STEELFORCE WAREHOUSE

BRINGELLY ROAD BUSINESS HUB
SKYLINE CRESCENT, WEST HOXTON, NSW

LANDSCAPE MANAGEMENT PLAN

06.02.2020
ISSUE C

FOR: Charter Hall

CIP DEVELOPING RELATIONSHIPS BUILDING SUCCESS

SSD8900

PREPARED BY:

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1.0 INTRODUCTION

This Landscape Management Plan (LMP) has been developed per the Development Consent dated 08.07.2019 for Steelforce Warehouse - the Project (SSD8900).

The Landscape Management Plan describes the landscape management activities to manage the revegetation and landscaping works on-site.

All landscaping works on site are located in the front (south), east and west boundaries of the warehouse facility. There are no proposed landscape works on the Northern Boundary, only hydro-mulch zone.

Any works near the riparian corridor will be undertaken as part of the Bringelly Road Business Hub Estate Works.

2.0 PLANTING

The planting on the site is located on Skyline Crescent frontage of the Bringelly Road Business hub, east and west boundaries of the site. All planting is located in the setback between hardstand and car parking and the front boundary. This is in considerable distance from the northern boundary and riparian corridor. There are no landscape setbacks adjoining the riparian corridor so this planting is not specified on this site. The list has been provided for reference only.

Our planting strategy has been divided up into themed zones:

1. Warehouse (frontage and car park, east and west setbacks)

A mixture of native plant Cumberland Plain species and feature trees.

2. Riparian corridor edge (N/A to our site)

Riparian corridor plant species.

2.1 PROPOSED PLANTING LIST

2.1.1 Proposed Warehouse Planting

TREES				
CODE	BOTANICAL NAME	COMMON NAME	MIN POT SIZE	QTY
CMA	Corymbia maculata	Spotted Gum	75L	11
EM	Eucalyptus moluccana	Grey Box	75L	7
WFL	Waterhousea floribunda	Lilly Pilly	75L	8
TL	Tristaniopsis 'Luscious'	Kanooka Gum	110L	8
MCWG	Magnolia 'Coolwyn Gloss''	Coolwyn Gloss	110L	6
ER	Elaeocarpus reticulatus	Blueberry Ash	75L	1
SHRUBS				
DVI	Dodonaea viscosa	Sticky Hop Bush	200mm	170
IAU	Indigofera australis	Austral Indigo	200mm	170
SAS	Syzygium 'Aussie Southern'	Aussie Southern ‘Lilly Pilly’	300mm	179
CCC	Callistemon citrinus	Crimson Bottlebrush	200mm	85
DEX	Doryanthes excelsa	Gymea Lily	200mm	221
WF	Westringia fruticosa	Coastal Rosemary	200mm	267
GROUNDCOVERS				
HV	Hardenbergia violacea	Coral Pea	150mm	370
LT	Lomandra longifolia 'Tanika'	Tanika	150mm	370
DC	Dianella caerulea	Flax Lily	150mm	400
CGL	Carpobrotus glaucescens	Pigface	150mm	400
PE	Poa labillardieri ‘Eskdale’	Tussock Grass	150mm	500

2.1.2 Cumberland Plain Species

TREES	
BOTANICAL NAME	COMMON NAME
Eucalyptus moluccana	Grey Box
Eucalyptus tereticornis	Forest Red Gum
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus eugenioides	White Stringybark
Corymbia maculata	Spotted Gum
Acacia decurrens	Black Wattle
Acacia parramattensis	Parramatta Wattle
Acacia implexa	Lightwood
Exocarpos cupressiformis	Native Cherry
SHRUBS & GROUNDCOVERS	
Bursaria spinosa	Native Blackthorn
Indigofera australis	Australian Indigo
Hardenbergia violacea	False Sarsaparilla
Daviesia ulicifolia	Gorse Bitter Pea
Lespedeza cuneata	Chinese Bushclover
Dillwynia	dillwynia
Dodonaea viscosa	Florida Hopbush
GRASS	
Themeda australis	Kangaroo Grass
Microlaena stipoides	Weeping Meadow Grass

2.1.3 Riparian Corridor Species

TREES		
BOTANICAL NAME	COMMON NAME	LOCATION
Casaurina glauca	Swamp She-Oak	Bottom of batter
Allocasuarina distyla		Top of batter
Melaleuca decora	White Feather Honeymyrtle	Bottom of batter
Melaleuca ericifolia	Swamp Paperbark	Bottom of batter
Melaleuca styphellioides	Prickly - leaved Paperbark	Bottom of batter
Melaleuca nodosa	Ball Honeymyrtle	middle of batter
Melaleuca quinquenervia	Broad leaf Paperbark	any where
Acmena smithii	Lillypilly	middle of batter
Tristaniopsis laurina	Watergum	middle of batter
Syncarpia glomulifera	Turpentine	Top of batter
Eucalyptus tereticornis	Forest Red Gum	Top of batter
Eucalyptus moluccana	Grey Box	Bottom of batter
Eucalyptus longifolia	Woollybutt	Bottom of batter
Eucalyptus robusta	Swamp Mahogany	Bottom of batter
Eucalyptus amplifolia	Cabbage Gum	Bottom of batter
Eucalyptus eugenioides	Thin-leaved Stringybark	Bottom of batter
Angophora floribunda	Rough Barked Apple	Top of batter
Banksia integrifolia	Coastal Banksia	any where
GRASS		
Themeda australis	Kangaroo Grass	any where
Lomandra longifolia	Mat Rush	any where
Anisopogon avenaceus	Oat Speargrass	any where
Danthonia tenuior		any where
Dichelachne micrantha	Shorthair Plume Grass	any where
Entolasia stricta		any where
Microleana stipoides	Weeping Grass	any where
Stipa pubescens	Tall Speargrass	any where
Poa affinis		any where

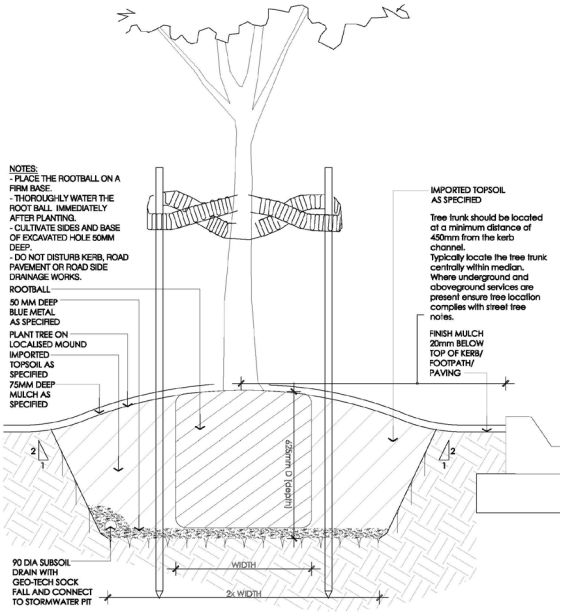
SHRUBS		
Kunzea ambigua	Tick bush	any where
Leptospermum polygalifolium	Lemon-scented Tea-tree	any where
Acacia parramattensis	Parramatta Green Wattle	top of batter
Acacia ulicifolia	Prickly Moses	top of batter
Acacia falcata		top of batter
Acacia floribunda	White Sallow Wattle	bottom of batter
Acacia longifolia var longofolia	Sydney Golden Wattle	any where
Hibertia aspera	Rough Guinea Flower	any where
Hibbertia diffusa		top of batter
Omalanthus populifolius	Bleeding Heart	top of batter
Davesia ulicifolia		top of batter
Indigofera australis		middle of batter
Callistemon linearis	Narrow-leaved Bottlebrush	bottom and middle of batter
Callistemon rigidus	Stiff Bottlebrush	bottom and middle of batter
Leptospermum trinervium	Paperbark Tea-tree	any where
	Mock Olive	bottom of batter
Hakea bakerana		top of batter
Hakea sericea	Bushy Needlebush	any where
Bursaria spinosa	Blackthorn	any where
Personia linearis	Narrow-leaved Geebung	any where
Leptospurmum laevigatum	Coastal Tea tree	any where
Dodonea triquetra		top of batter
Lasiopetalum parvifolium		top of batter
VINES / GROUNDCOVERS / HERBS		
Pandorea pandorana	Wonga Wonga Vine	any where
Kennedia rubicunda		any where
Hardenbergia violacea	False Sarsaparilla	any where
Geranium homeanum	Northern Cranesbill	any where
Geranium solanderi var solanderi	Cutleaf Cranesbill	any where
Hydrocotyle peduncularis		bottom
Clematis aristata	Old Man's Beard	any where
Clematis glycinoides	Forest Clematis	any where
Centella asiatica		any where
Dichondra repens		any where
Convolvulus erubescens		any where
Pratia purpurascens	White Root	any where

