

## FIRE PROTECTION SPECIFICATIONS

### 1.0 GENERAL NOTES AND GUIDE TO SPECIFICATIONS

- .1 THE SPRINKLER SYSTEM DRAWINGS DO NOT SHOW ALL ARCHITECTURAL AND STRUCTURAL DETAILS. ANY INFORMATION INVOLVING ACCURATE MEASUREMENT OF THE BUILDING SHALL BE TAKEN FROM THE ARCHITECTURAL AND STRUCTURAL DRAWINGS OR SHALL BE MEASURED ON THE SITE. ANY CHANGES OR ADDITIONS TO ACCOMMODATE THE SITE CONDITIONS SHALL BE MADE WITHOUT CHARGE TO THE OWNER.
- .2 FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE FIRE PROTECTION SYSTEMS AND FOR CO-ORDINATION WITH ALL OTHER TRADES. BEFORE COMMENCING WORK EXAMINE THE SITE AND THE WORK OF THE OTHER TRADES AND REPORT AT ONCE TO THE ENGINEER ANY DEFECT OR INTERFERENCE AFFECTING THE COMPLETION OF THE WORK, OR THE GUARANTEE OF THIS CONTRACTOR.
- .3 FIRE PROTECTION CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT DISCREPANCIES TO THE ENGINEERS BEFORE PROCEEDING WITH THE WORK.
- .4 ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL CODES, STANDARDS, BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
- .5 THE WORK IN THIS SECTION MUST BE CARRIED OUT BY A CONTRACTOR WITH AN ESTABLISHED REPUTATION IN FIRE PROTECTION INSTALLATIONS.
- .6 THE FIRE PROTECTION CONTRACTOR MUST BE IN GOOD STANDING AND A MEMBER OF THE CANADIAN AUTOMATIC SPRINKLER ASSOCIATION (C.A.S.A.).
- .7 FIRE PROTECTION CONTRACTOR TO CO-ORDINATE INSTALLATION WITH OTHER TRADES ON THE SITE AND ACCEPT RESPONSIBILITY FOR AND COST OF MAKING ADJUSTMENTS TO PIPING TO AVOID INTERFERENCE WITH MECHANICAL, ELECTRICAL AND OTHER BUILDING COMPONENTS.
- .8 FIRE PROTECTION CONTRACTOR TO INCLUDE FOR OFFSETS IN SPRINKLER PIPING AND SUPPLY AND INSTALLATION OF TRAPEZE HANGERS WHERE REQUIRED.
- .9 ALL SPRINKLER VALVES TO BE SUPERVISED, U.L.C. LISTED AND F.M. APPROVED.
- .10 FIRE PROTECTION CONTRACTOR TO ALLOW FOR ADDITIONAL PRESSURE SWITCHES WHERE REQUIRED FOR ALARM SYSTEM.
- .11 ALL MATERIALS USED IN THE INSTALLATION OF THE SPRINKLER SYSTEM SHALL BE CANADIAN AND/OR UNITED STATES MADE UNLESS SPECIFICALLY APPROVED IN WRITING PRIOR TO INSTALLATION BY THE ARCHITECTS AND/OR ENGINEERS RESPONSIBLE FOR THE SYSTEM DESIGN.
- .12 DRAWINGS ARE NOT TO BE SCALED.
- .13 THESE DRAWINGS ARE THE PROPERTY OF THE ENGINEERS AND SHALL NOT BE ALTERED WITHOUT APPROVAL. DRAWINGS SHALL BE RETURNED UPON REQUEST.
- .14 FIRE PROTECTION CONTRACTOR TO ALLOW IN PRICE FOR SUFFICIENT PIPE AND FITTINGS TO INSTALL PENDENT SPRINKLERS WITHIN 5 FT. RADIUS OF LOCATION SHOWN.
- .15 ALL SPRINKLER EQUIPMENT (SPRINKLER HEADS, ALARM VALVES, DELUGE VALVES ETC.) SHALL BE PRODUCTS OF ONE MANUFACTURER FROM THE FOLLOWING: TYCO, RELIABLE, VIKING, ASTRA OR APPROVED EQUAL AND SHALL BE U.L.C. LISTED AND F.M. APPROVED FOR THE SPECIFIC APPLICATION.

- .16 ALL SPRINKLER SYSTEMS SHALL BE INSTALLED AND TESTED TO THE FOLLOWING CODES AND STANDARDS. ONTARIO BUILDING CODE, ONTARIO FIRE CODE, N.F.P.A. No. 13 (LATEST EDITION), F.M. GLOBAL AND LOCAL AUTHORITIES.

