

OUR REF: 5941-ENG

YOUR REF: OPW/2020/650

30 June 2020

City Development  
Gold Coast City Council  
PO Box 5042  
GOLD COAST MAIL CENTRE QLD 9729

Attention: Mr. Sanjib Bhowmick

Dear Sanjib,

**RE: RESPONSE TO INFORMATION REQUEST FOR OPW/2020/650  
EXTERNAL WATER MAIN RELOCATION ASSOCIATED WITH STAGE 1 OF THE  
VANTAGE, YATALA INDUSTRIAL DEVELOPMENT**

**Property: Lot 501 on SP295994 – 60 Stapylton Jacobs Well Road Stapylton QLD**

We act on behalf of the Applicant, Frasers Property Australia Pty Ltd, and provide the following response to Council's Information Request dated 8 June 2020. Given the nature of the response, the Applicant considers this to be a full response to the information request.

#### ***Water and Waste***

##### ***General Comment:***

- From 1 July 2019, the only approved watermain material for industrial / commercial developments is to be DICL. Amend all notes throughout all drawings proposing PVC-M to DICL PN35.*

#### **GDP Response:**

GCWW's comments are acknowledged regarding the approved material type for industrial / commercial development being DICL. As this is largely to deal with the uncertainty around the location of future vehicular crossovers into industrial / commercial properties, GDP had previously sought approval from GCWW that PVC-M PN20 pipe could be utilised in areas outside of the DTMR-approved access location for Stage 1 of the development as the location is fixed and there is no further opportunities for access across the new watermain into the subject site. Upon receipt of Council's Information Request, GDP have re-confirmed this advice with GCWW's Roman Thomas. Copy of this correspondence is contained within **Attachment 1**. On this basis the material types for the relocated main have been retained in line with the original submission.

- 2 *Provide confirmation from the Department of Transport and Main Roads (TMR), approving for the redundant main to be left in place and grout filled, as opposed to removed entirely. Update all relevant drawings as required.*

**GDP Response:**

The feedback received from DTMR's Trevor Greene has been communicated to GCWW via email correspondence on 23 June 2020 with the water main alignment and extent of demolition requested by DTMR acknowledged by GCWW's Roman Thomas on 25 June 2020 (refer **Attachment 2**). The amended engineering drawing set included in this response (refer **Attachment 3**) to Council reflects the requested changes by DTMR the extent of demolition along with the extent which can be grout filled and abandoned in place due to its ultimate depth in the future verge of Staplyton Jacobs Well Road.

- 3 *Provide confirmation from TMR approving the alignment of the proposed water main.*

The feedback received from DTMR's Trevor Greene has been communicated to GCWW via email correspondence on 23 June 2020 with the water main alignment and extent of demolition requested by DTMR acknowledged by GCWW's Roman Thomas on 25 June 2020 (refer **Attachment 2**). The amended engineering drawing set included in this response (refer **Attachment 3**) to Council reflects the requested changes by DTMR to move the alignment of the relocated water main south of the DTMR stormwater drainage network to minimise the extent of crossing DMTR's pavement and for the water main under the pavement to be installed within an enveloper.

*General Notes – 5941 ENG SJW WAT 002-A:*

- 4 *Water Reticulation Note 4 references a standard SEQ drawing. As the watermain is within TMR's corridor, the cover over the watermain must adhere to their standards. Namely Table 5.2.1 within Technical Note 163 'Third Party Utility Infrastructure Installation in State Controlled road Technical Guidelines'. Amend the note to reflect this.*

**GDP Response:**

Water Reticulation Note 4 has been updated as per Council's request. The revised engineering drawing set containing this updated plan is contained with **Attachment 3**.

- 5 *Water Reticulation Notes 6 & 9 are not relevant to this application. Delete.*

**GDP Response:**

Previously numbered Water Reticulation Notes 6 & 9 has been deleted as per Council's request. The revised engineering drawing set containing this updated plan is contained with **Attachment 3**.

*Standard Details Plan Sheet 1 of 2 – 5941 ENG SJW WAT 004-A:*

- 6      *The trench detail under signalised intersection pavement must show 300 minimum pipe embedment above the pipe due to being trafficable as per standard drawing SEQ-WAT-1202-1.*

**GDP Response:**

The trench detail on drawing 004 has been amended to incorporate Council's request of 300mm minimum pipe embedment above the pipe. The revised engineering drawing set containing this updated plan is contained with **Attachment 3**.

- 7      *Update Section 1 notes regarding the watermain to abandoned following confirmation from TMR that it can remain in place, rather than removed.*

**GDP Response:**

The Section 1 notes regarding the watermain demolition / abandonment have been updated to reflect DTMR's advice. The revised engineering drawing set containing this updated plan is contained with **Attachment 3**.

*Design Water Alignment Sheet 1 of 2 – 5941 ENG SJW WAT 009-A &  
Design Water Alignment Sheet 2 of 2 – 5941 ENG SJW WAT 010-A:*

- 8      *There is a note in the upper left hand corner proposing PVC-M, amend to D1CL PN35.*

**GDP Response:**

The referenced note has been retained as per the original submission to reflect GCWW's advice that PVC-M can be utilised for the works.

- 9      *Within the Live Works Schedule, I(B) states 'contractor' to turn off existing water main. Amend to 'Water and Waste to turn off existing water main'.*

**GDP Response:**

The Live works Schedule has been updated in accordance with GCWW's requested change. The revised engineering drawing set containing this updated plan is contained with **Attachment 3**.

*Design Water Main Longitudinal Section – 5941 ENG SJW WAT 011-A:*

10 *Amend PVC-M to DICL PN35*

**GDP Response:**

No amendment has been made based on GCWW's advice that PVC-M can be utilised for the works.

11 *Provide and show any required vertical bends and notes for any thrust blocks.*

**GDP Response:**

Drawing 011 has been updated to show the required vertical bends and thrust blocks as per Council's request. The revised engineering drawing set containing this updated plan is contained with **Attachment 3**.

We feel that the above information satisfactorily responds and addresses all the matters raised as part of the Information Request and we look forward to a timely and favourable determination of the application.

If you require any further information or have any queries, please contact the undersigned.

Yours faithfully,

**GASSMAN DEVELOPMENT PERSPECTIVES**



**MITCHELL GASSMAN**

**CIVIL PROJECT ENGINEER**

**Enclosed**

Attachment 1 – GCWW's Advice confirming watermain material type  
Attachment 2 – GCWW's Advice acknowledging DTMR design feedback  
Attachment 3 – Amended Engineering Drawing Set & Drawing Transmittal

## **ATTACHMENT 1 – GCWW’s Advice Confirming Watermain Material Type**

## Mitchell Gassman

---

**From:** THOMAS Roman <RTHOMAS@goldcoast.qld.gov.au>  
**Sent:** Tuesday, 16 June 2020 1:04 PM  
**To:** Mitchell Gassman  
**Cc:** Ian Grieves; MUNRO Darren; JUELFS Kyle  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Hi Mitchell,

Apologies for the delay in responding to this email.

PVC-M is appropriate for use outside the subdivision with the exception of the entry road crossing and any areas of insufficient cover. Where depth exceeds 1.5m water main material may also need to be considered.

Cheers

Regards,

**Roman Thomas**  
**MBA, BEng (Hons) (Civil), BBus (Mgt), JP (Qual), MIEAust, CPEng, NER, RPEQ**  
Coordinator Asset Audit and Handover  
Water and Waste  
City of Gold Coast

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[cityofgoldcoast.com.au](http://cityofgoldcoast.com.au)

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**From:** Mitchell Gassman [mailto:mitchell@gassman.com.au]  
**Sent:** Monday, 15 June 2020 11:19 AM  
**To:** THOMAS Roman  
**Cc:** Ian Grieves; MUNRO Darren  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Morning Roman,

Just touching base to see if you have had an opportunity to review the below email?

Regards,  
Mitchell

g a s s m a n **development perspectives**



**Mitchell Gassman**  
Civil Project Engineer | B.Eng.Civil, MIEAust, CPEng, NER, RPEQ  
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**From:** Mitchell Gassman  
**Sent:** Tuesday, 9 June 2020 11:39 AM

**To:** 'THOMAS Roman' <RTHOMAS@goldcoast.qld.gov.au>  
**Cc:** Ian Grieves <igrieves@gassman.com.au>; MUNRO Darren <DMUNRO@goldcoast.qld.gov.au>  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

**Council Ref:** OPW/2020/650

Morning Roman,

Further to your previous advice below on the material type of the proposed relocated 225mm dia. water main along Stapylton Jacobs Well Road we have received the attached information request from Council now that the formal OPW submission has been made.

The main item besides DTMR's confirmation of the alignment, is the request to utilise DICL for the full extent as opposed to only under the road crossing with uPVC PN20 to be utilised for the balance of the relocation extent.

Prior to GDP responding to Council's IR can you please confirm your advice remains current. In line with the below the below PN20 was proposed for the balance of the relocation extent as the access into the estate is limited solely to the DTMR approved location nominated on the plans so no further driveways will ever be constructed above the new main. I have attached the design plans as submitted to Council for your reference.

Regards,  
Mitchell



---

**From:** THOMAS Roman <RTHOMAS@goldcoast.qld.gov.au>  
**Sent:** Thursday, 6 February 2020 8:45 AM  
**To:** Mitchell Gassman <mitchell@gassman.com.au>  
**Cc:** Ian Grieves <igrieves@gassman.com.au>; MUNRO Darren <DMUNRO@goldcoast.qld.gov.au>  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Hi Mitchell,

Given this water main is along Stapylton Jacobs Well Rd, if there is no opportunity for future driveways in this area then uPVC water main can be installed.

If there is a potential for future driveways to Stapylton Jacobs Well Rd then DICL is to be used.

Note that DICL is the only approved water main material for use in industrial areas for City of Gold Coast. This is to avoid future replacement of new uPVC mains with DICL under driveways for each new development once construction begins on each individual lot. PN20 is no longer approved for use in industrial areas or under industrial driveways.

Any questions please let me know.

Regards,

**Roman Thomas**  
Coordinator Asset Audit and Handover  
Gold Coast Water and Waste  
City of Gold Coast

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---

**From:** Mitchell Gassman [<mailto:mitchell@gassman.com.au>]  
**Sent:** Tuesday, 4 February 2020 3:56 PM  
**To:** THOMAS Roman  
**Cc:** Ian Grieves; MUNRO Darren  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Afternoon Roman,

Thanks for the below advice. To confirm our telephone conversation, GCWW will accept the new main along Stapylton Jacobs Well Road as uPVC PN20 along the frontage unless under the site entry intersection where DICL is to be utilised?

Regards,  
Mitchell



---

**From:** THOMAS Roman <[RTHOMAS@goldcoast.qld.gov.au](mailto:RTHOMAS@goldcoast.qld.gov.au)>  
**Sent:** Friday, 31 January 2020 10:31 AM  
**To:** Mitchell Gassman <[mitchell@gassman.com.au](mailto:mitchell@gassman.com.au)>  
**Cc:** Ian Grieves <[igrieves@gassman.com.au](mailto:igrieves@gassman.com.au)>; MUNRO Darren <[DMUNRO@goldcoast.qld.gov.au](mailto:DMUNRO@goldcoast.qld.gov.au)>  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Hi Mitchell,

Apologies for the delayed response.

As discussed Wednesday afternoon, given that this road corridor has a large number of services on various non-standard alignments, our preference is to have the water main no deeper than 2.0m along Stapylton Jacobs Well Rd following the completion of road and earthworks. This may require some replacement of existing main to achieve desired cover. The alignment can remain generally as it is given the potential clashes which will occur if we attempt to relocate the water main.

If you have any questions please let me know.

Regards,

**Roman Thomas**

Coordinator Asset Audit and Handover  
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---

**From:** Mitchell Gassman [<mailto:mitchell@gassman.com.au>]  
**Sent:** Thursday, 16 January 2020 7:54 AM  
**To:** THOMAS Roman  
**Cc:** Ian Grieves  
**Subject:** FW: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

---

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---

Morning Roman,

Prior to the Christmas break we spoke about the below existing water main along Stapylton Jacobs Well Road and GCWW's potential requirement to relocate.

Are you able to formal GCWW's advice via return email so that we can undertake the detailed design?

Thanks,  
Mitchell

**g a s s m a n development perspectives**



**Mitchell Gassman**

Civil Project Engineer | B.Eng.Civil, MIEAust, CPEng, NER, RPEQ  
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**From:** Mitchell Gassman  
**Sent:** Friday, 13 December 2019 12:59 PM  
**To:** 'JUELFS Kyle' <[JUELFS@goldcoast.qld.gov.au](mailto:JUELFS@goldcoast.qld.gov.au)>  
**Cc:** Ian Grieves <[igrieves@gassman.com.au](mailto:igrieves@gassman.com.au)>  
**Subject:** 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Afternoon Kyle,

This aerial map displays a proposed road layout with various colored lines (red, green, blue, purple) and labels (G6, G7, G8, ROAD, DEDICATION, BOUNDARY). The map includes elevation markers (115.000, 120.000, 125.000, 130.000, 135.000, 140.000) and a grid of orange dashed lines.

There is currently a 225mm dia potable water main running along the boundary frontage at minimum cover on a 1.3m offset. Once the intersection works commence it will remain outside of the new pavement profile but due to the filling required by approximately 4m deep if retained insitu. Please see attached cross section sketch I have marked up for your information.

I understand the SEQ code limits the desired maximum depth to invert to 1.5m for this size main unless otherwise approved by the service provider. Can you please advise if GCWW would support retention of the existing main or if this would require realignment off the new boundary at standard cover. If the main is required to be relocated can you please confirm GCWW's desired boundary offset for this State-controlled road as it is busy corridor with comms, sewer, sign main, gas etc.

Any queries please let me know.

Regards,  
Mitchell

## gassman development perspectives



### Mitchell Gassman

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**We wish to advise that our offices will be closed from 5pm Tuesday 24th December 2019 and will reopen at 8am Monday 13th of January 2020.**

**The team at Gassman Development Perspectives wish you a safe and Merry Christmas, and look forward to working with you in the New Year.**

## **ATTACHMENT 2 – GCWW’s Email Acknowledging DTMR Design Feedback**

## Mitchell Gassman

---

**From:** THOMAS Roman <RTHOMAS@goldcoast.qld.gov.au>  
**Sent:** Thursday, 25 June 2020 1:35 PM  
**To:** Mitchell Gassman  
**Cc:** Ian Grieves; MUNRO Darren; JUELFS Kyle; Alan Kelly  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road - DTMR Approval of Alignment IR Item

Hi Mitchell,

As you discussed with Kyle this morning we have no concerns with the comments from TMR.

The water main can be located within the TMR road corridor or the Stage 1 road reserve whichever suits. We have no significant preference either way.

Let me know if you require anything further from Water and Waste.

Regards,

**Roman Thomas**  
MBA, BEng (Hons) (Civil), BBus (Mgt), JP (Qual), MIEAust, CPEng, NER, RPEQ  
Coordinator Asset Audit and Handover  
Water and Waste  
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---

**From:** Mitchell Gassman [mailto:mitchell@gassman.com.au]  
**Sent:** Tuesday, 23 June 2020 11:34 PM  
**To:** THOMAS Roman  
**Cc:** Ian Grieves; MUNRO Darren; JUELFS Kyle; Alan Kelly  
**Subject:** RE: 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road - DTMR Approval of Alignment IR Item

**Council Ref: OPW/2020/650**

Evening Roman,

Thanks for confirming the below.

I have spoken to Trevor Greene today regarding GCWW's IR item for OPW/202/650 (copy attached) requiring DTMR's confirmation of the new alignment being acceptable.

Trevor's comments are summarised below and on the attached plan I have marked up with how I interpret his comments being applied:

- DTMR Would like the relocated water main extent within the intersection road pavement moved to the southern side of the proposed SW drainage pipes within the intersection. This is marked in light blue on the attached;
- The proposed water main location could even be pushed back further passed the DTMR truncation point into the Council extent of road reserve to avoid the main requiring an enveloper if acceptable to GCWW;
- The shallow section of existing water main which will be redundant after the relocation occurs is to be removed (approximately from the western live connection point through to the existing cattle crossing location); and

- The existing main which will be redundant within the deeper fill area can be grout filled and abandoned in place due to the impracticalities of removing with the new live water main above it. DTMR request that the abandoned extent is to remain on GCWW as con records noted as such.

Can you please review these comments along with the attached marked up plan and confirm if this change in alignment of the new water main is acceptable to GCWW. If so, please also confirm if your preference is for the new main to remain in DTMR road reserve or move into the Stage 1 Council road reserve. Once this feedback is received we will formally amend the design plans.

Regards,  
Mitchell



---

**From:** THOMAS Roman <RTHOMAS@goldcoast.qld.gov.au>  
**Sent:** Tuesday, 16 June 2020 1:04 PM  
**To:** Mitchell Gassman <mitchell@gassman.com.au>  
**Cc:** Ian Grieves <igrieves@gassman.com.au>; MUNRO Darren <DMUNRO@goldcoast.qld.gov.au>; JUELFS Kyle <KJUELFS@goldcoast.qld.gov.au>  
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**Sent:** Monday, 15 June 2020 11:19 AM  
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**Cc:** Ian Grieves; MUNRO Darren  
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**Sent:** Tuesday, 9 June 2020 11:39 AM

**To:** 'THOMAS Roman' <[RTHOMAS@goldcoast.qld.gov.au](mailto:RTHOMAS@goldcoast.qld.gov.au)>

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**Sent:** Thursday, 6 February 2020 8:45 AM

**To:** Mitchell Gassman <[mitchell@gassman.com.au](mailto:mitchell@gassman.com.au)>

**Cc:** Ian Grieves <[igrieves@gassman.com.au](mailto:igrieves@gassman.com.au)>; MUNRO Darren <[DMUNRO@goldcoast.qld.gov.au](mailto:DMUNRO@goldcoast.qld.gov.au)>

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City of Gold Coast

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CITY OF  
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**Sent:** Tuesday, 4 February 2020 3:56 PM

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**Cc:** Ian Grieves; MUNRO Darren

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**Cc:** Ian Grieves <[igrieves@gassman.com.au](mailto:igrieves@gassman.com.au)>; MUNRO Darren <[DMUNRO@goldcoast.qld.gov.au](mailto:DMUNRO@goldcoast.qld.gov.au)>  
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Gold Coast Water and Waste  
City of Gold Coast

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Morning Roman,

Prior to the Christmas break we spoke about the below existing water main along Stapylton Jacobs Well Road and GCWW's potential requirement to relocate.

Are you able to formal GCWW's advice via return email so that we can undertake the detailed design?

Thanks,  
Mitchell

g a s s m a n development perspectives



## Mitchell Gassman

Civil Project Engineer | B.Eng.Civil, MIEAust, CPEng, NER, RPEQ  
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76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207  
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**From:** Mitchell Gassman

**Sent:** Friday, 13 December 2019 12:59 PM

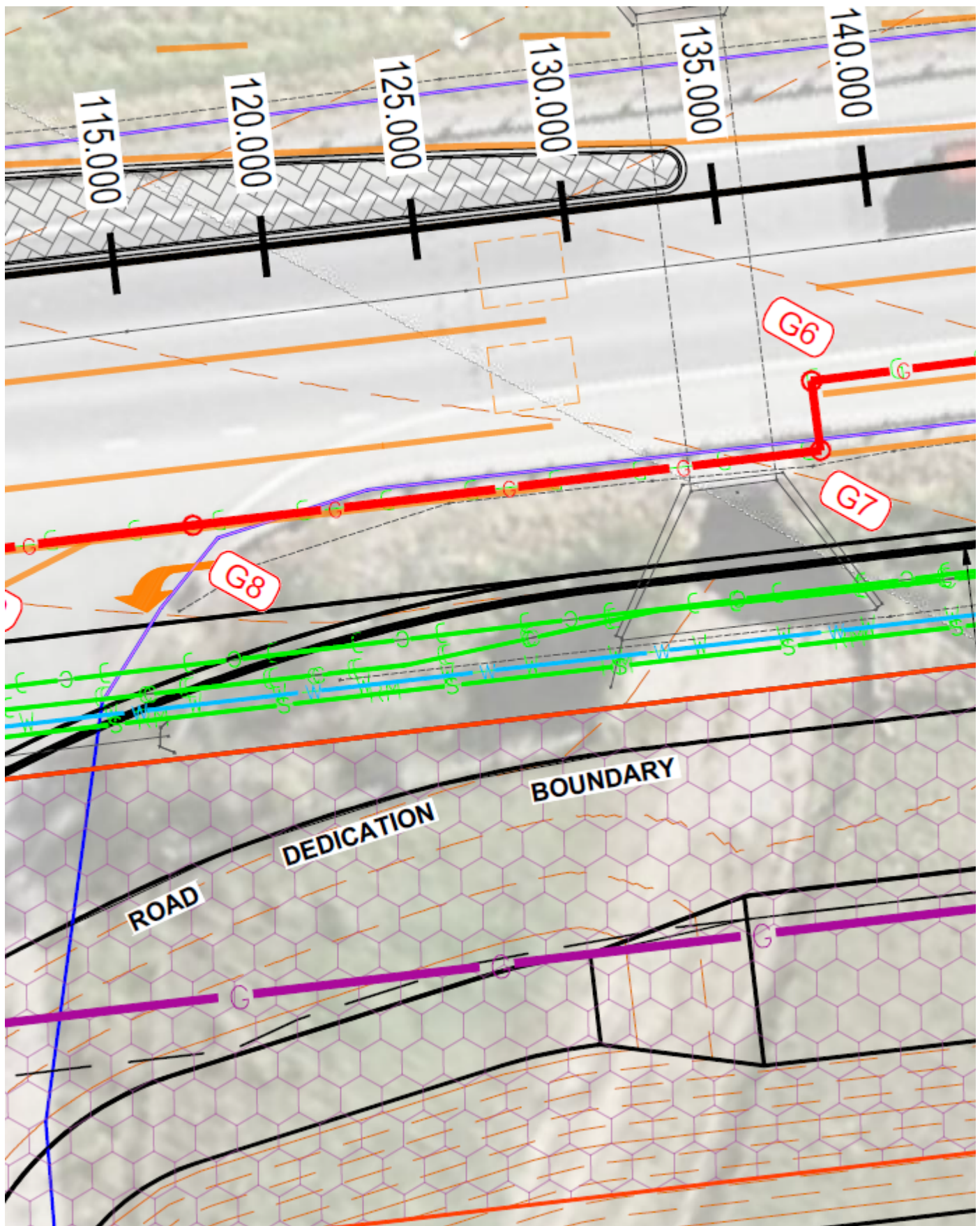
**To:** 'JUELFS Kyle' <[KJUELFS@goldcoast.qld.gov.au](mailto:KJUELFS@goldcoast.qld.gov.au)>

**Cc:** Ian Grieves <[igrieves@gassman.com.au](mailto:igrieves@gassman.com.au)>

**Subject:** 5941 - M38 Industrial Development - Existing 225mm diameter water main on Stapylton Jacobs Well Road

Afternoon Kyle,

We are currently working on an industrial development along Stapylton Jacobs Well Road, Stapylton for Frasers Property Australia. As part of the works we are required to upgrade the road along the development frontage and build a four-lane signalised intersection into the site which will fill the approximately 3.0m deep height difference between the lower lot boundary and existing level of Stapylton Jacobs Well Road. Preliminary plans are attached and a screenshot below for your reference.



