Huon Highway Summerleas Road – Intersection Upgrade

Submission to the Parliamentary Standing Committee on Public Works

Department of State Growth

Tasmania
Explore the possibilities

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1. Introduction

1.1 Background

The Huon Highway is a key intra-regional corridor in Southern Tasmania connecting major industry sectors such as forestry, aquaculture and agriculture to central Hobart and other destinations. It provides the key road link for travel to and from the Huon Valley.

The Huon Highway passes adjacent to Kingston, one of Greater Hobart's fastest growing residential areas. Summerleas Road is a major connection from the Highway linking residential areas to major commercial, educational, sporting and other facilities at Kingston. The intersection has a history of crashes, notably those related to right-turn movements from the Huon Highway onto Summerleas Road and cross-highway traffic on Summerleas Road. The most recent upgrade of the intersection, in 2003, involved alterations to traffic islands, signs and line marking, as well as the installation of informal park-and-ride facilities. The 100 km/h speed limit along the Huon Highway through the intersection was reduced to 80 km/h in 2008. Despite these improvements the crash rate has remained fairly consistent. Forty-eight crashes occurred at the intersection over the period from January 2005 to October 2015.

Throughout the previous decade or more there have been active campaigns to address safety issues at the intersection. In June 2013, the previous Australian Government committed to providing $18 million to upgrade the safety of the Huon Highway/Summerleas Road intersection. The upgrade is intended to reduce the risk of traffic crashes significantly. The grade separation proposed will achieve this and improve traffic efficiency throughout the district which is desirable given the forecast traffic growth for this area.

In November 2015, an Options Analysis was conducted to determine possible alternative solutions for the intersection, including 'at grade' and 'grade separated' solutions. Midson Traffic, a Hobart based traffic engineering consultancy, was also engaged for the analysis to provide feedback on the safety and service levels of each option considered. 'At grade' solutions, including a roundabout, were discounted due to their disruption to traffic flow along the highway, the topography of the site, and safety concerns. Whilst a number of 'grade separated' arrangements were considered, the option which has been progressed to both the Concept Design and Preliminary Design involves;

- **A grade separated interchange** with Summerleas Road passing under the Huon Highway; Summerleas Road will be lowered and realigned approximately 4m below its current level. The Huon Highway will be raised a maximum of 1.8m over a length of 240m, in order to provide adequate clearance over Summerleas Road.
- **A dumbbell roundabout configuration** for traffic travelling along Summerleas Road and vehicles turning onto the Highway
- **An overtaking lane** on the Huon Highway for traffic travelling towards the Huon Valley, beginning immediately after the Kingston interchange. This is to resolve an existing issue whereby slow moving vehicles use the gravel shoulder to allow other vehicles to pass.
- **Flexible safety barrier** within a central median dividing the carriageway
- **Bus, cyclist and pedestrian** facilities

This design was selected because it has minimal impact on property acquisition and property accesses, geometry is relatively easy to navigate, safety for all road users is enhanced and, importantly, an acceptable level of service can be achieved for future traffic growth in the area.

Following completion of the Concept Design in February 2016, public consultation commenced. Generally, the proposed intersection improvements have been well-received by surrounding landowners and the Kingborough community. Further consultation will occur during the Detailed Design Phase and following the Development Application submitted to Kingborough Council in April 2016.

The Preliminary Design Phase is now complete with the final design to be completed by mid 2016. Road works are expected to commence in December 2016 and it is anticipated that works will be completed by April 2018.

1.2 Project Objectives

As residential, industrial and commercial development increases within the Kingborough region, traffic volumes at this intersection will increase and cause a decline in the level of service. This is likely to increase driver frustration and cause risk taking behaviour which could contribute to an increase in the number of crashes. As such, the upgrade of this intersection will:

- Improve safety for all road users and reduce the number of crashes by eliminating cross-highway movements.
- Improve intersection efficiency to cater for growth in the number of passenger and freight vehicles.
- Reduce head-on collisions by providing a flexible safety barrier in a central median
- Install an overtaking lane for slow moving vehicles for southbound traffic on the Huon Highway, immediately north of the Kingston interchange.
- Provide greater connectivity and accessibility for the Kingborough community, including to the commercial centre at Kingston.
- Improve bus, pedestrian and cyclists accessibility within the intersection area.

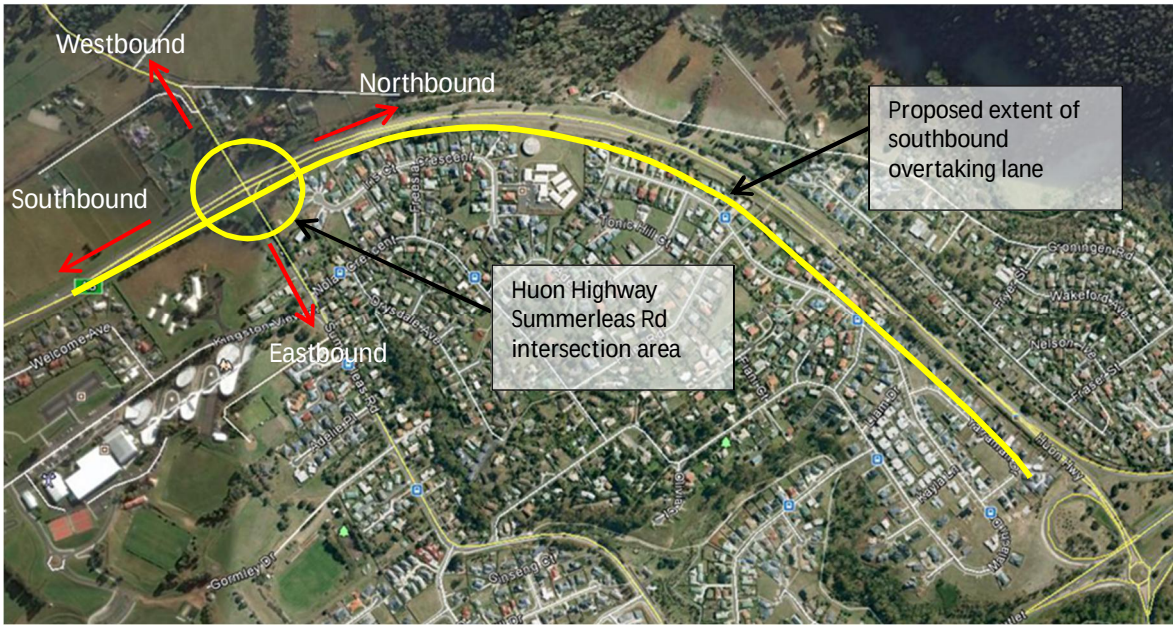
1.3 Project Location

The Project is located approximately 14km south of Hobart at the intersection of the Huon Highway (A0168) and Summerleas Road (Department of State Growth Link 6, Chainage 1.6km (**E** 523,509, **N** 5,242,794).

The overtaking lane for Huonville bound vehicles commences just after the Kingston Interchange (Link 6, Ch. 0.0km, **E** 515,315, **N** 5,396,498) and joins in with the existing overtaking lane south of the intersection (Link 6, Ch. 1.9km, **E** 523,344, **N** 5,242,645). The Project site is designated Huon Highway Summerleas Road and is shown in Figure 1-1.

Figure 1-1 – Project Location Map

Figure 1-2 – Project Components and Definitions



1.4 Strategic Context of the Project

1.4.1 Alignment with Approved Strategies

This project is to be undertaken as part of the State Government *Roads for Our Future* long-term strategy. Under the *Roads for Our Future* Program, a total of $21.9 million has been committed by the Australian and Tasmanian Governments to upgrade the intersection of Summerleas Road with the Huon Highway to improve safety, support population, traffic and freight growth, and improve traffic flow efficiency.

1.4.2 Alignment with Planning Policies and Themes

The *Southern Integrated Transport Plan 2010*, a collaborative initiative of the Tasmanian Government, the Southern Tasmanian Councils Authority and twelve member councils, identifies one of its infrastructure strategies as being to "improve the safety and consistency of key regional roads including the Huon Highway". The upgrade is located within the Kingborough municipality and is subject to the requirements of the *Kingborough Interim Planning Scheme 2015* (KIPS 2015).

2. Project Details

2.1 Proposed Works

Under the *Roads for Our Future* program, the primary scope of the project is to improve the safety for all road users at the intersection of the Huon Highway (A0168) and Summerleas Road, along with improved efficiency for southbound traffic. This includes:

- Grade separation of the intersection to eliminate cross-highway movements and prevent lengthy queue delays.

- Widening of the existing highway to accommodate an overtaking lane for southbound traffic travelling on the Huon Highway from the Kingston interchange (Link 6, Ch. 0.0km), joining in with the existing southbound overtaking lane south of the intersection (Link, Ch. 1.9km).
- Installation of a flexible safety barrier within a central median to eliminate head-on collisions.
- Provision of pedestrian and cycling facilities within the intersection area.
- Reinstatement of existing accesses and/or provision of service roads, where required.

The existing bus stops and the informal gravel parking facilities in the vicinity of the intersection were considered as part of the design process. These have both been moved away from the intersection primarily for safety reasons.

Other features within this Project's scope include pavement widening and rehabilitation, smooth tie-ins with existing property accesses, upgrades to roadside drainage, relocation of Kingborough Council stormwater assets, removal of a White Gum tree north of the intersection, installation of street-lighting, relocation of TasNetworks power poles and underground cables, relocation of Telstra communication cables, partial relocation of TasWater sewer and water mains, and architectural landscaping of the intersection area.

The proposed works are shown on the drawings included as Appendix A.

2.2 Design Speed

The Huon Highway meets the requirements for a 100 km/h design speed within the project site. However in 2008, the posted speed through the intersection area was reduced from 100 km/h to 80 km/h in an effort to reduce the crash rate at the intersection. The highway is currently posted at 80 km/h, from just south of the Summerleas Road intersection through to the Kingston interchange. Within the project site the design speed for the Huon Highway is 100km/hr, with the entry and exit ramps designed for 80km/hr. As part of this design philosophy, the location of the existing southbound 100 km/h speed sign is to be relocated to the southernmost limit of works. This sign will now be located opposite the 80 km/h speed sign for northbound traffic.

The highway will remain signposted at 80km/h for the foreseeable future. This is recommended to ensure noise impacts on surrounding properties are minimised and so that vehicles reduce their speed as they approach the Kingston interchange and the entry ramp to the Southern Outlet.

The design speed adopted for Summerleas Road is 60km/h, which is signposted at 50km/h.

2.3 Road Cross Section

2.3.1. Huon Highway

The adopted cross section for the Huon Highway consists of one lane northbound towards Hobart and two lanes southbound towards Huonville. This will connect to the proposed overtaking lane from the Kingston interchange to the current overtaking lane south of the Summerleas Road intersection.

The geometry of the proposed cross section is:

- 3.5m traffic lanes
- 2.1m centre median
- 1.0m sealed shoulders
- Verge widths:
  - 0.5m unsealed
  - 1.0m unsealed with barrier

- 0m where kerbed

This is a departure from the Department of State Growth Technical Specification T3 “Roads Design Standards” for a Road Category 2 Freight Road with an AADT >5,000 vpd, Section Reference A1, which requires 2.0m wide sealed shoulders. The narrower geometry as adopted by the design has been at the direction of the Department of State Growth.

2.3.2. Interchange Ramps

The adopted cross section for interchange entry and exit ramps conforms to the A1 Section Reference and includes:

- 4.0m traffic lanes
- 1.0m sealed shoulder (left)
- 0.5m sealed shoulder (right)

2.3.3. Summerleas Road

The adopted cross section for Summerleas Road includes:

- 3.0m traffic lanes
- 1.2m sealed shoulders

2.3.4. Footpaths and Shared Paths

The adopted cross section for footpaths adjacent to Summerleas Road is:

- 1.5m wide

The adopted cross section for the shared path adjacent to road pavements that carries foot traffic and cyclists through the interchange area is:

- 2.5m wide

2.4 Drainage

Open drains have been specified where required as per the Department of State Growth Roadworks Specification – R31 ‘Open Drains and Channels’ to account for both existing conditions and also the changes to the roadside environment.

Due to the widening of the highway and grade separation of the intersection, a number of culverts are proposed to be abandoned, installed or extended in the Preliminary Design. Culverts at property accesses have also been specified for replacement in some instances where the existing access is being upgraded. Traverse culverts north of the intersection were found to be of sufficient hydraulic capacity to cope with peak flows generated from road and roadside runoff for a 1 in 50 year flood event. Culverts have been designed in accordance with Department of State Growth Roadwork’s Specification R32.

Flooding or ponding issues along the section of highway have been reported by adjacent landowners on the north-western corner of the intersection, and by another landowner further north of the intersection. Diverting the majority of the flow away from these properties is a key component of the basis of the drainage design in this area.

Kerb and channel has been incorporated into the design in a number of locations to capture and convey road surface run off, reduce the cost of earthworks and to minimise land acquisition. Barrier kerb and channel has been proposed along sections of the entry and exit ramps, as well as along

the edges of Summerleas Road. Mountable kerb and channel is to be installed around the circumference of the dumbbell roundabout and traffic islands.

Side entry pits have been incorporated into the kerb and channel in locations which will be confirmed through further hydraulic analysis as part of the Detail Design phase.

Subsoil drains are anticipated to be required at a number of locations within the project and will generally be required where flow paths are able to travel through the pavement material. This will include areas where cut batters are present on both sides of the road. The geotechnical report indicates the potential for a relatively high water table in the vicinity of the intersection. This will be further explored in the Detail Design stage, however 500m of drain (maximum 750mm deep) has been allowed for in the cost estimate which is consistent for a project of this size and hence should be adequate.

2.5 Utilities

2.5.1 Overhead Power

TasNetworks overhead power lines, power poles, underground cables and streetlights are located within the project site, predominately in the intersection area. The current design indicates that approximately six power poles require relocation to accommodate the new geometry. The design also includes 22 streetlights which are to be installed around the dumbbell roundabout and entry and exit ramps. These lights will be powered by an underground cable network. Power relocation works will be finalised as part of TasNetworks' design.

2.5.2 Telecommunications Cables

Telstra underground cables are located within the intersection area, primarily on the eastern side of the intersection. There are also cables crossing the highway which will require relocation in some areas. Based on 'Dial Before You Dig' plans and initial service locations carried out on site, approximately 675m of copper cable and 165m of optic fibre will require reinstatement during construction.

2.5.3 Sewer, and Water and Irrigation

There are a number of TasWater assets within the project site, including six water main road crossings and one gravity sewer main highway crossing. There are also a number of locations where water / sewer mains run adjacent to Summerleas Road / Huon Highway.

Relocation and regrading of a number of these assets will be confirmed during Detailed Design in consultation with TasWater.

3. Social, Environmental Impacts and Stakeholder Engagement

3.1 Property Acquisition

Design of the intersection upgrades has been limited to the existing road reserve where possible, however acquisition will still be required from some properties. Some properties not impacted by acquisition will also require realignment or reconstruction of their access. Individual meetings were held with landowners affected by land acquisition or changes to their access.

Acquisition is limited to properties on the southern side of the intersection. A summary of the properties impacted by land acquisition and approximate areas is provided in Table 3-1. Where acquisition is required, the new property boundary is currently four metres from the limit of earthworks. This may be able to be reduced to three metres during the Detailed Design, which we understand is State Growth's requirement to allow access for maintenance vehicles. Preliminary drainage design indicates three meters is sufficient for the size of the drain. Thus, the acquisition volumes listed in Table 3-1 may be able to be reduced in the order of 25%.

Preliminary results from the Geotechnical Design Report indicate that cut batters of 1:1.5 is a realistic, though slightly conservative, batter angle. The interpretation of the final report may allow a steeper batter angle to be incorporated in the Detailed Design, reducing the areas of acquisition. A comparison of the probable savings in acquisition between a 1:1 and 1:1.5 batter angle has not been undertaken as the batter angles may vary around the site, depending on the geotechnical conditions in that specific locality. The opportunity to steepen the batters will be explored further as the design moves to the Detail Design stage.

Table 3-1 Land acquisition

Property ID	Title Reference	Approximate acquisition required (m^2)
1685427	122515/1	1,120
1685443	122515/3	1,907
1685451	122515/4	1,890
1685478	122515/5	1,263
1868813	121547/1	2,025

3.2 Noise

The eligibility of this project for noise mitigation has been assessed against the relevant criteria contained in Tables A and D in Part B of the Tasmanian State Road Traffic Noise Management Guidelines, Revision 1, October 2015. The results of this assessment are detailed below.

Table 3-2: Tasmanian State Road Traffic Noise Management Guidelines (Table A)

Scenario	Description	Noise mitigation consideration
Safety upgrades	Works related to improving road safety. Examples include: installation of crash barriers and fences; seal replacement for skid prevention; road shoulder sealing; widening to create turning lanes; installation of speed controls; signage; signals; removal of vegetation.	No mitigation will be considered.
Reconfiguration	The reconfiguration of lanes or traffic controls within the existing carriageway width. Examples include: the creation of a bus lane; the construction of traffic islands; the rearrangement of safety barriers; a change in lane width, road shoulder sealing.	No mitigation will be considered.
Roundabout construction	Replacing a junction with a roundabout.	No mitigation will be considered.
Junction upgrade	An upgrade of a junction, other than signalization or roundabout construction	No mitigation will be considered.
Natural traffic growth	Traffic volumes naturally increase as population increases. Growth rates vary depending on the location and type of road but are typically in the order of 1 to 3 %.	Mitigation will not be considered unless the immediate LA10(18 hour) exceeds 68 dB(A) and then it will be considered on a State wide prioritisation basis.

Scenario	Description	Noise mitigation consideration
Lane addition or realignment within existing road corridor	Road widening by lane addition or road realignment within an established road corridor.	No mitigation will be considered if the lane addition or realignment is simply to improve safety or traffic flow. If the lane addition or realignment is to facilitate a material (>10%) increase in traffic volume, mitigation will be considered.

Table 3-3: Tasmanian State Road Traffic Noise Management Guidelines (Table D)

Description	Comment
Permanent increase in the maximum speed limit to more than 20 km/hr above the existing limit.	The current speed limit will remain and will reduce south of the intersection as the 80km/hr speed limit sign is moved further south.
Change to a noisier seal type that takes 10-year future traffic noise above LA10(18 hour) 68 dB(A).	Carriageway will receive a new spray seal and asphalt over a re-graded pavement which will be quieter than the current seal type.
Natural traffic growth that takes 10-year future traffic noise above LA10 (18 hour) 68 dB(A).	Natural traffic growth will occur irrespective of whether the project proceeds and any increase over 68dB (if any) needs to weighed up against “a State wide prioritisation basis” as per Table A.
A permanent material (>10%) increase in the volume of traffic as a result of a Departmental decision that takes 10-year future traffic noise above LA10(18 hour) 68 dB(A).	Not applicable.
A permanent increase in the proportion of heavy vehicles as a result of a Departmental decision that takes 10-year	Not applicable.

Description	Comment
future night time traffic noise from heavy vehicles (considered alone) on a category 1, 2 or 3 road above LAeq(8 hour) 45 dB(A).	
Lane addition or road realignment within an established road corridor to facilitate a material (>10%) increase in traffic volume (not simply safety or traffic flow improvements).	The addition of the overtaking lane is not forecast to facilitate a material increase in traffic volume.

