

# **Põlevkiviaheraine kasutusvõimaluste uurimine tee muldkeha ehitamisel**

**Lõpparuanne**

**AS Teede Tehnokeskus**

**2012-7**



**MAANTEEAMET**

**Tallinn 2012**



# **Põlevkiviaheraine kasutusvõimaluste uurimine tee muldkeha ehitamisel**

## **Lõpparuanne**

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**Tallinn, 2012**

## Eessõna

Käesoleva uurimistöö on tellinud Maanteeamet. Uurimistöö eesmärgiks on uurida põlevkiviaheraine kasutusvõimalusi muldkeha ehitamisel ning vastava juhise koostamine.

Uurimistöö teostati aastatel 2009-2012 ja see jagati neljaks etapiks. Aastatel 2009-2011 anti välja vahearuanDED (kokku 3 tk) ning 2012. aastal uurimistöö lõpparuanne, mis sisaldab ka põlevkiviaherainest muldkeha ehitamise juhise. Järgnevalt on kirjeldatud uurimistöö etappide sisu:

### **I etapp – 2009. aasta**

- muldkeha materjalide uuringud – liiva ja põlevkiviaheraine omadused
- optimaalse liiva ja aheraine vahekorra määramine
- muldkeha kandevõime mõõtmised
- muldkeha ehitamise ülevaatus
- ülevaade kasutatud materjalidest
- ülevaade valitud muldkeha ehitamise tehnoloogiast
- vahearuanne

### **II etapp – 2010. aasta**

- valmis teekonstruktsiooni jälgimine
- vaatlusreeperite paigaldus ehitatava teelõigu põhimaantee osale ja mõõdistamine
- andmed muldkeha vajumise jälgimise kohta
- andmed teelõigu põhimaantee osa kandevõime mõõtmiste kohta
- vahearuanne

### **III etapp – 2011. aasta**

- valmis teekonstruktsiooni jälgimine
- vaatlusreeperite mõõdistamine
- andmed muldkeha vajumise jälgimise kohta
- andmed kandevõime mõõtmiste kohta
- vahearuanne

**IV etapp – 2012. aasta**

- valmis teekonstruktsiooni jälgimine
- vaatlusreeperite mõõdistamine
- andmed muldkeha vajumise jälgimise kohta
- andmed kandevõime mõõtmiste kohta
- kokkuvõtted eelnevatel aastatel tehtud mõõtmiste ja katsetamiste kohta
- lõpparuanne
- põlevkiviaherainest muldkeha ehitamise juhised

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## Sissejuhatus

2010. aasta suvel lõpetati maanteel nr 1 Tallinn-Narva Kukuruse-Jõhvi teelõigu remondi- ja ehitustööd ning teelõigu pidulik avamine toimus 31.augustil 2010. aastal.

Uuritava teelõigu esimesed teekonstruktsiooni kandevõime mõõtmised tehti 2010. aasta augustis-septembris peale teekatte valmimist. Lisaks sellele teostati ka maanteelõigu seisukorra visuaalne hindamine ning paigaldati vaatlusreeperid muldkeha võimaliku vajumise jälgimiseks.

Järgneval kahel aastal (2011-2012) mõõdeti uuritaval teelõigul teekonstruktsioon kandevõime kahel korral – kevadel peale muldkeha sulamist ning varasügisel. Ka vaatlusreeperite nivelleerimised tehti kahel korral, kuid erinevalt kandevõime mõõtmistele tehti seda talve lõpus, kui muldkeha polnud veel eeldatavalt sulama hakanud. Teistkordne nivelleerimine toimus sügisel. Lisaks eelnevale teostati kevadel ka maanteelõigu seisukorra visuaalne hindamine.

Käesolev lõpparuanne võtab kokku uurimistöö viimasel ja eelnevatel etappidel tehtud tööd.

## 1. Teekonstruktsiooni kandevõime mõõtmised

Teekonstruktsiooni kandevõime mõõtmised on teostatud langeva raskusega dünaamilise koormusseadmega Dynatest FWD-8002, mille 7 andurit registreerivad teekonstruktsiooni läbipainde kindla koormuse all. Kandevõime üldise elastsusmooduli arvutamiseks kasutatakse dünaamilise koormusseadme 0-anduri (langeva raskuse keskmises oleva anduri) lugemit, mille alusel on arvutatud katendi kevadine üldine elastsusmoodul. Lisaks 0-andurile mõõdab FWD-seade teekatendi deformatsioone veel kuues punktis – 0-andurist 300, 600, 750, 900, 1200 ja 1500 mm kaugusel. FWD mõõtmistulemuste alusel arvutatud vajumiskõvera põhjal on võimalik hinnata olemasolevat katendikonstruktsiooni ja selle erinevate kihtide ning aluspinnaste tugevusomadusi.

Lisaks üldisele elastsusmoodulile on teekonstruktsiooni kandevõime mõõtmistulemuste alusel võimalik välja arvutada vajumiskausi parameetrite SCI, BDI ja BCI väärtused.

- Pinna kõverustegur (SCI – *Surface Curvature Index*) – kirjeldab seotud kihtide väsimust, see arvutatakse FWD läbivajumisandurite D1 ja D2 lugemite põhjal ning iseloomustab ülemiste katendikihtide seisukorda;
- Aluse vigastatuse tegur (BDI – *Base Damage Index*) – kirjeldab aluse seisukorda, see arvutatakse FWD läbivajumisandurite D2 ja D3 lugemite põhjal;
- Aluse kõverustegur (BCI – *Base Curvature Index*) – kirjeldab muldkeha materjalide või aluspinnase seisukorda, see arvutatakse FWD läbivajumisandurite D6 ja D7 lugemite põhjal.

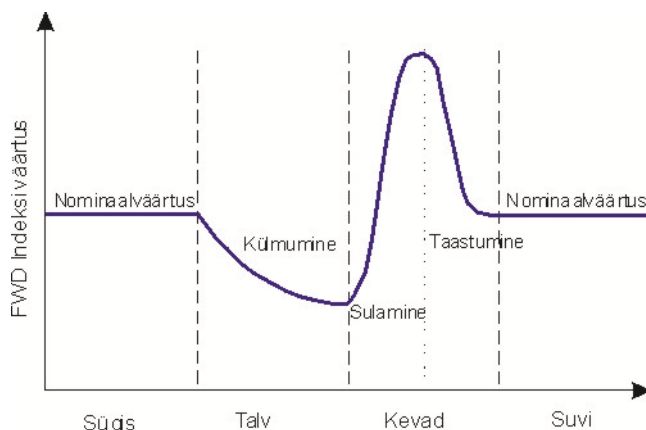
Sõltuvalt teekonstruktsiooni (katendiarvutuse põhjal) nõutavast minimaalsest elastsusmooduli väärtusest on arvutatud vajumikausi parameetrite piirväärtused.

Selleks, et hinnata teekonstruktsiooni erinevate kihtide omadusi, võrreldakse vajumikausi parameetrite tegelikke väärtusi ja piirväärtusi. Juhul, kui:

- arvutatud tegelik SCI väärtus on suurem, kui tema lubatud piirväärtus, siis on tõenäoliselt probleeme katendi ülemistes kihtides (kuni 30 cm sügavuseni);
- arvutatud tegelik BDI väärtus on suurem, kui tema lubatud piirväärtus, siis võib esineda probleeme teekonstruktsioonis 30-60 cm sügavusel;

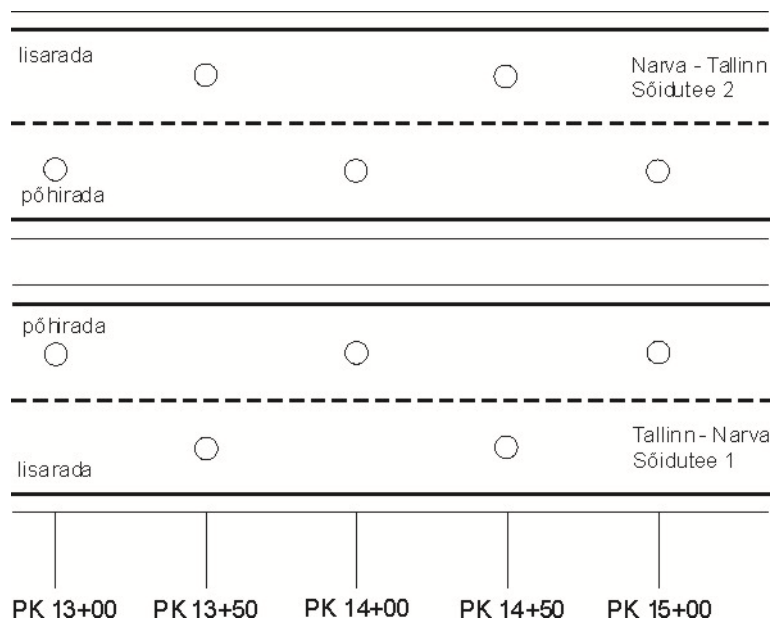
- arvutatud tegelik BCI väärtus on suurem, kui tema lubatud piirväärtus, siis on tõenäoliselt probleeme aluspinnastes (120-150 cm sügavusel).

Joonisel 1 on toodud vajumikausi parameetrite tüüpiline aastaringne muutumine.



Joonis 1. FWD vajumikausi parameetrite aastaringne muutumine.

Teekonstruktsiooni kandevõime mõõtmine teostati 17.05.2012.a. ja 20.09.2012.a. 100 m mõõtmisammuga põhimaantee mõlemal sõiduteel nii põhirajal kui ka lisarajal. Kandevõime mõõtmiskeem on toodud joonisel 2.



Joonis 2. Kandevõime mõõtmiskeem.

Vastavalt katendiarvutusele on minimaalne vajalik elastsusmoodul vaadeldaval teelõigul vahemikus 270-274 MPa. Teekonstruktsiooni kandevõimet mõõdeti eraldi

mõlemal maantee sõiduteel – põhirajal kokku 146 punktis ja lisarajal 94 punktis. Kuna kandevõimet iseloomustava  $E_{mod}$  väärtus arvutatakse mõõtmistulemuste põhjal kevadisele kõige nõrgemale tasemele, siis sügisel tehtud mõõtmistulemuste põhjal arvutatud elastsusmooduli võrdlemisel kevadise omaga pole eriti mõtet. Kui, siis vaid niivõrd, et jälgida kui hästi sügisesed mõõtmistulemused korreleeruvad kevadise omaga. Kandevõime võib muutuda pikema ajaperioodi jooksul, kuid paar aastat on liiga lühike periood, et võrdlust eelmise aasta tulemusega oleks mõtet välja tuua.

Katendikonstruktsioonis ja muldkehas toimuvaid protsesse saab paremini vaadelda võrreldes vajumikausi parameetreid erinevatel ajaperioodidel. Tabelis 1 on toodud kokkuvõtte BCI väärtustest viiel mõõtmisperioodil. Suhteliselt sarnased on 2010.a. sügise, 2011.a. kevade ning 2012.a. mõlema mõõtmisperioodi tulemused. Muldkeha seisukorda iseloomustava parameetri BCI väärtused oli enamasti piirväärtustest väiksemad. Kõikidest mõõtmisperioodidest oli kõige erinevamad tulemused 2011.a. sügisel, mil üle 60% mõõtmiskohtade BCI väärtus ületas lubatud piirväärtust ja seda nii põhi- kui ka lisarajal ning mõlemas sõidusuunas. 2010.a. sügisel, 2011.a. kevadel ning 2012.a. kevadel ja sügisel olid piirväärtustest suuremad numbrid pigem remondiobjekti algus- ja lõpupikettide alas, kuid 2011.a. sügisel jagunesid need suhteliselt ühtlasele kogu vaadeldavale teelõigule.

*Tabel 1. Lubatud BCI piirväärtust ületavate mõõtmiskohtade arv põhi- ja lisaradadel sõidusuundadel kaupa*

|            | Mõõtmis-punkte | Üle piirväärtuse | %     |            | Mõõtmis-punkte | Üle piirväärtuse | %     |
|------------|----------------|------------------|-------|------------|----------------|------------------|-------|
| PR1 2010   | 72             | 14               | 19,4% | PR2 2010   | 72             | 17               | 23,6% |
| PR1 2011-k | 72             | 11               | 15,3% | PR2 2011-k | 72             | 21               | 29,2% |
| PR1 2011-s | 72             | 46               | 63,9% | PR2 2011-s | 72             | 43               | 59,7% |
| PR1 2012-k | 72             | 7                | 9,7%  | PR2 2012-k | 72             | 14               | 19,4% |
| PR1 2012-s | 72             | 4                | 5,6%  | PR2 2012-s | 72             | 14               | 19,4% |
| LR1 2010   | 49             | 7                | 14,3% | LR2 2010   | 45             | 9                | 20,0% |
| LR1 2011-k | 49             | 13               | 26,5% | LR2 2011-k | 45             | 8                | 17,8% |
| LR1 2011-s | 49             | 35               | 71,4% | LR2 2011-s | 45             | 33               | 73,3% |
| LR1 2012-k | 49             | 6                | 12,2% | LR2 2012-k | 45             | 12               | 26,7% |
| LR1 2012-s | 49             | 6                | 12,2% | LR2 2012-s | 45             | 12               | 26,7% |

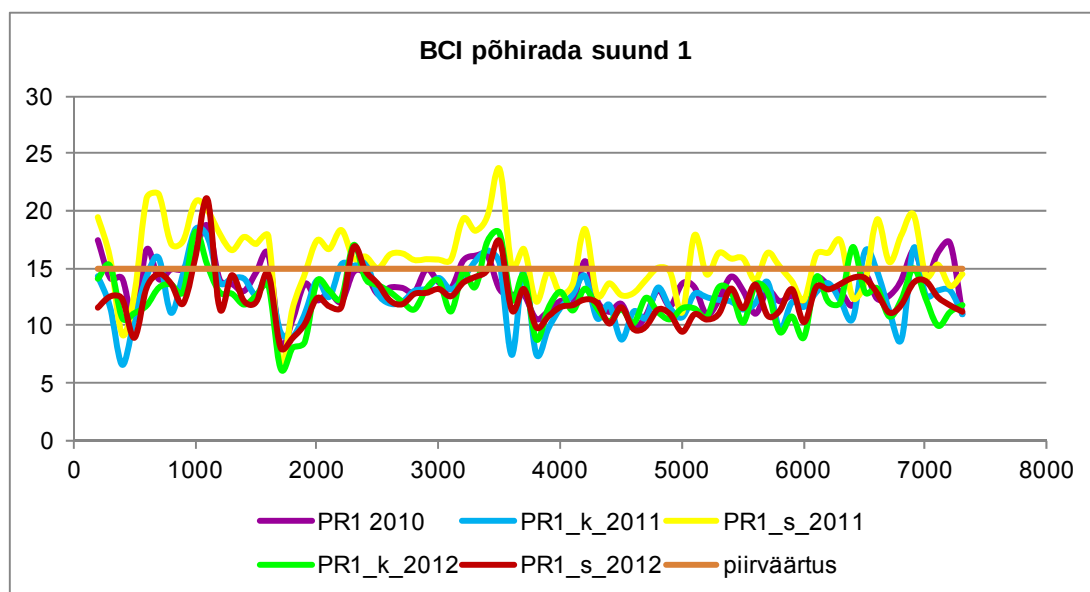
**Lühendite selgitus:**

PR1 2012-k – põhirada sõidutee 1 (suund Tallinn-Narva) 2012.a. kevad

LR2 2012-s – lisarada sõidutee 2 (suund Narva-Tallinn) 2012.a. sügis

Seoste leidmiseks ja järelduste tegemiseks on vaadeldav ajaperiood (sügis 2010 – sügis 2012) siiski liiga lühike.

Graafikul 2 on näidisedena toodud Tallinn-Narva suuna põhiraaja BCI väärtused erinevate mõõtmisaegade kaupa. Ülejäänud graafikud erinevate vajumikausi parameetrite kohta (SCI, BDI ja BCI) nii põhi- kui ka lisarajal ning suundade kaupa eraldi on toodud Lisas 2.



Graafik 2. BCI väärtused põhiraajal Tallinn-Narva suunal

Sarnaselt eelmiste aastatega võib mõõtmistulemuste ning ka visuaalsete vaatlustulemuste põhjal öelda, et probleemseimad kohad on järgmiste pikettide vahelises alas:

| Tallinn-Narva (sõidutee 1) | Narva-Tallinn (sõidutee 2) |
|----------------------------|----------------------------|
|                            | PK 0+00 ... PK 2+00        |
| PK 7+00 ... PK 10+00       | PK 8+00 ... PK 9+00        |
| PK 20+00 ... PK 22+00      | PK 17+00 ... PK 20+00      |
|                            | PK 27+00 ... PK 28+00      |
| PK 30+00 ... PK 33+00      | PK 31+00 ... PK 34+00      |
|                            | PK 67+00 ... PK 71+00      |

Teekonstruktsiooni kandevõime mõõtmisprotokolli lühikokkuvõte on toodud tabelis 2.

Tabel 2. Teekonstruktsiooni kandevõime mõõtmistulemuste kokkuvõte

|                                                  | Emod,<br>MPa | Min<br>vajalik<br>Emod,<br>MPa | Mõõdetud Emod-i<br>erinevus arvutatust |     | SCI<br>(piir 140) | BDI<br>(piir 70) | BCI<br>(piir 15) |
|--------------------------------------------------|--------------|--------------------------------|----------------------------------------|-----|-------------------|------------------|------------------|
|                                                  |              |                                | %                                      | MPa |                   |                  |                  |
| Sõidutee 1: Tallinn-Narva, põhirada (sügis 2010) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 462          | 272                            | 70%                                    | 190 | 48                | 40               | 14               |
| Min:                                             | 328          |                                | 21%                                    | 58  | 23                | 21               | 9                |
| Max:                                             | 610          |                                | 123%                                   | 336 | 101               | 72               | 20               |
| Sõidutee 1: Tallinn-Narva, põhirada (kevad 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 469          | 272                            | 72%                                    | 197 | 57                | 49               | 13               |
| Min:                                             | 321          |                                | 19%                                    | 51  | 29                | 29               | 7                |
| Max:                                             | 626          |                                | 128%                                   | 352 | 125               | 86               | 18               |
| Sõidutee 1: Tallinn-Narva, põhirada (sügis 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 475          | 272                            | 74%                                    | 203 | 40                | 38               | 16               |
| Min:                                             | 329          |                                | 22%                                    | 59  | 23                | 23               | 7                |
| Max:                                             | 601          |                                | 119%                                   | 327 | 89                | 66               | 24               |
| Sõidutee 1: Tallinn-Narva, põhirada (kevad 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 460          | 272                            | 69%                                    | 187 | 72                | 50               | 12               |
| Min:                                             | 313          |                                | 16%                                    | 43  | 45                | 31               | 6                |
| Max:                                             | 578          |                                | 111%                                   | 304 | 149               | 89               | 18               |
| Sõidutee 1: Tallinn-Narva, põhirada (sügis 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 452          | 272                            | 66%                                    | 180 | 52                | 44               | 12               |
| Min:                                             | 310          |                                | 15%                                    | 40  | 31                | 21               | 8                |
| Max:                                             | 592          |                                | 116%                                   | 318 | 101               | 78               | 21               |
|                                                  |              |                                |                                        |     |                   |                  |                  |
| Sõidutee 2: Narva-Tallinn, põhirada (sügis 2010) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 437          | 272                            | 61%                                    | 165 | 46                | 41               | 15               |
| Min:                                             | 300          |                                | 10%                                    | 26  | 26                | 23               | 9                |
| Max:                                             | 610          |                                | 123%                                   | 336 | 69                | 64               | 30               |
| Sõidutee 2: Narva-Tallinn, põhirada (kevad 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 451          | 272                            | 66%                                    | 179 | 63                | 53               | 14               |
| Min:                                             | 284          |                                | 4%                                     | 10  | 34                | 34               | 8                |
| Max:                                             | 589          |                                | 115%                                   | 315 | 103               | 83               | 33               |
| Sõidutee 2: Narva-Tallinn, põhirada (sügis 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 452          | 272                            | 66%                                    | 180 | 42                | 41               | 17               |
| Min:                                             | 293          |                                | 7%                                     | 19  | 26                | 24               | 11               |
| Max:                                             | 565          |                                | 108%                                   | 293 | 65                | 69               | 37               |
| Sõidutee 2: Tallinn-Narva, põhirada (kevad 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 421          | 272                            | 55%                                    | 149 | 85                | 58               | 13               |
| Min:                                             | 266          |                                | -2%                                    | -4  | 53                | 34               | 9                |
| Max:                                             | 554          |                                | 102%                                   | 280 | 139               | 114              | 28               |
| Sõidutee 2: Tallinn-Narva, põhirada (sügis 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 420          | 272                            | 54%                                    | 148 | 58                | 49               | 14               |
| Min:                                             | 280          |                                | 2%                                     | 6   | 35                | 26               | 7                |
| Max:                                             | 549          |                                | 103%                                   | 279 | 85                | 87               | 28               |
|                                                  |              |                                |                                        |     |                   |                  |                  |
| Sõidutee 1: Tallinn-Narva, lisarada (sügis 2010) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 440          | 272                            | 61%                                    | 168 | 50                | 42               | 14               |
| Min:                                             | 358          |                                | 31%                                    | 84  | 32                | 28               | 10               |
| Max:                                             | 555          |                                | 103%                                   | 281 | 71                | 56               | 21               |

|                                                  | Emod,<br>MPa | Min<br>vajalik<br>Emod,<br>MPa | Mõõdetud Emod-i<br>erinevus arvutatust |     | SCI<br>(piir 140) | BDI<br>(piir 70) | BCI<br>(piir 15) |
|--------------------------------------------------|--------------|--------------------------------|----------------------------------------|-----|-------------------|------------------|------------------|
|                                                  |              |                                | %                                      | MPa |                   |                  |                  |
| Sõidutee 1: Tallinn-Narva, lisarada (kevad 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 424          | 272                            | 55%                                    | 151 | 78                | 59               | 14               |
| Min:                                             | 335          |                                | 24%                                    | 65  | 50                | 40               | 10               |
| Max:                                             | 560          |                                | 104%                                   | 286 | 108               | 81               | 20               |
| Sõidutee 1: Tallinn-Narva, lisarada (sügis 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 458          | 272                            | 68%                                    | 186 | 44                | 42               | 16               |
| Min:                                             | 341          |                                | 26%                                    | 71  | 27                | 26               | 8                |
| Max:                                             | 585          |                                | 113%                                   | 311 | 79                | 67               | 24               |
| Sõidutee 1: Tallinn-Narva, lisarada (kevad 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 413          | 272                            | 51%                                    | 140 | 92                | 61               | 13               |
| Min:                                             | 318          |                                | 16%                                    | 44  | 61                | 40               | 10               |
| Max:                                             | 521          |                                | 90%                                    | 247 | 130               | 86               | 26               |
| Sõidutee 1: Tallinn-Narva, lisarada (sügis 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 420          | 272                            | 54%                                    | 147 | 62                | 50               | 13               |
| Min:                                             | 328          |                                | 20%                                    | 54  | 40                | 31               | 10               |
| Max:                                             | 539          |                                | 97%                                    | 265 | 93                | 75               | 24               |
| Sõidutee 2: Narva-Tallinn, lisarada (sügis 2010) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 430          | 272                            | 58%                                    | 157 | 50                | 43               | 14               |
| Min:                                             | 337          |                                | 23%                                    | 64  | 29                | 24               | 10               |
| Max:                                             | 549          |                                | 100%                                   | 275 | 90                | 64               | 19               |
| Sõidutee 2: Narva-Tallinn, lisarada (kevad 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 429          | 272                            | 58%                                    | 157 | 76                | 58               | 14               |
| Min:                                             | 315          |                                | 17%                                    | 45  | 52                | 37               | 10               |
| Max:                                             | 527          |                                | 92%                                    | 253 | 125               | 86               | 23               |
| Sõidutee 2: Narva-Tallinn, lisarada (sügis 2011) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 450          | 272                            | 65%                                    | 178 | 43                | 43               | 17               |
| Min:                                             | 335          |                                | 24%                                    | 65  | 25                | 22               | 11               |
| Max:                                             | 578          |                                | 111%                                   | 304 | 78                | 70               | 28               |
| Sõidutee 2: Tallinn-Narva, lisarada (kevad 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 401          | 272                            | 47%                                    | 129 | 98                | 62               | 14               |
| Min:                                             | 292          |                                | 8%                                     | 22  | 56                | 37               | 10               |
| Max:                                             | 518          |                                | 89%                                    | 244 | 187               | 105              | 21               |
| Sõidutee 2: Tallinn-Narva, lisarada (sügis 2012) |              |                                |                                        |     |                   |                  |                  |
| Keskmine:                                        | 404          | 272                            | 48%                                    | 131 | 64                | 53               | 14               |
| Min:                                             | 312          |                                | 14%                                    | 38  | 42                | 29               | 9                |
| Max:                                             | 510          |                                | 86%                                    | 236 | 107               | 81               | 21               |

Mõõtmisprotokoll on täies mahus toodud Lisas 1.

