Transport for NSW

Monaro Highway Safety Improvements - South of Nimmitabel

Minor works review of environmental factors

May 2024



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Acknowledgement of Country

Transport for NSW acknowledges the Bidwell, Ngarigo and Yuin people, the traditional custodians of the land on which the Monaro Highway Safety Improvements is proposed.

We pay our respects to their Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation's First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples' cultural and spiritual connections to the land, waters and seas and their rich contribution to society.



OFFICIAL

Report review tracking

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Approval and authorisation

Approved by	Daniel Jones
Signed	
Date	27/3/2024

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1. Introduction

The purpose of the minor works review of environmental factors (REF) is to describe the proposal, to document the likely impacts of the proposal on the environment, to detail mitigation measures to be implemented and to determine whether or not the proposal can proceed. For the purposes of this work Transport for NSW (Transport) is the proponent and determining authority under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The description of the proposed works and assessment of associated environmental impacts has been undertaken in the context of section 171 of the Environmental Planning and Assessment Regulation 2021, Guidelines for Division 5.1 Assessments (DPE, 2022), the *Biodiversity Conservation Act 2016* (BC Act), the *Fisheries Management Act 1994* (FM Act) and the *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)* (EPBC Act).

In doing so the REF helps to fulfil the requirements of section 5.5 of the EP&A Act including that Transport examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the activity.

The findings of the REF would be considered when assessing:

- Whether the proposal is likely to have a significant impact on the environment and therefore the necessity for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act.
- The significance of any impact on threatened species as defined by the BC Act and/or FM Act, in section 1.7 of the EP&A Act and therefore the requirement for a Species Impact Statement or a Biodiversity Development Assessment Report.
- The potential for the proposal to significantly impact a matter of national environmental significance, including nationally listed threatened biodiversity matters, or the environment of Commonwealth land. Where a significant impact is considered likely on nationally listed biodiversity matters, either the proposal must be reconsidered or a project REF must be prepared.

2. The proposal

2.1 Description

2.1.1 Proposal location

Table 2-1: Proposal location details

Location details	
Title	Monaro Highway Safety Improvements, South of Nimmitabel Minor Works Review of Environmental Factors
File number	A64051632
Road name and number	HW19 - Monaro Highway
Closest crossroad(s)	Northern extent approximately 1900 m south of Old Bombala Rd, extending to 50 m south of Wallaces Road (Figure 1)
Chainage of works	44350 - 47385
Local government area	Snowy Monaro Regional Council
Transport for NSW region	South Region

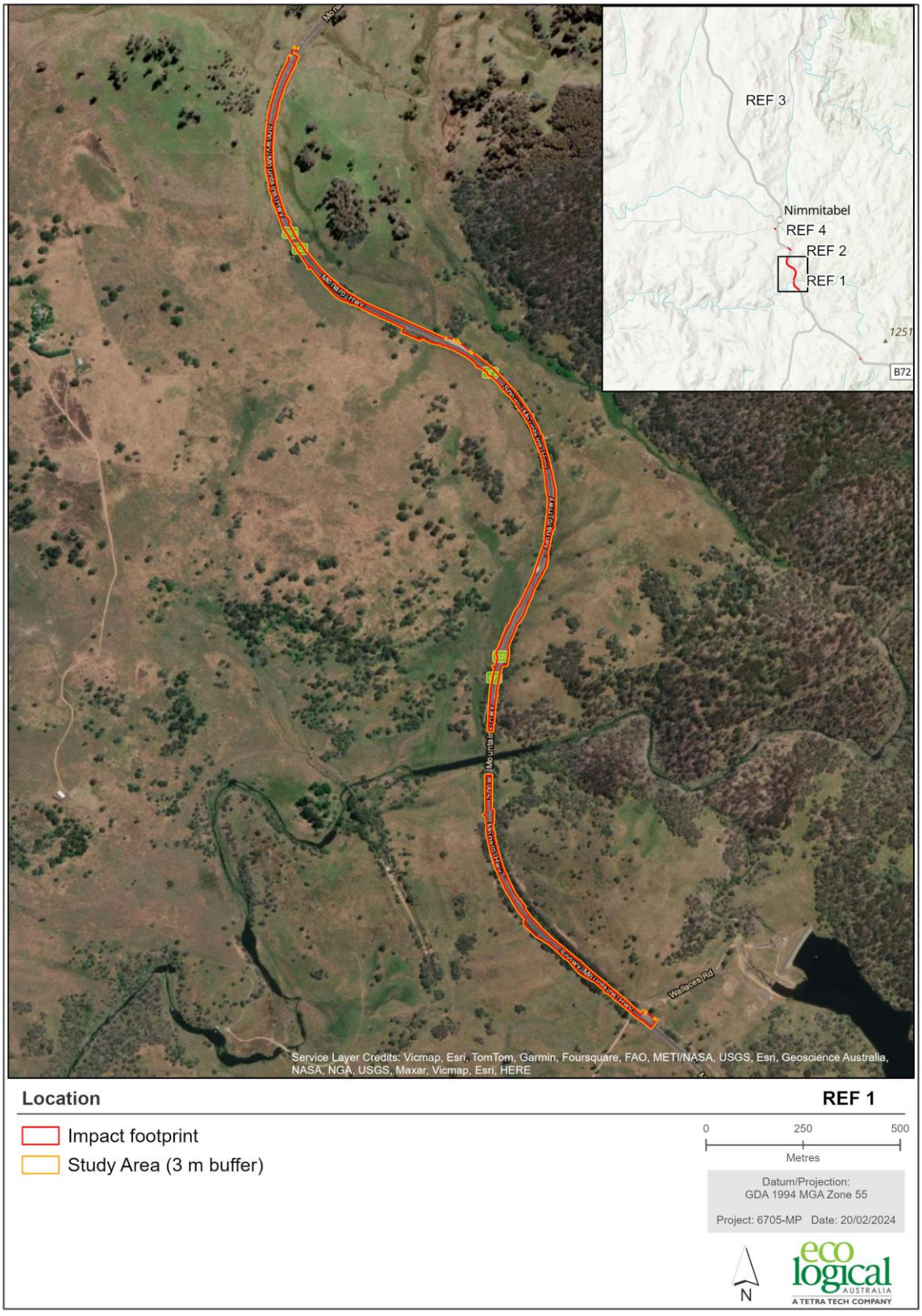


Figure 1: Location of the proposal (REF 1)

2.1.2 Proposal description

The Monaro Highway extends from the ACT border (Williamsdale) to the Victorian Border (Rockton) and measures 205 km long (within NSW). It provides an important link between the ACT and the Victorian Border via Michelago, Cooma, Nimmitabel and Bombala.

The Monaro Highway corridor:

- Serves as the primary connection to the NSW snowfields for traffic travelling from areas north of the ACT and Sydney, catering to both light vehicles and coach services
- Provides an important link between Regional Centres (Cooma and Bega) and the Global Gateway City of Canberra
- Facilitates travel within the South East and Tablelands region by providing a connection to east-west routes such as the Snowy Mountains Highway, Ando-Berridale Road and South Pambula-Bombala Road
- Supports freight access for South Eastern NSW forestry operations.

Between January 2015 and December 2019, the Monaro Highway corridor witnessed 182 recorded accidents. Among these, eight were fatal, resulting in 12 fatalities, while 26 were categorised as serious injury crashes. This collectively represents an overall accident rate of 17.2 accidents per 100 million vehicle kilometres travelled (100MVKT). In comparison to the statewide average, the accident rate on the Monaro Highway is lower north of Cooma but higher south of Cooma. Transport proposes to undertake safety improvement works on the Monaro Highway, to help mitigate this issue. This proposal will address one of a series of proposed safety improvement works as part of the Monaro Highway Upgrade Program (MHUP). Works will be located south of Nimmitabel, NSW, across Segments 637 to 639. It begins approximately 1.9 km south of Old Bombala Road and extends to about 50 m South of Wallaces Rd (approximately 3 km long), excluding the MacLaughlin River Bridge. The location of this proposal is shown in Figure 1.

The proposal design is presented in Appendix B: Proposal Design. Key features of the proposal include:

- Road widening to allow for 3.5 m wide travel lanes for the full length of the proposal
- Construction of a 0.6 metre wide centre line treatment (WCLT) for the full length of the proposal
- Construction of a minimum of one (1) metre sealed shoulder (total length 4.613 m), with up to three (3) metre sealed shoulder at selected locations (estimated total 136 m)
- Construction of audio tactile land marking (ATLM) between centre lines and adjacent to edge lines (9.000 m total length)
- Installation of flexible roadside safety barrier (FRSB) at selected location (total length 1.159 m)
- Installation of concrete SO gutter (estimated 2.200 m).

Locations of these key features are shown in Figure 4 and Figure 5. Locations of the stockpile sites (0.25 ha total area), compound site (0.02 ha in size) and spoil sites (0.1 ha in size) are shown in Figure 2 and Figure 3. Plant parking will occur on the compound site.

The proposed cross sections are shown in Figure 6. The total impact footprint of the proposal is 5.6 ha, with the study area (inclusive of the 3 m buffer), 1.9 ha. A total of 0.96 ha of vegetation will be impacted as a result of the proposal, including the removal of nineteen trees, and up to 0.04 ha of a threatened ecological community. These impacts are located within the impact footprint. There is potential for indirect impacts to 1.2 ha of mixed native and exotic vegetation and 0.01 ha of threatened ecological community vegetation in the 3m study area buffer, through disturbance via vehicle movements. These impacts will be avoided through appropriate controls outlined in this REF. Details on impacts to vegetation along with the trees to be removed within the impact footprint are provided in Section 3.7 and in Appendix C: Flora and Fauna Assessment Report Tree pruning is also required, however impacts to flora and fauna habitat are expected to be negligible, as discussed in the FFA (Appendix C: Flora and Fauna Assessment Report).

The proposal is anticipated to involve the following work methodology for the road widening and pavement placement:

Road Widening

Work Methodology

1. Clearing and grubbing.
2. Extend/ replace culverts.
3. Remove guard rail(s).
4. Commence boxing out.
5. Place fill.
6. Import and place pavement material.
7. Complete road furnishing works.
8. Sealing and line marking.

Machinery Required

- Excavator
- Trucks
- Watercart
- Rollers
- Graders
- Backhoe
- Bobcat
- Mills
- Kerb machines
- Concrete trucks
- Skid steer.

Pavement

Work Methodology

1. Import over lay.
2. Mix pavement with foam bitumen.
3. Place and roll pavement.
4. Seal and line mark.

Machinery required

- Road mills
- Mixers
- Spray trucks
- Grader
- Trucks
- Rollers.

Expected Hours of Works:

The proposal will be undertaken during standard working hours, with the exception of Saturday afternoon (1:00pm to 6:00pm):

Monday to Friday:	07:00 am – 06:00 pm
Saturday:	08:00 am – 06:00 pm
Sunday and Public Holidays:	No work

The proposed works require additional working hours during Saturday afternoon. These additional hours should only pose minor impacts on highway traffic and local residential receivers. The work site is within an isolated location. Further assessment of the impact of the additional hours has been discussed in section 3 of this document.

Storage and Disposal of Waste Material

Material will be stored at stockpile sites until it can be reused (Figure 2, Figure 3). Any unsuitable material will be disposed of at Cooma landfill.

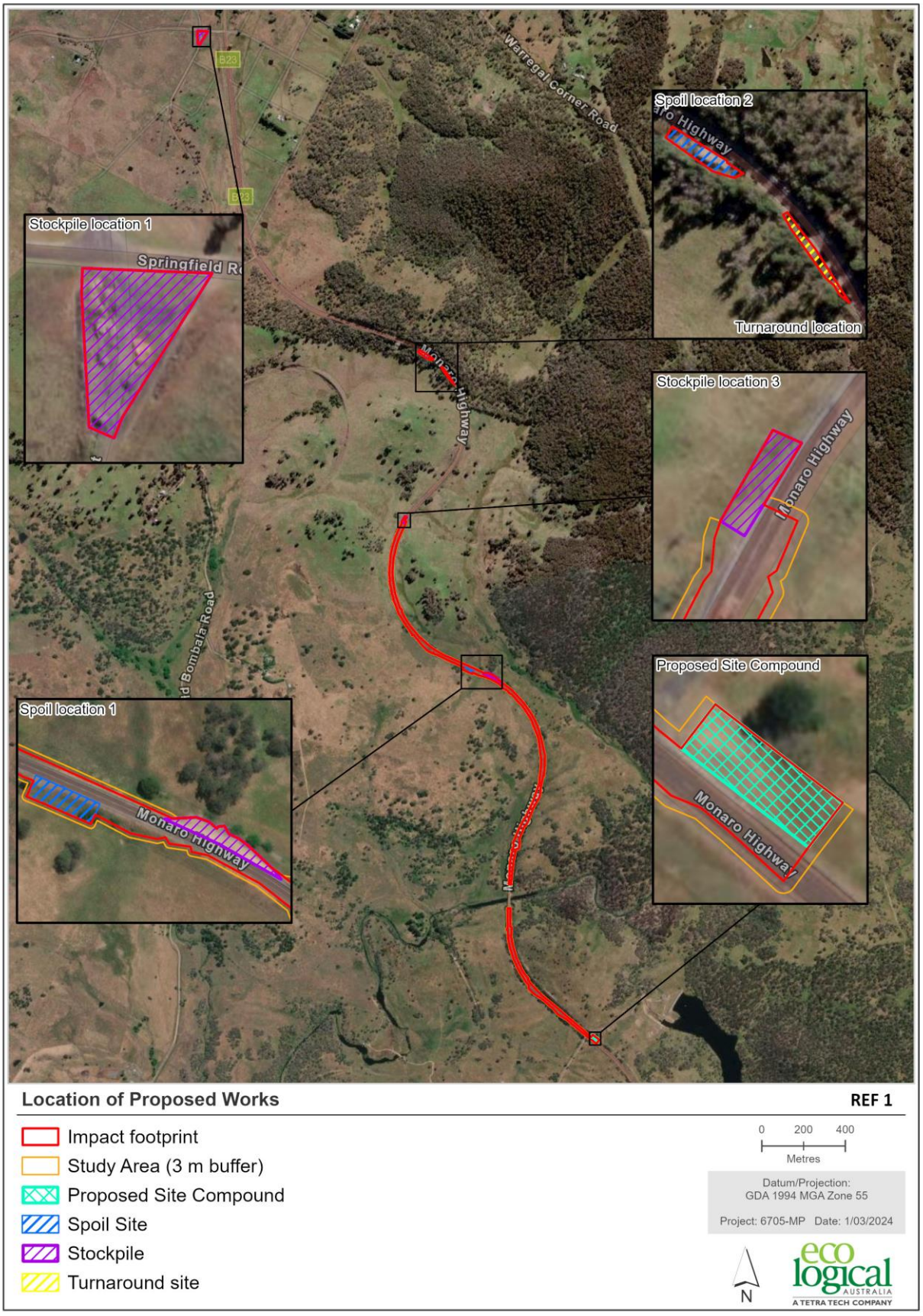


Figure 2 - Location of proposed works and ancillary activities (North)

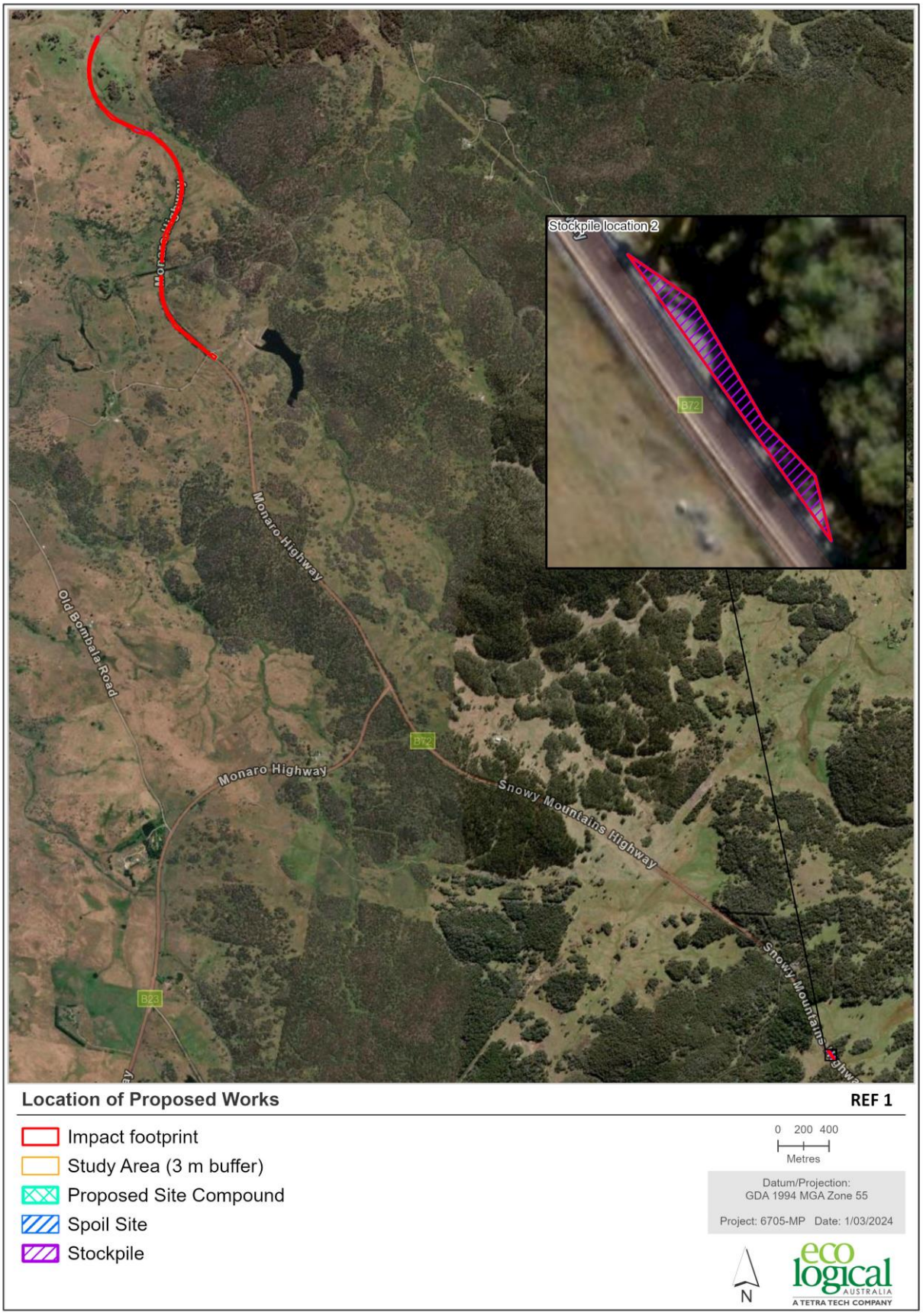


Figure 3: Location of proposed works and ancillary activities (South)

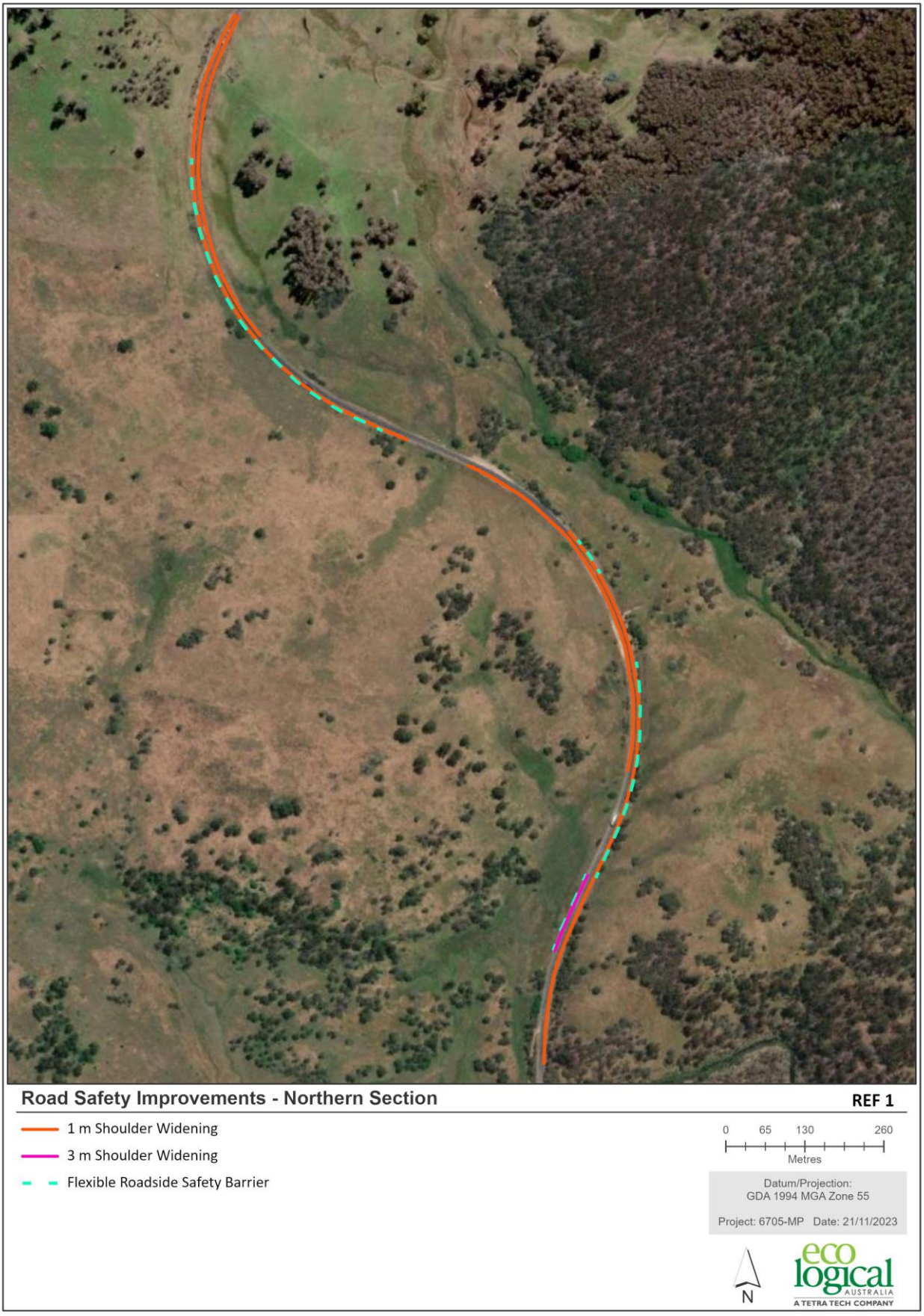


Figure 4: Key features of the proposal (Northern Section)



Figure 5: Key features of the proposal (Southern section)

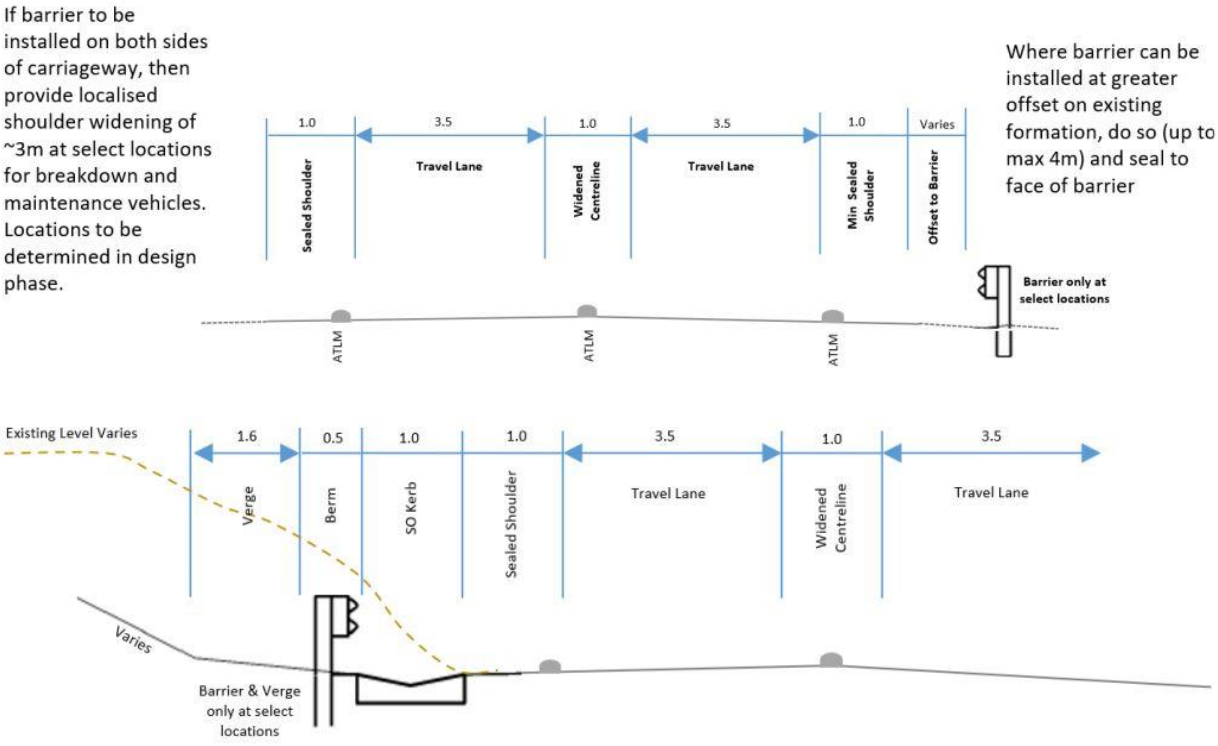


Figure 6: Targeted cross section (top) and targeted shoulder treatment in cut (bottom) of the proposal.

2.1.3 Proposal objectives

The proposal aims to contribute to the overall Monaro Highway Upgrade Program (MHUP) program objectives of:

- Reducing frequency of fatal and serious injury crashes on the highway through upgrading sections of the corridor that have existing 1 or 2-Star Australian Road Assessment Program (AusRAP) ratings to target minimum 3-Star ratings
- Enhancing corridor resilience to road incidents, natural hazards and during emergency situations
- Improving corridor efficiency for all road users through reduction in journey times and costs.

2.1.4 Ancillary facilities

Table 2-2: Ancillary facilities

Ancillary facilities		
Will the proposal require the use or installation of a compound site? The compound site is approximately 0.06 ha in size and will be positioned adjacent to the entrance of Wallaces Road, south of MacLaughlin River Bridge, on the eastern side of the highway (Figure 2 - Location of proposed works and ancillary activities (North) Figure 2 above, Photo 1, below). The vegetation within the proposed compound site is highly modified grassland, dominated by exotic grasses and weed species. The area is already very highly disturbed, and no threatened flora or fauna were identified during the survey. The compound site area will be restored to its previous condition upon completion of the proposed works. The compound site will be the location of non-erodible stockpiling and laydown area, staff amenities, site office and lunch room as well as a designated parking area. The location of the compound will be established next to the entrance to Lake Wallace Dam. Perimeter fencing will be established around the compound area to ensure the compound does not encroach on the access to the dam. Snowy Monaro Regional Council, who operate the dam will be notified of the proposal and its impact prior to commencement of works.	Yes ☒	No ☐
Will the proposal require the use or installation of a stockpile site? Four stockpile sites will be utilised for stockpiling of cut and fill materials arising from the bulk earthworks stage of the development (Photo 2, Photo 4, Photo 6, Photo 7; Figure 8-Figure 11). These stockpile areas are covered by exotic pasture grasses or are existing disturbed sites and as such, hold very little, if any, conservation value. The stockpile site areas will be restored to its previous condition or better upon completion of the proposed works.	Yes ☒	No ☐
Are any other ancillary facilities required? Two spoil sites will be utilised by the proposal up to a maximum of 0.1 ha. One site is located on the western side of the highway (Figure 11 above, Photo 5 below). This area contains highly modified grassland that is heavily dominated by exotic pasture grasses and contains two exotic *Rosa rubiginosa* (Sweet Briar) shrubs that will require removal. **The second spoil site is positioned alongside the Monaro Highway (**Photo 3 **below,** Figure 12 **above).** The spoil sites are positioned alongside the road corridor, flattening the gradient of the road edge and resulting in a minor beneficial safety improvement for road users. The second spoil site may require the removal of two trees as outlined in Appendix C: Flora and Fauna Assessment Report. In addition, Transport for NSW stockpiles STH19/Dalgety Road (approximately 4.5 kms North) and STH4/022 (approximately 12 kms South) may be utilised for the temporary storage of cut and fill materials during the proposed works. Use of these stockpiles will conform with Transport's Stockpile Management Guideline including but not limited to the implementation of erosion and sediment controls. Where possible, suitable materials currently stored at STH4/022 and STH19/Dalgety Road may be utilised as fill for the proposed works. The spoil sites will be restored to their previous condition or better upon completion of the proposed works. Parking areas will be required for plant vehicles at the compound site described above and shown in Figure 7. Approximately 3.5 m wide tracks for access to culverts will be required, though these will be located within the study area assessed. A turnaround area will be utilised throughout construction as mapped in Figure 12.	Yes ☒	No ☐



Figure 7: Site compound location

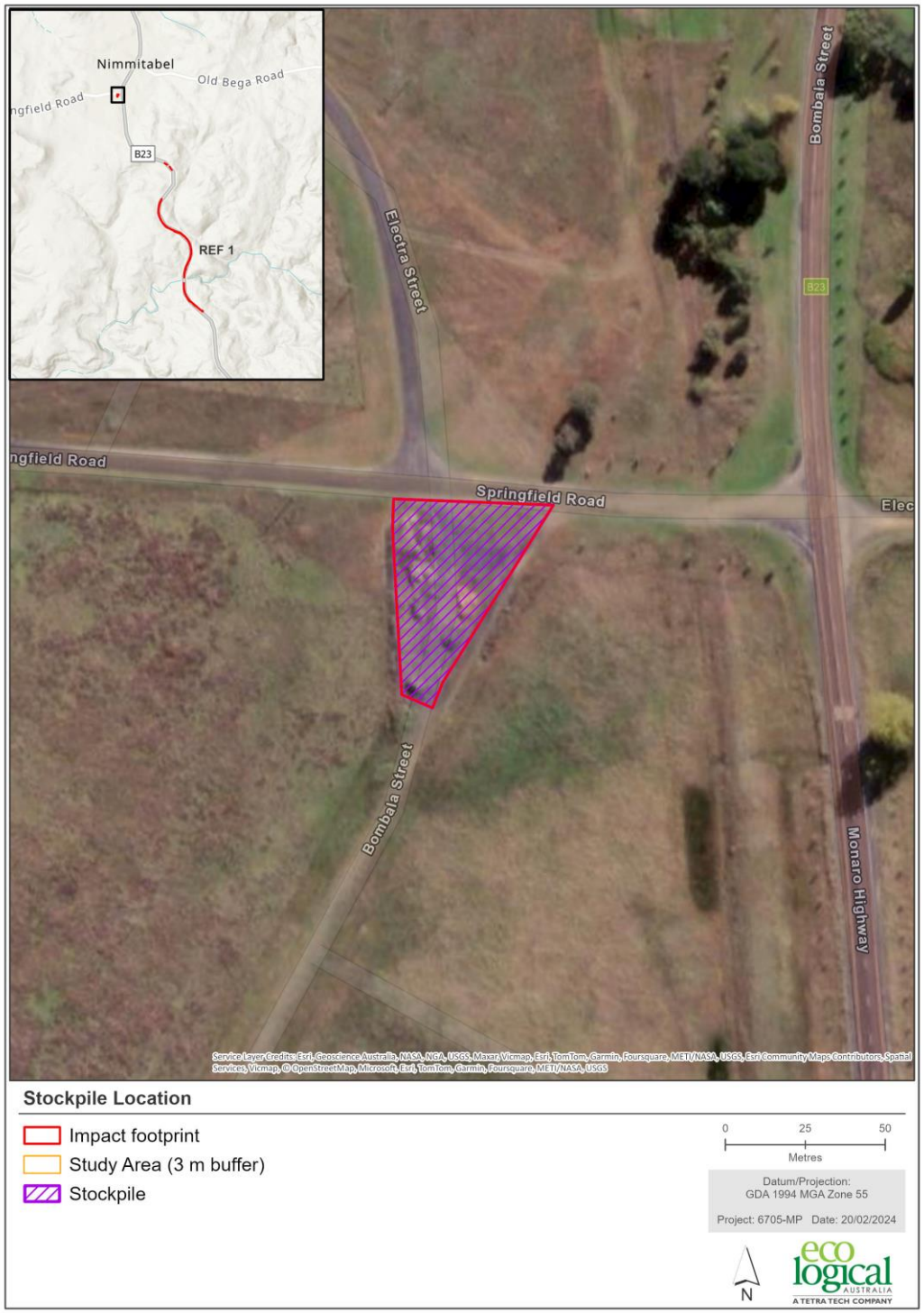


Figure 8: Stockpile location 1



Figure 9: Stockpile location 2



Figure 10: Stockpile location 3

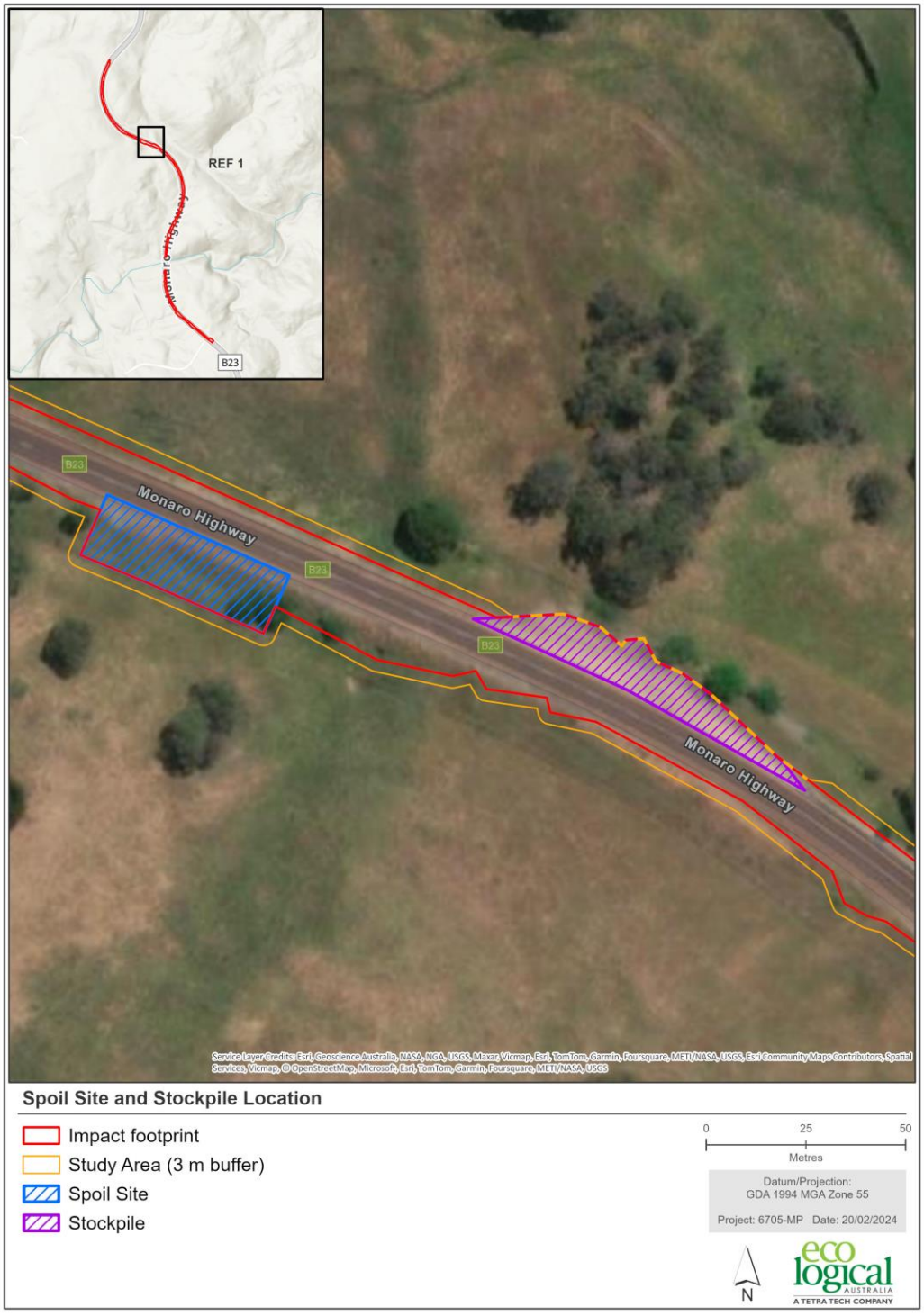


Figure 11: Spoil location 1 and stockpile location 4

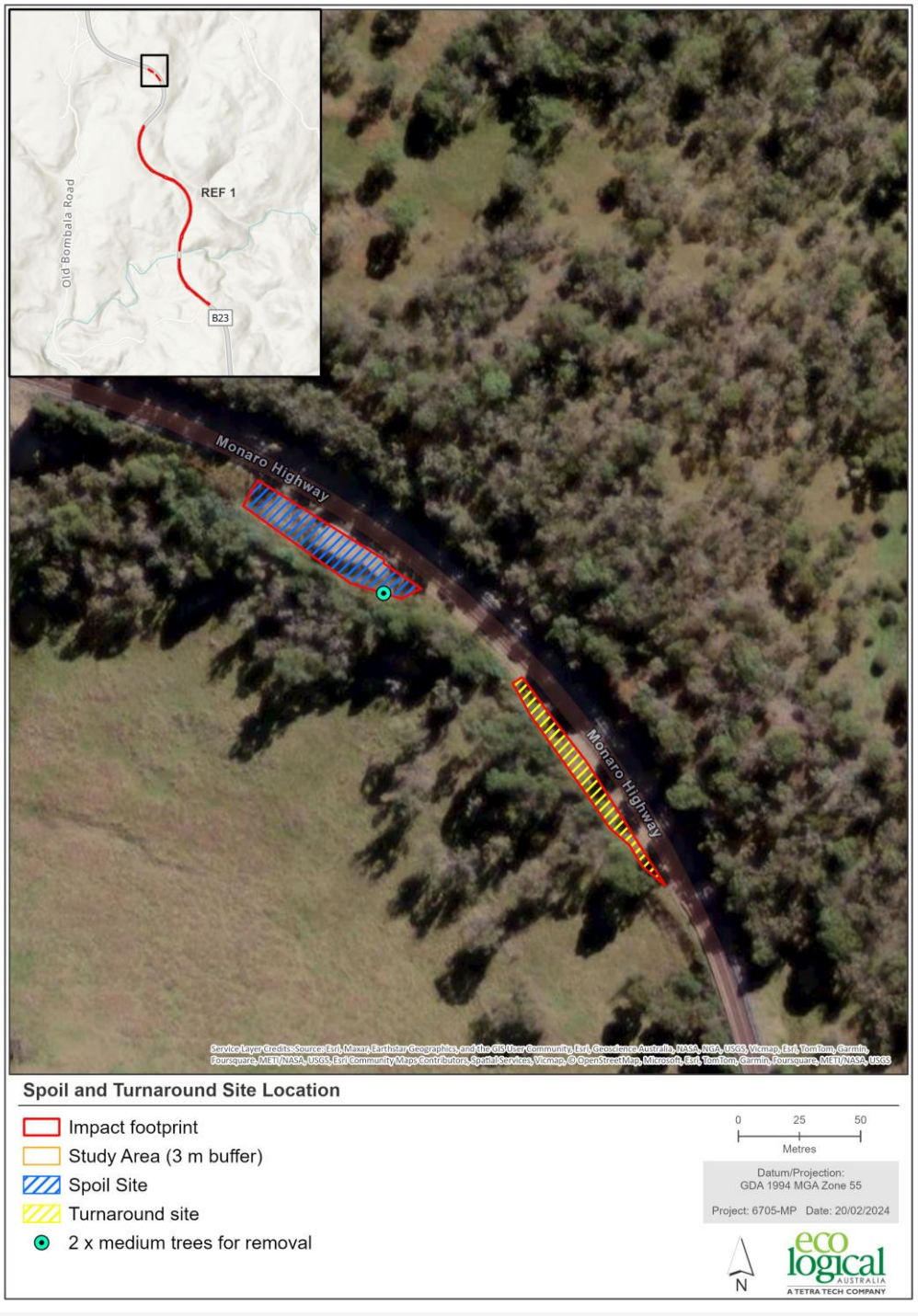


Figure 12: Spoil location 2 and turnaround site

2.1.5 Proposed date of commencement

The works are proposed to commence September 2024. Note that any timeframes provided are indicative only.

2.1.6 Estimated length of construction period

The estimated length of the construction period is 42 weeks. Note that any timeframes provided are indicative only.



Photo 1: Proposed compound site adjacent to entry to Lake Wallace Dam.



Photo 2: Stockpile location 4 to be positioned behind guard rails in existing vehicle pull over area.



Photo 3: Spoil site location 2 to occur in existing stockpile along the Monaro Highway.



Photo 4: Stockpile location 1 to occur in existing stockpile along Springfield Road.



Photo 5: Spoil site location 1 on highly modified grassland.



Photo 6: Stockpile location 3 along road corridor.



Photo 7: Stockpile location 2 at highly disturbed roadside location



Photo 8: Stockpile location 4 within disturbed location with highly modified grassland

2.2 Need and options

2.2.1 Options considered

In response to the strategic need for the proposal, two options were considered – the 'do nothing' option and the upgrade of the existing Monaro Highway south of Nimmitabel, beginning approximately 1.9 km south of Old Bombala Road and extending to roughly 50 m South of Wallaces Road (approximately 3 km long). These options were assessed against the proposal objectives delineated in Section 2.1.3 to determine a preferred option.

Option 1 - 'Do nothing'

The 'do nothing' option would involve the Monaro Highway continuing in its existing state, with no upgrade. This option would not align with the proposal objectives as it does not involve any improvements to corridor efficiency, resilience and safety. Consequently, it is unlikely to lead to a reduction in the frequency of fatal and serious injury accidents.

Option 2 – Monaro Highway Upgrade, South of Nimmitabel

The upgrade of the Monaro Highway option would improve road safety through the widening of travel lanes and shoulders, and the addition of WCLT, ATLM, SO kerbs and roadside safety barriers.

- **3.5 m wide travel lanes**

  The widening of travel lanes (to 3.5 m) would reduce the frequency of crashes, particularly head-on, run-off and sideswipe crashes. 3.5 m is the recommended width, as wider than 3.6 m does little to reduce crashes (iRAP, 2022).

- **0.6 m WCLT**

  WCLTs are a valuable road safety strategy for mitigating the likelihood of head-on collisions that result from drivers veering out of their designated lanes and right-hand run-off road accidents. This approach creates a physical division between vehicles traveling in opposite directions, proving especially beneficial on rural, undivided two-lane roads. It involves replacing the current centreline on a road with two new lines, spaced approximately 0.6 m apart, which is significantly wider than the standard 0.1 m centreline. This increased space between traffic lanes offers drivers more reaction time in case they inadvertently cross the centreline toward oncoming traffic. It is estimated that wide centrelines can contribute to a 50% reduction in head-on collisions. Additionally, WCLTs enhance road safety by increasing the visibility of oncoming traffic. This is particularly beneficial for motorists when passing cyclists, navigating around stopped vehicles, and overtaking slower-moving vehicles. WCLTs have gained international recognition as an efficient and cost-effective solution for reducing head-on collisions (NSW Government, 2018).

- **ATLM between centre lines and adjacent to edge lines (9,000 m total length)**

  In addition to road line markings (such as WCLTs), ATLM can be used to further enhance driver safety. ATLM functions by alerting drivers that their vehicle is departing the lane through both visual and audible cues. It is especially effective during nighttime and adverse weather conditions. When a vehicle's tyre crosses over these markings, they produce a distinctive audio-tactile effect, combining noise and vibration, thereby notifying the driver of any lane departure. It is estimated that ATLM can reduce the incidence of vehicles leaving their designated lanes by up to 30%, thereby contributing significantly to road safety (NSW Government, 2018).

- **Minimum 1 m sealed shoulder (estimated total 4 613 m) with 3 m sealed shoulder at select locations (estimated total 136 m)**

  Widening shoulders is a traditional road safety measure that offers drivers additional space to react and safely manoeuvre their vehicle.

- **Flexible roadside safety barrier at selected location (total length 1,159 m)**

  Flexible roadside safety barriers provide protection for vehicles against oncoming traffic and roadside hazards. In the event of a collision, these safety barriers deflect the vehicle thereby redirecting the vehicle away from the hazard. This not only helps mitigate the damage but also minimises the forces exerted on the vehicle's occupants. The implementation of flexible barriers has the potential to substantially reduce the severity of accidents by up to 85% (NSW Government, 2018).

- **SO gutter (estimated 2,200 m)**

  SO gutters will be constructed along approximately 2,200 m of the road to capture stormwater runoff from the road surface. The gutter will be approximately 1 m wide.

Preferred option

Option 2 was selected as the preferred option as it is consistent with the proposal objectives that are outlined in Section 2.1.3, and is therefore the subject of this REF. This option previously considered 1 m WCTL treatment, however this was later revised to 0.6 m which will reduce the overall environmental impact of the road safety upgrades on the road corridor and reduce the need for property acquisition. The proposal would assist in Transport maintenance. While the works would involve impacts to the surrounding environment, including sediment or water quality impacts, soil disturbance, visual and noise disturbance, the potential environmental impacts of the proposal have been identified as relatively minor and short term. On balance, the benefits derived from proceeding with the proposal are considered to outweigh the potential impacts.

2.2.2 Justification for the proposal

The proposal is required to improve road safety, corridor efficiency and enhance corridor resilience. By widening travel lanes and shoulders, and installing a one metre WCLT, the frequency of head-on collisions and run-off road accidents should be reduced, creating a safer road and resulting in a lesser number of fatal and serious injury road incidents. The installation of a flexible roadside safety barrier will provide protection for road users against roadside hazards, again improving road safety and mitigating the above average accident rate along this section of the Monaro Highway. The safety upgrades will improve the AusRAP rating to a minimum 3-star. The environmental impacts of the proposal are minor and outweighed by the positive outcomes outlined above and is therefore justified. Safeguards identified in Section 3 have been developed to manage and mitigate the potential negative impacts.

2.3 Statutory and planning framework

2.3.1 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP (Transport and Infrastructure)) aims to facilitate the effective delivery of infrastructure across the state. This includes roads and road infrastructure facilities.

Section 2.109 of the SEPP (Transport and Infrastructure) permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent. As the proposal is appropriately characterised as development for the purposes of a road or road infrastructure facilities and is to be carried out by or on behalf of Transport, it can be assessed under Division 5.1 of the EP&A Act. Development consent from council is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not require development consent or approval under:

- State Environmental Planning Policy (Resilience and Hazards) 2021
- State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021
- State Environmental Planning Policy (Precincts – Central River City) 2021
- State Environmental Planning Policy (Precincts – Western Parkland City) 2021
- State Environmental Planning Policy (Precincts – Regional) 2021
- State Environmental Planning Policy (Planning Systems) 2021.

2.3.2 Other relevant legislation and environmental planning instruments

Biodiversity Conservation Act 2016	The BC Act seeks: • *To conserve biological diversity at bioregional and State scales.* • *To maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations.* • *To assess the extinction risk of species and ecological communities and identify key threatening processes through an independent and rigorous scientific process; and* • *To establish a framework to avoid, minimise and offset the impacts of proposed development and land use change on biodiversity.* Section 7.3 of the Act requires proponents of activities subject to Part 5 of EP&A Act to determine whether they will have a significant impact on threatened species or ecological communities. The test for significant impact is described in Section 7.3 of the BC Act. If a significant impact is likely to occur, the proponent of the activity must prepare a Species Impact Statement (SIS) or a Biodiversity Development Assessment Report (BDAR) following Section 7.2 of the BC Act. To determine the significance of impact, tests of significance (5-part-tests) in accordance with Section 7.3 of the BC Act, were undertaken for entities listed under the BC Act which are considered likely to occur. A FFA was undertaken which included a desktop review of relevant background materials and databases (Section 3.7 and Appendix C: Flora and Fauna Assessment Report). A site inspection was also undertaken to validate the findings of the desktop assessment and identify the presence of Threatened Ecological Communities (TECs), flora, or fauna, or whether potential habitat for these entities is present. The FFA concluded that the proposed works will not significantly impact on any NSW state listed threatened species or ecological communities. As a result, a Species Impact Assessment is not required.
Biosecurity Act 2015	The *Snowy Monaro Region Local Weed Management Plan* provides a framework for regional weed management and supports regional implementation of the *Biosecurity Act 2015* (BS Act). The plan outlines how land managers can meet requirements under the General Biosecurity Duty. The plan also identifies state level and other priority weeds to provide focus to weed management in the region. Eight 'high threat weeds' were identified within the study area and include *Acetosella vulgaris* (Sheep Sorrel), *Achillea millefolium* (Yarrow), *Crataegus monogyna* (Hawthorn), Eragrostis curvula (African Lovegrass), Hypericum perforatum (St. John's Wort), *Paspalum dilatatum* (Paspalum), *Rosa rubiginosa* (Sweet Briar), and *Rubus parvifolius* (Native Raspberry). The proposal should minimise their spread to protect priority assets. The NSW Department of Primary Industries has issued an NSW Biosecurity (Invasive Ant Carriers) Control Order 2023 under the BS Act. The Order delegates the entire NSW as an Emergency Zone and imposes restrictions on moving 'invasive ant carrier' materials into NSW from infested areas, including organic mulch, soil, hay, plants, machinery and more. 'Invasive ant carrier' materials from infested regions entering NSW require an Interstate Biosecurity Certificate. All Transport personnel, contractors, and operators must adhere to the Order's provisions.
Fisheries Management Act 1994	The FM Act provides for the protection, conservation, and recovery of threatened species defined under the Act. It also makes provision for the management of threats to threatened species, populations and ecological communities defined under the Act, as well as the protection of fish and fish habitat in general. Concurrence from the Department of Primary Industries (Fisheries) is required prior to the commencement of works if triggers in accordance with Sections 198-202, 205 and 218-220 of the Act are met. No watercourses located within, adjacent to or near the proposed works are mapped as being habitat for threatened freshwater species. The MacLaughlin River, located adjacent to the proposed works, and Lake Wallace Dam, located 300 m from the proposed works, are mapped as key fish habitat.

	The proposal would not trigger consultation and/or permit requirements under the Act as dredging and reclamation (as defined in the Act) are not included in the proposed works.
Heritage Act 1977	The Heritage Act provides protection for the environmental and cultural heritage of the State, which includes places, buildings, works, relics, movable objects, or precincts that are of State or local heritage significance. Searches of the Australian Heritage Database, State Heritage Inventory (SHI) and the Cooma-Monaro LEP 2013 were conducted on 14 November 2023 to determine if any places of archaeological significance were located within the study area. No Aboriginal archaeological sites or heritage items were recorded on these databases as being within the study area.
National Parks and Wildlife Act 1974	The NPW Act is administered by the Director-General of the National Parks and Wildlife Service (NPWS), who is responsible for the control and management of all national parks, historic sites, nature reserves, and Aboriginal areas (among others). The main aim of the NPW Act is to conserve the natural and cultural heritage of NSW. The provisions of the NPW Act as they relate to the conservation of nature and cultural heritage items are unlikely to be triggered by the Proposal. Under the Act, it is an offence to cause damage to a plant or animal or cultural heritage item unless it is essential for carrying out an activity by a determining authority within the meaning of Part 5 of that Act if the determining authority has complied with that Part. No NPWS estate occurs in the immediate vicinity of the site, with the closest NPWS estate (South East Forest National Park) being approximately 8km to the east. An Aboriginal Heritage Information Management System (AHIMS) search based on a 10 km radius of the study area was completed in October 2023 (refer to Appendix D: AHIMS Database Searches). The search found: • Forty-two (42) Aboriginal sites within the vicinity of the study area (Appendix D: AHIMS Database Searches). The majority of sites recorded within the vicinity of the study area are recorded as artefact scatters and isolated finds (57.14%) and artefact with Potential Archaeological Deposit (PAD) (23.81%). • No sites have previously been recorded within the study area, though several artefact sites and areas of PAD have been recorded in association with the 'Lake Wallace Project' approximately 200m to the south-east of the study area (Appendix D: AHIMS Database Searches). These sites will not be impacted by the proposed works. A Stage 1 PACHCI Assessment was completed for the proposal by Transport for NSW Southern Region Aboriginal Cultural Heritage Officer (refer to Appendix C). Section 3.5 identifies safeguards to mitigate potential impacts resulting from the proposal. No permits under the National Parks and Wildlife Act 1979 are required for the proposal.
State Environmental Planning Policy (Biodiversity and Conservation) 2021	The Biodiversity and Conservation State Environmental Planning Policy (BCSEPP) came into effect on March 1, 2022, replacing the now repealed State Environmental Planning Policy (Koala Habitat Protection) 2021 (Koala Habitat Protection SEPP), which aims to encourage the proper conservation and management of areas of natural vegetation, including areas that provide habitat for Phascolarctos cinereus (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline. The proposal is located on land to which Chapter 4 Koala Habitat Protection of the BCSEPP applies. The habitat within the study area and surrounds is not typically associated with Koalas and their preferred feed species, however the study area does contain some Peppermint towards the southern end. This taller forest species and forest type is more associated with Koala habitat and exists in the wider locality, though provides only marginal potential dispersal habitat. Two koala records have been identified within 5 km of the study area (historic records from 1980 and 1981) and one closer to Nimmitabel within 10 km of the study area (community survey with very little information). Due to the distinct lack of recent records close to the study area and lack of habitat to be modified, the proposal is unlikely to have any significant impact on Koalas or their habitat in the region or the state. The proposal would not impact

	on any known koala feed trees. Trees proposed to be removed are not listed as koala feed trees in the Biodiversity and Conservation SEPP. Vegetation will be retained where possible and it is unlikely that these have habitat value for koalas. The vegetation removal associated with project would be limited to weeds and a small area of regrowth shrubs. No threatened species habitat would be removed.
Environment Protection and Biodiversity Conservation Act 1999	The EPBC Act protects Matters of National Environmental Significance (MNES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others). Any actions that will or are likely to have a significant impact on the matters of MNES require referral and approval from the Australian Government Environment Minister. Significant impacts are defined by the Australian Government (Commonwealth of Australia, 2013) for matters of MNES. MNES that may potentially be impacted by the proposal were assessed in the FFA (Appendix C: Flora and Fauna Assessment Report) and summarised in Appendix A: Consideration of State and Commonwealth environmental factors. Assessments of significance were completed and concluded that no MNES or Commonwealth Land are likely to be significantly impacted by the proposal.
Environmental Planning and Assessment Act 1979	The proposal is located within the Snowy Monaro Local Government Area and is covered by the Cooma-Monaro Local Environmental Plan (LEP) 2013. The proposed works will occur on land zoned as SP2 Infrastructure. Objectives of the SP2 zone are: • To provide for infrastructure and related uses. • To prevent develpoment that is not compatible with or that may detract from the provision of infrastructure. Land surrounding the study area is zoned RU1 Primary Production. Objectives of the RU1 zone are: • To encourage sustainable primary industry production by maintaining and enhancing the natural resource base. • To encourage diversity in primary industry enterprises and systems appropriate for the area. • To minimise the fragmentation and alienation of resource lands. • To minimise conflict between land uses within this zone and land uses within adjoining zones. • To ensure that the productive capacity of agricultural land is appropriately recognised and managed. The proposal is exempt from requiring development consent under Section 2.109(1) of Transport and Infrastructure SEPP. Despite this, transport requires all environmental impacts to be considered, including zoning objectives. The proposal is consistent with the LEP zoning objectives.
Native Title Act 1993	The *Native Title Act 1993* (NT Act) recognises and protects native title. The Act covers actions affecting native title, the processes for determining whether native title exists and compensation for actions affective native title. It establishes the Native Title Registrar, the National Native Title Tribunal, the Register of Native Title Claims, the Register of Indigenous Land Use Agreements and the National Native Title Register. A search of the National Native Title Tribunal did not identify any Registered Native Title claims within the proposal area.
Protection of the Environment Operations Act 1997	*The Protection of the Environment Operations Act 1997* (POEO Act) is the key piece of environment protection legislation administered by the EPA. Part 5.4 illustrates the requirements to minimise air pollution, Part 5.5 communicates the conditions to minimise noise pollution and Part 5.7 describes the obligation to notify pollution incidents. The proposal will comply with these Parts throughout all aspects. In the unlikely event of a pollution incident, notification will be completed as required.

2.4 Community engagement and agency consultation

2.4.1 SEPP (Transport and Infrastructure) consultation

Part 2.2 of the SEPP (Transport and Infrastructure) contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. This is detailed below:

Table 2-3: Consultation required with Council

Is consultation with Council required under sections 2.10 -2.12 and 2.14 of the SEPP (Transport and Infrastructure)?		
Are the works likely to have a substantial impact on the stormwater management services which are provided by council?	Yes ☐	No ☒
Are the works likely to generate traffic to an extent that will strain the capacity of the existing road system in a local government area?	Yes ☐	No ☒
Will the works involve connection to a council owned sewerage system? If so, will this connection have a substantial impact on the capacity of the system?	Yes ☐	No ☒
Will the works involve connection to a council owned water supply system? If so, will this require the use of a substantial volume of water?	Yes ☐	No ☒
Will the works involve the installation of a temporary structure on, or the enclosing of, a public place which is under local council management or control? If so, will this cause more than a minor or inconsequential disruption to pedestrian or vehicular flow?	Yes ☐	No ☒
Will the works involve more than a minor or inconsequential excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	Yes ☐	No ☒
Is there a local heritage item (that is not also a state heritage item) or a heritage conservation area in the study area for the works? If yes, does a heritage assessment indicate that the potential impacts to the heritage significance of the item/area are more than minor or inconsequential?	Yes ☐	No ☒
Is the proposal within the coastal vulnerability area and inconsistent with a certified coastal management program applying to that land? Note: See interactive map at Coastal management - (nsw.gov.au). Note the coastal vulnerability area has not yet been mapped. Note: a certified coastal zone management plan is taken to be a certified coastal management program.	Yes ☐	No ☒
Are the works located on flood liable land? If so, will the works change flooding patterns to more than a minor extent? Note: Flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the Floodplain Development Manual: the management of flood liable land (nsw.gov.au).	Yes ☐	No ☒

Table 2-4: Consultation with other public authorities

Is consultation with a public authority (other than Council) required under sections 2.13, 2.15 and 2.16 of the SEPP (Transport and Infrastructure)?		
Are the works located on flood liable land? (to any extent) If so, do the works comprise more than minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance? Note: Flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the Floodplain Development Manual: the management of flood liable land (nsw.gov.au).	Yes ☐	No ☒
Are the works adjacent to a national park, nature reserve or other area reserved under the *National Parks and Wildlife Act 1974*, or on land acquired under that Act?	Yes ☐	No ☒
Are the works on land in Zone C1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	Yes ☐	No ☒
Do the works include a fixed or floating structure in or over navigable waters?	Yes ☐	No ☒
Are the works for the purpose of residential development, an educational establishment, a health services facility, a correctional facility or group home in bush fire prone land?	Yes ☐	No ☒
Would the works increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map? (Note: the dark sky region is within 200 kilometres of the Siding Spring Observatory)	Yes ☐	No ☒
Are the works on buffer land around the defence communications facility near Morundah?	Yes ☐	No ☒
Are the works on land in a mine subsidence district within the meaning of the *Mine Subsidence Compensation Act 1961*?	Yes ☐	No ☒
Are the works on, or reasonably likely to have an impact on, a part of the Willandra Lakes Region Work Heritage Property?	Yes ☐	No ☒
Are the works within a Western City operational area specified in Schedule 2 of the *Western Parkland City Authority Act 2018* with a capital value of $30 million or more?	Yes ☐	No ☒

Table 2-5: Notification of council and occupiers of adjoining land

Do Council and occupiers of adjoining land need to be notified under section 2.111 of the SEPP (Transport and Infrastructure)?		
Does the proposal include a car park intended for the use by commuters using regular bus services?	Yes ☐	No ☒
Does the proposal include a bus depot?	Yes ☐	No ☒

Does the proposal include a permanent road maintenance depot or associated infrastructure, such as garages, sheds, tool houses, storage yards, training facilities and workers amenities?	Yes ☐	No ☒

2.4.2 Other agency and community engagement

No other agency or community engagement has been undertaken. However, TfNSW would notify the Snowy Monaro Council of the proposed works.

Variable Message Signs (VMS) would be installed at the site prior to work commencing advising of the proposed work and subsequent impact on road users. TfNSW would also advertise the proposed works on Live Traffic NSW and by Traffic Alert.

If any works are to occur outside the standard working hours between 1:00pm and 6:00pm on Saturdays as outlined in the REF, a notification will be sent to the community advising of the additional working hours and its impact.

3. Environmental assessment

This chapter provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposal. All aspects of the environmental potentially impacted upon by the proposal are considered. This includes consideration of the factors specified in s171 of the Environmental Planning and Assessment Regulation 2021.

The matters of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) are also considered in Appendix A. Site-specific safeguards are provided to ameliorate the identified potential impacts.

3.1 Soil

Table 3-1: Soil

Description of existing environmental and potential impacts		
Are there any known occurrences of salinity or acid sulfate soils in the area?	Yes ☐	No ☒
Does the proposal involve the disturbance of large areas for earthworks? The proposal's impact footprint is 5.6 ha, and the study area (3 m buffer) is 1.9 ha, and therefore involves the disturbance of large areas for earthworks. Safeguards have been provided to mitigate potential impacts to erosion and sedimentation (Table 3-2).	Yes ☒	No ☐
Does the site have constraints for erosion and sedimentation controls such as steep gradients or narrow corridors? There is sufficient land available that would allow the future implementation of appropriate erosion and sedimentation control measures.	Yes ☐	No ☒
Are there any sensitive receiving environments that are located in or nearby the likely proposal area or that would likely receive stormwater discharge from the proposal? Sensitive receiving environments include (but are not limited to) wetlands, state forests, national parks, nature reserves, rainforests, drinking water catchments). Lake Wallace Dam, the drinking water supply for the township of Nimmitabel, is located approximately 300 m from the study area at its closest point. The dam is located upstream of the works, therefore will not have the potential to receive any stormwater discharge from the proposal. The MacLaughlin's River is located downstream of the proposal, along with several smaller tributaries connected to this river and Grandfathers Creek, therefore appropriate erosion and sediment control measures will be implemented and maintained to avoid discharge of sediment laden water.	Yes ☐	No ☒
Is there any evidence within or nearby the likely footprint of potential contamination? No potential contamination sites were identified within 1km of the proposal in the NSW EPA Contaminated Land Record of Notices.	Yes ☐	No ☒
Is the likely proposal footprint in or nearby highly sloping landform?	Yes ☐	No ☒
Is the proposal likely to result in more than 2.5ha (area) of exposed soil? The proposal's impact footprint is 5.6 ha and is therefore likely to result in more than 2.5 ha of exposed soil. On review of NSW Soil and Land Information (eSPADE), it is noted that soils in the vicinity of the study area are Kandosols which are known to occur in upland areas close to the dividing range. Soil in the study area has a moderate level of erodibility, which will require careful consideration to reduce the potential for erosion impacts on sensitive receiving environments. Safeguards have been provided to mitigate potential impacts of erosion and sedimentation (Table 3-2).	Yes ☒	No ☐

Safeguards

Safeguards to be implemented can be found in Table 3-2.

Table 3-2 Soil safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
E1	Erosion and sedimentation	Erosion and sediment control measures are to be implemented and maintained to: • Prevent sediment moving off-site and sediment laden water entering any water course, drainage line, or drain inlet • Reduce water velocity and capture sediment on site • Minimise the amount of material transported from site to surrounding pavement surfaces • Divert clean water around the site. (In accordance with the Landcom/Department of Housing *Managing Urban Stormwater, Soils and Construction Guidelines* (the Blue Book)).	Construction
E2	Erosion and sedimentation	Erosion and sedimentation controls are to be checked and maintained on a regular basis (including clearing of sediment from behind barriers) and records kept and provided on request.	Construction
E3	Erosion and sedimentation	Erosion and sediment control measures are not to be removed until the work is complete, and areas are stabilised.	Construction
E4	Erosion and sedimentation	Work areas are to be stabilised progressively during the work.	Construction
E5	Erosion and sedimentation	A progressive erosion and sediment control plan is to be prepared for the work.	Construction
E6	Erosion and sedimentation	The maintenance of established stockpile sites during is to be in accordance with the *RMS Stockpile Site Management Guidelines 2015.*	Construction

3.2 Waterways and water quality

Table 3-3: Waterways and water quality

Description of existing environmental and potential impacts		
Is the proposal located within, adjacent to or near a waterway? The proposal is located adjacent to the MacLaughlin River and in proximity to (within 300 m) Lake Wallace Dam, the water supply for Nimmitabel. Although the proposed works won't directly impact the MacLaughlin River, there is potential for an adverse, indirect impact through sediment run-off and erosion. This impact can be mitigated in accordance with the Landcom/Department of Housing *Managing Urban Stormwater, Soils and Construction Guidelines* (the Blue Book) via the installation of erosion and sediment control measures to prevent any materials from entering any nearby waterways. Other impacts on water quality can occur as the result of unplanned discharge and accidental spills on construction sites, such as hydrocarbon-based products accidentally entering the water environment. Safeguards including preventative checks and adherence to controls during construction works will be undertaken to minimise the potential for unplanned discharge and accidental spills that could affect water quality. Safeguards have been provided to mitigate potential impacts to waterways and water quality (Table 3-4).	Yes ☒	No ☐
Is the location known to flood or be prone to water logging?	Yes ☐	No ☒

Is the proposal located within a regulated catchments covered by chapter 6 of State Environmental Planning Policy (Biodiversity and Conservation) 2021 (SEPP (Biodiversity and Conservation))?	Yes ☐	No ☒
Would the proposal be undertaken on a bridge or ferry? The MacLaughlin River Bridge is not a part of the proposed works.	Yes ☐	No ☒
Is the proposal likely to require the extraction of water from a local water course (not mains)?	Yes ☐	No ☒

Safeguards

Safeguards to be implemented can be found in Table 3-4.

Table 3-4: Waterways and water quality safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
W1	Waterways and water quality	There is to be no release of dirty water into drainage lines and/or waterways.	Construction
W2	Waterways and water quality	Visual monitoring of local water quality is to be carried out on a regular basis to identify any potential spills or deficient erosion and sediment controls.	Construction
W3	Waterways and water quality	Water quality control measures are to be used to prevent any materials entering drain inlets or waterways. Excess debris from cleaning and washing is to be removed using hand tools. Further details around waste water quality controls will be specified in an Environmental Management Plan.	Construction
W4	Waterways and water quality	Potable water is to be used for wash down. Containment material is used to capture / filter water used in wash down.	Construction
W5	Waterways and water quality	A dedicated concrete washout facility that is impervious shall be provided during construction so that runoff from the washing of concrete machinery, equipment and concrete trucks can be collected and disposed of at an appropriate waste facility. Vehicle wash down and/or cement truck washout is to occur in a designated bunded area and least 50 metres away from water bodies and surface water drains.	Construction

3.3 Noise and vibration

Table 3-5: Noise and vibration

Description of existing environmental and potential impacts		
Are there any residential properties or other noise sensitive areas near the location of the proposal that may be affected by the work? The closest residential properties are located approximately 650 m and 800 m away from the proposed work on Wallaces Road and Old Bombala Road.	Yes ☐	No ☒
Is the proposal going to be undertaken only during standard working hours? The proposal will be undertaken during standard working hours as outlined below: • Monday-Friday: 7:00am to 6.00pm • Saturday: 8.00am to 1.00pm • Sunday and Public Holidays: no work	Yes ☒	No ☐

In addition to the standard working hours the project will occasionally be required to work a full day on Saturdays, from 01:00pm – 06:00pm. The additional impact for construction noise and vibration impact has been assessed in Appendix E: Noise and Vibration Estimator		
Is any explosive blasting required for the proposal?	Yes ☐	No ☒
Would construction noise or vibration from the proposal affect sensitive receivers? As the nearest sensitive receiver is located greater than 600 m from the construction work, and the construction works will be undertaken only during standard working hours, it is not expected to significantly affect sensitive receivers. Using the Transport Construction and Maintenance Noise Estimator, the existing noise category was defined as R0 with the Distance Based (nosiest plant) estimator identifying a 13.5T excavator as the nosiest plant as the activity and the relative representative distance of 600 metres (being the closest sensitive receiver). Noise calculations detailed in Appendix E: Noise and Vibration Estimator Assessment outlined that any receivers within 120m should be notified of the proposed works during standard working hours. Any receivers within 250m should be notified during OOHW (day) works. Therefore, no notification is required for the proposed working hours. Should the proposed work being carried out outside the assessed hours, additional mitigation measures would be required as detailed in Appendix E: Noise and Vibration Estimator Assessment.	Yes ☐	No ☒
Would operation of the proposal alter the noise environment for sensitive receivers? ATLM will be constructed between centre lines and adjacent to edge lines of the road (9,000 m total length), however due to the distance of sensitive receivers to the road upgrades being greater than 600 m, ATLM is not likely to substantially alter the noise environment. As the proposal involves minor works that are primarily to improve safety, an increase in the traffic carrying capacity is not expected and therefore is unlikely to alter the noise environment for sensitive receivers once operational.	Yes ☐	No ☒
Would the proposal result in vibration being experienced by any surrounding properties or infrastructure during operation?	Yes ☐	No ☒

Safeguards

Safeguards to be implemented can be found in Table 3-6.

Table 3-6: Noise and vibration safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
N1	Noise and vibration	Work to be carried out during normal work hours. Any work that is performed outside normal work hours or on Sundays or public holidays is to minimise noise impact, would be subject to approval, notification, and preparation of a management plan.	Construction
N2	Noise and vibration	Noise impact is to be minimised in accordance with Transport's *Construction Noise and Vibration Guideline 2023.*	Construction

3.4 Air quality

Table 3-7: Air quality

Description of existing environmental and potential impacts		
Is the proposal likely to result in large areas (>2ha) of exposed soils? The proposal's impact footprint is 5.6 ha, therefore is likely to result in large areas of exposed soils. Dust emissions associated with the preparation and operations of stockpile sites would be minimised through implementation of Transport Stockpile Site Management Guideline. It is noted that the nearest sensitive receivers to the impact footprint are located greater than 600 m away, therefore impacts of dust are likely to be negligible at these locations. Safeguards have been provided to mitigate potential impacts to air quality (Table 3-8).	Yes ☒	No ☐
Are there any dust-sensitive receivers located within the vicinity of the proposal during the construction period?	Yes ☐	No ☒
Is there likely to be an emission to air during construction? Air quality impacts include emissions of CO_2, NO_2 and SO_2 associated with combustion of diesel fuel and petrol from construction vehicles, vessels, plant and equipment and dust emissions associated with preparation and operations of the nominated stockpile sites. The main sources for emissions will result from plant and dust from earthworks. Air quality impacts during construction of the proposal would include temporary impacts associated with dust particles and combustion sources. Anticipated sources of dust and dust-generating activities include dust from the loading and transfer of material from trucks and removal and placement of materials associated with the upgrade and dust emissions associated with preparation and operations of the nominated stockpile sites. Minimal and very localised excavation and soil stockpiling is expected as a result of the proposal. As such the dust load generated over a typical construction day is likely to be minor and is not expected to result in reduced local air quality. These emissions can be reduced through the implementation of recommended safeguards (Table 3-8).	Yes ☒	No ☐

Safeguards

Safeguards to be implemented can be found in Table 3-8.

Table 3-8: Air quality safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
A1	Air quality	Measures (including but not limited to watering or covering exposed areas) will be used to minimise or prevent air pollution and dust. The mitigation of specific tasks will be addressed in the Environmental Management Plan.	Construction
A2	Air quality	Vehicles transporting waste or other materials that may produce odours or dust will be covered during transportation.	Construction

3.5 Aboriginal cultural heritage

Table 3-9: Aboriginal cultural heritage

Description of existing environmental and potential impacts		
Would the proposal involve disturbance in any area that has not been subject to previous ground disturbances? The proposed works would involve widening the existing travel lanes. The study area has previously been highly modified by the construction of the Monaro highway, and the works are likely to be conducted over areas that have been subject to previous ground disturbances. The proposed works are unlikely to impact areas that have not previously been modified by natural erosional processes and the construction of the existing road.	Yes ☐	No ☒
Has an online Aboriginal Heritage Information Management System (AHIMS) search been completed? **AHIMS Database Search** An extensive search of the AHIMS database, as maintained by Heritage NSW and regulated under Section 90Q of the NPW Act, was conducted on 29 October 2023 to identify if any registered Aboriginal sites were present within, or adjacent to, the study area (Appendix D: AHIMS Database Searches). The AHIMS search represents 10km around the study area and was conducted within the following coordinates: GDA Zone 55; Eastings 700637 - 710637, Northings 5941962 - 5961962, with a buffer of 0 meters. The search resulted in the identification of forty-two (42) Aboriginal sites within the vicinity of the study area (Appendix D: AHIMS Database Searches). The sites recorded within the vicinity of the study area are recorded as artefact scatters and isolated finds (57.14%) and artefact with Potential Archaeological Deposit (PAD) (23.81%). **Heritage Database Searches** Searches of the Australian Heritage Database, State Heritage Inventory (SHI) and the Cooma-Monaro LEP 2013 were conducted on 14 November 2023 to determine if any places of archaeological significance were located within the study area. No Aboriginal archaeological sites or heritage items were recorded on these databases as being within the study area.	Yes ☒	No ☐
Is there potential for the proposal to impact on any items of Aboriginal cultural heritage? No known Aboriginal sites are expected to be harmed by the proposed works and no sites have previously been recorded within the study area. Several artefact sites and areas of PAD have been recorded in association with the 'Lake Wallace Project' approximately 200m to the south-east of the study area (Figure 14). The sites associated with the Lake Wallace Project have previously been subject to salvage under AHIP C0000529 and test excavations under AHIP 1132023 (issued in 2012 and expired in December 2014; see *Onsite, 2013. Aboriginal Cultural Heritage Assessment Archaeological Investigations and test excavations for the Lake Wallace Project*). AHIP C0000529 was issued to Cooma-Monaro Shire Council on 07 August 2014 and remains active until 07 August 2024. The current scope of works are located outside of the AHIP area (Figure 14).	Yes ☐	No ☒
Would the proposal involve the removal of mature native trees? There are mature native trees within the vicinity of the study area and the proposed works may involve the removal of six small to medium trees to the south of the bridge and ten small trees to the north of the bridge, as well as potential tree pruning. Whilst there is the potential for mature native trees to be removed by the proposed works, the existing road corridor has been largely cleared of native vegetation and there are no known culturally modified trees within the study area, indicating there is a low potential for any culturally modified mature trees to be impacted by the proposed works. However, avoiding and eliminating impacts to any mature trees within the proposed impact area is recommended.	Yes ☒	No ☐

Is the proposal consistent with the requirements of Transport's *Procedure for Aboriginal cultural heritage consultation and investigation* (PACHCI)? The proposal is consistent with the PACHCI stage one assessment and was assessed as being unlikely to have an impact on Aboriginal cultural heritage (Appendix F: Stage 1 Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI))). If the scope changes further consultation is required.	Yes ☒	No ☐

Safeguards

The study area has previously been highly modified by the construction of the Monaro highway, indicating a low potential for *intact* subsurface deposits to remain. There is a low likelihood for Aboriginal objects to be harmed by the proposed works, provided the safeguards and recommended mitigation measures are implemented. Safeguards to be implemented can be found in Table 3-10.

Table 3-10: Aboriginal cultural heritage safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
B1	Aboriginal heritage	If Aboriginal heritage items are uncovered during the works, all works in the vicinity of the find must cease and the Transport Aboriginal cultural heritage officer and Senior Manager Environment and Sustainability contacted immediately. Refer to steps in the Transport *Unexpected heritage items procedure* (EMF-HE-PR-0076) which must be followed.	Construction



Figure 13: Location of AHIMS sites and features

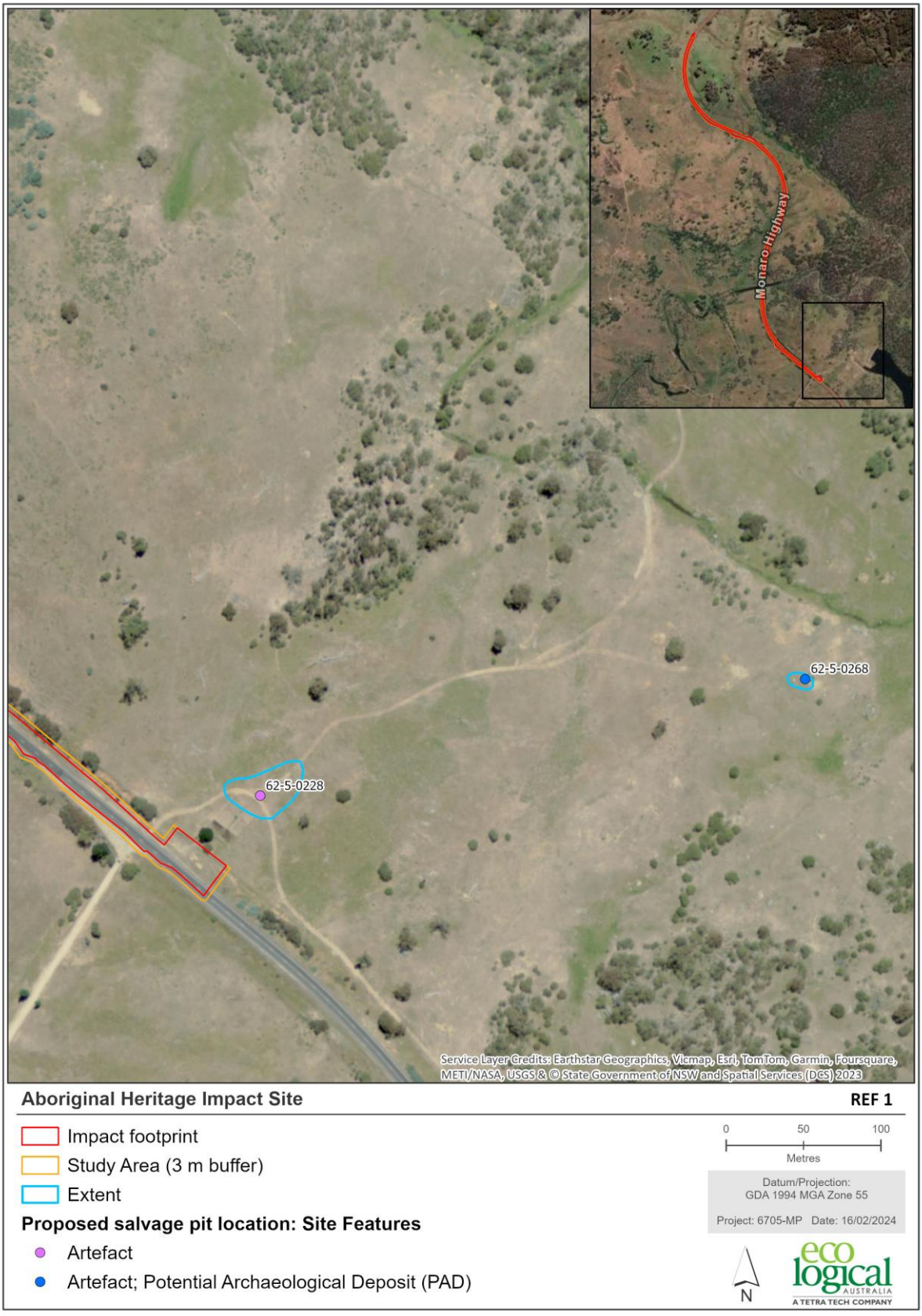


Figure 14: AHIMS ID 62-5-0028 site extent and area to which AHIP C0000529 applies.

3.6 Non-Aboriginal heritage

Table 3-11: Non-Aboriginal heritage

Description of existing environmental and potential impacts		
Have online heritage database searches been completed? • Transport (including legacy Roads and Maritime) section 170 register • NSW Heritage database • Commonwealth Heritage List, established under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) • Maritime heritage database • Australian Heritage Places Inventory • Local Environmental Plan(s) heritage items. **Heritage Database Searches** Searches of the Australian Heritage Database, Commonwealth Heritage List, Section 170 Heritage and Conservation Register, State Heritage Register (SHR) and the Cooma-Monaro LEP 2013 were conducted on the 14th of November 2023 to determine if any places of historic heritage area located within or in proximity to the study area. There are no heritage items listed as being within or in proximity to the study area.	Yes ☒	No ☐
Are there any items of non-Aboriginal heritage or heritage conservation areas listed on relevant heritage databases/registers that are located within the vicinity of the proposal?	Yes ☐	No ☒
Is the proposal likely to impact trees that form part of a heritage listing or have other heritage value?	Yes ☐	No ☒
Is the proposal likely to occur in or near features that indicate potential archaeological remains? There are no known historical archaeological sites in or within the vicinity of the study area and the proposed works will not impact on any known historical heritage items.	Yes ☐	No ☒

Safeguards

There are no known historical archaeological sites in or within the vicinity of the study area and the proposed works will not impact on any known historical heritage items, provided the recommended safeguards and mitigation measures are implemented. Safeguards to be implemented can be found in Table 3-12.

Table 3-12: Non-Aboriginal heritage safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
H1	Non-Aboriginal heritage	If unexpected heritage items are uncovered during the works, all works must cease in the vicinity of the material/find and the steps in the Transport *Unexpected heritage items procedure* (EMF-HE-PR-0076) must be followed.	During Construction

3.7 Biodiversity

Table 3-13: Biodiversity

Description of existing environmental and potential impacts		
Have relevant database searches been carried out? The following database searches have been completed (Appendix C: Flora and Fauna Assessment Report):	Yes ☒	No ☐

• Threatened species/populations listed under the EPBC Act or BC Act that have previously been recorded within or near the study area (10 km buffer) • Aerial imagery and any available vegetation mapping. • 1:25,000 hydro-line data (Natural Resource Access Regulator). • Fisheries NSW Key Fish Habitat (KFH) Spatial Data Portal. • Existing reporting, where relevant.		
Did the database searches identify any endangered ecological communities, threatened flora and/or threatened or protected fauna, or migratory species in or within the vicinity of the proposed works? Both Commonwealth and State listed matters must be considered. The database searches identified eight TECs. Of these, one was considered known to occur in the study area: • *Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion* (Snow Gum Grassy Woodland) 38 threatened fauna species and 23 threatened flora species within the locality (Appendix C: Flora and Fauna Assessment Report). Of these species, one may potentially be present within the study area: • Flame Robin (*Petroica phoenicea*) The Flora and Fauna Assessment provides a justification on the likelihood of TEC occurrence, and on threatened species occurrence, within the study area. Tests of significance were completed for the TEC Snow Gum Grassy Woodland and the Flame Robin (Appendix C: Flora and Fauna Assessment Report). The MacLaughlin River is identified as KFH, however no watercourses within the proposal area contain habitat for threatened freshwater species.	Yes ☒	No ☐
Does the proposal involve pruning, trimming or removal of any tree/s? **Tree pruning** Some trees may require pruning back for safety and access during and after construction and for ongoing road maintenance. The majority of these trees are located toward the south of the study area, with a small number scattered across the site. The potential impacts to flora and fauna habitat are expected to be negligible from this as the branches to be removed provide very little value to fauna that may utilise this resource due to the very close proximity to the road. Some common hardy species, such as Australian Ravens, will nest in these trees, and two small stick nests were observed during surveys. Efforts should be made to avoid any unnecessary impacts to any nests during pruning. **Tree removal** The proposal will result in the removal of 19 trees along the western edge to allow for road and shoulder widening. These trees are not part of any identified TEC, and no hollows were observed in any of the trees to be removed or any trees that are adjacent. The location of the trees identified for removal is shown in as 'Tree clump 1, 2, 3 and 4' (Photo 9 - Photo 11; Figure 16), details of individual trees are outlined in Table 3-14 below. Size class is dictated by Transport's *Tree and hollow replacement guidelines* (Transport, 2023): Very large (Diameter at breast height (DBH) >100 cm), Large (DBH 50-100 cm), Medium (20-50 cm) and Small (5-20 cm). **Table 3-14: Tree species identified for removal** Tree clump | Species | Common name | Size class | Quantity 1 | *Eucalyptus dives* | Broad-leaved Peppermint | Small | 2 | *Eucalyptus rubida* | Candlebark | Medium | 2 2 | *Eucalyptus rubida* | Candlebark | Medium | 2 | *Eucalyptus pauciflora* | White Sally | Large | 1 3 | *Eucalyptus pauciflora* | White Sally | Small | 5 | *Eucalyptus stellulata* | Black Sallee | Small | 5 4 | *Eucalyptus rubida* | Candlebark | Medium | 2	Yes ☒	No ☐

Trees that are removed should be replaced in accordance with Transport's *Tree and hollow replacement guidelines* outlined below (Table 3-15). There are a total of 19 trees proposed for removal, with a replacement requirement of 56 planted trees. Replanting should be considered wherever possible before fund transfer to improve local biodiversity outcomes and habitat enrichment. Species planted should reflect those removed by the proposal.

Table 3-15: Trees to be removed and their required replacement

Tree size class	Number removed	Tree replacement required (each tree)	Fund transfer
Very large	0	Plant Min 16 trees	$2500
Large	1	Plant min 8 trees	$1000
Medium	6	Plant min 4 trees	$500
Small	12	Plant min 2 trees	$125
Hollows	0	Provide 3 artificial hollows for every occupied hollow	$500

Is the proposal likely to impact nationally listed threatened species, ecological communities or migratory species? The study area contains several small areas of *Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion* CEEC, and will impact up to 0.04 ha of this vegetation classified as being in poor condition (Figure 15). The impact of this has been assessed in Appendix A: Consideration of State and Commonwealth environmental factors and the FFA (Appendix C: Flora and Fauna Assessment Report). The TECs have been divided into zones throughout the proposal as shown in Figure 15. Zone 1 is on top of a batter and therefore the proposal will not impact the TEC in this zone. Zone 2 is located down a steep embankment which will not be impacted by the proposal. Zone 3 and 4 are located outside the impact zone, but within the 3 m study area buffer. A conscious effort will be made to avoid potential impacts to the TECs in these zones. The proposal is likely to have the greatest impact on the TEC in Zone 5, however the TEC in this location is in poor condition considering the large drop of the existing travel lane into an existing pit. Therefore, the proposal is unlikely to significantly affect this TEC.	Yes ☐	No ☒
Would the proposal require the removal of any other vegetation? The majority of the area within the impact footprint is existing road shoulders and gravel or maintained (slashed) grass verges and drainage depressions. The proposal would remove up to 0.96 ha of vegetation of highly modified grassland vegetation (exotic and native species). This vegetation occurs beside a major highway and is already subject to ongoing disturbances from road use and maintenance, and continued encroachment by exotic species from neighbouring grazing properties and does not provide any conservation value within the area as it makes up the majority of the surrounding landscape and is in very poor condition. Some very small areas (0.05 ha) of the native flora community Plant Community Type (PCT) 3743 Monaro Ranges Sheltered Shrub Forest that occur on the southern end of the study area may be indirectly impacted by the proposal. This PCT within the study area is of low quality as it is highly modified and contains many exotic species. This PCT is not a listed community and occurs in large areas within the surrounding region.	Yes ☒	No ☐
Would the proposal require the removal of any tree hollows?	Yes ☐	No ☒
Are there any known areas of outstanding biodiversity value or areas mapped as 'littoral rainforest' or 'coastal wetland' under chapter 2 of SEPP (Resilience and Hazards) in or within the vicinity of the proposed work?	Yes ☐	No ☒
Would the proposal provide any additional barriers to the movement of wildlife? Although roads often act as barriers to the movement of wildlife, the proposed works will not exacerbate the current barrier. A large number of *Vombatus ursinus* (Common Wombat) burrows were identified within the study area or very close to it which have the potential to be impacted by the proposal (Appendix C: Flora and Fauna Assessment	Yes ☐	No ☒

Report). A Wombat Management Plan should be developed to mitigate potential impacts to wombats and their habitat.		
Would the proposal disturb any natural waterways or aquatic habitat? The proposed works won't directly impact any natural waterways or aquatic habitat. However, there is potential for an adverse impact through sediment run-off and erosion. This impact can be mitigated in accordance with the Landcom/Department of Housing *Managing Urban Stormwater, Soils and Construction Guidelines* (the Blue Book) via the installation of erosion and sediment control measures to prevent any materials from entering any nearby waterways. Additional safeguards have been provided to mitigate potential impacts to waterways and water quality (Table 3-4).	Yes ☐	No ☒
Would the proposal impact (directly or indirectly) any potential microbat roosting or breeding habitat such as on bridges and culverts?	Yes ☐	No ☒

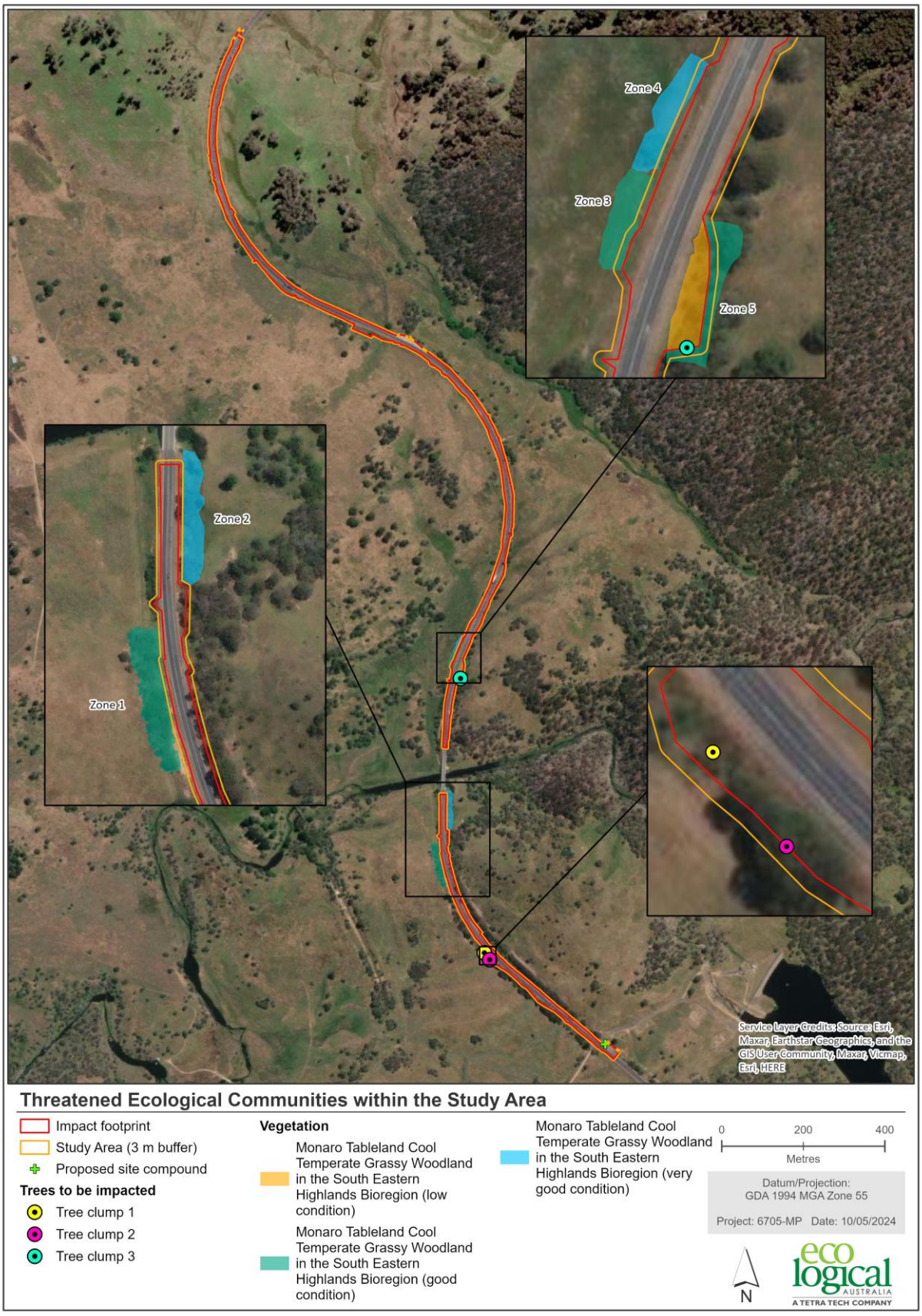


Figure 15: Threatened Ecological Communities within the Study Area

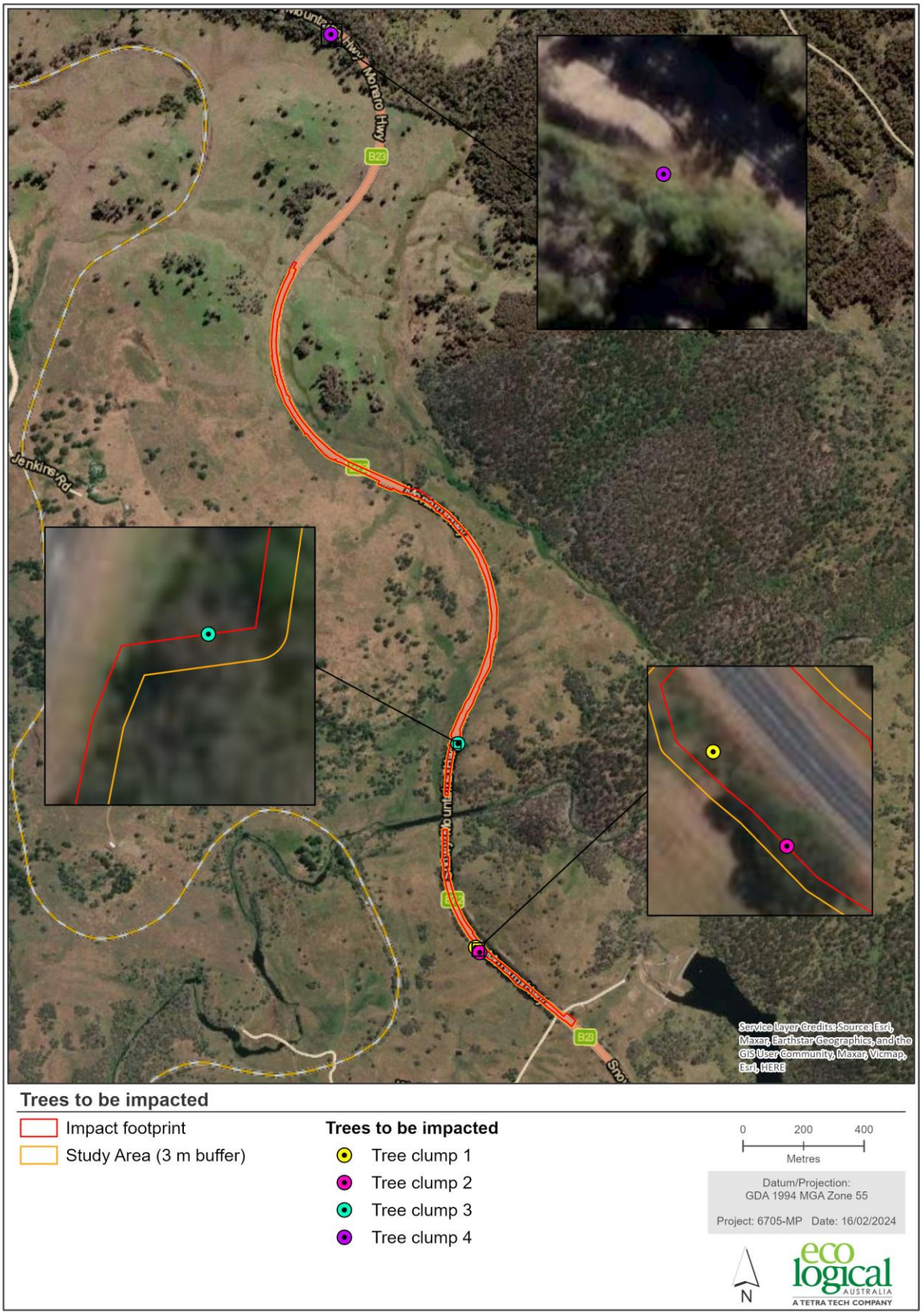


Figure 16: Tree removal impacts identified in the study area



Photo 9: Part of Tree Clump 1 - Small and medium *E. dives* and *E. rubida*



Photo 10: Tree Clump 2 - Medium and large *E. rubida* and *E. pauciflora*



Photo 11: Tree Clump 3 - Small *E. pauciflora* and *E. stellulata*

Safeguards

Safeguards to be implemented can be found in Table 3-16.

Table 3-16: Biodiversity safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
F1	Biodiversity	The limit of works (including spoil, stockpile, and compounds and parking areas) must be clearly and physically demarcated with flagging/fencing or similar using a reusable product.	Construction
F2	Biodiversity	A "no-go" area must be clearly and physically demarcated with appropriate signage around the areas of TEC to be protected.	Construction
F3	Biodiversity	If unexpected, threatened fauna or flora species are discovered, stop work immediately and follow the *Unexpected threatened species find procedure* in *Roads and Maritime's Biodiversity Guidelines 2011 – Guide 1 (Pre-clearing process)*.	Construction
F4	Biodiversity	Declared noxious weeds are to be managed according to requirements under the *Noxious Weeds Act 1993* and *Guide 6 (Weed Management)* of Roads and Maritime's *Biodiversity Guidelines 2011*.	Construction
F5	Biodiversity	Fauna handling must be carried out in accordance with the requirements of Roads and Maritime's *Biodiversity Guidelines - Guide 9 (Fauna Handling)*.	Construction
F6	Biodiversity	A Wombat Management Plan should be created to inform and mitigate impacts to wombats and burrows before, during and after construction.	Construction

3.8 Traffic and transport

Table 3-17: Traffic and transport

Description of existing environmental and potential impacts		
Is the proposal likely to result in detours or disruptions to traffic flow (vehicular, cycle and pedestrian) or access during construction? The project will require temporary lane closures and traffic control. During working hours, traffic will be reduced to one lane under traffic control (traffic lights). A traffic control plan would be implemented to manage alterations in traffic flow.	Yes ☒	No ☐
Is the proposal likely to result in detours or disruptions to traffic flow (vehicular, cycle and pedestrian) or access during operation? The proposal objectives are to improve the safety of the current roadway. Consequently, no additional detours or disruptions to traffic flow or access in the area will result from proposal completion.	Yes ☐	No ☒
Is the proposal likely to affect any other transport nodes or transport infrastructure in the surrounding area? Or result in detours or disruptions to traffic flow (vehicular, cycle and pedestrian) or access during operation? No bus stops are registered within the proposal area. The proposal objectives are to improve the safety of the current roadway. Consequently, no additional detours or disruptions to traffic flow or access in the area will result from the proposed works.	Yes ☐	No ☒

Safeguards

Safeguards to be implemented can be found in Table 3-18.

Table 3-18: Traffic and transport safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
T1	Traffic	Where possible, current traffic movements and property accesses are to be maintained during work. Any disturbance is to be minimised to prevent unnecessary traffic delays.	Construction
T2	Traffic	A Traffic Guidance Scheme will be prepared in accordance with the *Traffic Control at Work Sites Manual (Transport, 2022)* and the *Australian Standard 1742.3 Manual of uniform control devices*.	Construction

3.9 Socio-economic

Table 3-19: Socio-economic

Description of existing environmental and potential impacts		
Is the proposal likely to impact on local business? There are no immediate businesses with the exception of farming and rural activities. These activities will not be impacted.	Yes ☐	No ☒
Is the proposal likely to require any property acquisition?	Yes ☐	No ☒
Is the proposal likely to alter any access for properties (either temporarily or permanently)? The proposed construction works are located along the Monaro Highway, in proximity to Old Bombala Road and Wallaces Road. These roads provide direct access to rural-residential properties. The site compound will be located next to the entrance to Wallace	Yes ☒	No ☐

Dam. Access to these properties and the Dam will be maintained throughout the duration of the construction works.		
Is the proposal likely to alter any on-street parking arrangements (either temporarily or permanently)?	Yes ☐	No ☒
Is the proposal likely to change pedestrian movements or pedestrian access (either temporarily or permanently)?	Yes ☐	No ☒
Is the proposal likely to impact on any items or places of social value to the community (either temporarily or permanently)?	Yes ☐	No ☒
Is the proposal likely to reduce or change visibility of any businesses, farms, tourist attractions or the like (either temporarily or permanently)?	Yes ☐	No ☒
Is the proposal likely to impact trees planted by a community group, Landcare group or by council or a tree that is a memorial or part of a memorial group?	Yes ☐	No ☒
Is the proposal likely to impact trees that form part of a streetscape, an avenue or roadside planting?	Yes ☐	No ☒

Safeguards

Safeguards to be implemented can be found in Table 3-20.

