



JASPER TRAIN STATION

SPRINKLER SYSTEM REPLACEMENT

607 CONNAUGHT AVE.
JASPER, AB

Sheet Legend	
Sheet Number	Sheet Description
FP-1	Cover Page
FP-2	Site Plan, Building Sections, Drawing Details
FP-3	Basement/Crawlspace Plan
FP-4	Main Floor Plan
FP-5	Second Floor Plan
FP-6	Attic Plan
FP-7	Attic Iso-Schematic

APPLICABLE CODES
1 - NATIONAL BUILDING CODE OF CANADA (2015)
2 - NATIONAL FIRE CODE OF CANADA (2015)
3 - NFPA 13 (2013)

Fire Sprinkler System - Zone Breakdown						
Zone #	System Type	Hazard Classification	System Area	Control Valve Location	Number of Sprinklers	Protected Area
1	Wet	Existing	360 SQ. M	Sprinkler Room	Existing	Basement
2	Wet	As Noted	844 SQ. M	Sprinkler Room	107	Main Floor
3	Wet	As Noted	824 SQ. M	Sprinkler Room	64	Second Floor
4	Dry	Light Hazard	1321 SQ. M	Sprinkler Room	193	Attic
5	Dry	Light Hazard	163 SQ. M	Sprinkler Room	20	Train Station Lobby

ATTIC DRY SYSTEM VOL. APPROX 1700L
TRAIN STATION LOBBY DRY SYSTEM VOL. APPROX 551L

GENERAL NOTES
1 - SPRINKLER SYSTEM TO BE INSTALLED IN ACCORDANCE WITH NFPA 13-2013 REQUIREMENTS
2 - ALL SPRINKLER SYSTEM COMPONENTS TO BE ULc LISTED
3 - ALL PIPE, FITTINGS, SPRINKLERS AND DEVICES TO HAVE MIN 12 BAR WORKING PRESSURE RATING
4 - ENTIRE SYSTEM TO BE HYDROSTATICALLY TESTED AT 13.8 BAR FOR A PERIOD OF 2 HOURS PRIOR TO SYSTEM ACCEPTANCE
5 - SPARE SPRINKLER CABINET TO CONTAIN MIN. 2 OF EACH TYPE OF SPRINKLER, WRENCH AND COPY OF NFPA 25
6 - WIRING OF ALL REQUIRED SYSTEM MONITORING DEVICES IS THE RESPONSIBILITY OF THIS CONTRACTOR.
7 - HANGERS TO BE IN ACCORDANCE WITH NFPA 13-2013
8 - INSPECTORS TEST CONNECTION AND LOW-POINT DRAINS TO BE PROVIDED IN ACCORDANCE WITH NFPA 13-2013
9 - PROVIDE ALL REQUIRED SIGNAGE IN ACCORDANCE WITH NFPA 13-2013
10 - PROVIDE HYDRAULIC PLACARD AT SYSTEM RISER
11 - ALL VALVES CONTROLLING SPRINKLER SYSTEM WATER TO BE PROVIDED WITH TAMPER SWITCHES

WET PIPE SPRINKLER SYSTEM

- 1 - WET PIPE SPRINKLER SYSTEMS TO BE INSTALLED EXPOSED, SUPPORTED FROM FLOOR/ROOF JOISTS ABOVE
- 2 - NEW WET PIPE SPRINKLER SYSTEMS TO BE INSTALLED IN THE FOLLOWING LOCATIONS:
-- MAIN FLOOR (EXCEPT TRAIN STATION LOBBY VAULTED CEILING AREA)
-- SECOND FLOOR
- 3 - WET PIPE SPRINKLER SYSTEM PIPING TO BE BLACK STEEL, WALL THICKNESS AND END PREP/FITTINGS AS NOTED ON DRAWINGS AND WITHIN SPECIFICATIONS
- 4 - WET PIPE SPRINKLER SYSTEMS HAVE BEEN HYDRAULICALLY CALCULATED IN ACCORDANCE WITH NFPA 13-2013 TO SUIT SPECIFIC HAZARD CLASSIFICATIONS NOTED ON DRAWINGS
- 5 - ALL EXPOSED WET SYSTEM PIPING 50mm AND LESS IN DIAMETER TO BE THREADED SCH. 40 c/w THREADED FITTINGS
- 6 - ALL WET SYSTEM PIPING GREATER THAN 50mm TO BE GROOVED SCH. 10 c/w GROOVED FITTINGS

