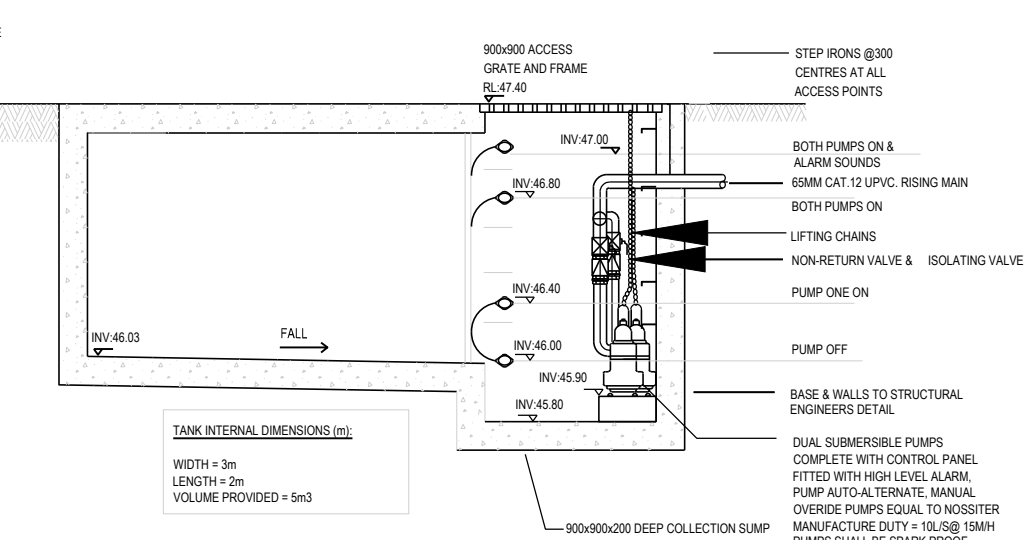
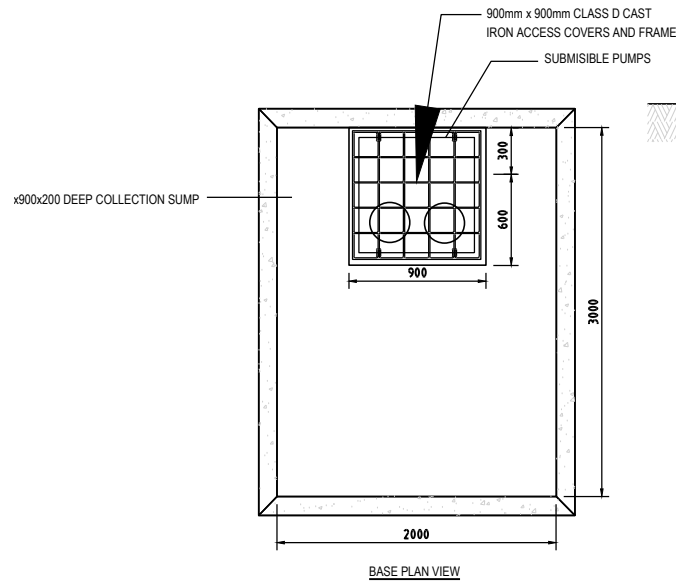
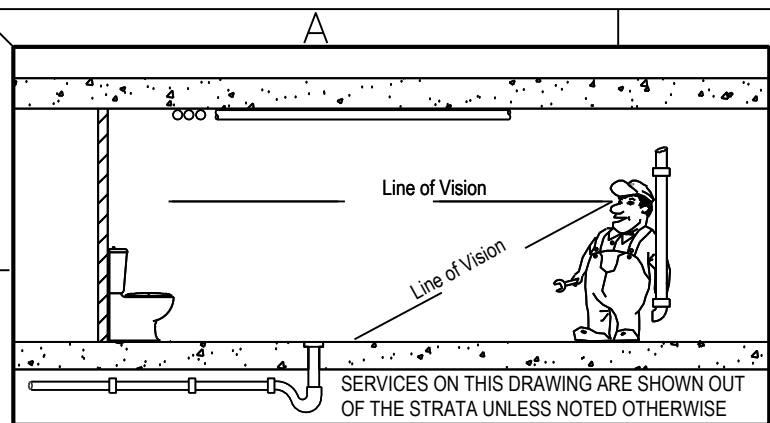
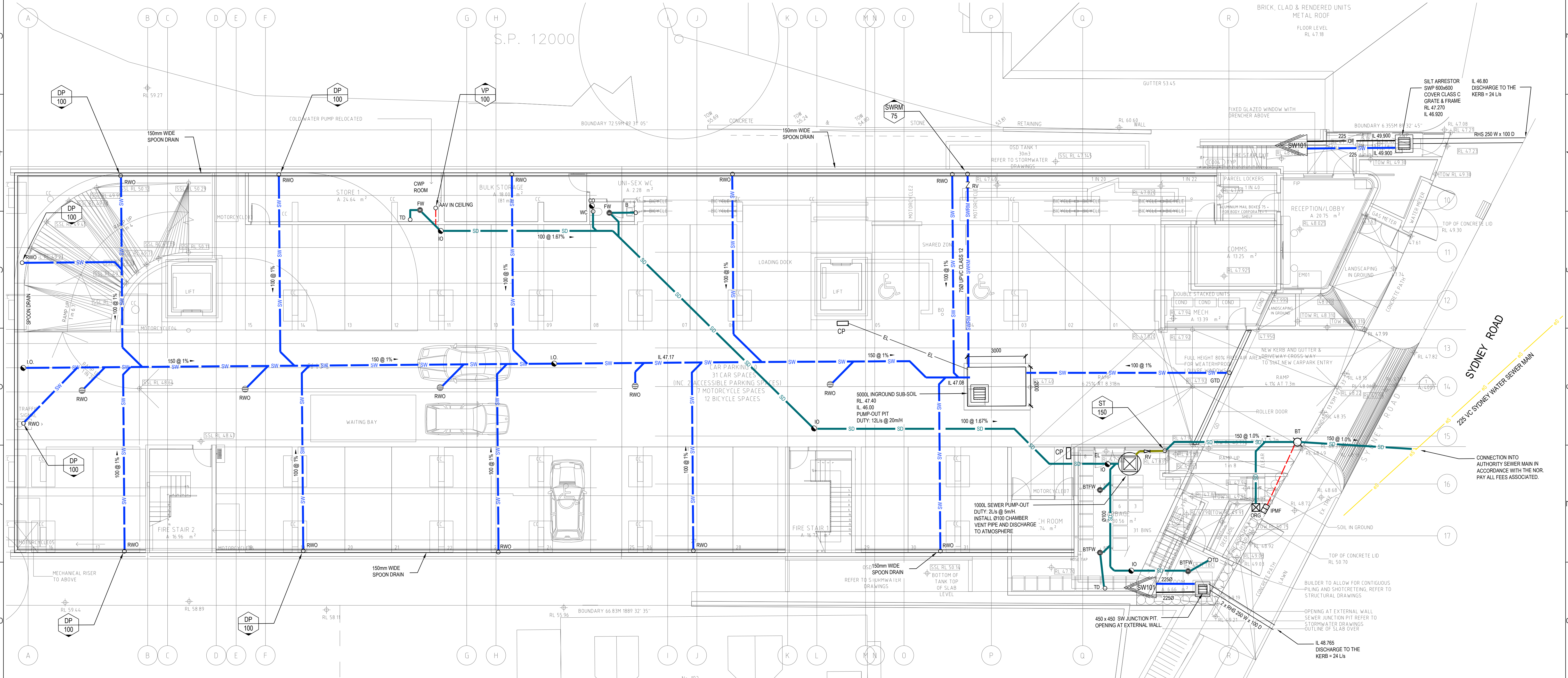




STORMWATER SUB-SOIL PUMP STATION 5m³

NOT TO SCALE



AMENDMENTS/REVISIONS				AMENDMENTS/REVISIONS			
Rev	Description	Initials	Date	Rev	Description	Initials	Date
01	PRELIMINARY ISSUE	BM	07.12.20				
02	TENDER ISSUE	BM	14.12.20				
03	TENDER ISSUE	BM	05.02.21				
04	TENDER ISSUE	JS	16.02.21				
05	TENDER ISSUE	JS	09.03.21				

