

Marija Bakulich

From: Anthony Frith
Sent: Friday, 20 March 2015 11:00 a.m.
To: Mark Owen
Subject: FW: Otaihanga roundabout

They will call you at 11.05ish.

They are very focused on talking about the design of the roundabout, but it's important we use this as a chance to remind motorists how they need to approach roundabouts (as per the road code)

Here are our messages:

- The design of the roundabout has been carried out in accordance with the NZ Transport Agency and Austroad (trans-Tasman) guidelines & standards. That is, it not only meets NZ standards, but also Australian standards.
- We have commissioned four independent safety audits. None of these have raised any concerns about the camber of the roundabout.
- We will be looking into this crash to understand what caused it.
- Just as a stop sign or a red light is designed to stop traffic, a roundabout is designed to slow down traffic. It is legally a controlled intersection.
- Motorists must slow down and give way at roundabouts, irrespective of the speed limit. This is reflected in the road code, and is fundamental safe driving practice.
- We urge motorists to exercise caution and commonsense.
- Despite these crashes, the roundabout has greatly reduced the risk of severe crashes arising from motorists being hit at high speed when pulling out of Otaihanga Road.

Cheers

Anthony Frith / Media Manager - Central Region
 NZ Transport Agency - Strategy, Communications and Performance Group
 DDI 64 4 894 5251 / M 64 27 213 7617
 E anthony.frith@nzta.govt.nz / w nzta.govt.nz
 Central Office / Level 9, 20 Ballance Street,
 PO Box 5084, Wellington 6145, New Zealand

For travel information: Follow us on Twitter [@NZTAWGTN](https://twitter.com/NZTAWGTN); sign up to email alerts at [On The Move](#); or check our [live traffic cameras](#).

To provide feedback on our customer service or something you've noticed on the highways please email info@nzta.govt.nz



Marija Bakulich

From: Mark Owen
Sent: Thursday, 22 January 2015 2:00 p.m.
To: Caron Greenough
Subject: RE: Otaihanga Roundabout

Thanks Caron

From: Caron Greenough
Sent: Thursday, 22 January 2015 1:45 p.m.
To: [REDACTED]
Cc: Mark Owen; Steve James
Subject: Otaihanga Roundabout

Hi [REDACTED]

Mark Owen has passed on your email and your concerns regarding the road markings at Otaihanga Roundabout.

Firstly just for context. This roundabout has been designed for the traffic volumes that will occur once the Mackays to Peka Peka expressway has been finished but was needed now to allow for access to the local network as the expressway is being built, for the construction traffic and because this intersection, before the roundabout was built, was quite dangerous. Because of all of this we do have slightly unbalanced flows i.e. not much traffic exiting Otaihanga Road and more traffic just travelling north and south. This means that traffic, in particular those travelling south, doesn't see a lot of traffic turning right and gets used to not having to stop at the give way lines. To increase visibility of the traffic travelling right and to slow the traffic going south, following a lot of feedback from the public, it was decided to change the road markings so to 'push' traffic travelling right out to the edge of the roundabout and use the left hand lane to go south. This should happen even if you are in the right hand lane leaving Otaihanga Road and shouldn't cause any conflict with left turning traffic and you should remain in the left hand lane to exit the roundabout. There should be no need to suddenly do a right movement into the right hand lane and traffic travelling south should still be able to use both lanes. It also allows easier access for vehicles needing to go into the side road on the eastern side.

This type of layout has been used on a number of roundabouts in NZ and overseas.

While it may seem a little scary when faced with traffic appearing to travel quite fast towards the give way lines we have had speed detection loops on the approaches to the roundabout and we know that the majority of traffic is not travelling faster than the ability for them to stop safely at the give way line. Roundabouts are much more efficient than the alternative option of traffic signals and are the safest intersection layout that we have as traffic speeds are much slower.

I hope that explains what we are trying to achieve and despite a few teething problems with trucks getting used to the new layout we have found that the roundabout is generally working well.

Kind regards


Caron

Caron Greenough BE (Civil/Env) MSc (TP/TE) / Principal Safety Engineer – Central
HNO Central

DDI 64 4 931 8928 / M 64 21 232 6854

E caron.greenough@nzta.govt.nz / W nzta.govt.nz

Level 9, 20 Balance Street,
PO Box 5084, Lambton Quay, Wellington 6145, New Zealand

Mistakes are inevitable
Crashes are inevitable
Death and serious injuries are not
 Safer Journeys

Marija Bakulich

From: Phil Chatterley
Sent: Friday, 28 November 2014 6:21 p.m.
To: David Callan
Cc: Kiran Hira
Subject: Re: Safety rails at Otaihanga Roundabout

Hi Dave,

The hand rails were removed because they were getting struck and due to their positioning, their removal was promoted by the post construction RSA dated Aug 2014.

Dave, set report actions undertaken and Alex may be able to shed some light on this.

Regards

Phil

Sent from my iPhone

On 28/11/2014, at 11:36 am, "David Callan" <David.Callan@m2pp.co.nz> wrote:

Chaps

I'm out of the loop on this one, can you confirm why the safety rails where removed?

Cheers

From: Kate Zimmerman
Sent: Friday, 28 November 2014 9:03 a.m.
To: David Callan
Subject: Safety rails at Otaihanga Roundabout

Hi David!

