

KEY PLAN
N.T.S.

200mmØ WATERMAIN TABLE A

STATION	FINISHED GRADE	TOP W/M	ITEM
0+000	81.1	78.700	200mmØ CAP AND THRUST BLOCK
0+001.5	81.08	78.680	W3 CHAMBER AND VALVE
0+017.5	81.05	78.65±	300mm X 200mm CROSS
0+025.5	81.00	78.600	200mm VALVE AND BOX
0+040	81.10	78.700	TOP OF PIPE
0+043.0	81.00	78.600	22½° HORIZONTAL BEND
0+060	81.26	78.860	TOP OF PIPE
0+069.28	81.40	79.000	200mm x 200mm TEE
0+075.28	81.40	79.000	200mm VALVE AND BOX
0+080	81.33	78.930	TOP OF PIPE
0+100	81.31	78.910	TOP OF PIPE
0+101.36	81.31	78.910	22½° HORIZONTAL BEND
0+103.18	81.29	78.890	45° HORIZONTAL BEND
0+113.92	81.28	78.880	FIRE HYDRANT
0+120	81.41	79.010	TOP OF PIPE
0+127.54	81.25	78.850	22½° HORIZONTAL BEND
0+140	81.42	79.020	45° HORIZONTAL BEND
0+142.33	81.43	79.030	45° HORIZONTAL BEND
0+154.52	81.41	79.010	200mm VALVE AND BOX
0+160	81.40	79.000	TOP OF PIPE
0+178.68	81.46	79.060	45° HORIZONTAL BEND
0+183.64	81.48	79.080	FIRE HYDRANT
0+188.32	81.44	79.040	45° HORIZONTAL BEND
0+197.06	81.35	78.950	200mm x 200mm TEE
0+212.37	81.27	78.870	200mm VALVE AND BOX
0+219.4	81.50	79.100	200mm x 200mm TEE

200mmØ WATERMAIN TABLE B

STATION	FINISHED GRADE	TOP W/M	ITEM
0+000	81.35	78.950	200mm x 200mm TEE
0+006	81.52	79.120	200mm VALVE AND BOX
0+020	81.91	79.510	TOP OF PIPE
0+027.69	81.87	79.470	200mm x 150mm TEE
0+030	81.63	79.230	TOP OF PIPE
0+036.9	81.50	79.100	W3 CHAMBER AND VALVE
0+040.7	81.32	78.920	5° LONG BEND
0+043.7	81.21	78.810	11¼° HORIZONTAL BEND
0+045.4	81.26	78.91±	300mm x 200mm TEE

