VACUUM SEWERAGE DRAWINGS
DRAWING INDEX - SHEET 1 OF 1

DRAWING No.	DRAWING TITLE				REV No.
SEQ-VAC-INDEX	VACUUM SEWERAGE	DRAWING INDEX	SHEET 1 OF 1		0
SEQ-VAC-1100-1	VACUUM SEWER PROFILE	TYPICAL EXAMPLE WITH DESIGN DETAILS			0
SEQ-VAC-1101-1	VACUUM SEWER DETAILS – PVC				0
SEQ-VAC-1102-1	VACUUM SEWER DETAILS - PE				0
SEQ-VAC-1102-2	POLYETHYLENE PIPELINE DETAILS	FOR VACUUM SEWERS			0
SEQ-VAC-1103-1	VACUUM SEWER SYSTEM	LAYOUT FOR	INDUSTRIAL SITES		0
SEQ-VAC-1103-2	VACUUM SEWER SYSTEM	COMPONENT LAYOUT AND NOTES			0
SEQ-VAC-1104-1	VACUUM SEWER SYSTEM	LONGITUDINAL SECTIONS			0
SEQ-VAC-1105-1	VACUUM SEWER	TYPICAL ESTATE DETAILS & NOTES			0
SEQ-VAC-1106-1	VACUUM SEWER	TYPICAL P & ID DIAGRAM			0
SEQ-VAC-1200-1	VACUUM COLLECTION MANHOLE	& VALVE PIT	TYPICAL DETAIL		0
SEQ-VAC-1201-1	DN1500 COLLECTION CHAMBER WITH	SINGLE VACUUM INTERFACE VALVE	DN150 & DN225 SEWERS, 1.8 & 2.4m DEEP	TYPICAL EXAMPLE WITH DESIGN DETAIL	0
SEQ-VAC-1202-1	DN1500 COLLECTION CHAMBER WITH	TWO VACUUM INTERFACE VALVES DN150	& DN225 SEWERS, 1.8 & 2.4m DEEP.	TYPICAL EXAMPLE WITH DESIGN DETAIL	0
SEQ-VAC-1203-1	DN1800 COLLECTION CHAMBER WITH	TWO VACUUM INTERFACE VALVES DN150	& DN225 SEWERS, 1.8 & 2.4m DEEP.	TYPICAL EXAMPLE WITH DESIGN DETAIL	0
SEQ-VAC-1206-1	COLLECTION CHAMBER	SERVICE CONNECTION, TYPICAL PROPERTY	CONNECTION LAYOUT & PIPE PENETRATION	THROUGH COLLECTION CHAMBER WALL DETAILS	0
SEQ-VAC-1300-1	VACUUM STATION LAYOUT	HORIZONTAL VACUUM VESSEL			0
SEQ-VAC-1301-1	VACUUM STATION LAYOUT	VERTICAL VACUUM VESSEL			0

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWERAGE
DRAWING INDEX
SHEET 1 OF 1

GCCC	LCC	RCC	QUU	UW

DRAWING No.

SEQ-VAC-INDEX

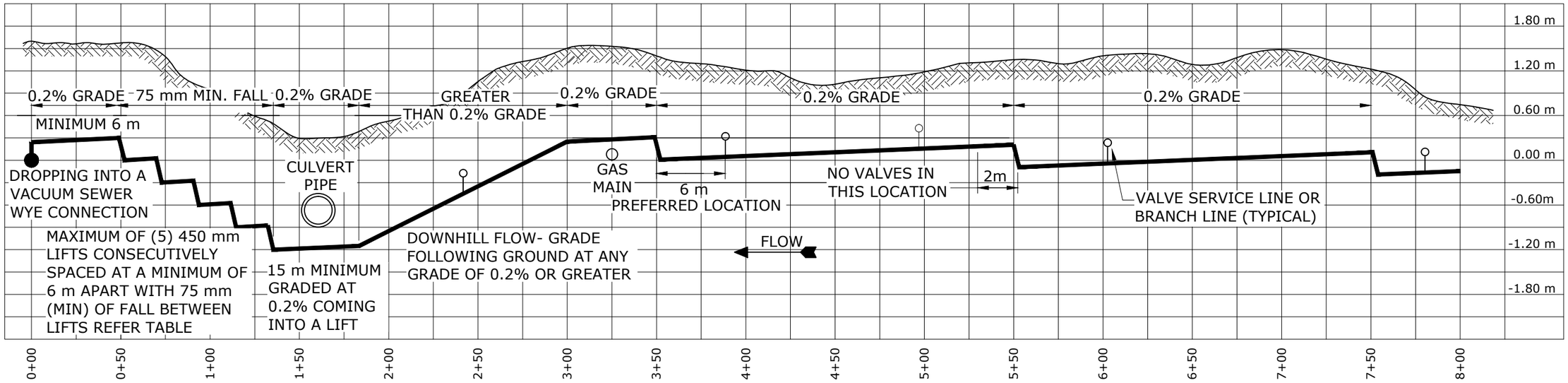
VERSION

A

NOT TO SCALE

ORG DATE:
1/1/2013

PROFILE DESIGN FOR DN100 OR LARGER VACUUM SEWERS



LEVEL AND UPGRADE TRANSPORT

LIFT DETAILS FOR PVC OR PE PIPE

PIPE SIZE DN	MIN DISTANCE BETWEEN LIFTS m	MIN LIFT HEIGHT mm	CRITERIA GRADING BETWEEN LIFTS		
			USE MIN FALL UP TO & INCLUDING DISTANCE BETWEEN LIFTS mm	DISTANCE BETWEEN LIFTS m	USE MIN GRADE ABOVE DISTANCE BETWEEN LIFTS %
80	1.5	128	60	30	0.2
100	6.0	137	75	40	0.2
150	6.0	216	75	40	0.2
200	6.0	262	75	40	0.2
250	6.0	326	75	40	0.2

DN80 SERVICE LATERAL PROFILE DESIGN

DN80 VALVE SERVICE LINE - MAXIMUM LENGTH 100 m, 1 COLLECTION CHAMBER FLOW UNIT. USE PN 12 PVC PIPE.

DN100 OR LARGER PVC SEWER PROFILE DESIGN REFER CLAUSE 5.3

DN100 VACUUM SEWER - MAXIMUM LENGTH 600 m; 2.3 L/s MAXIMUM FLOW.
DN150 VACUUM SEWER - NO MAXIMUM LENGTH; 5.7 L/s MAXIMUM FLOW.
DN200 VACUUM SEWER - NO MAXIMUM LENGTH; 13.2 L/s MAXIMUM FLOW.
DN250 VACUUM SEWER - NO MAXIMUM LENGTH; 23.5 L/s MAXIMUM FLOW.
USE SERIES 1 PN 12 PVC PIPE.

NOTES:

1. FOR PE LEVEL AND UPGRADE TRANSPORT DETAILS REFER TO SEQ-VAC-1102-1.
2. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP

HYDRAULIC

SUM OF STATIC LIFT LOSSES < 4 m
SUM OF FRICTION LOSSES < 1.5 m

PROFILE CHANGES

USE 300mm LIFTS WHENEVER POSSIBLE. FOR DN150 OR LARGER VACUUM SEWERS, USE 450mm LIFTS IN ANY SERIES OF LIFTS, OTHERWISE 300 mm LIFTS ARE RECOMMENDED. CONSULT INTERFACE VALVE MANUFACTURER REGARDING LIFTS ABOVE 900mm.

OTHER CONSTRAINTS

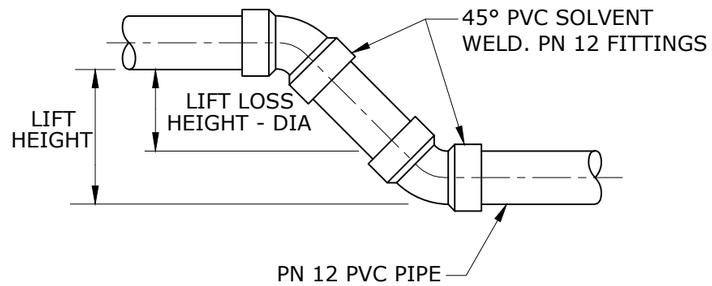
MAXIMUM DESIGN FLOW PER VALVE 0.25 L/s
ALLOW OVERFLOW STORAGE IN VACUUM COLLECTION CHAMBERS
MAXIMUM SPACING BETWEEN COLLECTION CHAMBERS 150m
CONSULT INTERFACE VALVE MANUFACTURER IF EXCEEDING ABOVE

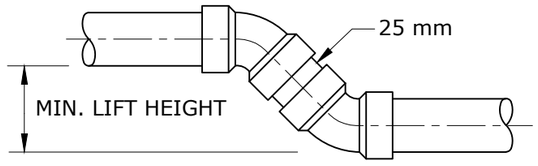
POLYETHYLENE SEWER PROFILE DESIGN REFER CLAUSE 5.3 AND SEQ-VAC-1102-1

DN90 VACUUM SEWER - MAXIMUM LENGTH 100 m; 1.1 L/s MAXIMUM FLOW.
DN110 VACUUM SEWER - MAXIMUM LENGTH 600 m; 2.0 L/s MAXIMUM FLOW.
DN125 VACUUM SEWER - MAXIMUM LENGTH 600 m; 2.9 L/s MAXIMUM FLOW.
DN160 VACUUM SEWER - NO MAXIMUM LENGTH; 5.5 L/s MAXIMUM FLOW.
DN200 VACUUM SEWER - NO MAXIMUM LENGTH; 9.8 L/s MAXIMUM FLOW.
DN225 VACUUM SEWER - NO MAXIMUM LENGTH; 13.4 L/s MAXIMUM FLOW.
USE PN 10 PE100 (SDR 17) PIPE.

PROFILE CHANGE CONSTRUCTION

STATIC LIFT FOR CALCULATING LINE LOSSES = LIFT HEIGHT MINUS PIPE DIAMETER, FOR ALL PIPE SIZES.





REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER PROFILE
TYPICAL EXAMPLE WITH DESIGN DETAILS

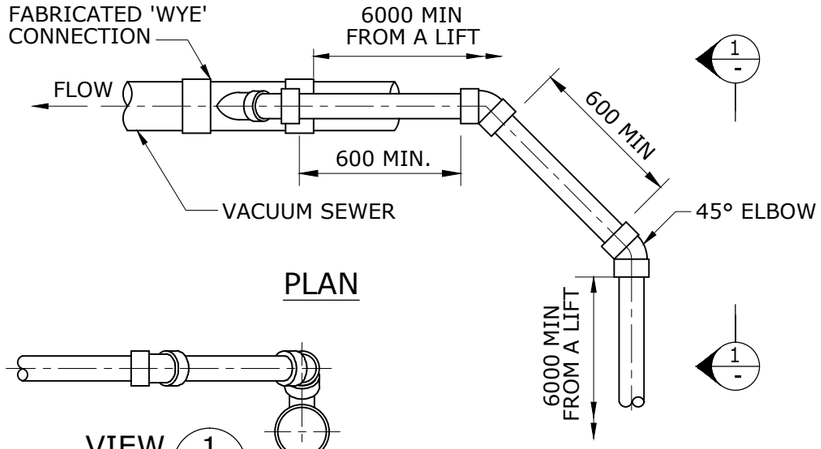
GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1100-1

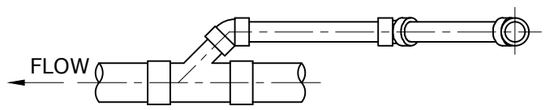
VERSION A

NOT TO SCALE

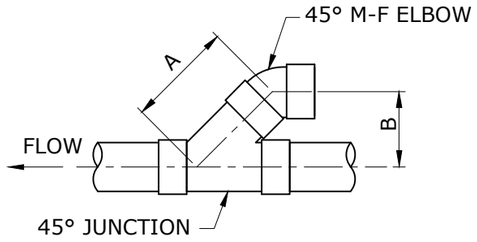
ORG DATE: 1/1/2013



PLAN



ELEVATION
BRANCH CONNECTION - TYPE 1



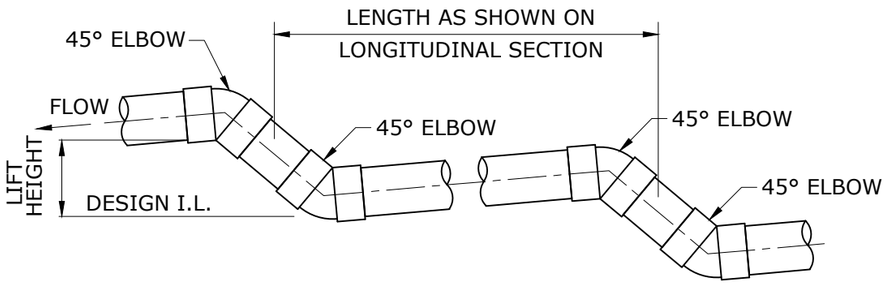
FABRICATED 'WYE' DETAIL
FOR BRANCH TO MAIN VACUUM SEWER AND COLLECTION CHAMBER TO VACUUM SEWER CONNECTIONS

'WYE' DIMENSIONS

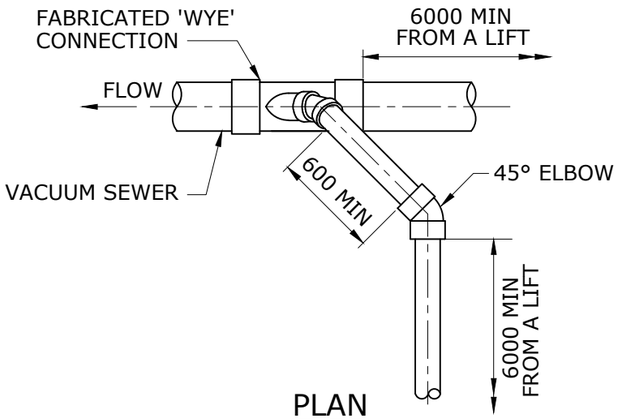
NOMINAL SIZE DN	'A'	'B'
100 x 80	262	185
100 x 100	296	207
150 x 80	292	208
150 x 100	326	230
150 x 150	387	272
200 x 80	362	241
200 x 100	371	263
200 x 150	432	305

NOTES:

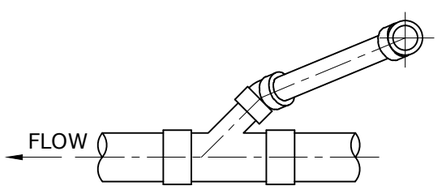
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. TRENCHING SHALL BE AS SPECIFIED IN THE SEWERAGE CODE SEQ-SEW-1400 SERIES.
3. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.



TYPICAL VERTICAL LIFT DETAIL ELEV.

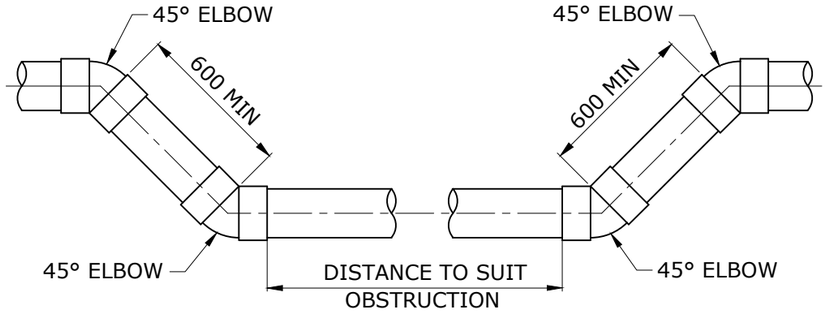


PLAN

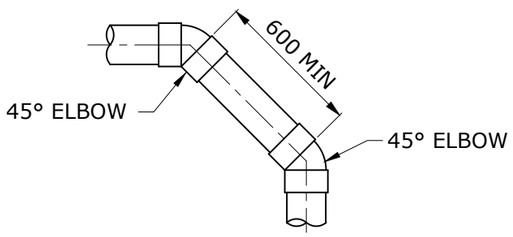


ELEVATION
BRANCH CONNECTION - TYPE 2

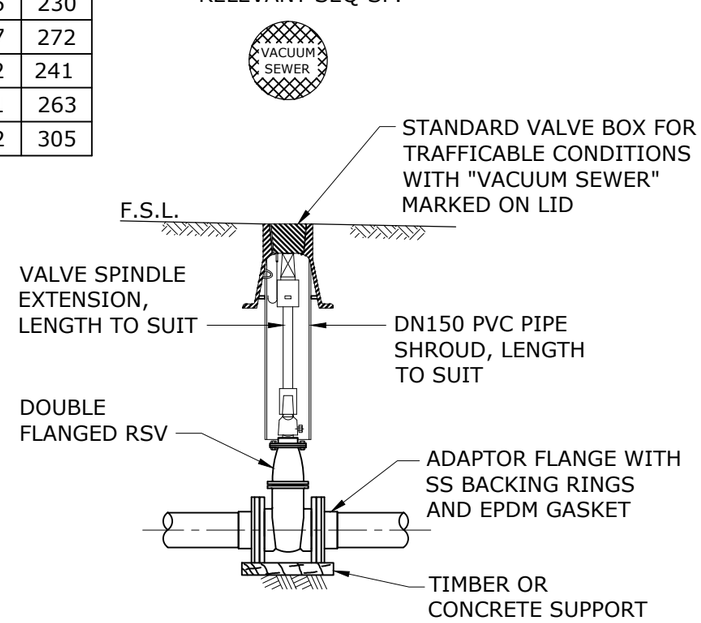
NOTE: REQUIRES ADDITIONAL HEIGHT BUT LESS FITTINGS



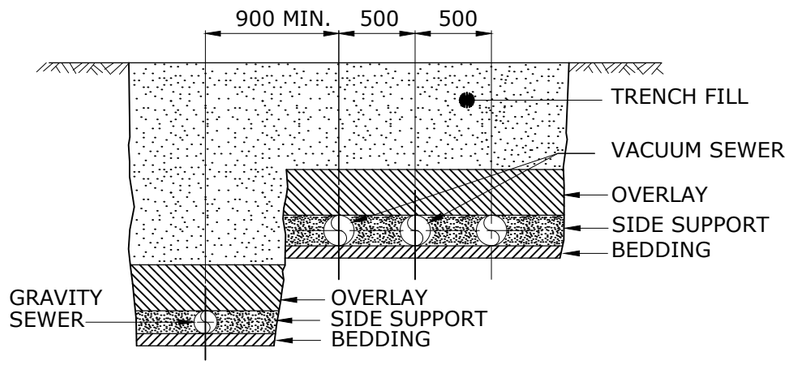
TYPICAL ARRANGEMENT TO AVOID ISOLATED OBSTRUCTIONS (HORIZONTAL DEVIATION) - ELEV.



