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PLANS AND DOCUMENTS
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DEVELOPMENT APPROVAL

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STORMWATER MANAGEMENT REPORT

PROPOSED RESIDENTIAL DEVELOPMENT AT
8014 PARK AVENUE, NIRIMBA

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Our Ref: S25-060



DOCUMENT INFORMATION

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The assessment, conclusions or recommendations in this report are based on conditions encountered and information received at the time of preparing the report and may not be relied upon as site conditions or operations vary over time.



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1 INTRODUCTION

Westera Partners Pty Ltd has been commissioned by Nirimba By Vantage Ptd Ltd to prepare a Stormwater Management Report to accompany a development application for a proposed residential development at 8014 Park Ave, Nirimba.

The proposal involves the construction of a proposed 24 lot community title subdivision with shared access driveway, parking and landscaping. Access will be provided via a crossover from Stephen Crescent.

This report documents how stormwater runoff will be managed on site in accordance with Sunshine Coast Council requirements.

2 SITE DESCRIPTION

2.1 Location and Land Use

The site of the proposed development is located at 8014 Park Ave, Nirimba, part of Lot 4 on SP347407. The proposed development area is 3,218m² and is currently vacant within the Nirimba Masterplan area. The site currently falls to the east towards Aura Boulevard at minimal grade.

The proposed development is bound by residential dwellings and Remi Lane to the west, residential dwellings and Stephen Crescent to the south, Aura Boulevard to the east and Park Ave to the north. Refer to Figure 1 for an indicative site location.



Figure 1 - Indicative site location (Nearmaps, 2025)

2.2 Lawful Point of Discharge

There is an existing field inlet and pipe connection to the underground stormwater infrastructure within Aura Boulevard to function as the lawful point of discharge for the development site as part of the subdivision works to create the lot. The pipe connection is proposed to be reconstructed to move the infrastructure clear of proposed lot 18. Stormwater runoff from the roof and impervious ground levels shall be captured via new on-site stormwater infrastructure and directed to the lawful point of discharge. Refer to Appendix C for further information regarding the proposed stormwater works for the development.

2.3 Upstream Drainage Connection

An upstream stormwater drainage connection is not considered to be required for any neighbouring properties as all would be able to gravity drain to a lawful point of discharge without the need for a piped connection through the subject site.

2.4 Flooding

The proposed development site is not shown to be impacted by SCC flood mapping and is generally considered to be flood free.

3 STORMWATER QUANTITY MANAGEMENT

Stormwater quantity management is not considered to be required as the downstream stormwater infrastructure has been designed to consider the developed case for the development.

4 WATER QUALITY MANAGEMENT

4.1 Operational Phase

Typically, the proposed development would be required to meet the Queensland Governments State Planning Policy (July 2017) as the development site area exceeds 2,500m². As the site is located within the Nirimba masterplan area, all of the stormwater infrastructure discharges to existing constructed wetlands to the south which have been designed to treat the stormwater from the upstream developed catchment and therefore no further dedicated on site stormwater quality infrastructure is considered to be required.

It is still proposed to implement best management practices on site as part of the development works. Pollutants typically generated during the operational phrase of the development include:

- Litter/gross pollutants
- Sediment (Total Suspended Solids – TSS)
- Nutrients (Total Nitrogen and Total Phosphorus – TN & TP)
- Hydrocarbons (oils and grease)
- Heavy metals

Stormwater quality best management practices may be implemented for the development as follows:

- First flush diversion system for roof water diverting the roof water for irrigation purposes
- Rainwater storage tanks may be used to collect rainwater for landscape irrigation.

Best management practices have been deemed sufficient for the site area and land use.

4.2 Construction Phase

Management of stormwater runoff during construction and the implementation of an erosion & sediment control program is necessary to avoid impacts to receiving waters from pollutants typically generated during the construction phase. Typical pollutants are described in Table 1 below:

Table 1 – Pollutants Typically Generated During the Construction Phase

Pollutant	Sources
Litter (Gross Pollutants)	Paper, construction packaging, food packaging, cement bags.
Sediment	Unprotected exposed soils and stockpiles during earthworks and building.
Hydrocarbons	Fuel and oil spills, leaks from construction equipment.
Toxic materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash waters.
pH altering substances	Acid sulphate soils, cement slurry and wash waters.

In addition to the degradation of receiving waters, impacts of inadequate erosion and sediment control downstream from the site include:

- traffic safety problems;
- blocked drains;
- local flooding problems;
- aesthetic pollution of drainage paths; and
- damage to local ecosystems.

4.2.1 Design Objectives

Management of stormwater runoff during construction should be undertaken in accordance with Appendix 2 of the SPP (July 2017). The SPP outlines the design objectives for construction phase stormwater management. These are presented in Table 2, Table 3 and Table 4.

Table 2 – SPP Appendix 2: Part 1 Construction Phase – Stormwater Management Design Objectives

Issue	Desired Outcomes
Drainage Control	1. Manage stormwater flows around or through areas of exposed soil to avoid contamination. 2. Manage sheet flows in order to avoid or minimise the generation of rill or gully erosion. 3. Provide stable concentrated flow paths to achieve the construction phase stormwater management design objectives for temporary drainage works (part 2).

Issue	Desired Outcomes
	4. Provide emergency spillways for sediment basins to achieve the construction phase stormwater management design objectives for emergency spillways on temporary sediment basins (part 3).
Erosion Control	1. Stage clearing and construction works to minimise the area of exposed soil at any one time. 2. Effectively cover or stabilise exposed soils prior to predicted rainfall. 3. Prior to completion of works for the development, and prior to removal of sediment controls, all site surfaces must be effectively stabilised using methods which will achieve effective short-term stabilisation.
Sediment Control	1. Direct runoff from exposed site soils to sediment controls that are appropriate to the extent of disturbance and level of erosion risk. 2. All exposed areas greater than 2500 metres must be provided with sediment controls which are designed, implemented and maintained to a standard which would achieve at least 80% of the average annual runoff volume of the contributing catchment treated (i.e. 80% hydrological effectiveness) to 50mg/L Total Suspended Solids (TSS) or less, and pH in the range (6.5–8.5).
Litter, Hydrocarbons and other contaminants	1. Remove gross pollutants and litter. 2. Avoid the release of oil or visible sheen to released waters. 3. Dispose of waste containing contaminants at authorised facilities.
Waterway Stability and flood flow management	1. Where measures are required to meet post-construction waterway stability objectives, these are either installed prior to land disturbance and are integrated with erosion and sediment controls, or equivalent alternative measures are implemented during construction. 2. Earthworks and the implementation of erosion and sediment controls are undertaken in ways which ensure flooding characteristics (including stormwater quantity characteristics) external to the development site are not worsened during construction for all events up to and including the 1 in 100 year ARI (1% AEP).

Table 3 – SPP Appendix 2: Part 2 Construction Phase – Stormwater Management Design Objectives for Temporary Drainage Works

Temporary Drainage Works	Anticipated Operation Design Life and Minimum Design Storm Event		
	<12 Months	12-24 Months	>24 Months
Drainage Structure	1 in 2 year ARI/39% AEP	1 in 5 year ARI/18% AEP	1 in 10 year ARI/10% AEP

Temporary Drainage Works	Anticipated Operation Design Life and Minimum Design Storm Event		
	<12 Months	12-24 Months	>24 Months
Where located immediately up-slope of an occupied property that would be adversely affected by the failure or overtopping of the structure	1 in 10 year ARI/10% AEP		
Culvert Crossing	1 in 1 year ARI/63% AEP		

Table 4 – SPP Appendix 2: Part 3 Construction Phase – Stormwater Management Design Objectives for Emergency Spillways on Temporary Sediment Basins

Drainage Structure	Anticipated Operation Design Life and Minimum Design Storm Event		
	<3 Months	3-12 Months	>12 Months
Emergency spillways on temporary sediment basins	1 in 10 year ARI/10% AEP	1 in 20 year ARI/5% AEP	1 in 50 year ARI/2% AEP

Best practice erosion and sediment controls must be installed to minimise the discharge of sediment laden runoff during construction and to achieve the objectives outlined in Tables 2-4. This is discussed in the following section.

4.2.2 Erosion and Sediment Control

Management of stormwater runoff during construction is necessary to avoid pollution of downstream waterways from sediment and gross pollutant loading. Impacts of inadequate erosion and sediment control downstream from the site include:

- traffic safety problems;
- blocked drains;
- local flooding problems;
- aesthetic pollution of drainage paths; and
- damage to local ecosystems.

Best practice erosion and sediment controls must be installed to minimise the discharge of sediment laden runoff during construction. Erosion and sediment control plans are included within Appendix B and must be continually maintained and amended as required to minimise environmental harm.

Erosion and sediment control plans are based on three sets of control measures:

- drainage control;
- erosion control; and
- sediment control.

These control measures must be maintained in an effective operational condition. Sediment disposal from site is to occur to the satisfaction of Sunshine Coast Council. Defects in erosion and sediment control devices, such as sediment fences, are to be inspected and documented. Upon Inspection, the Contractor is to determine whether the device

should be replaced or repaired. Documentation is to include how the damage was caused and what measures can be implemented to reduce the possibility of repeat occurrences. Any damage to either permanent or temporary water quality control structures or devices is to be immediately rectified at the contractor's expense.

The effectiveness of the erosion and sediment control devices can be monitored by visual audits. All ESC measures are to be inspected:

- at least daily (when work is occurring on site) or weekly (when work is not occurring on site);
- within 24 hours of expected rain; and
- within 18 hours of a rainfall event (i.e. an event of sufficient intensity and duration to mobilise sediment on site).

Drainage paths are to be inspected to ensure the sediment fences are not being bypassed as a result of soil erosion.

Sediment laden runoff shall be prevented from entering neighbouring properties. This shall be achieved by landscaping disturbed areas immediately and prior to a rainfall event.

The proposed development has scored a '15' on the IECA erosion hazard assessment with no trigger score values exceeded (refer Appendix A for details).

4.2.3 Maintenance and Monitoring Requirements

Periodic maintenance and monitoring of stormwater devices proposed in this report is crucial to ensure effective operation and design life.

Inspect field inlet grates, pits and underground pipes for blockage or damage at least 6 monthly or after significant rainfall event. The filter baskets shall be inspected and maintained preferably by the manufacturer to avoid damage to units and to ensure adequate cleaning and record keeping. For the first 12 months routine inspections of filter baskets shall be carried out monthly with routine clean out at alternate months. Results of the initial 12 months maintenance program shall be used to determine future maintenance intervals. Refer manufactures maintenance and monitoring methodology for specific details.

Maintenance of ESC measures must occur in accordance with Table 5.

Table 5 – ESC maintenance requirements

ESC Measure	Maintenance Trigger	Timeframe for Completion of Maintenance
Sediment basins	When settled sediment exceeds the volume of the sediment storage zone	Within 7 days of the inspection.
Other ESC measures	The capacity of ESC measures falls below 75%.	By the end of the day.

Sediment accumulation on ESC devices is to be removed and disposed of to the satisfaction of Sunshine Coast Council.



5 CONCLUSION

This SWMR outlines how stormwater runoff from the site will be managed in order to not adversely impact the receiving environment.

There is an existing field inlet and pipe connection to the underground stormwater infrastructure within Aura Boulevard to function as the lawful point of discharge for the development site as part of the subdivision works to create the lot. The pipe connection is proposed to be reconstructed to move the infrastructure clear of proposed lot 18. Stormwater runoff from the roof and impervious ground levels shall be captured via new on-site stormwater infrastructure and directed to the lawful point of discharge.

The site is not considered to be impacted by flooding.

By implementing the proposed stormwater management system, and providing adequate maintenance, the downstream environment and neighbouring properties will not experience any adverse deterioration of water quality as a result of the proposed development.



6 APPENDICES

Appendix A – Erosion Hazard Assessment

Erosion Hazard Assessment Form

Condition	Points	Score	Trigger value
AVERAGE SLOPE OF DISTURBANCE AREA [1] - not more than 3% [3% . 33H:1V] - more than 3% but not more than 5% [5% = 20H:1V] - more than 5% but not more than 10% [10% = 10H:1V] - more than 10% but not more than 15% [15% . 6.7H:1V] - more than 15%	0 1 2 4 6	0	4
SOIL CLASSIFICATION GROUP (AS1726) [2] - GW, GP, GM, GC - SW, SP, OL, OH - SM, SC, MH, CH - ML, CL, or if <i>imported fill</i> is used, or if soils are untested	0 1 2 3	3	
EMERSON (DISPERSION) CLASS NUMBER [3] - Class 4, 6, 7, or 8 - Class 5 - Class 3, (default value if soils are untested) - Class 1 or 2	0 2 4 6	4	6
DURATION OF SOIL DISTURBANCE [4] - not more than 1 month - more than 1 month but not more than 4 months - more than 4 months but not more than 6 months - more than 6 months	0 2 4 6	2	6
AREA OF DISTURBANCE [5] - not more than 1000 m² - more than 1000 m² but not more than 5000 m² - more than 5000 m² but not more than 1 ha - more than 1 ha but not more than 4 ha - more than 4 ha	0 1 2 4 6	1	4
WATERWAY DISTURBANCE [6] - No disturbance to a watercourse, open drain or channel - Involves disturbance to a constructed open drain or channel - Involves disturbance to a natural watercourse	0 1 2	0	2
REHABILITATION METHOD [7] Percentage of area (relative to total disturbance) revegetated by seeding without light mulching (i.e. worst-case revegetation method). - not more than 1% - more than 1% but not more than 5% - more than 5% but not more than 10% - more than 10%	0 1 2 4	0	
RECEIVING WATERS [8] - Saline waters only - Freshwater body (e.g. creek or freshwater lake or river)	0 2	2	
SUBSOIL EXPOSURE [9] - No subsoil exposure except of service trenches - Subsoils are likely to be exposed	0 2	2	
EXTERNAL CATCHMENTS [10] - No external catchment - External catchment diverted around the soil disturbance - External catchment not diverted around the soil disturbance	0 1 2	0	
ROAD CONSTRUCTION [11] - No road construction - Involves road construction works	0 2	0	
pH OF SOILS TO BE REVEGETATED [12] - more than pH 5.5 but less than pH 8 - other pH values, or if soils are untested	0 1	1	
Total Score ^[13]		15	

Explanatory notes

Requirements: Specific issues or actions required by the proponent.

Warnings: Issues that should be considered by the proponent.

Comments: General information relating to the topic.

[1] **REQUIREMENTS:**

For sites with an average slope of proposed land disturbance greater than 10%, a preliminary ESCP must be submitted to the regulatory authority for approval during planning negotiations.

Proponents must demonstrate that adequate erosion and sediment control measures can be implemented on-site to effectively protect downstream environmental values.

If site or financial constraints suggest that it is not reasonable or practicable for the prescribed water quality objectives to be achieved for the proposal, then the proponent must demonstrate that alternative designs or construction techniques (e.g. pole homes, suspended slab) cannot reasonably be implemented on the site.

WARNINGS:

Steep sites usually require more stringent drainage and erosion controls than flatter grade sites.

COMMENTS:

The steeper the land, the greater the need for adequate drainage controls to prevent soil and mulch from being washed from the site.

[2] **REQUIREMENTS:**

If the actual soil K-factor is known from soil testing, then the Score shall be determined from Table 1.

If a preliminary ESCP is required during planning negotiations, then it must be demonstrated that adequate space is available for the construction and operation of any major sediment traps, including the provision for any sediment basins and their associated embankments and spillways. It must also be demonstrated that all reasonable and practicable measures can be taken to divert the maximum quantity of sediment-laden runoff (up to the specified design storm) to these sediment traps throughout the construction phase and until the contributing catchment is adequately stabilised against erosion.

WARNINGS:

The higher the point score, the greater the need to protect the soil from raindrop impact and thus the greater the need for effective erosion control measures. A point score of 2 or greater will require a greater emphasis to be placed on revegetation techniques that do not expose the soil to direct rainfall contact during vegetation establishment, e.g. turfing and *Hydromulching*.

COMMENTS:

Table 2 provides an *indication* of soil conditions likely to be associated with a particular Soil group based on a statistical analysis of soil testing across NSW. This table provides only an initial estimate of the likely soil conditions.

The left-hand-side of the table provides an indication of the type of sediment basin that will be required (Type C, F or D). The right-hand-side of the table provides an indication of the likely erodibility of the soil based on the Revised Universal Soil Loss Equation (RUSLE) K-factor.

Table 3 provides some general comments on the erosion potential of the various soil groups.

Table 1 – Score if soil K-factor is known

	RUSLE soil erodibility K-factor			
	K < 0.02	0.02<K<0.04	0.04<K<0.06	K > 0.06
Score	0	1	2	3

Table 2 – Statistical analysis of NSW soil data^[1]

Unified Soil Class System	Likely sediment basin classification (%)			Probable soil erodibility K-factor (%) ^[2]			
	Dry	Wet		Low	Moderate	High	Very High
	Type C	Type F	Type D	K < 0.02	0.02<K<0.04	0.04<K<0.06	K > 0.06
GM	30	58	12	12	51	26	12
GC	42	33	25	13	71	17	0
SW	40	48	12	49	39	12	0
SP	53	32	15	76	18	5	1
SM	21	67	12	26	48	25	1
SC	26	50	24	16	64	18	2
ML	5	63	32	4	35	45	16
CL	9	51	39	12	56	19	13
OL	2	80	18	34	61	5	1
MH	12	41	48	15	19	41	25
CH	5	44	51	39	43	11	7

Notes: [1] Analysis of soil data presented in Landcom (2004).

[2] Soil erodibility based on Revised Universal Soil Loss Equation (RUSLE) K-factor.

Unified Soil Classification System (USCS)

- GW Well graded gravels, gravel-sand mixtures, little or no fines
- GP Poorly graded gravels, gravel-sand mixture, little or no fines
- GM Silty gravels, poorly graded gravel-sand-silt mixtures
- GC Clayey gravels, poorly graded gravel-sand-clay mixtures
- SW Well graded sands, gravelly sands, little or no fines
- SP Poorly graded sands, gravelly sands, little or no fines
- SM Silty sands, poorly graded sand-silt mixtures
- SC Clayey sands, poorly graded sand-clay mixtures
- ML Inorganic silts & very fine sands, rock flour, silty or clayey fine sands with slight plasticity
- CL Inorganic clays, low–medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
- OL Organic silts and organic silt-clays of low plasticity
- MH Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
- CH Inorganic clays of high plasticity, fat clays
- OH Organic clays of medium to high plasticity

Table 3 – Typical properties of various soil groups^[1]

Soil Groups	Typical properties ^[2]
GW, GP	Low erodibility potential.
GM, GC	- Low to medium erodibility potential. - May create turbid runoff if disturbed as a result of the release of silt and clay particles.
SW, SP	Low to medium erodibility potential.
SM, SC	- Medium erodibility potential. - May create turbid runoff if disturbed as a result of the release of silt and clay particles.
MH, CH	- Highly variable (low to high) erodibility potential. - Will generally create turbid runoff if disturbed.
ML, CL	- High erodibility potential. - Tendency to be dispersive. - May create some turbidity in runoff if disturbed.