Based on the above assessment the project is deemed not eligible for noise mitigation.

3.3 Flora and Fauna Issues

Within the project site, white gum trees (Eucalyptus viminalis) provide potential habitat for the eastern barred bandicoot (Perameles gunnii), forty-spotted pardalote (Pardalotus quadragintus) and swift parrot (Lathamus discolor). There are also a number of black gum trees (Eucalyptus ovata) within the project area which are potential habitat for the swift parrot. At this stage, only one white gum tree is expected to be impacted by the design, with the design aiming to minimise environmental impact where possible. This is unlikely to constitute a “significant impact” under the Department of the Environment’s Significant Impact Guidelines for EPBCA referral.

Based on a review of findings from the flora and fauna investigation undertaken by ECOTas, no threatened flora was identified within the project footprint.

The white gum tree (Eucalyptus Viminalis) within the project site is listed on the Kingborough Council’s Significant Tree Register. This tree is located on the Huon Highway, approximately 400m north of the Summerleas Road intersection. Preliminary Design drawings indicate that impacts to this tree cannot be avoided given its close proximity to the widened highway. As the proximity of the highway to the tree may impact its long-term survival and due to the improved safety outcomes that would result from removal of the tree, it is likely that its removal would be approved in accordance with the criteria identified in the Significant Trees Code (Code E24.0) of the Kingborough Interim Planning Scheme 2015. Approval for the tree removal will be granted as part of the Development Application, and once works are confirmed to proceed, Kingborough Council will initiate the process to remove the tree from the register and amend the Planning Scheme.

Twelve species, classified as declared weeds within the Tasmanian Weed Management Act 1999 were located within the project area. Several species of environmental weeds within the Kingborough Planning Scheme 2000 were also detected. A project-level weed and hygiene management plan is to be developed in order to manage vegetation debris and topsoil into and out of the project site.

3.4 Aboriginal Heritage

Aboriginal Heritage Tasmania (AHT) has reviewed the Aboriginal Heritage Register (AHR) in the context of the updated Preliminary Design footprint provided by Jacobs to the Department of State Growth in February 2016 and advised there is a low probability of Aboriginal heritage being present,

particularly as the intersection area is highly disturbed. AHT did not require further assessment.

3.5 Historic Heritage

There are no registered sites in close proximity to the Huon Highway Summerleas Road intersection, as described in the Department of State Growth's Concept Design Report (2012). Based on a review of historical aerial imagery, a small number of structures, likely to be farm buildings, were located adjacent to the intersection and have likely been demolished for construction of the new highway.

One site located off the Huon Highway, approximately 650m south-west of the Summerleas Road intersection, is listed on the Tasmanian Heritage Register. The site, known as 'Wharncliffe and Wharncliffe Cottage' is located at 219-221 Summerleas Rd. Since the site is not directly adjacent to the intersection or highway, impacts such as land acquisition, noise and vibration are not expected to be a significant issue as part of proposed intersection upgrades.

3.6 Landscape and Visual Impacts

3.6.1. Landscaping

Due to the nature of the proposed intersection arrangement, many components of the interchange will require careful consideration with regards to landscaping requirements. The suburban setting, use by pedestrians and ongoing maintenance all need to be considered.

Elements that require landscaping design include:

- Central islands of roundabouts
- 'Splitter' islands at roundabouts
- Areas between the main alignments and the interchange ramps
- Area between the shared path and the back of the kerb
- Bridge abutments

A low mound, approximately 0.5m high, with stamped concrete around the outside and synthetic turf in the middle is proposed for the central islands of the roundabouts, similar to the example shown in Figure 3-1. The splitter islands at the roundabouts will be stamped concrete.

Figure 3-1 Example roundabout landscaping

The areas between the main alignment and the interchange ramps will be grassed. The area between the shared path and the back of the kerb will be stamped concrete.

The surface finish on the bridge abutments will be plain concrete however this may be amended during the Detailed Design and may include an exposed aggregate or rendered finish.

3.6.1. Visual Impacts

The Huon Highway has been raised approximately 1.8m at the location of the underpass. The section of the highway affected by the vertical realignment is limited to approximately 120m either side of the underpass. A survey of the visual impact was carried out to confirm the skyline views or ocean views had not been affected.

3.7 Stakeholder Engagement

Extensive public and stakeholder consultation has been undertaken as part of the development phase. A presentation to Kingborough Council councilors and management was undertaken on 11 February 2016. This was followed up with another presentation to the Kingborough Council user groups, namely the Kingborough Council Road Safety Committee and the Kingborough Bicycle Advisory Committee on 17 February 2016. The Kingborough Access Advisory Committee was invited however declined to attend. A presentation was made to the RACT on 18 February 2016. Feedback across all of the above groups was positive and supportive of the proposed design.

An introductory letter was sent to landowners in the vicinity of the works, introducing the project and inviting them to a public display. Individual meetings were also held with landowners directly impacted by the works.

A public display was held on Saturday 5 March 2016, allowing the public to view and comment on the Concept Design. Staff from the Consultant and State Growth attended to discuss the design and answer questions. Following this public display, the Concept Design was displayed at Kingborough Council and Huon Valley Council for two weeks. Feedback forms were provided at each display to invite comment on the design.

Following the Preliminary Design and Detailed Design Phases, further discussions with landowners directly affected by the works will be held to ensure that their needs are accommodated in the final design, where possible. Information regarding the project will continue to be developed and maintained on the project website.

The key stakeholder groups for the upgrade of the intersection of the Huon Highway and Summerleas Road are:

- Landowners
- Southern Lights Hotel
- Kingborough Sports Centre
- Kingston High School
- Kingborough Cemetery
- RACT
- Department of State Growth
- Department of Primary Industries, Parks, Water and Environment
- Australian Government
- Kingborough Council
- Public utilities

    - TasNetworks
    - Telstra
    - TasWater
- Heavy vehicle Industry
- TasBus
- Passenger Transport operators
- School bus operators

3.7.1 Stakeholder Response

To date, the majority of feedback relating to the design has been positive, with most stakeholders concerned about the safety issues of the current intersection. Many commented that they avoid the intersection if possible and the upgrade 'cannot happen soon enough'. The table below summarises stakeholder feedback to date;

Aspects stakeholders liked about the design:	Concerns raised by stakeholders:
• Much safer design • Reduced delays and queuing • Inclusion of pedestrian and cyclist facilities • Provision of southbound overtaking lane on the Huon Highway • Safer bus stop locations • Minimised visual and noise impact by lowering Summerleas Road • Roundabouts on Summerleas Road providing efficient traffic flows • Removal of the informal gravel car parking	• Noise / visual impacts (increased noise / potential loss of views) • Impact of lighting on surrounding properties • Noise, dust and disruptions during construction • Safety of motorcyclists with the flexible safety barrier • Loss of informal car parking on the highway • Greater walking distance for pedestrians to new bus stops • Overtaking lane not provided for northbound traffic • Impact on property accesses • Impact of construction on foundations of directly adjacent properties • Impact on property values • Speed limit remaining at 80km/h

Where possible, concerns raised by stakeholders have been incorporated into aspects of the Preliminary Design.

Further details of the stakeholder engagement undertaken are provided in the Stakeholder Engagement Report attached as Appendix B.

3.8 Development Approvals

The project is located within the Kingborough municipality and will be subject to the provisions in the *Kingborough Interim Planning Scheme 2015*. The project area falls within the Utilities Zone (existing road reserves of the Huon Highway and eastern leg of Summerleas Road) and the Rural Living Zone (western leg of Summerleas Road). A Development Application has been submitted to

Kingborough Council as the works will not meet the exemption for minor upgrade of road infrastructure.

The project is a discretionary use/development under the provision of the Planning Scheme. As part of the discretionary planning application, all affected landowners will be notified of the development. A 14 day public display period will be advertised and facilitated by Kingborough Council as part of the Development Application.

4. Project Program and Costs

4.1 Project Program

The critical path for the Project is based on the delivery of Detailed Design and tender documentation in August 2016. Meeting these critical dates will ensure that construction works can begin in the 2016 / 2017 summer construction season. The key dates for the Project are shown in Table 4-1.

Table 4-1 Critical Project Tasks and Timing

Project Task	Completion Date / Timing	Critical Path?
Submission of Project Proposal Report Development and Delivery Phase for Australian Government approval	April 2016	**Yes**
Development application submission	April 2016	**Yes**
Parliamentary Standing Committee on Public Works submission	May 2016	**Yes**
Advertisement of tender	August 2016	**Yes**
Commencement of works	December 2016	**Yes**
Practical completion of works	April 2018	**Yes**
Project close out	April 2019	**No**

The key assumptions of the project schedule developed for the Huon Highway Summerleas Road intersection improvements include:

- The PPR for the Development and Delivery Phase is submitted in April 2016 and approved by the Department of State Growth and the Australian Government allowing the project documentation to advance to development and delivery
- The Development Application is accepted by the Kingborough Council without any major representations or onerous conditions imposed.
- No environmental or heritage delays impact the Project.

4.2 Costs

The total project outturn cost for the proposed upgrade at the intersection of Summerleas Road and the Huon Highway is $19.3 million for the P50 case and $21.2 million for the P90 case, based on the Evans and Peck “Best Practice Cost Estimation for Publicly Funded Projects”.

The base estimate cash flow for each year has been calculated by assessing the likely activities that will be undertaken in each year and summing the cost of these activities to determine the total expenditure. Where activities are expected to extend over more than one year the costs have been distributed based on the percentage of the overall activity cost that is expected to be carried out in a particular year.

The total outturn cost for the project has been calculated by applying cost escalations to the Development and Delivery Phase costs (i.e. multiplying the cash flow for each year by the expected percentage increase in cost). A compound growth rate of 3.5% has been applied to the anticipated cash flow for activities beyond the 2015 / 2016 financial year. The cost estimates are summarised in Table 4-2 and Table 4.3.

Jacobs has exercised reasonable skill, care and diligence in the preparation of the project cost estimate. Rates have been based on previous tender rates and experience. Quantities have been derived from the designs and are subject to change as the design is refined within the Detailed Design phases. Costs are subject to change as the design is refined within the Detailed Design phases. Costs are subject to revision with further investigation and design review and development.

Table 4-2: P50 / P90 Cost Estimate Summary

Base Estimate (Owners Cost + Construction Cost)	$	16,403,038.93
	P50	**P90**
Inherent risk allowance	$ 1,340,713	$ 2,354,787
Contingent risk allowance	$ 645,086	$ 1,461,297
Base Estimate + Contingency (Inherent + Contingent)	**$ 18,388,837**	**$ 20,219,123**
Total contingency % above base estimate + Escalation	12%	23%
Escalation (Nominal - applied to base case + contingency)	**$ 856,350**	**$ 946,931**
Total Out turn	**$ 19,250,000**	**$ 21,170,000**

	P50	P90
Total Out turn Cost	**$ 19,250,000**	**$ 21,170,000**

Table 4-3: P50 / P90 Cost Estimate Summary

Overall Cash Flow

	Financial Year			
P50 Cash Flow	2015 / 2016	2016 / 2017	2017 / 2018	2018 / 2019
Milestone 1: Preliminary Design	$ -	$ -	$ -	$ -
Milestone 2: Detailed Design	$ 1,137,420	$ -	$ -	$ -
Milestone 3: Tender Award and Early Works	$ -	$ 2,910,827	$ -	$ -
Milestine 4-5:Project Delivery (incll. CA)	$ -	$ 6,177,396	$ 6,177,396	$ -
Inherent Risk	$ -	$ 804,428	$ 536,285	$ -
Contingent Risk	$ -	$ 387,052	$ 258,034	$ -
Escalation costs (nominal)	$ -	$ 359,790	$ 496,560	$ -
Sub-Total (annual)	$ 1,137,420	$ 10,639,492	$ 7,468,276	$ -
Accumulative Total	$ 1,137,420	$ 11,776,912	$ 19,245,187	$ 19,245,187

	Financial Year			
P90 Cash Flow	2015 / 2016	2016 / 2017	2017 / 2018	2018 / 2019
Milestone 1: Preliminary Design	$ -	$ -	$ -	$ -
Milestone 2: Detailed Design	$ 1,137,420.00	$ -	$ -	$ -
Milestone 3: Tender Award and Early Works	$ -	$ 2,910,827.48	$ -	$ -
Milestine 4-5:Project Delivery (incll. CA)	$ -	$ 6,177,395.73	$ 6,177,395.73	$ -
Inherent Risk	$ -	$ 1,412,872.46	$ 941,914.97	$ -
Contingent Risk	$ -	$ 876,777.96	$ 584,518.64	$ -
Escalation costs (nominal)	$ -	$ 398,225.58	$ 548,705.24	$ -
Sub-Total (annual)	$ 1,137,420	$ 11,776,099	$ 8,252,535	$ -
Accumulative Total	$ 1,137,420	$ 12,913,519	$ 21,166,054	$ 21,166,054

4.3 Risk Assessment

The Department of State Growth has established a Risk Assessment process which has been set up to support delivery of this project. The risk assessment includes impact, risk rating, mitigation strategies and revised risk rating, throughout the Planning, Scoping and Delivery Phases of the project. The rating system for the risk assessment is defined in Table 4. The risk assessment has been continually updated throughout the project lifecycle as appropriate.

Table 4-4 – Risk Ratings

Risk Rating	Risk Action Levels
VH - Very High	▪ Minister/Secretary decision/direction may be required ▪ Provide memorandum to Manager Project Services ▪ Include in Project Monthly Report
H – High	▪ Take immediate action to further control the risk ▪ Include in Project Monthly Report ▪ Consider providing supplementary advice to Manager Project Services
M – Medium	▪ Proactively manage risks ▪ Report to Project Steering Committee through risk register ▪ Review for improvement opportunities
L – Low	▪ Monitor risk, reduce if practicable

A summary of key themes relevant to the project risks discussed in Table 4-5 include:

- Tight project timeframes
- Cost increases
- Stakeholder opposition / landowner negotiations
- Approvals and permit conditions
- Construction issues

Table 4-5 details the impacts and proposed mitigation strategies for each of the key risks identified to enable successful delivery of the Project.

Table 4-5 – Major Project Risks and Proposed Mitigation Strategies

Risk Event	Potential Impact of Risk	Risk Mitigation Strategy
The limited Time available to complete the Project Design Development & Tender Documentation affects the quality, cost and Practical Completion of the project.	Construction delayed until 2017 / 2018 seasons.	The revised project program has identified critical path and dates for key milestones. The consultant and State Growth will work to the tight timeframes to achieve deadlines. Any deviations from the program shall be identified to the PM.

Risk Event	Potential Impact of Risk	Risk Mitigation Strategy
Planning Permit has a number of unexpected conditions.	Design rework may be required, resulting in construction delays and/or additional costs.	Regular engagement with the Council is required, and unexpected Planning Permit conditions shall be allowed for within the cost estimate contingencies.
There is an appeal against the Council's decision to issue a Planning Permit / Stakeholder opposition.	Construction delayed until appeals are resolved.	Engagement with the landowners / stakeholders to continue in the Project Development Phase to address particular issues of concern and possible design solutions. Concept and Preliminary designs have been developed to minimise acquisition where possible and incorporate feedback from the landowners. A Stakeholder Engagement Plan has been developed and actioned. Jacobs have met all affected landowners.
Discovery of unlisted site/object with heritage values.	Construction program delayed and variations for re-design required.	Allow for heritage site / object discovery within cost estimate contingencies.
Unforeseen ground condition or latent condition.	Construction program delayed and variations for re-design required.	Detailed geotechnical investigations have been undertaken to determine site conditions as accurately as possible. Tender documents to allow for rock excavation and unsuitable material provisional quantities. Construction timeframes and cost estimate contingencies to include inclement weather allowances.

5. Conclusion

The Huon Highway is a key intra-regional corridor in Southern Tasmania connecting major industry sectors such as forestry, aquaculture and agriculture to central Hobart and other destinations. It provides the key road link for passengers to and from the Huon Valley.

At the intersection with Summerleas Road, the Highway passes adjacent to Kingston, one of Greater Hobart's highest growth residential areas. Summerleas Road is a major connection from and across the Highway linking residential areas to major commercial, educational and other facilities at Kingston.

The intersection has a history of crashes, notably those related to right-turn movements from Huon Highway to Summerleas Road and cross-highway traffic on Summerleas Road.

The Huon Highway Summerleas Road Intersection Upgrade aligns with the strategies outlined in the *Southern Integrated Transport Plan 2010*; a collaborative initiative of the Tasmanian Government, the Southern Tasmanian Councils Authority, and twelve member councils. The upgrade supports the objectives of the *Roads for Our Future* program; to deliver safer and more efficient roads for Tasmanians by;

- Improving safety for all road users and reducing the number of crashes.
- Improving intersection efficiency to cater for passenger and freight growth.
- Reducing the risk of head-on collisions through provision of a central flexible safety barrier.
- Providing greater connectivity and accessibility for the Kingborough community, including to the commercial centre at Kingston.

It is recommended the project be approved.

Appendix A: Drawings

HUON HIGHWAY (A0168)

SUMMERLEAS ROAD INTERSECTION UPGRADE

COVER SHEET

CONTRACT No. TBC

PRELIMINARY DESIGN

JACOBS

ABN 37 001 024 095 and ACN 001 024 095
Jacobs Group (Australia) Pty Ltd
Ground Floor, 100 Melville Street
HOBART, TAS 7000
AUSTRALIA

Tel: +61 3 6221 3711
Fax: +61 3 6224 2325
Web: www.jacobsklm.com

SETOUT REVIEW NAME P. DIGNEY SIGNED DATE	DESIGNED NAME B. ANNAKIN / M. YOSHIDA SIGNED DATE	THESE DRAWINGS HAVE BEEN CHECKED, TAKEN TO SITE AND VERIFIED THAT THEY ARE APPROPRIATE FOR SITE CONDITIONS AND CONSTRAINTS. THE DRAWINGS ARE RECOMMENDED FOR ACCEPTANCE. DESIGN MANAGER B. GAMLIN (DESIGN ORGANISATION) SIGNED DATE	I CERTIFY THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE BRIEF AND AS DETAILED IN THE FINAL DESIGN REPORT. PRINCIPAL C. WEBB (DESIGN ORGANISATION) SIGNED DATE	Department of State Growth THESE DRAWINGS HAVE BEEN PREPARED IN ACCORDANCE WITH THE DESIGN BRIEF AND PROJECT SCOPE. THE DRAWINGS ARE RECOMMENDED FOR ACCEPTANCE. PROJECT MANAGER ANDREW KNIGHT SIGNED DATE	ACCEPTED MANAGER DENISE McINTYRE SIGNED DATE	CONTRACT No. TBC REGISTRATION NUMBER A130018.001 ROAD LINK No. START: LINK 06 CH 0.00 FINISH: LINK 06 CH 2.70 (TBC)	DRAWING IS132400-600-CR-DRG-1001.dwg PRINTED DATE 21-Apr-16, 3:08 PM SHEET No. 1001 REVISION 1	No. of SHEETS 179
STRUCTURAL REVIEW NAME S. SNEDDEN SIGNED DATE	DESIGN REVIEW NAME R. SYKES SIGNED DATE						

DEPARTMENT OF STATE GROWTH

HUON HIGHWAY (A0168)
SUMMERLEAS ROAD
INTERSECTION UPGRADE

1	PRELIMINARY DESIGN		23/03/2016
No.	Amendment Description	Initials	Date
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SCALES
N.T.S.

