

Building 401: Unit 1 Manchester Airport

Transport Statement

MAG

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1. Introduction

Overview of Scope

- 1.1 AECOM has been appointed by Manchester Airport Group (MAG), to provide a Transport Statement (TS) in support of the planning application for a proposed development of two logistics units in the cargo area at Manchester Airport.
- 1.2 The proposed site, located at the World Freight Terminal, Manchester Airport, Manchester, M90 5XR, is currently occupied by an existing building on the site, Building 401, plus associated car parking.
- 1.3 This TS includes a review of:
 - Existing highway conditions associated with the current use of the development site, plus existing wider highway conditions and characteristics; and
 - Proposed development, covering the trip generation for the proposed development site and expected highway impacts due to the additional generated trips on the adjacent highway network.
- 1.4 Conditions have been assessed using pre-COVID-19 pandemic traffic data.

COVID-19 Statement

- 1.5 The global pandemic has significantly impacted the way people travel and businesses operate and those impacts are ongoing. One of the most affected sectors is aviation, which has been severely negatively impacted by the travel restrictions imposed through the pandemic. Given the uncertainty in how travel will continue to be impacted, this TS has not considered the impact of COVID-19 and is based on available data collected prior to the pandemic.

Site Location

- 1.6 Manchester Airport is located to the south of Manchester City Centre, between M56 junction 5 and junction 6 (see **Figure 1**).
- 1.7 Building 401, the site of the proposed development, is located in the cargo area at Manchester Airport. This is located on the south west side of the Airport (see **Figure 2**). The site is to the west of Pinfold Lane and South of Avro Way, with access to Building 401 site via Avro way, which is approached from Runger Lane.
- 1.8 The area to the south of Avro Way is made up of several industrial units, one of which is Building 401. This group of units make up part of Manchester Airport's World Freight Terminal and comprise primarily logistic companies or flight services providers. The existing unit on the site is currently in use by MAG Airport maintenance, though is due to be demolished. The site also includes a small car park which is used by Airport servicing staff.

Figure 1: Manchester Airport Location



Image Source: Openstreetmaps

Figure 2: Location of Building 401

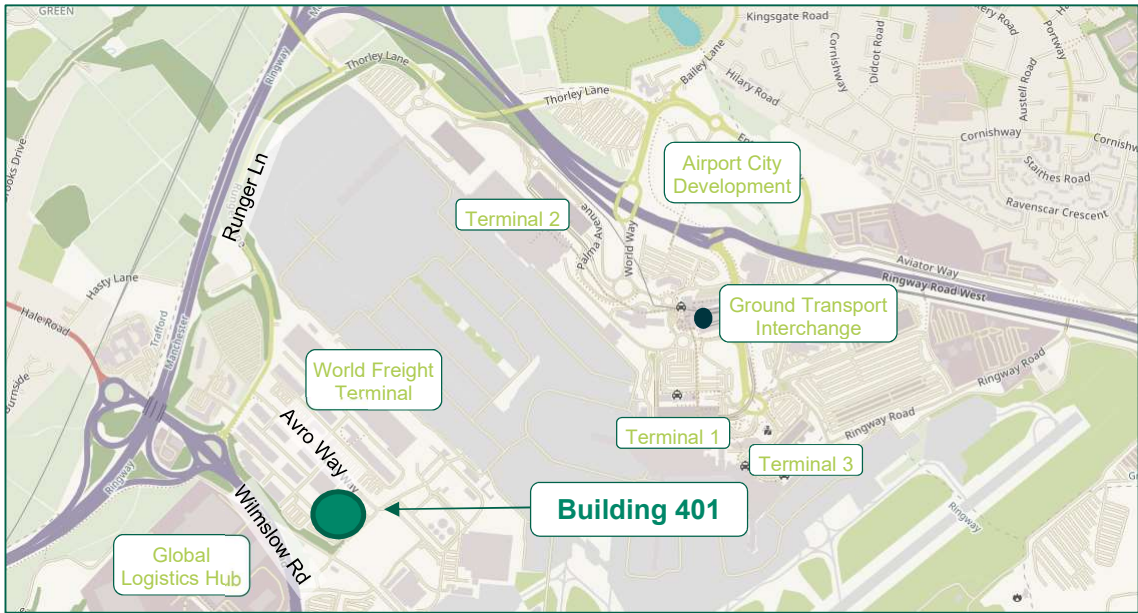


Image Source: Openstreetmaps

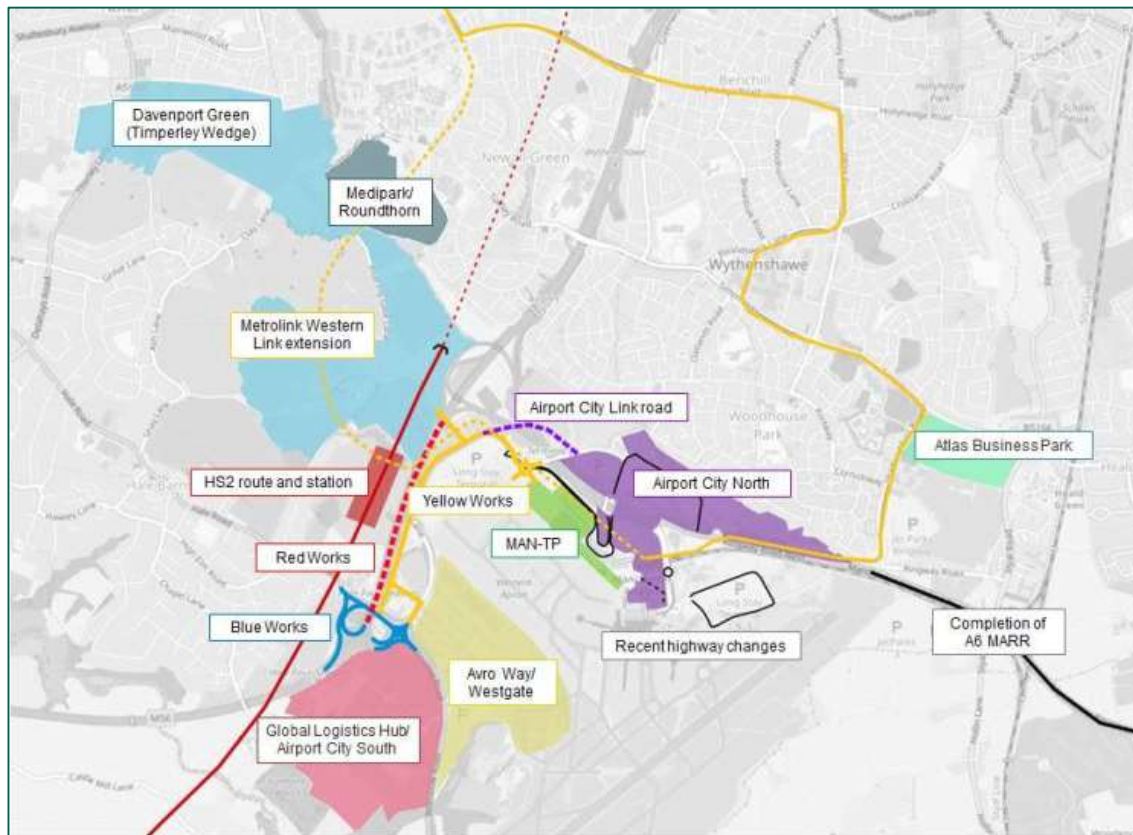
Report Structure

- 1.9 Following this introductory chapter, this report will comprise of the following sections:
- **Chapter 2** provides a summary of the planning background;
 - **Chapter 3** considers national, regional and local transport policy;
 - **Chapter 4** presents the existing conditions relating to traffic and vehicular movements at the site;
 - **Chapter 4** details the development proposal for Unit 1, along with trip generation data and likely highway impacts; and
 - **Chapter 5** provides a summary and presents the conclusions of the Assessment.
- 1.10 The Report is also support by a series of appendices which present the baseline traffic data, plus the results of the highways assessment.

2. Planning Background

- 2.1 There are several developments in the vicinity of Manchester Airport which are either under development or currently in the planning stage. This section provides details of the relevant developments. A summary diagram showing the location of these developments is provided in **Figure 3**. The development assessed by this TS sits within the Avro Way / Westgate development zone.

Figure 3: Developments in the Vicinity of Manchester Airport



MAN-TP

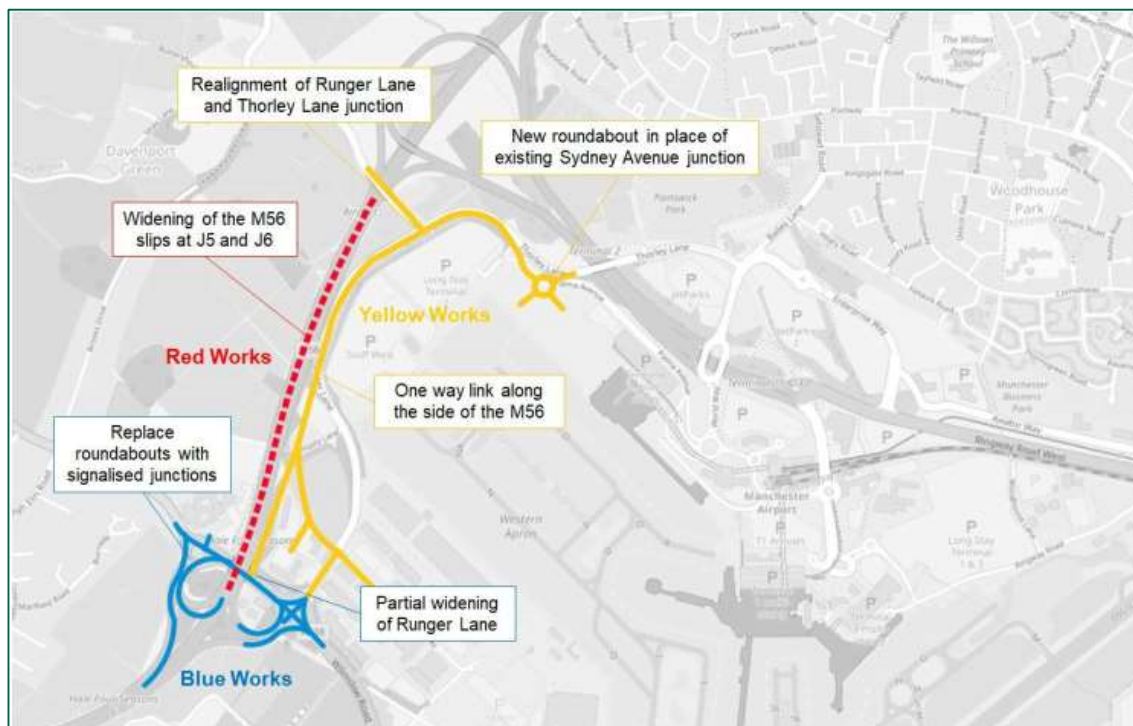
- 2.2 The Manchester Airport Transformation Programme (MAN-TP) is a £1 billion investment to transform Manchester Airport into a world class operation with significant enhancements to current facilities and major improvements to customer experience, with improvements to the airport, airfield and airport access. A key focus of MAN-TP is the expansion of Terminal 2, currently under development.

Rainbow Works

- 2.3 The highway improvement scheme, known as the 'Rainbow Works', was established through Section 106 obligations associated with the second runway planning permission for the airport to handle circa 30 million passengers per annum. The purpose of the planned improvements is to upgrade access to and from the west of the Airport, via the M56, reduce congestion at Junction 5 and between Junction 5 and 6.

- 2.4 The proposed Rainbow Works scheme consists of the following three phases of highway improvements (see **Figure 4**):
- ‘Blue’ works: Improvements at Junction 6 of the M56 including signalling the western roundabout, enhancements to the east side roundabout and extension of slip roads;
 - ‘Yellow’ works: Delivery of a new dual carriageway between Terminal 2 and M56 Junction 6 along with slip road extension. There is an option to split this phase into two to allow for early development of Airport City Plot 350 (known as ‘Light Yellow’) followed by subsequent northern section improvements to Terminal 2 (known as ‘Dark Yellow’); and
 - ‘Red’ works: Widening the M56 Junction 5 and 6 slip roads to two lanes, including adjustments to the mainline between Junction 5 and 6.
- 2.5 The second runway planning permission includes a trigger point for when all three phases of highway improvements are to be completed. That trigger point is set at 10,100 passengers per hour (two-way) using the Airport’s terminals in the 30th busiest hour. Based on existing demand profiles, this equates to annual passenger volumes estimated to be in the region of 32 to 34 million passengers per annum.

Figure 4: Location of Rainbow Works



Manchester Airport Sustainable Development Plan

- 2.6 The Manchester Airport Sustainable Development Plan (SDP) sets out the context for the growth and development of the Airport to 2030. The long-term aim of the SDP is to deliver development growth and infrastructure provision to support a throughput of up to 55 million passengers per annum. To achieve this, the SDP and particularly the Land Use Plan element, provides the framework for the Airport’s detailed investment and capacity planning.

- 2.7 In recent years planning applications have been submitted for developments forming part of this long-term growth strategy. Manchester Airport has planning approval for a Transit Unit on Runger Lane, to the west of the existing Cargo and Logistics Centre, as well as an extension to the existing Airport cargo handling centre to the north of Wilmslow Road (the Global Logistics Hub).
- 2.8 Two separate planning consents were also granted for the development of a business park on land to the north of the M56 Spur, between Thorley Lane and Ringway Road West. These proposals were then further developed and resubmitted for approval as Airport City North.

Local Motorway Network

- 2.9 M56 SMART Motorways - Motorway improvements are under way on the M56 close to the Airport, with the construction of all-lane running (four lanes) smart motorway on the M56 between Junction 6 and 8. This will provide increased capacity and improve access to Manchester Airport and improve journey time reliability on this congested section of M56.
- 2.10 M6 Junction 19 – currently under construction is the £43 million improvement to M6 Junction 19, designed to enable better flow between the motorway and the A556. The improvements are designed to speed up journey times and reduce congestion at the junction roundabout, whilst also providing improvements for pedestrians and cyclists.

Terminal 2 Metrolink Extension Outline Business Case

- 2.11 TfGM (Transport for Greater Manchester) is assessing options for the extension of the Metrolink network in line with the ambitions of Greater Manchester's Transport Strategy 2040, to create an integrated and sustainable transport system. The extension of the Metrolink Network includes an extension to Terminal 2 at Manchester Airport, with a £2.1m grant from central government the extension has the potential to be delivered by 2026. The extension of the Metrolink network to Terminal 2 will improve access to Manchester Airport for those in an around Greater Manchester.
- 2.12 The extension of Metrolink is subject to planning approval.

High Speed Rail Phase 2, Manchester Airport Station

- 2.13 Phase 2b of HS2 (High Speed 2) involves a route from Crewe to Manchester. The plans propose a new station at Manchester Airport to bring together Northern Powerhouse Rail (NPR) and HS2 services, improving transport connections and services in the North. The development of Phase 2b will increase the airport's importance as an international gateway, a new proposed HS2 station at Manchester Airport will improve the airports accessibility and capitalise on the investment programme at Terminal 2.
- 2.14 Currently a rail journey from London to Manchester Airport takes 135 minutes, the development of HS2 will facilitate the same rail journey at 63 minutes. Improvements to journey time and capacity will provide quicker and easier access to the country's third largest airport, seeing huge benefits for businesses and leisure passengers. Highway access to the proposed station will be via M56 Junction 6, which will be upgraded to accommodate the access to the HS2 Station.

Northern Powerhouse Rail (NPR)

- 2.15 NPR aims to maximise benefits for the north through a combination of new rail lines, major upgrades to existing routes and through the use of planned HS2 infrastructure. The integrated NPR/HS2 station at Manchester Airport will enhance connectivity and access to global opportunities, NPR will allow the rail network to have the capacity to significantly increase train size and frequency, shortening journey times to Manchester Airport.
- 2.16 NPR intends to bring Manchester Airport within 90 minutes reach for 4.3 million people, more than doubling the number of people currently within 90 minutes reach without NPR¹.

Stockport to Manchester Airport Bus Rapid Transit

- 2.17 Proposals for a new Bus Rapid Transit (BRT) network operating between Stockport and Manchester Airport are under development by Stockport Council, Cheshire East Council and TfGM, and have been identified as a Strategic Priority² by those organisations.
- 2.18 The opening of A6MARR (Manchester Airport Relief Road) has vastly improved highway connections to the airport from south Manchester and Stockport, and potentially open new bus service opportunities, but wider public transport options are likely to remain limited³. Therefore, three new BRT services are proposed; one from Stockport and Manchester Airport, with stops at Hazel Grove, Bramhall, Woodford, Handforth, Stanley Green and Heald Green. The other two services would both begin in Wilmslow and serve Handforth and Stanley Green, with one moving on to Heald Green and Manchester Airport and the other instead travelling through Cheadle to the East Didsbury Metrolink stop.
- 2.19 The final details of the routes are still being developed through a study commissioned by TfGM.

Timperley Wedge Development (Trafford Council – Places for Everyone (PfE) Plan – Jul 2021)

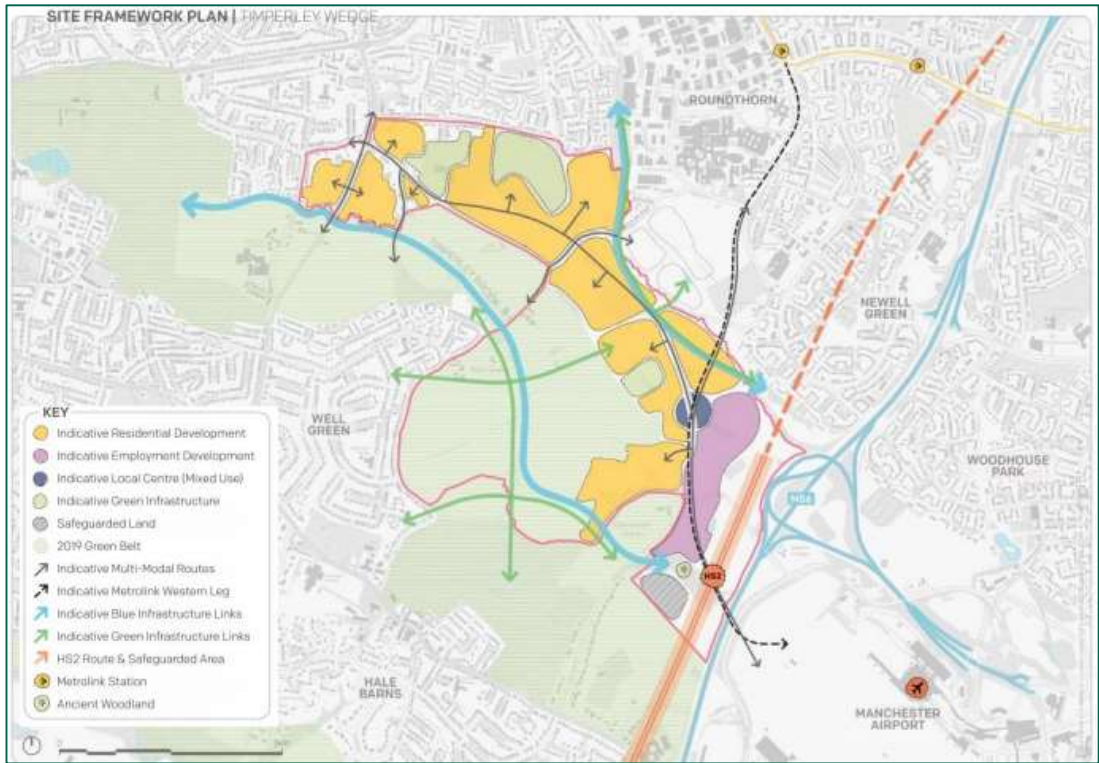
- 2.20 Proposals to develop 2,500 quality homes and 15,000 square metres employment land to provide high quality office space located to the south east of Timperley, west of M56, Junction 5 (see **Figure 5**).
- 2.21 The planned development includes proposals for a new spine road to improve access through the site, also incorporating bus priority measures. The proposed Metrolink Line, Western Leg extension, would also serve the development site. The development will also provide safe cycling and walking routes and significantly enhance public transport.

¹ <https://transportforthenorth.com/northern-powerhouse-rail/>

² <https://moderngov.cheshireeast.gov.uk/documents/s72259/Local%20Transport%20Plan%20-%20app%203.pdf>

³ <https://cbwmagazine.com/south-east-manchester-multi-modal-strategy-calls-for-three-new-brt-services/>

Figure 5: Timperley Wedge Development Overview



Source: <https://www.trafford.gov.uk/planning/strategic-planning/docs/GMSF-FAQs/Timperley-Wedge-Framework-Plan.pdf>

3. Transport Policy

Introduction

- 3.1 This chapter identifies and summaries the relevant Transport Policy in the area surrounding the Building 401 development site.

National Policy

National Planning Policy Framework (2021)

- 3.2 This national planning guidance has been designed for local planning authorities and decision makers, for both drawing up plans and as a material consideration in determining applications.
- 3.3 Essentially, the NPPF identifies a presumption in favour of sustainable development. This is not intended to replace the development plan as the starting point for decision-making, but it does imply that, in accordance with the development plan, proposals should be approved without delay.
- 3.4 It calls on the planning system to do “everything it can to support sustainable economic growth”, and that “significant weight should be placed on the need to support economic growth.”
- 3.5 All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:
- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
 - Safe and suitable access to the site can be achieved for all people; and
 - Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.
- 3.6 Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to:
- Accommodate the efficient delivery of goods and supplies;
 - Prioritise pedestrian and cycle movements, and have access to high quality public transport facilities;
 - Ensure safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establish home zones;
 - Incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
 - Consider the needs of people with disabilities by all modes of transport.

3.7 Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities. If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- The accessibility of the development;
- The type, mix and use of development;
- The availability of and opportunities for public transport;
- Local car ownership levels; and
- An overall need to reduce the use of high-emission vehicles.

Decarbonising Transport: A Better, Greener Britain (2021)

3.8 The Government is developing an ambitious plan to accelerate the decarbonisation of transport. The Transport Decarbonisation Plan (TDP) will set out in detail what government, business and society will need to do to deliver the significant emissions reduction needed across all modes of transport, putting us on a pathway to achieving carbon budgets and net zero emissions across every single mode of transport by 2050.

3.9 Whilst there have been recently published strategies to reduce Greenhouse Gas (GHG) emissions in individual transport modes, the journey to net zero demands that transport as a whole sector moves further, faster. The TDP will take a coordinated, cross-modal approach to deliver the transport sector's contribution to both carbon budgets and net zero.

