



Date: October 24, 2023
 Project Name: Pembina Trails Collegiate
 Project Number: 202176

SUBMITTAL

#21-03

To: LM Architectural Group

Supplier: Infinity Fire Protection Inc.

Address: _____

Address: Box 832

Pilot Butte SK SOG 3Z0

Attn: Contract Admin

Submittal Name: **WW HS – Fire Suppression O&M & As Builts**

Submittal Type: **O & M Manuals**

Specification Section: **21**

Submittal Due Date:

Please use the following link to login and review this submittal:

<https://cmiccloud.com/cmiproduct/SysLaunchPopup/Index.jsp?objType=PMSBM&objOraseq=1982818258>

Comment: Sprinkler O&M
 Sprinkler As-Builts



This document has been reviewed for
 general conformity only.

Colin Pantos

Building Confidence Through Performance

Blumenort Office

Box 60, 25 Penner Drive, Blumenort, MB R0A 0C0

Winnipeg Office

Unit 6, 1333 Niakwa Rd East

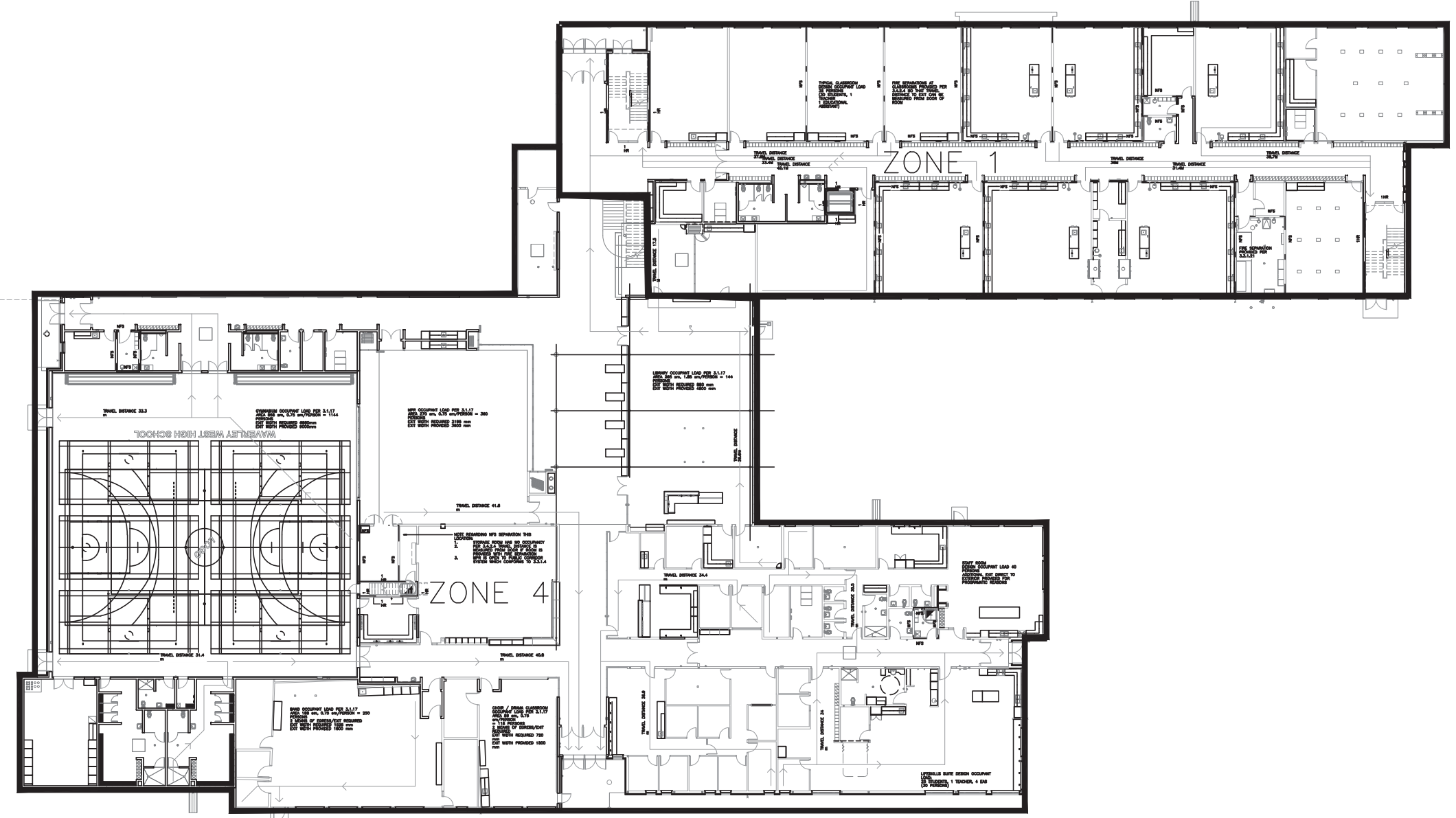
Phone

204-326-1341

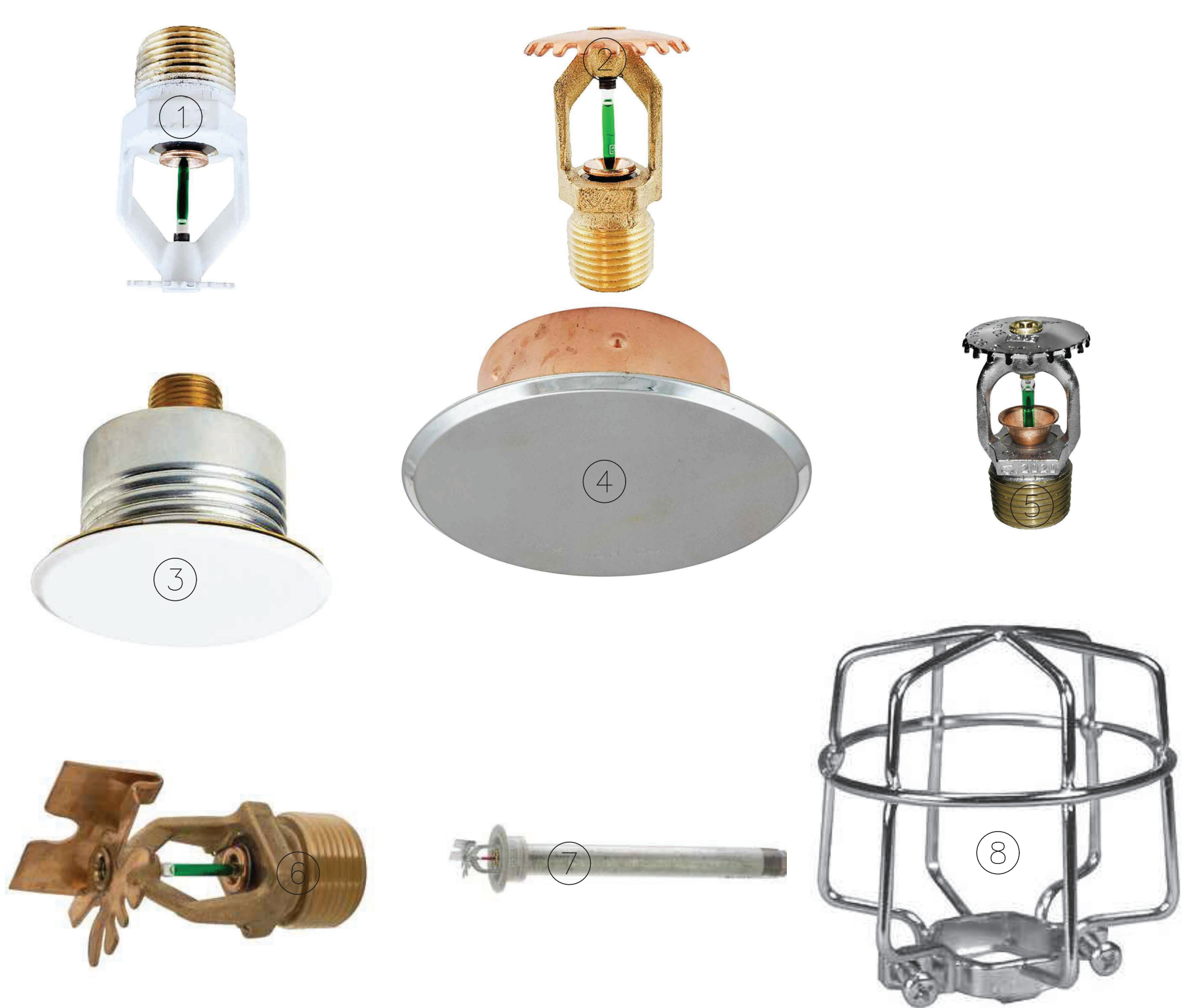
Toll Free

866-326-1341

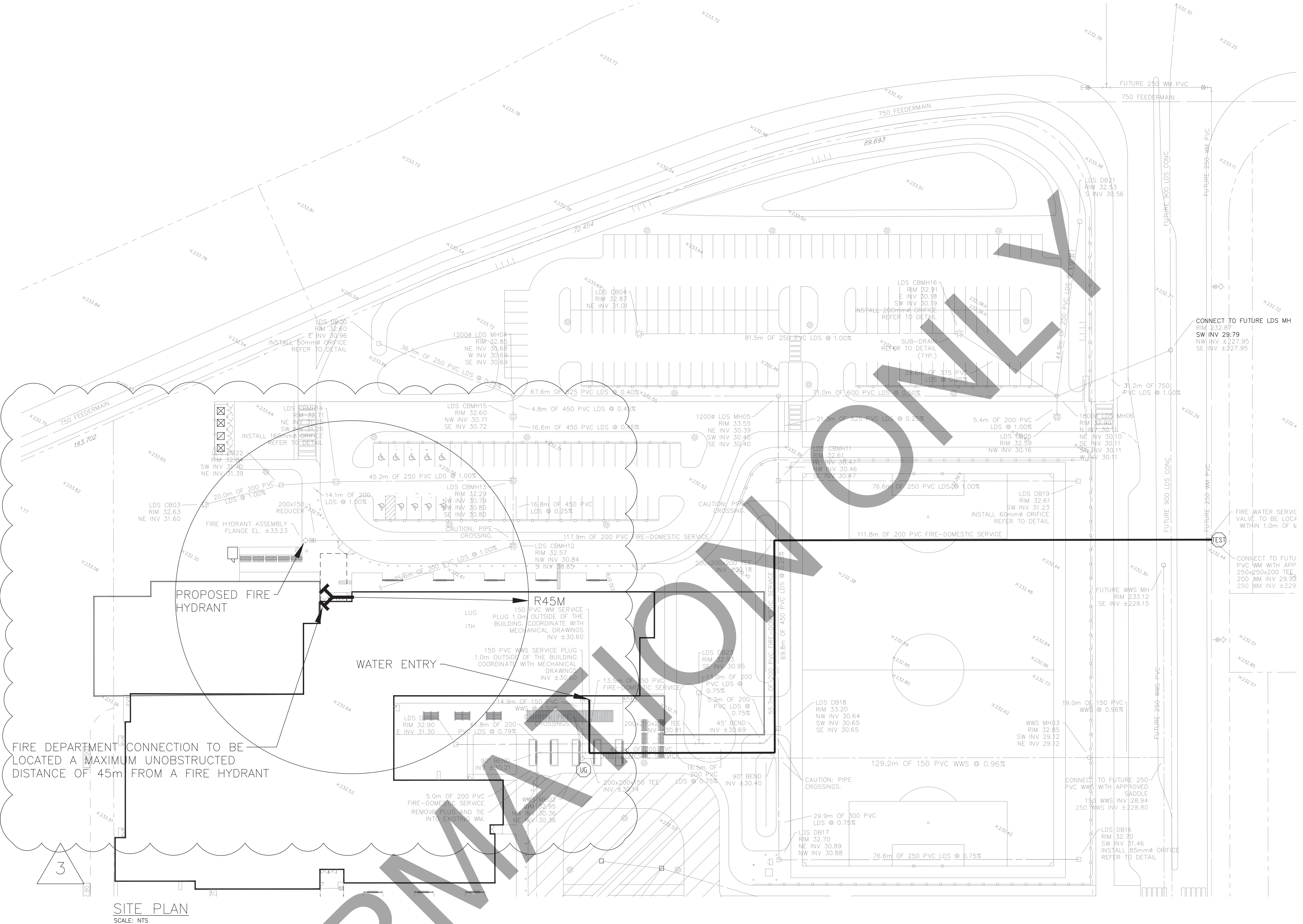
Penn-co.com



MAIN FLOOR KEY PLAN
SCALE: NTS



SPRINKLERS, COVERS, AND GUARDS



SITE PLAN
SCALE: NTS

Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
1	600	15mm	80.6	VICTALIC V27 V2708 OR 93°C WHITE PENNANT	ON DROP
2	151	15mm	80.6	VICTALIC V27 V2704 OR 93°C BRASS UPRIGHT	ON DROP
3	123	15mm	80.6	VICTALIC V38 V3802 OR 93°C WHITE CONCEALED	ON DROP
4	23	15mm	80.6	VICTALIC V38 V3802 OR 93°C BRUSHED SATIN CHROME CONCEALED	ON DROP
5	77	15mm	80.6	VICTALIC V27 V2704 OR 93°C BRUSHED SATIN CHROME UPRIGHT	ON DROP
6	80	15mm	80.6	VICTALIC V27 V2704 OR 93°C BRUSHED SATIN CHROME UPRIGHT	WITH SPRINKLER GUARD FOR DYWIDAG
7	1	15mm	80.6	VICTALIC V27 V2710 OR 93°C BRASS HSW	VERIFY LENGTH ON SITE PRIOR TO ORDERING
8	6	25mm	85.6	VICTALIC V36 V3610 OR 68°C DRY WHITE HSW	VERIFY LENGTH ON SITE PRIOR TO ORDERING

1061 = Total Number of Heads Entire Project

POSITIONS OF STANDARD COVERAGE UPRIGHT & PENDANT SPRINKLERS TO AVOID OBSTRUCTIONS TO DISCHARGE FROM REFLECTORS - (TABLE 6.3.1.1) (FIGURE 6.3.1.1)

DISTANCE FROM SPRINKLER TO SIDE OF OBSTRUCTION	MAXIMUM ALLOWABLE DISTANCE OF REFLECTOR ABOVE BOTTOM OF OBSTRUCTION
LESS THAN 305mm (1'-0")	0
305mm (1'-0") TO LESS THAN 460mm (1'-6")	65mm (2 1/2")
460mm (1'-6") TO LESS THAN 610mm (2'-0")	90mm (3 5/8")
610mm (2'-0") TO LESS THAN 760mm (2'-5")	140mm (5 1/2")
760mm (2'-5") TO LESS THAN 915mm (3'-0")	190mm (7 5/8")
915mm (3'-0") TO LESS THAN 1070mm (3'-6")	240mm (9 5/8")
1070mm (3'-6") TO LESS THAN 1225mm (4'-0")	305mm (12")
1225mm (4'-0") TO LESS THAN 1380mm (4'-6")	355mm (14 1/8")
1380mm (4'-6") TO LESS THAN 1535mm (5'-0")	420mm (16 1/2")
1535mm (5'-0") TO LESS THAN 1690mm (5'-6")	460mm (18 1/8")
1690mm (5'-6") TO LESS THAN 1845mm (6'-0")	505mm (20")
1845mm (6'-0") TO LESS THAN 2000mm (6'-6")	610mm (24")
2000mm (6'-6") TO LESS THAN 2155mm (7'-0")	760mm (30")
2155mm (7'-0") TO LESS THAN 2310mm (7'-6")	810mm (32")

MAXIMUM DISTANCE BETWEEN HANGERS - STEEL PIPE
 426" = 354" = 2860MM
 426" = 354" = 2860MM

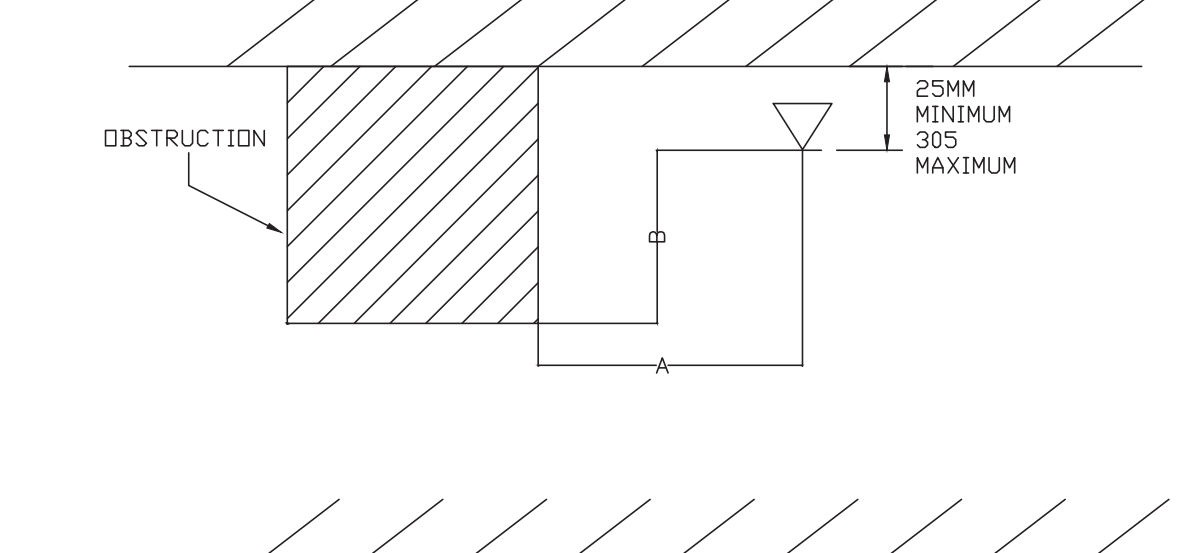
• WHEN FIRST INSTALLED HANGERS ARE INSTALLED IN A VERTICAL POSITION SPACING IS NOT TO EXCEED 3050MM WHERE PIPING IS 100mm OR LARGER

MAXIMUM UNSUPPORTED LENGTH OF AN ANCHOR NOT TO EXCEED 610MM
 MAXIMUM UNSUPPORTED LENGTH OF AN ANCHOR NOT TO EXCEED 3050MM WHERE SYSTEM PRESSURES EXCEED 6.895 BARS. EXCEED 3050MM SPACES OR SPACES EXCEEDING 1200MM IN LENGTH TO BE RESTRAINED FROM LATERAL MOVEMENT

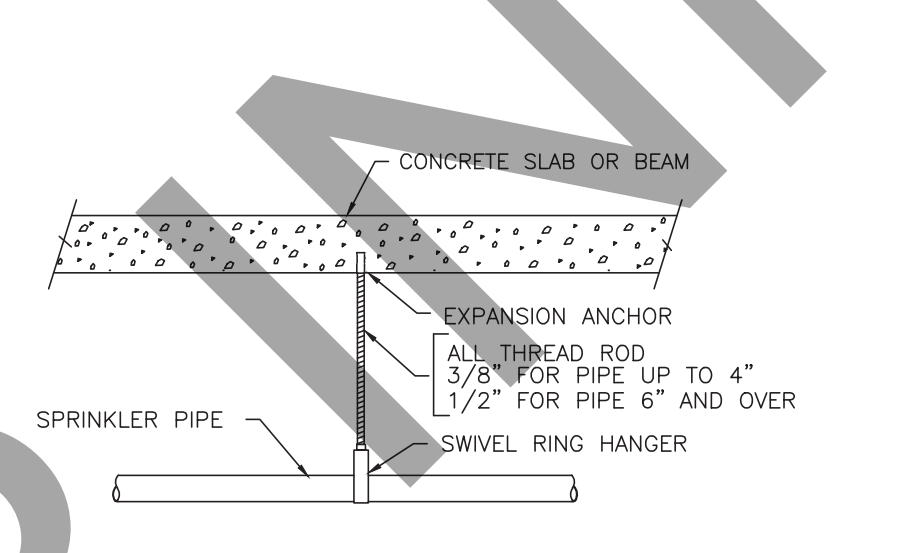
MAXIMUM UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER NOT TO EXCEED:
 915mm FOR 25mm PIPE
 2250mm FOR 38mm PIPE
 1525mm FOR 40mm AND LARGER PIPE

