PROJECT

SAFETy

Safety and acoustics for the isolating tip

Sicherheit und Akustik für den Trenninselspitz

Funding: National (Austria)

Duration: Aug 2017 - Sep 2018

Status: Complete

Background & policy context:

Motorway- and operational exits as well as parking entrances represent neuralgic points in the ASFINAG network, with regard to noise protection, sight distances and traffic safety. Traffic safety problems arise especially due to reaction errors by drivers, because of a lack of attention and inappropriate speed. In the current situation, the overlapping of noise protection walls is standard in the Austrian highways- and expressways network in the area of exit and entry traffic island elements with necessary noise protection measures. In comparison with continuous noise protection systems, this results in a reduced efficiency. Furthermore, noise protection systems can affect visual conditions for drivers at the exit.

Objectives:

The project team is familiar with the challenges of a traffic safety related design in the proposed vicinity due to ongoing conducts of Road Safety Inspections (RSI). There is also the necessary expertise available in terms of effects of different noise measures and technical design of guardrails with already implemented projects and research plans. Within the project emmission measurements are carried out at different points of selected road section, to evaluate the effectiveness or possible shielding gap of noise protection systems. With the aid of noise emmission measurements, solutions for the shielding are delivered with different noise protection wall layouts (differences in height, overlapping or shape).

The findings of the noise emmission measurements and traffic safety analyses enter into the development of solution concepts for the entire area around the exit and entry traffic island element. Different variants are developed, for example with and without guardrails. Different connections of concrete traffic safety walls and guardrails as well as the possibility of integrating noise protection measures are considered. For the developed solution concepts, advantages and disadvantages regarding traffic safety and noise protection are presented as well as an evaluation of effectiveness, cost calculations and a cost benefit comparison of the individual solutions.

In consultation with the client, the main output of the project will be the development of a user manual. The user manual will include a compilation of the solution concepts for a safety- and noise- optimized features and suggested areas of application. This user manual is intended to provide a basis for the design in Austria. Requirements concerning the traffic control, Car-2infrastructure information exchange as well as requirements of the future development of autonomous and semi-autonomous vehicles are included.

Parent Programmes:

MOTF - Mobility of the Future

Institute type: Public institution

Institute name: FFG - Die Österreichische Forschungsförderungsgesellschaft

Funding type: Public (national/regional/local)

Other programmes: VIF 2016

Lead Organisation:

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Organisation Website:
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Technologies:

"Tools for noise and vibration reduction"""

Development phase: Research/Invention

STRIA Roadmaps: Infrastructure
Societal/Economic issues, Environmental/Emissions
Transport policies: aspects

Geo-spatial type: Other