Future of Mobility: Urban Strategy, Department for Transport (2019)

3.10 The Future of Mobility Grand Challenges are central in the Government's Industrial Strategy, in facilitating innovation in urban mobility for freight, passengers and services. The Government's approach will be underpinned by the following principles:

- New modes of transport and new mobility services must be safe and secure by design;
- The benefits of innovation in mobility must be available to all parts of the UK and all segments of society;
- Walking, cycling and active travel must remain the best options for short urban journeys;
- Mass transit must remain fundamental to an efficient transport system;
- New mobility services must lead the transition to zero emissions;
- Mobility innovation must help to reduce congestion through more efficient use of limited road space, for example through sharing rides, increasing occupancy or consolidating freight;
- The marketplace for mobility must be open to stimulate innovation and give the best deal to consumers;
- New mobility services must be designed to operate as part of an integrated transport system combining public, private and multiple modes for transport users; and
- Data from new mobility services must be shared where appropriate to improve choice and the operation of the transport system.

- 3.11 The speed of transport innovation has been increased by advanced data science, artificial intelligence and sensing technology, allowing opportunity for cleaner transport, automation, new business models and new modes of travel promising to transform how people, goods and services move. Delivering these changes successfully has the potential to boost productivity and investment, increase export opportunities for UK companies and create high-quality jobs.

Aviation Policy Framework (2013)

- 3.12 The UK Aviation Policy Framework was published by the previous Government in 2013 and outlines national objectives and principles to guide plans and decisions at the local and regional level. The framework's primary objective is to achieve long-term economic growth and aviation is viewed as a key enabler in this regard by providing domestic and international connectivity which links business communities and markets. Aviation also benefits the UK economy through direct contributions to gross domestic product and employment, with the sector estimated to directly provide 220,000 jobs. The overall objective in the UK Aviation Policy Framework is to ensure that the UK's air links continue to make it one of the best-connected countries in the world.
- 3.13 The number of passengers using non-London airports has increased by over a third since 2000. Recognising the importance of airports such as Manchester the framework states 'a key priority is to work with the aviation industry and other stakeholders to make better use of existing runway capacity at all UK airports'. The framework also places importance on ensuring these airports are better integrated into the wider transport network. The UK Aviation Policy Framework seeks to promote improved surface access to airports and that future development schemes should be accompanied by clear proposals that demonstrate how the airport will ensure easy and reliable access for passengers and staff, increase the use of public transport and minimise the impact of the operation in the local area. The UK Aviation Policy Framework continues to encourage airport operators to publish plans that set out their approach to growth and future development.

Regional Policy

The Greater Manchester Transport Strategy (2040)

- 3.14 The Greater Manchester Transport Strategy 2040 was adopted in February 2017. It was developed by TfGM on behalf of the Greater Manchester Combined Authority (GMCA) and Greater Manchester Local Enterprise Partnership (LEP). The document builds upon the '2040 Vision for Transport' and highlights the priority interventions needed to achieve the vision. The strategy addresses long term challenges for the Greater Manchester area, such as a rapidly growing and ageing population, climate change and the need to improve productivity.
- 3.15 The overall aim of the strategy is to create 'world class connections that support long-term, sustainable economic growth and access to opportunity for all'. The four key goals of the vision are:
- Supporting sustainable economic growth;
 - Improving quality of life for all;
 - Protecting our environment; and
 - Developing an innovative city-region.
- 3.16 The strategy acknowledges Greater Manchester's role as an important city region and national growth engine. Anticipated growth over the next 20 years will see wide scale development across the region and managing the impact of this on the transport network will be challenging. For this reason, integration between transport and development will be vital.

Our People, Our Place - The Greater Manchester Strategy (2017)

- 3.17 This new strategy sets out GMCAs collective ambition to make Greater Manchester one of the best places in the world. It is a strategy for everyone in Greater Manchester – residents, the voluntary, community and social enterprise sector, businesses, and civic leaders. This is the third Greater Manchester Strategy and it builds on the substantial progress made since the first Strategy published in 2009 and the most recent refresh in 2013. The previous strategies have delivered a strong drive for economic growth, the 2017 strategy builds on that experience, increasing the focus on ensuring that the people of Greater Manchester can all benefit from economic growth and the opportunities it brings throughout their lives.

Manchester Core Strategy (2012-2027)

- 3.18 Manchester's Core Strategy was adopted by the City Council in July 2012. Policy MA1 (Manchester Airport Strategic Site) sets out the policy context for the development of the proposed Airport City development. The document states that the area provides significant opportunity for employment in Manchester.

Policy MA1 Manchester Airport Strategic Site

- 3.19 This sets out the policy context for the development of the Airport. It identifies areas for expansion of the Airport and shows amendments to the Green Belt required to deliver that expansion. In Table 8.1 of that Policy, the area subject to this application falls within Existing Area Strategic Site, which identified as being suitable for the development of "Terminal, taxiways, aircraft apron, ancillary operational facilities, offices, hotels and other uses, surface access and car parking".
- 3.20 Policy MA1 goes on to state "All development proposed as part of the Airport expansion should seek to ensure that any environmental effects of development are assessed at the planning application stage to ensure that any impact is acceptable. It will be necessary to mitigate or compensate any negative effects. In particular:
- Minimise any adverse impact on areas of international or national conservation, ecological and landscape value. In particular, development should avoid Cotterill Clough SSSI. Where it is not possible to avoid harm, mitigation measures to compensate for any adverse impact will be necessary. Development within the expansion areas must implement the mitigation measures agreed with the Council, informed by an up to date environmental assessment;
 - Support the retention and preservation of heritage assets. Detailed proposals which impact upon heritage assets within or close to the site, including listed buildings, will be required to show they have met the tests within PPS5. Development which has a detrimental impact on heritage assets should be necessary to meet operational capacity requirements, taking account of the availability of preferable development options within the Airport site;
 - Retain or relocate the allotments;
 - Include surface car access and car parking arrangements which encourage the use of public transport, walking and cycling, and satisfactorily manage impacts upon the highway network;
 - Seek the maximum possible reductions in noise through compliance with the Manchester Airport Noise Action Plan and the Manchester Airport Environment Plan;
 - Demonstrate that the number of people affected by atmospheric pollution is minimised and the extent to which any impact can be mitigated; and
 - Improve access to training and job opportunities, particularly for people in Wythenshawe."

Local Policy

Manchester Airport Sustainable Development Plan (2016)

- 3.21 MAG published the Manchester Airport Sustainable Development Plan (SDP) in June 2016. This document sets out the strategic context for the long-term development of the Airport. The SDP comprises a high-level summary and four detailed plans that deal with the Economy and Surface Access, Environment, Community and Land Use. These plans set out in greater detail how MAG will realise future opportunities and deal with the principle issues faced.
- 3.22 The Sustainable Development Plan updates the 2007 Manchester Airport Master Plan and develops the land use, environmental and community programmes and sets a context for the economic growth strategy that is strongly linked to the surface access strategy. The overall approach to surface access is to improve the airports accessibility with quick, convenient and reliable access from all parts of the airport's catchment area. The aim is to extend and improve rail services, making the airport a node in the wider network. It is intended to manage growth in road traffic and promote the improvement in public transport links for passengers and staff. The airport's public transport connections are also important in local access to airport employment.
- 3.23 Embedded within this plan is the detailed surface access strategy which has re-emphasised the airports long standing commitment to delivering sustainable travel and managing growth in road traffic. A key element of this commitment has been the setting of long-term modal split targets for both passengers and staff which reflects the on-going commitment to delivering a fully integrated surface access network.

Summary

- 3.24 The overriding theme of national policy is that developments must be accessible by sustainable means of transport as well as to all members of the local community. Local policy echoes the sustainability sentiment of national policy and provides more detail relevant to the proposed development site. The following chapters of this report will demonstrate that the proposed development is compliant with local, regional and national policies outlined within this chapter.

4. Baseline Transport Data

Introduction

4.1 This chapter considers the relevant baseline transport conditions in the vicinity of the proposed development site for Unit 1. The section below considers:

- Strategic Highway Conditions;
- Local Highway access;
- Public Transport provision; and
- Active travel connections to the site.

Strategic Highway Conditions

4.2 Wider strategic access to the site is provided by the surrounding motorway and A road network, which provides excellent connectivity both within the North West and Nationally.

M56

4.3 The M56 spur provides direct access to Manchester Airport via Junction 5. The M56 forms a strategic east west route from the M60 in the east to the M53 in the west, providing access to the Greater Manchester and Cheshire areas. The M56 also provides direct links to the M6, which is approximately 15km to the west. Access to the freight and cargo area of the airport, is typically accessed via Junction 6.

4.4 Currently the M56 can become extremely congested during peak periods, in particular the section between Junction 6 and 8, and to the north of the Airport.

4.5 The M56 is currently being upgraded to SMART motorway, with the construction of all-lane running motorway on the M56 between Junction 6 and 8. This will provide increased capacity and will reduce congestion and improve journey time reliability through this section.

M60

4.6 The M60 forms an orbital ring road around Manchester and is approximately 7km to the north of the proposed site. The M60 also provides links to other areas of Greater Manchester via other strategic motorways such as the M62, M61, M66 and M67.

M6

4.7 The M6 provides a major national strategic route in a north-south direction and is approximately 15km from the proposed site via Junction 20. As well as providing the main north-south movement from Greater Manchester via M6 Junction 19, and A556 (which was recently upgraded), the M6 also provides direct links to the M62 and M58 to Liverpool.

A555

4.8 The A555 is a dual carriageway linking the A6 near Hazel Grove (south east Stockport), through to M56 Junction 5. The road includes the recent completion of the A6MARR scheme, which bypasses heavily congested district and local centres, including Bramhall, Cheadle Hulme, Hazel Grove, Handforth, Poynton, Wythenshawe, Gatley and Heald Green.

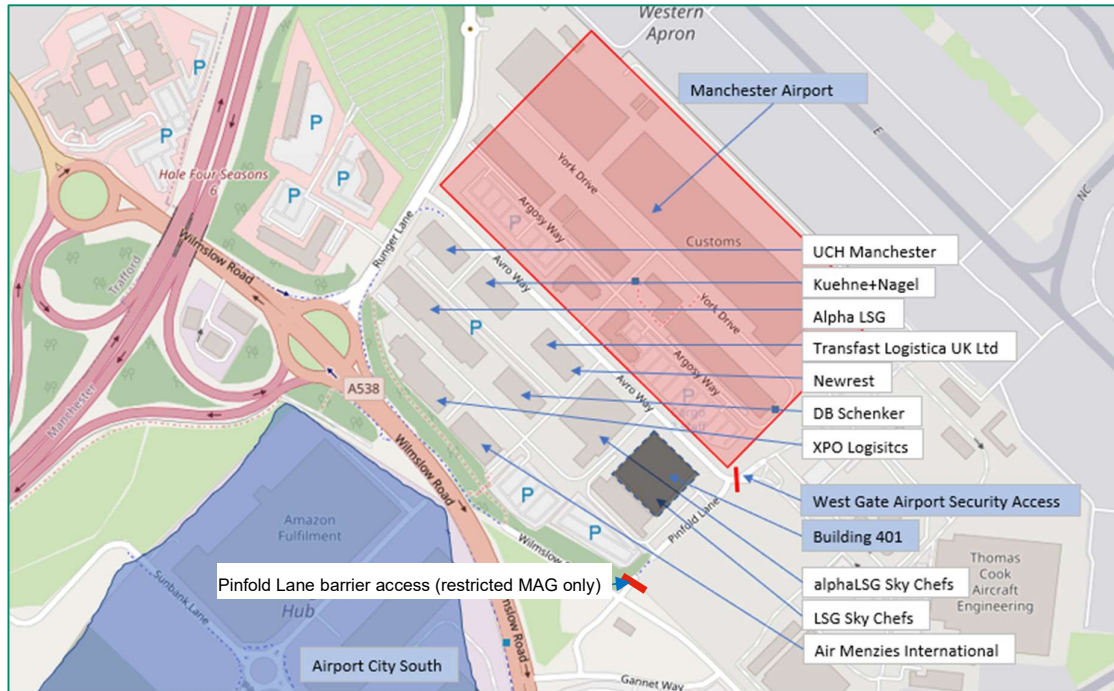
A538 / Runger Lane

- 4.9 The A538 provides access south from M56 Junction 6, in 2018 significant junction improvements were construction on the A538, at Sunbank Lane, to enable access to the Airport City South development. There are proposed plans for the widening of Runger lane to improve access as part of the Rainbow Works.

Local Highway Conditions

Avro Way

- 4.10 The site for development already holds an industrial unit, Building 401. This site is located to the southwest of the priority junction of Avro Way and Pinfold Lane. The site is bounded to the north by Avro Way, to the east by Pinfold Lane, to the south by Manchester Airport Coach Parking, the A538 Wilmslow Road and World Logistics Hub, and to the west by the access road to Building 401 which is shared with AlphaLSG Sky Chefs building. This access road forms the minor arm of a simple priority junction with Avro Way. A second existing access is also present via Pinfold Lane, to the east of the site.
- 4.11 Vehicles travelling to the site will route via A638 Wilmslow Road, Runger Lane and Avro Way. The junction of Runger Lane and Avro Way is an existing priority junction where, at its western end, Avro Way forms the minor arm. During peak times, queues occasionally form on Runger Lane back from the A538 junction. Yellow box markings are currently in place to maintain movements to/from Avro Way at these times.
- 4.12 Immediately northeast of the site, Avro Way (which runs in a northwest to south-easterly direction) becomes Pinfold Lane and continues to the north east. At the point at which the road changes direction and name, a simple priority junction is present to the south, where the minor arm is formed by another Pinfold Lane.
- 4.13 Pinfold Lane (to the north east of the site) is barrier controlled so currently access is not permitted from this direction. The barriers only allow access to MAG approved vehicles. Pinfold Lane (to the east of the site) also has a barrier south of the site access, preventing access to the A538 from this location.
- 4.14 Avro Way also forms the main access to West Gate, the main airside highway link to the airfield which is located from the north of Pinfold Lane
- 4.15 The western end of Avro Way has a 30mph speed limit with controlled on-street parking (30 min limit). Along the site boundary, approximately 65m west of the junction with Pinfold Lane, this is reduced to 20mph.
- 4.16 Carriageway widths are considered acceptable and can accommodate HGV access.
- 4.17 **Figure 6** provides a summary of the key building occupants for the area accessed from Avro Way.

Figure 6: Key building Occupants from Avro Way**Site Review**

4.18 To support the development of this TS, a site visit to the proposed development site would usually be undertaken. However due to the restrictions imposed due to the COVID-19 global pandemic, a desk-based site review was undertaken using online mapping tools to understand existing conditions in the vicinity of the proposed development site. The full observations from the site review can be found in **Appendix B**.

4.19 The review identified the following key considerations:

- Runger Lane, is a single carriageway road, 30mph, with footway and cycleway one eastern side of Runger Lane;
- The Avro Way junction with Runger Lane is in close proximity to the A538 junction, a signalised roundabout;
- Avro Way is a private road and a no through route, the speed limit reduces to 20mph at Pinfold Lane end;
- There is designated on-street parking on sections of Avro Way, which has a 30 minute time limit; and
- Pinfold Lane is single track with grass verge. The junction of Pinfold Lane / Wilmslow Old Road to south is barrier-controlled access, which means no access to A538 Wilmslow Road is possible via Pinfold Lane.

4.20 Also, to support the assessment existing traffic data in the form of a classified turning count was surveyed in May 2018, by Intelligent Data Collection (IDC), for the Runger Lane / Avro Way Junction. These data have helped to inform the Junction Assessment for this TS.

Public Transport

4.21 This Section discusses access to the development site via the various public transport modes which serve the Airport.

Bus

4.22 The Manchester Airport Ground Transport Interchange (GTI) is located central to the airport terminals and provides the main interchange for public transport surface access at Manchester Airport. The GTI provides both local bus connections and also longer distance bus and coach connections to other UK cities.

4.23 The GTI is some distance from the Building 401 site and is therefore not a viable walk distance to directly access bus from this Interchange. There are however local bus stops located closer to the development site, which both serve the GTI and wider local destinations.

4.24 The nearest bus stops to the site location are:

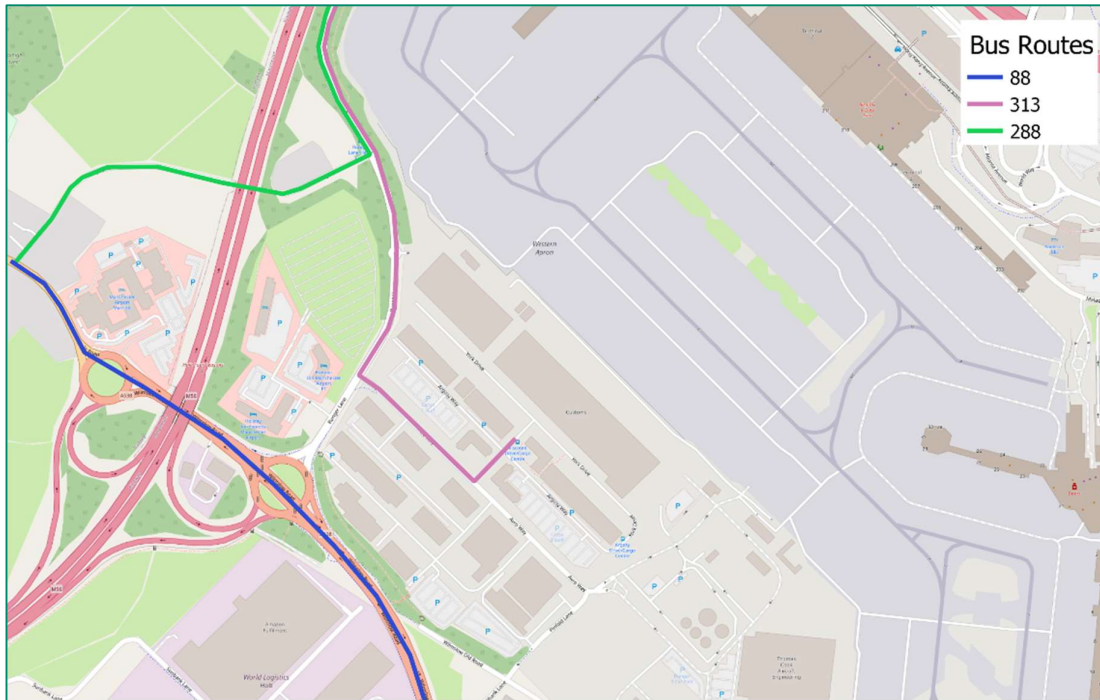
- World Freight Terminal (adjacent to Avro Away) and a short walk (2 minutes) from the development site. These bus stops are served by service 313, which provides a 30-minute headway between the World Freight Terminal and the GTI. The service also continues beyond the GTI, providing a direct via the A6MARR to Stanley Green, Cheadle Hulme and terminates at Stockport Bus Station.
- Runger Lane /, Hasty Lane junction (Bus routes 288 & 313) (8 minute walk)
- Wilmslow Road /, Sunbank Lane junction (Bus routes 288 northbound & 88 in both directions) (12 minute walk)
- Aviation Viewing Park on Wilmslow Old Road (Bus route 288) (20 minute walk);

4.25 The bus service serving these bus stops follow the routings shown in **Figure 7** These services typically operate at the following service frequencies shown in **Table 1**

Table 1: Bus Services and Frequencies serving the World Freight Terminal

Route	Weekday (Mon – Fri) Frequency	Saturday Frequency	Sunday Frequency	Journey Time
288: East Didsbury – Runger Lane / Hasty Lane	1 per hour between 06:34 and 18:20	1 per hour between 08:43 and 17:43	No Service	50 minutes
313: Stockport – Runger Lane / Hasty Lane	1 every 30 minutes between 05:15 and 22:30	1 every 30 minutes between 05:15 and 22:30	1 every 30 minutes between 07:05 and 22:30	37 minutes
88: Altrincham and Macclesfield, via Wilmslow – Wilmslow Road / Sunbank Lane	1 per hour between 07:03 and 18:50	1 per hour between 07:45 and 19:10	1 every 2 hours between 09:00 and 17:00	12 minutes

Source: TfGM

Figure 7: Local Bus Service Routing

Rail

- 4.26 Manchester Airport is well served by heavy rail services. The Station is operational 24 hours a day. The Airport station (GTI) provides direct links to Manchester Piccadilly every 10 minutes with a journey time of approximately 20 minutes. Many of these services continue beyond Manchester Piccadilly providing direct rail connections across the north of England and into Scotland. Wider rail connections are also provided via Interchange at Manchester Piccadilly or Crewe Rail Station, this also has a direct service to the south via Wilmslow.
- 4.27 The Rail Station and Manchester Airport is a considerable distance from the Building 401 site (approximately 3km, or just under a 40-minute walk), therefore other connections such as via the 313 bus would offer improved access to rail. Also, the Airport Staff car park shuttle bus service is available from the nearby Staff South car park which provides a direct link to the passenger terminals and GTI.

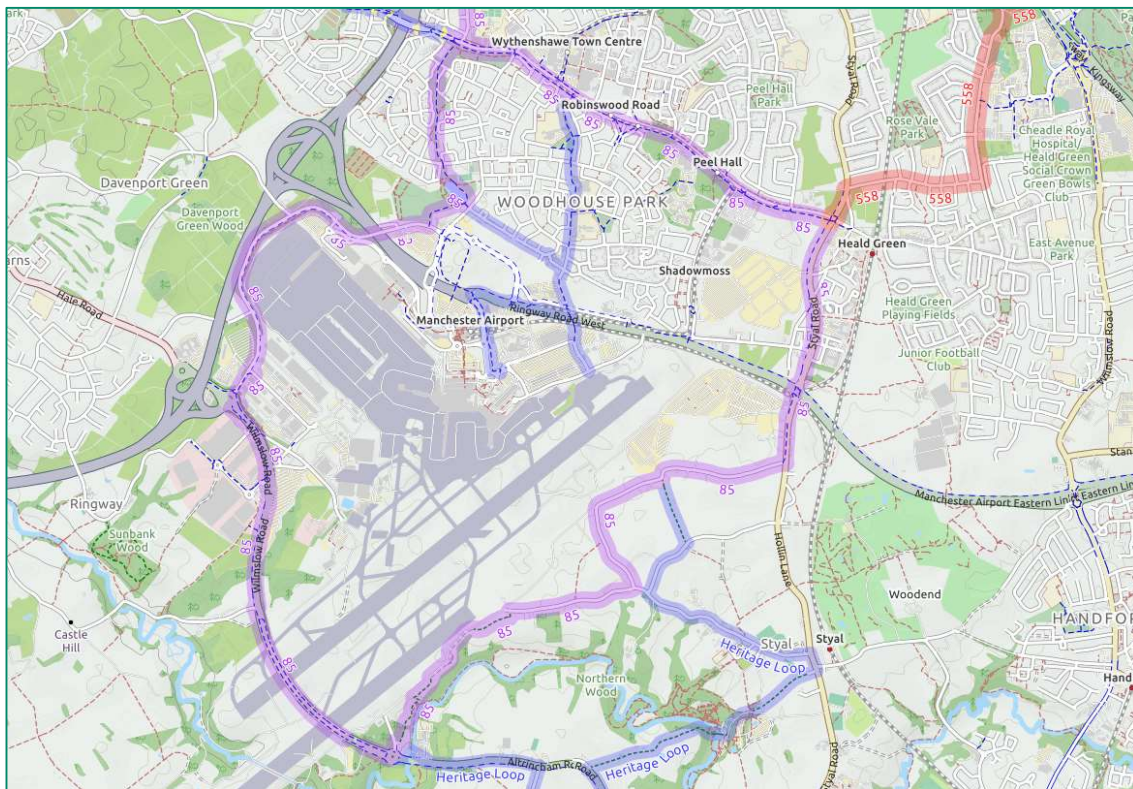
Metrolink

- 4.28 The Manchester Airport Metrolink Line opened in November 2014 and connects the Airport to the East Didsbury Metrolink line at St Werburghs Road Metrolink Stop. The provision of a connection to the Metrolink network adds considerably to the accessibility of the Airport, increasing the public transport catchment of the proposed development and the Airport as a whole and improving the quality of the journey for passengers and employees based at the Airport.
- 4.29 The Metrolink stop for the airport is provided within the GTI and so access between the Building 401 would be considered via other modes, such as Bus service 313. The Metrolink Airport line currently operates with a 12-minute frequency between Manchester Airport and Manchester Victoria.