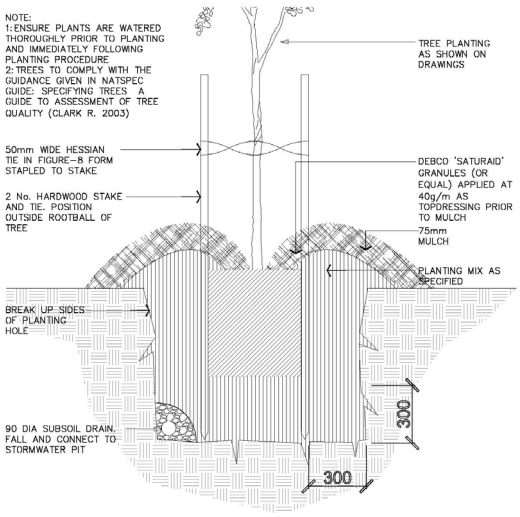
3.0 LANDSCAPE MAINTENANCE

Maintenance shall mean the care and maintenance of the landscape works by accepted horticultural practice as rectifying any defects that become apparent in the landscape works under normal use. This shall include, but shall not be limited to, watering, mowing, fertilising, re-seeding, returfing, weeding, pest and disease control, staking and tying, replanting, cultivation, pruning, aerating, renovating, top dressing, maintaining the site in a neat and tidy condition as follows:

3.1 TYPICAL TREE PLANTING AND MATURE TREE PLANTING

Tree selection for replacement and new tree plantings is reflected on the Landscape Masterplan, wherein the key consideration is to select endemic trees that contribute to local biodiversity. The underside of tree canopies shall not exceed 2m from ground level at maturity.





3.1.1 Stakes & Ties

The landscape contractor shall replace or adjust plant stakes and tree guards as necessary or as directed by the Landscape Architect. Remove stakes and ties at the end of the maintenance period if so directed.

3.1.2 Replacement Planting

The landscape contractor shall replace all plants that are missing, unhealthy or dead at the Landscape Contractor's cost. Replacements shall be of the same size, quality and species as the plant that has failed unless otherwise directed by the Landscape Architect. Replacements shall be made on a continuing basis after the plant has died or is seen to be missing.

Densities, sizes and species used are to be in accordance with those specified in the original landscape plans. To ensure survival, water replacement plantings for a minimum of 12 weeks after planting.

3.1.3 Pruning

General: Prune to reflect the natural growth flowering and regrowth habit of the individual species.
Tip pruning: To encourage development of new shoots during the active growing season. Do not remove buds before the flowering season in those plants that have terminal flowers.
Trees: Prune to eliminate diseased or damaged growth, avoid inter-branch contact and thin out crowns in a natural manner,maintain sight lines to signs and lights, or maintain visibility for personal security. Tree branch removal to AS 4373. Give notice and engage a suitably qualified 'arborist'
It is necessary to prune trees when limbs and branches hang lower than 4 metres over a parking or roadway. Also, prune to reduce continuous canopy within the APZ.

3.1.4 Fertilizing & Mulching

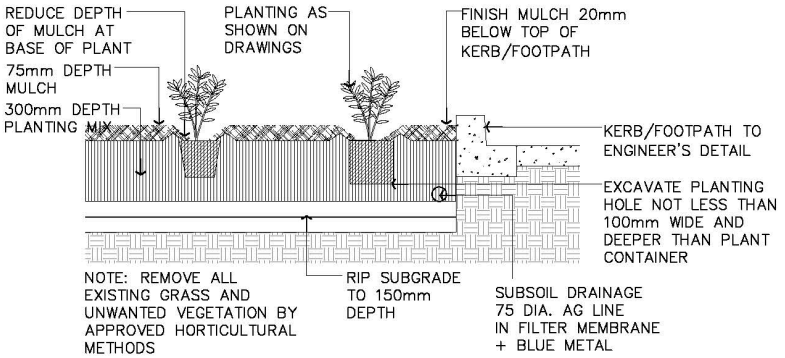
All mulched surfaces shall be maintained in a clean and tidy condition and be reinstated if necessary to ensure that a depth of 75mm is maintained. Ensure mulch is kept clear of plant stems at all times. Remove all mulching materials off lawn or paved areas and maintain a clean and tidy appearance when viewed on a weekly basis.
Though fertilizing and composting are not critical maintenance activities, soil health is achieved by regular application of organic soil enhancements.
Pellets shall be in the form intended to uniformly release plant food elements for a period of approximately nine months equal to Shirleys Kokei pellets, analysis 6.3:1.8:2.9. Kokei pellets shall be placed at the time of planting to the base of the plant, 50mm minimum from the root ball at a rate of two pellets per 300mm of top growth to a maximum of 8 pellets per tree.

3.1.5 Soil Subsidence

Any soil subsidence or erosion which may occur after the soil filling and preparation operations shall be made good by the landscape contractor at no cost to the client.

3.2 MASS PLANTING AREA

Mass planted areas must not only consider the aesthetics and design but also balance with the application of the principles of Crime Prevention through Environmental Design (CPTED). Proposed landscape shall not create concealment opportunities and also restrict sightlines within the site. Shrubs and groundcovers shall not exceed a height of 1m above ground level at maturity.



3.2.1 Weed Eradication

Eradicate weeds by environmentally acceptable methods using a non-residual glyphosate herbicide (eg. 'Roundup') in any of its registered formulae, at the recommended maximum rate. Regularly remove by hand, weed growth that may occur or recur throughout grassed, planted and mulched areas. Remove weed growth from an area 750mm diameter around the base of trees in grassed areas. Continue eradication throughout the course of the works and during the maintenance period.

3.2.2 Replacement Planting

The landscape contractor shall replace all plants that are missing, unhealthy or dead at the Landscape Contractor's cost. Replacements shall be of the same size, quality and species as the plant that has failed unless otherwise directed by the Landscape Architect. Replacements shall be made on a continuing basis after the plant has died or is seen to be missing.
Densities, sizes and species used are to be in accordance with those specified in the original landscape plans. To ensure survival, water replacement plantings for a minimum of 12 weeks after planting.

3.2.3 Pruning

General: Prune to reflect the natural growth flowering and regrowth habit of the individual species.
Shrubs: Prune after flowering - Spring and Summer and on a spot basis as required.
Hedge trimming: Schedule trimming at times which will maintain the character and design of hedges. Allow up to three times per season.
Tip pruning: To encourage development of new shoots during the active growing season. Do not remove buds before the flowering season in those plants that have terminal flowers.
Radical pruning: To maintain a hedge or formal shape or when a particular problem, growth habit, damage, or disease requires branch removal.

3.2.4 Fertilizing & Mulching

All mulched surfaces shall be maintained in a clean and tidy condition and be reinstated if necessary to ensure that a depth of 75mm is maintained. Ensure mulch is kept clear of plant stems at all times. Remove all mulching materials off lawn or paved areas and maintain a clean and tidy appearance when viewed on a weekly basis.
Though fertilizing and composting are not critical maintenance activities, soil health is achieved by regular application of organic soil enhancements.
Fertiliser shall be 'Nutricote' or approved equivalent in granule form intended for slow release of plant nutrients over a period of approximately nine months. Thoroughly mix fertiliser with planting mixture at the recommended rate, prior to installing plants.

3.2.5 Soil Subsidence

Any soil subsidence or erosion which may occur after the soil filling and preparation operations shall be made good by the landscape contractor at no cost to the client.

