Badia Tedalda Eolico SrL
| Via Francesco Tamagno, 7 | 20124 Milano (MI) | P.IVA 12334000960 | PEC badiatedaldaeolicosrl@pec.it |

Parco Eolico
Poggio Tre Vescovi

Formato: A4

Aprile 2023

Progettazione specialistica
Soc. ENKI s.r.l.
Ing. Andrea Mazzetti
Ord.Ing. Prov. Siena n. 680

Firmato digitalmente da
ANDREA MAZZETTI
CN = MAZZETTI ANDREA
Data e ora della firma: 13/04/2023 15:08:38

PD.OCC.R.02.a
Progetto Parco Eolico
Opere Civili
REPORT TRASPORTISTICO

Rev.	Data	Oggetto
a	06/04/2023	Prima emissione

Parco eolico
Poggio Tre Vescovi

Proponente

Badia Tedalda Eolico SrL
Via Francesco Tamagno, 7 - 20124 Milano (MI)

Referente di progetto

Dott. Roberto Schirru

Coordinamento tecnico

ENVIarea stp snc
Ing. Cristina Rabozzi
Dott. Agr. Elena Lanzi
Dott. Agr. Andrea Vatteroni

Progettazione opere civili e cantierizzazione

ENKI srl
Ing. Andrea Mazzetti

Progettazione opere di utenza e di rete per la connessione CP "Badia Tedalda"

Ing. Michele Pigliaru

Geologia e geotecnica

Sinergia srls
Dott. Geol. Luca Gardone

Aspetti trasportistici

Siemens Gamesa S.A.
Ing. Alessandro Noro

Topografia

3D Metrica – Ing. Paolo Corradeghini

Anemometria

Skywind GmbH
Ing. Sasha Claes

Studio di impatto ambientale, studio di incidenza ambientale, aspetti socio-economici e antropici

ENVIarea stp snc
Ing. Cristina Rabozzi
Dott. Agr. Elena Lanzi
Dott. Agr. Andrea Vatteroni

Paesaggio

INLAND Landscape Architecture – Arch. Andrea Meli

Biodiversità, ecosistemi e reti ecologiche

Consorzio Futuro in Ricerca
Dott. Lisa Brancaleoni (aspetti floristico-vegetazionali)
Dott. For. Ilaria Scatarzi (aspetti forestali, ecosistemi e reti ecologiche)
Dott. Biol. Marco Lucchesi (avifauna)
Dott. Dino Scaravelli (chirotterofauna)

Archeologia

Cooperativa archeologia s.c.
Dott. Andrea Biondi

Acustica

Tecnocreo srl
Ing. Matteo Bertoneri

CEM e vibrazioni

Ing. Michele Pigliaru

SOMMARIO

* * *

1. DESCRIZIONE PROGETTO

Progetto	Poggio (FC)
Paese	Italia
Località	Poggio (FC) – regione Emilia-Romagna
Scopo	Fase di Pianificazione – Logistica di Trasporto – Studio di fattibilità
Turbina	SG5X-155-T102.5.51A
Modalità di trasporto	☒ Standard ☒ Trasbordo ☒ Blade Lifter ☒ Torre ☒ Navicella ☐ SPMT
MW	6.0/6.6
Inizio da	Porto di Ravenna (RA) – regione Emilia-Romagna

1.1 PREAMBOLO

SAE è stata incaricata di condurre uno studio di fattibilità per un progetto di Siemens Gamesa situato vicino a Poggio (FC) in Emilia Romagna - Italia. Lo studio è stato commissionato al fine di definire la fattibilità della fornitura di componenti per turbine eoliche al parco eolico di Poggio Tre Vescovi, costituito da SG5X-155-T102.5.51A.

Per i dettagli dell'indagine stradale, riferirsi all'ALLEGATO A: *ROAD SURVEY Project: Poggio (FC) - SG155 - T102.5*

A seguito della visita effettuata l'11 gennaio 2023 dal Porto di Ravenna all'accesso al sito, ipotizzate tutte le modifiche descritte nella presente relazione, SAE ha riscontrato la possibilità di effettuare il trasporto di tutti i componenti a POGGIO (FC).

2. TRASPORTI CONVENZIONALI E MODULARI

Nel paragrafo seguente, si illustreranno le modalità per il trasporto in sito dei componenti degli aerogeneratori.

In particolare, si evidenzia che il Proponente ricorrerà a soluzioni altamente tecnologiche ed innovative, al fine di non generare o indurre il minimo impatto sull'ambiente naturale e costruito limitrofo alla viabilità esistente.

Come di seguito evidenziato per il trasporto dei componenti degli aerogeneratori, si prevede la consegna delle componenti dei trami delle torri, delle navicelle e delle pale, al porto di Ravenna o di Livorno, da dove si percorrerà la viabilità autostradale e/o ordinaria fino al sito.

Per il trasporto delle componenti degli aerogeneratori saranno utilizzati mezzi ad alta tecnologia prevedibilmente diversificati per il trasporto in autostrada, per la viabilità pubblica fino in prossimità del Parco Eolico e per la viabilità interna del Parco.

I mezzi disponibili presso le numerose imprese altamente specializzate operanti in Italia, opereranno in maniera integrata ricorrendo a mezzi di trasporto speciali e trasporti modulari semoventi, assimilabili a varie specie di carrelli modulari semoventi, con assi indipendenti e tutti sterzanti, che permettono il passaggio nei tratti curvilinei a ridotto raggio di curvatura, evitando o minimizzando al massimo la necessità di pesanti interventi di adeguamento della viabilità esistente, e rendendo quindi nulli e/o minimi gli impatti sull'ambiente e sul territorio circostante e limitrofo alla resede della carreggiata della viabilità esistente.

In particolare, con riferimento alle migliori tecnologie esistenti sul mercato, al fine di limitare i potenziali impatti e problematiche relativamente al trasporto in cantiere delle componenti degli aerogeneratori, e quindi al fine di rendere nulla o minima la necessità di eseguire qualsivoglia intervento sul territorio limitrofo alla carreggiata della viabilità esistente, il proponente ha deciso di prevedere che il trasporto degli aerogeneratori avverrà per elementi separati senza ricorrere ad aree di stoccaggio temporaneo, per poi essere con tecnica "just in time", assemblati direttamente presso le piazzole dell'impianto, sollevati e posizionati nella posizione prestabilita.

Per i dettagli dei mezzi utilizzati, riferirsi agli ALLEGATO B: *Schemi grafici convenzionali* e ALLEGATO C. *Schemi grafici modulari*.

3. RICOGNIZIONE MANUFATTI ATTRAVERSAMENTI IDRAULICI

Si evidenzia che lungo il tragitto definitivo sono stati individuati una serie di manufatti idraulici.

Relativamente alla fattibilità della percorrenza da parte di mezzi speciali, ad oggi, non sono state acquisite notizie relative a limitazioni d'uso.

A favore di sicurezza, contestualmente alla procedura di PAUR, è prevista l'esecuzione di una serie di prove di sicurezza sulla portata dei manufatti, cosi come quantificate in CME.

Si riportano di seguito i manufatti individuati.

Figura 1. Estratto Compito Metrico Estimativo

Computo Metrico Estimativo - Quadro di Sintesi							
cod.	Descrizione	Unità di misura	Importo unitario	Quantità	Importo di progetto	Totali parziali	% relativa
A1	**INTERVENTI ADEGUAMENTO DELLA VIABILITA' ESISTENTE ESTERNA AL PARCO**				**€ 3.985.000,00**	**€ 3.985.000,00**	**3,7%**
A1.1	Interventi di adeguamento della viabilità esistente, consistenti in temporanee rimozioni di segnaletica e guard-rail e modesti interventi di rimozione/rifacimento di opere di sostegno a bordo carreggiata	c.d.	€ 18.000,00	110	€ 1.980.000,00		
A1.2	Intervento di adeguamento della viabilità esistente, SP67 - SP258 , con interventi di allargamento o adeguamento strutturale	c.d.	€ 300.000,00	4	€ 1.200.000,00		
A1.3	Esecuzione di indagini sui materiali, prove geognostiche e di laboratorio e prove di carico a supporto di valutazione della sicurezza statica di ponte di pubblica viabilità	c.d.	€ 35.000,00	23	€ 805.000,00		

3.1 Attraversamento P1 Via Pratieghi

Figura 2. Inquadramento dell'attraversamento

Tabella 1. Coordinate

ID	Coordinata Nord	Coordinata Est
P1	43°44'22.01"N	12° 6'2.52"E

3.2 Attraversamento P2 Via Alto Marecchia

Figura 3. Inquadramento dell'attraversamento

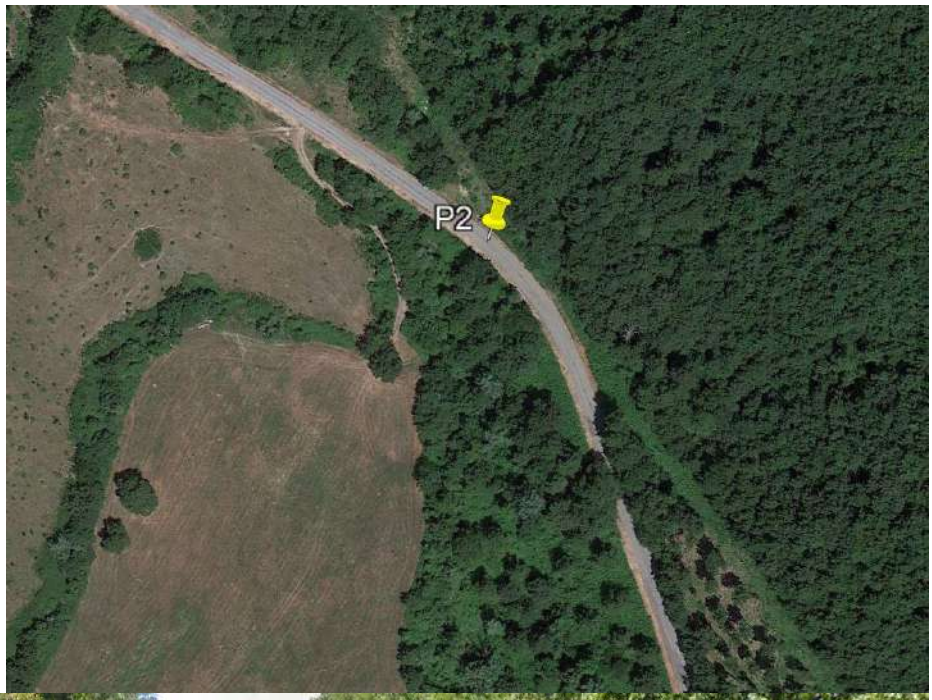


Tabella 2. Coordinate

ID	Coordinata Nord	Coordinata Est
P2	43°43'54.77"N	12° 6'46.54"E

3.3 Attraversamento P3 Via Alto Marecchia

Figura 4. Inquadramento dell'attraversamento

Tabella 3. Coordinate

ID	Coordinata Nord	Coordinata Est
P3	43°43'27.38"N	12° 7'18.06"E

3.4 Attraversamento P4 Via Alto Marecchia

Figura 5. Inquadramento dell'attraversamento

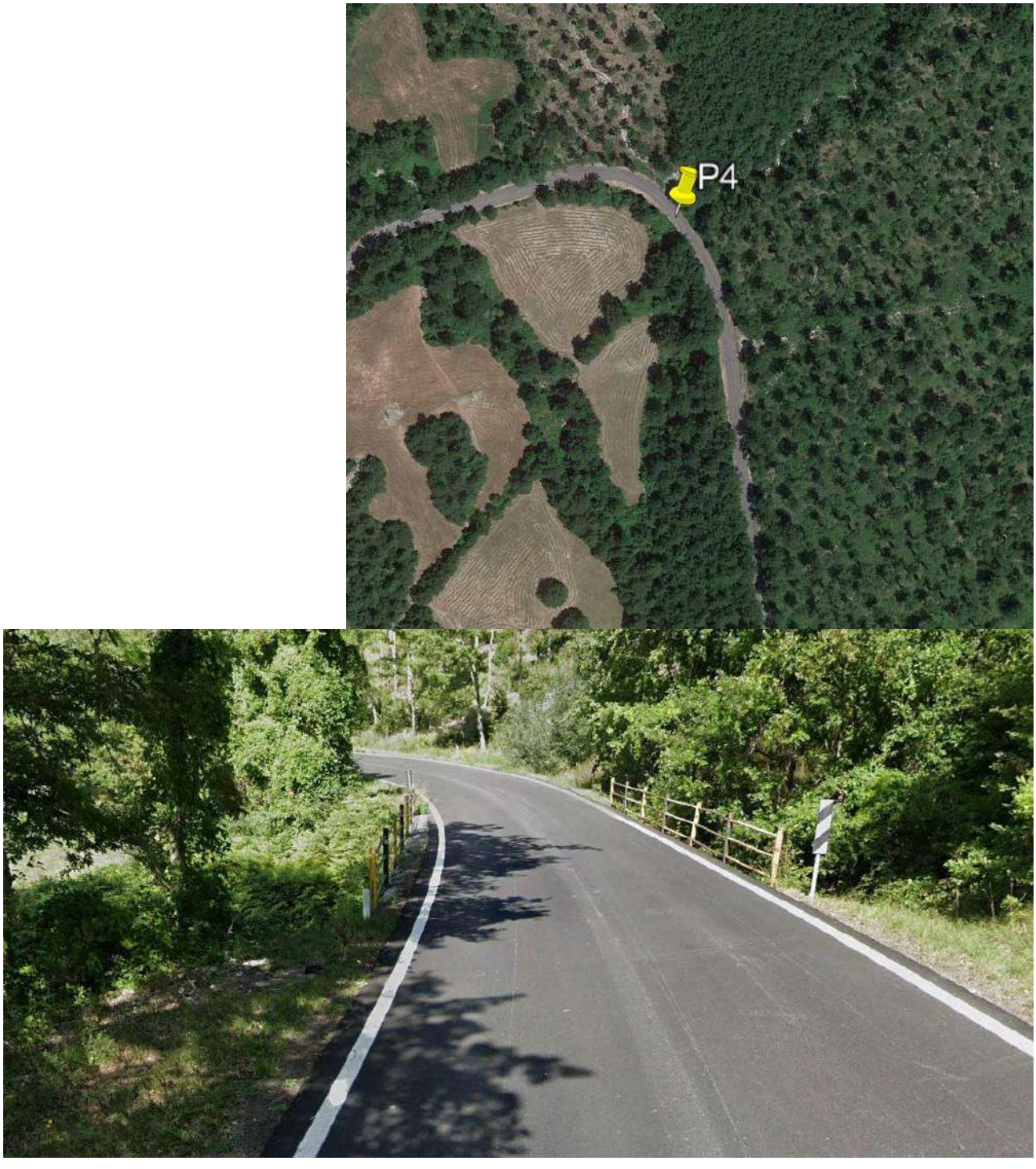


Tabella 4. Coordinate

ID	Coordinata Nord	Coordinata Est
P4	43°43'27.44"N	12° 7'23.23"E

3.5 Attraversamento P5 Via Alto Marecchia

Figura 6. Inquadramento dell'attraversamento

Tabella 5. Coordinate

ID	Coordinata Nord	Coordinata Est
P5	43°43'8.85"N	12° 7'28.59"E

3.6 Attraversamento P6 Via Alto Marecchia

Figura 7. Inquadramento dell'attraversamento

Tabella 6. Coordinate

ID	Coordinata Nord	Coordinata Est
P6	43°42'50.23"N	12° 7'20.49"E

3.7 Attraversamento P7 Via Alto Marecchia

Figura 8. Inquadramento dell'attraversamento

Tabella 7. Coordinate

ID	Coordinata Nord	Coordinata Est
P7	43°42'46.17"N	12° 7'22.61"E

3.8 Attraversamento P8 Via Alto Marecchia

Figura 9. Inquadramento dell'attraversamento

Tabella 8. Coordinate

ID	Coordinata Nord	Coordinata Est
P8	43°42'17.11"N	12° 7'48.74"E

3.9 Attraversamento P9 SP 258

Figura 10. Inquadramento dell'attraversamento

Tabella 9. Coordinate

ID	Coordinata Nord	Coordinata Est
P9	43°41'5.83"N	12° 7'24.75"E

3.10 Attraversamento P10 SP 258

Figura 11. Inquadramento dell'attraversamento

Tabella 10. Coordinate

ID	Coordinata Nord	Coordinata Est
P10	43°40'28.95"N	12° 6'59.31"E

3.11 Attraversamento P11 SP 258

Figura 12. Inquadramento dell'attraversamento

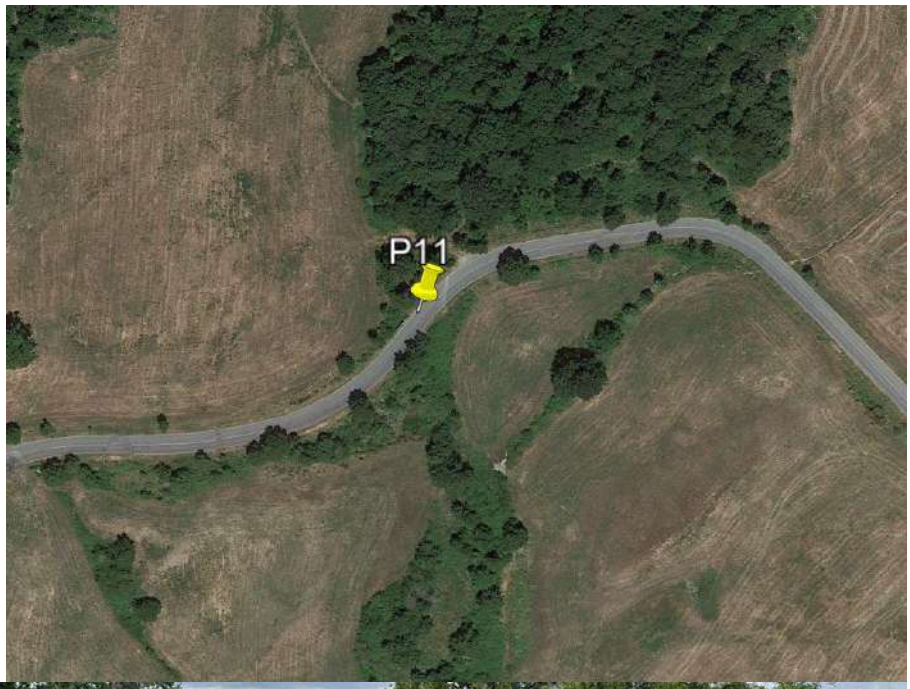


Tabella 11. Coordinate

ID	Coordinata Nord	Coordinata Est
P11	43°39'5.65"N	12° 6'20.91"E

3.12 Attraversamento P12 SP 258

Figura 13. Inquadramento dell'attraversamento

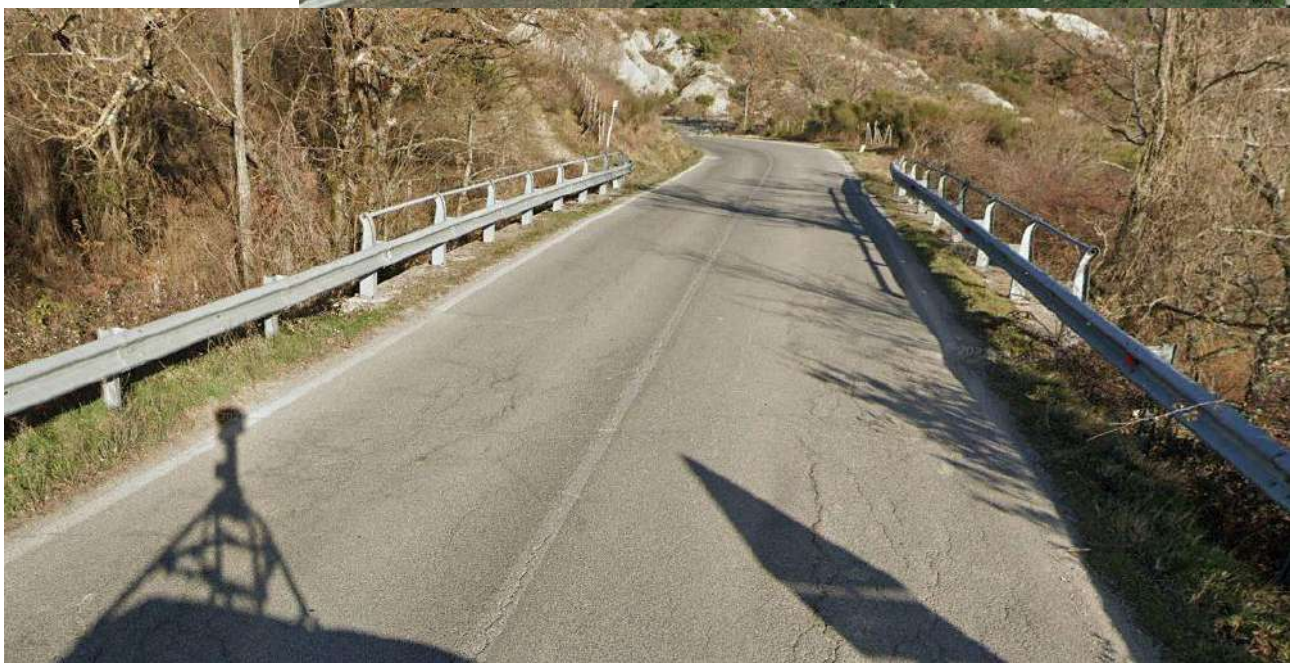
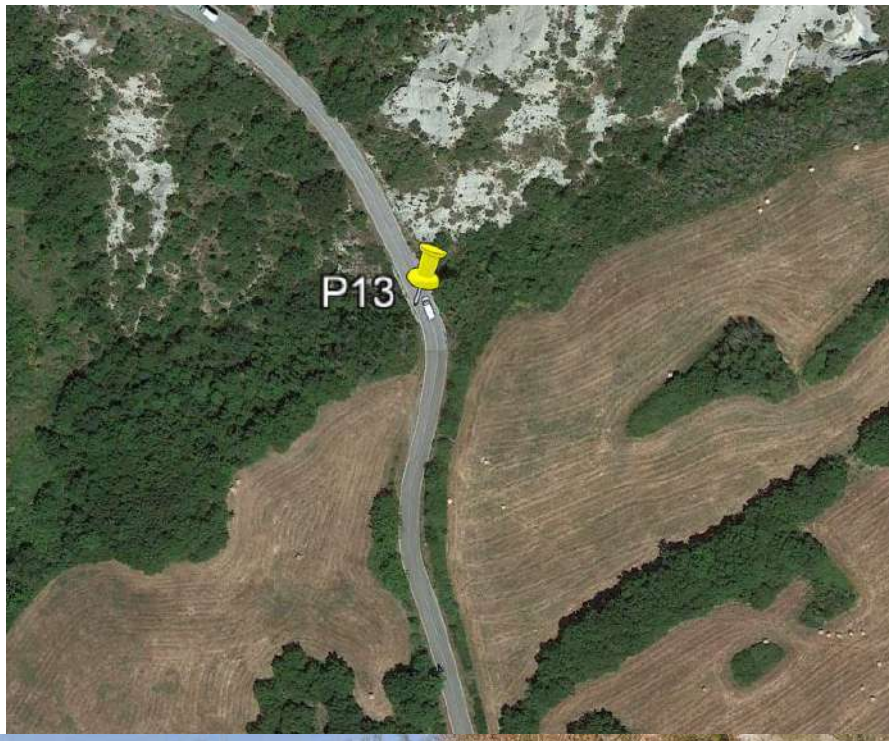


Tabella 12. Coordinate

ID	Coordinata Nord	Coordinata Est
P12	43°38'43.37"N	12° 6'15.24"E

3.13 Attraversamento P13 SP 258

Figura 14. Inquadramento dell'attraversamento



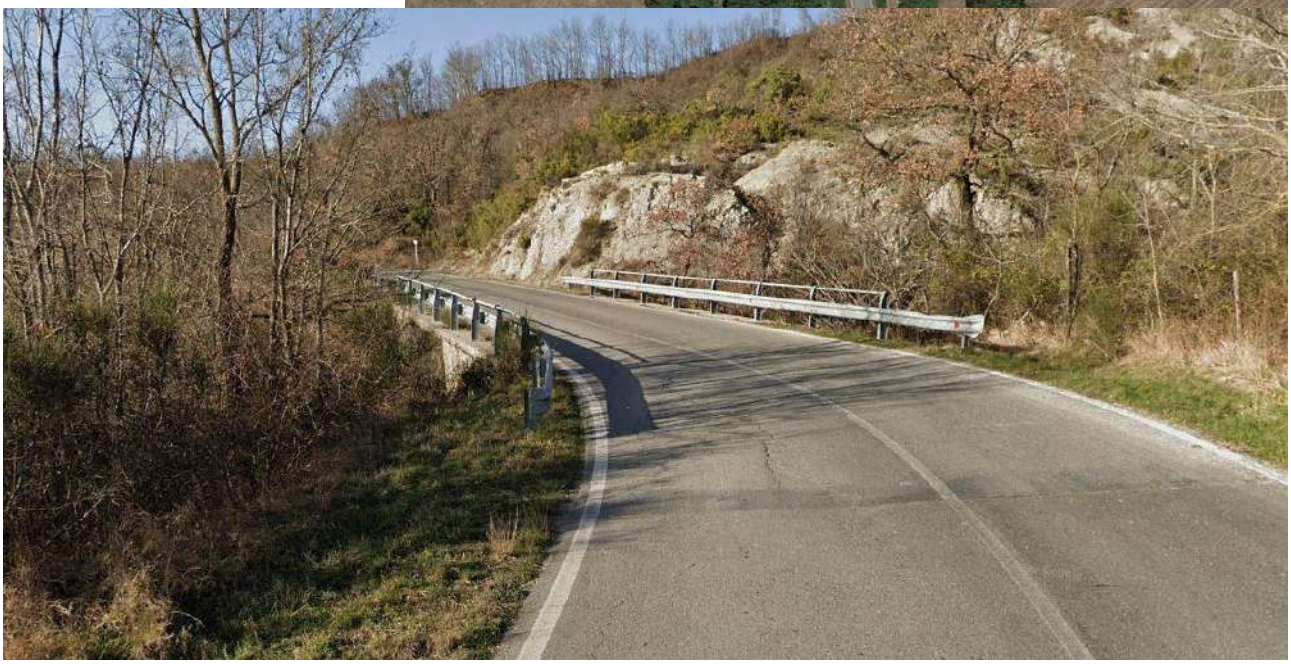


Tabella 13. Coordinate

ID	Coordinata Nord	Coordinata Est
P13	43°38'39.07"N	12° 6'25.84"E

3.14 Attraversamento P14 SP 258

Figura 15. Inquadramento dell'attraversamento

Tabella 14. Coordinate

ID	Coordinata Nord	Coordinata Est
P14	43°38'24.89"N	12° 6'45.20"E

3.15 Attraversamento P15 SP 258

Figura 16. Inquadramento dell'attraversamento

Tabella 15. Coordinate

ID	Coordinata Nord	Coordinata Est
P15	43°38'9.28"N	12° 6'50.70"E

3.16 Attraversamento P16 SP 258

Figura 17. Inquadramento dell'attraversamento

Tabella 16. Coordinate

ID	Coordinata Nord	Coordinata Est
P16	43°37'51.67"N	12° 7'2.17"E

3.17 Attraversamento P17 SP 258

Figura 18. Inquadramento dell'attraversamento

Tabella 17. Coordinate

ID	Coordinata Nord	Coordinata Est
P17	43°37'36.82"N	12° 7'7.13"E

3.18 Attraversamento P18 SP 258

Figura 19. Inquadramento dell'attraversamento

Tabella 18. Coordinate

ID	Coordinata Nord	Coordinata Est
P18	43°37'14.17"N	12° 7'6.77"E

3.19 Attraversamento P19 SP 258

Figura 20. Inquadramento dell'attraversamento

Tabella 19. Coordinate

ID	Coordinata Nord	Coordinata Est
P19	43°36'58.47"N	12° 7'9.06"E

3.20 Attraversamento P20 SP 258

Figura 21. Inquadramento dell'attraversamento

Tabella 20. Coordinate

ID	Coordinata Nord	Coordinata Est
P20	43°36'51.06"N	12° 6'57.75"E

3.21 Attraversamento P21 SP 258

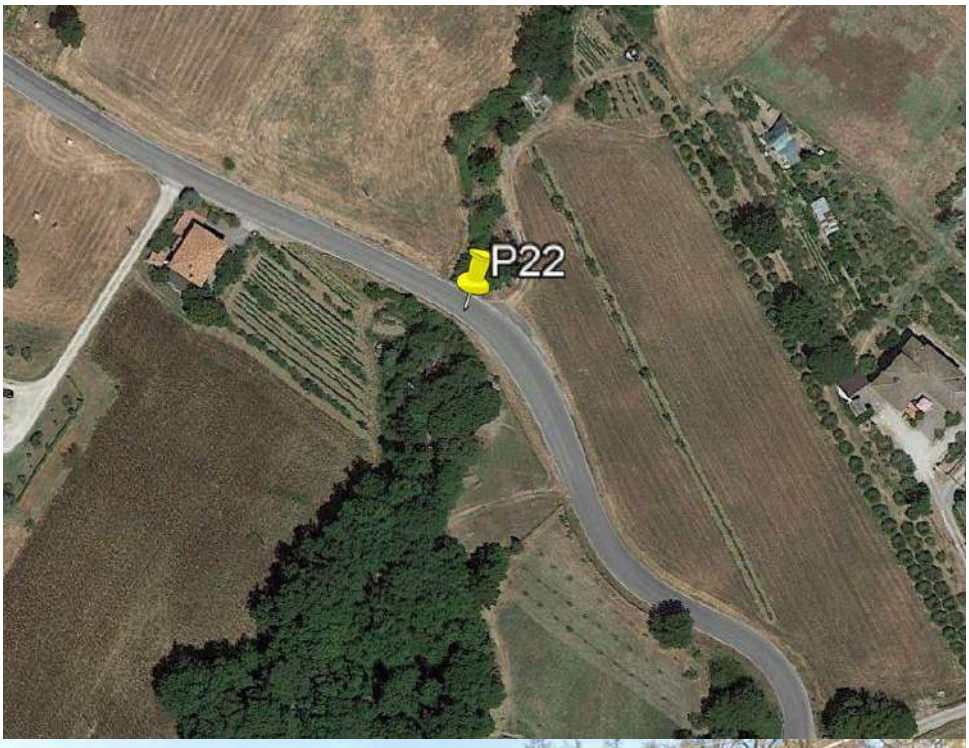
Figura 22. Inquadramento dell'attraversamento

Tabella 21. Coordinate

ID	Coordinata Nord	Coordinata Est
P21	43°36'31.50"N	12° 6'38.17"E

3.22 Attraversamento P22 SP 258

Figura 23. Inquadramento dell'attraversamento



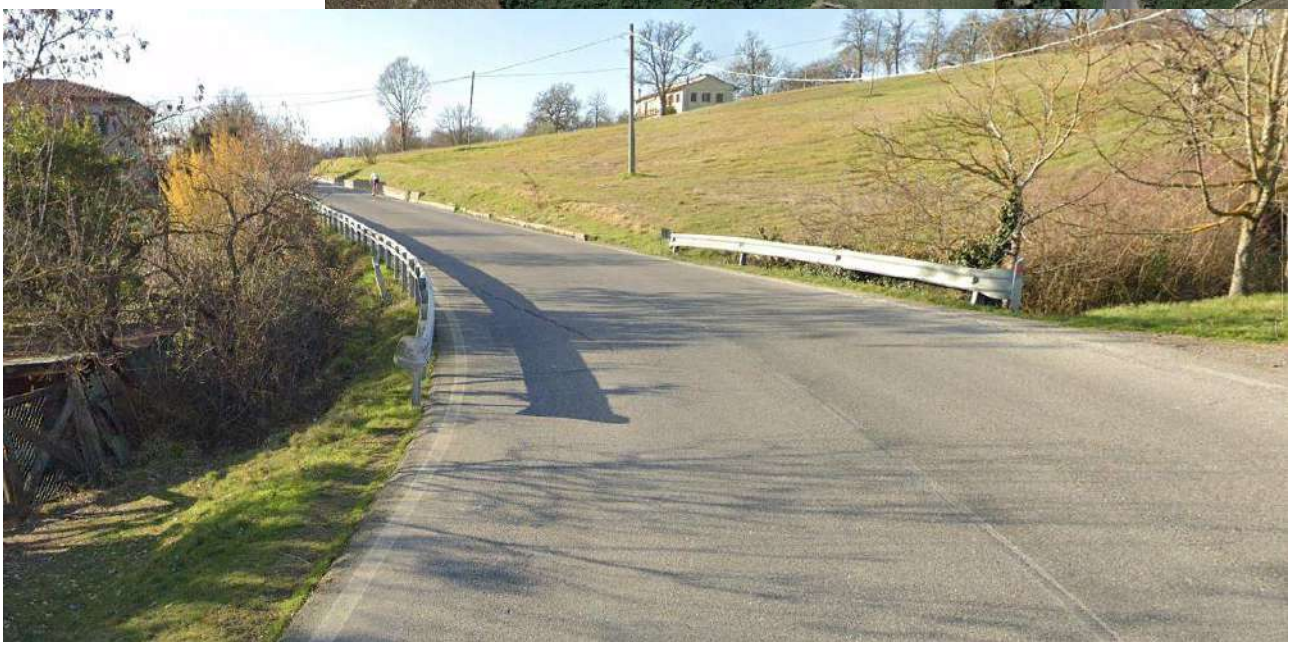


Tabella 22. Coordinate

ID	Coordinata Nord	Coordinata Est
P22	43°35'40.34"N	12° 6'46.03"E

3.23 Attraversamento P23 SP 258

Figura 24. Inquadramento dell'attraversamento

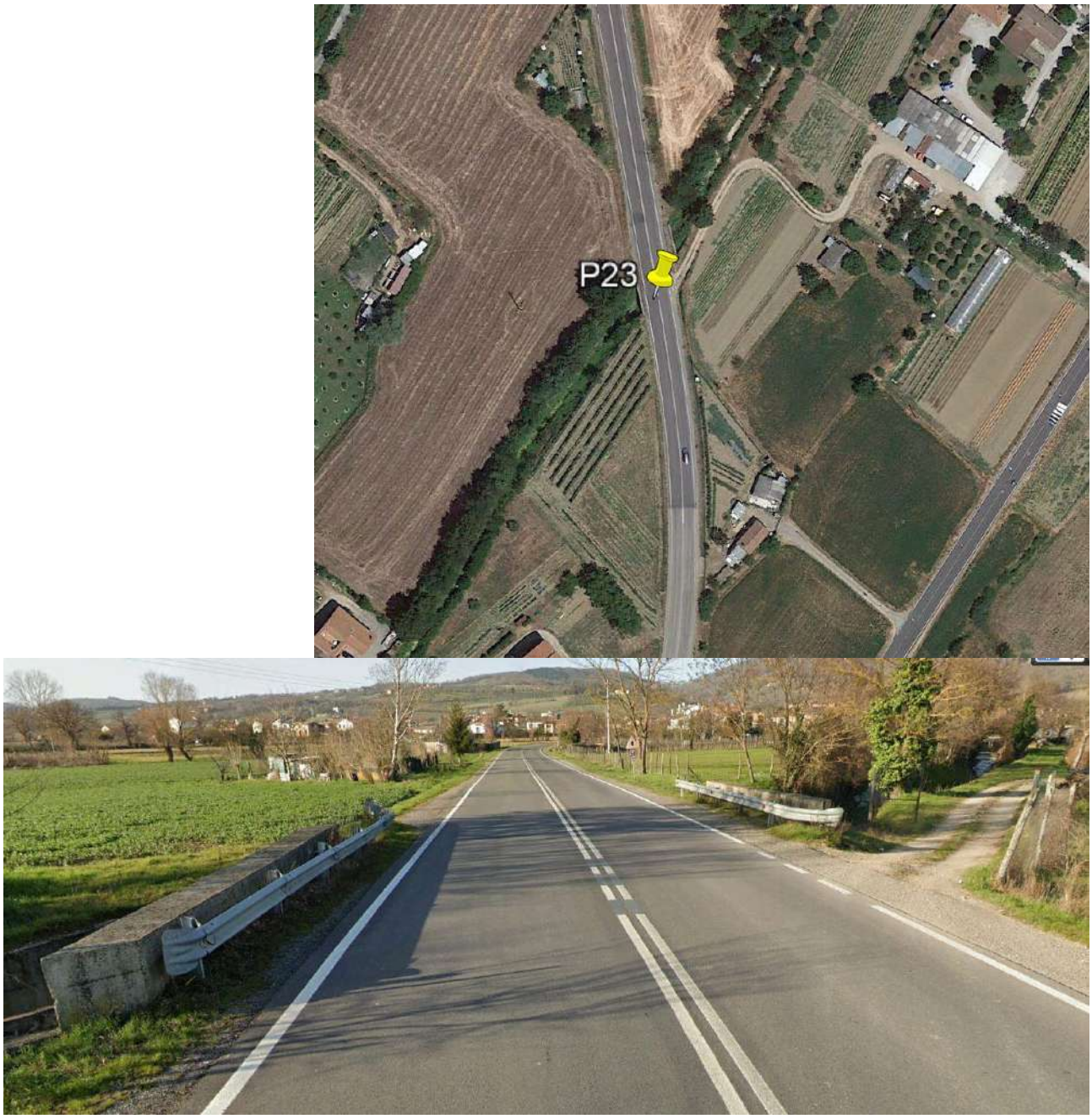


Tabella 23. Coordinate

ID	Coordinata Nord	Coordinata Est
P23	43°34'26.22"N	12° 7'26.54"E

ALLEGATO A
ROAD SURVEY Project: Poggio (FC) - SG155 -T102.5

ROAD SURVEY

Project: *Poggio (FC)*

Poggio (FC)

SG155 – T102.5.51A

Transport rappresentative:

Angelo QUARATO, S.A.E. S.r.l.
Mirko LAFRATTA, S.A.E. S.r.l.

1. Summary

According to the Customer request, it has been analyzed a feasibility study for the transport of Wind components to Poggio (FC).

Road Survey date: *05/07/2022*
Road Survey date: 11/01/2023

Customer Representative:

Transporter Representative: Angelo QUARATO *S.A.E. S.r.l.*
Mirko LAFRATTA *S.A.E. S.r.l.*

2. Specs Description

Project	Poggio (FC)
Country	Italy
Location	Poggio (FC) – Emilia Romagna region
Scope	Planning Stage – Transport Logistic – Feasibility Study
Turbine	SG5X-155-T102.5.51A
Transport Mode	☒ Standard ☒ Transshipment ☒ Blade Lifter ☒ Tower ☒ Nacelle ☐ SPMT
MW	6.6
Start From	Port of Ravenna (RA) – Emilia Romagna region

3. Weight and Dimensions

SG5X-155 – T102.5.51A Specifications

			WEIGHT GROSS		METERS GROSS		
UNITS	**CONTENTS**	**MATERIAL CODE**	**GROSS WT. EACH (Tn)**	**TOTAL GROSS (Tn)**	**LENGTH (m)**	**WIDTH (m)**	**HEIGHT (m)**
1	Tower Section 1	*(mat. code)*	82,280	82,280	13,180	4,370	4,360
1	Tower Section 2	*(mat. code)*	79,700	79,700	20,720	4,360	4,300
1	Tower Section 3	*(mat. code)*	81,070	81,070	29,960	4,300	4,300
1	Tower Section 4	*(mat. code)*	72,490	72,490	35,850	4,300	3,500
3	SG155 BLADE	*(mat. code)*	25,640	76,920	76,710	4,320	3,030
1	NACELLE GLOBAL	*(mat. code)*	80,030	80,030	15,160	4,210	3,640
1	DRIVE TRAIN	*(mat. code)*	84,680	84,680	7,450	3,130	3,220
1	HUB	*(mat. code)*	54,960	54,960	4,770	4,500	4,110

4. Preamble

SAE has been appointed to conduct a feasibility study for a project of Siemens Gamesa located near Poggio (FC) in Emilia Romagna Region - Italy. The study has been commissioned in order to define the feasibility to deliver wind turbine components to ***Poggio Tre Vescovi Wind farm***, that consists of SG5X-155-T102.5.51A.

The study that follows has been conducted on the basis of the packing list that Siemens Gamesa has provided to SAE on December 2022 and the site visit was done on 11 January 2023 – week 2.

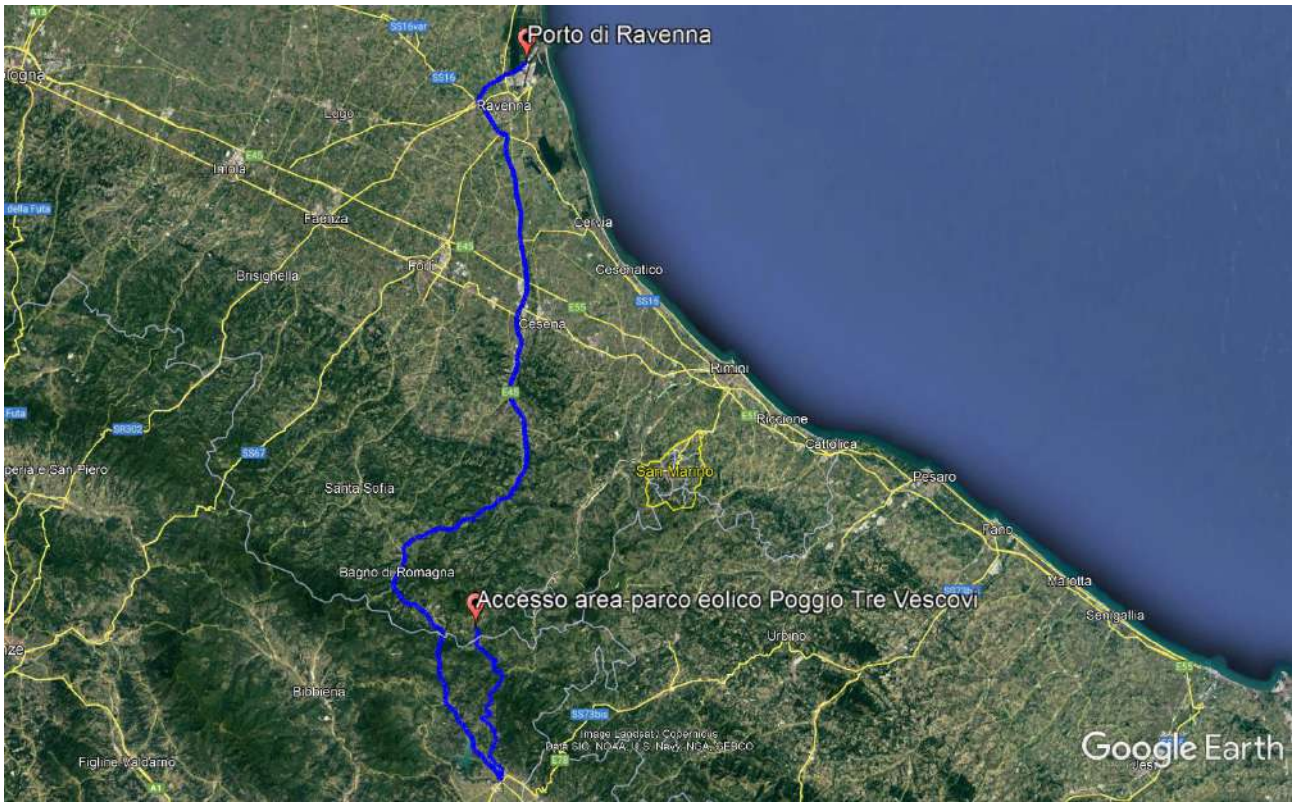
5. Table of content

6. Executive Summary

Following the visit carried out on 11th of January 2023 from Port of Ravenna to the site access, assumed all modifications described in this report, SAE found the possibility to do transportation of all components to *POGGIO (FC)*.

7. General Route Description:

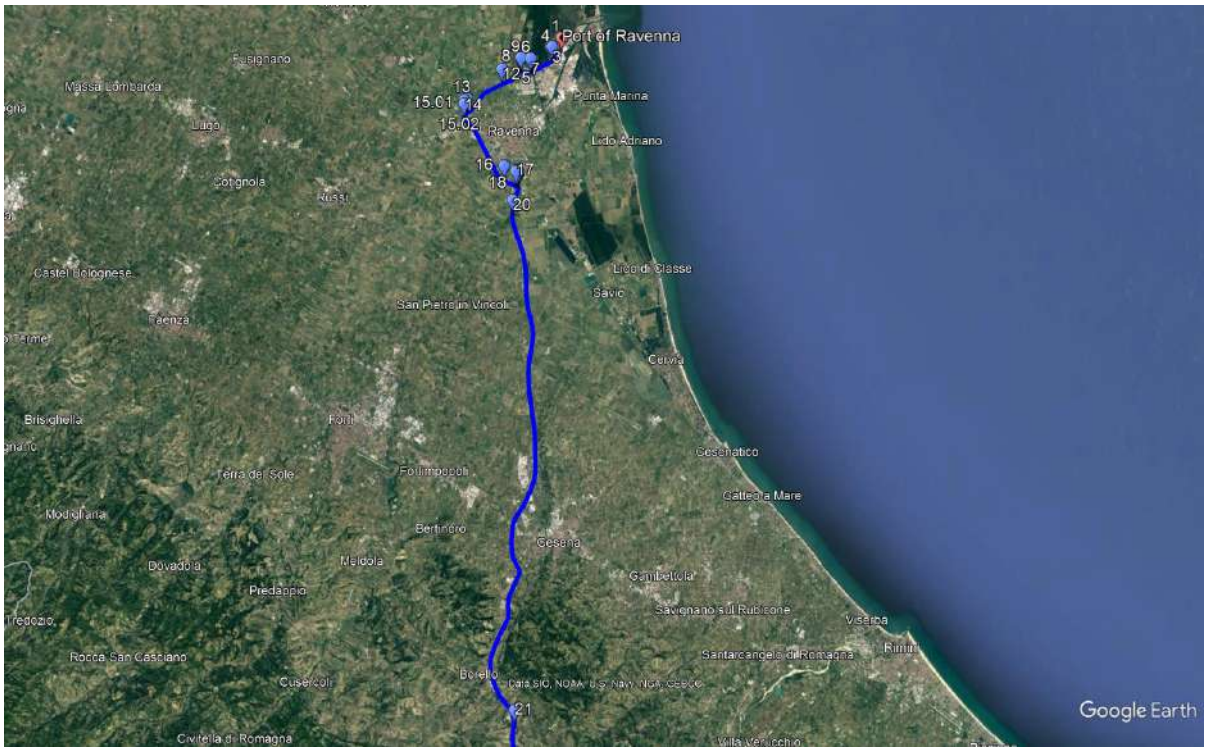
7.1 Route description from Port of Ravenna



- **Port of Ravenna (RA)**
- **Via Baiona:** from Port of Ravenna to Via Canale Magni;
- **Via Canale Magni:** from Via Baiona to SS 309 Romea;
- **SS 309 Romea:** from via Canale Magni to SS 16 Adriatica;
- **SS 16 Adriatica:** from SS 309 Romea to SS 3 bis;
- **SS 3 bis:** from SS 16 Adriatica to SS 73;
- **SS 73:** from SS 3 bis to Via Sandro Pertini;
- **Via Sandro Pertini:** from SS 73 to SP 258;
- **SS 258:** from Via Sandro Pertini to Via Alto Marecchia;
- **Via Alto Marecchia:** from SS258 to Via Pratieghi;
- **Via Pratieghi:** from Via Alto Marecchia to SP 67;
- **SP 67:** from Via Pratieghi to site access.

