

Idejni projekt lokalne ceste

Vučko, Sara

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2023

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SVEUČILIŠTE U SPLITU
FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE

ZAVRŠNI RAD

Sara Vučko

Split, 2023.

SVEUČILIŠTE U SPLITU
FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE

IDEJNI PROJEKT LOKALNE CESTE

Završni rad

Split 2023.

Idejni projekt lokalne ceste

Sažetak:

Idejni projekt lokalne ceste izrađen je na geodetskoj podlozi u mjerilu 1:1000 od točke A do točke B prema zadatku iz kolegija Ceste. Za izradu projekta je korišten program AutoCAD Civil 3D. Vrsta terena na kojem se polaže trasa je brdovit. Cesta je projektirana za godišnji dnevni promet (PGDP) od 950 vozila na dan. Predviđena projektna brzina je 40 km/h. Idejno rješenje izrađeno je prema Pravilniku i osnovnim uvjetima za projektiranje ceste s elementima koji zadovoljavaju važeće propise, kao i sigurnosne i estetske kriterije.

Ključne riječi:

Idejni projekt, lokalna cesta, projektna brzina, os ceste, niveleta, uzdužni presjek, poprečni presjek

Conceptual project of a local road

Abstract:

A conceptual project of a road was created at a scale of 1:1000 of a geodetic base. The AutoCAD Civil 3D software was used for the project desing. The roads route is marked by a hilly terrain. The road is designed for annual daily traffic 950 vehicles per day (AADT). Intended desing speed id 40 miles per hour. The preliminary desing was made according to the Regulation on basic requirements for the public road desing with elements that meet relevant regulations, as well as safety and aesthetic criteria.

Keywords:

Conceptual project, local road, design speed, the road axis, profile, cross-section

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1. PROGRAMSKI ZADATAK

Katedra za prometnice

Studij: Stručni

Nastavni predmet: CESTE

Student:*Sara Vučko*.....

ZADATAK

Treba izraditi idejni projekt dionice ceste između točaka A i B naznačenih na priloženoj geodetskoj podlozi u mjerilu 1:1000.

Zadano je:

- ➔ PGDP - prosječni godišnji dnevni promet: **950 voz/dan**,
- ➔ vrsta terena: **brdovit**.

Idejni projekt treba sadržavati:

1. Tehnički opis
2. Proračun horizontalne geometrije
3. Proračun proširenja kolnika u krivini
4. Proračun vertikalne geometrije i kota nivelete
5. Proračun vitoperenja kolnika
6. Građevinska situacija MJ. 1:1000
7. Uzdužni presjek MJ. 1:1000/100
8. Normalni poprečni presjek MJ. 1:50
9. Karakteristični poprečni presjeci MJ. 1:100

Predmetna asistentica:

Daniela Dumanić, mag.ing.aedif.

2. TEHNIČKI OPIS

1.1. OPĆENITO

Izrađen je idejni projekt dionice ceste između točke A i točke B koje su naznačene na priloženoj geodetskoj podlozi u mjerilu 1:1000. Točka A se nalazi na 177 metara nadmorske visine, a točka B na 154 metra nadmorske visine. Trasa kontinuirane ceste ima duljinu od 321,11 metara. Cesta je projektirana na brdovitom terenu za prosječni godišnji dnevni promet od 950 vozila na dan. Za ovu kategoriju ceste predviđena je projektna brzina $V_p = 40$ km/h.

1.2. HORIZONTALNI ELEMENTI

Projektirana trasa se sastoji od tri pravca i dvije krivine. Minimalni radijus horizontalne krivine je 55 m, a minimalna duljina prijelaznice je 30 m. Odnosno prva i druga krivina imaju radijus $R = 55$ m, a prijelaznicu $L = 30$ m.

1.3. VERTIKALNI ELEMENTI

Maksimalni dozvoljeni nagib nivelete je 12%, dok je minimalni radijus vertikalne krivine 355 m. Nagib prvo pravca je $S_1 = -8.62\%$, a drugog $S_2 = -4.01\%$. Tangenta je dužine 22.91 m, a radijus vertikalne krivine je 500 m.

1.4. POPREČNI PRESJEK

Cesta ove kategorije ima dva kolnička traka širine svakog po 3.00 m i rubni trak širine 0.2 m. U nasipu bankina širine 1.0 m nagiba 4% također u smjeru berme nagiba 4% i širine 1.0 m. U usjecima se izvode rigoli za odvodnju vode dimenzije 0.65 m i drenaža koja je postavljena u glinenu posteljinu sa minimalnom dubinom od 85 m te postavljanje cijevi $\varnothing 200$. Cesta se nalazi velikim dijelom u zasjeku te ponegdje u dubokom iskopu. Nagib usjeka je 2:1, a nasipa 1:1, te se u pojedinim dijelovima nasipa predviđaju potporni zidovi.

1.5. KOLNIČKA KONSTRUKCIJA

Projektom je predviđena sljedeća kolnička konstrukcija:

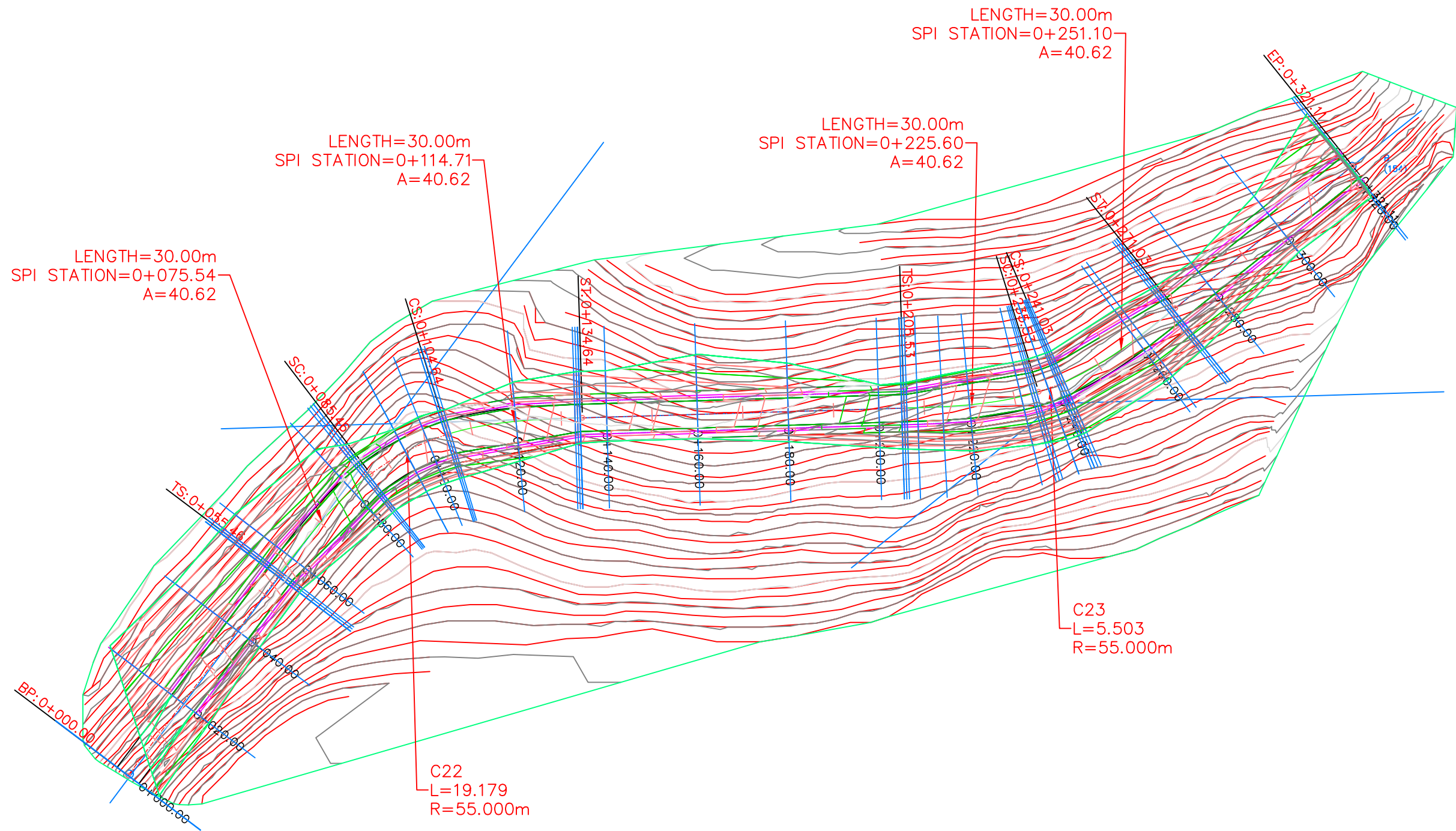
- Asfaltbeton habajući sloj AB11 4 cm
- Bitumenizirani nosivi sloj BNS 22 6 cm
- Mehanički stabilizirani nosivi sloj MZNS 30 cm

1.6. ODVODNJA

Odvodnja kolnika predviđa se otvorenim sustavom odvodnje prihvaćanjem kolničkih i pribrženih voda u zasjeku i usjeku u betonske rigole, te kontroliranim ispuštanjem u teren direktno ili betonskim cijevnim propustima kroz trup kolnika.

3. GRAFIČKI PRILOZI

3.1. GRAĐEVINSKA SITUACIJA M 1:1000

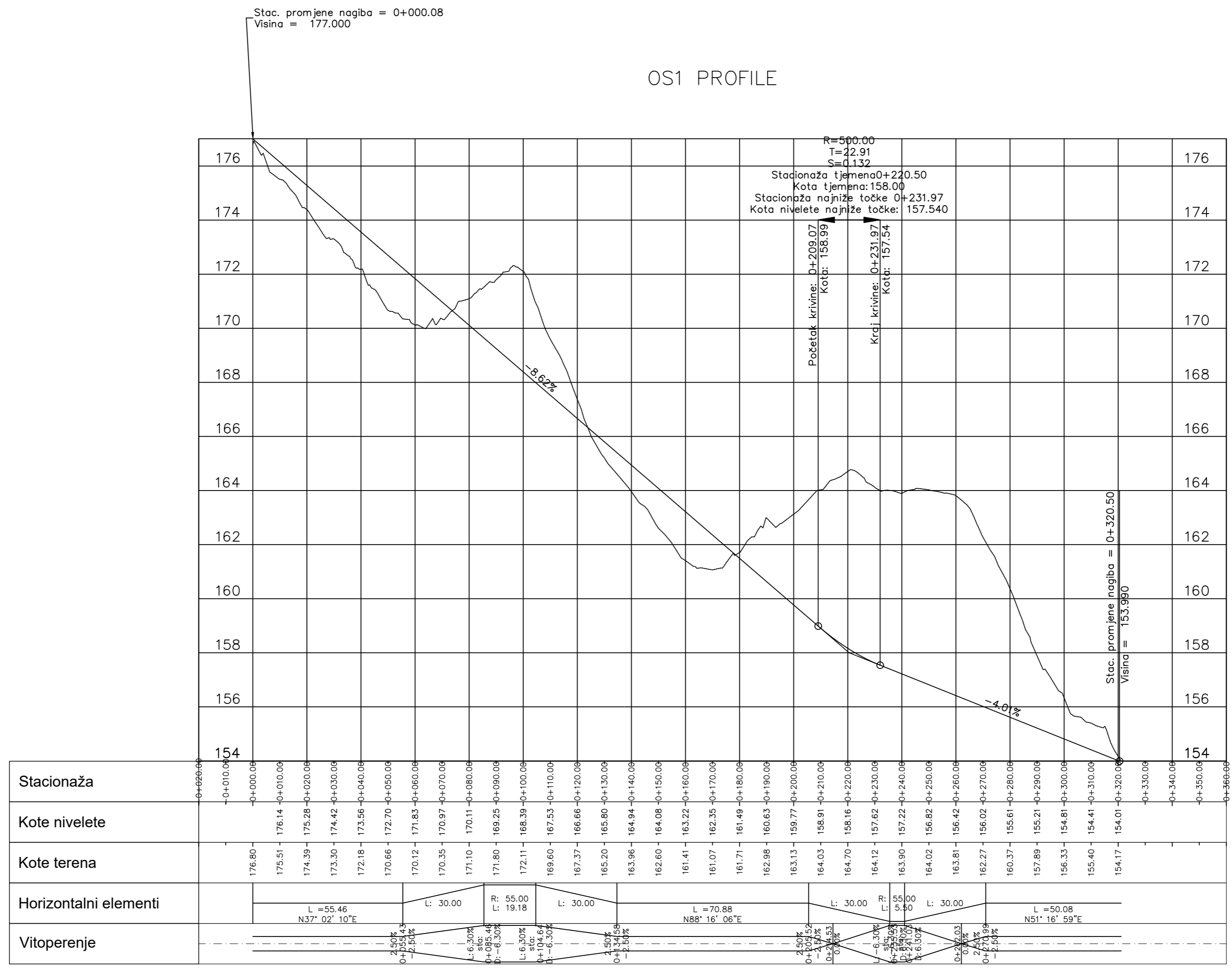


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| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | GRAĐEVINSKA SITUACIJA | M 1:1000 |
| STUDENT | SARA VUČKO | |

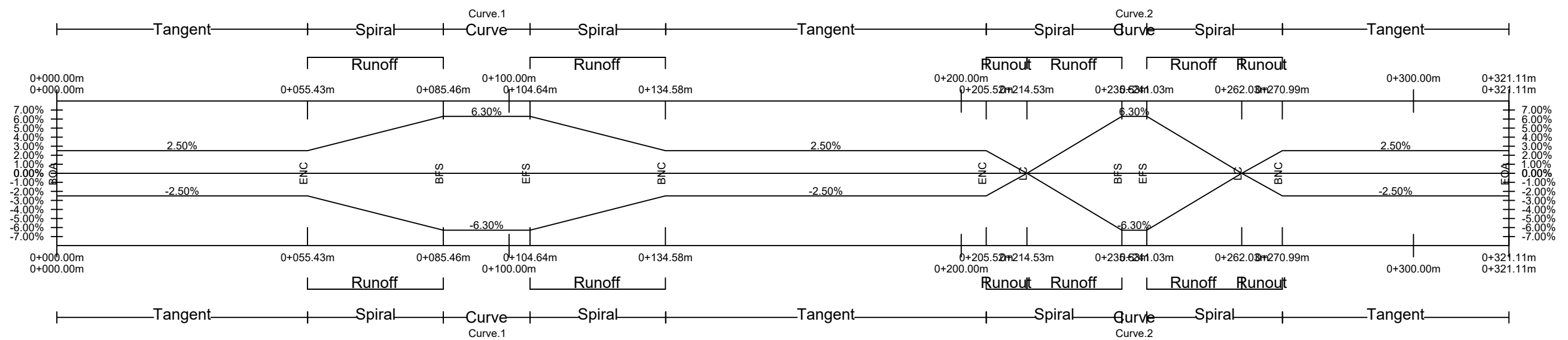
3.2. UZDUŽNI PRESJEK M 1:1000/100

OS1 PROFILE



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| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | UZDUŽNI PRESJEK | M 1:1000/100 |
| STUDENT | SARA VUČKO | |

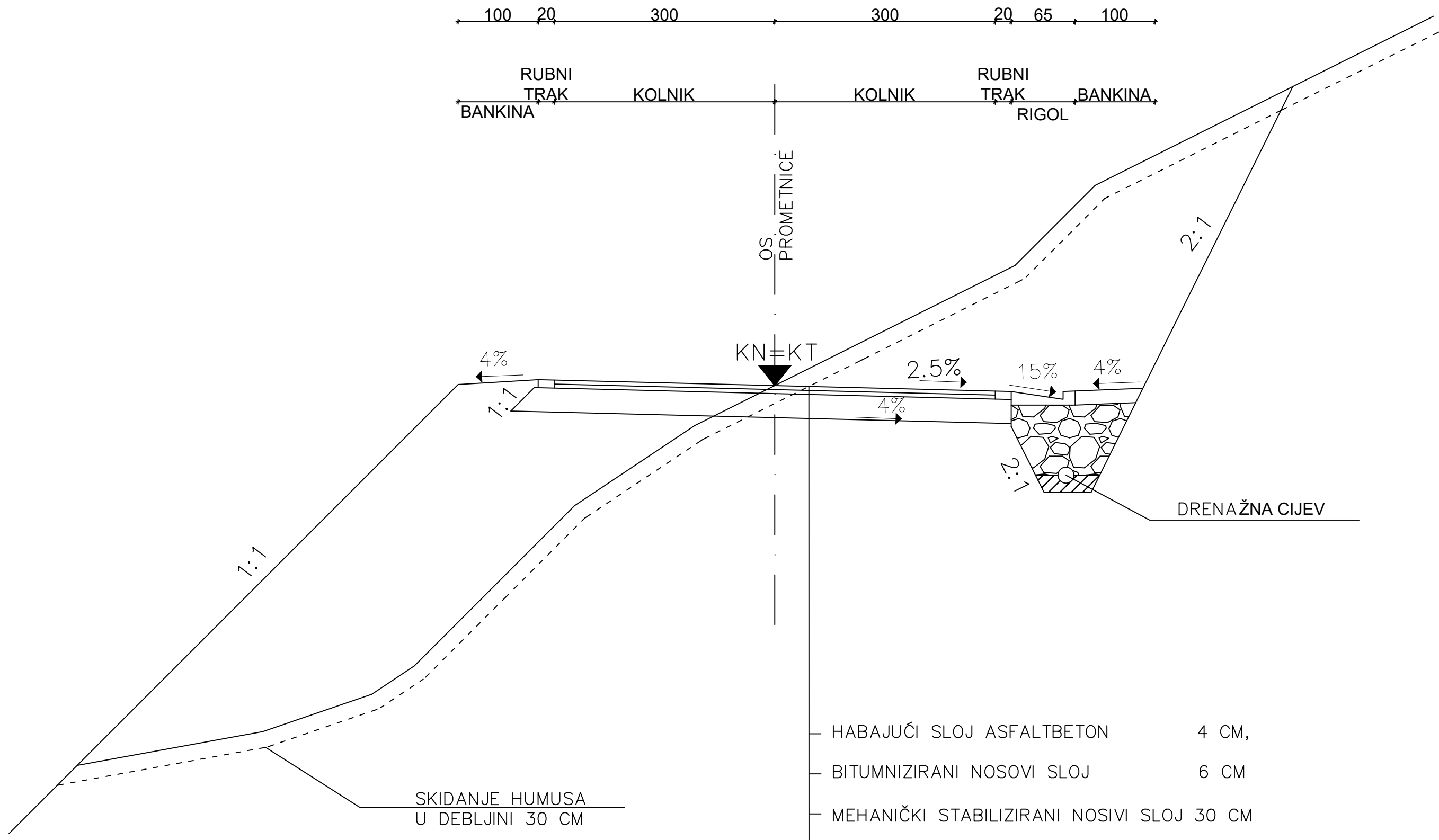
Superelevation



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| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | DIJAGRAM VITOPERENJA | M 1:1000 |
| STUDENT | SARA VUČKO | |

3.3. NORMALNI POPREČNI PRESJEK M 1:50



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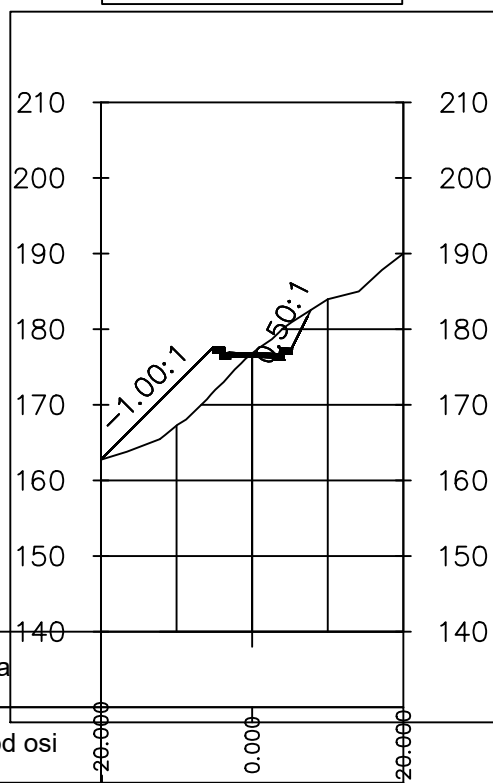
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| PREDMET | ZAVRŠNI RAD – CESTE |
| ZADATAK | IDEJNI PROJEKT |
| SADRŽAJ | KARAKT. POP. PRESJEK |
| STUDENT | SARA VUČKO |

GODINA
2022./2023.

M 1:50

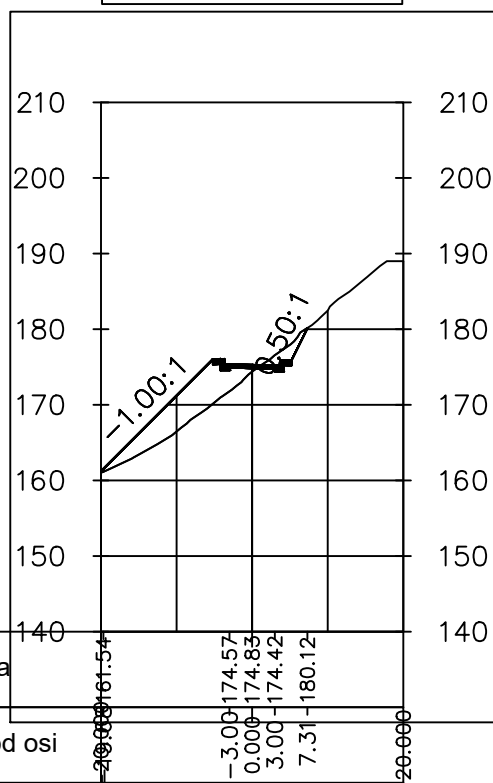
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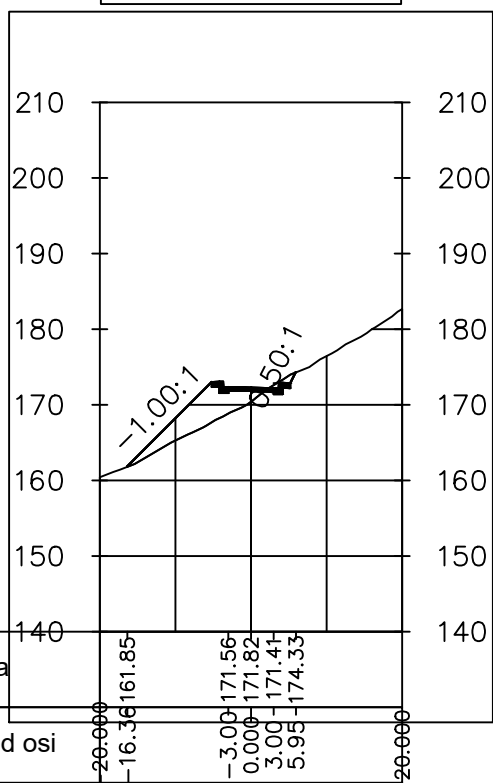
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|-------------------|--------|-------|--------|
| Kote projekta | | | |
| Udaljenost od osi | 20.000 | 0.000 | 20.000 |
| Kote terena | | | |

0+020.00



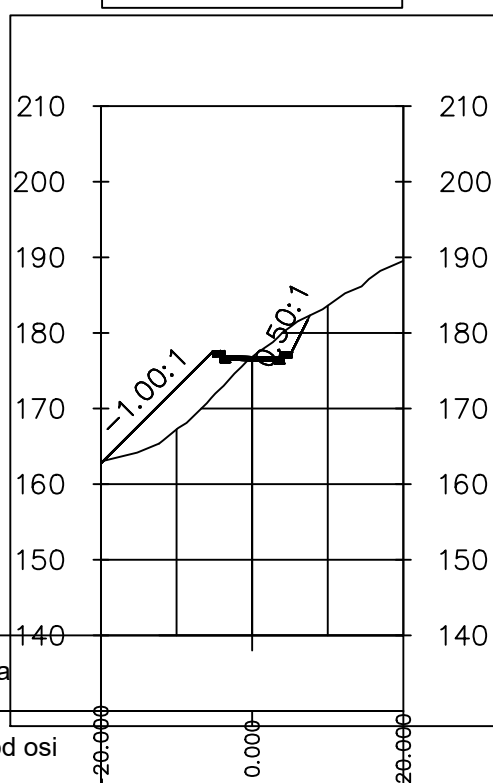
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| Kote projekta | | | |
| Udaljenost od osi | 20.000 | 0.000 | 20.000 |
| Kote terena | 161.57 | 174.57 | 180.12 |