## 2. Vaatlusreeperite paigaldamine ja nende nivelleerimine

Vaatlusreeperid paigaldati ja nivelleeriti 2010. aasta sügisel. Töö teostas OÜ Geo S.T. Vaatlusreeperid paigaldati asfaltkattesse mõlema sõidusuuna välimise sõiduraja äärejoone vahetusse lähedusse. Vaatlusreeperite asukohad ühildati maantee kilometraažiga alates km 155,9 kuni km 163,2 iga 100 m tagant. Vaatlusreeperite paigaldamisel püüti arvestada asjaoluga, et oleks tagatud märkide võimalikult pikaajaline säilivus ning kasutusmugavus geodeetidele.



*Foto 1. Kattesse paigaldatud ja tähistatud vaatlusreeper*

Kõrgus määrati geomeetrilise nivelleerimise meetodil ning lähtereeperina kasutati kohaliku geodeetilise põhivõrgu punkti nr 1659 (KUKRUSE). Lähtepunktide andmed on saadud Maa-ameti Andmekogude arhiivi Geodeesia fondist. Kasutusel on 1977.a. Balti kõrguste süsteem BK77 ning lähtereeperi (KGPP nr 1659 KUKRUSE kõrgus on  $H=72,495\text{m}$ ).

Geomeetrilisel nivelleerimisel kasutati digitaalnivelliiri Trimble DiNi 0,3 ja 2 meetri pikkuseid invarlatte Trimble LD12.

Töö lõpptulemusena koostati vaatlusreeperite tabel seotuna maantee kilometraažiga.

Neljas ja viies vaatlusreeperite kordusnivelleerimine toimus 27.-28.märtsil ning 23.-26.oktoobril 2012.a.

Eelmiste aastate mõõtmiste põhjal võis öelda, et väga olulisi teekonstruktsiooni kerkimisi või vajumisi ei täheldatud. Nii kerkimised kui vajumised olid keskmiselt 2...3 mm piires. Suuremaid erinevusi võib aga täheldada 2012. aasta sügise nivelleerimise tulemustes – siis olid võrreldes nii 2012. aasta kevadise kui ka 2011. aasta sügise perioodiga praktiliselt kõik vaatlusreeperid vajunud keskmiselt 5...9 mm ja seda mõlemal suunal. Võrdluses 2012 kevad vs 2011 kevad olid samuti märgatavad mõnevõrra suuremad erinevused – võib öelda, et nt Tallinn-Narva suunal oli enamikes kohtades teekonstruktsioon kerkinud (keskmiselt ~3 mm).

Suuremad vajumised olid teelõigu alguse paaril kilomeetril ja pikettide PK33+00...PK35+00 alas (Tammiku viadukti lähedal).

Tabelis 3 on toodud kokkuvõtte, mitmes mõõtmispunktis teekonstruktsioon on tõusnud ja mitmes vajunud ning seda suundade kaupa eraldi. Tabelis 4 on toodud nivelleerimistulemused kõigil kolmel perioodil pikettide ja suundade kaupa.

*Tabel 3. Teekonstruktsiooni kerkimine ja vajumine vaatlusreeperite nivelleerimise põhjal.*

| Suund                           | Uusi reepereid | Teekonstruktsiooni |            |          |          |            |          |
|---------------------------------|----------------|--------------------|------------|----------|----------|------------|----------|
|                                 |                | kerkimine          |            |          | vajumine |            |          |
|                                 |                | rp arv             | keskm (mm) | max (mm) | rp arv   | keskm (mm) | max (mm) |
| Kevad 2011 võrreldes sügis 2010 |                |                    |            |          |          |            |          |
| Tallinn-Narva                   | 3              | 37                 | 2,7        | 13,1     | 34       | -1,9       | -5,9     |
| Narva-Tallinn                   | 11             | 16                 | 3,7        | 9,4      | 47       | -3,3       | -6,8     |
| Sügis 2011 võrreldes kevad 2011 |                |                    |            |          |          |            |          |
| Tallinn-Narva                   | 1              | 39                 | 1,5        | 4,2      | 34       | -3,9       | -11,8    |
| Narva-Tallinn                   | 1              | 38                 | 2,3        | 0,3      | 35       | -3,6       | -10,4    |
| Sügis 2011 võrreldes sügis 2010 |                |                    |            |          |          |            |          |
| Tallinn-Narva                   |                | 36                 | 0,9        | 2,8      | 34       | -1,5       | -3,6     |
| Narva-Tallinn                   |                | 3                  | 0,1        | 0,3      | 59       | -2,2       | -5,9     |
| Kevad 2012 võrreldes kevad 2011 |                |                    |            |          |          |            |          |
| Tallinn-Narva                   |                | 54                 | 2,8        | 9,3      | 19       | -2,0       | -6,0     |
| Narva-Tallinn                   |                | 50                 | 2,3        | 6,9      | 22       | -2,1       | -6,6     |
| Sügis 2012 võrreldes sügis 2011 |                |                    |            |          |          |            |          |
| Tallinn-Narva                   |                | 0                  |            |          | 73       | -6,2       | -13,1    |
| Narva-Tallinn                   |                | 1                  | 0,7        | 0,7      | 72       | -5,2       | -9,3     |
| Sügis 2012 võrreldes kevad 2012 |                |                    |            |          |          |            |          |
| Tallinn-Narva                   |                | 0                  |            |          | 73       | -8,8       | -21,8    |
| Narva-Tallinn                   |                | 1                  | 0,6        | 0,6      | 72       | -6,8       | -21,9    |

Geodeetiliste mõõdistustööde tehniline aruanne on toodud Lisas 3.

Tabel 4. Nivelleerimise tulemused perioodide kaupa.

| pk   | km    | kevad 2011 vs sügis 2010 |       | sügis 2011 vs sügis 2010 |       | sügis 2011 vs kevad 2011 |       | kevad 2012 vs kevad 2011 |       | sügis 2012 vs sügis 2011 |        | sügis 2012 vs kevad 2012 |        |
|------|-------|--------------------------|-------|--------------------------|-------|--------------------------|-------|--------------------------|-------|--------------------------|--------|--------------------------|--------|
|      |       | vasak                    | parem | vasak                    | parem | vasak                    | parem | vasak                    | parem | vasak                    | parem  | vasak                    | parem  |
| -200 | 155,9 | -0,5                     | 1,8   |                          |       |                          |       |                          |       |                          |        |                          |        |
| -100 | 156,0 | 1,8                      | 1,3   | -5,9                     | -2,4  | -7,6                     | -3,7  | 5,6                      | 0,1   | -8,69                    | -8,2   | -21,92                   | -12,03 |
| 0    | 156,1 | 6,7                      | 1,3   | -3,6                     | -3,6  | -10,4                    | -4,9  | 2,56                     | -1,25 | -8,51                    | -7,89  | -21,43                   | -11,52 |
| 100  | 156,2 | -0,4                     | 6,0   | -4,5                     | -1,6  | -4,1                     | -7,6  | 2,63                     | -0,81 | -8,47                    | -9,44  | -15,16                   | -16,27 |
| 200  | 156,3 | 4,8                      | uus   | -2,6                     |       | -7,5                     | -5,0  | 2,76                     | -2,32 | -8,23                    | -11,26 | -18,47                   | -13,96 |
| 300  | 156,4 | 0,3                      | uus   | -2,2                     |       | -2,5                     | -9,2  | -0,2                     | -5,98 | -9,25                    | -10,59 | -11,56                   | -13,83 |
| 400  | 156,5 | -0,2                     | uus   | -1,6                     |       | -1,4                     | -6,3  | 1,54                     | 2,37  | -7,58                    | -8,82  | -10,53                   | -17,53 |
| 500  | 156,6 | -2,1                     | 7,1   | -2,3                     | -1,0  | -0,2                     | -8,1  | 0,08                     | 2,11  | -7,34                    | -8,25  | -7,62                    | -18,45 |
| 600  | 156,7 | -3,8                     | 2,2   | -5,2                     | -2,9  | -1,4                     | -5,1  | -2,79                    | -1,81 | -6,24                    | -8,45  | -4,86                    | -11,72 |
| 700  | 156,8 | -2,3                     | 2,9   | -4,2                     | -1,9  | -2,0                     | -4,8  | -0,48                    | -1,09 | -6,79                    | -7,72  | -8,26                    | -11,41 |
| 800  | 156,9 | 3,1                      | 13,0  | -2,4                     | 1,3   | -5,6                     | -11,8 | 1,38                     | -2,18 | -5,33                    | -7,07  | -12,27                   | -16,65 |
| 900  | 157,0 | uus                      | 1,7   |                          | -1,8  | -8,0                     | -3,6  | -0,35                    | 3,11  | -7,09                    | -7,1   | -14,72                   | -13,78 |
| 1000 | 157,1 | 4,8                      | 2,5   | -1,5                     | -1,4  | -6,3                     | -3,9  | 0,08                     | 1,9   | -5,6                     | -7,79  | -12,03                   | -13,6  |
| 1100 | 157,2 | -0,2                     | -2,3  | -1,5                     | -1,9  | -1,3                     | 0,4   | 1,83                     | 5,46  | -6,04                    | -6,31  | -9,19                    | -11,38 |
| 1200 | 157,3 | -3,9                     | 1,8   | -1,6                     | -0,9  | 2,3                      | -2,7  | 2,05                     | 2,33  | -5,61                    | -8,4   | -5,37                    | -13,4  |
| 1300 | 157,4 | -0,2                     | 3,5   | -1,7                     | -2,0  | -1,4                     | -5,5  | 4,21                     | 0,97  | -6,26                    | -7,98  | -11,89                   | -14,41 |
| 1400 | 157,5 | -0,7                     | 2,5   | -2,0                     | -1,5  | -1,2                     | -4,1  | 1,08                     | 2,61  | -6,76                    | -8,04  | -9,09                    | -14,71 |
| 1500 | 157,6 | 2,7                      | 1,8   | -3,2                     | -1,2  | -5,9                     | -2,9  | 1,76                     | 0,64  | -6,37                    | -7,55  | -14,06                   | -11,14 |
| 1600 | 157,7 | -0,4                     | -3,0  | -0,8                     | -2,9  | -0,5                     | 0,1   | 1,51                     | 2,17  | -5,01                    | -7,43  | -6,99                    | -9,5   |
| 1700 | 157,8 | 4,7                      | 1,2   | -2,1                     | -1,2  | -6,8                     | -2,4  | -3,23                    | 3,45  | -4,88                    | -7,75  | -8,43                    | -13,57 |
| 1800 | 157,9 | -1,6                     | -0,1  | -2,2                     | -1,8  | -0,6                     | -1,7  | -0,33                    | 2,93  | -4,2                     | -7,88  | -4,42                    | -12,5  |
| 1900 | 158,0 | 3,1                      | 0,4   | -2,1                     | -2,4  | -5,2                     | -2,8  | -1,85                    | 0,82  | -5,23                    | -7,99  | -8,54                    | -11,57 |
| 2000 | 158,1 | 3,3                      | 3,8   | -2,1                     | -1,7  | -5,3                     | -5,5  | -0,45                    | 1,73  | -5,31                    | -8,34  | -10,21                   | -15,53 |
| 2100 | 158,2 | 6,8                      | 3,3   | -0,6                     | -2,1  | -7,3                     | -5,4  | -0,88                    | 0,49  | -4,82                    | -8,58  | -11,26                   | -14,52 |
| 2200 | 158,3 | -1,8                     | -3,9  | -2,3                     | -1,0  | -0,5                     | 2,8   | 0,78                     | 4,32  | -4,2                     | -7,91  | -5,49                    | -9,38  |
| 2300 | 158,4 | -3,7                     | -5,9  | -1,8                     | -1,7  | 1,8                      | 4,2   | 2,88                     | 3,8   | -3,27                    | -7,96  | -4,32                    | -7,57  |
| 2400 | 158,5 | uus                      | -4,4  |                          | -3,3  | 0,3                      | 1,1   | -4,55                    | -0,92 | -4,24                    | -7,97  | 0,61                     | -6     |
| 2500 | 158,6 | uus                      | -3,3  |                          | -2,9  | -0,5                     | 0,4   | -6,63                    | -1,74 | -6,58                    | -8,97  | -0,47                    | -6,8   |
| 2600 | 158,7 | uus                      | -2,8  |                          | -1,9  | -0,5                     | 0,8   | -4,04                    | -2,22 | -6,53                    | -9,41  | -3,01                    | -6,35  |
| 2700 | 158,8 | -3,0                     | -2,0  | -2,5                     | -0,7  | 0,5                      | 1,4   | -2,83                    | -2,07 | -5,05                    | -9,88  | -1,7                     | -6,45  |
| 2800 | 158,9 | -1,4                     | -0,7  | -1,4                     | 0,4   | 0,0                      | 1,1   | 0,66                     | -1,38 | -5,24                    | -10,24 | -5,94                    | -7,76  |
| 2900 | 159,0 | -0,6                     | -0,9  | -1,2                     | 0,8   | -0,6                     | 1,8   | -5,3                     | -2,34 | -5,46                    | -10,65 | -0,8                     | -6,55  |
| 3000 | 159,1 | -0,9                     | -1,0  | -3,1                     | -0,3  | -2,2                     | 0,7   | -4,55                    | -4,27 | -6,69                    | -12,16 | -4,31                    | -7,2   |
| 3100 | 159,2 | 1,2                      | 0,4   | -0,9                     | 1,7   | -2,1                     | 1,3   | -0,69                    | -2,04 | -4,61                    | -10,91 | -6,05                    | -7,56  |
| 3200 | 159,3 | 2,7                      | -0,8  | 0,0                      | 0,9   | -2,6                     | 1,7   | 1,46                     | -2,17 | -4,64                    | -11,42 | -8,73                    | -7,56  |
| 3300 | 159,4 | uus                      | 5,0   |                          | 2,8   | -8,2                     | -2,2  | -2,39                    | -0,76 | -5,03                    | -11,53 | -10,82                   | -12,94 |
| 3400 | 159,5 | 9,4                      | 4,1   | 0,3                      | 0,0   | -9,1                     | -4,1  | -3,25                    | -1,35 | -5,88                    | -13,1  | -11,78                   | -15,88 |
| 3500 | 159,6 | 2,3                      | 6,1   | -0,7                     | 1,5   | -3,1                     | -4,6  | -0,05                    | 0,4   | -4,06                    | -11,13 | -7,07                    | -16,13 |
| 3600 | 159,7 | -2,4                     | -1,0  | -1,6                     | -0,6  | 0,8                      | 0,4   | 4,06                     | 2,2   | -3,28                    | -2,33  | -6,49                    | -4,15  |
| 3700 | 159,8 | -1,0                     | 0,7   | -2,5                     | 0,6   | -1,5                     | -0,2  | 2,02                     | 1,67  | -3,53                    | -1,87  | -7,1                     | -3,69  |
| 3800 | 159,9 | -2,4                     | 4,5   | -3,7                     | 0,2   | -1,2                     | -4,3  | 1,93                     | -1,94 | -3,82                    | -1,71  | -6,97                    | -4,09  |
| 3900 | 160,0 | 2,0                      | 1,7   | -0,8                     | 0,1   | -2,8                     | -1,6  | 5,26                     | 0,48  | -3,86                    | -2,26  | -11,97                   | -4,34  |

| pk   | km    | kevad 2011 vs<br>sügis 2010 |       | sügis 2011 vs<br>sügis 2010 |       | sügis 2011 vs<br>kevad 2011 |       | kevad 2012 vs<br>kevad 2011 |       | sügis 2012 vs<br>sügis 2011 |       | sügis 2012 vs<br>kevad 2012 |        |
|------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|-------|-----------------------------|--------|
|      |       | vasak                       | parem | vasak                       | parem | vasak                       | parem | vasak                       | parem | vasak                       | parem | vasak                       | parem  |
| 4000 | 160,1 | -3,7                        | -0,5  | -2,6                        | -0,1  | 1,1                         | 0,4   | 5,43                        | 1,3   | -3,42                       | -2,64 | -7,7                        | -3,58  |
| 4100 | 160,2 | -4,6                        | 0,0   | -2,1                        | 1,0   | 2,5                         | 1,0   | 1,46                        | 2,5   | -3,54                       | -2,53 | -2,46                       | -4     |
| 4200 | 160,3 | -4,5                        | 1,2   | -1,8                        | 1,1   | 2,7                         | -0,1  | 1,06                        | 6,46  | -3,08                       | -2,06 | -1,47                       | -8,59  |
| 4300 | 160,4 | -4,8                        | -0,6  | -1,8                        | 0,9   | 3,0                         | 1,6   | 1,87                        | 3,26  | -3,73                       | -2,71 | -2,57                       | -4,42  |
| 4400 | 160,5 | -4,8                        | 0,5   | -2,5                        | 2,0   | 2,4                         | 1,6   | 1,3                         | 2,44  | -4,24                       | -2,33 | -3,19                       | -3,21  |
| 4500 | 160,6 | -5,8                        | -0,2  | -3,2                        | 0,4   | 2,7                         | 0,6   | 1,37                        | 1,51  | -4,23                       | -2,69 | -2,95                       | -3,57  |
| 4600 | 160,7 | -4,6                        | 1,1   | -2,3                        | 0,8   | 2,4                         | -0,3  | 0,83                        | 3,63  | -4,51                       | -2,97 | -2,98                       | -6,85  |
| 4700 | 160,8 | -3,9                        | 1,2   | -1,6                        | 1,4   | 2,3                         | 0,2   | -0,45                       | 6,51  | -4,27                       | -2,21 | -1,51                       | -8,55  |
| 4800 | 160,9 | -4,0                        | 0,1   | -2,5                        | 0,7   | 1,5                         | 0,7   | -0,04                       | 1,27  | -2,68                       | -2,63 | -1,17                       | -3,21  |
| 4900 | 161,0 | -3,2                        | -0,5  | -0,9                        | 0,7   | 2,2                         | 1,2   | 3,55                        | 2,43  | -4,02                       | -2,8  | -5,35                       | -4,03  |
| 5000 | 161,1 | -4,3                        | 0,1   | -1,5                        | 1,1   | 2,8                         | 1,0   | 1,56                        | 3,95  | -4,01                       | -2,15 | -2,75                       | -5,07  |
| 5100 | 161,2 | -5,3                        | 0,6   | -2,0                        | 1,5   | 3,3                         | 0,9   | 1,36                        | 3,94  | -4,79                       | -2,75 | -2,87                       | -5,79  |
| 5200 | 161,3 | -5,2                        | -0,7  | -2,2                        | 0,6   | 3,1                         | 1,3   | 1,97                        | 4,78  | -4,75                       | -3,04 | -3,66                       | -6,49  |
| 5300 | 161,4 | -5,3                        | 1,5   | -3,0                        | 0,4   | 2,2                         | -1,1  | 3,99                        | 3,07  | -4,22                       | -3,19 | -5,97                       | -7,33  |
| 5400 | 161,5 | -6,7                        | -0,2  | -2,6                        | 0,1   | 4,1                         | 0,3   | 4,66                        | 3,09  | -4,5                        | -2,88 | -5,01                       | -5,66  |
| 5500 | 161,6 | -5,1                        | 0,9   | -1,5                        | 0,6   | 3,7                         | -0,2  | 4,19                        | 6,62  | -4,41                       | -3,09 | -4,94                       | -9,95  |
| 5600 | 161,7 | -6,1                        | -1,5  | -1,7                        | -0,4  | 4,4                         | 1,0   | 0,96                        | 4,98  | -4,61                       | -4,86 | -1,15                       | -8,8   |
| 5700 | 161,8 | -5,0                        | -1,1  | -1,2                        | 0,5   | 3,9                         | 1,6   | 2,89                        | 3,17  | -4,16                       | -4,16 | -3,17                       | -5,72  |
| 5800 | 161,9 | -6,8                        | -3,4  | -2,4                        | 0,3   | 4,4                         | 3,7   | 3,13                        | 3,52  | -4,69                       | -4,06 | -3,41                       | -3,91  |
| 5900 | 162,0 | -5,1                        | -3,5  | -2,5                        | -0,2  | 2,6                         | 3,2   | 5,6                         | 1,71  | -4,05                       | -3,99 | -7,03                       | -2,46  |
| 6000 | 162,1 | -0,6                        | -2,5  | 0,1                         | -0,2  | 0,7                         | 2,3   | 2,68                        | 1,03  | -4,78                       | -3,88 | -6,73                       | -2,62  |
| 6100 | 162,2 | -4,9                        | -3,1  | -1,6                        | -0,5  | 3,3                         | 2,6   | 5,59                        | 1,61  | -4,34                       | -3,98 | -6,6                        | -2,96  |
| 6200 | 162,3 | uus                         | 1,9   |                             | 1,7   | 3,7                         | -0,1  | 1,86                        | 6,75  | -4,66                       | -3,93 | -2,78                       | -10,81 |
| 6300 | 162,4 | uus                         | -3,4  |                             | 0,6   | 2,6                         | 4,0   | -1,03                       | 2,28  | -6,74                       | -4,67 | -3,08                       | -2,93  |
| 6400 | 162,5 | -6,5                        | -3,5  | -3,7                        | -0,7  | 2,8                         | 2,8   | 0,07                        | 1,21  | -6,06                       | -4,95 | -3,35                       | -3,37  |
| 6500 | 162,6 | -4,3                        | -4,0  | -0,2                        | -1,0  | 4,0                         | 3,0   | 1,89                        | 0,31  | -3,88                       | -4,83 | -1,72                       | -2,17  |
| 6600 | 162,7 | -3,6                        | -2,5  | -1,6                        | 0,0   | 2,0                         | 2,5   | 0,76                        | 0,89  | -4,92                       | -4,81 | -3,67                       | -3,25  |
| 6700 | 162,8 | uus                         | 9,1   |                             | 1,1   | 1,5                         | -8,0  | 0,78                        | 9,32  | -5,76                       | -4,51 | -5,06                       | -21,8  |
| 6800 | 162,9 | uus                         | -0,8  |                             | 0,4   | 1,3                         | 1,2   | 6,9                         | 2,23  | -6,28                       | -5,88 | -11,88                      | -6,91  |
| 6900 | 163,0 | uus                         | -0,4  |                             | 0,1   | 1,6                         | 0,5   | 0,76                        | 3,63  | -5,19                       | -4,02 | -4,33                       | -7,2   |
| 7000 | 163,1 | uus                         | -0,6  |                             | 0,7   | 1,7                         | 1,2   | 0,62                        | 2,12  | -5,28                       | -4,19 | -4,18                       | -5,1   |
| 7100 | 163,2 | -1,8                        | 2,4   | -1,6                        | 2,3   | 0,1                         | -0,1  | 0,67                        | 1,91  | -5,2                        | -3,88 | -5,72                       | -5,93  |

**Märkus:**

Vasak – Narva-Tallinn suund

Parem – Tallinn-Narva suund

### 3. Maanteelõigu visuaalne hindamine

AS Teede Tehnokeskus järelevalve osakonna töötaja käis maantee nr 1 Tallinn-Narva asuval Kukruse-Jõhvi uurimisobjektil 5. juunil 2012.a.