THE DISTANCE BETWEEN A HANGER AND THE CENTERLINE OF AN UPRIGHT SPRINKLER SHALL NOT BE LESS THAN 60mm

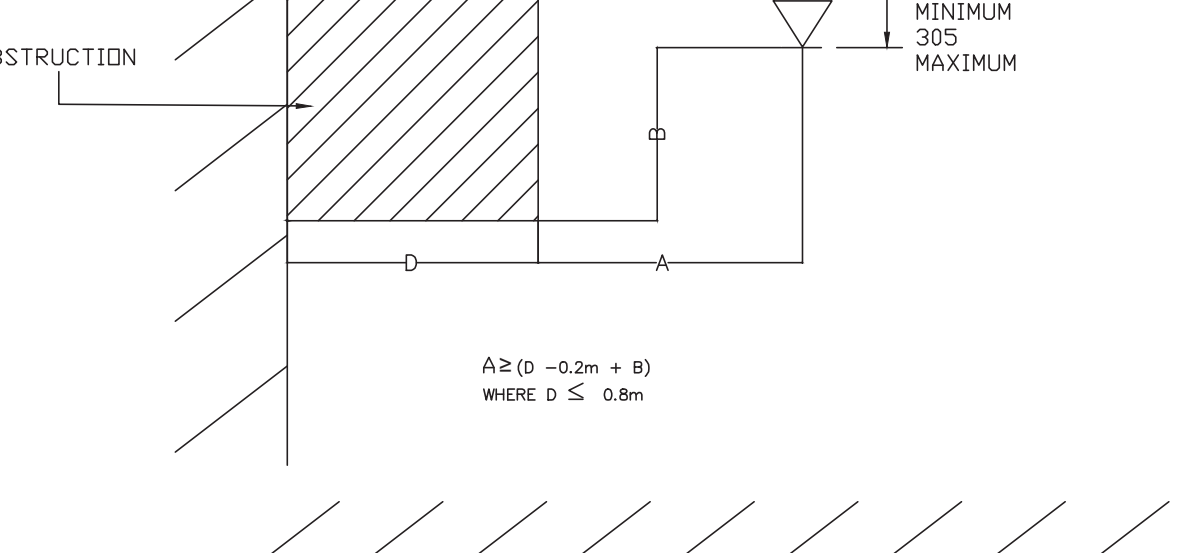
HANGER ROD SIZES
 UP TO & INCLUDING 100mm PIPE - 94 (3/8") ROD
 100mm TO 200mm PIPE - 128 (1 1/2") ROD



