

ADDITIONAL INFORMATION TO TENDER CONDITIONS No. 4 - 5.2.2014

CONTRACTING AUTHORITY: Centrum dopravního výzkumu, v. v. i.
Líšeňská 2657/33a, 636 00 Brno - Líšeň
prof. Ing. Karel Pospíšil, Ph.D., MBA
Registration No. 44994575

PUBLIC CONTRACT:

VR 67: Purchase of Driving Simulator for Transport R&D Centre

Contracting Authority stated above notify you in accordance with § 49 of the Act No. 137/2006 Coll. On Public Contracts, as amended (hereinafter referred to as "The Act"), and add this additional information to tender conditions regarding the public contract stated above.

The request for additional information to tender conditions No. 1:

As I am sure you both are aware of, the process to fulfil basic qualifications (receiving the right documents from our and Czech Republic Governments) and the process of collecting quotes from suppliers is hard to estimate. These procedures are taking more time than expected and because of this we are hereby making an extension request on the procurement VR:67.

Additional information to tender conditions No. 1:

The Contracting Authority prolonged the deadline for the offer submission until 19. 2. 2014, 10:00 o'clock. The Contracting Authority considers this prolonged deadline to be sufficient. The law also allows the Contracting Authority to call the tenderer to complete his offer after the deadline, if all the legally relevant conditions are fulfilled.

The request for additional information to tender conditions No. 2:

Requirement CDV 3-4 and CDV 8-9

Quotation:

PP1 – Visualisation system of virtual traffic environment of passenger vehicle with the parameters of simulated view of 160° x 35° (horizontally x vertically).

PP2 – Projection system of virtual traffic environment of vehicles Truck a Bus with the parameters of simulated view of 180° x 40° (horizontally x vertically).

P1 – Visualisation system displaying a traffic situation of passenger vehicle

Possible alternatives:

- rear projection
- front projection on curved wall
- LCD screens mounted in front of the cabin.

P2 – Projection system displaying a traffic situation of vehicles Truck and Bus

Possible alternatives:

- rear projection
- front projection on curved wall

Request to additional information

Technical specification of the Contracting Authority states the requirements for the visualisation

system, which are stated so unclearly, that they allow the tenderers to offer various technical solutions in large price scale, naturally with very different quality of solution. It relates to these specifications:

- The difference between the prices of projection of the scenes to LCD monitors and to curved wall with seamless projection may be enormous
- It is not specified, whether the vertical angle of projection must be kept only by the technical devices of the projection system, or also the inclination of the vehicle must be considered, as well as the deflection of the driver's look from the horizontal level. This detail strongly influences the technical solution of the projection system (and its price).

We ask for the statement of requirements CDV 3-4 and CDV 8-9 so, that they clearly show required quality and price of the complete solution. Considering the Contracting Authority excludes the possibility of offering the variant offers, this way formulated instructions make the processing of the relevant offers impossible, as well as the objective evaluation of the tender.

Additional information to tender conditions No. 2:

The tenderer must choose such technical parameters of particular parts of the driving simulator to ensure the working of the technology with maximal reliability, endurance and efficiency on all the system levels including the visualisation system. The rear projection or the front projection on curved wall is defined in the requirement for the visualisation of traffic environment of the Truck and Bus vehicles, because this way of visualisation by the system of projectors projecting on projection screen is considered to be highly immersive, when the driver is more immersed into the traffic virtual environment.

The option of projection by LCD panel is stated for the driving simulator of passenger vehicle in requirement CDV 8, which allows the tenderer to choose less expensive solution with preserving of sufficiently quality level of traffic environment visualisation. The tenderer designs detailed technical specification of particular components of visualisation systems, according to tenderers professional knowledge and experience.

The vertical angle of projection must be held by the technical devices of the projection system. If the tenderer chooses the solution within the budget, where he considers also the deflection of the vehicle and of the driver's look from the horizontal level, then he describes the way of realisation in comment in "Tenderer's answers".

The Contracting Authority points out the requirement, that the "Tenderer's answers" are integral part of the technical specification, and the tenderer **must unequivocally state how he fulfils the given requirement** (e.g. technical parameters, references to specifications/tests, other possible solutions, etc.).

There is no reason to change the technical specification.