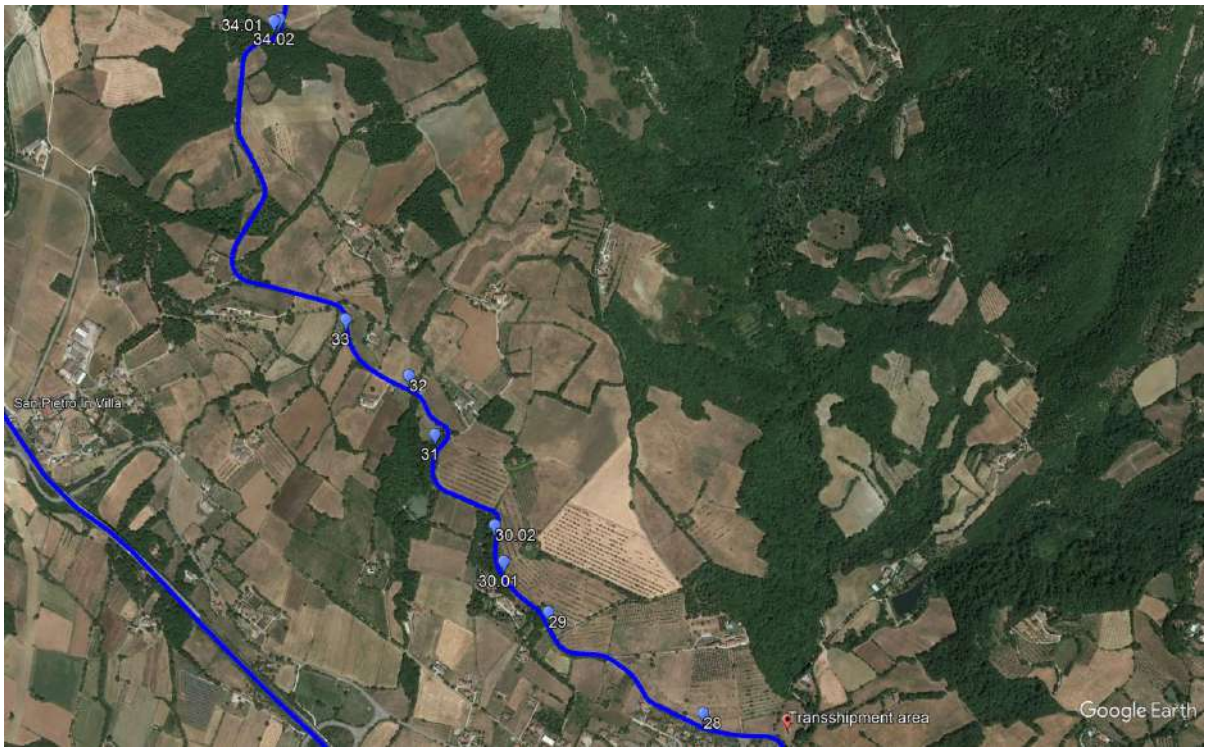
8. Map of observations

Map of Observations from Obs. 1 to Obs. 21

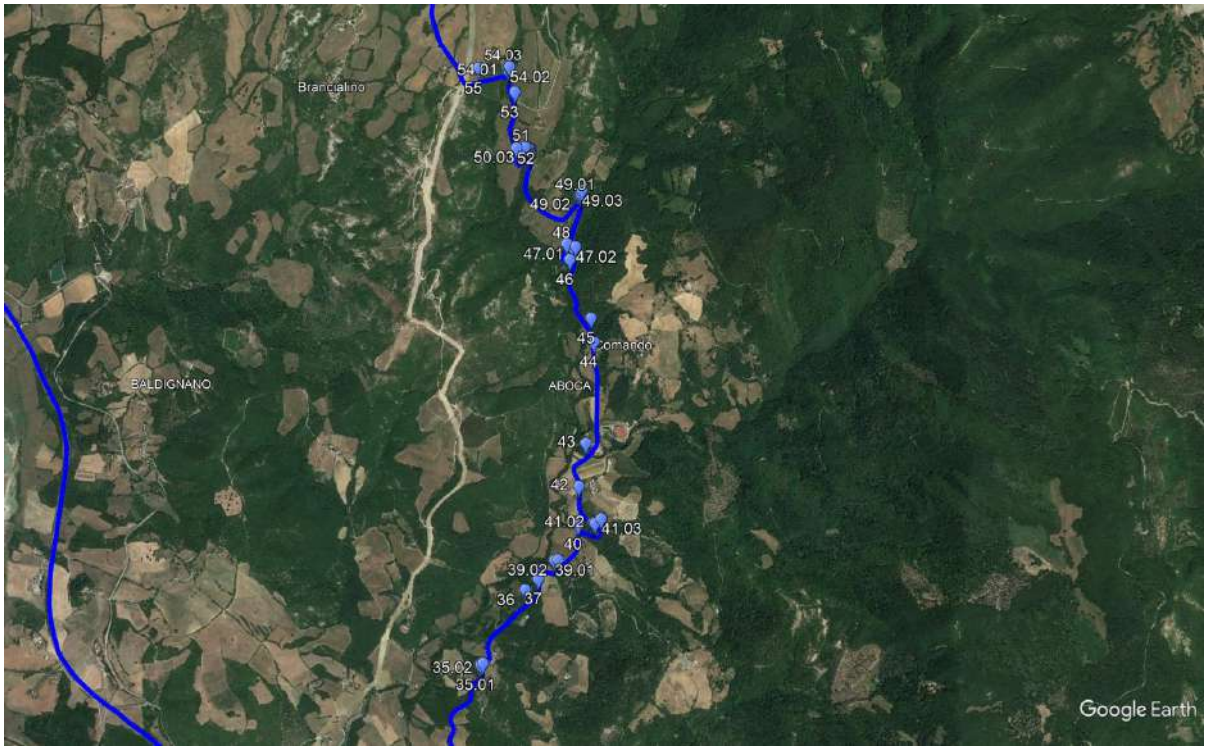


Map of Observations from Obs. 22.01 to Obs. 27.03 – 2nd option (Transshipment area)

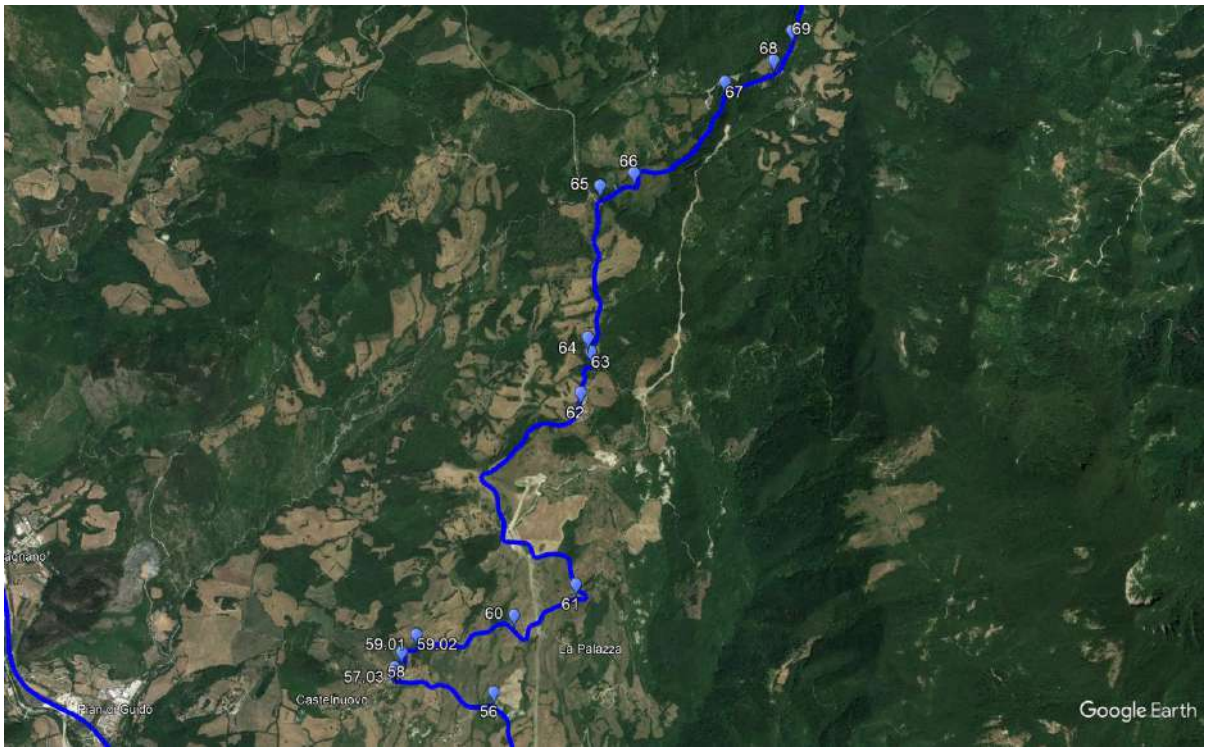
Map of Observations from Obs. 28 to Obs. 34.02



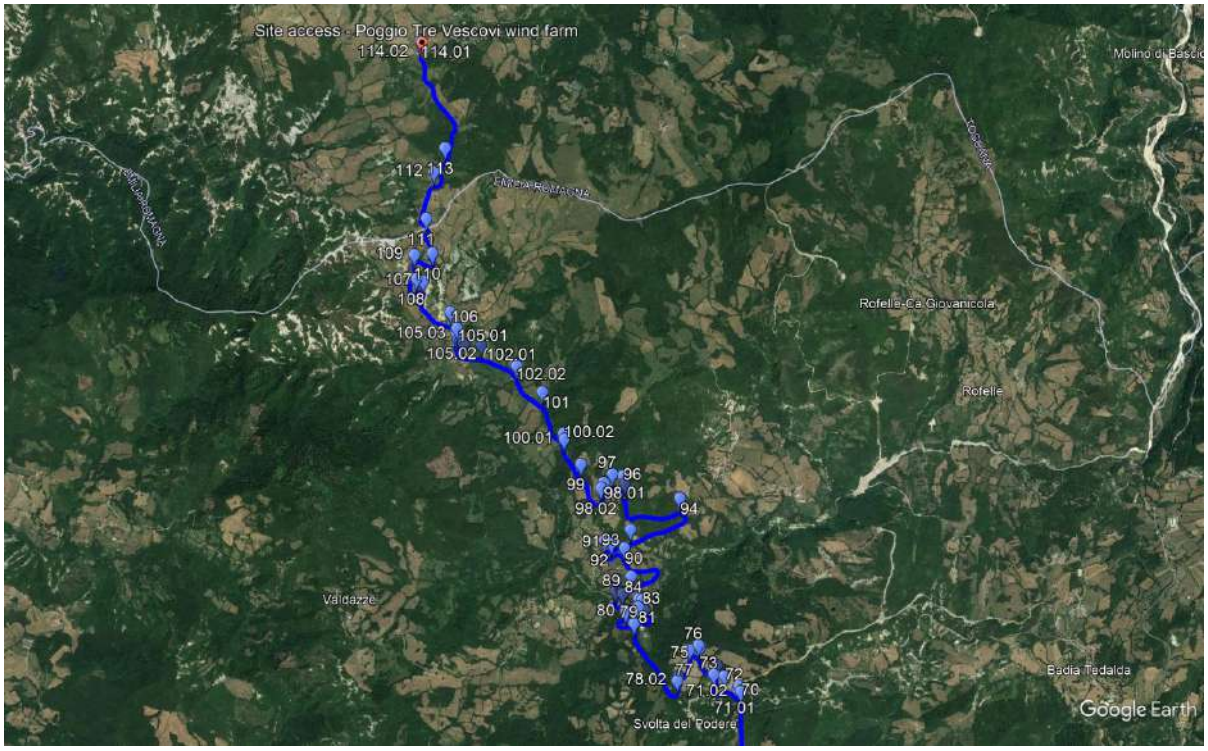
Map of Observations from Obs. 35.01 to Obs. 55



Map of Observations from Obs. 56 to Obs. 69



Map of Observations from Obs. 70 to Obs. 114.02 (site access)

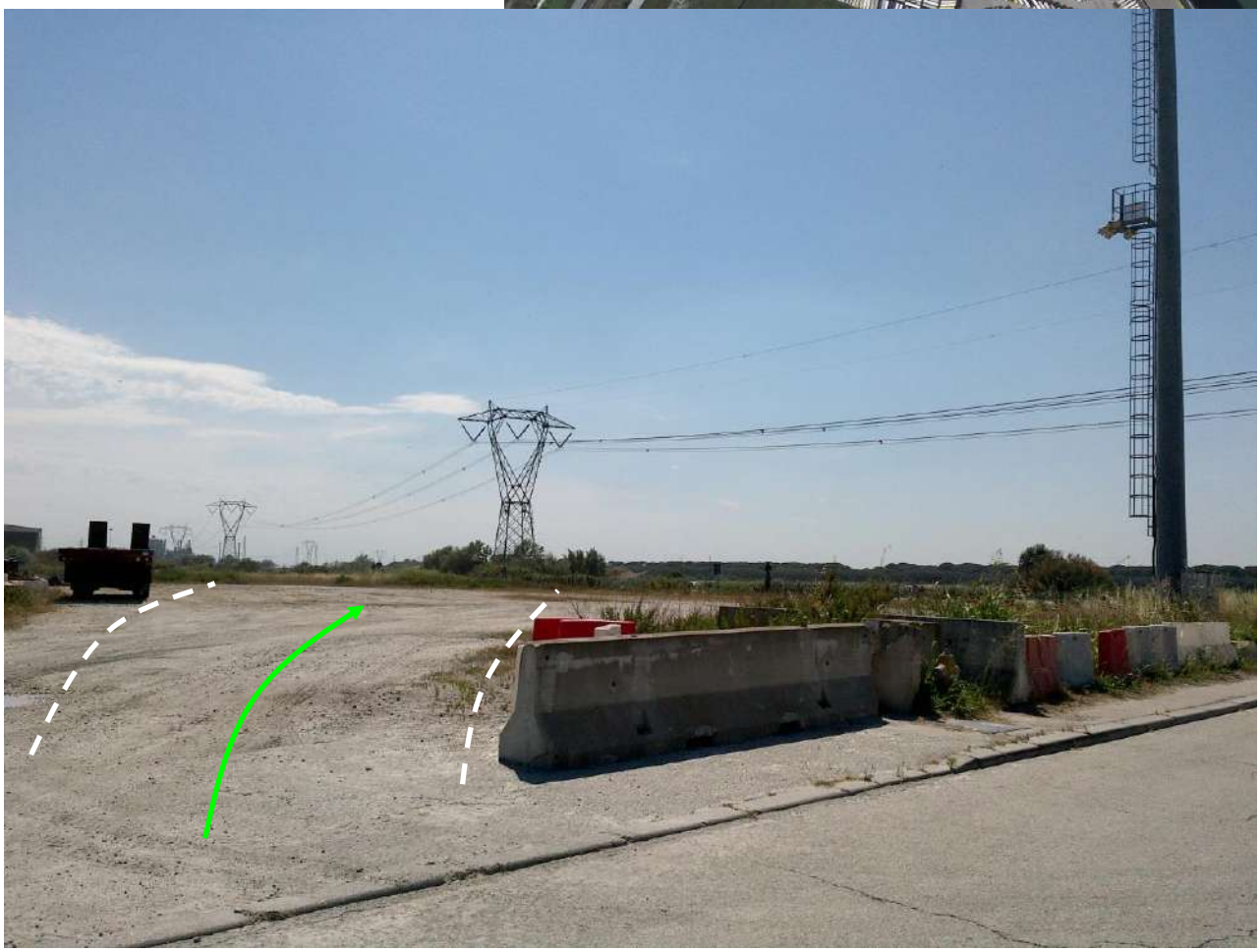


9. Road Modifications

Observation 1
Exit from port.
N 44.471763° E 12.248508°

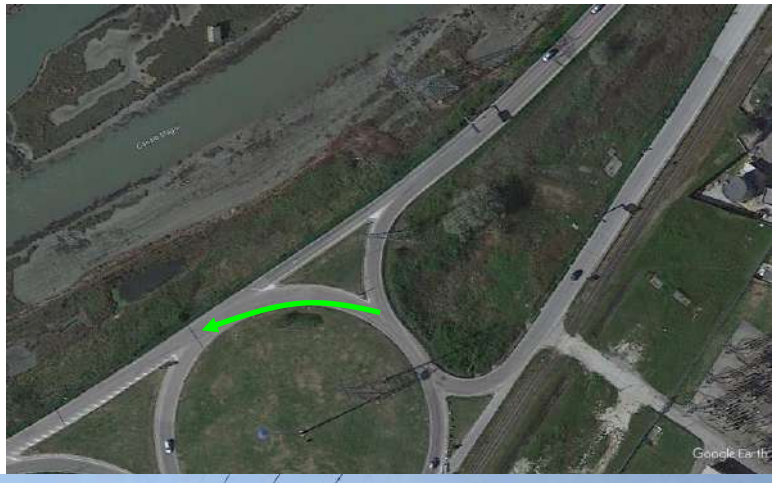
Observation 2.01
Start by-pass on the left.
N 44.471827° E 12.248105°

Observation 2.02
By-pass has to be created according to Siemens Gamesa guidelines.
N 44.471883° E 12.247863°

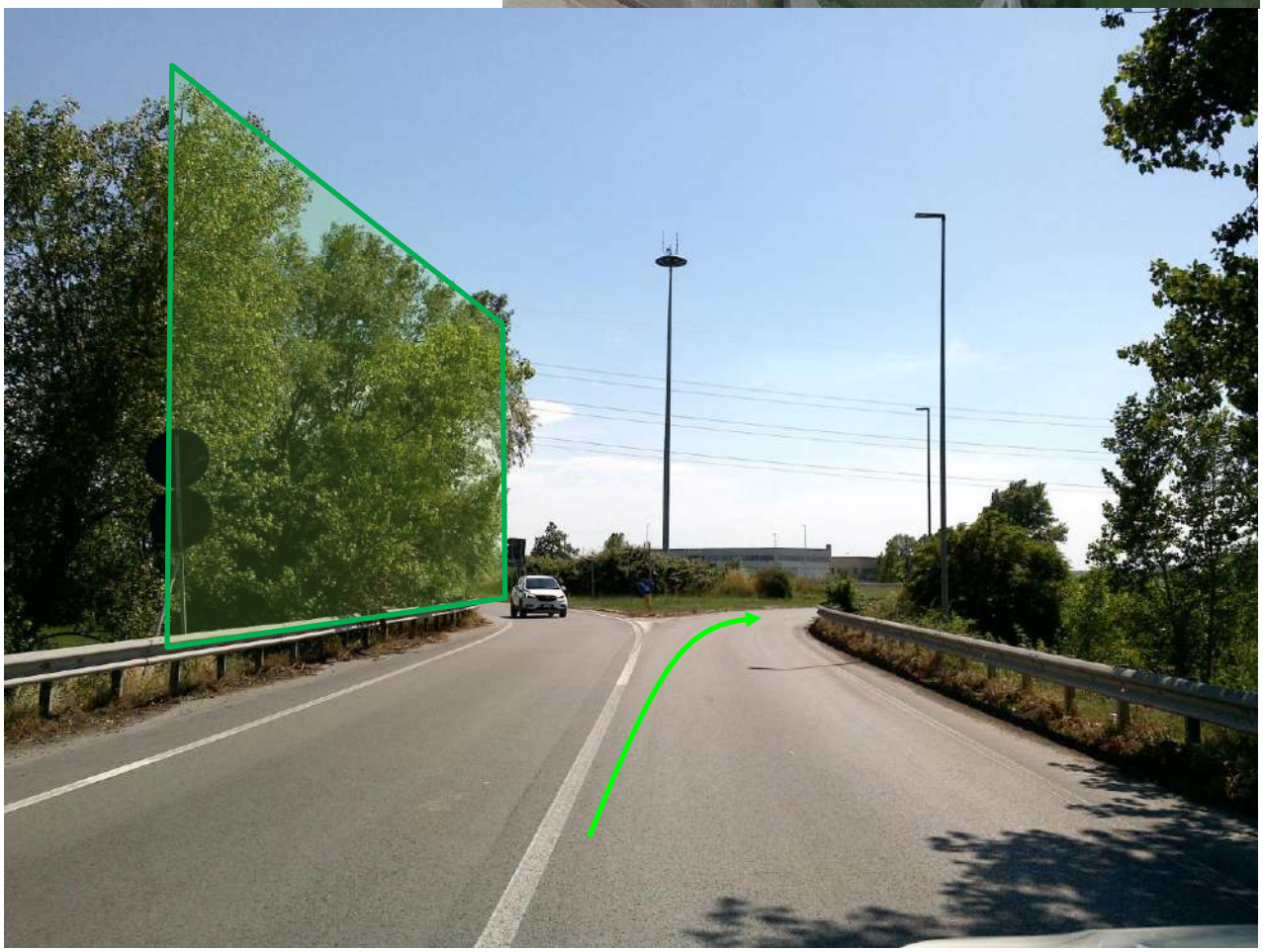


Observation 3
By-pass has to be created according to Siemens Gamesa guidelines.
N 44.465355° E 12.240013°

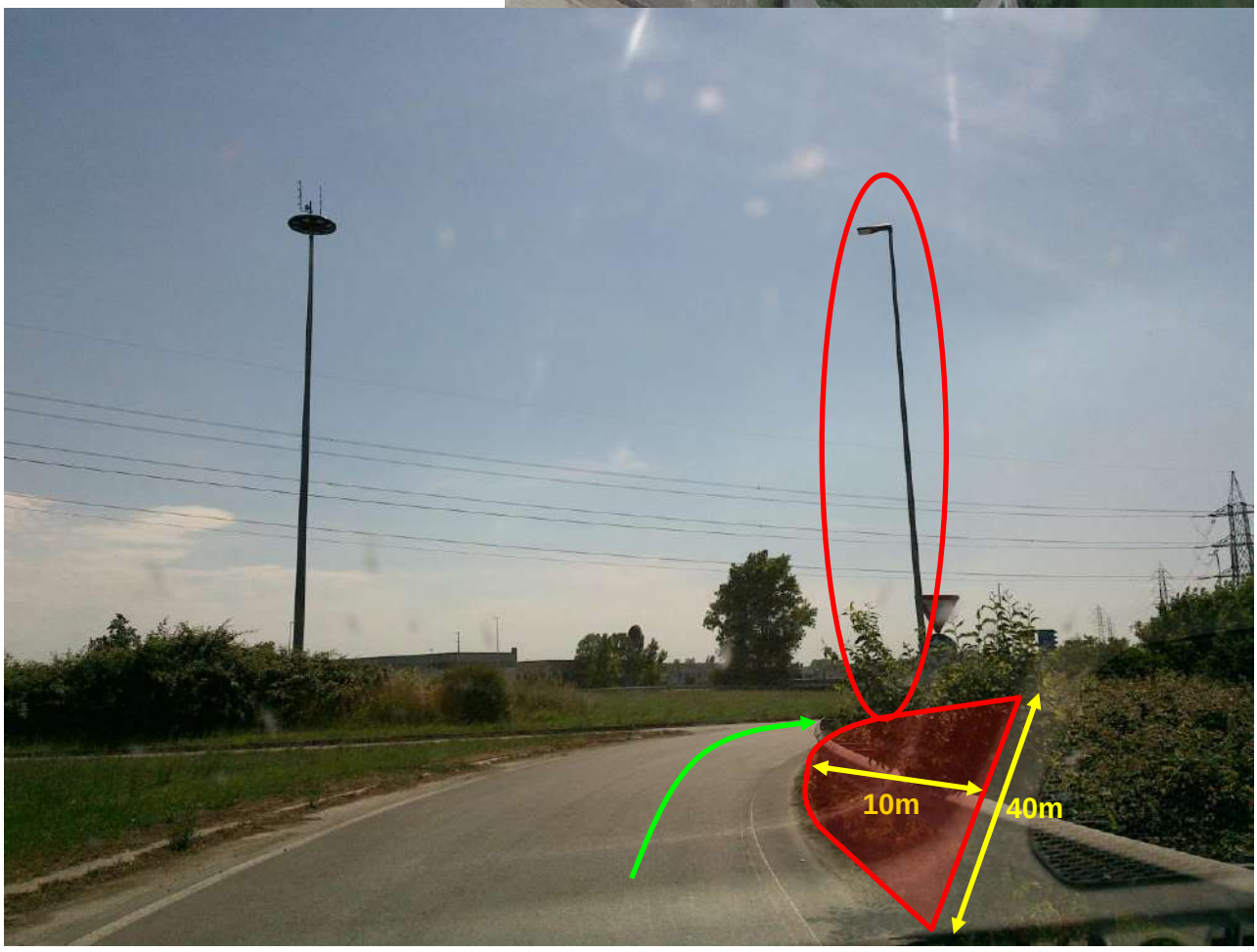
Observation 4
The roundabout has to be widened for 10x50 meters.
N 44.465122° E 12.238936°



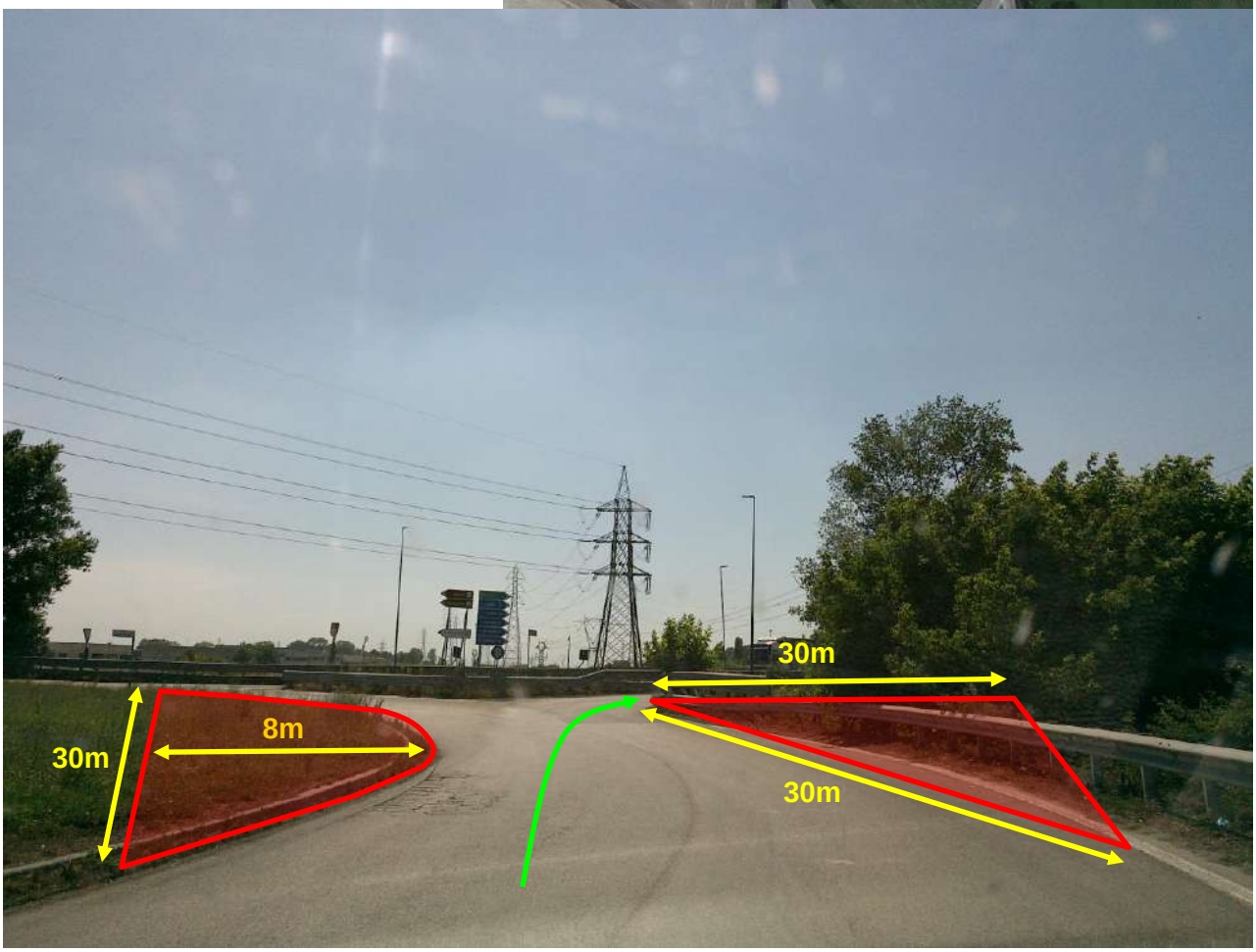
Observation 5
Trees have to be cut.
N 44.457877° E 12.220286°



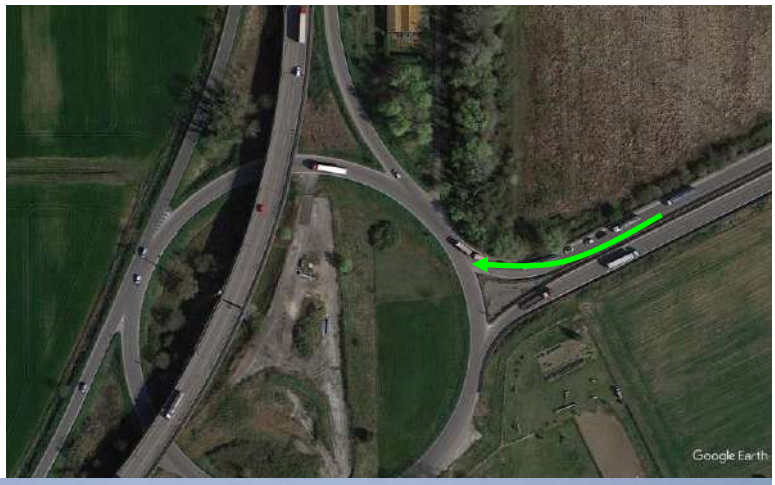
Observation 6
Widen and make practicable for 10x40 meters on the right side.
Lighting pole has to be removed.
N 44.457608° E 12.220016°



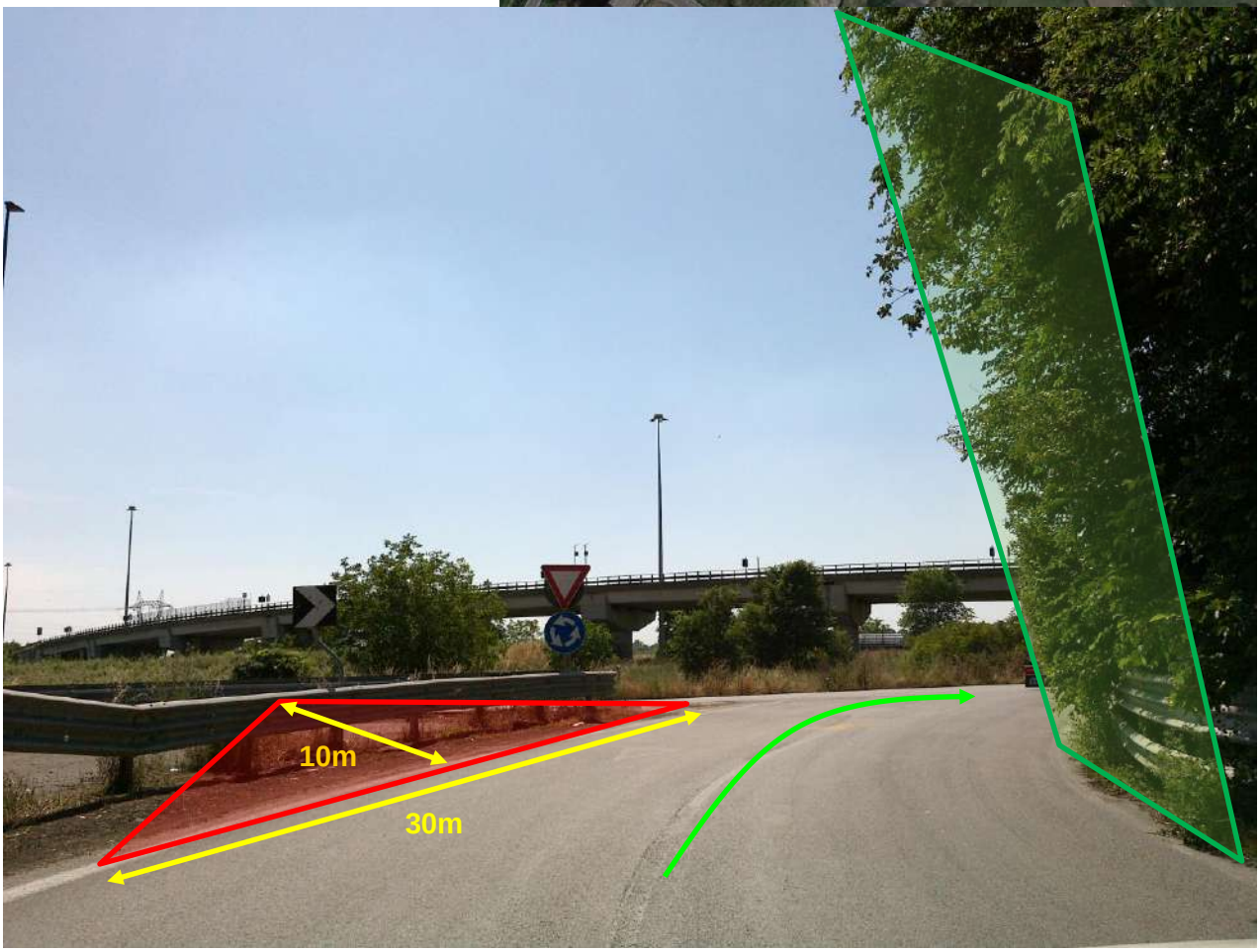
Observation 7
Widen and make practicable for 8x30 meters on the left side.
Widen and make practicable for 30x30 meters on the right side.
N 44.457377° E 12.219561°



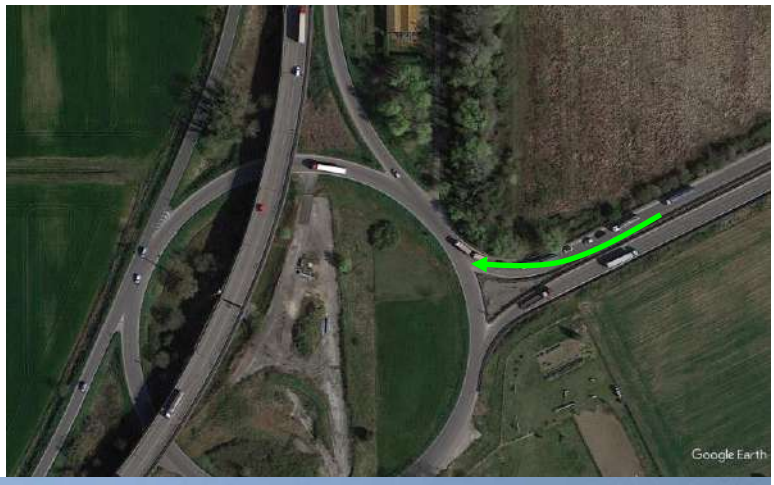
Observation 8
Guardrail has to be removed for 50 meters.
N 44.458100° E 12.211019°



Observation 9
Widen and make practicable for 10x30 meters on the left side.
Trees have to be cut.
N 44.457888° E 12.210369°

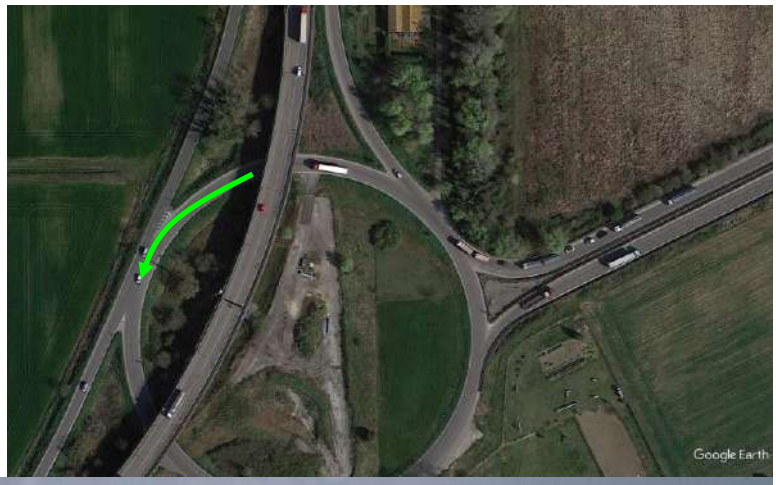


Observation 10.01
The road has to be widened and made accessible for 10x40 meters on the left side.
N 44.457875° E 12.209941°

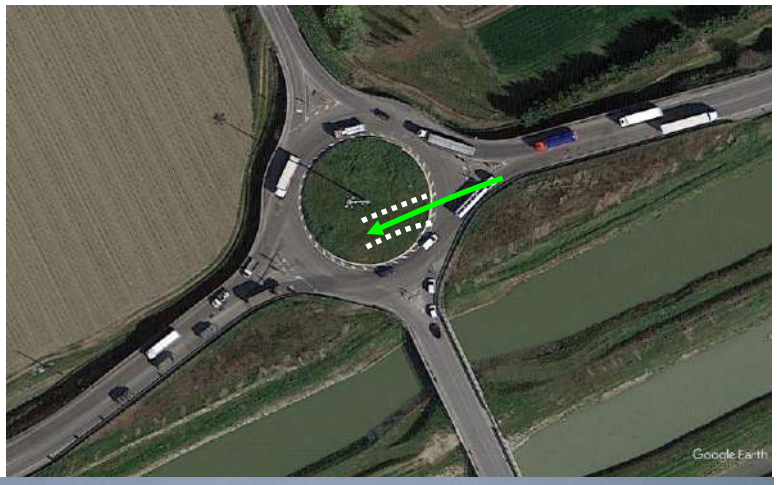


Observation 10.02
The road has to be widened and made accessible for 20x20 meters on the right side.
Road signs have to be removed.
N 44.458138° E 12.209686°

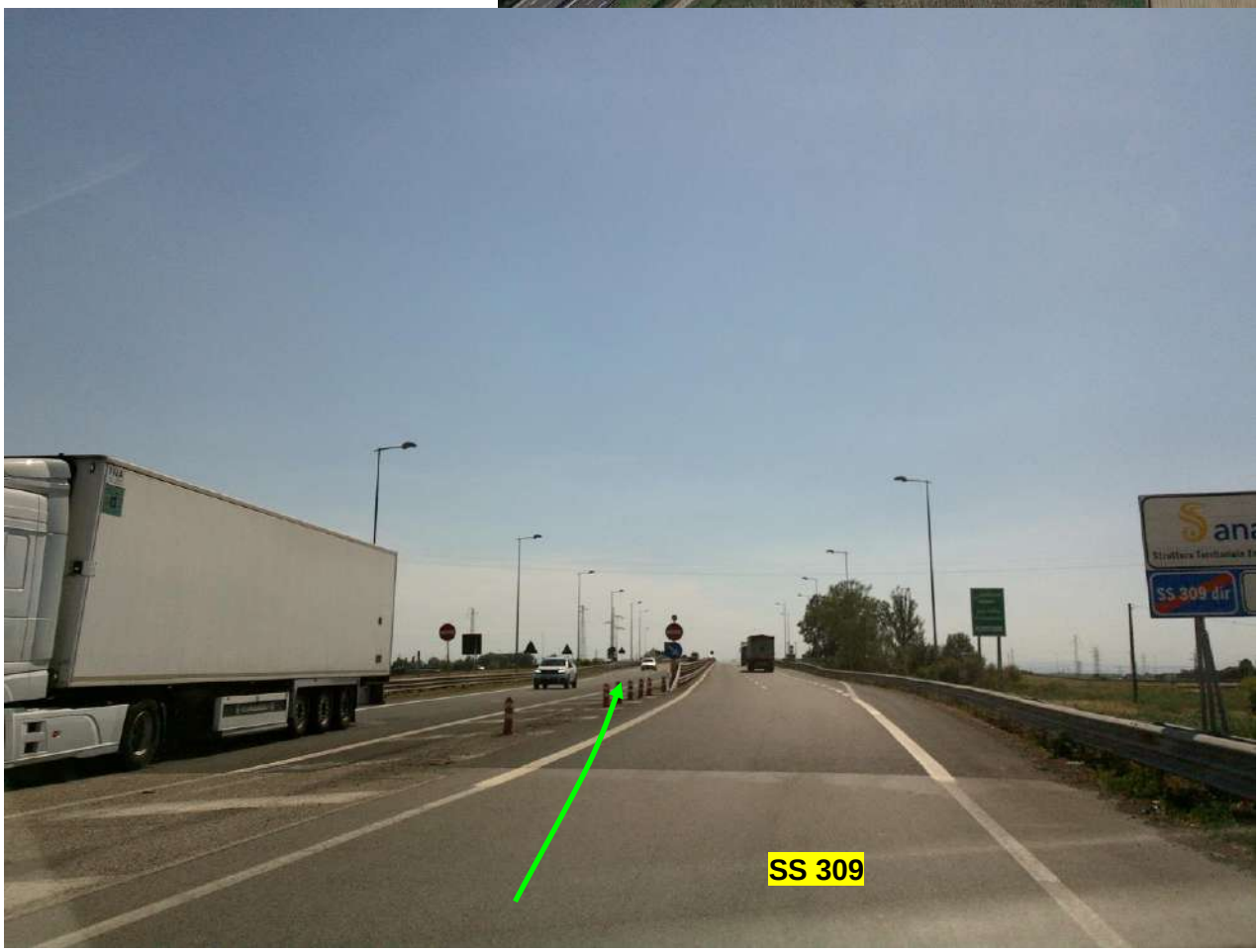
Observation 11
The road has to be widened and made accessible for 10x30 meters on the right side.
Road signs have to be removed.
N 44.458286° E 12.208569°



Observation 12
By-pass has to be created into roundabout according to Siemens Gamesa guidelines.
Traffic island has to be made practicable for 2m width removing also no.2 road signs.
N 44.450075° E 12.192527°

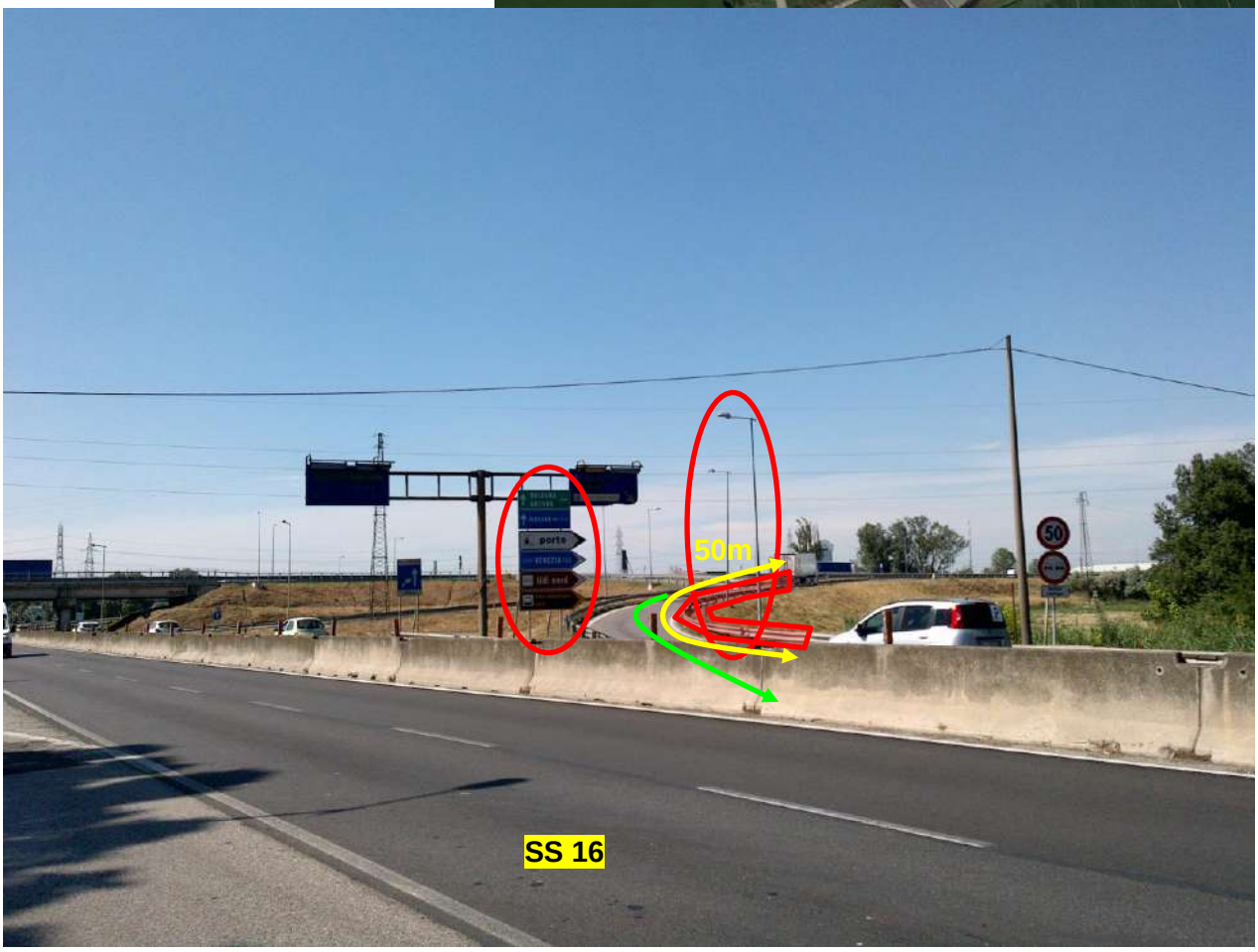


Observation 13
Proceed against the traffic flow.
N 44.430374° E 12.159288°

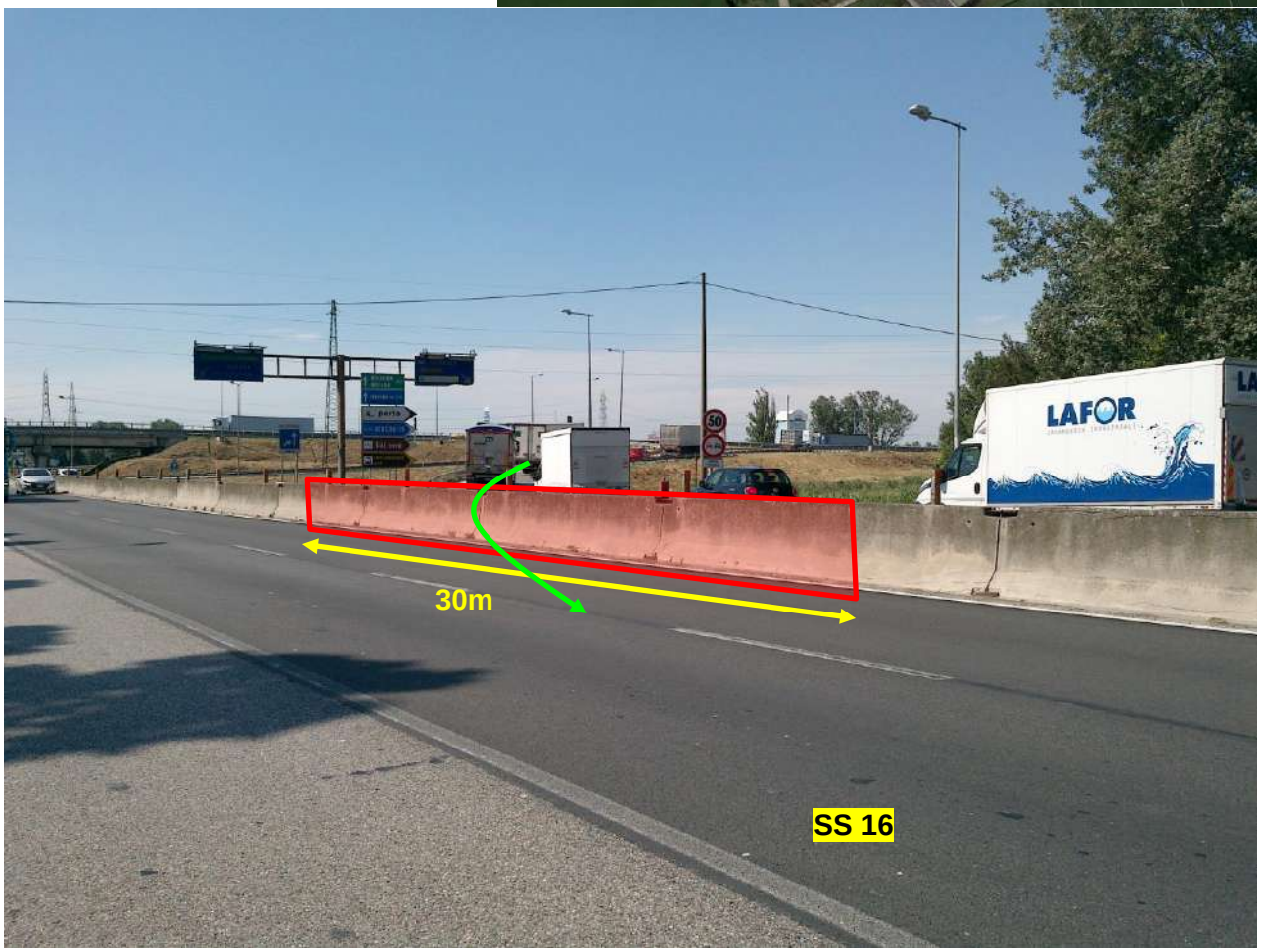


Observation 14
Take the ramp against the traffic flow.
The guardrail on the left side has to be removed for 25m entering the slip road.
N 44.428905° E 12.156561°

Observation 15.01
Exit from the ramp against the traffic flow.
No.2 lighting poles have to be removed.
Road signs have to be removed.
The last part of guardrail has to be removed for 50m length.
N 44.426599° E 12.156591°



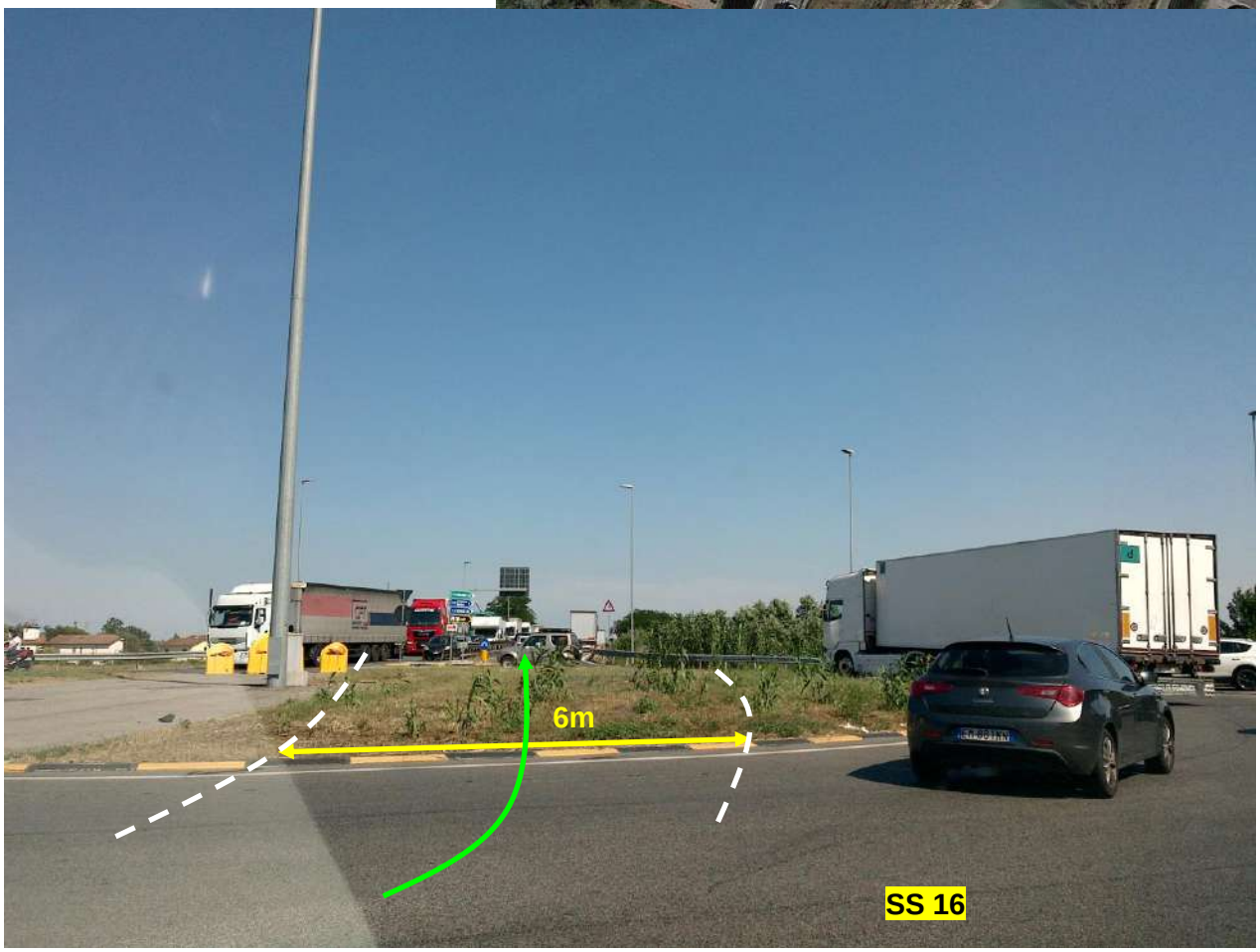
Observation 15.02
A pass has to be opened through the new jersey for 30 meters.
N 44.426541° E 12.156675°



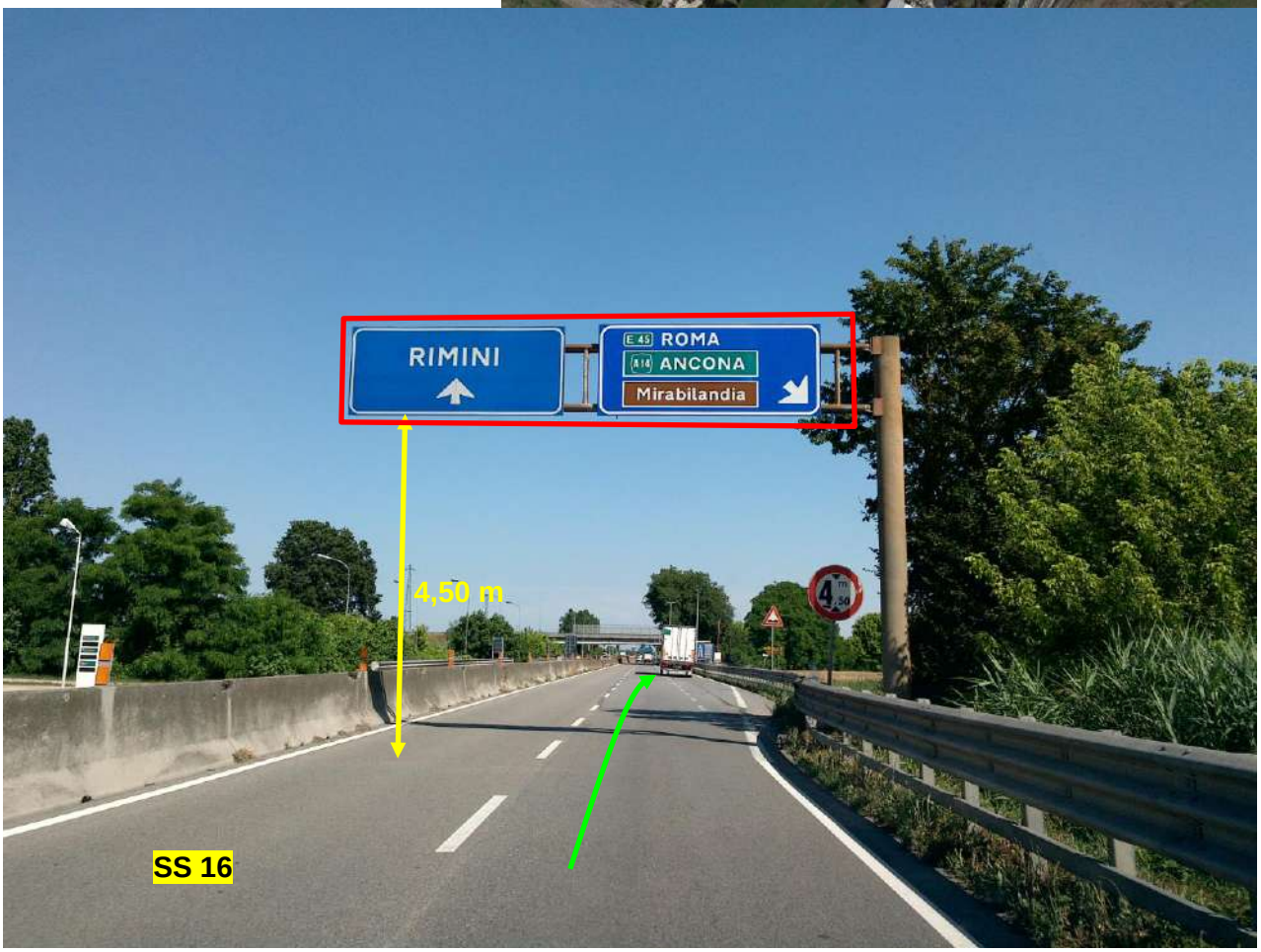
Observation 16

By-pass has to be created for 6m wide into roundabout according to Siemens Gamesa guidelines.

