

EASTLEIGH SGO

HIGHBRIDGE ROAD TO BISHOPSTOKE LANE REVIEW

May 2019

The Highwood Group and Galliford Try Partnerships

EASTLEIGH STRATEGIC GROWTH OPTION

HIGHBRIDGE ROAD TO **BISHOPSTOKE LANE APPRAISAL**

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1. INTRODUCTION

- 1.1 This Highbridge Road to Bishopstoke Lane Review (HRR) has been prepared by Paul Basham Associates (PBA) on behalf of the Highwood Group and Galliford Try Partnership to provide an updated appraisal to the highways elements on the route of the proposed Bishopstoke Link Road relating to the Eastleigh Strategic Growth Option (SGO) at North Bishopstoke and Fair Oak as allocated in Eastleigh Borough Council's (EBC) emerging Local Plan.
- 1.2 This appraisal focuses on the section of road which falls within Winchester District, covering the section between Allbrook (with a separate assessment completed within PBA's Allbrook Appraisal for the section in and around Allbrook Rail Bridge and bridge over the Itchen Navigation) and Bishopstoke Lane. This appraisal is split into an assessment of three component parts of the link road, including the realigned section of Highbridge Road (Chapter 2), the retained alignment section of Highbridge Road (Chapter 3) and the new link road from the junction with Highbridge Road to the junction with Bishopstoke Lane (Chapter 4).
- 1.3 The focus of the study area is demonstrated in **Figure 1**, but consideration is given to the wider context and link road alignments.

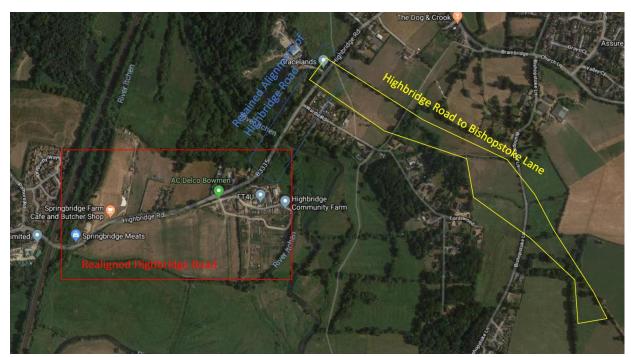


Figure 1: Highbridge Road to Bishopstoke Lane Review Study Area Focus

Principles of the Link Road through Non-Residential Areas

- 1.4 This report has been informed by multiple site visits but most recently a detailed walkover of the route in February 2019 which was attended by the project team including representatives considering the landscaping and ecology impacts of the proposals in order to ensure the design of the Link Road through these non-residential areas takes account of any identified landscaping and ecology constraints.
- 1.5 The overarching principles of the Link Road are defined within Hampshire County Council's *North Bishopstoke Bypass and Allbrook Hill Relief Road Feasibility Options Report* (February 2016 Evidence Ref SGO008a/8b), including component improvements at Allbrook Hill (Option 1C), Highbridge Road (Option H4) and the Bypass (Option 2A). HCC's assessment did not identify improvements to the section of Highbridge Road between Highbridge Farmhouse (the easternmost tie in of Option H4) and the Gracelands access (the northwestern end of Option 2A), with the vehicles utilising the existing stretch of Highbridge Road between these two locations.
- 1.6 The components of the Link Road through non-residential areas will be designed to cater for the strategic nature of the route but need to respond to the opportunities and constraints specific to the route. All new sections of road will be delivered to a standard DMRB road width of 7.3m (with two lanes of 3.65m width), whilst the current Highbridge Road varies in width along its length, but with a minimum width of 6.2m at the location of the existing bridge over the River Itchen.
- 1.7 HCC's typical cross section through Option H4 and 2A are the same and demonstrated in Figure 2.