Table 3-20: Socio-economic safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
C1	Socio-economic	Community consultation is to be carried out in accordance with Roads and Maritime's *Community - Engagement and Communications October 2012*.	Prior to construction
C2	Socio-economic	Complaints received are to be recorded and attended to promptly in accordance with Roads and Maritime's *Community - Engagement and Communications October 2012*.	Construction and operation
C3	Socio-economic	Existing access for nearby and adjoining properties is to be maintained at all times during the work unless otherwise agreed to by the affected property owner.	Construction and operation

3.10 Landscape character and visual amenity

Table 3-21: Landscape character and visual amenity

Description of existing environmental and potential impacts		
Is the proposed work over or near an important physical or cultural element or landscape? (For example, heritage items and areas, distinctive or historic built form, National Parks, conservation areas, scenic highways etc.)	Yes ☐	No ☒
Would the proposal obstruct or intrude upon the character or views of a valued landscape or urban area? (For example, locally significant topography, a rural landscape or a park, a river, lake or the ocean or a historic or distinctive townscape or landmark)	Yes ☐	No ☒
Would the proposal require the removal of mature trees or stands of vegetation, either native or introduced? The proposal will require the removal of 17 trees, 2.24 ha of vegetation (within the footprint and 3 m buffer study area). This includes a very small area (0.05 ha) of the CEEC Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion.	Yes ☒	No ☐

Would the proposal result in large areas of shotcrete visible from the road or adjacent properties?	Yes ☐	No ☒
Would the proposal involve new noise walls or visible changes to existing noise walls?	Yes ☐	No ☒
Would the proposal involve the removal or reuse of large areas of road corridor, landscape, either verges or medians?	Yes ☐	No ☒
Would the proposal involve substantial changes to the appearance of a bridge (including piers, girders, abutments and parapets) that are visible from the road or residential areas?	Yes ☐	No ☒
If involving lighting, would the proposal create unwanted light spillage on residential properties at night (in construction or operation)?	Yes ☐	No ☒
Would any new structures or features to be constructed, result in over shadowing to adjoining properties or areas? There will be some minor tree clearance and installation of barriers along the roadsides however this is not expected to result in over shadowing to adjoining properties.	Yes ☐	No ☒

Safeguards

Safeguards to be implemented can be found in Table 3-22.

Table 3-22: Landscape character and visual amenity safeguards and mitigation measures

Reference	Impact	Safeguards	Responsibility	Timing
V1	Landscape character and visual amenity	Works to be carried out in accordance with EIA-N04 *Guidelines for visual impact assessment and landscape character assessment.*	Contractor	Construction

3.11 Waste

Table 3-23: Waste

Description of existing environmental and potential impacts		
Is the proposal likely to generate >200 tonnes of waste material (contaminated and /or non-contaminated material)? **The proposal is likely to generate the following waste material:** • Cut – 2,050 m^3 • Fill – 4,300 m^3 This is equivalent to 2,928 tonnes of cut and 6,143 tonnes of fill based on an assumption of 0.7 m^3 to 1 tonne. Due to the excess fill requirement of the works, it is unlikely greater than 200 tonnes of waste material will be produced. Any excess material created from the proposal will be reused within the designated spoil site (Figure 2) to flatten the gradient of the road edge, resulting in a safety improvement for road users. In addition, Transport stockpiles STH19/Dalgety Road (approximately 4.5 kms North) and STH4/022 (approximately 12 kms South) may be utilised for the temporary storage of cut and fill materials during the proposed works. Use of these stockpiles will conform with Transport's Stockpile Management Guideline including but not limited to the implementation of erosion and sediment controls. Where possible, suitable materials currently stored at STH4/022 and STH19/Dalgety Road may be utilised as fill for the proposed works. Mulched vegetation will be beneficially reused within the site for rehabilitation. Any unsuitable material will be disposed of at Cooma landfill.	Yes ☐	No ☒
Is the proposal likely to require a licence from EPA?	Yes ☐	No ☒
Is the proposal likely to require the removal of asbestos?	Yes ☐	No ☒

Safeguards

Safeguards to be implemented can be found in Table 3-24.

Table 3-24: Waste safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
M1	Waste	Resource management hierarchy principles are to be followed: • Avoid unnecessary resource consumption as a priority • Avoidance is followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery) • Disposal is carried out as a last resort. (In accordance with the *Waste Avoidance & Resource Recovery Act 2001*)	Construction
M2	Waste	Bulk project waste sent to a site not owned by Roads and Maritime Services (excluding Office and Environment and Heritage licensed landfills) for land disposal is to have prior formal written approval from the landowner, in accordance with RTA *Environmental Direction No. 20 – Legal Off-site disposal of Bulk RTA Project Wastes.*	Construction
M3	Waste	Waste is not to be burnt on site.	Construction
M4	Waste	Waste material, other than vegetation and tree mulch, is not to be left on site once the work has been completed.	Construction
M5	Waste	Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.	Construction
M6	Waste	Although no asbestos is known to be present on site, if encountered, removal of this material must be undertaken in	Construction

		accordance with *Working with Asbestos: Guide 2008* published by WorkCover Australia.	

3.12 Climate change and greenhouse gas emissions

Table 3-25: Climate change and greenhouse gas emissions

Description of existing environmental and potential impacts		
Is the proposal located in an area likely to be permanently or tidally inundated in the future or subject to increased duration and intensity of flooding?	Yes ☐	No ☒
Have opportunities for reduced energy consumption during construction and operation been considered. Opportunities for reduced energy consumption during construction and operation have been considered and include: • Carpooling of staff to site from Cooma depot. • During selection of suppliers for material, local options will be considered in analysis.	Yes ☒	No ☐
Greenhouse gas emissions sources during construction are likely to be largest from: • Transporting materials to site. • Operation of plant and equipment. • Powering compound site with diesel generator. During operation sources would include: • Maintenance of the proposal which includes infrastructure and pavement repairs, and fuel use for the operation of the plant and equipment to perform the maintenance activities. • Use of the proposal by vehicles.		

Safeguards

Safeguards to be implemented can be found in Table 3-24.

Table 3-26: Climate change and greenhouse gas emissions safeguards and mitigation measures

Reference	Impact	Safeguards	Timing
G1	Climate change and greenhouse gas emissions	Equipment should be turned off when not in use to reduce energy and fuel consumption.	Construction
G2	Climate change and greenhouse gas emissions	Plant and equipment shall be serviced regularly.	Construction

3.13 Cumulative impact

Table 3-27: Cumulative impact

Description of existing environmental and potential impacts		
Are there other projects and developments in the study area which could add to potential impacts in both construction and operation? This proposal is one of four minor works along the Monaro Highway. Together, these works will improve corridor efficiency for all road users, enhance corridor resilience to road accidents, natural hazards and during emergency situations, and reduce the frequency of fatal and serious injury accidents. As all four works are proposed to occur at separate times, extensive traffic delays for road users during construction are unlikely to result. Traffic delays can further be reduced by coinciding construction works to avoid the winter period where traffic volumes are larger due to an influx of tourist for the snow season. Cumulative impacts to biodiversity will occur through the four minor works, however the total impact is expected to be minor provided appropriate mitigations measures implemented.	Yes ☒	No ☐

4. Summary of safeguards and environmental management measures

4.1 Safeguards and environmental management measures

This section provides a summary of the site-specific environmental safeguards and management measures identified in described in chapter 3 of this minor works REF. These safeguards will be implemented to reduce potential environmental impacts throughout construction and operation. A framework for managing the potential impacts is provided with reference to environmental management plans and relevant Transport QA specifications. Any potential licence and/or approval requirements required prior to construction are also listed.

Table 4-1: Summary of site-specific safeguards for proposed work

Factor	Safeguards	
Soil	E1	Erosion and sediment control measures are to be implemented and maintained to: • Prevent sediment moving off-site and sediment laden water entering any water course, drainage line, or drain inlet • Reduce water velocity and capture sediment on site • Minimise the amount of material transported from site to surrounding pavement surfaces • Divert clean water around the site. (In accordance with the Landcom/Department of Housing *Managing Urban Stormwater, Soils and Construction Guidelines* (the Blue Book)).
	E2	Erosion and sedimentation controls are to be checked and maintained on a regular basis (including clearing of sediment from behind barriers) and records kept and provided on request.
	E3	Erosion and sediment control measures are not to be removed until the work is complete, and areas are stabilised.
	E4	Work areas are to be stabilised progressively during the work.
	E5	A progressive erosion and sediment control plan is to be prepared for the work.
	E6	The maintenance of established stockpile sites during is to be in accordance with the *RMS Stockpile Site Management Guidelines 2015*.
Waterways and water quality	W1	There is to be no release of dirty water into drainage lines and/or waterways.
	W2	Visual monitoring of local water quality is to be carried out on a regular basis to identify any potential spills or deficient erosion and sediment controls.
	W3	Water quality control measures are to be used to prevent any materials entering drain inlets or waterways. Excess debris from cleaning and washing is to be removed using hand tools. Further details around waste water quality controls will be specified in an Environmental Management Plan.
	W4	Potable water is to be used for wash down. Containment material is used to capture / filter water used in wash down.
	W5	A dedicated concrete washout facility that is impervious shall be provided during construction so that runoff from the washing of concrete machinery, equipment and concrete trucks can be collected and disposed of at an appropriate waste facility. Vehicle wash down and/or cement truck washout is to occur in a designated bunded area and least 50 metres away from water bodies and surface water drains.

Noise and vibration	N1	Work to be carried out during normal work hours. Any work that is performed outside normal work hours or on Sundays or public holidays is to minimise noise impact, would be subject to approval, notification, and preparation of a management plan.
	N2	Noise impact is to be minimised in accordance with Transport's *Construction Noise and Vibration Guideline 2023*.
Air quality	A1	Measures (including watering or covering exposed areas) will be used to minimise or prevent air pollution and dust. The mitigation of specific tasks will be addressed in the Environmental Management Plan.
	A2	Vehicles transporting waste or other materials that may produce odours or dust will be covered during transportation.
Non-Aboriginal heritage	H1	If unexpected heritage items are uncovered during the works, all works must cease in the vicinity of the material/find and the steps in the Transport *Unexpected heritage items procedure* (EMF-HE-PR-0076) must be followed.
Aboriginal cultural heritage	B1	If Aboriginal heritage items are uncovered during the works, all works in the vicinity of the find must cease and the Transport Aboriginal cultural heritage officer and Senior Manager Environment and Sustainability contacted immediately. Refer to steps in the Transport *Unexpected heritage items procedure* (EMF-HE-PR-0076) which must be followed.
Biodiversity	F1	The limit of works (including spoil, stockpile, and compounds and parking areas) must be clearly and physically demarcated with flagging/fencing or similar using a reusable product.
	F2	A "no-go" area must be clearly and physically demarcated with appropriate signage around the areas of TEC to be protected.
	F3	If unexpected, threatened fauna or flora species are discovered, stop work immediately and follow the *Unexpected threatened species find procedure* in *Roads and Maritime's Biodiversity Guidelines 2011 – Guide 1 (Pre-clearing process)*.
	F4	Declared noxious weeds are to be managed according to requirements under the *Noxious Weeds Act 1993* and *Guide 6 (Weed Management)* of Roads and Maritime's *Biodiversity Guidelines 2011*.
	F5	Fauna handling must be carried out in accordance with the requirements of Roads and Maritime's *Biodiversity Guidelines - Guide 9 (Fauna Handling)*.
	F6	A Wombat Management Plan should be created to inform and mitigate impacts to wombats and burrows before, during and after construction.
Traffic and transport	T1	Where possible, current traffic movements and property accesses are to be maintained during work. Any disturbance is to be minimised to prevent unnecessary traffic delays.
	T2	A Traffic Guidance Scheme will be prepared in accordance with the *Traffic Control at Work Sites Manual (Transport, 2022)* and the *Australian Standard 1742.3 Manual of uniform control devices*.
Socio-economic	C1	Community consultation is to be carried out in accordance with Roads and Maritime's *Community - Engagement and Communications October 2012*.
	C2	Complaints received are to be recorded and attended to promptly in accordance with Roads and Maritime's *Community - Engagement and Communications October 2012*.

	C3	Existing access for nearby and adjoining properties is to be maintained at all times during the work unless otherwise agreed to by the affected property owner.
Landscape character and visual amenity	V1	Works to be carried out in accordance with EIA-N04 *Guidelines for visual impact assessment and landscape character assessment.*
Waste	M1	Resource management hierarchy principles are to be followed: • Avoid unnecessary resource consumption as a priority • Avoidance is followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery) • Disposal is carried out as a last resort. (In accordance with the *Waste Avoidance & Resource Recovery Act 2001*)
	M2	Bulk project waste sent to a site not owned by Roads and Maritime Services (excluding Office and Environment and Heritage licensed landfills) for land disposal is to have prior formal written approval from the landowner, in accordance with *RTA Environmental Direction No. 20 – Legal Off-site disposal of Bulk RTA Project Wastes*.
	M3	Waste is not to be burnt on site.
	M4	Waste material, other than vegetation and tree mulch, is not to be left on site once the work has been completed.
	M5	Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.
	M6	Although no asbestos is known to be present on site, if encountered, removal of this material must be undertaken in accordance with *Working with Asbestos: Guide 2008* published by WorkCover Australia.
Climate change and greenhouse gas emissions	G1	Equipment should be turned off when not in use to reduce energy and fuel consumption.
	G2	Plant and equipment shall be serviced regularly.

4.2 Other requirements

Table 4-2: Other requirements

Requirement		
Environmental management plan sent to SMES or their delegate (ESL) for review 10 working days prior to starting works.	Yes ☒	No ☐
Conduct a risk assessment workshop (Ensite) must occur prior to the commencement of any work on site. The workshop agenda must be provided 10 working days prior to the workshop.	Yes ☒	No ☐

Certification, review and determination

4.3 Certification

This minor works REF provides a true and fair review of the proposal in relation to its potential effects on the environment. It addresses, to the fullest extent possible, all matters affecting or likely to affect the environment as a result of the proposal.

Prepared by:

Signature



Name:	Kathrine Pellowe
Position:	Senior Environmental Consultant
Company name:	Eco Logical Australia Pty Ltd
Date:	4 March 2024

Minor works REF reviewed by:

Signature



Name:	Konrad Grinlaubs
Position:	Senior Environmental Consultant
Company name:	Eco Logical Australia Pty Ltd
Date:	4 March 2024

4.4 Environment and sustainability staff review

The minor works REF has been reviewed and considered against the requirements of sections 5.5 and 5.7 of the EP&A Act.

In considering the proposal this assessment has examined and taken into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of that activity as addressed in the minor works REF and associated information. This assessment is considered to be in accordance with the factors required to be considered under section 171 of the Environmental Planning and Assessment Regulation 2021.

The proposal described in this minor works REF will have some environmental impacts which can be ameliorated satisfactorily. Having regard to the safeguards and management measures proposed, this assessment has considered that these impacts are unlikely to be significant and therefore an approval for the proposal does not need to be sought under Division 5.2 of the EP&A Act.

The assessment has considered the potential impacts of the activity on areas of outstanding value and on threatened species, ecological communities or their habitats for both terrestrial and aquatic species as defined by the *Biodiversity Conservation Act 2016* and the *Fisheries Management Act 1994*.

The proposal described in the minor works REF will not affect areas of outstanding value. The activity described in the minor works REF will not significantly affect threatened species ecological communities or their habitats. Therefore, a species impact statement is not required.

The assessment has also addressed the potential impacts of the activity on matters of national environmental significance and any impacts on the environment of Commonwealth land and concluded that there will be no significant impacts. Therefore, there is no need for a referral to be made to the Australian Government Department of Climate Change, Energy, the Environment and Water for a decision by the Commonwealth Minister for the Environment on whether assessment and approval is required under the *Environment Protection and Biodiversity Conservation Act 1999*.

The minor works REF is considered to meet all relevant requirements.

4.5 Environment and Sustainability staff recommendation

It is recommended that the proposal to provide safety upgrades along approximatley 3km of road south of Nimmitabel as described in this minor works REF proceed subject to the implementation of all safeguards identified in the minor works REF and compliance with all other relevant statutory approvals, licences, permits and authorisations.

The minor works REF has examined and taken into account to the fullest extent possible all matters likely to affect the environment by reason of the activity in accordance with the EP&A Act, EP&A Regulation and the Guidelines approved under clause 170 of the EP&A Regulation. The minor works REF has established that the activity is not likely to significantly affect the environment or threatened species, ecological communities or their habitats.

The minor works REF has concluded that there will be no significant impacts on matters of national environmental significance or any impacts on the environment of Commonwealth land.

If the proposal has not commenced within two years of the determination date the SMES must be consulted to identify any new or updated assessment or approval requirements.

Recommended by:		**Noted by:**	
Signature		Signature	
Name:	Vincent Gillies	Name:	Daniel Jones
Position:	Manager Environment and Sustainability	Position:	Project Manager
Date:	27/4/2024	Date:	27/3/2024

4.6 Decision statement

In accordance with the above recommendation, I certify that I have reviewed and endorsed the contents of this minor works REF, and to the best of my knowledge, it is in accordance with the EP&A Act, the EP&A Regulation and the Guidelines approved under Section 170 of the EP&A Regulation, and the information is neither false nor misleading.

I determine that Transport for NSW may proceed with the activity.

Signature	
Name:	Stephen Onions
Position:	Senior Manager Project Services South
Date:	31st May, 2024

4.7 EP&A Regulation publication requirement

Table 0-1: EP&A Regulation publication requirement

Requirement		
Does this minor works REF need to be published under section 171(4) of the EP&A Regulation? Required for publishing as the value of works is more than $5 million.	Yes ☒	No ☐

5. Definitions

Table 5-1: Definitions

Term	Definition
AHIMS	Aboriginal Heritage Information Management Systems
ATLM	Audio Tactile Land Marking
AusRAP	Australian Road Assessment Program
BC Act	*Biodiversity Conservation Act 2016*
BCSEPP	Biodiversity and Conservation State Environmental Planning Policy
BDAR	Biodiversity Development Assessment Report
BS Act	*Biosecurity Act 2015*
CE	Critically Endangered
CEEC	Critically Endangered Ecological Community
CP	Contribution Plans
CSP	Community Strategic Plan
DBH	Diameter at Breast Height
DCP	Development Control Plans
DPE	NSW Department of Planning and Environment
EEC	Endangered Ecological Community
EPA	Environmental Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
FFA	Flora and Fauna Assessment
FM Act	*Fisheries Management Act 1994*
FRSB	Flexible Roadside Safety Barrier
GDA	Geocentric Datum of Australia
KFH	Key Fish Habitat
LEP	Local Environmental Plan
LSPS	Local Strategic Planning Statement
MHUP	Monaro Highway Upgrade Program
MNES	Matters of National Environmental Significance
NPW Act	*National Parks and Wildlife Act 1974*
NPWS	National Parks and Wildlife Service
OOHW	Out Of Hours Work
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation

PAD	Potential Archaeological Deposit
PCT	Plant Community Type
POEO	*The Protection of the Environment Operations Act 1997*
QA	Quality Assurance
REF	Review of Environmental Factors
RTA	Residential Tenancies Authority
SHI	State Heritage Inventory
SHR	State Heritage Register
SIS	Species Impact Statement
SMES	Senior Manager Environment & Sustainability
TEC	Threatened Ecological Community
VEC	Vulnerable Ecological Community
WCLT	Wide Centre Line Treatment

Appendix A: Consideration of State and Commonwealth environmental factors

Environmental Planning and Assessment Regulation 2021 section 171(2) factors

The following factors, listed in section 171(2) of the Environmental Planning and Assessment Regulation 2021, have been considered to assess the likely impacts of the proposal on the natural and built environment. This consideration is required to comply with sections 5.5 and 5.7 of the EP&A Act.

Table A1: Consideration of section 171 of the EP&A Regulation factors

Factor	Description of impact	Duration and extent
a) Environmental impact on the community.	• Traffic delays. This impact will be mitigated through maintaining current traffic movement and property access throughout the duration of construction, where possible. Any disturbance to traffic flow will be minimised to prevent unnecessary traffic delays.	Short-term, negative (minor), temporary.
	• Safer travelling conditions for road users.	Long-term, positive (moderate).
	Safeguards to minimise these impacts are provided in Section 3.8.	
b) The transformation of the locality.	• The proposal is not expected to transform the locality due the minority of the works and owing to the fact that the works will be located along an existing roadway.	Long-term, negative (negligible).
	• Vegetation removal, though insignificant, will slightly alter the visual amenity of the area. Vegetation has been avoided where possible.	Long-term, negative (minor).
	• Road and shoulder widening, and construction of FRSB will also cause visual changes, however changes are not expected to be significant as to transform the locality.	Long-term, negative (negligible).
	Safeguards to minimise these impacts are provided in Section 3.10.	
c) Any environmental impact on the ecosystems of the locality.	• The proposal will have a potential, though insignificant, environmental impact on the ecosystems in the locality. A total of 0.95 ha of vegetation will be removed inside the impact footprint, including 0.05 ha of *CEEC Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion*). No threatened flora, fauna, or fauna habitat was identified to be impacted by the proposed works.	Long-term, negative (minor).
	Safeguards to minimise these impacts are provided in Section 3.7 recommendations are provided in the FFA (Appendix C: Flora and Fauna Assessment Report).	

Factor	Description of impact	Duration and extent
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality.	• The proposal is not considered to reduce the aesthetic, scientific, or recreational values of the locality. The environmental quality of the locality will be reduced through the removal of 0.05 ha of the CEEC *Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion*. No impact to threatened flora or fauna species is considered likely as a result of the proposal. Safeguards to minimise these impacts are provided in Section 3.7 recommendations are provided in the FFA (Appendix C: Flora and Fauna Assessment Report)	Long-term, negative (minor).
e) Any effect on any locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.	• The proposal is not considered to impact any locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations	No impact expected.
f) Any impact on the habitat of protected fauna (within the meaning of the Biodiversity and Conservation Act 2016).	• No impact on threatened fauna habitats is expected as part of the proposal.	No impact expected.
g) Any endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air.	• The proposal is unlikely to endanger any species of animal, plant or other form of life.	No impact expected.
h) Any long-term effects on the environment	• The proposal will have a minor, negative, long-term effect on the environment as a result of the removal of vegetation. Safeguards to minimise these impacts are provided in Section 3.7 and recommendations are provided in the FFA (Appendix C: Flora and Fauna Assessment Report).	Long-term, negative (minor).
i) Any degradation of the quality of the environment.	• Vegetation removal as a result of the proposal will slightly degrade the quality of the environment. Safeguards to minimise these impacts are provided in Section 3.7 and recommendations are provided in	Long-term, negative (minor).

Factor	Description of impact	Duration and extent
	the FFA (Appendix C: Flora and Fauna Assessment Report).	
j) Any risk to the safety of the environment.	• The proposal will improve safety for road users.	Long-term, positive.
k) Any reduction in the range of beneficial uses of the environment.	• During the construction of the proposal, lane closures are likely to cause traffic delays. Safeguards to minimise these impacts are provided in Section 3.8.	Short-term, negative.
l) Any pollution of the environment.	• The proposal is likely to cause pollution to the environment, through emissions to air (greenhouse gases and dust), and potential erosion and sedimentation from soil disturbance. Safeguards to minimise these impacts are provided in Section 3.1, 3.2 and 3.4.	Short-term, negative.
m) Any environmental problems associated with the disposal of waste	• No environmental problems associated with the disposal of waste are anticipated from the proposal. All waste generated will be stored at the stockpiles identified until it can be reused, with any unsuitable material disposed of at Cooma landfill. Safeguards to minimise these impacts are provided in Section 3.11.	Short-term, negative (negligible).
n) Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply.	• Increased demands on resources which are or are unlikely to become in short supply is not expected as a result of this proposal.	No impact expected.
o) The cumulative environmental effect with other existing or likely future activities.	• The cumulative environmental effect with the other MHUP safety improvement works, or likely future activities, is negligible due to the minority of works covered in this REF. Safeguards to minimise environmental impacts are provided in Section 3.7 and recommendations are provided in the FFA (Appendix C: Flora and Fauna Assessment Report)	Long-term, negative (minor).
p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions.	• The proposal is not expected to impact on coastal processes or hazards as it is not located in a coastal area.	No impact expected.

Factor	Description of impact	Duration and extent
q) Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	The Snowy Monaro Regional Council (Council) prepared a Local Strategic Planning Statement (LSPS), adopted in May 2020. The LSPS has been prepared in accordance with section 3.9 of the EP&A Act. It brings together and builds on Council's other plans and strategies, including the LEP, Development Control Plans (DCP) and Contribution Plans (CP). It is also informed by other state government policies including South East and Tablelands Regional Plan 2036, Future Transport Plan 2056, State Infrastructure Strategy, Council's Community Strategic Plan (CSP) and has regard to the ACT Planning Strategy. The LSPS identifies the following planning priorities for the Snowy Monaro Region: • Protect and enhance the cultural and built heritage. • Protect and enhance the scenic landscape. • Identify, protect and encourage restoration of environmental values. • Move towards a carbon neutral future. • Promote, grow and protect agricultural production and industry. • Maximise potential business growth and efficiency. • Support development of the Snowy Mountains as Australia's premier year-round alpine destination. • Use appropriate, evidence-based planning controls to respond to a diverse region and provide for the recreational needs of the community. • Provide a variety of housing options. • Identify and integrate transport corridors and connections with the right types and levels of development. • Foster resilient, enduring and safe local communities using land use planning controls which address local and regional natural hazards. • Capitalise on growth and change by preparing for new business and population. The proposal is aligned with the priorities identified by the LSPS, as it will: • Facilitate the growth of agricultural production and industry, and maximise potential business growth, through more safe and efficient movement. • Support the development of the Snowy Mountains as a tourist destination by providing safe roads for tourists. • Aid the safe transportation of material to provide a variety of housing options. • Prepare for new business and population growth. • Provide safer travel routes in the event of local and regional natural hazards. • Protect environmental values from pollution and damage caused by vehicle crashes.	Long-term, positive.

Matters of National Environmental Significance

Table A2: Matters of national environmental significance

Environmental factor	Impact
a) Any impact on a World Heritage property?	N/A. The proposal will not impact on a World Heritage Property.
b) Any impact on a National Heritage place?	N/A. The proposal will not impact on a National Heritage Place.
c) Any impact on a wetland of international importance (often called 'Ramsar' wetlands)?	N/A. The proposal will not affect any part of a Ramsar Wetland.
d) Any impact on nationally threatened species, ecological communities or migratory species?	The study area contains several small areas of Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion CEEC (0.05 ha). The impact of this has been assessed in Appendix C: Flora and Fauna Assessment Report. The proposal will not significantly affect this community.
e) Any impact on a Commonwealth marine area?	N/A. The proposal will not impact on a Commonwealth Marine Area.
f) Does the proposal involve a nuclear action (including uranium mining)?	N/A. The proposal will not involve a Nuclear Action.
Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	N/A. The proposal will not directly or indirectly impact on Commonwealth land.

Appendix B: Proposal Design

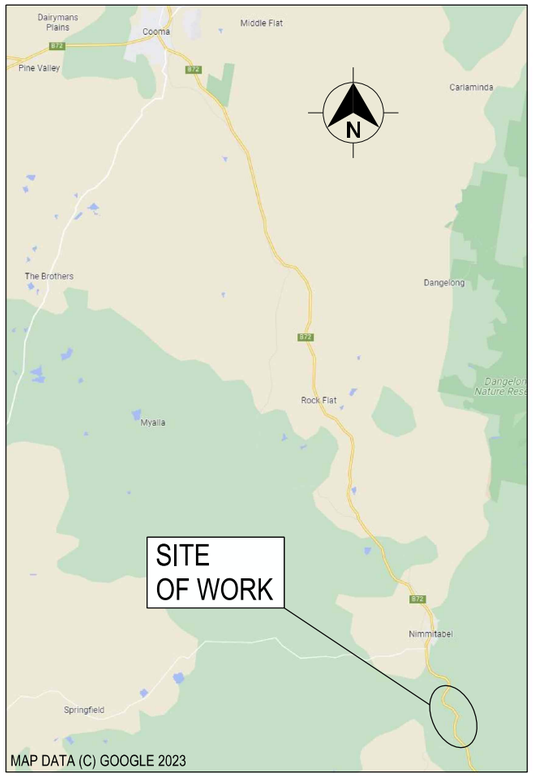
GDA 2020

NSW GOVERNMENT | Transport for NSW

SNOWY MONARO REGIONAL LGA

HW19 - MONARO HIGHWAY

SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL



LOCALITY PLAN

ROAD DESIGN

DETAIL DESIGN

GROUP CODE INDEX

CODE	NAME
GN	GENERAL
RW	ROAD ALIGNMENT AND DETAIL
RC	ROAD CROSS SECTIONS
SM	STORMWATER MANAGEMENT
PV	PAVEMENT
RF	ROADSIDE FURNITURE & PAVEMENT MARKING
MS	PRESERVATION OF SURVEY INFRASTRUCTURE

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LINEAR REFERENCING
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PLOT DATE / TIME: 24/10/2023 7:28:13 AM PLOT BY: waltersj

PREPARED BY
TRANSPORT FOR NSW
INFRASTRUCTURE & PLACE
TECHNICAL & PROJECT SERVICES
TECHNICAL SOUTH
ROAD DESIGN SOUTHERN

DESIGNED
SIGNED
NAME J. WALTERS
TITLE LEAD ROAD DESIGNER
DATE

REVIEWED
SIGNED
NAME G. KOZAROSKI
TITLE ROAD DESIGN MANAGER
DATE

VERIFIED
SIGNED
NAME N. COOKE
TITLE SENIOR ROAD DESIGN MANAGER
DATE

TFNSW PROJECT MANAGER
NAME S. WAKELING
TITLE PROJECT / CONTRACT MANAGER

VALIDATION AND ACCEPTANCE OF THESE DRAWINGS AND THE DESIGN SHOWN THEREON IS TO BE CARRIED OUT UNDER SEPARATE PROCESS

CLIENT
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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL

A3

RMS PROJECT No. P.0073492
DESIGN PROJECT No. SF2023/137411
RMS REGISTRATION No. DS2023 / 000777
ISSUE STATUS 100% - DETAIL DESIGN
SHEET No. GN-0001
ISSUE 2

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SHEET NAME	SHEET DESCRIPTION	ISSUE											
		0	1	2	3	A	B	C	D	E	F	G	H
GN-0001	COVER SHEET	Refer to Amendment Box											
GN-0101	SHEET INDEX - 1 OF 3												
GN-0102	SHEET INDEX - 2 OF 3												
GN-0103	SHEET INDEX - 3 OF 3												
GN-0201	OVERVIEW PLAN		24.10.23	15.12.23									
RW-0001	TYPICAL CROSS SECTIONS - 1 OF 2	17.07.23	24.10.23	15.12.23									
RW-0002	TYPICAL CROSS SECTIONS - 2 OF 2		24.10.23	15.12.23									
RW-0003	TYPICAL DETAILS - 1 OF 2		24.10.23	15.12.23									
RW-0004	TYPICAL DETAILS - 2 OF 2			15.12.23									
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RW-0102	ROAD ALIGNMENT PLAN AND LONG SECTION - MC00 - 44880.000 TO 45410.000		24.10.23	15.12.23									
RW-0103	ROAD ALIGNMENT PLAN AND LONG SECTION - MC00 - 44410.000 TO 45940.000		24.10.23	15.12.23									
RW-0104	ROAD ALIGNMENT PLAN AND LONG SECTION - MC00 - 45940.000 TO 46470.000		24.10.23	15.12.23									
RW-0105	ROAD ALIGNMENT PLAN AND LONG SECTION - MC00 - 46470.000 TO 47000.000		24.10.23	15.12.23									
RW-0106	ROAD ALIGNMENT PLAN AND LONG SECTION - MC00 - 47000.000 TO 47385.000		24.10.23	15.12.23									
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RW-0202	SURVEY CONTROL SCHEDULE		24.10.23	15.12.23									
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RW-0303	DETAIL PLAN - HW19 - MC00 - CH.44825.000 TO CH.45075.000	17.07.23	24.10.23	15.12.23									
RW-0304	DETAIL PLAN - HW19 - MC00 - CH.45075.000 TO CH.45325.000	17.07.23	24.10.23	15.12.23									
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RC-0110	CROSS SECTION - HW19 - MC00 - CH. 45450.000 TO CH. 45575.000	17.07.23	24.10.23	15.12.23									
RC-0111	CROSS SECTION - HW19 - MC00 - CH. 45600.000 TO CH. 45725.000	17.07.23	24.10.23	15.12.23									
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
NOT TO SCALE

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:47:08 PM PLOT BY: walterslj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SHEET INDEX
SHEET 1 OF 3

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	GN-0101	2

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SHEET NAME	SHEET DESCRIPTION	ISSUE											
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RC-0121	CROSS SECTION - HW19 - MC00 - CH. 46975.000 TO CH. 47050.000	17.07.23	24.10.23	15.12.23									
RC-0122	CROSS SECTION - HW19 - MC00 - CH. 47075.000 TO CH. 47175.000	17.07.23	24.10.23	15.12.23									
RC-0123	CROSS SECTION - HW19 - MC00 - CH. 47200.000 TO CH. 47275.000	17.07.23	24.10.23	15.12.23									
RC-0124	CROSS SECTION - HW19 - MC00 - CH. 47300.000 TO CH. 47385.000	17.07.23	24.10.23	15.12.23									
SD-0001	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.44350.000 TO CH.44575.000		24.10.23	15.12.23									
SD-0002	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.44575.000 TO CH.44825.000		24.10.23	15.12.23									
SD-0003	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.44825.000 TO CH.45075.000		24.10.23	15.12.23									
SD-0004	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.45075.000 TO CH.45325.000		24.10.23	15.12.23									
SD-0005	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.45325.000 TO CH.45575.000		24.10.23	15.12.23									
SD-0006	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.45575.000 TO CH.45825.000		24.10.23	15.12.23									
SD-0007	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.45825.000 TO CH.46075.000		24.10.23	15.12.23									
SD-0008	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.46075.000 TO CH.46325.000		24.10.23	15.12.23									
SD-0009	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.46325.000 TO CH.46575.000		24.10.23	15.12.23									
SD-0010	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.46575.000 TO CH.46825.000		24.10.23	15.12.23									
SD-0011	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.46825.000 TO CH.47075.000		24.10.23	15.12.23									
SD-0012	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.47075.000 TO CH.47325.000		24.10.23	15.12.23									
SD-0013	STORMWATER MANAGEMENT PLAN - HW19 - MC00 - CH.47325.000 TO CH.47385.000		24.10.23	15.12.23									
SD-0101	DRAINAGE PROFILES - 1 OF 4		24.10.23	15.12.23									
SD-0102	DRAINAGE PROFILES - 2 OF 4		24.10.23	15.12.23									
SD-0103	DRAINAGE PROFILES - 3 OF 4		24.10.23	15.12.23									
SD-0103	DRAINAGE PROFILES - 4 OF 4		24.10.23	15.12.23									
SD-0201	DRAINAGE SCHEDULES		24.10.23	15.12.23									
SM-0301	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.44350.000 TO CH.44575.000			15.12.23									
SM-0302	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.44575.000 TO CH.44825.000			15.12.23									
SM-0303	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.44825.000 TO CH.45075.000			15.12.23									
SM-0304	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.45075.000 TO CH.45325.000			15.12.23									
SM-0305	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.45325.000 TO CH.45575.000			15.12.23									
SM-0306	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.45575.000 TO CH.45825.000			15.12.23									
SM-0307	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.45825.000 TO CH.46075.000			15.12.23									
SM-0308	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.46075.000 TO CH.46325.000			15.12.23									
SM-0309	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.46325.000 TO CH.46575.000			15.12.23									
SM-0310	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.46575.000 TO CH.46825.000			15.12.23									
SM-0311	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.46825.000 TO CH.47075.000			15.12.23									
SM-0312	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.47075.000 TO CH.47325.000			15.12.23									
SM-0313	SUBSURFACE DRAINAGE PLAN - HW19 - MC00 - CH.47325.000 TO CH.47835.000			15.12.23									
SM-0401	SUBSURFACE DRAINAGE SCHEDULE			15.12.23									
PV-0001	PAVEMENT DETAIL		24.10.23	15.12.23									
PV-0101	PAVEMENT PLAN - HW19 - MC00 - CH.44350.000 TO CH.44575.000		24.10.23	15.12.23									
PV-0102	PAVEMENT PLAN - HW19 - MC00 - CH.44575.000 TO CH.44825.000		24.10.23	15.12.23									
PV-0103	PAVEMENT PLAN - HW19 - MC00 - CH.44825.000 TO CH.45075.000		24.10.23	15.12.23									
PV-0104	PAVEMENT PLAN - HW19 - MC00 - CH.45075.000 TO CH.45325.000		24.10.23	15.12.23									
PV-0105	PAVEMENT PLAN - HW19 - MC00 - CH.45325.000 TO CH.45575.000		24.10.23	15.12.23									
PV-0106	PAVEMENT PLAN - HW19 - MC00 - CH.45575.000 TO CH.45825.000		24.10.23	15.12.23									
PV-0107	PAVEMENT PLAN - HW19 - MC00 - CH.45825.000 TO CH.46075.000		24.10.23	15.12.23									
PV-0108	PAVEMENT PLAN - HW19 - MC00 - CH.46075.000 TO CH.46325.000		24.10.23	15.12.23									
PV-0109	PAVEMENT PLAN - HW19 - MC00 - CH.46325.000 TO CH.46575.000		24.10.23	15.12.23									
PV-0110	PAVEMENT PLAN - HW19 - MC00 - CH.46575.000 TO CH.46825.000		24.10.23	15.12.23									
PV-0111	PAVEMENT PLAN - HW19 - MC00 - CH.46825.000 TO CH.47075.000		24.10.23	15.12.23									
PV-0112	PAVEMENT PLAN - HW19 - MC00 - CH.47075.000 TO CH.47325.000		24.10.23	15.12.23									

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-01-GN.dgn

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
NOT TO SCALE

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:47:13 PM PLOT BY: walterslj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SHEET INDEX
SHEET 2 OF 3

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	GN-0102	2

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SHEET NAME	SHEET DESCRIPTION	ISSUE											
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PV-0113	PAVEMENT PLAN - HW19 - MC00 - CH.47325.000 TO CH.47385.000		24.10.23	15.12.23									
FN-0001	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.44350.000 TO CH.44575.000		24.10.23	15.12.23									
FN-0002	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.44575.000 TO CH.44825.000		24.10.23	15.12.23									
FN-0003	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.44825.000 TO CH.45075.000		24.10.23	15.12.23									
FN-0004	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.45075.000 TO CH.45325.000		24.10.23	15.12.23									
FN-0005	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.45325.000 TO CH.45575.000		24.10.23	15.12.23									
FN-0006	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.45575.000 TO CH.45825.000		24.10.23	15.12.23									
FN-0007	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.45825.000 TO CH.46075.000		24.10.23	15.12.23									
FN-0008	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.46075.000 TO CH.46325.000		24.10.23	15.12.23									
FN-0009	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.46325.000 TO CH.46575.000		24.10.23	15.12.23									
FN-0010	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.46575.000 TO CH.46825.000		24.10.23	15.12.23									
FN-0011	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.46825.000 TO CH.47075.000		24.10.23	15.12.23									
FN-0012	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.47075.000 TO CH.47325.000		24.10.23	15.12.23									
FN-0013	ROADSIDE FURNITURE & PAVEMENT MARKING PLAN - HW19 - MC00 - CH.47325.000 TO CH.47385.000		24.10.23	15.12.23									
FN-0101	ROADSIDE FURNITURE SCHEDULES		24.10.23	15.12.23									
MS-0001	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.44350.000 TO CH.44575.000		24.10.23	15.12.23									
MS-0002	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.44575.000 TO CH.44825.000		24.10.23	15.12.23									
MS-0003	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.44825.000 TO CH.45075.000		24.10.23	15.12.23									
MS-0004	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.45075.000 TO CH.45325.000		24.10.23	15.12.23									
MS-0005	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.45325.000 TO CH.45575.000		24.10.23	15.12.23									
MS-0006	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.45575.000 TO CH.45825.000		24.10.23	15.12.23									
MS-0007	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.45825.000 TO CH.46075.000		24.10.23	15.12.23									
MS-0008	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.46075.000 TO CH.46325.000		24.10.23	15.12.23									
MS-0009	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.46325.000 TO CH.46575.000		24.10.23	15.12.23									
MS-0010	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.46575.000 TO CH.46825.000		24.10.23	15.12.23									
MS-0011	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.46825.000 TO CH.47075.000		24.10.23	15.12.23									
MS-0012	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.47075.000 TO CH.47325.000		24.10.23	15.12.23									
MS-0013	PRESERVATION OF SURVEY INFRASTRUCTURE PLAN - HW19 - MC00 - CH.47325.000 TO CH.47385.000		24.10.23	15.12.23									

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-01-GN.dgn

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
NOT TO SCALE

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020) HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME 15/12/2023 12:47:17 PM PLOT BY walterslj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

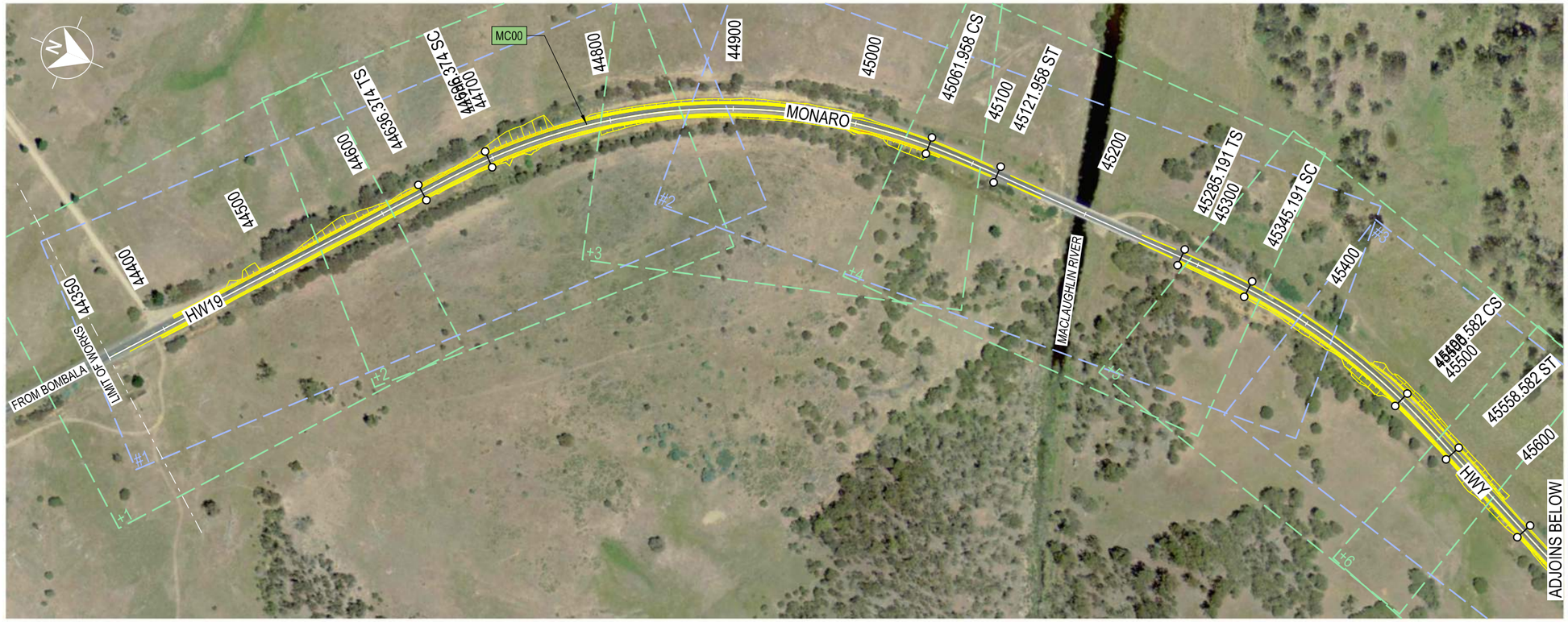
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SHEET INDEX
SHEET 3 OF 3

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	GN-0103	2

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LEGEND

MC?? — DESIGN CONTROL CALLOUT

FULL PLAN SHEETS AT 1:1000

FULL PLAN SHEETS AT 1:2000

GDA 2020

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DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:42:11 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
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SCALE 1:4000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

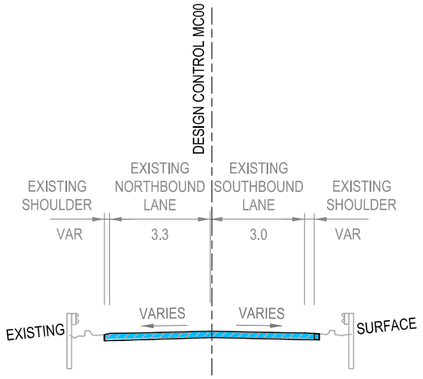
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
OVERVIEW PLAN

A3

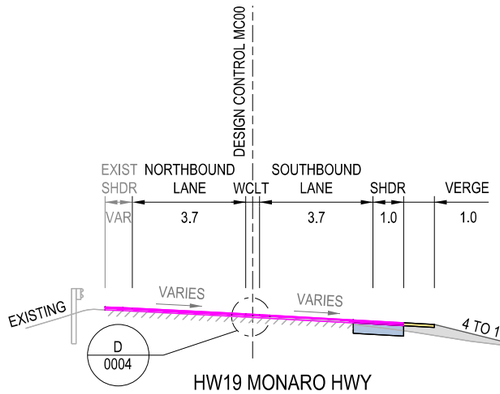
RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	GN-0201	2

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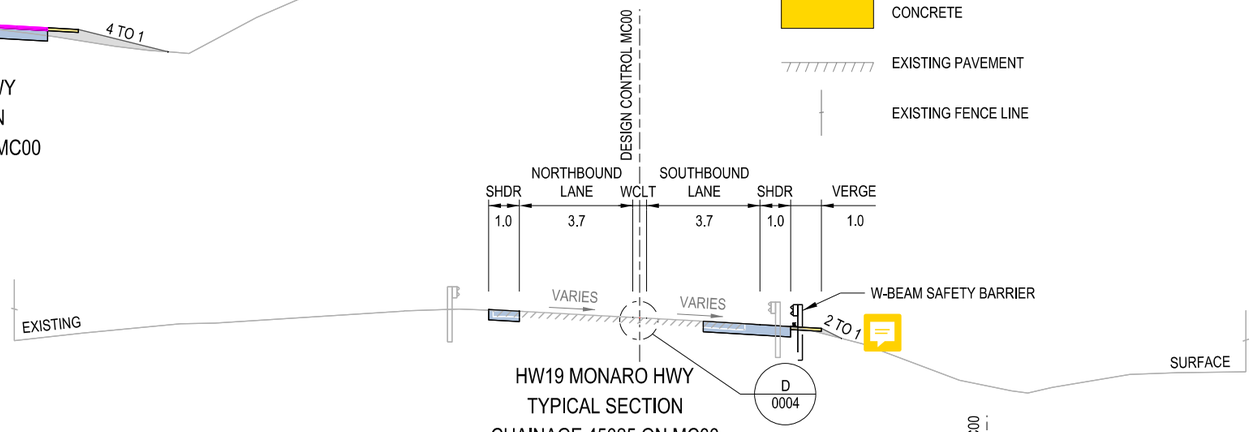
HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 45250 ON MC00
(ASPHALT AT ABUTMENTS)



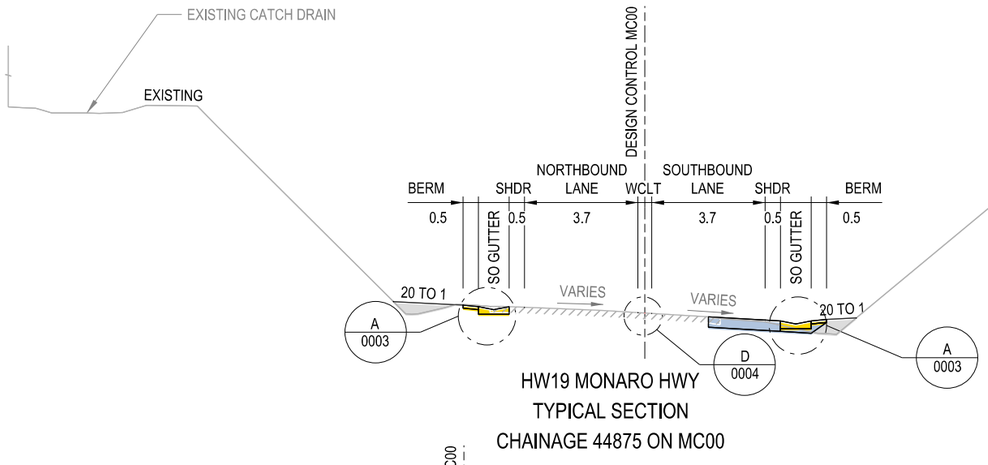
HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 45400 ON MC00

LEGEND

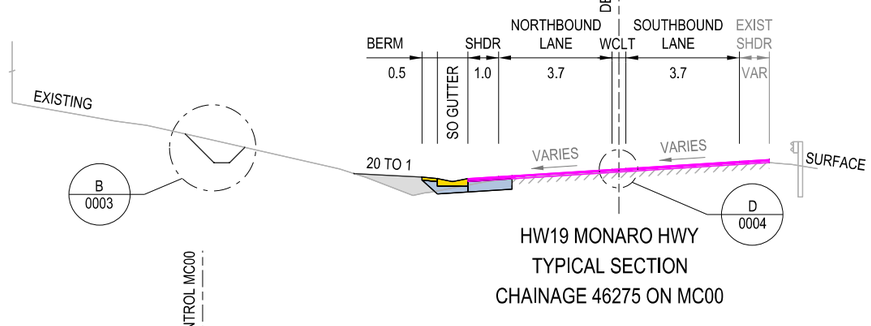
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- PAVEMENT TYPE P2
- 100MM DGB20 OVERLAY - PLANNED TO BE INSTALLED POST PROJECT
- EMBANKMENT MATERIAL
- VERGE
- CONCRETE
- EXISTING PAVEMENT
- EXISTING FENCE LINE



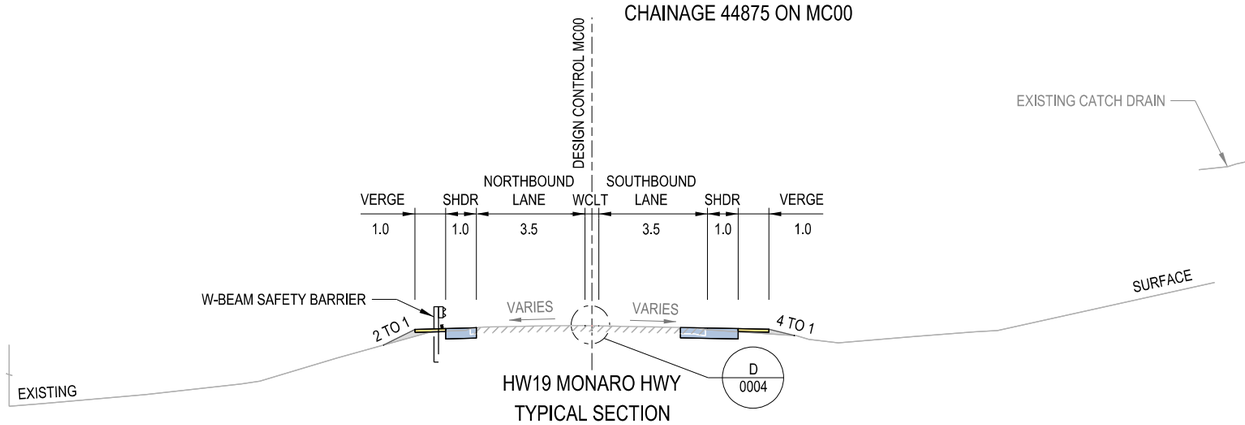
HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 45025 ON MC00



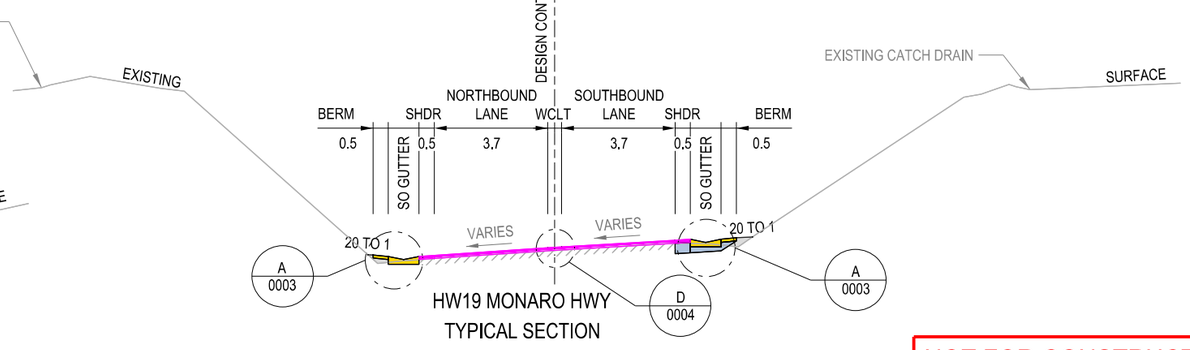
HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 44875 ON MC00



HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 46275 ON MC00



HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 44650 ON MC00



HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 46000 ON MC00

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY
0 2 4 6 8 SCALE 1:200m	NSW GOVERNMENT Transport for NSW
CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD	

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

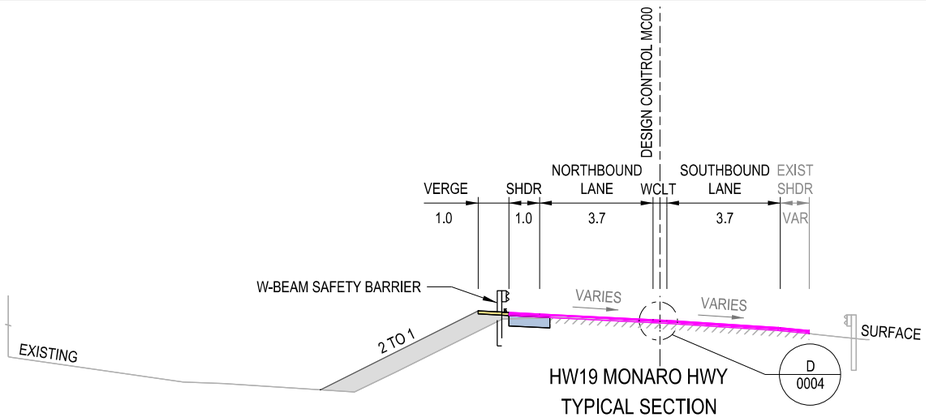
PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

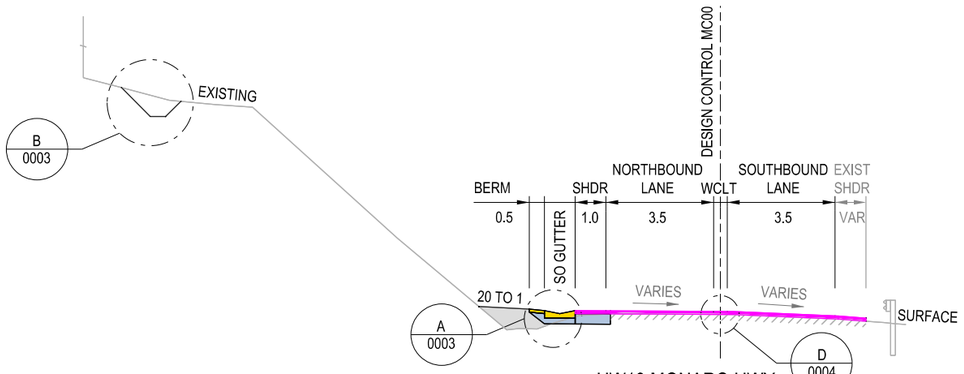
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100% - DETAIL DESIGN	SF2023/137411	RW-0001	2

A3

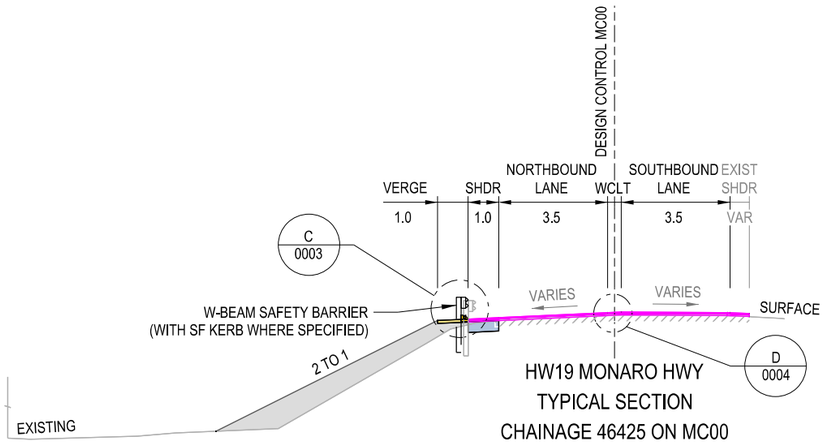
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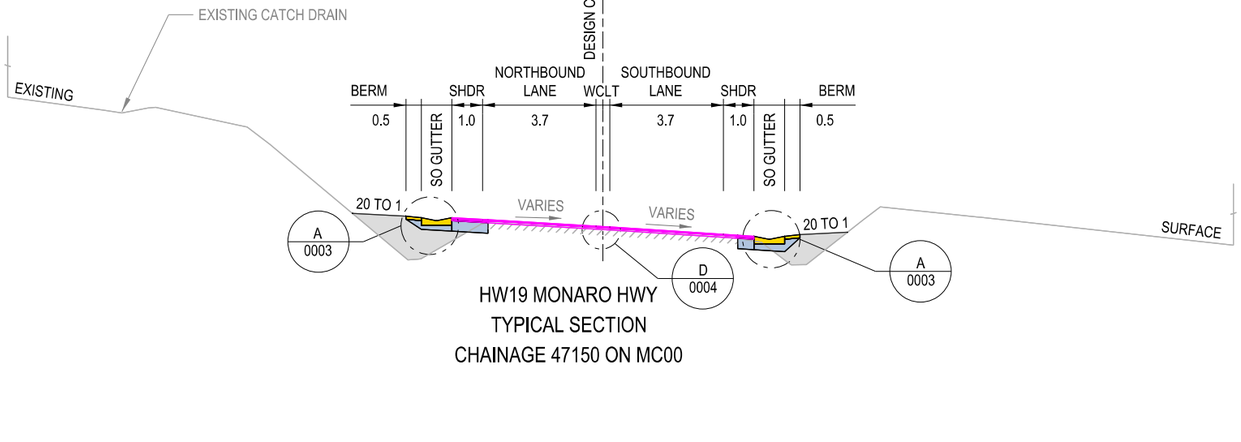
HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 46725 ON MC00



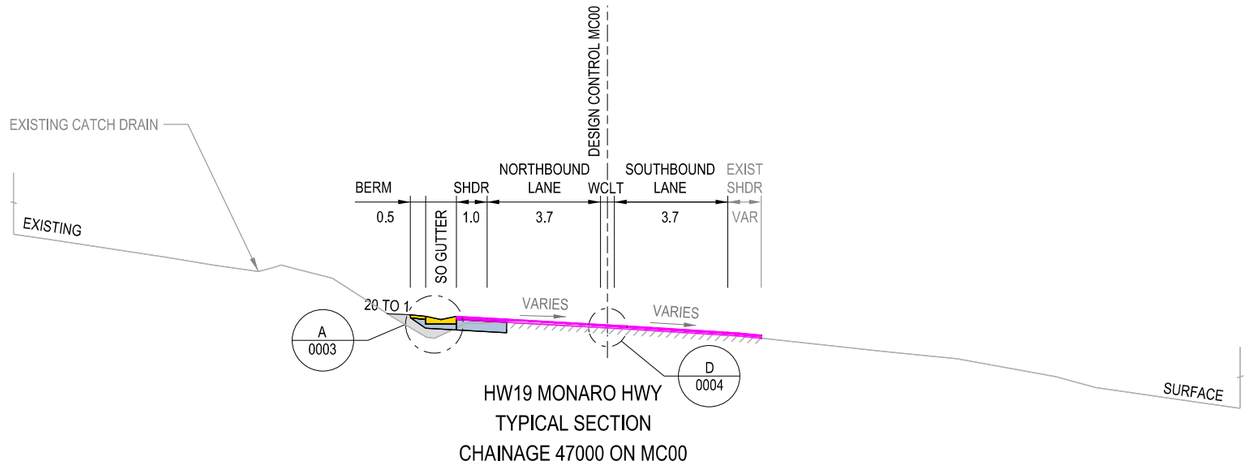
HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 46575 ON MC00



HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 46425 ON MC00



HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 47150 ON MC00



HW19 MONARO HWY
TYPICAL SECTION
CHAINAGE 47000 ON MC00

LEGEND

- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- 100MM DGB20 OVERLAY - PLANNED TO BE INSTALLED POST PROJECT
- EMBANKMENT MATERIAL
- VERGE
- CONCRETE
- EXISTING PAVEMENT
- EXISTING FENCE LINE

GDA 2020

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-05-RC.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:48:52 AM
PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 2 4 6 8
SCALE 1:200m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

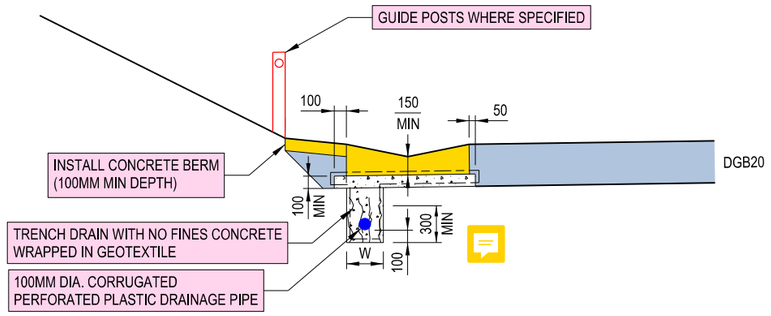
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
TYPICAL CROSS SECTIONS
SHEET 2 OF 2

A3

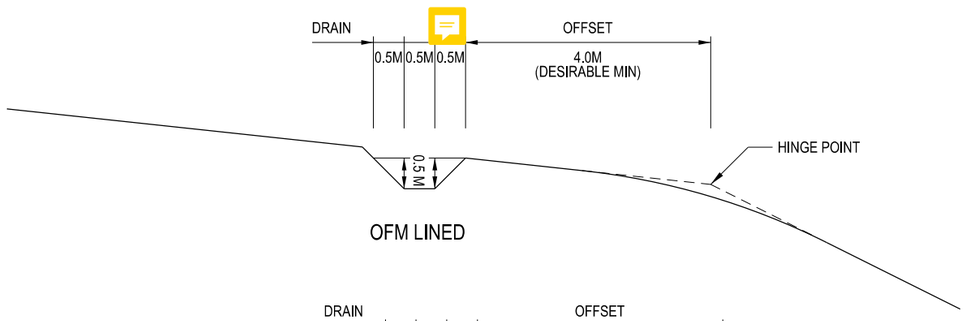
RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0002	2

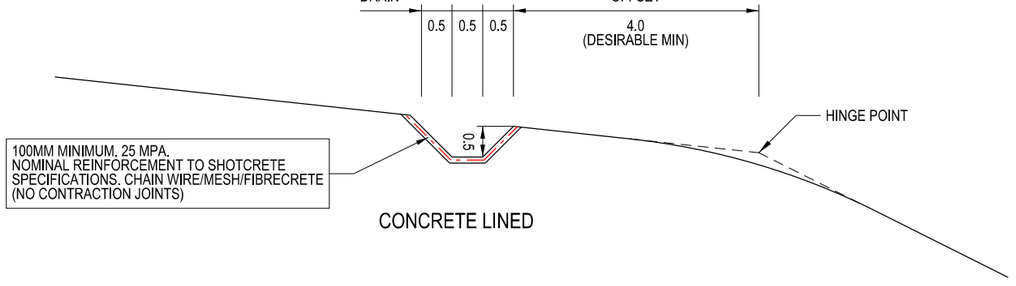
© Transport for NSW



DETAIL A
TRENCH DRAIN UNDER 'SO' GUTTER

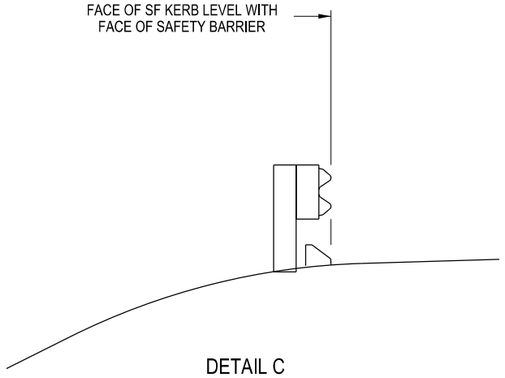


OFM LINED



CONCRETE LINED

DETAIL B
BATTER WITH LINED CATCH DRAIN



DETAIL C
SAFETY BARRIER WITH SF KERB

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-05-RC.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:48:54 AM
PLOT BY: walters|

CLIENT: NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
TYPICAL DETAILS
SHEET 1 OF 2

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: NOT TO SCALE

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

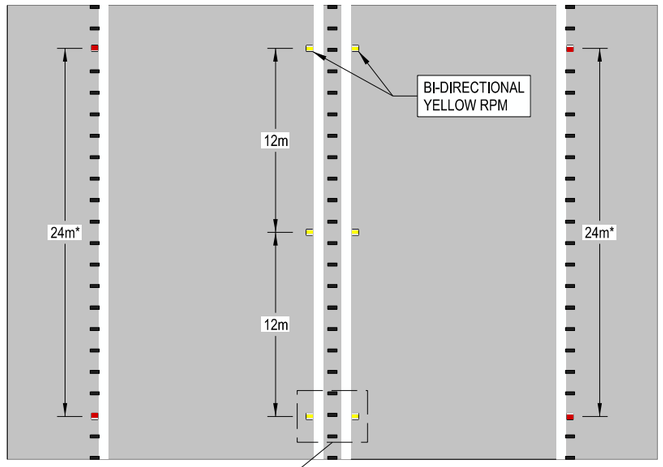
CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

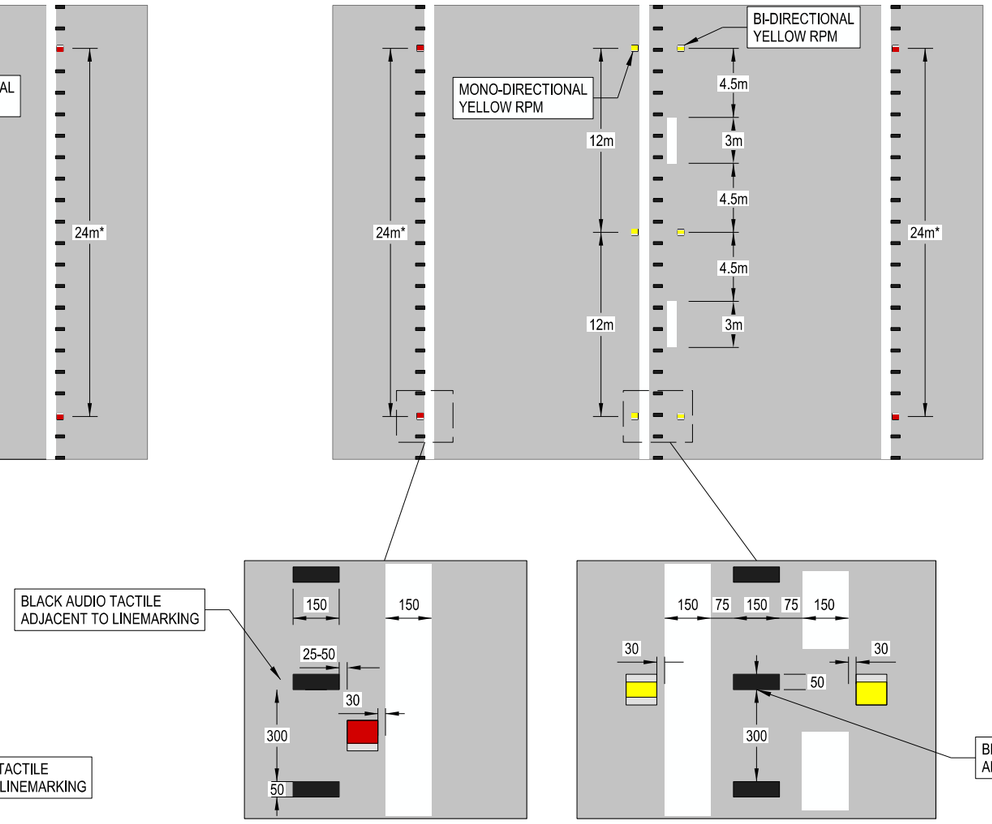
RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0003	2

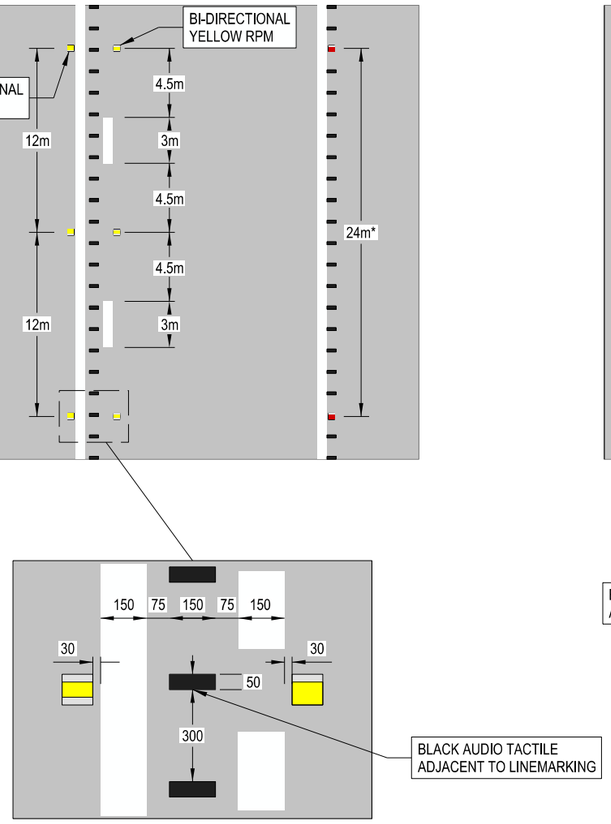
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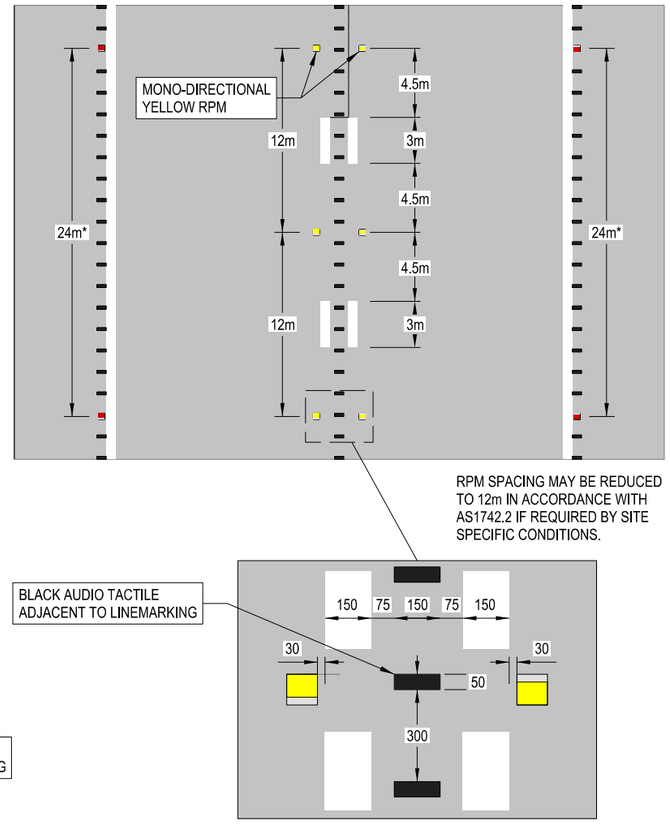
BB2 LINEMARKING



E1 LINEMARKING



BS2 LINEMARKING



WS2 LINEMARKING

DETAIL D
BB2 / BS2 / WS2 / E1 LINEMARKING AND ATLM

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-05-RC.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:48:54 AM
PLOT BY: waltersj

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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: NOT TO SCALE

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
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DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

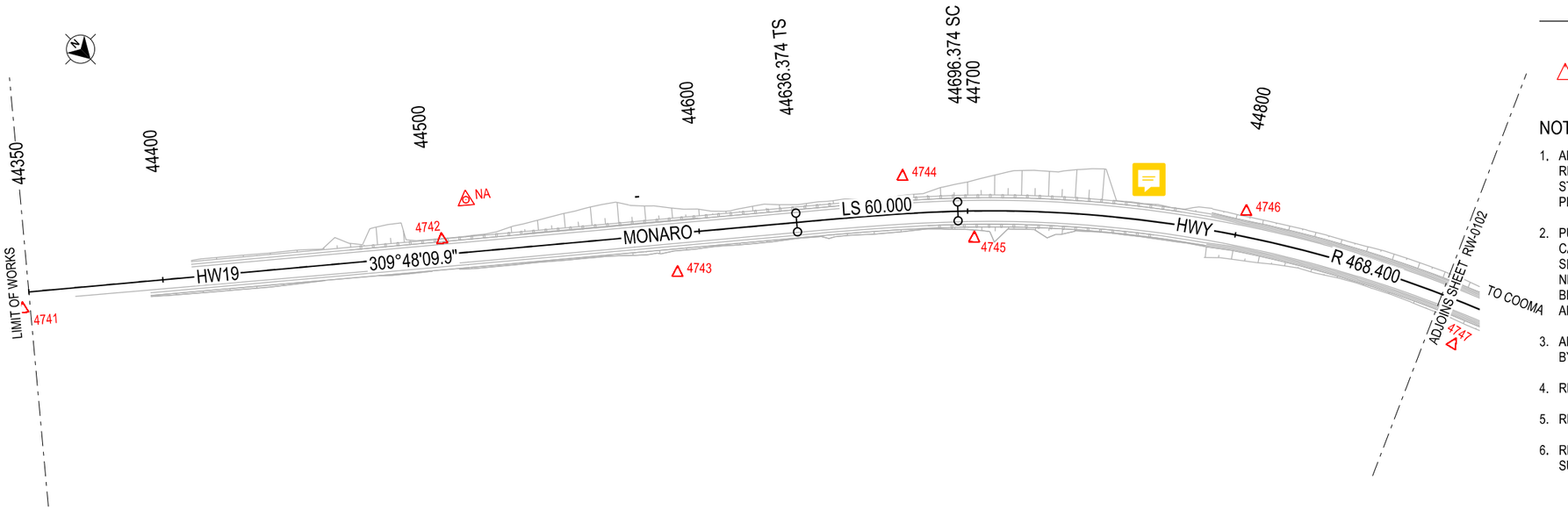
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
TYPICAL DETAILS
SHEET 2 OF 2

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0004	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- MASTER CONTROL
- NAME — SURVEY CONTROL MARK

GDA 2020

NOTES

1. ANY SURVEY PMS OR SSMS THAT ARE DESTROYED ARE TO BE REPLACED, CO-ORDINATED AND DOCUMENTED TO LANDS DEPARTMENT STANDARDS. REFER TO TFNSW TECHNICAL DIRECTION SD02. PENALTIES MAY APPLY FOR NON-CONFORMANCE.
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5. REFER TO SHEET RW-0202 FOR SURVEY CONTROL SCHEDULE.
6. REFER TO SHEETS MS-0001 TO MS-0013 FOR INFORMATION REGARDING SURVEY INFRASTRUCTURE.

DATUM RL 1011 — DATUM RL 996

GRADE	G=-5.73%	G=-5.73%	G=-5.74%	G=-5.77%	G=-5.74%	G=-5.75%	G=-6.01%	G=-5.94%	G=-5.95%	G=-5.50%	G=-5.64%	G=-5.58%	G=-5.68%	G=-5.62%	G=-5.53%	G=-5.30%	G=-5.42%	G=-5.70%	G=-5.68%	G=-5.90%	G=-5.90%		
HORIZONTAL ALIGNMENT	L = 286.374												Ls = 60.000	R = 468.400 L = 365.585									
EXISTING SURFACE LEVELS	1030.271	1028.838	1027.404	1025.968	1024.526	1023.091	1021.654	1020.153	1018.668	1017.181	1015.805	1014.394	1012.998	1011.578	1010.173	1008.791	1007.467	1006.112	1004.686	1003.266	1001.792	1000.316	1000.021
CHAINAGE	44350	44375	44400	44425	44450	44475	44500	44525	44550	44575	44600	44625	44650	44675	44700	44725	44750	44775	44800	44825	44850	44875	44880

LONGITUDINAL SECTION MC00

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-02-RW.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:43:50 AM — PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
HORIZONTAL SCALE 1:2000m (0 20 40 60 80)
VERTICAL SCALE 1:400m (0 4 8 12 16)
CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN	J. WALTERS		15.12.23
DRG CHECK	J. YANEZ		15.12.23
DESIGN	J. WALTERS		15.12.23
DESIGN CHECK	J. YANEZ		15.12.23
DESIGN MNGR	G. KOZAROSKI		15.12.23
PROJECT MNGR	S. WAKELING		15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

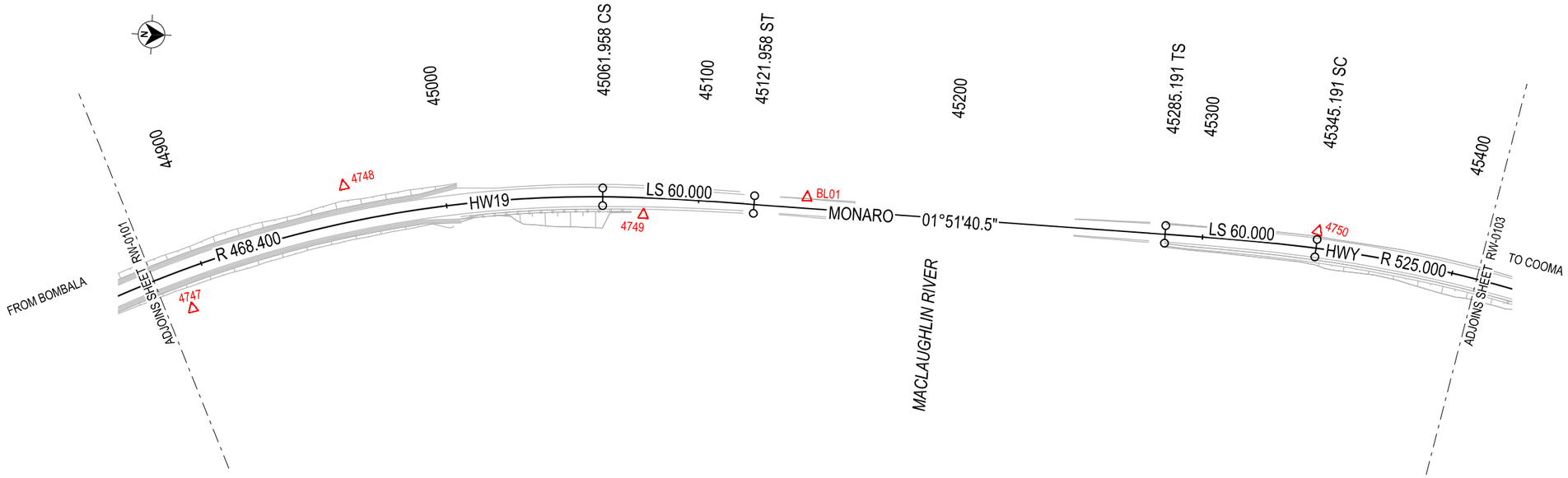
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ALIGNMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44350 TO CH.44880

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0101	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- MASTER CONTROL
- △ NAME — SURVEY CONTROL MARK

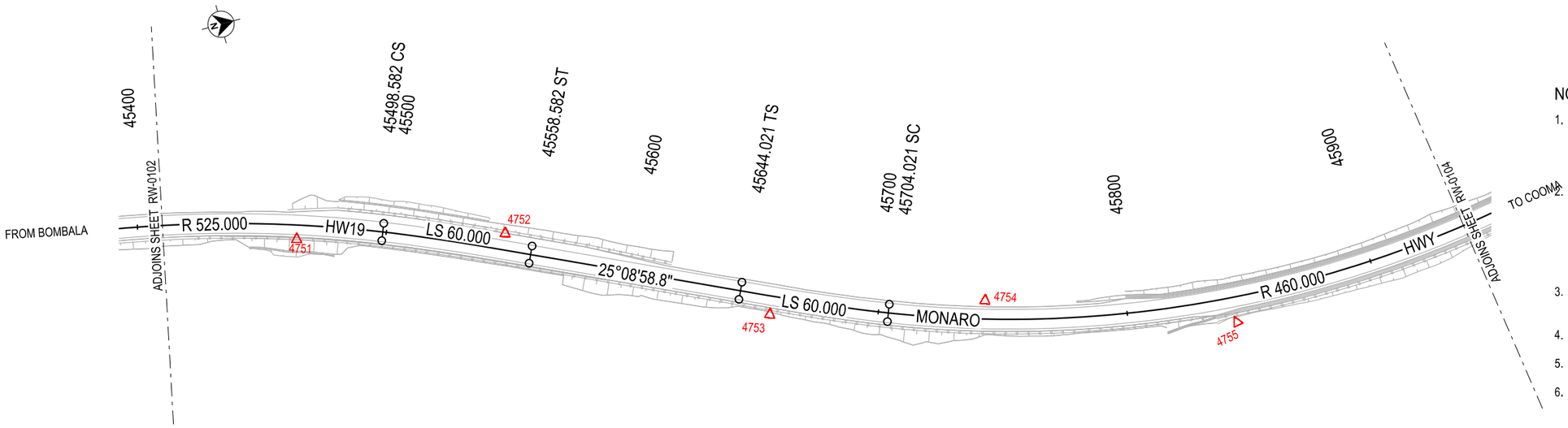
GDA 2020

NOTES

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6. REFER TO SHEETS MS-0001 TO MS-0013 FOR INFORMATION REGARDING SURVEY INFRASTRUCTURE.

DATUM RL 983

| | | |



LEGEND

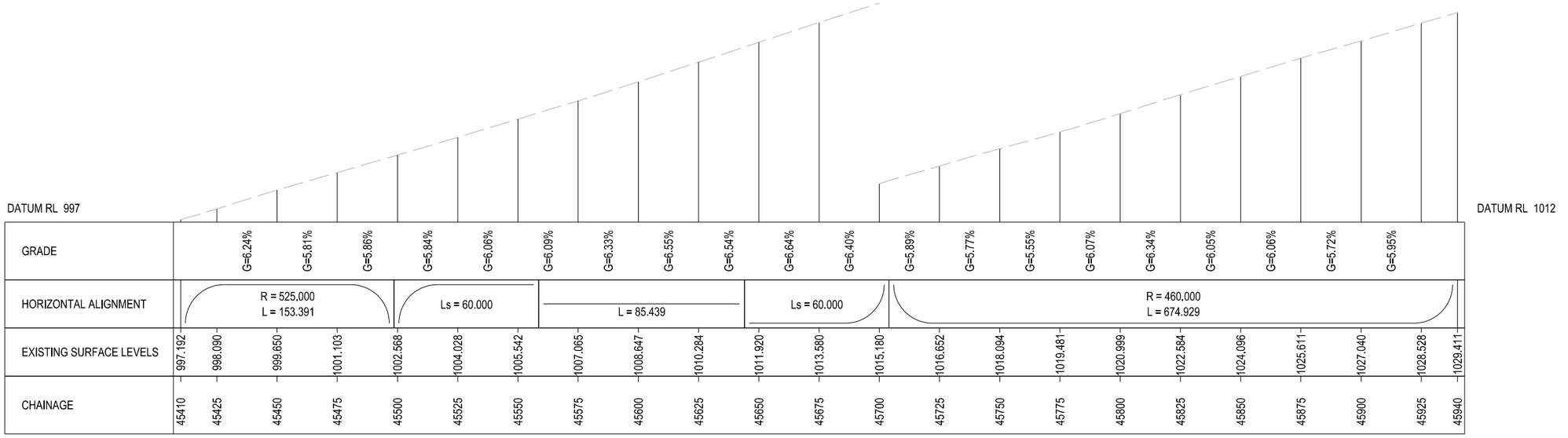
MC?? — DESIGN CONTROL CALLOUT

MASTER CONTROL

NAME — SURVEY CONTROL MARK

NOTES

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LONGITUDINAL SECTION MC00

NOT FOR CONSTRUCTION

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
HORIZONTAL SCALE 1:2000m (0 20 40 60 80)
VERTICAL SCALE 1:400m (0 4 8 12 16)

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:43:53 AM
PLOT BY: walterj

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

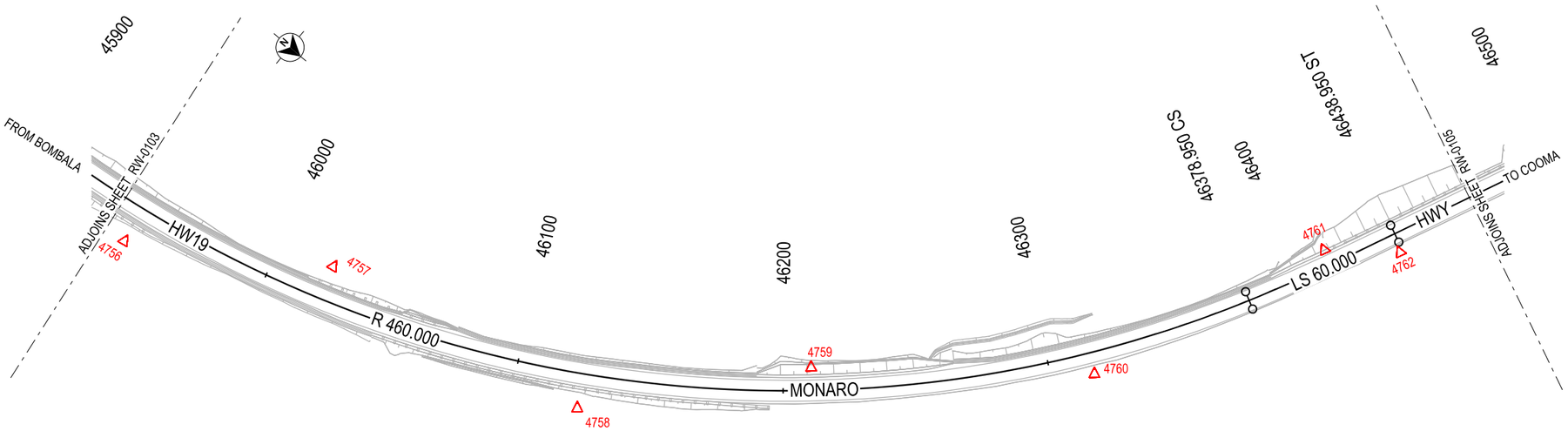
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ALIGNMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45410 TO CH.45940

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0103	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- MASTER CONTROL
- △ NAME — SURVEY CONTROL MARK

GDA 2020

NOTES

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DATUM RL 1029

GRADE		G=6.16%	G=5.76%	G=5.80%	G=5.88%	G=5.64%	G=5.25%	G=4.46%	G=3.76%	G=2.79%	G=2.39%	G=2.47%	G=2.27%	G=2.28%	G=2.17%	G=2.37%	G=1.80%	G=2.24%	G=2.31%	G=2.47%	G=2.64%			
HORIZONTAL ALIGNMENT		R = 460.000 L = 674.929																	Ls = 60.000		L = 132.600			
EXISTING SURFACE LEVELS	1029.411	1030.016	1031.555	1032.995	1034.445	1035.916	1037.327	1038.839	1039.755	1040.694	1041.392	1041.989	1042.607	1043.175	1043.744	1044.285	1044.879	1045.328	1045.887	1046.465	1047.083	1047.743	1048.268	
CHAINAGE	45940	45950	45975	46000	46025	46050	46075	46100	46125	46150	46175	46200	46225	46250	46275	46300	46325	46350	46375	46400	46425	46450	46470	

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-02-RW.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:43:55 AM — PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 20 40 60 80
HORIZONTAL SCALE 1:2000m
0 4 8 12 16
VERTICAL SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

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TITLE		
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DRG CHECK	J. YANEZ	15.12.23
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CLIENT
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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

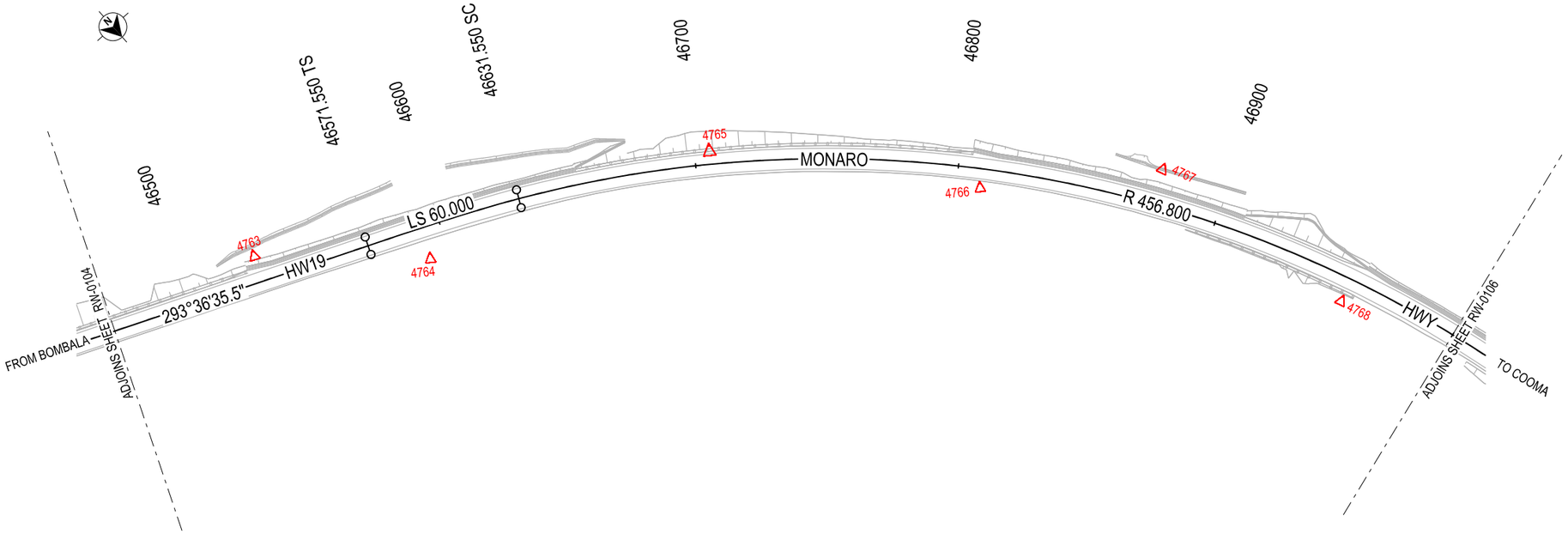
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ALIGNMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45940 TO CH.46470

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0104	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- MASTER CONTROL
- NAME — SURVEY CONTROL MARK

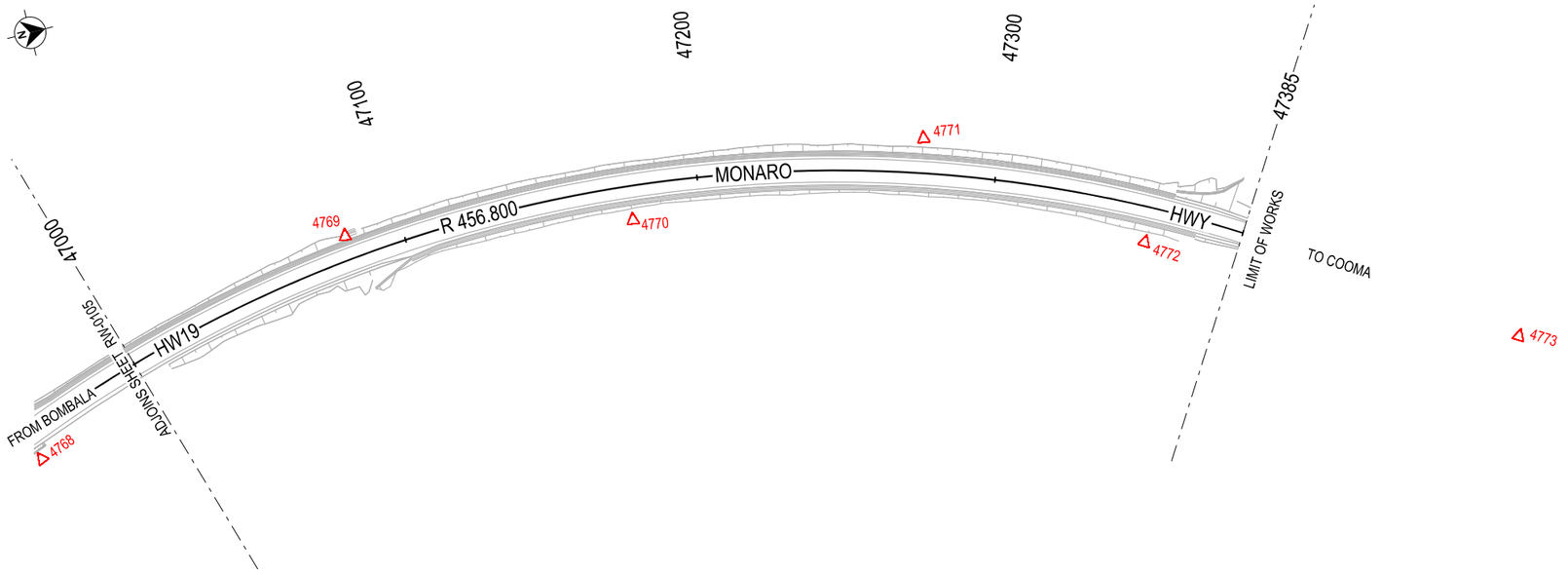
GDA 2020

NOTES

1. ANY SURVEY PMS OR SSMS THAT ARE DESTROYED ARE TO BE REPLACED, CO-ORDINATED AND DOCUMENTED TO LANDS DEPARTMENT STANDARDS. REFER TO TFNSW TECHNICAL DIRECTION SD02. PENALTIES MAY APPLY FOR NON-CONFORMANCE.
2. PURSUANT TO THE SURVEYING AND SPATIAL INFORMATION ACT, ANY CADASTRAL REFERENCE MARKS THAT ARE ON KERBS, FOOTPATHS OR SIMILAR THAT MAY BE AFFECTED BY CONSTRUCTION OR MAINTENANCE, NEED TO BE IDENTIFIED AND SURVEYED BY A REGISTERED SURVEYOR BEFORE THEY ARE DESTROYED OR DISTURBED. PERSONAL FINES APPLY FOR BREACH OF THE ACT.
3. ALL SURVEY CONTROL IS NOT TO BE DISTURBED BEFORE ASSESSMENT BY SURVEYOR.
4. REFER TO SHEET RW-0201 FOR ALIGNMENT SETOUT DETAILS.
5. REFER TO SHEET RW-0202 FOR SURVEY CONTROL SCHEDULE.
6. REFER TO SHEETS MS-0001 TO MS-0013 FOR INFORMATION REGARDING SURVEY INFRASTRUCTURE.

