

## Construction of the third lane on the A4 motorway (sections Fischamend-West Bruck and West Bruck-Neusiedl)

### General information

This project regards the construction of the **third lane** on the A4 motorway sections **Fischamend-West Bruck** and **West Bruck-Neusiedl**, in the region of Lower Austria.

The A4 motorway is a major axis, connecting Vienna to Budapest. It is part of the Rhine-Danube and the Orient-East/Med CNCs, thus representing an important section for the TEN-T Core Network.

This project is also part of a **four-step safety package conceived for the A4**. This has been launched in June 2013 by the Ministry of Transport, ASFINAG and the regions of Burgenland and Lower Austria<sup>1</sup>. It is expected that by 2023, the 60-km-long East motorway from the airport of Vienna to the border with Hungary (via the city of Nickelsdorf) will be improved to **enhance safety levels** of the infrastructure. The A4 project on the section Fischamend-Neusiedl is the last step of this project.

The total length of the concerned road section is 26,5 km, notably 15,9 km from Fischamend to West Bruck 10,6 km from West Bruck to Neusiedl, respectively<sup>2</sup> (see Figure 2-1).

Figure 2-1: Location of the adjacent sections Fischamend-West Bruck and West Bruck-Neusiedl of A4 motorway



Source: ASFINAG (2016)

<sup>1</sup> See also BMVIT (2011), Austrian Road Safety Programme 2011-2020.

<sup>2</sup> From km 18,60 to km 34,50 and from km 34,50 to km 45,10 on the alignment of the A4.

Due to the steadily **growing traffic volume**, the widening from 2 to 3 lanes per carriageway has been planned in order to improve the level of service and traffic safety of the section. It is also expected that the increased capacity could relieve frequent congestions and improve the connection of the Eastern Austria to the nearby airport of Vienna.

Being part of the motorway network of Austria, the A4 is a tolled road. A time-based tolling system (i.e., vignette<sup>3</sup>) is applied for vehicles up to 3,5 tonnes. A distance-based tolling system is applied for trucks and buses, with surcharges calculated depending on the pollutant emissions (i.e., according to engine EURO class) and noise (i.e., day and night time periods).

The **project promoter** is the fully public-owned Austrian road infrastructure manager ASFINAG.

### Technical description

The widening of this section of the A4 motorway to 3 lanes per carriageway will also include adaptation works of the acceleration and deceleration lanes. Moreover, refurbishment works of the Fischamend bridge are not envisaged and the interchange at Fischamend does not require adaptation works to make it compatible with the additional lanes. The estimated construction costs are reported in Table 2-1.

**Table 2-1: Estimated construction costs of third lane of A4 motorway**

Section	Total estimated cost [€ million]	Cost per km [€ million]
Fischamend-West Bruck	151,64	9,54
West Bruck-Neusiedl	93,06	8,78
<b>Total</b>	<b>244,70</b>	<b>9,23</b>

Source: EC (2014a)

### Project implementation

According to schedule, works started in January 2017 from the site of Fischamend. From February to June 2017, the bridges on the intersection between the A4 with the B9 Hainburgerstraße and between Fischamend and Hainburg will be refurbished in order to accommodate the additional lane.

The construction of the additional lane is scheduled in phases over the period from 2018 to 2020. Consultations with concerned municipalities (i.e., Fischamend, Raststation Göttlesbrunn and Bruck) have been started and the field reconnaissance for the archaeological excavations has almost been completed.

During the construction of the third lane, also general **rehabilitation works of the existing roadway** will be carried out<sup>4</sup>. Table 2-2 provides information on the construction timeline for the two sections covered by the project.

**Table 2-2: Construction timeline of A4 motorway**

Section	Start date	End date
Fischamend-West Bruck	2017	2020
West Bruck-Neusiedl	2020	2022

Source: EC (2014a)

<sup>3</sup> Three types of vignette are available for road users with duration of 10 days, 2 months and one year, respectively.

<sup>4</sup> Furthermore, specific measures as not to interrupt traffic flows during the construction works are envisaged.

## Transport demand

Table 2-3 shows the data of the observed daily vehicles (i.e., cars and trucks) of year 2012 and forecasted values of year 2025, with respect to the sections covered. The figures of 2012 refer to the two-lane per carriageway transversal section. The values of 2025 refer to the three-lane configuration. Information is not provided on how the forecast has been elaborated and regarding the evolution through time of the vehicles without the additional lane.

**Table 2-3: Traffic figures in the Status quo and in the Investment scenarios [number of vehicles per day] of A4 motorway**

Section	2012 (two lanes)	2025 (three lanes)
Fischamend-West Bruck	54.000	67.000
West Bruck-Neusiedl	37.000	44.000

Source: TRT elaboration on ASFINAG (2016)

Elaborating with respect to the information provided one can observe that the daily traffic on the section Fischamend-West Bruck is expected to increase by 1,85% on yearly basis. The annual growth rate of the section West Bruck-Neusiedl is slightly lower and equal to 1,46%. The average annual value of the two sections is equal to 1,65%. This is in line with the annual growth rate of the GDP for Austria for the period 2010-2025 (i.e., 1,67%), according to projections of EC Reference scenario 2016 (Capros et al., 2016). The elasticity of traffic with respect to GDP is approximately equal to 1.

Finally, the modal share of trucks<sup>5</sup> is expected in the interval 16-17%, both with and without the construction of the third lane.

On the consulted documents, there is no information available with respect to the assumed values of key drivers of traffic growth. There is not additional information on the demand components (i.e., long and short distance, induced and diverted). Eventually, indications are not provided on the evolution of level of service or capacity according to project implementation.

## Financial analysis

There is **no available information on the financial analysis**. It is worth reminding that the A4 is a tolled motorway, according to ASFINAG's regime.

As far as the sources of financing are concerned, the project will be financed with road infrastructure manager's own revenues, together with the financial support of the region of Lower Austria. The documents made available do not provide information on application for CEF grants.

## Economic analysis

According to the consulted stakeholders, for this project ASFINAG did **not carry out the cost-benefit analysis**. Indeed, cost-benefit analysis is not mandatory in Austria for infrastructure projects which do not apply for grants.

Furthermore, due to the urgency of the project caused by the high number of accidents, a political decision of anticipating the construction phase was adopted, hence restraining the project preparatory stage.

<sup>5</sup> There is no available data for trucks modal share of the section West Bruck-Neusiedl.

## **Environmental analysis**

The **EIA was originally scheduled for submission in 2018**. However, according to the consulted stakeholders, ASFINAG is still verifying with the Ministry of Transport whether the legal circumstances for which the EIA is mandatory occur or not.

As regards the environmental issues and the envisaged mitigation measures, during the construction of the third lane the road drainage will be adapted to the current requirements of water protection and the noise protection facilities will be re-established in accordance with the current regulations on health protection of the residents.

## **Safety levels**

According to consulted stakeholders, this project is meant to improve safety levels and its implementation has been anticipated to address this issue. However, specific indications and localisation of the black spots have not been provided. Data on accidents and trends are not provided in the documents made available.