### 2.0 SHOP DRAWINGS

- .1 PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:
  - SUPERVISORY DEVICES
  - SPRINKLER HEADS
  - CONTROL VALVES
  - FIRE HOSE CABINETS
  - FIRE EXTINGUISHERS
- .2 FIRE PROTECTION CONTRACTOR SHALL PREPARE A SET OF CONSTRUCTION SHOP DRAWINGS AND INTERFERENCE DRAWINGS SHOWING THE COMPLETE SYSTEMS AND HAVE SAME APPROVED BY LOCAL AUTHORITIES, INSURANCE RATING ORGANIZATION AND AS REQUIRED BY CODES AND REGULATIONS. CONTRACTOR SHALL PAY ANY FEES LEVIED BY APPROVALS AUTHORITIES FOR REVIEW OF DRAWINGS. AFTER THE ABOVE APPROVALS HAVE BEEN OBTAINED, THE CONTRACTOR SHALL SUBMIT THE DRAWINGS TO THE ARCHITECT AND ENGINEER FOR APPROVAL. MATERIALS SHALL NOT BE ORDERED NOR SHALL ANY WORK BE INSTALLED UNTIL ALL THE APPROVALS HAVE BEEN OBTAINED.

### 3.0 TEST AND CERTIFICATION

- .1 UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL TEST THE SYSTEM AND SUBMIT TO THE ENGINEER COMPLETED CONTRACTOR'S TEST CERTIFICATES AFFIRMING THAT THE SYSTEM HAS BEEN INSTALLED, TESTED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION IN ACCORDANCE WITH N.F.P.A. LATEST EDITION.

### 4.0 SLEEVES AND PLATES

- .1 USE STANDARD WEIGHT STEEL PIPE SLEEVES WHERE PIPES PASS THROUGH MASONRY, CONCRETE OR TILE WALLS AND WHERE FOR PIPES PASS THROUGH MECHANICAL ROOMS AND SERVICE AREA FLOORS. ALL SLEEVES SHALL HAVE MACHINE CUT ENDS.
- .2 SLEEVES THROUGH MECHANICAL ROOMS AND SERVICE AREA FLOORS SHALL TERMINATE 3" ABOVE FINISH FLOOR LEVEL.
- .3 SLEEVES SHALL BE OF SUFFICIENT SIZE TO ALLOW (UNBROKEN) INSULATION, TO PASS THROUGH, LEAVING A 1/2" SPACE BETWEEN THE INSULATION AND SLEEVE.
- .4 ALL OTHER SLEEVES MAY BE EIGHTEEN (18) GAUGE GALVANIZED STEEL.
- .5 AFTER TESTING, THE ANNULAR SPACE BETWEEN PIPES AND SLEEVES SHALL BE COMPLETELY FILLED WITH FIBERGLASS INSULATION AND CAULKED AROUND EDGES WITH AN APPROVED FIRE RATED COMPOUND.
- .6 PROVIDE CHROME PLATES, SOLID BRASS ESCUTCHEONS WITH SET SCREWS ON ALL PIPING, WHERE EXPOSED TO VIEW IN UNFINISHED AREAS.
- .7 PROVIDE MALLEABLE CAST IRON ESCUTCHEONS WITH SET SCREWS ON ALL PIPING, WHERE EXPOSED TO VIEW, IN UNFINISHED AREAS. ESCUTCHEONS ARE NOT REQUIRED WHERE PIPING IS INSTALLED AS PER ARTICLE (E).

- .8 LOCATE SLEEVES PRIOR TO POURING OF CONCRETE OR CONSTRUCTION OF WALLS. ANY SLEEVES MISSED OR IMPROPERLY PLACED WILL BE DRILLED AT THE EXPENSE OF DIVISION 15.