Note: [1] After Soil Services & NSW DLWC (1998).

[2] Any soil can represent a high erosion risk if the binding clays or silts are unstable.

Table 4 provides **general** guidelines on the suitability of various soil groups to various engineering applications.

Table 4 – Engineering suitability based on Unified Soil Classification^[1]

Unified Soil Class	USC Group	Embankments		Fill	Slope stability	Untreated roads
		Water retaining	Non water retaining			
Well graded gravels	GW	Unsuitable	Excellent	Excellent	Excellent	Average
Poorly graded gravel	GP	Unsuitable	Average	Excellent	Average	Unsuitable
Silty gravels	GM	Unsuitable	Average	Good	Average	Average
Clayey gravels	GC	Suitable	Average	Good	Average	Excellent
Well graded sands	SW	Unsuitable	Excellent	Excellent	Excellent	Average
Poorly graded sands	SP	Unsuitable	Average	Good	Average	Unsuitable
Silty sands	SM	Suitable ^[2]	Average	Average	Average	Poor
Clayey sands	SC	Suitable	Average	Average	Average	Good
Inorganic silts	ML	Unsuitable	Poor	Average	Poor	Unsuitable
Inorganic clays	CL	Suitable ^[2]	Good	Average	Good	Poor
Organic silts	OL	Unsuitable	Unsuitable	Poor	Unsuitable	Unsuitable
Inorganic silts	MH	Unsuitable	Poor	Poor	Poor	Unsuitable
Inorganic clays	CH	Suitable ^[2]	Average	Unsuitable	Average	Unsuitable
Organic clays	OH	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Highly organic soils	Pt	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable

Notes: [1] Modified from Hazelton & Murphy (1992)

[2] Suitable only after modifications to soil such as compaction and/or erosion protection

- [3] If the soils have not been tested for Emerson Class, then adopt a score of 4.

REQUIREMENTS:

Works proposed on sites containing Emerson Class 1 or 2 soils have a very high pollution potential and must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the authority) during planning negotiations.

WARNINGS:

Class 3 and 5 soils disturbed by cut and fill operations or construction traffic are highly likely to discolour stormwater (i.e. cause turbid runoff). Chemical stabilisation will likely be required if these soils are placed immediately adjacent to a retaining wall. Any disturbed Class 1, 2, 3 and 5 soils that are to be revegetated must be covered with a non-dispersive topsoil as soon as possible (unless otherwise agreed by the regulatory authority).

Class 1 and 2 soils are highly likely to discolour (pollute) stormwater if exposed to rainfall or flowing water. Treatment of these soils with gypsum (or other suitable substance) will most likely be required. These soils should not be placed directly behind a retaining wall unless it has been adequately treated (stabilised) or covered with a non-dispersible soil.

- [4] The duration of disturbance refers to the total duration of soil exposure to rainfall up until a time when there is at least 70% coverage of all areas of soil.

REQUIREMENTS:

All land developments with an expected soil disturbance period greater than 6 months must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the authority) during planning negotiations.

COMMENTS:

Construction periods greater than 3 months will generally experience at least some significant storm events, independent of the time of year that the construction (soil disturbance) occurs.

- [5] **REQUIREMENTS:**

Development proposals with an expected soil disturbance in excess of 1ha must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the regulatory authority) during planning negotiations.

The area of disturbance refers to the total area of soil exposed to rainfall or dust-producing winds either as a result of:

- (a) the removal of ground cover vegetation, mulch or sealed surfaces;
- (b) past land management practices;
- (c) natural conditions.

WARNINGS:

A *Sediment Basin* will usually be required if the disturbed area exceeds 0.25ha (2500m²) within any sub-catchment (i.e. land flowing to one outlet point).

COMMENTS:

For soil disturbances greater than 0.25ha, the revegetation phase should be staged to minimise the duration for which soils are exposed to wind, rain and concentrated runoff.

[6] REQUIREMENTS:

All developments that involve earthworks or construction within a natural watercourse (whether that watercourse is in a natural or modified condition) must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the regulatory authority) during planning negotiations.

Permits and/or licences may be required from the State Government, including possible submission of the ESCP to the relevant Government department.

[7] REQUIREMENTS:

No areas of soil disturbance shall be left exposed to rainfall or dust-producing winds at the end of a development without an adequate degree of protection and/or an appropriate action plan for the establishment of at least 70% cover.

COMMENTS:

Grass seeding without the application of a light mulch cover is considered the least favourable revegetation technique. A light mulch cover is required to protect the soil from raindrop impact, excessive temperature fluctuations, and the loss of essential soil moisture.

[8] COMMENTS:

All receiving waters can be adversely affected by unnatural quantities of sediment-laden runoff. Freshwater ecosystems are generally more susceptible to ecological harm resulting from the inflow of fine or dispersible clays than saline water bodies. The further inland a land disturbance is, the greater the potential for the released sediment to cause environmental harm as this sediment travels towards the coast.

For the purpose of this clause it is assumed that all sediment-laden runoff will eventually flow into saline waters. Thus, sediment-laden discharges that flow first into freshwater are likely to adversely affect both fresh and saline water bodies and are therefore considered potentially more damaging to the environment.

This clause does **not** imply that sediment-laden runoff will not cause harm to saline waters.

[9] COMMENTS:

This clause refers to subsoils exposed during the construction phase either as a result of past land practices or proposed construction activities. The exposure of subsoils resulting from the excavation of minor service trenches should not be considered.

[10] WARNINGS:

The greater the extent of external catchment, the greater the need to divert up-slope stormwater runoff around any soil disturbance.

COMMENTS:

The ability to separate "clean" (i.e. external catchment) stormwater runoff from "dirty" site runoff can have a significant effect on the size, efficiency and cost of the temporary drainage, erosion, and sediment control measures.

[11] REQUIREMENTS:

Permission must be obtained from the owner of a road reserve before placing any erosion and sediment control measures within the road reserve.

WARNINGS:

Few sediment control techniques work efficiently when placed on a road and/or around roadside stormwater inlets. Great care must be taken if sediment control measures are located on a public roadway, specifically:

- safety issues relating to road users;
- the risk of causing flooding on the road or within private property.

The construction of roads (whether temporary or permanent) will usually modify the flow path of stormwater runoff. This can affect how “dirty” site runoff is directed to the sediment control measures.

COMMENTS:

“On-road” sediment control devices are at best viewed as secondary or supplementary sediment control measures. Only in special cases and/or on very small projects (e.g. kerb and channel replacement) might these controls be considered as the “primary” sediment control measure.

[12] WARNINGS:

Soils with a pH less than 5.5 or greater than 8 will usually require treatment in order to achieve satisfactory revegetation. Soils with a pH of less than 5 (whether naturally acidic or in acid sulfate soil areas) may also limit the choice of chemical flocculants (e.g. Alum) for use in the flocculation of *Sediment Basins*.

[13] REQUIREMENTS:

A preliminary ESCP must be submitted to the local government for approval during the planning phase for any development that obtains a total point score of 17 or greater or when any trigger value is scored or exceeded.



Appendix B – Preliminary Engineering Plans

PROPOSED RESIDENTIAL DEVELOPMENT

8014 PARK AVE, NIRIMBA
NIRIMBA BY VANTAGE PTY LTD

Project Number: S25-060

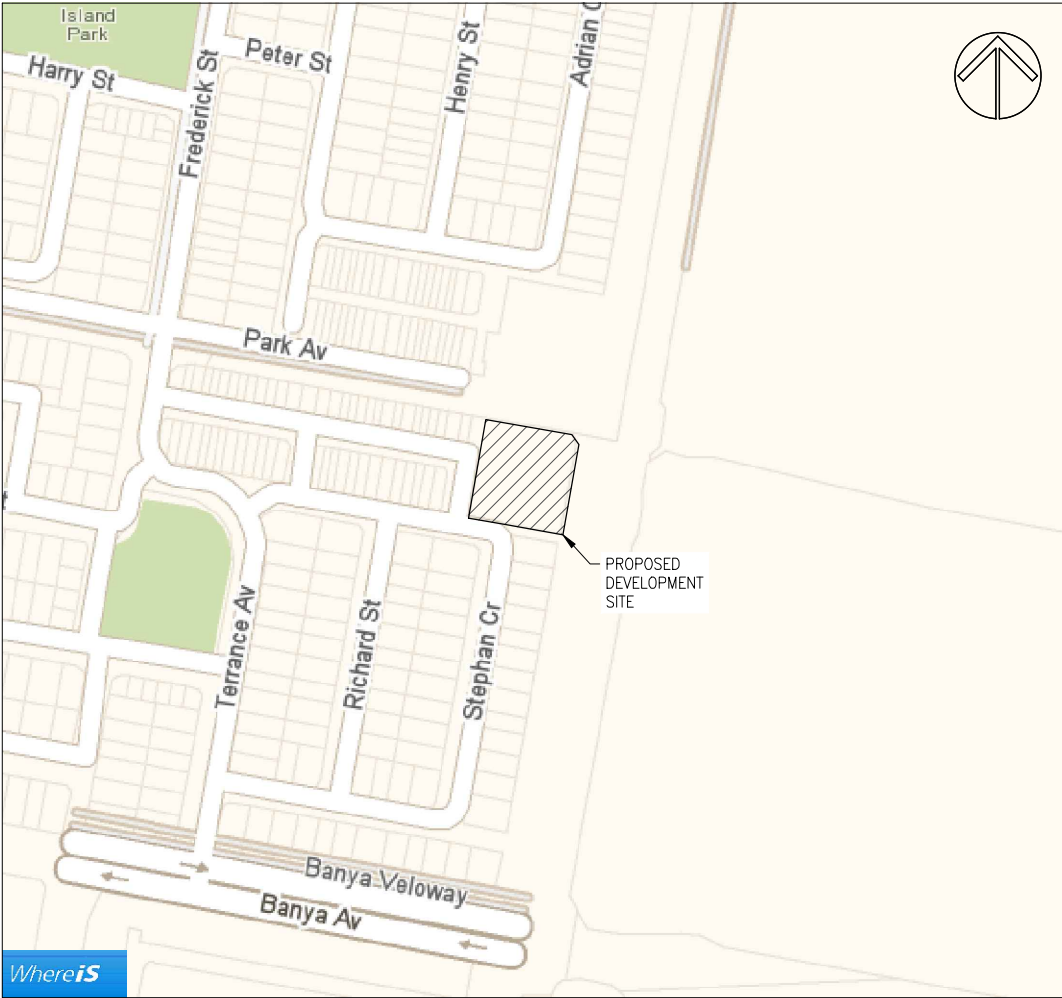
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S25-060-C01 CIVIL NOTES & LEGEND
S25-060-C02 SITE PLAN
S25-060-C03 CIVIL WORKS PLAN 01 OF 02
S25-060-C04 CIVIL WORKS PLAN 02 OF 02
S25-060-C05 PAVEMENT & JOINTING PLAN
S25-060-C06 PAVEMENT & JOINTING PLAN DETAILS
S25-060-C07 SIGNS & LINEMARKING PLAN

EARTHWORKS DRAWINGS
S25-060-E01 EARTHWORKS SITE PLAN
S25-060-E02 EARTHWORKS PLAN 01 OF 02
S25-060-E03 EARTHWORKS PLAN 02 OF 02
S25-060-E04 EARTHWORKS SECTIONS

EROSION & SEDIMENT CONTROL DRAWINGS
S25-060-ESC01 EROSION & SEDIMENT CONTROL PLAN
S25-060-ESC02 EROSION & SEDIMENT CONTROL DETAILS
S25-060-ESC03 EROSION & SEDIMENT CONTROL NOTES



LOCALITY PLAN
NOT TO SCALE

								DESIGNED J.M.H.				</			
--	--	--	--	--	--	--	--	-----------------	--	--	--	--	--	--	--

WESTERA PARTNERS HAS LIMITED CONTROL OR INPUT TO LOCAL GOVERNMENT OR OTHER LEGISLATED APPROVALS UNLESS SPECIFICALLY ENGAGED BY IT'S CLIENT. ANY CHANGES TO APPROVAL REQUIREMENTS (INCLUDING ORDERS FOR SUSPENSION OF WORKS ETC) SHOULD BE COMMUNICATED TO WESTERA PARTNERS AND ALL OTHER RELEVANT DESIGNERS TO ALLOW ASSESSMENT OF POTENTIAL RISKS AND ENSURE DESIGN AND SAFETY COMPLIANCE.

G2 ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS & SPECIFICATIONS AND COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY.

G3 UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.

G4 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR MUST LOCATE ALL EXISTING SERVICES AND PROMPTLY PROVIDE THE LOCATION DATA TO THE DESIGN ENGINEER TO ASSESS IMPACTS ON THE DESIGN.

G5 ALL CONNECTIONS TO EXISTING SEWERS AND WATER MAINS ARE TO BE CONSTRUCTED BY THE LOCAL AUTHORITY OR AN APPROVED CONTRACTOR. THE CONTRACTOR IS TO ALLOW IN HIS CONTRACT SUM FOR THE COST OF ANY PROPOSED CONNECTIONS.

G6 ALL SEWERS ARE TO BE 150MM DIA. U.P.V.C. CLASS SN8 RUBBER RING JOINTED AND PROPERTY CONNECTIONS ARE TO BE 100MM DIA. U.P.V.C CLASS SN6 UNLESS NOTED OTHERWISE

G7 THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING SUB-SOIL TESTS OF THE SUB-GRADE MATERIAL.

G8 ALL ROOFWATER CONNECTIONS FROM KERB ADAPTERS ARE TO BE 100MM DIA CLASS SN10 AT A MIN GRADE OF 1.0% UNLESS SHOWN OTHERWISE. ROOFWATER CONNECTIONS FROM FIELD INLETS OR GULLY PITS ARE TO BE 150MM DIA CLASS SN8 AT A MIN GRADE OF 1.0% UNLESS NOTED OTHERWISE.

G9 ALL U.P.V.C. STORMWATER DRAINAGE PIPES ARE TO BE CLASS SN8 (U.N.O.)
ALL R.C. PIPES ARE TO BE CLASS 3 (U.N.O.) WITH SPIGOT AND SOCKET AND RUBBER RING JOINTS.

ALL F.R.C. PIPES ARE TO BE FRCP/PIPE R+ CLASS 4 (U.N.O.) AND SHALL BE DUAL RUBBER RING JOINT WITH COLLAR. PIPES SHALL BE FROM 225Ø TO 525Ø ONLY.

POLYPROPYLENE/POLYETHYLENE STORMWATER PIPE MINIMUM CLASS SN8 (U.N.O.) SUBJECT TO ACCEPTANCE BY CERTIFYING ENGINEER AND LOCAL AUTHORITY. CONSTRUCTION AND EMBEDMENT TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

G10 WATER PIPES SHALL BE;
- P.V.C.-M WATER PIPES ARE TO BE SERIES 2 PN16 SN10 R.R.J.
- D.I.C.L. WATER PIPES ARE TO BE PN35 WITH ALL FITTINGS TO BE FUSION BONDED POLYMERIC COATED.
- PE WATER PIPES ARE TO BE PN16 SDR11 PE100. DN25 AND DN32 WATER SERVICES SHALL BE PE80B.

G11 ALL "AS CONSTRUCTED" INFORMATION IS TO BE RECORDED AS REQUIRED BY THE LOCAL AUTHORITY AND SUBMITTED TO THE SUPERINTENDENT IMMEDIATELY AFTER COMPLETION OF THE WORKS.

G12 ALL ALLOTMENTS ARE TO BE GRADED AT A MINIMUM GRADE OF 1 IN 200.

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES CODE AND THE REFERENCED STANDARDS THEREIN.

C2 THE CONCRETE STRENGTH GRADE AND THE COVER TO REINFORCEMENT FOR THE VARIOUS CONCRETE ELEMENTS SHALL BE AS LISTED BELOW:

- CLIMATE ZONE: TROPICAL TEMPERATE ARID
- LOCATION: COASTAL NEAR COASTAL INLAND

*RIGID FORMWORK & INTENSE COMPACTION

- | | |
|----|---|
| C3 | CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP, A WATER/CEMENT RATIO OF NOT GREATER THAN 0.65 AND A MAXIMUM FINAL BASIC DRYING SHRINKAGE STRAIN OF 800×10^{-6} , UNLESS APPROVED OTHERWISE. |
| C4 | NO ADDITIVES SHALL BE ADDED OR APPLIED TO THE CONCRETE MIX WITHOUT THE APPROVAL OF THE ENGINEER. |

- | AMBIENT AIR TEMPERATURE | MAX. BATCHING TO PLACEMENT TIME |
|-------------------------|--|
| 10° - 24°C | 120 MINUTES |
| 25° - 27°C | 90 MINUTES |
| 28° - 30°C | 60 MINUTES |
| 31° - 33°C | 45 MINUTES |
| 34° - 36°C | 30 MINUTES |
| 37°C+ | NO PLACEMENT OF CONCRETE
UNLESS CHILLED WATER OR ICE IN MIX |

- C0 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
- C7 ALL CONCRETE SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH AS1379 ADOPTING THE PROJECT ASSESSMENT METHOD FOR COMPRESSIVE STRENGTH AND SLUMP COMPLIANCE. THE RESULTS OF ALL TESTS SHALL BE PROMPTLY SUBMITTED TO THE ENGINEER FOR REVIEW.
- C8 WHEN THE AIR TEMPERATURE EXCEEDS 30°C, ALIPHATIC ALCOHOL SHALL BE APPLIED TO THE CONCRETE SURFACE OF SLABS IMMEDIATELY AFTER THE INITIAL SCREED AND AGAIN AFTER BULL FLOATING.
- C9 CURING OF ALL CONCRETE SURFACES SHALL COMMENCE IMMEDIATELY AFTER COMPLETING CONCRETE FINISHING AND SHALL CONTINUE FOR 7 DAYS. CONTRACTOR TO CONFIRM METHOD OF CURING WITH ENGINEER PRIOR TO USE.
- C10 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C11 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.
- C12 NO HOLES, CHASES OR EMBEDDED ITEMS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER. CONDUITS, PIPES ETC. SHALL NOT BE PLACED IN THE COVER THICKNESS OF THE CONCRETE.
- C13 WHERE SERVICE PIPES PENETRATE CONCRETE ELEMENTS, PROVISION SHOULD BE MADE TO ALLOW FOR MOVEMENT OF THE ELEMENT.
- C14 FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610 FORMWORK CODE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION OR SCALE.
- C16 ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION ON PLASTIC BAR CHAIRS, GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS.
- C17 WELDING AND HEATING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.
- C18 ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS SHALL BE INSPECTED BY THE ENGINEER AND PASSED PRIOR TO POURING OF ANY CONCRETE.
- C19 LAP REINFORCEMENT ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.
- C20 SLAB FABRIC SHALL BE LAPPED ONE FULL PANEL OF FABRIC PLUS 50mm. SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED BY 50mm.
- C21 BAR REINFORCEMENT SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING TABLE.

WHERE LAPS ARE SHOWN ON THE DRAWINGS THE ABOVE LAP LENGTHS SHALL BE ADOPTED UNLESS NOTED OTHERWISE. WHERE BARS OF DIFFERENT DIAMETER ARE SHOWN LAPPED, ADOPT THE LAP LENGTH APPROPRIATE TO THE SMALLER DIAMETER BAR.

