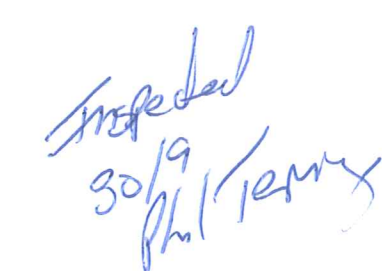
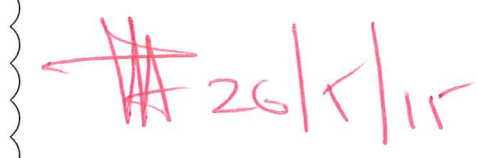


<u>LEGEND</u>	<u>SERVICES</u>
	WASTEWATER
	WASTEWATER (PRESSURE)
	WASTEWATER PREV. ABANDONED
	WATER SUPPLY
	WATER SUPPLY PREV. ABANDONED
	STORMWATER
	POWER (& High Voltage Indicated)
	TELECOMS
	FIBRE OPTIC NETWORK
	GAS
	POWER POLE
	WATER SUPPLY VALVES
	FIRE HYDRANT
	MANHOLES
	SINGLE SUMP (SS), DOUBLE SUMP (DS)
WWMH 17900	MANHOLE ID
<u>WASTEWATER DESIGN</u>	
	WASTEWATER
	WASTEWATER (PRESSURE)
	WASTEWATER (RELINED)
	WASTEWATER LINE TO BE ABANDONED
	MANHOLE, VENTED MANHOLE
<u>LONG SECTION VIEW</u>	
	WASTEWATER EXISTING
	WASTEWATER DESIGN
	EXISTING SURFACE
	DESIGN SURFACE

- NOTES**
1. REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
 2. CONFIRM ALL PIPE / MANHOLE LEVELS AND LOCATIONS AFFECTING DESIGN PRIOR TO START OF CONSTRUCTION.
 3. THE LEVELS AND LOCATIONS OF EXISTING SERVICES ARE APPROXIMATE ONLY. CARRY OUT FURTHER INVESTIGATION TO DETERMINE EXACT DEPTH AND LOCATION OF EXISTING SERVICES.
 4. NOMINAL COVERS FOR SERVICES ARE:
TELSTRA/TELCOM 0.60
ORION 0.60
WATER SUBMAIN 0.50
WATER MAIN 0.80
 5. DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
 6. VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF BMs AND LEVELS.
 7. ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000).
 8. LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 IN 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET W4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
 9. WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 IN 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 IN 120) WITHIN PRIVATE PROPERTY.
 10. ALL LATERAL CONNECTIONS ARE TO BE "CONNECTION BY RAISED RISER" OR "CONNECTION TO 45° SIDE JUNCTION" AS PER SD383. VERTICAL RISER JUNCTIONS ARE NOT TO BE USED.
 11. HAUNCHING TO CSS SD344 / P.
 12. CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS SD303 UNLESS STATED OTHERWISE.
 13. PIPE JOINT W/REF DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET W4001.
 14. WHERE EXISTING RCRRJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SCIRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH: 021 279 6566.
 15. WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS.
REMOVAL: ALL PIPES, INCLUDING LATERALS, SHALL BE REMOVED AND THE TRENCH BACKFILLED TO THE REQUIREMENTS OF CSS PART 127.0.
FILLED: FILLING SHALL BE WITH A FLOWABLE FILL OR CONCRETE WITH STRENGTH OF 15 MPa. THE VOLUME OF MATERIAL INSERTED INTO THE PIPE SHALL BE EQUAL TO OR GREATER THAN THE VOLUME OF PIPE TO BE ABANDONED. BEFORE FILLING COMMENCES ALL CONNECTIONS TO THE PIPE SHALL BE SEALED OR THE VOLUME OF CONNECTED PIPES INCLUDED IN THE VOLUME OF MATERIAL INSERTED.



THE DESIGNER IS TO PROVIDE
COORDINATES FOR THE
LOCATION OF SUMPS,
MANHOLES AND OUTLETS AS
REQUIRED, AT THE TIME OF
CONSTRUCTION

FOR CONSTRUCTION

2	LEVEL AMENDMENTS	GT	3.02.2014
1	ISSUED FOR CONSTRUCTION	GT	19.12.2013
ISSUE	AMENDMENTS	SIGNED	DATE

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FOR WASTEWATER DESIGN ON TANCRE STREET REFER TO DRG WW2024

FOR WASTEWATER DESIGN ON TANCRE STREET REFER TO DRG WW2023

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
- REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
 - CONFIRM ALL PIPE / MANHOLE LEVELS AND LOCATIONS AFFECTING DESIGN PRIOR TO START OF CONSTRUCTION.
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 - NOMINAL COVERS FOR SERVICES ARE:

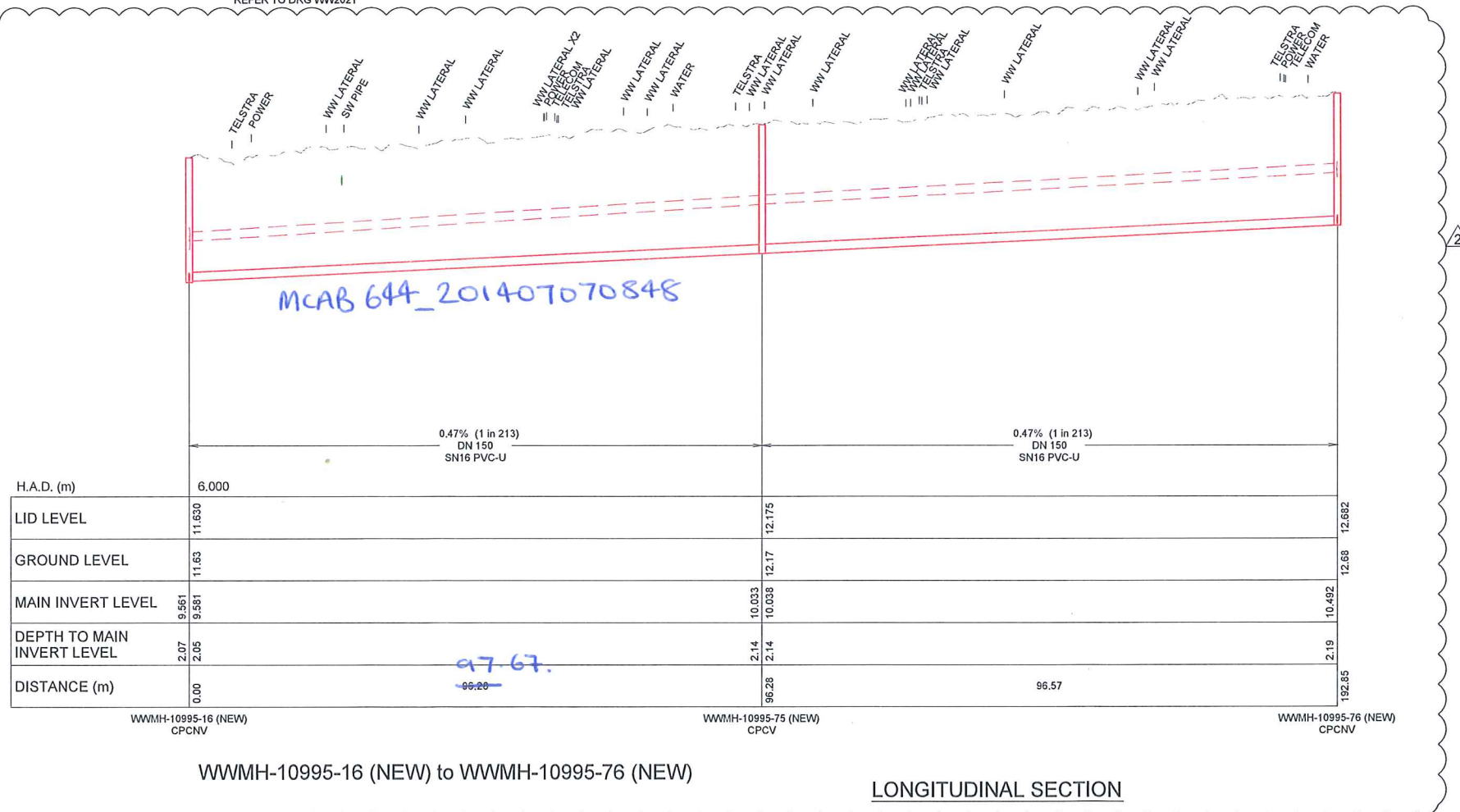
TELSTRATELCOM	0.60
ORION	0.60
WATER SUBMAIN	0.50
WATER MAIN	0.80
 - DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
 - VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF BMS AND LEVELS.
 - ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000).
 - LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 in 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW401. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
 - WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 in 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 in 120) WITHIN PRIVATE PROPERTY.
 - ALL LATERAL CONNECTIONS ARE TO BE "CONNECTION BY RAMPED RISER" OR "CONNECTION TO 45° SIDE JUNCTION" AS PER SD363. VERTICAL RISER JUNCTIONS ARE NOT TO BE USED.
 - HAUNCHING TO CSS:SD344 / P.
 - CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS:SD303 UNLESS STATED OTHERWISE.
 - PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET WW401.
 - WHERE EXISTING RCRRJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SCIRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH. 021 279 6568.
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FILLED: FILLING SHALL BE WITH A FLOWABLE FILL OR CONCRETE WITH STRENGTH OF 15 MPa. THE VOLUME OF MATERIAL INSERTED INTO THE PIPE SHALL BE EQUAL TO OR GREATER THAN THE VOLUME OF PIPE TO BE ABANDONED. BEFORE FILLING COMMENCES ALL CONNECTIONS TO THE PIPE SHALL BE SEALED OR THE VOLUME OF CONNECTED PIPES INCLUDED IN THE VOLUME OF MATERIAL INSERTED.

26/5/15

Inspected
8/9/14
Phil Tenn

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION



WWMH-10995-16 (NEW) to WWMH-10995-76 (NEW)

LONGITUDINAL SECTION

DESIGNED	NAME	SIGNED	DATE
DES. REVIEW	C. Cadogan	CC	19.12.2012
DRAWN	A. Ingles	AI	19.12.2012
DRW. CHECK	S. Sutton	SS	19.12.2012
FILE LOCATION	N. Locke	NBL	19.12.2012
10995-DE-WW-DG-2022.dwg			
PRINTED ON	3-Feb-14	BY	gahsfordb

APPROVED	DATE	SIGNED
FOR RECOMMENDATION	19.12.2012	GT
FOR CONSTRUCTION	19.12.2012	GT

SCIRT
Rebuilding Infrastructure

CONSULTANT FILE REF.
10995-DE-WW-DG-2022

PROJECT TITLE
INFRASTRUCTURE REBUILD
AVONSIDE - LINWOOD STAGE 1
WOODHOUSE STREET

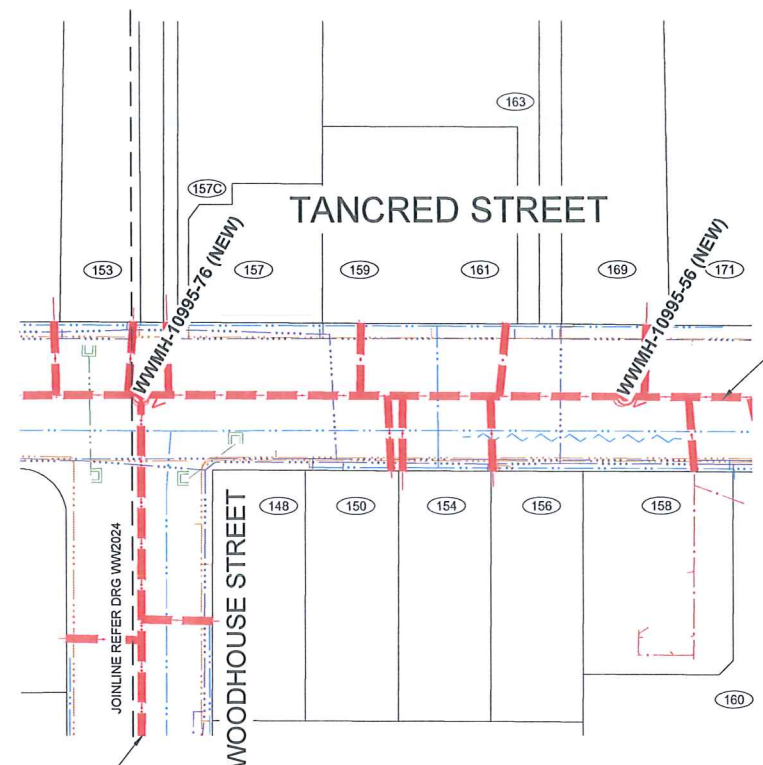
DRAWING TITLE
WASTEWATER
PLAN & LONG SECTION

SCIRT PROJECT REF.	ORIGINAL SHEET SIZE	SCALES
10995	A1	1:500 HORIZ 1:50 VERT
CPG CAD DRAWING FILE REF.		
CPG PROJECT FILE NUMBER		

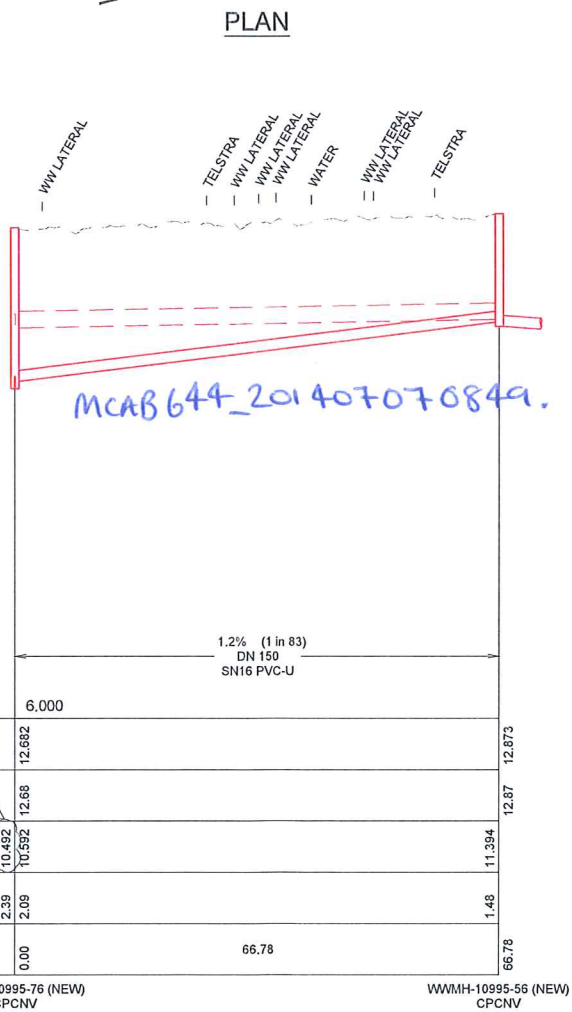
DRAWING No.
WW2022

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PLAN



WWMH-10995-76 to WWMH-10995-56

LONGITUDINAL SECTION

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
- REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
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ORION 0.60
WATER SUBMAIN 0.50
WATER MAIN 0.60
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 - LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 in 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
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 - HAUNCHING TO CSS SD344 / P.
 - CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS SD303 UNLESS STATED OTHERWISE.
 - PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET WW4001.
 - WHERE EXISTING RCRRJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE 'CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM' AND PASS COMPLETED RECORDS BACK TO THE SCIRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH. 021 279 6566.
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Inspected 18/9/14 Phil Perry

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION

2	LEVEL AMENDMENTS	GT	3.02.2014
1	ISSUED FOR CONSTRUCTION	GT	19.12.2012
ISSUE	AMENDMENTS	SIGNED	DATE

New Zealand Government



DESIGNED	NAME	SIGNED	DATE
DES. REVIEW	C. Cadogan	CC	19.12.2012
DRAWN	A. Inglis	AI	19.12.2012
DRW. CHECK	S. Sutton	SS	19.12.2012
	N. Locke	NBL	19.12.2012
FILE LOCATION	J:\10995 Avonside Linwood Stage 1\10995-DE-WW-DG-2023.dwg		
PRINTED ON	3-Feb-14 BY gainfordb		

APPROVED

FOR RECOMMENDATION

DATE SIGNED

19.12.2012 GT

FOR CONSTRUCTION

DATE SIGNED

19.12.2012 GT

CONSULTANT

SCIRT

Rebuilding Infrastructure

CONSULTANT FILE REF.

10995-DE-WW-DG-2023

PROJECT TITLE

INFRASTRUCTURE REBUILD

AVONSIDE - LINWOOD STAGE 1

TANCRED STREET

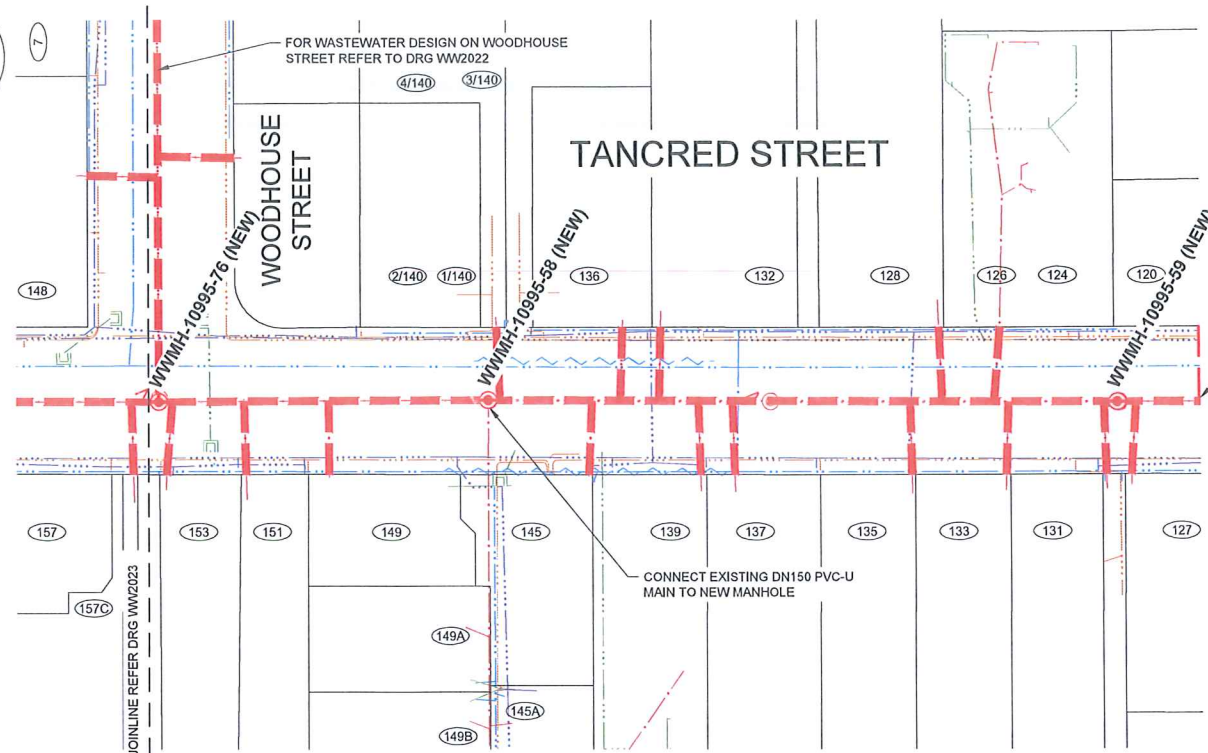
DRAWING TITLE

WASTEWATER

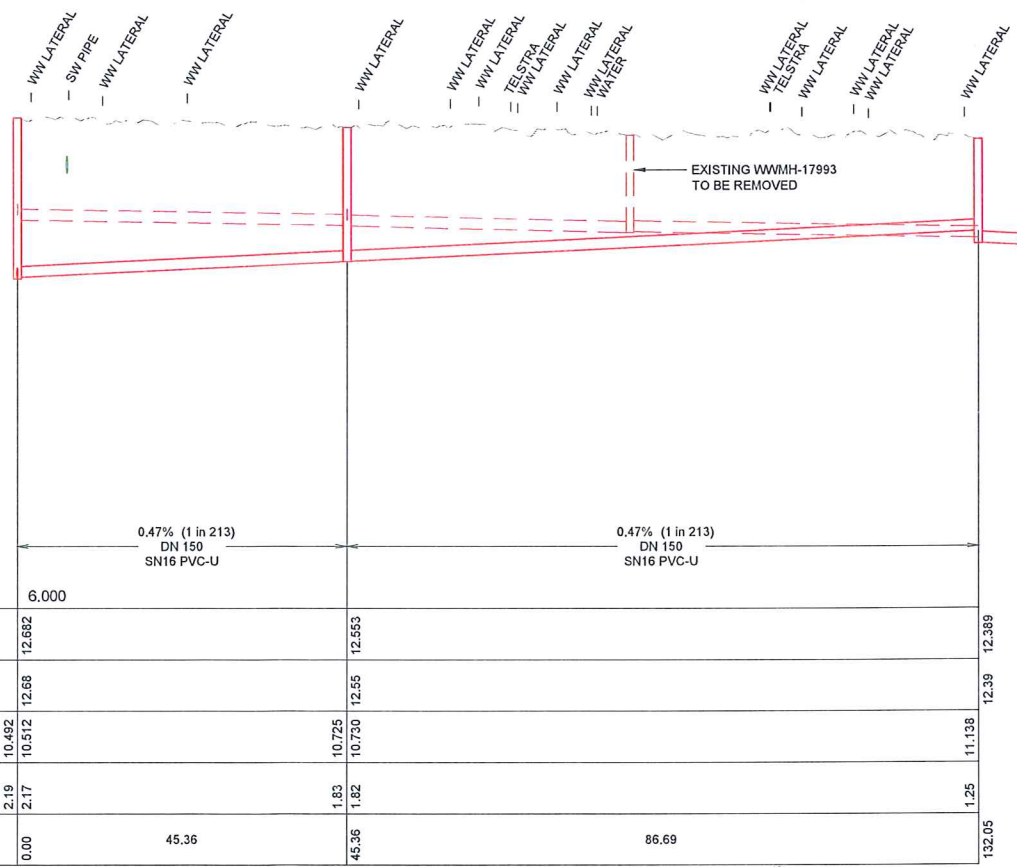
PLAN & LONG SECTION

SHEET 1

SCIRT PROJECT REF.	10995	ORIGINAL SHEET SIZE	A1	SCALES	1:500 HORIZ	1:50 VERT
CPG CAD DRAWING FILE REF.	-	CPG PROJECT FILE NUMBER	-	DRAWING No.	WW2023	



PLAN



LONGITUDINAL SECTION

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
- REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
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Inspected 18/9/14 Phil Perry

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION

2	LEVEL AMENDMENTS	GT	3.02.2014
1	ISSUED FOR CONSTRUCTION	GT	19.12.2012
1	ISSUE	AMENDMENTS	SIGNED DATE

New Zealand Government



DESIGNED	NAME	SIGNED	DATE
DES. REVIEW	C. Cadogan	CC	19.12.2012
DRAWN	A. Ingles	AI	19.12.2012
DRW. CHECK	S. Sutton	SS	19.12.2012
FILE LOCATION	N. Locke	NBL	19.12.2012
10995-DE-WW-DG-2024.dwg			
PRINTED ON 3-Feb-14	BY gahinfordb		

APPROVED

FOR RECOMMENDATION

DATE SIGNED

19.12.2012 GT

FOR CONSTRUCTION

DATE SIGNED

19.12.2012 GT

CONSULTANT

SCIRT

Rebuilding Infrastructure

CONSULTANT FILE REF.

