

INVERCARGILL CENTRAL 33 ESK STREET

HYDRAULICS SERVICES ZONE 1 UPDATED CONSENT ISSUE

DRAWING INDEX

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NOTES:
SOME SYMBOLS ON THIS LEGEND MAY NOT BE APPLICABLE TO THIS PROJECT.
REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR SET-OUT OF ALL CEILING MOUNTED SERVICES.
3. REFER TO ARCHITECTURAL ELEVATIONS FOR SET-OUT OF ALL HYDRAULIC SERVICES.
4. REFER TO THE ENGINEERS SPECIFICATION FOR FURTHER INFORMATION.

PIPEWORK SYMBOLS

---	EXISTING PIPEWORK
---	PIPE RUNS BELOW FLOOR / GROUND
---	PIPE RUNS IN CEILING SPACE
---	PIPE RUNS NEAR FLOOR OR UNDER BENCH
---	PIPE RUNS AT HIGH LEVEL
---	INDICATES COPPER PIPEWORK
---	DIRECTION OF FLOW
T.A.	PIPE TO LEVEL ABOVE
T.B.	PIPE TO LEVEL BELOW
F.A.	PIPE FROM LEVEL ABOVE
F.B.	PIPE FROM LEVEL BELOW
HL	PIPE RISES TO HIGH LEVEL
LL	PIPE DROPS TO LOW LEVEL
SU	PIPE SETS UP
SD	PIPE SETS DOWN
↑	PIPE TEES UP
↓	PIPE TEES DOWN
→	DOMESTIC WATER OUTLET

HYDRAULIC SYMBOLS

TRV	TEMPERATURE RELIEF VALVE
PRV	PRESSURE RELIEF VALVE
IV	ISOLATING VALVE
NC	ISOLATING VALVE (NORMALLY CLOSED)
IR	ISOLATING / REGULATING VALVE
CV	CHECK VALVE
NR	NON RETURN VALVE
M	2 PORT MOTORIZED VALVE
M	3 PORT MOTORIZED VALVE
P	PUMP
M	WATER METER
TV	TEMPERING VALVE
STR	STRAINER
PS	PRESSURE SWITCH
RV	RELIEF VALVE
BFP	BACKFLOW PREVENTION
RPZ	REDUCED PRESSURE ZONE TYPE BACKFLOW PREVENTION
FC	FLEXIBLE CONNECTION
DV	DIAPHRAGM VALVE
SV	SOLENOID VALVE
AAV	AUTOMATIC AIR VENT
T	TEMPERATURE GAUGE
P	PRESSURE GAUGE
UN	UNION
FL	FLANGE
TP	TEST POINT
DP	DRAIN POINT
AAV	AUTOMATIC AIR VALVE
DHU	DRAIN WITH HOSE UNION CONNECTION
SWIC	STORM WATER INSPECTION CHAMBER
SWMH	STORM WATER MAN HOLE
FWIC	FOUL WATER INSPECTION CHAMBER
FWMH	FOUL WATER MAN HOLE
FW	FLOOR WASTE
FWG	FLOOR WASTE GULLY TRAP
FWIC	FOUL WATER INSPECTION CHAMBER
FWMH	FOUL WATER MAN HOLE
FW	FLOOR WASTE
FWG	FLOOR WASTE GULLY TRAP
ORG	OVERFLOW RELIEF GULLY TRAP
SWMH	STORM WATER INSPECTION CHAMBER
SWMH	STORM WATER MAN HOLE
ID	INSPECTION JUNCTION
IB	INSPECTION BEND
SEJ	SWIVEL AND EXPANSION JOINT
GT	GULLY TRAP
ORG	OVERFLOW RELIEF GULLY
SUMP	SUMP
LHCE	LAMP HOLE CLEANING EYE
RE	RODDING EYE
□	CEILING ACCESS PANEL (450x450 MIN) REMOVABLE CEILING TILE MAY ACT AS ACCESS PANEL (WHERE GRID CEILING IN PLACE)

PIPEWORK SYSTEM ABBEVIATIONS

FVMS	STACK REFERENCE
#1	STACK NUMBER
V	VENT REFERENCE
#1	VENT NUMBER
CA	COMPRESSED AIR
COND	CONDENSATE
CW	COLD WATER
NPCW	NON-POTABLE COLD WATER
HPCW	HIGH PRESSURE COLD WATER
LPCW	LOW PRESSURE COLD WATER
EMS	EMERGENCY WATER SUPPLY
FVMS	FULLY VENTED MODIFIED STACK
FVS	FULLY VENTED STACK
LPG	LIQUEFIED PETROLEUM GAS
LPG-H	HIGH PRESSURE - LPG
LPG-L	LOW PRESSURE - LPG
NG	NATURAL GAS
FW	FLUSHING WATER
FWD	FOUL WASTE DRAIN
FWD-G	FOUL WASTE DRAIN - GREASE
HW	HOT WATER
HW-{{# #°C}}	HOT WATER FLOW ({{# #°C}} - DESIGN TEMPERATURE STATED)
HW-r	HOT WATER RETURN
NPHW	NON-POTABLE HOT WATER
NPHW-f	NON-POTABLE HOT WATER FLOW
NPHW-r	NON-POTABLE HOT WATER RETURN
SST	SINGLE STACK MODIFIED
SWD	STORM WATER DRAIN
STEAM	STEAM LINE
TW	TANK WATER
V	VENT PIPE, STACK (COMBINED)
V	VENT, RELIEF VENT, GROUP VENT & FIXTURE VENT

HYDRAULIC ABBREVIATIONS

AFLL	ABOVE FINISHED FLOOR LEVEL
AP	ACCESS PANEL
B	BATH
BFP	BACKFLOW PREVENTION UNIT
BD	BIDET
CM	COFFEE MACHINE
CS	CLEANERS SINK
CU	COPPER
DF	DRINKING FOUNTAIN
DN	DIAMETER NOMINAL
DW	DISHWASHER
EW	EYE WASH
FU	FIXTURE UNITS
FC	FIRE COLLAR
FWG	FLOOR WASTE GULLY TRAP
FWIC	FOUL WATER INSPECTION CHAMBER
FWMH	FOUL WATER MAN HOLE
HL	HIGH LEVEL
HT	HOSE TAP
HWB	HOT WATER BOILER
HWC	HOT WATER CYLINDER
IL	INVERT LEVEL
LL	LOW LEVEL
DN	DIAMETER NOMINAL
P	PUMP
RL	RELATIVE LEVEL
S	SINK
SEJ	SWIVEL AND EXPANSION JOINT
SHR	SHOWER
SWIC	STORM WATER INSPECTION CHAMBER
SWMH	STORM WATER MAN HOLE
TD	TUNDISH
TS	TEA SINK
TP	TRAP PRIMER
TH	TRACE HEATED
TUB	LAUNDRY TUB
UR	URINAL
WC	WATER CLOSET PAN
WHB	WASH HAND BASIN
WM	WASHING MACHINE

HYDRAULICS PIPEWORK TABLES

SIZE OF GRADED SECTION OF WASTE / DRAIN PIPE - DN	MINIMUM GRADE
40	1:40
50	1:40
65	1:40
80	1:60
100	1:60
125	1:80
150	1:100
225	1:150
300	1:250

SIZE OF GRADED SECTION DRAIN PIPE - DN	MINIMUM GRADE
85	1:90
100	1:120
150	1:200
225	1:350

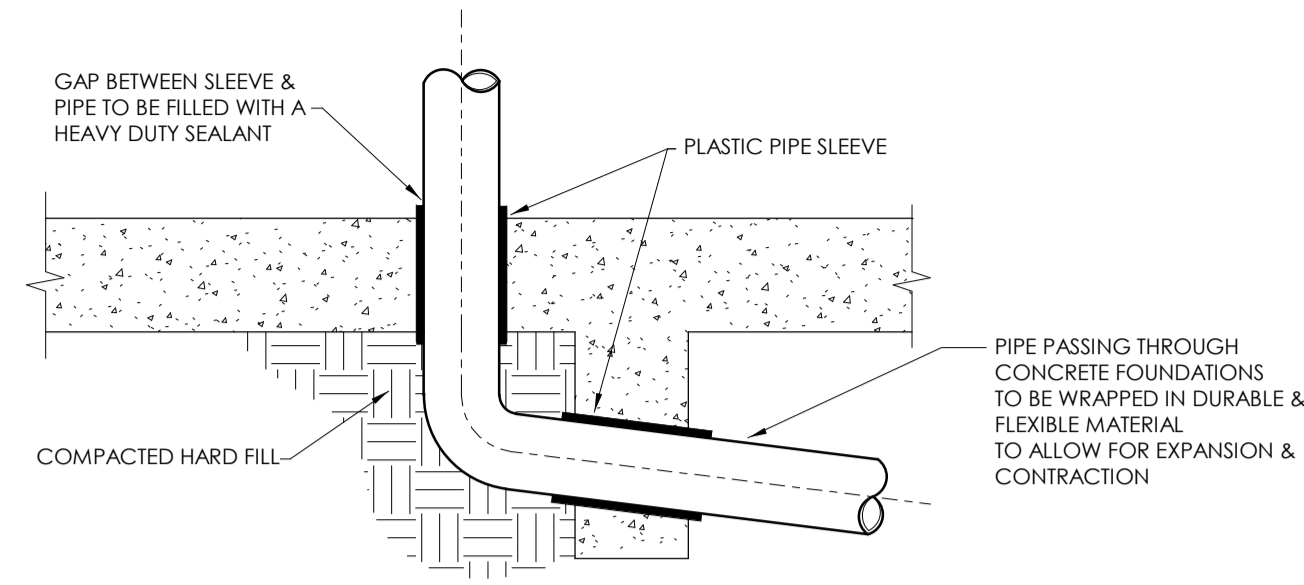
O/D	I/D
16.0mm	11.6mm
20.0mm	16.2mm
25.0mm	20.4mm
32.0mm	26.2mm
40.0mm	32.6mm
50.0mm	40.8mm
63.0mm	51.4mm
75.0mm	61.4mm
90.0mm	73.6mm
110.0mm	90.0mm

DOMESTIC WATER NOTES

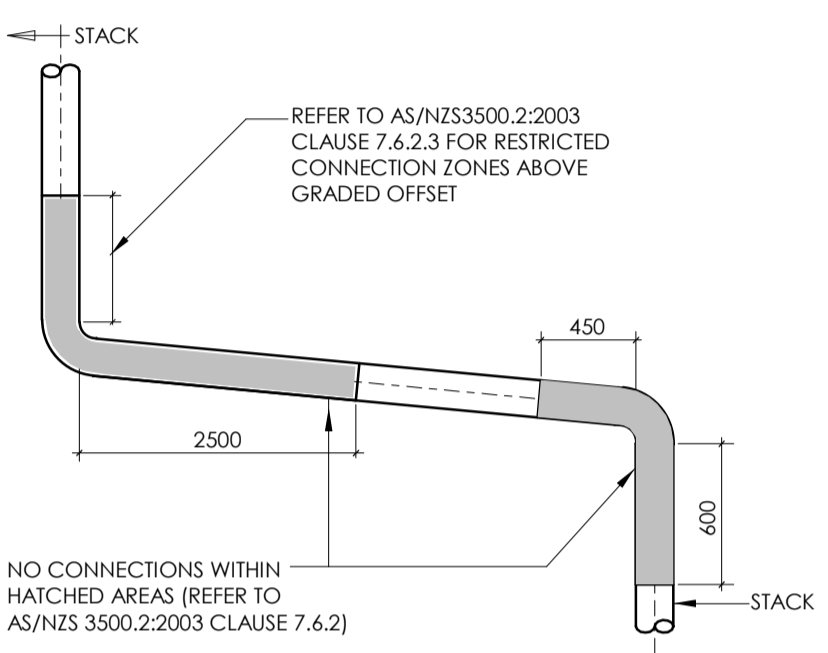
- REFER TO THE SPECIFICATION FOR FURTHER DETAILS.
- ALLOW TO INSTALL 300x300 ACCESS PANELS UNDER ALL VALVES LOCATED WITHIN CEILING.
- SERVICES PENETRATING FIRE RATED ELEMENTS ARE TO BE FIRED STOPPED WITH AN APPROPRIATE TESTED SOLUTION AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER INSTRUCTIONS.
- THE PLUMBING CONTRACTOR SHALL ENSURE PIPEWORK INSTALLATION IS TO COMPLY WITH SEISMIC PERFORMANCE STANDARD NZS4219:2009.
- THE PLUMBING CONTRACTOR IS TO NOTIFY THE MAIN CONTRACTOR OF THE LOCATIONS OF CEILING ACCESS HATCHES AND ENSURE THAT THEY ARE COORDINATED WITH THE ARCHITECT.
- URINAL STALLS ARE TO BE PROVIDED WITH A TIMED FLOW CONTROL SYSTEM (REFER TO SPECIFICATION).
- ALL PIPEWORK SIZES SHOWN ARE OUTSIDE DIAMETER.
- UNLESS OTHERWISE NOTED ALL CONNECTIONS TO FITTINGS SHALL BE MINIMUM AS FOLLOWS:
DN Ø25
DW Ø25
SHR Ø20
WM Ø25
WC Ø20
WHB Ø20

SANITARY & STORM WATER NOTES

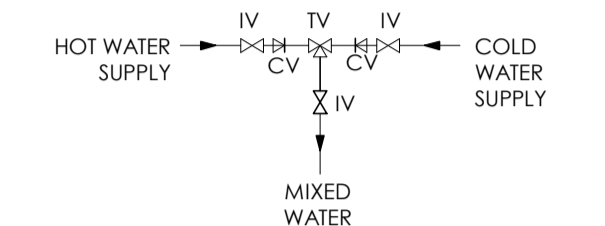
- REFER TO THE SPECIFICATION FOR FURTHER DETAILS.
- ALL BELOW FLOOR/SLAB FOUL WASTE DRAINAGE PIPEWORK SHALL HAVE A MINIMUM SIZE OF Ø65.
- ALL EXISTING DRAINS TO BE WATER BLASTED AND CCTV PRIOR TO REUSE.
- ALL IN-GROUND RODDING EYES ARE TO BE ALL PROOF BRONZE CLEANOUTS, C/W O-RING-SEALS.
- ALL TO COORDINATE WITH THE MECHANICAL SERVICES CONTRACTOR WITH REGARD TO THE PROVISION OF TRAPPED TUNDISHES FOR THE COLLECTION OF AC CONDENSATE.
- THE SANITARY SERVICES CONTRACTOR SHALL INSTALL FIRE COLLARS ON ALL PIPEWORK THAT PASS THROUGH FLOOR SLABS AND FIRE RATED WALL (REFER TO FIRE REPORT).
- ALL Ø100 AND LARGER BELOW GROUND PIPEWORK SHALL HAVE RUBBER RING JOINTS TO ACCOMMODATE SEISMIC MOVEMENTS.
- DRAINAGE CONTRACTOR IS TO COORDINATE WITH THE SITE ENGINEER WITH REGARDS TO THE SEWER INVERT LEVELS. LEVELS SHOWN ON LAYOUTS ARE TO BE CONFIRMED BY THE CONTRACTOR ON SITE.
- SWIVEL AND EXPANSION FITTINGS ARE TO BE PROVIDED ON ALL FWD CONNECTIONS TO THE BUILDING.
- WHERE POSSIBLE ALL DROPPING DRAINAGE STACKS ARE TO INCORPORATE V-FITTING C/W RUBBER RING ACCESS CAP.
- ENSURE 2x45° BENDS ARE PROVIDED AT THE BASE OF EACH DRAINAGE STACK.