- C22 A VAPOUR BARRIER OF 0.2mm (200um) MINIMUM THICK POLYTHENE SHEETING SHALL BE PLACED BENEATH SLABS ON GROUND UNLESS NOTED OTHERWISE.

ASPHALTIC CONCRETE PAVEMENT	
REINFORCED CONCRETE PAVEMENT	
REINFORCED CONCRETE PATHWAY/CROSSOVER	
TURF	
STONE PITCHING	
CEMENT GROUTED STONE PITCHING	
TELECOMMUNICATION	— T —
GAS MAIN	— G —
ELECTRICITY OVERHEAD	— V —
ELECTRICITY UNDERGROUND	— E —
LIGHT POLE	— V — — V —
POWER POLE	— V — — V —
PIT (TEL/STRA/ELEC)	— —
EDGE OF BITUMEN	— —
FENCE	— / — / — / —
EXISTING SURFACE LEVEL	× 2.53
EXISTING CONTOUR MINOR	— 33.75 —
EXISTING CONTOUR MAJOR	— 34.00 —
DESIGN SURFACE LEVEL	× 2.53
DESIGN CONTOUR MINOR	— 33.75 —
DESIGN CONTOUR MAJOR	— 34.00 —
RETAINING WALL	
STAGE BOUNDARY	

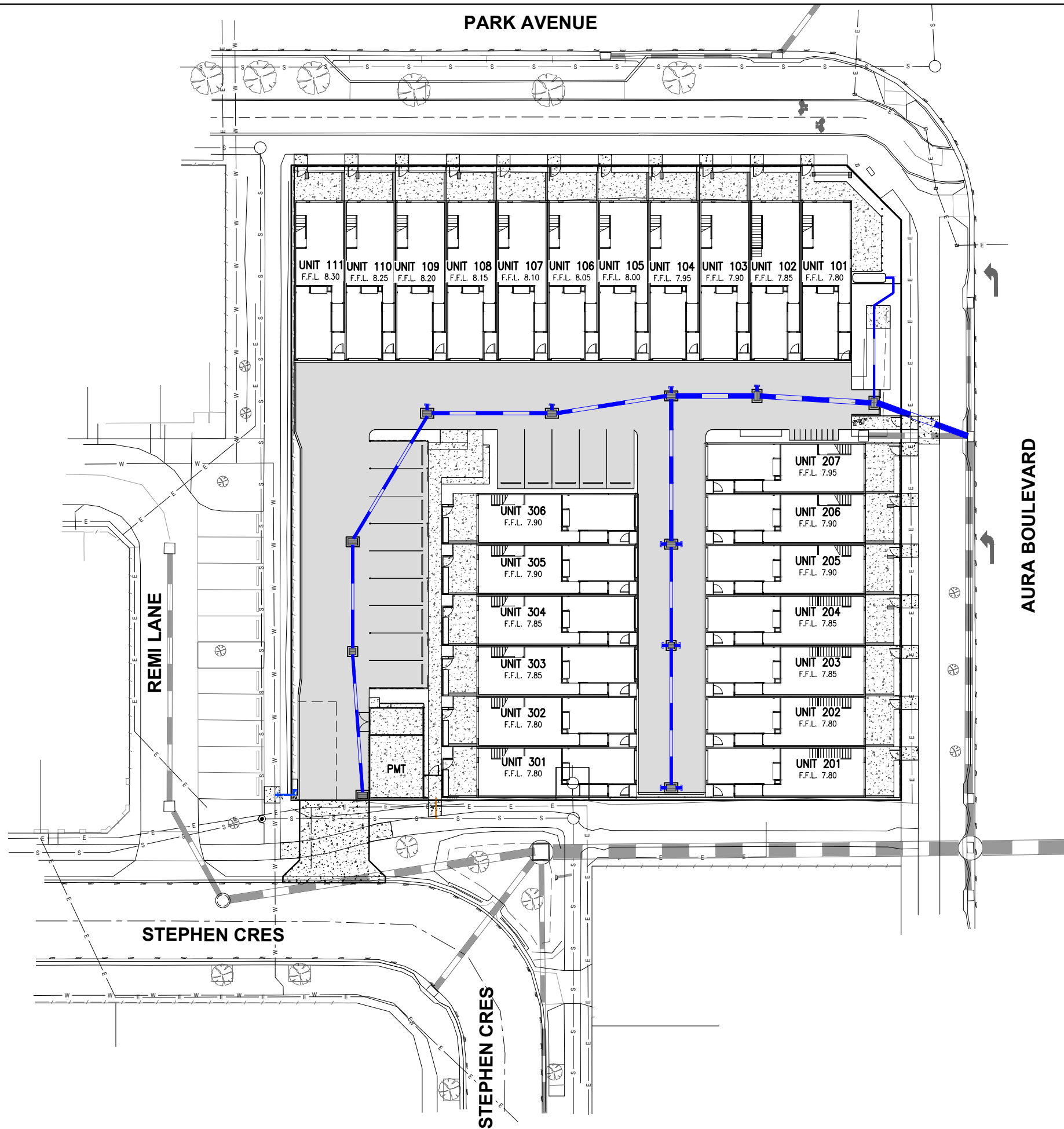
	NEW	EXISTING
STORMWATER PIPE		
SAG GULLY PIT		
ON GRADE GULLY PIT		
MANHOLE		
600 x 600 FIELD INLET		
900 x 600 FIELD INLET		
1050 DIA FIELD INLET		
HEADWALL		
KERB ADAPTER WITH ROOFWATER PIPE		
STORMWATER STRUCTURE LABEL		

WATER

	NEW	EXISTING	DISUSED
WATER MAIN			
FIRE HYDRANT			
DUAL OUTLET FIRE HYDRANT			
SWABBING DUAL OUTLET FIRE HYDRANT			
SWABBING FIRE HYDRANT			
ISOLATION VALVE			
SCOUR VALVE			
AIR VALVE			
DEAD END			
TEST/CHLORINATION POINT			
REDUCER			
PIPE MATERIAL CHANGE			
WATER SERVICE PRE-TAPPED TEE			
WATER SERVICE PIPE & CONDUIT			
FLOW METER			
FLUSHING POINT			

	NEW	EXISTING	DISUSED
GRAVITY SEWER MAIN			
SEWER RISING MAIN			
SEWER VACUUM MAIN			
MAINTENANCE HOLE & END OF LINE			
END OF LINE			
MAINTENANCE SHAFT			
HORIZONTAL/VERTICAL BEND			
COMPOUND BEND			
STUB / TEMPORARY END			
RODDING END			
PROPERTY CONNECTION			
OVERFLOW MAINTENANCE HOLE			
ISOLATION VALVE			
SCOUR VALVE AND CHAMBER			
GAS RELEASE VALVE			
FLUSHING POINT			
DISCHARGE MAINTENANCE HOLE			
NON-RETURN/REFLUX VALVE			
VENT POLE / ODOUR CONTROL UNIT			

S25-060-C Civil Notes.dwg



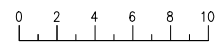
NOTE:
THE INVERT LEVEL & LOCATION OF ALL
EXISTING STORMWATER & SEWER
INFRASTRUCTURE SHALL BE CONFIRMED ON
SITE PRIOR TO THE COMMENCEMENT OF
CONSTRUCTION.

*** STORMWATER STUB NOTE:**
PROVIDE STUBS AS SHOWN FOR ROOF
AND/OR YARD DRAINAGE CONNECTION.
REFER HYDRAULIC ENGINEERS DRAWINGS
FOR DETAILS.

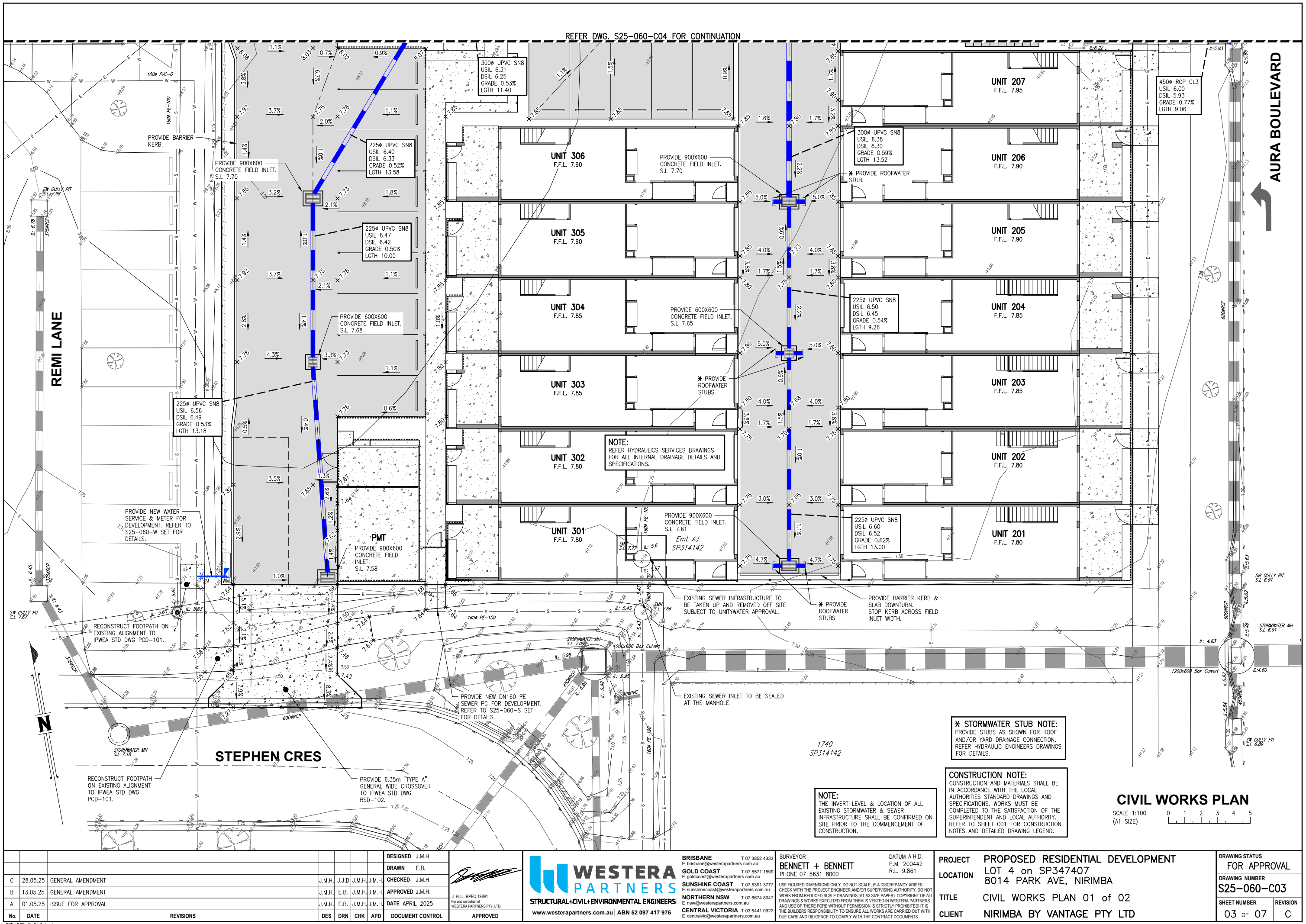
CONSTRUCTION NOTE:
CONSTRUCTION AND MATERIALS SHALL BE
IN ACCORDANCE WITH THE LOCAL
AUTHORITIES STANDARD DRAWINGS AND
SPECIFICATIONS. WORKS MUST BE
COMPLETED TO THE SATISFACTION OF THE
SUPERINTENDENT AND LOCAL AUTHORITY.
REFER TO SHEET C01 FOR CONSTRUCTION
NOTES AND DETAILED DRAWING LEGEND.

SITE PLAN

SCALE 1:200
(A1 SIZE)



										DESIGNED J.M.H.				BRISBANE T 07 3852 4333 E brisbane@westerapartners.com.au		SURVEYOR BENNETT + BENNETT PHONE 07 5631 8000		DATUM A.H.D. P.M. 200442 R.L. 9.861		PROJECT LOCATION TITLE CLIENT	PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA SITE PLAN NIRIMBA BY VANTAGE PTY LTD		DRAWING STATUS FOR APPROVAL	
										DRAWN E.B.				GOLD COAST T 07 5571 1599 E goldcoast@westerapartners.com.au		USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THEM FOR ANY PURPOSE WITHOUT PERMISSION IS STRICTLY PROHIBITED IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.		DRAWING NUMBER S25-060-C02						
										CHECKED J.M.H.				SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au				SHEET NUMBER 02 OF 07						
										APPROVED J.M.H.				NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au				REVISION C						
										DATE APRIL 2025		CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au												



No.	DATE	REVISIONS	DESIGNED	DRAWN	CHECKED	APPROVED	DOCUMENT CONTROL
C	28.05.25	GENERAL AMENDMENT	J.M.H.	J.J.D.	J.M.H.	J.M.H.	
B	13.05.25	GENERAL AMENDMENT	J.M.H.	E.B.	J.M.H.	J.M.H.	
A	01.05.25	ISSUE FOR APPROVAL	J.M.H.	E.B.	J.M.H.	J.M.H.	

DESIGNED	J.M.H.
DRAWN	E.B.
CHECKED	J.M.H.
APPROVED	J.M.H.
DATE	APRIL 2025



WESTERA PARTNERS
STRUCTURAL-CIVIL-ENVIRONMENTAL ENGINEERS
www.westerapartners.com.au | ABN 52 097 417 975

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GOLD COAST T 07 5571 1599
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SUNSHINE COAST T 07 5391 3777
E sunshine@westera.com.au
NORTHERN NSW T 02 6874 8047
E nsw@westera.com.au
CENTRAL VICTORIA T 03 5441 0922
E centralvic@westera.com.au

SURVEYOR
BENNETT + BENNETT
PHONE 07 5631 8000

DATUM A.H.D.
P.M. 200442
R.L. 9.861

PROJECT PROPOSED RESIDENTIAL DEVELOPMENT
LOCATION LOT 4 on SP347407
8014 PARK AVE, NIRIMBA
TITLE CIVIL WORKS PLAN 01 of 02
CLIENT NIRIMBA BY VANTAGE PTY LTD

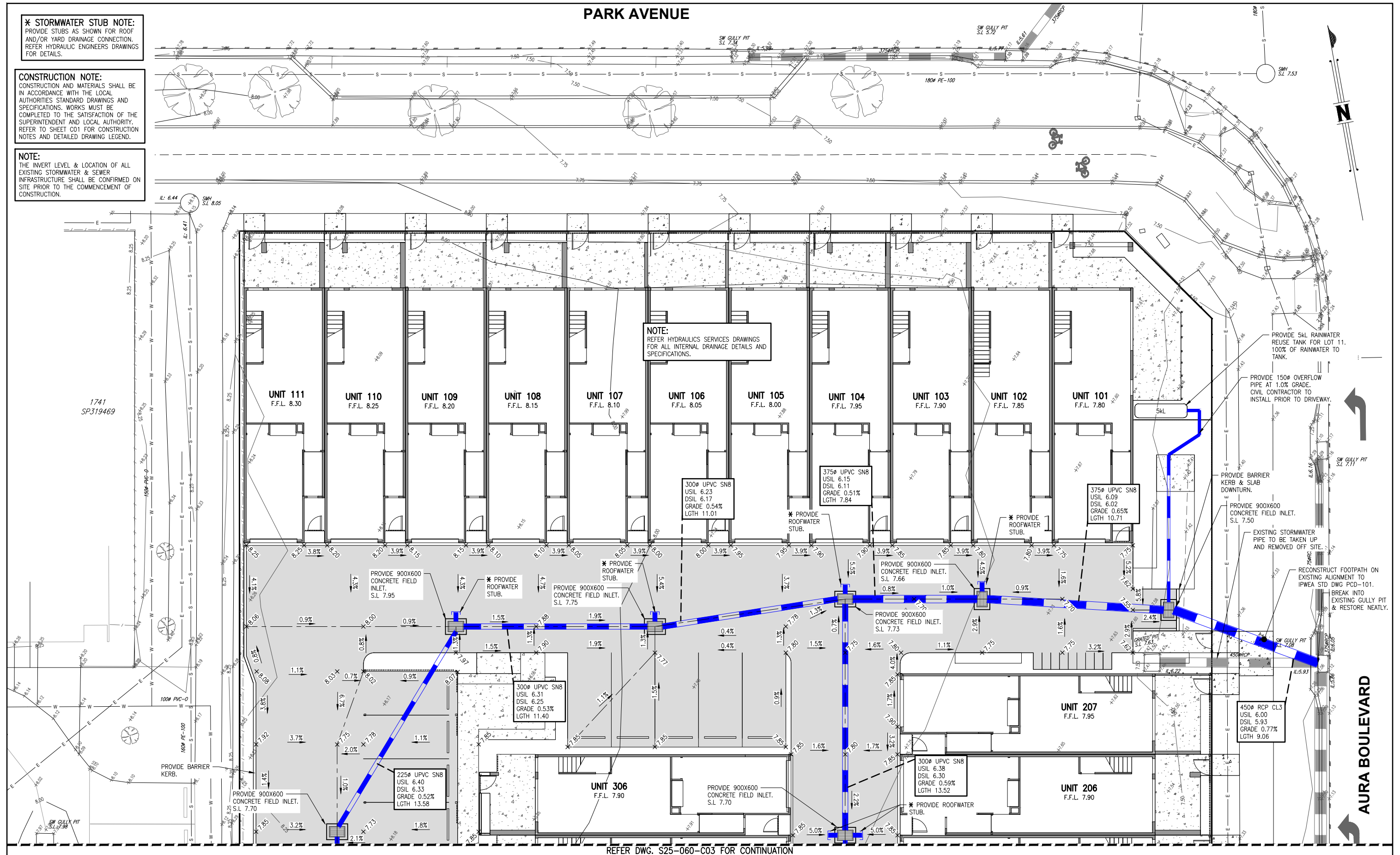
DRAWING STATUS
FOR APPROVAL
DRAWING NUMBER
S25-060-C03
SHEET NUMBER
03 OF 07
REVISION
C

✱ STORMWATER STUB NOTE:
PROVIDE STUBS AS SHOWN FOR ROOF
AND/OR YARD DRAINAGE CONNECTION.
REFER HYDRAULIC ENGINEERS DRAWINGS
FOR DETAILS.

CONSTRUCTION NOTE:
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REFER TO SHEET C01 FOR CONSTRUCTION
NOTES AND DETAILED DRAWING LEGEND.

NOTE:
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EXISTING STORMWATER & SEWER
INFRASTRUCTURE SHALL BE CONFIRMED ON
SITE PRIOR TO THE COMMENCEMENT OF
CONSTRUCTION.

PARK AVENUE



REFER DWG. S25-060-C03 FOR CONTINUATION

CIVIL WORKS PLAN

SCALE 1:100
(A1 SIZE)

No.	DATE	REVISIONS	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
C	28.05.25	GENERAL AMENDMENT	J.M.H.	E.B.	J.M.H.	J.M.H.	
B	13.05.25	GENERAL AMENDMENT	J.M.H.	E.B.	J.M.H.	J.M.H.	
A	01.05.25	ISSUE FOR APPROVAL	J.M.H.	E.B.	J.M.H.	J.M.H.	