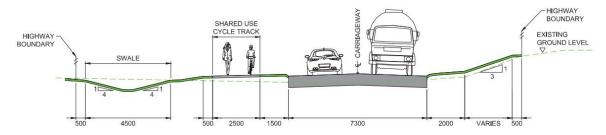


Figure 2: HCC Typical Section (Realigned Highbridge Road – Option H4 & 2A)



- 1.8 With regards to street lighting, Highbridge Road is currently unlit between Allbrook Rail Bridge and Brambridge. Given this section of road would remain predominantly rural with no additional dwellings proposed within this area, and mindful of feedback regarding landscape and ecology there are no proposals to light this section of highway. This approach has been raised and broadly supported by HCC highways at SGO meetings, reflecting HCC's Street Lighting Maintenance Management Plan (SLMMP, version 1.2 April 2018) policy statement that "Street lighting should not be provided in Zone E2 areas unless the County Council, or the Local Lighting Authority, deem it to be in the best interest of the local community from either a road safety or a personal security point of view" (page 11) with Zone E2 defined as areas of low district brightness (rural areas outside of National Parks, AONB, SSSI and other Dark Areas).
- 1.9 The proposed speed limit for this section of road is national (60mph) as per the existing Highbridge Road route. The speed limit reduces to 30mph on approach to the Allbrook Rail Bridge (as per the existing) and will reduce to 30mph to the east of the junction with Bishopstoke Lane where the road enters the residential element of the allocation.
- 1.10 Informed by the masterplan for the SGO development prepared by Allies & Morrison (Evidence Ref SGO006), the majority of the housing allocation, as well as key services and amenities including 2 primary and the secondary schools, employment land and new district centre are located at the eastern aspect of the SGO. As a result the section of road assessed within this appraisal remains largely remote from the primary walking and cycling desire lines, with the link road intersection with Winchester Road being 2.3km from the intersection with Bishopstoke Lane.
- 1.11 A review of Future Pedestrian and Cycle Desire Lines associated with the SGO is included within the Allbrook Bridge Appraisal Report (October 2018, Evidence ref TRA007). The findings of the review confirm that the Link Road through Non-Residential Areas does not represent the most direct route for pedestrians and cyclists to access Eastleigh Railway Station and High Street from the SGO as demonstrated via Figure 3.
- 1.12 It is therefore considered likely that the vast majority of pedestrian and cycle movements between the SGO and Eastleigh town centre will be via existing routes to Bishopstoke Road (with the Bishopstoke Road corridor being the focus of non-motorised user improvement).

- 1.13 This strategy aligns with EBC's "Eastleigh Local Plan: Scope of Public Transport and Cycling Strategy for SGO" document, which highlights that "The SGO benefits from good links to the existing cycle network and bridleways. The new link road through the site will become a new cycle corridor with dedicated provision and associated infrastructure" (para 2.12) and with a strategy of "Enhancement of the existing Bishopstoke Cycle route, with an emphasis on improving and completing missing links through off-road cycle paths, cycle lanes and on road facilities" (para 2.16).
- 1.14 The SGO will deliver off-road cycle facilities through the site, not only adjacent to the link road through the developable areas and some key sections of the off-site link road, but also provide connectivity through the site towards connection points to the existing Bishopstoke and Fair Oak cycle routes and desire lines, to the benefit of existing residents of Bishopstoke and Fair Oak as well as future SGO residents and users.