Co-ordinate System: GDA/MGA 55 **Height Datum:** AHD 83

JACOBS

Tasmanian Government

DESIGNED B.ANNAKIN / M.YOSHIDA

REVIEWED R. SYKES

Department of State Growth

HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
LOCALITY PLAN

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
TBC	IS132400-600-CR-DRG-1002.dwg	21-Apr-16, 3:08 PM	1002

REGISTRATION NUMBER
A130018.001

REVISION 1

GENERAL NOTES

1. ALL WORKS IN ACCORDANCE WITH THE DEPARTMENT OF STATE GROWTH DESIGN GUIDELINES AND WORKS SPECIFICATION.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.

SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY JACOBS BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. THE SURVEY HAS BEEN UNDERTAKEN FOR THE PURPOSE OF DESIGN AND CONSTRUCTION, HOWEVER JACOBS WOULD RECOMMEND SURVEY CONTROL IS CHECKED AND VERIFIED IMMEDIATELY PRIOR TO CONSTRUCTION ACTIVITIES.

COORDINATES FOR THE PRIMARY CONTROL SURVEY HAVE BEEN ESTABLISHED VIA A RIGOROUS NETWORK ADJUSTMENT, BASED ON EXISTING STATE SURVEY MARKS. ALL SURVEY DATA IS PROVIDED IN MGA ZONE 55, AHD83 COORDINATES PER DEPARTMENT OF STATE GROWTH SPECIFICATION T4- PLANNING AND DESIGN SURVEY JULY 2011.

HORIZONTAL CONTROL:
THE PRIMARY CONTROL SURVEY NETWORK WAS ESTABLISHED USING A COMBINATION OF BOTH CENTRED TRAVERSING WITH TOTAL STATION AND GNSS RAPID STATIC OBSERVATIONS. HORIZONTAL DATUM WAS ESTABLISHED VIDE SPM8868, WITH CONNECTIONS TO OTHER STATE MARKS CHECKED AND VERIFIED.

VERTICAL CONTROL:
THE VERTICAL CONTROL WAS ESTABLISHED USING ORTHOMETRIC LEVELLING TECHNIQUES, WITH CLOSED LOOP TRAVERSING. THE DATUM OF THE VERTICAL CONTROL IS AHD 83 VIDE SPM8668 WITH CONNECTIONS TO OTHER STATE MARKS CHECKED AND VERIFIED.

COMBINED SCALE FACTOR (CSF)
SURVEY IS IN MGA GRID DISTANCES.
THE AVERAGE COMBINED SCALE FACTOR TO CONVERT FROM LOCAL PLANE DISTANCES TO MAP GRID OF AUSTRALIA (MGA) DISTANCES IS 0.999585.

IT IS ADVISED THAT THE PROJECT SURVEY REPORT BE REFERENCED FOR ALL SURVEY CONTROL REQUIREMENTS.

LEGEND

EXISTING SURVEY FEATURES

- EXISTING ROAD SIGNAGE
- EXISTING SAFETY BARRIER
- PROPERTY BOUNDARY (DP)
- FENCE LINE

EXISTING SURVEY MARKERS

- STATE SURVEY MARK (PSSM) (SS)
- CONTROL MARK (CM)
- MISCELLANEOUS CONTROL MARK
- MISCELLANEOUS - PUMP (P)
- POST
- MAILBOX
- GATE

DRAIN (STORMWATER)

- INVERT - 450 DIA. (IN 450 Dia)
- INVERT - 225 DIA. (IN 225 Dia)
- INVERT - 300 DIA. (IN 300 Dia)
- INVERT - 375 DIA. (IN 375 Dia)
- INVERT - 525 DIA. (IN 525 Dia)
- INVERT - 600 DIA. (IN 600 Dia)
- INVERT - 750 DIA. (IN 750 Dia)
- INVERT - 900 DIA. (IN 900 Dia)

OTHER SERVICES

- ELECTRICAL POWER POLE (EP)
- ELECTRICAL POLE STAY
- POLE STAY ANCHOR
- TELSTRA PIT
- STORMWATER MANHOLE (S)
- FIRE HYDRANT (FH)
- STOP VALVE (SV)
- EXISTING TELEPHONE CABLE MARKER (TC)

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REVIEWED R. SYKES

Department of State Growth

HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
GENERAL NOTES AND LEGEND

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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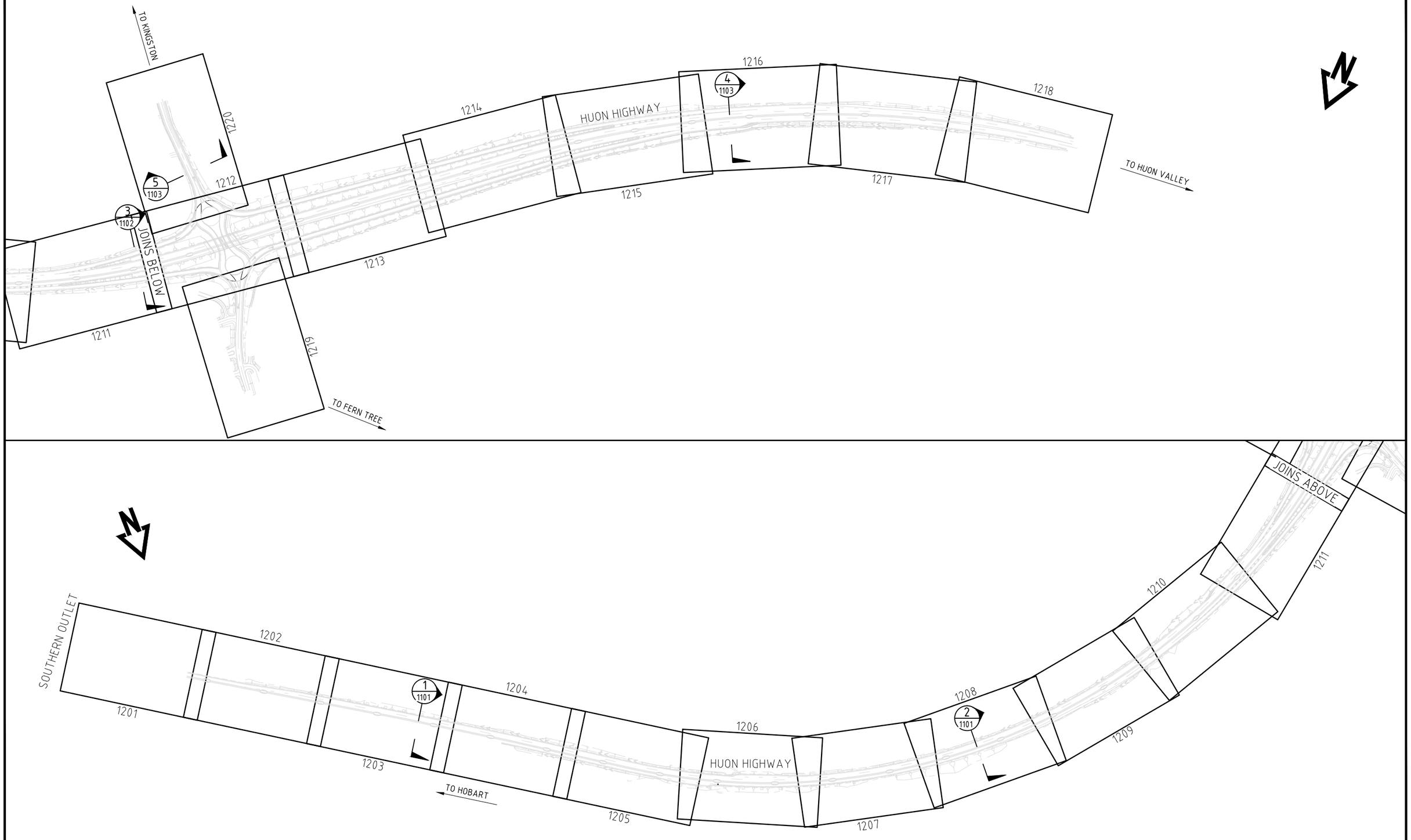

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Department of State Growth

HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
KEY PLAN - GENERAL ARRANGEMENT

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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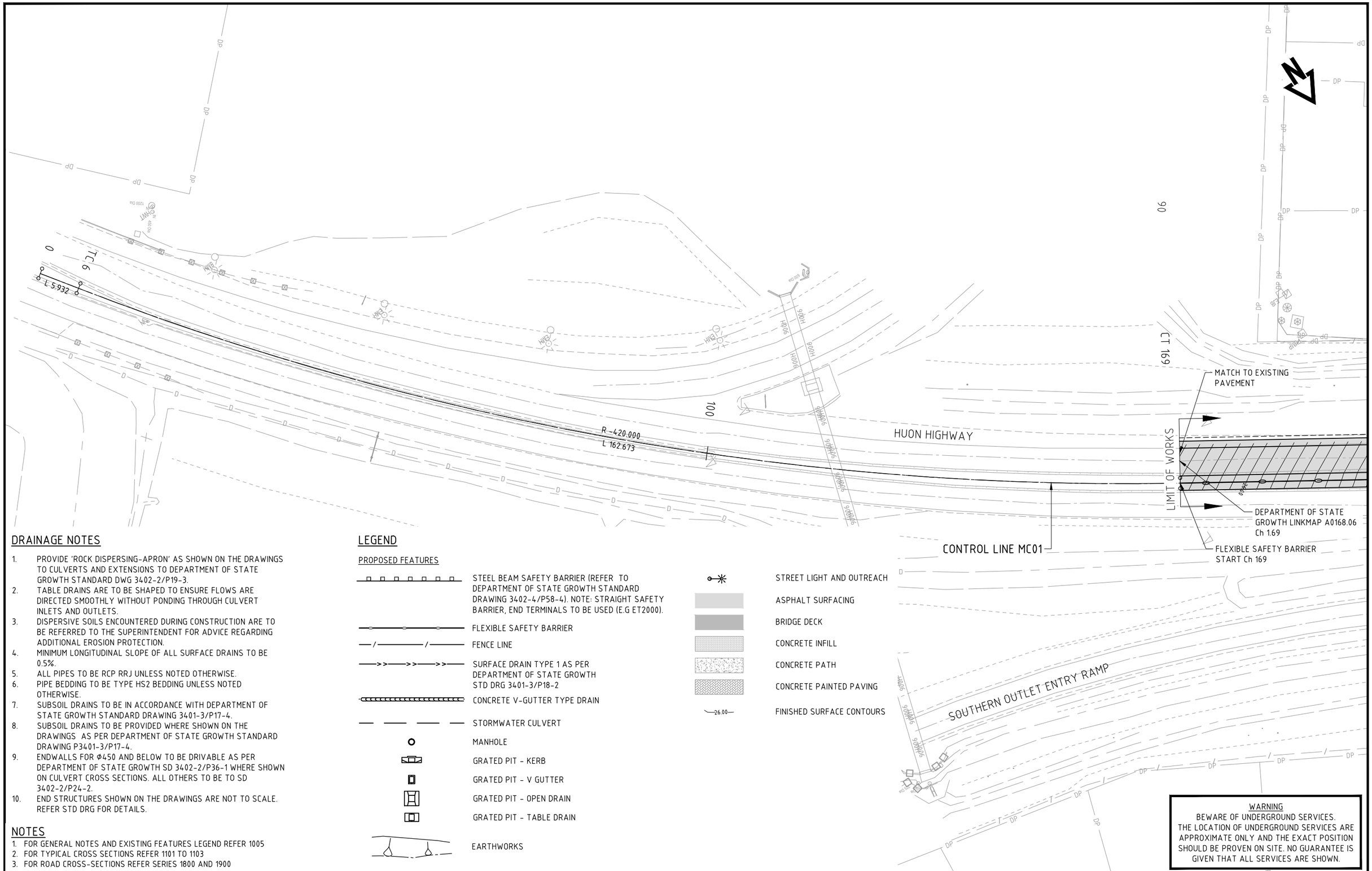

DRAINAGE NOTES

1. PROVIDE 'ROCK DISPERSING-APRON' AS SHOWN ON THE DRAWINGS TO CULVERTS AND EXTENSIONS TO DEPARTMENT OF STATE GROWTH STANDARD DWG 3402-2/P19-3.
2. TABLE DRAINS ARE TO BE SHAPED TO ENSURE FLOWS ARE DIRECTED SMOOTHLY WITHOUT PONDING THROUGH CULVERT INLETS AND OUTLETS.
3. DISPERSIVE SOILS ENCOUNTERED DURING CONSTRUCTION ARE TO BE REFERRED TO THE SUPERINTENDENT FOR ADVICE REGARDING ADDITIONAL EROSION PROTECTION.
4. MINIMUM LONGITUDINAL SLOPE OF ALL SURFACE DRAINS TO BE 0.5%.
5. ALL PIPES TO BE RCP RRJ UNLESS NOTED OTHERWISE.
6. PIPE BEDDING TO BE TYPE HS2 BEDDING UNLESS NOTED OTHERWISE.
7. SUBSOIL DRAINS TO BE IN ACCORDANCE WITH DEPARTMENT OF STATE GROWTH STANDARD DRAWING 3401-3/P17-4.
8. SUBSOIL DRAINS TO BE PROVIDED WHERE SHOWN ON THE DRAWINGS AS PER DEPARTMENT OF STATE GROWTH STANDARD DRAWING P3401-3/P17-4.
9. ENDWALLS FOR ø450 AND BELOW TO BE DRIVABLE AS PER DEPARTMENT OF STATE GROWTH SD 3402-2/P36-1 WHERE SHOWN ON CULVERT CROSS SECTIONS. ALL OTHERS TO BE TO SD 3402-2/P24-2.
10. END STRUCTURES SHOWN ON THE DRAWINGS ARE NOT TO SCALE. REFER STD DRG FOR DETAILS.

NOTES

1. FOR GENERAL NOTES AND EXISTING FEATURES LEGEND REFER 1005
2. FOR TYPICAL CROSS SECTIONS REFER 1101 TO 1103
3. FOR ROAD CROSS-SECTIONS REFER SERIES 1800 AND 1900

LEGEND

PROPOSED FEATURES

- STEEL BEAM SAFETY BARRIER (REFER TO DEPARTMENT OF STATE GROWTH STANDARD DRAWING 3402-4/P58-4). NOTE: STRAIGHT SAFETY BARRIER, END TERMINALS TO BE USED (E.G ET2000).
- FLEXIBLE SAFETY BARRIER
- FENCE LINE
- SURFACE DRAIN TYPE 1 AS PER DEPARTMENT OF STATE GROWTH STD DRG 3401-3/P18-2
- CONCRETE V-GUTTER TYPE DRAIN
- STORMWATER CULVERT
- MANHOLE
- GRATED PIT - KERB
- GRATED PIT - V GUTTER
- GRATED PIT - OPEN DRAIN
- GRATED PIT - TABLE DRAIN
- EARTHWORKS
- STREET LIGHT AND OUTREACH
- ASPHALT SURFACING
- BRIDGE DECK
- CONCRETE INFILL
- CONCRETE PATH
- CONCRETE PAINTED PAVING
- 26.00 FINISHED SURFACE CONTOURS

WARNING
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HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 1

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YARRAMAN DRIVE

CT 148176/4

CT 155057/0

CT 144119/55

CT 144119/56

CT 144119/57

CT 144119/58

CT 144119/59

CT 144119/60

CT 144119/61

200

300

EXISTING CULVERT TO REMAIN UNAFFECTED

CONTROL LINE MC01

HUON HIGHWAY

L 304.713

FLEXIBLE SAFETY BARRIER

SOUTHERN OUTLET ENTRY RAMP

CT 5213/47

CT 5213/48

CT 5213/49

NOTES

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HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 2

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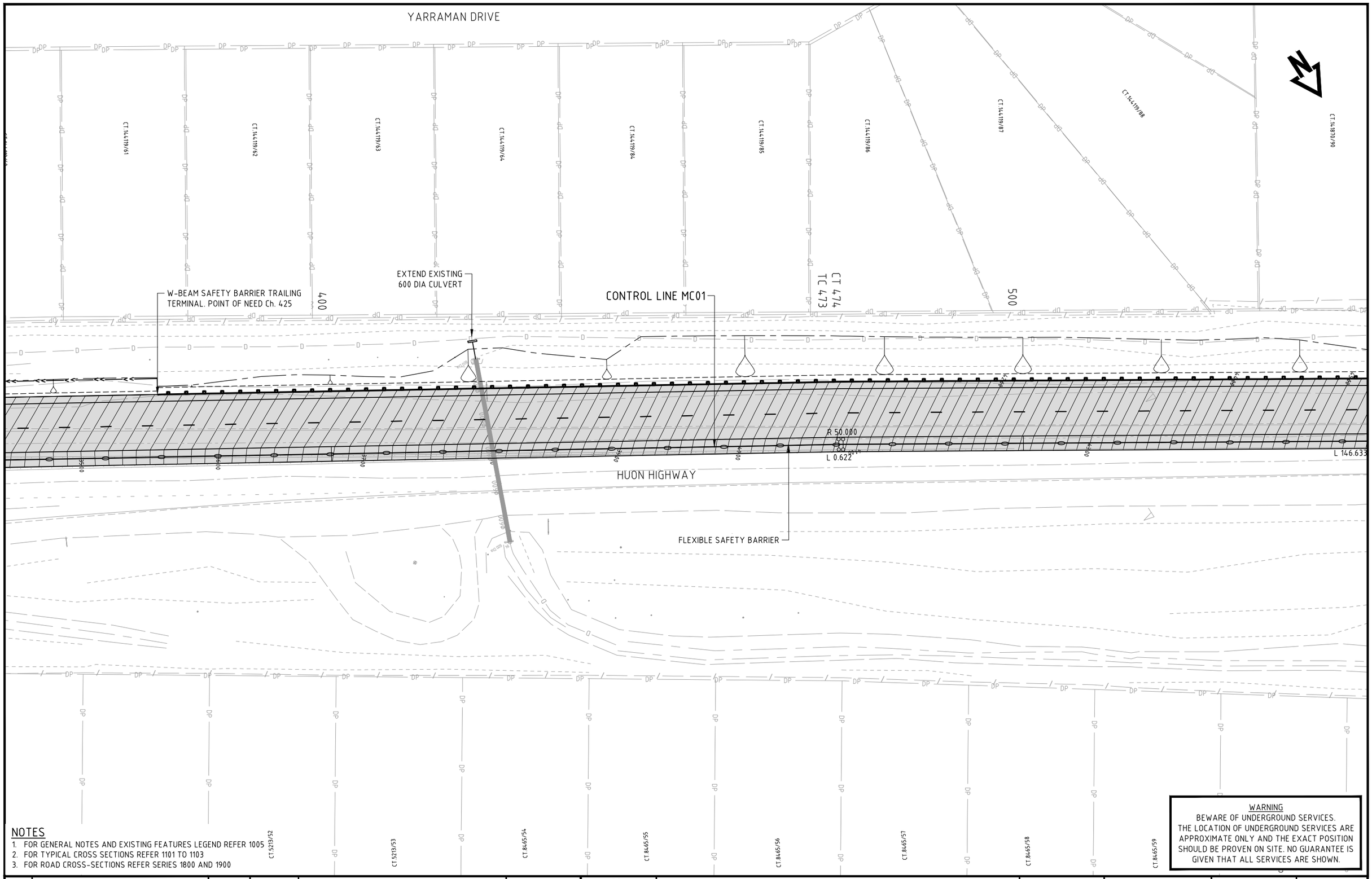