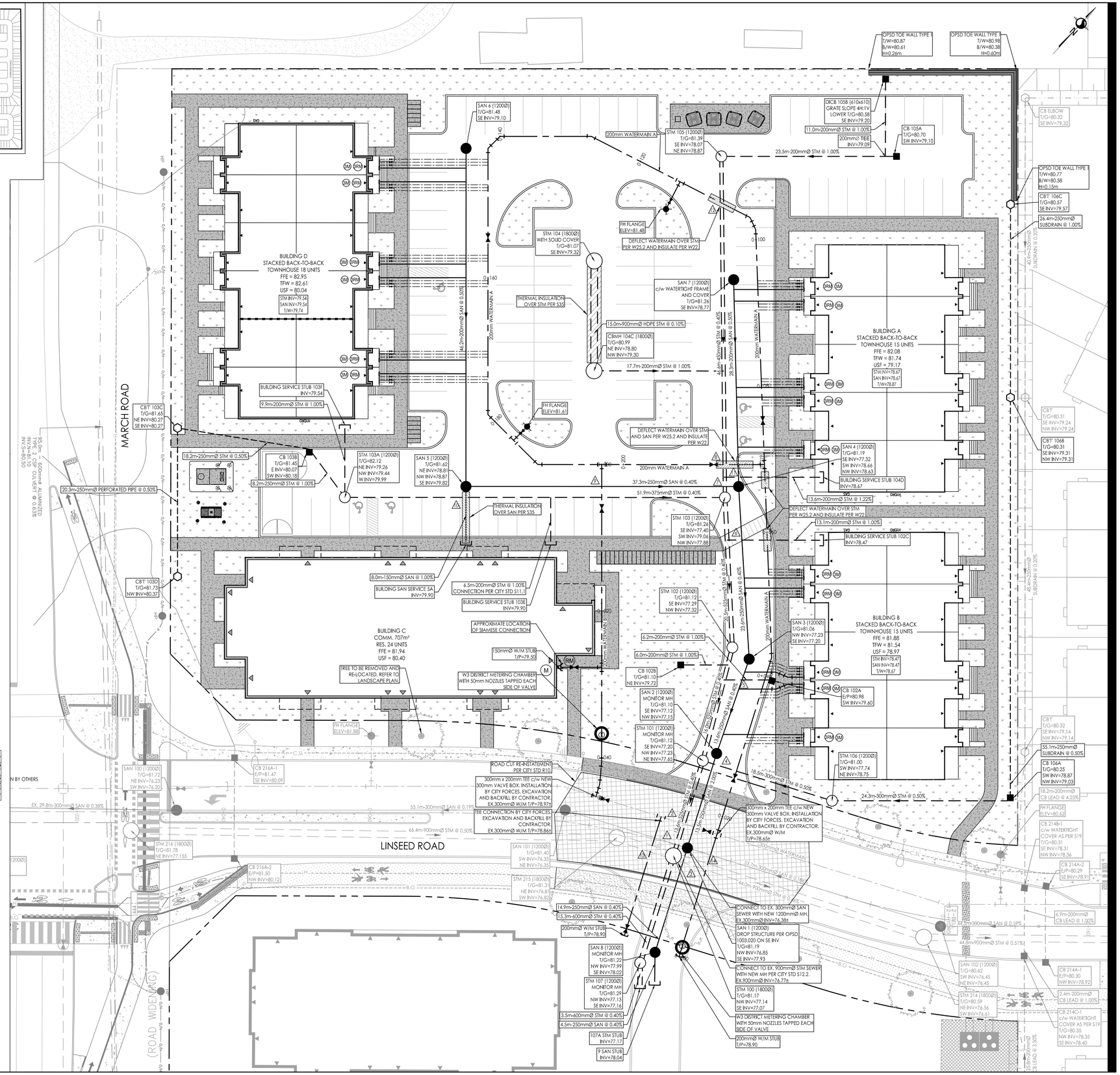
SEWER AND WATERMAIN CROSSING TABLE

CROSSING	STM INV	STM OBV	SAN INV	SAN OBV	WTR TOP	WTR BTM
1	77.08(76.98)	77.68(77.78)	76.38	76.68		
2	77.09(76.99)	77.69(77.79)	76.86	77.11	78.70	78.40
3	76.76(76.64)	77.66(77.78)	77.81	78.06		
4	77.67	77.97	77.09	77.34	78.59	78.39
5	79.57	79.77	77.18	77.43	78.60	78.40
6	78.35	78.55	77.29	77.54	78.85	79.05
7	77.89(77.80)	78.42(78.52)	78.67	78.92		
8	77.90(77.81)	78.43(78.52)	78.65	78.90	79.29	79.09
9	79.12	79.50	78.73	78.98	78.23	78.03
10	79.19	79.57	79.84	79.99		
11	78.61	78.41	78.63	78.83	78.97	78.77
12	78.04(77.96)	78.49(78.57)			78.88	78.68
13	76.78	77.08	76.84	77.74	78.92	78.72
14	77.05	77.95	77.94	78.24	78.84	78.64

* BRACKETS DENOTE ADJUSTED VALUE WITH CONCRETE PIPE THICKNESS

ICD

Catchbasin ID	Tributary Area ID	ICD Type	2yr Head (m)	100yr Head (m)	2yr Flow (L/s)	100yr Flow (L/s)
CB 102A	L102A	152 mm Orifice	0.23	1.45	18.3	53.9
CB 102B	L102B	UMF 80	0.61	1.56	4.5	7.1
CB 103B	L103A, L103B, L103C	127 mm Orifice	0.6	1.56	22.5	36.6
CBMH 104C	L104	140 mm Orifice	2.02	2.45	54.5	60.2
CB 105A	L105A	83 mm Orifice	0.61	1.53	10.4	16.7
CB 106A	L106	152 mm Orifice	0.88	1.77	21.0	48.1