DRY PIPE SPRINKLER SYSTEM - ATTIC

- 1 - PIPING TO BE SUPPORTED FROM ROOF STRUCTURE, USING HANGER TYPES NOTED WITHIN THESE PLANS
- 2 - INSPECTORS TEST CONNECTION AND LOW-POINT DRAINS TO BE PROVIDED IN ACCORDANCE WITH NFPA 13-2013
- 3 - ALL PIPING TO BE PROPERLY GRADED TO DRAINS IN ACCORDANCE WITH NFPA 13-2013
- 4 - COUPLINGS ARE TO BE LISTED FOR DRY PIPE SYSTEM SERVICE
- 5 - DRY PIPE SPRINKLER SYSTEM IS REQUIRED TO MEET MAXIMUM 60 SECOND TRIP TIME DUE TO PRESENCE OF SPECIFIC APPLICATION 'ATTIC PLUS' SPRINKLERS
- 6 - PROVIDE GENERAL INFORMATION SIGN AT SYSTEM RISER CLEARLY DENOTING LOCATIONS OF ALL AUXILIARY DRAINS
- 7 - PROVIDE AIR COMPRESSOR CAPABLE OF RETURNING SPRINKLER SYSTEM TO NORMAL WORKING AIR PRESSURE WITHIN 30 MINUTES
- 8 - PROVIDE NEW LISTED AIR MAINTENANCE DEVICE COMPATIBLE WITH DRY PIPE VALVE
- 9 - ALL DRY SYSTEM PIPING 25mm IN DIAMETER TO BE THREADED BLK SCH. 40 c/w THREADED FITTINGS
- 10 - ALL DRY SYSTEM PIPING 32mm AND GREATER TO BE GROOVED BLK SCH. 40 c/w GROOVED FITTINGS

DEMOLITION

- 1 - REMOVE ALL EXISTING DRY SPRINKLER SYSTEM PIPE, FITTINGS, HANGERS, SPRINKLERS AND VALVES AND DISCARD.
- 2 - REMOVE ALL EXPOSED WET SPRINKLER SYSTEM COMPONENTS WITHIN CRAWLSPACE, MAIN FLOOR, AND SECOND FLOOR AREA. BASEMENT SPRINKLER SYSTEM TO REMAIN WITH MINOR MODIFICATIONS DEPICTED. PATCH AND MAKE GOOD ALL PENETRATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.
- 3 - EXISTING WET SPRINKLER SYSTEM PIPE AND FITTINGS CONCEALED BEHIND WALLS/CEILING TO BE CAPPED OFF AND ABANDONED IN PLACE.
- 4 - ALL EXISTING SPRINKLERS WITHIN MAIN FLOOR AND SECOND FLOOR LEVELS TO BE REMOVED AND DISCARDED.

DRY PIPE SPRINKLER SYSTEM - TRAIN STATION LOBBY

- 1 - PIPING TO BE SUPPORTED FROM ROOF STRUCTURE AND VAULTED CEILING BELOW, USING HANGER TYPES NOTED WITHIN THESE PLANS
- 2 - INSPECTORS TEST CONNECTION AND LOW-POINT DRAINS TO BE PROVIDED IN ACCORDANCE WITH NFPA 13-2013
- 3 - ALL PIPING TO BE PROPERLY GRADED TO DRAINS IN ACCORDANCE WITH NFPA 13-2013
- 4 - COUPLINGS ARE TO BE LISTED FOR DRY PIPE SYSTEM SERVICE
- 5 - DRY PIPE SPRINKLER SYSTEM VOLUME DOES NOT EXCEED 1900 L. AND IS THEREFORE NOT REQUIRED TO MEET A SPECIFIC TRIP TIME
- 6 - PROVIDE GENERAL INFORMATION SIGN AT SYSTEM RISER CLEARLY DENOTING LOCATIONS OF ALL AUXILIARY DRAINS
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REVISION HISTORY

No.	DATE:	DESCRIPTION
0	JAN. 29, 2016	ISSUED FOR PRELIMINAR REVIEW
1	JUNE 29, 2016	RE-ISSUED FOR REVIEW - WET PIPE SYSTEM REPLACEMENT ADDED TO SCOPE
2	AUG. 31, 2016	RE-ISSUED FOR REVIEW
3	DEC. 19, 2016	RE-ISSUED FOR REVIEW - TRAIN STATION LOBBY VAULTED CEILING REVISED TO DRY SYSTEM
4	MAR 1, 2017	ISSUED FOR 95% REVIEW
5	APR. 21, 2017	ISSUED FOR TENDER
6	OCT. 23, 2017	RE-ISSUED FOR TENDER