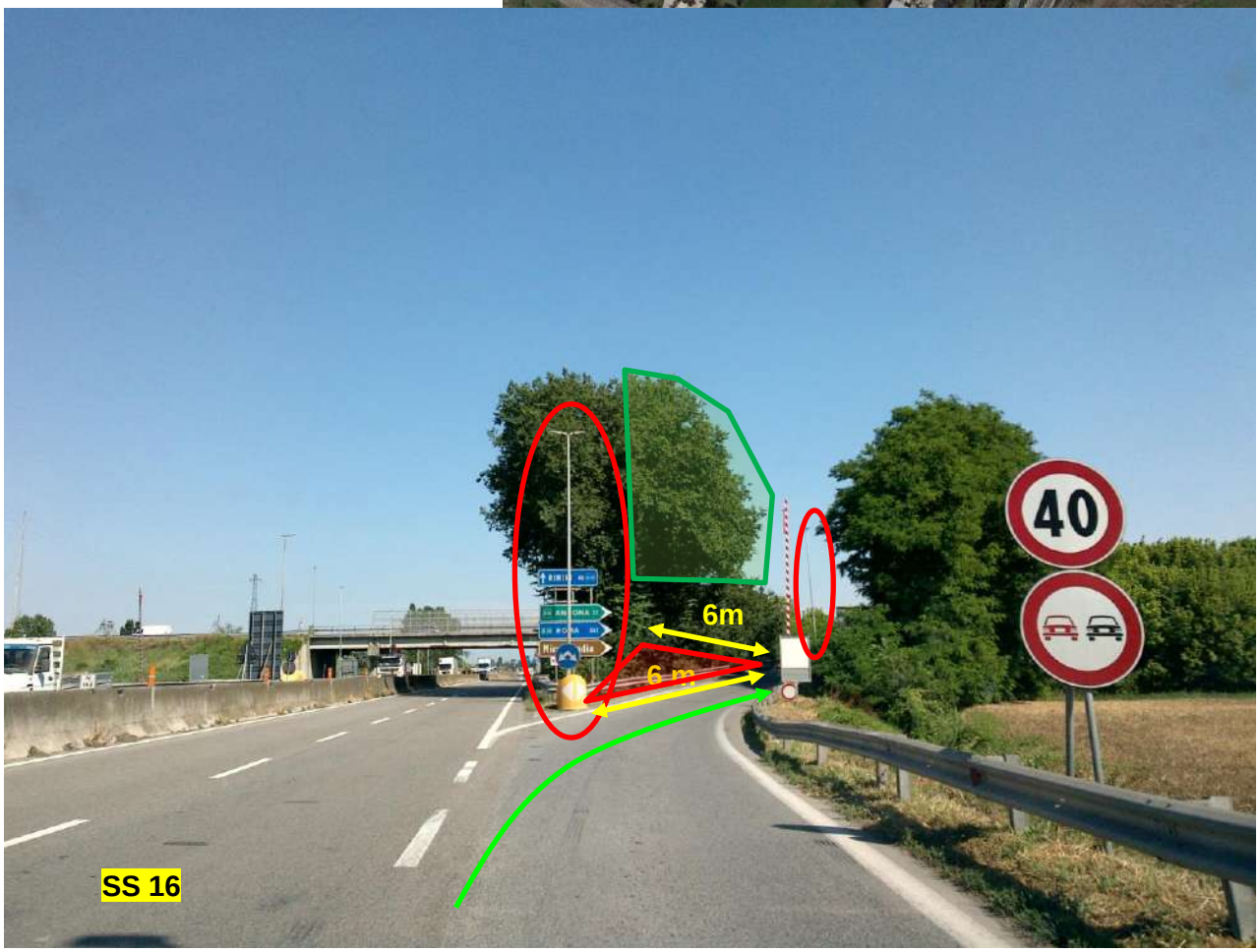
N 44.384488° E 12.194508°



Observation 17
The maximum height is 4,50 meters. Road signs have to be removed or rotated in order to keep free the road.
N 44.380913° E 12.205530°



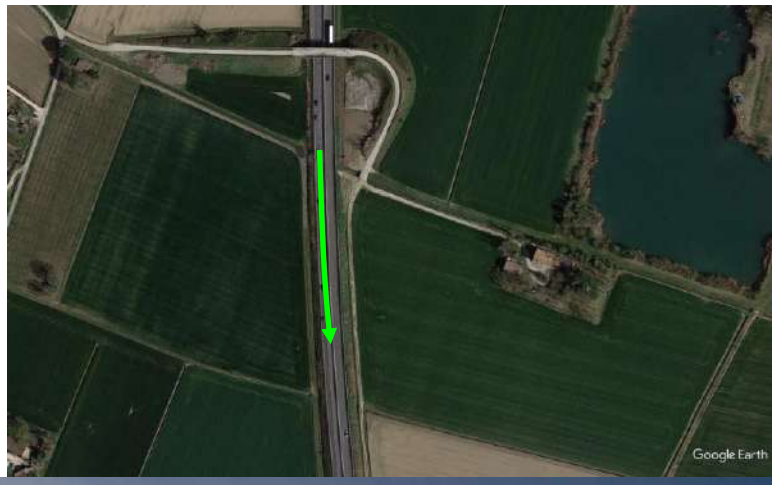
Observation 18
Road signs on the left side have to be removed.
No.2 lighting poles have to be removed.
Wide and make accessible for 6x6 meters on the left side.
Tree branches have to be cut.
N 44.380386° E 12.207094°



Observation 19.01
Vegetation has to be cut on both sides.
N 44.379936° E 12.208008°

Observation 19.02
Lighting pole has to be removed on the left side.
N 44.379652° E 12.208238°

Observation 20
From this point there are several works along SS 3 bis.
N 44.361222° E 12.202513°

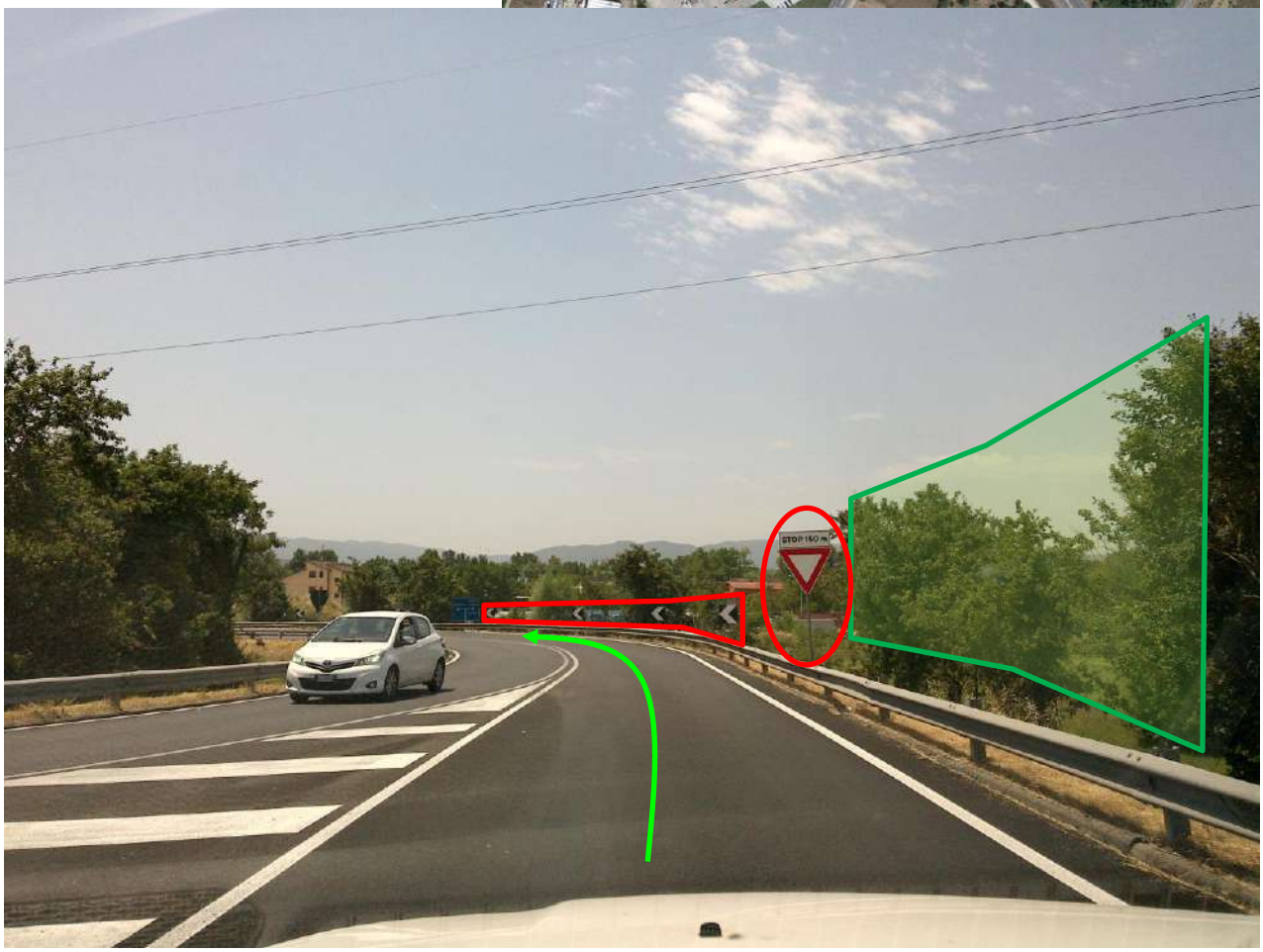


Observation 21
The maximum bearing capacity of the bridge has to be checked.
N 44.015786° E 12.204663°

Observation 22.01
Widen and make accessible on the left side for 6 meters in depth.
N 43.570808° E 12.121355°

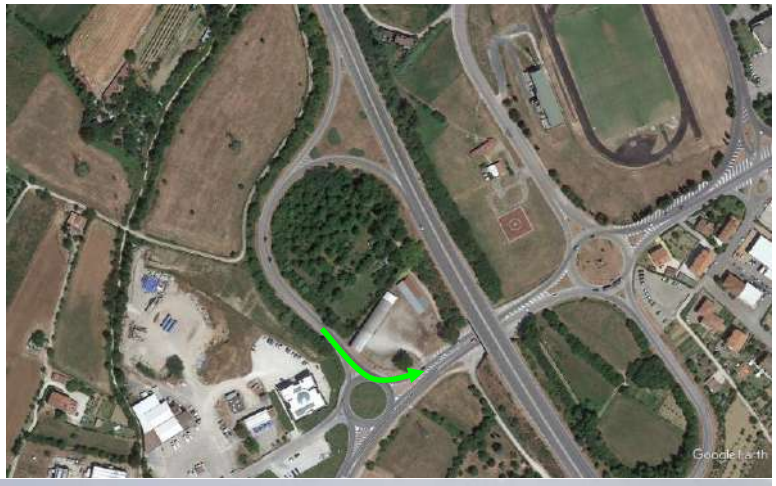
Observation 22.02
Widen and make accessible on the left side for 6 meters in depth.
Road signs on the right side have to be removed.
N 43.570352° E 12.121594°

Observation 23.01
Tree branches have to be cut.
Road signs on the right side have to be removed.
N 43.569624° E 12.121336°



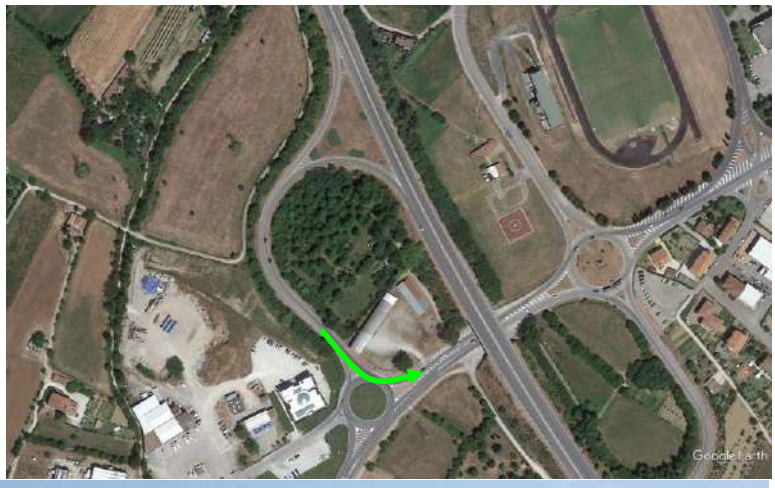
Observation 23.02
Tree branches have to be cut.
Road signs on the right side have to be removed.
N 43.569072° E 12.120836°

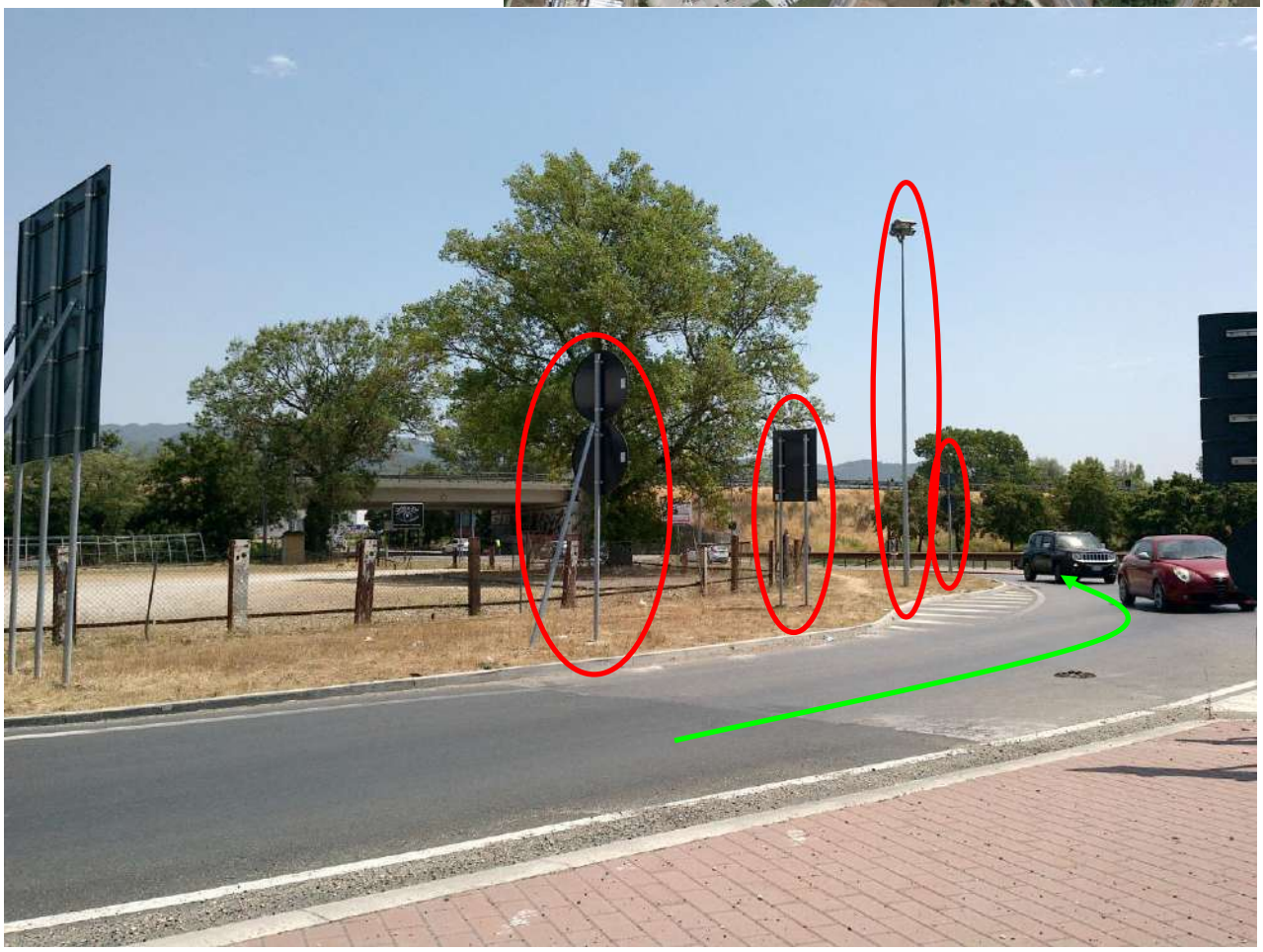
Observation 24.01
Trees have to be cut.
Road signs on the right side have to be removed.
N 43.568472° E 12.121138°



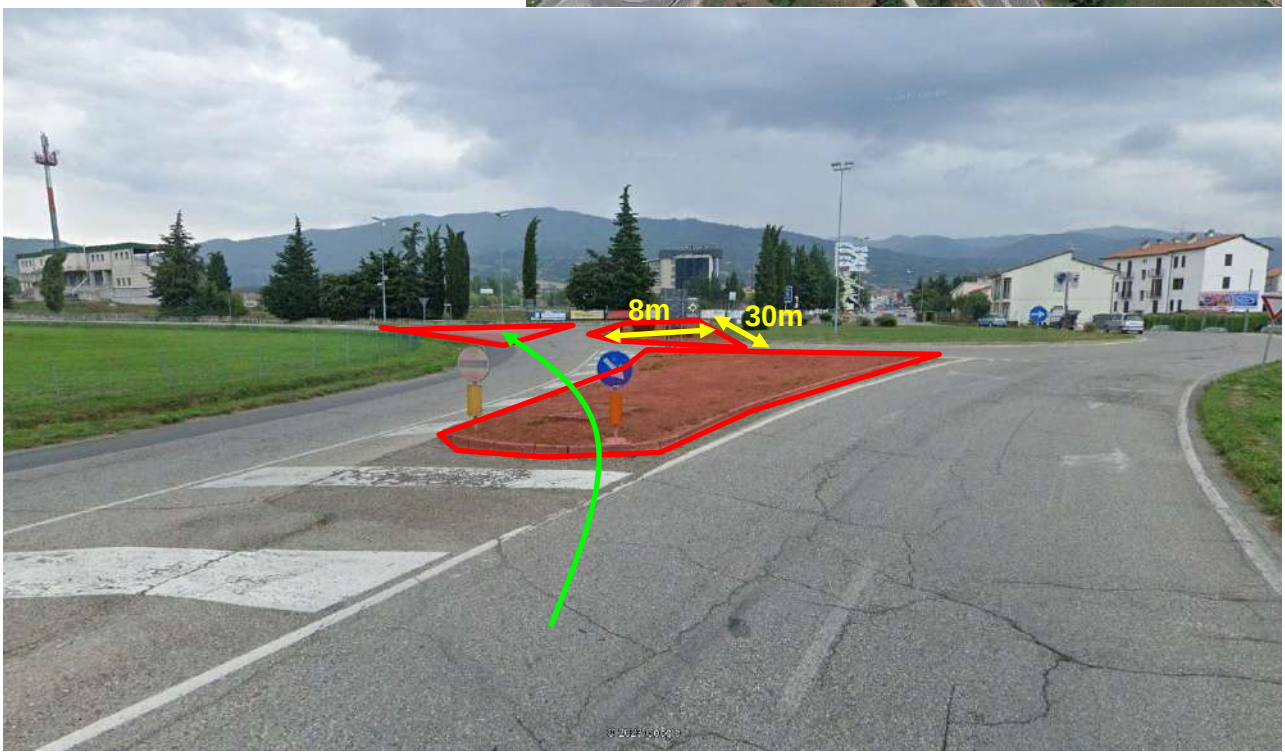
Observation 24.02
Road signs have to be removed.
Roundabout has to be widened and made practicable for 5x20m.
N 43.568116° E 12.121624°

Observation 24.03
Road signs on the left side have to be removed.
Lighting pole on the left side has to be removed.
N 43.568022° E 12.121688°

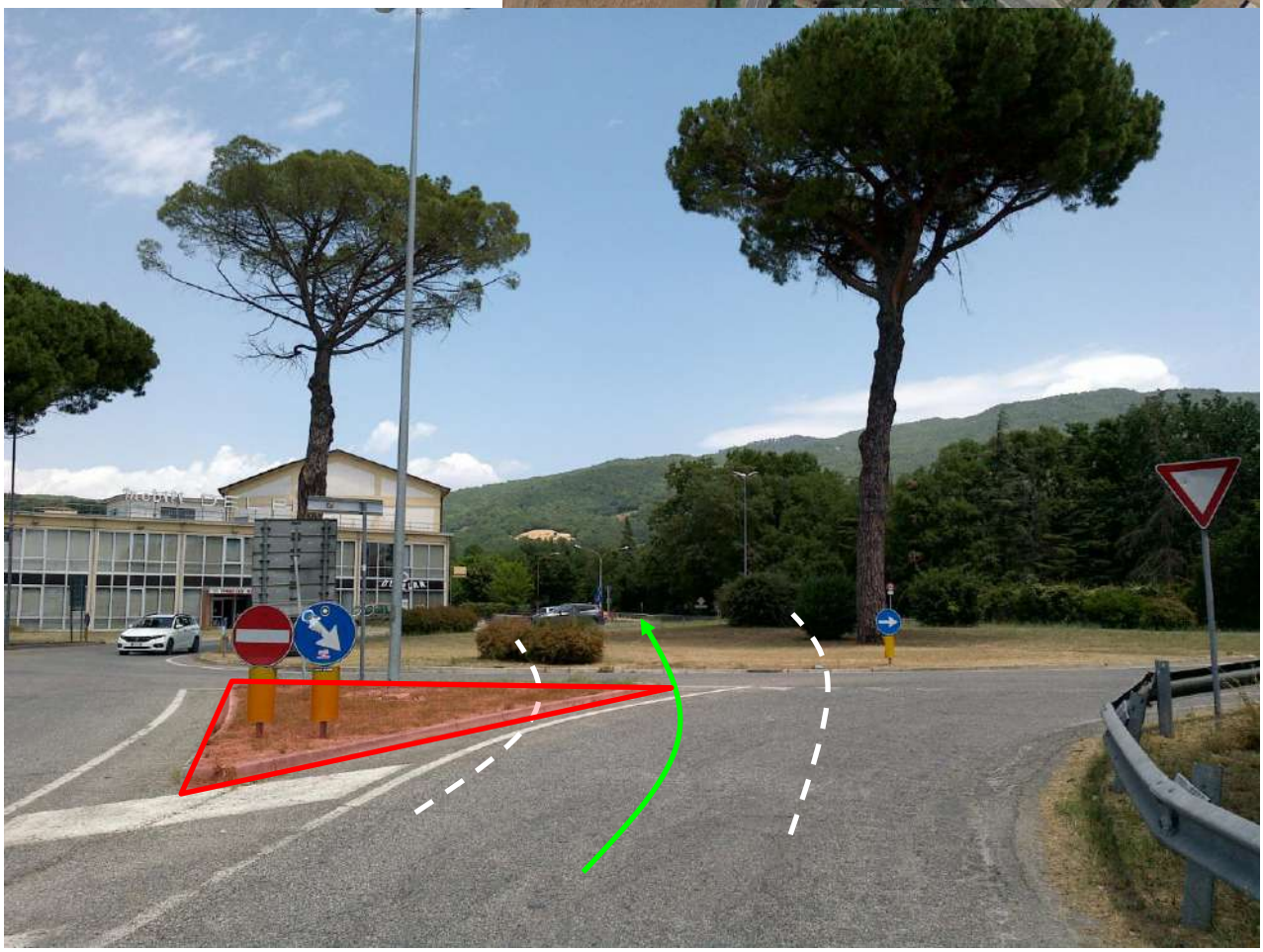




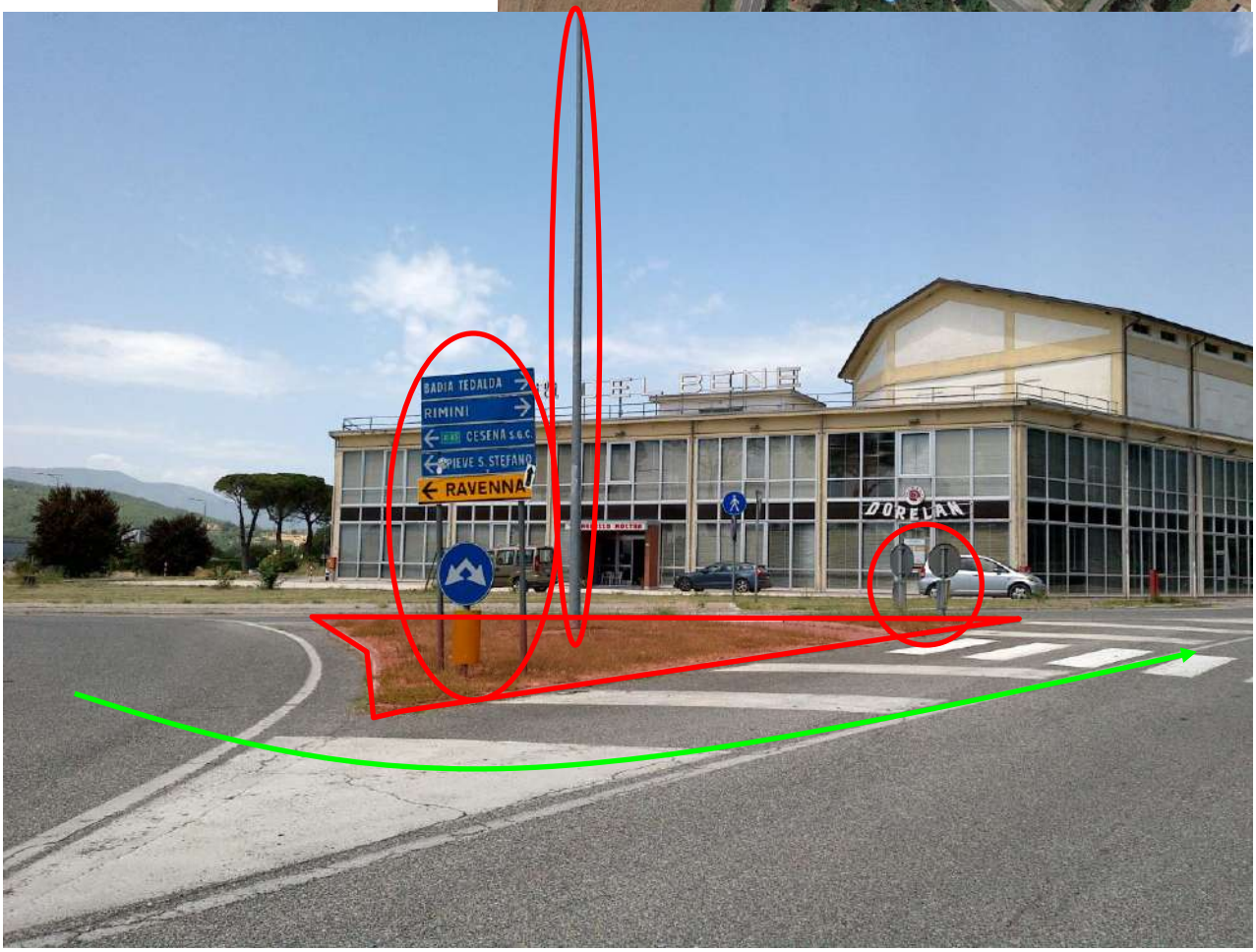
Observation 25
Take the road against traffic flow.
Traffic islands have to be made practicable.
Roundabout has to be widened and made accessible for 8x30m.
N 43.568336° E 12.123616°



Observation 26.01
By-pass into roundabout has to be created according to Siemens Gamesa guidelines.
Make practicable the traffic island, removing all obstacles on it.
N 43.580038° E 12.125286°



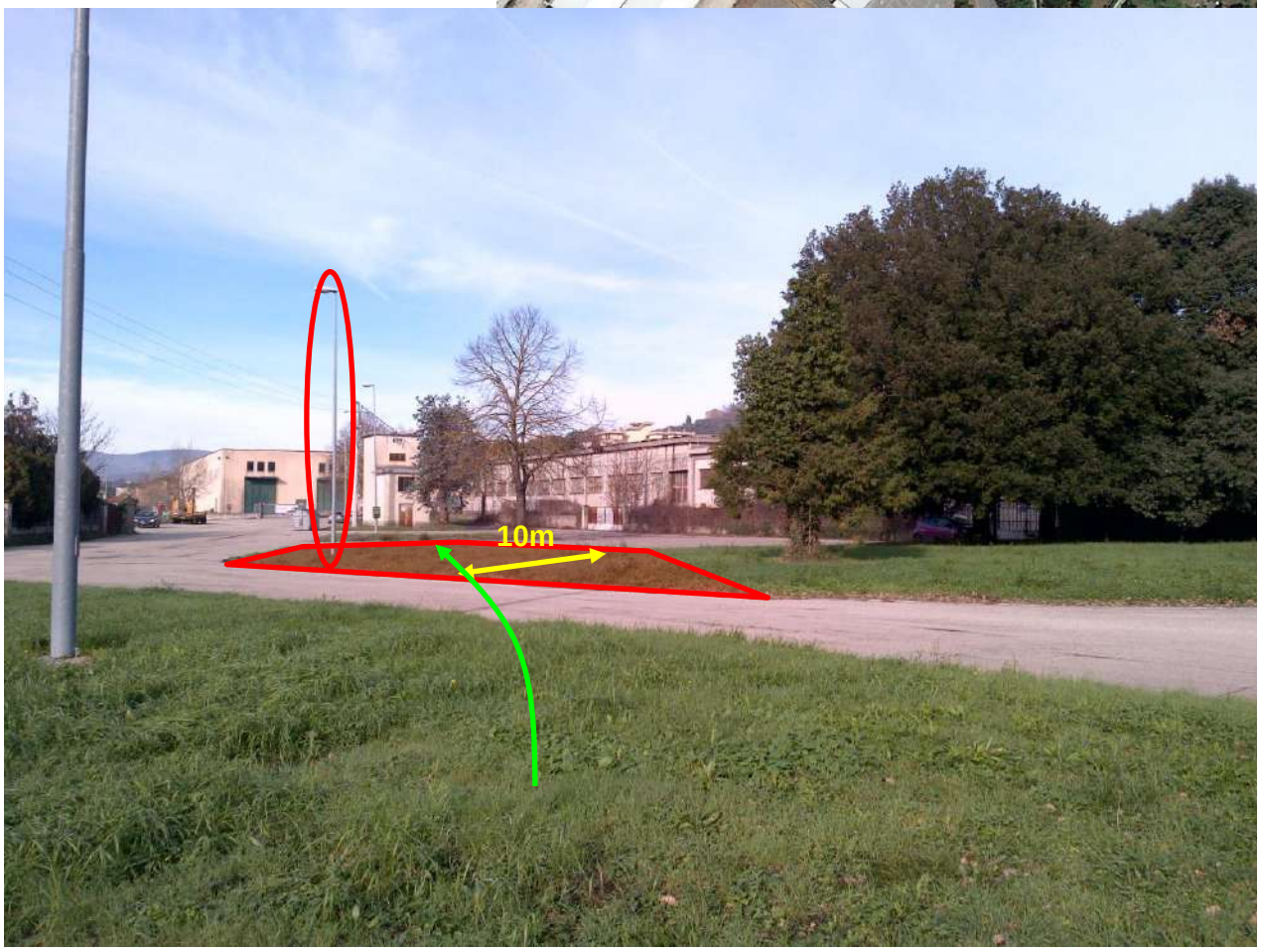
Observation 26.02
Traffic island has to be removed with road signs and lighting pole on it.
N 43.580613° E 12.125858°



Observation 27.01 – 1st option
Half traffic island has to be widened and made practicable.
No.2 road signs have to be removed.
N 43.582322° E 12.125161°

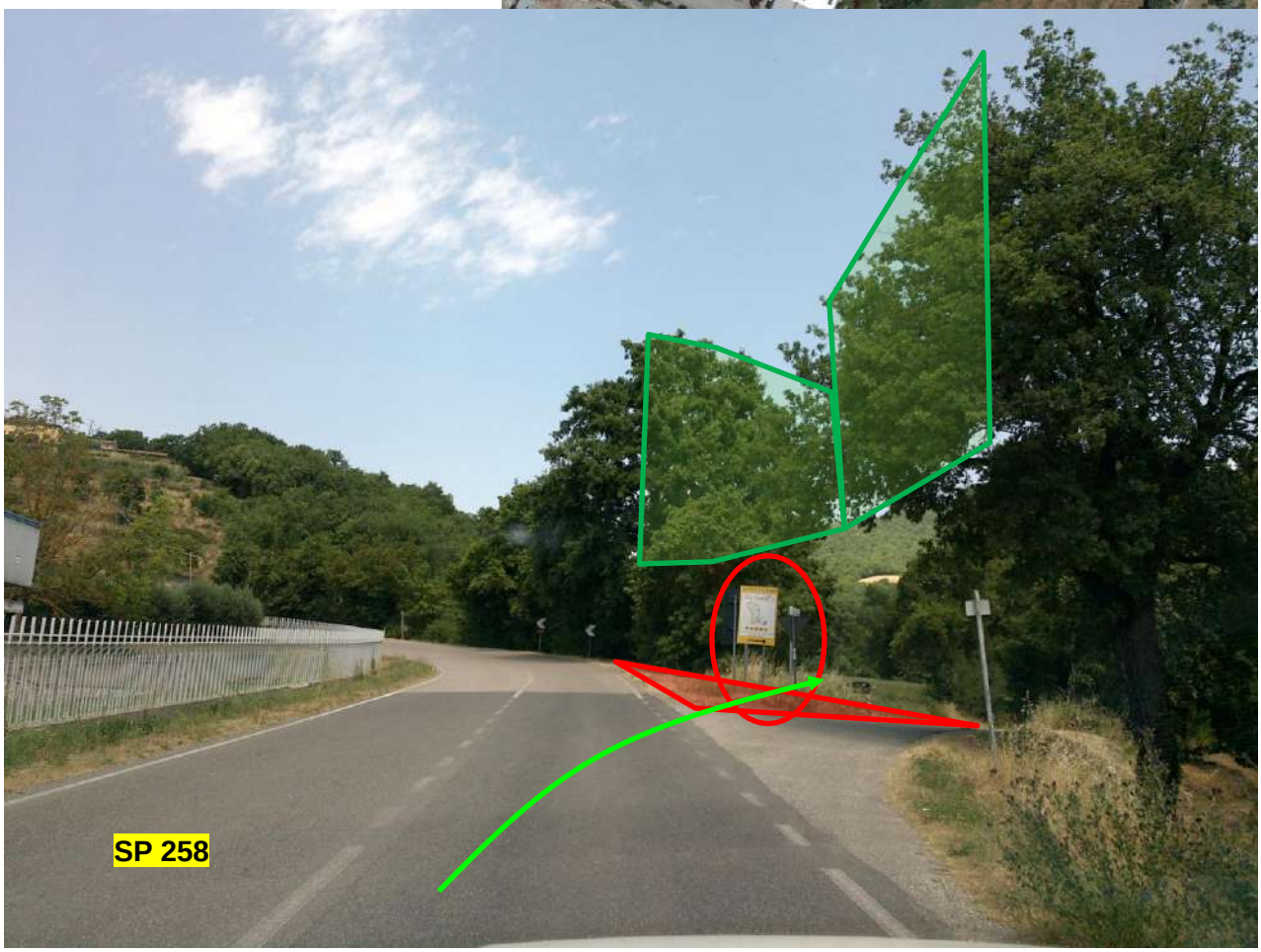
Observation 27.02 – 1st option
Half traffic island has to be widened and made practicable.
No.1 lighting pole has to be removed.
N 43.582263° E 12.125216°

Observation 27.03 – 1st option
Wide and make practicable the road for 10m.
No.1 lighting pole has to be removed.
N 43.582374° E 12.125277°



Observation 27.04 – 1st option
Make practicable the road and removing tree and lighting pole.
N 43.582416° E 12.124922°

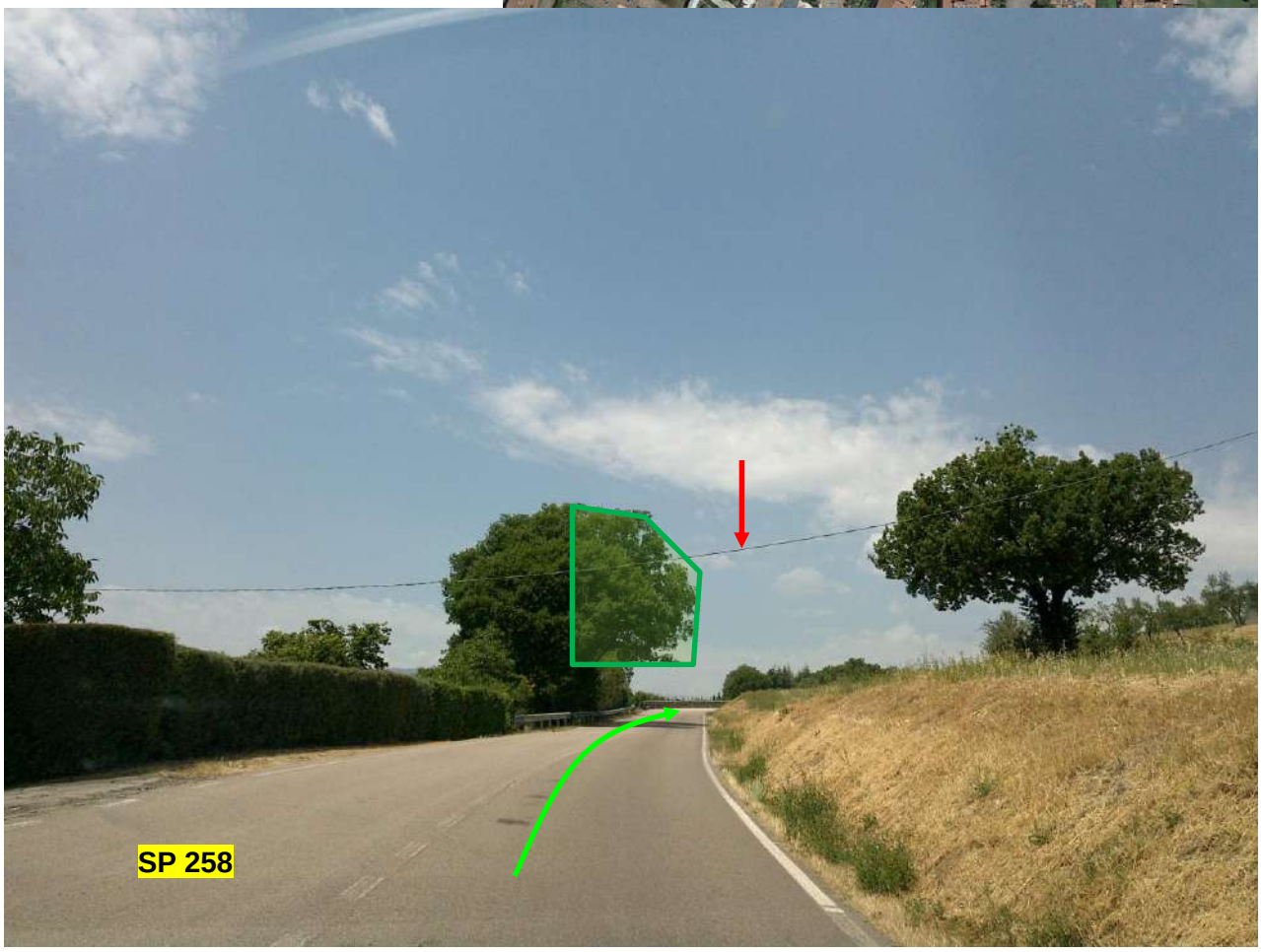
Observation 27.01 – 2nd option
Entry into transshipment area.
Widen and made accessible as shown.
N 43.584969° E 12.125402°



Observation 27.02 – 2nd option
Transshipment area.
N 43.585433° E 12.125566°

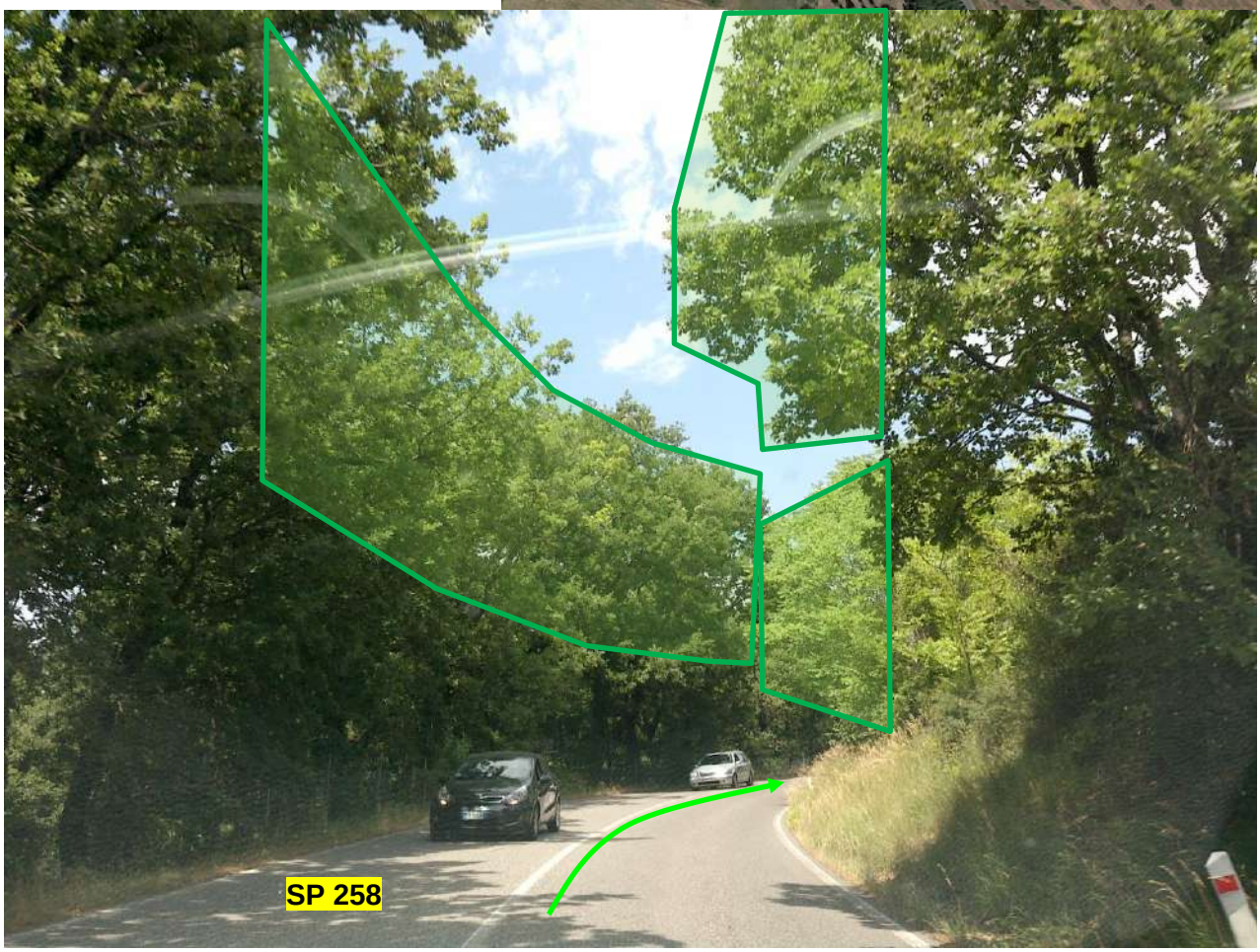
Observation 27.03 – 2nd option
Exit from transshipment area with modular trailers and blade lifter.
N 43.585758° E 12.125272°

Observation 28
Cable has to be buried.
Tree branches jutting out on the road on the left side have to be cut.
N 43.586094° E 12.122624°

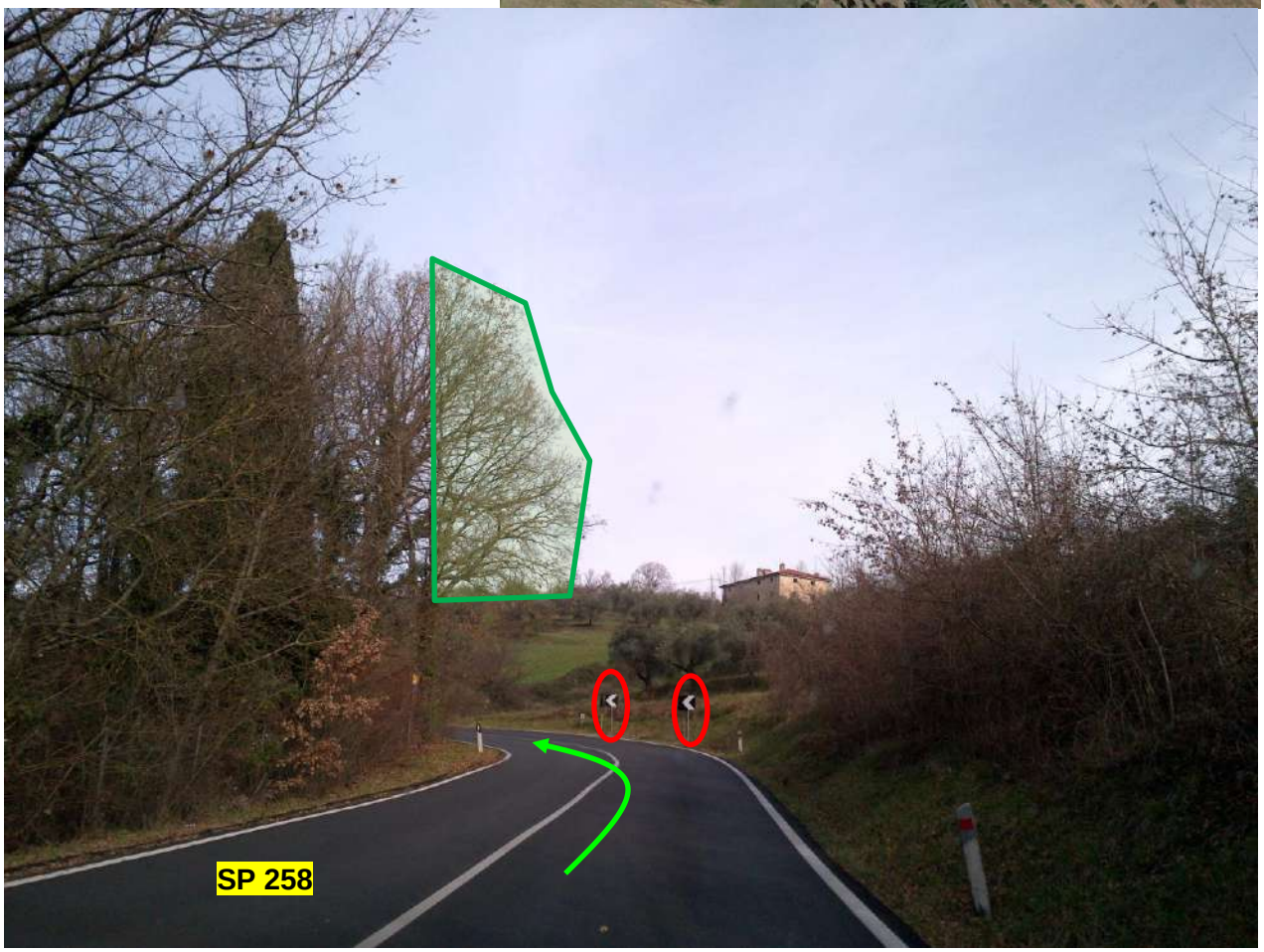


Observation 29
Tree branches jutting out on the road on both sides have to be cut.
N 43.588716° E 12.117236°

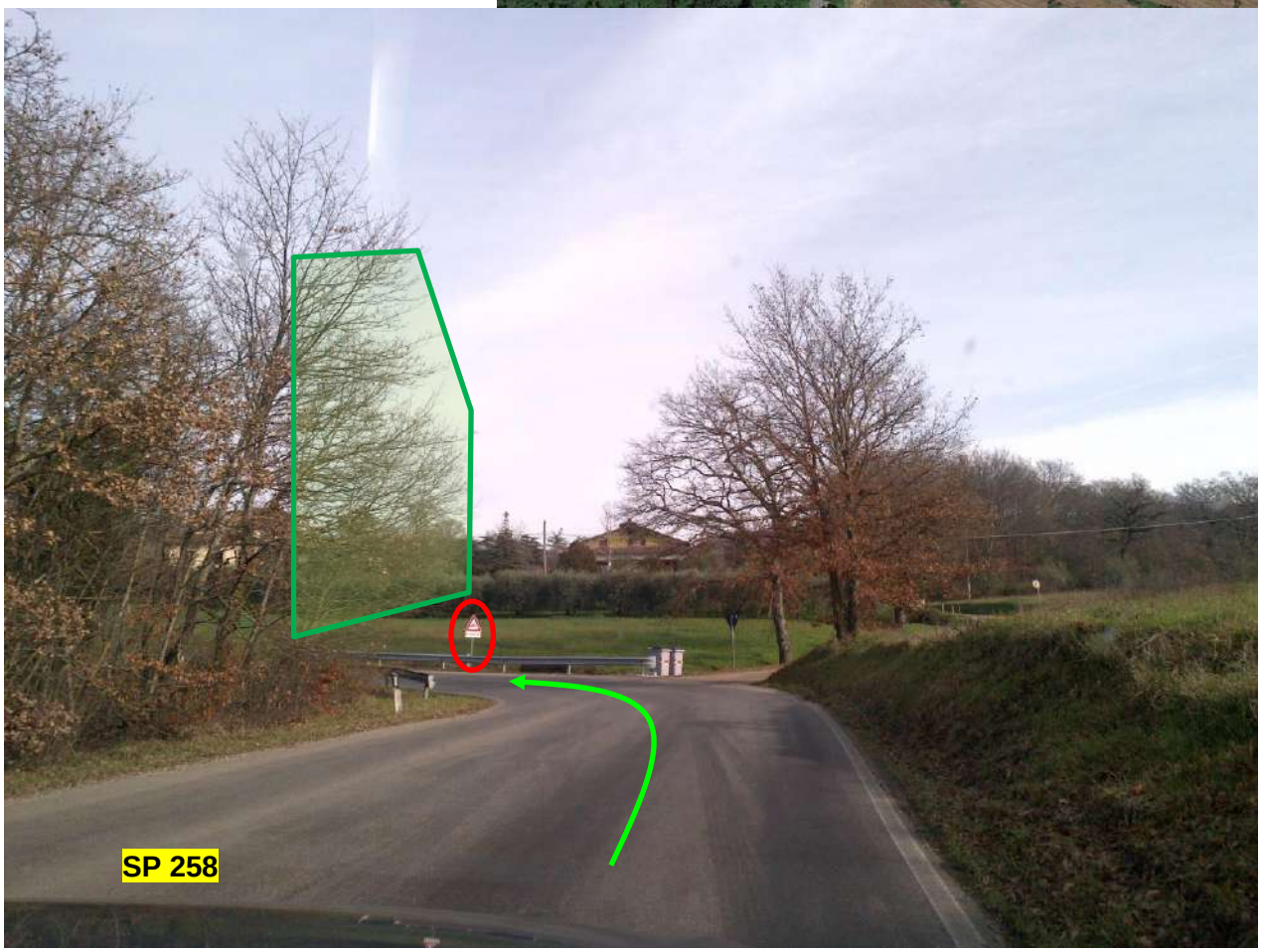
Observation 30.01
Tree branches jutting out on the road on both sides have to be cut.
N 43.589997° E 12.115708°



Observation 30.02
No.2 road signs have to be removed.
Tree branches jutting out on the road have to be cut.
N 43.590911° E 12.115408°



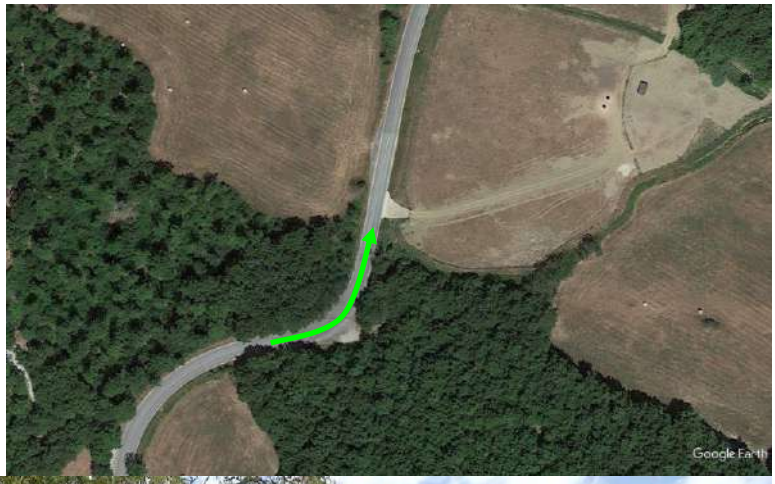
Observation 31
No.1 road sign has to be removed.
Tree branches jutting out on the road have to be cut.
N 43.593174° E 12.113383°



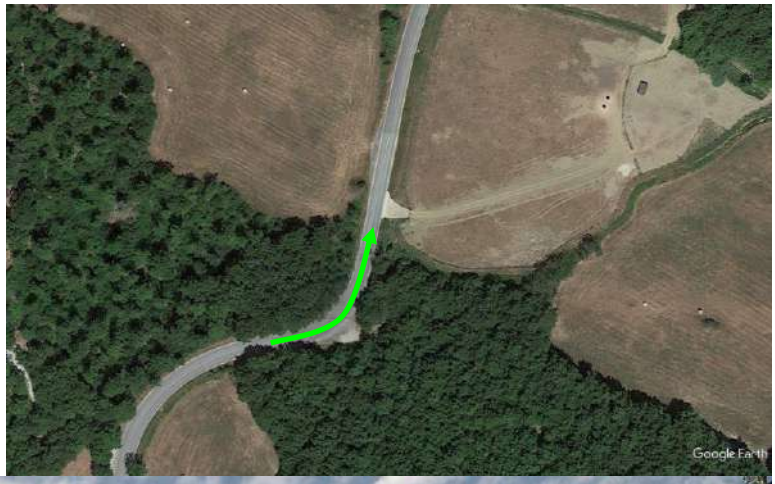
Observation 32
No.2 cables have to be buried.
N 43.594627° E 12.112516°

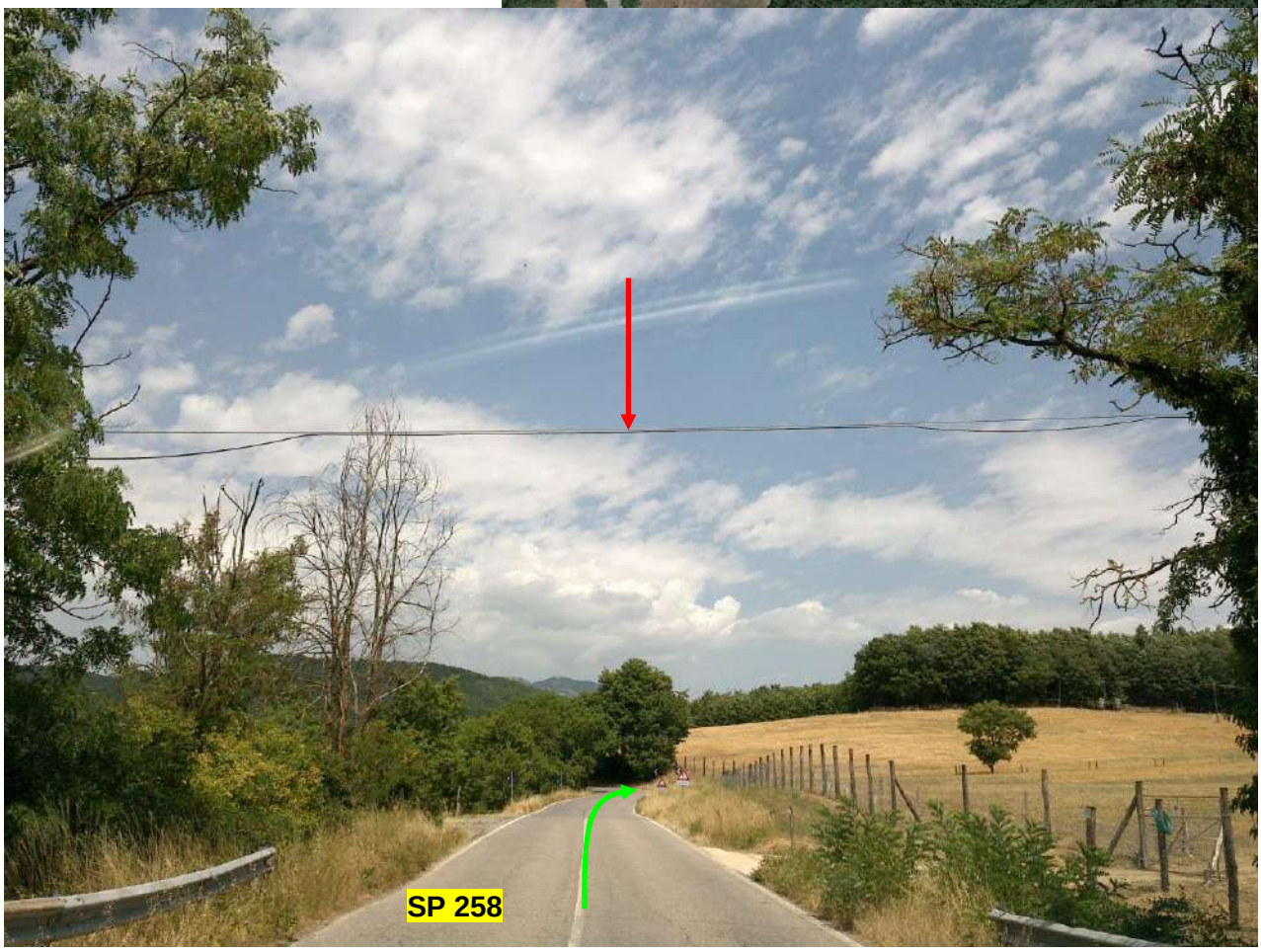
Observation 33
Vegetation on the left side has to be cut.
No.1 road sign has to be removed.
N 43.596002° E 12.110405°