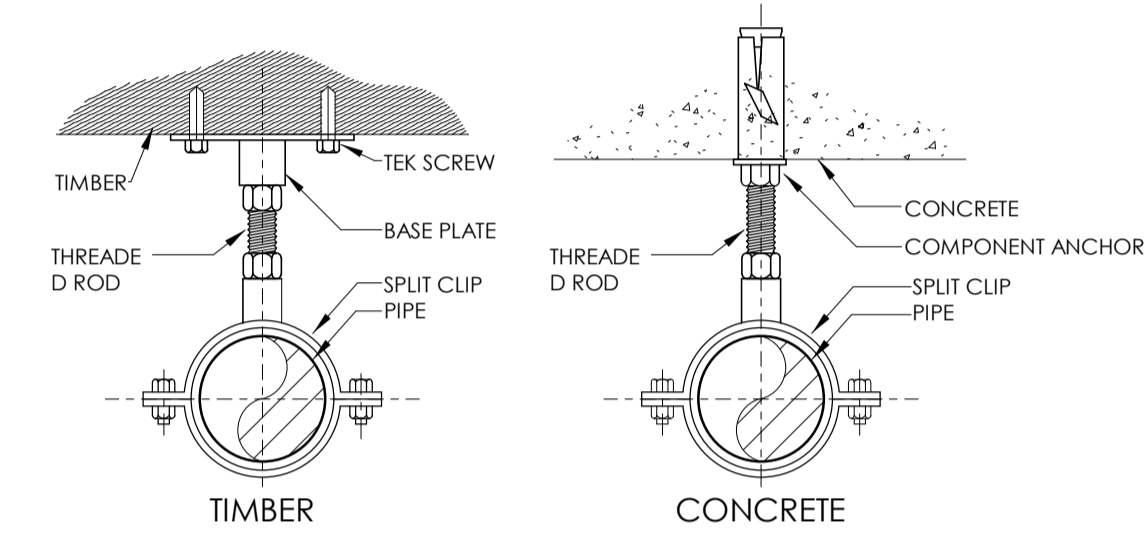
TYPICAL WATER/GAS PIPEWORK PENETRATION THROUGH FLOOR SLAB



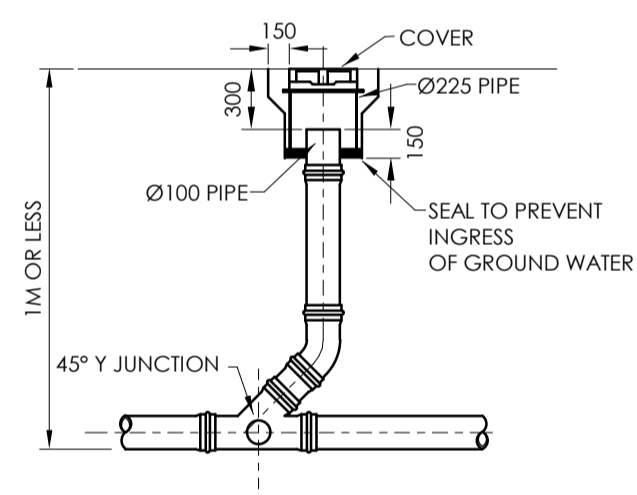
FVMS RESTRICTED ZONES



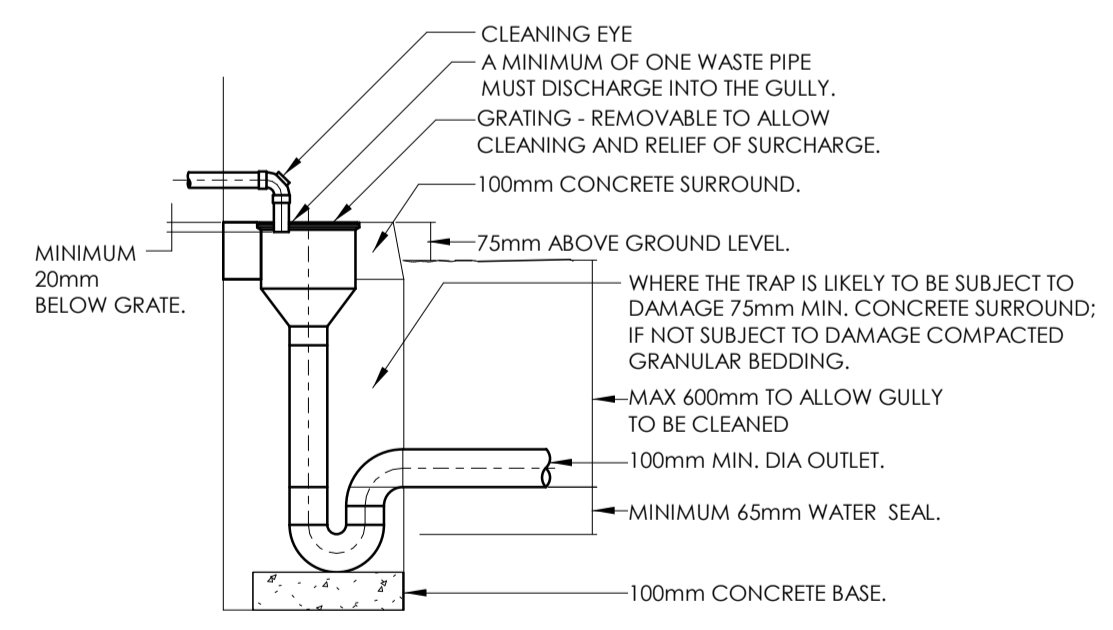
TYPICAL TEMPERING VALVE DETAIL
SCALE: NTS



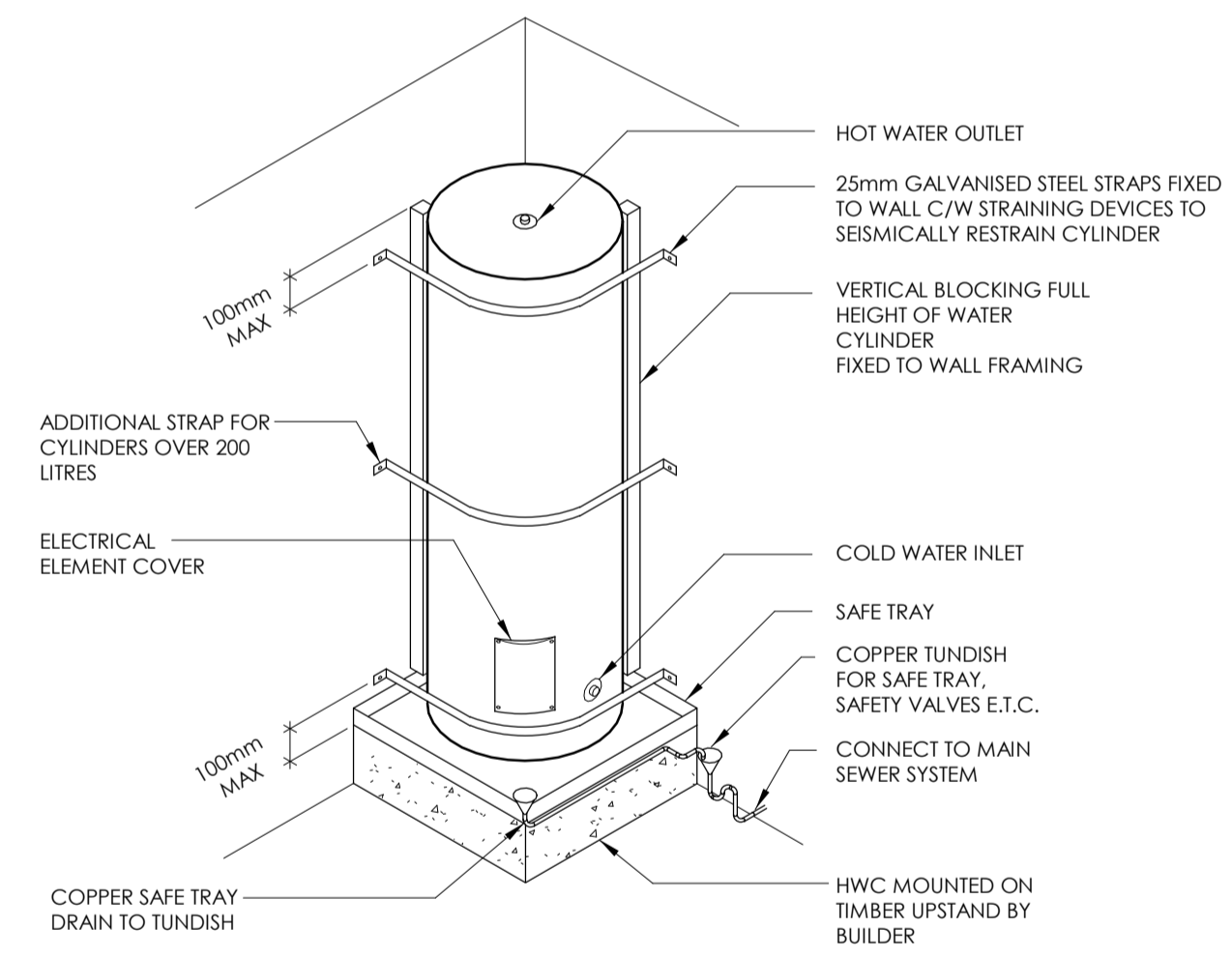
TYPICAL PIPE SUPPORTS DETAIL



TYPICAL RODDING EYE DETAIL



GULLY TRAP DETAIL



HWC RESTRAINT DETAIL

ISSUE	AMENDMENT	DATE
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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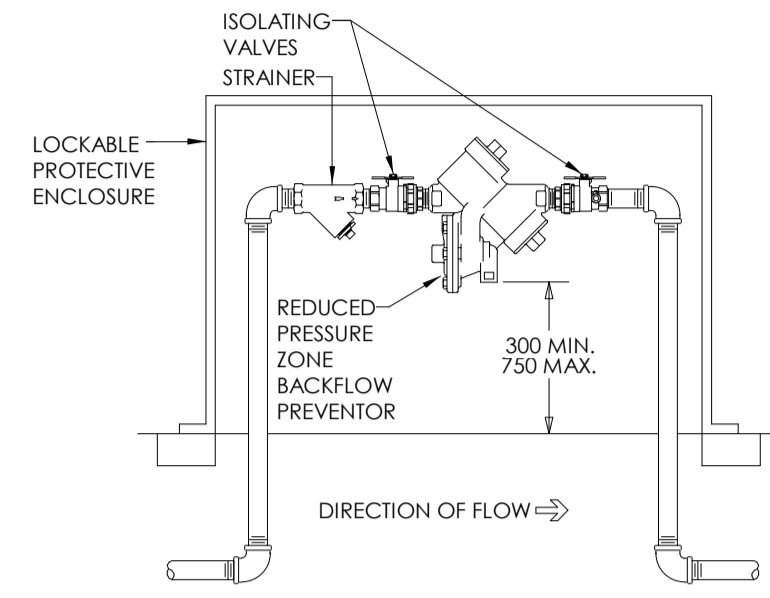
PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
STANDARD SYMBOLS
LEGEND & DETAILS

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No:	CS18007-1	
SHEET No:	H-0001	

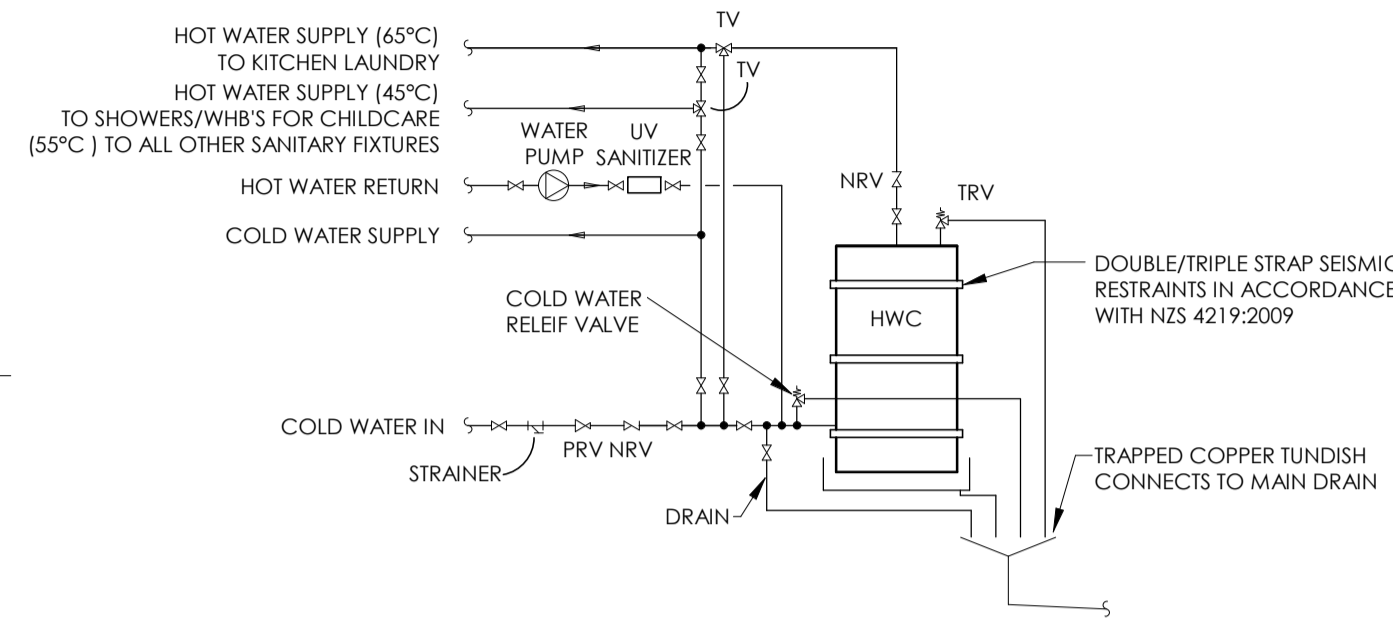
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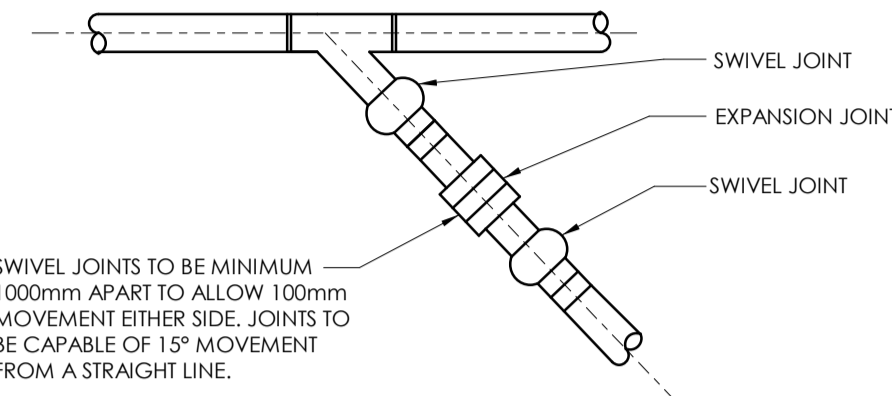
ABOVE GROUND BFP (Ø50NB)

SCALE: N.T.S.



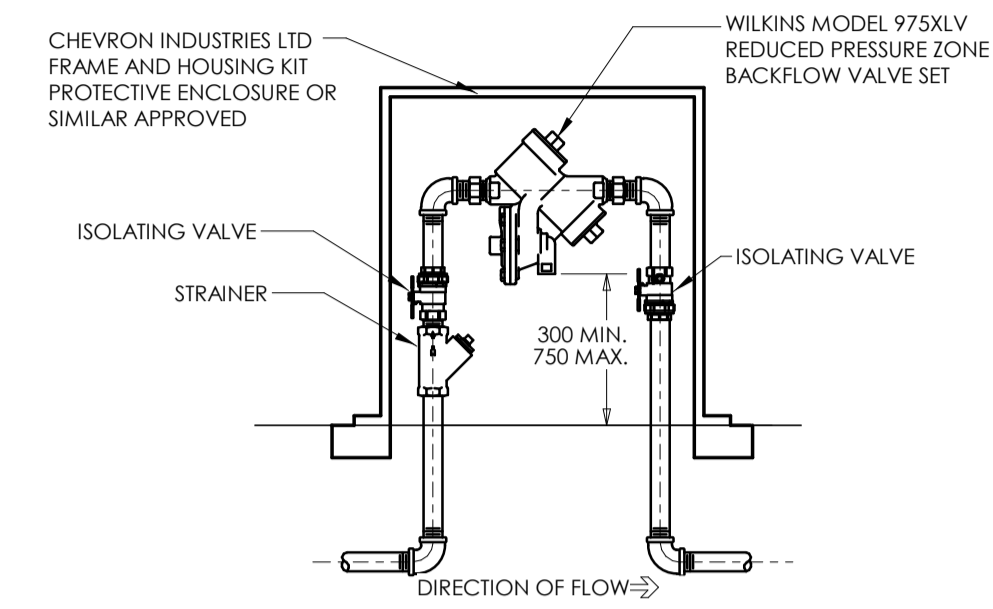
TYPICAL HWC DETAIL #2

SCALE: N.T.S.