At our CLG meeting earlier this week, the group queried the removal of the safety rails for cyclists at Otaihanga Roundabout. Can you confirm if this was a result of the safety audits and what the background to this might be?

Thanks,
Kate

Kate Zimmerman

Stakeholder / Consents Administrator | M2PP Alliance

43 Ihakara St, Paraparaumu 5032 | PO Box 723, Paraparaumu 5254
Ph: +64 4 897 7385 Email: Kate.Zimmerman@m2pp.co.nz

Delivering MacKays to Peka Peka - Phase One of the Kāpiti Expressway
View latest M2PP [photos](#), and read our [eNewsletter](#)

Think GREEN before choosing to print this email

The M2PP Alliance comprises: The New Zealand Transport Agency, The Fletcher Construction Company Ltd, Beca Ltd and Higgins Contractors Ltd.

Marija Bakulich

From: Phil Chatterley
Sent: Tuesday, 25 November 2014 5:48 p.m.
To: Roger Burra (Roger.Burra@nzta.govt.nz)
Cc: Kiran Hira; 'David Callan' (David.Callan@m2pp.co.nz); Peter Bradshaw
Subject: M2PP : Road Safety Audit Close Out (450 Aug 2014, Item 2.8): Otaihanga R/A

Subject: Otaihanga R/A Southbound Cycle Exit on to (SH1) Shoulder

Hi Roger,

To close out item 2.8 - Southbound Cycle Exit on to (SH1) Shoulder of the above Road Safety Audit, please note the following action along with initial responses.

Concern:

Moderate Concern – Southbound cycle exit onto shoulder

Designers response:

The intension of the design radius is to slow the cyclists down so they can look to the right and safely merge with the State Highway 1 traffic.

It is not proposed to amend this exit where it is considered to operate safely.

Safety Engineers response:

Agree with the SAT. The drop kerb should be extended to the south and additional concrete path provided to allow cyclists to move smoothly on the carriageway.

Clients Decision:

Further to the advice of the Safety Engineer confirm agreement with the SAT recommendations.

Action taken:

In discussion with the client, it was agreed that the Alliance would monitor any feedback from road users on the operation/safety of the cycle lane exit in the period up to Christmas.

In addition the Alliance would consult with local cycle group representative(s) to determine the safest arrangement. Changes to the pavement and kerb arrangement would then be considered in discussion with the NZTA before issuing any instruction to amend the drop kerb and path.

We have since held a brief meeting with Lynn Sleath of Kapiti Cycle Inc. (dated 21.11.2014) to discuss the current southbound cycle exit on to SH1 shoulder as shown in the attached photo.



It was generally agreed that the current design is fundamentally acceptable with no major safety concerns and would cater for cyclist by giving them the opportunity to slow down and look for traffic before merging.

This was based on the understanding that cyclists are made up from a diverse group of individual and their behaviour is dependent on many factors and it is not always possible to cater for every situation.

The proposal to move the drop kerb, flare the entry further south and construct additional concrete path to allow cyclists to merge smoothly on the carriageway was discussed. It was thought that although this may cater for a wider range of cyclists, it may encourage high speed manoeuvre which may be inherently less safe.

In line with this discussion with Lynn we do not propose to change the exit unless we receive any negative feedback from road users on the operation/safety of the cycle lane exit in the period up to Christmas.

We trust this is a satisfactory conclusion to this item.

Regards

Phil Chatterley

Alignment Design Lead | M2PP Alliance

43 Ihakara St, Paraparaumu 5032 | PO Box 723, Paraparaumu 5254

Mobile Ph: 021 205 1193 DDI: +64 4 460 1775 Email: phil.chatterley@m2pp.co.nz

Delivering MacKays to Peka Peka - Phase One of the Kapiti Expressway

Think GREEN before choosing to print this email

The M2PP Alliance comprises: The New Zealand Transport Agency, The Fletcher Construction Company Ltd, Beca Ltd and Higgins Contractors Ltd.

Sent from my iPhone

Marija Bakulich

From: Julian Chisnall
Sent: Wednesday, 29 October 2014 3:04 p.m.
To: James Hughes
Subject: FW: Bridge Barriers for M2PP Bridges, Structural Implications of Changing to Texas HT or Equivalent
Attachments: 141028_NZTA_Position_Bridge Barriers_v2.docx
Importance: High

FYI

From: Tony Coulman [mailto:Tony.Coulman@m2pp.co.nz]
Sent: Wednesday, 29 October 2014 2:22 p.m.
To: Julian Chisnall; Barry Wright
Cc: Roger Burra; Mike Pilgrim
Subject: FW: Bridge Barriers for M2PP Bridges, Structural Implications of Changing to Texas HT or Equivalent
Importance: High

Julian, Barry,

Julian, thank you for your time earlier today.

This E-Mail confirms the position I am reinforcing with the M2PP Alliance with respect to the addition of top rails to RL-4 barriers for the purpose of providing for occasional cyclists. My memo on this matter (shared with you previously Julian) is attached.

In essence the minimum requirements provide for the 2nd Ed Bridge Manual and TL-4 barriers at all structures bar one. Many structures designs are complete and foundation/abutment works are now underway.

The focus of debate has been on the top rail addition and not the raising of test levels, a move that would create significant extra cost (to the agency) and potential delay given earlier agreement on these parameters. The current alliance design is a standard TL-4 concrete barrier with a top rail added (non tested).