The request for additional information to tender conditions No. 3:

Requirement CDV 5 and CDV 6

Quotation:

PZ1 – Moving base of passenger vehicle (3 or 6 degrees of freedom)

PZ2 – Moving base of vehicles Truck and Bus (3 or 6 degrees of freedom)

Request to additional information



EVROPSKÁ UNIE
EVROPSKÝ FOND PRO REGIONÁLNÍ ROZVOJ
INVESTICE DO VAŠÍ BUDOUCNOSTI



The technical specification of the Contracting Authority allows to design solution of the moving bases both with 3 and 6 degrees of freedom. Again it is option to offer technical solution with qualitatively very variable level (moving base with 6 degrees of freedom allows highly more accurate simulation of the car moves perception than moving base with 3 degrees of freedom) for highly different price. Requirements CDV 5 and CDV 6 must be stated so, they clearly show required quality and price of complete solution. Considering the Contracting Authority excludes the possibility of offering the variant offers, this way formulated instructions make the processing of the relevant offers impossible, as well as the objective evaluation of the tender.

Additional information to tender conditions No. 3:

Requirement CDV 5 and 6 defines, that the SIM laboratory must contain 2 moving bases. PZ1 – for passenger vehicle cabin and PZ2 – for Truck cabin modifiable to BUS cabin. Concrete variants are described in requirement CDV 76 to CDV 84 in chapter “Moving base”. There are the MUST requirements and SHOULD requirements there, that specify the level of moving bases (3 or 6 degrees of freedom etc.). The base with 6 degrees of freedom, compared to 3 degrees base, has a bonus according to the Evaluating table, which is part of the tender documentation. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 4:

Requirement CDV 13

Quotation:

Operator’s workplace (CO – Operator’s centre) must contain training control (start, stop, replay, moving base blocking, etc.).

Request to additional information

It is not possible to use “etc.” by stating of the requirements. We ask to state unequivocal enumeration of the Operator’s workplace requirements.

Additional information to tender conditions No. 4:

The technical specification states minimal technical requirements on simulator. The tenderers have possibility to offer additional functions beyond the minimal requirements. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 5:

Requirement CDV 16

Quotation:

... They concern at least:

- ...
- Other relevant variables.

Request to additional information

We ask to state unequivocal enumeration of “other relevant variables”, or to delete this item from the requirements.

Additional information to tender conditions No. 5:

The technical specification states minimal technical requirements on simulator. The tenderers have possibility to offer additional functions beyond the minimal requirements. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 6:

Requirement CDV 24

Quotation:

... must allow for setting of different weather types, at least: fog, rain, snow, rain intensity, speed and direction of wind.

Request to additional information

It is not possible to use "etc." by stating of the requirements. We ask to state unequivocal enumeration of the function solution.

Additional information to tender conditions No. 6:

The technical specification states minimal technical requirements on simulator. The tenderers have possibility to offer additional functions beyond the minimal requirements. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 7:

Requirement CDV 32

Quotation:

... activation of hazardous scenarios (e.g. puncture, fire in the engine, etc.) must be possible to be programmed in advance, ...

Request to additional information

It is not possible to use "etc." by stating of the requirements. We ask to state unequivocal enumeration of the function solution.

Additional information to tender conditions No. 7:

The requirement 32 defines the methods, how to activate (or launch) the hazardous scenarios in actual scene. The generation of these scenarios must be possible to programme in advance, in what moment a in what place of the scenario they are to be started. It must be possible to let them generate randomly and also it must be possible to start them directly from the operator's user interface. The example in the brackets (e.g. puncture, fire in the engine...) is just demonstrative information, completing the information to clarify the term "hazardous scenario". It will be possible to create these hazardous scenarios in the scenario editor. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 8:

Requirement CDV 37

Quotation:

... it must be possible to modify signs and road markings (e.g. add, remove and move) on an existing road.

Request to additional information

It is not possible to use “etc.” by stating of the requirements. We ask to state unequivocal enumeration of the function solution.

Additional information to tender conditions No. 8:

The technical specification states minimal technical requirements on simulator. The tenderers have possibility to offer additional functions beyond the minimal requirements. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 9:

Requirement CDV 38

Quotation:

it must be possible to modify billboards (e.g. content, add, remove and move) on an existing road. Optional video sequences displayed on a digital billboard.

Request to additional information

It is not possible to use “etc.” by stating of the requirements. We ask to state unequivocal enumeration of the function solution.

Additional information to tender conditions No. 9:

The technical specification states minimal technical requirements on simulator. The tenderers have possibility to offer additional functions beyond the minimal requirements. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 10:

Requirement CDV 44

Quotation:

In order to create a 3D situation, it must be possible to use a standard format, e.g. “OpenFlight” or some of formats supported by “3D studio Max”.