STAMP



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fire protection engineering
building & fire code consulting
www.rmae.ca
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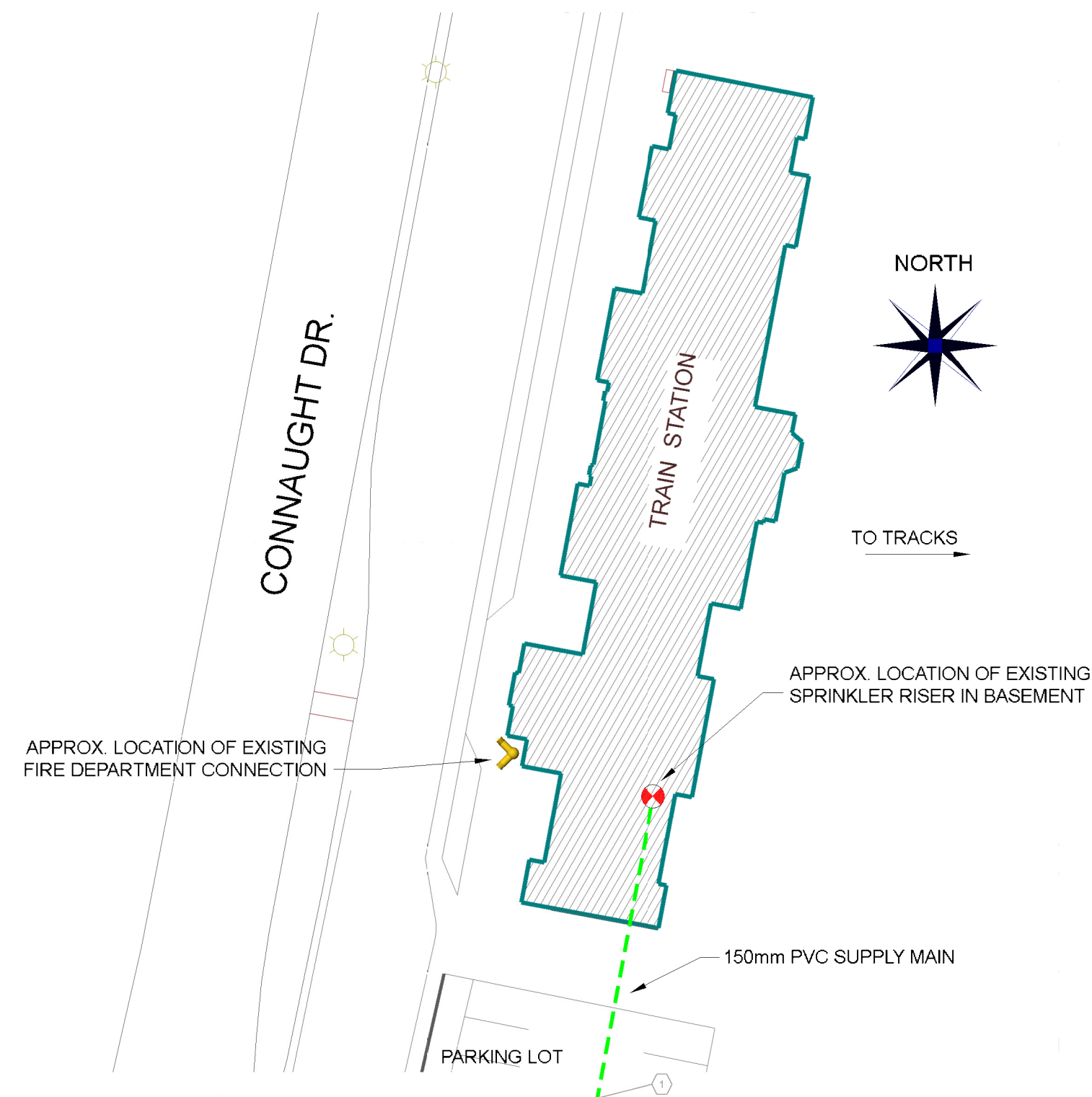
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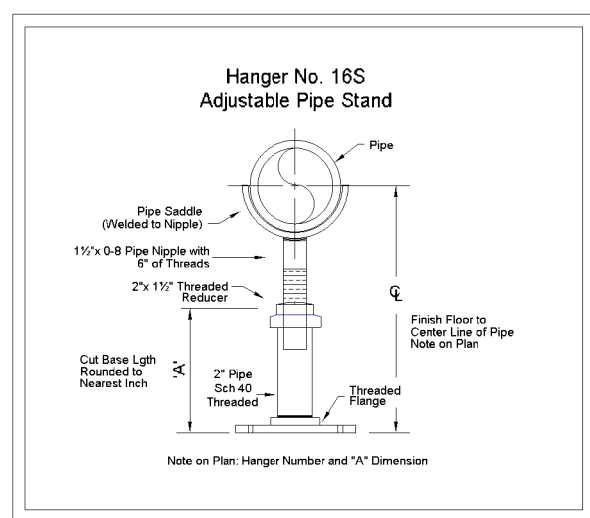
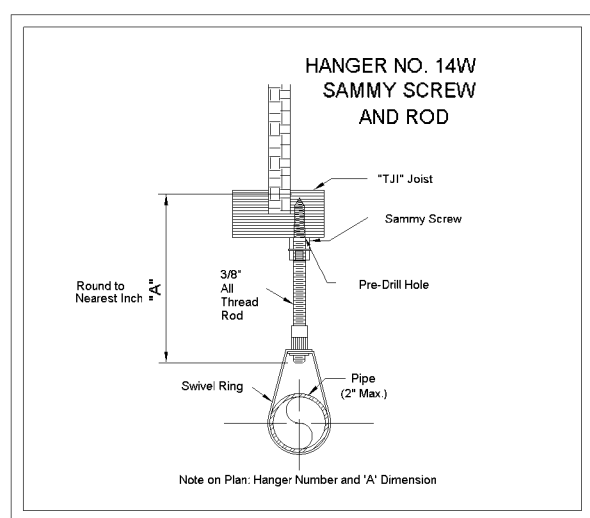
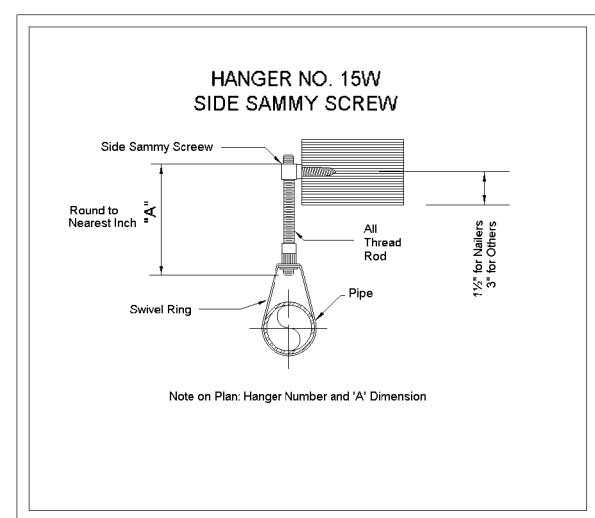