Ülevaatus käigus sõideti läbi mõlemad sõidusuunad, tehti fotosid nii üldisest olukorrast kui ka defektsetest kohtadest. Üleüldine olukord teelõigul võrreldes eelmise aasta ülevaatusega (19.05.2011) on sarnane. Eelmisel korral leitud vajumised on muutunud taas vähem märgatavaks. Katte pinnal on edasi arenenud mõned vigastused ja defektid. On tekkinud paar kerget vajumist teepeenras (vt fotod truupide kohal). Suvisel perioodil on sellel teelõigul lubatud suurendatud piirkiirus 110 km/h. Selle kiirusega sõites on tunda profiili ebatasasusi, mis aga pole muidu märgatavad. Muldkeha, mille ehitamisel on kasutatud põlevkivi aherainet, defekte ei täheldatud, kuigi profiilsete ebatasasuste puhul võib olla tegu muldkehas tekkinud väiksemate täiendavate tihenemistega. Ei saa aga väita, et need oleksid seotud just aherainega. Tehtud fotosid ei olnud üldjuhul enam võimalik seostada ehitusaegse piketaažiga, mis on hävinud. Seetõttu on fotod seostatud mingi iseloomuliku kohaga teel. Osa fotosid on tehtud üldseisundi kajastamiseks, mis ei ole otseselt uurimistööks olulised, kuid aitavad orienteeruda asukohtade määratlemisel.

Järgnevalt on toodud valik visuaalse hindamise käigus tehtud fotodest.

#### Tallinn-Narva suund



Foto 2. Bituumenilaikude rida PK 5...7



Foto 3. Bituumenilaikude rida PK 5...7



Foto 4. Vajunud koht PK 14+75



Foto 5. Enne ristumist mnt nr 93 hõredad pikitriibud



Foto 6. Pärast ristumist mnt nr 93 rambi mahasõidu kohal truubi peal vajum peenral



Foto 7. Üldine seisukord settebasseini piirkonnas



Foto 8. Üldine seisukord km 162, märgistus kulunud



Foto 9. Remonditud koht PK 66 juures püsib korras

## Narva-Tallinn suund



Foto 10. Bituumenilaikude rida



Foto 11. Defekt PK 58+00



Foto 12. Defekt PK 50+00



Foto 13. Üldine seisukord



Foto 14. Enne ristumist mnt nr 93 rambi  
mahasõidu kohal truubi peal vajum peenral



Foto 15. Arenevad augud kattes



*Foto 16. Enne mahapööret Kohtla-Järvele bituumenilaigud*



*Foto 17. Üldine seisukord, vaade Jõhvi ristmiku viaduktilt*

## Kokkuvõte

Käesoleva uurimistöö eesmärgiks oli uurida põlevkiviaheraine kasutusvõimalusi muldkeha ehitamisel ning vastava juhise koostamine.

Leping antud uurimistöö teostamiseks sõlmiti Maanteeametiga 2008.a. suvel ning uurimistöö esimene etapp pidi valmima sama aasta detsembri alguseks. Kuna teelõigu ehitushanke vaidlustamiste tõttu muldkeha ehitamine viibis, siis polnud ka uurimistööd võimalik 2008. aastal alustada.

Kukruse-Jõhvi teelõigu km 155,9...163,2 teelõigu ehitamise töövõtuleping sõlmiti 2009. aasta veebruaris äriühingutega AS Talter, AS Tref, AS Teede REV-2 ja AS K-Most ning valminud teelõigu pidulik avamine toimus 31.08.2010.a.

Rekonstrueeritud teetrass asub vanade kaevanduskäikude kohal. Kukruse piirkonnas on kaevanduskäigud 3-14 meetri sügavusel maapinnast. Piirkonnas on toimunud maapinna vajumisi ja kaevanduskäikudest jäänud tühimike varinguid. Kaevanduskäikudest tuleneda võivate vajumisohtude vältimiseks rajati uus geovõrguga tugevdatud muldkeha. Muldkeha ehitusmaterjaliks oli põlevkiviaheraine ja liiva segu.

Käesoleva uurimistöö raames tehti mitmeid laboratoorseid katseid põlevkiviaheraine ja liiva omaduste määramiseks ning samuti ka optimaalse liiva ja aheraine vahekorra määramiseks (täpsemalt on need kirjeldatud I vahearuanes). Põlevkiviaheraine veeimavus oli 4...6%, mis on ligi 2 korda suurem kui lubjakivil. Aheraine oli oma loomulikus olekus veega küllastunud ja seega on oluline jälgida aheraine paiknemist muldes. Tühiklikkuse katsetamine näitas, et arvestades ja liiva/aheraine segamistehnoloogia täpsust, saab mulde ehitamiseks võimalik liiva/aheraine vahekord olla 50:50 või siis 60:40. Põlevkiviaherainele määrati ka purunemiskindlus Los Angelese katsel. Purunemiskindlus oli keskmiselt 35...38% ja seega võib katsete tulemuse alusel öelda, et aheraine vastab purunemiskindluse poolest peaaegu IV klassi killustiku nõuetele (IV klassi killustiku purunemiskindlus peab olema  $\leq 35\%$ ). Põlevkiviaheraine orgaanika sisaldus oli ligi 5...10%, mis vastas eelnevalt seatud piirangule (orgaanika sisaldus ei tohtinud ületada 10%).

Teelõigu ehitamine oli jagatud kolmeks töömaaks ning muldkeha ehitati neil mõnevõrra erinevate tehnoloogiatega (vt I vahearuanne). Edasised mõõtmised ja

vaatlused (aastatel 2010-2012) on näidanud, et teekonstruktsiooni vastupidavusele pole olulist mõju muldkeha ehitamise erinevate tehnoloogiate kasutamine avaldanud.

Uuritava teelõigu esimesed teekonstruktsiooni kandevõime mõõtmised tehti 2010. aasta augustis-septembris peale teekatte valmimist. Lisaks sellele teostati ka maanteelõigu seisukorra visuaalne hindamine ning paigaldati vaatlusreeperid muldkeha võimaliku vajumise jälgimiseks. Järgneval kahel aastal mõõdeti uuritaval teelõigul teekonstruktsioon kandevõime kahel korral – kevadel peale muldkeha sulamist ning varasügisel. Ka vaatlusreeperite nivelleerimised tehti kahel korral, kuid erinevalt kandevõime mõõtmistele tehti seda talve lõpus, kui muldkeha polnud veel eeldatavalt sulama hakanud. Igal kevadel teostati ka maanteelõigu seisukorra visuaalne hindamine.

Vastavalt katendiarvutusele on minimaalne vajalik elastsusmoodul vaadeldaval teelõigul vahemikus 270-274 MPa. Kõikidel sõiduradadel oli vajaliku elastsusmooduli nõue täidetud, keskmine Emod oli enamasti 300...360 MPa. Katendi muldkeha seisukorda näitava aluse kõverusteguri väärtused (BCI) kõikusid erinevatel mõõtmisperioodidel – lubatud BCI väärtust (piir 15) ületavaid mõõtmispunkte oli enim 2011.a. sügisel. Samuti oli märgata tendentsi, et lubatud väärtust ületavad mõõtmispunktid asetsesid viaduktide lähedal.

Vaatlusreeperite nivelleerimise tulemusel võib öelda, et suuremad teekonstruktsiooni kõrguse muutused olid teelõigu alguse paaril kilomeetril (sh ka Kukruse viadukti ala) ja pikettide PK33+00...PK35+00 alas (Tammiku viadukti lähedal).

Praegused vaatlused ja mõõtmistulemused on näidanud, et üldiselt on põlevkiviaherainest ehitatud muldkeha hästi vastupidanud. On üksikuid kohti, millel tasub silma peal hoida (viaduktide piirkonnad), et võimalikult varakult võimalikke tekkivaid probleeme avastada.

Kindlasti tasub mõne aja pärast vaatlusuuringuid korrata, et näha kas ja kui palju on aja jooksul teekonstruktsioon vajunud või kerkinud või kas on tekkinud märgatavaid defekte. Uurimistöö koostajad teevad Tellijale ettepaneku korraldada järgmised uuringud hiljemalt kolme aasta pärast – aastal 2015.

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## **Lisa 1**

### **Teekonstruksiooni kandevõime mõõtmiste protokoll**

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK -2+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist

Seade: Dynatest FWD-8002

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 1         | 1      | 1    |        | 0      | PK -2+00 | 26.08.10 | 24,0           | 26,1    | 16,2 | 742    | 52    | 191                        | 128 | 93  | 81  | 70 | 53 | 40 | 477       | 270                   | 77%                               | 207 | 60             | 33            | 13            |
| 2         | 1      | 1    |        | 100    | PK -1+00 | 26.08.10 | 24,0           | 25,0    | 16,3 | 733    | 52    | 229                        | 177 | 131 | 114 | 98 | 72 | 52 | 409       | 270                   | 52%                               | 139 | 50             | 44            | 20            |
| 3         | 1      | 1    |        | 200    | PK 0+00  | 26.08.10 | 24,0           | 25,7    | 16,9 | 726    | 51    | 227                        | 165 | 116 | 94  | 80 | 58 | 40 | 408       | 270                   | 51%                               | 138 | 60             | 48            | 18            |
| 4         | 1      | 1    |        | 300    | PK 1+00  | 26.08.10 | 24,0           | 24,7    | 16,6 | 719    | 51    | 192                        | 139 | 100 | 87  | 73 | 54 | 39 | 463       | 270                   | 71%                               | 193 | 52             | 38            | 14            |
| 5         | 1      | 1    |        | 400    | PK 2+00  | 26.08.10 | 24,0           | 25,4    | 16,7 | 717    | 51    | 231                        | 149 | 93  | 77  | 65 | 47 | 32 | 400       | 270                   | 48%                               | 130 | 81             | 54            | 14            |
| 6         | 1      | 1    |        | 500    | PK 3+00  | 26.08.10 | 24,0           | 26,7    | 17,4 | 713    | 50    | 250                        | 148 | 87  | 71  | 57 | 39 | 28 | 374       | 270                   | 38%                               | 104 | 101            | 60            | 11            |
| 7         | 1      | 1    |        | 600    | PK 4+00  | 26.08.10 | 24,0           | 26,1    | 17,4 | 715    | 51    | 296                        | 195 | 123 | 101 | 81 | 54 | 37 | 328       | 270                   | 21%                               | 58  | 99             | 72            | 17            |
| 8         | 1      | 1    |        | 700    | PK 5+00  | 26.08.10 | 24,0           | 25,2    | 17,2 | 710    | 50    | 242                        | 165 | 103 | 85  | 68 | 45 | 31 | 381       | 270                   | 41%                               | 111 | 77             | 62            | 14            |
| 9         | 1      | 1    |        | 800    | PK 6+00  | 26.08.10 | 24,0           | 25,1    | 17,4 | 708    | 50    | 252                        | 166 | 109 | 91  | 76 | 54 | 39 | 369       | 270                   | 37%                               | 99  | 86             | 57            | 15            |
| 10        | 1      | 1    |        | 900    | PK 7+00  | 26.08.10 | 24,0           | 25,0    | 17,4 | 709    | 50    | 214                        | 143 | 98  | 82  | 69 | 50 | 35 | 420       | 270                   | 56%                               | 150 | 71             | 44            | 15            |
| 11        | 1      | 1    |        | 1000   | PK 8+00  | 26.08.10 | 24,0           | 24,4    | 17,4 | 708    | 50    | 234                        | 161 | 106 | 87  | 70 | 47 | 30 | 391       | 270                   | 45%                               | 121 | 73             | 55            | 17            |
| 12        | 1      | 1    |        | 1100   | PK 9+00  | 26.08.10 | 24,0           | 25,6    | 17,5 | 711    | 50    | 243                        | 169 | 115 | 94  | 79 | 55 | 36 | 381       | 270                   | 41%                               | 111 | 74             | 53            | 19            |
| 13        | 1      | 1    |        | 1200   | PK 10+00 | 26.08.10 | 24,0           | 24,9    | 17,2 | 707    | 50    | 234                        | 149 | 95  | 80  | 65 | 44 | 30 | 391       | 270                   | 45%                               | 121 | 85             | 54            | 14            |
| 14        | 1      | 1    |        | 1300   | PK 11+00 | 26.08.10 | 24,0           | 24,7    | 17,2 | 705    | 50    | 225                        | 157 | 102 | 84  | 69 | 48 | 34 | 403       | 270                   | 49%                               | 133 | 68             | 55            | 14            |
| 15        | 1      | 1    |        | 1400   | PK 12+00 | 26.08.10 | 24,0           | 23,8    | 16,5 | 712    | 50    | 243                        | 157 | 102 | 83  | 69 | 48 | 35 | 381       | 270                   | 41%                               | 111 | 85             | 55            | 13            |
| 16        | 1      | 1    |        | 1500   | PK 13+00 | 26.08.10 | 24,0           | 23,6    | 16,3 | 725    | 51    | 251                        | 164 | 104 | 84  | 71 | 50 | 35 | 378       | 270                   | 40%                               | 108 | 84             | 59            | 15            |
| 17        | 1      | 1    |        | 1600   | PK 14+00 | 26.08.10 | 24,0           | 21,8    | 16,0 | 715    | 51    | 230                        | 155 | 99  | 82  | 68 | 49 | 32 | 400       | 270                   | 48%                               | 130 | 74             | 55            | 16            |
| 18        | 1      | 1    |        | 1700   | PK 15+00 | 26.08.10 | 24,0           | 22,8    | 16,3 | 715    | 51    | 180                        | 110 | 68  | 55  | 44 | 29 | 20 | 486       | 270                   | 80%                               | 216 | 69             | 42            | 9             |
| 19        | 1      | 1    |        | 1800   | PK 16+00 | 26.08.10 | 24,0           | 23,3    | 16,2 | 712    | 50    | 168                        | 111 | 71  | 60  | 49 | 34 | 23 | 512       | 270                   | 90%                               | 242 | 57             | 39            | 11            |
| 20        | 1      | 1    |        | 1900   | PK 17+00 | 26.08.10 | 24,0           | 22,9    | 16,3 | 710    | 50    | 222                        | 145 | 92  | 75  | 62 | 46 | 33 | 409       | 270                   | 52%                               | 139 | 76             | 53            | 14            |
| 21        | 1      | 1    |        | 2000   | PK 18+00 | 19.09.10 | 11,0           | 10,9    | 10,4 | 764    | 54    | 186                        | 140 | 96  | 82  | 69 | 51 | 37 | 459       | 270                   | 70%                               | 189 | 43             | 40            | 12            |
| 22        | 1      | 1    |        | 2100   | PK 19+00 | 19.09.10 | 11,0           | 10,9    | 10,4 | 764    | 54    | 170                        | 129 | 92  | 78  | 66 | 48 | 34 | 494       | 270                   | 83%                               | 224 | 38             | 34            | 13            |
| 23        | 1      | 1    |        | 2200   | PK 20+00 | 19.09.10 | 11,0           | 11,0    | 10,4 | 761    | 54    | 177                        | 133 | 96  | 81  | 69 | 50 | 37 | 476       | 270                   | 76%                               | 206 | 41             | 35            | 12            |
| 24        | 1      | 1    |        | 2300   | PK 21+00 | 19.09.10 | 11,0           | 11,0    | 10,4 | 757    | 53    | 197                        | 151 | 105 | 90  | 75 | 54 | 38 | 435       | 270                   | 61%                               | 165 | 44             | 42            | 15            |
| 25        | 1      | 1    |        | 2400   | PK 22+00 | 19.09.10 | 11,0           | 11,0    | 10,4 | 781    | 55    | 221                        | 162 | 110 | 93  | 78 | 56 | 39 | 408       | 270                   | 51%                               | 138 | 54             | 47            | 15            |
| 26        | 1      | 1    |        | 2500   | PK 23+00 | 19.09.10 | 11,0           | 11,1    | 10,4 | 739    | 52    | 160                        | 122 | 88  | 76  | 64 | 47 | 34 | 503       | 270                   | 86%                               | 233 | 37             | 32            | 13            |
| 27        | 1      | 1    |        | 2600   | PK 24+00 | 19.09.10 | 11,0           | 11,1    | 10,5 | 738    | 52    | 176                        | 133 | 93  | 82  | 69 | 50 | 36 | 466       | 270                   | 73%                               | 196 | 41             | 39            | 13            |
| 28        | 1      | 1    |        | 2700   | PK 25+00 | 19.09.10 | 11,0           | 11,2    | 10,4 | 735    | 52    | 167                        | 127 | 92  | 80  | 68 | 50 | 36 | 486       | 270                   | 80%                               | 216 | 38             | 34            | 13            |
| 29        | 1      | 1    |        | 2800   | PK 26+00 | 19.09.10 | 11,0           | 10,9    | 10,3 | 732    | 52    | 173                        | 130 | 92  | 79  | 67 | 49 | 35 | 471       | 270                   | 74%                               | 201 | 41             | 36            | 13            |
| 30        | 1      | 1    |        | 2900   | PK 27+00 | 19.09.10 | 11,0           | 11,4    | 10,4 | 730    | 52    | 173                        | 131 | 97  | 86  | 74 | 56 | 40 | 470       | 270                   | 74%                               | 200 | 40             | 33            | 15            |
| 31        | 1      | 1    |        | 3000   | PK 28+00 | 19.09.10 | 11,0           | 11,4    | 10,6 | 730    | 52    | 165                        | 128 | 94  | 81  | 70 | 52 | 38 | 488       | 270                   | 81%                               | 218 | 36             | 33            | 14            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |    |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4 | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 32        | 1      | 1    |        | 3100   | PK 29+00 | 19.09.10 | 11,0           | 11,4    | 10,6 | 731    | 52    | 180                        | 137 | 98  | 85 | 72 | 51 | 37 | 455       | 270                   | 69%                               | 185 | 42             | 37            | 13            |
| 33        | 1      | 1    |        | 3200   | PK 30+00 | 19.09.10 | 11,0           | 11,5    | 10,5 | 732    | 52    | 184                        | 144 | 104 | 89 | 76 | 54 | 38 | 448       | 270                   | 66%                               | 178 | 39             | 38            | 16            |
| 34        | 1      | 1    |        | 3300   | PK 31+00 | 19.09.10 | 11,0           | 11,5    | 10,5 | 730    | 52    | 203                        | 155 | 111 | 96 | 79 | 56 | 40 | 413       | 270                   | 53%                               | 143 | 47             | 42            | 16            |
| 35        | 1      | 1    |        | 3400   | PK 32+00 | 19.09.10 | 11,0           | 11,5    | 10,3 | 731    | 52    | 196                        | 153 | 111 | 96 | 82 | 59 | 43 | 425       | 274                   | 55%                               | 151 | 42             | 40            | 16            |
| 36        | 1      | 1    |        | 3500   | PK 33+00 | 19.09.10 | 11,0           | 11,4    | 10,4 | 715    | 51    | 166                        | 129 | 95  | 83 | 73 | 55 | 42 | 478       | 274                   | 74%                               | 204 | 36             | 34            | 13            |
| 37        | 1      | 1    |        | 3600   | PK 34+00 | 19.09.10 | 11,0           | 11,4    | 10,4 | 724    | 51    | 159                        | 122 | 93  | 81 | 71 | 54 | 41 | 499       | 274                   | 82%                               | 225 | 36             | 29            | 13            |
| 38        | 1      | 1    |        | 3700   | PK 35+00 | 19.09.10 | 11,0           | 11,4    | 10,6 | 721    | 51    | 182                        | 137 | 97  | 82 | 69 | 50 | 37 | 446       | 274                   | 63%                               | 172 | 44             | 39            | 13            |
| 39        | 1      | 1    |        | 3800   | PK 36+00 | 19.09.10 | 11,0           | 11,5    | 10,6 | 722    | 51    | 141                        | 107 | 76  | 66 | 56 | 41 | 30 | 547       | 274                   | 100%                              | 273 | 33             | 30            | 11            |
| 40        | 1      | 1    |        | 3900   | PK 37+00 | 19.09.10 | 11,0           | 11,6    | 10,6 | 714    | 50    | 152                        | 115 | 82  | 71 | 61 | 44 | 33 | 511       | 274                   | 87%                               | 237 | 37             | 32            | 11            |
| 41        | 1      | 1    |        | 4000   | PK 38+00 | 19.09.10 | 11,0           | 11,6    | 10,7 | 722    | 51    | 164                        | 124 | 89  | 76 | 65 | 47 | 35 | 485       | 274                   | 77%                               | 211 | 39             | 35            | 12            |
| 42        | 1      | 1    |        | 4100   | PK 39+00 | 19.09.10 | 11,0           | 11,8    | 10,6 | 719    | 51    | 156                        | 116 | 84  | 72 | 62 | 46 | 34 | 502       | 274                   | 83%                               | 228 | 40             | 31            | 12            |
| 43        | 1      | 1    |        | 4200   | PK 40+00 | 19.09.10 | 11,0           | 11,6    | 10,5 | 716    | 51    | 206                        | 158 | 108 | 91 | 75 | 51 | 35 | 402       | 274                   | 47%                               | 128 | 48             | 49            | 16            |
| 44        | 1      | 1    |        | 4300   | PK 41+00 | 19.09.10 | 11,0           | 11,6    | 10,6 | 721    | 51    | 171                        | 130 | 94  | 80 | 68 | 49 | 37 | 469       | 274                   | 71%                               | 195 | 40             | 36            | 12            |
| 45        | 1      | 1    |        | 4400   | PK 42+00 | 19.09.10 | 11,0           | 11,7    | 10,8 | 720    | 51    | 155                        | 116 | 83  | 71 | 60 | 43 | 31 | 505       | 274                   | 84%                               | 231 | 39             | 33            | 11            |
| 46        | 1      | 1    |        | 4500   | PK 43+00 | 19.09.10 | 11,0           | 11,7    | 10,8 | 720    | 51    | 148                        | 112 | 81  | 69 | 60 | 43 | 31 | 524       | 274                   | 91%                               | 250 | 36             | 30            | 12            |
| 47        | 1      | 1    |        | 4600   | PK 44+00 | 19.09.10 | 11,0           | 11,8    | 11,3 | 714    | 50    | 151                        | 113 | 79  | 68 | 57 | 40 | 30 | 513       | 274                   | 87%                               | 239 | 38             | 34            | 10            |
| 48        | 1      | 1    |        | 4700   | PK 45+00 | 19.09.10 | 11,0           | 12,1    | 11,1 | 716    | 51    | 142                        | 108 | 78  | 67 | 57 | 41 | 30 | 540       | 274                   | 97%                               | 266 | 34             | 30            | 11            |
| 49        | 1      | 1    |        | 4800   | PK 46+00 | 19.09.10 | 11,0           | 12,1    | 11,0 | 713    | 50    | 175                        | 132 | 92  | 78 | 66 | 46 | 33 | 457       | 274                   | 67%                               | 183 | 43             | 39            | 13            |
| 50        | 1      | 1    |        | 4900   | PK 47+00 | 19.09.10 | 11,0           | 12,1    | 11,2 | 719    | 51    | 139                        | 109 | 82  | 72 | 61 | 44 | 32 | 552       | 274                   | 101%                              | 278 | 29             | 27            | 12            |
| 51        | 1      | 1    |        | 5000   | PK 48+00 | 19.09.10 | 11,0           | 12,4    | 11,4 | 719    | 51    | 174                        | 134 | 93  | 78 | 66 | 48 | 34 | 461       | 274                   | 68%                               | 187 | 40             | 40            | 14            |
| 52        | 1      | 1    |        | 5100   | PK 49+00 | 19.09.10 | 11,0           | 12,8    | 11,6 | 721    | 51    | 173                        | 138 | 103 | 89 | 77 | 56 | 43 | 464       | 274                   | 70%                               | 190 | 34             | 35            | 13            |
| 53        | 1      | 1    |        | 5200   | PK 50+00 | 19.09.10 | 11,0           | 12,7    | 11,4 | 717    | 51    | 125                        | 96  | 74  | 64 | 55 | 41 | 30 | 599       | 274                   | 119%                              | 325 | 29             | 22            | 11            |
| 54        | 1      | 1    |        | 5300   | PK 51+00 | 19.09.10 | 11,0           | 13,1    | 11,6 | 717    | 51    | 147                        | 112 | 80  | 69 | 58 | 41 | 29 | 526       | 274                   | 92%                               | 252 | 35             | 31            | 12            |
| 55        | 1      | 1    |        | 5400   | PK 52+00 | 19.09.10 | 11,0           | 13,4    | 11,2 | 719    | 51    | 162                        | 129 | 95  | 83 | 70 | 51 | 37 | 488       | 274                   | 78%                               | 214 | 33             | 33            | 14            |
| 56        | 1      | 1    |        | 5500   | PK 53+00 | 19.09.10 | 11,0           | 13,8    | 11,6 | 722    | 51    | 178                        | 136 | 96  | 82 | 68 | 49 | 35 | 454       | 274                   | 66%                               | 180 | 41             | 39            | 13            |
| 57        | 1      | 1    |        | 5600   | PK 54+00 | 19.09.10 | 11,0           | 13,3    | 11,5 | 724    | 51    | 144                        | 110 | 83  | 72 | 63 | 48 | 36 | 539       | 274                   | 97%                               | 265 | 34             | 26            | 11            |
| 58        | 1      | 1    |        | 5700   | PK 55+00 | 19.09.10 | 11,0           | 13,4    | 11,3 | 722    | 51    | 147                        | 112 | 83  | 72 | 63 | 48 | 35 | 529       | 274                   | 93%                               | 255 | 35             | 28            | 13            |
| 59        | 1      | 1    |        | 5800   | PK 56+00 | 19.09.10 | 11,0           | 13,5    | 11,1 | 718    | 51    | 157                        | 121 | 86  | 73 | 61 | 44 | 31 | 500       | 274                   | 82%                               | 226 | 36             | 34            | 12            |
| 60        | 1      | 1    |        | 5900   | PK 57+00 | 19.09.10 | 11,0           | 13,6    | 11,2 | 720    | 51    | 165                        | 125 | 88  | 73 | 62 | 45 | 32 | 482       | 274                   | 76%                               | 208 | 39             | 37            | 13            |
| 61        |        |      |        | 6000   | PK 58+00 | 19.09.10 | 11,0           | 13,6    | 11,1 | 715    | 51    | 166                        | 123 | 85  | 71 | 59 | 41 | 29 | 476       | 274                   | 74%                               | 202 | 43             | 38            | 12            |
| 62        | 1      | 1    |        | 6100   | PK 59+00 | 19.09.10 | 11,0           | 13,4    | 11,1 | 725    | 51    | 177                        | 136 | 97  | 83 | 71 | 51 | 36 | 458       | 274                   | 67%                               | 184 | 40             | 38            | 14            |
| 63        | 1      | 1    |        | 6200   | PK 60+00 | 19.09.10 | 11,0           | 13,1    | 10,9 | 727    | 51    | 172                        | 130 | 91  | 76 | 64 | 46 | 32 | 470       | 274                   | 72%                               | 196 | 40             | 39            | 14            |
| 64        | 1      | 1    |        | 6300   | PK 61+00 | 19.09.10 | 11,0           | 13,1    | 10,8 | 726    | 51    | 158                        | 121 | 87  | 75 | 64 | 46 | 33 | 503       | 274                   | 83%                               | 229 | 36             | 33            | 13            |
| 65        | 1      | 1    |        | 6400   | PK 62+00 | 19.09.10 | 11,0           | 12,5    | 10,7 | 728    | 51    | 124                        | 100 | 79  | 70 | 61 | 47 | 34 | 610       | 274                   | 123%                              | 336 | 23             | 21            | 12            |
| 66        | 1      | 1    |        | 6500   | PK 63+00 | 19.09.10 | 11,0           | 12,6    | 10,7 | 727    | 51    | 168                        | 134 | 100 | 86 | 74 | 54 | 39 | 478       | 274                   | 74%                               | 204 | 34             | 33            | 14            |
| 67        | 1      | 1    |        | 6600   | PK 64+00 | 19.09.10 | 11,0           | 12,5    | 10,8 | 728    | 51    | 153                        | 120 | 91  | 80 | 68 | 49 | 37 | 517       | 274                   | 89%                               | 243 | 32             | 29            | 12            |
| 68        | 1      | 1    |        | 6700   | PK 65+00 | 19.09.10 | 11,0           | 12,5    | 10,7 | 729    | 51    | 151                        | 120 | 91  | 79 | 68 | 51 | 38 | 523       | 274                   | 91%                               | 249 | 30             | 28            | 13            |
| 69        | 1      | 1    |        | 6800   | PK 66+00 | 19.09.10 | 11,0           | 12,7    | 10,9 | 729    | 52    | 164                        | 132 | 102 | 90 | 80 | 62 | 48 | 489       | 274                   | 78%                               | 215 | 31             | 29            | 14            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 70        | 1      | 1    |        | 6900   | PK 67+00 | 19.09.10 | 11,0           | 12,7    | 10,9 | 718    | 51    | 247                        | 189 | 127 | 104 | 85 | 59 | 42 | 349       | 274                   | 28%                                 | 75  | 57             | 61            | 17            |
| 71        | 1      | 1    |        | 7000   | PK 68+00 | 19.09.10 | 11,0           | 12,4    | 10,7 | 718    | 51    | 176                        | 138 | 98  | 85  | 70 | 50 | 36 | 456       | 274                   | 66%                                 | 182 | 38             | 39            | 14            |
| 72        | 1      | 1    |        | 7100   | PK 69+00 | 19.09.10 | 11,0           | 12,5    | 10,8 | 713    | 50    | 212                        | 160 | 113 | 96  | 82 | 61 | 44 | 392       | 274                   | 43%                                 | 118 | 52             | 47            | 16            |
| 73        | 1      | 1    |        | 7200   | PK 70+00 | 19.09.10 | 11,0           | 12,5    | 10,9 | 705    | 50    | 200                        | 158 | 116 | 99  | 84 | 61 | 44 | 406       | 274                   | 48%                                 | 132 | 43             | 42            | 17            |
| 74        | 1      | 1    |        | 7300   | PK 71+00 | 19.09.10 | 11,0           | 12,5    | 11,0 | 707    | 50    | 137                        | 108 | 82  | 72  | 63 | 48 | 37 | 550       | 274                   | 101%                                | 276 | 29             | 26            | 11            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 462       | 272                   | 70%                                 | 190 | 48             | 40            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 328       |                       | 21%                                 | 58  | 23             | 21            | 9             |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 610       |                       | 123%                                | 336 | 101            | 72            | 20            |