Observation 34.01
Vegetation has to be cut.
N 43.603213° E 12.108091°

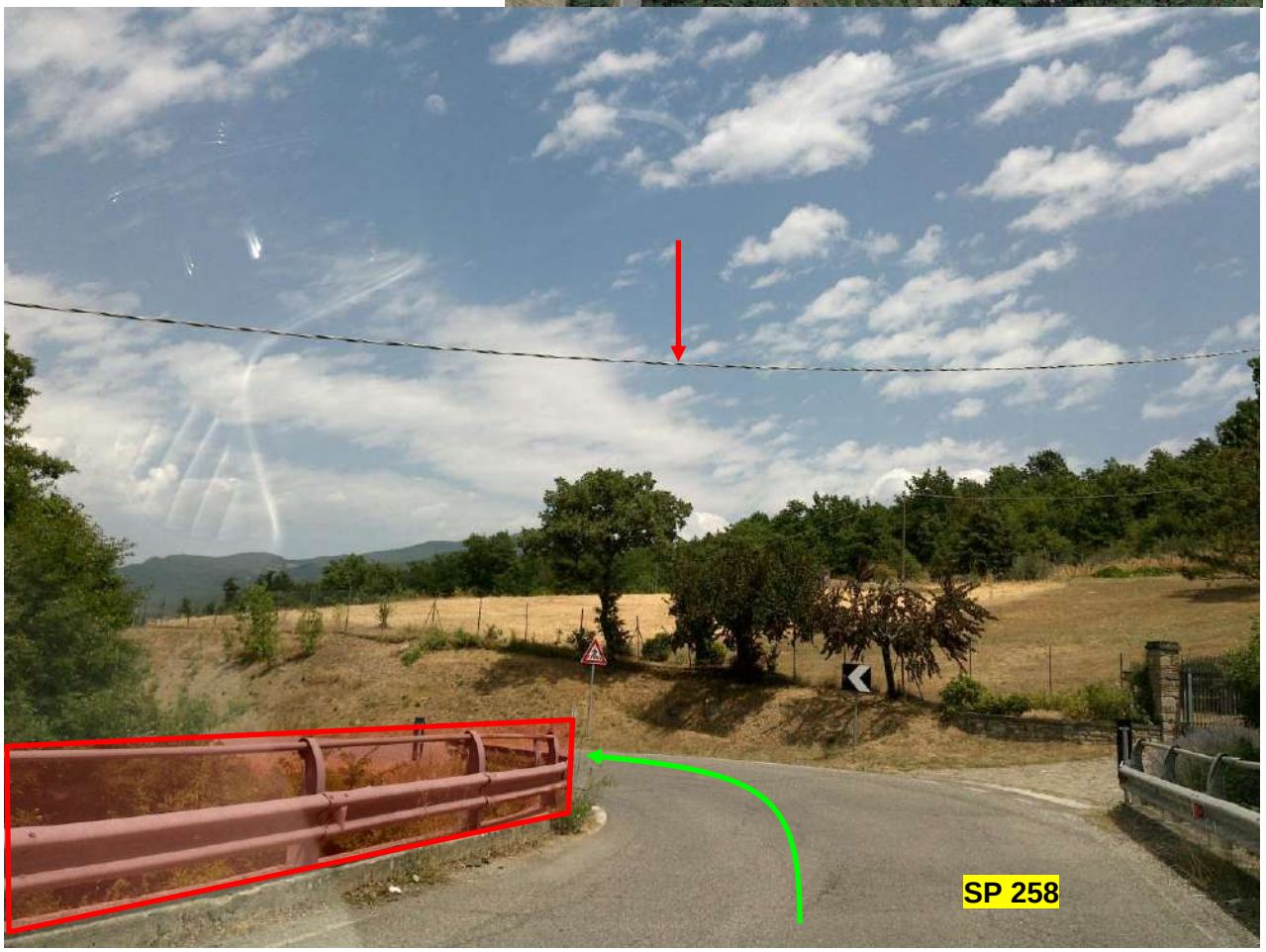


Observation 34.02
No.1 cable has to be buried.
N 43.603272° E 12.108261°





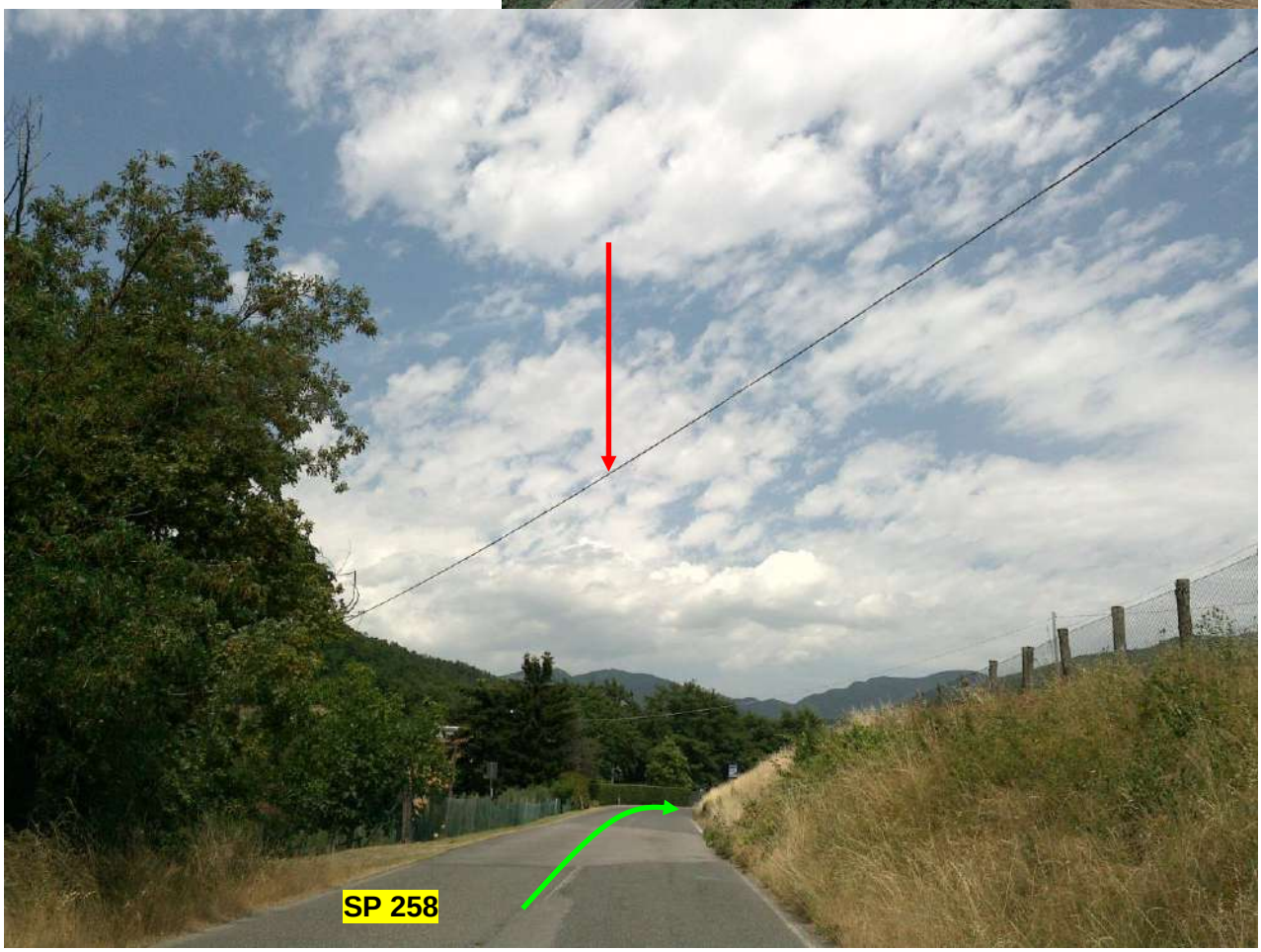
Observation 35.01
Cable has to be buried.
Guardrail on the left side has to be removed.
N 43.608630° E 12.110541°



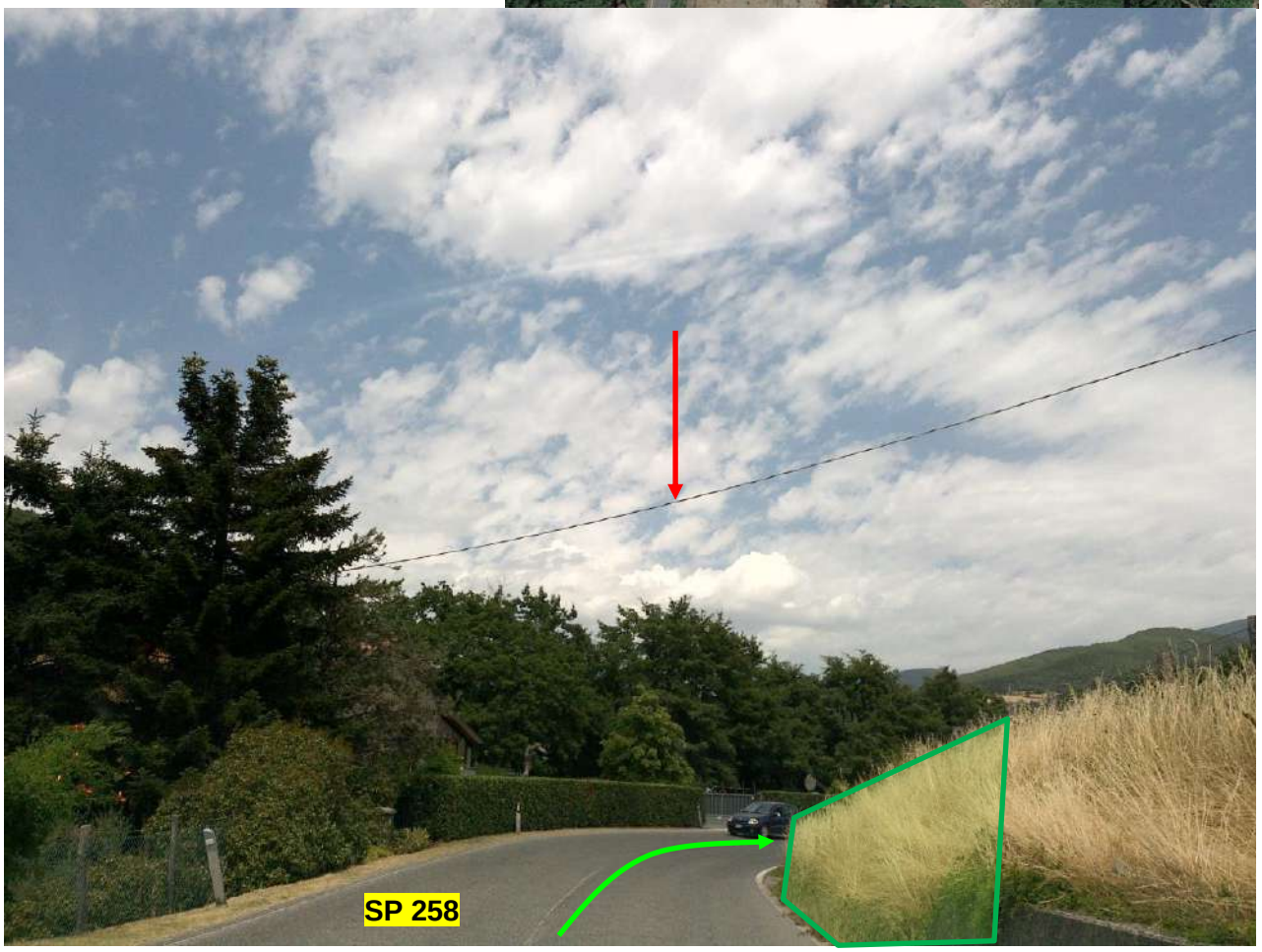
Observation 35.02
The maximum bearing capacity of the bridge has to be checked.
N 43.608722° E 12.110711°

Observation 36
No.1 road sign has to be removed.
N 43.612616° E 12.113786°

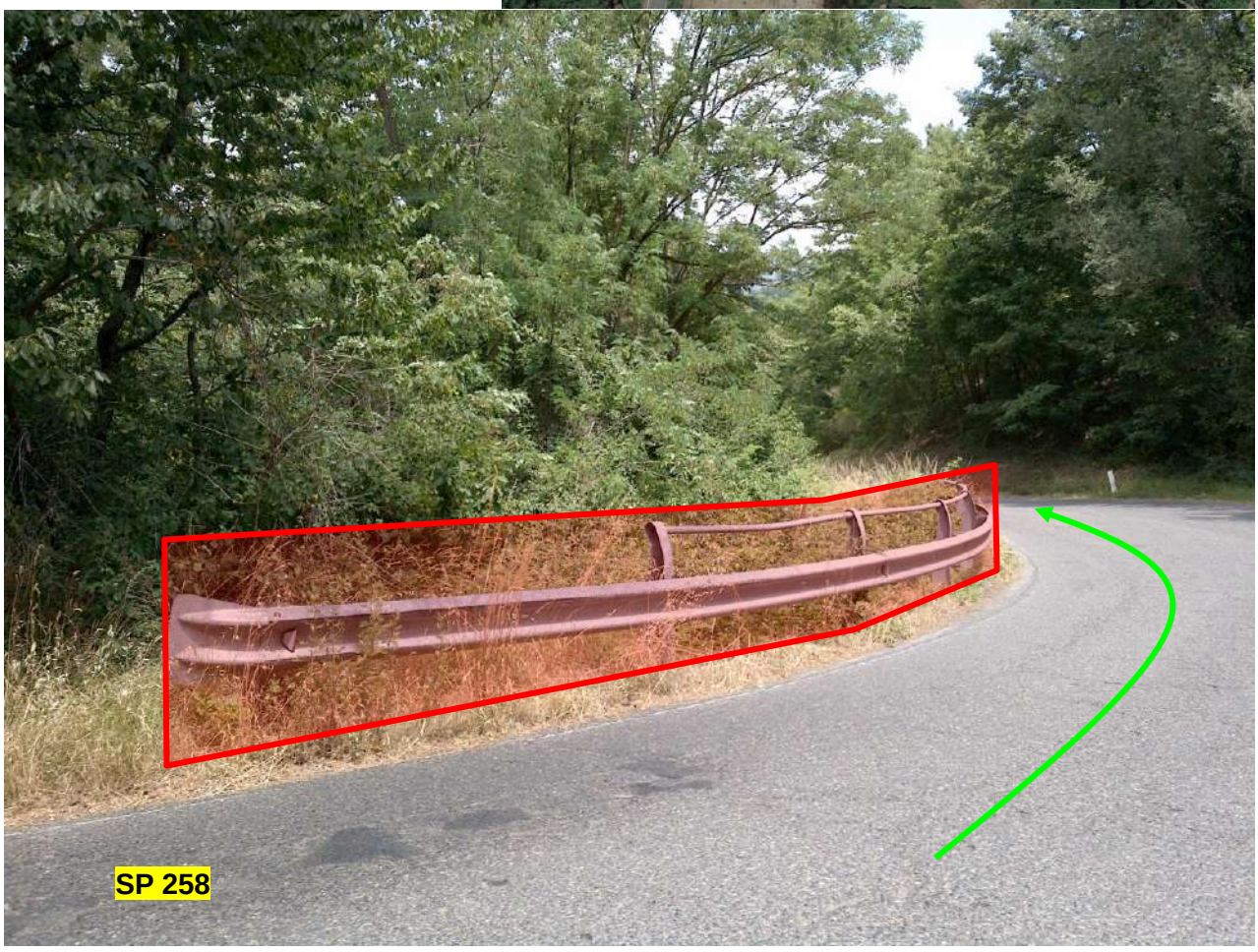
Observation 37
No.1 cable has to be buried.
N 43.613188° E 12.114736°



Observation 38
No.1 cable has to be buried.
Vegetation on the right side has to be cut for entire curving radius.
N 43.613730° E 12.114850°



Observation 39.01
Guardrail has to be removed.
N 43.614186° E 12.115936°

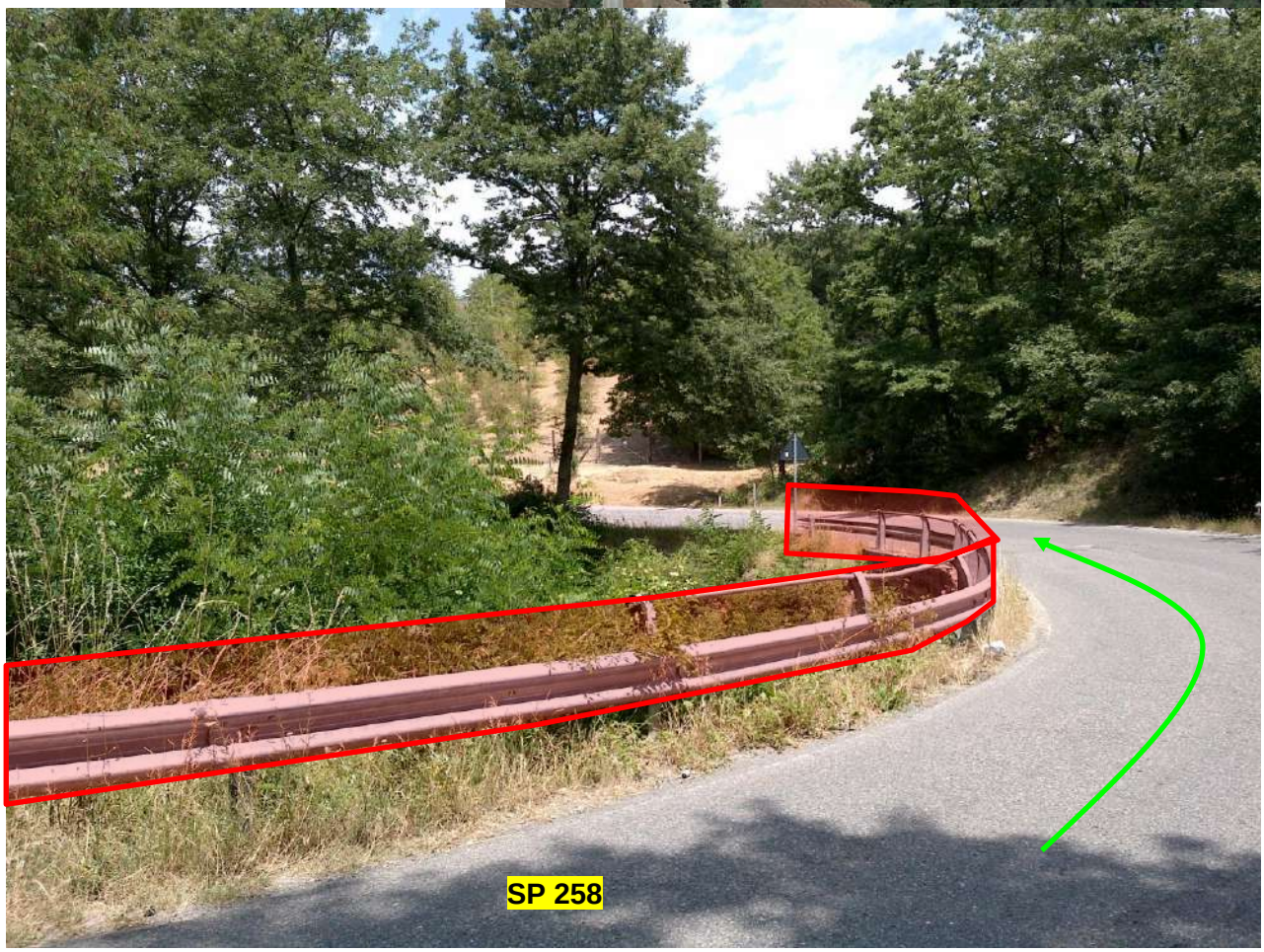


Observation 39.02
The maximum bearing capacity of the bridge has to be checked.
N 43.614211° E 12.116183°

Observation 40
No.1 three-wire cable has to be buried.
N 43.616086° E 12.117658°

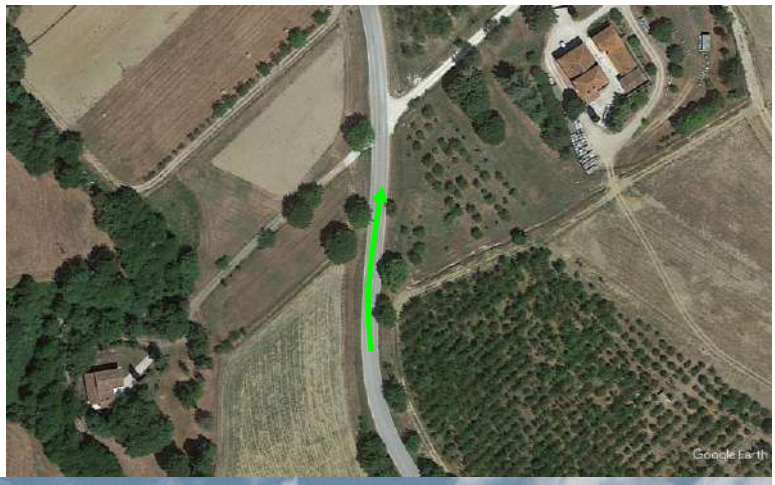
Observation 41.01
Widen and make accessible on the right side for 3x30m.
N 43.616188° E 12.118738°

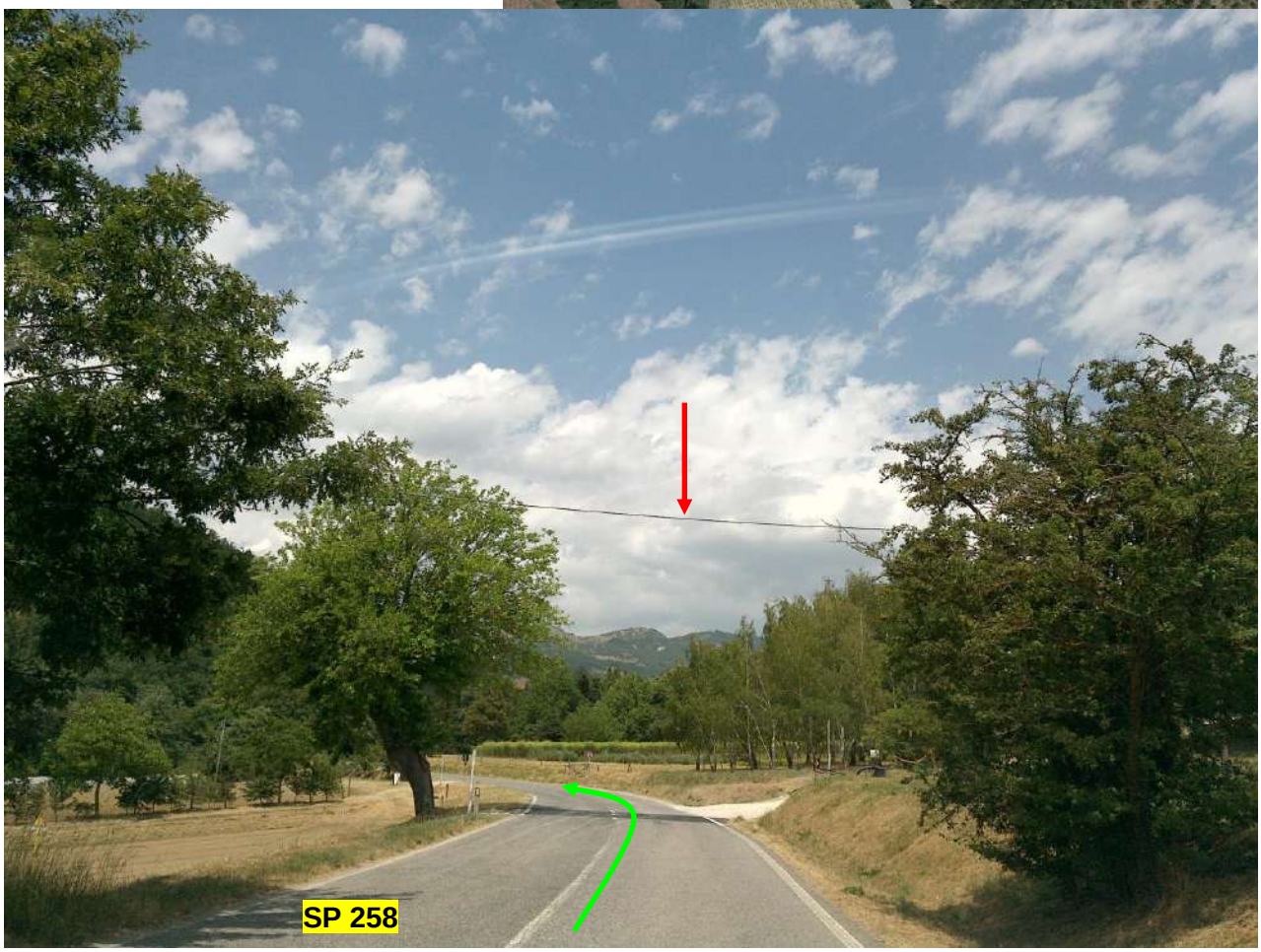
Observation 41.02
Guardrail on the left side has to be removed.
N 43.616147° E 12.118893°



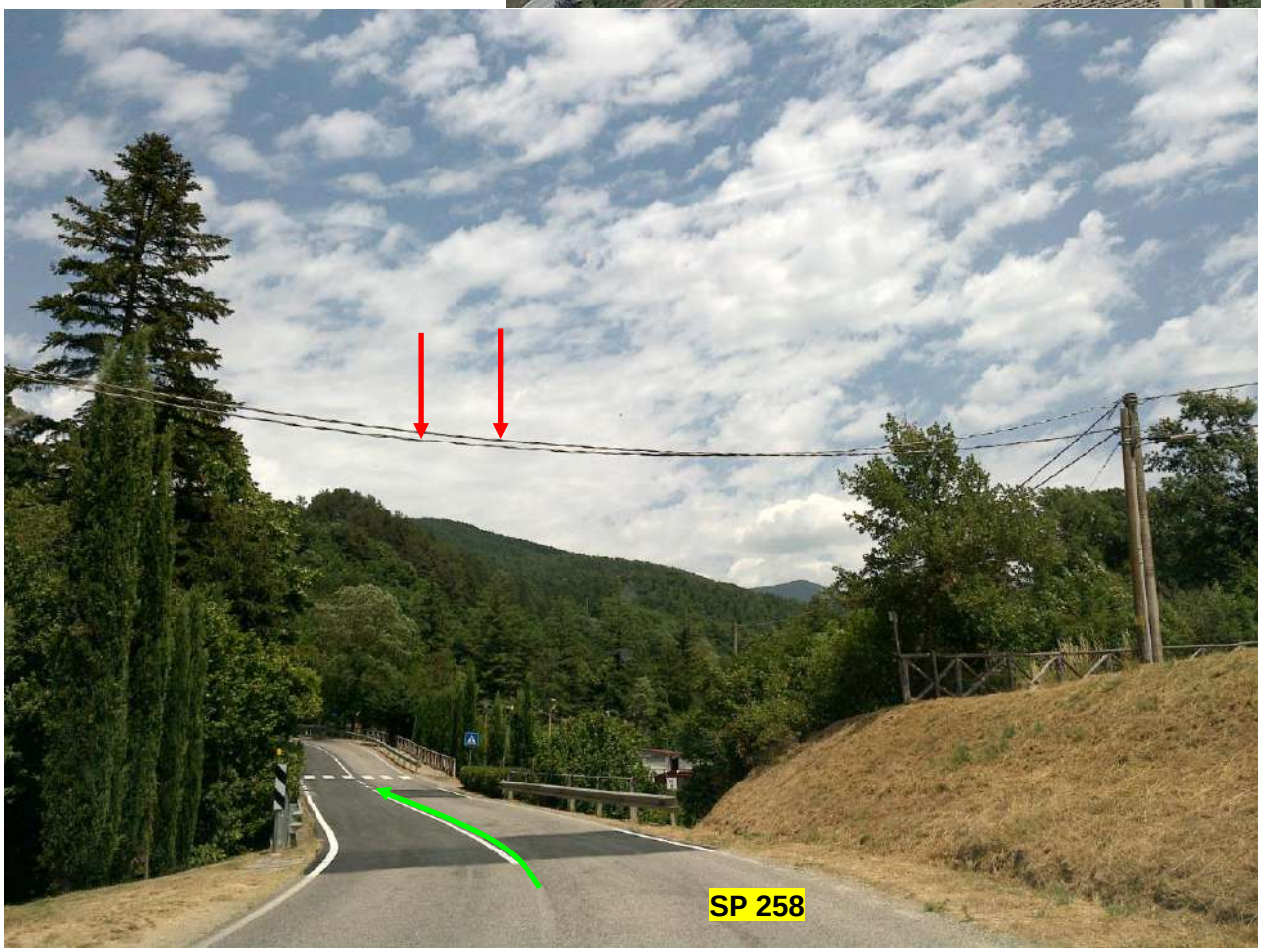
Observation 41.03
The maximum bearing capacity of the bridge has to be checked.
N 43.616391° E 12.119355°

Observation 42
No.1 cable has to be buried.
N 43.618099° E 12.117711°

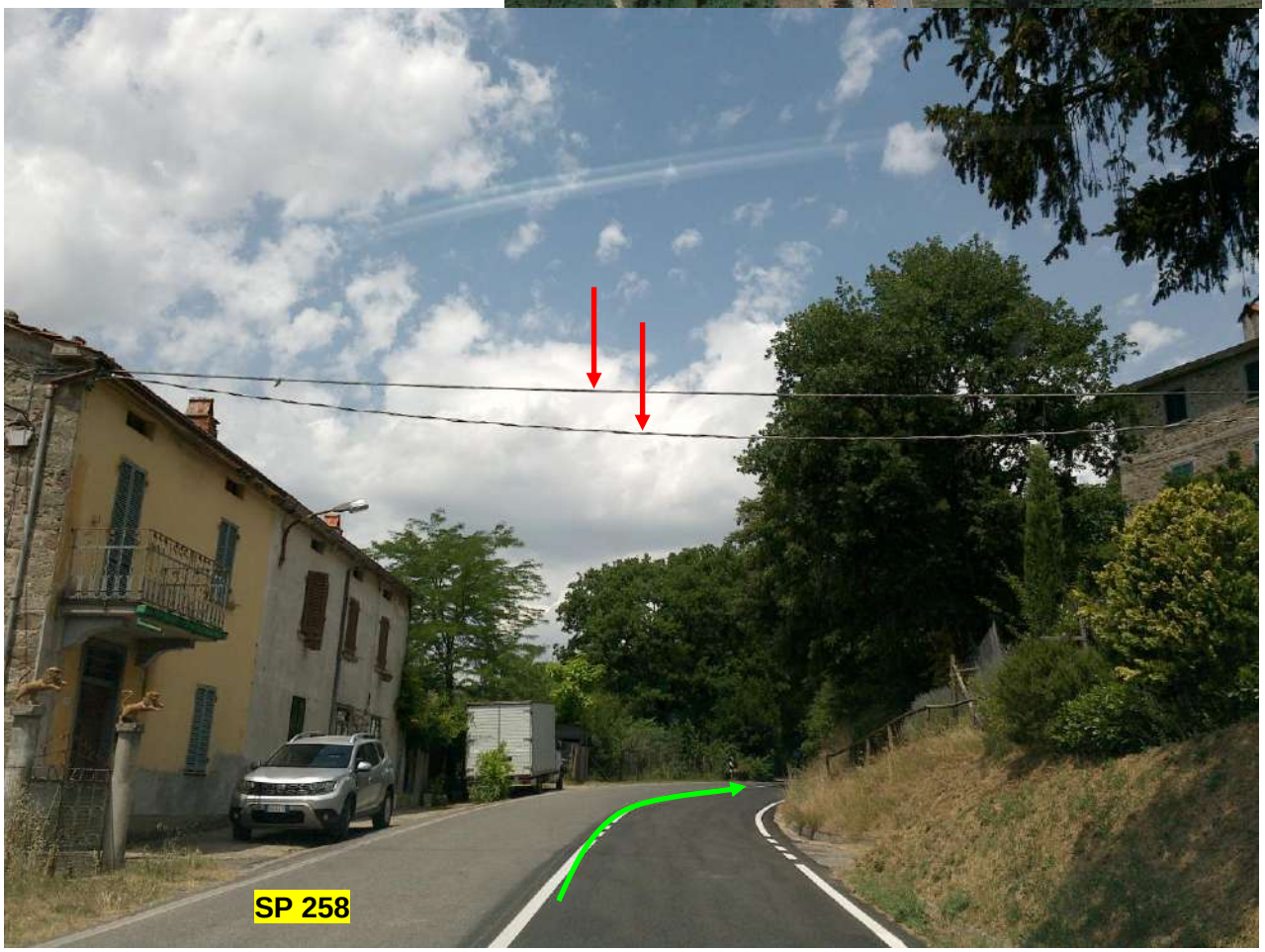




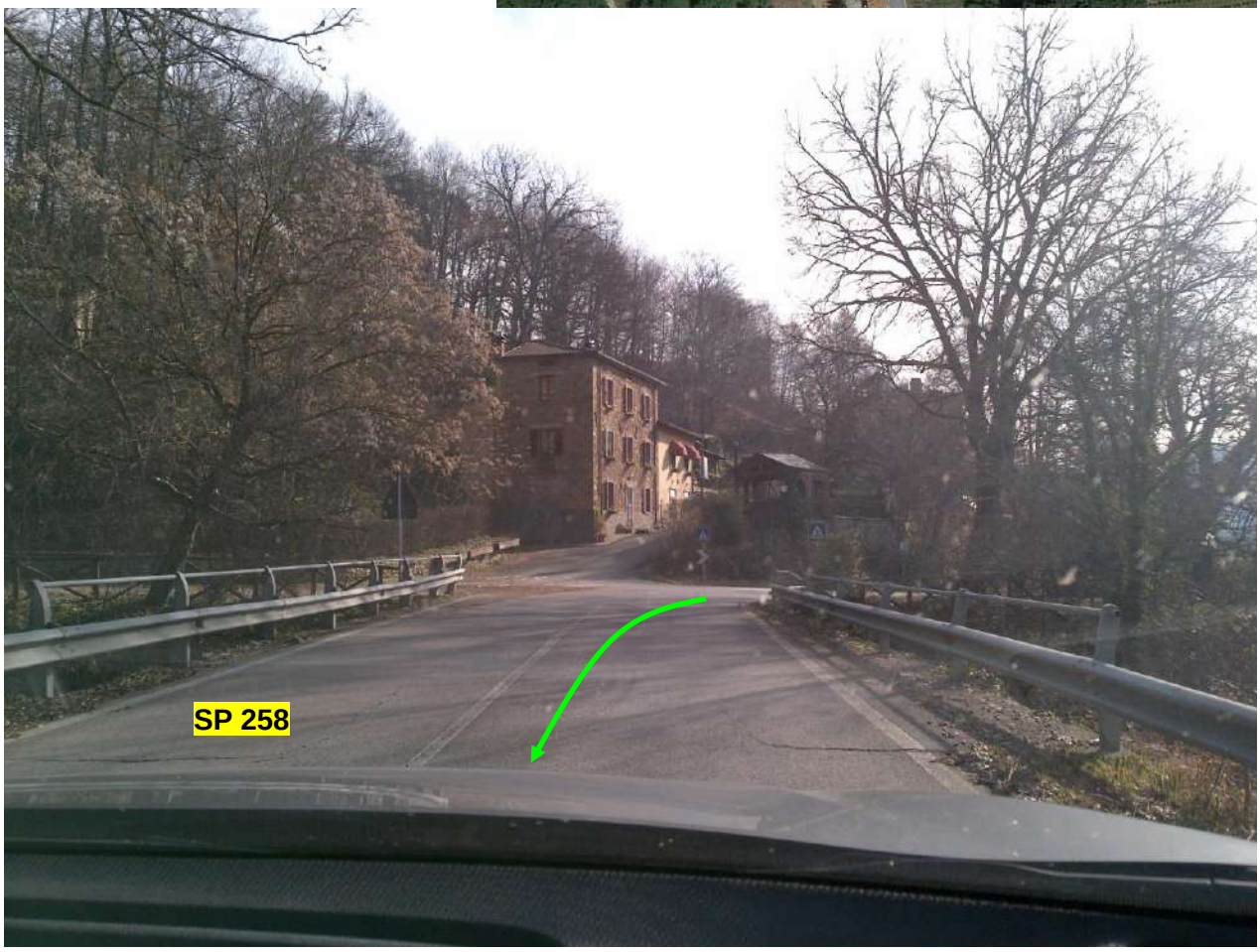
Observation 43
The maximum bearing capacity of the bridge has to be checked.
No.2 cables have to be buried.
N 43.620386° E 12.118224°



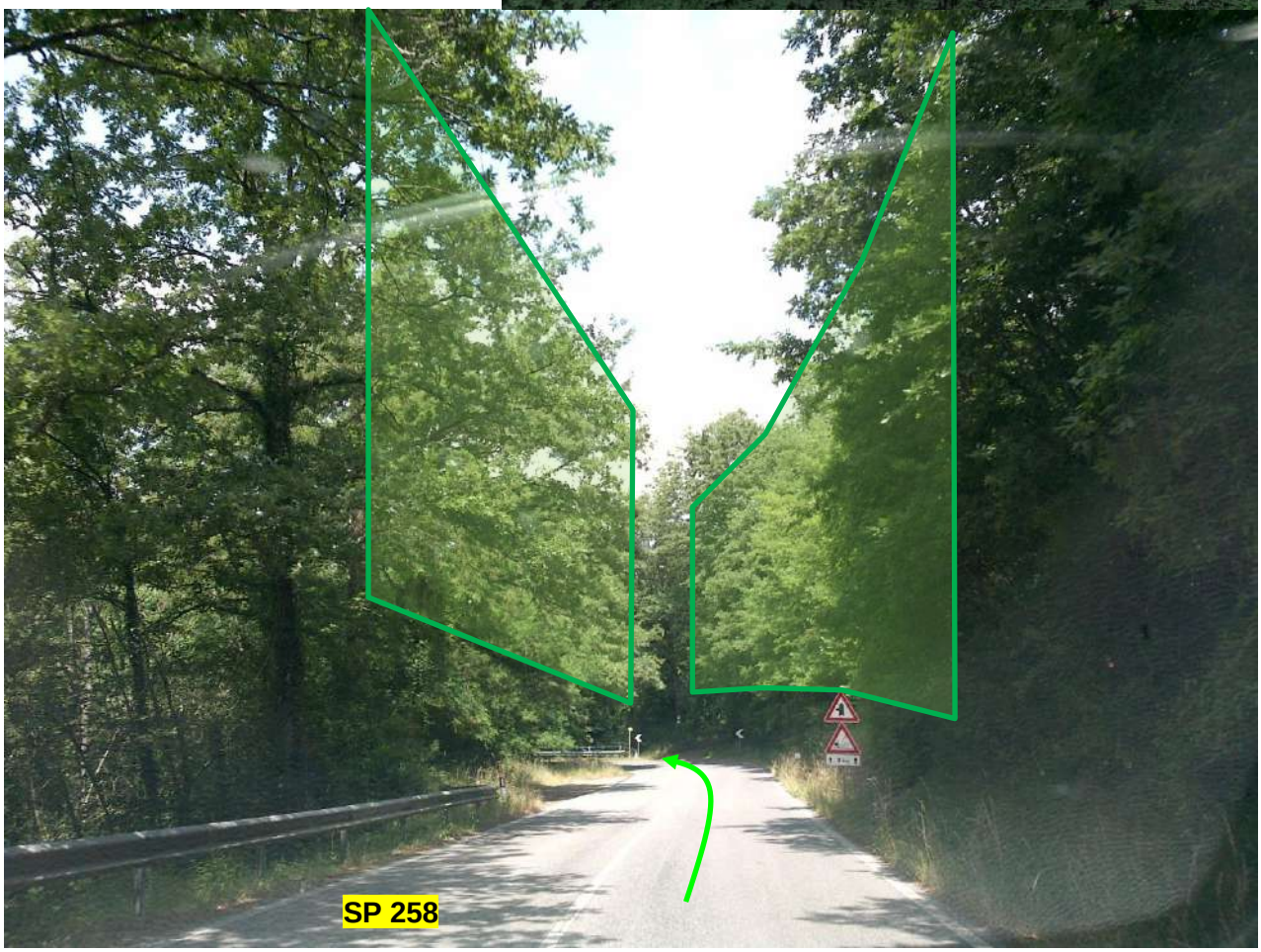
Observation 44
No.2 cables have to be buried.
N 43.625763° E 12.118799°



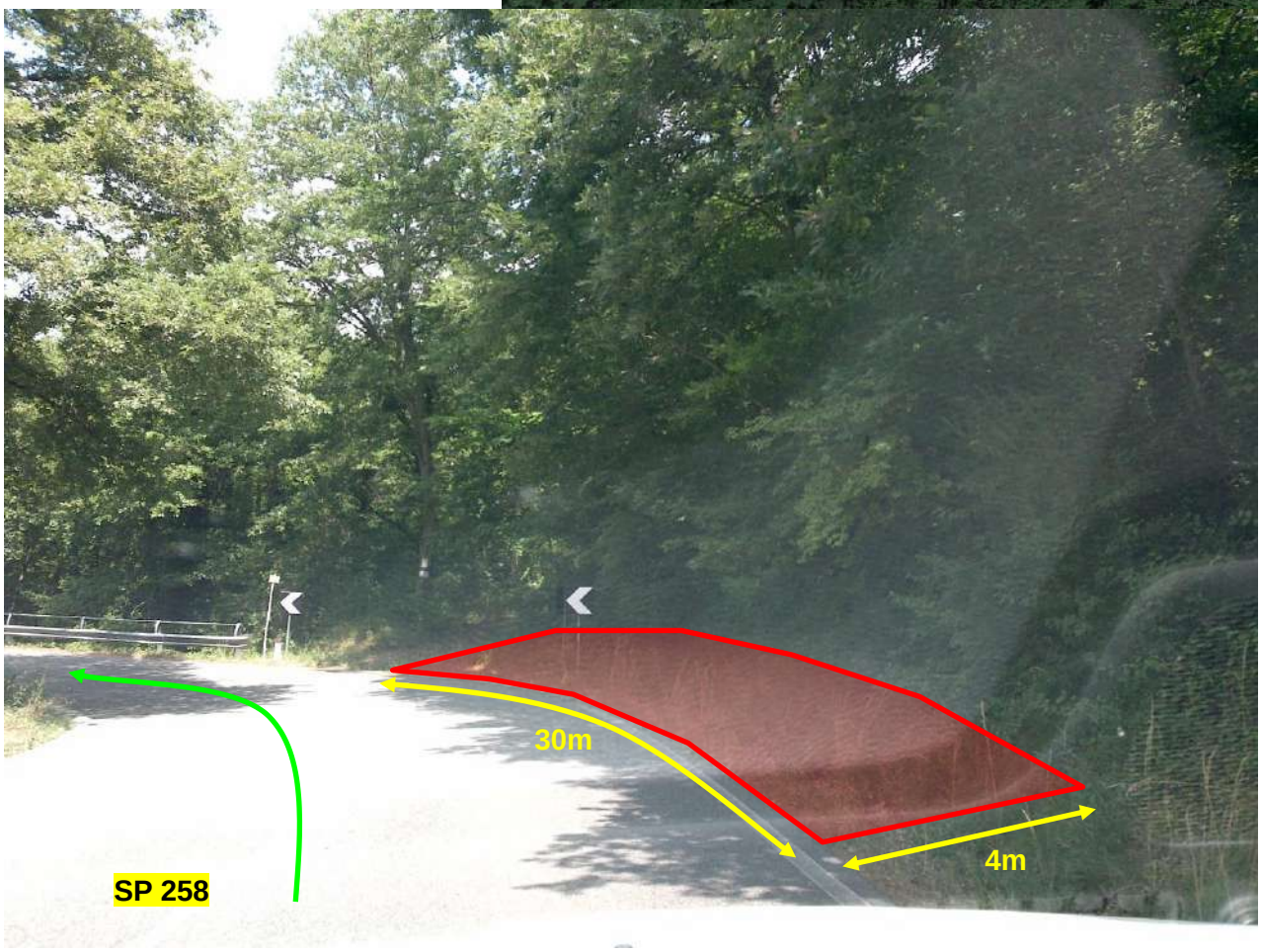
Observation 45
The maximum bearing capacity of the bridge has to be checked.
N 43.627024° E 12.118602°



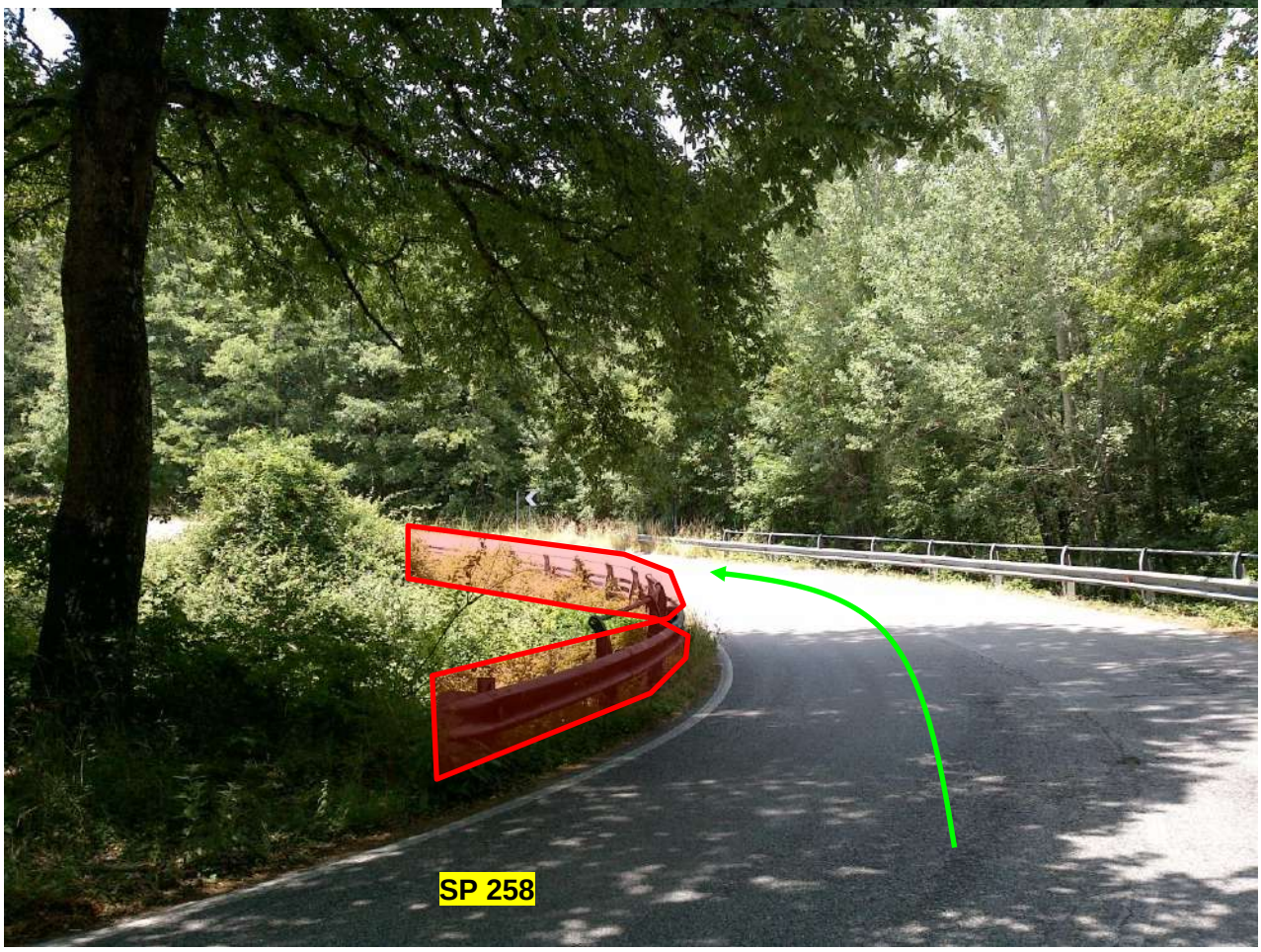
Observation 46
Tree branches jutting out on the road have to be cut.
N 43.630116° E 12.117038°



Observation 47.01
The road on the right side has to be widened and made accessible for 4x30m.
N 43.630638° E 12.117363°



Observation 47.02
The maximum bearing capacity of the bridge has to be checked.
Guardrail and vegetation on the left side have to be removed.
N 43.630788° E 12.117461°



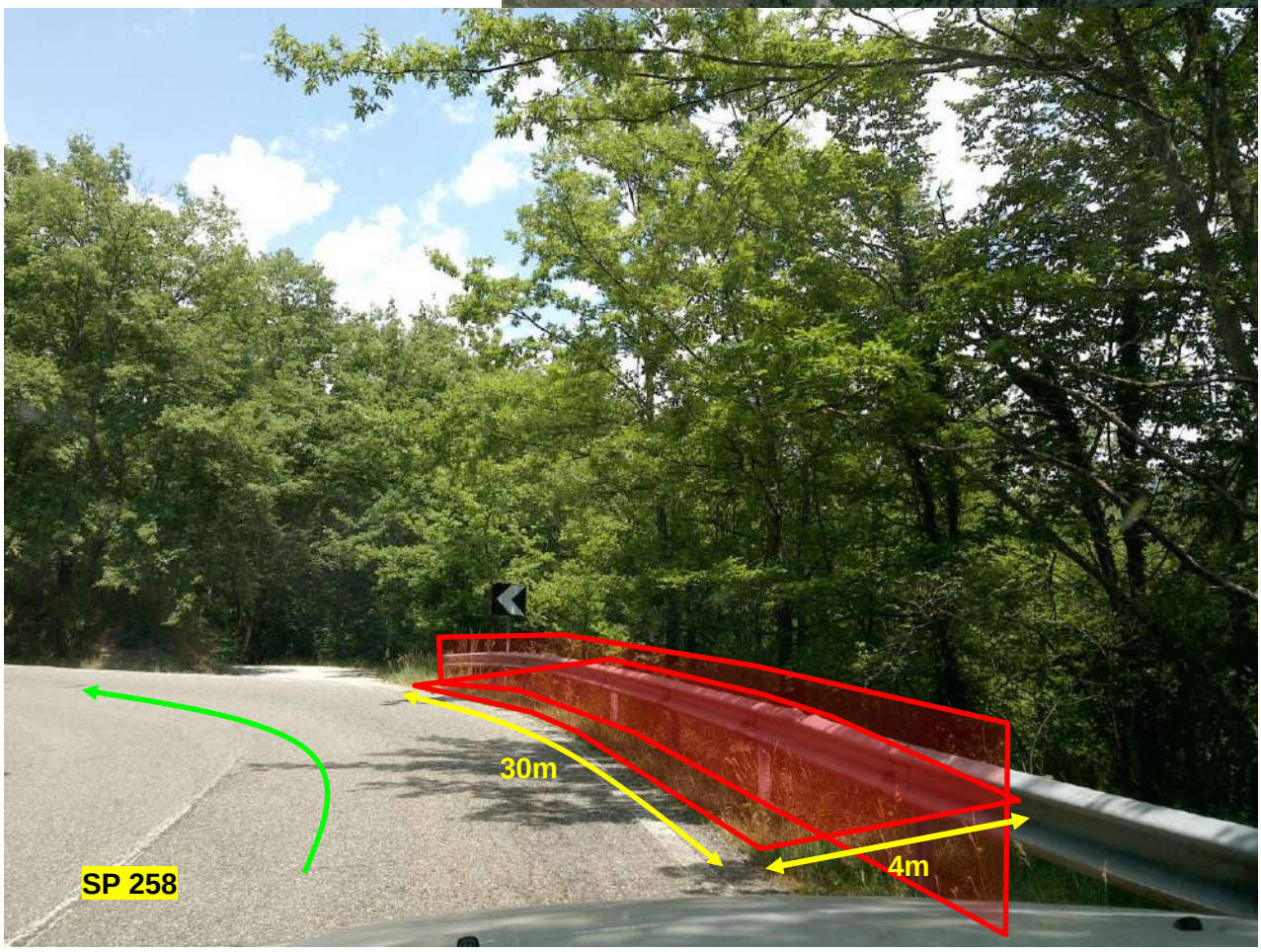
Observation 48

The road on the right side has to be widened and made accessible for 7 meters for entire curving radius.

Trees have to be removed.

N 43.630944° E 12.116802°

Observation 49.01
The road on the right side has to be widened and made accessible for 4x30m.
Guardrail has to be removed.
N 43.633449° E 12.117797°



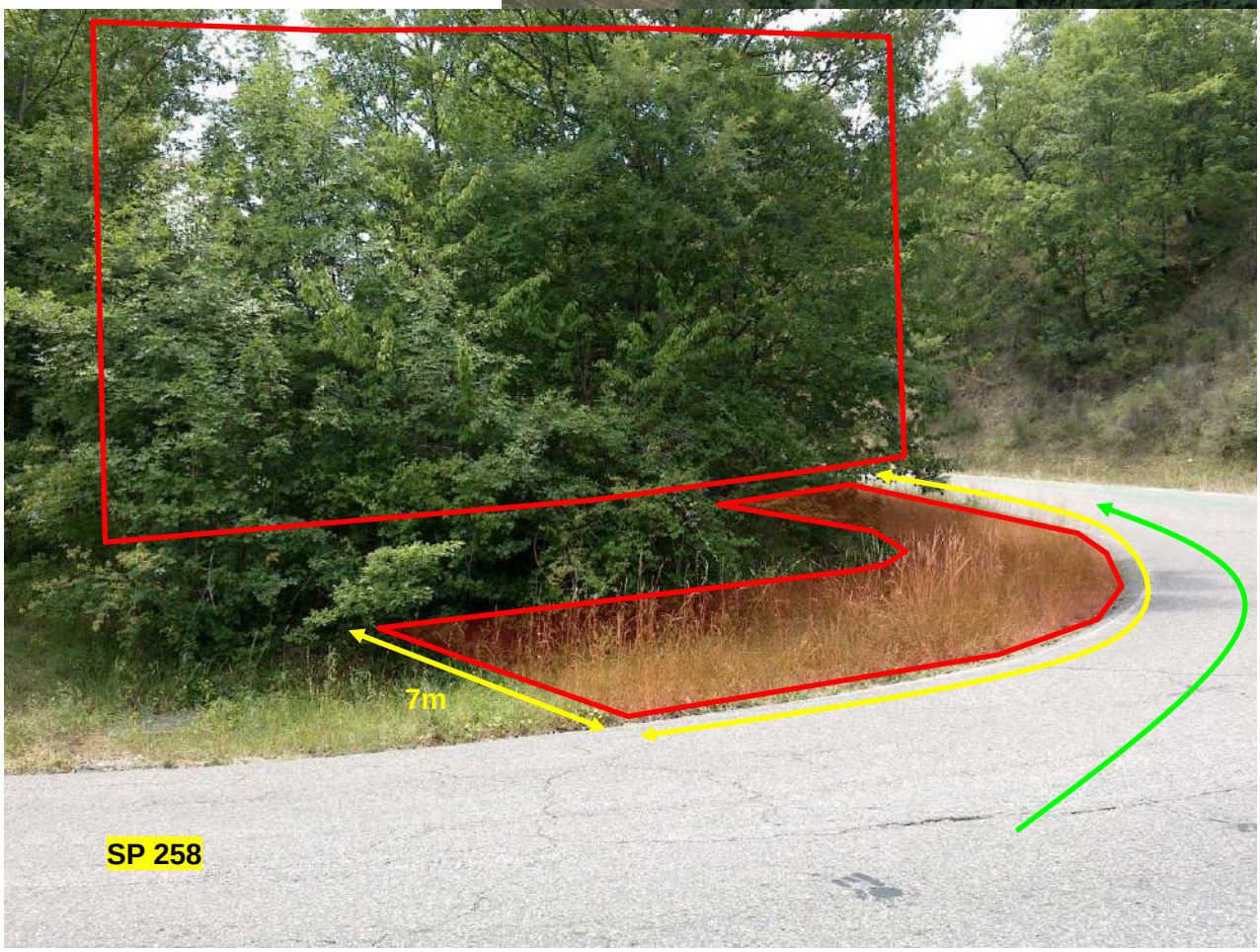
Observation 49.02
The road on the left side has to be widened and made accessible for 7 meters for entire curving radius.
N 43.633533° E 12.117849°

Observation 49.03

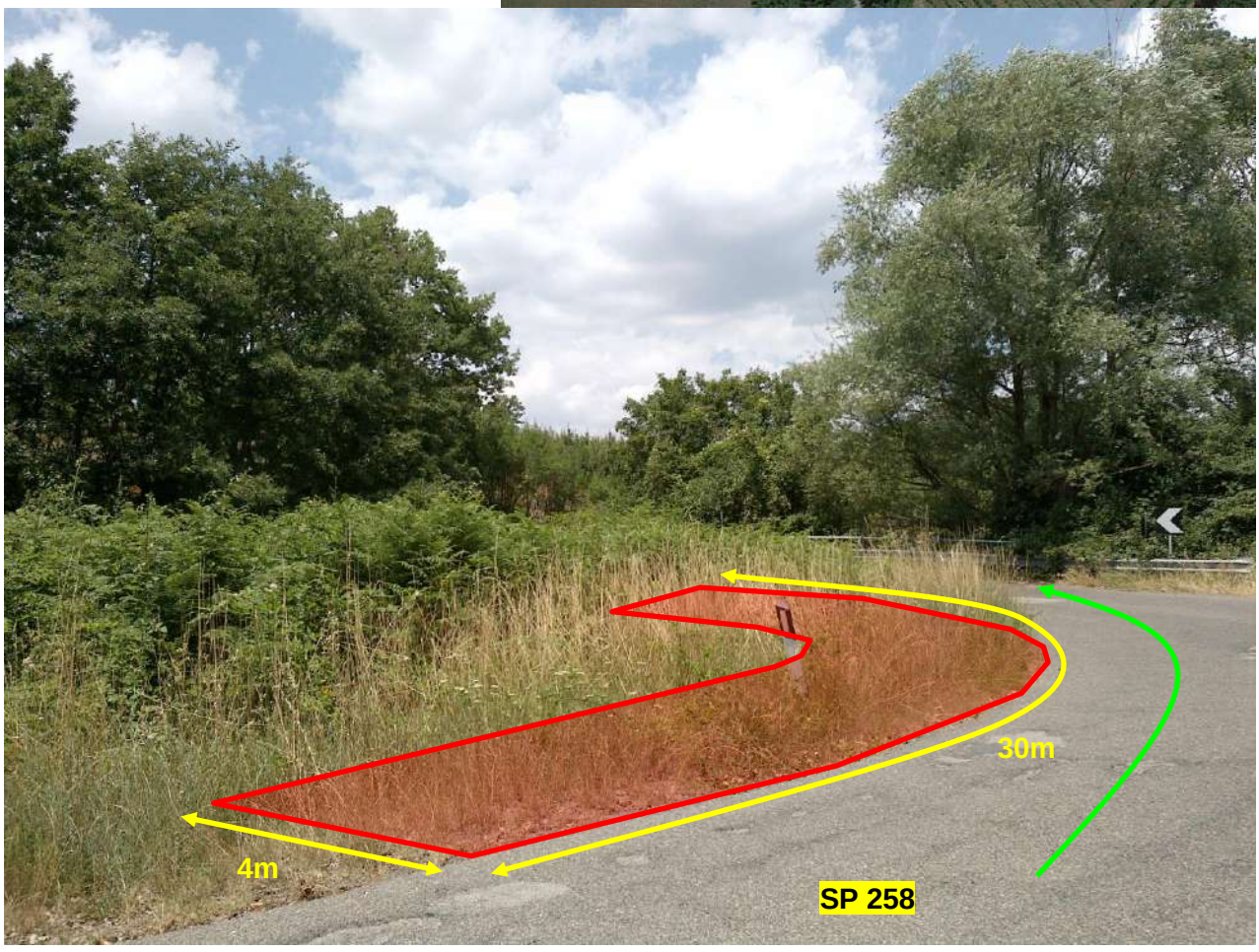
The road on the left side has to be widened and made accessible for 7 meters for entire curving radius.