CLIENT

ARCHITECT

MOSTAGHIM

a L2, 17 Federation rd, newtown nsw 2042
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

CONSULTANT

IGS INTEGRATED GROUP SERVICES

Phone +61 2 8488 4600 Fax +61 2 9475 4588
Address Suite 1.11, 75 Mary St, St Peters, NSW 2044 Australia
Web www.igs.com.au

PROJECT

195-197 SYDNEY ROAD
FAIRLIGHT

DRAWING TITLE

HYDRAULIC SERVICES
GROUND FLOOR
DRAINAGE

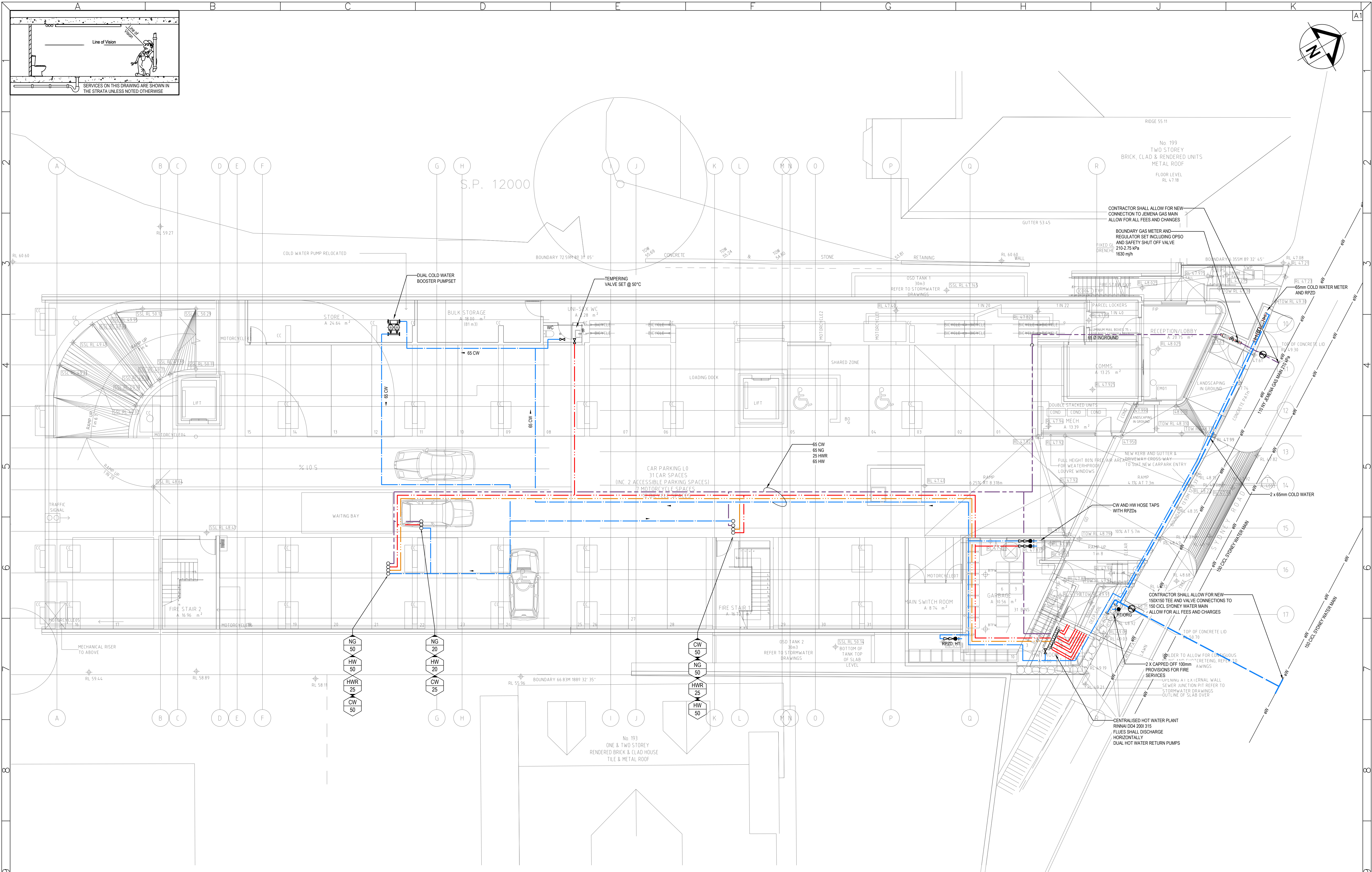
TENDER ISSUE

DRAWN	DESIGNED	CHECKED	SCALE (AT FULL SIZE)	DATE
RH	GM	MC	1:100 @ A1	FEB 21

PROJECT No. EN-N18_89

DRAWING No. H100

REVISION 05



AMENDMENTS/REVISIONS				AMENDMENTS/REVISIONS			
Rev	Description	Initials	Date	Rev	Description	Initials	Date
01	PRELIMINARY ISSUE	BM	07.12.20				
02	TENDER ISSUE	BM	15.12.20				
03	TENDER ISSUE	BM	23.02.21				
04	TENDER ISSUE	JS	09.03.21				

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MOSTAGHIM

a L2, 17 federation rd, newtown nsw 2042
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002

CONSULTANT



IGS INTEGRATED GROUP SERVICES
Phone +61 2 8488 4600 Fax +61 2 9475 4588
Address Suite 1.11, 75 Mary St, St Peters, NSW 2044 Australia
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PROJECT