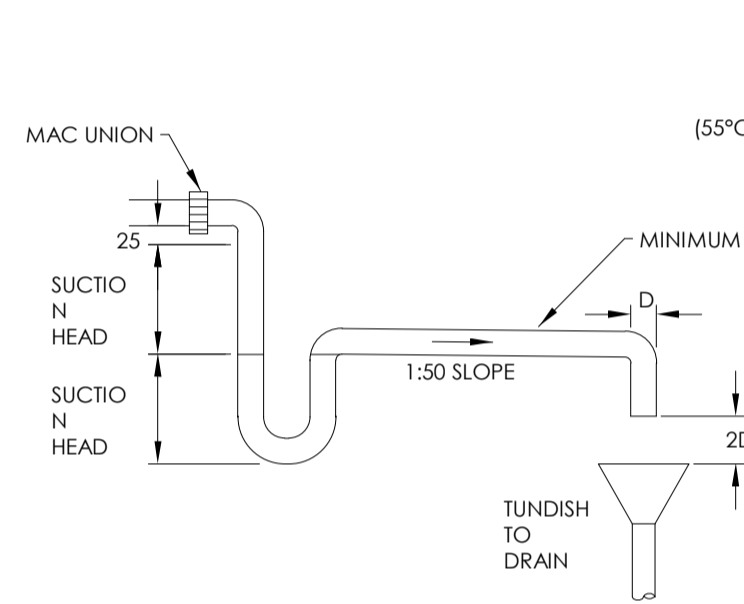
SWIVEL AND EXPANSION JOINT DETAIL

SCALE: N.T.S.

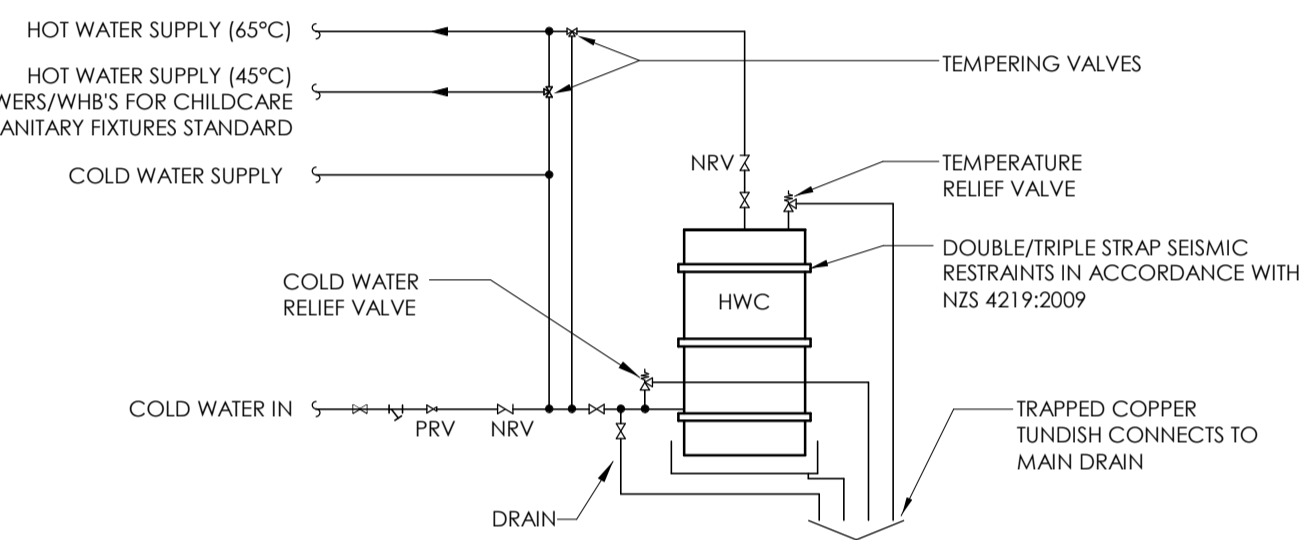


ABOVE GROUND BFP SMALL (Ø15-Ø50)

SCALE: N.T.S.

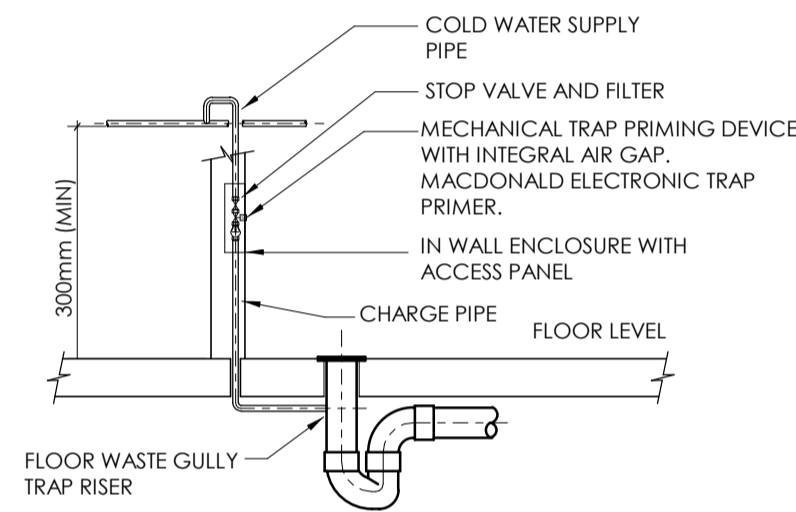


AC UNIT CONDENSATE TRAP DETAIL



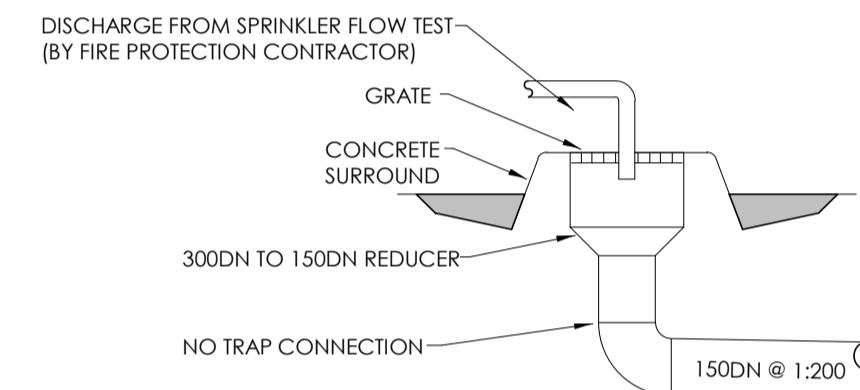
TYPICAL HWC CYLINDER DETAIL #1

SCALE: N.T.S.

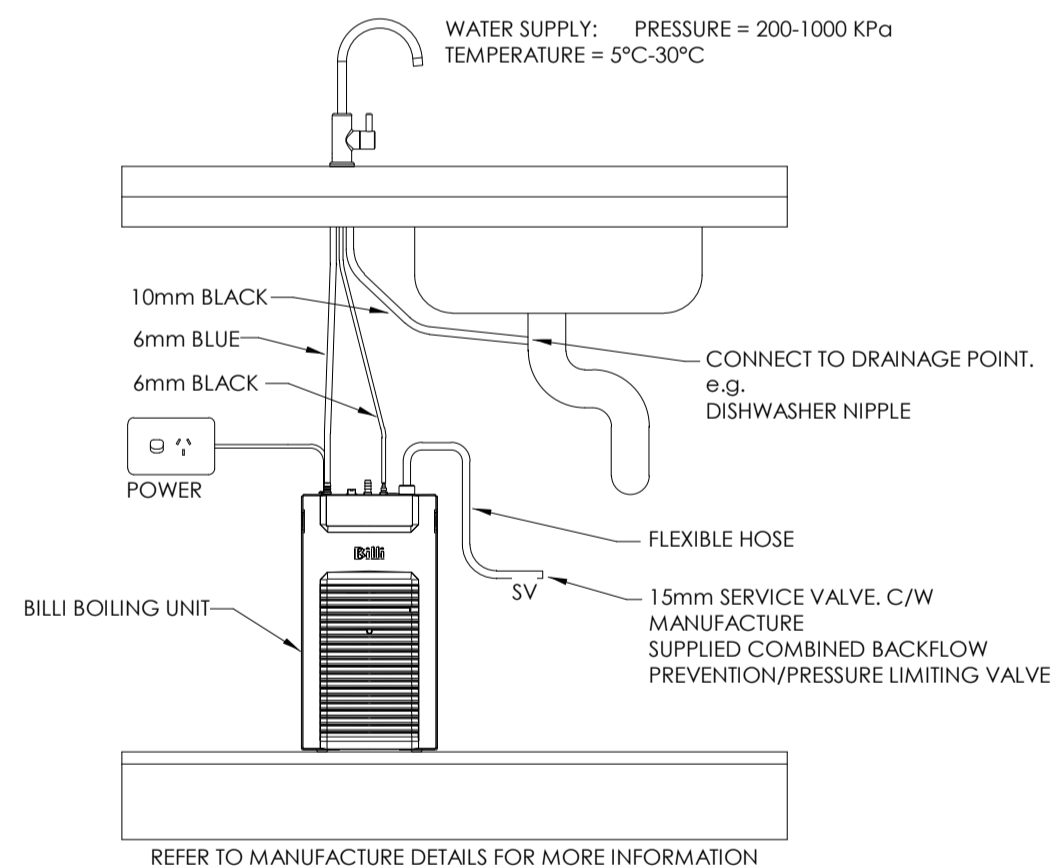


TRAP PRIMER DETAIL

SCALE: N.T.S.

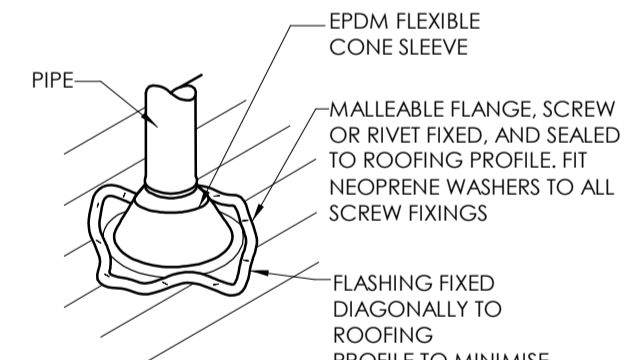


GULLY TRAP FOR SPRINKLER SYSTEM



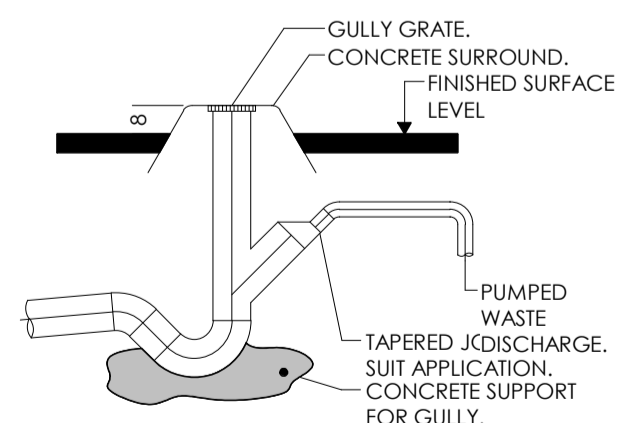
TYPICAL BILLI WATER BOILER DETAIL

REFER TO MANUFACTURE DETAILS FOR MORE INFORMATION



VENT ROOF PENETRATION DETAIL

SCALE: N.T.S.



CONNECTION OF PUMPED WASTE DISCHARGE

ISSUE	AMENDMENT	DATE
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET

SHEET TITLE
ADDITIONAL STANDARD
DETAILS

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007		
SHEET No: H-0002		

17 Dec 2019

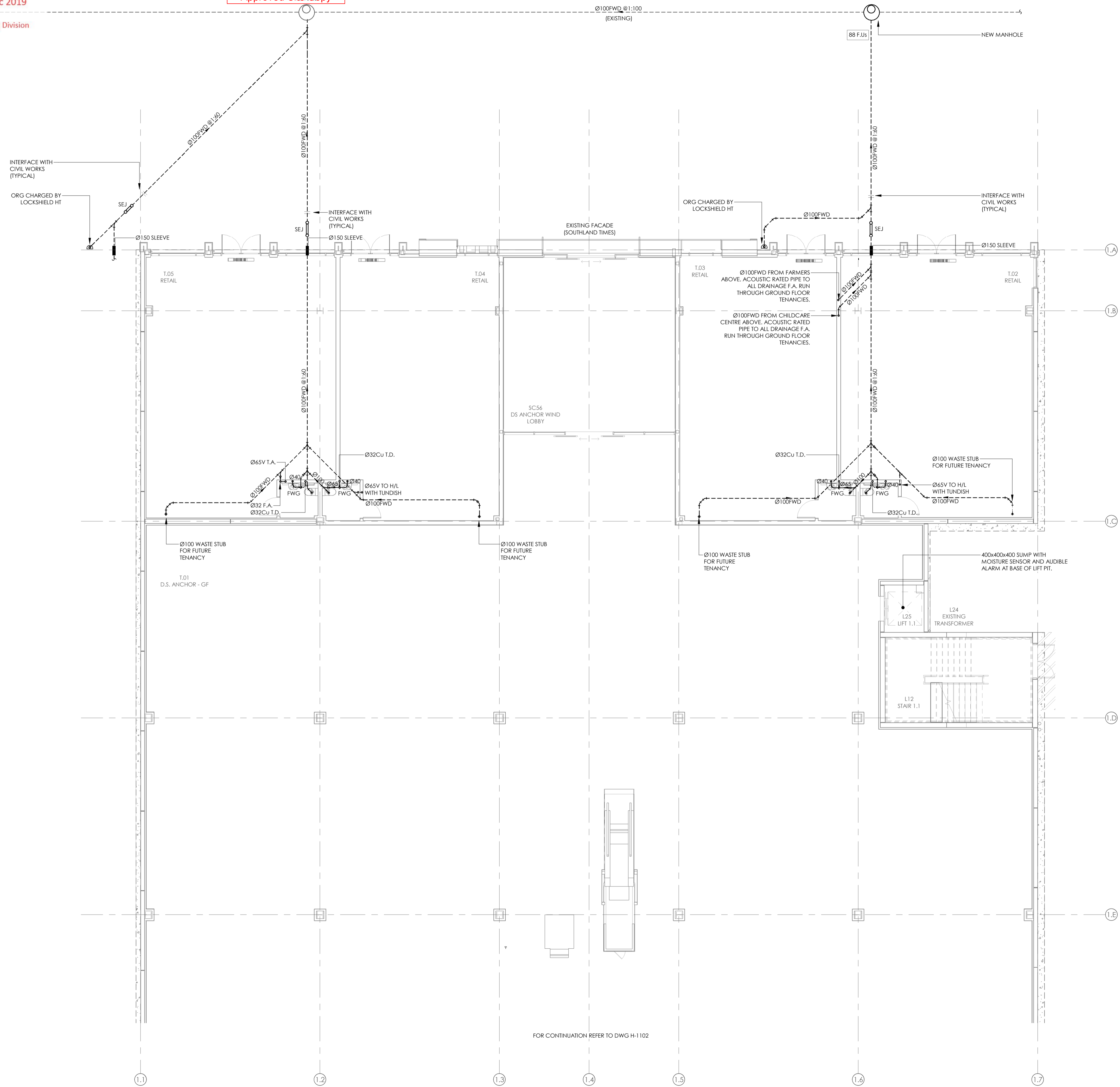
Building Division

Invercargill City
Council
Building Consent
Authority
Approved Site Copy

Approved For Issue
27/02/2020

BUILDING CONSENT NUMBER
2019/1381

NOTES:
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SYMBOLS LEGEND & DETAILS.
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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

