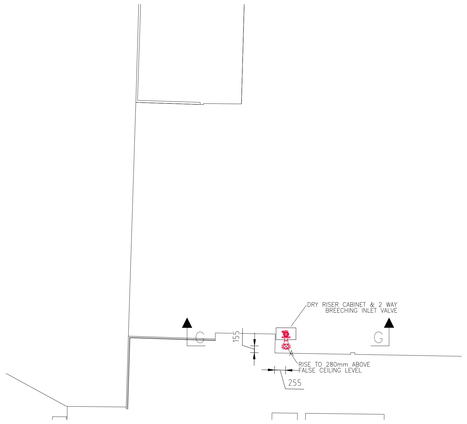
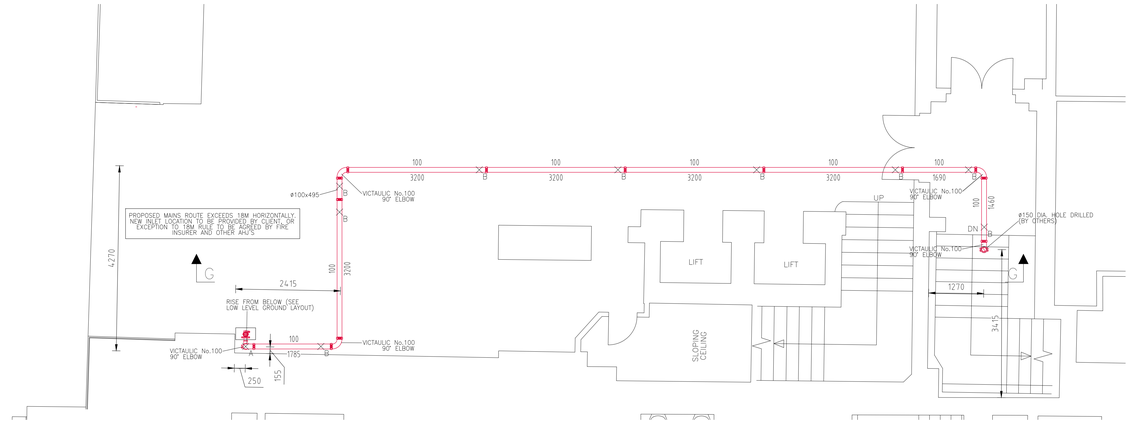
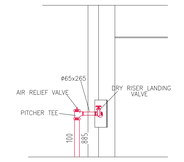


