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CLAUSE 4.6 VARIATION REQUEST

*State Environmental Planning
Policy (Housing for Seniors or
People with a Disability) 2004*
– Cl 26(2) Location and
Access to Facilities

461-473 Pacific Highway,
Asquith

Prepared for

CHINESE AUSTRALIAN SERVICES SOCIETY LIMITED

4 August 2020

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Jacqueline Parker
Senior Consultant	Erin Dethridge
Project Code	SA7013
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1. INTRODUCTION

This Clause 4.6 Variation Request (the Request) has been prepared on behalf of the Chinese Australian Services Society (the Applicant) and accompanies an amended Development Application (DA) for the construction of a seniors living development at 461-473 Pacific Highway, Asquith (the site).

On 11 February 2019, the Sydney North Planning Panel (Panel) considered a DA for a seniors living development on the site. At the request of the Applicant, the Panel deferred the DA to allow the Applicant and Council to resolve key issues with the application. This Request specifically responds to the Record of Deferral, which states that the Panel is not in a position to approve the application in the absence of a Clause 4.6 Variation Request in relation to clause 26 of *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* (Seniors SEPP).

Clause 26 of the Seniors SEPP includes the site-related requirements for location and access to facilities to ensure that residents of the seniors housing accommodation have adequate access to:

- *“shops, bank service providers and other retail and commercial services that residents may reasonably require, and*
- *community services and recreation facilities, and*
- *the practice of a general medical practitioner.”*

For access to comply with the development standard, the above facilities and services must be either:

1. Accessible by means of a suitable access pathway within 400m of the site, or
2. A public transport service must be available to residents by means of a suitable access pathway within 400m of the site.

As outlined in the Amended Statement of Environmental Effects (SEE) prepared by Urbis and dated August 2020, the required public transport services to satisfy clause 26(2)(b) of the Seniors SEPP are available between the site and Hornsby Town Centre. Unfortunately, the footpath to the bus stop on the southern side of Mills Avenue (180m from the site) requires reconstruction in association with a recently completed residential flat building development at the corner of Mills Ave and Pacific Highway (457-459 Pacific Highway).. It is expected that this footpath will be delivered by that developer prior to the issue of an occupation certificate (OC) for the proposed seniors living development at the subject site.

If the footpath has not been delivered by the adjacent development prior to OC for the subject site, the Applicant intends to provide a private bus service for residents to access the local facilities and services at Hornsby Town Centre until such time as the footpath is completed. This alternate access arrangement is considered to adequately accommodate the needs of residents until footpath works are completed, resulting in the provision of a compliant access pathway to local bus services. It is noted that if the footpath was present, this Request would not be required.

This Request seeks an exemption from the strict application of the development standard contained in clause 26 of the Seniors SEPP, specifically clause 26(2)(b):

there is a public transport service available to the residents who will occupy the proposed development—

(i) that is located at a distance of not more than 400 metres from the site of the proposed development and the distance is accessible by means of a suitable access pathway, and

(ii) that will take those residents to a place that is located at a distance of not more than 400 metres from the facilities and services referred to in subclause (1), and

(iii) that is available both to and from the proposed development at least once between 8am and 12pm per day and at least once between 12pm and 6pm each day from Monday to Friday (both days inclusive),

The variation request is made pursuant to clause 4.6 of *Hornsby Local Environmental Plan 2013* (HLEP).

The following sections of the report include:

- **Section 2:** description of the site, local context and planning context, including key features relevant to the proposed variation.
- **Section 3:** brief overview of the proposed development as outlined in further detail within the SEE and accompanying drawings.
- **Section 4:** identification of the development standard which is proposed to be varied, including the extent of the contravention.
- **Section 5:** outline of the relevant assessment framework for the variation in accordance with clause 4.6 of the HLEP 2013.
- **Section 6:** detailed assessment and justification of the proposed variation in accordance with the relevant guidelines and relevant planning principles and judgements issued by the Land and Environment Court.
- **Section 7:** summary of key findings and conclusion arising from the detailed assessment.

2. SITE CONTEXT

2.1. SITE DESCRIPTION

The site comprises the amalgamation of seven existing lots to provide a consolidated development site with a total area of approximately 5,050m². The street address and legal description of each land parcel is outlined in **Table 1**. An aerial photograph is provided at **Figure 1**.

Table 1 - Site details

Street Address	Legal Description
461 Pacific Highway, Asquith	Lot 15 of DP14476
463 Pacific Highway, Asquith	Lots 16 of DP 1003192
465 Pacific Highway, Asquith	Lots 17 of DP 1003192
467 Pacific Highway, Asquith	Lots 18 of DP 1003192
469 Pacific Highway, Asquith	Lots 19 of DP 1003192
471 Pacific Highway, Asquith	Lot 1 of DP 1003107
473 Pacific Highway, Asquith	Lot 1 of DP120748

Figure 1 - Aerial photograph



Source: Urbis

Key characteristics of the site include:

- The site has a total frontage to the Pacific Highway of approximately 115m and a maximum width of approximately 48m.
- The site has an average fall of 6% (2.5m) from the eastern boundary to western boundary.
- Each allotment is currently occupied by a single storey detached dwelling. The dwellings are constructed of brick or weatherboard cladding and sit within garden settings surrounded by a number of large mature trees.
- Vehicular access is currently provided to each allotment by individual vehicular crossovers to the Pacific Highway.
- A 1.83m wide stormwater drainage easement traverses the site along the southern boundary of 471 Pacific Highway.
- The Pacific Highway road verge along the subject site frontage generally grades downwards from the edge of the bitumen towards the site boundary. The road verge includes an existing table drain which collects and conveys stormwater from the upstream catchment to a sag point outside 471 Pacific Highway.

2.2. LOCAL CONTEXT

The site is located at the transition between the high-density residential developments (zoned R4) recently constructed to the south of Mills Avenue and the lower-density residential environment (zoned R3) to the immediate north. Surrounding development includes the following:

- **North:** The adjoining property at 475-477 Pacific Highway comprises nine, recently completed townhouses. The townhouses are three storeys, with the upper level provided in an attic arrangement. Vehicle access to the basement of that development is adjacent to the common boundary with the subject site. Further north, properties including single storey detached dwellings facing the Pacific Highway.
- **East:** Immediately east of the site is the Pacific Highway and the railway corridor. The Pacific Highway is a state classified road under the control of Transport for NSW.
- **West:** To the rear of the site is Asquith Oval, comprising a sports oval, amenities block and playground. Further west is the residential suburb of Hornsby Heights.
- **South:** To the south of the site is a small bushland reserve at the corner of Pacific Highway and Mills Avenue, and car parking for Asquith Oval. Land on the southern side of Mills Avenue comprises five and six storey residential developments, including 457-459 Pacific Highway, 447-451 Pacific Highway and 48-50 Lords Avenue.

The Hornsby Town Centre is located approximately 3.3km south of the site and includes a range of land uses including supermarkets, speciality retail, banks, post office, library, medical centres and recreation facilities. Public transport to the Hornsby Town Centre from the site is available by bus route 598, with bus stops located in Mills Avenue.

2.3. PLANNING CONTEXT

Development consent DA/723/2016 relates to 457-459 Pacific Highway, Asquith and was approved on 2 December 2016 for a residential flat building comprising 32 units. The consent for this development required the following prior to the issue of a construction certificate:

18 Road works

f) Council's standard 100 mm thick 1.2m wide concrete footpath shall be designed and constructed across the Mills Avenue frontage of the site on Council's standard alignment. Unpaved verge areas are to be topsoiled and turfed.

19 Bus stop

a) The bus stop on Mills Avenue Road adjacent to the development is to be upgraded to an accessible bus zone with bus shelter and concrete pad in accordance with Council's Sketch Plan, HSC Bus Shelter, which is attached subject to referral to the Local Traffic Committee; and

b) The existing bus stop at the frontage of the proposed development in Mills Avenue is to be upgraded to a 20m bus zone subject to LTC referral;

c) Installation of regulatory "No Stopping" signs 10m from the corner of the proposed development (intersection of Mills Avenue and Pacific Highway) subject to LTC referral.

Whilst the development at 457-459 Pacific Highway, Asquith has been completed (and is occupied), the footpath and bus shelter on the southern side of Mills Avenue have not been constructed as at 22 July 2020 (refer **Figure 2**). Following discussions with Council officers, Urbis understands the design of the proposed works are still being settled between Council and the Applicant for D723/2016. Council has not been able to provide an approximate timeframe for the proposed works at this stage. Based on the Public Domain Works Plans available on Council's DA Tracker for D723/2016 (Ref: ACE161351 dated 8 March 2019), the proposed footpath will satisfy the gradient requirements at clause 26(3) of the Seniors SEPP (refer **Appendix A**).

Figure 2 – Photographs of 457-459 Pacific Highway's Mills Ave frontage (taken 22 July 2020)



Picture 1 – Completed development



Picture 2 – Temporary bus stop

In the absence of this footpath, the proposal cannot access the public transport service by means of a suitable access pathway. Clause 26(4)(a) states that a 'suitable access pathway' *"is a path of travel by means of a sealed footpath or other similar and safe means that is suitable for access by means of an electric wheelchair, motorised cart or the like"*.

It is noted that a bus stop known as 'Mills Avenue, Asquith' has been established along the Mills Ave frontage of 457-459 Pacific Highway and is located within 180m of the subject site. This stop is serviced by bus route 598 and the frequency of the bus services satisfy the requirements of clause 26(b)(iii).

3. PROPOSED DEVELOPMENT

This Request has been prepared to accompany an amended DA for the construction of a seniors living development. The amended proposal is a result of comprehensive consultation with Council and its urban design consultant, GMU.

A detailed description of the proposed development is provided in the SEE prepared by Urbis and dated August 2020. The proposal is also detailed within the architectural plans prepared by Calder Flower Architects that form part of the DA.

The proposed development comprises:

- Demolition of all existing structures on site.
- **Residential Aged Care Facility (RACF)**
 - Construction of a three-storey building providing 97 rooms with communal dining, lounge, treatment areas and open space.
 - Basement level accommodating 30 car parking spaces and one ambulance bay, laundry, kitchen, storage, garbage storage room and mechanical services space.
- **Independent Living Units (ILUs)**
 - Construction of a three-storey building comprising 11 ILUs (2 x one bedroom, 9 x two bedrooms), communal lounge and open spaces.
 - Basement level accommodating six car parking spaces, garbage storage space, and bulky goods waste storage.
- Removal of seven vehicle crossovers and construction of a single new vehicular access point from the Pacific Highway.
- Construction of an at-grade waste hardstand area located along Pacific Highway.
- Removal of 46 trees and site landscaping works.
- Relocation of the existing easement to adjacent the northern boundary of the site.

A numerical overview of the proposal is provided in **Table 2** and a perspective of the proposal as viewed from the south-east is provided in **Figure 3**.

Table 2 - Numerical overview

Element	Proposed Development
Site Area	5,050m ²
Total GFA	5,274m ²
Total FSR	1.03:1
Minimum Building Setbacks (Ground Level)	Pacific Highway (east): 7.51m North: 3.03m South: 3.07m West: 5.62m
Building Heights (maximum)	11.64m
Total Landscaped Area	2,720m ² (53.8%)

Element	Proposed Development
Total Deep Soil Zone	1,986m ² (39.3%)

Figure 3 – Perspective from Pacific Highway, looking north-west



Source: Calder Flower Architects

4. VARIATION TO DEVELOPMENT STANDARD

This section of the report identifies the development standard proposed to be varied, including the extent of the contravention. A detailed justification for the proposed variation is provided in **Section 6** of the report.

4.1. CLAUSE 26 – LOCATION AND ACCESS TO FACILITIES

Clause 26 of the Seniors SEPP stipulates a development standard that must be satisfied prior to a consent authority granting development consent. This Request specifically seeks a variation to clause 26(2)(b), which stipulates the following:

“(2)(b) in the case of a proposed development on land in a local government area within the Greater Sydney (Greater Capital City Statistical Area)—there is a public transport service available to the residents who will occupy the proposed development—

(i) that is located at a distance of not more than 400 metres from the site of the proposed development and the distance is accessible by means of a suitable access pathway, and

(ii) that will take those residents to a place that is located at a distance of not more than 400 metres from the facilities and services referred to in subclause (1), and

(iii) that is available both to and from the proposed development at least once between 8am and 12pm per day and at least once between 12pm and 6pm each day from Monday to Friday (both days inclusive),

and the gradient along the pathway from the site to the public transport services (and from the public transport services to the facilities and services referred to in subclause (1)) complies with subclause (3)...”

“(3) For the purposes of subclause (2) (b) and (c), the overall average gradient along a pathway from the site of the proposed development to the public transport services (and from the transport services to the facilities and services referred to in subclause (1)) is to be no more than 1:14, although the following gradients along the pathway are also acceptable—

(i) a gradient of no more than 1:12 for slopes for a maximum of 15 metres at a time,

(ii) a gradient of no more than 1:10 for a maximum length of 5 metres at a time,

(iii) a gradient of no more than 1:8 for distances of no more than 1.5 metres at a time.”

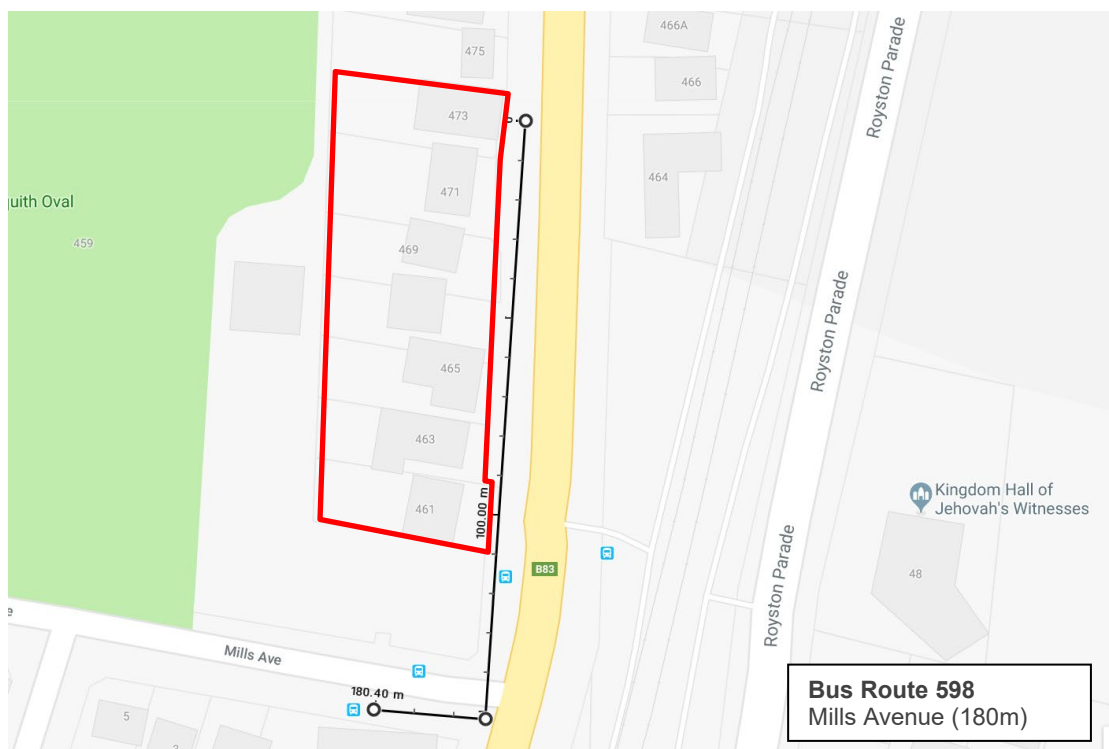
For the purposes of subclause (2)(b)(i) a **suitable access pathway** is “a path of travel by means of a sealed footpath or other similar and safe means that is suitable for access by means of an electric wheelchair, motorised cart or the like...”

4.2. EXTENT OF CONTRAVENTION

Having regard to the provisions of clause 26 outlined in **Section 4.1** above, the proposal is compliant with the following requirements:

1. There are bus stops within 400m of the site, which are serviced by bus route 598 and provide transport to/from the site and Hornsby Town Centre. The closest stops providing access to/from Hornsby Town Centre are located on the southern side of Mills Avenue, approximately 180m from the site (refer **Figure 4**) and in line with the subject site's southern boundary on Pacific Highway.

Figure 4 - Distance to Public Transport – Bus Stops on Mills Avenue



Source: Google Maps and Urbis

2. Hornsby Town Centre includes supermarkets, speciality retail, banks, post office, library, medical centres and recreation facilities, which are all located within 400m of the bus stop for route 598.
3. Calder Flower Architects have confirmed that the existing sealed footpath along the Pacific Highway will meet the Seniors SEPP clause 26(3) requirement and have a gradient of no more than 1:14. A Longitudinal Section Plan is provided at **Appendix B**.
4. Based on the Public Domain Works Plans available for D723/2016 (Ref: ACE161351 dated 8 March 2019), the proposed design of the footpath to the bus stop on the southern side of Mills Avenue will satisfy the gradient requirements at clause 26(3) of the Seniors SEPP (refer **Appendix A**).
5. Bus route 598 between the site and Hornsby Town Centre satisfies the frequency requirements of clause 26(2) as the following minimum services are available:
 - One daily service between 8am and 12pm Monday to Sunday in each direction.
 - One daily service between 12pm and 6pm Monday to Friday in each direction.

Whilst the printed timetable (effective 6 July 2020) available on the TfNSW website (refer **Figure 5**) makes it look like there are no morning services available to 'Asquith Park, Mills Avenue', the service operates in two directions depending on the time of day and does not list all stops. During the morning period for each day of the week, the timetable indicates that services stop at 'Pacific Highway opp Mills Avenue'. This is further clarified by the use of the NSW Government's Trip Planner which shows all individual stops and confirms that the required services are available (refer Appendix C for example Sunday services) This stop is one immediately before the Mills Avenue stop proposed to be used by the development.