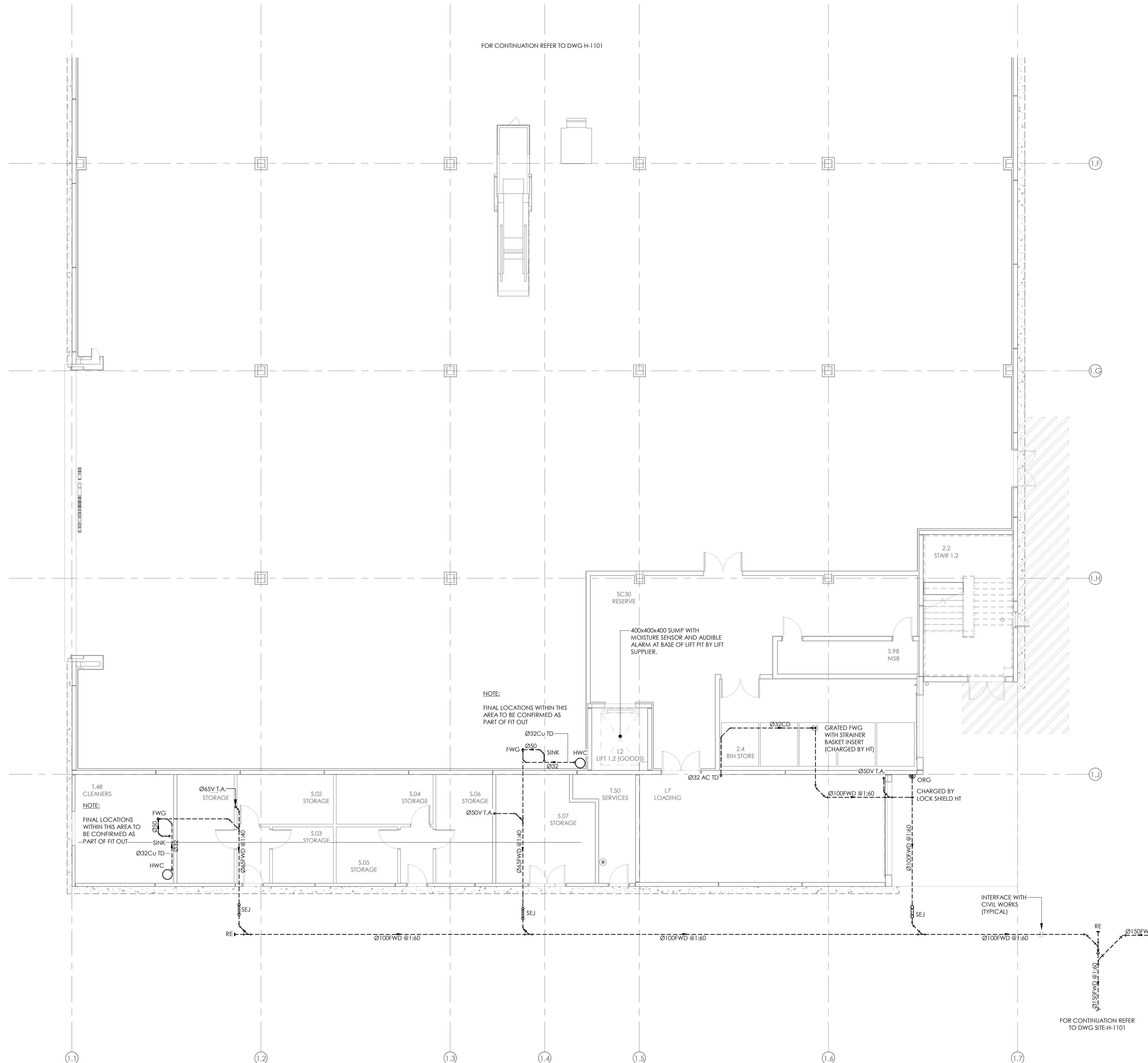
SHEET TITLE
**SANITARY LAYOUT
GROUND FLOOR PART 1**

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1101		

FOR CONTINUATION REFER TO DWG H-1102

NOTES:

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

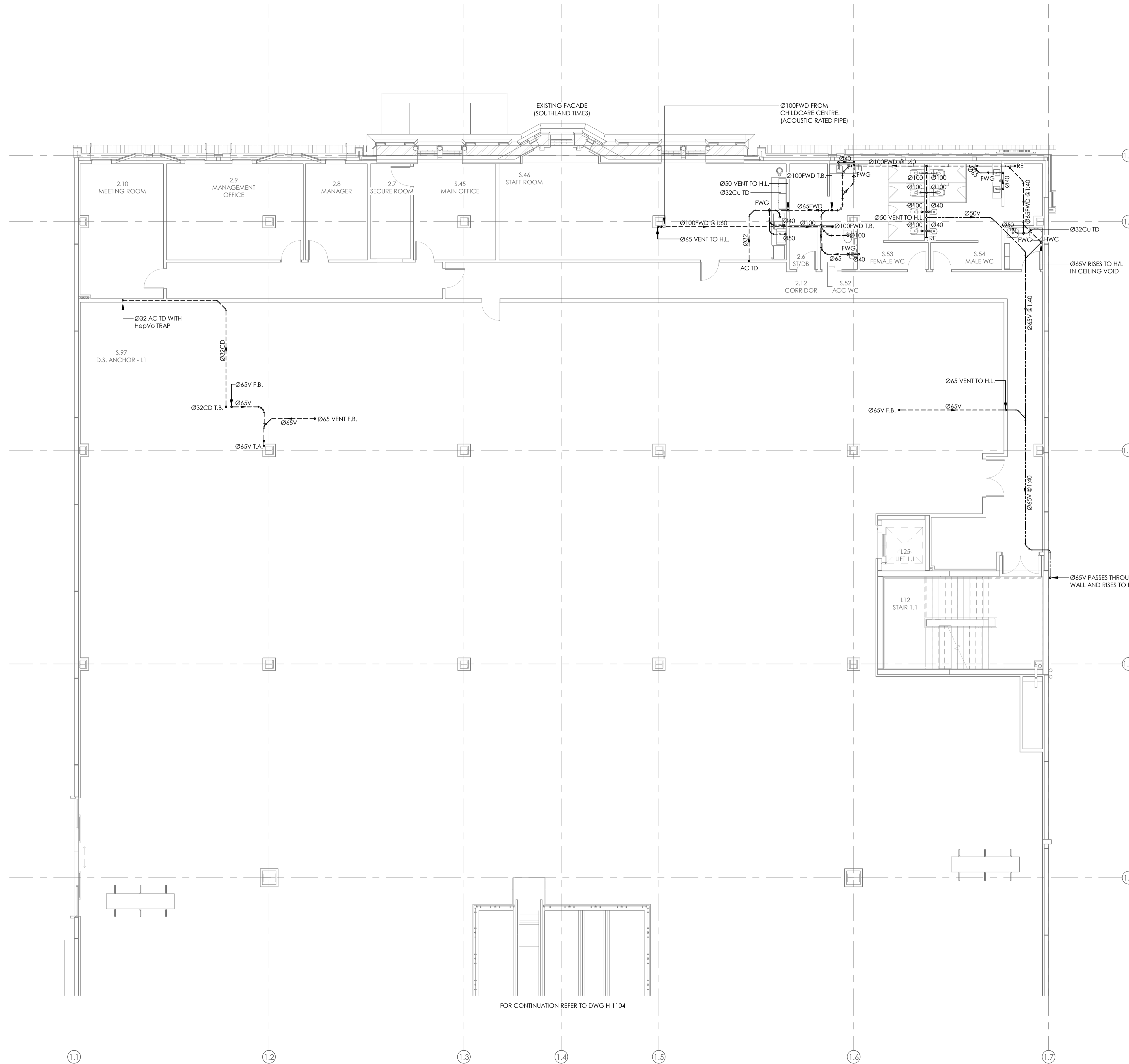
SHEET TITLE
SANITARY LAYOUT
GROUND FLOOR PART 2

CONSENT

DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1102		

NOTES:

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- 3. ALL PIPEWORK AT HIGH LEVEL BELOW SHALL BE ACOUSTIC RATED.



ISSUE	AMENDMENT	DATE
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PROJECT
INVERCARGILL CENTRAL
 33 ESK STREET
 ZONE 1

SHEET TITLE
SANITARY LAYOUT LEVEL
 1 PART 1

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: C
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1103		

17 Dec 2019

Building Division

Invercargill City
Council
Building Consent
Authority
Approved Site Copy

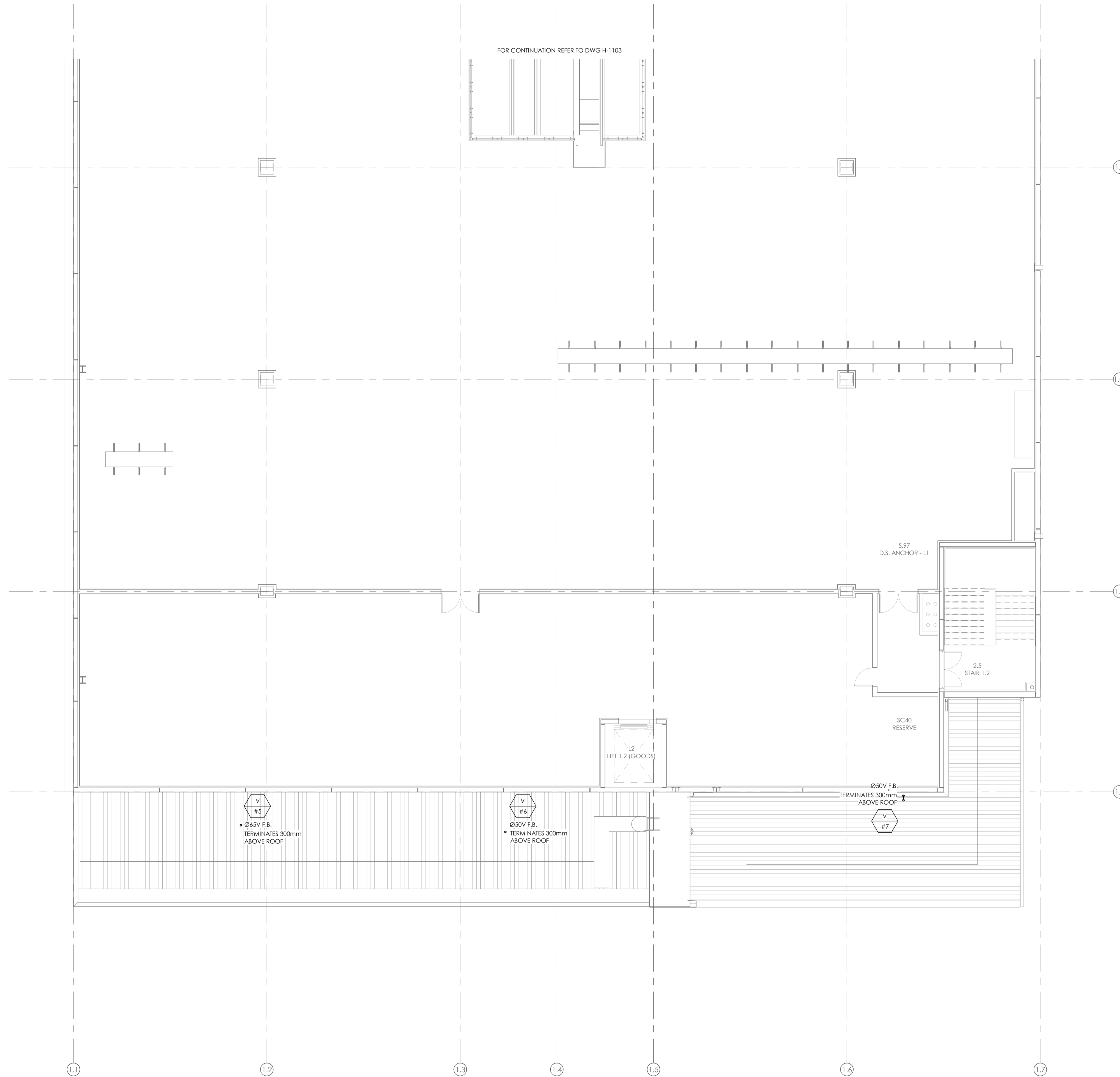
Approved For Issue
27/02/2020

BUILDING CONSENT NUMBER

2019/1381

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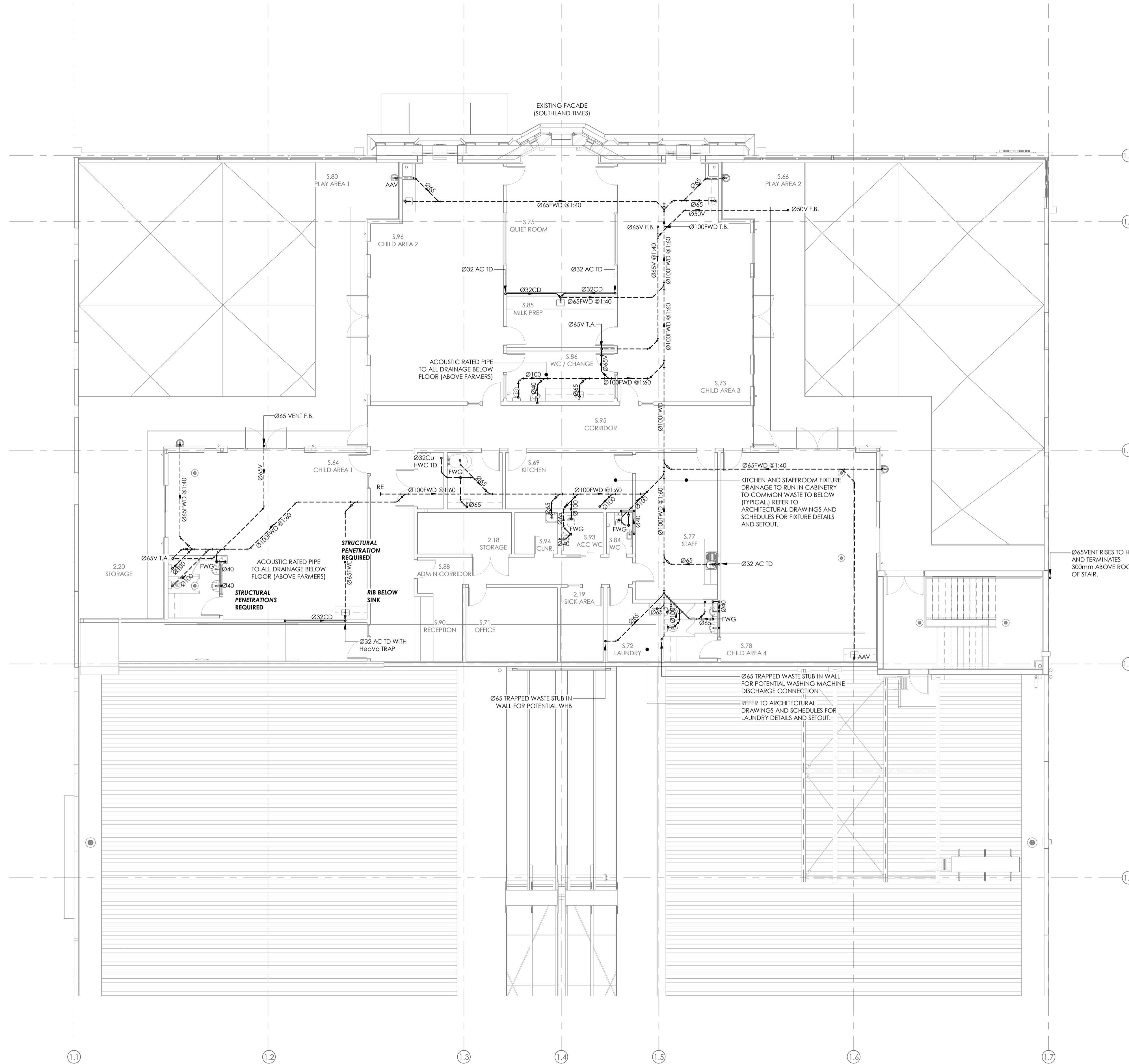


PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
SANITARY LAYOUT LEVEL
1 PART 2

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: C
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: CS18007-1
SHEET No: H-1104



- NOTES:
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 - REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
 - ALL PIPEWORK AT FLOOR BELOW SHALL BE ACOUSTIC RATED.
 - FIRE COLLARS AT FLOOR: SEE FIRE ENGINEERS SPECIFICATION FOR DETAILS.