Request to additional information

There is no binding standardization for the creation of 3D terrain databases. The mostly used format OpenFlight is so called industrial standard and exists in many versions. We ask to exact statement of required formats, including their versions.

Additional information to tender conditions No. 10:

The exact format and version of the software is not given. The tenderer must use such software, which allows to realize the requirements stated by the technical specification. There is no reason to change the technical specification.

The request for additional information to tender conditions No. 11:

Requirement CDV 46

Quotation:

Must include a terrain database designed for creating any road network including the following modules (components): ...

Request to additional information

This seemingly simple requirement allows very diverse solution and it is not possible to react with it adequately. We ask to clearer / more exact statement in the area of required extent, topographical and altimetrical continuity of particular components (communications and terrain), as well as the requirements on the operating of the graphic user interface.

Additional information to tender conditions No. 11:

Requirement No. 46 is stated quite clearly and it is not clear to us, what information the tenderer wants to complete. The extent of the database is determined by the requirement on the possibility of creating of any road network with option to input the components stated in requirement No. 46. The topographical and altimetrical continuity is not given and is to tenderer's discretion. Requirement on the operating of the graphic user interface is not given, but it must allow to operate and common work with the database.

The request for additional information to tender conditions No. 12:

Requirement CDV 57

Quotation:

[only applicable for SIM Bus]

it must be possible to see passengers in the internal rear-view mirror during the bus ride simulation – in the internal rear-view mirror it must also be possible to adequately display video sequences recorded by a video camera in the real environment of the rear parts of vehicle interiors **see**

Requirement CDV 93

Request to additional information

We ask to closer specification of “adequate” display.

Additional information to tender conditions No. 12:

Requirement CDV 93 describes LCD panel, on which it will be possible to display the back seats area in the passenger car and passenger area in the bus. Video sequences recorded by video camera in real environment of back area of car interiors will be played here. If this LCD panel behind the driver is active, it will be needed to display this view of car back area also in the rear-view mirror. If this LCD panel behind the driver is not active, i.e. the video sequences of the car back area do not play, also the bus rear-view mirror will be not active.

The request for additional information to tender conditions No. 13:

Requirement CDV 58

Quotation:

[only applicable for passenger vehicle SIM]

it must be possible to see passengers at rear seats in the internal rear-view mirror at the passenger vehicle ride simulation – in the internal rear-view mirror it must also be possible to adequately display video sequences recorded by a video camera in the real environment of the rear parts of vehicle interiors **see Requirement CDV 93**

Request to additional information

We ask to closer specification of “adequate” display.

Additional information to tender conditions No. 13:

Requirement CDV 93 describes LCD panel, on which it will be possible to display the back seats area in the passenger car and passenger area in the bus. Video sequences recorded by video camera in real environment of back area of car interiors will be played here. If this LCD panel behind the driver is active, it will be needed to display this view of car back area also in the rear-view mirror. If this LCD panel behind the driver is not active, i.e. the video sequences of the car back area do not play, the rear-view mirror of the passenger car will display actual scene of the virtual traffic environment.

The request for additional information to tender conditions No. 14:

Requirement CDV 83

Quotation from the Czech version:

Acceleration noise transient peak values for the linear degrees of freedom should be lower than 0.2 [m/s²] for the given payload. Using a 0.5 Hz sinusoidal signal with amplitudes within the allowed operational space - actual acceleration of the moving base may never deviate more than 0.2 [m/s²] from the commanded value during a transient maneuver.

Note. Requirement is for completeness stated also in English version:

Acceleration noise transient peak values for the linear degrees of freedom should be lower than 0.2 [m/s²] for the given payload. Using a 0.5 Hz sinusoidal signal with amplitudes within the allowed operational space - actual acceleration of the moving base may never deviate more than 0.2 [m/s²] from the commanded value during a transient maneuver.

Request to additional information

What original English document comes the instruction from? We ask to provide this document.

Additional information to tender conditions No. 14:

The term "original English document" describes the original English version of the technical specification, which can be downloaded from the Contracting Authority's profile – in the folder named „VR_67_tender_documentation_ENG.zip“. The Contracting Authority decided to refer to the English version of the technical specification by reason of unequivocal and technically understandable technical description even for the tenderers based outside the Czech Republic.

The request for additional information to tender conditions No. 15:

Requirement CDV 84

Quotation:

The simulation must be able to create a sufficient motion, auditive, and visual effect in the moving base at a head-on collision.

Request to additional information

We ask closer specification of the necessary and sufficient level of simulation of "sufficient motion, auditive, and visual effect in the moving base at a head-on collision".