0+054.90



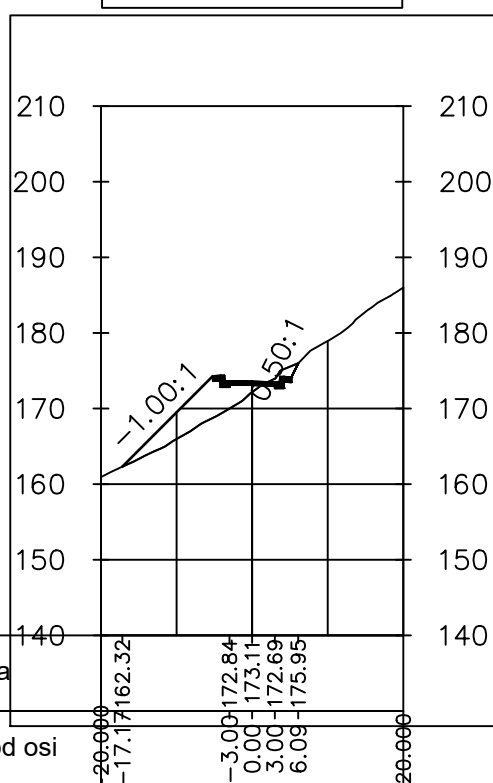
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|-------------------|--------|--------|--------|
| Kote projekta | | | |
| Udaljenost od osi | 20.000 | 0.000 | 20.000 |
| Kote terena | 161.85 | 171.56 | 174.33 |

0+000.08



| | | | |
|-------------------|--------|-------|--------|
| Kote projekta | | | |
| Udaljenost od osi | 20.000 | 0.000 | 20.000 |
| Kote terena | | | |

0+040.00



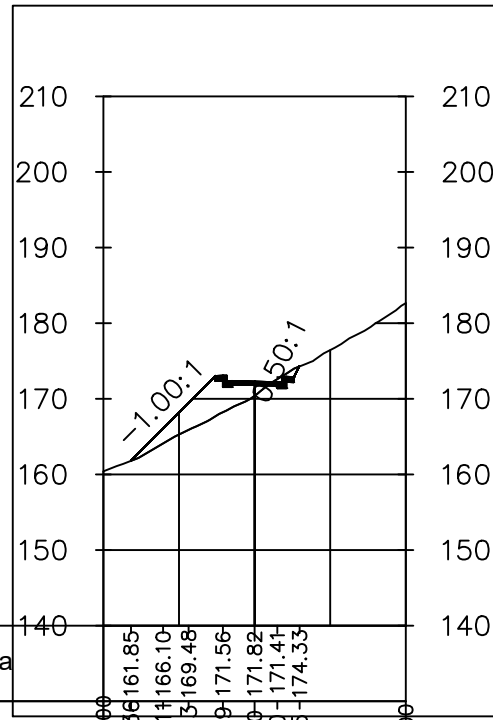
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|-------------------|--------|--------|--------|
| Kote projekta | | | |
| Udaljenost od osi | 20.000 | 0.000 | 20.000 |
| Kote terena | 162.32 | 172.84 | 175.95 |



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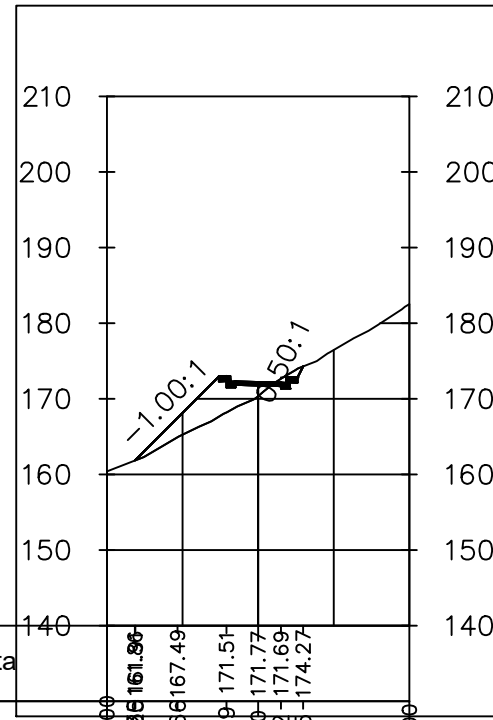
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| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
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0+054.94



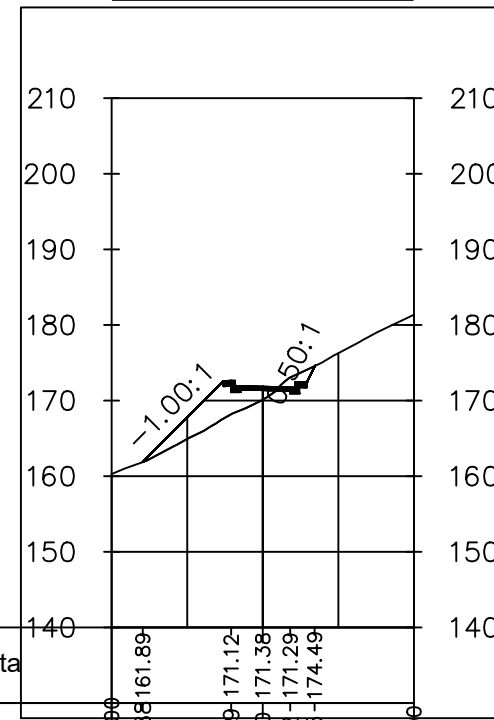
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| Kote projekta | 161.85 | 16.36 | 161.85 | 166.10 | 12.14 | 166.10 | 169.48 | 8.73 | 169.48 | 171.56 | 4.19 | 171.56 | 171.82 | 0.00 | 171.82 | 171.41 | 3.00 | 171.41 | 174.33 | 5.95 | 174.33 | |
| Udaljenost od osi | 20+000 | 16.36 | 20+000 | 16.36 | 10.96 | 20+000 | 10.96 | 10.96 | 20+000 | 4.19 | 4.19 | 4.19 | 0.00 | 0.00 | 3.00 | 3.00 | 3.00 | 3.00 | 5.95 | 5.95 | 5.95 | 20+060 |
| Kote terena | 161.85 | 161.85 | 161.85 | 167.30 | 167.30 | 167.30 | 171.56 | 171.56 | 171.56 | 171.82 | 171.82 | 171.82 | 171.41 | 171.41 | 171.41 | 171.41 | 171.41 | 171.41 | 174.33 | 174.33 | 174.33 | 174.33 |

0+055.53



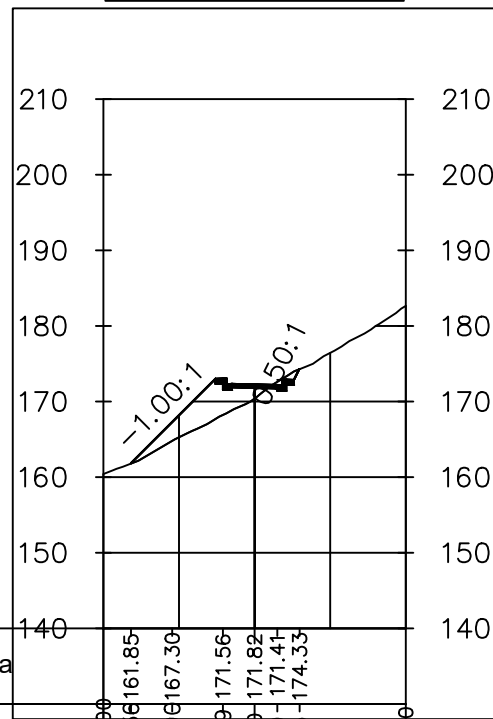
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| Kote projekta | 161.85 | 16.26 | 161.85 | 167.49 | 10.66 | 167.49 | 171.51 | 4.19 | 171.51 | 171.77 | 0.00 | 171.77 | 171.69 | 3.02 | 171.69 | 174.27 | 5.95 | 174.27 | | | |
| Udaljenost od osi | 20+000 | 16.26 | 20+000 | 10.66 | 10.66 | 10.66 | 4.19 | 4.19 | 4.19 | 0.00 | 0.00 | 3.02 | 3.02 | 3.02 | 3.02 | 5.95 | 5.95 | 5.95 | 20+060 | | |
| Kote terena | 161.85 | 161.85 | 161.85 | 167.49 | 167.49 | 167.49 | 171.51 | 171.51 | 171.51 | 171.77 | 171.77 | 171.77 | 171.69 | 171.69 | 171.69 | 174.27 | 174.27 | 174.27 | 174.27 | 174.27 | 174.27 |

0+060.00



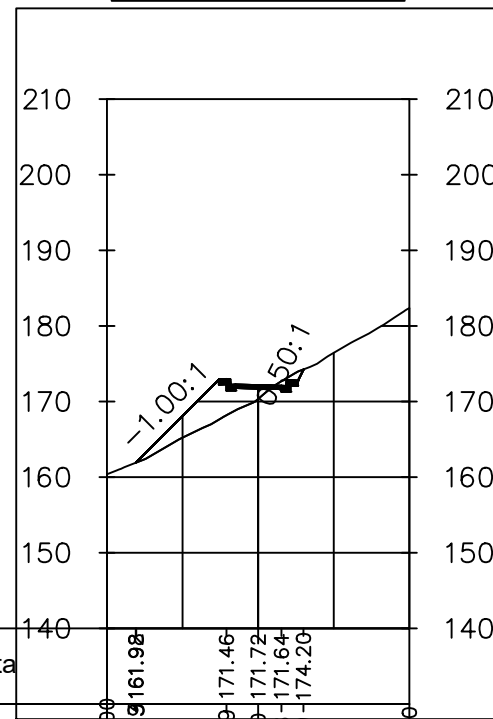
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| Kote projekta | 161.85 | 15.88 | 161.85 | 171.12 | 4.19 | 171.12 | 171.38 | 0.00 | 171.38 | 171.29 | 3.62 | 171.29 | 174.49 | 6.85 | 174.49 |
| Udaljenost od osi | 20+000 | 15.88 | 20+000 | 4.19 | 4.19 | 4.19 | 0.00 | 0.00 | 0.00 | 3.62 | 3.62 | 3.62 | 6.85 | 6.85 | 20+060 |
| Kote terena | 161.85 | 161.85 | 161.85 | 171.12 | 171.12 | 171.12 | 171.38 | 171.38 | 171.38 | 171.29 | 171.29 | 171.29 | 174.49 | 174.49 | 174.49 |

0+054.96



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|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 161.85 | 16.36 | 161.85 | 167.30 | 10.96 | 167.30 | 171.56 | 4.19 | 171.56 | 171.82 | 0.00 | 171.82 | 171.41 | 3.00 | 171.41 | 174.33 | 5.95 | 174.33 | | |
| Udaljenost od osi | 20+000 | 16.36 | 20+000 | 10.96 | 10.96 | 10.96 | 4.19 | 4.19 | 4.19 | 0.00 | 0.00 | 3.00 | 3.00 | 3.00 | 3.00 | 5.95 | 5.95 | 5.95 | 20+060 | |
| Kote terena | 161.85 | 161.85 | 161.85 | 167.30 | 167.30 | 167.30 | 171.56 | 171.56 | 171.56 | 171.82 | 171.82 | 171.82 | 171.41 | 171.41 | 171.41 | 174.33 | 174.33 | 174.33 | 174.33 | 174.33 |

0+056.10



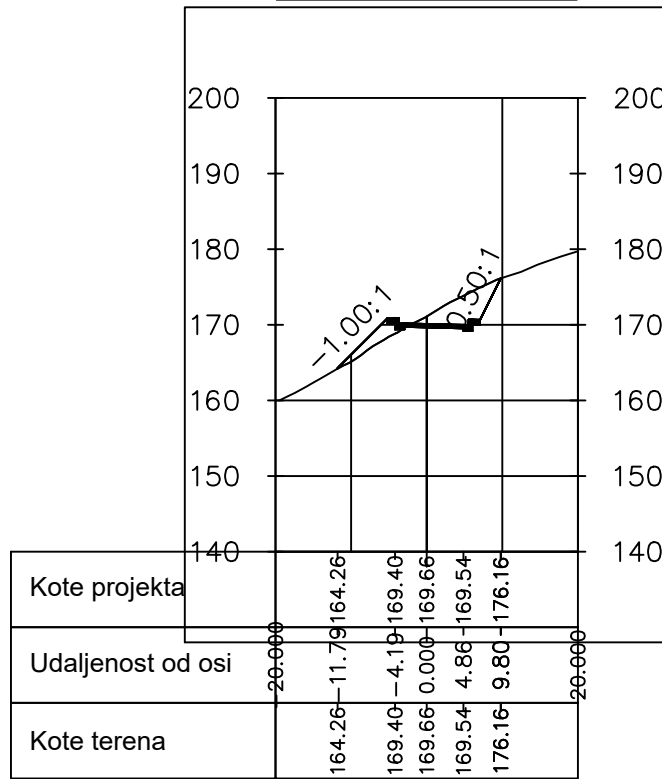
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| Kote projekta | 161.98 | 16.19 | 161.98 | 171.46 | 4.19 | 171.46 | 171.72 | 0.00 | 171.72 | 171.64 | 3.08 | 171.64 | 174.20 | 5.99 | 174.20 |
| Udaljenost od osi | 20+000 | 16.19 | 20+000 | 4.19 | 4.19 | 4.19 | 0.00 | 0.00 | 0.00 | 3.08 | 3.08 | 3.08 | 5.99 | 5.99 | 20+060 |
| Kote terena | 161.98 | 161.98 | 161.98 | 171.46 | 171.46 | 171.46 | 171.72 | 171.72 | 171.72 | 171.64 | 171.64 | 171.64 | 174.20 | 174.20 | 174.20 |



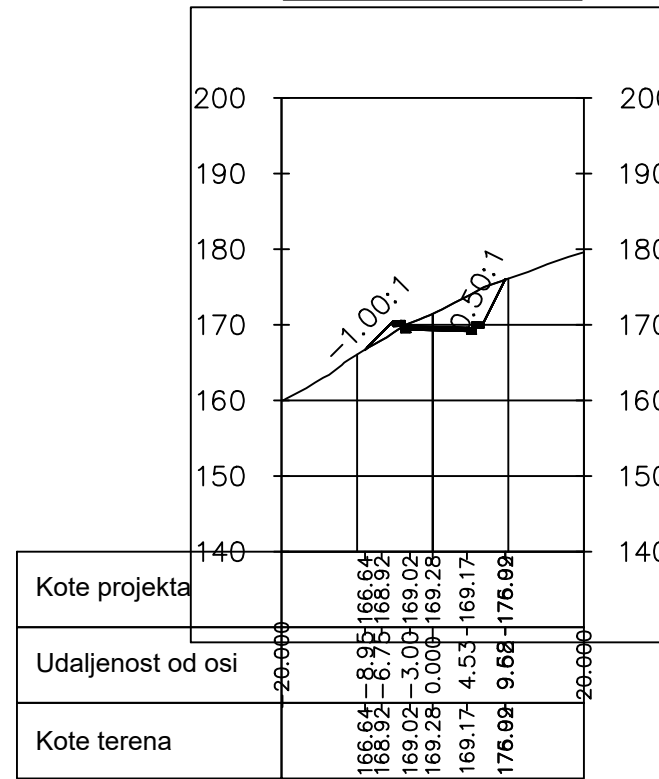
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| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

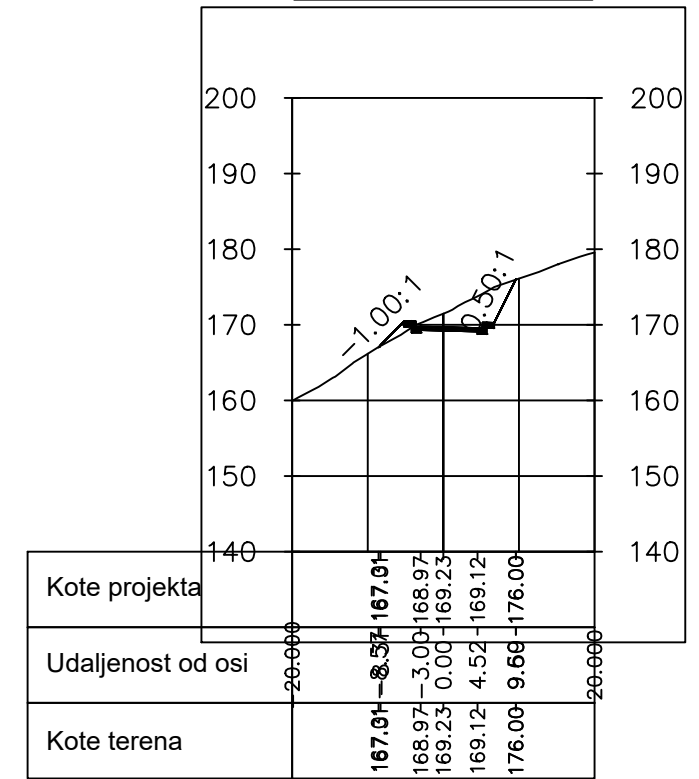
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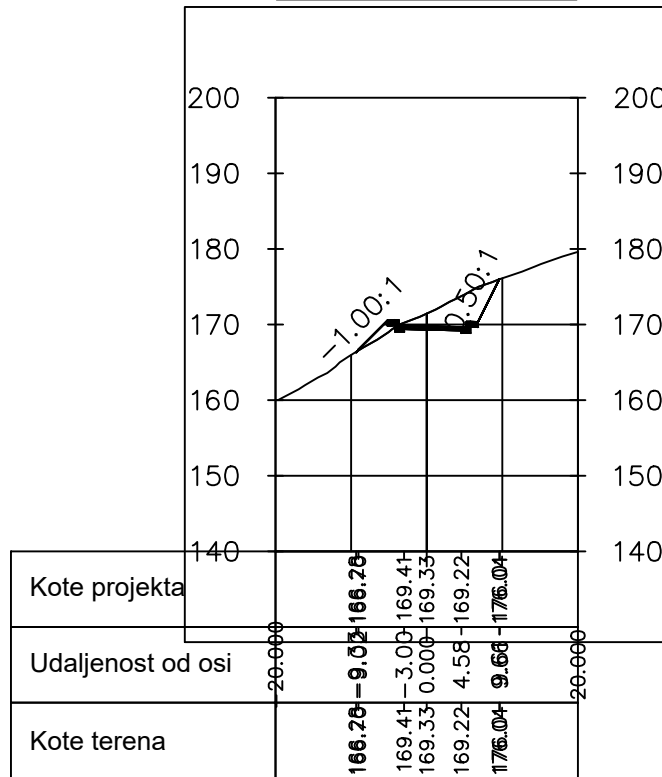
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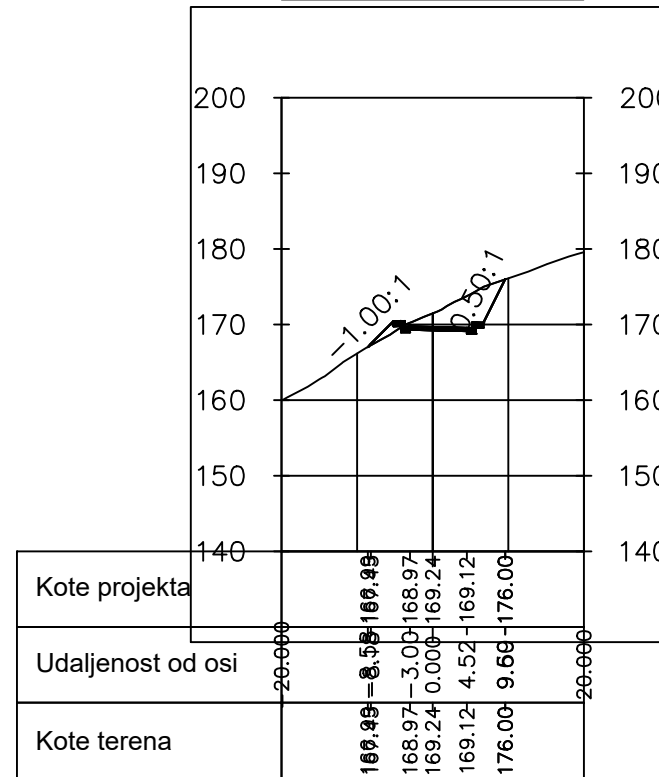
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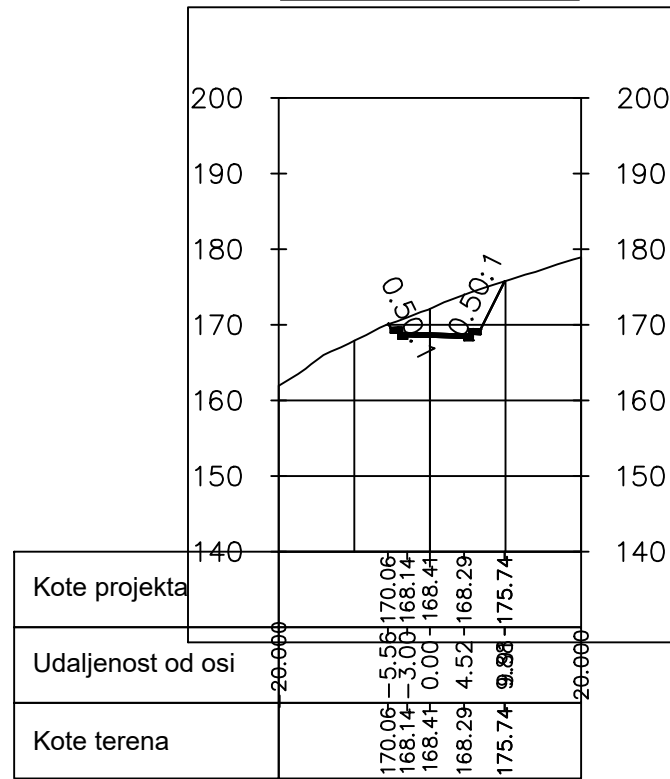
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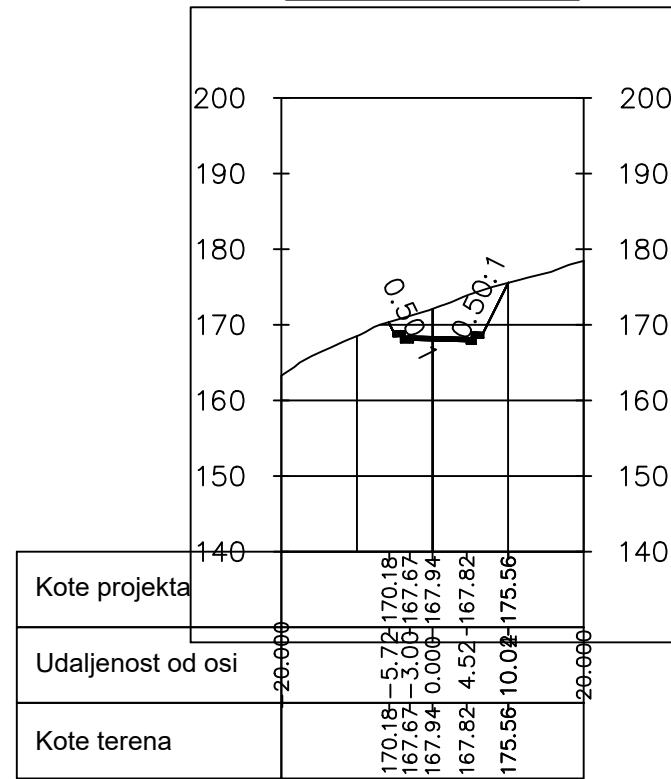
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| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