DESIGNED	J.M.H.
DRAWN	E.B.
CHECKED	J.M.H.
APPROVED	J.M.H.
DATE	APRIL 2025
DOCUMENT CONTROL	

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SUNSHINE COAST T 07 5391 3777
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CENTRAL VICTORIA T 03 5441 0922
E centralvic@westerapartners.com.au

SURVEYOR
BENNETT + BENNETT
PHONE 07 5631 8000

DATUM A.H.D.
P.M. 200442
R.L. 9.861

PROJECT
LOCATION
TITLE
CLIENT

PROPOSED RESIDENTIAL DEVELOPMENT
LOT 4 on SP347407
8014 PARK AVE, NIRIMBA
CIVIL WORKS PLAN 02 of 02
NIRIMBA BY VANTAGE PTY LTD

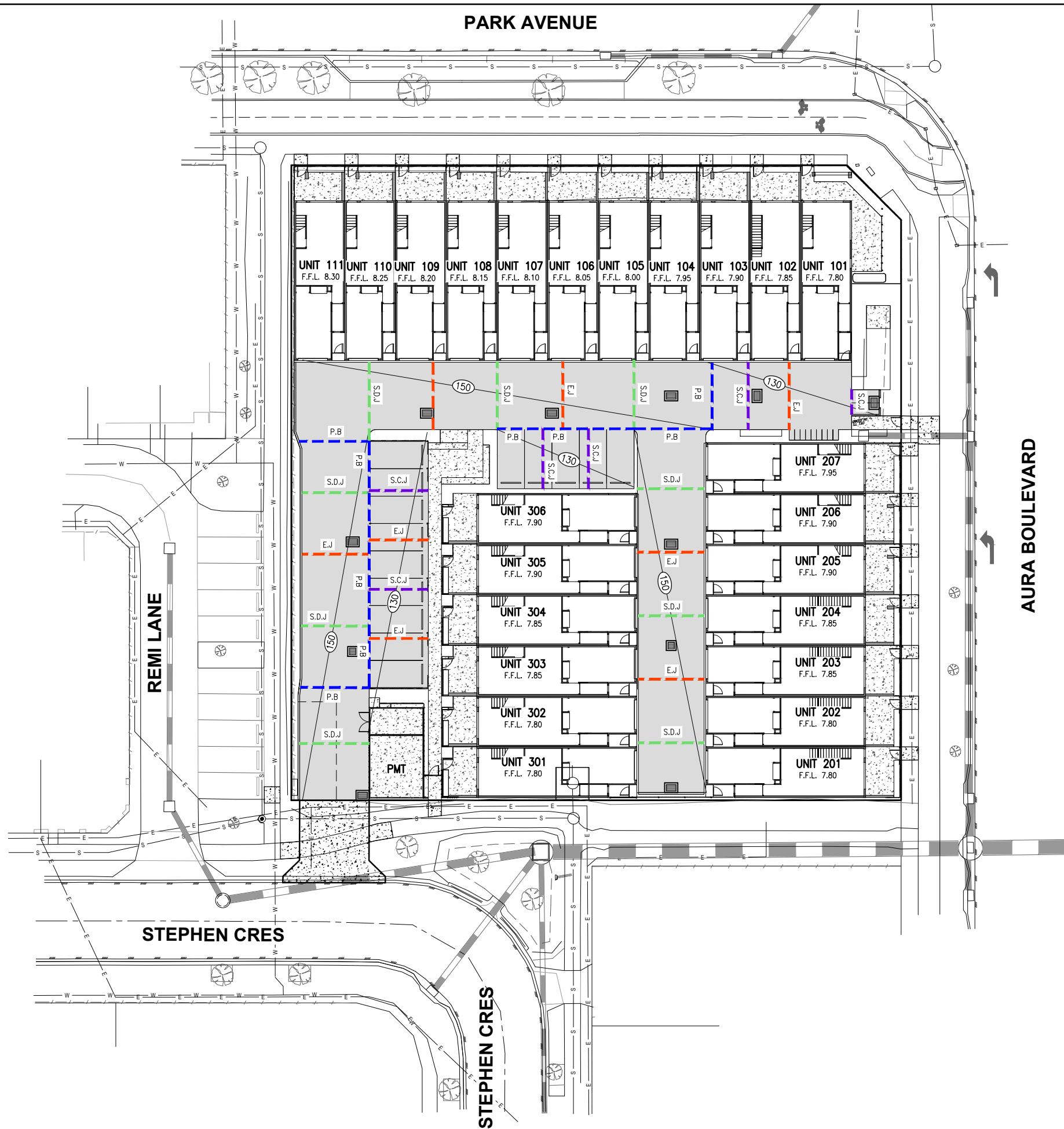
DRAWING STATUS	FOR APPROVAL
DRAWING NUMBER	S25-060-C04
SHEET NUMBER	04 OF 07
REVISION	C

LEGEND

- EXPANSION JOINT (E.J.)
- POUR BREAK (P.B.)
- SAWN DOWELLED JOINT (S.D.J.)
- SAW CUT JOINT (S.C.J.)

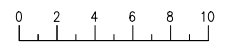
PAVEMENTS SUBGRADE PREPARATION

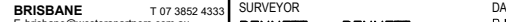
- FOLLOWING EARTHWORKS THE PAVEMENT SUBGRADE SHALL BE PROOF ROLLED AND ANY AREAS SHOWING EXCESSIVE MOVEMENT SHALL BE TREATED BY TYING AND DRYING OUT OR EXCAVATING AND REPLACING WITH SUITABLE IMPORTED MATERIAL AND RE-COMPACTING UNDER ENGINEERS SUPERVISION.
- ONCE A HARD FLAT SUBGRADE IS ACHIEVED A BEDDING LAYER OF MINIMUM 50 GRANULAR MATERIAL (CRUSHER DUST OR EQ.) SHALL BE PLACED AND PROFILED TO ACHIEVE THE SPECIFIED SLAB THICKNESS.
- A LAYER OF 200 MICRON HDPE SHEET SHALL BE PLACED OVER THE BEDDING MATERIAL PRIOR TO STEELING UP.

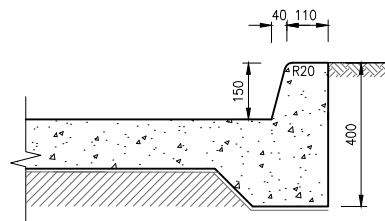


PAVEMENT & JOINTING PLAN

SCALE 1:200
(A1 SIZE)

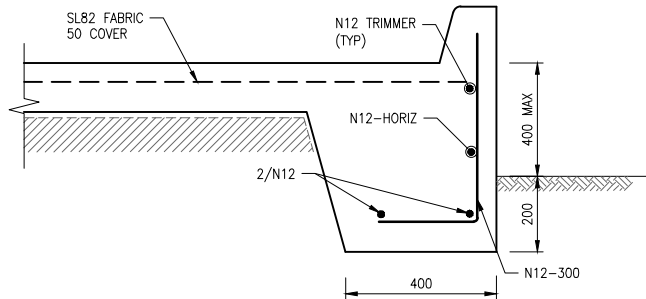


							DESIGNED J.M.H.				  WESTERA PARTNERS STRUCTURAL+CVIL+ENVIRONMENTAL ENGINEERS www.westerapartners.com.au ABN 52 097 417 975		BRISBANE T 07 3852 4333 E brisbane@westerapartners.com.au GOLD COAST T 07 5571 1599 E goldcoast@westerapartners.com.au SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au		SURVEYOR BENNETT + BENNETT PHONE 07 5631 8000 DATUM A.H.D. P.M. 200442 R.L. 9.861		PROJECT LOCATION TITLE CLIENT	PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA PAVEMENT & JOINTING PLAN NIRIMBA BY VANTAGE PTY LTD		DRAWING STATUS FOR APPROVAL	
			DRAWN E.B.				DRAWING NUMBER S25-060-C05														
			CHECKED J.M.H.				SHEET NUMBER														
			APPROVED J.M.H.				REVISION														
No.	DATE	REVISIONS				DES	DRN	CHK	APD	DOCUMENT CONTROL	APPROVED		05 OF 07		C						
C	28.05.25	GENERAL AMENDMENT				J.M.H.	J.J.D	J.M.H.	J.M.H.	J. HILL RPEO 19891 For and on behalf of WESTERA PARTNERS PTY. LTD.											
B	13.05.25	GENERAL AMENDMENT				J.M.H.	E.B.	J.M.H.	J.M.H.												
A	01.05.25	ISSUE FOR APPROVAL				J.M.H.	E.B.	J.M.H.	J.M.H.												



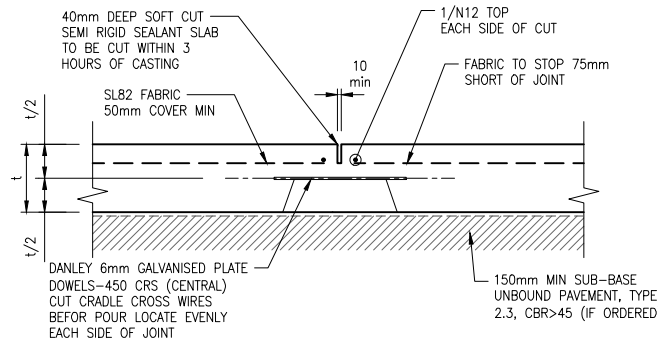
TYPICAL BARRIER KERB DETAIL

SCALE 1:10



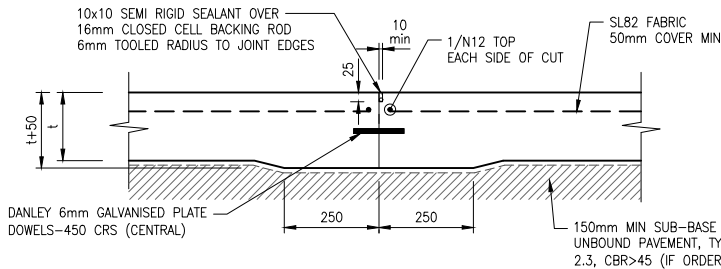
TYPICAL EDGE DOWNTURN DETAIL

SCALE A1 - 1 : 10
A3 - 1 : 20



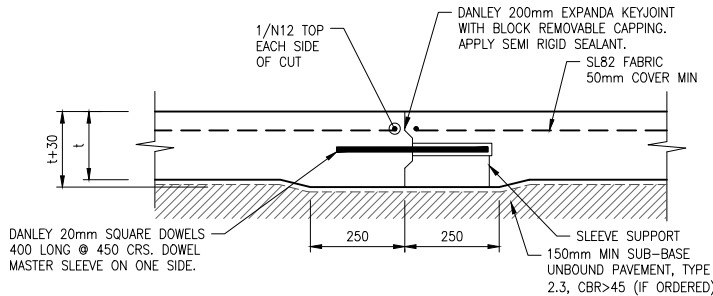
SAWN DOWELLED JOINT (S.D.J.)

SCALE A1 - 1 : 10
A3 - 1 : 20



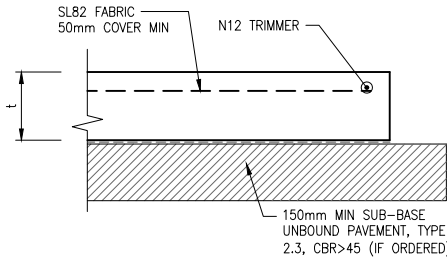
POUR BREAK (P.B.)

SCALE A1 - 1 : 10
A3 - 1 : 20



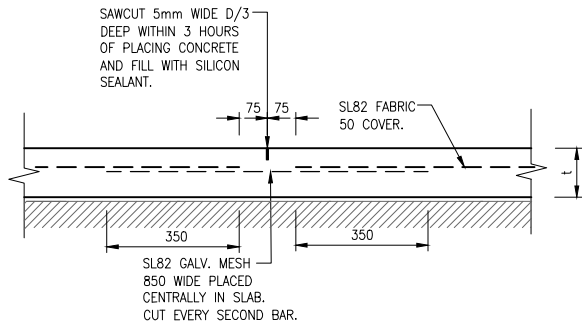
EXPANSION JOINT (E.J.)

SCALE A1 - 1 : 10
A3 - 1 : 20



TYPICAL EDGE TREATMENT

SCALE A1 - 1 : 10
A3 - 1 : 20

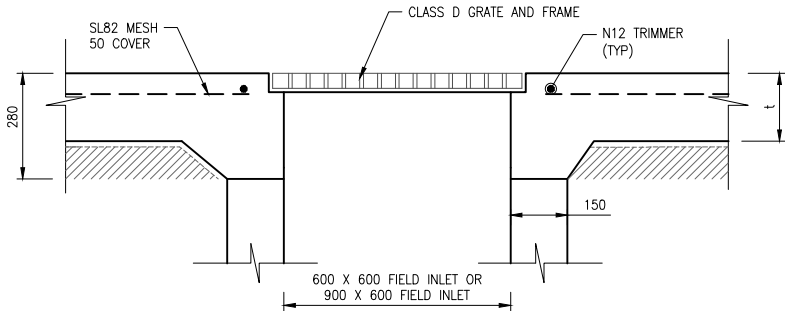


SAW CUT JOINT (S.C.J.)

SCALE 1:10

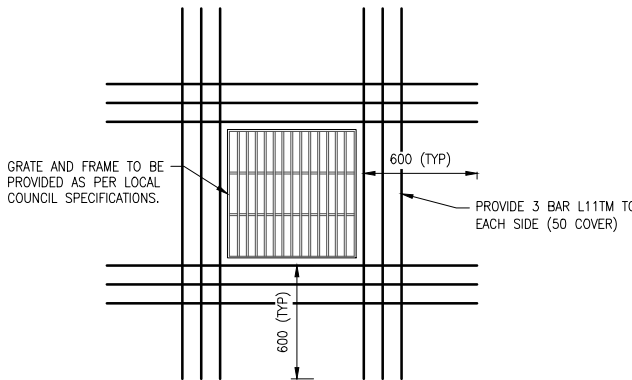
NOTES:

1. CONCRETE STRENGTH TO BE N32
2. THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING CBR TESTS OF THE SUBGRADE MATERIAL
3. MARK PROPOSED JOINT LOCATIONS CLEARLY ON EDGE FORMS PRIOR TO POURING.
4. POUR BREAK JOINTS ARE TO BE PLACED AT NOT MORE THAN 36m MAXIMUM SPACINGS.
5. EXPANSION JOINTS ARE TO BE PLACED AT NOT MORE THAN 12m MAXIMUM SPACINGS.
6. SAWN DOWELLED JOINTS ARE TO BE PLACED AT NOT MORE THAN 6m MAXIMUM SPACINGS.
7. JOINT SPACING AND ARRANGEMENT MAY BE ALTERED ONSITE WITH THE APPROVAL OF THE INSPECTING ENGINEER.



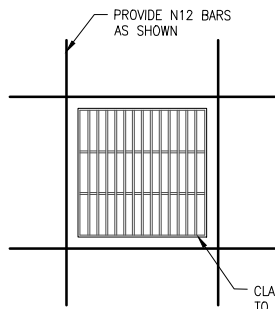
TYPICAL FIELD INLET DETAIL

SCALE A1 - 1 : 20
A3 - 1 : 40

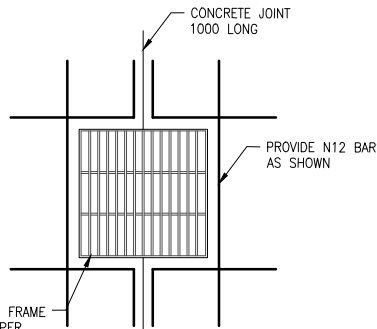


STORMWATER GRATE ADDITIONAL STEEL DETAIL

SCALE A1 - 1 : 20
A3 - 1 : 40



PLAN



PLAN - WITH JOINT

				DESIGNED J.M.H. E. brisbane@westerapartners.com.au		 WESTERA PARTNERS STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS www.westerapartners.com.au ABN 52 097 417 975				BRISBANE T 07 3852 4333 E. brisbane@westerapartners.com.au		SURVEYOR	DATUM A.H.D.	PROJECT PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA TITLE PAVEMENT & JOINTING PLAN DETAILS CLIENT NIRIMBA BY VANTAGE PTY LTD	DRAWING STATUS FOR APPROVAL DRAWING NUMBER S25-060-C06 SHEET NUMBER 06 OF 07 REVISION A		
				DRAWN E.B. E. goldcoast@westerapartners.com.au						GOLD COAST T 07 5571 1599 E. goldcoast@westerapartners.com.au	BENNETT + BENNETT PHONE 07 5631 8000	P.M. 200442 R.L. 9.861					
				CHECKED J.M.H. E. sunshinecoast@westerapartners.com.au						SUNSHINE COAST T 07 5391 3777 E. sunshinecoast@westerapartners.com.au	USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED. IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.						
				APPROVED J.M.H. J. HILL RPEQ 19891 For and on behalf of WESTERA PARTNERS PTY. LTD.						NORTHERN NSW T 02 6674 8047 E. nsw@westerapartners.com.au							
A	01.05.25	ISSUE FOR APPROVAL			J.M.H.	E.B.	J.M.H.	J.M.H.	DATE APRIL 2025								
No.	DATE	REVISIONS			DES	DRN	CHK	APD	DOCUMENT CONTROL	APPROVED							

PARK AVENUE

LEGEND

- EDGE LINE (EL)

150
- DIVIDING LINE (DL)

100
- SINGLE BARRIER LINE (SBL)

80
- DOUBLE BARRIER LINE (DBL)

80
- BARRIER LINE (BL)

100
- CONTINUITY LINE (CL)

200
- UNBROKEN LANE LINE (UBL)

100
- GIVE WAY LINE (GL)

300
- GUIDE POST
- WHITE UNIDIRECTIONAL RRPM
- YELLOW BIDIRECTIONAL RRPM
- STOP LINE (SL)

300
- UNBROKEN EDGE LINE (UEL)

100
- CROSSWALK LINE (CWL)

100

AURA BOULEVARD

REMI LANE

STEPHEN CRES

STEPHEN CRES

SIGNS & LINEMARKING PLAN

SCALE 1:200
(A1 SIZE)

			DESIGNED J.M.H.					 WESTERA PARTNERS STRUCTURAL·CIVIL·ENVIRONMENTAL ENGINEERS www.westerapartners.com.au ABN 52 097 417 975	BRISBANE T 07 3852 4333 E brisbane@westerapartners.com.au GOLD COAST T 07 5571 1599 E goldcoast@westerapartners.com.au SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au	SURVEYOR BENNETT + BENNETT PHONE 07 5631 8000 DATUM A.H.D. P.M. 200442 R.L. 9.861	PROJECT LOCATION TITLE CLIENT	PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA SIGNS & LINEMARKING PLAN NIRIMBA BY VANTAGE PTY LTD	DRAWING STATUS FOR APPROVAL		
C	28.05.25	GENERAL AMENDMENT	J.M.H.	J.J.D	J.M.H.	J.M.H.							CHECKED J.M.H.	DRAWING NUMBER S25-060-C07	
B	13.05.25	GENERAL AMENDMENT	J.M.H.	E.B.	J.M.H.	J.M.H.							APPROVED J.M.H.	SHEET NUMBER 07 OF 07	
A	01.05.25	ISSUE FOR APPROVAL	J.M.H.	E.B.	J.M.H.	J.M.H.							DATE APRIL 2025	REVISION C	
No.	DATE	REVISIONS			DES	DRN	CHK			APD			DOCUMENT CONTROL	APPROVED	