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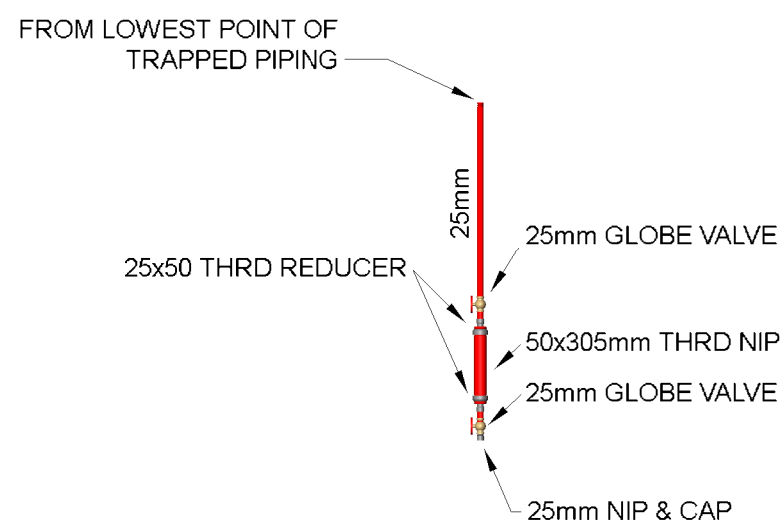
PROJECT JASPER TRAIN STATION - SPRINKLER SYSTEM REPLACEMENT	DATE: OCT., 2017
DRAWING TITLE: COVER SHEET	DRN: SF CHKD: RA SHEET: FP-1 of 7