TYPICAL 90 DEGREE BEND DETAIL - PLAN



DIVISION VALVE DETAIL - TRAFFICABLE
FOR NON-TRAFFICABLE DETAIL REFER VAC-1102



TYPICAL MULTIPLE SERVICE TRENCH DETAIL
SEE NOTE 2

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER DETAILS – PVC

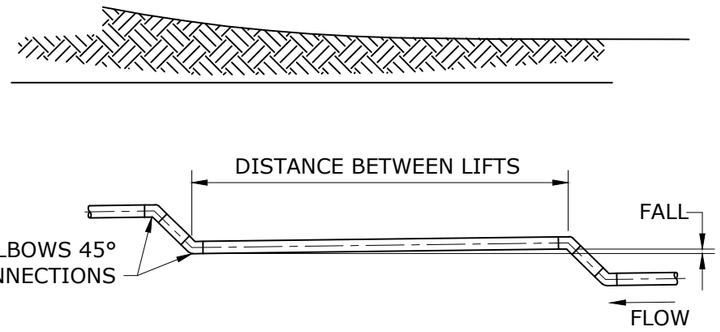
GCCC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1101-1

VERSION
A

NOT TO SCALE

ORG DATE:
1/1/2013



VACUUM SEWER GRADE BETWEEN LIFTS

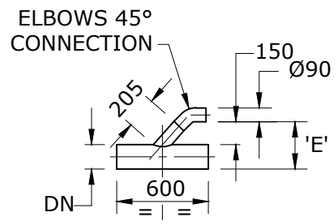
SEE SCHEDULE

LIFT DETAILS FOR PE PIPE

PIPE SIZE DN	MIN DISTANCE BETWEEN LIFTS m	MIN LIFT HEIGHT mm	CRITERIA GRADING BETWEEN LIFTS		
			USE MIN FALL UP TO & INCLUDING DISTANCE BETWEEN LIFTS mm	DISTANCE BETWEEN LIFTS m	USE MIN GRADE ABOVE DISTANCE BETWEEN LIFTS %
90	1.5	123	60	38	NA
110	6.0	154	75	38	0.2
125	6.0	149	75	38	0.2
160	6.0	207	75	38	0.2
200	6.0	210	75	38	0.2
250	6.0	260	110	55	0.2
315	6.0	325	110	55	0.2

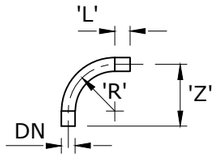
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. PE COMPONENTS SHALL BE JOINED USING ELECTROFUSION FITTINGS OR BUTT WELDING. INTERNAL WELD BEADS > 5mm SHALL BE REMOVED.
3. WHERE LIFTS ARE LESS THAN THE HEIGHT OF STANDARD LIFTS CORRECT LIFT HEIGHT MAY BE ACHIEVED BY LAYING THE LIFT OVER AT AN ANGLE.
4. USE MINIMUM 15m AT 0.2% GRADE AFTER DOWNHILL GRADES OF > 0.2%.
5. MINIMUM LIFT HEIGHTS ARE BASED ON ELECTROFUSION COUPLINGS UP TO AND INCLUDING DN160. SIZES > DN160 ARE BUTT WELDED BECAUSE ELECTROFUSION FITTINGS ARE NOT NORMALLY AVAILABLE.
6. USE PN10 PE100 (SDR 17) PIPE/FITTING
7. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.



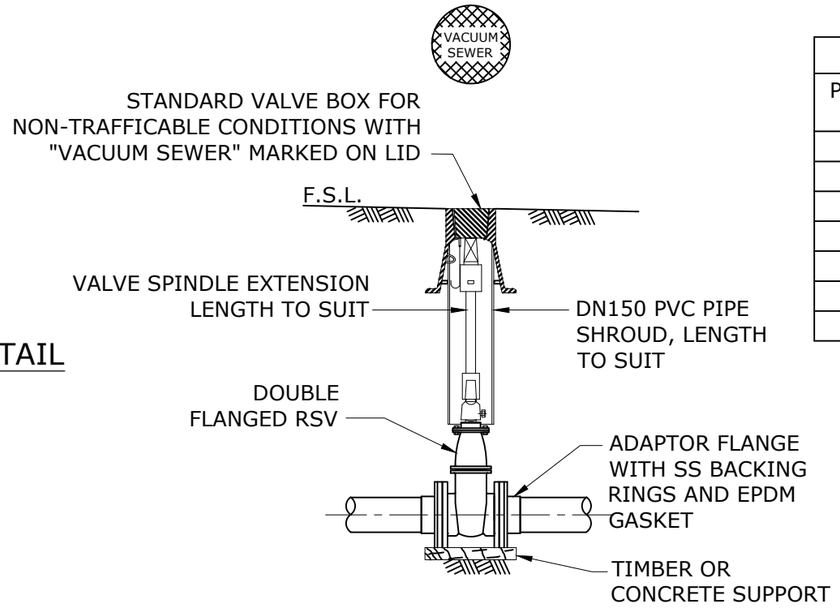
WYE JOINT DETAIL

SEE SCHEDULE



SWEEP BEND 90° DETAIL

SEE SCHEDULE



DIVISION VALVE DETAIL - NON-TRAFFICABLE

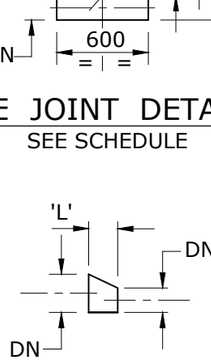
FOR TRAFFICABLE DETAIL REFER SEQ-VAC-1101-1

FABRICATED 45° BEND			
PIPE SIZE DN	SDR MIN	'Z'	'L'
90	17	104	82
110	17	108	82
125	17	133	100
160	17	157	177
200	17	171	121
250	17	219	157
315	17	256	177

FABRICATED WYE		
PIPE SIZE DN	BRANCH SIZE DN	'E'
90	90	285
110	90	305
125	90	320
160	90	355
200	90	395
225	90	420
250	90	445
300	90	495

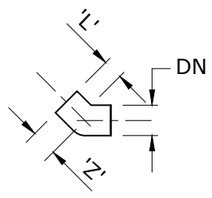
ECCENTRIC REDUCER	
PIPE SIZE DN	'L'
110-50	100
160-110	90
250-160	155
355-250	200

FABRICATED 90° SWEEP BEND				
PIPE SIZE DN	SDR MIN	'R'	'Z'	'L'
90	17	305	405	100
110	17	380	480	100
125	17	380	530	150
160	17	460	610	150
200	17	535	735	200
225	17	535	735	200
250	17	615	865	250
315	17	715	965	250



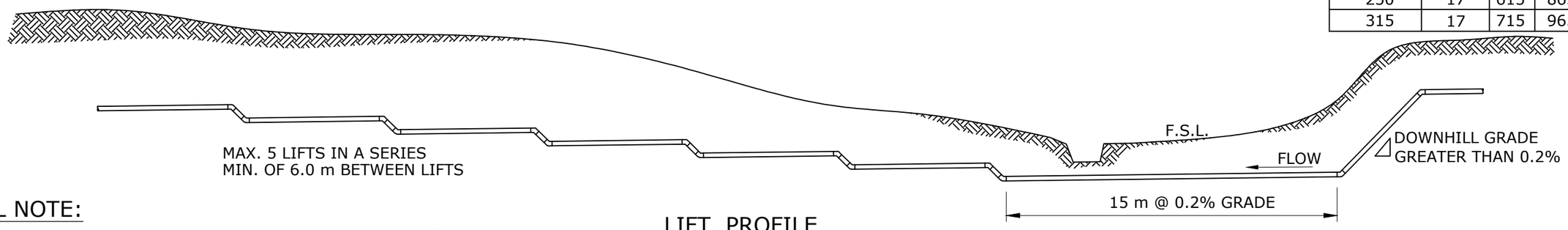
ECCENTRIC REDUCER

SEE SCHEDULE



BEND 45° DETAIL

SEE SCHEDULE



LIFT PROFILE

GENERAL NOTE:

VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY SEQ-SP DRAWINGS. ADDITIONAL INFORMATION PROVIDED IN SEQ-VACUUM ADDENDUM WSA-06-2008 SERIES COMMENTARY

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER DETAILS - PE

GCCC	LCC	RCC	QUU	UW

DRAWING No.

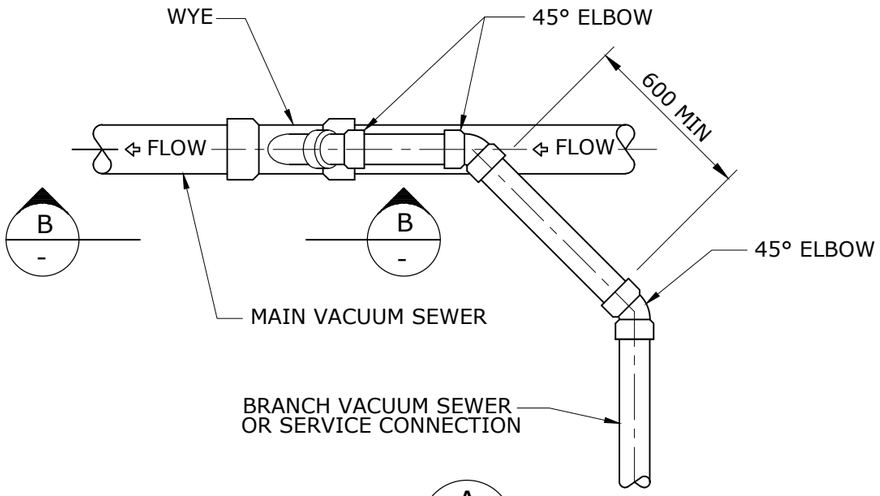
SEQ-VAC-1102-1

VERSION

A

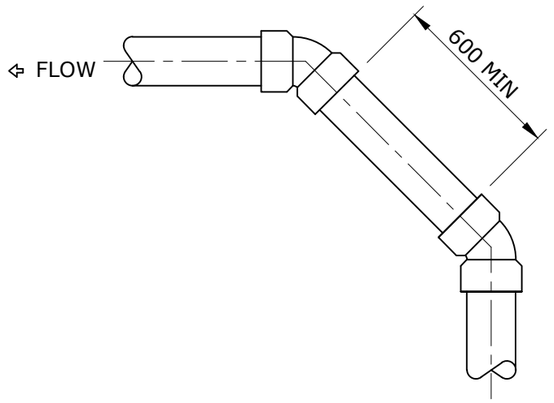
NOT TO SCALE

ORG DATE: 1/1/2013

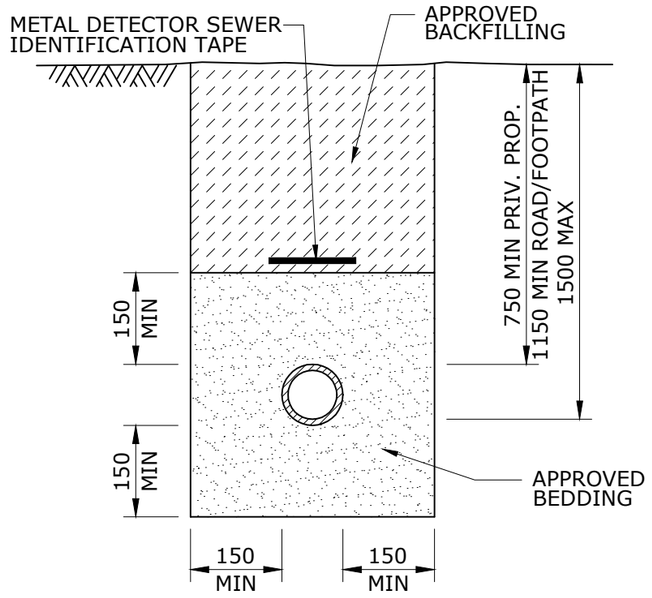


DETAIL A -

TYPICAL BRANCH TO MAIN CONNECTION

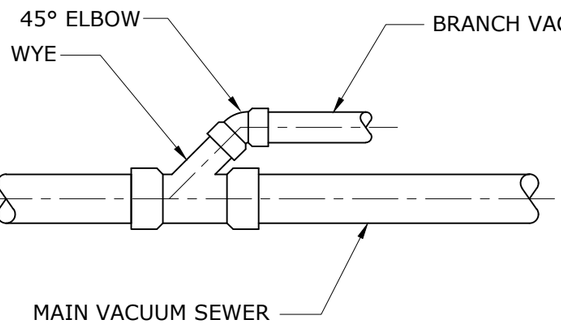


TYPICAL 90° CHANGE OF DIRECTION



PE VACUUM PIPELINE TRENCH DETAILS

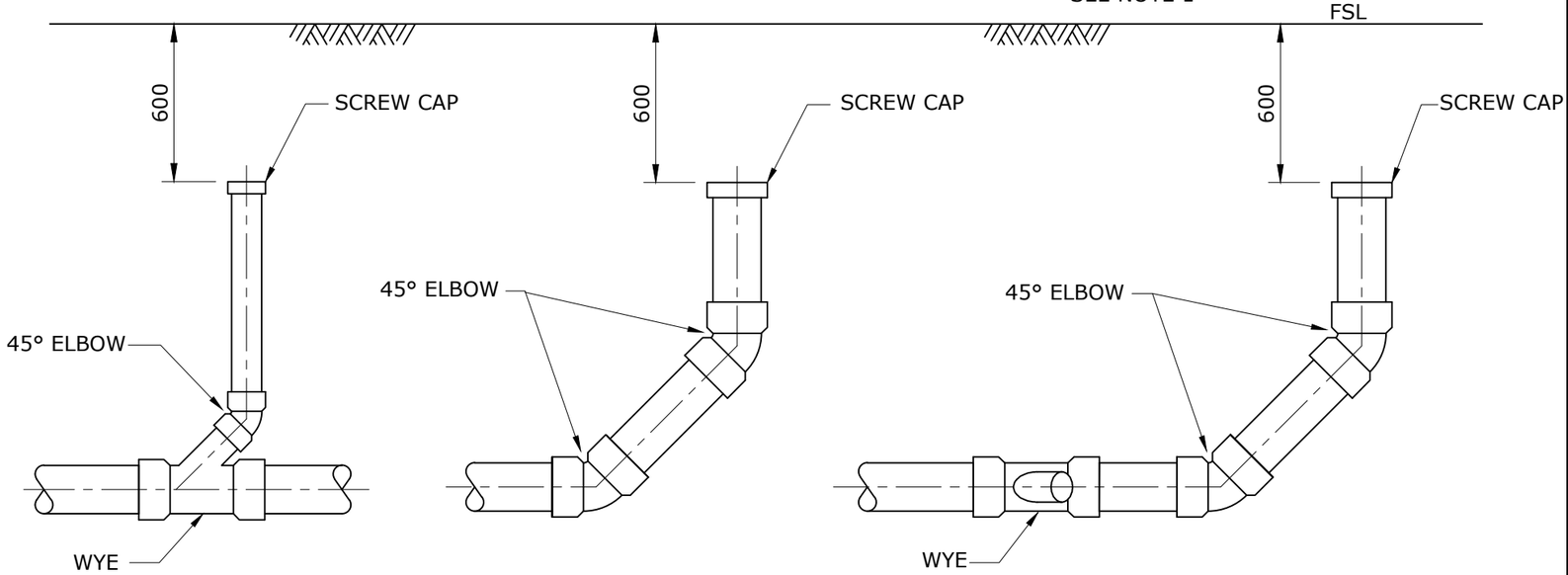
SEE NOTE 1



ELEVATION B -

MINIMUM COVER OVER PIPE ALL SIZES	
PRIVATE PROPERTY	ROADWAY & FOOTPATH
750mm	1150mm

MINIMUM DIAMETER OF RODDING POINT SHALL BE DN/ID 80. RODDING POINTS SHALL BE CONSTRUCTED OVER LINE OF SEWER.