Figure 5 – Printed Timetable for Bus Route 598 – Sunday Example

<div> <div>598</div> <div>Hornsby to Asquith (Loop Service)</div> <div>B</div> </div>						
Sunday & Public Holidays						
Hornsby Station	09:00	11:00	13:00	15:00	17:00	
Lockwood St at Olive St, Asquith	09:04	11:04	–	–	–	
Carrington Rd after Silvia St, Hornsby	–	–	13:02	15:02	17:02	
Ethel St opp Rosamond St, Hornsby	–	–	13:07	15:07	17:07	
Asquith Park, Mills Ave, Asquith	–	–	13:12	15:12	17:12	
Mt Colah Seventh - Day Adventist Church, Cowan Rd, Mount Colah	–	–	13:14	15:14	17:14	
Kingdom Hall of Jehovah's Witnesses, Royston Pde, Asquith	–	–	13:17	15:17	17:17	
Asquith Public School, Royston Pde, Asquith	–	–	13:18	15:18	17:18	
Royston Pde opp Asquith Public School, Asquith	09:09	11:09	–	–	–	
Royston Pde opp Queens Rd, Asquith	09:10	11:10	–	–	–	
Cowan Rd opp Mt Colah Seventh - Day Adventist Church, Mount Colah	09:14	11:14	–	–	–	
Pacific Hwy opp Mills Ave, Asquith	09:18	11:18	–	–	–	
Ethel St after Ida St, Hornsby	09:22	11:22	–	–	–	
Carrington Rd opp Silvia St, Hornsby	09:24	11:24	–	–	–	
Lockwood St opp Olive St, Asquith	–	–	13:20	15:20	17:20	
Hornsby Station	09:27	11:27	13:27	15:27	17:27	

Source: Transport for NSW

Having regard to the above, the site meets the location and access requirements of clause 26 with the exception of the suitable access pathway to the bus stop along the southern side of Mills Avenue. As highlighted in **Section 2.3**, the sealed footpath is to be reconstructed in association with the development at 457-459 Pacific Highway.

If the footpath has not been delivered by the adjacent development prior to OC for the seniors living development at the subject site, the Applicant intends to provide a private bus service for residents to access the local facilities and services at Hornsby Town Centre until such time as the footpath is completed. The private bus service will include (at a minimum):

- One daily service between 8am and 12pm Monday to Sunday in each direction.
- One daily service between 12pm and 6pm Monday to Friday in each direction.

5. RELEVANT ASSESSMENT FRAMEWORK

Clause 4.6 of HLEP 2013 includes provisions that allow for exceptions to development standards in certain circumstances. The objectives of clause 4.6 of HLEP 2013 are:

- (a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,*
- (b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.*

Clause 4.6 provides flexibility in the application of planning provisions by allowing the consent authority to approve a DA that does not comply with certain development standards, where it can be shown that flexibility in the particular circumstances of the case would achieve better outcomes for and from the development.

In determining whether to grant consent for development that contravenes a development standard, clause 4.6(3) requires that the consent authority to consider a written request from the applicant that seeks to justify the contravention of the development by demonstrating:

- (a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
- (b) that there are sufficient environmental planning grounds to justify contravening the development standard.*

Clause 4.6(4)(a) requires the consent authority to be satisfied that the applicant's written request adequately addresses each of the matters listed in clause 4.6(3). The consent authority should also be satisfied that the proposed development will be in the public interest because it is consistent with the objectives of the standard and the objectives for development within the zone in which it is proposed to be carried out.

Clause 4.6(4)(b) requires the concurrence of the Secretary to have been obtained. In deciding whether to grant concurrence, subclause (5) requires that the Secretary consider:

- (a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
- (b) the public benefit of maintaining the development standard, and*
- (c) any other matters required to be taken into consideration by the Secretary before granting concurrence.*

The concurrence of the Secretary can be assumed to have been granted for the purpose of this Request in accordance with the Department of Planning *Circular PS 18–003 Variations to development standards*, dated 21 February 2018. This circular is a notice under section 64(1) of the *Environmental Planning and Assessment Regulation 2000* and provides for assumed concurrence. A consent granted by a consent authority that has assumed concurrence is as valid and effective as if concurrence had been given.

The Secretary can be assumed to have given concurrence if the matter is determined by an independent hearing and assessment panel or a Sydney district or regional planning panel in accordance with the Planning Circular.

This Request demonstrates that compliance with the location and access requirement at clause 26 of the Seniors SEPP is unreasonable and unnecessary, that there are sufficient environmental planning grounds to justify the requested variation and that the approval of the variation is in the public interest because it is consistent with the development standard and zone objectives.

In accordance with clause 4.6(3), the applicant requests that the development standard at clause 26(2)(b) of the Seniors SEPP be varied.

6. ASSESSMENT OF CLAUSE 4.6 VARIATION

The following sections of the report provide a comprehensive assessment of the request to vary the development standard at clause 26 of the Seniors SEPP relating to location and access requirement.

Detailed consideration has been given to the following matters within this assessment:

- *Varying development standards: A Guide*, prepared by the Department of Planning and Infrastructure dated August 2011.
- Relevant planning principles and judgements issued by the NSW Land and Environment Court.

The following sections of the report provide detailed responses to the key questions required to be addressed within the above documents and clause 4.6 of the HELP 2013.

6.1. IS THE PLANNING CONTROL A DEVELOPMENT STANDARD THAT CAN BE VARIED? – CLAUSE 4.6(2)

The location and access to facilities requirement prescribed by clause 26 of the Seniors SEPP, as it pertains to the gradient and design of a 'suitable access pathway' is a development standard capable of being varied under clause 4.6(2) of HLEP 2013.

The proposed variation is not excluded from the operation of clause 4.6(2) as it does not comprise any of the matters listed within clause 4.6(6) or clause 4.6(8) of HLEP 2013.

6.2. IS COMPLIANCE WITH THE DEVELOPMENT STANDARD UNREASONABLE OR UNNECESSARY IN THE CIRCUMSTANCES OF THE CASE? – CLAUSE 4.6(3)(A)

Historically, the most common way to establish whether a development standard was unreasonable or unnecessary was by satisfying the first method set out in *Wehbe v Pittwater Council* [2007] NSWLEC 827. This method requires the objectives of the standard be achieved despite the non-compliance with the standard.

This was recently re-affirmed by the Chief Judge in *Initial Action Pty Ltd v Woollahra Municipal Council* [2018] NSWLEC 118 at [16]-[17]. Similarly, in *Randwick City Council v Micaul Holdings Pty Ltd* [2016] NSWLEC 7 at [34] the Chief Judge held that "*establishing that the development would not cause environmental harm and is consistent with the objectives of the development standards is an established means of demonstrating that compliance with the development standard is unreasonable or unnecessary*".

This Request addresses the first method outlined in *Wehbe v Pittwater Council* [2007] NSWLEC 827. This method alone is sufficient to satisfy the 'unreasonable and unnecessary' requirement.

The Request also addresses the third method, that the underlying objective or purpose of the development standard would be undermined, defeated or thwarted if compliance was required with the consequence that compliance is unreasonable (*Initial Action* at [19] and *Linfield Developments Pty Ltd v Cumberland Council* [2019] NSWLEC 131 at [24]). Again, this method alone is sufficient to satisfy the 'unreasonable and unnecessary' requirement.

The Request also seeks to demonstrate the 'unreasonable and unnecessary' requirement is met because the burden placed on the community by not permitting the variation would be disproportionate to the non-existent or inconsequential adverse impacts arising from the proposed non-complying development. This disproportion provides sufficient grounds to establish unreasonableness (relying on comments made in an analogous context, in *Botany Bay City Council v Saab Corp* [2011] NSWCA 308 at [15]).

- ***The objectives of the standard are achieved notwithstanding non-compliance with the standard*** (the first method in *Wehbe v Pittwater Council* [2007] NSWLEC 827 [42]-[43])

The Seniors SEPP does not include specific objectives at clause 26 for the location and access to facilities requirements. Notwithstanding this, the objective is presumably to ensure that residents of seniors housing

accommodation have adequate and independent access to local services and facilities, recognising that these residents may no longer drive or have access to a car.

The site is located more than 400m to the local services and facilities and without the sealed footpath on the southern side of Mills Avenue, a suitable access pathway to public transport is not available. Until such time as the footpath is completed, the Applicant intends to supply a private bus service that will transport residents between the site and Hornsby Town Centre. The private bus service will be available at the minimum frequency required by clause 26(2)(b) including:

- One daily service between 8am and 12pm Monday to Sunday in each direction.
- One daily service between 12pm and 6pm Monday to Friday in each direction.

The public transport service will therefore be replaced with a private bus service, ensuring residents have the same level of access to facilities and services as intended by clause 26.

- **The underlying object or purpose would be undermined, if compliance was required with the consequence that compliance is unreasonable** (the third method in *Wehbe v Pittwater Council* [2007] NSWLEC 827 [42]-[43] as applied in *Linfield Developments Pty Ltd v Cumberland Council* [2019] NSWLEC 131 at [24])

Not relied upon.

- **The burden placed on the community (by requiring strict compliance with the standard) would be disproportionate to the (non-existent or inconsequential) adverse consequences attributable to the proposed non-compliant development** (cf *Botany Bay City Council v Saab Corp* [2011] NSWCA 308 at [15]).

Strict compliance with the development standard could defeat or thwart the achievement of underlying objectives of the control, consequentially creating an adversely disproportionate impact to the community.

Without a variation to the access requirements, the site would not be able to accommodate seniors housing as, for a temporary period, public transport may not be available by a suitable access pathway and the site is located more than 400m from the required facilities and services. This, in turn, will reduce the capacity for the site to support the well-being of the community by providing for the housing needs of its seniors.

The proposed variation to clause 26 will enable the development to:

- Accommodate a range of seniors housing within the site by providing beds within a RACF to cater for seniors who are in need of a high level of care and ILUs catering to seniors living independently.
- Accommodate seniors housing in an appropriate location that will not adversely impact on the scale and character of the low density residential areas in the LGA.
- Provide a feasible and appropriate alternative means of transport until such time that the sealed footpath along the southern side of Mills Avenue has been constructed.
- Provide future residents of the seniors housing accommodation with adequate and independent access to local facilities and services.

Overall, it is considered that strict compliance with the development standard is unreasonable and will result in the significant loss of accommodation for seniors within the locality.

6.3. ARE THERE SUFFICIENT ENVIRONMENTAL PLANNING GROUNDS TO JUSTIFY CONTRAVENING THE DEVELOPMENT STANDARD? – CLAUSE 4.6(3)(B)

The Land & Environment Court judgment in *Initial Action Pty Ltd v Woollahra Council* [2018] NSWLEC 2018, assists in considering whether there are sufficient environmental planning grounds to justify a variation from the development standard. Preston J observed:

“...in order for there to be 'sufficient' environmental planning grounds to justify a written request under clause 4.6, the focus must be on the aspect or element of the development that contravenes the development standard and the environmental planning grounds advanced in

the written request must justify contravening the development standard, not simply promote the benefits of carrying out the development as a whole; and

...there is no basis in Clause 4.6 to establish a test that the non-compliant development should have a neutral or beneficial effect relative to a compliant development”

There are sufficient environmental planning grounds to justify the proposed variation to the development standard, including the following:

- The proposal satisfies the general objectives in section 1.3 of the *Environmental Planning and Assessment Act 1979* in that it promotes the orderly and economic use and development of land and promotes good design and amenity of the built environment.
- The development achieves the underlying objective and intent of the development standard as a bus service to Hornsby Town Centre will still be fulfilled. As such, strict compliance with the development stand is not considered necessary.
- As soon as the footpath has been delivered, as required by an adjacent development, the access requirements of clause 26 will be satisfied and the private bus service will no longer be required. In this regard, if the footpath was already present (as indeed it should be as its provision is a pre-CC requirement for D723/2016), this Request would not be required.
- The proposal is consistent with aims and provisions of the Seniors SEPP, in accordance with which the DA has been submitted.
- The development is consistent with the objectives of the R3 Zone as set out in **Section 6.5** below.
- The proposed variation will not result in any unacceptable environmental impacts on the site, the adjoining public open spaces or the adjoining residential property.

In summary, there are sufficient environmental planning grounds to justify convening the development.

6.4. HAS THE WRITTEN REQUEST ADEQUATELY ADDRESSED THE MATTERS IN SUB-CLAUSE (3)? – CLAUSE 4.6(4)(A)(I)

Clause 4.6(4)(a)(i) states that development consent must not be granted for development that contravenes a development standard unless the consent authority is satisfied that the Applicant’s written request has adequately addressed the matters required to be demonstrated by subclause (3).

Each of the sub-clause (3) matters are comprehensively addressed in this written request, including a detailed consideration of whether compliance with a development standard is unreasonable or unnecessary in the circumstances of the case. The written request also provides sufficient environmental planning grounds, including matters specific to the proposal and the site, to justify the proposed variation to the development standard.

6.5. IS THE PROPOSED DEVELOPMENT IN THE PUBLIC INTEREST? – CLAUSE 4.6(4)(B)(II)

Clause 4.6(4)(a)(ii) states development consent must not be granted for development that contravenes a development standard unless the consent authority is satisfied the proposal will be in the public interest because it is consistent with the objectives of the development standard and the objectives for the zone.

The consistency of the development with the underlying objective of the development standard is demonstrated in **Section 6.4** above. The proposal is also consistent with the land use objectives that apply to the site under the HLEP 2013. The site is located within the R3 Medium Density Residential Zone and the proposed development is consistent with the relevant land use zone objectives as outlined in **Table 5** below.

Table 3 - Assessment of compliance with land use zone objectives

Objective	Assessment
<i>To provide for the housing needs of the community within a medium density residential environment.</i>	The RACF and ILUs will increase the supply of seniors housing within the locality, which is a housing type with a demonstrated need within the Hornsby LGA. The proposal will provide high-quality seniors housing within an attractive landscaped setting and proximate to public transport and services.
<i>To provide a variety of housing types within a medium density residential environment.</i>	The site is at the transition between the high-density residential buildings to the south and lower density residential properties to the north comprising townhouses and detached dwellings. The proposal will further increase the provision and diversity of housing within the area through the combination of a RACF and ILUs, allowing senior members of the Asquith community to 'age in place'. The various building forms proposed within the site will sit comfortably within the medium density context and provide a transition in building heights along the Pacific Highway.
<i>To enable other land uses that provide facilities or services to meet the day to day needs of residents.</i>	Not applicable, although the ancillary services (doctor and hairdresser) proposed within the site will provide a high level of amenity and meet the needs of future residents of the seniors housing accommodation.

The proposal is considered to be in the public interest as the development is consistent with the underlying objective of the development standard and the land use objectives of the zone.

6.6. HAS THE CONCURRENCE OF THE PLANNING SECRETARY BEEN OBTAINED? – CLAUSE 4.6(4)(B) AND CLAUSE 4.6(5)

Concurrence of the Secretary to the variation can be assumed in accordance with Department of Planning Circular PS 18–003 'Variations to development standards', dated 21 February 2018. This circular is a notice under 64(1) of the *Environmental Planning and Assessment Regulation 2000*.

The Secretary can be assumed to have given concurrence as the matter will be determined by the Sydney North Planning Panel in accordance with the Planning Circular.

The matters for consideration under clause 4.6(5) are considered below.

- **Clause 4.6(5)(a) – does contravention of the development standard raise any matter of significance for State or regional environmental planning?**

The proposed non-compliance with the access to facilities standard will not raise any matter of significance for State or regional environmental planning. It has been demonstrated that the proposed variation is appropriate based on the specific circumstances of the case and would be unlikely to result in an unacceptable precedent for the assessment of other development proposals.

- **Clause 4.6(5)(b) - is there a public benefit of maintaining the planning control standard?**

The proposed development achieves the underlying objectives and intent of the development standard and the land use zone objectives despite the technical non-compliance.

In the absence of a sealed footpath to the bus stop on the southern side of Mills Avenue, the proposal cannot provide residents with the required level of access to local facilities and services in accordance with clause 26(2) of the Seniors SEPP.

Refusal of the proposal on this basis is not in the public interest as the footpath design and approval is in-train and its construction is conditioned on D723/2016, and the proposal will result in a public benefit by the delivery of high-quality seniors housing, including residents requiring high level of care. It is further noted that the proposal will directly generate employment within the locality.

The assessment provided in the SEE has identified no adverse environmental impacts arising as a result of the proposal.

There is no material impact or benefit associated with strict adherence to the development standard and there is no compelling reason or public benefit derived from maintenance of the standard.

- **Clause 4.6(5)(c) – are there any other matters required to be taken into consideration by the Secretary before granting concurrence?**

Concurrence can be assumed, however, there are no known additional matters that need to be considered within the assessment of the clause 4.6 variation request prior to granting concurrence, should it be required.

7. CONCLUSION

For the reasons set out in this written request, strict compliance with the development standard at clause 26 of the Seniors SEPP is unreasonable and unnecessary in the circumstances of the case. Further, there are sufficient environmental planning grounds to justify the proposed variation and it is in the public interest to do so.

It is reasonable and appropriate to vary the development standard to the extent proposed for the reasons detailed within this submission and as summarised below:

- The proposal achieves the underlying objective of the development standard as provided in clause 26 of the Seniors SEPP and is consistent with the objectives of development within the R3 Medium Density Residential Zone.
- The alternate access arrangement to local services for residents of the seniors housing accommodation is considered to adequately accommodate the needs of residents until an adjacent development completes footpath works that result in a compliant access pathway to local bus services. As highlighted previously, if the footpath were present, this Request would not be required.
- The proposed development is compatible with the existing site context and is consistent with the desired future character of the site and locality.
- The proposal will deliver significant public benefits, including increased provision of seniors housing, allowing seniors members of the Asquith community to 'age in place'.

For the reasons outlined above, this Request is well-founded. The development standard is unnecessary and unreasonable in the circumstances, and there are sufficient environmental planning grounds that warrant contravention of the standard. In the circumstances of this case, flexibility in the application of the access to facilities development standard should be applied.