1 SITE PLAN
FP-2 SCALE: 1:500

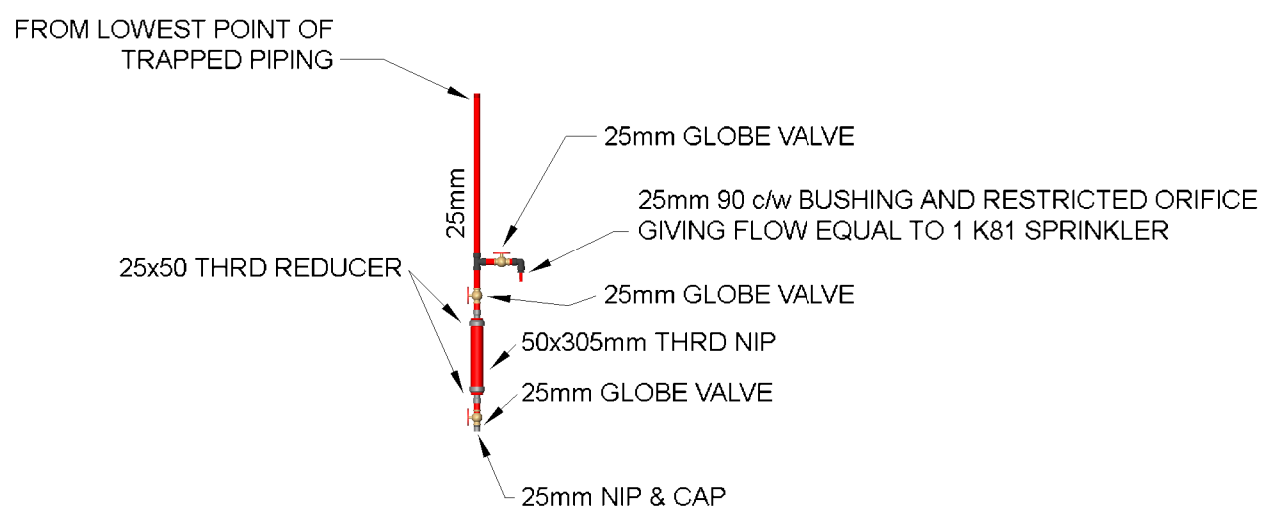


HANGERS

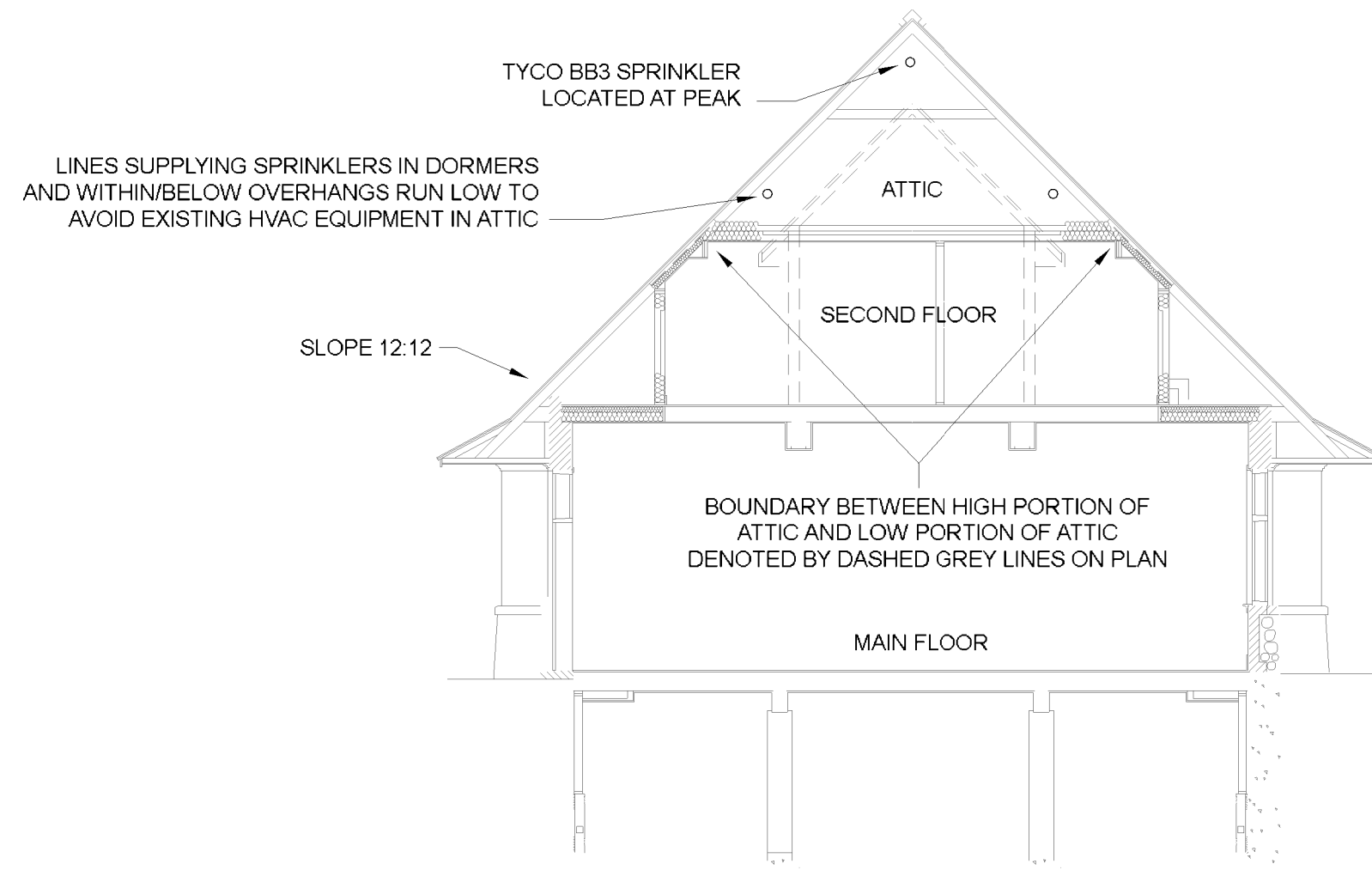


AUXILLIARY DRAIN

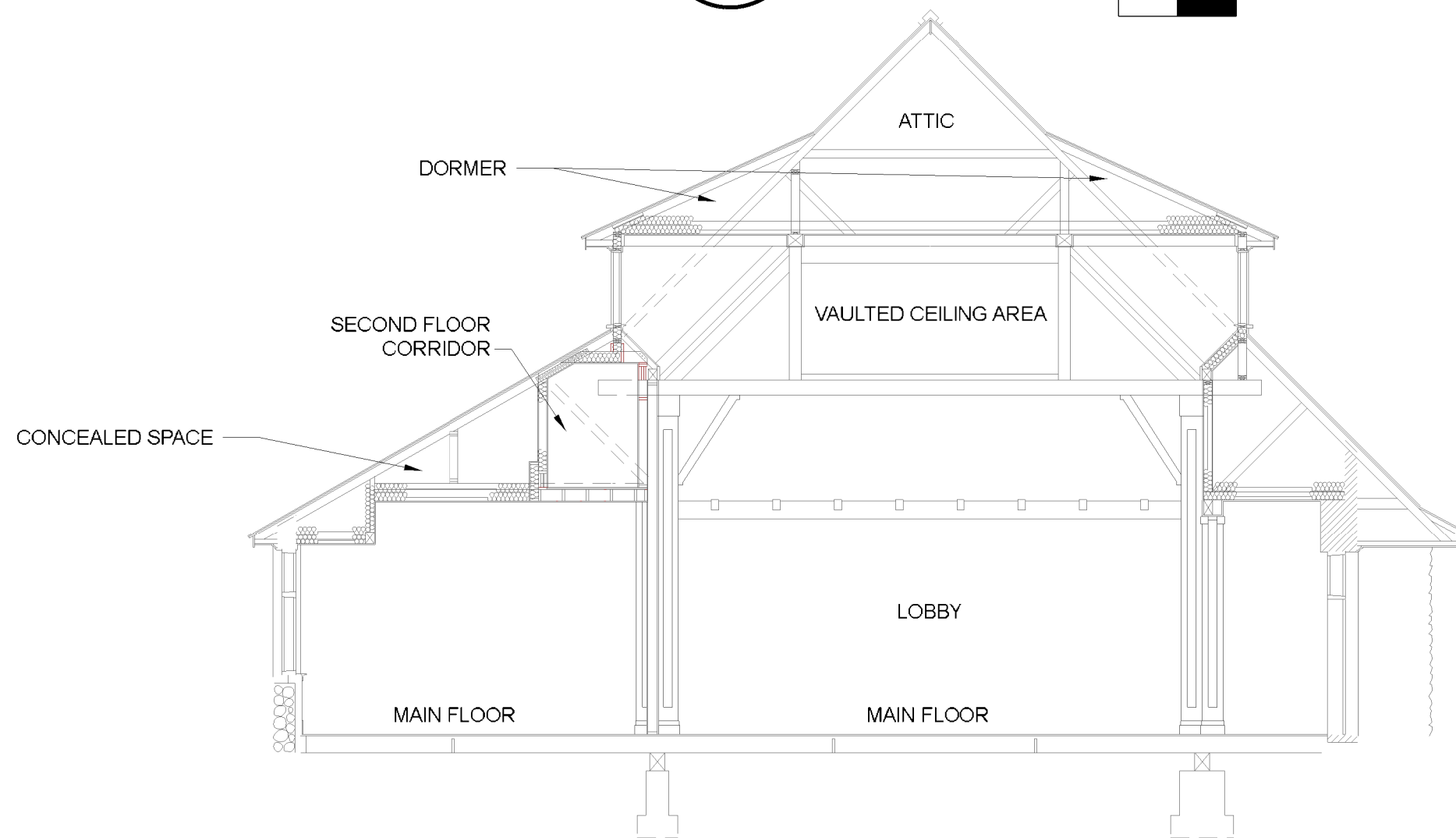
2 INSTALLATION DETAILS
FP-2 SCALE: NTS



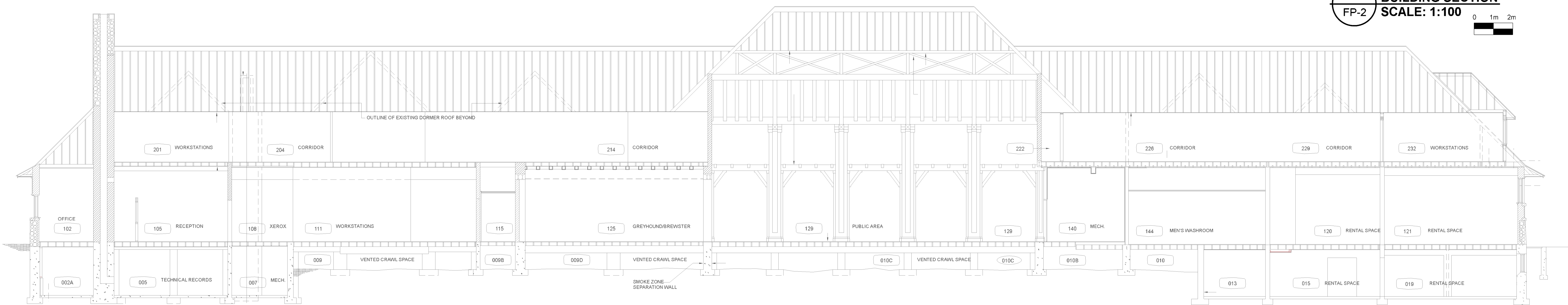