IN LINE | END OF LINE | CHANGE OF DIRECTION

TYPICAL DETAIL OF RODDING POINTS

NOTES

1. TRENCHING SHALL BE AS SPECIFIED IN THE SEWERAGE CODE SEQ-SEW-1400 SERIES.
2. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

POLYETHYLENE PIPELINE DETAILS
FOR VACUUM SEWERS

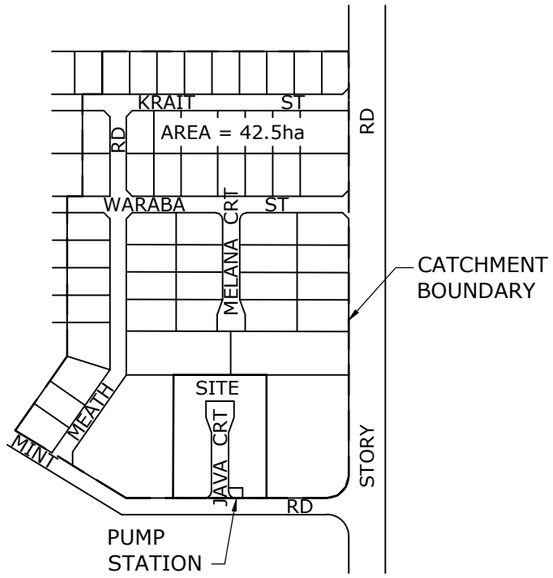
GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1102-2

VERSION A

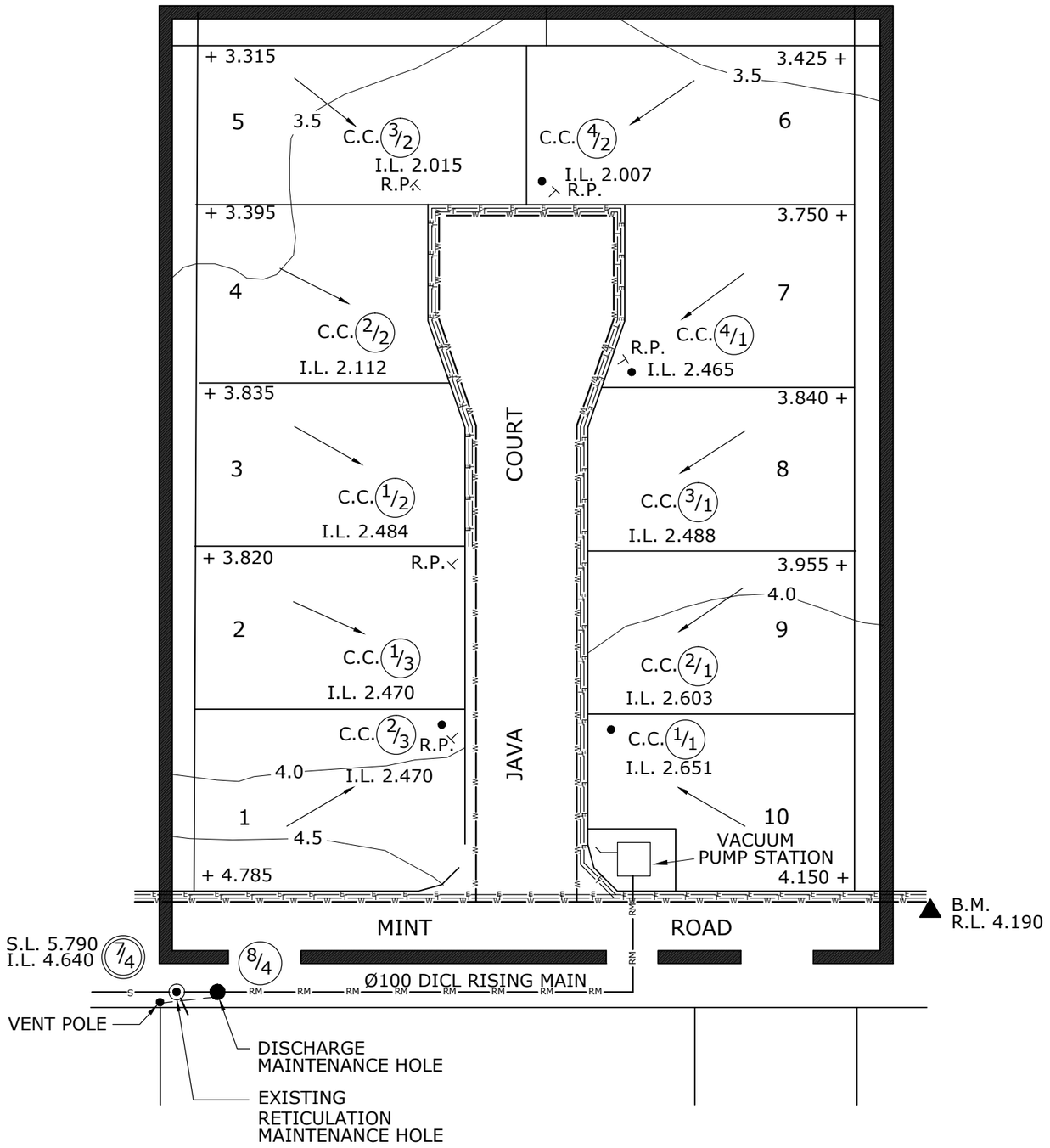
NOT TO SCALE

ORG DATE: 1/1/2013



LOCALITY/PUMP STATION CATCHMENT PLAN

SCALE 1:2500
UBD MAP REFERENCE NUMBER



SITE PLAN

SCALE 1:500

- REFER SHEET SEQ-GEN-1100-1 FOR LEGEND
- REFER SHEET SEQ-VAC-1103-2 FOR NOTES

DRAWINGS AND DETAILS OF PUMP STATION TO BE PREPARED IN ACCORDANCE WITH THE SEQ-SP PUMP STATION CODE.

DRAWING PRODUCED NOT TO SCALE. HOWEVER, SCALES SHOWN ARE INDICATIVE OF THOSE REQUIRED.

THE LAYOUT SHOWN ON THIS DRAWING IS NOT THE PREFERRED OPTION FOR LOCATION OF VACUUM SEWERS. REFER TO STANDARD DRAWING NO. SEQ-VAC-1103-2

VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER SYSTEM
LAYOUT FOR
INDUSTRIAL SITES

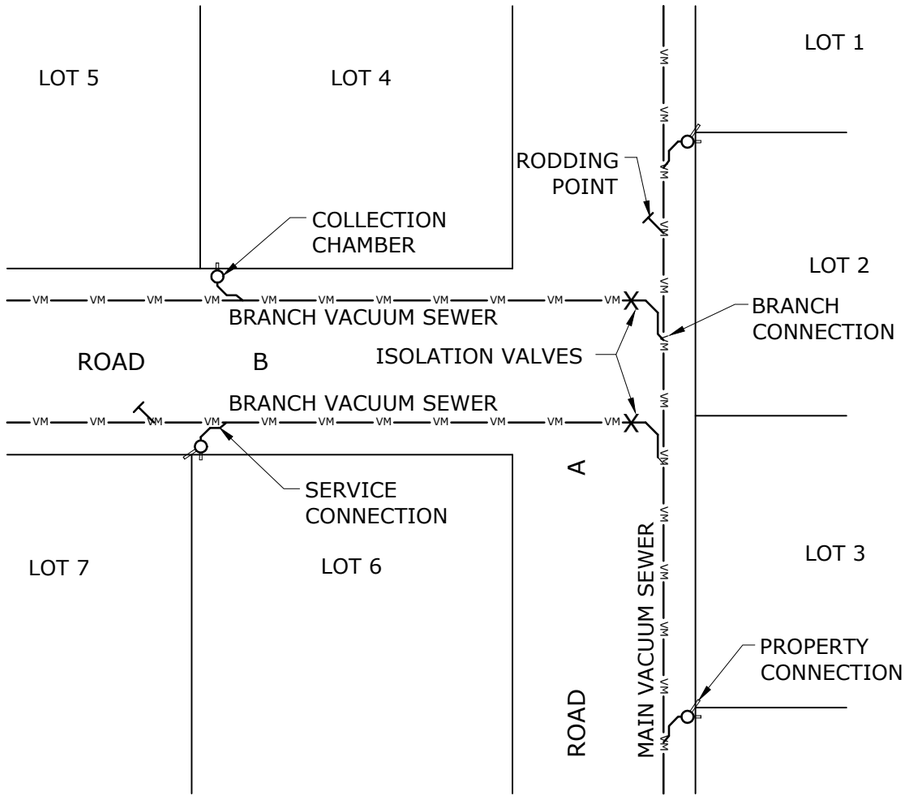
GCCC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1103-1

VERSION
A

NOT TO SCALE

ORG DATE:
1/1/2013



VACUUM SEWER COMPONENTS

GENERAL NOTE:

VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

NOTES

GENERAL

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SEQ-D&C CODE.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. VACUUM SEWER SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED TO MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH SEQ-SP CODE.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY SEQ-SP AT THE DEVELOPERS COST.
5. FOR SINGLE RESIDENTIAL DEVELOPMENTS THE VACUUM SEWER SHALL BE LOCATED IN THE FOOTPATH. SEWERS THROUGH PRIVATE PROPERTY WILL NOT BE APPROVED.
6. FOR OTHER THAN SINGLE RESIDENTIAL DEVELOPMENTS THE VACUUM SEWERS SHALL GENERALLY BE LOCATED IN THE FOOTPATH. WHERE IT IS NECESSARY TO LOCATE THE SEWER WITHIN A PROPERTY, THE SEWER SHALL BE LOCATED ON THE SAME ALIGNMENTS AS GRAVITY SEWERS.
7. EXCEPT FOR ROAD CROSSINGS VACUUM SEWERS SHALL NOT BE LOCATED UNDER ROAD PAVEMENTS OR KERB AND CHANNELS.
8. WHERE THE VACUUM SEWER AND THE COLLECTION CHAMBERS CANNOT FIT WITHIN THE STANDARD SEWERAGE CORRIDOR, NEGOTIATIONS SHALL BE MADE WITH THE RELEVANT AUTHORITIES TO WIDEN THE SEWERAGE CORRIDOR OR TO LOCATE THE SEWER AND CHAMBERS ELSEWHERE IN THE FOOTPATH.
9. VACUUM SEWERS SHALL BE POLYETHYLENE CLASS PE100 PN 10 TO A.S. 4130 AND A.S. 4131.
10. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIAL'S MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH AS 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
11. ALL DIMENSIONS ARE IN MILLIMETRES.
12. BACKFILLING IN ROADWAYS SHALL BE TO RELEVANT AUTHORITIES REQUIREMENTS.

VACUUM SEWERS (MAIN BRANCH)

13. VACUUM SEWERS SHALL HAVE A MINIMUM DN/ID OF 80mm
14. VACUUM SEWERS SHALL HAVE A MINIMUM GRADE OF 1 IN 500 (0.2%).
15. THE MINIMUM DISTANCE BETWEEN LIFTS SHALL BE 6.0m. CONNECTIONS SHALL NOT BE MADE WITHIN 2.0m OF A LIFT ON A VACUUM SEWER.
16. THE CONNECTION BETWEEN THE BRANCH AND MAIN VACUUM SEWER SHALL ENSURE FLOW IS DIRECTED TOWARDS THE VACUUM PUMP STATION.
17. BENDS SHALL NOT BE GREATER THAN 45°. WHERE A 90° CHANGE IN DIRECTION IS REQUIRED, TWO 45° BENDS SHALL BE USED.
18. POLYETHYLENE PIPES AND FITTINGS SHALL BE JOINED USING BUTT WELDING AND/OR ELECTROFUSION WELDING PROCESSES.
19. ISOLATION VALVES SHALL BE PROVIDED AT BRANCH CONNECTIONS AND THE START OF EACH NEW STREET.
20. THE MAXIMUM DISTANCE BETWEEN ISOLATION VALVES SHALL BE 300 METRES.
21. VALVE BOXES SHALL BE PROVIDED OVER ISOLATION VALVES. REFER STANDARD DRAWING NO. SEQ-SEW-1300 SERIES.
22. RODDING POINTS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 90 METRES AND WHERE DEEMED NECESSARY TO FACILITATE CLEANING OF THE SYSTEM.
23. A CLEAR AREA OF ONE METRE SQUARE SHALL BE PROVIDED CENTRALLY OVER EACH RODDING POINT.

SERVICE CONNECTIONS

24. SERVICE CONNECTIONS SHALL HAVE A MINIMUM DN/ID OF 50 MILLIMETRES.
25. THE DN/ID OF THE SERVICE CONNECTION SHALL NOT BE LESS THAN THE DN/ID OF THE COLLECTION CHAMBER SUCTION PIPE.
26. SERVICE CONNECTIONS SHALL CONNECT INTO THE TOP OF THE VACUUM SEWER.
27. SERVICE CONNECTIONS SHALL FALL BY GRAVITY FROM THE INTERFACE VALVE TO THE VACUUM SEWER.

PROPERTY CONNECTIONS

28. PROPERTY CONNECTIONS SHALL END WITH A SOCKET TO SUIT PIPES TO A.S. 1741. CONNECTIONS SHALL FINISH WITH AN INTERNAL PVC SCREW CAP.
29. FOR SINGLE RESIDENTIAL SITES, THE PROPERTY CONNECTIONS SHALL BE OF A MATERIAL APPROVED FOR GRAVITY SEWERS.
30. FOR SITES OTHER THAN SINGLE RESIDENTIAL, PROPERTY CONNECTIONS SHALL BE POLYETHYLENE CLASS PE100 PN 10 TO A.S. 4130 AND A.S. 4131.
31. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND A MAXIMUM OF 750mm.
32. PROPERTY CONNECTIONS SHALL BE LOCATED 1.2m FROM THE DOWNSTREAM ALIGNMENT. IF THIS IS NOT POSSIBLE THE CONNECTION SHALL NOT BE GREATER THAN 3.5m FROM THE DOWNSTREAM ALIGNMENT.
33. EACH ALLOTMENT SHALL BE SERVED BY A 100mm DIAMETER PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A 150mm DIAMETER PROPERTY CONNECTION SHALL BE PROVIDED.
34. THE NUMBER OF PROPERTY CONNECTIONS ENTERING A COLLECTION CHAMBER SHALL DEPEND ON THE DEVELOPMENT LAYOUT AND THE SEWER SYSTEM DESIGN.
35. EACH PROPERTY SHALL BE SERVED BY A SEPARATE PROPERTY CONNECTION.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER SYSTEM
COMPONENT LAYOUT AND NOTES

GCCC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1103-2

VERSION
A

NOT TO SCALE

ORG DATE:
1/1/2013

COLLECTION CHAMBER No.

COVER TYPE
JUNCTION LINE No.

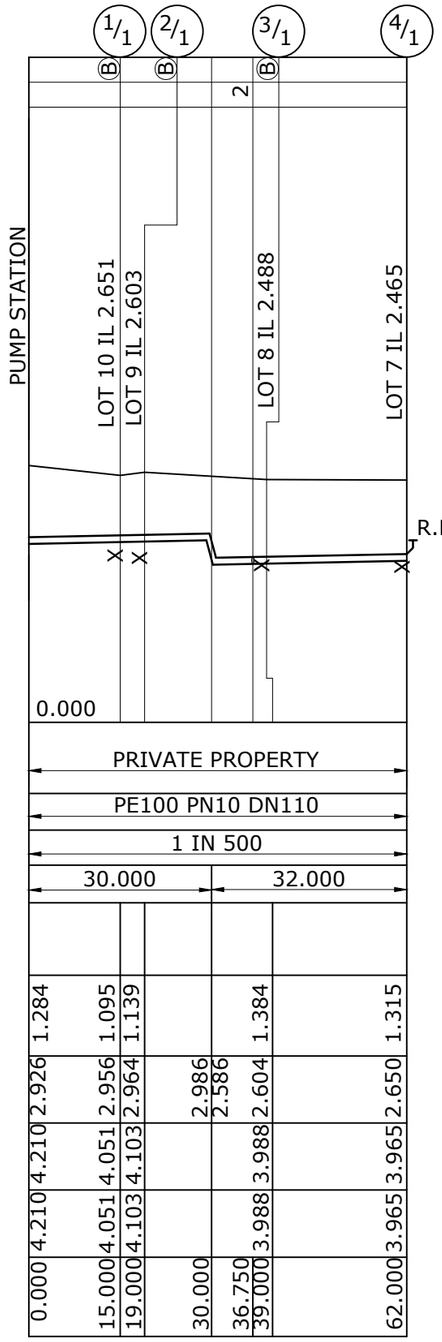
PUBLIC UTILITY INFORMATION HAS BEEN OMITTED FOR CLARITY AT THIS SCALE. HOWEVER, CHAINAGE, INVERT OR CROWN LEVEL AND DESCRIPTION eg. 2 x 100 CONDUITS etc, SHALL BE SHOWN FOR ALL PUBLIC UTILITIES.