8. DISCLAIMER

This report is dated 4 August 2020 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Chinese Australian Services Society Limited (**Instructing Party**) for the purpose of Clause 4.6 Variation Request (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above

APPENDIX A PUBLIC DOMAIN WORKS PLANS FOR D723/2016

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D R A W I N G S C H E D U L E

DRAWING No.	DRAWING TITLE	REV
C00	GENERAL NOTES, LOCALITY PLAN & DRAWING SCHEDULE	G
C01	CIVIL WORKS LAYOUT PLAN	I
C02	PACIFIC HIGHWAY AND KERB RETURN – LONGITUDINAL SECTION	F
C03	MILLS AVENUE – LONGITUDINAL SECTION SHEET	D
C04	DRIVEWAY – LONGITUDINAL SECTION (CH 6.11)	D
C05	PACIFIC HIGHWAY – CROSS SECTIONS	E
C06	MILLS AVENUE – CROSS SECTIONS SHEET 1 OF 2	C
C07	MILLS AVENUE – CROSS SECTIONS SHEET 2 OF 2	C
C08	TYPICAL CROSS SECTIONS	E
C09	LINE MARKING AND TRAFFIC SIGN	H
C10	BUS TURNING TEMPALTE	F
C11	CONSTRUCTION NOTES AND DETAILS SHEET 1 OF 3	C
C12	CONSTRUCTION NOTES AND DETAILS SHEET 2 OF 3	E
C12.1	CONSTRUCTION NOTES AND DETAILS SHEET 3 OF 3	B
C13	PAYEMENT AND JOINTING PLAN	C
C14	STORMWATER CALCULATION AND PIT DETAILS SHEET	C



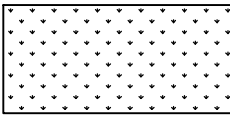

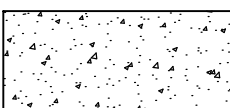


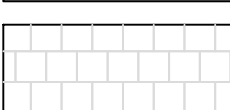



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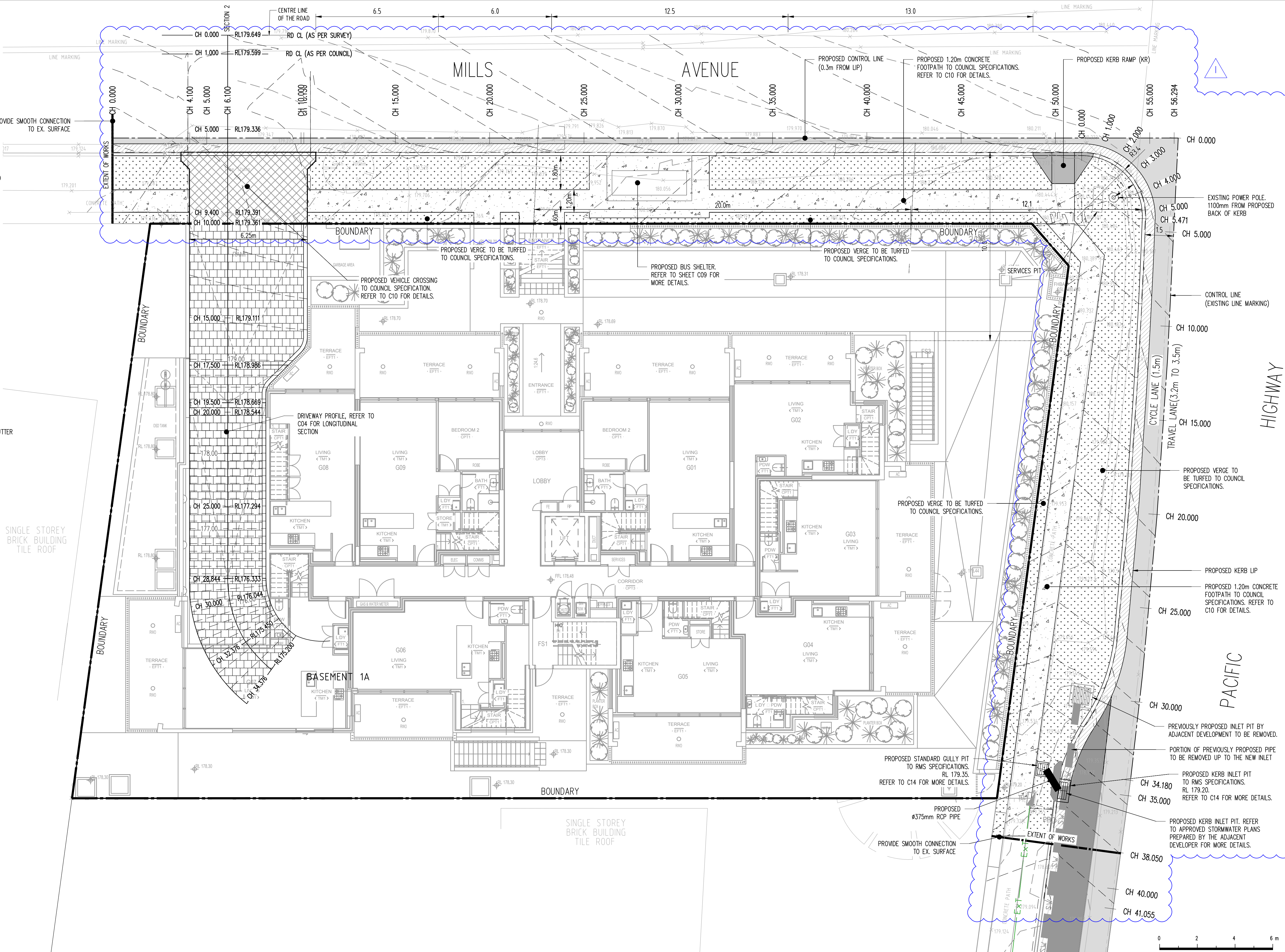
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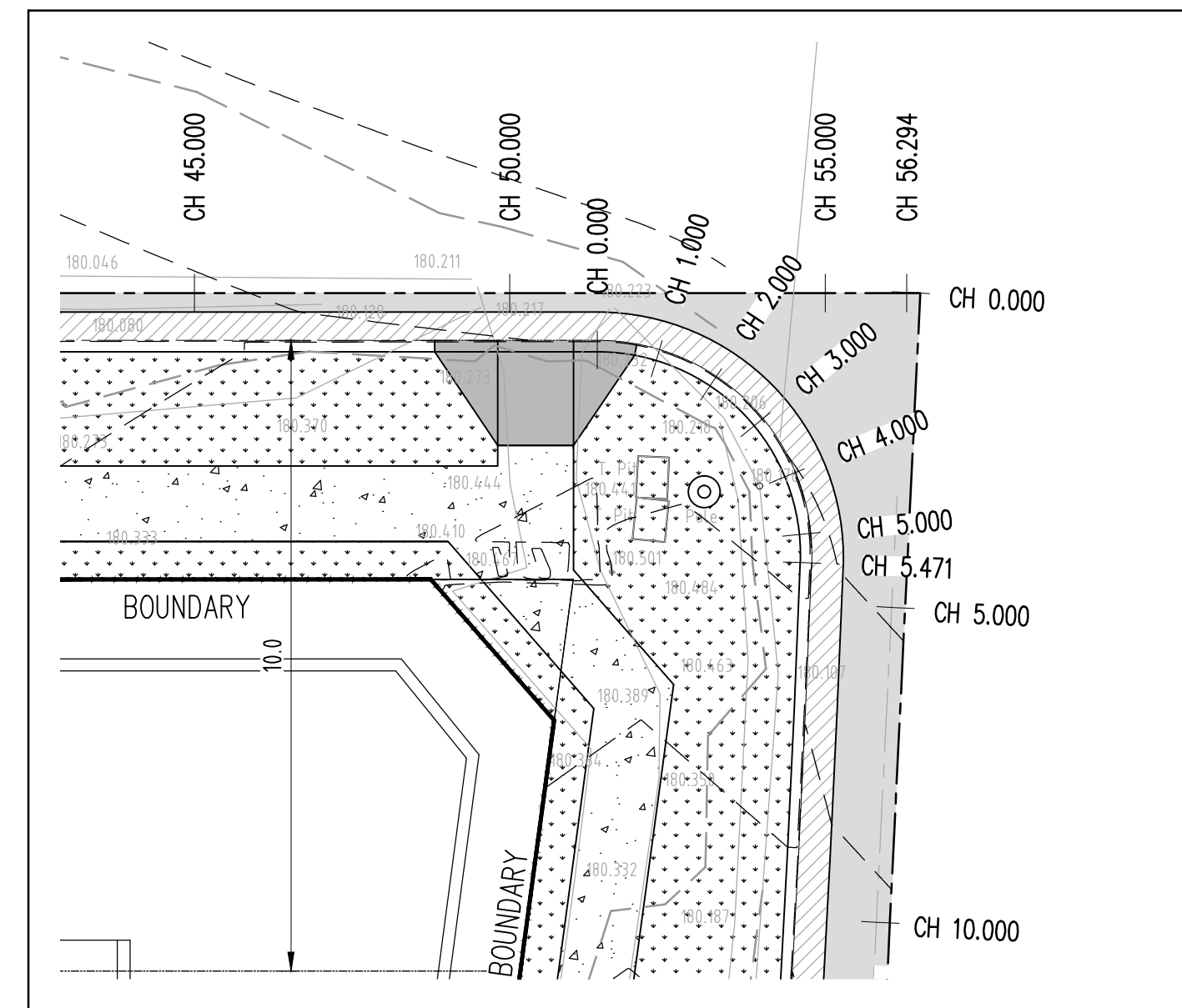
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— — — — —	EXISTING STORMWATER DRAINAGE
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— — — — —	EXISTING SEWER MAIN
— — — — —	EXISTING TELSTRA
— — — — —	EXISTING ELECTRICAL
— — — — —	EXISTING ELECTRICAL UNDERGROUND
— — — — —	EXISTING GAS
— — — — —	EXISTING OVERHEAD ELECTRICAL

	PROPOSED VERGE
	PROPOSED DRIVEWAY
	PROPOSED CONCRETE FOOTPATH
	PROPOSED ROAD PAVEMENT
	PROPOSED PARKING BAY (2.2m)
	PROPOSED DRIVEWAY HATCH
	PROPOSED ROLL TOP KERB AND GUTTER
	TREES TO BE RETAINED
	TREES TO BE REMOVED

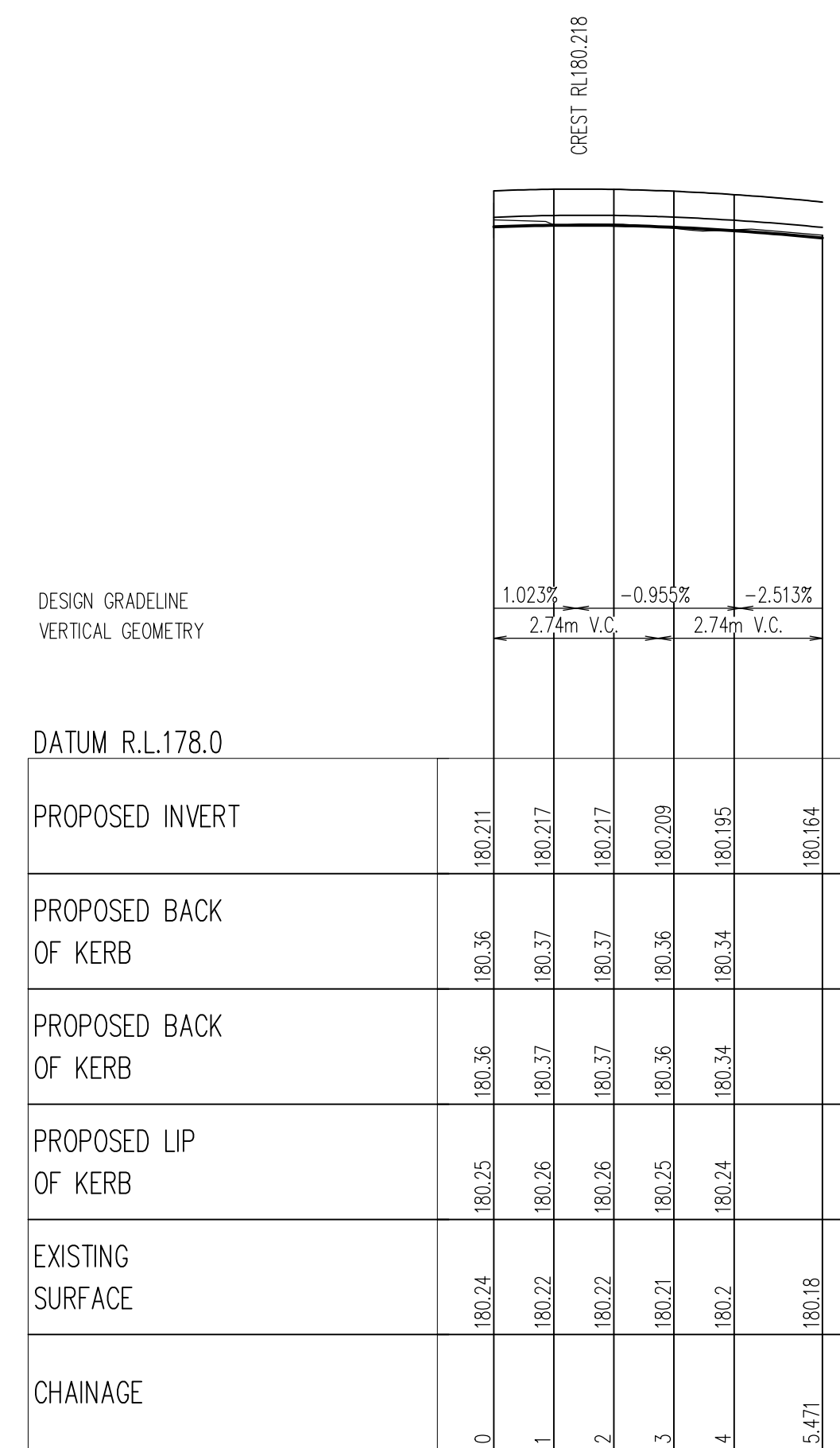
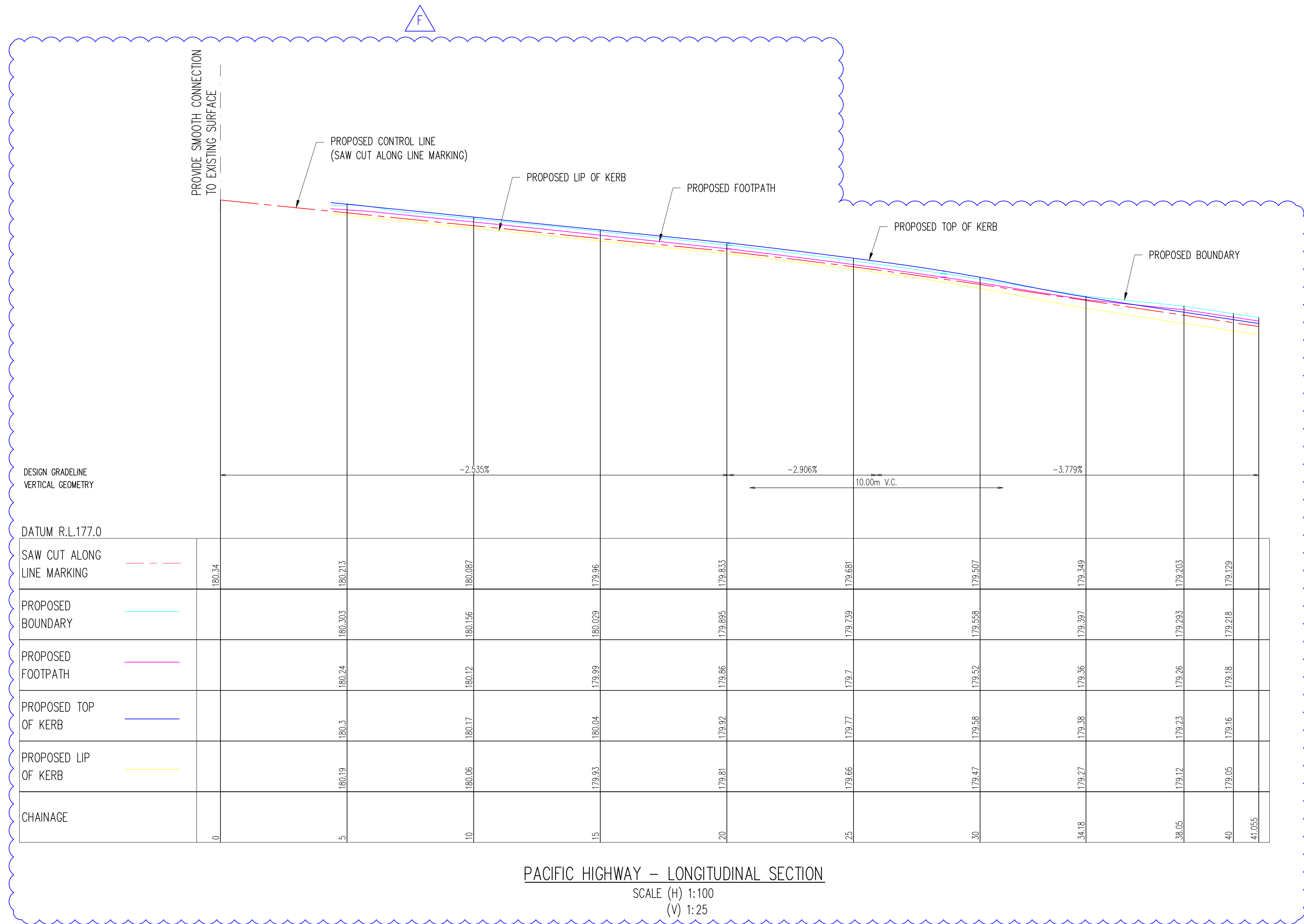
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TO MATCH PROPOSED SURFACE LEVELS.