NOTES

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HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 3

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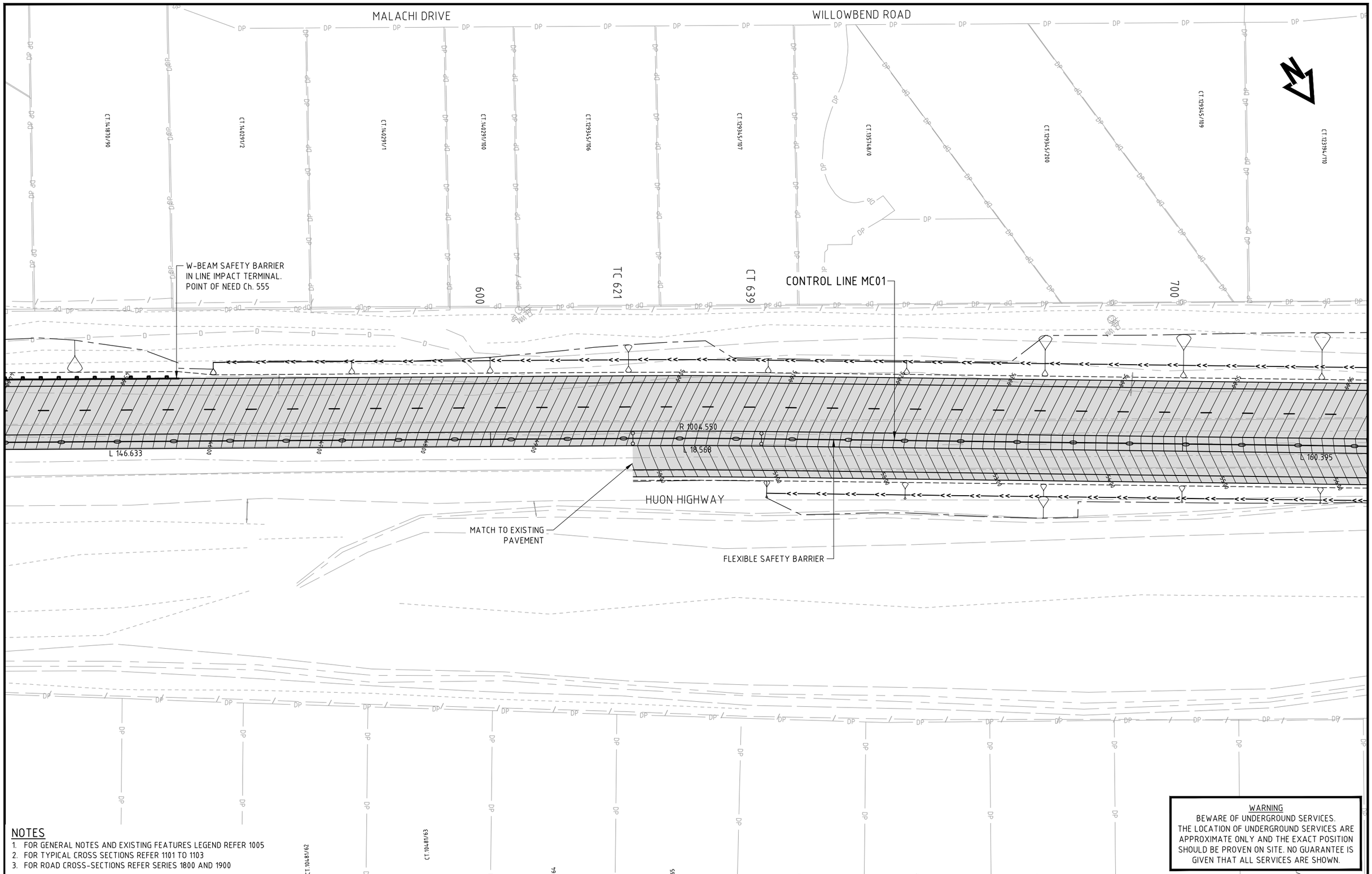

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Department of State Growth
HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 4

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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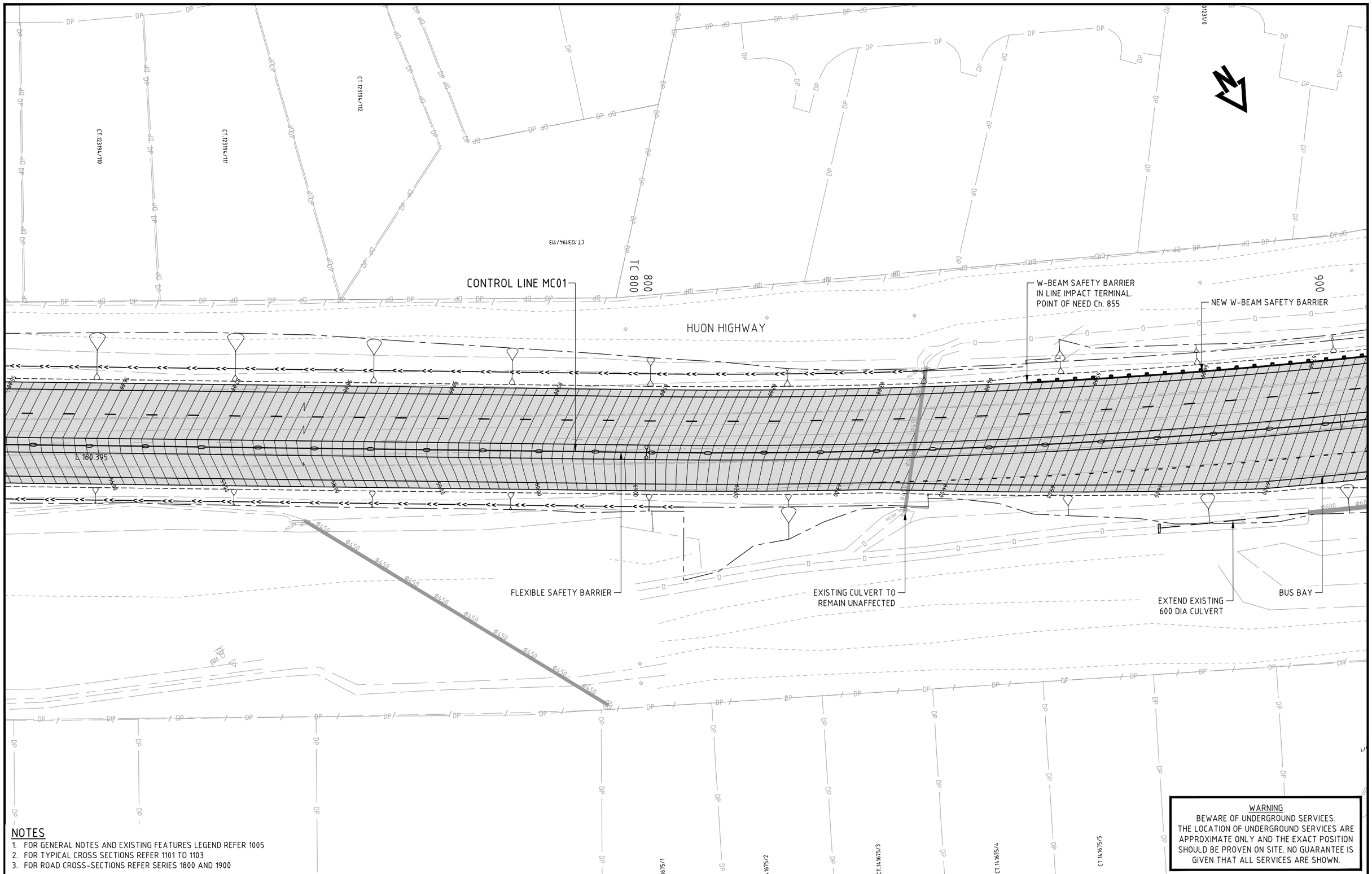

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HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 5

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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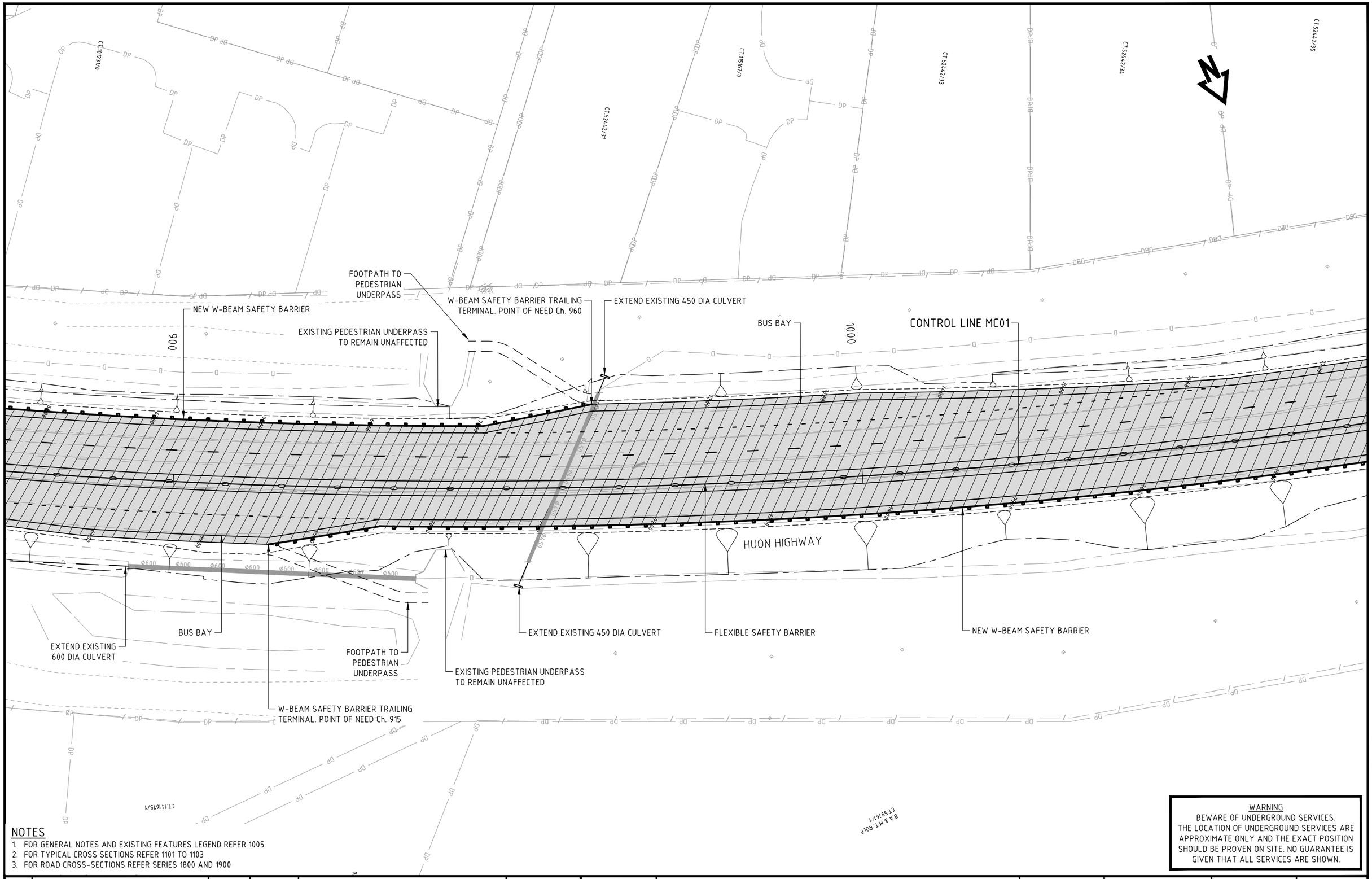

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Co-ordinate System: GDA/MGA 55 **Height Datum:** AHD 83

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Department of State Growth

HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 6

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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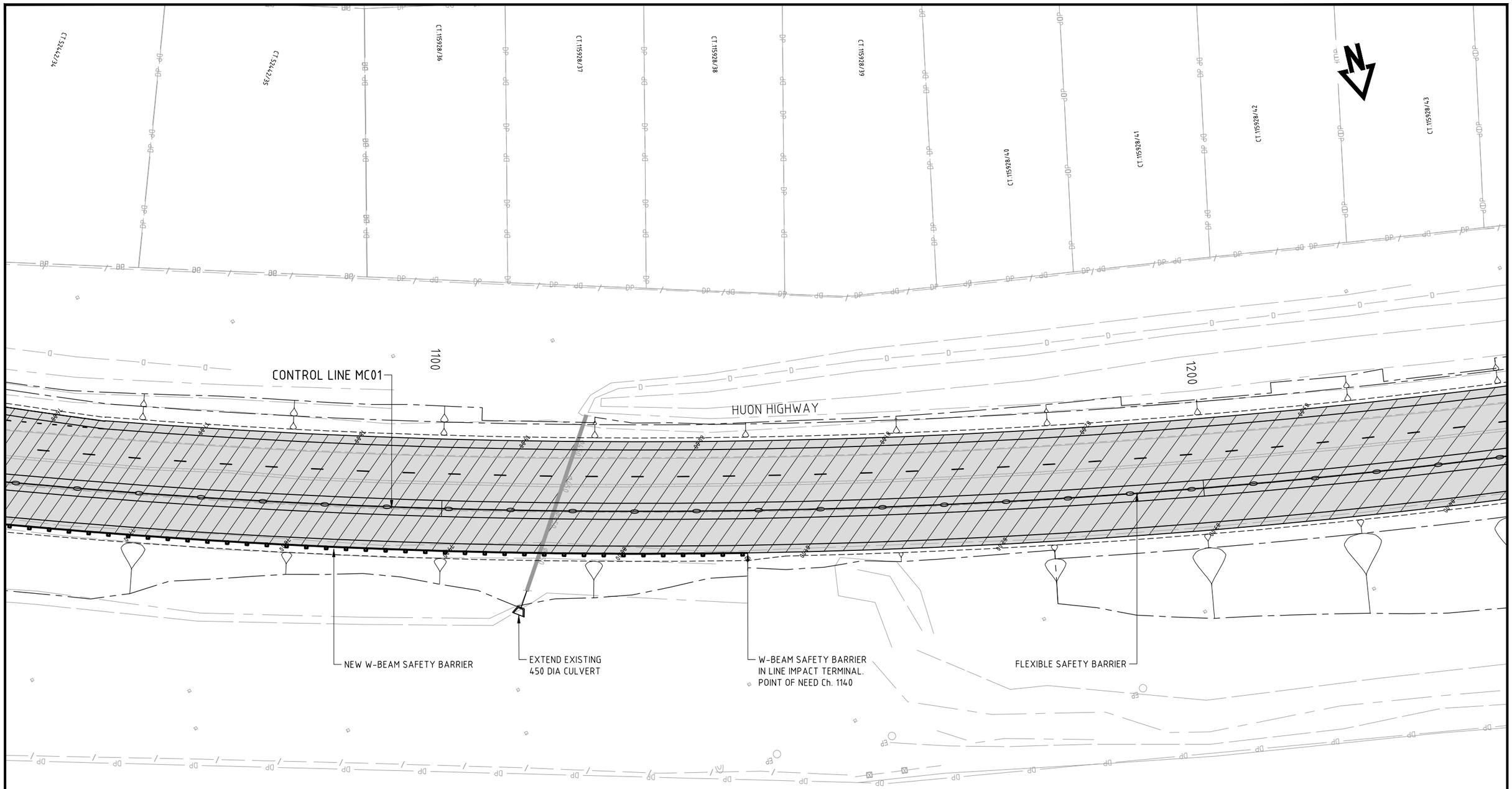

NOTES

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HUON HIGHWAY (A0168)
SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
SHEET 7

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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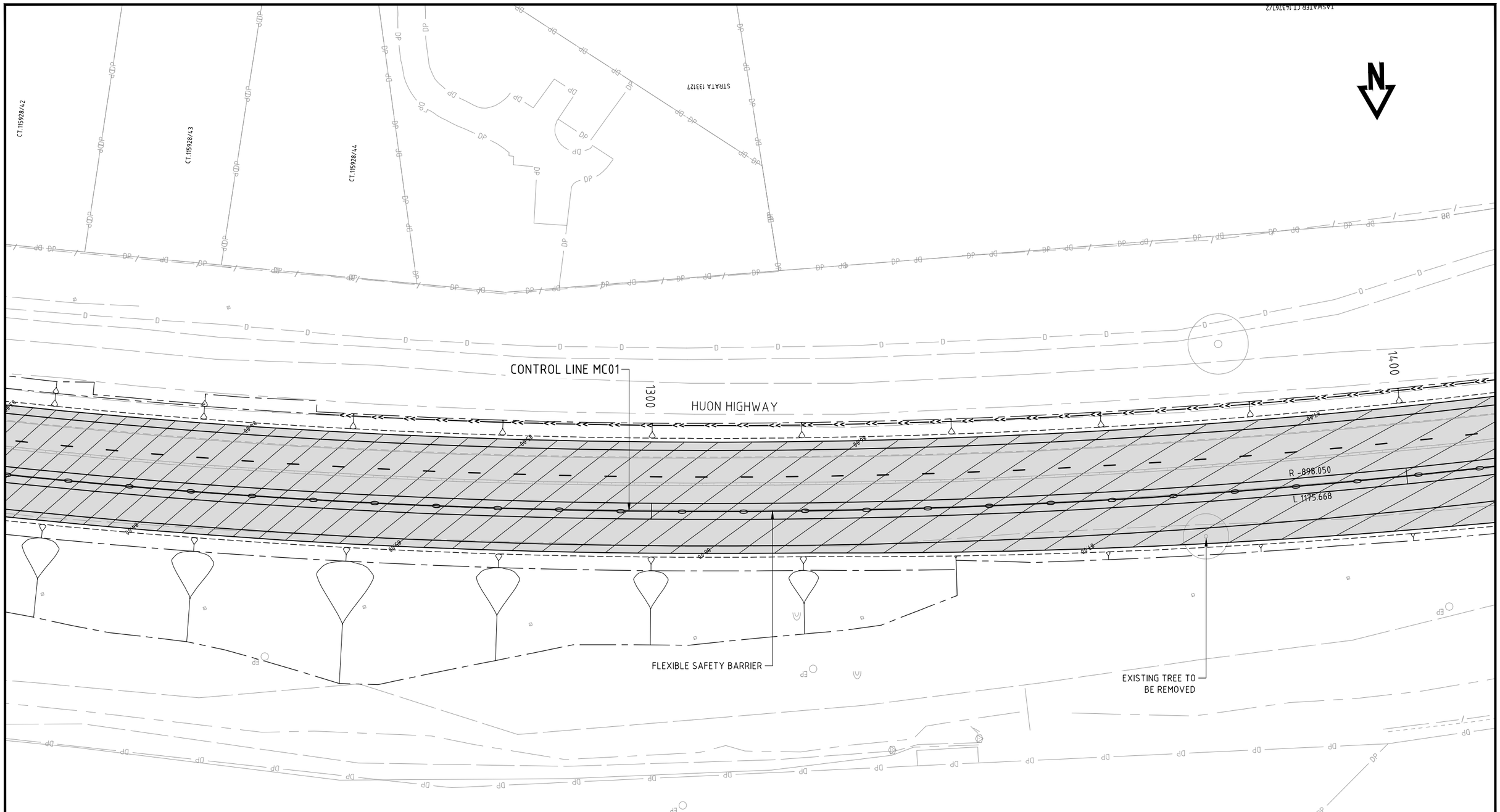