DETAILS SHOWN ON THE LONGITUDINAL SECTIONS ARE TYPICAL FOR DESIGN PRESENTATION PURPOSES ONLY. ACTUAL GRADES, NUMBER AND LOCATION OF LIFTS, AND DIAMETER OF SEWERS SHALL COMPLY WITH THE MANUFACTURERS DESIGN AND SPECIFICATION.

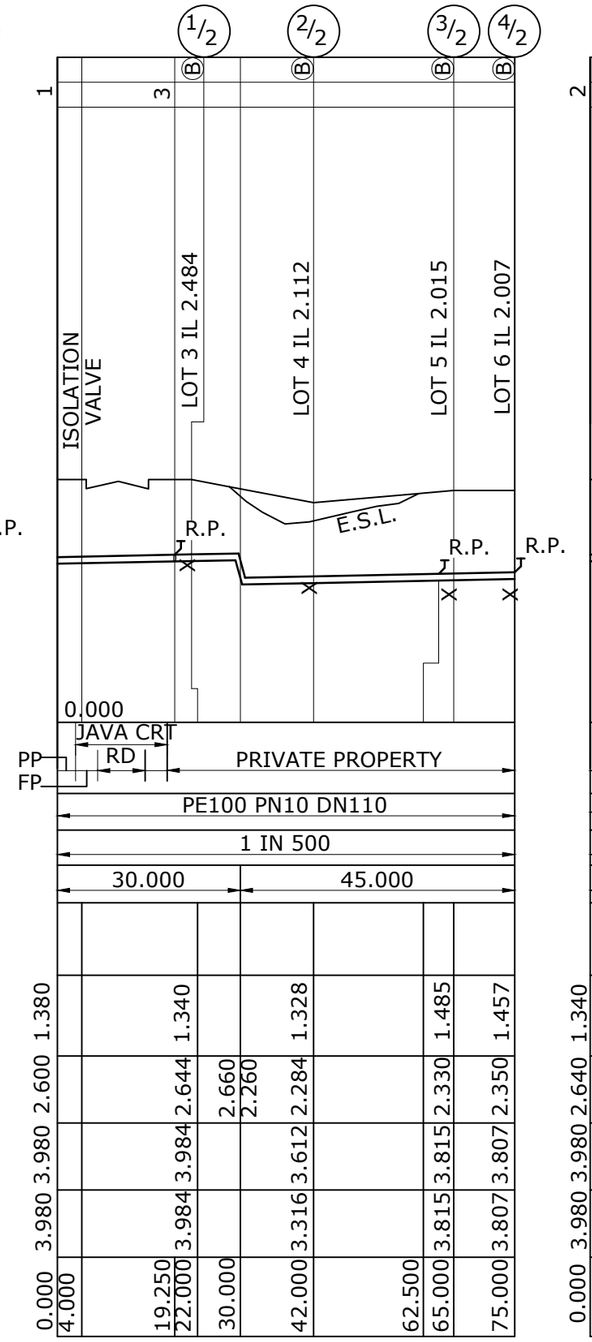
DATUM

PROP. DESCRIPTION
DIAMETER
GRADE (1 IN X)
LENGTH
JUNCTION INVERT LEVEL
DEPTH BELOW F.S.L.
INVERT LEVEL
FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
CHAINAGE

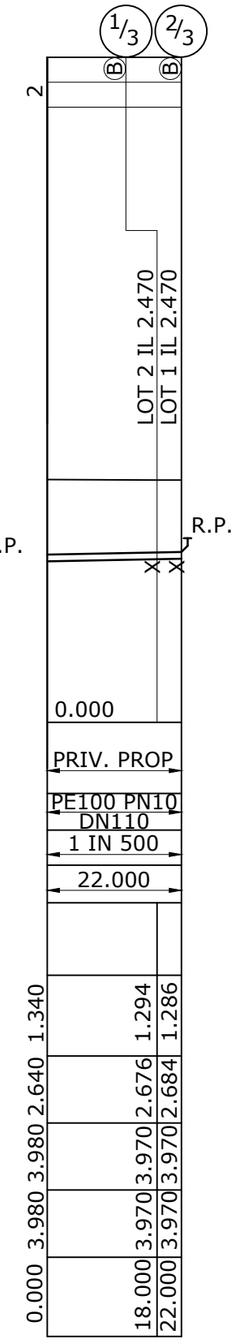
LINE NUMBER



V.P.1



V.P.2



V.P.3

ABBREVIATIONS:

- V.P. - VACUUM PROFILE
- PP - PRIVATE PROPERTY
- FP - FOOT PATH
- RD - ROAD

GENERAL NOTE:

VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

LONGITUDINAL SECTIONS

SCALES: HORIZONTAL 1:1000
VERTICAL 1:100

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER SYSTEM
LONGITUDINAL SECTIONS

GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1104-1

VERSION A

NOT TO SCALE

ORG DATE: 1/1/2013

ENVIRONMENTAL CONDITIONS

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHOULD BE, WHERE POSSIBLE TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
C. WHERE POSSIBLE, TREE ROOTS SHOULD BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHOULD BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT SERVICE PROVIDER ARBORIST FOR FURTHER ADVICE.

SOIL

A. TOPSOIL AND SUBSOIL SHOULD BE STOCKPILED SEPARATELY.
B. CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THROUGH STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHOULD BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
B. APPROPRIATE SEDIMENT CONTROLS SHOULD BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
C. NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
B. PREDISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

NOTE

ALL ENVIRONMENT PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH SEQ-SP CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ-SP CODE SEWERAGE SYSTEM
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY SEQ SP AT THE DEVELOPER'S COST.
5. VC SEWERS SHALL BE CLASS 4 TO A.S. 1741 OR CONFORM TO EN295-1. DICL SEWERS SHALL BE CLASS PN35 TO A.S. 2280 WITH POLYETHYLENE SLEEVED. PE VACUUM PIPELINES SHALL BE PE100 PN10 TO A.S. 4130 AND A.S. 4131.
6. EACH ALLOTMENT SHALL BE SERVED BY A 100mm DIAMETER PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A 150mm DIAMETER CONNECTION SHALL BE PROVIDED.
7. PROPERTY CONNECTIONS AT COLLECTION CHAMBERS SHALL BE POLYETHYLENE PE100 PN10 TO A.S. 4130 AND A.S. 4131.
8. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ-SP UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
9. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
10. BENCH MARK AND LEVELS ARE TO AHD.
11. VACUUM SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH SEQ-SP CODE SPECIFICATION FOR VACUUM SEWER SYSTEMS AND SEWAGE PUMP STATIONS.
12. A VALVE CHAMBER SHALL BE CONSTRUCTED OVER ISOLATION VALVES AS DETAILED ON STANDARD DRAWING NO SEQ-VAC-1200-1.
13. BACKFILLING IN ROADWAYS SHALL BE TO RELEVANT AUTHORITIES REQUIREMENTS.
14. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

NAME OF ESTATE		SUNDOWN ESTATE
SUBDIVIDER		JOPE PTY LTD
SUB. PLAN No.		
SP DELEGATES APPROVAL DATE		7.12.11
No. OF ALLOTMENTS		10
AREA IN Ha.		1.388
LENGTH OF SEWERS	100mm PE100	159.000
	100mm DICL	64.000
	150mm VC	5.000

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER
TYPICAL ESTATE DETAILS & NOTES

GCCC	LCC	RCC	QUU	UW

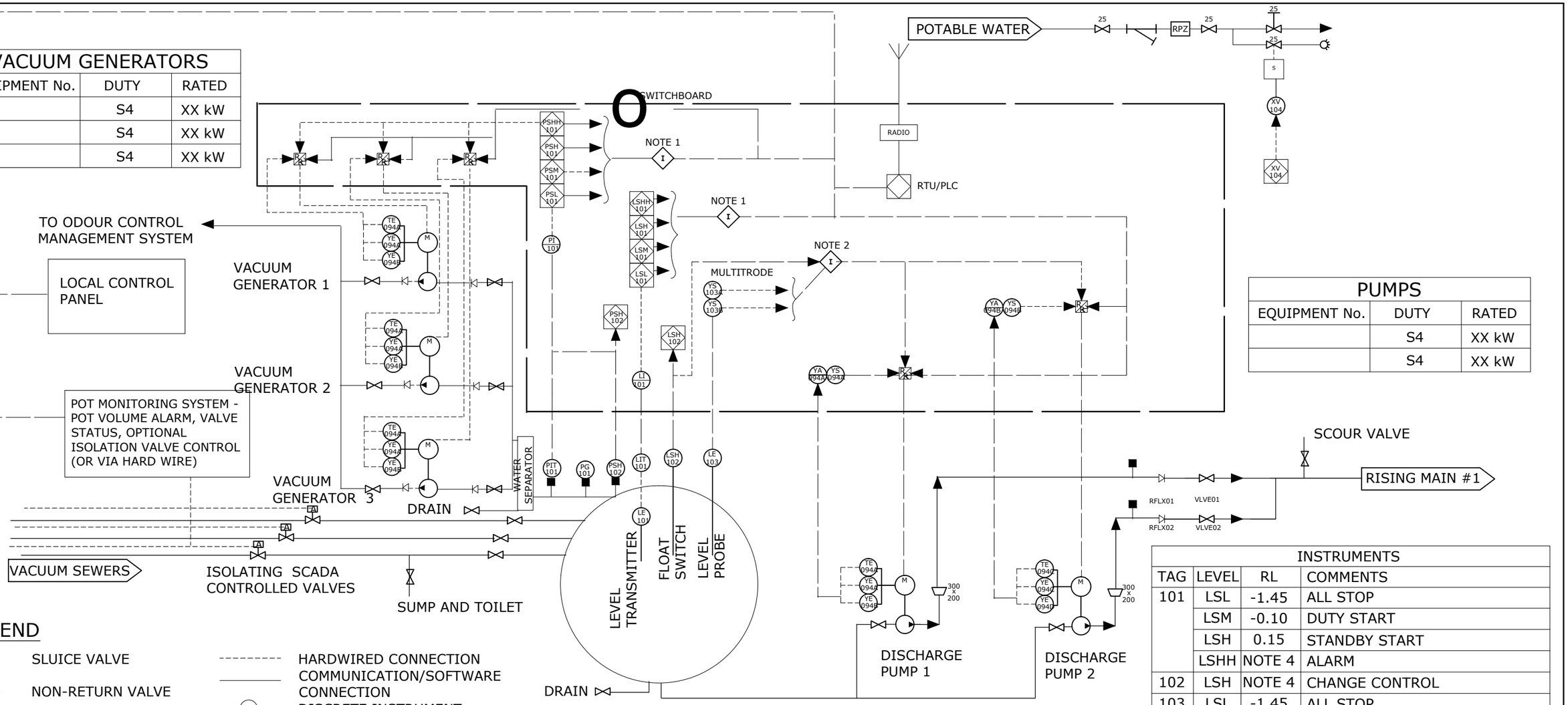
DRAWING No.
SEQ-VAC-1105-1

VERSION
A

NOT TO SCALE

ORG DATE:
1/1/2013

VACUUM GENERATORS		
EQUIPMENT No.	DUTY	RATED
	S4	XX kW
	S4	XX kW
	S4	XX kW



PUMPS		
EQUIPMENT No.	DUTY	RATED
	S4	XX kW
	S4	XX kW

LEGEND

- SLUICE VALVE
- NON-RETURN VALVE
- 'Y' TYPE STRAINER
- ELECTRIC MOTOR
- PUMP/VACUUM GENERATOR
- TAPPING POINT
- REDUCED PRESSURE ZONE BACKFLOW PREVENTION DEVICE IN ACCORDANCE WITH SEQ SP REQUIREMENTS
- HARDWIRED CONNECTION
- COMMUNICATION/SOFTWARE CONNECTION
- DISCRETE INSTRUMENT - FIELD MOUNTED/OPERATOR NOT ACCESSIBLE
- DISCRETE INSTRUMENT - OPERATOR ACCESSIBLE
- RTU - OPERATOR NOT ACCESSIBLE
- LOGIC INTERLOCK (SOFTWARE OR HARDWARE)
- VARIABLE SPEED DRIVE/ SOFT STARTER DRIVE

NOTES

1. PUMP/VACUUM GENERATOR START/STOP NORMALLY CONTROLLED BY RTU USING LEVEL/PRESSURE TRANSMITTER LIT/PIT.
2. UPON HIGH LEVEL (LSH 102) PUMP START/STOP CONTROL IS SWITCHED AUTOMATICALLY TO MULTIRODE LEVEL CONTROL UNIT.
3. ALL INSTRUMENTS AND ALARM R.L'S TO BE CONFIRMED BY SEQ-SP.
4. PUMP PROTECTION RELAY CAN BE CONFIGURED SUCH THAT THE INPUTS CAN PRODUCE AN ALARM AND SHUTDOWN - COMMISSIONING TO DETERMINE. (P&ID TO BE MARKED UP WHEN CONFIGURATION KNOWN.)
5. ASSET/EQUIPMENT NOs TO BE ADDED IN ACCORDANCE WITH SEQ-SP ASSET ID SYSTEMS.

VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

INSTRUMENTS			
TAG	LEVEL	RL	COMMENTS
101	LSL	-1.45	ALL STOP
	LSM	-0.10	DUTY START
	LSH	0.15	STANDBY START
	LSHH	NOTE 4	ALARM
102	LSH	NOTE 4	CHANGE CONTROL
103	LSL	-1.45	ALL STOP
	LSM	-0.10	DUTY START
	LSH	0.15	STANDBY START
094A	TE	NOTE 5	STATOR HIGH TEMP.
094B	TE	NOTE 5	PUMP MAIN BEARING HIGH TEMP.
094A	YE	NOTE 5	JUNCTION BOX SEAL FAIL
094B	YE	NOTE 5	STATOR HOUSING SEAL FAIL
094C	TE	NOTE 5	STATOR HIGH TEMP.
094D	TE	NOTE 5	PUMP MAIN BEARING HIGH TEMP.
094C	YE	NOTE 5	JUNCTION BOX SEAL FAIL
094D	YE	NOTE 5	STATOR HOUSING SEAL FAIL

THIS TABLE IS AN EXAMPLE, NOT A DEFINITIVE LIST, EACH SITE WILL HAVE A CUSTOMISED LIST OF TAGS, LEVELS, ALARMS ETC.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM SEWER
TYPICAL P & ID DIAGRAM

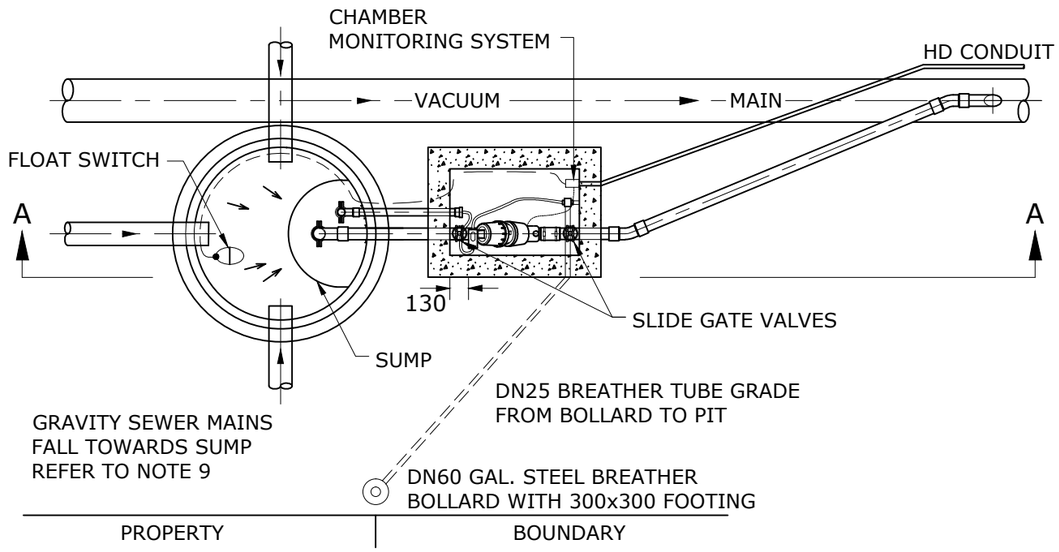
GCCC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1106-1