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK -2+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

## Suund 2: Narva-Tallinn, põhirada

## Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |     |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|-----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6  | D7 |           |                       | %                                 | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |     |    |           |                       |                                   |     |                |               |               |
| 75        | 1      | 2    |        | 7300   | PK 71+00 | 19.09.10 | 11,0           | 12,4    | 11,3 | 721    | 51    | 300                        | 260 | 210 | 188 | 167 | 130 | 99 | 300       | 274                   | 10%                               | 26  | 39             | 49            | 30            |
| 76        | 1      | 2    |        | 7200   | PK 70+00 | 19.09.10 | 11,0           | 12,4    | 11,2 | 719    | 51    | 198                        | 157 | 118 | 103 | 92  | 72  | 57 | 416       | 274                   | 52%                               | 142 | 40             | 39            | 15            |
| 77        | 1      | 2    |        | 7100   | PK 69+00 | 19.09.10 | 11,0           | 12,4    | 11,3 | 717    | 51    | 207                        | 172 | 134 | 119 | 105 | 82  | 63 | 401       | 274                   | 46%                               | 127 | 35             | 37            | 19            |
| 78        | 1      | 2    |        | 7000   | PK 68+00 | 19.09.10 | 11,0           | 12,1    | 11,2 | 713    | 50    | 288                        | 245 | 195 | 173 | 153 | 117 | 88 | 307       | 274                   | 12%                               | 33  | 43             | 50            | 29            |
| 79        | 1      | 2    |        | 6900   | PK 67+00 | 19.09.10 | 11,0           | 12,4    | 11,0 | 707    | 50    | 250                        | 206 | 157 | 138 | 122 | 93  | 71 | 342       | 274                   | 25%                               | 68  | 44             | 49            | 22            |
| 80        | 1      | 2    |        | 6800   | PK 66+00 | 19.09.10 | 11,0           | 12,5    | 11,1 | 715    | 51    | 181                        | 145 | 111 | 98  | 85  | 65  | 51 | 445       | 274                   | 62%                               | 171 | 36             | 33            | 15            |
| 81        | 1      | 2    |        | 6700   | PK 65+00 | 19.09.10 | 11,0           | 12,4    | 11,0 | 709    | 50    | 144                        | 115 | 87  | 76  | 66  | 50  | 37 | 531       | 274                   | 94%                               | 257 | 29             | 28            | 12            |
| 82        | 1      | 2    |        | 6600   | PK 64+00 | 19.09.10 | 11,0           | 12,2    | 10,9 | 713    | 50    | 150                        | 118 | 86  | 73  | 62  | 46  | 33 | 516       | 274                   | 88%                               | 242 | 32             | 32            | 12            |
| 83        | 1      | 2    |        | 6500   | PK 63+00 | 19.09.10 | 11,0           | 12,4    | 11,0 | 713    | 50    | 159                        | 120 | 83  | 69  | 57  | 39  | 26 | 492       | 274                   | 80%                               | 218 | 39             | 37            | 12            |
| 84        | 1      | 2    |        | 6400   | PK 62+00 | 19.09.10 | 11,0           | 12,5    | 11,2 | 711    | 50    | 148                        | 117 | 88  | 76  | 65  | 47  | 33 | 520       | 274                   | 90%                               | 246 | 31             | 29            | 14            |
| 85        | 1      | 2    |        | 6300   | PK 61+00 | 19.09.10 | 11,0           | 12,6    | 11,3 | 715    | 51    | 140                        | 110 | 83  | 71  | 61  | 44  | 31 | 545       | 274                   | 99%                               | 271 | 30             | 27            | 13            |
| 86        | 1      | 2    |        | 6200   | PK 60+00 | 19.09.10 | 11,0           | 12,9    | 11,3 | 713    | 50    | 121                        | 95  | 70  | 61  | 52  | 38  | 27 | 610       | 274                   | 123%                              | 336 | 26             | 25            | 10            |
| 87        | 1      | 2    |        | 6100   | PK 59+00 | 19.09.10 | 11,0           | 12,8    | 11,5 | 717    | 51    | 191                        | 142 | 99  | 80  | 68  | 48  | 32 | 428       | 274                   | 56%                               | 154 | 48             | 43            | 16            |
| 88        | 1      | 2    |        | 6000   | PK 58+00 | 19.09.10 | 11,0           | 12,9    | 11,5 | 719    | 51    | 215                        | 161 | 111 | 93  | 81  | 56  | 40 | 390       | 274                   | 42%                               | 116 | 53             | 49            | 16            |
| 89        | 1      | 2    |        | 5900   | PK 57+00 | 19.09.10 | 11,0           | 13,1    | 11,5 | 714    | 50    | 175                        | 130 | 94  | 80  | 67  | 48  | 33 | 457       | 274                   | 67%                               | 183 | 44             | 36            | 14            |
| 90        | 1      | 2    |        | 5800   | PK 56+00 | 19.09.10 | 11,0           | 13,6    | 11,6 | 715    | 51    | 151                        | 115 | 85  | 74  | 63  | 47  | 35 | 515       | 274                   | 88%                               | 241 | 35             | 29            | 12            |
| 91        | 1      | 2    |        | 5700   | PK 55+00 | 19.09.10 | 11,0           | 13,4    | 11,7 | 715    | 51    | 156                        | 119 | 88  | 77  | 67  | 50  | 36 | 500       | 274                   | 82%                               | 226 | 37             | 31            | 14            |
| 92        | 1      | 2    |        | 5600   | PK 54+00 | 19.09.10 | 11,0           | 13,2    | 11,5 | 713    | 50    | 163                        | 119 | 87  | 75  | 65  | 48  | 36 | 482       | 274                   | 76%                               | 208 | 44             | 32            | 13            |
| 93        | 1      | 2    |        | 5500   | PK 53+00 | 19.09.10 | 11,0           | 13,6    | 11,8 | 715    | 51    | 181                        | 137 | 95  | 80  | 67  | 48  | 34 | 445       | 274                   | 62%                               | 171 | 43             | 42            | 14            |
| 94        | 1      | 2    |        | 5400   | PK 52+00 | 19.09.10 | 11,0           | 13,6    | 11,2 | 715    | 51    | 174                        | 135 | 100 | 87  | 75  | 56  | 41 | 459       | 274                   | 68%                               | 185 | 39             | 34            | 15            |
| 95        | 1      | 2    |        | 5300   | PK 51+00 | 19.09.10 | 11,0           | 13,7    | 11,3 | 712    | 50    | 175                        | 132 | 94  | 80  | 68  | 49  | 35 | 456       | 274                   | 66%                               | 182 | 42             | 38            | 14            |
| 96        | 1      | 2    |        | 5200   | PK 50+00 | 19.09.10 | 11,0           | 13,6    | 11,3 | 716    | 51    | 170                        | 126 | 89  | 75  | 64  | 46  | 33 | 469       | 274                   | 71%                               | 195 | 43             | 37            | 13            |
| 97        | 1      | 2    |        | 5100   | PK 49+00 | 19.09.10 | 11,0           | 13,9    | 11,5 | 716    | 51    | 205                        | 150 | 103 | 87  | 72  | 52  | 38 | 404       | 274                   | 47%                               | 130 | 55             | 46            | 15            |
| 98        | 1      | 2    |        | 5000   | PK 48+00 | 19.09.10 | 11,0           | 14,0    | 11,3 | 714    | 50    | 187                        | 139 | 98  | 84  | 71  | 51  | 37 | 434       | 274                   | 58%                               | 160 | 48             | 40            | 14            |
| 99        | 1      | 2    |        | 4900   | PK 47+00 | 19.09.10 | 11,0           | 13,8    | 11,5 | 715    | 51    | 196                        | 150 | 105 | 88  | 74  | 51  | 35 | 418       | 274                   | 52%                               | 144 | 46             | 44            | 16            |
| 100       | 1      | 2    |        | 4800   | PK 46+00 | 19.09.10 | 11,0           | 14,2    | 11,9 | 715    | 51    | 191                        | 143 | 100 | 84  | 71  | 50  | 34 | 427       | 274                   | 56%                               | 153 | 47             | 43            | 15            |
| 101       | 1      | 2    |        | 4700   | PK 45+00 | 19.09.10 | 11,0           | 13,9    | 11,8 | 714    | 50    | 191                        | 141 | 97  | 81  | 68  | 48  | 34 | 427       | 274                   | 56%                               | 153 | 49             | 44            | 13            |
| 102       | 1      | 2    |        | 4600   | PK 44+00 | 19.09.10 | 11,0           | 13,9    | 11,4 | 713    | 50    | 186                        | 143 | 102 | 86  | 72  | 51  | 36 | 434       | 274                   | 58%                               | 160 | 43             | 41            | 15            |
| 103       | 1      | 2    |        | 4500   | PK 43+00 | 19.09.10 | 11,0           | 13,9    | 11,5 | 711    | 50    | 179                        | 138 | 98  | 83  | 70  | 49  | 35 | 447       | 274                   | 63%                               | 173 | 41             | 40            | 15            |
| 104       | 1      | 2    |        | 4400   | PK 42+00 | 19.09.10 | 11,0           | 13,7    | 11,6 | 716    | 51    | 179                        | 135 | 95  | 80  | 66  | 47  | 33 | 450       | 274                   | 64%                               | 176 | 43             | 40            | 14            |
| 105       | 1      | 2    |        | 4300   | PK 41+00 | 19.09.10 | 11,0           | 13,7    | 11,5 | 710    | 50    | 176                        | 135 | 95  | 78  | 66  | 47  | 34 | 452       | 274                   | 65%                               | 178 | 41             | 40            | 13            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 106       | 1      | 2    |        | 4200   | PK 40+00 | 19.09.10 | 11,0           | 13,6    | 11,6 | 712    | 50    | 176                        | 131 | 93  | 78  | 65  | 47 | 34 | 454       | 274                   | 66%                               | 180 | 44             | 38            | 13            |
| 107       | 1      | 2    |        | 4100   | PK 39+00 | 19.09.10 | 11,0           | 13,8    | 11,7 | 710    | 50    | 172                        | 128 | 87  | 73  | 61  | 43 | 30 | 461       | 274                   | 68%                               | 187 | 44             | 40            | 13            |
| 108       | 1      | 2    |        | 4000   | PK 38+00 | 19.09.10 | 11,0           | 13,2    | 12,3 | 711    | 50    | 175                        | 130 | 89  | 74  | 61  | 44 | 30 | 455       | 274                   | 66%                               | 181 | 45             | 41            | 13            |
| 109       | 1      | 2    |        | 3900   | PK 37+00 | 19.09.10 | 11,0           | 13,9    | 12,6 | 712    | 50    | 163                        | 124 | 89  | 75  | 64  | 47 | 32 | 483       | 274                   | 76%                               | 209 | 38             | 35            | 14            |
| 110       | 1      | 2    |        | 3800   | PK 36+00 | 19.09.10 | 11,0           | 13,6    | 12,6 | 711    | 50    | 168                        | 126 | 89  | 76  | 65  | 49 | 37 | 469       | 274                   | 71%                               | 195 | 42             | 37            | 12            |
| 111       | 1      | 2    |        | 3700   | PK 35+00 | 19.09.10 | 11,0           | 14,0    | 12,7 | 709    | 50    | 157                        | 118 | 84  | 72  | 62  | 45 | 34 | 494       | 274                   | 80%                               | 220 | 40             | 33            | 11            |
| 112       | 1      | 2    |        | 3600   | PK 34+00 | 19.09.10 | 11,0           | 14,1    | 13,0 | 708    | 50    | 197                        | 154 | 112 | 95  | 81  | 60 | 45 | 413       | 274                   | 51%                               | 139 | 43             | 42            | 15            |
| 113       | 1      | 2    |        | 3500   | PK 33+00 | 19.09.10 | 11,0           | 14,2    | 12,9 | 711    | 50    | 239                        | 188 | 139 | 120 | 102 | 73 | 52 | 356       | 274                   | 30%                               | 82  | 50             | 49            | 21            |
| 114       | 1      | 2    |        | 3400   | PK 32+00 | 19.09.10 | 11,0           | 14,2    | 12,7 | 711    | 50    | 204                        | 153 | 109 | 93  | 79  | 56 | 40 | 403       | 274                   | 47%                               | 129 | 51             | 44            | 16            |
| 115       | 1      | 2    |        | 3300   | PK 31+00 | 19.09.10 | 11,0           | 14,3    | 12,5 | 714    | 50    | 208                        | 160 | 116 | 100 | 85  | 61 | 43 | 398       | 270                   | 47%                               | 128 | 48             | 43            | 18            |
| 116       | 1      | 2    |        | 3200   | PK 30+00 | 19.09.10 | 11,0           | 14,5    | 12,8 | 712    | 50    | 192                        | 148 | 106 | 90  | 75  | 52 | 37 | 423       | 270                   | 57%                               | 153 | 44             | 41            | 15            |
| 117       | 1      | 2    |        | 3100   | PK 29+00 | 19.09.10 | 11,0           | 14,5    | 12,7 | 715    | 51    | 201                        | 148 | 101 | 84  | 70  | 49 | 35 | 410       | 270                   | 52%                               | 140 | 52             | 46            | 13            |
| 118       | 1      | 2    |        | 3000   | PK 28+00 | 19.09.10 | 11,0           | 15,0    | 12,8 | 709    | 50    | 209                        | 154 | 107 | 92  | 78  | 56 | 41 | 394       | 270                   | 46%                               | 124 | 55             | 46            | 15            |
| 119       | 1      | 2    |        | 2900   | PK 27+00 | 19.09.10 | 11,0           | 15,0    | 12,9 | 714    | 50    | 216                        | 156 | 107 | 91  | 76  | 53 | 38 | 386       | 270                   | 43%                               | 116 | 59             | 49            | 15            |
| 120       | 1      | 2    |        | 2800   | PK 26+00 | 19.09.10 | 11,0           | 14,6    | 12,9 | 713    | 50    | 229                        | 159 | 98  | 81  | 65  | 44 | 32 | 369       | 270                   | 37%                               | 99  | 69             | 61            | 12            |
| 121       | 1      | 2    |        | 2700   | PK 25+00 | 19.09.10 | 11,0           | 14,7    | 12,8 | 712    | 50    | 174                        | 130 | 90  | 75  | 63  | 45 | 33 | 457       | 270                   | 69%                               | 187 | 44             | 39            | 12            |
| 122       | 1      | 2    |        | 2600   | PK 24+00 | 19.09.10 | 11,0           | 14,4    | 12,9 | 706    | 50    | 155                        | 116 | 83  | 71  | 60  | 43 | 31 | 498       | 270                   | 84%                               | 228 | 40             | 33            | 12            |
| 123       | 1      | 2    |        | 2500   | PK 23+00 | 19.09.10 | 11,0           | 14,4    | 12,8 | 707    | 50    | 194                        | 143 | 101 | 86  | 74  | 55 | 41 | 418       | 270                   | 55%                               | 148 | 51             | 42            | 13            |
| 124       | 1      | 2    |        | 2400   | PK 22+00 | 19.09.10 | 11,0           | 14,4    | 12,8 | 715    | 51    | 204                        | 146 | 99  | 84  | 71  | 51 | 37 | 406       | 270                   | 50%                               | 136 | 57             | 46            | 14            |
| 125       | 1      | 2    |        | 2300   | PK 21+00 | 19.09.10 | 11,0           | 14,4    | 13,0 | 714    | 50    | 182                        | 132 | 86  | 72  | 61  | 44 | 33 | 444       | 270                   | 64%                               | 174 | 49             | 46            | 12            |
| 126       | 1      | 2    |        | 2200   | PK 20+00 | 19.09.10 | 11,0           | 14,2    | 12,9 | 714    | 50    | 202                        | 146 | 103 | 84  | 72  | 53 | 40 | 407       | 270                   | 51%                               | 137 | 56             | 43            | 13            |
| 127       | 1      | 2    |        | 2100   | PK 19+00 | 19.09.10 | 11,0           | 14,4    | 12,8 | 710    | 50    | 206                        | 152 | 105 | 89  | 76  | 56 | 41 | 400       | 270                   | 48%                               | 130 | 53             | 47            | 15            |
| 128       | 1      | 2    |        | 2000   | PK 18+00 | 19.09.10 | 11,0           | 14,6    | 13,1 | 716    | 51    | 172                        | 124 | 85  | 71  | 61  | 43 | 31 | 464       | 270                   | 72%                               | 194 | 47             | 39            | 12            |
| 129       | 1      | 2    |        | 1900   | PK 17+00 | 19.09.10 | 11,0           | 14,5    | 13,2 | 708    | 50    | 223                        | 175 | 129 | 112 | 96  | 69 | 50 | 374       | 270                   | 38%                               | 104 | 48             | 46            | 19            |
| 130       | 1      | 2    |        | 1800   | PK 16+00 | 19.09.10 | 11,0           | 14,1    | 13,1 | 709    | 50    | 178                        | 135 | 91  | 73  | 61  | 44 | 31 | 447       | 270                   | 66%                               | 177 | 44             | 44            | 13            |
| 131       | 1      | 2    |        | 1700   | PK 15+00 | 19.09.10 | 11,0           | 14,4    | 12,9 | 712    | 50    | 220                        | 152 | 98  | 80  | 66  | 46 | 32 | 380       | 270                   | 41%                               | 110 | 68             | 54            | 14            |
| 132       | 1      | 2    |        | 1600   | PK 14+00 | 19.09.10 | 11,0           | 14,6    | 12,8 | 709    | 50    | 205                        | 147 | 99  | 82  | 68  | 48 | 34 | 401       | 270                   | 48%                               | 131 | 57             | 48            | 14            |
| 133       | 1      | 2    |        | 1500   | PK 13+00 | 19.09.10 | 11,0           | 14,5    | 12,9 | 712    | 50    | 201                        | 136 | 86  | 72  | 60  | 43 | 31 | 409       | 270                   | 51%                               | 139 | 64             | 50            | 12            |
| 134       | 1      | 2    |        | 1400   | PK 12+00 | 19.09.10 | 11,0           | 14,6    | 13,0 | 709    | 50    | 187                        | 133 | 90  | 76  | 64  | 46 | 33 | 431       | 270                   | 60%                               | 161 | 54             | 43            | 13            |
| 135       | 1      | 2    |        | 1300   | PK 11+00 | 19.09.10 | 11,0           | 14,4    | 13,1 | 702    | 50    | 168                        | 122 | 86  | 73  | 62  | 45 | 33 | 466       | 270                   | 72%                               | 196 | 47             | 36            | 13            |
| 136       | 1      | 2    |        | 1200   | PK 10+00 | 19.09.10 | 11,0           | 14,7    | 13,2 | 705    | 50    | 160                        | 119 | 88  | 77  | 66  | 49 | 36 | 485       | 270                   | 80%                               | 215 | 42             | 31            | 14            |
| 137       | 1      | 2    |        | 1100   | PK 9+00  | 19.09.10 | 11,0           | 14,9    | 13,4 | 707    | 50    | 159                        | 115 | 83  | 73  | 62  | 46 | 32 | 488       | 270                   | 81%                               | 218 | 45             | 32            | 13            |
| 138       | 1      | 2    |        | 1000   | PK 8+00  | 19.09.10 | 11,0           | 15,1    | 13,5 | 709    | 50    | 200                        | 148 | 105 | 90  | 76  | 56 | 39 | 408       | 270                   | 51%                               | 138 | 52             | 43            | 17            |
| 139       | 1      | 2    |        | 900    | PK 7+00  | 19.09.10 | 11,0           | 15,0    | 13,6 | 702    | 50    | 122                        | 90  | 67  | 59  | 52  | 40 | 30 | 598       | 270                   | 122%                              | 328 | 33             | 23            | 9             |
| 140       | 1      | 2    |        | 800    | PK 6+00  | 19.09.10 | 11,0           | 14,8    | 13,5 | 705    | 50    | 167                        | 127 | 89  | 76  | 64  | 47 | 34 | 469       | 270                   | 74%                               | 199 | 41             | 38            | 13            |
| 141       | 1      | 2    |        | 700    | PK 5+00  | 19.09.10 | 11,0           | 16,0    | 13,8 | 707    | 50    | 166                        | 118 | 80  | 67  | 56  | 39 | 27 | 473       | 270                   | 75%                               | 203 | 48             | 38            | 12            |
| 142       | 1      | 2    |        | 600    | PK 4+00  | 19.09.10 | 11,0           | 15,9    | 14,5 | 708    | 50    | 173                        | 130 | 92  | 78  | 66  | 48 | 34 | 457       | 270                   | 69%                               | 187 | 44             | 38            | 13            |
| 143       | 1      | 2    |        | 500    | PK 3+00  | 19.09.10 | 11,0           | 15,8    | 14,6 | 705    | 50    | 181                        | 133 | 88  | 73  | 59  | 40 | 28 | 440       | 270                   | 63%                               | 170 | 49             | 45            | 12            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 144       | 1      | 2    |        | 400    | PK 2+00  | 19.09.10 | 11,0           | 15,1    | 14,5 | 713    | 50    | 279                        | 219 | 154 | 129 | 109 | 76 | 56 | 315       | 270                   | 17%                                 | 45  | 60             | 64            | 21            |
| 145       | 1      | 2    |        | 300    | PK 1+00  | 19.09.10 | 11,0           | 16,4    | 14,6 | 710    | 50    | 195                        | 156 | 119 | 103 | 90  | 67 | 50 | 418       | 270                   | 55%                                 | 148 | 38             | 37            | 17            |
| 146       | 1      | 2    |        | 200    | PK 0+00  | 19.09.10 | 11,0           | 16,5    | 14,5 | 712    | 50    | 218                        | 166 | 116 | 98  | 83  | 60 | 44 | 383       | 270                   | 42%                                 | 113 | 52             | 50            | 16            |
| 147       | 1      | 2    |        | 100    | PK -1+00 | 19.09.10 | 11,0           | 16,5    | 14,1 | 708    | 50    | 264                        | 207 | 150 | 129 | 109 | 78 | 56 | 328       | 270                   | 21%                                 | 58  | 56             | 57            | 22            |