NOTES

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SHEET 8

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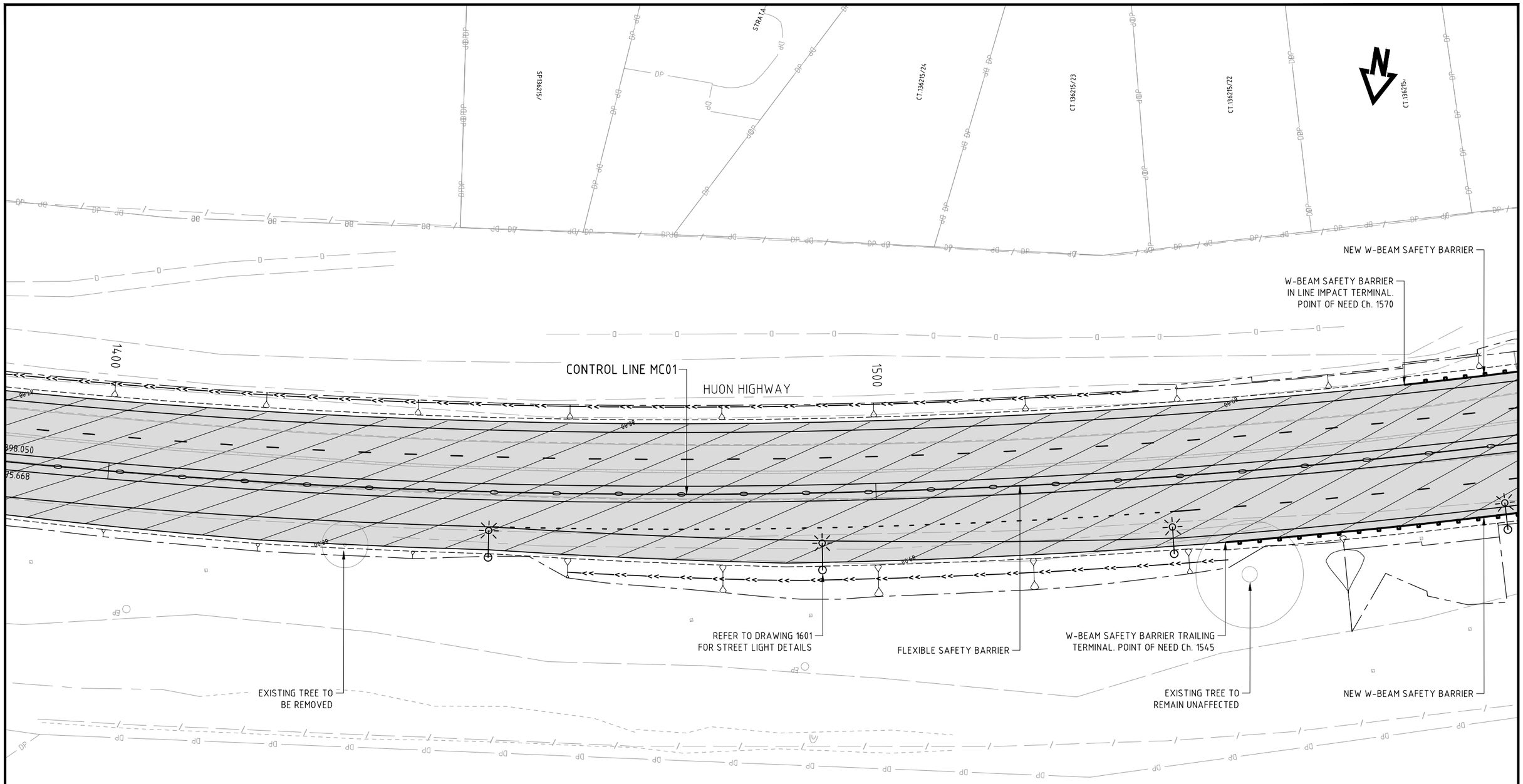

NOTES

1. FOR GENERAL NOTES AND EXISTING FEATURES LEGEND REFER 1005
2. FOR TYPICAL CROSS SECTIONS REFER 1101 TO 1103
3. FOR ROAD CROSS-SECTIONS REFER SERIES 1800 AND 1900

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CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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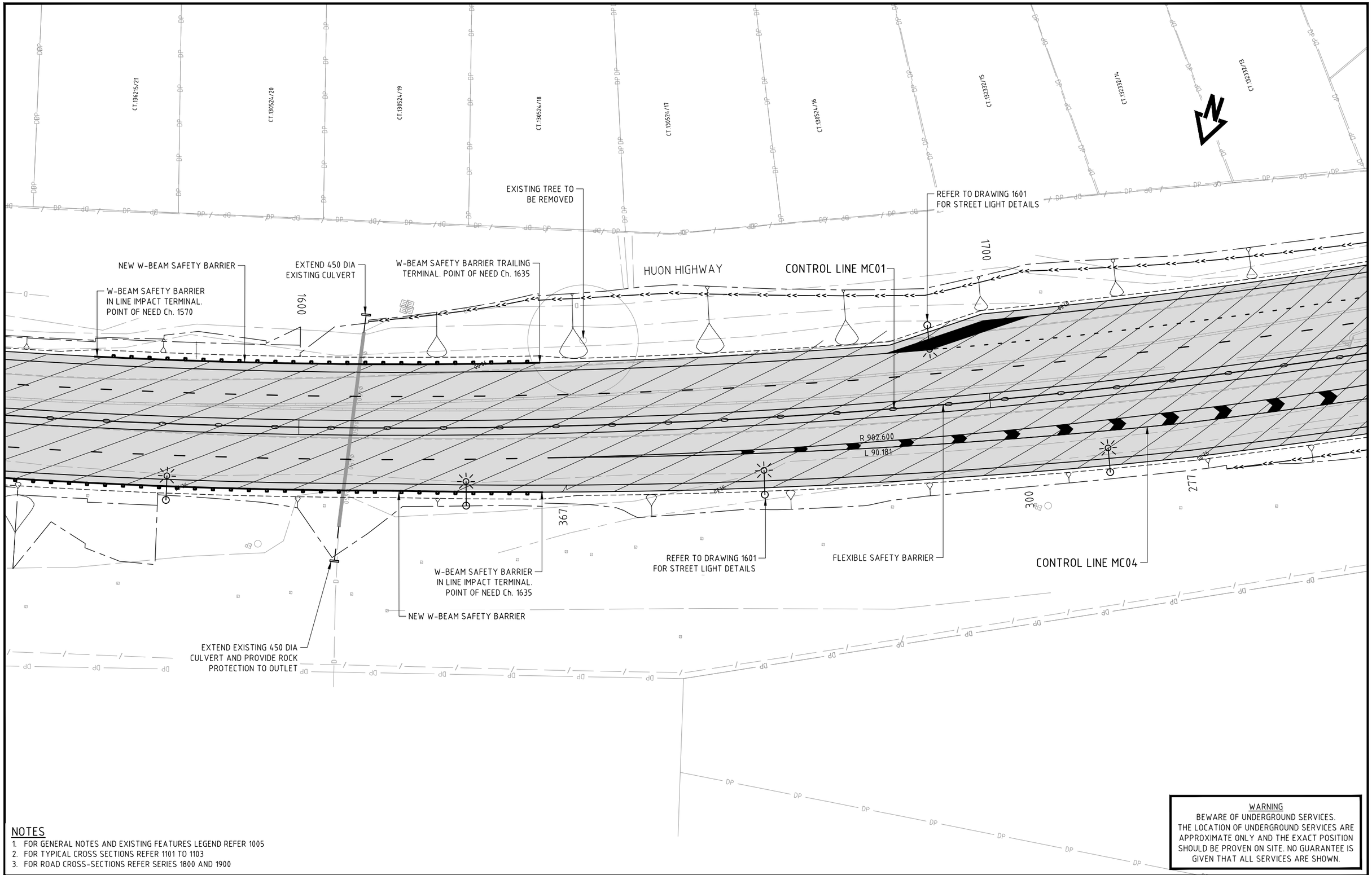

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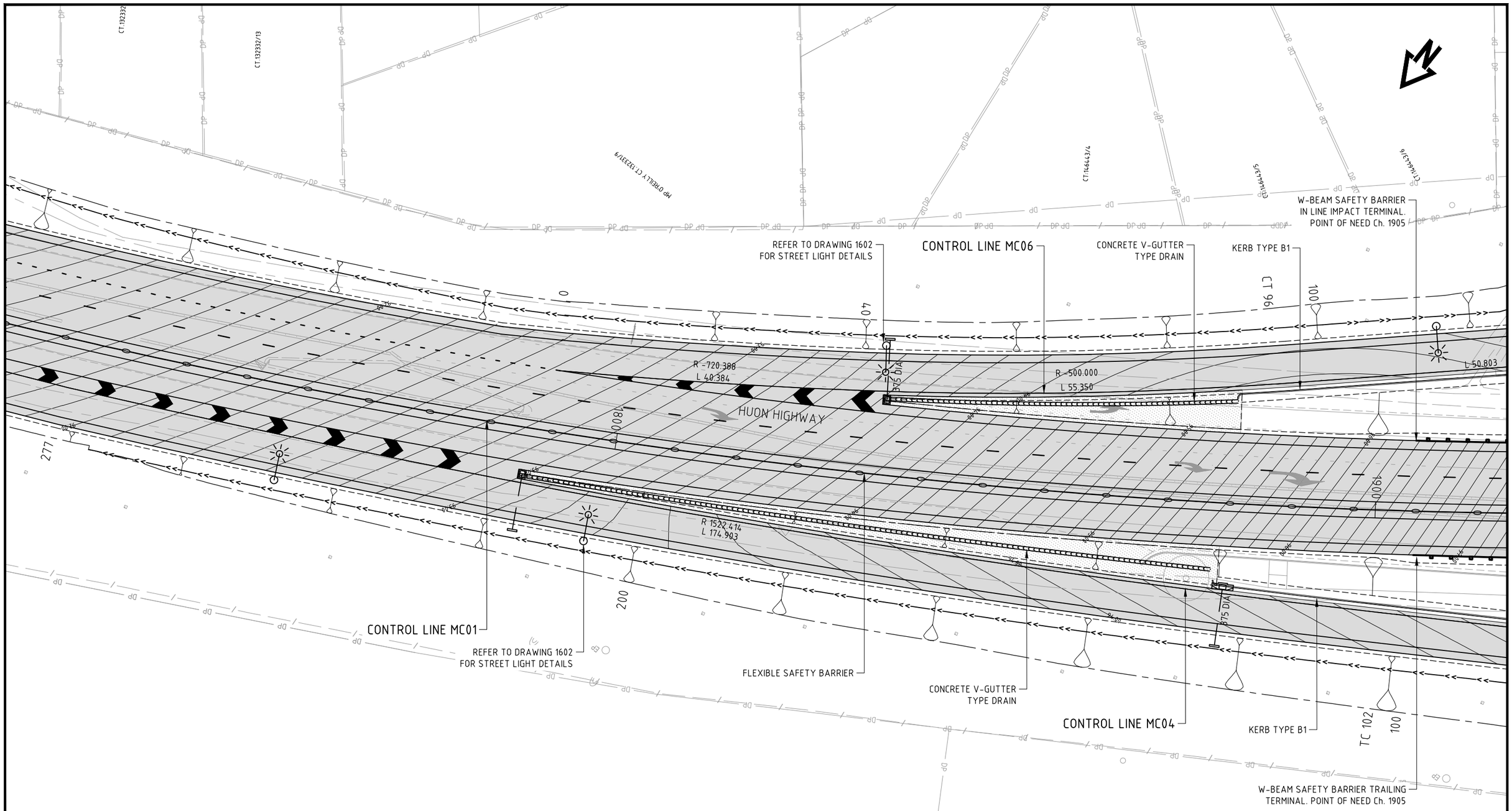

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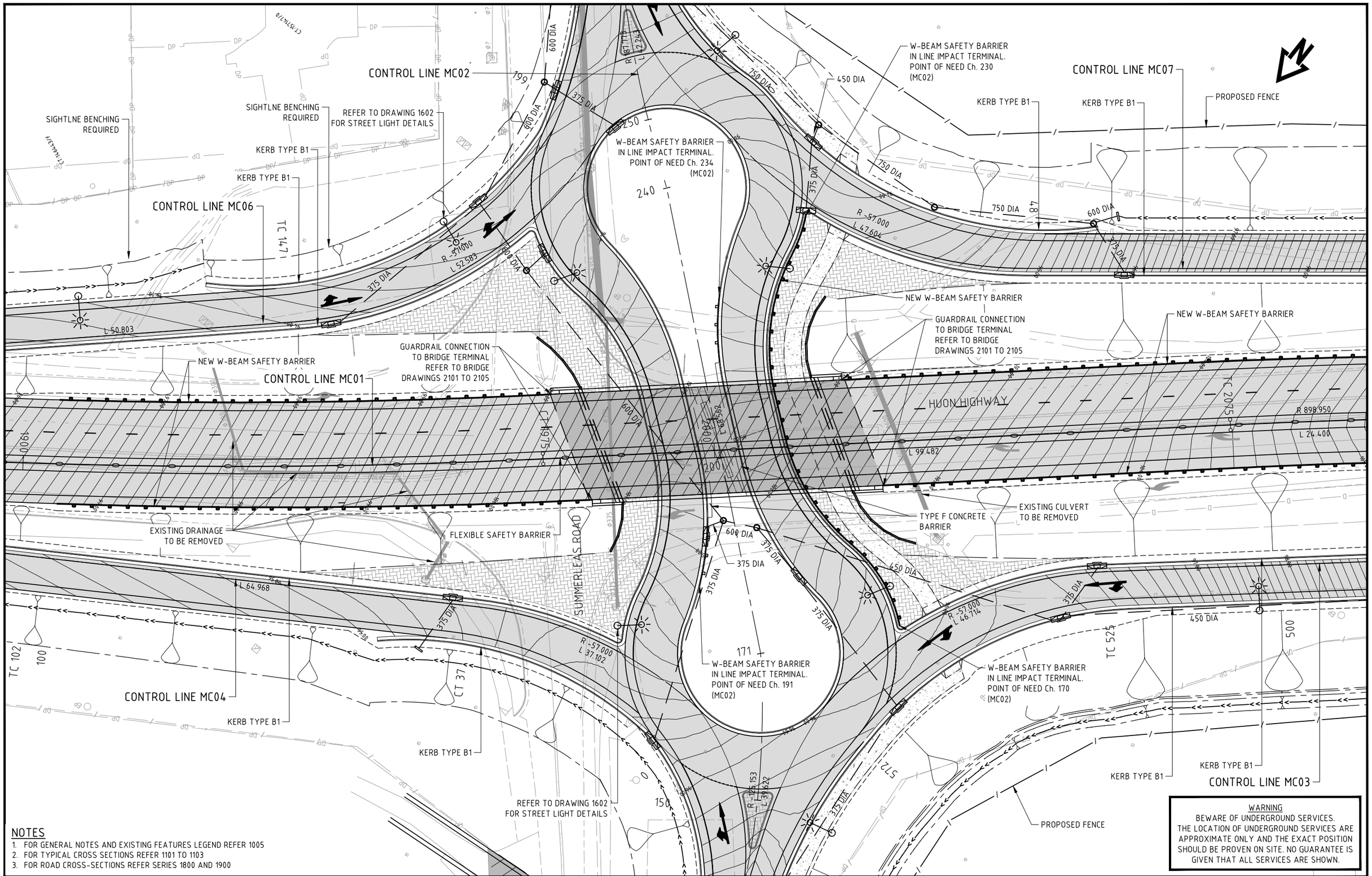

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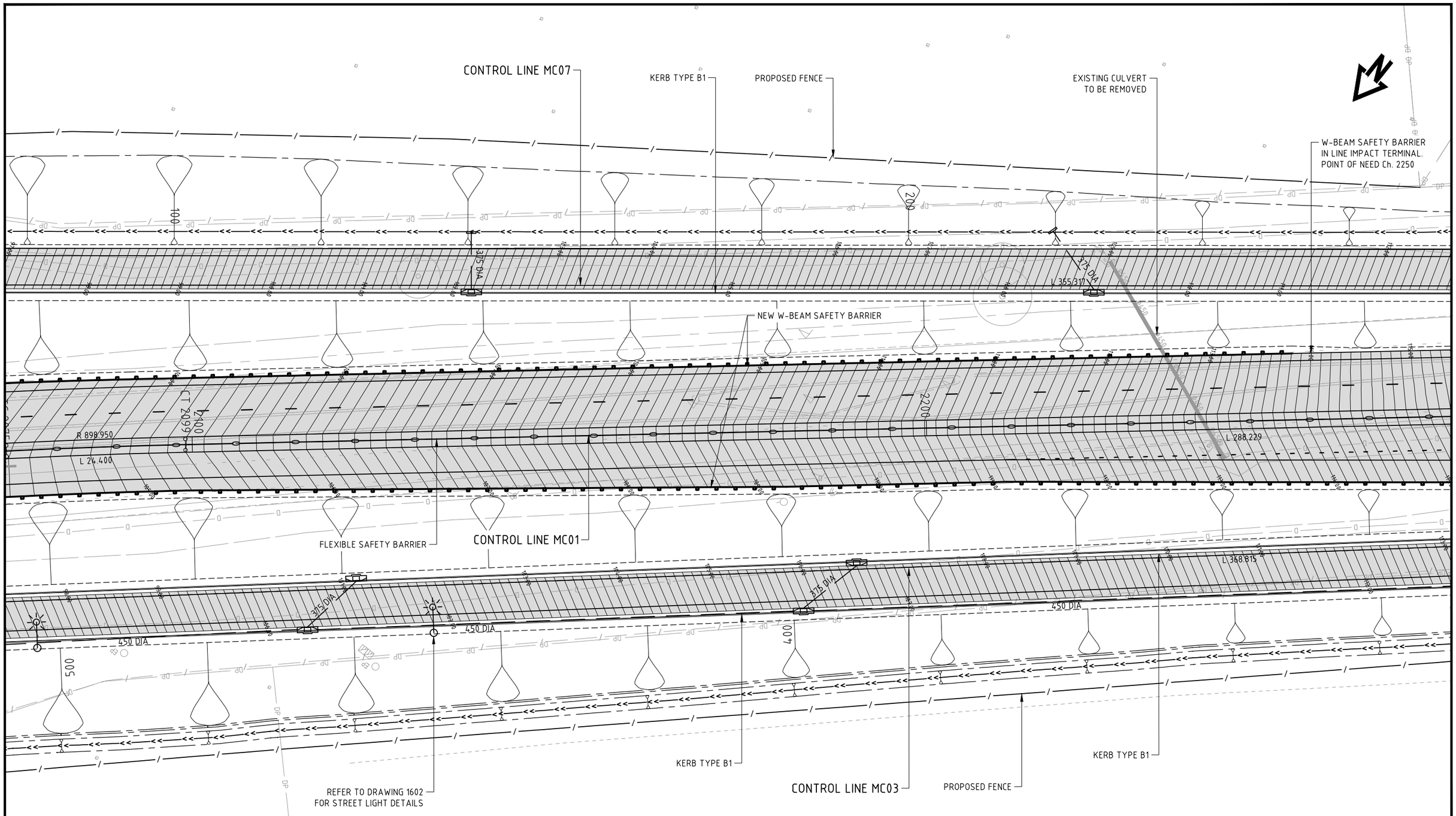