DATUM RL 1048 — DATUM RL 1057

| | | |



LEGEND

MC?? — DESIGN CONTROL CALLOUT

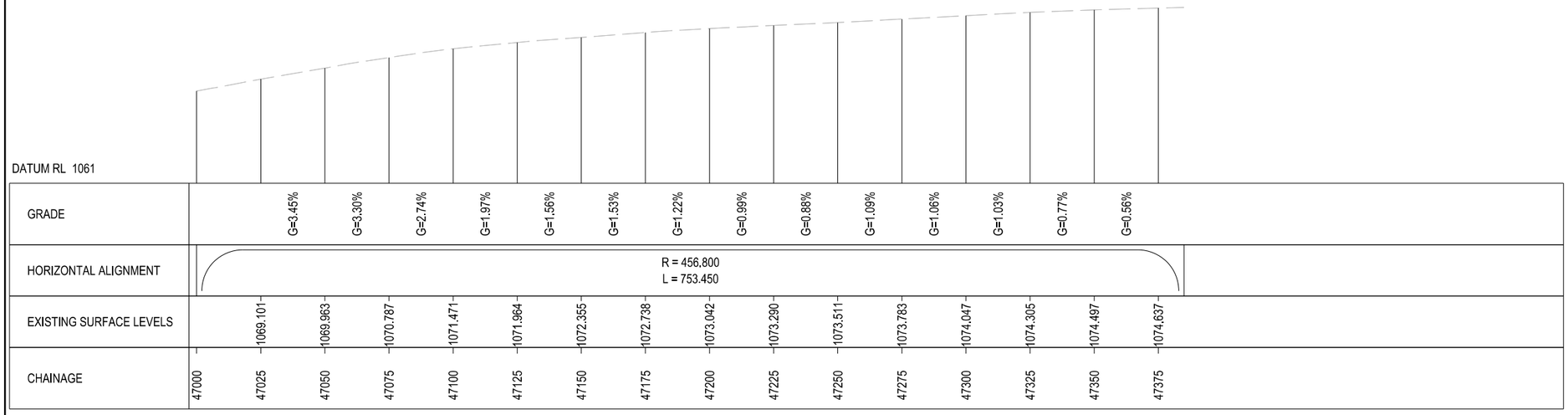
——— - ——— MASTER CONTROL

△ NAME — SURVEY CONTROL MARK

GDA 2020

NOTES

1. ANY SURVEY PMS OR SSMS THAT ARE DESTROYED ARE TO BE REPLACED, CO-ORDINATED AND DOCUMENTED TO LANDS DEPARTMENT STANDARDS. REFER TO TFNSW TECHNICAL DIRECTION SD02. PENALTIES MAY APPLY FOR NON-CONFORMANCE.
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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-02-RW.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:43:58 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
HORIZONTAL SCALE 1:2000m (0 20 40 60 80)
VERTICAL SCALE 1:400m (0 4 8 12 16)
CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ALIGNMENT PLAN
HW19 - MONARO HWY - MC00 - CH.47000 TO CH.47385.059

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0106	2

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GDA 2020

HW19 MONARO HWY - ALIGNMENT MC00

POINT	CHAINAGE	EASTING	NORTHING	LEVEL	ELEMENT	LENGTH	BEARING
START	44350.000	706052.334	5951277.722	1030.271			
					STRAIGHT	286.374	309°48'09.9"
TS	44636.374	705832.326	5951461.043	1013.766			309°48'09.9"
					SPIRAL	60.000	
SC	44696.374	705787.070	5951500.420	1010.374			313°28'20.7"
CC		706109.332	5951840.340		R = +468.400	365.585	
CS	45061.958	705641.165	5951825.559	989.565			358°11'29.7"
					SPIRAL	60.000	
ST	45121.958	705641.833	5951885.544	987.402			
					STRAIGHT	163.232	01°51'40.5"
TS	45285.191	705647.135	5952048.690	990.104			01°51'40.5"
					SPIRAL	60.000	
SC	45345.191	705650.225	5952108.602	993.465			05°08'07.1"
CC		706173.117	5952061.610		R = +525.000	153.391	
CS	45498.582	705685.920	5952257.222	1002.486			21°52'32.3"
					SPIRAL	60.000	
ST	45558.582	705710.377	5952312.002	1006.080			
					STRAIGHT	85.439	25°08'58.8"
TS	45644.021	705746.687	5952389.341	1011.523			25°08'58.8"
					SPIRAL	60.000	
SC	45704.021	705770.995	5952444.184	1015.434			21°24'46.8"
CC		705342.747	5952612.125		R = -460.000	674.929	
CS	46378.950	705554.058	5953020.717	1045.973			297°20'47.6"
					SPIRAL	60.000	
ST	46438.950	705499.626	5953045.932	1047.446			
					STRAIGHT	132.600	293°36'35.5"
TS	46571.550	705378.125	5953099.039	1051.292			293°36'35.5"
					SPIRAL	60.000	
SC	46631.550	705323.697	5953124.263	1053.100			297°22'21.8"
CC		705533.723	5953529.917		R = +456.800	753.450	
END	47385.000	705145.816	5953771.151	1074.689			31°52'36.8"

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

NOT FOR CONSTRUCTION

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-02-RW.dgn

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:43:59 AM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ALIGNMENT SCHEDULE

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0201	2

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GDA 2020

Primary Survey Control Mark Schedule - i004626 - GDA2020 MGA Zone 55

[P] PERMANENT MARKS MUST BE PROTECTED AS PER SPECIFICATION G71 IN ACCORDANCE WITH SGD11 AND SGD12
[C] CONTROL STATIONS SUITABLE FOR CONSTRUCTION AND MUST NOT BE DISTURBED UNTIL ASSESSED BY SURVEYOR
ALL OTHER SURVEY STATIONS ARE TO BE CONSIDERED TEMPORARY AND UNSUITABLE FOR CONSTRUCTION

NB: STATIONS 4741, 4760, 4761, 4774 AND 4775 ESTABLISHED USING GNSS. ALL OTHER STATIONS ARE DRIVED FROM THESE 5 GNSS STATIONS THROUGH COMPNET

Station	Code	GDA2020 MGA Coordinates		MGA			Source	AHD	AHD			Source	CSF	Description	Status	Date
		Easting	Northing	Class	PU	LU			Class	PU	LU					
4741	PSSA	706058.215	5951281.338	C			TfNSW	1030.135	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4760	PSSA	705611.898	5952993.943	C			TfNSW	1044.658	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4761	PSSA	705520.990	5953028.942	C			TfNSW	1046.195	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4774	PSSA	705302.030	5953940.777	C			TfNSW	1078.162	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4775	PSSA	705336.873	5953996.577	C			TfNSW	1081.441	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4742	PSSA	705929.464	5951371.650	C			TfNSW	1021.031	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4743	PSSA	705876.160	5951442.307	C			TfNSW	1016.348	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4744	PSSA	705791.777	5951476.072	C			TfNSW	1009.837	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4745	PSSA	705789.103	5951511.110	C			TfNSW	1009.312	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4746	PSSA	705710.624	5951575.529	C			TfNSW	1006.233	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4747	PSSA	705690.899	5951664.888	C			TfNSW	1004.673	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4748	PSSA	705639.998	5951722.698	C			TfNSW	1001.747	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4749	PSSA	705646.680	5951841.947	C			TfNSW	988.525	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
BL01	PSSA	705637.195	5951906.484	C			TfNSW	986.916	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4750	PSSA	705642.519	5952109.355	C			TfNSW	993.249	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4751	PSSA	705678.659	5952223.407	C			TfNSW	1000.073	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4752	PSSA	705698.573	5952304.702	C			TfNSW	1005.013	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4753	PSSA	705758.096	5952398.474	C			TfNSW	1012.297	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4754	PSSA	705775.546	5952483.222	C			TfNSW	1017.045	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4755	PSSA	705810.659	5952577.965	C			TfNSW	1024.751	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4756	PSSA	705810.014	5952685.859	C			TfNSW	1033.558	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4757	PSSA	705766.434	5952751.563	C			TfNSW	1039.435	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4758	PSSA	705747.582	5952855.115	C			TfNSW	1040.698	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4759	PSSA	705679.058	5952911.731	C			TfNSW	1041.198	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4762	PSSA	705503.215	5953051.060	C			TfNSW	1047.063	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4763	PSSA	705412.432	5953072.089	C			TfNSW	1051.638	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4764	PSSA	705363.364	5953117.889	C			TfNSW	1052.689	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4765	PSSA	705257.228	5953158.555	C			TfNSW	1056.432	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4766	PSSA	705190.548	5953238.242	C			TfNSW	1060.099	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4767	PSSA	705134.219	5953279.923	C			TfNSW	1064.919	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4768	PSSA	705117.573	5953362.557	C			TfNSW	1065.611	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4769	PSSA	705070.724	5953479.963	C			TfNSW	1071.642	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4770	PSSA	705089.586	5953574.667	C			TfNSW	1074.807	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4771	PSSA	705087.477	5953675.709	C			TfNSW	1076.958	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4772	PSSA	705139.783	5953738.997	C			TfNSW	1075.767	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
4773	PSSA	705201.494	5953852.487	C			TfNSW	1075.162	C			TfNSW	0.999958	STARPICKET	[C]	15/05/2023
												Mean CSF:	0.999958	+/-		

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

NOT FOR CONSTRUCTION

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-02-RW.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:44:00 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SURVEY CONTROL SCHEDULE

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: RW-0202
ISSUE: 2

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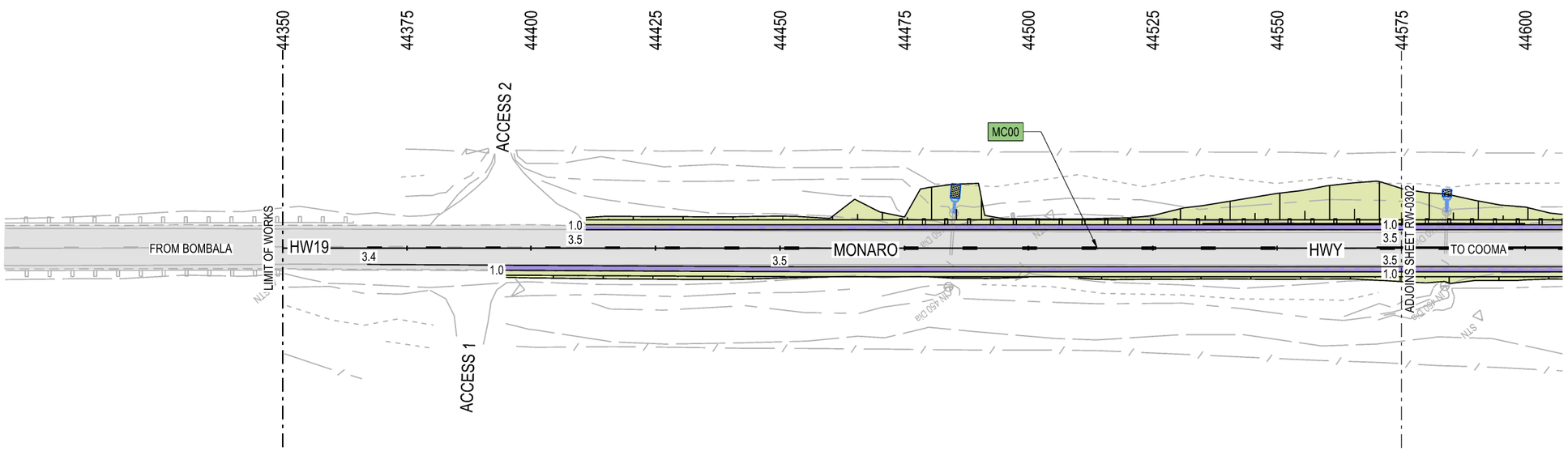
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. CONTRACTOR TO CONFIRM LOCATION OF ALL SERVICES, DRAINAGE WORKS AND UNDERGROUND INFRASTRUCTURE PRIOR TO COMMENCING WORK. CONTRACTOR TO ENSURE ADOPTED METHOD OF CONSTRUCTION AND PROPOSED WORKS WILL AVOID DAMAGE TO ALL SERVICES AND DRAINAGE WORKS, INCLUDING CLEARANCES TO OVERHEAD POWER LINES.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE. ALL LEVELS, METERAGES, CHAINAGES AND CO-ORDINATES ARE EXPRESSED IN METRES
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NOT FOR CONSTRUCTION

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:50:41 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

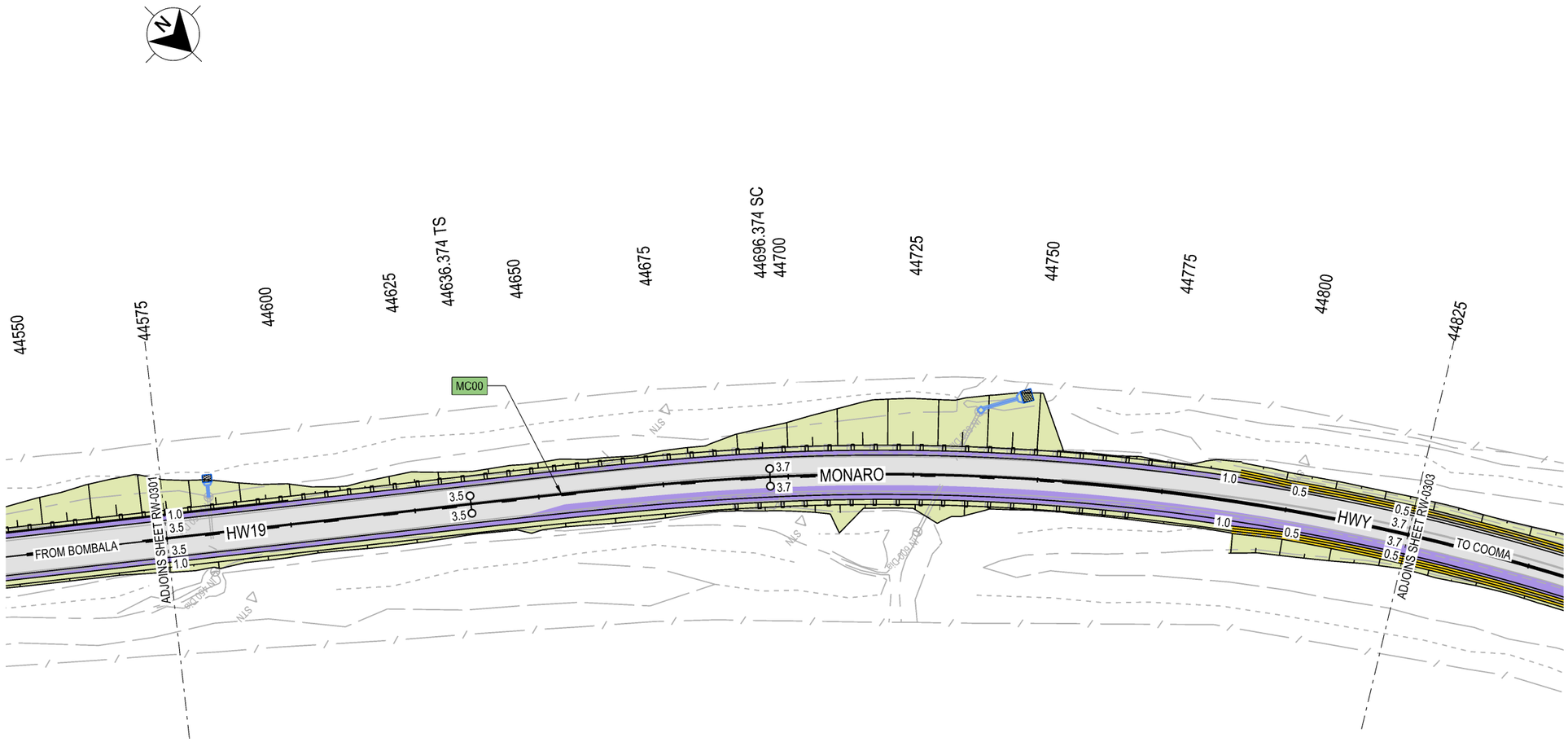
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.44350.000 TO CH.44575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0301	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:50:50 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

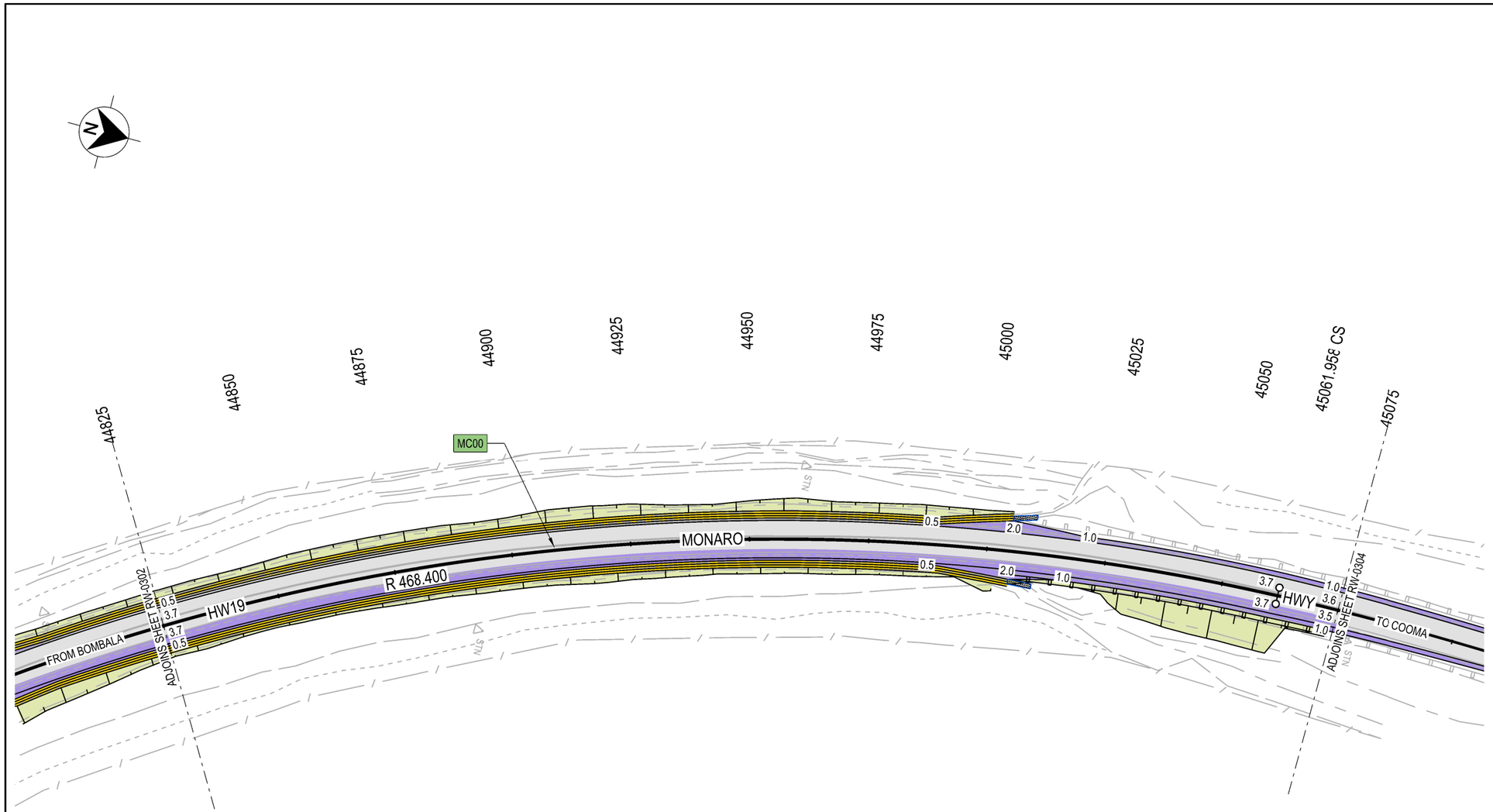
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.44575.000 TO CH.44825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0302	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:50:57 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

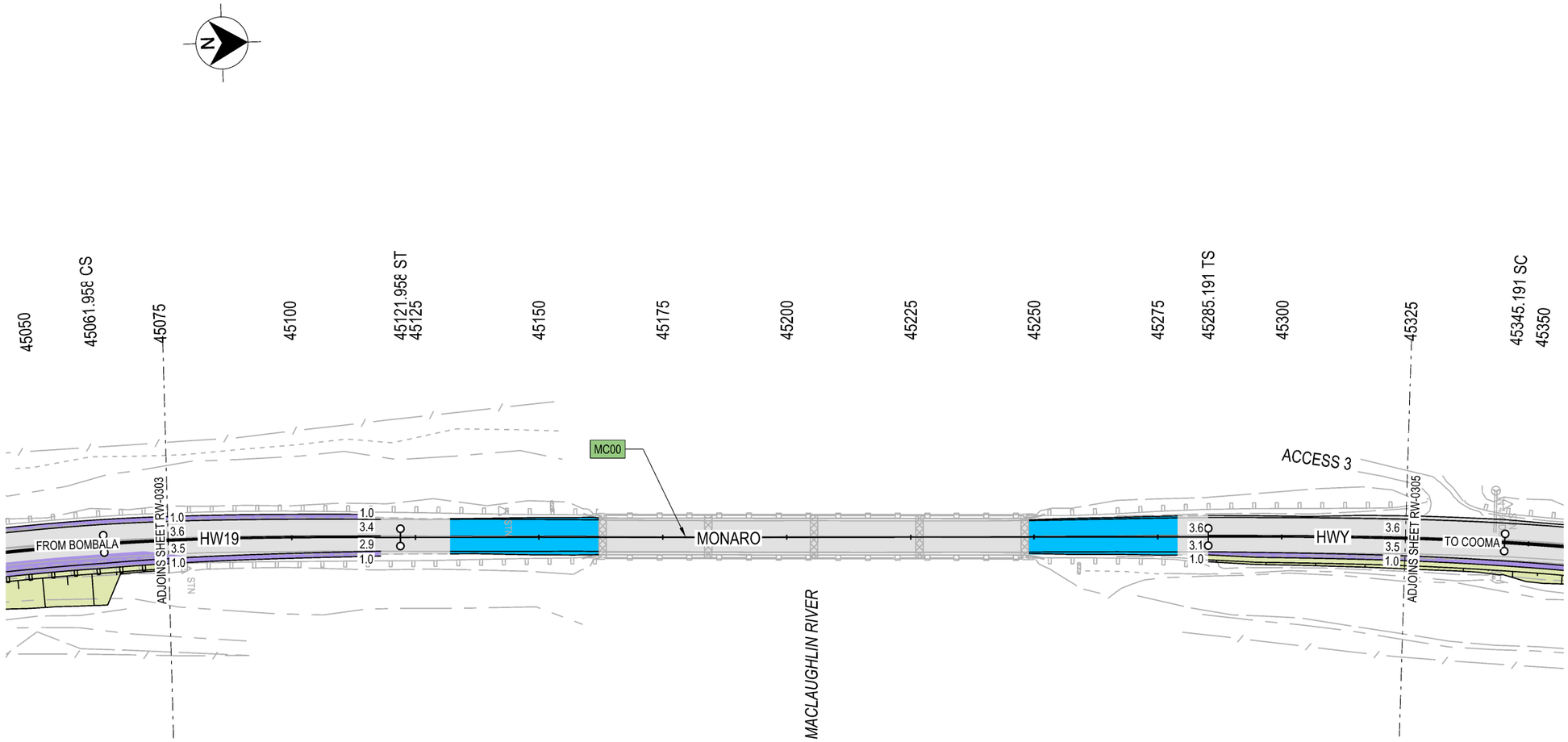
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.44825.000 TO CH.45075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0303	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:51:05 AM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

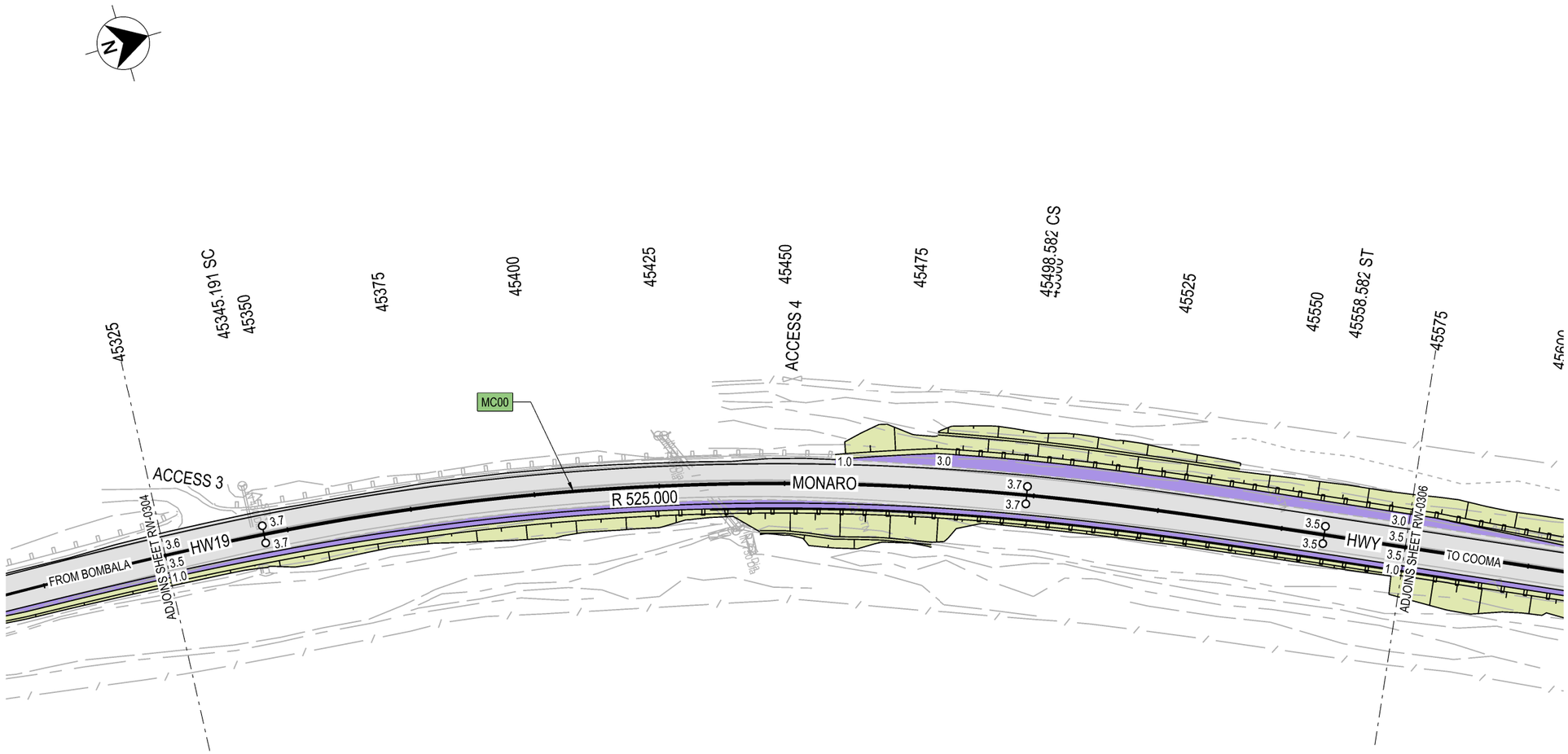
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.45075.000 TO CH.45325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0304	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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NOT FOR CONSTRUCTION

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0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:51:13 AM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

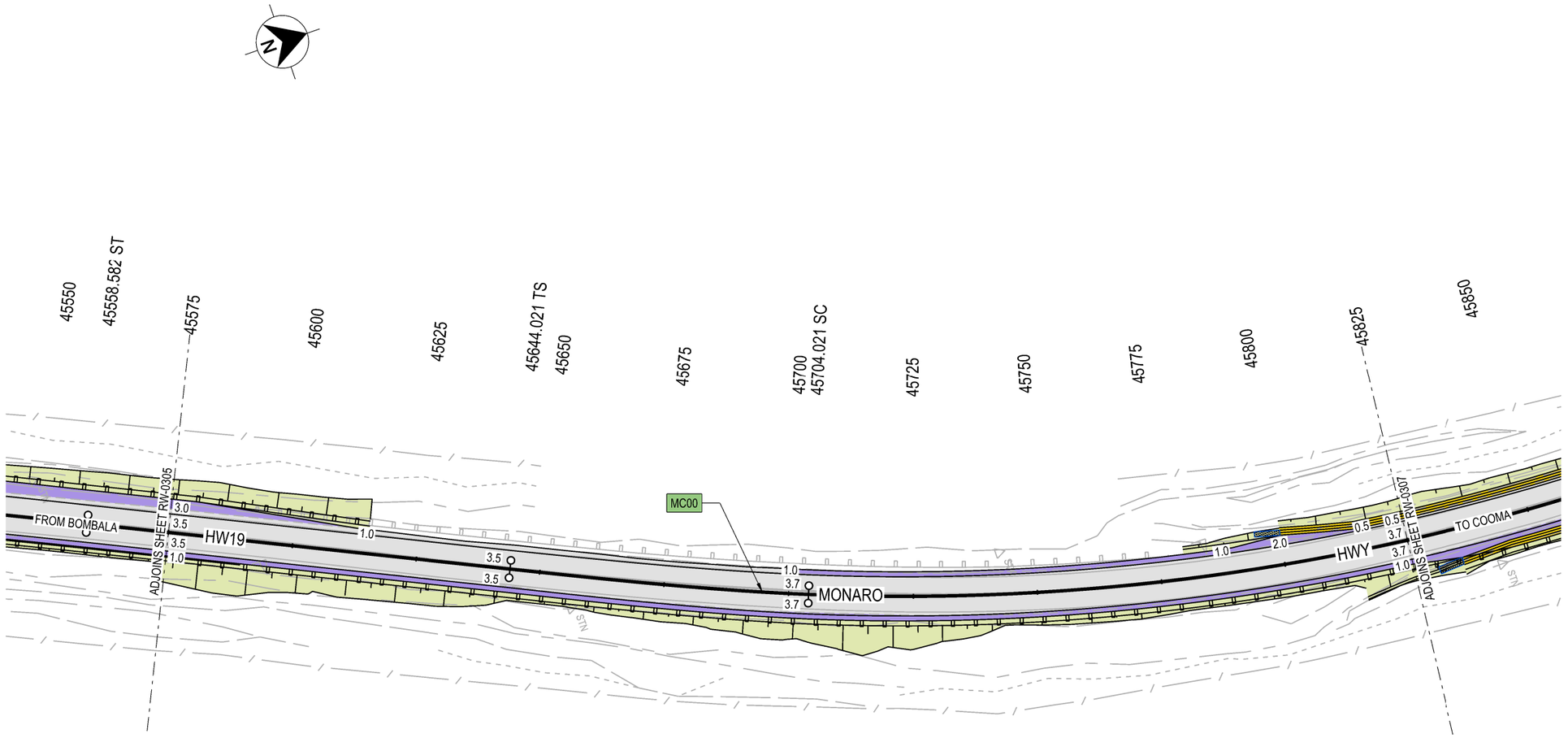
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.45325.000 TO CH.45575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0305	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

EXTERNAL REFERENCE FILES
XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:51:21 AM
PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

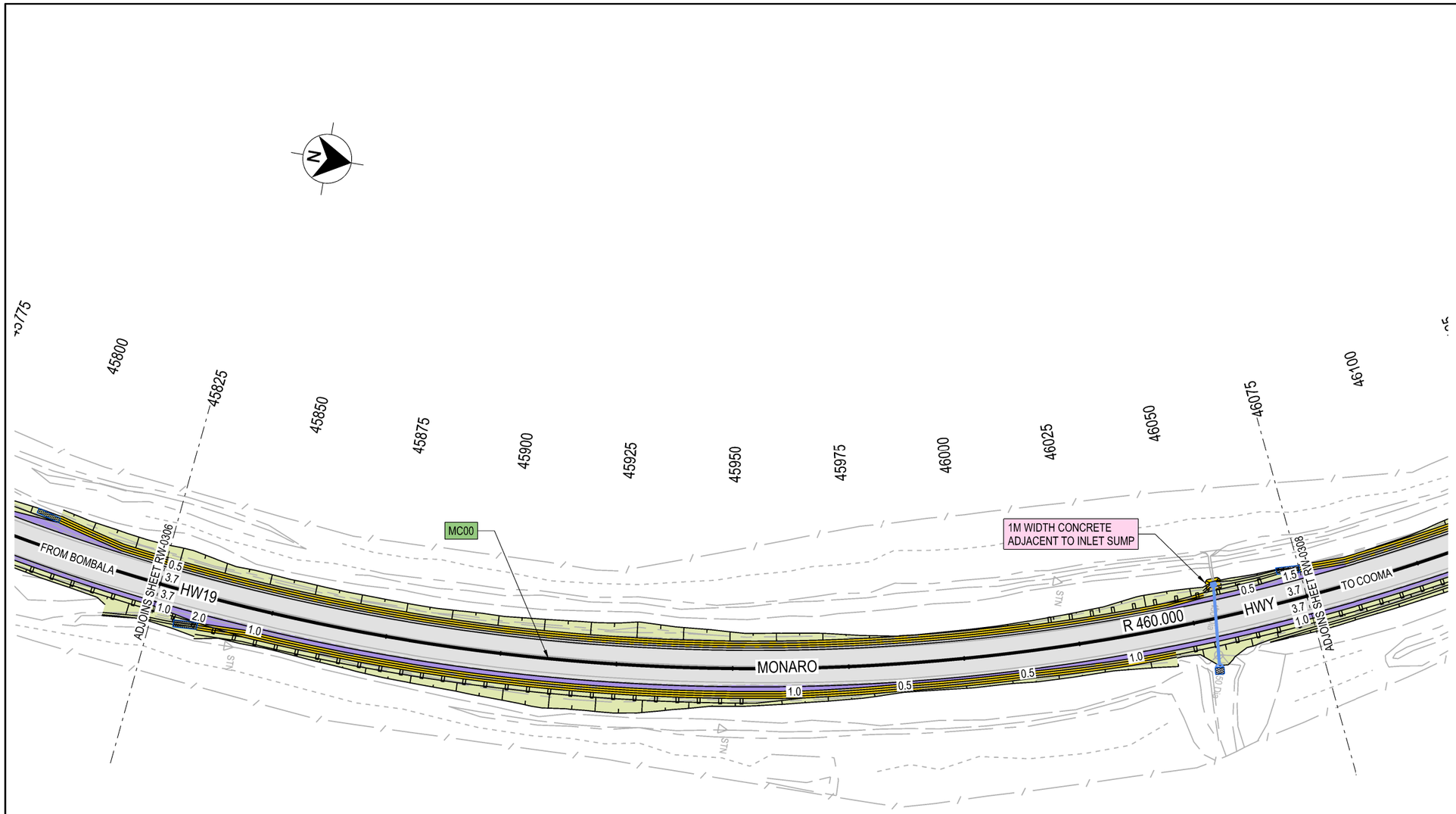
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.45575.000 TO CH.45825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0306	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:51:33 AM — PLOT BY: walterssj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

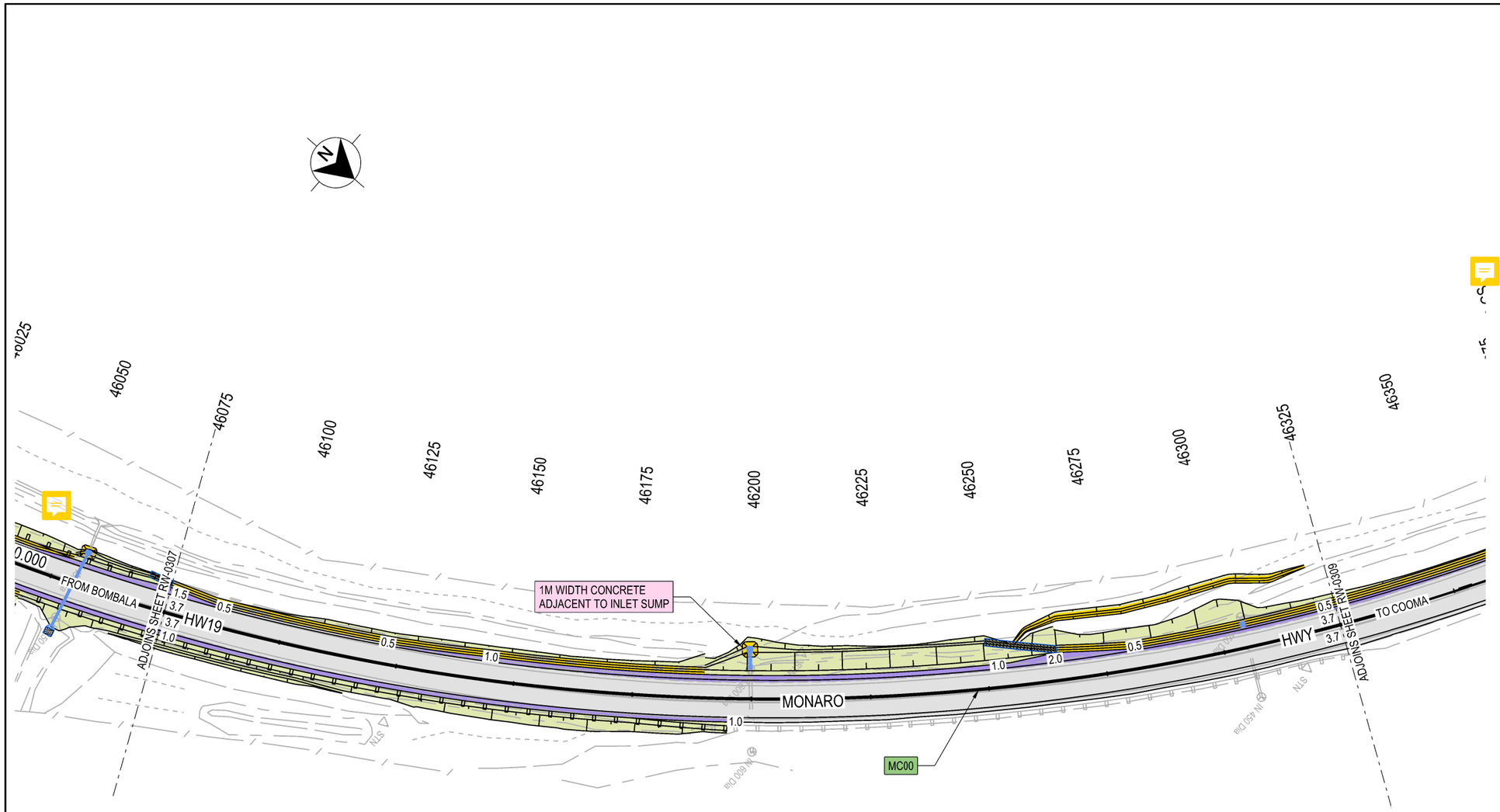
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.45825.000 TO CH.46075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0307	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:51:48 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
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DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

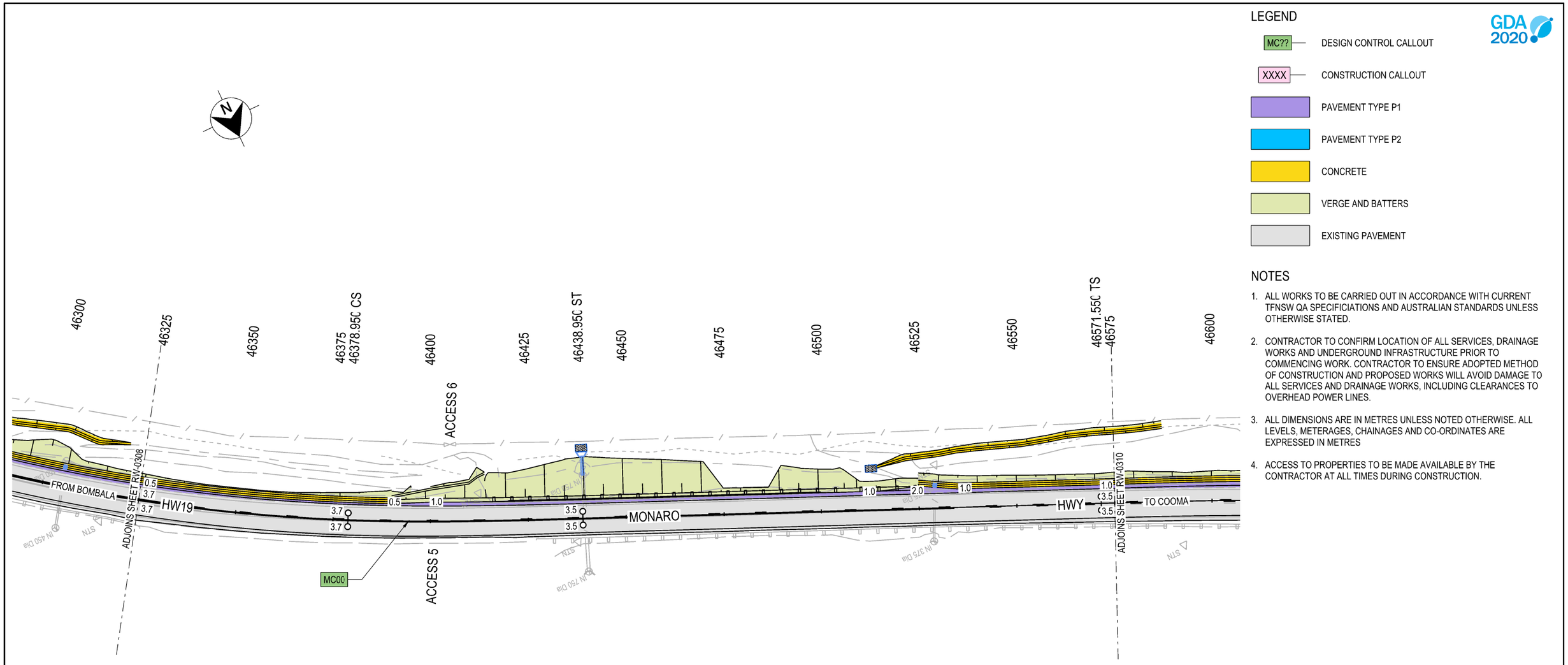
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.46075.000 TO CH.46325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0308	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

EXTERNAL REFERENCE FILES
XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:52:03 AM
PLOT BY: waltersj

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
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NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

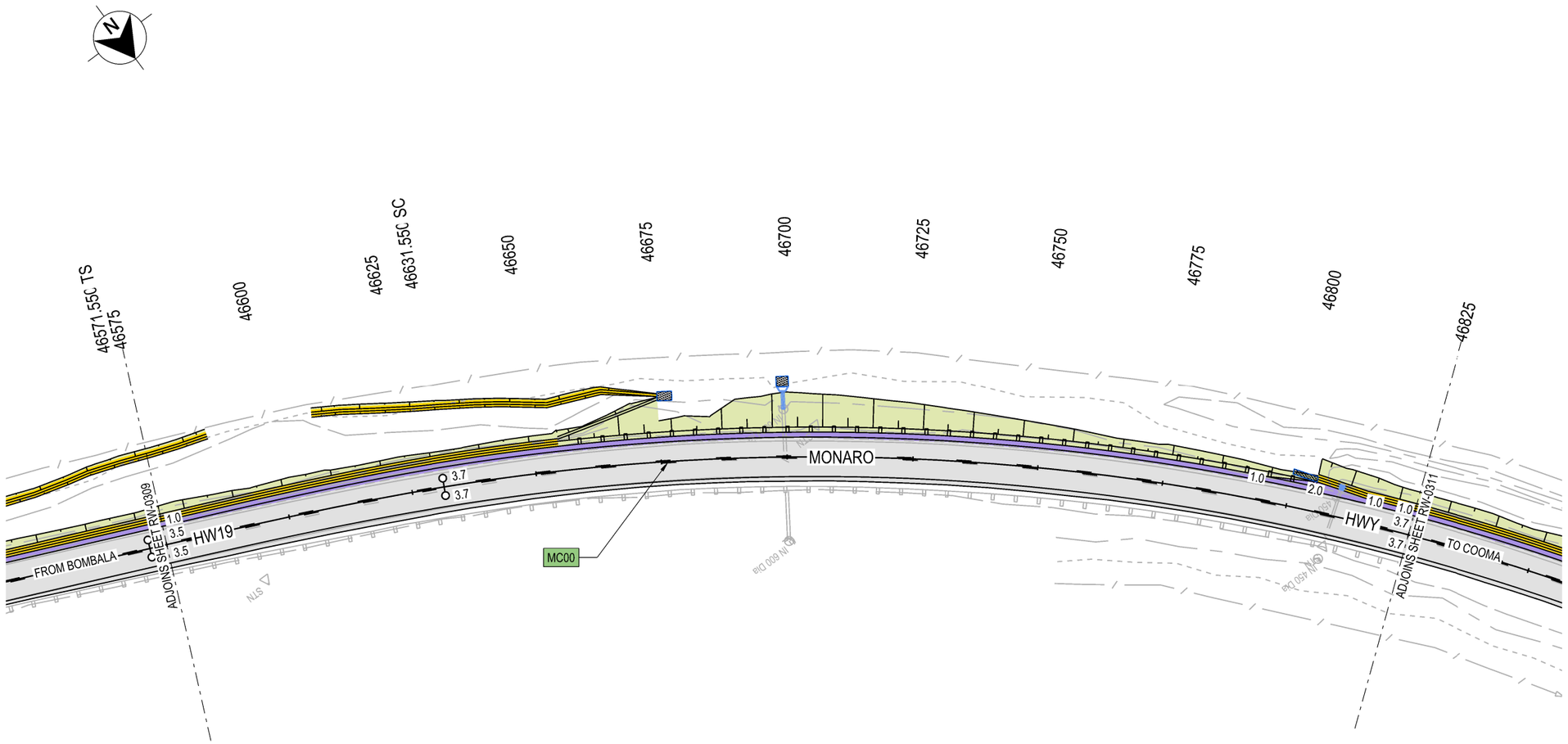
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.46325.000 TO CH.46575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0309	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
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4. ACCESS TO PROPERTIES TO BE MADE AVAILABLE BY THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:52:14 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

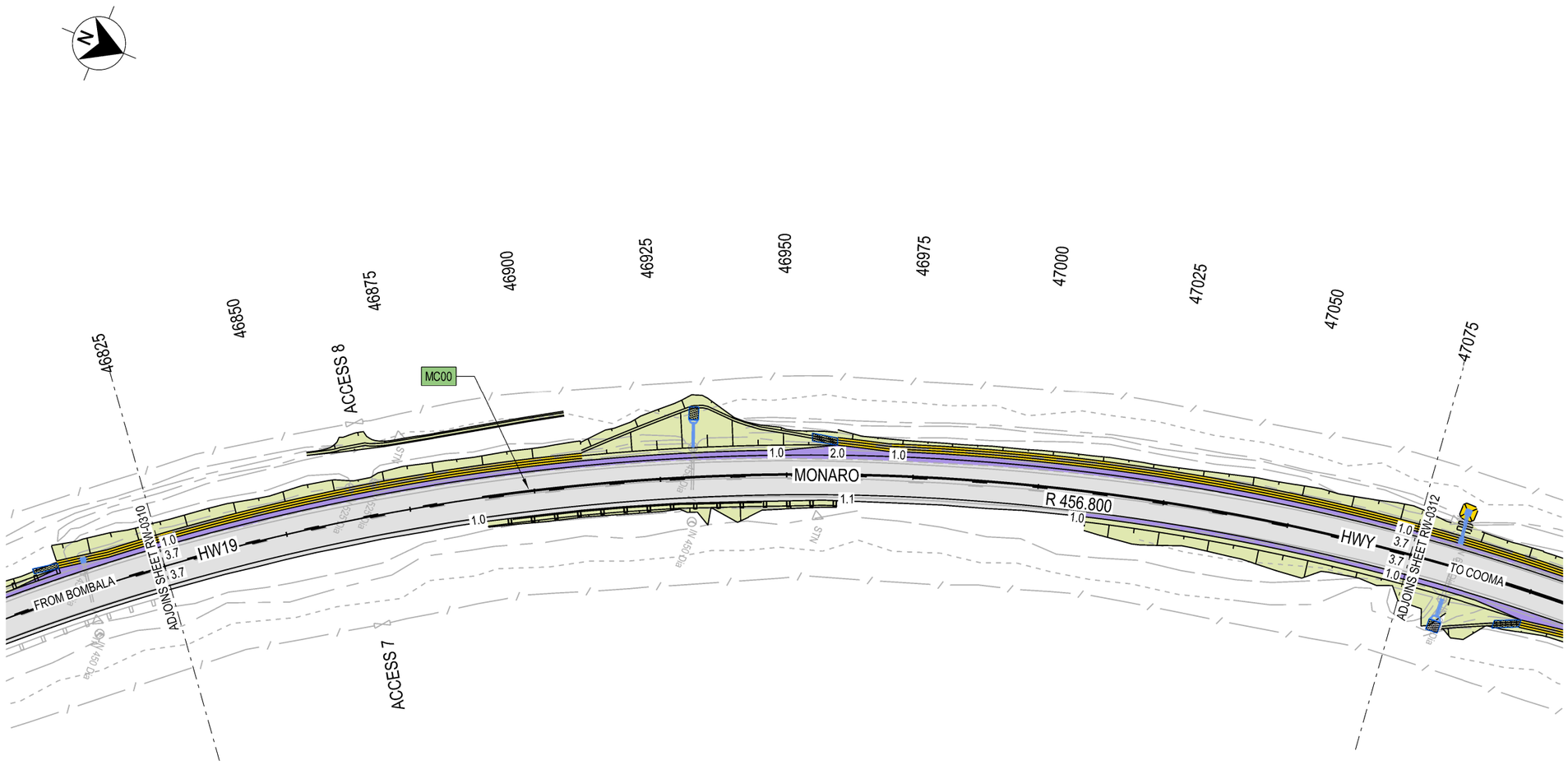
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.46575.000 TO CH.46825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0310	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:52:28 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

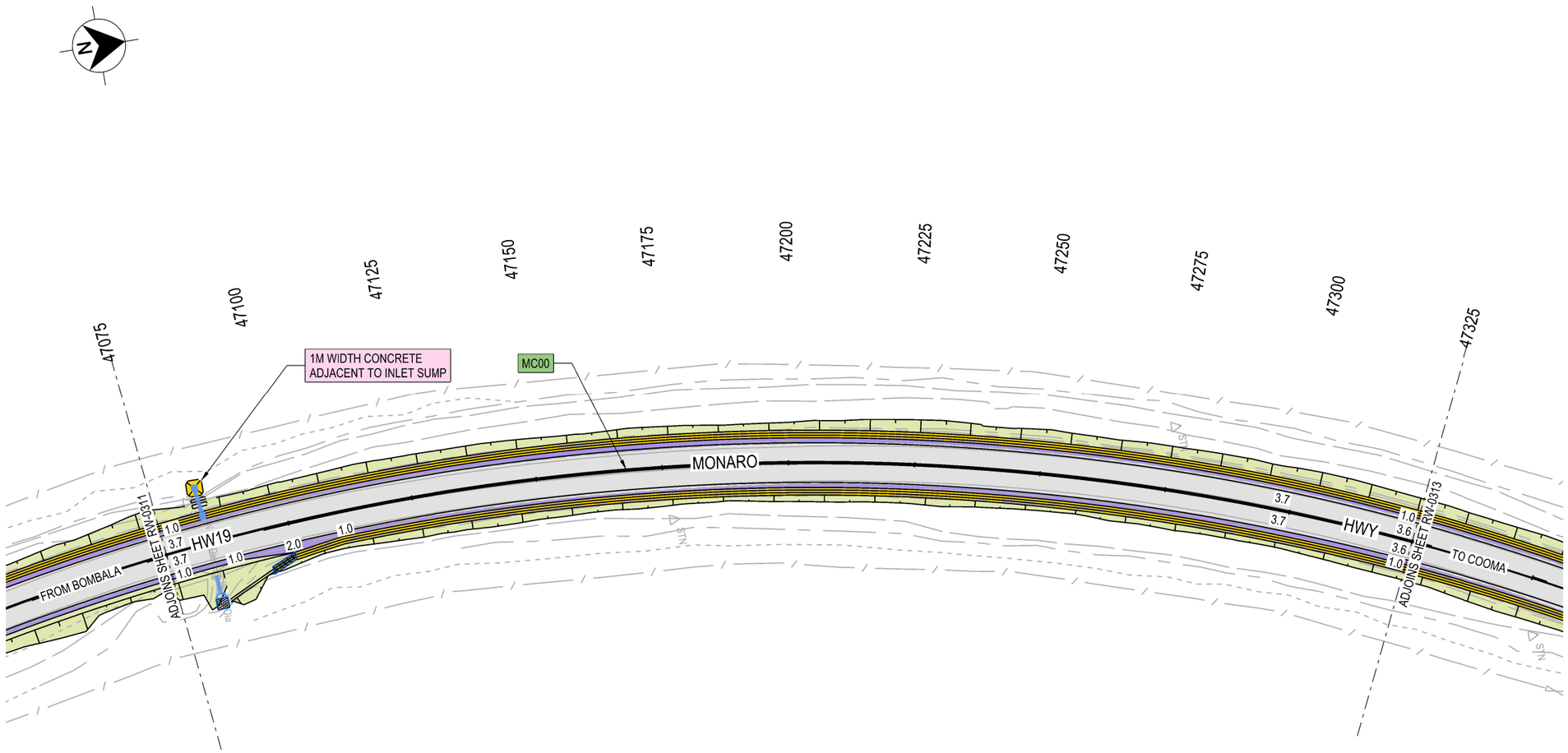
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.46825.000 TO CH.47075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0311	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:52:42 AM — PLOT BY: walterswj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

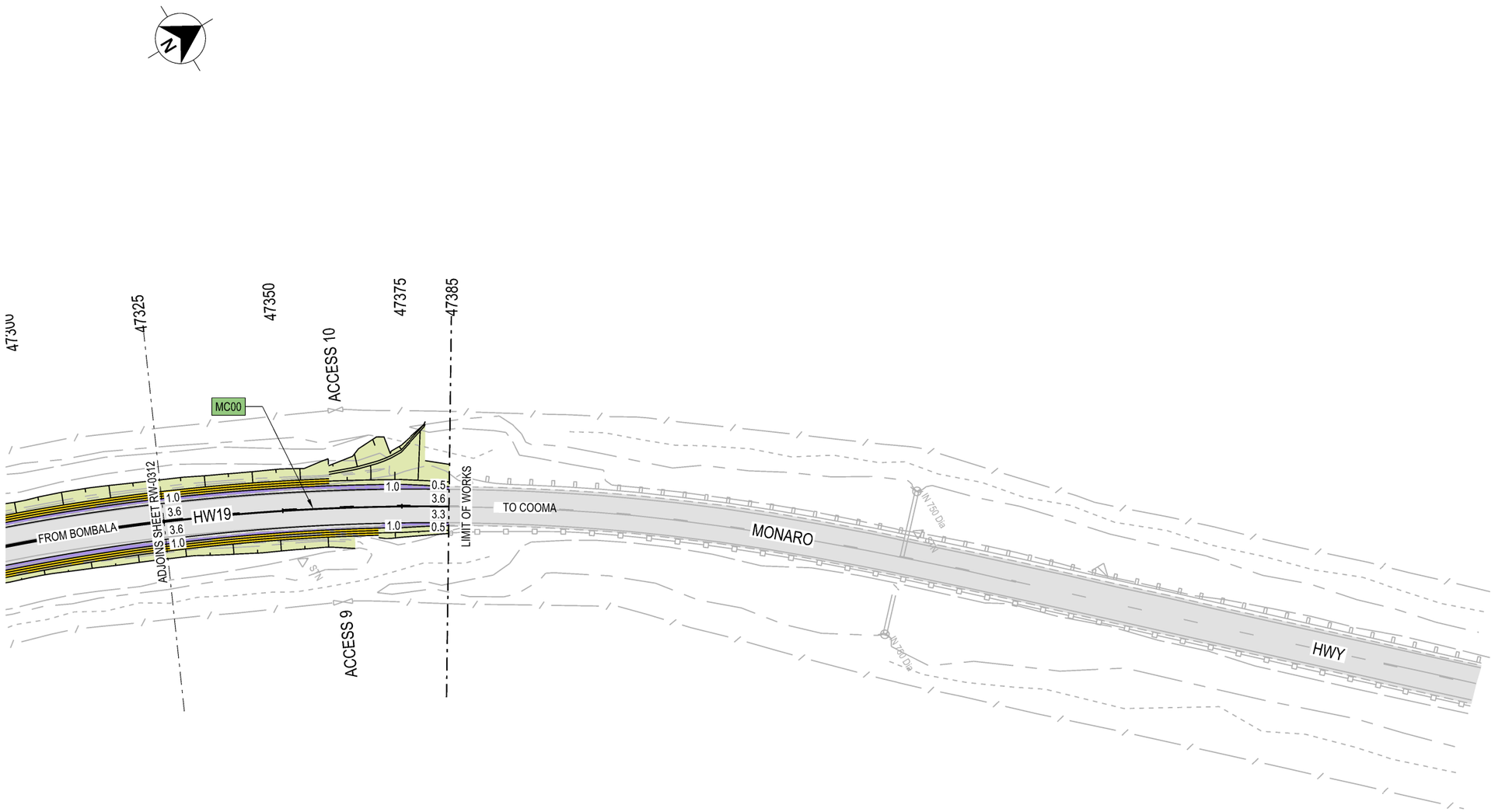
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.47075.000 TO CH.47325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0312	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- CONCRETE
- VERGE AND BATTERS
- EXISTING PAVEMENT

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
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THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-04-RD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:52:50 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DETAIL PLAN
HW19 - MONARO HWY - MC00 - CH.47325.000 TO CH.47385.055

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RW-0313	2

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STRING PREFIX	STRING DESCRIPTION
BF	W BEAM G4-THRIE BEAM (LHS)
BG	W BEAM G4-THRIE BEAM (RHS)
CB	KERB (BACK)
CF	GUTTER FLOW LINE
DJ	BACK OF TABLE DRAIN
DK	FRONT OF TABLE DRAIN
EH	HINGE
ES	BACK OF SHOULDER
EV	BACK OF VERGE
IA	GROUND INTERFACE
IJ	INTERFACE JOINT
L8	SEPARATION LINE (PART OF BS2 OR WS2 WIDE CENTRELINE TREATMENT)
LE	EDGE LINE (GENERAL)
LM	BARRIER LINE (PART OF BB2 OR BS2 WIDE CENTRELINE TREATMENT)
MC	MASTER CONTROL

LEGEND

NEW W-BEAM SAFETY BARRIER

EXISTING W-BEAM SAFETY BARRIER

EXISTING FENCE LINE

EXISTING PAVEMENT

PLANNED 100MM OVERLAY

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-05-RC.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 11:54:12 AM
PLOT BY waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020) HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
DESIGN FEATURE LABELS

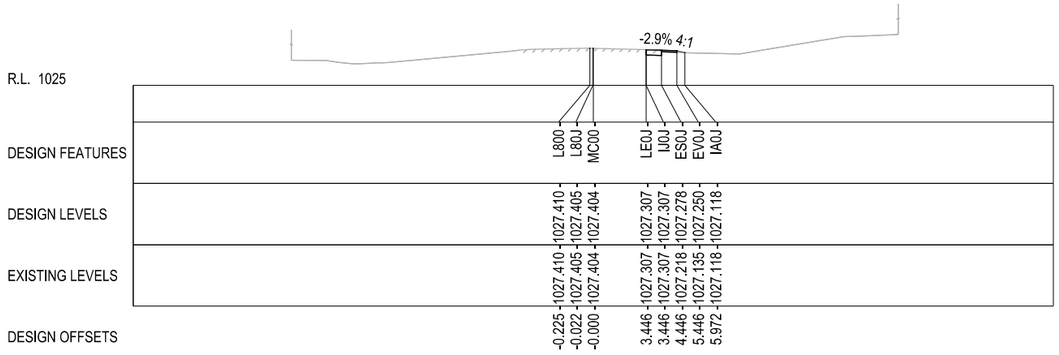
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RMS REGISTRATION No. DS2023/000777

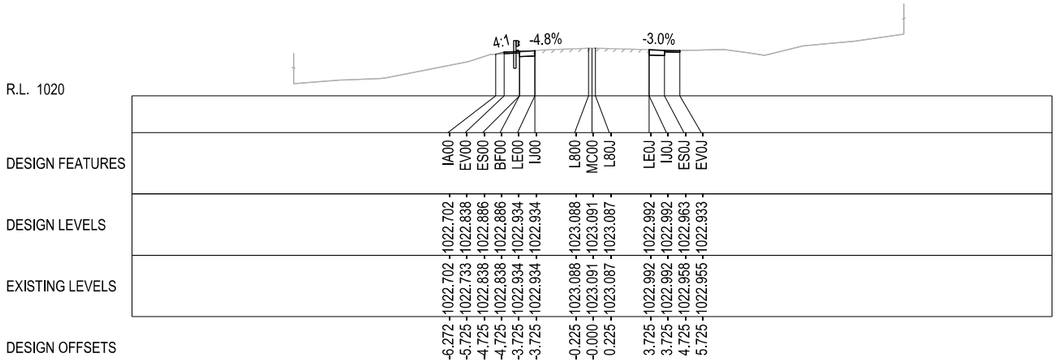
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0001	2

© Transport for NSW

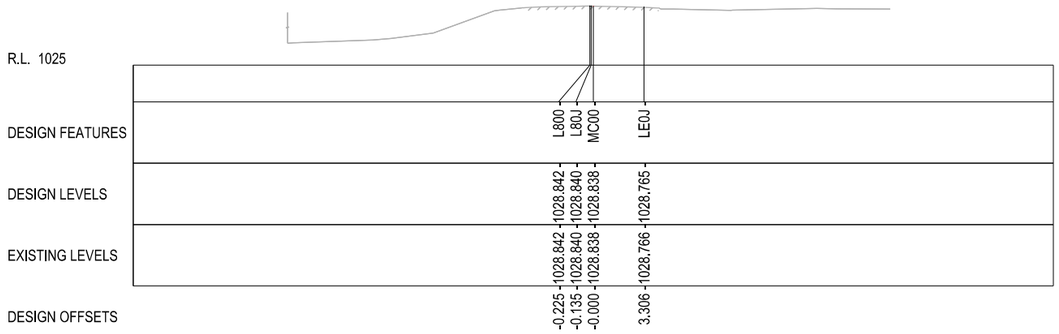
GDA 2020



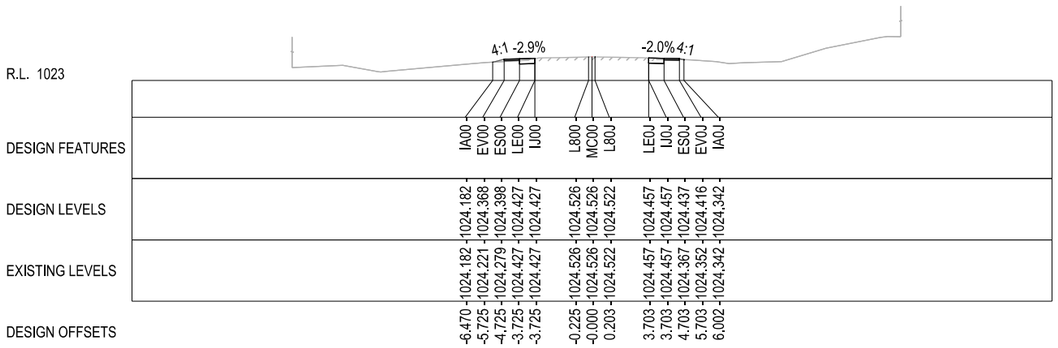
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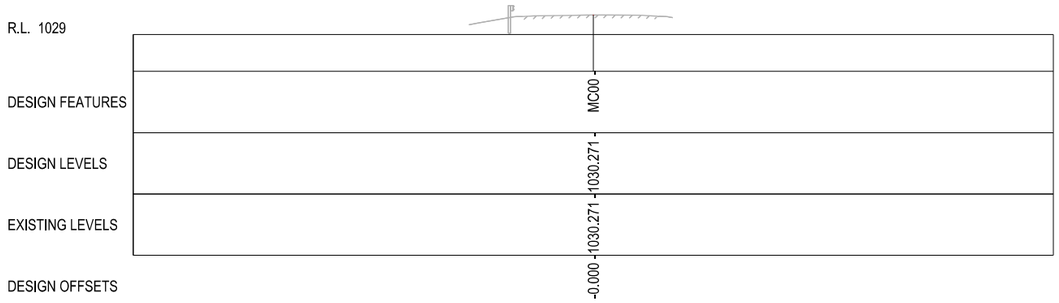
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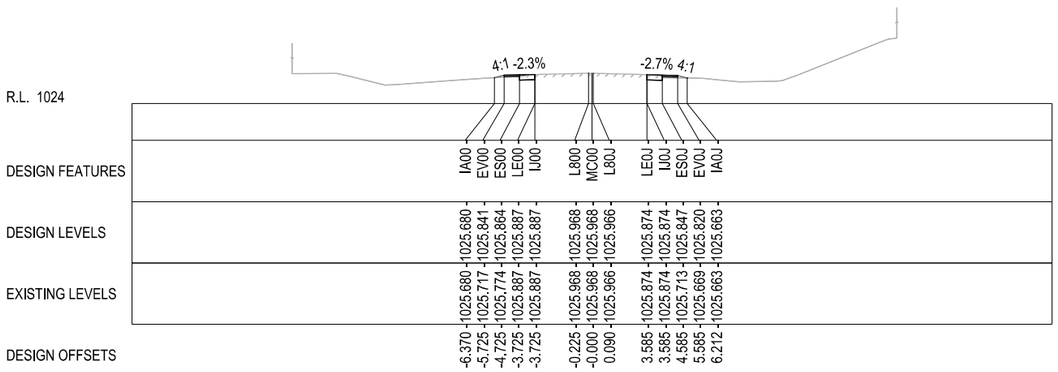
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44350.000



44425.000

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\Standards\Sheet Borders\A3_border.dgn				
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME				
PLOT DATE / TIME: 15/12/2023 11:54:13 AM	PLOT BY: walterj			
CLIENT: Transport for NSW				
SNOWY MONARO REGIONAL LGA HW19 - MONARO HIGHWAY SAFETY IMPROVEMENTS 3KM TO 6KM SOUTH OF NIMMITABEL CROSS SECTION HW19 - MONARO HIGHWAY - MC00 - CH. 44350.000 TO CH. 44475.000				A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 5 10 15, SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

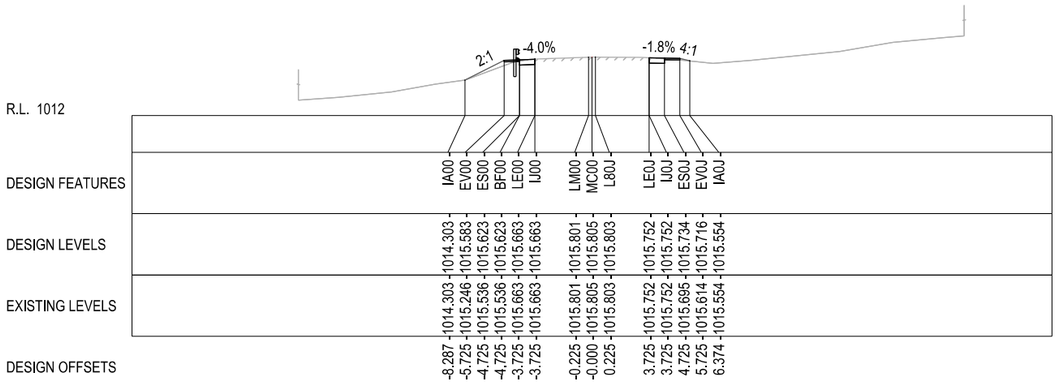
PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

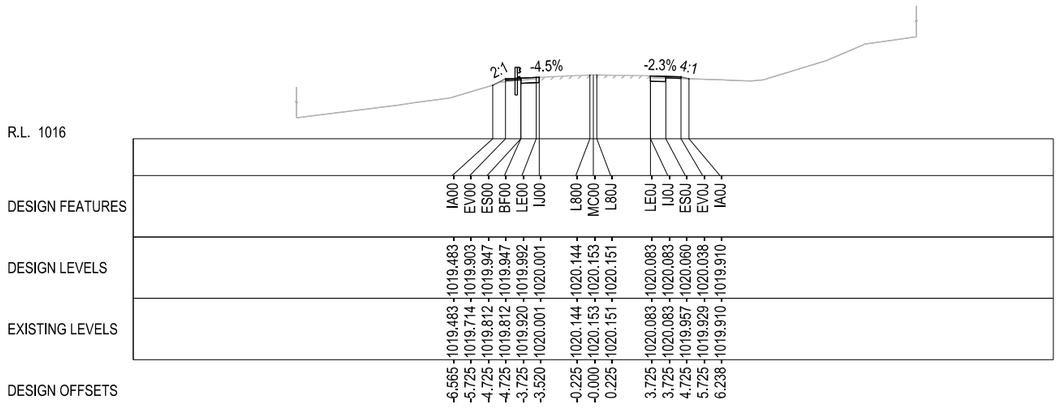
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0101	2

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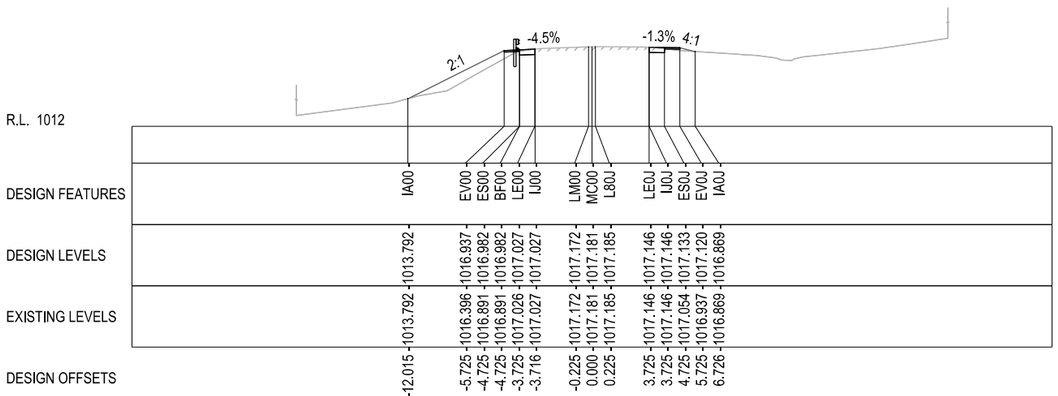
GDA 2020



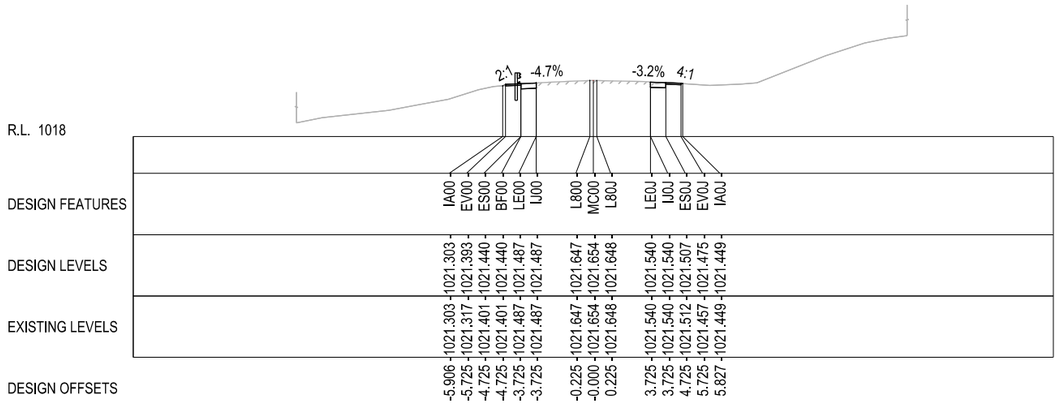
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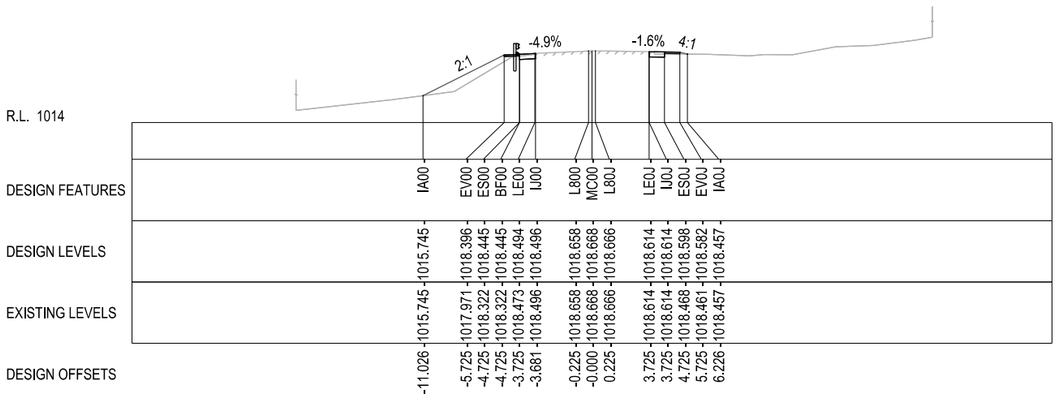
44525.000



44575.000



44500.000



44550.000

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:54:17 AM
PLOT BY: walterj

CLIENT: NSW GOVERNMENT Transport for NSW

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

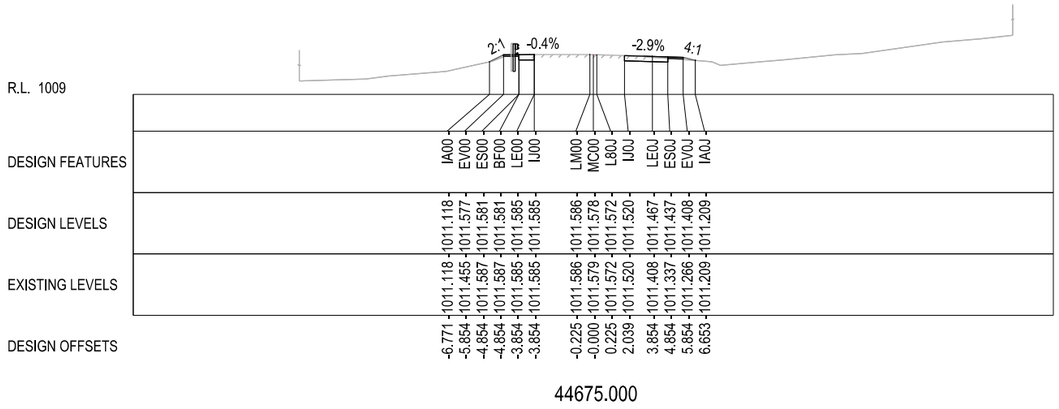
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 44500.000 TO CH. 44600.000

A3

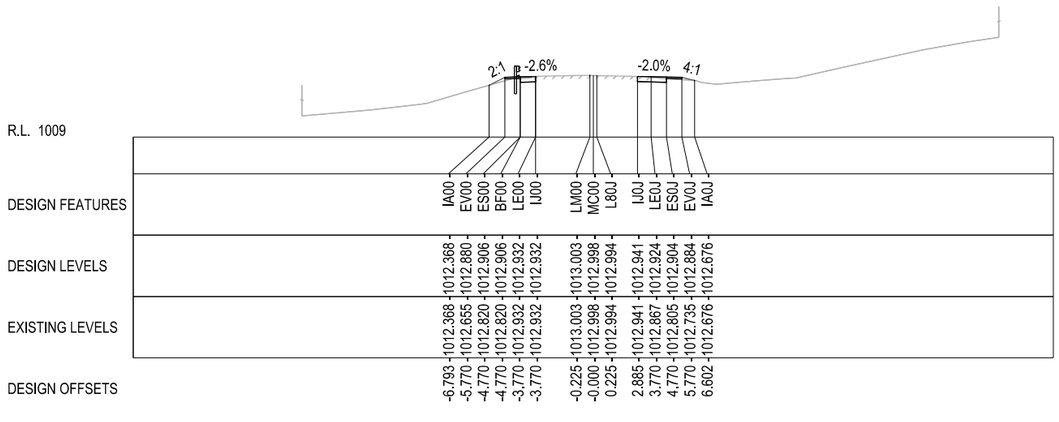
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100% - DETAIL DESIGN	SF2023/137411	RC-0102	2

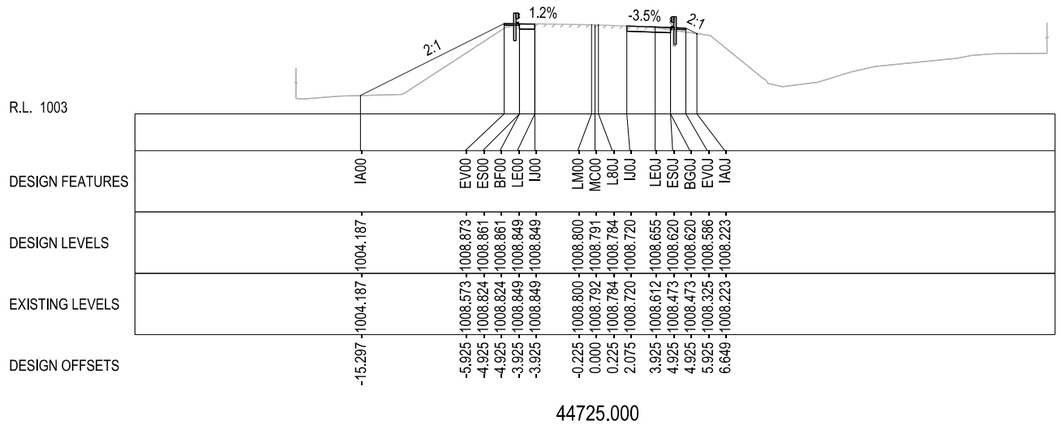
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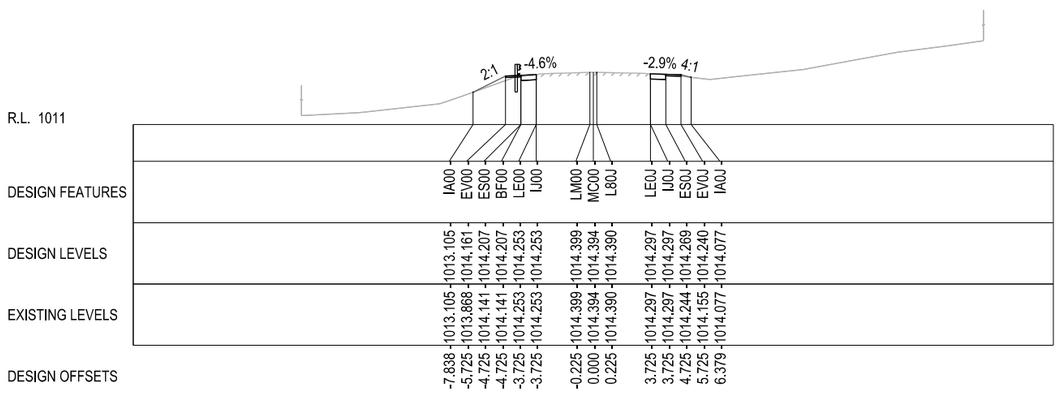
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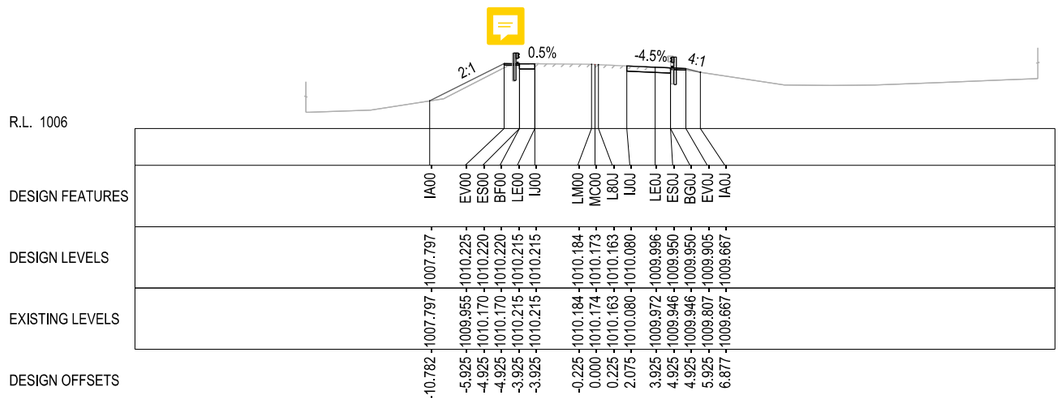
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44725.000



44625.000



44700.000

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 11:54:18 AM
PLOT BY waltersj

CLIENT
NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 44625.000 TO CH. 44725.000

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020)
HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

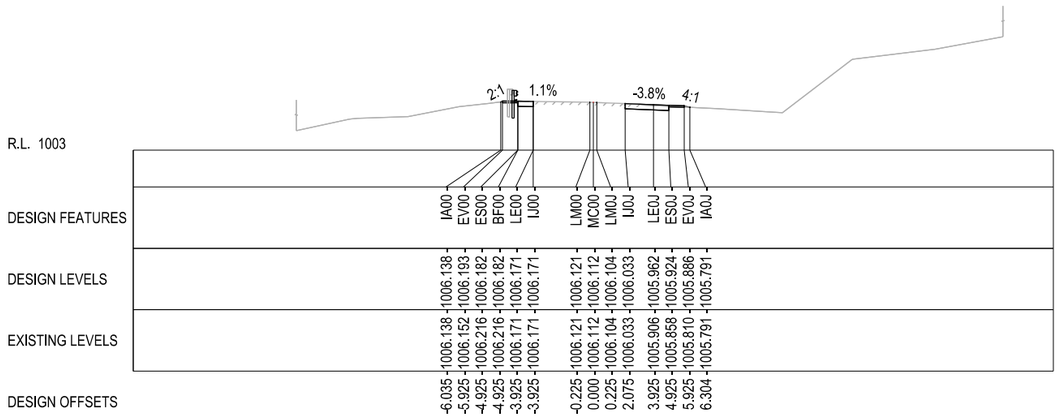
PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

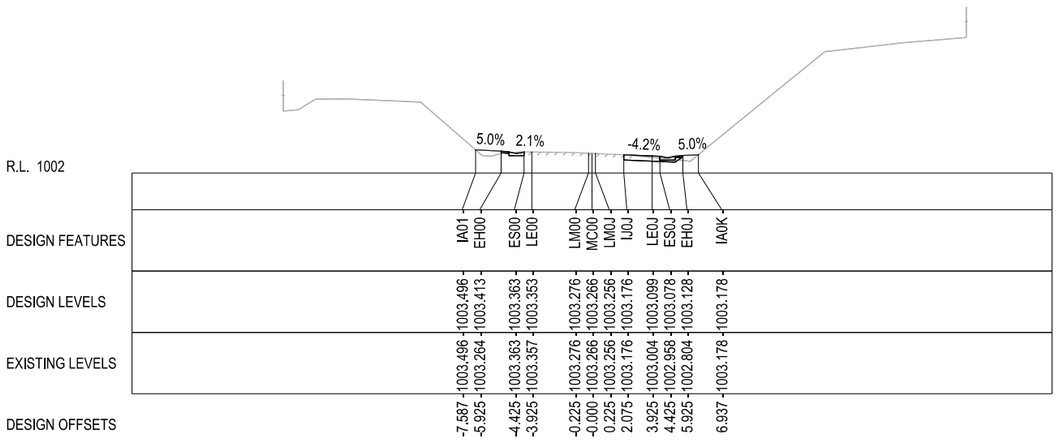
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100% - DETAIL DESIGN	SF2023/137411	RC-0103	2

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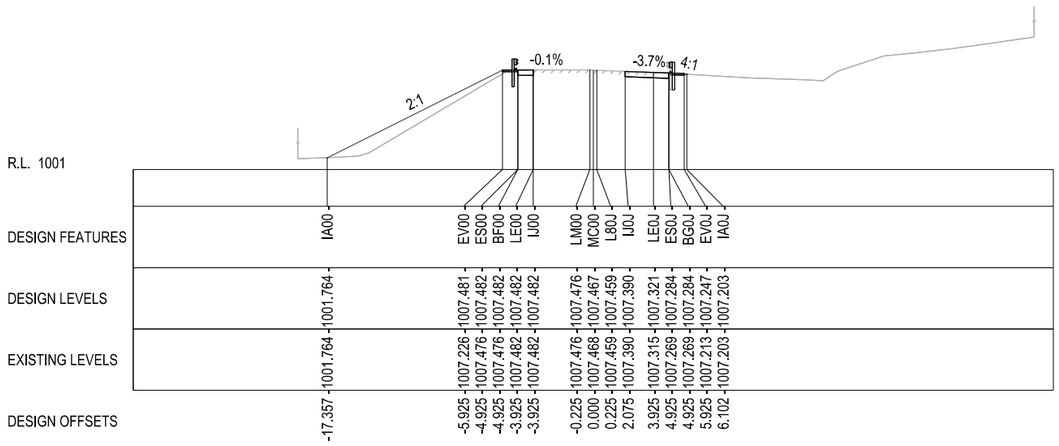
GDA 2020



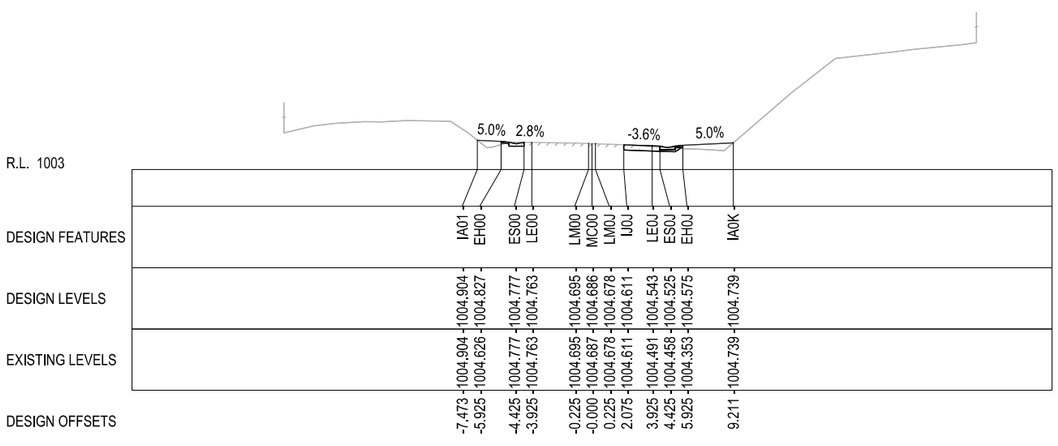
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44825.000



44750.000



44800.000

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50mm ON A3 SIZE ORIGINAL

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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 5 10 15 SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 44750.000 TO CH. 44825.000

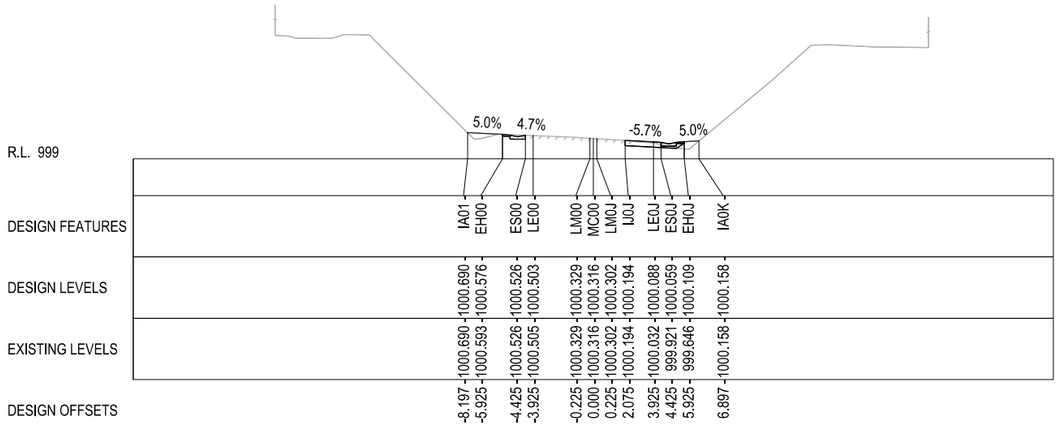
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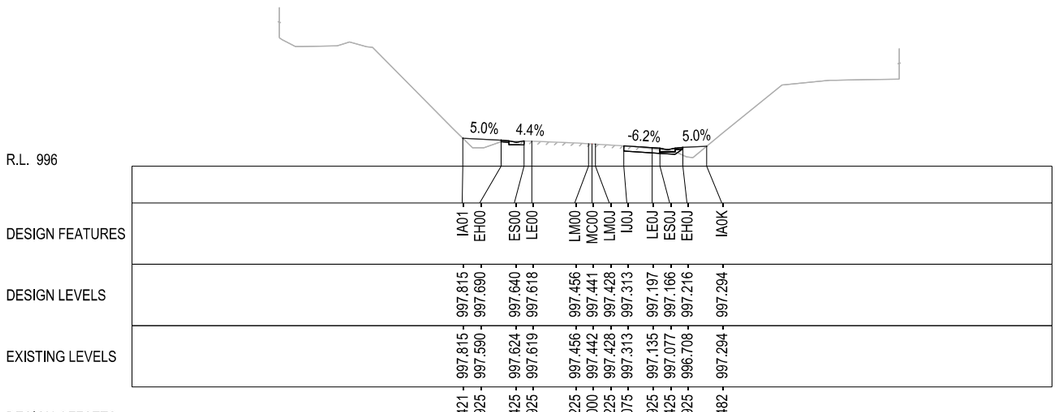
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100% - DETAIL DESIGN	SF2023/137411	RC-0104	2

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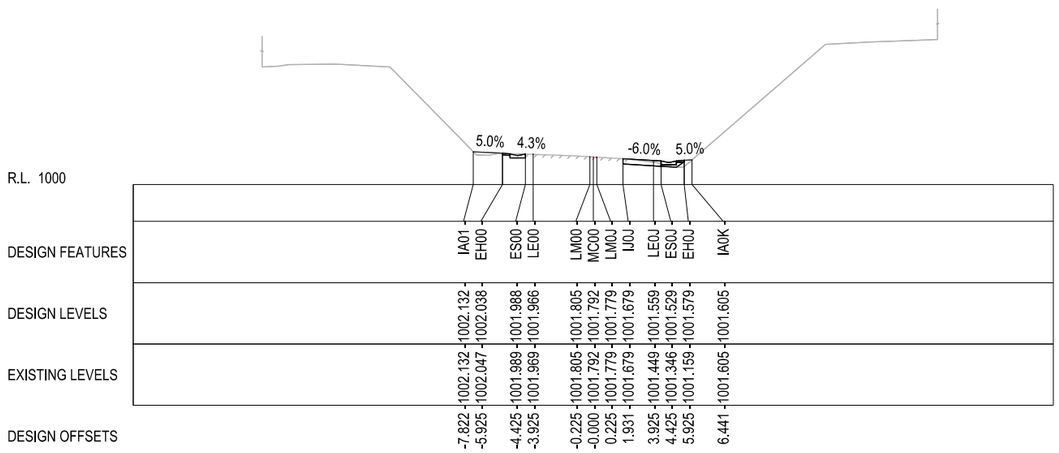
GDA 2020



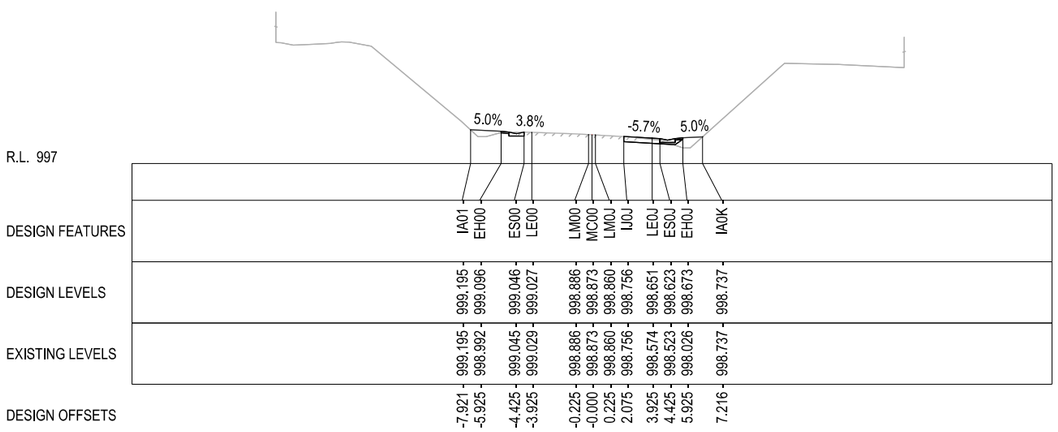
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44925.000



44850.000



44900.000

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DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:54:20 AM
PLOT BY: waltersj

CLIENT: NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 44850.000 TO CH. 44925.000

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
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SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

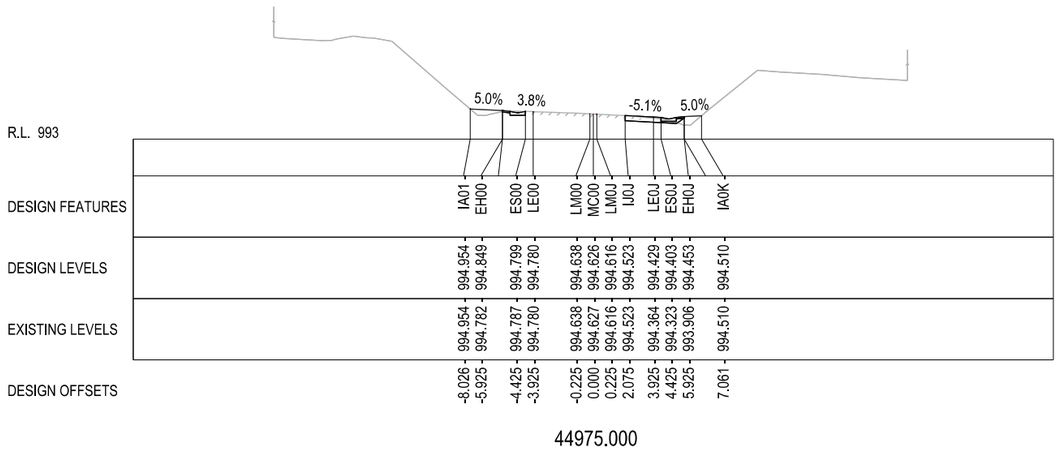
	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

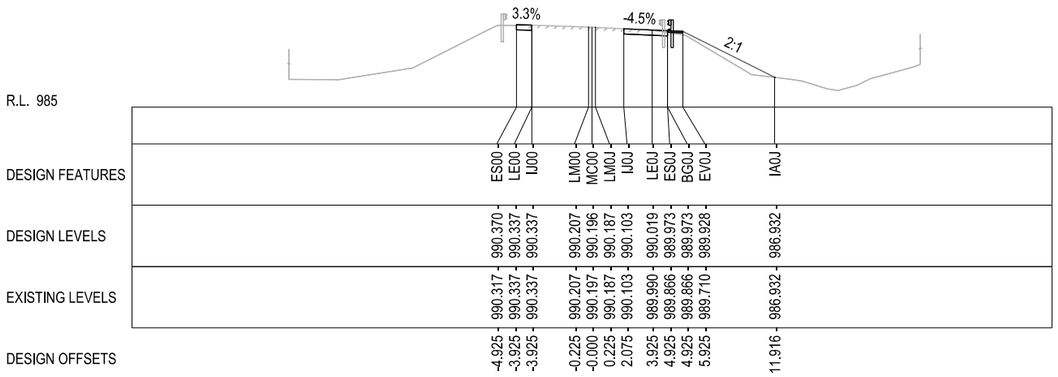
RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0105	2

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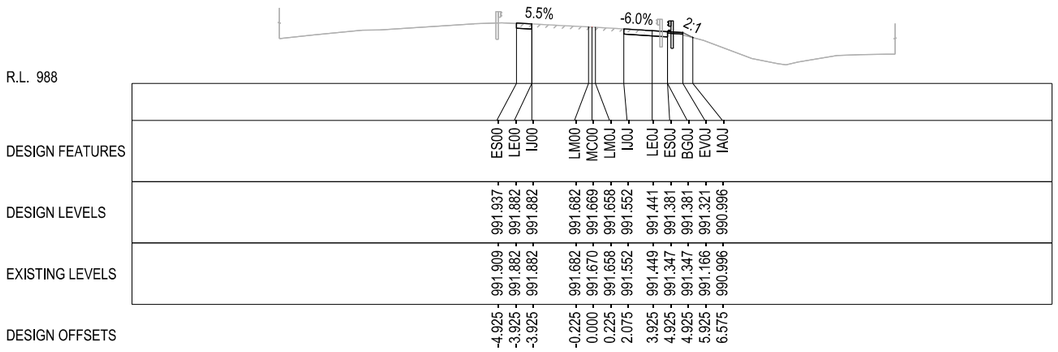


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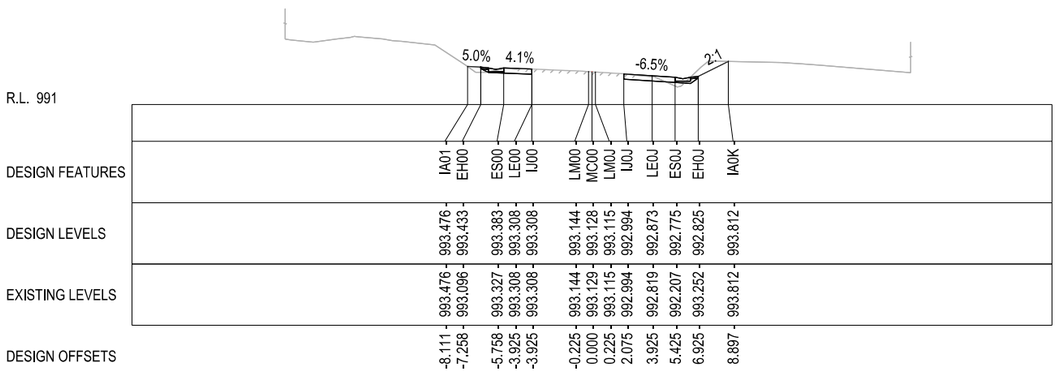


45050.000

44950.000



45025.000



45000.000

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DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:23 AM
PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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NSW GOVERNMENT Transport for NSW

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

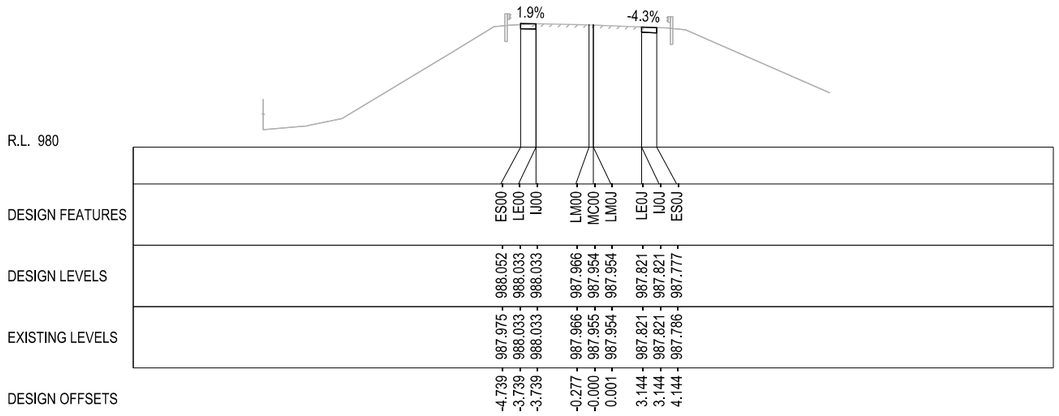
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 44950.000 TO CH. 45050.000

A3

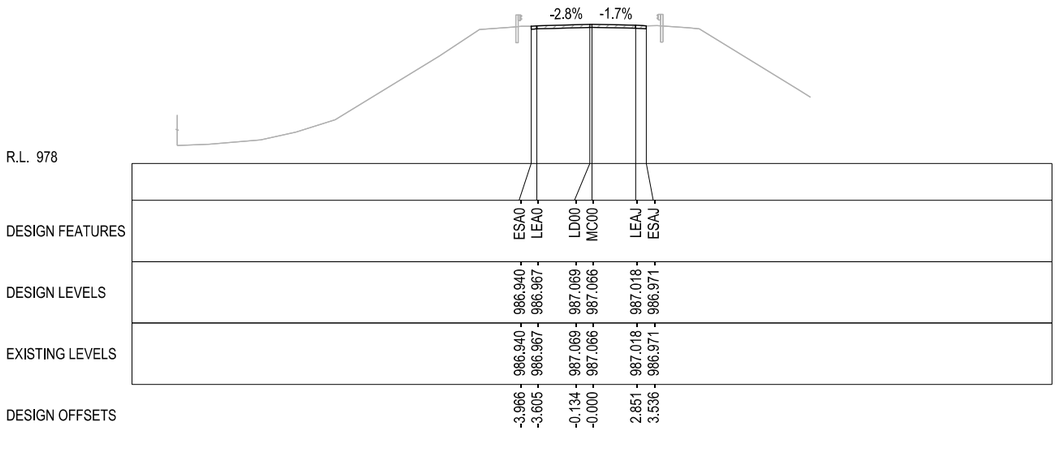
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100% - DETAIL DESIGN	SF2023/137411	RC-0106	2

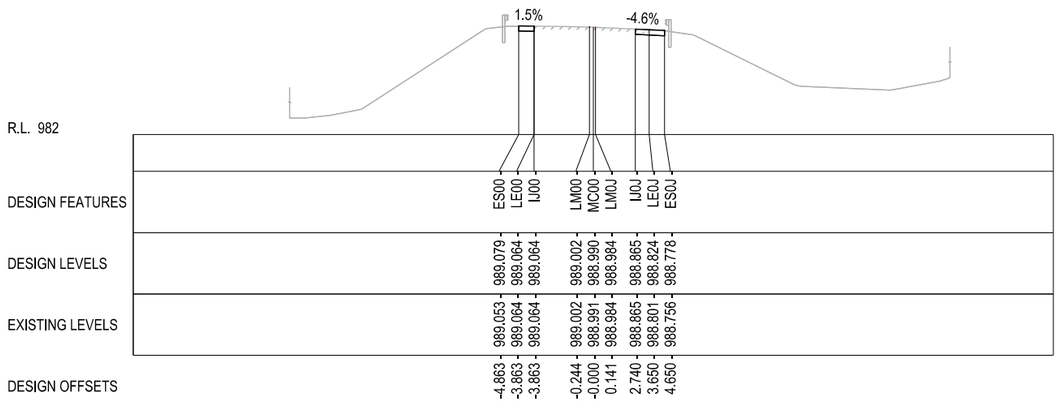
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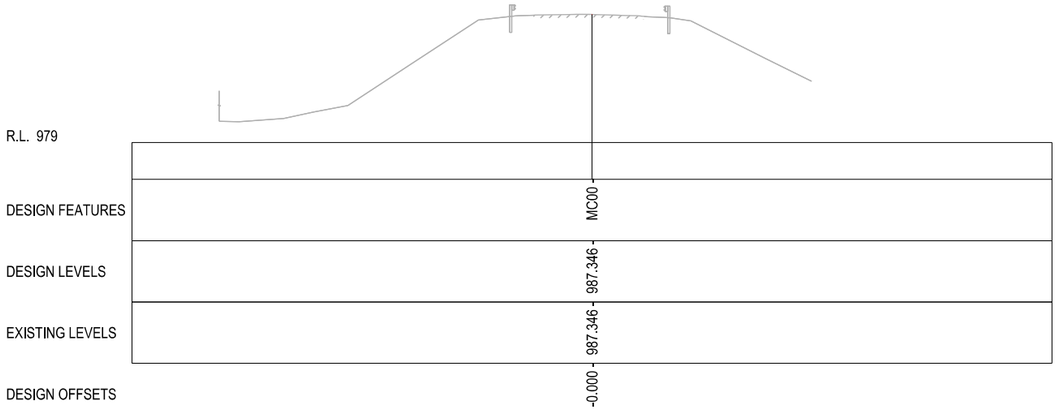
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50mm ON A3 SIZE ORIGINAL | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |

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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:23 AM
PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
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CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

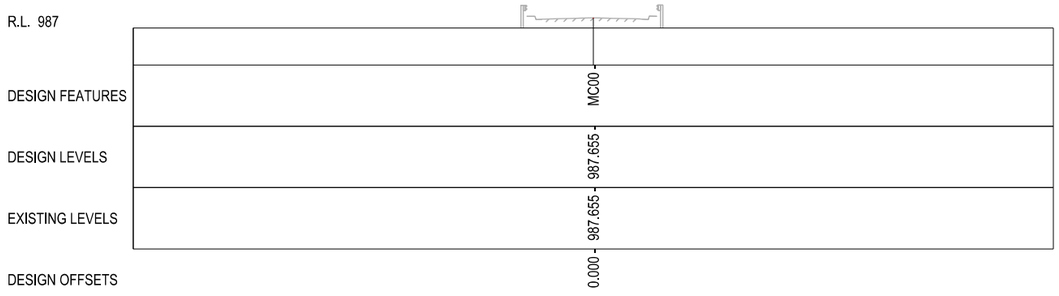
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45075.000 TO CH. 45150.000