| 148       | 1      | 2    |        | 0      | PK -2+00 | 19.09.10 | 11,0           | 15,1    | 13,5 | 705    | 50    | 217                        | 172 | 127 | 110 | 95  | 70 | 50 | 381       | 270                   | 41%                                 | 111 | 45             | 45            | 20            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 437       | 272                   | 61%                                 | 165 | 46             | 41            | 15            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 300       |                       | 10%                                 | 26  | 26             | 23            | 9             |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 610       |                       | 123%                                | 336 | 69             | 64            | 30            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 1         | 1      | 1    |        | 200    | PK 0+00  | 13.05.11 | 14,1           | 16,8    | 12,9 | 725    | 51    | 194                        | 149 | 107 | 92  | 79 | 58 | 43 | 485       | 270                   | 80%                                 | 215 | 44             | 41            | 14            |
| 2         | 1      | 1    |        | 300    | PK 1+00  | 13.05.11 | 14,1           | 16,8    | 12,8 | 716    | 51    | 191                        | 159 | 108 | 104 | 85 | 61 | 49 | 488       | 270                   | 81%                                 | 218 | 31             | 50            | 12            |
| 3         | 1      | 1    |        | 400    | PK 2+00  | 13.05.11 | 14,1           | 16,8    | 12,9 | 726    | 51    | 223                        | 153 | 94  | 76  | 65 | 45 | 38 | 435       | 270                   | 61%                                 | 165 | 68             | 57            | 7             |
| 4         | 1      | 1    |        | 500    | PK 3+00  | 13.05.11 | 14,1           | 16,8    | 13,2 | 719    | 51    | 226                        | 145 | 86  | 70  | 58 | 40 | 29 | 427       | 270                   | 58%                                 | 157 | 80             | 58            | 11            |
| 5         | 1      | 1    |        | 600    | PK 4+00  | 13.05.11 | 14,1           | 16,8    | 13,4 | 722    | 51    | 248                        | 176 | 114 | 95  | 79 | 55 | 40 | 399       | 270                   | 48%                                 | 129 | 70             | 61            | 14            |
| 6         | 1      | 1    |        | 700    | PK 5+00  | 13.05.11 | 14,1           | 16,8    | 13,4 | 715    | 51    | 255                        | 178 | 113 | 92  | 76 | 51 | 35 | 387       | 270                   | 43%                                 | 117 | 76             | 64            | 16            |
| 7         | 1      | 1    |        | 800    | PK 6+00  | 13.05.11 | 14,1           | 16,8    | 13,7 | 716    | 51    | 248                        | 162 | 102 | 85  | 71 | 52 | 41 | 396       | 270                   | 47%                                 | 126 | 85             | 59            | 11            |
| 8         | 1      | 1    |        | 900    | PK 7+00  | 13.05.11 | 14,1           | 16,8    | 13,7 | 720    | 51    | 243                        | 160 | 104 | 86  | 72 | 49 | 35 | 404       | 270                   | 50%                                 | 134 | 81             | 55            | 14            |
| 9         | 1      | 1    |        | 1000   | PK 8+00  | 13.05.11 | 14,1           | 16,8    | 13,7 | 714    | 50    | 254                        | 184 | 121 | 100 | 84 | 58 | 40 | 388       | 270                   | 44%                                 | 118 | 69             | 62            | 18            |
| 10        | 1      | 1    |        | 1100   | PK 9+00  | 13.05.11 | 14,1           | 16,8    | 13,5 | 723    | 51    | 283                        | 204 | 134 | 113 | 95 | 68 | 49 | 359       | 270                   | 33%                                 | 89  | 78             | 68            | 18            |
| 11        | 1      | 1    |        | 1200   | PK 10+00 | 13.05.11 | 14,1           | 16,8    | 13,4 | 708    | 50    | 270                        | 166 | 101 | 82  | 68 | 47 | 33 | 367       | 270                   | 36%                                 | 97  | 104            | 65            | 14            |
| 12        | 1      | 1    |        | 1300   | PK 11+00 | 13.05.11 | 14,1           | 16,8    | 13,4 | 715    | 51    | 259                        | 180 | 111 | 90  | 74 | 51 | 37 | 382       | 270                   | 42%                                 | 112 | 78             | 68            | 14            |
| 13        | 1      | 1    |        | 1400   | PK 12+00 | 13.05.11 | 14,1           | 16,8    | 13,3 | 711    | 50    | 321                        | 196 | 112 | 91  | 75 | 53 | 39 | 321       | 270                   | 19%                                 | 51  | 125            | 83            | 14            |
| 14        | 1      | 1    |        | 1500   | PK 13+00 | 13.05.11 | 14,1           | 16,8    | 13,2 | 719    | 51    | 228                        | 158 | 103 | 85  | 71 | 50 | 38 | 425       | 270                   | 57%                                 | 155 | 69             | 54            | 13            |
| 15        | 1      | 1    |        | 1600   | PK 14+00 | 13.05.11 | 14,1           | 16,8    | 13,2 | 720    | 51    | 237                        | 168 | 110 | 92  | 78 | 55 | 41 | 413       | 270                   | 53%                                 | 143 | 67             | 56            | 14            |
| 16        | 1      | 1    |        | 1700   | PK 15+00 | 13.05.11 | 14,1           | 16,8    | 13,2 | 717    | 51    | 171                        | 108 | 68  | 55  | 46 | 31 | 22 | 532       | 270                   | 97%                                 | 262 | 62             | 40            | 9             |
| 17        | 1      | 1    |        | 1800   | PK 16+00 | 13.05.11 | 14,1           | 16,8    | 13,4 | 718    | 51    | 187                        | 123 | 75  | 63  | 53 | 35 | 26 | 497       | 270                   | 84%                                 | 227 | 63             | 47            | 9             |
| 18        | 1      | 1    |        | 1900   | PK 17+00 | 13.05.11 | 14,1           | 16,8    | 13,4 | 721    | 51    | 201                        | 139 | 89  | 75  | 63 | 45 | 34 | 471       | 270                   | 74%                                 | 201 | 60             | 49            | 11            |
| 19        | 1      | 1    |        | 2000   | PK 18+00 | 13.05.11 | 14,1           | 16,8    | 13,5 | 713    | 50    | 204                        | 150 | 100 | 86  | 72 | 53 | 39 | 460       | 270                   | 70%                                 | 190 | 53             | 50            | 14            |
| 20        | 1      | 1    |        | 2100   | PK 19+00 | 13.05.11 | 14,1           | 16,8    | 13,4 | 717    | 51    | 200                        | 144 | 96  | 80  | 69 | 49 | 36 | 470       | 270                   | 74%                                 | 200 | 56             | 47            | 12            |
| 21        | 1      | 1    |        | 2200   | PK 20+00 | 13.05.11 | 14,1           | 16,8    | 13,7 | 718    | 51    | 214                        | 157 | 106 | 89  | 76 | 54 | 39 | 445       | 270                   | 65%                                 | 175 | 57             | 50            | 15            |
| 22        | 1      | 1    |        | 2300   | PK 21+00 | 13.05.11 | 14,1           | 16,8    | 13,3 | 715    | 51    | 231                        | 168 | 111 | 93  | 78 | 55 | 40 | 419       | 270                   | 55%                                 | 149 | 62             | 56            | 15            |
| 23        | 1      | 1    |        | 2400   | PK 22+00 | 13.05.11 | 14,1           | 16,8    | 13,4 | 729    | 52    | 242                        | 172 | 112 | 94  | 79 | 56 | 40 | 409       | 270                   | 51%                                 | 139 | 69             | 58            | 15            |
| 24        | 1      | 1    |        | 2500   | PK 23+00 | 13.05.11 | 14,1           | 16,8    | 13,6 | 730    | 52    | 187                        | 135 | 90  | 77  | 64 | 46 | 33 | 503       | 270                   | 86%                                 | 233 | 50             | 44            | 13            |
| 25        | 1      | 1    |        | 2600   | PK 24+00 | 13.05.11 | 14,1           | 16,8    | 13,5 | 728    | 51    | 192                        | 141 | 95  | 79  | 67 | 47 | 35 | 491       | 270                   | 82%                                 | 221 | 50             | 45            | 12            |
| 26        | 1      | 1    |        | 2700   | PK 25+00 | 13.05.11 | 14,1           | 16,8    | 13,6 | 725    | 51    | 175                        | 127 | 88  | 77  | 64 | 47 | 34 | 528       | 270                   | 95%                                 | 258 | 47             | 38            | 12            |
| 27        | 1      | 1    |        | 2800   | PK 26+00 | 13.05.11 | 14,1           | 16,8    | 13,9 | 725    | 51    | 188                        | 141 | 92  | 80  | 66 | 47 | 34 | 497       | 270                   | 84%                                 | 227 | 46             | 48            | 13            |
| 28        | 1      | 1    |        | 2900   | PK 27+00 | 13.05.11 | 14,1           | 16,8    | 14,1 | 720    | 51    | 177                        | 137 | 96  | 83  | 71 | 52 | 38 | 519       | 270                   | 92%                                 | 249 | 40             | 39            | 13            |
| 29        | 1      | 1    |        | 3000   | PK 28+00 | 13.05.11 | 14,1           | 16,8    | 14,5 | 723    | 51    | 188                        | 143 | 102 | 89  | 77 | 57 | 43 | 498       | 270                   | 84%                                 | 228 | 44             | 40            | 14            |
| 30        | 1      | 1    |        | 3100   | PK 29+00 | 13.05.11 | 14,1           | 16,8    | 14,9 | 724    | 51    | 206                        | 150 | 101 | 87  | 74 | 52 | 38 | 462       | 270                   | 71%                                 | 192 | 55             | 48            | 13            |
| 31        | 1      | 1    |        | 3200   | PK 30+00 | 13.05.11 | 14,1           | 16,8    | 15,1 | 718    | 51    | 219                        | 168 | 119 | 105 | 86 | 60 | 46 | 438       | 270                   | 62%                                 | 168 | 50             | 48            | 14            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 32        | 1      | 1    |        | 3300   | PK 31+00 | 13.05.11 | 14,1           | 16,8    | 15,3 | 728    | 51    | 222                        | 167 | 113 | 95  | 79 | 54 | 38 | 439       | 270                   | 62%                               | 169 | 53             | 53            | 16            |
| 33        | 1      | 1    |        | 3400   | PK 32+00 | 13.05.11 | 14,1           | 16,8    | 15,4 | 712    | 50    | 219                        | 167 | 117 | 100 | 86 | 60 | 44 | 436       | 274                   | 59%                               | 162 | 51             | 49            | 16            |
| 34        | 1      | 1    |        | 3500   | PK 33+00 | 13.05.11 | 14,1           | 16,8    | 15,0 | 704    | 50    | 216                        | 169 | 123 | 107 | 93 | 69 | 54 | 437       | 274                   | 59%                               | 163 | 46             | 47            | 15            |
| 35        | 1      | 1    |        | 3600   | PK 34+00 | 13.05.11 | 14,1           | 16,8    | 15,0 | 708    | 50    | 162                        | 125 | 91  | 79  | 69 | 51 | 44 | 549       | 274                   | 101%                              | 275 | 37             | 34            | 7             |
| 36        | 1      | 1    |        | 3700   | PK 35+00 | 13.05.11 | 14,1           | 16,8    | 15,0 | 705    | 50    | 208                        | 155 | 107 | 90  | 76 | 53 | 38 | 449       | 274                   | 64%                               | 175 | 53             | 49            | 15            |
| 37        | 1      | 1    |        | 3800   | PK 36+00 | 13.05.11 | 14,1           | 16,8    | 15,1 | 711    | 50    | 164                        | 118 | 77  | 66  | 55 | 40 | 32 | 547       | 274                   | 100%                              | 273 | 45             | 41            | 7             |
| 38        | 1      | 1    |        | 3900   | PK 37+00 | 13.05.11 | 14,1           | 16,8    | 15,1 | 708    | 50    | 169                        | 127 | 85  | 74  | 63 | 45 | 35 | 533       | 274                   | 95%                               | 259 | 42             | 41            | 10            |
| 39        | 1      | 1    |        | 4000   | PK 38+00 | 13.05.11 | 14,1           | 16,8    | 15,3 | 708    | 50    | 191                        | 136 | 91  | 77  | 66 | 47 | 35 | 483       | 274                   | 76%                               | 209 | 55             | 45            | 11            |
| 40        | 1      | 1    |        | 4100   | PK 39+00 | 13.05.11 | 14,1           | 16,8    | 15,5 | 710    | 50    | 199                        | 138 | 92  | 77  | 66 | 47 | 34 | 469       | 274                   | 71%                               | 195 | 61             | 46            | 13            |
| 41        | 1      | 1    |        | 4200   | PK 40+00 | 13.05.11 | 14,1           | 16,8    | 15,5 | 709    | 50    | 205                        | 151 | 104 | 87  | 74 | 52 | 38 | 458       | 274                   | 67%                               | 184 | 53             | 47            | 14            |
| 42        | 1      | 1    |        | 4300   | PK 41+00 | 13.05.11 | 14,1           | 16,8    | 15,6 | 709    | 50    | 202                        | 144 | 95  | 80  | 68 | 49 | 39 | 463       | 274                   | 69%                               | 189 | 58             | 49            | 11            |
| 43        | 1      | 1    |        | 4400   | PK 42+00 | 13.05.11 | 14,1           | 16,8    | 15,8 | 704    | 50    | 178                        | 130 | 89  | 75  | 63 | 45 | 34 | 507       | 274                   | 85%                               | 233 | 48             | 41            | 12            |
| 44        | 1      | 1    |        | 4500   | PK 43+00 | 13.05.11 | 14,1           | 16,8    | 15,6 | 713    | 50    | 167                        | 123 | 84  | 72  | 61 | 44 | 36 | 539       | 274                   | 97%                               | 265 | 44             | 39            | 9             |
| 45        | 1      | 1    |        | 4600   | PK 44+00 | 13.05.11 | 14,1           | 16,8    | 15,2 | 716    | 51    | 196                        | 138 | 89  | 75  | 62 | 44 | 33 | 478       | 274                   | 74%                               | 204 | 57             | 48            | 11            |
| 46        | 1      | 1    |        | 4700   | PK 45+00 | 13.05.11 | 14,1           | 16,8    | 15,4 | 713    | 50    | 163                        | 115 | 78  | 66  | 55 | 40 | 29 | 550       | 274                   | 101%                              | 276 | 47             | 37            | 11            |
| 47        | 1      | 1    |        | 4800   | PK 46+00 | 13.05.11 | 14,1           | 16,8    | 15,3 | 710    | 50    | 220                        | 155 | 100 | 83  | 69 | 47 | 34 | 432       | 274                   | 58%                               | 158 | 65             | 55            | 13            |
| 48        | 1      | 1    |        | 4900   | PK 47+00 | 13.05.11 | 14,1           | 16,8    | 15,8 | 710    | 50    | 175                        | 128 | 87  | 73  | 62 | 43 | 31 | 518       | 274                   | 89%                               | 244 | 47             | 40            | 11            |
| 49        | 1      | 1    |        | 5000   | PK 48+00 | 13.05.11 | 14,1           | 16,8    | 16,5 | 716    | 51    | 212                        | 147 | 92  | 76  | 63 | 44 | 34 | 448       | 274                   | 64%                               | 174 | 64             | 54            | 11            |
| 50        | 1      | 1    |        | 5100   | PK 49+00 | 13.05.11 | 14,1           | 16,8    | 17,3 | 713    | 50    | 192                        | 146 | 103 | 88  | 76 | 55 | 42 | 483       | 274                   | 76%                               | 209 | 46             | 43            | 13            |
| 51        | 1      | 1    |        | 5200   | PK 50+00 | 13.05.11 | 17,4           | 26,9    | 17,2 | 718    | 51    | 153                        | 114 | 82  | 71  | 61 | 44 | 31 | 593       | 274                   | 116%                              | 319 | 39             | 31            | 12            |
| 52        | 1      | 1    |        | 5300   | PK 51+00 | 13.05.11 | 17,4           | 26,9    | 17,2 | 709    | 50    | 184                        | 139 | 96  | 84  | 72 | 48 | 36 | 508       | 274                   | 86%                               | 234 | 44             | 43            | 12            |
| 53        | 1      | 1    |        | 5400   | PK 52+00 | 13.05.11 | 17,4           | 26,9    | 16,9 | 717    | 51    | 183                        | 137 | 98  | 85  | 73 | 51 | 39 | 514       | 274                   | 88%                               | 240 | 46             | 39            | 12            |
| 54        | 1      | 1    |        | 5500   | PK 53+00 | 13.05.11 | 17,4           | 26,9    | 17,3 | 705    | 50    | 215                        | 155 | 100 | 83  | 68 | 48 | 36 | 447       | 274                   | 63%                               | 173 | 60             | 55            | 11            |
| 55        | 1      | 1    |        | 5600   | PK 54+00 | 13.05.11 | 17,4           | 26,9    | 17,4 | 713    | 50    | 160                        | 123 | 89  | 76  | 66 | 48 | 36 | 569       | 274                   | 108%                              | 295 | 37             | 34            | 12            |
| 56        | 1      | 1    |        | 5700   | PK 55+00 | 13.05.11 | 17,4           | 26,9    | 17,4 | 706    | 50    | 175                        | 130 | 92  | 79  | 68 | 50 | 37 | 526       | 274                   | 92%                               | 252 | 46             | 37            | 14            |
| 57        | 1      | 1    |        | 5800   | PK 56+00 | 13.05.11 | 17,4           | 26,9    | 17,1 | 709    | 50    | 183                        | 136 | 91  | 76  | 63 | 44 | 35 | 511       | 274                   | 86%                               | 237 | 47             | 44            | 10            |
| 58        | 1      | 1    |        | 5900   | PK 57+00 | 13.05.11 | 17,4           | 26,9    | 17,0 | 716    | 51    | 188                        | 138 | 90  | 75  | 62 | 43 | 31 | 504       | 274                   | 84%                               | 230 | 49             | 47            | 12            |
| 59        |        |      |        | 6000   | PK 58+00 | 13.05.11 | 17,4           | 26,9    | 17,4 | 715    | 51    | 205                        | 142 | 88  | 72  | 58 | 39 | 27 | 470       | 274                   | 72%                               | 196 | 62             | 53            | 12            |
| 60        | 1      | 1    |        | 6100   | PK 59+00 | 13.05.11 | 17,4           | 26,9    | 18,0 | 727    | 51    | 226                        | 156 | 99  | 81  | 67 | 47 | 34 | 440       | 274                   | 61%                               | 166 | 68             | 56            | 13            |
| 61        | 1      | 1    |        | 6200   | PK 60+00 | 13.05.11 | 17,4           | 26,9    | 18,3 | 727    | 51    | 233                        | 163 | 103 | 87  | 71 | 49 | 35 | 430       | 274                   | 57%                               | 156 | 67             | 58            | 14            |
| 62        | 1      | 1    |        | 6300   | PK 61+00 | 13.05.11 | 17,4           | 26,9    | 17,8 | 726    | 51    | 204                        | 146 | 95  | 79  | 65 | 43 | 31 | 476       | 274                   | 74%                               | 202 | 57             | 50            | 12            |
| 63        | 1      | 1    |        | 6400   | PK 62+00 | 13.05.11 | 17,4           | 26,9    | 17,5 | 731    | 52    | 146                        | 116 | 86  | 74  | 65 | 47 | 36 | 626       | 274                   | 128%                              | 352 | 29             | 29            | 11            |
| 64        | 1      | 1    |        | 6500   | PK 63+00 | 13.05.11 | 17,4           | 26,9    | 17,8 | 728    | 51    | 211                        | 160 | 112 | 94  | 80 | 55 | 38 | 466       | 274                   | 70%                               | 192 | 50             | 47            | 16            |
| 65        | 1      | 1    |        | 6600   | PK 64+00 | 13.05.11 | 17,4           | 26,9    | 18,3 | 729    | 52    | 194                        | 139 | 92  | 79  | 65 | 45 | 30 | 499       | 274                   | 82%                               | 225 | 53             | 45            | 15            |
| 66        | 1      | 1    |        | 6700   | PK 65+00 | 13.05.11 | 17,4           | 26,9    | 18,3 | 724    | 51    | 168                        | 125 | 87  | 74  | 63 | 45 | 34 | 554       | 274                   | 102%                              | 280 | 43             | 37            | 11            |
| 67        | 1      | 1    |        | 6800   | PK 66+00 | 13.05.11 | 17,4           | 26,9    | 18,5 | 720    | 51    | 175                        | 133 | 97  | 86  | 73 | 54 | 45 | 536       | 274                   | 96%                               | 262 | 41             | 35            | 9             |
| 68        | 1      | 1    |        | 6900   | PK 67+00 | 13.05.11 | 17,4           | 26,9    | 19,0 | 703    | 50    | 315                        | 224 | 138 | 113 | 89 | 59 | 42 | 330       | 274                   | 20%                               | 56  | 92             | 86            | 17            |
| 69        | 1      | 1    |        | 7000   | PK 68+00 | 13.05.11 | 17,4           | 26,9    | 19,1 | 708    | 50    | 193                        | 140 | 91  | 77  | 63 | 44 | 32 | 489       | 274                   | 79%                               | 215 | 52             | 49            | 13            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |    |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4 | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 70        | 1      | 1    |        | 7100   | PK 69+00 | 13.05.11 | 17,4           | 26,9    | 18,9 | 718    | 51    | 239                        | 165 | 102 | 83 | 69 | 48 | 35 | 417       | 274                   | 52%                                 | 143 | 72             | 62            | 13            |
| 71        | 1      | 1    |        | 7200   | PK 70+00 | 13.05.11 | 17,4           | 26,9    | 19,2 | 714    | 50    | 220                        | 158 | 104 | 87 | 72 | 50 | 37 | 443       | 274                   | 62%                                 | 169 | 62             | 54            | 13            |
| 72        | 1      | 1    |        | 7300   | PK 71+00 | 13.05.11 | 17,4           | 26,9    | 19,4 | 712    | 50    | 190                        | 138 | 94  | 80 | 69 | 50 | 39 | 497       | 274                   | 81%                                 | 223 | 52             | 44            | 11            |