Trees have to be removed.

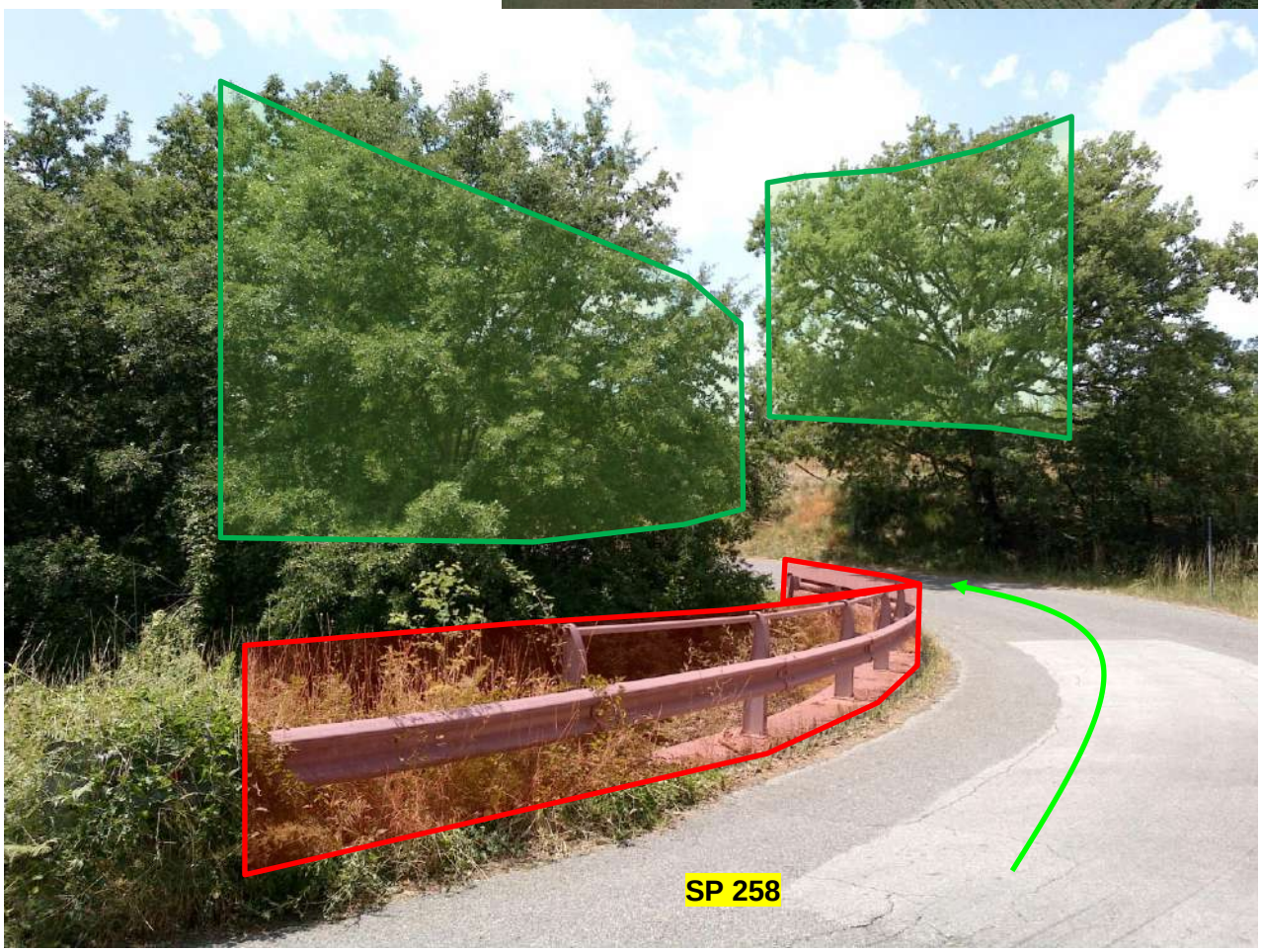
N 43.633716° E 12.117911°



Observation 50.01
The road on the left side has to be widened and made accessible for 4x30m.
N 43.635602° E 12.114197°



Observation 50.02
Guardrail has to be removed.
Tree branches jutting out on the road on both sides have to be cut.
N 43.635830° E 12.114202°

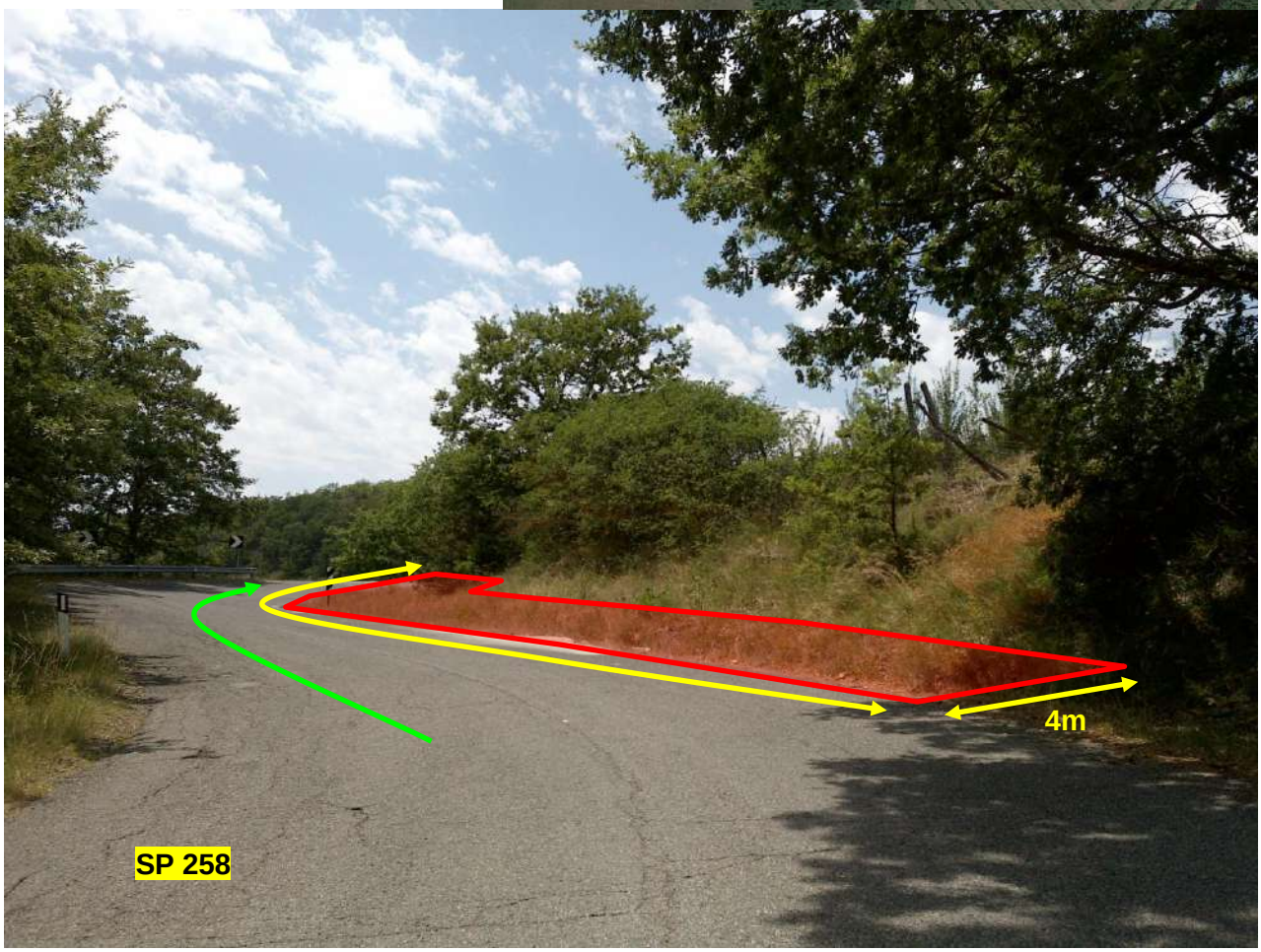


Observation 50.03
The maximum bearing capacity of the bridge has to be checked.
N 43.635938° E 12.113808°

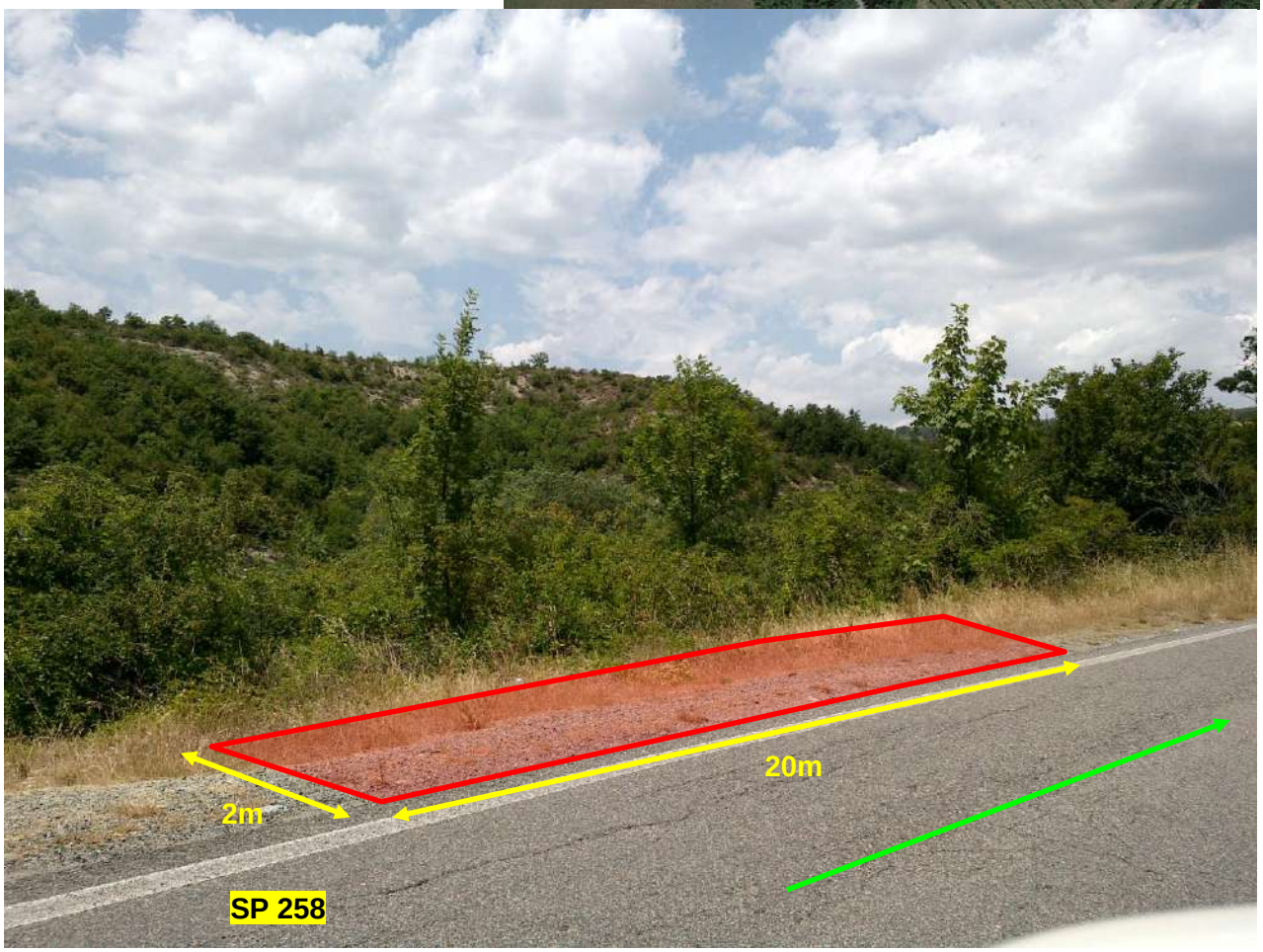
Observation 51

The road on the right side has to be widened and made accessible for 4 meters for entire curving radius.

N 43.635963° E 12.113883°



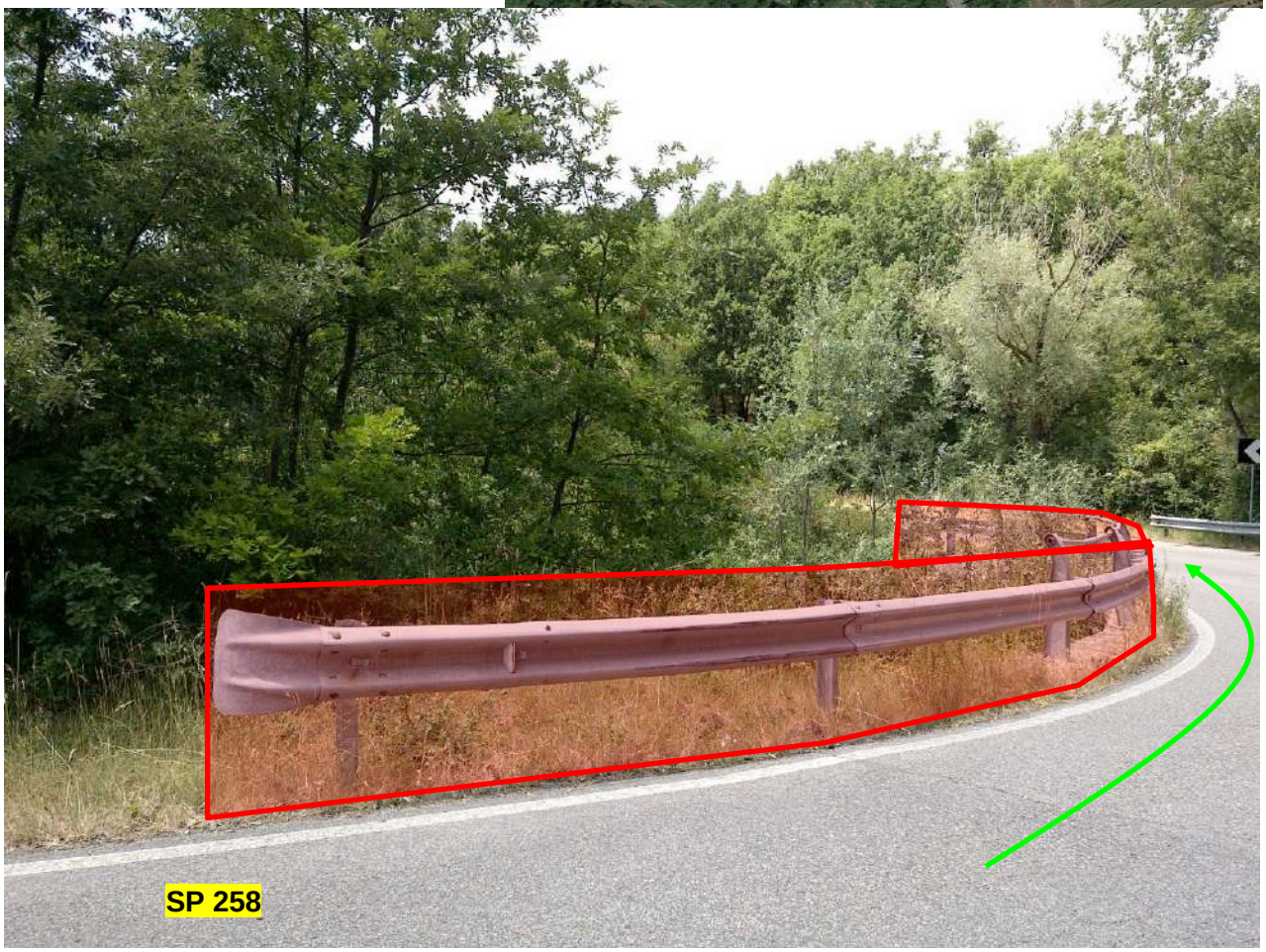
Observation 52
The road on the left side has to be widened and made accessible for 2x20m.
N 43.635883° E 12.113202°



Observation 53
No.1 three-wire cable has to be buried.
N 43.638758° E 12.113083°

Observation 54.01
The road on the right side has to be widened and made accessible for 3x30m.
Road signs have to be removed.
N 43.639833° E 12.112647°

Observation 54.02
Guardrail on the left side has to be removed.
N 43.640063° E 12.112702°



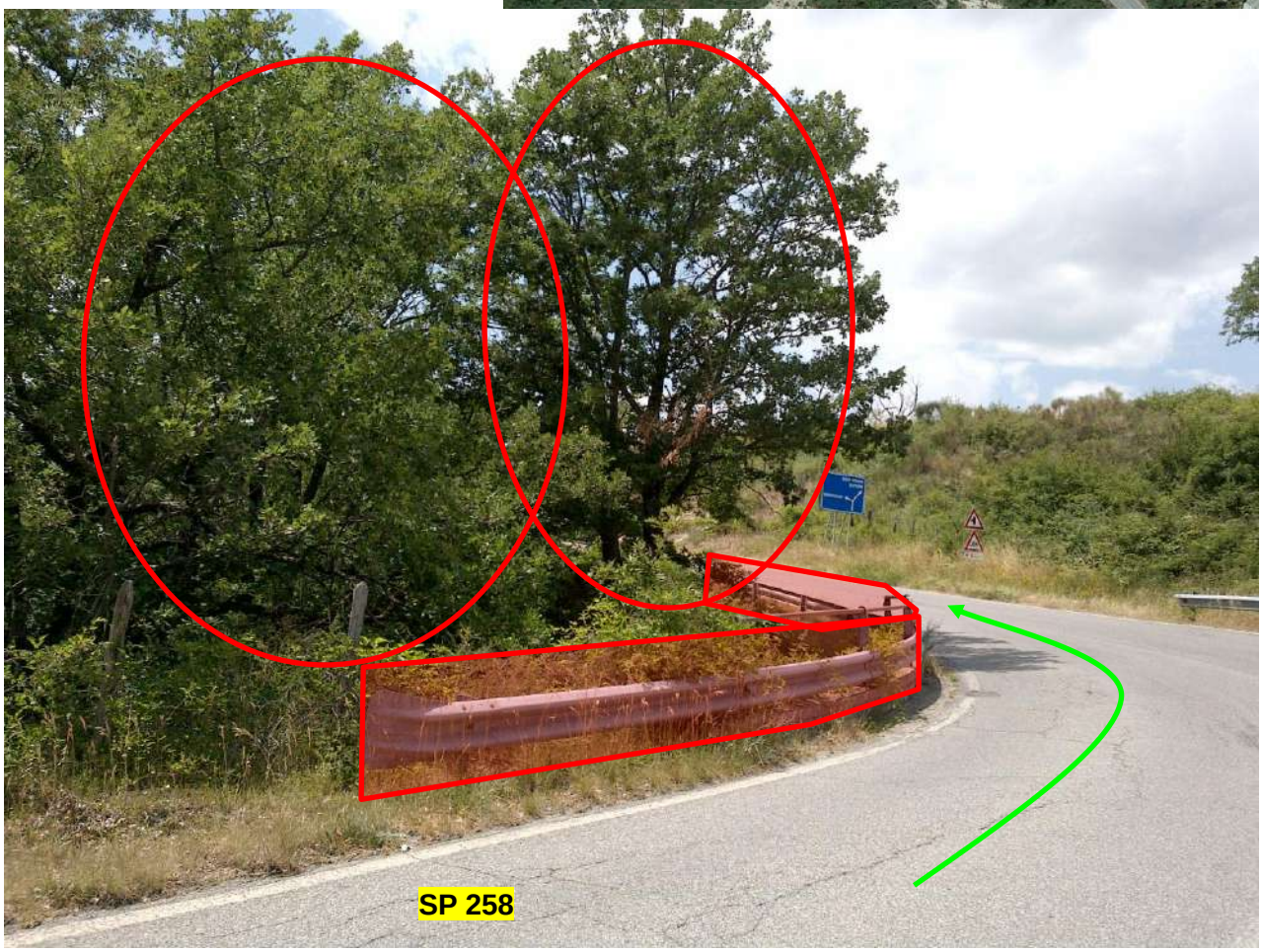
Observation 54.03
The maximum bearing capacity of the bridge has to be checked.
N 43.639991° E 12.112658°

Observation 55

The road on the right has to be widened and made practicable for 2m in depth for entire curving radius.

N 43.639974° E 12.110497°

Observation 56
Guardrail on the left side has to be removed.
No.2 trees have to be removed.
N 43.645438° E 12.105766°



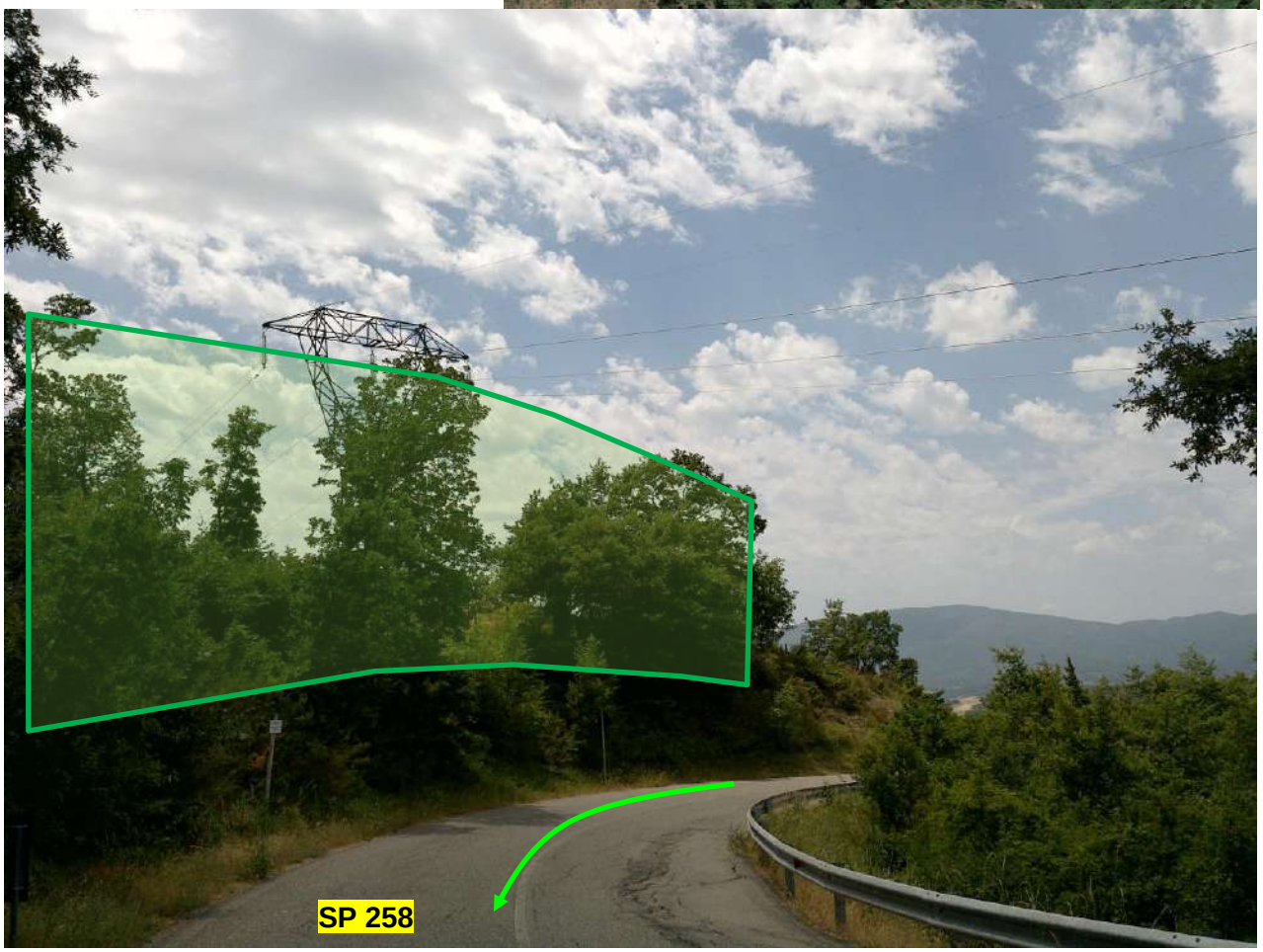
Observation 57.01
The road on the right side has to be widened and made accessible for 15x40m.
N 43.647308° E 12.096141°

Observation 57.02
The road on the right side has to be widened and made accessible for 15x40m.
N 43.647308° E 12.095694°

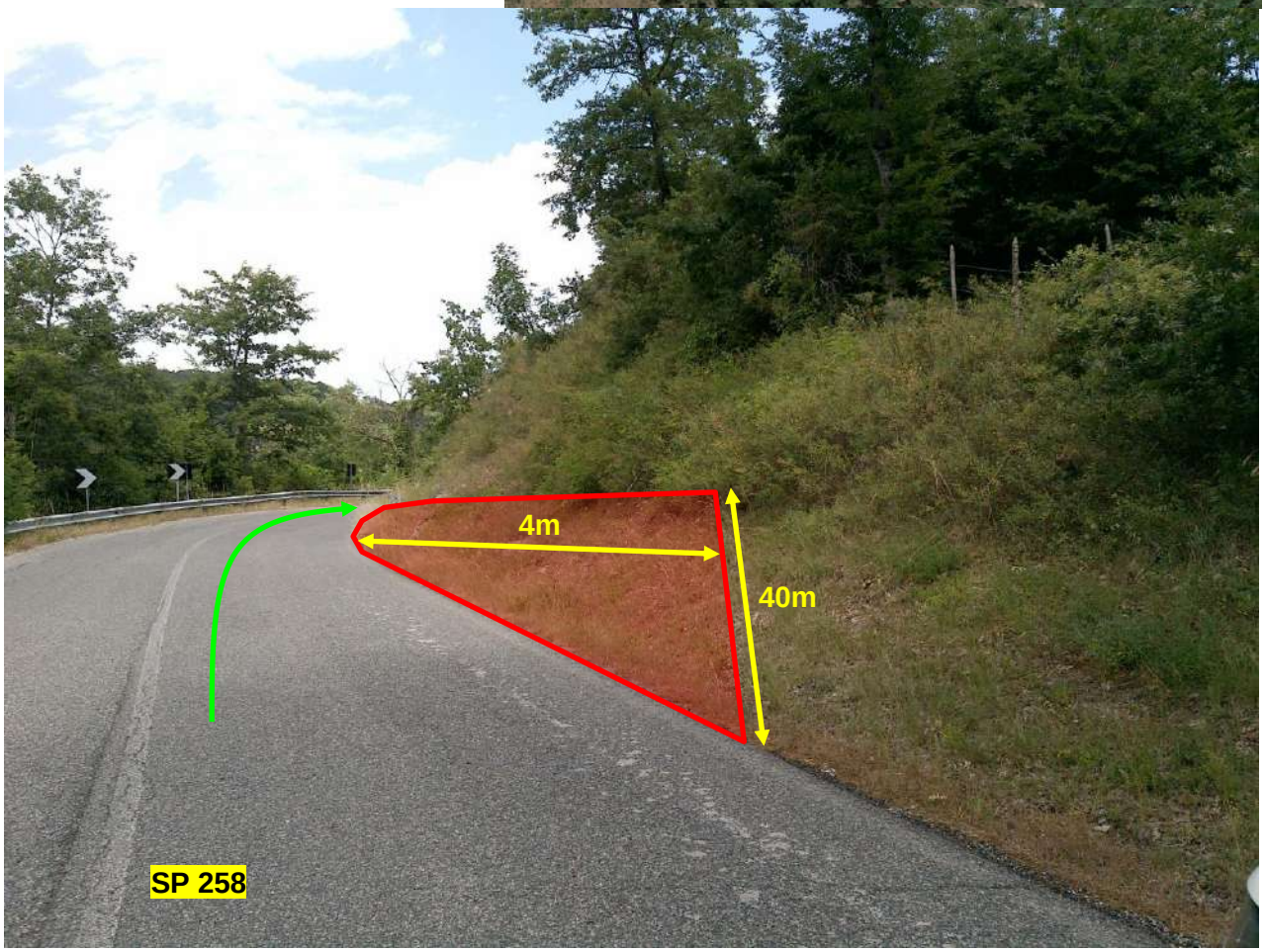
Observation 57.03
No.1 tree has to be cut.
N 43.647352° E 12.095605°

Observation 58
The road on the right has to be widened for 2m in depth for entire curving radius.
N 43.648513° E 12.096361°

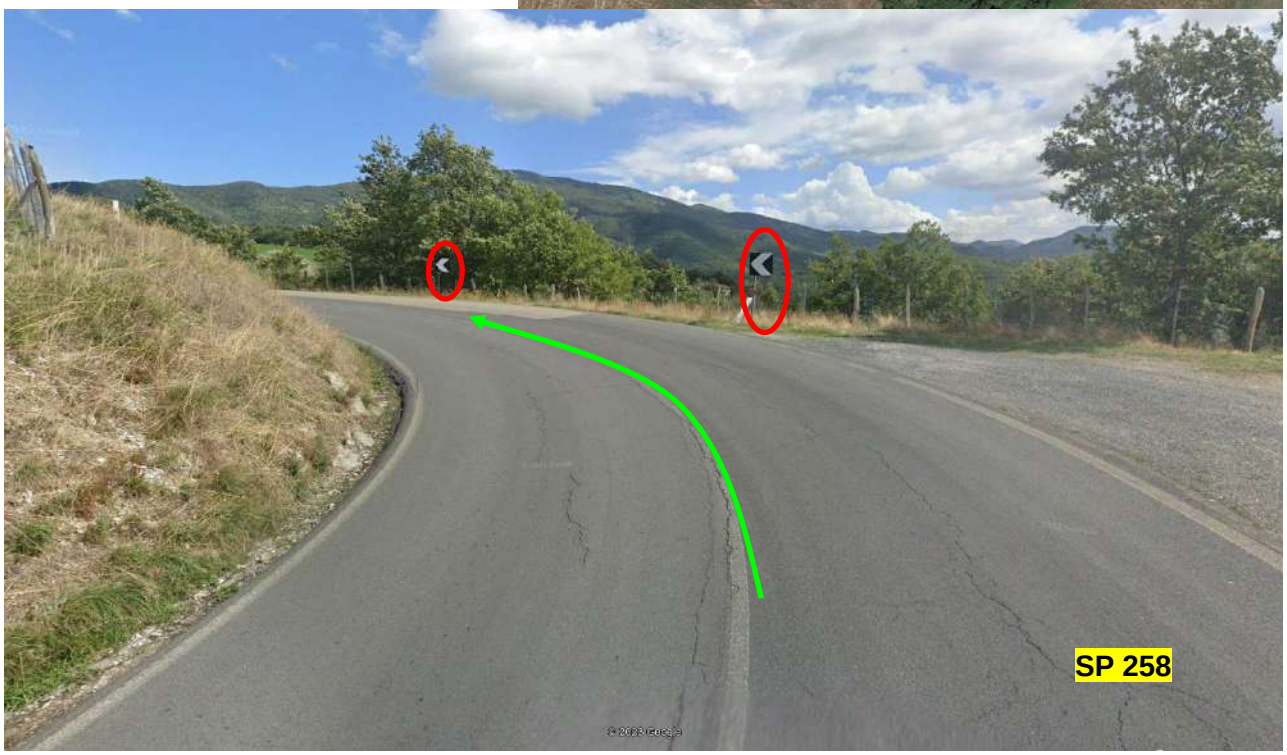
Observation 59.01
Trees have to be cut.
N 43.649869° E 12.097908°



Observation 59.02
The road on the right side has to be widened and made accessible for 4x40m.
N 43.649877° E 12.097908°



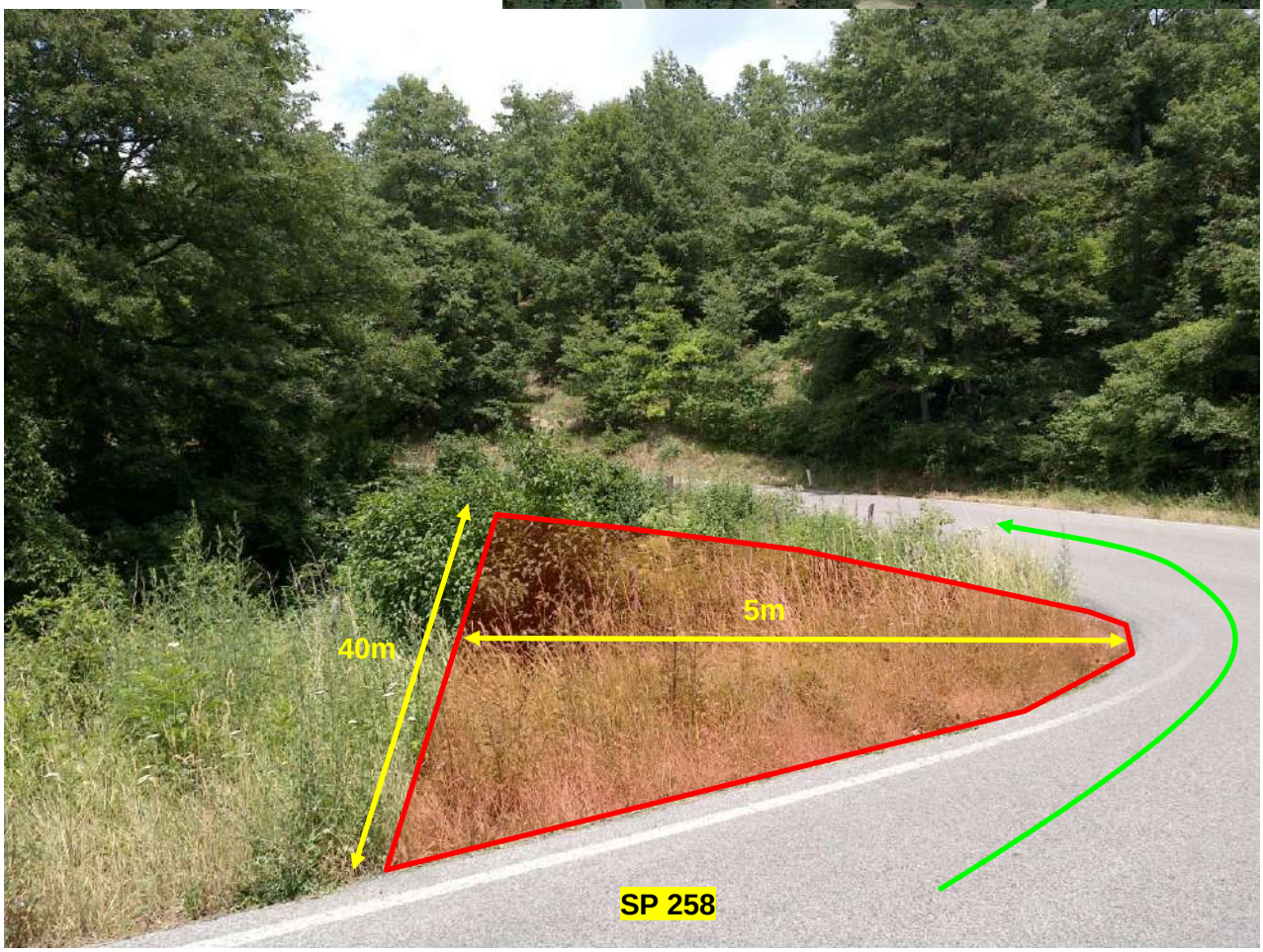
Observation 60
No.2 road signs have to be removed.
N 43.651386° E 12.107941°



Observation 61
The road on the left has to be widened for 3m in depth for entire curving radius.
N 43.653752° E 12.114266°

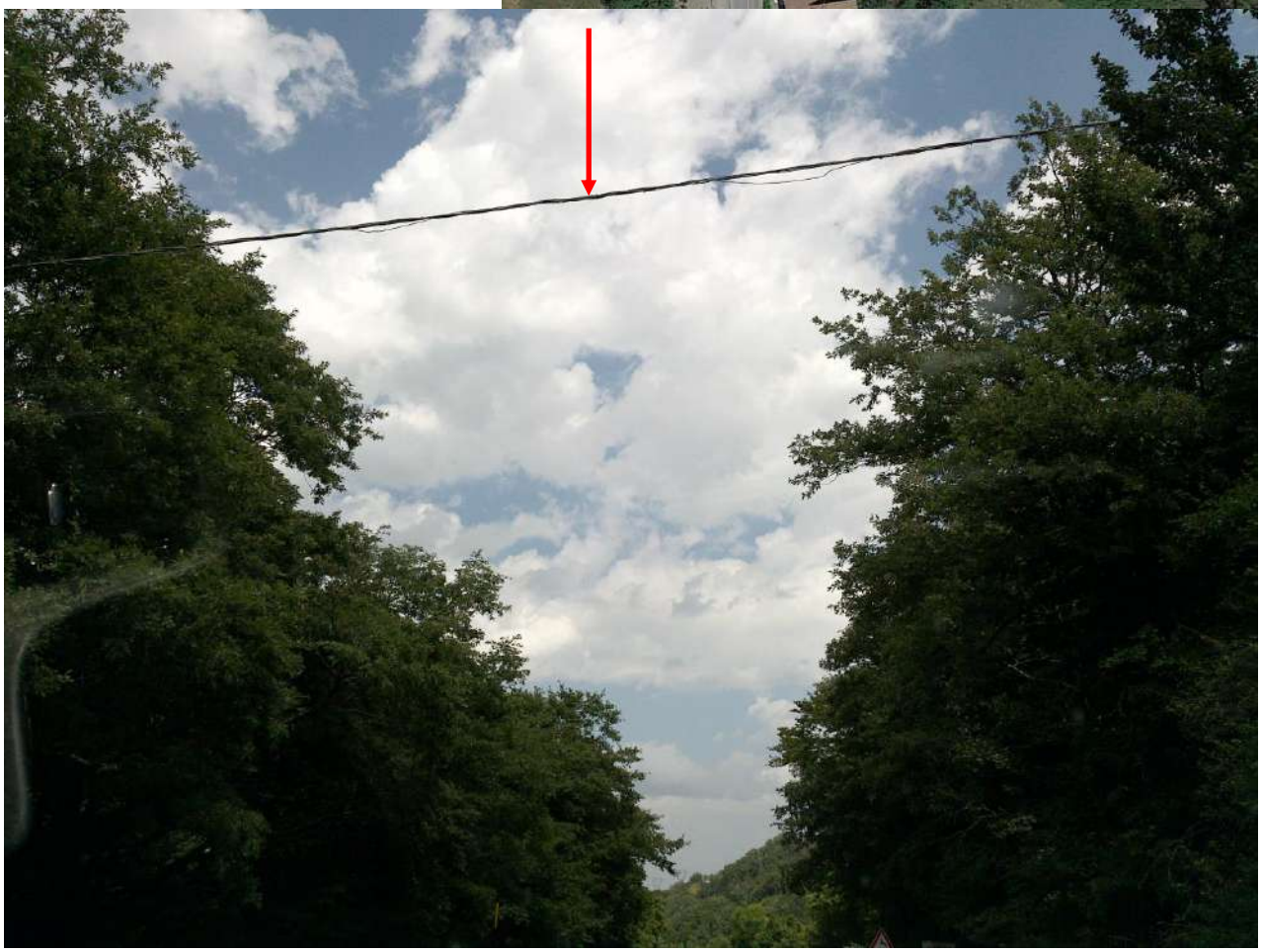
Observation 62
No.1 cable has to be buried.
N 43.667855° E 12.114747°

Observation 63
The road on the left side has to be widened and made accessible for 5x40m.
N 43.670783° E 12.115777°

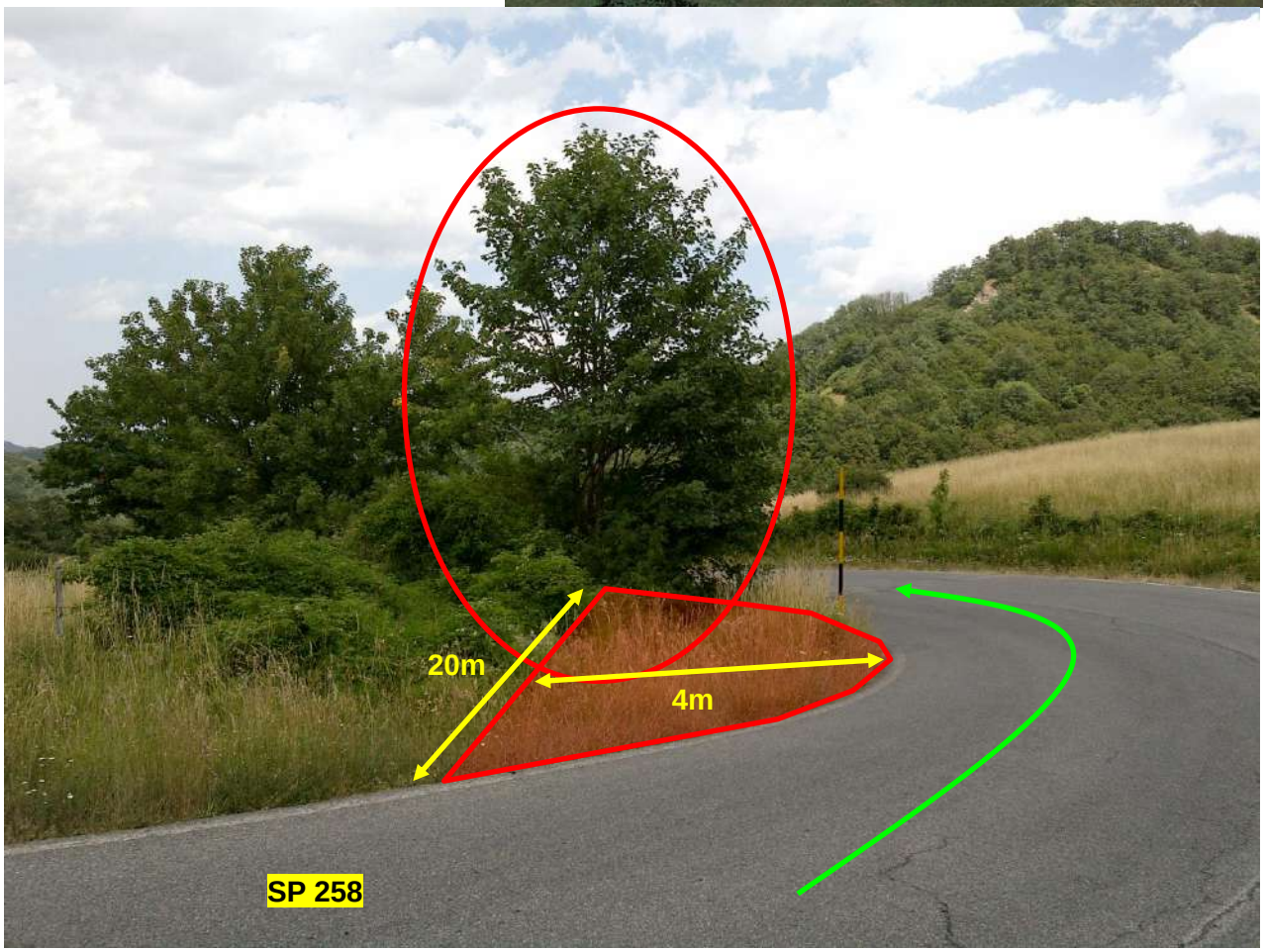


Observation 64
The road on the right side has to be widened and made accessible for 2x40m.
Tree branches jutting out on the road on the right have to be cut.
N 43.671811° E 12.115463°

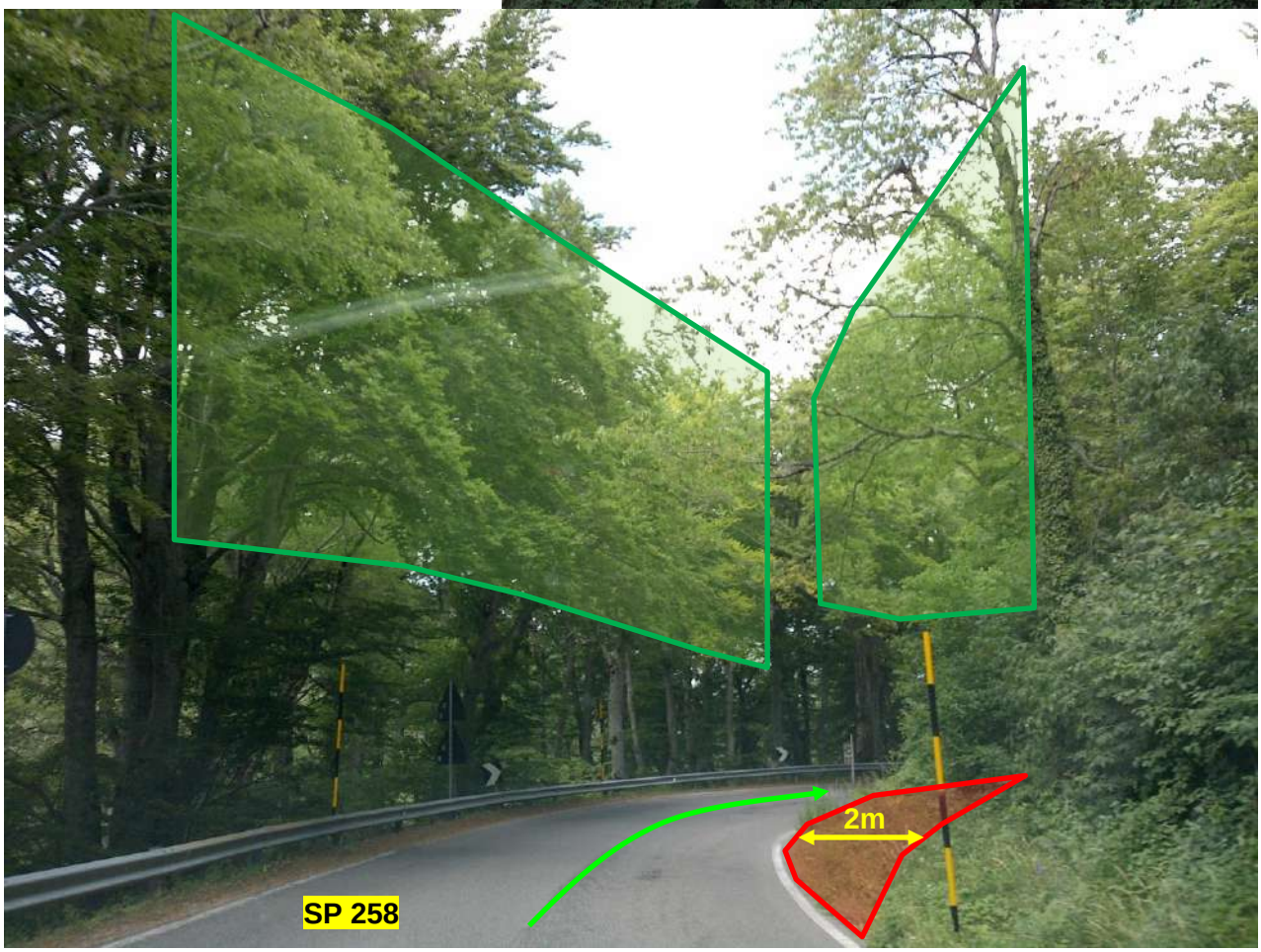
Observation 65
No.1 cable has to be buried.
N 43.682691° E 12.116663°



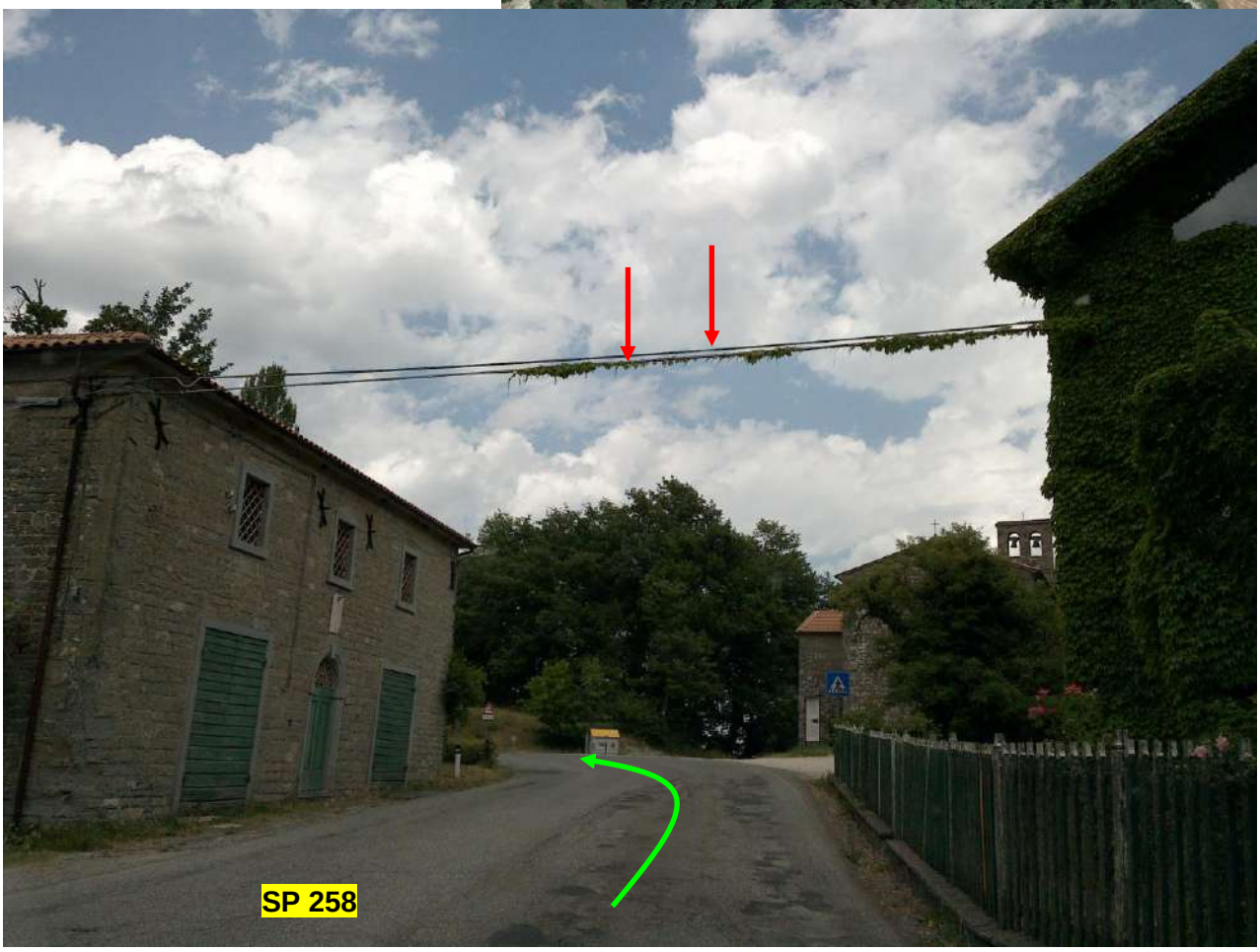
Observation 66
The road on the left side has to be widened and made accessible for 4x20m.
No.1 tree has to be removed.
N 43.683644° E 12.120016°