3.3 GENERAL

The landscape contractor shall maintain the landscape works for the term of the maintenance (or Plant establishment) period to the satisfaction of the council. The landscape contractor shall attend to the site on a weekly basis. Landlord to maintain all landscape areas in perpetuity (life of the development).

3.3.1 Watering

Grass, trees and garden areas shall be watered regularly so as to ensure continuous healthy growth

3.3.2 Rubbish Removal

During the term of the maintenance period the landscape contractor shall remove rubbish that may occur and reoccur throughout the maintenance period. This work shall be carried out regularly so that at weekly intervals the area may be observed in a completely clean and tidy condition.

3.3.2 Pest & Disease Control

The landscape contractor shall spray against insect and fungus infestation with all spraying to be carried out in accordance with the manufacturer's directions. Report all instances of pests and diseases (immediately that they are detected) to the Landscape Architect.

3.4 MONITORING & REPORTING

Regular inspections of all landscape areas should be managed by the Maintenance or Assets Team to ensure that maintenance is carried out according to the plan. Frequency of the inspection should not be less than three months (with special attention carried out after high rainfall, wind or heat events). Inspection checklist should be prepared and filled out.
Maintenance Staff should receive the form and carry out remediation work required.

4.0 BUSHFIRE PROTECTION

4.1 ASSET PROTECTION ZONE (APZ)

A minimum defendable space should be provided within the area. In this site, the distance between the bushfire prone vegetation on the northern boundary and the outer wall of the proposed buildings ranges from 66 to 91 metres. An APZ ranging from 21 to 26m within the Subject Land is included (20m measuring from the nearest sprinkler tank to retaining wall). The 42 to 70m distance from bushfire prone vegetation to the retaining wall of the northern site boundary serves as an additional separation as part of the broader management area of the business park area, which includes landscaped swales between the site boundary and riparian corridor.

4.2 VEGETATION TYPES

The riparian corridor is identified as Cumberland Plain Woodlands which are commonly dominated by Grey Box (Eucalyptus moluccana) and Forest Red Gum (E. tereticornis) with sporadic planting of E. crebra, E. eugenioides and Corymbia maculata. Layer of small trees may be sighted and would include Acacia decurrens, Acacia parramattensis, Acacia implexa and Exocarpos cupressiformis. In Cumberland Plain Woodlands, the shrub layer is predominantly composed of Bursaria spinosa, Indigofera australis, Hardenbergia violacea, Daviesia ulicifolia, Lespedeza cuneata, Dillwynia, Dodonaea viscosa, and also grasses such as Kangaroo Grass (Themeda australis) and Weeping Meadow Grass (Microlaena stipoides).

A supplementary Landscape Masterplan (Section 5.0) provided further the landscape treatments on Skyline Crescent frontage of the Bringelly Road Business hub. This would include a selection of native groundcovers, grasses, shrubs and trees that would complement the existing vegetation within the adjacent riparaian corridor (Bedwell Park) whilst ensuring that it does not create concealment opportunities and restrict sight lines.

4.2 APZ MAINTENANCE PLAN

For the APZ maintenance plan, the following standards should be considered:

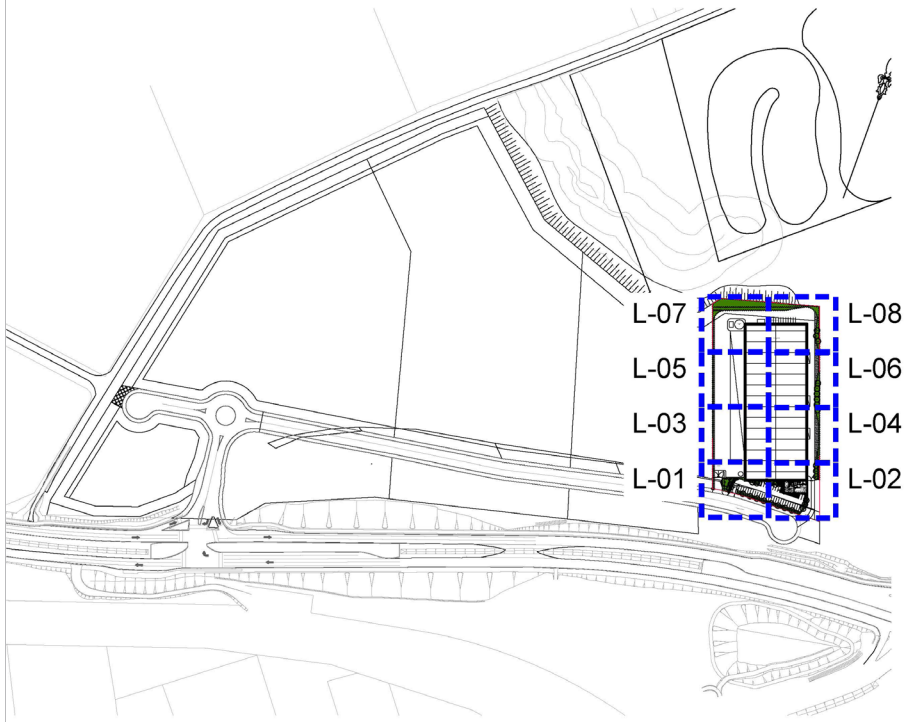
- Rooflines should have a 2m clearance from nearest tree or tree canopy.
- Presence of a few planting in the APZ is acceptable only provided that they are well spread out and do not form a continuous canopy. It should also not retain dead material or deposit quantities of ground fuel in a short or dangerous period. It must also be located far enough from the building so that plants will not ignite the building by direct flame contact or radiant heat emission.
- Plant selection should preferably include local endemic species. Remove flammable species especially those with rough, flaky or stringy barks. Remove all noxious and environmental weeds as well.
- Woodpiles, combustible material, large quantities of garden mulch, stacked flammable building materials etc. should be located away from the building. As such, any structure storing combustible materials must be sealed to prevent entry of burning debris.
- Removal of fuel to reduce a bush fire hazard is necessary, but soil stability should also be considered as soil erosion can reduce the quality of the land. Prevent soil erosion by establishing groundcovers especially to sloping areas.

Information on APZ implementation and management can be found on the NSW RFS website:
https://www.rfs.nsw.gov.au/__data/assets/pdf_file/0010/13321/Standards-for-Asset-Protection-Zones.pdf

STEELFORCE WAREHOUSE

BRINGELLY ROAD BUSINESS HUB
SKYLINE CRESCENT, WEST HOXTON NSW

LANDSCAPE DOCUMENTATION
FOR: TENDER



SITE PLAN
NTS

PLANT SCHEDULE

CODE	BOTANICAL NAME	POT SIZE	DENSITY	QUANTITY	SUBSTITUTES
TREES					
CMA	Corymbia maculata	45L	As Shown	3	C. tereticornis
EM	Eucalyptus moluccana	45L	As Shown	7	E. amplifolia
WFL	Waterhousea floribunda	45L	As Shown	8	
TL	Tristaniopsis 'Luscious'	75L	As Shown	8	
MCWG	Magnolia 'Coolwyn Gloss"	110L	As Shown	6	M. Little Gem
SHRUBS					
DVI	Dodonaea viscosa	Tubestock	2/m²	170	
IAU	Indigofera australis	Tubestock	2/m²	170	
SAS	Syzygium 'Aussie Southern'	300mm		179	S. Select
DEX	Doryanthes excelsa	150mm	2/m²	161	
WF	Westringia fruticosa	150mm	2/m²	207	
GROUNDCOVERS & GRASSES					
HV	Hardenbergia violacea	Tubestock	4/m²	190	
LT	Lomandra longifolia 'Tanika'	Tubestock	4/m²	370	
DC	Dianella caerulea	Tubestock	4/m²	220	
CGL	Carpobrotus glaucescens	Tubestock	4/m²	400	
PE	Poa labillardieri	Tubestock	4/m²	500	

PLANTING NOTES (LEGAL OBLIGATIONS)

LANDSCAPE ARCHITECT TAKES NO RESPONSIBILITY FOR THE SPECIFIED PLANT SIZES AND QUALITY OF PLANTS SUPPLIED AS THE SCHEDULE HAS BEEN DRAFTED UNDER INSTRUCTION FROM THE CLIENT.