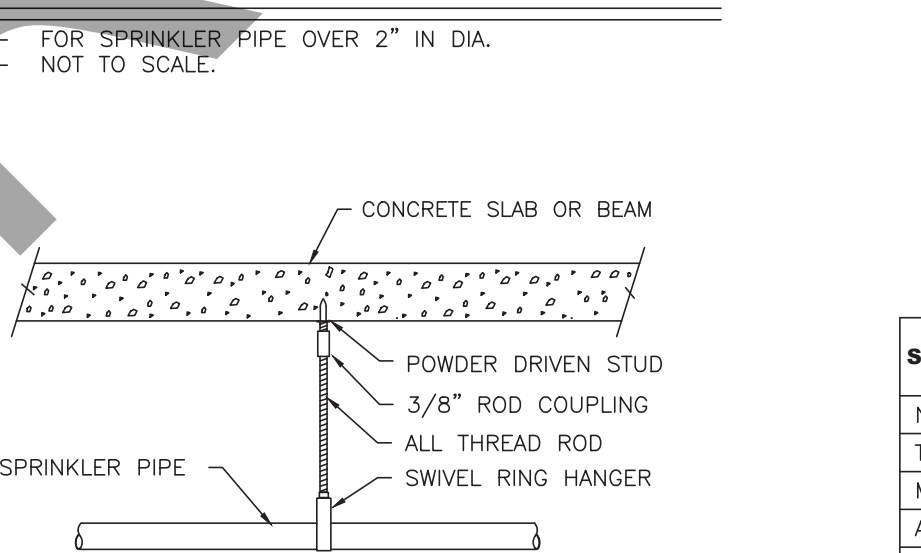
TYP. PIPE HANGER DETAIL
- NOT TO SCALE



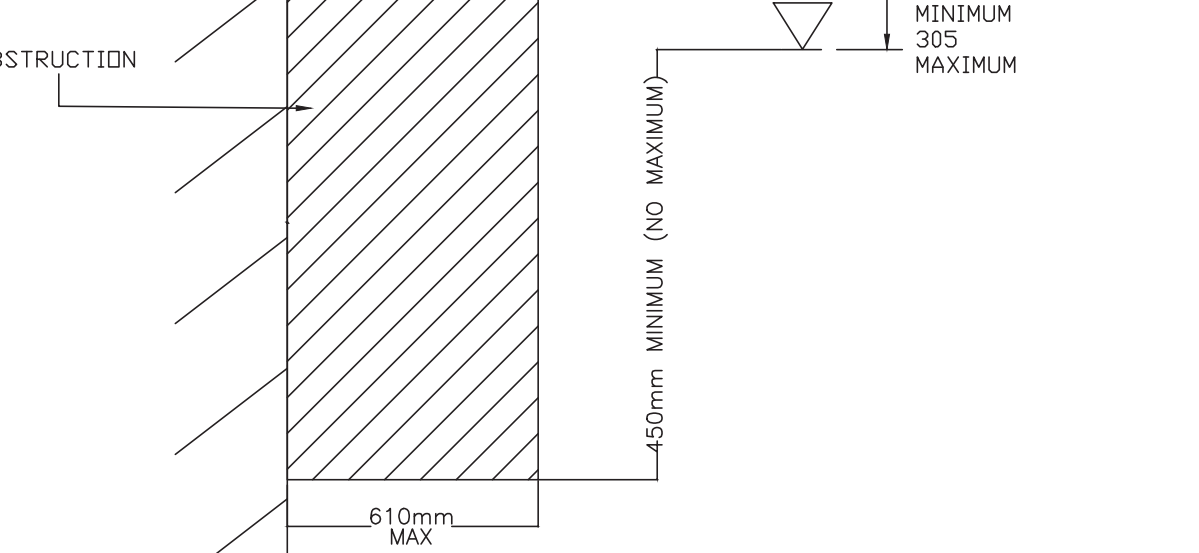
TYP. PIPE HANGER DETAIL
- NOT TO SCALE



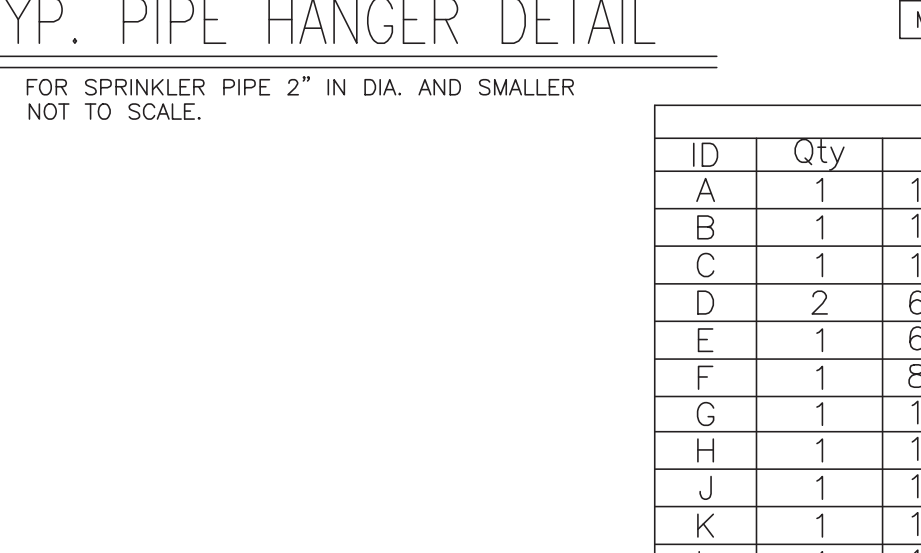
TYP. PIPE HANGER DETAIL
- NOT TO SCALE



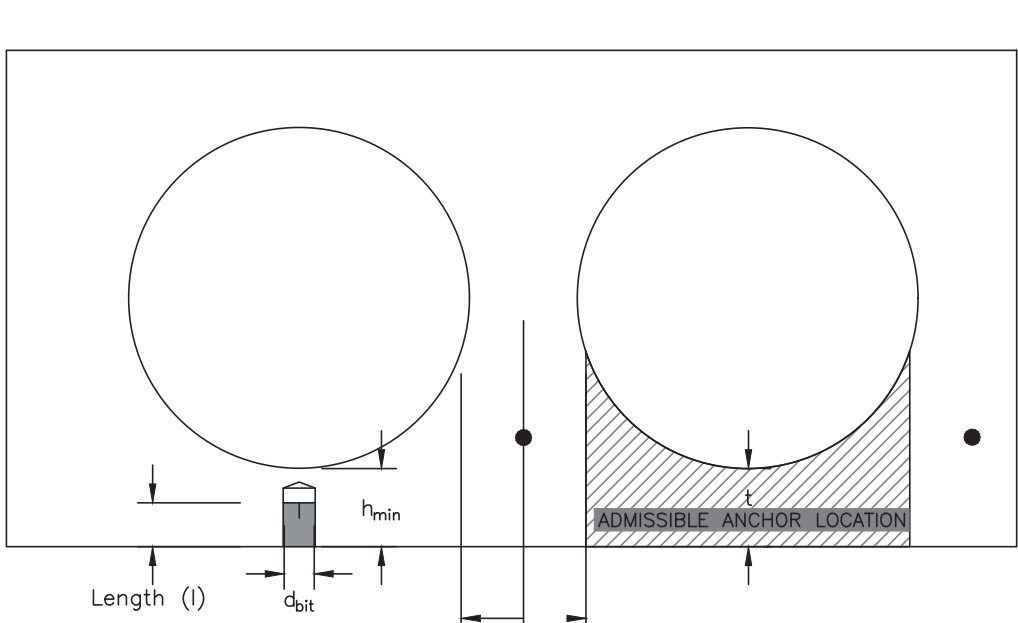
TYP. PIPE HANGER DETAIL
- NOT TO SCALE



TYP. PIPE HANGER DETAIL
- NOT TO SCALE



TYP. PIPE HANGER DETAIL
- NOT TO SCALE



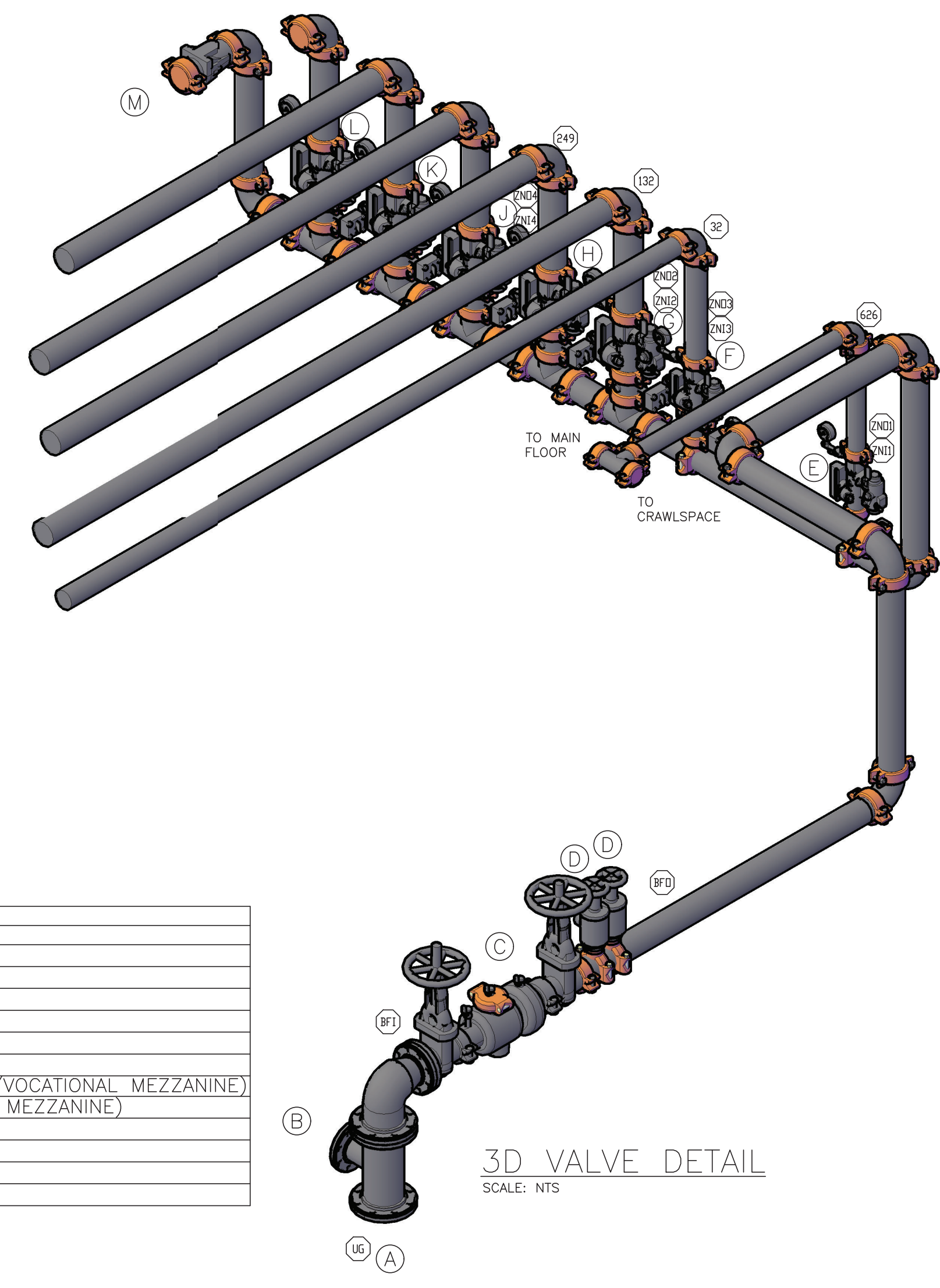
HOLLOWCORE INSTALLATION DETAIL

SETTING INFORMATION

SYMBOL	UNITS	NOMINAL ANCHOR DIAMETER
NOMINAL BIT DIAMETER	dia	in. 3/8"
THREADED ROD DIAMETER	dia	in. 3/8"
MINIMUM BASE MATERIAL THICKNESS	thick	in. 1-3/8"
ANCHOR LENGTH	l	in. 3"
HOLE DEPTH IN BASE MATERIAL	h ₁	in. 3/4"
MINIMUM ANCHOR SPACING	s _{min}	in. 4-1/8"
MINIMUM EDGE DISTANCE	e _{min}	in. 3-3/4"

ALL THREADED ROD 3/8" FOR PIPE UP TO 4" 1/2" FOR PIPE 6" AND OVER

ID	Qty	Legend	Description
A	1		150 INCOMING WATER CONNECTION
B	1		150 FLG TEE TO DOMESTIC (BY OTHERS)
C	1		100 WILKINS 350A DOUBLE CHECK VALVE ASSEMBLY
D	2		65 HOSE VALVE AND CAP
E	1		65 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 1/10 (MAIN FLOOR/EAST CRAWLSPACE)
F	1		80 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 3 (THIRD FLOOR EDUCATIONAL WING)
G	1		100 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 2/8 (SECOND FLOOR EDUCATIONAL WING/VOCATIONAL MEZZANINE)
H	1		100 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 4/9 (ADMINISTRATION WING /MECHANICAL MEZZANINE)
J	1		100 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 7 (WOOD/DESIGN LAB)
K	1		100 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 6 (WELDING)
L	1		100 RISER MANIFOLD C/W RELIEF VALVE & BUTTERFLY VALVE C/W IS TO ZONE 5/11 (CULINARY ARTS/CRAWLSPACE)
M	1		100 FIRE DEPARTMENT CONNECTION



3D VALVE DETAIL
SCALE: NTS

- FIRE PROTECTION DESIGN NOTES**
- SPRINKLER SYSTEM INSTALLATION TO BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS, CODES AND APPROVALS: NFPA 13 (2019) NFPA 13R (2019) NFPA 13A (2016) NFPA 13A-10 (2016) NFPA 20 (2016) NFPA 30 (2012) NFPA 33 (2016) FM GLOBAL THE NATIONAL BUILDING CODE OF CANADA, 2010 AND THE CITY OF WINNIPEG
 - ALL SPRINKLER SYSTEM COMPONENTS TO BE UL LISTED
 - ALL 250 PIPE TO BE SCHEDULE 40 BLACK STEEL C/W CAST IRON STEEL FITTINGS
 - ALL 300-500 PIPE TO BE SCHEDULE 40 BLACK STEEL C/W GROOVED FITTINGS
 - ALL 600 PIPE AND LARGER TO BE SCHEDULE 10 BLACK STEEL C/W GROOVED FITTINGS
 - IN ALL CLOSETS AND COMPARTMENTS, INCLUDING THOSE CLOSETS HOUSING MECHANICAL EQUIPMENT, THAT ARE NOT LARGER THAN 1.13m² (400 FT²) IN SIZE, A SINGLE SPRINKLER AT THE HIGHEST CEILING SPACE SHALL BE SUFFICIENT WITHOUT REGARD TO OBSTRUCTIONS OR MINIMUM DISTANCE TO THE WALL
 - ALL PIPE, FITTINGS, SPRINKLERS AND DEVICES TO HAVE A MINIMUM 175 PSI WORKING PRESSURE RATING
 - ALL HANGER ASSEMBLIES TO BE IN ACCORDANCE WITH NFPA 113
 - ALL SPRINKLER SYSTEM CONTROL VALVES TO BE PROVIDED WITH TAMPER SWITCHES
 - HYDRAULIC PLACARDS AND SPRINKLER SYSTEM GENERAL INFORMATION SIGN TO BE PLACED ON SYSTEM RISERS
