



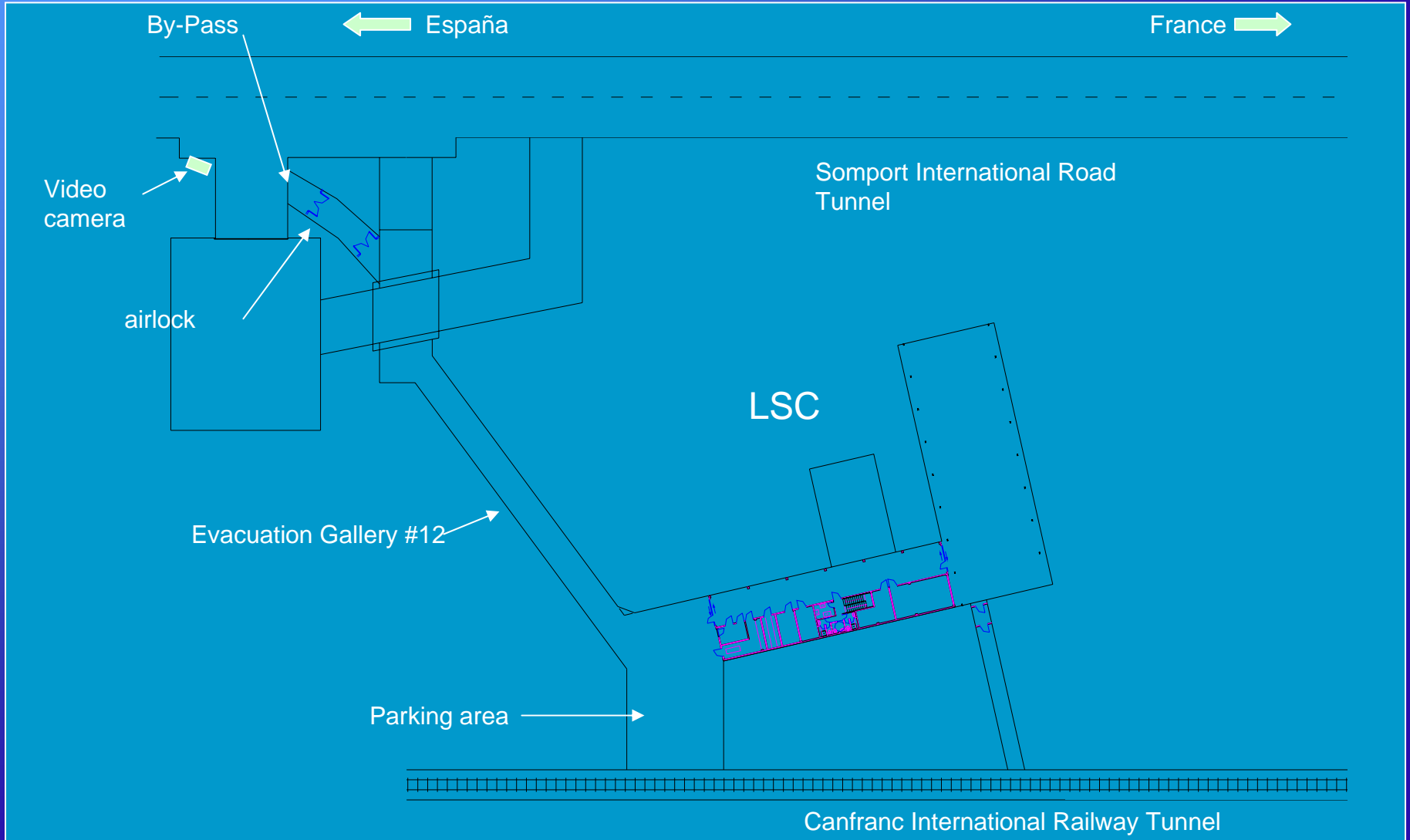
Safety Protocol for Vehicle Access to the LSC

General objectives:

- Designed according to the **safety levels** of the Somport International Road Tunnel
- At the same time, allowing for the **maximum** possible **autonomy** in the access of the personnel of the laboratory
- Control permanently the **number of vehicles** inside the laboratory
- Access protocol under supervision of the Tunnel Control Center (TCC)



Safety Protocol for Vehicle Access to the LSC





Safety Protocol for Vehicle Access to the LSC

Equipment:

- Equipment for official vehicles:
 - Rotary lights
 - Reflectants and distinctive signs
 - Radio emitter and receiver connected to the Tunnel Control Center (TCC)





Safety Protocol for Vehicle Access to the LSC

Equipment:

- Traffic lights and electronic display pannels inside the road tunnel
- Video monitoring at the by-pass
- Airlock
- Sensors on the doors





Safety Protocol for Vehicle Access to the LSC

General rules:

- Only LSC official vehicles will be accessing with this protocole
- Drivers (LSC personnel or people authorized by the LSC director) will have to meet the following requirements:
 - Knowledge of Spanish and/or French
 - Knowledge of the safety regulation of the Somport road tunnel
 - Knowledge of the safety protocole of the LSC
 - Will have followed a course on safety with annual periodicity
- The final responsibility of the access will belong to the shift manager of the TCC
- The maximum number of vehicles at the parking will be 7



Safety Protocol for Vehicle Access to the LSC

Entrance protocol – before the access:

- Inform the TCC about:
 - Vehicle identification
 - Name of driver
 - Number of passengers





Safety Protocol for Vehicle Access to the LSC

Entrance protocole – authorization:

- TCC:
 - Sets traffic lights to yellow
 - Sets speed limit to 40 km/h
 - Activates the video monitoring system at the by-pass
- LSC driver:
 - Activates the rotary lights
 - Opening sequence of the airlock
 - Parks inside the LSC
 - Informs TCC everything is OK





Safety Protocol for Vehicle Access to the LSC





Safety Protocol for Vehicle Access to the LSC

Exit protocole – before the by-pass:

- Inform the TCC about:
 - Vehicle identification
 - Name of driver
 - Number of passengers

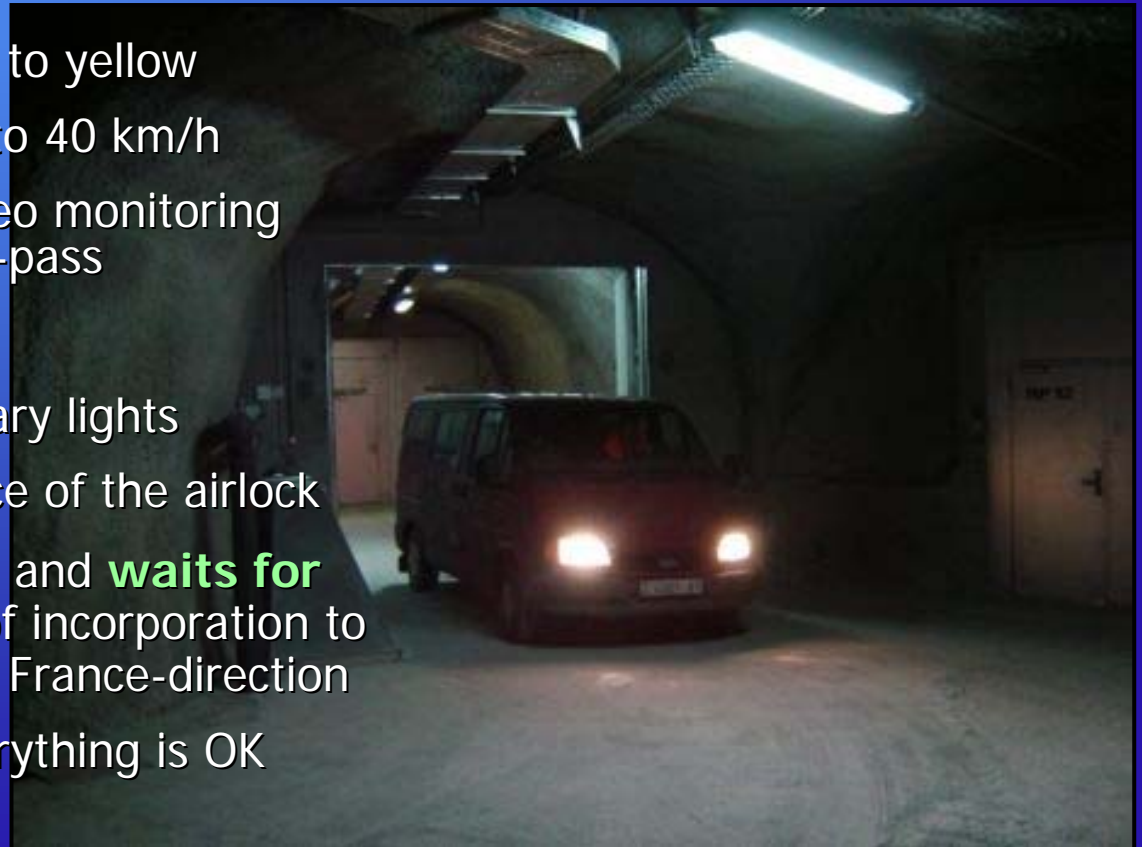




Safety Protocol for Vehicle Access to the LSC

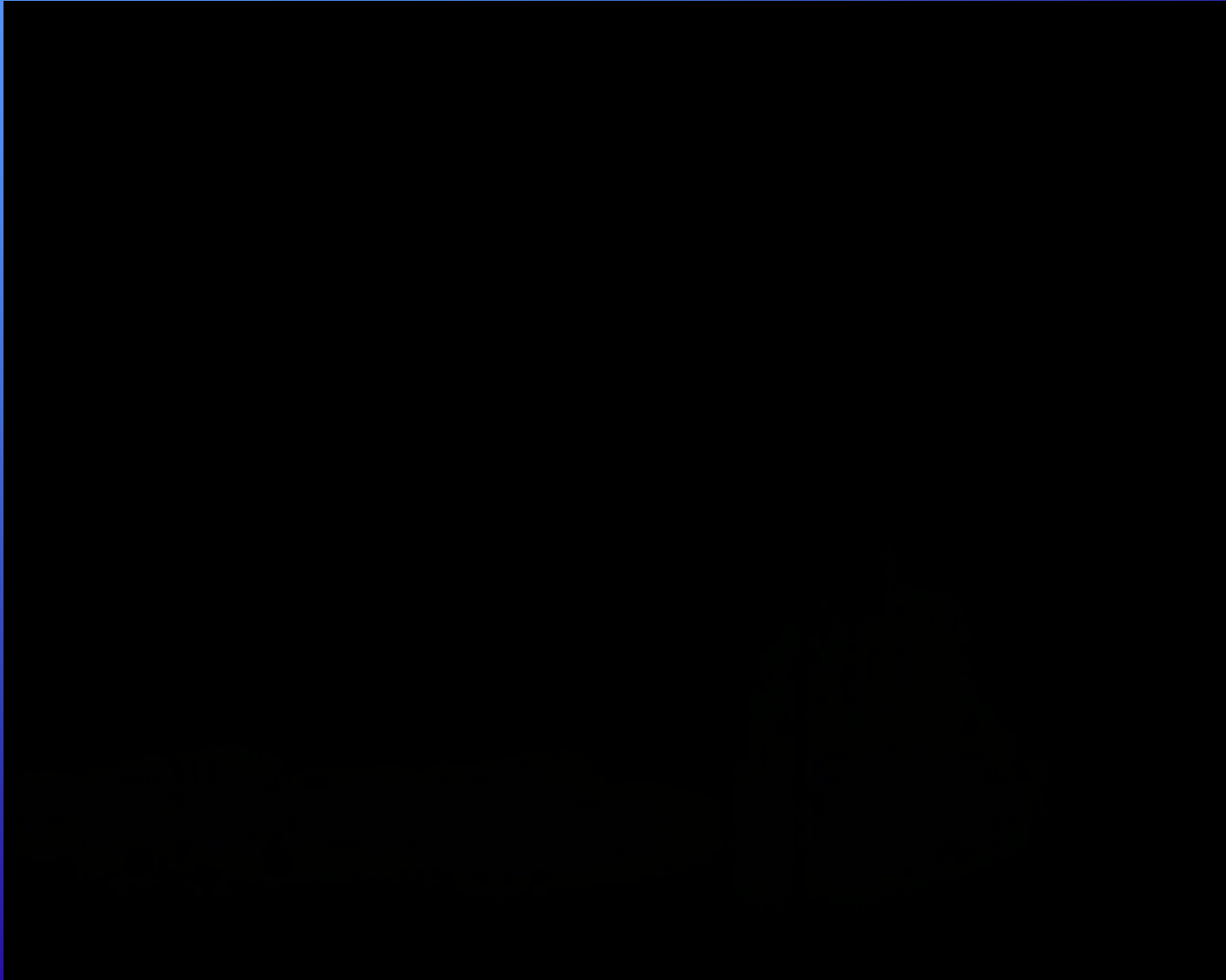
Exit protocole – authorization:

- TCC:
 - Sets traffic lights to yellow
 - Sets speed limit to 40 km/h
 - Activates the video monitoring system at the by-pass
- LSC driver:
 - Activates the rotary lights
 - Opening sequence of the airlock
 - Exits the By-pass and **waits for authorization** of incorporation to the traffic, in the France-direction
 - Informs TCC everything is OK





Safety Protocol for Vehicle Access to the LSC





Safety Protocol for Vehicle Access to the LSC

Special cases:

- Non-official vehicles will be escorted by LSC or TCC personnel
- Visits to the LSC will be studied for each case, depending on the number of people
- Companies of assembly and maintenance will be escorted by LSC personnel



Safety Protocol for Vehicle Access to the LSC

Transport of non-dangerous products:

- Normal protocole with a LSC vehicle (max. load 3500 kg): **by-pass access**
- Use of **railway tunnel** for larger volumes/load (max. vol. 4 m x 4 m)

Transport of dangerous products:

- Mainly done through the **railway tunnel**
- In **coordination** with the **TCC**





Safety Protocol for Vehicle Access to the LSC



Real Zaragoza 6

Real Madrid 1

(dedicated to Jose Manuel Carmona)