DEPTH OF CUT TABLE DEPTH OF FILL TABLE

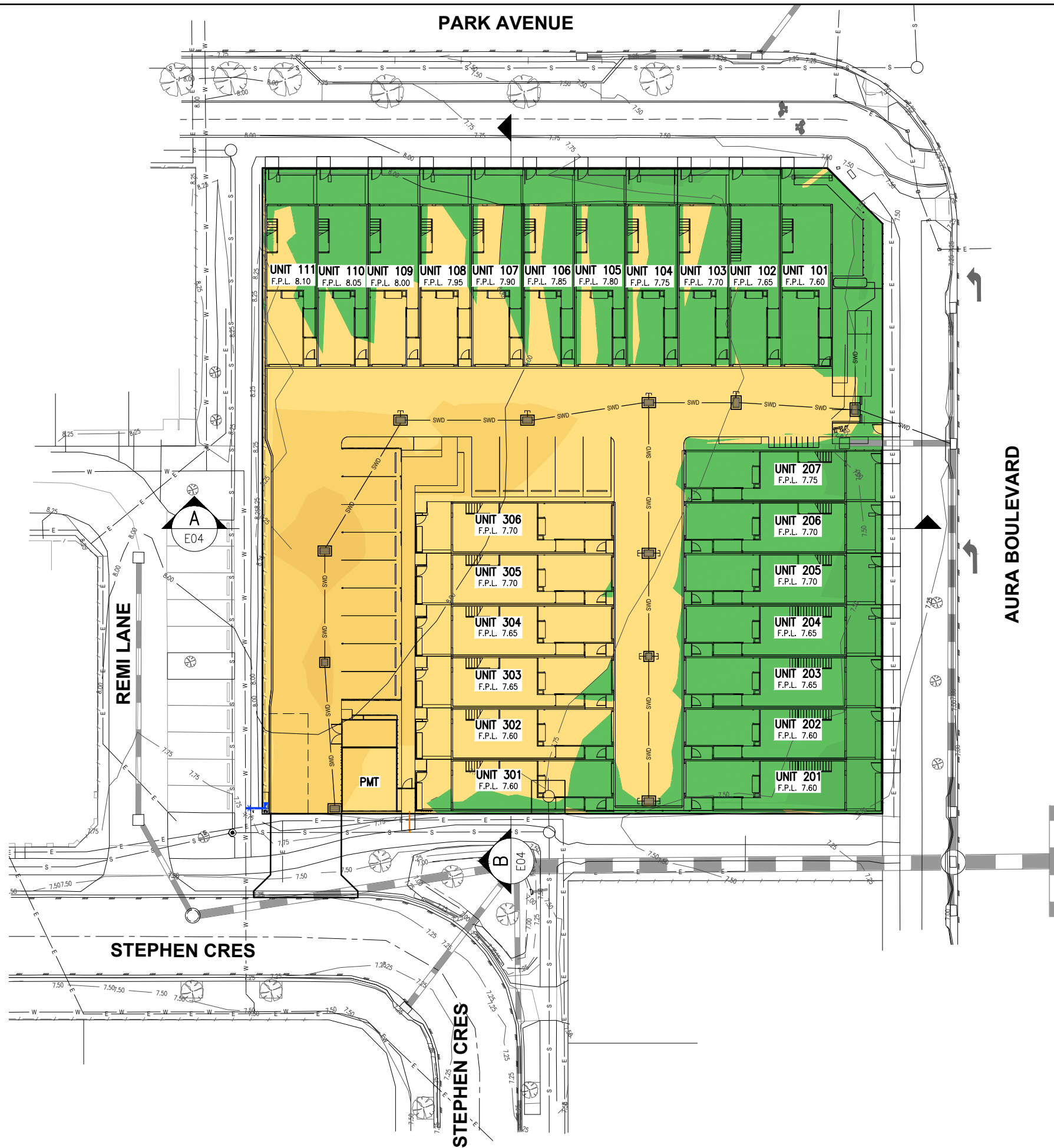
0.0m – 0.25m		0.0m – 0.25m	
0.25m – 0.5m		0.25m – 0.5m	
0.5m – 0.75m		0.5m – 0.75m	
0.75m – 1.0m		0.75m – 1.0m	
1.0m – 1.25m		1.0m – 1.25m	
1.25m – 1.5m		1.25m – 1.5m	
1.5m – 1.75m		1.5m – 1.75m	
1.75m – 2.0m		1.75m – 2.0m	
2.0m – 2.25m		2.0m – 2.25m	
2.25m – 2.5m		2.25m – 2.5m	
> 2.5m		> 2.5m	

AREA OF CUT - 1,792.0m²
AREA OF FILL - 1,425.0m²
VOLUME OF CUT - 325.0m³
VOLUME OF FILL - 178.0m³

PAVEMENT LEVELS SHOWN ARE 200mm BELOW F.S.L
BUILDING PAD LEVELS SHOWN ARE 200mm BELOW F.S.L
LANDSCAPING LEVELS SHOWN ARE 100mm BELOW F.S.L

GENERAL NOTES

1. IN CASE OF DOUBT – ASK!
2. ALL LEVELS TO AHD, DIMENSIONS IN METERS U.N.O
3. ALL LIAISON WITH LOCAL, STATE & STATUTORY AUTHORITIES IS THE CONTRACTOR'S RESPONSIBILITY.
4. THE LOCATION OF EXISTING SERVICES IS FOR CONTRACTOR'S INFORMATION ONLY, THE LOCATION OF SERVICES WILL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
5. ANY DAMAGE CAUSED TO THE EXISTING SERVICE WILL BE MADE GOOD AT THE CONTRACTORS EXPENSE.
6. EARTHWORKS PROCEDURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS 3798 – 2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
7. EARTHWORKS OPERATIONS ARE TO BE CARRIED OUT IN GENERAL ACCORDANCE WITH THE GEOTECHNICAL REPORT.
8. WORKS NOT SPECIFICALLY REFERRED TO, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL DRAWINGS AND SPECIFICATIONS OF THE LOCAL AUTHORITY.
9. THE CONTRACTOR IS TO ALLOW FOR ALL FEES AND HAULAGE COSTS ASSOCIATED WITH DISPOSAL OF MATERIAL FROM THE SITE.
10. ALL COSTS ASSOCIATED WITH NOISE AND DUST SUPPRESSION FOR SITE WORKS ARE DEEMED THE CONTRACTOR'S RESPONSIBILITY.
11. COMPACTION STANDARDS
 - "MODIFIED" TO AS 1289 TEST 5.2.1
 - "STANDARD" TO AS 1289 TEST 5.1.1
12. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR WILL PROVIDE SCOUR AND EROSION PROTECTION INCLUDING PROVISION OF SILT TRAPS AND FENCES TO MINIMISE DEPOSITION OF MATERIAL DOWNSTREAM OF THE PROPERTY.
13. NO BLASTING WILL BE PERMITTED.
14. THE LOCATION OF THE SITE SHEDS, SITE OFFICE AND AMENITIES BUILDING WILL BE LOCATED TO SUIT TEMPORARY UTILITY SERVICES OR AS AGREED WITH THE MANAGER.
15. TESTING FREQUENCY AS 3798 – 2007 SECTION 8.0 OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
16. AT COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT LICENSED SURVEYOR TO CARRY OUT A "WORKS AS CONSTRUCTED" SURVEY AND SUBMIT THE DETAIL PLAN TO THE MANAGER.
17. THE LOCATION OF TEMPORARY STOCKPILES DURING CONSTRUCTION IS TO BE AGREED WITH THE MANAGER.



NOTE:
TEMPORARY EXCAVATIONS ARE TO BE SUPERVISED
BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.

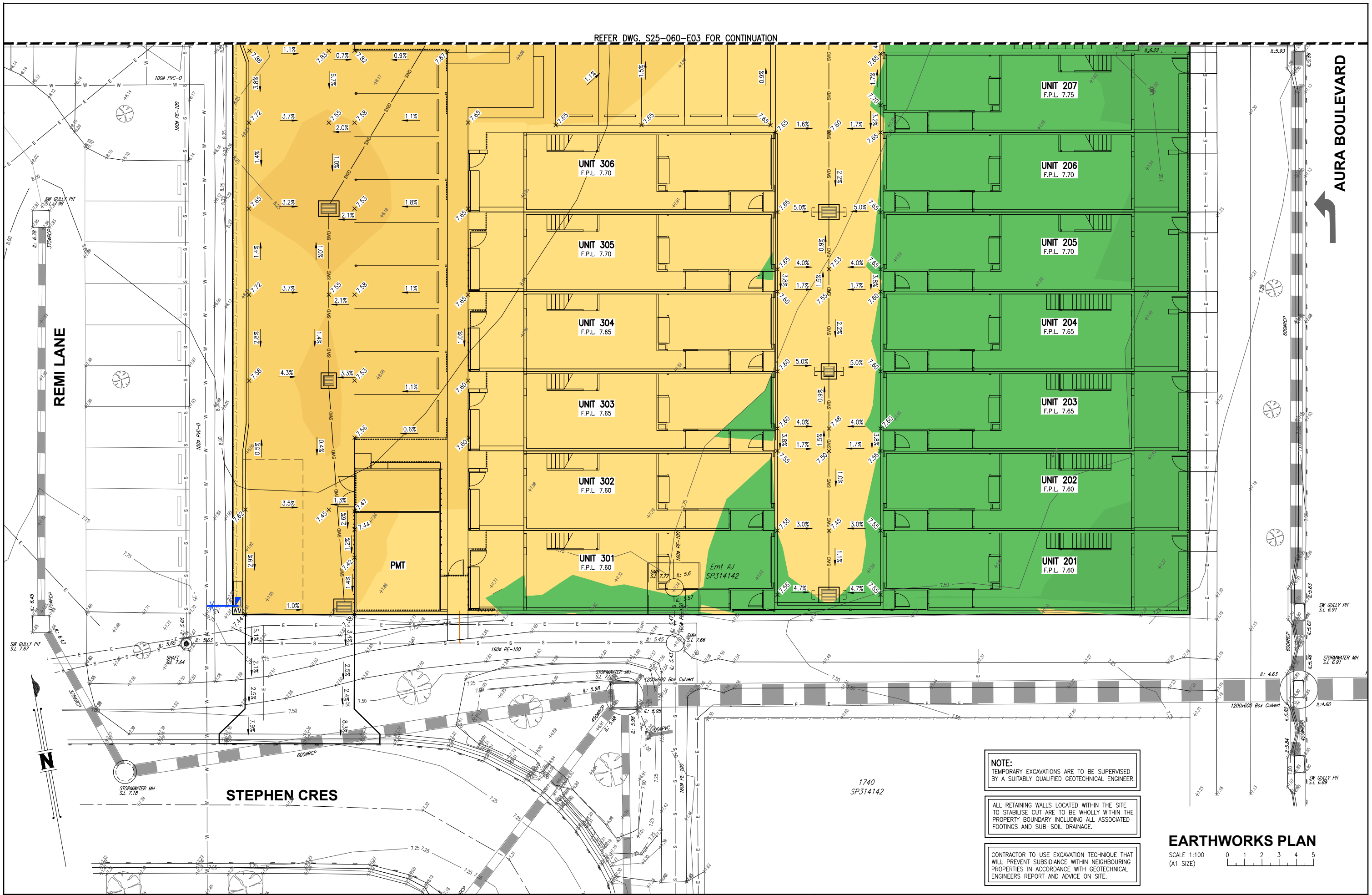
ALL RETAINING WALLS LOCATED WITHIN THE SITE TO STABILISE CUT ARE TO BE WHOLLY WITHIN THE PROPERTY BOUNDARY INCLUDING ALL ASSOCIATED FOOTINGS AND SUB-SOIL DRAINAGE.

CONTRACTOR TO USE EXCAVATION TECHNIQUE THAT
WILL PREVENT SUBSIDANCE WITHIN NEIGHBOURING
PROPERTIES IN ACCORDANCE WITH GEOTECHNICAL
ENGINEERS REPORT AND ADVICE ON SITE.

EARTHWORKS SITE PLAN

SCALE 1:200
(A1 SIZE)

[illegible]



REFER DWG. S25-060-E03 FOR CONTINUATION

AURA BOULEVARD

REMI LANE

STEPHEN CRES

NOTE:
TEMPORARY EXCAVATIONS ARE TO BE SUPERVISED
BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.

ALL RETAINING WALLS LOCATED WITHIN THE SITE
TO STABILISE CUT ARE TO BE WHOLLY WITHIN THE
PROPERTY BOUNDARY INCLUDING ALL ASSOCIATED
FOOTINGS AND SUB-SOIL DRAINAGE.

CONTRACTOR TO USE EXCAVATION TECHNIQUE THAT
WILL PREVENT SUBSIDANCE WITHIN NEIGHBOURING
PROPERTIES IN ACCORDANCE WITH GEOTECHNICAL
ENGINEERS REPORT AND ADVICE ON SITE.

EARTHWORKS PLAN

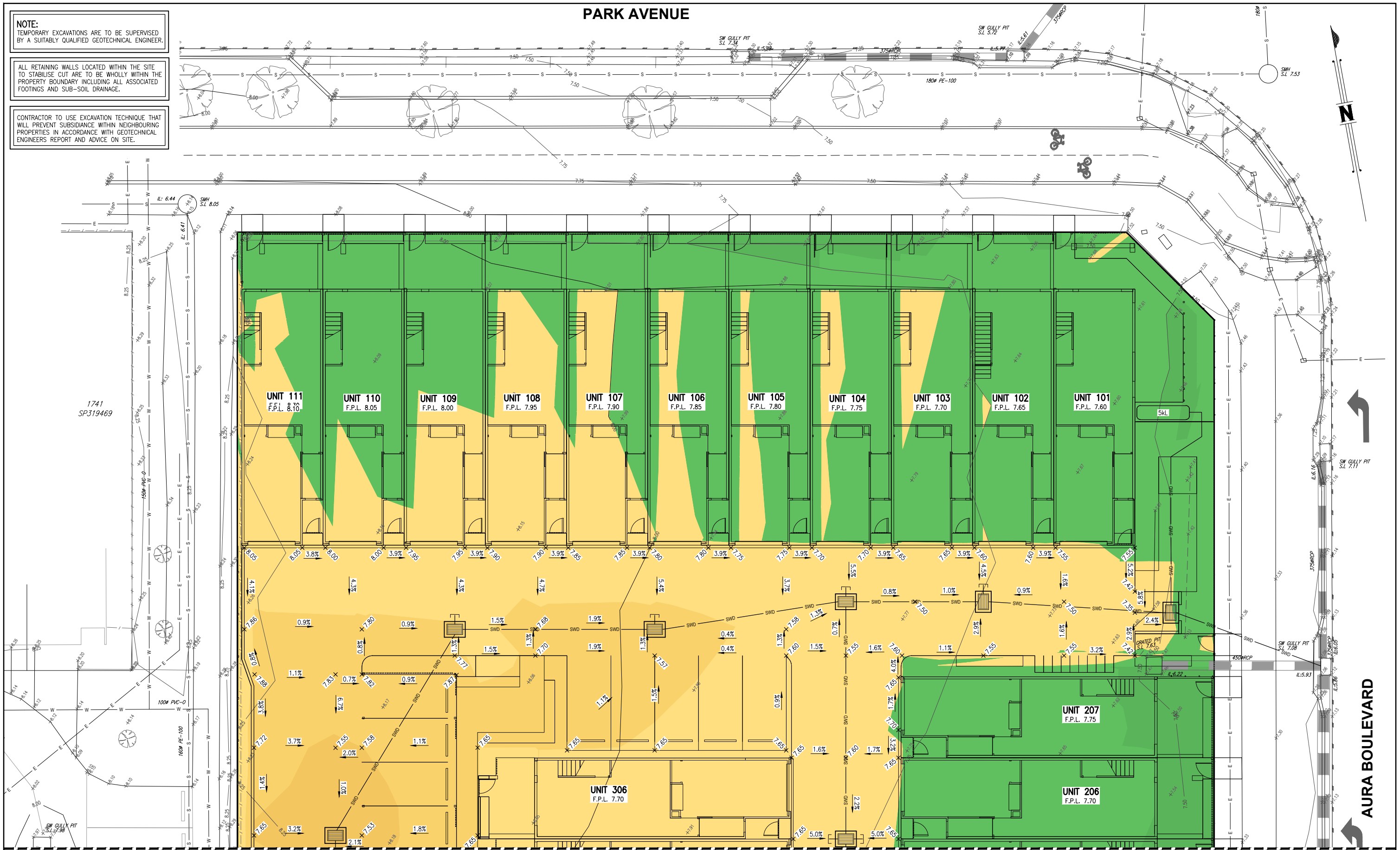
SCALE 1:100
(A1 SIZE)

				DESIGNED J.M.H. E brisbane@westerapartners.com.au					BRISBANE T 07 3852 4333 E brisbane@westerapartners.com.au				SURVEYOR BENNETT + BENNETT PHONE 07 5631 8000				DATUM A.H.D. P.M. 200442 R.L. 9.861				PROJECT PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA				DRAWING STATUS FOR APPROVAL			
				DRAWN E.B.						GOLD COAST T 07 5571 1599 E goldcoast@westerapartners.com.au				USE FIGURED DIMENSIONS ONLY. DO NOT SCALE, IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.				DRAWING NUMBER S25-060-E02										
				CHECKED J.M.H.						SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au																		
				APPROVED J.M.H.						NORTHERN NSW T 02 6874 8047 E nsw@westerapartners.com.au																		
				DATE APRIL 2025				J. HILL RPEO 19891 For and on behalf of WESTERA PARTNERS PTY. LTD.				CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au				TITLE EARTHWORKS PLAN 01 of 02				SHEET NUMBER 02 OF 04				REVISION C				
No. DATE REVISIONS				DES DRN CHK APD				DOCUMENT CONTROL				APPROVED				www.westerapartners.com.au ABN 52 097 417 975				CLIENT NIRIMBA BY VANTAGE PTY LTD								
C 28.05.25 GENERAL AMENDMENT				J.M.H. J.J.D. J.M.H. J.M.H.																								
B 13.05.25 GENERAL AMENDMENT				J.M.H. E.B. J.M.H. J.M.H.																								
A 01.05.25 ISSUE FOR APPROVAL				J.M.H. E.B. J.M.H. J.M.H.																								

NOTE:
TEMPORARY EXCAVATIONS ARE TO BE SUPERVISED
BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.