MARCH ROAD
LINSEED ROAD
(ROAD WIDENING)
BUILDING A
STACKED BACK-TO-BACK
TOWNHOUSE 15 UNITS
FFE = 82.08
TFW = 81.74
USF = 79.17
STM INV=78.67
SAN INV=78.67
T/W=78.87
BUILDING B
STACKED BACK-TO-BACK
TOWNHOUSE 15 UNITS
FFE = 81.88
TFW = 81.54
USF = 78.97
STM INV=78.47
SAN INV=78.47
T/W=78.67
BUILDING C
COMM. 707m²
RES. 24 UNITS
FFE = 81.94
USF = 80.40
BUILDING D
STACKED BACK-TO-BACK
TOWNHOUSE 18 UNITS
FFE = 82.95
TFW = 82.61
USF = 80.04
STM INV=79.54
SAN INV=79.54
T/W=79.74
OPSD TOE WALL TYPE 1
T/W=80.87
B/W=80.61
H=0.26m
OPSD TOE WALL TYPE 1
T/W=80.98
B/W=80.38
H=0.60m
OPSD TOE WALL TYPE 1
T/W=80.77
B/W=80.58
H=0.15m
SAN 6 (1200Ø)
T/G=81.48
SE INV=79.10
STM 105 (1200Ø)
T/G=81.39
SE INV=78.07
NE INV=78.87
DICB 105B (610x610)
GRATE SLOPE 4H:1V
LOWER T/G=80.58
SE INV=79.20
CB 105A
T/G=80.70
SW INV=79.10
CB ELBOW
T/G=80.32
SE INV=79.32
CBT 104C
T/G=80.57
SE INV=79.57
STM 104 (1800Ø)
WITH SOLID COVER
T/G=81.07
SE INV=79.32
SAN 7 (1200Ø)
c/w WATERTIGHT FRAME
AND COVER
T/G=81.26
SE INV=78.77
CBMH 104C (1800Ø)
T/G=80.99
NE INV=78.80
NW INV=79.30
SAN 4 (1200Ø)
T/G=81.19
SE INV=77.32
SW INV=78.66
NW INV=78.63
BUILDING SERVICE STUB 104D
INV=78.67
BUILDING SERVICE STUB 102C
INV=78.47
SAN 3 (1200Ø)
T/G=81.06
NW INV=77.23
SE INV=77.20
CB 102A
E/P=80.98
SW INV=79.60
CB 102B
T/G=81.10
NE INV=79.72
SAN 2 (1200Ø)
MONITOR MH
T/G=81.10
SE INV=77.12
NW INV=77.15
STM 101 (1200Ø)
MONITOR MH
T/G=81.12
SE INV=77.20
NW INV=77.23
NE INV=77.63
STM 106 (1200Ø)
T/G=81.00
SW INV=77.74
NE INV=78.75
CBT
T/G=80.31
SE INV=79.24
NW INV=79.24
CBT 1068
T/G=80.31
SE INV=79.31
NW INV=79.31
CBT
T/G=80.32
SE INV=79.14
NW INV=79.14
CB 106A
T/G=80.25
SW INV=78.87
NW INV=79.03
CB 214B-1
c/w WATERTIGHT
COVER AS PER S19
T/G=80.31
SE INV=78.31
NW INV=78.36
CB 214A-2
E/P=80.29
SE INV=78.91
CB 214A-1
E/P=80.30
NW INV=78.92
CB 214C-1
c/w WATERTIGHT
COVER AS PER S19
T/G=80.35
NW INV=78.35
SE INV=78.40
CB 102C
T/G=81.45
E INV=80.07
SW INV=80.18
STM 103A (1200Ø)
T/G=82.12
NE INV=79.26
NW INV=79.44
W INV=79.99
SAN 5 (1200Ø)
T/G=81.62
NE INV=78.81
NW INV=78.87
SE INV=78.82
STM 103 (1200Ø)
T/G=81.26
SE INV=77.40
SW INV=79.06
NW INV=77.88
STM 102 (1200Ø)
T/G=81.12
SE INV=77.29
NW INV=77.32
CBT 103C
T/G=81.65
NE INV=80.27
SE INV=80.27
CBT 103D
T/G=81.73
NW INV=80.37