DRAWING REGISTER

GENERAL NOTES

1.0 These drawings must be read in conjunction with the drawing package from the consultant team including all engineering drawings.

2.0 Do not scale from these drawings - use figured dimensions.

3.0 SERVICES
Verify the 'as built' location of all existing services before excavation works are started. Services shown are indicative only.

4.0 FALLS
All pavement, planting & turf areas to be graded evenly. Ponding is unacceptable.

5.0 SURFACE LEVELS
Bulk surface levels to be verified on site post Civil Contractor works.
All adjacent surfaces are to be level and flush unless stated or documented otherwise.

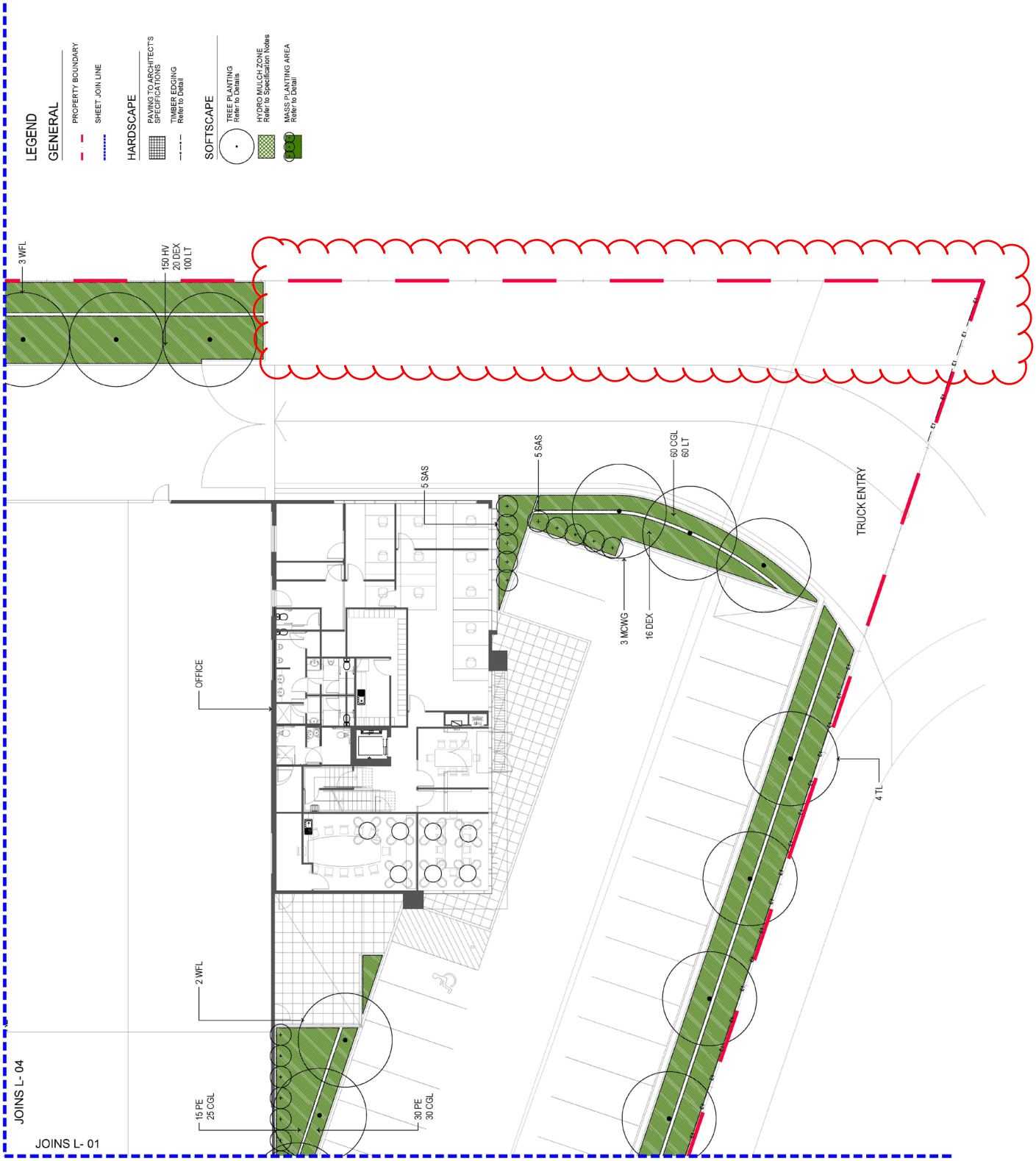
6.0 PLANT LIST
No plant species and pot size substitutions allowed without written approval by Landscape Architect.

7.0 PLANT STOCK
Landscape Architect to approve plant stock prior to delivery on site.

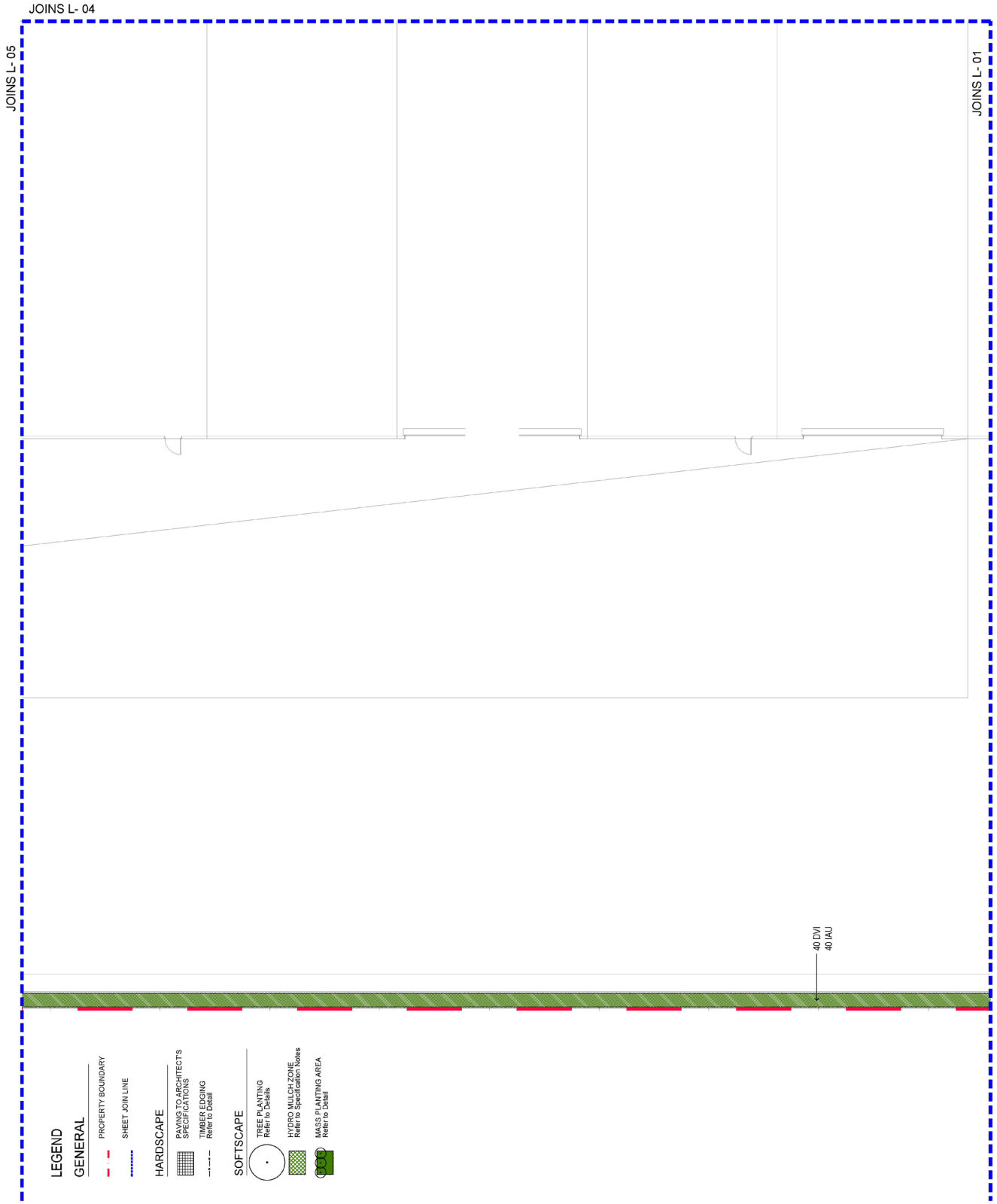
8.0 PLANT SET OUT
Landscape Architect to approve plant set out on site prior to planting.