The conclusions and recommended approach are summarised below and have been discussed with Julian who agrees that at this stage of the contract this provides a practicable outcome that improves on the base minimum requirements and current alliance proposal, but does not achieve a TL5 performance level (this would incur a significant variation, when the assessed risk level does not warrant it). Barry, if you do have any concerns do please share these with us, otherwise I trust that you will agree this is a pragmatic and sensible approach. I will give you a call to follow up on this and any queries.

I do need to provide a formal decision this week and preferably no later than Thursday COB.

Much appreciated

Tony

Conclusion/Recommendation (from attached memo):

I am grateful for the efforts of all parties to find common ground. This work has been helpful in fully scoping the influences on this decision. The risks associated with implementation of the proposed top-rail system are potential brittle failure on impact creating a spear, or detachment from the barrier creating a falling hazard. Whilst the design team have attempted to demonstrate that the risk for this barrier system is low, this has not been adequately proven in New Zealand or elsewhere. The Transport Agency therefore believes that all bridge barrier

systems used on this project should be crash-tested and note that T80HT barrier ('Texas HT') represents current best practice and an acceptable solution for a system that would also address cyclist rail requirements. The system currently proposed is not crash-tested or deemed to comply and therefore does not meet the Bridge Manual criteria.

It is accepted that the test level performance in the PAA minimum requirements have identified that a barrier performance TL-4 is appropriate at bridges, with the exception of TL-5 at Otaihanga. Recognising that this agreed minimum requirement has driven the completed bridge structure and deck designs, including adoption of double hollow core decks, it is noted and accepted that it is not practicable at this stage of the project to re-design decks for a higher test level. On this basis the agreed philosophy is to provide for the Texas HT barrier to provide protection to cyclists and design for the TL-4 impact loads at the higher rail height, provided the Bridge Manual requirements are followed for ductile failure in the barrier system and preservation of the deck structure should higher impact loads occur (the design team have confirmed that these increased moments can be accommodated in the current decks). This practicable approach will still address cyclist safety, meet the assessed performance level for the structures, and will actually provide some additional vehicle restraint over a standard TL-4 barrier.

I do accept that the absence of cyclists on the median side of split bridges, and test level selection criteria in line with the minimum requirements, do permit the current proposal for a 1.1m concrete barrier (designed to the appropriate TL 4 or 5) on the median side of structures to provide for vehicle restraint, but also safety for maintenance crews. I have discussed this approach with the Agency Safety team and they will accept this approach.

The recent developments in health and safety legislation emphasise our responsibility as designers and asset owners to take all reasonable steps to identify, avoid or minimise the avoidable safety hazards. I acknowledge that adopting Texas HT is estimated to cost more (initial project estimate of approximately \$0.73M more than the barrier system proposed by the Design Team), however the potential cost differential does not in my opinion outweigh the safety concerns relative to a barrier that complies with best practice. Furthermore, high levels of traffic safety form a key foundation of the project objectives and adoption of a proven Texas HT system is consistent with a best for project philosophy.

From: Doug Stirrat

Sent: Tuesday, 28 October 2014 1:11 p.m.

To: Tony Coulman; Roger Burra

Cc: Jamil Khan; Peter Bradshaw

Subject: Bridge Barriers for M2PP Bridges, Structural Implications of Changing to Texas HT or Equivalent

Tony, Roger

Further to our meeting today regarding these barriers, we advise the following clarification regarding the structural implications of using Texas HT type barriers/rails on the M2PP expressway bridges.

Refer to Section 6 of the M2PP Alliance memo to Roger dated 30 September 2014.

The last sentence of this section stated that "It is noted that the design performance level for the barriers is still taken as TL 4 generally and TL 5 at Otaihanga Road bridge due to the geometry of this bridge".

This means that the design loads are still taken as TL 4 level of loading at all bridges (apart from Otaihanga Road and TL 5 at Otaihanga Road) even if the barriers are changed to Texas HT or equivalent. This performance level has previously been determined and agreed for the bridges. Our understanding is that the only reason Texas HT is being considered is to provide additional height to the barriers due to the potential for cyclists to be using these expressway bridges, and is not intended to change the test level, or performance level that the barriers need to be designed for.

The adoption of Texas HT barriers raises the height of applying the design impact load by about 400 mm for TL 4 barriers and 100 mm for TL 5 barrier. All of the M2PP bridge structural types can resist the additional bending from

this additional height of impact, based on applying the TL4 level of lateral load (250 kN) or the TL 5 level of load (500 kN) at Otaihanga.

However single hollowcore bridge decks without a topping slab cannot resist the TL 5 level of loading. This applies at several of the M2PP bridges. Also, bridges which have a topping slab would require a significant increase in the reinforcing steel if the design load is to increase to TL 5 level.

As Jamil noted, the bridge decks are designed to be 20% stronger than the barriers above to avoid damage to the bridge deck in the event of a greater level of impact loading occurring.

We await your confirmation before proceeding to change any barrier details.

Regards

Doug Stirrat

Sector Design Manager

43 Ihakara St, Paraparaumu 5032 | PO Box 723, Paraparaumu 5254
Ph: 04 4962534 Mob: 021 676 292 Email: doug.stirrat@m2pp.co.nz

Delivering MacKays to Peka Peka - Phase One of the Kapiti Expressway
View latest M2PP [photos](#), and read our [eNewsletter](#)

Think GREEN before choosing to print this email

The M2PP Alliance comprises: The New Zealand Transport Agency, The Fletcher Construction Company Ltd, Beca Ltd and Higgins Contractors Ltd.