195-197 SYDNEY ROAD
FAIRLIGHT

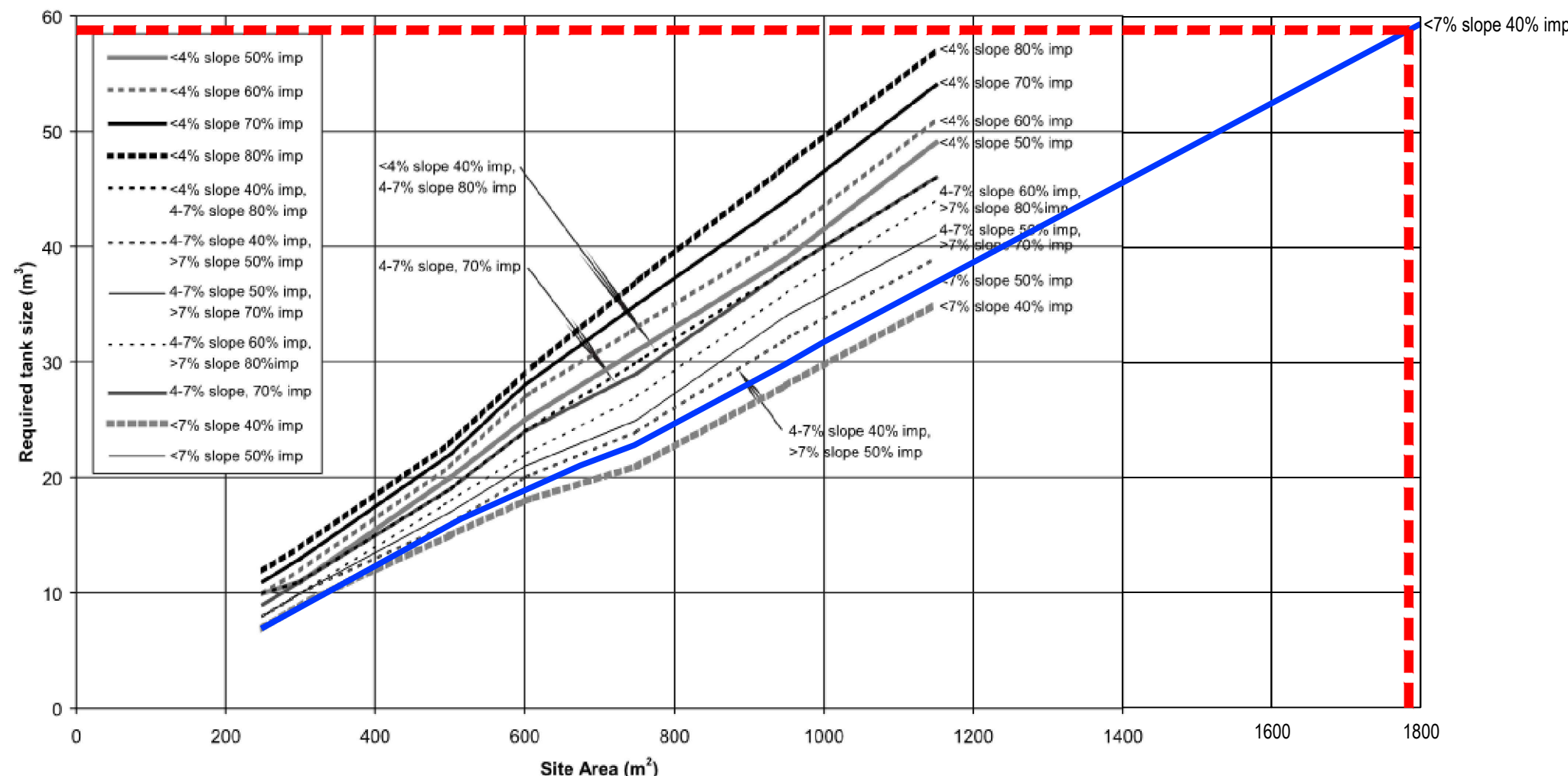
DRAWING TITLE

HYDRAULIC SERVICES
GROUND FLOOR
WATER & GAS

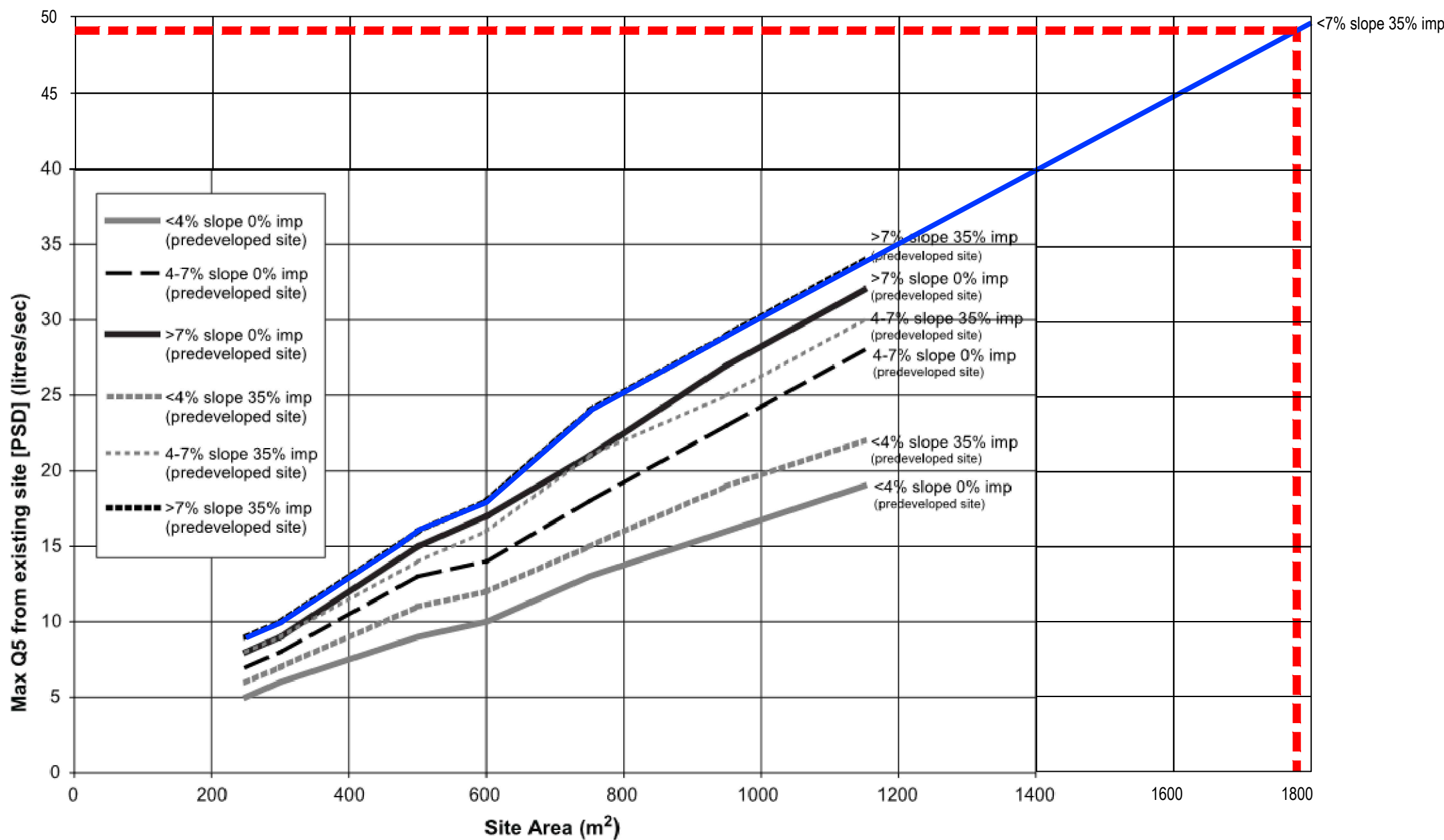
TENDER ISSUE

DRAWN	DESIGNED	CHECKED	SCALE (AT FULL SIZE)	DATE
RH	GM	MC	1:100 @ A1	FEB.21

PROJECT No. **EN-N18_89** DRAWING No. **H200** REVISION **04**



Density subzone 3-6—35% predeveloped impervious area



Permissible site discharge

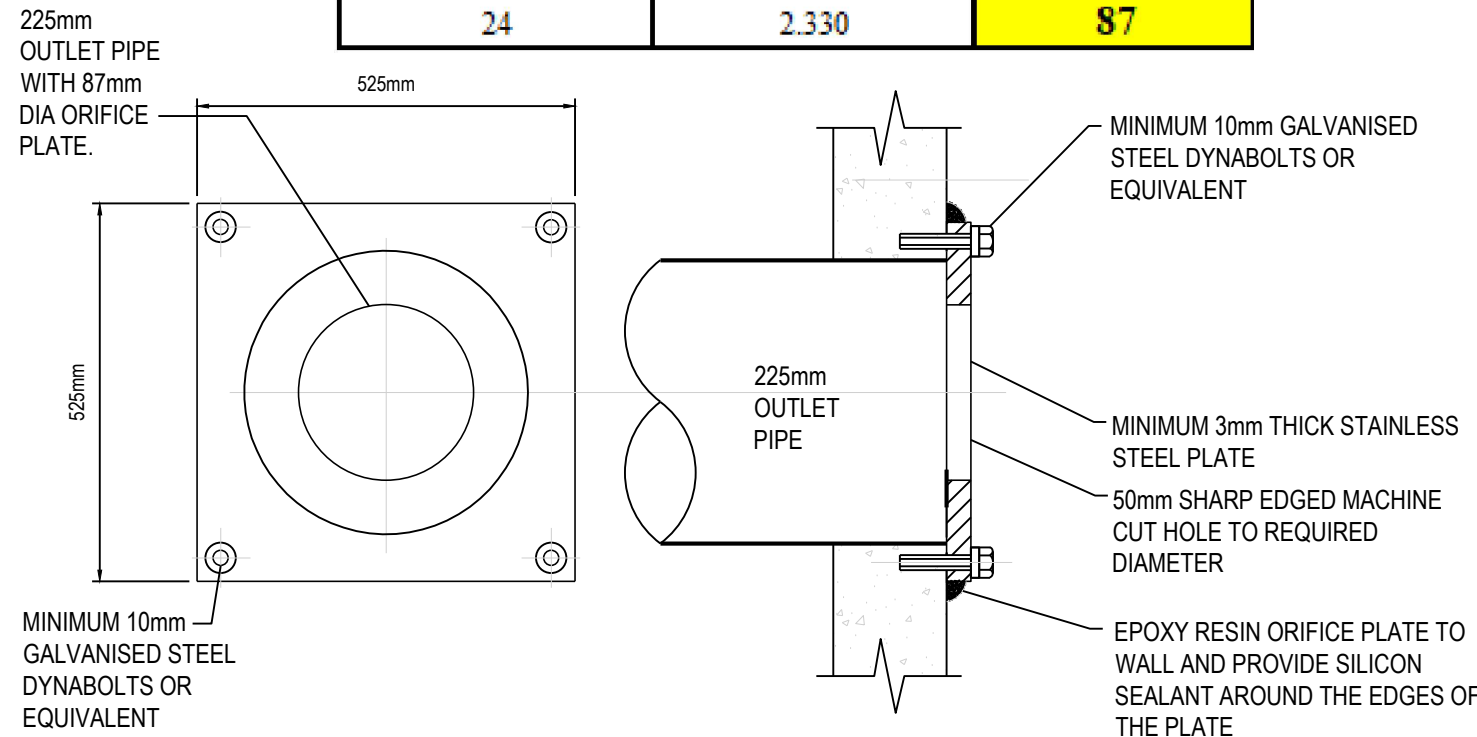
PSD FROM MANLY COUNCIL ON-SITE STORMWATER MANAGEMENT 2003

Orifice Plate Calculation

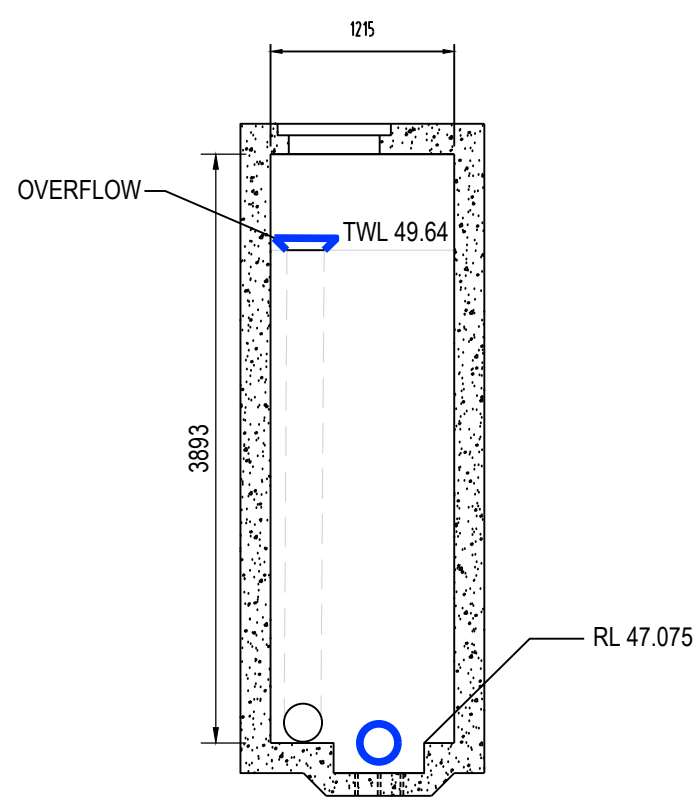
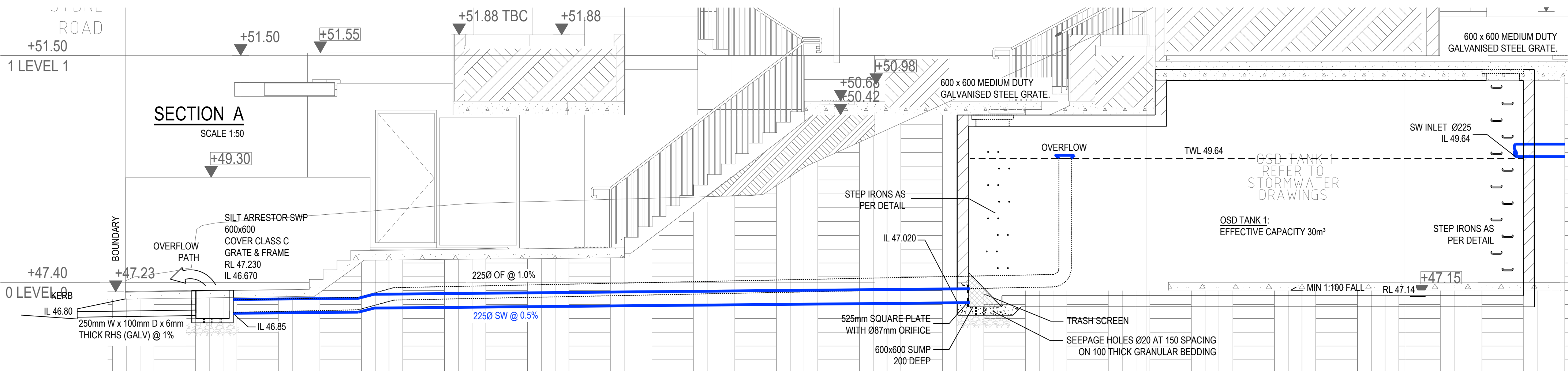