10995-DE-WW-DG-2024

PROJECT TITLE

INFRASTRUCTURE REBUILD

AVONSIDE - LINWOOD STAGE 1

TANCRED STREET

DRAWING TITLE

WASTEWATER

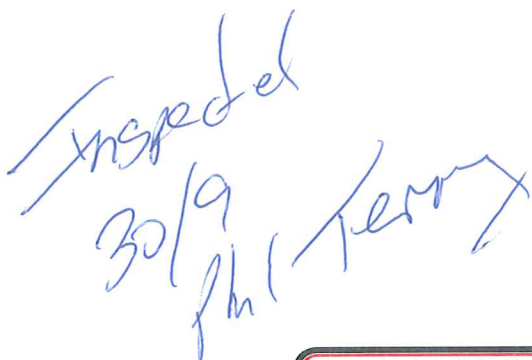
PLAN & LONG SECTION

SHEET 2

SCIRT PROJECT REF.	10995	ORIGINAL SHEET SIZE	A1	SCALES	1:500 HORIZ 1:50 VERT
CAD DRAWING FILE REF.	-				
CAD PROJECT FILE NUMBER	-				
					WW2024



- POSITIVELY IDENTIFY LATERAL DEPTHS PRIOR TO COMMENCING CONSTRUCTION ON GLOUCESTER STREET



LONGITUDINAL SECTION

NOTES

1. REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
2. CONFIRM ALL PIPE / MANHOLE LEVELS AND LOCATIONS AFFECTING DESIGN PRIOR TO START OF CONSTRUCTION.
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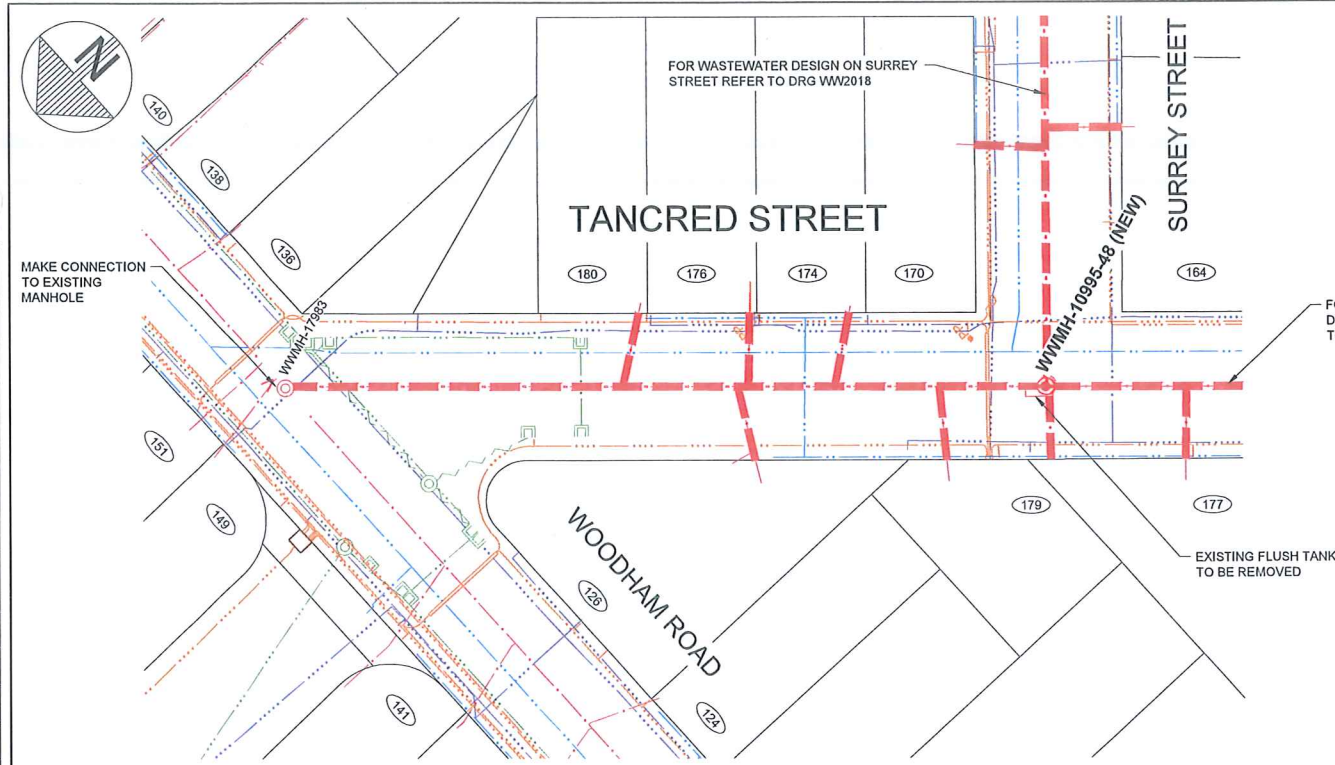
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ORION	0.60
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WATER MAIN	0.80
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9. WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 in 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 in 120) WITHIN PRIVATE PROPERTY.
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11. HAUNCHING TO CSS S0344 / P.
12. CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS S0303 UNLESS STATED OTHERWISE.
13. PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE. REFER SHEET W4001.
14. WHERE EXISTING RCRRJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SCRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH. 021 279 6568.
15. WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS.

REMOVAL: ALL PIPES, INCLUDING LATERALS, SHALL BE REMOVED AND THE TRENCH BACKFILLED TO THE REQUIREMENTS OF CSS PART 1 2.7.0.

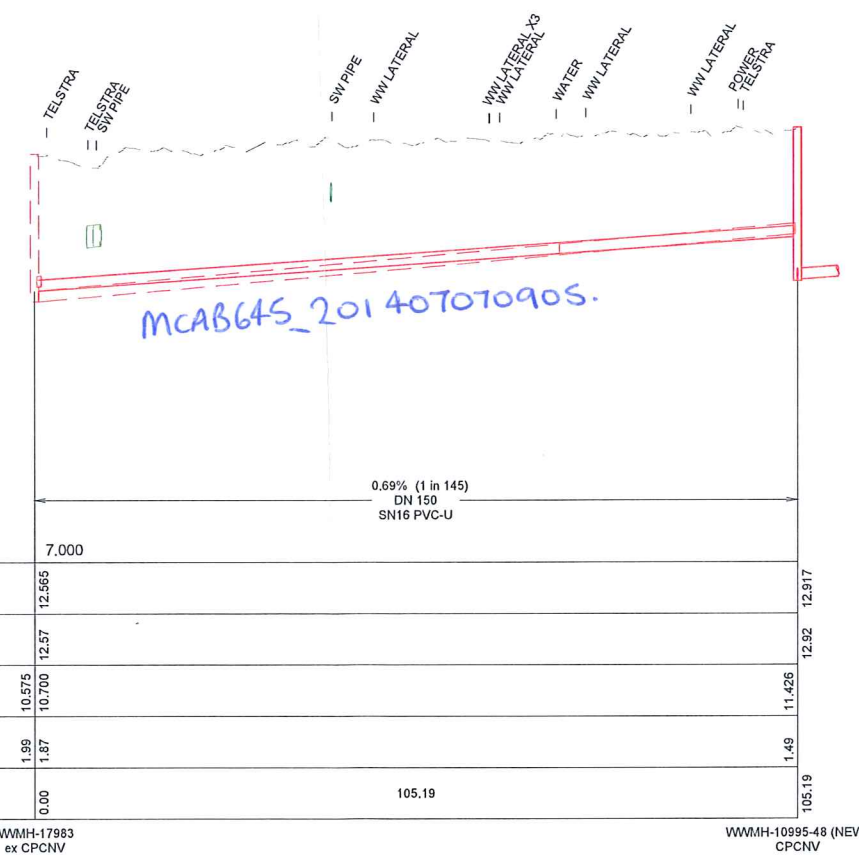
FILLED: FILLING SHALL BE WITH A FLOWABLE FILL OR CONCRETE WITH STRENGTH OF 1.5 MPa. THE VOLUME OF MATERIAL INSERTED INTO THE PIPE SHALL BE EQUAL TO OR GREATER THAN THE VOLUME OF PIPE TO BE ABANDONED. BEFORE FILLING COMMENCES ALL CONNECTIONS TO THE PIPE SHALL BE SEALED OR THE VOLUME OF CONNECTED PIPES INCLUDED IN THE VOLUME OF MATERIAL INSERTED.

FOR CONSTRUCTION

SCIRT PROJECT REF. 10995	ORIGINAL SHEET SIZE	SCALES 1:500 HORIZ 1:50 VERT
CPG CAD DRAWING FILE REF. ---	A1	
CPG PROJECT FILE NUMBER ---	DRAWING No. WW2023	



PLAN



LONGITUDINAL SECTION

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
- REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
 - CONFIRM ALL PIPE / MANHOLE LEVELS AND LOCATIONS AFFECTING DESIGN PRIOR TO START OF CONSTRUCTION.
 - THE LEVELS AND LOCATIONS OF EXISTING SERVICES ARE APPROXIMATE ONLY. CARRY OUT FURTHER INVESTIGATION TO DETERMINE EXACT DEPTH AND LOCATION OF EXISTING SERVICES.
 - NOMINAL COVERS FOR SERVICES ARE:
TELSTRATEL.COM 0.60
ORION 0.60
WATER SUBMAIN 0.50
WATER MAIN 0.80
 - DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
 - VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF BMS AND LEVELS.
 - ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000).
 - LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 in 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
 - WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 in 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 in 120) WITHIN PRIVATE PROPERTY.
 - ALL LATERAL CONNECTIONS ARE TO BE "CONNECTION BY RAMPED RISER" OR "CONNECTION TO 45° SIDE JUNCTION" AS PER SD383. VERTICAL RISER JUNCTIONS ARE NOT TO BE USED.
 - HAUNCHING TO CSS SD344 / P.
 - CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS SD303 UNLESS STATED OTHERWISE.
 - PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET WW4001.
 - WHERE EXISTING RCRRJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SCIRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO WYNNE MACDONALD, PH. 021 279 6566.
 - WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS.
REMOVAL: ALL PIPES, INCLUDING LATERALS, SHALL BE REMOVED AND THE TRENCH BACKFILLED TO THE REQUIREMENTS OF CSS PART 1:27.0.
FILLED: FILLING SHALL BE WITH A FLOWABLE FILL OR CONCRETE WITH STRENGTH OF 15 MPa. THE VOLUME OF MATERIAL INSERTED INTO THE PIPE SHALL BE EQUAL TO OR GREATER THAN THE VOLUME OF PIPE TO BE ABANDONED. BEFORE FILLING COMMENCES ALL CONNECTIONS TO THE PIPE SHALL BE SEALED OR THE VOLUME OF CONNECTED PIPES INCLUDED IN THE VOLUME OF MATERIAL INSERTED.

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION

New Zealand Government



DESIGNED	NAME	SIGNED	DATE
DES. REVIEW	C. Cadogan	CC	19.12.2012
DRAWN	A. Inglis	AI	19.12.2012
DRW. CHECK	S. Sutton	SS	19.12.2012
	N. Locke	NBL	19.12.2012
FILE LOCATION	Z:\10995 Avonside Linwood Stage 1\10995-DE-WW-DG-2026.dwg		
PRINTED ON	19-Dec-12 BY galsfordb		

APPROVED

FOR RECOMMENDATION

DATE: 19.12.2012 SIGNED: GT

FOR CONSTRUCTION

DATE: 19.12.2012 SIGNED: GT

CONSULTANT

SCIRT

Rebuilding Infrastructure

CONSULTANT FILE REF. 10995-DE-WW-DG-2026

PROJECT TITLE

INFRASTRUCTURE REBUILD

AVONSIDE - LINWOOD STAGE 1

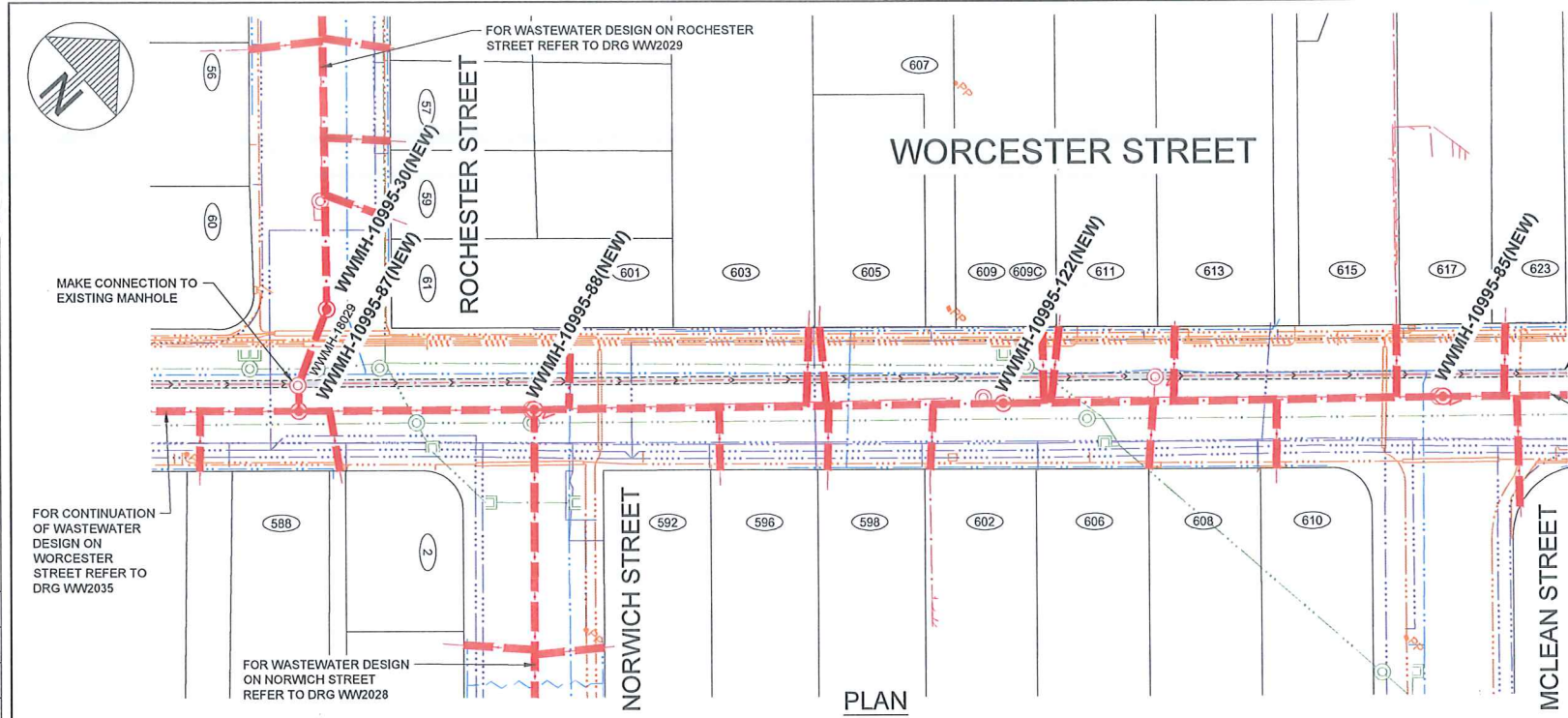
TANCREDE STREET

DRAWING TITLE

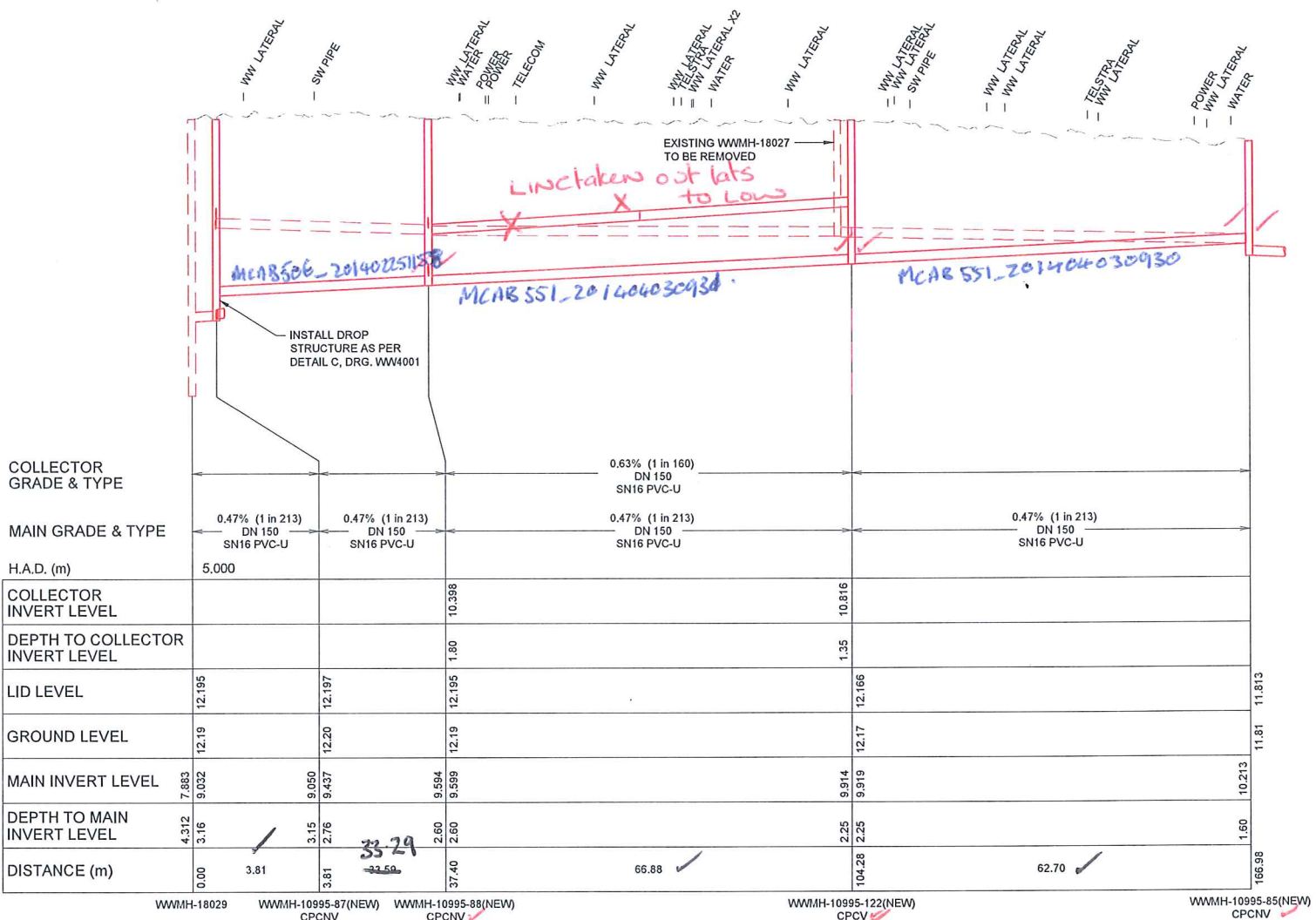
WASTEWATER

PLAN & LONG SECTION

SCIRT PROJECT REF.	10995	ORIGINAL SHEET SIZE	A1	SCALES	1:500 HORIZ 1:50 VERT
CPG CAD DRAWING FILE REF.	---	CPG PROJECT FILE NUMBER	---	DRAWING No.	WW2026



SUB MAIN removed
RFI # 0736
26/5/15



COLLECTOR GRADE & TYPE	0.47% (1 in 213) DN 150 SN16 PVC-U	0.47% (1 in 213) DN 150 SN16 PVC-U	0.63% (1 in 160) DN 150 SN16 PVC-U	0.47% (1 in 213) DN 150 SN16 PVC-U
MAIN GRADE & TYPE	0.47% (1 in 213) DN 150 SN16 PVC-U	0.47% (1 in 213) DN 150 SN16 PVC-U	0.63% (1 in 160) DN 150 SN16 PVC-U	0.47% (1 in 213) DN 150 SN16 PVC-U
H.A.D. (m)	5.000			
COLLECTOR INVERT LEVEL	12.195	12.197	10.398	10.816
DEPTH TO COLLECTOR INVERT LEVEL			1.80	1.35
LID LEVEL	12.195	12.197	12.195	12.166
GROUND LEVEL	12.19	12.20	12.19	12.17
MAIN INVERT LEVEL	7.883	9.050	9.594	9.914
DEPTH TO MAIN INVERT LEVEL	4.312	3.15	2.60	2.25
DISTANCE (m)	0.00	3.81	37.40	62.70