A3

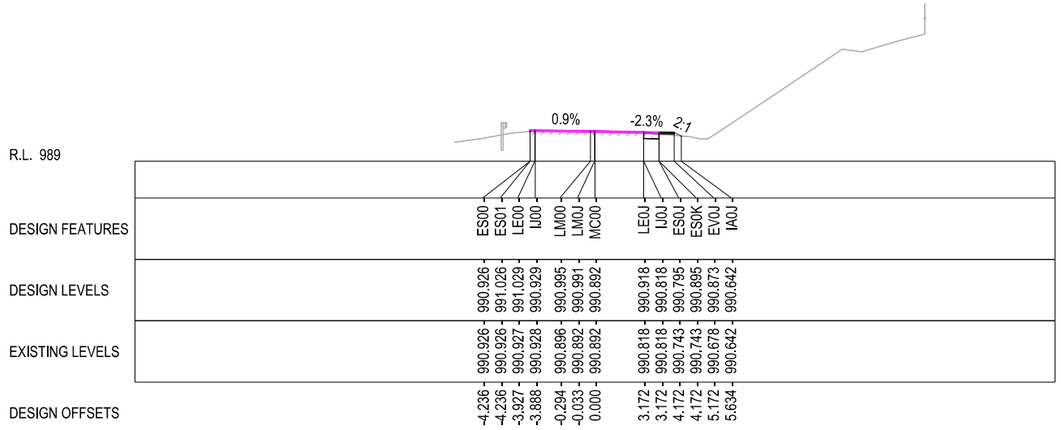
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ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
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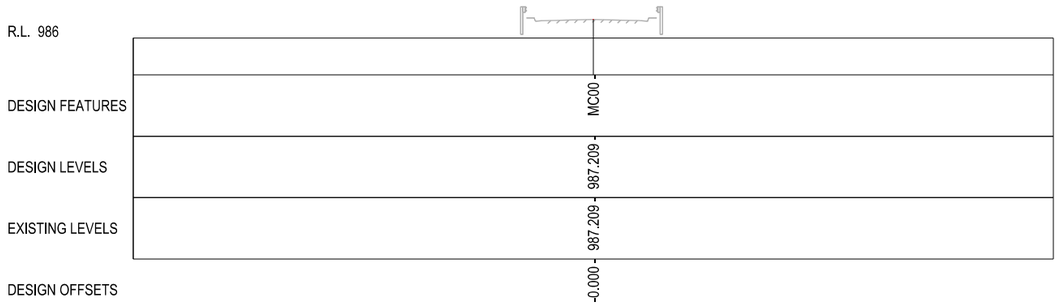
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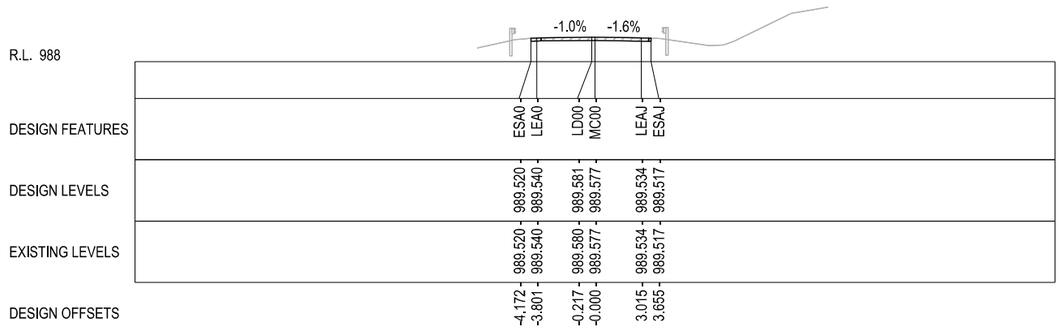
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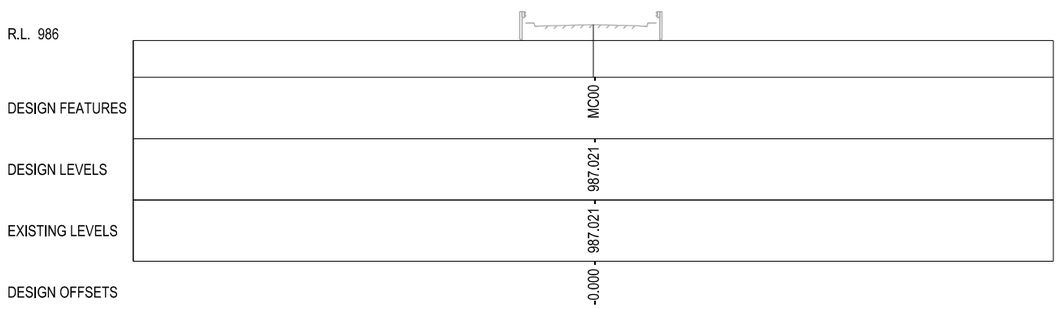
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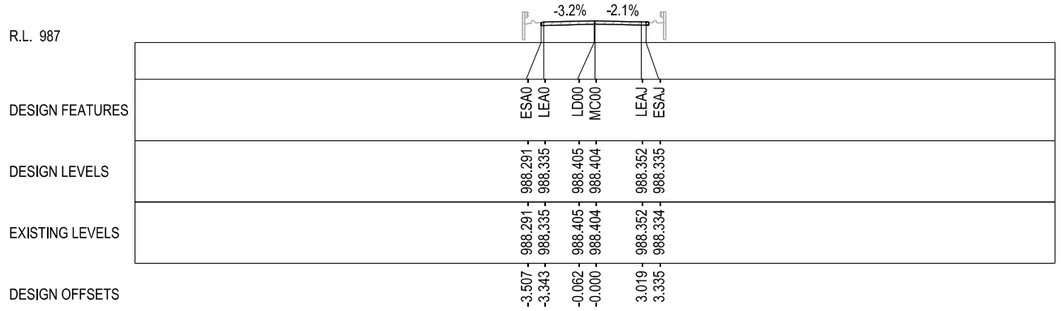
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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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FILE NAME ; FILE NAME

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PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
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DESIGN MNGR	G. KOZAROSKI	15.12.23
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CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45175.000 TO CH. 45300.000

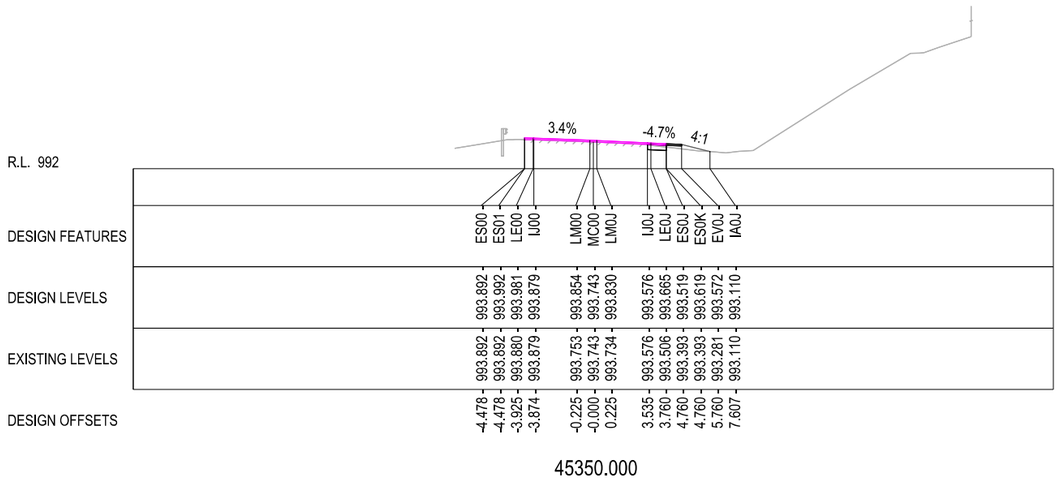
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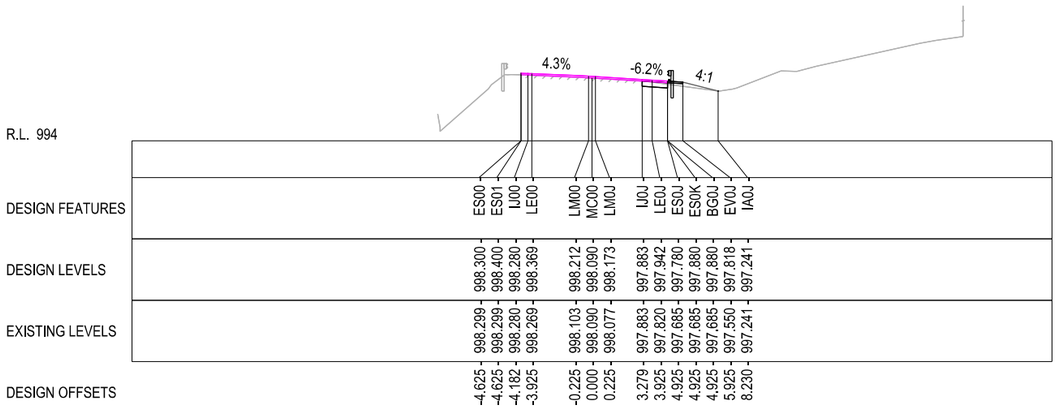
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100% - DETAIL DESIGN	SF2023/137411	RC-0108	2

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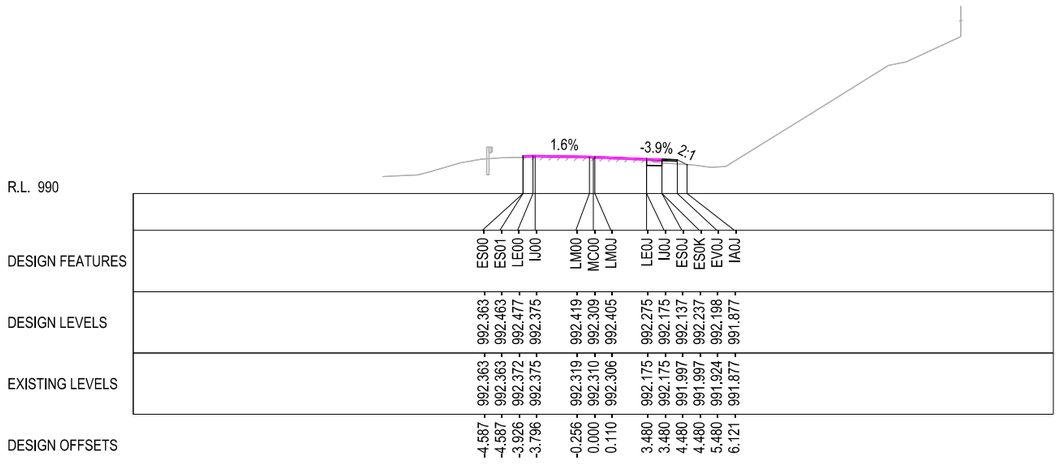
GDA 2020



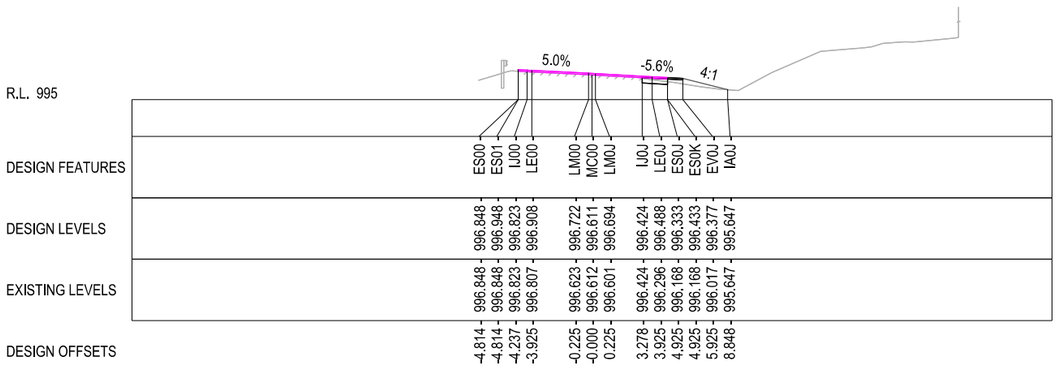
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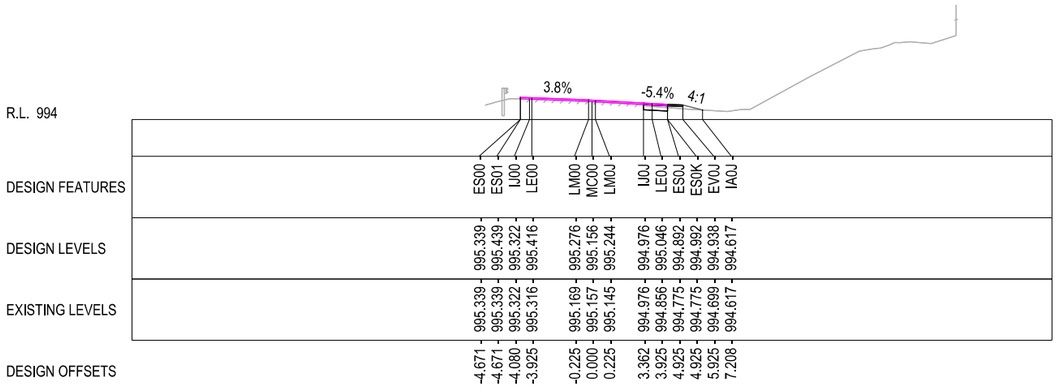
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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME	C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\Standards\Sheet Borders\A3_border.dgn
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	FILE NAME ; FILE NAME
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CO-ORDINATE SYSTEM / HEIGHT DATUM	MGA ZONE 55 (GDA2020) AHD
DRAWINGS / DESIGN PREPARED BY	NSW GOVERNMENT Transport for NSW
PLOT DATE / TIME	15/12/2023 11:54:26 AM
PLOT BY	walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45325.000 TO CH. 45425.000

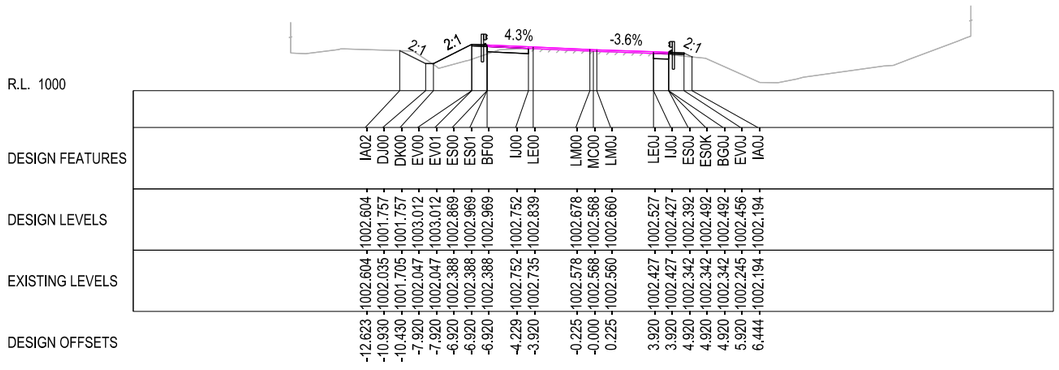
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RMS REGISTRATION No. DS2023/000777

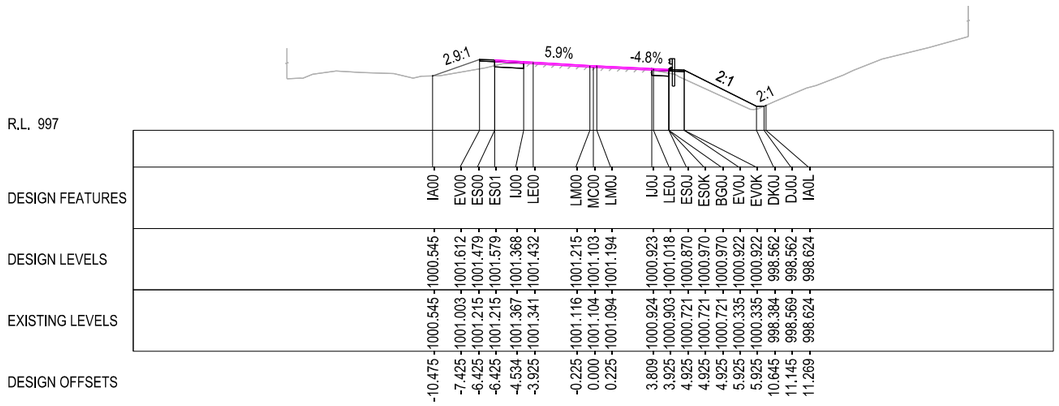
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0109	2

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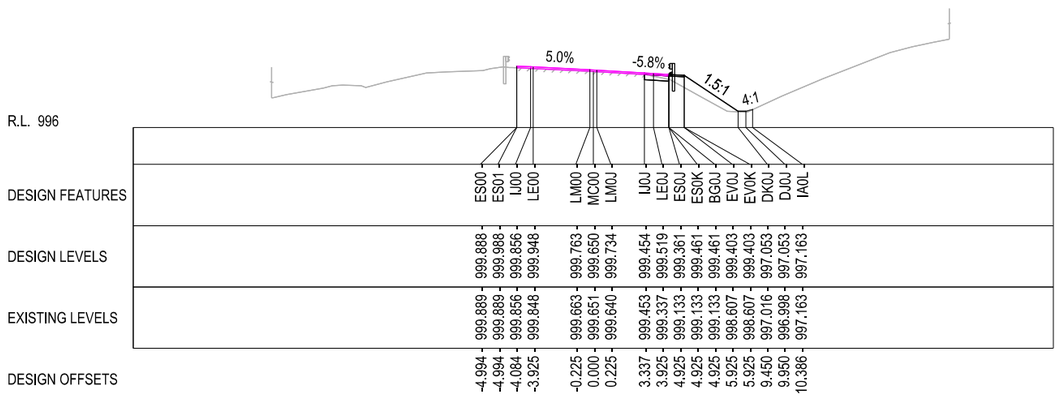
GDA 2020



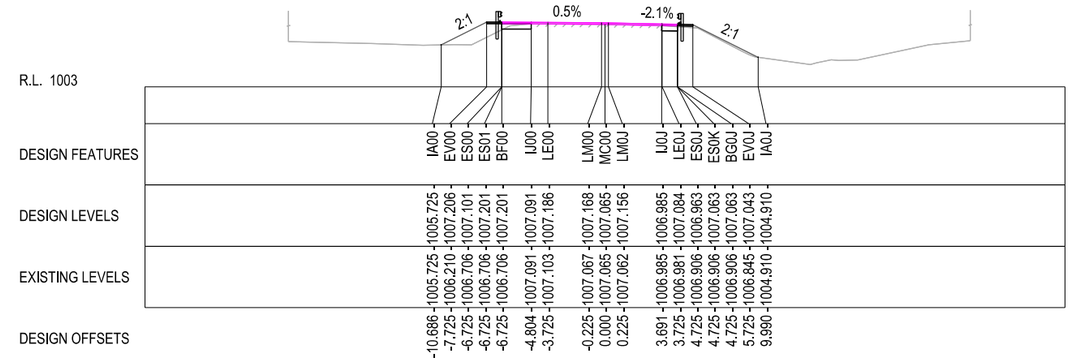
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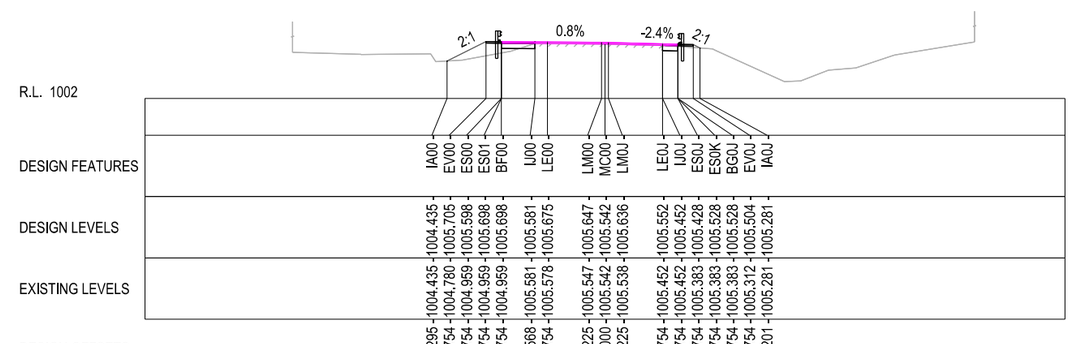
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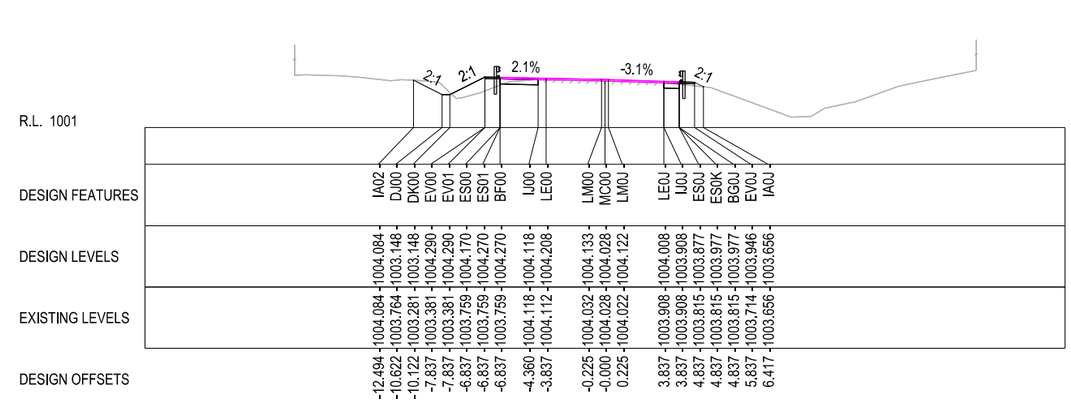
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45550.000



45525.000

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:28 AM PLOT BY: walterj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45450.000 TO CH. 45575.000

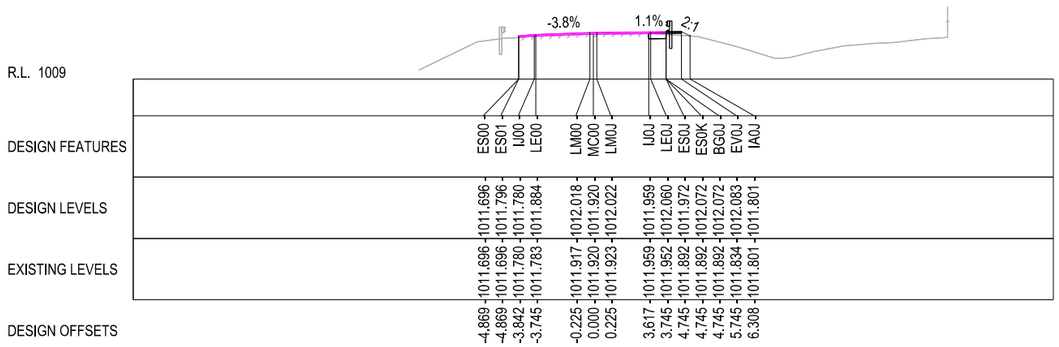
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RMS REGISTRATION No. DS2023/000777

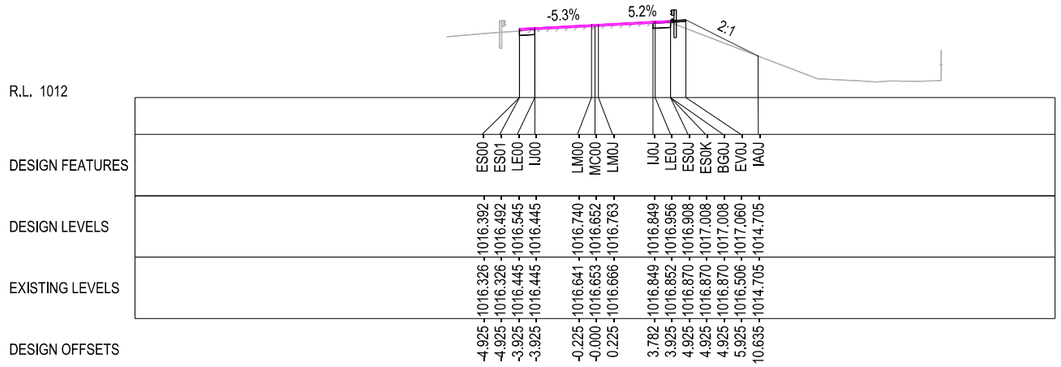
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0110	2

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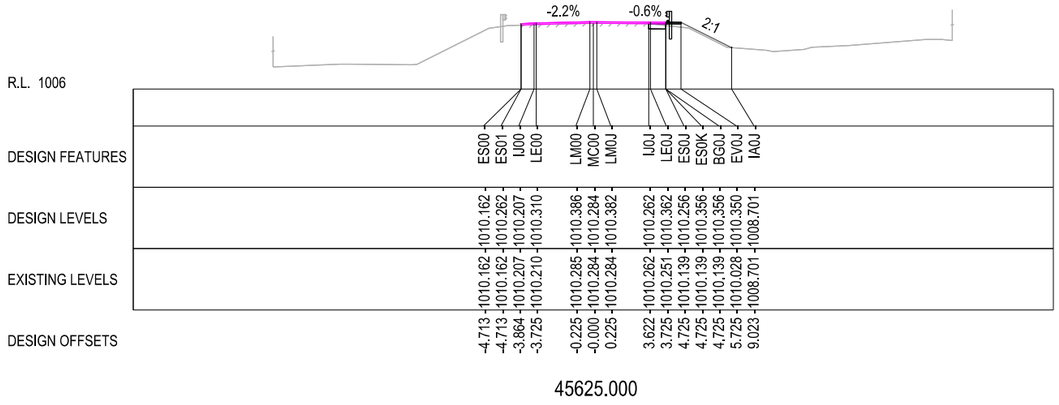
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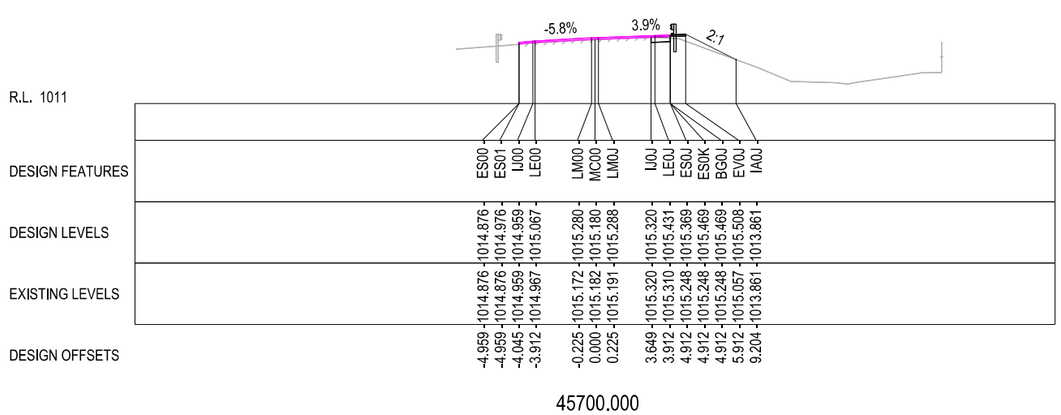
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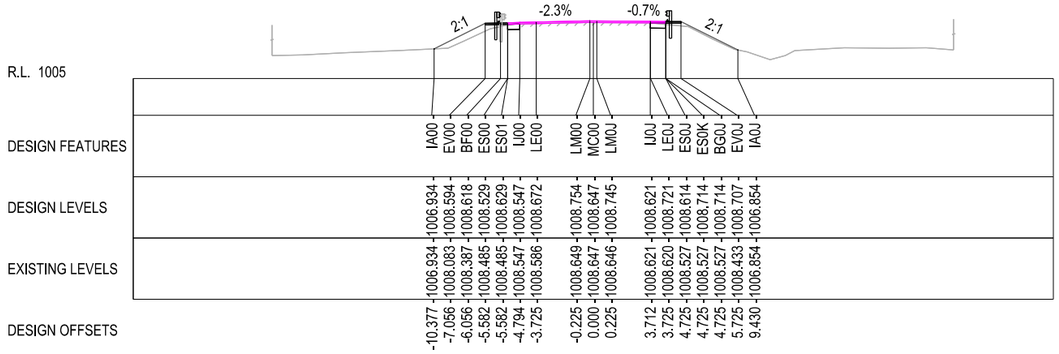
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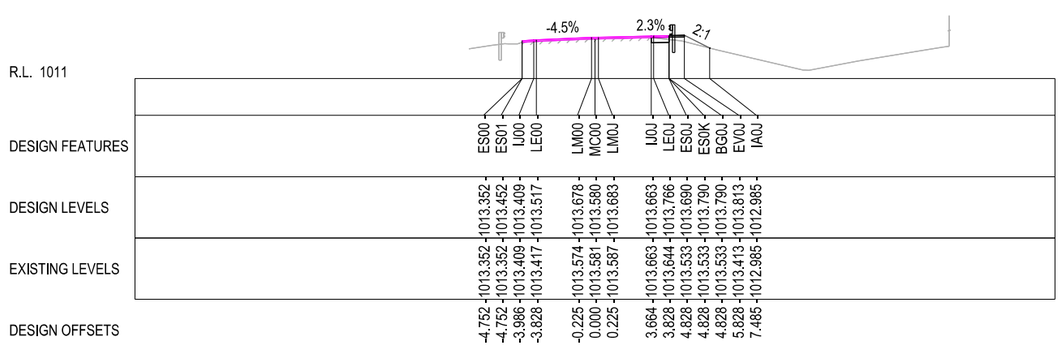
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45600.000



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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:30 AM
PLOT BY: walterslj

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

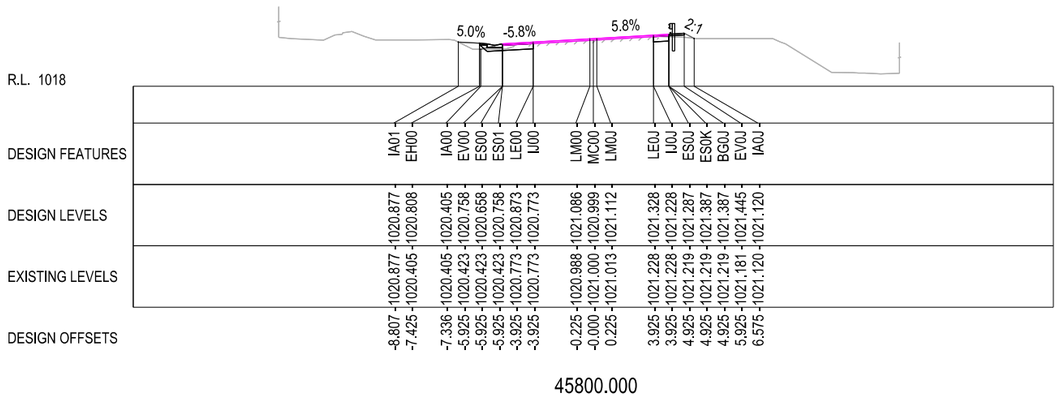
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45600.000 TO CH. 45725.000

A3

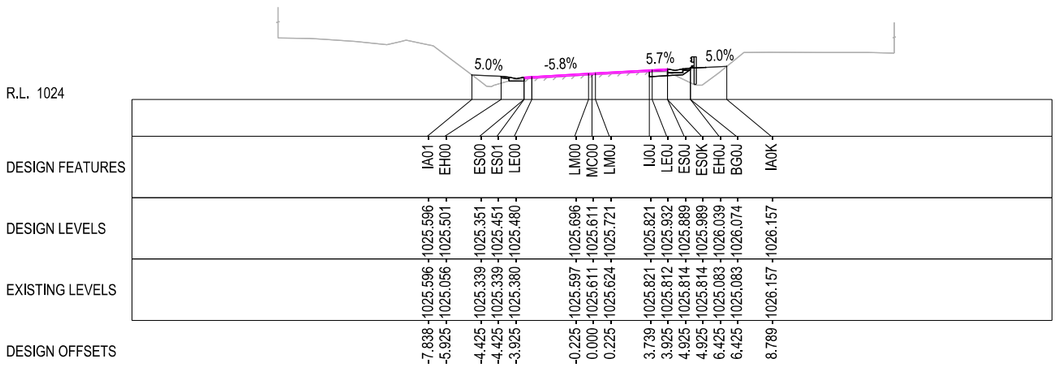
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ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0111	2

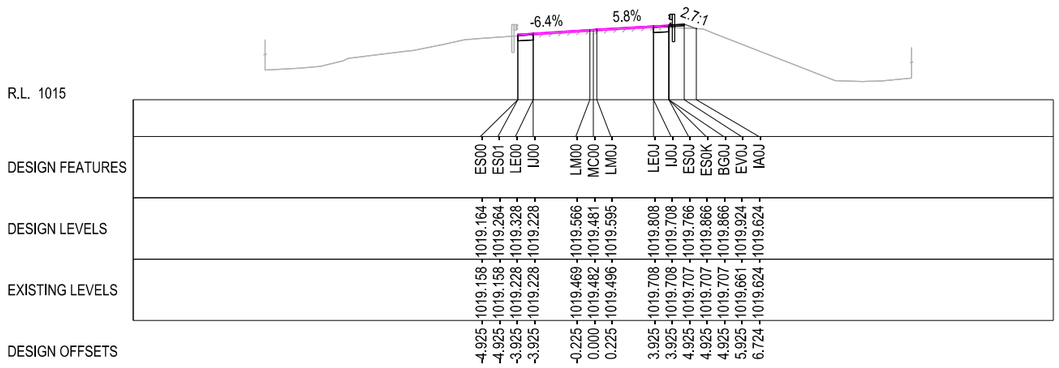
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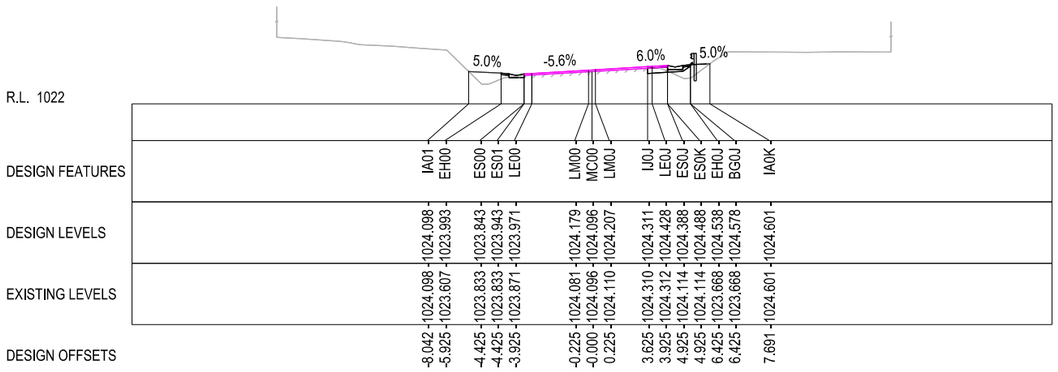
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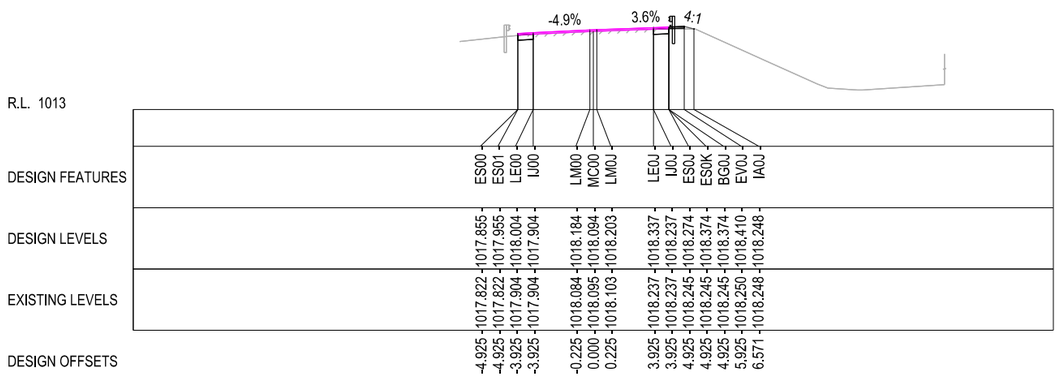
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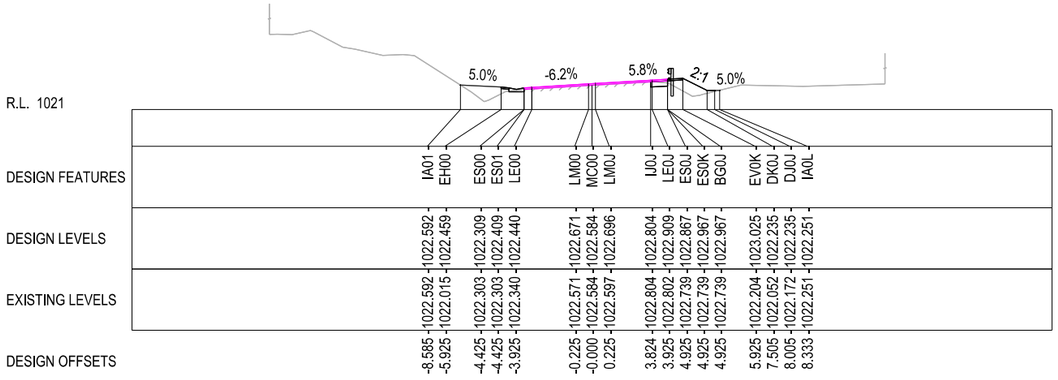
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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:54:32 AM
PLOT BY: walterj

CLIENT: NSW GOVERNMENT Transport for NSW

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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45750.000 TO CH. 45875.000

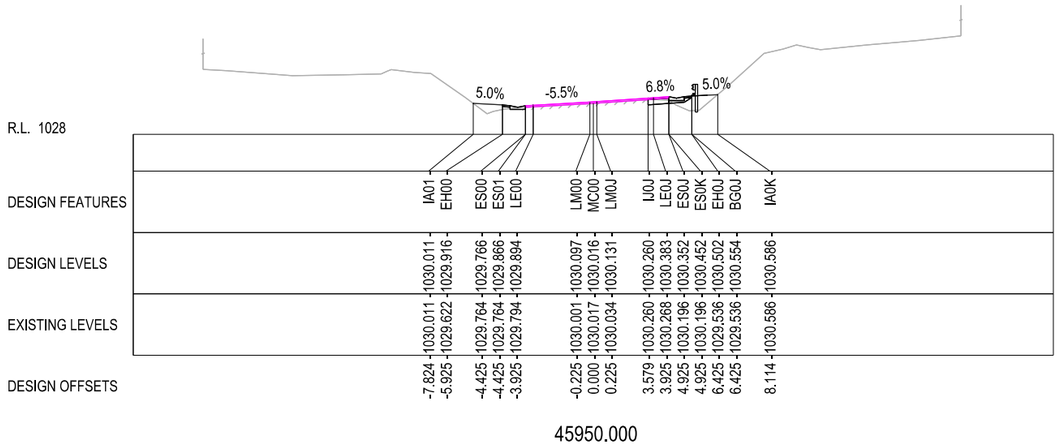
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RMS REGISTRATION No. DS2023/000777

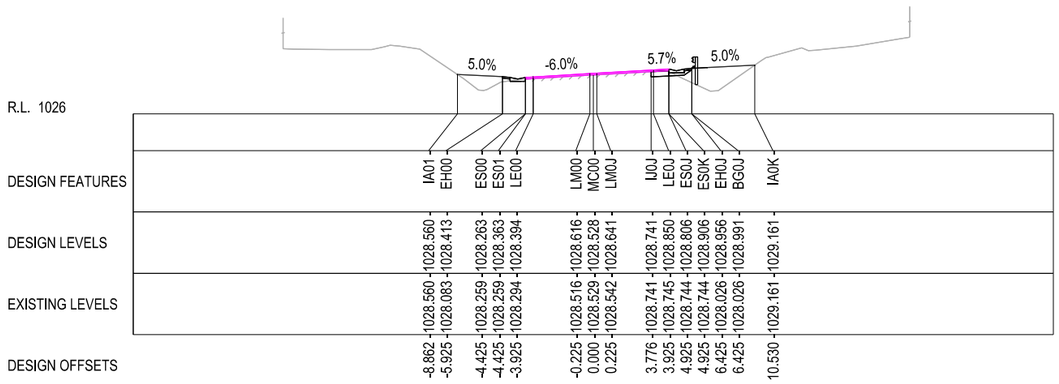
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0112	2

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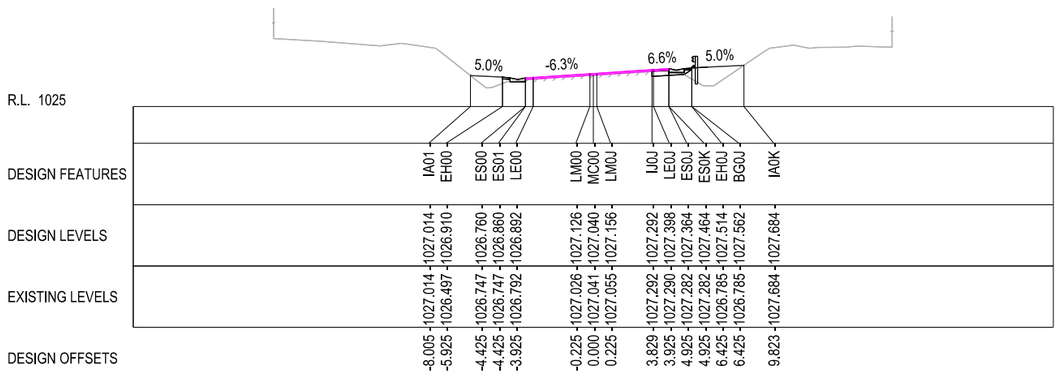
GDA 2020



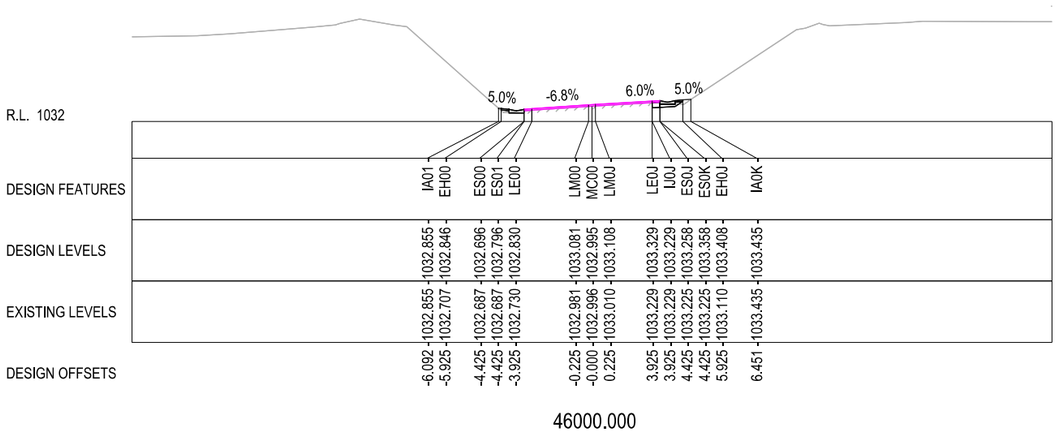
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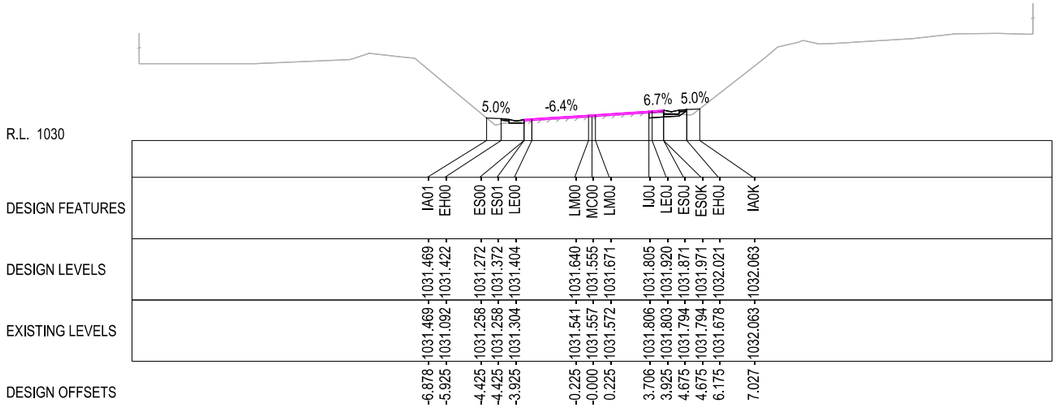
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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\Standards\Sheet Borders\A3_border.dgn				DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 5 10 15, SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:34 AM PLOT BY: walterj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 45900.000 TO CH. 46000.000

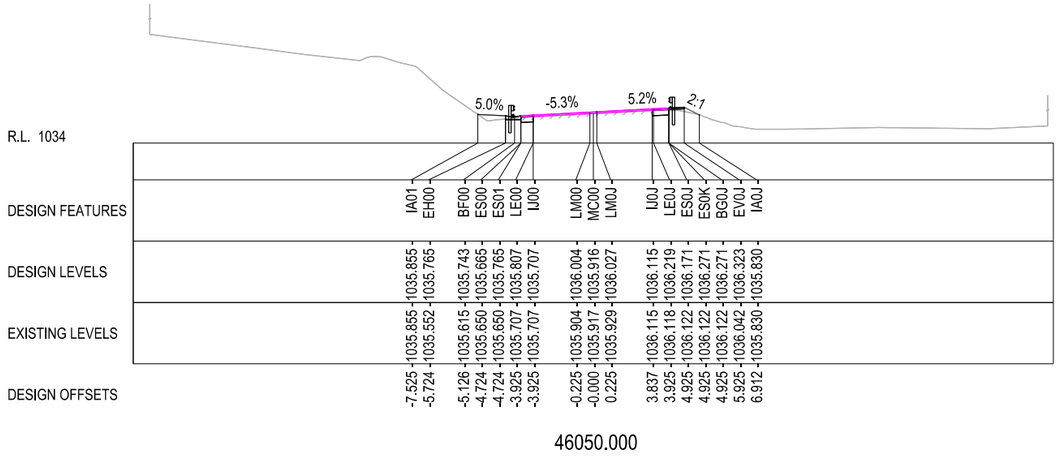
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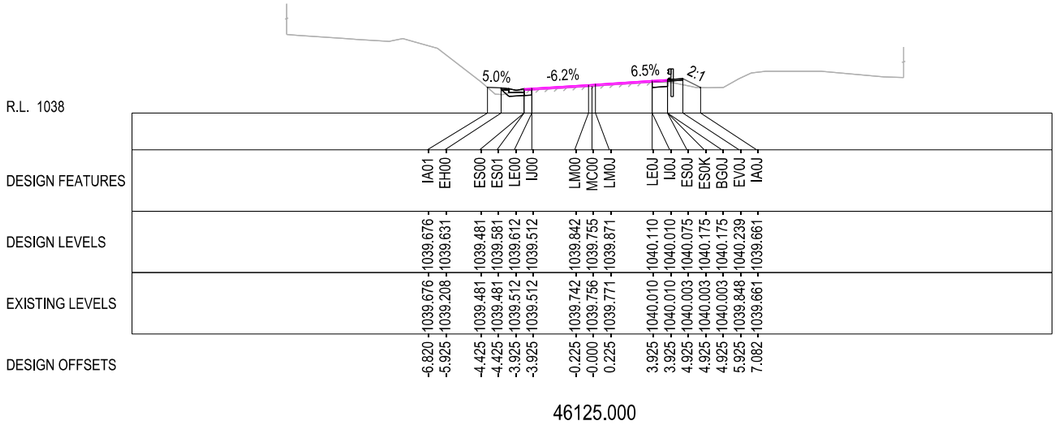
RMS REGISTRATION No. DS2023/000777

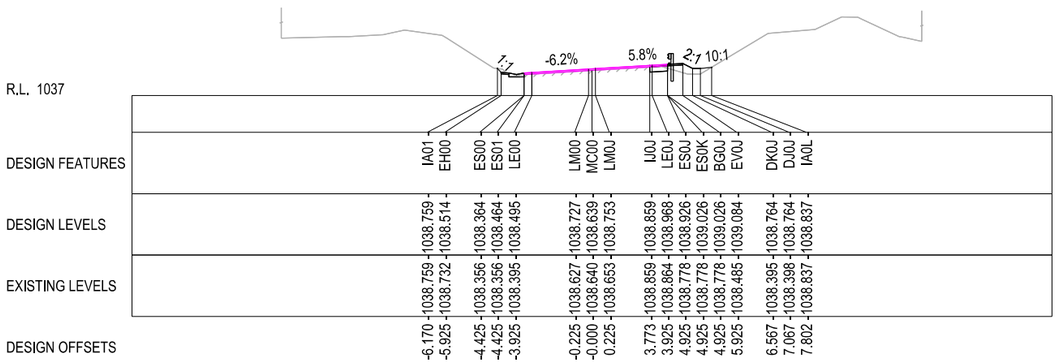
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100% - DETAIL DESIGN	SF2023/137411	RC-0113	2

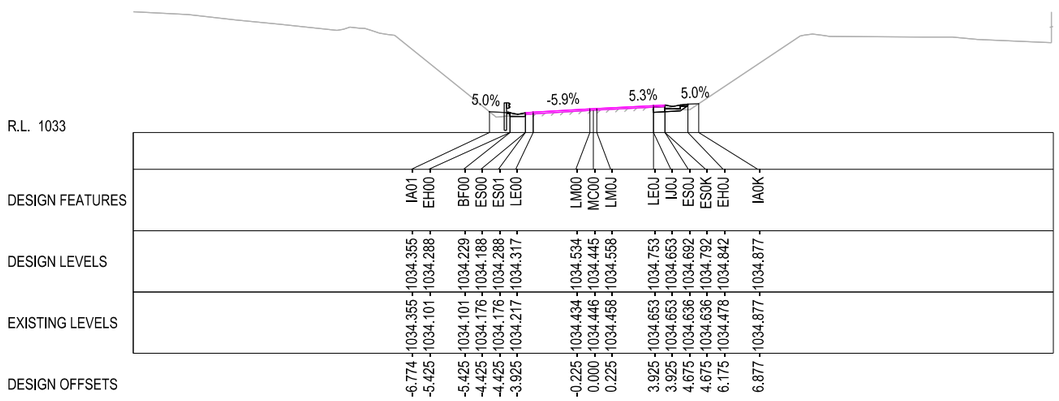
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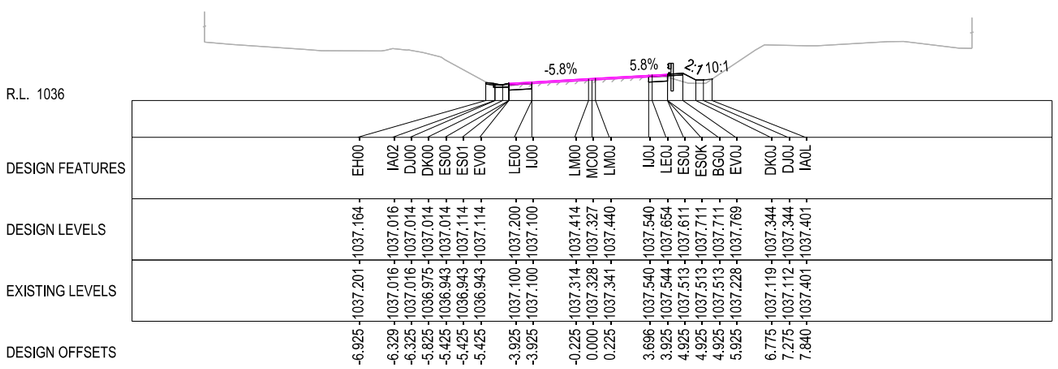
GDA 2020











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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\Standards\Sheet Borders\A3_border.dgn				DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 5 10 15 SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:35 AM PLOT BY: walterj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46025.000 TO CH. 46125.000

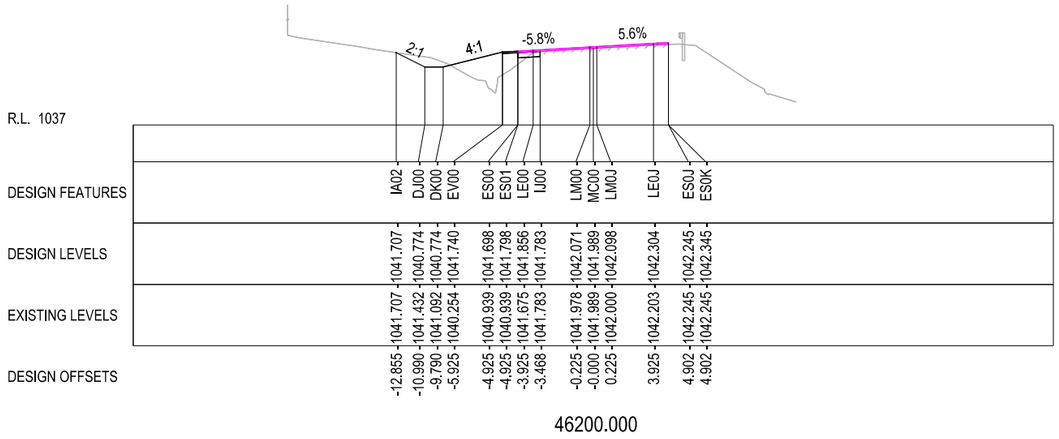
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RMS REGISTRATION No.: DS2023/000777

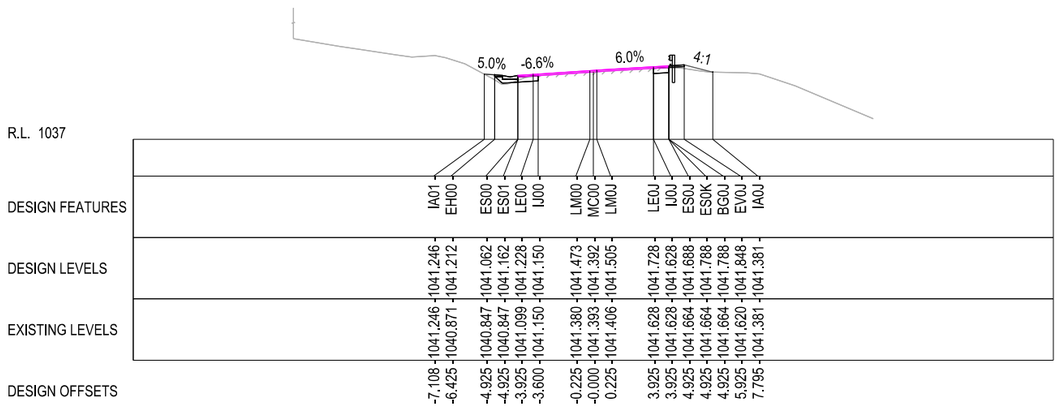
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0114	2

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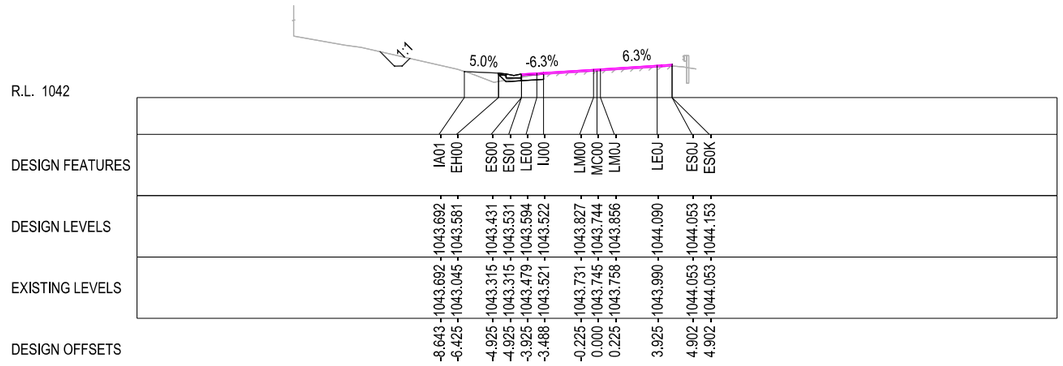


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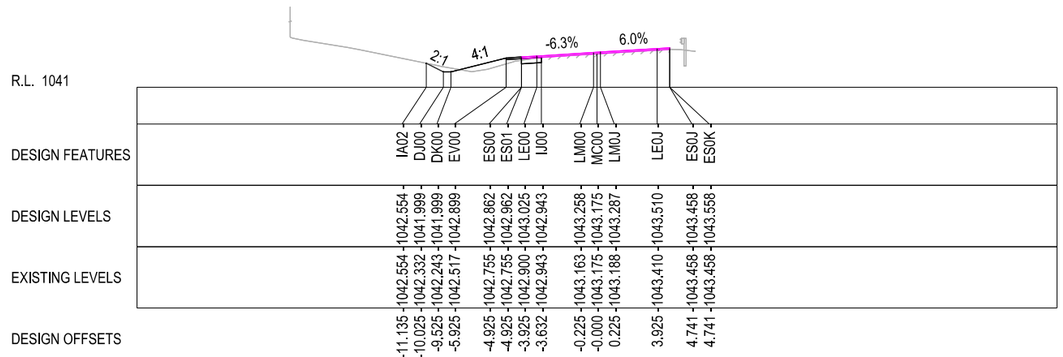


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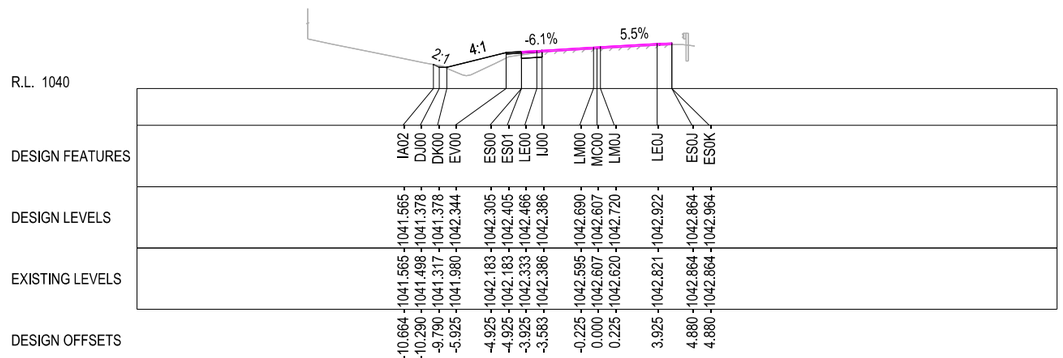
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46275.000



46250.000



46225.000

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
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DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
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PLOT DATE / TIME: 15/12/2023 11:54:36 AM
PLOT BY: walterj

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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

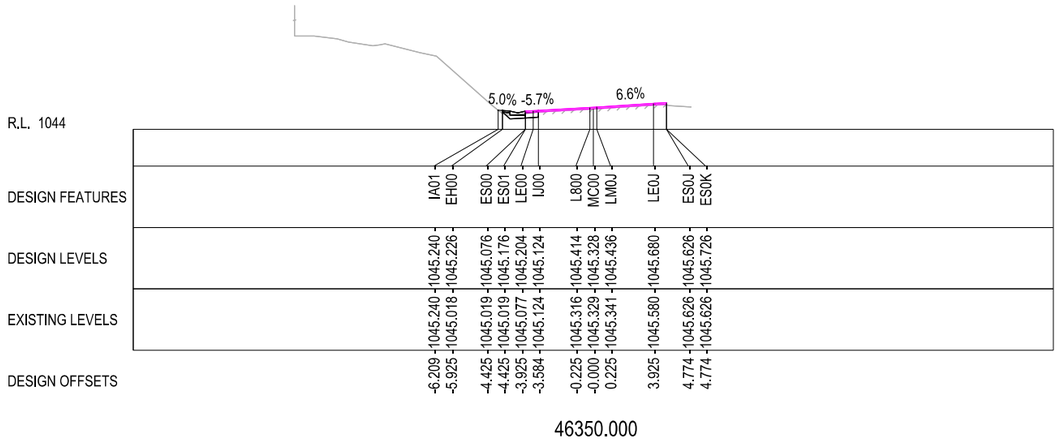
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46150.000 TO CH. 46275.000

A3

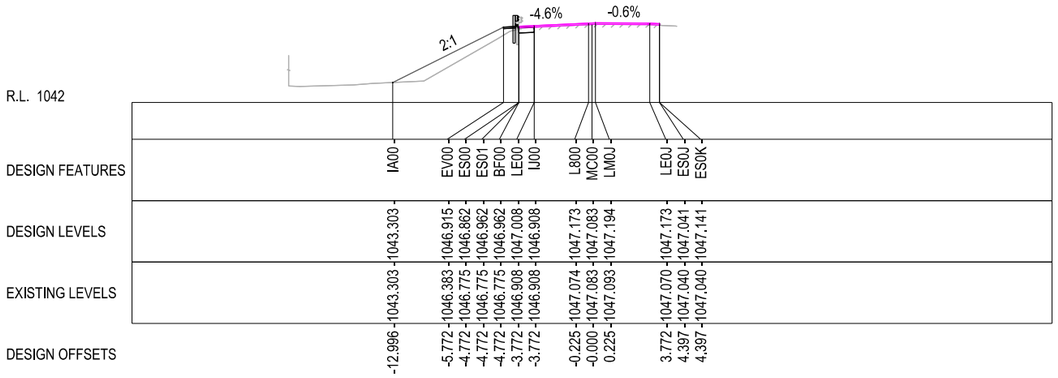
RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0115	2

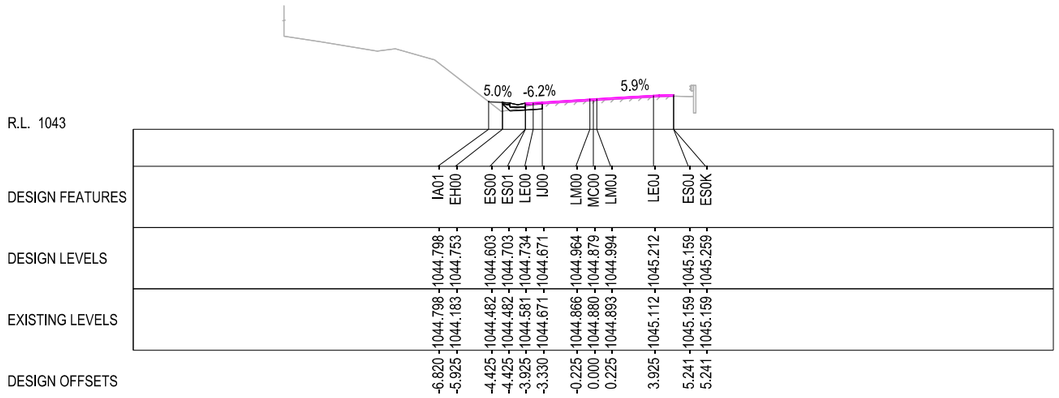
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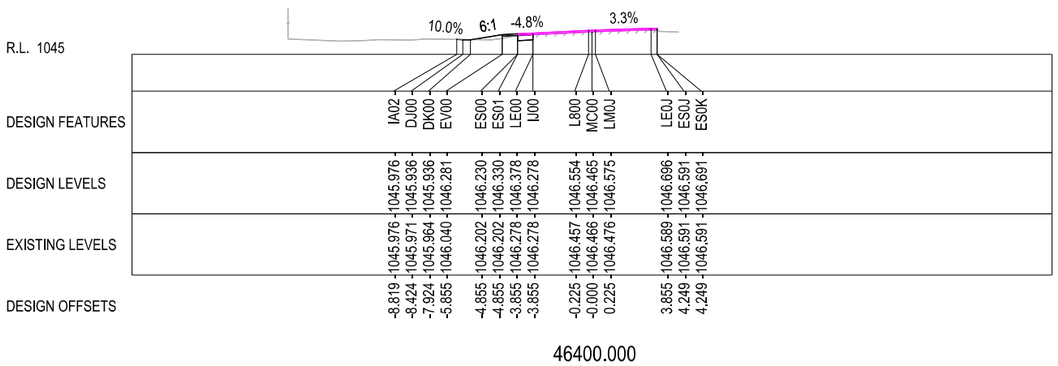
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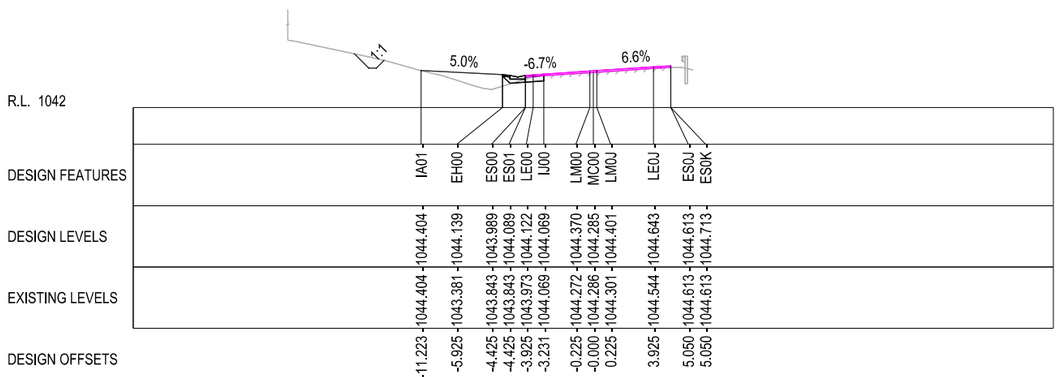
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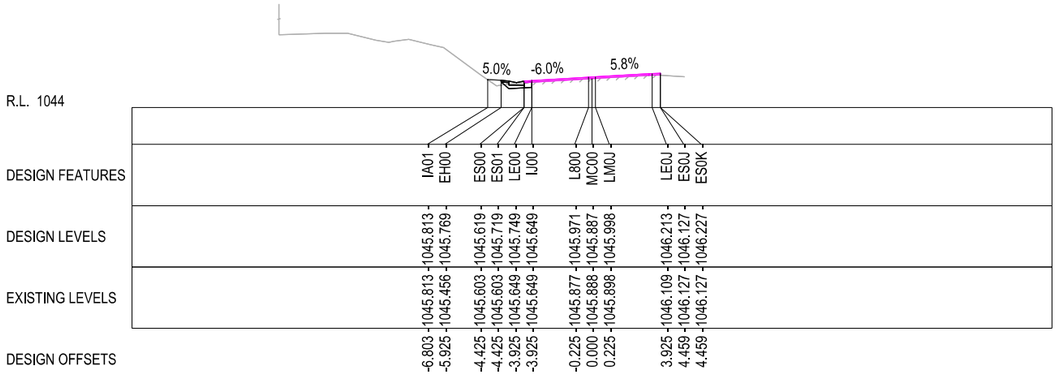
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46400.000



46300.000



46375.000

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:38 AM
PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

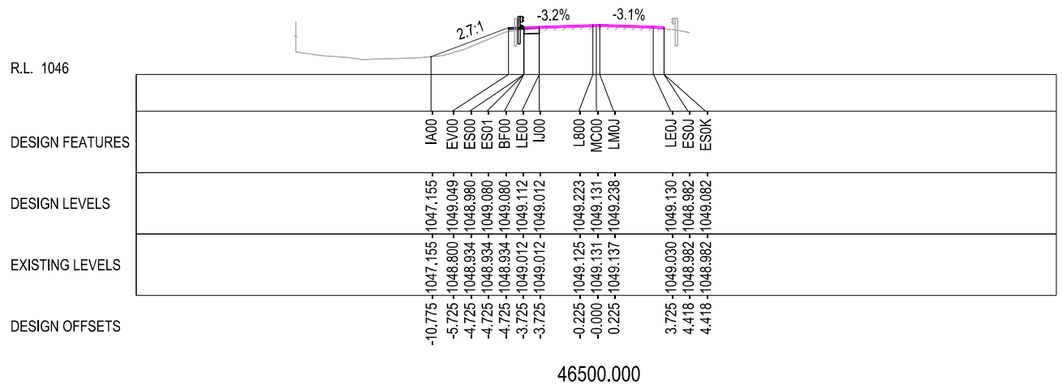
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46300.000 TO CH. 46425.000

A3

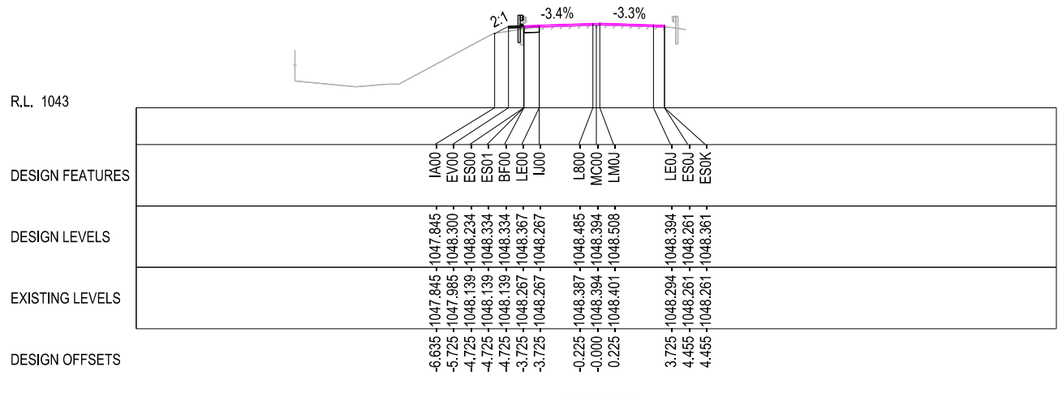
RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0116	2

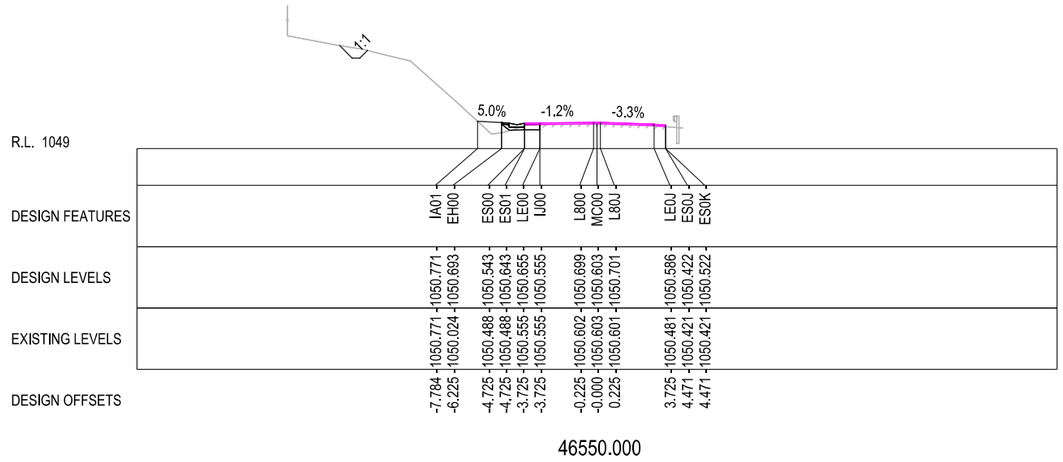
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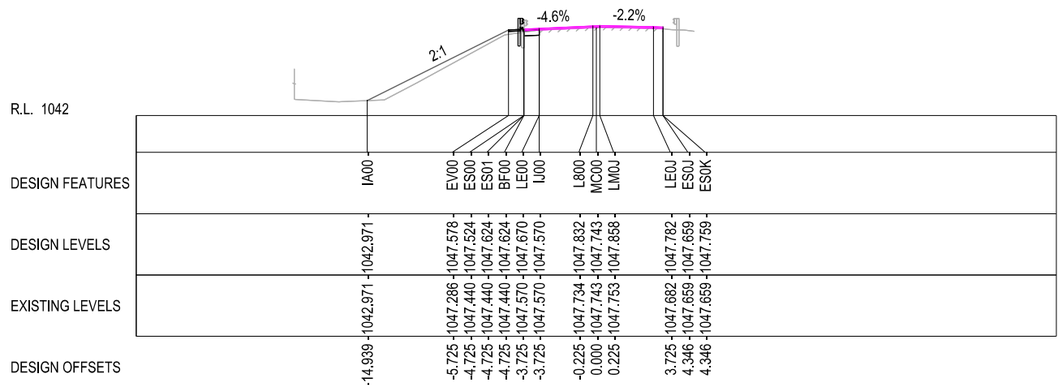
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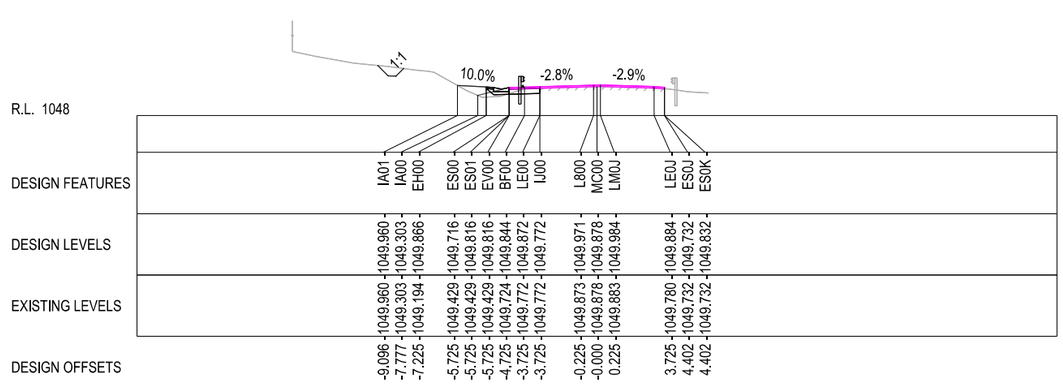
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46550.000



46450.000



46525.000

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THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50

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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:39 AM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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NSW GOVERNMENT Transport for NSW

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

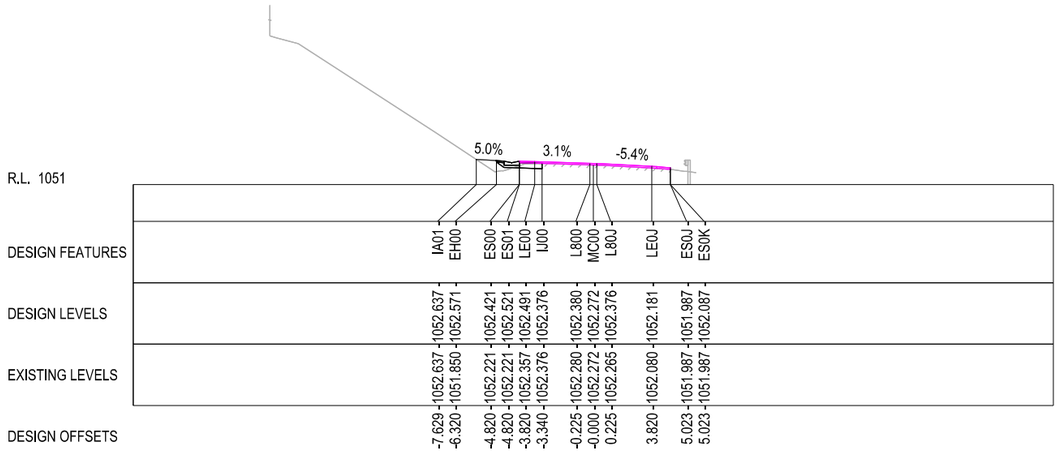
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46450.000 TO CH. 46550.000

A3

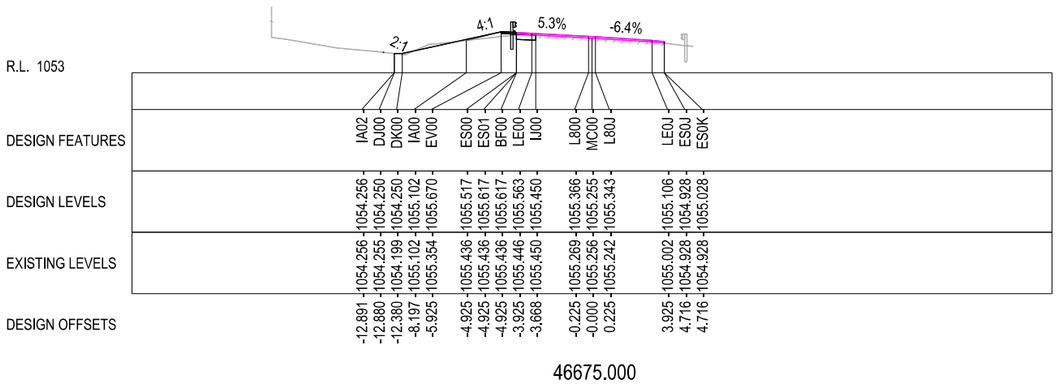
RMS REGISTRATION No. DS2023/000777

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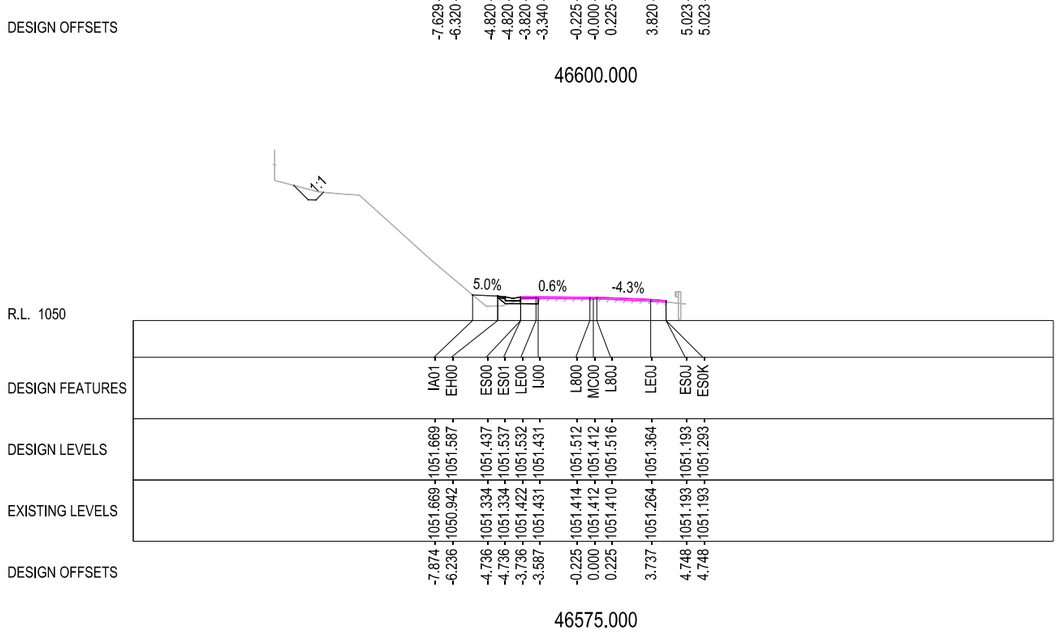
© Transport for NSW



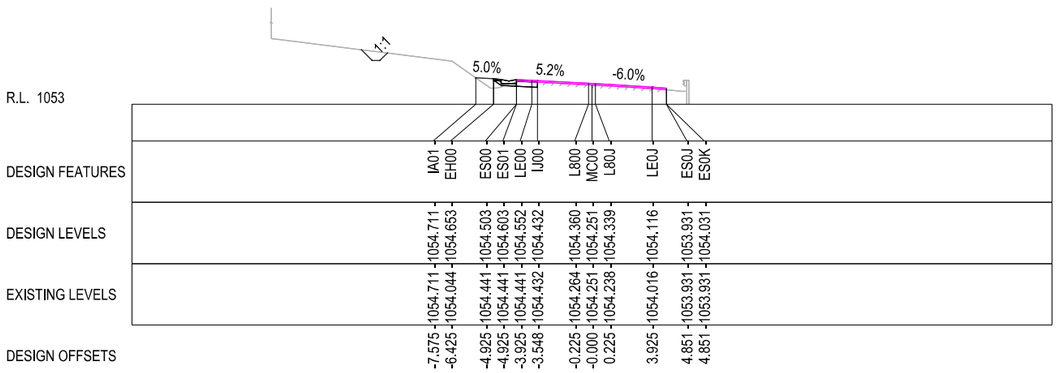
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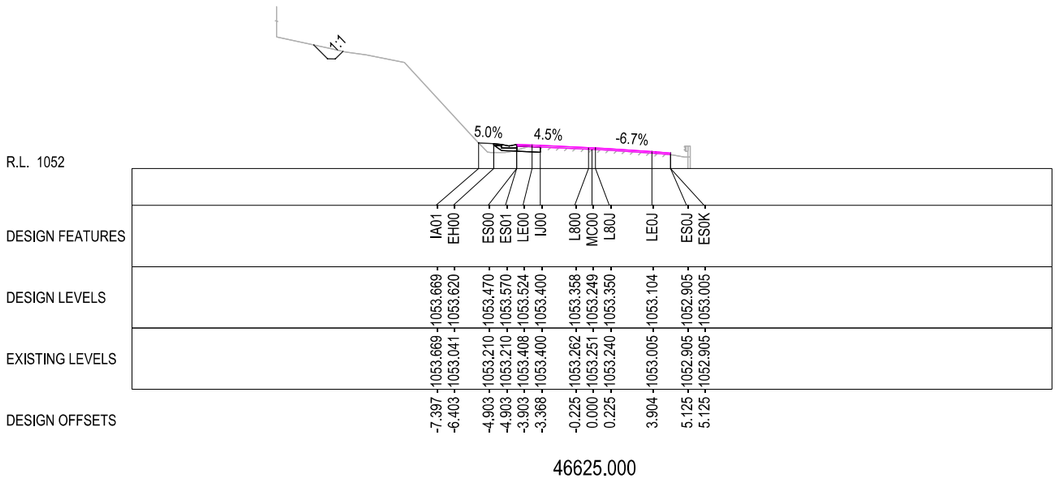
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46575.000



46650.000



46625.000

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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FILE NAME ; FILE NAME

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:40 AM
PLOT BY: waltersj

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

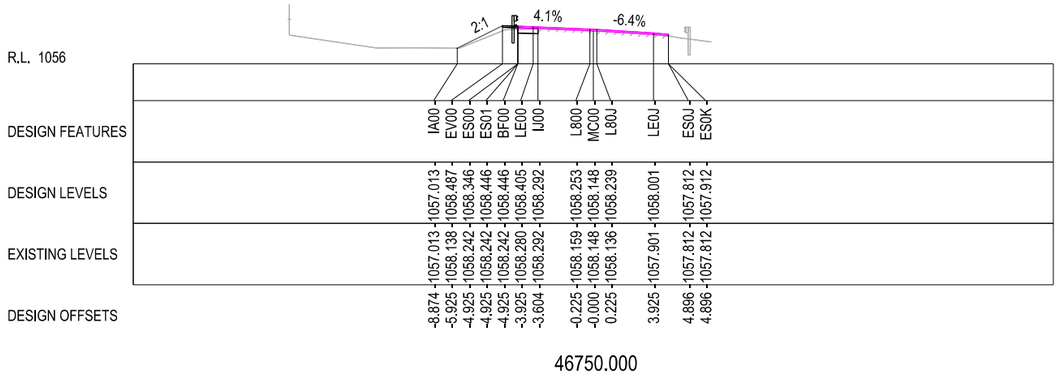
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46575.000 TO CH. 46675.000

A3

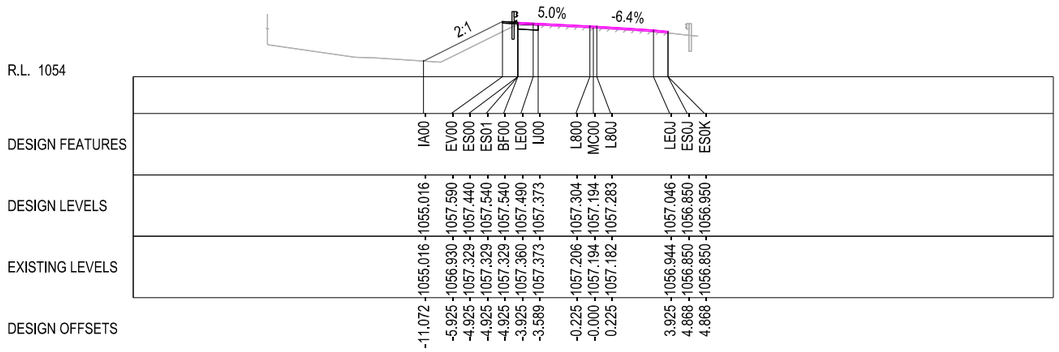
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ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
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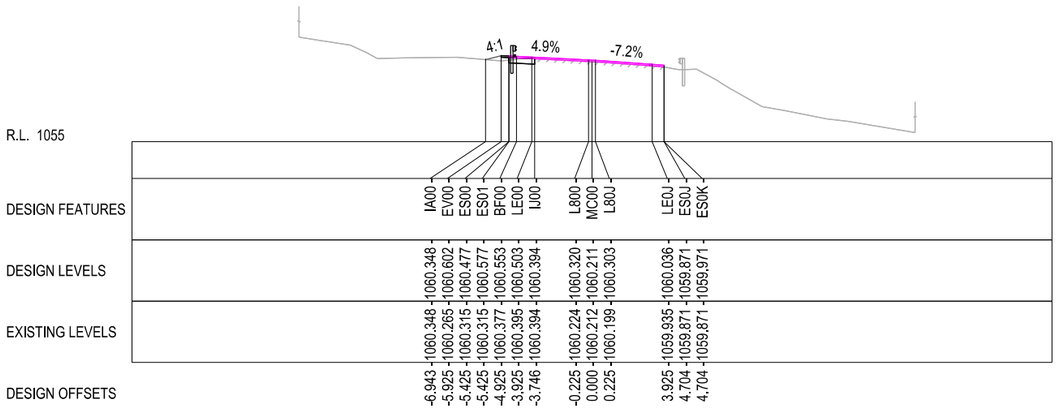
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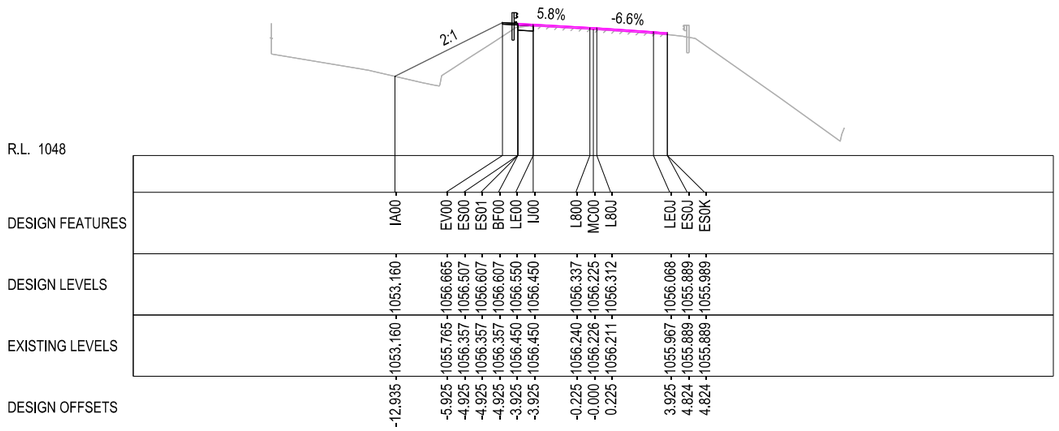
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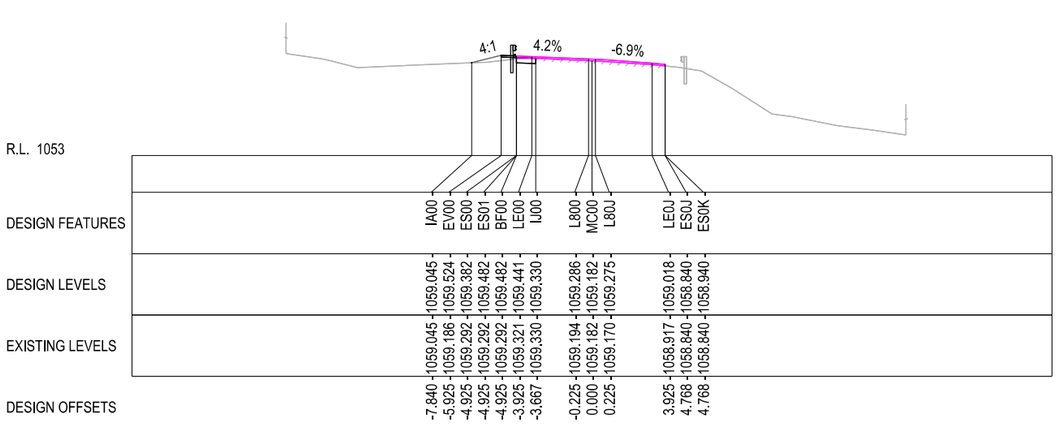
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46800.000



46700.000



46775.000

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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PLOT DATE / TIME 15/12/2023 11:54:41 AM
PLOT BY walterswj

CLIENT
NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46700.000 TO CH. 46800.000

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020)
HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

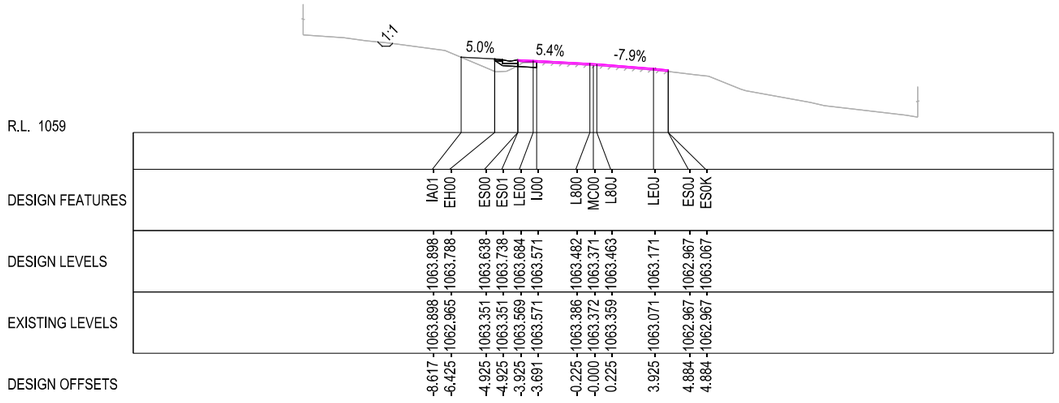
PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

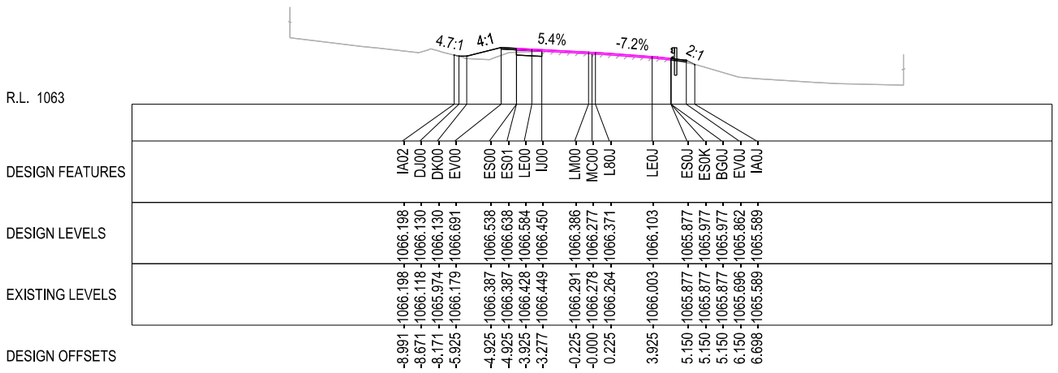
ISSUE STATUS 100% - DETAIL DESIGN
EDMS No. SF2023/137411
SHEET No. RC-0119
ISSUE 2

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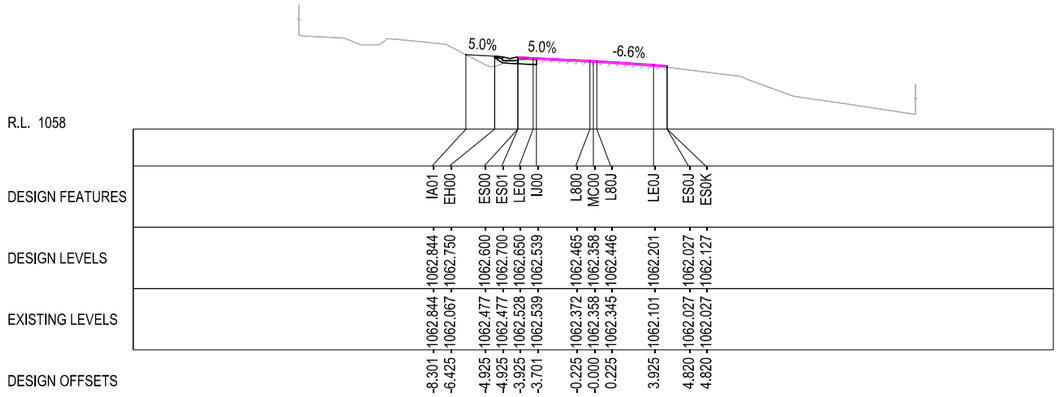
GDA 2020



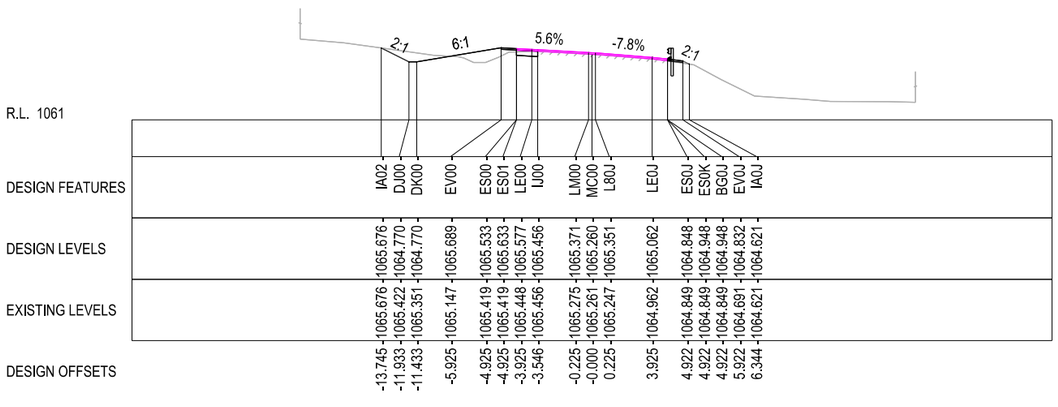
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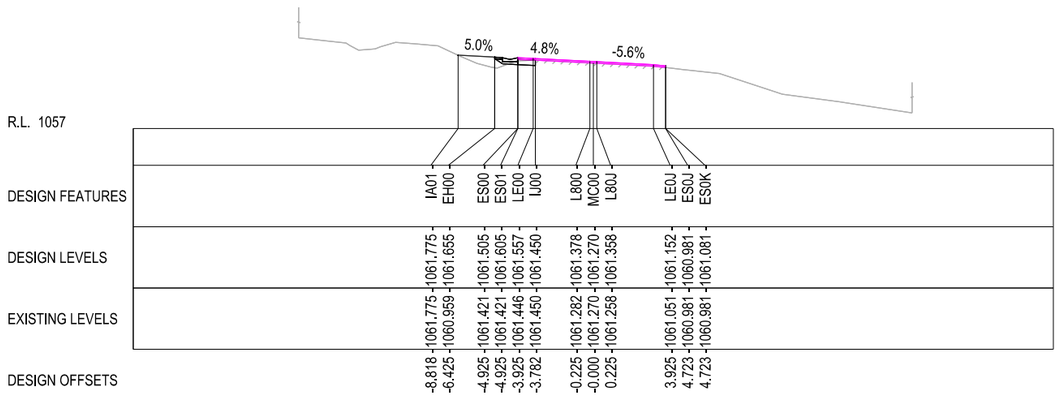
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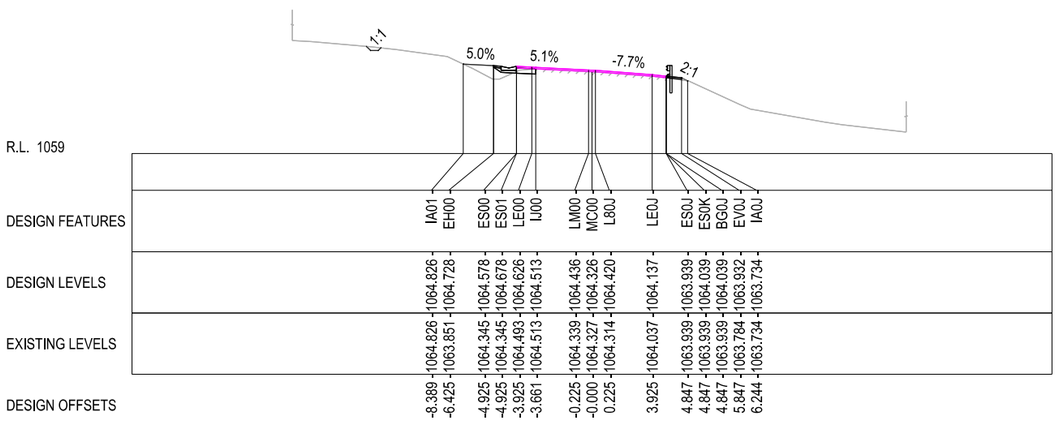
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46925.000



46825.000



46900.000

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 11:54:43 AM
PLOT BY waltersj

CLIENT
NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46825.000 TO CH. 46950.000

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020) HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

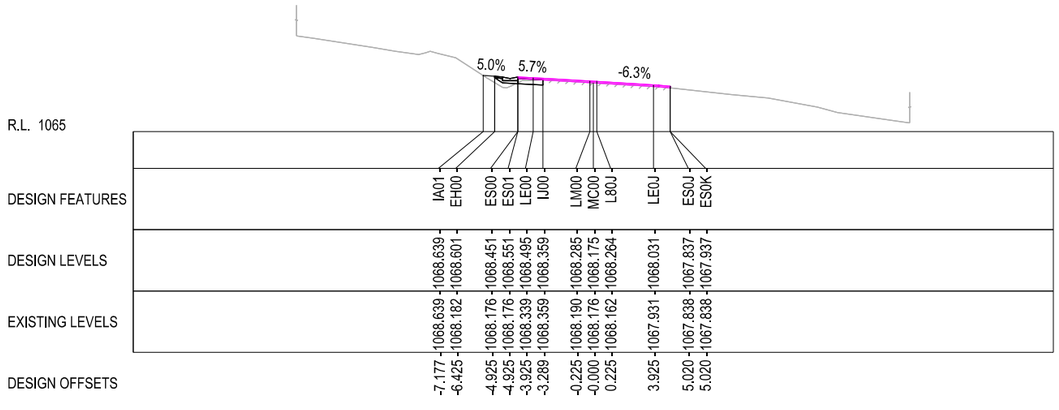
PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

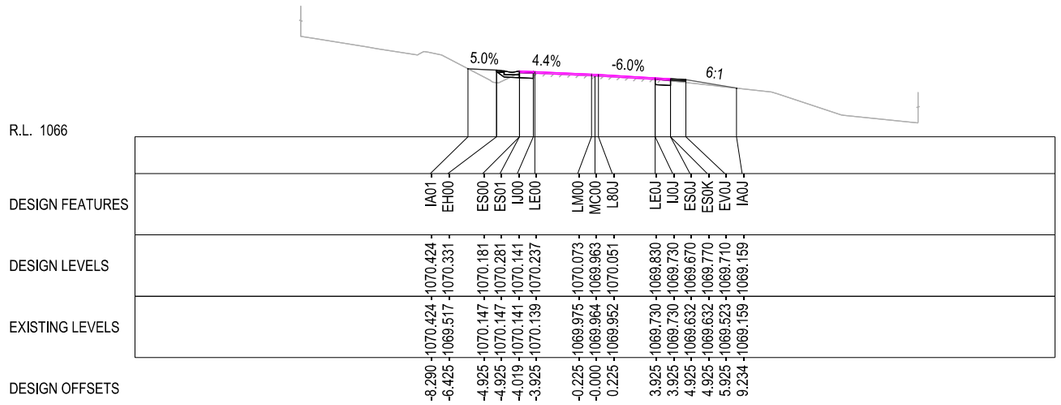
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100% - DETAIL DESIGN	SF2023/137411	RC-0120	2

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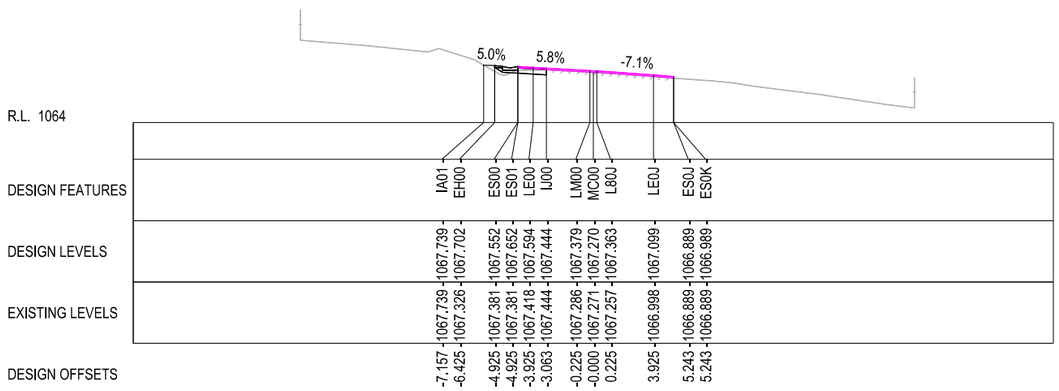
GDA 2020



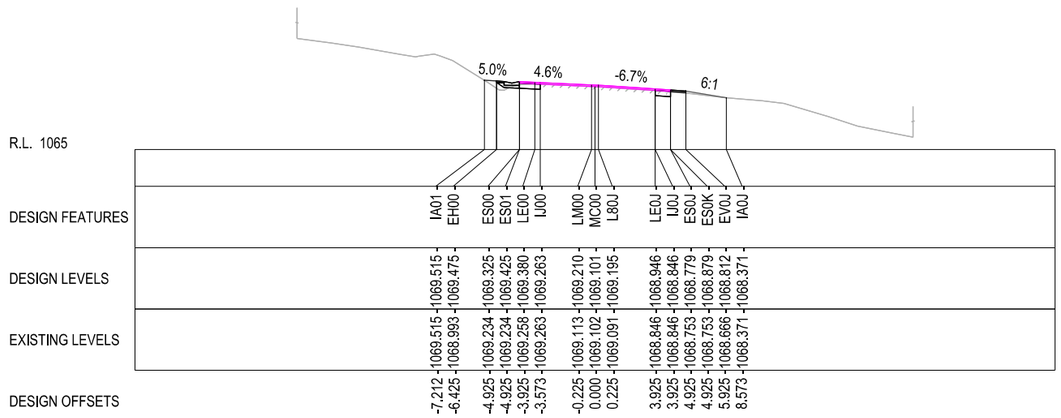
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47050.000