Formula for orifice plate calculation

$$Q = C.A.\sqrt{(2.g.H)}.10^3$$

Design Discharge Rate	Head over orifice Centre	Recommended Diameter
[L/s]	[m]	[mm]
24	2.330	87

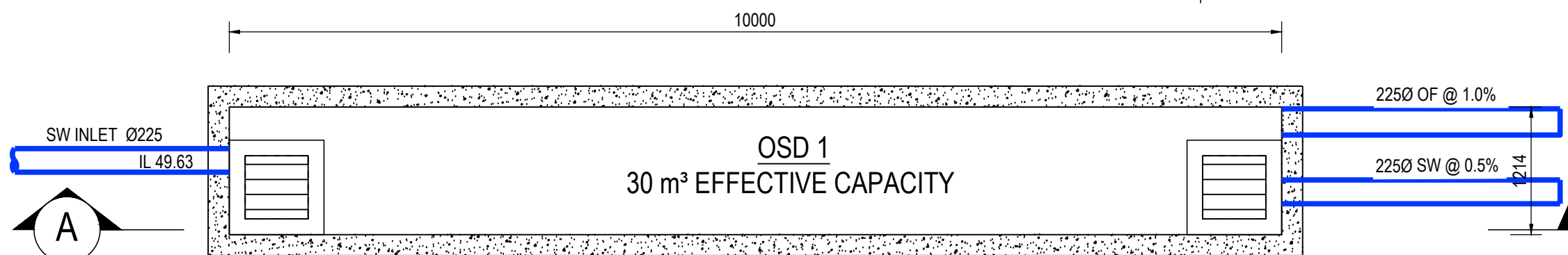


ORIFICE PLATE INSTALLATION
NOT TO SCALE

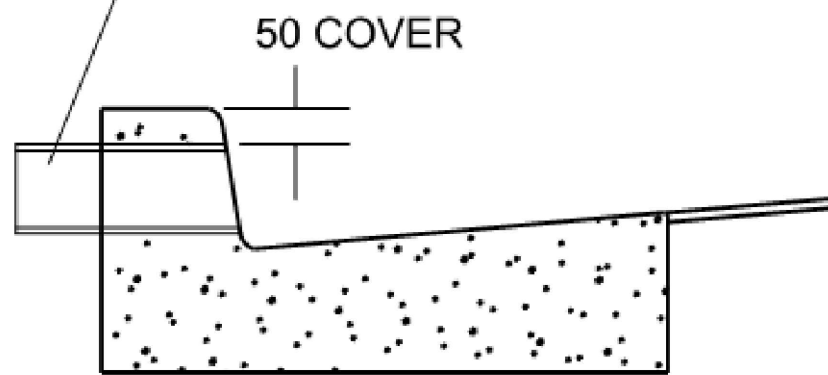


SECTION B
SCALE 1:50

PROPERTY ADDRESS: 195-197 SYDNEY ROAD, FAIRLIGHT
SITE AREA: 1789m²
AVERAGE SLOPE: 19%
PRE-DEVELOPMENT IMPERVIOUS AREA: 695m²
POST-DEVELOPMENT IMPERVIOUS AREA: 147m²
PROPERTY IS LOCATED WITHIN DENSITY SUB-ZONE 3 & STORMWATER CONTROL ZONE 1
PSD = 48 L/s
OSD 1 + OSD 2 SIZE = 60m³