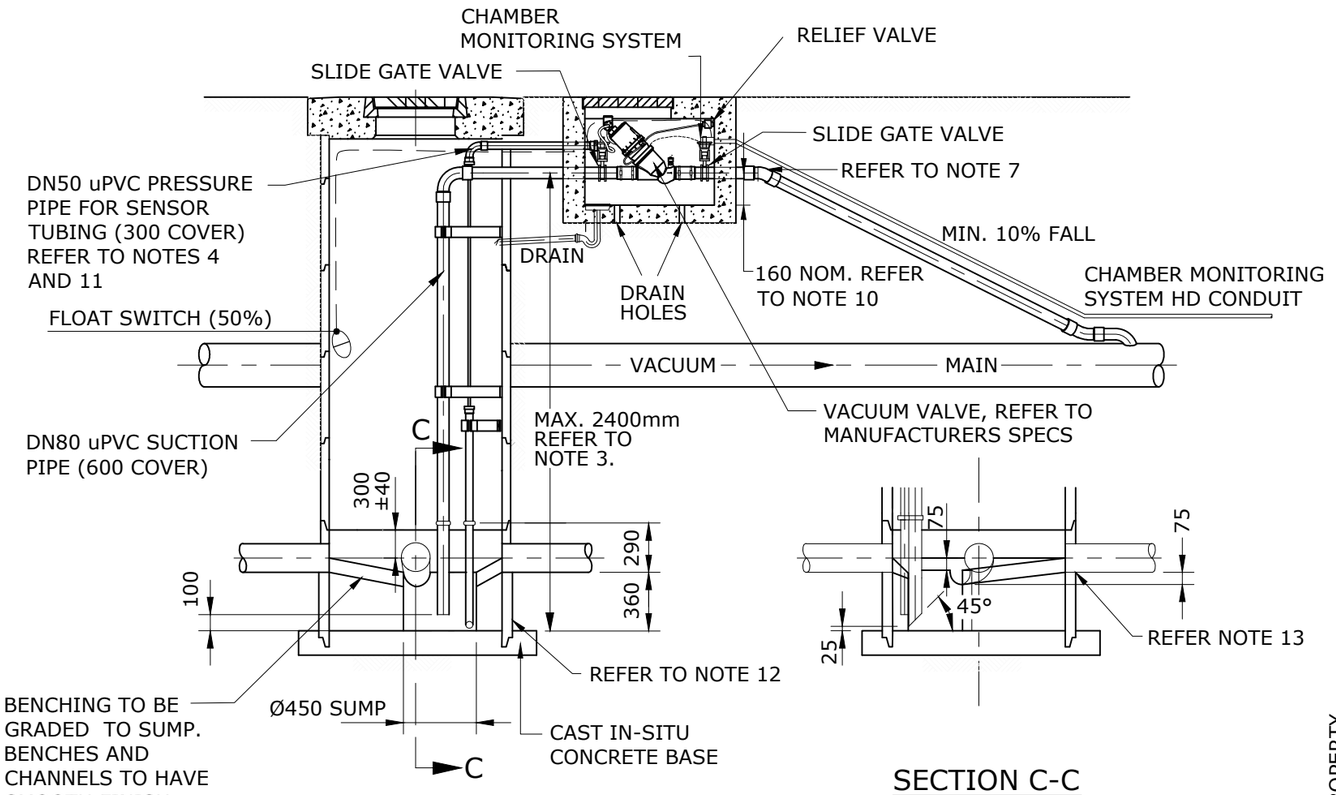
VERSION
A

NOT TO SCALE

ORG DATE:
1/1/2013



PLAN (COVERS REMOVED)



SECTION A-A

SECTION C-C
DETAILS OF BENCHING

NOTES

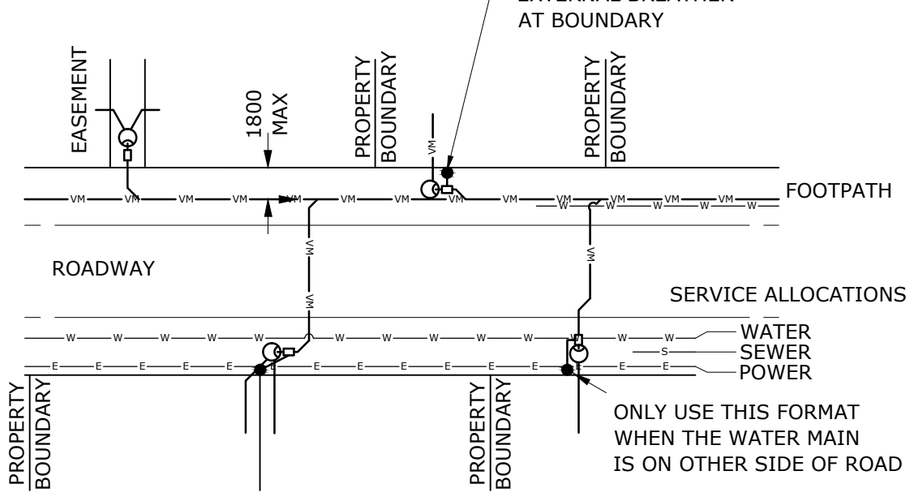
1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. BENCHING TO HAVE 80mm FALL TO SUMP FOR 1050mm MANHOLE.
3. NORMAL OPERATING DEPTH OF THE SUCTION PIPE IS 1.8M TO 2.4M GREATER DEPTHS REQUIRE APPROVAL FROM SEQ-SP.
4. SENSING LINE LENGTH IS NOT TO EXCEED 4 METRES.
5. VALVE PIT IS SINGLE PIECE ACOTYPE 8 POLYCRETE OR SIMILAR WITH A TWO PART CONCRETE COVER TO MATCH THE COVER CLASS OF THE VACUUM COLLECTION MANHOLE VALVE TO BE CENTRALLY LOCATED BELOW LID.
6. VALVE BOX NEED NOT BE IN LINE WITH VACUUM MAIN.
7. MAXIMUM DEVIATION ANGLE IS 45 DEGREES.
8. PIPEWORK PENETRATIONS TO THE CHAMBER AND PIT ARE TO BE SEALED WITH EPOXY MORTAR.
9. IF A CHANNEL IS REQUIRED IN THE ACCESS CHAMBER BENCHING, PIPE PENETRATIONS FOR GRAVITY SEWER MAINS INTO THE ACCESS CHAMBER ARE TO BE OFFSET IN ACCORDANCE WITH SEQ-SP CODE DRAWINGS SEQ-SEW-1304-1.
10. MOUNT SUCTION PIPE TO MAINTAIN 50mm MIN. CLEARANCE BETWEEN TOP OF VACUUM VALVE AND UNDERSIDE OF ACCESS CHAMBER. 20mm BREATHER HOSE IS TO SLOPE DOWNWARDS FROM VACUUM VALVE TO THE EXTERNAL BREATHER UNIT.
11. OPTIONAL ARRANGEMENT FOR SENSING TUBE: SWJ DN50 uPVC PRESSURE PIPE FOR FULL DISTANCE TO VALVE BOX AND COMMENCE SENSOR TUBING IN VALVE BOX (PAY ATTENTION TO ENSURE THAT JOINTS ARE AIR-TIGHT).
12. MANHOLE FORMAT, REFER TO SEQ SP CODE DRAWINGS SEQ-SEW-1300 SERIES.
13. PIPE PENETRATION THROUGH COLLECTION CHAMBER WALL REFER DWG. SEQ-VAC-1206-1 FOR DETAIL.

SINGLE RESIDENTIAL SITES

14. COLLECTION CHAMBERS & VACUUM SEWERS SHALL BE LOCATED IN THE FOOTPATH.
15. THE PROPERTY CONNECTION SHALL BE 100mm.

OTHER THAN SINGLE RESIDENTIAL SITES

16. COLLECTION CHAMBER LINERS SHALL BE POLYETHYLENE CLASS PE100 TO AS 4130 AND AS 4131.
17. PROPERTY CONNECTIONS SHALL BE MIN 150mm DIA.



VARIATIONS IN CONFIGURATION

GENERAL NOTE:

VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM COLLECTION MANHOLE
& VALVE PIT
TYPICAL DETAIL

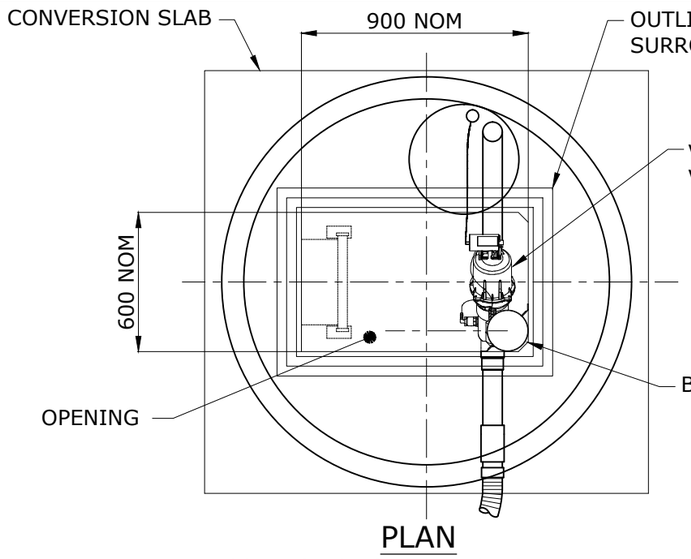
GCCC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1200-1

VERSION
A

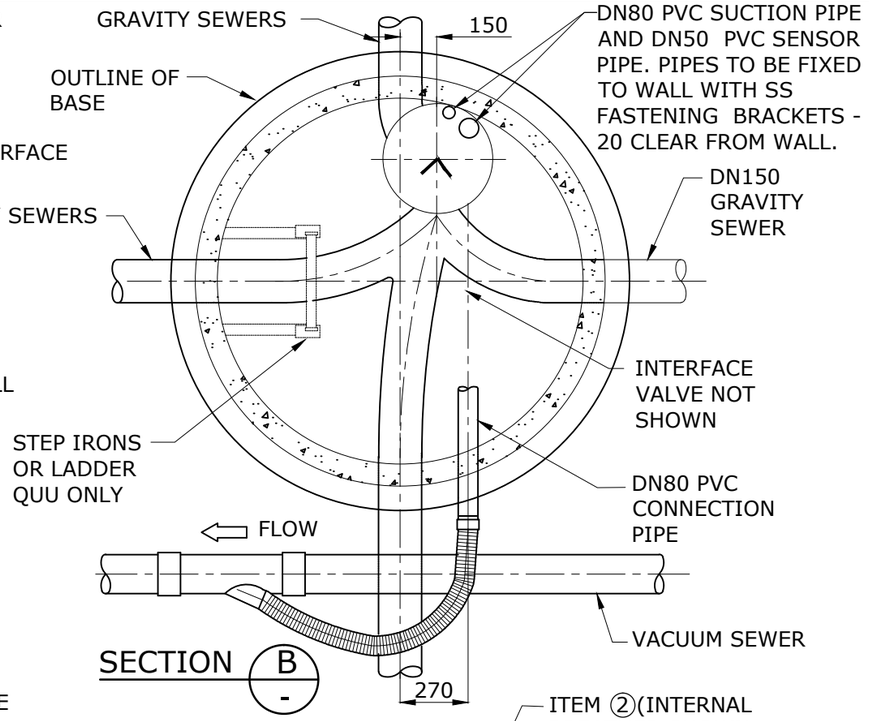
NOT TO SCALE

ORG DATE:
1/1/2013

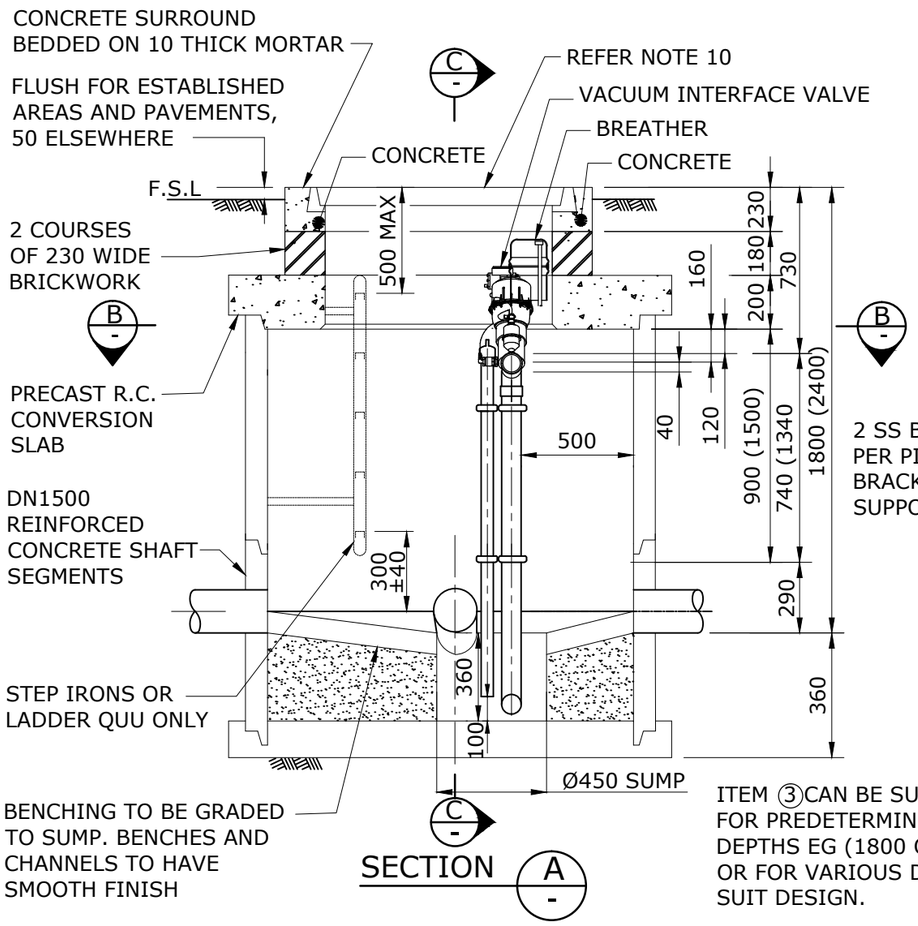


PLAN

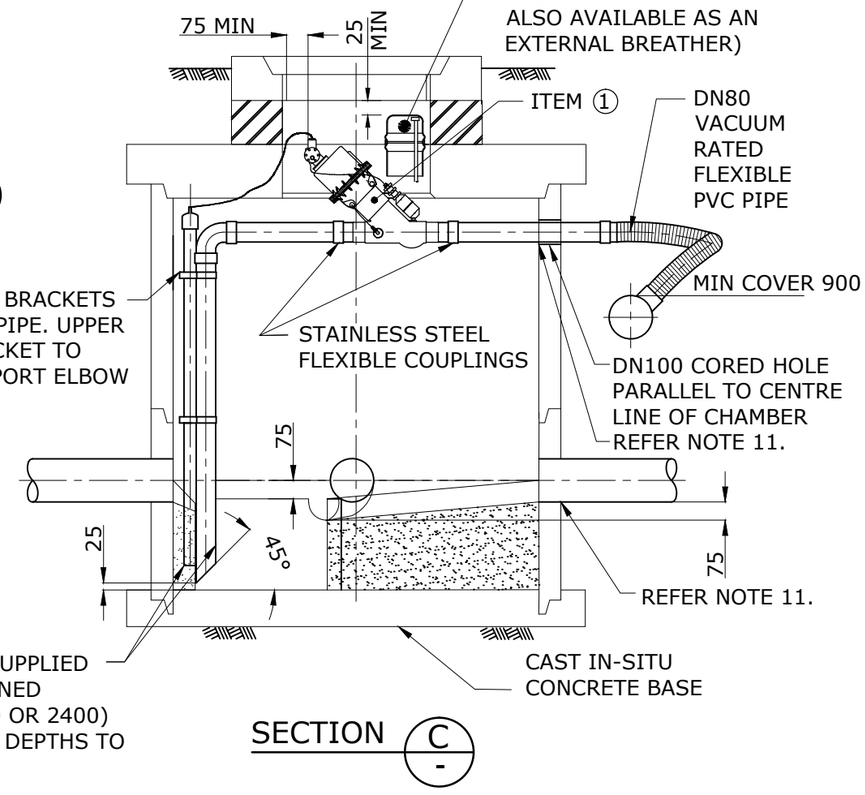
COVERS NOT SHOWN FOR CLARITY



SECTION B



SECTION A



SECTION C

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. COLLECTION CHAMBER COVERS SHALL BE SQUARE TO KERBS AND OR BOUNDARIES WHERE PRACTICABLE.
3. COLLECTION CHAMBER COVERS SHALL OPEN AWAY FROM KERBS, FENCES AND OTHER OBSTRUCTIONS WHICH MAY HINDER OPENING. COVERS IN TRAFFICABLE AREAS SHALL OPEN AGAINST THE FLOW OF TRAFFIC.
4. BRICKWORK IN WET GROUND SHALL BE RENDERED ON THE OUTSIDE FACE WITH CEMENT MORTAR. RENDER SHALL BE 12 THICK. WET GROUND IS:
   (a) CLAY OR LOAMY SOIL
   (b) ANY GROUND LESS THAN 600 ABOVE THE ESTIMATED GROUND WATER LEVEL.
5. BRICKS SHALL BE 230 X 110 X 76.
6. CEMENT MORTAR BY VOLUME SHALL BE ONE PART CEMENT TO THREE PARTS SAND.
7. STEP IRONS AND LADDERS SHALL COMPLY WITH WSA PS-314 AND WSA PS 315 OR 316 OR 317, RESPECTIVELY.
8. ONLY COLLECTION CHAMBERS AND COLLECTION CHAMBER COMPONENTS APPROVED BY THE SEQ-SP SHALL BE USED.
9. VACUUM INTERFACE VALVE ITEMS SHALL BE INSTALLED BY AN INSTALLER ACCREDITED BY THE VALVE MANUFACTURER.
10. 900 x 600 NOM. SIZE D.I. TWO PART COVER AND FRAME, CLASS B OR D TO SUIT LOCATION. BRICKWORK ADJUSTED TO SUIT.
11. PIPE PENETRATION THROUGH COLLECTION CHAMBER WALL REFER TO DRAWING SEQ-VAC-1206-1 FOR DETAIL.
12. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