5.2 L-01: LANDSCAPE PLAN 01

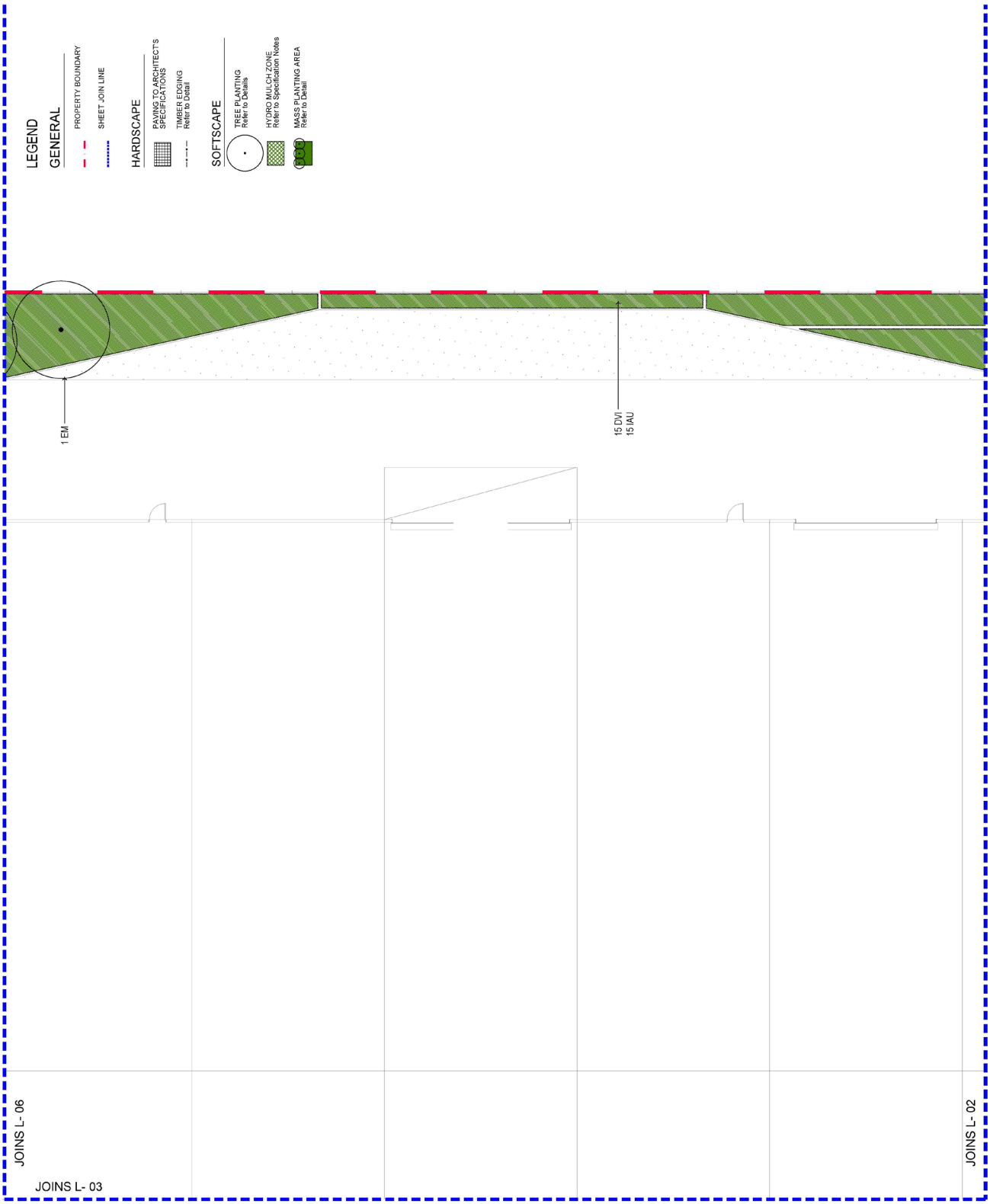
5.3 L-02: LANDSCAPE PLAN 02



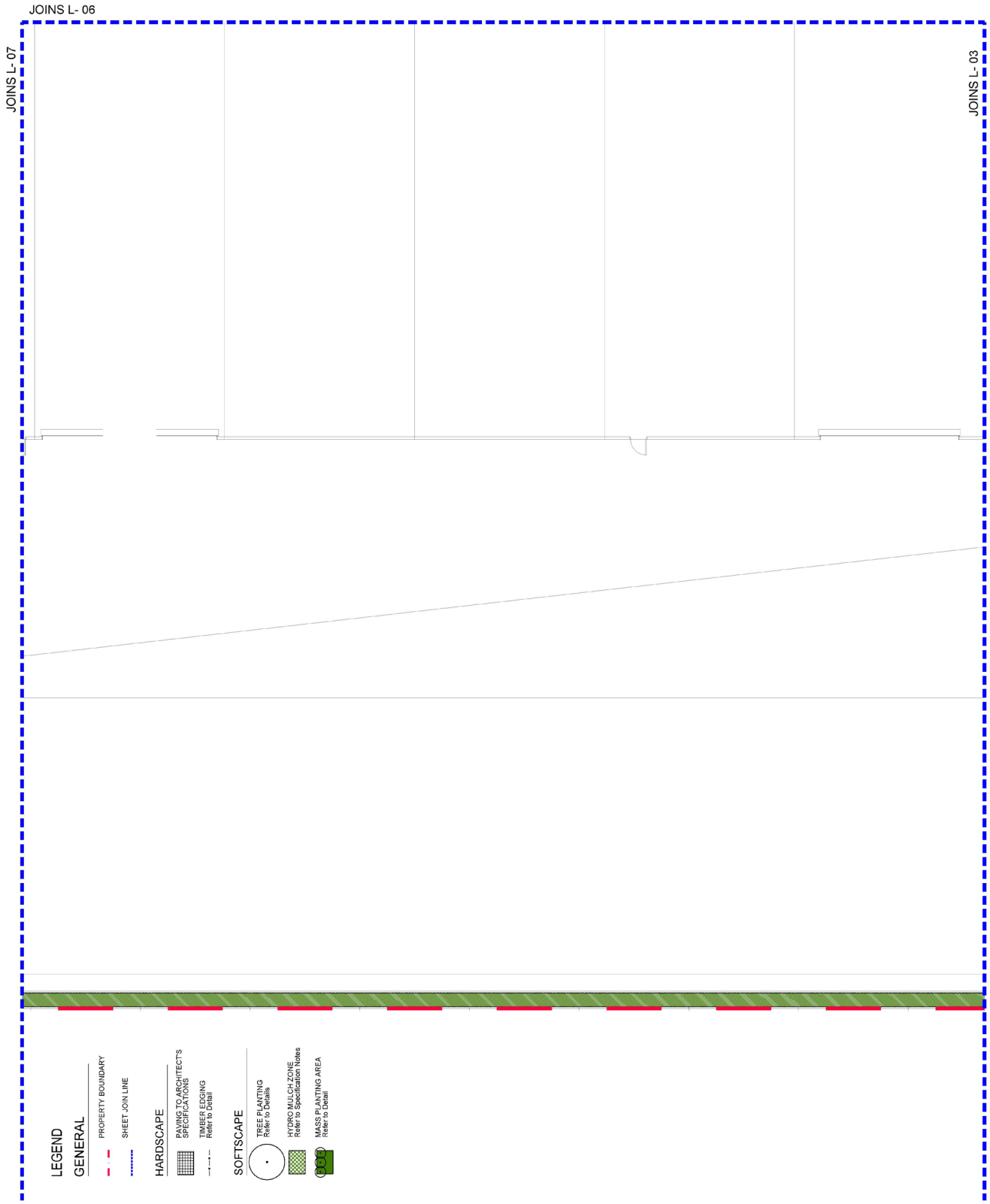
5.4 L-03: LANDSCAPE PLAN 03



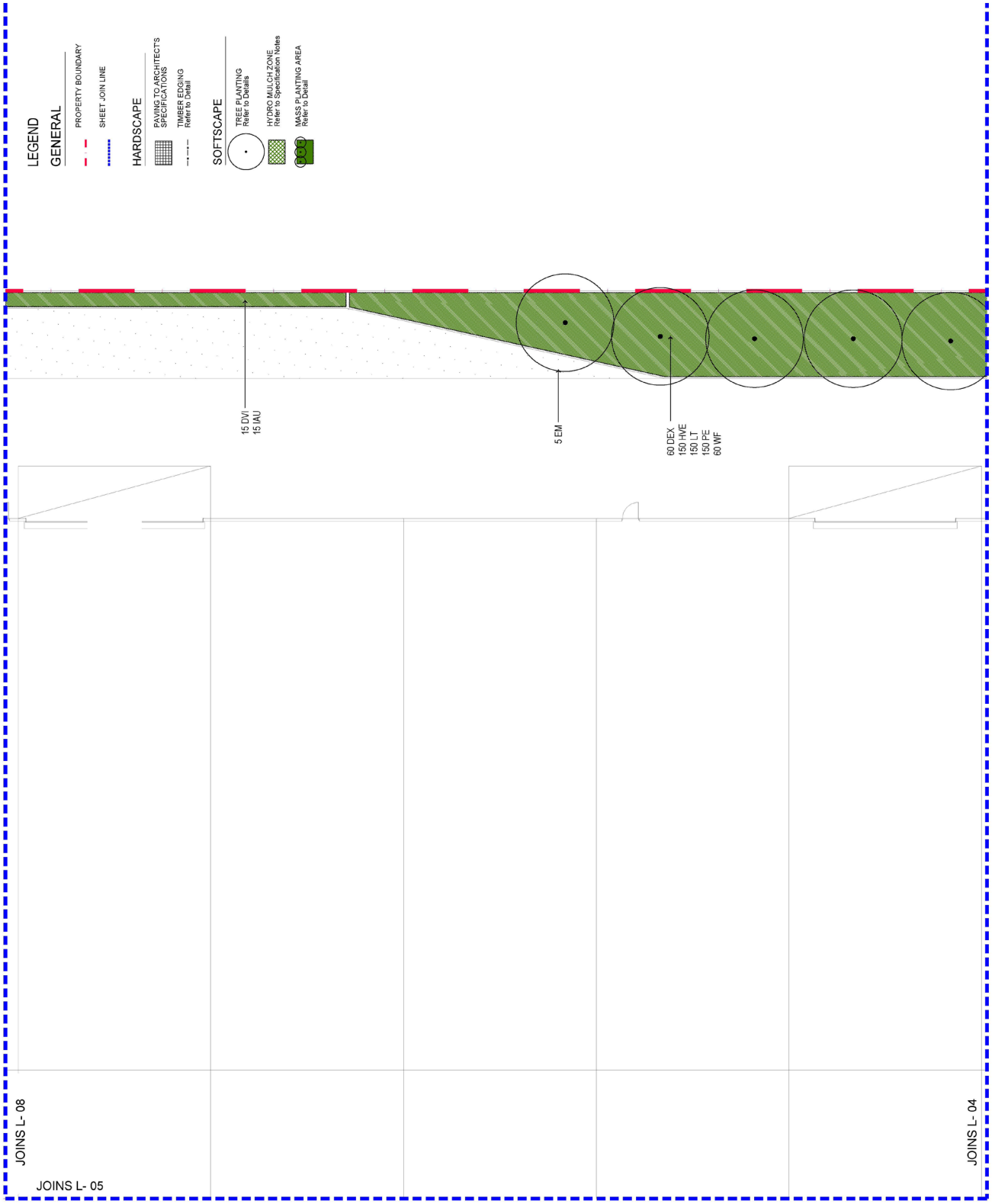
5.5 L-04: LANDSCAPE PLAN 04



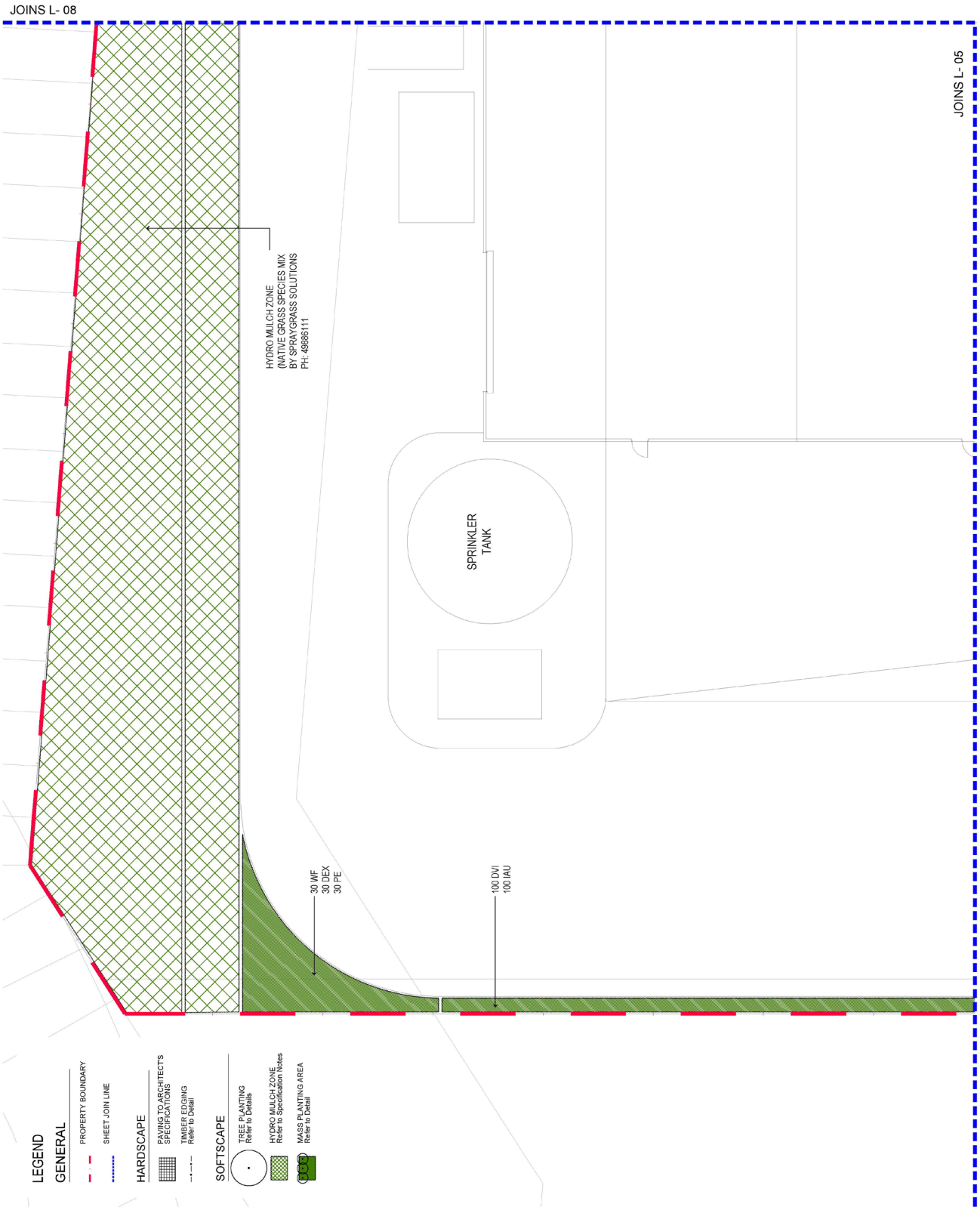
5.6 L-05: LANDSCAPE PLAN 05



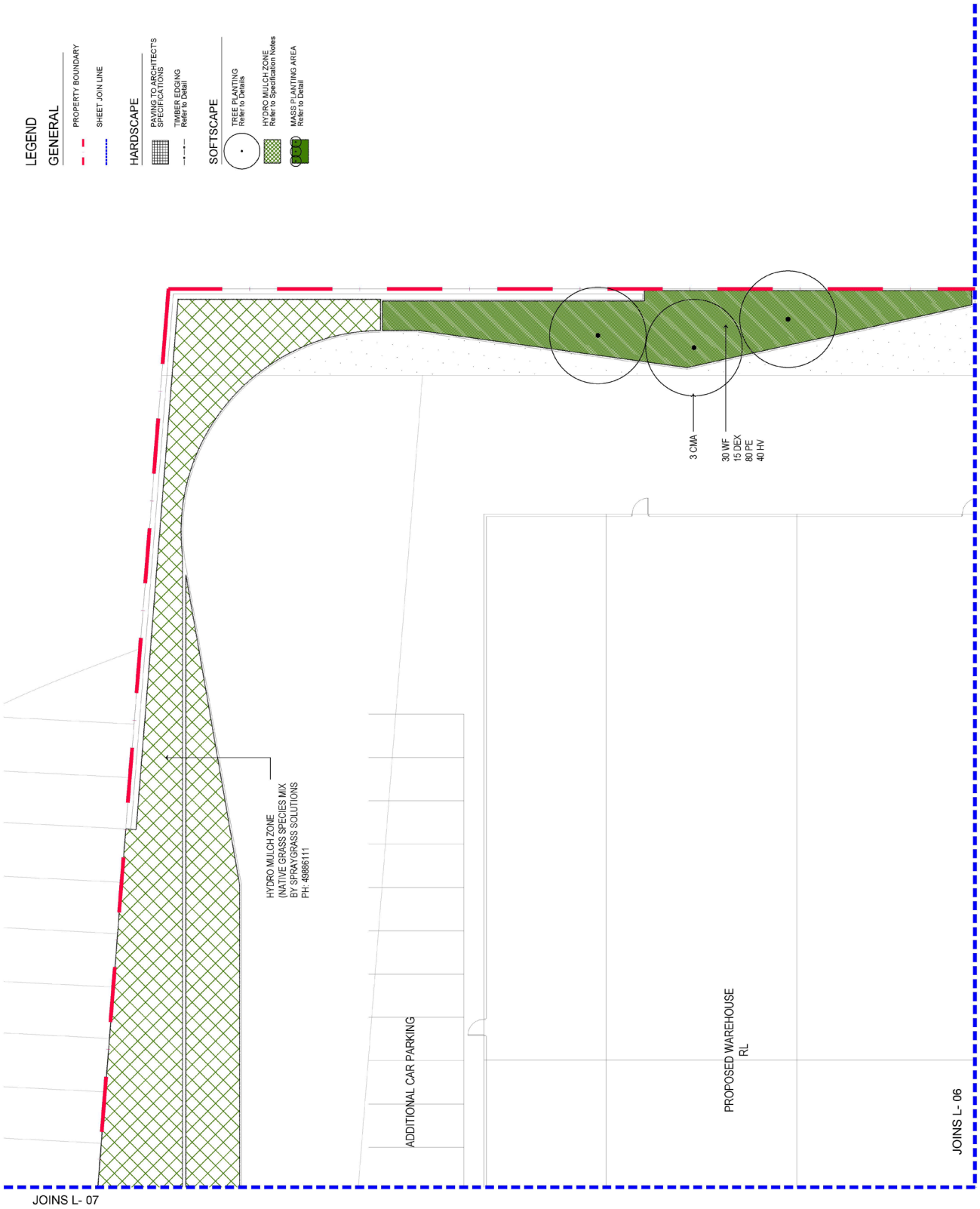
5.7 L-06: LANDSCAPE PLAN 06



5.8 L-07: LANDSCAPE PLAN 07



5.9 L-08: LANDSCAPE PLAN 08



SPECIFICATION NOTES

SERVICES
Before landscape work is commenced the Landscape Contractor is to establish the position of all service lines and ensure tree planting is carried out at least 3 metres away from these services. Service lids, vents and hydrants shall be left exposed and not covered by any landscape finishes (turfing, paving, garden beds etc.) Finish adjoining surfaces flush with pit lids.

PLANTING MIXTURE
Imported Garden Mix.
Type: Premium
Available: Australian Native Landscapes (ANL) - Min. 200mm depth for garden beds.

MULCH
APPLICATION: Place mulch to the required depth, (refer to drawings) clear of plant stems, and rake to an even surface finishing 25mm below adjoining levels. Ensure mulch is watered in and tamped down during installation.
MULCH TYPE:
Type 1 (Mass planting):
Pine bark: From mature trees, graded in size from 15mm to 30mm, free from wood slivers. Dark brown in colour and texture.

COMPOST
Shall be "GO Compost" as available from Soilco or approved equal.

PLANT MATERIAL
All plants supplied are to conform with those species listed in the Plant Schedule on the drawings. Generally plants shall be vigorous, well established, hardened off, of good form consistent with species or variety, not soft or forced, free from disease or insect pests with large healthy root systems and no evidence of having been restricted or damaged. Trees shall have a leading shoot. Immediately reject dried out, damaged or unhealthy plant material before planting. All stock is to be container grown for a minimum of six (6) months