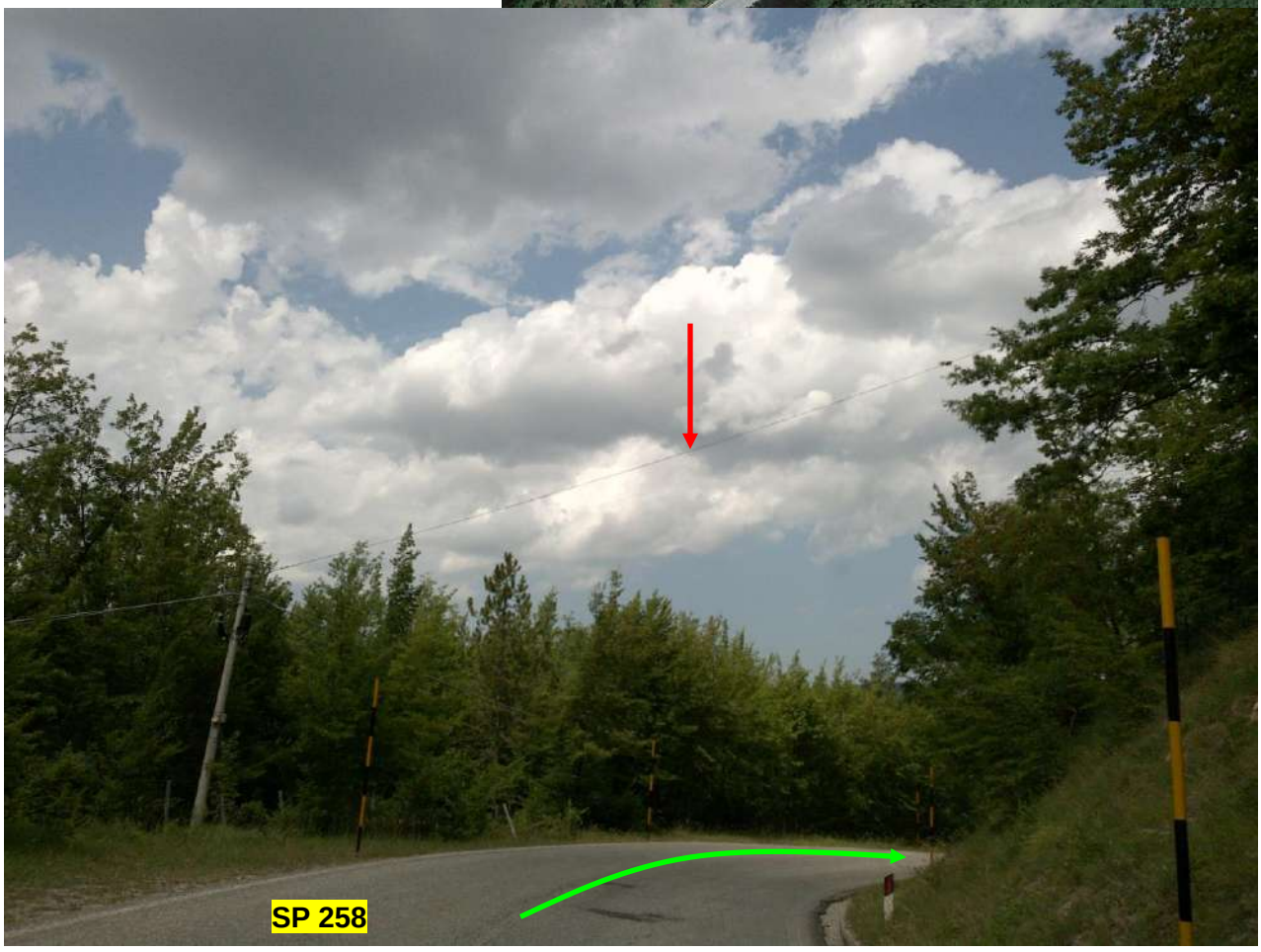
Observation 67
The road on the right has to be widened and made accessible for 2m in depth for entire curving radius.
Tree branches jutting out on the road have to be cut.
N 43.690383° E 12.129141°



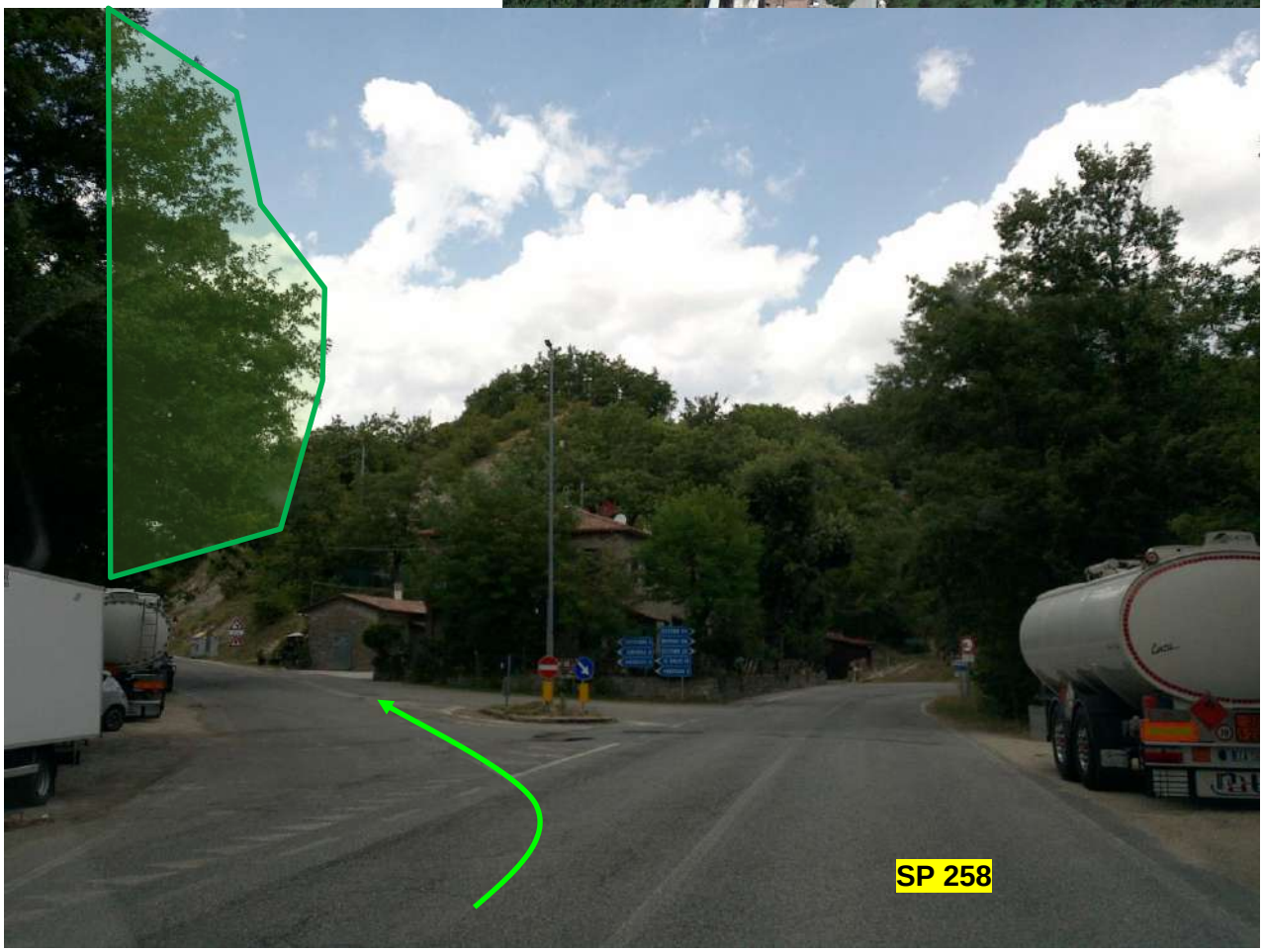
Observation 68
No.2 cables have to be buried.
N 43.692038° E 12.134097°



Observation 69
No.1 cable has to be buried.
N 43.694222° E 12.135944°

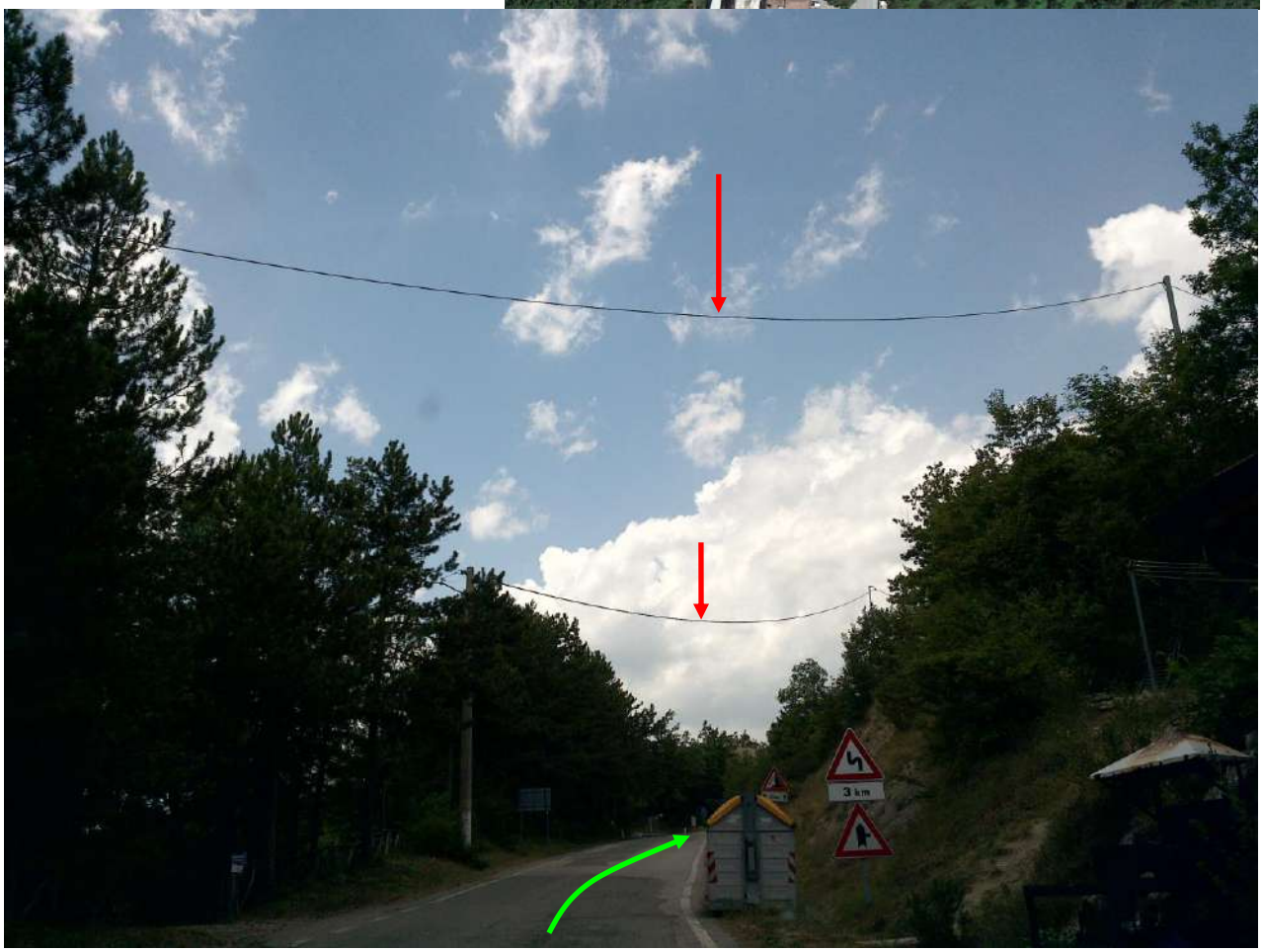


Observation 70
Turn left to Via Alto Marecchia.
Tree branches jutting out on the road have to be cut.
N 43.703933° E 12.138613°

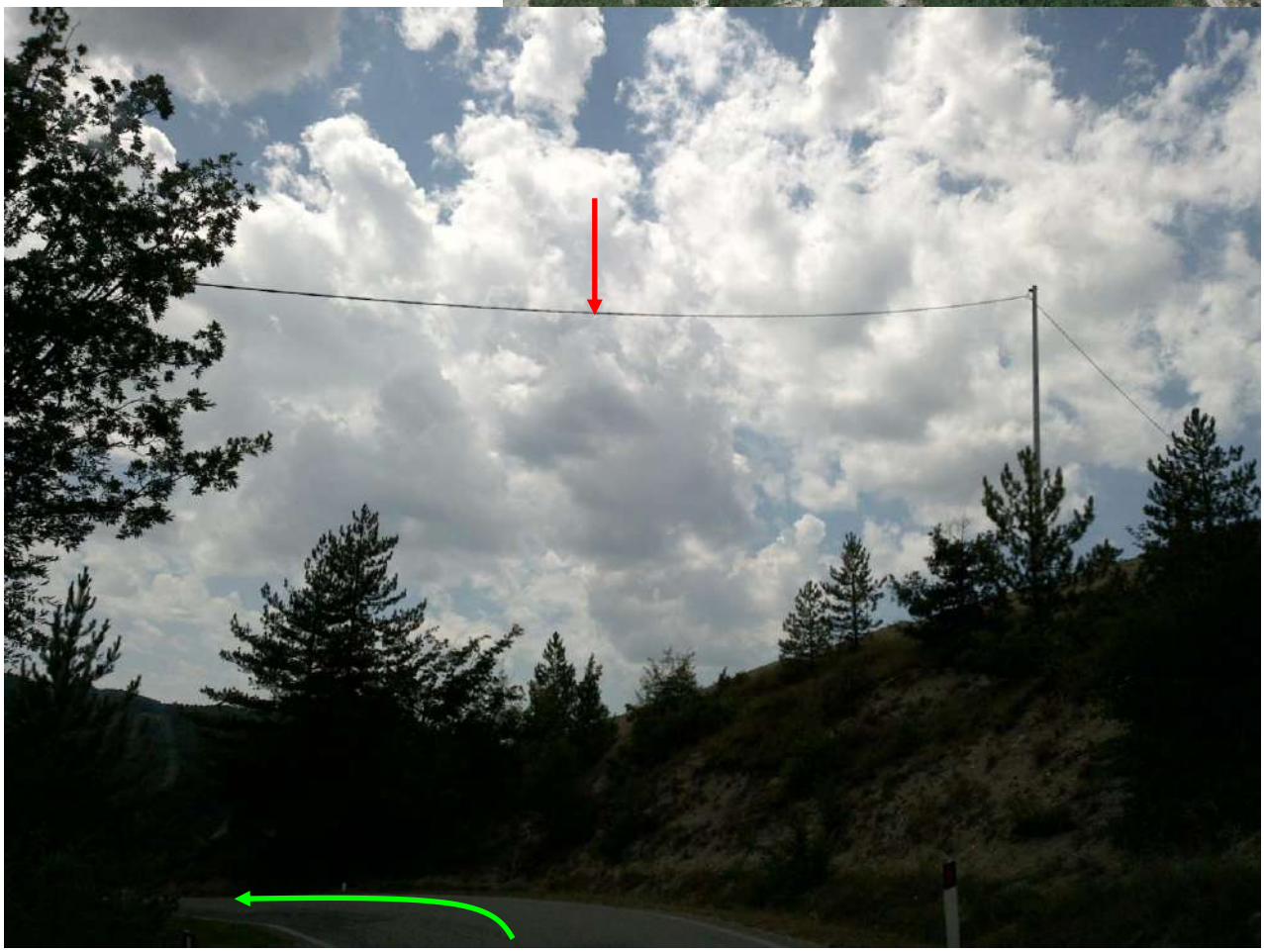


Observation 71.01
No.2 cables have to be buried.
N 43.704313° E 12.138486°

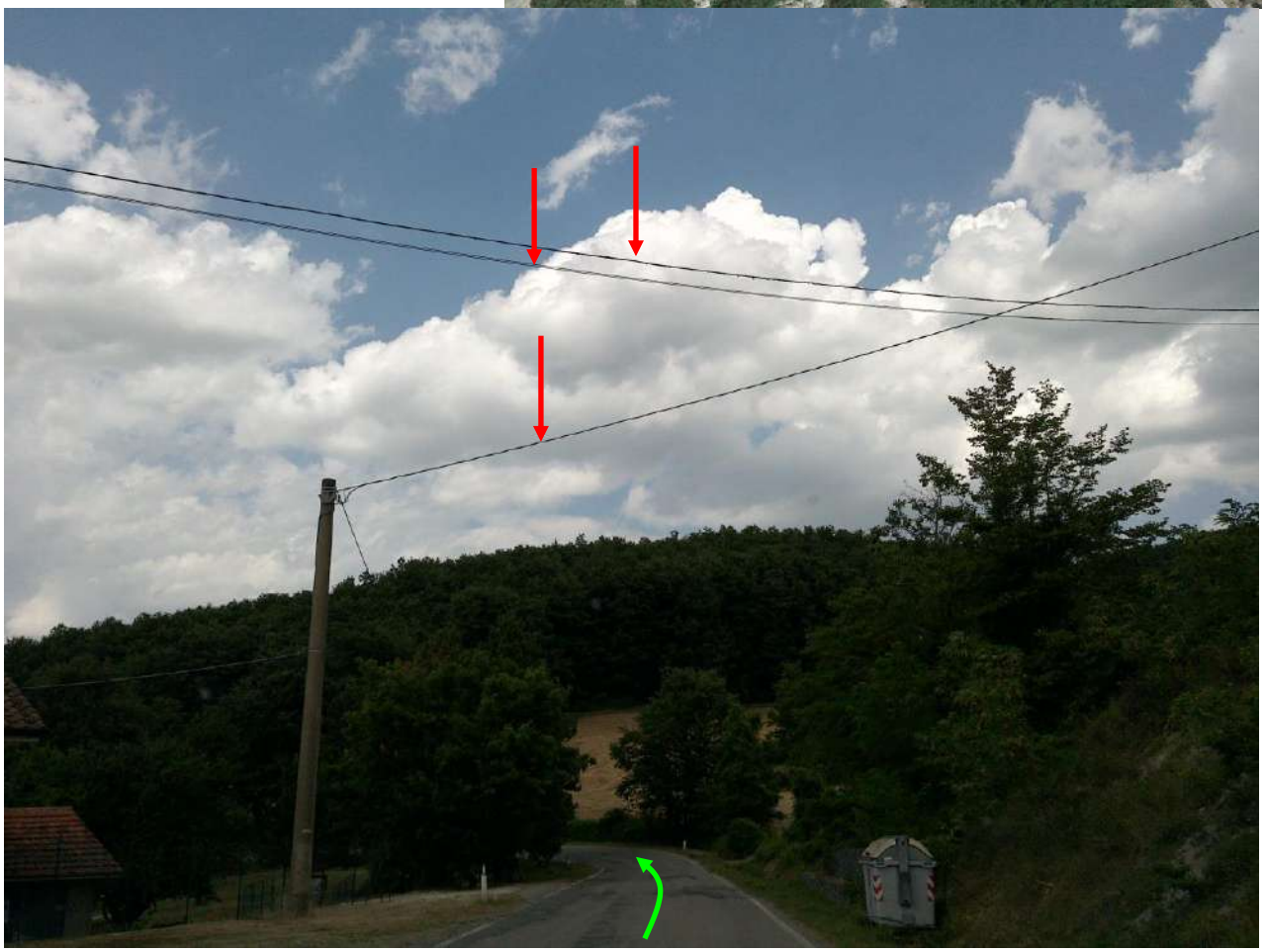
Observation 71.02
No.2 cables have to be buried.
N 43.704441° E 12.138291°



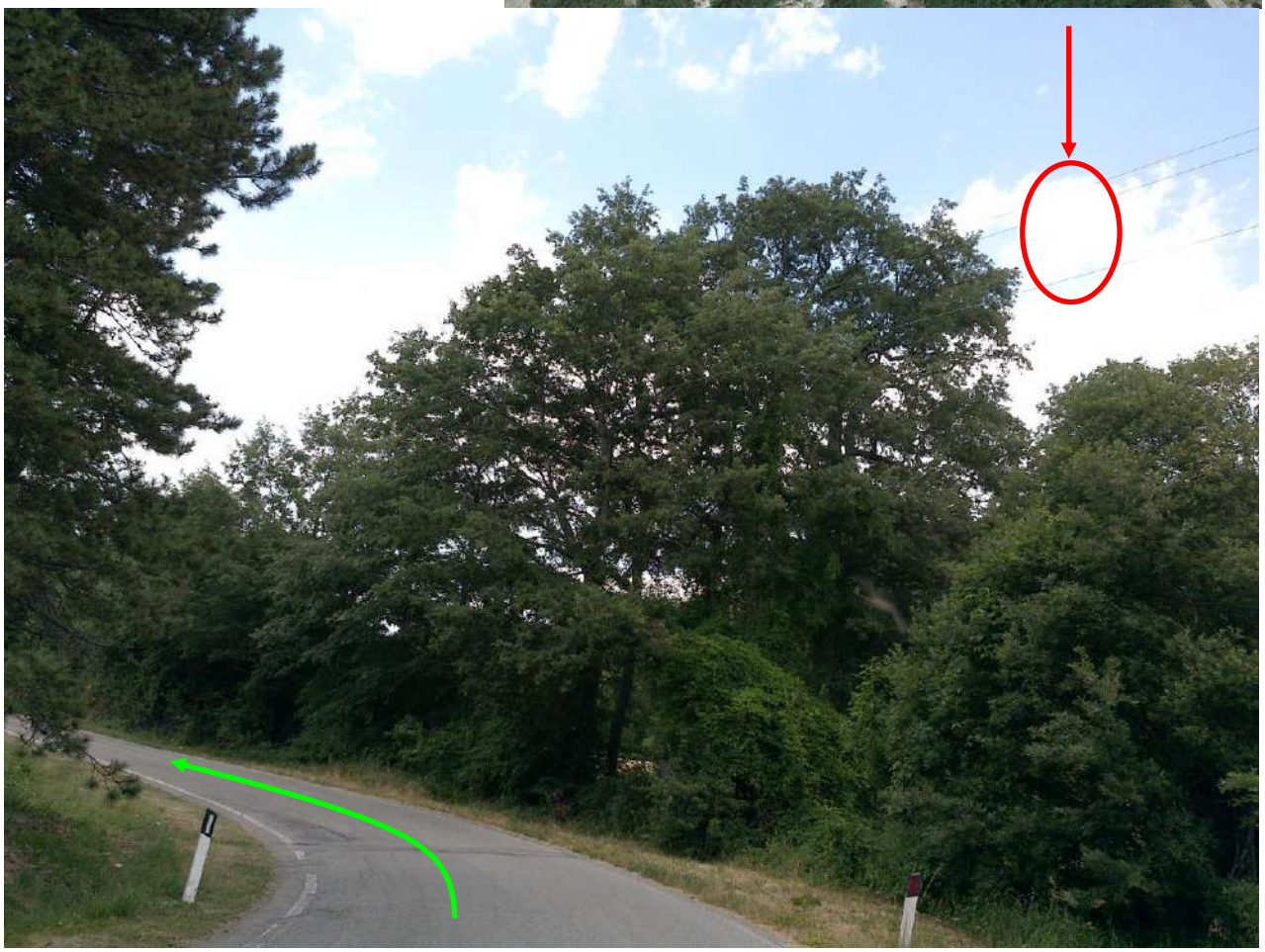
Observation 72
No.1 cable has to be buried.
N 43.705408° E 12.136488°



Observation 73
Three cables have to be buried.
N 43.705516° E 12.135102°

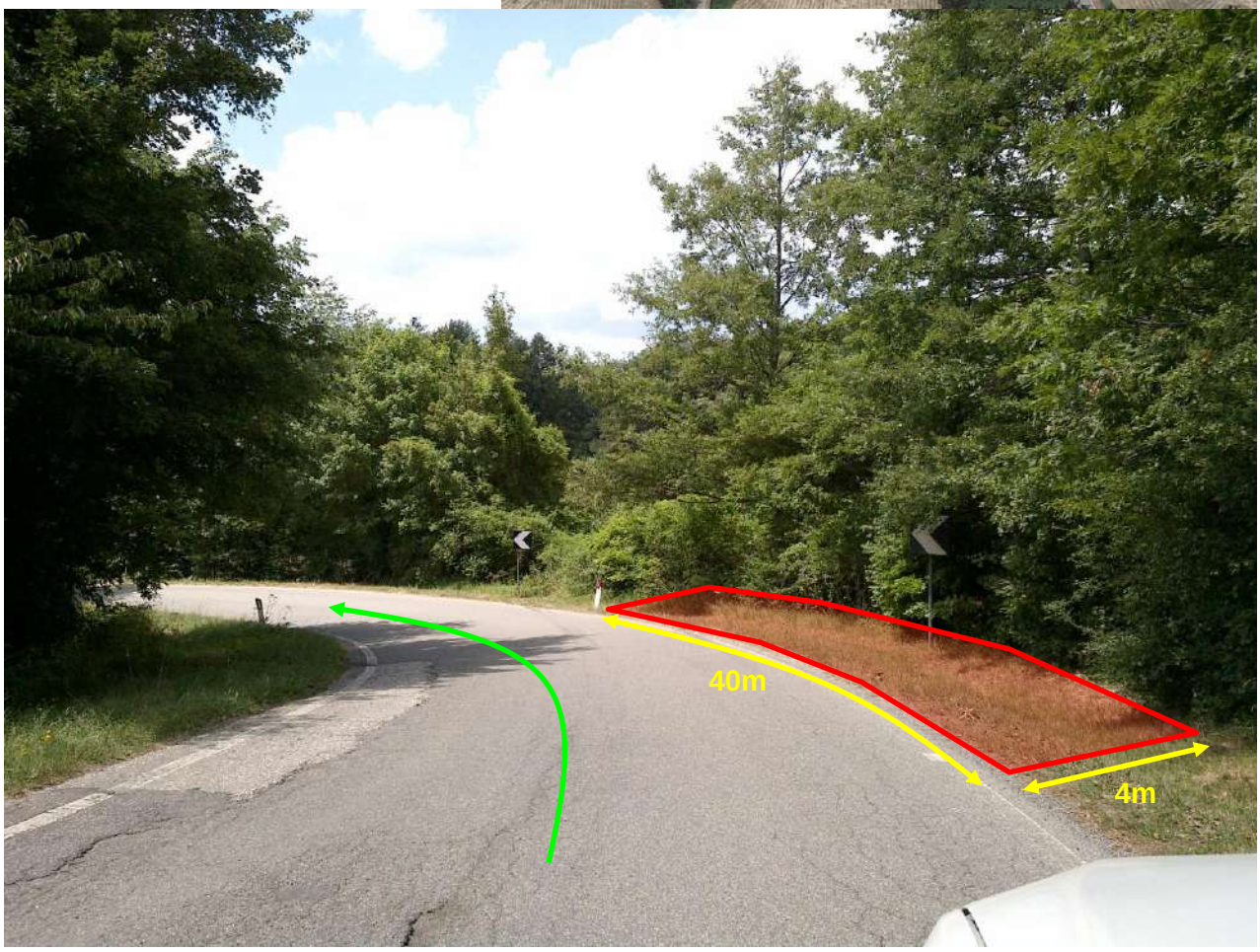


Observation 74
No.1 three-wire cable has to be buried.
N 43.706347° E 12.135488°

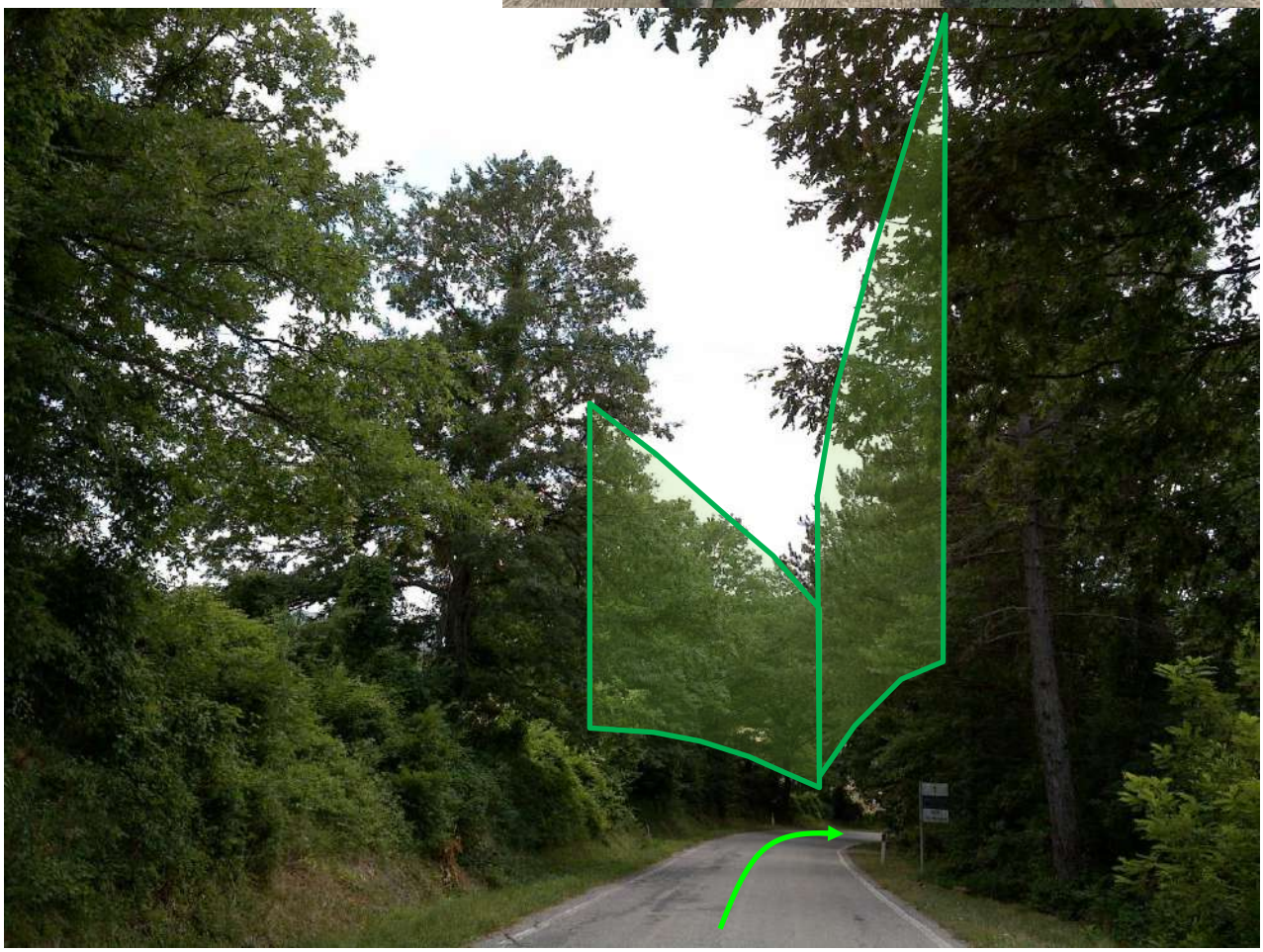


Observation 75
No.2 cables have to be buried.
N 43.707952° E 12.133313°

Observation 76
The road on the right side has to be widened and made accessible for 4x40m.
N 43.708236° E 12.133161°



Observation 77
Tree branches jutting out on the road have to be cut.
N 43.707738° E 12.131997°



Observation 78.01
The road on the left side has to be widened and made accessible for 4x30m.
No.2 road signs have to be removed.
N 43.705213° E 12.130583°

Observation 78.02
The maximum bearing capacity of the bridge has to be checked.
N 43.704780° E 12.130441°

Observation 79

The road on the left has to be widened and made accessible for 2m depth for entire curving radius.

No.2 road signs have to be removed.

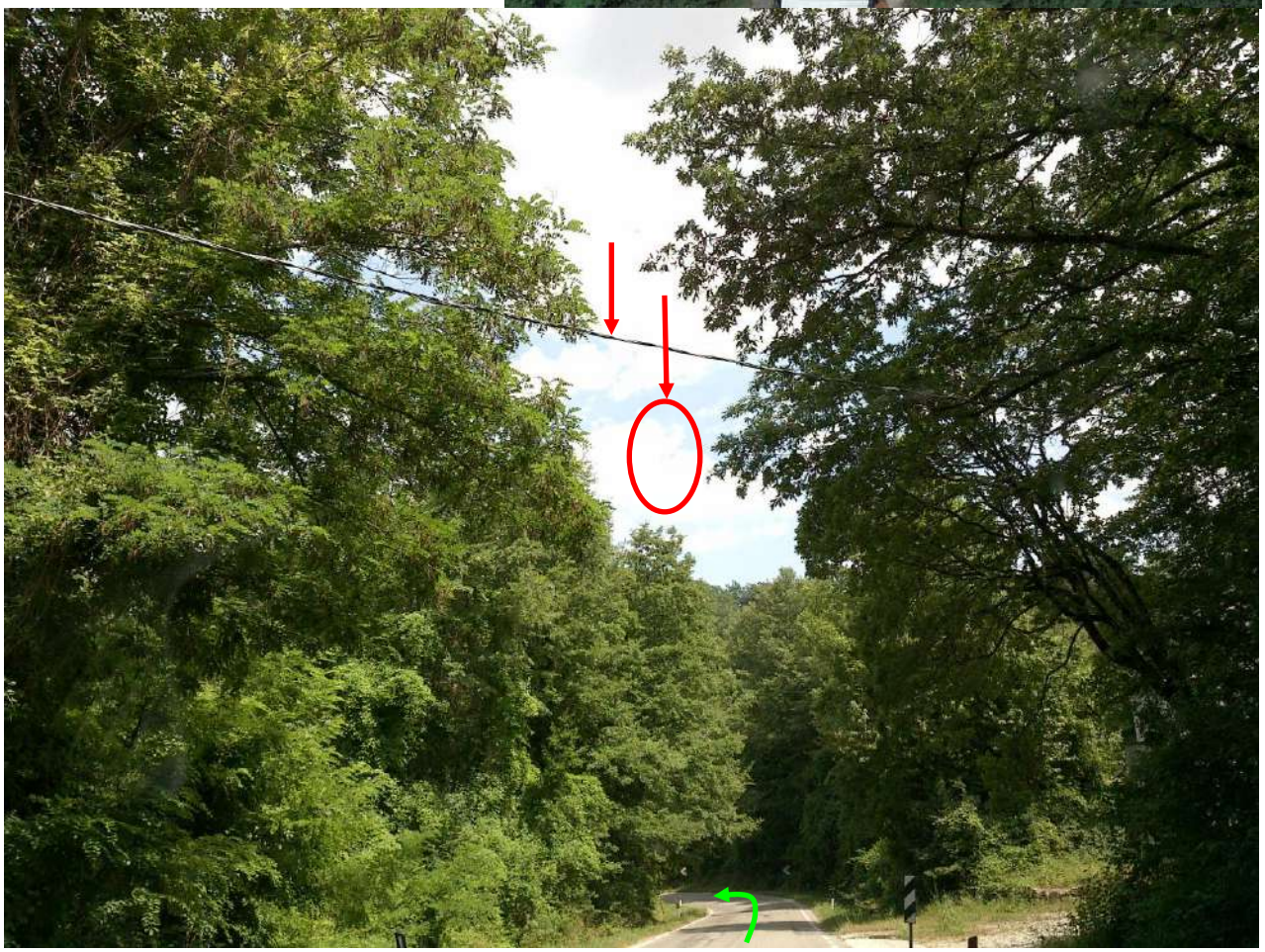
N 43.710155° E 12.124786°

Observation 80

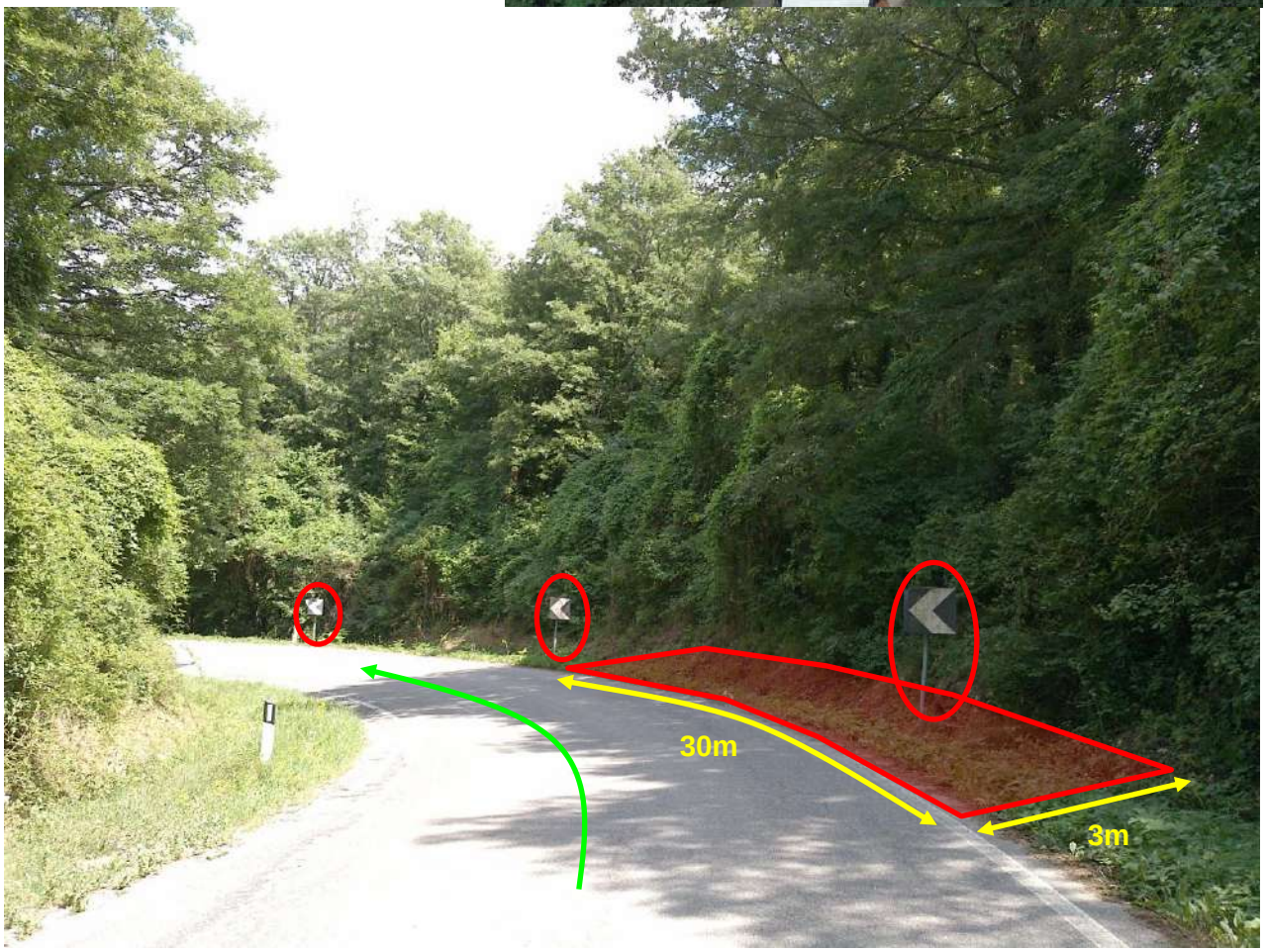
The road on the right has to be widened and made accessible for 4m depth for entire curving radius.

N 43.711188° E 12.123691°

Observation 81
No.2 cables have to be buried.
N 43.711613° E 12.125316°



Observation 82
The road on the right side has to be widened and made accessible for 3x30m.
All road signs for entire curving have to be removed.
N 43.711313° E 12.126147°

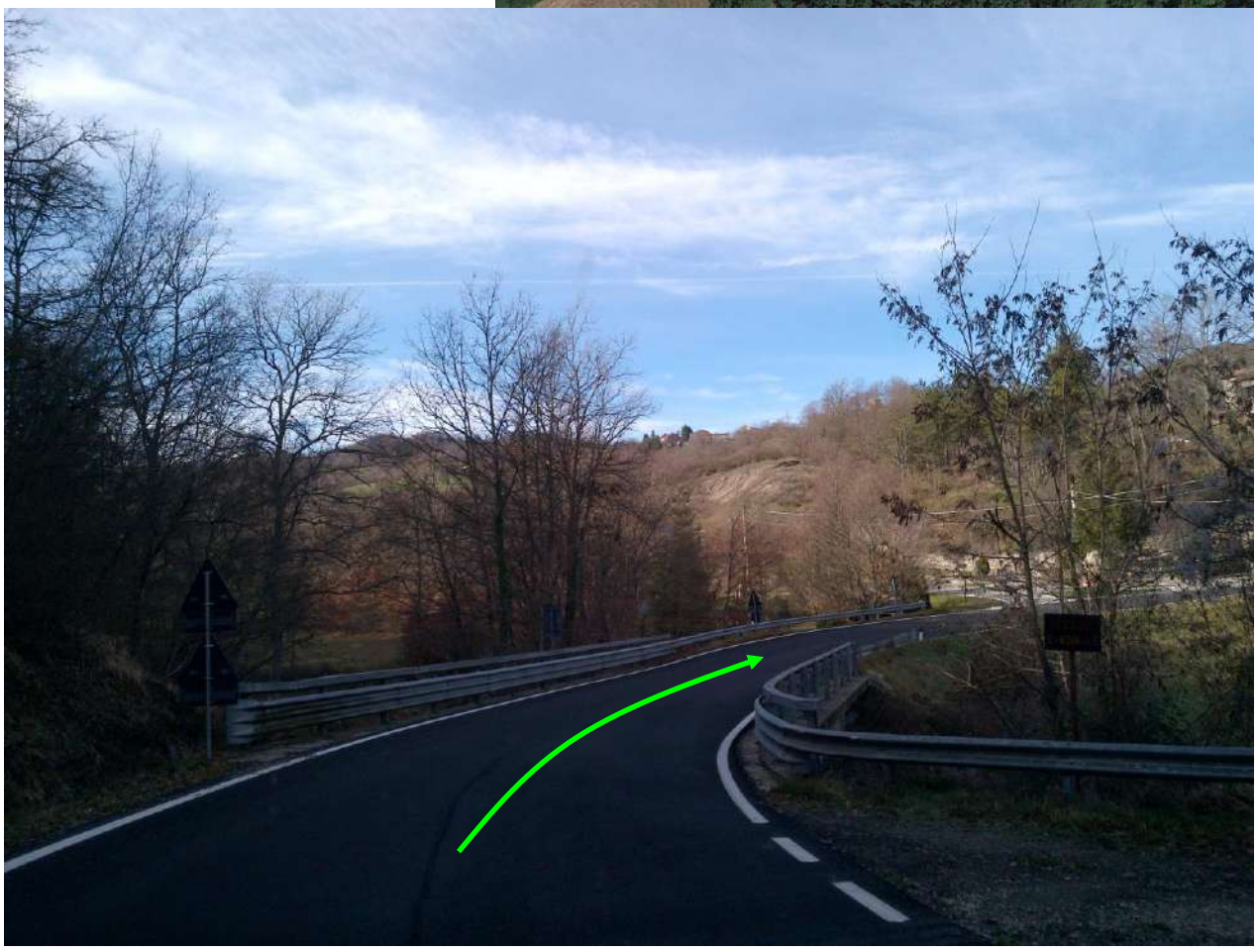


Observation 83
No.1 cable has to be buried.
N 43.712275° E 12.125841°

Observation 84
No.1 three-wire cable has to be buried.
N 43.712391° E 12.125411°

Observation 85.01
No.1 cable has to be buried.
N 43.712908° E 12.123463°

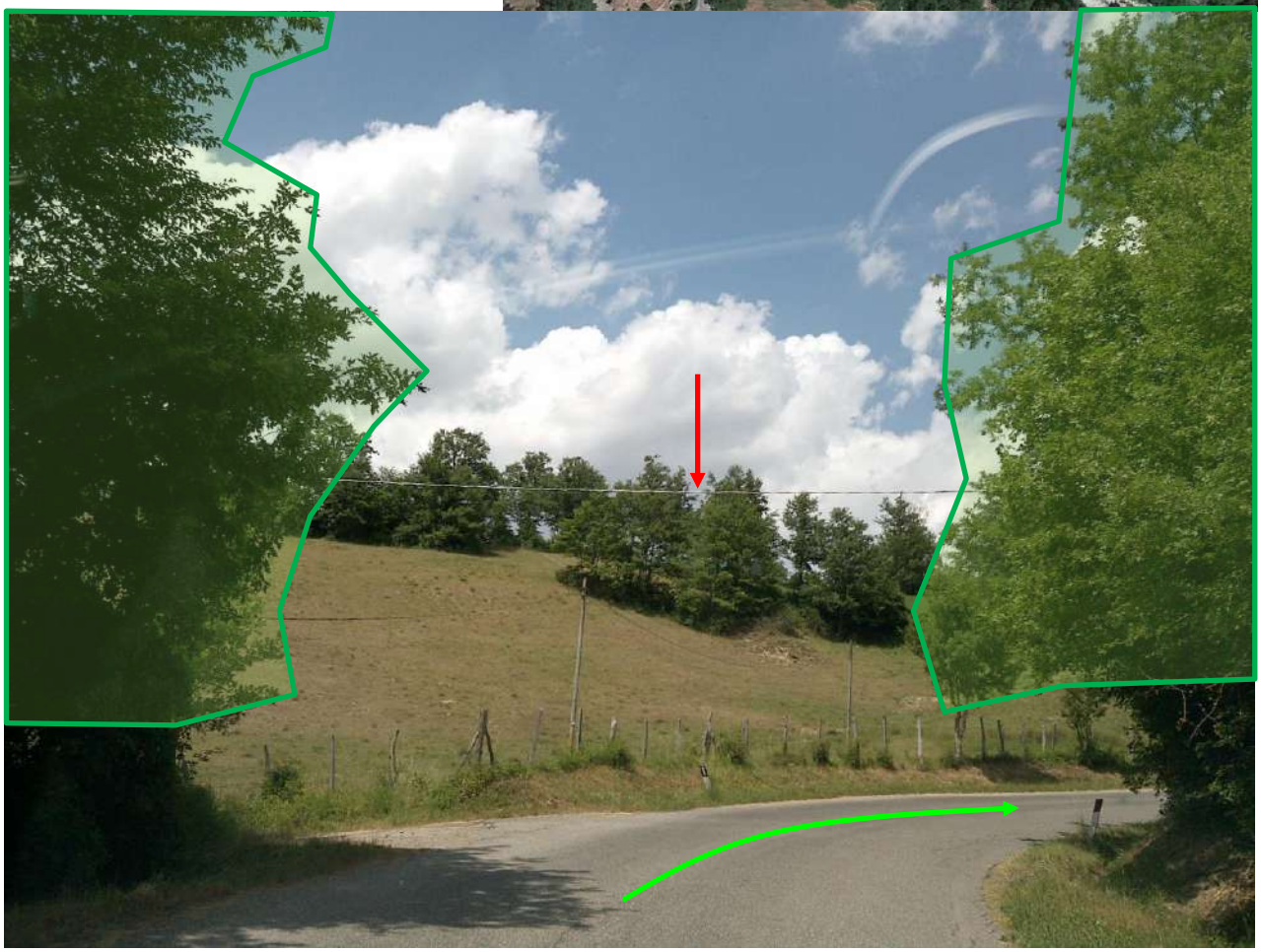
Observation 85.02
The maximum bearing capacity of the bridge has to be checked.
N 43.712816° E 12.123283°



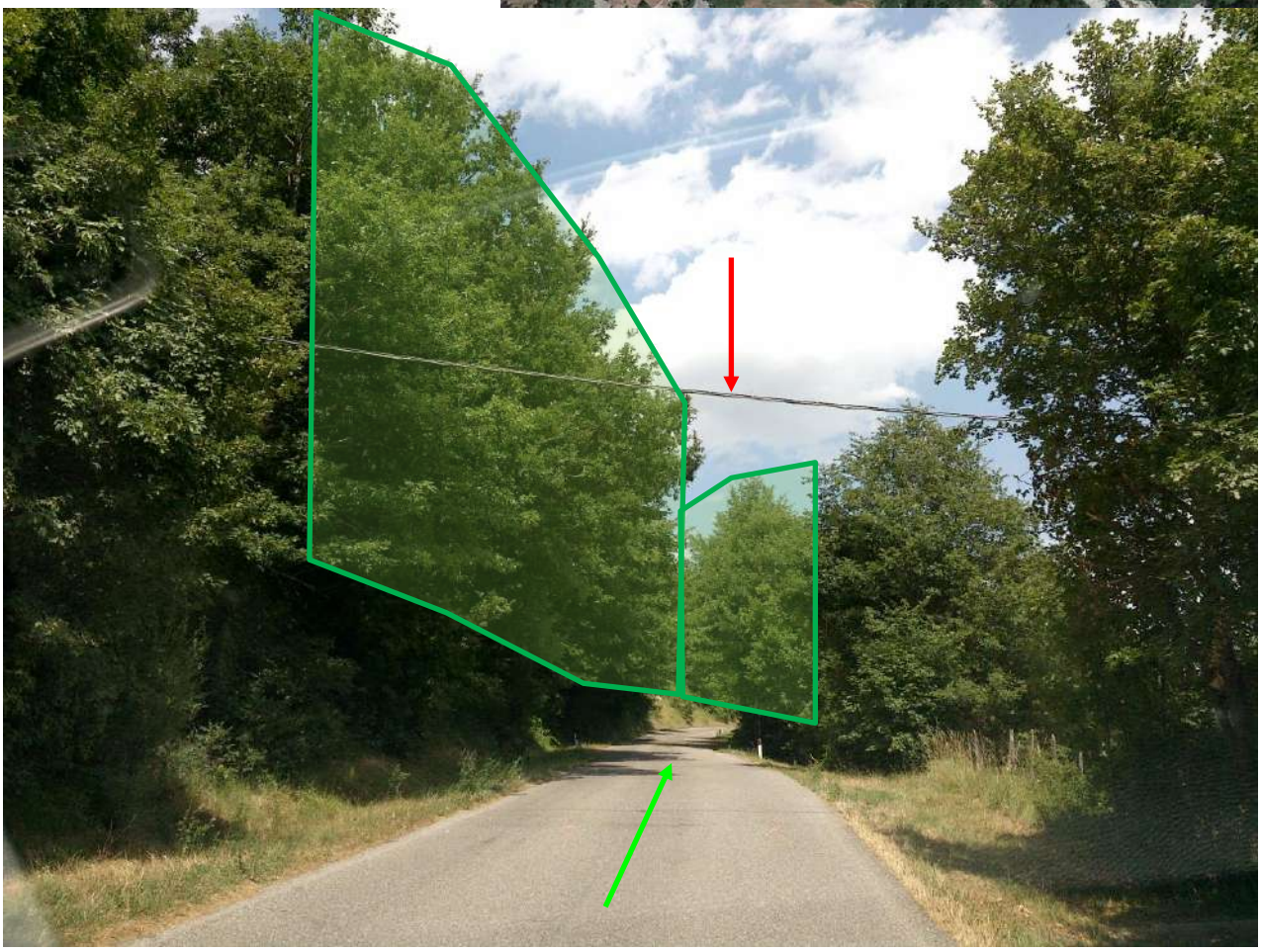
Observation 86
No.3 cables have to be buried.
N 43.713069° E 12.122361°

Observation 87
The maximum bearing capacity of the bridge has to be checked.
N 43.713541° E 12.122358°

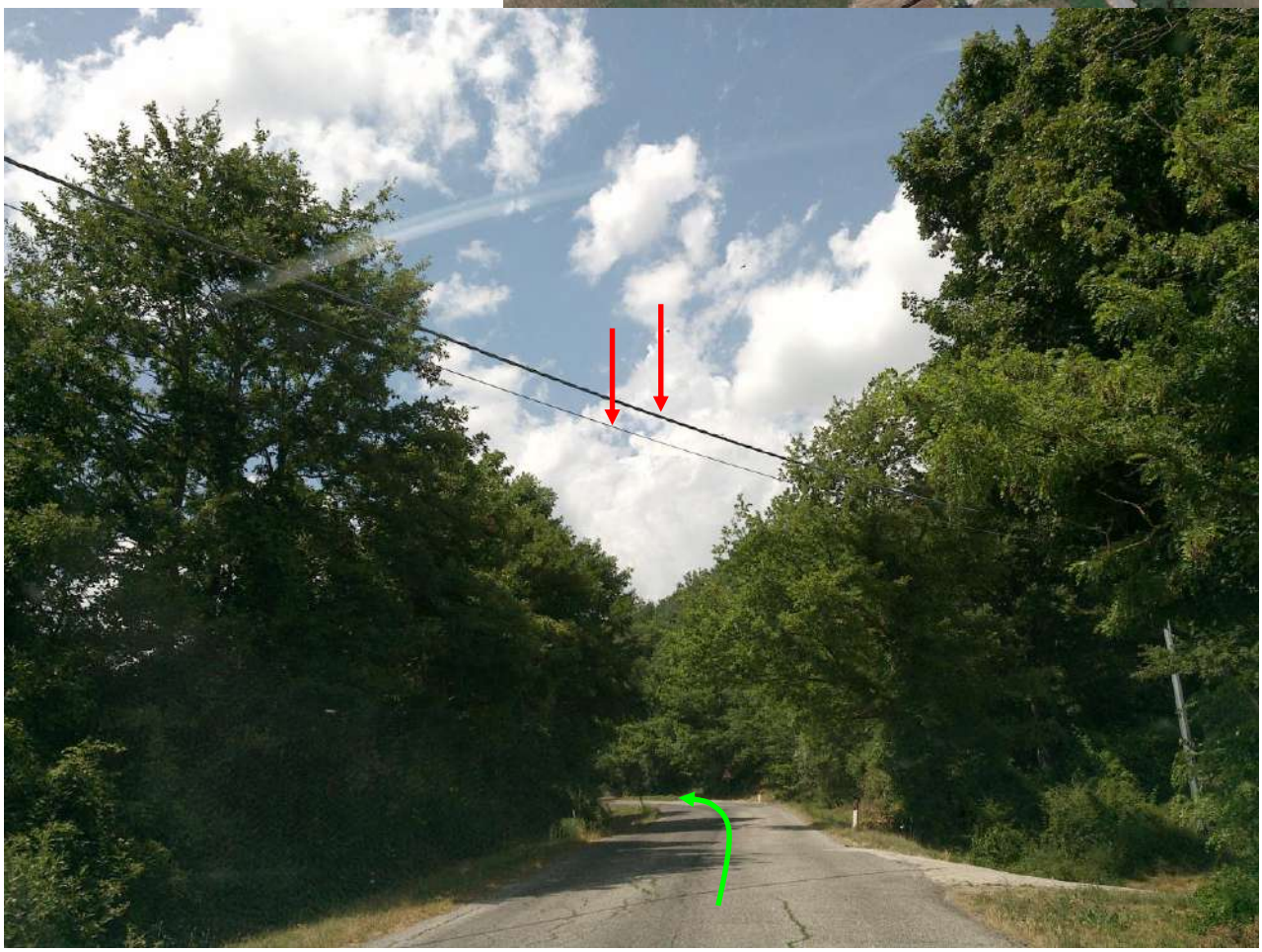
Observation 88
Cable has to be buried.
Tree branches jutting out on the road have to be cut.
N 43.714161° E 12.122452°