ALL RETAINING WALLS LOCATED WITHIN THE SITE
TO STABILISE CUT ARE TO BE WHOLLY WITHIN THE
PROPERTY BOUNDARY INCLUDING ALL ASSOCIATED
FOOTINGS AND SUB-SOIL DRAINAGE.

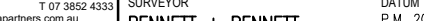
CONTRACTOR TO USE EXCAVATION TECHNIQUE THAT
WILL PREVENT SUBSIDENCE WITHIN NEIGHBOURING
PROPERTIES IN ACCORDANCE WITH GEOTECHNICAL
ENGINEERS REPORT AND ADVICE ON SITE.



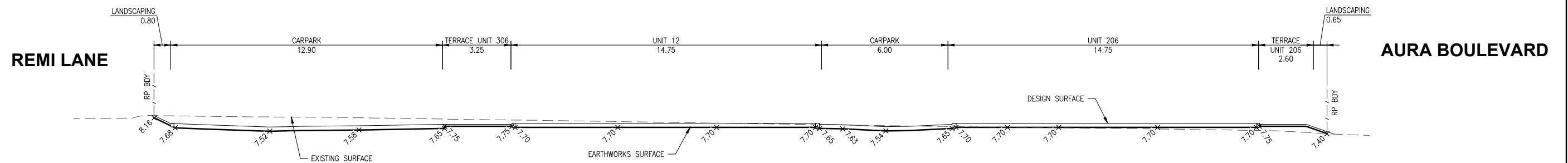
REFER DWG. S25-060-E02 FOR CONTINUATION

EARTHWORKS PLAN

SCALE 1:100
(A1 SIZE)

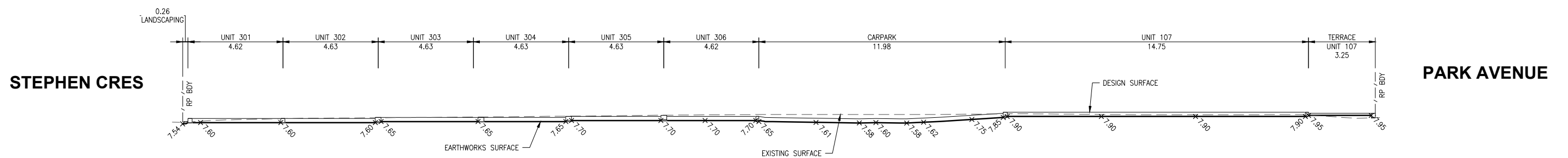
								DESIGNED J.M.H. E.brisbane@westerapartners.com.au				BRISBANE T 07 3852 4333 E.brisbane@westerapartners.com.au GOLD COAST T 07 5571 1599 E.goldcoast@westerapartners.com.au SUNSHINE COAST T 07 5391 3777 E.sunshinecoast@westerapartners.com.au NORTHERN NSW T 02 6874 8047 E.nsw@westerapartners.com.au CENTRAL VICTORIA T 03 5441 0922 E.centralvictoria@westerapartners.com.au	SURVEYOR BENNETT + BENNETT PHONE 07 5631 8000 DATUM A.H.D. P.M. 200442 R.L. 9.861	PROJECT LOCATION TITLE CLIENT PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA EARTHWORKS PLAN 02 of 02 NIRIMBA BY VANTAGE PTY LTD	DRAWING STATUS FOR APPROVAL DRAWING NUMBER S25-060-E03 SHEET NUMBER 03 OF 04 REVISION C
				DRAWN E.B.											
				CHECKED J.M.H.											
				APPROVED J.M.H.											
C	28.05.25	GENERAL AMENDMENT		J.M.H.	J.J.D.	J.M.H.	J.M.H.	J. HILL RPEO 19891 For and on behalf of WESTERA PARTNERS PTY. LTD.		www.westerapartners.com.au ABN 52 097 417 975					
B	13.05.25	GENERAL AMENDMENT		J.M.H.	E.B.	J.M.H.	J.M.H.								
A	01.05.25	ISSUE FOR APPROVAL		J.M.H.	E.B.	J.M.H.	J.M.H.	DATE APRIL 2025							
No.	DATE	REVISIONS		DES	DRN	CHK	APD	DOCUMENT CONTROL	APPROVED						

CONTRACTOR TO USE EXCAVATION TECHNIQUE THAT WILL PREVENT SUBSIDANCE WITHIN NEIGHBOURING PROPERTIES IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS REPORT AND ADVICE ON SITE.



SCALE	A1	- 1	: 100
	A3	- 1	: 200

EO



SCALE	A1	-	1	:	100
	A3	-	1	:	200

EO:

[illegible]

LEGEND

	EXTENT OF DISTURBED AREA
	INLET PROTECTION
	STRAW BALE FLOW DIVERSION BANK
	DIVERSION BANK
	DIVERSION CHANNEL
	COMPOST BERM
	SEDIMENT FENCE
	ROCK CHECK DAM
	CATCH DRAIN
	SURFACE FLOW ARROW
	CHUTE
	LEVEL SPREADER
	SLOPE DRAIN
	OUTLET STRUCTURE
	ON GRADE GULLY PIT
	SAG GULLY PIT
	600 x 600 FIELD INLET
	900 x 600 FIELD INLET
	1050 DIA FIELD INLET
	STORMWATER LINE
	STORMWATER HEADWALL
	STORMWATER NUMBER

SEDIMENT CONTROL
INSTALLATION SEQUENCE

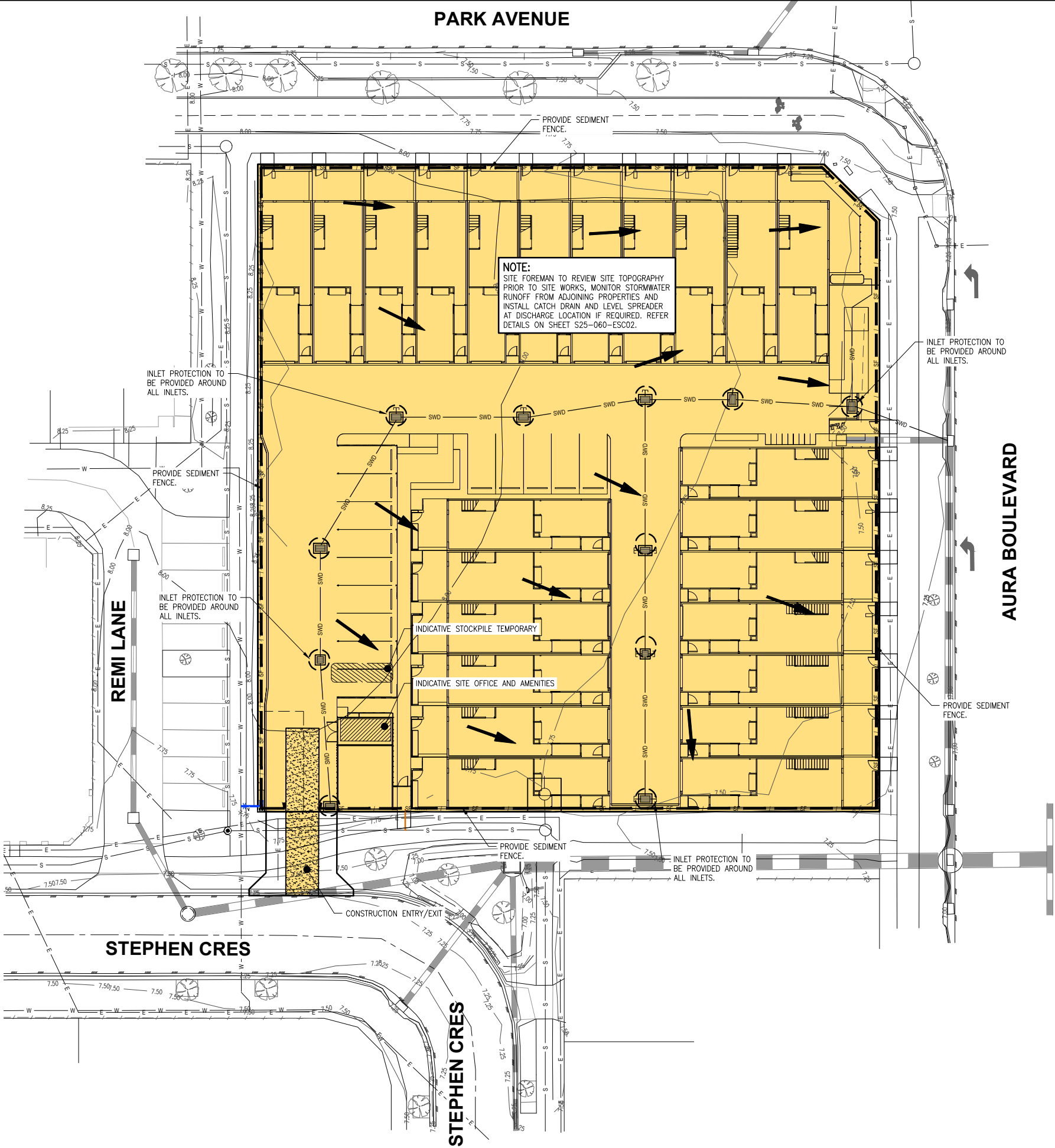
1. INSTALL SEDIMENT FENCES AND CONSTRUCTION ENTRY/EXIT, PRIOR TO SITE STRIPPING
2. INSTALL CATCH DRAINS AND CHUTE WITH ROCK CHECK DAM
3. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED FOLLOWING SUCCESSFUL SITE STABILISATION
4. ACCESS CHAMBER/INLET PROTECTION TO BE INSTALLED CONCURRENTLY WITH STORMWATER PIPEWORK
5. REFER TO SHEET 3 FOR ACCESS CHAMBER/INLET PROTECTION INSTALLATION PROCESS AND DETAILS
7. EARTHWORKS STAGE B TO COMMENCE UPON COMPLETION OF ALL STAGE A EARTHWORKS AND CIVIL WORKS
8. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED UPON COMPLETION OF CONSTRUCTION WORKS AND AS APPROVED BY THE SUPERINTENDENT

DIVERT ANY UPSLOPE "CLEAN WATER" AROUND DISTURBANCE AREA WHERE POSSIBLE AND AS DIRECTED ON SITE BY SUPERVISING ENGINEER.

LOCATION OF TEMPORARY STOCKPILES AND SITE SHEDS TO BE CONFIRMED ONSITE PRIOR TO COMMENCEMENT OF SITE WORKS.

DEWATERING NOTE:
DEWATERING DURING EXCAVATION MUST BE CARRIED OUT IN ACCORDANCE WITH **SCC** & I.E.C.A STANDARD DRAWINGS & SPECIFICATIONS. ALL RELEASED STORMWATER MUST NOT EXCEED THE FOLLOWING LIMITS:

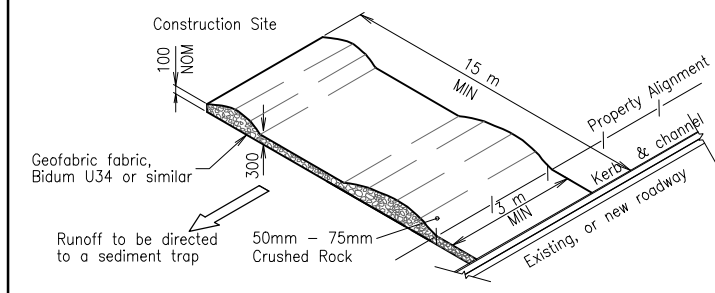
- 50mg/L OF TSS
- TURBIDITY LESS THAN 10% BACKGROUND
- pH VALUE OF 6.5-8.5



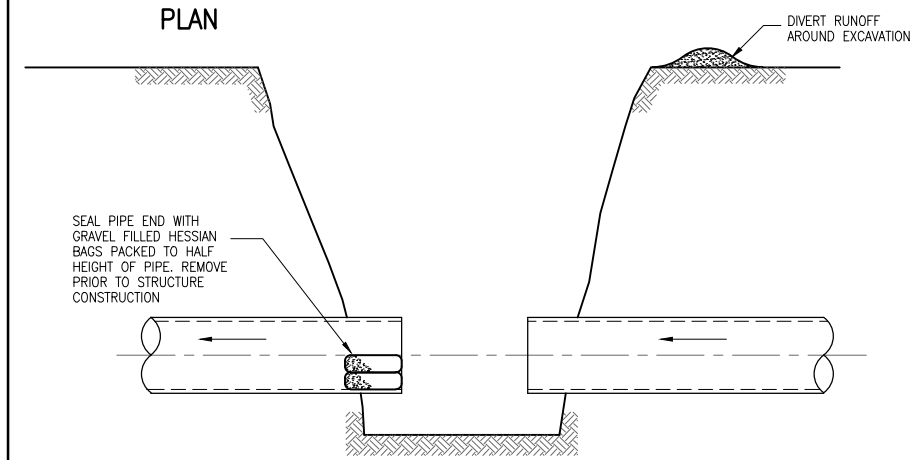
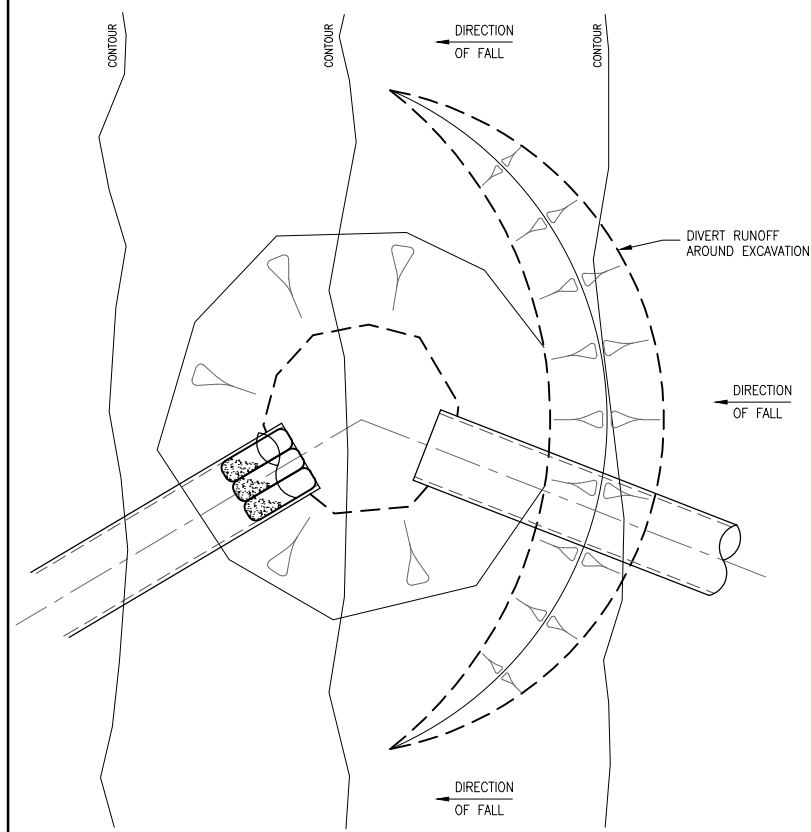
EROSION & SEDIMENT
CONTROL PLAN

SCALE 1:200
(A1 SIZE)

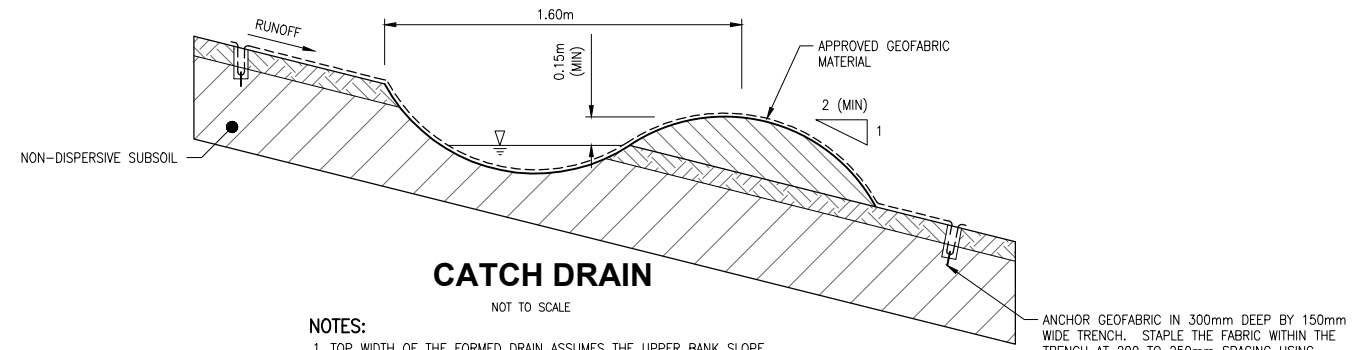
			DESIGNED J.M.H.		 WESTERA PARTNERS STRUCTURAL-CIVIL-ENVIRONMENTAL ENGINEERS www.westerapartners.com.au ABN 52 097 417 975	BRISBANE T 07 3852 4333 E brisbane@westerapartners.com.au GOLD COAST T 07 5571 1599 E goldcoast@westerapartners.com.au SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au	SURVEYOR BENNETT + BENNETT PHONE 07 5631 8000 DATUM A.H.D. P.M. 200442 R.L. 9.861	PROJECT LOCATION TITLE CLIENT	PROPOSED RESIDENTIAL DEVELOPMENT LOT 4 on SP347407 8014 PARK AVE, NIRIMBA EARTHWORKS EROSION AND SEDIMENT CONTROL PLAN NIRIMBA BY VANTAGE PTY LTD	DRAWING STATUS FOR APPROVAL	
C	28.05.25	GENERAL AMENDMENT	J.M.H. J.J.D. J.M.H. J.M.H.							CHECKED J.M.H.	DRAWING NUMBER S25-060-ESC01
B	13.05.25	GENERAL AMENDMENT	J.M.H. E.B. J.M.H. J.M.H.							APPROVED J.M.H.	SHEET NUMBER 01 OF 03
A	01.05.25	ISSUE FOR APPROVAL	J.M.H. E.B. J.M.H. J.M.H.							DATE April 2025	REVISION C
No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL	APPROVED			



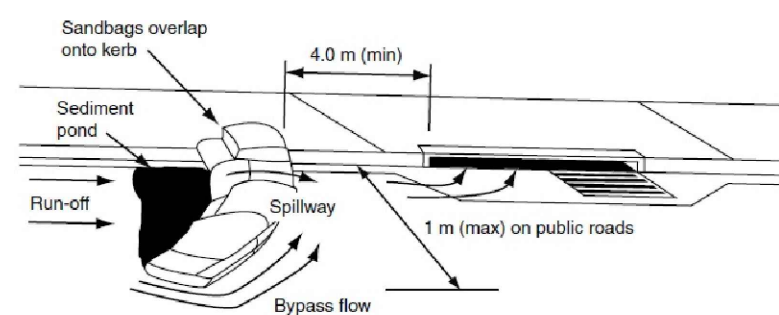
CONSTRUCTION ENTRY/EXIT
SEDIMENT TRAP



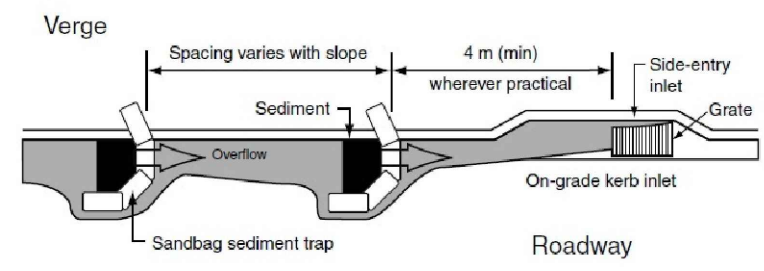
SECTION
STAGE 1
EXCAVATION AND PIPE INSTALLATION



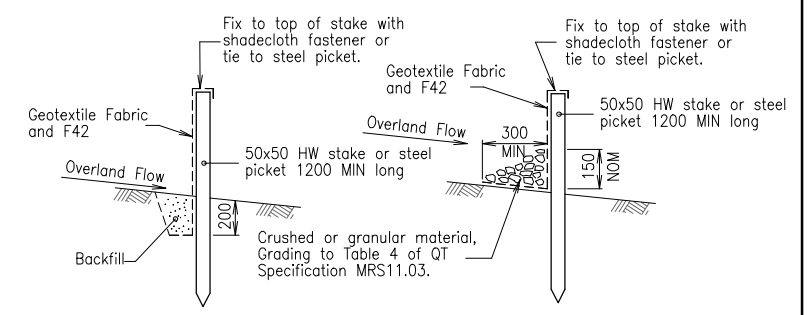
- NOTES:
1. TOP WIDTH OF THE FORMED DRAIN ASSUMES THE UPPER BANK SLOPE IS LIMITED TO A MAXIMUM OF 1 IN 2.
 2. CATCH DRAIN TO BE LINED WITH APPROVED GEOFABRIC MATERIAL IF SUBSOIL IS DISPERSIVE. PRIOR TO PLACEMENT OF GEOFABRIC THE DISPERSIVE SUBSOIL MUST BE TREATED WITH GYPSUM. THE APPLICATION RATE OF GYPSUM SHALL BE DETERMINED ONCE THE SOIL TESTING RESULTS OF THE SUBSOIL ARE OBTAINED.
 3. PROVIDE ROCK CHECK DAMS AS PER IECA STD. DWG. RCD-01 AS REQUIRED.