WWMH-18029 to WWMH-10995-85

LONGITUDINAL SECTION

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- WWMH 17900 MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

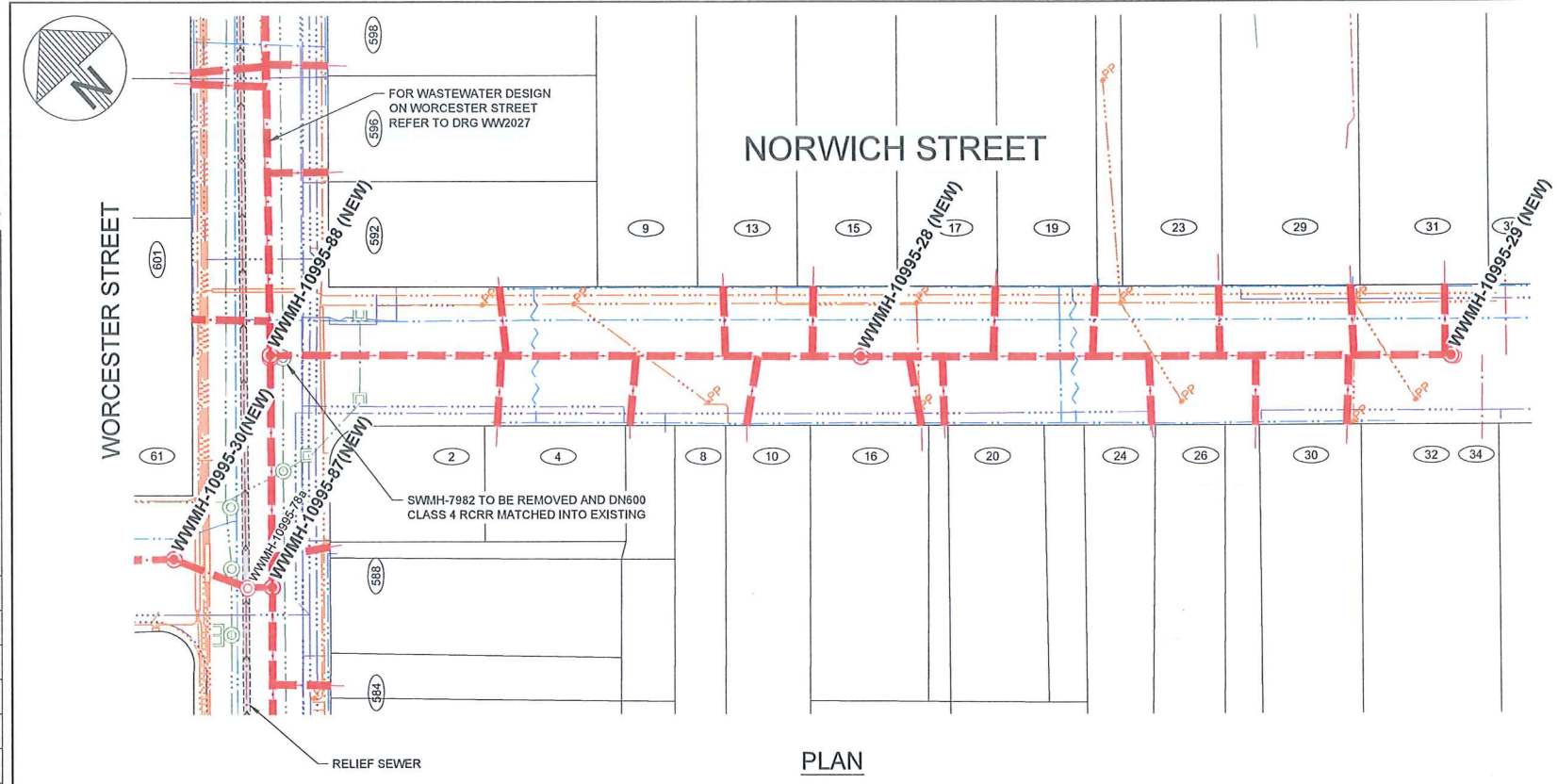
- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
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ORION 0.60
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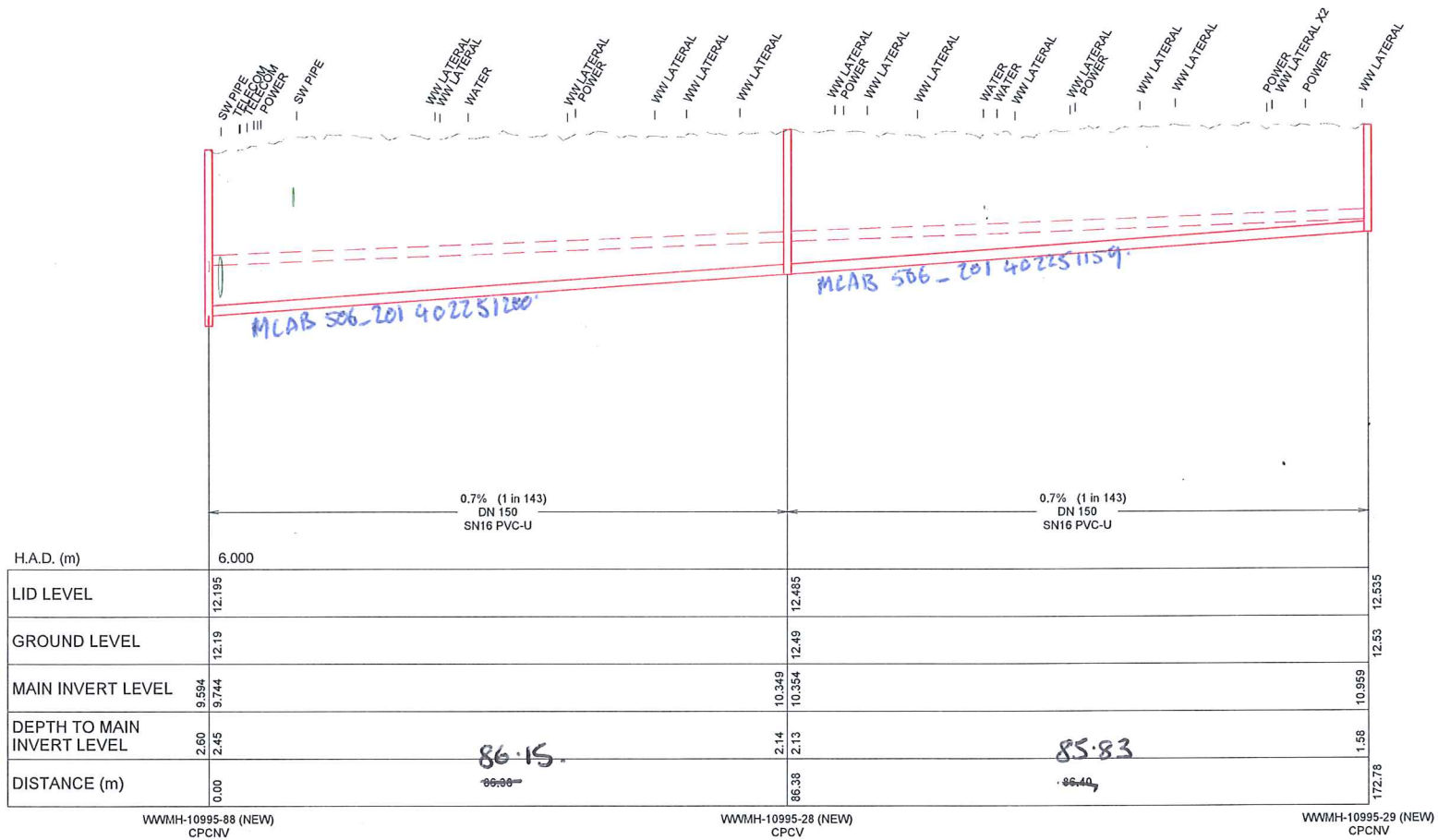
THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION

			PROJECT TITLE INFRASTRUCTURE REBUILD AVONSIDE - LINWOOD STAGE 1 WORCESTER STREET	DRAWING TITLE WASTEWATER PLAN & LONG SECTION	SCIRT PROJECT REF. 10995	ORIGINAL SHEET SIZE A1	SCALES 1:500 HORIZ 1:50 VERT
					CPD CAD DRAWING FILE REF. --	CPD PROJECT FILE NUMBER --	DRAWING NO. WW2027



PLAN



LONGITUDINAL SECTION

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
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ORION 0.60
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 - CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS:SD303 UNLESS STATED OTHERWISE.
 - PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET WW4001.
 - WHERE EXISTING RCRR OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SCIRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH. 021 279 6565.
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THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION

New Zealand Government

Christchurch City Council

DESIGNED	NAME	SIGNED	DATE
DES. REVIEW	C. Cadogan	CC	19.12.2012
DRAWN	A. Ingles	AI	19.12.2012
DRW. CHECK	S. Sutton	SS	19.12.2012
	N. Locke	NBL	19.12.2012
FILE LOCATION	Z:\10995 Avonside Linwood Stage 1\10995-DE-WW-DG-2028.dwg		
PRINTED ON	19-Dec-12	BY	gainsfordb

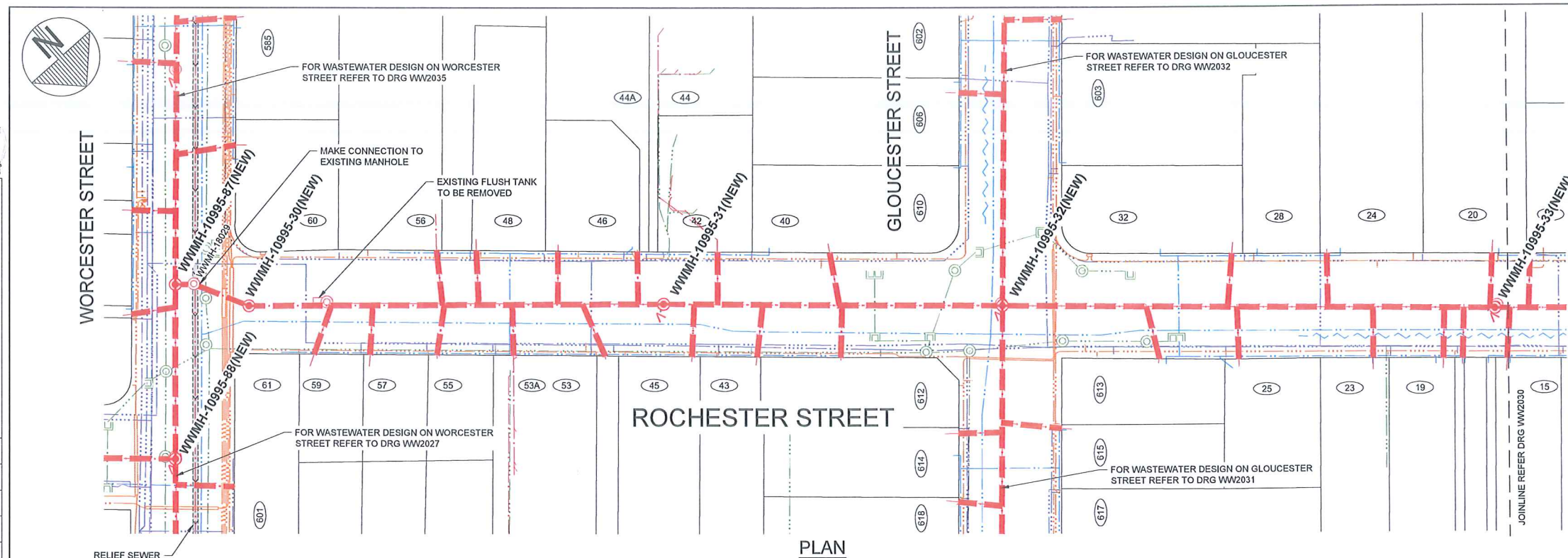
APPROVED	FOR CONSTRUCTION
DATE	SIGNED
19.12.2012	GT
DATE	SIGNED
19.12.2012	GT

CONSULTANT
SCIRT
Rebuilding Infrastructure
CONSULTANT FILE REF.
10995-DE-WW-DG-2028

PROJECT TITLE
**INFRASTRUCTURE REBUILD
AVONSIDE - LINWOOD STAGE 1
NORWICH STREET**

DRAWING TITLE
**WASTEWATER
PLAN & LONG SECTION**

SCIRT PROJECT REF. 10995	ORIGINAL SHEET SIZE A1	SCALES 1:500 HORIZ 1:50 VERT
CPG CAD DRAWING FILE REF. ---		
CPG PROJECT FILE NUMBER ---		DRAWING NO. WW2028



PLAN

LEGEND	
SERVICES	
	WASTEWATER
	WASTEWATER (PRESSURE)
	WASTEWATER PREV. ABANDONED
	WATER SUPPLY
	WATER SUPPLY PREV. ABANDONED
	STORMWATER
	POWER (& High Voltage Indicated)
	TELECOMS
	FIBRE OPTIC NETWORK
	GAS
	POWER POLE
	WATER SUPPLY VALVES
	FIRE HYDRANT
	MANHOLES
	SINGLE SUMP (SS), DOUBLE SUMP (DS)
	MANHOLE ID
WASTEWATER DESIGN	
	WASTEWATER
	WASTEWATER (PRESSURE)
	WASTEWATER (RELINED)
	WASTEWATER LINE TO BE ABANDONED
	MANHOLE, VENTED MANHOLE
LONG SECTION VIEW	
	WASTEWATER EXISTING
	WASTEWATER DESIGN
	EXISTING SURFACE
	DESIGN SURFACE

NOTES

- REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
- CONFIRM ALL PIPE / MANHOLE LEVELS AND LOCATIONS AFFECTING DESIGN PRIOR TO START OF CONSTRUCTION.
- THE LEVELS AND LOCATIONS OF EXISTING SERVICES ARE APPROXIMATE ONLY. CARRY OUT FURTHER INVESTIGATION TO DETERMINE EXACT DEPTH AND LOCATION OF EXISTING SERVICES.
- NOMINAL COVERS FOR SERVICES ARE:

TELSTRATELCOM	0.60
ORION	0.60
WATER SUBMAIN	0.50
WATER MAIN	0.80
- DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
- VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF BMs AND LEVELS.
- ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000).
- LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 in 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
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FOR CONSTRUCTION

COLLECTOR GRADE & TYPE	0.63% (1 in 160) DN 150 SN16 PVC-U			
MAIN GRADE & TYPE	0.47% (1 in 213) DN 150 SN16 PVC-U			
H.A.D. (m)	5.000			
COLLECTOR INVERT LEVEL	10.082			
DEPTH TO COLLECTOR INVERT LEVEL	2.06			
LID LEVEL	12.193	12.140	11.937	12.095
GROUND LEVEL	12.19	12.14	11.94	12.09
MAIN INVERT LEVEL	7.893	9.132	9.522	10.293
DEPTH TO MAIN INVERT LEVEL	4.312	3.01	2.42	1.80
DISTANCE (m)	0.00	11.21	91.97	253.79

WWMH-10995-78 to WWMH-10995-33

LONGITUDINAL SECTION

New Zealand Government

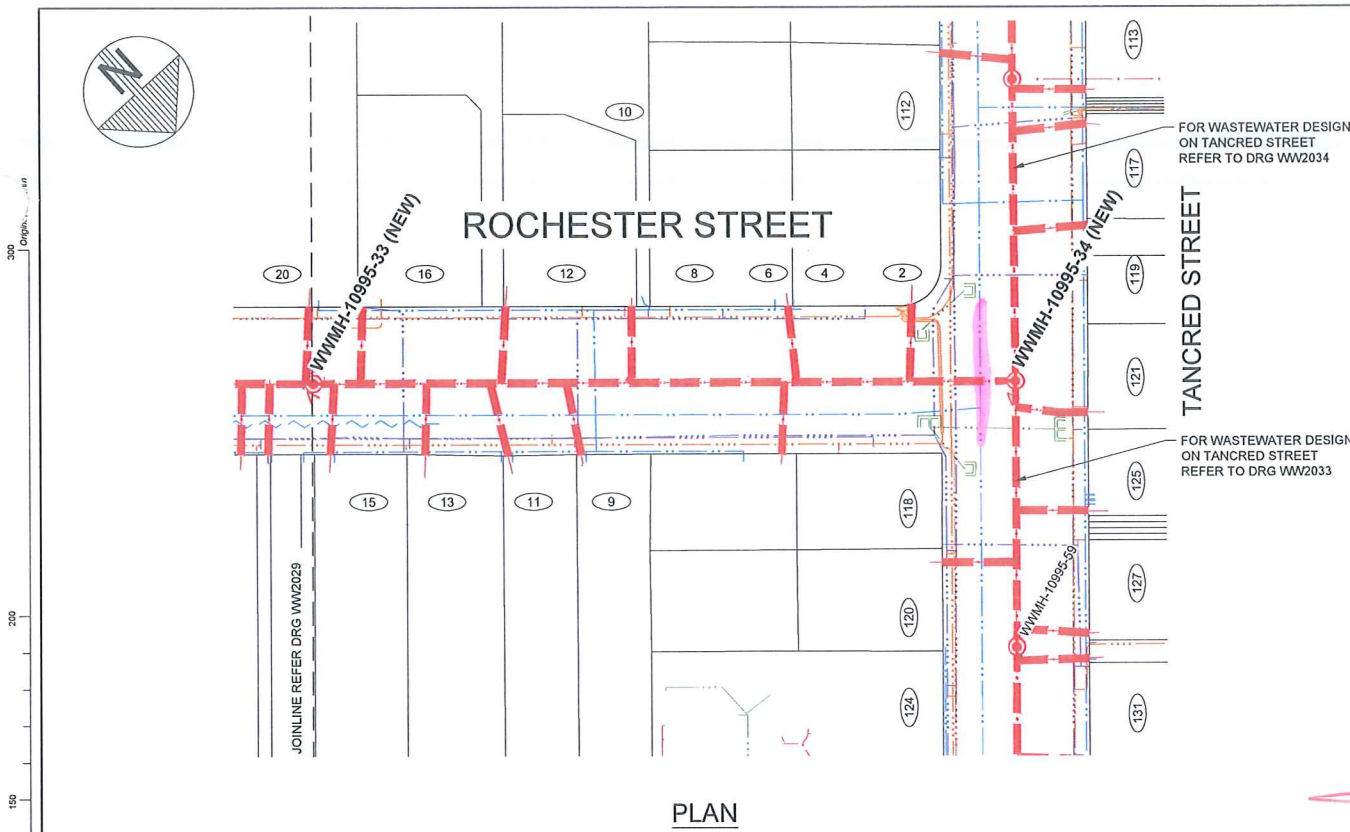
Christchurch City Council

DESIGNED	NAME	SIGNED	DATE	APPROVED
DES. REVIEW	C. Cadogan	CC	19.12.2012	FOR RECOMMENDATION
DRAWN	A. Ingles	AI	19.12.2012	DATE
DRWL CHECK	S. Sutton	SS	19.12.2012	GT
FILE LOCATION	N. Locke	NBL	19.12.2012	FOR CONSTRUCTION
10995-DE-WW-DG-2029.dwg				DATE
19.12.2012				SIGNED
19.12.2012				GT

CONSULTANT	PROJECT TITLE
SCIRT Rebuilding Infrastructure	INFRASTRUCTURE REBUILD AVONSIDE - LINWOOD STAGE 1 ROCHESTER STREET
CONSULTANT FILE REF. 10995-DE-WW-DG-2029	

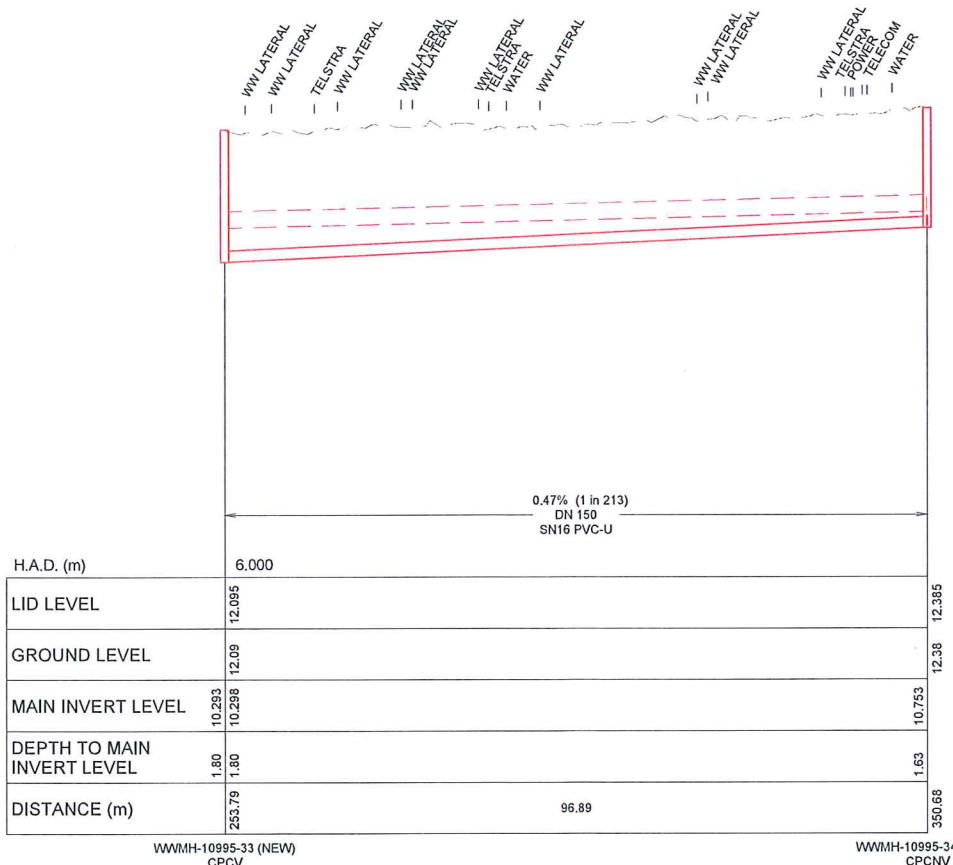
DRAWING TITLE
**WASTEWATER
PLAN & LONG SECTION
SHEET 1**

SCIRT PROJECT REF.	ORIGINAL SHEET SIZE	SCALES
10995	A1	1:500 HORIZ 1:50 VERT
CPG CAD DRAWING FILE REF.	CPG PROJECT FILE NUMBER	DRAWING No.
-	---	WW2029