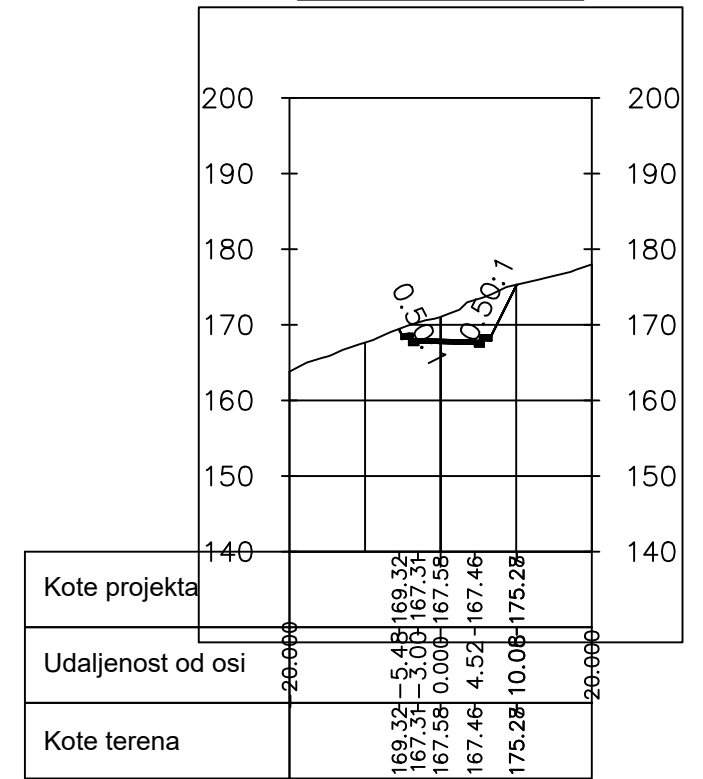
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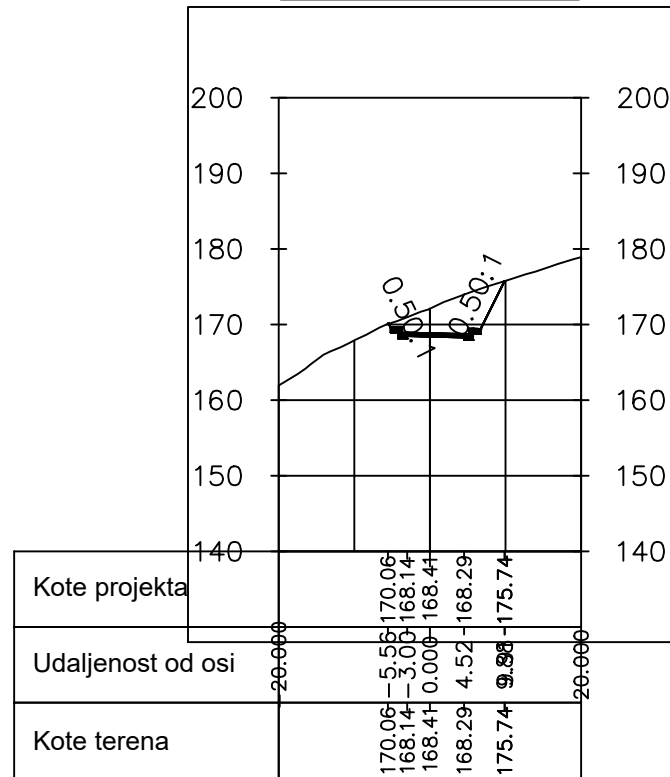
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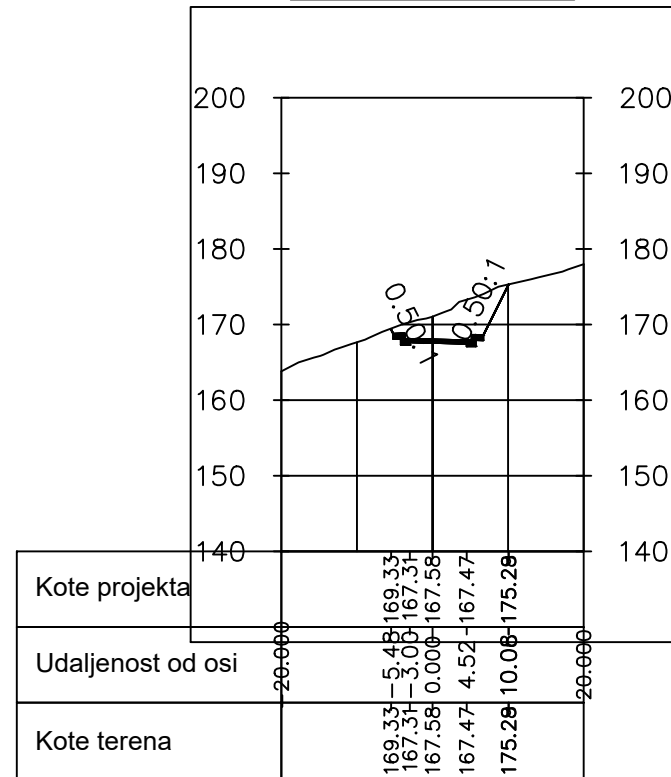
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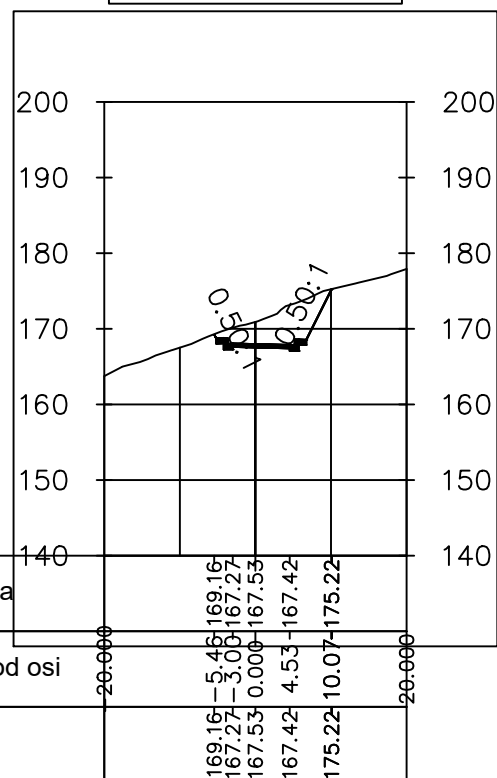
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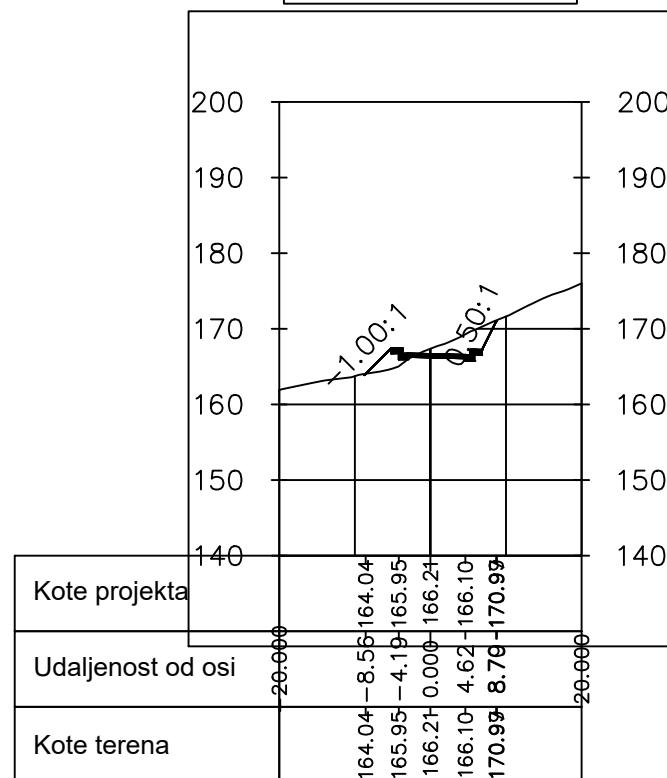
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| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

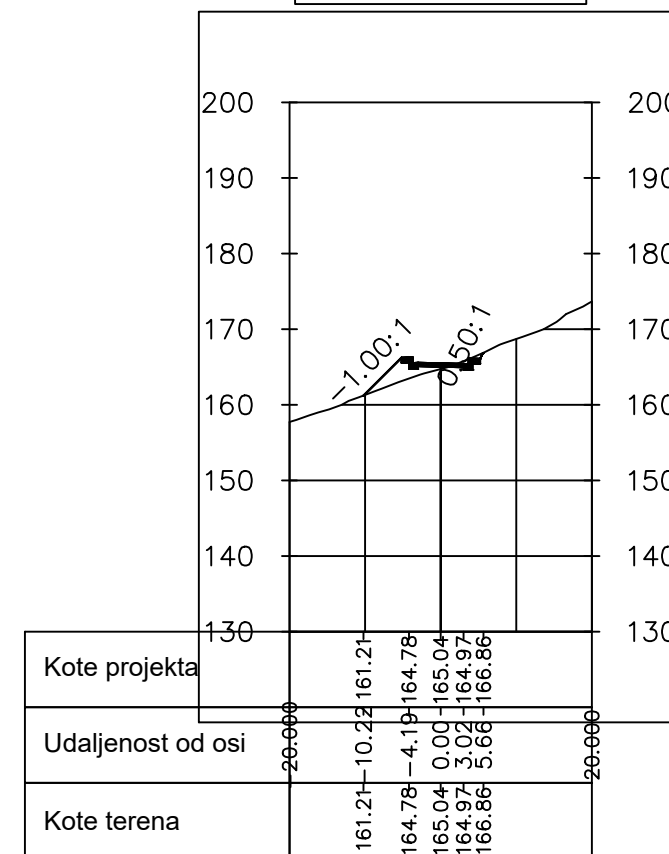
0+104.73



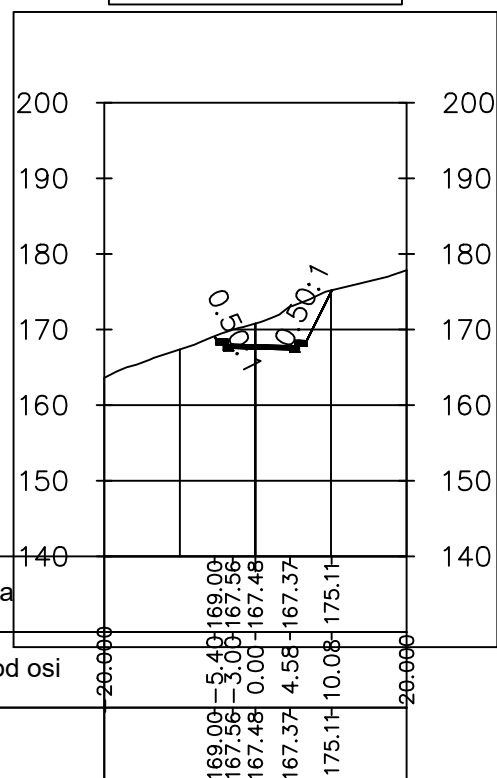
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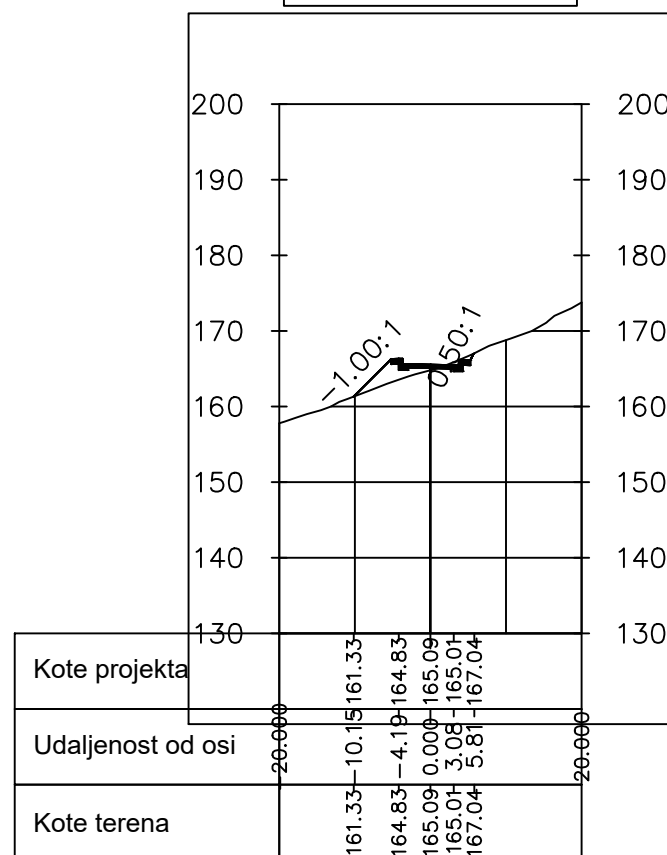
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0+105.30



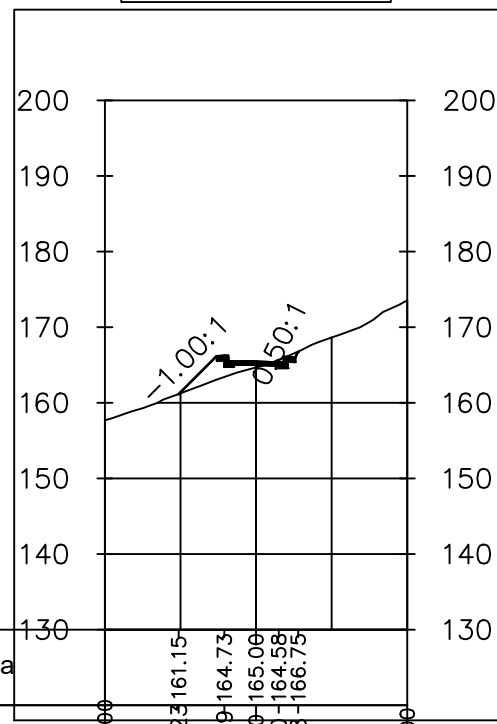
0+133.02



SVEUČILIŠTE U SPLITU, FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE
21000 Split, Matice hrvatske 15, tel: 021/303-333

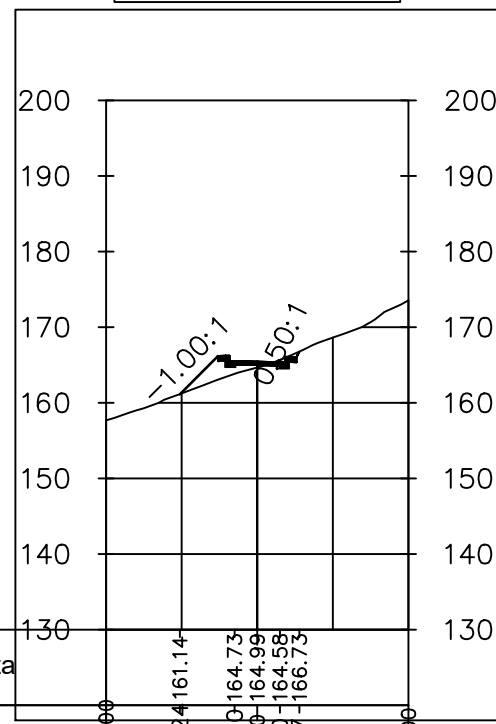
| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

0+134.11



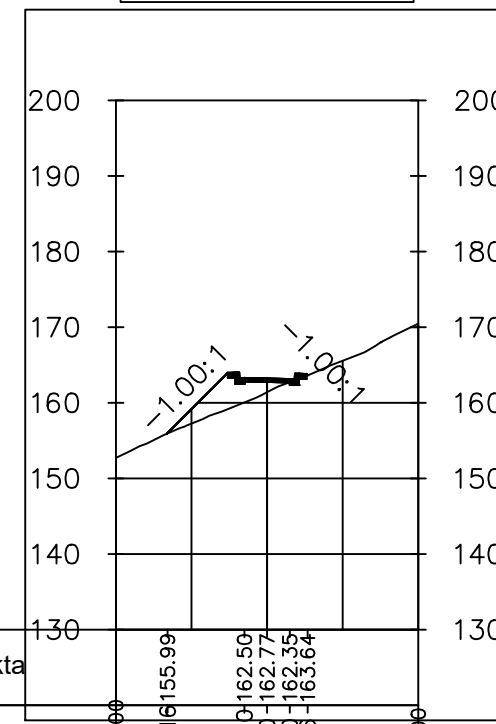
| | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta | | | | | | |
| Udaljenost od osi | 20.000 | 10.23 | 161.15 | | | 20.000 |
| Kote terena | | 161.15 | 164.73 | 165.00 | 164.58 | 166.75 |

0+134.17



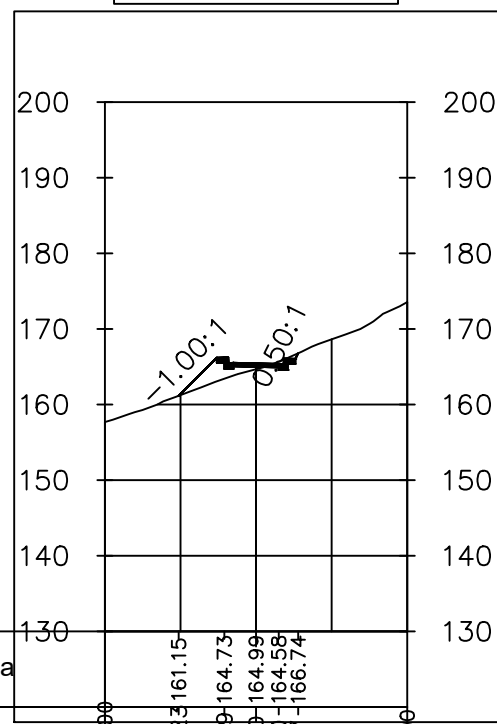
| | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta | | | | | | |
| Udaljenost od osi | 20.000 | 10.24 | 161.14 | | | 20.000 |
| Kote terena | | 161.14 | 164.73 | 164.99 | 164.58 | 166.75 |

0+160.00



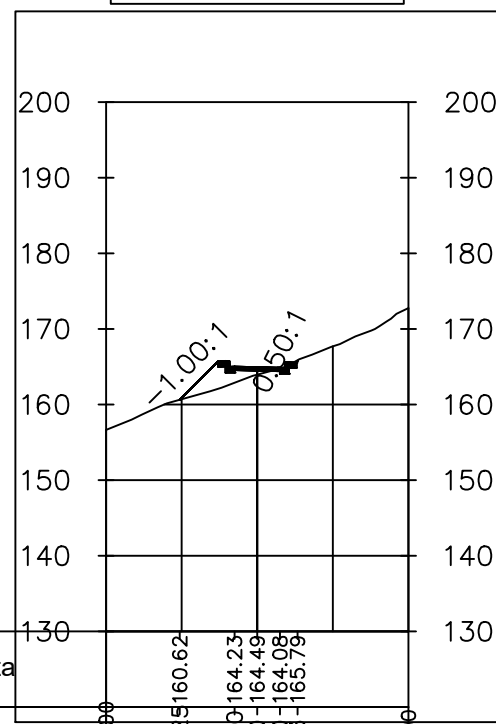
| | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta | | | | | | |
| Udaljenost od osi | 20.000 | 13.16 | 155.99 | | | 20.000 |
| Kote terena | | 155.99 | 162.50 | 162.77 | 162.35 | 163.64 |

0+134.16



| | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta | | | | | | |
| Udaljenost od osi | 20.000 | 10.23 | 161.15 | | | 20.000 |
| Kote terena | | 161.15 | 164.73 | 164.99 | 164.58 | 166.74 |

0+140.00



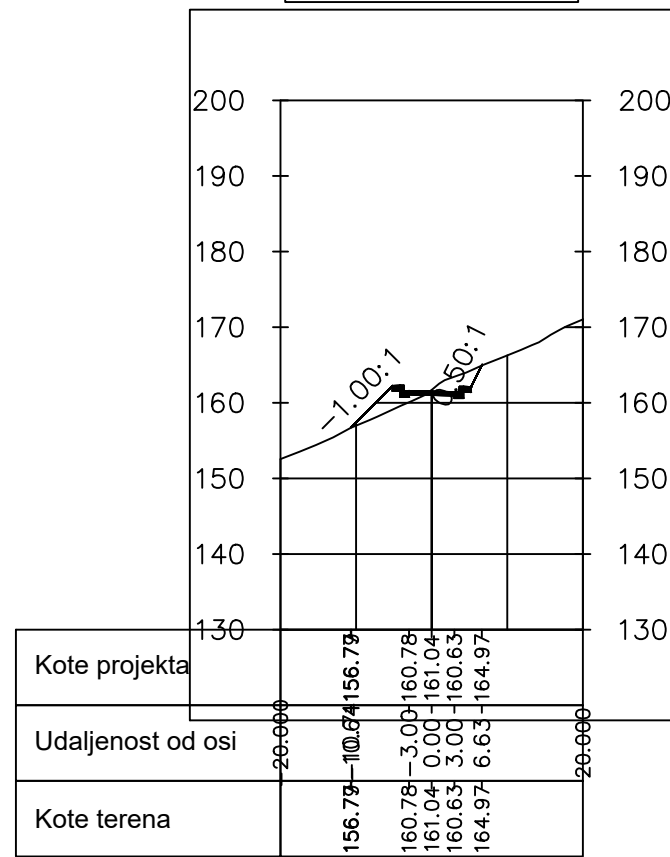
| | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|
| Kote projekta | | | | | | |
| Udaljenost od osi | 20.000 | 10.25 | 160.62 | | | 20.000 |
| Kote terena | | 160.62 | 164.23 | 164.49 | 164.08 | 165.79 |