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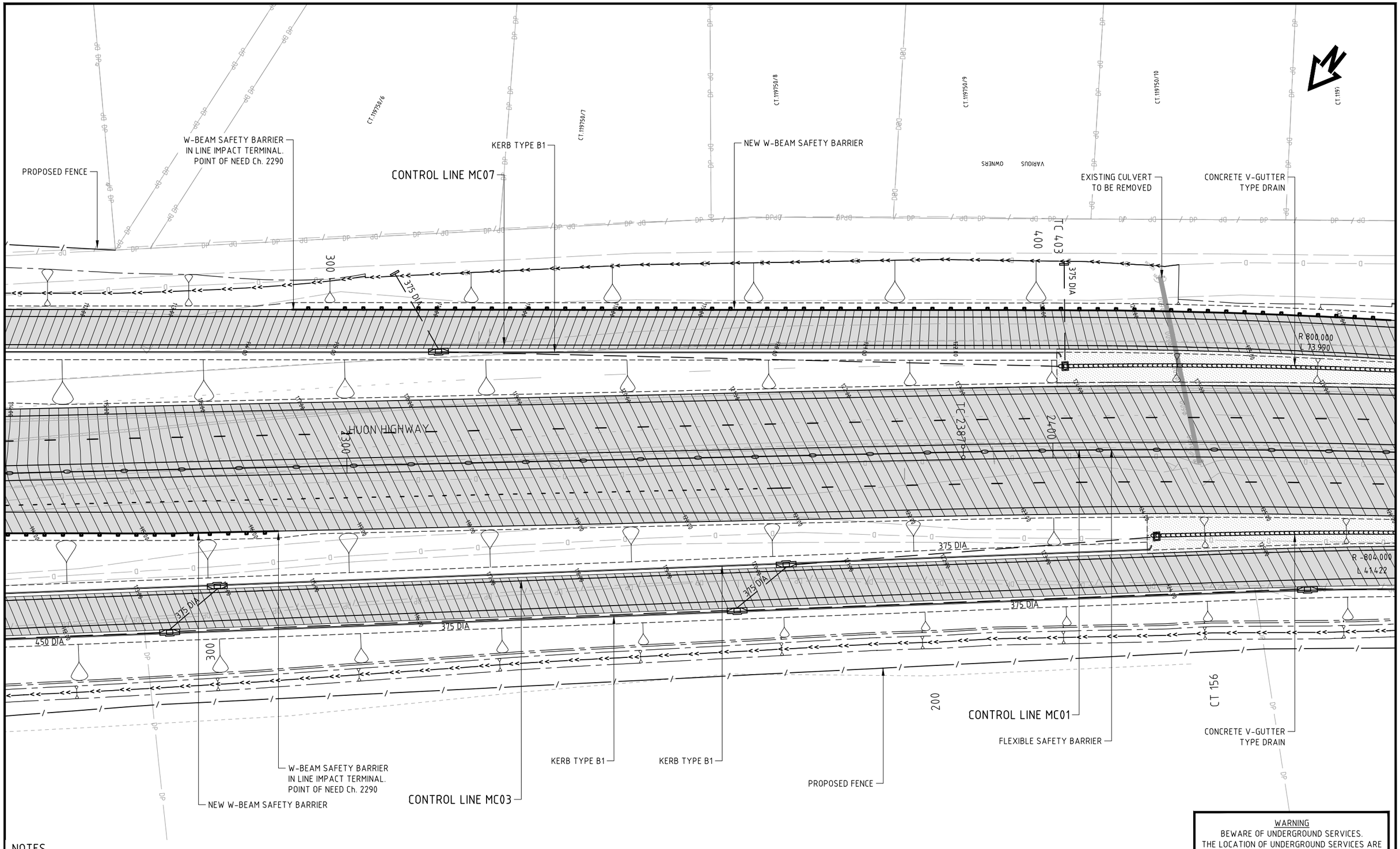

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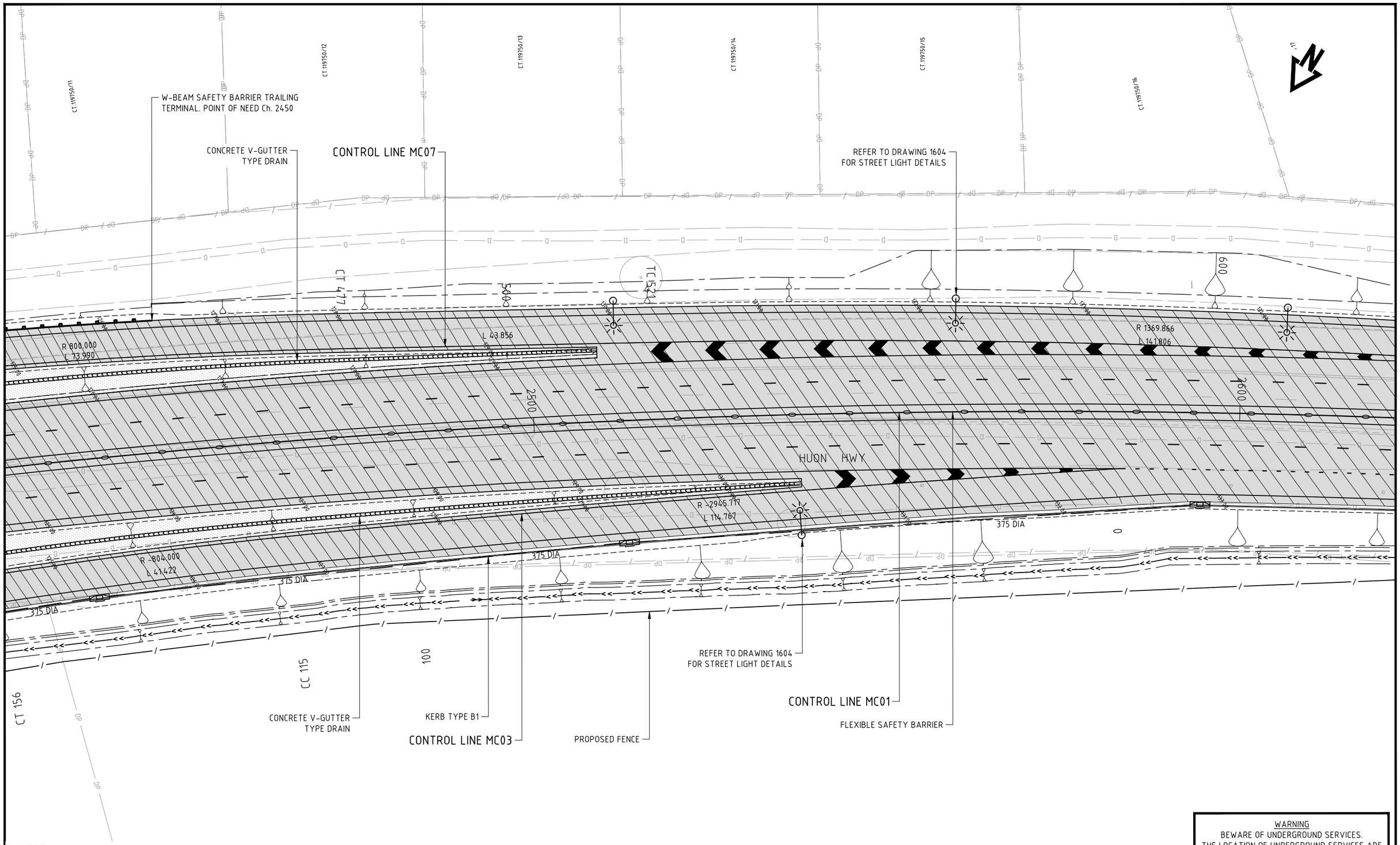

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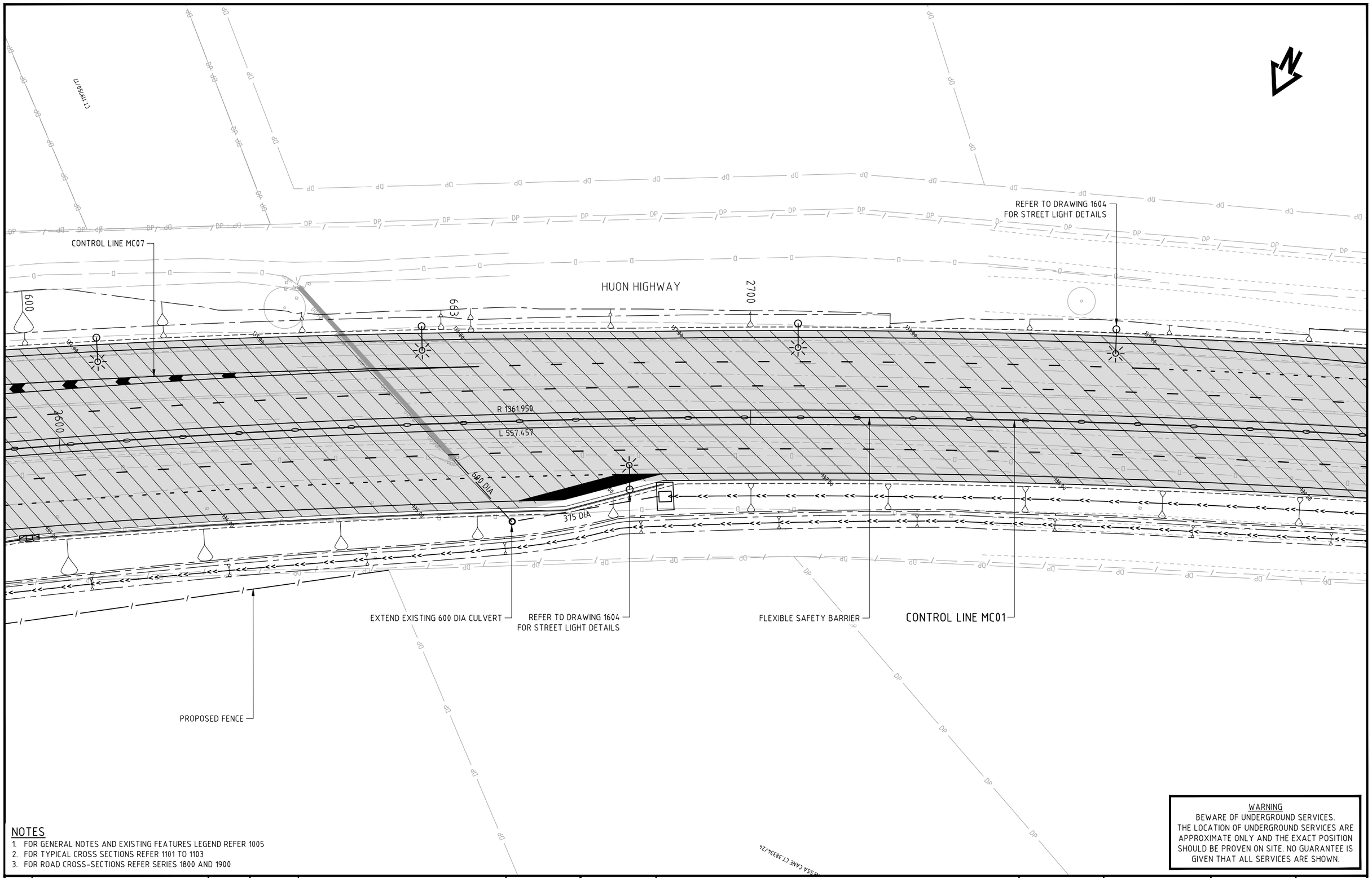

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SUMMERLEAS ROAD INTERSECTION UPGRADE
ROADWORKS - GENERAL ARRANGEMENT
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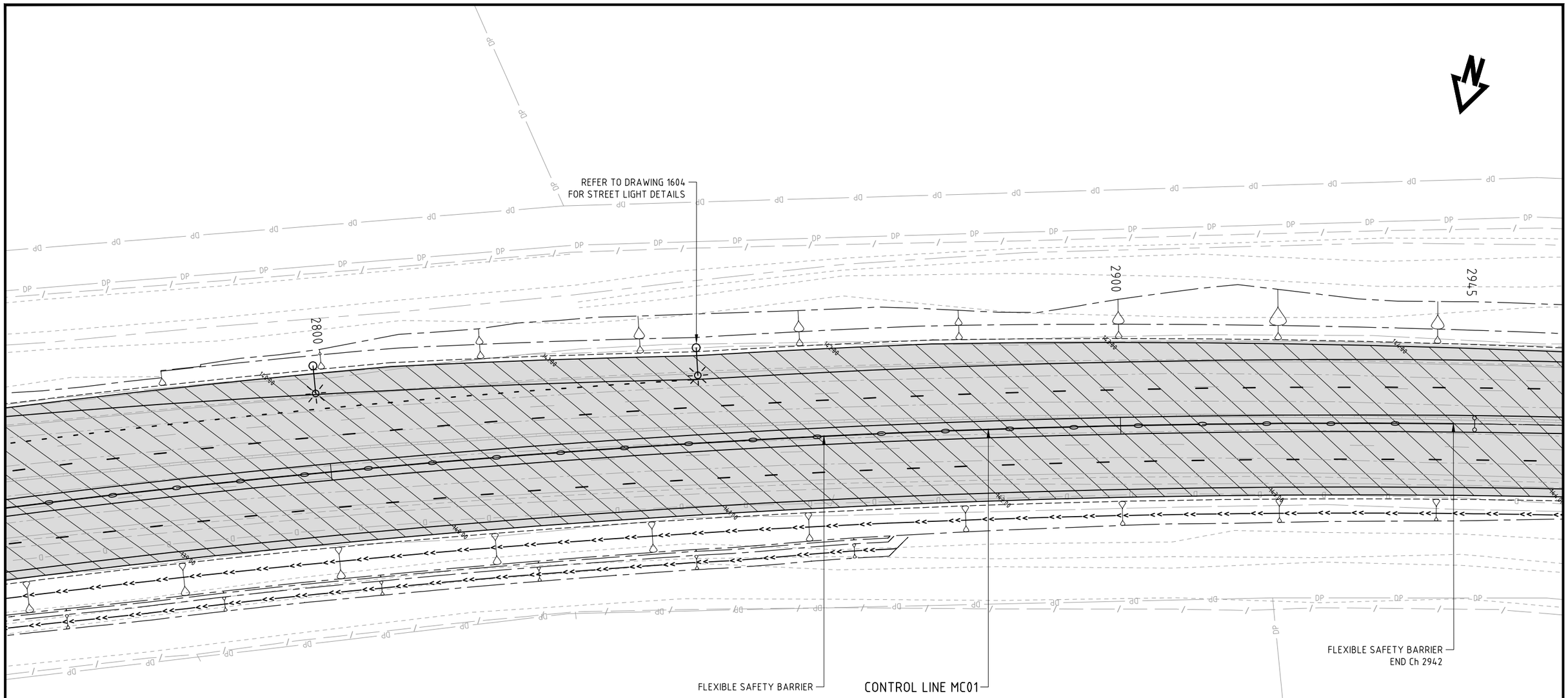

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SUMMERLEAS ROAD INTERSECTION UPGRADE
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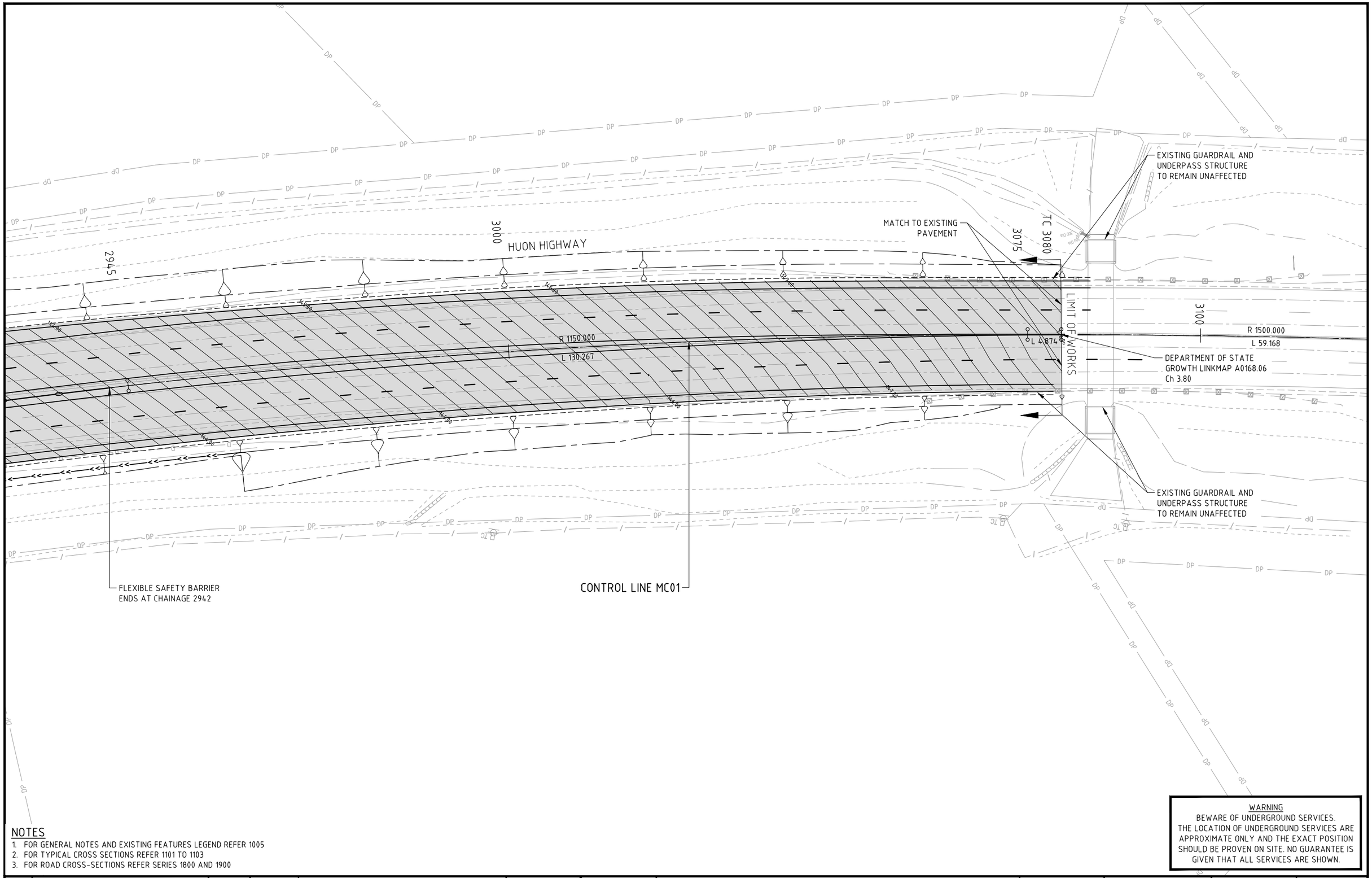