OSD ROOF SLAB PLAN
SCALE 1:50

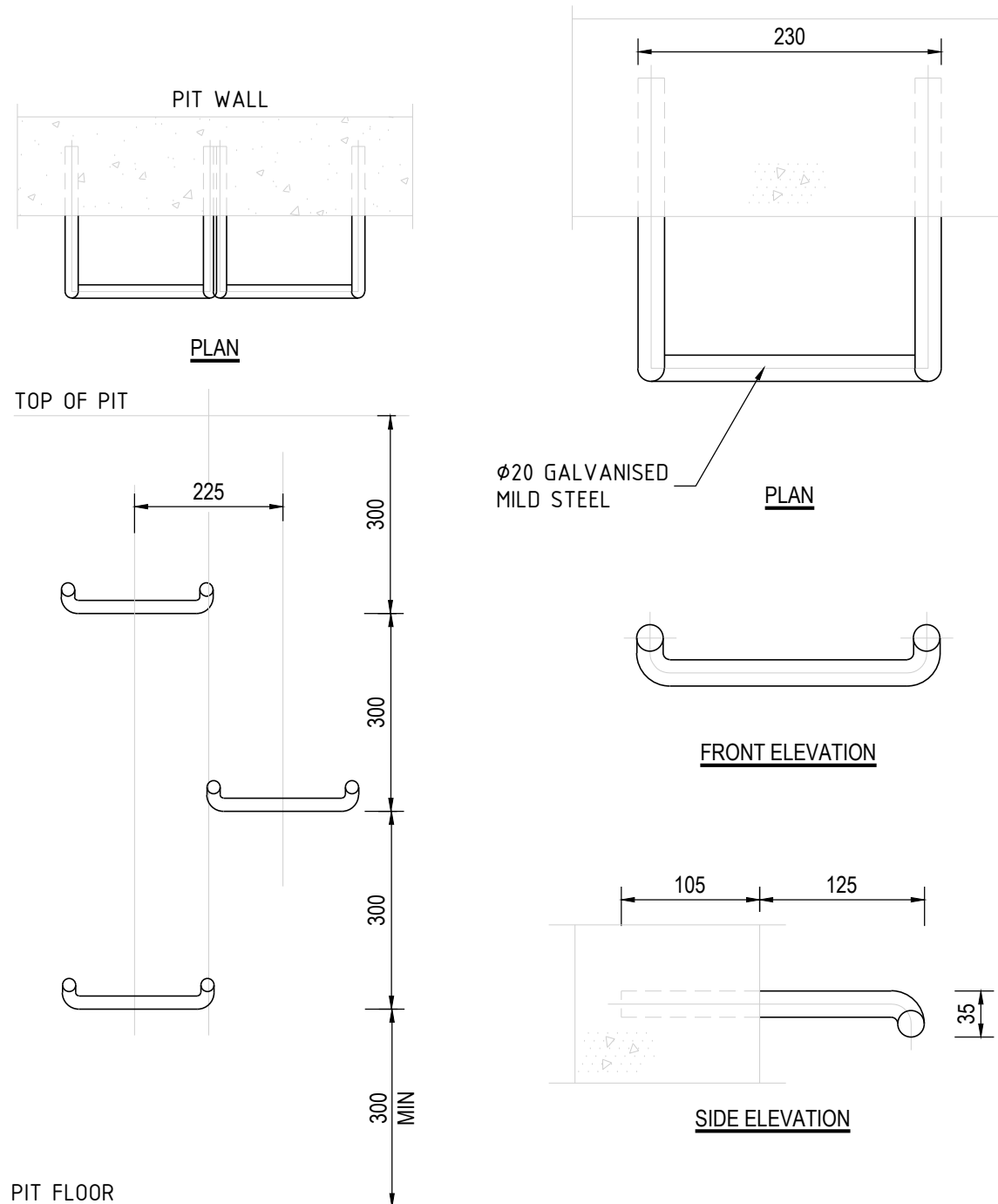


CONNECTION TO KERB DETAIL
N.T.S.



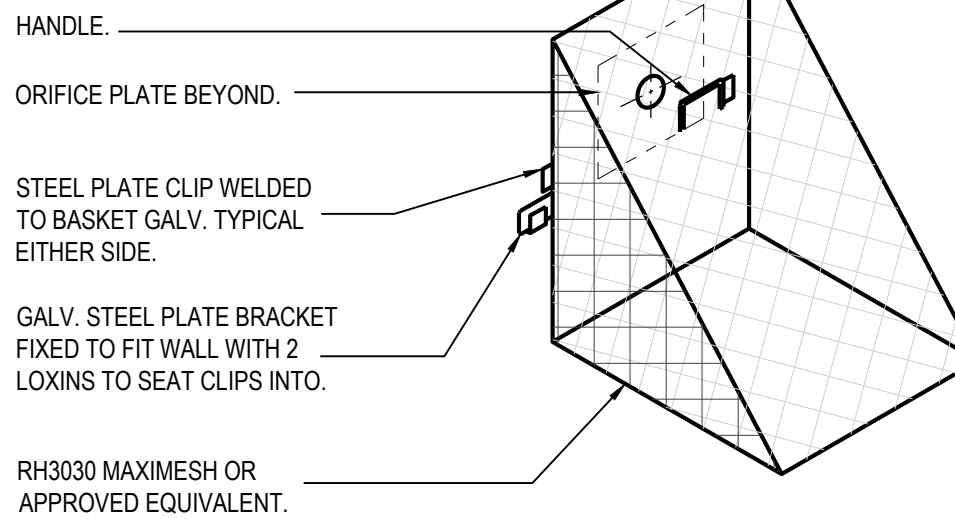
CONFINED SPACE WARNING SIGN TO BE LOCATED AT EACH PIT ENTRANCE OF UNDERGROUND TANK INCLUDING CONTROL PIT.
COLOURS: 'DANGER' AND BACKGROUND WHITE
ELLIPTICAL AREA RED
RECTANGLE CONTAINING ELLIPSE OTHER LETTERING AND BORDER BLACK
MATERIAL: POLYPROPYLENE

CONFINED SPACE WARNING SIGN
NOT TO SCALE



ELEVATION
STEP IRON
PLACEMENT TO PIT WALL
SCALE NTS

STEP IRON DETAIL
SCALE 1:5



TRASH SCREEN DETAIL
NOT TO SCALE

AMENDMENTS/REVISIONS				AMENDMENTS/REVISIONS			
Rev	Description	Initials	Date	Rev	Description	Initials	Date
01	TENDER ISSUE	RH	21.12.20				
02	TENDER ISSUE	RH	22.12.20				
03	TENDER ISSUE	RH	18.01.21				
04	TENDER ISSUE	RH	04.02.21				
05	TENDER ISSUE	JS	09.03.21				



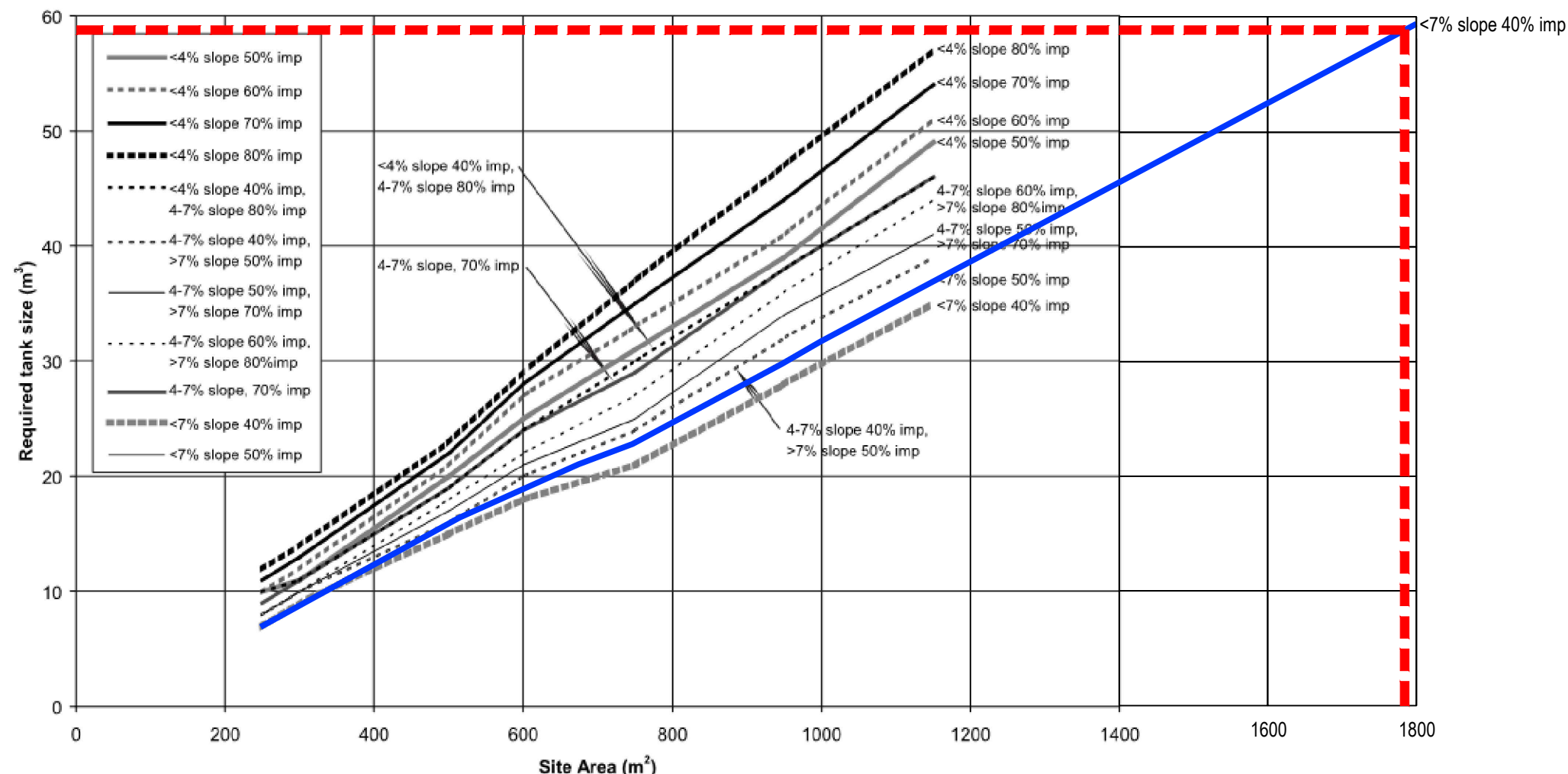
ARCHITECT
MOSTAGHIM
a L2, 17 federation rd, newtown nsw 2042
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002