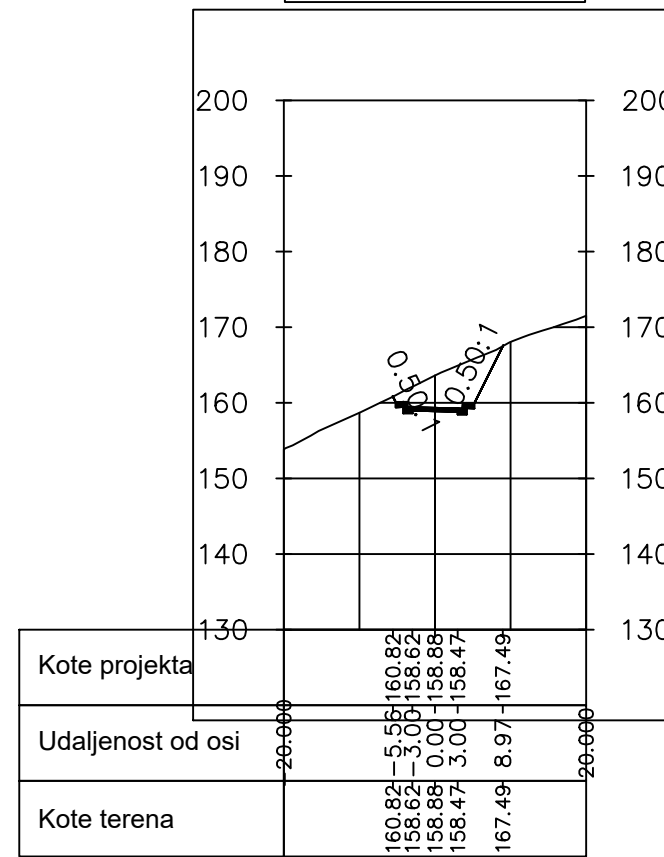
SVEUČILIŠTE U SPLITU, FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE
21000 Split, Matice hrvatske 15, tel: 021/303-333

| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

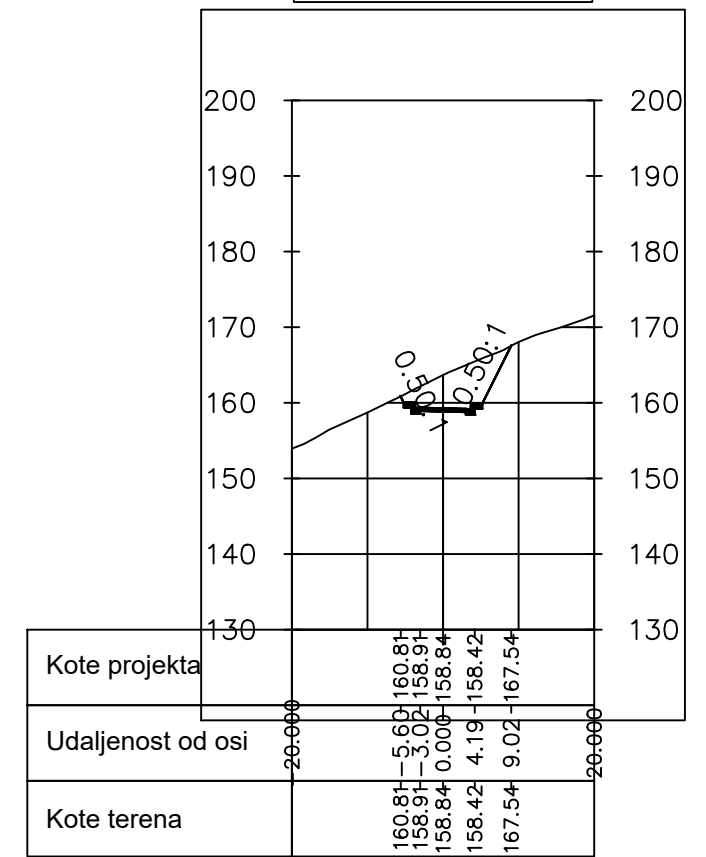
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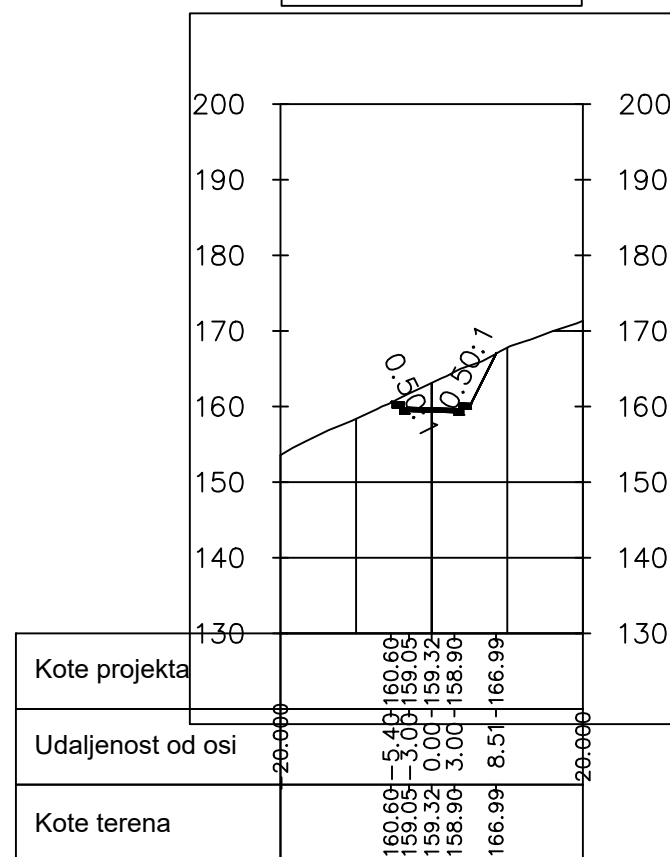
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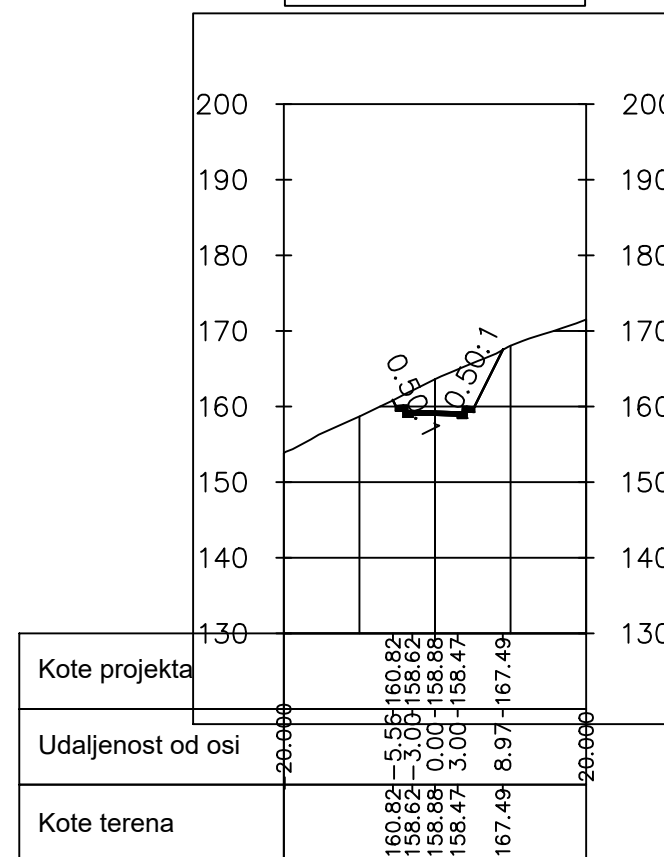
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0+200.00



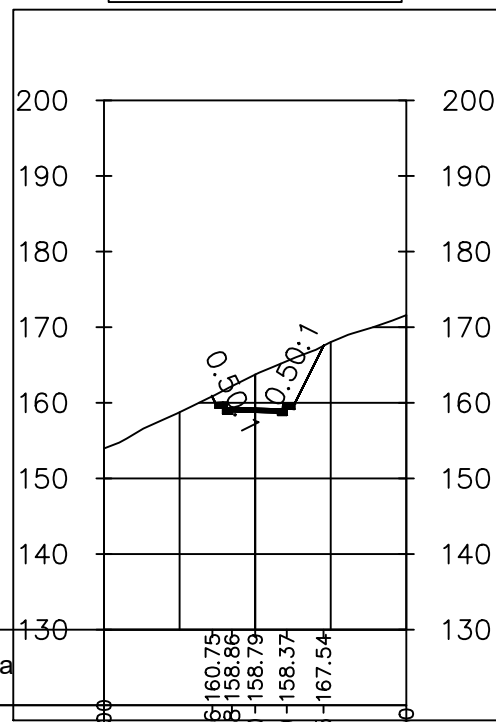
0+205.02



SVEUČILIŠTE U SPLITU, FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE
21000 Split, Matice hrvatske 15, tel: 021/303-333

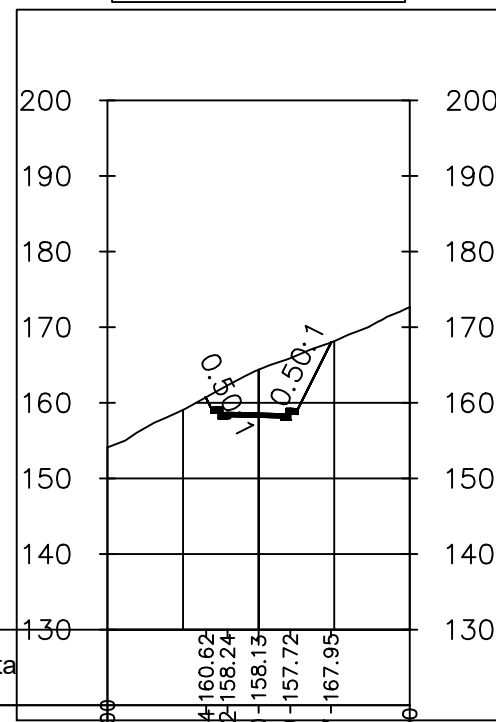
| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

0+206.15



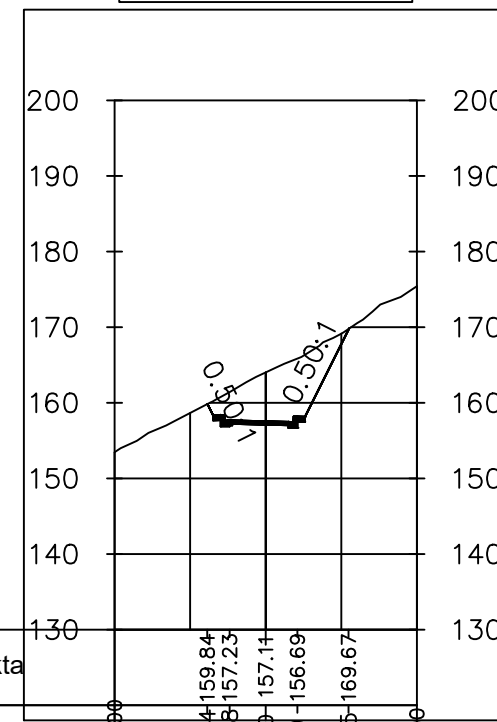
| | | | | |
|-------------------|--------|--------|-------|--------|
| Kote projekta | | 160.75 | -5.66 | 160.75 |
| Udaljenost od osi | 20.000 | | | 26.000 |
| Kote terena | | 158.86 | -3.08 | 158.86 |
| | | 158.79 | 0.00 | 158.79 |
| | | 158.37 | 4.19 | 158.37 |
| | | 167.54 | 9.05 | 167.54 |

0+214.02



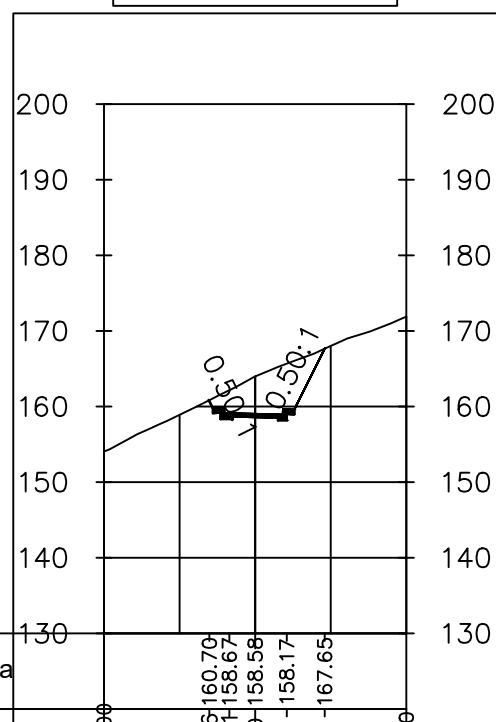
| | | | | |
|-------------------|--------|--------|-------|--------|
| Kote projekta | | 160.62 | -6.94 | 160.62 |
| Udaljenost od osi | 20.000 | | | 26.000 |
| Kote terena | | 158.24 | -4.12 | 158.24 |
| | | 158.13 | 0.00 | 158.13 |
| | | 157.72 | 4.19 | 157.72 |
| | | 167.95 | 9.57 | 167.95 |

0+231.52



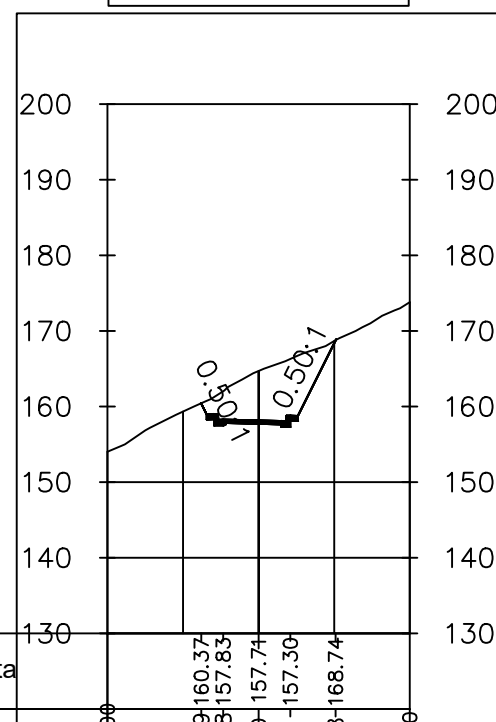
| | | | | |
|-------------------|--------|--------|-------|--------|
| Kote projekta | | 159.84 | -7.71 | 159.84 |
| Udaljenost od osi | 20.000 | | | 26.000 |
| Kote terena | | 157.23 | -4.78 | 157.23 |
| | | 157.11 | 0.00 | 157.11 |
| | | 156.69 | 4.19 | 156.69 |
| | | 169.67 | 10.95 | 169.67 |

0+208.51



| | | | | |
|-------------------|--------|--------|-------|--------|
| Kote projekta | | 160.70 | -6.06 | 160.70 |
| Udaljenost od osi | 20.000 | | | 26.000 |
| Kote terena | | 158.67 | -3.41 | 158.67 |
| | | 158.58 | 0.00 | 158.58 |
| | | 158.17 | 4.19 | 158.17 |
| | | 167.65 | 9.20 | 167.65 |

0+220.00



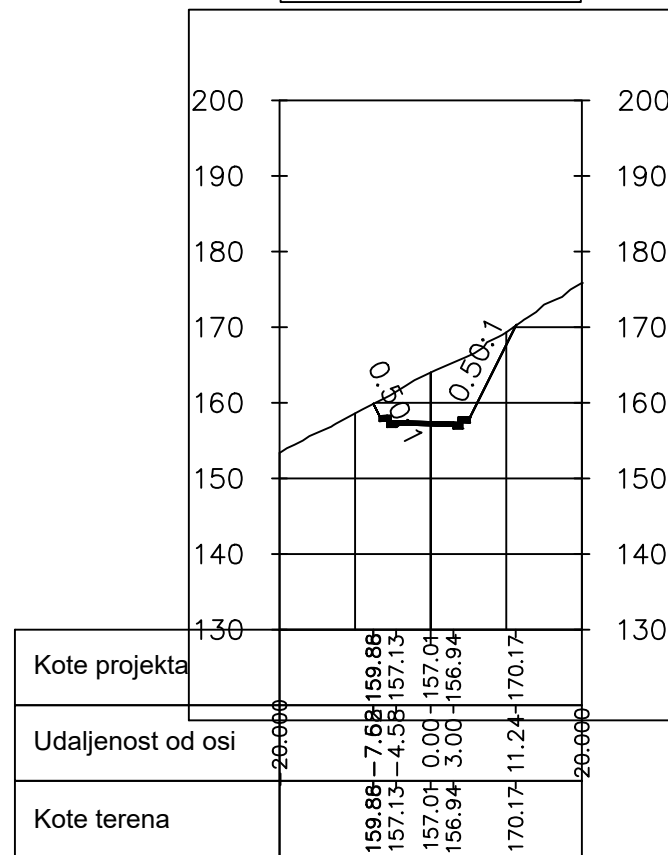
| | | | | |
|-------------------|--------|--------|-------|--------|
| Kote projekta | | 160.37 | -7.59 | 160.37 |
| Udaljenost od osi | 20.000 | | | 26.000 |
| Kote terena | | 157.83 | -4.68 | 157.83 |
| | | 157.71 | 0.00 | 157.71 |
| | | 157.30 | 4.19 | 157.30 |
| | | 168.74 | 10.18 | 168.74 |



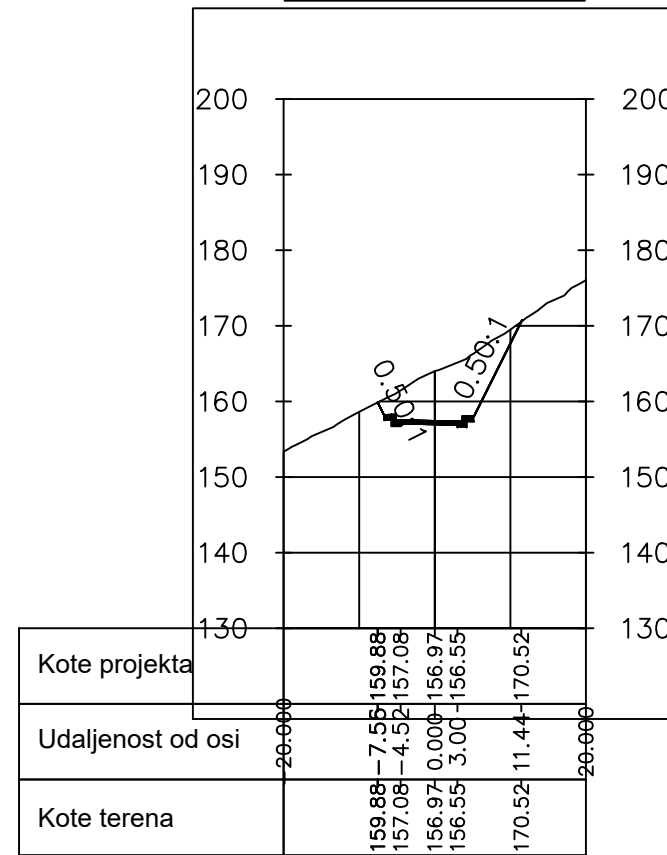
SVEUČILIŠTE U SPLITU, FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE
21000 Split, Matice hrvatske 15, tel: 021/303-333

| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

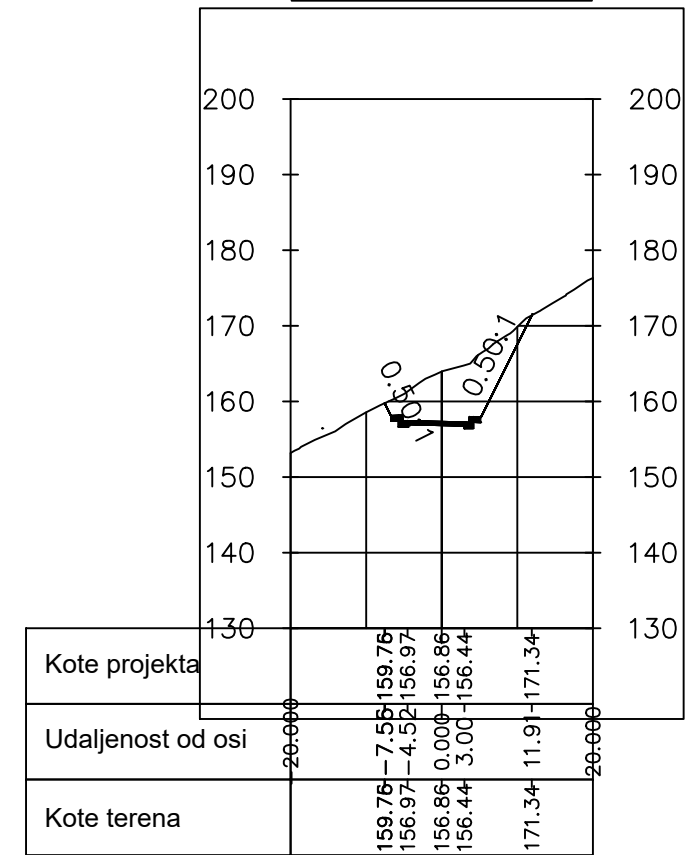
0+233.88



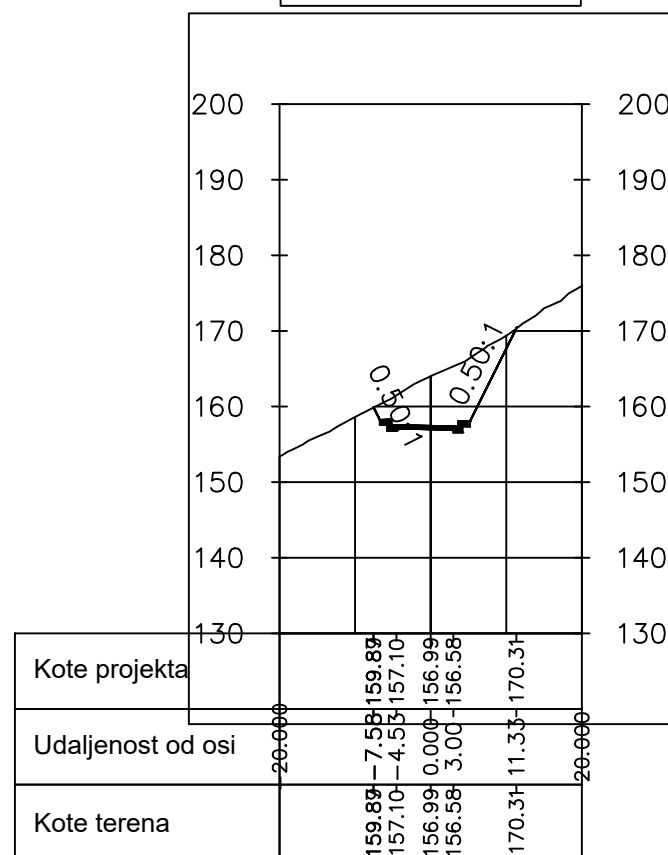
0+235.02



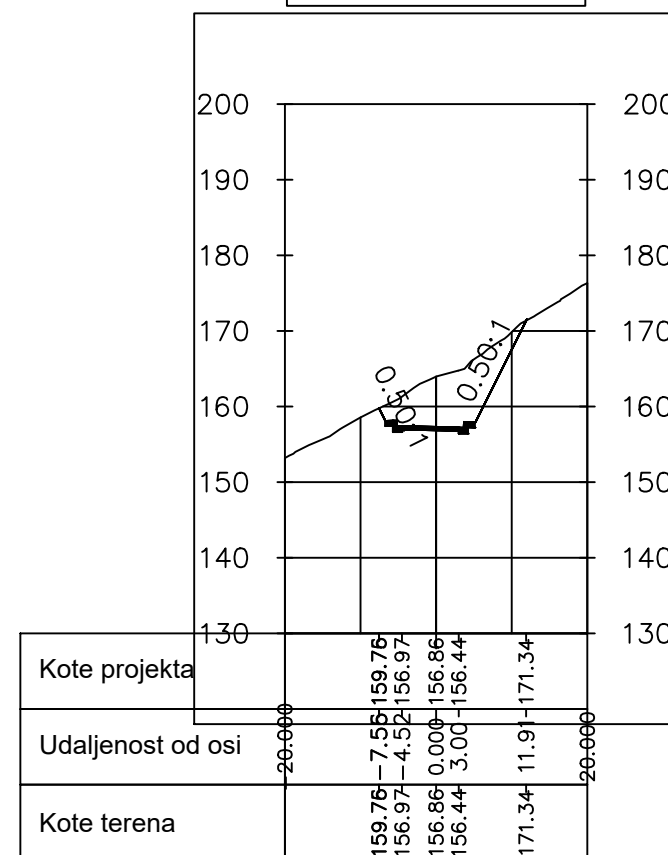
0+237.77



0+234.45



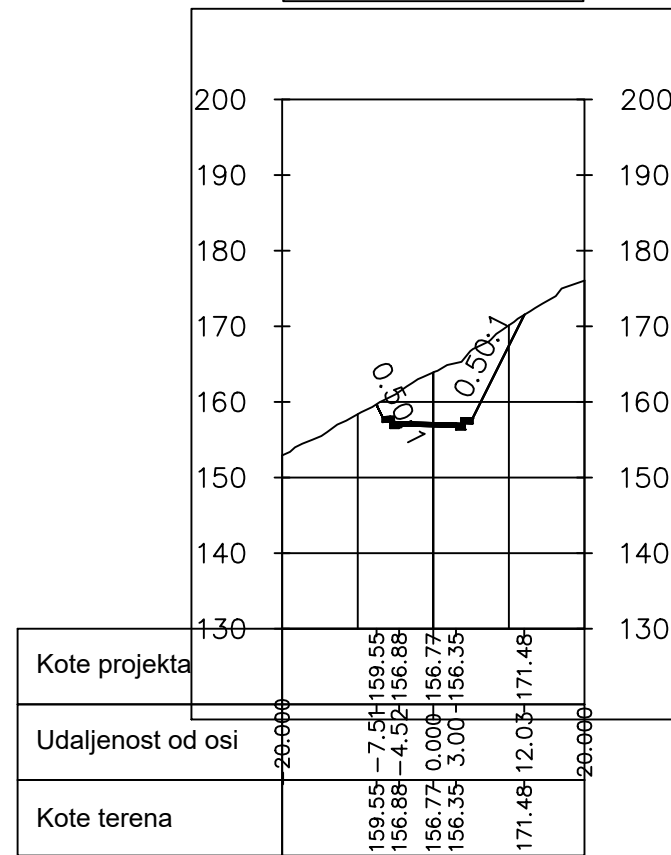
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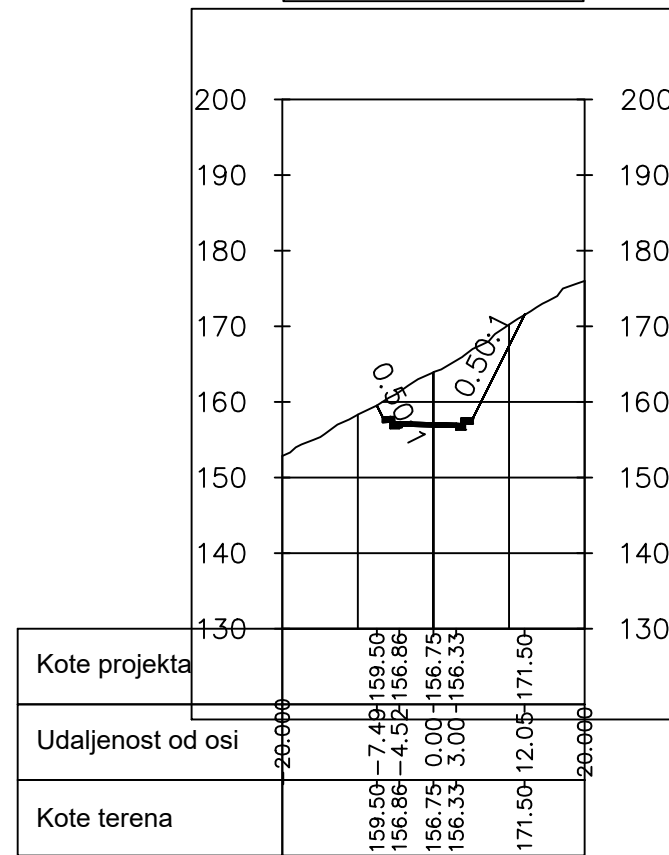
SVEUČILIŠTE U SPLITU, FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE
21000 Split, Matice hrvatske 15, tel: 021/303-333

| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

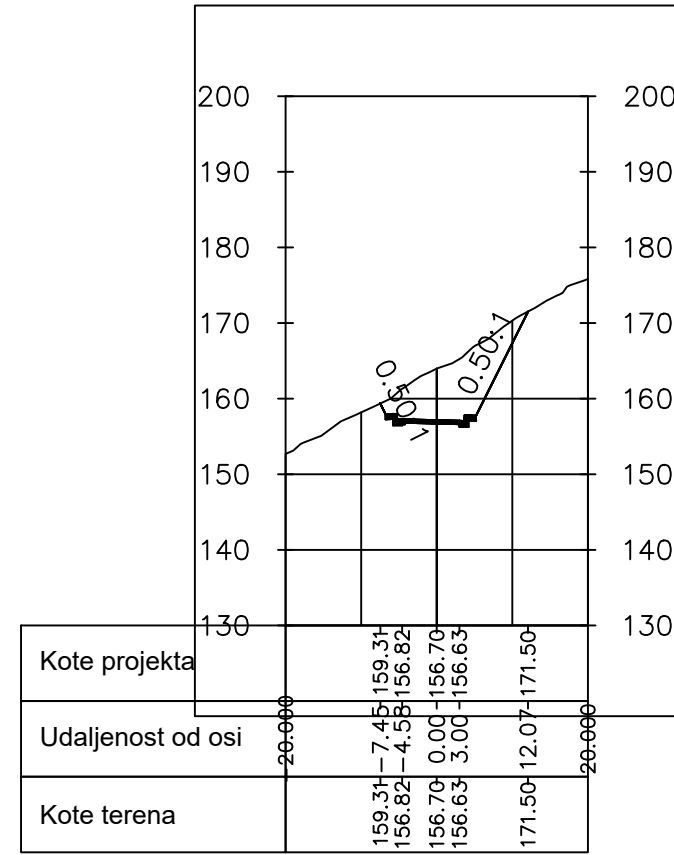
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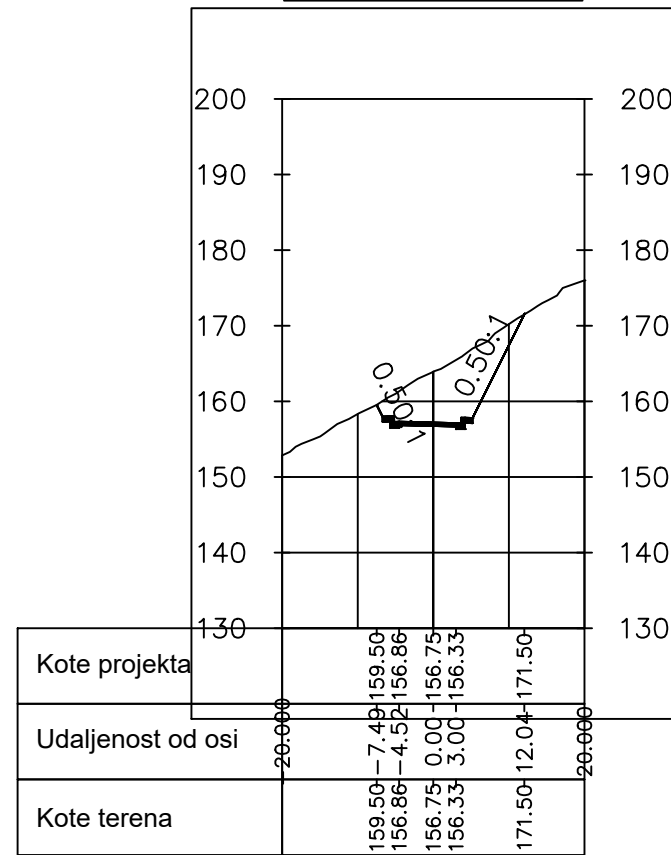
0+240.52



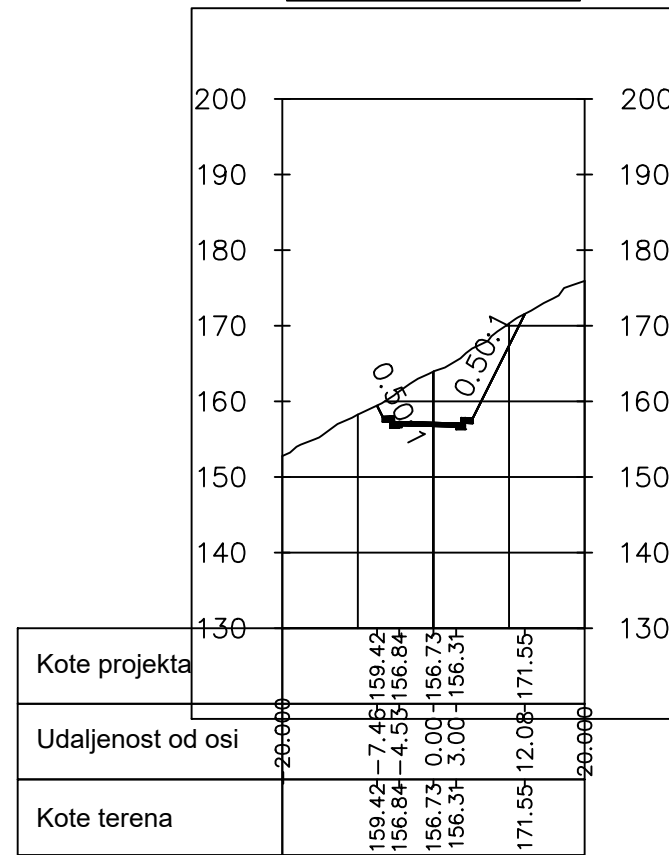
0+241.63



0+240.49



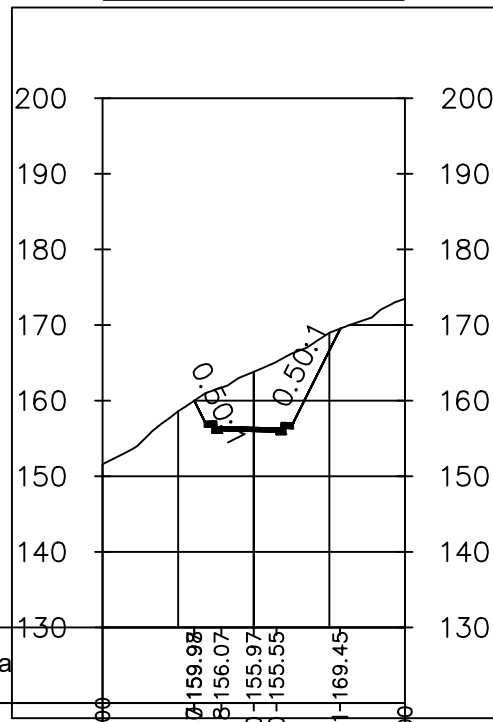
0+241.07



SVEUČILIŠTE U SPLITU, FAKULTET GRAĐEVINARSTVA, ARHITEKTURE I GEODEZIJE
21000 Split, Matice hrvatske 15, tel: 021/303-333

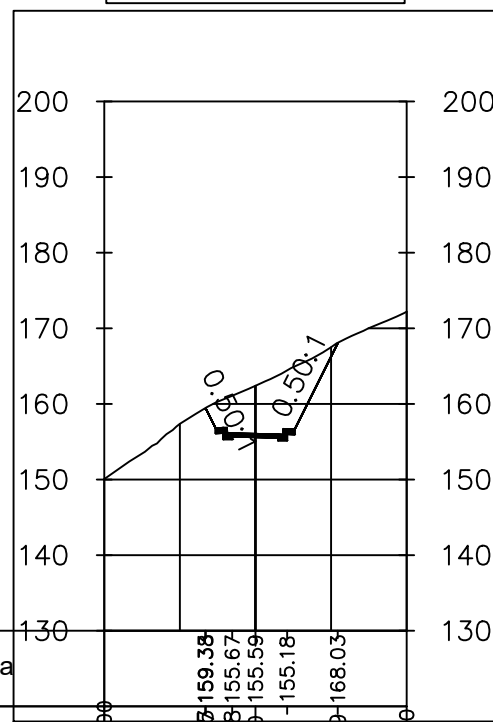
| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

0+260.00



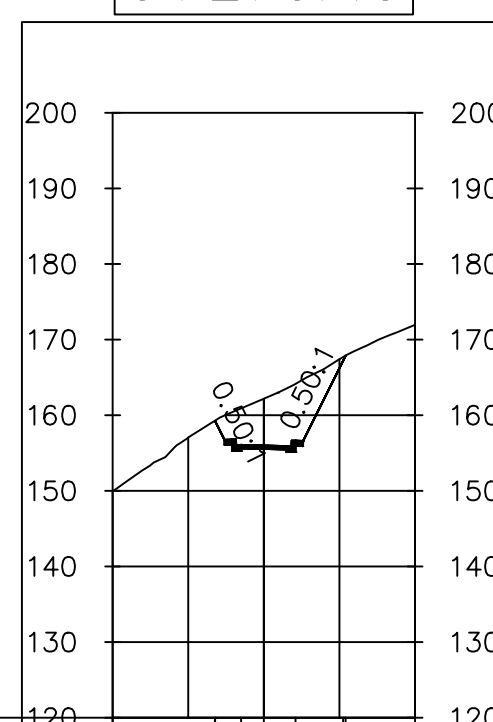
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.98 | 156.07 | 155.97 | 155.55 | 169.45 | 20.000 |
| Udaljenost od osi | | -7.82 | -4.28 | 0.00 | 3.00 | 11.41 | |
| Kote terena | | 159.98 | 156.07 | 155.97 | 155.55 | 169.45 | |

0+269.36



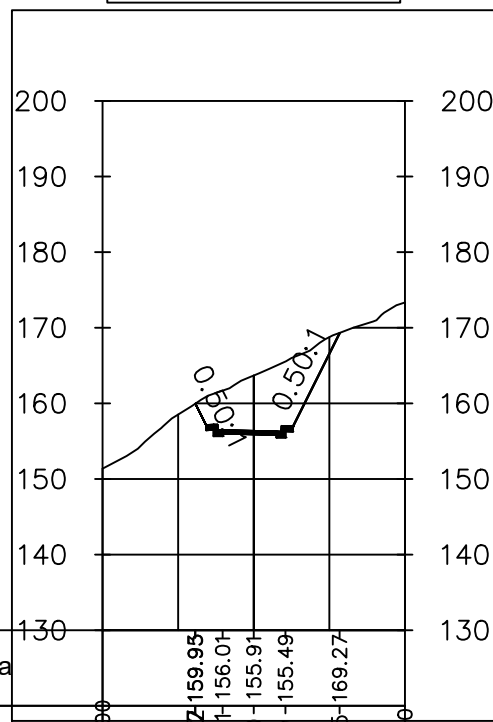
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.38 | 155.67 | 155.59 | 155.18 | 168.03 | 20.000 |
| Udaljenost od osi | | -6.67 | -3.08 | 0.00 | 4.19 | 10.89 | |
| Kote terena | | 159.38 | 155.67 | 155.59 | 155.18 | 168.03 | |

0+270.49



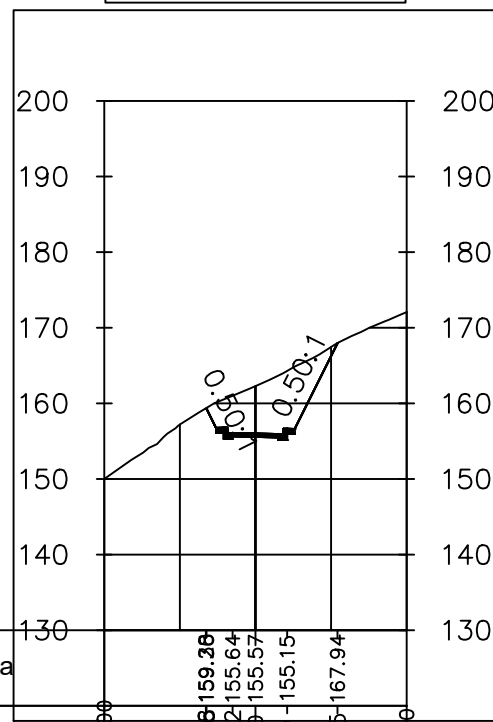
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.28 | 155.28 | 155.55 | 155.13 | 167.89 | 20.000 |
| Udaljenost od osi | | -6.47 | -3.00 | 0.00 | 4.19 | 10.89 | |
| Kote terena | | 159.28 | 155.28 | 155.55 | 155.13 | 167.89 | |

0+261.52



| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.95 | 156.04 | 155.94 | 155.49 | 169.27 | 20.000 |
| Udaljenost od osi | | -7.77 | -4.11 | 0.00 | 4.19 | 11.35 | |
| Kote terena | | 159.95 | 156.04 | 155.94 | 155.49 | 169.27 | |

0+269.93



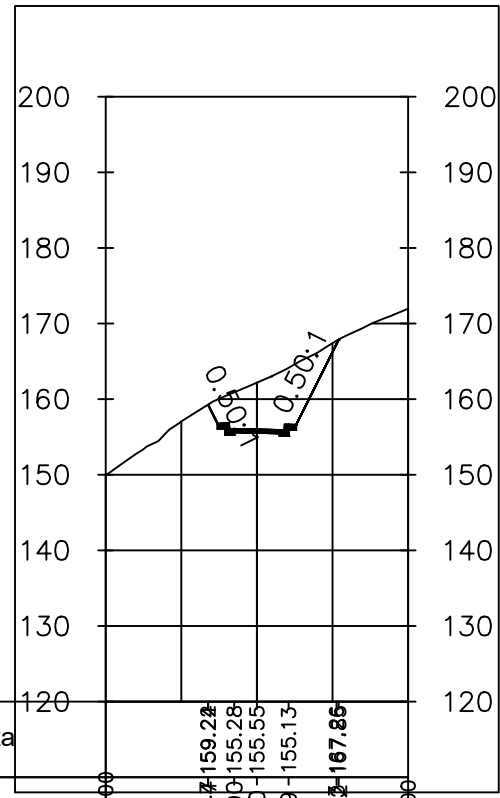
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.36 | 155.64 | 155.57 | 155.15 | 167.94 | 20.000 |
| Udaljenost od osi | | -6.85 | -3.02 | 0.00 | 4.19 | 10.85 | |
| Kote terena | | 159.36 | 155.64 | 155.57 | 155.15 | 167.94 | |



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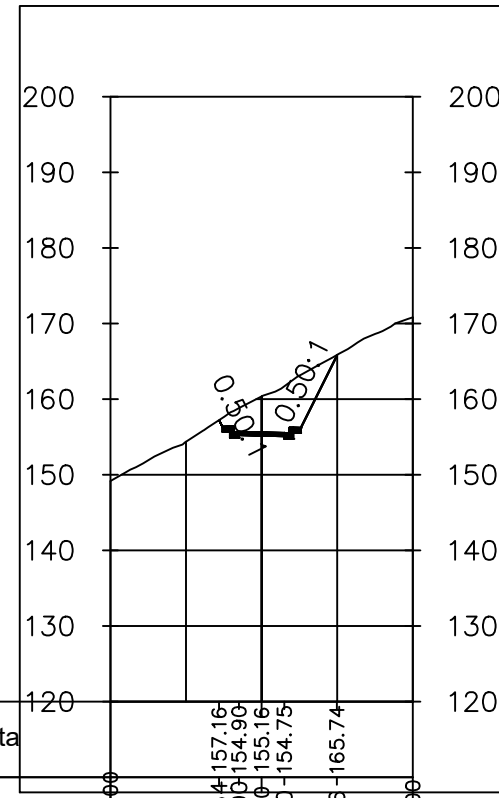
| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

0+270.49



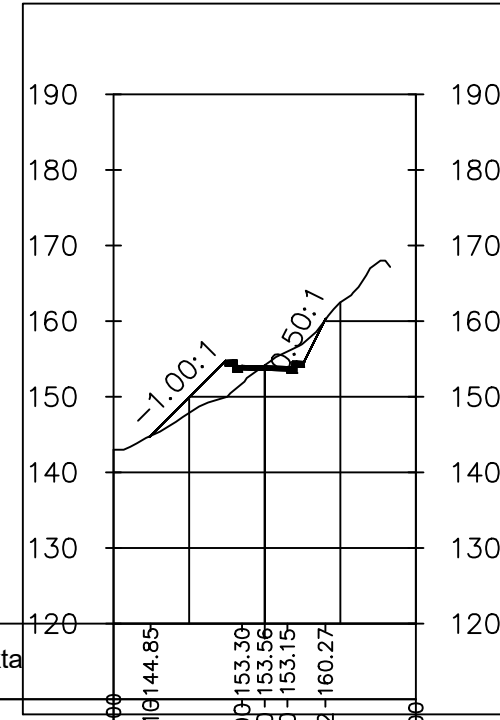
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.22 | 155.28 | 155.55 | 155.13 | 167.86 | 20.000 |
| Udaljenost od osi | | -6.47 | -3.00 | 0.00 | 4.19 | 10.82 | |
| Kote terena | | 159.22 | 155.28 | 155.55 | 155.13 | 167.86 | |

0+280.00



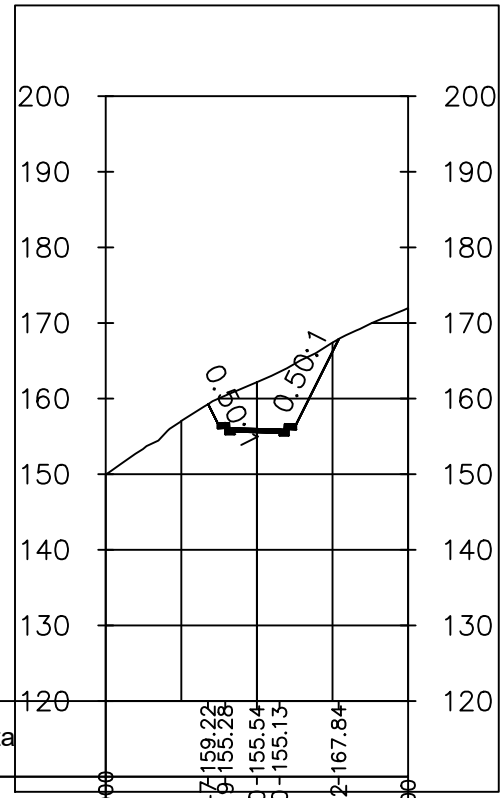
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 157.16 | 154.90 | 155.16 | 154.75 | 165.74 | 20.000 |
| Udaljenost od osi | | -5.64 | -3.00 | 0.00 | 3.00 | 9.96 | |
| Kote terena | | 157.16 | 154.90 | 155.16 | 154.75 | 165.74 | |

0+320.00



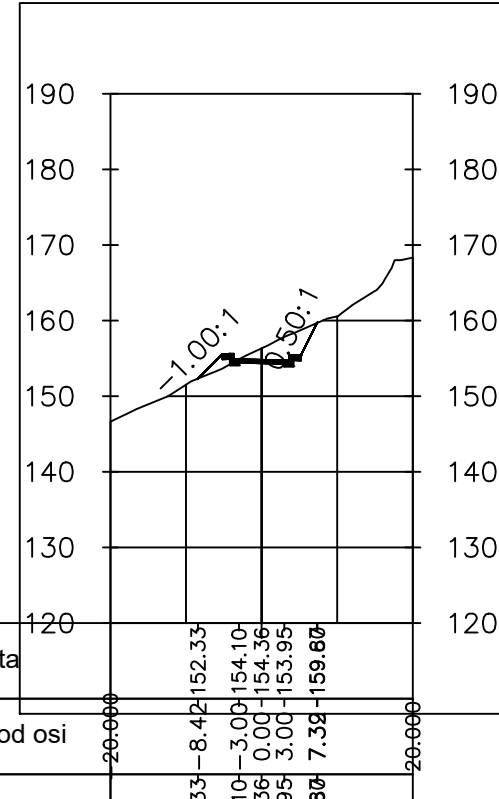
| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 144.85 | 153.30 | 153.56 | 153.15 | 160.27 | 20.000 |
| Udaljenost od osi | | -15.10 | -3.00 | 0.00 | 3.00 | 8.02 | |
| Kote terena | | 144.85 | 153.30 | 153.56 | 153.15 | 160.27 | |

0+270.52

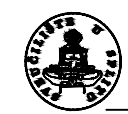


| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 159.22 | 155.28 | 155.54 | 155.13 | 167.84 | 20.000 |
| Udaljenost od osi | | -6.47 | -4.19 | 0.00 | 3.00 | 10.82 | |
| Kote terena | | 159.22 | 155.28 | 155.54 | 155.13 | 167.84 | |

0+300.00



| | | | | | | | |
|-------------------|--------|--------|--------|--------|--------|--------|--------|
| Kote projekta | 20.000 | 152.33 | 154.10 | 154.36 | 153.95 | 159.67 | 20.000 |
| Udaljenost od osi | | -8.42 | -3.00 | 0.00 | 3.00 | 7.38 | |
| Kote terena | | 152.33 | 154.10 | 154.36 | 153.95 | 159.67 | |



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| | | |
|---------|-----------------------|-----------------------|
| PREDMET | ZAVRŠNI RAD – CESTE | GODINA 2022./2023. |
| ZADATAK | IDEJNI PROJEKT | |
| SADRŽAJ | KARAKT. POP. PRESJECI | M 1:200 |
| STUDENT | SARA VUČKO | |