46975.000



47025.000

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50

DRAWING FILE LOCATION / NAME
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REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
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SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:45 AM
PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 46975.000 TO CH. 47050.000

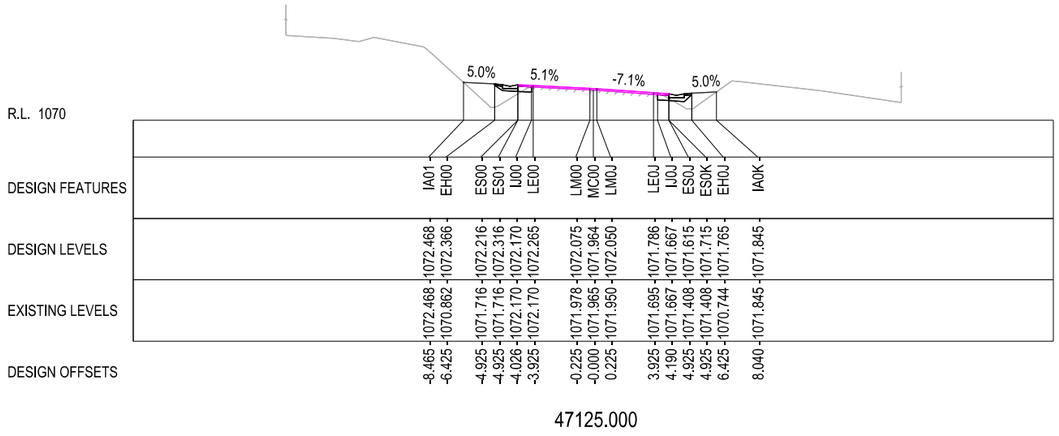
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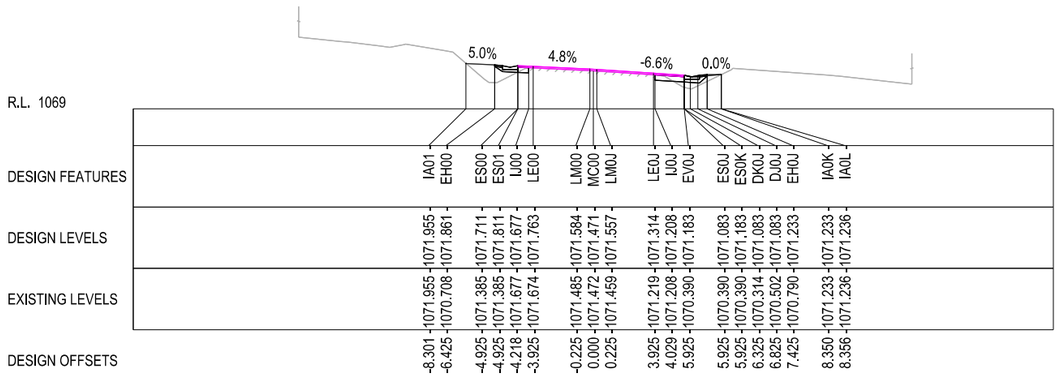
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100% - DETAIL DESIGN	SF2023/137411	RC-0121	2

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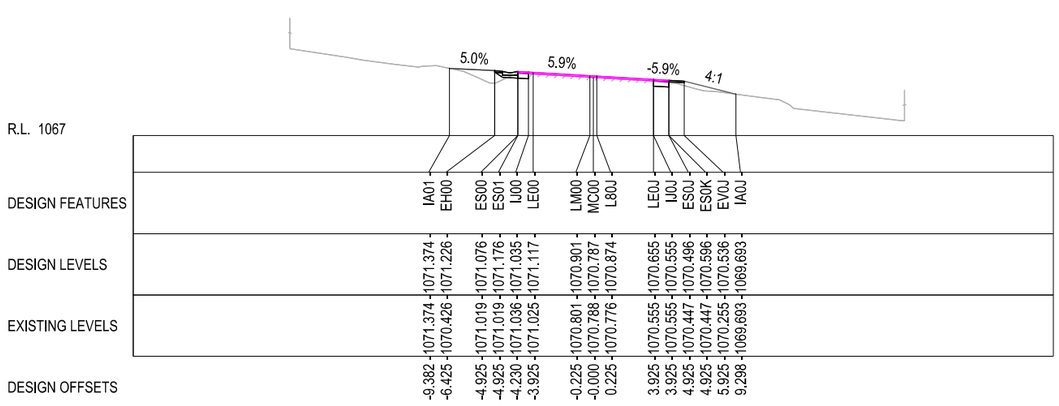
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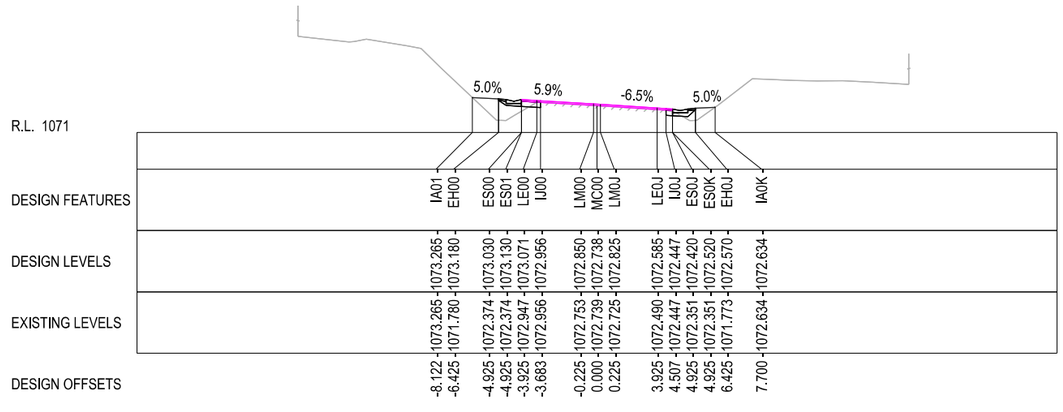
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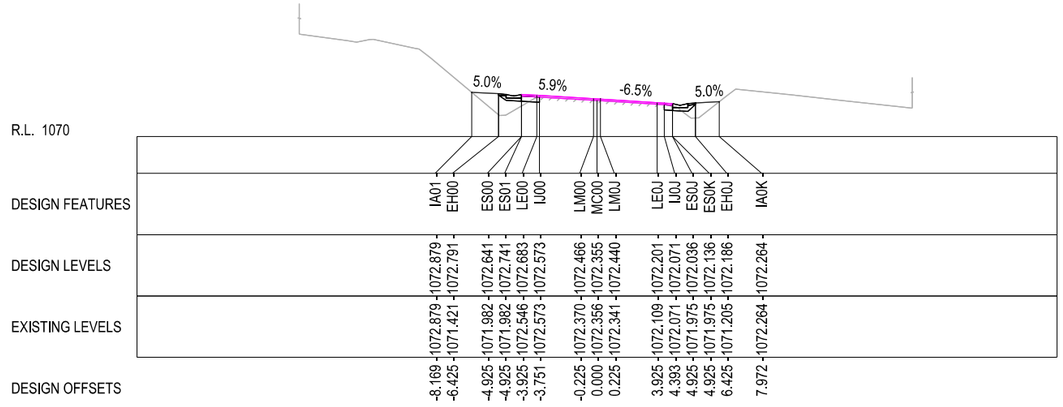
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THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:54:47 AM
PLOT BY: waltersj

CLIENT: NSW GOVERNMENT Transport for NSW

A3

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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

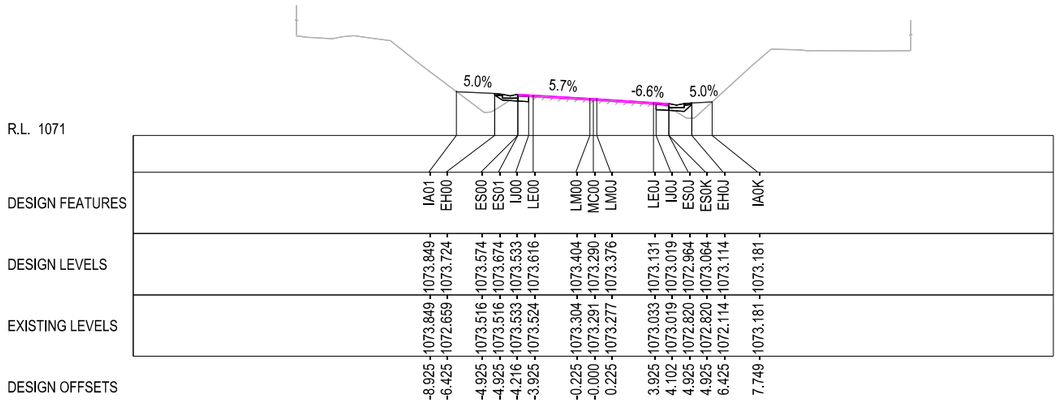
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 47075.000 TO CH. 47175.000

RMS REGISTRATION No. DS2023/000777

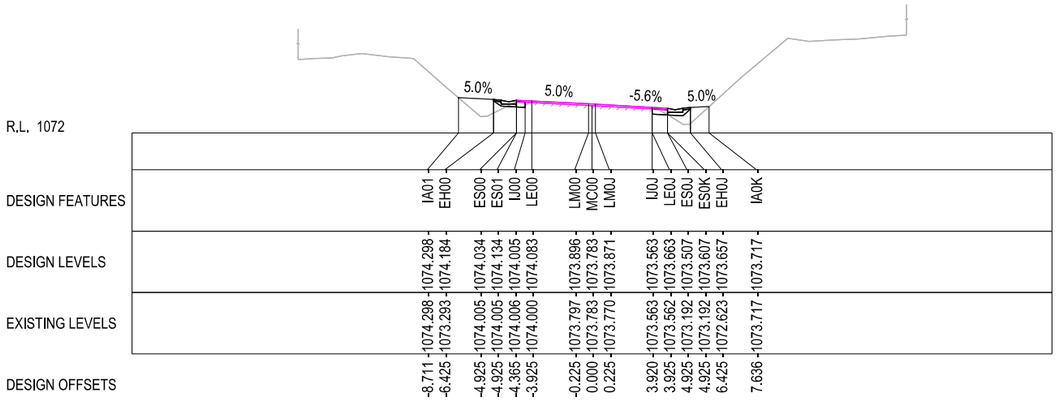
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100% - DETAIL DESIGN	SF2023/137411	RC-0122	2

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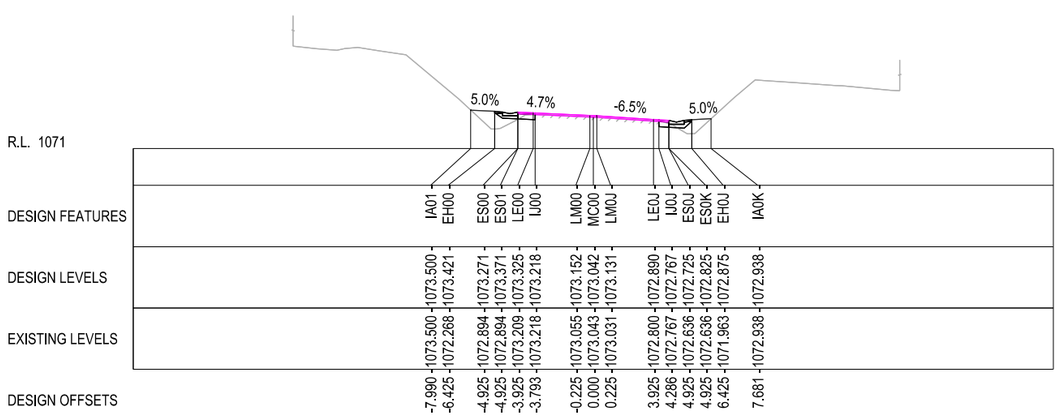
GDA 2020



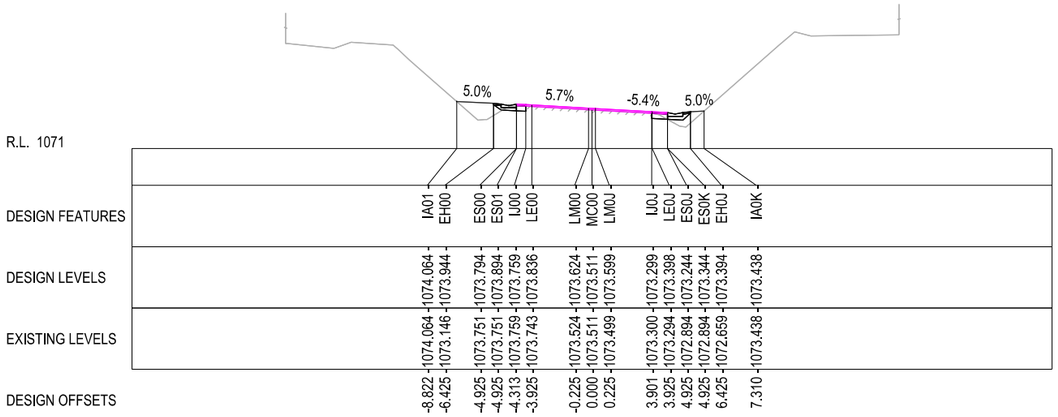
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THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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PLOT BY: walterj

CLIENT: NSW GOVERNMENT Transport for NSW

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

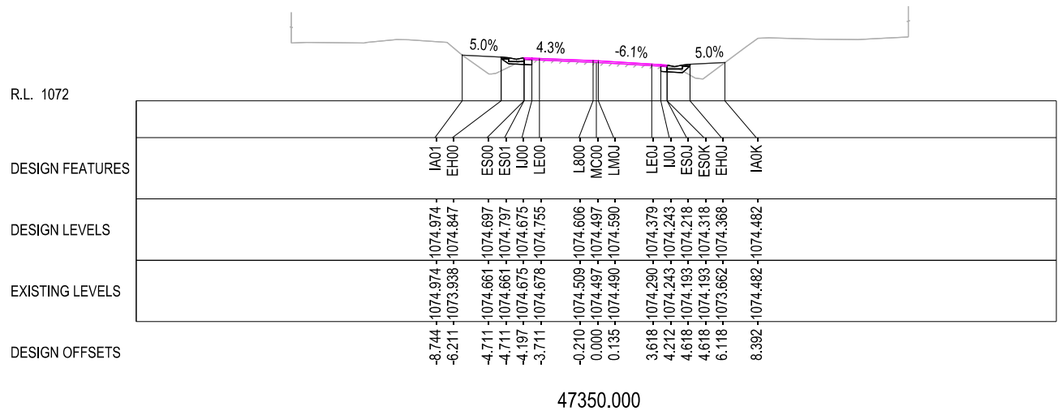
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 47200.000 TO CH. 47275.000

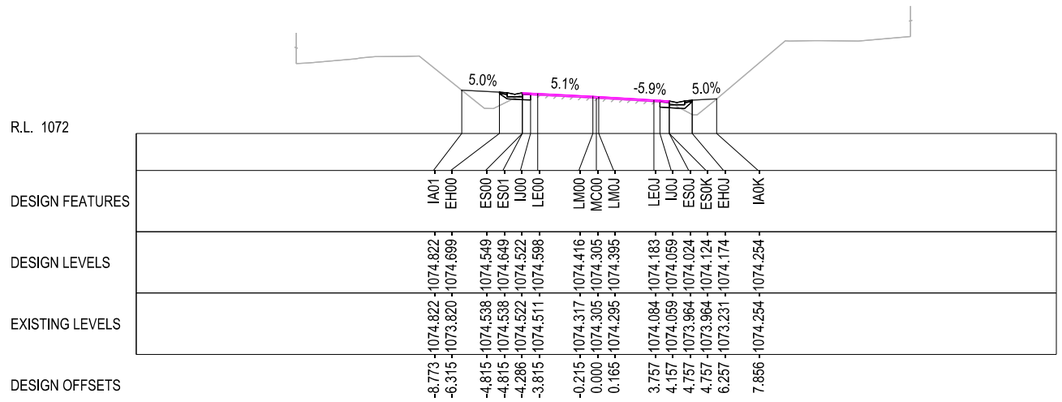
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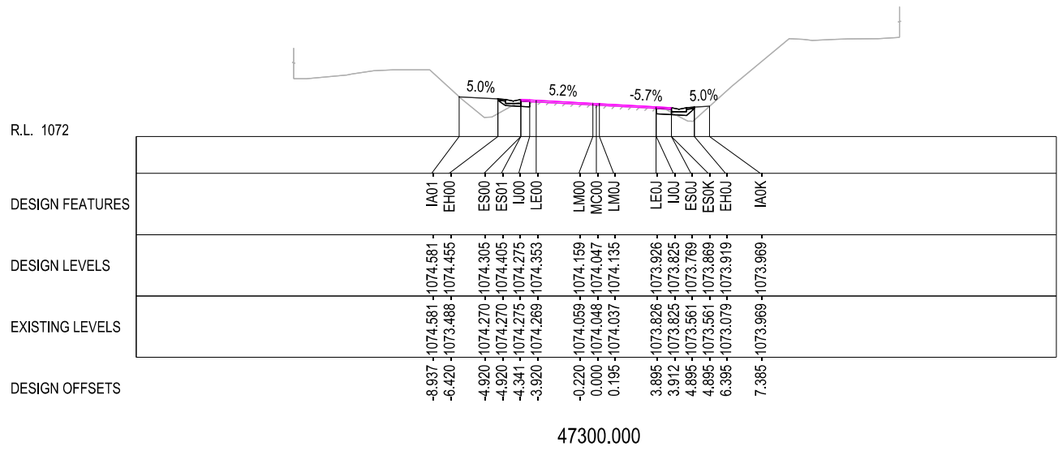
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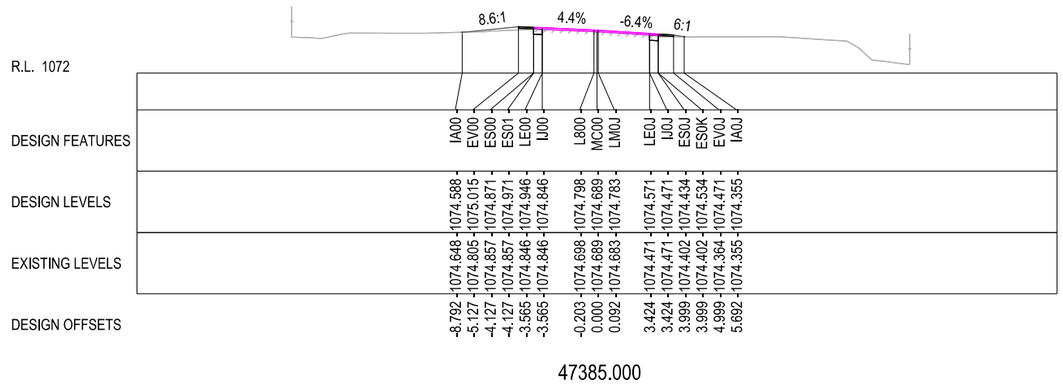
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100% - DETAIL DESIGN	SF2023/137411	RC-0123	2

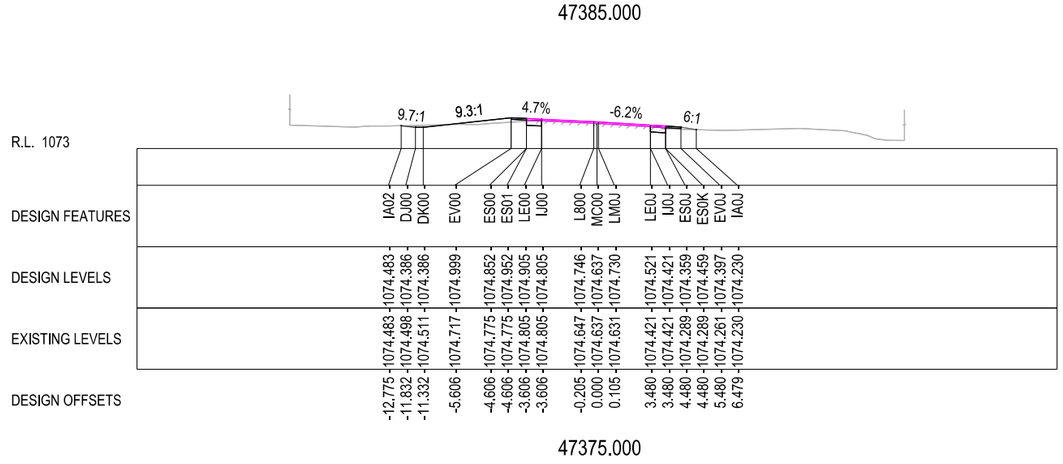
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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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FILE NAME ; FILE NAME

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 5 10 15
SCALE 1:400m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 11:54:51 AM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

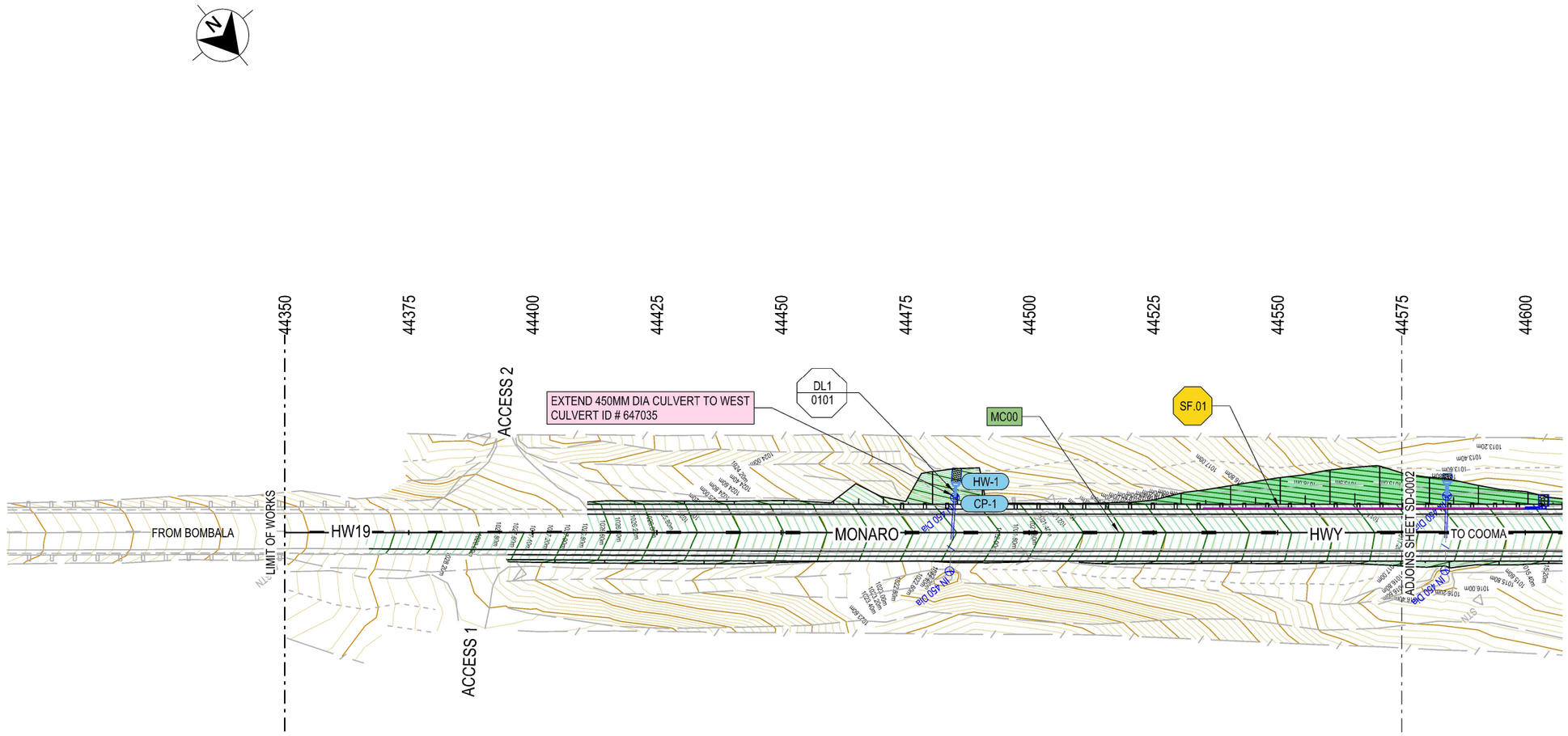
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
CROSS SECTION
HW19 - MONARO HIGHWAY - MC00 - CH. 47300.000 TO CH. 47385.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	RC-0124	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
- HW1 — DRAINAGE HEADWALL LABEL
- CP-1 — DRAINAGE CONNECTION POINT
- SO.01 — DRAINAGE KERB SYSTEM LABEL

DESIGN FEATURES

- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
- DESIGN CONTOUR MINOR INTERVAL 0.1M

EXISTING FEATURES

- Ø600 — DRAINAGE PIPE
- DP — DP OVERLAY (ACCURACY 0.1M)
- EXISTING CONTOUR MAJOR INTERVAL 1.0M
- EXISTING CONTOUR MINOR INTERVAL 0.2M

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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PLOT DATE / TIME: 15/12/2023 12:03:35 PM
PLOT BY: waltersj

CLIENT: NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44350.000 TO CH.44575.000

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

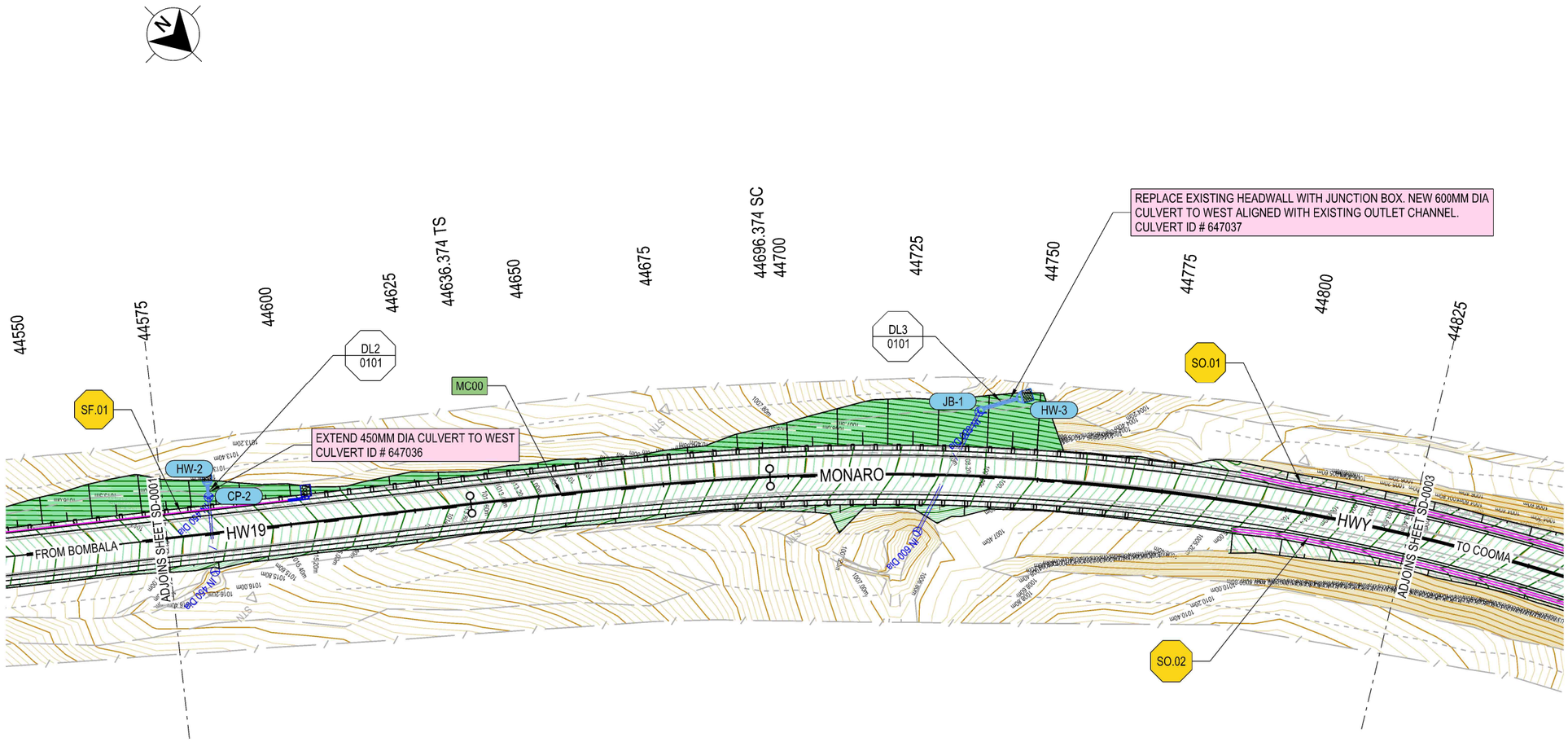
TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0001	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
- HW1 — DRAINAGE HEADWALL LABEL
- CP-1 — DRAINAGE CONNECTION POINT
- SO.01 — DRAINAGE KERB SYSTEM LABEL

DESIGN FEATURES

- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
- DESIGN CONTOUR MINOR INTERVAL 0.1M

EXISTING FEATURES

- Ø600 — DRAINAGE PIPE
- DP — DP OVERLAY (ACCURACY 0.1M)
- EXISTING CONTOUR MAJOR INTERVAL 1.0M
- EXISTING CONTOUR MINOR INTERVAL 0.2M

GDA 2020

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

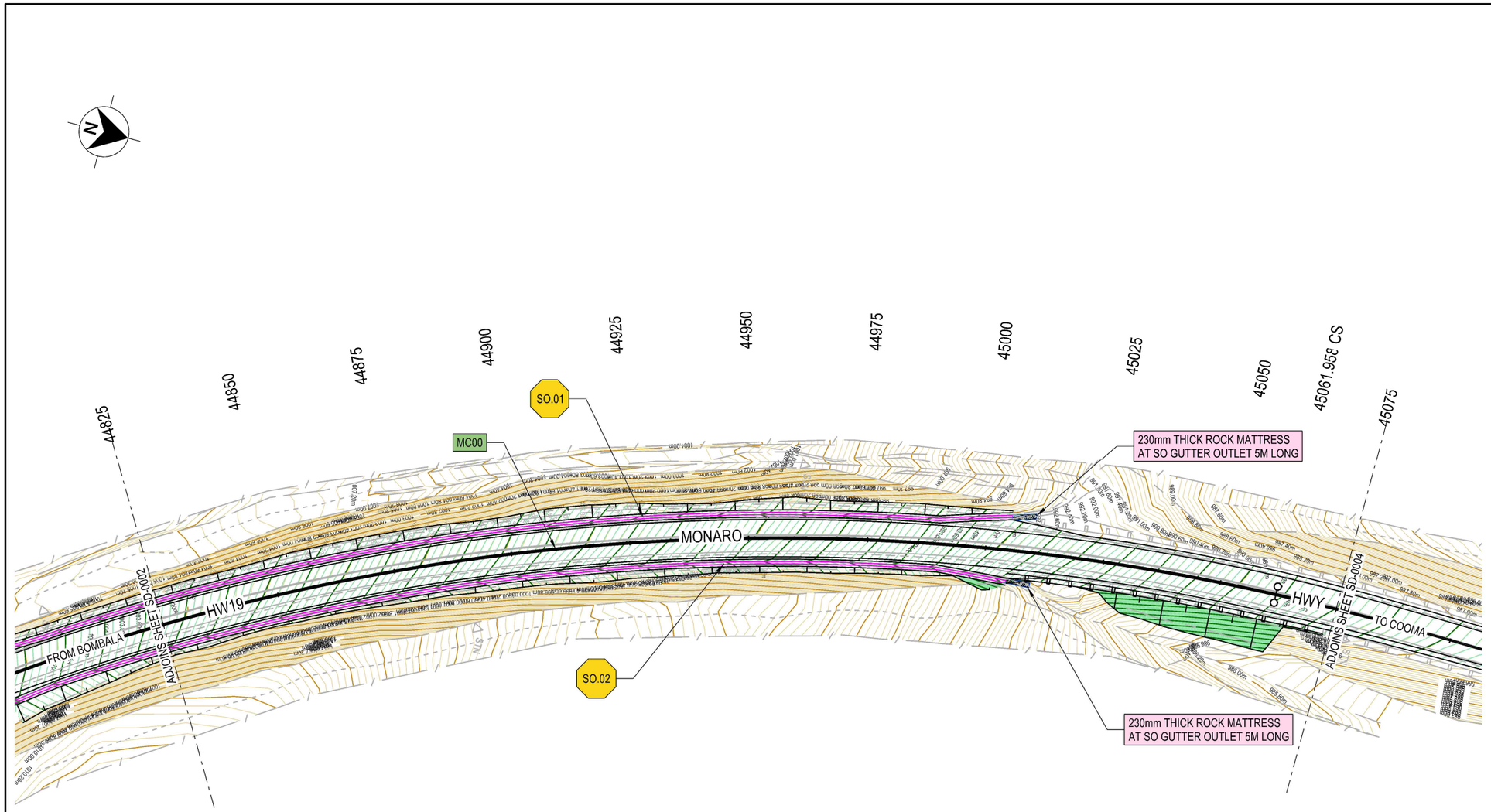
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44575.000 TO CH.44825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0002	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
- HW1 — DRAINAGE HEADWALL LABEL
- CP-1 — DRAINAGE CONNECTION POINT
- SO.01 — DRAINAGE KERB SYSTEM LABEL

DESIGN FEATURES

- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
- DESIGN CONTOUR MINOR INTERVAL 0.1M

EXISTING FEATURES

- ø600 — DRAINAGE PIPE
- DP — DP OVERLAY (ACCURACY 0.1M)
- EXISTING CONTOUR MAJOR INTERVAL 1.0M
- EXISTING CONTOUR MINOR INTERVAL 0.2M

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn

EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:03:53 PM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

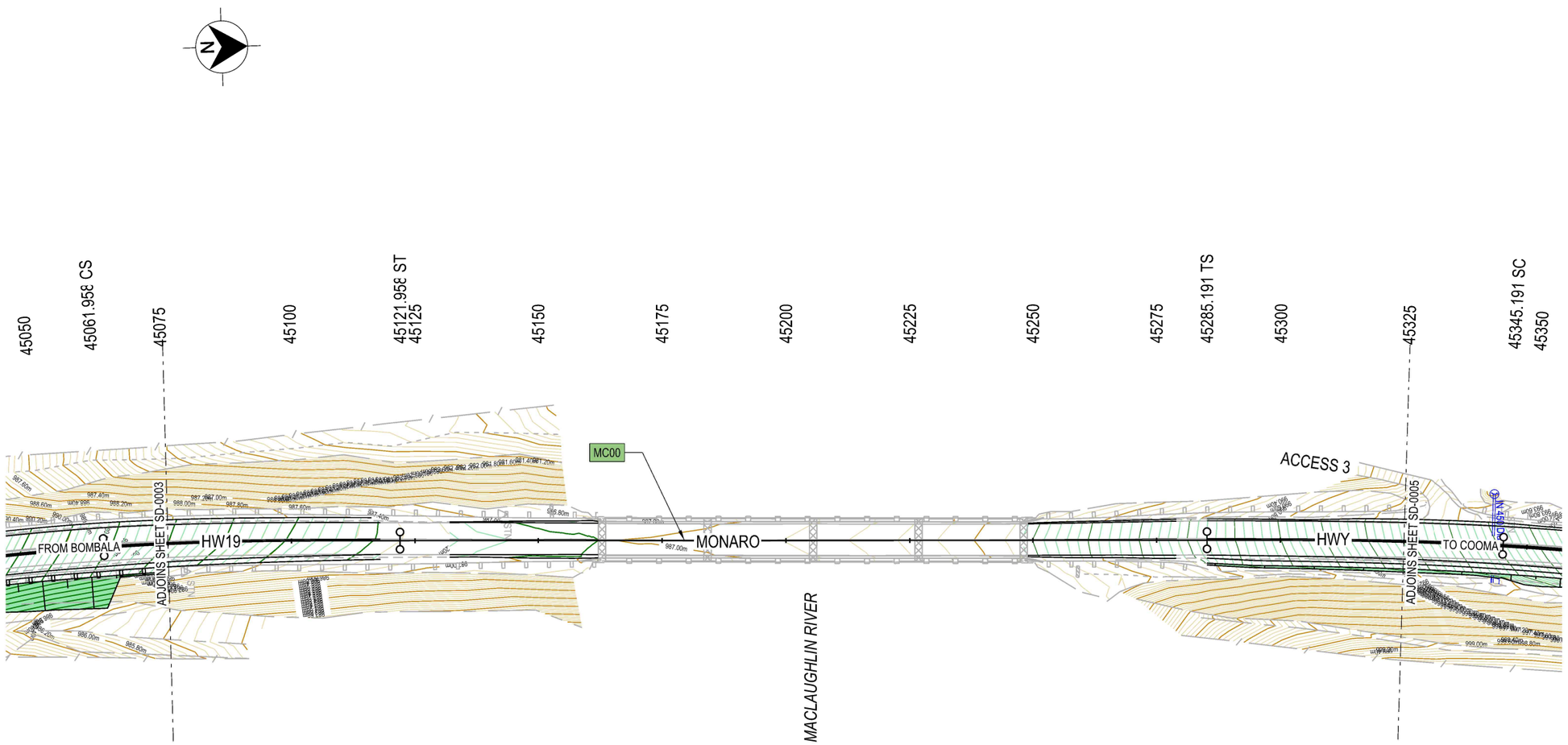
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44825.000 TO CH.45075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0003	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
- HW1 — DRAINAGE HEADWALL LABEL
- CP-1 — DRAINAGE CONNECTION POINT
- SO.01 — DRAINAGE KERB SYSTEM LABEL

DESIGN FEATURES

- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
- DESIGN CONTOUR MINOR INTERVAL 0.1M

EXISTING FEATURES

- ø600 — DRAINAGE PIPE
- DP — DP OVERLAY (ACCURACY 0.1M)
- EXISTING CONTOUR MAJOR INTERVAL 1.0M
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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:04:02 PM — PLOT BY: walterssj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

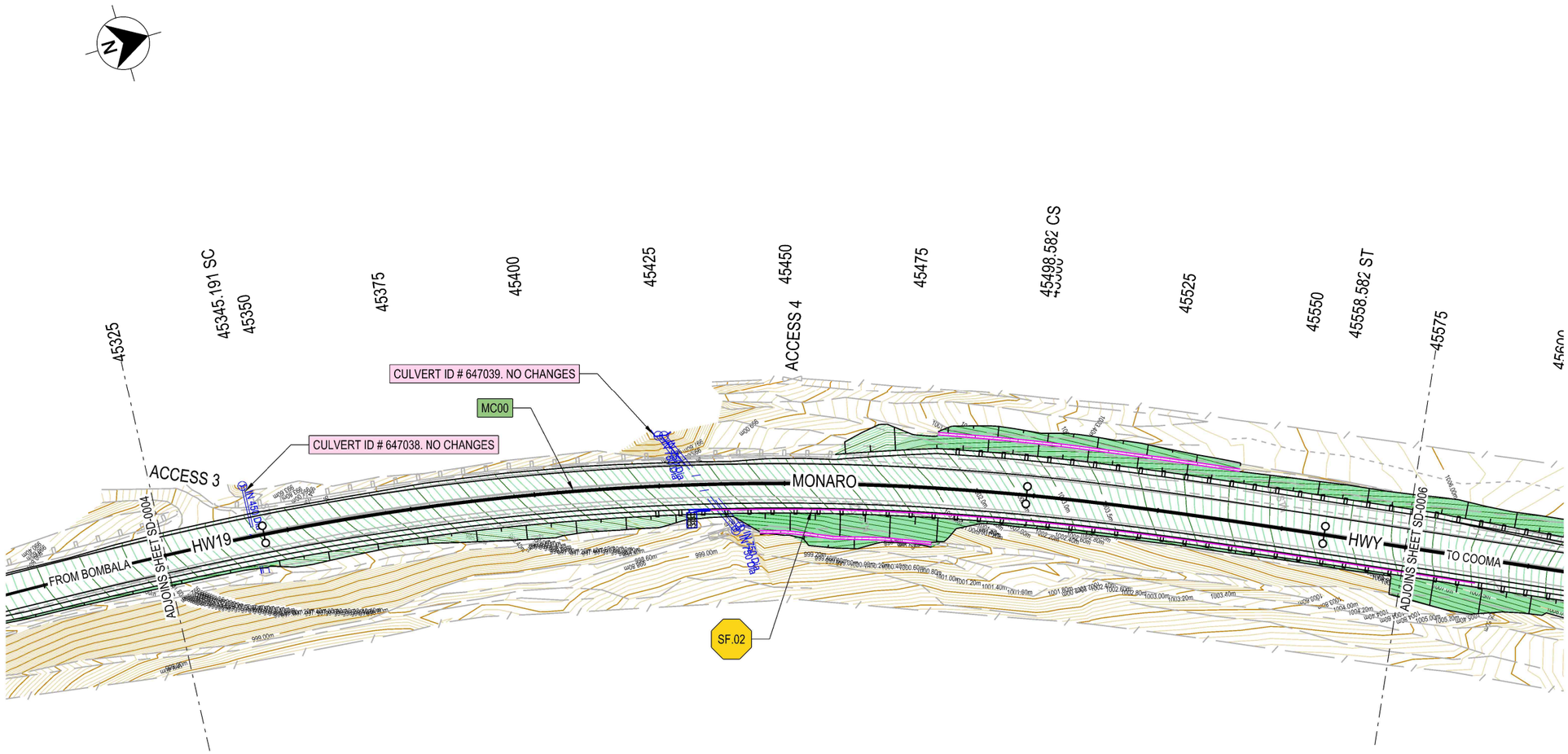
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45075.000 TO CH.45325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0004	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

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- PROPOSED ROAD BOUNDARY
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EXISTING FEATURES

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:04:11 PM — PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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NSW GOVERNMENT Transport for NSW

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

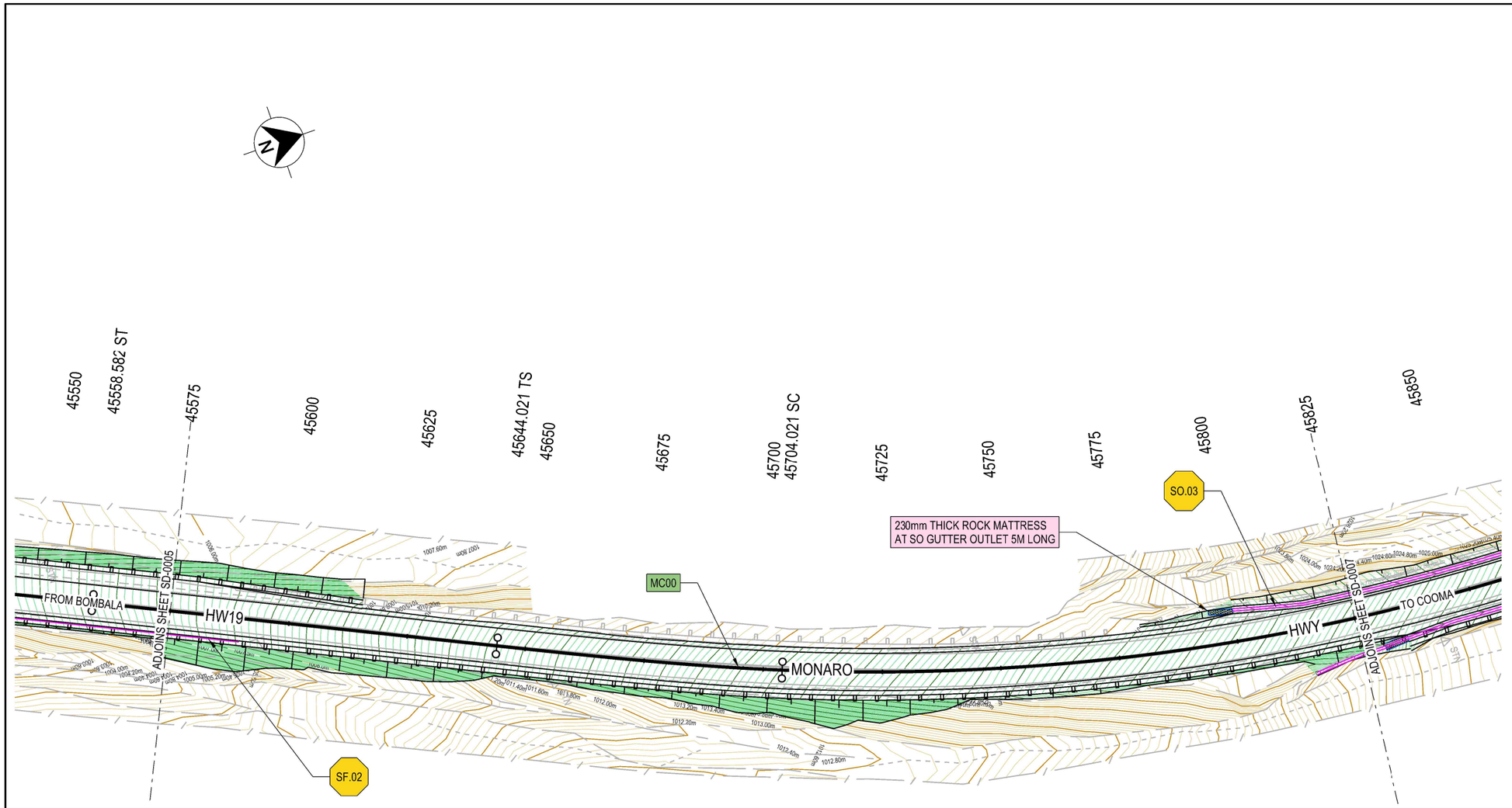
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45325.000 TO CH.45575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0005	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

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DESIGN FEATURES

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DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:04:22 PM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

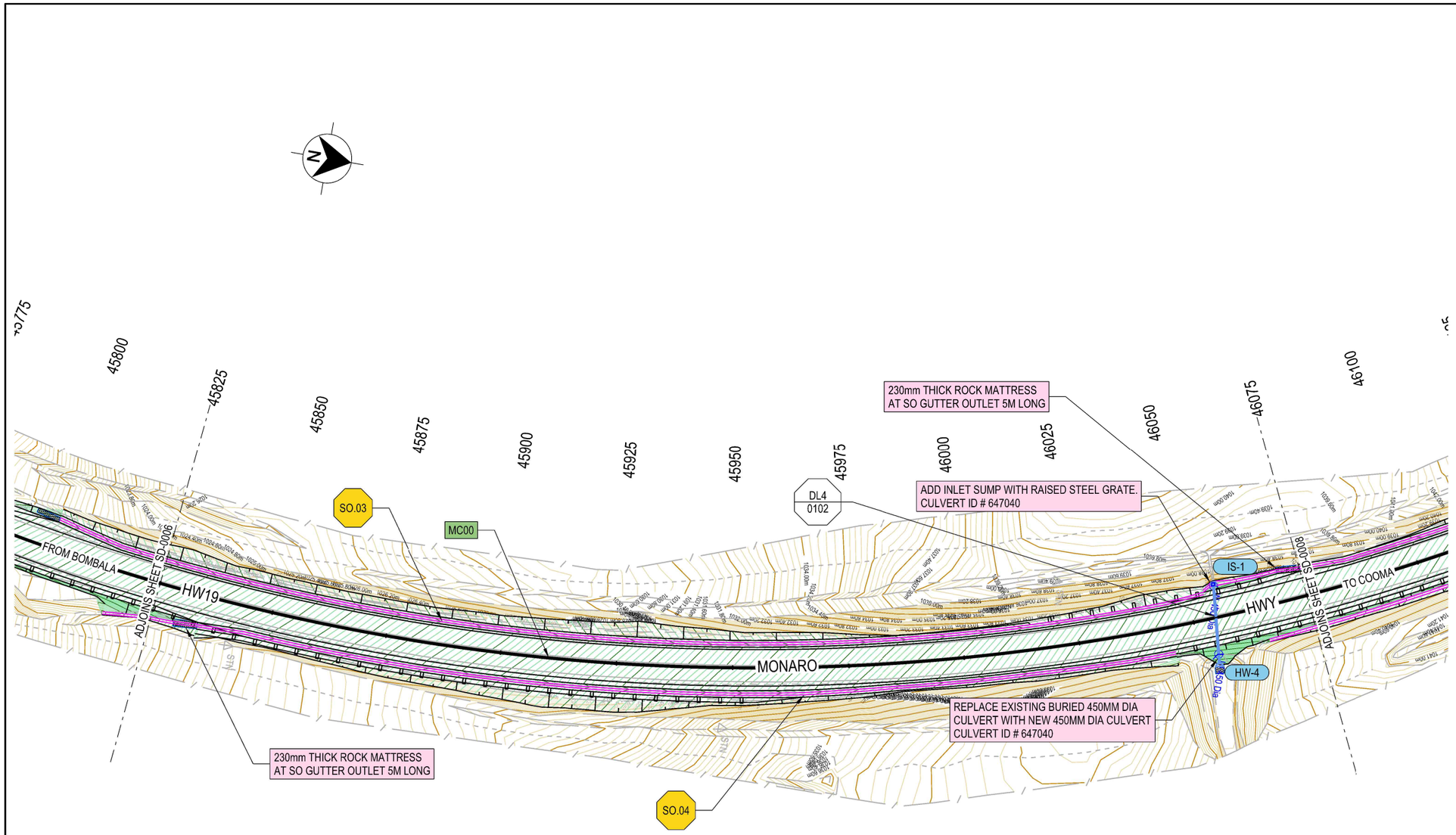
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45575.000 TO CH.45825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0006	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
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DESIGN FEATURES

- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
- DESIGN CONTOUR MINOR INTERVAL 0.1M

EXISTING FEATURES

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- DP — DP OVERLAY (ACCURACY 0.1M)
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- EXISTING CONTOUR MINOR INTERVAL 0.2M

GDA 2020

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:04:34 PM PLOT BY: waltersj

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

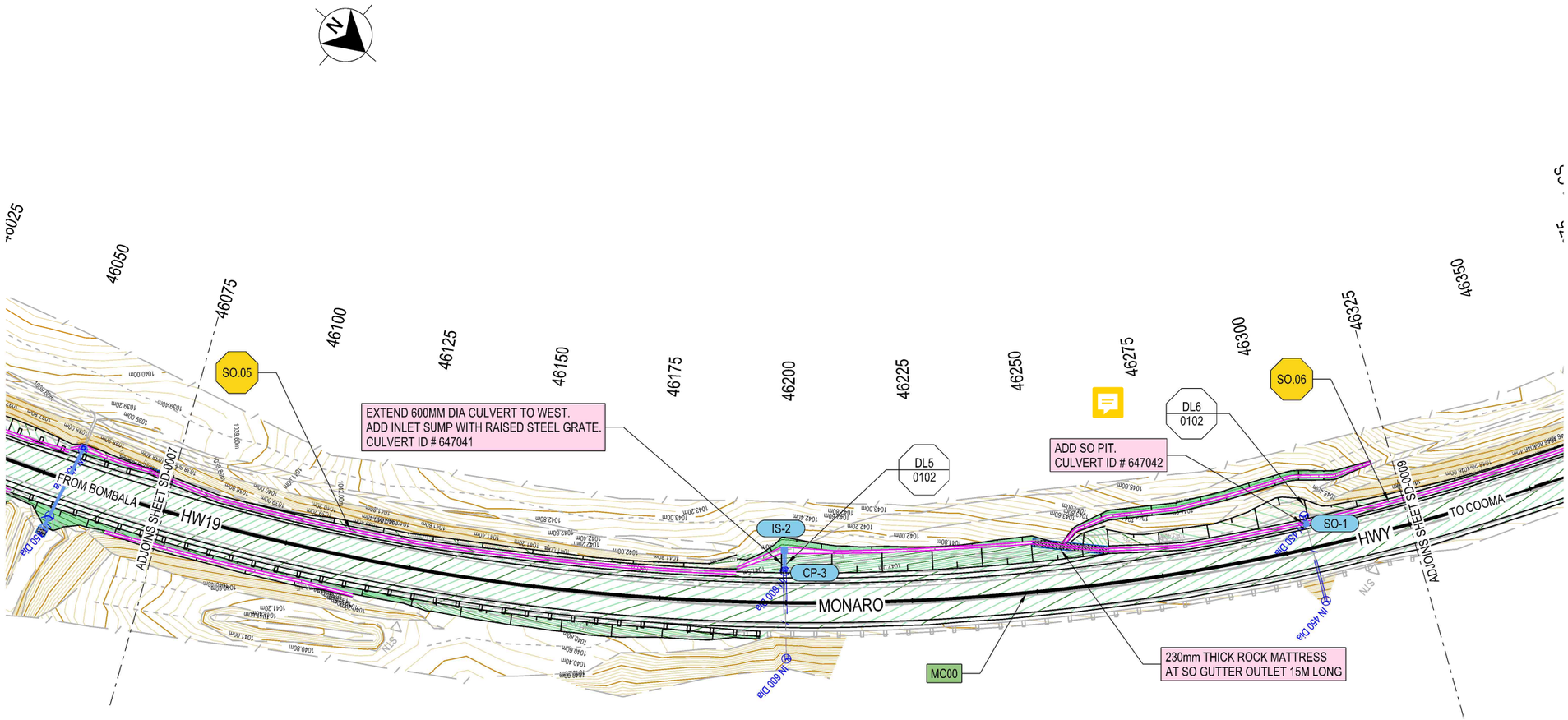
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45825.000 TO CH.46075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0007	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

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DESIGN FEATURES

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- DESIGN CONTOUR MAJOR INTERVAL 0.5M
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EXISTING FEATURES

- ø600 — DRAINAGE PIPE
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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:04:50 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
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NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

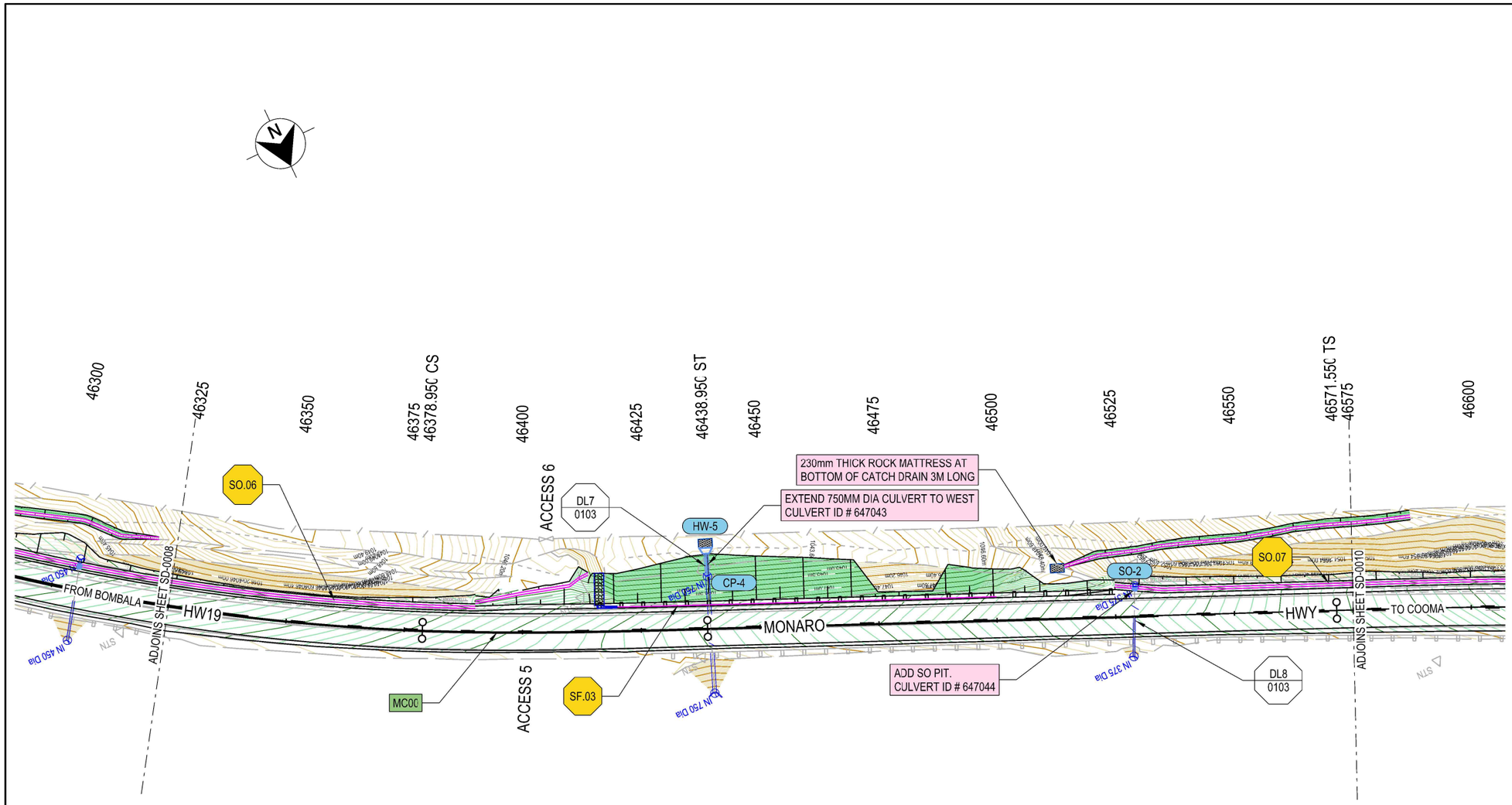
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46075.000 TO CH.46325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0008	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

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- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
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DESIGN FEATURES

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

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C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:05:07 PM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
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CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

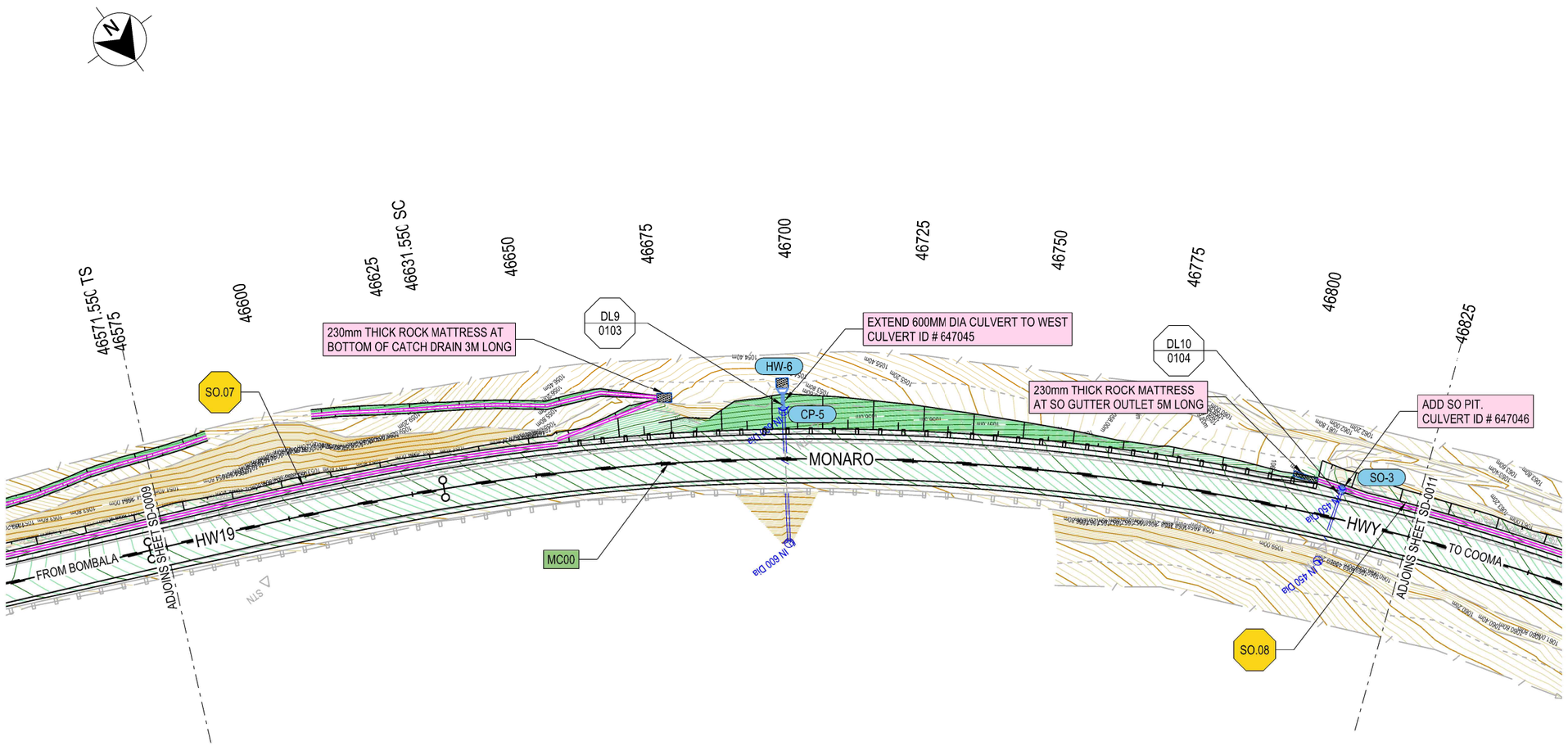
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46325.000 TO CH.46575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0009	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

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C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:05:20 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
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DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

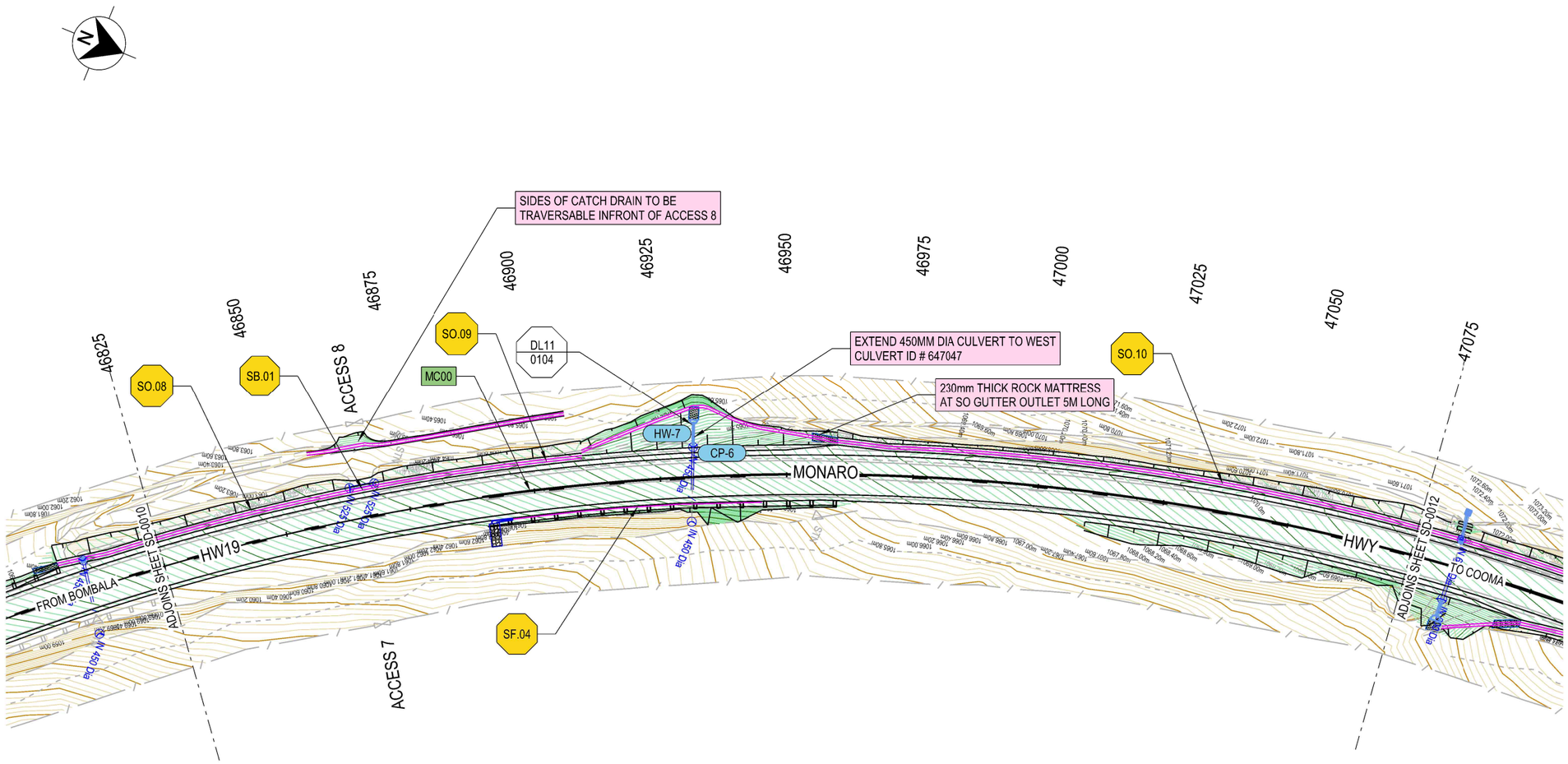
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46575.000 TO CH.46825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0010	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
- HW1 — DRAINAGE HEADWALL LABEL
- CP-1 — DRAINAGE CONNECTION POINT
- SO.01 — DRAINAGE KERB SYSTEM LABEL

DESIGN FEATURES

- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
- DESIGN CONTOUR MINOR INTERVAL 0.1M

EXISTING FEATURES

- ø600 — DRAINAGE PIPE
- DP — DP OVERLAY (ACCURACY 0.1M)
- EXISTING CONTOUR MAJOR INTERVAL 1.0M
- EXISTING CONTOUR MINOR INTERVAL 0.2M

GDA 2020

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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EXTERNAL REFERENCE FILES
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REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:05:37 PM
PLOT BY: waltersj

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

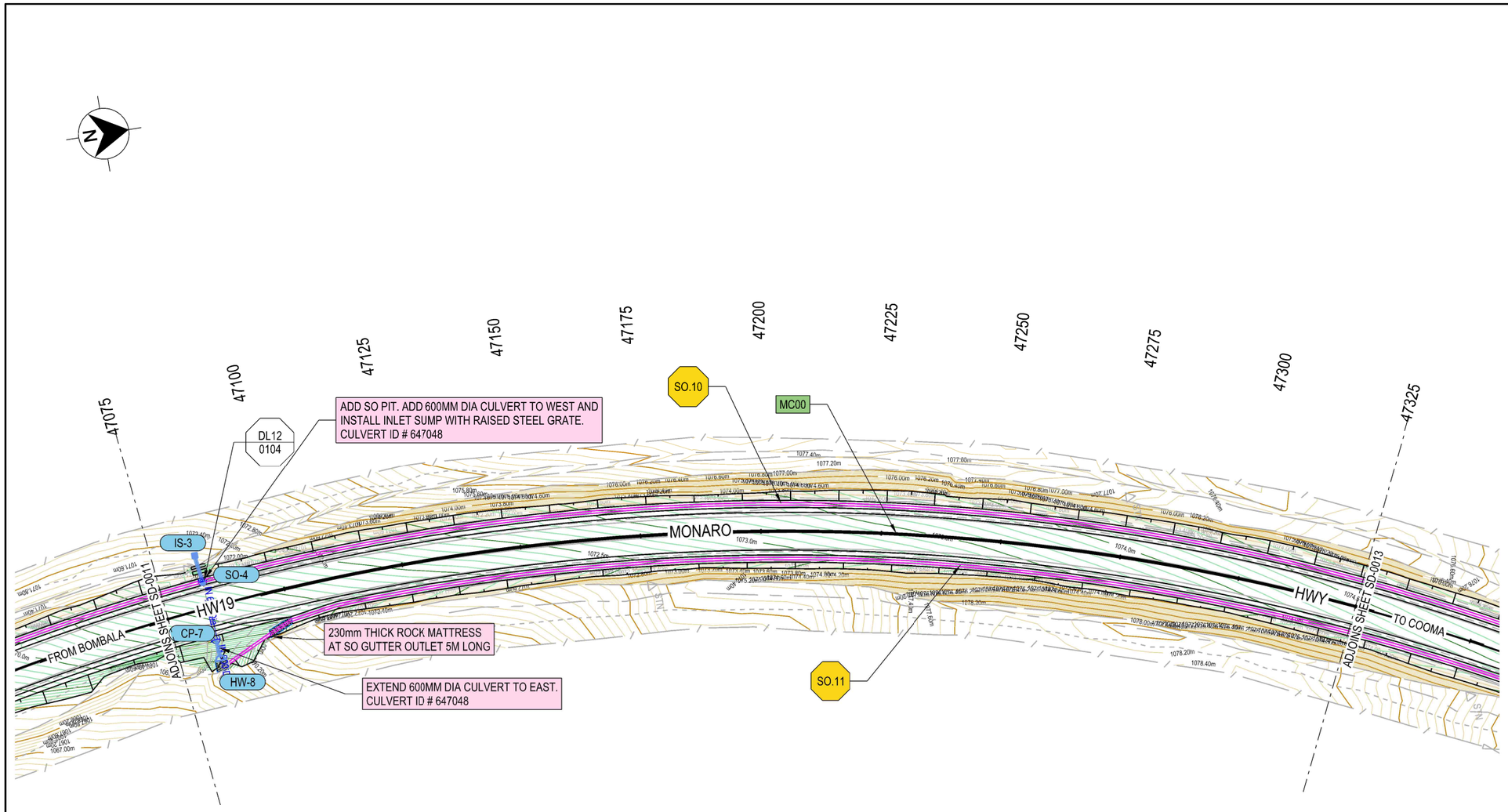
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46825.000 TO CH.47075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0011	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

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- DRAINAGE CHANNEL SYSTEM
- PROPOSED ROAD BOUNDARY
- DESIGN CONTOUR MAJOR INTERVAL 0.5M
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EXISTING FEATURES

- ø600 — DRAINAGE PIPE
- DP — DP OVERLAY (ACCURACY 0.1M)
- EXISTING CONTOUR MAJOR INTERVAL 1.0M
- EXISTING CONTOUR MINOR INTERVAL 0.2M

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:05:53 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

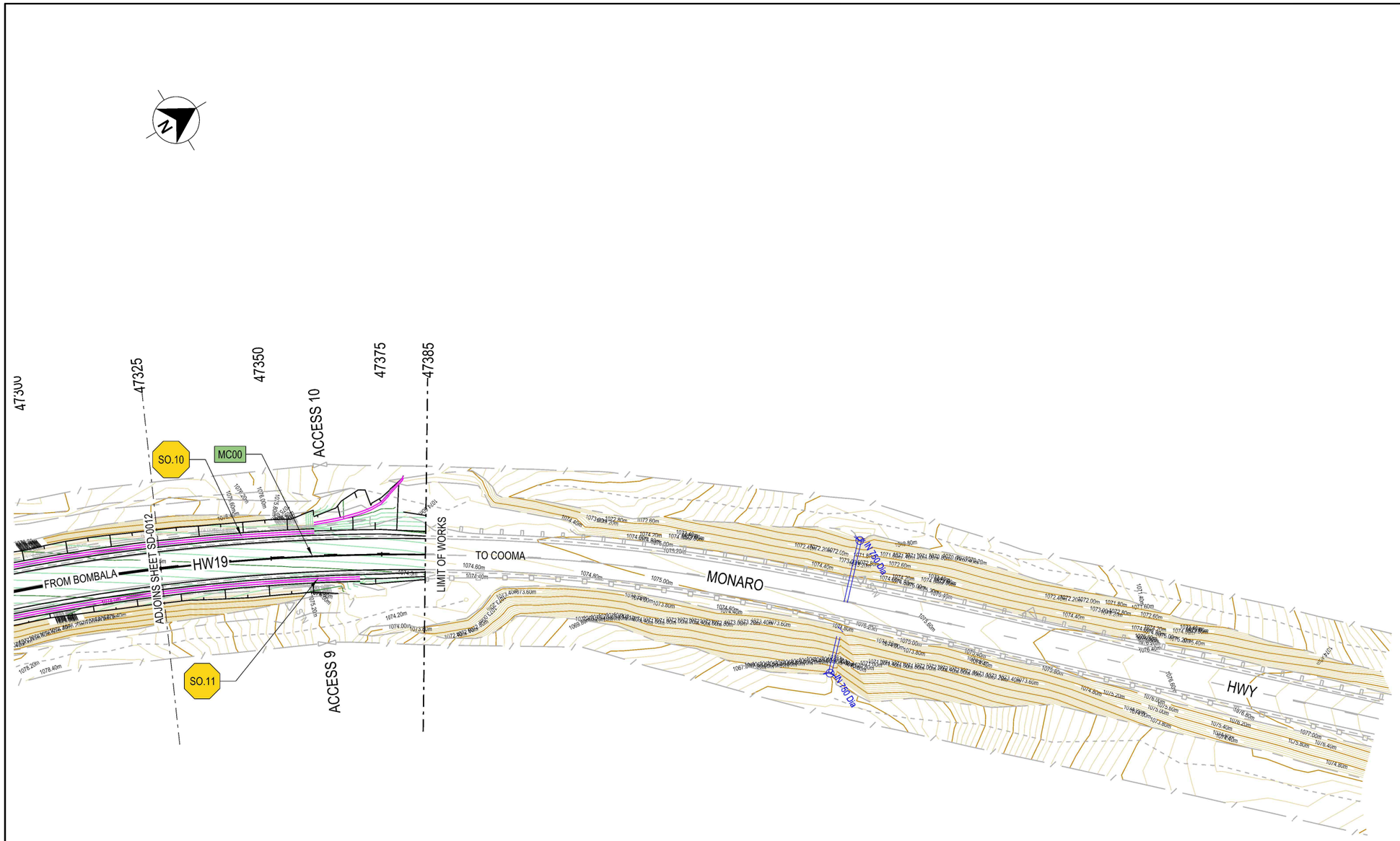
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.47075.000 TO CH.47325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0012	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT

DRAINAGE ELEMENTS TO BE CONSTRUCTED

- Ø450 — DRAINAGE CULVERT
- DRAINAGE HEADWALL
- ROCK PROTECTION OF INLET / OUTLET

DRAINAGE LABELS

- DL1 / XXXX — DRAINAGE LINE LABEL / SHEET NUMBER
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- ø600 — DRAINAGE PIPE
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- EXISTING CONTOUR MAJOR INTERVAL 1.0M
- EXISTING CONTOUR MINOR INTERVAL 0.2M

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-06-SD.dgn	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME	PLOT DATE / TIME: 15/12/2023 12:06:03 PM	PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
STORMWATER MANAGEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.47325.000 TO CH.47385.059

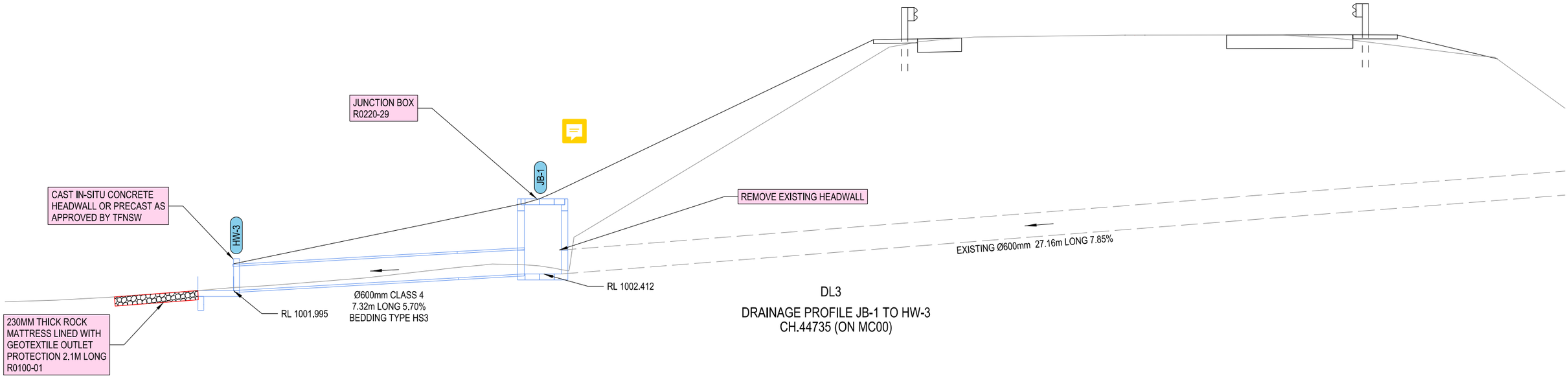
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RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
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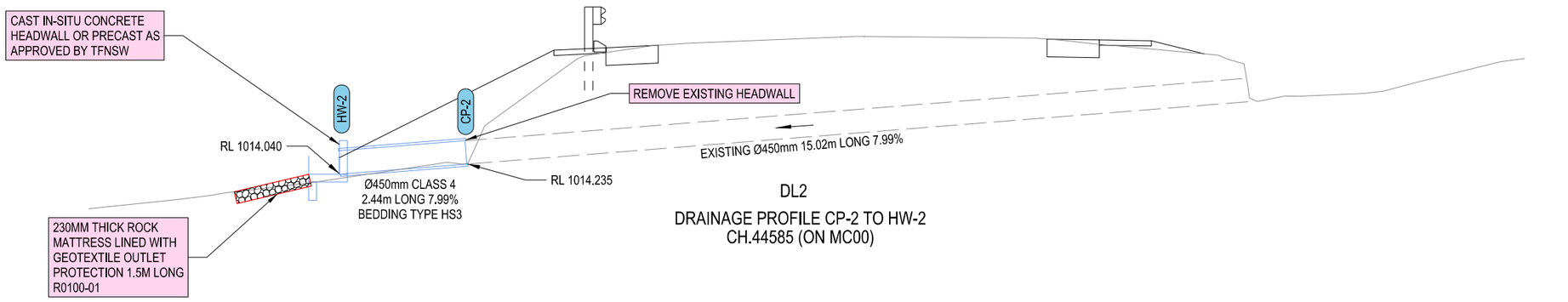
© Transport for NSW

GDA 2020



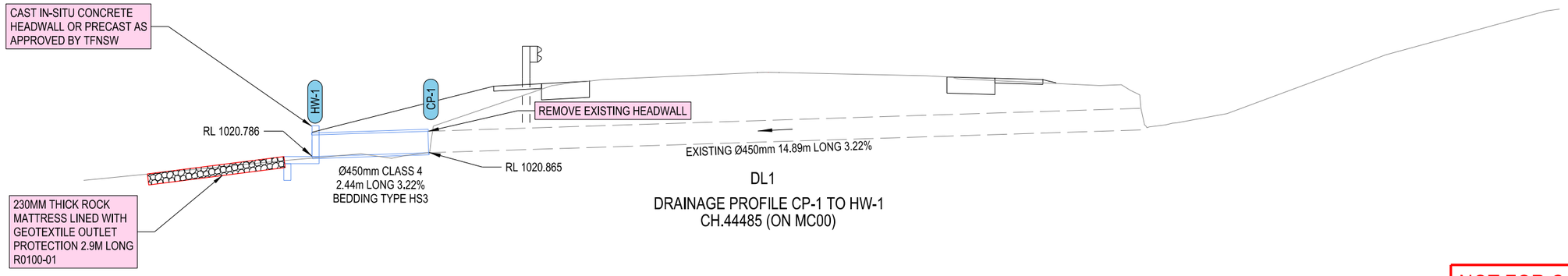
DL3

DRAINAGE PROFILE JB-1 TO HW-3
CH.44735 (ON MC00)



DL2

DRAINAGE PROFILE CP-2 TO HW-2
CH.44585 (ON MC00)



DL1

DRAINAGE PROFILE CP-1 TO HW-1
CH.44485 (ON MC00)

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\04-Corridors\06-Drainage\D-Drainage.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:09 PM
PLOT BY: walterslj

CLIENT: NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DRAINAGE PROFILES
SHEET 1 OF 4

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 1 2 3 4
SCALE 1:100m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

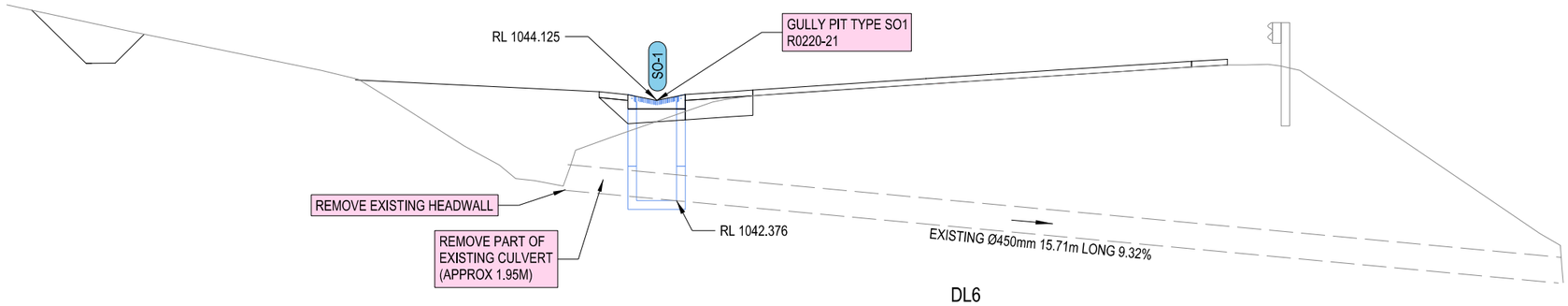
PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0101	2

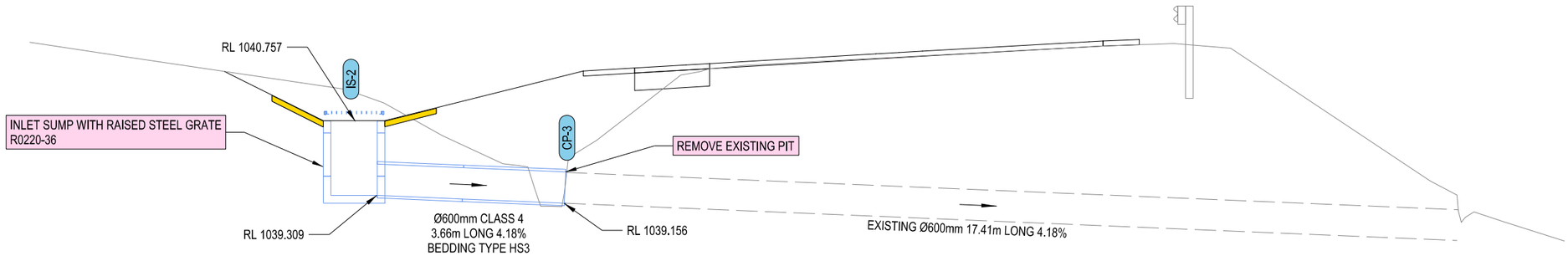
© Transport for NSW

GDA 2020



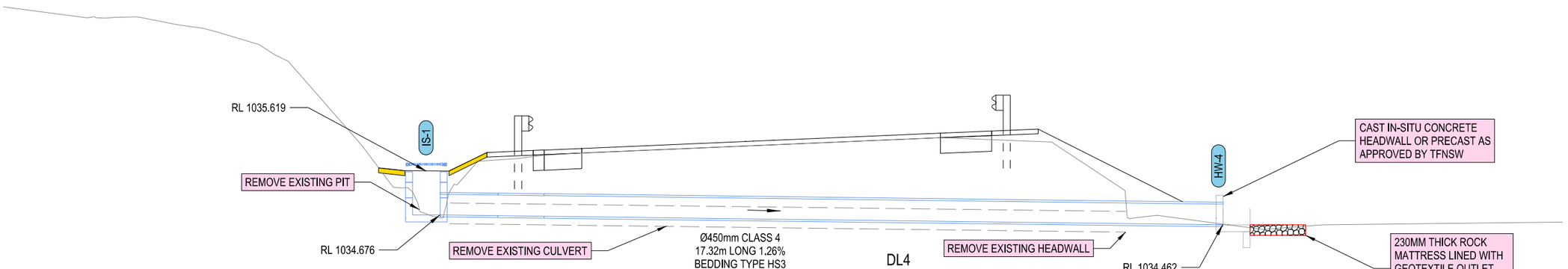
DL6

DRAINAGE PROFILE SO-1
CH.46305 (ON MC00)



DL5

DRAINAGE PROFILE IS-2 TO CP-3
CH.46200 (ON MC00)



DL4

DRAINAGE PROFILE IS-1 TO HW-4
CH.46055 (ON MC00)

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\04-Corridors\06-Drainage\D-Drainage.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:09 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 1 2 3 4
SCALE 1:100m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DRAINAGE PROFILES
SHEET 2 OF 4

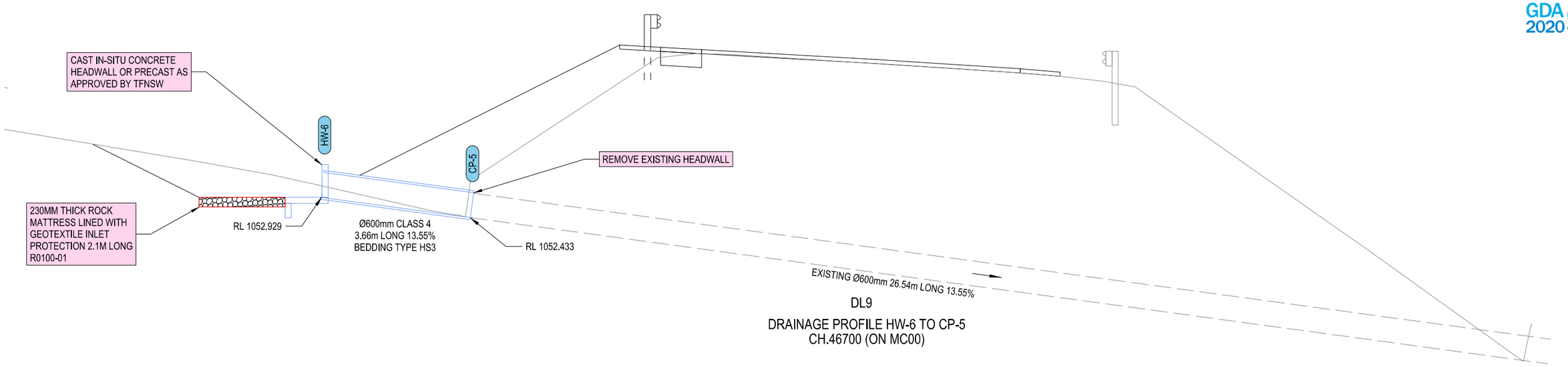
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RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: SD-0102
ISSUE: 2

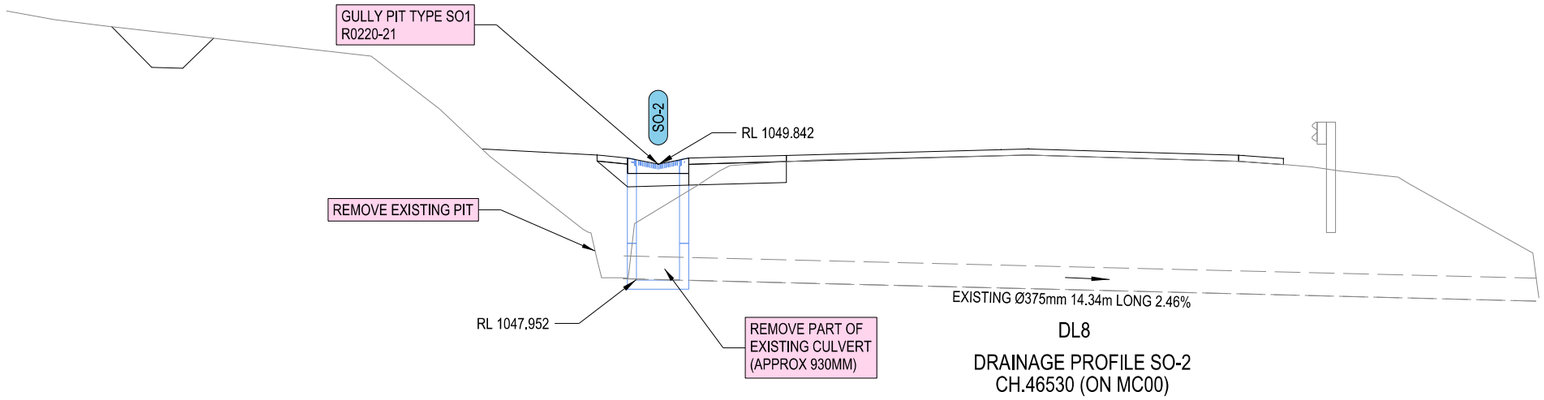
© Transport for NSW

GDA 2020



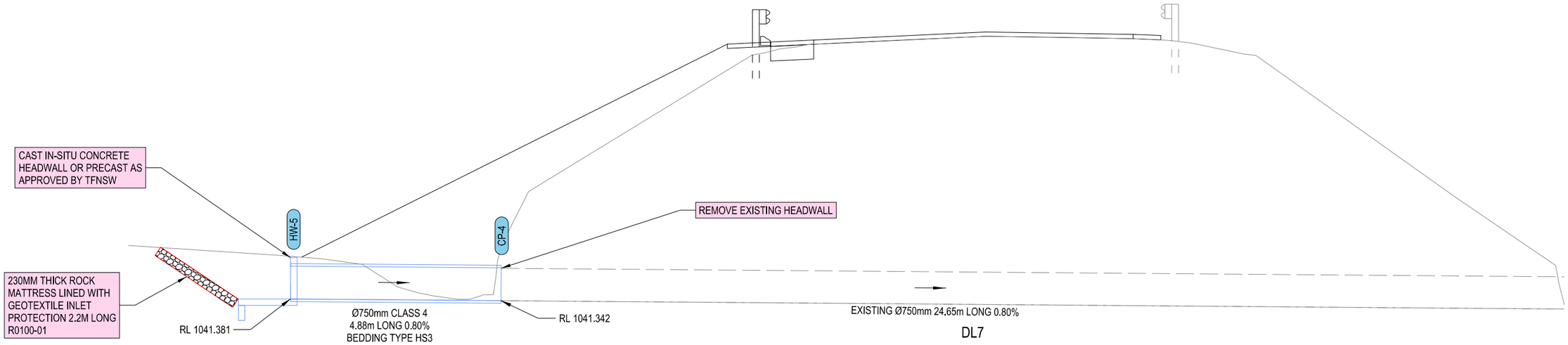
DL9

DRAINAGE PROFILE HW-6 TO CP-5
CH.46700 (ON MC00)



DL8

DRAINAGE PROFILE SO-2
CH.46530 (ON MC00)



DL7

DRAINAGE PROFILE HW-5 TO CP-4
CH.46440 (ON MC00)

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\04-Corridors\06-Drainage\D-Drainage.dgn	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME	PLOT DATE / TIME: 15/12/2023 12:06:10 PM	PLOT BY: waltersj	CLIENT: NSW GOVERNMENT Transport for NSW
SCALES ON A3 SIZE DRAWING: 0 1 2 3 4 SCALE 1:100m	DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW	CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)	HEIGHT DATUM: AHD	PREPARED FOR: PROJECT SERVICES PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

	TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23	
DRG CHECK	J. YANEZ	15.12.23	
DESIGN	J. WALTERS	15.12.23	
DESIGN CHECK	J. YANEZ	15.12.23	
DESIGN MNGR	G. KOZAROSKI	15.12.23	
PROJECT MNGR	S. WAKELING	15.12.23	

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DRAINAGE PROFILES
SHEET 3 OF 4

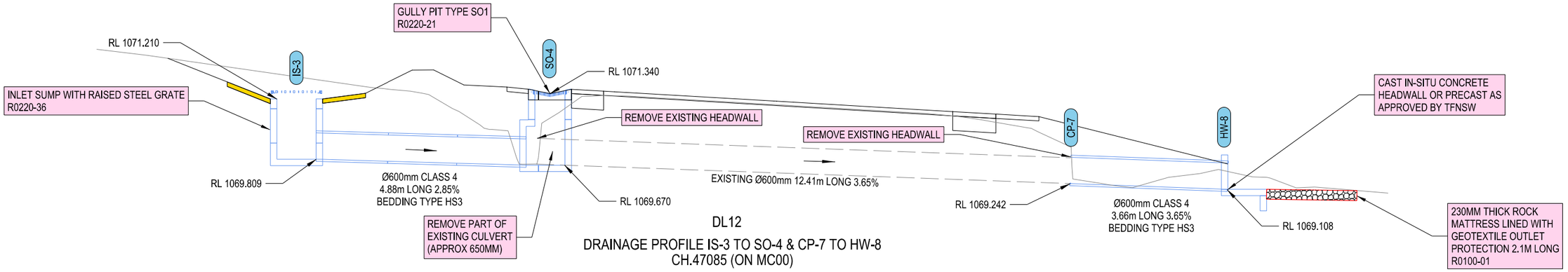
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RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0103	2

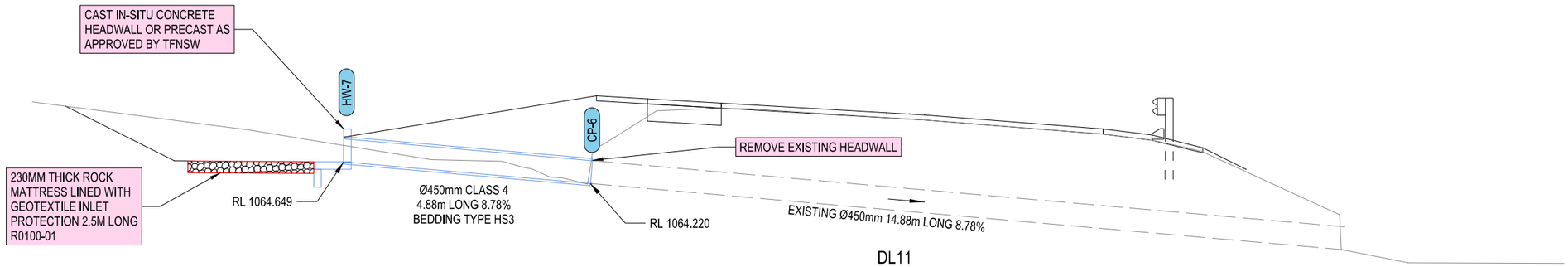
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GDA 2020



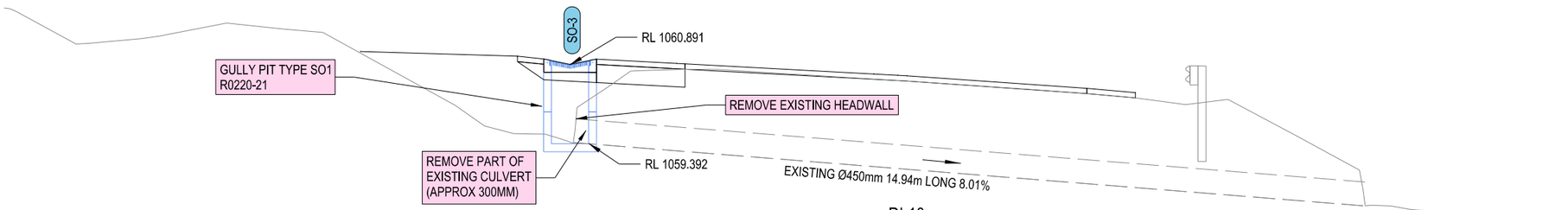
DL12

DRAINAGE PROFILE IS-3 TO SO-4 & CP-7 TO HW-8
CH.47085 (ON MC00)



DL11

DRAINAGE PROFILE HW-7 TO CP-6
CH.46930 (ON MC00)



DL10

DRAINAGE PROFILE SO-3
CH.46810 (ON MC00)

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\04-Corridors\06-Drainage\D-Drainage.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:10 PM
PLOT BY: walterssj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 1 2 3 4
SCALE 1:100m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DRAINAGE PROFILES
SHEET 4 OF 4

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0104	2

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GDA 2020

CULVERT SCHEDULE

DIAMETER (mm) (ID)	LENGTH (m)	U/S PIT	U/S INVERT (m AHD)	U/S EASTING	U/S NORTHING	D/S PIT	D/S INVERT (m AHD)	D/S EASTING	D/S NORTHING	GRADE (%)	PIPE TYPE	CLASS
450 (DL1)	2.44	CP-1	1020.865	705944.050	5951358.736	HW-1	1020.786	705942.357	5951356.979	3.22	CONCRETE	4
450 (DL2)	2.44	CP-2	1014.235	705867.673	5951421.967	HW-2	1014.040	705866.066	5951420.131	7.99	CONCRETE	4
600 (DL3)	7.32	JB-1	1002.412	705747.635	5951521.653	HW-3	1001.995	705741.317	5951525.350	5.70	CONCRETE	4
450 (DL4)	17.32	IS-1	1034.676	705761.585	5952784.883	HW-4	1034.462	705778.093	5952789.035	1.26	CONCRETE	4
600 (DL5)	3.66	IS-2	1039.309	705685.934	5952903.288	CP-3	1039.156	705688.653	5952905.738	4.18	CONCRETE	4
750 (DL7)	4.88	HW-5	1041.381	705493.191	5953031.450	CP-4	1041.342	705494.988	5953035.987	0.80	CONCRETE	4
600 (DL9)	3.66	HW-6	1052.929	705258.351	5953149.051	CP-5	1052.433	705260.407	5953152.079	13.55	CONCRETE	4
450 (DL11)	4.88	HW-7	1064.649	705109.614	5953332.766	CP-6	1064.220	705114.164	5953334.530	8.78	CONCRETE	4
600 (DL12)	4.88	IS-3	1069.809	705068.552	5953481.788	SO-4	1069.670	705073.386	5953482.460	2.85	CONCRETE	4
600 (DL12)	3.66	CP-7	1069.242	705085.995	5953483.332	HW-8	1069.108	705089.647	5953483.579	3.65	CONCRETE	4

DRAINAGE PIT SCHEDULE

PIT LABEL	TYPE	EASTING	NORTHING	PIT SETOUT R.L. (m AHD)	PIT DEPTH (m)
HW-1	HEADWALL	705942.357	5951356.979	1020.786	-
HW-2	HEADWALL	705866.066	5951420.131	1014.040	-
HW-3	HEADWALL	705741.317	5951525.350	1001.995	-
JB-1	JUNCTION BOX	705748.085	5951521.622	1002.412	1.89
IS-1	INLET SUMP	705761.291	5952784.809	1035.619	0.94
HW-4	HEADWALL	705778.093	5952789.035	1034.462	-
IS-2	INLET SUMP	705685.599	5952902.987	1040.757	1.45
SO-1	SO PIT	705613.831	5952977.648	1044.125	1.75
HW-5	HEADWALL	705493.191	5953031.450	1041.381	-
SO-2	SO PIT	705414.645	5953076.734	1049.842	1.89
HW-6	HEADWALL	705258.351	5953149.051	1052.929	-
SO-3	SO PIT	705180.523	5953230.980	1060.891	1.50
HW-7	HEADWALL	705109.614	5953332.766	1064.649	-
IS-3	INLET SUMP	705068.102	5953481.790	1071.210	1.40
SO-4	SO PIT	705073.935	5953482.517	1071.340	1.66
HW-8	HEADWALL	705089.647	5953483.579	1069.108	-

DRAINAGE KERB SCHEDULE

KERB LABEL	SHEET NUMBER	KERB TYPE	START		END		LENGTH	COMMENT
			CONTROL STRING	CHAINAGE	CONTROL STRING	CHAINAGE		
SF.01	SD-0001 - SD-0002	SF	MC00	44535.000	MC00	44600.000	65.0	
SO.01	SD-0002 - SD-0003	SO	MC00	44790.000	MC00	45005.000	215.0	
SO.02	SD-0002 - SD-0003	SO	MC00	44790.000	MC00	45005.000	215.0	
SF.02	SD-0005 - SD-0006	SF	MC00	45435.000	MC00	45590.000	155.0	
SO.03	SD-0006 - SD-0007	SO	MC00	45800.000	MC00	46053.000	253.0	
SO.04	SD-0007	SO	MC00	45835.000	MC00	46045.000	210.0	
SO.05	SD-0008	SO	MC00	46075.000	MC00	46190.000	115.0	
SO.06	SD-0008 - SD-0009	SO	MC00	46265.000	MC00	46390.000	125.0	
SF.03	SD-0009	SF	MC00	46420.000	MC00	46500.000	80.0	
SO.07	SD-0009 - SD-0010	SO	MC00	46525.000	MC00	46655.000	130.0	
SO.08	SD-0010 - SD-0011	SO	MC00	46805.000	MC00	46860.000	55.0	
SB.01	SD-0011	SB	MC00	46860.000	MC00	46870.000	10.0	
SO.09	SD-0011	SO	MC00	46870.000	MC00	46910.000	40.0	
SF.04	SD-0011	SF	MC00	46895.000	MC00	46945.000	50.0	
SO.10	SD-0011 - SD-0013	SO	MC00	46960.000	MC00	47360.000	400.0	
SO.11	SD-0012 - SD-0013	SO	MC00	47100.000	MC00	47370.000	270.0	

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DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:14 PM
PLOT BY: walterswj