prior to delivery to site.

FERTILISER
MASS PLANTING AREAS: Fertiliser shall be 'Nutricote' or approved equivalent in granule form intended for slow release of plant nutrients over a period of approximately nine months. Thoroughly mix fertiliser with planting mixture at the recommended rate, prior to installing plants.
SUPER ADVANCED TREES: Pellets shall be in the form intended to uniformly release plant food elements for a period of approximately nine months equal to Shirleys Kokei pellets, analysis 6.3:1.8:2.9. Kokei pellets shall be placed at the time of planting to the base of the plant, 50mm minimum from the root ball at a rate of two pellets per 300mm of top growth to a maximum of 8 pellets per tree.

STAKING AND TYING
Stakes shall be straight hardwood, free from knots and twists, pointed at one end and sized according to size
of plants to be staked.
a. 5-15 litre size plant 1x(1200x25x25mm)
b. 35-75 litre size plant 2x(1500x38x38mm)
c. 100-greater than 200litre 3x(1800x50x50mm)
Ties shall be 50mm wide hessian webbing or approved equivalent nailed or stapled to stake. Drive stakes a minimum one third of their length, avoiding damage to the root system, on the windward side of the plant.

LANDSCAPE MAINTENANCE PROGRAM
Maintenance shall mean the care and maintenance of the landscape works by accepted horticultural practice as rectifying any defects that become apparent in the landscape works under normal use. This shall include, but shall not be limited to, watering, mowing, fertilising, re-seeding, returfing, weeding, pest and disease control, staking and tying, replanting, cultivation, pruning, aerating, renovating, top dressing, maintaining the site in a neat and tidy condition as follows:-

GENERAL
The landscape contractor shall maintain the landscape works for the term of the maintenance (or Plant establishment) period to the satisfaction of the council. The landscape contractor shall attend to the site on a weekly basis. Landlord to maintain all landscape areas in perpetuity (life of the development).

