INSTALLED AS A THRU TEE, SIDE OUTLET TEE OR BULL TEE.
6. STANDARD PIPE HANGERS OR PIPE CLAMPS SHALL BE USED FOR SUPPORT. THE MAXIMUM DISTANCE BETWEEN HANGERS SHALL NOT EXCEED 5 FEET.
7. HANGERS SHOULD BE PLACED BETWEEN ELBOWS WHEN THE DISTANCE IS GREATER THAN 2 FEET.
8. INSTALL THE CORRECT NOZZLE TO A PREDETERMINED AIM POINT AS SHOWN IN THESE DRAWINGS.
9. BEFORE INSTALLING BLOW-OFF CAPS ON NOZZLES, APPLY A SMALL AMOUNT OF DOW CORNING NO. 111 SILICONE GREASE ACROSS THE OPENING IN THE NOZZLE TIP AND ALSO A SMALL AMOUNT COATING THE EXTERIOR OF THE BLOW-OFF CAP. DO NOT FORCE SILICONE GREASE INTO THE NOZZLE TIP OPENING OR FILL THE BLOW-OFF CAP WITH GREASE.
10. MAKE CERTAIN A BLOW-OFF CAP IS IN PLACE OVER EACH NOZZLE TIP. THESE BLOW-OFF CAPS ARE DESIGNED TO KEEP GREASE FROM BUILDING UP ON THE NOZZLE ORIFICE AND INHIBITING AGENT FLOW.



**ELECTRIC APPLIANCE SHUTDOWN & ALARM INITIATING SWITCH DETAIL**

THE ALARM INITIATING & APPLIANCE SHUTDOWN SWITCH KIT (ANSUL PART NUMBER 423879 IS FIELD MOUNTED WITHIN THE ANSUL AUTOMAN ENCLOSURE. THE SWITCHES ARE INTENDED FOR USE WITH ELECTRIC GAS VALVES, ALARMS, CONTACTORS, LIGHTS, CONTRACTOR SUPPLIED ELECTRIC POWER SHUT-OFF DEVICES AND OTHER ELECTRICAL DEVICES THAT ARE DESIGNED TO SHUT OFF OR TURN ON WHEN THE SYSTEM IS ACTUATED.

THE SWITCHES ARE PROVIDED WITH 12 IN. WIRE LEADS AND ALL THE NECESSARY MOUNTING COMPONENTS ALONG WITH AN INSTRUCTION SHEET.

THE SWITCH IS RATED 50mA @ 28 VDC.  
 125 VAC, 1 HP  
 250 VAC, 21A RESISTIVE



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**System Information:**  
 ANSUL MODEL R102 - 1.5G "WET"  
 CHEMICAL KITCHEN FIRE SUPPRESSION SYSTEMS PROTECTING AN EXHAUST HOOD & COOKING APPLIANCES

**Client:**  
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"WET" CHEMICAL KITCHEN FIRE SUPPRESSION SYSTEM PIPE SPECIFICATION & COMPONENT DETAIL

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SHEET :

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