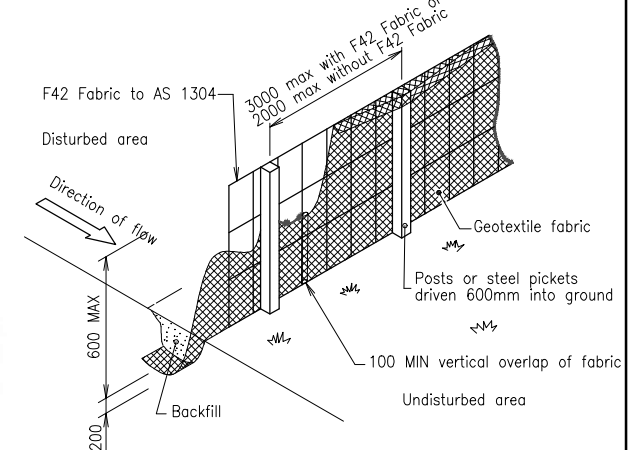
SANDBAG SEDIMENT COLLECTION DAM
REFER IECA STD. DWG. OG-01 FOR DETAILS.



TYPICAL LAYOUT ON-GRADE KERB
SEDIMENT TRAP

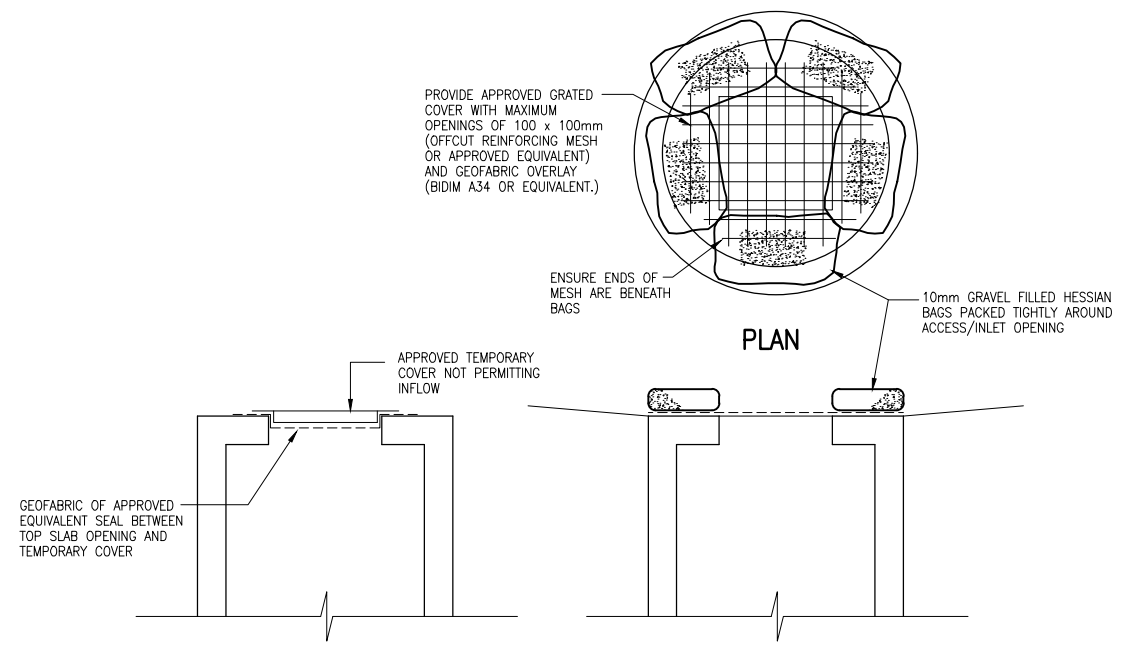


ALTERNATIVE 1
ALTERNATIVE 2



ELEVATION

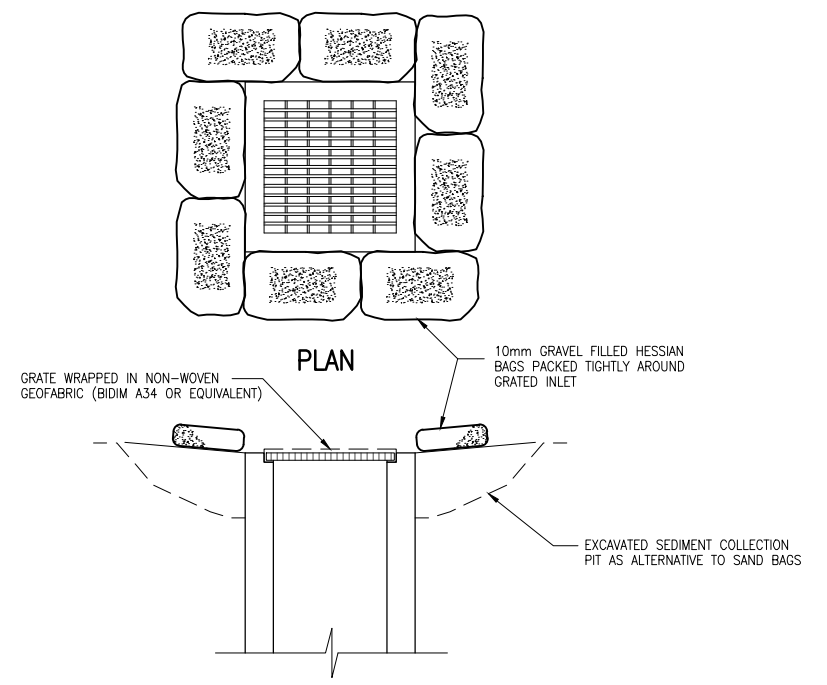
SEDIMENT FENCE DETAILS



ACCESS CHAMBER SECTION
INLET STRUCTURE SECTION

STAGE 2

STRUCTURE COMPLETE UP TO TOP SLAB



INLET STRUCTURE SECTION

STAGE 3

STRUCTURE COMPLETE

ACCESS CHAMBER / INLET STRUCTURE PROTECTION

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1. THE CONSULTING ENGINEER AND/OR COUNCIL INSPECTOR MAY ISSUE INSTRUCTIONS TO THE CONTRACTOR REGARDING EROSION AND SEDIMENT CONTROL THAT MAY VARY TO THE MEASURES SHOWN ON THIS DRAWING DUE TO CONSTRUCTION METHODOLOGIES AND VARYING SITE CONDITIONS.

- A SITE SPECIFIC GEOTECHNICAL INVESTIGATION SHALL BE CARRIED OUT PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE GEOTECHNICAL INVESTIGATION SHALL BE COMPLETED IN ACCORDANCE WITH SUNSHINE COAST COUNCIL'S SOIL SAMPLING AND TESTING GUIDELINE FOR EROSION POTENTIAL. THE EROSION AND SEDIMENT CONTROL MEASURES ON THIS DRAWING MAY BE ALTERED TO SUIT THE RESULTS OF THE GEOTECHNICAL INVESTIGATION AS DIRECTED BY THE CONSULTING ENGINEER.
3. THIS ESCP DOES NOT OUTLINE ACID SULPHATE SOIL (ASS) MANAGEMENT REQUIREMENTS. IF ENCOUNTERED, ASS SHALL BE MANAGED IN ACCORDANCE WITH AN APPROVED ASS MANAGEMENT PLAN.
4. SEDIMENT BASIN OPERATION AND MAINTENANCE SHALL BE IN ACCORDANCE WITH SUNSHINE COAST COUNCIL'S SEDIMENT BASIN DESIGN GUIDELINES.
5. TREATMENT AND DOSING RATES FOR APPROVED FLOCCULATING AGENTS TO BE DETERMINED FOLLOWING GEOTECHNICAL INVESTIGATION OF ON SITE SOILS.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT CONTROL DEVICES IN A FUNCTIONAL ORDER.
7. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED AND A REVISED EROSION AND SEDIMENT CONTROL PROGRAM (ESCP) MUST BE SUBMITTED FOR APPROVAL BY THE SUPERINTENDENT AND INSPECTING ENGINEER IF CONSTRUCTION METHODOLOGIES OR SITE CONDITIONS VARY FROM THOSE CONSIDERED WITHIN THE ESCP. A REVISED ESCP IS ALSO REQUIRED IN THE EVENT THAT THE IMPLEMENTED WORKS FAIL TO ACHIEVE THE STATED 'OBJECTIVE' OF THE ESCP, THE LOCAL GOVERNMENT ESC STANDARD, OR THE STATE'S ENVIRONMENTAL PROTECTION REQUIREMENTS.
8. IN CIRCUMSTANCES WHERE IT IS CONSIDERED NECESSARY TO PREPARE AN AMENDED ESCP, AND WHERE THE DELIVERY OF SUCH AN AMENDED ESCP IS NOT IMMINENT, THEN ALL NECESSARY NEW OR MODIFIED EROSION AND SEDIMENT CONTROL WORKS MUST BE IN ACCORDANCE WITH THE I.E.C.A. TECHNICAL NOTES AND DRAWINGS AS DIRECTED BY THE SUPERINTENDENT AND INSPECTING ENGINEER. UPON APPROVAL OF THE AMENDED ESCP, ALL WORKS MUST BE IMPLEMENTED IN ACCORDANCE WITH THE AMENDED PLAN.
9. ALL CONSTRUCTION AND MAINTENANCE IS TO BE CARRIED OUT IN ACCORDANCE WITH THE LOCAL AUTHORITIES SPECIFICATIONS AND THE I.E.C.A. TECHNICAL NOTES AND DRAWINGS TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. THIS ESCP IS BASED ON THE WORKS OUTLINED IN THE CIVIL ENGINEERING DRAWINGS BY WESTERA PARTNERS DATED APRIL 2025, PROJECT NO. S25-060.

1. ANY BULK CLEARING AND GRUBBING OF THE SITE MUST BE IMMEDIATELY FOLLOWED BY SPECIFIED STABILISATION MEASURES (e.g. TEMPORARY GRASSING OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.

2. DISTURBANCE TO NATURAL WATERCOURSES (INCLUDING BED AND BANKS) AND THEIR ASSOCIATED RIPARIAN ZONES MUST BE LIMITED TO THE MINIMUM PRACTICABLE.
3. NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION OF ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES.
4. LAND CLEARING MUST BE LIMITED TO 5M FROM THE EDGE OF PROPOSED CONSTRUCTED WORKS, 2M OF ESSENTIAL CONSTRUCTION TRAFFIC ROUTES, AND A TOTAL OF 10M WIDTH FOR CONSTRUCTION ACCESS, UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.
5. PRIOR TO LAND CLEARING, AREAS OF PROTECTED VEGETATION MUST BE CLEARLY IDENTIFIED AND PROTECTED FROM CONSTRUCTION ACTIVITY FOR THE PURPOSE OF MINIMISING THE RISK OF UNNECESSARY LAND CLEARING.
6. LAND CLEARING SHALL BE LIMITED TO THE MINIMUM PRACTICABLE DURING PERIODS WHEN SOIL EROSION DUE TO WIND, RAIN OR SURFACE WATER IS POSSIBLE.

1. PRIOR TO THE COMMENCEMENT OF SITE WORKS, THE LOCATION OF THE SITE ACCESS POINT MUST BE VERIFIED WITH THE SUPERINTENDENT.

2. SITE EXIT POINTS MUST BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED, PUBLIC ROADWAYS.
3. THE PUBLIC ROAD AT THE SITE ENTRY/EXIT POINT MUST BE KEPT CLEAN OF SEDIMENT. DIRTY ROADS MUST BE BROOMED IMMEDIATELY, NOT WASHED OFF INTO COUNCIL'S STORMWATER SYSTEM.
4. STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS MUST DRAIN TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
5. WHEEL – WASH OR SPRAY UNIT MAY BE REQUIRED DURING WET WEATHER.

1. STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, MUST BE:
 - (a) APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS.
 - (b) LOCATED AT LEAST 2M FROM ANY HAZARDOUS AREA, RETAINED VEGETATION, OR CONCENTRATED DRAINAGE LINE.
 - (c) LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM.
 - (d) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
 - (e) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
 - (f) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A EXTREME EROSION RISK.

2. A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500M².

1. SEDIMENT (INCLUDING CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT AND CERAMIC WASTE) DEPOSITED OFF THE SITE AS A DIRECT RESULT OF AN ON-SITE ACTIVITY, MUST BE COLLECTED AND THE AREA APPROPRIATELY CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE, AND IN A MANNER THAT GIVES APPROPRIATE CONSIDERATION TO THE SAFETY AND ENVIRONMENTAL RISKS ASSOCIATED WITH THE SEDIMENT DEPOSITION.

2. ADEQUATE WASTE COLLECTION BINS MUST BE PROVIDED ON-SITE AND MAINTAINED SUCH THAT POTENTIAL AND ACTUAL ENVIRONMENTAL HARM RESULTING FROM SUCH MATERIAL WASTE IS MINIMISED.
3. CONCRETE WASTE AND CHEMICAL PRODUCTS, INCLUDING PETROLEUM AND OIL-BASED PRODUCTS, MUST BE PREVENTED FROM ENTERING AN INTERNAL WATER BODY, OR AN EXTERNAL DRAIN, STORMWATER SYSTEM, OR WATER BODY.
4. ALL FLAMMABLE AND COMBUSTIBLE LIQUIDS, INCLUDING ALL LIQUID CHEMICALS IF SUCH CHEMICALS COULD POTENTIALLY BE WASHED OR DISCHARGED FROM THE SITE, ARE STORED AND HANDLED ON-SITE IN ACCORDANCE WITH RELEVANT STANDARDS SUCH AS AS1940 THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
5. TRENCHES NOT LOCATED WITHIN ROADWAYS MUST BE BACKFILLED, CAPPED WITH TOPSOIL, AND COMPACTED TO A LEVEL AT LEAST 75MM ABOVE ADJOINING GROUND LEVEL AND APPROPRIATELY STABILISED.
6. ALL STORMWATER, SEWER LINE AND OTHER SERVICE TRENCHES, NOT LOCATED WITHIN ROADWAYS, MUST BE MULCHED AND SEEDED, OTHER OTHERWISE APPROPRIATELY STABILISED WITHIN 7 DAYS AFTER BACKFILL.
7. NO MORE THAN 150M OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH MUST BE OPEN AT ANY ONE TIME.
8. SITE SPOIL MUST BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

1. ALL DRAINAGE CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.

2. WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, MUST BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.
3. DURING THE CONSTRUCTION PERIOD, ALL REASONABLE AND PRACTICABLE MEASURES MUST BE IMPLEMENTED TO CONTROL FLOW VELOCITIES IN SUCH A MANNER THAN PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE AND EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS UP TO THE RELEVANT DESIGN STORM DISCHARGE.
4. TO THE MAXIMUM DEGREE REASONABLE AND PRACTICABLE, ALL WATERS DISCHARGED DURING THE CONSTRUCTION PHASE MUST DISCHARGE ONTO STABLE LAND, IN A NON-EROSIVE MANNER, AND AT A LEGAL POINT OF DISCHARGE.
5. WHEREVER REASONABLE AND PRACTICABLE, "CLEAN" SURFACE WATERS MUST BE DIVERTED AWAY FROM SEDIMENT CONTROL DEVICES AND ANY UNTREATED, SEDIMENT-LADEN WATERS.
6. DURING THE CONSTRUCTION PERIOD, ROOF WATER MUST BE MANAGED IN A MANNER THAT MINIMISES SOIL EROSION THROUGHOUT THE SITE, AND SITE WETNESS WITHIN ACTIVE WORK AREAS.
7. DEWATERING DURING EXCAVATION MUST BE CARRIED OUT IN ACCORDANCE WITH SCC AND I.E.C.A. STANDARD DRAWINGS AND SPECIFICATIONS. ALL WATER DISCHARGED FROM SITE MUST BE TREATED FOR SEDIMENT AND BE APPROPRIATELY MANAGED IN A MANNER THAT DOES NOT CAUSE ENVIRONMENTAL HARM, FLOODING, DAMAGE OR NUISANCE TO NEIGHBOURING PROPERTIES.