CLIENT: NSW GOVERNMENT Transport for NSW

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
DRAINAGE SCHEDULES

A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0201	2

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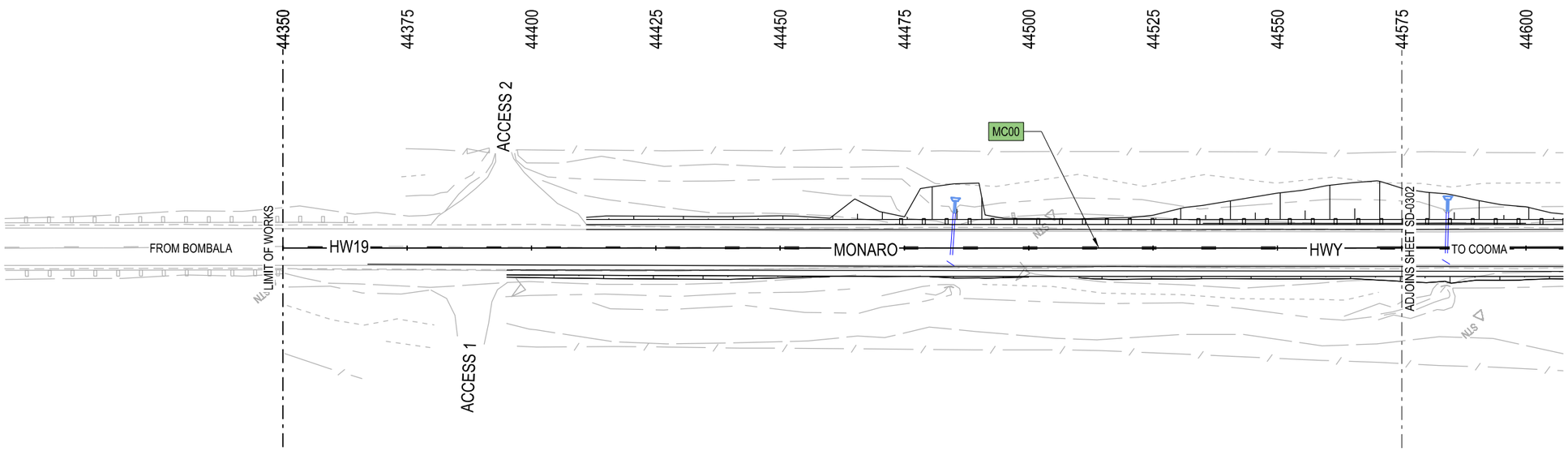
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.44350.000 TO CH.44575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0301	2

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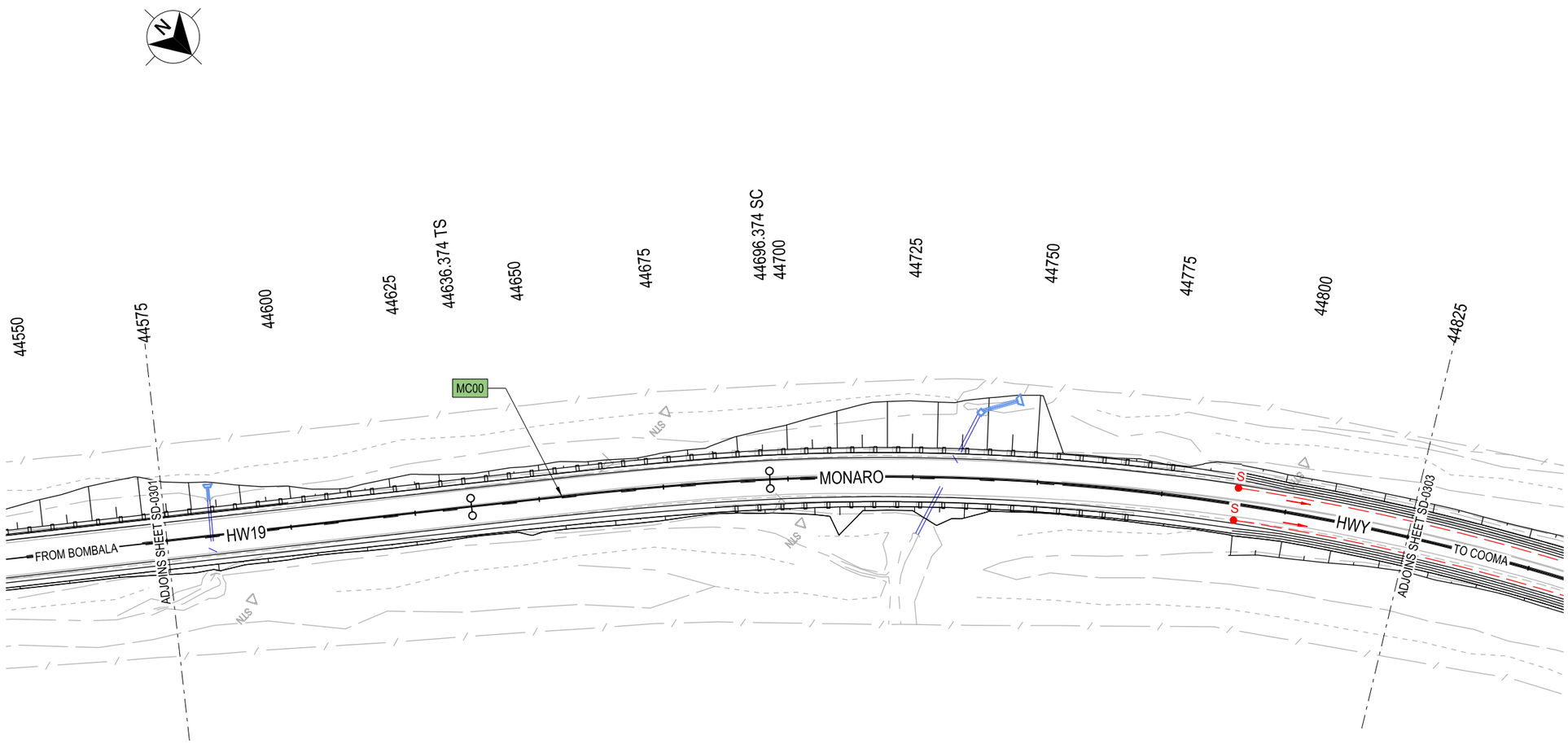
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



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DRAWING FILE LOCATION / NAME C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn					DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING FILE NAME ; FILE NAME		PLOT DATE / TIME 15/12/2023 12:06:22 PM		PLOT BY walterswj	CLIENT NSW GOVERNMENT Transport for NSW	SNOWY MONARO REGIONAL LGA HW19 - MONARO HIGHWAY SAFETY IMPROVEMENTS 3KM TO 6KM SOUTH OF NIMMITABEL SUBSURFACE DRAINAGE PLAN HW19 - MONARO HWY - MC00 - CH.44575.000 TO CH.44825.000	A3
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE			
XXXXXX	00 01 02	17-07-23 24-10-23 15-12-23	ISSUED FOR 20% DESIGN REVIEW ISSUED FOR 80% DESIGN REVIEW ISSUED FOR 100% DESIGN REVIEW	JW JW JW	0 10 20 30 40 SCALE 1:1000m	NSW GOVERNMENT Transport for NSW	DRAWN	J. WALTERS	15.12.23			
							DRG CHECK	J. YANEZ	15.12.23			
							DESIGN	J. WALTERS	15.12.23			
							DESIGN CHECK	J. YANEZ	15.12.23			
							DESIGN MNGR	G. KOZAROSKI	15.12.23			
					CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020)	HEIGHT DATUM AHD	PROJECT MNGR	S. WAKELING	15.12.23	PREPARED FOR PROJECT SERVICES PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN	RMS REGISTRATION No. DS2023/000777	
											ISSUE STATUS 100% - DETAIL DESIGN	EDMS No. SF2023/137411	SHEET No. SD-0302	ISSUE 2

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

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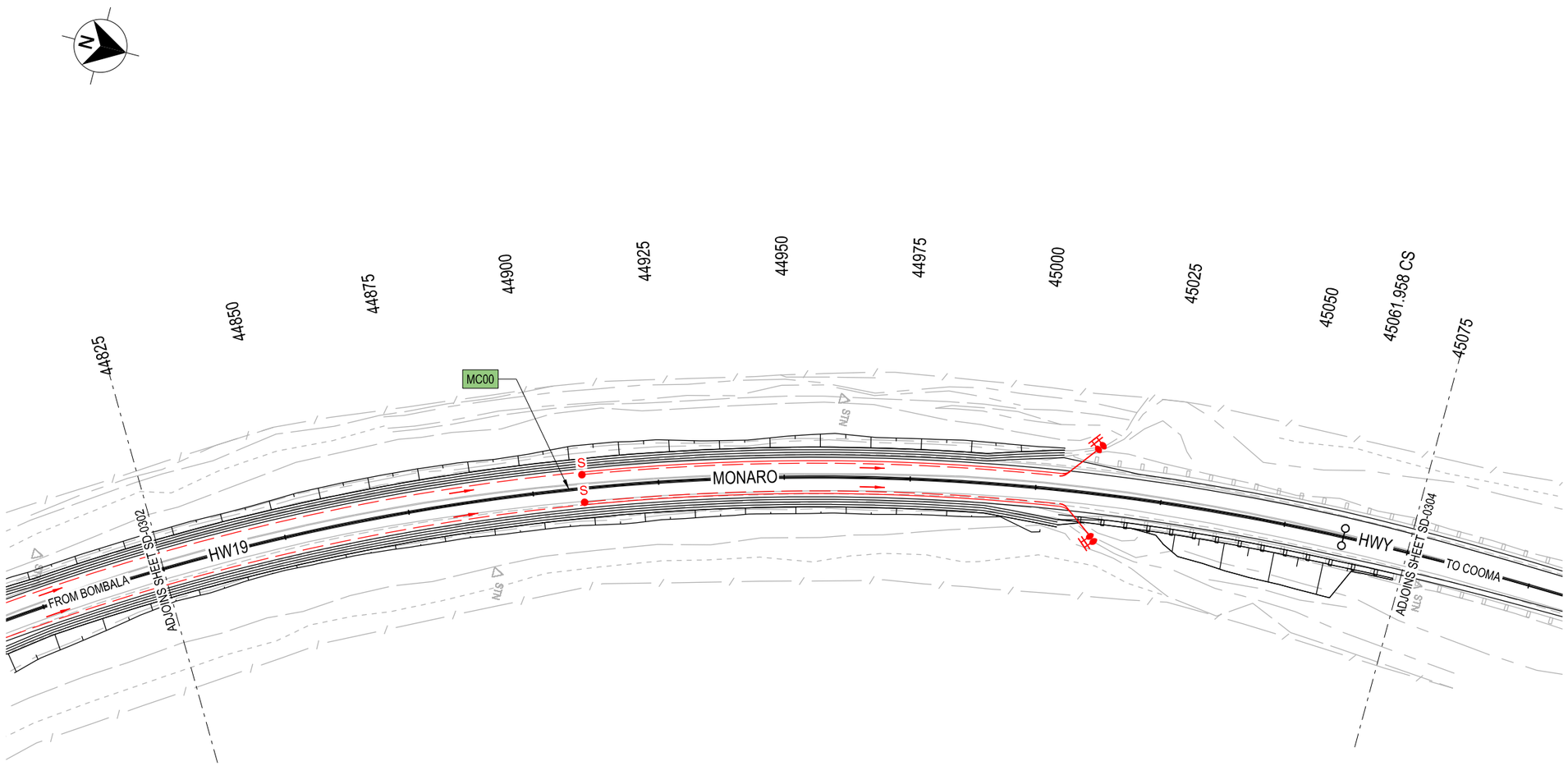
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



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DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME	PLOT DATE / TIME: 15/12/2023 12:06:24 PM	PLOT BY: walterslj	CLIENT: NSW GOVERNMENT Transport for NSW
SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 SCALE 1:1000m	DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW	CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)	HEIGHT DATUM: AHD	PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

SNOWY MONARO REGIONAL LGA — A3

HW19 - MONARO HIGHWAY

SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN

HW19 - MONARO HWY - MC00 - CH.44825.000 TO CH.45075.000

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0303	2

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

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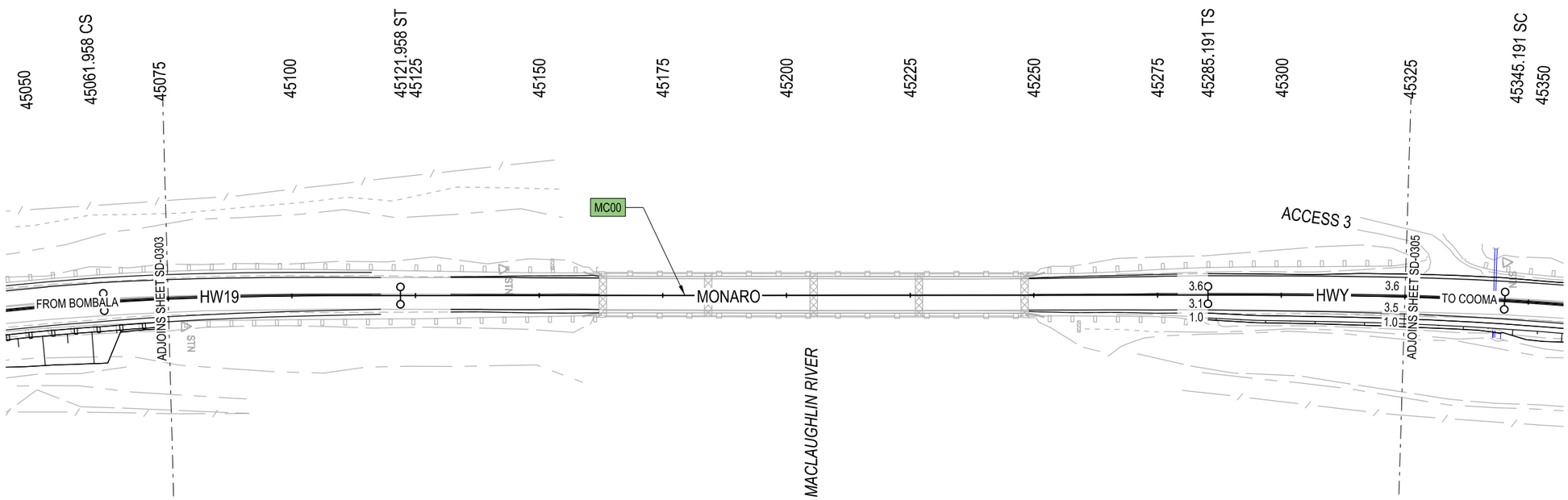
LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE



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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:06:26 PM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.45075.000 TO CH.45325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0304	2

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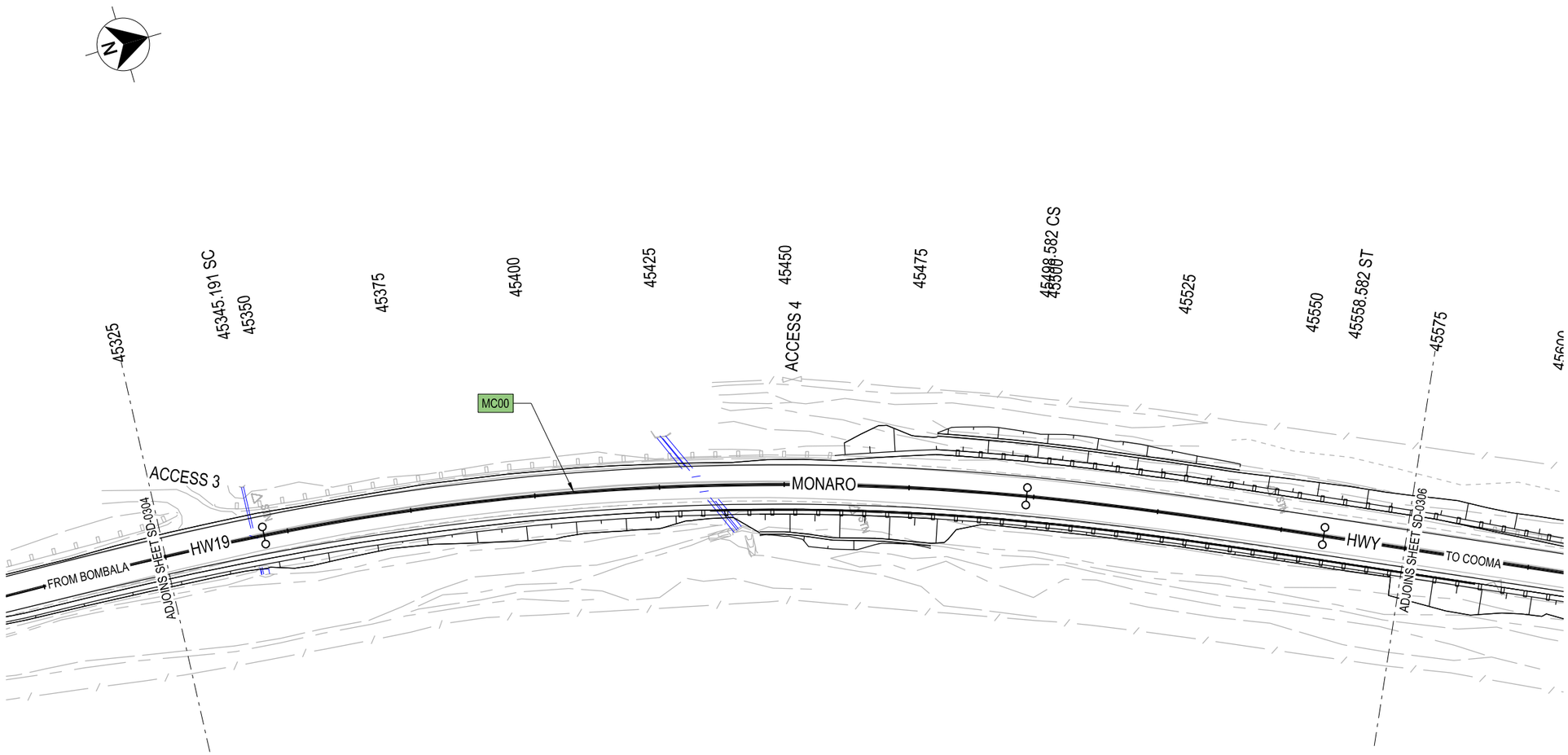
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:27 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.45325.000 TO CH.45575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0305	2

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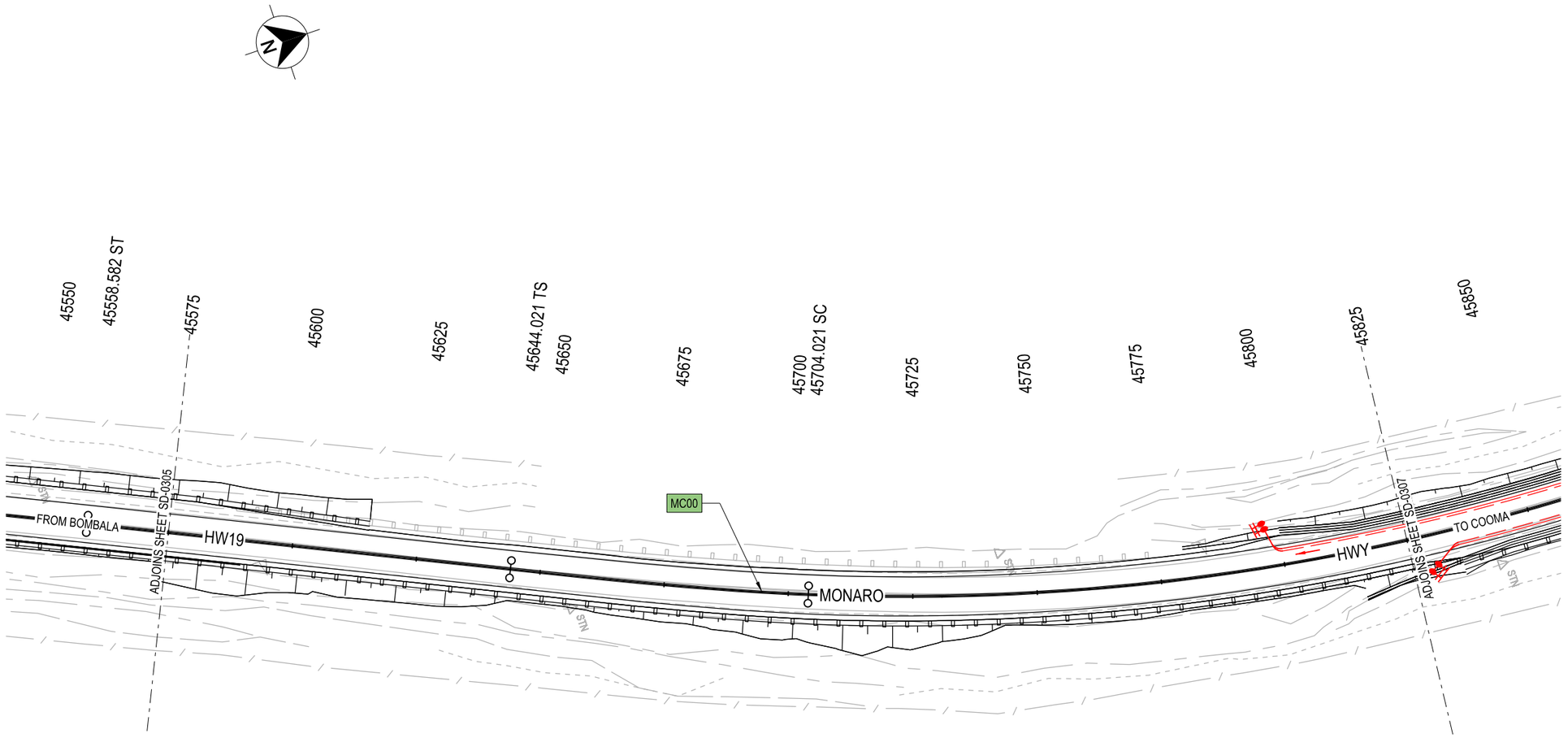
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



NOT FOR CONSTRUCTION

DRAWING FILE LOCATION / NAME					DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING			PLOT DATE / TIME		PLOT BY	CLIENT	
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY		TITLE	NAME	DATE		A3
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW	0 10 20 30 40 SCALE 1:1000m	NSW GOVERNMENT Transport for NSW		DRAWN	J. WALTERS	15.12.23		
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW				DRG CHECK	J. YANEZ	15.12.23		
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW				DESIGN	J. WALTERS	15.12.23		
								DESIGN CHECK	J. YANEZ	15.12.23		
								DESIGN MNGR	G. KOZAROSKI	15.12.23	PREPARED FOR PROJECT SERVICES PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN	RMS REGISTRATION No. DS2023/000777
								PROJECT MNGR	S. WAKELING	15.12.23		ISSUE STATUS: 100% - DETAIL DESIGN; EDMS No.: SF2023/137411; SHEET No.: SD-0306; ISSUE: 2

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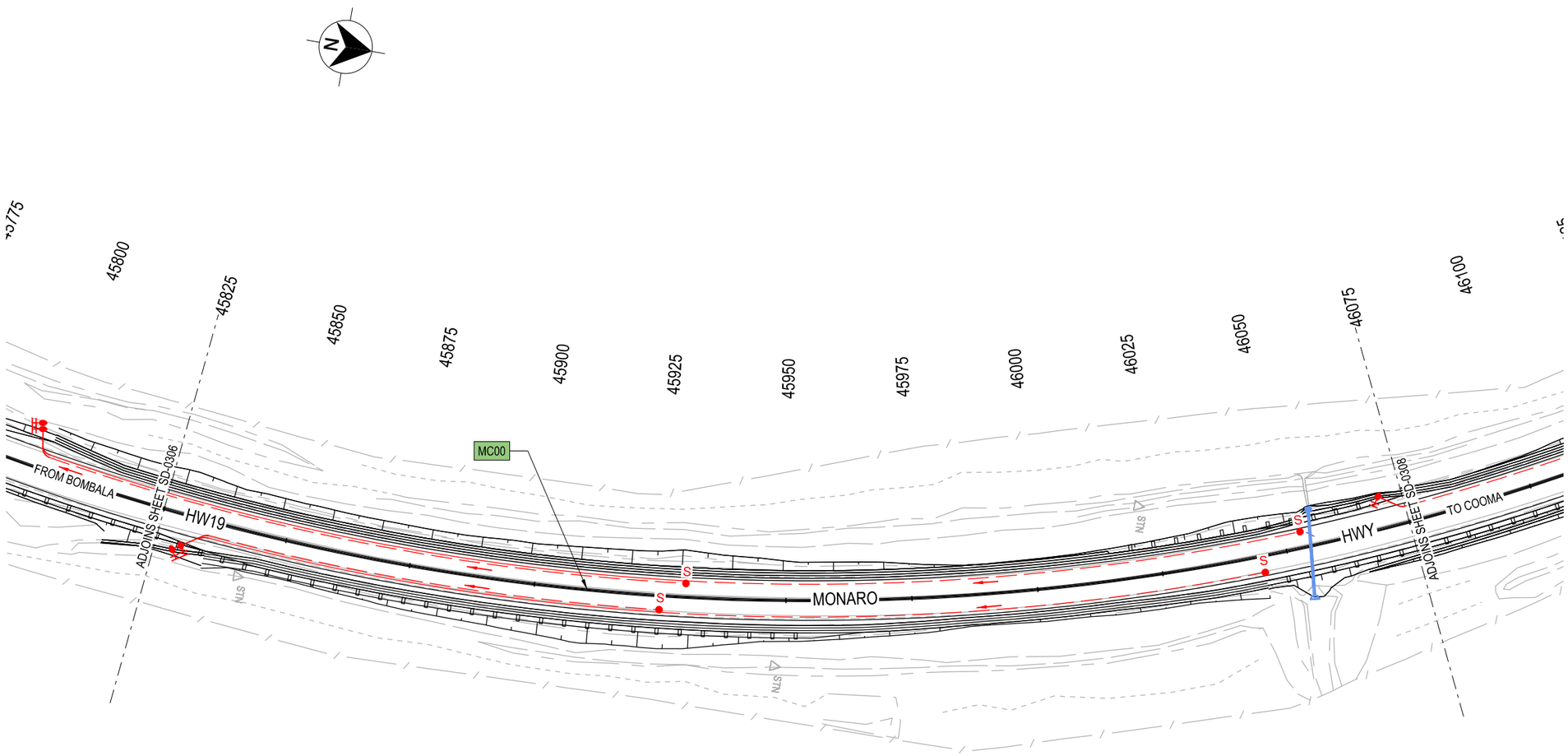
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:31 PM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.45825.000 TO CH.46075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0307	2

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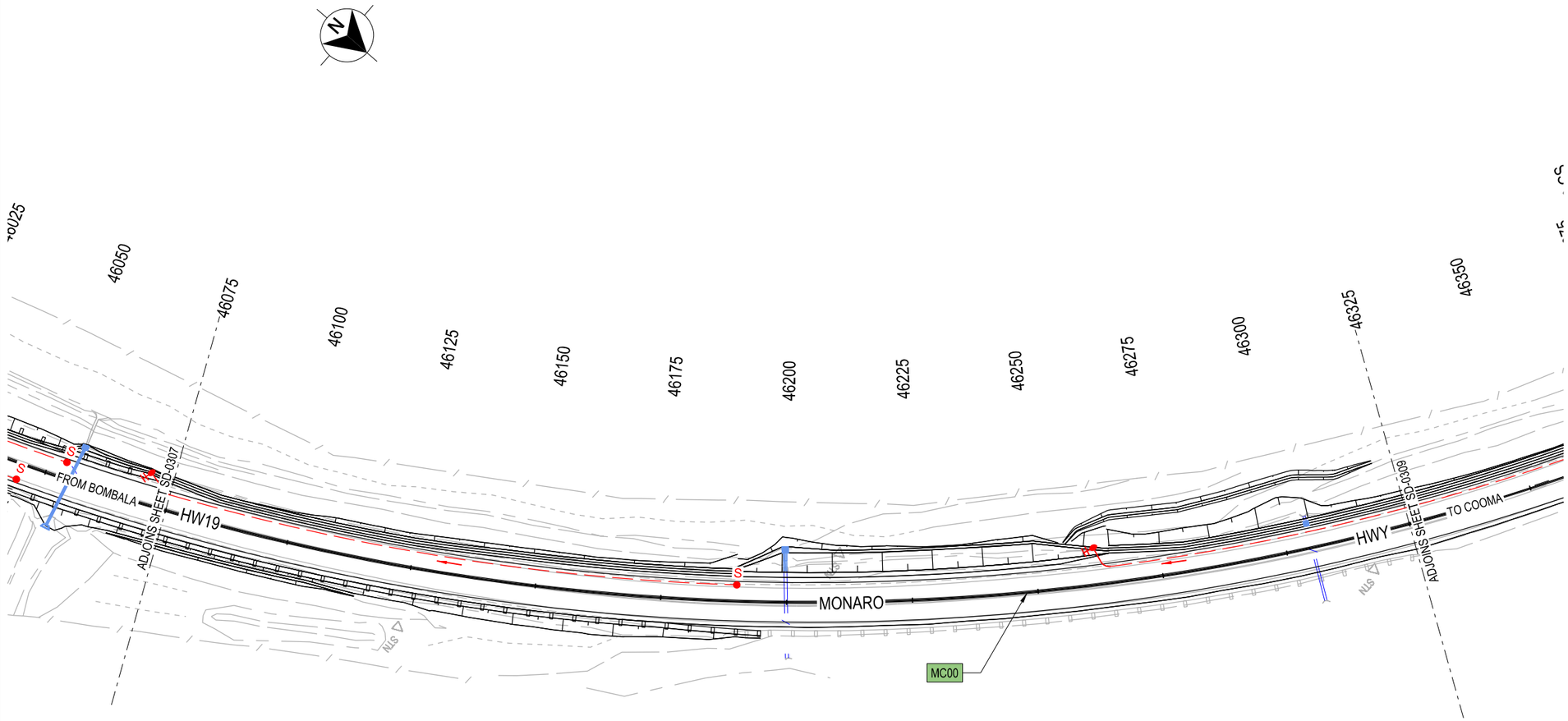
LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn	FILE NAME ; FILE NAME	15/12/2023 12:06:33 PM	waltersj	NSW GOVERNMENT Transport for NSW	A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
	DRAWN	J. WALTERS	15.12.23
	DRG CHECK	J. YANEZ	15.12.23
	DESIGN	J. WALTERS	15.12.23
	DESIGN CHECK	J. YANEZ	15.12.23
	DESIGN MNGR	G. KOZAROSKI	15.12.23
	PROJECT MNGR	S. WAKELING	15.12.23

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.46075.000 TO CH.46325.000

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0308	2

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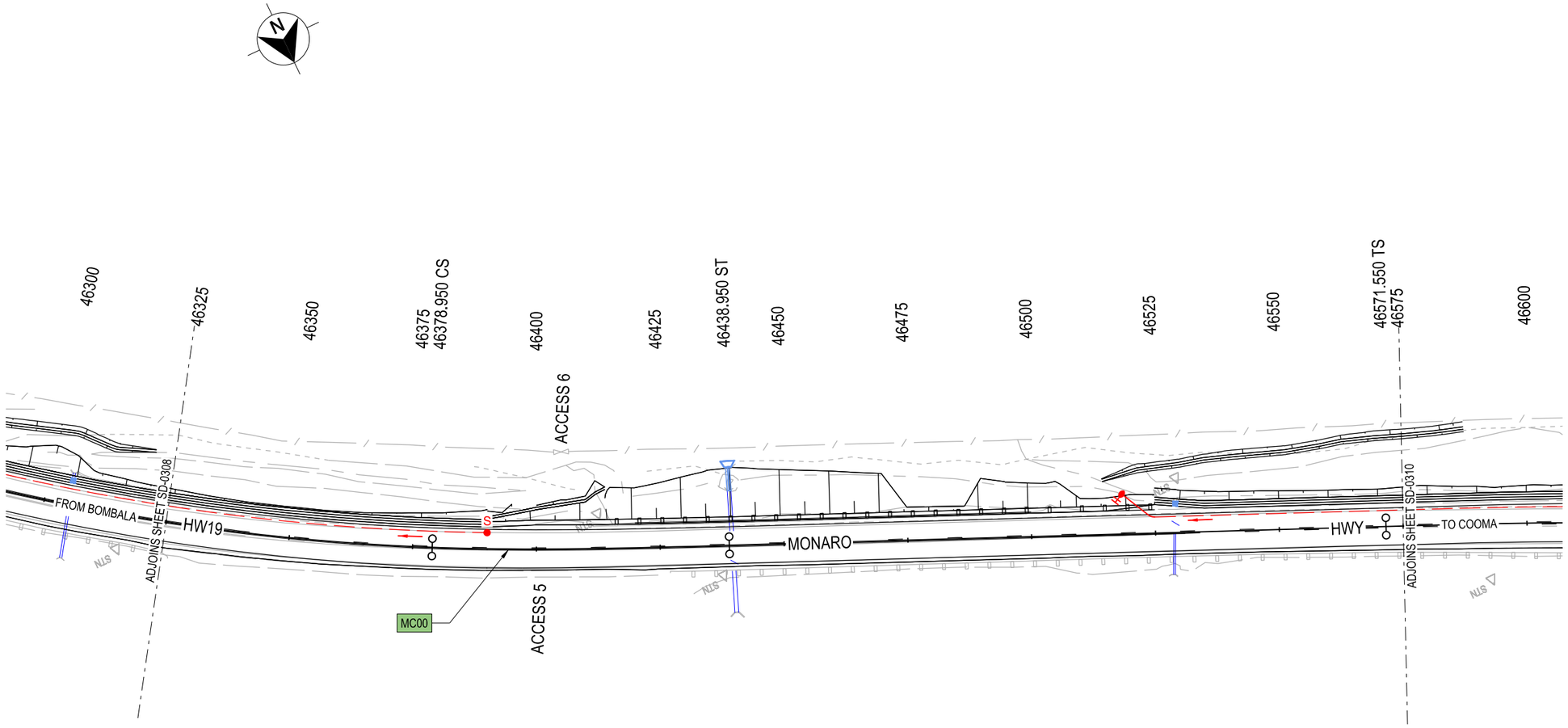
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:36 PM — PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.46325.000 TO CH.46575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0309	2

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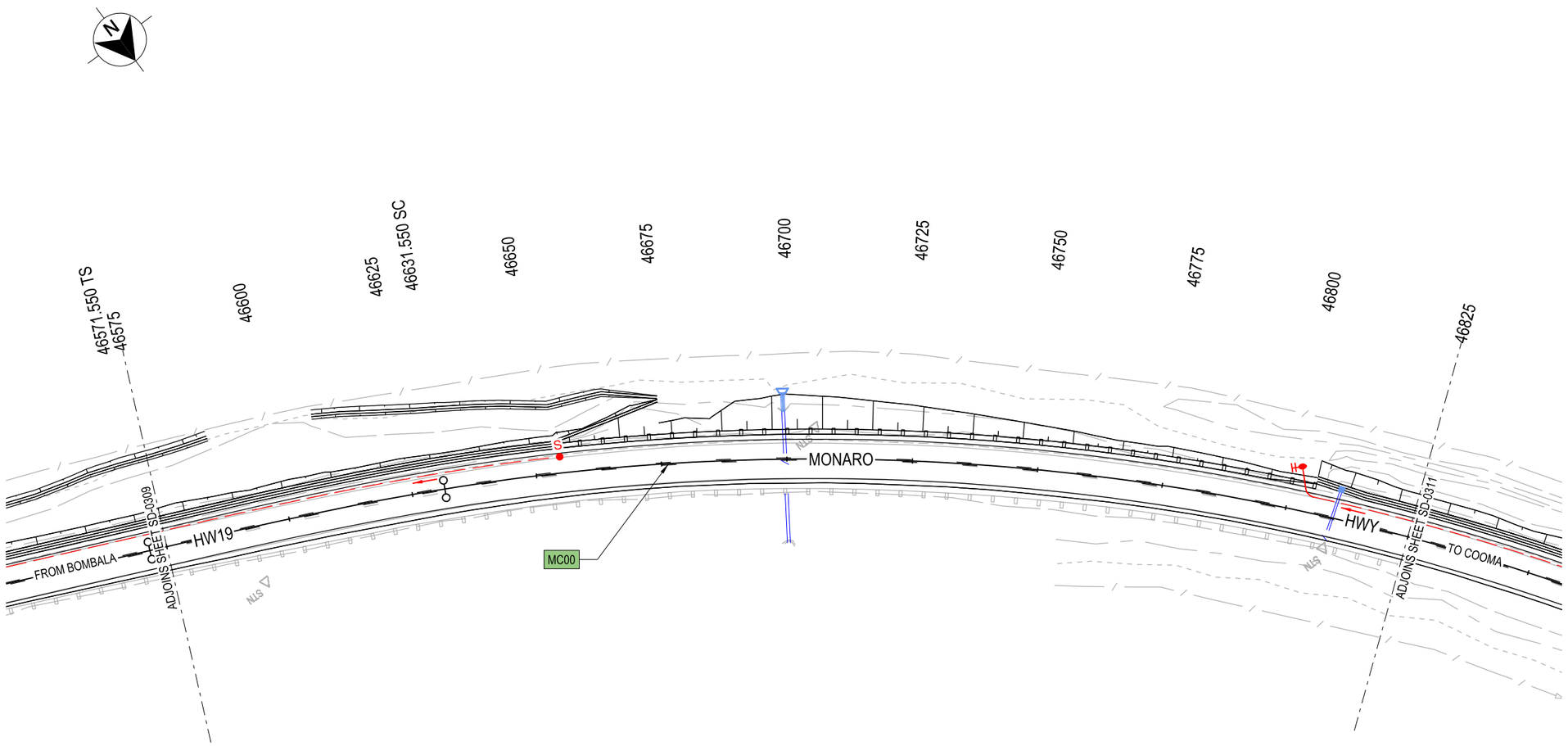
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- H — SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:39 PM
PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

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3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.46575.000 TO CH.46825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0310	2

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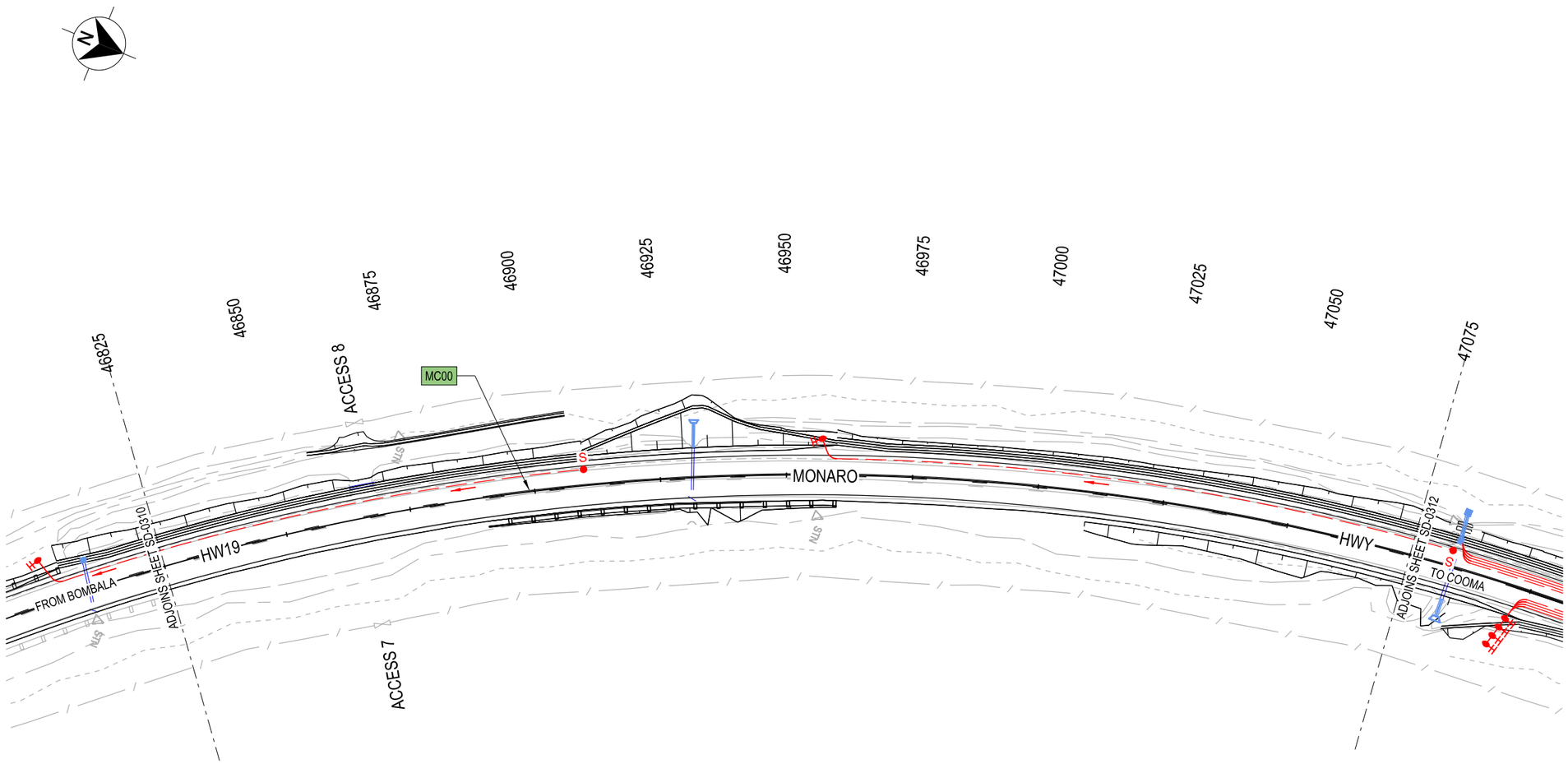
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 12:06:41 PM
PLOT BY walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020)
HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
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HW19 - MONARO HIGHWAY
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3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.46825.000 TO CH.47075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0311	2

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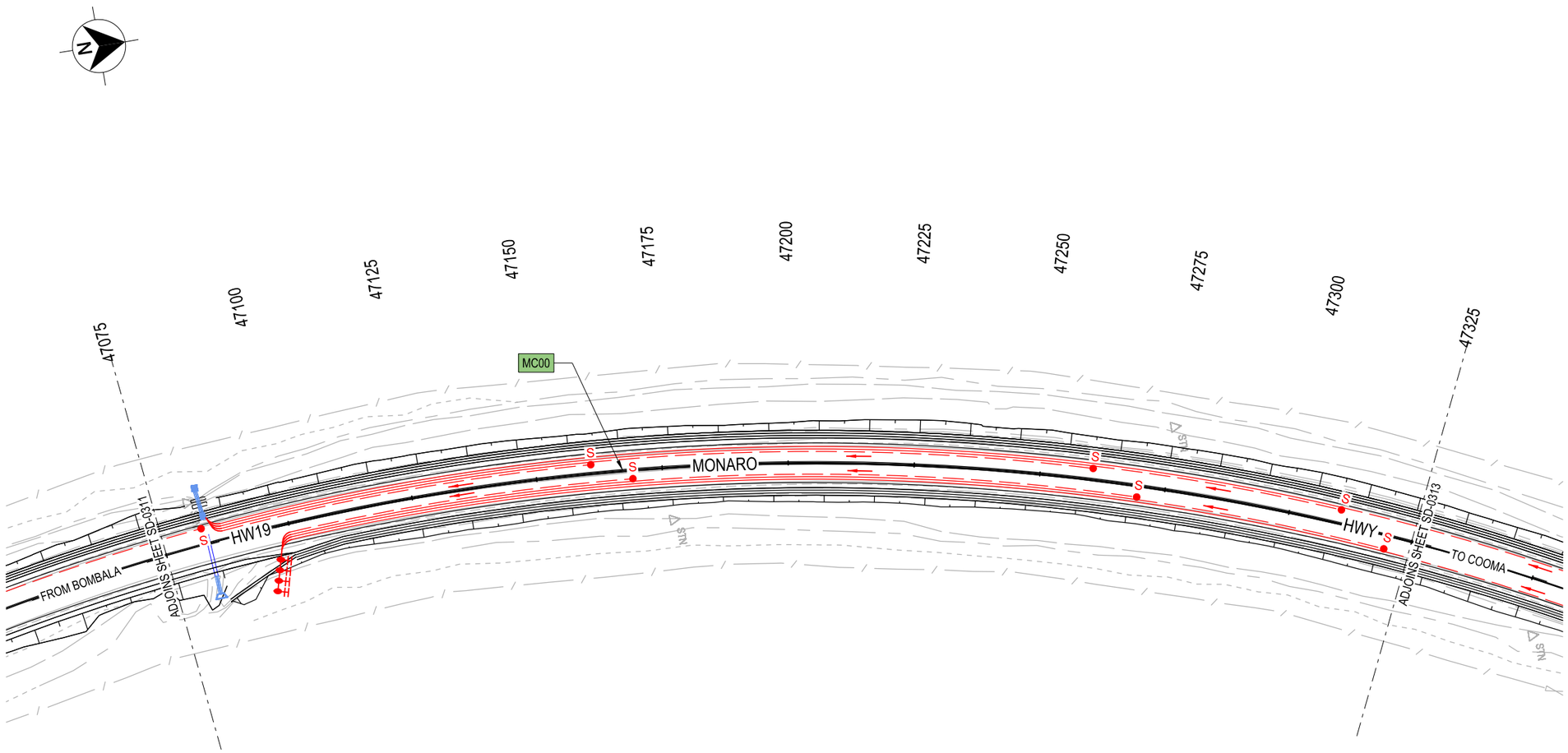
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



NOT FOR CONSTRUCTION

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0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:43 PM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.47075.000 TO CH.47325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0312	2

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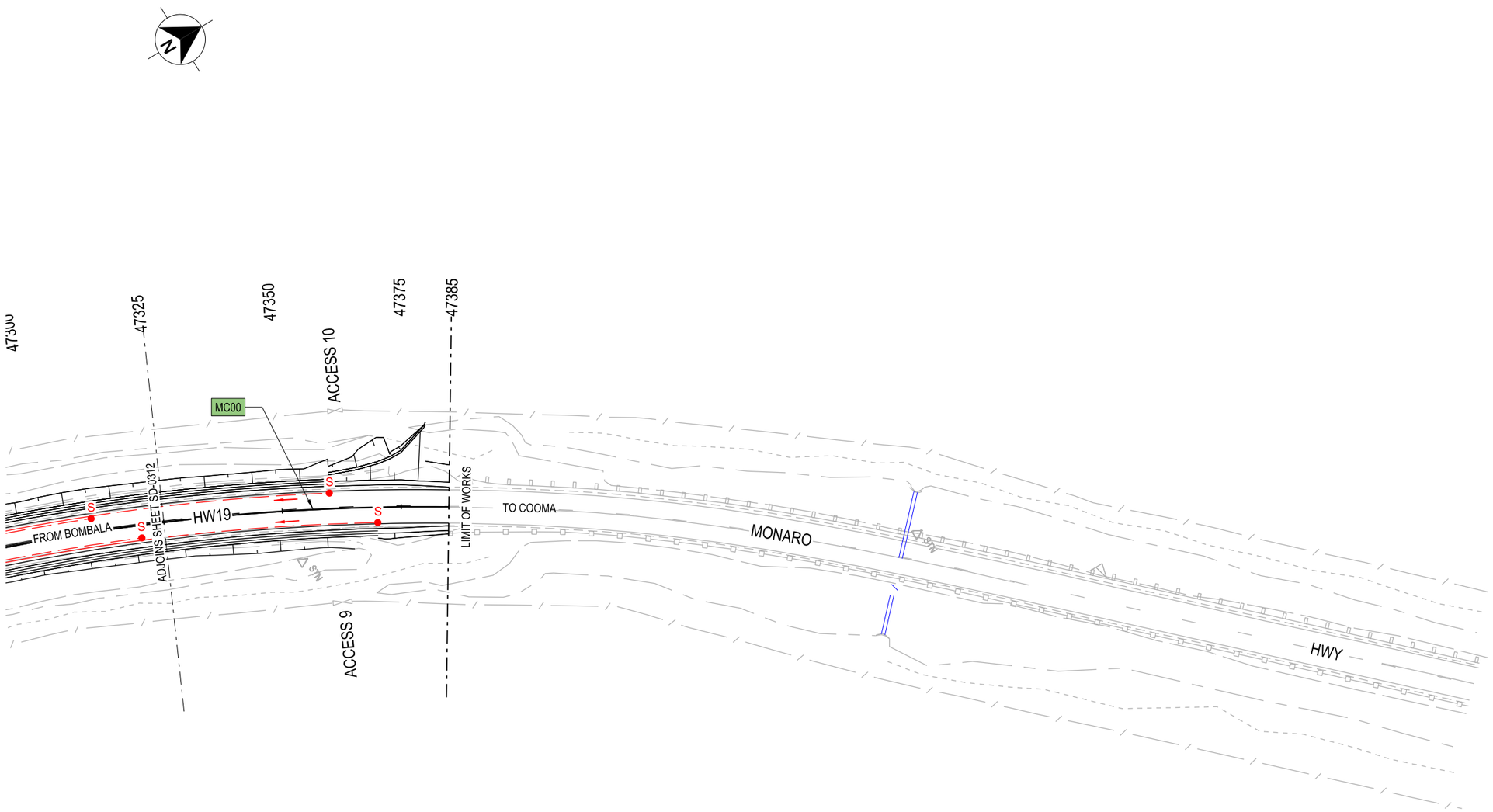
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- START OF RUN WITH CAP
- SURFACE OUTLET
- SLOTTED 100MM DIA PVC PIPE
- UNSLOTTED 100MM DIA PVC PIPE
- DIRECTION OF FLOW

EXISTING FEATURES

= ø600 = DRAINAGE PIPE

GDA 2020



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DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn				DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:06:46 PM PLOT BY: waltersj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE PLAN
HW19 - MONARO HWY - MC00 - CH.47325.000 TO CH.47385.059

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0313	2

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

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GDA 2020

SUBSURFACE DRAINAGE SCHEDULE

SHEET NUMBER	START CHAINAGE	END CHAINAGE	LOCATION	LENGTH	TYPE	COMMENT
SD-0302 - SD-0303	44790.000	44910.000	LEFT	120	SLOTTED	UNDER SO GUTTER
SD-0302 - SD-0303	44790.000	44910.000	RIGHT	120	SLOTTED	UNDER SO GUTTER
SD-0303	44910.000	45005.000	LEFT	95	SLOTTED	UNDER SO GUTTER
SD-0303	44910.000	45005.000	RIGHT	95	SLOTTED	UNDER SO GUTTER
SD-0303	44910.000	45005.000	LEFT	95	UNSLOTTED	UNDER SO GUTTER
SD-0303	44910.000	45005.000	RIGHT	95	UNSLOTTED	UNDER SO GUTTER
SD-0306 - SD-0307	45800.000	45930.000	LEFT	130	SLOTTED	UNDER SO GUTTER
SD-0306 - SD-0307	45800.000	45930.000	LEFT	130	UNSLOTTED	UNDER SO GUTTER
SD-0307	45835.000	45925.000	RIGHT	90	SLOTTED	UNDER SO GUTTER
SD-0307	45835.000	45925.000	RIGHT	90	UNSLOTTED	UNDER SO GUTTER
SD-0307	45925.000	46045.000	RIGHT	120	SLOTTED	UNDER SO GUTTER
SD-0307	45930.000	46053.000	LEFT	123	SLOTTED	UNDER SO GUTTER
SD-0308	46075.000	46190.000	LEFT	115	SLOTTED	UNDER SO GUTTER
SD-0308 - SD-0309	46265.000	46390.000	LEFT	125	SLOTTED	UNDER SO GUTTER
SD-0309 - SD-0310	46525.000	46655.000	LEFT	130	SLOTTED	UNDER SO GUTTER
SD-0310 - SD-0311	46805.000	46910.000	LEFT	105	SLOTTED	UNDER SO GUTTER
SD-0311 - SD-0312	46960.000	47083.000	LEFT	123	SLOTTED	UNDER SO GUTTER
SD-0312	47087.000	47310.000	LEFT	223	UNSLOTTED	UNDER SO GUTTER
SD-0312	47087.000	47260.000	LEFT	175	UNSLOTTED	UNDER SO GUTTER
SD-0312	47087.000	47160.000	LEFT	75	UNSLOTTED	UNDER SO GUTTER
SD-0312	47087.000	47160.000	LEFT	75	SLOTTED	UNDER SO GUTTER
SD-0312	47100.000	47320.000	RIGHT	220	UNSLOTTED	UNDER SO GUTTER
SD-0312	47100.000	47270.000	RIGHT	169	UNSLOTTED	UNDER SO GUTTER
SD-0312	47100.000	47170.000	RIGHT	69	UNSLOTTED	UNDER SO GUTTER
SD-0312	47100.000	47170.000	RIGHT	69	SLOTTED	UNDER SO GUTTER
SD-0312	47160.000	47260.000	LEFT	100	SLOTTED	UNDER SO GUTTER
SD-0312	47170.000	47270.000	RIGHT	100	SLOTTED	UNDER SO GUTTER
SD-0312	47260.000	47310.000	LEFT	50	SLOTTED	UNDER SO GUTTER
SD-0312	47270.000	47320.000	RIGHT	50	SLOTTED	UNDER SO GUTTER
SD-0312 - SD-0313	47310.000	47360.000	LEFT	50	SLOTTED	UNDER SO GUTTER
SD-0312 - SD-0313	47320.000	47370.000	RIGHT	50	SLOTTED	UNDER SO GUTTER

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-SD.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:06:47 PM
PLOT BY: walterslj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
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DESIGN MNGR	G. KOZAROSKI	15.12.23
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CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
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PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
SUBSURFACE DRAINAGE SCHEDULE

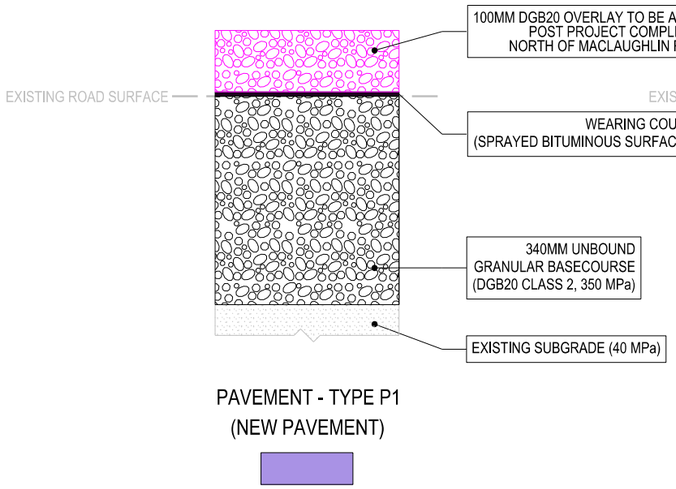
A3

RMS REGISTRATION No. DS2023/000777

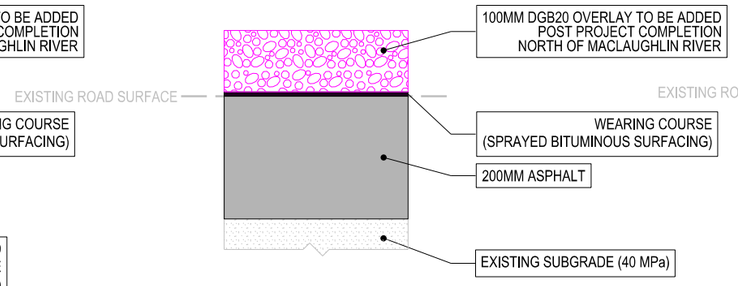
ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	SD-0401	2

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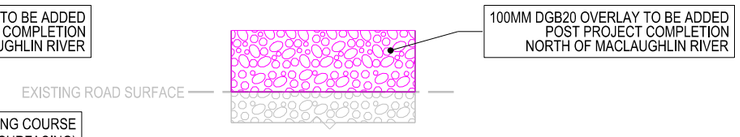
GDA 2020



PAVEMENT - TYPE P1
(NEW PAVEMENT)



PAVEMENT - TYPE P2
(ASPHALT AT BRIDGE ABUTMENTS)



EXISTING PAVEMENT
(OVERLAY OF EXISTING ROAD POST PROJECT,
ONLY NORTH OF MACLAUGHLIN RIVER)

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:56:24 AM
PLOT BY: walterslj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: NOT TO SCALE

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN	J. WALTERS		15.12.23
DRG CHECK	J. YANEZ		15.12.23
DESIGN	J. WALTERS		15.12.23
DESIGN CHECK	J. YANEZ		15.12.23
DESIGN MNGR	G. KOZAROSKI		15.12.23
PROJECT MNGR	S. WAKELING		15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN
REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT DETAIL

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0001	2

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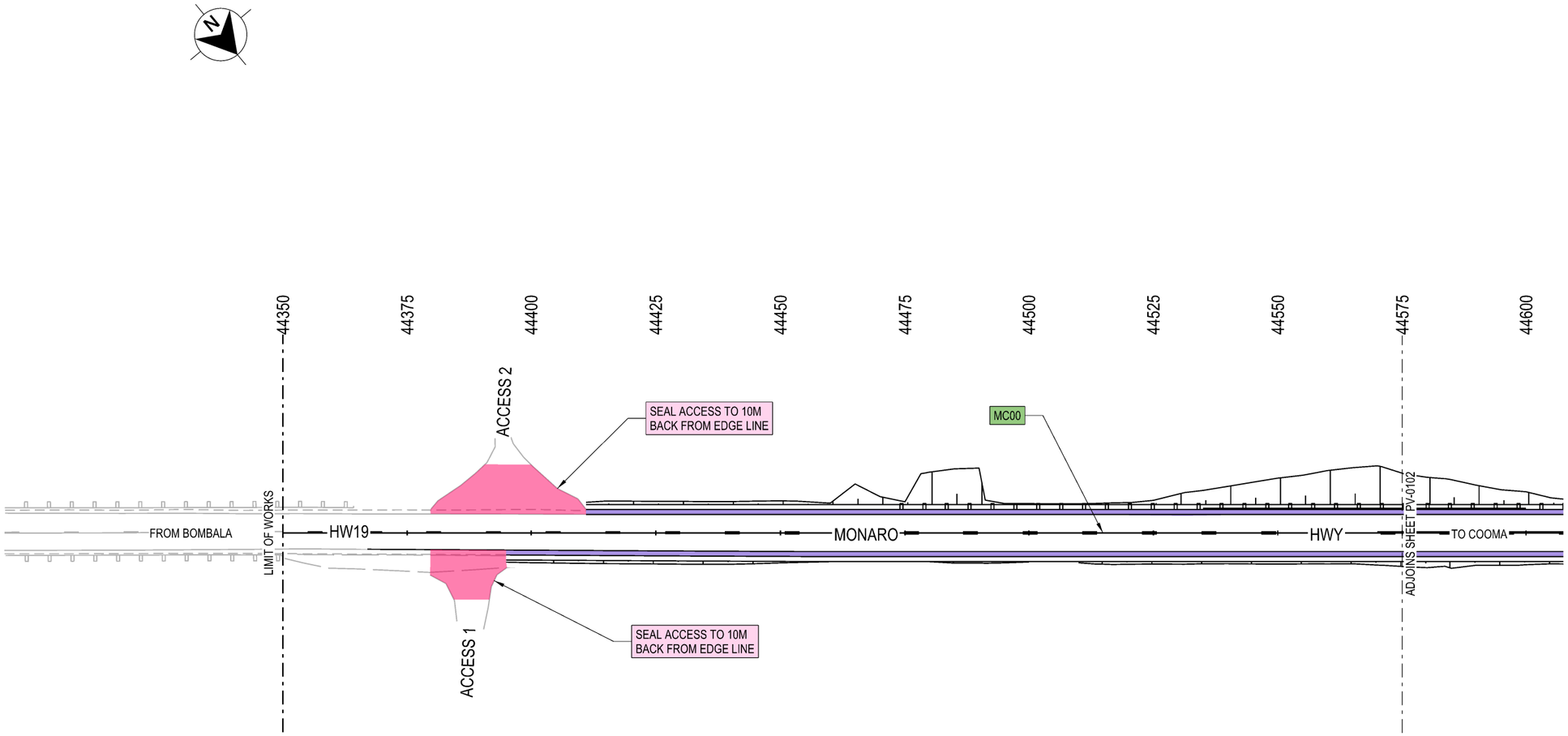
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:56:30 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

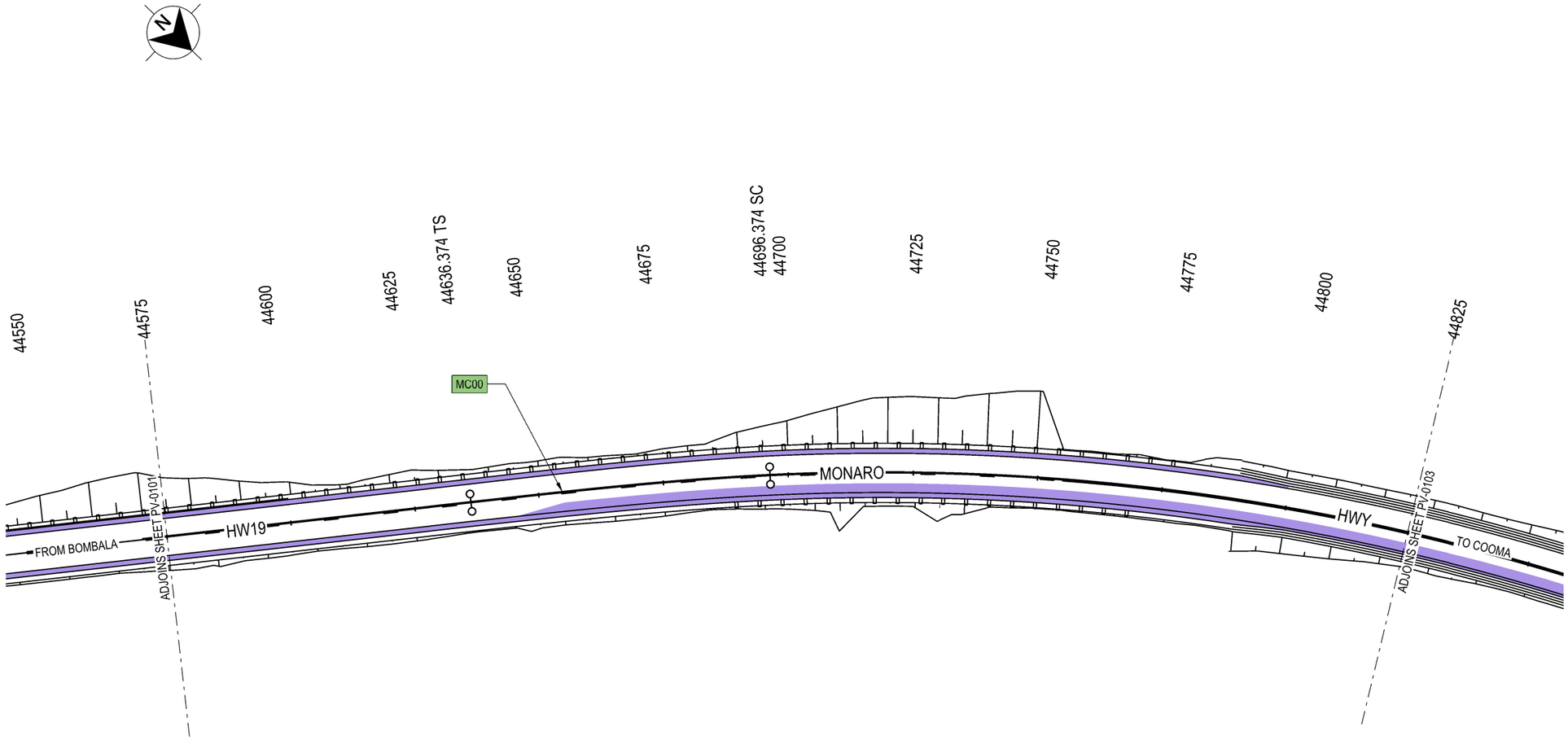
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44350.000 TO CH.44575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0101	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:56:36 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

A3

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44575.000 TO CH.44825.000

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0102	2

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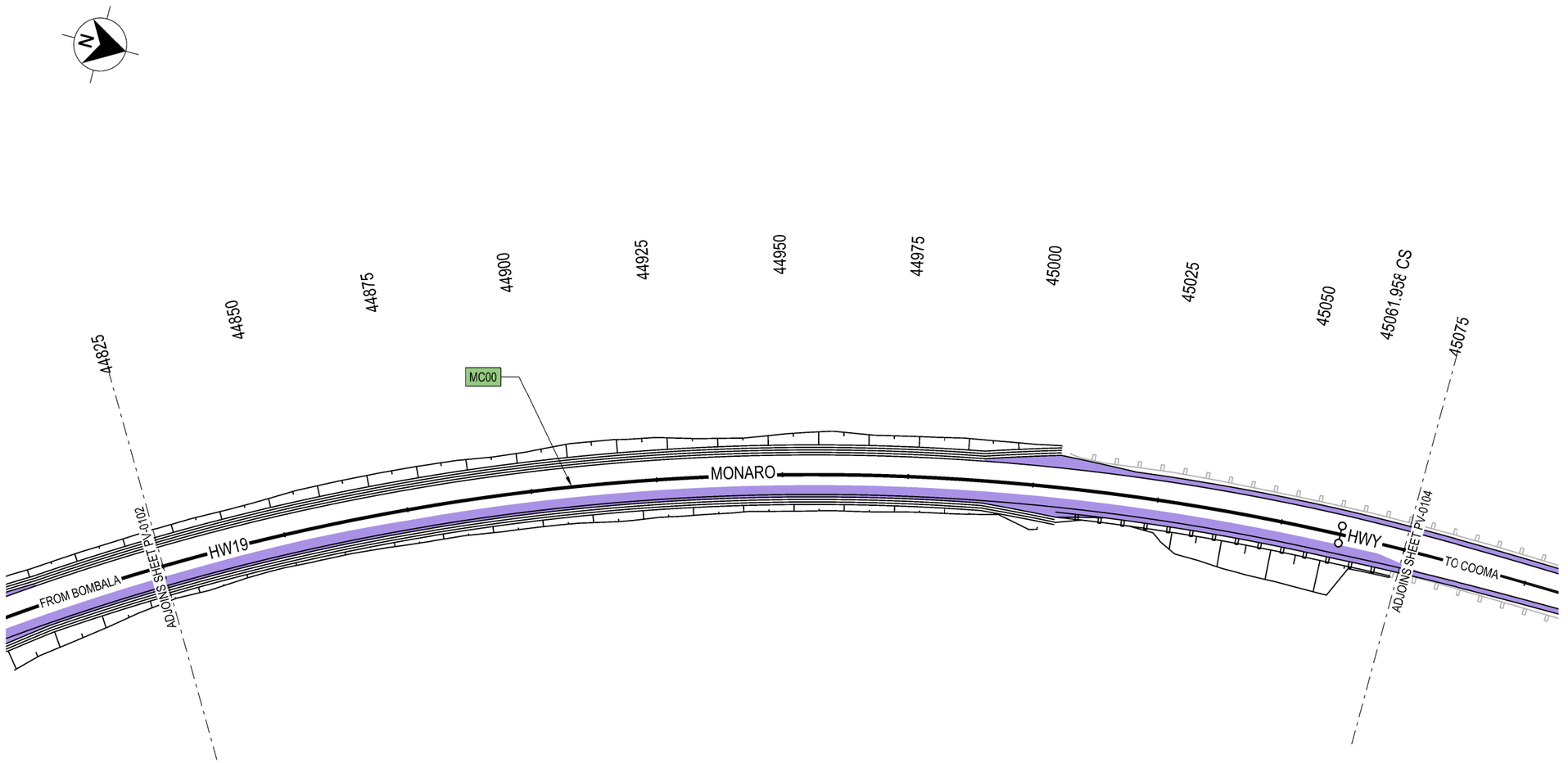
LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 11:56:42 AM
PLOT BY waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020)
HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.44825.000 TO CH.45075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0103	2

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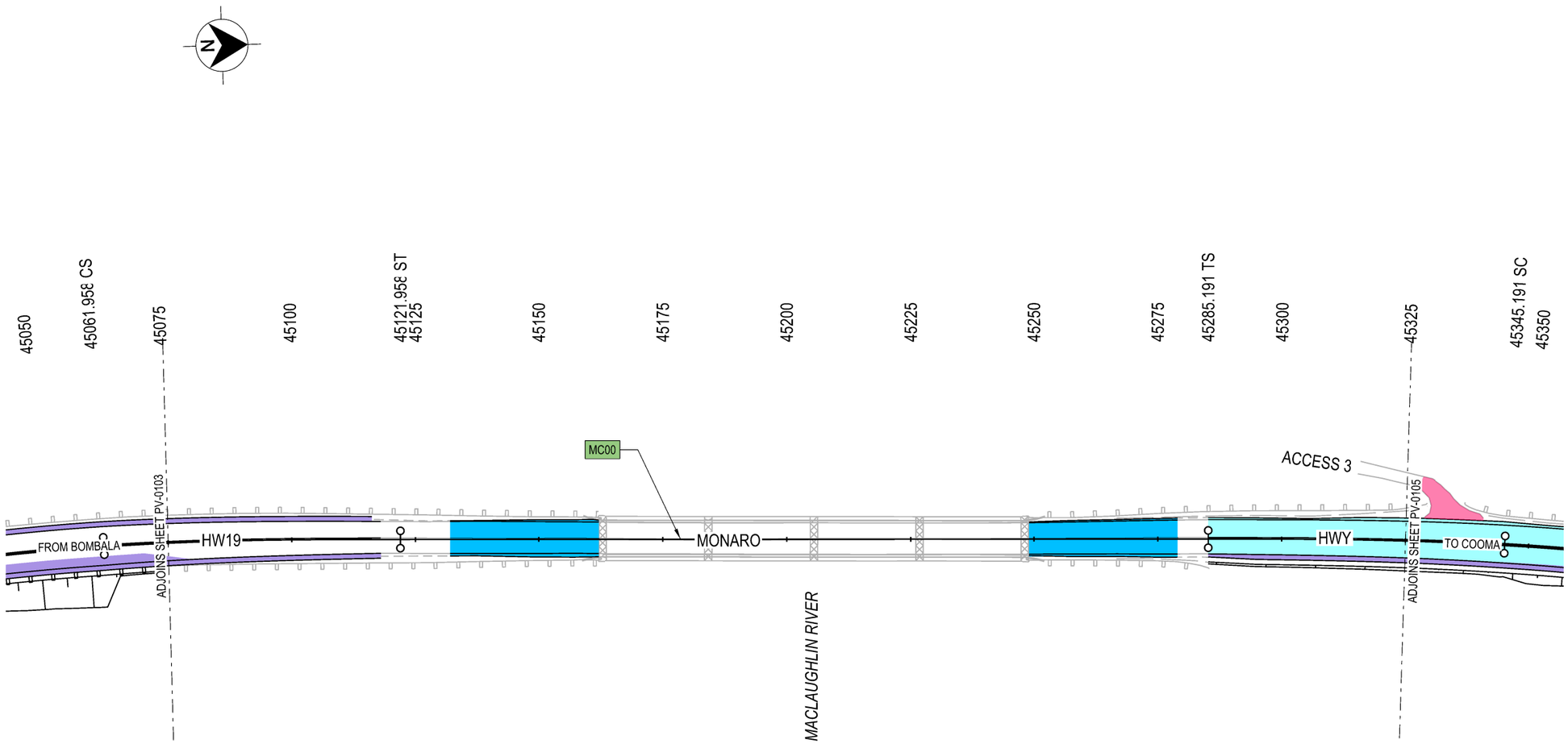
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:56:50 AM — PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

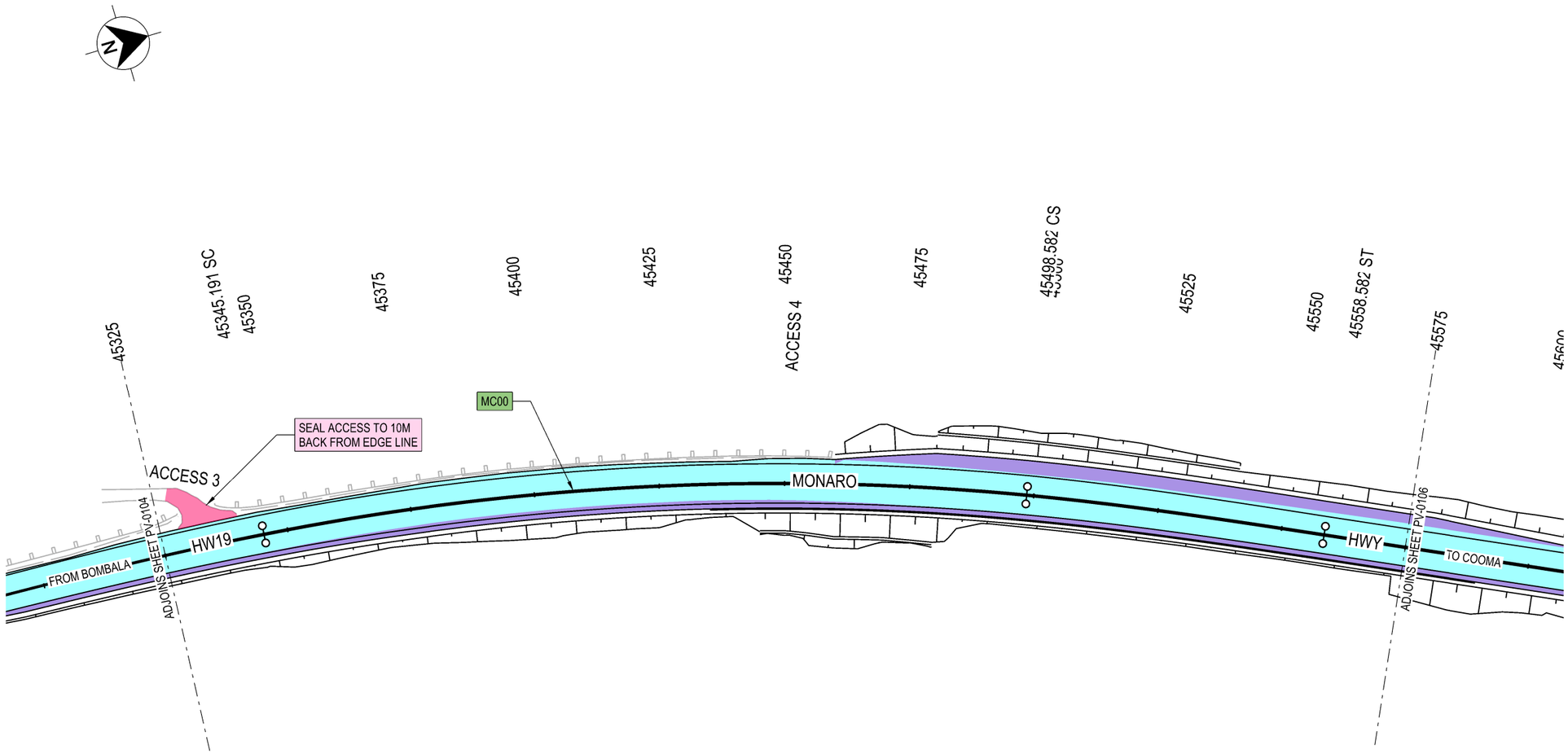
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45075.000 TO CH.45325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0104	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:56:57 AM
PLOT BY: walterssj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

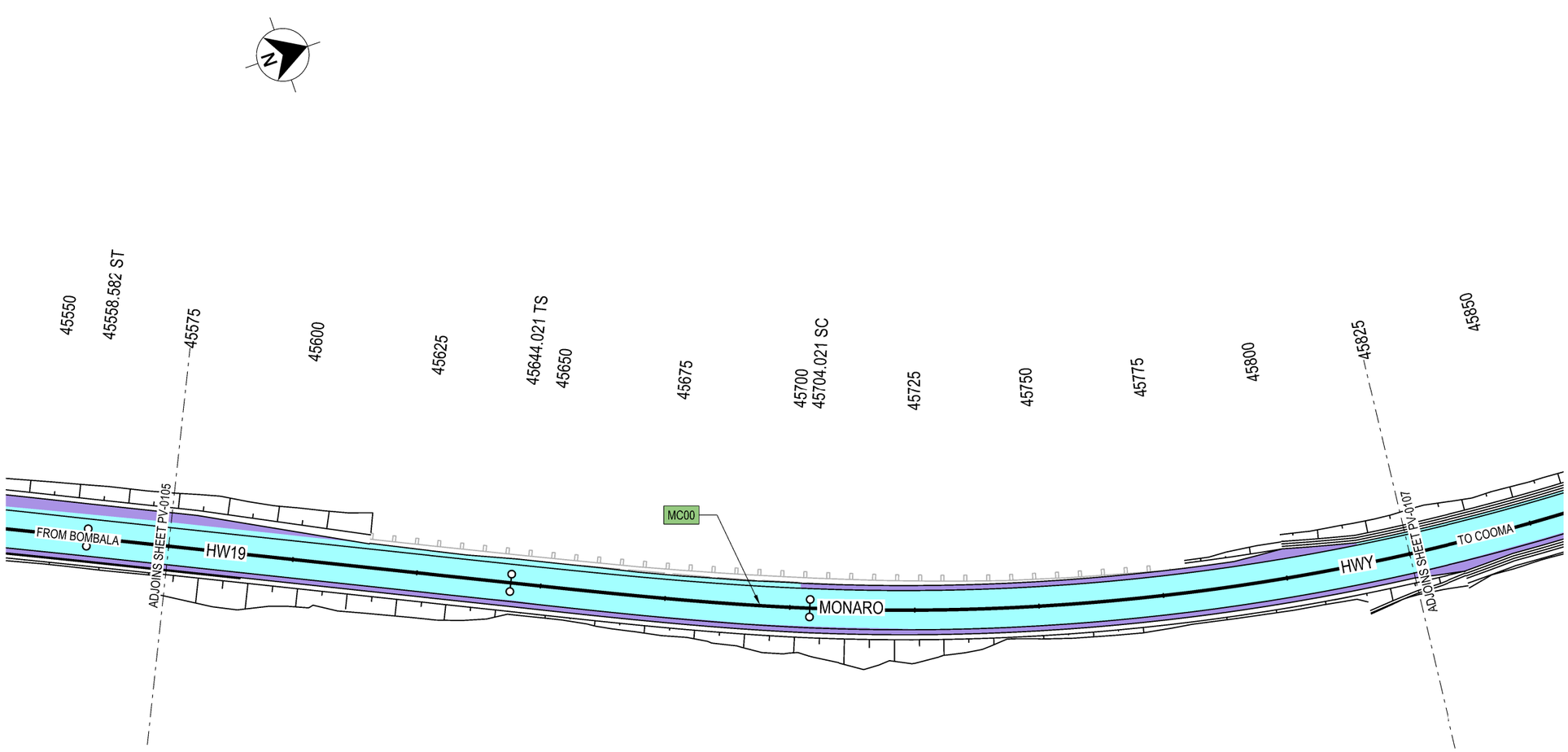
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45325.000 TO CH.45575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0105	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:57:04 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45575.000 TO CH.45825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0106	2

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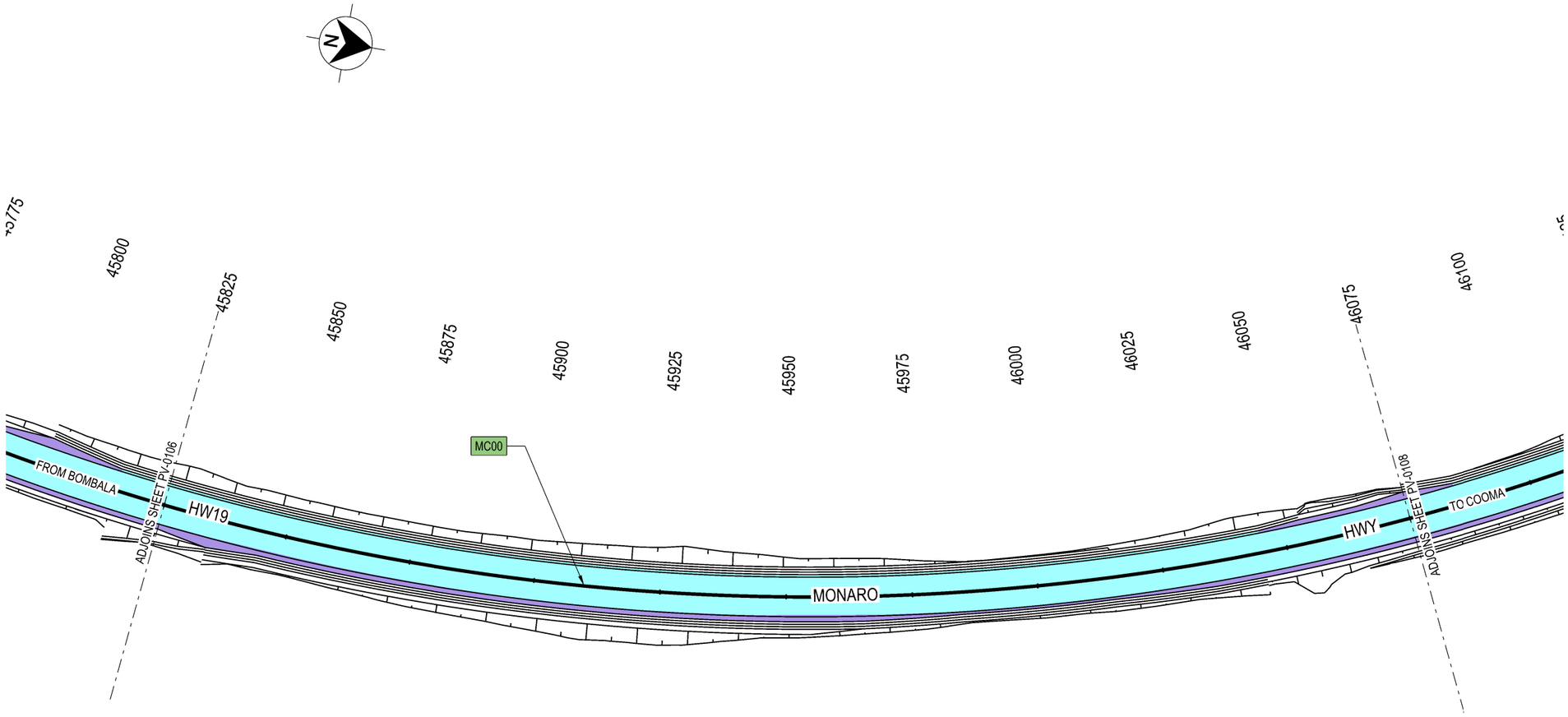
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
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NOT FOR CONSTRUCTION

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:57:12 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

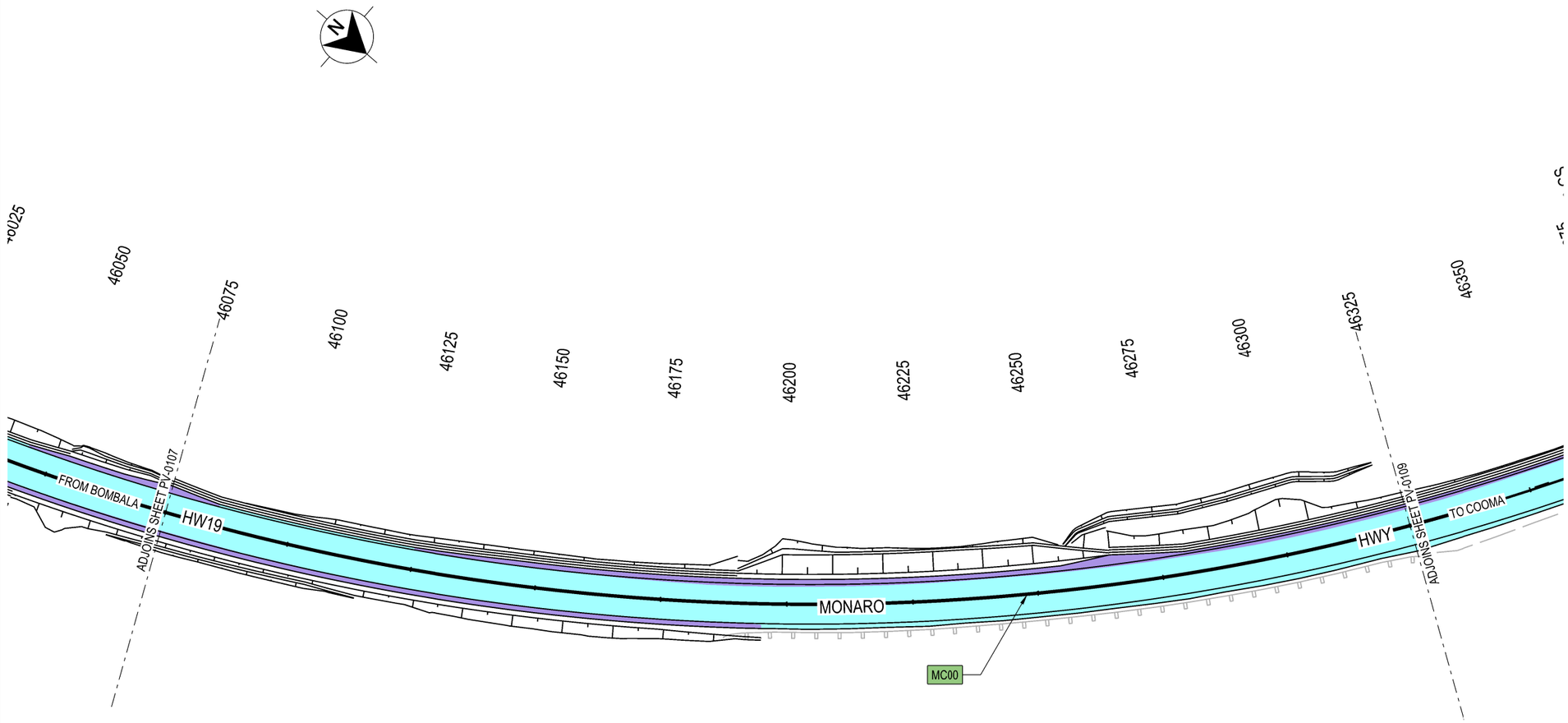
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.45825.000 TO CH.46075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0107	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.

GDA 2020

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:57:20 AM
PLOT BY: walterssj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46075.000 TO CH.46325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: PV-0108
ISSUE: 2

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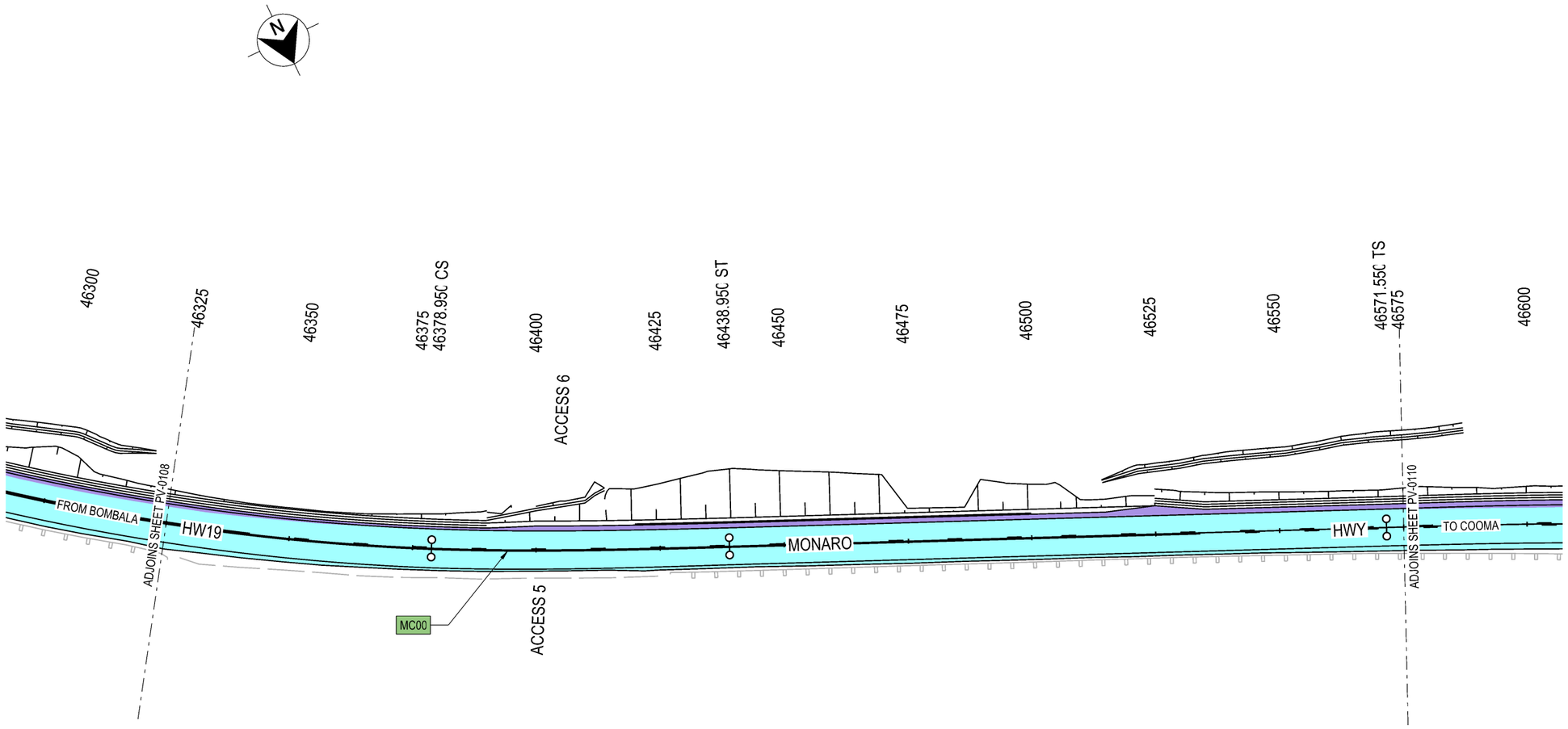
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.



NOT FOR CONSTRUCTION

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME	PLOT DATE / TIME: 15/12/2023 11:57:28 AM	PLOT BY: waltersj	CLIENT: NSW GOVERNMENT Transport for NSW
SNOWY MONARO REGIONAL LGA HW19 - MONARO HIGHWAY SAFETY IMPROVEMENTS 3KM TO 6KM SOUTH OF NIMMITABEL PAVEMENT PLAN HW19 - MONARO HWY - MC00 - CH.46325.000 TO CH.46575.000				A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

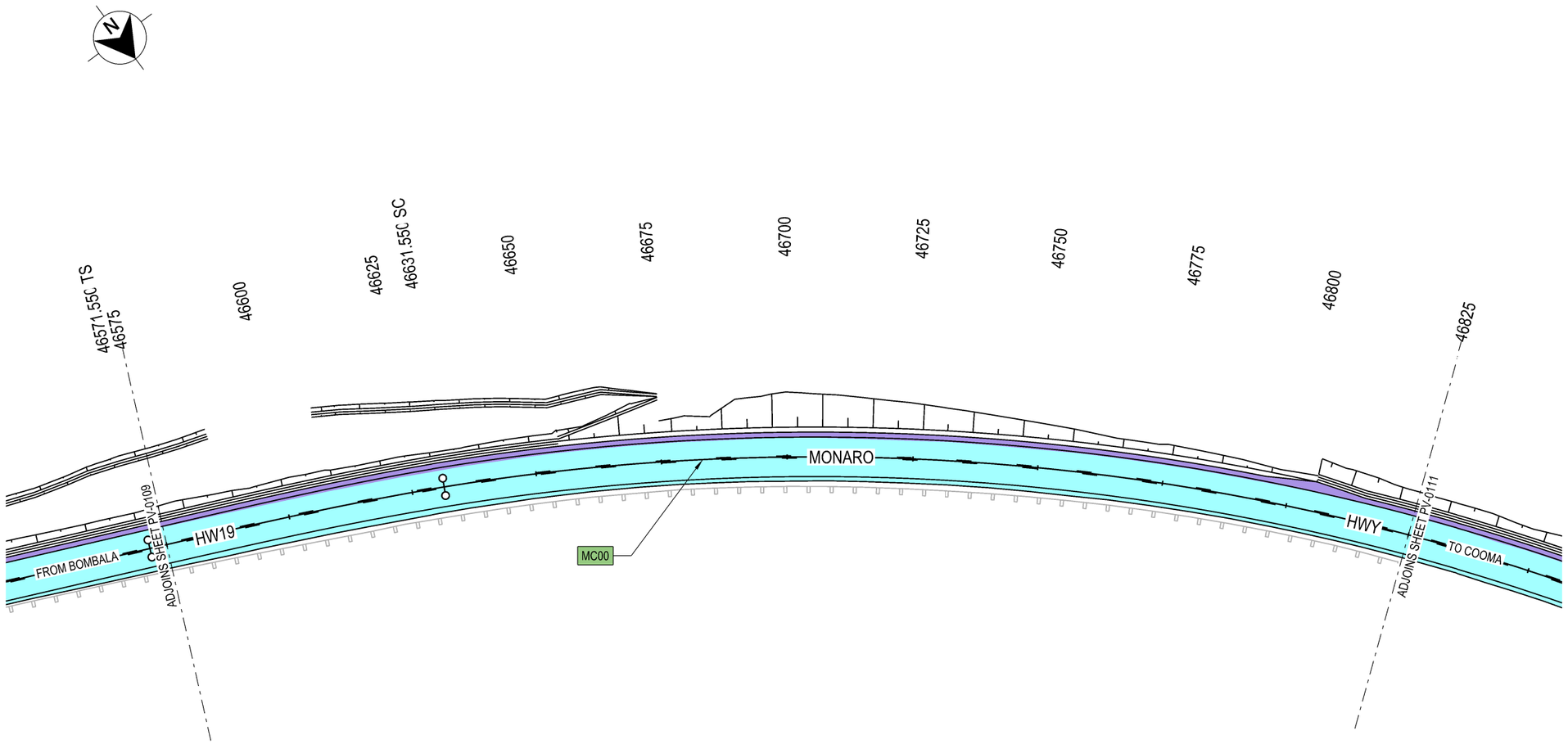
PREPARED FOR: PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0109	2

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

© Transport for NSW



LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:57:36 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

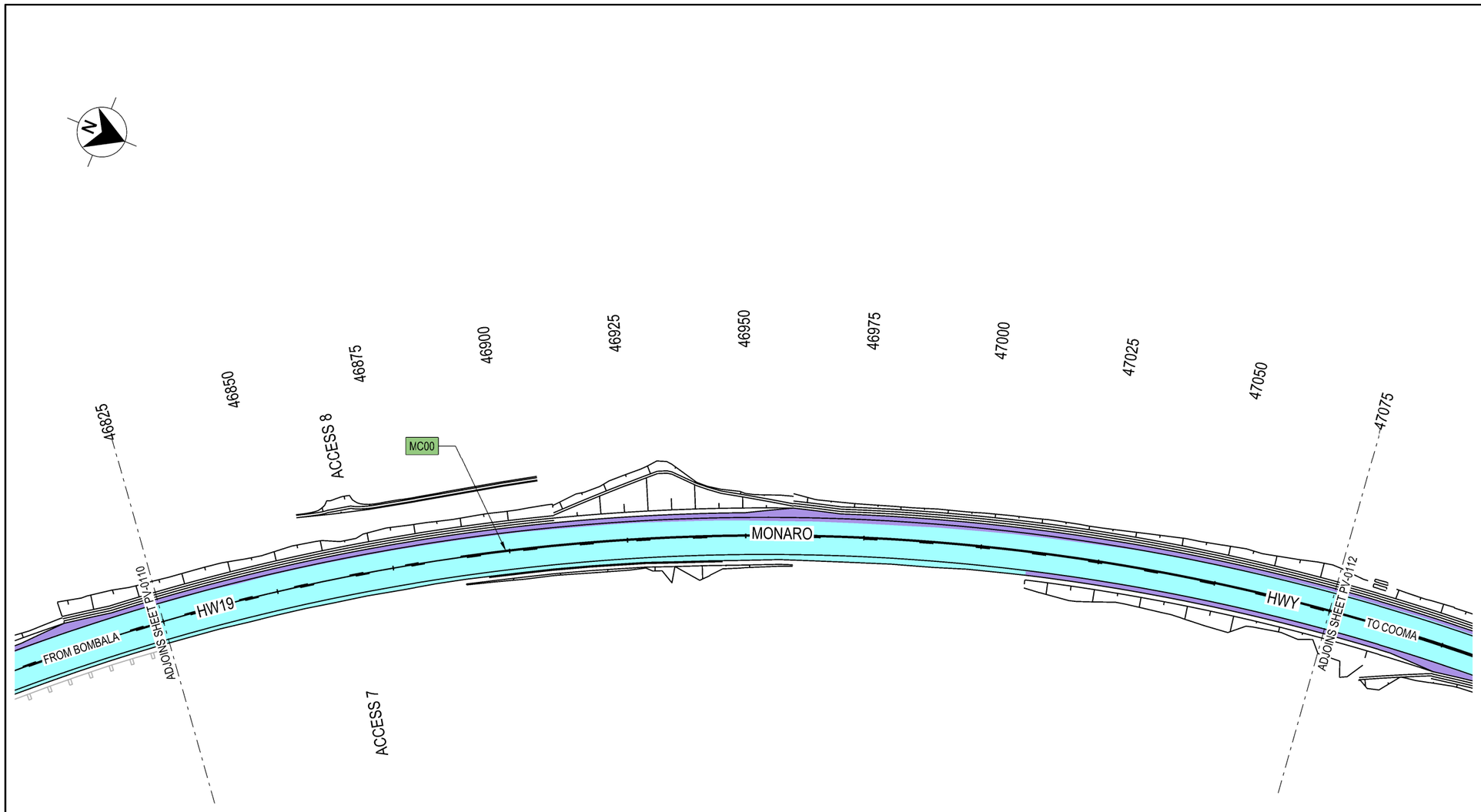
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46575.000 TO CH.46825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0110	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:57:43 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.46825.000 TO CH.47075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0111	2

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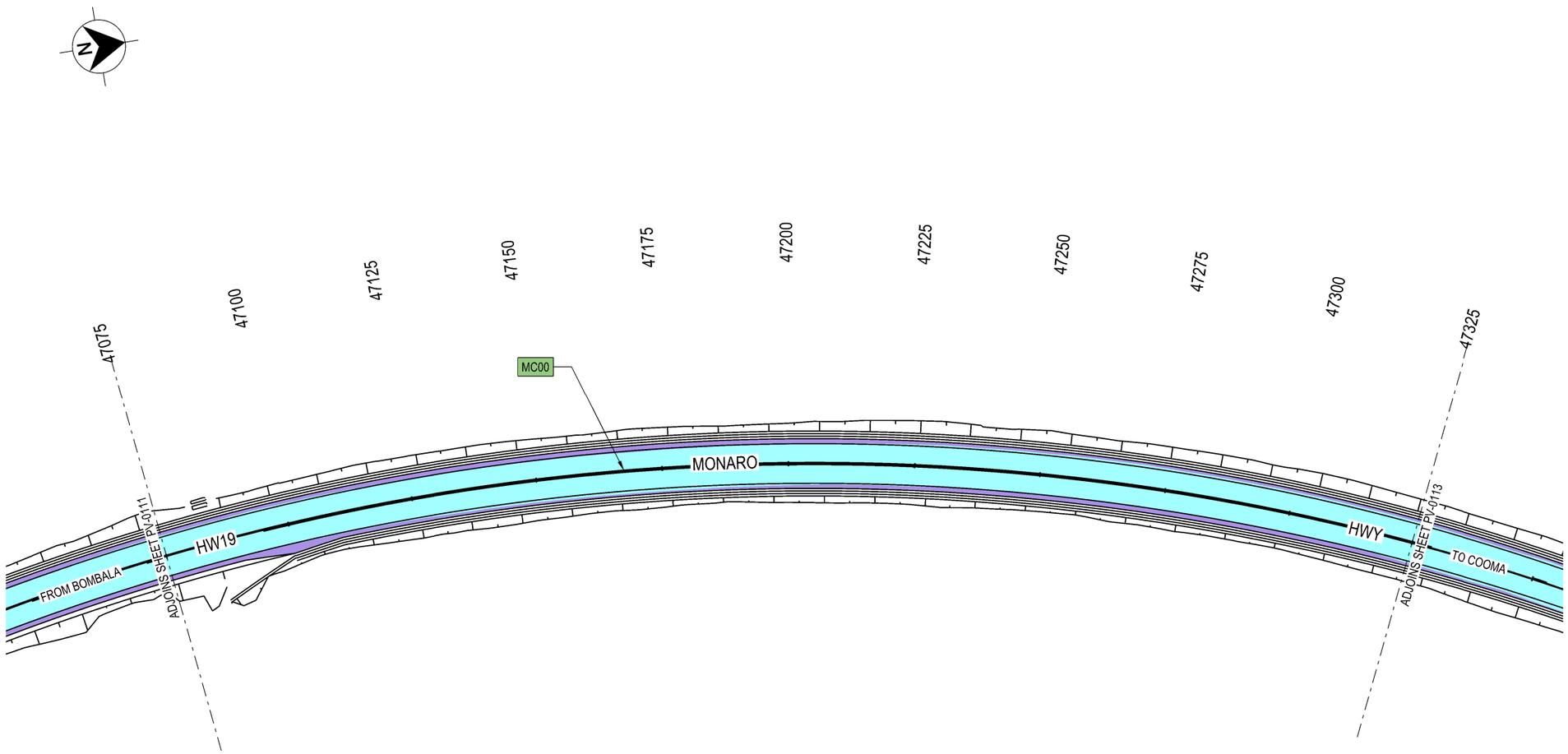
LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
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3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-07-PV.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:57:50 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.47075.000 TO CH.47325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0112	2

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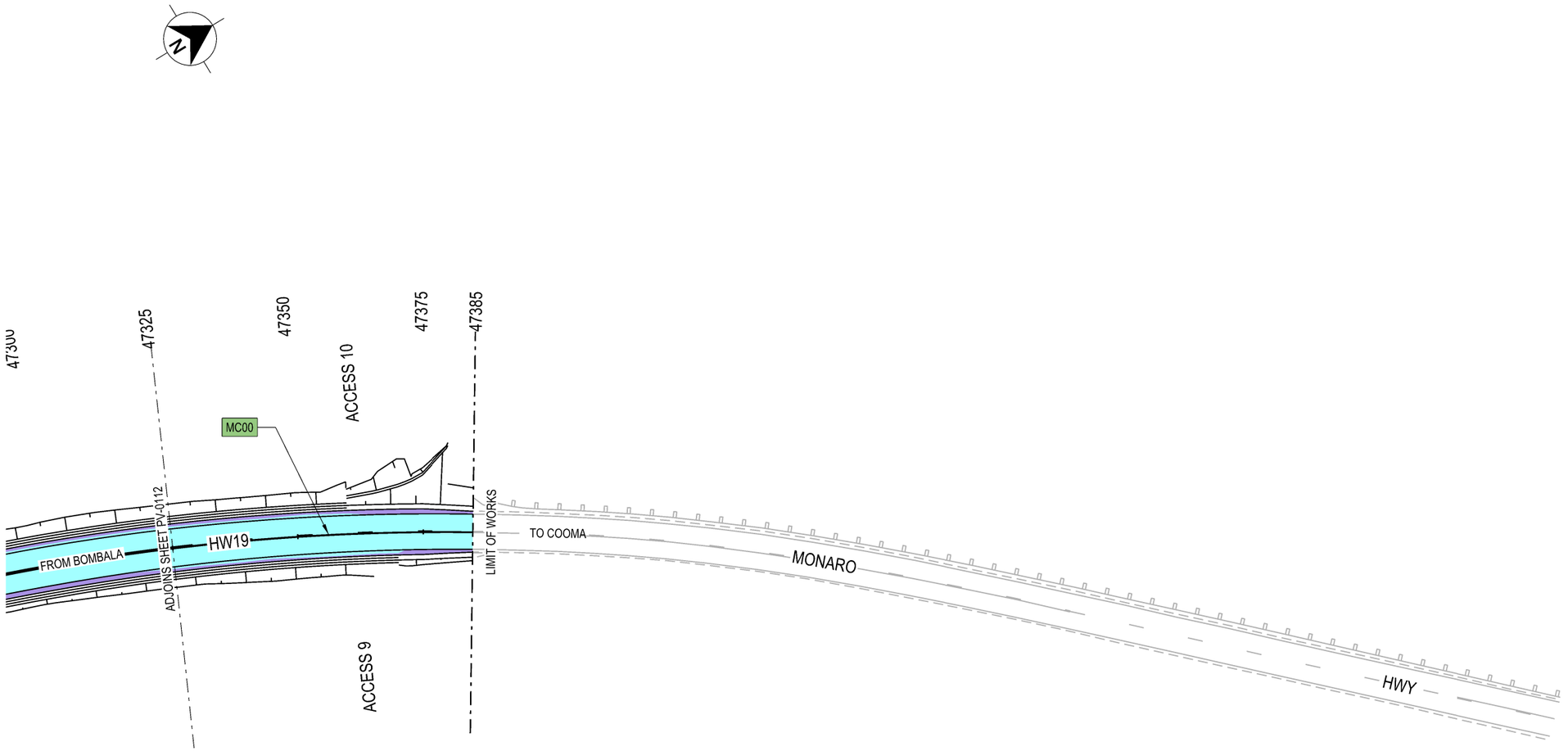
LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- PAVEMENT TYPE P1
- PAVEMENT TYPE P2
- PLANNED 100MM OVERLAY OF EXISTING PAVEMENT POST-PROJECT
- PROPERTY ACCESS SEAL

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICIATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. REFER TO SHEET PV-0001 FOR PAVEMENT PROFILES.
3. 100MM OVERLAY PLANNED FOR ALL PAVEMENT, NEW AND OLD, NORTH OF MACLAUGHLIN RIVER POST-PROJECT COMPLETION.