PLAN

26/11/15



LONGITUDINAL SECTION

LEGEND	
SERVICES	
---	WASTEWATER
---	WASTEWATER (PRESSURE)
---	WASTEWATER PREV. ABANDONED
---	WATER SUPPLY
---	WATER SUPPLY PREV. ABANDONED
---	STORMWATER
---	POWER (& High Voltage Indicated)
---	TELECOMS
---	FIBRE OPTIC NETWORK
---	GAS
PP	POWER POLE
WM	WATER SUPPLY VALVES
FD	FIRE HYDRANT
○	MANHOLES
○	SINGLE SUMP (SS), DOUBLE SUMP (DS)
WWMH 17900	MANHOLE ID
WASTEWATER DESIGN	
---	WASTEWATER
---	WASTEWATER (PRESSURE)
---	WASTEWATER (RELINED)
---	WASTEWATER LINE TO BE ABANDONED
○	MANHOLE, VENTED MANHOLE
LONG SECTION VIEW	
---	WASTEWATER EXISTING
---	WASTEWATER DESIGN
---	EXISTING SURFACE
---	DESIGN SURFACE

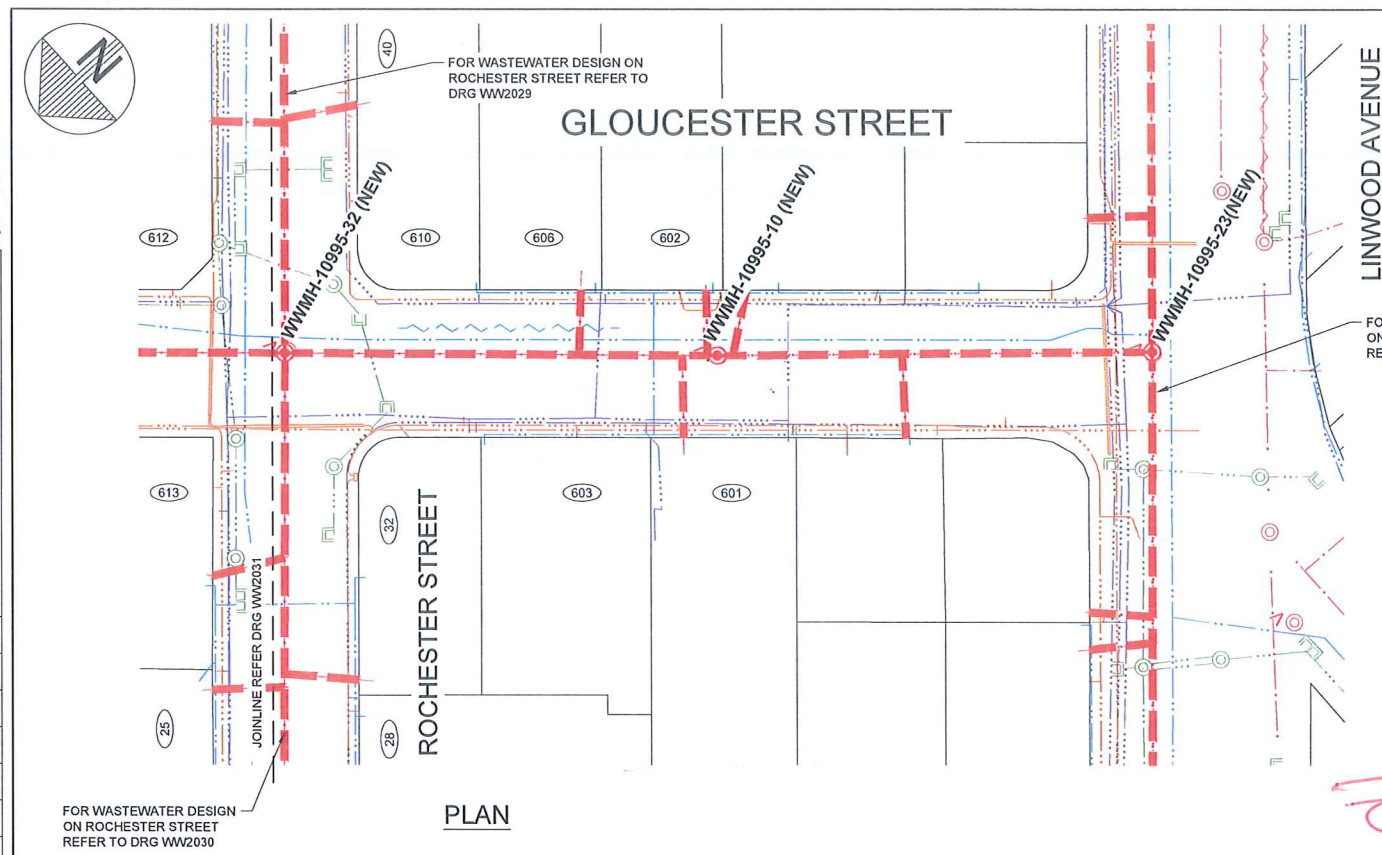
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 - THE LEVELS AND LOCATIONS OF EXISTING SERVICES ARE APPROXIMATE ONLY. CARRY OUT FURTHER INVESTIGATION TO DETERMINE EXACT DEPTH AND LOCATION OF EXISTING SERVICES.
 - NOMINAL COVERS FOR SERVICES ARE:

TELSTRATELCOM	0.60
ORION	0.60
WATER SUBMAIN	0.50
WATER MAIN	0.60
 - DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
 - VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF BMS AND LEVELS.
 - ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000).
 - LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 in 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
 - WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 in 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 in 120) WITHIN PRIVATE PROPERTY.
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 - WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS.
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Accepted
18/9/14
Phil Kemp

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION

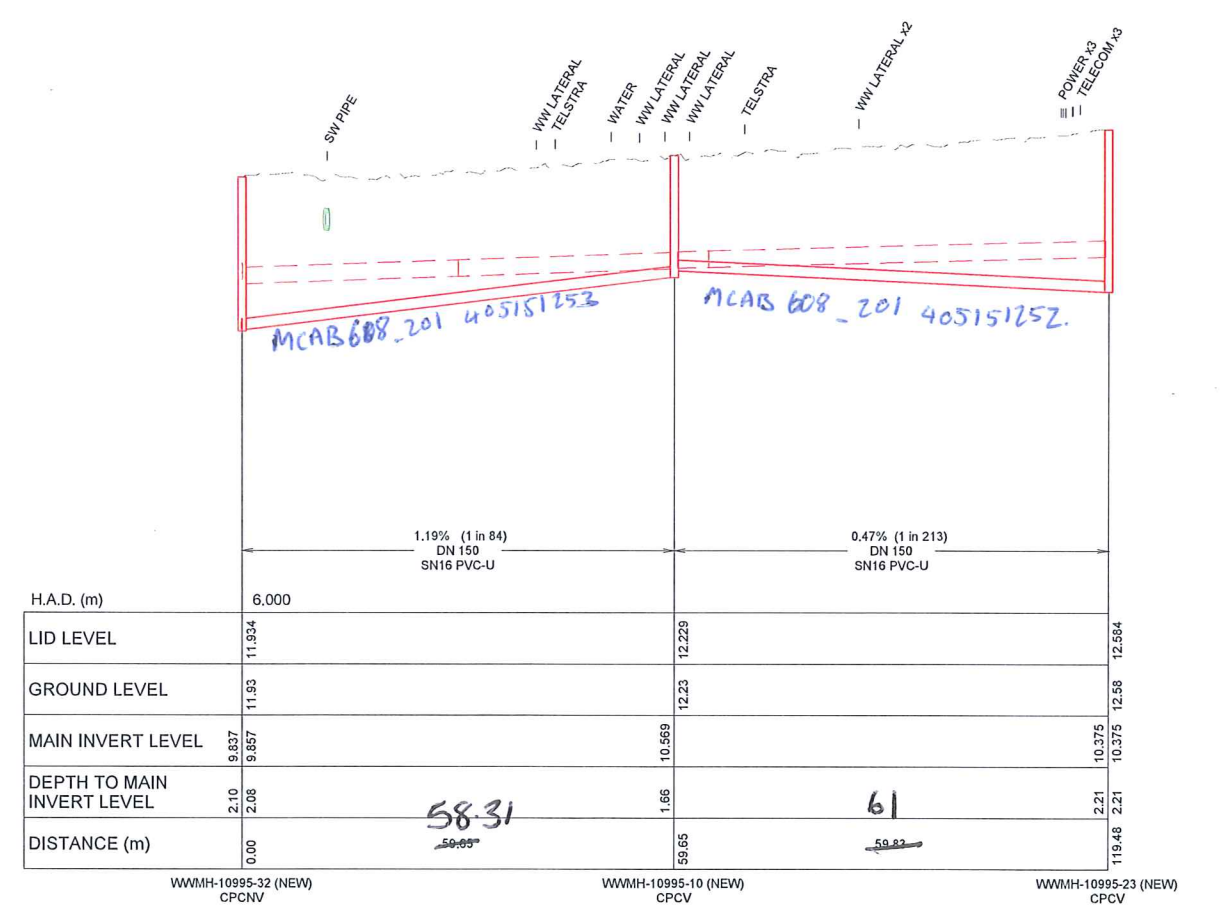


26/5/15

LEGEND	
SERVICES	
---	WASTEWATER
---	WASTEWATER (PRESSURE)
---	WASTEWATER PREV. ABANDONED
---	WATER SUPPLY
---	WATER SUPPLY PREV. ABANDONED
---	STORMWATER
---	POWER (& High Voltage Indicated)
---	TELECOMS
---	FIBRE OPTIC NETWORK
---	GAS
PP	POWER POLE
WM	WATER SUPPLY VALVES
HD	FIRE HYDRANT
○	MANHOLES
○	SINGLE SUMP (SS), DOUBLE SUMP (DS)
WWMH 17900	MANHOLE ID
WASTEWATER DESIGN	
---	WASTEWATER
---	WASTEWATER (PRESSURE)
---	WASTEWATER (RELINED)
---	WASTEWATER LINE TO BE ABANDONED
○	MANHOLE, VENTED MANHOLE
LONG SECTION VIEW	
---	WASTEWATER EXISTING
---	WASTEWATER DESIGN
---	EXISTING SURFACE
---	DESIGN SURFACE

- NOTES
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 - NOMINAL COVERS FOR SERVICES ARE:

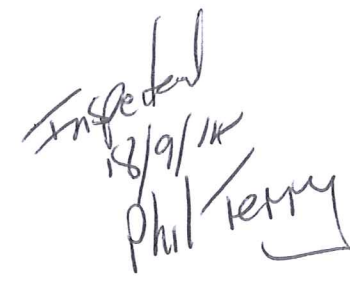
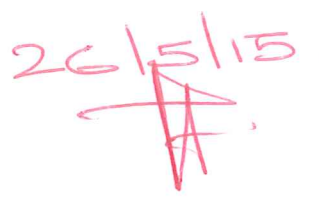
TELSTRATEL.COM	0.60
ORION	0.60
WATER SUBMAIN	0.50
WATER MAIN	0.80
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Inspected
30/9
Phyllis

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION

FOR CONSTRUCTION



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FOR CONSTRUCTION

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ORION	0.60
WATER SUBMAIN	0.50
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 11. HAUNCHING TO CSS SD3034 / P.
 12. CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS SD303 UNLESS STATED OTHERWISE.
 13. PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE. REFER SHEET W40001.
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 15. WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS.

REMOVAL: ALL PIPES, INCLUDING LATERALS, SHALL BE REMOVED AND THE TRENCH BACKFILLED TO THE REQUIREMENTS OF CSS PART 1.27.0.

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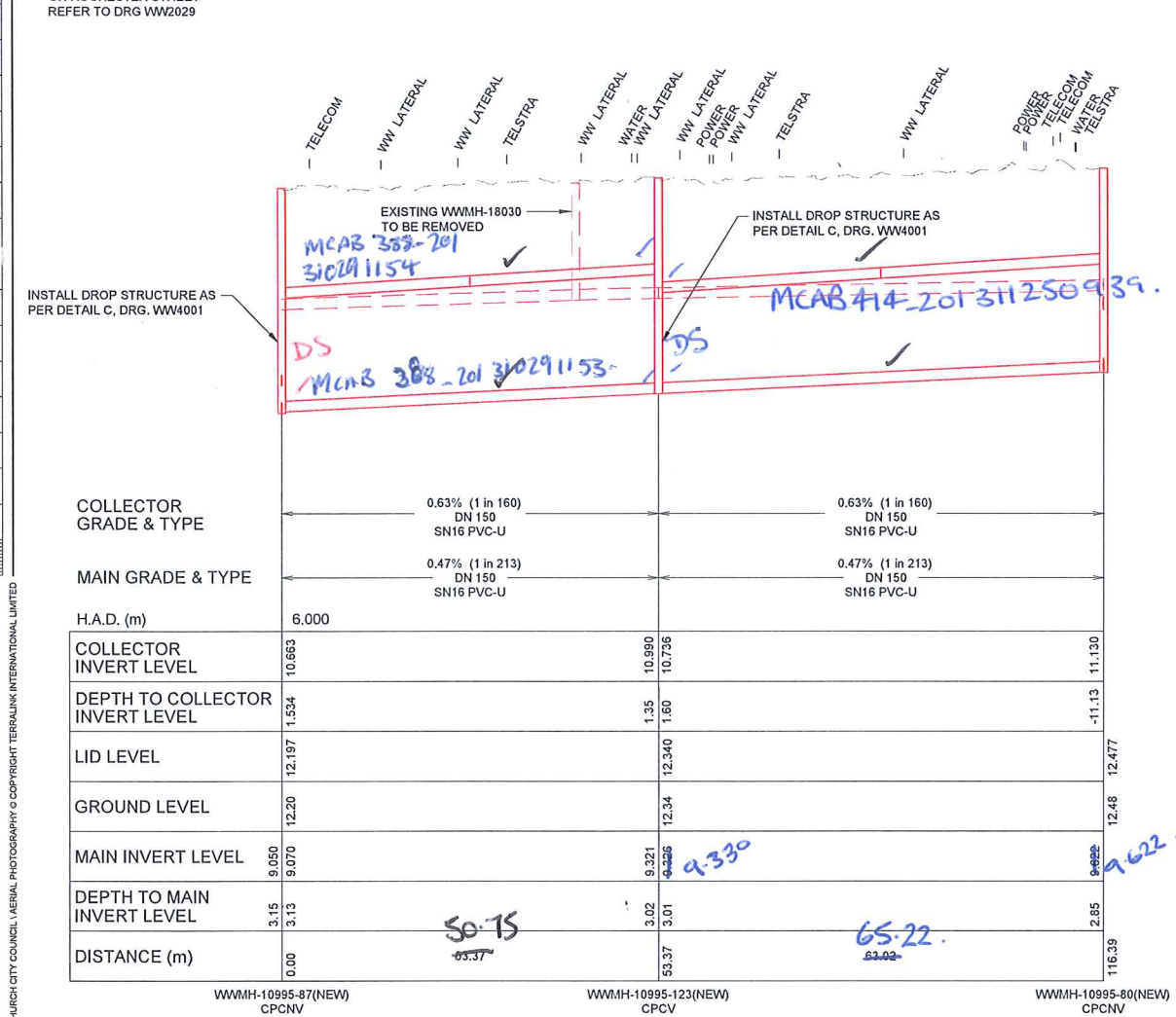
1	ISSUED FOR CONSTRUCTION	GT	19.12.2012
ISSUE	AMENDMENTS	SIGNED	DATE

<div>New Zealand Government</div> <div>Christchurch City Council</div> <div></div>	<table><tr><td>DESIGNED</td><td>C. Cadogan</td><td>CC</td><td>19.12.2012</td></tr><tr><td>DES. REVIEW</td><td>A. Ingles</td><td>AI</td><td>19.12.2012</td></tr><tr><td>S. Sullivan</td><td>SS</td><td>19.12.2012</td><td></td></tr><tr><td>DRAW. CHECK</td><td>N. Locke</td><td>NBL</td><td>19.12.2012</td></tr></table>	DESIGNED	C. Cadogan	CC	19.12.2012	DES. REVIEW	A. Ingles	AI	19.12.2012	S. Sullivan	SS	19.12.2012		DRAW. CHECK	N. Locke	NBL	19.12.2012	<table><tr><th colspan="2">APPROVED</th></tr><tr><th>DATE</th><th>SIGNED</th></tr><tr><td>19.12.2012</td><td>GT</td></tr></table>	APPROVED		DATE	SIGNED	19.12.2012	GT	<div>CONSULTANT</div> <div></div>	<div>PROJECT TITLE</div> <div>INFRASTRUCTURE REBUILD AVONSIDE - LINWOOD STAGE 1 TANCRED STREET</div>	<div>DRAWING TITLE</div> <div>WASTEWATER PLAN & LONG SECTION SHEET 1</div>	<table><tr><td>SCIRT PROJECT REF. 10995</td><td rowspan="2">ORIGINAL SHEET SIZE A1</td><td rowspan="2">SCALES 1:500 HORIZ 1:50 VERT</td></tr><tr><td>CPG CAD DRAWING FILE REF. --</td></tr><tr><td colspan="2">CPG PROJECT FILE NUMBER --</td><td>DRAWING No. WW2033</td></tr></table>	SCIRT PROJECT REF. 10995	ORIGINAL SHEET SIZE A1	SCALES 1:500 HORIZ 1:50 VERT	CPG CAD DRAWING FILE REF. --	CPG PROJECT FILE NUMBER --		DRAWING No. WW2033
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	<div>PRINTED ON 18-Dec-12 BY nainfordb</div>	<table><tr><th>DATE</th><th>SIGNED</th></tr><tr><td>19.12.2012</td><td>GT</td></tr></table>	DATE	SIGNED	19.12.2012	GT																													
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1 = Phil Kerry 25/8/14



PLAN



LONGITUDINAL SECTION

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

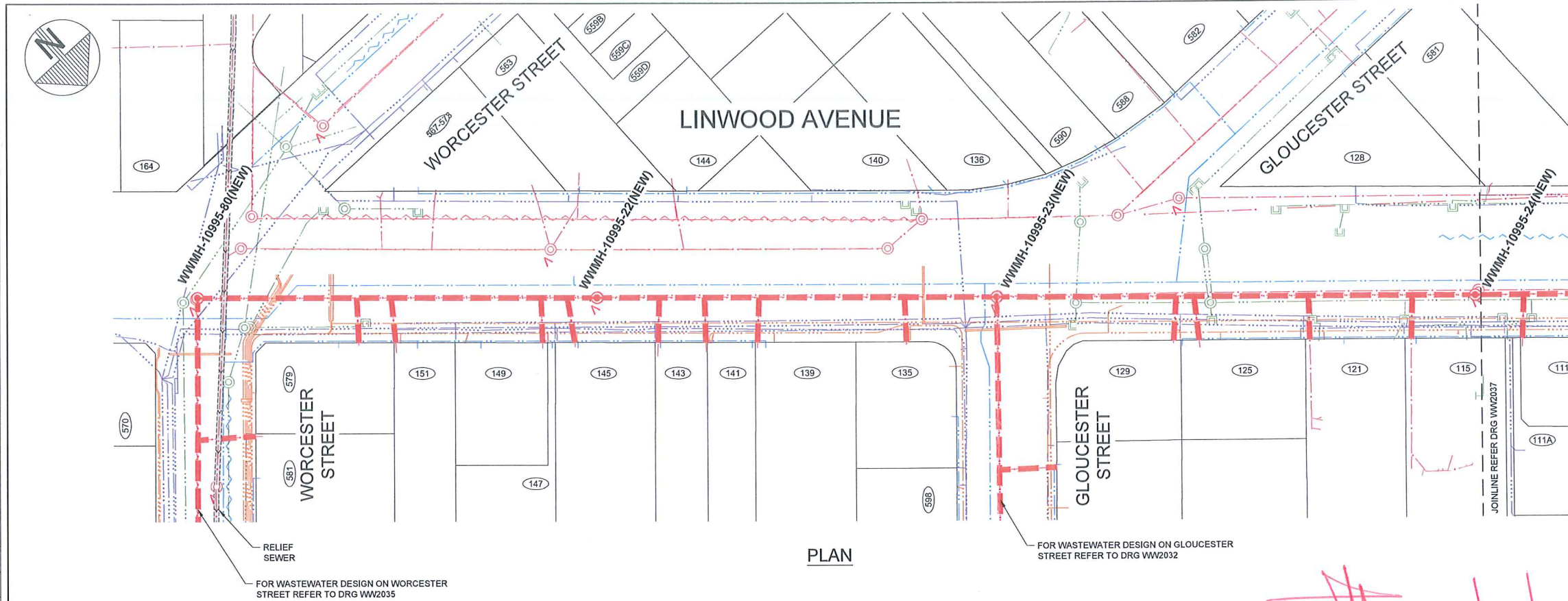
LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE

- NOTES**
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FOR CONSTRUCTION



LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
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- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