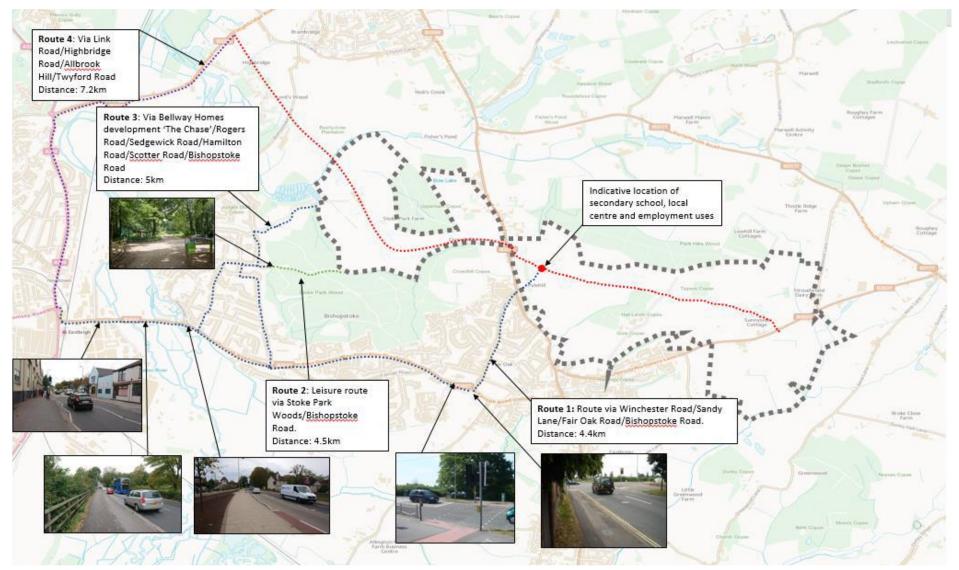


Figure 3: Difference in travel distance from Central SGO to Central Eastleigh



2. REALIGNED HIGHBRIDGE ROAD

- 2.1 The proposed realignment of Highbridge Road broadly follows HCC's Option H4, providing a consistent road width of 7.3m, a shared footway cycleway on the southern side of the road and a swale along the northern side of the road. The proposed alignment provides an improved horizontal alignment, removing the current sharper bends at Springbridge Farm where forward visibility is restricted. The design for this realigned section of Highbridge Road is attached as **Appendix A**.
- 2.2 The realigned section of Highbridge Road will include supporting bus infrastructure, replacing the existing stops located on Highbridge Road (serving routes E1 and X9). Discussion with local bus operators and Hampshire County Council will inform the exact location of the proposed stops and supporting infrastructure requirements. The current bus stops are simple flag posts with timetables demonstrated within **Photographs 1 and 2**, located to the south west of the entrances to Riverside and Highbridge Farm.



Photograph 1: Eastbound Bus Stop



Photograph 2: Westbound Bus Stop

2.3 The current section of Highbridge Road would be retained to ensure retained access to existing properties/businesses on this section of Highbridge Road, with a new turning head provided at the southern end of the route to allow refuse vehicles to turn. Boundary vegetation would also therefore be retained. This route would however experience significantly lower traffic volumes that the route currently accommodates, and so would become a more attractive environment for existing users of this route.

Re-routing of Overly Large HGVs

- 2.4 The existing section of Highbridge Road would also serve as a redirection route for overly-large HGVs that are unable to navigate under the (improved clearance) Allbrook Rail Bridge). This would be achieved through a one-way route at the rear of the turning head (supported by associated signage and Traffic Regulation Order (TRO)). This arrangement is demonstrated within **Appendix A**, which also shows tracking manoeuvres for an articulated vehicle re-routing back to the northern end of Highbridge Road through the new T-junction access. Given the improved clearances and number of HGVs using this route on a daily basis (further details within Paul Basham Associates Allbrook Appraisal and Systra's Local Plan Transport Assessment), this re-route arrangement is not anticipated to be used on a regular basis but acts as a mitigation route improvement over the current arrangement.
- 2.5 This re-routing arrangement will be supported through the use of early warning systems, as outlined within the submitted Allbrook Appraisal, including additional/improved advanced warning signage, infra-red sensors and physical systems on the bridge itself. This arrangement will not only mitigate against potential impacts of the SGO but also provide improvement over an existing constraint for existing HGVs attempting to travel along this route.

Flood Plain Compensation

2.6 The proposed realignment of Highbridge Road is located within the Flood Plain for the Itchen Navigation, compensatory storage will be created so as not to increase flood risk. The calculated volume of storage lost through the new section of road is 8540sqm, and the proposal is to provide that same area within the land located between the existing and proposed Highbridge Road (as shown in **Appendix A**). This area is within the current flood zone, but lowering of the level of the land in this area will create a basin to accommodate flood waters, with linkages to allow connectivity of water flow to other flood zone areas. This also provides opportunity for enhanced landscaping and ecological mitigation in close proximity to the Itchen Navigation.

3. RETAINED ALIGNMENT OF HIGHBRIDGE ROAD

3.1 From the tie in of the realigned Highbridge Road identified within Section 2, the existing alignment of Highbridge Road will be retained up to the intersection of the link road at the existing entrance to 'Gracelands' where a new roundabout junction is proposed.



- 3.2 The retained section of Highbridge Road, having been considered to present a suitable road alignment during the conceptual route identification stage by HCC has been the subject of further consideration. The existing carriageway width is circa 6.5m, with a minimum width of 6.1m across the existing River Itchen bridge (circa 110 south of the junction with Wardle Road).
- 3.3 A continuous footway is present on the northern aspect of Highbridge Road from the realigned section to circa 90m south of its junction with Wardle Road (just north of the River Itchen bridge), after which the footway continues on the southern aspect of Highbridge Road. The footways in this vicinity are of varied width (between 1.3m and 1.7m), as shown in **Photographs 3 and 4**. These footways are relatively lightly used, with vegetation overhang and grass verge creep into the rear of the footway. There could be opportunity to widen the footway to a more consistent width of 2m using highway verge if considered necessary (albeit with a pinch of 6.1m over the River Itchen bridge), although the level of footfall is not expected to alter significantly on this route as previously explained.