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

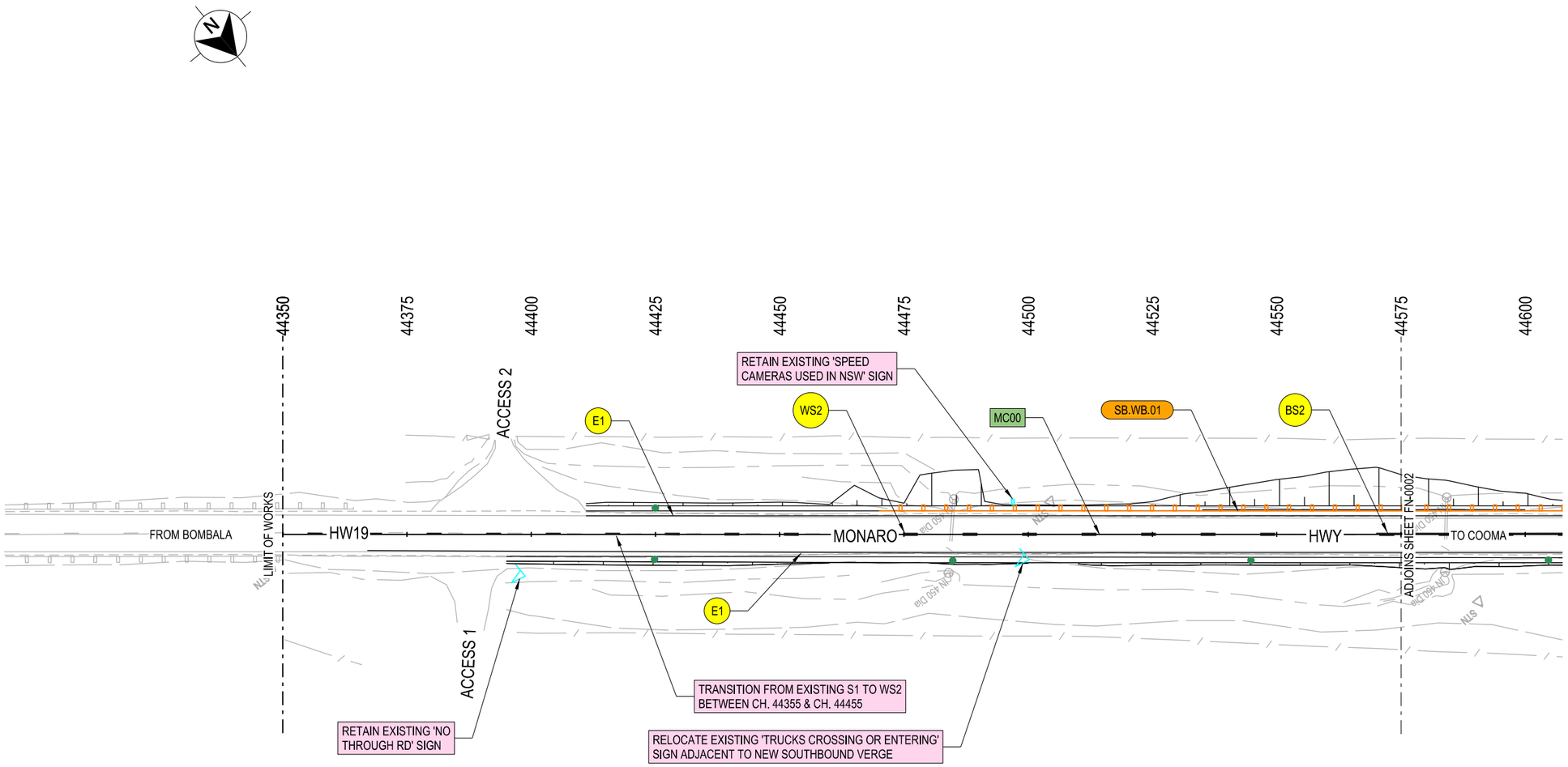
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PAVEMENT PLAN
HW19 - MONARO HWY - MC00 - CH.47325.000 TO CH.47385.059

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	PV-0113	2

© Transport for NSW



LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
- EXISTING SIGNAGE LOCATION
- PROPOSED SIGNAGE LOCATION
- PROPOSED GUIDE POSTS
- NEW SIGN TO BE INSTALLED
- EXISTING SIGN TO BE RETAINED OR RELOCATED
- EXISTING SIGN TO BE REMOVED

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. ALL REDUNDANT LINEMARKING TO BE REMOVED. REINSTATE EXISTING LINEMARKING AFFECTED BY PAVEMENT RE-SHEETING.
3. LINEMARKING AND RETRO REFLECTIVE PAVEMENT MARKERS (RRPM) TO BE INSTALLED IN ACCORDANCE WITH TFNSW DELINEATION GUIDELINES.
4. SIGNPOSTING LOCATION AND ORIENTATION TO BE INSTALLED IN ACCORDANCE WITH AS1742.2 AND TFNSW SUPPLEMENTS.
5. EXISTING SIGNS TO BE REMOVED OR RELOCATED HAVE BEEN IDENTIFIED ONLY. EXISTING SIGNS WHICH ARE NOT NOTED ARE TO REMAIN UNLESS APPROVED BY THE PRINCIPALS REPRESENTATIVE.
6. FOR SIGN POST AND FOOTING DETAILS REFER TO TFNSW ACCEPTANCE DOCUMENT FOR FRANGIBLE SIGN POST PRODUCT.
7. WIDE CENTRELINE MARKINGS AS PER TYPICAL DETAILS SHEET RW-0003
8. BLACK ATLM TO BE INSTALLED ADJACENT TO EDGE LINES.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:59:52 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

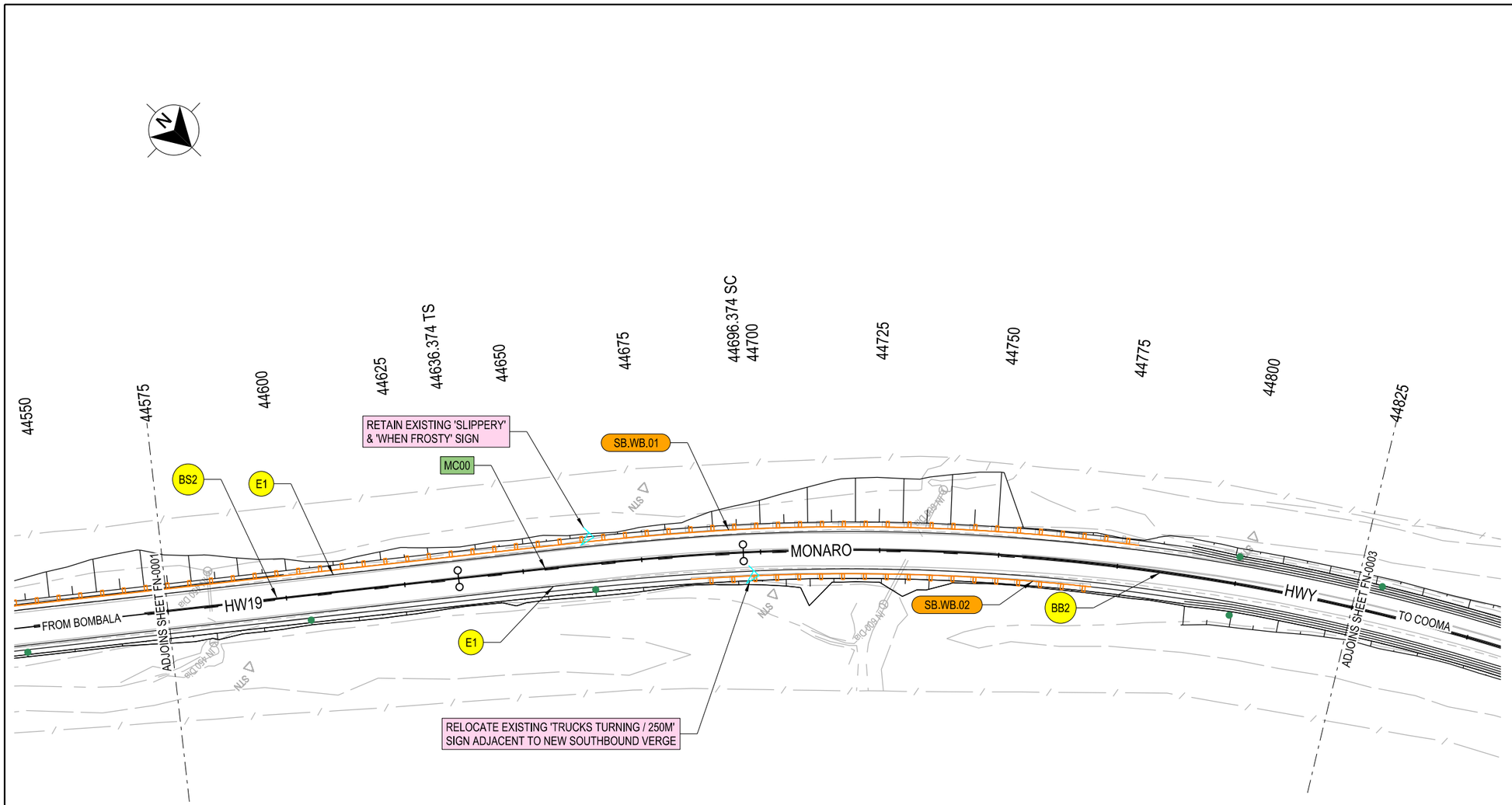
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.44350.000 TO CH.44575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0001	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
- EXISTING SIGNAGE LOCATION
- PROPOSED SIGNAGE LOCATION
- PROPOSED GUIDE POSTS
- NEW SIGN TO BE INSTALLED
- EXISTING SIGN TO BE RETAINED OR RELOCATED
- EXISTING SIGN TO BE REMOVED

GDA 2020

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. ALL REDUNDANT LINEMARKING TO BE REMOVED. REINSTATE EXISTING LINEMARKING AFFECTED BY PAVEMENT RE-SHEETING.
3. LINEMARKING AND RETRO REFLECTIVE PAVEMENT MARKERS (RRPM) TO BE INSTALLED IN ACCORDANCE WITH TFNSW DELINEATION GUIDELINES.
4. SIGNPOSTING LOCATION AND ORIENTATION TO BE INSTALLED IN ACCORDANCE WITH AS1742.2 AND TFNSW SUPPLEMENTS.
5. EXISTING SIGNS TO BE REMOVED OR RELOCATED HAVE BEEN IDENTIFIED ONLY. EXISTING SIGNS WHICH ARE NOT NOTED ARE TO REMAIN UNLESS APPROVED BY THE PRINCIPALS REPRESENTATIVE.
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7. WIDE CENTRELINE MARKINGS AS PER TYPICAL DETAILS SHEET RW-0003
8. BLACK ATLM TO BE INSTALLED ADJACENT TO EDGE LINES.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:59:54 AM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

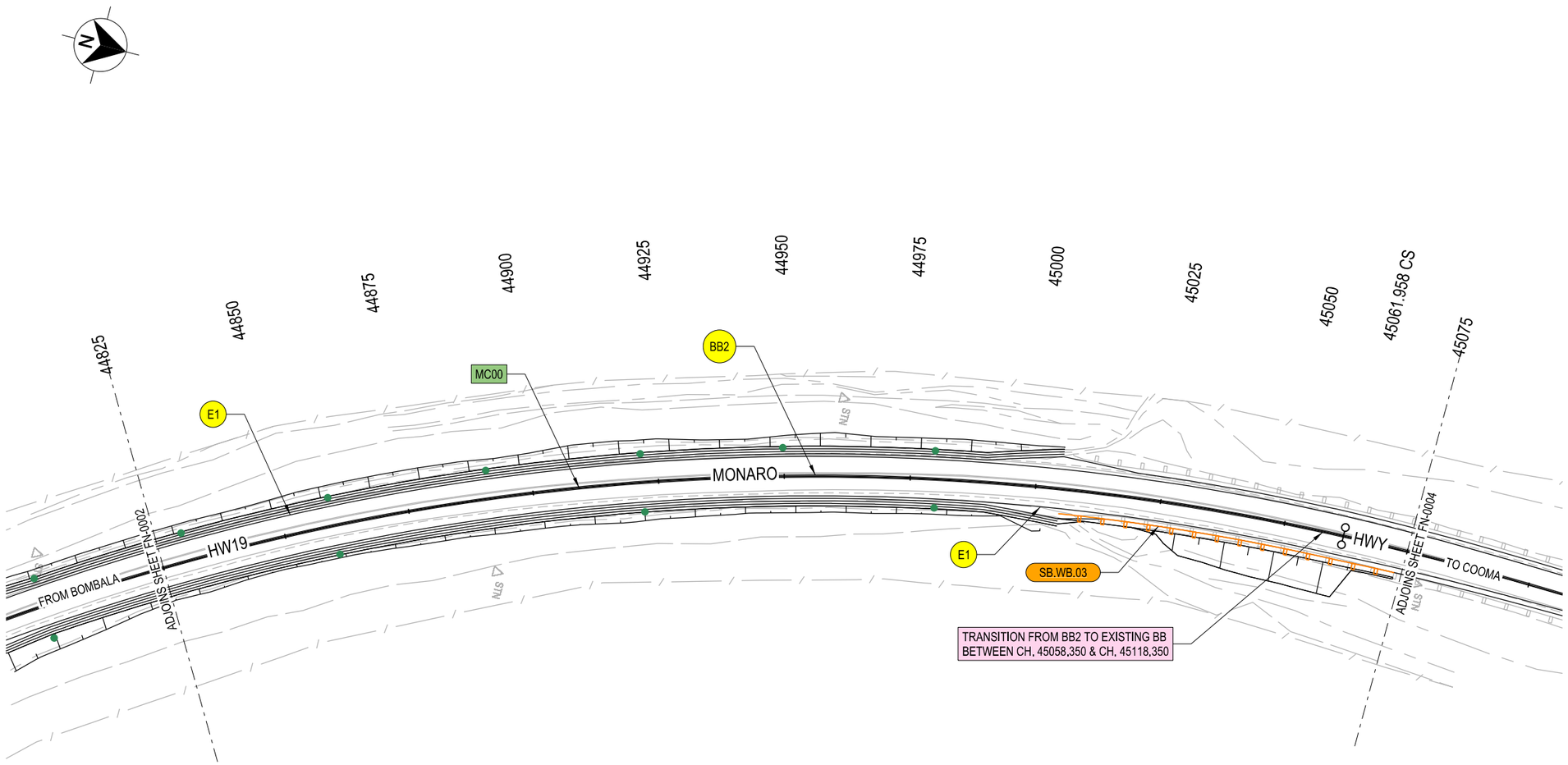
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.44575.000 TO CH.44825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0002	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
- EXISTING SIGNAGE LOCATION
- PROPOSED SIGNAGE LOCATION
- PROPOSED GUIDE POSTS
- NEW SIGN TO BE INSTALLED
- EXISTING SIGN TO BE RETAINED OR RELOCATED
- EXISTING SIGN TO BE REMOVED

GDA 2020

NOTES

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6. FOR SIGN POST AND FOOTING DETAILS REFER TO TFNSW ACCEPTANCE DOCUMENT FOR FRANGIBLE SIGN POST PRODUCT.
7. WIDE CENTRELINE MARKINGS AS PER TYPICAL DETAILS SHEET RW-0003
8. BLACK ATLM TO BE INSTALLED ADJACENT TO EDGE LINES.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 11:59:55 AM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

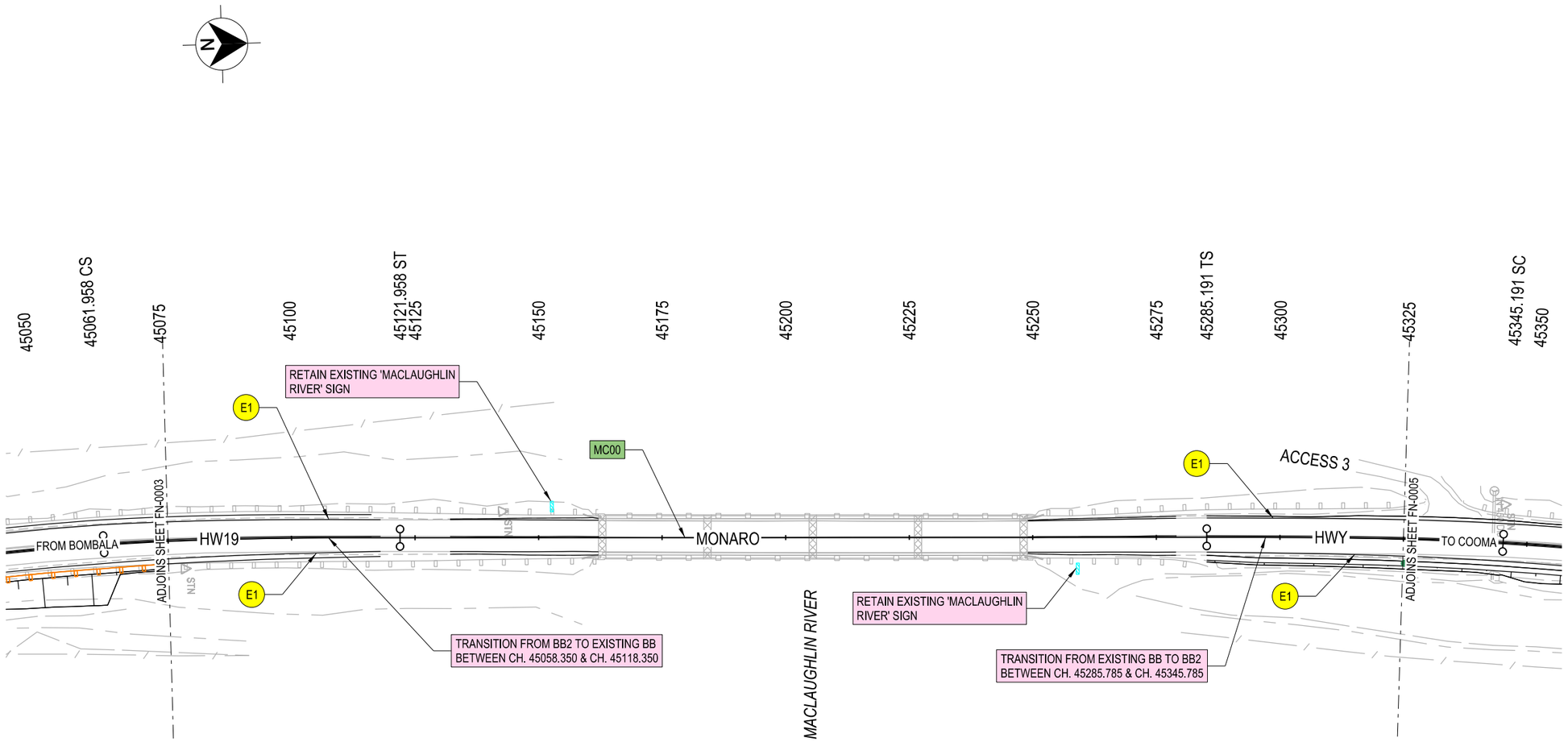
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.44825.000 TO CH.45075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: FN-0003
ISSUE: 2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
- EXISTING SIGNAGE LOCATION
- PROPOSED SIGNAGE LOCATION
- PROPOSED GUIDE POSTS
- NEW SIGN TO BE INSTALLED
- EXISTING SIGN TO BE RETAINED OR RELOCATED
- EXISTING SIGN TO BE REMOVED

GDA 2020

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

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PLOT BY: waltersj

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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
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DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

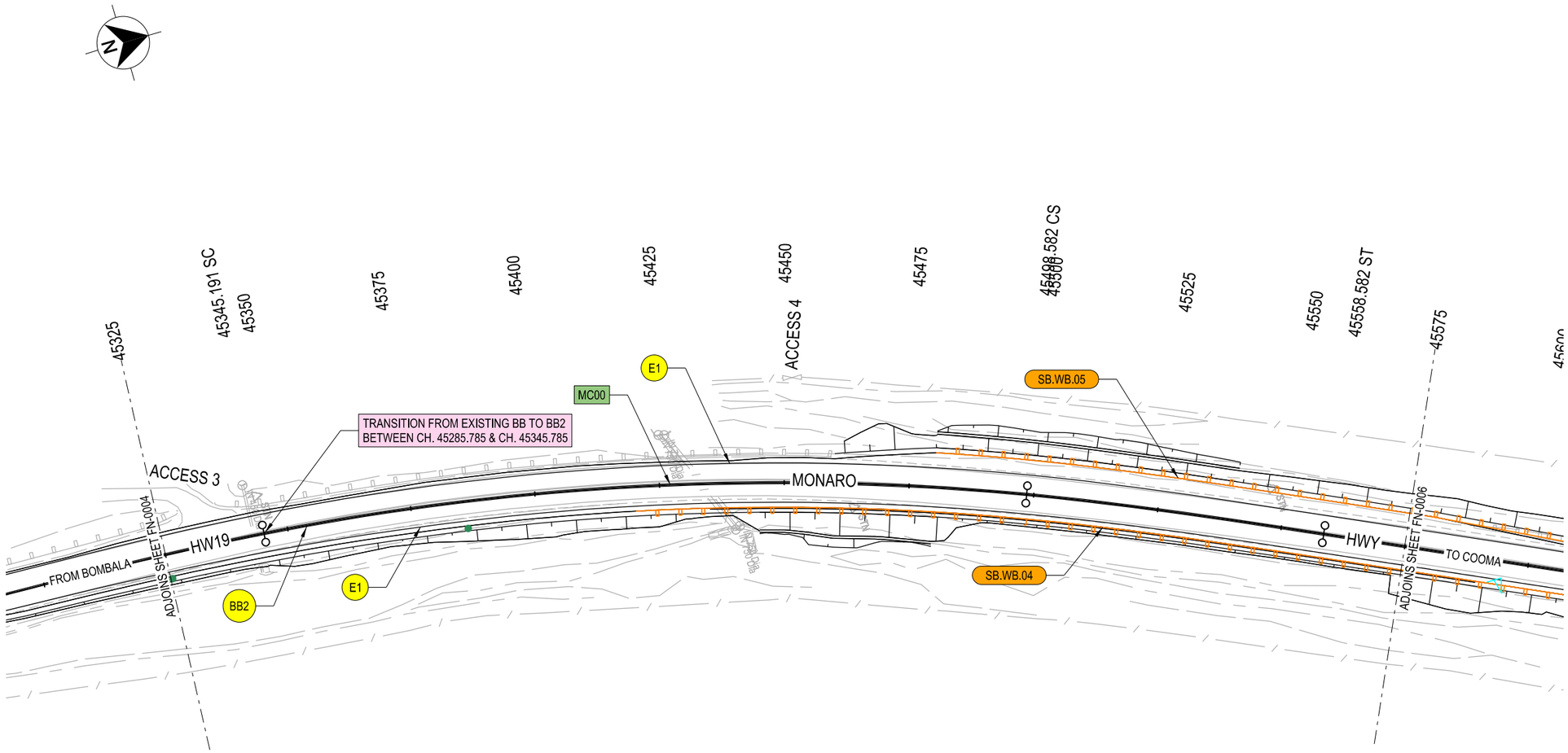
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.45075.000 TO CH.45325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0004	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
- EXISTING SIGNAGE LOCATION
- PROPOSED SIGNAGE LOCATION
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- EXISTING SIGN TO BE REMOVED

GDA 2020

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 11:59:59 AM
PLOT BY waltersj

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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020)
HEIGHT DATUM AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
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PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

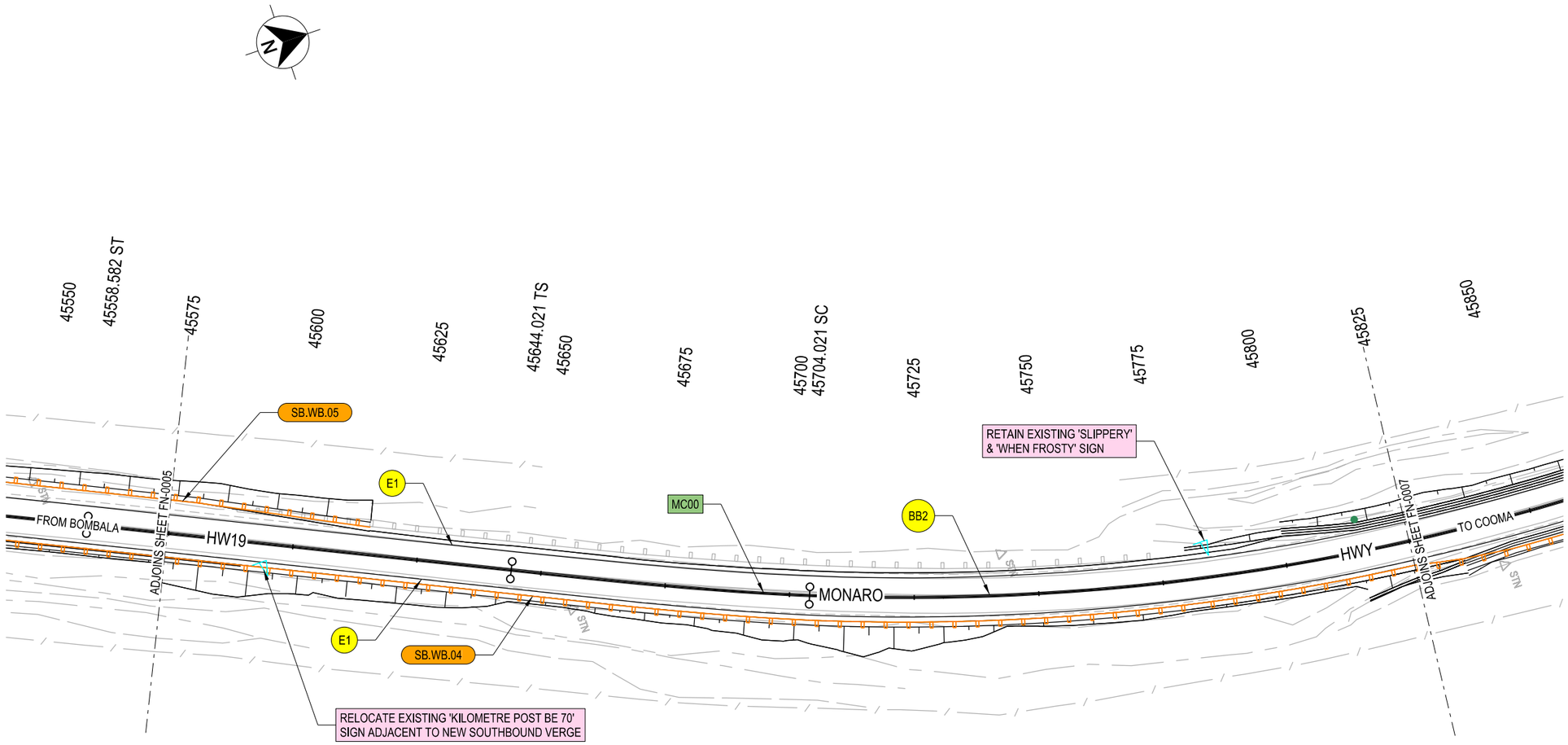
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.45325.000 TO CH.45575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0005	2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
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GDA 2020

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:00:00 PM
PLOT BY: walterswj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

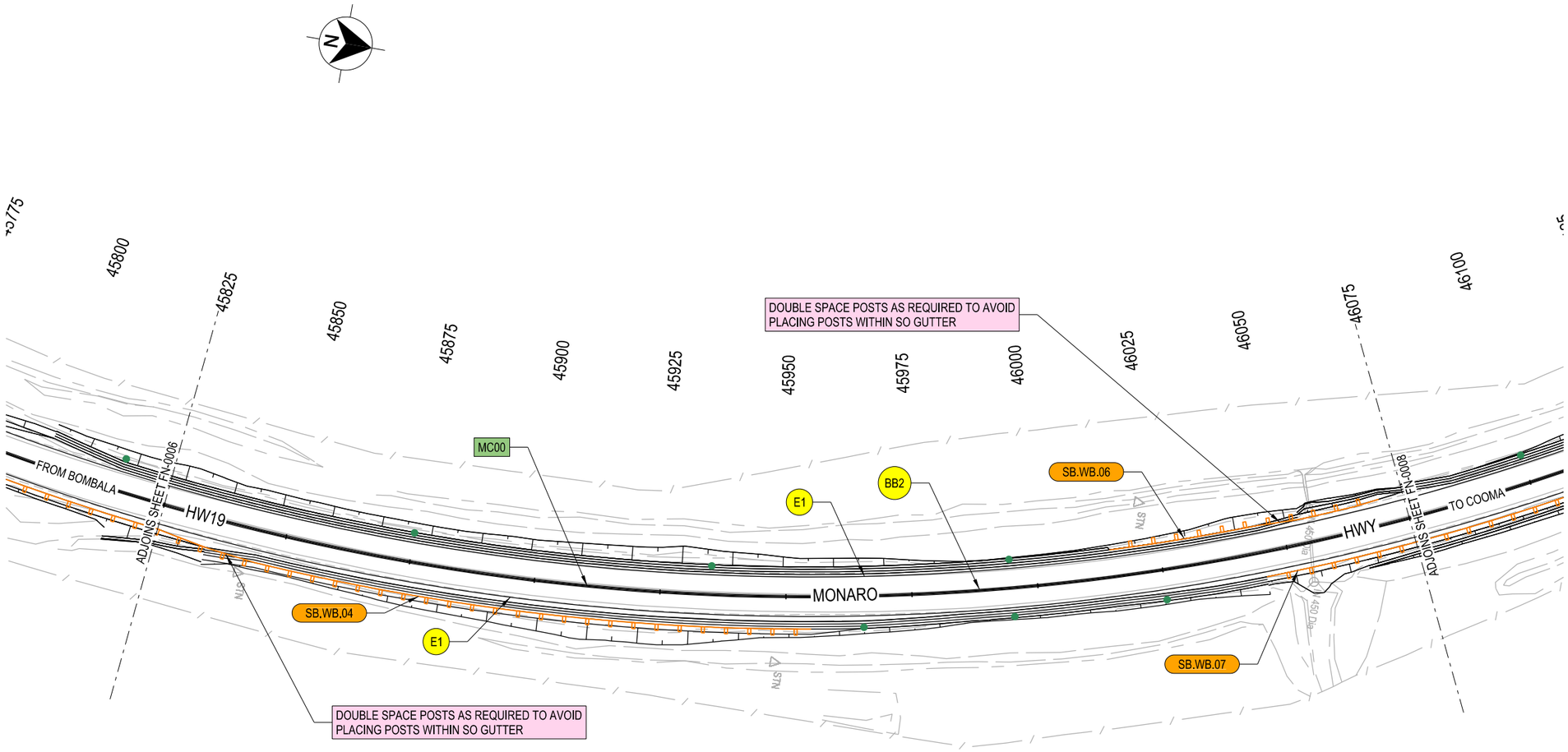
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.45575.000 TO CH.45825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: FN-0006
ISSUE: 2

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LEGEND

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
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GDA 2020

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
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FILE NAME ; FILE NAME

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PLOT BY: waltersj

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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

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TITLE		
DRAWN	J. WALTERS	15.12.23
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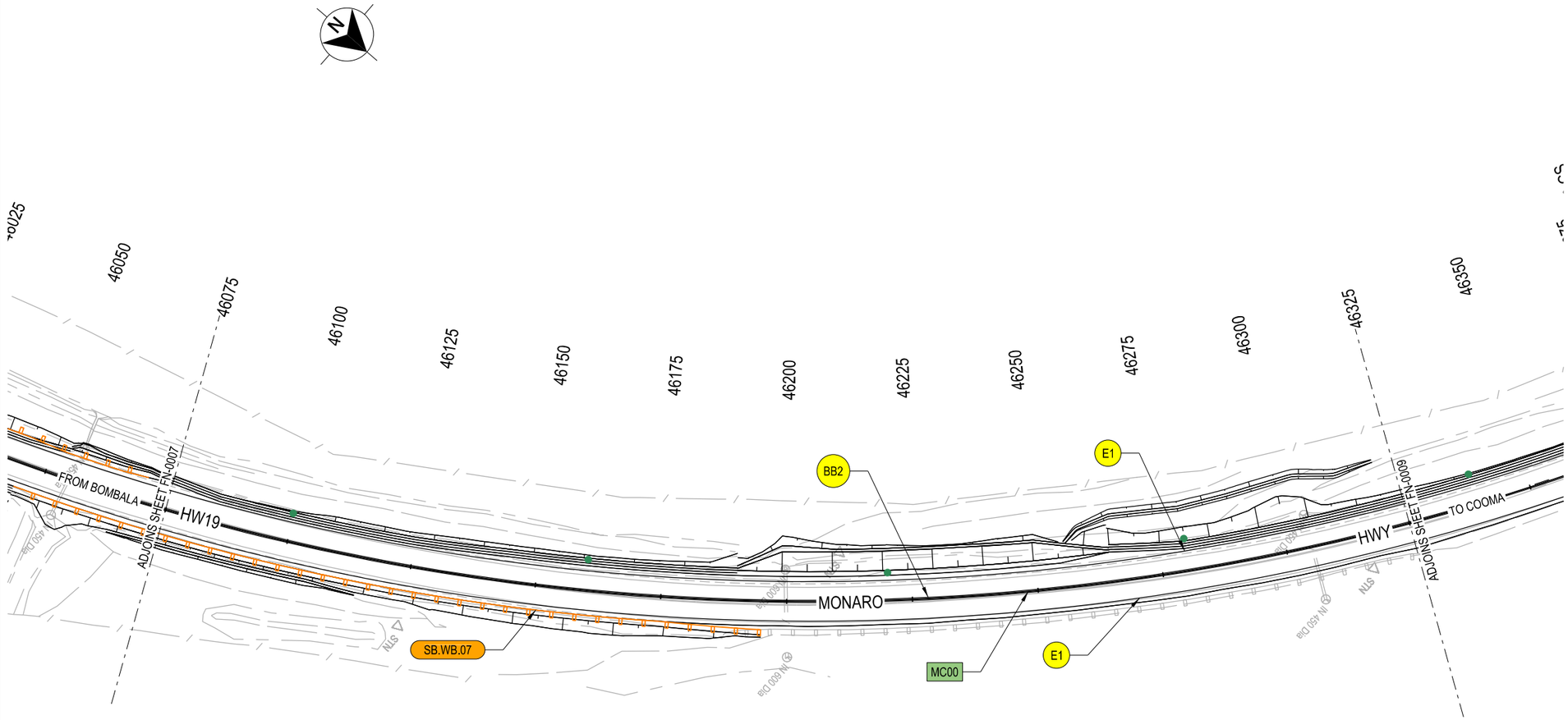
SNOWY MONARO REGIONAL LGA
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ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.45825.000 TO CH.46075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0007	2

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LEGEND

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GDA 2020

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DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:00:04 PM
PLOT BY: walterswj

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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
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DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

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NSW GOVERNMENT Transport for NSW

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PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.46075.000 TO CH.46325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0008	2

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LEGEND

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- W BEAM / THRIE BEAM GUARD RAIL
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- EXISTING SIGN TO BE REMOVED

GDA 2020

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EXTERNAL REFERENCE FILES: XXXXXX

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:00:06 PM PLOT BY: walterslj

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

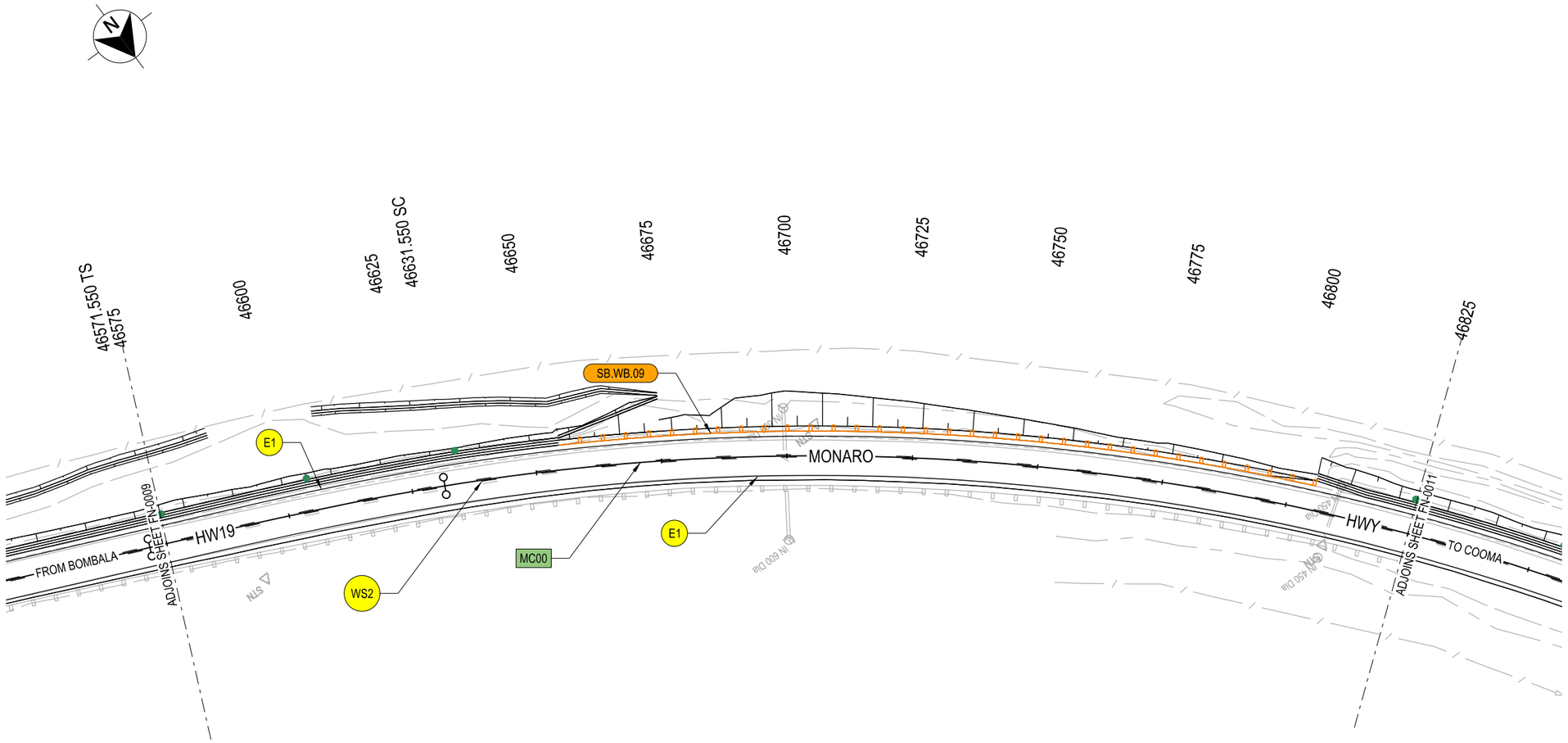
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.46325.000 TO CH.46575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0009	2

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LEGEND

GDA 2020

- MC?? — DESIGN CONTROL CALLOUT
- XXXX — CONSTRUCTION CALLOUT
- BB — LINEMARKING CALLOUT
- SB01 — SAFETY BARRIER CALLOUT
- W BEAM / THRIE BEAM GUARD RAIL
- EXISTING SIGNAGE LOCATION
- PROPOSED SIGNAGE LOCATION
- PROPOSED GUIDE POSTS
- NEW SIGN TO BE INSTALLED
- EXISTING SIGN TO BE RETAINED OR RELOCATED
- EXISTING SIGN TO BE REMOVED

NOTES

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT TFNSW QA SPECIFICATIONS AND AUSTRALIAN STANDARDS UNLESS OTHERWISE STATED.
2. ALL REDUNDANT LINEMARKING TO BE REMOVED. REINSTATE EXISTING LINEMARKING AFFECTED BY PAVEMENT RE-SHEETING.
3. LINEMARKING AND RETRO REFLECTIVE PAVEMENT MARKERS (RRPM) TO BE INSTALLED IN ACCORDANCE WITH TFNSW DELINEATION GUIDELINES.
4. SIGNPOSTING LOCATION AND ORIENTATION TO BE INSTALLED IN ACCORDANCE WITH AS1742.2 AND TFNSW SUPPLEMENTS.
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6. FOR SIGN POST AND FOOTING DETAILS REFER TO TFNSW ACCEPTANCE DOCUMENT FOR FRANGIBLE SIGN POST PRODUCT.
7. WIDE CENTRELINE MARKINGS AS PER TYPICAL DETAILS SHEET RW-0003
8. BLACK ATLM TO BE INSTALLED ADJACENT TO EDGE LINES.

NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:00:08 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
TITLE		
DRAWN	J. WALTERS	15.12.23
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CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

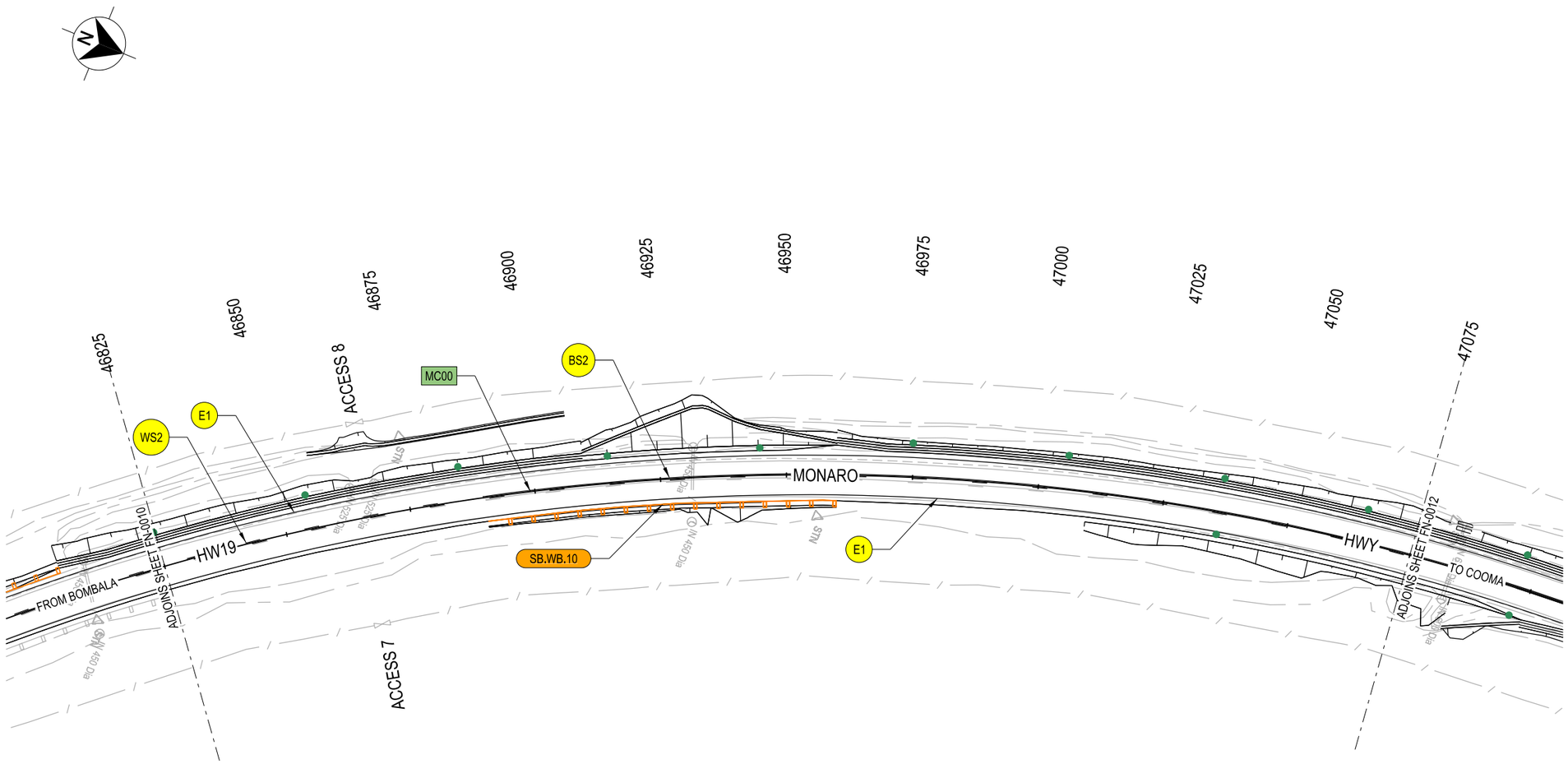
SNOWY MONARO REGIONAL LGA
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ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.46575.000 TO CH.46825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: FN-0010
ISSUE: 2

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LEGEND

GDA 2020

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50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:00:10 PM
PLOT BY: waltersj

CLIENT: NSW GOVERNMENT Transport for NSW

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

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PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

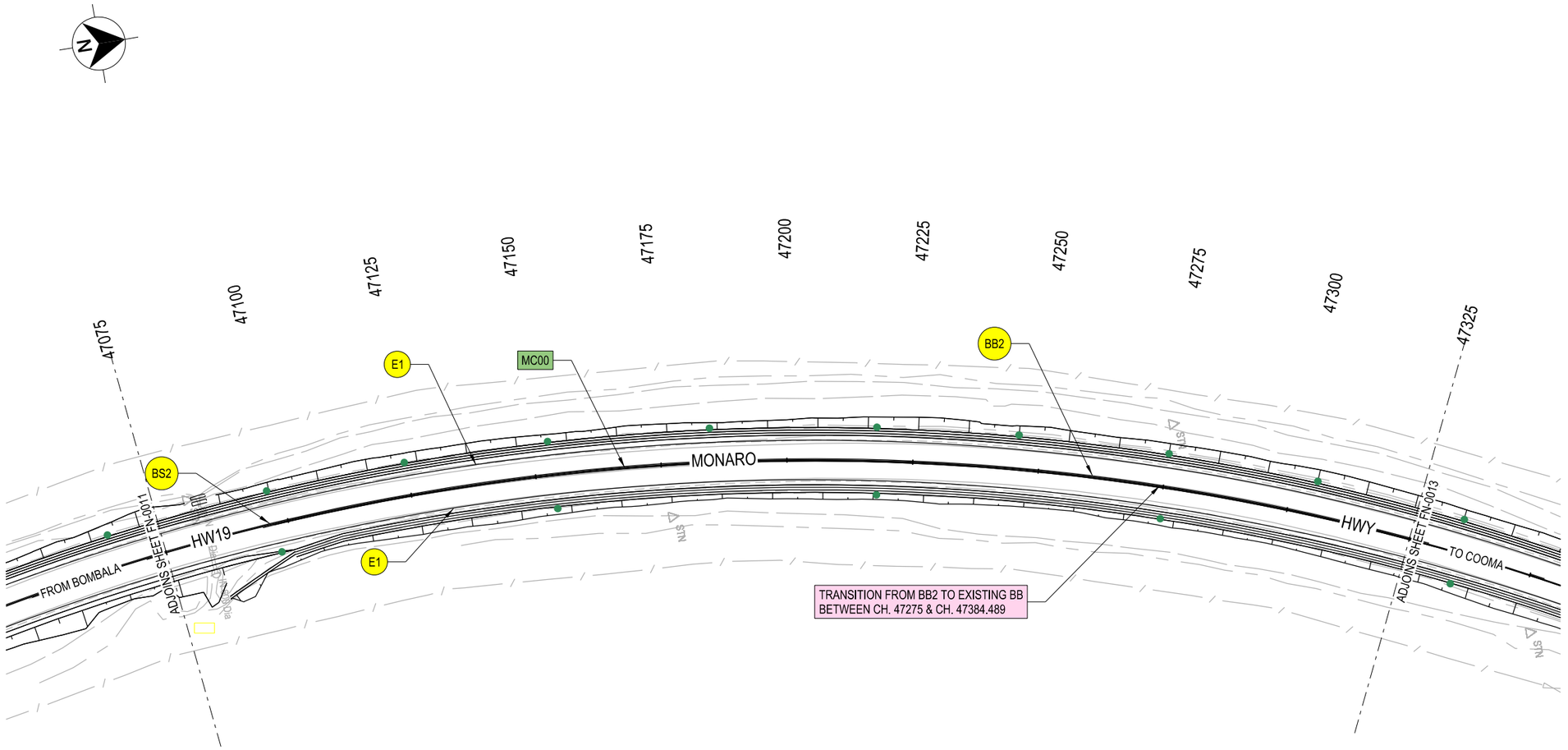
SNOWY MONARO REGIONAL LGA
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ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.46825.000 TO CH.47075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0011	2

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LEGEND

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME: C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:00:12 PM — PLOT BY: walterswj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

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DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
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CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

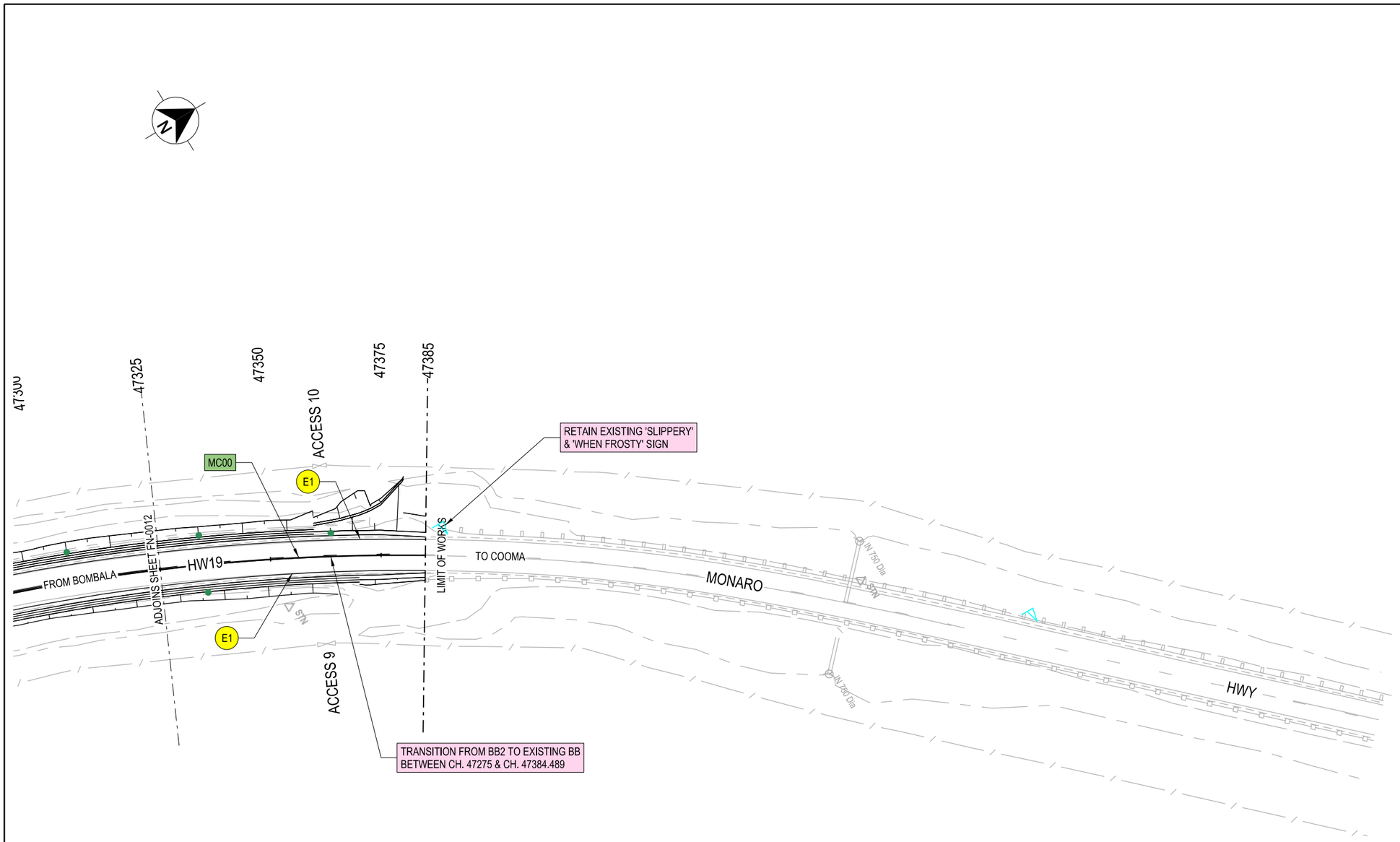
SNOWY MONARO REGIONAL LGA
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ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.47075.000 TO CH.47325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN — EDMS No. SF2023/137411 — SHEET No. FN-0012 — ISSUE 2

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LEGEND

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GDA 2020

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50mm ON A3 SIZE ORIGINAL

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C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:00:14 PM PLOT BY: walterj

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
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SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
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ROADSIDE FURNITURE & PAVEMENT MARKING PLAN
HW19 - MONARO HWY - MC00 - CH.47325.000 TO CH.47385.059

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0013	2

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GDA 2020

SAFETY BARRIER SCHEDULE

BARRIER LABEL	SHEET NUMBER	BARRIER TYPE	LEFT / RIGHT	START				APPROX SYSTEM LENGTH (m)	END			
				CONTROL STRING	TERMINAL/CONNECTION TYPE	CHAINAGE	POINT OF NEED CHAINAGE		CONTROL STRING	TERMINAL/CONNECTION TYPE	CHAINAGE	POINT OF NEED CHAINAGE
SB.WB.01	FN-0001 - 0002	EZY-GUARD*	LEFT	MC00	MSKT*	44470	44476	309	MC00	MSKT*	44779	44773
SB.WB.02	FN-0002	EZY-GUARD*	RIGHT	MC00	MSKT*	44685	44691	85	MC00	MSKT*	44770	44764
SB.WB.03	FN-0003	EZY-GUARD*	RIGHT	MC00	MSKT*	45005	45011	69	MC00	EXISTING W-BEAM	45074	45068
SB.WB.04	FN-0005 - 0007	EZY-GUARD*	RIGHT	MC00	MSKT*	45420	45426	535	MC00	MSKT*	45955	45949
SB.WB.05	FN-0005 - 0006	EZY-GUARD*	LEFT	MC00	MSKT*	45480	45486	135	MC00	EXISTING W-BEAM	45615	45609
SB.WB.06	FN-0007	EZY-GUARD*	LEFT	MC00	MSKT*	46015	46021	55	MC00	MSKT*	46070	46064
SB.WB.07	FN-0007 - 0008	EZY-GUARD*	RIGHT	MC00	MSKT*	46045	46051	150	MC00	EXISTING W-BEAM	46195	46189
SB.WB.08	FN-0009	EZY-GUARD*	LEFT	MC00	MSKT*	46412	46418	113	MC00	MSKT*	46525	46519
SB.WB.09	FN-0010	EZY-GUARD*	LEFT	MC00	MSKT*	46655	46661	150	MC00	MSKT*	46805	46799
SB.WB.10	FN-0011	EZY-GUARD*	RIGHT	MC00	MSKT*	46890	46896	70	MC00	MSKT*	46960	46954

GUIDEPOST SCHEDULE

CONTROL STRING	LEFT	RIGHT
MC00	44425.000	44425.000
MC00	44800.000	44485.000
MC00	44830.000	44545.000
MC00	44860.000	44605.000
MC00	44890.000	44665.000
MC00	44920.000	44800.000
MC00	44950.000	44860.000
MC00	44980.000	44920.000
MC00	45815.000	44980.000
MC00	45875.000	45325.000
MC00	45935.000	45385.000
MC00	45995.000	45965.000
MC00	46100.000	45995.000
MC00	46160.000	46025.000
MC00	46220.000	47035.000
MC00	46280.000	47095.000
MC00	46340.000	47155.000
MC00	46400.000	47215.000
MC00	46575.000	47275.000
MC00	46605.000	47335.000
MC00	46635.000	
MC00	46825.000	
MC00	46855.000	
MC00	46885.000	
MC00	46915.000	
MC00	46945.000	
MC00	46975.000	
MC00	47005.000	
MC00	47035.000	
MC00	47065.000	
MC00	47095.000	
MC00	47125.000	
MC00	47155.000	
MC00	47185.000	
MC00	47215.000	
MC00	47245.000	
MC00	47275.000	
MC00	47305.000	
MC00	47335.000	
MC00	47365.000	

SIGNPOSTING SCHEDULE

SIGN NUMBER	SHEET NUMBER	DESCRIPTION	CONTROL STRING	CHAINAGE	LEFT/RIGHT/ MIDDLE	FACES TRAFFIC	COMMENTS
G9-19N	FN-0001	NO THROUGH ROAD	MC00	44395.000	RIGHT	NORTHBOUND/SOUTHBOUND	RETAIN EXISTING SIGN
G6-306	FN-0001	SPEED CAMERAS USED IN NSW	MC00	44495.000	LEFT	NORTHBOUND	RETAIN EXISTING SIGN
W5-22	FN-0001	TRUCKS CROSSING OR ENTERING	MC00	44500.000	RIGHT	SOUTHBOUND	RELOCATE EXISTING SIGN TO NEW VERGE
W5-20 / W8-8	FN-0002	SLIPPERY / WHEN FROSTY	MC00	44655.000	LEFT	NORTHBOUND	RETAIN EXISTING SIGN
-	FN-0002	TRUCKS TURNING / 250M	MC00	44695.000	RIGHT	SOUTHBOUND	RELOCATE EXISTING SIGN TO NEW VERGE
-	FN-0004	MACLAUGHLIN RIVER	MC00	45155.000	LEFT	NORTHBOUND	RETAIN EXISTING SIGN
-	FN-0004	MACLAUGHLIN RIVER	MC00	45260.000	RIGHT	SOUTHBOUND	RETAIN EXISTING SIGN
G10-3	FN-0006	KILOMETRE POST 'BE 70'	MC00	45590.000	RIGHT	SOUTHBOUND	RELOCATE EXISTING SIGN TO NEW VERGE
W5-20 / W8-8	FN-0006	SLIPPERY / WHEN FROSTY	MC00	45785.000	LEFT	NORTHBOUND	RETAIN EXISTING SIGN
W5-20 / W8-8	FN-0013	SLIPPERY / WHEN FROSTY	MC00	47390.000	LEFT	NORTHBOUND	RETAIN EXISTING SIGN

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DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-08-FN.dgn

EXTERNAL REFERENCE FILES: XXXXXX

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FILE NAME ; FILE NAME

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

PLOT DATE / TIME: 15/12/2023 12:00:15 PM PLOT BY: waltersj

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SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
ROADSIDE FURNITURE SCHEDULES

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	FN-0101	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
- EA — EASEMENT
- EXTENT OF WORKS

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

WARNING: PENALTIES APPLY FOR REMOVAL, DAMAGE, DESTRUCTION, DISPLACEMENT, AND DISTURBANCE OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS (SURVEY INFRASTRUCTURE) WITHOUT AUTHORISATION BY THE SURVEYOR GENERAL AS PER THE REQUIREMENTS UNDER SECTION 24 OF THE *SURVEYING AND SPATIAL INFORMATION ACT 2002*. AUTHORISATION MUST BE SOUGHT PRIOR TO ANY ACTIVITIES ON SITE WHICH MAY IMPACT ON THE SURVEY INFRASTRUCTURE AS DETAILED IN THE *SURVEYING AND SPATIAL INFORMATION REGULATION 2017*.

THIS DRAWING IS OF SURVEY INFRASTRUCTURE IN THE GENERAL VICINITY OF THE PROPOSED CONSTRUCTION FOOTPRINT FOR WORKS UNDER CONTRACT. THE SURVEY INFRASTRUCTURE SHOWN HAS BEEN DERIVED FROM AN OFFICE INVESTIGATION OF EXISTING CADASTRAL AND DEPOSITED PLANS AND/OR SCIMS SEARCH AND MAY VARY IN ACCURACY.

THE PURPOSE OF THIS DRAWING IS TO ASSIST THE CONTRACTOR IN THE CARE AND PROTECTION OF SURVEY INFRASTRUCTURE AS REQUIRED UNDER THE LEGISLATION. IT IS PROVIDED AS GENERAL INFORMATION FOR THE CONTRACTOR AND MUST BE VERIFIED AND UPDATED FOR COMPLETENESS PRIOR TO ANY SITE ACTIVITY WITHIN OR NEAR THE CONSTRUCTION LIMITS.

TRANSPORT FOR NSW *G71 – CONSTRUCTION SURVEYS* SPECIFICATION SETS OUT THE PROCESS TO BE FOLLOWED AND ALIGNS WITH THE PROCESS DETAILED IN THE *SURVEYOR GENERAL'S DIRECTIONS NO.11 PRESERVATION OF SURVEY INFRASTRUCTURE*.

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- TEMPORARY ACCESS TRACKS
- SITE OFFICES AND COMPOUNDS
- STOCKPILES
- ENVIRONMENTAL CONSTRAINTS LIMITS
- TRAFFIC CONTROL (IN ADVANCE OF WORKS)
- SIGNAGE PLACEMENT
- DESIGN CHANGES

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NOT FOR CONSTRUCTION

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DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:24:57 PM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.44350.000 TO CH.44575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0001	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
- EA — EASEMENT
- EXTENT OF WORKS

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:02 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

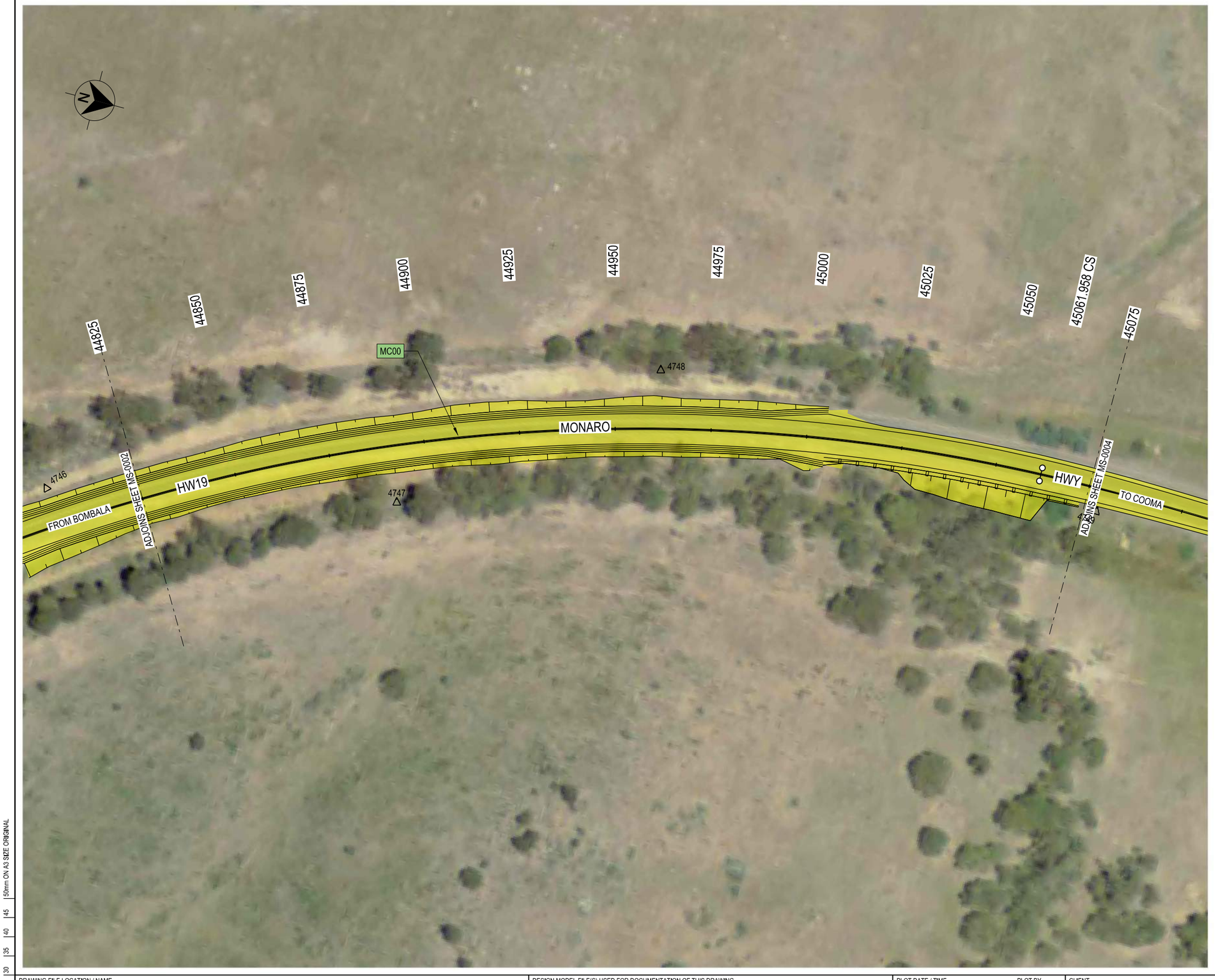
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.44575.000 TO CH.44825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0002	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
- EA — EASEMENT
- EXTENT OF WORKS

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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NOT FOR CONSTRUCTION

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:04 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.44825.000 TO CH.45075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0003	2

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LEGEND

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
- EA — EASEMENT
- EXTENT OF WORKS

GDA 2020

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED
50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:06 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT
NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.45075.000 TO CH.45325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0004	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
- EA — EASEMENT
- EXTENT OF WORKS

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:08 PM — PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
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CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.45325.000 TO CH.45575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0005	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:10 PM — PLOT BY: walterj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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SCALES ON A3 SIZE DRAWING: 0 10 20 30 40 — SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: NSW GOVERNMENT Transport for NSW

TITLE	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

CLIENT: NSW GOVERNMENT Transport for NSW

PREPARED FOR: PROJECT SERVICES, PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.45575.000 TO CH.45825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0006	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
- EA — EASEMENT
- EXTENT OF WORKS

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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TRANSPORT FOR NSW *G71 – CONSTRUCTION SURVEYS* SPECIFICATION SETS OUT THE PROCESS TO BE FOLLOWED AND ALIGNS WITH THE PROCESS DETAILED IN THE *SURVEYOR GENERAL'S DIRECTIONS NO.11 PRESERVATION OF SURVEY INFRASTRUCTURE*.

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- UTILITY ADJUSTMENTS
- TEMPORARY ACCESS TRACKS
- SITE OFFICES AND COMPOUNDS
- STOCKPILES
- ENVIRONMENTAL CONSTRAINTS LIMITS
- TRAFFIC CONTROL (IN ADVANCE OF WORKS)
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ADVICE MUST BE SOUGHT FROM THE TRANSPORT FOR NSW DIRECTOR OF SURVEYING UPON CONTRACT AWARD.

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NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:13 PM
PLOT BY: walterswj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

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NSW GOVERNMENT Transport for NSW

PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.45825.000 TO CH.46075.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS: 100% - DETAIL DESIGN
EDMS No.: SF2023/137411
SHEET No.: MS-0007
ISSUE: 2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
- DP — DP OVERLAY (ACCURACY 0.1M)
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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:15 PM
PLOT BY: walterswj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
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	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020)
HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	TITLE	NAME	DATE
DRAWN		J. WALTERS	15.12.23
DRG CHECK		J. YANEZ	15.12.23
DESIGN		J. WALTERS	15.12.23
DESIGN CHECK		J. YANEZ	15.12.23
DESIGN MNGR		G. KOZAROSKI	15.12.23
PROJECT MNGR		S. WAKELING	15.12.23

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PREPARED FOR
PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.46075.000 TO CH.46325.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0008	2

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LEGEND

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
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GDA 2020

CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:18 PM
PLOT BY: walterswj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
DESIGN CHECK	J. YANEZ	15.12.23
DESIGN MNGR	G. KOZAROSKI	15.12.23
PROJECT MNGR	S. WAKELING	15.12.23

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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

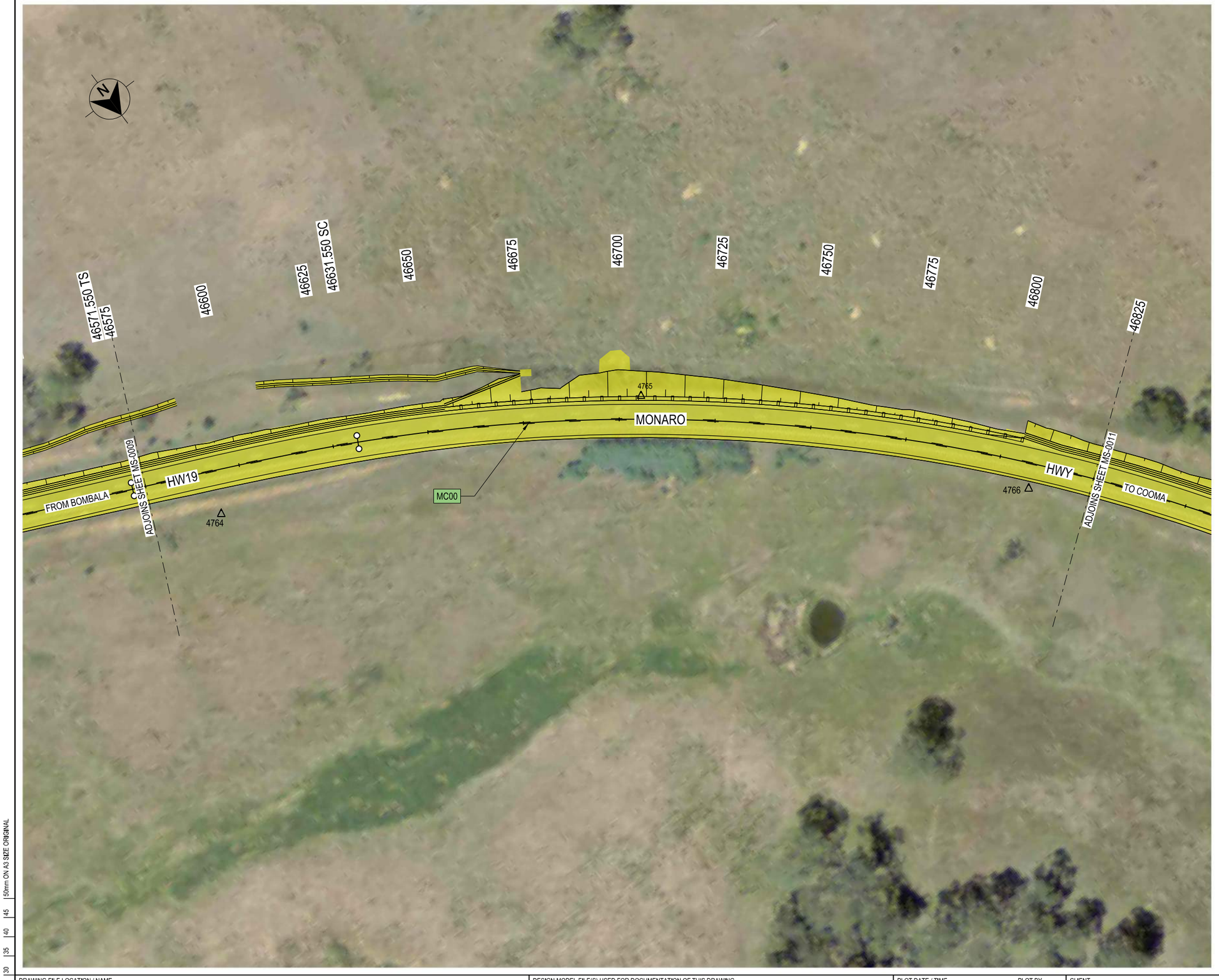
SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
HW19 - MONARO HWY - MC00 - CH.46325.000 TO CH.46575.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0009	2

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LEGEND

GDA 2020

- SAFE
- VULNERABLE
- TO BE DESTROYED
- MC?? — DESIGN CONTROL CALLOUT
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CARE, PROTECTION AND PRESERVATION OF PERMANENT SURVEY AND CADASTRAL REFERENCE MARKS

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION / NAME
C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
FILE NAME ; FILE NAME

PLOT DATE / TIME: 15/12/2023 12:25:21 PM
PLOT BY: waltersj

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
XXXXXX	00	17-07-23	ISSUED FOR 20% DESIGN REVIEW	JW
	01	24-10-23	ISSUED FOR 80% DESIGN REVIEW	JW
	02	15-12-23	ISSUED FOR 100% DESIGN REVIEW	JW

SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM: MGA ZONE 55 (GDA2020) HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY
NSW GOVERNMENT Transport for NSW

	NAME	DATE
DRAWN	J. WALTERS	15.12.23
DRG CHECK	J. YANEZ	15.12.23
DESIGN	J. WALTERS	15.12.23
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DESIGN MNGR	G. KOZAROSKI	15.12.23
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PROJECT SERVICES
PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
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HW19 - MONARO HWY - MC00 - CH.46575.000 TO CH.46825.000

A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0010	2

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LEGEND

GDA 2020

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0 5 10 15 20 25 30 35 40 45 50mm ON A3 SIZE ORIGINAL

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C:\Data\Worksets\HW19 Nimmitabel Shoulder Widening\dgn\05-Drawing Production\P-PLAN-16-MS.dgn

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FILE NAME ; FILE NAME

PLOT DATE / TIME 15/12/2023 12:25:23 PM
PLOT BY waltersj

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SCALES ON A3 SIZE DRAWING
0 10 20 30 40
SCALE 1:1000m

CO-ORDINATE SYSTEM MGA ZONE 55 (GDA2020) HEIGHT DATUM AHD

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A3

RMS REGISTRATION No. DS2023/000777

ISSUE STATUS	EDMS No.	SHEET No.	ISSUE
100% - DETAIL DESIGN	SF2023/137411	MS-0011	2

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LEGEND

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PROJECT MANAGEMENT SOUTHERN REGIONAL AND OUTER METROPOLITAN

SNOWY MONARO REGIONAL LGA
HW19 - MONARO HIGHWAY
SAFETY IMPROVEMENTS
3KM TO 6KM SOUTH OF NIMMITABEL
PRESERVATION OF SURVEY INFRASTRUCTURE PLAN
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Appendix C: Flora and Fauna Assessment Report

Flora and Fauna Assessment –HW19 SUP Monaro Highway Safety Improvements, South of Nimmitabel: REF 1

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Template 2.8.1

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Abbreviations

Abbreviation	Description
ATLM	Audio Tactile Land Marking
BC Act	NSW *Biodiversity Conservation Act 2016*
BCSEPP	The Biodiversity and Conservation State Environmental Planning Policy 2022
BV	Biodiversity Values
CMSLEP	Cooma-Monaro Shire Local Environmental Plan 2013
DBH	Diameter at Breast Height
DPE	Department of Planning and Environment
EEC	Endangered Ecological Community
ELA	Eco Logical Australia
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
FFA	Flora and Fauna Assessment
FM Act	*Fisheries Management Act 1991*
LEP	Local Environment Plan
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NPW Act	*National Parks & Wildlife Act 1974*
OEH	Office of Environment and Heritage
PCT	Plant Community Type
REF	Review of Environmental Factors
SEPP	State Environmental Planning Policy
SVTM	State Vegetation Type Map
TEC	Threatened Ecological Community
TfNSW	Transport for New South Wales
WCTL	Wide Centre Line Treatment

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Introduction

Eco Logical Australia Pty Ltd (ELA) was engaged by Transport for New South Wales (TfNSW) to prepare a Flora and Fauna Assessment (FFA) to support a 'Minor Works' Review of Environmental Factors (REF) for the proposed Monaro Highway safety improvements project. The proposal aims to improve safety infrastructure and reduce accidents and fatalities along this section of the Monaro Highway. This FFA supports the REF for first of four packages of works for the project (REF 1), located south of Nimmitabel between Old Bombala Road and Wallaces Road.

TfNSW requires the preparation of a REF to fulfil the requirements of Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), and to take into account all matters affecting or likely to affect the environment as a result of the proposal. TfNSW is the determining authority for these works. The REF will also assess all environmental factors listed in clause 171(2) of the *Environmental Planning & Assessment Regulation 2021* (EP&A Reg); and outline impact mitigation measures to be undertaken.

The aim of this report was to determine the ecological values present within the study area and assess the ecological impacts of the proposal on threatened species and ecological communities pursuant to the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and Section 7.3 of the NSW *Biodiversity Conservation Act 2016* (BC Act).

1.1. Impact footprint, study area and locality

The locality for the purposes of this report is the area of land within 5 km of the study area, approximately 6 km to the south of the small town of Nimmitabel in the New South Wales Southern Tablelands, and includes areas directly adjoining the existing Monaro Highway (Figure 1). The impact footprint for the purposes of this report comprises the limits of the proposed road upgrades works for REF 1, including potential access and proposed site compound, stockpile and spoil locations. The study area includes the impact footprint and a three (3) m buffer to allow for potential indirect impacts to surrounding habitat (Figure 2).

1.2. Project description

The proposal comprises of a number of road upgrades, with a potential location for a site compound and stockpiling location at the southern extent of the proposed works. The proposed road upgrades for REF 1 include:

a. 3.5 m wide travel lanes
b. 1 m wide centre line treatment (WCLT)
c. Minimum 1 m sealed shoulder (total length 4,613 m)
d. 3 m sealed shoulder at selected locations (est. total 136 m)
e. Audio tactile land marking (ATLM) between centre lines and adjacent to edge lines (9,000 m total length)
f. Flexible roadside safety barrier at selected locations (total length 1,159 m)
g. SO gutter (est. 2,200 m)

The proposal will involve the removal of areas of both intact and heavily modified native vegetation, including ground covers and shrubs, as well as several native trees. The vegetation is contained within road reserve areas and existing disturbed verges, however there are some small areas of good condition native vegetation

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that may be impacted by the proposal. The study area is not mapped on the Department of Planning and Environment (DPE) Biodiversity Values (BV) map (Appendix A). There are riparian areas mapped in the locality, however these areas will not be directly impacted by the proposed works, with protection measures outlined in section 5.

1.3. Potential direct and indirect impacts

The direct impacts of the development are proposed within the impact footprint as outlined in Figure 1. The impact footprint covers a total area of 5.6 ha. A buffer to the impact area of 3 m was applied to assess any potential indirect impacts totalling 1.9 ha. The total study area assessed during the field work was 6.75 ha.

The following direct impacts on flora and fauna are anticipated from the proposal:

- The removal of approximately 0.95 ha of highly disturbed vegetation along the existing roadside and verges for the road upgrade works. Approximately 0.21 ha comprises disturbance arising from the establishment of compound, spoil, and stockpile sites. The bulk of the area affected is dominated by exotic grasses and forbs with cosmopolitan native species that can persist on the road verge.
- A small area of poor condition threatened ecological community vegetation (up to 0.04 ha) may be disturbed through upgrades to an existing culvert.
    - Vegetation removal will include the removal of one large, four medium and twelve small trees (17 trees total).
- Pruning back of overhanging tree branches.

The following indirect impacts on flora and fauna are anticipated from the proposal:

- Potential disturbance from vehicle movement to up to 1.2 ha of mixed native and exotic vegetation within the 3 m buffer area, and 0.01 ha of good condition threatened ecological community vegetation.
- Potential for increased spread of weeds into adjacent areas of native vegetation.
- Potential for increased soil erosion and runoff during construction.
- Potential for increased dust and noise impacts to retained habitats during construction.

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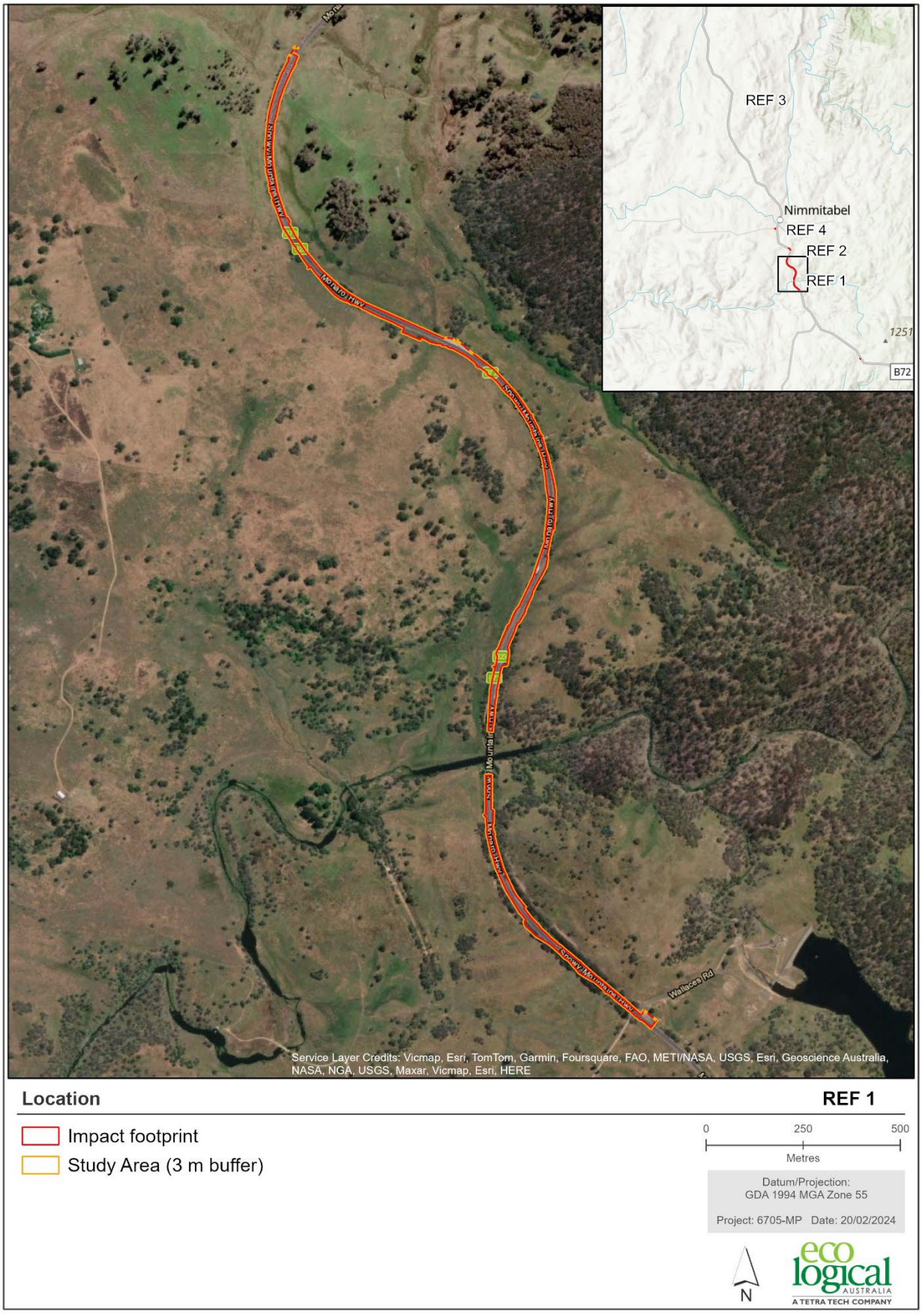


Figure 1: Location of REF 1



Figure 2: Impact footprint and study area

1.4. Disturbances

The study area is located within and directly adjoining the Monaro Highway, which is a heavily used roadway and major freight route. The bulk of the study area is heavily modified by past road development and ongoing roadside maintenance. There are existing gravel road shoulders, guardrails, a bridge spanning the Maclaughlin River with public access to the river on the western side of the road (north of the bridge), and multiple roadside batters and drainage culverts (Photos 1-3). There are several areas where there is vehicle disturbance on the roadside where vehicles regularly stop (Photo 4).

Properties adjacent to the study area are primarily used for agriculture (livestock grazing) and as such the vegetation within the study area is has also been modified by the encroachment of weeds and exotic pasture grasses. The properties are generally fenced along the boundaries between the road verge/reserve and the paddock/property, however, in some areas the fence line encompasses some of the road reserve. There are several areas along the fence line with gates and property access to the road (Photo 5).

Much of the vegetation within the study area is dominated by exotic grasses and forbs, with some areas containing regrowth native shrubs, and further from the road verge mature canopy trees, particularly at the southern end of the study area. There are scattered trees within the surrounding landscape and canopy connectivity is typically sparse. Though the study area contains areas of intact native vegetation, they are largely beyond the impact footprint.



Photo 1: River access vehicle turnout north of the Maclauglin River bridge on the western side, facing north. Primarily exotic and mixed grasses and forbs within the study area. Some native and introduced tree species are adjacent to the study area.



Photo 2: Existing road shoulder and drainage depression at the base of the batter, facing south along the eastern side at the southern extent of the study area. Vegetation typical of the study area, mixed native and exotic grasses and forbs with some native trees and shrubs on the batter ridge, outside of the study area. Impacts here will be limited to the disturbed road verge and drain.



Photo 3: Vehicle pullover area on existing shoulder facing north along the eastern side, at the southern end of the study area. Primarily highly modified grassy vegetation where existing shoulder has been maintained along the highway. The remnant woodland trees on the edge of the study areaare beyond the limit of the proposed works and will not be impacted.



Photo 4: Maclaughlin River bridge approach facing north. Some remnant native woodland on the eastern edge adjoining the study area. Impacts will be limited to the weedy road verge. The trees on the edge of the road reserve will not be affected.



Photo 5: Proposed site compound at the southern extent of the study area. Adjoining property fencing, gate and stock yards on the right. Vegetation is dominated by exotic grasses, with some hardier native species persisting on the margins.

Methods

2.1. Background database and literature

A desktop review of relevant background literature and databases was undertaken to identify ecological values and guide field investigations. This included a review of:

- Threatened species/populations listed under the EPBC Act or BC Act that have previously been recorded within or near the study area (10 km buffer) (Appendix C).
- Aerial imagery and any available vegetation mapping.
- 1:25,000 hydro-line data (Natural Resource Access Regulator).
- existing reporting, where relevant.

2.2. Flora survey

A site survey of the study area was conducted on 26 October 2023 by ELA ecologists Ryan Smithers and Kylie Lopes for a period of approximately five hours. Weather conditions during the surveys were clear but windy, which did not impact any survey methodologies.

2.2.1. Community identification and floristic audit

The botanical survey involved traversing the full extent of the study area and a search of any identified high value habitat. The following tasks were undertaken:

- Random Meander flora inventory (Cropper 1993).
- Searches for specific, non-cryptic threatened flora species in appropriate habitats using the Random Meander technique.

These methods were used to gather the data necessary to describe the vegetation communities with reference to the classifications of Plant Community Types (PCT). General observations were made of the wider area.

Trees that may be impacted within the impact footprint were identified and sorted into size classes based on TfNSW guidelines. These were recorded in 'clumps' (groups) of trees to be removed by the proposal.

2.3. Fauna habitat surveys

Field investigations for fauna habitats were conducted within the study area in conjunction with the flora surveys on the 26 October 2023. This involved searches for habitat or resources relevant to threatened fauna species which have the potential to occur within the study area. This included potential feed trees and other foraging resources, and any evidence of foraging activity, water sources, hollow-bearing trees and other sheltering resources. An opportunistic fauna survey was undertaken, focussing on the detection of threatened fauna species, by direct and indirect means.

2.4. Survey limitations

The results of biodiversity assessments can be optimised by conducting investigations over a long period to compensate for the effects of unfavourable weather, seasonal changes and climatic variation. In general, the longer the survey the more species detected. Results can also be improved by using a wide range of techniques, since some species are more likely to be detected by a particular method. However, surveys and assessment are subject to constraints that determine the amount of time allocated, the methods used and the timing of the work. The biodiversity values detected during the site survey are a guide to those present but are by no means definitive. However, the techniques used in this investigation are considered adequate

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to gather the data necessary to assess the impacts of the proposal on the flora and fauna species and vegetation communities within the study area.

Results

3.1. Flora

3.1.1. Vegetation communities

The vegetation in the study area is mapped on the State Vegetation Type Map (SVTM) as primarily PCT 3413 *Monaro Kangaroo Grass Woodland-Grassland Complex* and PCT 3220 *Southeast Tableland Ranges Brown Barrel Fern Forest* (Figure 3). Although these PCT's are known within the region, the vegetation within the study area, as observed during the field investigations, does not correlate with the SVTM PCTs. The study area primarily supports exotic vegetation that is not identifiable to a PCT. There are small patches of grassy woodland and grassland derived from the historic clearing of grassy woodland, which are typically beyond the disturbance footprint. Shrubby forest, attributed as PCT 3743 *Monaro Ranges Sheltered Shrub Forest,* dominates the southern parts of the study area, however, this community is typically beyond the limits of the proposed works. There are some small areas of good condition PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* (BC Act listed TEC), and grassland derived from the community within the study area that has the potential to be impacted by proposed works. However, the proposed works have been designed to largely avoid impacts on these areas through appropriate mitigation measures.

Vegetation communities are described below.

3.1.1.1. Heavily modified grassland

This community occurs across the majority of the study area (Photo 6). The community has been so heavily modified that it is of negligible conservation significance and is highly unlikely to support threatened flora and fauna. The community is characterised by exotic grasses and forbs such as *Paspalum dilatatum* (Paspalum), *Avena spp*. (Oats), *Briza maxima* (Quaking Grass), *Cirsium vulgare* (Spear Thistle), *Conyza* spp. (Fleabane), *Trifolium repens* (White Clover), *Verbascum thapsus* subsp. *Thapsus* (Great Mullein) and *Taraxacum officinale* (Dandelion), with some priority weed species present such as *Eragrostis curvula* (African Lovegrass), *Hypericum perforatum* (St. John's Wort) and *Rubus ulmifolius* (Blackberry). There are also some hardier native species including *Austrostipa scabra* subsp. *scabra* (Rough Speargrass), *Carex appressa* (Tall Sedge) and *Poa labillardierei* var. *labillardierei* (Tussock).



Photo 6: Heavily modified grassland community toward the southern end of the study area. Location of proposed site compound.

3.1.1.2. PCT 3743 Monaro Ranges Sheltered Shrub Forest

PCT 3743 *Monaro Ranges Sheltered Shrub Forest* occurs in one location near the southern end of the study area, south of the Maclaughlins River bridge (Photo 7). This PCT is characterised by canopy species *Eucalyptus dives* (Broad-leaved Peppermint), *Eucalyptus rubida* subsp. *rubida*, and a sparse shrub layer including *Bossiaea* sp., *Acacia dealbata* subsp. *dealbata* (Silver Wattle), and *Brachyloma daphnoides* subsp. *daphnoides*. The ground cover is primarily characterised by *Rytidosperma pallidum* (Redanther Wallaby Grass), *Poa meionectes* and *Gonocarpus tetragynus* (Poverty Raspwort) when this PCT is in good condition, however within the study area this community is somewhat modified by encroachment of pasture grasses and exotic forbs, including *Paspalum dilatatum* (Paspalum), *Anthoxanthum odoratum* (Sweet Vernal Grass), *Hordeum* spp. (a Barley Grass) and *Echium vulgare* (Viper's Bugloss).



Photo 7: PCT 3743 *Monaro Ranges Sheltered Shrub Forest* on both roadsides at the southern end of the study area.

3.1.1.3. PCT 3341 Monaro-Gourock Frost Hollow Grassy Woodland

PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* was identified in five areas within the study area (Figure 4) and occurs as either a woodland (poor-very good condition) or Derived Native Grassland (poor-very good condition) of this PCT. This community is characterised by native canopy species *Eucalyptus pauciflora* (White Sally) and *Eucalyptus rubida* subsp. *rubida* (Candlebark), a very sparse shrub layer including *Acacia dealbata* subsp. *dealbata* (Silver Wattle) and *Mirbelia oxylobioides* (Mountain Mirbelia). An ground layer of native grasses and forbs is dominated by *Themeda triandra*, *Poa sieberiana* var. *sieberiana* (Snowgrass), *Microlaena stipoides* var. *stipoides* (Weeping Grass), *Poa labillardierei* var. *labillardierei* (Tussock), *Scleranthus biflorus* (Two-flowered Knawel) and *Hydrocotyle laxiflora* (Stinking Pennywort) (Photo 8). This community is described further in the section below.



Photo 8: PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* TEC south of the bridge on the Eastern side of the highway.

3.1.2. Threatened ecological communities

The TEC '*Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion'* (referred to hereafter as 'Snow Gum Grassy Woodland'), is listed as a critically endangered ecological community (BC Act). The PCTs that are associated with this TEC within the study area are PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* and Derived Native Grassland of PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland.*

This community is mapped as occurring throughout the locality and has been identified within five patches in the study area. Snow Gum Grassy Woodland TEC is characterised by *E. pauciflora* (White Sally) and *E. rubida* (Candlebark) canopy species and an assortment of native ground covers including *T. triandra* and *P. sieberiana* (Snowgrass). This TEC is associated with several species of threatened flora within the region including *Leucochrysum albicans* subsp. *tricolor* (Hoary Sunray), *Rutidosis leiolepis* (Monaro Golden Daisy) and *Swainsona sericea* (Silky Swainson-pea) and is the most likely vegetation community in which these species may occur within the study area. This PCT has been identified in five zones (Figure 4) and is discussed in Section 4.