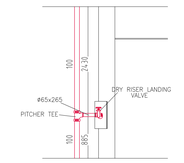

GROUND FLOOR - DRY RISER 3 INLET CABINET



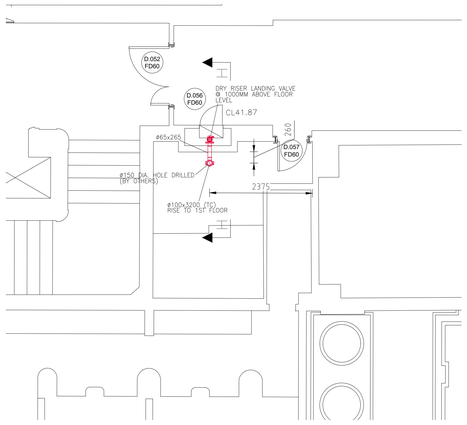

GROUND FLOOR - HORIZONTAL MAINS ROUTE



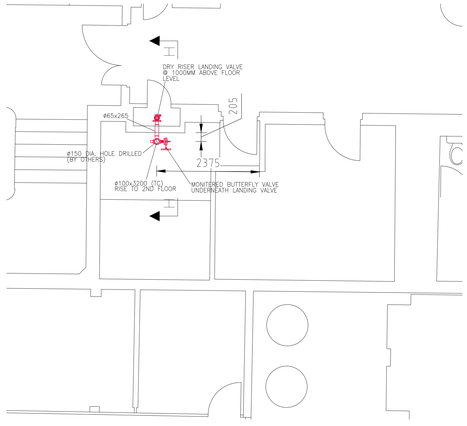

SECTION I-I



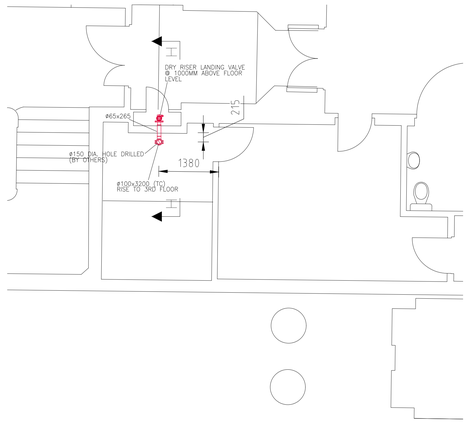

SECTION H-H



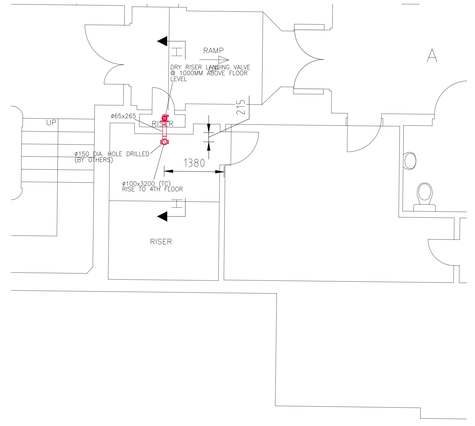

EXCHANGE FLOOR - DRY RISER 3 OUTLET & RISER



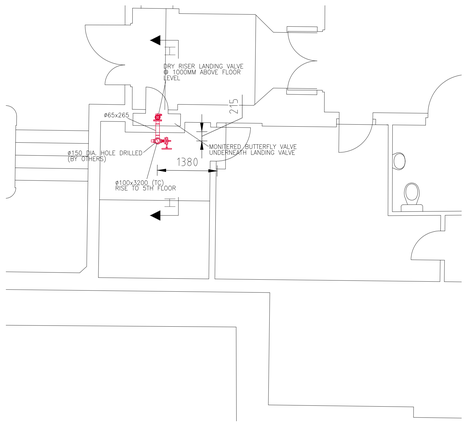

FIRST FLOOR - DRY RISER 3 OUTLET & RISER



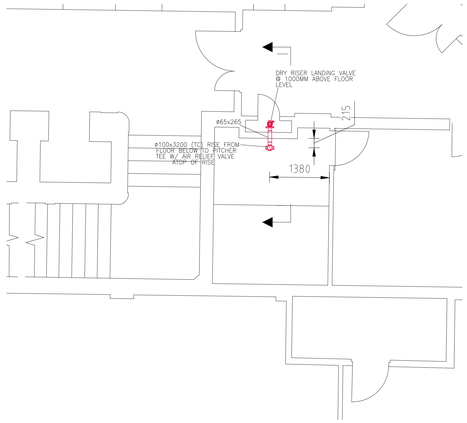

SECOND FLOOR - DRY RISER 3 OUTLET & RISER



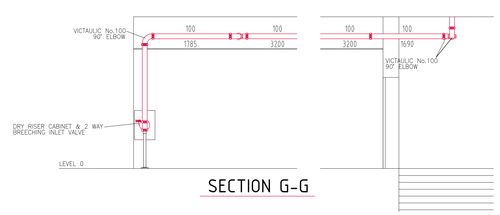

THIRD FLOOR - DRY RISER 3 OUTLET & RISER



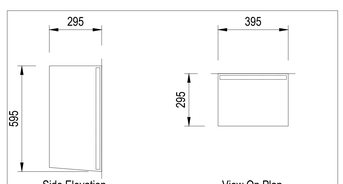

FOURTH FLOOR - DRY RISER 3 OUTLET & RISER



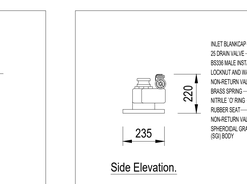

FIFTH FLOOR - DRY RISER 3 OUTLET & RISER



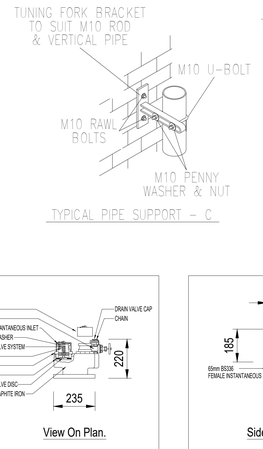

SECTION G-G



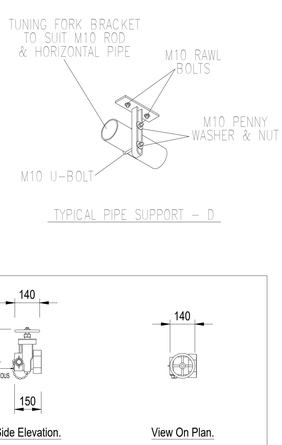

TYPICAL PIPE SUPPORT - A




TYPICAL PIPE SUPPORT - B




TYPICAL PIPE SUPPORT - C




TYPICAL PIPE SUPPORT - D




SPECIFICATIONS

| | |
|---|---|
| CABINET & DOOR: | 16swg ZINTEC STEEL. |
| COLOUR: | AS STANDARD RED RAL 3002. |
| ARCHITRAVE: | 40mm WIDE ALL ROUND. |