There is currently a 225mm dia potable water main running along the boundary frontage at minimum cover on a 1.3m offset. Once the intersection works commence it will remain outside of the new pavement profile but due to the filling required by approximately 4m deep if retained insitu. Please see attached cross section sketch I have marked up for your information.

I understand the SEQ code limits the desired maximum depth to invert to 1.5m for this size main unless otherwise approved by the service provider. Can you please advise if GCWW would support retention of the existing main or if this would require realignment off the new boundary at standard cover. If the main is required to be relocated can you please confirm GCWW's desired boundary offset for this State-controlled road as it is busy corridor with comms, sewer, sign main, gas etc.

Any queries please let me know.

Regards,  
Mitchell

## g a s s m a n development perspectives



### Mitchell Gassman

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We wish to advise that our offices will be closed from  
5pm Tuesday 24th December 2019 and will reopen  
at 8am Monday 13th of January 2020.

The team at Gassman Development Perspectives  
wish you a safe and Merry Christmas, and look  
forward to working with you in the New Year.

## **ATTACHMENT 3 – Amended Engineering Drawing Set & Drawing Transmittal**

DOCUMENT TRANSMITTAL SCHEDULE

To: City of Gold Coast Council

Address : PO Box 5042  
GCMC 9726

Attention: Development Assessment



PROJECT: OPERATIONAL WORKS APPLICATION FOR WATER MAIN RELOCATION Job No: 5941

The documents listed below are issued for your use as indicated in the "Issued for" section.  
All revisions supersede any revision of the same document.

|               |       |    |    |    |  |  |  |  |  |  |  |  |  |  |
|---------------|-------|----|----|----|--|--|--|--|--|--|--|--|--|--|
| DATE OF ISSUE | Day   | 06 | 29 | 30 |  |  |  |  |  |  |  |  |  |  |
|               | Month | 05 | 05 | 06 |  |  |  |  |  |  |  |  |  |  |
|               | Year  | 20 | 20 | 20 |  |  |  |  |  |  |  |  |  |  |

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| Attention                  | Issued To                 |       |       |       |  |  |  |  |  |  |  |  |  |  |
| CoGC COUNCIL               | DEVELOPMENT ASSESSMENT    | 1xPDF |       | 1xPDF |  |  |  |  |  |  |  |  |  |  |
| FRASERS PROPERTY AUSTRALIA | COMMERCIAL AND INDUSTRIAL |       | 1xPDF |       |  |  |  |  |  |  |  |  |  |  |
|                            |                           |       |       |       |  |  |  |  |  |  |  |  |  |  |
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|---|---------------|---|----------------|---|----------|--|--|--|--|--|--|--|--|--|
| A | A             | A |                |   |          |  |  |  |  |  |  |  |  |  |
| P | - Preliminary | C | - Construction | T | - Tender |  |  |  |  |  |  |  |  |  |
| A | - Approval    | I | - Information  | O | - Other  |  |  |  |  |  |  |  |  |  |

Issued Media

|    |           |    |       |    |          |  |  |  |  |  |  |  |  |  |
|----|-----------|----|-------|----|----------|--|--|--|--|--|--|--|--|--|
| EP | EP        | EP |       |    |          |  |  |  |  |  |  |  |  |  |
| D  | - Disk    | P  | Print | CP | -CAD&PDF |  |  |  |  |  |  |  |  |  |
| ED | - DWG/DXF | EP | - PDF |    |          |  |  |  |  |  |  |  |  |  |

| Drg/Doc No.          |     | Title                                                                                             | Revision Issued |   |   |  |  |  |  |  |  |  |  |  |
|----------------------|-----|---------------------------------------------------------------------------------------------------|-----------------|---|---|--|--|--|--|--|--|--|--|--|
| 5941 ENG SJW WAT 001 |     | DRAWING INDEX AND LOCALITY PLAN                                                                   | A               | A | A |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 002 |     | GENERAL NOTES                                                                                     | A               | A | B |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 003 |     | LEGEND                                                                                            | A               | A | A |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 004 |     | STANDARD DETAILS PLAN SHEET 1 OF 2                                                                | A               | A | B |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 005 |     | STANDARD DETAILS PLAN SHEET 2 OF 2                                                                | A               | A | A |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 006 |     | EXISTING WATER MAIN LAYOUT SHEET 1 OF 2                                                           | A               | A | A |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 007 |     | EXISTING WATER MAIN LAYOUT SHEET 2 OF 2                                                           | A               | A | A |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 008 |     | EXISTING WATER MAIN LONGITUDINAL SECTION                                                          | A               | A | B |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 009 |     | DESIGN WATER ALIGNMENT SHEET 1 OF 2                                                               | A               | A | B |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 010 |     | DESIGN WATER ALIGNMENT SHEET 2 OF 2                                                               | A               | A | B |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 011 |     | DESIGN WATER MAIN LONGITUDINAL SECTION                                                            | A               | A | B |  |  |  |  |  |  |  |  |  |
| 5941 ENG SJW WAT 012 |     | DESIGN WATER PIPE SETOUT TABLE                                                                    | A               | A | B |  |  |  |  |  |  |  |  |  |
| STANDARD DRAWINGS    |     |                                                                                                   |                 |   |   |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1200-2       | SEQ | EMBEDMENT & TRENCHFILL TYPICAL ARRANGEMENT                                                        | C               | C | C |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1201-1       | SEQ | STANDARD EMBEDMENT TYPICAL FLEXIBLE & RIGID PIPES                                                 | A               | A | C |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1212-1       | SEQ | TYPICAL BURIED CROSSINGS MAJOR ROADWAYS                                                           | -               | - | C |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1301-1       | SEQ | TYPICAL VALVE AND HYDRANT INSTALLATION VALVE ARRANGEMENT                                          | C               | C | C |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1302-1       | SEQ | TYPICAL VALVE AND HYDRANT INSTALLATION HYDRANT ARRANGEMENT                                        | C               | C | C |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1303-1       | SEQ | TYPICAL VALVE AND HYDRANT INSTALLATION FUTURE EXTENSION INSTALLATION                              | B               | B | B |  |  |  |  |  |  |  |  |  |
| SEQ-WAT-1306-1       | SEQ | TYPICAL SURFACE FITTING INSTALLATION VALVE AND HYDRANT SURFACE BOXES SUPPORT AND SURROUND DETAILS | C               | C | C |  |  |  |  |  |  |  |  |  |

Please confirm that you have received all documents listed on the Document Register & Transmittal.

I hereby acknowledge receipt of the documents listed above.

Name & Company: Signed: Dated: / /

Project Manager: mitchell@gassman.com.au Sent by: mitchell@gassman.com.au

# OPERATIONAL WORKS APPLICATION FOR WATER MAIN RELOCATION WORKS



planning | environment | landscape | engineering | survey  
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Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207

| DRAWING INDEX        |         |                                          |
|----------------------|---------|------------------------------------------|
| DRAWING No.          | REV No. | TITLE                                    |
| 594I ENG SJW WAT 001 | B       | DRAWING INDEX AND LOCALITY PLAN          |
| 594I ENG SJW WAT 002 | B       | GENERAL NOTES                            |
| 594I ENG SJW WAT 003 | A       | LEGEND                                   |
| 594I ENG SJW WAT 004 | B       | STANDARD DETAILS PLAN SHEET 1 OF 2       |
| 594I ENG SJW WAT 005 | A       | STANDARD DETAILS PLAN SHEET 2 OF 2       |
| 594I ENG SJW WAT 006 | A       | EXISTING WATER MAIN LAYOUT SHEET 1 OF 2  |
| 594I ENG SJW WAT 007 | A       | EXISTING WATER MAIN LAYOUT SHEET 2 OF 2  |
| 594I ENG SJW WAT 008 | B       | EXISTING WATER MAIN LONGITUDINAL SECTION |
| 594I ENG SJW WAT 009 | B       | DESIGN WATER ALIGNMENT SHEET 1 OF 2      |
| 594I ENG SJW WAT 010 | B       | DESIGN WATER ALIGNMENT SHEET 2 OF 2      |
| 594I ENG SJW WAT 011 | B       | DESIGN WATER MAIN LONGITUDINAL SECTION   |
| 594I ENG SJW WAT 012 | B       | DESIGN WATER PIPE SETOUT TABLE           |

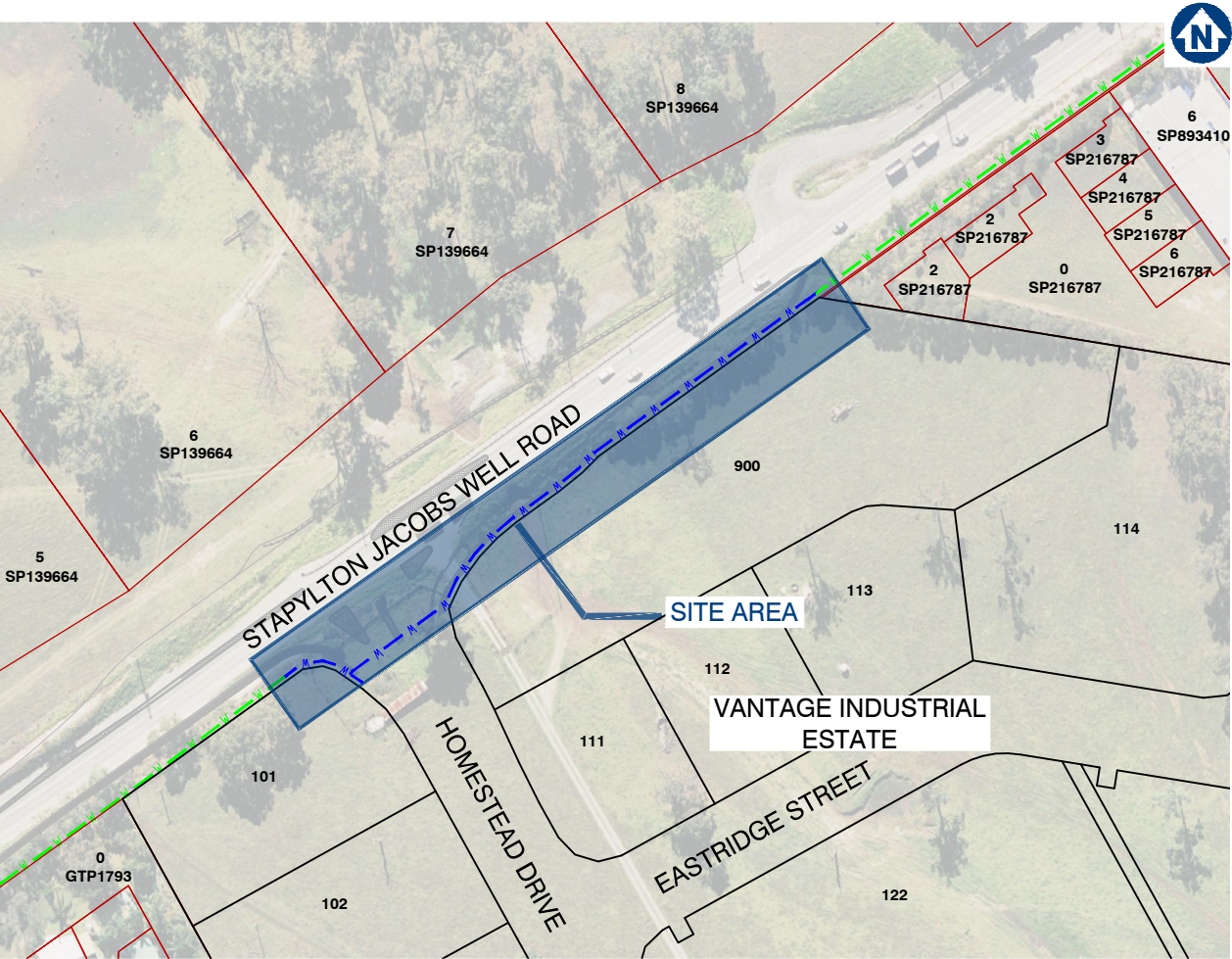
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PROPERTY**

**FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.**

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**LOT 501 ON SP295994**  
**60 STAPYLTON JACOBS WELL ROAD**  
**STAPYLTON QLD 4207**

| STANDARD DRAWINGS |         |         |                                                                                                   |
|-------------------|---------|---------|---------------------------------------------------------------------------------------------------|
| DRAWING No.       | REV No. | NETWORK | DRAWING TITLE                                                                                     |
| SEQ-WAT-I200-2    | C       | SEQ     | EMBEDMENT & TRENCHFILL TYPICAL ARRANGEMENT                                                        |
| SEQ-WAT-I201-I    | A       | SEQ     | STANDARD EMBEDMENT TYPICAL FLEXIBLE & RIGID PIPES                                                 |
| SEQ-WAT-I212-I    | C       | SEQ     | TYPICAL BURIED CROSSINGS MAJOR ROADWAYS                                                           |
| SEQ-WAT-I301-I    | C       | SEQ     | TYPICAL VALVE AND HYDRANT INSTALLATION VALVE ARRANGEMENT                                          |
| SEQ-WAT-I302-I    | C       | SEQ     | TYPICAL VALVE AND HYDRANT INSTALLATION HYDRANT ARRANGEMENT                                        |
| SEQ-WAT-I303-I    | B       | SEQ     | TYPICAL VALVE AND HYDRANT INSTALLATION FUTURE EXTENSION INSTALLATION                              |
| SEQ-WAT-I306-I    | C       | SEQ     | TYPICAL SURFACE FITTING INSTALLATION VALVE AND HYDRANT SURFACE BOXES SUPPORT AND SURROUND DETAILS |



**LOCALITY PLAN**  
SCALE 1: 1000 (A1)

1. CONTRACT DOCUMENTATION  
ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION AND CoGC STANDARD DRAWINGS AND SPECIFICATIONS.
2. DATUM  
LEVELS SHOWN ON THE PLANS ARE A.H.D.
3. SURVEY SETOUT  
THE SURVEY SET OUT INFORMATION TO ALLOW THE CONTRACTOR TO ACCURATELY SET OUT THE WORKS HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR. THE CONTRACTOR IS NOT TO SCALE FROM THESE PLANS AS A MEANS OF OBTAINING SETOUT INFORMATION.
4. EXISTING SURVEY CONTROL STATIONS  
IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT EXISTING SURVEY CONTROL STATIONS ARE NOT DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES. SHOULD THE CONTRACTOR IDENTIFY ANY CONFLICT BETWEEN EXISTING SURVEY CONTROL AND THE REQUIRED CONSTRUCTION ACTIVITIES THE SUPERINTENDENT IS TO BE NOTIFIED IMMEDIATELY.
5. EXISTING SERVICES  
THE LOCATION OF EXISTING SERVICES WHERE SHOWN ON THE PLANS ARE INDICATIVE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT SERVICE AUTHORITIES TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORKS AND TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO THE EXISTING SERVICES.
6. SITE ACCESS  
THE CONTRACTOR SHALL ONLY GAIN ACCESS TO THE SITE VIA ACCESS LOCATIONS APPROVED BY THE SUPERINTENDENT. FREEDOM OF ACCESS TO OTHER WORK AREAS ON THE SITE SHALL BE MAINTAINED AT ALL TIMES.
7. PROVISION FOR TRAFFIC  
PROVISION FOR TRAFFIC ON LOCAL ROADS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND CoGC COUNCIL REQUIREMENTS.
8. WORK EXTENT  
THE CONTRACTOR IS TO RESTRICT ACTIVITIES TO THOSE AREAS DESIGNATED AS WORKS AREAS UNDER THE CONTRACT. AT NO TIME IS THE CONTRACTOR TO ENTER ADJOINING PROPERTIES OR CONTRACT AREAS WITHOUT THE WRITTEN AUTHORISATION OF THE SUPERINTENDENT.
9. TESTING  
ALL TESTING IS TO BE CARRIED OUT BY AN APPROVED N.A.T.A TESTING AUTHORITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND REQUIREMENTS OF CoGC COUNCIL.
10. "AS CONSTRUCTED" SURVEY  
"AS CONSTRUCTED" SURVEY SHALL BE CARRIED OUT BY THE PRINCIPAL'S SURVEYOR AS WORK PROCEEDS. THE CONTRACTOR IS TO PROVIDE ADEQUATE NOTICE TO THE PRINCIPAL'S SURVEYOR ON WHEN THIS IS REQUIRED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS OF CoGC COUNCIL.
11. MAINTENANCE OF SITE CONDITION  
AT THE COMPLETION OF WORKS THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT AND CoGC.

- a. THE OBJECTIVES OF THE EROSION AND SEDIMENT CONTROL PROGRAM ARE:
  - a. ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AT NON-EROSIVE FLOW VELOCITIES.
  - b. MINIMISE SOIL EROSION FROM WATER AND WIND
  - c. MINIMISE ADVERSE EFFECTS OF SEDIMENT RUNOFF.
  - d. MINIMISE OR PREVENT ENVIRONMENTAL HARM ASSOCIATED WITH DISCHARGE FROM THE CONSTRUCTED SITE.
  - e. ENSURE THAT THE VALUE AND USE OF RESIDENTIAL AND INDUSTRIAL PROPERTIES ADJACENT TO THE DEVELOPMENT ARE NOT DIMINISHED AS A RESULT OF THE MIGRATION OF SEDIMENT FROM THE DEVELOPMENT.
2. THE EROSION AND SEDIMENT CONTROL PROGRAM SHALL COMPLY WITH THE ENVIRONMENTAL BEST ENGINEERING GUIDELINES FOR QUEENSLAND CONSTRUCTION SITES. THE CURRENT INSTITUTION OF ENGINEERS AUSTRALIA AND LOCAL AUTHORITY GUIDELINES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTIONS INCLUDING THE MAINTENANCE PERIOD. NOTWITHSTANDING THE FINISHED EARTHWORK DESIGN SHOWN ON THE DRAWINGS THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AND DEVICES USING BEST PRACTICES AS NECESSARY TO MINIMISE THE QUANTITY LEAVING THE SITE DURING CONSTRUCTION AND UPON COMPLETION OF EARTHWORKS.
3. THE CONTRACTOR IS TO FOLLOW CONSTRUCTION PHASE AS OUTLINED IN THE CONSTRUCTION SEQUENCE/SILT MANAGEMENT PROGRAM. ALL SEDIMENT CONTROL DEVICES SHALL BE MONITORED, CLEANED AND/OR REPLACED WHENEVER THE ACCUMULATED SEDIMENT REDUCES THE CAPACITY BY 50%. ALL PERIMETER BANK/SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND GULLY INLETS. INLETS TO HAVE SILT PROTECTION IN ACCORDANCE WITH KERB INLET PROTECTION DETAIL AT LOCATIONS SHOWN OR AS INDICATED BY THE ENGINEER.
4. PRIOR TO THE COMMENCEMENT OF EARTHWORKS, THE CONTRACTOR IS TO CARRY OUT SOIL TESTING (IF REQUIRED BY SUPERINTENDENT) TO DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL AND RESULTS TO BE GIVEN TO THE ENGINEER'S SO THE FINALIZATION OF THE EROSION AND SEDIMENT CONTROL PLAN CAN BE COMPLETE.
5. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS AGREED WITH THE SUPERINTENDENT. CLEARING OF SITE AND STOCKPILE AREAS TO BE AS DIRECTED BY THE SUPERVISING ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DUST AT ALL TIMES INCLUDING WEEKENDS AND PUBLIC HOLIDAYS.
6. SUITABLE ACCESS SHALL BE PROVIDED TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES (IT IS TO BE NOTED THAT CLEARING SHALL ONLY OCCUR IN AREAS WHERE THERE IS NO OTHER ALTERNATIVE TO GAIN ACCESS TO THE LOCATION OF THE SEDIMENT CONTROL DEVICES). APPROVAL FOR REMOVAL OF PROTECTED SIZE VEGETATION MUST BE OBTAINED PRIOR TO CLEARING.

7. ROCK BUNDS TO BE PLACED AROUND ALL HEADWALLS DURING CONSTRUCTION.
8. 0.8m TURF IS TO BE PLACED BEHIND ON ALL BATTERS WITHIN PRIVATE OPEN SPACE STEEPER THAN 1:4 UNLESS OTHERWISE NOTED. THE EXTENT OF GRASSING SHALL BE DETERMINED BY THE ENGINEER AND SHALL BE SEED, AS SPECIFIED, WITHIN 7 DAYS OF FINAL TRIMMING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT GRASS STRIKE RATES ARE ACHIEVED AT ON AND OFF MAINTENANCE INSPECTION IN ACCORDANCE WITH COUNCIL REQUIREMENTS.
9. TURF IS TO BE PLACED FROM BACK OF KERB TO ROAD RESERVE BOUNDARY ON ALL ROADS AFTER EARTHWORKS ARE COMPLETE.
10. GEO—FABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
11. FILLING AND OR MAINTENANCE OF EXISTING AND OR SEDIMENT BASINS MAY REQUIRE FLOCCULATION.
12. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH THE APPROVED OPEN SPACE MANAGEMENT PLAN (OSMP).
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN OUT GPT'S, SEDIMENT FOREBAYS AND ALL OTHER SEDIMENT CONTROL DEVICES DURING CONSTRUCTION AND PRIOR BOTH ON AND OFF MAINTENANCE INSPECTIONS WITH CoGC. THE CONTRACTOR SHALL ALLOW FOR THE COST OF THESE WORKS WITHIN THEIR SUBMITTED TENDER PRICE.