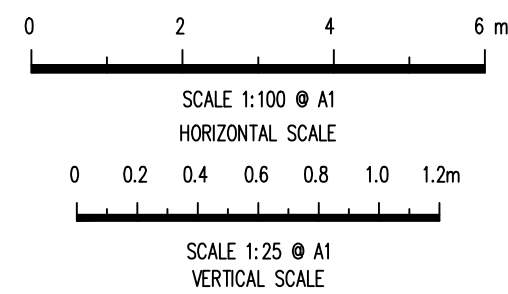
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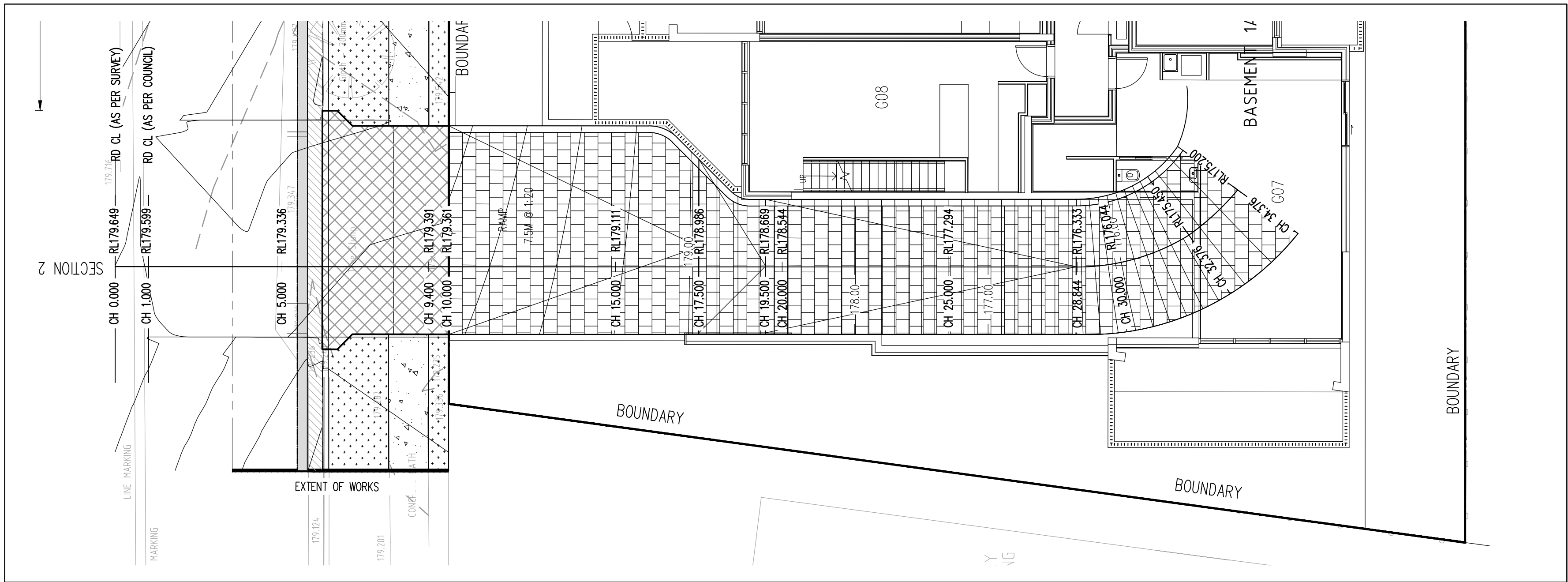


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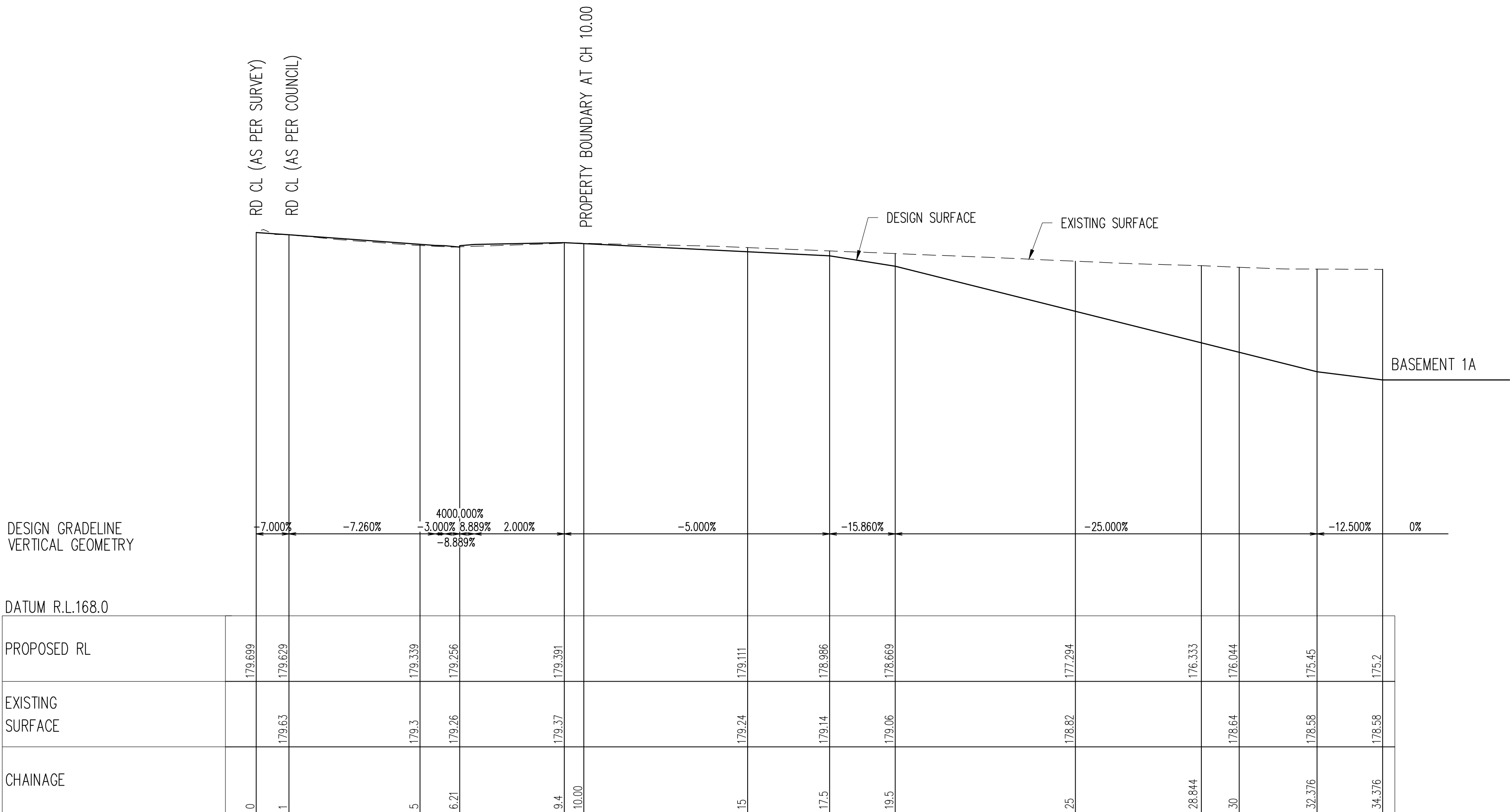


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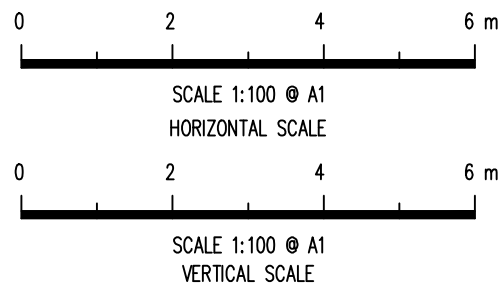


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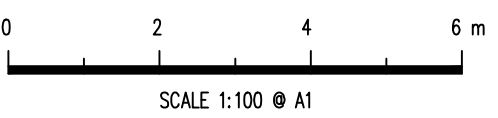
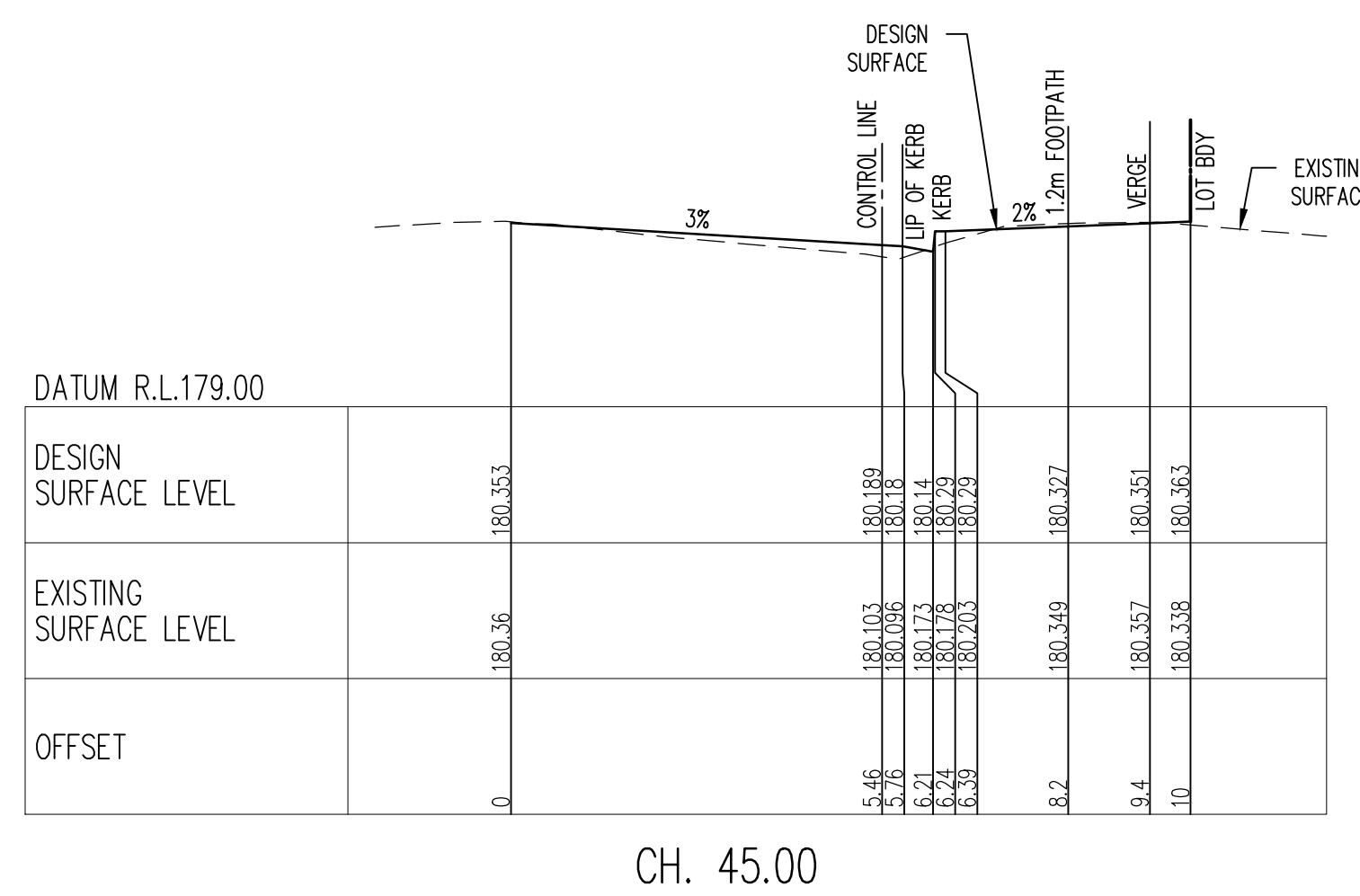
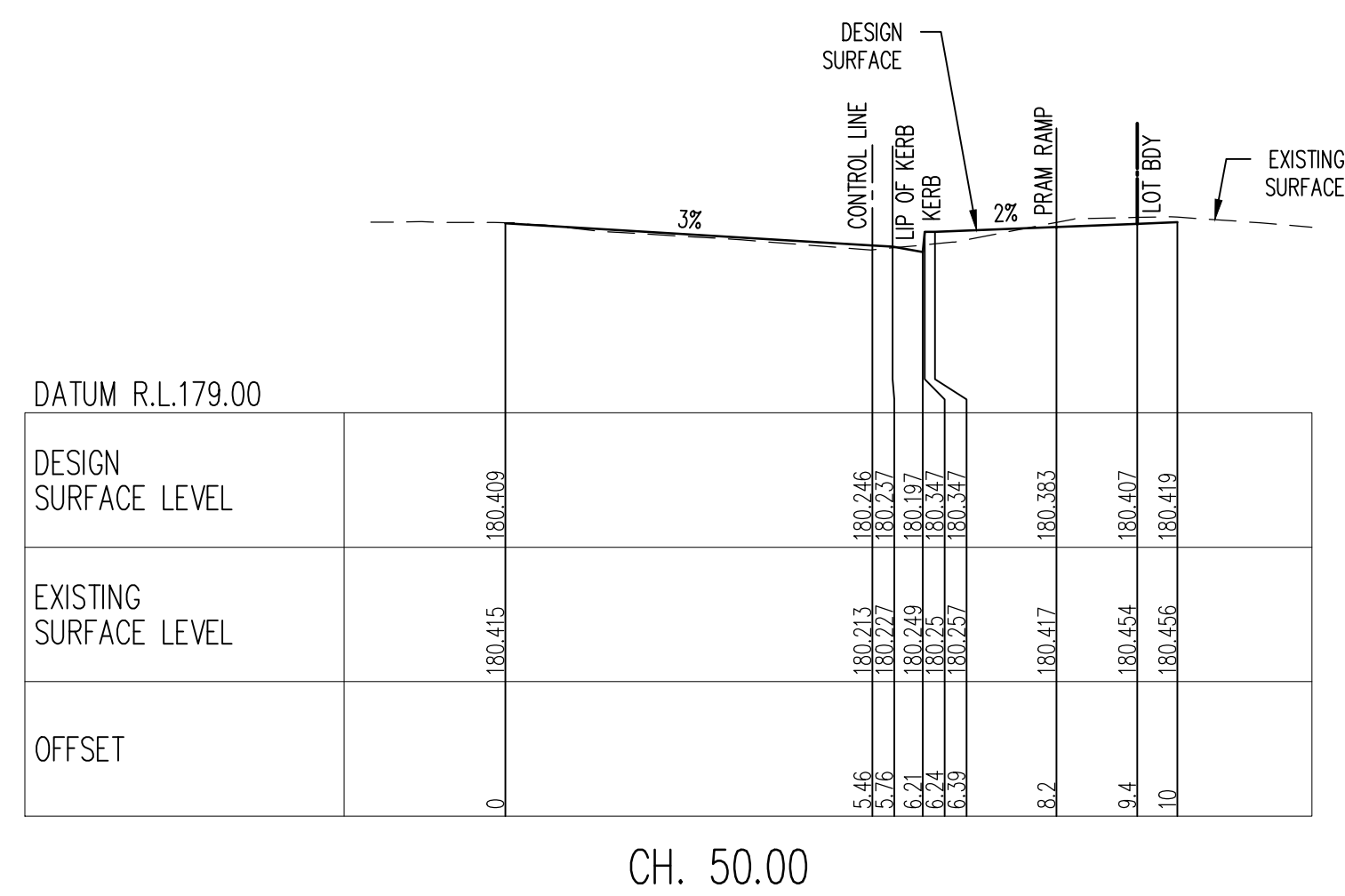
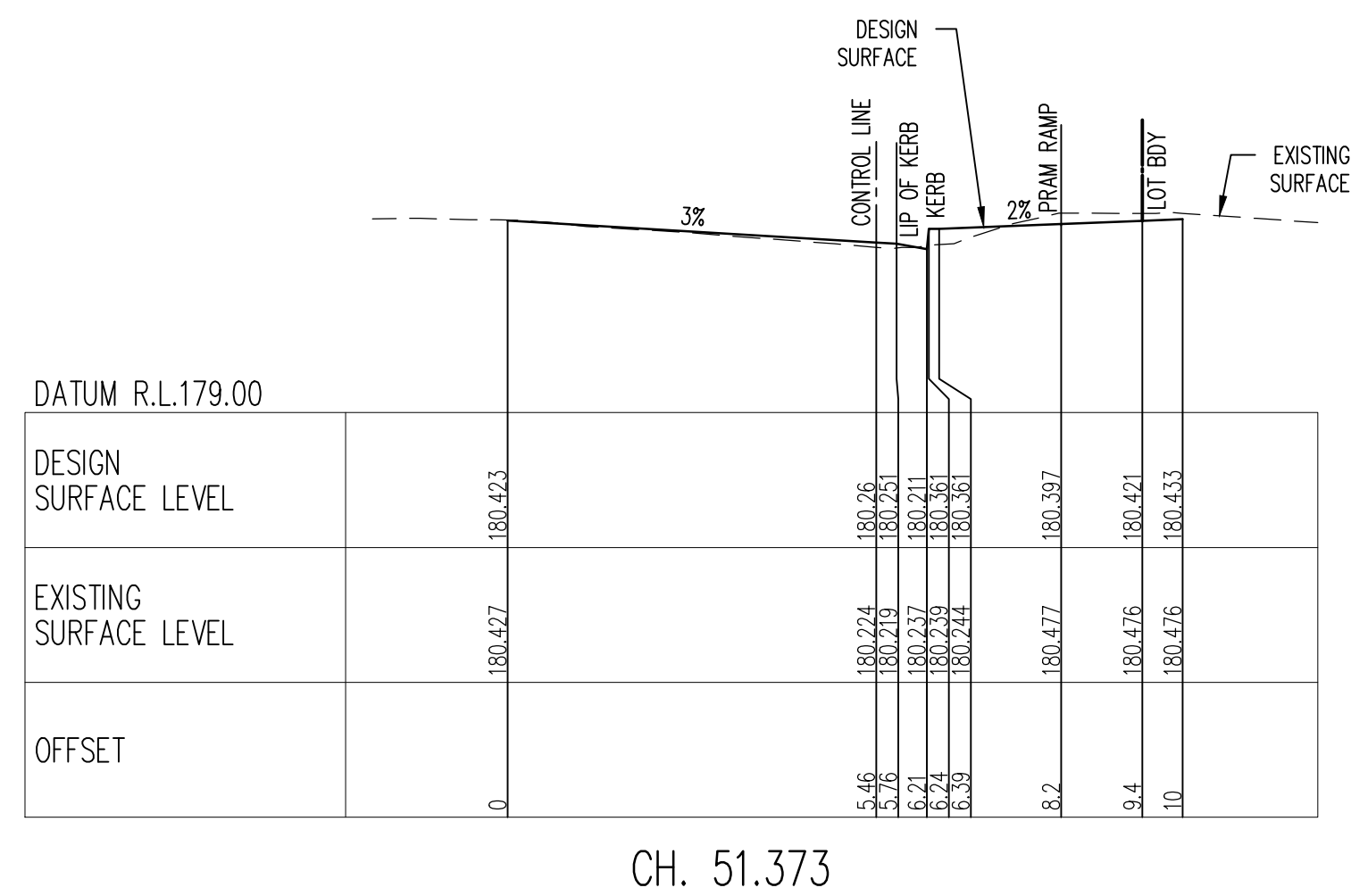
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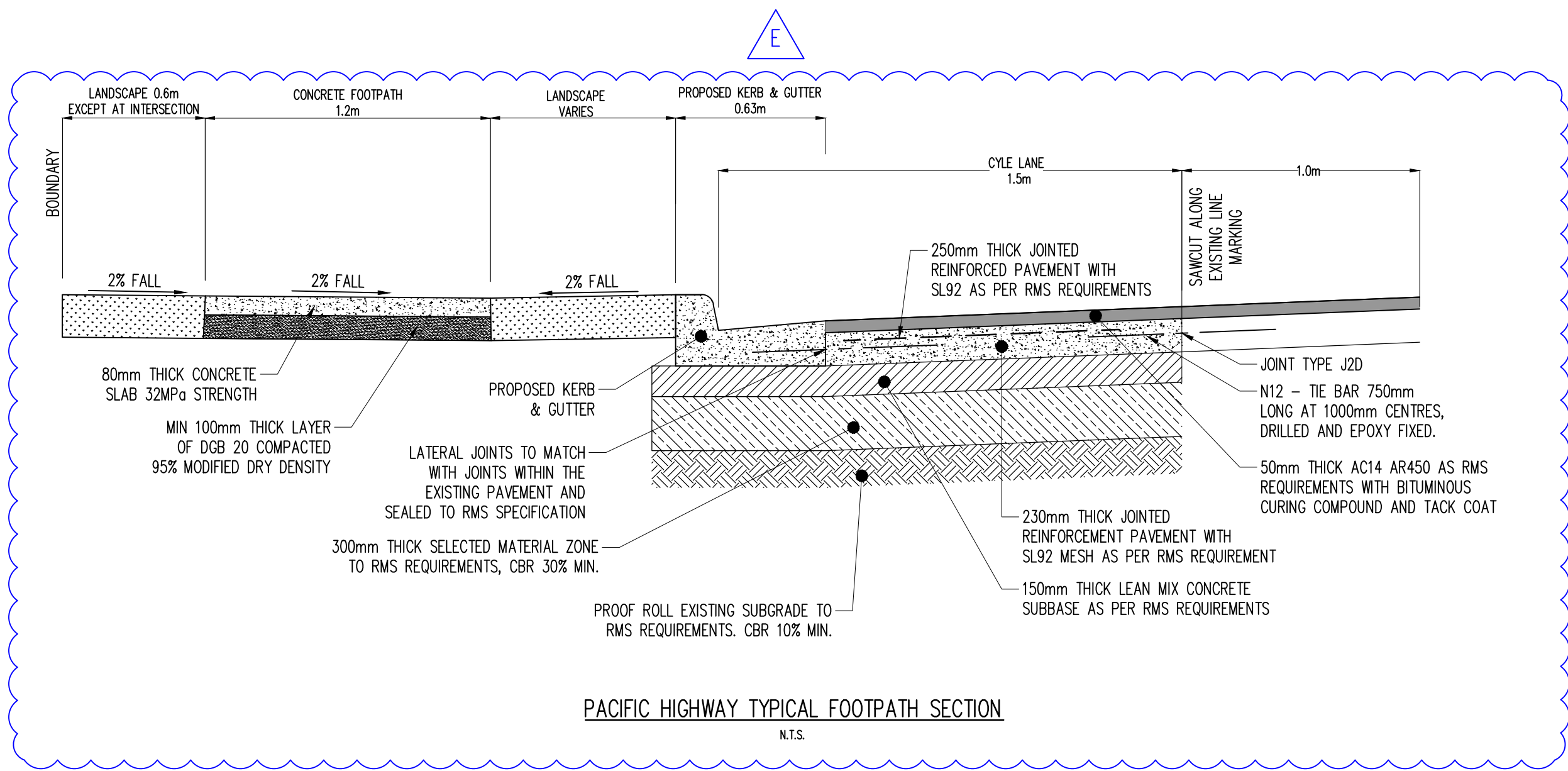
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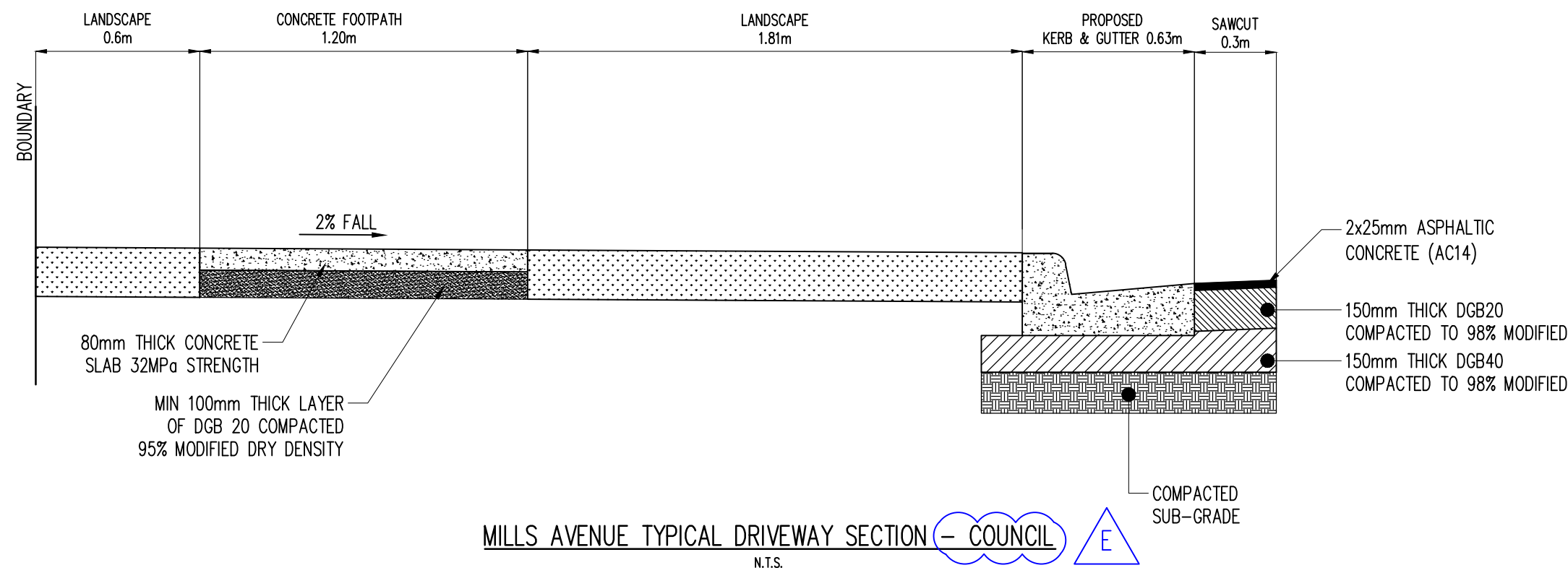
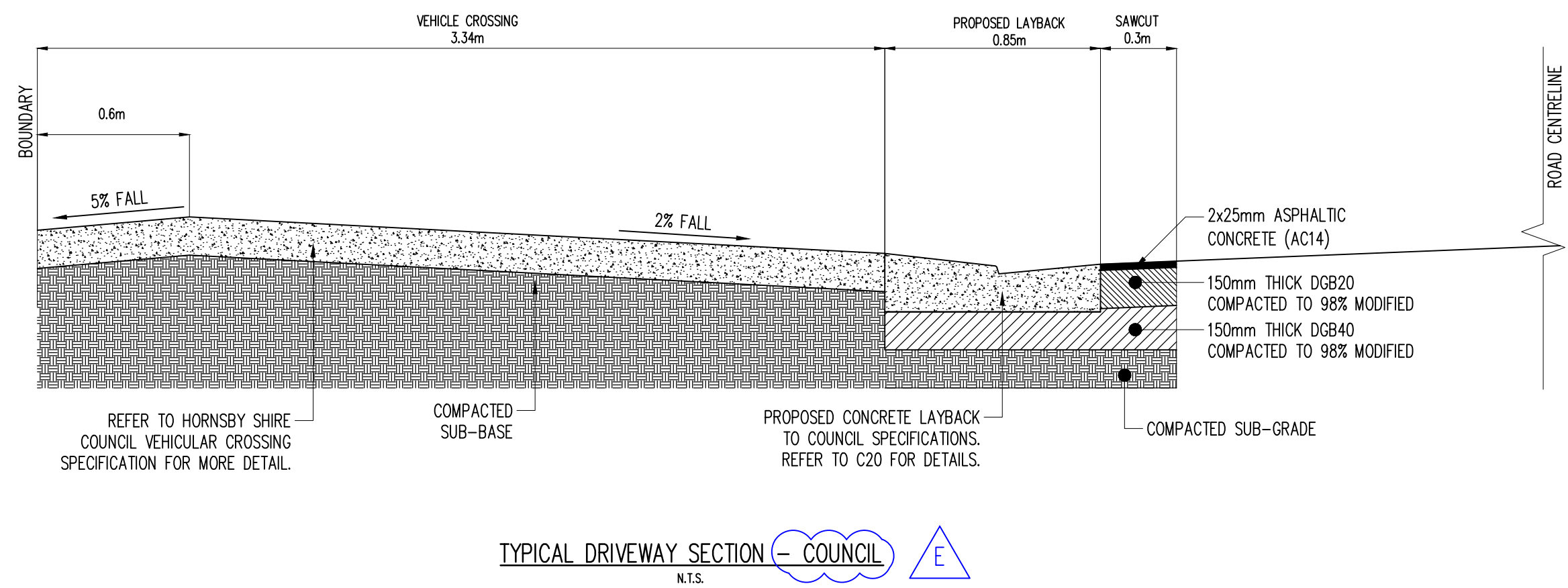
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NOTES FOR FOOTPATH CONSTRUCTION