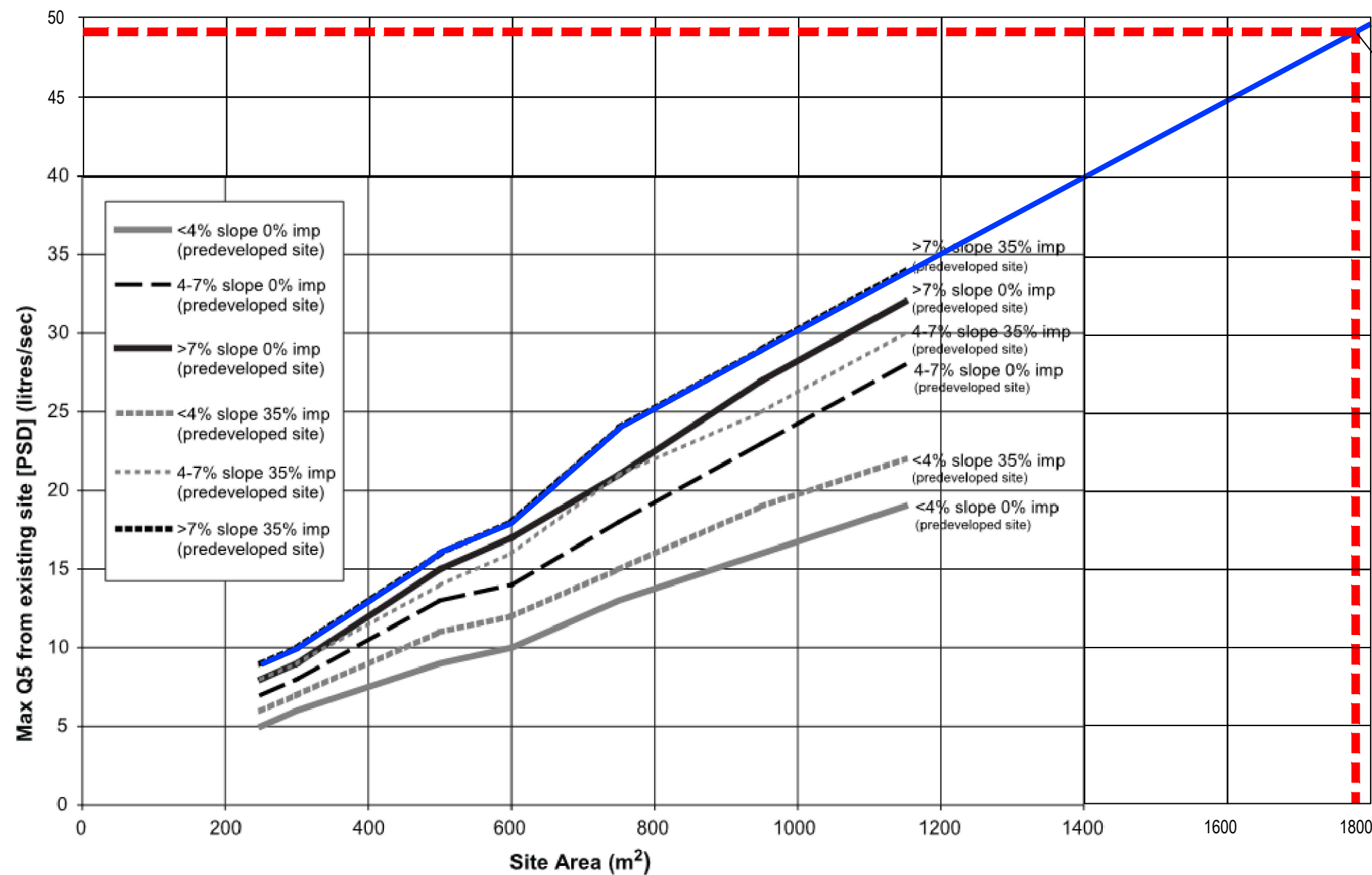
PROJECT
195-197 SYDNEY ROAD
FAIRLIGHT

DRAWING TITLE
STORMWATER SERVICES
DETAIL SHEET
OSD 1

TENDER ISSUE				
DRAWN	DESIGNED	CHECKED	SCALE (AT FULL SIZE)	DATE
RH	GM	MC	1:50 @ A1	FEB 21
PROJECT No.		DRAWING No.		REVISION
EN-N18_89		H500		05