- a. ERECT SITE SIGNAGE, CONSTRUCT ENTRY AND EXIT POINT AS INDICATED BY INDICATED CONSTRUCTION VEHICLE WASH-DOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.
- b. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA
- c. ERECT SILT FENCE AT LOW POINTS OF THE SITE AS DEMONSTRATED
- d. ERECT TEMPORARY TREE PROTECTION FENCING FOR VEGETATION TO BE RETAINED IN ACCORDANCE WITH AN OPW (TREE CLEARING) APPROVAL OR IN ACCORDANCE WITH AS4970 PROTECTION OF TREES ON DEVELOPMENT SITE.
- e. CONSTRUCT ROCK CHECK DAMS AND SILT FENCE DOWN STREAM OF BASIN.
- f. CONSTRUCT BASIN TO FULL DEPTH.
- g. CONSTRUCT BALANCE OF BASIN IN CONJUNCTION WITH CLEARING AND BULK EARTHWORKS OPERATIONS.
- h. BASIN TO BE UTILISED AS A TEMPORARY SEDIMENT BASIN. DO NOT FILL IN FILTRATION MATERIAL UNTIL CONSTRUCTION OF DEVELOPMENT IS COMPLETE.

2. CLEARING AND BULK EARTHWORKS  
THERE SHALL BE NO CLEARING OF PROTECTED SITE VEGETATION WITHOUT AN APPROVED TREE CLEARING PLAN WHICH SHALL BE IN ACCORDANCE WITH AS4970.  
SILT FENCE, SAND BAGS AND EARTH RILLS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED DURING CLEARING & EARTHWORKS.  
SUPERINTENDENT TO CONFIRM THE EXTENT OF CLEARING PRIOR TO COMMENCEMENT OF WORKS.

3. CONSTRUCTION OF SEWER/ROOFWATER/ STORMWATER/SERVICES  
EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.  
TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.  
DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.

4. CONSTRUCTION – SEDIMENT BASINS  
SEDIMENT BASIN TO BE CONSTRUCTED TO THE EARTHWORK PROFILES SHOWN.  
STORMWATER OUTLET PIPES TO BE TEMPORARY BLOCKED OFF UNTIL DECOMMISSIONING OF SEDIMENT BASIN (SUBSEQUENT TO CONSTRUCTION OF ALL STAGES).  
PLACE SPOIL FROM SEDIMENT BASIN INTO ALLOCATED AREAS AS ENGINEERED FILL IN ACCORDANCE WITH THE STAGING ORDER.  
SEDIMENT BASIN SHALL ONLY BE REMOVED AFTER APPROVAL BY SUPERINTENDENT AND COUNCIL.

5. CONSTRUCTION – STOCKPILING  
TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.  
STOCKPILE SITE TO BE CLEARED OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE NUISANCE TO ADJOINING PROPERTIES.  
NO STOCKPILES ARE TO BE LOCATED WITHIN THE DRIP ZONE OR STRUCTURAL ROOT ZONE OF ANY RETAINED VEGETATION.

6. CONSTRUCTION – ROADWORKS  
SILT FENCES TO ALLOTMENTS TO BE ERECTED.  
KERB INLET PROTECTION TO BE PROVIDED TO ALL GULLIES.

7. CONSTRUCTION – ALLOTMENTS  
TOPSOIL AND SEED ALLOTMENTS.  
SILT FENCES TO ALLOTMENTS TO BE RE-ERECTED.  
COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATE THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT RIMMING).

8. POST CONSTRUCTION – ALLOTMENTS  
TOPSOIL AND GRASS SEED ALL ALLOTMENTS.  
COVERS TO GULLY GRATES TO BE REMOVED IF THE SUPERINTENDENT INDICATES THE GRASS STRIKE IS SUFFICIENT (80% WITHIN 30 CALENDAR DAYS OF FINAL ALLOTMENT TRIMMING).

9. POST CONSTRUCTION – BASIN  
BASIN TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL COMPLETION OF ALL STAGES.

10. POST CONSTRUCTION – ROAD RESERVES  
TOPSOIL AND TURFING IS TO BE PROVIDED BEHIND KERB.

11. MAINTENANCE (PRE TO POST CONSTRUCTION)  
THE SILT FENCES ARE TO BE INSPECTED WEEKLY.  
ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY.  
SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE OF THE FAILURE.

PRIOR TO COMMENCING CONSTRUCTION OF THE DETENTION BASIN THE DIVERSION OF SURFACE WATER FROM THE PROPOSED WORK AREAS, USING MEASURES SUCH AS OPEN DRAINS/SUMPS, ARE REQUIRED TO AID IN SITE DE-WATERING. BASINS TO CONTINUE ACTING AS SEDIMENT BASIN UNTIL 85% OF CATCHMENT CONSTRUCTION IS COMPLETE.

THE CLAY FILLING FOR THE BASIN WALLS SHALL BE PLACED IN HORIZONTAL LAYERS OF 200mm THICKNESS AND COMPACTED TO DENSITY RATIO WITHIN THE RANGE 98%-102% STANDARD COMPACTION (AS I289.5-11). PLACEMENT MOISTURE CONTENT SHOULD BE WITHIN THE RANGE OMC - 1% TO OMC - 2% (WHERE OMC = OPTIMUM MOISTURE CONTENT FOR STANDARD COMPACTION). CONTRACTOR TO PROVIDE SAFETY FENCING TO BASIN DURING CONSTRUCTION AND APPROPRIATE SIGNAGE (PERMANENT OR TEMPORARY).

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
4. FOR COVER ON MAINS FROM PERMANENT LEVEL REFER TO DTMF TABLE 5.2.1 WITHIN TECHNICAL NOTE 163 'THIRD PARTY UTILITY INFRASTRUCTURE INSTALLATION IN STATE CONTROLLED ROADS TECHNICAL GUIDELINES'.
5. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE CITY OF GOLD COAST/GOLD COAST WATER STANDARD DRAWINGS.
6. ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE SEQ-SP'S ACCEPTED PRODUCTS AND MATERIALS LIST.
7. ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS.
8. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

## VANTAGE YATALA

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

Lot: 501  
Plan: SP295994  
Local Authority: CITY OF GOLD COAST  
COUNCIL  
Level Datum: AHD  
Meridian: -  
Contour Interval: -  
PSM: -  
RL: -

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## GENERAL NOTES

NOT APPLICABLE

|                      |          |
|----------------------|----------|
| Drawing No:          | Rev. No: |
| 5941 ENG SJW WAT 002 | B        |

OVERLAND FLOW PATH/SWALE  
CATCH DRAIN (NOT LINED)  
DIVERSION CHANNEL  
TABLE DRAIN  
STREAM INVERT  
CATCH DRAIN (CONCRETE LINED)  
SUBSOIL DRAINAGE  
SAWCUT  
SEDIMENT FENCE  
CHAINWIRE FENCE  
WOODEN FENCE  
BRIFEN WIRE SAFETY BARRIER  
PROPOSED GUARDRAIL  
RETAINING WALL (PILED)  
RETAINING WALL (WITH FOOTINGS)  
RETAINING WALL  
ROCKBLOCK RETAINING WALL  
TOP OF BATTER / BERM  
NOISE WALL  
EDGE OF VEGETATION  
PROPERTY LINE  
PROPERTY LINE WITH FENCE  
PROPOSED KERB, FOOTPATH  
CONTROL LINE / CENTER OF ROAD  
RAILWAY (MAJOR)  
RAILWAY (MINOR)  
EXISTING PROPERTY LINE  
EXISTING PROPERTY LINE WITH FENCE  
EXISTING KERB, FOOTPATH  
EXISTING GUARD RAIL  
EXISTING EDGE OF BITUMEN  
EXISTING RAILWAY (MAJOR)  
EXISTING RAILWAY (MINOR)  
LIMIT OF WORKS  
LIMIT OF SITE  
CATCHMENT BOUNDARY  
EXISTING CONTOURS  
DESIGN CONTOURS

|  |                                        |
|--|----------------------------------------|
|  | PROPOSED TRUNK SEWER                   |
|  | PROPOSED RETICALTION SEWER (ø150)      |
|  | PROPOSED STORMWATER                    |
|  | PROPOSED ROOFWATER                     |
|  | PROPOSED ROOFWATER                     |
|  | PROPOSED SUBSOIL                       |
|  | INTERNAL PROPOSED WATER                |
|  | PROPOSED WATER MAIN RELOCATION         |
|  | PROPOSED RECYCLED WATER                |
|  | PROPOSED OIL                           |
|  | PROPOSED FUEL                          |
|  | PROPOSED GAS MAIN RELOCATION           |
|  | PROPOSED PIPELINE                      |
|  | PROPOSED HIGH VOLTAGE ELECTRICITY      |
|  | PROPOSED UNDERGROUND ELECTRICITY       |
|  | PROPOSED OVERHEAD ELECTRICITY          |
|  | PROPOSED LIGHTING                      |
|  | PROPOSED TELSTRA                       |
|  | PROPOSED COMMUNICATIONS                |
|  | PROPOSED GAS, ELECT                    |
|  | PROPOSED GAS, TELSTRA                  |
|  | PROPOSED ELECT, TELSTRA                |
|  | PROPOSED GAS, ELECTRICITY, TELSTRA     |
|  | EXISTING RISING MAIN                   |
|  | EXISTING SEWER                         |
|  | EXISTING STORMWATER                    |
|  | EXISTING ROOFWATER                     |
|  | EXISTING SUBSOIL                       |
|  | EXISTING WATER                         |
|  | EXISTING ABANDONED WATER PIPE IN PLACE |
|  | EXISTING RECYCLED WATER                |
|  | EXISTING OIL                           |
|  | EXISTING FUEL                          |
|  | EXISTING GAS                           |
|  | EXISTING PIPELINE                      |
|  | EXISTING HIGH VOLTAGE ELECTRICITY      |
|  | EXISTING UNDERGROUND ELECTRICITY       |
|  | EXISTING OVERHEAD ELECTRICITY          |
|  | EXISTING LIGHTING                      |
|  | EXISTING TELSTRA                       |
|  | EXISTING COMMUNICATIONS                |
|  | EXISTING GAS, ELECT                    |
|  | EXISTING GAS, TELSTRA                  |
|  | EXISTING ELECT, TELSTRA                |
|  | EXISTING GAS, ELECTRICITY, TELSTRA     |

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| BK(A)                                                                                 | BARRIER KERB (A)                     |
| BK(B)                                                                                 | BARRIER KERB (B)                     |
| BK(G)                                                                                 | BARRIER KERB (G)                     |
| MK(D)                                                                                 | MOUNTABLE KERB (D)                   |
| SMK(C)                                                                                | SEMI MOUNTABLE KERB (C)              |
| ER(E)                                                                                 | EDGE RESTRAINT (E)                   |
| KER(F)                                                                                | KERB EDGE RESTRAINT (F)              |
| RK&C(H)                                                                               | ROLL TOP KERB & CHANNEL (H)          |
| BK&C(J)                                                                               | BARRIER KERB & CHANNEL (J)           |
| ERH                                                                                   | KERB EDGE RESTRAINT (HIGH)           |
| ERL                                                                                   | KERB EDGE RESTRAINT (LOW)            |
| CS(K/L)                                                                               | CHANNEL SECTION (K/L)                |
| PMB                                                                                   | PRECAST MOTOR BED                    |
| DD                                                                                    | DISH DRAIN                           |
| K&G                                                                                   | KERB AND GUTTER                      |
| K&T                                                                                   | KERB AND TOE                         |
| KO                                                                                    | KERB ONLY                            |
| MK                                                                                    | MOUNTABLE KERB                       |
| RK                                                                                    | ROLL KERB                            |
|    | EXISTING SIGN                        |
|    | PROPOSED SIGN                        |
|    | PROPOSED ROAD EDGE GUIDE POST        |
|    | EXISTING BIN                         |
|    | POST BOX                             |
|    | TELEPHONE BOX                        |
|    | TELSTRA PIT                          |
|    | TELSTRA MARKER POST                  |
|    | WATER METER                          |
|    | WATER VALVE                          |
|    | WATER TAP                            |
|    | WATER HYDRANT                        |
|    | WATER TEE                            |
|    | WATER REDUCER                        |
|    | WATER ENDCAP                         |
|   | WATER CONNECTION                     |
|  | SEWER MANHOLE                        |
|  | SEWER RODDING END                    |
|  | SEWER BEND                           |
|  | SEWER MAINTENANCE SHAFT              |
|  | SEWER 'T' END                        |
|  | SEWER SLUICE VALVE                   |
|  | SEWER PIT                            |
|  | SEWER PUMP STATION                   |
|  | TEMPORARY SEWER PUMP STATION         |
|  | SEWER / STORMWATER PIT NO/LINE       |
|  | SETOUT POINT                         |
|  | OFFSET PIT WITH GRATE                |
|  | IN LINE PIT WITH GRATE               |
|  | JUNCTION PIT                         |
|  | LETTERBOX PIT                        |
|  | GRATED INLET PIT                     |
|  | MANHOLE                              |
|  | GULLY PIT (LIP INLINE) BARRIER KERB  |
|  | GULLY PIT (LIP INLINE) BARRIER KERB  |
|  | GULLY PIT (LIP INLINE) ROLL TOP KERB |
|  | GULLY PIT (LIP INLINE) ROLL TOP KERB |
|  | GULLY PIT (KERB INLINE) – GRADE      |
|  | GULLY PIT (KERB INLINE) – SAG        |
|  | INFILTRATION TRENCH                  |
|  | HEADWALL                             |
|  | GROSS POLLUTANT TRAP                 |
|  | STORMWATER CHAMBER                   |
|  | BUND                                 |
|  | POWER POLE                           |
|  | POWER POLE WITH LIGHT                |
|  | LIGHT POLE                           |
|  | STAY POLE                            |
|  | LIGHT POLE WITH EXTENSION            |
|  | ELECTRICAL INSPECTION BOX            |
|  | ELECTRICAL POLE                      |

|  |                            |
|--|----------------------------|
|  | ELECTRICAL TURRET          |
|  | TRAFFIC SIGNAL             |
|  | MAIN ROADS PIT             |
|  | TANGENT POINT              |
|  | KERB RETURN NO.            |
|  | PRAM RAMP                  |
|  | GRAVEL ROCK CHECK DAM      |
|  | MESH & GRAVEL INLET FILTER |
|  | STORMWATER INLET FILTER    |
|  | DIRECTION OF OVERLAND FLOW |
|  | VEHICLE SHAKEDOWN          |
|  | GATE                       |
|  | NOT IN SCOPE OF WORKS      |
|  | DEMOLITION                 |
|  | PROPOSED CONCRETE FOOTPATH |
|  | SCOUR PROTECTION           |
|  | TREES                      |
|  | EARTHWORKS BATTER TADPOLE  |



VANTAGE YATALA

THIS DRAWING IS INTENDED TO  
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Level Datum:  
Meridian:  
Contour Interval:  
PSM:  
BL:

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## LEGEND

|         |            |                |  |        |     |
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|         |            |                |  |        |     |
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|         |            |                |  |        |     |
|         |            |                |  |        |     |
|         |            |                |  |        |     |
| A Issue | 06-05-2020 | ORIGINAL ISSUE |  | SK DRN | MCH |
|         | Date       | Description    |  |        |     |

NOT APPLICABLE

NA

IG

SK

MG

169

*M*

06-

Rev. No:  
A

Client:



Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

RPD:

Lot: 501  
Plan: SP295994  
Local Authority: CITY OF GOLD COAST  
COUNCIL  
Level Datum: AHD  
Meridian: -  
Contour Interval: -  
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DRAWING TITLE

STANDARD DETAILS  
PLAN SHEET 1 OF 2

|       |            |                              |     |     |  |
|-------|------------|------------------------------|-----|-----|--|
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
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|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
| B     | 30-06-2020 | INFORMATION REQUEST RESPONSE | SK  | MG  |  |
| A     | 06-05-2020 | ORIGINAL ISSUE               | SK  | MG  |  |
| Issue | Date       | Description                  | DRN | CHK |  |

SCALE IN METRES

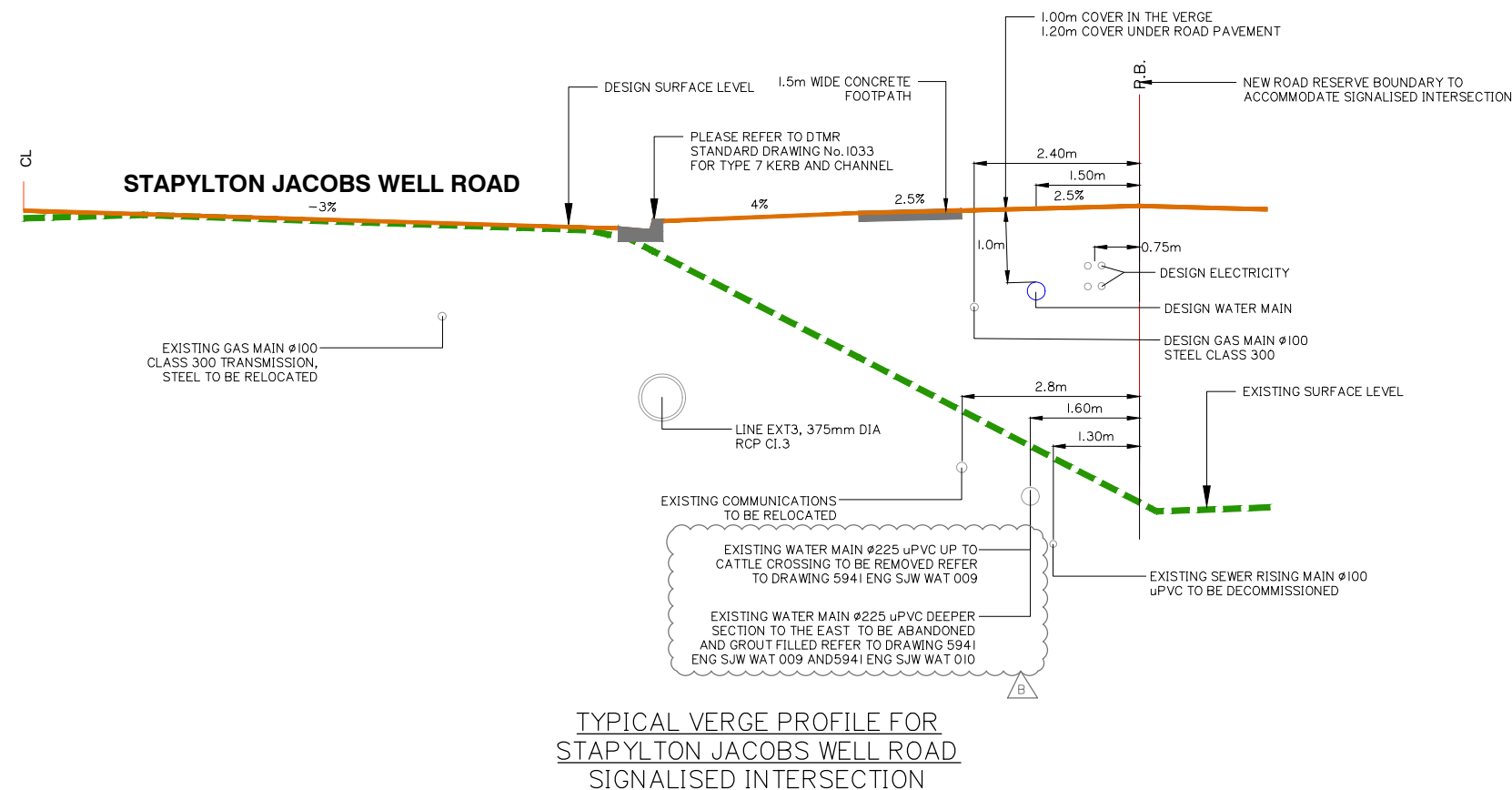


1:50 (FULL SIZE A1)  
1:100 (HALF SIZE A3)

Scale at A1: 1:50

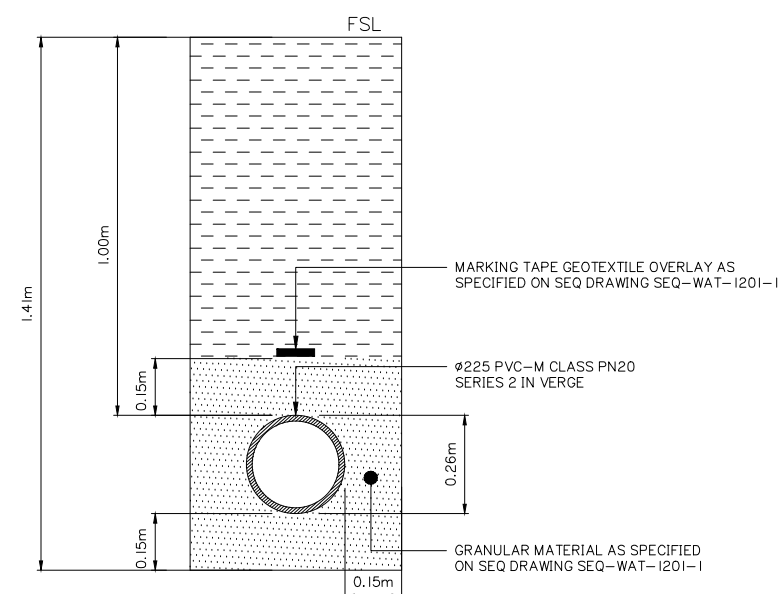
|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | SK         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 30-06-2020 |