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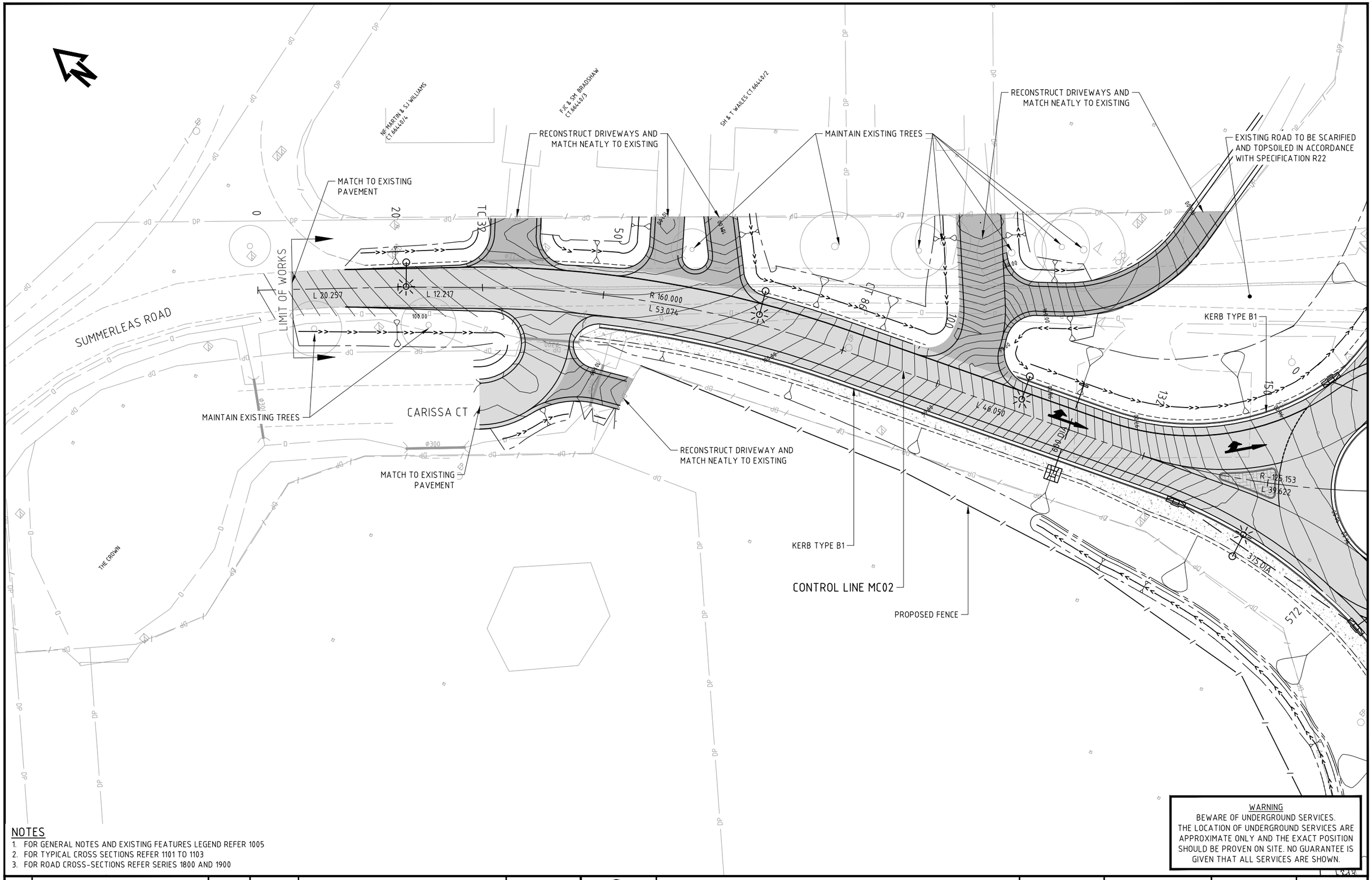

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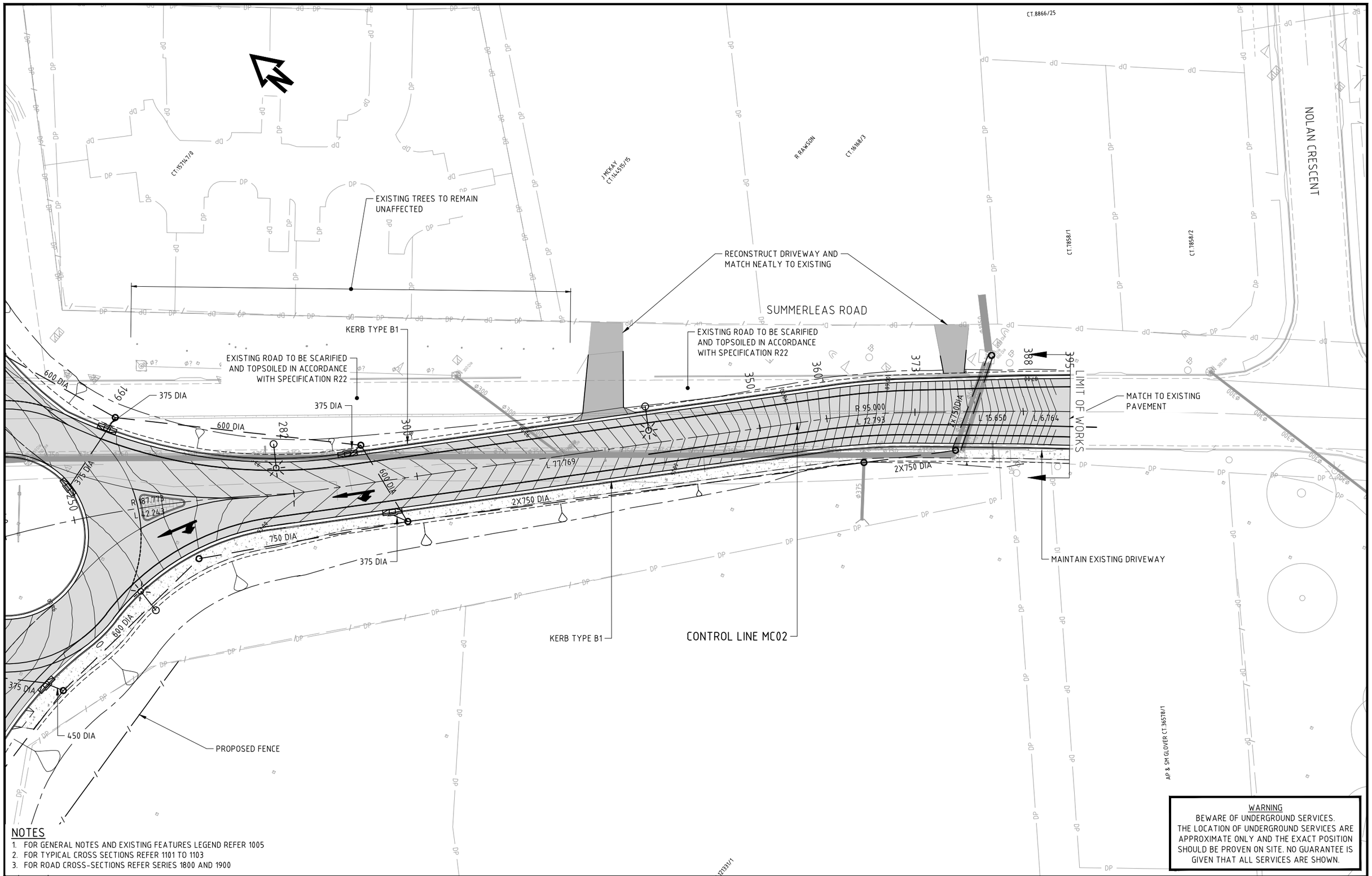

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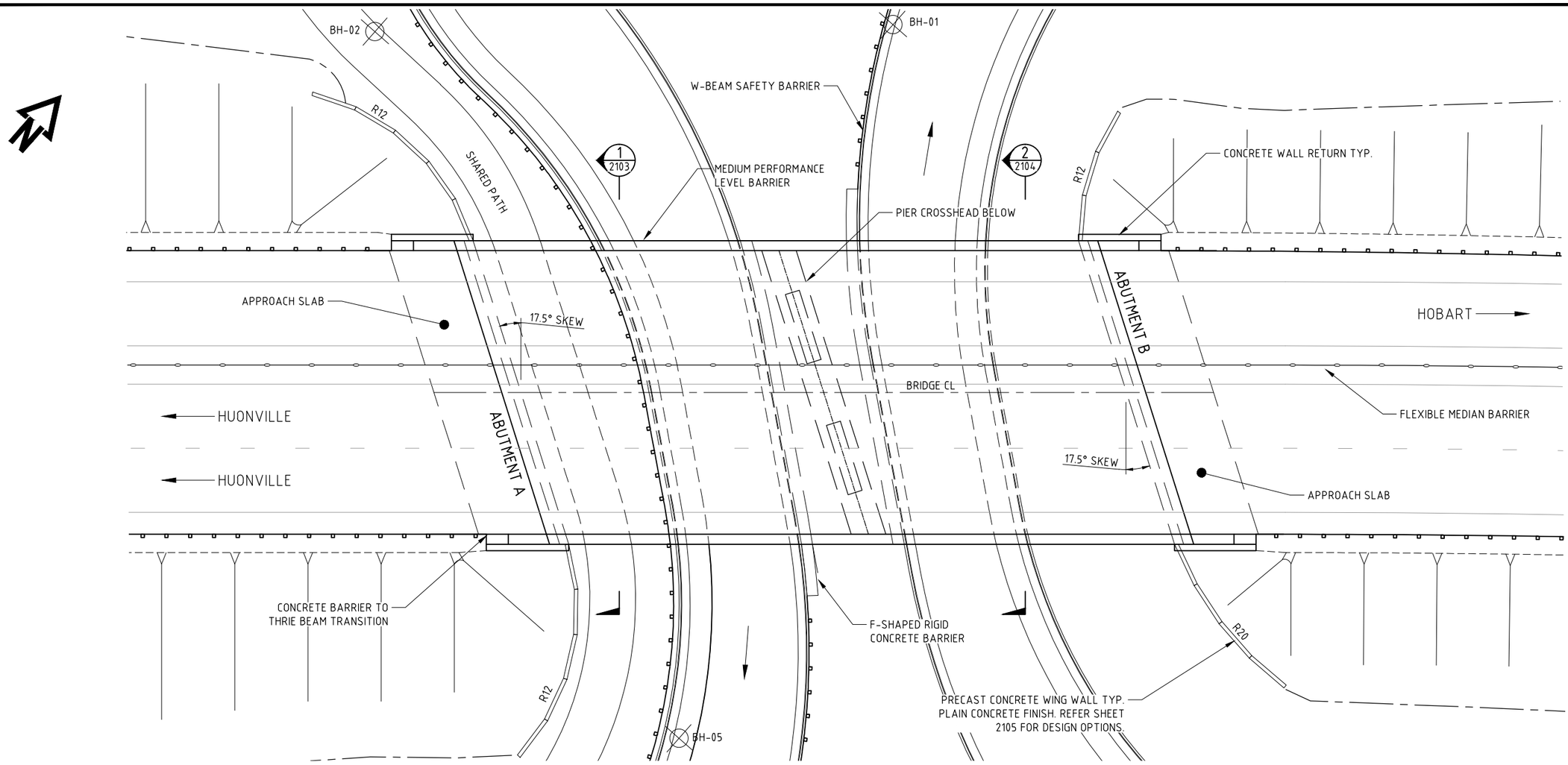

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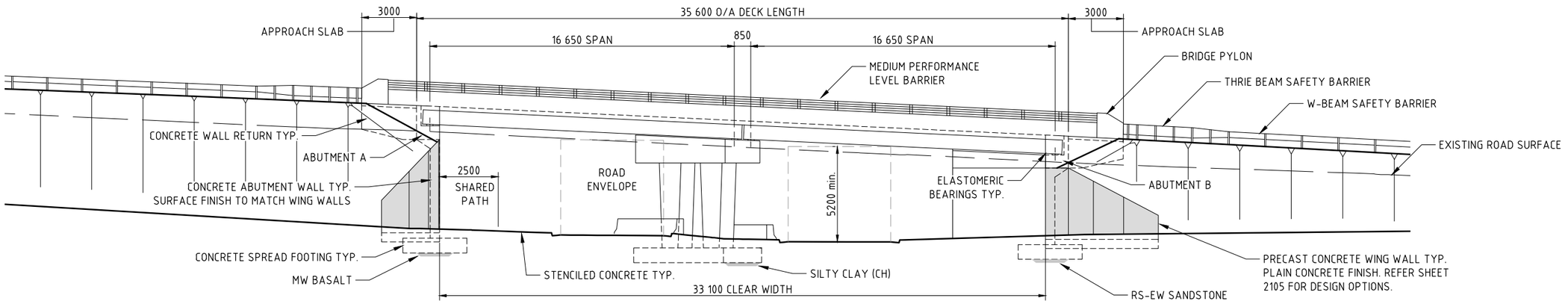

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1	PRELIMINARY DESIGN		23/03/2016

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SUMMERLEAS ROAD UNDERPASS (B6154)
GENERAL ARRANGEMENT

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A130018.001

REVISION 2

Appendix B: Stakeholder Engagement Report

Huon Highway/ Summerleas Road Intersection Upgrade

Department of State Growth

Stakeholder Engagement Report

| 2

19 April 2016

Client Reference

Huon Highway/ Summerleas Road Intersection Upgrade

Project No:	IS132400
Document Title:	Stakeholder Engagement Report
Document No.:	
Revision:	2
Date:	19 April 2016
Client Name:	Department of State Growth
Client No:	Client Reference
Project Manager:	Andrew Knight
Author:	Kathryn Easther
File Name:	C:\users\rsykes\appdata\local\projectwise\jacobs_anz_ie\dms76516\IS132400-200-CR-RPT-0002.docx

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Document history and status

Revision	Date	Description	By	Review	Approved
1	23/03/2016	Draft Stakeholder Engagement Report	Kathryn Easther	Andrew Knight	
2	19/04/2016	Stakeholder Engagement Report (Final)	Andrew Knight	Bob Sykes	

Contents

1. Introduction

This report summarises the stakeholder engagement process undertaken by Jacobs and the Department of State Growth for the Huon Highway / Summerleas Road Intersection Upgrade and the feedback received from stakeholders.

In the initial stage of the project a stakeholder engagement plan was developed which identified the stakeholders, as listed in Table 1.1. Stakeholders were categorised as primary, secondary or other depending on their level of interest or influence in the project. Action plans were developed for each key stakeholder identifying at which stage of the project to contact the stakeholder and the best means of engagement.

Stakeholder engagement activities undertaken included individual meetings with key stakeholders, telephone discussions, a public display of the concept design and letters / emails introducing the project and advertising the public display.

A project specific website has been set up to provide information about the project (http://www.transport.tas.gov.au/road/projects/huon_highway_summerleas_road_-_intersection_improvements). The website has been used on all promotional material and correspondence with stakeholders. The website is regularly updated as the project progresses and will be an important site for information about construction programming and traffic management.

Contact details for the Project Manager, Andrew Knight, have also been provided on the website and all stakeholder correspondence material.

Table 1.1 : Stakeholder List

Primary ***(Involve)***	**Secondary** ***(Keep informed)***	**Other** ***(Minimal specific action)***
Important or key stakeholders with a medium-high level of project interest or influence. *Targeted consultation involving regular meetings or briefings to inform design and constructability.*	*Affected or key stakeholders with a medium-low level of interest or influence.* *Keep informed through communication channels and contact on as needs basis.*	*Affected stakeholders with low level of interest and influence.* *Keep informed through project communications channels.*
Infrastructure Australia (Aus Govt)	Communications unit (State Growth)	Aboriginal Heritage Tasmania (AHT)
Denise McIntyre, Project Sponsor	Bridge Assets, Asset Management (State Growth	Kingston Tennis Club Inc.
Directly adjacent property owners	Cycling Tasmania	Car rental companies
Environmental Development and Approvals Unit (EDAU)	Heavy Vehicle Operators	Department of Primary Industries, Parks, Water and Environment (DPIPWE)
TasBus (Tasmanian Bus Association)	Local residents adjacent to works	Emergency Services
Julie Collins, MP (Federal Labor Member for Franklin)	Metro	Huon News
Paul Harriss, MP (Tasmanian Liberal Member for Franklin)	Other bus operators	Huon Valley Council
Senator David Bushby (Liberal Senator for Tasmania)	Passenger Transport Services (PTS)	Kingborough Council newsletter

Primary ***(Involve)***	**Secondary** ***(Keep informed)***	**Other** ***(Minimal specific action)***
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Jacquie Petrusma, MP (Tasmanian Liberal Member for Franklin)	Royal Automobile Club Tasmania (RACT)	Livestock Carriers Assoc
Kingborough Council	Tasmanian Salmonid Growers Association (TSGA)	Model car racing club
Kingborough Sports Centre	TasNetworks	Kingborough Chronicle
Kingston Cemetery	TasWater	Maintenance contractor
Kingston High School	Telstra	The Mercury
Rene Hidding, MP (Minister for Infrastructure)	Travelling public	Motorcycle Riders Assoc.
Will Hodgman MP, Premier of Tasmania.	Cycling South	Periodic Maintenance, Asset Management (State Growth)
Southern Lights Hotel	Fern Tree Progress Association	Road Safety Taskforce (RSTF)
Stakeholder Engagement and Acquisition Unit (SEAU)	Kingborough Bicycle User Group (KBUG)	Tas Transport Assoc
Tassielink	Kingborough Road Safety Committee	Taxi Industry Assoc.
		Visitor Information Centres (Southern)

2. Consultation with key stakeholders

2.1 Kingborough Council

A presentation to Kingborough Council councillors and management was undertaken on 11 February 2016. This was followed up with another presentation to the Kingborough Council user groups, namely the Kingborough Council Road Safety Committee and the Kingborough Bicycle Advisory Committee on 17 February 2016. The Kingborough Access Advisory Committee was invited however declined to attend. Feedback across all groups was positive and supportive of the design.

2.2 Adjacent landowners

An introductory letter was sent to landowners in the vicinity of the works on 11 February 2016, introducing the project and inviting them to view the concept design at the public display on 5 March 2016. Letters were sent to the owner/ resident of 124 adjacent properties. Where the owner address was different to the property address, a letter was sent to both the owner and the resident.

Design of the intersection upgrades has been limited to the existing road reserve where possible, however acquisition will still be required from some properties. Some properties not impacted by acquisition will also require realignment or reconstruction of their access. Individual meetings were held with landowners affected by land acquisition or changes to their access prior to the public display.

Following the public display, individual meetings were held with a number of additional landowners who attended the public display and were interested in a meeting. Summaries of all landowner meetings are recorded in Consultation Manager.

Most landowners were accepting of the design and understood the need for acquisition, but would like to see it minimised as much as possible. Owners of 14 Carissa Court were not happy with the acquisition required from their property as it impacts on their available farm land and the trees planted on the highway side of their property. Jacobs informed them that the intent of the project is to acquire as little land as possible, however the constraints of the site have meant that some land is required. The required acquisition from 14 Carissa Court is currently estimated as 1,263 m^2 but may be able to be reduced during the detailed design.