Active Travel

- 4.30 Given the nature of the site, and limited nearby residential development near the site, it is unlikely there will be significant travel to the site on foot as a main mode of transport.
- 4.31 For those accessing the site on foot, there is a footpath along Avro Way and adjacent roads including Runger Lane. As part of the wider Airport City development proposals, pedestrian and cycle facilities will be provided and improved in the area. The core of the Airport city development will be arranged around a network of pedestrian friendly and vibrant routes.
- 4.32 There are also existing cycle routes located near the development site, such as the NCN85 which passes by the site⁴. This could provide easy access for a confident cyclist to the residential areas of southern Manchester, or via 85 and 558 routes to Stockport. A map showing the key cycle routes near to the proposed development site are shown in **Figure 8**.

Figure 8: Existing Cycle Routes

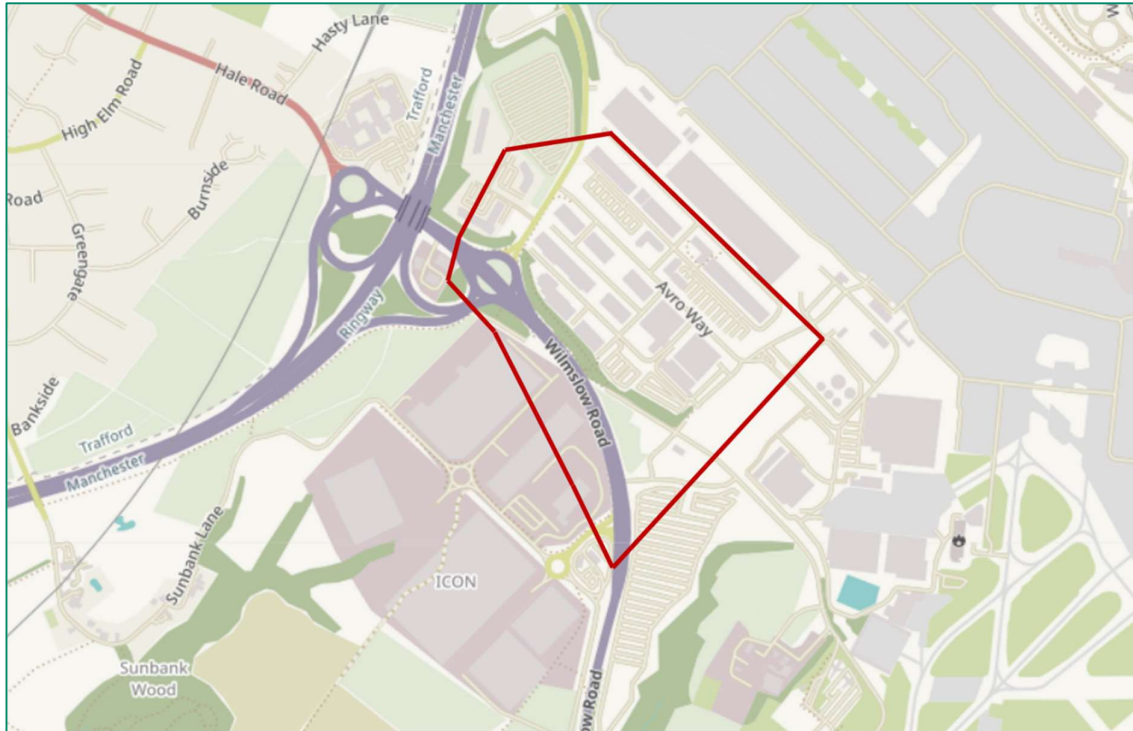


Accident Review

A review of accident data within the boundary, as shown below in **Figure 9**, was carried out using Crashmap accident data recorded over the last 5 years (2016-2020). 6 accidents were recorded in the boundary over the 5 year period⁵. All of the accidents recorded were slight accidents, there were no serious or fatal accidents recorded in the 5 year period. Predominantly the accidents recorded were on the A538 / Hale Four Seasons Roundabout, and 2 were recorded on Wilmslow Old Road south of Building 401. No accidents were recorded in the boundary over the 5 year period on Avro Way or Runger Lane.

⁴ [www. https://www.sustrans.org.uk/](https://www.sustrans.org.uk/)

⁵ <https://www.crashmap.co.uk/Search>

Figure 9: Accident Review Boundary

Summary

4.33 The site is well connected with good existing highway links and public transport provision. The site is located within the World Freight Terminal with surrounding business predominately logistics or related to air travel. The recent development at Airport City, especially the Global Logistics Hub, has resulted in further improvements in infrastructure to support active travel.

5. Proposed Development

Introduction

5.1 This chapter introduces the proposed development, each section considers;

- The existing site of the proposed development;
- The proposed development;
- Site access to the proposed development; and
- Trip generation and trip distribution

Existing Site Closure

5.2 The site of the proposed development, Building 401, is located in the cargo area at Manchester Airport, on the south west side of the Airport. The cargo area is made up of several industrial units, the group of units make up part of Manchester Airports World Freight Terminal and comprises of primarily logistic companies or flight services providers. Building 401, up until recently, was in use by MAG Airport maintenance, though is due to be demolished.

5.3 Part of the proposed Unit 1 site was also recently utilised as a car park and consisted of 320 spaces, which were in use by MAG Airport servicing staff. Current uses have been displaced to an existing nearby staff car park, Staff South, which is accessed via Wilmslow Road and Sunbank Lane.

Proposed Development

5.4 The proposed development has planned use for Airport freight, the proposed site is to the west of Pinfold Lane and South of Avro Way. The proposed plans include Unit 1 as 7,056m². Unit 1 is comprised of 3 individual sub-units; Unit 1a, Unit 1b and Unit 1c. An overview of the proposed development site is provided in **Figure 10**. All units include office spaces and 3 separate car parks to the east, with a total of 72 spaces, all include cycle parking facilities. HGV access is also provided for each of the units, with access and loading bays to the east of each unit.

5.5 Unit 1a is the largest unit with a 32-space car park, plus loading bay capable of accommodating up to 5 HGVs. Parking also includes 2 disabled parking bays and separate new car park access, directly off Avro Way.

5.6 Unit 1b is the smallest unit with 2 loading bays and an 18-space car park, including 1 disabled parking bay. Unit 1b and Unit 1c are both accessed via a new access road, immediately adjacent to the existing access road between Building 401 and Alpha LSG Sky Chefs, off the southern side of Avro Way.

5.7 Unit 1c is the second smallest unit with 3 loading bays and a 22-space car park with 1 disabled parking bay.

5.8 The proposed development therefore represents an overall decrease of 248 car parking spaces when compared with the previous use of the site.

Figure 10: Proposed Development Site Overview

Source: MAG

Site Access

- 5.9 The site for development is located to the southwest of the existing simple priority junction of Avro Way and Pinfold Lane. The site is currently accessed via an access road to the west of the site which forms the minor arm of a simple priority junction with Avro Way. A second existing access is also present on Pinfold Lane to the east of the site.
- 5.10 As previously mentioned, a number of barriers are present on the local highway network within the vicinity of the site and these restrict movements along Pinfold Lane to the northeast of the site and along Pinfold Lane to the southeast of the site. All existing and proposed vehicle movements to/from the site will be via the Avro Way / Runger Lane existing priority junction.
- 5.11 For those accessing the site on foot, there is a footpath along Avro Way and adjacent roads including Runger Lane. As part of the wider Airport City development proposals, pedestrian and cycle network routes and facilities will be provided and improved in the area.
- 5.12 Unit 1b and Unit 1c will be accessible for all traffic from Avro Way via a new access road, immediately to the east of the existing access road between the Building 401 site and the Alpha LSG Sky Chefs building. Traffic will travel along the access road to access loading bays and the two car parks for these two units. Unit 1a will be directly accessible by car from a separate junction directly off Avro Way, and HGVs will access loading bays by the access road.

- 5.13 The level of parking demand for this development is considerably less than recent land uses of the Building 401 site.

Trip Generation

- 5.14 Development related traffic flow has been developed for the proposed development site using TRICS analysis, based on developments of similar existing usage types to the proposed develop. TRICS (Trip Rate Information Computer System) is an industry standard software which holds numerous traffic surveys of similar sites. To inform the TRICS analysis a sample of Industrial Units development type was applied within the assessment. The TRICS outputs provided a series of trip rates which were applied to the development size for the unit to determine the overall quantum of trip generation. A summary of the trip generation totals for arriving and departing vehicles are provided in **Table 2**.

Table 2: Trip Generation Summary (all vehicles)

Unit	Development Size	Time Period	Arrival (veh per hr)	Departing (veh per hr)
Unit 1	7,056 Sqm	AM Peak 1 (7:00-8:00)	26	7
		AM Peak 2 (8:00-9:00)	36	19
		PM Peak (17:00-18:00)	13	31

Source: TRICS

- 5.15 A record of TRICS outputs can be found in **Appendix C**.

Trip Distribution

- 5.16 It is important to establish if there will be forecast changes in traffic distribution due to the proposed development site. The distribution of traffic associated with the proposed development site is assumed to follow existing travel distribution patterns, as the uses of the proposed development are assumed to align with existing operations to those existing businesses located on the area accessed from Avro Way.
- 5.17 To inform the distributions for traffic accessing/egressing the site, all traffic must access via Avro Way, with the distribution of north and south access determined from the Runger Lane / Avro Way turning count data collected in May 2018 (see **Table 3**).

Table 3: Development Trip Distribution

Time Period	From Runger Lane North	From Runger Lane South	To Runger Lane North	To Runger Lane South
AM Peak 1 (7:00-8:00)	35%	65%	37%	63%
AM Peak 2 (8:00-9:00)	41%	59%	51%	49%
PM (17:00-18:00)	41%	59%	40%	60%

Source: May 2018 Turning Count Data (collected by IDC)

6. Junction Assessment

Introductions & Junctions to be assessed

- 6.1 To understand the impacts of the proposed development site a junction assessment has been undertaken. This includes a mixture of quantitative and qualitative review of the key junctions impacted by the development.
- 6.2 There is no traffic data available for the existing junctions of Avro Way which directly access the proposed development site (e.g. one to the west of the existing Building 401 site). Due to the travel restrictions imposed by COVID-19, it was not seen as appropriate to survey these locations, both in terms of the restrictions in place at the time which would have discouraged site visits, also any data collected would have been heavily skewed by the travel restrictions imposed at the time. For this location a qualitative assessment has been undertaken, based on knowledge of existing land uses and desk-based site review, via online aerial mapping tools.
- 6.3 Due to the relatively small scale of development proposed, it is not envisaged that capacity issues for these junctions would be expected under the travel demand forecast for the proposed development site. It is also worth noting the level of car parking provision for the development is considerably lower than for previous uses (see **Section 5.2**).
- 6.4 All traffic accessing the proposed development will need to utilise the Runger Lane / Avro Way junction, along with all other traffic accessing this part of the airport. Existing turning count data for this junction exists from prior to the pandemic and has therefore enabled a quantitative assessment of the impact on travel delay at this junction due to the proposed development, which has been undertaken using VISSIM modelling software.

Existing Traffic Demand

- 6.5 Prior to the COVID-19 global pandemic in 2018, traffic counts were undertaken at the junction of Avro Way / Runger Lane, to support MAG studies. To support the understanding of highway conditions, these data have also been utilised to support this TS. A summary of the key data relevant to this assessment is located in **Appendix A**.

Runger Lane / Avro Way (Quantified Assessment)

Overview and Modelling Approach

- 6.6 To assess the impacts of the development on the Runger Lane / Avro Way junction, a junction model was developed within VISSIM modelling software (Version 2021). An overview of the scale of the VISSIM model prepared is summarised in **Figure 11**. The model has been developed to assess the impacts of the AM and PM peak hours and has considered the impacts of an opening year of 2023, plus a design year of 2038 with and without the proposed development. The VISSIM model includes a base year of 2018, which has been calibrated to existing count data prior to the pandemic.
- 6.7 When reviewing the base traffic data for the junction, the peak hours presented by the data show the following:
 - AM Peak Hour 1 (7:00 to 8:00);
 - AM Peak Hour 2 (8:00 to 9:00); and
 - PM Peak Hour (17:00 to 18:00).

6.8 As the peak flow for the AM peak is prior to the standard commuter peak, a 2-hour VISSIM model has been developed to represent 06:45 to 09:15 including 15-min model warm-up and cool-down periods.

Figure 11: Extent of VISSIM Model



6.9 Future year demand forecasts for the model were derived by applying NTEM 7.2 growth, based on factors forecast by TEMPRO. These have been based on the Manchester NTEM zone, and forecasts the growth factors as shown in **Table 4**. To ensure worst case assessment, Manchester values have been used as opposed to Greater Manchester NTEM values which present an overall lower level of growth.

Table 4: NTEM Growth Factors

Column heading	AM Peak	PM Peak
2018 to 2023	1.105	1.083
2018 to 2038	1.333	1.262

Source: NTEM 7.2 Manchester

6.10 The NTEM factors shown above were applied to the base traffic flows in order to determine future year without development scenarios. The impact of the development was then added to the without development flows. This also represents a worst-case scenario, as the Building 401 was previously occupied in 2018, so would have been captured within the base flows. These were retained in the junction assessment.

Modelling Results

6.11 The VISSIM model was run under the following scenarios:

- 2018 Base Year, AM & PM Peak hrs;
- 2023 Open Year, AM & PM Peak – Without Development;
- 2023 Open Year, AM & PM Peak – With Development;
- 2038 Design Year, AM & PM Peak – Without Development; and
- 2038 Design Year, AM & PM Peak – With Development.

- 6.12 Model outputs for junction performance and speed plots were extracted to understand the impacts of the additional development traffic on the Runger Lane / Avro Way junction. A summary of these results for AM Peak 1 (busiest AM hour) and PM Peak hour is presented in **Table 5**. Also, more detailed model outputs are provided in **Appendix D**

Table 5: Model Results Summary

	Base	2023 Without Development	2023 With Development	2038 Without Development	2038 With Development
AM Peak 1					
Delay Total (min)	124	156	168	271	286
Delay Average (s)	5.18	5.89	6.21	8.45	8.76
Travel Time Total (min)	880	989	1020	1276	1314
Speed Average (mph)	22.67	22.23	22.04	20.81	20.62
PM Peak					
Delay Total (min)	149	195	205	333	469
Delay Average (s)	6.35	7.65	7.82	11.24	15.39
Travel Time Total (min)	925	1034	1073	1309	1478
Speed Average (mph)	20.87	20.21	20.1	18.61	17.06

- 6.13 The key findings from the assessment shows that traffic to Avro Way are highest in the AM Peak, as vehicles access employment sites accessed from Avro Way. The right turn from Runger Lane (south) into Avro Way, must give way to southbound travel on Runger Lane to access Avro Way.
- 6.14 In the existing base model, small queues indicated by orange and red sections of the link exist due to traffic waiting for gaps in traffic to enable the turning movement, **Figure 12**.
- 6.15 Under future year without development 2038 further drop in speed is observed for junction turning movements as shown in **Figure 13**. The impact of the development adds approx. 15m to the queue on Avro Way approach caused by Avro Way traffic giving way to increased flow from Runger Lane onto Avro Way as presented in **Figure 14**.

Figure 12: Base AM Peak 1 Average Speed

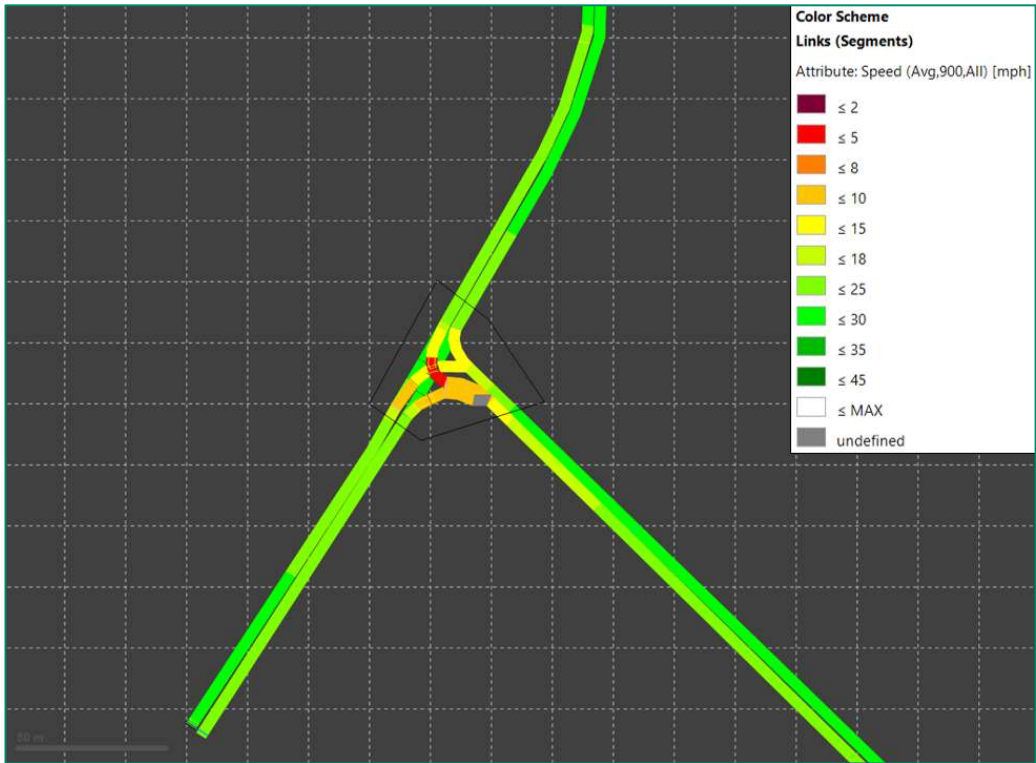


Figure 13: 2038 Without Development AM Peak 1 Average Speed

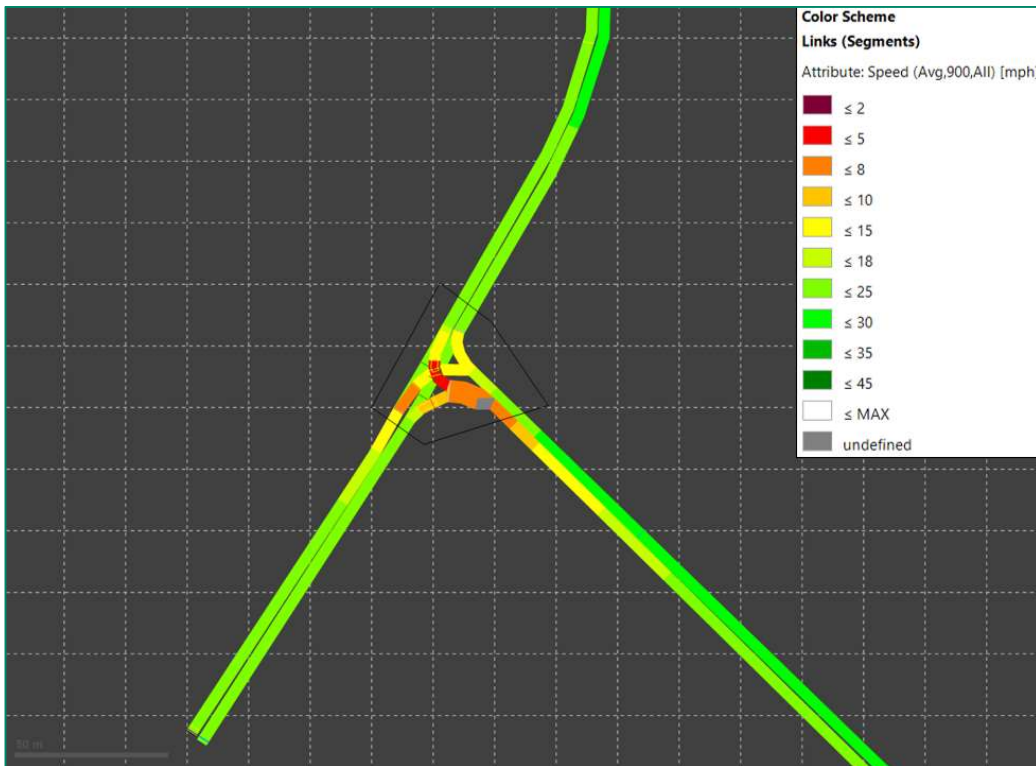
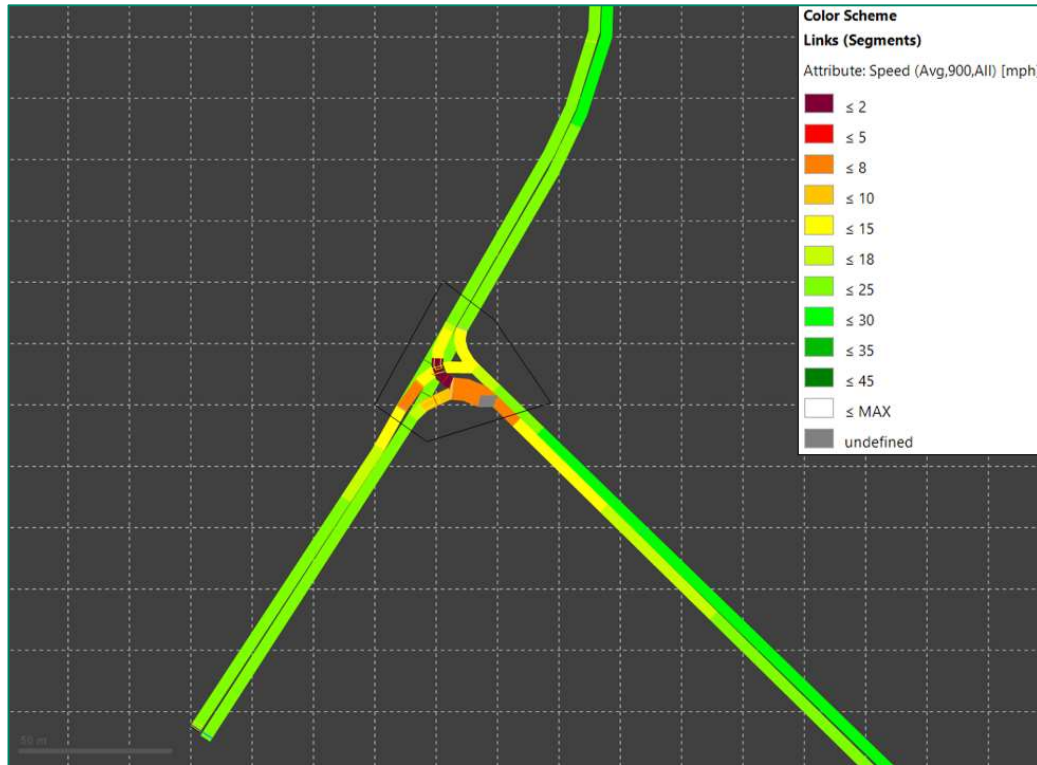


Figure 14: 2038 With Development AM Peak 1 Average Speed

6.16 In the PM, a queue typically forms on Avro Way and Runger Lane South for traffic accessing Avro Way as presented in the Base model speed plot, **Figure 15**. Under future year 2038 demand scenarios, without development, these queues increase to up to approx.25m on Avro Way, see **Figure 16**. The introduction of the development related traffic marginally increases the maximum queue by 35m to approx.60m, see **Figure 17**, an overall modest change. Other vehicle movements through the junction generally show minimal queues forming.