Drawing No: 5941 ENG SJW WAT 004 Rev. No: B



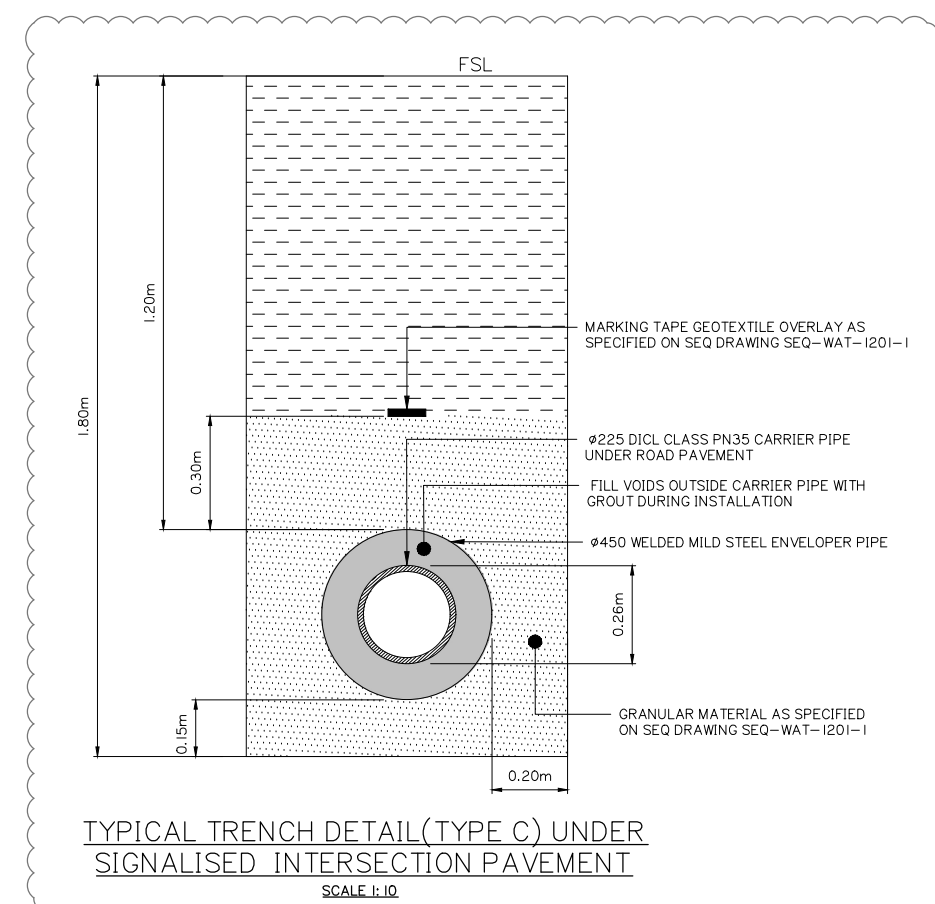
TYPICAL VERGE PROFILE FOR  
STAPYLTON JACOBS WELL ROAD  
SIGNALISED INTERSECTION

SECTION  
SCALE 1:50  
1  
010



TYPICAL TRENCH DETAIL (TYPE C) IN  
STAPYLTON JACOBS WELL ROAD VERGE

SCALE 1:10

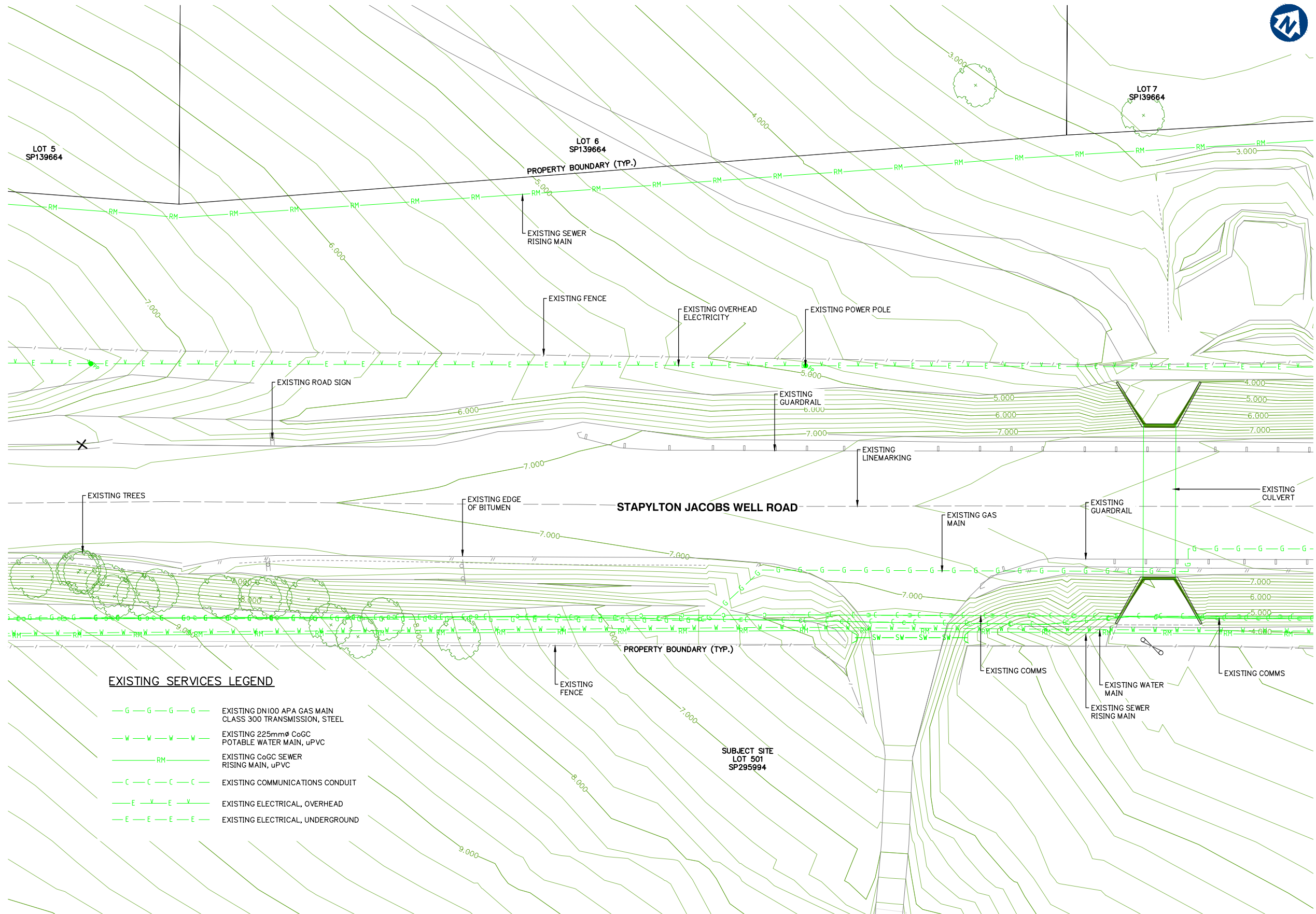


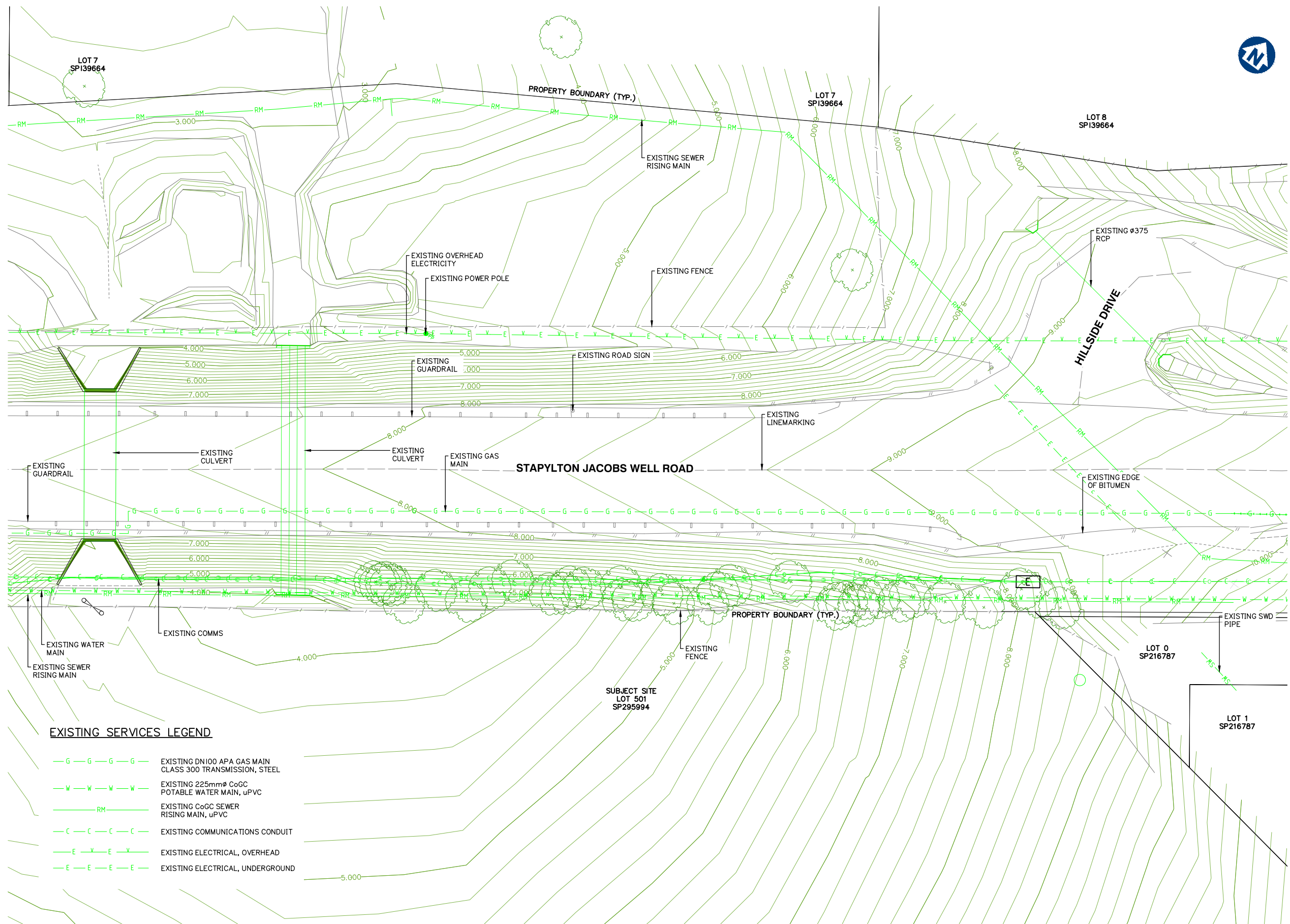
TYPICAL TRENCH DETAIL (TYPE C) UNDER  
SIGNALISED INTERSECTION PAVEMENT

SCALE 1:10



|                      |          |
|----------------------|----------|
| Drawing No:          | Rev. No: |
| 5941 ENG SJW WAT 006 | A        |



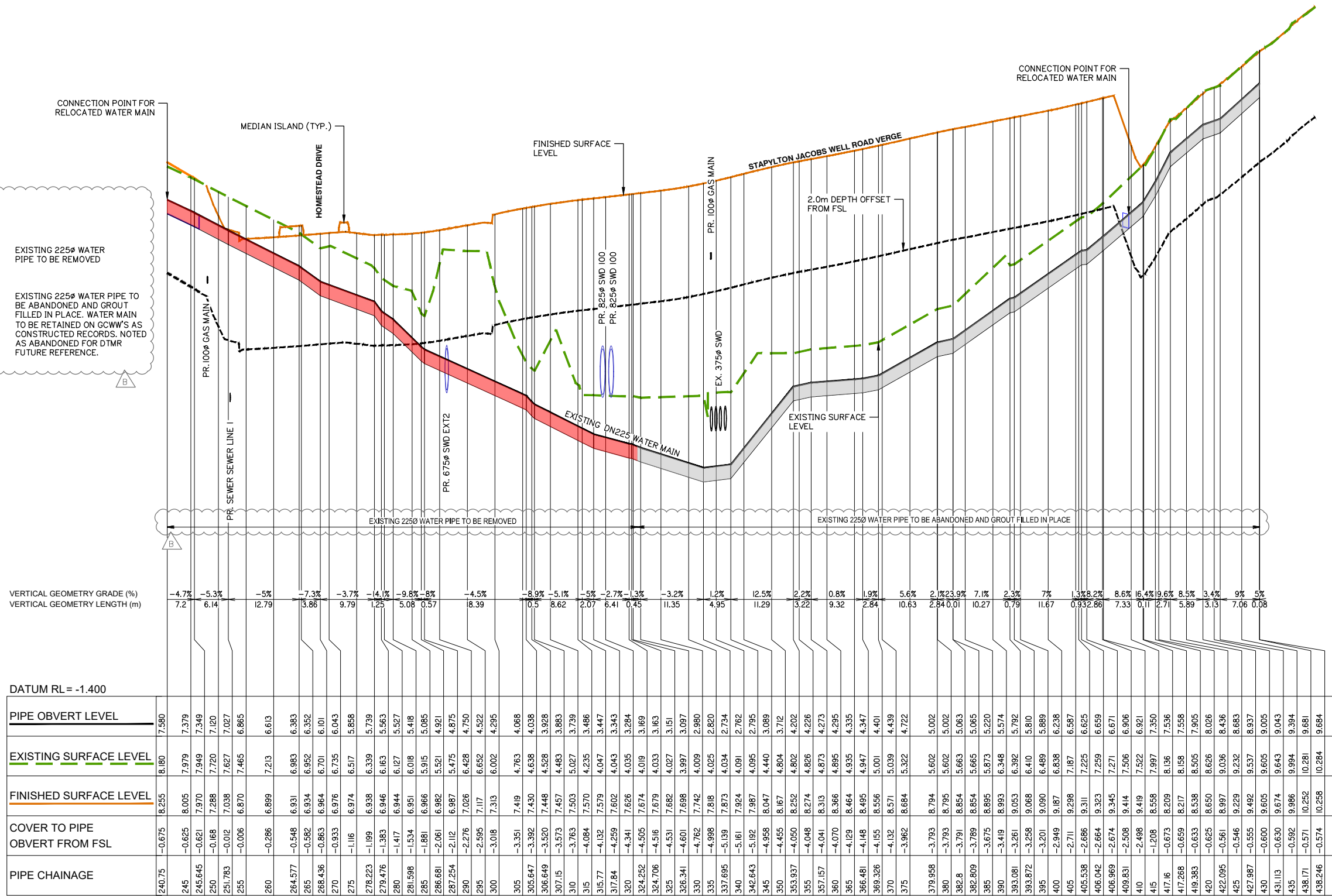


NOTE:

- EXISTING COMMUNICATIONS EXISTING SEWER RISING MAIN AND EXISTING WATER MAIN SHOWN ON THIS DRAWING ARE BASED ON A POTHOLED ALIGNMENT. HOWEVER, ALL DEPTHS AREA BASED ON ASSUMED MINIMUM COVER. ADDITIONAL SERVICES LOCATION POTHOLING IS CURRENTLY BEING UNDERTAKEN TO IMPROVE THE LOCATION ACCURACY OF THE DEPTH OF THESE SERVICES WITHIN THE STATE ROAD CORRIDOR.

LEGEND

- EXISTING 225Ø WATER PIPE TO BE REMOVED
- EXISTING 225Ø WATER PIPE TO BE ABANDONED AND GROUT FILLED IN PLACE. WATER MAIN TO BE RETAINED ON GCWW'S AS CONSTRUCTED RECORDS. NOTED AS ABANDONED FOR DTMR FUTURE REFERENCE.



LONGITUDINAL SECTION – EXISTING DN225 WATER MAIN

AI HORZ SCALE: 1 : 400  
AI VERT SCALE: 1 : 40

Client:



Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

RPD:

Lot: 501  
Plan: SP295994  
Local Authority: CITY OF GOLD COAST  
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DRAWING TITLE

EXISTING WATER MAIN  
LONGITUDINAL SECTION

|       |            |                              |     |     |
|-------|------------|------------------------------|-----|-----|
| B     | 30-06-2020 | INFORMATION REQUEST RESPONSE | SK  | MG  |
| A     | 06-05-2020 | ORIGINAL ISSUE               | SK  | MG  |
| Issue | Date       | Description                  | DRN | CHK |

HOZ: Scale 1:400 - Lengths are in METRES.  
0 5 10 15 20 25 30

VERT: Scale 1:40 - Lengths are in Metres.  
0 0.5 1 1.5 2 2.5 3

Scale at A1: AS SHOWN

|           |            |
|-----------|------------|
| Designed: | IG         |
| Drafted:  | SK         |
| Approved: | MG         |
| RPEQ:     | 16939      |
| Signed:   |            |
| Date:     | 30-06-2020 |

Drawing No: 5941 ENG SJW WAT 008  
Rev. No: B

## NOTE:

- ABANDON EXISTING WATER MAIN FOLLOWING LIVE CONNECTION WORKS (84.90m LENGTH).
- WATER MAIN RELOCATION ALONG STAPYLTON JACOBS WELL ROAD TO BE DN225 PVC-M CLASS PN20 SERIES 2 AND TO BE DN225 DICL CLASS PN35 UNDER ROADS. 2.0m MAX DEPTH.

## WATER FITTING SCHEDULE

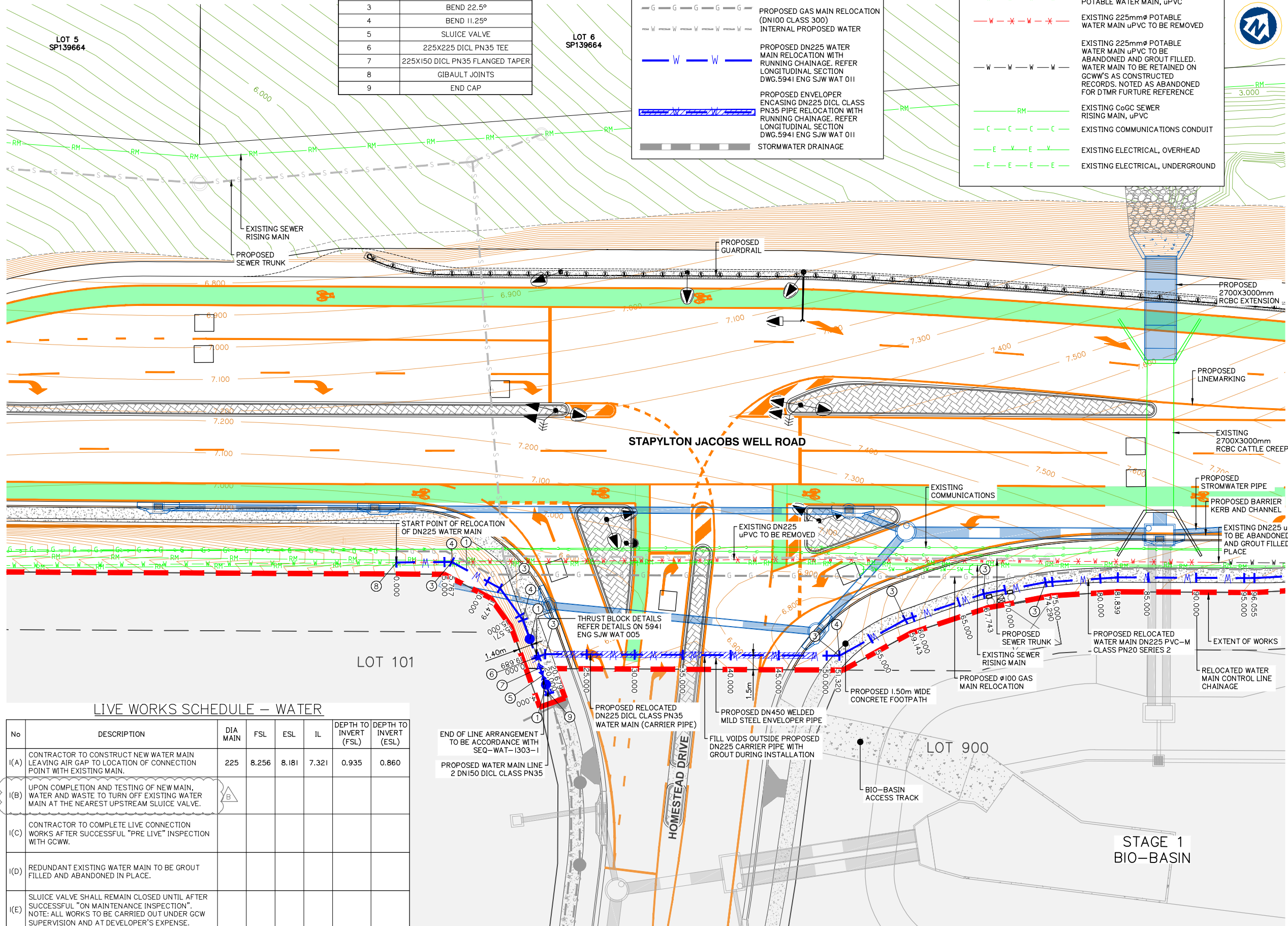
| No | DESCRIPTION                     |
|----|---------------------------------|
| 1  | FIRE HYDRANT                    |
| 2  | BEND 45°                        |
| 3  | BEND 22.5°                      |
| 4  | BEND 11.25°                     |
| 5  | SLUICE VALVE                    |
| 6  | 225X225 DICL PN35 TEE           |
| 7  | 225X150 DICL PN35 FLANGED TAPER |
| 8  | GIBBAULT JOINTS                 |
| 9  | END CAP                         |

## PROPOSED SERVICES LEGEND

|  |                                                                                                                                              |
|--|----------------------------------------------------------------------------------------------------------------------------------------------|
|  | TRUNK GRAVITY SEWER                                                                                                                          |
|  | RETICULATION SEWER (150mm)                                                                                                                   |
|  | PROPOSED GAS MAIN RELOCATION (DN100 CLASS 300)                                                                                               |
|  | INTERNAL PROPOSED WATER                                                                                                                      |
|  | PROPOSED DN225 WATER MAIN RELOCATION WITH RUNNING CHAINAGE. REFER LONGITUDINAL SECTION DWG.5941 ENG SJW WAT 011                              |
|  | PROPOSED ENVELOPER ENCASING DN225 DICL CLASS PN35 PIPE RELOCATION WITH RUNNING CHAINAGE. REFER LONGITUDINAL SECTION DWG.5941 ENG SJW WAT 011 |
|  | STORMWATER DRAINAGE                                                                                                                          |

## EXISTING SERVICES LEGEND

|  |                                                                                                                                                                                   |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | EXISTING DN100 APA GAS MAIN CLASS 300 TRANSMISSION, STEEL                                                                                                                         |
|  | EXISTING 225mm CoGC POTABLE WATER MAIN, uPVC                                                                                                                                      |
|  | EXISTING 225mm POTABLE WATER MAIN uPVC TO BE REMOVED                                                                                                                              |
|  | EXISTING 225mm POTABLE WATER MAIN uPVC TO BE ABANDONED AND GROUT FILLED. WATER MAIN TO BE RETAINED ON GCWW'S AS CONSTRUCTED RECORDS. NOTED AS ABANDONED FOR DTMR FUTURE REFERENCE |
|  | EXISTING CoGC SEWER RISING MAIN, uPVC                                                                                                                                             |
|  | EXISTING COMMUNICATIONS CONDUIT                                                                                                                                                   |
|  | EXISTING ELECTRICAL, OVERHEAD                                                                                                                                                     |
|  | EXISTING ELECTRICAL, UNDERGROUND                                                                                                                                                  |



- ABANDON EXISTING WATER MAIN FOLLOWING LIVE CONNECTION WORKS (84.90m LENGTH).
- WATER MAIN RELOCATION ALONG STAPYLTON JACOBS WELL ROAD TO BE DN225 PVC-M CLASS PN20 SERIES 2 AND TO BE DN225 DICL CLASS PN35 UNDER ROADS. 2.0m MAX DEPTH.