 - A MINIMUM OF 24 SPRINKLERS (INCL. WRENCHES) TO BE LEFT ON PREMISES TO BE LOCATED WHERE TEMPERATURE IN ROOM DOES NOT EXCEED 35°C
 - PER NFPA 13 ARTICLE 8.3.2.1 ORDINARY OR INTERMEDIATE TEMPERATURE SPRINKLERS SHALL BE USED THROUGHOUT THE BUILDING. INTERMEDIATE SPRINKLERS TO BE UTILIZED IN ELECTRICAL DATA AND JANITOR ROOMS AND KITCHENS. HIGHER TEMPERATURE SPRINKLERS TO BE PROVIDED IN MECHANICAL & BOILER ROOMS AND WHERE ADJACENT TO ALL HEAT SOURCES IN ACCORDANCE WITH NFPA 13 ARTICLE 8.3.2.5. SEE TABLE 6.2.5.1 FOR MAXIMUM CEILING TEMPERATURE LIMITS
 - SPRINKLER GUARDS TO BE INSTALLED WHERE SPRINKLERS ARE SUBJECT TO MECHANICAL DAMAGE
 - SEE DETAILS THIS PAGE FOR POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTIONS TO SPRINKLER DISCHARGE
 - FIRE EXTINGUISHERS ARE SHOWN FOR REFERENCE ONLY AND ARE TO BE INSTALLED TO NFPA 10 REQUIREMENTS. ALL LOCATIONS TO BE REVIEWED AND APPROVED BY THE OWNER, MECHANICAL CONSULTANT AND THE AHU PRIOR TO INSTALLATION
 - ADEQUATE HEAT TO BE MAINTAINED BY OWNER AT ALL TIMES FOR AREAS CONTAINING WATER FILLED SPRINKLER PIPE
 - WATER SUPPLY INFORMATION: STATIC PRESSURE: 4.551 BARS (66 PSI) RESIDUAL PRESSURE AT 100% FLOW: 4.141 BARS (60 PSI) SIMULATION PERFORMED 24 JANUARY 2022 AT HYDRANT NORTH TOWN RD AND BRICKLAND DR
 - WHERE THE ABOVE NOTED FLOW TEST DATE EXCEEDS 12 MONTHS FROM THE DATE OF THE TEST, A NEW HYDRANT FLOW TEST MUST BE REQUIRED UNLESS THE AUTHORITY HAVING JURISDICTION APPROVES THE DATE OF THE EXISTING TEST AS SUBMITTED. RISK/FIRE PROTECTION LTD OR THE SPRINKLER CONTRACTOR ASSUME THE ABOVE FLOW TEST DATA IS RELIABLE AS THE DATE OF THE TEST. VARIATIONS TO THE WATER SUPPLY AFTER THE TEST DATE IS NOT THE RESPONSIBILITY OF RIXOU FIRE PROTECTION LTD OR THE SPRINKLER CONTRACTOR. ALSO WHOM ARE COLLECTIVELY NOT RESPONSIBLE WHERE WATER SUPPLIES BECOME UNRELIABLE AS A RESULT OF SUCH VARIATIONS AT ANY TIME AFTER THE DATE OF THE HYDRANT FLOW TEST
 - FLUSHING OF UNDERGROUND PIPING AT MINIMUM FLOW RATES, REQUIRED BY NFPA 13 AND NFPA 24 IS TO BE COMPLETED BY OTHERS PRIOR TO INSTALLATION OF BACKFLOW PREVENTER
 - THE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE FIRE PROTECTION SYSTEM COMPONENTS WHICH ARE APPROVED HAVE BEEN OBTAINED
 - BY UTILIZING THESE FIRE SPRINKLER DRAWINGS FOR INSTALLATION, THE INSTALLATION CONTRACTOR ACKNOWLEDGES THAT THEY HAVE FULLY REVIEWED THESE PLANS TO ENSURE THEY COMPLY WITH THE CONTRACT SCOPE AND HAVE READ AND UNDERSTOOD ALL CONSULTANT DRAWINGS AND SPECIFICATIONS, INCLUDING RELEVANT SYSTEM COMPONENT DESIGN AND INSTALLATION CRITERIA
 - THE SPRINKLER CONTRACTOR SHALL CONTACT THE REGISTERED PROFESSIONAL TO PERFORM CONSTRUCTION REVIEWS AT ROUGH-IN STAGE PRIOR TO COVERING OF SPRINKLER PIPES AT THE TIME OF SPRINKLER SYSTEM VERIFICATION, AND FOR FINAL REVIEW PRIOR TO BUILDING OCCUPANCY
 - THE SPRINKLER CONTRACTOR SHALL PROVIDE COPIES OF ALL SIGNOFF DOCUMENTATION (INCLUDING FIRE ALARM VERIFICATION, CONTRACTORS MATERIAL TEST CERTIFICATES, HYDROSTATIC PRESSURE TEST CERTIFICATE, AS-BUILT DRAWING MARK-UPS, AND ALL APPLICABLE MUNICIPAL DOCUMENTS TO THE REGISTERED PROFESSIONAL PRIOR TO BUILDING OCCUPANCY