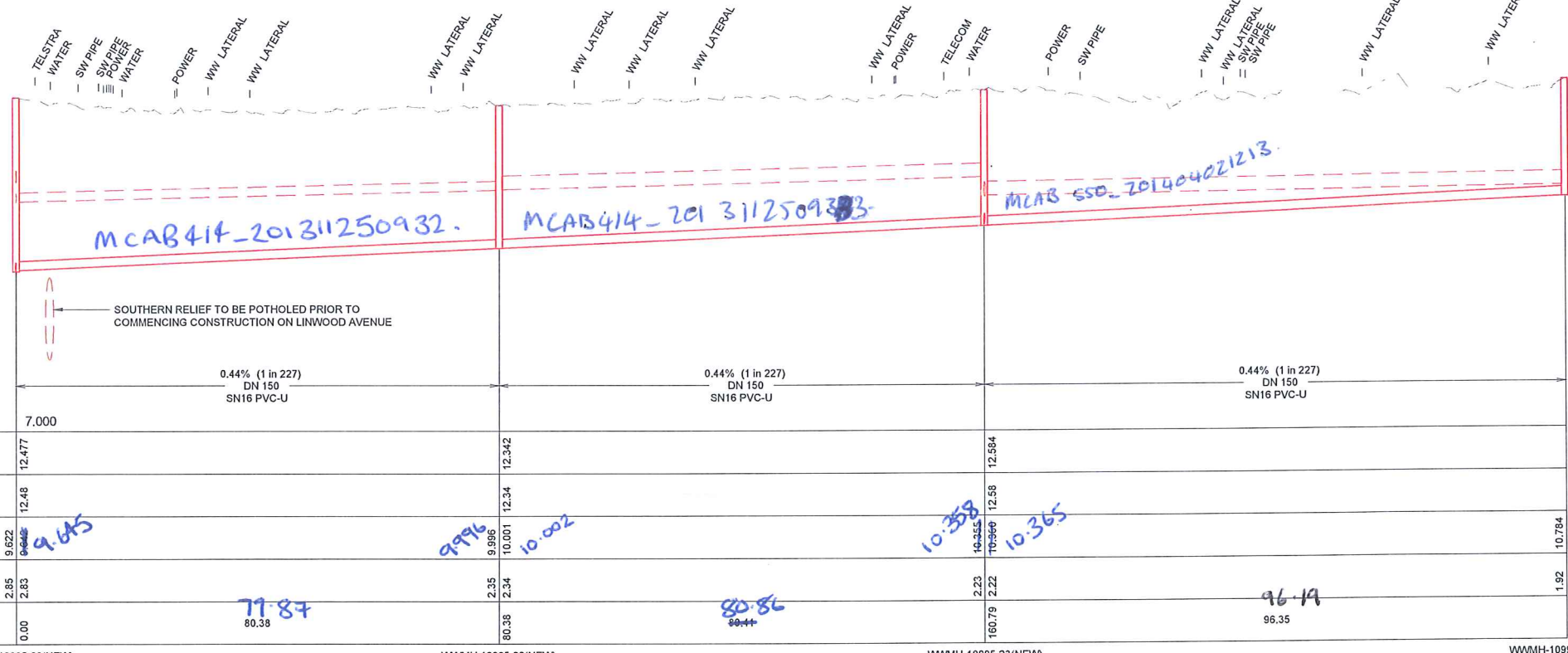
- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
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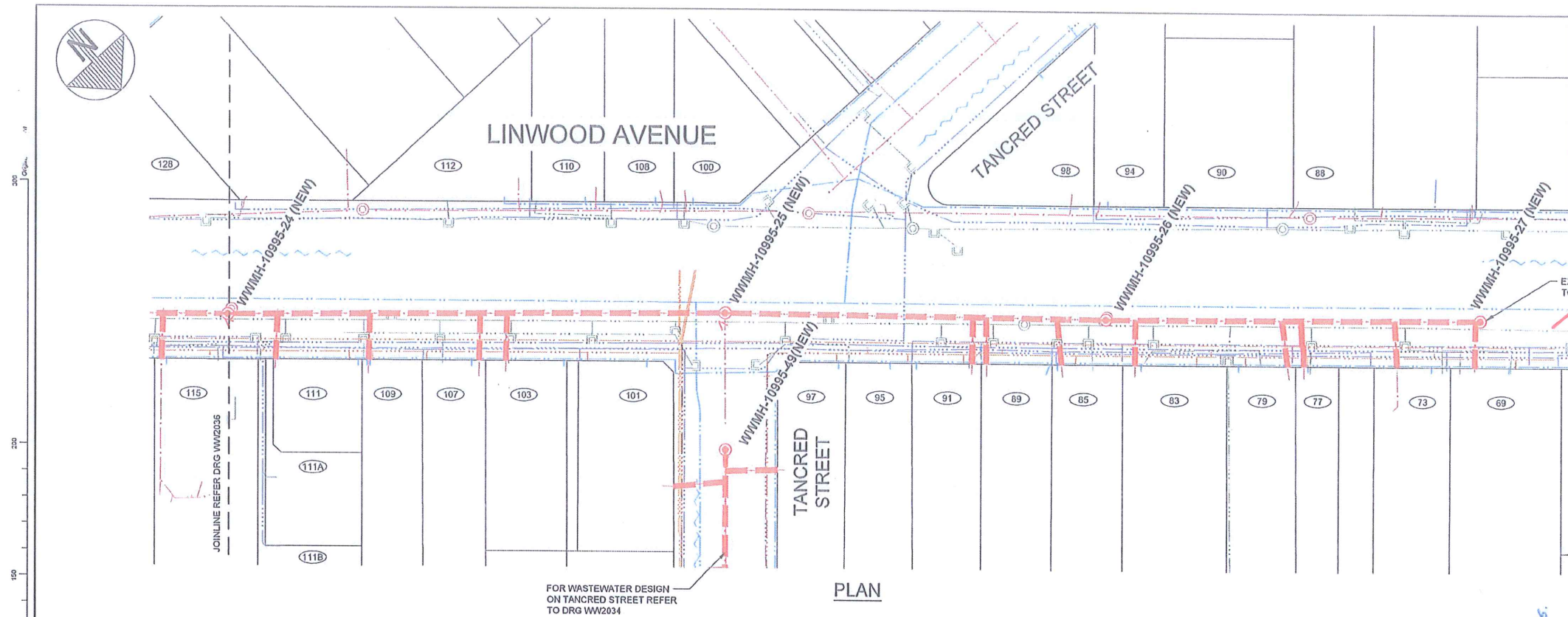


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Inspected
30/9
Ph/Tony

FOR CONSTRUCTION

New Zealand Government	Christchurch City Council	SCIRT Rebuilding Infrastructure	PROJECT TITLE INFRASTRUCTURE REBUILD AVONSIDE - LINWOOD STAGE 1 LINWOOD AVENUE	DRAWING TITLE WASTEWATER PLAN & LONG SECTION SHEET 1	SCIRT PROJECT REF. 10995	ORIGINAL SHEET SIZE A1	SCALES 1:500 HORIZ 1:50 VERT			
DESIGNED C. Cadogan CC 19.12.2012 DES. REVIEW A. Ingles AJ 19.12.2012 DRAWN S. Sutton SS 19.12.2012 DRW. CHECK N. Locke NBL 19.12.2012 FILE LOCATION I:\10995 Avonside Linwood Stage 1 10995-DE-WW-DG-2036.dwg PRINTED ON 19-Dec-12 BY galsford					APPROVED FOR RECOMMENDATION DATE 19.12.2012 SIGNED GT FOR CONSTRUCTION DATE 19.12.2012 SIGNED GT CONSULTANT FILE REF. 10995-DE-WW-DG-2036			ISSUED FOR CONSTRUCTION ISSUE 1 AMENDMENTS GT 19.12.2012 DATE		



EXISTING
FLUSH TANK
ABANDONED

LEGEND

SERVICES

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
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- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- WWMH 17900 MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER (RELINED)
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

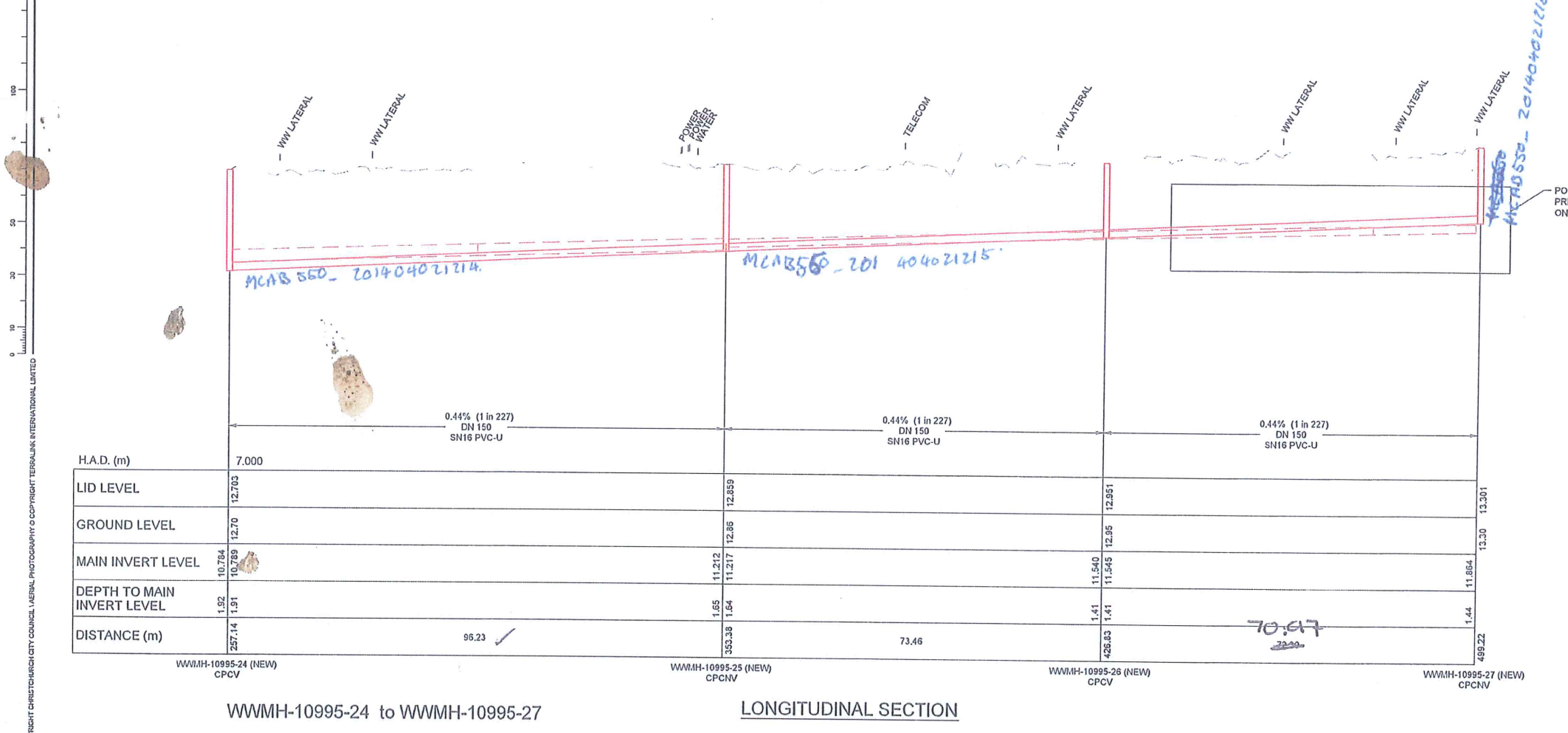
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ORION 0.60
WATER SUBMAIN 0.50
WATER MAIN 0.80
 - DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
 - VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF B/Ls AND LEVELS.
 - ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000).
 - LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.44% (1 in 227). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
 - WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 in 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 in 120) WITHIN PRIVATE PROPERTY.
 - ALL LATERAL CONNECTIONS ARE TO BE "CONNECTION BY RAISED RISER" OR "CONNECTION TO 45° SIDE JUNCTION" AS PER SD363. VERTICAL RISER JUNCTIONS ARE NOT TO BE USED.
 - HAUNCHING TO CSS SD344/P.
 - CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS SD303 UNLESS STATED OTHERWISE.
 - PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET WW4001.
 - WHERE EXISTING RCR/RJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT WORKS DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SCIRT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH. 021 279 6566.
 - WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS:
REMOVAL: ALL PIPES, INCLUDING LATERALS, SHALL BE REMOVED AND THE TRENCH BACKFILLED TO THE REQUIREMENTS OF CSS PART 1.27.0.
FILL: FILLING SHALL BE WITH A FLOWABLE FILL OR CONCRETE WITH STRENGTH OF 15 MPa. THE VOLUME OF MATERIAL INSERTED INTO THE PIPE SHALL BE EQUAL TO OR GREATER THAN THE VOLUME OF PIPE TO BE ABANDONED. BEFORE FILLING COMMENCES ALL CONNECTIONS TO THE PIPE SHALL BE SEALED OR THE VOLUME OF CONNECTED PIPES INCLUDED IN THE VOLUME OF MATERIAL INSERTED.

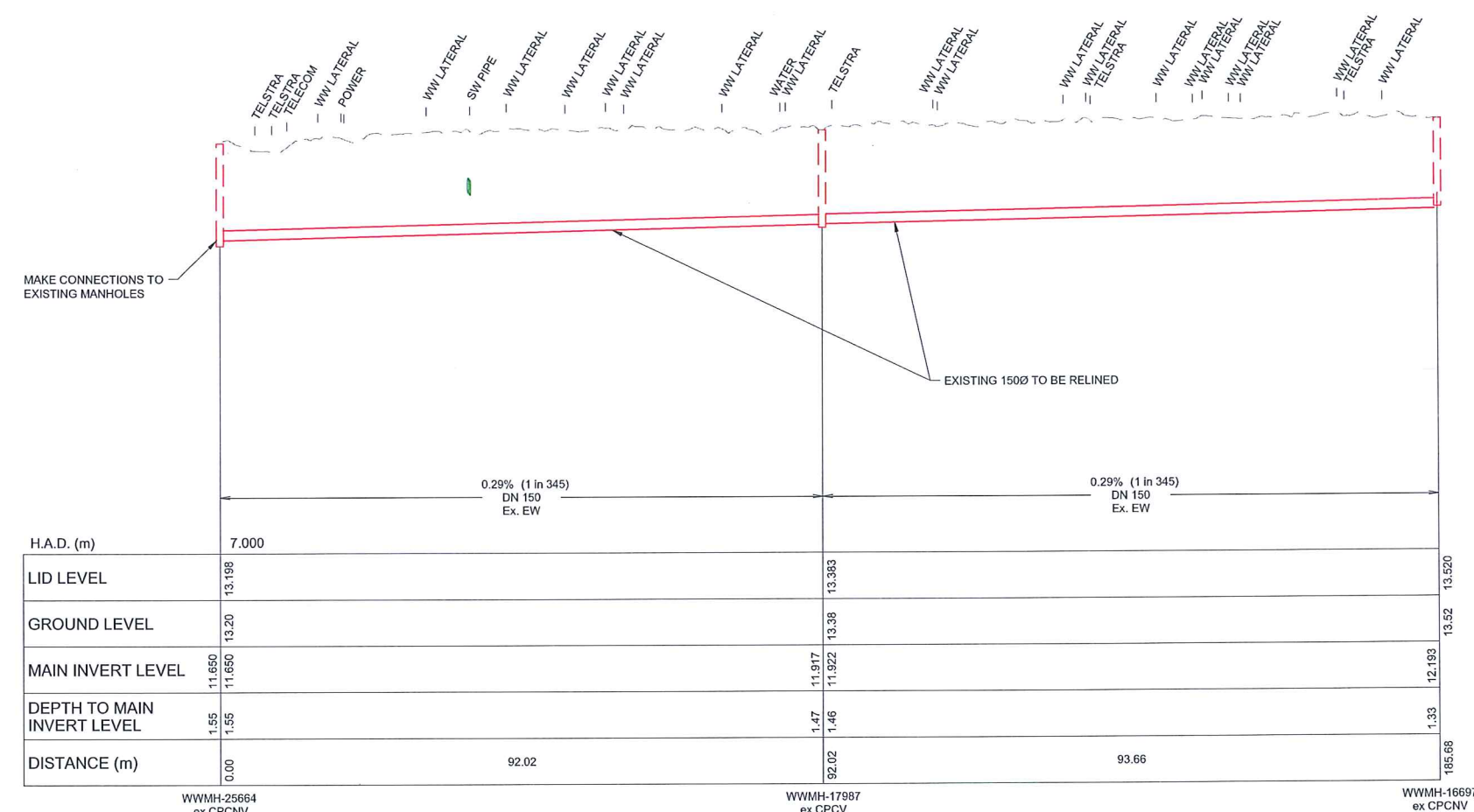
Inspected
30/9
[Signature]

THE DESIGNER IS TO PROVIDE COORDINATES FOR THE LOCATION OF SUMPS, MANHOLES AND OUTLETS AS REQUIRED, AT THE TIME OF CONSTRUCTION
































FOR CONSTRUCTION



<p>New Zealand Government</p> <p>Christchurch City Council</p>	<p>DESIGNED: C. Cadogan CC 19.12.2012</p> <p>DES. REVIEW: A. Inglis AJ 19.12.2012</p> <p>DRAWN: S. Sutton SB 19.12.2012</p> <p>DRIVE CHECK: M. Locke NBL 19.12.2012</p> <p>FILE LOCATION: [Path]</p> <p>10995-DE-WW-DG-2037.dwg</p> <p>PRINTED ON: 19-Dec-12 BY: gshuford</p>	<p>APPROVED</p> <p>FOR RECOMMENDATION</p> <p>DATE: 19.12.2012</p> <p>SIGNED: GT</p> <p>FOR CONSTRUCTION</p> <p>DATE: 19.12.2012</p> <p>SIGNED: GT</p>	<p>CONSULTANT</p> <p>SCIRT</p> <p>Rebuilding Infrastructure</p> <p>CONSULTANT FILE REF: 10995-DE-WW-DG-2037</p>	<p>PROJECT TITLE</p> <p>INFRASTRUCTURE REBUILD</p> <p>AVONSIDE - LINWOOD STAGE 1</p> <p>LINWOOD AVENUE</p>	<p>DRAWING TITLE</p> <p>WASTEWATER</p> <p>PLAN & LONG SECTION</p> <p>SHEET 2</p>	<p>1 ISSUED FOR CONSTRUCTION</p> <p>DATE: 19.12.2012</p>
						<p>SCIRT PROJECT REF: 10995</p> <p>CPG CAD DRAWING FILE REF: -</p> <p>CPG PROJECT FILE NUMBER: -</p>



26/5/15

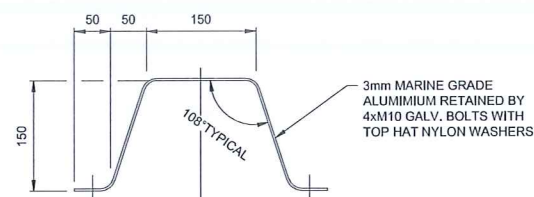
LEGEND		SERVICES	
			WASTEWATER
	FM		WASTEWATER (PRESSURE)
			WASTEWATER (RELINED)
			WASTEWATER LINE TO BE ABANDONED
			MANHOLE, VENTED MANHOLE
			<u>LONG SECTION VIEW</u>
			WASTEWATER EXISTING
			WASTEWATER DESIGN
	EnFibre		EXISTING SURFACE
	GN		DESIGN SURFACE
	PP		
	WM FH		
	FH		
	H		
	H		
	U S		
WWMH 17900			
			<u>WASTEWATER DESIGN</u>
			WASTEWATER
	FM		
	LH		
			
	V		
	V		

1. REFER TO CONSTRUCTION STANDARD SPECIFICATION: CSS PARTS 1-7 AND INFRASTRUCTURE DESIGN STANDARD (IDS) FOR STANDARD DETAILS AND SPECIFICATIONS.
2. CONFIRM ALL PIPE / MANHOLE LEVELS AND LOCATIONS AFFECTING DESIGN TO START OF CONSTRUCTION.
3. THE LEVELS AND LOCATIONS OF EXISTING SERVICES ARE APPROXIMATE ONLY. CARRY OUT FURTHER INVESTIGATION TO DETERMINE EXACT DEPTH AND LOCATION OF EXISTING SERVICES.
4. NOMINAL COVERS FOR SERVICES ARE:

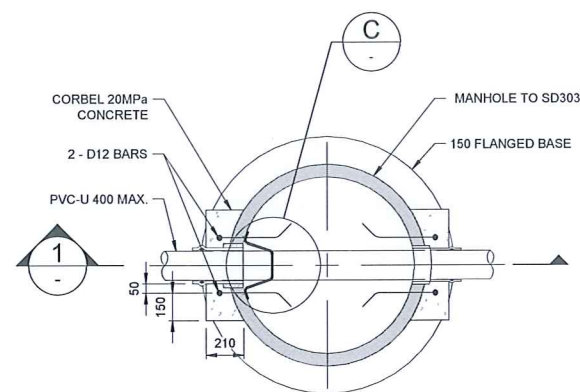
TELSTRATEL.COM	0.60
ORION	0.60
WATER SUBMAIN	0.50
WATER MAIN	0.80
5. DISTANCES SHOWN ON LONG SECTIONS ARE BETWEEN THE CENTRELINE OF THE MANHOLES.
6. VERTICAL DATUM IS THE CHRISTCHURCH DRAINAGE DATUM (CDD). REFER TO SURVEY CONTROL PLAN FOR POSITION OF BM's AND LEVELS.
7. ALL COORDINATES ARE IN TERMS OF MILE PLANT PROJECTION (NZGD2000).
8. LAY DN150 PVC-U COLLECTOR TO A MINIMUM GRADE OF 0.47% (1 in 213). MINIMUM COVER ON COLLECTOR IS 1.2m. COLLECTOR TO MANHOLE CONNECTIONS AS SHOWN ON SHEET WW4001. COLLECTOR LEVELS ARE TO BE CONFIRMED FOLLOWING EXPOSURE OF PRIVATE PROPERTY LATERALS AT BOUNDARY.
9. WASTEWATER LATERALS TO HAVE MINIMUM GRADE OF 1.25% (1 in 80) WITHIN THE ROAD CORRIDOR. LATERALS TO HAVE A MINIMUM GRADE OF 0.83% (1 in 120) WITHIN PRIVATE PROPERTY.
10. ALL LATERAL CONNECTIONS ARE TO BE "CONNECTION BY RAMPED RISER" OR "CONNECTION TO 45° SIDE JUNCTION" AS PER SD363. VERTICAL RISER JUNCTIONS ARE NOT TO BE USED.
11. HAUNCHING TO CSS-SD344 / P.
12. CONSTRUCTION AND INSTALLATION OF ALL NEW MANHOLES SHALL BE TO CSS-SD303 UNLESS STATED OTHERWISE.
13. PIPE JOINT WRAP DETAIL OF RUBBER RING JOINTED (RRJ) PIPE, REFER SHEET WW4001.
14. WHERE EXISTING RCRRJ OR PVC PIPE IS EXPOSED, RECORD OBSERVATIONS OF THE CONDITION OF EXPOSED PIPE, JOINTS AND LATERALS USING THE "CONCURRENT VIDEO DAMAGE INVESTIGATION FIELD FORM" AND PASS COMPLETED RECORDS BACK TO THE SORT DELIVERY TEAM MANAGER. DIRECT QUERIES TO YVONNE MACDONALD, PH. 021 279 6566.
15. WHERE AN EXISTING PIPE IS SPECIFIED FOR ABANDONMENT TREATMENT SHALL BE EITHER REMOVED OR TREATED AS FOLLOWS:

REMOVAL: ALL PIPES, INCLUDING LATERALS, SHALL BE REMOVED AND THE TRENCH BACKFILLED TO THE REQUIREMENTS OF CSS PART 1.27.0.
FILLED: FILLING SHALL BE WITH A FLOWABLE FILL OR CONCRETE WITH STRENGTH OF 1.5 MPa. THE VOLUME OF MATERIAL INSERTED INTO THE PIPE SHALL BE EQUAL TO OR GREATER THAN THE VOLUME OF PIPE TO BE ABANDONED. BEFORE FILLING COMMENCES ALL CONNECTIONS TO THE PIPE SHALL BE SEALED OR THE VOLUME OF CONNECTED PIPES INCLUDED IN THE VOLUME OF MATERIAL INSERTED.