TRUNK GRAVITY SEWER

RETICULATION SEWER (1500)

PROPOSED GAS MAIN RELOCATION (DN100 CLASS 300)

INTERNAL PROPOSED WATER

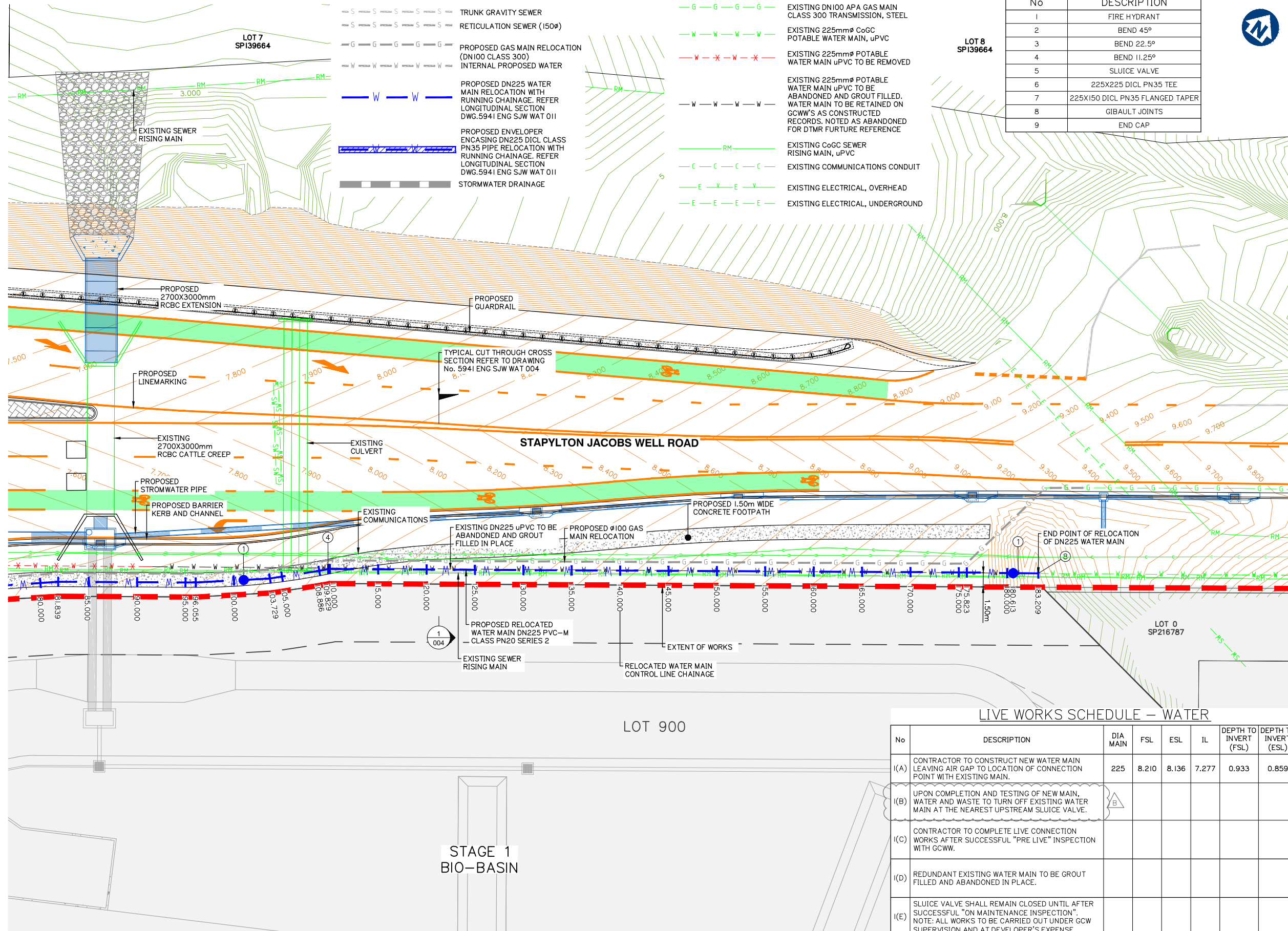
PROPOSED DN225 WATER MAIN RELOCATION WITH RUNNING CHAINAGE, REFER LONGITUDINAL SECTION DWG.5941 ENG SJW WAT 011

PROPOSED ENVELOPER ENCASING DN225 DICL CLASS PN35 PIPE RELOCATION WITH RUNNING CHAINAGE, REFER LONGITUDINAL SECTION DWG.5941 ENG SJW WAT 011

STORMWATER DRAINAGE

|                                                                                     |                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | EXISTING DN100 APA GAS MAIN<br>CLASS 300 TRANSMISSION, STEEL                                                                                                                                          |
|  | EXISTING 225mmø CoGC<br>POTABLE WATER MAIN, uPVC                                                                                                                                                      |
|  | EXISTING 225mmø POTABLE<br>WATER MAIN uPVC TO BE REMOVED                                                                                                                                              |
|  | EXISTING 225mmø POTABLE<br>WATER MAIN uPVC TO BE<br>ABANDONED AND GROUT FILLED.<br>WATER MAIN TO BE RETAINED ON<br>CGWW'S AS CONSTRUCTED<br>RECORDS. NOTED AS ABANDONED<br>FOR DTMR FURTURE REFERENCE |
|  | EXISTING CoGC SEWER<br>RISING MAIN, uPVC                                                                                                                                                              |
|  | EXISTING COMMUNICATIONS CONDUIT                                                                                                                                                                       |
|  | EXISTING ELECTRICAL, OVERHEAD                                                                                                                                                                         |
|  | EXISTING ELECTRICAL, UNDERGROUND                                                                                                                                                                      |

| No | DESCRIPTION                      |
|----|----------------------------------|
| 1  | FIRE HYDRANT                     |
| 2  | BEND 45°                         |
| 3  | BEND 22.5°                       |
| 4  | BEND 11.25°                      |
| 5  | SLUICE VALVE                     |
| 6  | 225X225 DI CL PN35 TEE           |
| 7  | 225X150 DI CL PN35 FLANGED TAPER |
| 8  | GIBALT JOINTS                    |
| 9  | END CAP                          |



| No   | DESCRIPTION                                                                                                                                                                | DIA MAIN                                                                              | FSL   | ESL   | IL    | DEPTH TO INVERT (FSL) | DEPTH TO INVERT (ESL) |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------|-------|-------|-----------------------|-----------------------|
| I(A) | CONTRACTOR TO CONSTRUCT NEW WATER MAIN LEAVING AIR GAP TO LOCATION OF CONNECTION POINT WITH EXISTING MAIN.                                                                 | 225                                                                                   | 8.210 | 8.136 | 7.277 | 0.933                 | 0.859                 |
| I(B) | UPON COMPLETION AND TESTING OF NEW MAIN, WATER AND WASTE TO TURN OFF EXISTING WATER MAIN AT THE NEAREST UPSTREAM SLUICE VALVE.                                             |  |       |       |       |                       |                       |
| I(C) | CONTRACTOR TO COMPLETE LIVE CONNECTION WORKS AFTER SUCCESSFUL "PRE LIVE" INSPECTION WITH GCWW.                                                                             |                                                                                       |       |       |       |                       |                       |
| I(D) | REDUNDANT EXISTING WATER MAIN TO BE GROUT FILLED AND ABANDONED IN PLACE.                                                                                                   |                                                                                       |       |       |       |                       |                       |
| I(E) | SLUICE VALVE SHALL REMAIN CLOSED UNTIL AFTER SUCCESSFUL "ON MAINTENANCE INSPECTION".<br>NOTE: ALL WORKS TO BE CARRIED OUT UNDER GCW SUPERVISION AND AT DEVELOPER'S EXPENSE |                                                                                       |       |       |       |                       |                       |

planning | environment | landscape | engineering | survey  
T: 3807 3333 | F: 3287 5461 | [www.gassman.com.au](http://www.gassman.com.au)  
Gold Coast & Logan | 76 Business Street, Yatala QLD | PO Box 392, Beenleigh 4207



VANTAGE YATALA

|                   |                               |
|-------------------|-------------------------------|
| Lot:              | 501                           |
| Plan:             | SP295994                      |
| Local Authority:  | CITY OF GOLD COAST<br>COUNCIL |
| Level Datum:      | AHD                           |
| Meridian:         | -                             |
| Contour Interval: | -                             |
| PSM:              | -                             |
| RL:               | -                             |

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DESIGN WATER  
ALIGNMENT SHEET 2 OF 2

|       |            |                              |     |     |  |
|-------|------------|------------------------------|-----|-----|--|
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
|       |            |                              |     |     |  |
| B     | 30-06-2020 | INFORMATION REQUEST RESPONSE | SK  | MQ  |  |
| A     | 06-05-2020 | ORIGINAL ISSUE               | SK  | MQ  |  |
| Issue | Date       | Description                  | DRN | CHK |  |

|                      |          |
|----------------------|----------|
| Drawing No:          | Rev. No: |
| 5941 ENG SJW WAT 010 | B        |

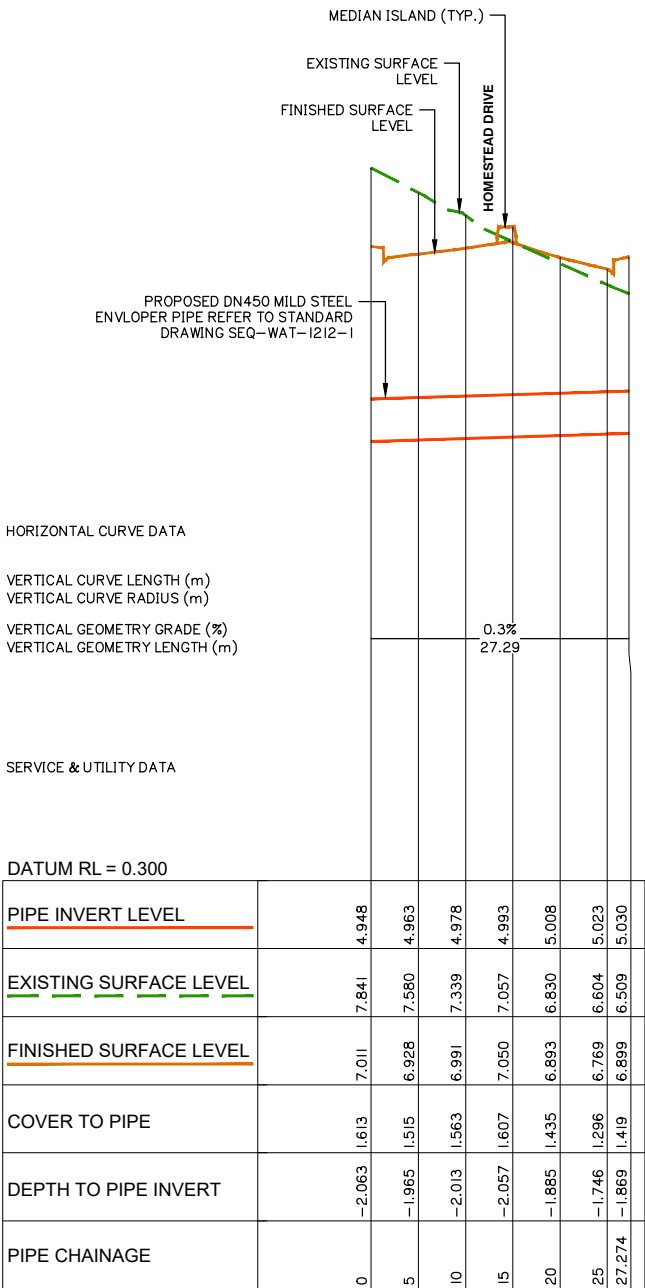
Rev. No:  
B



| DESIGN DN225 WATER MAIN RELOCATION LINE 1 – SETOUT TABLE |          |          |          |                   |               |
|----------------------------------------------------------|----------|----------|----------|-------------------|---------------|
| PT                                                       | CHAINAGE | EASTING  | NORTHING | PIPE INVERT LEVEL | BEARING       |
| IP 1                                                     | 0.000    | 2167.743 | 7004.961 | 7.321             | 53°33'03.94"  |
|                                                          | 5.000    | 2171.765 | 7007.931 | 6.793             | 53°33'03.94"  |
|                                                          | 5.767    | 2172.382 | 7008.387 | 6.687             |               |
|                                                          | 10.000   | 2176.579 | 7008.935 | 6.097             | 82°33'28.07"  |
|                                                          | 11.479   | 2178.045 | 7009.127 | 5.891             |               |
| IP 2                                                     | 15.000   | 2181.390 | 7008.026 | 5.401             | 108°12'33.22" |
|                                                          | 15.571   | 2181.933 | 7007.848 | 5.322             |               |
|                                                          | 19.689   | 2185.335 | 7005.528 | 5.037             |               |
|                                                          | 20.000   | 2185.510 | 7005.785 | 5.038             | 34°17'35.00"  |
|                                                          | 20.679   | 2185.892 | 7006.346 | 5.040             |               |
| IP 3                                                     | 25.000   | 2189.401 | 7008.867 | 5.053             | 54°17'56.01"  |
|                                                          | 30.000   | 2193.462 | 7011.785 | 5.068             | 54°17'56.01"  |
|                                                          | 35.000   | 2197.522 | 7014.703 | 5.083             | 54°17'56.01"  |
|                                                          | 40.000   | 2201.583 | 7017.621 | 5.098             | 54°17'56.01"  |
|                                                          | 45.000   | 2205.643 | 7020.538 | 5.113             | 54°17'56.01"  |
| IP 4                                                     | 50.000   | 2209.703 | 7023.456 | 5.128             | 54°17'56.01"  |
|                                                          | 51.320   | 2210.775 | 7024.227 | 5.132             |               |
|                                                          | 55.000   | 2212.350 | 7027.552 | 5.164             | 25°20'10.75"  |
|                                                          | 59.143   | 2214.123 | 7031.297 | 5.288             |               |
|                                                          | 60.000   | 2214.624 | 7031.992 | 5.314             | 35°49'09.47"  |
| IP 5                                                     | 65.000   | 2217.551 | 7036.046 | 5.464             | 35°49'09.47"  |
|                                                          | 67.743   | 2219.156 | 7038.270 | 5.546             |               |
|                                                          | 70.000   | 2220.706 | 7039.911 | 5.614             | 43°22'00.90"  |
|                                                          | 74.290   | 2223.651 | 7043.030 | 5.743             |               |
|                                                          | 75.000   | 2224.197 | 7043.485 | 5.764             | 50°09'29.86"  |
| IP 6                                                     | 80.000   | 2228.036 | 7046.688 | 5.914             | 50°09'29.86"  |
|                                                          | 81.839   | 2229.448 | 7047.867 | 5.969             |               |
|                                                          | 85.000   | 2232.015 | 7049.711 | 6.043             | 54°17'35.00"  |
|                                                          | 90.000   | 2236.075 | 7052.629 | 6.144             | 54°17'35.00"  |
|                                                          | 95.000   | 2240.135 | 7055.548 | 6.245             | 54°17'35.00"  |
| IP 7                                                     | 96.055   | 2240.991 | 7056.163 | 6.267             |               |
|                                                          | 100.000  | 2244.052 | 7058.652 | 6.346             | 50°53'18.46"  |
|                                                          | 103.729  | 2246.946 | 7061.005 | 6.422             |               |
|                                                          | 105.000  | 2247.848 | 7061.900 | 6.447             | 45°11'36.26"  |
|                                                          | 108.886  | 2250.605 | 7064.639 | 6.526             |               |
| IP 8                                                     | 109.829  | 2251.247 | 7065.329 | 6.545             |               |
|                                                          | 110.000  | 2251.385 | 7065.429 | 6.549             | 54°17'56.01"  |
|                                                          | 115.000  | 2255.446 | 7068.347 | 6.650             | 54°17'56.01"  |
|                                                          | 120.000  | 2259.506 | 7071.265 | 6.751             | 54°17'56.01"  |
|                                                          | 125.000  | 2263.567 | 7074.182 | 6.852             | 54°17'56.01"  |
| IP 9                                                     | 130.000  | 2267.627 | 7077.100 | 6.953             | 54°17'56.01"  |
|                                                          | 135.000  | 2271.687 | 7080.018 | 7.054             | 54°17'56.01"  |
|                                                          | 140.000  | 2275.748 | 7082.936 | 7.155             | 54°17'56.01"  |
|                                                          | 145.000  | 2279.808 | 7085.854 | 7.256             | 54°17'56.01"  |
|                                                          | 150.000  | 2283.868 | 7088.771 | 7.357             | 54°17'56.01"  |
| IP 10                                                    | 155.000  | 2287.929 | 7091.689 | 7.458             | 54°17'56.01"  |
|                                                          | 160.000  | 2291.989 | 7094.607 | 7.495             | 54°17'56.01"  |
|                                                          | 165.000  | 2296.049 | 7097.525 | 7.388             | 54°17'56.01"  |
|                                                          | 170.000  | 2300.110 | 7100.443 | 7.280             | 54°17'56.01"  |
|                                                          | 175.000  | 2304.170 | 7103.360 | 7.173             | 54°17'56.01"  |
| IP 11                                                    | 175.823  | 2304.838 | 7103.840 | 7.156             |               |
|                                                          | 180.000  | 2308.259 | 7106.238 | 7.066             | 54°58'19.04"  |
|                                                          | 180.613  | 2308.761 | 7106.590 | 7.053             |               |
|                                                          | 183.209  | 2310.873 | 7108.100 | 7.276             | 54°26'06.15"  |
|                                                          |          |          |          |                   |               |

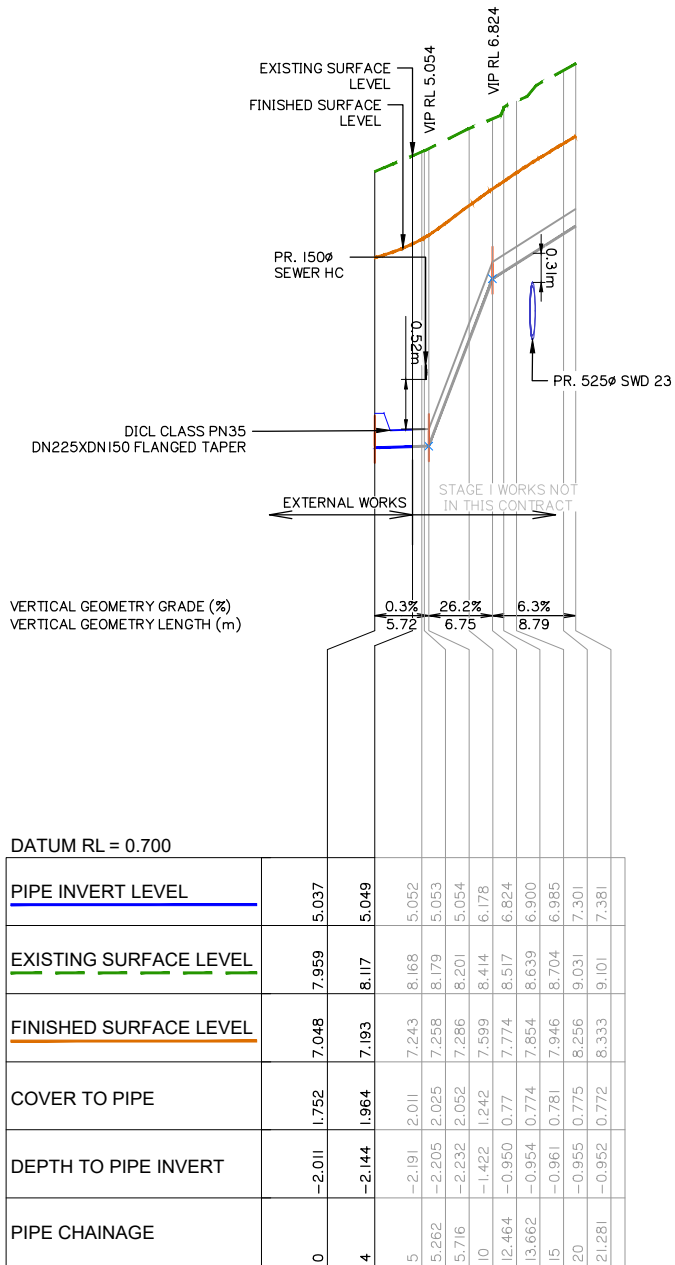
LONGITUDINAL SECTION – DESIGN ENVELOPER PIPE LINE 1

At HORZ SCALE: 1 : 400  
At VERT SCALE: 1 : 40



LONGITUDINAL SECTION – DESIGN WATER MAIN LINE 1

At HORZ SCALE: 1 : 400  
At VERT SCALE: 1 : 40



| DESIGN WATER MAIN LINE 2 – SETOUT TABLE |          |          |          |                   |               |
|-----------------------------------------|----------|----------|----------|-------------------|---------------|
| PT                                      | CHAINAGE | EASTING  | NORTHING | PIPE INVERT LEVEL | BEARING       |
| IP 1                                    | 0.000    | 2185.335 | 7005.528 | 5.037             | 124°17'35.00" |
|                                         | 1.000    | 2186.161 | 7004.964 | 5.040             | 124°17'35.00" |
|                                         | 2.000    | 2186.987 | 7004.401 | 5.043             | 124°17'35.00" |
|                                         | 3.000    | 2187.813 | 7003.838 | 5.046             | 124°17'35.00" |
|                                         | 4.000    | 2188.639 | 7003.274 | 5.049             | 124°17'35.00" |

Client:



FRASERS PROPERTY  
(AUSTRALIA) PTY. LTD.