RELEASED UNDER THE
OFFICIAL INFORMATION ACT

Memorandum

To: Peter Bradshaw,
Doug Stirrat
Alan Orange

Date: 28 October 2014

From: Tony Coulman, Transport Agency
Interface Manager

Our Ref: Version 1

Subject: Transport Agency Position on Bridge Barrier Systems for the Mackays to Peka Peka Expressway

Dear Peter

1 Introduction

This memo confirms the Transport Agency position on the bridge barrier systems to be adopted for the Mackays to Peka Peka (M2PP) Expressway. All bridge barrier systems adopted or proposed by the Design Team should either be deemed to comply by the Transport Agency, or be crash-tested and compliant with other aspects of the Transport Agency Bridge Manual (2nd Edition, 2004), as per the PAA minimum requirements.

By definition, expressways may be used by non-motorised road users such as cyclists. There is therefore a need to provide additional height to prevent cyclists falling from height. The combined traffic and cyclist barrier proposed in the current detail designs is not a proven system and has not been deemed to comply by the Transport Agency. The T80HT barrier ('Texas HT') is an acceptable solution, has been crash tested, and is the barrier system preferred by the Transport Agency where cyclists are to be protected from falls from height.

2 Discussions to Date

Questions during the detailed design phase regarding the suitability of the Design Team's proposed bridge barrier system were first raised by the Transport Agency in May 2014. Prior to this, the Transport Agency's review of the Bridge Design Philosophy Statement developed in December 2011, was focused on structural and seismic performance of the bridges. During the design development process there has been a more considered focus on the details which build on recent experience. This has highlighted the issue.

For the last six months there have been ongoing discussions to find common ground. Alliance participants have worked hard to explore the factors that influence this decision. The Design Team have sought to demonstrate the adequacy of the barrier system they have developed. They have also demonstrated that there are no technical constraints preventing an approved, crash-tested bridge barrier system from being readily adopted (i.e. the bridge decks can currently accommodate such barriers).

Memorandum

All agree that the bridges should incorporate barrier systems that meet NCHRP 350¹ Test Level 4 or above, except the Otaihanga Road Crossing which should meet Test Level 5. It is also agreed that increased barrier height is needed to prevent pedestrians and cyclists falling from height. The Alliance design philosophy has always been founded on the basis that cyclists will be permitted, but not encouraged, to use the expressway. This approach was re-confirmed last month following a robust review by the National Traffic & Safety Team.

More recently, as the team has worked through (and overcome) technical and environmental constraints, the focus has been on the rationale for promoting an un-tested barrier system. There are different views on:

- the risk arising from the use of a system that has not been used on an expressway or proven in a similar real-life situation;
- whether un-tested systems are compliant with the Transport Agency Bridge Manual (2nd Edition, 2004) which forms part of the Principal's Requirements.

3 Residual Concerns

The Transport Agency are promoting the use of crash-tested barrier systems because the physical response to collisions is documented and understood, giving an expectation of a safe outcome. Concerns regarding the use of the system currently proposed are:

- it has never been accepted for use on a State Highway/expressway;
- it has never been tested in a real-life situation²;
- there is a lack of information about the behaviour of the top rail during a collision;
- the benefits for adopting an un-tested barrier system have not been clearly articulated; and
- that the risks associated with these unknowns outweigh potential cost savings associated with an un-tested barrier system.

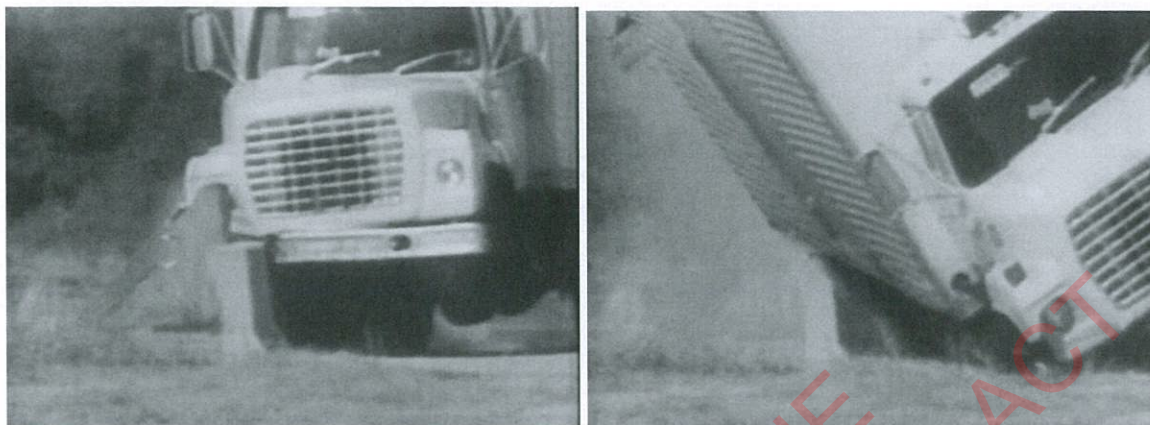
Tests of other barrier systems indicate that any top rail is likely to be struck by motorised vehicles colliding with the barrier system. This is shown in photographs which are extracted from a sequence taken during a NCHRP350 TL4 crash-test for an 8000kg single axle truck³.