SAN 100 (1200Ø)
T/G=81.72
NE INV=76.23
SW INV=76.20
SAN 101 (1200Ø)
T/G=81.40
SW INV=76.35
NE INV=76.35
STM 215 (1800Ø)
T/G=81.3
NE INV=76.8
SW INV=76.82
STM 216 (1800Ø)
T/G=81.78
NE INV=77.155
SAN 8 (1200Ø)
MONITOR MH
T/G=81.22
NW INV=77.99
SE INV=78.02
STM 107 (1200Ø)
MONITOR MH
T/G=81.29
NW INV=77.13
SE INV=77.16
107A STM STUB
INV=77.17
9 SAN STUB
INV=78.04
STM 100 (1800Ø)
T/G=81.17
NW INV=77.14
SE INV=77.07
CB 216A-1
E/P=81.47
SE INV=80.09
CB 216A-2
E/P=81.50
NW INV=80.12
FH FLANGE
ELEV=81.48
FH FLANGE
ELEV=81.61
FH FLANGE
ELEV=81.88
IRE TO BE REMOVED AND
RE-LOCATED. REFER TO
LANDSCAPE PLAN
APPROXIMATE LOCATION
OF SIAMESE CONNECTION
W3 DISTRICT METERING CHAMBER
WITH 50mm NOZZLES TAPPED EACH
SIDE OF VALVE
W3 DISTRICT METERING CHAMBER
WITH 50mm NOZZLES TAPPED EACH
SIDE OF VALVE
200mm WATERMAIN A
DEFLECT WATERMAIN OVER STM
PER W25.2 AND INSULATE PER W22
DEFLECT WATERMAIN OVER STM
AND SAN PER W25.2 AND INSULATE
PER W22
DEFLECT WATERMAIN OVER STM
PER W25.2 AND INSULATE PER W22
THERMAL INSULATION
OVER STM PER S35
THERMAL INSULATION
OVER SAN PER S35
THERMAL INSULATION
OVER STM PER S35
ROAD CUT RE-INSTATEMENT
PER CITY STD R10
300mm x 200mm TEE c/w NEW
300mm VALVE BOX, INSTALLATION
BY CITY FORCES. EXCAVATION
AND BACKFILL BY CONTRACTOR.
EX.300mmØ W/M T/P=78.97±
TEE CONNECTION BY CITY FORCES.
EXCAVATION AND BACKFILL BY
CONTRACTOR.
EX.300mmØ W/M T/P=78.86±
300mm x 200mm TEE c/w NEW
300mm VALVE BOX. INSTALLATION
BY CITY FORCES. EXCAVATION
AND BACKFILL BY CONTRACTOR.
EX.300mmØ W/M
T/P=78.65±
CONNECT TO EX. 300mmØ SAN
SEWER WITH NEW 1200mmØ MH.
EX.300mmØ INV=76.38±
CONNECT TO EX. 900mmØ STM SEWER
WITH NEW MH PER CITY STD S12.2.
EX.900mmØ INV=76.77±
SAN 1 (1200Ø)
DROP STRUCTURE PER OPSD
1003.020 ON SE INV
T/G=81.19
NW INV=76.85
SE INV=77.23
SAN 102 (1200Ø)
T/G=80.62
SW INV=76.45
NW INV=76.45
STM 214 (1800Ø)
T/G=80.59
NE INV=76.56
SW INV=76.61
BUILDING SERVICE STUB 108A
INV=78.87
BUILDING SERVICE STUB 108E
INV=79.90
BUILDING SERVICE STUB 103E
INV=79.54
BUILDING SERVICE STUB 103F
INV=79.54
BUILDING SERVICE STUB
INV=78.87
BUILDING SAN SERVICE 5A
INV=79.90
8.0m-150mmØ SAN @ 1.00%
9.9m-200mmØ STM @ 1.00%
11.0m-200mmØ STM @ 1.00%
200mmØ TEE
INV=79.09
23.5m-200mmØ STM @ 1.00%
17.7m-200mmØ STM @ 1.00%
15.0m-900mmØ HDPE STM @ 0.10%