4. TABLICA VOLUMENA UKUPNIH ZEMLJANIH RADOVA

Alignment os 1

Sample Line Group: SL Collection – 5

Start Sta: 0+000.000

End Sta: 0+320.608

| Station | Cut Area (Sq.m.) | Cut Volume (Cu.m.) | Reusable Volume (Cu.m.) | Fill Area (Sq.m.) | Fill Volume (Cu.m.) | Cum. Cut Vol. (Cu.m.) | Cum. Reusable Vol. (Cu.m.) | Cum. Fill Vol. (Cu.m.) | Cum. Net Vol. (Cu.m.) |
|----------------|-----------------------------|-------------------------------|------------------------------------|------------------------------|--------------------------------|----------------------------------|---------------------------------------|-----------------------------------|----------------------------------|
| 0+000.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0+000.078 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0+020.000 | 10.25 | 102.14 | 102.14 | 66.83 | 665.69 | 102.14 | 102.14 | 665.69 | -563.55 |
| 0+040.000 | 5.82 | 160.69 | 160.69 | 50.49 | 1173.19 | 262.84 | 262.84 | 1838.88 | -1576.05 |
| 0+054.900 | 4.24 | 74.89 | 74.89 | 46.15 | 719.93 | 337.72 | 337.72 | 2558.81 | -2221.09 |
| 0+054.938 | 4.25 | 0.16 | 0.16 | 46.11 | 1.77 | 337.89 | 337.89 | 2560.58 | -2222.70 |
| 0+054.962 | 4.27 | 0.10 | 0.10 | 46.10 | 1.09 | 337.99 | 337.99 | 2561.67 | -2223.68 |
| 0+055.530 | 4.55 | 2.50 | 2.50 | 45.56 | 26.03 | 340.49 | 340.49 | 2587.70 | -2247.21 |
| 0+056.096 | 4.78 | 2.64 | 2.64 | 44.98 | 25.61 | 343.13 | 343.13 | 2613.30 | -2270.17 |
| 0+060.000 | 7.38 | 23.73 | 23.73 | 42.40 | 170.58 | 366.86 | 366.86 | 2783.88 | -2417.02 |
| 0+080.000 | 32.89 | 386.61 | 386.61 | 10.94 | 565.40 | 753.46 | 753.46 | 3349.28 | -2595.81 |
| 0+083.823 | 38.60 | 127.59 | 127.59 | 4.04 | 31.77 | 881.05 | 881.05 | 3381.05 | -2500.00 |
| 0+084.391 | 39.08 | 22.07 | 22.07 | 3.52 | 2.15 | 903.12 | 903.12 | 3383.20 | -2480.08 |
| 0+084.938 | 39.80 | 21.58 | 21.58 | 3.04 | 1.79 | 924.71 | 924.71 | 3384.99 | -2460.29 |
| 0+084.962 | 39.84 | 0.94 | 0.94 | 3.02 | 0.07 | 925.64 | 925.64 | 3385.07 | -2459.42 |
| 0+094.556 | 57.17 | 438.49 | 438.49 | 0.00 | 16.10 | 1364.14 | 1364.14 | 3401.16 | -2037.02 |
| 0+094.560 | 57.18 | 0.19 | 0.19 | 0.00 | 0.00 | 1364.33 | 1364.33 | 3401.16 | -2036.83 |
| 0+100.000 | 63.94 | 313.24 | 313.24 | 0.00 | 0.01 | 1677.57 | 1677.57 | 3401.17 | -1723.60 |
| 0+104.158 | 58.11 | 241.10 | 241.10 | 0.00 | 0.00 | 1918.67 | 1918.67 | 3401.17 | -1482.50 |
| 0+104.175 | 58.06 | 0.98 | 0.98 | 0.00 | 0.00 | 1919.65 | 1919.65 | 3401.17 | -1481.52 |
| 0+104.728 | 56.34 | 31.67 | 31.67 | 0.00 | 0.00 | 1951.32 | 1951.32 | 3401.17 | -1449.85 |
| 0+105.296 | 54.82 | 31.57 | 31.57 | 0.00 | 0.00 | 1982.89 | 1982.89 | 3401.17 | -1418.28 |
| 0+120.000 | 22.41 | 542.38 | 542.38 | 7.19 | 56.88 | 2525.27 | 2525.27 | 3458.05 | -932.78 |
| 0+133.024 | 3.96 | 168.19 | 168.19 | 13.47 | 138.17 | 2693.47 | 2693.47 | 3596.22 | -902.75 |
| 0+133.590 | 3.70 | 2.17 | 2.17 | 13.72 | 7.69 | 2695.64 | 2695.64 | 3603.91 | -908.27 |
| 0+134.110 | 3.47 | 1.86 | 1.86 | 13.90 | 7.19 | 2697.50 | 2697.50 | 3611.09 | -913.59 |
| 0+134.158 | 3.45 | 0.16 | 0.16 | 13.92 | 0.66 | 2697.67 | 2697.67 | 3611.76 | -914.09 |
| 0+134.175 | 3.45 | 0.06 | 0.06 | 13.93 | 0.24 | 2697.72 | 2697.72 | 3611.99 | -914.27 |
| 0+140.000 | 1.91 | 15.61 | 15.61 | 17.54 | 91.64 | 2713.34 | 2713.34 | 3703.63 | -990.30 |
| 0+160.000 | 0.91 | 28.23 | 28.23 | 34.38 | 519.11 | 2741.57 | 2741.57 | 4222.74 | -1481.18 |
| 0+180.000 | 13.33 | 142.36 | 142.36 | 13.50 | 478.71 | 2883.93 | 2883.93 | 4701.45 | -1817.52 |
| 0+200.000 | 47.57 | 608.97 | 608.97 | 0.00 | 134.96 | 3492.90 | 3492.90 | 4836.41 | -1343.51 |

| | | | | | | | | | |
|-----------|--------|---------|---------|-------|--------|----------|----------|---------|----------|
| 0+105.296 | 54.82 | 31.57 | 31.57 | 0.00 | 0.00 | 1982.89 | 1982.89 | 3401.17 | -1418.28 |
| 0+120.000 | 22.41 | 542.38 | 542.38 | 7.19 | 56.88 | 2525.27 | 2525.27 | 3458.05 | -932.78 |
| 0+133.024 | 3.96 | 168.19 | 168.19 | 13.47 | 138.17 | 2693.47 | 2693.47 | 3596.22 | -902.75 |
| 0+133.590 | 3.70 | 2.17 | 2.17 | 13.72 | 7.69 | 2695.64 | 2695.64 | 3603.91 | -908.27 |
| 0+134.110 | 3.47 | 1.86 | 1.86 | 13.90 | 7.19 | 2697.50 | 2697.50 | 3611.09 | -913.59 |
| 0+134.158 | 3.45 | 0.16 | 0.16 | 13.92 | 0.66 | 2697.67 | 2697.67 | 3611.76 | -914.09 |
| 0+134.175 | 3.45 | 0.06 | 0.06 | 13.93 | 0.24 | 2697.72 | 2697.72 | 3611.99 | -914.27 |
| 0+140.000 | 1.91 | 15.61 | 15.61 | 17.54 | 91.64 | 2713.34 | 2713.34 | 3703.63 | -990.30 |
| 0+160.000 | 0.91 | 28.23 | 28.23 | 34.38 | 519.11 | 2741.57 | 2741.57 | 4222.74 | -1481.18 |
| 0+180.000 | 13.33 | 142.36 | 142.36 | 13.50 | 478.71 | 2883.93 | 2883.93 | 4701.45 | -1817.52 |
| 0+200.000 | 47.57 | 608.97 | 608.97 | 0.00 | 134.96 | 3492.90 | 3492.90 | 4836.41 | -1343.51 |
| 0+205.020 | 59.24 | 268.09 | 268.09 | 0.00 | 0.00 | 3760.99 | 3760.99 | 4836.41 | -1075.42 |
| 0+205.022 | 59.24 | 0.09 | 0.09 | 0.00 | 0.00 | 3761.08 | 3761.08 | 4836.41 | -1075.33 |
| 0+205.589 | 60.66 | 34.00 | 34.00 | 0.00 | 0.00 | 3795.08 | 3795.08 | 4836.41 | -1041.33 |
| 0+206.153 | 62.12 | 34.67 | 34.67 | 0.00 | 0.00 | 3829.75 | 3829.75 | 4836.41 | -1006.66 |
| 0+208.515 | 68.21 | 153.88 | 153.88 | 0.00 | 0.00 | 3983.63 | 3983.63 | 4836.41 | -852.78 |
| 0+214.022 | 82.81 | 418.16 | 418.16 | 0.00 | 0.00 | 4401.79 | 4401.79 | 4836.41 | -434.62 |
| 0+220.000 | 96.08 | 540.27 | 540.27 | 0.00 | 0.00 | 4942.06 | 4942.06 | 4836.41 | 105.65 |
| 0+231.519 | 101.10 | 1157.71 | 1157.71 | 0.00 | 0.00 | 6099.76 | 6099.76 | 4836.41 | 1263.35 |
| 0+233.884 | 102.70 | 248.05 | 248.05 | 0.00 | 0.00 | 6347.82 | 6347.82 | 4836.41 | 1511.41 |
| 0+234.452 | 103.69 | 58.55 | 58.55 | 0.00 | 0.00 | 6406.37 | 6406.37 | 4836.41 | 1569.96 |
| 0+235.022 | 103.48 | 59.02 | 59.02 | 0.00 | 0.00 | 6465.39 | 6465.39 | 4836.41 | 1628.98 |
| 0+237.758 | 105.26 | 295.83 | 295.83 | 0.00 | 0.00 | 6761.22 | 6761.22 | 4836.41 | 1924.81 |
| 0+237.773 | 105.29 | 1.63 | 1.63 | 0.00 | 0.00 | 6762.85 | 6762.85 | 4836.41 | 1926.44 |
| 0+240.000 | 110.33 | 249.28 | 249.28 | 0.00 | 0.00 | 7012.13 | 7012.13 | 4836.41 | 2175.72 |
| 0+240.494 | 111.76 | 54.85 | 54.85 | 0.00 | 0.00 | 7066.99 | 7066.99 | 4836.41 | 2230.57 |
| 0+240.525 | 111.78 | 3.46 | 3.46 | 0.00 | 0.00 | 7070.45 | 7070.45 | 4836.41 | 2234.04 |
| 0+241.065 | 112.12 | 60.47 | 60.47 | 0.00 | 0.00 | 7130.92 | 7130.92 | 4836.41 | 2294.51 |
| 0+241.634 | 112.31 | 63.80 | 63.80 | 0.00 | 0.00 | 7194.72 | 7194.72 | 4836.41 | 2358.31 |
| 0+260.000 | 119.43 | 2179.71 | 2179.71 | 0.00 | 0.00 | 9374.43 | 9374.43 | 4836.41 | 4538.02 |
| 0+261.525 | 116.88 | 180.18 | 180.18 | 0.00 | 0.00 | 9554.61 | 9554.61 | 4836.41 | 4718.20 |
| 0+269.360 | 97.17 | 843.64 | 843.64 | 0.00 | 0.00 | 10398.25 | 10398.25 | 4836.41 | 5561.83 |
| 0+269.926 | 95.63 | 54.56 | 54.56 | 0.00 | 0.00 | 10452.81 | 10452.81 | 4836.41 | 5616.40 |
| 0+270.490 | 94.09 | 53.52 | 53.52 | 0.00 | 0.00 | 10506.33 | 10506.33 | 4836.41 | 5669.92 |
| 0+270.494 | 94.08 | 0.38 | 0.38 | 0.00 | 0.00 | 10506.72 | 10506.72 | 4836.41 | 5670.30 |
| 0+270.525 | 94.00 | 2.91 | 2.91 | 0.00 | 0.00 | 10509.62 | 10509.62 | 4836.41 | 5673.21 |
| 0+280.000 | 70.49 | 779.29 | 779.29 | 0.00 | 0.00 | 11288.91 | 11288.91 | 4836.41 | 6452.50 |
| 0+300.000 | 24.84 | 953.30 | 953.30 | 4.02 | 40.25 | 12242.21 | 12242.21 | 4876.66 | 7365.55 |
| 0+320.000 | 14.93 | 397.67 | 397.67 | 29.64 | 336.65 | 12639.88 | 12639.88 | 5213.31 | 7426.57 |
| 0+320.608 | 0.00 | 4.54 | 4.54 | 0.00 | 9.01 | 12644.42 | 12644.42 | 5222.32 | 7422.10 |

5. OBRADA NA RAČUNALU

Za izradu idejnog projekta lokalne ceste korišten je program AutoCAD Civil 3D koji znatno olakšava izradu programskog zadatka, zbog svoje jednostavnosti i preciznosti, brži je postupak crtanja te izračuna u odnosu na ručno rješavanje.

Skeniranje geodetske podloge i njezino iscrtavanje slojnica je prvi korak u izradi ovog idejnog rješenja. Slojnice se iscrtavaju 3D poligonalnim linijama pomoću kojih postupkom triangulacije se dobije trodimenzionalni model terena. Sljedeći korak je definiranje koordinate točaka tangenti na terenu, za svaku tangentu po dvije točke. Na sjecištima tangenti definiramo kružne lukove i prijelazne krivine te na taj način dobijemo horizontalni tok ceste.

Sljedeći korak projekta je izrada uzdužnog presjeka ceste, kojega definira niveleta. Niveleta se postavlja tako da se zadovolje geometrijski, sigurnosni elementi i odvodnja. Između tangenti se ubacuje kružna krivina određenog radijusa.

Definiranjem poprečnog presjeka profila prometnice su odabrani poprečno nagibi kolnika, njegova širina te pokosi usjeka i nasipa.

Nakon definiranih vertikalnih i horizontalnih elemenata osi ceste, izrađuje se njezin koridor. Koridor omogućuje uvid u poprečne presjeke u svim karakterističnim i zadanim točkama osi ceste. Na taj način smo definirali cijelu dionicu ceste

Izlazni podaci su računalni ispisi koordinatnih točaka osi, točaka svakog poprečnog presjeka te količina zemljanih radova po presjeku.

6. IZLAZNI PODACI IZ PROGRAMA
6.1. KOORDINATNI RAČUN GLAVNIH TOČKA

123 Main Street
Suite #321
City, State 01234

Alignment Station and Curve Report

Project Name: D:\Sara\ZAVRŠNI\Podloga.dwg

Report Date: 16.6.2023. 22:01:36

Client: Client Company

Project Description:

Prepared by: Preparer

Alignment: OS1

Description:

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 0+00.000 | 12.896 | 36.050 |
| End: | 0+55.464 | 57.170 | 69.457 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 55.464 | Course: | N 37° 02' 10.3884" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| TS: | 0+55.464 | 57.170 | 69.457 |
| SPI: | | 73.198 | 81.551 |
| SC: | 0+85.464 | 79.306 | 89.558 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.000 | L Tan: | 20.078 |
| Radius: | 55.000 | S Tan: | 10.071 |
| Theta: | 15° 37' 34.0381" | P: | 0.680 |
| X: | 29.778 | K: | 14.963 |
| Y: | 2.713 | A: | 40.620 |
| Chord: | 29.901 | Course: | N 42° 14' 29.9058" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| SC: | 0+85.464 | 79.306 | 89.558 |

RP: 35.577 122.916
 CS: 1+04.643 88.072 106.508

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 19° 58' 47.6963" | Type: | RIGHT |
| Radius: | 55.000 | | |
| Length: | 19.179 | Tangent: | 9.688 |
| Mid-Ord: | 0.834 | External: | 0.847 |
| Chord: | 19.082 | Course: | N 62° 39' 08.2746" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 1+04.643 | 88.072 | 106.508 |
| SPI: | | 91.077 | 116.120 |
| ST: | 1+34.643 | 91.684 | 136.190 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.000 | L Tan: | 20.078 |
| Radius: | 55.000 | S Tan: | 10.071 |
| Theta: | 15° 37' 34.0381" | P: | 0.680 |
| X: | 29.778 | K: | 14.963 |
| Y: | 2.713 | A: | 40.620 |
| Chord: | 29.901 | Course: | N 83° 03' 46.6434" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 1+34.643 | 91.684 | 136.190 |
| End: | 2+05.531 | 93.826 | 207.045 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 70.888 | Course: | N 88° 16' 06.1609" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| TS: | 2+05.531 | 93.826 | 207.045 |
| SPI: | | 94.433 | 227.114 |
| SC: | 2+35.531 | 97.437 | 236.727 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|--------|
| Length: | 30.000 | L Tan: | 20.078 |
| Radius: | 55.000 | S Tan: | 10.071 |
| Theta: | 15° 37' 34.0381" | P: | 0.680 |

| | | | |
|--------|--------|---------|----------------------|
| X: | 29.778 | K: | 14.963 |
| Y: | 2.713 | A: | 40.620 |
| Chord: | 29.901 | Course: | N 83° 03' 46.6434" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| SC: | 2+35.531 | 97.437 | 236.727 |
| RP: | | 149.933 | 220.319 |
| CS: | 2+41.025 | 99.335 | 241.880 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 05° 43' 23.9244" | Type: | LEFT |
| Radius: | 55.000 | | |
| Length: | 5.494 | Tangent: | 2.749 |
| Mid-Ord: | 0.069 | External: | 0.069 |
| Chord: | 5.492 | Course: | N 69° 46' 50.1606" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 2+41.025 | 99.335 | 241.880 |
| SPI: | | 103.284 | 251.146 |
| ST: | 2+71.025 | 115.840 | 266.814 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.000 | L Tan: | 20.078 |
| Radius: | 55.000 | S Tan: | 10.071 |
| Theta: | 15° 37' 34.0381" | P: | 0.680 |
| X: | 29.778 | K: | 14.963 |
| Y: | 2.713 | A: | 40.620 |
| Chord: | 29.901 | Course: | N 56° 29' 53.6777" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 2+71.025 | 115.840 | 266.814 |
| End: | 3+21.118 | 147.165 | 305.904 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 50.093 | Course: | N 51° 17' 34.1603" E |

Alignment: OS1-Left-3.000

Description:

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 0+00.000 | 14.703 | 33.655 |
| End: | 0+55.464 | 58.977 | 67.062 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 55.464 | Course: | N 37° 02' 10.3884" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| TS: | 0+55.464 | 58.977 | 67.062 |
| SPI: | | 75.333 | 79.404 |
| SC: | 0+86.282 | 81.691 | 87.739 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.818 | L Tan: | 20.622 |
| Radius: | 58.000 | S Tan: | 10.342 |
| Theta: | 15° 13' 19.1923" | P: | 0.681 |
| X: | 30.601 | K: | 15.373 |
| Y: | 2.715 | A: | 42.278 |
| Chord: | 30.716 | Course: | N 42° 18' 39.1023" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| SC: | 0+86.282 | 81.691 | 87.739 |
| RP: | | 35.577 | 122.916 |
| CS: | 1+06.507 | 90.936 | 105.613 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 19° 58' 47.6963" | Type: | RIGHT |
| Radius: | 58.000 | | |
| Length: | 20.225 | Tangent: | 10.216 |
| Mid-Ord: | 0.879 | External: | 0.893 |
| Chord: | 20.123 | Course: | N 62° 39' 08.2746" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 1+06.507 | 90.936 | 105.613 |

SPI: 94.063 115.618
 ST: 1+37.325 94.682 136.099

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.818 | L Tan: | 20.622 |
| Radius: | 58.000 | S Tan: | 10.342 |
| Theta: | 15° 13' 19.1923" | P: | 0.681 |
| X: | 30.601 | K: | 15.373 |
| Y: | 2.715 | A: | 42.278 |
| Chord: | 30.716 | Course: | N 82° 59' 37.4469" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 1+37.325 | 94.682 | 136.099 |
| End: | 2+08.208 | 96.824 | 206.949 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 70.882 | Course: | N 88° 16' 06.1609" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| PC: | 2+08.208 | 96.824 | 206.949 |
| RP: | | 104.821 | 206.707 |
| PT: | 2+09.342 | 96.939 | 208.077 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 08° 07' 22.5164" | Type: | LEFT |
| Radius: | 8.000 | | |
| Length: | 1.134 | Tangent: | 0.568 |
| Mid-Ord: | 0.020 | External: | 0.020 |
| Chord: | 1.133 | Course: | N 84° 12' 24.9026" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 2+09.342 | 96.939 | 208.077 |
| End: | 2+36.016 | 101.504 | 234.357 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 26.674 | Course: | N 80° 08' 43.6444" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|---------|----------|---------|
|-------------|---------|----------|---------|

| | | | |
|-----|----------|---------|---------|
| PC: | 2+36.016 | 101.504 | 234.357 |
| RP: | | 109.386 | 232.988 |
| CS: | 2+37.063 | 101.750 | 235.374 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 07° 29' 52.6391" | Type: | LEFT |
| Radius: | 8.000 | | |
| Length: | 1.047 | Tangent: | 0.524 |
| Mid-Ord: | 0.017 | External: | 0.017 |
| Chord: | 1.046 | Course: | N 76° 23' 47.3249" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 2+37.063 | 101.750 | 235.374 |
| SPI: | | 101.751 | 235.376 |
| SC: | 2+37.068 | 101.751 | 235.379 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 0.005 | L Tan: | 0.002 |
| Radius: | 50.480 | S Tan: | 0.002 |
| Theta: | 00° 00' 18.8825" | P: | 0.000 |
| X: | 0.005 | K: | 0.000 |
| Y: | 0.000 | A: | 35.718 |
| Chord: | 0.005 | Course: | N 72° 38' 41.5643" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| SC: | 2+37.068 | 101.751 | 235.379 |
| RP: | | 149.933 | 220.319 |
| PCC: | 2+42.086 | 103.484 | 240.086 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 05° 41' 44.6545" | Type: | LEFT |
| Radius: | 50.480 | | |
| Length: | 5.018 | Tangent: | 2.511 |
| Mid-Ord: | 0.062 | External: | 0.062 |
| Chord: | 5.016 | Course: | N 69° 47' 39.7955" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| PCC: | 2+42.086 | 103.484 | 240.086 |
| RP: | | 110.845 | 236.953 |

PT: 2+43.135 103.957 241.022

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 07° 30' 52.3340" | Type: | LEFT |
| Radius: | 8.000 | | |
| Length: | 1.049 | Tangent: | 0.525 |
| Mid-Ord: | 0.017 | External: | 0.017 |
| Chord: | 1.048 | Course: | N 63° 11' 21.3013" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 2+43.135 | 103.957 | 241.022 |
| End: | 2+69.803 | 117.519 | 263.984 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 26.668 | Course: | N 59° 25' 55.1343" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| PC: | 2+69.803 | 117.519 | 263.984 |
| RP: | | 124.407 | 259.915 |
| CS: | 2+70.940 | 118.165 | 264.918 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 08° 08' 20.9329" | Type: | LEFT |
| Radius: | 8.000 | | |
| Length: | 1.136 | Tangent: | 0.569 |
| Mid-Ord: | 0.020 | External: | 0.020 |
| Chord: | 1.135 | Course: | N 55° 21' 44.6678" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 2+70.940 | 118.165 | 264.918 |
| SPI: | | 118.165 | 264.918 |
| ST: | 2+70.965 | 118.181 | 264.938 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|--------|
| Length: | 0.026 | L Tan: | 0.017 |
| Radius: | 64362.714 | S Tan: | 0.009 |
| Theta: | 00° 00' 00.0411" | P: | 0.000 |
| X: | 0.026 | K: | 0.013 |
| Y: | 0.000 | A: | 40.619 |

Chord: 0.026 Course: N 51° 17' 34.1603" E

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 2+70.965 | 118.181 | 264.938 |
| End: | 3+21.058 | 149.506 | 304.028 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 50.093 | Course: | N 51° 17' 34.1603" E |

Alignment: OS1-Right-3.000

Description:

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 0+00.000 | 11.089 | 38.445 |
| End: | 0+55.452 | 55.354 | 71.845 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 55.452 | Course: | N 37° 02' 10.3884" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| PC: | 0+55.452 | 55.354 | 71.845 |
| RP: | | 50.535 | 78.231 |
| PT: | 0+56.586 | 56.207 | 72.589 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 08° 07' 15.7815" | Type: | RIGHT |
| Radius: | 8.000 | | |
| Length: | 1.134 | Tangent: | 0.568 |
| Mid-Ord: | 0.020 | External: | 0.020 |
| Chord: | 1.133 | Course: | N 41° 05' 48.2791" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 0+56.586 | 56.207 | 72.589 |
| End: | 0+83.267 | 75.022 | 91.508 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 26.681 | Course: | N 45° 09' 26.1699" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| PC: | 0+83.267 | 75.022 | 91.508 |
| RP: | | 69.350 | 97.149 |
| CS: | 0+84.314 | 75.710 | 92.296 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 07° 30' 01.0905" | Type: | RIGHT |
| Radius: | 8.000 | | |
| Length: | 1.047 | Tangent: | 0.524 |
| Mid-Ord: | 0.017 | External: | 0.017 |
| Chord: | 1.046 | Course: | N 48° 54' 26.7151" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 0+84.314 | 75.710 | 92.296 |
| SPI: | | 75.711 | 92.298 |
| SC: | 0+84.318 | 75.712 | 92.300 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 0.004 | L Tan: | 0.002 |
| Radius: | 50.480 | S Tan: | 0.002 |
| Theta: | 00° 00' 17.1661" | P: | 0.000 |
| X: | 0.004 | K: | 0.000 |
| Y: | 0.000 | A: | 35.718 |
| Chord: | 0.004 | Course: | N 52° 39' 35.8432" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| SC: | 0+84.318 | 75.712 | 92.300 |
| RP: | | 35.577 | 122.916 |
| CS: | 1+01.922 | 83.758 | 107.856 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 19° 58' 47.6963" | Type: | RIGHT |
| Radius: | 50.480 | | |
| Length: | 17.603 | Tangent: | 8.892 |
| Mid-Ord: | 0.765 | External: | 0.777 |
| Chord: | 17.514 | Course: | N 62° 39' 08.2746" E |

Spiral Point Data

| Description | Station |
|-------------|----------|
| CS: | 1+01.922 |
| SPI: | |
| SC: | 1+01.937 |

Spiral Curve Data: clothoid

| Parameter | Value |
|-----------|------------------|
| Length: | 0.016 |
| Radius: | 50.480 |
| Theta: | 00° 01' 04.3592" |
| X: | 0.016 |
| Y: | 0.000 |
| Chord: | 0.016 |

Curve Point Data

| Description | Station |
|-------------|----------|
| SC: | 1+01.937 |
| RP: | |
| PT: | 1+02.983 |