VACUUM SUPPLIED ITEMS

ITEM	DESCRIPTION
①	VACUUM INTERFACE VALVE INCLUDING FLEXIBLE COUPLINGS
②	BREATHER BELL INCLUDING ASSOCIATED PIPEWORK AND FASTENING BRACKETS
③	SUCTION KIT INCLUDING DN80 PVC SUCTION PIPE, DN50PVC SENSOR PIPE, CONNECTING TUBES AND SS FASTENING BRACKETS

NOTE:

SEQ-SP REQUIRE ALL INTERFACE VALVES TO BE PROVIDED OUTSIDE CHAMBER IN SEPARATE PITS AS PER DWG. SEQ-VAC-1200-1.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

DN1500 COLLECTION CHAMBER WITH SINGLE VACUUM INTERFACE VALVE DN150 & DN225 SEWERS, 1.8 & 2.4m DEEP TYPICAL EXAMPLE WITH DESIGN DETAIL

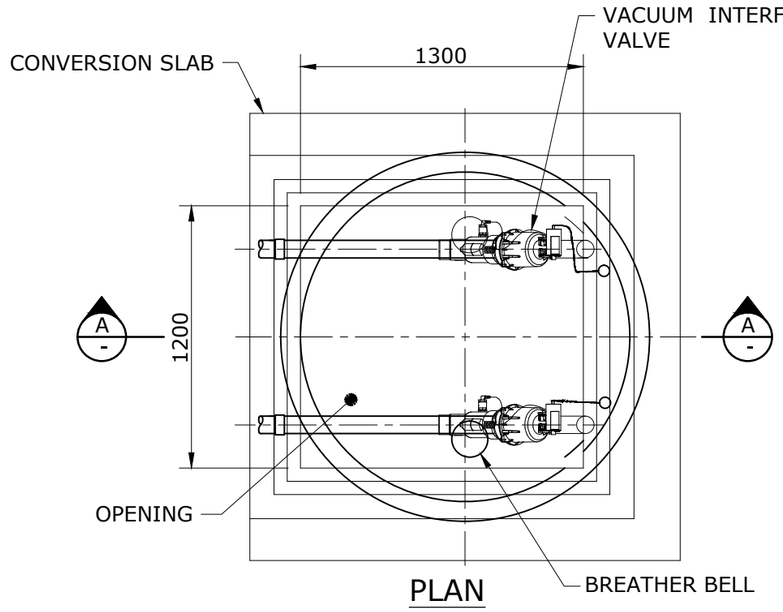
GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1201-1

VERSION A

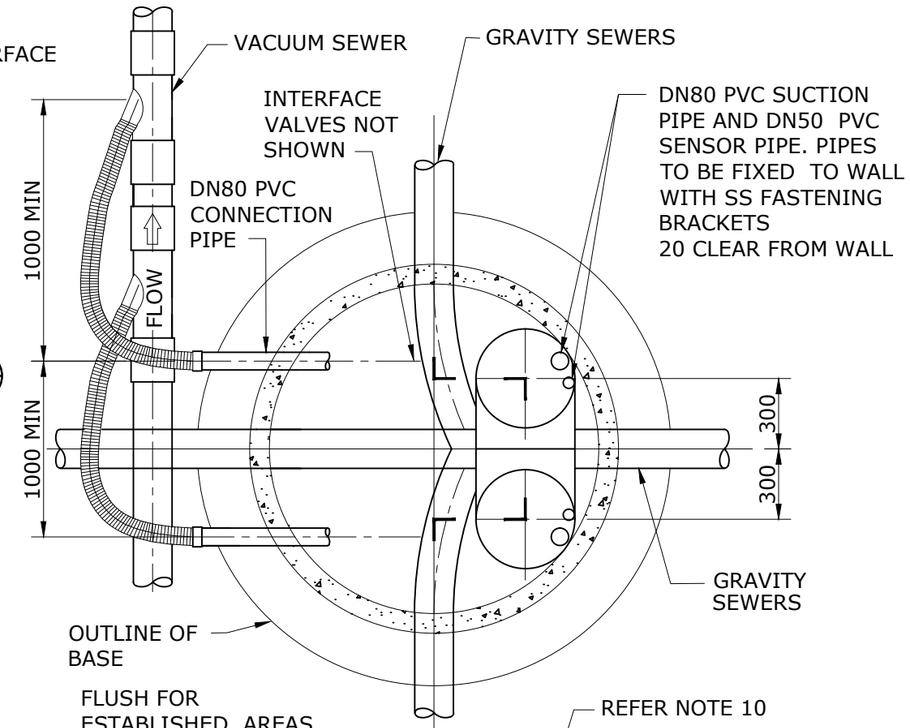
NOT TO SCALE

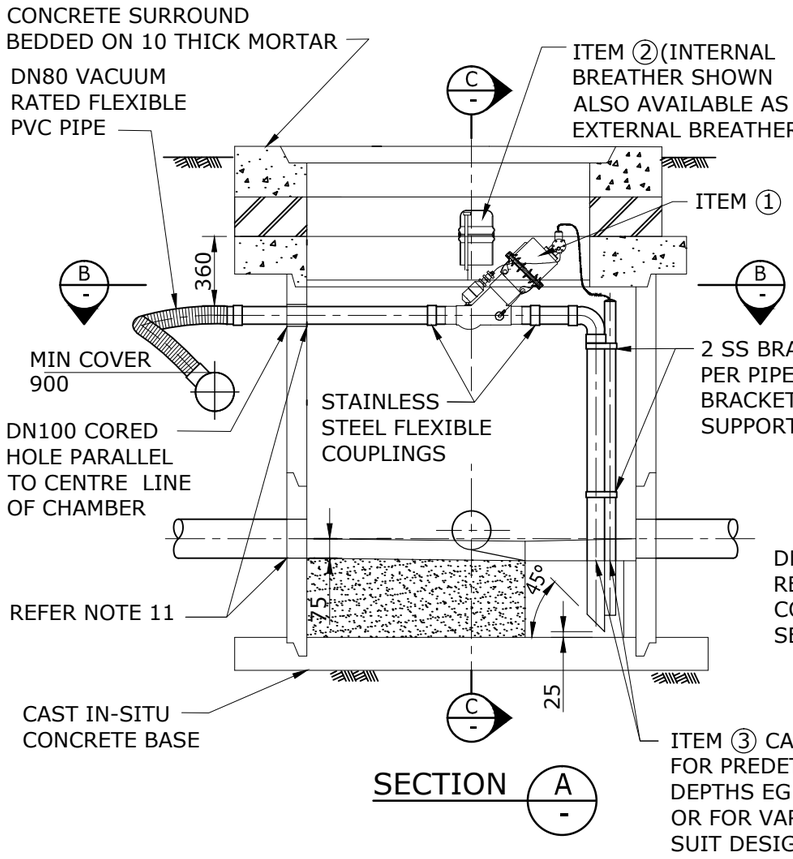
ORG DATE: 1/1/2013



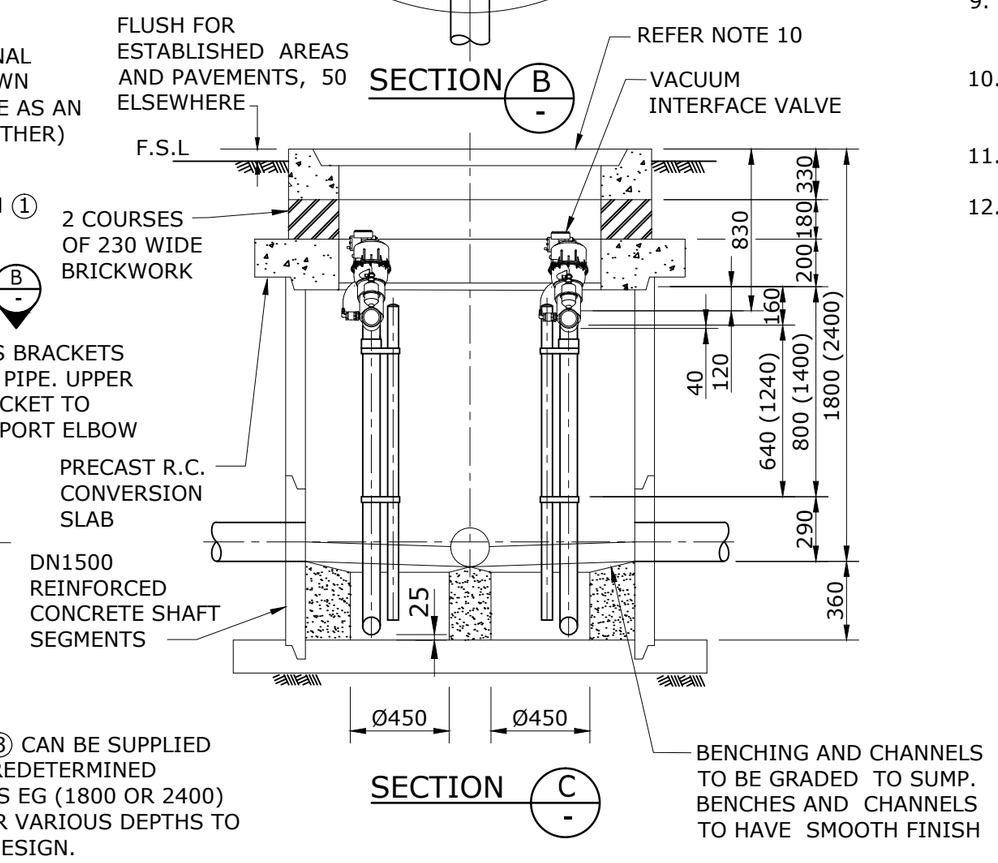
PLAN

COVERS NOT SHOWN FOR CLARITY





SECTION A -



SECTION B -

SECTION C -

BENCHING AND CHANNELS TO BE GRADED TO SUMP. BENCHES AND CHANNELS TO HAVE SMOOTH FINISH

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. COLLECTION CHAMBER COVERS SHALL BE SQUARE TO KERBS AND OR BOUNDARIES WHERE PRACTICABLE.
3. COLLECTION CHAMBER COVERS SHALL OPEN AWAY FROM KERBS, FENCES AND OTHER OBSTRUCTIONS WHICH MAY HINDER OPENING. COVERS IN TRAFFICABLE AREAS SHALL OPEN AGAINST THE FLOW OF TRAFFIC.
4. BRICKWORK IN WET GROUND SHALL BE RENDERED ON THE OUTSIDE FACE WITH CEMENT MORTAR. RENDER SHALL BE 12 THICK. WET GROUND IS :
   (a) CLAY OR LOAMY SOIL
   (b) ANY GROUND LESS THAN 600 ABOVE THE ESTIMATED GROUND WATER LEVEL.
5. BRICKS SHALL BE 230 X 110 X 76.
6. CEMENT MORTAR BY VOLUME SHALL BE ONE PART CEMENT TO THREE PARTS SAND.
7. STEP IRONS AND LADDERS SHALL COMPLY WITH WSA PS-314 AND WSA PS 315 OR 316 OR 317, RESPECTIVELY.
8. ONLY COLLECTION CHAMBERS AND COLLECTION CHAMBER COMPONENTS APPROVED BY SEQ-SP SHALL BE USED. THIS IS AN EXAMPLE DRAWING, THE DETAILS OF SOME APPROVED COLLECTION CHAMBERS MAY VARY FROM THOSE SHOWN ON THE DRAWINGS.
9. VACUUM INTERFACE VALVE ITEMS SHALL BE INSTALLED BY AN INSTALLER ACCREDITED BY THE VALVE MANUFACTURER.
10. FOUR PART DI COVER AND FRAME IN CONCRETE SURROUND, CLASS B OR D TO SUIT LOCATION. BRICKWORK ADJUSTED TO SUIT.
11. PIPE PENETRATION THROUGH COLLECTION CHAMBER WALL REFER TO DRAWING SEQ-VAC-1206-1 FOR DETAIL.
12. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

VACUUM SUPPLIED ITEMS	
ITEM	DESCRIPTION
①	VACUUM INTERFACE VALVE INCLUDING FLEXIBLE COUPLINGS
②	BREATHER BELL INCLUDING ASSOCIATED PIPEWORK AND FASTENING BRACKETS
③	SUCTION KIT INCLUDING DN80 PVC SUCTION PIPE, DN50 PVC SENSOR PIPE, CONNECTING TUBES AND SS FASTENING BRACKETS

NOTE:
SEQ-SP REQUIRE ALL INTERFACE VALVES TO BE PROVIDED OUTSIDE CHAMBER IN SEPARATE PITS AS PER DWG. SEQ-VAC-1200-1.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

DN1500 COLLECTION CHAMBER WITH TWO VACUUM INTERFACE VALVES DN150 & DN225 SEWERS, 1.8 & 2.4m DEEP. TYPICAL EXAMPLE WITH DESIGN DETAIL

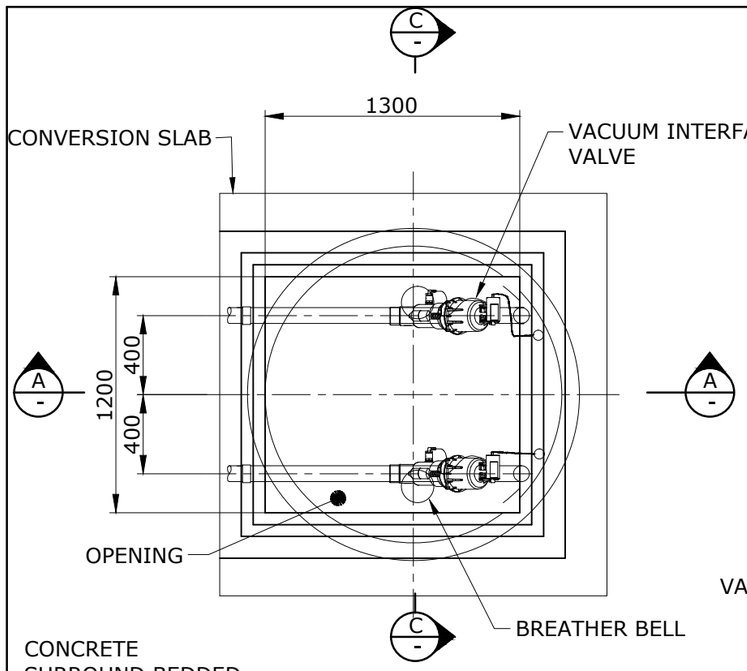
GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1202-1