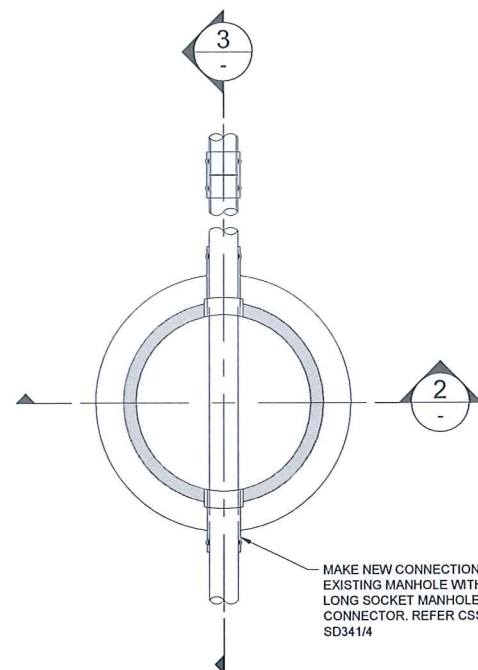
FOR CONSTRUCTION



C DROP STRUCTURE
SCALE 1:5

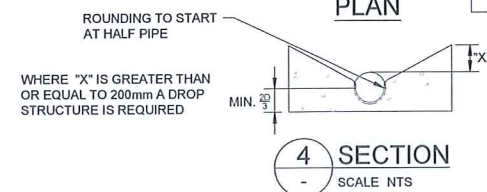


A CIRCULAR MANHOLE
SCALE 1:20

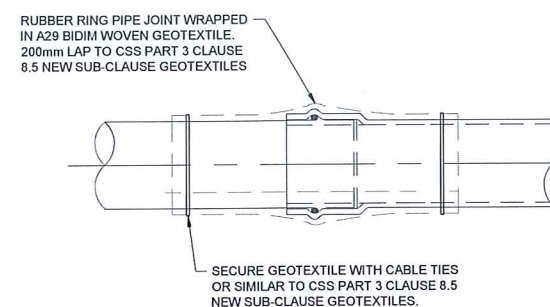


B MANHOLE RE-BENCHING
SCALE 1:20

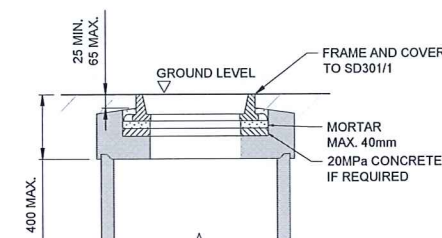
PREFORMED CONNECTION OR A FORMED JOINT USING CUT PIPE TO PRODUCE A CLEAN TIDY JOINT WITH A GAP OF NO GREATER THAN 5mm. GAP SHALL BE MADE GOOD WITH GROUT OF SIMILAR STRENGTH TO CONCRETE BENCHING



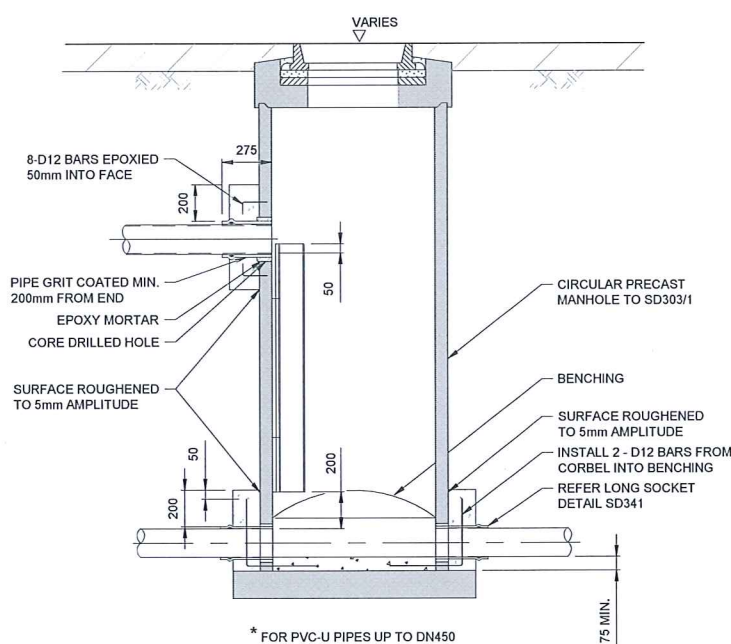
EARTHENWARE PIPE FORMING BENCHING
SCALE 1:20



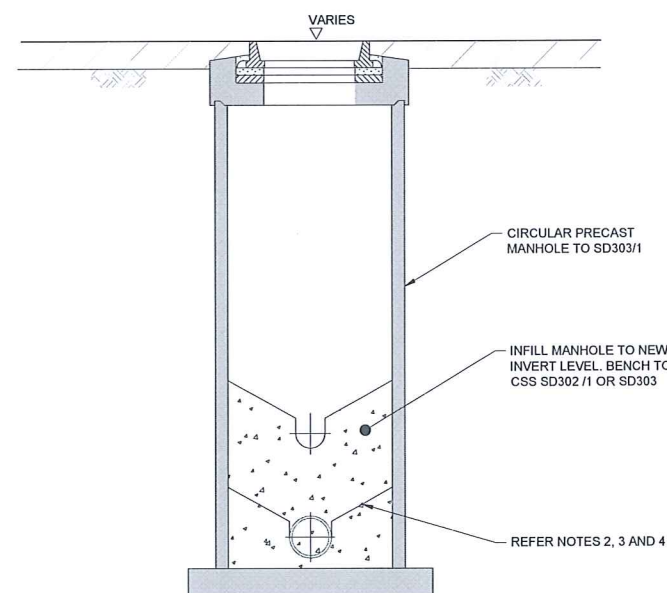
PIPE JOINT WRAP DETAIL
SCALE: 1:10



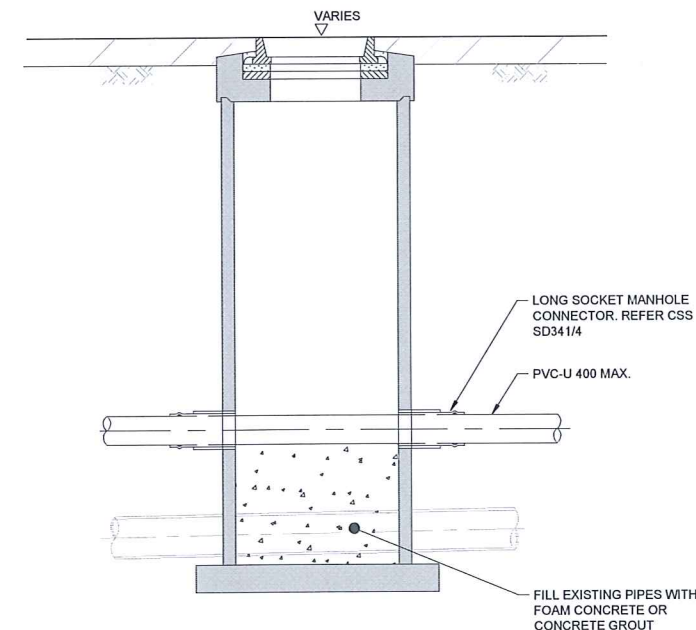
MANHOLE LID DETAIL
SCALE 1:20



1 SECTION
SCALE 1:20



2 SECTION
SCALE 1:20



3 SECTION
SCALE 1:20

26/1/15

FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	GT	19.12.2012
ISSUE	AMENDMENTS	SIGNED	DATE

New Zealand Government

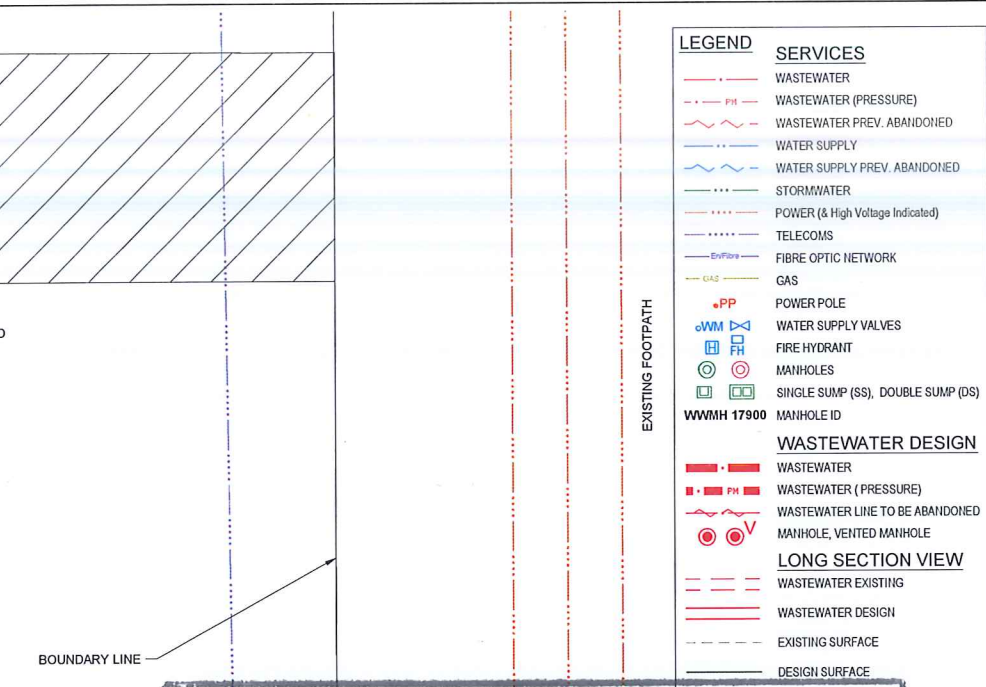
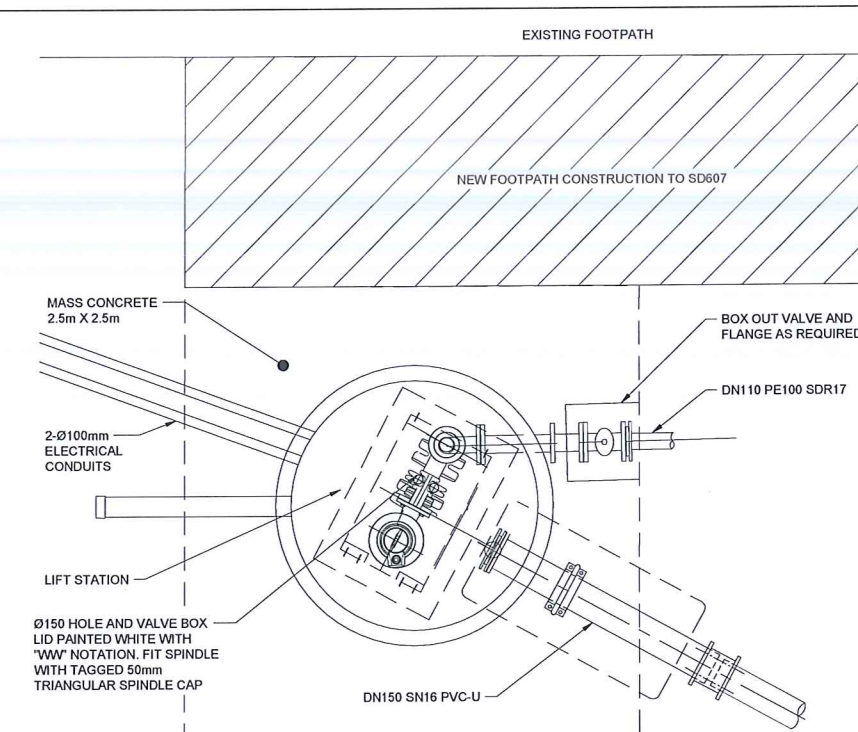
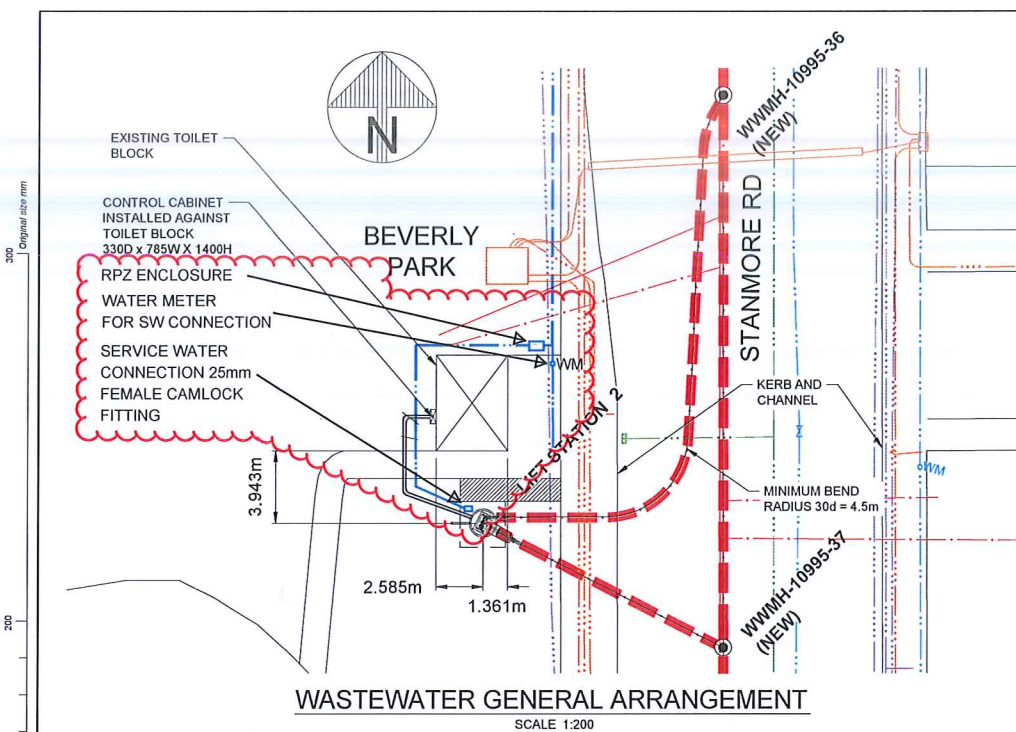
Christchurch City Council

DESIGNED	NAME	SIGNED	DATE	APPROVED
C. Cadogan	CC	19.12.2012	FOR RECOMMENDATION	
M. Sheppard	MS	19.12.2012	DATE	SIGNED
B. Gainsford	SS	19.12.2012	DATE	GT
N. Locke	NBL	19.12.2012	FOR CONSTRUCTION	
FILE LOCATION	J:\10995 Avonside Linwood Stage 1		DATE	SIGNED
10995-DE-WWDG-4001.dwg			19.12.2012	GT
PRINTED ON 19-Dec-12 BY gainsford				

CONSULTANT	PROJECT TITLE
SCIRT Rebuilding Infrastructure	INFRASTRUCTURE REBUILD AVONSIDE - LINWOOD STAGE 1
CONSULTANT FILE REF. 10995-DE-WW-DG-4001	

DRAWING TITLE
**WASTEWATER
CONNECTION AND
WRAP DETAILS**

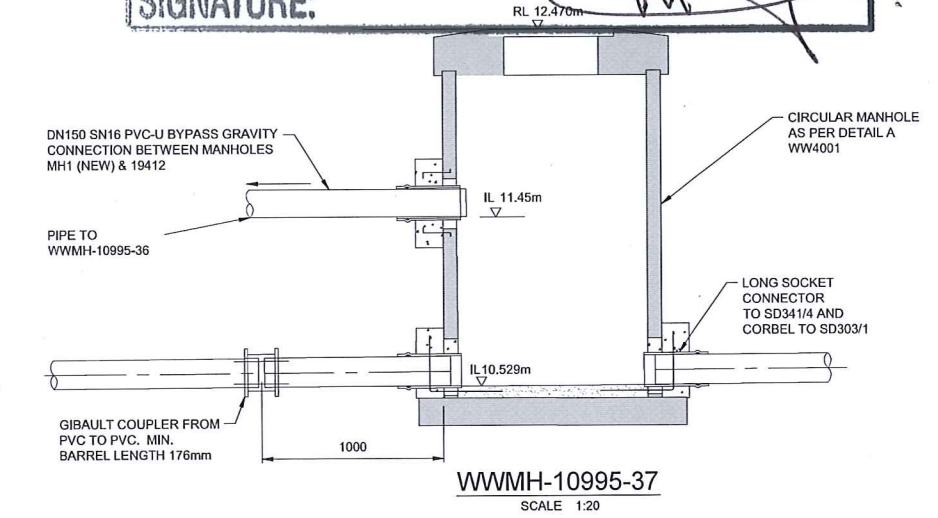
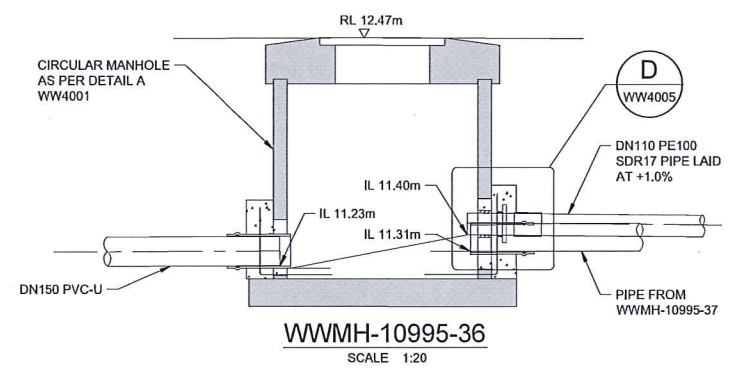
SCIRT PROJECT REF. 10995	ORIGINAL SHEET SIZE A1	SCALES AS SHOWN
CPG CAD DRAWING FILE REF.		
CPG PROJECT FILE NUMBER		DRAWING No. WW4001



CONTROLLED COPY

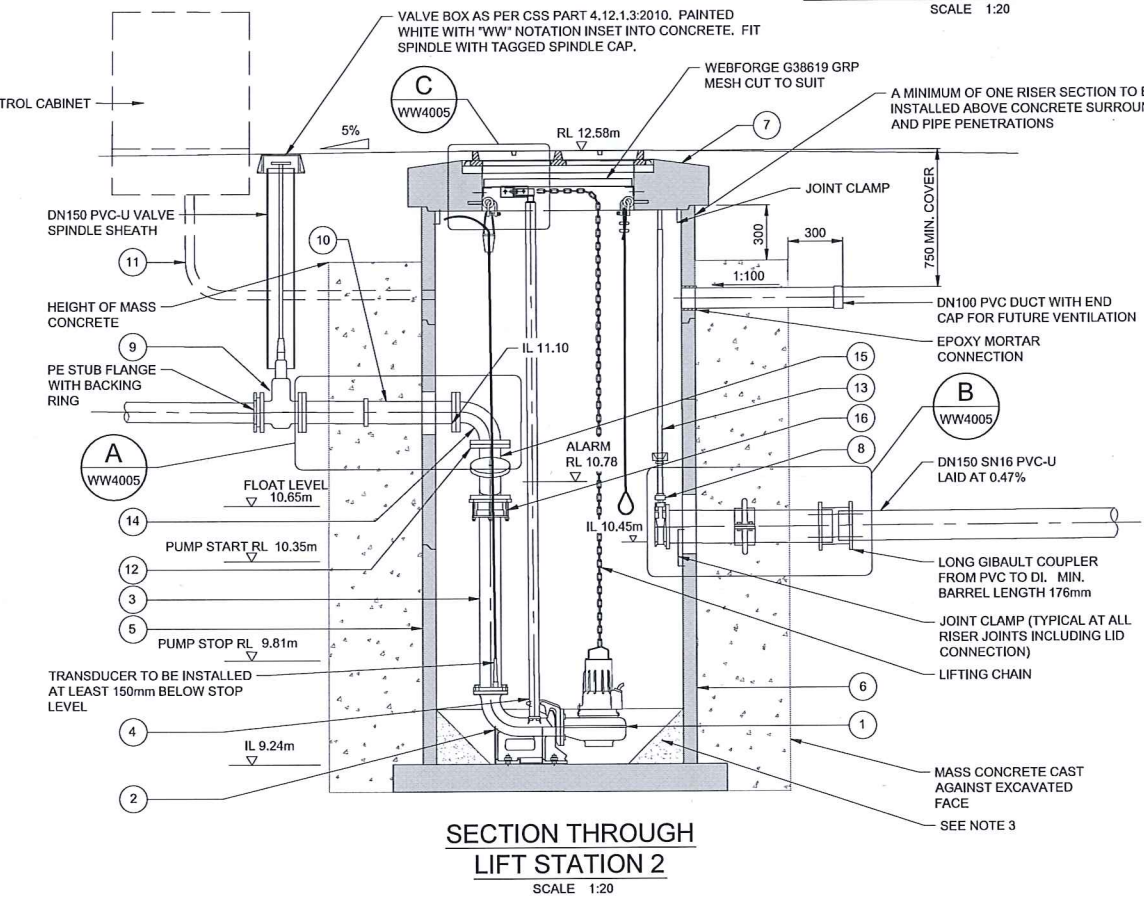
DATE ISSUED: 30/6/15

CONSTRUCTION MANAGER SIGNATURE: [Signature]