Figure 15: Base PM Peak Average Speed

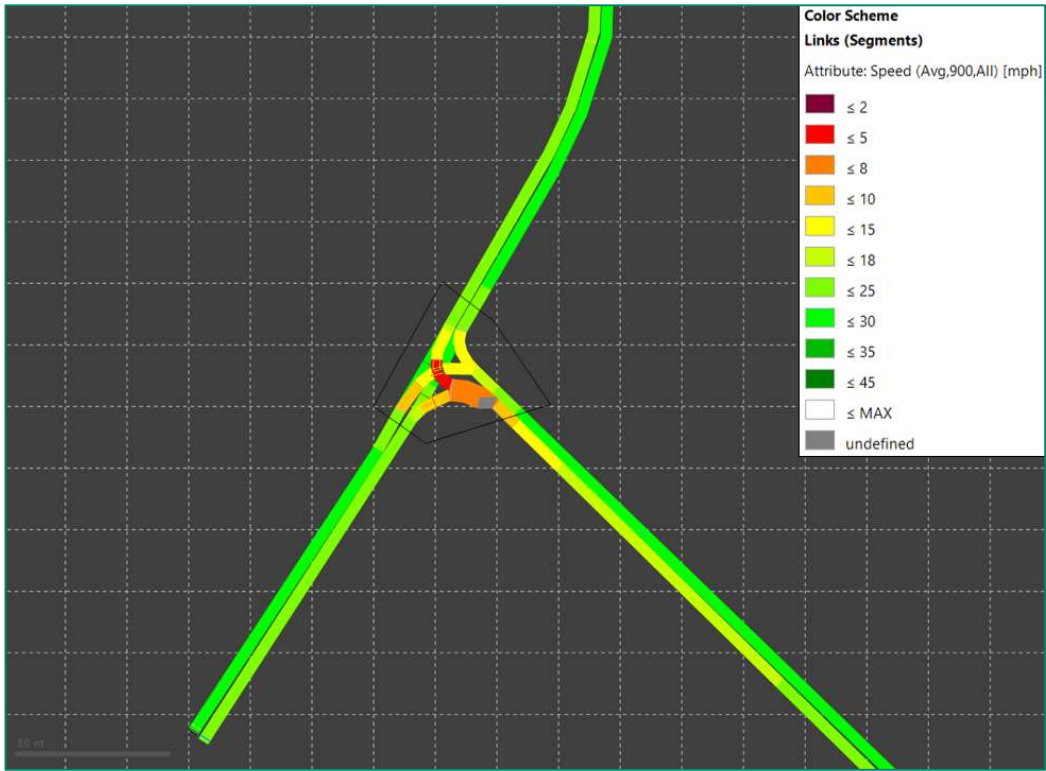


Figure 16: 2038 Without Development PM Peak Average Speed

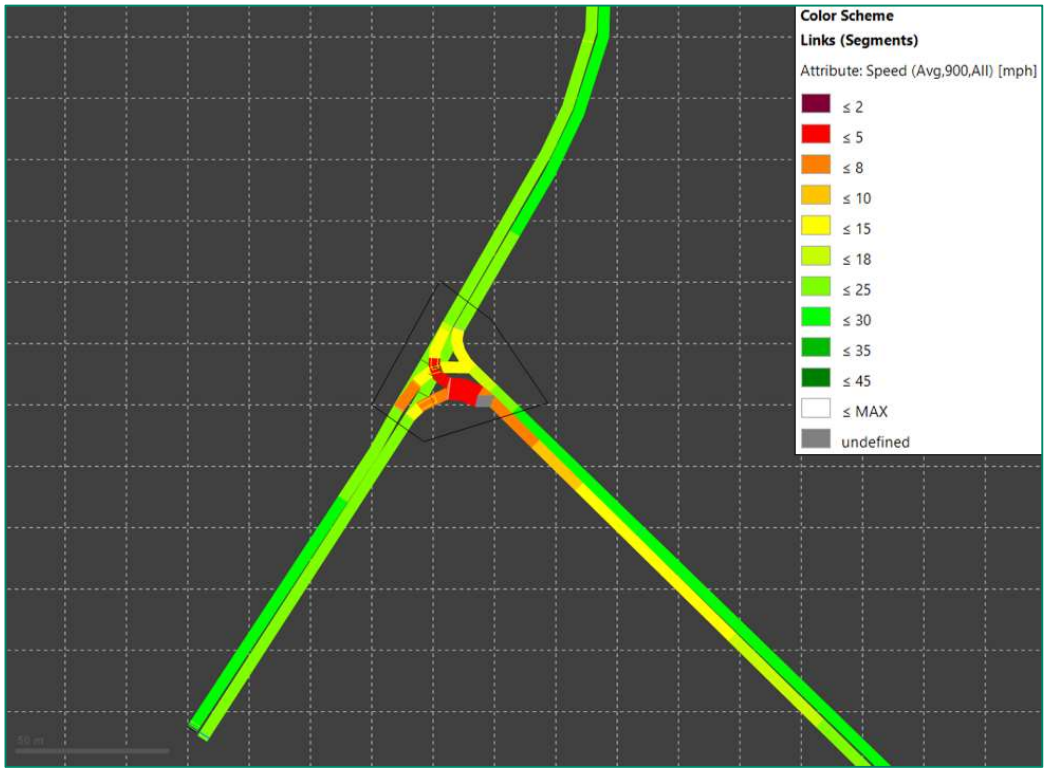
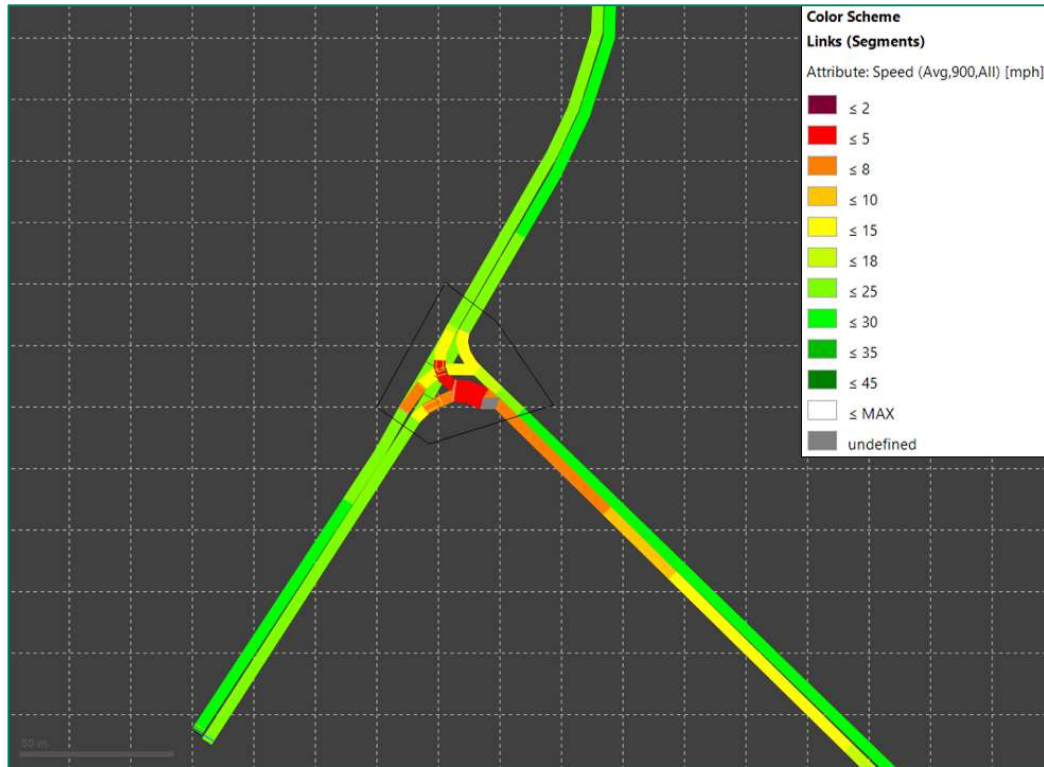


Figure 17: 2038 With Development PM Peak Average Speed

Avro Way / Unit 1 Access (Qualitative Assessment)

Overview

6.17 To assess the impacts of the development on the Avro Way / Unit 1 Access junction, due to the absence of available traffic surveys at this location, online aerial mapping tools and knowledge based on existing land uses, to inform a qualitative assessment. As shown in **Figure 18** a new access road has been proposed for Unit 1, this will be a new access road into the development site, to replace the current access via Pinfold Lane (north of the barrier controlled access to Wilmslow Old Road).

Figure 18: Highway Access Unit 1 / Avro Way

Assessment Narrative

- 6.18 Avro Way / Unit 1 access junction will be via a new priority junction located on Avro Way, providing all vehicular access to Unit 1, except for the separate 32 space car park access for Unit1a (shown above). This access replaces the existing site access via Pinfold Lane. The layout of the Avro Way / Unit 1 access junction will be designed and tracked to accommodate HGVs accessing the site, the improved access road will be similar to other priority junctions to access other site access provided along Avro Way. The junction will be wide to allow ease for manoeuvring HGVs entering and exiting the site, and therefore will be able to comfortably accommodate HGVs accessing the proposed all HGV loading bays serving the Unit 1 development.
- 6.19 Opposite the proposed junction is on road parking with a maximum stay of 30 minutes, that runs adjacent to Avro Way for 107 yards. Adjacent to the parking bays is a grass verge with a pedestrian pavement running parallel to Avro Way.
- 6.20 West Gate Airport Security Access on Pinfold Lane is 155 yards west of the Avro Way / Unit 1 access junction, traffic leaving Unit 1 will be expected to give way to traffic from the right. Pinfold Lane is barrier controlled so currently access is not permitted from this direction, therefore traffic turning onto Unit 1 access road will predominately be traffic turning right off Avro Way onto the access road. The revised access to Unit 1 will also reduce the traffic volumes using the Avro Way / Pinfold Lane junction, which was the previous main access to the site.
- 6.21 The overall relatively small size of development and accompanying car parking is not expected to result in significant impacts on the highway network of Avro Way. Also, the level of car parking provided is considerably less than recent usage of the existing site which has already been displaced from the site.

Junction Impact Summary

- 6.22 Following the qualitative junction impact assessment, it is determined that the junction impact is **neutral**. The assessment does not foresee any issues with capacity and therefore the junction assessment is complete.

Summary and Key Findings

- 6.23 The junction assessment has shown no overall adverse impacts on the surrounding highway network due to the proposed development site.

7. Summary and Recommendations

Summary

- 7.1 AECOM has prepared the Transport Statement on behalf of MAG in order to support the proposed Building 401 redevelopment. Which includes the development of Unit 1 and associated vehicle parking.
- 7.2 The report has assessed the highway impact of the development, on the immediate network and the wider highway network. In summary the report has analysed the following key areas:
- The policy context of the site;
 - Known planned developments within the surrounding area;
 - The site location and existing highway network conditions;
 - The development proposal; and
 - Trip generation and junction assessment.

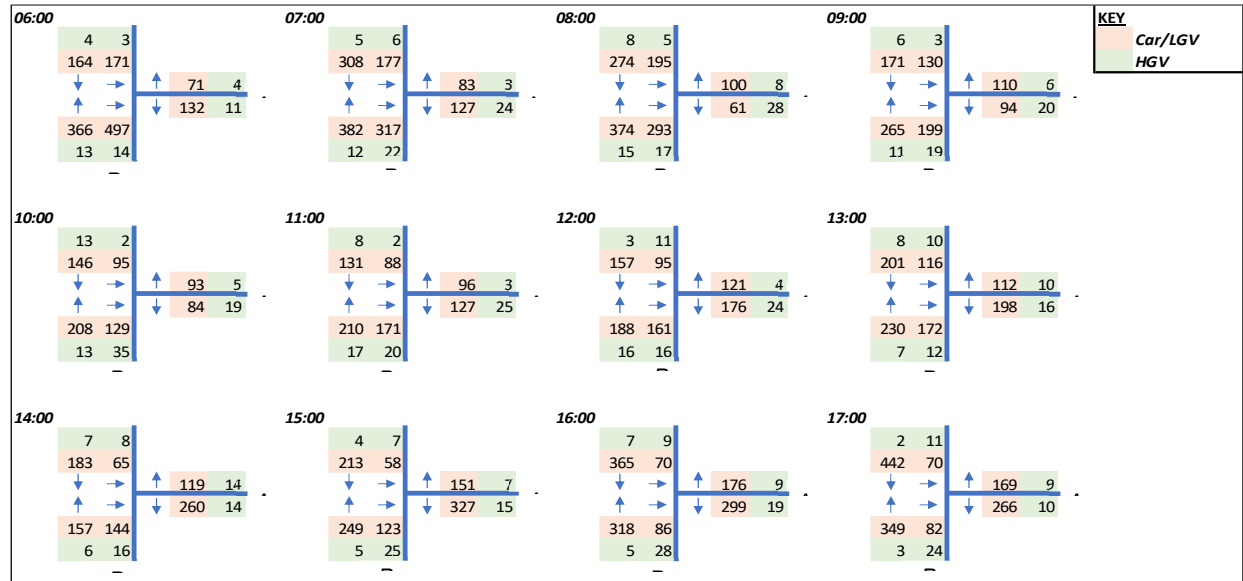
Conclusion and Recommendations

- 7.3 The TS has determined that the overall trip generation associated with the proposed development is relatively modest and is unlikely to result in additional congestion at the points at which the site is accessed from existing junction on Avro Way. Also, the small overall net change in travel demand on Avro Way has been shown to represent only minimal impacts on the performance of the Runger Lane / Avro Way junction.
- 7.4 The TS has set out how the site might be assessed via sustainable modes of travel, while the reduction in traffic is likely to have a benefit impact on safety in the area. This could potentially lead to a reduction in highways related accidents within the vicinity of the development site, which could be identified, following an accident investigation review.
- 7.5 Given the reduction of 248 car parking spaces between the existing and proposed use, it is likely that the development will significantly decrease the number of vehicles travelling to/from the site, and in turn will not detrimentally impact upon local junctions.
- 7.6 The TS is in line with the overriding theme of national, regionally and local policy; that developments must be accessible by sustainable means of transport. The TS demonstrates that the proposed development is compliant with national, regional and local policies outlined in the Transport Policy section of this document.
- 7.7 The junction modelling work that has been presented represents a 'worse-case' scenario, in that the trips generated by the proposed development have been added to the existing flows without any discounting for the existing site. The junction is still found to operate within capacity in the future year scenarios tested.
- 7.8 The assessment of the local highway network surrounding the proposed site concludes that there will be no significant detrimental impact to the operation of local highway networks resulting from the development site.

Appendix A Traffic Data

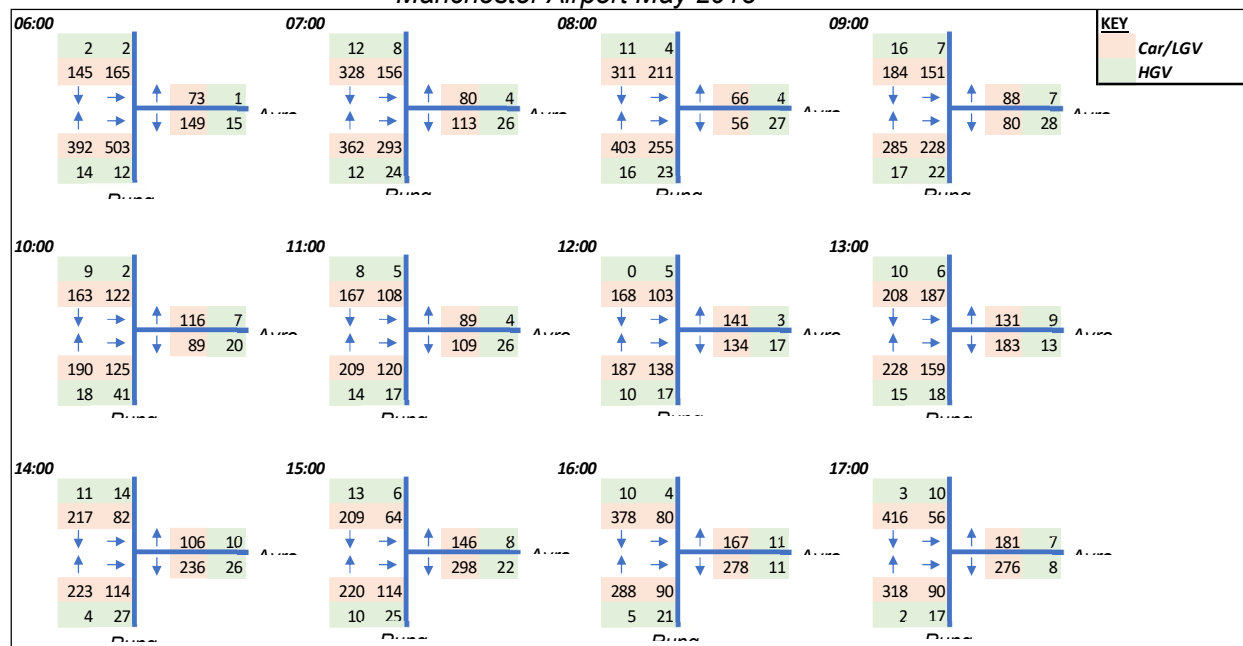
This Section provides turning count data for the junction of Runger Lane / Avro Way, which was surveyed on 16th and 17th May 2018.

A.1 Runger Lane / Avro Way Turning Count Data



Turning Data 16.05.2018

Data from survey undertaken by Intelligent Data Collection Limited on behalf of AECOM at Manchester Airport May 2018



Turning Data 17.05.2018

Appendix B Site Review

To support the development of a Transport Statement, a site visit to the proposed development site would be undertaken. However due to the restrictions imposed due to the COVID-19 global pandemic, a desk-based site review was undertaken using online mapping tools to understand existing conditions in the vicinity of the proposed development site. The full observations from the site visit are discussed within this Appendix.

B.1 Runger Lane

- Runger Lane is single carriageway, 30mph speed limit with footway / cycleway down one side.
- Junction with Avro Way oversite Holiday Inn Express car park access (**Figure B1**),
- Approximately 100m south of Avro Way junction signalised junction, A538 and access to M56 Junction 6 (**Figure B2**); on approach to the signalised junction speed limit changes to 40mph (**Figure B3**)

B 1 – Runger Lane / Avro Way Junction



Source: [google.com/maps](https://www.google.com/maps)

B 2 – Runger Lane South of Avro Way Junction



Source: [google.com/maps](https://www.google.com/maps)

B 3 – Speed Limit Runger Lane



Source: [google.com/maps](https://www.google.com/maps)

B.2 Avro Way

- Avro Way, single carriage with footpath / cycle way down one side, speed 30mph, no through route,
- Private road, signed as World Freight Terminal, industrial units to south, airport to north,
- On road parking, Mon – Sun 6am – 6.30pm, 30 min no return with 2 hours, CCTV monitored (Figure B 4),
- Avro Way junction with Viscount Drive, Manchester Airport Cargo Centre (Figure B 5), Manchester airport bus assess via Viscount Drive,
- Figure B 6 shows the existing access from Avro Way, a priority junction, with designated on-street parking opposite.
- Pinfold Lane end of Avro Way 20mph, signed as security controlled, with barrier-controlled airport access.

B 4 – Avro Way Parking



B 5 – Avro Way Junction Manchester Airport Cargo Centre



B 6 – Building 401 Access



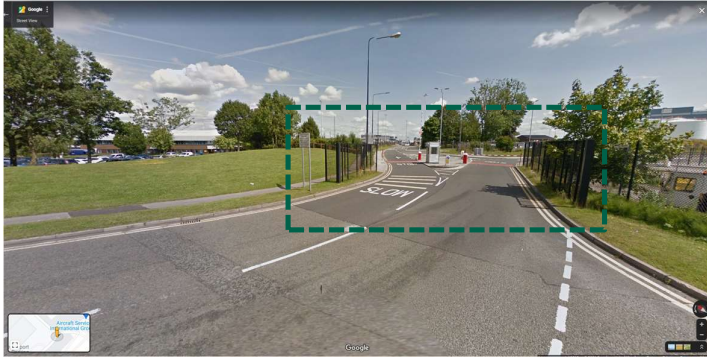
B.3 Pinfold Lane

- Pinfold Lane, single track with grass verge, no footpath, double yellow lines (Figure B 7),
- Previous access to building 401 site, no longer used,
- North of Avro Way, barrier-controlled airport access (Figure B 8),
- Pinfold Lane junction with Wilmslow Old Road to south is barrier-controlled access (Figure B 9)

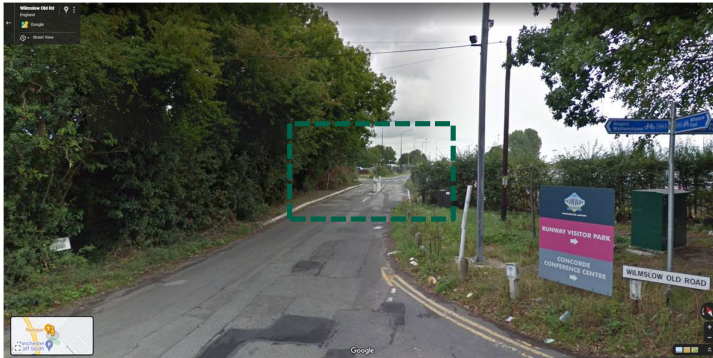
B 7 – Pinfold Lane



B 8 – Airport Access Pinfold Lane via Avro Way



B 9 – South Pinfold Lane, junction Wilmslow Old Road



B.4 Wilmslow Road / Sunbank Lane

- South of Pinfold Lane, recently modified signalised junction (Figure B 10 & B 11),
- Modified as part of Airport City development.