¹ National Cooperative Highway Research Program Research Report 350.

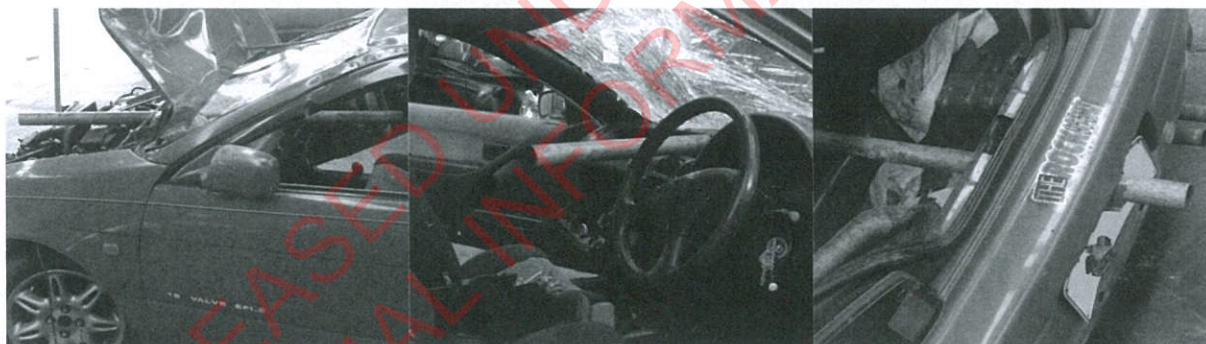
² The proposed system is being incorporated into bridges carrying low volume local roads across the Ngaruawahia Bypass although it is not known how they will perform when a motorist collides with them.

³ travelling at 80kmh at a 15° collision angle.

Memorandum



Fundamentally the Transport Agency is concerned that there is no documented evidence to show how the top rail element of the proposed barrier system will behave when struck by a motor vehicle. There are recognised risks that the top rail will deform in a brittle manner creating a spear (see photos below) or detach from the barrier creating a falling hazard. The Transport Agency is unwilling to accept the risk resulting from this uncertainty, particularly in an expressway situation.



4 Transport Agency Bridge Manual

While the Bridge Manual (2nd and 3rd edition) includes details and loadings for combined pedestrian/cycle and vehicle barriers, these should be considered as part of a system which is also required to meet the criteria outlined below.

The Bridge Manual encompasses bridges and barriers in a range of situations from low speed/low volume environments through to high speed/high volume situations. Discussion with the owners of Bridge Manual confirms that the intent (around combined barriers) is to create an opportunity for discussion around the possible combination barrier systems. They highlight that ultimately final approval for an un-tested system rests with the Transport Agency's National Traffic and Safety Manager.

The M2PP situation relates to a high speed, high volume route with occasional experienced cyclist usage in the shoulders. A high level of safety outcome is also a key project objective. We do not believe the barrier system that is currently proposed is compliant with the Transport Agency Bridge

Memorandum

Manual (2nd Edition, 2004). Section B4, (Appendix B) lists the criteria that must be met before a barrier system may be used in New Zealand.

“Only barriers that comply with one of the following three performance criteria shall be used for bridge side protection:

The barrier system has undergone satisfactory crash testing to the appropriate test level in accordance with NCHRP Report 350 with a maximum deflection not greater than 600mm”

- The barrier system currently promoted by the Design Team has never been crash-tested.

“The barrier system is based on similar crash tested barriers used elsewhere with a maximum deflection not greater than 600mm, subject to Transit New Zealand approval.”

- Although the barrier system currently promoted by the Design Team has been constructed on local road bridges across the Ngaruawahia bypass, these systems have never been crash-tested (and have not been approved for use on the bypass mainline).

“The barrier system is one that is deemed to comply by Transit New Zealand.”

- Until such time as the barrier system currently promoted by the Design Team is crash-tested the Transport Agency deem that it does not comply for the proposed situation.

Crash-testing is necessary to determine how the barrier system will perform as a whole. Adding new elements to crash-tested barriers means that the performance of the system as a whole is not understood and that the new system would need to be crash-tested.

The Project Alliance Agreement requires that bridge barrier systems comply with the Bridge Manual (2nd Edition, 2004). The criteria above highlight that an un-tested barrier system, which the Transport Agency has not deemed to comply, cannot comply with the Bridge Manual.

The Transport Agency National Traffic & Safety Team have responsibility for review and approval of any un-tested barrier systems. They have made it very clear that the project should adopt a proven, best practice bridge barrier system rather than an un-tested system in the situation of a high speed expressway application. It is clear that acceptance of a non-tested barrier system on M2PP is not going to be forthcoming.

5 Conclusion

I am grateful for the efforts of all parties to find common ground. This work has been helpful in fully scoping the influences on this decision. The risks associated with implementation of the proposed top-rail system are potential brittle failure on impact creating a spear, or detachment from the barrier creating a falling hazard.

Whilst the design team have attempted to demonstrate that the risk for this barrier system is low, this has not been adequately proven in New Zealand or elsewhere. The Transport Agency therefore believes that all bridge barrier systems used on this project should be crash-tested and note that T80HT barrier (‘Texas HT’) represents current best practice and an acceptable solution for a system that would also address cyclist rail requirements. The system currently proposed is not crash-tested or deemed to comply and therefore does not meet the Bridge Manual criteria.