- NOTES:**
- REFER TO STANDARD SPECIFICATIONS (IDS, CSS, SPDS) FOR MORE DETAILED DESCRIPTION OF CCC APPROVED EQUIPMENT.
 - CONDUITS FROM WETWELL TO CONTROL CABINET TO BE SEALED WITH RAGCHEM TDUX-100 INFLATABLE SEAL OR APPROVED EQUIVALENT
 - 300 x 300 CONCRETE FILLET TO BASE OF SUMP.
 - ALL MANHOLE RISER JOINTS INCLUDING THE LID TO RISER CONNECTION TO HAVE AN APPROPRIATE TWO POT EPOXY JOINTING SYSTEM AND A MINIMUM OF THREE MECHANICAL JOINT CLAMPS.
 - ALL METAL FLANGES TO AS4087 FIGURE B5 AND PE FLANGES TO AS4087 FIG. B7
 - PUMP AND CHAMBER LID AT 90° TO THE INCOMING SEWER
 - ALL HOT DIP GALVANISING TO BE COMPLETED IN ACCORDANCE WITH AS/NZS 4680:2006. REFER TO TABLE 1 FOR MINIMUM COATING MASS
 - ON SITE GALVANISING REPAIR MAY BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 4680:2006 SECTION 8
 - WELDING OF ALL PIPE WORK SHALL BE TO NZS 3404:1997

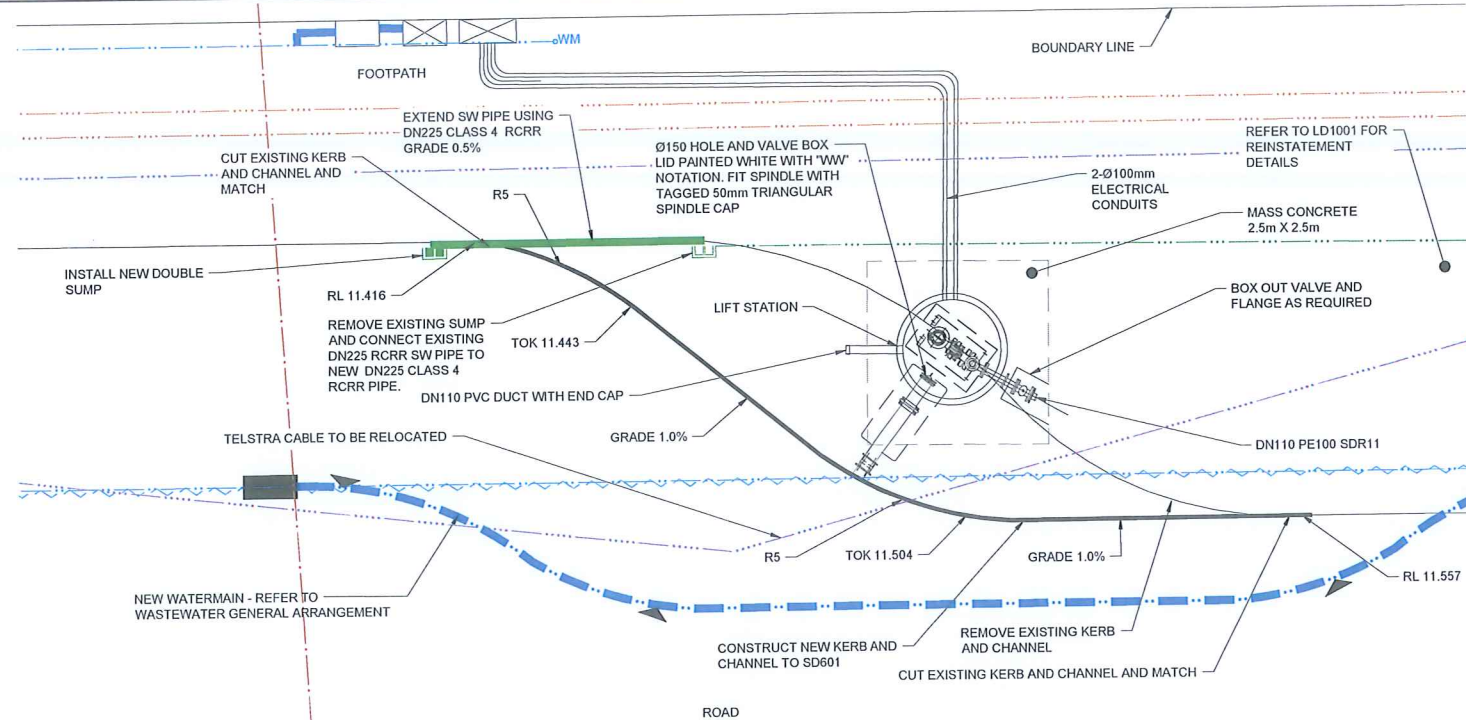
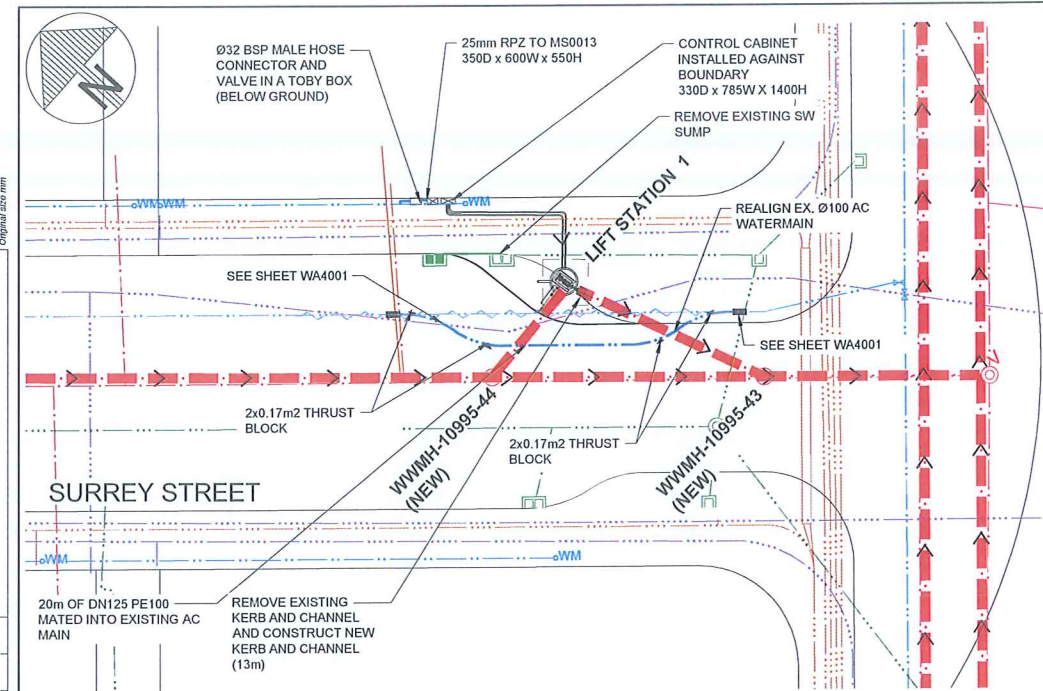
LIFT STATION MATERIAL LIST	
ITEM	DESCRIPTION
1	FLYGT PUMP: DP3068.180 MT 473 DN80
2	FLYGT DISCHARGE CONNECTION DN80
3	STEEL PIPE DN100 SCH120 (ID=92mm) GALVANISED
4	PUMP GUIDE BARS (2) GALVANISED
5	DN1350 RCFJ 1.2m MANHOLE RISER SECTION WITH FLANGED BASE
6	DN1350 RCFJ PRECAST MANHOLE RISER
7	PRECAST CONCRETE COVER WITH ACCESS LID AND SAFETY GRATING
8	DN150 KNIFE GATE
9	DN100 RESILIENT SEATED GATE VALVE - (FL - FL) WITH 50mm TRIANGULAR VALVE CAP
10	DN100 S.G. THICK WALLED (11.7mm) DUCTILE PIPE 800mm LONG (FL - FL)
11	2 x Ø100mm ELECTRICAL CONDUITS TO CONTROL CABINET
12	HIGH LEVEL ALARM SWITCH
13	304 STAINLESS STEEL VALVE SPINDLE EXTENSION AND SUPPORT BRACKETS TO SUIT. H.D. GALV.
14	90° STEEL BEND SCH160 (FL-FL) GALVANISED
15	DN100 HDL BALL CHECK VALVE WITH 178mm PLD OR SIMILAR APPROVED
16	DN100 FLANGE ADAPTER COUPLER



mN	mE	DESCRIPTION
807168.26	394336.077	WET WELL CENTRE

ALL COORDINATES ARE IN TERMS OF MT PLEASANT PROJECTION (NZGD2000)

FOR CONSTRUCTION



LEGEND

EXISTING SERVICES

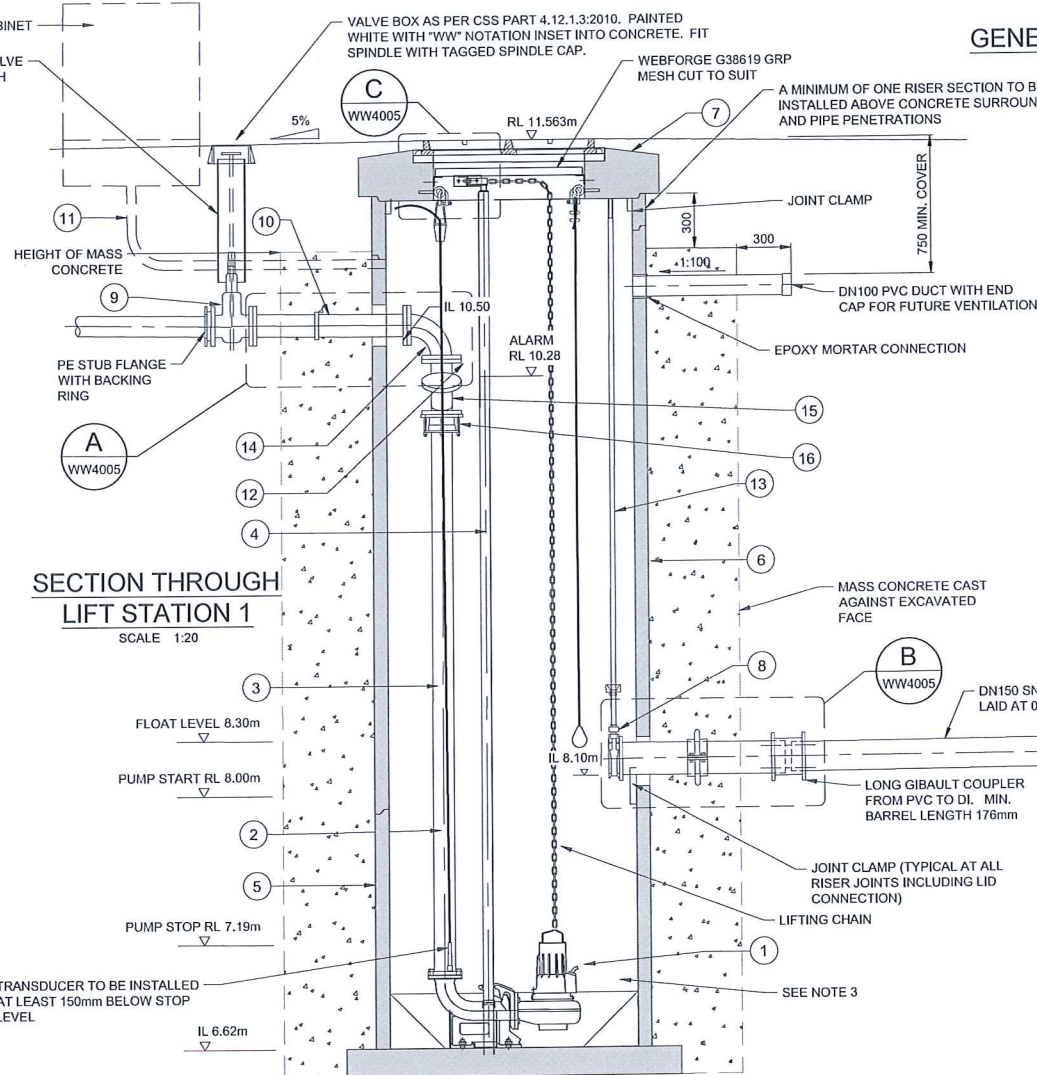
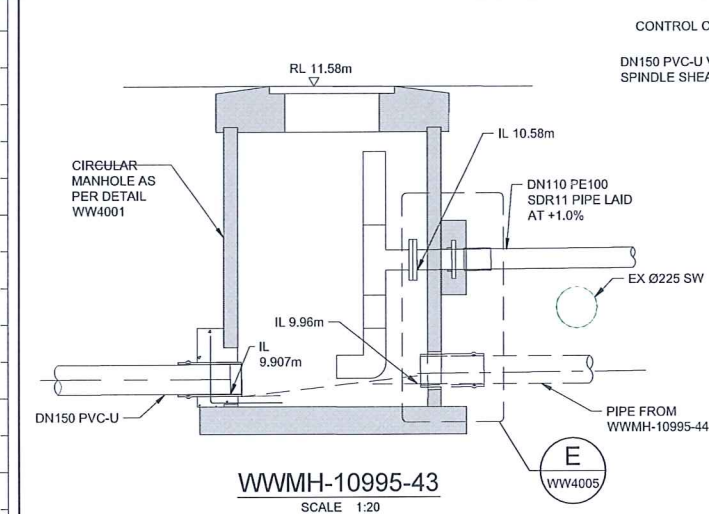
- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER PREV. ABANDONED
- WATER SUPPLY
- WATER SUPPLY PREV. ABANDONED
- STORMWATER
- STORMWATER PREV. ABANDONED
- POWER (& High Voltage Indicated)
- TELECOMS
- FIBRE OPTIC NETWORK
- GAS
- POWER POLE
- WATER SUPPLY VALVES
- FIRE HYDRANT
- MANHOLES
- SINGLE SUMP (SS), DOUBLE SUMP (DS)
- MANHOLE ID

WASTEWATER DESIGN

- WASTEWATER
- WASTEWATER (PRESSURE)
- WASTEWATER LINING
- WASTEWATER LINE TO BE ABANDONED
- MANHOLE, VENTED MANHOLE

LONG SECTION VIEW

- WASTEWATER EXISTING
- WASTEWATER DESIGN
- EXISTING SURFACE
- DESIGN SURFACE



mN	mE	DESCRIPTION
806964.345	395591.096	WET WELL CENTRE

All coordinates are in terms of Mt Pleasant Projection (NZGD2000)

NOTES:

- REFER TO STANDARD SPECIFICATIONS (IDS, CSS, SPSPDS) FOR MORE DETAILED DESCRIPTION OF CCC APPROVED EQUIPMENT.
- CONDUITS FROM WETWELL TO CONTROL CABINET TO BE SEALED WITH RAGCHEM TDUX-100 INFLATABLE SEAL OR APPROVED EQUIVALENT
- 300 x 300 CONCRETE FILLET TO BASE OF SUMP.
- ALL MANHOLE RISER JOINTS INCLUDING THE LID TO RISER CONNECTION TO HAVE AN APPROPRIATE TWO POT EPOXY JOINTING SYSTEM AND A MINIMUM OF THREE MECHANICAL JOINT CLAMPS.
- ALL METAL FLANGES TO AS4087 FIGURE B5 AND PE FLANGES TO AS4087 FIG. B7
- PUMP AND CHAMBER LID AT 90° TO THE INCOMING SEWER
- ALL HOT DIP GALVANISING TO BE COMPLETED IN ACCORDANCE WITH AS/NZS 4680:2006. REFER TO TABLE 1 FOR MINIMUM COATING MASS
- ON SITE GALVANISING REPAIR MAY BE CARRIED OUT IN ACCORDANCE WITH AS/NZS 4680:2006 SECTION 8
- WELDING OF ALL PIPE WORK SHALL BE TO NZS 3404:1997

FOR CONSTRUCTION

2	PUMP MODEL CHANGED	GT	11.09.2014
1	ISSUED FOR CONSTRUCTION	GT	19.12.2012
ISSUE	AMENDMENTS	SIGNED	DATE

New Zealand Government

Christchurch City Council

DESIGNED: C. Cloggin CC 19.12.2012

DES. REVIEW: A. Ingles AI 19.12.2012

DRAWN: S. Sutton SS 19.12.2012

DRW. CHECK: N. Locke NSL 19.12.2012

FILE LOCATION: J:\10995 Avonside\Linwood Stage 1\10995-DE-WW-DG-4003.dwg

PRINTED ON 11-Jun-14 BY chikanim

APPROVED

FOR RECOMMENDATION

DATE: 19.12.2012 SIGNED: GT

FOR CONSTRUCTION

DATE: 19.12.2012 SIGNED: GT

CONSULTANT

SCIRT

Rebuilding Infrastructure

CONSULTANT FILE REF: 10995-DE-WW-DG-4003

PROJECT TITLE

INFRASTRUCTURE REBUILD

AVONSIDE - LINWOOD STAGE 1 SURREY STREET

DRAWING TITLE

LIFT STATION 1 GENERAL ARRANGEMENT

SCIRT PROJECT REF: 10995

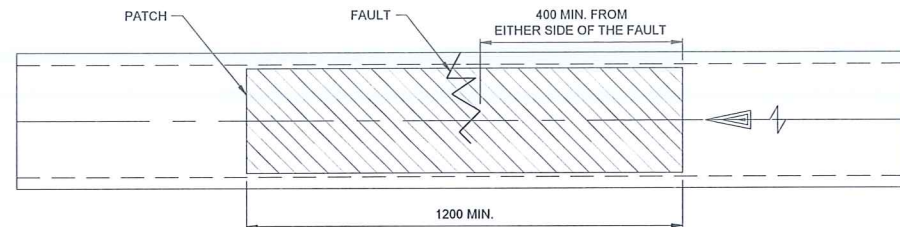
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CPG PROJECT FILE NUMBER

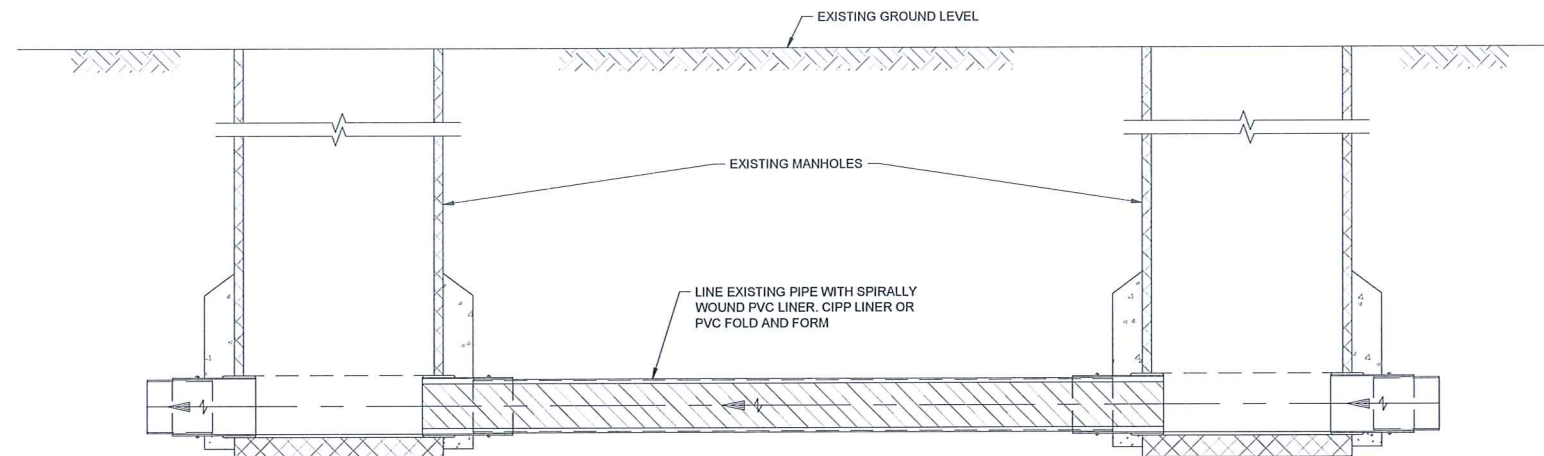
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SCALES: AS SHOWN

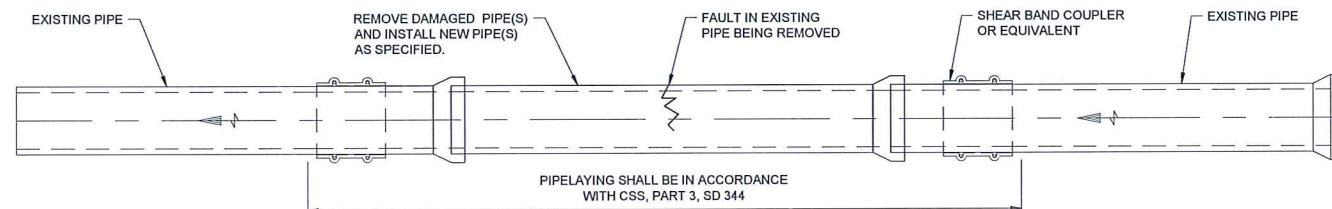
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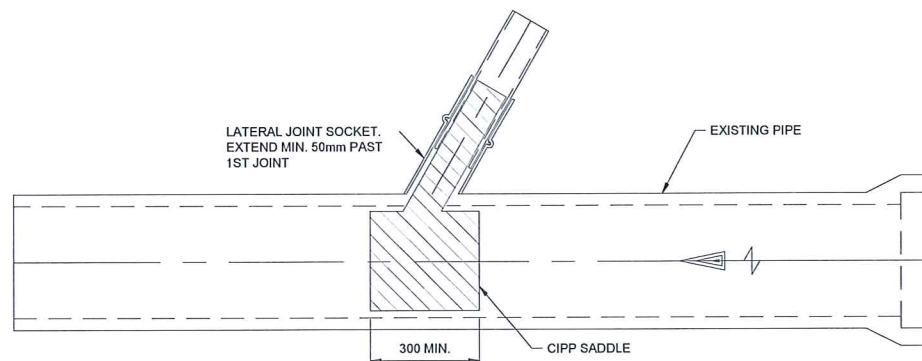
1 REPAIR METHOD 1: PIPE PATCH
SCALE 1:10



2 REPAIR METHOD 2: PIPE LINING
SCALE 1:20



3 REPAIR METHOD 3: PIPE PARTIAL RENEWAL
SCALE 1:20



4 REPAIR METHOD 4: LATERAL REPAIR
SCALE 1:10

REPAIR METHOD 1 NOTES:

1. DESIGN THE PATCH WITH A MINIMUM DESIGN LIFE OF 50 YEARS TO PROVIDE A FULLY STRUCTURAL REPAIR IN ACCORDANCE WITH ASTM F1216.
2. DESIGN THE PATCH WITH THE FOLLOWING PARAMETERS:
SOIL DENSITY 20MPa
SOIL MODULUS 2MPa
TRAFFIC LOADING (SITE SPECIFIC)
WATER TABLE (ALLOW FOR IT TO BE AT THE SURFACE)
3. THE PATCH IS TO BE OF GLASS FIBRE REINFORCED MATTING AND IMPREGNATED WITH A EPOXY RESIN.
4. THE PATCH IS TO BE MINIMUM 1200mm LONG AND EXTENDED TO A MINIMUM OF 400mm EITHER SIDE FROM THE FAULT.
5. CLEAN AND INSPECT THE EXISTING PIPE PRIOR TO LINER INSTALLATION TO ENSURE THE PIPE IS CLEAR OF DEBRIS AND OBSTRUCTIONS. LOG LOCATIONS OF ANY LATERAL CONNECTIONS.