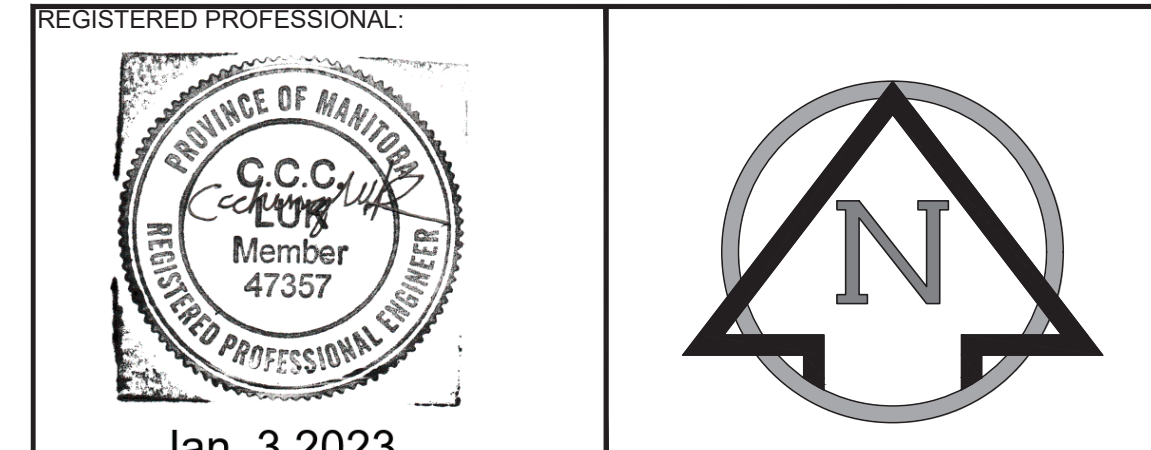
SPRINKLER SYSTEM - GENERAL INFORMATION

ITEM	DESCRIPTION	DATE
1	REVISION	2022
2	REVISION	2022
3	REVISION	2022
4	REVISION	2022
5	REVISION	2022
6	REVISION	2022
7	REVISION	2022
8	REVISION	2022
9	REVISION	2022
10	REVISION	2022
11	REVISION	2022
12	REVISION	2022
13	REVISION	2022
14	REVISION	2022
15	REVISION	2022
16	REVISION	2022
17	REVISION	2022
18	REVISION	2022
19	REVISION	2022
20	REVISION	2022
21	REVISION	2022
22	REVISION	2022

SPRINKLER SYSTEM DESIGN AREAS

- ZONE 1/10 (MAIN FLOOR EDUCATIONAL WING/EAST CRAWLSPACE) - (2123.8+1023) m² (22860.1 + 1101.7) ft² = 3146.8 m² (33871.8 ft²)
- ZONE 2/8 (SECOND FLOOR EDUCATIONAL WING/FUTURE VOCATIONAL MEZZANINE) - 2056 m² (22130.6 ft²)
- ZONE 3 (THIRD FLOOR EDUCATIONAL WING) - 2048 m² (22053.2 ft²)
- ZONE 4/9 (ADMINISTRATION WING/MECHANICAL MEZZANINE) - (3988.7+1111.53) m² (42719.06+1200.4) ft² = 4080.26 m² (43919.6 ft²)
- ZONE 5/11 (CULINARY ARTS/CRAWLSPACE (FUTURE VOCATIONAL WING)) - NOT IN CONTRACT
- ZONE 6 - WELDING (FUTURE VOCATIONAL WING) - NOT IN CONTRACT
- ZONE 7 - WOOD/DESIGN LAB (FUTURE VOCATIONAL WING) - NOT IN CONTRACT

Rixou Fire Protection Ltd.
 No. 7733



REGISTERED PROFESSIONAL

NO.	DATE	REVISION	BY
00	28 APR 2022	ISSUED FOR CONSTRUCTION	CL
01	14 JUN 2022	RE-ISSUED FOR CONSTRUCTION AS PER ESE COMMENTS	CL
02	22 JUL 2022	RE-ISSUED FOR CONSTRUCTION AS PER ESE COMMENTS	CL
03	03 JAN 2023	RE-ISSUED FOR CONSTRUCTION AS PER CITY OF WINNIPEG	CL

FIRE EXTINGUISHER LEGEND

DESCRIPTION	QUANTITY
2.27 KG ABC FIRE EXTINGUISHER IN A SEMI-RECESSED CABINET	15
4.5 KG ABC FIRE EXTINGUISHER ON A WALL BRACKET	13
4.5 KG BC CARBON DIOXIDE FIRE EXTINGUISHER ON A WALL BRACKET	10

TOTAL THIS PROJECT: 45

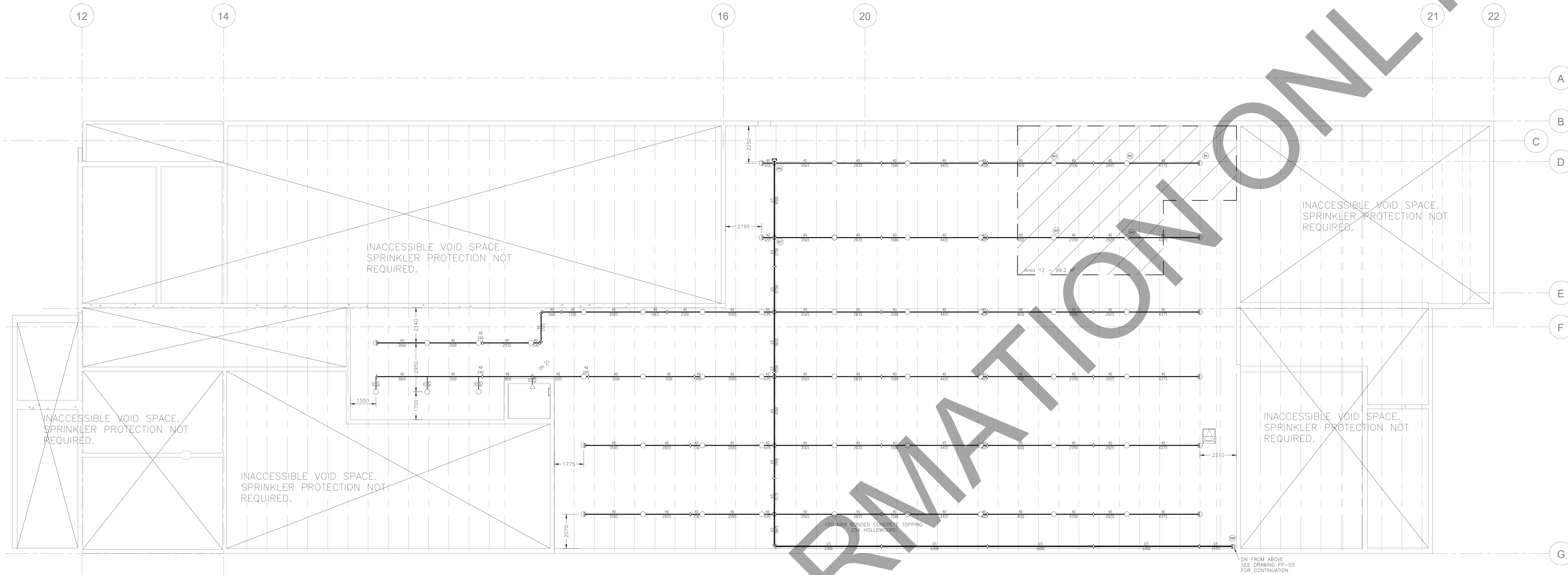
CONSULTANT:
Rixou Fire Protection Ltd.
 403.651.7206
 204.794.9468
 info@rixoufire.com