COMBINATION AUXILLIARY DRAIN AND DRY INSPECTORS TEST CONNECTION



3 BUILDING SECTION
FP-2 SCALE: 1:100



4 BUILDING SECTION
FP-2 SCALE: 1:100



5 LONGITUDINAL BUILDING SECTION
FP-2 SCALE: 1:100

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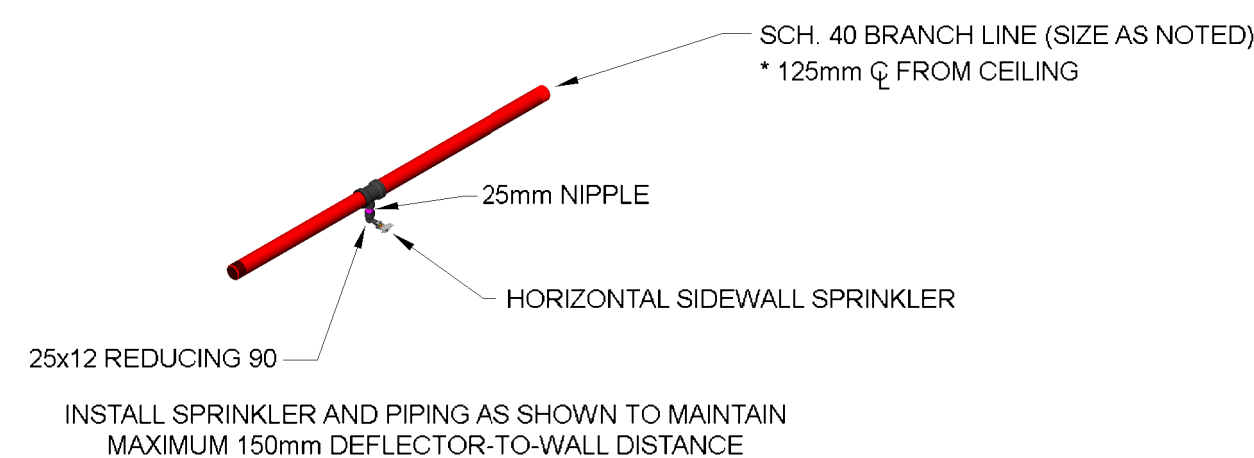
CLIENT

Parks Canada
PO Box 10
Jasper, AB

PROJECT
JASPER TRAIN STATION - SPRINKLER SYSTEM REPLACEMENT

DRAWING TITLE:
DETAILS

DATE: OCT., 2017
DRN: SF **CHKD:** RA
SHEET: FP-2 of 7



NOTE:
LOCATIONS OF DRY PENDENT SPRINKLERS PROTECTING BELOW OVERHANGS ARE APPROXIMATE. REUSE EXISTING HOLES WHERE POSSIBLE (TYP)