46.4m-450mmØ STM @ 0.40%
28.3m-200mmØ SAN @ 0.50%
13.1m-200mmØ STM @ 1.00%
37.3m-250mmØ SAN @ 0.40%
51.9m-375mmØ STM @ 0.40%
13.6m-200mmØ STM @ 1.22%
6.2m-200mmØ STM @ 1.00%
6.0m-200mmØ STM @ 1.00%
14.9m-250mmØ SAN @ 0.40%
15.3m-600mmØ STM @ 0.40%
200mmØ W/M STUB
T/P=78.90
3.5m-600mmØ STM @ 0.40%
4.5m-250mmØ SAN @ 0.40%
200mmØ W/M STUB
T/P=78.90
6.5m-200mmØ STM @ 1.00%
CONNECTION PER CITY STD S11.1
50mmØ W/M STUB
T/P=79.50
18.2m-250mmØ STM @ 0.50%
8.2m-250mmØ STM @ 1.00%
20.3m-250mmØ PERFORATED PIPE @ 0.50%
EX. 29.8m-300mmØ SAN @ 0.38%
53.1m-300mmØ SAN @ 0.10%
66.4m-900mmØ STM @ 0.50%
44.0m-900mmØ STM @ 0.51%
24.3m-300mmØ STM @ 0.50%
18.5m-300mmØ STM @ 0.50%
14.8m-250mmØ SAN @ 2.40%
6.9m-200mmØ
CB LEAD @ 1.00%
2.4m-200mmØ
CB LEAD @ 1.00%
55.1m-250mmØ
SUBDRAIN @ 0.50%
40.9m-250mmØ
SUBDRAIN @ 0.20%
45.4m-250mmØ
SUBDRAIN @ 0.20%
18.2m-200mmØ
CB LEAD @ 4.25%
CB 102B
T/G=81.10
NE INV=79.72
CB 102A
E/P=80.98
SW INV=79.60
STM 106 (1200Ø)
T/G=81.00
SW INV=77.74
NE INV=78.75
SAN 100 (1200Ø)
T/G=81.72
NE INV=76.23
SW INV=76.20
SAN 101 (1200Ø)
T/G=81.40
SW INV=76.35
NE INV=76.35
SAN 102 (1200Ø)
T/G=80.62
SW INV=76.45
NW INV=76.45
SAN 3 (1200Ø)
T/G=81.06
NW INV=77.23
SE INV=77.20
SAN 2 (1200Ø)
MONITOR MH
T/G=81.10
SE INV=77.12
NW INV=77.15
SAN 1 (1200Ø)
DROP STRUCTURE PER OPSD
1003.020 ON SE INV
T/G=81.19
NW INV=76.85
SE INV=77.23
SAN 8 (1200Ø)
MONITOR MH
T/G=81.22
NW INV=77.99
SE INV=78.02
STM 107 (1200Ø)
MONITOR MH
T/G=81.29
NW INV=77.13
SE INV=77.16
STM 100 (1800Ø)
T/G=81.17
NW INV=77.14
SE INV=77.07
STM 216 (1800Ø)
T/G=81.78
NE INV=77.155
STM 215 (1800Ø)
T/G=81.3
NE INV=76.8
SW INV=76.82
STM 103A (1200Ø)
T/G=82.12
NE INV=79.26
NW INV=79.44
W INV=79.99
SAN 5 (1200Ø)
T/G=81.62
NE INV=78.81
NW INV=78.87
SE INV=78.82
STM 103 (1200Ø)
T/G=81.26
SE INV=77.40
SW INV=79.06
NW INV=77.88
STM 102 (1200Ø)
T/G=81.12
SE INV=77.29
NW INV=77.32
CB 103B
T/G=81.45
E INV=80.07
SW INV=80.18
CB 216A-1
E/P=81.47
SE INV=80.09
CB 216A-2
E/P=81.50
NW INV=80.12
CBT 103C
T/G=81.65
NE INV=80.27
SE INV=80.27
CBT 103D
T/G=81.73
NW INV=80.37
FH FLANGE
ELEV=81.48
FH FLANGE
ELEV=81.61
FH FLANGE
ELEV=81.88
IRE TO BE REMOVED AND
RE-LOCATED. REFER TO
LANDSCAPE PLAN
APPROXIMATE LOCATION
OF SIAMESE CONNECTION
W3 DISTRICT METERING CHAMBER
