Vegfinans Fv33 Oppland

Request for Proposal

CPE Procurement

Fv.33 Tonsåsen

Skartjednet – Tonsvatnet og Bjørgokrysset – Nedre Øydgarden

SSA-T, Appendix 1, Annex 1

Requirements for Charging Points

Version log

Version	Initials	Date	Comments/amendments
1.0	DIK	18.10.2019	Part of the Tender documents

Contents

TECHNICAL INFRASTRUCTURE PROVIDED BY NPRA

1. Charging Point 1, Fv.33 *Skartjednet - Tonsvatnet*

NPRA will provide technical infrastructure as described in Sections 1.1. to 1.5.

1.1 POWER AND COMMUNICATION

- Power and communication (fibre) connection to technical booth for CP1.

1.2 GANTRY FOUNDATIONS

- Manholes, Ø 2000 mm, H 2000 mm, **formwork/preparation** for gantry foundations:
  - Gantry for eastbound traffic
  - Gantry for westbound traffic

1.3 MANHOLES, 1600 X 900 MM:

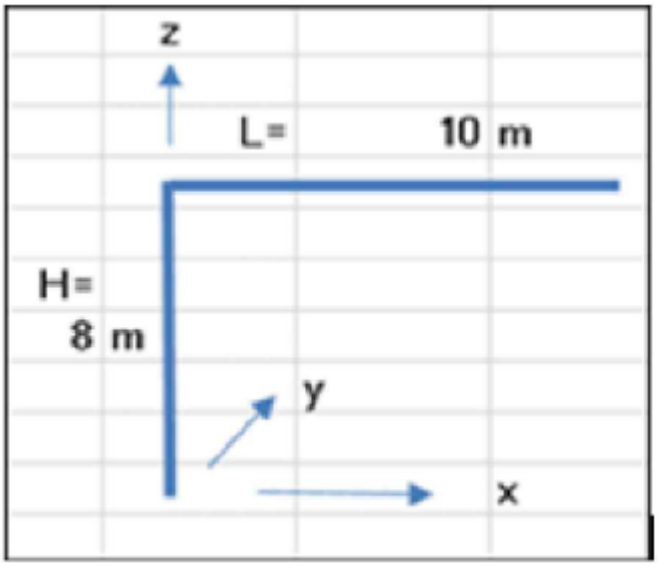
- Next to technical booth
- Next to gantry for eastbound traffic
- Next to gantry for westbound traffic

1.4 PIPELINES FOR ELECTRICAL/OPTICAL WIRING

- 4 x Ø 110 mm from technical booth to southern road bank
- 2 x Ø 110 mm from southern road bank to northern road bank
- 2 x Ø 110 mm to gantry for eastbound traffic
- 2 x Ø 110 mm to gantry for westbound traffic

1.5 PRECONDITIONS FOR GANTRY FOUNDATION FORMWORK

- Manholes, Ø 2000 mm, H 2000 mm (outside dimensions)
- Foundation and backfill: Drained, compressed crushed stone/gravel
- basic wind velocity (vb): 22 m/s
- Characteristic peak velocity pressure: 0,78 kN/m^2
- Gantry height (H): maximum 8,0 m
- Gantry cantilever (L): maximum 10,0 m
- Tubular steel gantries: max. diameter 400 mm
  max. wall thickness 10 mm.



The contractor shall provide technical infrastructure as described in Sections 1.6. to 1.8, Figure 1 and Figure 2 in Chapter 1.