Photograph 3: Footway South of River Itchen Bridge



Photograph 4: Footway North of River Itchen Bridge

- 3.4 Within this section of Highbridge Road there are single flagpole bus stops located just north of the Wardle Road junction. It is proposed that these bus stops are retained (with minor relocation south of Wardle Road junction if needed to segregate further from the new link road junction, with supporting infrastructure to be agreed with the local bus operators and Hampshire County Council.
- 3.5 A drawing demonstrating the characteristics of this retained section of Highbridge Road is included as **Appendix B**, with cross section shown in **Appendix C**.

4. HIGHBRIDGE ROAD TO BISHOPSTOKE LANE

- 4.1 The existing alignment of Highbridge Road will be intersected at the existing entrance to 'Gracelands' with a new 36m ICD 4-arm roundabout junction with the North Bishopstoke Link Road. The design of this roundabout is demonstrated within **Appendix D** and has been used to inform the strategic transport modelling work completed within Eastleigh Local Plan Part 2 Transport Assessment (Evidence ref TRA002) prepared by Systra.
- 4.2 The proposed alignment of the link road broadly follows HCC's Option 2A, providing a consistent road width of 7.3m, a shared footway cycleway and a swale along the northern side of the road. The road alignment and typical cross section are provided within **Appendix E**.
- 4.3 The proposed link road would bisect Bishopstoke Lane north of Fresh Fields (the last house on the eastern side of Bishopstoke Lane before the bends to the north), providing connection to the southern section of Bishopstoke Lane via a right turn lane, whilst the northern section of Bishopstoke Lane would terminate with a turning head suitable for pantechnicon vehicles (with associated TRO required to restrict through movement for vehicles). This arrangement is demonstrated within **Appendix E**. Through movement for pedestrians and cycles would be maintained, but Bishopstoke Lane would become a no-through road for vehicular traffic. The provision of the right turn lane would accommodate traffic movement to northern Bishopstoke from the link road without obstructing the free-flow of traffic on the link road, whilst the northern section of Bishopstoke Lane would become a lightly-trafficked cul-de-sac.

Existing Footpath Consideration

The new roundabout junction will be supported by a footway on the southern aspect to connect to the existing footways on Highbridge Road. The link road will be flanked by a shared footway/cycleway which will connect to the existing footways on Highbridge Road and the proposed SGO development to the southeast. The proposed link road will cross existing Public Right of Way (PROW) "Colden Common Footpath 2a" which connects Highbridge Road to Wardle Road at a 45-degree angle. Whilst there are no proposals to formally divert this footpath, the proposed design factors in and accommodates pedestrian movements on this route. The existing footpath is supported by a style at the connection point with Wardle Road (Photograph 5) but there is no clear location on the ground where this footpath connects to Highbridge Road (Photograph 6). The PRoWs are identified within Figure 4.



Photograph 5: Footpath 2a at Wardle Road end



Photograph 6: Highbridge Road Frontage

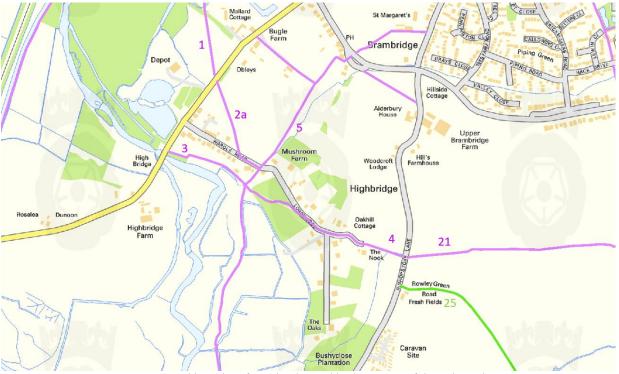
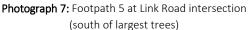


Figure 4: Public Rights of Way local to Highbridge section of the Link Road

4.5 The link road also crosses "Colden Common Footpath 5" which connects Wardle Road to Church Lane. Where Footpath 5 is located adjacent to a ditch and is heavily vegetated on both sides, It is proposed that the link road would cross the footpath at a point where there are fewer trees/less dense vegetation (between the mature Ash and Oak trees, avoiding root protection areas where possible), and would incorporate a culvert over the ditch. Pedestrian connectivity for those using Footpath 5 would be retained. Existing conditions are demonstrated within **Photograph 7**, whilst the details of the road link are shown in **Appendix D**.