B 10 – Wilmslow Road junction with Sunbank Lane



B 11 – Sunbank Lane junction with Wilmslow Road



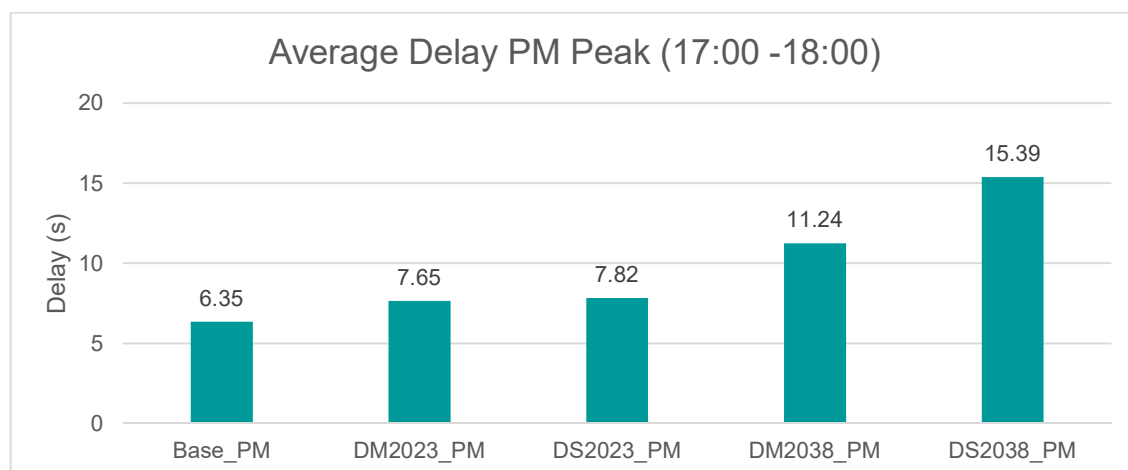
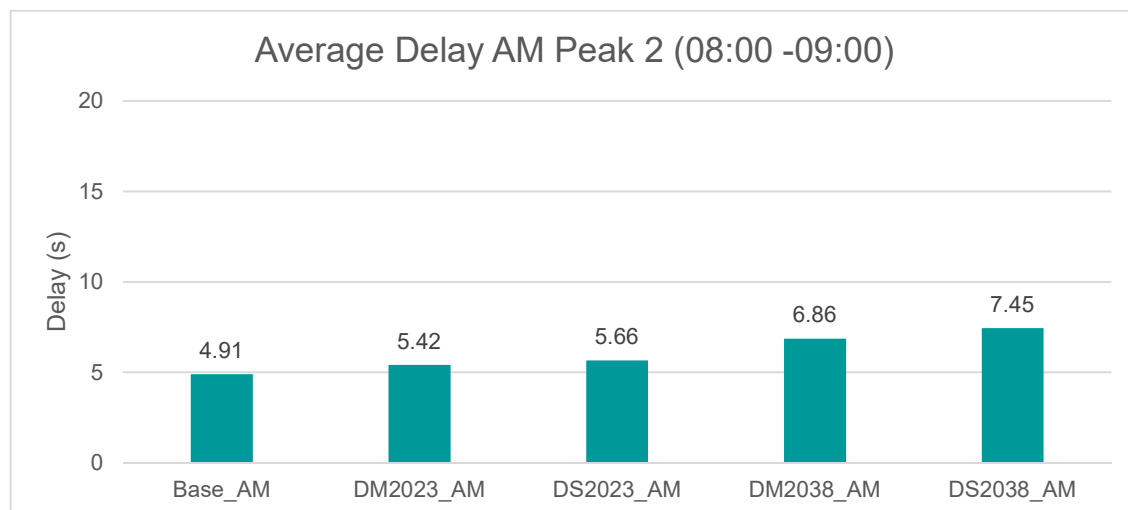
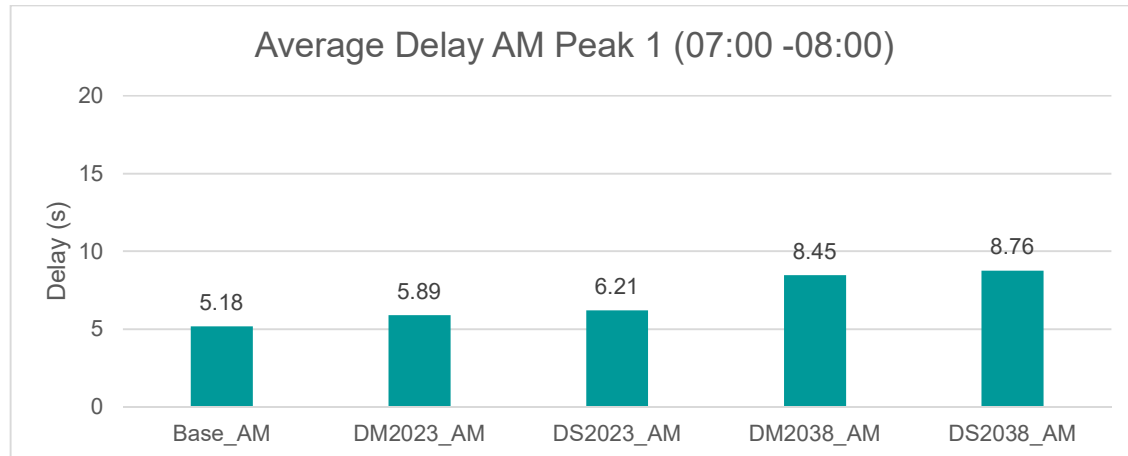
Appendix C TRICS Model Outputs

(Available upon request)

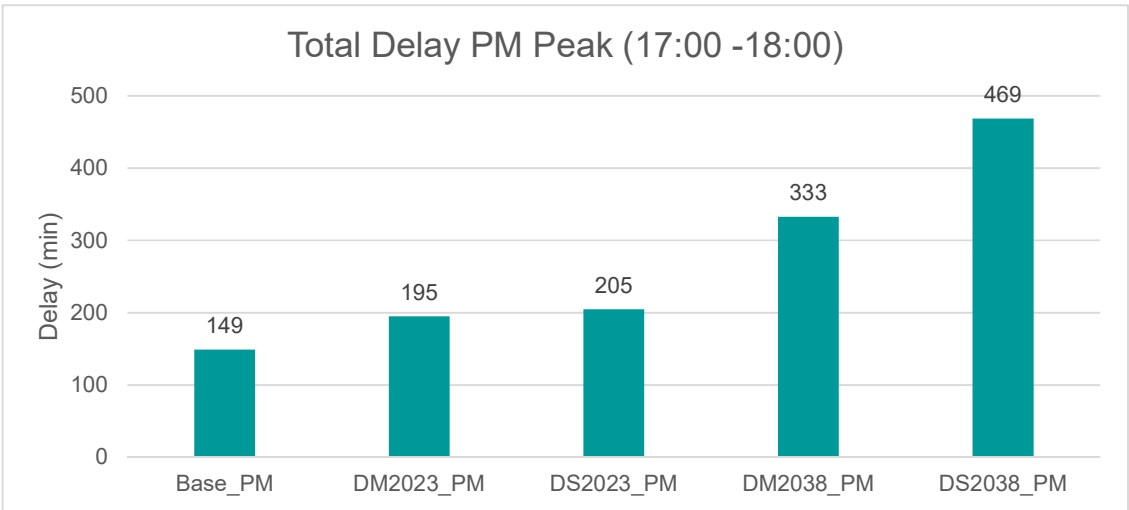
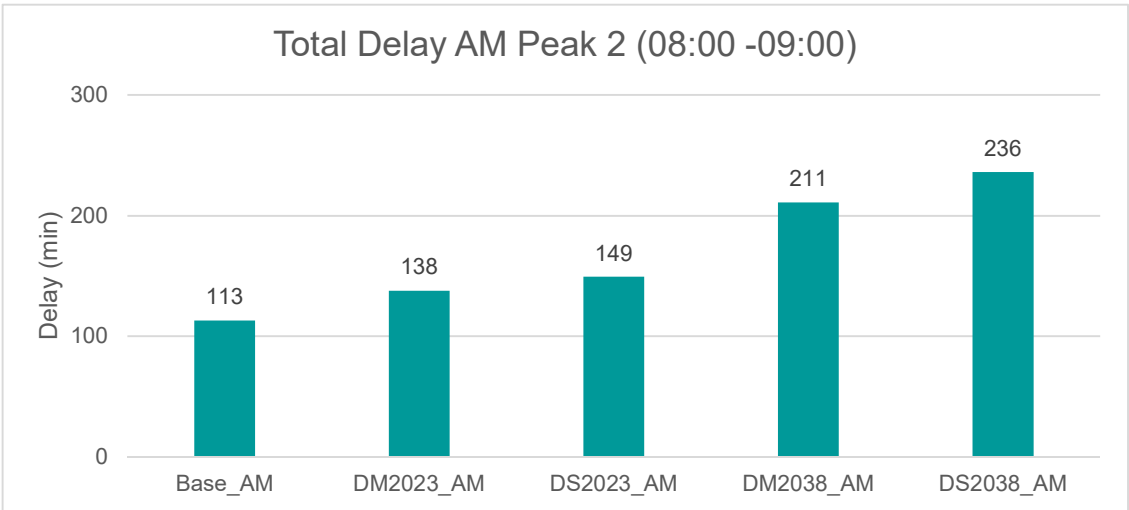
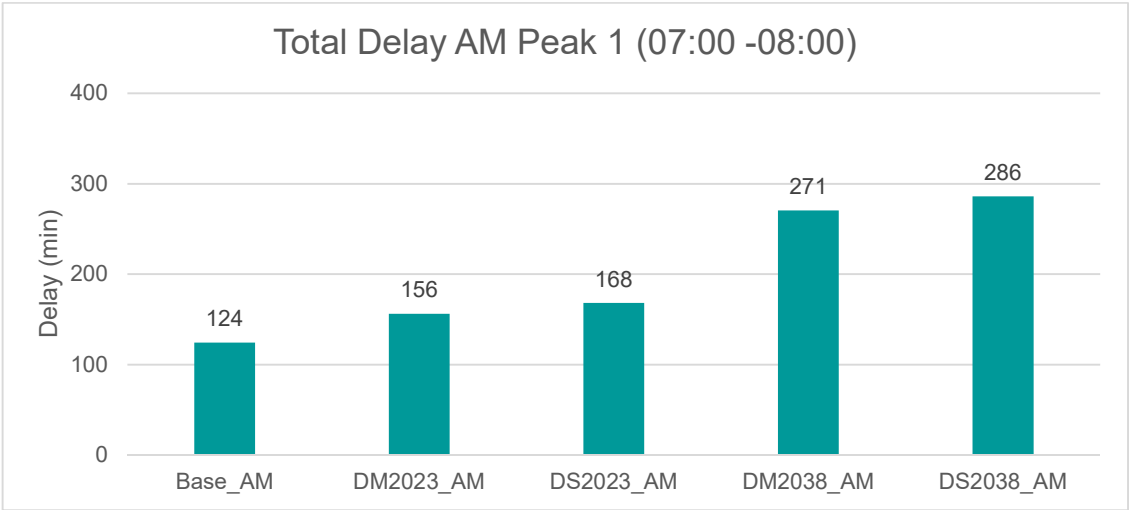
Appendix D VISSIM Model Outputs

Network Performance Indicators Summary

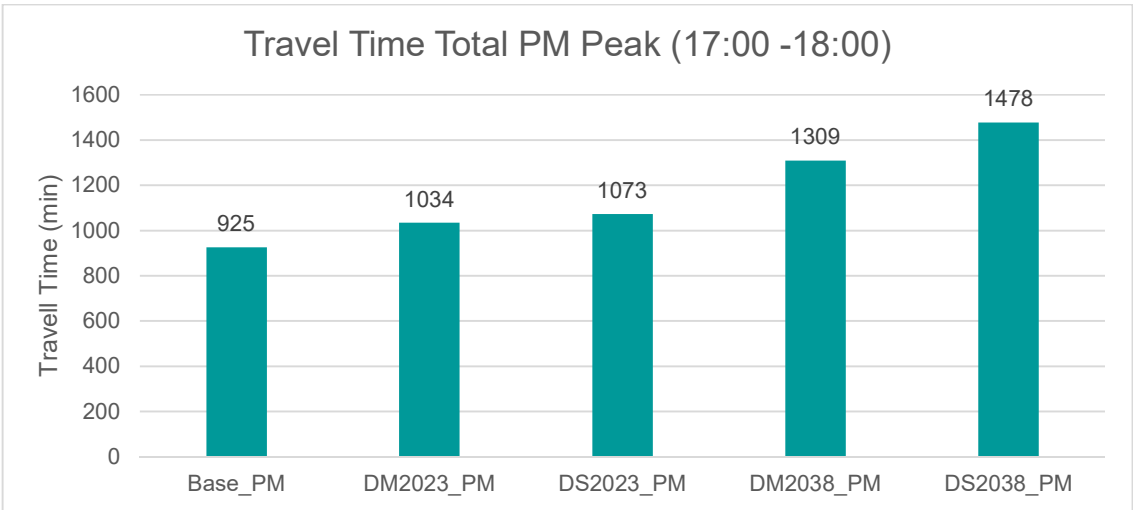
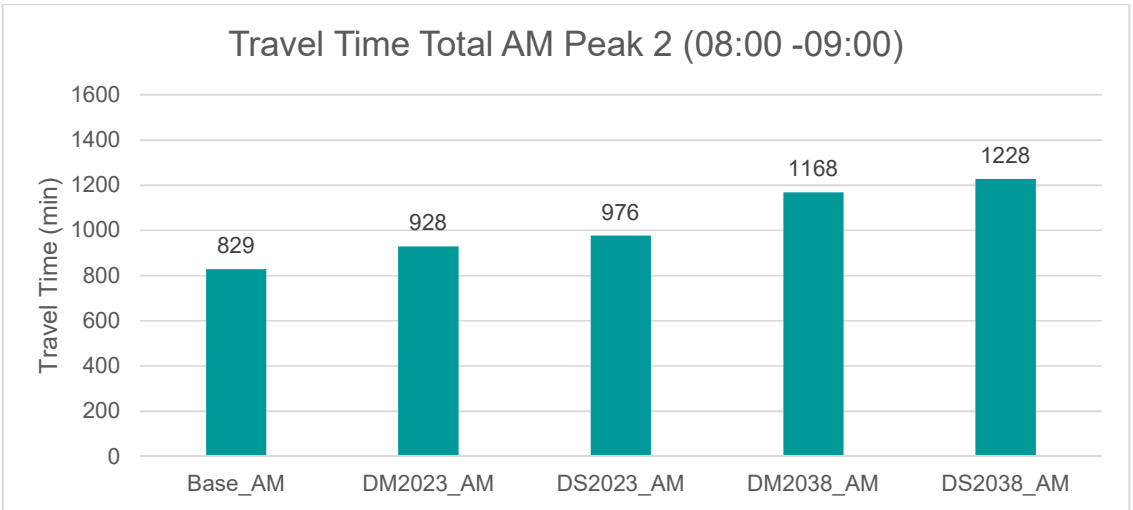
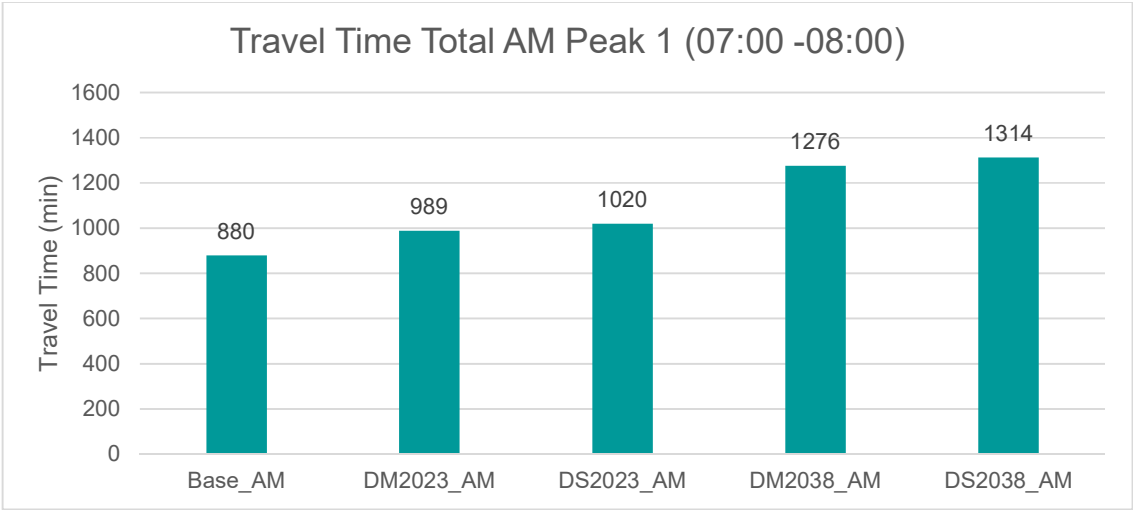
Average Delay



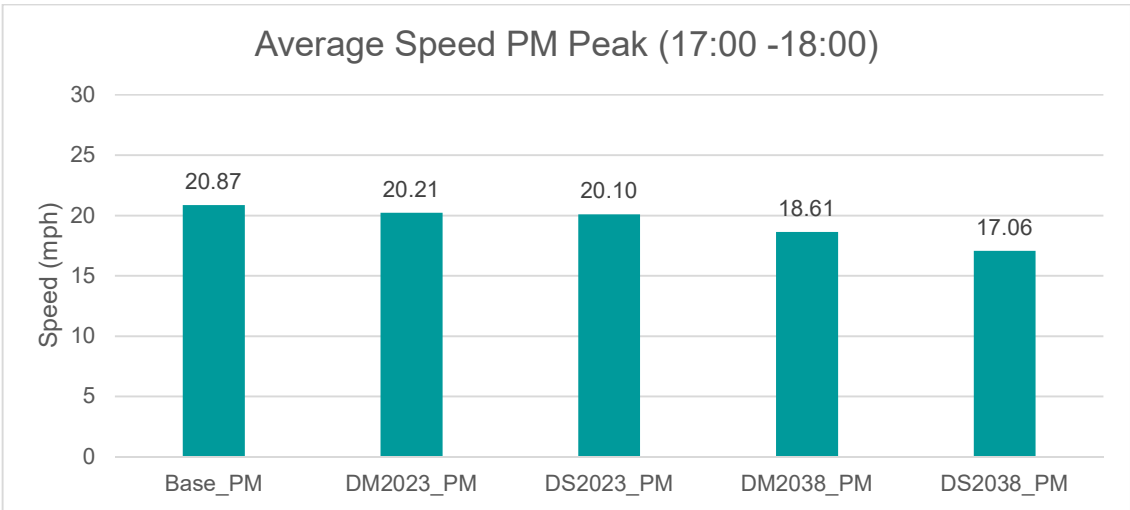
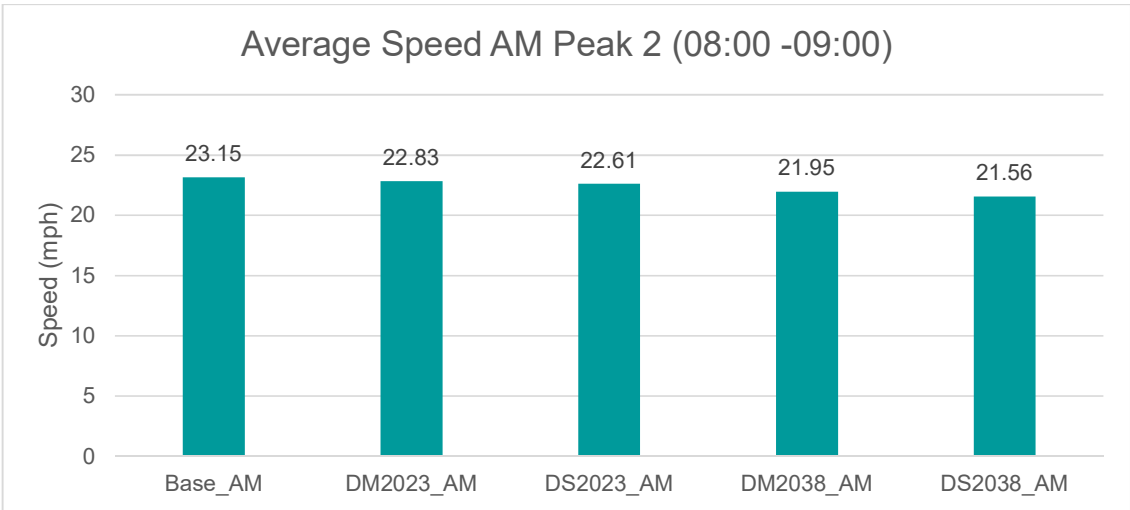
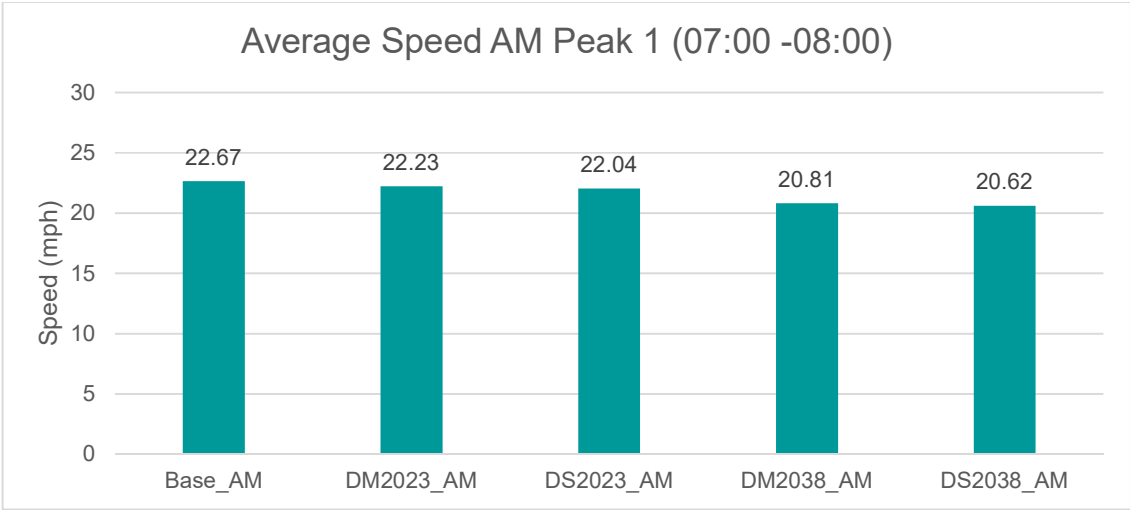
Total Delay