ISSUE	AMENDMENT	DATE
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C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

CHECK ALL INFORMATION ON SITE PRIOR TO COMMENCING WORK. READ IN CONJUNCTION WITH THE SPECIFICATION AND OTHER RELEVANT DRAWINGS AND DOCUMENTS

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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**SANITARY LAYOUT LEVEL
2 PART 1**

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1105		

17 Dec 2019

Building Division

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Council
Building Consent
Authority
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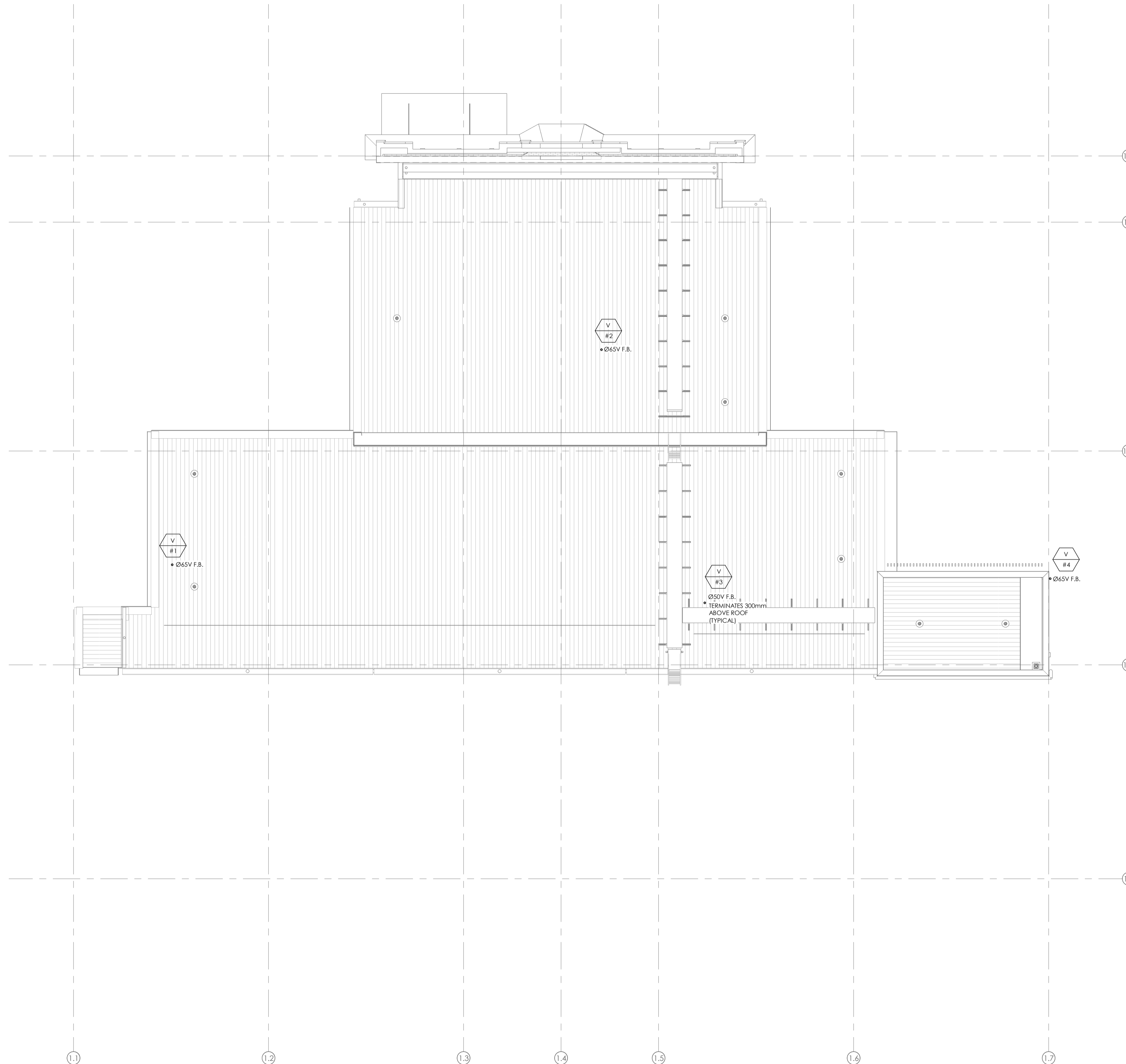
Approved For Issue
27/02/2020

BUILDING CONSENT NUMBER

2019/1381

NOTES:

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SYMBOLS LEGEND & DETAILS.
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INFORMATION.



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET

SHEET TITLE
SANITARY LAYOUT
CHILDCARE ROOF

CONSENT

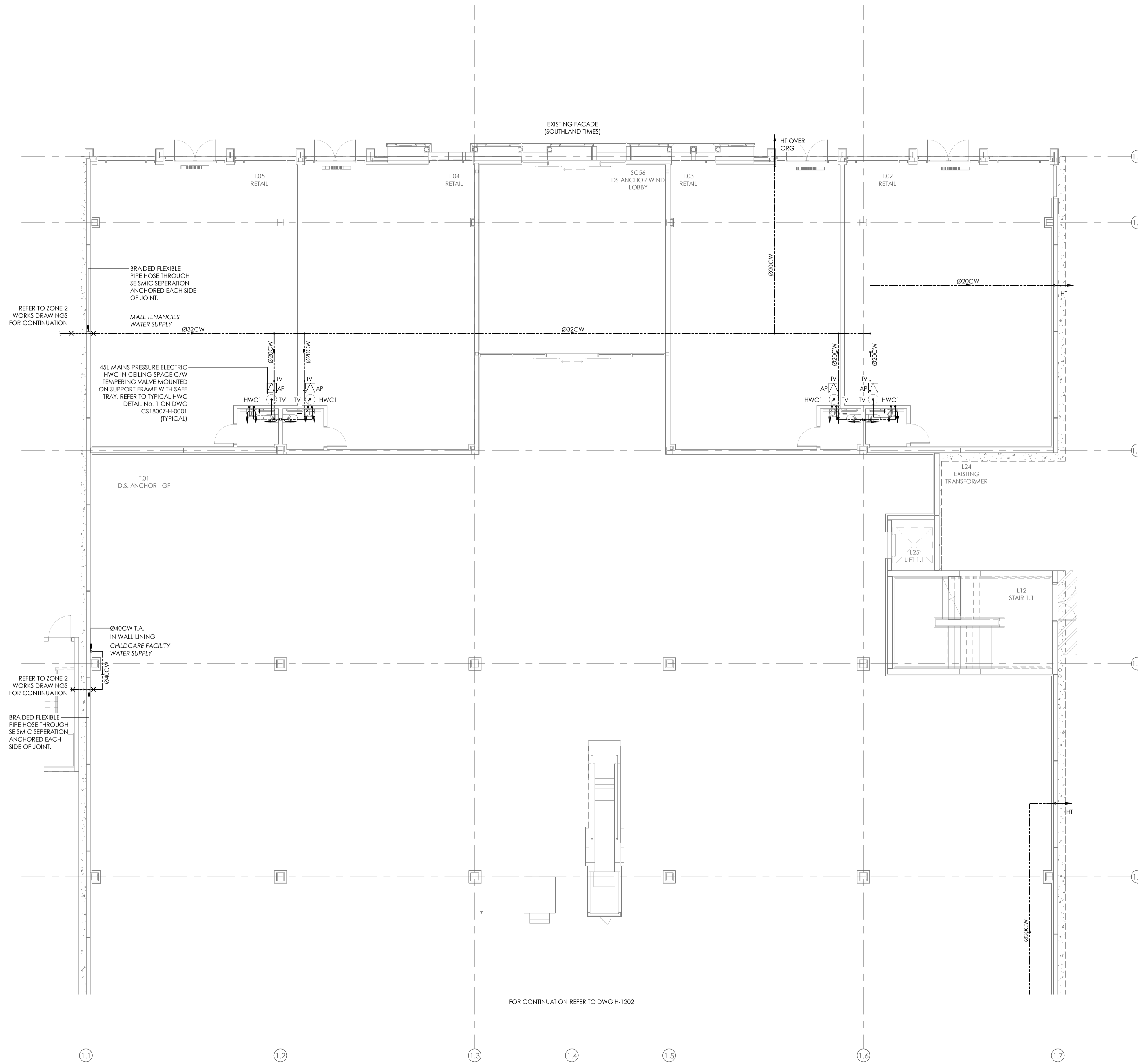
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: CS18007

SHEET No: H-1107

NOTES:

- REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
- REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
- ALL HOSE TAPS TO BE LOCKABLE AND FITTED WITH VACUUM BREAKER VALVES.



D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

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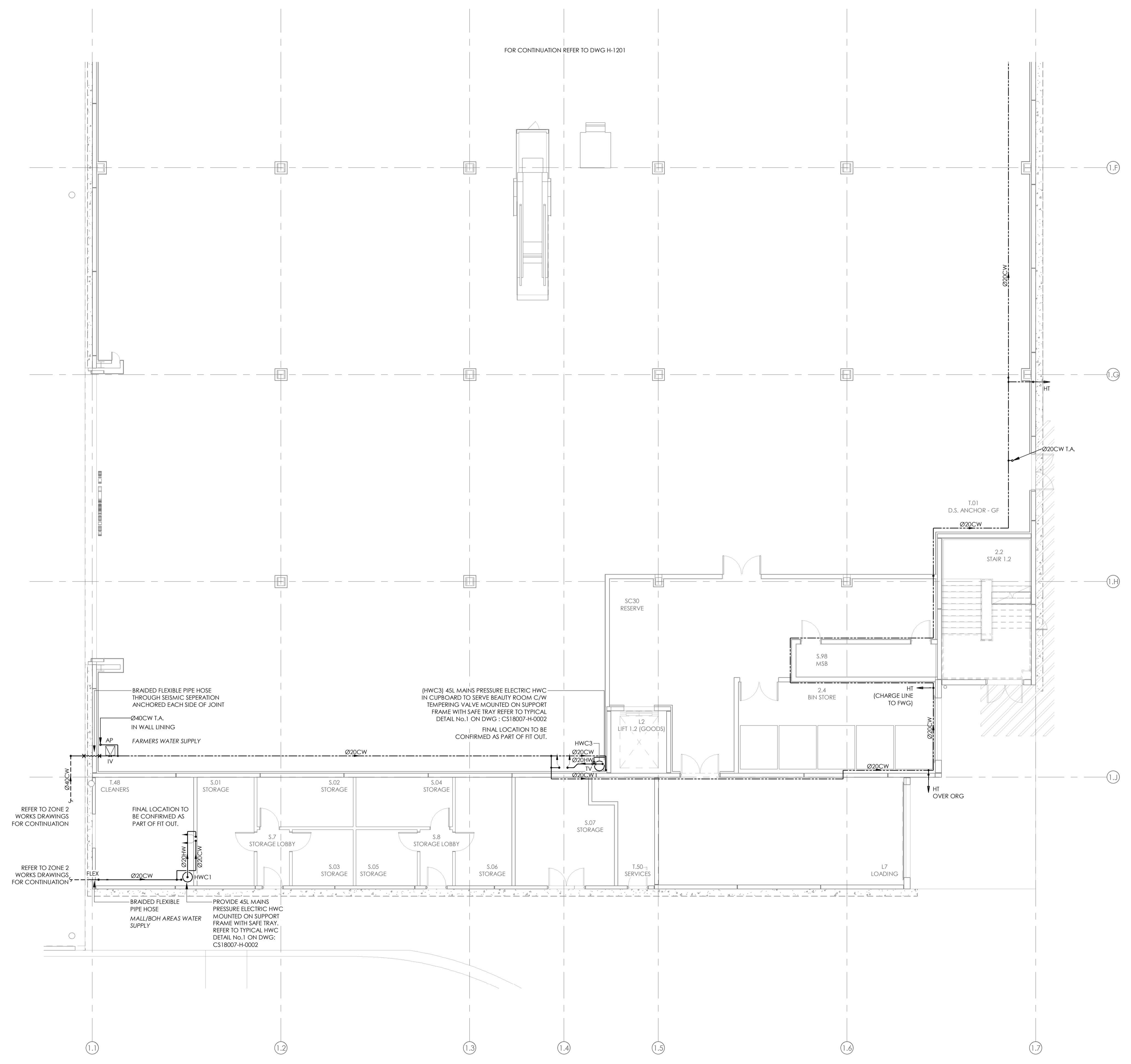
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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DOMESTIC WATER
LAYOUT GROUND
FLOOR PART 1

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1201		

- NOTES:
REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
3. ALL HOSE TAPS TO BE LOCKABLE AND FITTED WITH VACUUM BREAKER VALVES.



ISSUE	AMENDMENT	DATE
E	UPDATED CONSENT ISSUE	24.10.19
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DOMESTIC WATER LAYOUT GROUND FLOOR PART 2

UPDATED CONSENT

DESIGNED: SF	DATE: 24.10.19	ISSUE: E
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: **CS18007-1**

SHEET No: **H-1202**

17 Dec 2019

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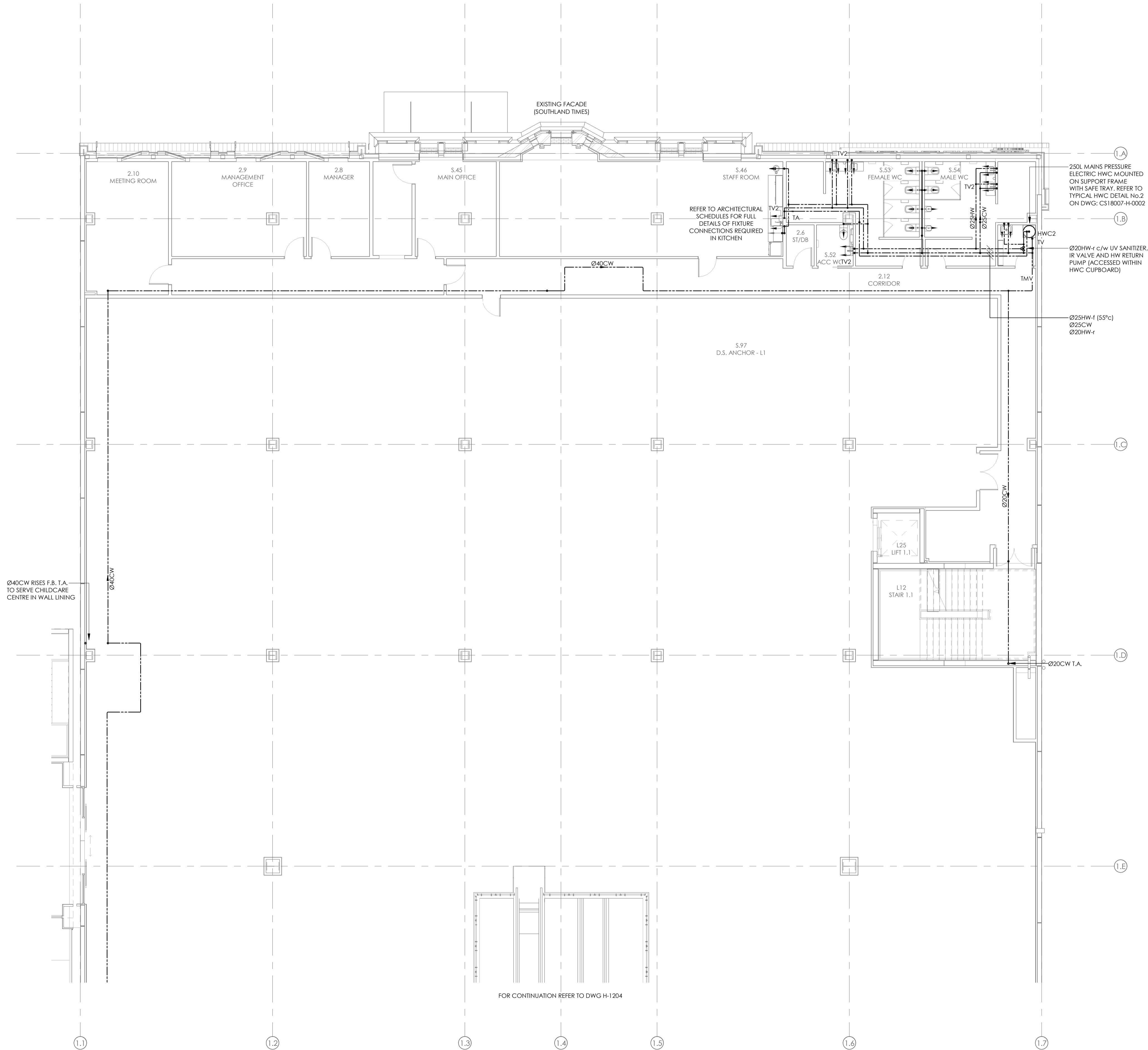
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BUILDING CONSENT NUMBER

2019/1381

NOTES:

- REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
- REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
- 3. ALL HOSE TAPS TO BE FITTED WITH VACUUM BREAKER VALVES.
- 4. LOCAL TEMPERING VALVES TO BE PROVIDED TO SERVE ALL WHB'S.