VERSION A

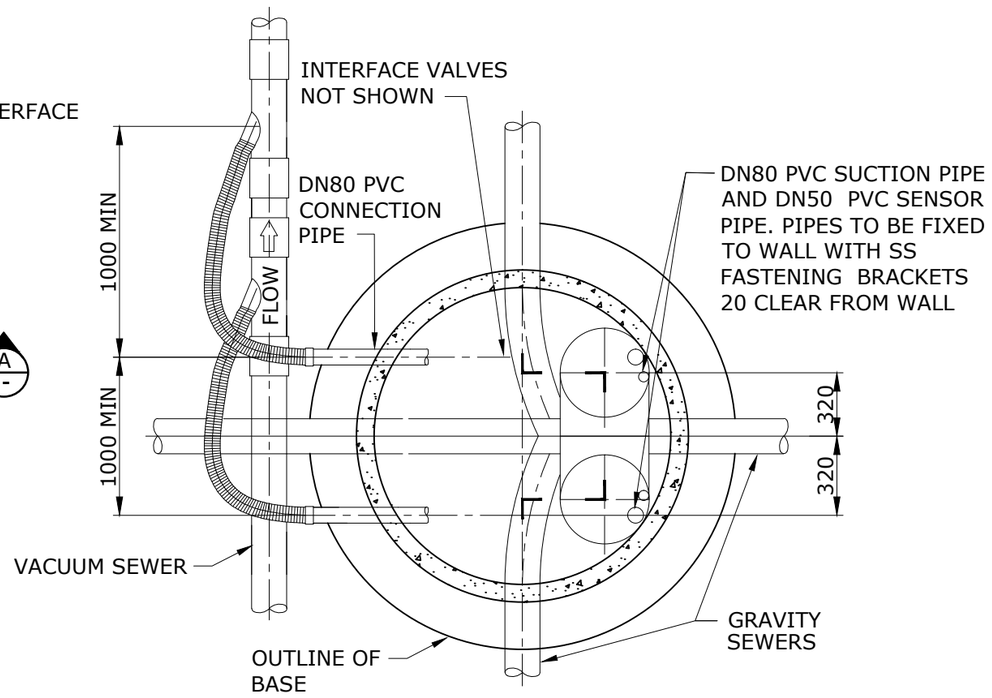
NOT TO SCALE

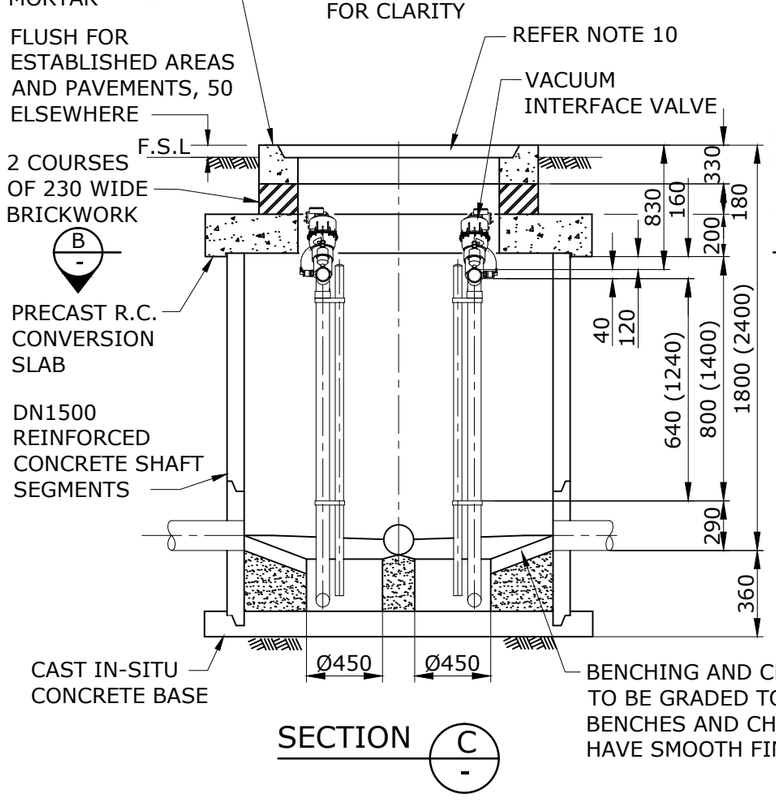
ORG DATE: 1/1/2013



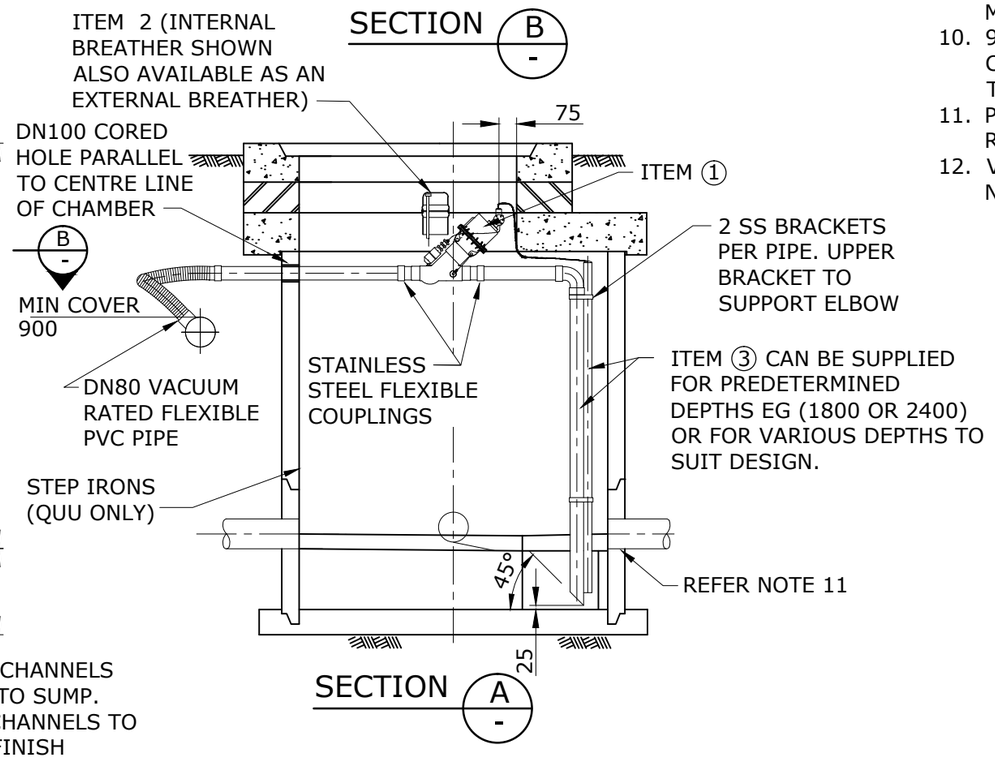
PLAN

COVERS NOT SHOWN FOR CLARITY





SECTION C



SECTION A

SECTION B

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. COLLECTION CHAMBER COVERS SHALL BE SQUARE TO KERBS AND OR BOUNDARIES WHERE PRACTICABLE.
3. COLLECTION CHAMBER COVERS SHALL OPEN AWAY FROM KERBS, FENCES AND OTHER OBSTRUCTIONS WHICH MAY HINDER OPENING. COVERS IN TRAFFICABLE AREAS SHALL OPEN AGAINST THE FLOW OF TRAFFIC.
4. BRICKWORK IN WET GROUND SHALL BE RENDERED ON THE OUTSIDE FACE WITH CEMENT MORTAR. RENDER SHALL BE 12 THICK. WET GROUND IS:
   (a) CLAY OR LOAMY SOIL
   (b) ANY GROUND LESS THAN 600 ABOVE THE ESTIMATED GROUND WATER LEVEL.
5. BRICKS SHALL BE 230 X 110 X 76.
6. CEMENT MORTAR BY VOLUME SHALL BE ONE PART CEMENT TO THREE PARTS SAND.
7. STEP IRONS AND LADDERS SHALL COMPLY WITH WSA PS-314 AND WSA PS 315 OR 316 OR 317, RESPECTIVELY.
8. ONLY COLLECTION CHAMBERS AND COLLECTION CHAMBER COMPONENTS APPROVED BY SEQ-SP SHALL BE USED. THIS IS AN EXAMPLE DRAWING, THE DETAILS OF SOME APPROVED COLLECTION CHAMBERS MAY VARY FROM THOSE SHOWN ON THE DRAWINGS.
9. VACUUM INTERFACE VALVE ITEMS SHALL BE INSTALLED BY AN INSTALLER ACCREDITED BY THE VALVE MANUFACTURER.
10. 900x600 NOMINAL SIZE DI TWO PART COVER AND FRAME CLASS B OR D TO SUIT LOCATION. BRICKWORK ADJUSTED TO SUIT.
11. PIPE PENETRATION THROUGH COLLECTION CHAMBER WALL REFER TO DRAWING SEQ-VAC-1206-1 FOR DETAIL.
12. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.

VACUUM SUPPLIED ITEMS	
ITEM	DESCRIPTION
①	VACUUM INTERFACE VALVE INCLUDING FLEXIBLE COUPLINGS
②	BREATHER BELL INCLUDING ASSOCIATED PIPEWORK AND FASTENING BRACKETS
③	SUCTION KIT INCLUDING DN80 PVC SUCTION PIPE, DN50 PVC SENSOR PIPE, CONNECTING TUBES AND SS FASTENING BRACKETS

NOTE:

SEQ-SP REQUIRE ALL INTERFACE VALVES TO BE PROVIDED OUTSIDE CHAMBER IN SEPARATE PITS AS PER DWG. SEQ-VAC-1200-1.

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

DN1800 COLLECTION CHAMBER WITH TWO VACUUM INTERFACE VALVES DN150 & DN225 SEWERS, 1.8 & 2.4m DEEP. TYPICAL EXAMPLE WITH DESIGN DETAIL

GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1203-1

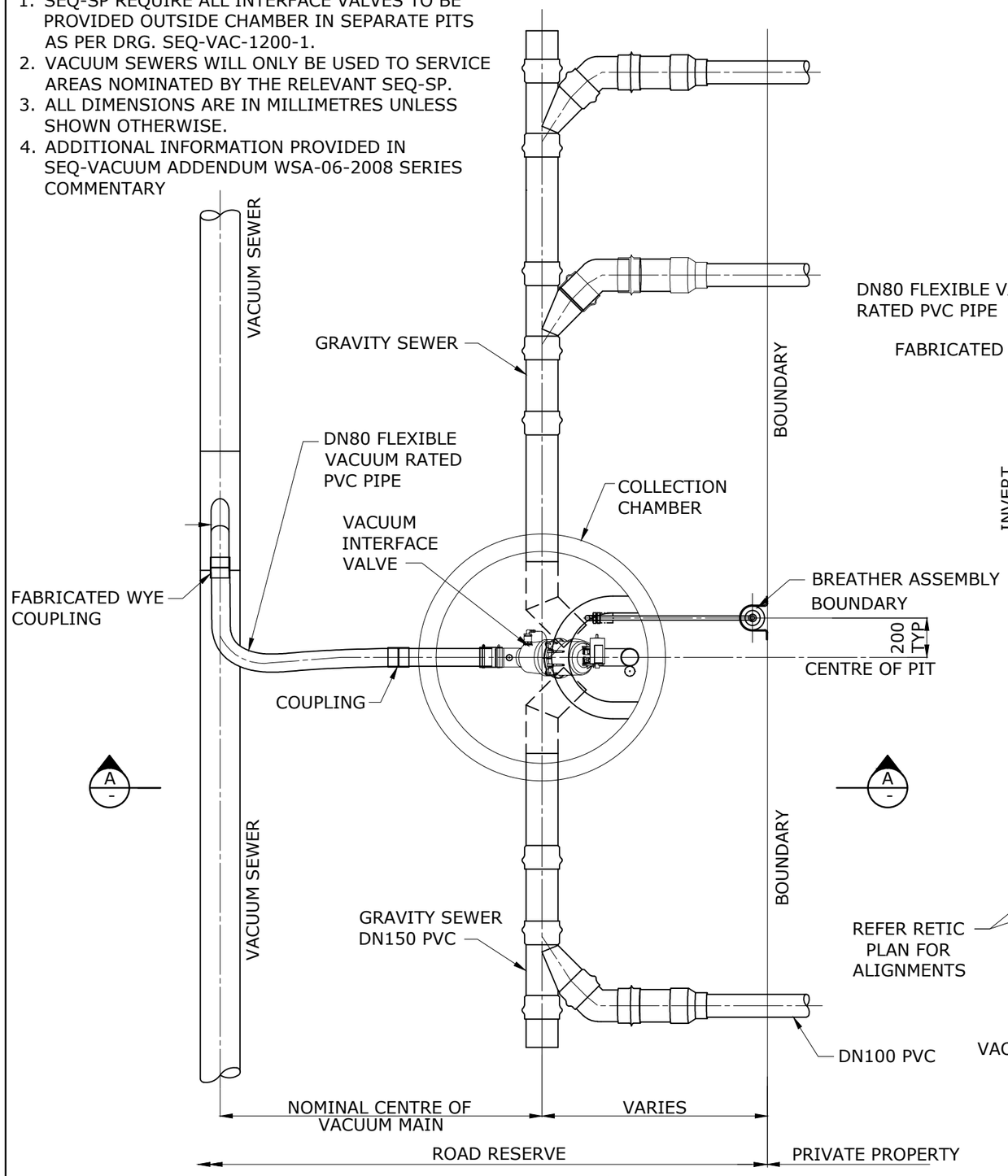
VERSION A

NOT TO SCALE

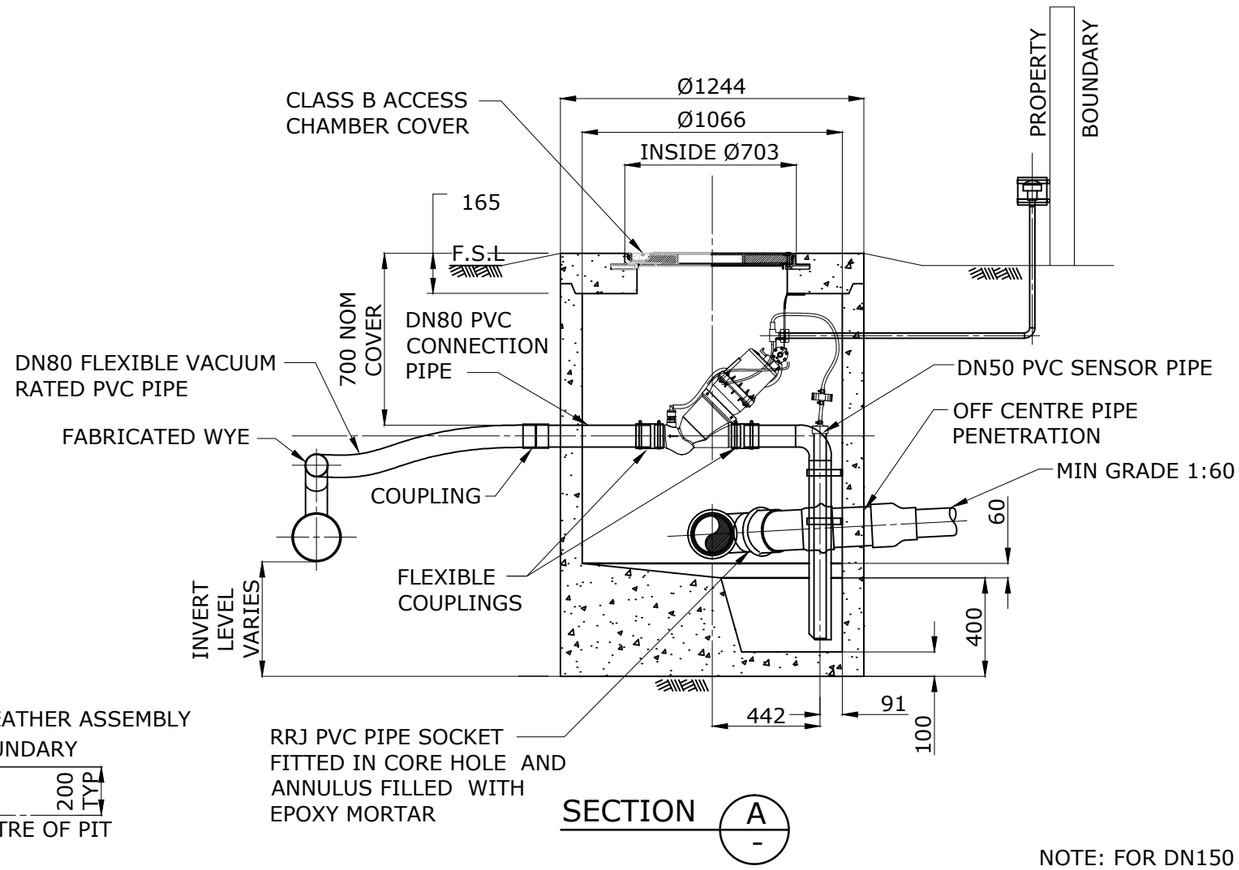
ORG DATE: 1/1/2013

NOTES

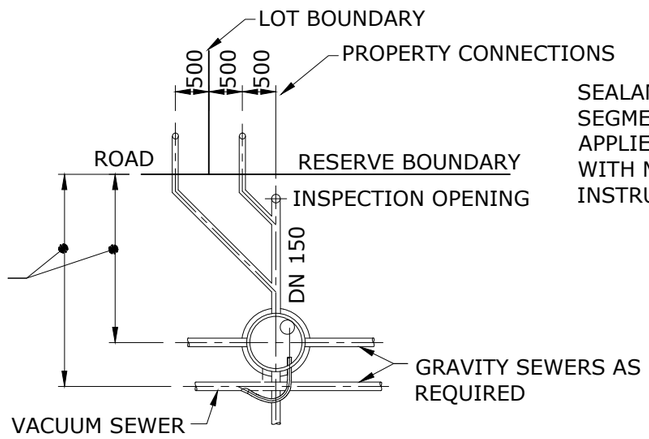
1. SEQ-SP REQUIRE ALL INTERFACE VALVES TO BE PROVIDED OUTSIDE CHAMBER IN SEPARATE PITS AS PER DRG. SEQ-VAC-1200-1.
2. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
4. ADDITIONAL INFORMATION PROVIDED IN SEQ-VACUUM ADDENDUM WSA-06-2008 SERIES COMMENTARY



PLAN - ELEVATION

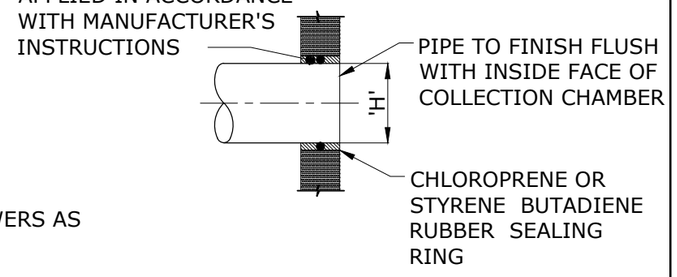


SECTION A -



TYPICAL PROPERTY CONNECTION LAYOUT

NOTE: FOR DN150 PIPE, 'H' = 178 WITH 165 x 14 SEALING RING FOR DN225 PIPE, 'H' = 279 WITH 230 x 19 SEALING RING



PIPE PENETRATION THROUGH COLLECTION CHAMBER WALL DETAIL

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

COLLECTION CHAMBER SERVICE CONNECTION, TYPICAL PROPERTY CONNECTION LAYOUT & PIPE PENETRATION THROUGH COLLECTION CHAMBER WALL DETAILS.