WATERING
Grass, trees and garden areas shall be watered regularly so as to ensure continuous healthy growth.

RUBBISH REMOVAL
During the term of the maintenance period the landscape contractor shall remove rubbish that may occur and reoccur throughout the maintenance period. This work shall be carried out regularly so that at weekly intervals the area may be observed in a completely clean and tidy condition.

REPLACEMENTS
The landscape contractor shall replace all plants that are missing, unhealthy or dead at the Landscape Contractor's cost. Replacements shall be of the same size, quality and species as the plant that has failed unless otherwise directed by the Landscape Architect. Replacements shall be made on a continuing basis after the plant has died or is seen to be missing.

STAKES AND TIES
The landscape contractor shall replace or adjust plant stakes, and tree guards as necessary or as directed by the Landscape Architect. Remove stakes and ties at the end of the maintenance period if so directed.

PRUNING
General: Prune to reflect the natural growth flowering and regrowth habit of the individual species. Shrubs: Prune after flowering - Spring and Summer and on a spot basis as required.
Hedge trimming: Schedule trimming at times which will maintain the character and design of hedges. Allow up to three times per season.
Tip pruning: To encourage development of new shoots during the active growing season. Do not remove buds before the flowering season in those plants that have terminal flowers.
Radical pruning: To maintain a hedge or formal shape or when a particular problem, growth habit, damage, or disease requires branch removal.
Trees: Prune to eliminate diseased or damaged growth, avoid inter-branch contact and thin out crowns in a natural manner, maintain sight lines to signs and lights, or maintain visibility for personal security. Tree branch removal to AS 4373. Give notice and engage a suitably qualified 'arborist'.