It is accepted that the test level performance in the PAA minimum requirements have identified that a barrier performance TL-4 is appropriate at bridges, with the exception of TL-5 at Otaihangā.

Memorandum

Recognising that this agreed minimum requirement has driven the completed bridge structure and deck designs, including adoption of double hollow core decks, it is noted and accepted that it is not practicable at this stage of the project to re-design decks for a higher test level. On this basis the agreed philosophy is to provide for the Texas HT barrier to provide protection to cyclists and design for the TL-4 impact loads at the higher rail height, provided the Bridge Manual requirements are followed for ductile failure in the barrier system and preservation of the deck structure should higher impact loads occur (the design team have confirmed that these increased moments can be accommodated in the current decks). This practicable approach will still address cyclist safety, meet the assessed performance level for the structures, and will actually provide some additional vehicle restraint over a standard TL-4 barrier.

I do accept that the absence of cyclists on the median side of split bridges, and test level selection criteria in line with the minimum requirements, do permit the current proposal for a 1.1m concrete barrier (designed to the appropriate TL 4 or 5) on the median side of structures to provide for vehicle restraint, but also safety for maintenance crews. I have discussed this approach with the Agency Safety team and they will accept this approach.

The recent developments in health and safety legislation emphasise our responsibility as designers and asset owners to take all reasonable steps to identify, avoid or minimise the avoidable safety hazards. I acknowledge that adopting Texas HT is estimated to cost more (initial project estimate of approximately \$0.73M more than the barrier system proposed by the Design Team), however the potential cost differential does not in my opinion outweigh the safety concerns relative to a barrier that complies with best practice. Furthermore, high levels of traffic safety form a key foundation of the project objectives and adoption of a proven Texas HT system is consistent with a best for project philosophy.

Regards,

Tony Coulman
Transport Agency Interface Manager

Marija Bakulich

From: James Hughes
Sent: Tuesday, 7 October 2014 9:50 a.m.
To: Steve James
Subject: RE: SH1 Otaihanga Roundabout Markings

No drama, just a little bit technical and clinical I guess.

We appreciate the issue, but I am not sure that we have a solution.
Have you ever spoken to him to gauge his attitude?

james
Safer Speeds and Roadsides – we're getting there

James R Hughes / National Design Engineer
DDI 64 4 894 6312 / M 64 21 562 769
E james.hughes@nzta.govt.nz / w nzta.govt.nz



Please consider the environment before printing this email

From: Steve James
Sent: Tuesday, 7 October 2014 9:28 a.m.
To: James Hughes
Subject: RE: SH1 Otaihanga Roundabout Markings

I did read through your comments carefully and thought they were perfect for my response. I did change a few words!
I expect they would escalate it to their MP.

Steve James
Sent from my Sony Ericsson Xperia arc

James Hughes <James.Hughes@nzta.govt.nz> wrote:

James Hughes <James.Hughes@nzta.govt.nz> wrote:

Ok – I thought you were going to use my comments as information to write back to him and hadn't really intended them to be sent to him verbatim.

We have a temp working with Stu Fraser who lives that way and has been feeding back to me on the dissatisfaction of the residents. It sounds as though we may need to pay the residents a visit and I am happy to be involved.

This is typical of the issues arising from heavily imbalanced flows exacerbated by an accessway as a fourth leg. Might I suggest that we only consider single lane roundabouts where they are being installed only to calm the traffic e.g. Moonshine Road.

Just out of interest, who would he escalate this to?

James
Safer Speeds and Roadsides – we're getting there

James R Hughes / National Design Engineer
DDI 64 4 894 6312 / M 64 21 562 769
E james.hughes@nzta.govt.nz / w nzta.govt.nz



Please consider the environment before printing this email

From: Steve James
Sent: Tuesday, 7 October 2014 7:42 a.m.
To: James Hughes
Cc: Caron Greenough
Subject: FW: SH1 Otaihanga Roundabout Markings

Fyi

He is suggesting a sign that indicates the markings are substandard.

Everyone knows that you have to slow down and give way to the right at a roundabout.

He may escalate this further, any further thoughts?

Steve James / Senior Safety Engineer
Highways and Network Operations Group
DDI 64 4 910 8247 / M 64 21 245 3876
E steve.james@nzta.govt.nz / w nzta.govt.nz
Wellington Regional Office / PSIS House, 20 Ballance Street,
P O Box 5084, Wellington 6145, New Zealand



Please consider the environment before printing this email

From: [REDACTED]
Sent: Tuesday, 7 October 2014 6:25 a.m.

To: Steve James
Subject: Re: SH1 Otaihanga Roundabout Markings

Hi Steve

Thanks for your reply.

I understand what you are trying to do to make egress safer for the houses on the eastern side of the roundabout. The KCDC officer who was part of the the original partnership team also explained it.

I realise we have a fixed structure as designed but road markings and signage can be improved for minimal cost compared to the initial build. I hope you can reconsider this option as proposed in my earlier email which you have not commented on.

The residents of our subdivision feel strongly to putting themselves at risk by going south from Otaihanga road, so they ignore the road markings. Not a good solution for any of us from user or as road safety manager.

I would welcome your response to this suggestion before we escalate it further.

All the best

██████████

On Mon, Oct 6, 2014 at 11:33 AM, Steve James <Steve.James@nzta.govt.nz> wrote:
Good morning ██████████

Many thanks for your recent emails regarding the above.