Circular Curve Data

| Parameter | Value |
|-----------|------------------|
| Delta: | 07° 29' 31.0039" |
| Radius: | 8.000 |
| Length: | 1.046 |
| Mid-Ord: | 0.017 |
| Chord: | 1.045 |

Tangent Data

| Description | PT Station |
|-------------|------------|
| Start: | 1+02.983 |
| End: | 1+29.662 |

Tangent Data

| Parameter | Value |
|-----------|--------|
| Length: | 26.678 |

Curve Point Data

| Description | Station |
|-------------|----------|
| PC: | 1+29.662 |
| RP: | |
| PT: | 1+30.795 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 08° 06' 58.6749" | Type: | RIGHT |
| Radius: | 8.000 | | |
| Length: | 1.133 | Tangent: | 0.568 |
| Mid-Ord: | 0.020 | External: | 0.020 |
| Chord: | 1.132 | Course: | N 84° 12' 36.8234" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 1+30.795 | 88.686 | 136.299 |
| End: | 2+01.664 | 90.827 | 207.136 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 70.869 | Course: | N 88° 16' 06.1609" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| TS: | 2+01.664 | 90.827 | 207.136 |
| SPI: | | 91.446 | 227.617 |
| SC: | 2+32.482 | 94.574 | 237.622 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.818 | L Tan: | 20.622 |
| Radius: | 58.000 | S Tan: | 10.342 |
| Theta: | 15° 13' 19.1923" | P: | 0.681 |
| X: | 30.601 | K: | 15.373 |
| Y: | 2.715 | A: | 42.278 |
| Chord: | 30.716 | Course: | N 82° 59' 37.4469" E |

Curve Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| SC: | 2+32.482 | 94.574 | 237.622 |
| RP: | | 149.933 | 220.319 |
| CS: | 2+38.276 | 96.575 | 243.057 |

Circular Curve Data

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Delta: | 05° 43' 23.9244" | Type: | LEFT |
| Radius: | 58.000 | | |
| Length: | 5.794 | Tangent: | 2.899 |
| Mid-Ord: | 0.072 | External: | 0.072 |
| Chord: | 5.791 | Course: | N 69° 46' 50.1606" E |

Spiral Point Data

| Description | Station | Northing | Easting |
|-------------|----------|----------|---------|
| CS: | 2+38.276 | 96.575 | 243.057 |
| SPI: | | 100.685 | 252.700 |
| ST: | 2+69.094 | 113.498 | 268.690 |

Spiral Curve Data: clothoid

| Parameter | Value | Parameter | Value |
|-----------|------------------|-----------|----------------------|
| Length: | 30.818 | L Tan: | 20.622 |
| Radius: | 58.000 | S Tan: | 10.342 |
| Theta: | 15° 13' 19.1923" | P: | 0.681 |
| X: | 30.601 | K: | 15.373 |
| Y: | 2.715 | A: | 42.278 |
| Chord: | 30.716 | Course: | N 56° 34' 02.8742" E |

Tangent Data

| Description | PT Station | Northing | Easting |
|-------------|------------|----------|---------|
| Start: | 2+69.094 | 113.498 | 268.690 |
| End: | 3+19.187 | 144.824 | 307.780 |

Tangent Data

| Parameter | Value | Parameter | Value |
|-----------|--------|-----------|----------------------|
| Length: | 50.093 | Course: | N 51° 17' 34.1603" E |

6.2. KOORDINATNI RAČUN DETALJNIH TOČKA OSI

Alignment Incremental Station Report

Client:

Client

Client Company

Address 1

Date: 16.6.2023. 22:52:17

Prepared by:

Preparer

Your Company Name

123 Main Street

Alignment Name: OS1

Description:

Station Range: Start: 0+000.00, End: 32+111.00

Station Increment: 20.00

| Station | Northing | Easting | Tangential Direction |
|----------|-----------|-----------|----------------------|
| 0+000.00 | 12.8959m | 36.0502m | N37° 02' 10"E |
| 0+020.00 | 28.8610m | 48.0965m | N37° 02' 10"E |
| 0+040.00 | 44.8261m | 60.1429m | N37° 02' 10"E |
| 0+060.00 | 60.7855m | 72.1969m | N37° 23' 37"E |
| 0+080.00 | 75.7947m | 85.3749m | N47° 29' 20"E |
| 0+100.00 | 86.5020m | 102.1399m | N67° 48' 20"E |
| 0+120.00 | 90.9246m | 121.5693m | N84° 32' 44"E |
| 0+140.00 | 91.8457m | 141.5444m | N88° 16' 06"E |
| 0+160.00 | 92.4501m | 161.5352m | N88° 16' 06"E |
| 0+180.00 | 93.0544m | 181.5261m | N88° 16' 06"E |
| 0+200.00 | 93.6588m | 201.5170m | N88° 16' 06"E |
| 0+220.00 | 94.5691m | 221.4928m | N84° 37' 50"E |
| 0+240.00 | 98.9443m | 240.9338m | N67° 58' 51"E |
| 0+260.00 | 109.0558m | 258.1257m | N53° 23' 41"E |
| 0+280.00 | 121.4586m | 273.8142m | N51° 16' 59"E |
| 0+300.00 | 133.9681m | 289.4191m | N51° 16' 59"E |
| 0+320.00 | 146.4776m | 305.0240m | N51° 16' 59"E |

6.3. RAČUN KOTA KOLNIKA

Client: Prepared by:

Client Preparer

Client Company Your Company Name

Address 1123 Main Street

Date: 22.6.2023. 19:09:33

Corridor Name: KORIDOR0

Description:

Base Alignment Name: OS1

Station Range: Start: 0+000.49, End: 0+321.11

CHAINAGE 0+000.49

CHAINAGE 0+020.49

| Station | Offset | Northing | Easting | Elevation | Description |
|----------|---------|----------|---------|-----------|-----------------|
| 0+020.00 | 3.000 | 27.0541 | 50.4913 | 174.758 | ETW_SubBase |
| 0+020.00 | 3.000 | 27.0541 | 50.4913 | 175.208 | Flange |
| 0+020.00 | 3.000 | 27.0541 | 50.4913 | 175.208 | ETW |
| 0+020.00 | 3.650 | 26.6626 | 51.0102 | 175.169 | Flowline_Gutter |
| 0+020.00 | 3.692 | 26.6375 | 51.0435 | 175.919 | Top_Curb |
| 0+020.00 | -20.434 | 41.1690 | 31.7848 | 160.786 | Daylight |
| 0+020.00 | -20.434 | 41.1690 | 31.7848 | 160.786 | Daylight_Fill |
| 0+020.00 | -5.192 | 31.9881 | 43.9522 | 176.029 | EPS |
| 0+020.00 | -5.192 | 31.9881 | 43.9522 | 176.029 | Hinge |
| 0+020.00 | -5.192 | 31.9881 | 43.9522 | 176.029 | Hinge_Fill |
| 0+020.00 | -5.191 | 31.9875 | 43.9530 | 175.359 | EPS_Sub |
| 0+020.00 | -4.192 | 31.3858 | 44.7505 | 176.069 | Back_Curb |

| | | | | | |
|----------|--------|---------|---------|---------|-----------------|
| 0+020.00 | -3.692 | 31.0846 | 45.1496 | 176.069 | Top_Curb |
| 0+020.00 | -3.650 | 31.0595 | 45.1829 | 175.319 | Flowline_Gutter |
| 0+020.00 | -3.000 | 30.6680 | 45.7018 | 174.908 | ETW_SubBase |
| 0+020.00 | -3.000 | 30.6680 | 45.7018 | 175.358 | ETW |
| 0+020.00 | -3.000 | 30.6680 | 45.7018 | 175.358 | Flange |
| 0+020.00 | 4.192 | 26.3363 | 51.4426 | 175.919 | Back_Curb |
| 0+020.00 | 5.191 | 25.7346 | 52.2401 | 175.209 | EPS_Sub |
| 0+020.00 | 5.192 | 25.7340 | 52.2408 | 175.879 | Ditch_In |
| 0+020.00 | 5.192 | 25.7340 | 52.2408 | 175.879 | EPS |
| 0+020.00 | 5.192 | 25.7340 | 52.2408 | 175.879 | Hinge_Cut |
| 0+020.00 | 5.192 | 25.7340 | 52.2408 | 175.879 | Ditch_Out |
| 0+020.00 | 7.312 | 24.4569 | 53.9334 | 180.119 | Daylight_Cut |
| 0+020.00 | 7.312 | 24.4569 | 53.9334 | 180.119 | Daylight |

CHAINAGE 0+040.49

| | | | | | |
|----------|---------|---------|---------|---------|-----------------|
| 0+040.00 | -17.175 | 55.1707 | 46.4333 | 162.322 | Daylight |
| 0+040.00 | -17.175 | 55.1707 | 46.4333 | 162.322 | Daylight_Fill |
| 0+040.00 | -5.192 | 47.9532 | 55.9986 | 174.305 | EPS |
| 0+040.00 | -5.192 | 47.9532 | 55.9986 | 174.305 | Hinge |
| 0+040.00 | -5.192 | 47.9532 | 55.9986 | 174.305 | Hinge_Fill |
| 0+040.00 | -5.191 | 47.9526 | 55.9994 | 173.635 | EPS_Sub |
| 0+040.00 | -4.192 | 47.3509 | 56.7969 | 174.345 | Back_Curb |
| 0+040.00 | -3.692 | 47.0497 | 57.1960 | 174.345 | Top_Curb |
| 0+040.00 | -3.650 | 47.0246 | 57.2293 | 173.595 | Flowline_Gutter |
| 0+040.00 | -3.000 | 46.6331 | 57.7482 | 173.184 | ETW_SubBase |
| 0+040.00 | -3.000 | 46.6331 | 57.7482 | 173.634 | ETW |
| 0+040.00 | -3.000 | 46.6331 | 57.7482 | 173.634 | Flange |

| | | | | | |
|----------|-------|---------|---------|---------|-----------------|
| 0+040.00 | 3.000 | 43.0192 | 62.5377 | 173.034 | ETW_SubBase |
| 0+040.00 | 3.000 | 43.0192 | 62.5377 | 173.484 | Flange |
| 0+040.00 | 3.000 | 43.0192 | 62.5377 | 173.484 | ETW |
| 0+040.00 | 3.650 | 42.6277 | 63.0566 | 173.445 | Flowline_Gutter |
| 0+040.00 | 3.692 | 42.6026 | 63.0899 | 174.195 | Top_Curb |
| 0+040.00 | 4.192 | 42.3014 | 63.4890 | 174.195 | Back_Curb |
| 0+040.00 | 5.191 | 41.6997 | 64.2864 | 173.485 | EPS_Sub |
| 0+040.00 | 5.192 | 41.6991 | 64.2872 | 174.155 | Hinge_Cut |
| 0+040.00 | 5.192 | 41.6991 | 64.2872 | 174.155 | Ditch_Out |
| 0+040.00 | 5.192 | 41.6991 | 64.2872 | 174.155 | Ditch_In |
| 0+040.00 | 5.192 | 41.6991 | 64.2872 | 174.155 | EPS |
| 0+040.00 | 6.092 | 41.1570 | 65.0056 | 175.955 | Daylight |
| 0+040.00 | 6.092 | 41.1570 | 65.0056 | 175.955 | Daylight_Cut |

CHAINAGE 0+060.49

| | | | | | |
|----------|---------|---------|---------|---------|-----------------|
| 0+060.00 | -15.893 | 70.4368 | 59.5705 | 161.880 | Daylight_Fill |
| 0+060.00 | -15.893 | 70.4368 | 59.5705 | 161.880 | Daylight |
| 0+060.00 | -5.192 | 63.9383 | 68.0722 | 172.581 | Hinge_Fill |
| 0+060.00 | -5.192 | 63.9383 | 68.0722 | 172.581 | Hinge |
| 0+060.00 | -5.192 | 63.9383 | 68.0722 | 172.581 | EPS |
| 0+060.00 | -5.191 | 63.9377 | 68.0730 | 171.911 | EPS_Sub |
| 0+060.00 | -4.192 | 63.3311 | 68.8667 | 172.621 | Back_Curb |
| 0+060.00 | -3.692 | 63.0274 | 69.2639 | 172.621 | Top_Curb |
| 0+060.00 | -3.650 | 63.0021 | 69.2971 | 171.871 | Flowline_Gutter |
| 0+060.00 | -3.000 | 62.6074 | 69.8135 | 171.460 | ETW_SubBase |
| 0+060.00 | -3.000 | 62.6074 | 69.8135 | 171.910 | Flange |
| 0+060.00 | -3.000 | 62.6074 | 69.8135 | 171.910 | ETW |

| | | | | | |
|----------|-------|---------|---------|---------|-----------------|
| 0+060.00 | 3.622 | 58.5859 | 75.0745 | 171.294 | ETW_SubBase |
| 0+060.00 | 3.622 | 58.5859 | 75.0745 | 171.744 | Flange |
| 0+060.00 | 3.622 | 58.5859 | 75.0745 | 171.744 | ETW |
| 0+060.00 | 4.272 | 58.1912 | 75.5909 | 171.705 | Flowline_Gutter |
| 0+060.00 | 4.314 | 58.1659 | 75.6240 | 172.455 | Top_Curb |
| 0+060.00 | 4.814 | 57.8622 | 76.0213 | 172.455 | Back_Curb |
| 0+060.00 | 5.813 | 57.2556 | 76.8150 | 171.745 | EPS_Sub |
| 0+060.00 | 5.814 | 57.2550 | 76.8158 | 172.415 | EPS |
| 0+060.00 | 5.814 | 57.2550 | 76.8158 | 172.415 | Ditch_Out |
| 0+060.00 | 5.814 | 57.2550 | 76.8158 | 172.415 | Ditch_In |
| 0+060.00 | 5.814 | 57.2550 | 76.8158 | 172.415 | Hinge_Cut |
| 0+060.00 | 6.927 | 56.5786 | 77.7006 | 174.643 | Daylight |
| 0+060.00 | 6.927 | 56.5786 | 77.7006 | 174.643 | Daylight_Cut |

CHAINAGE 0+080.49

| | | | | | |
|----------|---------|---------|---------|---------|-----------------|
| 0+080.00 | -11.786 | 84.4830 | 77.4103 | 164.262 | Daylight |
| 0+080.00 | -11.786 | 84.4830 | 77.4103 | 164.262 | Daylight_Fill |
| 0+080.00 | -5.191 | 79.6215 | 81.8668 | 170.857 | EPS |
| 0+080.00 | -5.191 | 79.6215 | 81.8668 | 170.857 | Hinge |
| 0+080.00 | -5.191 | 79.6215 | 81.8668 | 170.857 | Hinge_Fill |
| 0+080.00 | -5.190 | 79.6208 | 81.8675 | 170.187 | EPS_Sub |
| 0+080.00 | -4.191 | 78.8844 | 82.5426 | 170.897 | Back_Curb |
| 0+080.00 | -3.691 | 78.5158 | 82.8804 | 170.897 | Top_Curb |
| 0+080.00 | -3.650 | 78.4851 | 82.9086 | 170.147 | Flowline_Gutter |
| 0+080.00 | -3.000 | 78.0059 | 83.3478 | 169.736 | ETW_SubBase |
| 0+080.00 | -3.000 | 78.0059 | 83.3478 | 170.186 | ETW |
| 0+080.00 | -3.000 | 78.0059 | 83.3478 | 170.186 | Flange |

| | | | | | |
|----------|-------|---------|---------|---------|-----------------|
| 0+080.00 | 4.856 | 72.2148 | 88.6565 | 169.540 | ETW_SubBase |
| 0+080.00 | 4.856 | 72.2148 | 88.6565 | 169.990 | ETW |
| 0+080.00 | 4.856 | 72.2148 | 88.6565 | 169.990 | Flange |
| 0+080.00 | 5.506 | 71.7356 | 89.0958 | 169.951 | Flowline_Gutter |
| 0+080.00 | 5.548 | 71.7049 | 89.1239 | 170.701 | Top_Curb |
| 0+080.00 | 6.048 | 71.3363 | 89.4618 | 170.701 | Back_Curb |
| 0+080.00 | 7.047 | 70.5999 | 90.1369 | 169.991 | EPS_Sub |
| 0+080.00 | 7.048 | 70.5991 | 90.1375 | 170.661 | EPS |
| 0+080.00 | 7.048 | 70.5991 | 90.1375 | 170.661 | Hinge_Cut |
| 0+080.00 | 7.048 | 70.5991 | 90.1375 | 170.661 | Ditch_In |
| 0+080.00 | 7.048 | 70.5991 | 90.1375 | 170.661 | Ditch_Out |
| 0+080.00 | 9.798 | 68.5721 | 91.9957 | 176.160 | Daylight_Cut |
| 0+080.00 | 9.798 | 68.5721 | 91.9957 | 176.160 | Daylight |

CHAINAGE 0+100.49

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+100.00 | -5.783 | 91.8565 | 99.9554 | 170.316 | Daylight |
| 0+100.00 | -5.783 | 91.8565 | 99.9554 | 170.316 | Daylight_Cut |
| 0+100.00 | -5.192 | 91.3090 | 100.1787 | 169.133 | Ditch_In |
| 0+100.00 | -5.192 | 91.3090 | 100.1787 | 169.133 | EPS |
| 0+100.00 | -5.192 | 91.3090 | 100.1787 | 169.133 | Hinge_Cut |
| 0+100.00 | -5.192 | 91.3090 | 100.1787 | 169.133 | Ditch_Out |
| 0+100.00 | -5.191 | 91.3081 | 100.1791 | 168.463 | EPS_Sub |
| 0+100.00 | -4.192 | 90.3831 | 100.5565 | 169.173 | Back_Curb |
| 0+100.00 | -3.692 | 89.9201 | 100.7454 | 169.173 | Top_Curb |
| 0+100.00 | -3.650 | 89.8815 | 100.7611 | 168.423 | Flowline_Gutter |
| 0+100.00 | -3.000 | 89.2797 | 101.0067 | 168.012 | ETW_SubBase |
| 0+100.00 | -3.000 | 89.2797 | 101.0067 | 168.462 | Flange |

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+100.00 | -3.000 | 89.2797 | 101.0067 | 168.462 | ETW |
| 0+100.00 | 4.520 | 82.3169 | 103.8473 | 167.824 | ETW_SubBase |
| 0+100.00 | 4.520 | 82.3169 | 103.8473 | 168.274 | ETW |
| 0+100.00 | 4.520 | 82.3169 | 103.8473 | 168.274 | Flange |
| 0+100.00 | 5.170 | 81.7150 | 104.0929 | 168.235 | Flowline_Gutter |
| 0+100.00 | 5.212 | 81.6764 | 104.1086 | 168.985 | Top_Curb |
| 0+100.00 | 5.712 | 81.2135 | 104.2975 | 168.985 | Back_Curb |
| 0+100.00 | 6.711 | 80.2885 | 104.6749 | 168.275 | EPS_Sub |
| 0+100.00 | 6.712 | 80.2875 | 104.6753 | 168.945 | Hinge_Cut |
| 0+100.00 | 6.712 | 80.2875 | 104.6753 | 168.945 | Ditch_Out |
| 0+100.00 | 6.712 | 80.2875 | 104.6753 | 168.945 | Ditch_In |
| 0+100.00 | 6.712 | 80.2875 | 104.6753 | 168.945 | EPS |
| 0+100.00 | 10.019 | 77.2256 | 105.9245 | 175.559 | Daylight_Cut |
| 0+100.00 | 10.019 | 77.2256 | 105.9245 | 175.559 | Daylight |

CHAINAGE 0+120.49

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+120.00 | -8.727 | 99.6125 | 120.7397 | 163.873 | Daylight_Fill |
| 0+120.00 | -8.727 | 99.6125 | 120.7397 | 163.873 | Daylight |
| 0+120.00 | -5.191 | 96.0922 | 121.0758 | 167.409 | Hinge_Fill |
| 0+120.00 | -5.191 | 96.0922 | 121.0758 | 167.409 | Hinge |
| 0+120.00 | -5.191 | 96.0922 | 121.0758 | 167.409 | EPS |
| 0+120.00 | -5.190 | 96.0912 | 121.0759 | 166.739 | EPS_Sub |
| 0+120.00 | -4.191 | 95.0968 | 121.1709 | 167.449 | Back_Curb |
| 0+120.00 | -3.691 | 94.5990 | 121.2184 | 167.449 | Top_Curb |
| 0+120.00 | -3.649 | 94.5575 | 121.2224 | 166.699 | Flowline_Gutter |
| 0+120.00 | -2.999 | 93.9105 | 121.2842 | 166.288 | ETW_SubBase |
| 0+120.00 | -2.999 | 93.9105 | 121.2842 | 166.738 | ETW |

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+120.00 | -2.999 | 93.9105 | 121.2842 | 166.738 | Flange |
| 0+120.00 | 4.622 | 86.3232 | 122.0086 | 166.098 | ETW_SubBase |
| 0+120.00 | 4.622 | 86.3232 | 122.0086 | 166.548 | Flange |
| 0+120.00 | 4.622 | 86.3232 | 122.0086 | 166.548 | ETW |
| 0+120.00 | 5.272 | 85.6762 | 122.0704 | 166.509 | Flowline_Gutter |
| 0+120.00 | 5.314 | 85.6347 | 122.0744 | 167.259 | Top_Curb |
| 0+120.00 | 5.814 | 85.1369 | 122.1219 | 167.259 | Back_Curb |
| 0+120.00 | 6.813 | 84.1425 | 122.2169 | 166.549 | EPS_Sub |
| 0+120.00 | 6.814 | 84.1415 | 122.2170 | 167.219 | EPS |
| 0+120.00 | 6.814 | 84.1415 | 122.2170 | 167.219 | Ditch_Out |
| 0+120.00 | 6.814 | 84.1415 | 122.2170 | 167.219 | Hinge_Cut |
| 0+120.00 | 6.814 | 84.1415 | 122.2170 | 167.219 | Ditch_In |
| 0+120.00 | 8.699 | 82.2651 | 122.3961 | 170.988 | Daylight |
| 0+120.00 | 8.699 | 82.2651 | 122.3961 | 170.988 | Daylight_Cut |

CHAINAGE 0+140.49

| | | | | | |
|----------|---------|----------|----------|---------|-----------------|
| 0+140.00 | -10.254 | 102.0946 | 141.2345 | 160.623 | Daylight |
| 0+140.00 | -10.254 | 102.0946 | 141.2345 | 160.623 | Daylight_Fill |
| 0+140.00 | -5.192 | 97.0350 | 141.3875 | 165.685 | EPS |
| 0+140.00 | -5.192 | 97.0350 | 141.3875 | 165.685 | Hinge |
| 0+140.00 | -5.192 | 97.0350 | 141.3875 | 165.685 | Hinge_Fill |
| 0+140.00 | -5.191 | 97.0340 | 141.3875 | 165.015 | EPS_Sub |
| 0+140.00 | -4.192 | 96.0355 | 141.4177 | 165.725 | Back_Curb |
| 0+140.00 | -3.692 | 95.5357 | 141.4328 | 165.725 | Top_Curb |
| 0+140.00 | -3.650 | 95.4940 | 141.4341 | 164.975 | Flowline_Gutter |
| 0+140.00 | -3.000 | 94.8443 | 141.4537 | 164.564 | ETW_SubBase |
| 0+140.00 | -3.000 | 94.8443 | 141.4537 | 165.014 | Flange |

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+140.00 | -3.000 | 94.8443 | 141.4537 | 165.014 | ETW |
| 0+140.00 | 3.000 | 88.8471 | 141.6350 | 164.414 | ETW_SubBase |
| 0+140.00 | 3.000 | 88.8471 | 141.6350 | 164.864 | ETW |
| 0+140.00 | 3.000 | 88.8471 | 141.6350 | 164.864 | Flange |
| 0+140.00 | 3.650 | 88.1974 | 141.6547 | 164.825 | Flowline_Gutter |
| 0+140.00 | 3.692 | 88.1557 | 141.6559 | 165.575 | Top_Curb |
| 0+140.00 | 4.192 | 87.6559 | 141.6710 | 165.575 | Back_Curb |
| 0+140.00 | 5.191 | 86.6574 | 141.7012 | 164.865 | EPS_Sub |
| 0+140.00 | 5.192 | 86.6564 | 141.7013 | 165.535 | Ditch_In |
| 0+140.00 | 5.192 | 86.6564 | 141.7013 | 165.535 | Hinge_Cut |
| 0+140.00 | 5.192 | 86.6564 | 141.7013 | 165.535 | Ditch_Out |
| 0+140.00 | 5.192 | 86.6564 | 141.7013 | 165.535 | EPS |
| 0+140.00 | 5.309 | 86.5390 | 141.7048 | 165.770 | Daylight |
| 0+140.00 | 5.309 | 86.5390 | 141.7048 | 165.770 | Daylight_Cut |