MULCHED SURFACES
All mulched surfaces shall be maintained in a clean and tidy condition and be reinstated if necessary to ensure that a depth of 75mm is maintained. Ensure mulch is kept clear of plant stems at all times. Remove all mulching materials off lawn or paved areas and maintain a clean and tidy appearance when viewed on a weekly basis.

PEST AND DISEASE CONTROL
The landscape contractor shall spray against insect and fungus infestation with all spraying to be carried out in accordance with the manufacturer's directions. Report all instances of pests and diseases (immediately that they are detected) to the Landscape Architect.

GRASS AND TURF AREAS
The landscape contractor shall maintain all grass and turf areas by watering, weeding, re-seeding, rolling, mowing, trimming or other operations as necessary. Seed and turf species shall be the same as the original specified mixture. Grass and turf areas shall be sprayed with approved selective herbicide against broad leafed weeds as required by the Landscape Architect and in accordance with the manufacturer's directions. Grass and turf areas shall be fertilised once a year in autumn with "Dynamic Lifter" for lawns at a rate of 20kg per 100m2.
Fertiliser shall be watered in immediately after application. Irregularities in the grass and turf shall be watered in immediately after application.
Grass and turf areas shall be kept mown to maintain a healthy and vigorous sward. Mowing height: 30-50mm.

WEED ERADICATION
Eradicate weeds by environmentally acceptable methods using a non-residual glyphosate herbicide (eg. 'Roundup') in any of its registered formulae, at the recommended maximum rate. Regularly remove by hand, weed growth that may occur or recur throughout grassed, planted and mulched areas. Remove weed growth from an area 750mm diameter around the base of trees in grassed areas. Continue eradication throughout the course of the works and during the maintenance period.

SOIL SUBSIDENCE
Any soil subsidence or erosion which may occur after the soil filling and preparation operations shall be made good by the landscape contractor at no cost to the client.

MAINTENANCE PERIOD: 13 Weeks

IRRIGATION NOTES
IRRIGATION OVERVIEW - Confirm with irrigation contractor at tender stage

EXTENT
All mass planting landscape areas and trees are to have full coverage by a fully automatic irrigation system. The design, materials and installation are to be in accordance with Sydney Water Codes and all relevant Australian Standards.

1. An automatic irrigation system is to be installed to all turf and garden bed areas.
2. The irrigation system shall be designed and installed by a licensed contractor to relevant Australian standards and Sydney water guidelines.
3. The irrigation system shall be connected into the rainwater tank system and pump

DRIPLINE
Provide 13mm dripline to all garden bed areas with appropriate 13mm joiners. Dripline to be Toro drip or similar with 400mm centre drippers. Install line at 500mm spacings with the first line to be 150mm in from edge.
Install dripline after planting and prior to mulching to allow for an adequate mulch cover. Anchor at 1.5m maximum intervals with u-shaped stakes. Dripline pattern to suit planting.

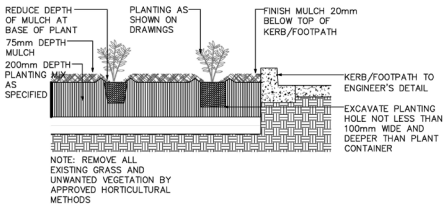
CONTROL VALVES
24v solenoid actuated hydraulic valve with flow control. Control valves to be Toro ezflow series solenoids 25mm or approved equal. Provide a gate valve of the same size immediately upstream of each valve. House both valves in a high impact plastic valve box with a high impact plastic cover at finished ground level. Support the box with bricks on each side.
Controller to be Toro greenkeeper or approved equal with a rain switch.
Install a master valve/pressure regulating valve equal to Toro p220 with exreg pressure regulation valve. Filter to be installed
equal to Toro y filter 75mm screen filter.

CONTROL WIRES
Connect the control valves and soil moisture sensor to the controller with double insulated underground cables laid alongside piping where possible. Lay intertwined for their full length without joints except at the valves and branches off common wires. Provide waterproof connectors.

Provide a backflow prevention device to Sydney water standards AS 3500.

RELEVANT AUSTRALIAN STANDARDS
Soil: AS4419, AS3743, AS4454.
Mulch: AS4454.
Tree Stock: AS2303.
Pruning: AS4373.
Tree Protection: AS4970.
Contractors to comply with the above Australian Standards.

5.4 L-03: SPECIFICATION NOTES & LANDSCAPE DETAILS



01 TYPICAL PLANTING DETAIL
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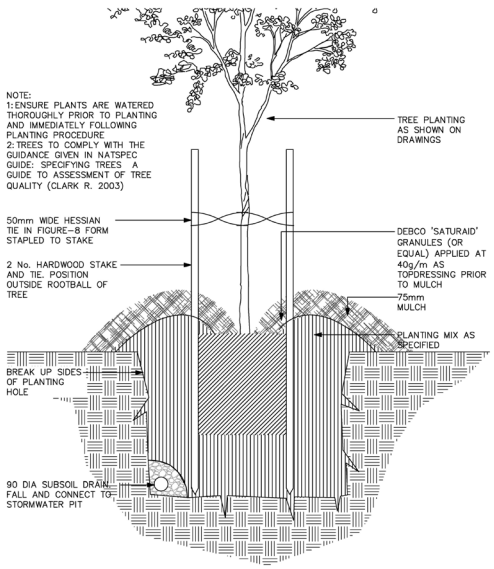

02 TYPICAL TREE DETAIL (75L-100L)
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HYDROMULCH SPECIFICATION NOTES

SITE PREPARATION
Where possible, prior to topsoiling, the areas should be deep ripped. After topsoiling, all areas to be seeded shall be scarified to provide a reasonably firm but friable seed bed, free of weed or plant growth, large stones or other debris, and the whole left ready for hydromulching.

APPLICATION RATES
The required areas shall be treated by the Contractor with the following:
a) Certified Seed - Minimum 56 Kg per hectare. The seed mix will vary according to the season, soil condition and client requirement

b) Fertilizer - 250 kg to 400 kg per hectare. Selection will depend on soil analysis results and client requirement

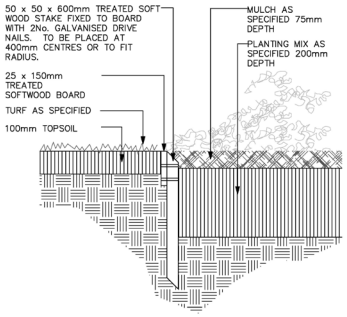
c) Wood Fibre - Defibrated pinus radiata dyed green. 2.5 tonnes per ha.

d) Binder - Anionic Bitumen Emulsion or Polymer Binder. Anionic Bitumen Emulsion 50/50 bitumen water 1,000-2,000 litres per hectare. Polymer binder maximum 250 litres per hectare.
Note: The seed and fertilizer application rates are a representative sample only of the minimum quantities that should be applied per hectare.

OPERATION
Seed, fertilizer, wook-fibre mulch, water and binder (where required) shall be thoroughly mixed together with water to provide a slurry and then applied under pressure on to the area to be treated by means of hydromulching equipment specifically designed for this purpose and by operators trained in the use of this equipment.

AFTER CARE MAINTENANCE
Where possible, adequate water to ensure a continuous vigorous and healthy growth of grass shall be applied regularly. A great deal will depend on natural rainfall, but as a general guide, 25mm of water should be applied to all seeded areas weekly. It is important that the wood fibre mulch be kept moist until germination occurs. After that, sufficient watering must be kept up until a healthy sward of grass is achieved.

Six weeks after germination, sulphate of ammonia should be applied by hand or mechanical spreader and well watered into the grass, or it may be applied in solution. After the grass has reached a height of 20mm to 300mm it shall be done by tractor-drawn equpment and clippings shall not be collected.



03 TIMBER EDGE DETAIL
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