ISSUE	AMENDMENT	DATE
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DOMESTIC WATER
LAYOUT LEVEL 1 PART 1

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1203		

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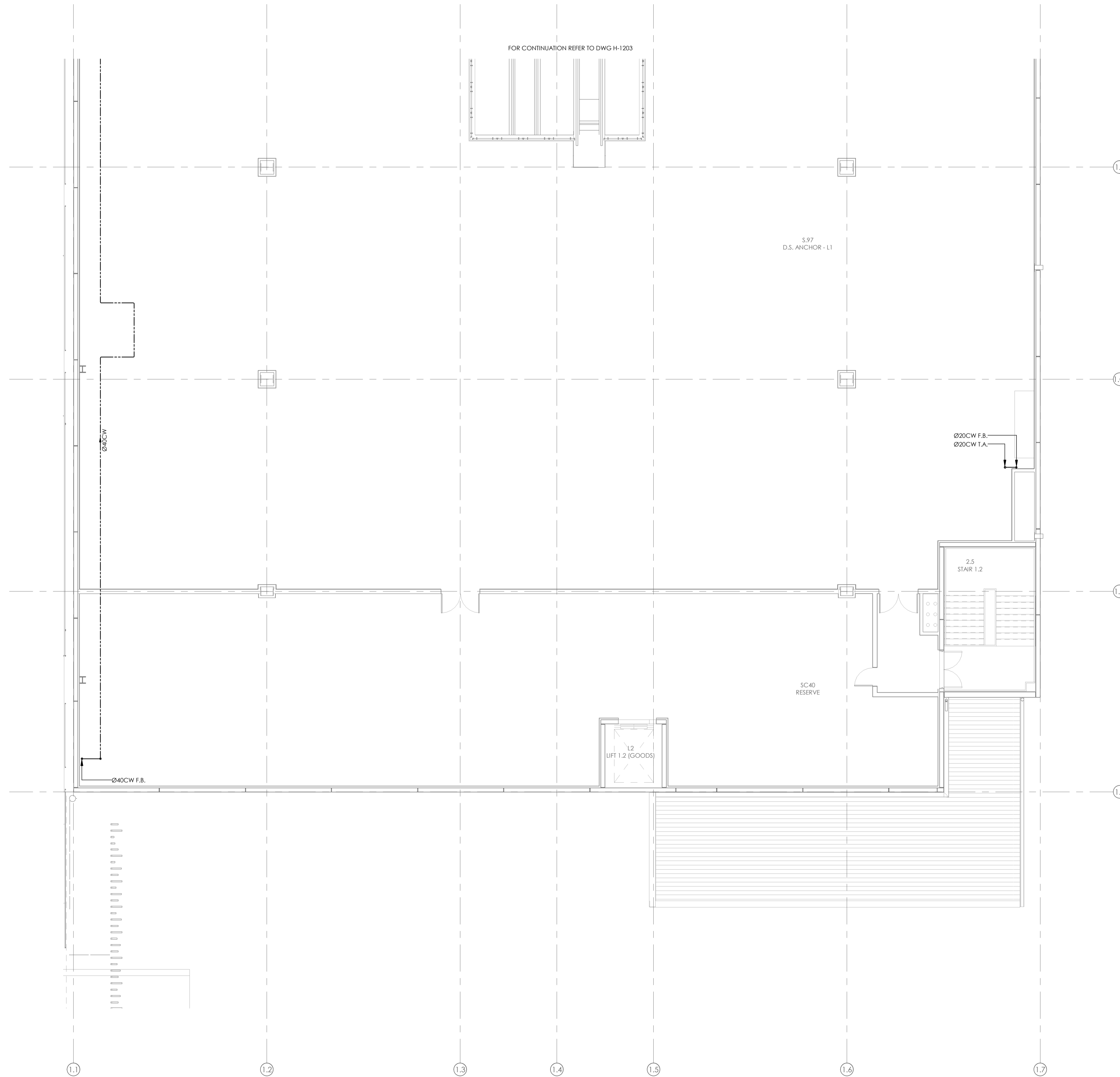
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BUILDING CONSENT NUMBER
2019/1381

NOTES:
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INFORMATION.



E	UPDATED CONSENT ISSUE	24.10.19
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19
ISSUE	AMENDMENT	DATE

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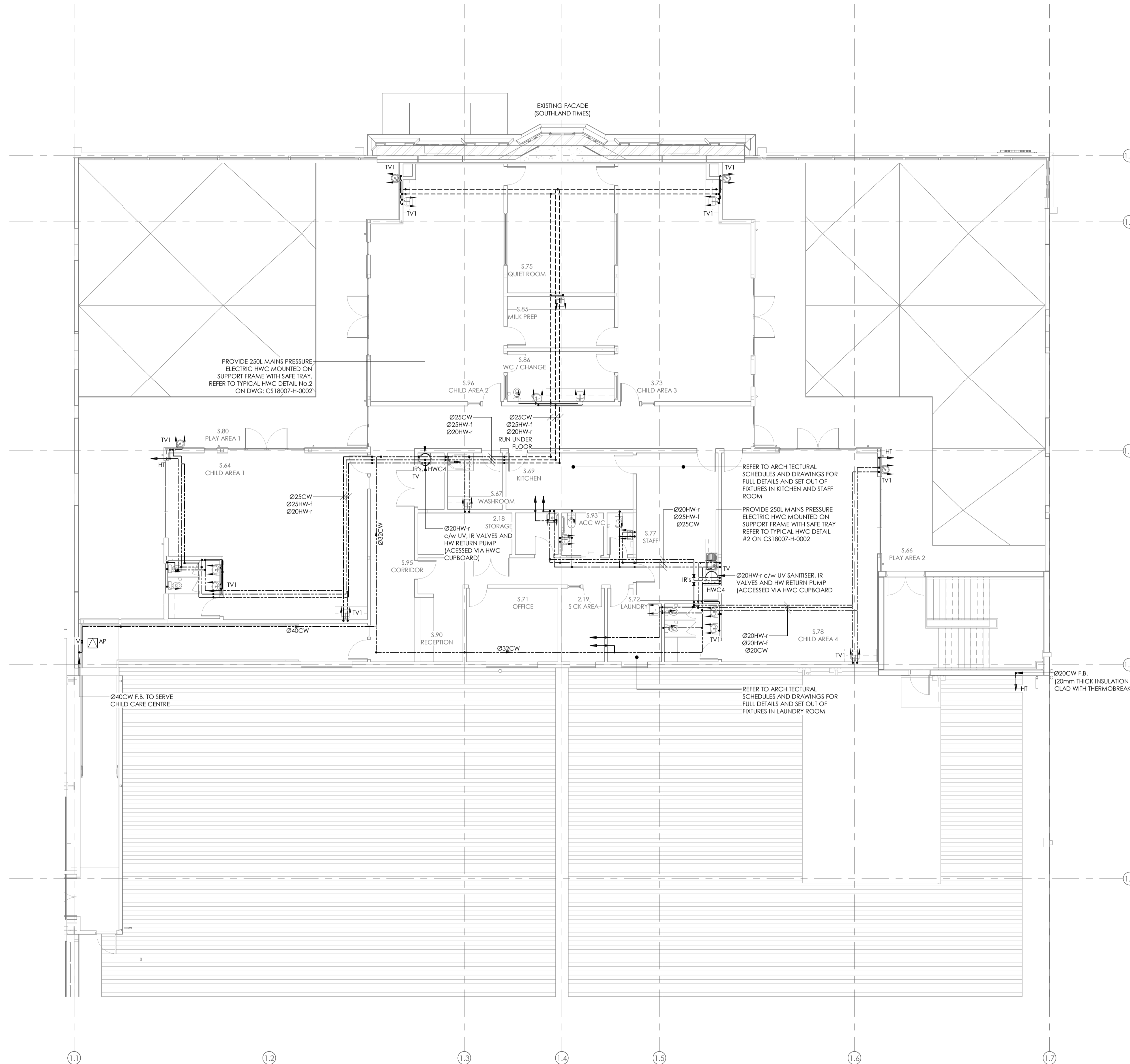
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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1


SHEET TITLE
DOMESTIC WATER
LAYOUT LEVEL 1 PART 2

UPDATED CONSENT			
DESIGNED: SF	DATE: 24.10.19	ISSUE: E	
DRAWN: RC	SCALE @ A1: 1 : 100		
PROJECT No: CS18007-1			
SHEET No: H-1204			



ISSUE	AMENDMENT	DATE
D	CONSENT ISSUE	11.10.19
C	COORDINATION ISSUE	27.09.19
B	50% DETAILED DESIGN	12.07.19
A	DEVELOPED DESIGN ISSUE	14.06.19

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DOMESTIC WATER
LAYOUT LEVEL 2 PART 1

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1205		

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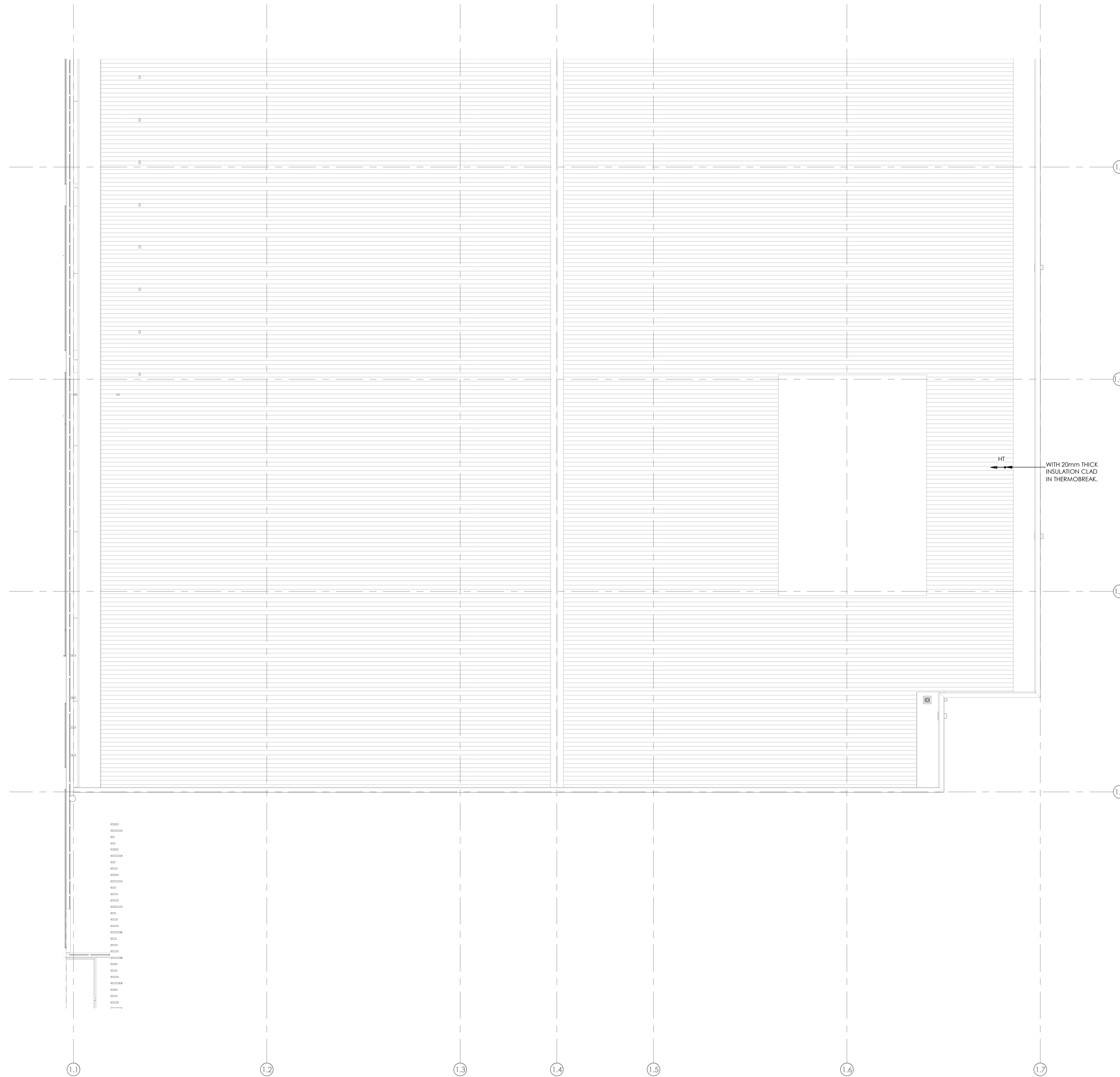
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27/02/2020

BUILDING CONSENT NUMBER

2019/1381

NOTES:

REFER TO DRAWING H001 FOR STANDARD
SYMBOLS LEGEND & DETAILS.
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INFORMATION.