CHAINAGE 0+160.49

| | | | | | |
|----------|---------|----------|----------|---------|---------------|
| 0+160.00 | -13.240 | 105.6839 | 161.1352 | 155.913 | Daylight_Fill |
| 0+160.00 | -13.240 | 105.6839 | 161.1352 | 155.913 | Daylight |
| 0+160.00 | -5.191 | 97.6384 | 161.3784 | 163.291 | EPS_Sub |
| 0+160.00 | 3.000 | 89.4514 | 161.6259 | 162.690 | ETW_SubBase |
| 0+160.00 | 3.000 | 89.4514 | 161.6259 | 163.140 | ETW |
| 0+160.00 | 3.000 | 89.4514 | 161.6259 | 163.140 | Flange |
| 0+160.00 | 4.192 | 88.2603 | 161.6619 | 163.851 | Back_Curb |
| 0+160.00 | 5.192 | 87.2607 | 161.6921 | 163.811 | Hinge_Fill |
| 0+160.00 | 5.192 | 87.2607 | 161.6921 | 163.811 | EPS |
| 0+160.00 | 5.192 | 87.2607 | 161.6921 | 163.811 | Hinge |
| 0+160.00 | -5.192 | 97.6394 | 161.3784 | 163.961 | EPS |

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+160.00 | -5.192 | 97.6394 | 161.3784 | 163.961 | Hinge_Fill |
| 0+160.00 | -5.192 | 97.6394 | 161.3784 | 163.961 | Hinge |
| 0+160.00 | -4.192 | 96.6398 | 161.4086 | 164.001 | Back_Curb |
| 0+160.00 | -3.692 | 96.1401 | 161.4237 | 164.001 | Top_Curb |
| 0+160.00 | -3.650 | 96.0984 | 161.4250 | 163.251 | Flowline_Gutter |
| 0+160.00 | -3.000 | 95.4487 | 161.4446 | 162.840 | ETW_SubBase |
| 0+160.00 | -3.000 | 95.4487 | 161.4446 | 163.290 | ETW |
| 0+160.00 | -3.000 | 95.4487 | 161.4446 | 163.290 | Flange |
| 0+160.00 | 3.650 | 88.8017 | 161.6455 | 163.101 | Flowline_Gutter |
| 0+160.00 | 3.692 | 88.7600 | 161.6468 | 163.851 | Top_Curb |
| 0+160.00 | 5.191 | 87.2617 | 161.6921 | 163.141 | EPS_Sub |
| 0+160.00 | 5.362 | 87.0906 | 161.6973 | 163.641 | Daylight_Fill |
| 0+160.00 | 5.362 | 87.0906 | 161.6973 | 163.641 | Daylight |

CHAINAGE 0+180.49

| | | | | | |
|----------|---------|----------|----------|---------|-----------------|
| 0+180.00 | -10.640 | 103.6900 | 181.2046 | 156.789 | Daylight |
| 0+180.00 | -10.640 | 103.6900 | 181.2046 | 156.789 | Daylight_Fill |
| 0+180.00 | -5.191 | 98.2427 | 181.3693 | 161.567 | EPS_Sub |
| 0+180.00 | 3.000 | 90.0558 | 181.6168 | 160.966 | ETW_SubBase |
| 0+180.00 | 3.000 | 90.0558 | 181.6168 | 161.416 | ETW |
| 0+180.00 | 3.000 | 90.0558 | 181.6168 | 161.416 | Flange |
| 0+180.00 | 3.650 | 89.4061 | 181.6364 | 161.377 | Flowline_Gutter |
| 0+180.00 | 3.692 | 89.3644 | 181.6377 | 162.127 | Top_Curb |
| 0+180.00 | 4.192 | 88.8646 | 181.6528 | 162.127 | Back_Curb |
| 0+180.00 | 5.192 | 87.8651 | 181.6830 | 162.087 | EPS |
| 0+180.00 | 5.192 | 87.8651 | 181.6830 | 162.087 | Ditch_In |
| 0+180.00 | 5.192 | 87.8651 | 181.6830 | 162.087 | Ditch_Out |

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|----------|--------|---------|----------|---------|-----------------|
| 0+180.00 | 5.192 | 87.8651 | 181.6830 | 162.087 | Hinge_Cut |
| 0+180.00 | -5.192 | 98.2437 | 181.3692 | 162.237 | EPS |
| 0+180.00 | -5.192 | 98.2437 | 181.3692 | 162.237 | Hinge_Fill |
| 0+180.00 | -5.192 | 98.2437 | 181.3692 | 162.237 | Hinge |
| 0+180.00 | -4.192 | 97.2442 | 181.3995 | 162.277 | Back_Curb |
| 0+180.00 | -3.692 | 96.7444 | 181.4146 | 162.277 | Top_Curb |
| 0+180.00 | -3.650 | 96.7027 | 181.4158 | 161.527 | Flowline_Gutter |
| 0+180.00 | -3.000 | 96.0530 | 181.4355 | 161.116 | ETW_SubBase |
| 0+180.00 | -3.000 | 96.0530 | 181.4355 | 161.566 | ETW |
| 0+180.00 | -3.000 | 96.0530 | 181.4355 | 161.566 | Flange |
| 0+180.00 | 5.191 | 87.8661 | 181.6830 | 161.417 | EPS_Sub |
| 0+180.00 | 6.665 | 86.3929 | 181.7275 | 165.033 | Daylight_Cut |
| 0+180.00 | 6.665 | 86.3929 | 181.7275 | 165.033 | Daylight |

CHAINAGE 0+200.49

| | | | | | |
|----------|--------|---------|----------|---------|-----------------|
| 0+200.00 | -5.263 | 98.9197 | 201.3579 | 160.657 | Daylight |
| 0+200.00 | -5.263 | 98.9197 | 201.3579 | 160.657 | Daylight_Cut |
| 0+200.00 | -5.191 | 98.8471 | 201.3601 | 159.843 | EPS_Sub |
| 0+200.00 | -4.192 | 97.8486 | 201.3903 | 160.553 | Back_Curb |
| 0+200.00 | -3.692 | 97.3488 | 201.4054 | 160.553 | Top_Curb |
| 0+200.00 | -3.650 | 97.3071 | 201.4067 | 159.803 | Flowline_Gutter |
| 0+200.00 | 3.000 | 90.6601 | 201.6076 | 159.242 | ETW_SubBase |
| 0+200.00 | 3.000 | 90.6601 | 201.6076 | 159.692 | ETW |
| 0+200.00 | 3.000 | 90.6601 | 201.6076 | 159.692 | Flange |
| 0+200.00 | 3.650 | 90.0104 | 201.6273 | 159.653 | Flowline_Gutter |
| 0+200.00 | 3.692 | 89.9688 | 201.6285 | 160.403 | Top_Curb |
| 0+200.00 | 4.192 | 89.4690 | 201.6436 | 160.403 | Back_Curb |

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|----------|--------|---------|----------|---------|--------------|
| 0+200.00 | 5.192 | 88.4694 | 201.6739 | 160.363 | Hinge_Cut |
| 0+200.00 | 5.192 | 88.4694 | 201.6739 | 160.363 | Ditch_Out |
| 0+200.00 | 5.192 | 88.4694 | 201.6739 | 160.363 | Ditch_In |
| 0+200.00 | 5.192 | 88.4694 | 201.6739 | 160.363 | EPS |
| 0+200.00 | 8.555 | 85.1078 | 201.7755 | 167.090 | Daylight_Cut |
| 0+200.00 | 8.555 | 85.1078 | 201.7755 | 167.090 | Daylight |
| 0+200.00 | -5.192 | 98.8481 | 201.3601 | 160.513 | Hinge_Cut |
| 0+200.00 | -5.192 | 98.8481 | 201.3601 | 160.513 | Ditch_In |
| 0+200.00 | -5.192 | 98.8481 | 201.3601 | 160.513 | Ditch_Out |
| 0+200.00 | -5.192 | 98.8481 | 201.3601 | 160.513 | EPS |
| 0+200.00 | -3.000 | 96.6574 | 201.4263 | 159.392 | ETW_SubBase |
| 0+200.00 | -3.000 | 96.6574 | 201.4263 | 159.842 | ETW |
| 0+200.00 | -3.000 | 96.6574 | 201.4263 | 159.842 | Flange |
| 0+200.00 | 5.191 | 88.4704 | 201.6738 | 159.693 | EPS_Sub |

CHAINAGE 0+220.49

| | | | | | |
|----------|--------|---------|----------|---------|--------------|
| 0+220.00 | 5.191 | 89.4005 | 221.9785 | 158.760 | Ditch_Out |
| 0+220.00 | 5.191 | 89.4005 | 221.9785 | 158.760 | EPS |
| 0+220.00 | 10.248 | 84.3658 | 222.4517 | 168.874 | Daylight |
| 0+220.00 | 10.248 | 84.3658 | 222.4517 | 168.874 | Daylight_Cut |

CHAINAGE 0+240.49

| | | | | | |
|----------|--------|----------|----------|---------|-----------------|
| 0+240.49 | -5.712 | 104.4071 | 239.2020 | 158.022 | Back_Curb |
| 0+240.49 | -5.212 | 103.9453 | 239.3936 | 158.022 | Top_Curb |
| 0+240.49 | -5.170 | 103.9068 | 239.4096 | 157.272 | Flowline_Gutter |
| 0+240.49 | -4.520 | 103.3064 | 239.6587 | 156.861 | ETW_SubBase |
| 0+240.49 | -4.520 | 103.3064 | 239.6587 | 157.311 | ETW |

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|----------|--------|----------|----------|---------|-----------------|
| 0+240.49 | -4.520 | 103.3064 | 239.6587 | 157.311 | Flange |
| 0+240.49 | 3.000 | 96.3606 | 242.5406 | 156.673 | ETW_SubBase |
| 0+240.49 | 3.000 | 96.3606 | 242.5406 | 157.123 | Flange |
| 0+240.49 | 3.000 | 96.3606 | 242.5406 | 157.123 | ETW |
| 0+240.49 | 3.650 | 95.7602 | 242.7897 | 157.084 | Flowline_Gutter |
| 0+240.49 | 3.692 | 95.7217 | 242.8056 | 157.834 | Top_Curb |
| 0+240.49 | 4.192 | 95.2598 | 242.9972 | 157.834 | Back_Curb |
| 0+240.49 | 5.191 | 94.3371 | 243.3801 | 157.124 | EPS_Sub |
| 0+240.49 | 5.192 | 94.3362 | 243.3805 | 157.794 | Hinge_Cut |
| 0+240.49 | 5.192 | 94.3362 | 243.3805 | 157.794 | EPS |
| 0+240.49 | 5.192 | 94.3362 | 243.3805 | 157.794 | Ditch_In |
| 0+240.49 | 5.192 | 94.3362 | 243.3805 | 157.794 | Ditch_Out |
| 0+240.49 | 12.094 | 87.9609 | 246.0256 | 171.599 | Daylight |
| 0+240.49 | 12.094 | 87.9609 | 246.0256 | 171.599 | Daylight_Cut |
| 0+240.49 | -7.463 | 106.0245 | 238.5310 | 159.484 | Daylight |
| 0+240.49 | -7.463 | 106.0245 | 238.5310 | 159.484 | Daylight_Cut |
| 0+240.49 | -6.712 | 105.3308 | 238.8188 | 157.982 | Hinge_Cut |
| 0+240.49 | -6.712 | 105.3308 | 238.8188 | 157.982 | Ditch_Out |
| 0+240.49 | -6.712 | 105.3308 | 238.8188 | 157.982 | EPS |
| 0+240.49 | -6.712 | 105.3308 | 238.8188 | 157.982 | Ditch_In |
| 0+240.49 | -6.711 | 105.3299 | 238.8191 | 157.312 | EPS_Sub |

CHAINAGE 0+260.49

| | | | | | |
|----------|--------|----------|----------|---------|--------------|
| 0+260.00 | -7.866 | 115.3705 | 253.4351 | 159.976 | Daylight_Cut |
| 0+260.00 | -7.866 | 115.3705 | 253.4351 | 159.976 | Daylight |
| 0+260.00 | -6.475 | 114.2541 | 254.2644 | 157.194 | Hinge_Cut |
| 0+260.00 | -6.475 | 114.2541 | 254.2644 | 157.194 | Ditch_Out |

| | | | | | |
|----------|--------|----------|----------|---------|-----------------|
| 0+260.00 | -6.475 | 114.2541 | 254.2644 | 157.194 | Ditch_In |
| 0+260.00 | -6.475 | 114.2541 | 254.2644 | 157.194 | EPS |
| 0+260.00 | -6.474 | 114.2533 | 254.2650 | 156.524 | EPS_Sub |
| 0+260.00 | -5.475 | 113.4513 | 254.8607 | 157.234 | Back_Curb |
| 0+260.00 | -4.975 | 113.0499 | 255.1589 | 157.234 | Top_Curb |
| 0+260.00 | -4.934 | 113.0164 | 255.1837 | 156.484 | Flowline_Gutter |
| 0+260.00 | -4.284 | 112.4947 | 255.5713 | 156.073 | ETW_SubBase |
| 0+260.00 | -4.284 | 112.4947 | 255.5713 | 156.523 | ETW |
| 0+260.00 | -4.284 | 112.4947 | 255.5713 | 156.523 | Flange |
| 0+260.00 | 3.000 | 106.6474 | 259.9147 | 155.891 | ETW_SubBase |
| 0+260.00 | 3.000 | 106.6474 | 259.9147 | 156.341 | ETW |
| 0+260.00 | 3.000 | 106.6474 | 259.9147 | 156.341 | Flange |
| 0+260.00 | 3.650 | 106.1256 | 260.3023 | 156.302 | Flowline_Gutter |
| 0+260.00 | 3.692 | 106.0921 | 260.3272 | 157.052 | Top_Curb |
| 0+260.00 | 4.192 | 105.6907 | 260.6253 | 157.052 | Back_Curb |
| 0+260.00 | 5.191 | 104.8887 | 261.2210 | 156.342 | EPS_Sub |
| 0+260.00 | 5.192 | 104.8879 | 261.2216 | 157.012 | Hinge_Cut |
| 0+260.00 | 5.192 | 104.8879 | 261.2216 | 157.012 | Ditch_In |
| 0+260.00 | 5.192 | 104.8879 | 261.2216 | 157.012 | Ditch_Out |
| 0+260.00 | 5.192 | 104.8879 | 261.2216 | 157.012 | EPS |
| 0+260.00 | 11.445 | 99.8685 | 264.9501 | 169.518 | Daylight |
| 0+260.00 | 11.445 | 99.8685 | 264.9501 | 169.518 | Daylight_Cut |

CHAINAGE 0+280.49

| | | | | | |
|----------|--------|----------|----------|---------|--------------|
| 0+280.00 | -5.592 | 125.8215 | 270.3167 | 157.160 | Daylight |
| 0+280.00 | -5.592 | 125.8215 | 270.3167 | 157.160 | Daylight_Cut |
| 0+280.00 | -5.192 | 125.5094 | 270.5669 | 156.360 | Ditch_In |

| | | | | | |
|----------|--------|----------|----------|---------|-----------------|
| 0+280.00 | -5.192 | 125.5094 | 270.5669 | 156.360 | EPS |
| 0+280.00 | -5.192 | 125.5094 | 270.5669 | 156.360 | Hinge_Cut |
| 0+280.00 | -5.192 | 125.5094 | 270.5669 | 156.360 | Ditch_Out |
| 0+280.00 | -5.191 | 125.5086 | 270.5675 | 155.690 | EPS_Sub |
| 0+280.00 | -3.692 | 124.3391 | 271.5051 | 156.400 | Top_Curb |
| 0+280.00 | -3.650 | 124.3065 | 271.5312 | 155.650 | Flowline_Gutter |
| 0+280.00 | -3.000 | 123.7994 | 271.9378 | 155.239 | ETW_SubBase |
| 0+280.00 | -3.000 | 123.7994 | 271.9378 | 155.689 | ETW |
| 0+280.00 | -3.000 | 123.7994 | 271.9378 | 155.689 | Flange |
| 0+280.00 | 3.000 | 119.1179 | 275.6906 | 155.089 | ETW_SubBase |
| 0+280.00 | 3.000 | 119.1179 | 275.6906 | 155.539 | Flange |
| 0+280.00 | 3.000 | 119.1179 | 275.6906 | 155.539 | ETW |
| 0+280.00 | 3.692 | 118.5782 | 276.1233 | 156.250 | Top_Curb |
| 0+280.00 | 5.191 | 117.4086 | 277.0608 | 155.540 | EPS_Sub |
| 0+280.00 | -4.192 | 124.7292 | 271.1924 | 156.400 | Back_Curb |
| 0+280.00 | 3.650 | 118.6107 | 276.0972 | 155.500 | Flowline_Gutter |
| 0+280.00 | 4.192 | 118.1881 | 276.4360 | 156.250 | Back_Curb |
| 0+280.00 | 5.192 | 117.4078 | 277.0615 | 156.210 | EPS |
| 0+280.00 | 5.192 | 117.4078 | 277.0615 | 156.210 | Hinge_Cut |
| 0+280.00 | 5.192 | 117.4078 | 277.0615 | 156.210 | Ditch_In |
| 0+280.00 | 5.192 | 117.4078 | 277.0615 | 156.210 | Ditch_Out |
| 0+280.00 | 9.959 | 113.6884 | 280.0431 | 165.744 | Daylight_Cut |
| 0+280.00 | 9.959 | 113.6884 | 280.0431 | 165.744 | Daylight |

CHAINAGE 0+300.49

| | | | | | |
|----------|--------|----------|----------|---------|---------------|
| 0+300.00 | -8.489 | 140.5915 | 284.1095 | 152.261 | Daylight_Fill |
| 0+300.00 | -8.489 | 140.5915 | 284.1095 | 152.261 | Daylight |

| | | | | | |
|----------|--------|----------|----------|---------|-----------------|
| 0+300.00 | -5.192 | 138.0189 | 286.1718 | 155.558 | Hinge_Fill |
| 0+300.00 | -5.192 | 138.0189 | 286.1718 | 155.558 | EPS |
| 0+300.00 | -5.192 | 138.0189 | 286.1718 | 155.558 | Hinge |
| 0+300.00 | -5.191 | 138.0181 | 286.1724 | 154.888 | EPS_Sub |
| 0+300.00 | -4.192 | 137.2387 | 286.7973 | 155.598 | Back_Curb |
| 0+300.00 | -3.692 | 136.8486 | 287.1100 | 155.598 | Top_Curb |
| 0+300.00 | -3.650 | 136.8160 | 287.1361 | 154.848 | Flowline_Gutter |
| 0+300.00 | -3.000 | 136.3089 | 287.5427 | 154.437 | ETW_SubBase |
| 0+300.00 | -3.000 | 136.3089 | 287.5427 | 154.887 | ETW |
| 0+300.00 | -3.000 | 136.3089 | 287.5427 | 154.887 | Flange |
| 0+300.00 | 3.000 | 131.6274 | 291.2955 | 154.287 | ETW_SubBase |
| 0+300.00 | 3.000 | 131.6274 | 291.2955 | 154.737 | Flange |
| 0+300.00 | 3.000 | 131.6274 | 291.2955 | 154.737 | ETW |
| 0+300.00 | 3.650 | 131.1202 | 291.7021 | 154.698 | Flowline_Gutter |
| 0+300.00 | 3.692 | 131.0877 | 291.7281 | 155.448 | Top_Curb |
| 0+300.00 | 4.192 | 130.6976 | 292.0409 | 155.448 | Back_Curb |
| 0+300.00 | 5.191 | 129.9181 | 292.6657 | 154.738 | EPS_Sub |
| 0+300.00 | 5.192 | 129.9173 | 292.6664 | 155.408 | Hinge_Cut |
| 0+300.00 | 5.192 | 129.9173 | 292.6664 | 155.408 | Ditch_In |
| 0+300.00 | 5.192 | 129.9173 | 292.6664 | 155.408 | Ditch_Out |
| 0+300.00 | 5.192 | 129.9173 | 292.6664 | 155.408 | EPS |
| 0+300.00 | 7.321 | 128.2558 | 293.9983 | 159.667 | Daylight |
| 0+300.00 | 7.321 | 128.2558 | 293.9983 | 159.667 | Daylight_Cut |

CHAINAGE 0+320.49

| | | | | | |
|----------|---------|----------|----------|---------|---------------|
| 0+320.00 | -15.269 | 158.3915 | 295.4733 | 144.679 | Daylight_Fill |
| 0+320.00 | -15.269 | 158.3915 | 295.4733 | 144.679 | Daylight |

| | | | | | |
|----------|--------|----------|----------|---------|-----------------|
| 0+320.00 | -5.192 | 150.5284 | 301.7767 | 154.756 | Hinge_Fill |
| 0+320.00 | -5.192 | 150.5284 | 301.7767 | 154.756 | Hinge |
| 0+320.00 | -5.192 | 150.5284 | 301.7767 | 154.756 | EPS |
| 0+320.00 | -5.191 | 150.5276 | 301.7773 | 154.086 | EPS_Sub |
| 0+320.00 | -4.192 | 149.7482 | 302.4022 | 154.796 | Back_Curb |
| 0+320.00 | -3.692 | 149.3581 | 302.7149 | 154.796 | Top_Curb |
| 0+320.00 | -3.650 | 149.3255 | 302.7410 | 154.046 | Flowline_Gutter |
| 0+320.00 | -3.000 | 148.8184 | 303.1475 | 153.635 | ETW_SubBase |
| 0+320.00 | -3.000 | 148.8184 | 303.1475 | 154.085 | Flange |
| 0+320.00 | -3.000 | 148.8184 | 303.1475 | 154.085 | ETW |
| 0+320.00 | 3.000 | 144.1369 | 306.9004 | 153.485 | ETW_SubBase |
| 0+320.00 | 3.000 | 144.1369 | 306.9004 | 153.935 | ETW |
| 0+320.00 | 3.000 | 144.1369 | 306.9004 | 153.935 | Flange |
| 0+320.00 | 3.650 | 143.6297 | 307.3070 | 153.896 | Flowline_Gutter |
| 0+320.00 | 3.692 | 143.5972 | 307.3330 | 154.646 | Top_Curb |
| 0+320.00 | 4.192 | 143.2071 | 307.6458 | 154.646 | Back_Curb |
| 0+320.00 | 5.191 | 142.4276 | 308.2706 | 153.936 | EPS_Sub |
| 0+320.00 | 5.192 | 142.4268 | 308.2712 | 154.606 | Hinge_Cut |
| 0+320.00 | 5.192 | 142.4268 | 308.2712 | 154.606 | Ditch_Out |
| 0+320.00 | 5.192 | 142.4268 | 308.2712 | 154.606 | Ditch_In |
| 0+320.00 | 5.192 | 142.4268 | 308.2712 | 154.606 | EPS |
| 0+320.00 | 8.043 | 140.2024 | 310.0545 | 160.308 | Daylight |
| 0+320.00 | 8.043 | 140.2024 | 310.0545 | 160.308 | Daylight_Cut |

6.4. VERTIKALNI TOK TRASE

Profile PVI Station & Curve Report

Client:

Client

Client Company

Address 1

Date: 16.6.2023. 22:55:29

Prepared by:

Preparer

Your Company Name

123 Main Street

Vertical Alignment: NIVELETA

Description:

Station Range: Start: 0+008.00, End: 32+050.00

| PVI | Station | Grade Out | Curve Length |
|---|----------|-----------|--------------|
| 0.00 | 0+220.50 | -4.01% | 22.906m |
| Vertical Curve Information:(sag curve) <hr/> PVC Station: 0+209.07 Elevation: 158.986m PVI Station: 0+220.50 Elevation: 158.000m PVT Station: 0+231.97 Elevation: 157.540m Low Point: 0+231.97 Elevation: 157.540m Grade in: -8.62% Grade out: -4.01% Change: 4.61% K: Curve Length: 22.906m Headlight Distance: | | | |
| 1.00 | 0+320.50 | | |

7. LITERATURA

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