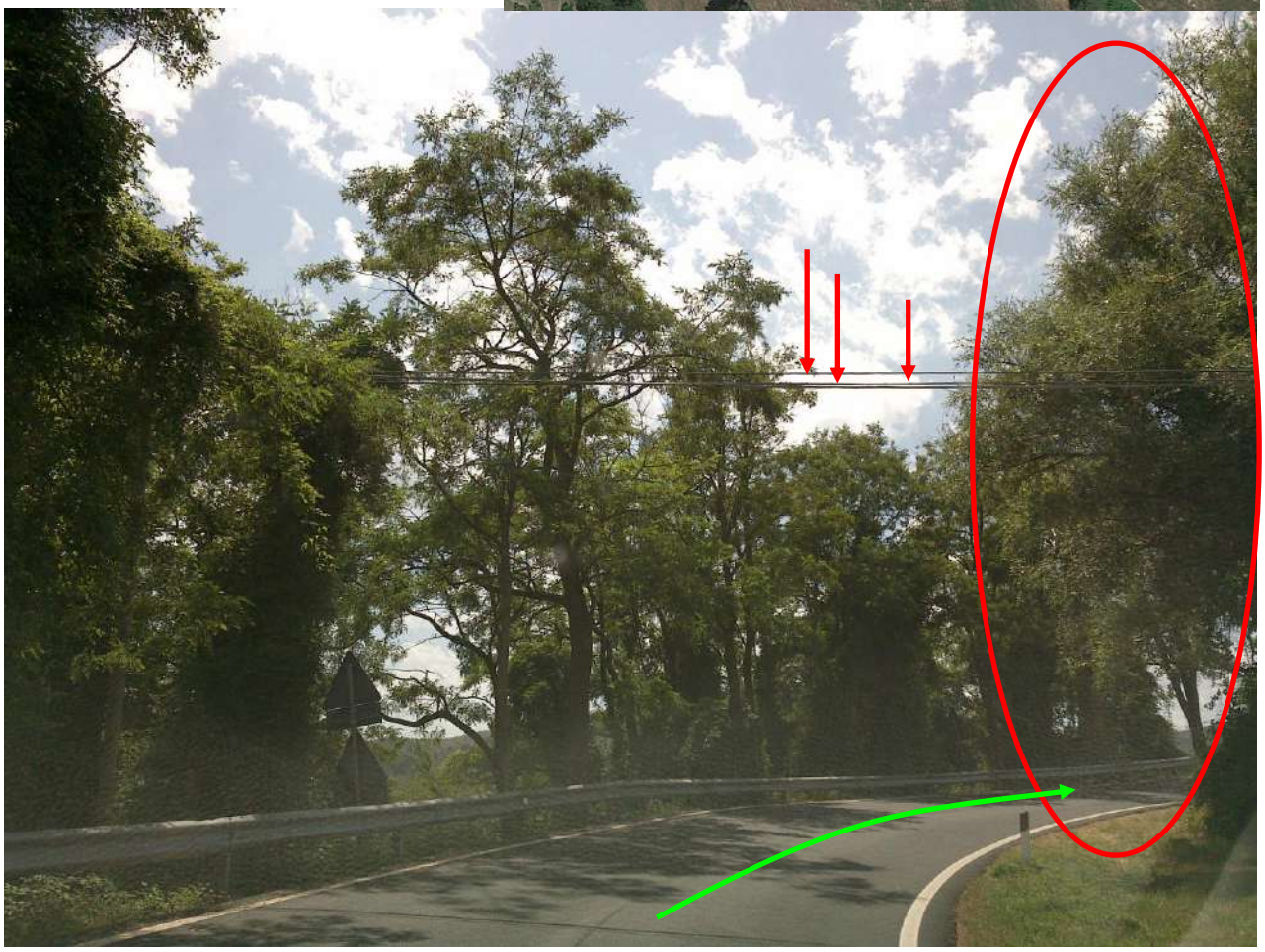
Observation 89
No.1 cable has to be buried.
Tree branches jutting out on the road have to be cut.
N 43.714497° E 12.124402°



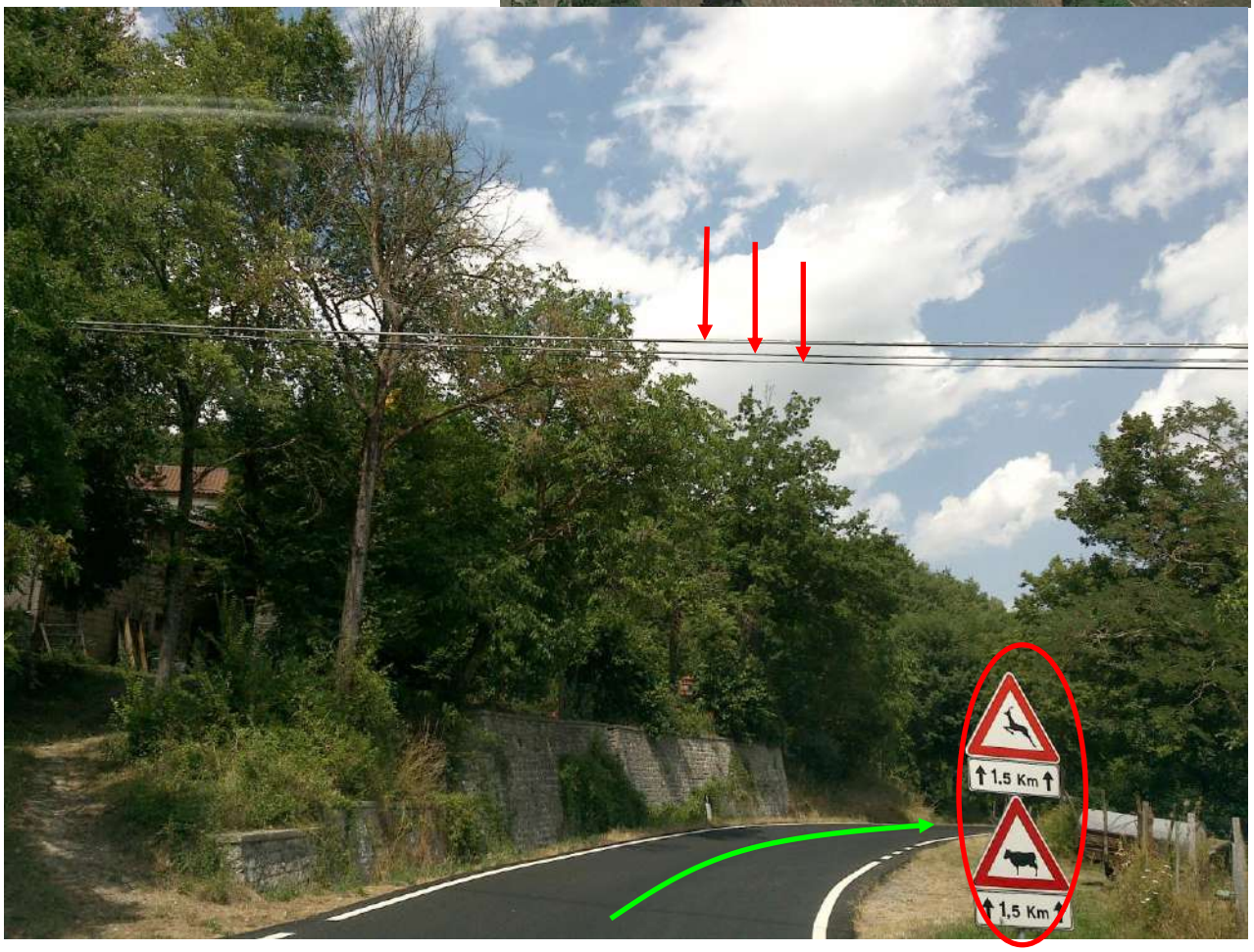
Observation 90
No.2 cables have to be buried.
N 43.717252° E 12.123513°



Observation 91
No.3 cables have to be buried.
No.1 tree on the right has to be removed.
N 43.717749° E 12.121786°



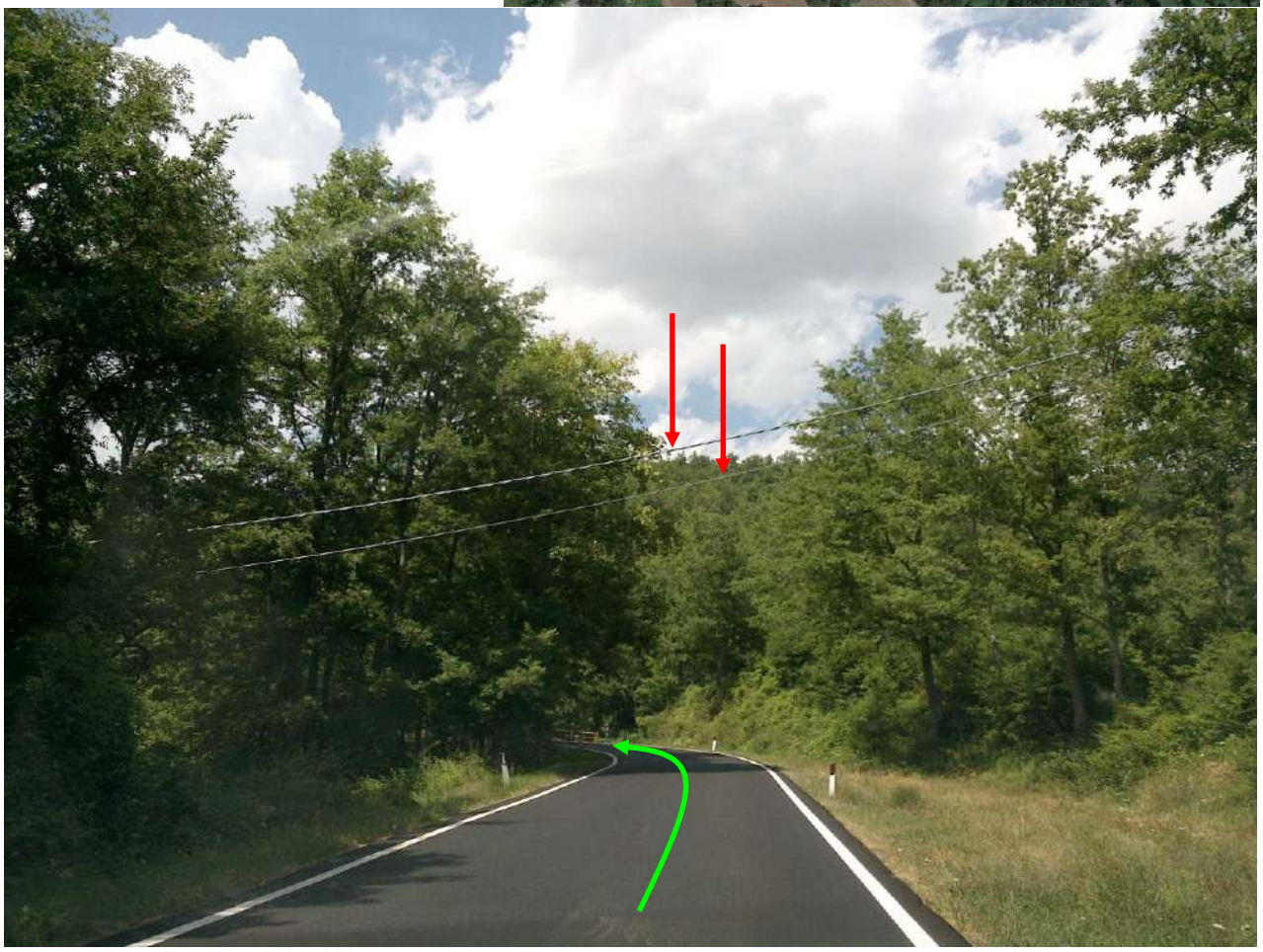
Observation 92
No.3 cables have to be buried.
No.2 road signs have to be removed.
N 43.718016° E 12.120927°



Observation 93
The maximum bearing capacity of the bridge has to be checked.
N 43.719024° E 12.124299°

Observation 94
No.1 road sign on the left has to be removed.
N 43.722024° E 12.130691°

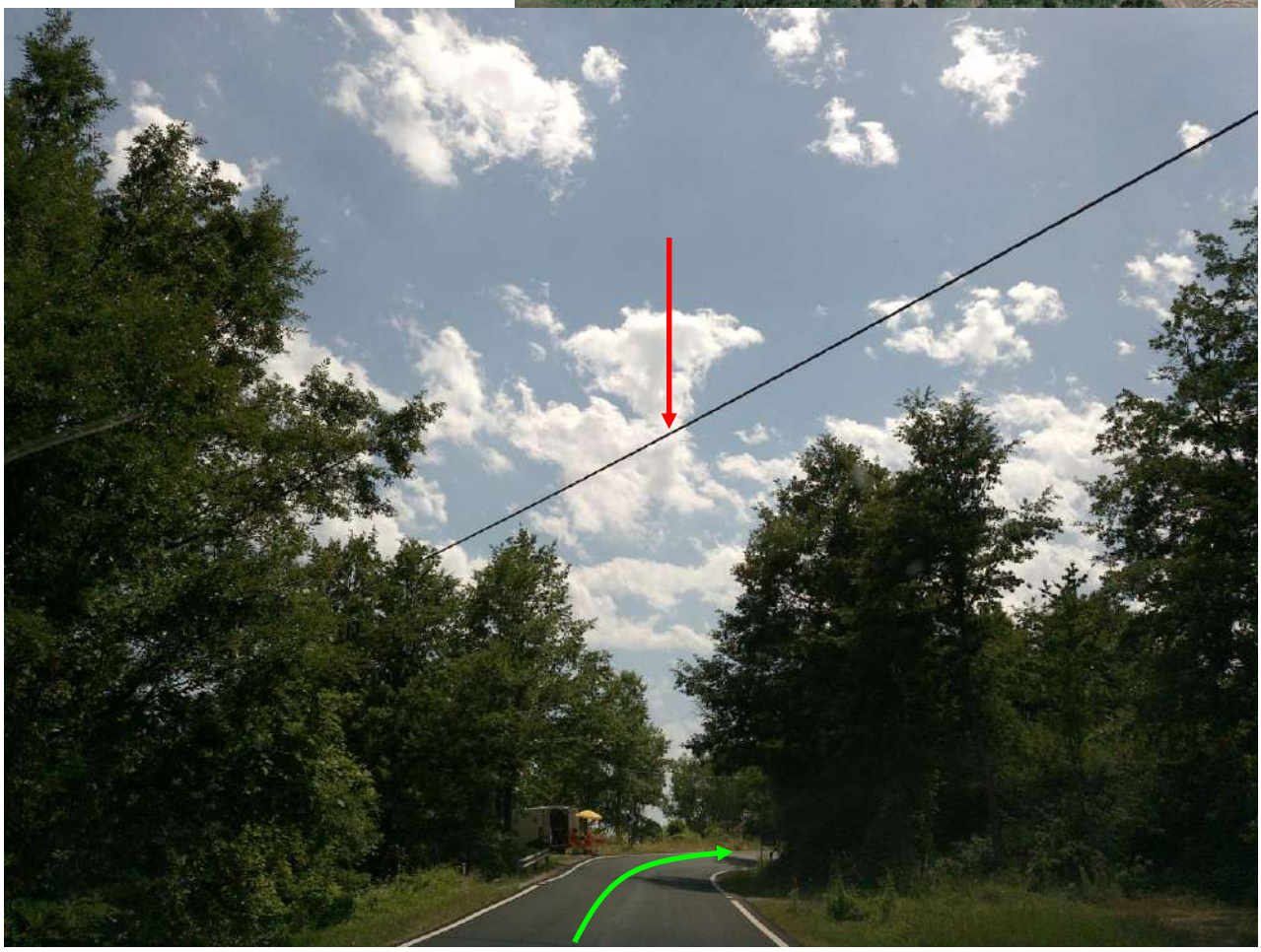
Observation 95
No.2 cables have to be buried.
N 43.723416° E 12.123513°



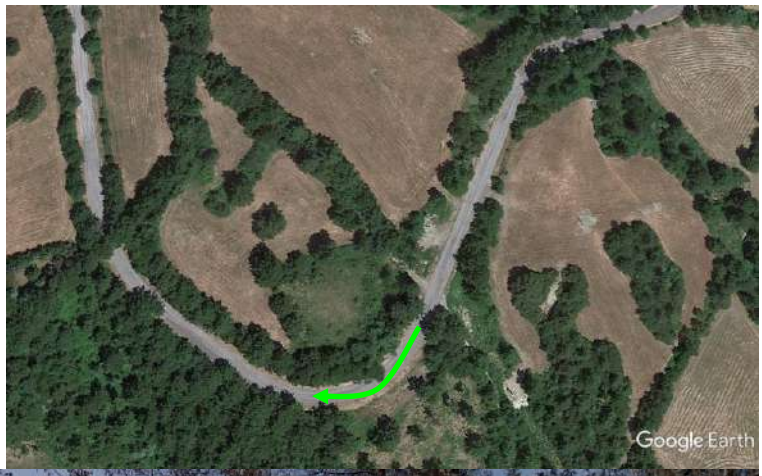
Observation 96
The maximum bearing capacity of the bridge has to be checked.
N 43.724161° E 12.123274°

Observation 97
The maximum bearing capacity of the bridge has to be checked.
N 43.724344° E 12.121913°

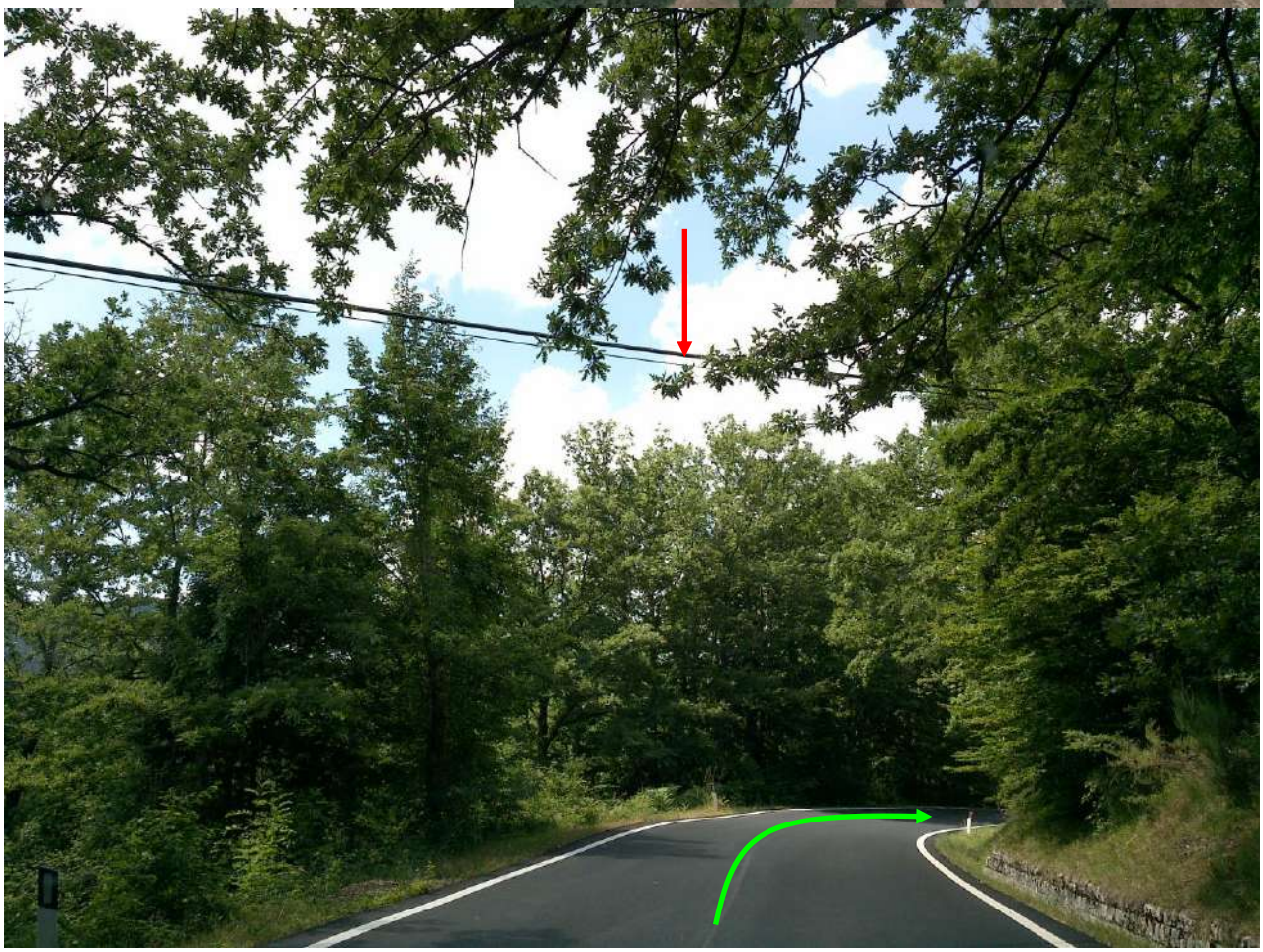
Observation 98.01
No.1 cable has to be buried.
N 43.723538° E 12.120786°



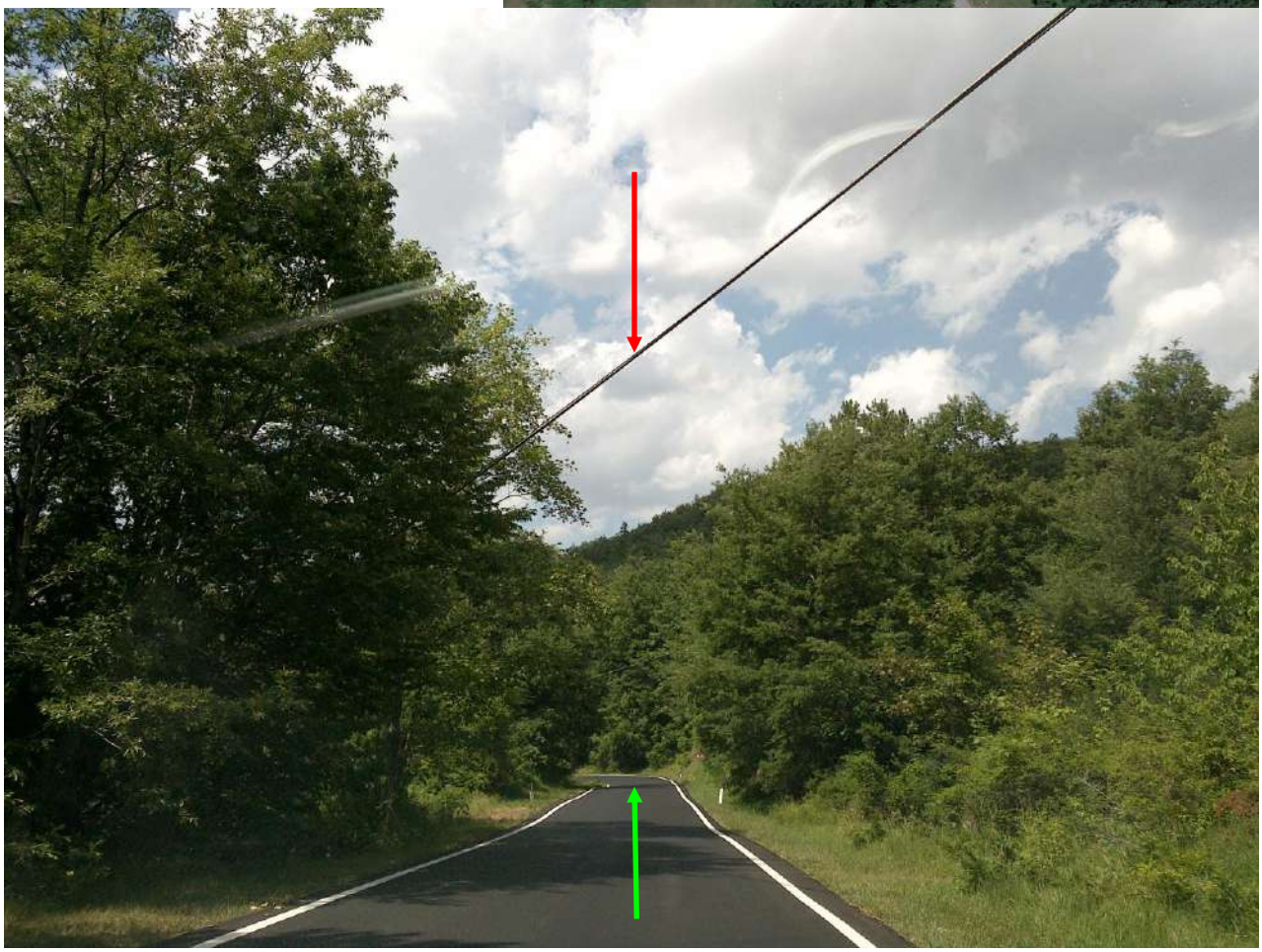
Observation 98.02
No.2 road signs have to be buried.
N 43.723027° E 12.120469°



Observation 99
No.1 cable has to be buried.
N 43.725274° E 12.117886°



Observation 100.01
No.1 cable has to be buried.
N 43.727586° E 12.115700°



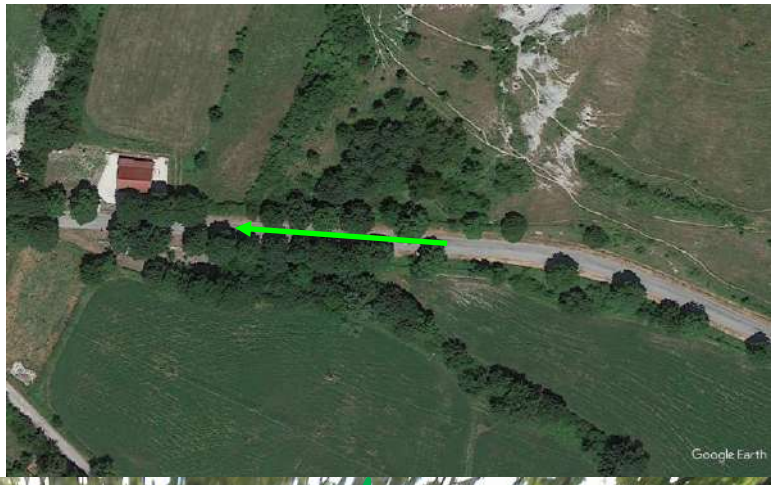
Observation 100.02
No.1 cable has to be buried.
N 43.728136° E 12.115602°

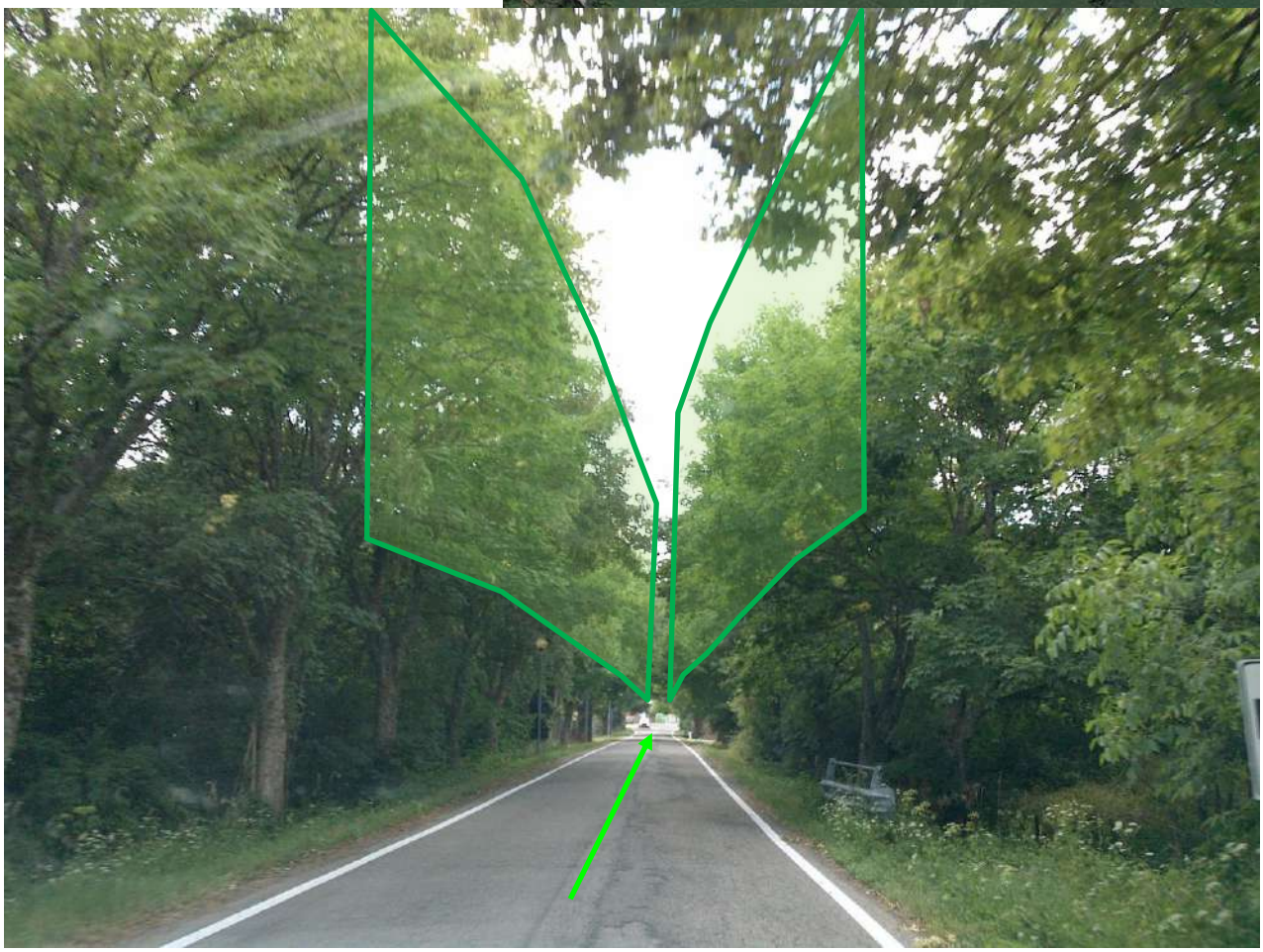
Observation 101
The maximum bearing capacity of the bridge has to be checked.
N 43.731997° E 12.112844°

Observation 102.01
No.1 cable has to be buried.
N 43.734402° E 12.109525°

Observation 102.02
No.1 cable has to be buried.
N 43.734630° E 12.109372°

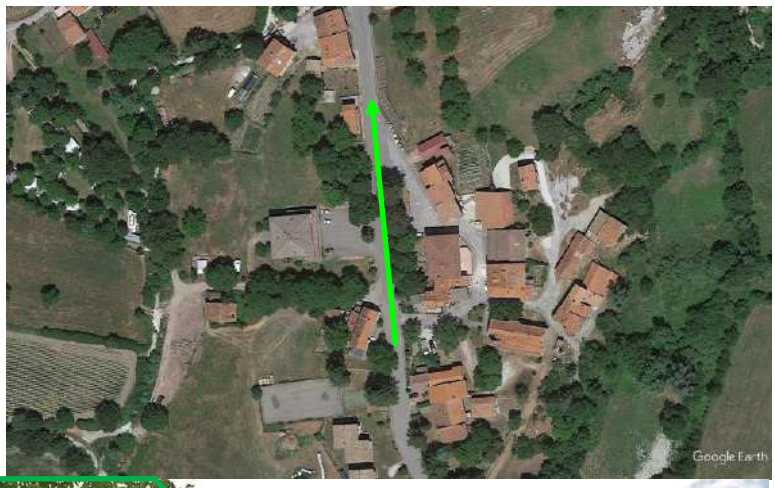
Observation 103
Tree branches jutting out on the road have to be cut.
N 43.736366° E 12.104925°



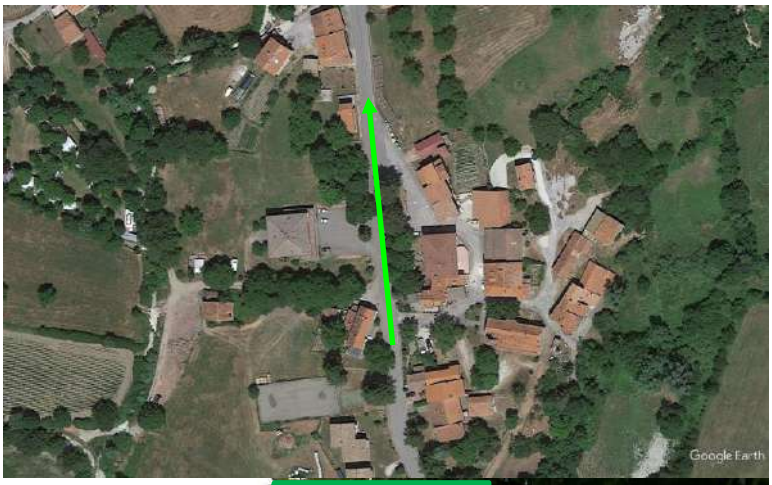


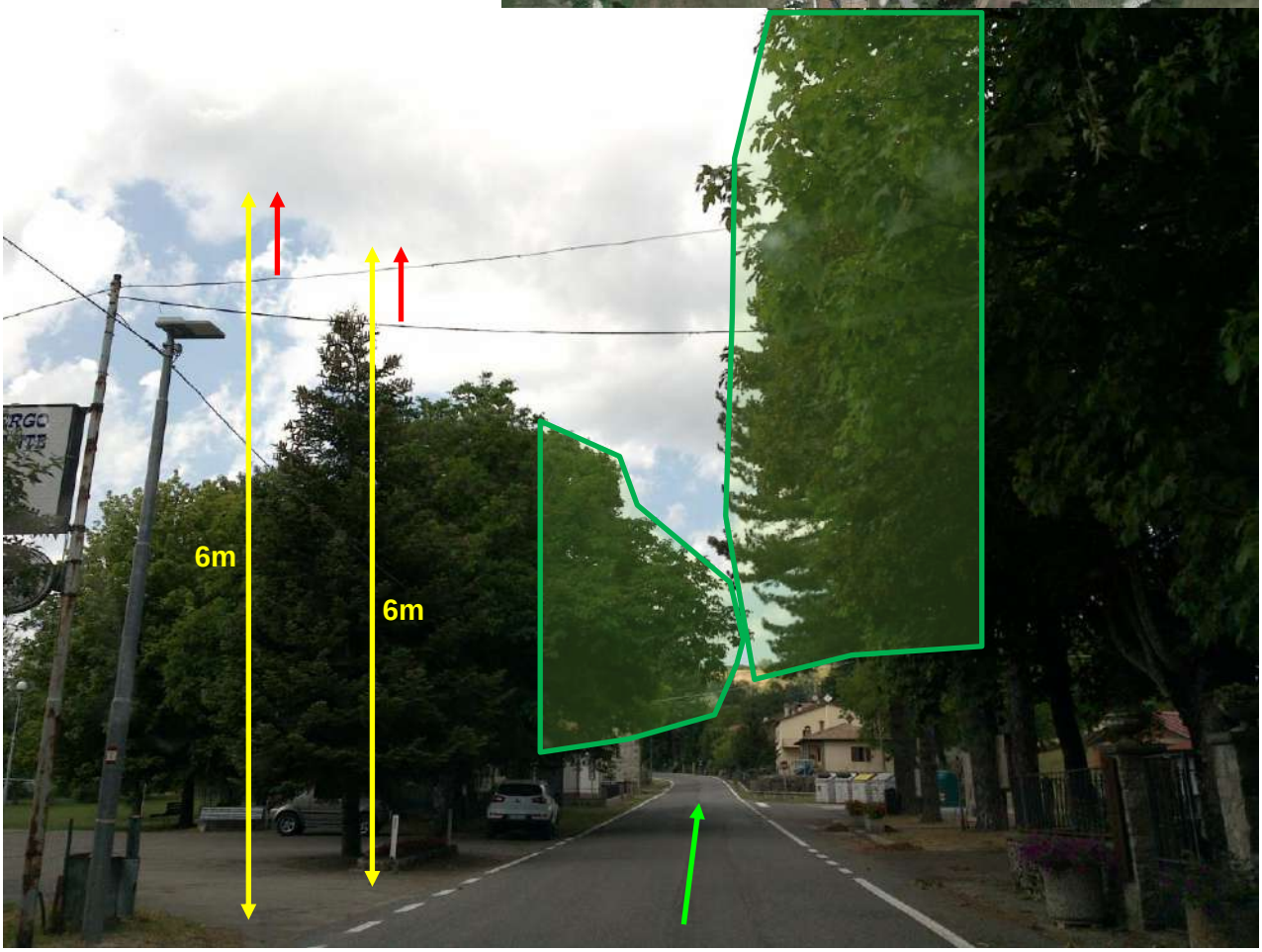
Observation 104
No.1 cable has to be buried.
N 43.736458° E 12.102675°

Observation 105.01
No.2 cables have to be raised to 6m.
Tree branches jutting out on the road have to be cut.
N 43.737099° E 12.101838°

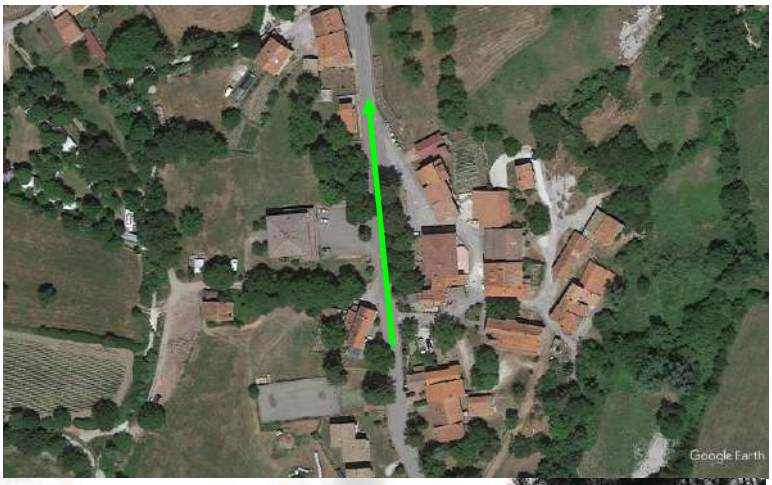


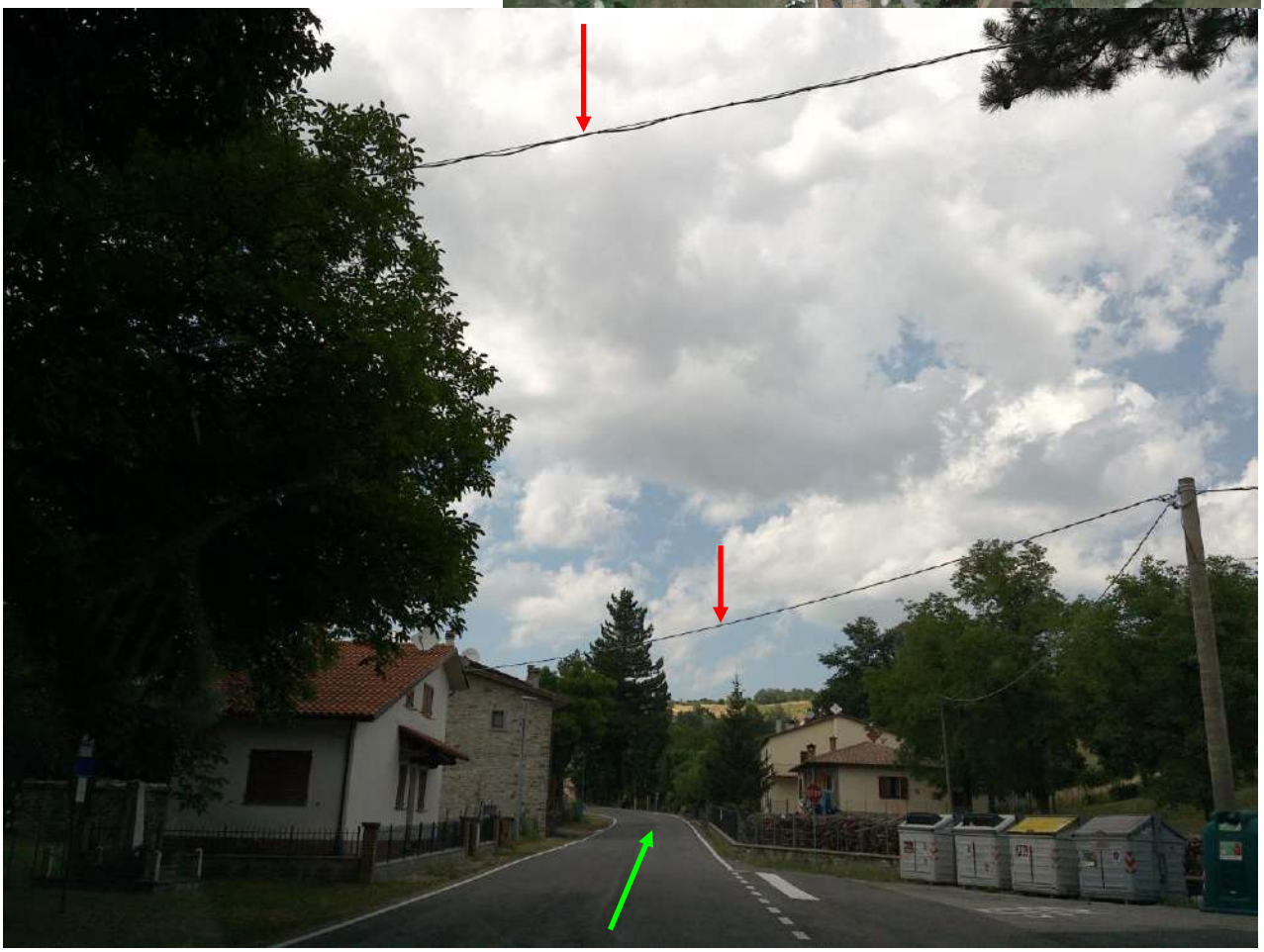
Observation 105.02
No.2 cables have to be raised to 6m.
Tree branches jutting out on the road have to be cut.
N 43.737469° E 12.101761°





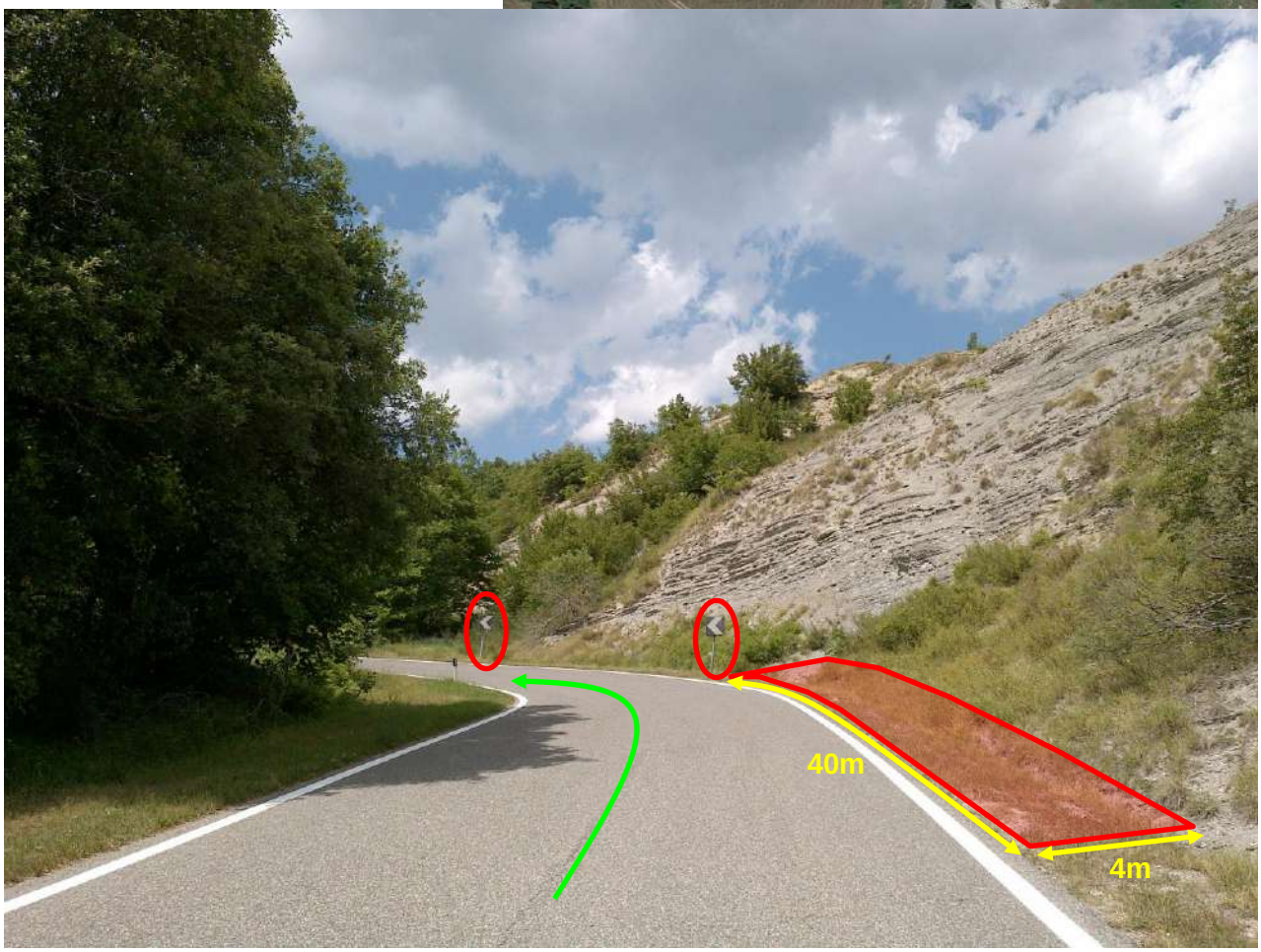
Observation 105.03
No.2 cables have to be buried.
N 43.737927° E 12.101783°





Observation 106
The maximum bearing capacity of the bridge has to be checked.
No.1 cable has to be buried.
N 43.739430° E 12.100966°

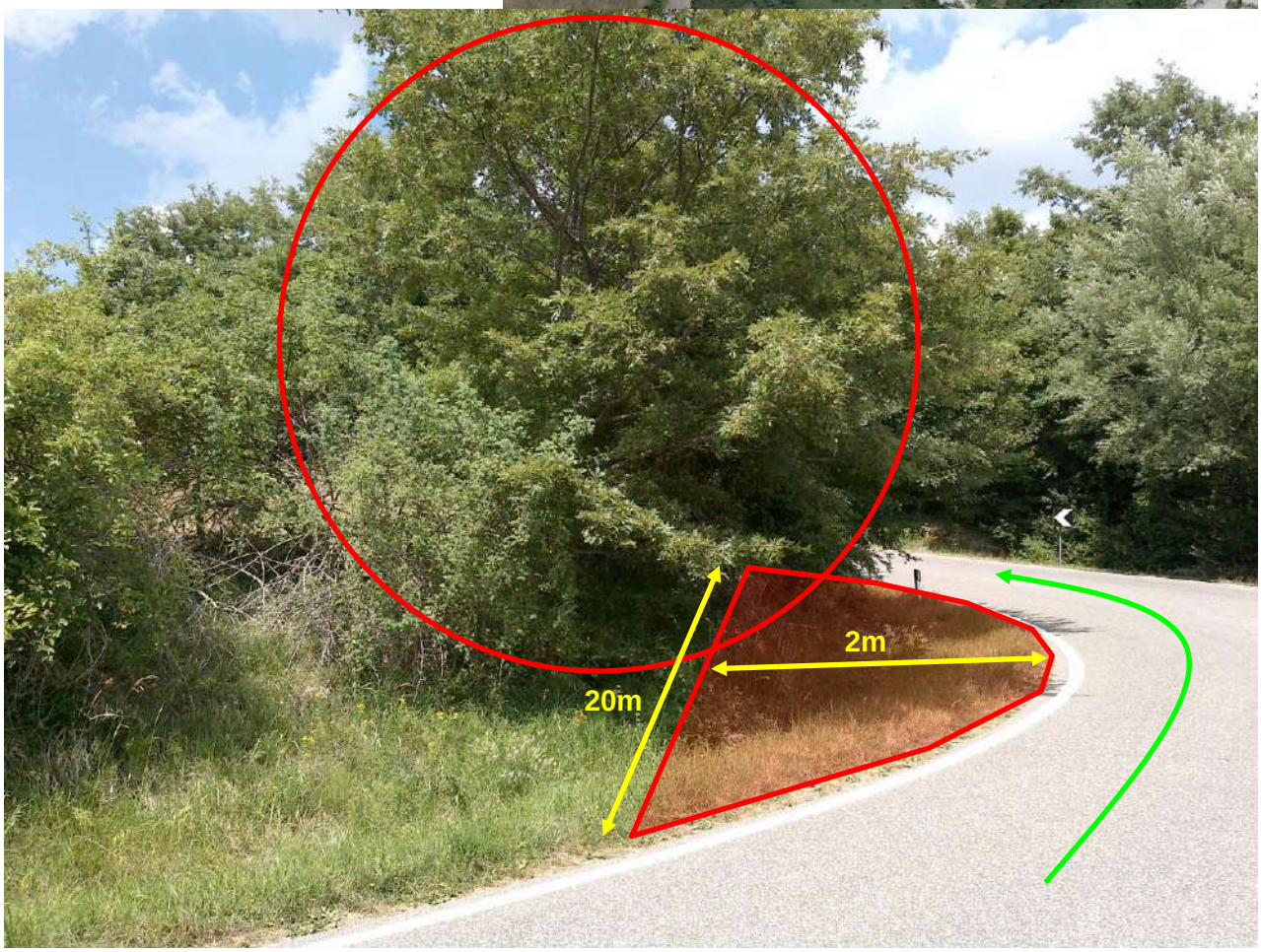
Observation 107
The road on the right side has to be widened and made accessible for 4x40m.
No.2 road signs have to be removed.
N 43.742336° E 12.097452°



Observation 108
No.3 road signs have to be removed.
N 43.742541° E 12.096577°

Observation 109
Vegetation on the right side has to be removed for entire curving radius.
N 43.744738° E 12.096377°

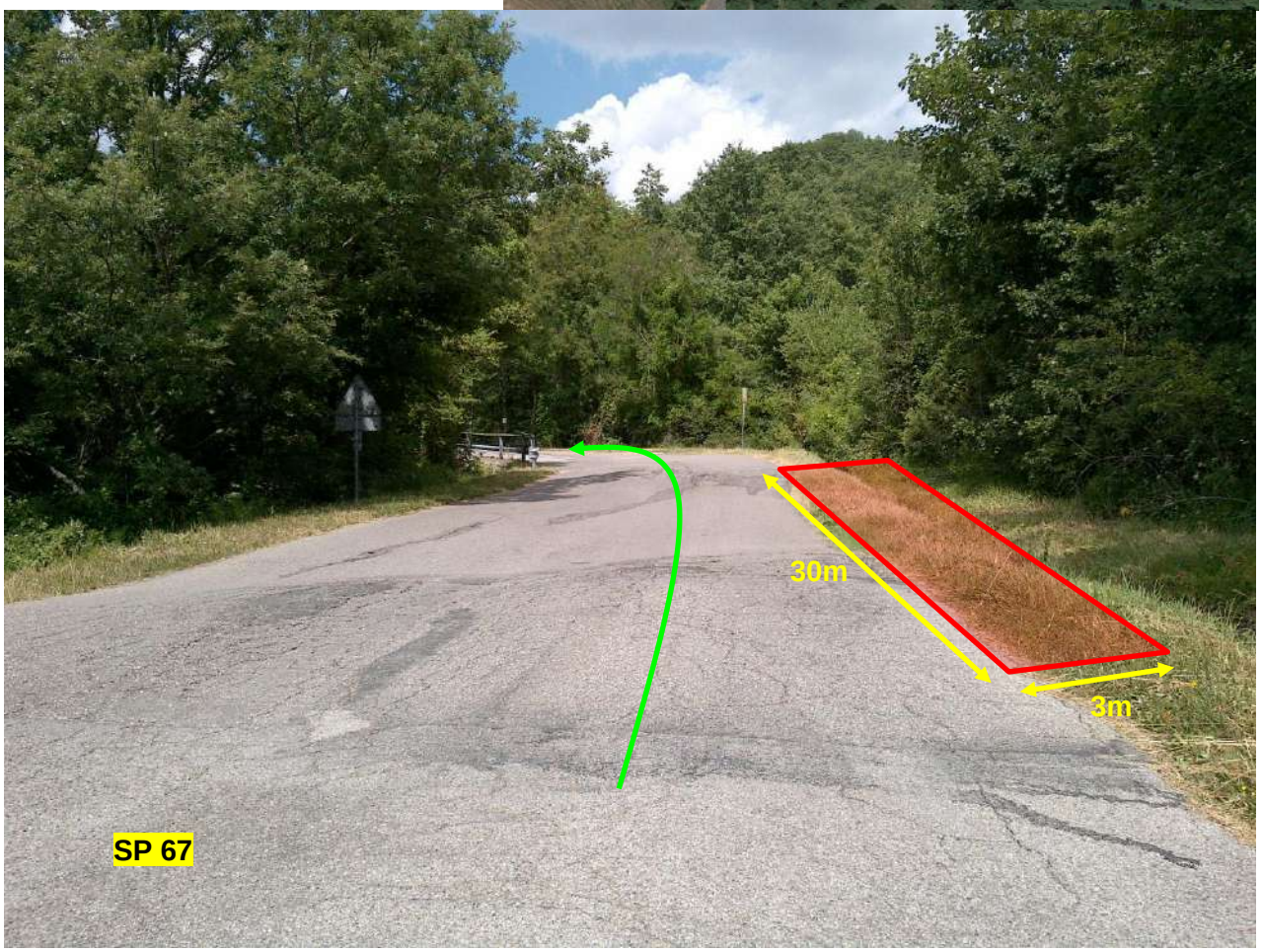
Observation 110
The road on the left side has to be widened and made accessible for 2x20m.
Trees have to be removed.
N 43.744880° E 12.098741°



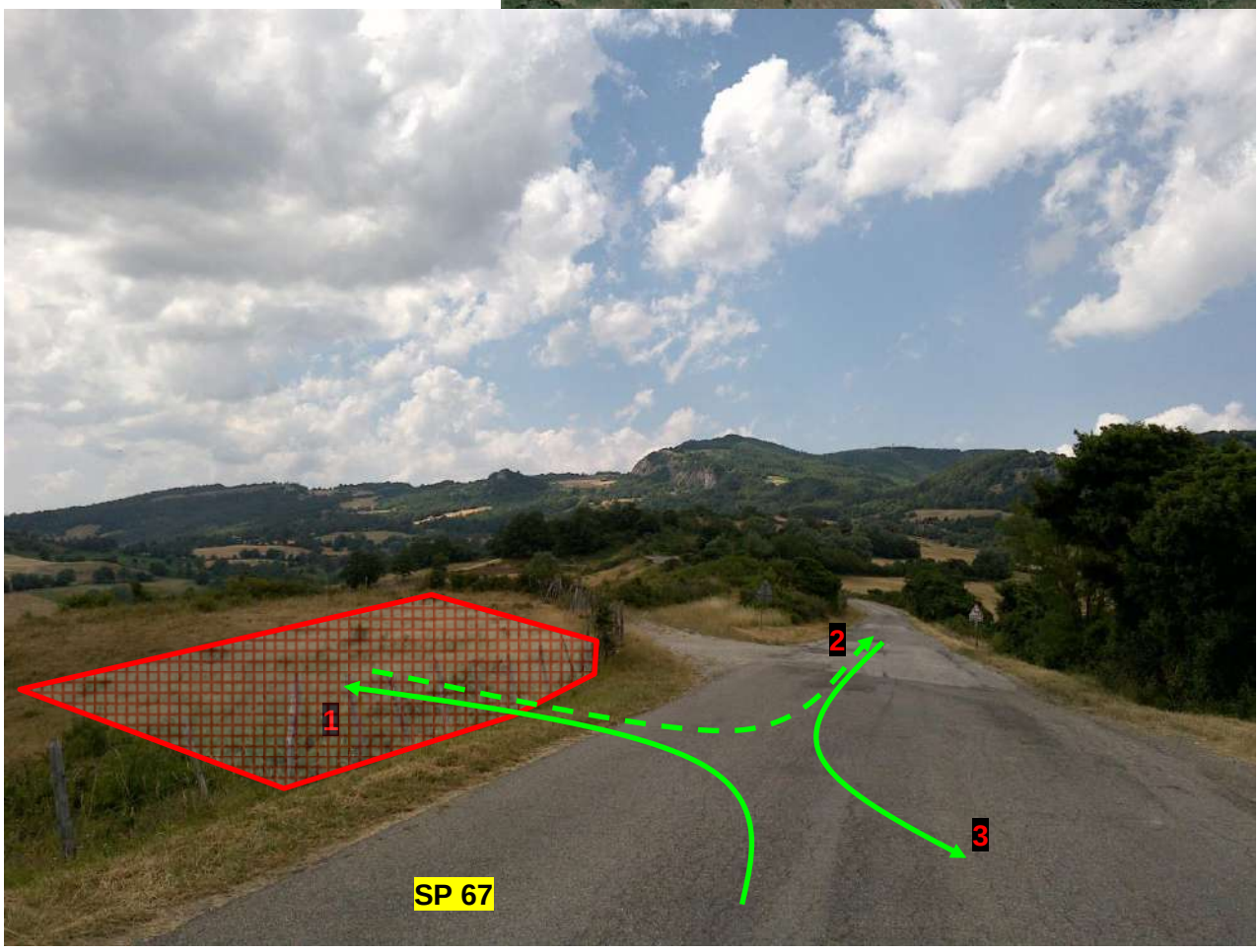
Observation 111
No.1 road sign on the left has to be removed.
N 43.748044° E 12.098027°

Observation 112
The road has to be restored from this point up to site access.
N 43.752325° E 12.099041°

Observation 113
The road on the right side has to be widened and made accessible for 3x30m.
Landslide has to be restored.
N 43.754527° E 12.100483°



Observation 114.01
Maneuver area has to be created to do reverse.
N 43.764361° E 12.097247°



Observation 114.02
Site access.
The road has to be stabilized, levelled and compacted for at least 5m width.
N 43.764427° E 12.097183°

10. Final Considerations

This feasibility study of transport was carried out to transport SG5X-155-T102.5.51A.