Some residents were concerned about increased noise at their property. Jacobs explained that early noise modelling results show that no properties will experience a noticeable increase in noise and therefore no mitigation measures are currently proposed. Jacobs explained that the current results would be validated with noise monitoring over the coming weeks and Jacobs will contact affected residents if mitigation is shown to be required.

Residents of 26 Iris Court (8 units) would all like to see the pine trees on Summerleas Road removed. Jacobs explained that removal of the pine trees is currently not required with the design.

2.3 Adjacent businesses

An introductory letter was sent to businesses in the vicinity of the works on 11 February 2016, introducing the project and offering an individual meeting to discuss the project. This included:

- Kingston High School
- Kingborough Sports Centre
- Southern Lights Hotel
- Kingston Cemetery

An individual meeting was held with Shane McIndoe, the current lessee of the Southern Lights Hotel. Shane does not own the land, which is owned by Baronda Pty Ltd. Shane is currently trying to buy the land and plans to build a retirement village around the hotel. Shane was generally happy with the proposed intersection safety improvements, but had some queries in regards to the acquisition process and how the project will impact on plans to build a retirement village.

Jacobs contacted Barry Dodge, the owner of the Southern Lights Hotel, on 2 March 2016, emailed him the design on 4 March and discussed the project with him at the public display on 5 March.

2.4 Bus operators

Two bus companies, Roberts Coaches and Goodluck, are licensed to use the stops currently located on the Huon Highway at the intersection. Telephone conversations were held with both companies on 4 November 2015 to discuss their operations. Both companies expressed safety concerns with the current location of the stops and were open to relocation of the stops, provided there wasn't a significant time impact.

A meeting was held with Jacobs, Andrew Mullen (State Growth), Roberts Coaches and Goodluck on 2 February 2016 to discuss the proposed bus stop locations at the existing pedestrian underpass. Both companies were receptive to this solution. It was agreed that installing stops at the underpass (about 800m from the intersection) is a safer alternative to having bus stops on the interchange ramps.

Whilst the stops are mainly used to exchange passengers, it was acknowledged that there are a small number of passengers who walk to and from the bus stops along Summerleas Road. This inconvenience was not thought to be a significant issue.

Both organisations were happy about the inclusion of a southbound overtaking lane and mentioned that merging back into highway traffic will be safer.

Tassielink services the area surrounding the intersection but does not use the stops on the highway. A meeting was held with Tassielink on 1 December 2015 to discuss the intersection upgrade.

Tassielink uses the stop on Nolan Crescent and commented that it isn't ideal due to the degree of detouring required. Tassielink stated that a DDA compliant bus stop on the east side of Summerleas Road near the intersection would be a better solution for them if it could be accommodated.

Jacobs investigated an additional bus stop on Summerleas Road (eastbound, located between the intersection and Nolan Cresent), however it could not be accommodated due to proximity to the interchange and conflict with an existing property access.

A telephone conversation was held with Tassielink on 22 March 2016 to inform them of the proposed design and that a bus stop on Summerleas Road could not be accommodated.

All discussions with bus operators are recorded in Consultation Manager.

2.5 RACT

A presentation was made to the RACT on 18 February 2016. Feedback on the design was positive. RACT offered to publish an article about the upgrade in their Journeys magazine. The article will be published in the June edition of the magazine.

2.6 Heavy vehicle operators

Denise McIntyre (State Growth) discussed the proposed height of the bridge with the Tasmanian Transport Association (TTA) who were supportive of a bridge height of 5.0m or greater. A link to the project website was emailed to the Tasmanian Transport Association on 4 March 2016, noting that the concept design would be displayed on the website the following day. This was later followed up with a courtesy email to the TTA on 18 March, with a response from the TTA on the same day.

2.7 Other stakeholders

On 16 February 2016 an email referring to the project website and the public display was sent to:

- Huon Valley Council
- RACT
- Cycling Tasmania
- Bicycle Network
- Kingborough Road Safety Committee
- Fern Tree Community Association
- Kingborough Bicycle Advisory Commitee
- Tasmanian Salmon Growers Association
- Transport Associations

3. Public Display

3.1 Overview

A public display was held on Saturday 5 March 2016, from 11am – 3pm, at the Channel Court shopping centre in Kingston, allowing the public to view and comment on the concept design. Staff from Jacobs and State Growth attended to explain the design and answer questions.

Following this public display, the concept design was displayed at Kingborough Council and the Huon Valley Council for two weeks. Feedback forms were provided at each display to invite comment on the design. The concept design was also provided for viewing on the State Growth website following the event on 5 March 2016.

The public display was advertised through a number of channels. A letter was sent to residents and businesses in the vicinity of the works, introducing the project and inviting them to the public display. Email invitations were sent to a number of stakeholders. Advertisements were published in the Mercury and the Kingborough Chronicle. Notices were also published in local school newsletters.

Posters advertising the public display were displayed at various locations around Kingston. A Variable Message Board (VMB) was used on the Huon Highway at the intersection to advertise the public display.

The public display was well attended. A total of 41 feedback forms were received from the manned public display and subsequent displays at council offices.

3.2 Feedback

The majority of feedback was positive, with most stakeholders concerned about the safety issues currently at the intersection. Many commented that they avoid the intersection if possible and the upgrade 'cannot happen soon enough'.

Stakeholders were pleased that the upgrade was happening soon but a number were concerned about accidents occurring before the upgrade commences. Some felt mitigation measures should be put in place in the interim such as reducing the speed limit or installing warning signage.

While the overwhelming majority of stakeholders were supportive of the grade separated solution, some felt that a less expensive at-grade solution would have been more appropriate.

Aspects that stakeholders liked about the design included:

- Much safer design
- Reduced delays and queuing
- Inclusion of pedestrian and cyclist facilities
- Provision of southbound overtaking lane on the Huon Highway
- Safer bus stop locations
- Minimised visual and noise impact by lowering Summerleas Road
- Roundabouts on Summerleas Road providing efficient traffic flows
- Removal of the informal gravel car parking

Concerns raised by stakeholders included:

- Perceived increase in noise
- Potential loss of views
- Impact of lighting on surrounding properties
- Noise, dust and disruptions during construction
- Safety of motorcyclists with the flexible safety barrier
- Loss of informal car parking on the highway
- Greater walking distance for pedestrians to new bus stops

- Overtaking lane not provided for northbound traffic
- Impact on property accesses
- Impact of construction on foundations of directly adjacent properties
- Impact on property values
- Speed limit remaining at 80km/h

Some issues caused conflicting stakeholder views. A number of residents adjacent to the intersection or passing lane would like to see noise barriers provided. Other residents were more concerned about loss of views and did not want noise barriers.

Some stakeholders would like to see the speed limit increased following the upgrade. Others preferred the 80km/h speed limit to be retained for reduced noise.

Residents adjacent to the intersection were pleased to see the removal of the informal gravel car parking. Other stakeholders were concerned about this loss of parking.

The most commonly raised issue was the concern of increased noise for residents adjacent to the intersection and passing lane, with many residents stating that noise barriers should be provided. At the public display it was explained that current noise modelling results show that no properties will experience a noticeable increase in noise and therefore no mitigation measures are currently proposed. Jacobs explained that the current results would be validated with noise monitoring over the coming weeks and Jacobs will contact affected residents if mitigation is shown to be required.

A number of residents complained about existing noise issues, particularly due to heavy vehicle engine braking. Jacobs explained that the Department of State Growth does not mitigate for existing noise issues.

Another common concern was the greater walking distance for pedestrians to the relocated bus stops. Jacobs acknowledged that some pedestrians will be required to walk further, however the proposed location is much safer for pedestrians to access as opposed to the current location.

The loss of the informal parking on the highway was raised by a number of stakeholders, with many referring to this area as a ‘park and ride’ facility. However the area is not a ‘park and ride’ facility (the bus stops service school buses only) and is mainly used for carpooling. Jacobs explained that it is not safe to provide parking at the intersection and the large parking facility near the Kingborough Sports Centre provides a convenient and safe alternative.

Many stakeholders were concerned about disruptions during construction, although it was acknowledged that some disruption is inevitable. It will be important to provide regular updates to the public during construction.

Appendix C: Public Display Plans

Roads for our Future

Huon Highway Summerleas Road Intersection Improvements

Background

The Huon Highway is an important road connecting community, industry and visitors to the Huon Valley with Hobart and delivering produce from the region to the major sea and air ports.

At the intersection with Summerleas Road, the Huon Highway passes next to the fast-growing Kingborough municipality, with Summerleas Road being a key link between residential areas and major commercial, educational, sporting and other facilities.

The existing intersection has a history of crashes, notably those related to right-turn movements and cross-highway traffic on Summerleas Road.

The Australian and Tasmanian Governments are jointly funding a project to improve this intersection to provide a safer road for all road users and reduce traffic delays in the area.

Features

The project will improve safety and reduce traffic delays at the Huon Highway - Summerleas Road intersection by constructing:

- a grade separated interchange with Summerleas Road passing under the Huon Highway
- roundabouts on Summerleas Road to provide access to and from the Huon Highway
- an overtaking lane on the Huon Highway for traffic travelling towards the Huon Valley (lane beginning immediately north of the Kingston interchange)
- a flexible safety barrier to separate traffic on the Huon Highway
- facilities for cyclists and pedestrians
- new bus bays.

Construction

Construction will be staged and traffic managed to reduce the impact on traffic flow and nearby residents and properties.

Benefits

- Improved road safety due to the elimination of cross-traffic movements
- Reduced traffic delays due to the (grade) separation of traffic streams
- Flexible safety barrier prevents head-on crashes and reduces severity of single vehicle crashes
- Improved safety for pedestrians and cyclists
- A better intersection to cater for growth in passenger and freight vehicles
- Greater connectivity and accessibility for the Kingborough community, including to the commercial centre and Kingston High School
- Reduced travel times for vehicles travelling towards the Huon Valley by providing an overtaking lane on the Huon Highway.

Proposed timing

Public Consultation	March-April 2016
Final Detail Design completed	August 2016
Start of works	November 2016
Completion of works	April 2018

Further Information

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Email: Andrew.Knight@jacobs.com

Web: www.transport.tas.gov.au/road/projects

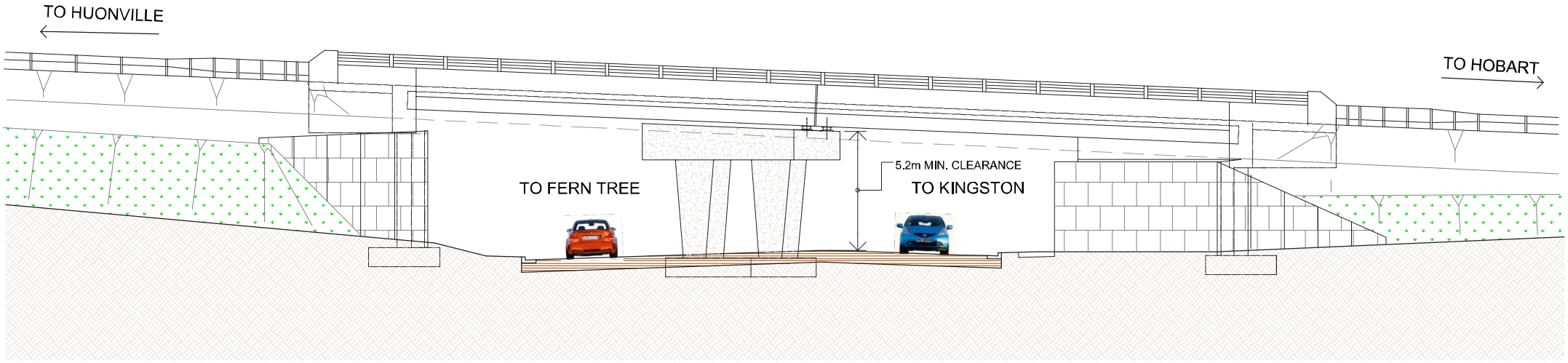
Scan this QR code with your smart phone to access the project website

Australian Government

BUILDING OUR FUTURE

Tasmanian Government

Huon Highway Summerleas Road Intersection Improvements - concept design



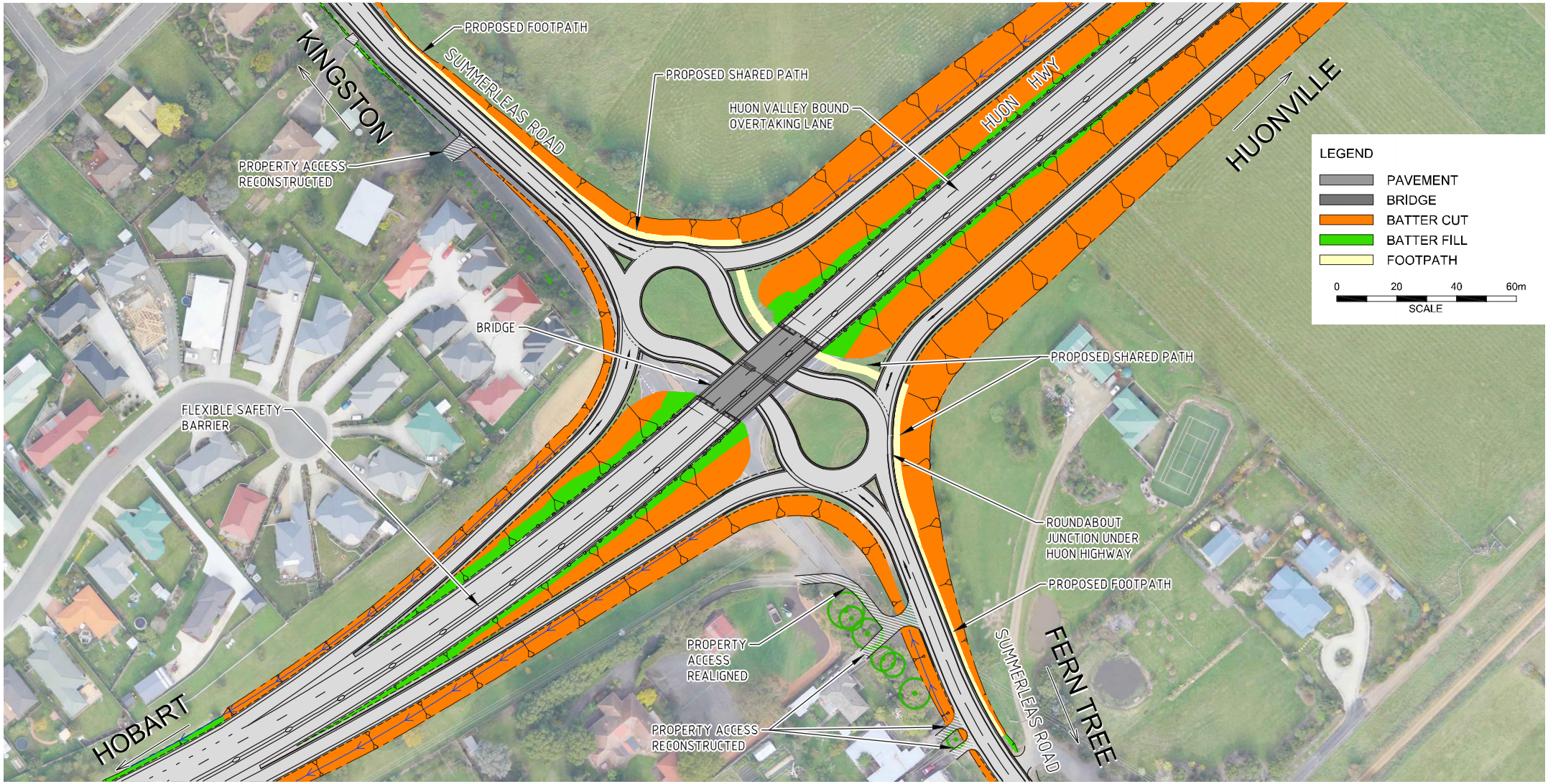
TYPICAL ELEVATION
SUMMERLEAS ROAD LOOKING TO FERN TREE

Australian Government
BUILDING OUR FUTURE

Tasmanian Government

Roads for our Future

Huon Highway Summerleas Road
Intersection Improvements - concept design



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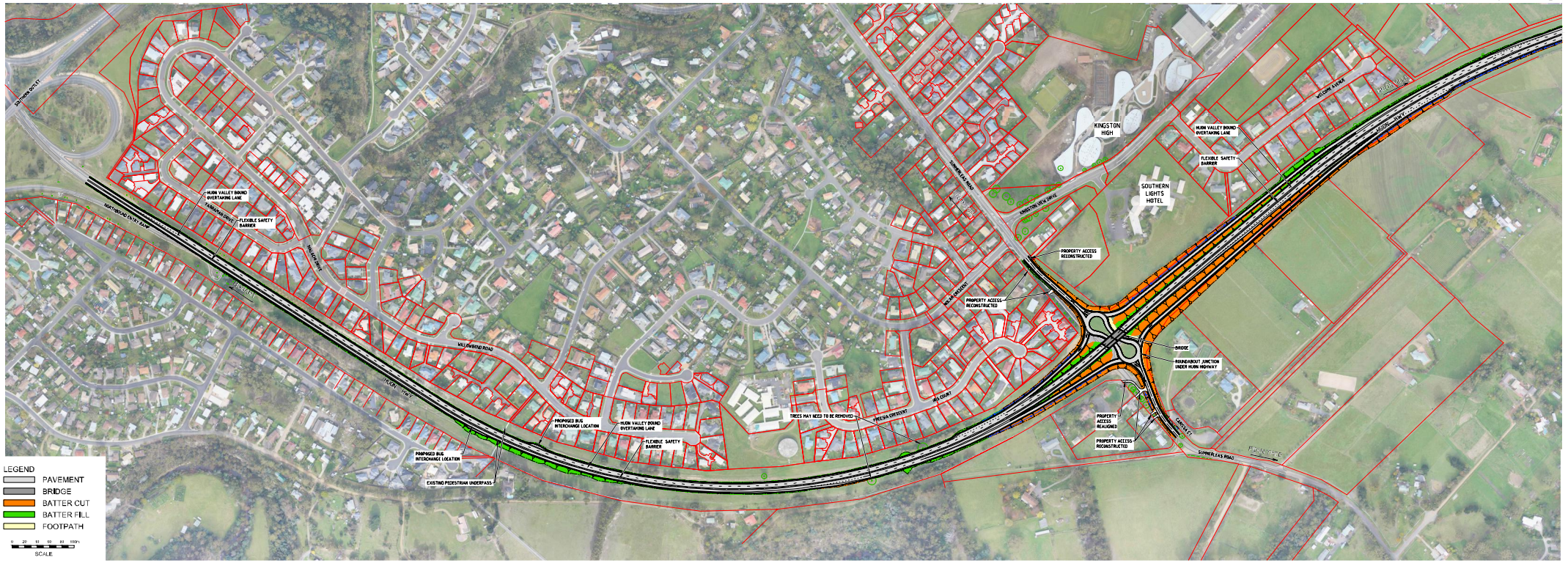
Roads for our Future

Huon Highway Summerleas Road Intersection Improvements - concept design



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