D	UPDATED CONSENT ISSUE	24.10.19
C	CONSENT ISSUE	11.10.19
B	COORDINATION ISSUE	27.09.19
A	DEVELOPED DESIGN ISSUE	14.06.19
ISSUE	AMENDMENT	DATE

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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
DOMESTIC WATER
LAYOUT LEVEL 2 PART 2

UPDATED CONSENT

DESIGNED: SF	DATE: 24.10.19	ISSUE: D
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: CS18007-1

SHEET No: H-1206

17 Dec 2019

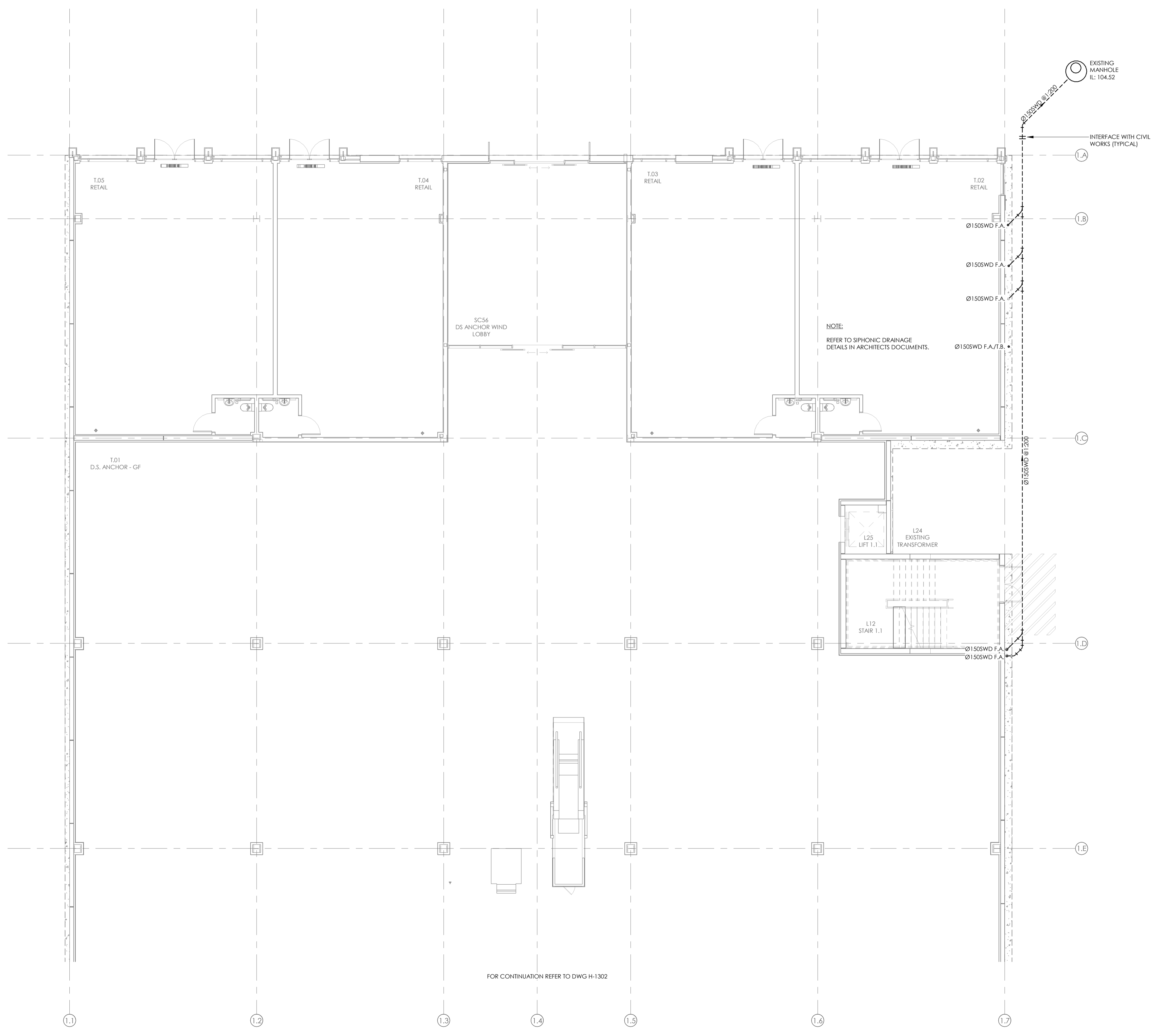
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27/02/2020

BUILDING CONSENT NUMBER
2019/1381

- NOTES:
- REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
 - REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
 - REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER DETAILS OF STORMWATER DRAINAGE WITHIN BUILDING.



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

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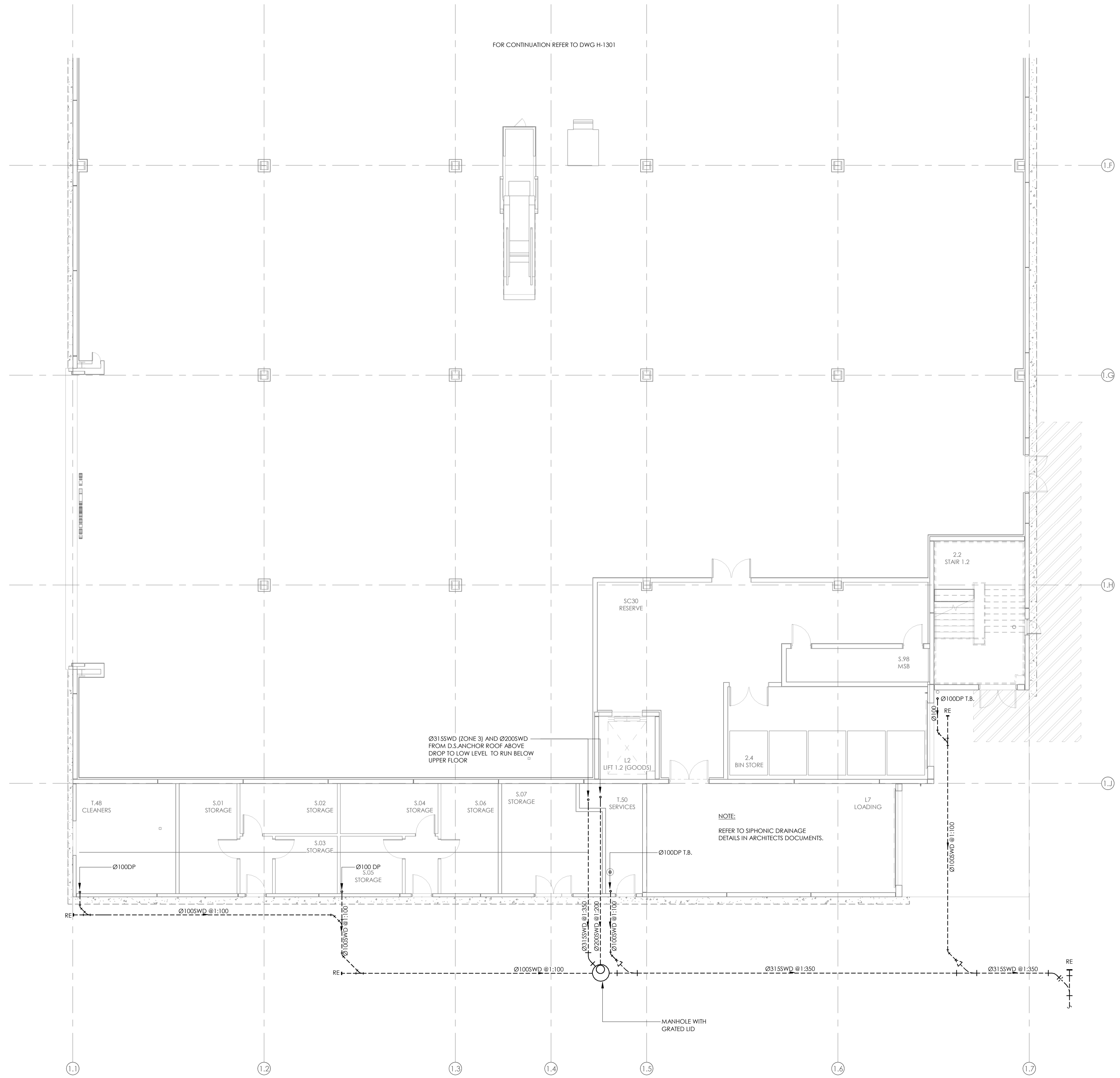
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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
STORMWATER LAYOUT
GROUND FLOOR PART 1

CONSENT		
DESIGNED: KW	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1301		

- NOTES:
- REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
 - REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
 - REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER DETAILS OF STORMWATER DRAINAGE WITHIN BUILDING.



ISSUE	AMENDMENT	DATE
B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19

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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**STORMWATER LAYOUT
GROUND FLOOR PART 2**

CONSENT

DESIGNED: KW	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	

PROJECT No: **CS18007-1**
SHEET No: **H-1302**

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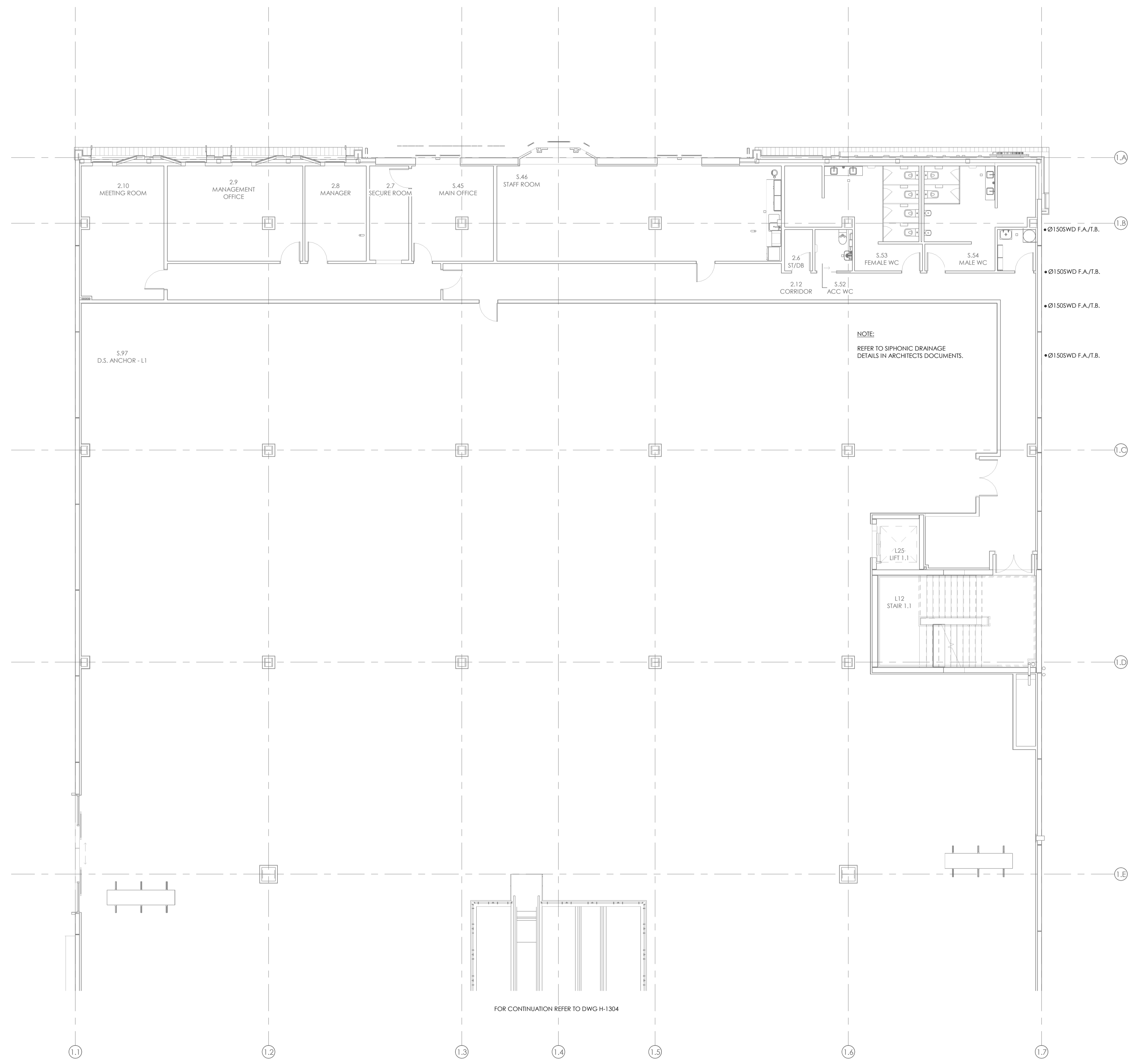
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27/02/2020

BUILDING CONSENT NUMBER
2019/1381

- NOTES:
- REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
 - REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
 - REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER DETAILS OF STORMWATER DRAINAGE WITHIN BUILDING.



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

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PROJECT
**INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1**

SHEET TITLE
**STORMWATER LAYOUT
LEVEL 1 PART 1**

CONSENT		
DESIGNED: KW	DATE: 11.10.19	ISSUE: B
DRAWN: RC	SCALE @ A1: 1 : 100	
PROJECT No: CS18007-1		
SHEET No: H-1303		

17 Dec 2019

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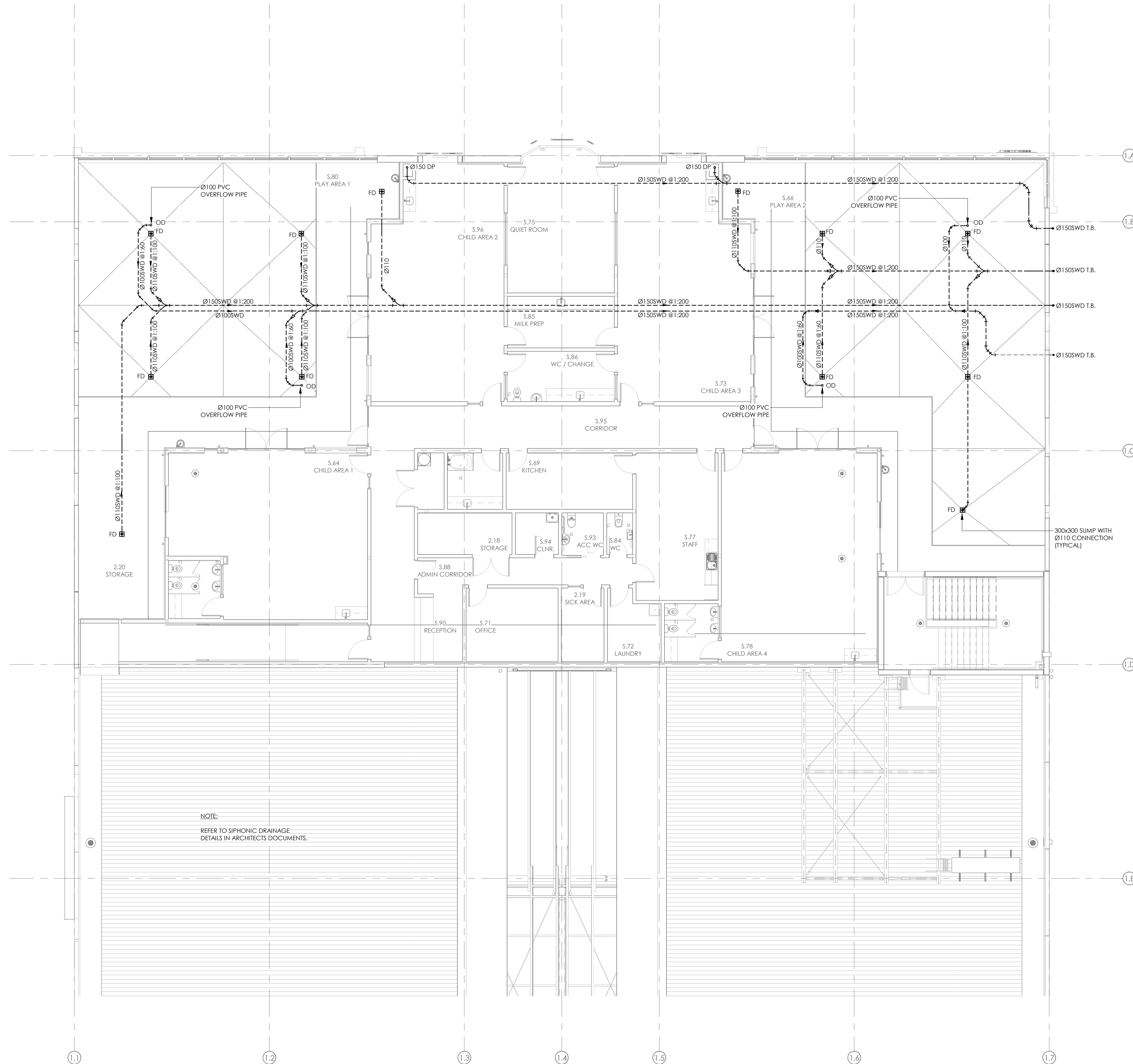
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27/02/2020

BUILDING CONSENT NUMBER

2019/1381

NOTES:

- REFER TO DRAWING H001 FOR STANDARD SYMBOLS LEGEND & DETAILS.
- REFER TO THE SPECIFICATION FOR FURTHER INFORMATION.
- ALL DOWNPIPES AND SUMPS WHICH PASS THROUGH THE CONCRETE FLOOR SLAB SHALL INCORPORATE SUITABLE FIRE TOPPING SOLE TURNS TO MAINTAIN THE FIRE RATING AS DETAILED IN HOLMES FIRE STRATEGY REPORT.
- SEE ARCHITECTS DRAWING / MODEL FOR DETAILS OF CHILDCARE ROOF STORMWATER DRAINAGE.
- REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER DETAILS OF STORMWATER DRAINAGE WITHIN BUILDING.