The proposed road does not consider the weight limitations and/or examination of the bridges' weight capacity along the route.

The enclosed transport requirements and related observations are based on the existing road infrastructures, combined with the overall extent of the wind farm, without any indications regarding the site road, its arrangement, and access to each installation pad.

The site road to reach the platforms has to be built according to SAE equipment specifications. An inspection is needed before the kickoff of the project in order to evaluate the civil works.

The entire site road has to be ensured with at least 6m clearance, free from any obstacles on either side of the road and must be levelled, compacted, cleared from all branches jutting out on the carriageway. We would like to advise you to have, during the first transport, an authorized staff with a forklift that can do this operation.

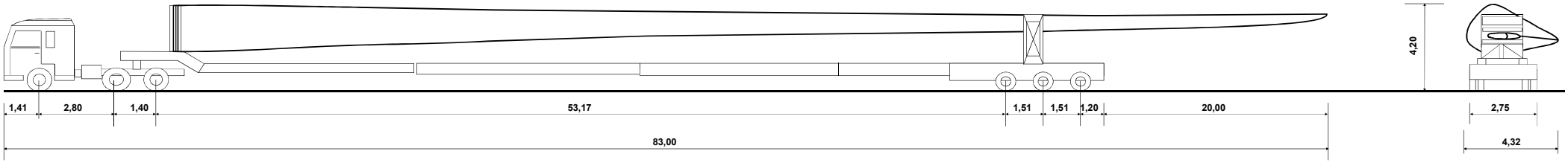
Along the route, it will be necessary to keep flat each height difference (vertical radius has to be defined according to SIEMENS GAMESA Guidelines).

All cables overpassing the entire transport route must be secured at a minimum of 5,5 m of height.

In order to prove the route feasibility and the delivery of all components to each platform, a further inspection and a test run should be performed by SAE before the transportation commencement. We suggest that on the first transport our Carrier will be supported by Client team in case of needs.

ALLEGATO B
Schemi grafici convenzionali

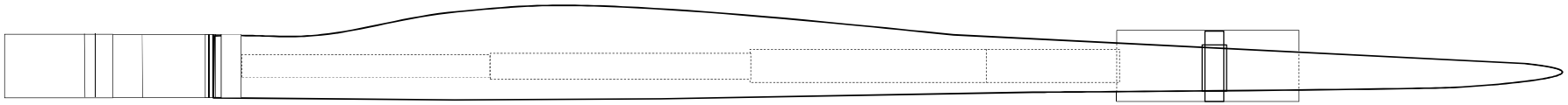
S.A.E. S.r.l.
DM377KV
XA064ED



ASSE								
S	TSG	TSG		C4L	C4L	C4L		
RUOTE								
2	4	4		4	4	4		
MASSA MASSIMA								
8,00	12,00	12,00		12,00	12,00	12,00		
P. VUOTO Ton.								
3,27	6,51	6,51		7,87	7,87	7,87		
P. CARICO Ton.								
6,00	11,77	11,77		12,00	12,00	12,00		
KG/CM²								
5,00	4,90	4,90		7,50	7,50	7,50		

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	10,00	29,90
PESO DEL CARICO	T.	13,25	12,39
PORTATA UTILE	T.	22,00	28,10
PESO COMPLESSIVO	T.	29,54	36,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	400

	L	W	H	PESO
CONV. CARICO	83,00	4,32	4,20	65,54
ECCEDENZE	65,00	1,77	0,20	21,54

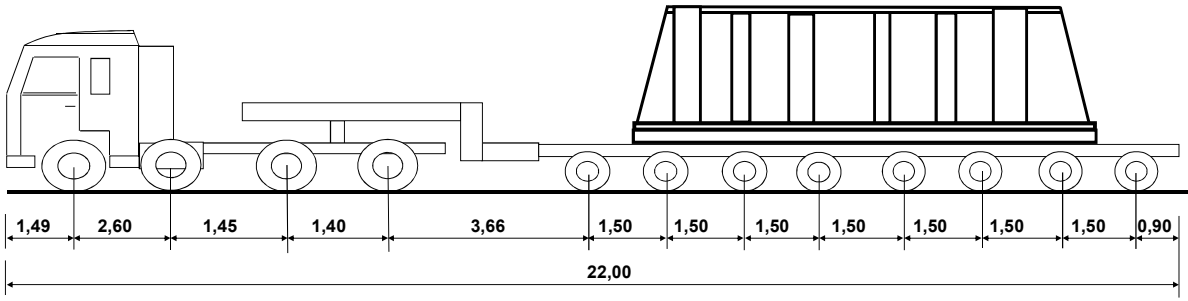


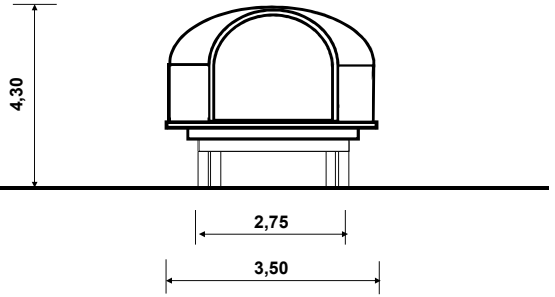
Descrizione del carico : **PALA PER AEROGENERATORE**

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Chiarati)

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

S.A.E. S.r.l.
FT618EY
AE99323

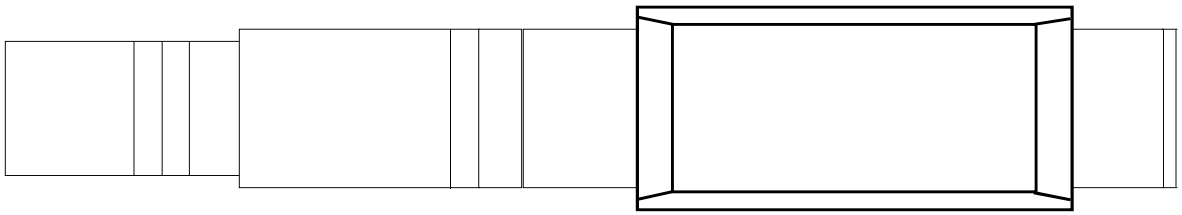




ASSE											
S	S	TSG	TSG	C4L	C4L	C4L	C4L	C4L	C4L	C4L	C4L
RUOTE											
2	2	4	4	4	4	4	4	4	4	4	4
P. MASSIMO AMMESSO											
7,50	7,50	13,00	13,00	14,49	14,49	14,49	14,49	14,49	14,49	14,49	14,49
P. VUOTO T.											
3,08	3,08	5,70	5,70	3,18	3,18	3,18	3,18	3,17	3,17	3,17	3,17
P. TOT. T.											
5,52	5,52	11,50	11,50	11,70	11,70	11,70	11,70	11,70	11,70	11,70	11,70
KG/CM²											
3,73	3,73	4,17	4,17	5,63	5,63	5,63	5,63	5,63	5,63	5,63	5,63

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	13,90	29,06
PESO DEL CARICO	T.	16,48	68,20
PORTATA UTILE	T.	26,10	112,96
PESO COMPLESSIVO	T.	34,04	93,60
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	400

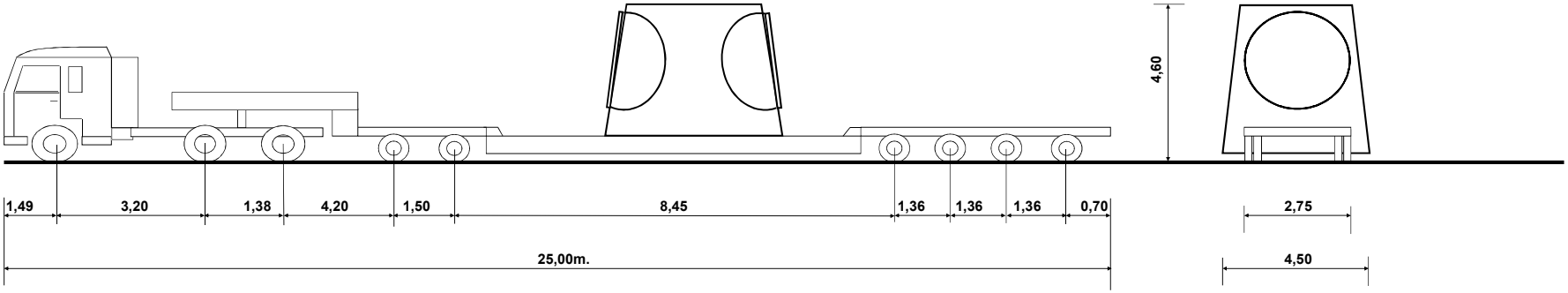
	L	W	H	PESO
CONV. CARICO	22,00	3,50	4,30	127,64
ECCEDENZE	4,00	0,95	0,30	83,64



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **DRIVE TRAIN**

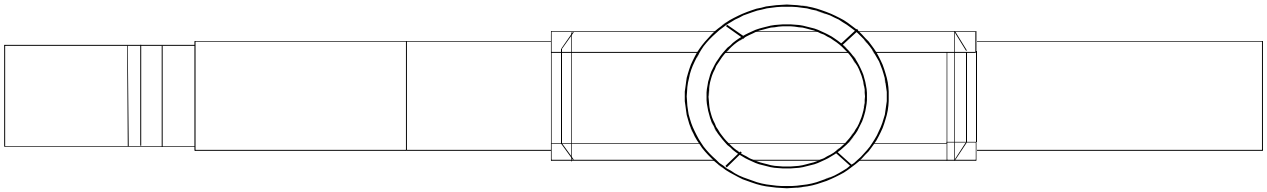
S.A.E. S.r.l.
CK517XY
AF69466



ASSE									
S	TSG	TSG	C4L	C4L	C4L	C4L	C4L	C4L	
RUOTE									
2	4	4	4	4	4	4	4	4	
P. MAX AMMESSO Ton.									
8,50	15,30	15,30	14,64	14,64	14,64	14,64	14,64	14,64	
P. VUOTO Ton.									
3,19	6,38	6,38	4,58	4,58	4,58	4,58	4,58	4,58	
P. CARICO Ton.									
7,09	11,75	11,75	11,30	11,30	11,30	11,30	11,30	11,30	
KG/CM²									
5,91	4,90	4,90	5,65	5,65	5,65	5,65	5,65	5,65	

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	10,43	33,00
PESO DEL CARICO	T.	14,64	40,32
PORTATA UTILE	T.	27,50	82,34
PESO COMPLESSIVO	T.	30,59	67,80
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	500

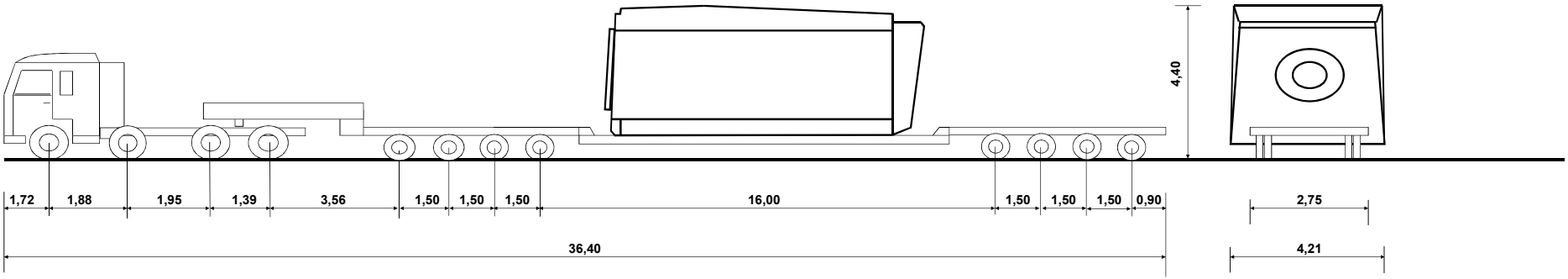
	L	W	H	PESO
CONV. CARICO	25,00	4,50	4,60	98,39
ECCEDENZE	7,00	1,95	0,60	54,39



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **HUB**

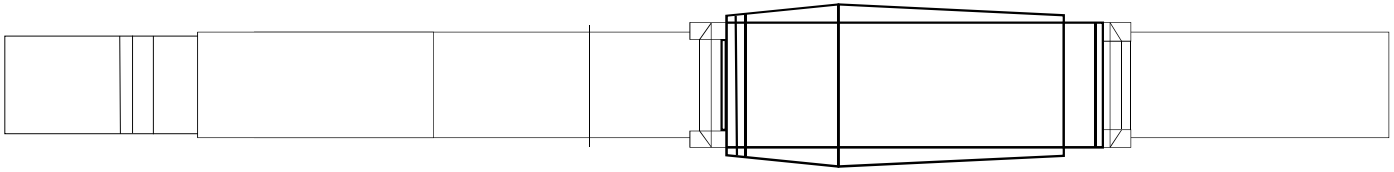
S.A.E. S.r.l.
DP770GP
AF26053



ASSE												
S	S	TSG	TSG	C4L	C4L	C4L	C4L	C4L	C4L	C4L	C4L
RUOTE												
2	2	4	4	4	4	4	4	4	4	4	4
MASSA MASSIMA AMMESSA												
8,50	8,50	16,00	16,00	14,49	14,49	14,49	14,49	14,49	14,49	14,49	14,49
P. VUOTO Ton.												
3,14	3,14	5,82	5,82	4,48	4,48	4,48	4,48	4,48	4,48	4,48	4,48
P. CARICO Ton.												
7,00	7,00	11,89	11,90	12,00	12,00	12,00	12,00	12,00	12,00	12,00	12,00
KG/CM²												
4,67	4,67	3,96	3,67	6,67	6,67	6,67	6,67	6,67	6,67	6,67	6,67

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	14,70	39,06
PESO DEL CARICO	T.	19,87	60,16
PORTATA UTILE	T.	33,30	110,16
PESO COMPLESSIVO	T.	37,79	96,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	750	450

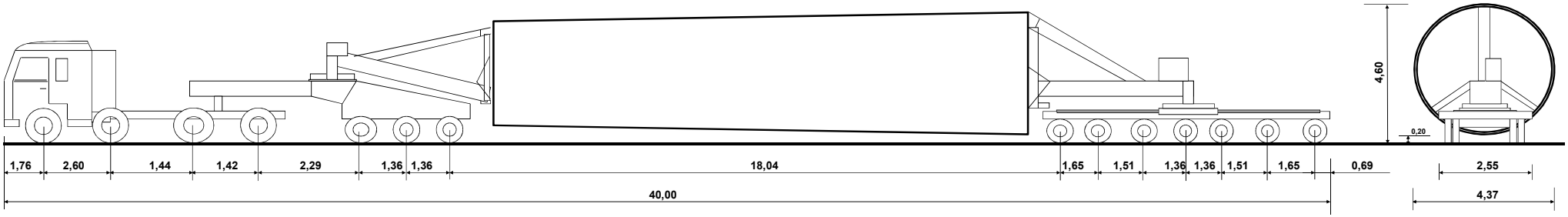
	L	W	H	PESO
CONV. CARICO	36,40	4,21	4,40	133,79
ECCEDENZE	18,40	1,66	0,40	89,79



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **NAVICELLA**

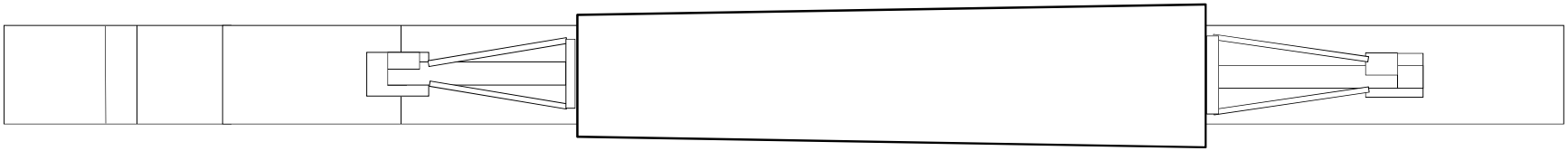
S.A.E. S.r.l.
EW427JF
AE99206



ASSE	S	S	TSG	TSG	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V
RUOTE	2	2	4	4	4	4	4	4	4	4	4	4	4
MASSA MASS. T.A.	8,00	7,50	13,00	13,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
P. VUOTO T.	3,00	3,00	5,40	5,40	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42
P. TOT. T.	4,00	4,00	7,44	7,44	10,10	10,10	10,10	10,10	10,10	10,10	10,10	10,10	10,10
KG/CM²	3,33	3,33	3,10	3,10	7,21	7,21	7,21	7,21	7,21	7,21	7,21	7,21	7,21

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	15,00	26,00
PESO DEL CARICO	T.	6,08	76,80
PORTATA UTILE	T.	25,00	99,00
PESO COMPLESSIVO	T.	22,88	101,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	350

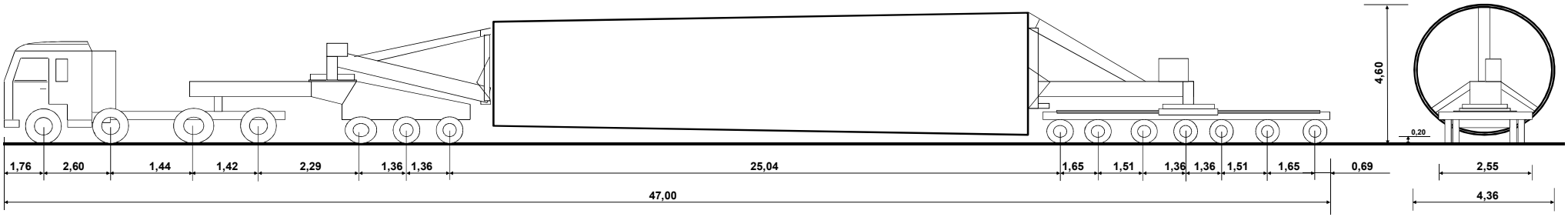
	L	W	H	PESO
CONV. CARICO	40,00	4,37	4,60	123,88
ECCEDENZE	22,00	1,82	0,60	79,88



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **SEZIONE DI TORRE BOTTOM**

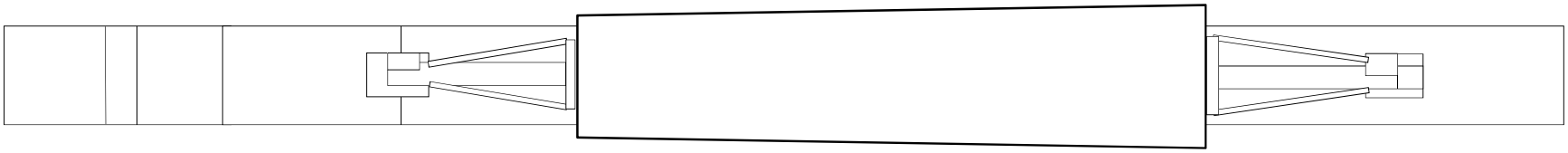
S.A.E. S.r.l.
EW427JF
AE99206



ASSE														
S	S	TSG	TSG	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V
RUOTE														
2	2	4	4	4	4	4	4	4	4	4	4	4	4	4
MASSA MASS. T.A.														
8,00	7,50	13,00	13,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
P. VUOTO T.														
3,00	3,00	5,40	5,40	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42
P. TOT. T.														
3,80	3,80	7,05	7,05	9,90	9,90	9,90	9,90	9,90	9,90	9,90	9,90	9,90	9,90	9,90
KG/CM²														
3,17	3,17	2,94	2,94	7,07	7,07	7,07	7,07	7,07	7,07	7,07	7,07	7,07	7,07	7,07

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	15,00	26,00
PESO DEL CARICO	T.	4,90	74,80
PORTATA UTILE	T.	25,00	99,00
PESO COMPLESSIVO	T.	21,70	99,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	350

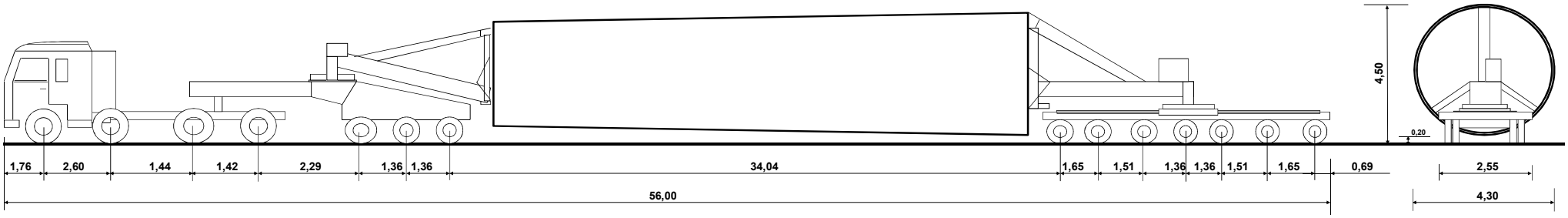
	L	W	H	PESO
CONV. CARICO	47,00	4,36	4,60	120,70
ECCEDENZE	29,00	1,81	0,60	76,70



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **SEZIONE DI TORRE MIDDLE1**

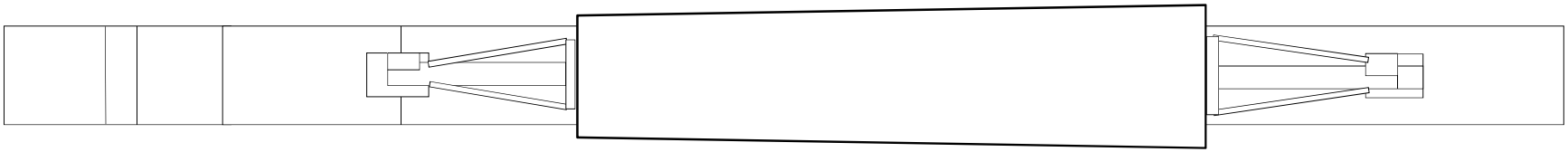
S.A.E. S.r.l.
EW427JF
AE99206



ASSE														
S	S	TSG	TSG	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V
RUOTE														
2	2	4	4	4	4	4	4	4	4	4	4	4	4	4
MASSA MASS. T.A.														
8,00	7,50	13,00	13,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
P. VUOTO T.														
3,00	3,00	5,40	5,40	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42	2,42
P. TOT. T.														
3,86	3,87	7,17	7,17	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
KG/CM²														
3,22	3,23	2,99	2,99	7,14	7,14	7,14	7,14	7,14	7,14	7,14	7,14	7,14	7,14	7,14

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	15,00	26,00
PESO DEL CARICO	T.	5,27	75,80
PORTATA UTILE	T.	25,00	99,00
PESO COMPLESSIVO	T.	22,07	100,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	350

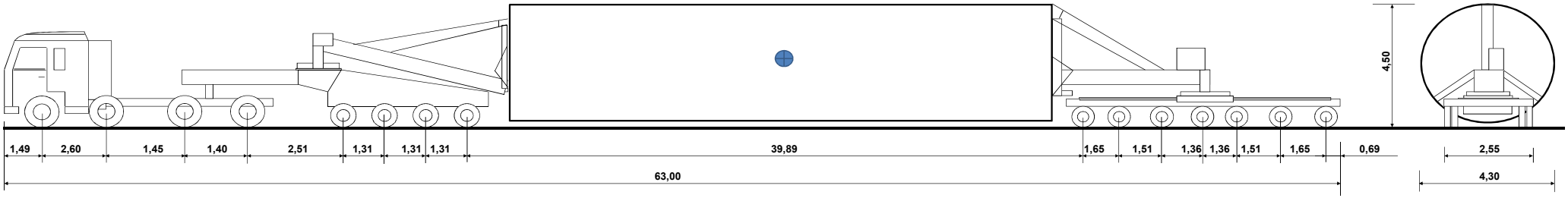
	L	W	H	PESO
CONV. CARICO	56,00	4,30	4,50	122,07
ECCEDENZE	38,00	1,75	0,50	78,07



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **SEZIONE DI TORRE MIDDLE2**

S.A.E. S.r.l.
FT616EY
XA375PC



ASSE														
S	S	TSG	TSG	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V	C4V
RUOTE														
2	2	4	4	4	4	4	4	4	4	4	4	4	4	4
MASS. MASSIMA														
7,50	7,50	13,00	13,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
P. VUOTO T.														
3,60	3,60	6,45	6,45	2,65	2,65	2,65	2,65	2,63	2,63	2,63	2,63	2,63	2,63	2,62
P. TOT. T.														
4,53	4,54	8,41	8,41	8,70	8,70	8,70	8,70	8,70	8,70	8,70	8,70	8,70	8,70	8,70
KG/CM²														
3,78	3,78	3,50	3,50	5,44	5,44	5,44	5,44	5,44	5,44	5,44	5,44	5,44	5,44	5,44

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	12,70	36,40
PESO DEL CARICO	T.	5,79	66,70
PORTATA UTILE	T.	27,30	98,60
PESO COMPLESSIVO	T.	25,89	95,70
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	400

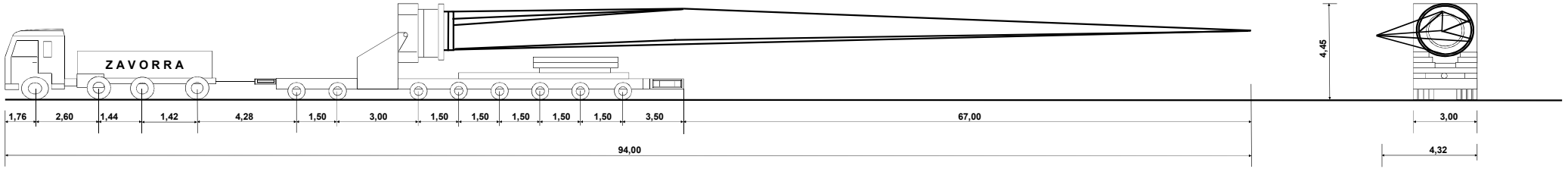
	L	W	H	PESO
CONV. CARICO	63,00	4,30	4,50	121,59
ECCEDENZE	45,00	1,75	0,50	77,59

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **SEZIONE DI TORRE TOP**

ALLEGATO C
Schemi grafici modulari

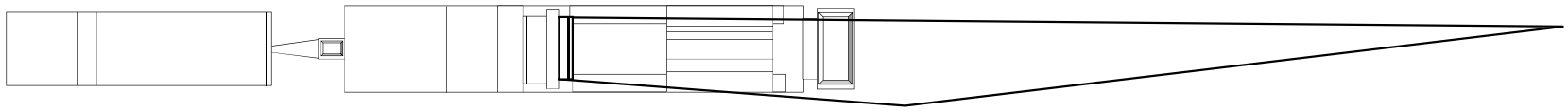
S.A.E. S.r.l.
EW427JF
XA165BZ



ASSE											
S	S	TSG	TSG	C8	C8	C8	C8	C8	C8	C8	C8
RUOTE											
2	2	4	4	8	8	8	8	8	8	8	8
MASSA MASS.											
8,50	8,50	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00
P. VUOTO T.											
4,00	4,00	8,50	8,50	7,90	7,89	7,89	7,89	7,89	7,89	7,89	7,89
P. CARICO T.											
4,00	4,00	8,50	8,50	11,10	11,10	11,10	11,10	11,10	11,09	11,09	11,09
KG/cm²											
2.86	2,86	3.04	3,04	3,47	3,47	3,47	3,47	3,47	3,46	3,46	3,46

CARATTERISTICHE		MOT./TRATT.	RIM./SEMIRI.
TARA	T.	25,00	63,13
PESO DEL CARICO	T.	0,00	25,64
PORTATA UTILE	T.	20,00	43,67
PESO COMPLESSIVO	T.	25,00	88,77
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	700	400

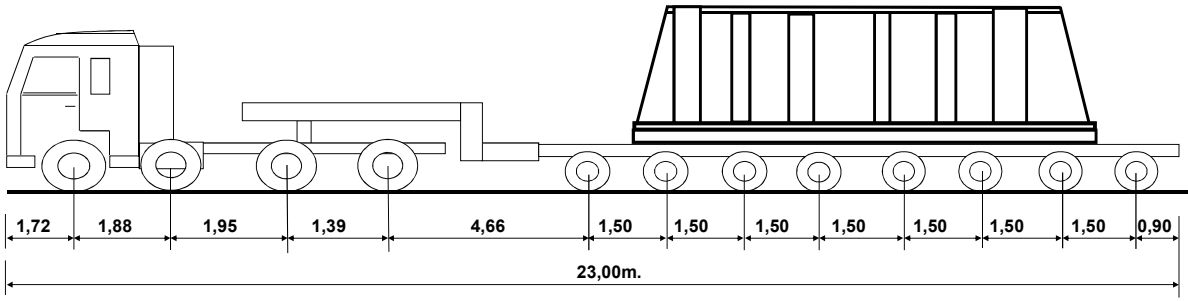
	L	W	H	PESO
CONV. CARICO	94,00	4,32	4,45	113,77
ECCEDENZE	76,00	1,77	0,45	69,77

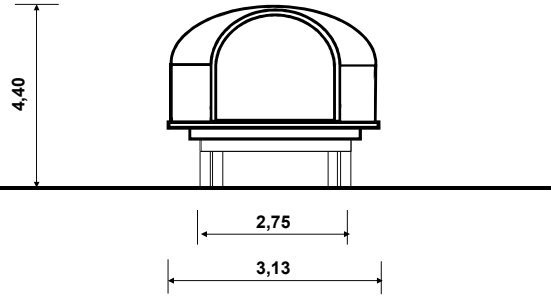


S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **WIND BLADE**

S.A.E. S.r.l.
DP770GP
AF26053

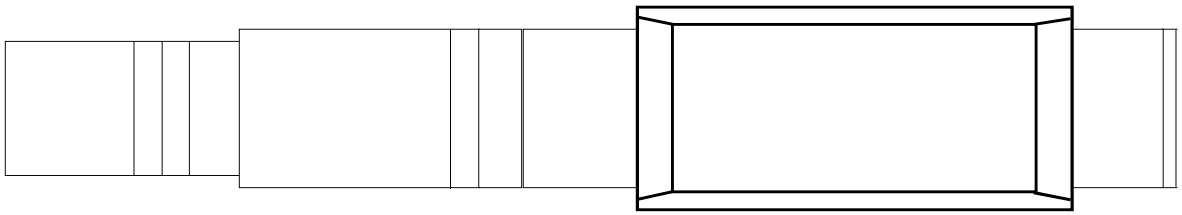




ASSE											
S	S	TSG	TSG	C4L	C4L	C4L	C4L	C4L	C4L	C4L	C4L
RUOTE											
2	2	4	4	4	4	4	4	4	4	4	4
P. VUOTO T.											
3,08	3,08	5,90	5,90	3,25	3,25	3,25	3,25	3,25	3,25	3,25	3,25
P. MASSIMO AMMESSO											
8,50	8,50	16,00	16,00	14,49	14,49	14,49	14,49	14,49	14,49	14,49	14,49
P. TOT. T.											
6,32	6,32	12,00	12,00	11,50	11,50	11,50	11,50	11,50	11,50	11,50	11,50
KG/CM²											
4,58	4,58	4,58	4,58	6,39	6,39	6,39	6,39	6,39	6,39	6,39	6,39

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	14,70	29,26
PESO DEL CARICO	T.	18,68	66,00
PORTATA UTILE	T.	33,30	119,96
PESO COMPLESSIVO	T.	36,64	92,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	450

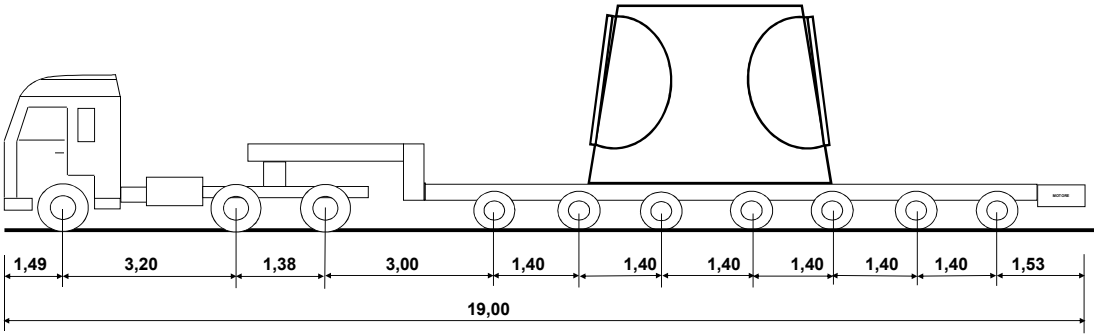
	L	W	H	PESO
CONV. CARICO	23,00	3,13	4,40	128,64
ECCEDENZE	5,00	0,58	0,40	84,64

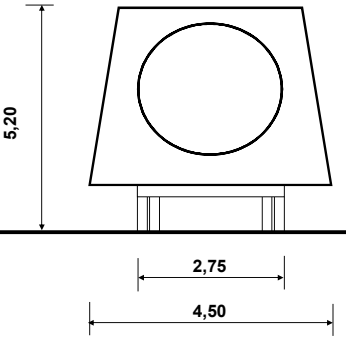


S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **DRIVE TRAIN**

S.A.E. S.r.l.
CK517XY
XA305PC

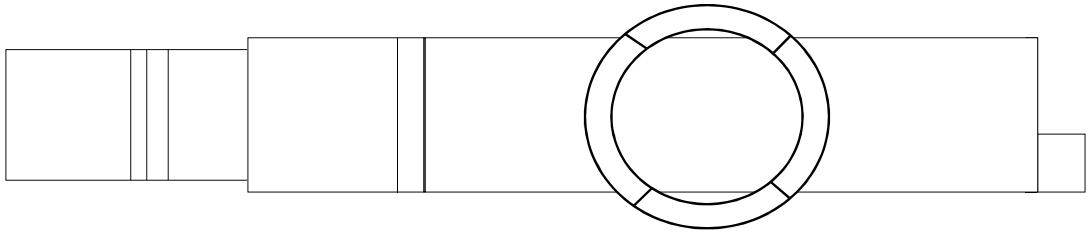




ASSE S	TSG	TSG	C4L	C4L	C4L	C4L	C4L	C4L	C4L
RUOTE 2	4	4	4	4	4	4	4	4	4
MASS. MASSIMA T.A. 8,50	16,00	16,00	14,00	14,00	14,00	14,00	14,00	14,00	14,00
P. VUOTO T. 4,09	4,50	4,50	2,71	2,71	2,71	2,71	2,71	2,71	2,71
P. TOT. T. 4,62	9,00	9,00	9,20	9,20	9,20	9,20	9,20	9,20	9,20
KG/CM² 3,85	3,75	3,75	5,11	5,11	5,11	5,11	5,11	5,11	5,11

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	10,43	21,63
PESO DEL CARICO	T.	9,53	45,43
PORTATA UTILE	T.	27,57	103,94
PESO COMPLESSIVO	T.	22,62	64,40
PRESS. PNEUMAT.	BAR	8,50	8,50
SUP. IMPRONTA	CM²	600	450

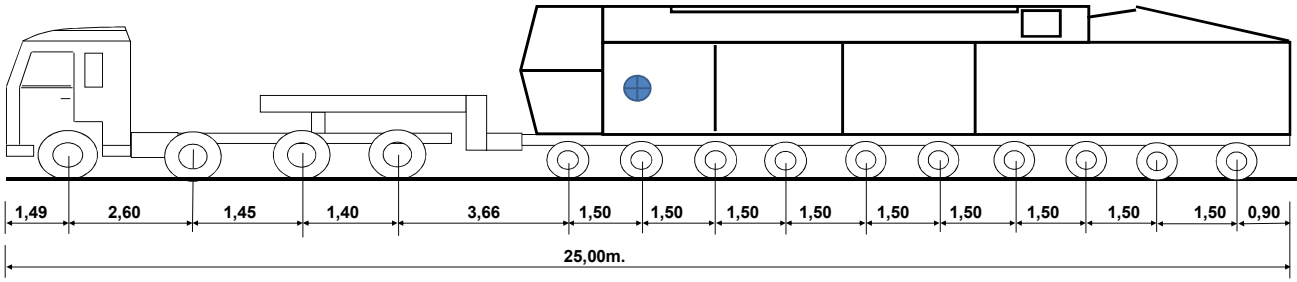
	L	W	H	PESO
CONV. CARICO	19,00	4,50	5,20	87,02
ECCEDENZE	1,00	1,95	1,20	43,02

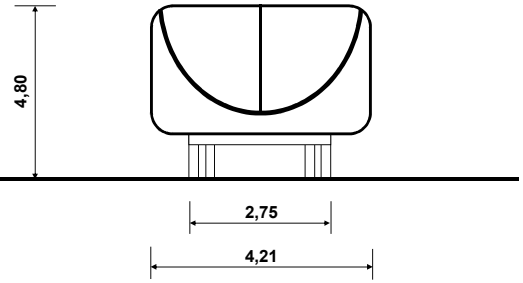


S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **HUB**

S.A.E. S.r.l.
FT618EY
AF26053

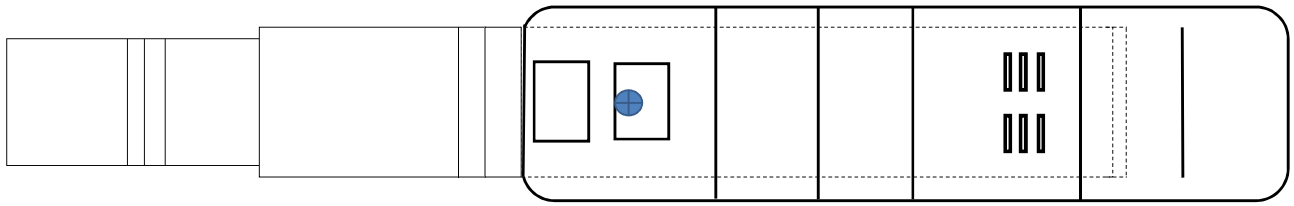




ASSE													
S	S	TSG	TSG	C4L	C4L	C4L	C4L	C4L	C4L	C4L	C4L	C4L	C4L
RUOTE													
2	2	4	4	4	4	4	4	4	4	4	4	4	4
MASS. MASSIMA													
7,50	7,50	13,00	13,00	14,49	14,49	14,49	14,49	14,49	14,49	14,49	14,49	14,49	14,49
P. VUOTO T.													
3,05	3,05	6,00	6,00	3,10	3,10	3,10	3,10	3,10	3,10	3,10	3,10	3,10	3,10
P. TOT. T.													
5,09	5,09	9,47	9,48	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
KG/CM²													
4,24	4,24	3,94	3,95	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00	5,00

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	13,90	35,20
PESO DEL CARICO	T.	14,90	65,13
PORTATA UTILE	T.	26,10	112,76
PESO COMPLESSIVO	T.	29,13	100,00
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	500

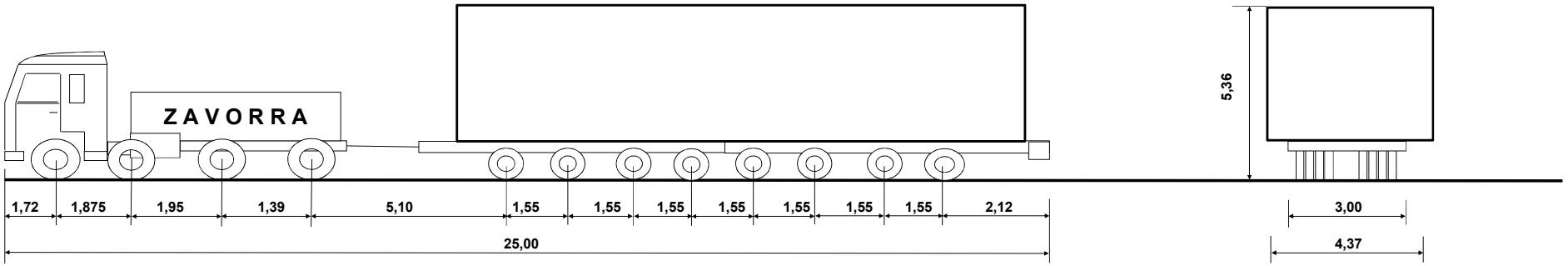
	L	W	H	PESO
CONV. CARICO	25,00	4,21	4,80	129,13
ECCEDENZE	7,00	1,66	0,80	85,13



S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

Descrizione del carico : **NACELLE**

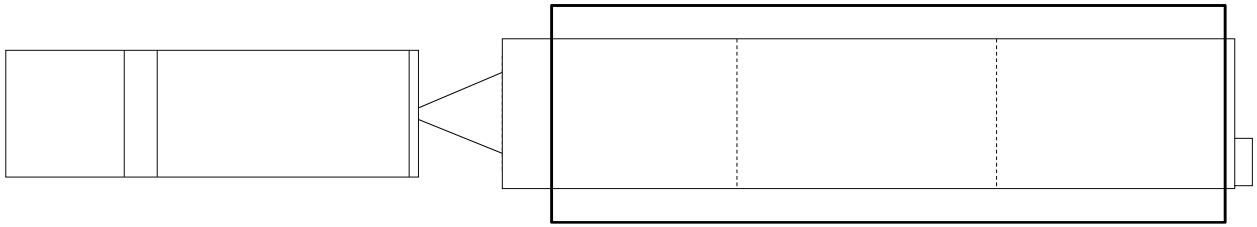
S.A.E. S.r.l.
DP770GP
AB95007+AB95008



ASSE											
S	S	TSG	TSG	C8	C8	C8	C8	C8	C8	C8	C8
RUOTE											
2	2	4	4	8	8	8	8	8	8	8	8
P. VUOTO T.											
4,00	4,00	8,50	8,50	3,60	3,60	3,60	3,60	3,60	3,60	3,60	3,60
P. TOT. T.											
4,00	4,00	8,50	8,50	13,96	13,96	13,96	13,96	13,96	13,96	13,96	13,96
KG/cm²											
2,35	2,35	2,50	2,50	5,82	5,82	5,82	5,82	5,82	5,82	5,82	5,82

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	25,00	28,80
PESO DEL CARICO	T.	0,00	82,88
PORTATA UTILE	T.	32,30	165,98
PESO COMPLESSIVO	T.	25,00	111,68
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	850	300

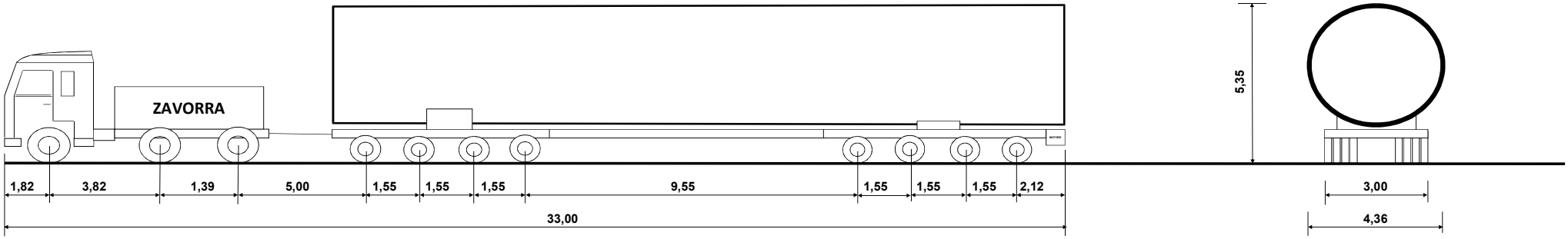
	L	W	H	PESO
CONV. CARICO	25,00	4,37	5,36	136,68
ECCEDENZE	7,00	1,82	1,36	92,68



Descrizione del carico : **TOWER SECTION T1**

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

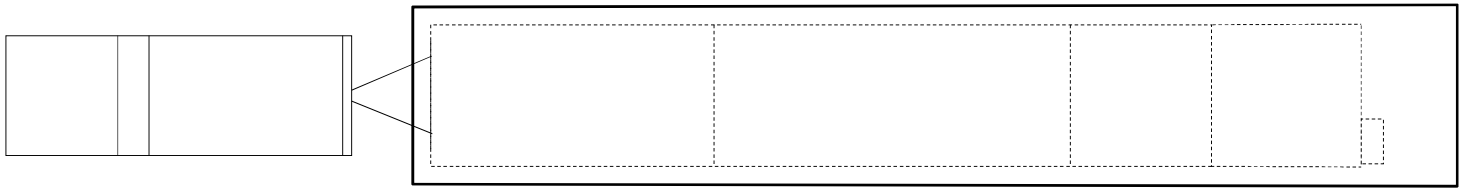
S.A.E. S.r.l.
BW935GT
AB95007+AB95008



ASSE											
S	TSG	TSG	C8	C8	C8	C8	C8	C8	C8	C8
RUOTE											
2	4	4	8	8	8	8	8	8	8	8
PESO MAX AMM.											
9,00	16,00	16,00	21,20	21,20	21,20	21,20	21,20	21,20	21,20	21,20
P. VUOTO T.											
5,00	10,00	10,00	3,95	3,95	3,95	3,95	3,95	3,95	3,95	3,95
P. CARICO T.											
5,00	10,00	10,00	13,91	13,91	13,91	13,92	13,92	13,91	13,91	13,91
KG/cm²											
4,17	4,17	4,17	5,80	5,80	5,80	5,80	5,80	5,80	5,80	5,80

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	25,00	31,60
PESO DEL CARICO	T.	0,00	79,70
PORTATA UTILE	T.	26,70	138,00
PESO COMPLESSIVO	T.	25,00	111,30
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	300

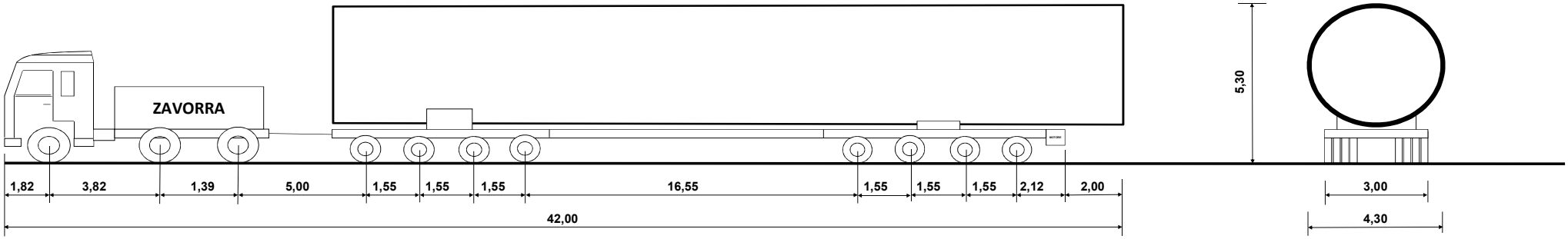
	L	W	H	PESO
CONV. CARICO	33,00	4,36	5,35	136,30
ECCEDENZE	15,00	1,81	1,35	92,30



Descrizione del carico : **TOWER SECTION MIDDLE 1**

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

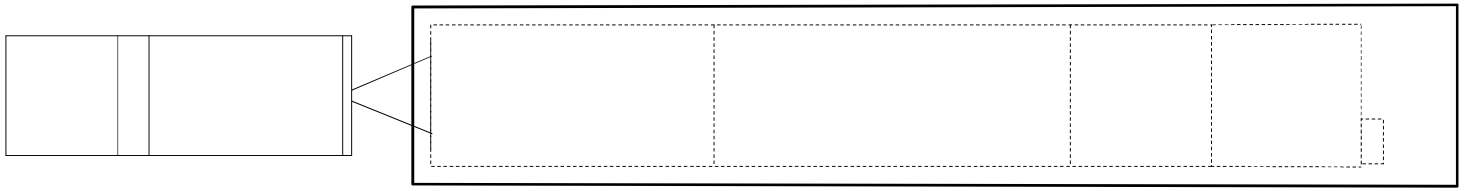
S.A.E. S.r.l.
BW935GT
AB95007+AB95008



ASSE											
S	TSG	TSG	C8	C8	C8	C8	C8	C8	C8	C8
RUOTE											
2	4	4	8	8	8	8	8	8	8	8
PESO MAX AMM.											
9,00	16,00	16,00	21,20	21,20	21,20	21,20	21,20	21,20	21,20	21,20
P. VUOTO T.											
5,00	10,00	10,00	3,95	3,95	3,95	3,95	3,95	3,95	3,95	3,95
P. CARICO T.											
5,00	10,00	10,00	14,08	14,08	14,09	14,09	14,09	14,08	14,08	14,08
KG/cm²											
4,17	4,17	4,17	5,86	5,86	5,87	5,87	5,87	5,86	5,86	5,86

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	25,00	31,60
PESO DEL CARICO	T.	0,00	81,07
PORTATA UTILE	T.	26,70	138,00
PESO COMPLESSIVO	T.	25,00	112,67
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	300

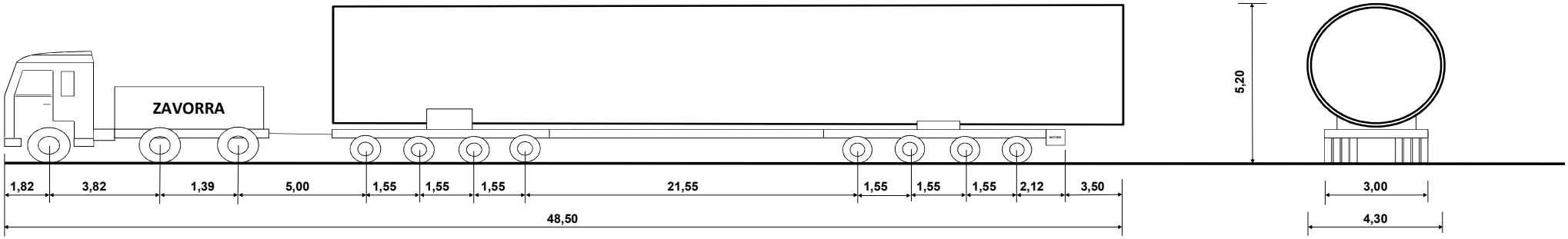
	L	W	H	PESO
CONV. CARICO	42,00	4,30	5,30	137,67
ECCEDENZE	24,00	1,75	1,30	93,67



Descrizione del carico : **TOWER SECTION MIDDLE 2**

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)

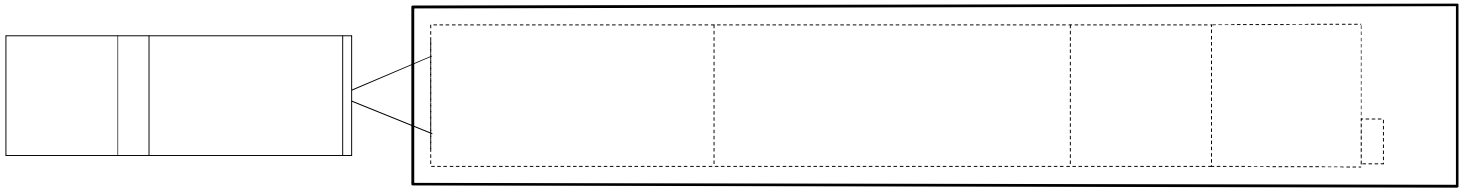
S.A.E. S.r.l.
BW935GT
AB95007+AB95008



ASSE											
S	TSG	TSG	C8	C8	C8	C8	C8	C8	C8	C8
RUOTE											
2	4	4	8	8	8	8	8	8	8	8
PESO MAX AMM.											
9,00	16,00	16,00	21,20	21,20	21,20	21,20	21,20	21,20	21,20	21,20
P. VUOTO T.											
5,00	10,00	10,00	3,95	3,95	3,95	3,95	3,95	3,95	3,95	3,95
P. CARICO T.											
5,00	10,00	10,00	13,01	13,01	13,01	13,02	13,01	13,01	13,01	13,01
KG/cm²											
4,17	4,17	4,17	5,42	5,42	5,42	5,43	5,42	5,42	5,42	5,42

CARATTERISTICHE		MOTR./TRATT.	RIM./SEMIRI.
TARA	T.	25,00	31,60
PESO DEL CARICO	T.	0,00	72,49
PORTATA UTILE	T.	26,70	138,00
PESO COMPLESSIVO	T.	25,00	104,09
PRESS. PNEUMAT.	BAR	8,5	8,5
SUP. IMPRONTA	CM²	600	300

	L	W	H	PESO
CONV. CARICO	48,50	4,30	5,02	129,09
ECCEDENZE	30,50	1,75	1,02	85,09



Descrizione del carico : **TOWER SECTION TOP**

S.A.E. S.r.l.
L'AMMINISTRATORE UNICO
(Francesco Quarato)