Additional information to tender conditions No. 15:

The simulator should be able to simulate driving of the car on maximum possible level, which means, that the device synchronously generates visual, auditive and moving perception of actual ride in given traffic environment. Requirement defines, that these audio-visual moving reactions must believably affect also in the case of head-on collision of the car to static or moving object. There cannot

arise the situation in actual scene, where the vehicle “freezes” (software and hardware stops) at the head-on collision, without proper audio-visual moving perception closely after the collision. The reaction of the vehicle, with respect to the requirement on the real reaction, is in tenderer’s competence, who applies proper dynamic model of given vehicle and related moving reaction in the moment of head-on collision.

The request for additional information to tender conditions No. 16:

Requirement CDV 89

Quotation:

[only applicable for passenger vehicle SIM]

Cabin must be generically equipped with a dashboard with clocks, indicators, switches, etc. Speedometer, tachometer and other gauges and indicators of the dashboard will be displayed on an integrated monitor, so that it could be possible to modify them for research purposes. An alternative may be real components on the dashboard.

Request to additional information

In connection with requirement CDV 86, do you require equipment of the dashboard by real components or displaying of the devices on the LCD panel?

We ask to put requirement CDV 89 to accordance with CDV 86, including enumeration of required components of dashboard, to clearly show required quality and price of complete solution. Considering the Contracting Authority excludes the possibility of offering the variant offers, this way formulated instructions make the processing of the relevant offer impossible, as well as the objective evaluation of the tender.

Additional information to tender conditions No. 16:

Requirement CDV 86 defines generic cabin, i.e. replica of original cabin. Dashboard with clocks, indicators and switches arranged identically like in the real vehicle is part of required components of cabin. Requirement CDV 89 states two possible alternatives of this dashboard, that is either dashboard with real indicators, or generic dashboard on display integrated to LCD panel. It is valid for both the variants, that they must be arranged identically like in the cabin of real vehicle, i.e. concrete type of vehicle cabin, chosen by tenderer and mentioned in comment in the “Tenderer’s answer” tab. Requirement CDV 89 is not contrary to requirement CDV 86. In case of realization of requirements CDV 85 and 86 concerning generic cabin, as well as in case of realization of requirements CDV 87 and 88 concerning original cabin, it is possible to realize the dashboard in both above mentioned ways.

The request for additional information to tender conditions No. 17:

Requirement CDV 90

Quotation:

[only applicable for SIM Truck + Bus]

Cabin must be generically equipped with a dashboard with clocks, indicators, switches, etc. Speedometer, tachometer and other gauges and indicators of the dashboard will be displayed on an integrated monitor, so that it could be possible to modify them for research purposes. An alternative may be real components on the dashboard.

Request to additional information

In connection with requirement CDV 86, do you require equipment of the dashboard by real components or displaying of the devices on the LCD panel?

We ask to put requirement CDV 90 to accordance with CDV 86, including enumeration of required components of dashboard, to clearly show required quality and price of complete solution. Considering the Contracting Authority excludes the possibility of offering the variant offers, this way formulated instructions make the processing of the relevant offer impossible, as well as the objective evaluation of the tender.

Additional information to tender conditions No. 17:

Requirement No. 90 is connected to requirement no. 85, not 86.

Requirement No. 85 defines generic cabin, i.e. replica of original cabin. Dashboard with clocks, indicators and switches arranged identically like in the real vehicle is part of required components of cabin. Requirement CDV 90 states two possible alternatives of this dashboard, that is either dashboard with real indicators, or generic dashboard on display integrated to LCD panel. It is valid for both the variants, that they must be arranged identically like in the cabin of real vehicle, i.e. concrete type of vehicle cabin, chosen by tenderer and mentioned in comment in the "Tenderer's answer" tab. Requirement CDV 90 is not contrary to requirement CDV 85. In case of realization of requirements CDV 85 and 86 concerning generic cabin, as well as in case of realization of requirements CDV 87 and 88 concerning original cabin, it is possible to realize the dashboard in both above mentioned ways.

The request for additional information to tender conditions No. 18:

I've seen the contract for work, but unfortunately we cannot sign a contract written in Czech language without a translation. Is there a possibility to get this contract in English?

Additional information to tender conditions No. 18:

The Contracting Authority published the contract for work in English already before receiving of this request on Contracting Authority's profile: <http://sluzby.e-zakazky.cz/Profil-Zadavatele/5e88782d-168d-48e0-b908-d1b43e446f20/Zakazka/P13V00000053>

Best regards

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