Project:

VANTAGE YATALA

Site Address:

60 STAPYLTON JACOBS WELL  
ROAD, STAPYLTON QLD 4207

THIS DRAWING IS INTENDED TO  
BE PRINTED IN COLOUR

RPD:

Lot: 501  
Plan: SP295994  
Local Authority: CITY OF GOLD COAST  
COUNCIL  
Level Datum: AHD  
Meridian: -  
Contour Interval: -  
PSM: -  
RL: -

ISSUED FOR APPROVAL  
NOT FOR CONSTRUCTION

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ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH GENERAL NOTES

DRAWING TITLE

DESIGN WATER PIPE  
SETOUT TABLE

HOZ: Scale 1:400 - Lengths are in METRES.

VERT: Scale 1:40 - Lengths are in Metres.

Scale at A1: AS SHOWN

Designed: IG

Drafted: SK

Approved: MG

RPEQ: 16939

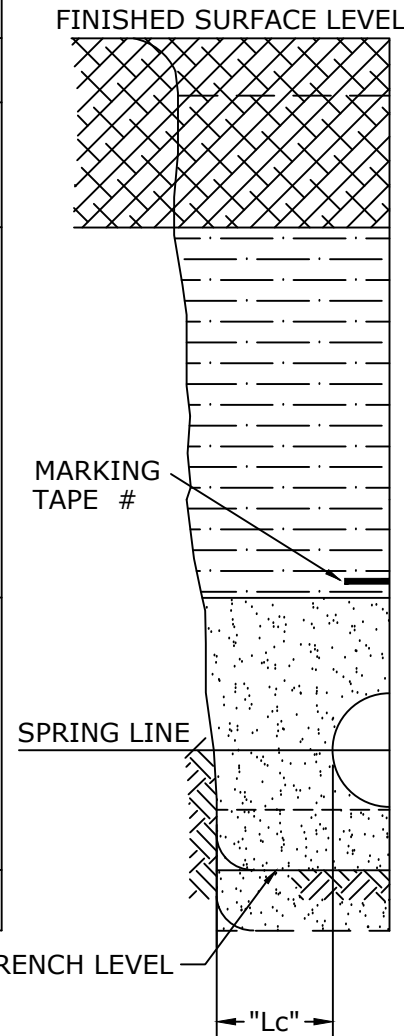
Signed:

Date: 30-06-2020

Drawing No:  
5941 ENG SJW WAT 012

Rev. No:  
B

| MATERIAL                                                                                                                                                                                               |                                                                                         | ZONE            |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------|-----------|
| ROAD SURFACE                                                                                                                                                                                           | VERGE & TRACK                                                                           |                 |           |
| ROAD SURFACE LAYER                                                                                                                                                                                     | TO MATCH EXISTING                                                                       | SURFACE COURSE  |           |
| TO MATCH EXISTING ROAD BASE OR TO ROAD OWNER'S REQUIREMENTS                                                                                                                                            | TO ROAD OWNER'S REQUIREMENTS<br><br>OR<br><br>INORGANIC FILL WITH MAXIMUM 75 STONE SIZE | ROAD BASE       |           |
| TO ROAD OWNER'S REQUIREMENTS (SEE NOTE 5)<br><br>OR<br><br>INORGANIC FILL WITH 75 MAXIMUM STONE SIZE                                                                                                   |                                                                                         | TRENCH FILL     |           |
| EMBEDMENT MATERIAL IN ACCORDANCE WITH DESIGN DRAWINGS AND SEQ-SP REQUIREMENTS.<br><br><br><br><br><br><br><br><br><br>WHERE APPROVED BY SEQ-SP, BEDDING MAY BE OMITTED IF TRENCH BASE IS GRANULAR SAND |                                                                                         | OVERLAY         | EMBEDMENT |
|                                                                                                                                                                                                        |                                                                                         | SIDE SUPPORT    |           |
|                                                                                                                                                                                                        |                                                                                         | BEDDING         |           |
|                                                                                                                                                                                                        |                                                                                         | OVER-EXCAVATION |           |



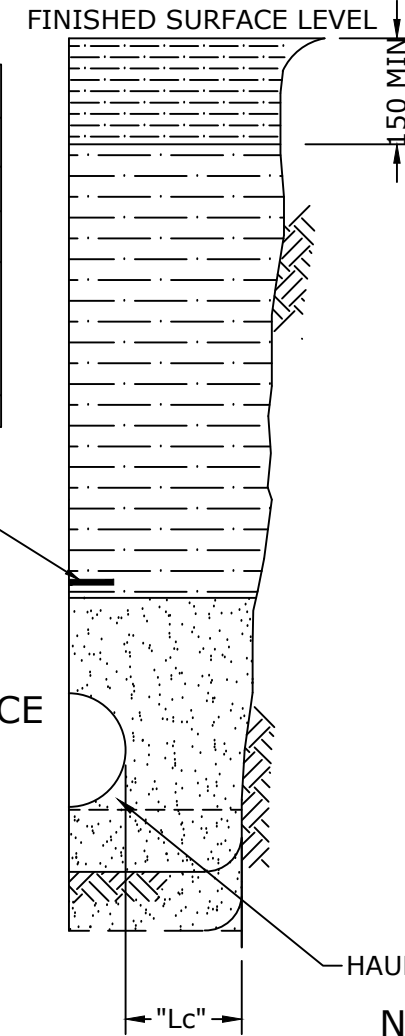
### MINIMUM PIPE COVER

| LOCATION                                                  | NOMINAL BORE (NB) |      |
|-----------------------------------------------------------|-------------------|------|
|                                                           | ≤200              | >200 |
| NON ROADWAYS                                              | 600               | 1000 |
| SEALED ROADS                                              | 600               | 1000 |
| MAJOR ROADWAYS/ EMBANKMENTS/ COMMERCIAL/ INDUSTRIAL AREAS | 750               | 1000 |
| FREEWAYS                                                  | 1200              | 1200 |

### SPRING LINE TRENCH CLEARANCE

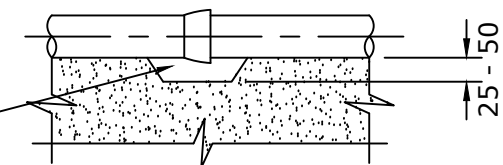
| NOMINAL BORE (NB) | MINIMUM CLEARANCE "Lc" TO AS/NZS 2566.1 |
|-------------------|-----------------------------------------|
| ≤300              | 150                                     |
| >300-≤450         | 200                                     |
| >450-≤900         | 300                                     |
| >900-≤1500        | 350                                     |

TRENCH WIDTH TO BE SUFFICIENT TO SAFELY LAY THE PIPE AND COMPACT THE SIDE SUPPORT ZONE.



### NO VEHICULAR LOADING

(INCLUDES LOCATIONS WHERE OCCASIONAL VEHICLES LOADINGS OCCUR EG. PARKLANDS, FOOTWAYS)



### PIPE JOINT BEDDING POCKETS

FOR JOINT PROJECTIONS (SOCKETS, FLANGES ETC)

PROVIDE POCKETS IN BEDDING, AT JOINTS PRIOR TO LAYING PIPES. FILL VOID DURING PLACEMENT OF EMBEDMENT.

### VEHICULAR LOADING

### LEGEND

# SPECIFIED BY THE DESIGNER IN DESIGN DRAWINGS

### NOTES

- ALL DIMENSIONS IN MILLIMETRES.
- BEDDING - SPECIAL BEDDING SHALL BE SPECIFIED TO SUIT THE CONDITIONS IF THE TRENCH FLOOR HAS:
  - IRREGULAR OUTCROPS OF ROCK.
  - AHBP OF < 50 kPa (SEE SEQ-WAT-1200-1), OR
  - UNCONTROLLED GROUND WATER HAS DISTURBED THE FLOOR OF THE TRENCH.
- EMBEDMENT, TRENCH FILL AND COMPACTION TO MEET THE 3. REQUIREMENTS OF WSA-03 PART 3 AND THE RELEVANT SEQ-SP.
- SIDES OF EXCAVATION TO BE KEPT VERTICAL TO AT LEAST 150 ABOVE THE PIPE.
- DESIGNER TO CHECK ON RELEVANT ROAD AUTHORITIES REQUIREMENTS.
- ADDITIONAL INFORMATION PROVIDED IN SEQ-WAT-1200 SERIES COMMENTARY

| REV. No. | DATE     | DESCRIPTION                                                   | AUTH. |
|----------|----------|---------------------------------------------------------------|-------|
|          |          |                                                               |       |
|          |          |                                                               |       |
|          |          |                                                               |       |
| C        | 4/06/18  | AMENDED MINIMUM PIPE COVER TABLE AND TRENCH CLEARANCE TABLES. |       |
| B        | 20/08/15 | MINIMUM PIPE COVER TABLE AMENDED.                             |       |

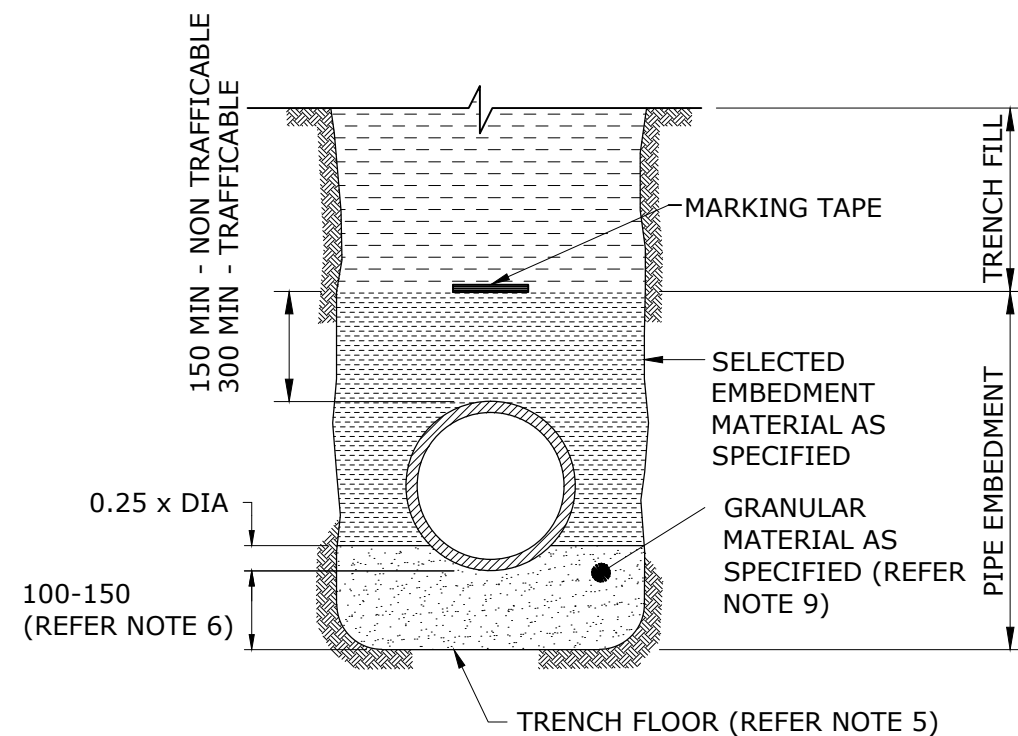
## SEQ WATER SERVICE PROVIDERS

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

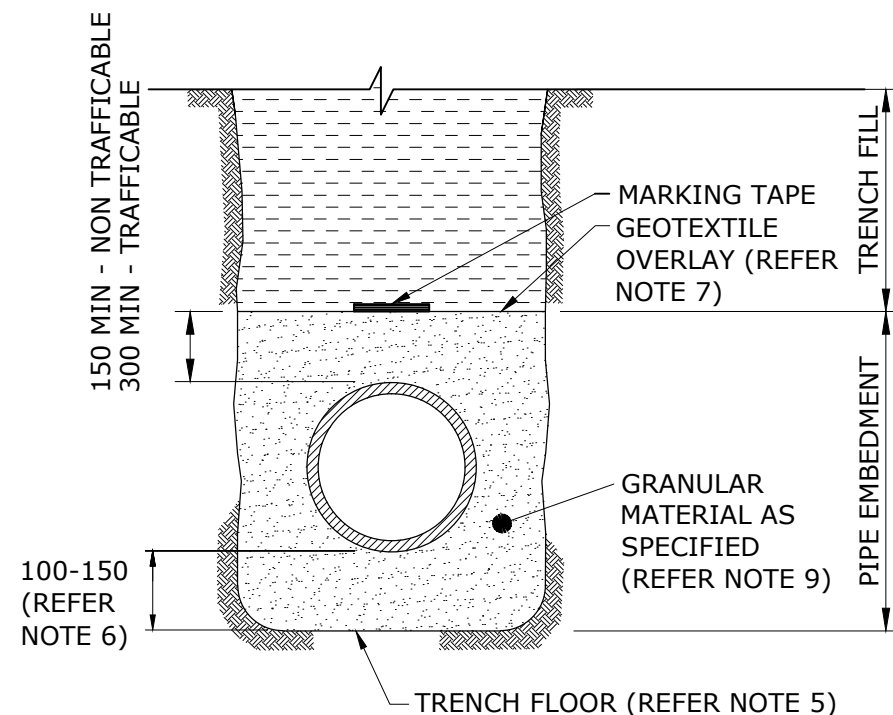
### WATER SUPPLY STANDARD DRAWING

### EMBEDMENT & TRENCHFILL TYPICAL ARRANGEMENT

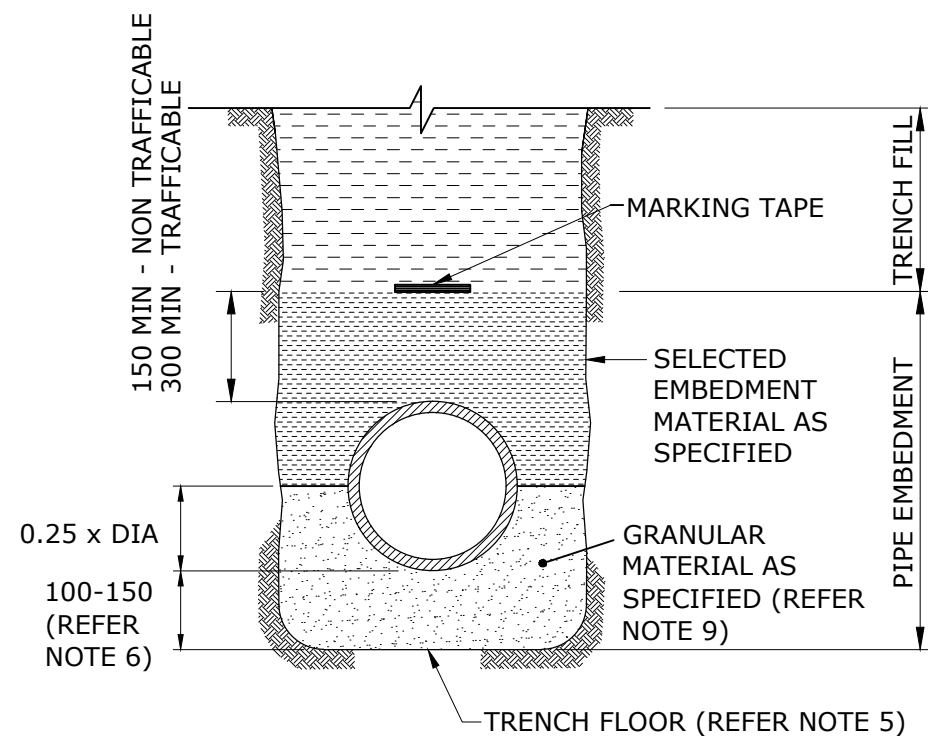
| GCCC           | LCC | RCC | QUU | UW                    |
|----------------|-----|-----|-----|-----------------------|
| DRAWING No.    |     |     |     | VERSION               |
| SEQ-WAT-1200-2 |     |     |     | C                     |
| NOT TO SCALE   |     |     |     | ORG DATE:<br>1/1/2013 |



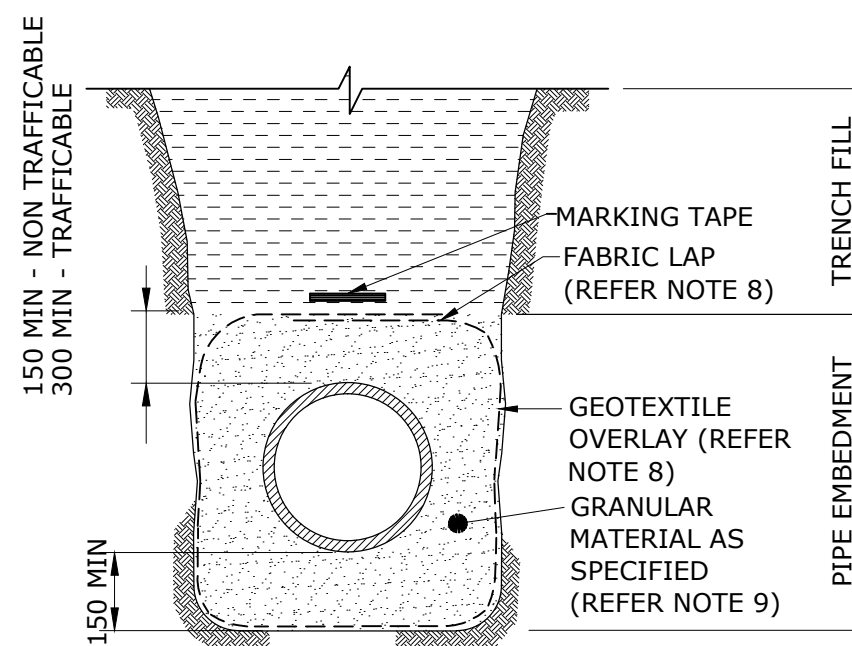
**TYPE A SUPPORT**  
FOR RIGID PIPES ONLY ( REFER NOTE 3 )



**TYPE C SUPPORT**  
FOR FLEXIBLE & RIGID PIPES ( REFER NOTE 3 )



**TYPE B SUPPORT**  
FOR RIGID PIPES ONLY ( REFER NOTE 3 )



**TYPE D SUPPORT - WITH GEOTEXTILE**  
FOR FLEXIBLE & RIGID PIPES ( REFER NOTE 3 )

## NOTES

- ALL DIMENSIONS IN MILLIMETRES.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH SEQ-WAT-1200.
- PIPE CLASSIFICATION
  - RIGID PIPES: VC AND RC
  - FLEXIBLE PIPES: PVC, GRP, STEEL, DI AND PE.
- PLACEMENT OF EMBEDMENT, TRENCHFILL & COMPACTION TO MEET THE REQUIREMENTS OF THE CODE.
- EXCAVATE OR COMPACT TRENCH FLOOR TO PROVIDE A FLAT FIRM BASE TO SUPPORT BEDDING MATERIAL AND MINIMISE PIPELINE SETTLEMENT. WHEN EXCAVATED, REPLACE WITH GRANULAR MATERIAL AS SPECIFIED FOR BEDDING OR ADOPT TYPE E,F,G OR H SUPPORT AS REQUIRED.
- ENSURE BEDDING IS DEEP ENOUGH THAT PIPE JOINT PROJECTIONS (SOCKETS, FLANGES) DO NOT TOUCH TRENCH FLOOR.
- GEOTEXTILE TO BE USED WHERE TRENCH FILL IS A SAND OR FINE CLAY MATERIAL.
- TYPE D SUPPORT TO BE USED WHERE MIGRATORY NATIVE SOILS. (SANDS & CLAYS) ARE ENCOUNTERED ADJACENT TO THE EMBEDMENT ZONE AND SINGLE SIZE AGGREGATE IS USED.
- LAY GEOTEXTILE FILTER FABRIC AGAINST TRENCH FLOOR AND WALLS SUCH THAT IT FULLY ENCASES THE EMBEDMENT.
  - PRESS FABRIC INTO THE VOIDS BEFORE INSTALLING EMBEDMENT TO PREVENT FABRIC TEARING.
  - PROVIDE A MINIMUM OF 250 OVERLAP AT ALL FABRIC JOINTS.
- PURCHASE SPECIFICATIONS FOR TRENCH FILL AND EMBEDMENT MATERIAL ARE DETAILED IN THE CODE.