| GLASS: | 6mm GEORGIAN WIRED, PRV LETTERING. |
| LOCK: | YALE SLAM LOCK. |
| HINGE: | STAINLESS STEEL PIANO HINGE. |
| CONFORMS: | TO BS 5041 PART 5 |

MINIMUM APERTURE 605 HIGH 405 WIDE

Dry Riser Inlet Cabinet Detail




MATERIALS

| | |
|---|---|
| BODY: | S.G.I. |
| INSTANTANEOUS MALE: | GUNMETAL. |
| GLAND NUT: | MANGANESE BRONZE. |
| BLANK CAPS: | RUBBER. |
| DRAIN VALVE: | GUNMETAL. |
| CONFORMS: | TO BS 5041 PART 3. |

Dry Riser Inlet Valve Detail

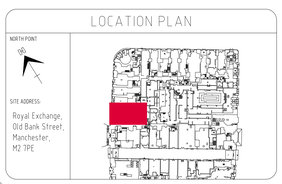



MATERIALS

| | |
|---|---|
| BODY: | GUNMETAL. |
| VALVE STEM: | MANGANESE BRONZE. |
| GLAND NUT: | MANGANESE BRONZE. |
| HANDWEEL: | CAST IRON. |
| CONFORMS: | TO BS 5041 PART 2. |

Dry Riser Outlet Valve Detail

## LOCATION PLAN




MONITORED BUTTERFLY VALVES SHALL BE WIRED TO THE FIRE ALARM PANEL (BY OTHERS) & SECURED OPEN BY PADLOCKS AND STRAPS

## SCHEDULE OF SPRINKLERS

| RIS/TN NR or ZONE NR | LOCATION | CONST'N TYPE | SPRINKLER HEAD MAKE, MODEL, SIZE & K-FACTOR | TEMP RATING °C | DESIGN SPACING $M^2$ | QTY |
|---|---|---|---|---|---|---|

SPECIFICATION STANDARD: LPC Rules for Automatic Sprinkler Installations 2015 Incorporating BS EN 12845