WITH 50mm NOZZLES TAPPED EACH
SIDE OF VALVE
W3 DISTRICT METERING CHAMBER
WITH 50mm NOZZLES TAPPED EACH
SIDE OF VALVE
200mm WATERMAIN A
DEFLECT WATERMAIN OVER STM
PER W25.2 AND INSULATE PER W22
DEFLECT WATERMAIN OVER STM
AND SAN PER W25.2 AND INSULATE
PER W22
DEFLECT WATERMAIN OVER STM
PER W25.2 AND INSULATE PER W22
THERMAL INSULATION
OVER STM PER S35
THERMAL INSULATION
OVER SAN PER S35
THERMAL INSULATION
OVER STM PER S35
ROAD CUT RE-INSTATEMENT
PER CITY STD R10
300mm x 200mm TEE c/w NEW
300mm VALVE BOX. INSTALLATION
BY CITY FORCES. EXCAVATION
AND BACKFILL BY CONTRACTOR.
EX.300mmØ W/M T/P=78.97±
TEE CONNECTION BY CITY FORCES.
EXCAVATION AND BACKFILL BY
CONTRACTOR.
EX.300mmØ W/M T/P=78.86±
300mm x 200mm TEE c/w NEW
300mm VALVE BOX. INSTALLATION
BY CITY FORCES. EXCAVATION
AND BACKFILL BY CONTRACTOR.
EX.300mmØ W/M
T/P=78.65±
CONNECT TO EX. 300mmØ SAN
SEWER WITH NEW 1200mmØ MH.
EX.300mmØ INV=76.38±
CONNECT TO EX. 900mmØ STM SEWER
WITH NEW MH PER CITY STD S12.2.
EX.900mmØ INV=76.77±
BUILDING SERVICE STUB 108A
INV=78.87
BUILDING SERVICE STUB 108E
INV=79.90
BUILDING SERVICE STUB 103E
INV=79.54
BUILDING SERVICE STUB 103F
INV=79.54
BUILDING SERVICE STUB
INV=78.87
BUILDING SAN SERVICE 5A
INV=79.90
8.0m-150mmØ SAN @ 1.00%
9.9m-200mmØ STM @ 1.00%
11.0m-200mmØ STM @ 1.00%
200mmØ TEE
INV=79.09
23.5m-200mmØ STM @ 1.00%
17.7m-200mmØ STM @ 1.00%
15.0m-900mmØ HDPE STM @ 0.10%
46.4m-450mmØ STM @ 0.40%
28.3m-200mmØ SAN @ 0.50%
13.1m-200mmØ STM @ 1.00%
37.3m-250mmØ SAN @ 0.40%
51.9m-375mmØ STM @ 0.40%
13.6m-200mmØ STM @ 1.22%
6.2m-200mmØ STM @ 1.00%
6.0m-200mmØ STM @ 1.00%
14.9m-250mmØ SAN @ 0.40%
15.3m-600mmØ STM @ 0.40%
200mmØ W/M STUB
T/P=78.90
3.5m-600mmØ STM @ 0.40%
4.5m-250mmØ SAN @ 0.40%
200mmØ W/M STUB
T/P=78.90
6.5m-200mmØ STM @ 1.00%
CONNECTION PER CITY STD S11.1
50mmØ W/M STUB
T/P=79.50
18.2m-250mmØ STM @ 0.50%
8.2m-250mmØ STM @ 1.00%
20.3m-250mmØ PERFORATED PIPE @ 0.50%
EX. 29.8m-300mmØ SAN @ 0.38%
53.1m-300mmØ SAN @ 0.10%
66.4m-900mmØ STM @ 0.50%
44.0m-900mmØ STM @ 0.51%
24.3m-300mmØ STM @ 0.50%
18.5m-300mmØ STM @ 0.50%
14.8m-250mmØ SAN @ 2.40%
6.9m-200mmØ
CB LEAD @ 1.00%
2.4m-200mmØ
CB LEAD @ 1.00%
55.1m-250mmØ
SUBDRAIN @ 0.50%
40.9m-250mmØ
SUBDRAIN @ 0.20%
45.4m-250mmØ
SUBDRAIN @ 0.20%
18.2m-200mmØ
CB LEAD @ 4.25%