AUXILIARY DRAIN - SEE FP-2 FOR DETAIL

ROLL UP SLOPE

PIPE UP SLOPE

PIPE DN SLOPE

SLOPE 12:12

UP 100mm FROM BELOW

Dry pendant sprinklers below combustible overhangs (TYP)

AUXILIARY DRAIN - SEE FP-2 FOR DETAIL

COMBINATION AUXILIARY DRAIN / DRY INSPECTORS TEST CONNECTION AT THIS LOCATION - SEE FP-2 FOR DETAIL

1
FP-6

ATTIC PLAN
SCALE: 1:100

0 1m 2m

6" (152.4 mm) MAXIMUM

BB or HIP ATTIC SPRINKLER

22" (558.8 mm) MAX.
16" (406.4 mm) MIN.
BOTTOM OF SHEATHING

6" (152.4 mm) MAX.
4" (101.6 mm) MIN.
FROM WALL

DEC

FULL WALL TO DECK

1 C I TC

--- DENOTES INTERIOR SLOPED GWB CEILING INSTALLED DIRECTLY ON BOTTOM OF JOISTS - NO COMBUSTIBLE CONCEALED SPACE

- - - - - DENOTES BOUNDARY BETWEEN HIGH PORTION OF ATTIC AND LOWER PORTION ADJACENT TO SECOND FLOOR WALLS - SEE BUILDING SECTIONS FOR CLARIFICATION

===== SECOND FLOOR WALL BELOW

- - - - - MAIN FLOOR FACE OF EXTERIOR WALL

BB, SD, or HIP Deflector Installation

Position Below Peak/Ridge or Deck

For roof pitches of 4:12 (33%) to 12:12 (100%), 22 inches (558,8 mm) maxi-mum, 16 inches (406,4 mm) minimum
(Ref. Figures 2 & 5)



For roof pitches of 3:12 (25%) up to 4:12 (33%) (only 4,2K model BB), 12 inches (304,8 mm) maximum below the peak and a minimum of 1 inch (25,4 mm) below the bottom of top chord or solid wood rafter

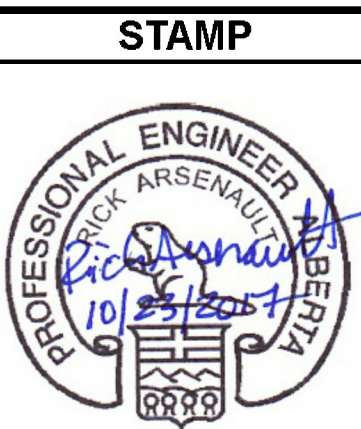
AP Deflector Position and Roof Pitch

1 to 3 inches (25,4 to 75,6 mm) below the bottom of the top chord or bottom of solid wood rafter, where the roof pitch is 3:12 to 12:12 and the top chord or solid wood rafter is a nominal 12 inches (600 mm) or less



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SPRINKLERS ON THIS DRAWING											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
	Tyco	TY3235	DS-1	23	5.6	Pendent	1"	Quick	Chrome	68°C	DRY PEND TY3190 SD1 BB3 SD1
	Tyco	TY3190		4	5.6	Upright	½"	Quick	Brass	93°C	
	Tyco	TY3185		16	5.6	Upright	½"	Quick	Brass	100°C	
	Tyco	TY3182		59	5.6	Upright	½"	Quick	Brass	100°C	
	Tyco	TY3183		6	5.6	Upright	½"	Quick	Brass	100°C	SD1
				Total =	192						



The logo for R M Arsenault Engineering Inc. features the stylized lowercase letters 'r.mae' in a bold, italicized serif font, with a red dot over the 'r'. Below this, the full name 'R M Arsenault Engineering Inc' is written in a standard serif font. Underneath the name, the services 'fire protection engineering' and 'building & fire code consulting' are listed in a smaller serif font. To the right of the company name, a vertical line separates it from the contact information, which includes the address '3706 ROUTE 24 GRANDVIEW, PE COA 1A0', the phone number 'PH: (902) 838-4195', and the website 'WEB: www.rm-ae.ca'. At the bottom of the advertisement, the text 'www.rm-ae.ca' and 'APEGA PERMIT TO PRACTICE No.: 12689' are displayed.

  Parks Canada	<h1 style="margin: 0;">Parks Canada</h1> <p style="margin: 0;">PO Box 10 Jasper, AB</p>	DATE: OCT., 1977 DRN: SF CHKD: RA SHEET: <h2 style="margin: 0;">FP-6 of 7</h2>
PROJECT: ASPER TRAIN STATION - SPRINKLER SYSTEM REPLACEMENT DRAWING TITLE: ATTIC		

Plot Date: 10/24/1708:50:57