KESKMINE: 469 272 72% 197 57 49 13

Min: 321 19% 51 29 29 7

Max: 626 128% 352 125 86 18

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |     |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|-----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6  | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |     |    |           |                       |                                     |     |                |               |               |
| 73        | 1      | 2    |        | 7300   | PK 71+00 | 13.05.11 | 19,4           | 28,6    | 16,9 | 701    | 50    | 354                        | 287 | 210 | 183 | 159 | 121 | 95 | 303       | 274                   | 10%                                 | 29  | 68             | 77            | 26            |
| 74        | 1      | 2    |        | 7200   | PK 70+00 | 13.05.11 | 19,4           | 28,6    | 16,7 | 710    | 50    | 256                        | 192 | 132 | 112 | 96  | 72  | 56 | 396       | 274                   | 45%                                 | 122 | 63             | 60            | 16            |
| 77        | 1      | 2    |        | 7100   | PK 69+00 | 13.05.11 | 19,4           | 28,6    | 16,8 | 708    | 50    | 282                        | 213 | 151 | 130 | 113 | 84  | 64 | 365       | 274                   | 33%                                 | 91  | 69             | 63            | 20            |
| 78        | 1      | 2    |        | 7000   | PK 68+00 | 13.05.11 | 19,4           | 28,6    | 17,0 | 715    | 51    | 391                        | 317 | 233 | 202 | 175 | 129 | 96 | 284       | 274                   | 4%                                  | 10  | 73             | 83            | 33            |
| 79        | 1      | 2    |        | 6900   | PK 67+00 | 13.05.11 | 19,4           | 28,6    | 17,4 | 708    | 50    | 291                        | 231 | 168 | 145 | 127 | 94  | 71 | 356       | 274                   | 30%                                 | 82  | 60             | 63            | 23            |
| 80        | 1      | 2    |        | 6800   | PK 66+00 | 13.05.11 | 19,4           | 28,6    | 17,8 | 708    | 50    | 191                        | 146 | 104 | 90  | 78  | 59  | 46 | 498       | 274                   | 82%                                 | 224 | 45             | 42            | 13            |
| 81        | 1      | 2    |        | 6700   | PK 65+00 | 13.05.11 | 19,4           | 28,6    | 17,4 | 709    | 50    | 183                        | 136 | 93  | 78  | 65  | 45  | 33 | 517       | 274                   | 89%                                 | 243 | 47             | 43            | 12            |
| 82        | 1      | 2    |        | 6600   | PK 64+00 | 13.05.11 | 19,4           | 28,6    | 17,4 | 710    | 50    | 164                        | 126 | 90  | 77  | 66  | 47  | 33 | 563       | 274                   | 105%                                | 289 | 38             | 36            | 13            |
| 83        | 1      | 2    |        | 6500   | PK 63+00 | 13.05.11 | 19,4           | 28,6    | 17,1 | 711    | 50    | 234                        | 172 | 111 | 92  | 74  | 49  | 35 | 426       | 274                   | 55%                                 | 152 | 61             | 61            | 14            |
| 84        | 1      | 2    |        | 6400   | PK 62+00 | 13.05.11 | 19,4           | 28,6    | 16,8 | 707    | 50    | 189                        | 146 | 104 | 89  | 75  | 53  | 37 | 501       | 274                   | 83%                                 | 227 | 43             | 42            | 16            |
| 85        | 1      | 2    |        | 6300   | PK 61+00 | 13.05.11 | 19,4           | 28,6    | 16,5 | 706    | 50    | 155                        | 121 | 86  | 74  | 62  | 42  | 30 | 587       | 274                   | 114%                                | 313 | 34             | 34            | 13            |
| 86        | 1      | 2    |        | 6200   | PK 60+00 | 13.05.11 | 19,4           | 28,6    | 16,5 | 705    | 50    | 154                        | 119 | 83  | 70  | 59  | 40  | 29 | 589       | 274                   | 115%                                | 315 | 35             | 36            | 11            |
| 87        | 1      | 2    |        | 6100   | PK 59+00 | 13.05.11 | 19,4           | 28,6    | 16,7 | 705    | 50    | 227                        | 159 | 102 | 84  | 69  | 46  | 33 | 433       | 274                   | 58%                                 | 159 | 68             | 57            | 14            |
| 88        | 1      | 2    |        | 6000   | PK 58+00 | 13.05.11 | 19,4           | 28,6    | 17,2 | 712    | 50    | 253                        | 173 | 110 | 90  | 75  | 51  | 37 | 400       | 274                   | 46%                                 | 126 | 80             | 63            | 13            |
| 89        | 1      | 2    |        | 5900   | PK 57+00 | 13.05.11 | 19,4           | 28,6    | 16,7 | 710    | 50    | 178                        | 126 | 86  | 72  | 61  | 41  | 29 | 527       | 274                   | 92%                                 | 253 | 52             | 40            | 12            |
| 90        | 1      | 2    |        | 5800   | PK 56+00 | 13.05.11 | 19,4           | 28,6    | 17,3 | 716    | 51    | 171                        | 122 | 86  | 73  | 62  | 44  | 31 | 548       | 274                   | 100%                                | 274 | 48             | 36            | 12            |
| 91        | 1      | 2    |        | 5700   | PK 55+00 | 13.05.11 | 19,4           | 28,6    | 17,8 | 715    | 51    | 187                        | 131 | 91  | 77  | 66  | 47  | 35 | 510       | 274                   | 86%                                 | 236 | 56             | 39            | 12            |
| 92        | 1      | 2    |        | 5600   | PK 54+00 | 13.05.11 | 19,4           | 28,6    | 17,6 | 713    | 50    | 177                        | 128 | 88  | 74  | 64  | 46  | 33 | 531       | 274                   | 94%                                 | 257 | 49             | 39            | 12            |
| 93        | 1      | 2    |        | 5500   | PK 53+00 | 13.05.11 | 19,4           | 28,6    | 17,2 | 710    | 50    | 214                        | 146 | 93  | 77  | 63  | 44  | 32 | 457       | 274                   | 67%                                 | 183 | 67             | 53            | 12            |
| 94        | 1      | 2    |        | 5400   | PK 52+00 | 13.05.11 | 19,4           | 28,6    | 17,0 | 708    | 50    | 196                        | 142 | 100 | 86  | 73  | 53  | 39 | 488       | 274                   | 78%                                 | 214 | 54             | 42            | 14            |
| 95        | 1      | 2    |        | 5300   | PK 51+00 | 13.05.11 | 19,4           | 28,6    | 17,3 | 718    | 51    | 218                        | 152 | 100 | 84  | 70  | 49  | 34 | 453       | 274                   | 65%                                 | 179 | 65             | 51            | 14            |
| 96        | 1      | 2    |        | 5200   | PK 50+00 | 13.05.11 | 19,4           | 28,6    | 17,2 | 714    | 50    | 214                        | 150 | 100 | 83  | 70  | 49  | 35 | 459       | 274                   | 67%                                 | 185 | 63             | 50            | 14            |
| 97        | 1      | 2    |        | 5100   | PK 49+00 | 13.05.11 | 19,4           | 28,6    | 17,0 | 709    | 50    | 227                        | 156 | 97  | 80  | 66  | 45  | 33 | 435       | 274                   | 59%                                 | 161 | 71             | 58            | 12            |
| 98        | 1      | 2    |        | 5000   | PK 48+00 | 13.05.11 | 19,4           | 28,6    | 17,0 | 706    | 50    | 223                        | 161 | 100 | 83  | 68  | 45  | 32 | 439       | 274                   | 60%                                 | 165 | 62             | 62            | 13            |
| 99        | 1      | 2    |        | 4900   | PK 47+00 | 13.05.11 | 19,4           | 28,6    | 17,1 | 710    | 50    | 242                        | 166 | 101 | 82  | 68  | 45  | 32 | 414       | 274                   | 51%                                 | 140 | 75             | 65            | 13            |
| 100       | 1      | 2    |        | 4800   | PK 46+00 | 13.05.11 | 19,4           | 28,6    | 16,9 | 707    | 50    | 205                        | 146 | 96  | 78  | 66  | 44  | 31 | 470       | 274                   | 71%                                 | 196 | 59             | 50            | 13            |
| 101       | 1      | 2    |        | 4700   | PK 45+00 | 13.05.11 | 19,4           | 28,6    | 17,3 | 708    | 50    | 212                        | 150 | 96  | 80  | 66  | 45  | 32 | 458       | 274                   | 67%                                 | 184 | 63             | 54            | 13            |
| 102       | 1      | 2    |        | 4600   | PK 44+00 | 13.05.11 | 19,4           | 28,6    | 16,9 | 708    | 50    | 216                        | 153 | 99  | 82  | 65  | 46  | 31 | 452       | 274                   | 65%                                 | 178 | 63             | 53            | 16            |
| 103       | 1      | 2    |        | 4500   | PK 43+00 | 13.05.11 | 19,4           | 28,6    | 17,3 | 705    | 50    | 229                        | 162 | 106 | 87  | 72  | 49  | 34 | 430       | 274                   | 57%                                 | 156 | 67             | 57            | 15            |
| 104       | 1      | 2    |        | 4400   | PK 42+00 | 13.05.11 | 19,4           | 28,6    | 17,3 | 708    | 50    | 212                        | 150 | 96  | 79  | 65  | 44  | 32 | 459       | 274                   | 67%                                 | 185 | 62             | 54            | 12            |
| 105       | 1      | 2    |        | 4300   | PK 41+00 | 13.05.11 | 20,8           | 28,6    | 16,9 | 708    | 50    | 194                        | 143 | 92  | 75  | 63  | 42  | 31 | 494       | 274                   | 80%                                 | 220 | 52             | 51            | 11            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 106       | 1      | 2    |        | 4200   | PK 40+00 | 13.05.11 | 20,8           | 28,6    | 17,0 | 711    | 50    | 212                        | 156 | 105 | 88  | 74 | 51 | 38 | 464       | 274                   | 69%                               | 190 | 55             | 51            | 13            |
| 107       | 1      | 2    |        | 4100   | PK 39+00 | 13.05.11 | 20,8           | 28,6    | 17,0 | 707    | 50    | 211                        | 153 | 100 | 83  | 69 | 47 | 35 | 464       | 274                   | 69%                               | 190 | 58             | 53            | 12            |
| 108       | 1      | 2    |        | 4000   | PK 38+00 | 13.05.11 | 20,8           | 28,6    | 17,2 | 713    | 50    | 179                        | 133 | 90  | 75  | 62 | 42 | 30 | 532       | 274                   | 94%                               | 258 | 46             | 43            | 12            |
| 109       | 1      | 2    |        | 3900   | PK 37+00 | 13.05.11 | 20,8           | 24,6    | 17,6 | 708    | 50    | 185                        | 137 | 92  | 78  | 65 | 45 | 33 | 514       | 274                   | 88%                               | 240 | 48             | 45            | 12            |
| 110       | 1      | 2    |        | 3800   | PK 36+00 | 13.05.11 | 20,8           | 24,6    | 17,4 | 712    | 50    | 184                        | 129 | 85  | 71  | 61 | 43 | 33 | 518       | 274                   | 89%                               | 244 | 55             | 44            | 9             |
| 111       | 1      | 2    |        | 3700   | PK 35+00 | 13.05.11 | 20,8           | 24,6    | 17,2 | 712    | 50    | 208                        | 145 | 92  | 77  | 64 | 46 | 34 | 471       | 274                   | 72%                               | 197 | 63             | 52            | 12            |
| 112       | 1      | 2    |        | 3600   | PK 34+00 | 13.05.11 | 20,8           | 24,6    | 16,8 | 708    | 50    | 214                        | 165 | 117 | 99  | 85 | 61 | 45 | 459       | 274                   | 67%                               | 185 | 49             | 48            | 15            |
| 113       | 1      | 2    |        | 3500   | PK 33+00 | 13.05.11 | 20,8           | 24,6    | 16,5 | 709    | 50    | 222                        | 164 | 111 | 93  | 78 | 54 | 38 | 445       | 274                   | 63%                               | 171 | 58             | 53            | 16            |
| 114       | 1      | 2    |        | 3400   | PK 32+00 | 13.05.11 | 20,8           | 24,6    | 16,7 | 703    | 50    | 236                        | 177 | 123 | 104 | 88 | 62 | 44 | 422       | 274                   | 54%                               | 148 | 59             | 55            | 18            |
| 115       | 1      | 2    |        | 3300   | PK 31+00 | 13.05.11 | 20,8           | 24,6    | 16,5 | 708    | 50    | 229                        | 173 | 118 | 99  | 83 | 57 | 38 | 434       | 270                   | 61%                               | 164 | 56             | 55            | 19            |
| 116       | 1      | 2    |        | 3200   | PK 30+00 | 13.05.11 | 20,8           | 24,6    | 16,6 | 703    | 50    | 204                        | 145 | 98  | 82  | 70 | 49 | 35 | 474       | 270                   | 76%                               | 204 | 59             | 47            | 14            |
| 117       | 1      | 2    |        | 3100   | PK 29+00 | 13.05.11 | 20,8           | 24,6    | 17,0 | 709    | 50    | 211                        | 145 | 95  | 80  | 68 | 48 | 35 | 465       | 270                   | 72%                               | 195 | 65             | 50            | 12            |
| 118       | 1      | 2    |        | 3000   | PK 28+00 | 13.05.11 | 20,8           | 24,6    | 16,9 | 702    | 50    | 247                        | 177 | 117 | 100 | 83 | 59 | 40 | 407       | 270                   | 51%                               | 137 | 70             | 60            | 19            |
| 119       | 1      | 2    |        | 2900   | PK 27+00 | 13.05.11 | 20,8           | 24,6    | 17,0 | 707    | 50    | 246                        | 164 | 104 | 86  | 71 | 49 | 35 | 410       | 270                   | 52%                               | 140 | 82             | 60            | 14            |
| 120       | 1      | 2    |        | 2800   | PK 26+00 | 13.05.11 | 20,8           | 24,6    | 17,0 | 699    | 49    | 218                        | 146 | 88  | 71  | 58 | 39 | 28 | 447       | 270                   | 65%                               | 177 | 73             | 59            | 11            |
| 121       | 1      | 2    |        | 2700   | PK 25+00 | 13.05.11 | 20,8           | 24,6    | 17,0 | 704    | 50    | 191                        | 135 | 87  | 72  | 60 | 41 | 31 | 500       | 270                   | 85%                               | 230 | 56             | 48            | 11            |
| 122       | 1      | 2    |        | 2600   | PK 24+00 | 13.05.11 | 20,8           | 24,6    | 16,8 | 705    | 50    | 166                        | 122 | 83  | 70  | 60 | 42 | 34 | 559       | 270                   | 107%                              | 289 | 43             | 40            | 8             |
| 123       | 1      | 2    |        | 2500   | PK 23+00 | 13.05.11 | 20,8           | 24,6    | 16,8 | 707    | 50    | 231                        | 158 | 102 | 86  | 71 | 52 | 40 | 431       | 270                   | 60%                               | 161 | 73             | 57            | 12            |
| 124       | 1      | 2    |        | 2400   | PK 22+00 | 13.05.11 | 20,8           | 24,6    | 17,0 | 710    | 50    | 228                        | 156 | 103 | 87  | 73 | 51 | 36 | 436       | 270                   | 62%                               | 166 | 72             | 52            | 15            |
| 125       | 1      | 2    |        | 2300   | PK 21+00 | 13.05.11 | 20,8           | 24,6    | 17,0 | 720    | 51    | 250                        | 168 | 106 | 87  | 73 | 51 | 37 | 410       | 270                   | 52%                               | 140 | 81             | 61            | 14            |
| 126       | 1      | 2    |        | 2200   | PK 20+00 | 13.05.11 | 21,0           | 26,7    | 16,9 | 710    | 50    | 234                        | 165 | 110 | 92  | 79 | 57 | 42 | 428       | 270                   | 58%                               | 158 | 70             | 55            | 15            |
| 127       | 1      | 2    |        | 2100   | PK 19+00 | 13.05.11 | 21,0           | 26,7    | 16,8 | 709    | 50    | 241                        | 169 | 114 | 98  | 83 | 60 | 44 | 418       | 270                   | 55%                               | 148 | 72             | 55            | 15            |
| 128       | 1      | 2    |        | 2000   | PK 18+00 | 13.05.11 | 21,0           | 26,7    | 17,1 | 713    | 50    | 209                        | 145 | 91  | 76  | 64 | 45 | 33 | 471       | 270                   | 74%                               | 201 | 63             | 53            | 12            |
| 129       | 1      | 2    |        | 1900   | PK 17+00 | 13.05.11 | 21,0           | 26,7    | 17,1 | 707    | 50    | 259                        | 193 | 135 | 115 | 99 | 71 | 53 | 394       | 270                   | 46%                               | 124 | 66             | 58            | 19            |
| 130       | 1      | 2    |        | 1800   | PK 16+00 | 13.05.11 | 21,0           | 26,7    | 17,0 | 708    | 50    | 224                        | 157 | 104 | 87  | 73 | 52 | 36 | 442       | 270                   | 64%                               | 172 | 66             | 54            | 15            |
| 131       | 1      | 2    |        | 1700   | PK 15+00 | 13.05.11 | 21,0           | 26,7    | 17,3 | 713    | 50    | 215                        | 144 | 91  | 75  | 63 | 44 | 32 | 459       | 270                   | 70%                               | 189 | 70             | 53            | 11            |
| 132       | 1      | 2    |        | 1600   | PK 14+00 | 13.05.11 | 21,0           | 26,7    | 17,3 | 709    | 50    | 254                        | 176 | 110 | 90  | 74 | 50 | 36 | 401       | 270                   | 48%                               | 131 | 78             | 65            | 14            |
| 133       | 1      | 2    |        | 1500   | PK 13+00 | 13.05.11 | 21,0           | 26,7    | 17,0 | 708    | 50    | 274                        | 170 | 98  | 79  | 65 | 45 | 34 | 377       | 270                   | 40%                               | 107 | 103            | 72            | 11            |
| 134       | 1      | 2    |        | 1400   | PK 12+00 | 13.05.11 | 21,0           | 26,7    | 17,0 | 712    | 50    | 228                        | 154 | 96  | 79  | 66 | 46 | 34 | 438       | 270                   | 62%                               | 168 | 74             | 57            | 12            |
| 135       | 1      | 2    |        | 1300   | PK 11+00 | 13.05.11 | 21,0           | 26,7    | 17,4 | 708    | 50    | 215                        | 150 | 100 | 84  | 70 | 49 | 35 | 457       | 270                   | 69%                               | 187 | 65             | 50            | 13            |
| 136       | 1      | 2    |        | 1200   | PK 10+00 | 13.05.11 | 21,0           | 26,7    | 17,4 | 715    | 51    | 206                        | 157 | 114 | 98  | 84 | 60 | 43 | 477       | 270                   | 76%                               | 207 | 49             | 43            | 17            |
| 137       | 1      | 2    |        | 1100   | PK 9+00  | 13.05.11 | 21,0           | 26,7    | 17,1 | 716    | 51    | 282                        | 190 | 120 | 98  | 82 | 54 | 38 | 372       | 270                   | 38%                               | 102 | 90             | 70            | 16            |
| 138       | 1      | 2    |        | 1000   | PK 8+00  | 13.05.11 | 21,0           | 26,7    | 17,4 | 707    | 50    | 296                        | 205 | 128 | 106 | 89 | 59 | 41 | 354       | 270                   | 31%                               | 84  | 91             | 77            | 18            |
| 139       | 1      | 2    |        | 900    | PK 7+00  | 13.05.11 | 21,0           | 26,7    | 17,6 | 708    | 50    | 181                        | 130 | 94  | 81  | 70 | 52 | 39 | 524       | 270                   | 94%                               | 254 | 51             | 36            | 13            |
| 140       | 1      | 2    |        | 800    | PK 6+00  | 13.05.11 | 21,0           | 26,7    | 17,7 | 718    | 51    | 207                        | 137 | 88  | 74  | 62 | 44 | 33 | 476       | 270                   | 76%                               | 206 | 69             | 48            | 11            |
| 141       | 1      | 2    |        | 700    | PK 5+00  | 13.05.11 | 21,0           | 26,7    | 17,7 | 704    | 50    | 187                        | 126 | 80  | 67  | 55 | 38 | 27 | 507       | 270                   | 88%                               | 237 | 62             | 46            | 11            |
| 142       | 1      | 2    |        | 600    | PK 4+00  | 13.05.11 | 21,0           | 26,7    | 18,0 | 713    | 50    | 221                        | 160 | 109 | 91  | 76 | 53 | 38 | 450       | 270                   | 67%                               | 180 | 60             | 51            | 14            |
| 143       | 1      | 2    |        | 500    | PK 3+00  | 13.05.11 | 21,0           | 26,7    | 17,3 | 711    | 50    | 232                        | 151 | 97  | 81  | 66 | 46 | 35 | 432       | 270                   | 60%                               | 162 | 81             | 54            | 11            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK      | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|---------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |         |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 144       | 1      | 2    |        | 400    | PK 2+00 | 13.05.11 | 21,0           | 26,7    | 17,0 | 709    | 50    | 328                        | 237 | 155 | 128 | 105 | 74 | 56 | 327       | 270                   | 21%                                 | 57  | 91             | 82            | 18            |
| 145       | 1      | 2    |        | 300    | PK 1+00 | 13.05.11 | 21,0           | 26,7    | 17,7 | 708    | 50    | 239                        | 184 | 131 | 114 | 97  | 71 | 53 | 421       | 270                   | 56%                                 | 151 | 55             | 52            | 18            |
| 146       | 1      | 2    |        | 200    | PK 0+00 | 13.05.11 | 21,0           | 26,7    | 18,0 | 710    | 50    | 294                        | 212 | 139 | 117 | 97  | 69 | 51 | 357       | 270                   | 32%                                 | 87  | 82             | 72            | 17            |