DESIGN CRITERIA

| | |
|---|---|
| ANNEX D & F ENHANCEMENTS | N/A |
| ANY OTHER APPLICABLE ANNEXES | N/A |
| HAZARD CLASS | N/A |
| DISCHARGE DENSITY | N/A |
| AREA of OPERATION | N/A |
| HEIGHT of 'C' GAUGE | N/A |
| HIGHEST HEAD ABOVE 'C' GAUGE | N/A |
| INSTALLATION TYPE | N/A |
| SYSTEM VOLUME - (DRY / ALTERNATE ONLY) | N/A |
| FHC or PRECALCULATED | N/A |

PIPEWORK PAINT FINISH

| | |
|---|---|
| RED OXIDE | N/A |
| POWDER COATED WHITE - RAL 9010 | N/A |
| POWDER COATED RED - RAL 3000 | N/A |
| OTHER (SPECIFY) : | Galvanised |

PIPEWORK SPECIFICATION(UNLESS OTHERWISE STATED)

1. ALL PIPEWORK TO BSEN 10255 MEDIUM WEIGHT UPTO 150NB
2. PIPEWORK ABOVE 150NB TO BS3601 HEAVY WEIGHT
3. ALL SCREWED FITTINGS TO BE BLACK MALLEABLE IRON TO BS 143
4. ALL WELDED FITTINGS TO BSEN 10253

Clear space to be maintained below the deflector of roof and ceiling sprinklers of at least 0.5m for ordinary hazard systems and 1.0m for high hazard.

Maximum Storage Heights:

| Storage Category | Maximum Storage Height in m | | |
|---|---|---|---|
| | Free Standing or Block Storage Metres, H = width less 0.5 | Storage Configurations (for HHS H= 0.5 x 0.5 x 0.5, 0.6 x 0.6 x 0.6) | Maximum Storage Height (m) |
| Category 1 | 4.0 | XXX | XXX |
| Category 2 | 3.0 | XXX | XXX |
| Category III | 2.1 | XXX | XXX |
| Category IV | 1.2 | XXX | XXX |

WEIGHT LOADINGS FOR MEDIUM WEIGHT PIPE WORK & FITTINGS
MAXIMUM SPACING BETWEEN BRACKET LOCATIONS (see IT1.2 - BSEN 12845)

| NOMINAL BORE | OUTSIDE DIAMETER | WEIGHT / METRE in KG - EMPTY | WEIGHT / METRE in KG - CHARGED | BRACKET LOCATIONS |
|---|---|---|---|---|
| 25mm | 33.7mm | 2.5 | 3.1 | 4m Maximum |
| 32mm | 42.4mm | 3.3 | 4.3 | 4m Maximum |
| 40mm | 48.3mm | 3.7 | 5.0 | 4m Maximum |
| 50mm | 60.3mm | 5.1 | 7.3 | 4m Maximum |
| 65mm | 76.1mm | 6.6 | 10.6 | 4m (For upto 6m - see Note 1) |
| 80mm | 88.9mm | 8.5 | 13.6 | 4m (For upto 6m - see Note 1) |
| 100mm | 114.3mm | 12.2 | 21.0 | 4m (For upto 6m - see Note 1) |
| 125mm | 165.1mm | 19.2 | 38.2 | 4m (For upto 6m - see Note 1) |
| 200mm | 219.1mm | 33.2 | 66.7 | 4m (For upto 6m - see Note 1) |

Note 1 Pipe supports on pipe work greater than Ø50 can be at 6m maximum spacing, providing 2no. independent supports are fixed directly to the structure.