1. FOOTPATH PAVING SHALL BE A MINIMUM OF 80mm THICK LAD ON A SAND BASE PLACED ON SUITABLY COMPACTED GROUND (95% STANDARD MODIFIED DRY DENSITY COMPACTION).
2. CONSTRUCTION TOLERANCES SHALL BE IN ACCORDANCE WITH AS 3610 (FORMWORK FOR CONCRETE).
3. CONCRETE SHALL BE OF MINIMUM COMPRESSIVE STRENGTH F'c 32 MPa AT 28 DAYS.
4. PROVIDE MASTIC JOINTS 10mm IN WIDTH FOR THE FULL DEPTH OF THE AT INTERVALS NOT EXCEEDING 6m AND DUMMY JOINTS 20mm DEEP NOT EXCEEDING 1.2m (OR MATCH EXISTING SPACING).
5. IF THE DISTURBED WIDTH IS GREATER THAN 500mm PLACE TOP SOIL OF MINIMUM 100mm DEPTH AND TURF THE AREA.
6. PROVIDE FALL TO MATCH EXISTING FOOTPATH TO FACILITATE EFFECTIVE DRAINAGE. MAXIMUM CROSS FALL SHALL BE 2.5% AND MAXIMUM LONGITUDINAL GRADE SHALL BE 7.15%.
7. FOOTPATH TO BE BRUSH FINISHED IN DIRECTION AS SHOWN AND ALL EDGES OF FOOTPATH SHAPED WITH AN EDGING TOOL 50mm WIDE 5mm RADIUS. APPLY EDGING IN ALL JOINTS AND EDGES.
8. NATURE STRIP RETORATION SHALL BE FINISHED WITH BUFFALO GRASS ON MINIMUM 100mm DEEP TOPSOIL LAYER LAID ON COMPACTED SUBGRADE.



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E	ISSUED FOR C.C. APPROVAL	P.T.	J.I.	08.03.19						ARCHITECT	<div><div>PBD ARCHITECTS</div><div>LEVEL 2, 52 ALBISON STREET, SURRY HILLS, NSW 2101</div><div>P: (02) 9698 8140</div><div>W: www.pbdarchitects.com.au</div></div> <div><div>AUSTRALIAN CONSULTING ENGINEERS</div><div>PTY LTD - A.C.N. 084 059 941</div><div>SHOP 2-141 CONCORD RD NORTH STRATHFIELD NSW 2137</div><div>PH: (02) 9763 1500 FX: (02) 9763 1515</div><div>EMAIL: info@aceeng.com.au</div></div>									
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B	ISSUED FOR C.C. APPROVAL	O.C.	E.E.	14.09.17																
A	ISSUED FOR C.C. APPROVAL	O.C.	E.E.	04.09.17																
No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE		No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE

LEGEND

- LOT BOUNDARY
- PROPOSED LINE OF SAWCUT
- PROPOSED CENTRE LINE
- 32.00-

PROPOSED CONTOURS
- 30.00-

EXISTING CONTOUR
- ExSW

EXISTING STORMWATER DRAINAGE
- ExW

EXISTING WATER MAIN
- ExS

EXISTING SEWER MAIN
- ExT

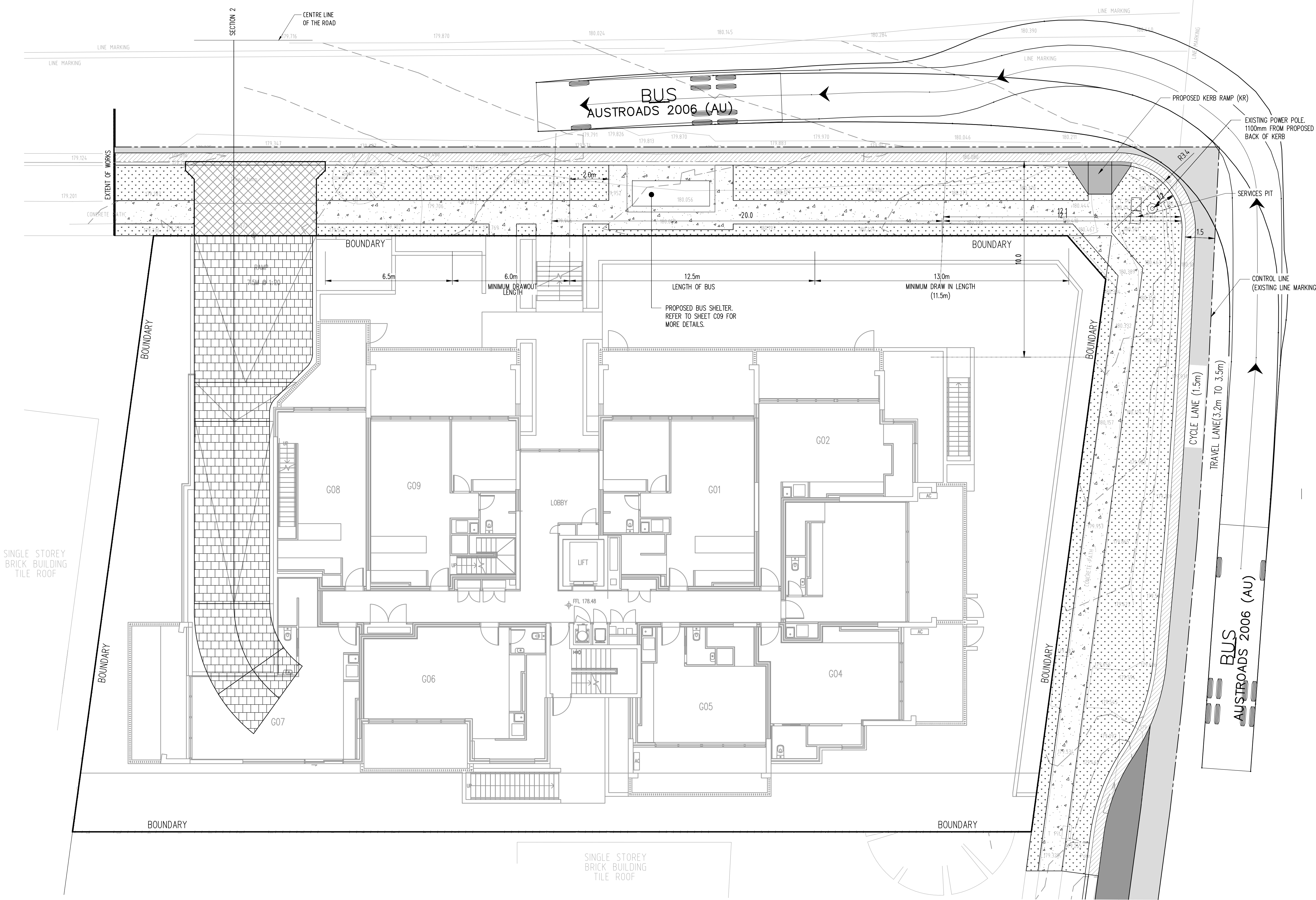
EXISTING TELSTRA
- ExE

EXISTING ELECTRICAL
- ExEU

EXISTING ELECTRICAL UNDERGROUND
- ExG

EXISTING GAS
- ExEO

EXISTING OVERHEAD ELECTRICAL
- PROPOSED VERGE
- PROPOSED DRIVEWAY
- PROPOSED CONCRETE FOOTPATH
- PROPOSED ROAD PAVEMENT
- PROPOSED PARKING BAY (2.2m)
- PROPOSED DRIVEWAY HATCH
- PROPOSED ROLL TOP KERB AND GUTTER
- TREES TO BE RETAINED
- TREES TO BE REMOVED



NOTE:
ALL EXISTING SERVICES TO BE ADJUSTED
TO MATCH PROPOSED SURFACE LEVELS.