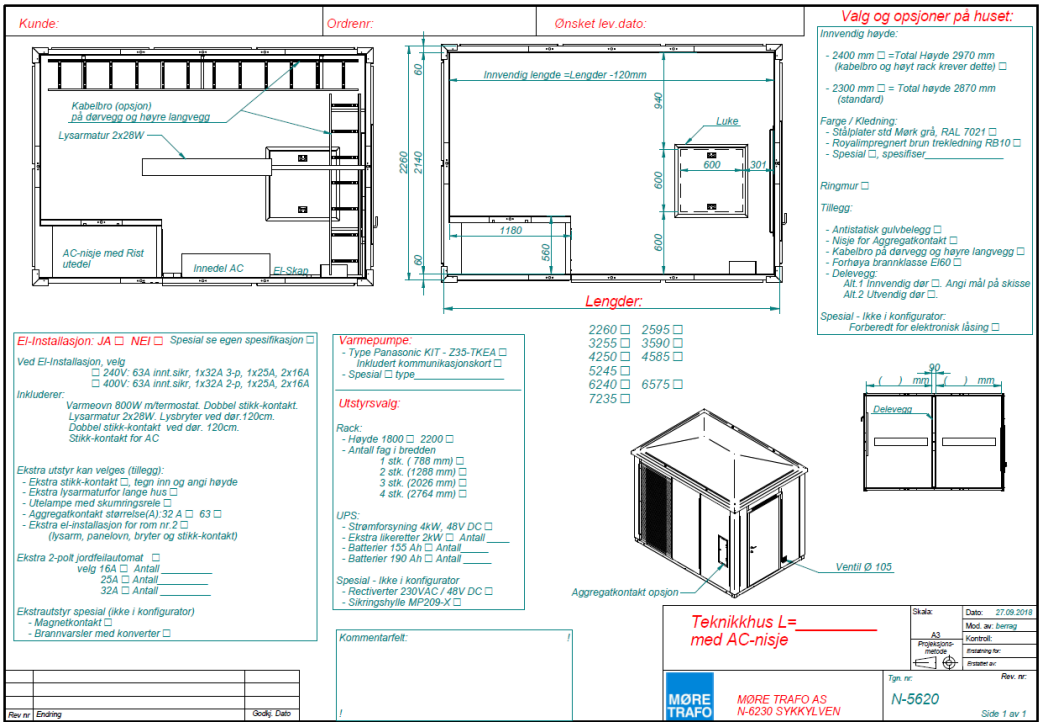
1.6 **TECHNICAL BOOTHS**

Technical booth example

- Measurements (indoor): 2140 x 3135 mm
- Type: «MAXI teknikkhus 3255» from Møre trafo
- Foundation: Wall foundation, 900 mm.

1.7 TECHNICAL BOOTH

Figure 1. Technical booth - Example

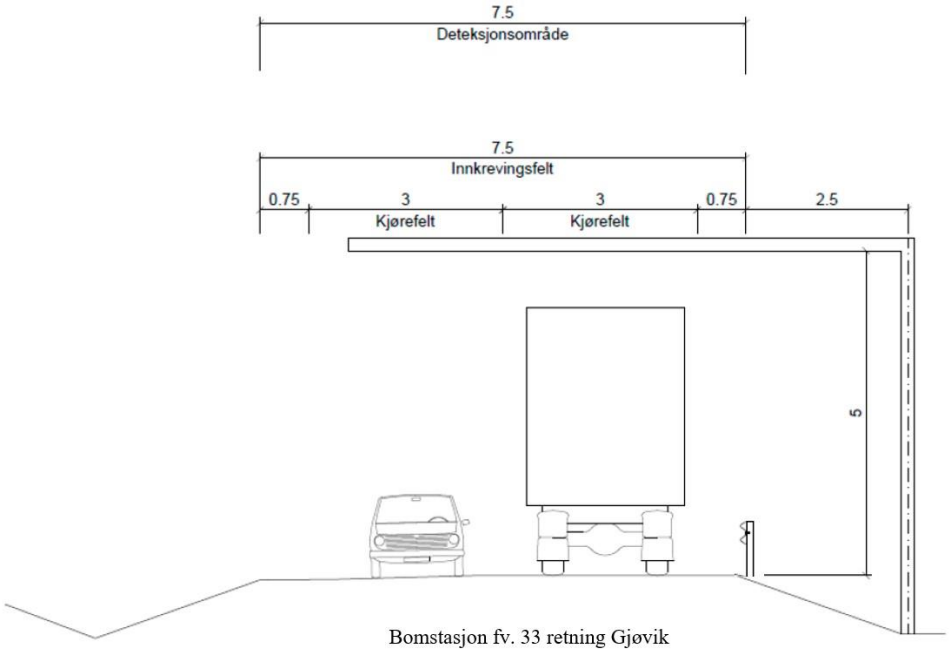


1.8 DESCRIPTION OF GANTRY SOLUTION

The gantry solutions shown **in figures indicate approximate dimensions and are meant to be suggestions**.

- Bidder can offer other single Tubular steel gantry solutions with smaller dimensions as long as they are according to AutoPASS requirements.
- The contractor shall deliver technical calculation for the gantries.
- The contractor shall deliver the monuting brackets between foundation and the gantry. The project will do the assembly

Figure 2. CP1 Toll station



2. CHARGING POINTS LAYOUT

2.1 CP 1 - TONSÅSEN

- This is a two-lane road, one in each direction.
- Charging area and detection area as shown in Table 1 and on Figure 2.
- Speed limit is supposed to be 80 km/h.
- Fee collection in all lanes, one lane eastbound and one lane westbound.
- Available area for service car.
- The cable distance from the equipment cabinet to the equipment in the gantries does not exceed 70 m.
- Characteristics and detailed information described in
- Table 1, Table 2 and Figure 2.

Table 1 shows the characteristics of the lanes that shall be provided with charging point equipment.

Table 1 – CP specifications and functionalities

CP ID	CP Name	Technical booth/ Technical outdoor cabinet	Number of lanes	Additional lane/area with camera detection	Charging in both directions	Half Gantry solution	Total charging area	OBU reading area in normal driving direction(s)	Dome Video Surveillance camera
1	Fv.33 Tonsåsen	Booth	2	Road shoulders	Yes	1 or 3	7,50 m	3,75+3,75	1

Table 2 shows the location and traffic density of the CP's.

Table 2

CP ID	CP Name	Municipality	North X-Coord. Euref 89 UTM32	East Y-Coord. Euref 89 UTM32	Traffic density AADT (approx.)
1	Fv.33 Tonsåsen	Etnedal	6 747 612	532 185	2200

Distribution of responsibility for procurement of equipment

Equipment	Contractor	Customer
Technical Booth with foundation	X	
Tubes and manholes		X
Foundation for gantry		X
Power		X
Communication		X
Gantry	X	
Mounting brackets between foundation and the gantry.	X	
All technical equipment according to the requirement	X	
Technical calculation for the gantries.	X	
Dome Video Surveillance camera	X	

Figure 3. Charging point