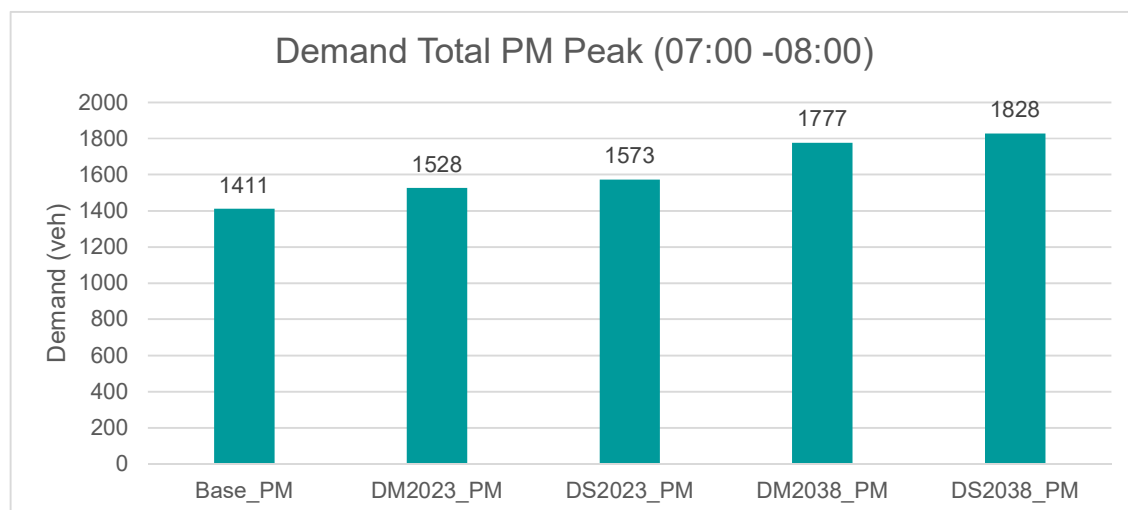
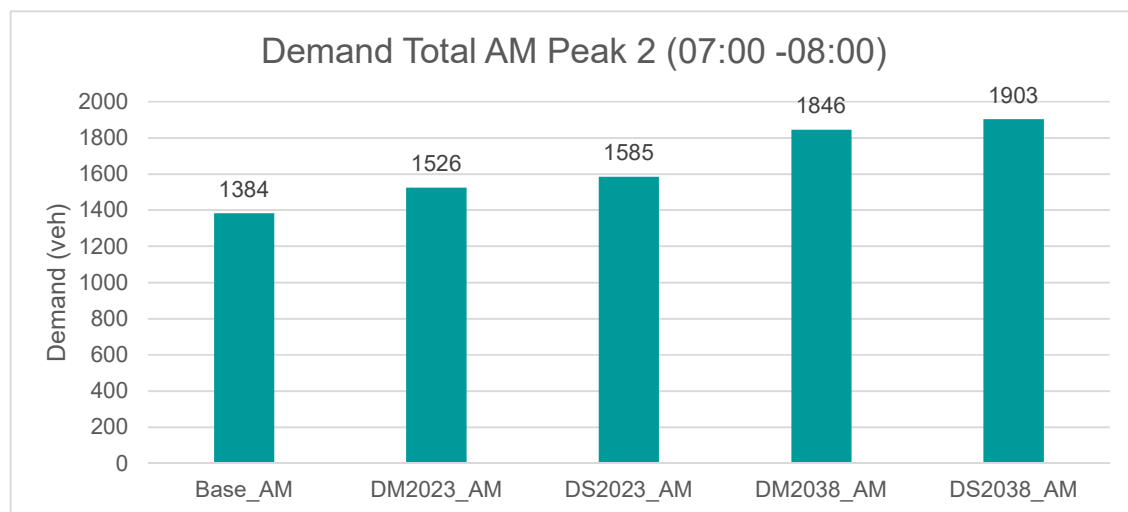
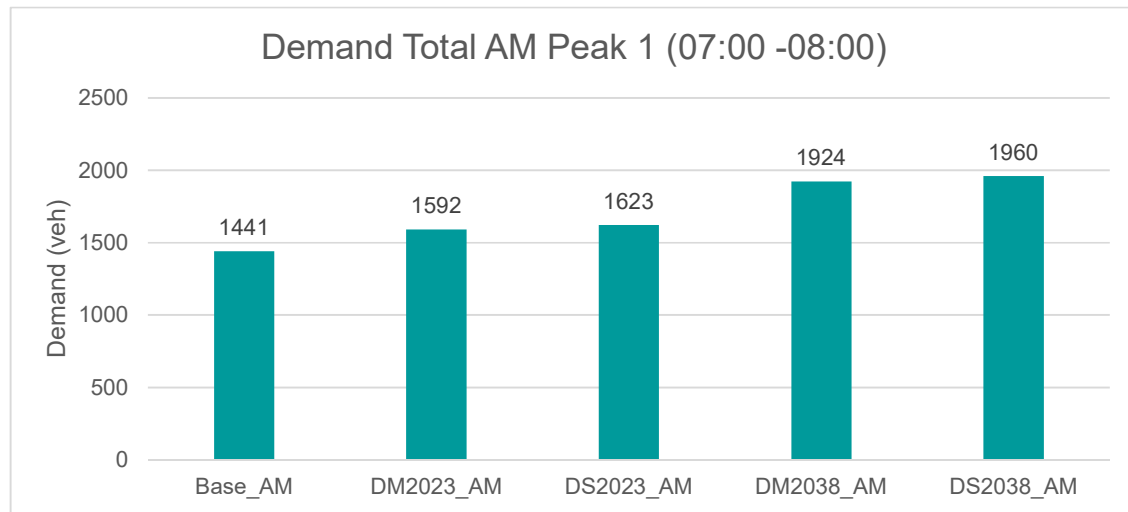
Total Travel Time



Average Speed



Demand Total



Node Evaluation Results (1/4)

MOVEMENT	FromLink	ToLink	Base AM (07:00-08:00)			
			All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4	328	282	34	12
Runger Lane North to Avro Way	1	6	168	147	19	2
Runger Lane South to Runger Lane North	3	2	371	345	23	3
Runger Lane South to Avro Way	3	6	335	261	44	30
Avro Way to Runger Lane North	5	2	91	60	16	15
Avro Way to Runger Lane South	5	4	133	92	28	13
Total			1426	1187	164	75

Base AM (08:00-09:00)			
All	Cars	LGV	HGV
297	251	35	11
205	181	23	1
387	358	24	5
308	240	39	29
92	59	19	14
75	32	27	16
1364	1121	167	76

MOVEMENT	FromLink	ToLink	2023 Without Development AM (07:00-08:00)			
			All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4	366	316	37	13
Runger Lane North to Avro Way	1	6	179	156	21	2
Runger Lane South to Runger Lane North	3	2	410	380	26	4
Runger Lane South to Avro Way	3	6	372	290	48	34
Avro Way to Runger Lane North	5	2	100	68	18	14
Avro Way to Runger Lane South	5	4	145	99	31	15
Total			1572	1309	181	82

2023 Without Development AM (08:00-09:00)			
All	Cars	LGV	HGV
325	272	40	13
232	206	25	1
426	394	25	7
339	267	42	30
102	65	21	16
85	35	31	19
1509	1239	184	86

MOVEMENT	FromLink	ToLink	2023 With Development AM (07:00-08:00)			
			All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4	366	316	37	13
Runger Lane North to Avro Way	1	6	190	165	23	2
Runger Lane South to Runger Lane North	3	2	411	381	26	4
Runger Lane South to Avro Way	3	6	387	303	50	34
Avro Way to Runger Lane North	5	2	103	71	19	13
Avro Way to Runger Lane South	5	4	149	101	31	17
Total			1606	1337	186	83

2023 With Development AM (08:00-09:00)			
All	Cars	LGV	HGV
329	274	41	14
245	218	26	1
420	388	25	7
364	287	46	31
111	71	23	17
97	41	34	22
1566	1279	195	92

Node Evaluation Results (2/4)

2038 Without Development AM (07:00-08:00)						
MOVEMENT	FromLink	ToLink	All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4	446	384	46	16
Runger Lane North to Avro Way	1	6	213	186	25	2
Runger Lane South to Runger Lane North	3	2	495	461	29	5
Runger Lane South to Avro Way	3	6	448	348	59	41
Avro Way to Runger Lane North	5	2	117	81	22	14
Avro Way to Runger Lane South	5	4	182	123	38	21
Total			1901	1583	219	99

2038 Without Development AM (08:00-09:00)			
All	Cars	LGV	HGV
393	329	49	15
279	248	29	2
503	463	31	9
419	333	49	37
123	78	27	18
105	43	37	25
1822	1494	222	106

				DS2038_AM			
				2038 With Development AM (07:00-08:00)			
MOVEMENT	FromLink	ToLink		All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4		444	383	45	16
Runger Lane North to Avro Way	1	6		224	196	26	2
Runger Lane South to Runger Lane North	3	2		494	460	29	5
Runger Lane South to Avro Way	3	6		466	362	63	41
Avro Way to Runger Lane North	5	2		118	83	22	13
Avro Way to Runger Lane South	5	4		190	126	39	25
Total				1936	1610	224	102

2038 With Development AM (08:00-09:00)			
All	Cars	LGV	HGV
392	329	49	14
293	260	31	2
506	463	34	9
439	352	50	37
133	86	28	19
116	47	41	28
1879	1537	233	109

Node Evaluation Results (3/4)

				Base PM (17:00-18:00)			
MOVEMENT	FromLink	ToLink		All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4		439	395	37	7
Runger Lane North to Avro Way	1	6		60	43	14	3
Runger Lane South to Runger Lane North	3	2		331	302	29	0
Runger Lane South to Avro Way	3	6		107	62	24	21
Avro Way to Runger Lane North	5	2		178	148	20	10
Avro Way to Runger Lane South	5	4		282	253	22	7
Total				1397	1203	146	48

			2023 Without Development PM (17:00-18:00)			
MOVEMENT	FromLink	ToLink				
Runger Lane North to Runger Lane South	1	4	All	Cars	LGV	HGV
Runger Lane North to Avro Way	1	6	476	427	40	9
Runger Lane South to Runger Lane North	3	2	64	45	15	4
Runger Lane South to Avro Way	3	6	357	327	30	0
Avro Way to Runger Lane North	5	2	116	67	27	22
Avro Way to Runger Lane South	5	4	189	158	22	9
Total			309	277	25	7
			1511	1301	159	51

				2023 With Development PM (17:00-18:00)			
MOVEMENT	FromLink	ToLink		All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4		476	427	40	9
Runger Lane North to Avro Way	1	6		70	49	17	4
Runger Lane South to Runger Lane North	3	2		360	329	31	0
Runger Lane South to Avro Way	3	6		123	69	29	25
Avro Way to Runger Lane North	5	2		203	171	22	10
Avro Way to Runger Lane South	5	4		323	290	25	8
Total				1555	1335	164	56

Node Evaluation Results (4/4)

2038 Without Development PM (17:00-18:00)

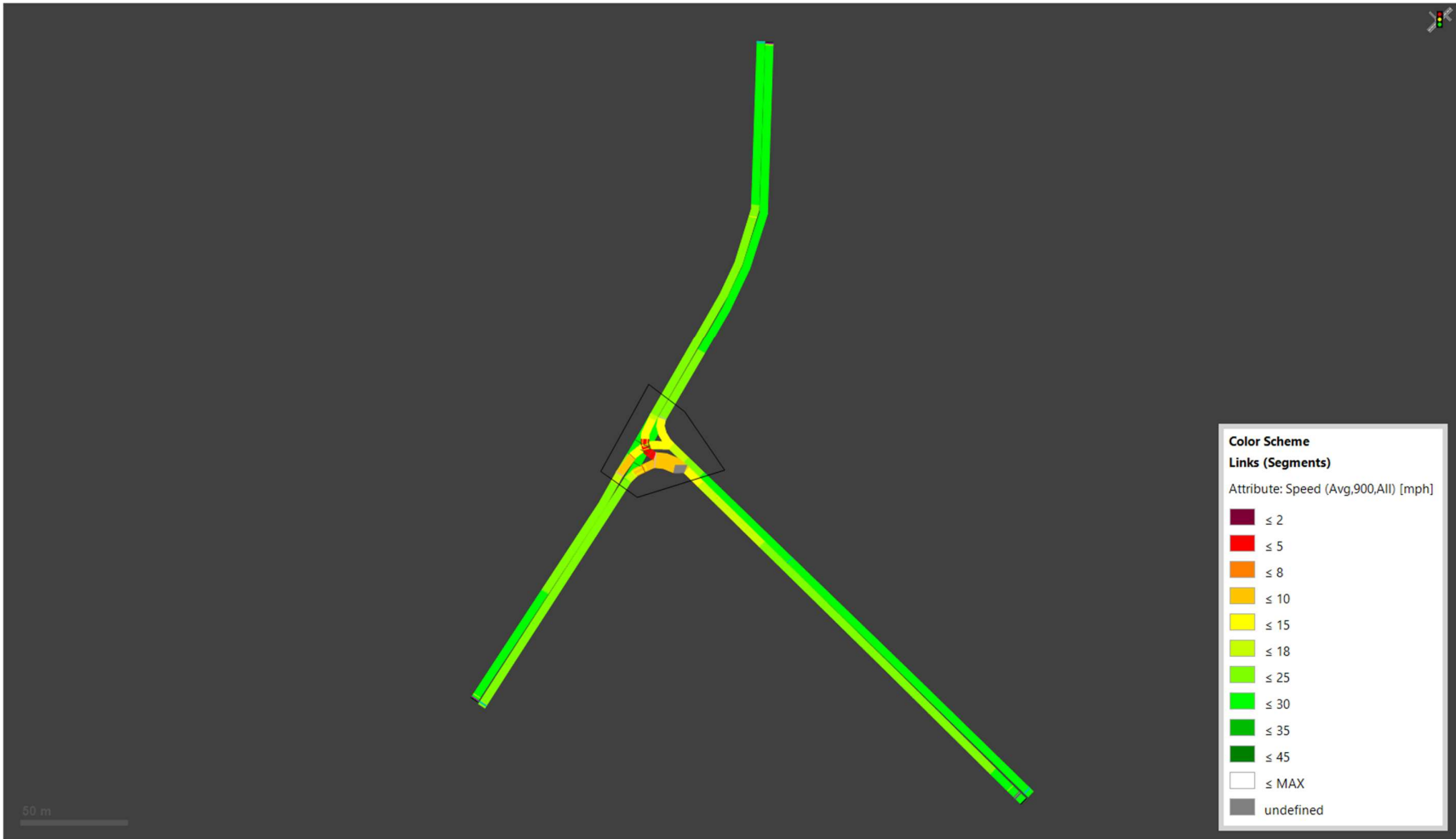
MOVEMENT	FromLink	ToLink	All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4	553	497	46	10
Runger Lane North to Avro Way	1	6	76	54	18	4
Runger Lane South to Runger Lane North	3	2	416	382	34	0
Runger Lane South to Avro Way	3	6	136	78	33	25
Avro Way to Runger Lane North	5	2	223	188	25	10
Avro Way to Runger Lane South	5	4	353	317	28	8
Total			1757	1516	184	57

2038 With Development PM (17:00-18:00)

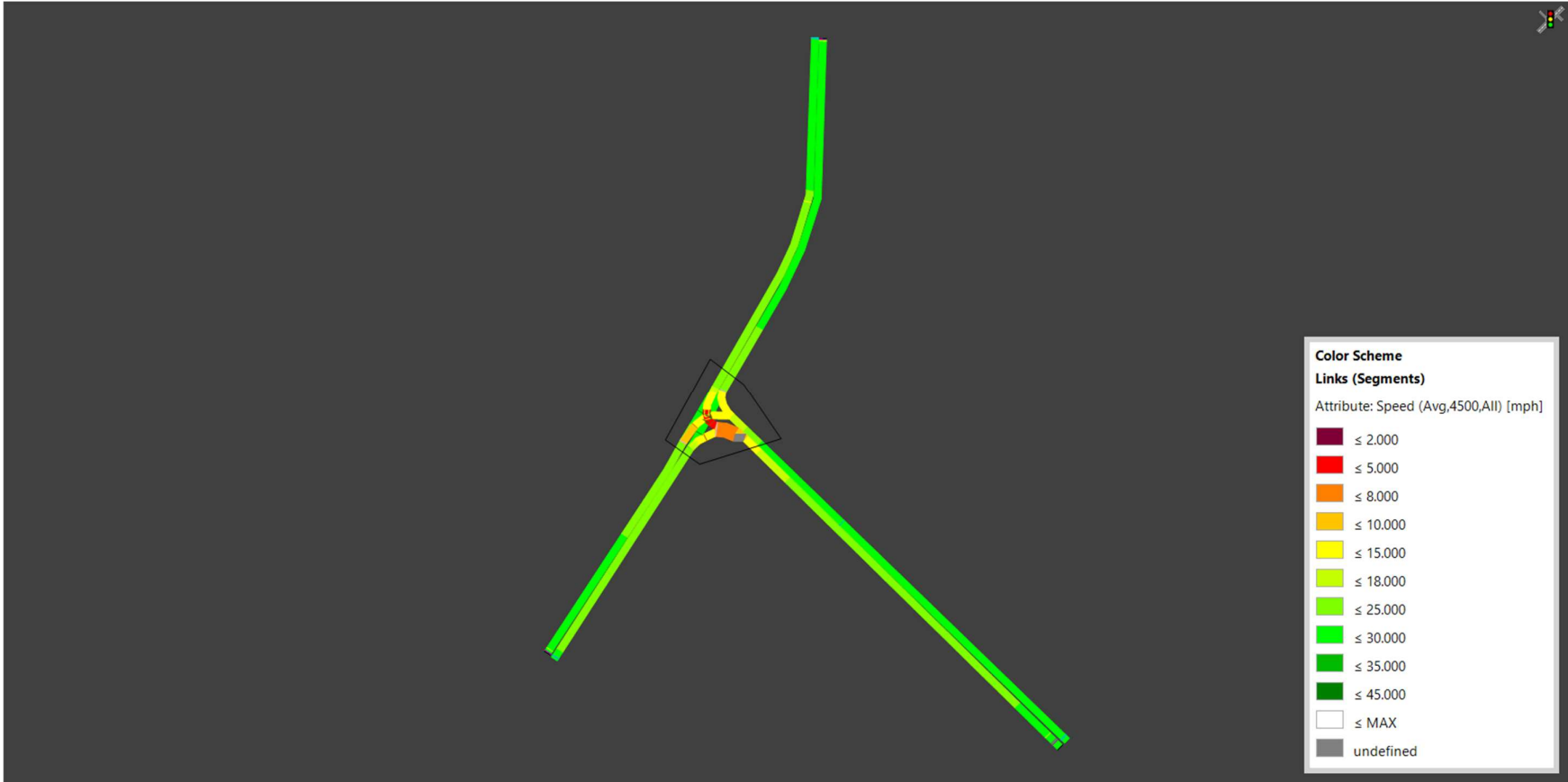
MOVEMENT	FromLink	ToLink	All	Cars	LGV	HGV
Runger Lane North to Runger Lane South	1	4	553	496	46	11
Runger Lane North to Avro Way	1	6	82	58	20	4
Runger Lane South to Runger Lane North	3	2	418	382	35	1
Runger Lane South to Avro Way	3	6	144	81	35	28
Avro Way to Runger Lane North	5	2	237	199	27	11
Avro Way to Runger Lane South	5	4	375	335	29	11
Total			1809	1551	192	66