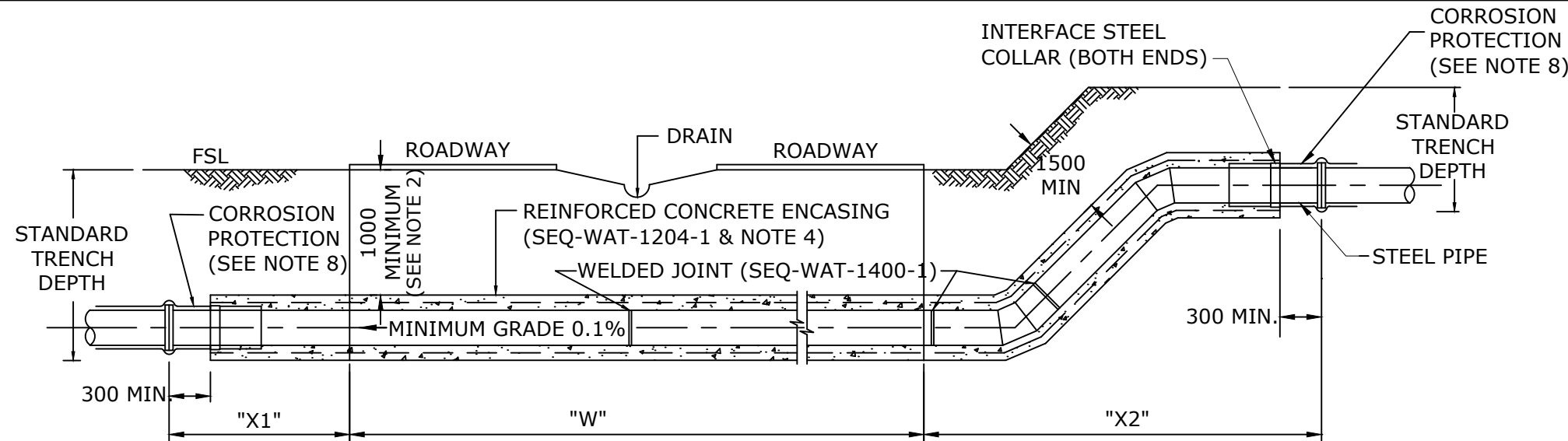
WHERE THIS DRAWING IS USED FOR THE VACUUM CODE,  
ADDITIONAL INFORMATION IS PROVIDED IN SEQ-VAC-1400 SERIES COMMENTARY

| REV. No. | DATE | DESCRIPTION | AUTH. | SEQ WATER<br>SERVICE PROVIDERS |  | WATER SUPPLY STANDARD DRAWING                        |  | GCCC           | LCC | RCC | QUU | UW                    |
|----------|------|-------------|-------|--------------------------------|--|------------------------------------------------------|--|----------------|-----|-----|-----|-----------------------|
|          |      |             |       |                                |  | STANDARD EMBEDMENT<br>TYPICAL FLEXIBLE & RIGID PIPES |  | DRAWING No.    |     |     |     | VERSION               |
|          |      |             |       |                                |  |                                                      |  | SEQ-WAT-1201-1 |     |     |     | A                     |
|          |      |             |       |                                |  |                                                      |  | NOT TO SCALE   |     |     |     | ORG DATE:<br>1/1/2013 |

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

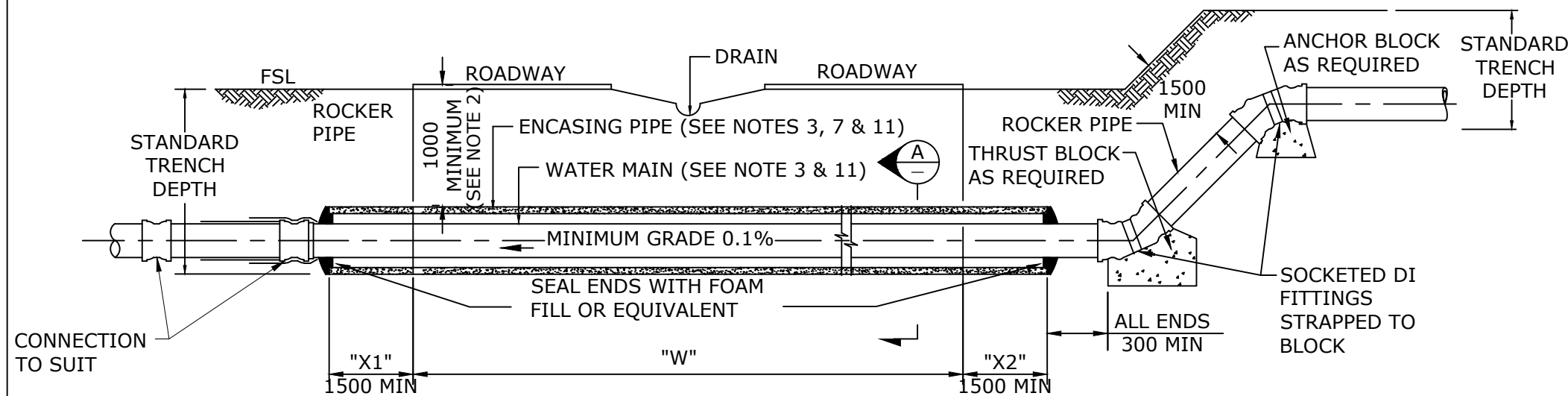
NOTES

- ALL DIMENSIONS IN MILLIMETRES.
- DETAILS SHOWN ARE TYPICAL. THE DESIGNER SHALL PROVIDE A SPECIFIC DESIGN FOR THE INSTALLATION AND OBTAIN APPROVAL FROM THE RELEVANT AUTHORITY FOR THE DESIGN. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE RELEVANT AUTHORITY TO ACCESS THE SITE.
- BORED AND JACKED ENCASING PIPE METHOD.  
ENCASING PIPE
  - REINFORCING CONCRETE CLASS 4 BUTT JOINED WITH STEEL LOCATING BANDS, OR WELDED MILD STEEL JACKING PIPE.WATER MAIN
  - STEEL CEMENT LINED WITH FUSION BONDED PE COATING.
  - DICL FLANGE CLASS
  - PE (SEE NOTE 14)
- CONCRETE ENCASED METHOD.
  - PIPE MATERIAL TO BE SCL OR DICL SOC-SP PIPE (REFER BOXED NOTE)
  - EXTERNAL COATING REQUIRED ON SCL PIPE.
  - SCL JOINTS TO BE FULLY WELDED.
  - NO SERVICE CONNECTIONS TO BE MADE TO ENCASED SECTION OF PIPELINE.
- STEEL PIPE JOINTS TO BE EITHER PLAIN ENDS WITH WELDED COLLAR, BUTT WELDED OR SLIP-IN TYPE WELDED JOINTS.
- DIMENSIONS "W", "X1" & "X2" AND LOCATION OF BULKHEADS & REINFORCING TO BE SHOWN IN DESIGN DRAWINGS. "W" SHALL BE ULTIMATE ROAD WIDTH.
- FILL VOIDS OUTSIDE ENCASING PIPE WITH GROUT DURING THE INSTALLATION, REFER SEQ-WAT-1214-1 FOR NOTE 4.
- FULLY WRAP PE COATED SCL PIPE USING BITUMASTIC WRAPPING TAPE SYSTEM THAT EXTENDS AT LEAST 300 mm WITHIN CONCRETE ENCASEMENT TO AT LEAST 300 mm BEYOND CONCRETE ENCASEMENT AND ENSURING TAPE OVERLAPS THE UNDAMAGED PE COATING BY AT LEAST 150 mm.
- INSTALL AIR RELIEF AND ISOLATION VALVES WHERE SHOWN IN DESIGN DRAWINGS.
- CONSTRUCTION TO BE IN ACCORDANCE WITH DESIGN DRAWINGS.
- SEE SEQ-WAT-1214-1 FOR DETAILS OF ENCASING AND WATER MAIN INSTALLATION AND GROUTING DETAILS.
- DIRECTIONAL BORING TO INSTALL PE PIPE IS ALSO ACCEPTABLE.
- SMALLER DIAMETER MAINS SHALL BE DICL SOC-SP PIPE WITH TYPE I EMBEDMENT SUPPORT(SEQ-WAT-1203-1) AND THRUST MANAGEMENT TO SEQ-WAT-1207-1.
- PLASTIC PIPE MATERIALS WHERE APPROVED SHALL BE MANAGED FOR FLOATATION AND THERMAL REVERSION DURING THE GROUTING PROCESS, REFER SEQ-WAT-1214-1 FOR GROUT.



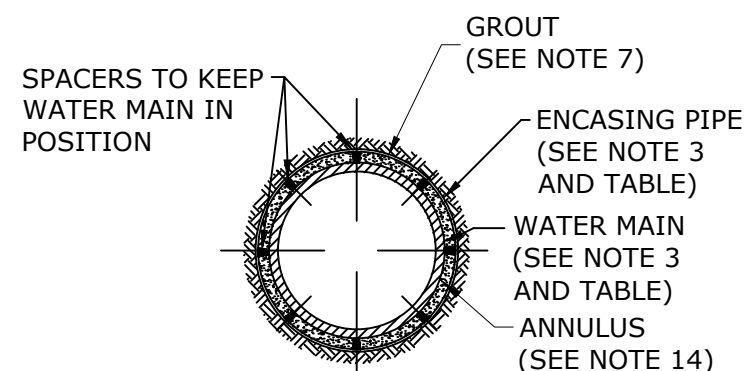
CONCRETE ENCASED METHOD ≥ DN 610 STEEL PIPE SHOWN

FOR INSTALLATIONS PRIOR TO ROAD CONSTRUCTION - REFER NOTE 13



BORED AND JACKED ENCASING PIPE METHOD

FOR INSTALLATIONS AFTER ROAD CONSTRUCTION (SEE SEQ-WAT-1214-1)



ENCASING PIPE & WATER MAIN

(PREFERRED INSTALLATION OPTION)

| WATER MAIN PIPE (DN)         | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 550 | 650 | 800  |
|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| STEEL ENCASING PIPE (DN) MIN | 300 | 375 | 375 | 450 | 525 | 600 | 700 | 750 | 825 | 1000 |

UNITYWATER REQUIRES ALL PIPELINES WITH SOC-SP JOINTS, THE SOCKET/SPIGOT WITNESS MARK TO BE MAINTAINED AT ALL TIMES DURING PIPE INSERTION INTO THE ENCASING PIPE. AN APPROPRIATE SOLUTION IS TO USE A THRUST RING LOCATED ON THE SPIGOT ADJACENT TO THE WITNESS MARK (THE HEIGHT OF THIS RING SHALL NOT RESTRICT THE FLOW OF THE GROUT).

| REV. No. | DATE     | DESCRIPTION                                                       | AUTH. |
|----------|----------|-------------------------------------------------------------------|-------|
| C        | 21/05/19 | MINOR CHANGES TO NOTE 14 AND DRAWING REFERENCES                   |       |
| B        | 25/06/18 | AMENDED CONC ENC DETAIL, NOTES 4, 8 AND 13. UPDATED UW BOXED NOTE |       |

SEQ WATER SERVICE PROVIDERS

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

WATER SUPPLY STANDARD DRAWING

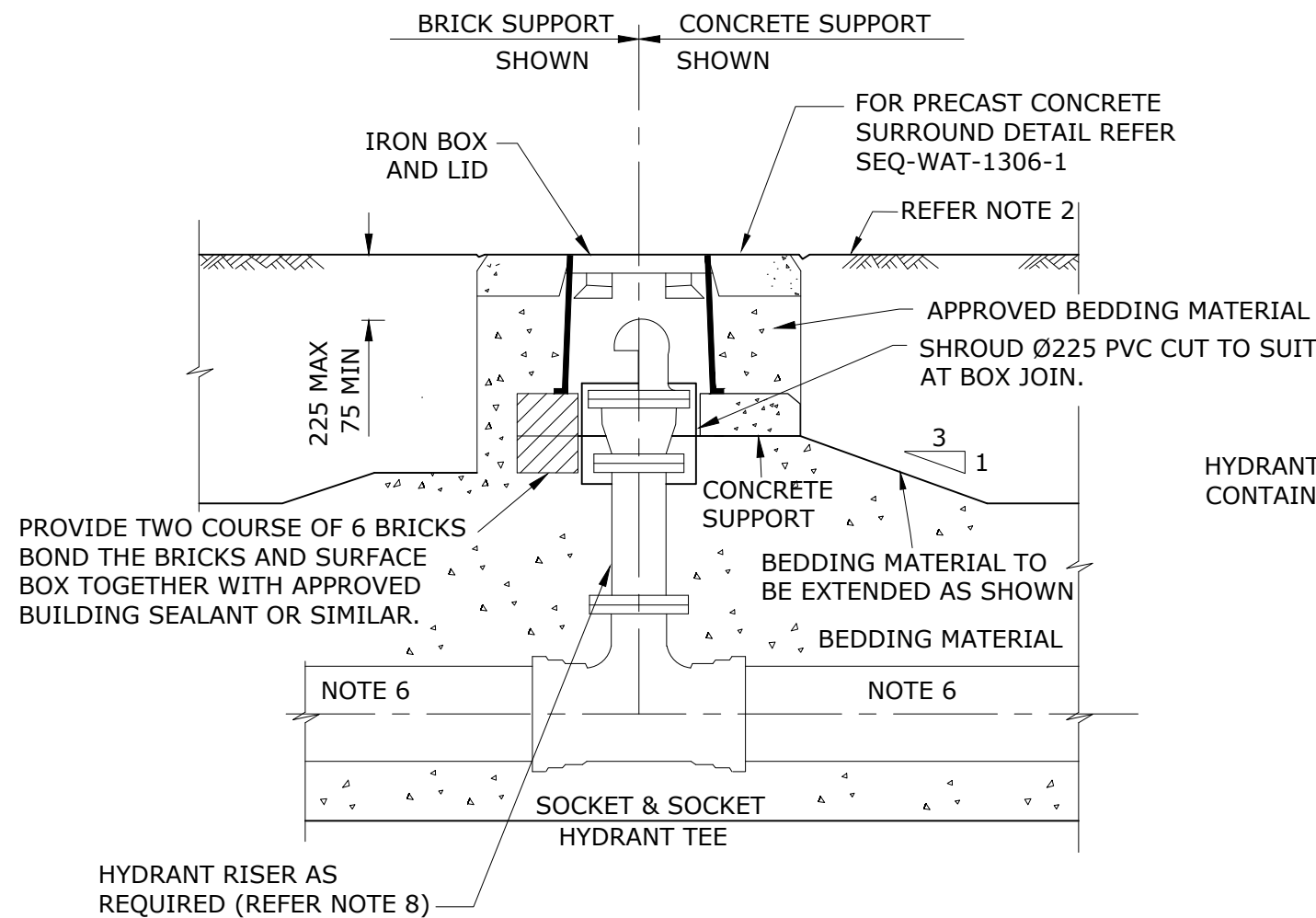
TYPICAL BURIED CROSSINGS  
MAJOR ROADWAYS

| CoGC           | LCC | RCC | QUU | UW                    |
|----------------|-----|-----|-----|-----------------------|
| DRAWING No.    |     |     |     | VERSION               |
| SEQ-WAT-1212-1 |     |     |     | C                     |
| NOT TO SCALE   |     |     |     | ORG DATE:<br>1/1/2013 |

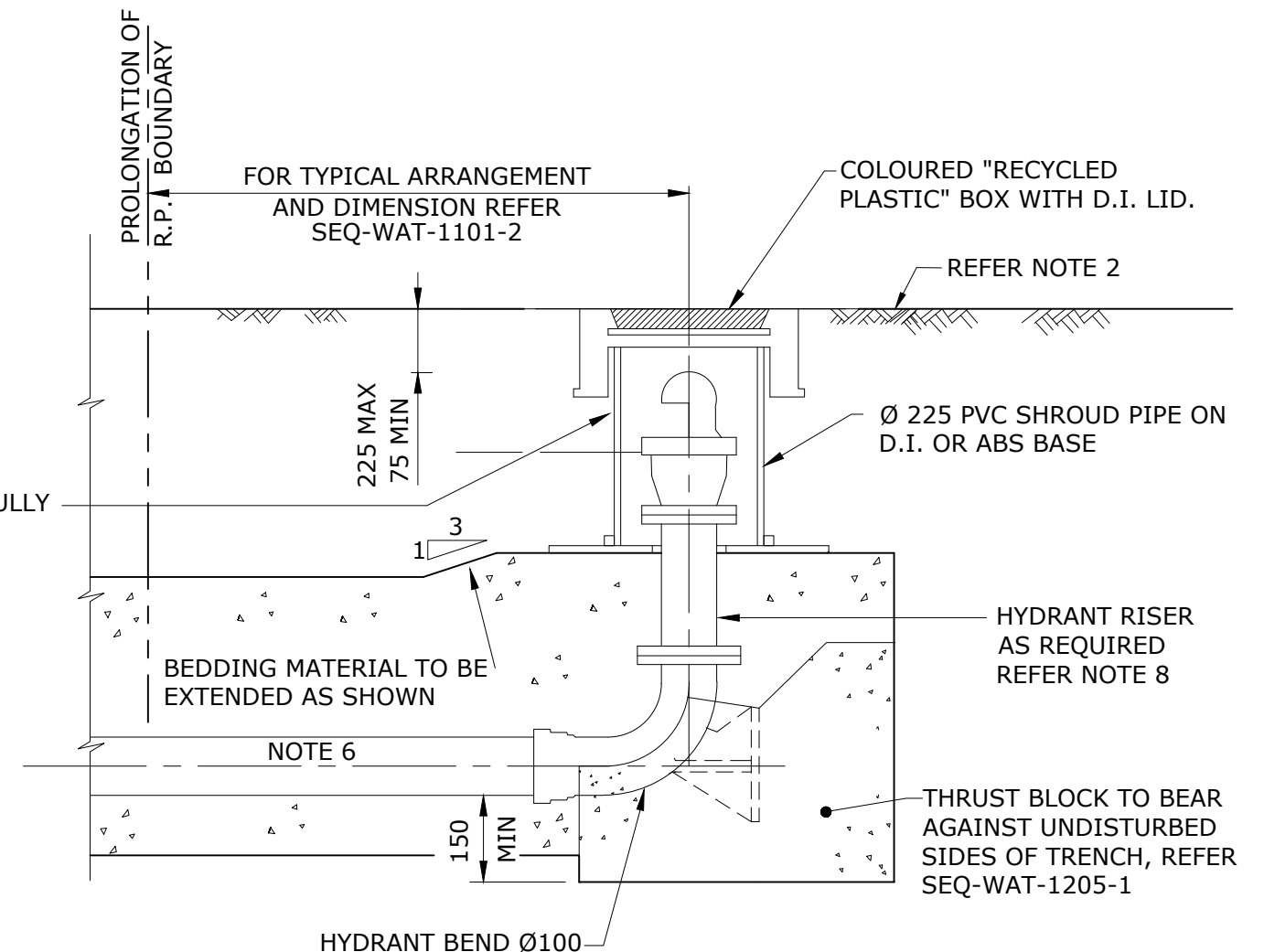


1. THRUST BLOCK DETAILS REFER SEQ-WAT-1206-1.
2. THRUST BLOCK REINFORCEMENT AS SPECIFIED IN SEQ-WAT-1206-1 OR WITHIN DESIGN DRAWINGS.
3. INSTALL PUDDLE FLANGES ON FLANGE CLASS D1CL PIPE.
4. SOC-SOC VALVES THRUST AREA TO BE AS SHOWN IN SEQ-WAT-1206-1.
5. FLANGED SHORTS MAY BE SPIGOTED OR SOCKETED.
6. WHERE DI PIPES AND FITTINGS WITH RESTRAINED JOINTS AND PIPE SYSTEM IS USED, THRUST BLOCKS MAY NOT BE REQUIRED, SEE SEQ-WAT-1208-1.
7. VALVE ANCHOR BLOCKS TO BE SIZED FOR A TEST PRESSURE OF 1200 kPa
8. FOR SURFACE BOX DETAILS REFER SEQ-WAT-1305-1 AND SEQ-WAT-1306-1.
9. SOLID CAST DUCTILE IRON ACCEPTABLE. WELDED EXTENSION SPINDLES NOT ACCEPTABLE.
10. EXTENSION SPINDLES WITHIN CONCRETE VALVE PITS SHALL BE SUPPORTED AT THE SPINDLE CAP AND EVERY 1800.
11. VALVES LARGER THAN DN 375 MAY BE DIRECTLY BURIED WITH INSTALLATION ASSEMBLY AND THRUST RESTRAINT SHOWN IN DESIGN DRAWINGS, REFER SEQ-WAT-1206-1 FOR THRUST RESTRAINT GUIDANCE.
12. DIMENSIONS ARE IN MILLIMETERS UNLESS SHOWN OTHERWISE.
13. VALVE BOX DETAIL FOR TRAFFICABLE INSTALLATIONS TO BE APPROVED BY SEQ-SP.
14. FOR SURFACE BOX ALIGNMENT REFER SEQ-WAT-1302-1.

|          |          |                                                                  |       |                                                                                                                                  |                                                                |                |     |     |     |                       |         |
|----------|----------|------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------|-----|-----|-----|-----------------------|---------|
| REV. No. | DATE     | DESCRIPTION                                                      | AUTH. | SEQ WATER<br>SERVICE PROVIDERS<br><br>WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE<br>OCCUPATIONAL HEALTH & SAFETY LEGISLATION | WATER SUPPLY STANDARD DRAWING                                  | CoGC           | LCC | RCC | QUU | UW                    |         |
|          |          |                                                                  |       |                                                                                                                                  | TYPICAL VALVE AND<br>HYDRANT INSTALLATION<br>VALVE ARRANGEMENT | DRAWING No.    |     |     |     |                       | VERSION |
|          |          |                                                                  |       |                                                                                                                                  |                                                                | SEQ-WAT-1301-1 |     |     |     |                       | C       |
|          |          |                                                                  |       |                                                                                                                                  |                                                                |                |     |     |     |                       |         |
|          |          |                                                                  |       |                                                                                                                                  |                                                                |                |     |     |     |                       |         |
|          |          |                                                                  |       |                                                                                                                                  |                                                                |                |     |     |     |                       |         |
| C        | 14/05/18 | IMPROVED BOX SUPPORT DETAILS, ADDED NOTE 14, OTHER MINOR CHANGES |       |                                                                                                                                  |                                                                |                |     |     |     |                       |         |
| B        | 15/07/15 | SLUICE VALVES INSTALLATION DETAILS AMENDED.                      |       |                                                                                                                                  | NOT TO SCALE                                                   |                |     |     |     | ORG DATE:<br>1/1/2013 |         |



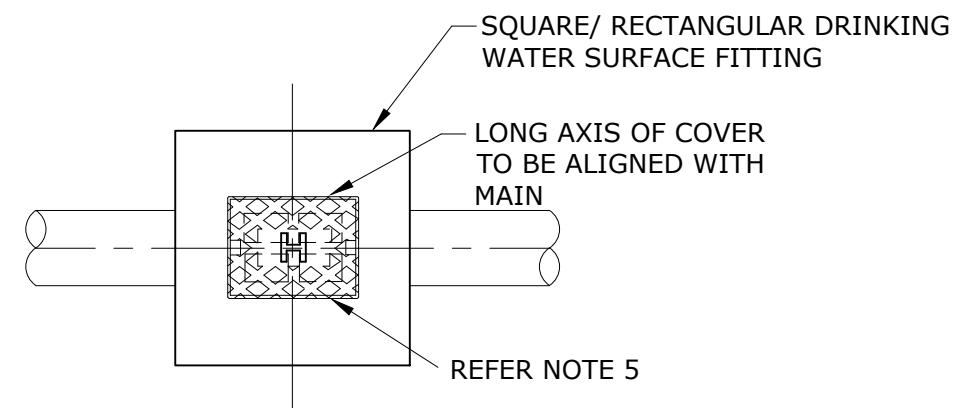
**STANDARD HYDRANT ON LINE**  
(TRAFFICABLE HYDRANT BOX USE WHERE APPROVED BY SEQ-SP SHOWN)



**HYDRANT AT END OF LINE AND HEAD OF CUL-DE-SAC**  
(NON-TRAFFICABLE HYDRANT BOX SHOWN)

## NOTES

1. EITHER PRECAST CONCRETE SURROUNDS/SUPPORTS AND/OR BRICK SUPPORT OR RECYCLED PLASTIC BOX ARE ACCEPTABLE.
2. ALL CONCRETE SURROUNDS AND PLASTIC BOXES SHALL BE LAID TO THE FINISHED PROFILE OF THE FOOTPATH VERGE.
3. FOR PRECAST CONCRETE SURROUND/SUPPORT AND BRICK SUPPORT DETAILS REFER SEQ-WAT-1305-1 AND 1306-1.
4. FOR TYPICAL HYDRANT MARKING ARRANGEMENT REFER SEQ-WAT-1300 SET.
5. BOX COVERS FOR HYDRANTS SHALL BE MARKED AS PER SEQ-WAT-1300-1.
6. FOR QUU AREAS PROVIDE HYDRANT ADJACENT TO SCOUR AS SHOWN IN SEQ-WAT-1307-2.
7. DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
8. ALL HYDRANT RISERS TO BE DN100.
9. GCCC REQUIRES SWABBING HYDRANTS FOR END OF LINES AND CUL-DE-SAC HEAD WITH LID TO STATE "SH".
10. HYDRANT TO BE PLACED ON RISER OR FITTING SO THAT THE LUGS/CLAWS ARE ON EITHER SIDE OF THE MAIN.