CLIENT:
INFINITY FIRE PROTECTION INC.
 FIRE SPRINKLER SYSTEMS, INSPECTIONS, BACKFLOW TESTING

BOX 832
 PILOT BUTTE, SASKATCHEWAN S0G 3Z0
 TEL: 306.539.6993

PROJECT:
 WAVERLY WEST HIGH SCHOOL
 WINNIPEG MANITOBA

LEGAL ADDRESS:
 FIRE PROTECTION NOTES & DETAILS



EAST CRAWSPACE SPRINKLER PLAN
SCALE: 1:100

Symbol	Count	Thread	K-factor	Description	Note
○	63	15mm	80.6	VICTAULIC V27 V2704 OR 87C BRASS UPRIGHT	
○	1	15mm	80.6	VICTAULIC V27 V2710 OR 97C BRASS HDW	
64 = Total Number of Heads Entire Floor					

Hydraulic Calculation Data	
Design Area Number:	12
Design Area Location:	CRWLSPACE
Hazard/Occupancy:	LIGHT HAZARD
Design Density:	4.1
Design Area:	99.2
Number of Sprinklers in Design Area:	5
System Flow:	815.270
System Pressure:	2.83
Safety Factor:	1.70
Hose Allowance (Included):	378.5

STORAGE NOT PERMITTED IN CRAWSPACE

FOR INFORMATION ONLY



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02	22 JUL 2022	RE-ISSUED FOR CONSTRUCTION AS PER ESE COMMENTS	CL

FIRE EXTINGUISHER LEGEND	
2.27 KG ABC FIRE EXTINGUISHER IN A SEMI-RECESSED CABINET	0
4.5 KG ABC FIRE EXTINGUISHER ON A WALL BRACKET	0
4.5 KG BC CARBON DIOXIDE FIRE EXTINGUISHER ON A WALL BRACKET	0
TOTAL THIS DRAWING	0

CONSULTANT:

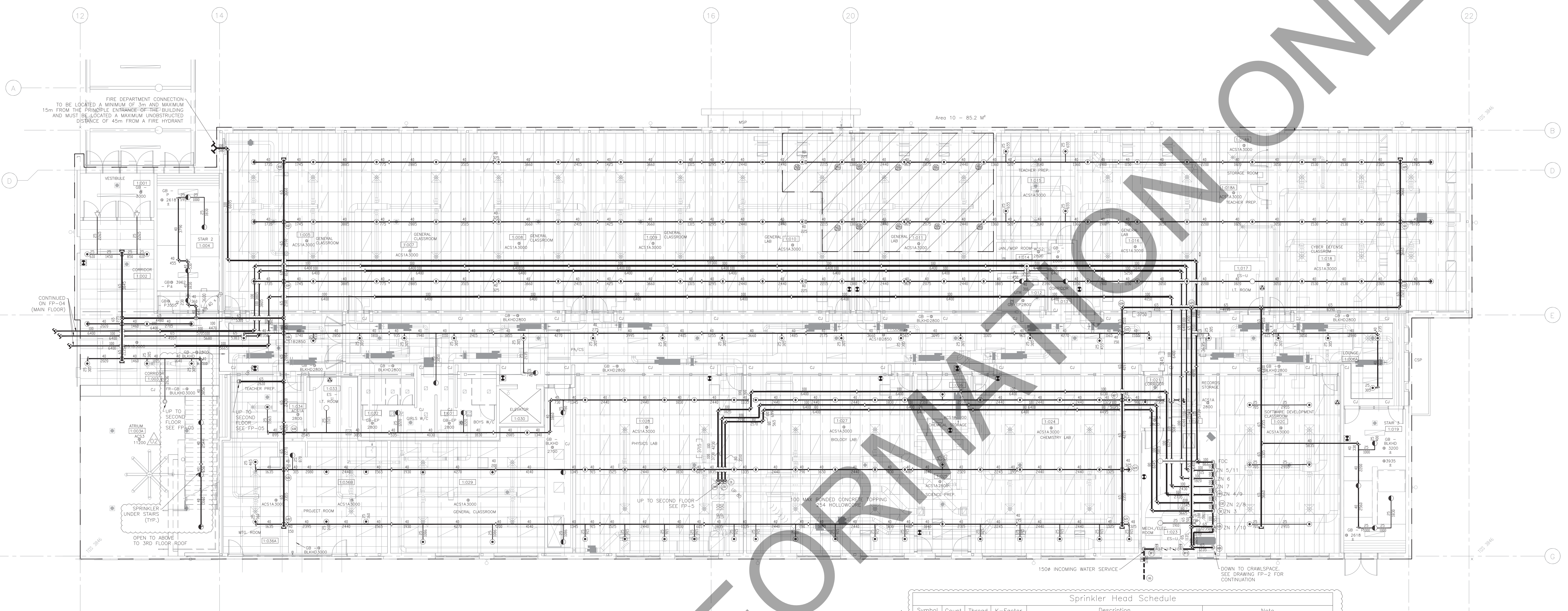
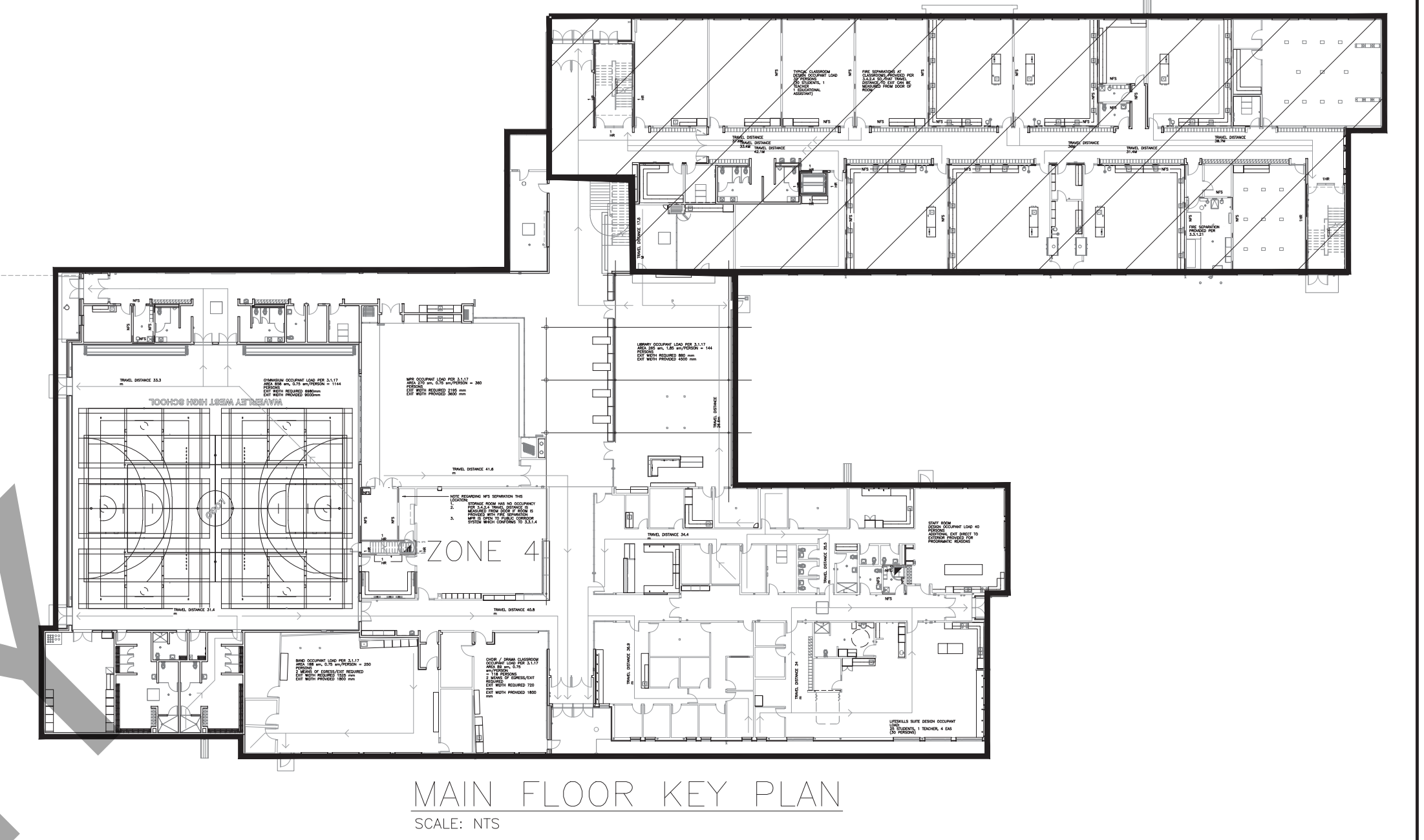
RIOUX FIRE PROTECTION LTD.
FIRE PROTECTION DESIGN & CONSULTING
Alberta 403-551-7206
Manitoba 204-794-9460
Email: info@riouxfire.com

CLIENT:

INFINITY FIRE PROTECTION INC.
FIRE SPRINKLER SYSTEMS, INSPECTIONS,
BACKFLOW TESTING & REPAIR

BOX 832
PILOT BUTTE, SASKATCHEWAN S0G 3Z0
TEL: 306.539.6993

PROJECT:
WAVERLY WEST HIGH SCHOOL
WINNIPEG MANITOBA



Hydraulic Calculation Data

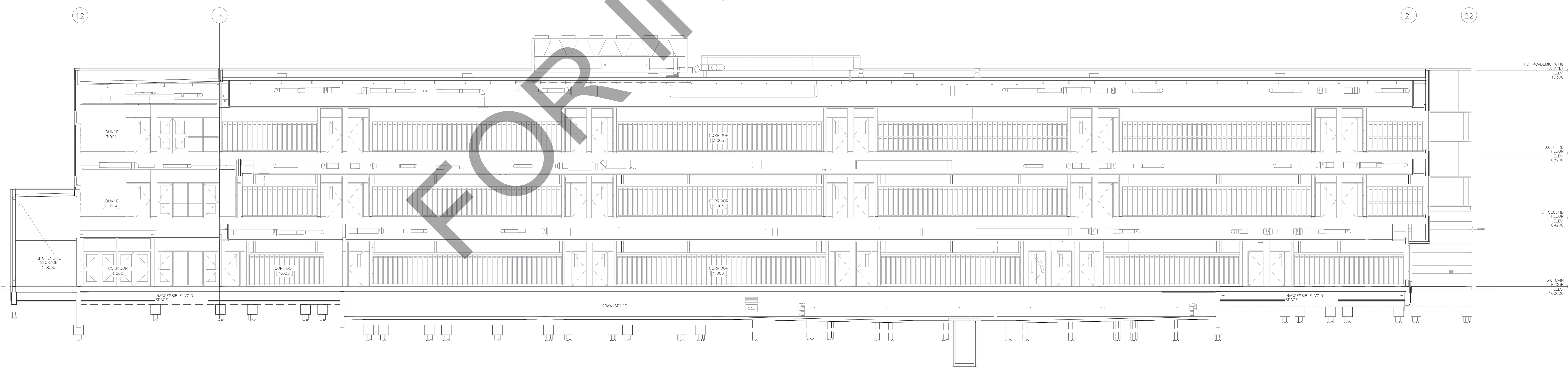
Design Area Number:	10
Design Area Location:	GENERAL LAB 1010/11
Hazard/Occupancy:	ORDINARY HAZARD GROUP 1
Design Density:	5.1
Design Area:	85.2
Number of Sprinklers in Design Area:	11
System Flow:	1671.88
System Pressure:	3.18
Safety Factor:	1.38
Note:	Absence Included 946.4

Sprinkler Head Schedule

Symbol	Count	Thread	K-Factor	Description	Note
○	170	15mm	80.6	VICTAULIC V27 V2708 OR 93°C WHITE PENDENT	ON DROP
○	6	15mm	80.6	VICTAULIC V27 V2704 OR 93°C BRASS UPRIGHT	ON DROP
●	21	15mm	80.6	VICTAULIC V38 V3802 OR 93°C WHITE CONCEALED	ON DROP
<-	2	25mm	80.6	VICTAULIC V36 V3610 OR 93°C DRY BRASS HSW	VERIFY LENGTH ON SITE PRIOR TO ORDERING

199 = Total Number of Heads This Drawing

MAIN FLOOR SPRINKLER PLAN - NORTH EAST
SCALE: 1:100



SECTION VIEW
SCALE: 1:100



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02	11 JUL 2022	RE-ISSUED FOR CONSTRUCTION AS PER ESE COMMENTS	CL

FIRE EXTINGUISHER LEGEND

2.27 KG ABC FIRE EXTINGUISHER IN A SEMI-RECESSED CABINET	5
4.5 KG ABC FIRE EXTINGUISHER ON A WALL BRACKET	8
4.5 KG BC CARBON DIOXIDE FIRE EXTINGUISHER ON A WALL BRACKET	3

TOTAL THIS DRAWING 16

CONSULTANT:

RIOUX FIRE PROTECTION LTD.
FIRE PROTECTION DESIGN & CONSULTING
Alberta 403.651.7206
Manitoba 204.794.0468
Email: info@riouxfire.com

CLIENT:

INFINITY FIRE PROTECTION INC.
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BACKFLOW TESTING & REPAIR
BOX 832
PILOT BUTTE, SASKATCHEWAN S0G 3Z0
TEL: 306.539.6993

PROJECT: WAVERLY WEST HIGH SCHOOL
WINNIPEG MANITOBA

LEGAL ADDRESS:

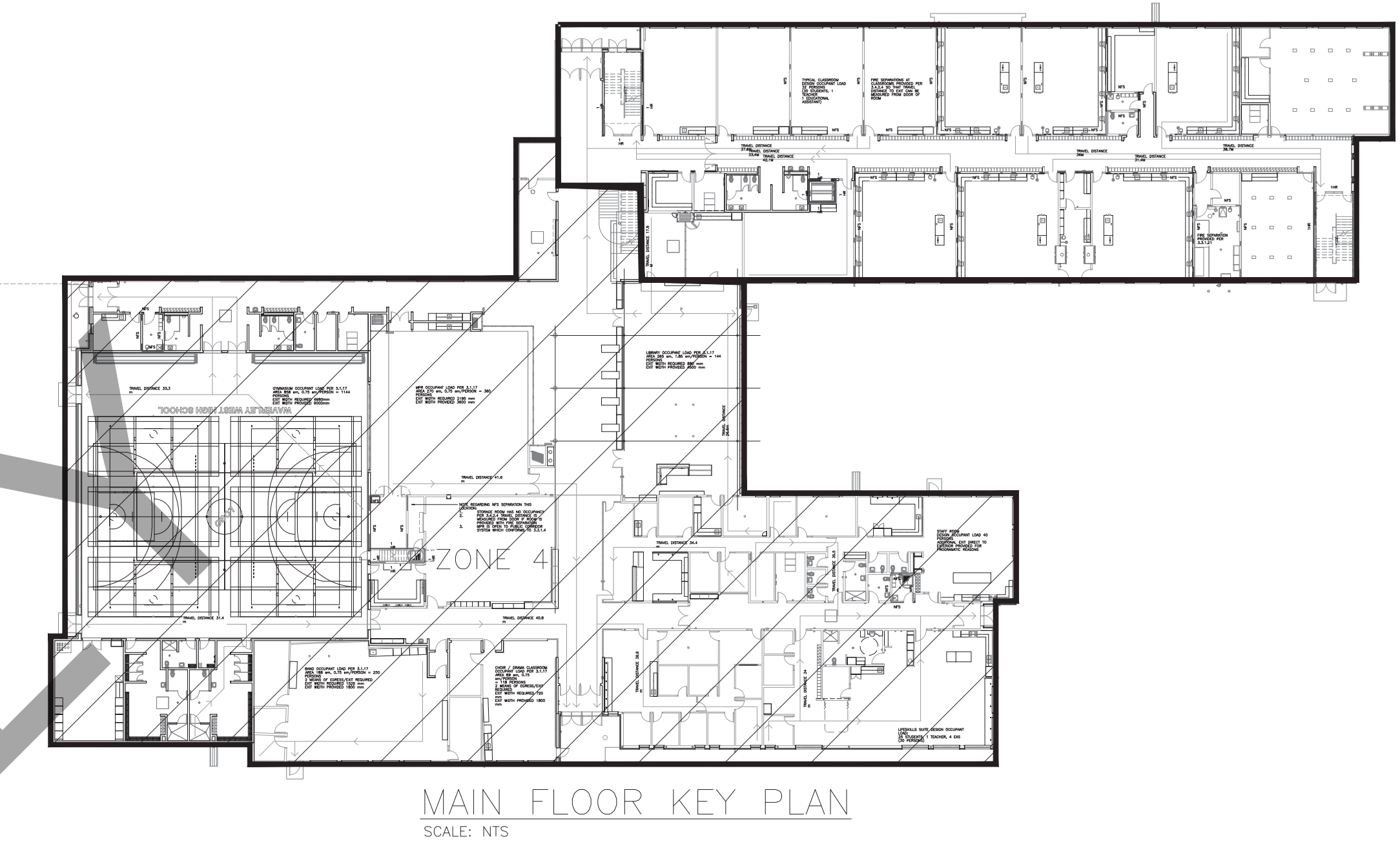
MAIN FLOOR SPRINKLER PLAN - NORTH & EAST (ZONE 1)

DRAWN: C. LUK
BUILDING PERMIT NO: 28 APRIL 2022
INFINITY JOB NO: P21952-34
SCALE: AS NOTED
DWG NO: 915x1220
SHEET NO: 3 OF 6
DWG NO: FP-3

Hydraulic Calculation Data	
Design Area Number:	7
Design Area Location:	LOBBY 1:088
Hazard/Occupancy:	ORDINARY HAZARD GROUP 1
Design Density:	6.1
Design Area:	150.3
Number of Sprinklers in Design Area:	14
System Flow:	1847.27
System Pressure:	2.48
Safety Factor:	0.97
Hose Allowance (Included):	946.4

Hydraulic Calculation Data	
Design Area Number:	9
Design Area Location:	KITCHENETTE 1:903C
Hazard/Occupancy:	ORDINARY HAZARD GROUP 2
Design Density:	8.1
Design Area:	45.4
Number of Sprinklers in Design Area:	6
System Flow:	1627.79
System Pressure:	3.21
Safety Factor:	1.27
Hose Allowance (Included):	946.4

Hydraulic Calculation Data	
Design Area Number:	5
Design Area Location:	CORRIDOR 1:095
Hazard/Occupancy:	LIGHT HAZARD
Design Density:	4.1
Design Area:	33.5
Number of Sprinklers in Design Area:	10
System Flow:	1175.39
System Pressure:	3.67
Safety Factor:	0.84
Hose Allowance (Included):	378.5



Symbol	Count	Thread	K-Factor	Description	Note
⊙	169	15mm	80.6	VICTALUC V27 V2708 OR 93°C WHITE PENDENT	DN DROP
⊙	41	15mm	80.6	VICTALUC V27 V2704 OR 93°C BRASS UPRIGHT	DN DROP
⊙	74	15mm	80.6	VICTALUC V38 V3802 OR 93°C WHITE CONCEALED	DN DROP
⊙	23	15mm	80.6	VICTALUC V38 V3802 OR 93°C (BRUSHED SATIN CHROME CONCEALED)	DN DROP
⊙	40	15mm	80.6	VICTALUC V27 V2704 OR 93°C (BRUSHED SATIN CHROME UPRIGHT)	WITH GUARD FOR GYM
⊙	80	15mm	80.6	VICTALUC V27 V2704 OR 93°C (BRUSHED SATIN CHROME UPRIGHT)	VERIFY LENGTH ON SITE PRIOR TO ORDERING
⊙	4	25mm	80.6	VICTALUC V36 V3610 OR 93°C DRY BRASS HSW	