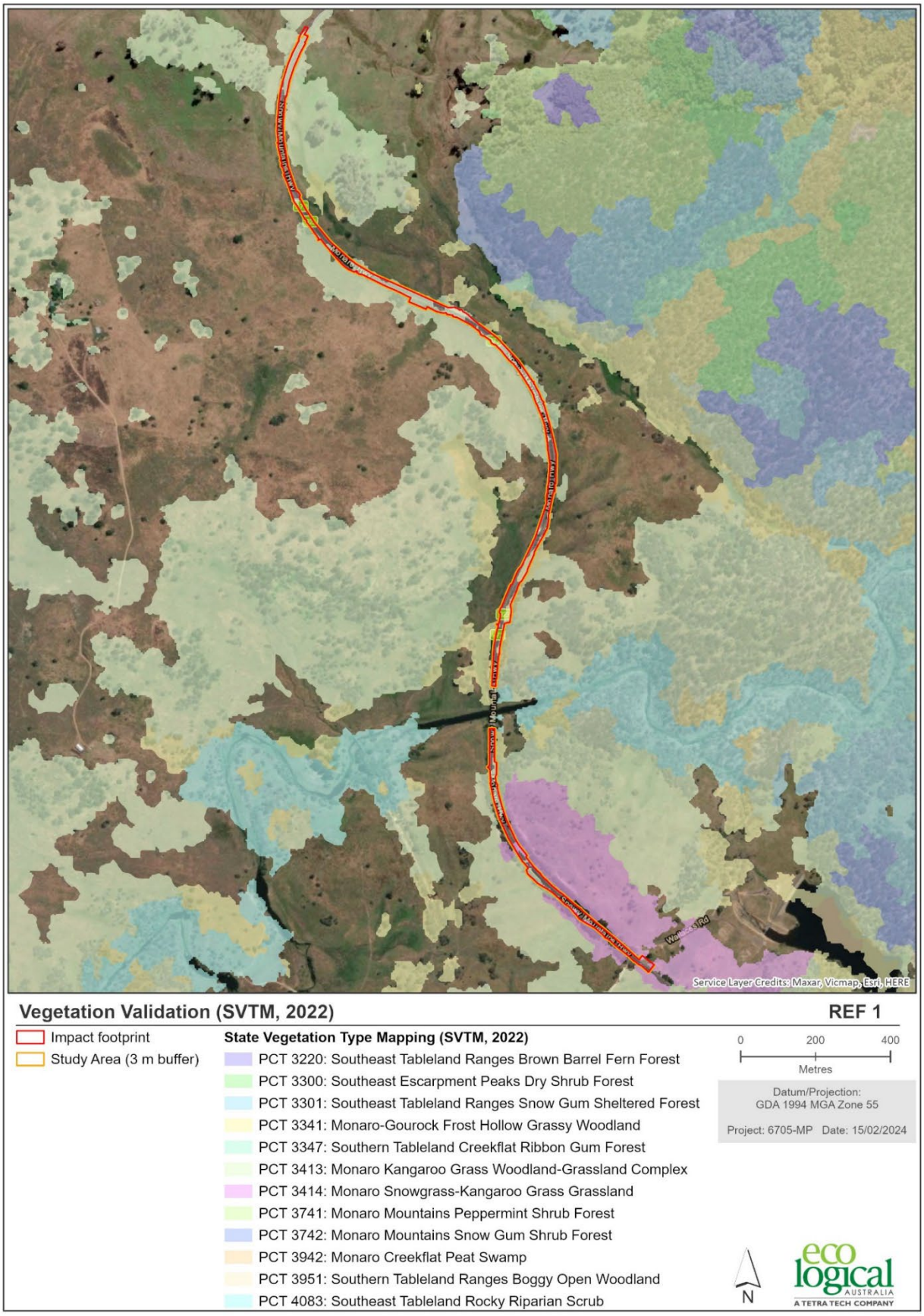


Figure 3: Mapped vegetation communities (SVTM, 2022)

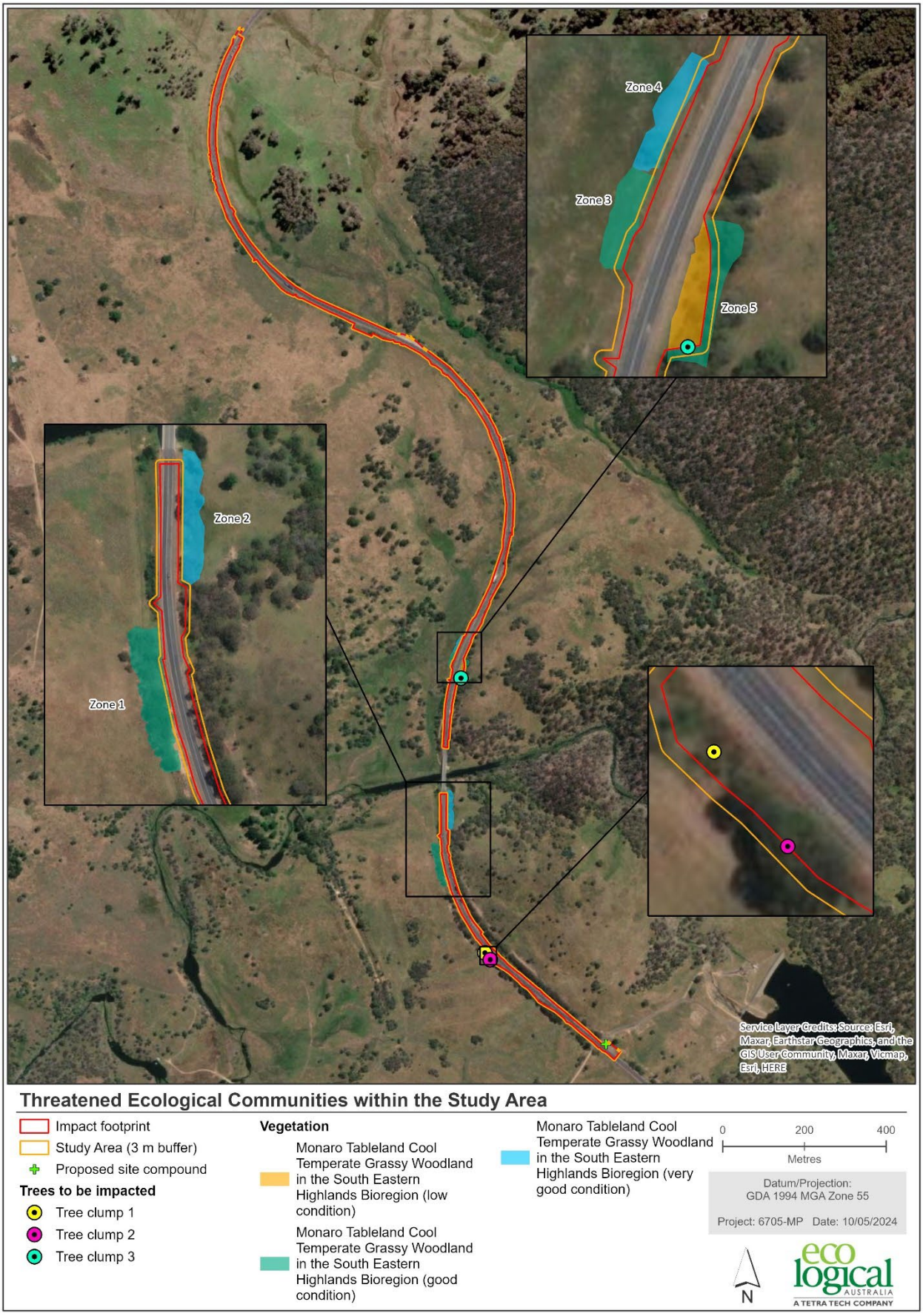


Figure 4: TECs identified in the study area

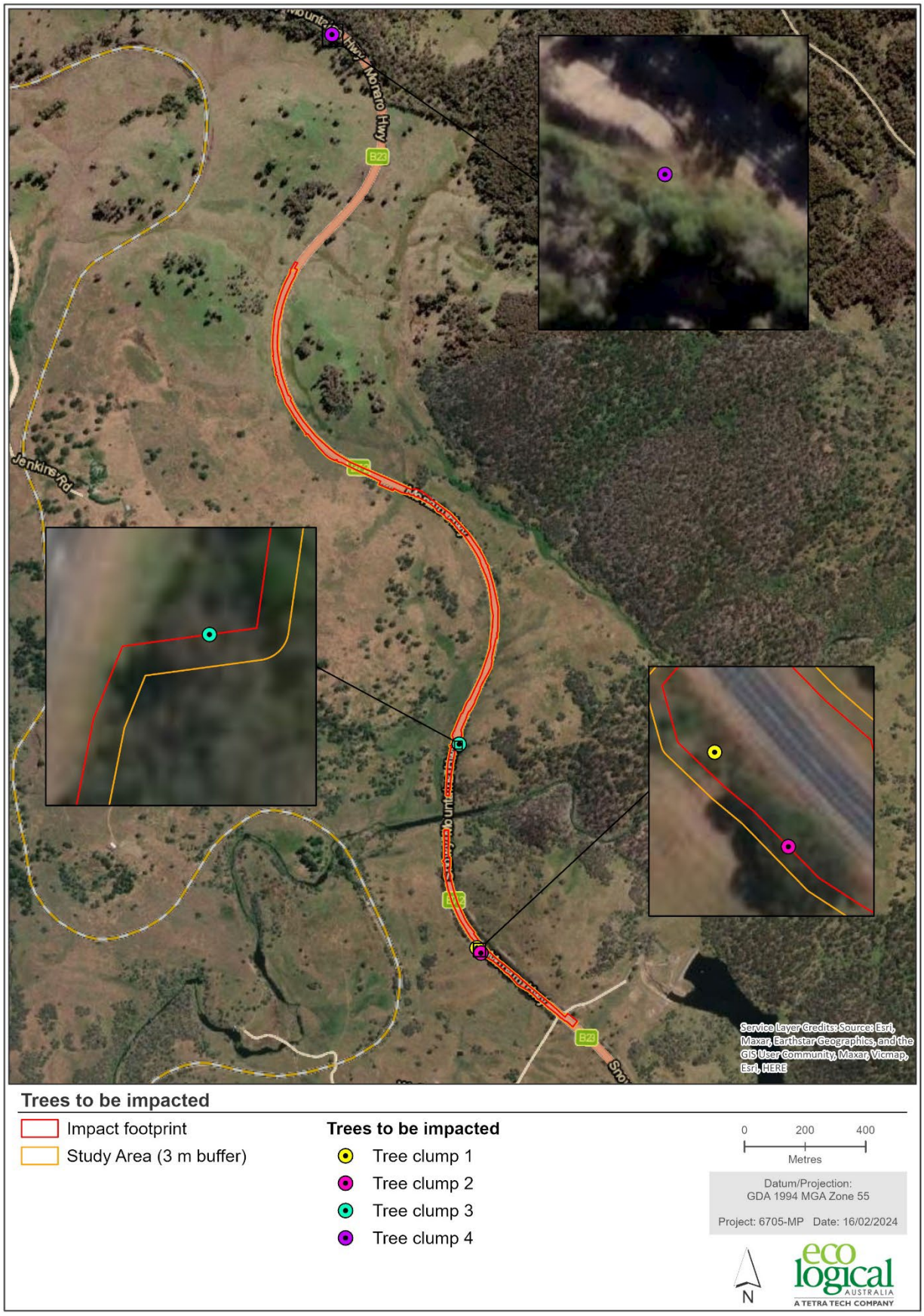


Figure 5: Trees to be impacted

3.1.3. Flora species

Ninety-seven (97) flora species were identified within the study area, including 62 native and 31 exotic species (Appendix B). Of the exotic species identified, eight (8) are considered to be 'high threat weeds' in NSW. These included *Acetosella vulgaris* (Sheep Sorrel), *Achillea millefolium* (Yarrow), *Crataegus monogyna* (Hawthorn), *Eragrostis curvula* (African Lovegrass), *Hypericum perforatum* (St. John's Wort), *Paspalum dilatatum* (Paspalum), *Rosa rubiginosa* (Sweet Briar), and *Rubus ulmifolius* (Blackberry). Native flora included many native grasses and forbs as well as some regrowth, shrubs and trees. This species list is not an exhaustive list of all species within the site but rather an identification of species characteristic of the study area.

3.1.4. Threatened flora species

No threatened flora species were identified during the site assessment; however, several species are known to occur in the wider area with records occurring within 5 km of the site (Appendix C). These threatened flora species are not expected to occur across much of the study area as they are only known to inhabit areas of good condition habitat, if they occur at all.

3.2. Fauna

3.2.1. Fauna habitats

Fauna habitats are limited due to the highly modified nature of the study area and its very close proximity to a major, heavily used highway. No hollow bearing trees were identified within or directly adjacent to the study area and the existing trees and shrubs provide only marginal foraging resources for highly mobile species of birds and mammals. Some small stick nests, being used by *Corvus coronoides* (Australian Raven) were observed in two trees toward the southern end of the study area (Photo 9), and a large number of *Vombatus ursinus* (Common Wombat) burrows were identified within the study area or very close to it (Photo 10; Figure 6).

Ground cover and shelter for small terrestrial mammals and reptiles is very limited within the study area, and non-existent is many areas where the current road shoulder is relatively wide. Open grassy areas provide generic foraging resources for some common birds and macropods. Overall, fauna resources and habitat within the study area is of little value given the condition and proximity to the road, and in consideration of the large expanse of grassy paddocks and nearby remnant woodland available in the surrounding area.

3.2.2. Fauna species

A limited range of common bird species were detected during the survey. No threatened fauna species were detected, nor was any indirect evidence of threatened fauna. No raptor nests were observed, nor was any evidence of feed tree use by gliders or cockatoos. Some highly mobile threatened birds or mammals could forage or disperse in the study area on occasions, but no important foraging resources are present for any threatened species. Threatened fauna are highly unlikely to shelter or breed in the study area due to its very close proximity to the highway and highly modified nature.

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Photo 9: Raven nest (small stick nest) in an *E. rubida* tree on the southern end of the study area.



Photo 10: Wombat burrow within the study area in modified grassland habitat.

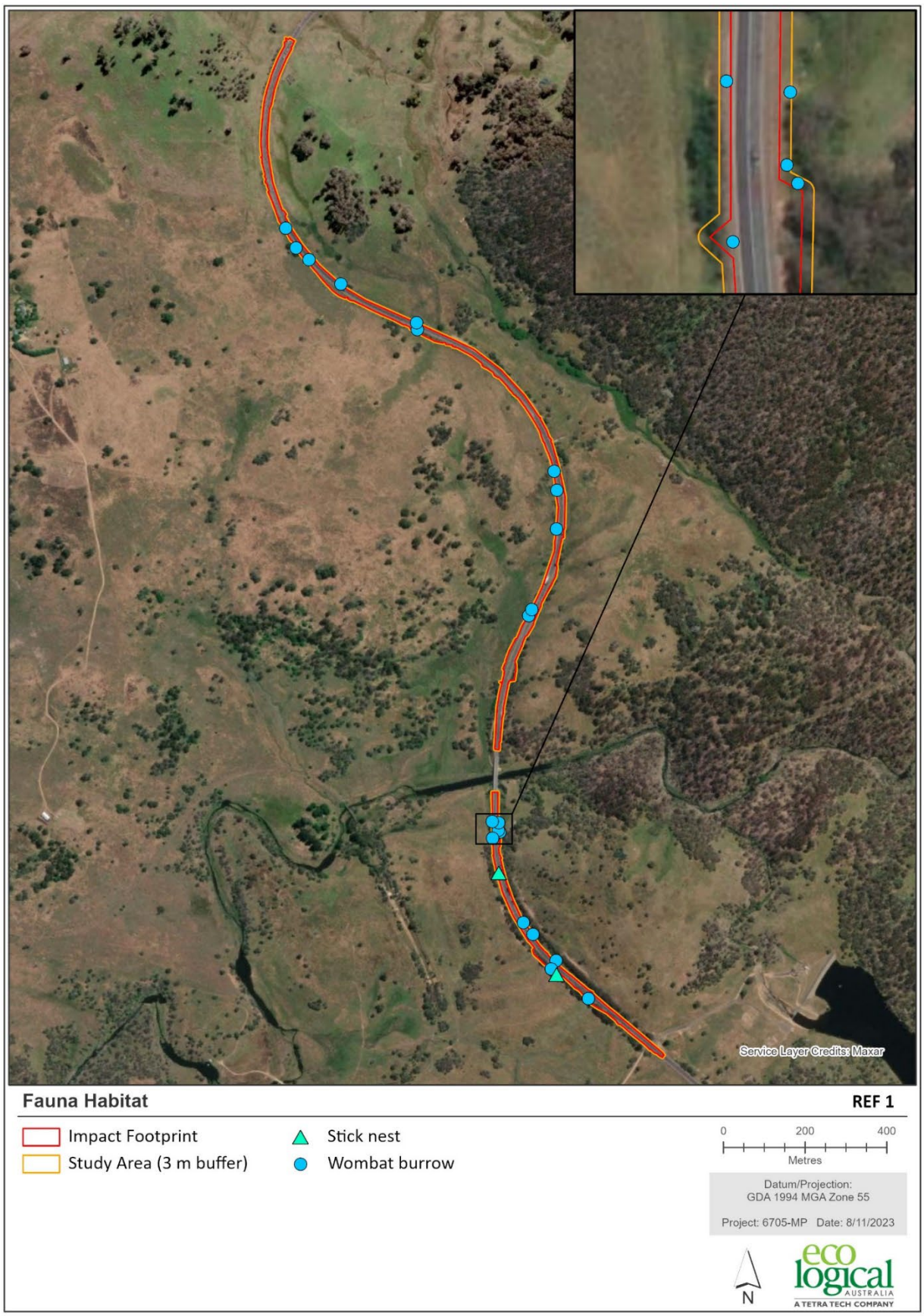


Figure 6: Identified fauna habitat

Impact Assessment

4.1. Vegetation

4.1.1. Impact area

Most of the 5.6 ha impact footprint is existing road shoulders and gravel or maintained (slashed) grass verges and drainage depressions. Within this area, the proposal will impact up to approximately 0.95 ha of exotic grassland vegetation (exotic and native species). This vegetation occurs adjacent to a major highway and is already subject to ongoing disturbances from road use and maintenance, and continued encroachment by exotic flora species from neighbouring grazing properties. As such, it does not provide any conservation value within the area as it makes up the majority of the surrounding landscape and is in very poor condition. A small area of Snow Gum Grassy Woodland TEC (0.04 ha) occurs within the proposed impact footprint. The vegetation within this area is in a highly disturbed, poor condition due to the proximity to the roadside, with the majority of good condition TEC being within the 3 m study area buffer and surrounds. Taking into account the presence of this vegetation in wider area, and the level of current disturbance, the impacts to this area of vegetation is not considered to be significant.

4.1.2. Buffer area

Some very small areas (<0.05 ha) of PCT 3743 *Monaro Ranges Sheltered Shrub Forest* that occur on the southern end of the study area within the 3 m study area buffer has the potential to be indirectly impacted by the proposal. This vegetation is of low quality as it is highly modified and contains many exotic species. This PCT is not a listed TEC and occurs in large areas within the surrounding region (DPE 2022). Additionally, approximately 0.045 ha of Snow Gum Grassy Woodland TEC occurs within the 3 m study area buffer. Provided appropriate mitigation measures are implemented, it is unlikely that the TEC within the buffer will be impacted.

4.1.3. Site compound

A site compound is proposed at the southern end of the study area in an area that is currently used for property access (Photo 5 and 6). The vegetation within the proposed compound site is highly modified derived grassland, dominated by exotic grasses and weed species. The area is already very highly disturbed and therefore no threatened flora or fauna are expected to occur within the area, nor were any identified during the survey. The impact on native habitats by the addition of this compound are expected to be negligible.

4.1.4. Stockpile and spoil sites

The proposed stockpile and spoil sites are located in areas that are heavily degraded by traffic use/ pull over, existing stockpiles, or predominantly exotic vegetation and as such, hold very little, if any, conservation value. Two medium sized *Eucalyptus rubida* (Candlebark) trees may require removal (Tree clump 4) in order to utilise one of the spoil sites (Figure 5). The impact on native habitats by the stockpile and spoil sites are expected to be negligible due to the degree of existing disturbance and amount of exotic flora species.

4.1.5. Tree pruning

Some trees may require pruning back for safety and access during and after construction and for ongoing road maintenance. Most of these trees are located toward the south of the study area, with a small number scattered across the study area. The potential impacts to flora and fauna habitat from tree pruning are expected to be negligible as the branches to be removed provide very little value to fauna that may utilise the resource due to the very close proximity to the road. Some common hardy species, such as Australian Ravens,

will nest in these trees and two (2) small stick nests were observed during surveys. Efforts should be made to avoid any unnecessary impacts to any nests during pruning and are outlined in Section 5.

4.1.6. Tree removal

The proposal will result in the removal of 19 trees along the western edge of the study area to allow for an access point for a fill/spoil area. These trees are not part of any identified TEC, and no hollows were observed in any of the trees to be removed or any trees that are adjacent.

The location of the trees identified for removal is shown as 'Tree clump 1, 2, 3 and 4' (Photo 11-13;Figure 5), and details of these trees are outlined in Table 1. No photographs of tree clump 4 were taken during the field survey. Size class is dictated by TfNSW's Tree and Hollow Replacement Guidelines (TfNSW 2023): Very large (Diameter at breast height (DBH) >100 cm), Large (DBH 50-100 cm), Medium (20-50 cm) and Small (5-20 cm).

Table 1: Details, quantity and size classes of trees to be removed

Tree clump	Species	Common name	Size class	Quantity
1	*Eucalyptus dives*	Broad-leaved Peppermint	Small	2
	Eucalyptus rubida	Candlebark	Medium	2
2	*Eucalyptus rubida*	Candlebark	Medium	2
	Eucalyptus pauciflora	White Sally	Large	1
3	*Eucalyptus pauciflora*	White Sally	Small	5
	Eucalyptus stellulata	Black Sallee	Small	5
4	*Eucalyptus rubida*	Candlebark	Medium	2



Photo 11: Part of tree clump 1 – Small and medium *E. dives* and *E. rubida.*



Photo 12: Tree clump 2 - Medium and large *E. rubida* and *E. pauciflora.*



Photo 13: Tree clump 3 - Small *E. pauciflora* and *E. stellulata*

4.2. Threatened ecological communities

The TEC '*Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion*' ('Snow Gum Grassy Woodland'), is listed as a critically endangered ecological community (BC Act). The PCTs that are associated with this TEC within the study area are PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* and Derived Native Grassland of PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland.* This TEC is located in four patches within and adjacent to the study area, with a total area of 0.43 ha. Approximately 0.025 ha of this TEC has been identified within the 3m study area buffer. A total of 0.04 ha of TEC is located within the impact footprint where direct impacts are proposed, however this is area is in poor condition. The TEC sections are broken up into zones as described below (Table 2) and in Figure 4.

Table 2: TEC Zones and areas

Zone	Impact footprint (ha)	Study area buffer (ha)	Total area of patch (ha)	TEC type
1	0	0.01	0.21	Derived Native Grassland of Snow Gum Grassy Woodland
2	0	0	0.14	Snow Gum Grassy Woodland
3	0	0.009	0.04	Derived Native Grassland of Snow Gum Grassy Woodland
4	0	0.006	0.04	Snow Gum Grassy Woodland
5	0.04	0.02	0.08	Snow Gum Grassy Woodland

4.2.1.1. TEC Zone 1

Zone 1 is located on the western side of the highway to the south of the MacLaughlin River bridge and is identified as derived native grassland. The total approximate patch size is 0.21 ha and is located outside of the proposed impact footprint, with approximately 0.01 ha occurring within the 3 m study area buffer. This area could be impacted by the proposed works, however with suggested mitigation and protection methods employed, this impact can be avoided.



Photo 14: TEC Zone 1

4.2.1.2. TEC Zone 2

Zone 2 is located on the eastern side of the highway south of the MacLaughlin River bridge and is identified as good quality TEC as it contains canopy trees as well as characteristic ground covers and shrubs. This area of TEC occurs beyond the impact footprint and the 3 m study area buffer, and is approximately 0.14 ha in size. No direct or indirect impact is expected to this area of TEC however additional protection considerations should be implemented to ensure this.



Photo 15: TEC Zone 2

4.2.1.3. TEC Zones 3 and 4

Zone 3 is located on the western side of the highway to the north of the bridge and adjoins directly with Zone 4 (combined patch size 0.08 ha). The area is identified as derived native grassland in good condition. Approximately 0.15 ha of TEC extends into the 3m study area buffer (0.009 ha Zone 3 and 0.006 ha Zone 4). This area could be impacted by the proposed works, however with suggested mitigation and protection methods employed, this impact can be avoided.



Photo 16: TEC Zone 3 and 4

4.2.1.4. TEC Zones 5

Zone 5 is located north of the bridge, on the eastern side of the road opposite Zone 3 and 4. The total approximate patch size is 0.08 ha and is located partially within the proposed impact footprint. The TEC within the 3m buffer area is identified as good quality TEC as it contains canopy trees as well as characteristic ground covers and shrubs, though areas closer to the roadside are highly disturbed. Approximately 0.04 ha of TEC is within the impact footprint, and is of poor condition. This area will be impacted by the proposed works, however with suggested mitigation and protection methods employed, impacts to the surrounding 3m buffer area can be minimised.



Photo 17: TEC Zone 5

4.3. Threatened species

A range of threatened flora and fauna species have been recorded within 10 km of the study area (Appendix C). None have been recorded within the study area. No threatened flora species were detected during the survey for this assessment and none are expected to occur, given the extensive disturbances and highly modified habitats. Threatened flora species associated with PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* TEC, include *Leucochrysum albicans subsp. Tricolor* (Hoary Sunray), *Rutidosis leiolepis* (Monaro Golden Daisy) and *Swainsona sericea* (Silky Swainson-pea). This PCT occurs in small, relatively isolated patches within the study area, therefore the presence of these species occurring is very unlikely. Regardless, avoiding impacts on these patches through appropriate mitigation measures is recommended to avoid potential impacts to threatened flora species.

Potential impacts to threatened fauna species from the proposal are expected to be negligible. A small amount of disturbed and modified habitat for species such as *Petroica phoenicea* (Flame Robin) would be potentially impacted through tree removal described in section 4.1.6. However, this makes up a very small proportion of available resources within the locality and is not an important resource given the extent of habitat modification within the study area and surrounding properties.

The study area does not contain any hollow-bearing trees and the proposal will not impact any other breeding habitat within the locality. Non-flying species such as *Dasyurus maculatus* (Spotted-tailed Quoll) are less likely to occur in the study area given the limited connectivity with intact areas of forest and marginal resources in and around the study area. Terrestrial threatened fauna species are unlikely to occur due to the lack of habitat in the study area, lack of connectivity and disturbance due to close proximity to traffic. No suitable habitat is present for threatened frogs and water birds. No embedded rocky habitat is present for *Aprasia parapulchella* (Pink-tailed Legless Lizard).

The study area does not contain important habitat for any threatened or migratory species listed under the Commonwealth EPBC Act and none are expected to occur within, or use the resources within the study area for foraging or breeding. The relatively small area of habitat affected is not important to these species and higher quality habitat is widespread in nearby vegetated areas.

4.3.1. Koala habitat protection

The Biodiversity and Conservation State Environmental Planning Policy (BCSEPP) came into effect on March 1, 2022, replacing the now repealed State Environmental Planning Policy (Koala Habitat Protection) 2021 (Koala Habitat Protection SEPP), which aims to encourage the proper conservation and management of areas of natural vegetation, including areas that provide habitat for *Phascolarctos cinereus* (Koala) to ensure a permanent free-living population over their present range and reverse the current trend of Koala population decline. Developers of land with Koala habitat must consider the impact of their project on Koalas, and in certain circumstances, prepare individual Koala plans of management for their land. The proposal is located on land to which Chapter 4 Koala Habitat Protection of the BCSEPP applies.

The habitat within the study area and surrounds is not typically associated with Koalas and their preferred feed species, though the study area contains some Peppermint towards the southern end. This taller forest species and forest type is more associated with Koala habitat and exists in the wider locality, though provides only marginal potential dispersal habitat. Two koala records have been identified very close to the study area, but are a historic records from 1980 and 1981. One other koala record closer to Nimmitabel is within 10 km of the study area, but was generated from a community survey with very little associated information. Due to the distinct lack of recent records close to the study area and lack of any substantial modification to habitat, the proposal is unlikely+ to have any significant impact on Koalas or their habitat in the region or the state.

4.4. Conclusion of BC Act Test of Significance

A test of significance under Section 7.3 of the BC Act was undertaken for the proposed development (Appendix D). Based on this assessment, it is considered very unlikely that the proposal would significantly impact any threatened species, population or ecological community.

4.5. Conclusion of EPBC Act MNES Assessment

An assessment of Matters of National Environmental Significance (MNES) under the Commonwealth EPBC Act was undertaken for the proposed development (Appendix D and E). Based on this assessment, it is considered very unlikely that the proposal would significantly impact any threatened species or other MNES.

Recommendations

The following recommendations are suggested to mitigate the impacts of the proposal and to improve environmental outcomes:

VEGETATION AND HABITAT MANAGEMENT

- Native vegetation to be retained in and around the study area should be appropriately protected during the clearing and construction process. Areas of TEC within the 3 m buffer should be flagged or fenced. All proposed road upgrade works should be contained within the proposed impact footprint to reduce the areas of TEC impacted by the proposal. This will also reduce potential impacts on threatened flora that may occur in the area within these TEC habitats.
- An induction program should be developed for workers so that the high conservation value vegetation and habitats within the study area and surrounds are not unnecessarily adversely impacted during the construction phase of the proposal or subsequently during the operation and maintenance of the proposed works.
- Tree pruning and felling should occur outside of nesting/ breeding seasons (spring/ summer) to avoid impacts to canopy nesting bird species if possible, or otherwise trees should be checked for bird nests by an appropriately qualified person prior to removal. If active bird nests are present at the time of clearing, they should be removed by an appropriately qualified person.
- A Wombat Management Plan should be created to inform and mitigate impacts to wombats and burrows before, during and after construction.

TREE REPLACEMENT

Trees that are removed should be replaced in accordance with the TfNSW Tree and Hollow Replacement Guidelines outlined in Table 3. There are a total of 19 trees proposed for removal, with a replacement requirement of 56 planted trees (equivalent to a fund transfer of $20,000). Replanting should be considered wherever possible before fund payment to improve local biodiversity outcomes and habitat enrichment. Species planted should reflect those removed by the proposal.

Table 3: TfNSW Tree and Hollow Replacement Guidelines requirements

Tree size class	Number to be removed	Tree replacement requirement (TfNSW Guidelines)	Total tree replacement required	Fund transfer (per tree)	Fund transfer (total)
Very large	0	Plant minimum of 16 trees	0	$2500	N/A
Large	1	Plant minimum of 8 trees	8	$1000	$8,000
Medium	6	Plant minimum of 4 trees	24	$500	$9,000
Small	12	Plant minimum of 2 trees	24	$125	$3,000
Hollows	0	Provide 3 artificial hollows for every occupied hollow	0	$500	N/A

WATER AND SEDIMENT MANAGEMENT

- Appropriate sediment control measures should be implemented and retained in place until exposed areas of soil are stabilised, to protect riparian BV mapped areas near the study area (McLauglin River) and reduce indirect effects.

Conclusion

This report assesses the potential biodiversity impacts associated the proposed Monaro Highway upgrade works for REF 1 located south of Nimmitabel between Old Bombala Road and Wallaces Road.

Most of the 5.6 ha impact footprint is existing road shoulders and gravel or maintained (slashed) grass verges and drainage depressions. Within this area, the proposal will directly impact approximately 0.95 ha of highly modified vegetation (exotic and native species). Adjacent vegetated areas within the 3 m study area buffer and beyond include patches of the TEC 'Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion' ('Snow Gum Grassy Woodland'), which is a listed as a critically endangered ecological community (BC Act), and other native vegetation. The PCTs that are associated with this TEC within the study area are PCT 3341 Monaro-Gourock Frost Hollow Grassy Woodland and Derived Native Grassland of PCT 3341 Monaro-Gourock Frost Hollow Grassy Woodland. Five patches of this TEC with a total area of approximately 0.045 ha has been identified outside of the impact footprint, within the 3 m study area buffer. One small patch (0.04 ha) has been identified within the impact footprint, and is of poor condition. Provided appropriate mitigation measures are followed, impacts to this TEC within the 3 m buffer area can be avoided.

Potential impacts to threatened fauna species from the proposal are expected to be negligible. A small amount of disturbed and modified habitat for *Petroica phoenicea* (Flame Robin) would be potentially impacted through tree removal described in section 4.1.6. However, this makes up a very small proportion of available resources within the locality and is not an important resource given the extent of habitat modification within the study area and surrounding properties. Threatened flora species *Rutidosis leiolepis* (Monaro Golden Daisy) is associated with PCT 3341 *Monaro-Gourock Frost Hollow Grassy Woodland* TEC), however as direct impacts to this TEC are limited to up to 0.04 ha within a disturbed roadside area, it is unlikely the species will be present.

Following the application of the test of significance under Section 7.3 of the BC Act, and in accordance with the relevant assessment guidelines, it is concluded that the proposal is unlikely to have a significant effect on threatened species, populations or communities.

Following consideration of the administrative guidelines for determining significance under the Commonwealth EPBC Act, it is concluded that the proposal is unlikely to have a significant impact on any Matters of National Environmental Significance.

Recommendations to mitigate impacts are provided in Section 5.

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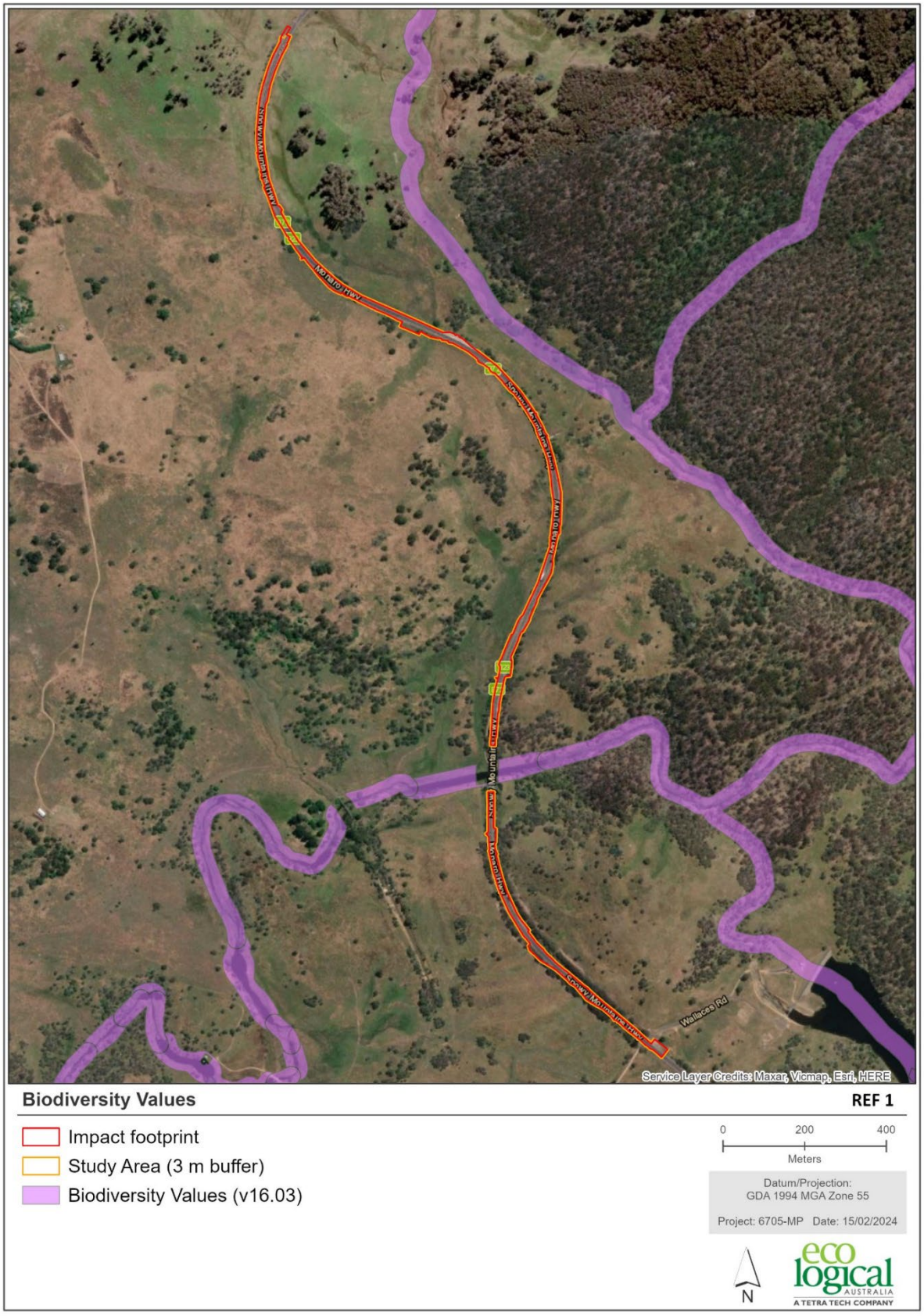
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Appendix A : Biodiversity Values mapping (13 November 2023)



Appendix B : Flora species recorded in the study area

Species name	Common name	Exotic	High threat weed
Acacia dealbata subsp. dealbata	Silver Wattle		
Acacia genistifolia	Early Wattle		
Acacia melanoxylon	Blackwood		
Acacia rubida	Red-stemmed Wattle		
Acaena novae-zelandiae	Bidgee-widgee		
Acaena ovina	Acaena		
Acetosella vulgaris	Sheep Sorrel	*	*
Achillea millefolium	Yarrow	*	*
Aira spp.	A Hairgrass	*	
Ajuga australis	Austral Bugle		
Anthoxanthum odoratum	Sweet Vernal Grass	*	
Asperula conferta	Common Woodruff		
Austrostipa scabra subsp. scabra	Rough Speargrass		
Avena spp.	Oats	*	
Bossiaea foliosa	Leafy Bossiaea		
Bossiaea prostrata			
Bothriochloa macra	Red Grass		
Brachyloma daphnoides subsp. daphnoides			
Briza maxima	Quaking Grass	*	
Bromus spp.	A Brome		
Brachyscome scapigera			
Carex appressa	Tall Sedge		
Carex breviculmis			
Carex incomitata			
Cassinia aculeata subsp. aculeata			
Chrysocephalum apiculatum	Common Everlasting		
Chrysocephalum semipapposum	Clustered Everlasting		
Cirsium vulgare	Spear Thistle	*	
Convolvulus spp.	A Bindweed		
Conyza spp.	A Fleabane	*	
Coronidium scorpioides	Button Everlasting		
Crataegus monogyna	Hawthorn	*	*
Cryptandra spp.			
Cullen tenax	Emu-foot		
Dactylis glomerata	Cocksfoot	*	
Daviesia mimosoides subsp. mimosoides			
Veronica derwentiana subsp. maideniana			
Dianella revoluta var. revoluta	A Blue Flax Lily		
Echium vulgare	Viper's Bugloss	*	
Epilobium spp.			
Eragrostis curvula	African Lovegrass	*	*
Erodium spp.	Crowfoot		
Eucalyptus dives	Broad-leaved Peppermint		
Eucalyptus pauciflora	White Sally		

Species name	Common name	Exotic	High threat weed
Eucalyptus radiata subsp. radiata			
Eucalyptus rubida subsp. rubida			
Euchiton japonicus			
Geranium antrorsum			
Geranium solanderi var. solanderi			
Gonocarpus tetragynus	Poverty Raspwort		
Hirschfeldia incana	Buchan Weed	*	
Holcus lanatus	Yorkshire Fog	*	
Hordeum spp.	A Barley Grass	*	
Hovea heterophylla			
Hydrocotyle laxiflora	Stinking Pennywort		
Hypericum perforatum	St. Johns Wort	*	*
Hypochaeris radicata	Catsear	*	
Leptorhynchos squamatus subsp. squamatus			
Lomandra longifolia	Spiny-headed Mat-rush		
Luzula spp.			
Melicytus spp.			
Microlaena stipoides var. stipoides	Weeping Grass		
Mirbelia oxylobioides	Mountain Mirbelia		
Modiola caroliniana	Red-flowered Mallow	*	
Oxylobium ellipticum	Common Shaggy Pea		
Paspalum dilatatum	Paspalum	*	*
Phalaris spp.		*	
Pimelea linifolia subsp. caesia			
Plantago lanceolata	Lamb's Tongues	*	
Plantago varia			
Poa labillardierei var. labillardierei	Tussock		
Poa meionectes			
Poa sieberiana var. sieberiana	Snowgrass		
Polystichum proliferum	Mother Shield Fern		
Poranthera microphylla	Small Poranthera		
Pseudognaphalium luteoalbum	Jersey Cudweed		
Ranunculus lappaceus	Common Buttercup		
Rosa rubiginosa	Sweet Briar	*	*
Rubus parvifolius	Native Raspberry		
Rubus ulmifolius	Blackberry	*	*
Rumex brownii	Swamp Dock		
Rytidosperma pallidum	Redanther Wallaby Grass; Silvertop Wallaby Grass		
Scleranthus biflorus	Two-flowered Knawel		
Senecio quadridentatus	Cotton Fireweed		
Stylidium graminifolium	Grass Triggerplant		
Taraxacum officinale	Dandelion	*	
Themeda triandra			
Tragopogon dubius	Goatsbeard	*	
Trifolium repens	White Clover	*	
Verbascum thapsus subsp. thapsus	Great Mullein	*	

Species name	Common name	Exotic	High threat weed
Veronica gracilis			
Vicia spp.	Vetch	*	
Viola betonicifolia	Native Violet		
Vittadinia cuneata var. cuneata	A Fuzzweed		
Vittadinia muelleri	A Fuzzweed		
Vulpia spp.	Rat's-tail Fescue	*	
Malus spp.		*	
Cytisus spp.		*	

Appendix C : Likelihood of Occurrence Assessments and Bionet threatened species records

An assessment of likelihood of occurrence was made for threatened or migratory species/communities identified from the database search. Additional species have been added where the study area is considered to provide potential habitat. This assessment was based on database or other records, presence or absence of suitable habitat, features of the proposal site, results of the field survey, and professional judgement. Some migratory, marine and aquatic species identified from the Commonwealth database search have been excluded from the assessment due to lack of habitat. The terms for likelihood of occurrence are defined below:

“yes” - the species was or has been observed on the site

“likely” = a medium to high probability that a species uses the site

“potential” = suitable habitat for a species occurs on the site, but there is insufficient information to categorise the species as likely or unlikely to occur

“unlikely” = a very low to low probability that a species uses the site

“no” = habitat on site and in the vicinity is unsuitable for the species.

The records column refers to the number of records occurring within 10 km of the development site, as provided by the NSW Wildlife Atlas (BioNet) database search (DPE 2023). Information provided in the ‘habitat associations’ column has primarily been extracted (and modified) from the Commonwealth Species Profile and Threats Database (DCCEEW 2023), NSW Threatened Biodiversity Profiles (OEH 2023) and BioNet (DPE 2023). Comments about the ‘known or predicted’ species distributions refer to the information provided on the NSW online Threatened Biodiversity Profiles (OEH 2023).

CE: Critically Endangered; E: Endangered; V: Vulnerable

Marine species have been excluded from this list due to lack of habitat.

Table 4: Bionet and Protected Matters threatened and migratory species within 10 km of the study area (Accessed 10 November 2023).

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
THREATENED FLORA						
Calochilus pulchellus	Pretty Beard Orchid	Known only from three locations on the NSW south coast, at altitudes between 20-560 m above sea level. At Vincentia the species grows in low Scribbly Gum dominated woodland with a low wet heath understorey. The soil is a sandy loam overlying sandstone. In Booderee National Park it grows in a tall heathy association. In Morton National Park on the Little Forest Plateau it occurs in low heath among scattered clumps of emergent eucalypts and Banksia in shallow coarse white sand over sandstone, in a near-escarpment area subject to strong orographic precipitation.	E	E	0	No. Outside of range and no habitat for this species in the area.
Calotis glandulosa	Mauve Burr-daisy	Calotis glandulosa occurs in the Monaro and Kosciuszko regions, upper Shoalhaven catchment and near Oberon. It is found in montane, subalpine and natural temperate grasslands. Appears to be a coloniser of bare patches, which explains why it often occurs on roadsides. Common on roadsides in parts of the Monaro, though it does not persist for long in such sites. Does not persist in heavily-grazed pastures of the Monaro or the Shoalhaven area.	V	V	0	Unlikely. No local records, Unlikely to persist in very heavily disturbed habitat.
Diuris ochroma	Pale Golden Moths	Recorded in south-eastern NSW on the sub-alpine plains of Kosciuszko National Park and the Kybean area. Also recorded in eastern Victoria. Open grassy woodland of *Eucalyptus viminalis / E. pauciflora* or *E. pauciflora / E. parvula* (or secondary grassland). Also found in sub-alpine grassland.	E	V	0	Unlikely. No local records and outside known range for this species.
Dodonaea procumbens	Trailing Hop-bush	Found in the dry areas of the Monaro, between Michelago and Dalgety. Here it occurs mostly in Natural Temperate Grassland or Snow Gum (*Eucalyptus pauciflora)* Woodland. There is one	V	V	0	No.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		population at Lake Bathurst (the northern-most occurrence of the species). Here it occurs in adjacent to the lake bed in grassland dominated by Corkscrew Grass (*Austrostipa scabra*) and Curly Sedge (*Carex bichenoviana*). Also occurs in South Australia and Victoria. Grows in Natural Temperate Grassland or fringing eucalypt woodland of Snow Gum. Grows in open bare patches where there is little competition from other species. Found on sandy-clay soils, usually on or near vertically-tilted shale outcrops.				No local records. Though some of the associate species are present this species is unlikely to occur in heavily degraded habitat. Non cryptic species was not observed during site assessment.
Eucalyptus aggregata	Black Gum	In NSW, this species is found in the Central and Southern Tablelands, in the South Eastern Highlands Bioregion and on the western fringe of the Sydney Basin Bioregion. It grows on alluvial soils, on cold, poorly-drained flats and hollows adjacent to creeks and small rivers, and usually occurs in open woodland with a grassy ground layer.	V	V	0	No. No local records, not observed during site assessment. Marginal habitat outside of study area.
Eucalyptus parvula	Small-leaved Gum	Small-leaved Gum grows at and above an elevation of 1100 m in acidic soil on cold wet grassy flats. This species has a very small distribution in the eastern edge of the Monaro, in a narrow 100 km strip from Big Badja Mountain (north-east of Cooma) to Nunnock Swamp in South-East Forests National Park, north-east of Bombala.	V	V	0	No. No local records and outside of general distribution.
Eucalyptus pulverulenta	Silver-leaved Mountain Gum, Silver-leaved Gum	The Silver-leafed Gum is found in two quite separate areas, the Lithgow to Bathurst area and the Monaro (Bredbo to Bombala). Grows in shallow soils as an understorey plant in open forest, typically dominated by Brittle Gum (*Eucalyptus mannifera*), Red	V	V	0	Unlikely. One local record, no suitable habitat for this species.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		Stringybark (*E. macrorhynca*), Broad-leafed Peppermint (*E. dives*), Silvertop Ash (*E. sieberi*) and Apple Box (*E. bridgesiana*).				
Eucalyptus stenostoma	Jillaga Ash	Jillaga Ash grows only in the catchment areas of the Tuross and Deua Rivers, the species also occurs in South East Forest NP and in Dampier State Forest with minor occurrences on private land. The currently known distribution encompasses three local government areas: Bega Valley, Eurobodalla and Snowy Monaro. A minor occurrence may also exist within the Queanbeyan Palerang Regional Council area. the species grows on rhyolite, hornfels, sandstone, mudstone, slate and granitoid rocks. It is restricted to very steep slopes, rocky hill tops and ridgelines with shallow, stony soils that are somewhat infertile.	-	E	0	No. No local records and no suitable habitat within or adjacent to the study area.
Glycine latrobeana	Clover Glycine	The Clover Glycine is endemic to south-eastern Australia, where it is widely distributed from Port Pirie in South Australia, through much of Victoria to near Hobart in Tasmania. It was recently discovered in Kosciuszko National Park. It occurs mainly in grassland and grassy woodland habitats, less often in dry forests, and only rarely in heathland.	CE	V	0	Unlikely. No local records. Suitable habitat in better quality patches but outside known distribution.
Lepidium aschersonii	Spiny Pepper-cress	Not widespread, occurring in the marginal central-western slopes and north-western plains regions of NSW (and potentially the south western plains). In the north of the State recent surveys have recorded a number of new sites including Brigalow Nature Reserve, Brigalow State Conservation Area, Leard State Conservation Area and Bobbiwaa State Conservation Area. Also known from the West Wyalong in the south of the State. Found on ridges of gilgai clays dominated by Brigalow (*Acacia harpophylla*), Belah (*Casuarina cristata*), Buloke (*Allocasuarina luehmanii*) and Grey Box (*Eucalyptus microcarpa*). In the south has been recorded growing in Bull Mallee (*Eucalyptus behriana*).	V	V	0	No. No records and no suitable habitat in the study area for this species.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		Often the understorey is dominated by introduced plants. The species grows as a component of the ground flora, in grey loamy clays. Vegetation structure varies from open to dense, with sparse grassy understorey and occasional heavy litter.				
Lepidium hyssopifolium	Basalt Pepper-cress/ Aromatic Peppercress	In NSW, there is a small population near Bathurst, one population at Bungendore, and one near Crookwell. The species was also recorded near Armidale in 1945 and 1958; however it is not known whether it remains in this area. A specimen collected in the Cooma area about 100 years ago may also be Aromatic Peppercress. In NSW the species was known to have occurred in both woodland with a grassy understorey and in grassland.	E	E	0	Unlikely. Outside or distribution and unlikely to occur in heavily degraded habitat.
Leucochrysum albicans subsp. tricolor	Hoary Sunray	Leucochrysum albicans var. tricolor occurs on the Southern Tablelands and adjacent areas in an area roughly bounded by Albury, Bega and Goulburn. It is usually found in grassland, woodland and forest, generally on relatively heavy soils. It is highly dependent on the presence of bare ground for germination. In some areas, disturbance is required for successful establishment.	E	E	4	No. Several nearby records and known from less disturbed roadsides in the region. Not observed during surveys.
Monotoca rotundifolia	Trailing Monotoca	In NSW Trailing Monotoca is known only from Big Badja Hill and Wadbilliga Trig. There is an unconfirmed record from west of Kybean State Conservation Area. In Victoria it is only known from Brumby Point on the Nunniong Plateau. The New South Wales populations of Trailing Monotoca occur in shrubland or Snow Gum woodland from 1250 to 1360m asl.	E	E	0	Unlikely. No local records and outside distribution. Elevation of study area is below the preferred range for this species.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
Pomaderris parrisiae	Parris' Pomaderris	Parris' Pomaderris is a shrub or small tree to 9 m tall. The species has been recorded in Egan Peaks Nature Reserve, Wadbilliga National Park (near Wadbilliga Trig.) and South East Forests National Park (Brown Mountain/Cochrane Dam area), with a questionable record in Ben Boyd National Park. It is found on skeletal soils in rocky shrubland or tall open forest chiefly on escarpment ranges.	V	V	0	No. No local records and no suitable rocky habitat.
Pomaderris pallida	Pale Pomaderris	This species usually grows in shrub communities surrounded by Brittle Gum (*Eucalyptus mannifera*) and Red Stringybark (*E. macrorhyncha*) or Callitris spp. Woodland. Pale Pomaderris has been recorded from near Kydra Trig (north-west of Nimmitabel), Tinderry Nature Reserve, the Queanbeyan River (near Queanbeyan), the Shoalhaven River (between Bungonia and Warri), the Murrumbidgee River west of the ACT and the Byadbo area in Kosciuszko National Park. It is also found along the Murrumbidgee River in the ACT and has been recently recorded in eastern Victoria.	V	V	0	Unlikely. No nearby records and outside of known distribution.
Prasophyllum petilum	Tarengo Leek Orchid	Prasophyllum petilum is known from four sites in NSW: Boorowa, Captains Flat, Ilford and Delegate. It grows in Natural Temperate Grassland, grassy woodland, and Box-Gum Woodland.	E	E	0	No. No local records and outside of distribution.
Rutidosis leiolepis	Monaro Golden Daisy	The Monaro Golden Daisy is found in scattered populations on the Monaro, and in low subalpine plains of Kosciuszko National Park. Found in Natural Temperate Grassland on the Monaro. Occurs in sub-alpine grasslands in Kosciuszko National Park. Grows on basalt, granite and sedimentary substrates. Apparently highly susceptible to grazing, being retained in only	V	V	8	Unlikely. Multiple local records. May occur within patches of high-quality habitat surrounding the study area, however unlikely within the impact

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		a small number of populations on roadsides, un-grazed reserves and very lightly grazed pastures on private lands.				footprint due to the degraded vegetation present.
Senecio macrocarpus	Large-fruit Fireweed	Little known. Main distribution on mainland in Victoria and South Australia. Has been found in Thalmeda spp. grassland habitats.	-	V	0	Unlikely. No local records.
Swainsona sericea	Silky Swainson-pea	Silky Swainson-pea has been recorded from the Northern Tablelands to the Southern Tablelands and further inland on the slopes and plains. There is one isolated record from the far north-west of NSW. Its stronghold is on the Monaro. Also found in South Australia, Victoria and Queensland. Found in Natural Temperate Grassland and Snow Gum Eucalyptus pauciflora Woodland on the Monaro. Found in Box-Gum Woodland in the Southern Tablelands and South West Slopes. Sometimes found in association with cypress-pines Callitris spp.	V	-	2	Unlikely. Some local records. Potentially suitable habitat within high-quality patches of habitat, however these areas are located outside the impact footprint. No observations during field survey.
Thesium australe	Austral Toadflax	In eastern NSW, this species is found in very small populations scattered along the coast, and from the Northern to Southern Tablelands. It grows in grassland on coastal headlands or grassland and grassy woodland away from the coast.	V	V	0	No. No local records, unlikely to occur in highly modified environment.
Viola improcera	Dwarf Violet	Dwarf violet occurs at high altitudes above ca. 1300 m and up to at least 1800 m elevation in open shrubland, snow-gum woodland. The species is known to grow in open areas on or near summits and upper slopes on rocky soil and is readily seen along tracks. In NSW, the species is known from only a single subpopulation, recently discovered on Big Badja Hill on the western edge of Deua NP.	-	E	0	No. No local records. Outside of known distribution and no suitable habitat.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
Westringia kydrensis	-	The species occurs in heath on rocky areas at Kydra Reefs, south-east of Cooma. Occurs in heathland with larger shrubs of *Allocasuarina nana* and *Banksia canei*. Grows on shallow rocky granite or quartzite soils.	E	E	0	No. No local records and no suitable habitat in the study area.
Xerochrysum palustre	The Swamp Everlasting	is a perennial herb, to 100 cm tall. Flowers appear from November to March. The species is Found in Kosciuszko National Park and the eastern escarpment south of Badja. It grows in swamps and bogs which are often dominated by heaths, and also grows at the edges of bog margins on peaty soils with a cover of shrubs or grasses. It re-sprouts after fires.	-	V	0	No. No suitable habitat for this species in or near the study area. No local records.
THREATENED ECOLOGICAL COMMUNITIES						
Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion		Monaro Grassy Woodland (MGW) occurs in the Southern Tablelands of NSW, occupying broad valley floors and slopes and low rises of the moderately undulating tablelands on a wide variety of substrates including basalt, fine-grained sedimentary rocks, granite, acid volcanics and alluvium. Characterised by the presence or prior occurrence of snow gum, and associated candlebark, ribbon gum, black sallee or blackwood.	E	-	0	Yes. Community identified within study area during field survey.
Montane Peatlands and Swamps of the New England Tableland, NSW North Coast, Sydney Basin, South East Corner, South Eastern Highlands and Australian Alps bioregions		The Montane Peatlands and Swamps EEC is currently known from parts of the Local Government Areas of Armidale Dumaresq, Bega Valley, Bellingen, Blue Mountains, Bombala, Cooma-Monaro, Eurobodalla, Gloucester, Greater Argyle, Guyra, Hawkesbury, Lithgow, Oberon, Palerang, Severn, Shoalhaven, Snowy River, Tenterfield, Tumbarumba, Tumut, Upper Lachlan and Wingecarribee but may occur elsewhere in these bioregions. Montane Peatlands and Swamps comprises a	E	-	0	No. Community not present.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		dense, open or sparse layer of shrubs with soft-leaved sedges, grasses and forbs. It is the only type of wetland that may contain more than trace amounts of Sphagnum spp., the hummock peat-forming mosses. Small trees may be present as scattered 46mergent or absent.				
Natural Temperate Grassland of the South Eastern Highlands		Natural temperate grassland is dominated by moderately tall (25–50 cm) to tall (50–100 cm), dense to open tussock grasses in the genera *Austrodanthonia, Austrostipa, Bothriochloa*, *Poa* and *Themeda*. It occurs on Ridges, crests, hillsides, undulating plains, valleys and lower slopes, creeks, drainage lines and river flats. It generally corresponds with the Monaro, Murrumbateman, Bungonia and Crookwell subregions of the South Eastern Highlands bioregion.	-	CE	-	No. Community is mapped as being an extensive community in the surrounding area and adjacent to the site, but not within the study area.
Tableland Basalt Forest in the Sydney Basin and South Eastern Highlands Bioregions		Tableland Basalt Forest is currently found in the Eastern Highlands and Southern and Central Tablelands, covering the local government areas of Bathurst Regional, Goulburn Mulwaree, Oberon, Palerang, Shoalhaven, Upper Lachlan and Wingecarribee. The community, however, may be found elsewhere within the designated bioregions. Tableland Basalt Forest typically occurs on loam or clay soils associated with basalt or, less commonly, alluvium, fine-grained sedimentary rocks, granites and similar substrates that produce relatively fertile soils.	E	-	-	No. Community not present.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
Upland Wetlands of the New England Tablelands (New England Tableland Bioregion) and the Monaro Plateau (South Eastern Highlands Bioregion)		This ecological community occurs in closed, high altitude topographic depressions that are not connected to rivers or streams. These wetlands occur on undulating, mostly basalt plateau with organic soils, forming in the lagoons, over dark chocolate loam. The ecological community consists of near-permanent, intermittent or ephemeral wetlands. Associated vegetation of this ecological community includes closed to mid-dense sedgeland and grassland. Deep lagoons tend to have vegetation on shores and shallow reaches whereas shallow wetlands have vegetation across the depression.	-	E	-	No. Community not present.
Werriwa Tablelands Cool Temperate Grassy Woodland in the South Eastern Highlands and South East Corner Bioregions		Werriwa Grassy Woodlands (WGW) occur in the Southern Tablelands of NSW, occupying broad valley floors and gentle slopes and low rises of the moderately undulating Southern Tablelands of NSW. It has been commonly recorded on a wide variety of substrates including basalt, fine-grained sedimentary rocks, granite, acid volcanics and alluvium but rarely on steep ridge lines on the tablelands. Geographically, it occurs on the eastern fall of the Great Dividing Range between Golspie in the north and Majors Creek in the south. The community has been recorded as far to the east as Marulan and as far west as Carwoola.	E	-	-	No. Community not present.
White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions		Box-Gum Woodland is found from the Queensland border in the north, to the Victorian border in the south. It occurs in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions. Characterised by the presence or prior occurrence of White Box, Yellow Box and/or Blakely's Red Gum and a generally grassy understorey.	E	-	-	No. Community not present.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland		This TEC is characterised by the presence or prior occurrence of *Eucalyptus albens* (White Box), *E. melliodora* (Yellow Box) and/or *E. blakelyi* (Blakely's Red Gum). Trees may occur as pure stands, mixtures of the three species, or in mixtures with other trees, including Wattles. The understorey in intact sites is characterised by native grasses and a high diversity of herbs; the most commonly encountered include *Themeda triandra, Poa sieberiana, Rytidosperma* spp., *Austrostipa* spp., *Chrysocephalum apiculatum, Goodenia pinnatifida, Hypericum gramineum, Vittadinia muelleri* and *Wahlenbergia* spp. Shrubs are generally sparse or absent, although they may be locally common. Remnants generally occur on fertile lower parts of the landscape where resources such as water and nutrients are abundant.	-	CE	-	No. Community not present.
AMPHIBIA						
Heleioporus australiacus	Giant Burrowing Frog	The Giant Burrowing Frog is distributed in south eastern NSW and Victoria. The southern of its two distinct populations occurs from north of Narooma through to Walhalla, Victoria. It is found in heath, woodland and open dry sclerophyll forest on a variety of soil types except those that are clay based. Breeding habitat of this species is generally soaks or pools within first or second order streams.	V	V	0	No. No habitat for this species. The creek area and riparian habitat will not be impacted by this proposal.
Litoria castanea	Yellow-spotted Tree Frog	A population of this species near Yass is currently the only known extant site of the species. The Yellow-spotted Tree Frog requires large permanent ponds or slow flowing 'chain-of-ponds' streams with abundant emergent vegetation such as bulrushes and aquatic vegetation. The species shelters during	CE	E	0	No. No suitable habitat. Outside of known distribution.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		autumn and winter under fallen timber, rocks, other debris or thick vegetation.				
Litoria verreauxii alpina	Alpine Tree Frog, Verreaux's Alpine Tree Frog	The Alpine Tree Frog occurs in the south-eastern NSW and Victorian high country (alpine and sub-alpine zones) generally above 1100 m asl. Most locations are within National Park and some are close to alpine resorts. Found in a wide variety of habitats including woodland, heath, grassland and herb fields. Breed in natural and artificial wetlands including ponds, bogs, fens, streamside pools, stock dams and drainage channels that are still or slow flowing.	E	V	0	No. No suitable rainforest or wet forest habitat.
REPTILIA						
Aprasia parapulchella	Pink-tailed Legless Lizard	The Pink-tailed Legless Lizard is only known from the Central and Southern Tablelands, and the South Western Slopes. There is a concentration of populations in the Canberra/Queanbeyan Region. Other populations have been recorded near Cooma, Yass, Bathurst, Albury and West Wyalong. This species is also found in the Australian Capital Territory. Inhabits sloping, open woodland areas with predominantly native grassy groundlayers, particularly those dominated by Kangaroo Grass (*Themeda australis*). Sites are typically well-drained, with rocky outcrops or scattered, partially-buried rocks. Commonly found beneath small, partially-embedded rocks and appear to spend considerable time in burrows below these rocks; the burrows have been constructed by and are often still inhabited by small black ants and termites.	V	V	0	Unlikely. No suitable rocky habitat for this species within the study area.
Delma impar	Striped Legless Lizard	The Striped Legless Lizard occurs in the Southern Tablelands, the South West Slopes, the Upper Hunter and possibly on the Riverina. Populations are known in the Goulburn, Yass,	V	V	0	No.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		Queanbeyan, Cooma, Muswellbrook and Tumut areas. Also occurs in the ACT, Victoria and south-eastern South Australia. Found mainly in Natural Temperate Grassland but has also been captured in grasslands that have a high exotic component. Also found in secondary grassland near Natural Temperate Grassland and occasionally in open Box-Gum Woodland. Habitat is where grassland is dominated by perennial, tussock-forming grasses such as Kangaroo Grass (*Themeda australis*), Spear-grasses (*Austrostipa* spp.) and Poa tussocks (*Poa* spp.), and occasionally wallaby grasses (*Austrodanthonia* spp.).				No local records and very little marginally suitable habitat for this species.
Tympanocryptis pinguicolla	Grassland Earless Dragon	Historically, the Grassland Earless Dragon ranged from Bathurst to Cooma, including the ACT region. The only populations now known are in the ACT and adjacent NSW at Queanbeyan, and on the Monaro Basalt Plains between Cooma and south-west of Nimmitabel. Formerly known from Victoria, though no recent records. Restricted to a small number of Natural Temperate Grassland sites dominated by wallaby grasses (*Nothodanthonia* spp.), spear grasses (*Austrostipa* spp.), Poa Tussock (*Poa sieberiana*), Red Grass (*Bothriochloa macra*), and occasionally Kangaroo Grass (*Themeda australis*).	E	E	0	Unlikely. very little suitable habitat for this species in the study area. Some grassland adjacent to study area but no local records.
DIURNAL BIRDS						
Anthochaera phrygia	Regent Honeyeater	The Regent Honeyeater inhabits temperate woodlands and open forests of the inland slopes of south-east Australia, particularly Box-Ironbark woodland, and riparian forests of *Casuarina cunninghamiana* (River Sheoak). These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. This species makes nomadic movements, following winter flowering Eucalypt species. Two of three known key breeding areas are in NSW: the Capertee	CE	CE	0	No. No habitat for this species, no mistletoes observe within or adjacent to study area.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		Valley and the Bundarra-Barraba region. The other breeding area is in Chiltern, Victoria. They breed between July and January and usually nest in horizontal branches or forks in tall mature *Eucalyptus* spp. and *Casuarina/Allocasuarina* spp.				
Aphelocephala leucopsis	Southern Whiteface	This species occurs across most of mainland Australia south of the tropics, from the north- eastern edge of the Western Australian wheatbelt, east to the Great Dividing Range. They live in a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains. Build large bulky domed nest of grass, bark and roots, usually in a hollow or crevice, although sometimes in low bushes	-	V	0	No. No local records and no suitable habitat within the study area.
Artamus cyanopterus cyanopterus	Dusky Woodswallow	This species occurs throughout most of NSW. It primarily inhabits dry, open Eucalypt forests and woodlands, including mallee associations, with an open or sparse understorey of Eucalypt saplings, acacias and other shrubs, and groundcover of grasses or sedges and fallen woody debris. Nest sites vary greatly, but generally occur in shrubs or low trees (living or dead) in horizontal or upright forks in branches, spouts, hollow stumps or logs, behind loose bark or in a hollow in the top of a wooden fence post.	V	-	1	Unlikely. one local record, no suitable foraging habitat within the study area given the proximity to the highway and level of disturbance. No breeding habitat observed.
Calidris ferruginea	Curlew Sandpiper	The Curlew Sandpiper occupies littoral and estuarine habitats, including intertidal mudflats, non-tidal swamps, lakes and lagoons on the coast and sometimes is found inland.	E	CE/M	0	No. No suitable habitat within the study area. No water bodies or swamps will be impacted by the proposal.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
Callocephalon fimbriatum	Gang-gang Cockatoo	In spring and summer (during the breeding season), this species is generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter (non-breeding season), the species often moves to lower altitudes in drier more open Eucalypt forests and woodlands, particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas. Potential breeding trees are Eucalypts containing hollows that are at least 9 m above the ground and with hollow diameter of 10 cm or larger.	V	E	1	Unlikely. No breeding or foraging habitat for this species in the study area. may pass through occasionally due to remnant woodlands in the region.
Calyptorhynchus lathami	Glossy Black-cockatoo (South-eastern)	The species is uncommon although widespread throughout suitable forest and woodland habitats, from the central Queensland coast to East Gippsland in Victoria, and inland to the southern tablelands and central western plains of NSW, with a small population in the Riverina. An isolated population exists on Kangaroo Island, South Australia. Inhabits open forest and woodlands of the coast and the Great Dividing Range where stands of She-oak occur. Black She-oak (*Allocasuarina littoralis*) and Forest She-oak (*A.torulosa*) are important foods.	V	V	0	Unlikely. No breeding or foraging habitat for this species in the study area. may pass through occasionally but very unlikely to stop.
Climacteris picumnus	Brown Treecreeper (eastern subspecies)	This species occurs in Eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range. It is not usually found in woodlands with a dense shrub layer. Fallen timber is an important habitat component for foraging. It is a sedentary species and is resident in many locations throughout its range and is present in all seasons or year-round at many sites. Hollows in standing dead or live trees and tree stumps are essential for nesting.	V	V	0	No. No local records and no suitable habitat for this species within the study area.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
Daphoenositta chrysoptera	Varied Sittella	The distribution of the Varied Sittella in NSW is nearly continuous from the coast to the far west. It inhabits Eucalypt forests and woodlands, mallee and Acacia woodland.	V	-	1	Unlikely. one local record, no suitable foraging habitat within the study area given the proximity to the highway and level of disturbance. No breeding habitat observed.
Falco hypoleucos	Grey Falcon	The Grey Falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. It is usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast.	E	V	0	Unlikely. No suitable foraging habitat for this species. No medium or large stick nests on site.
Grantiella picta	Painted Honeyeater	This species is nomadic and occurs predominantly on the inland slopes of the Great Dividing Range. It inhabits *Acacia pendula* (Boree/Weeping Myall), *A. harpophylla* (Brigalow) and Box-Gum Woodlands and Box-Ironbark Forests. It is a specialist feeder on the fruits of mistletoes growing on woodland Eucalypts and Acacias, preferring mistletoes of the genus *Amyema*. Nesting occurs from spring to autumn in a small, delicate nest hanging within the outer canopy of drooping *Eucalyptus* spp., *Allocasuarina* and *Casuarina* spp. (She-oaks), *Melaleuca* sp. (Paperbark) or Mistletoe branches.	V	V	0	No. No suitable foraging habitat for this species. No mistletoes observed on site.
Hieraaetus morphnoides	Little Eagle	The Little Eagle is found throughout the Australian mainland excepting the most densely forested parts of the Dividing Range escarpment. It occurs as a single population throughout NSW. Occupies open eucalypt forest, woodland or open woodland.	V	-	2	Unlikely. No suitable foraging habitat for this species. No medium or large stick nests on site.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		She-oak or Acacia woodlands and riparian woodlands of interior NSW are also used.				
Hirundapus caudacutus	White-throated Needletail	The White-throated Needletail is recorded in all coastal regions of Queensland and NSW, extending inland to the western slopes of the Great Divide and occasionally onto the adjacent inland plains. In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. They are recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but are less commonly recorded flying above woodland. The species also occurs over heathland, but less often over treeless areas such as grassland or swamps. When flying above farmland, they are more often recorded above partly cleared pasture, plantations or remnant vegetation at the edge of paddocks.	-	V/M	0	Unlikely. may occasionally fly over, however the region is dominated by open grassland and sparse woodland. Unlikely to stop or forage.
Lathamus discolor	Swift Parrot	This species breeds in Tasmania during Spring and Summer and migrates to the Australian south-east mainland between March and October. On the mainland they occur where Eucalypts are flowering profusely, or where there are abundant lerp infestations. Favoured feed trees include winter flowering species such as *Eucalyptus robusta* (Swamp Mahogany), *Corymbia Maculata* (Spotted Gum), *C. gummifera* (Red Bloodwood), *E. sideroxylon* (Mugga Ironbark), and *E. albens* (White Box).	E	CE	0	No. No foraging habitat for this species.
Melanodryas cucullata cucullata	Hooded Robin (south-eastern form)	This species is found throughout much of inland NSW, with the exception of the extreme north-west, where it is replaced by the subspecies pictata. It inhabits open *Eucalypt* woodland, *Acacia* scrub and mallee, often in or near clearing or open areas. It nests in tree forks or crevices, from 1 to 5 m above ground.	V	E	0	No. No habitat for this species within the study area and no local records.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
Neophema chrysostoma	Blue-winged Parrot	This species is found across south-eastern Australia, north to the Flinders Ranges, and across Victoria. It is more sporadic across central and western New South Wales and into Queensland. It lives in savannah woodland, grasslands, orchards, farmlands, marshes, heath, dunes, and other open habitats up to 1,200 m (3,937 ft) above sea level. mainly feed on the ground, eating seeds of grasses.	-	V	0	No. No local records, unlikely to utilise this highly modified and disturbed roadsides for foraging.
Oxyura australis	Blue-billed Duck	The Blue-billed Duck is endemic to south-eastern and south-western Australia. It is widespread in NSW, but most common in the southern Murray-Darling Basin area. Birds disperse during the breeding season to deep swamps up to 300 km away. It is generally only during summer or in drier years that they are seen in coastal areas. The Blue-billed Duck prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation. The species is completely aquatic, swimming low in the water along the edge of dense cover	V	-	2	No. Some local records, no habitat for this species within the study area.
Petroica phoenicea	Flame Robin	In NSW, the Flame Robin breeds in upland areas, and in winter many birds move to the inland slopes and plains, or occasionally to coastal areas. It breeds in upland tall moist *Eucalypt* forests and woodlands. In winter it uses dry forests, open woodlands, heathlands, pastures and native grasslands. It can occasionally be found in temperate rainforest, herbfields, heathlands, shrublands and sedgelands.	V	-	6	Possible. Multiple local records and known from the region. However unlikely to utilise the habitat within the study area due to proximity the road.
Pycnoptilus floccosus	Pilotbird	The pilotbird is found from the Wollemi National Park and Blue Mountains National Park in New South Wales through to the Dandenong Ranges, near Melbourne in Victoria. Its preferred habitat is temperate wet sclerophyll forests and occasionally	-	V	0	No. No suitable habitat for this species.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		temperate rainforest, where there is dense undergrowth with abundant debris.				
Rostratula australis	Australian Painted Snipe	In NSW, records of the Painted Snipe are from the Murray-Darling Basin, including the Paroo wetlands, Lake Cowal, Macquarie Marshes, Fivebough Swamp, and swamps near Balldale and Wanganella. Other important locations with recent records include wetlands on the Hawkesbury River and the Clarence and lower Hunter Valleys. It prefers the fringes of swamps, dams and nearby marshy areas, where there is a cover of grasses, lignum, low scrub or open timber. It nests on the ground amongst tall vegetation, such as grasses, tussocks or reeds.	E	E	0	No. No suitable habitat in the study area.
Stagonopleura guttata	Diamond Firetail	Within NSW, the Diamond Firetail has mainly been recorded in the Northern, Central and Southern Tablelands, the Northern, Central and South Western Slopes and the North West Plains and Riverina, and less commonly in coastal areas and further inland. It prefers gassy *Eucalypt* woodlands, open forest, mallee, Natural Temperate Grassland, secondary derived grassland, riparian areas, and lightly wooded farmland. The species roosts in dense shrubs or in smaller nests built especially for roosting.	V	-	1	No. No local records and not suitable habitat.
MAMMALS (EXCLUDING BATS)						
Dasyurus maculatus	Spotted-tailed Quoll	The Spotted-tailed Quoll has been recorded across a range of habitat types, including rainforest, open forest, woodland, coastal heath and inland riparian forest, from the sub-alpine zone to the coastline. It uses hollow-bearing trees, fallen logs, small caves, rock outcrops and rocky-cliff faces as den sites. It is mostly nocturnal and spends most of the time on the ground,	V	E	2	No. No suitable breeding or foraging habitat within or close to the study area.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		although is also an excellent climber and will hunt in tree hollows and prey on roosting birds.				
Petauroides volans	Southern Greater Glider	The Greater Glider occurs in Eucalypt forests along the ranges and coastal plains of eastern Australia, feeding almost exclusively on the young leaves and flower buds of select Eucalypt species. It shelters in tree hollows, with a particular preference for large hollows in large, old trees. Individuals occupy relatively small home ranges (1-3 ha).	E	E	0	No. No suitable breeding or foraging habitat within or close to the study area.
Petaurus australis	Yellow-bellied Glider	The Yellow-bellied Glider is found along the eastern coast to the western slopes of the Great Dividing Range, from southern Qld to Victoria. It is restricted to tall mature forests, preferring productive tall open sclerophyll forests with a mosaic of tree species including some that flower in winter. Large hollows (>25 cm) within mature trees are required for shelter, nesting and breeding. The species feeds primarily on plant and insect exudates. Individuals are very mobile, occupying large home ranges between 20 to 85 ha to encompass dispersed and seasonally variable food.	V	V	0	No. No suitable breeding or foraging habitat within or close to the study area.
Phascolarctos cinereus	Koala	In NSW, the koala mainly occurs on the central and north coasts, with some populations in the west of the Great Dividing Range. It is associated with both wet and dry Eucalypt forest and woodland, feeding on the foliage of more than 70 Eucalypt species and 30 non-Eucalypt species, but in any one area will select preferred browse species.	E	E	4	Unlikely. Koala records close to the site are from the 1980's and no recent records occur in the vicinity. Despite suitable tree species, Koalas are unlikely to occur in the study area.
Pseudomys fumeus	Smoky Mouse	In NSW there are 3 records of the Smoky Mouse from Kosciuszko National Park and 2 records adjacent to the park in Bondo and Ingbyra State Forests; the remainder are centred around Mt Poole, Nullica State Forest and the adjoining South East Forests	CE	E	0	No.

Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		National Park. The species appears to prefer heath habitat on ridge tops and slopes in sclerophyll forest, heathland and open-forest from the coast (in Victoria) to sub-alpine regions of up to 1800 metres, but sometimes occurs in ferny gullies.				No suitable habitat and no local records.
Pteropus poliocephalus	Grey-headed Flying-fox	This species is found along the eastern coast of Australia, from Bundaberg in Qld to Melbourne in Victoria. It inhabits subtropical and temperate rainforests, tall sclerophyll forests and woodlands, heaths and swamps as well as urban gardens and cultivated fruit crops. Roosting camps are generally located within 20 km of a regular food source and are commonly found in gullies, close to water, in vegetation with a dense canopy.	V	V	0	No. No nearby camps or local records. May pass over while foraging.
FISH						
Galaxias terenasus	Roundsnout Galaxias	Roundsnout galaxias is endemic to the freshwater rivers in the mid-catchment of the Snowy River and East Gippsland catchments of south-eastern Australia in New South Wales (NSW) and Victoria. In NSW, the species is found in the following rivers, Snowy, Maclaughlin, Delegate/Bombala and the upper Genoa.	-	E	0	No. No habitat for this species.
Macquaria australasica	Macquarie Perch	Macquarie Perch are found in the Murray-Darling Basin (particularly upstream reaches) of the Lachlan, Murrumbidgee and Murray rivers, and parts of south-eastern coastal NSW, including the Hawkesbury/Nepean and Shoalhaven catchments. Macquarie Perch are found in both river and lake habitats; especially the upper reaches of rivers and their tributaries in waters with lots of cover such as aquatic vegetation, snags, boulders and overhanging banks.				No. No habitat for this species.
Prototroctes maraena	Australian Grayling	The Australian Grayling occurs in streams and rivers on the eastern and southern flanks of the Great Dividing Range, from	E	V	0	No.

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Scientific name	Common name	Habitat associations	Conservation status		BioNet records within 10 km	Likelihood of occurrence
			BC Act	EPBC Act		
		Sydney, southwards to the Otway Ranges of Victoria and in Tasmania. Adults (including pre spawning and spawning adults) inhabit cool, clear, freshwater streams with gravel substrate and areas alternating between pools and riffle zones.				No habitat for this species.
MIGRATORY BIRDS						
Monarcha melanopsis	Black-faced Monarch	Australian resident, moving south when non-breeding. Rainforest and eucalypt forests, coastal scrubs, and moist forest in drainage lines; may be in woodland when migrating. Insectivorous, often feeding in tangled understory.	-	M	-	No. No habitat for this species.
Myiagra cyanoleuca	Satin Flycatcher	Occurs in Eucalypt-dominated forests, especially near wetlands, watercourses, and heavily-vegetated gullies. Prefers tall, wetter, denser forest but not rainforest; often at high elevations. Spring breeding migrant in southern Australia. During migration, may use coastal forests, woodlands, mangroves and open forests. In NSW, widespread on and east of the Great Divide and sparsely scattered on the western slopes, with very occasional records on the western plains	-	M	-	No. No habitat for this species.
Rhipidura rufifrons	Rufous Fantail	The Rufous Fantail is a summer breeding migrant to southeastern Australia. The Rufous Fantail is found in rainforest, dense wet eucalypt and monsoon forests, paperbark and mangrove swamps and riverside vegetation. Open country and drier open forest may be used by the Rufous Fantail during migration. Wet sclerophyll forests, subtropical and temperate rainforests. Sometimes drier sclerophyll forests and woodlands. Coastal and near coastal districts of northern and eastern Australia, including on and east of the Great Divide in NSW	-	M	-	Unlikely. No breeding or roosting habitat for this species

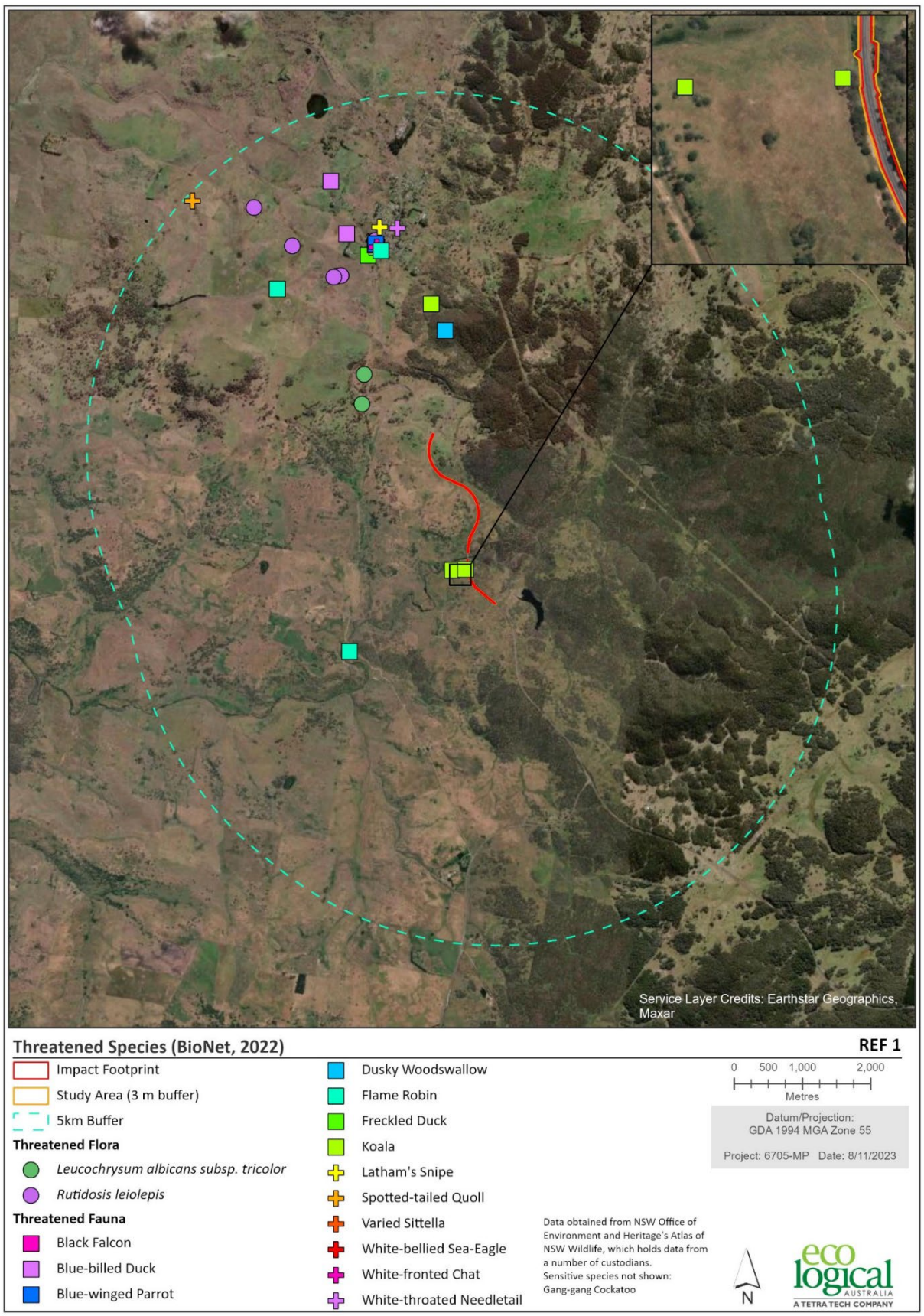


Figure 7: Threatened Flora and Fauna records within 5 km (Bionet)

Appendix D : Test of Significance for BC Act listed entities

The 'Test of significance' (5-part test) is applied to species, populations and ecological communities listed on Schedules 1 and 2 of the BC Act and Schedules 4, 4A and 5 of the FM Act. The assessment sets out 5 factors, which when considered, allow proponents to undertake a qualitative analysis of the likely impacts of an action and to determine whether a significant impact is likely. All factors must be considered, and an overall conclusion made based on all factors in combination.

Information about species/ communities has been primarily obtained from the OEH species profiles.

The 'Test of significance' (5-part test) has been applied to the following entities:

- Threatened Ecological Community *Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion* (Snow Gum Grassy Woodland)
- *Petroica phoenicea* (Flame Robin)

Snow Gum Grassy Woodland

Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion ('Snow Gum Grassy Woodland') is a critically endangered ecological community listed under the BC Act.

Minor direct impacts to 0.04 ha of Snow gum Grassy Woodland TEC is proposed, along with potential for minor pruning of branches. The 3m study area buffer also contains 0.045 ha of Snow gum Grassy Woodland.

BC Act	Question	Response
7.3.1 a)	In the case of a threatened species: whether the proposed works or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	Not applicable
7.3.1 b) i	In the case of an endangered ecological community or critically endangered ecological community, whether the proposed works or activity: Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction	Up to 0.51 ha of *Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion* threatened ecological community (TEC) occurs within the study area and immediate surrounds of the proposal in five zones. The TEC is in both the woodland and derived native grassland form. 0.045 ha of the TEC is present within the 3m study area buffer, and 0.04 ha is present within the impact footprint. It is unlikely that this TEC will be directly affected within the 3 m study area buffer provided appropriate mitigation measures are followed. Impacts to 0.04 ha of the TEC within the footprint are not significant within the greater context of the area.
7.3.1 b) ii	In the case of an endangered ecological community or critically endangered ecological community:	Up to 0.51 ha of Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion threatened ecological community (TEC) occurs within the study area and immediate surrounds of the proposal in five zones. The extent to be directly impacted is minimal and larger continuous patches of high quality TEC exist outside the study area and are mapped

BC Act	Question	Response
	Whether the proposed works or activity is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.	within the locality. There may be indirect impacts such as ongoing weed invasion, however these impacts are currently occurring in the absence of the proposed action. Therefore, it is unlikely that the proposed works would adversely modify the composition of this ecological community to the extent that its local occurrence is placed at risk of extinction.
7.3.1 c) i	In relation to the habitat of a threatened species or ecological community: The extent to which habitat is likely to be removed or modified as a result of the proposed works or activity	Up to 0.04 ha of direct impacts to the TEC will occur, however this impact is considered minor given that the TEC habitat of a continuous and higher quality occurs extensively surrounding the study area. There is the potential for minor pruning to be required for branches that may overhang the road, however this impact to habitat is expected to be negligible.
7.3.1 c) ii	In relation to the habitat of a threatened species or ecological community: Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed works or activity	The extent of this TEC within the study area is already fragmented and isolated from other nearby continuous patches. Direct impacts to 0.04 ha of this vegetation will not cause further fragmentation to occur.
7.3.1 c) iii	In relation to the habitat of a threatened species or ecological community: The importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.	Given that the works would have a minimal effect on the existence of this TEC, with up to 0.04 ha proposed to be impacted, the proposed works would not significantly affect habitat critical to the viability of Snow Gum Grassy Woodland.
7.3.1 d)	Whether the proposed works or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).	No declared areas of outstanding biodiversity value are likely to be affected.
7.3.1 e)	Whether the proposed works or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	Two key threatening processes are relevant to the proposed works. • Clearing of native vegetation • Invasion of native plant communities by exotic perennial grasses
Conclusion	**Is there likely to be a significant impact?**	**No. A significant impact is not likely.**

Flame Robin (*Petroica phoenicea*)

Flame Robin is a vulnerable species listed under the BC Act. Direct impacts to 19 trees in the impact footprint is proposed, along with potential for minor pruning of branches.

BC Act	Question	Response
7.3.1(a)	In the case of a threatened species: whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction	The proposed works will result in the removal of 19 trees and some minor pruning which may form occasional foraging habitat for this species. These trees occur in isolated clumps throughout the study area in areas where the groundlayer is predominantly exotic grasses. The Flame Robin breeds in upland tall moist eucalypt forests and woodlands, where the groundlayer is dominated by native grasses. It forages in low perches and branches of trees. The presence of exotic grasses in the groundlayer and the segregation of the 19 trees suggests this habitat is poorly suited to this species. Due to the high mobility of this species, and the presence of higher quality vegetation in the locality, the proposed works are unlikely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.
7.3.1(b) (i)	In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: Is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or	Not applicable
7.3.1(b) (ii)	In the case of an endangered ecological community or critically endangered ecological community: Whether the proposed development or activity is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.	Not applicable
7.3.1(c) (i)	In relation to the habitat of a threatened species or ecological community: The extent to which habitat is likely to be removed or modified as a result of the proposed development or activity	19 trees will be removed as a result of the proposed works, as well as some minor pruning of vegetation, that may constitute occasional foraging habitat for this species. Given the presence of exotic grasses in the groundlayer and the isolation of the trees to be removed, this habitat is of poor quality for this species.
7.3.1(c) (ii)	In relation to the habitat of a threatened species or ecological community: Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity	The potential habitat to be removed within the study area is minimal and of poor quality. Additionally, it is already fragmented and isolated from other areas of suitable habitat for this species. The proposed works will not result in further fragmentation or isolation from other areas of habitat.

BC Act	Question	Response
7.3.1(c) (iii)	In relation to the habitat of a threatened species or ecological community: The importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.	The removal of 19 trees and minor pruning of vegetation that would result from the proposed works is unlikely to constitute important habitat for the long-term survival of this species. This is due to the poor quality habitat present in the study area and the high mobility of this species, allowing it to easily move to areas of higher quality habitat.
7.3.1(d)	Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).	No declared areas of outstanding biodiversity value are likely to be affected.
7.3.1(e)	Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	Two key threatening processes are relevant to the proposed works. • Clearing of native vegetation • Invasion of native plant communities by exotic perennial grasses
Conclusion	**Is there likely to be a significant impact?**	**No. A significant impact is not likely.**

Appendix E: Matters of National Environmental Significance (MNES)

The EPBC Act Administrative Guidelines on Significance set out 'Significant Impact Criteria' that are to be used to assist in determining whether a proposed action is likely to have a significant impact on MNES. A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment, which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. MNES listed under the EPBC Act include:

- listed threatened species and ecological communities
- listed migratory species
- Wetlands of International Importance
- The Commonwealth marine environment
- World Heritage properties
- National Heritage places
- nuclear actions
- Great Barrier Reef
- a water resource, in relation to coal seam gas development and large coal mining development.

Matters to be addressed	Impact (Commonwealth legislation)
(a) any environmental impact on a World Heritage Property;	NA: The proposed action does not impact on a World Heritage Property.
(b) any environmental impact on Wetlands of International Importance;	NA: The proposed action will not affect any part of a Ramsar Wetland.
(c) any impact on Commonwealth Listed Endangered or Critically Endangered Species or Communities	No. The study area does not contain any Commonwealth listed TECs or important habitat for any Commonwealth listed endangered species.
(d) any impact on Commonwealth Listed Vulnerable Species;	No. The study area does not contain any habitat or resources important for any Commonwealth listed vulnerable species.
(e) any environmental impact on Commonwealth Listed Migratory Species;	No. The site contains no typical or potentially important habitat for migratory species.
(f) does any part of the Proposal involve a Nuclear Action;	NA: the proposed action does not involve a Nuclear Action.
(g) any environmental impact on a Commonwealth Marine Area;	NA: the proposed action will not impact on a Commonwealth Marine Area.
(h) In addition, any direct or indirect impact on Commonwealth lands	NA: the proposed action will not directly or indirectly impact on Commonwealth land.



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Appendix D: AHIMS Database Searches

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : 23CAN6705
Client Service ID : 834097

Eco Logical Australia Pty Ltd - Sydney - Individual users

Date: 29 October 2023

PO Box 12 668 Old Princes Hwy
Sutherland New South Wales 1499

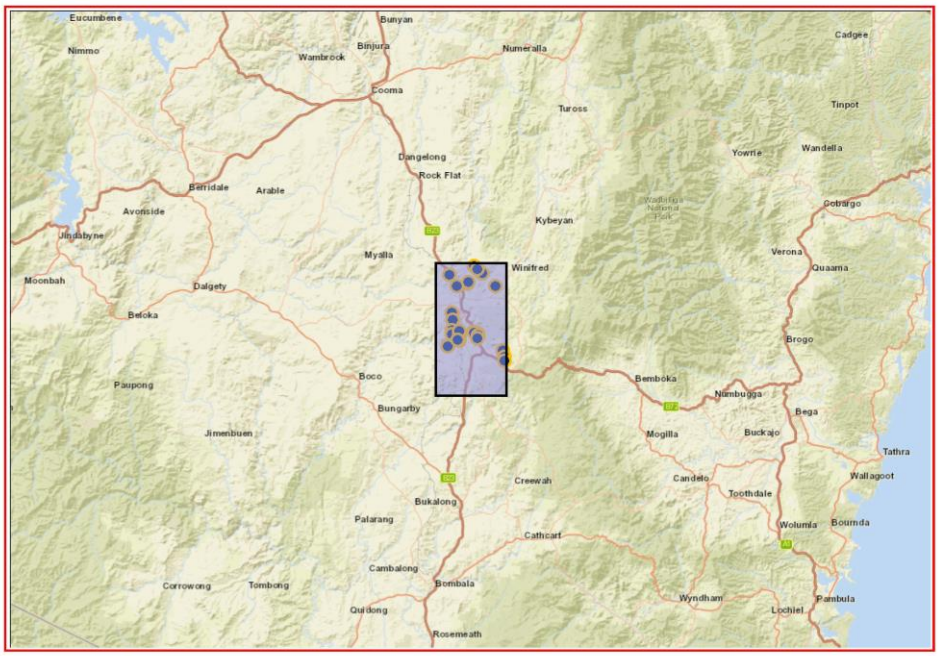
Attention: Kate Storan

Email: kate.storan@ecoaus.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 700637.0 - 710637.0, Northings : 5941962.0 - 5961962.0 with a Buffer of 0 meters, conducted by Kate Storan on 29 October 2023.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

42	**Aboriginal sites are recorded in or near the above location.**
0	**Aboriginal places have been declared in or near the above location. ***

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 23CAN6705
Client Service ID : 834098

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
62-2-0333	Nimmitabel 2	AGD	55	702500	5960070	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Doctor.Tim Stone					**Permits**		
62-5-0105	BE.1	AGD	55	702850	5951850	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Scarred Tree	
	Contact	**Recorders**	F.W Shawcross					**Permits**		
62-5-0269	PASA TP1	GDA	55	706479	5951425	Open site	Valid	Artefact : 1		103130
	Contact	**Recorders**	Onsite Environmental Management					**Permits**	3720	
62-5-0025	EGP 2-24;Thorntons Creek_4;Eastern Gas Pipline;	AGD	55	702710	5954300	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Kelvin Officer					**Permits**		
62-5-0031	EGP 2-99;MacLaughlin River 1;Eastern Gas Pipline;	AGD	55	703770	5950060	Open site	Valid	Artefact : 5	Open Camp Site	
	Contact	**Recorders**	Bobbie Oakley					**Permits**		
62-5-0231	Lake Wallace 7	GDA	55	706013	5951515	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**		
62-2-0388	CBS1_AS10	GDA	55	706312	5961547	Open site	Valid	Artefact : 4		
	Contact	**Recorders**	Doctor.Diana Neuweger					**Permits**		
62-2-0387	CBS1_AS01	GDA	55	706313	5961584	Open site	Valid	Artefact : 23		102205,102206
	Contact	**Recorders**	Doctor.Diana Neuweger					**Permits**		
62-5-0226	Lake Wallace 2	GDA	55	706689	5951274	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		103130
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**	3560,3720	
62-5-0272	Lake Wallace 11	GDA	55	706736	5950915	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mr.Gerard Niemoeller					**Permits**		
62-5-0223	CBS1_AS05	GDA	55	710362	5948554	Open site	Valid	Artefact : 5, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Doctor.Diana Neuweger					**Permits**		
62-5-0107	BE.3	AGD	55	703080	5950520	Open site	Valid	Artefact : 1	Isolated Find	
	Contact	**Recorders**	F.W Shawcross					**Permits**		
62-5-0229	Lake Wallace 5	GDA	55	706049	5951484	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**		
62-2-0393	CBS1_AS08	GDA	55	707371	5960544	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Holly Maclean					**Permits**		

Report generated by AHIMS Web Service on 29/10/2023 for Kate Storan for the following area at Datum :GDA, Zone : 55, Eastings : 700637.0 - 710637.0, Northings : 5941962.0 - 5961962.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 42

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 23CAN6705
Client Service ID : 834098

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
62-5-0024	EGP 2-23;Thorntons Creek_3;Eastern Gas Pipline;	AGD	55	702900	5953220	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	**Recorders**	Mr.Kelvin Officer					**Permits**		
62-5-0228	Lake Wallace 4	GDA	55	706082	5951354	Open site	Valid	Artefact : -		103130
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**	3560,3720	
62-2-0394	CBS1_AS09	GDA	55	707463	5960439	Open site	Valid	Artefact : 3		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Holly Maclean					**Permits**		
62-5-0033	EGP 2-101;Square Range Lake;Eastern Gas Pipline;	AGD	55	702660	5951630	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Bobbie Oakley					**Permits**		
62-5-0106	BE.2	AGD	55	702730	5951090	Open site	Valid	Modified Tree (Carved or Scarred) : 1	Scarred Tree	
	Contact	**Recorders**	F.W Shawcross					**Permits**		
62-2-0320	Tom Groggin Rd A1	AGD	55	705200	5958750	Open site	Valid	Artefact : -	Open Camp Site	98354,102206
	Contact	**Recorders**	Unknown Author					**Permits**	3230	
62-5-0230	Lake Wallace 6	GDA	55	706027	5951507	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**		
62-5-0268	Lake Wallace 3 TP1	GDA	55	706448	5951406	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		103130
	Contact	**Recorders**	Onsite Environmental Management					**Permits**	3720	
62-2-0392	CBS1_AS07	GDA	55	707100	5960809	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Holly Maclean					**Permits**		
62-2-0391	CBS1_AS04	GDA	55	709455	5958409	Open site	Valid	Artefact : 2, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Doctor.Diana Neuweger					**Permits**		
62-5-0221	MR_AS01	AGD	55	702017	5949209	Open site	Valid	Artefact : -		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Ms.Holly Maclean					**Permits**		
62-5-0022	EGP 2-21;Thorntons Creek;Eastern Gas Pipline;	AGD	55	703750	5950820	Open site	Valid	Artefact : -	Isolated Find	
	Contact	**Recorders**	Mr.Kelvin Officer					**Permits**		
62-5-0233	Lake Wallace 9	GDA	55	706107	5951454	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		103130
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**	3560,3720	
62-2-0389	CBS1_IF01	GDA	55	706382	5961529	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Doctor.Diana Neuweger					**Permits**		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 23CAN6705
Client Service ID : 834098

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
62-5-0227	Lake Wallace 3	GDA	55	706397	5951405	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		103130
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**	3560,3720	
62-5-0271	Woman Waterhole	GDA	55	706670	5950890	Open site	Valid	Aboriginal Resource and Gathering : 1, Water Hole : 1		
	Contact	**Recorders**	Onsite Environmental Management					**Permits**	3720	
62-5-0270	PASA TP7	GDA	55	706735	5951049	Open site	Valid	Artefact : 1		103130
	Contact	**Recorders**	Onsite Environmental Management					**Permits**	3720	
62-2-0390	CBS1_AS03	GDA	55	707507	5960391	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	ERM Australia Pty Ltd- Sydney CBD,Doctor.Diana Neuweger					**Permits**		
62-5-0023	EGP 2-22;Thorntons Creek_2;Eastern Gas Pipline;	AGD	55	703800	5951450	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Mr.Kelvin Officer					**Permits**		
62-2-0319	Tom Groggin Rd A2	AGD	55	705300	5958930	Open site	Valid	Artefact : -	Open Camp Site	98354,102206
	Contact	**Recorders**	Unknown Author					**Permits**		
62-5-0232	Lake Wallace 8	GDA	55	706076	5951451	Open site	Valid	Artefact : -		103130
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**	3560,3720	
62-5-0225	Lake Wallace 1	GDA	55	706694	5951057	Open site	Valid	Potential Archaeological Deposit (PAD) : -, Artefact : -		103130
	Contact	**Recorders**	Navin Officer Heritage Consultants Pty Ltd,Ms.Christine Gant-Thompson					**Permits**	3560,3720	
62-5-0296	GH-17	GDA	55	710590	5947580	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Access Archaeology and Heritage Pty Ltd,Mr.Douglas Williams					**Permits**		
62-5-0009	Harrys Lake;No.1;Aimmitabel;	AGD	55	703600	5958400	Open site	Valid	Artefact : -	Open Camp Site	1219
	Contact	**Recorders**	ASRSYS					**Permits**		
62-5-0032	EGP 2-100;MacLaughlin River 2;Eastern Gas Pipline;	AGD	55	703520	5950110	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Kerry Navin					**Permits**		
62-2-0395	CBS1_AS02	GDA	55	706855	5961039	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Doctor.Diana Neuweger					**Permits**		
62-5-0273	Lake Wallace 12	GDA	55	706624	5950492	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Onsite Cultural Heritage Management - Narooma,Mr.Gerard Niemoeller					**Permits**		

Report generated by AHIMS Web Service on 29/10/2023 for Kate Storan for the following area at Datum :GDA, Zone : 55, Eastings : 700637.0 - 710637.0, Northings : 5941962.0 - 5961962.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 42

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 23CAN6705
Client Service ID : 834098

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
62-5-0297	GH-18	GDA	55	710590	5946975	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Access Archaeology and Heritage Pty Ltd,Mr.Douglas Williams					**Permits**		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

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Appendix E: Noise and Vibration Estimator Assessment

Noise area category		R0
RBL or L_{A90} Background level (dB(A))	Day	30
	Evening	30
	Night	30
$L_{Aeq(15minute)}$ Noise Mangement Level (dB(A))	Day	40
	Day (OOHW)	35
	Evening	35
	Night	35
Noisiest plant		13.5T Excavator
Is there line of sight to receiver?		Yes

Abbreviation	Measure
N	Notification
SN	Specific notifications
PC	Phone calls
IB	Individual briefings
RO	Respite offer
R1	Respite period 1
R2	Respite period 2
DR	Duration respite
AA	Alternative accommodation
V	Verification

Residential receiver

		$L_{Aeq(15minute)}$ noise level above background (L_{A90})								
		5 to 10 dB(A)			10 to 20 dB(A)			20 to 30 dB(A)		
		Noticeable			Clearly audible			Moderately intrusive		
	Affected distance (m)	Measures	Within distance (m)	Mitigation level (dB(A))	Measures	Within distance (m)	Mitigation level (dB(A))	Measures	Within distance (m)	Mitigation level (dB(A))
Day	250							N	120	50
Day (OOHW)	365				N, R1, DR	250	40	N, R1, DR	120	50
Evening	365				N, R1, DR	250	40	N, R1, DR	120	50
Night	365	N	365	35	N, R2, DR	250	40	N, PC, SN, R2, DR	120	50
Highly Affected	15									
Day	305							N	135	50
Day (OOHW)	460				N, R1, DR	305	40	N, R1, DR	135	50
Evening	460				N, R1, DR	305	40	N, R1, DR	135	50
Night	460	N	460	35	N, R2, DR	305	40	N, PC, SN, R2, DR	135	50
Highly Affected	15									
Day	405							N	160	50
Day (OOHW)	630				N, R1, DR	405	40	N, R1, DR	160	50
Evening	630				N, R1, DR	405	40	N, R1, DR	160	50
Night	630	N	630	35	N, R2, DR	405	40	N, PC, SN, R2, DR	160	50
Highly Affected	15									

Appendix F: Stage 1 Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI)

08/11/2022

Amber Gault
Environment & Sustainability Officer
Safety Environment & Regulation
Transport for NSW

Dear Amber,

Preliminary assessment results for the HW19 SUP – Monaro Hwy Safety Improvements, South of Nimmitabel **on Stage 1 of the *Procedure for Aboriginal cultural heritage consultation and investigation* (the procedure).**

The project, as indicated in the Procedure for Aboriginal cultural heritage consultation and the AHIMS search was assessed as being unlikely to have an impact on Aboriginal cultural heritage.

The assessment is based on the following due diligence considerations:

- The project is unlikely to harm known Aboriginal objects or places (AHIMS sites).
- The AHIMS search did not indicate high concentrations of Aboriginal objects or places in the proposed project scope.
- Site Inspection with Project Manager and Environmental Officer

Your project may proceed in accordance with the environmental impact assessment process, as relevant, and all other relevant approvals.

If the scope of your project changes, you must contact Brad Hanlon, Aboriginal Cultural Heritage Officer, and your regional environmental staff to reassess any potential impacts on Aboriginal cultural heritage.

TfNSW staff and/or contractors should be aware of the potential of Aboriginal objects (including skeletal remains) being discovered during the course of the project, if this occurs all works in the vicinity of the find must cease. Follow the steps outlined in the Roads and Maritime Services' *Unexpected Archaeological Finds Procedure.*

For further assistance in this matter do not hesitate to contact Brad Hanlon.

Yours sincerely

Brad Hanlon
Aboriginal Cultural Heritage Officer – Southern

Transport for NSW
Level 6, 90 Crown Street, Wollongong NSW 2500 | PO Box 477, Wollongong NSW 2520
M 0435 383 457 | **E** bradley.hanlon@transport.nsw.gov.au

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NSW GOVERNMENT