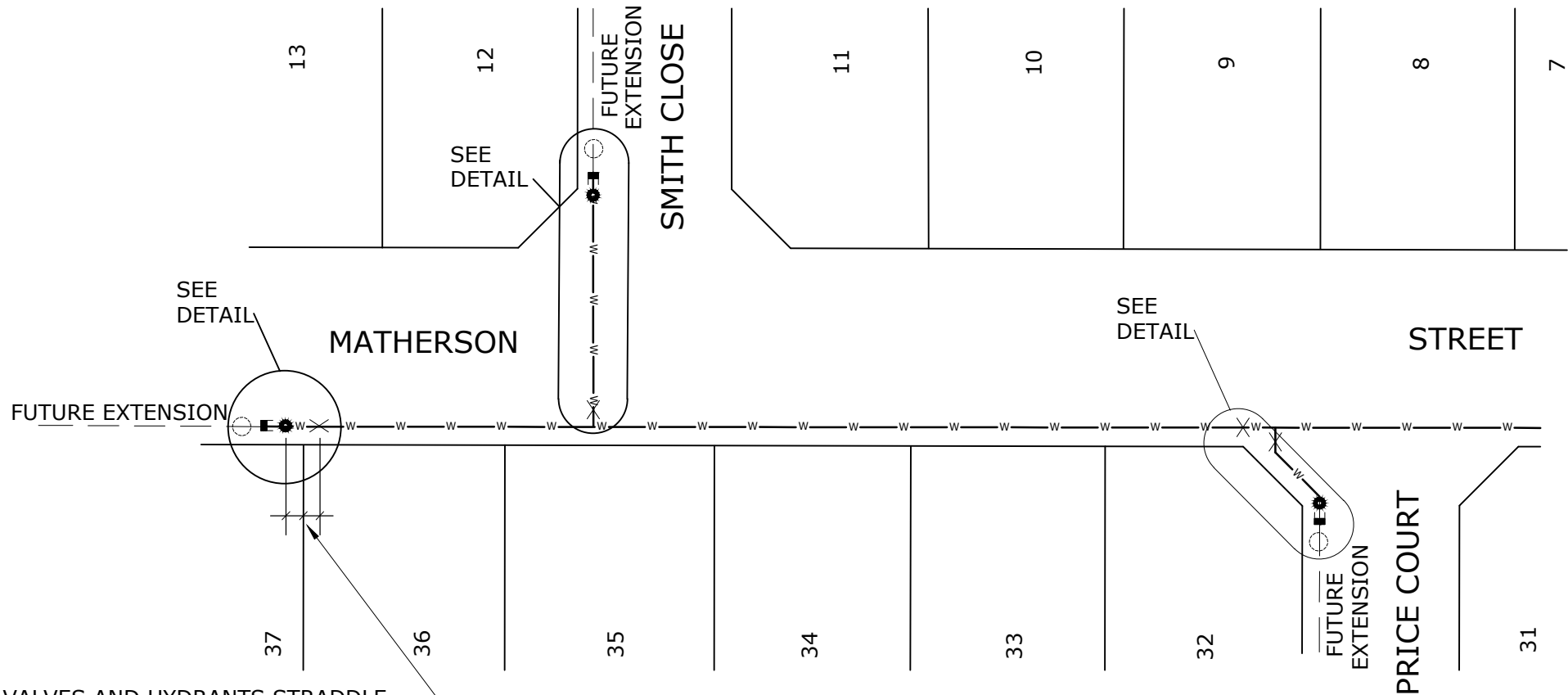
**HYDRANT AND VALVE BOX ALIGNMENT**  
(HYDRANT BOX SHOWN)

|          |          |                                                           |       |                                                                                                                                  |                                                                  |                |     |     |     |    |                       |
|----------|----------|-----------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------|-----|-----|-----|----|-----------------------|
| REV. No. | DATE     | DESCRIPTION                                               | AUTH. | SEQ WATER<br>SERVICE PROVIDERS<br><br>WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE<br>OCCUPATIONAL HEALTH & SAFETY LEGISLATION | WATER SUPPLY STANDARD DRAWING                                    | CoGC           | LCC | RCC | QUU | UW |                       |
|          |          |                                                           |       |                                                                                                                                  | TYPICAL VALVE AND<br>HYDRANT INSTALLATION<br>HYDRANT ARRANGEMENT | DRAWING No.    |     |     |     |    | VERSION               |
|          |          |                                                           |       |                                                                                                                                  |                                                                  | SEQ-WAT-1302-1 |     |     |     |    | C                     |
|          |          |                                                           |       |                                                                                                                                  |                                                                  | NOT TO SCALE   |     |     |     |    | ORG DATE:<br>1/1/2013 |
| C        | 14/05/18 | REMOVED DN80, ADDED CONCRETE SUPPORT, OTHER MINOR CHANGES |       |                                                                                                                                  |                                                                  |                |     |     |     |    |                       |
| B        | 15/07/15 | HYDRANT INSTALLATION DETAILS AND NOTE 8 AMENDED.          |       |                                                                                                                                  |                                                                  |                |     |     |     |    |                       |
|          |          |                                                           |       |                                                                                                                                  |                                                                  |                |     |     |     |    |                       |

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

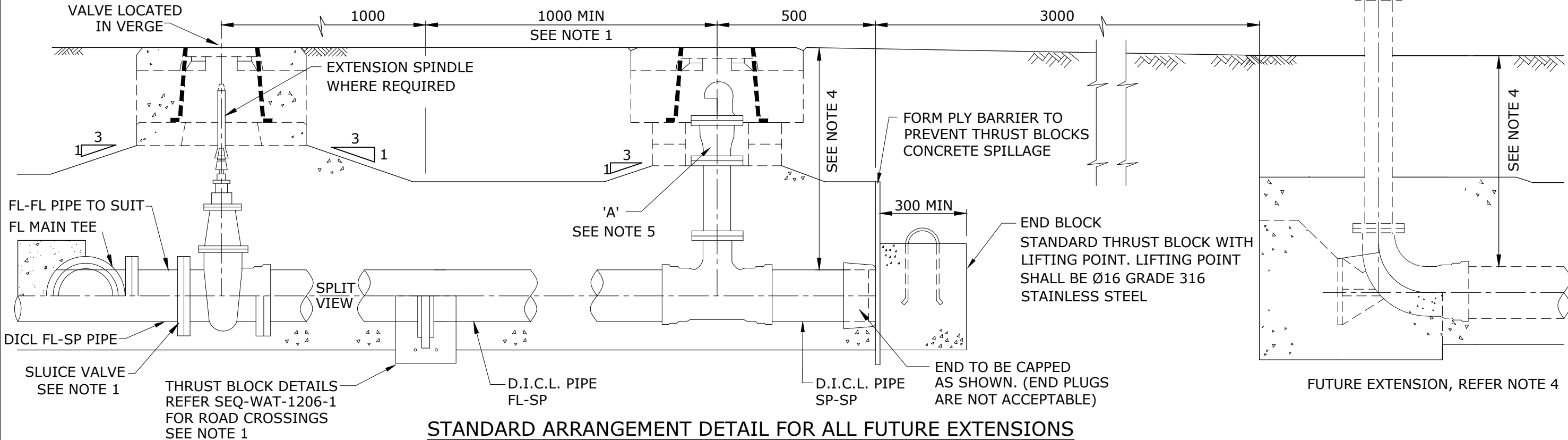
NOTES

- 1. FUTURE EXTENSIONS THAT CROSS A ROADWAY SHALL PROVIDE THE FL-FL VALVE TO THE FL MAIN TEE AND SHALL THRUST RESTRAIN THE VALVE AS SHOWN FOR A SOC-SOC VALVE IN SEQ-WAT-1206-1.
- 2. FOR PE PIPES REFER TO SEQ-WAT-1102-1 AND 1105-1.
- 3. HYDRANT DETAILS REFER TO SEQ-WAT-1302-1.
- 4. INSTALLATION TOLERANCE FOR FUTURE EXTENSION MAIN IS 200 HORIZONTAL AND 150 VERTICAL.
- 5. HYDRANT SPACING SHALL COMMENCE FROM HYDRANT 'A'.
- 6. FOR TRUNK MAINS WITHOUT PERMANENT HYDRANTS, THE DESIGN SHALL NOMINATE THE FITTING ASSEMBLIES REQUIRED FOR COMMISSIONING OF THE FUTURE EXTENSION AND THEIR STATUS FOLLOWING LIVE CONNECTION.
- 7. FOR QUU AREAS REFER SEQ-WAT-1303-2.
- 8. FOR UNITYWATER, HYDRANT SHALL BE LOCATED INLINE WITH SIDE BOUNDARY. FOR PERMANENT HYDRANT A HYDRANT TEE SHALL BE USED AND FOR TEMPORARY HYDRANT (REMOVED WITH NEXT STAGE EXTENSION OR WATER MAIN) A DUCKS FOOT HYDRANT SHALL BE USED. ANY VALVE REQUIRED ON THIS LEG OF WATER MAIN SHALL HAVE THE VALVE LOCATED BACK ADJACENT TO THE PREVIOUS TEE BRANCH OF THE WATER MAIN.

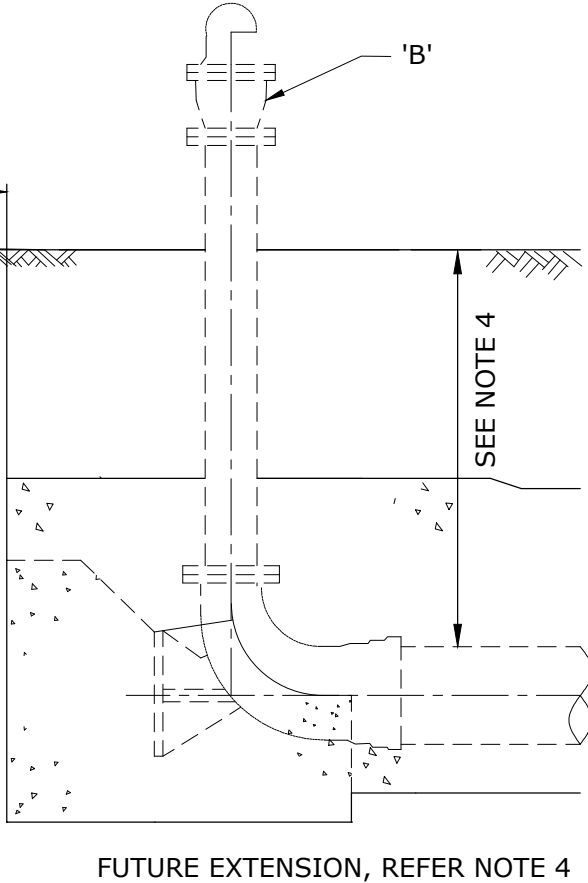


VALVES AND HYDRANTS STRADDLE SIDE BOUNDARY TO AVOID DRIVEWAYS  
SEE NOTE 8

TYPICAL ARRANGEMENT  
(REFER NOTE 7)



CONSTRUCTION HYDRANT 'B', RISER AND BEND FOR CONTRACTOR COLLECTION FOLLOWING LIVE CONNECTION.



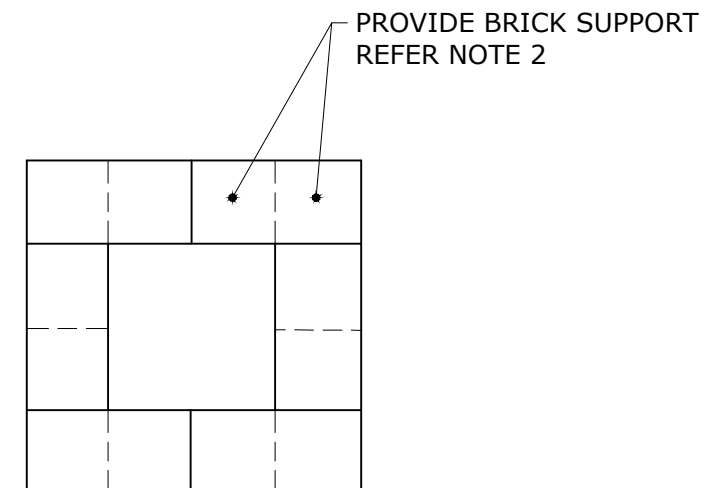
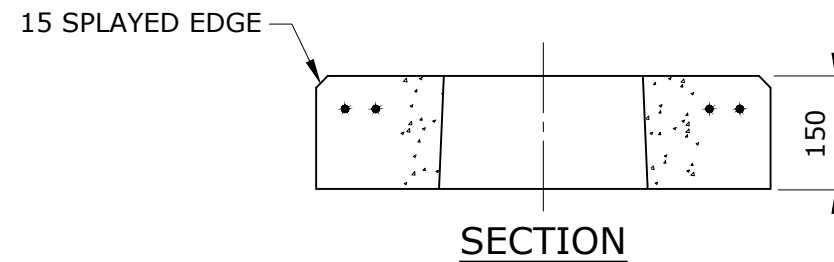
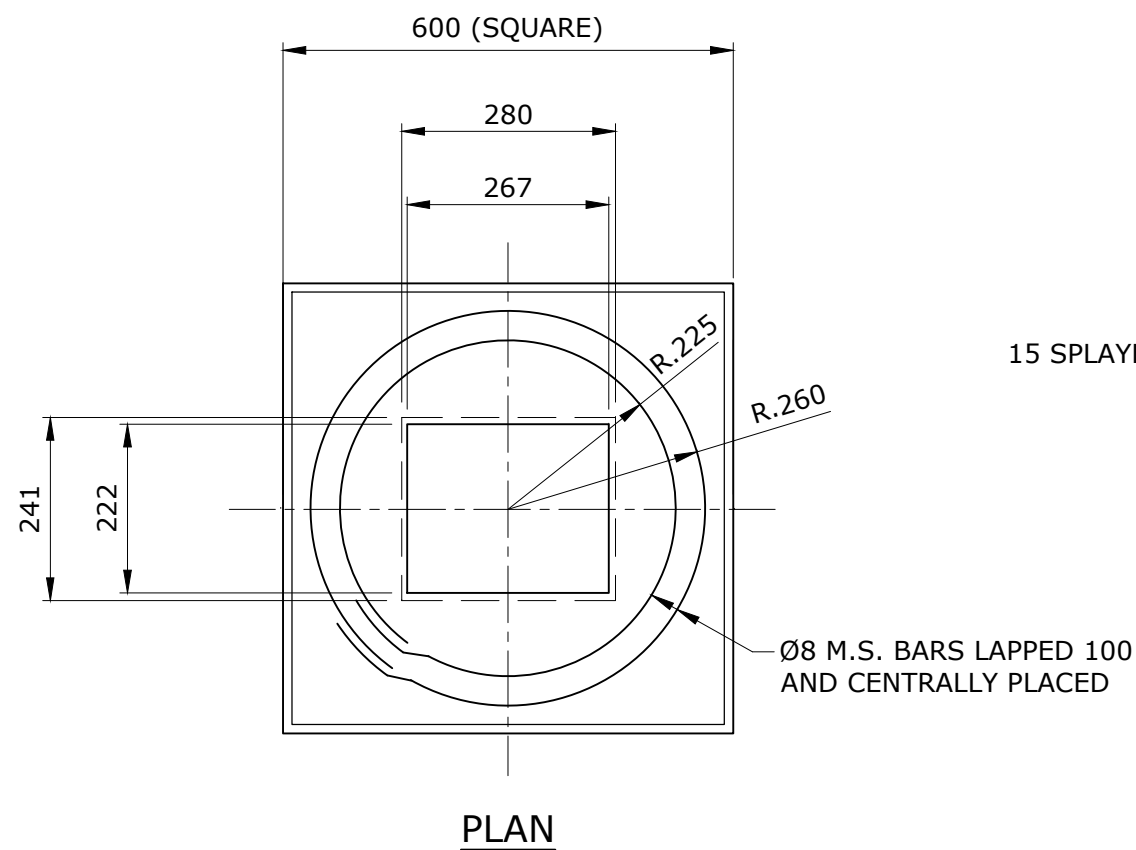
| REV. No. | DATE     | DESCRIPTION                                                     | AUTH. |
|----------|----------|-----------------------------------------------------------------|-------|
|          |          |                                                                 |       |
|          |          |                                                                 |       |
|          |          |                                                                 |       |
| B        | 13/08/18 | REMOVED TAPPING POINT ON HYDRANT. ADDED END OF LINE REQUIREMENT |       |

SEQ WATER  
SERVICE PROVIDERS

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

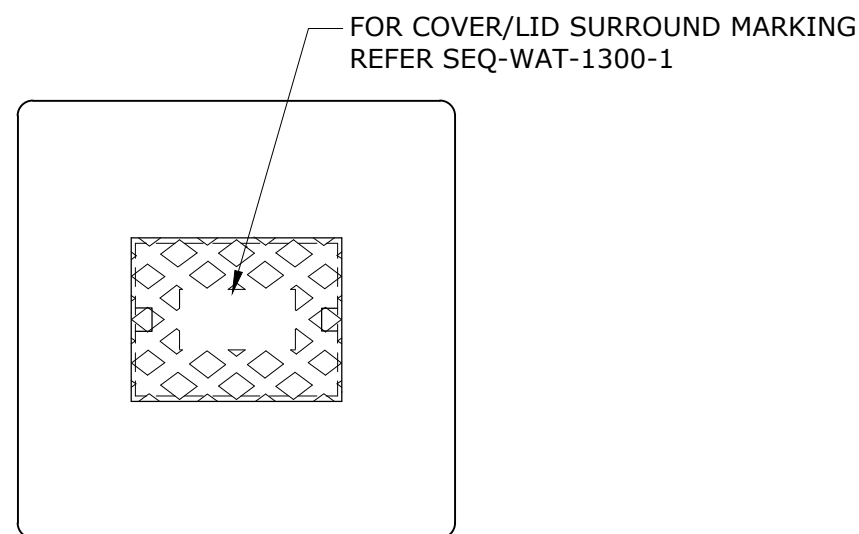
WATER SUPPLY STANDARD DRAWING  
TYPICAL VALVE AND  
HYDRANT INSTALLATION  
FUTURE EXTENSION INSTALLATION

|                |     |     |                |                       |
|----------------|-----|-----|----------------|-----------------------|
| CoGC           | LCC | RCC | <del>QUU</del> | UW                    |
| DRAWING No.    |     |     |                | VERSION               |
| SEQ-WAT-1303-1 |     |     |                | B                     |
| NOT TO SCALE   |     |     |                | ORG DATE:<br>1/1/2013 |



BRICK SUPPORT LAYOUT

PRECAST CONCRETE SURROUND  
AND SUPPORT DETAILS



SURFACE FITTING ARRANGEMENT

NOTES

1. BOTH PRECAST CONCRETE SURROUND AND BRICK SUPPORT DETAILS SHOWN ARE ACCEPTABLE.
2. BRICK SUPPORTS SHALL BE A MINIMUM TWO COURSES AND LAID DRY OVER THE BEDDING MATERIAL. APPLY BUILDING SEALANT OR SIMILAR TO BOND BRICKS TOGETHER AND TO THE VALVE/HYDRANT BOX.
3. FOR HYDRANTS AND FLUSHING POINTS THE CONCRETE SURROUND AND LID SHALL BE PAINTED IN ACCORDANCE WITH THE COLOUR CODE SHOWN ON SEQ-WAT-1300-1.
4. FOR VALVES AND OTHER FITTINGS THE CONCRETE SURROUND AND LID SHALL BE PAINTED WITH APPROVED REFLECTIVE PAINT IN ACCORDANCE WITH THE COLOUR CODE SHOWN ON SEQ-WAT-1300-1.
5. CONCRETE TO BE GRADE N25.
6. DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

| REV. No. | DATE     | DESCRIPTION                                          | AUTH. | SEQ WATER<br>SERVICE PROVIDERS                                                             | WATER SUPPLY STANDARD DRAWING                                                                           | CoGC           | LCC | RCC | QUU | UW |                       |
|----------|----------|------------------------------------------------------|-------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------|-----|-----|-----|----|-----------------------|
|          |          |                                                      |       |                                                                                            | TYPICAL SURFACE FITTING INSTALLATION<br>VALVE AND HYDRANT SURFACE BOXES<br>SUPPORT AND SURROUND DETAILS | DRAWING No.    |     |     |     |    | VERSION               |
|          |          |                                                      |       |                                                                                            |                                                                                                         | SEQ-WAT-1306-1 |     |     |     |    | C                     |
|          |          |                                                      |       |                                                                                            |                                                                                                         |                |     |     |     |    |                       |
| C        | 17/12/18 | AMENDED PLAN AND SURFACE FITTING ARRANGEMENT DETAIL. |       |                                                                                            |                                                                                                         | NOT TO SCALE   |     |     |     |    | ORG DATE:<br>1/1/2013 |
| B        | 16/07/15 | AMENDED CONCRETE VALVE/HYDRANT LID DETAILS.          |       |                                                                                            |                                                                                                         |                |     |     |     |    |                       |
|          |          |                                                      |       | WORK PRACTICES MUST COMPLY WITH ALL APPLICABLE<br>OCCUPATIONAL HEALTH & SAFETY LEGISLATION |                                                                                                         |                |     |     |     |    |                       |

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