The key points to make are:

- This roundabout has been installed early in order to address the safety issues of the old T intersection and facilitate safer turning for construction traffic
- It is, therefore, carrying much higher volumes than the design was intended for and, as it is SH1, some efficiency is lost for the benefit of safety.
- The markings have been put in to address the issue for drivers turning into the residential access to the east. This is not a common layout and, although it operates safely, with normal circulating markings, there was a concern that southbound drivers do not perceive it as an exit and therefore are not sufficiently prepared to give way; particularly those in the left lane as they expect drivers turning from west to south, to be in the right-hand lane.
- The aim, therefore, is to increase the presence of traffic turning from west to south (and west to east) so that southbound drivers are better prepared by pushing them towards the outside.
- Ultimately it is a roundabout, so regardless of the markings:
 - Drivers should always be slowing on the approaches
 - Drivers should always be prepared to give way
 - The speed environment is much lower and therefore much safer

It is a shame that some drivers still have to 'test' the layout, rather than accepting that it is a roundabout and they should slow and behave appropriately. However, although this is a temporary circumstance, until the expressway opens, we will continue to monitor the situation and garner feedback and undertake any temporary measures we consider will improve safety.

I hope this clarifies the situation a little clearer for you.

Kind regards

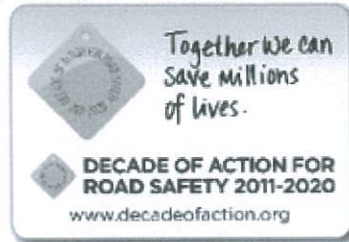
Steve James / Senior Safety Engineer

Highways and Network Operations Group

DDI 64 4 910 8247 / M 64 21 245 3876

E steve.james@nzta.govt.nz / w nzta.govt.nz

Wellington Regional Office / PSIS House, 20 Ballance Street,
P O Box 5084, Wellington 6145, New Zealand



Please consider the environment before printing this email

Find the latest transport news, information, and advice on our website:
www.nzta.govt.nz

This email is only intended to be read by the named recipient. It may contain information which is confidential, proprietary or the subject of legal privilege. If you are not the intended recipient you must delete this email and may not use any information contained in it. Legal privilege is not waived because you have read this email.

RELEASED UNDER THE OFFICIAL INFORMATION ACT

Marija Bakulich

From: James Hughes
Sent: Monday, 6 October 2014 11:29 a.m.
To: Steve James
Cc: Caron Greenough; Tony Coulman
Subject: RE: SH1 Otaihanga Roundabout Markings

Hello Steve

No I haven't responded – I was going to give you my thoughts rather than writing straight back to this chap directly.

The key points to make are:

- This roundabout has been installed early in order to address the safety issues of the old T intersection and facilitate safer turning for construction traffic
- It is, therefore, carrying much higher volumes than the design was intended for and, as it is SH1, some efficiency is lost for the benefit of safety.
- The markings have been put in to address the issue for drivers turning into the residential access to the east. This is not a common layout and, although it operates safely, with normal circulating markings, there was a concern that southbound drivers do not perceive it as an exit and therefore are not sufficiently prepared to give way; particularly those in the left lane as they expect drivers turning from west to south, to be in the right-hand lane.
- The aim, therefore, is to increase the presence of traffic turning from west to south (and west to east) so that southbound drivers are better prepared by pushing them towards the outside.
- Ultimately it is a roundabout, so regardless of the markings:
 - Drivers should always be slowing on the approaches
 - Drivers should always be prepared to give way
 - The speed environment is much lower and therefore much safer

It is a shame that drivers still have to 'test' the layout, rather than accepting that it is a roundabout and they should slow and behave appropriately. However, although this is a temporary circumstance, until the expressway opens, we will continue to monitor the situation and garner feedback and take any temporary measures we consider will improve safety.

Hope this helps – let me know if it rumbles on and I am happy to speak to the chap

James

James R Hughes Bsc CEng MICE/ National Design Engineer

Traffic & Safety Team

Highways and Network Operations Group

DDI 64 4 894 6312 / M 64 21 562 769

E james.hughes@nzta.govt.nz / w nzta.govt.nz



Please consider the environment before printing this email

From: Steve James
Sent: Thursday, 2 October 2014 12:09 p.m.
To: James Hughes
Subject: FW: SH1 Otaihanga Roundabout Markings

Hi James,

I sent you this a while ago. Did you get around to replying to this gentleman?

Cheers

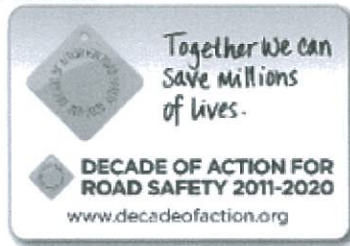
Steve James / Senior Safety Engineer

Highways and Network Operations Group

DDI 64 4 910 8247 / M 64 21 245 3876

E steve.james@nzta.govt.nz / w nzta.govt.nz

Wellington Regional Office / PSIS House, 20 Ballance Street,
P O Box 5084, Wellington 6145, New Zealand



Please consider the environment before printing this email

From: [REDACTED]
Sent: Wednesday, 24 September 2014 12:30 p.m.
To: Steve James
Cc: [REDACTED]
Subject: RE: SH1 Otaihanga Roundabout Markings

Hi Steve

I don't think you understand my concerns correctly.