### 5.0 WORK INCLUDED

- .1 THE FIRE PROTECTION CONTRACTOR TO SUPPLY AND INSTALL A COMPLETE AND FULLY OPERATIONAL AUTOMATIC SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS AND AS INDICATED IN THE SPECIFICATIONS AND CONFORMING TO N.F.P.A. REQUIREMENTS, O.B.C. REQUIREMENTS AND THE REQUIREMENTS OF THE LOCAL FIRE DEPARTMENT.
- .2 THE FIRE PROTECTION CONTRACTOR TO SUPPLY AND INSTALL A COMPLETE AND FULLY OPERATIONAL FIRE HOSE SYSTEM AS SHOWN ON THE DRAWINGS, AS INDICATED IN THE SPECIFICATIONS AND CONFORMING TO N.F.P.A. REQUIREMENTS, O.B.C. REQUIREMENTS AND THE REQUIREMENTS OF THE LOCAL FIRE DEPARTMENT

### 6.0 EQUIPMENT

#### 7.1 SPRINKLER AND VALVES

- .1 SPRINKLERS SHALL BE U.L.C. LISTED AND FACTORY MUTUAL APPROVED, AND SHALL BE OF THE TYPE AND TEMPERATURE RATING SPECIFIED ON THE DRAWINGS.
- .2 PROVIDE SPARE SPRINKLERS AND WRENCH IN A METAL CABINET, MOUNTED ON THE WALL OF THE MECHANICAL ROOM, NEAR THE MAIN SPRINKLER VALVE HEADER.
- .3 SPRINKLERS OF SUITABLE TEMPERATURE RATING SHALL BE INSTALLED NEAR HEATING EQUIPMENT AS SPECIFIED IN N.F.P.A. #13, LATEST EDITION.
- .4 SPRINKLERS AND VALVES SHALL BE THE PRODUCTS OF A RECOGNIZED MAJOR FIRE PROTECTION EQUIPMENT MANUFACTURER.
- .5 PENDENT SPRINKLERS AND ESCUTCHEONS INSTALLED IN OFFICES AND WASHROOMS SHALL PERMIT THE REPLACEMENT OF CEILING TILES WITHOUT REMOVAL OF THE SPRINKLER HEAD.
- .6 FULLY CONCEALED PENDENT SPRINKLERS TO BE INSTALLED IN ROOMS WITH DRYWALL CEILINGS.

#### 7.2 STANDARD FIRE HOSE CABINETS.

- .1 THE CABINETS SHALL BE NATIONAL FIRE EQUIPMENT LTD. OR EQUAL, FACTORY PAINTED GREY COLOUR, AND TO INCLUDE DEBURRING. ALL COMPONENTS SHALL BE UNDERWRITERS' LABORATORIES OF CANADA LABELLED. DOORS SHALL BE GLAZED WITH 5mm SMOKED GLASS. HOSE VALVES SHALL BE 38mm (1 1/2") WITH HYDRO VENTS AND CHROME FINISH ANGLE TYPE. THE 65mm (2 1/2") VALVE SHALL BE COMPLETE WITH CHROME METAL CAP AND CHROME DRAIN. WHERE APPLICABLE INSTALL RESTRICTED CHROME VALVE MODEL A 156 OR OTHER APPROVED DEVICE TO REDUCE PRESSURE TO 550kpa (80 p.s.i.) MAXIMUM. INSTALL CHROME HOSE RACK AND 30M (100'-0") OF 38mm (1 1/2") UNLINED LINEN HOSE WITH COMBINATION NOZZLE. FIRE EXTINGUISHERS SHALL BE 2.27 kg (5 lb.) ABC MULTIPURPOSE IN ALL CABINETS.
- .2 THE VALVE HEIGHT IN FIRE HOSE CABINETS SHALL NOT EXCEED 1.5m (5'-0") ABOVE FINISHED FLOOR.

### 7.3 FIRE DEPARTMENT CONNECTION FOR SPRINKLER SYSTEM

- .3.1 PROVIDE NATIONAL FIRE EQUIPMENT LTD. MODEL NO. 229 FLUSH (CHROME FINISH) WITH DOUBLE CLAPPER, SIZE 150 MM X 65 MM X 65 MM (6" X 2-1/2" X 2-1/2") WITH CAPS AND CHAINS. WALL PLATES TO BE LABELED "AUTO SPRINKLERS" AS REQUIRED.