Speed Plots

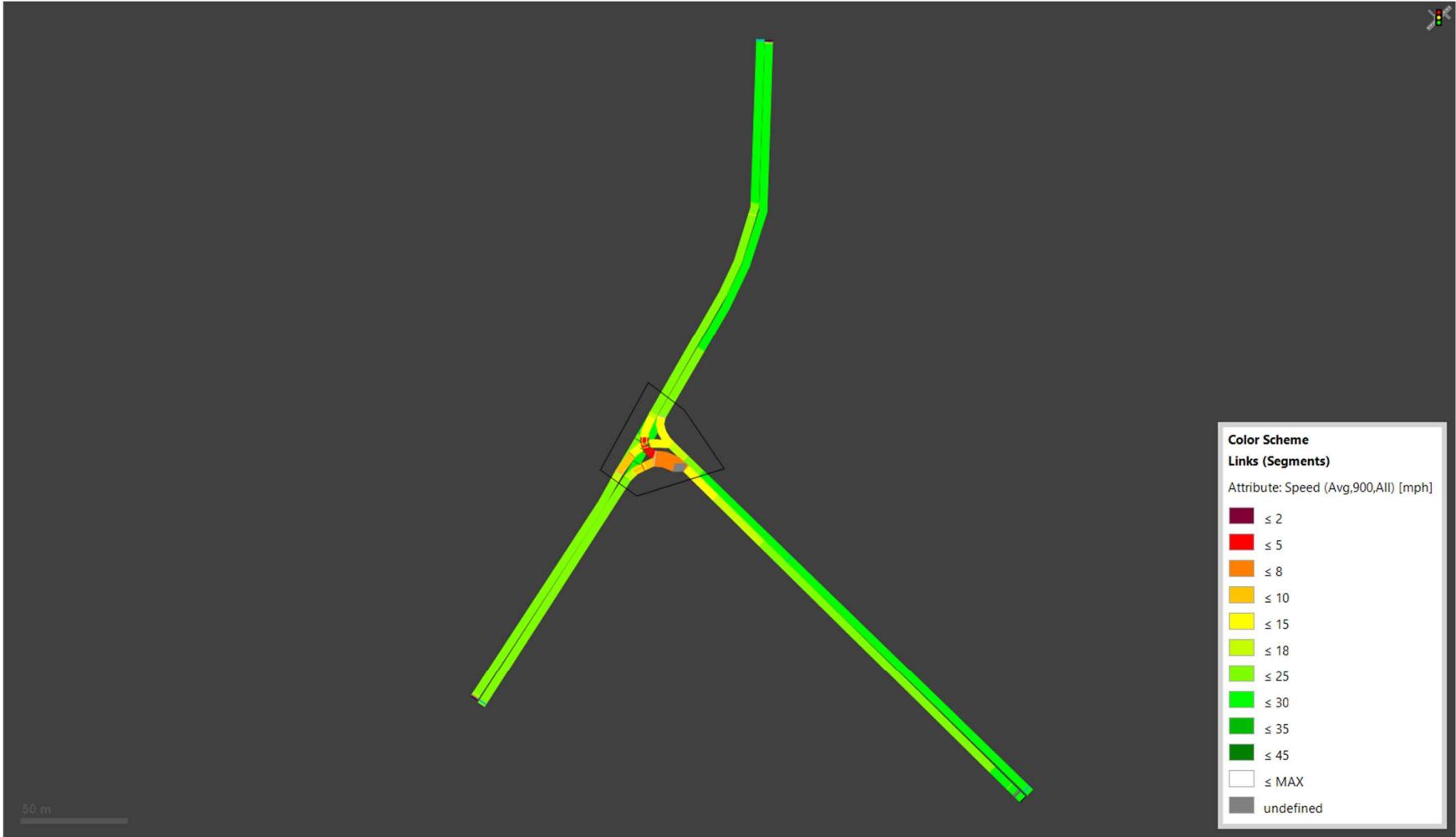
Base Model AM Peak 1



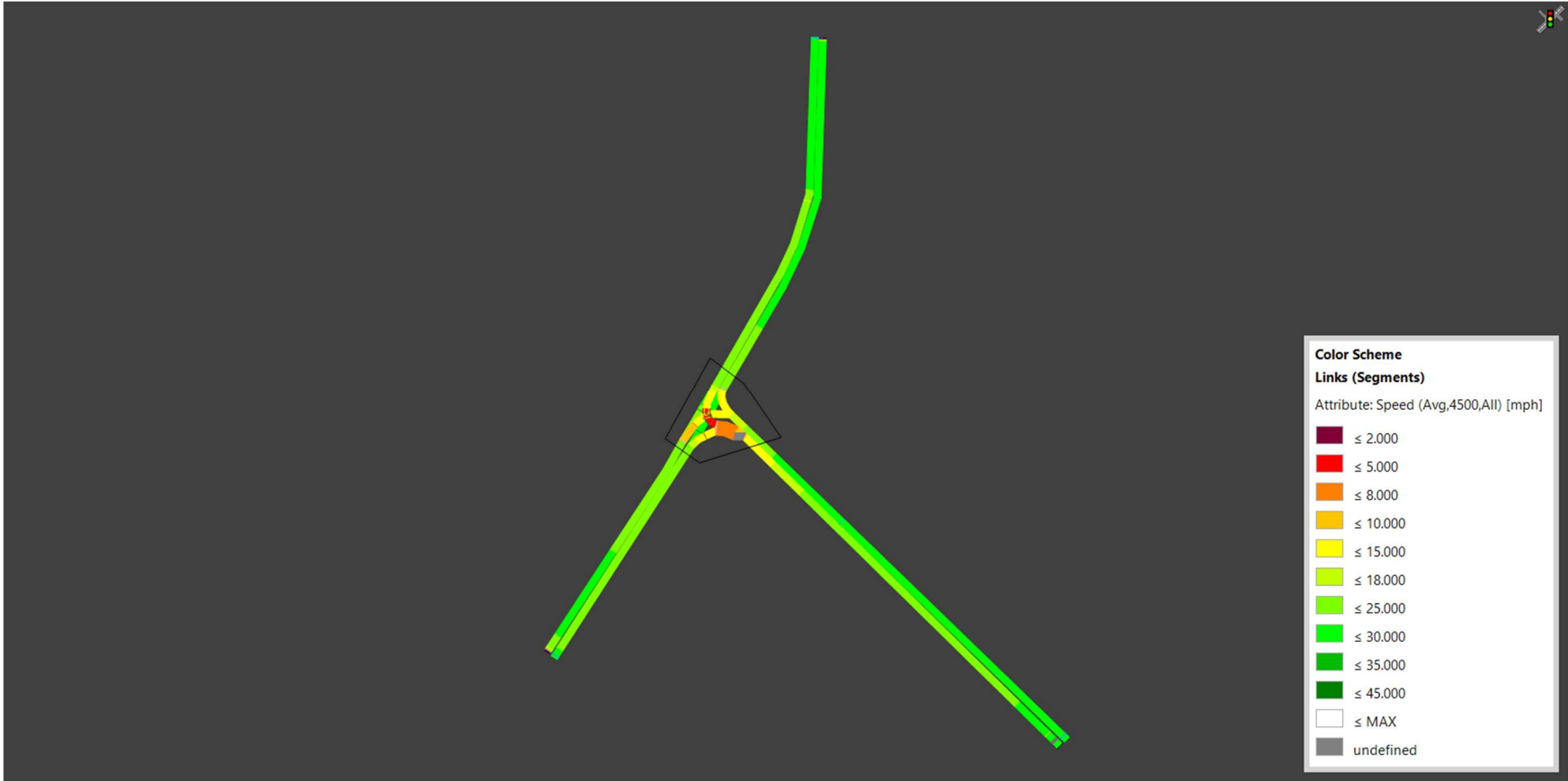
Base Model AM Peak 2



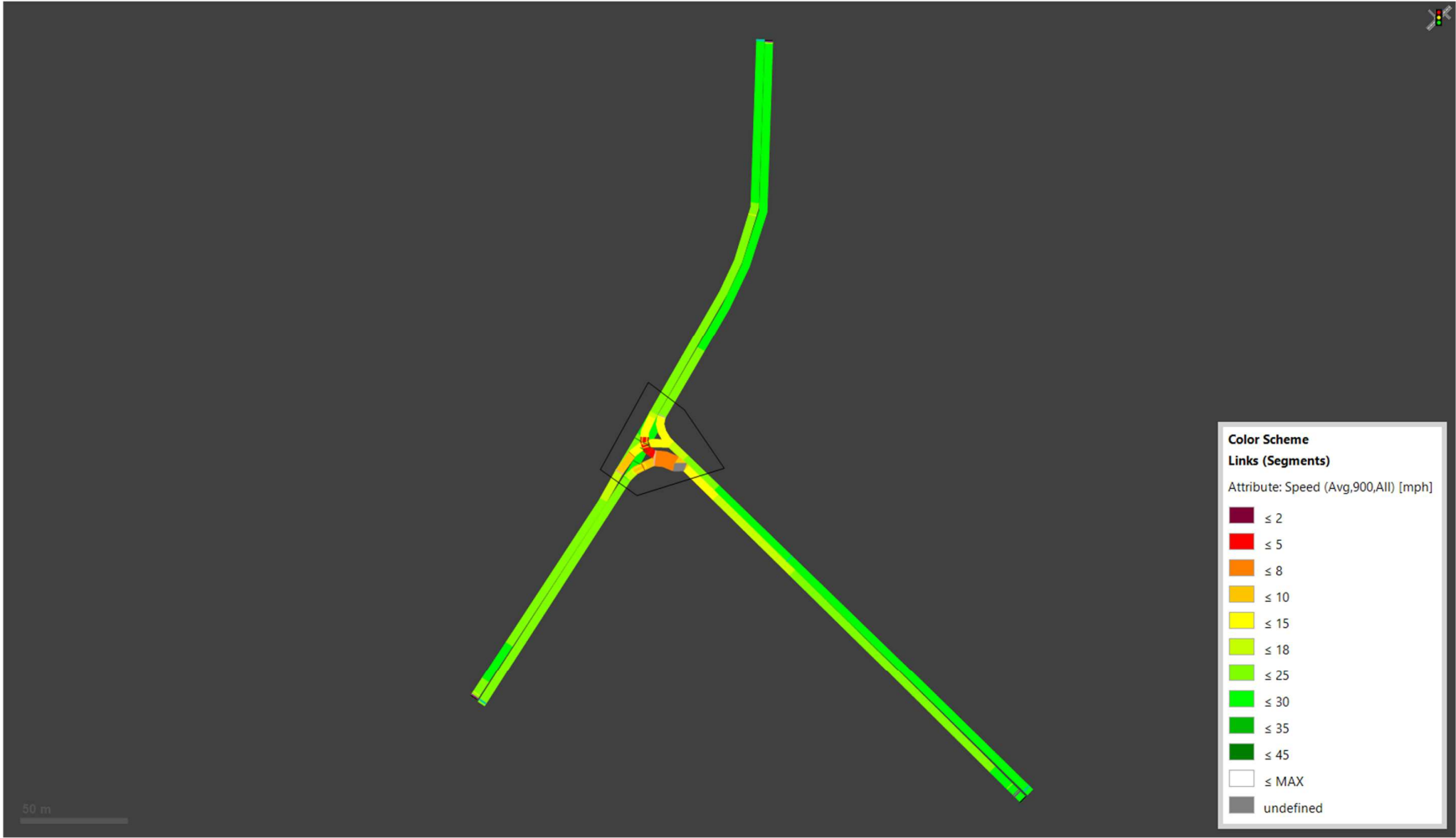
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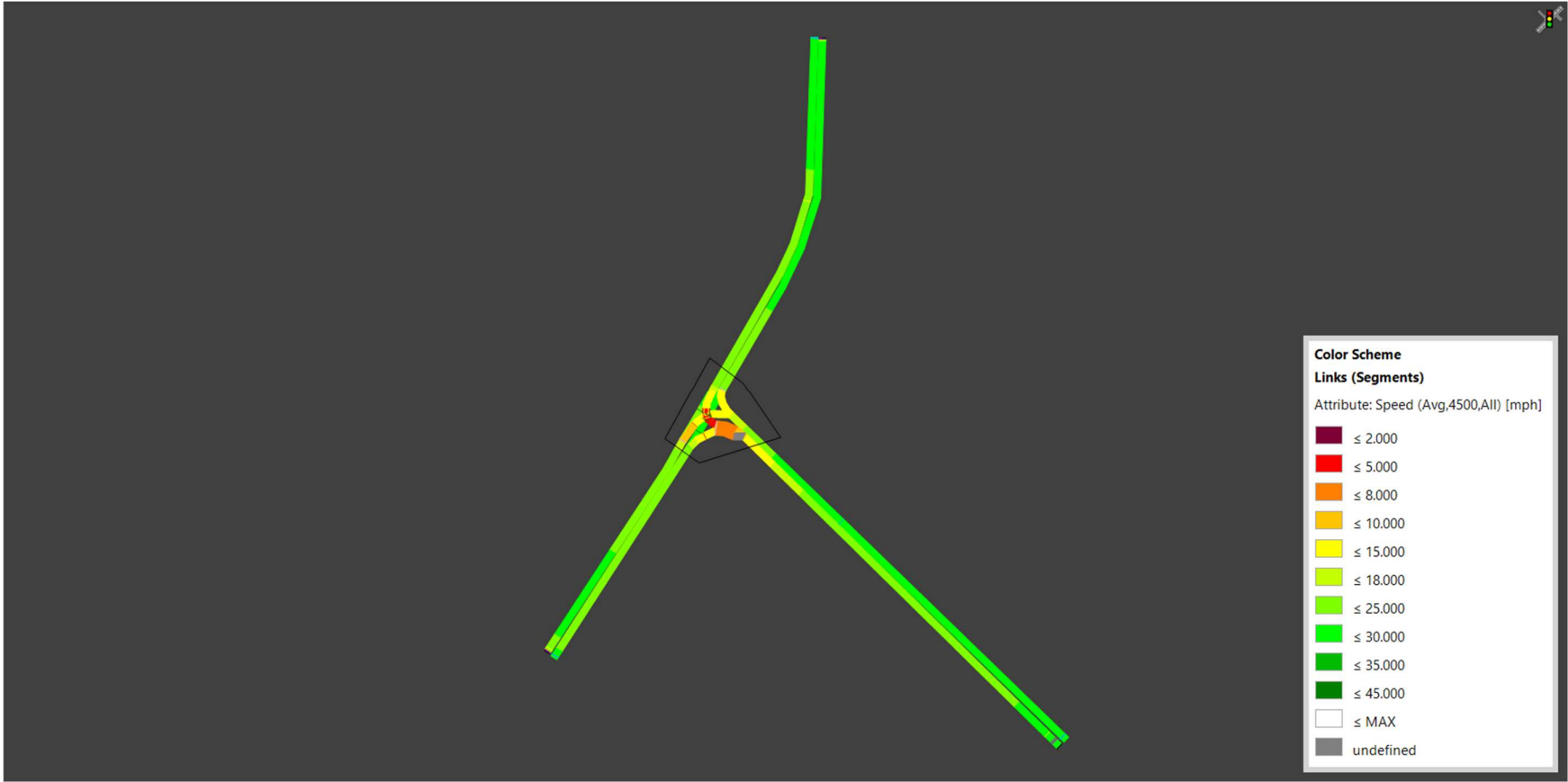
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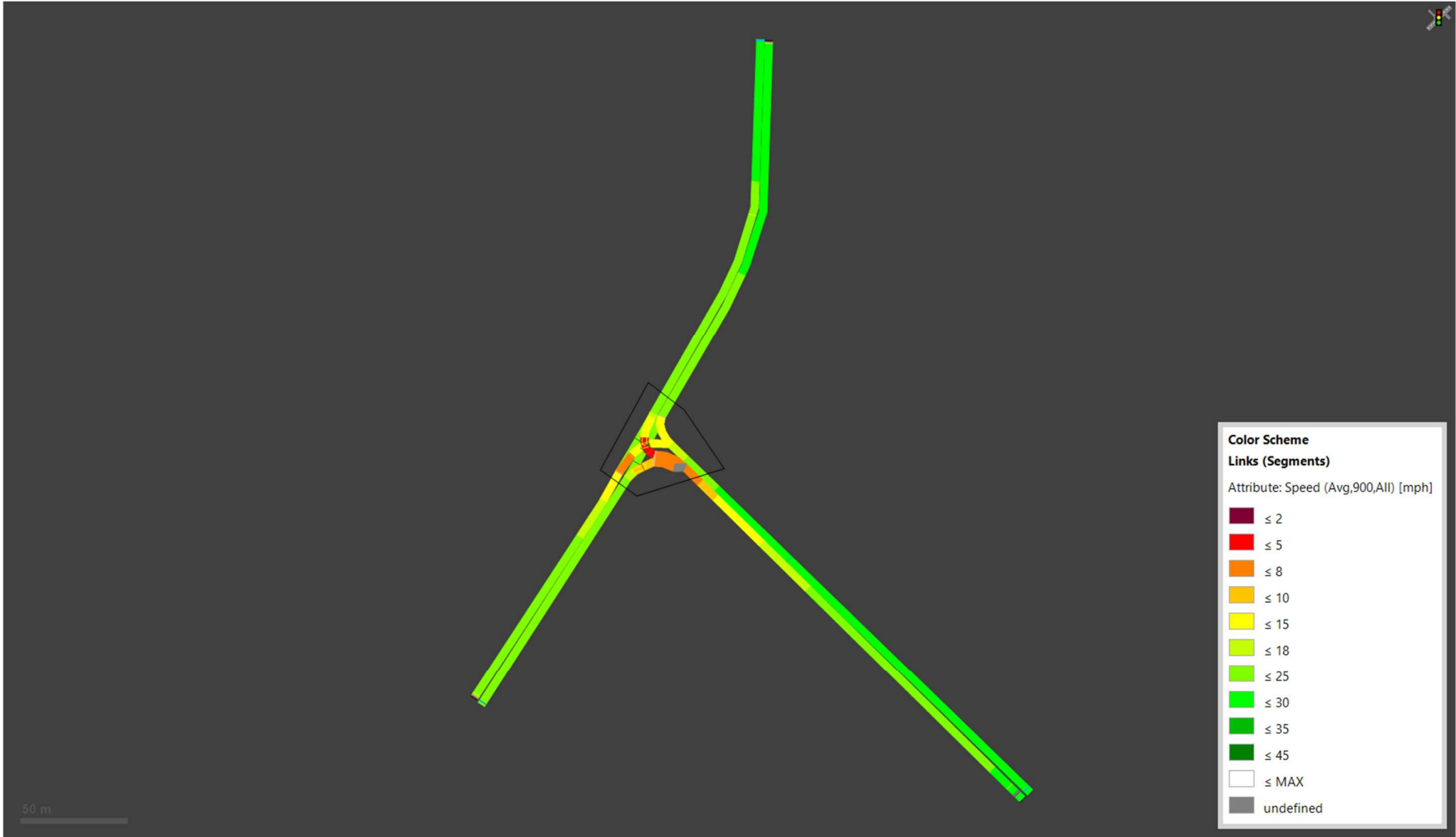
2023 With Development AM Peak 1



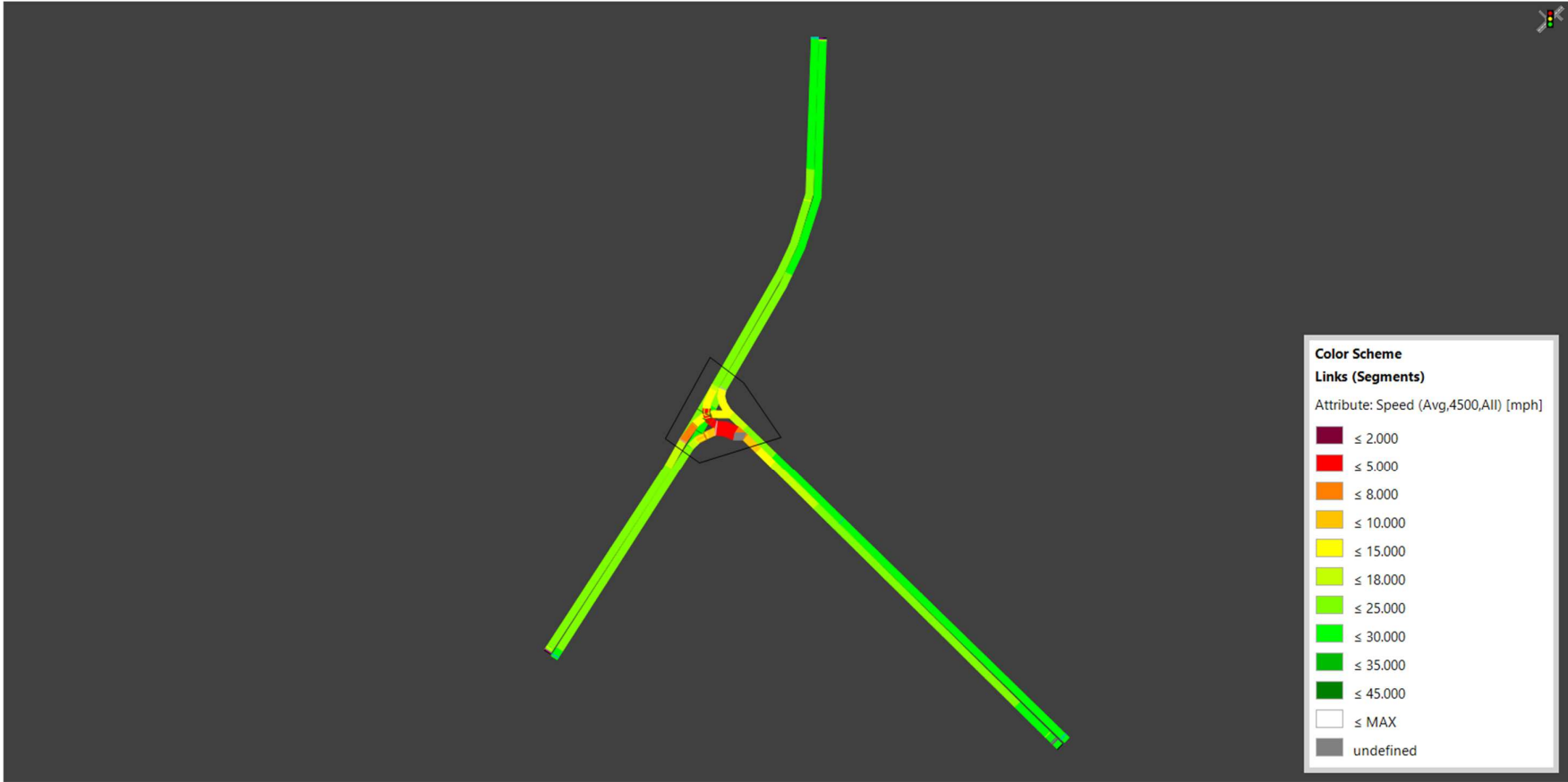
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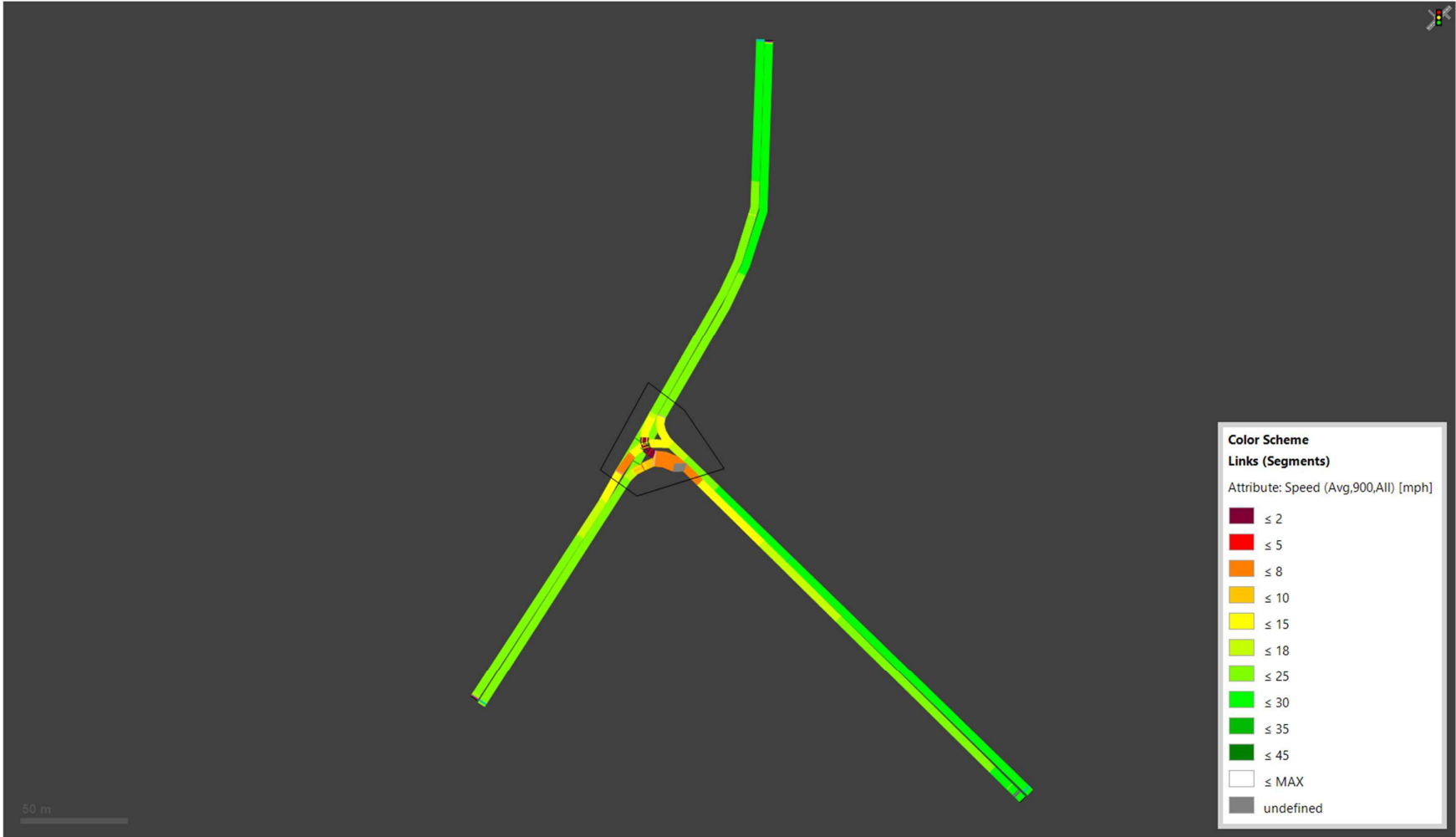
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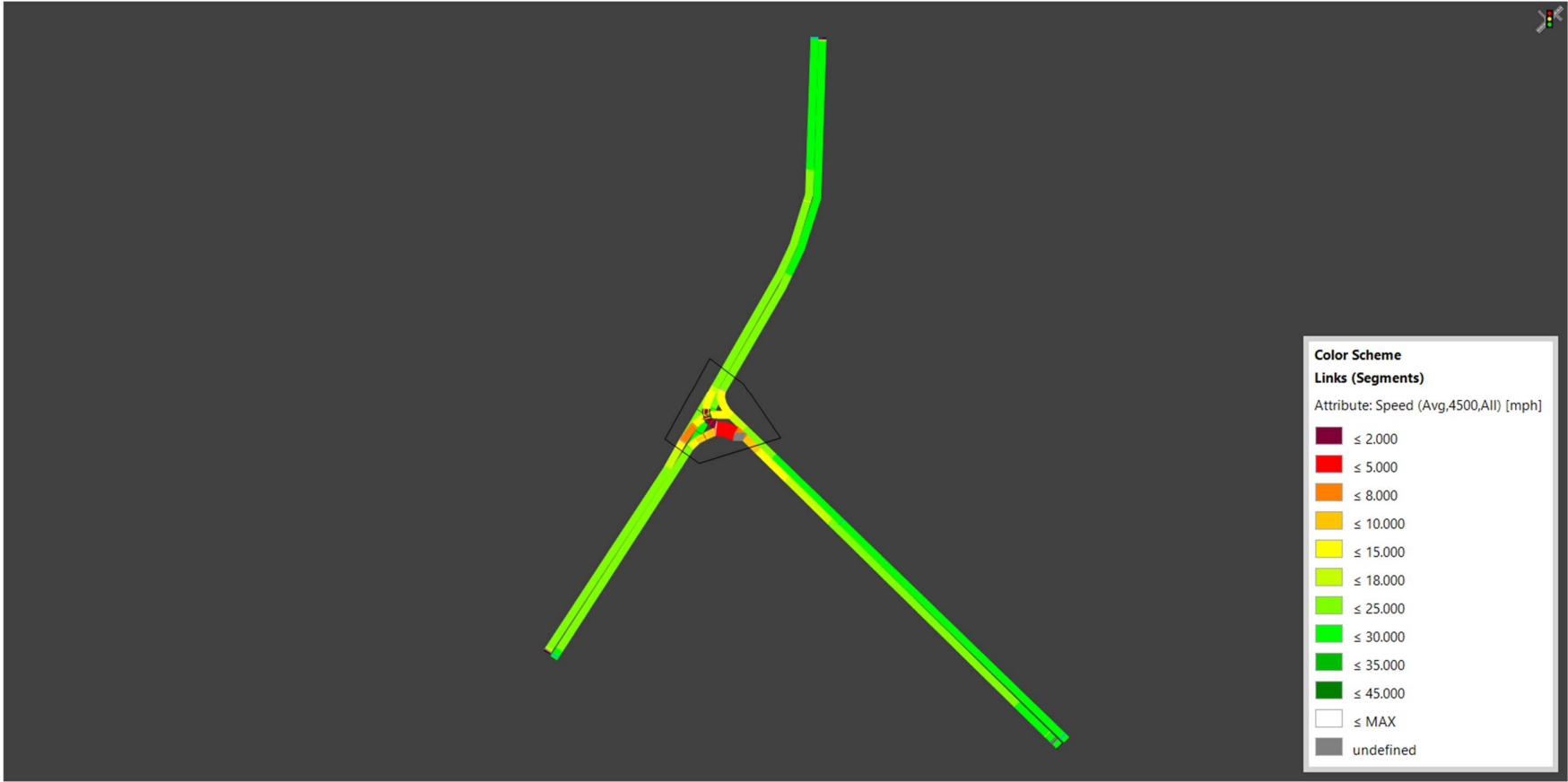
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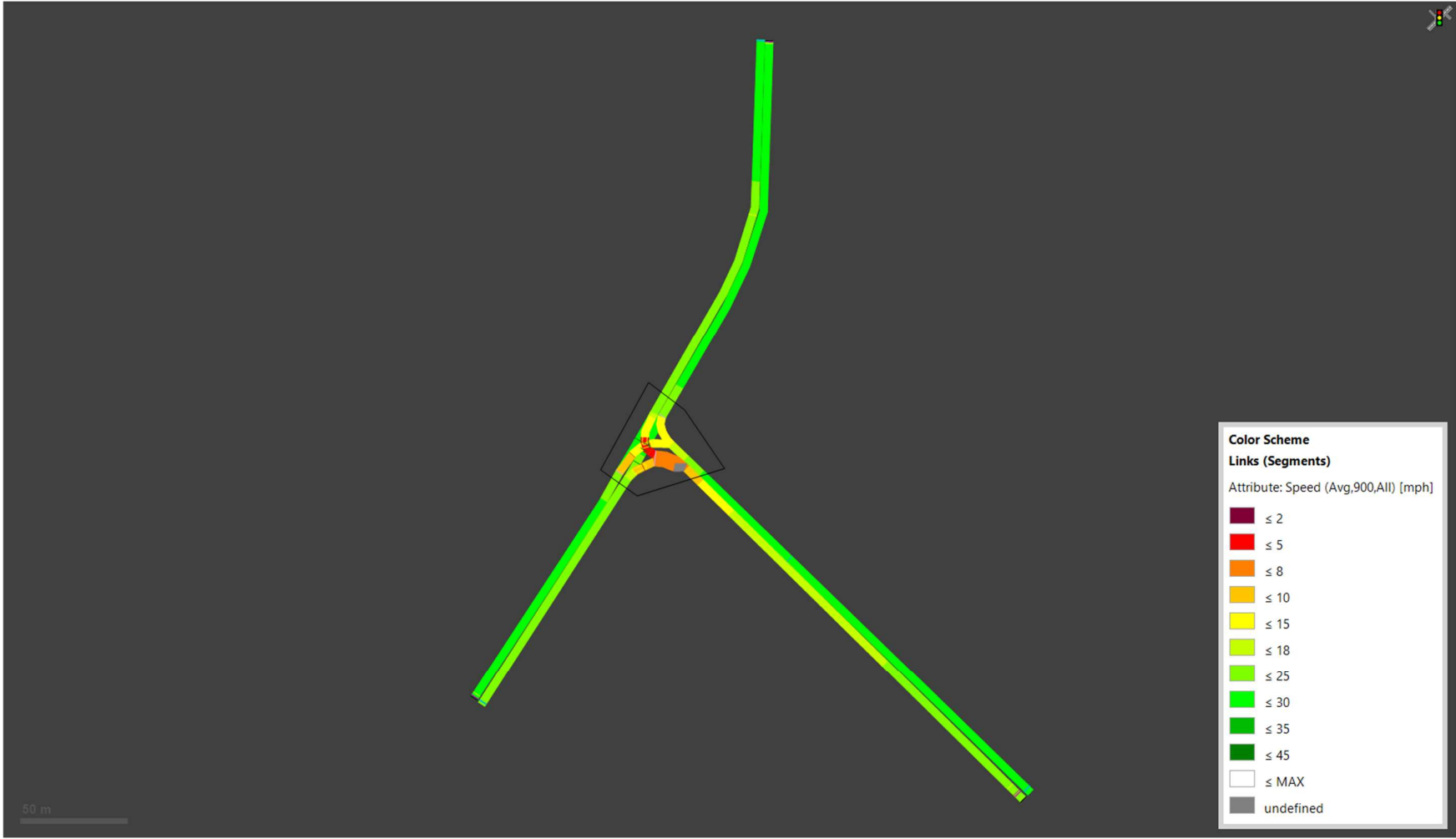
2038 With Development AM Peak 1