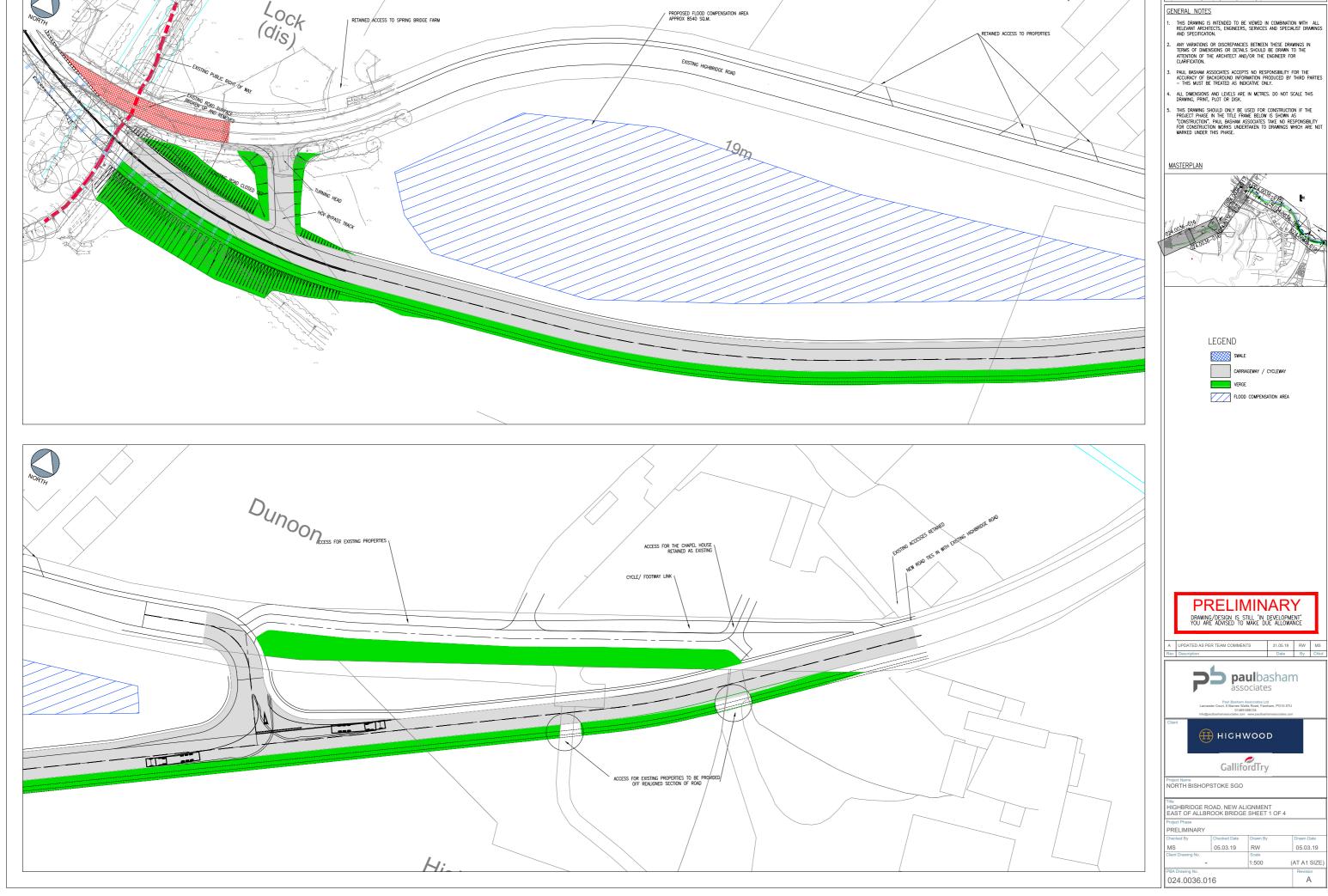
Photograph 8: Footpath 4 approaching Bishopstoke Lane