A1									
F	ISSUED FOR C.C. APPROVAL	E.M.	J.L.	12.02.19					
E	ISSUED FOR C.C. APPROVAL	P.T.	E.E.	20.12.18					
D	ISSUED FOR C.C. APPROVAL	S.S.	E.E.	05.12.18					
C	ISSUED FOR C.C. APPROVAL	S.S.	J.L.	23.10.18					
B	ISSUED FOR C.C. APPROVAL	O.C.	E.E.	14.09.17					
A	ISSUED FOR C.C. APPROVAL	O.C.	E.E.	04.09.17					
No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE

ARCHITECT
PBD ARCHITECTS
LEVEL 2, 52 ALBISON STREET, SURRY HILLS, NSW 2150
P: (02) 9698 8140
W: www.pbdarchitects.com.au

CLIENT



AUSTRALIAN CONSULTING ENGINEERS.
PTY LTD - A.C.N. 084 059 941
SHOP 2-141 CONCORD RD NORTH STRATHFIELD NSW 2137
PH: (02) 9763 1500 FX: (02) 9763 1515
EMAIL: info@aceeng.com.au

PROJECT
RESIDENTIAL DEVELOPMENT
457-459 PACIFIC HIGHWAY,
ASQUITH



SHEET SUBJECT
BUS TURNING TEMPLATE

PROJECT: 457-459 PACIFIC HIGHWAY, ASQUITH			
DATE SEPT 2017	DRAWN E.E.	DESIGNED O.C.	CHECKED A.S.H.
SCALE @ A1 1:100		JOB No 161351	
AUTHORISED Dr Anthony S. Hasham		DWG No C10	REV F

GENERAL NOTES

- TECHNICAL SPECIFICATIONS OR SPECIFIC INSTRUCTIONS ON DRAWINGS TAKE PRECEDENCE OVER THESE NOTES.
- DO NOT DEPART FROM THE DESIGN UNLESS AUTHORISED IN WRITING BY THE DESIGN ENGINEER
- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH ANY OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. CONSTRUCTION FROM THESE DRAWINGS, AND THEIR ASSOCIATED CONSULTANTS' DRAWINGS IS NOT TO COMMENCE UNTIL APPROVED BY THE RELEVANT AUTHORITIES.
- REFER TO ALL NOTES ON THESE DRAWINGS AND PREVIOUSLY MENTIONED DOCUMENTATION BEFORE BEGINNING CIVIL WORKS.
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT SPECIFIED STANDARDS AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT APPROVAL AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION AND/OR DRAWINGS.
- THE RELEVANT AUTHORITIES WORK HEALTH AND SAFETY PRACTICES MUST BE COMPLIED WITH.
- ALL DIMENSIONS AND LEVELS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. CIVIL DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND SETOUT. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN METRES (m) AND ALL LEVELS ARE IN METRES (m) TO AUSTRALIAN HEIGHT DATUM (AHD).
- GRADES TO PAVEMENTS TO BE AS IMPLIED BY RL'S ON CIVIL GRADING PLAN DRAWINGS. GRADE EVENLY BETWEEN NOMINATED RL'S. AREAS EXHIBITING PONDING GREATER THAN 5mm DEPTH WILL NOT BE ACCEPTED/ UNLESS IN A DESIGNATED SAG POINT.
- IF THERE IS DOUBT REGARDING THE CIVIL DESIGN, CONTACT THE ENGINEER FOR CLARIFICATION.
- ALL ABBREVIATIONS ARE AS FOLLOWS:

EGL	EXISTING GROUND LEVEL
FFL	FINISHED FLOOR LEVEL
RL	REDUCED LEVEL
E	EASTING COORDINATE
N	NORTHING COORDINATE
AHD	AUSTRALIAN HEIGHT DATUM
U.N.O.	UNLESS NOTED OTHERWISE
uPVC	UNPLASTICISED POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
VCP	VITRIFIED CLAY PIPE
FRC	FIBRE REINFORCED COMPOSITE
FSL	FINISHED SURFACE LEVEL
K&G	KERB AND GUTTER
KO	KERB ONLY
NFK	NOMINAL FACE OF KERB
FK	FLUSH KERB
TOK	TOP OF KERB
BOK	BACK OF KERB
DD	DISH DRAIN
MK	MOUNTABLE KERB
MIK	MOUNTABLE INTEGRAL KERB
IK	INTEGRAL KERB
IL	INVERT LEVEL
OL	OVERT LEVEL
GD	GRADED DRAIN
TWL	TOP WATER LEVEL
GALV.	GALVANISED
TE	THICKENED EDGE
FP	FLUSHING POINT
DP	DOWN PIPE
RW#	RETAINING WALL
IJ	ISOLATION JOINT
DEJ	DOWELLED EXPANSION JOINT
SJ	SAWN JOINT
KJ	KEYED JOINT
WPJ	TROWELED WEAKENED PLANE JOINT
EJ	EXPANSION JOINT
TW	TOP OF WALL LEVEL
BW	BOTTOM OF WALL LEVEL

SURVEY NOTES

- THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN DERIVED FROM SURVEY INFORMATION SUPPLIED FROM DAW & WATON CONSULTING SURVEYORS.
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
- BENCH MARK, SURVEY PEGS, LEVEL PEGS OR SUPPLEMENTARY REFERENCE MARKS SHALL NOT BE ADJUSTED OR MOVED WITHOUT WRITTEN APPROVAL FROM THE SUPERINTENDENT. THE CONTRACTOR SHALL TRANSFER ANY PEGS AFFECTED BY THE PROPOSED WORKS TO SIDE POSITIONS CLEAR OF OPERATIONS AND SHALL NOTE THE EXTENT OF THE MOVEMENT IN DISTANCE AND LEVEL.



EXISTING SERVICES AND FEATURES NOTES

- THE CONTRACTOR MUST CONFIRM THE EXACT LOCATION AND EXTENT OF EXISTING SERVICES PRIOR TO CONSTRUCTION AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY TO THE ENGINEER/SUPERINTENDENT.
- EXISTING SERVICES UNLESS SHOWN ON SURVEY PLAN HAVE BEEN PLOTTED FROM SERVICES SEARCH PLANS AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLETE A 'DIAL BEFORE YOU DIG' SEARCH AND TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER/SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.
- THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR SERVICES. DO NOT ASSUME DEPTHS OR ALIGNMENTS OF CABLES OR PLANT AS THESE MAY VARY SIGNIFICANTLY. THE CONTRACTOR MUST ACCEPT ALL RESPONSIBILITY TO DAMAGES TO EXISTING SERVICES AS SERVICE AUTHORITIES MAY SEEK COMPENSATION FOR DAMAGES CAUSED TO THEIR PROPERTY AND SUBSEQUENT LOSSES CAUSED.
- THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL OR RELOCATION (IF REQUIRED) TO RELEVANT AUTHORITIES GUIDELINES OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA OR AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE ENGINEER/SUPERINTENDENT.
- INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO SURROUNDING ALLOTMENTS. CONTRACTOR TO GAIN APPROVAL FROM THE RELEVANT AUTHORITIES FOR TIME OF INTERRUPTION.
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN SUPPLY TO EXISTING BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF ANY RELEVANT AUTHORITIES. ONCE DIVERSION IS COMPLETE AND COMMISSIONED, THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE RELEVANT AUTHORITY/SUPERINTENDENT.
- EXISTING SERVICES, BUILDINGS, EXTERNAL STRUCTURES AND TREES SHOWN ON THESE DRAWINGS ARE EXISTING FEATURES PRIOR TO ANY DEMOLITION WORKS.
- ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS, BRICK PAVING AND CONSTRUCTION TRAFFIC MANUEVERING AREAS SHALL BE PROTECTED TO RELEVANT AUTHORITIES GUIDELINES.
- ALL EXISTING SERVICE UTILITIES COVERS AND GRATES ARE TO BE ADJUSTED (TO RELEVANT AUTHORITY GUIDELINES) TO SUIT NEW FINISHED SURFACE LEVELS WHERE APPLICABLE.
- IF EXISTING SERVICE UTILITY COVERS AND GRATES OR SURROUNDING SURFACE LEVELS ARE TO BE LOWERED, THE CONTRACTOR IS TO MAKE CERTAIN THAT MINIMUM COVERS (TO RELEVANT SERVICE AUTHORITY GUIDELINES) TO SERVICES ARE MAINTAINED. IF MINIMUM COVERS AREN'T MAINTAINED THE CONTRACTOR IS TO LOWER OR PROTECT SERVICES TO THE SATISFACTION OF THE RELEVANT SERVICE AUTHORITY/SUPERINTENDENT.

STORMWATER DRAINAGE NOTES

- THE STORMWATER DESIGN SHOWN ON THESE DRAWINGS HAS BEEN CARRIED OUT IN ACCORDANCE WITH CITY OF RYDE COUNCIL'S REQUIREMENTS, AUSTRALIAN RAINFALL AND RUNOFF (AR&R) GUIDELINES AND RELEVANT AUTHORITIES GUIDELINES.
- FINISHED SURFACE LEVELS SHOWN ON CIVIL GRADING PLAN DRAWINGS TAKE PRECEDENCE OVER DRAINAGE LONGSECTION SURFACE LEVELS.
- ALL STORMWATER WORK IS TO COMPLY WITH AS3500 PART 3.
- PROTECTION OF PIPES EXPOSED TO LOADS EXCEEDING THE W7 WHEEL LOAD OF 70kN SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- NO CONSTRUCTION LOADS SHALL BE APPLIED TO uPVC PIPES.
- EXISTING STORMWATER PIPE LOCATIONS AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- FOR ALL STORMWATER DRAINAGE PITS REFER TO TYPICAL PIT CHAMBER DETAILS ON THESE DRAWINGS. IF PIT LID SIZE IS SMALLER THAN THE PIT CHAMBER SIZE THEN THE PIT LID IS TO BE CONSTRUCTED ON THE CORNER OF THE PIT CHAMBER WITH THE STEP IRONS DIRECTLY BELOW. ALTERNATIVELY THE PIT LID TO BE USED, IS TO BE THE SAME SIZE AS THE PIT CHAMBER.
- GALVANZED STEP IRONS SHALL BE PROVIDED AT 300 CTRS FOR PITS HAVING A DEPTH EXCEEDING 1200mm
- PIPES 300 DIA. AND LARGER TO BE REINFORCED CONCRETE PIPES (RCP) CLASS '4' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS U.N.O.
- PIPES UP TO 300 DIA. SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
- EQUIVALENT STRENGTH VCP OR FRC PIPES MAY BE USED IF RELEVANT APPROVAL AUTHORITY AND SUPERINTENDENT PERMITS.
- BEDDING TYPE SHALL BE TYPE HS2 FOR RCP CONFORMING TO AS4058. WHERE NECESSARY THE OVERLAY ZONE SHALL BE REDUCED TO ACCOMMODATE PAVEMENT REQUIREMENTS.
- PIPES SHALL BE LAID ON A 75mm THICK SAND BED. IN ALL CASES BACKFILL TRENCH WITH SAND TO 200mm ABOVE THE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 (OR A DENSITY INDEX OF NOT LESS THAN 75).
- WHERE TRENCHES ARE IN ROCK THE PIPE SHALL BE BEDDED ON A MINIMUM OF 50mm CONCRETE BED (OR 75mm BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE.
- ENLARGERS, CONNECTORS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
- GRATES AND COVERS SHALL CONFORM TO AS3996 AND AS1428.1 AT ALL TIMES DURING CONSTRUCTION OF THE STORMWATER PITS.
- ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT AND ENGINEER FOR FURTHER DIRECTIONS.

CONCRETE NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- PRE-MIXED CONCRETE SUPPLY SHALL COMPLY WITH AS 1379.
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- CONCRETE MIX DESIGNS TO BE SUBMITTED FOR REVIEW PRIOR TO USE OF CONCRETE.
- CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESSES OF APPLIED FINISHES.
- DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
- FOR CHAMFERS, DRIP GROOVES, REGLETS, ETC., REFER TO ARCHITECTURAL DETAILS. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT. APPROVED SPRAYED ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURER'S SPECIFICATION). POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC (REFER SPECIFICATION).
- CONSTRUCTION SUPPORT PROPPING IS TO BE LEFT IN PLACE WHERE NEEDED TO AVOID OVERSTRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING. NO MASONRY OR PARTITION WALLS ARE TO BE CONSTRUCTED ON SUSPENDED LEVELS UNTIL ALL PROPPING IS REMOVED AND THE SLAB HAS ABSORBED ITS DEAD LOAD DEFLECTION.
- THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DELIVERED UNTIL FINAL APPROVAL OBTAINED.
- CONDUITS, PIPES, ETC. SHALL ONLY BE LOCATED IN THE MIDDLE THIRD OF THE SLAB DEPTH. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.
- SLABS AND BEAMS SHALL BE CONSTRUCTED TO BEAR ONLY ON THE BEAMS, WALLS, COLUMNS, ETC. SHOWN ON THE DRAWINGS. ALL OTHER BUILDING ELEMENTS SHALL BE KEPT 25mm MINIMUM CLEAR FROM SOFFITS OF STRUCTURE.
- TESTING OF CONCRETE SPECIMENS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1012, AS1379 AND THE PROJECT SPECIFICATIONS.
- ENSURE CLEAR COVER TO REINFORCEMENT IS AS FOLLOWS UNLESS NOTED OTHERWISE.

ELEMENT	COVER (mm)					
	FORMED	NOT FORMED – CAST AGAINST THE GROUND				
		WITH DAMP PROOF MEMBRANE		WITHOUT DAMP PROOF MEMBRANE		
		EXPOSURE CLASSIFICATION				
	B2	C	B2	C	B2	C
STORMWATER PIT BASES	45	70	55	80	–	–
STORMWATER PIT WALLS	45	70	55	–	–	–
STORMWATER PIT ROOFS	45	70	55	–	–	–

NOTES:

- SOME ELEMENTS MAY HAVE COVER WHICH VARIES FROM THE ABOVE TO AVOID CLASHES etc. REFER DRAWINGS.
- COVER SHOWN IS THE MINIMUM COVER TO ALL GROOVES AND CHAMFERS.
- REFER TO NOTE 2.3 FOR EXPOSURE CLASSIFICATIONS TO EACH STRUCTURAL ELEMENT.

ENSURE CONCRETE PERFORMANCE IS AS FOLLOWS UNLESS NOTED OTHERWISE:

NOTES:

- FOR THESE CONCRETE MIXES THE REQUIREMENTS SPECIFIED FOR STRENGTH AND SHRINKAGE ARE MANDATORY, OTHER PARAMETERS FOR THESE MIXES HAVE BEEN SUGGESTED BUT MAY BE VARIED.
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379 – 2007– SECTION 6.
- MINIMUM CONCRETE STRENGTHS SHALL BE IN ACCORDANCE WITH AS 3600 SECTION 4.4 AND 4.5.
- THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL.
- UNLESS NOTED OTHERWISE ALL CONCRETE TO COMPLY WITH WATER SERVICES ASSOCIATION OF AUSTRALIA DOCUMENT NO. WSA 114–2002.

CONCRETE MIX PERFORMANCE CRITERIA TABLE

ELEMENT	LOCATION	STRENGTH (MPa) U.N.O.		TARGET SLUMP (mm)		CEMENT TYPE	MAXIMUM AGGREGATE SIZE (mm)	MAXIMUM SHRINKAGE AT 56 DAYS (mm/mm×10 ⁻³) (AS 1012 part 13)	MINIMUM CEMENT CONTENT (kg/m ³)	MAXIMUM WATER/CEMENT RATIO
		F _c AT 28 DAYS	F _c AT 4 DAYS	INITIAL	PRIOR TO PLACEMENT					
STORMWATER PIT BASES	ALL	50	–	–	80	SL	20	600	500	0.4
STORMWATER PIT WALLS	ALL	50	–	–	80	SL	20	600	500	0.4
STORMWATER PIT ROOFS	ALL	50	22	–	80	SL	20	600	500	0.4
SEWER PITS	ALL	40	–	–	80	SR	20	600	450	0.45

REINFORCEMENT NOTES

- REINFORCEMENT SYMBOLS:

S DENOTES GRADE D250 S HOT ROLLED DEFORMED BARS TO AS 4671

N DENOTES GRADE D500 N DEFORMED BARS TO AS 4671

SL DENOTES GRADE D500 L DEFORMED BARS (SQUARE MESH) TO AS 4671.

RL DENOTES GRADE D500 L DEFORMED BARS (RECTANGULAR MESH) TO AS 4671.

R DENOTES GRADE R250 N HOT ROLLED ROUND BARS TO AS4671.

NUMBER OF BARS

BAR DIAMETER (mm)

17N20-250

BAR GRADE

BAR SPACING (mm)

THE FIGURES FOLLOWING THE FABRIC SYMBOL SL, RL AND TM IS THE REFERENCE NUMBER FOR FABRIC TO AS 4671.

 - ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NO GREATER THAN 1m CENTRES IN BOTH DIRECTIONS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. IN EXPOSURE CONDITIONS GREATER THAN B1 USE ONLY PLASTIC CHAIRS.
 - REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
 - SLAB REINFORCEMENT SHALL EXTEND AT LEAST 75mm ONTO SUPPORT WALLS AND 50 PERCENT OF BOTTOM REINFORCEMENT SHALL BE COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS.
 - SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

BAR	TENSION SPLICE LAP LENGTH (mm)	
	CONCRETE GRADE 32MPa	
	LESS THAN 300mm CONCRETE CAST BELOW BAR	MORE THAN 300mm CONCRETE CAST BELOW BAR
N12	550	700
N16	750	1000
N20	1000	1300
N24	1250	1650
N28	1500	1950
N32	1800	2350
N36	2100	2700

THESE LAP LENGTHS ARE BASED ON THE FOLLOWING MINIMUM COVER TO REINFORCEMENT:

SLABS – 20mm

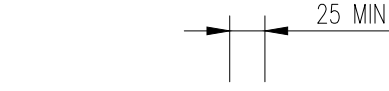
WALLS

BAR	TENSION SPLICE LAP LENGTH (mm)	
	CONCRETE GRADE 32MPa	
	LESS THAN 300mm CONCRETE CAST BELOW BAR OR VERTICAL BAR	MORE THAN 300mm CONCRETE CAST BELOW BAR
N12	700	850
N16	1000	1250
N20	1300	1700
N24	1650	2100
N28	1950	2550
N32	2350	3000
N36	2700	3550

THESE LAP LENGTHS ARE BASED ON THE FOLLOWING MINIMUM COVER TO REINFORCEMENT:

WALLS – 20mm

MESH SHALL BE LAPPED SUCH THAT THE TWO OUTERMOST WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST WIRES OF THE OTHER SHEET BY 25mm MINIMUM.



A MAXIMUM OF THREE SHEETS OF MESH SHALL BE LAPPED AT ANY POINT.

COMPRESSION SPLICE LAP LENGTH OF COLUMN BARS U.N.O.						
N12	N16	N20	N24	N28	N32	N36
500	650	800	1000	1150	1300	1450

- COMPRESSION & TENSION LAPPED SPLICES FOR BUNDLED BARS:

3 – BAR BUNDLE, INCREASE THE ABOVE VALUES BY 20% (= *1.20)
4 – BAR BUNDLE, INCREASE THE ABOVE VALUES BY 33% (= *1.33)

INDIVIDUAL BAR SPLICES WITHIN A GROUP SHALL NOT OVERLAP.

- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- JOGGLES TO BARS SHALL BE 1 BAR DIAMETER OVER A LENGTH OF 12 BAR DIAMETERS.
- WHERE TRANSVERSE THE BARS ARE NOT SHOWN PROVIDE N12-300 SPLICED WHERE NECESSARY AND LAP WITH MAIN 450mm U.N.O.

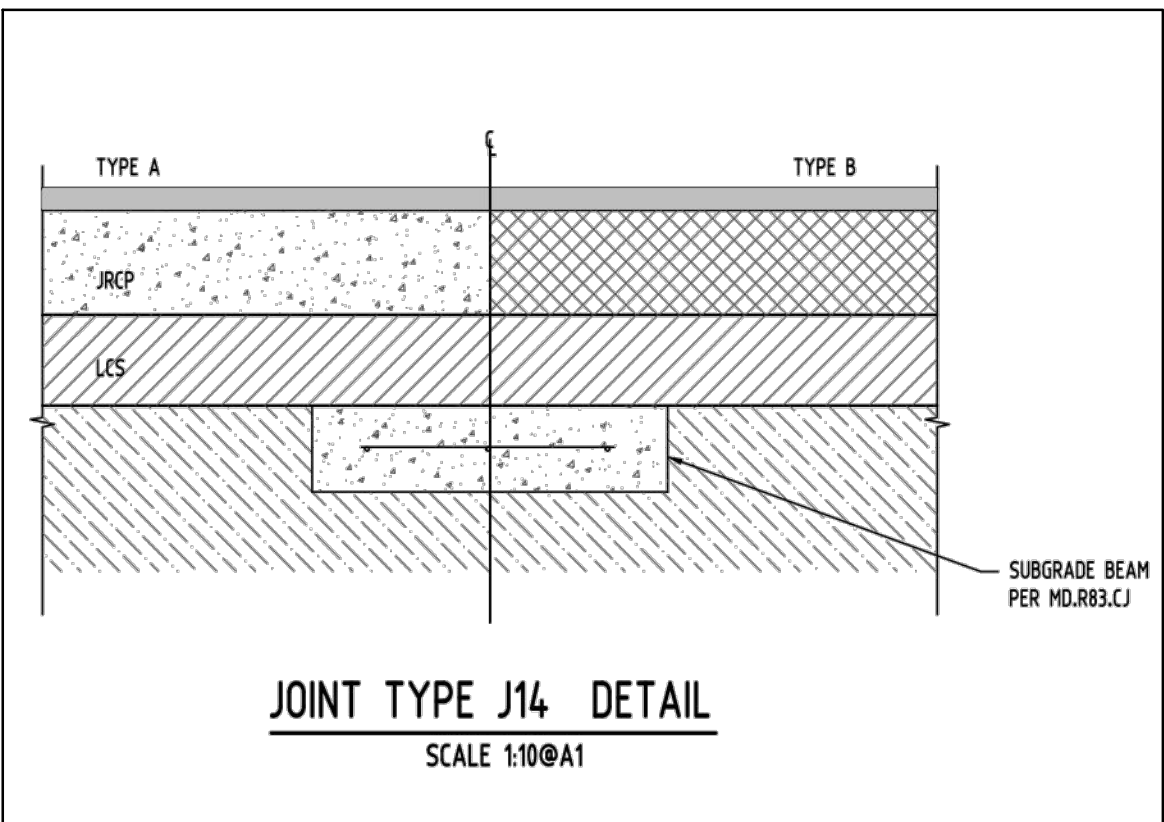
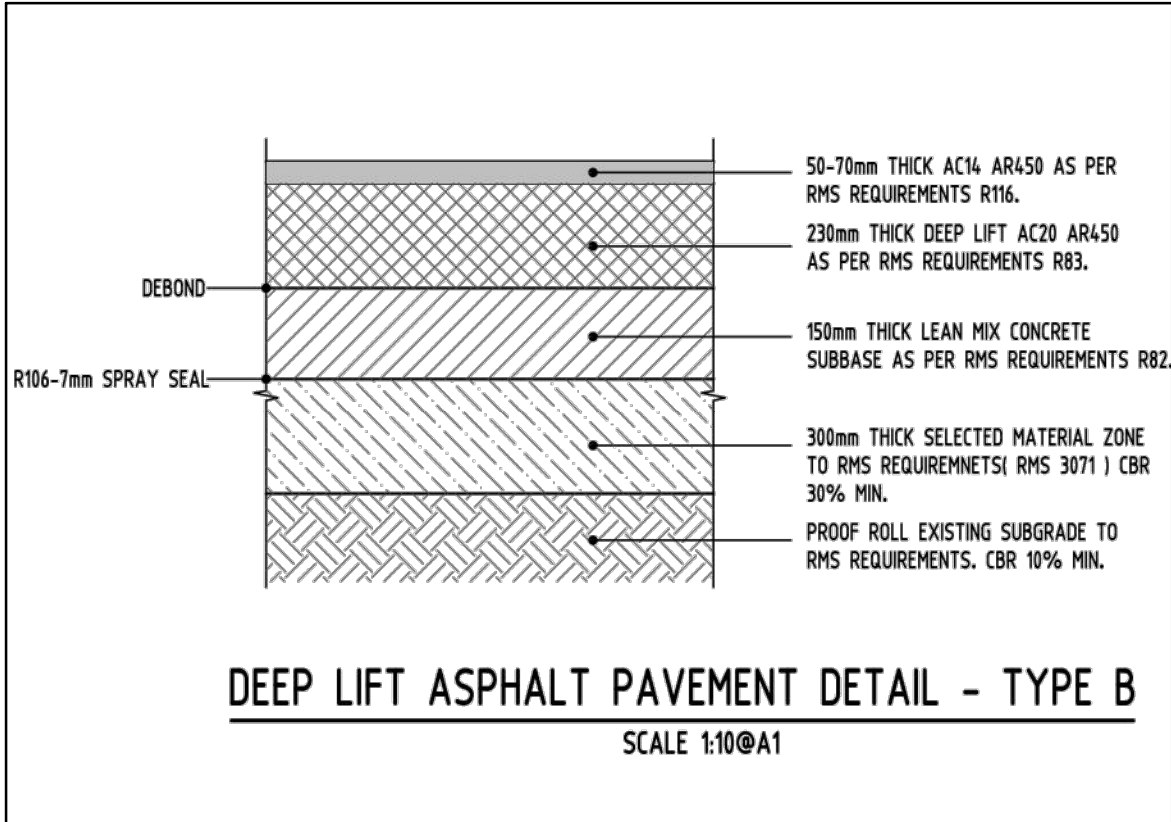
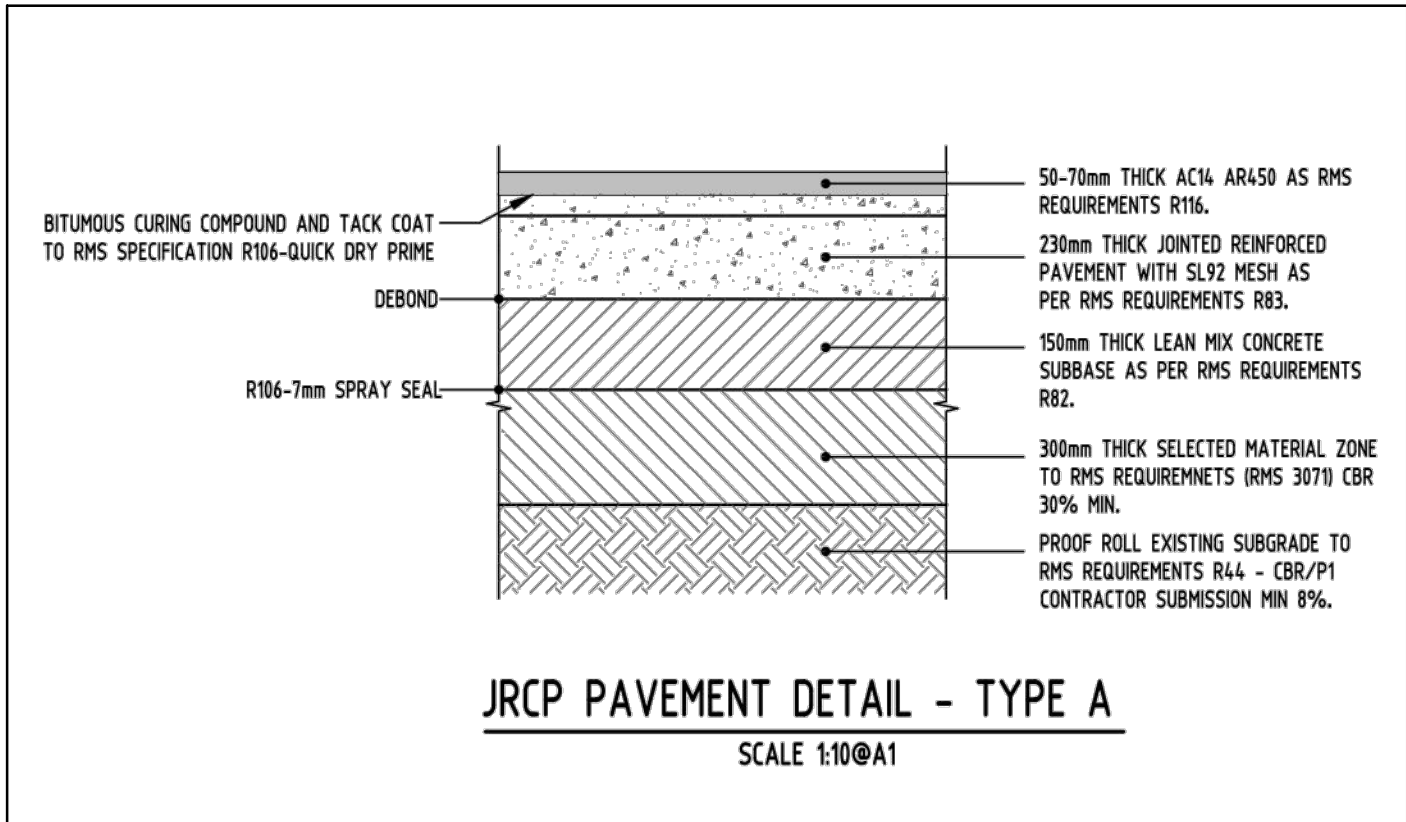
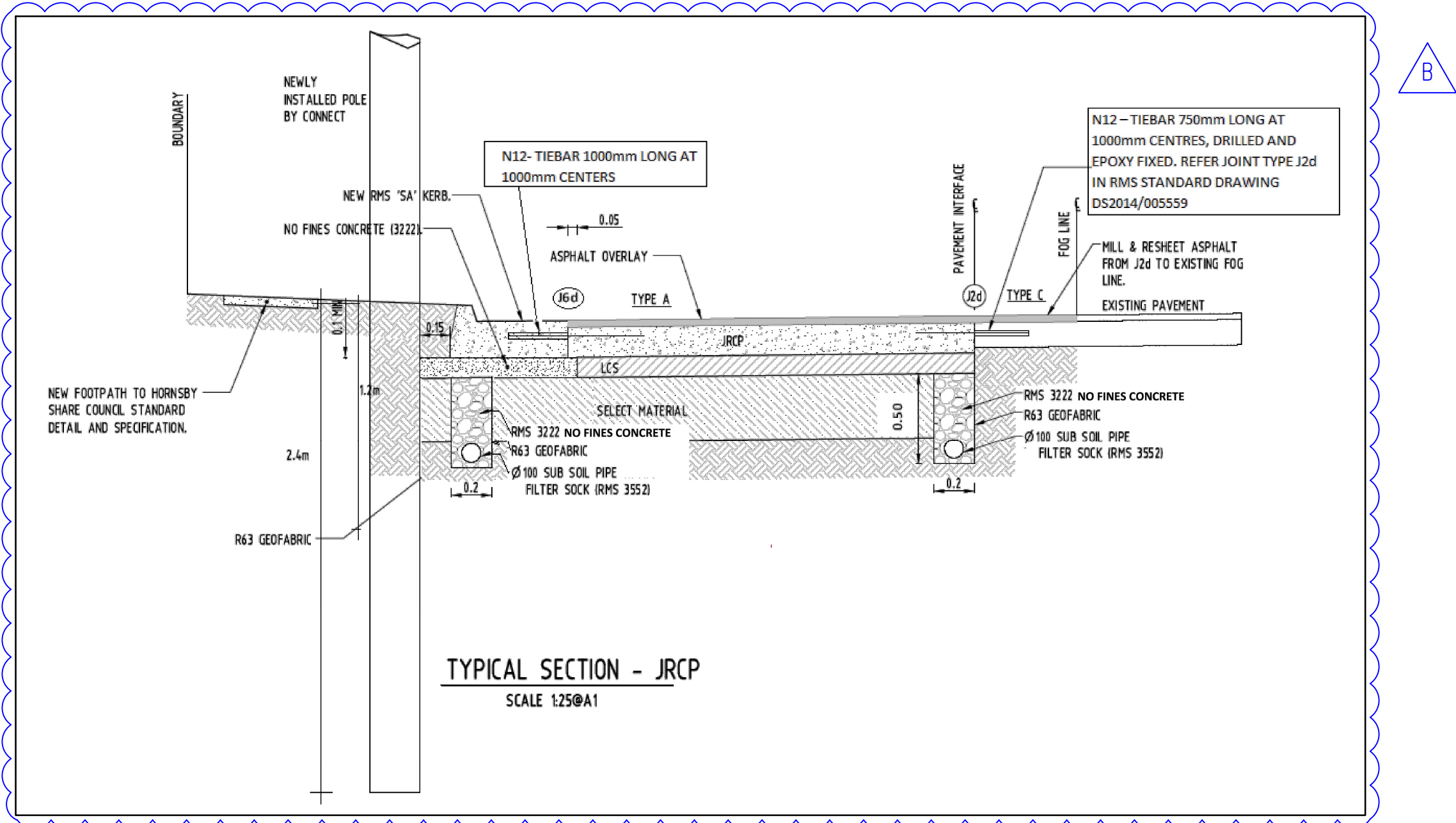
KERBING NOTES

INCLUDES ALL KERBS, GUTTERS, DISH DRAINS, CROSSINGS AND EDGES.

- ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON MINIMUM 75mm GRANULAR BASE COURSE MATERIAL COMPACTED TO A MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1/QTY HORNSBY SHIRE COUNCIL & RMS ENGINEERING SPECIFICATIONS
- EXPANSION JOINTS (EJ) TO BE FORMED FROM 10MM COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN SLABS.
- WEAKENED PLANE JOINTS (WPJ) ARE TO BE LOCATED AT A MAX 1.5 x WIDTH OF THE PAVEMENT. WEAKENED PLANE JOINTS (WPJ) ARE TO BE A MINIMUM 3mm WIDE WITH A JOINT DEPTH TO BE A MINIMUM OF 1/4 THE TOTAL DEPTH OF THE SECTION.
- ALL KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
- WHEN CONSTRUCTING NEW KERB TO EXISTING AND IN THE REPLACEMENT OF KERBS, EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm FROM LIP OF GUTTER. UPON COMPLETION OF NEW KERBS, NEW BASE COURSE AND SURFACE IS TO BE LAID 900mm WIDE TO MATCH EXISTING MATERIALS AND THICKNESS.
- EXISTING KERBS ARE TO BE COMPLETELY REMOVED WHERE NEW KERBS ARE SHOWN.

SUBSOIL DRAINAGE NOTES

- PROVIDE SUBSOIL DRAINS TO INTERCEPT GROUNDWATER SEEPAGE AND PREVENT WATER BUILD-UP BEHIND WALLS AND UNDER FLOORS AND PAVEMENTS. CONNECT SUBSOIL TO SURFACE DRAINS OR TO THE STORMWATER DRAINAGE SYSTEM AS APPLICABLE.
- ALL SUBSOIL PIPES SHALL BE 100mm SLOTTED CORRUGATED uPVC IN A FILTER SOCK U.N.O.
- FILTER SOCKS ARE TO BE POLYESTER PERMEABLE SOCKS CAPABLE OF RETAINING PARTICLES GREATER THAN 0.25mm IN SIZE. SECURELY FIT OR JOIN THE SOCK AT EACH JOINT.
- WHERE SUBSOIL DRAINS PASS UNDER EXTERNAL SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
- SUBSOIL DRAINAGE TRENCHES ARE TO BE WRAPPED WITH PERMEABLE TEXTILE FABRIC 'BIDIM A12' OR EQUIVALENT.
- TO REDUCE GROUND WATER TRACKING WITHIN STORMWATER TRENCHES INSTALL A 3m LENGTH OF SUBSOIL PIPE IN PIPE TRENCHES DRAINING IN DIRECTION OF FALL OF PIPE AND CONNECT TO DOWNSTREAM STORMWATER DRAINAGE PIT.
- SUBSOIL MINIMUM CLEARANCE DEPTHS, MEASURED TO THE CROWN OF THE PIPE, WHERE THE PIPE PASSES BELOW THE FOLLOWING ELEMENTS:
 - 100mm BELOW FORMATION LEVEL OF THE PAVEMENT, KERB OR CHANNEL.
 - AT THE AVERAGE GRADIENT OF THE BOTTOM OF FOOTINGS.
- AT JUNCTIONS OF SUBSOIL PIPES PROVIDE TEES, COUPLINGS OR ADAPTORS IN ACCORDANCE WITH AS2439.1.
- SUBSOIL DRAINAGE TRENCHES SHALL BE A MINIMUM 300mm WIDE.
- GRADE THE TRENCH FLOOR EVENLY TO THE GRADIENT OF THE PIPELINE. IF THE TRENCH FLOOR IS ROCK, CORRECT ANY IRREGULARITIES WITH COMPACTED BEDDING MATERIAL. BED PIPING ON A CONTINUOUS UNDERLAY OF BEDDING MATERIAL, AT LEAST 75mm THICK AFTER COMPACTION. LAY THE PIPE WITH ONE LINE OF PERFORATIONS AT THE BOTTOM.
- PLACE THE MATERIAL IN THE PIPE SURROUND IN LAYERS SMALLER THAN OR EQUAL TO 200mm LOOSE THICKNESS, AND COMPACT WITHOUT DAMAGING OR DISPLACING PIPING.