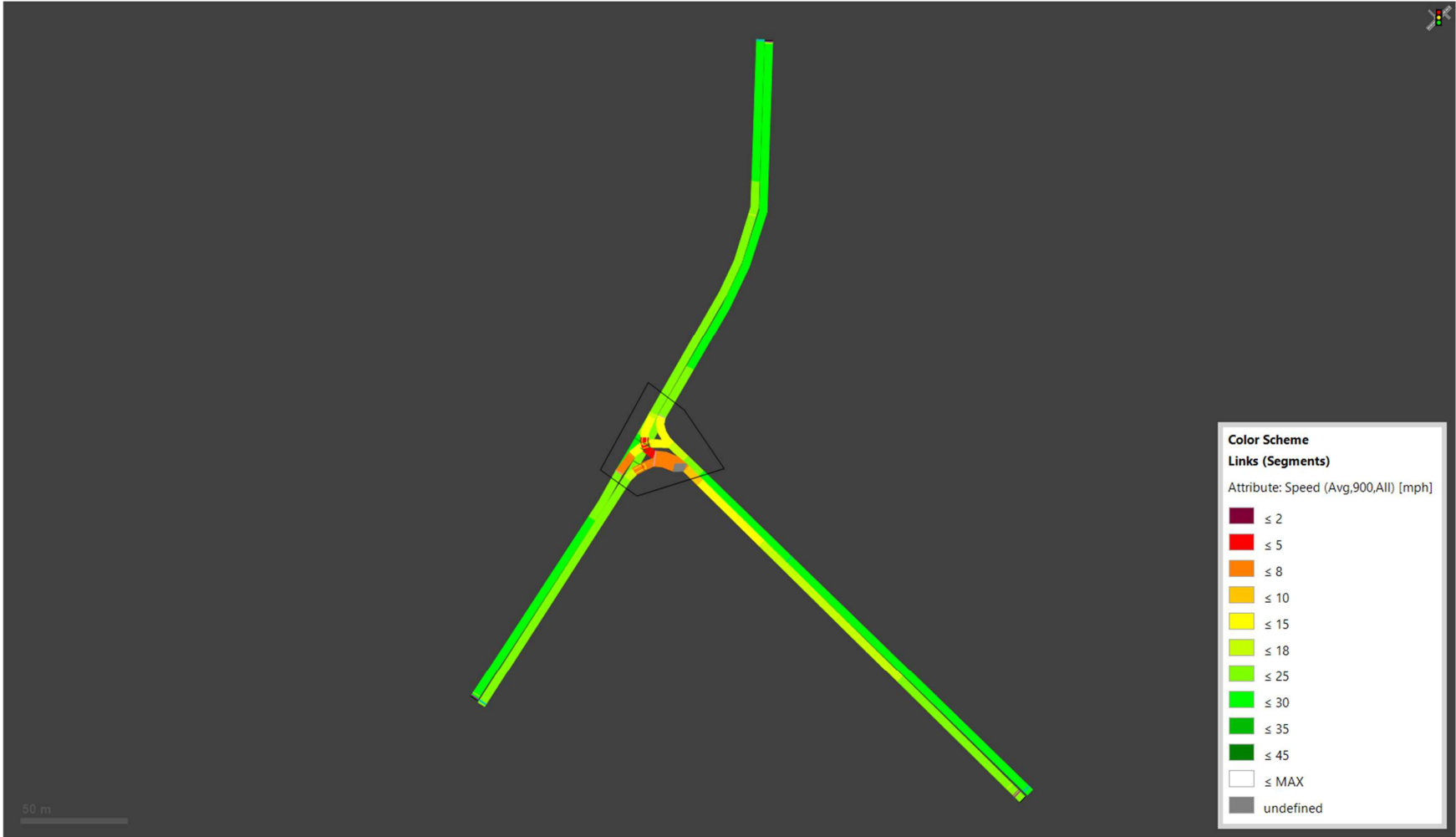
2038 With Development AM Peak 2



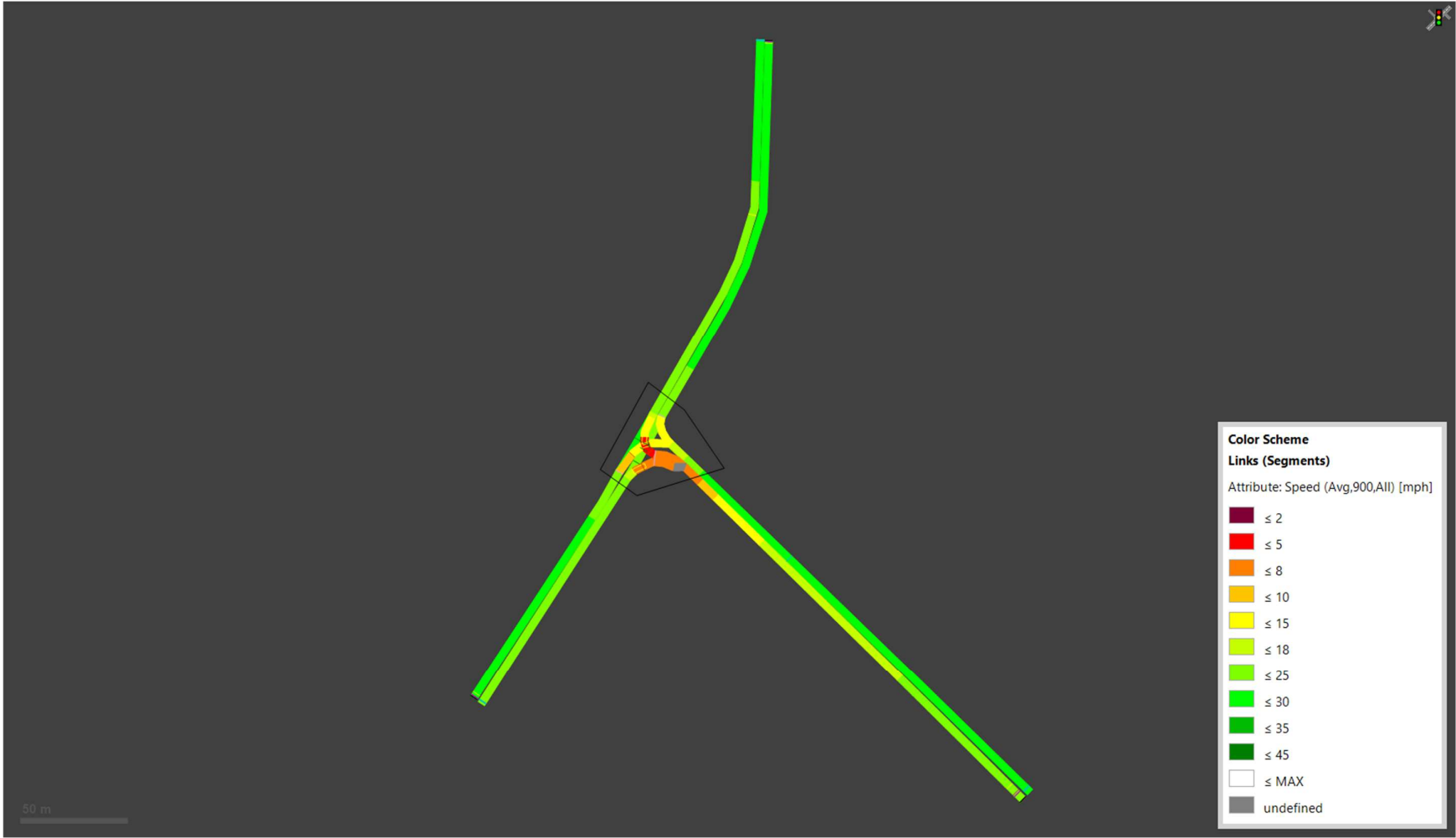
Base Model PM Peak



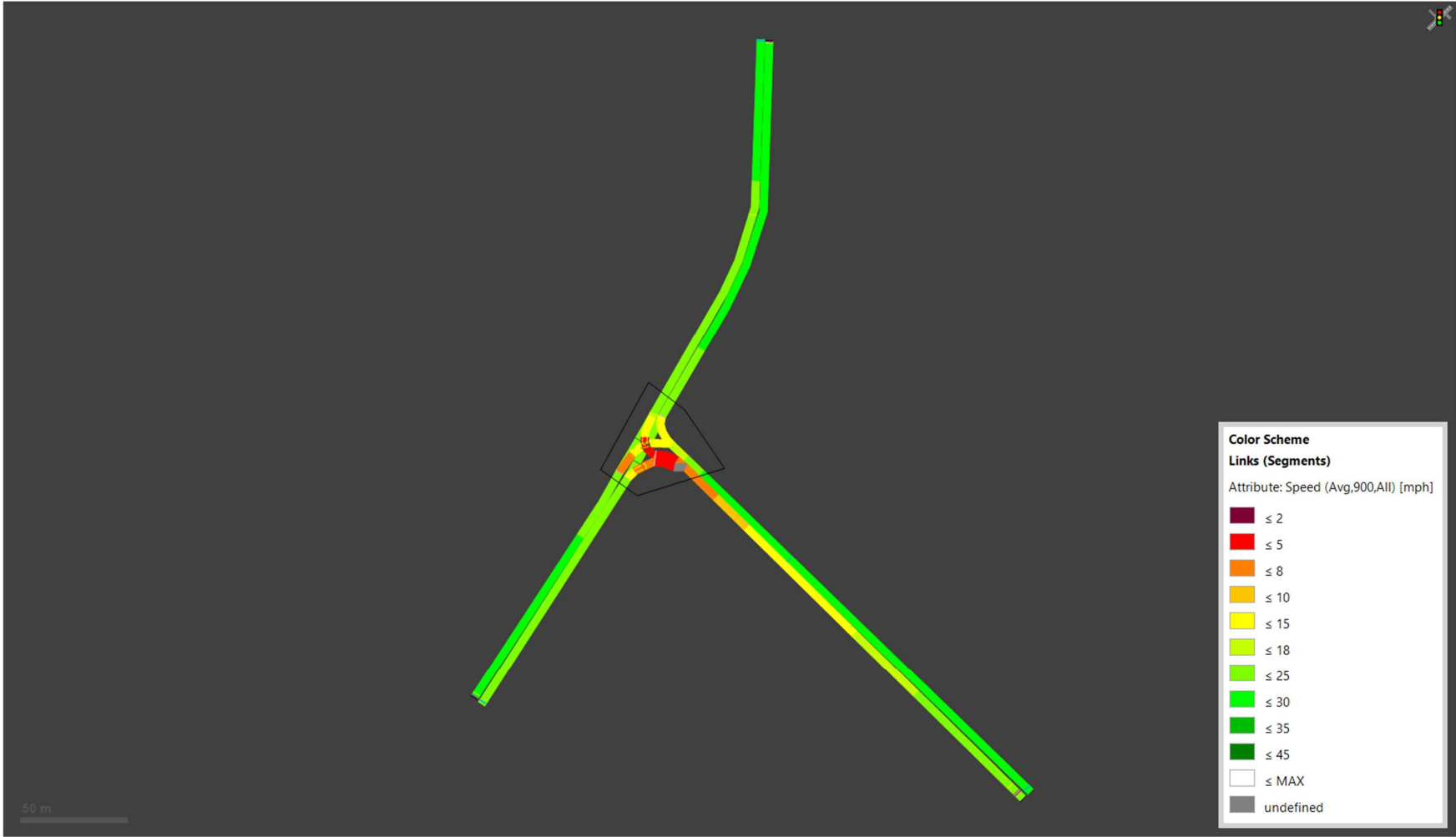
2023 Without Development PM Peak



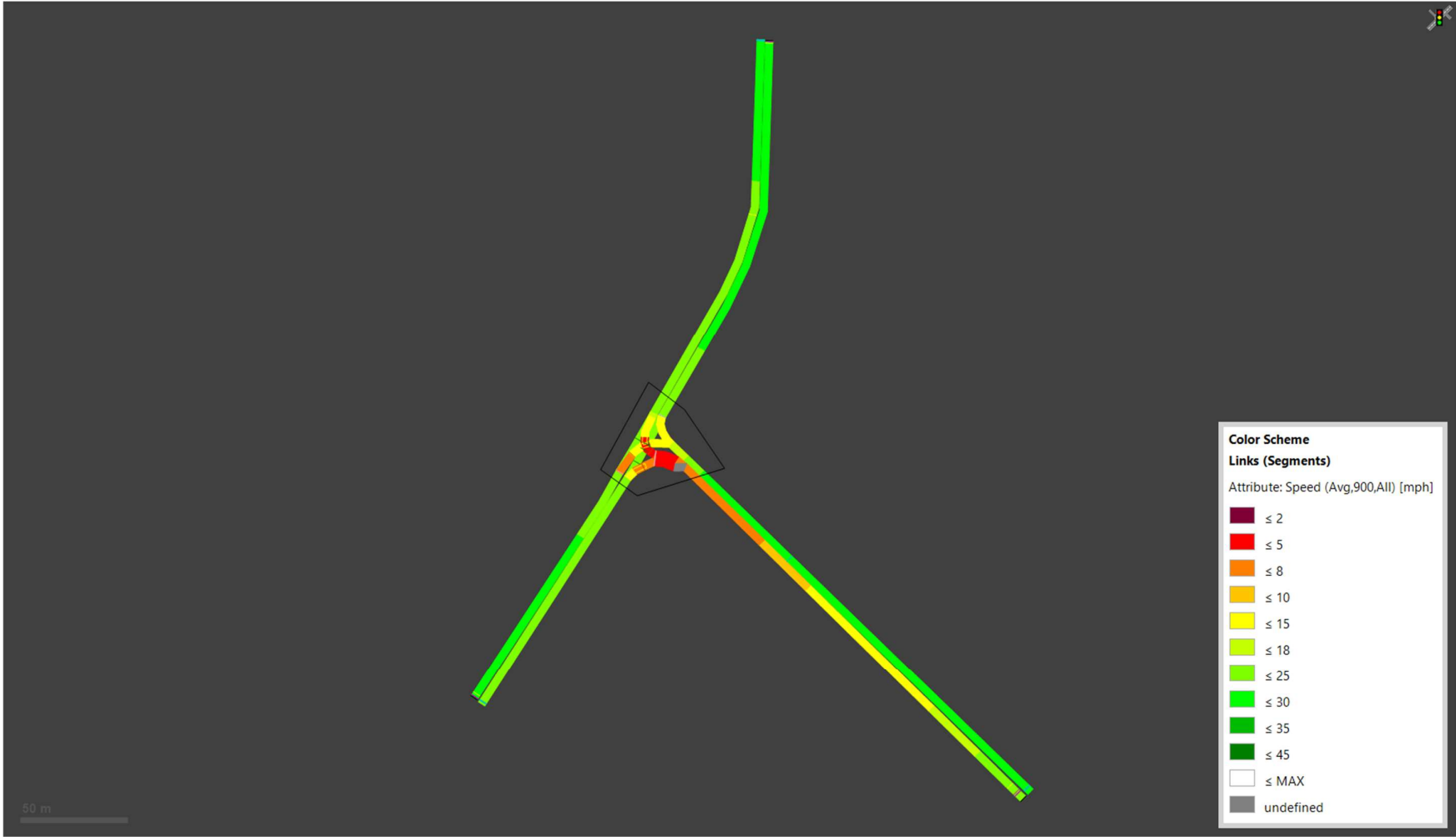
2023 With Development PM Peak



2038 Without Development PM Peak



2038 With Development PM Peak 1



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