4.6 The link road also crosses "Colden Common Footpath 4/21" which connects Lordswood to Nobs Crook via Bishopstoke Lane. Existing conditions are demonstrated within **Photograph 8**. The proposed link road would pass to the north of Footpath 4, but given the introduction of the right turn lane at Bishopstoke Lane, the connectivity to Footpath 21 would be affected. The proposals in **Appendix E** demonstrate the recommended arrangement whereby users of this footpath link would only be required to cross a single road to continue on their east-west desire lines. The proposals incorporate a pedestrian refuge island within the hatching of the right turn lane to assist these pedestrian movements. The link road would remain to the north of Bridleway 25 and not impact upon this route.

5. CONCLUSIONS

- 5.1 This Highbridge Road to Bishopstoke Lane Review (HRR) has been prepared by Paul Basham Associates (PBA) on behalf of the Highwood Group and Galliford Try Partnership to provide an updated appraisal to the highways elements on the route of the proposed Bishopstoke Link Road relating to the Eastleigh Strategic Growth Option (SGO) at North Bishopstoke and Fair Oak as allocated in Eastleigh Borough Council's (EBC) emerging Local Plan.
- 5.2 Further assessment has been completed over and above that completed by HCC within their *North Bishopstoke Bypass and Allbrook Hill Relief Road Feasibility Options Report* and should be read alongside PBA's *Allbrook Appraisal* to consider the site-specifics of the route including existing vegetation, footpaths and watercourses, as well as flood mitigation requirements and the suitability of the retained section of Highbridge Road.
- 5.3 This review has also been completed with due consideration to EBC's Eastleigh Local Plan: Scope of Public Transport and Cycling Strategy for the SGO, which identifies the ambitions and needs for the SGO to provide suitable public transport and cycle infrastructure through the site and connectivity to the existing networks available within Bishopstoke and Fair Oak, delivering a comprehensive package of works to deliver benefits for existing and future users of these routes.
- 5.4 Through the process of any application further detailed design work would be completed, but this appraisal provides a structure to build upon in terms of design parameters and features.

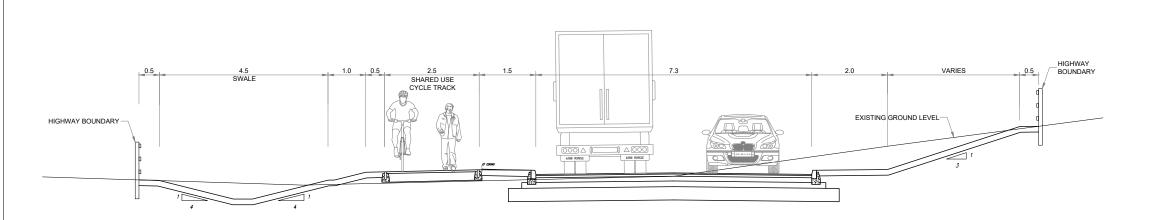




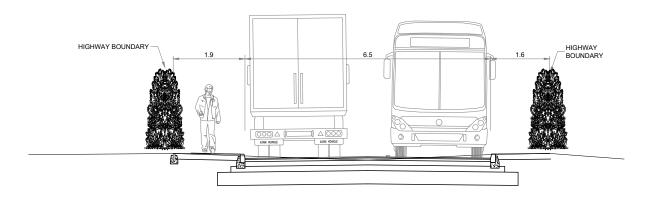




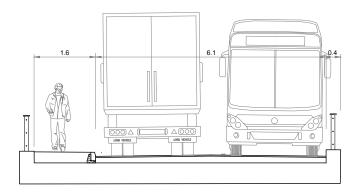




TYPICAL CROSS SECTION PROPOSED ROAD



TYPICAL CROSS SECTION EXISTING HIGHBRIDGE ROAD



TYPICAL CROSS SECTION AT HIGHBRIDGE ROAD BRIDGE

Rev Description Date By Chkd

024.0036.021

Project Name
HIGHBRIDGE ROAD NEW ALIGNMENT

Project Phase
PRELIMINARY

Title
TYPICAL ROAD CROSS SECTIONS





Checked By	Checked Date	Scale
MS	07.03.19	1:100
Drawn By	Drawn Date	Client [

06.03.19

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100 (AT A3 SIZE)
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