REPAIR METHOD 2 NOTES:

1. DESIGN THE PIPE LINER AS A STAND ALONE STRUCTURAL LINER ACCORDING TO AS/NZS 2566.1: 1998 BURIED FLEXIBLE PIPELINES, ASTM F 1697, 1741 AND 1216.
2. DESIGN THE PIPE LINER WITH THE FOLLOWING PARAMETERS:
SOIL DENSITY 20MPa
SOIL MODULUS 2MPa
TRAFFIC LOADING (SITE SPECIFIC)
WATER TABLE (ALLOW FOR IT TO BE AT THE GROUND SURFACE)
3. CLEAN AND INSPECT THE EXISTING PIPE PRIOR TO LINER INSTALLATION TO ENSURE THE PIPE IS CLEAR OF DEBRIS AND OBSTRUCTIONS. LOG LOCATIONS OF ANY LATERAL CONNECTIONS.
4. FIT THE LINER TIGHTLY AGAINST THE INSIDE WALL OF THE EXISTING PIPE.
5. SEAL THE ENDS OF THE LINER AT EACH MANHOLE (NO LEAKAGE BETWEEN HOST PIPE AND LINER) AND RENDER TO MAKE THEM SMOOTH WITH THE EXISTING PIPE.
6. RE-OPEN LIVE LATERALS BY ROBOTIC CUTTING IMMEDIATELY AFTER THE WASTEWATER HAS BEEN LINED.
7. LATERAL CONNECTION SHALL BE IN ACCORDANCE WITH REPAIR METHOD 4.

REPAIR METHOD 3 NOTES:

1. REMOVE PIPE AT FAULT LOCATION AND REPLACE WITH NEW PIPE OF SAME DIAMETER AND MATERIAL. REPLACE THE PIPE WITH PVC-U OR RC OF SIMILAR DIAMETER IF THE EXISTING MATERIAL IS AC OR EW.
2. DENSO WRAP GIBALTS OR SHEAR BAND COUPLERS WHERE REQUIRED.
3. GROUT AND COAT CONCRETE PIPE WITH EPOXY ON CUT CONCRETE PIPE.

REPAIR METHOD 4 NOTES:

1. CONSTRUCT THE CIPP SADDLE FROM A RESIN THAT WILL ENSURE THAT THE SADDLE ADHERES TO THE HOST PIPE AND ANY LINER INSTALLED IN THE MAINLINE.
2. LOG LOCATIONS OF ANY LATERAL CONNECTIONS PRIOR TO LINER INSTALLATION.
3. RE-OPEN LIVE LATERALS BY ROBOTIC CUTTING IMMEDIATELY AFTER THE WASTEWATER HAS BEEN LINED. REMOVE ROOTS, DEBRIS FROM THE JUNCTION PRIOR TO INSTALLATION WHERE NECESSARY.
4. FIT THE LINER TIGHTLY AGAINST THE INSIDE WALL OF THE EXISTING PIPE AND ADJOINING LATERAL.

GENERAL REPAIR NOTES:

1. CONFIRM FAULT TYPE, LOCATION AND REPAIR METHOD ON SITE.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF CSS AND IDS, AND LATEST STANDARDS.
3. ALL WORK SHALL COMPLY WITH CURRENT BEST PRACTICE.
4. USE PIPES, FITTINGS AND MATERIAL ON COUNCIL'S APPROVED MATERIAL LIST ONLY.
5. CCTV INSPECT, REVIEW AND CONFIRM INTEGRITY AFTER INSTALLATION.

Handwritten note: 20/5/15

FOR CONSTRUCTION

New Zealand Government

Christchurch City Council

DESIGNED	NAME	SIGNED	DATE
DES. REVIEW	C. Cadogan	CC	19.12.2012
DRAWN	A. Ingles	AI	19.12.2012
DRW. CHECK	S. Sutton	SS	19.12.2012
	N. Locke	NBL	19.12.2012

APPROVED	DATE
FOR RECOMMENDATION	19.12.2012
FOR CONSTRUCTION	19.12.2012

CONSULTANT	CONSULTANT FILE REF.
SCIRT	10995-DE-WW-DG-4004

PROJECT TITLE

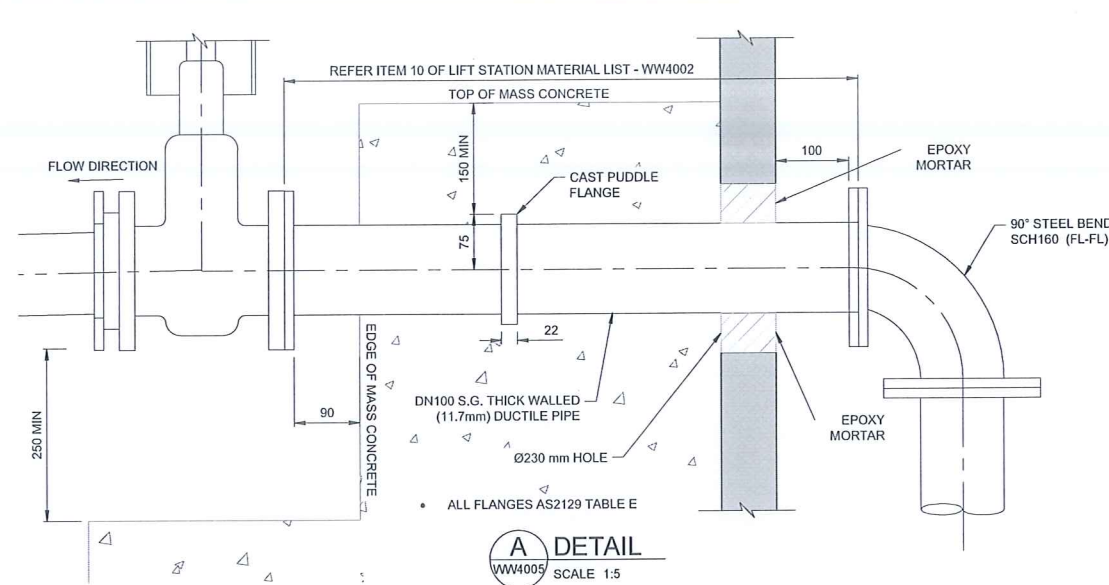
INFRASTRUCTURE REBUILD
AVONSIDE - LINWOOD STAGE 1

DRAWING TITLE

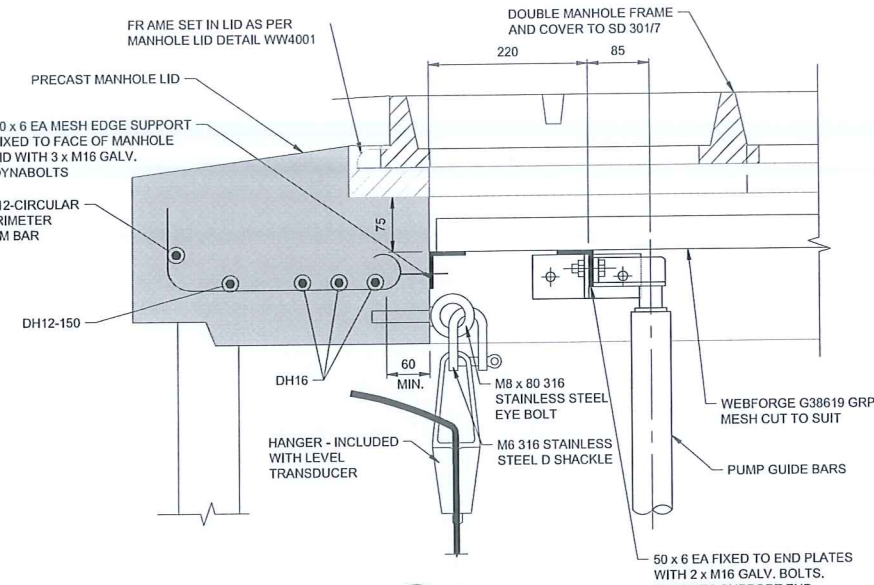
GRAVITY MAIN PIPE
REPAIR METHODS
DETAILS SHEET 1

SCIRT PROJECT REF.	ORIGINAL SHEET SIZE	SCALES
10995	A1	AS SHOWN
CPG CAD DRAWING FILE REF.	CPG PROJECT FILE NUMBER	DRAWING No.
		WW4004

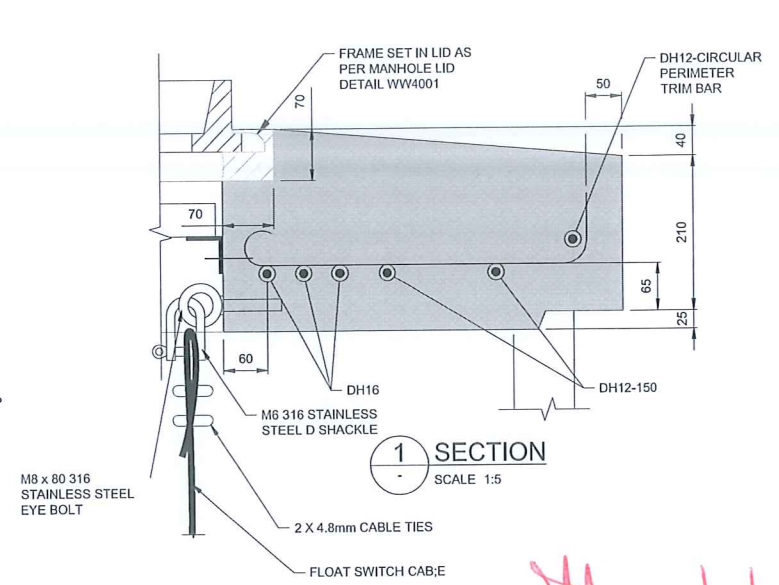
Original size mm
300
250
200
150
100
50
20
10
0



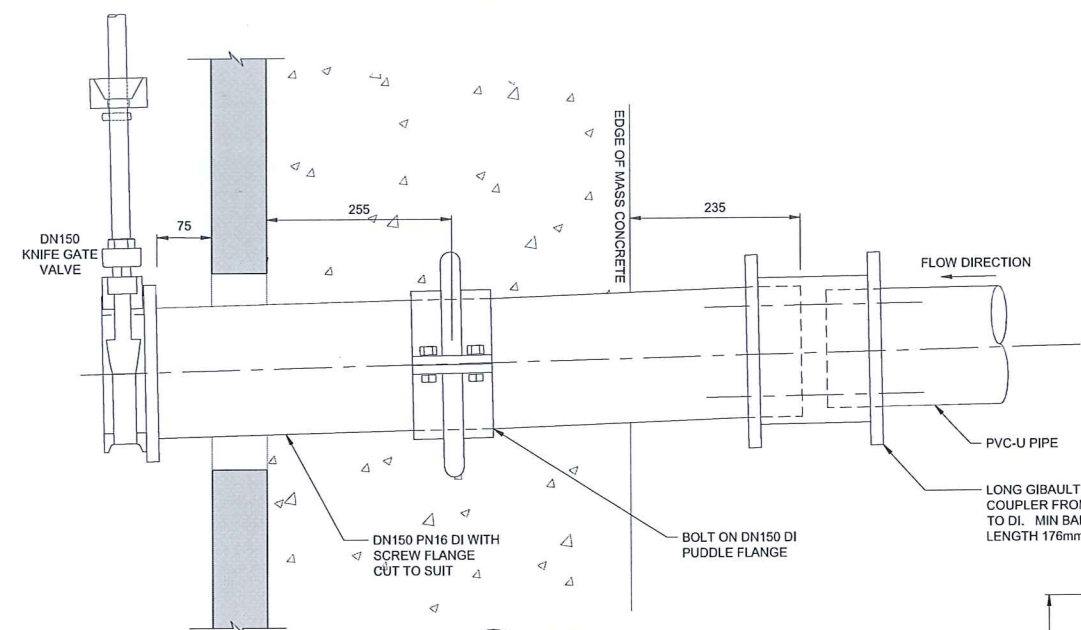
A DETAIL
WW4005 SCALE 1:5



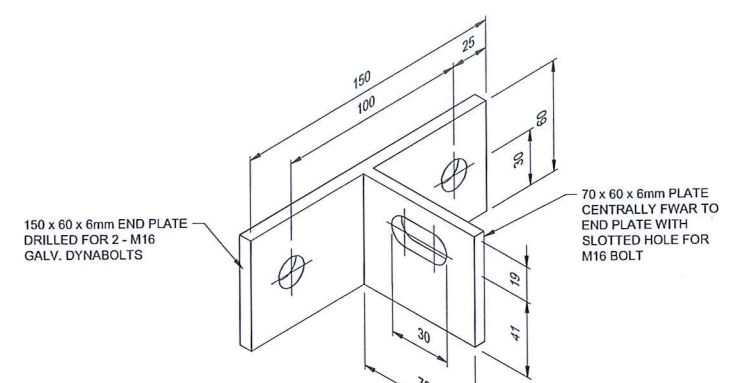
C DETAIL
WW4005 SCALE 1:5



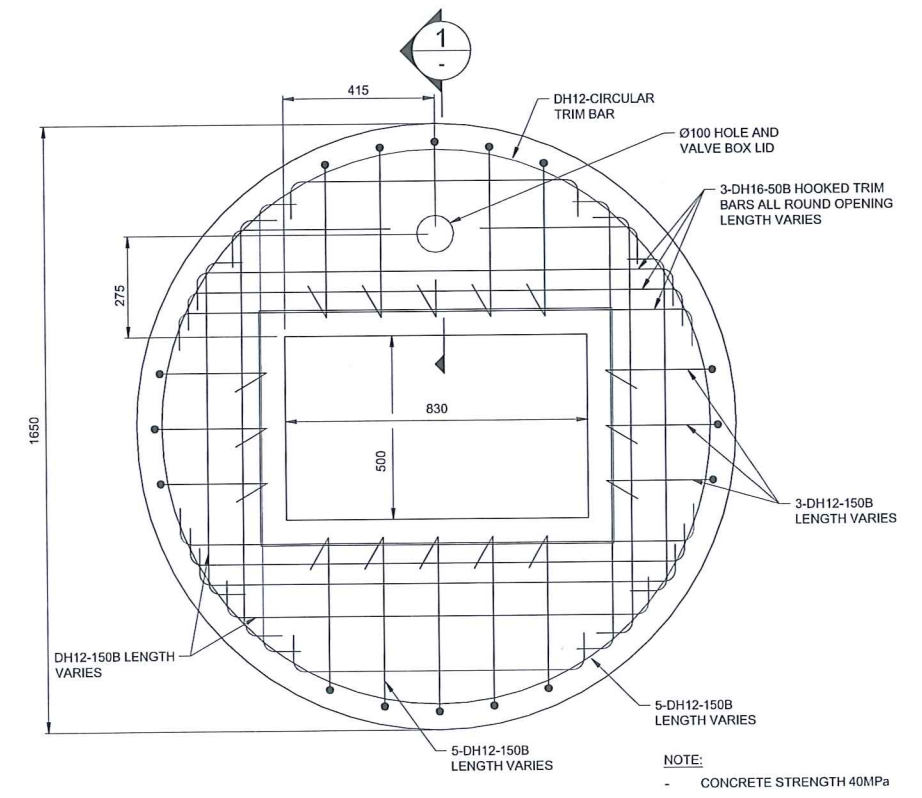
1 SECTION
SCALE 1:5



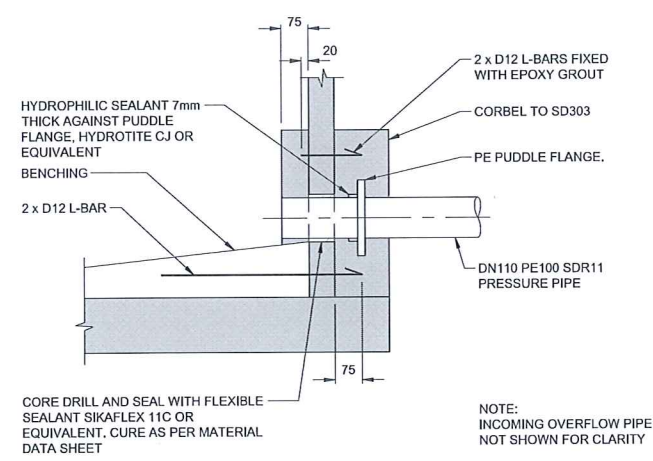
B DETAIL
WW4005 SCALE 1:5



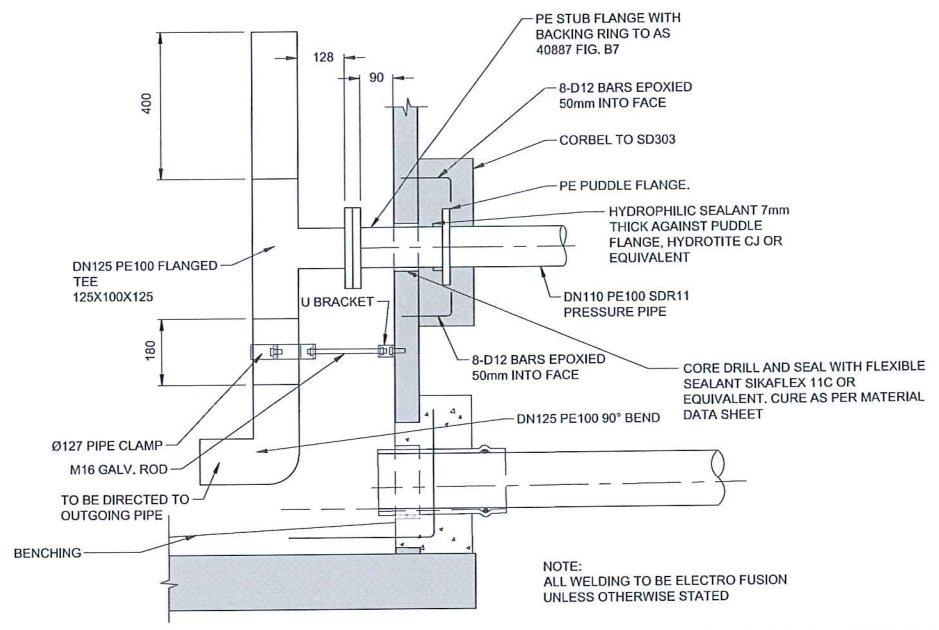
SUPPORT END PLATE DETAIL
SCALE 1:2



TOP SLAB REINFORCING
SCALE 1:10



D PE PIPE TO MANHOLE CONNECTION DETAIL WITHOUT DROP STRUCTURE
WW4005 SCALE 1:10



E PE PIPE TO MANHOLE CONNECTION DETAIL WITH DROP STRUCTURE
WW4005 SCALE 1:10

NOTE:
ALL STEEL TO BE HOT DIP GALV
UNLESS OTHERWISE STATED

FOR CONSTRUCTION