431 = Total Number of Heads This Drawing

FOR INFORMATION ONLY

Area 8 - 93.5 M²

Area 7 - 150.3 M²

Area 5 - 99.5 M²

Area 6 - 92.2 M²

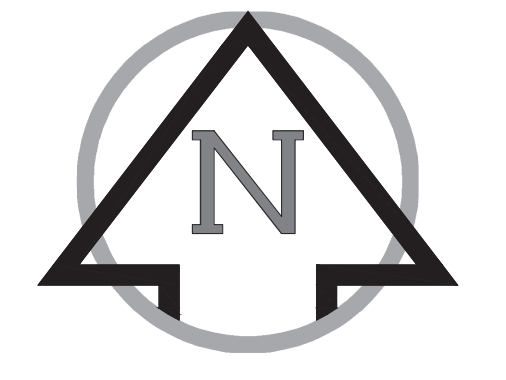
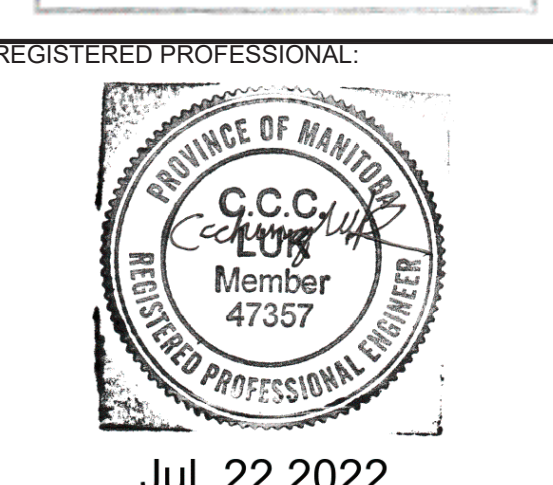
Area 4 - 90.5 M²

Hydraulic Calculation Data	
Design Area Number:	6
Design Area Location:	GYM STORAGE 1:086E
Hazard/Occupancy:	ORDINARY HAZARD GROUP 2
Design Density:	8.1
Design Area:	92.2
Number of Sprinklers in Design Area:	9
System Flow:	1600.71
System Pressure:	2.92
Safety Factor:	1.57
Hose Allowance (Included):	946.4

Hydraulic Calculation Data	
Design Area Number:	5
Design Area Location:	CHOR/DORMA CLASSROOM 1:054
Hazard/Occupancy:	LIGHT HAZARD
Design Density:	4.1
Design Area:	29.5
Number of Sprinklers in Design Area:	9
System Flow:	1034.86
System Pressure:	3.11
Safety Factor:	1.22
Hose Allowance (Included):	378.5

Hydraulic Calculation Data	
Design Area Number:	4
Design Area Location:	LIFESKILLS SUITE 1:062
Hazard/Occupancy:	LIGHT HAZARD
Design Density:	4.1
Design Area:	90.5
Number of Sprinklers in Design Area:	10
System Flow:	1208.18
System Pressure:	3.06
Safety Factor:	1.49
Hose Allowance (Included):	378.5

REGISTERED PROFESSIONAL
FIRE PROTECTION ENGINEER
G.C.C. 47357
Member
47357
Rioux Fire Protection Ltd.
No. 7733



Jul. 22 2022

NO.	DATE	REVISION	BY
00	28 APR 2022	ISSUED FOR CONSTRUCTION	CL
01	14 JUN 2022	RE-ISSUED FOR CONSTRUCTION AS PER ESE COMMENTS	CL
02	22 JUL 2022	RE-ISSUED FOR CONSTRUCTION AS PER ESE COMMENTS	CL

EXTINGUISHER	QUANTITY	TOTAL THIS DRAWING
2.27 KG ABC FIRE EXTINGUISHER IN A SEMI-RECESSED CABINET	2	2
4.5 KG ABC FIRE EXTINGUISHER ON A WALL BRACKET	0	0
4.5 KG BC CARBON DIOXIDE FIRE EXTINGUISHER ON A WALL BRACKET	14	14
		TOTAL THIS DRAWING 16

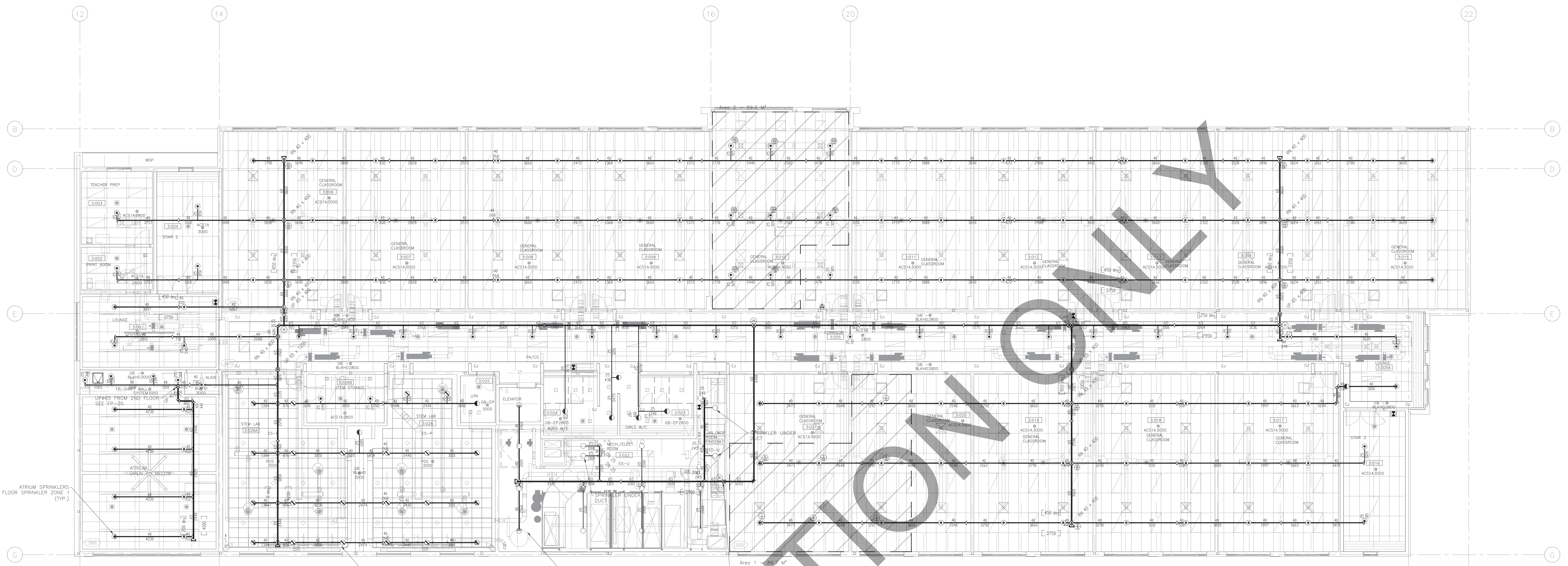
CONSULTANT:

RIOUX FIRE PROTECTION LTD.
FIRE PROTECTION DESIGN & CONSULTING
Alberta 403.651.7206
Manitoba 204.794.0460
Email: info@riouxfire.com

CLIENT:

INFINITY FIRE PROTECTION INC.
FIRE SPRINKLER SYSTEMS, INSPECTIONS,
BACKFLOW TESTING & REPAIR
BOX 832
PILOT BUTTE, SASKATCHEWAN S0G 3Z0
TEL: 306.539.6993

PROJECT: WAVERLY WEST HIGH SCHOOL
WINNIPEG MANITOBA



ATOM SPRINKLERS
TIED INTO MAIN FLOOR SPRINKLER ZONE 1
(TYP.)

SPACING IS 3.66M/12.000M DUE TO OPEN-GRID CEILING.
610MM CLEARANCE REQUIRED BETWEEN DEFLECTOR AND CEILING.

INSTALL SPRINKLERS AT CEILING LEVEL BELOW BEAMS,
OBSTRUCTED CONSTRUCTION (TYP.)
INSTALL SPRINKLERS BELOW DUCTS IF DISTANCE BETWEEN
SPRINKLER DEFLECTOR AND OBSTRUCTION IS BELOW 457MM.
INSTALL SPRINKLERS BELOW DUCTS GREATER THAN 1220MM.

UP 80# FROM MAIN FLOOR

Hydraulic Calculation Data	
Design Area Number: 2	Design Area Location: COMPUTER CLASSROOM 3.010
Hazard/Occupancy: LIGHT HAZARD	Design Density: 4.1
Design Area: 88.6	Number of Sprinklers in Design Area: 8
System Flow: 900.40	System Pressure: 3.29
Safety Factor: 1.24	Hose Allowance (Included): 178.5

Hydraulic Calculation Data	
Design Area Number: 1	Design Area Location: GENERAL CLASSROOM 3.020/21
Hazard/Occupancy: LIGHT HAZARD	Design Density: 4.1
Design Area: 99.7	Number of Sprinklers in Design Area: 7
System Flow: 844.69	System Pressure: 3.54
Safety Factor: 0.99	Hose Allowance (Included): 178.5

Sprinkler Head Schedule					
Symbol	Count	Thread	K-Factor	Description	Note
●	139	15mm	80.6	VICTAULIC V27 V2708 OR 93°C WHITE PENDENT	DN DROP
○	17	15mm	80.6	VICTAULIC V27 V2704 OR 93°C BRASS UPRIGHT	
●	8	15mm	80.6	VICTAULIC V38 V3802 OR 93°C WHITE CONCEALED	DN DROP
●	22	15mm	80.6	VICTAULIC V27 V2704 OR 93°C BRUSHED SATIN CHROME UPRIGHT	
186 = Total Number of Heads on Drawing					

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FIRE EXTINGUISHER LEGEND	
2.27 LB ABC FIRE EXTINGUISHER IN A SEMI-RECESSED CABINET	4
4.5 KG ABC FIRE EXTINGUISHER ON A WALL BRACKET	1
4.5 KG BC CARBON DIOXIDE FIRE EXTINGUISHER ON A WALL BRACKET	1
TOTAL THIS DRAWING	
6	

CONSULTANT:

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PROJECT: WAVERLY HIGH SCHOOL
WINNIPEG MANITOBA

LEGAL ADDRESS:

THIRD FLOOR SPRINKLER PLAN (ZONE 3)