NOTE:
REFER TO SIPHONIC DRAINAGE
DETAILS IN ARCHITECTS DOCUMENTS.

ISSUE	AMENDMENT	DATE
B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19

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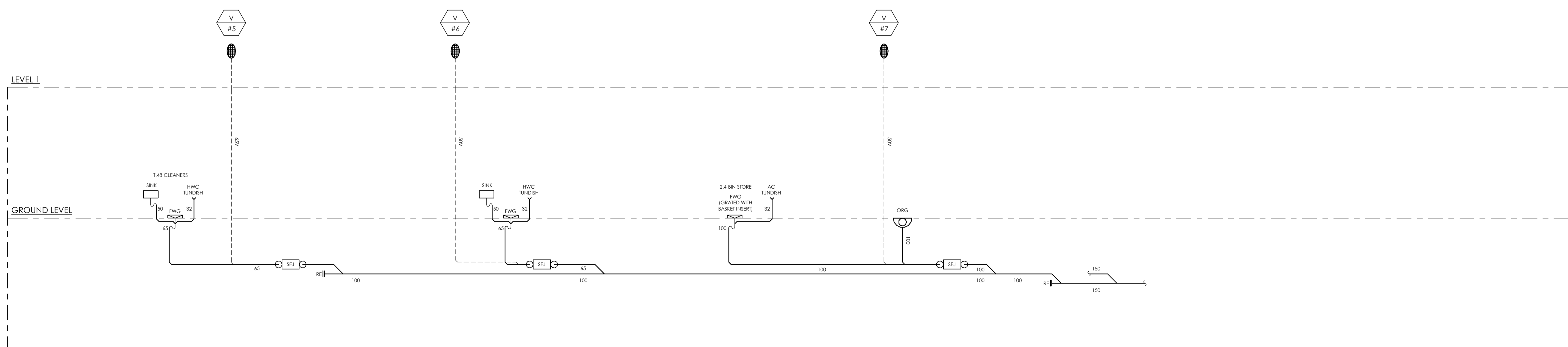
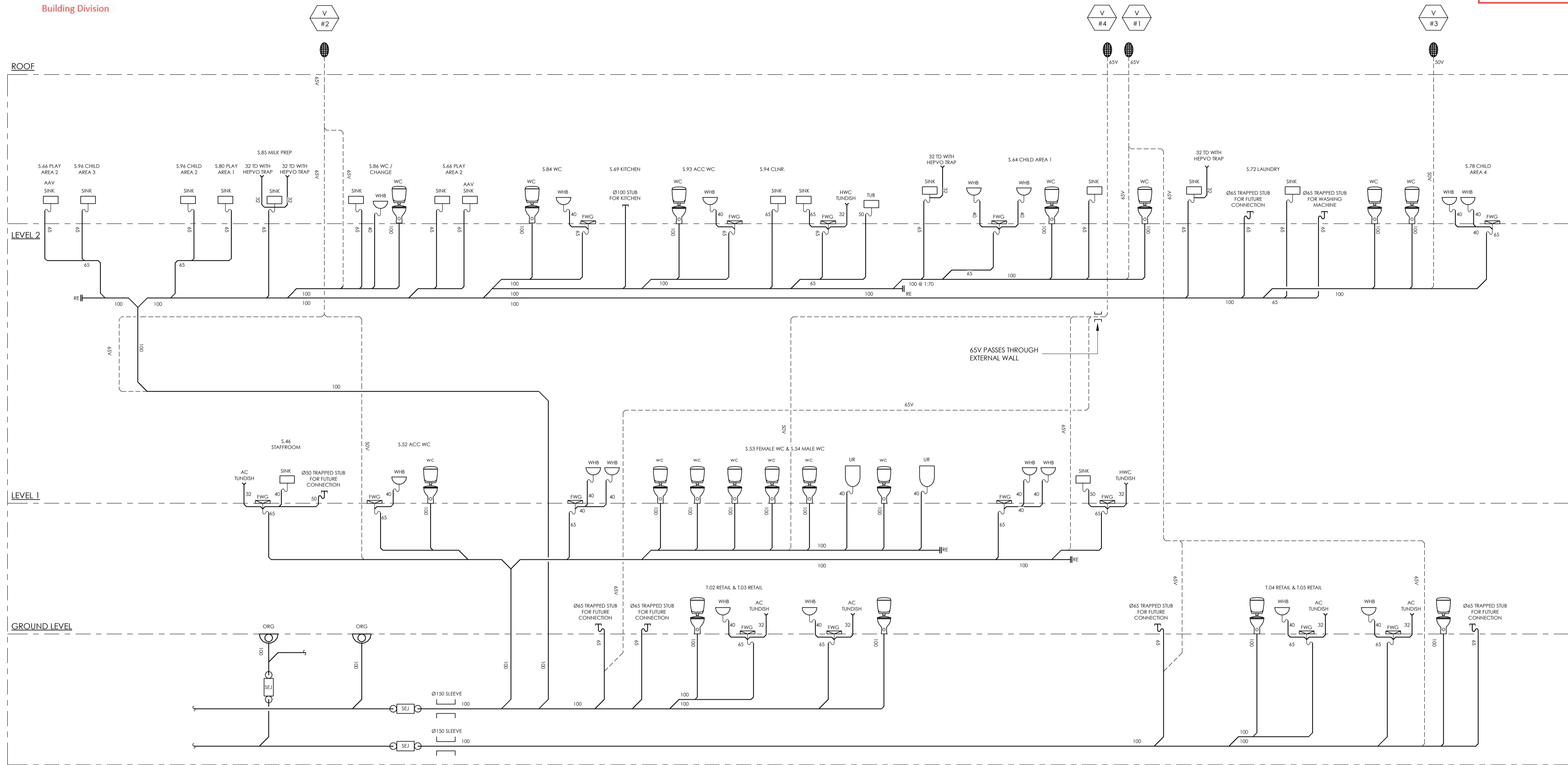
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PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
STORMWATER LAYOUT
LEVEL 2 PART 1

CONSENT			
DESIGNED: KW	DATE: 11.10.19	ISSUE: B	
DRAWN: RC	SCALE @ A1: 1 : 100		
PROJECT No: CS18007-1			
SHEET No: H-1305			



B	CONSENT ISSUE	11.10.19
A	COORDINATION ISSUE	27.09.19
ISSUE	AMENDMENT	DATE

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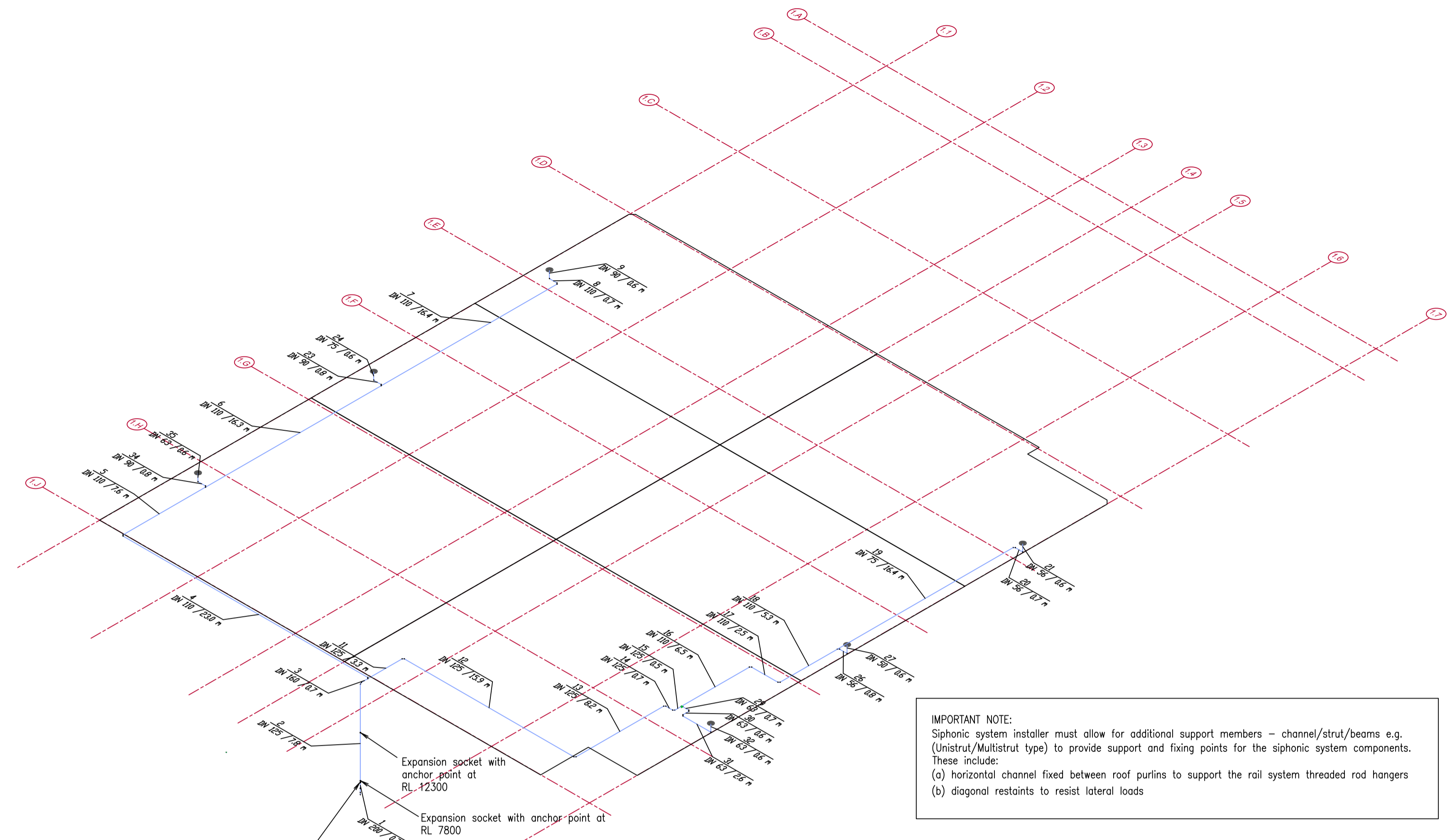
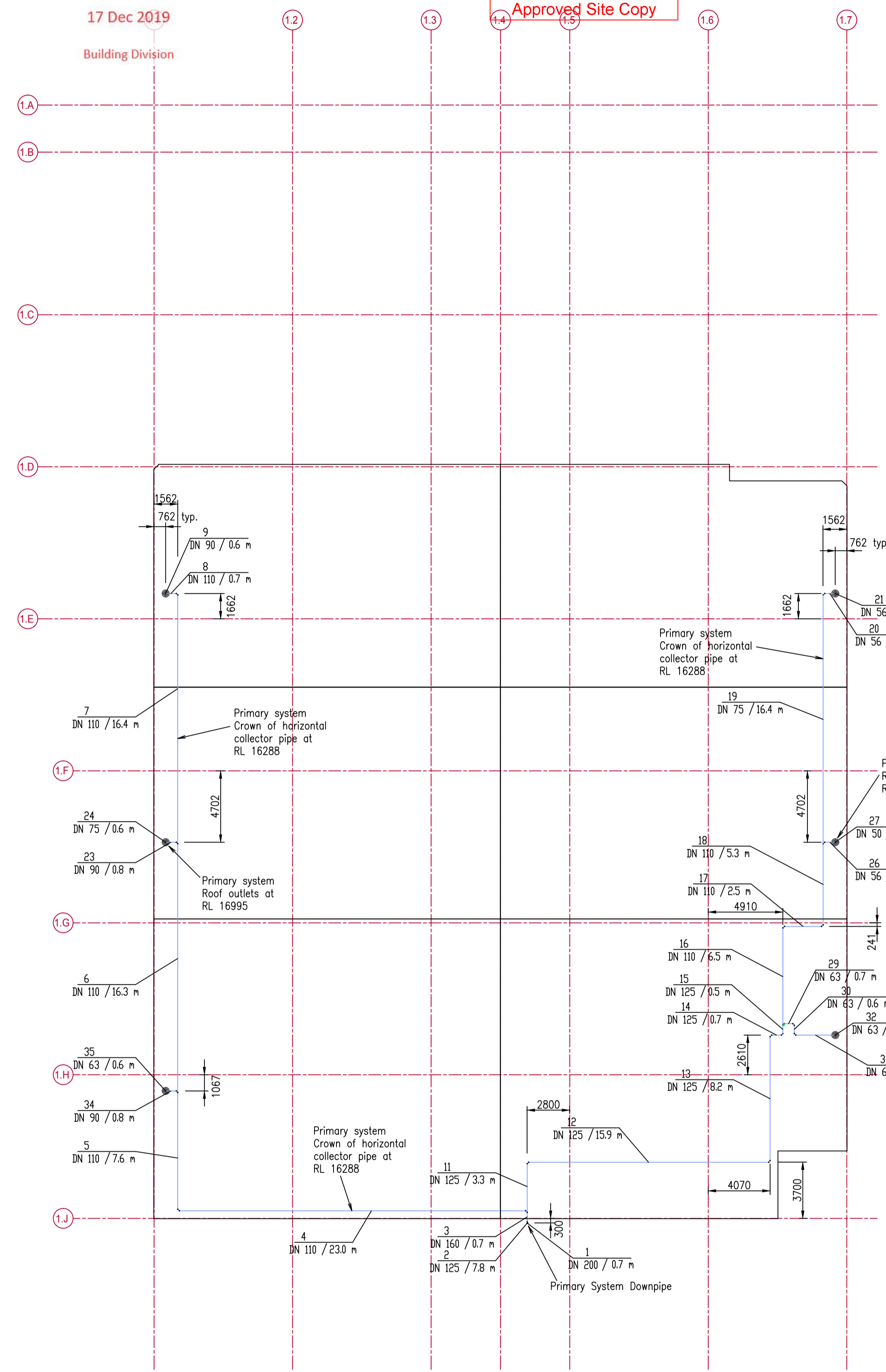


PROJECT
INVERCARGILL CENTRAL
33 ESK STREET
ZONE 1

SHEET TITLE
SANITARY SCHEMATIC

CONSENT		
DESIGNED: SF	DATE: 11.10.19	ISSUE: B
DRAWN: ZL	SCALE @ A1: 1:1	
PROJECT No: CS18007-1		
SHEET No: H-1401		

17 Dec 2019
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IMPORTANT NOTE:
Siphonic system installer must allow for additional support members – channel/strut/beams e.g. (Unistrut/Multistrut type) to provide support and fixing points for the siphonic system components. These include:
(a) horizontal channel fixed between roof purlins to support the rail system threaded rod hangers
(b) diagonal restraints to resist lateral loads

Primary system downpipe.
Siphon break point at RL 7300, upsized from DN125 by two pipe sizes to DN200, thereafter transition to gravity flow and connect to civil drainage via manhole with grated lid

ISOMETRIC VIEW

ZONE 1 FARMERS – PRIMARY SYSTEM PLAN

Installation

- All pipe and fittings joints including the joint to the outlet to be fusion welded by either electrofusion coupler or butt weld.
- All bends throughout the system to be 45 degrees, except for the first bend below the outlet, which must ONLY be 88.5 degrees.
- Design of restraints to resist lateral loads acting on siphonic pipework shall be undertaken by person suitably qualified in the design and application of earthquake actions on buildings. Marley are not suitably competent or qualified to design restraints for non-structural elements.

Maintenance IMPORTANT

- Siphonic roof drainage systems should be maintained regularly to ensure reliable performance.
- Roof outlets and pipework shall be inspected at least twice a year, or more frequently if the accumulation of leaves from trees is likely and similarly for buildings located in industrial areas where likelihood of accumulation of debris is greater.
- Debris around roof outlets e.g. leaves, plastic bags, bird feathers, that may partially or fully obstruct the outlet and shall be thoroughly cleaned away.
- Tailpipe drains shall be examined at the same time and any pipework with excessive debris shall be rodded out.



Index	Change	Date	Name	Project	Roof Drainage – Siphonic	D-No.	Scale
a	For building consent	28-08-19		Invercargill Central		D03a	SS
b							
c					Zone 1 Farmers – Primary System PLAN & ISO		
d							
e					Akasion XL75 outlets		