1. ALL SEDIMENT CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.

- OPTIMUM BENEFIT MUST BE MADE OF EVERY OPPORTUNITY TO TRAP SEDIMENT WITHIN THE WORK SITE, AND AS CLOSE AS PRACTICABLE TO ITS SOURCE.
3. SEDIMENT TRAPS MUST BE INSTALLED AND OPERATED TO BOTH COLLECT AND RETAIN SEDIMENT.
4. THE POTENTIAL SAFETY RISK OF A PROPOSED SEDIMENT TRAP TO SITE WORKERS AND THE PUBLIC MUST BE GIVEN APPROPRIATE CONSIDERATION, ESPECIALLY THOSE DEVICES LOCATED WITHIN PUBLICLY ACCESSIBLE AREAS.
5. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT FROM THE SITE.
6. SUITABLE ALL-WEATHER MAINTENANCE ACCESS MUST BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.
7. SEDIMENT CONTROL DEVICES MUST BE DE-SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT-PRODUCING EVENT, WHETHER NATURAL OR ARTIFICIAL, IF THE DEVICE'S SEDIMENT RETENTION CAPACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CAPACITY.
8. MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM SEDIMENT CONTROL DEVICES DURING MAINTENANCE OR DECOMMISSIONING, MUST BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
9. AS-CONSTRUCTED PLANS MUST BE PREPARED FOR ALL FOR CONSTRUCTED SEDIMENT-BASINS AND ASSOCIATED EMERGENCY SPILLWAYS. SUCH PLANS MUST APPROPRIATELY VERIFY THE BASIN'S DIMENSIONS, LEVELS AND VOLUMES, AND MUST BE SUBMITTED TO THE SUPERINTENDENT WITHIN 14 CALENDAR DAYS OF THE CONSTRUCTION OF EACH BASIN.
10. SEDIMENT BASINS AND CONTROL DEVICES MUST BE MAINTAINED AND FULLY OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL EACH DEVICE'S CATCHMENT AREA ACHIEVES 70% GROUND COVER ON ALL SOIL SURFACES.
11. SETTLED SEDIMENT MUST BE REMOVED FROM SEDIMENT BASINS WHEN THE VOLUME OF THE SEDIMENT EXCEEDS THE DESIGNATED SEDIMENT STORAGE VOLUME, OR THE DESIGN MAXIMUM SEDIMENT STORAGE ELEVATION.
12. IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.
13. STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.
14. SEDIMENT FENCE
 - (a) NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
 - (b) NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6 HA PER 100M LENGTH OF FENCE.
 - (c) ONLY WOVEN FABRICS ARE TO BE USED, NON-WOVEN FABRICS ARE TO BE AVOIDED UNLESS OTHERWISE DIRECTED BY THE SUPERVISING ENGINEER.
 - (d) WHERE FENCES NEED TO BE LOCATED ACROSS THE CONTOUR THE LAYOUT SHALL BE AS DIRECTED BY THE MANAGER.
 - (e) FENCES ARE REQUIRED 2M MIN FROM THE TOE OF CUT AND FILL BATTERS, WHERE NOT PRACTICAL ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1M MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.
15. ALL STORMWATER INLET STRUCTURES IN THE IMMEDIATE DOWNSTREAM VICINITY OF THE WORK AREA SHALL HAVE APPROVED INLET PROTECTION TO PREVENT INGRESS OF WATER BORNE SEDIMENTS.
16. SANDBAGS TO BE INSTALLED AT REGULAR INTERVALS ON ROAD PROFILE TO REDUCE EROSION & STEM FLOWS BY ACTING AS SMALL CHECK DAMS.
17. EXTRA CATCH DRAINS MAY BE CONSTRUCTED BY CONTRACTOR IN ACCORDANCE WITH THESE DRAWINGS & I.E.C.A. TECHNICAL NOTES & DRAWINGS.

1. ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE, MUST BE KEPT IN AN
2. ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY THE LOCAL AUTHORITY ON REQUEST.

- AT NOMINATED INSTREAM WATER QUALITY MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES MUST BE TAKEN AND ANALYSED, AND THE AVERAGE RESULT USED TO DETERMINE QUALITY.
4. SEDIMENT BASIN WATER QUALITY SAMPLES MUST BE TAKEN AT A DEPTH NO GREATER THAN 200MM ABOVE THE LEVEL OF SETTLED SEDIMENT.
5. ALL ENVIRONMENTALLY RELEVANT INCIDENTS MUST BE RECORDED IN A FIELD LOG THAT MUST REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL LIVES.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE FULLY OPERATIONAL AND MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THE MAINTENANCE PERIOD AS SPECIFIED BY THE LOCAL AUTHORITY.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE REMOVED AFTER ACHIEVING A SATISFACTORY "OFF-MAINTENANCE INSPECTION" BY THE LOCAL AUTHORITY.
9. ALL DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED:
 - (a) AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE);
 - (b) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE);
 - (c) WITHIN 24 HOURS OF EXPECTED RAINFALL; AND
 - (d) WITHIN 18 HOURS OF A RAINFALL EVENT OF SUFFICIENT INTENSITY AND DURATION TO CAUSE RUNOFF ON-SITE).
10. WASHING/FLUSHING OF SEALED ROADWAYS MUST ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE SUFFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE REMAINING SEDIMENT (E.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES, ALL REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES MUST BE USED TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT INTO RECEIVING WATERS. ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY FLOODING ISSUES SHALL BE EMPLOYED. SEDIMENT REMOVED FROM ROADWAYS MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
11. SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.
12. MAINTENANCE MOWING OF ALL ROAD SHOULDERS, TABLE DRAINS, BATTERS AND OTHER SURFACES LIKELY TO EXPERIENCE ACCELERATED SOIL EROSION MUST AIM TO LEAVE THE GRASS LENGTH NO SHORTER THAN 50MM WHERE REASONABLE AND PRACTICABLE.
13. MAINTENANCE MOWING MUST BE DONE IN A MANNER THAT WILL NOT DAMAGE THE PROFILE OF FORMED, SOFT EDGES, SUCH AS THE CREST OF EARTH EMBANKMENTS.

1. ALL EROSION CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.

2. THE APPLICATION OF LIQUID-BASED DUST SUPPRESSION MEASURES MUST ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.
3. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND EMBANKMENTS ASSOCIATED WITH CONSTRUCTED SEDIMENT BASINS MUST BE MACHINE-COMPACTED, SEEDED AND MULCHED FOR THE PURPOSE OF ESTABLISHING A TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING.
4. THE CONSTRUCTION AND STABILISATION OF EARTH BATTERS STEEPER THAN 6:1 (H:V) MUST BE STAGED SUCH THAT NO MORE THAN 3 VERTICAL-METRES OF ANY BATTER IS EXPOSED TO RAINFALL AT ANY INSTANT.
5. SYNTHETIC REINFORCED EROSION CONTROL MATS AND BLANKETS MUST NOT BE PLACED WITHIN, OR ADJACENT TO, RIPARIAN ZONES AND WATERCOURSES IF SUCH MATERIALS ARE LIKELY TO CAUSE ENVIRONMENTAL HARM TO WILDLIFE OR WILDLIFE HABITATS.

1. ALL DISTURBED AREAS IDENTIFIED AS VERY LOW, LOW, MEDIUM, HIGH OR EXTREME RISK MUST BE SUITABLE WITHIN 30, 30, 20, 10 OR 5 DAYS RESPECTIVELY, OR PRIOR TO ANTICIPATED RAINFALL, WHICHEVER IS THE GREATER, FROM THE DAY THAT SOIL DISTURBANCES ON THE AREA HAVE BEEN FINALISED.

2. A MINIMUM 60% GROUND COVER MUST BE ACHIEVED ON ALL COMPLETED EARTHWORKS EXPOSED TO ACCELERATED SOIL EROSION WITHIN 30 DAYS DURING THOSE MONTHS WHEN THE EXPECTED RAINFALL IS LESS THAN 30mm; MINIMUM 70% COVER WITHIN 30 DAYS IF BETWEEN 30 AND 45mm; MINIMUM 70% COVER WITHIN 20 DAYS IF BETWEEN 45 AND 100mm; MINIMUM 75% COVER WITHIN 10 DAYS IF BETWEEN 100 AND 225mm; AND MINIMUM 80% COVER WITHIN 5 DAYS IF GREATER THAN 225mm.
3. DURING TIMES OF DECLARED WATER RESTRICTIONS, REFER TO SUNSHINE COAST COUNCIL'S 'DROUGHT CONDITIONS SPECIFICATION V2' FOR A DEEMED TO COMPLY SOLUTION TO ACHIEVING 70% GROUND COVERAGE.
4. THE TYPE OF GROUND COVER APPLIED TO COMPLETED EARTHWORKS IS COMPATIBLE WITH THE ANTICIPATED LONG-TERM LAND USE, ENVIRONMENTAL RISK, AND SITE REHABILITATION MEASURES.
5. UNLESS OTHERWISE DIRECTED BY THE SUPERINTENDENT OR WHERE DIRECTED BY THE APPROVED REVEGETATION PLAN, TOPSOIL MUST BE PLACED AT A MINIMUM DEPTH OF 75mm ON SLOPES 4:1 (H:V) OR FLATTER, AND 50mm ON SLOPES STEEPER THAN 4:1.
6. TEMPORARY SITE STABILISATION PROCEDURES MUST COMMENCE AT LEAST 30 DAYS PRIOR TO THE NOMINATED SITE SHUTDOWN DATE. AT LEAST 70% STABLE COVER OF ALL UNSTABLE AND/OR DISTURBED SOIL SURFACES MUST BE ACHIEVED PRIOR TO COMPLETION OF WORKS. THE STABILISATION WORKS MUST NOT RELY UPON THE LONGEVITY OF NON-VEGETATES EROSION CONTROL BLANKETS, OR TEMPORARY SOIL BINDERS.
7. ALL UNSTABLE OR DISTURBED SOIL SURFACES MUST BE ADEQUATELY STABILISED AGAINST EROSION (MINIMUM 70%) PRIOR TO COMMENCEMENT OF USE, OR SURVEY PLAN ENDORSEMENT.

[illegible]



Appendix C – Site Detail Survey & Architectural Plans

LEGEND

- ⬮ ELEC P ELECTRICITY PILLAR
Ⓢ TELECOMMUNICATIONS MARKER
Ⓢ GAS LINE MARKER
Ⓢ WATER LINE MARKER
Ⓢ STORMWATER M/H
Ⓢ WATER VALVE
Ⓢ SEWER MANHOLE
Ⓢ TRAFFIC LIGHTS
Ⓢ TRAFFIC SIGNAL CONTROL BOX
Ⓢ COMMS PILLAR
Ⓢ FIRE HYDRANT
Ⓢ SIGN
Ⓢ PALM TREE
Ⓢ TREE
Ⓢ WM WATER METER
Ⓢ SURVEY STN
Ⓢ PERMANENT SURVEY MARK
Ⓢ PP POWER POLE
Ⓢ LP STREET LIGHT
Ⓢ ELECTRICITY MARKER
- SW STORM WATER
S SEWER MAIN
G GAS MAIN
W WATER MAIN
T COMMUNICATION
E ELECTRICITY

- NOTES:
1. Drawn to scale on an A1 sheet.
 2. All levels are in metres from the Australian Height Datum referred to PM200442 - RL9.861m AHD
 3. Contour Interval: 0.20m
 4. All dimensions are vide title and subject to confirmation by survey.
 5. The location of services is approximate only and is plotted from surface installations and the relevant authority records. The exact nature and location of these services should be confirmed prior to construction.
 6. Meridian of MGA Zone 56 vide SP347407
 7. Field Survey Completed on 08/04/2025

Horiz datum: MGA Zone 56 vide CORS
Coord System: Plane 1:1

A	Original Issue	JWP	10/04/2025
Issue	Revision	Int	Date

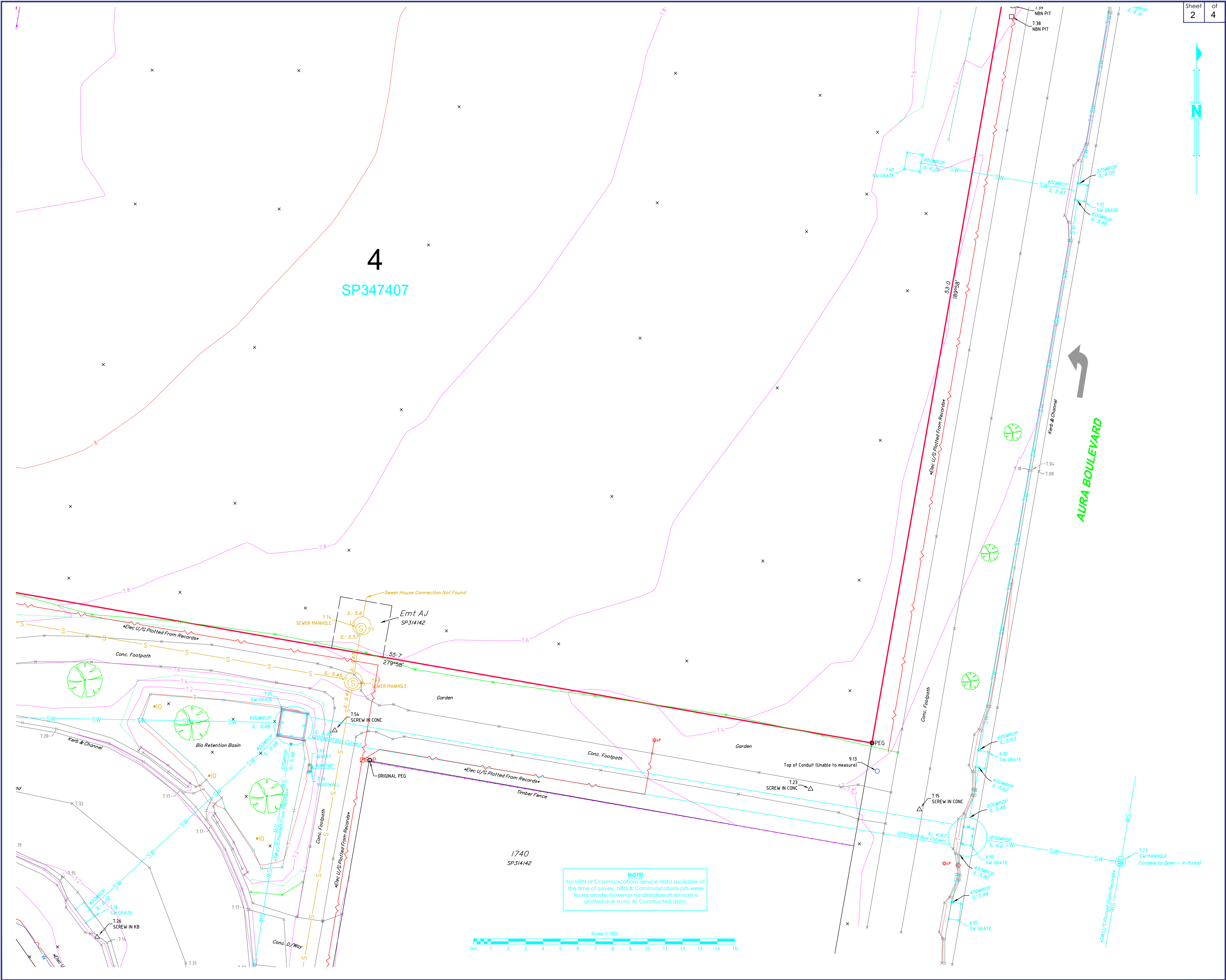
Title:

Verification Plot

Over Part of Lot 4 on SP347407
and Surrounding Roads

Client: **Vantage Building Group**

Locality:	Nirimba	Prepared By:	JWP
Local Gov:	SCRC	Approved:	KJ
Surveyed By:	JWP	Scale:	1:100@A1
Date Created:	10/04/2025	Comp File:	250493
Plan No:	250493_001_VER		



LEGEND

ELECTRICITY PILLAR

TELECOMMUNICATIONS MARKER

GAS LINE MARKER

WATER LINE MARKER

STORMWATER M/H

WATER VALVE

SEWER MANHOLE

TRAFFIC LIGHTS

TRAFFIC SIGNAL CONTROL BOX

COMMS PILLAR

FIRE HYDRANT

SIGN

PALM TREE

TREE

WM WATER METER

SURVEY STN

PERMANENT SURVEY MARK

PP POWER POLE

STREET LIGHT

ELECTRICITY MARKER

SW STORM WATER

S SEWER MAIN

G GAS MAIN

W WATER MAIN

T COMMUNICATION

ELECTRICITY

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Horiz datum: MGA Zone 56 vide CORS

Coord System: Plane 1:1

A	Original Issue	JWP	10/04/2025
Issue	Revision	Int	Date

Title:

Verification Plot

Over Part of Lot 4 on SP347407

and Surrounding Roads

Client:	Vantage Building Group		
Locality:	Nirimba		
Local Gov:	SCRC	Prepared By:	JWP
Surveyed By:	JWP	Approved:	KJ
Date Created:	10/04/2025	Scale:	1:100@A1
Comp File:	250493		
Plan No:	250493_001_VER		

LEGEND

- ELP ELECTRICITY PILLAR
- TELECOMMUNICATIONS MARKER
- GAS LINE MARKER
- WATER LINE MARKER
- STORMWATER M/H
- WATER VALVE
- SEWER MANHOLE
- TRAFFIC LIGHTS
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Horiz datum: MGA Zone 56 vide CORS
Coord System: Plane 1:1

A	Original Issue	JWP	10/04/2025
Issue	Revision	Int	Date

Title:

Verification Plot

Over Part of Lot 4 on SP347407
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	TELECOMMUNICATIONS PILLAR
	ELECTRICITY COMMUNICATIONS MARKER
	GAS LINE MARKER
	WATER LINE MARKER
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	STREET LIGHT
	ELECTRICITY MARKER

	STORM WATER
	SEWER MAIN
	GAS MAIN
	WATER MAIN
	TELECOMMUNICATIONS
	ELECTRICITY

- NOTES:
1. Drawn to scale on an A1 sheet.
 2. All levels are in metres on the Australian Height Datum referred to PM200442 - RL 9.861m AHD
 3. Contour Interval: 0.20m
 4. All dimensions are wide title and subject to confirmation by survey.
 5. The location of services is approximate only and is plotted from surface installations and the relevant authority records. The exact nature and location of these services should be confirmed prior to construction.
 6. Meridian of MGA Zone 56 wide SP347407

Horiz datum: MGA Zone 56 vide CORS
Coord System: Plane 1:1

A	Original Issue	JWP	10/04/2025
Issue	Revision	Int	Date

Title:
Verification Plot
Over Part of Lot 4 on SP347407
and Surrounding Roads

Client:	Vantage Building Group		
Locality:	Nirimba		
Local Gov:	SCRC	Prepared By:	JWP
Surveyed By:	JWP	Approved:	KJ
Date Created:	10/04/2025	Scale:	1:100@A1
Comp File:	250493		
Plan No:	250493_001_VER		

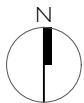
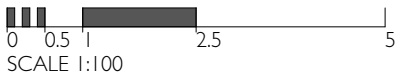
AURA -8014 - GROUND FLOOR



REV	DATE	DESCRIPTION	DRAWN	CHECKED

NOTE: Figured dimensions to be taken in preference to scaled. Verify all dimensions on site before commencing work or making shop drawings. When printing from electronic files it is the responsibility of the operator to ensure the required scale is achieved.

PRE LODGEMENT MEETING
NOT FOR CONSTRUCTION



PROJECT
AURA TOWNHOUSES
Aura
Sunshine Coast

DRAWING TITLE
GROUND FLOOR
CLIENT
Vantage

PROJECT No.
25013

DATE
26/5/2025
DRAWING No.
DA_2.02

SCALE @ A3
1:300
ISSUE No.
B

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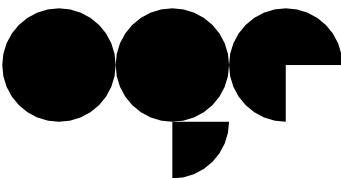
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Architects