### NOTES:

1. SEE STRUCTURAL DRAWINGS FOR LOCATION AND HANGING SPECIFICATIONS FOR ALL 6" AND 8" SPRINKLER MAINS.
2. FIRE PROTECTION CONTRACTOR TO SUBMIT A UNIT PRICE FOR DELETING OR ADDING ALL TYPES OF SPRINKLER HEADS LISTED ON THE DRAWINGS INCLUDING PIPING, FITTINGS AND LABOUR.
3. ALL SPRINKLER SYSTEM DRAINS TO TERMINATE AT NEAREST MECHANICAL FLOOR DRAIN AS PER PLUMBING SPECIFICATIONS.
4. FIRE PROTECTION CONTRACTOR TO INCLUDE FOR REQUIRED SIGNAGE, TAGS AND LABELS AS PER N.F.P.A. No. 13 AND LOCAL FIRE DEPARTMENT.
5. THE BUILDING OWNER AND/OR TENANT SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT HEAT TO PREVENT FREEZING OF WATER IN THE SPRINKLER SYSTEM.
6. FIRE PROTECTION CONTRACTOR TO VISIT SITE PRIOR TO FABRICATION OF SPRINKLER SYSTEM PIPING AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. FIRE PROTECTION CONTRACTOR TO PROVIDE FIRE EXTINGUISHERS AS PER O.B.C., ONTARIO FIRE CODE AND N.F.P.A. No. 10.
8. JOB SITE VISIT REQUIRED. THE FIRE PROTECTION CONTRACTOR, AFTER VISITING THE SITE TO SURVEY ALL SITE CONDITIONS, SHALL REPORT IN WRITING, ANY CONDITIONS WHICH PREVENT OR INHIBIT THE CONTRACTOR FROM INSTALLING THE SPRINKLER SYSTEM ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IF THE CONTRACTOR DOES NOT FORWARD SUCH REPORT TO THE DESIGN ENGINEER IN ADVANCE OF SUBMITTING A TENDER BID, IT SHALL BE DEEMED THAT THE CONTRACTOR ACCEPTS THE PREVAILING SITE CONDITIONS WITHOUT ADJUSTMENT TO BID.
9. SEISMIC DESIGN SHOP DRAWINGS WILL BE PROVIDED BY FIRE PROTECTION CONTRACTOR AND TO THE REQUIREMENT OF N.F.P.A. STANDARD, THE ONTARIO BUILDING CODE, AND CERTIFIED BY A PROFESSIONAL ENGINEER.

FIRE PROTECTION CONTRACTOR TO INCLUDE FOR ALL SEISMIC SUPPORTS AND LABOUR.

### NOTES:

SPRINKLER ARE NOT REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITH DWELLING UNITS IN HOTELS AND MOTELS WHERE THE AREA OF THE SPACE DOES NOT EXCEED 24FT<sup>2</sup>, THE LEAST DIMENSION DOES NOT EXCEED 3FT, AND THE WALLS AND CEILING ARE SURFACED WITH NON-COMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS ACCORDING TO N.F.P.A. SECTION 8.15.8.2

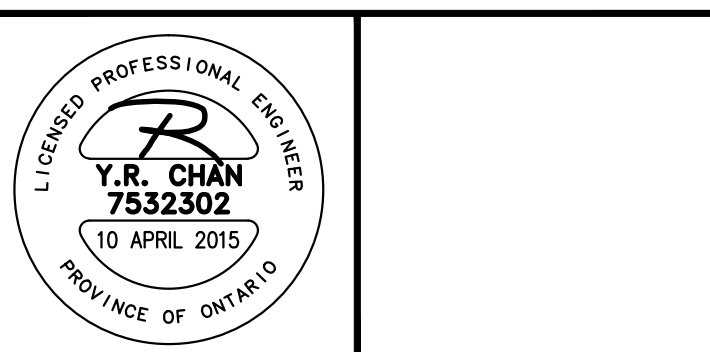
DATE	REVISION	DESCRIPTION	BY
26 MAY. 2015	-	REVISED AS PER OWNER AND ARCHITECTS COMMENTS	A.R.
10 APR. 2015	-	RE-ISSUED FOR REVIEW	D.A.
09 FEB. 2015	-	ISSUED FOR REVIEW	D.A.

MARK VOID ALL PRINTS DATED PRIOR TO LATEST DATE ABOVE

### REVISIONS

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT DISCREPANCIES TO THE ENGINEERS BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS THE PROPERTY OF THE ENGINEER AND MUST BE RETURNED UPON REQUEST OR AT COMPLETION OF THE WORK.

DRAWINGS ARE NOT TO BE SCALED



**novus**  
Fire Protection Consulting Inc.  
110 Woodbine Downs Blvd., Unit 4B, Toronto, Ontario M8W 5S6  
Tel: 416-676-2500 www.novusfire.com Fax: 416-676-2501

### SOUTHWAY HOTEL

2431 BANK STREET  
OTTAWA, ONTARIO

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#### FIRE PROTECTION

DATE	PROJECT NUMBER	DRAWING NUMBER
DECEMBER 2014	14-079	SP7 of 7