Density subzone 3-6-35% predeveloped impervious area



Permissible site discharge

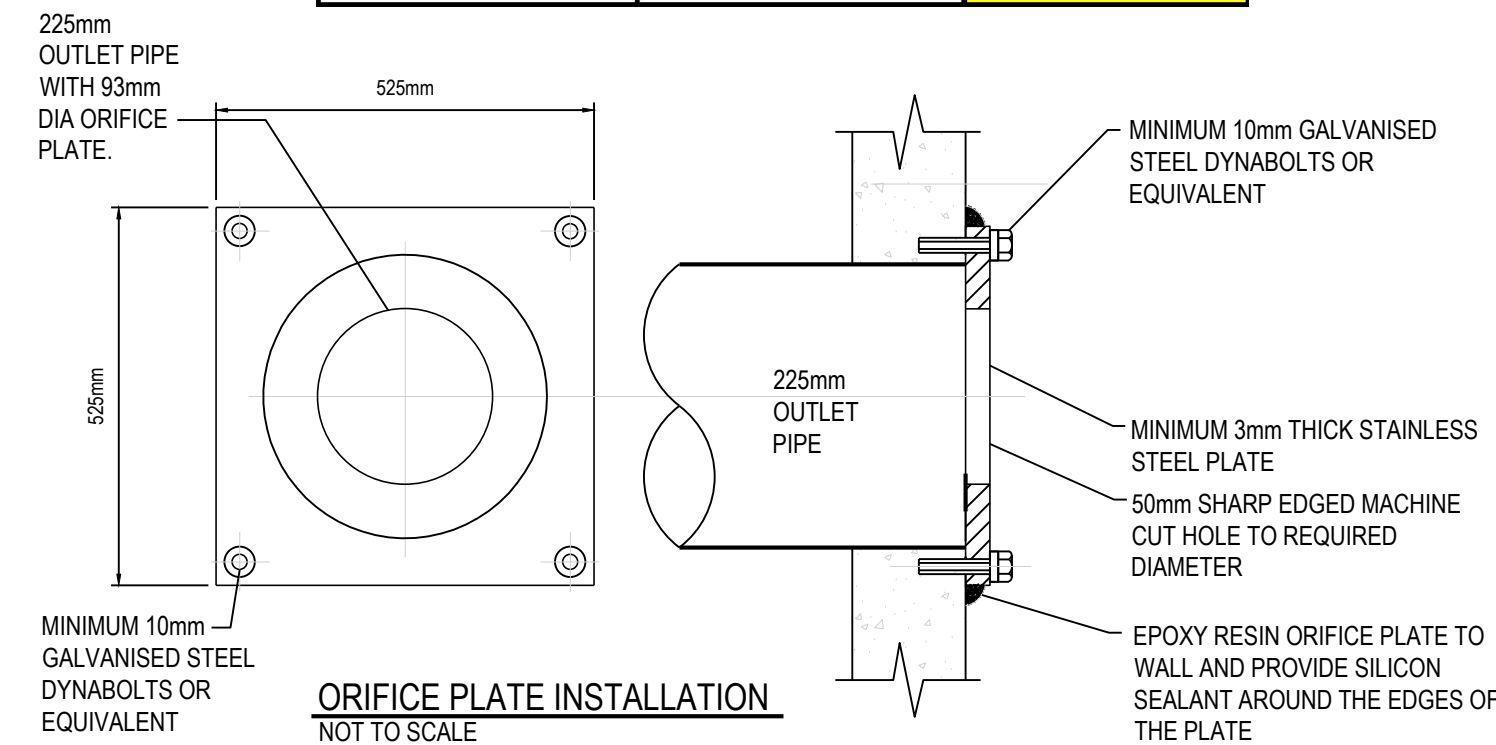
PSD FROM MANLY COUNCIL ON-SITE STORMWATER MANAGEMENT 2003

Orifice Plate Calculation

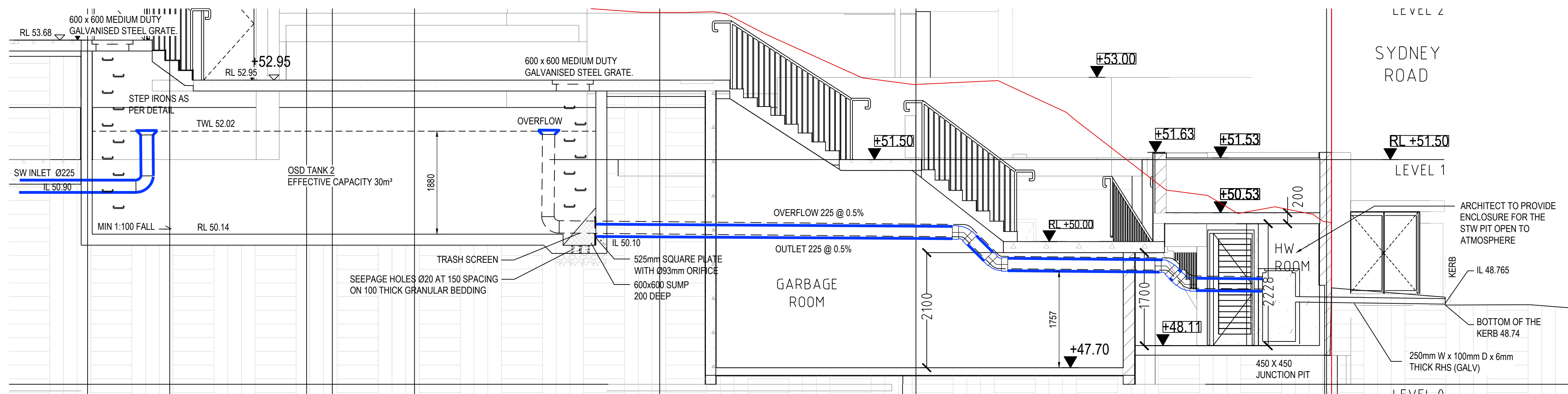
Formula for orifice plate calculation

$$Q = C.A.\sqrt{(2.g.H)}.10^3$$

Design Discharge Rate	Head over orifice Centre	Recommended Diameter
[L/s]	[m]	[mm]
24	1.759	93

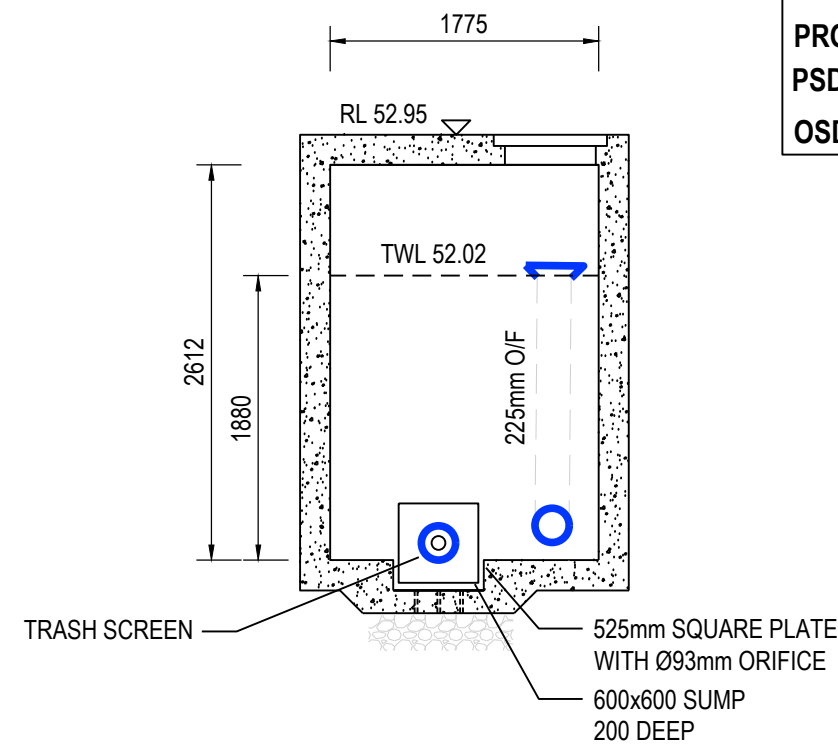


ORIFICE PLATE INSTALLATION
NOT TO SCALE

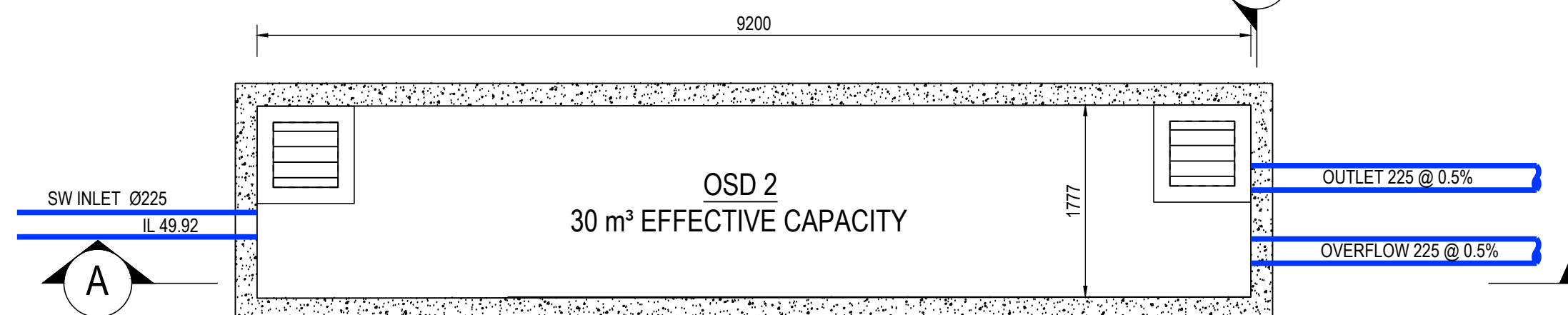


SECTION A
SCALE 1:50

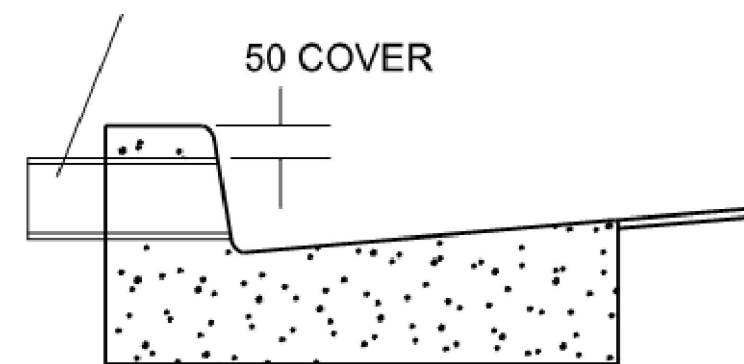
PROPERTY ADDRESS: 195-197 SYDNEY ROAD, FAIRLIGHT
SITE AREA: 1789m²
AVERAGE SLOPE: 19%
PRE-DEVELOPMENT IMPERVIOUS AREA: 695m²
POST-DEVELOPMENT IMPERVIOUS AREA: 147m²
PROPERTY IS LOCATED WITHIN DENSITY SUB-ZONE 3 & STORMWATER CONTROL ZONE 1
PSD = 48 L/s
OSD 1 + OSD 2 SIZE = 60m³