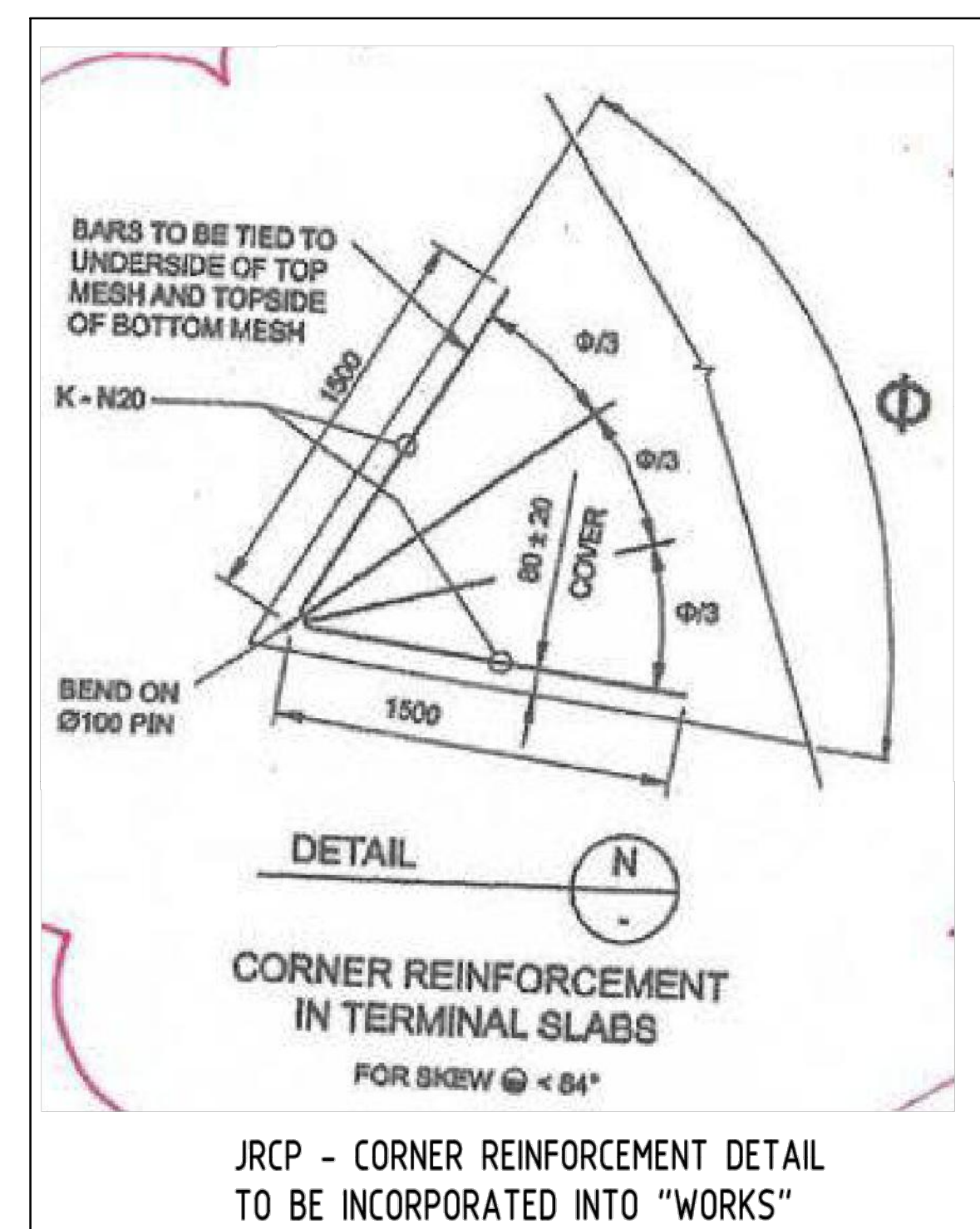
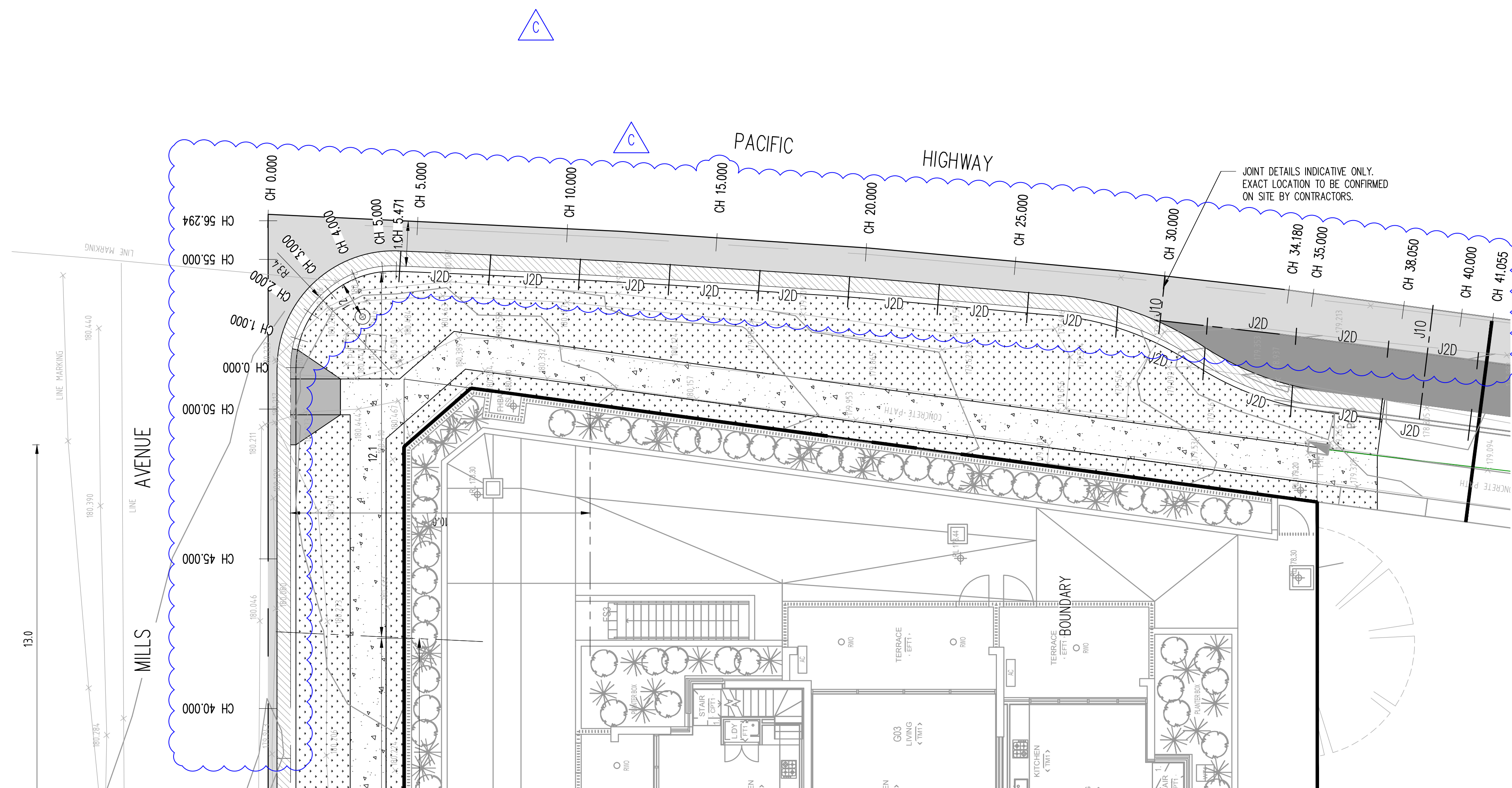
NOTE:
ALL ASPHALT WORKS TO BE
IN ACCORDANCE WITH R116.



A1 1 2 3 4 5 6 7 8 9 10																			
B ISSUED FOR C.C. APPROVAL										P.T. J.L. 08.03.19									
A ISSUED FOR C.C. APPROVAL										P.T. E.E. 20.12.18									
No AMENDMENT										No AMENDMENT									
No AMENDMENT										No AMENDMENT									
No AMENDMENT										No AMENDMENT									

JOINT DETAILS INDICATIVE ONLY.
EXACT LOCATION TO BE CONFIRMED
ON SITE BY CONTRACTORS.

1. MILL & RESHEET (RESURFACING) LIMITS WILL BE GREATER THAN SHOWN ON THE DRAWING/DESIGN AND IS TO BE DETERMINED BY RMS
2. EXISTING ASPHALT TO BE REMOVED TO DETERMINE JOINTING ARRANGEMENTS
3. DETAILS TO BE PROVIDED TO RMS PRIOR TO RESURFACING
4. PAVEMENT DETAILS MAY NEED TO EXTEND TO EXISTING LONGITUDINAL AND TRANSVERS JOINTS.

[illegible]

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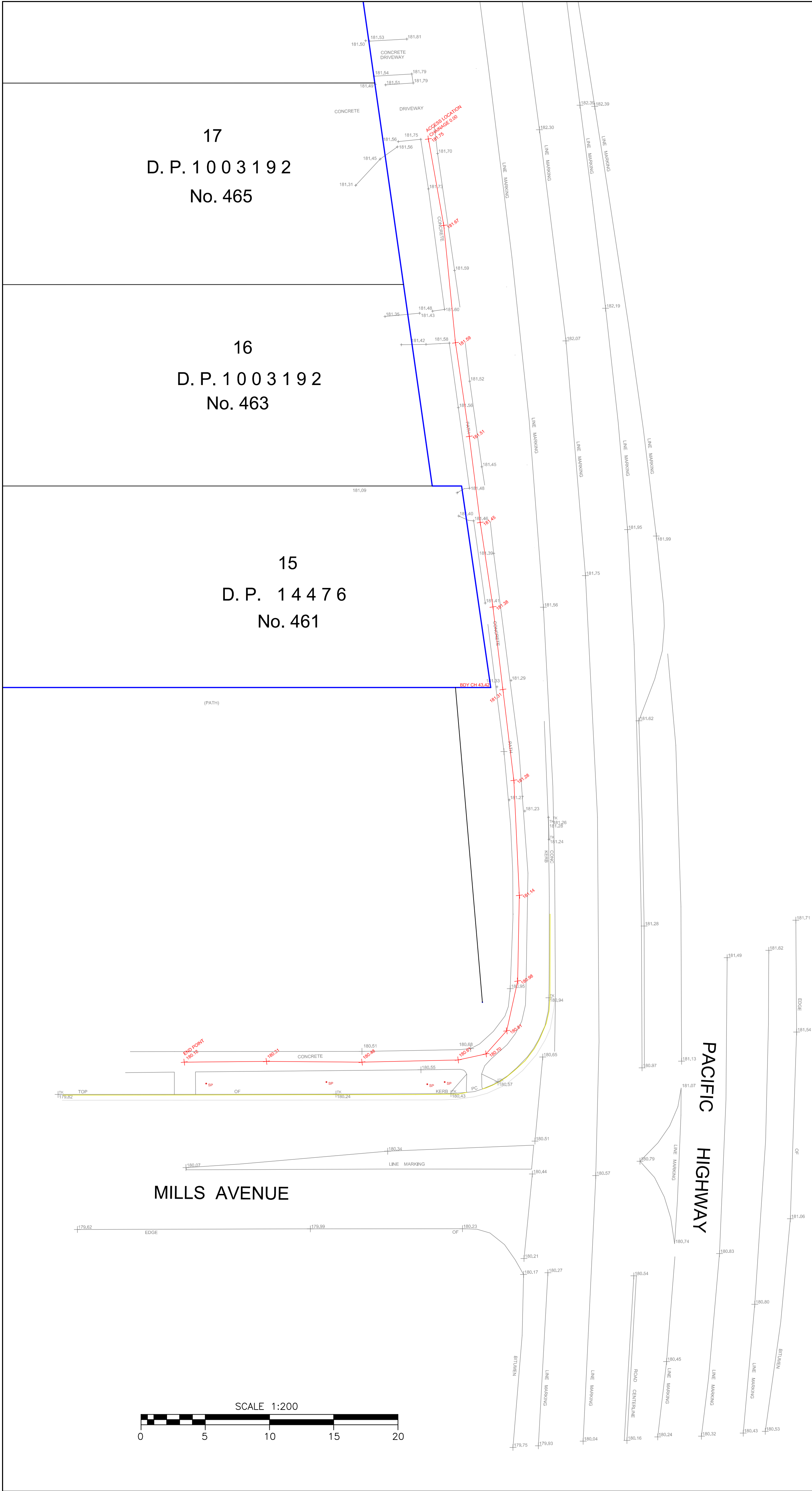
**AUSTRALIAN
CONSULTING
ENGINEERS.**

PTY LTD - A.C.N. 084 059 941
SHOP 2-1/41 CONCORD RD NORTH STRATHFIELD NSW 2157
PH: (02) 9763 1500 FX: (02) 9763 1515
EMAIL: info@aceeng.com.au

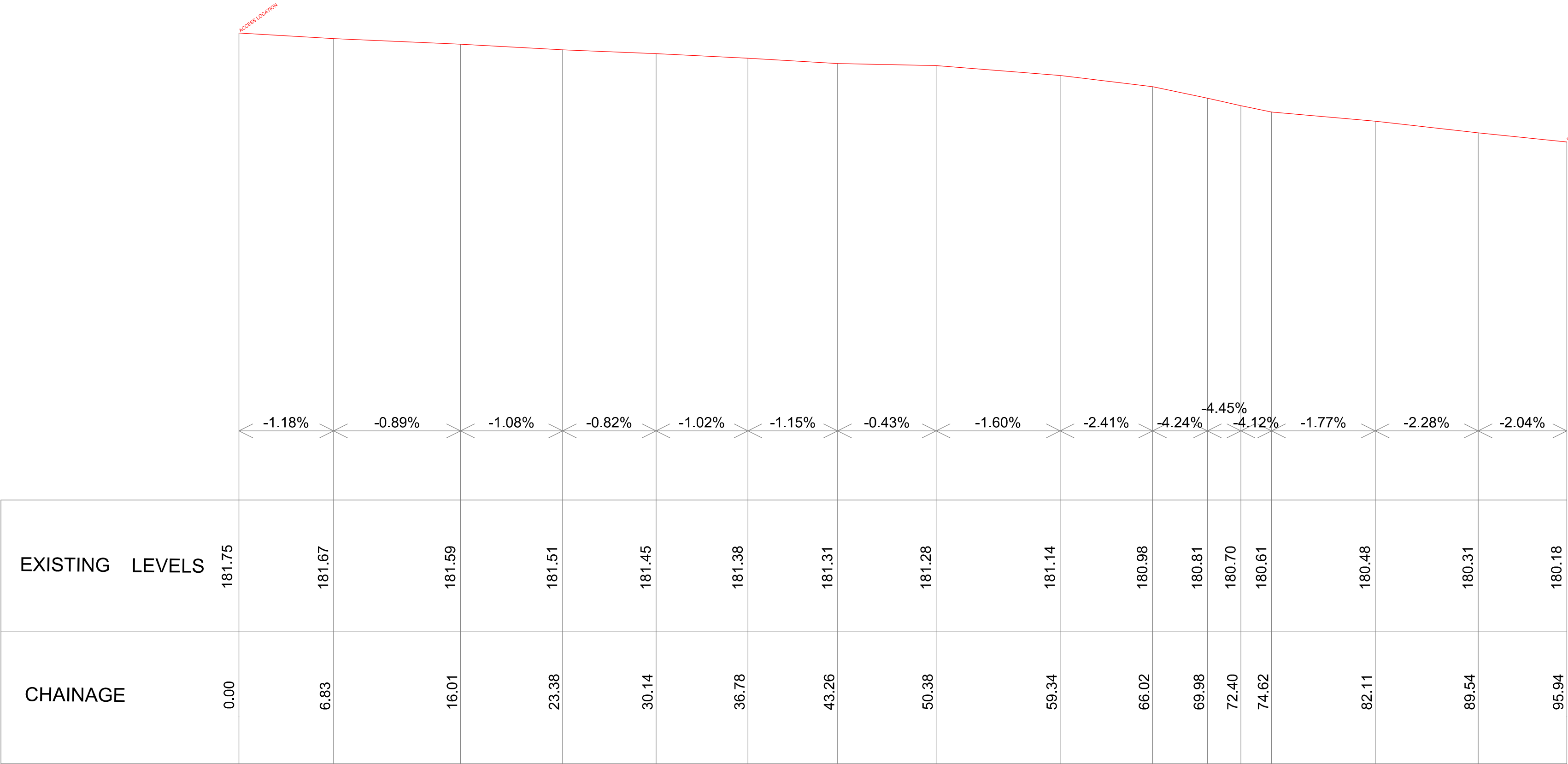
	AUTHORISED
	Dr Anthony S. Hasham

PROJECT 457-459 PACIFIC HIGHWAY, ASQUITH			
DATE SEPT 2017	DRAWN E.E.	DESIGNED O.C.	CHECKED A.S.H.
SCALE @ A1 N.T.S.		JOB No 161351	
AUTHORISED Dr Anthony S. Hosham		DWG No C13	REV C

APPENDIX B LONGITUDINAL SECTION PLAN



BUS STOP LONGSECTION



SCALES: HORIZONTAL 1:500
VERTICAL 1:100

SHEET 1 OF 1

DRAWING No. B3691—LONGSECTION

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BELLA VISTA

PO Box 7419
BAULKHAM HILLS NSW 2153
SUITE 405, LEVEL 4
14 LEXINGTON DRIVE
BELLA VISTA NSW 2153
PHONE : 9056 1900

email: office@projectsurveyors.com.au
www.projectsurveyors.com.au
ABN 20 068 433 974

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APPENDIX C EXAMPLE BUS TIMETABLE

Evidence of Available Bus Services from TfNSW Website

Stop number:
207784

Stop location:
Mills Av after Pacific Hwy

Buses from this stop:
598 to Hornsby Nth - Asquith Loop



Monday to Friday

Route	Time	Route	Time
♿ 598	05:58	♿ 598	08:21
♿ 598	06:13	♿ 598	08:56
♿ 598	06:34	598	09:15
598	06:59	♿ 598	10:15
♿ 598	07:22	♿ 598	11:15
♿ 598	07:36	♿ 598	12:15
598	07:56		

Saturday



Route	Time	Route	Time
♿ 598	08:36		
♿ 598	09:36		
♿ 598	10:36		
♿ 598	11:36		

**Sunday
& Public Holidays**

Route	Time
♿ 598	09:18
♿ 598	11:18

Explanations

♿ Accessible bus service

Effective: 25 March 2019

transportnsw.info