GCCC	LCC	RCC	QUU	UW

DRAWING No. SEQ-VAC-1206-1

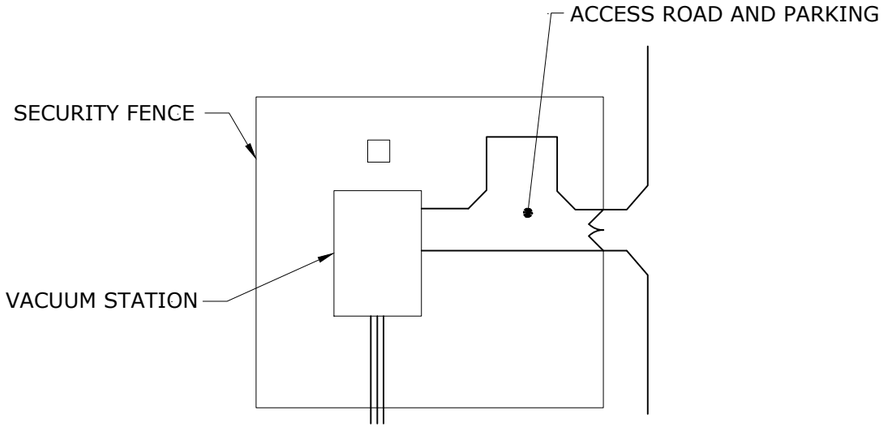
VERSION A

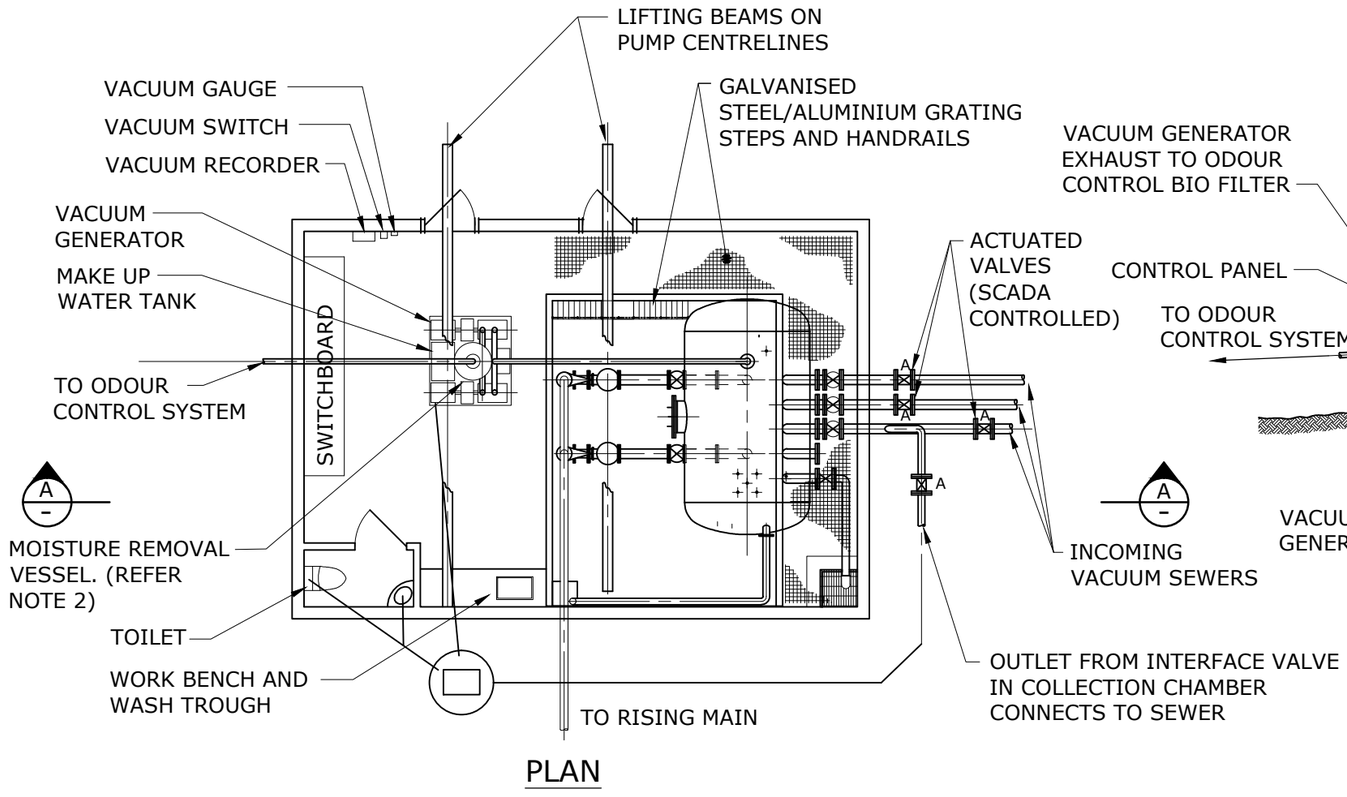
NOT TO SCALE

ORG DATE: 1/1/2013

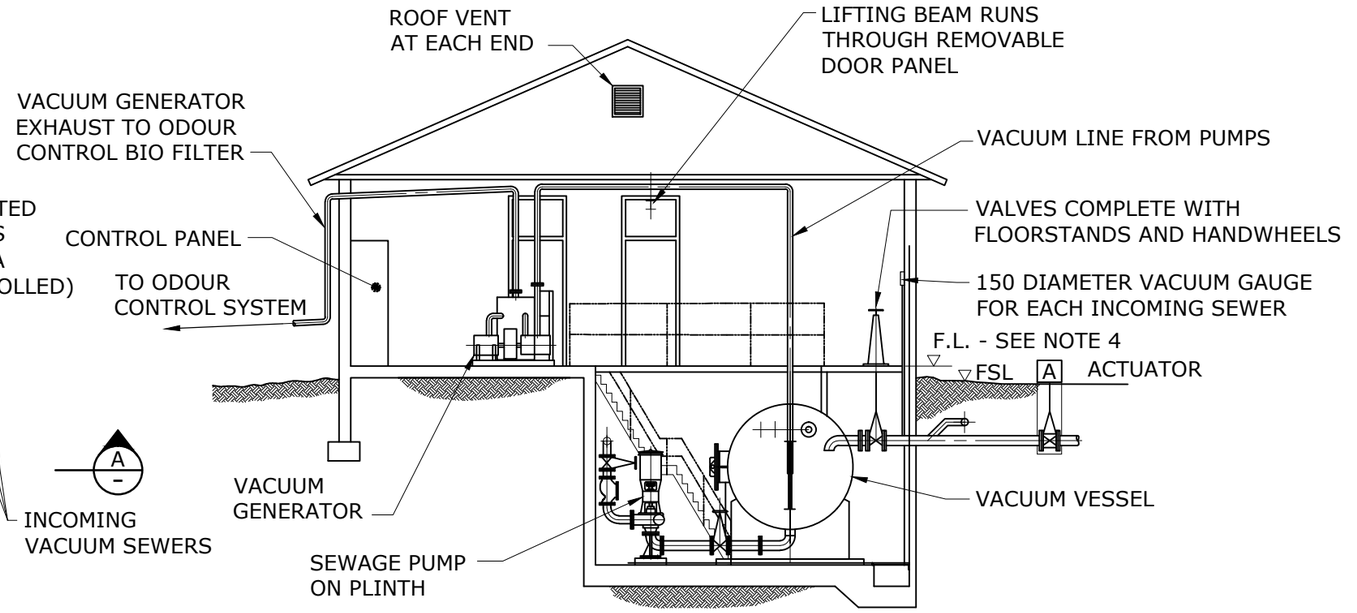
NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. MOISTURE REMOVAL VESSEL ON DISCHARGE SIDE FOR LIQUID PUMP AS SHOWN ON INLET FOR SLIDING VANE VACUUM GENERATOR.
3. BRICK / CONCRETE BLOCK, TILED ROOF CONSTRUCTION FOR MAXIMUM SOUND ATTENUATION.
4. FLOOR LEVEL TO MEET REQUIREMENTS OF SEQ SP WHERE THESE REQUIREMENTS EXCEED THE BUILDING CODE.
5. SEQ-SP REQUIRE ALL INTERFACE VALVES TO BE PROVIDED OUTSIDE CHAMBER IN SEPARATE PITS AS PER DWG. SEQ-VAC-1200-1.
6. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.





PLAN



SECTION A

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM STATION LAYOUT
HORIZONTAL VACUUM VESSEL

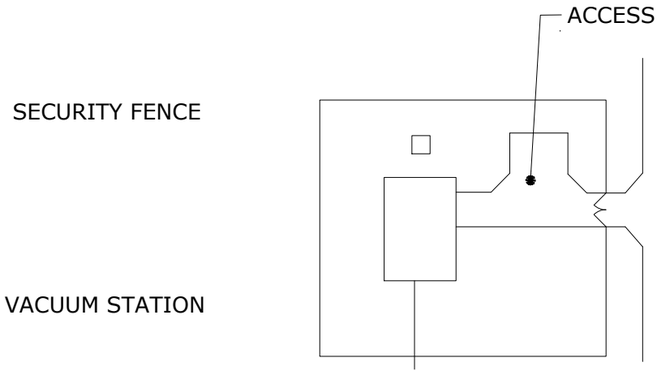
GCCC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1300-1

VERSION
A

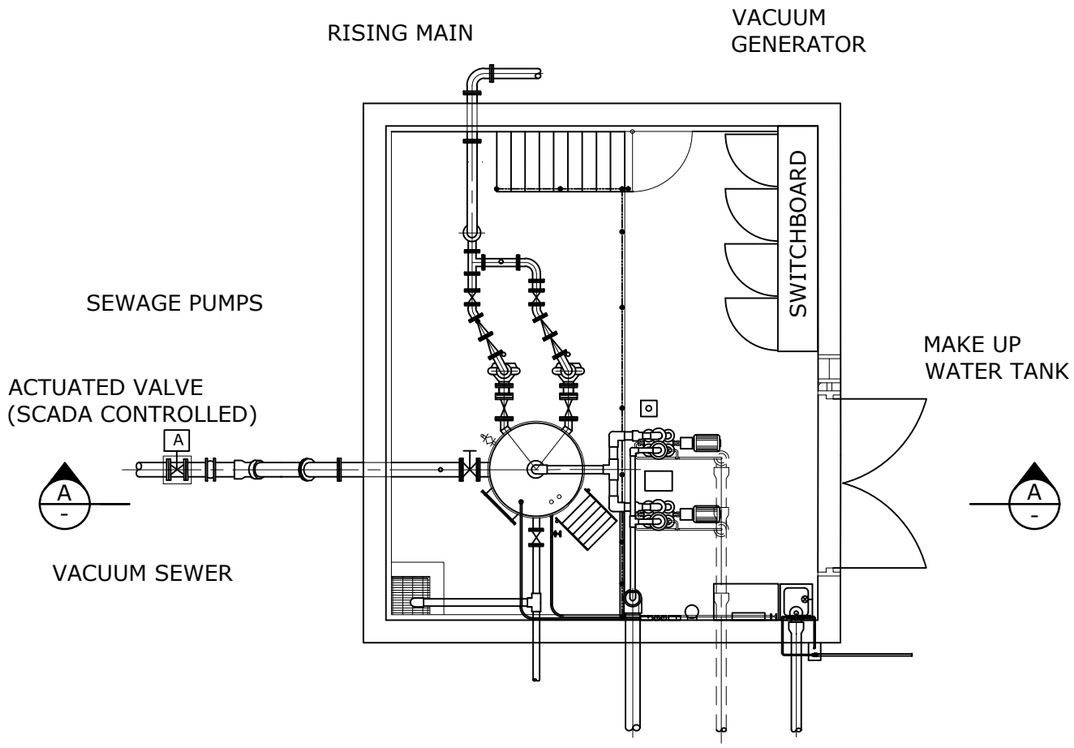
NOT TO SCALE

ORG DATE:
1/1/2013

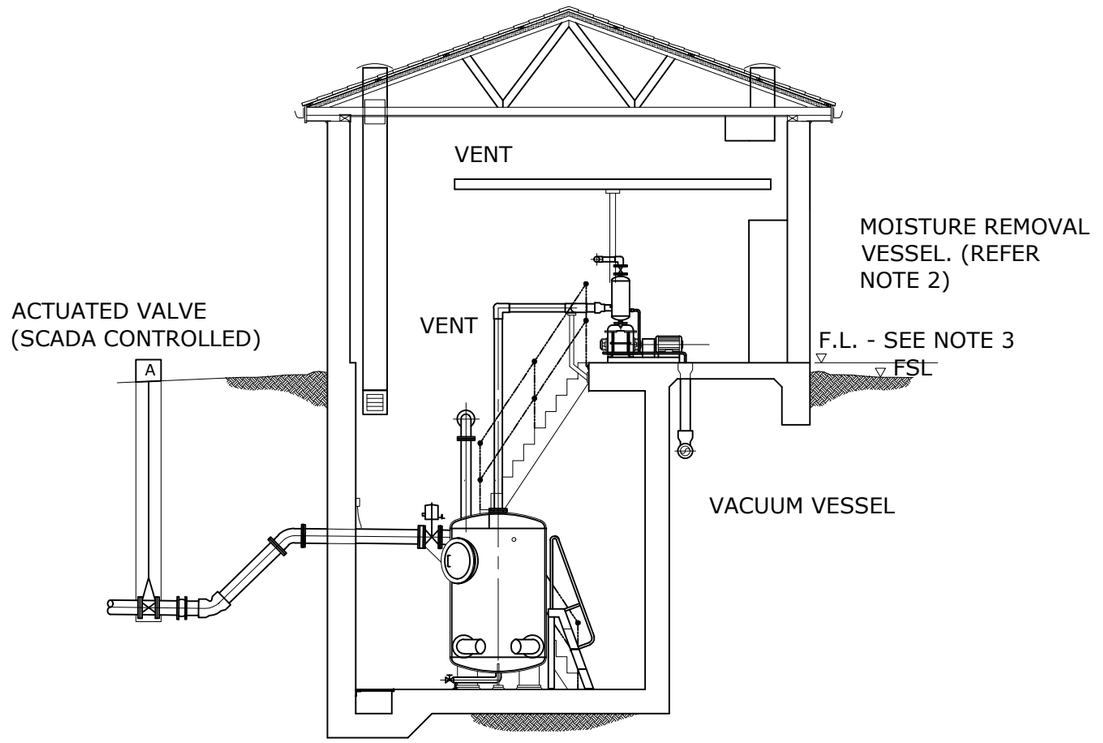


NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. MOISTURE REMOVAL VESSEL ON DISCHARGE SIDE FOR LIQUID PUMP AS SHOWN ON INLET FOR SLIDING VANE VACUUM GENERATOR.
3. FLOOR LEVEL TO MEET REQUIREMENTS OF SEQ SP WHERE THESE REQUIREMENTS EXCEED THE BUILDING CODE.
4. SEQ-SP REQUIRE ALL INTERFACE VALVES TO BE PROVIDED OUTSIDE CHAMBER IN SEPARATE PITS AS PER DWG. SEQ-VAC-1200-1.
5. VACUUM SEWERS WILL ONLY BE USED TO SERVICE AREAS NOMINATED BY THE RELEVANT SEQ-SP.



PLAN
(VENT NOT SHOWN)



SECTION A-A

REV. No.	DATE	DESCRIPTION	AUTH.

SEQ WATER
SERVICE PROVIDERS

WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE OCCUPATIONAL HEALTH & SAFETY LEGISLATION

VACUUM SEWERAGE STANDARD DRAWING

VACUUM STATION LAYOUT
VERTICAL VACUUM VESSEL

CoGC	LCC	RCC	QUU	UW

DRAWING No.
SEQ-VAC-1301-1

VERSION
A

NOT TO SCALE

ORG DATE:
1/1/2013