TABLE 40 - Design parameters for pipe supports

| NOMINAL PIPE DIAMETER DE mm | MINIMUM LOAD CAPACITY AT 20°C (see note 2) kg | MINIMUM CROSS SECTION (see note 2) $mm^2$ | MINIMUM LENGTH OF ANCHOR BOLT (see note 3) mm |
|---|---|---|---|
| ø 6 50 | 200 | 30 (M8) | 30 |
| 50 < ø ≤ 100 | 350 | 58 (M10) | 40 |
| 100 < ø ≤ 150 | 500 | 79 (M12) | 40 |
| 150 < ø ≤ 200 | 850 | 125 (M16) | 50 |

Note 2 When the material is heated to 250°C the load bearing capacity should not deteriorate more than 25%
Note 3 The needed cross section of threaded rods should be increased so that the minimum cross section is ≥ 0.8 achieved.
Note 4 The length of anchor bolts depends on the type used and the quality and type of material into which they are to be fixed. The values given are for concrete.


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ALL SPRINKLER HEADS TO BE FITTED 90° (PERPENDICULAR) TO ROOF / CEILING
ALL SPRINKLER HEADS MUST BE FITTED WITH MANUFACTURERS SPRINKLER SPANNER

SPRINKLER HEADS, VALVES AND CONTROLS MUST NOT BE PAINTED
HALL & KAY FIRE ENGINEERING WILL NOT ACCEPT RESPONSIBILITY FOR SYSTEMS WHICH HAVE FAILED TO TAKE ADEQUATE PRECAUTIONS AGAINST THE WATER IN THE PIPEWORK ABOVE AND BELOW CONTROL VALVES FREEZING DURING SEVERE WEATHER

PIPE WORK COMMISSIONING TESTS TO COMPLY WITH BSEN 12845: 9.11.1 & 9.11.2 WHICHEVER IS APPLICABLE TO THE SPECIFIC INSTALLATION

SERVICES TO BE PROVIDED BY CLIENTS UNLESS OTHERWISE STATED
ALL BUILDERSWORK, HOLES THROUGH WALLS, FLOORS, SLEEVING, FIRE STOPPING, THROST BLOCKS, TRENCHES, GROUTING & MAKING GOOD

## LEGEND

| | |
|---|---|
| | SPRINKLER HEAD UPRIGHT |
| | SPRINKLER HEAD PENDENT |
| | SPRINKLER HEAD FALSE CEILING / ON DROP PIPE |
| | SPRINKLER HEAD WITH FLEXIBLE ARM & DROP TO FALSE CEILING |
| | SPRINKLER HEAD ON RISE PIPE |
| | SPRINKLER HEAD SIDEWALL |
| HTC | SPRINKLER HIGH TEMPERATURE |
| | CHANGE OF ELEVATION IN PIPEWORK |
| FFL +0.000 | CENTRE LINE ELEVATION OF PIPEWORK BELOW SLAB / SOFFIT. CENTRE LINE ELEVATION OF PIPEWORK ABOVE FINISH FLOOR LEVEL / DATUM |
| DP.A | DESIGN POINT |
| | POSITION AND TYPE OF PIPE SUPPORT |
| | POSITION OF MECHANICAL COUPLING |
| | DRAIN / FLUSHING / TEST VALVE WITH BRASS PLUG |
| | FLUSHING CONNECTION |

## DRAWING REVISIONS

| REV | REVISION DESCRIPTION | DRAWN | APPROVED | DATE |
|---|---|---|---|---|
| P02 | REVISED AS PER CLIENT'S COMMENTS | CC | JM | 12.03.24 |
| P01 | ISSUED FOR APPROVAL | CC | JM | 06.02.24 |

REFERENCE DRAWINGS:
Manchester Royal Exchange - Blank Issue


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CLIENT: HFL Building Solutions

PROJECT: Royal Exchange, Dry Riser

DRAWING TITLE: DRY RISER DRAWING FOR ROYAL EXCHANGE, MANCHESTER

| | | | |
|---|---|---|---|
| DRAWN: C Campbell | DATE: 06.02.24 | | SUITABILITY STATUS: |
| APPROVED BY: J Murphy | SCALE: 1:50 | SHEET: A0 | REASON FOR ISSUE: PRELIMINARY |
| CONTRACT No.: 95112A | DRAWING No.: 03 | | REVISION: P02 |