You have a non-standard layout for the road markings which many drivers are not anticipating or allowing their speed to be reduced significantly.

If you feel that the benefits on speed control on the southbound carriageway of SH1 outweigh the risk to vehicles going south from Otaihanga Road, can I please ask you to install a suitably sized sign to warn southbound vehicles of this unusual road marking.

On 2 occasions out of 5 last week, going south at 6.20am I was put at risk with southbound drivers having to brake suddenly and one took exception all the way to Boat City flashing their lights.

I look forward to your reply. Please could I ask you to reply to my private email address [REDACTED]

Many thanks

[REDACTED]



From: Steve James [mailto:Steve.James@nzta.govt.nz]
Sent: Wednesday, 24 September 2014 9:53 a.m.
To: [REDACTED]
Subject: SH1 Otaihanga Roundabout Markings

Good morning [REDACTED]

Many thanks for your email regarding the above. The markings were changed to assist those vehicles turning into the access on the west side of the roundabout. From our observations on site, vehicles were hugging the inner side of the roundabout to turn into the access, and southbound vehicles were not giving way, because they were assuming wrongly that these vehicles were turning right and going southbound along SH1, rather than turning into the access. Our safety auditors advised us that the new markings would assist and make this movement safer. It does seem to have worked from our observations, but of course it does not suit everybody. It is very important that vehicles give way at the roundabout, so vehicles do need to have the best sight distance so that they can judge what other vehicles are doing on the roundabout. If any incidents do occur though, they will of course be at a lower speed, so that the severity of the crash would be less severe.

I hope this answers your concerns.

Kind regards

Steve James / Senior Safety Engineer
Highways and Network Operations Group
DDI 64 4 910 8247 / M 64 21 245 3876
E steve.james@nzta.govt.nz / www.nzta.govt.nz
Wellington Regional Office / PSIS House, 20 Ballance Street,
P O Box 5084, Wellington 6145, New Zealand



Please consider the environment before printing this email

Find the latest transport news, information, and advice on our website:
www.nzta.govt.nz

Marija Bakulich

From: James Hughes
Sent: Monday, 6 October 2014 4:27 p.m.
To: Caron Greenough; Mark Owen
Cc: Andrew Knackstedt; Steve James
Subject: RE: Dangerous road markings...

Hello all

Here are my thoughts:

1. Southbound - Assuming that [REDACTED] is referring to the curves that traverse part of the circulating carriageway:
 - a. Although this may appear strange, it is an essential feature of this 3 leg-roundabout that encourages drivers who would otherwise have an un-safely high speed entry and through path to slow to the required level.
 - b. It does appear as a 'tight kink' because the pavement shape fore-shortens all the curves.
 - c. Drivers tend to focus on their exit, which encourages early acceleration and probably makes the curves feel tighter.
 - d. If it is driven in 'roundabout mode' then there really isn't a problem (I have been through it in different sized trucks)

2. Northbound
Unfortunate fact of life when allowing both lanes to go that way, however take some comfort in the speed environment at the merge still being generally lower than for any comparable context (i.e. merge) remote from a roundabout. Drivers just need to let that one go I'm afraid. Visibility of and to the merge is also pretty good. I would expect most drivers to be in less of a hurry once the expressway opens.....maybe!

Happy to discuss of course

james
Safer Speeds and Roadside - we're getting there

James R Hughes / National Design Engineer

DDI 64 4 894 6312 / M 64 21 562 769

E james.hughes@nzta.govt.nz / W nzta.govt.nz



Please consider the environment before printing this email

From: Caron Greenough
Sent: Thursday, 2 October 2014 8:23 p.m.
To: Mark Owen; James Hughes
Cc: Andrew Knackstedt; Steve James
Subject: Re: Dangerous road markings...

Hi

Actually James had agreed to look after any complaints regarding the roundabout so as to track if any changes to the standards may be required. I believe this is the first one for a while and due the nature of roundabouts i.e. built to slow traffic the scenario envisaged would be unlikely.

James - could you and Steve work on a response if you haven't already got one!!

Cheers
Caron

Sent from me :)

Email: caron.greenough@nzta.govt.nz
021 232 6854

On 2/10/2014, at 4:49 pm, Mark Owen <Mark.Owen@nzta.govt.nz> wrote:

Hi Andy

Caron Greenough is contact for Otaihanga issues

cheers
Mark

From: Andrew Knackstedt
Sent: Thursday, 2 October 2014 9:24 a.m.
To: Mark Owen
Subject: FW: Dangerous road markings...

Hi Mark,

Possibly not one for you, but are you able to point this in the right direction for an acknowledgement and a response?

Cheers,

Andy

From: [REDACTED]
Sent: Wednesday, 1 October 2014 7:55 p.m.
To: Andrew Knackstedt
Subject: Dangerous road markings...

I wish to record that the roundabout, and the marking out of road lanes at Otaihanga intersection is much too tight, and is dangerous. Approaching from North to South - there is a dangerously tight curve to negotiate in the left hand lane. Even worse - Approaching from the South to North..if one stays in the correct right-hand lane, impatient cars behind sometimes zoom past on your left - overtaking at speed -instead of merging as was planned. **Some one will be killed by being cut off unexpectedly from their left (while travelling North). The offending car this time was a red sedan car r [REDACTED]
[REDACTED]