| KESKMINE: |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 451       | 272                   | 66%                                 | 179 | 63             | 53            | 14            |
| Min:      |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 284       |                       | 4%                                  | 10  | 34             | 34            | 8             |
| Max:      |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 589       |                       | 115%                                | 315 | 103            | 83            | 33            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |     | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|-----|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 1         | 1      | 1    |        | 200    | PK 0+00  | 24.09.11 | 10,2           | 11,3    | 9,4 | 721    | 51    | 176                        | 140 | 102 | 87  | 74 | 54 | 34 | 455       | 270                   | 68%                               | 185 | 35             | 37            | 19            |
| 2         | 1      | 1    |        | 300    | PK 1+00  | 24.09.11 | 10,2           | 11,5    | 9,4 | 712    | 50    | 156                        | 124 | 98  | 87  | 75 | 55 | 39 | 496       | 270                   | 84%                               | 226 | 32             | 25            | 16            |
| 3         | 1      | 1    |        | 400    | PK 2+00  | 24.09.11 | 10,2           | 11,7    | 9,5 | 722    | 51    | 182                        | 133 | 90  | 73  | 62 | 43 | 34 | 443       | 270                   | 64%                               | 173 | 48             | 42            | 9             |
| 4         | 1      | 1    |        | 500    | PK 3+00  | 24.09.11 | 10,2           | 11,9    | 9,6 | 718    | 51    | 179                        | 122 | 79  | 65  | 54 | 38 | 25 | 446       | 270                   | 65%                               | 176 | 56             | 43            | 13            |
| 5         | 1      | 1    |        | 600    | PK 4+00  | 24.09.11 | 10,2           | 11,9    | 9,7 | 715    | 51    | 223                        | 168 | 118 | 102 | 86 | 61 | 39 | 374       | 270                   | 38%                               | 104 | 55             | 49            | 21            |
| 6         | 1      | 1    |        | 700    | PK 5+00  | 24.09.11 | 10,2           | 11,7    | 9,9 | 713    | 50    | 226                        | 169 | 117 | 101 | 82 | 56 | 35 | 370       | 270                   | 37%                               | 100 | 56             | 51            | 21            |
| 7         | 1      | 1    |        | 800    | PK 6+00  | 24.09.11 | 10,2           | 11,4    | 9,7 | 714    | 50    | 201                        | 146 | 98  | 82  | 70 | 50 | 33 | 405       | 270                   | 50%                               | 135 | 55             | 48            | 17            |
| 8         | 1      | 1    |        | 900    | PK 7+00  | 24.09.11 | 10,2           | 11,7    | 9,7 | 709    | 50    | 169                        | 125 | 90  | 77  | 67 | 47 | 30 | 462       | 270                   | 71%                               | 192 | 44             | 35            | 17            |
| 9         | 1      | 1    |        | 1000   | PK 8+00  | 24.09.11 | 10,2           | 11,6    | 9,5 | 712    | 50    | 213                        | 165 | 113 | 97  | 83 | 56 | 36 | 386       | 270                   | 43%                               | 116 | 48             | 51            | 21            |
| 10        | 1      | 1    |        | 1100   | PK 9+00  | 24.09.11 | 10,2           | 11,8    | 9,5 | 717    | 51    | 228                        | 168 | 113 | 96  | 80 | 55 | 35 | 368       | 270                   | 36%                               | 98  | 59             | 54            | 20            |
| 11        | 1      | 1    |        | 1200   | PK 10+00 | 24.09.11 | 10,2           | 11,8    | 9,4 | 719    | 51    | 229                        | 160 | 102 | 84  | 70 | 47 | 29 | 368       | 270                   | 36%                               | 98  | 68             | 57            | 18            |
| 12        | 1      | 1    |        | 1300   | PK 11+00 | 24.09.11 | 10,2           | 11,7    | 9,4 | 726    | 51    | 211                        | 151 | 98  | 81  | 66 | 47 | 30 | 395       | 270                   | 46%                               | 125 | 59             | 52            | 17            |
| 13        | 1      | 1    |        | 1400   | PK 12+00 | 24.09.11 | 10,2           | 11,7    | 9,4 | 723    | 51    | 265                        | 174 | 107 | 88  | 74 | 51 | 33 | 329       | 270                   | 22%                               | 59  | 89             | 66            | 18            |
| 14        | 1      | 1    |        | 1500   | PK 13+00 | 24.09.11 | 10,2           | 11,7    | 9,4 | 728    | 51    | 192                        | 142 | 96  | 82  | 69 | 51 | 33 | 428       | 270                   | 58%                               | 158 | 48             | 45            | 17            |
| 15        | 1      | 1    |        | 1600   | PK 14+00 | 24.09.11 | 10,2           | 11,7    | 9,5 | 720    | 51    | 195                        | 144 | 98  | 83  | 70 | 49 | 31 | 419       | 270                   | 55%                               | 149 | 50             | 45            | 18            |
| 16        | 1      | 1    |        | 1700   | PK 15+00 | 24.09.11 | 10,2           | 11,7    | 9,4 | 719    | 51    | 140                        | 96  | 61  | 51  | 41 | 28 | 21 | 543       | 270                   | 101%                              | 273 | 44             | 34            | 7             |
| 17        | 1      | 1    |        | 1800   | PK 16+00 | 24.09.11 | 10,2           | 11,6    | 9,3 | 718    | 51    | 148                        | 102 | 68  | 57  | 48 | 33 | 22 | 521       | 270                   | 93%                               | 251 | 45             | 33            | 12            |
| 18        | 1      | 1    |        | 1900   | PK 17+00 | 24.09.11 | 10,2           | 11,6    | 9,4 | 707    | 50    | 181                        | 127 | 85  | 71  | 60 | 42 | 28 | 438       | 270                   | 62%                               | 168 | 54             | 42            | 15            |
| 19        | 1      | 1    |        | 2000   | PK 18+00 | 24.09.11 | 10,2           | 11,6    | 9,4 | 707    | 50    | 173                        | 131 | 92  | 81  | 67 | 49 | 31 | 454       | 270                   | 68%                               | 184 | 42             | 39            | 17            |
| 20        | 1      | 1    |        | 2100   | PK 19+00 | 24.09.11 | 10,2           | 11,7    | 9,5 | 709    | 50    | 164                        | 127 | 88  | 76  | 64 | 46 | 29 | 473       | 270                   | 75%                               | 203 | 37             | 38            | 17            |
| 21        | 1      | 1    |        | 2200   | PK 20+00 | 24.09.11 | 10,2           | 11,6    | 9,5 | 707    | 50    | 168                        | 131 | 91  | 78  | 65 | 47 | 28 | 465       | 270                   | 72%                               | 195 | 37             | 40            | 18            |
| 22        | 1      | 1    |        | 2300   | PK 21+00 | 24.09.11 | 10,2           | 11,6    | 9,4 | 713    | 50    | 183                        | 142 | 99  | 85  | 72 | 50 | 34 | 437       | 270                   | 62%                               | 167 | 40             | 42            | 16            |
| 23        | 1      | 1    |        | 2400   | PK 22+00 | 24.09.11 | 10,2           | 11,8    | 9,5 | 721    | 51    | 199                        | 148 | 102 | 86  | 72 | 49 | 33 | 412       | 270                   | 53%                               | 142 | 50             | 45            | 16            |
| 24        | 1      | 1    |        | 2500   | PK 23+00 | 24.09.11 | 10,2           | 11,7    | 9,5 | 722    | 51    | 145                        | 112 | 81  | 69  | 59 | 42 | 27 | 529       | 270                   | 96%                               | 259 | 33             | 30            | 15            |
| 25        | 1      | 1    |        | 2600   | PK 24+00 | 24.09.11 | 10,2           | 11,7    | 9,5 | 721    | 51    | 167                        | 127 | 90  | 78  | 66 | 46 | 30 | 474       | 270                   | 76%                               | 204 | 39             | 36            | 16            |
| 26        | 1      | 1    |        | 2700   | PK 25+00 | 24.09.11 | 10,2           | 11,6    | 9,5 | 717    | 51    | 156                        | 121 | 87  | 75  | 65 | 46 | 30 | 498       | 270                   | 84%                               | 228 | 34             | 34            | 16            |
| 27        | 1      | 1    |        | 2800   | PK 26+00 | 24.09.11 | 10,2           | 11,8    | 9,5 | 721    | 51    | 166                        | 127 | 90  | 76  | 65 | 46 | 30 | 475       | 270                   | 76%                               | 205 | 39             | 36            | 16            |
| 28        | 1      | 1    |        | 2900   | PK 27+00 | 24.09.11 | 10,2           | 11,6    | 9,5 | 713    | 50    | 152                        | 122 | 89  | 76  | 66 | 48 | 32 | 506       | 270                   | 87%                               | 236 | 30             | 33            | 16            |
| 29        | 1      | 1    |        | 3000   | PK 28+00 | 24.09.11 | 10,2           | 11,7    | 9,5 | 719    | 51    | 154                        | 121 | 89  | 77  | 67 | 49 | 33 | 505       | 270                   | 87%                               | 235 | 32             | 32            | 16            |
| 30        | 1      | 1    |        | 3100   | PK 29+00 | 24.09.11 | 10,2           | 11,7    | 9,6 | 710    | 50    | 164                        | 126 | 89  | 77  | 65 | 47 | 31 | 475       | 270                   | 76%                               | 205 | 37             | 37            | 16            |
| 31        | 1      | 1    |        | 3200   | PK 30+00 | 24.09.11 | 10,2           | 11,7    | 9,6 | 715    | 51    | 166                        | 133 | 96  | 82  | 69 | 48 | 29 | 472       | 270                   | 75%                               | 202 | 33             | 36            | 19            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 32        | 1      | 1    |        | 3300   | PK 31+00 | 24.09.11 | 10,2           | 11,7    | 9,4  | 717    | 51    | 187                        | 146 | 102 | 86  | 72 | 49 | 31 | 432       | 270                   | 60%                               | 162 | 40             | 44            | 18            |
| 33        | 1      | 1    |        | 3400   | PK 32+00 | 24.09.11 | 10,2           | 11,8    | 9,6  | 714    | 50    | 179                        | 143 | 104 | 89  | 77 | 55 | 35 | 444       | 274                   | 62%                               | 170 | 36             | 39            | 20            |
| 34        | 1      | 1    |        | 3500   | PK 33+00 | 24.09.11 | 10,2           | 11,6    | 9,5  | 719    | 51    | 198                        | 163 | 125 | 110 | 96 | 72 | 48 | 413       | 274                   | 51%                               | 139 | 35             | 38            | 24            |
| 35        | 1      | 1    |        | 3600   | PK 34+00 | 24.09.11 | 10,2           | 11,7    | 9,5  | 723    | 51    | 141                        | 112 | 84  | 74  | 65 | 49 | 34 | 543       | 274                   | 98%                               | 269 | 29             | 27            | 15            |
| 36        | 1      | 1    |        | 3700   | PK 35+00 | 24.09.11 | 10,2           | 11,7    | 9,7  | 710    | 50    | 161                        | 126 | 91  | 78  | 67 | 48 | 31 | 483       | 274                   | 76%                               | 209 | 34             | 35            | 17            |
| 37        | 1      | 1    |        | 3800   | PK 36+00 | 24.09.11 | 10,2           | 11,7    | 9,6  | 696    | 49    | 139                        | 102 | 70  | 60  | 51 | 37 | 25 | 533       | 274                   | 95%                               | 259 | 38             | 32            | 12            |
| 38        | 1      | 1    |        | 3900   | PK 37+00 | 24.09.11 | 10,2           | 11,7    | 9,6  | 713    | 50    | 145                        | 112 | 81  | 69  | 59 | 43 | 28 | 524       | 274                   | 91%                               | 250 | 33             | 31            | 15            |
| 39        | 1      | 1    |        | 4000   | PK 38+00 | 24.09.11 | 10,2           | 11,7    | 9,6  | 727    | 51    | 156                        | 120 | 85  | 73  | 63 | 45 | 32 | 502       | 274                   | 83%                               | 228 | 36             | 34            | 13            |
| 40        | 1      | 1    |        | 4100   | PK 39+00 | 24.09.11 | 10,2           | 12,0    | 9,6  | 702    | 50    | 166                        | 123 | 86  | 73  | 61 | 45 | 31 | 466       | 274                   | 70%                               | 192 | 43             | 38            | 14            |
| 41        | 1      | 1    |        | 4200   | PK 40+00 | 24.09.11 | 10,2           | 12,0    | 9,8  | 711    | 50    | 174                        | 134 | 93  | 79  | 67 | 47 | 29 | 454       | 274                   | 66%                               | 180 | 40             | 40            | 18            |
| 42        | 1      | 1    |        | 4300   | PK 41+00 | 24.09.11 | 10,2           | 11,8    | 9,6  | 710    | 50    | 164                        | 125 | 87  | 75  | 63 | 45 | 32 | 474       | 274                   | 73%                               | 200 | 39             | 38            | 13            |
| 43        | 1      | 1    |        | 4400   | PK 42+00 | 24.09.11 | 10,2           | 11,9    | 9,7  | 719    | 51    | 143                        | 112 | 80  | 68  | 58 | 41 | 27 | 535       | 274                   | 95%                               | 261 | 30             | 32            | 14            |
| 44        | 1      | 1    |        | 4500   | PK 43+00 | 24.09.11 | 10,2           | 12,0    | 9,7  | 705    | 50    | 138                        | 105 | 75  | 65  | 55 | 40 | 27 | 540       | 274                   | 97%                               | 266 | 33             | 30            | 13            |
| 45        | 1      | 1    |        | 4600   | PK 44+00 | 24.09.11 | 10,2           | 12,0    | 9,6  | 700    | 49    | 148                        | 112 | 75  | 63  | 53 | 37 | 24 | 509       | 274                   | 86%                               | 235 | 36             | 37            | 13            |
| 46        | 1      | 1    |        | 4700   | PK 45+00 | 24.09.11 | 10,2           | 12,0    | 9,7  | 704    | 50    | 134                        | 101 | 73  | 63  | 54 | 39 | 25 | 553       | 274                   | 102%                              | 279 | 33             | 28            | 14            |
| 47        | 1      | 1    |        | 4800   | PK 46+00 | 24.09.11 | 10,2           | 12,2    | 9,7  | 715    | 51    | 179                        | 135 | 91  | 75  | 63 | 43 | 28 | 445       | 274                   | 63%                               | 171 | 44             | 43            | 15            |
| 48        | 1      | 1    |        | 4900   | PK 47+00 | 24.09.11 | 10,2           | 12,2    | 9,6  | 709    | 50    | 151                        | 114 | 81  | 69  | 59 | 41 | 26 | 506       | 274                   | 85%                               | 232 | 37             | 33            | 15            |
| 49        | 1      | 1    |        | 5000   | PK 48+00 | 24.09.11 | 10,2           | 12,2    | 9,7  | 697    | 49    | 171                        | 131 | 88  | 73  | 61 | 43 | 32 | 453       | 274                   | 65%                               | 179 | 41             | 43            | 11            |
| 50        | 1      | 1    |        | 5100   | PK 49+00 | 24.09.11 | 10,2           | 12,3    | 9,8  | 709    | 50    | 161                        | 131 | 98  | 85  | 75 | 55 | 37 | 482       | 274                   | 76%                               | 208 | 30             | 33            | 18            |
| 51        | 1      | 1    |        | 5200   | PK 50+00 | 24.09.11 | 10,2           | 12,1    | 9,8  | 700    | 50    | 120                        | 93  | 70  | 61  | 53 | 39 | 25 | 601       | 274                   | 119%                              | 327 | 28             | 23            | 14            |
| 52        | 1      | 1    |        | 5300   | PK 51+00 | 24.09.11 | 10,2           | 12,3    | 10,0 | 702    | 50    | 143                        | 114 | 81  | 69  | 59 | 41 | 25 | 523       | 274                   | 91%                               | 249 | 30             | 33            | 16            |
| 53        | 1      | 1    |        | 5400   | PK 52+00 | 24.09.11 | 10,2           | 12,0    | 9,7  | 706    | 50    | 139                        | 112 | 83  | 72  | 62 | 45 | 29 | 537       | 274                   | 96%                               | 263 | 28             | 29            | 16            |
| 54        | 1      | 1    |        | 5500   | PK 53+00 | 24.09.11 | 10,2           | 12,5    | 9,8  | 697    | 49    | 173                        | 133 | 92  | 76  | 64 | 44 | 29 | 448       | 274                   | 64%                               | 174 | 40             | 42            | 16            |
| 55        | 1      | 1    |        | 5600   | PK 54+00 | 24.09.11 | 10,2           | 12,3    | 9,8  | 715    | 51    | 131                        | 106 | 79  | 69  | 61 | 45 | 31 | 569       | 274                   | 108%                              | 295 | 25             | 26            | 14            |
| 56        | 1      | 1    |        | 5700   | PK 55+00 | 24.09.11 | 10,2           | 12,1    | 9,9  | 715    | 51    | 151                        | 119 | 88  | 76  | 66 | 49 | 32 | 510       | 274                   | 86%                               | 236 | 32             | 30            | 16            |
| 57        | 1      | 1    |        | 5800   | PK 56+00 | 24.09.11 | 10,2           | 12,3    | 9,9  | 707    | 50    | 153                        | 122 | 86  | 73  | 62 | 43 | 28 | 499       | 274                   | 82%                               | 225 | 32             | 36            | 15            |
| 58        | 1      | 1    |        | 5900   | PK 57+00 | 24.09.11 | 10,2           | 12,3    | 9,8  | 699    | 49    | 155                        | 117 | 80  | 67  | 56 | 39 | 25 | 491       | 274                   | 79%                               | 217 | 38             | 38            | 14            |
| 59        |        |      |        | 6000   | PK 58+00 | 24.09.11 | 10,2           | 12,3    | 9,7  | 699    | 49    | 160                        | 123 | 82  | 68  | 57 | 38 | 25 | 479       | 274                   | 75%                               | 205 | 37             | 41            | 12            |
| 60        | 1      | 1    |        | 6100   | PK 59+00 | 24.09.11 | 10,2           | 12,4    | 9,8  | 712    | 50    | 169                        | 128 | 89  | 76  | 64 | 44 | 28 | 465       | 274                   | 70%                               | 191 | 41             | 39            | 16            |
| 61        | 1      | 1    |        | 6200   | PK 60+00 | 24.09.11 | 10,2           | 12,2    | 9,9  | 710    | 50    | 171                        | 131 | 90  | 75  | 62 | 43 | 26 | 459       | 274                   | 67%                               | 185 | 40             | 41            | 16            |
| 62        | 1      | 1    |        | 6300   | PK 61+00 | 24.09.11 | 10,2           | 12,2    | 9,8  | 709    | 50    | 168                        | 129 | 91  | 77  | 65 | 46 | 28 | 464       | 274                   | 69%                               | 190 | 39             | 38            | 17            |
| 63        | 1      | 1    |        | 6400   | PK 62+00 | 24.09.11 | 10,2           | 12,4    | 9,7  | 707    | 50    | 128                        | 105 | 80  | 70  | 62 | 46 | 34 | 577       | 274                   | 110%                              | 303 | 23             | 25            | 12            |
| 64        | 1      | 1    |        | 6500   | PK 63+00 | 24.09.11 | 10,2           | 12,5    | 9,8  | 709    | 50    | 141                        | 117 | 83  | 72  | 61 | 42 | 28 | 536       | 274                   | 96%                               | 262 | 24             | 34            | 14            |
| 65        | 1      | 1    |        | 6600   | PK 64+00 | 24.09.11 | 10,2           | 12,6    | 10,1 | 717    | 51    | 145                        | 116 | 86  | 75  | 65 | 46 | 27 | 527       | 274                   | 92%                               | 253 | 28             | 30            | 19            |
| 66        | 1      | 1    |        | 6700   | PK 65+00 | 24.09.11 | 10,2           | 12,4    | 10,0 | 706    | 50    | 134                        | 109 | 81  | 68  | 59 | 44 | 28 | 553       | 274                   | 102%                              | 279 | 25             | 28            | 16            |
| 67        | 1      | 1    |        | 6800   | PK 66+00 | 24.09.11 | 10,2           | 12,4    | 9,9  | 719    | 51    | 150                        | 124 | 94  | 84  | 73 | 56 | 38 | 514       | 274                   | 88%                               | 240 | 25             | 30            | 18            |
| 68        | 1      | 1    |        | 6900   | PK 67+00 | 24.09.11 | 10,2           | 12,3    | 9,7  | 695    | 49    | 222                        | 169 | 112 | 91  | 73 | 51 | 32 | 368       | 274                   | 34%                               | 94  | 53             | 58            | 20            |
| 69        | 1      | 1    |        | 7000   | PK 68+00 | 24.09.11 | 10,2           | 12,1    | 9,7  | 690    | 49    | 159                        | 120 | 80  | 66  | 56 | 38 | 24 | 476       | 274                   | 74%                               | 202 | 40             | 41            | 14            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |    |    |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|----|----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3 | D4 | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 70        | 1      | 1    |        | 7100   | PK 69+00 | 24.09.11 | 10,2           | 12,1    | 9,8  | 698    | 49    | 173                        | 129 | 88 | 74 | 63 | 44 | 29 | 449       | 274                   | 64%                                 | 175 | 45             | 41            | 15            |
| 71        | 1      | 1    |        | 7200   | PK 70+00 | 24.09.11 | 10,2           | 12,2    | 9,7  | 689    | 49    | 144                        | 113 | 80 | 70 | 60 | 43 | 30 | 513       | 274                   | 87%                                 | 239 | 32             | 34            | 13            |
| 72        | 1      | 1    |        | 7300   | PK 71+00 | 24.09.11 | 10,2           | 12,3    | 10,0 | 689    | 49    | 136                        | 107 | 79 | 68 | 60 | 45 | 31 | 538       | 274                   | 96%                                 | 264 | 29             | 29            | 14            |