SECTION B
SCALE 1:50



OSD ROOF SLAB PLAN
SCALE 1:50

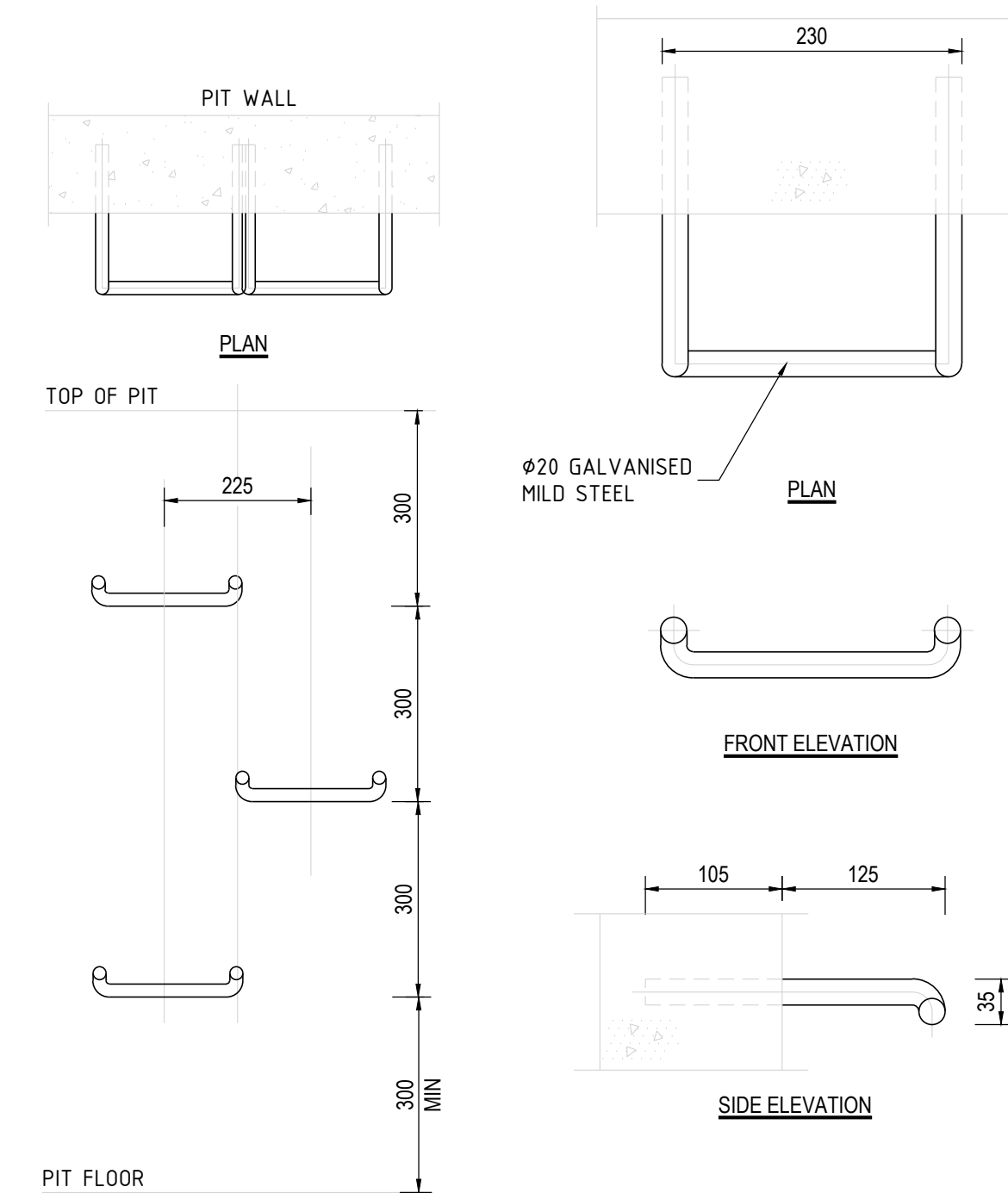


CONNECTION TO KERB DETAIL
N.T.S.



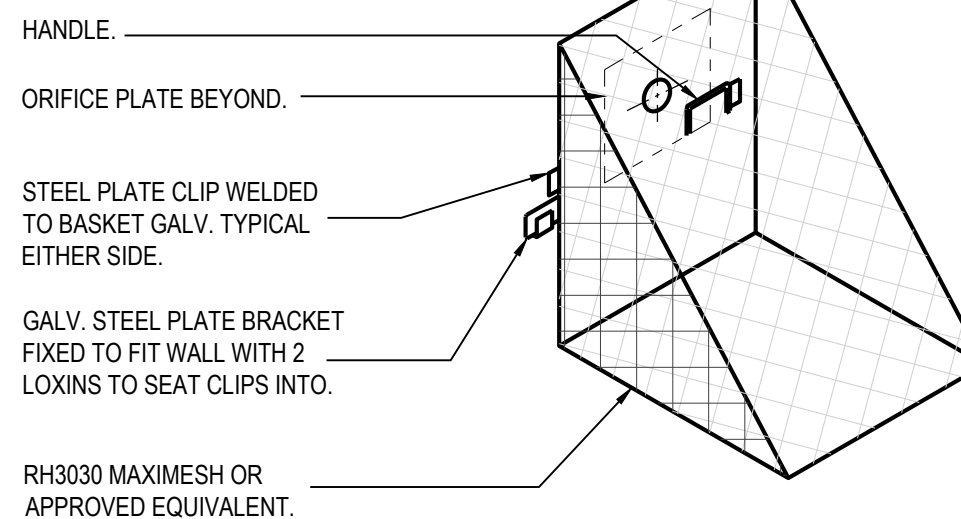
CONFINED SPACE WARNING SIGN TO BE LOCATED AT EACH PIT ENTRANCE OF UNDERGROUND TANK INCLUDING CONTROL PIT.
COLOURS: 'DANGER' AND BACKGROUND WHITE
ELLIPITICAL AREA RED
RECTANGLE CONTAINING ELLIPSE BLACK
OTHER LETTERING AND BORDER BLACK
MATERIAL: POLYPROPYLENE

CONFINED SPACE WARNING SIGN
NOT TO SCALE



STEP IRON
PLACEMENT TO PIT WALL
SCALE NTS

STEP IRON DETAIL
SCALE 1:5



TRASH SCREEN DETAIL
NOT TO SCALE

AMENDMENTS/REVISIONS				AMENDMENTS/REVISIONS			
Rev	Description	Initials	Date	Rev	Description	Initials	Date
01	TENDER ISSUE	RH	21.12.20				
02	TENDER ISSUE	RH	22.12.20				
03	TENDER ISSUE	RH	05.02.21				
04	TENDER ISSUE	JS	09.03.21				



ARCHITECT
MOSTAGHIM
a L2, 17 Federation rd, newtown nsw 2042
w mostaghim.com.au
e info@mostaghim.com.au
p 02 9557 2002



PROJECT
195-197 SYDNEY ROAD
FAIRLIGHT

DRAWING TITLE
STORMWATER SERVICES
DETAIL SHEET
OSD 2

TENDER ISSUE				
DRAWN	DESIGNED	CHECKED	SCALE (AT FULL SIZE)	DATE
RH	GM	MC	1:50 @ A1	DEC. 20
PROJECT No.		DRAWING No.		REVISION
EN-N18_89		H501		04