KESKMINE: 475 272 74% 203 40 38 16

Min: 329 22% 59 23 23 7

Max: 601 119% 327 89 66 24

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |     |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|-----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6  | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |     |    |           |                       |                                     |     |                |               |               |
| 73        | 1      | 2    |        | 7300   | PK 71+00 | 24.09.11 | 11,3           | 12,6    | 10,3 | 710    | 50    | 262                        | 226 | 182 | 163 | 147 | 117 | 80 | 330       | 274                   | 21%                                 | 56  | 36             | 44            | 37            |
| 74        | 1      | 2    |        | 7200   | PK 70+00 | 24.09.11 | 11,3           | 12,7    | 10,5 | 700    | 49    | 197                        | 154 | 111 | 96  | 84  | 64  | 45 | 411       | 274                   | 50%                                 | 137 | 43             | 43            | 19            |
| 77        | 1      | 2    |        | 7100   | PK 69+00 | 24.09.11 | 11,3           | 12,5    | 10,5 | 701    | 50    | 222                        | 184 | 140 | 124 | 110 | 84  | 58 | 373       | 274                   | 36%                                 | 99  | 38             | 44            | 26            |
| 78        | 1      | 2    |        | 7000   | PK 68+00 | 24.09.11 | 11,3           | 12,5    | 10,3 | 697    | 49    | 299                        | 250 | 194 | 172 | 154 | 116 | 81 | 293       | 274                   | 7%                                  | 19  | 50             | 57            | 35            |
| 79        | 1      | 2    |        | 6900   | PK 67+00 | 24.09.11 | 11,3           | 12,9    | 10,8 | 700    | 49    | 220                        | 182 | 137 | 123 | 111 | 83  | 61 | 376       | 274                   | 37%                                 | 102 | 38             | 45            | 23            |
| 80        | 1      | 2    |        | 6800   | PK 66+00 | 24.09.11 | 11,3           | 12,7    | 10,5 | 693    | 49    | 150                        | 121 | 90  | 79  | 70  | 54  | 39 | 506       | 274                   | 85%                                 | 232 | 29             | 32            | 15            |
| 81        | 1      | 2    |        | 6700   | PK 65+00 | 24.09.11 | 11,3           | 13,0    | 10,8 | 689    | 49    | 145                        | 114 | 83  | 71  | 59  | 42  | 26 | 516       | 274                   | 88%                                 | 242 | 31             | 32            | 16            |
| 82        | 1      | 2    |        | 6600   | PK 64+00 | 24.09.11 | 11,3           | 13,4    | 10,7 | 699    | 49    | 144                        | 118 | 84  | 70  | 59  | 43  | 31 | 525       | 274                   | 92%                                 | 251 | 26             | 34            | 12            |
| 83        | 1      | 2    |        | 6500   | PK 63+00 | 24.09.11 | 11,3           | 13,1    | 10,5 | 706    | 50    | 155                        | 120 | 81  | 67  | 56  | 38  | 23 | 499       | 274                   | 82%                                 | 225 | 35             | 39            | 14            |
| 84        | 1      | 2    |        | 6400   | PK 62+00 | 24.09.11 | 11,3           | 13,2    | 10,5 | 700    | 49    | 152                        | 121 | 92  | 78  | 67  | 46  | 31 | 504       | 274                   | 84%                                 | 230 | 31             | 30            | 16            |
| 85        | 1      | 2    |        | 6300   | PK 61+00 | 24.09.11 | 11,3           | 13,7    | 10,5 | 705    | 50    | 132                        | 106 | 77  | 66  | 56  | 38  | 25 | 565       | 274                   | 106%                                | 291 | 26             | 29            | 13            |
| 86        | 1      | 2    |        | 6200   | PK 60+00 | 24.09.11 | 11,3           | 13,1    | 10,3 | 692    | 49    | 130                        | 103 | 73  | 62  | 53  | 36  | 25 | 565       | 274                   | 106%                                | 291 | 28             | 30            | 12            |
| 87        | 1      | 2    |        | 6100   | PK 59+00 | 24.09.11 | 11,3           | 13,4    | 10,5 | 693    | 49    | 158                        | 119 | 82  | 70  | 58  | 40  | 26 | 485       | 274                   | 77%                                 | 211 | 39             | 38            | 15            |
| 88        | 1      | 2    |        | 6000   | PK 58+00 | 24.09.11 | 11,3           | 13,4    | 10,8 | 706    | 50    | 186                        | 141 | 99  | 83  | 70  | 49  | 33 | 432       | 274                   | 58%                                 | 158 | 44             | 43            | 16            |
| 89        | 1      | 2    |        | 5900   | PK 57+00 | 24.09.11 | 11,3           | 13,3    | 11,7 | 708    | 50    | 143                        | 112 | 80  | 68  | 58  | 41  | 26 | 533       | 274                   | 95%                                 | 259 | 31             | 31            | 14            |
| 90        | 1      | 2    |        | 5800   | PK 56+00 | 24.09.11 | 11,3           | 13,3    | 12,0 | 699    | 49    | 136                        | 106 | 79  | 68  | 59  | 42  | 26 | 548       | 274                   | 100%                                | 274 | 31             | 27            | 16            |
| 91        | 1      | 2    |        | 5700   | PK 55+00 | 24.09.11 | 11,3           | 13,1    | 11,5 | 702    | 50    | 141                        | 106 | 80  | 69  | 60  | 44  | 29 | 535       | 274                   | 95%                                 | 261 | 35             | 27            | 15            |
| 92        | 1      | 2    |        | 5600   | PK 54+00 | 24.09.11 | 11,3           | 13,4    | 11,6 | 695    | 49    | 151                        | 116 | 81  | 69  | 59  | 43  | 27 | 502       | 274                   | 83%                                 | 228 | 36             | 35            | 16            |
| 93        | 1      | 2    |        | 5500   | PK 53+00 | 24.09.11 | 11,3           | 13,5    | 11,7 | 712    | 50    | 164                        | 124 | 85  | 71  | 60  | 42  | 27 | 480       | 274                   | 75%                                 | 206 | 40             | 38            | 15            |
| 94        | 1      | 2    |        | 5400   | PK 52+00 | 24.09.11 | 11,3           | 13,4    | 11,7 | 707    | 50    | 159                        | 125 | 92  | 81  | 70  | 52  | 36 | 489       | 274                   | 79%                                 | 215 | 34             | 33            | 16            |
| 95        | 1      | 2    |        | 5300   | PK 51+00 | 24.09.11 | 11,3           | 13,6    | 11,6 | 704    | 50    | 175                        | 133 | 92  | 80  | 69  | 48  | 34 | 452       | 274                   | 65%                                 | 178 | 42             | 41            | 14            |
| 96        | 1      | 2    |        | 5200   | PK 50+00 | 24.09.11 | 11,3           | 13,8    | 11,9 | 701    | 50    | 163                        | 120 | 82  | 69  | 59  | 41  | 26 | 476       | 274                   | 74%                                 | 202 | 43             | 38            | 15            |
| 97        | 1      | 2    |        | 5100   | PK 49+00 | 24.09.11 | 11,3           | 13,8    | 12,2 | 700    | 49    | 172                        | 130 | 90  | 76  | 64  | 45  | 29 | 457       | 274                   | 67%                                 | 183 | 42             | 41            | 16            |
| 98        | 1      | 2    |        | 5000   | PK 48+00 | 24.09.11 | 11,3           | 13,4    | 12,1 | 707    | 50    | 181                        | 137 | 94  | 80  | 66  | 46  | 32 | 442       | 274                   | 61%                                 | 168 | 44             | 43            | 14            |
| 99        | 1      | 2    |        | 4900   | PK 47+00 | 24.09.11 | 11,3           | 13,6    | 11,9 | 711    | 50    | 194                        | 147 | 97  | 80  | 65  | 44  | 27 | 420       | 274                   | 53%                                 | 146 | 47             | 49            | 16            |
| 100       | 1      | 2    |        | 4800   | PK 46+00 | 24.09.11 | 11,3           | 13,4    | 11,7 | 711    | 50    | 180                        | 135 | 92  | 76  | 64  | 43  | 28 | 446       | 274                   | 63%                                 | 172 | 45             | 43            | 15            |
| 101       | 1      | 2    |        | 4700   | PK 45+00 | 24.09.11 | 11,3           | 13,4    | 11,7 | 711    | 50    | 175                        | 132 | 90  | 74  | 62  | 42  | 28 | 456       | 274                   | 66%                                 | 182 | 43             | 42            | 15            |
| 102       | 1      | 2    |        | 4600   | PK 44+00 | 24.09.11 | 11,3           | 13,4    | 11,9 | 703    | 50    | 180                        | 137 | 93  | 77  | 64  | 43  | 27 | 441       | 274                   | 61%                                 | 167 | 44             | 45            | 17            |
| 103       | 1      | 2    |        | 4500   | PK 43+00 | 24.09.11 | 11,3           | 13,6    | 12,1 | 699    | 49    | 187                        | 138 | 93  | 77  | 65  | 44  | 29 | 426       | 274                   | 55%                                 | 152 | 50             | 45            | 15            |
| 104       | 1      | 2    |        | 4400   | PK 42+00 | 24.09.11 | 11,3           | 13,4    | 11,9 | 694    | 49    | 167                        | 124 | 85  | 71  | 59  | 40  | 25 | 463       | 274                   | 69%                                 | 189 | 44             | 40            | 15            |
| 105       | 1      | 2    |        | 4300   | PK 41+00 | 24.09.11 | 11,3           | 13,5    | 11,7 | 698    | 49    | 164                        | 123 | 85  | 72  | 61  | 42  | 28 | 474       | 274                   | 73%                                 | 200 | 41             | 38            | 14            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 106       | 1      | 2    |        | 4200   | PK 40+00 | 24.09.11 | 11,3           | 13,7    | 12,2 | 696    | 49    | 171                        | 131 | 92  | 78  | 66  | 46 | 31 | 455       | 274                   | 66%                               | 181 | 41             | 40            | 15            |
| 107       | 1      | 2    |        | 4100   | PK 39+00 | 24.09.11 | 11,3           | 13,3    | 12,5 | 696    | 49    | 167                        | 127 | 87  | 73  | 61  | 43 | 27 | 465       | 274                   | 70%                               | 191 | 41             | 41            | 16            |
| 108       | 1      | 2    |        | 4000   | PK 38+00 | 24.09.11 | 11,3           | 13,0    | 12,0 | 692    | 49    | 146                        | 111 | 76  | 63  | 53  | 36 | 23 | 515       | 274                   | 88%                               | 241 | 36             | 36            | 13            |
| 109       | 1      | 2    |        | 3900   | PK 37+00 | 24.09.11 | 11,3           | 13,3    | 11,9 | 700    | 49    | 148                        | 117 | 81  | 69  | 60  | 42 | 29 | 513       | 274                   | 87%                               | 239 | 31             | 37            | 12            |
| 110       | 1      | 2    |        | 3800   | PK 36+00 | 24.09.11 | 11,3           | 13,2    | 11,8 | 694    | 49    | 145                        | 110 | 77  | 66  | 57  | 42 | 28 | 519       | 274                   | 89%                               | 245 | 36             | 34            | 14            |
| 111       | 1      | 2    |        | 3700   | PK 35+00 | 24.09.11 | 11,3           | 13,4    | 11,7 | 692    | 49    | 146                        | 110 | 79  | 68  | 58  | 42 | 28 | 516       | 274                   | 88%                               | 242 | 36             | 32            | 15            |
| 112       | 1      | 2    |        | 3600   | PK 34+00 | 24.09.11 | 11,3           | 13,5    | 11,9 | 695    | 49    | 185                        | 144 | 103 | 87  | 75  | 53 | 35 | 428       | 274                   | 56%                               | 154 | 41             | 42            | 19            |
| 113       | 1      | 2    |        | 3500   | PK 33+00 | 24.09.11 | 11,3           | 13,6    | 12,1 | 695    | 49    | 232                        | 189 | 144 | 128 | 115 | 84 | 62 | 357       | 274                   | 30%                               | 83  | 44             | 46            | 23            |
| 114       | 1      | 2    |        | 3400   | PK 32+00 | 24.09.11 | 11,3           | 13,7    | 12,2 | 707    | 50    | 191                        | 152 | 110 | 95  | 82  | 58 | 38 | 424       | 274                   | 55%                               | 150 | 39             | 42            | 20            |
| 115       | 1      | 2    |        | 3300   | PK 31+00 | 24.09.11 | 11,3           | 13,6    | 12,1 | 709    | 50    | 182                        | 144 | 99  | 87  | 72  | 50 | 35 | 440       | 270                   | 63%                               | 170 | 38             | 44            | 14            |
| 116       | 1      | 2    |        | 3200   | PK 30+00 | 24.09.11 | 11,3           | 13,9    | 12,0 | 708    | 50    | 176                        | 138 | 99  | 83  | 70  | 48 | 32 | 451       | 270                   | 67%                               | 181 | 38             | 39            | 16            |
| 117       | 1      | 2    |        | 3100   | PK 29+00 | 24.09.11 | 11,3           | 14,1    | 12,0 | 709    | 50    | 196                        | 145 | 96  | 80  | 67  | 47 | 27 | 415       | 270                   | 54%                               | 145 | 51             | 49            | 20            |
| 118       | 1      | 2    |        | 3000   | PK 28+00 | 24.09.11 | 11,3           | 14,0    | 12,1 | 720    | 51    | 208                        | 157 | 106 | 90  | 77  | 54 | 37 | 401       | 270                   | 49%                               | 131 | 50             | 50            | 16            |
| 119       | 1      | 2    |        | 2900   | PK 27+00 | 24.09.11 | 11,3           | 14,0    | 12,1 | 701    | 50    | 230                        | 171 | 110 | 91  | 75  | 48 | 30 | 362       | 270                   | 34%                               | 92  | 60             | 61            | 19            |
| 120       | 1      | 2    |        | 2800   | PK 26+00 | 24.09.11 | 11,3           | 14,0    | 12,1 | 719    | 51    | 189                        | 140 | 92  | 75  | 61  | 41 | 25 | 432       | 270                   | 60%                               | 162 | 48             | 48            | 16            |
| 121       | 1      | 2    |        | 2700   | PK 25+00 | 24.09.11 | 11,3           | 13,8    | 11,9 | 699    | 49    | 183                        | 140 | 91  | 77  | 63  | 43 | 28 | 434       | 270                   | 61%                               | 164 | 43             | 50            | 15            |
| 122       | 1      | 2    |        | 2600   | PK 24+00 | 24.09.11 | 11,3           | 13,8    | 11,7 | 711    | 50    | 152                        | 116 | 81  | 69  | 57  | 40 | 27 | 511       | 270                   | 89%                               | 241 | 36             | 34            | 14            |
| 123       | 1      | 2    |        | 2500   | PK 23+00 | 24.09.11 | 11,3           | 14,0    | 11,6 | 699    | 49    | 184                        | 137 | 95  | 81  | 68  | 50 | 40 | 432       | 270                   | 60%                               | 162 | 47             | 43            | 11            |
| 124       | 1      | 2    |        | 2400   | PK 22+00 | 24.09.11 | 11,3           | 14,1    | 11,6 | 709    | 50    | 185                        | 139 | 97  | 83  | 71  | 51 | 36 | 435       | 270                   | 61%                               | 165 | 46             | 42            | 15            |
| 125       | 1      | 2    |        | 2300   | PK 21+00 | 24.09.11 | 11,3           | 14,3    | 11,8 | 705    | 50    | 159                        | 118 | 82  | 71  | 62  | 44 | 31 | 489       | 270                   | 81%                               | 219 | 41             | 36            | 13            |
| 126       | 1      | 2    |        | 2200   | PK 20+00 | 24.09.11 | 11,3           | 14,0    | 12,0 | 697    | 49    | 188                        | 140 | 98  | 84  | 72  | 53 | 38 | 423       | 270                   | 57%                               | 153 | 50             | 42            | 15            |
| 127       | 1      | 2    |        | 2100   | PK 19+00 | 24.09.11 | 11,3           | 13,8    | 11,8 | 698    | 49    | 203                        | 157 | 112 | 96  | 82  | 61 | 38 | 400       | 270                   | 48%                               | 130 | 47             | 46            | 24            |
| 128       | 1      | 2    |        | 2000   | PK 18+00 | 24.09.11 | 11,3           | 13,7    | 11,8 | 708    | 50    | 173                        | 125 | 83  | 70  | 58  | 40 | 26 | 459       | 270                   | 70%                               | 189 | 47             | 42            | 13            |
| 129       | 1      | 2    |        | 1900   | PK 17+00 | 24.09.11 | 11,3           | 14,0    | 11,8 | 697    | 49    | 227                        | 174 | 123 | 104 | 89  | 63 | 40 | 365       | 270                   | 35%                               | 95  | 53             | 52            | 23            |
| 130       | 1      | 2    |        | 1800   | PK 16+00 | 24.09.11 | 11,3           | 14,0    | 12,0 | 698    | 49    | 179                        | 135 | 90  | 75  | 62  | 42 | 27 | 442       | 270                   | 64%                               | 172 | 44             | 45            | 15            |
| 131       | 1      | 2    |        | 1700   | PK 15+00 | 24.09.11 | 11,3           | 13,7    | 11,7 | 701    | 50    | 189                        | 139 | 89  | 74  | 62  | 43 | 27 | 424       | 270                   | 57%                               | 154 | 51             | 51            | 17            |
| 132       | 1      | 2    |        | 1600   | PK 14+00 | 24.09.11 | 11,3           | 14,4    | 11,8 | 704    | 50    | 200                        | 152 | 103 | 89  | 74  | 51 | 40 | 406       | 270                   | 50%                               | 136 | 48             | 49            | 11            |
| 133       | 1      | 2    |        | 1500   | PK 13+00 | 24.09.11 | 11,3           | 14,2    | 11,7 | 691    | 49    | 209                        | 150 | 97  | 80  | 66  | 46 | 30 | 387       | 270                   | 43%                               | 117 | 61             | 54            | 16            |
| 134       | 1      | 2    |        | 1400   | PK 12+00 | 24.09.11 | 11,3           | 14,3    | 11,8 | 686    | 49    | 171                        | 122 | 85  | 75  | 63  | 44 | 28 | 450       | 270                   | 67%                               | 180 | 51             | 38            | 17            |
| 135       | 1      | 2    |        | 1300   | PK 11+00 | 24.09.11 | 11,3           | 14,0    | 11,7 | 692    | 49    | 170                        | 127 | 88  | 77  | 68  | 46 | 30 | 455       | 270                   | 69%                               | 185 | 44             | 39            | 16            |
| 136       | 1      | 2    |        | 1200   | PK 10+00 | 24.09.11 | 11,3           | 14,9    | 12,1 | 692    | 49    | 156                        | 126 | 97  | 85  | 75  | 56 | 36 | 489       | 270                   | 81%                               | 219 | 30             | 30            | 20            |
| 137       | 1      | 2    |        | 1100   | PK 9+00  | 24.09.11 | 11,3           | 14,3    | 12,3 | 695    | 49    | 172                        | 130 | 91  | 78  | 67  | 47 | 31 | 453       | 270                   | 68%                               | 183 | 43             | 40            | 16            |
| 138       | 1      | 2    |        | 1000   | PK 8+00  | 24.09.11 | 11,3           | 14,9    | 12,2 | 689    | 49    | 218                        | 166 | 109 | 96  | 79  | 55 | 37 | 374       | 270                   | 38%                               | 104 | 53             | 59            | 18            |
| 139       | 1      | 2    |        | 900    | PK 7+00  | 24.09.11 | 11,3           | 15,4    | 12,7 | 689    | 49    | 130                        | 101 | 78  | 69  | 61  | 46 | 31 | 563       | 270                   | 108%                              | 293 | 30             | 24            | 16            |
| 140       | 1      | 2    |        | 800    | PK 6+00  | 24.09.11 | 11,3           | 16,0    | 13,1 | 699    | 49    | 155                        | 114 | 79  | 67  | 57  | 40 | 27 | 495       | 270                   | 83%                               | 225 | 42             | 35            | 13            |
| 141       | 1      | 2    |        | 700    | PK 5+00  | 24.09.11 | 11,3           | 16,1    | 13,1 | 692    | 49    | 146                        | 107 | 72  | 62  | 51  | 35 | 23 | 515       | 270                   | 91%                               | 245 | 40             | 36            | 12            |
| 142       | 1      | 2    |        | 600    | PK 4+00  | 24.09.11 | 11,3           | 16,0    | 13,3 | 694    | 49    | 184                        | 140 | 98  | 82  | 69  | 48 | 33 | 429       | 270                   | 59%                               | 159 | 45             | 43            | 15            |
| 143       | 1      | 2    |        | 500    | PK 3+00  | 24.09.11 | 11,3           | 15,9    | 13,3 | 696    | 49    | 162                        | 114 | 78  | 68  | 56  | 37 | 23 | 477       | 270                   | 77%                               | 207 | 48             | 37            | 14            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK      | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|---------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |         |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 144       | 1      | 2    |        | 400    | PK 2+00 | 24.09.11 | 11,3           | 16,2    | 12,9 | 689    | 49    | 285                        | 222 | 155 | 130 | 109 | 76 | 49 | 302       | 270                   | 12%                                 | 32  | 65             | 69            | 27            |
| 145       | 1      | 2    |        | 300    | PK 1+00 | 24.09.11 | 11,3           | 15,9    | 13,1 | 697    | 49    | 174                        | 143 | 108 | 94  | 83  | 62 | 41 | 451       | 270                   | 67%                                 | 181 | 31             | 36            | 21            |
| 146       | 1      | 2    |        | 200    | PK 0+00 | 24.09.11 | 11,3           | 17,0    | 13,3 | 701    | 50    | 217                        | 169 | 121 | 103 | 88  | 62 | 42 | 379       | 270                   | 40%                                 | 109 | 49             | 49            | 21            |
| KESKMINE: |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 452       | 272                   | 66%                                 | 180 | 42             | 41            | 17            |
| Min:      |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 293       |                       | 7%                                  | 19  | 26             | 24            | 11            |
| Max:      |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 565       |                       | 108%                                | 293 | 65             | 69            | 37            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 1         | 1      | 1    |        | 200    | PK 0+00  | 17.05.12 | 21,3           | 26,9    | 22,1 | 705    | 50    | 189                        | 145 | 106 | 90  | 77 | 55 | 41 | 498       | 270                   | 85%                                 | 228 | 45             | 39            | 14            |
| 2         | 1      | 1    |        | 300    | PK 1+00  | 17.05.12 | 21,3           | 26,9    | 22,3 | 695    | 49    | 204                        | 152 | 108 | 90  | 77 | 55 | 40 | 465       | 270                   | 72%                                 | 195 | 53             | 44            | 15            |
| 3         | 1      | 1    |        | 400    | PK 2+00  | 17.05.12 | 21,3           | 27,2    | 22,5 | 712    | 50    | 242                        | 153 | 92  | 72  | 59 | 40 | 29 | 414       | 270                   | 53%                                 | 144 | 88             | 61            | 11            |
| 4         | 1      | 1    |        | 500    | PK 3+00  | 17.05.12 | 21,3           | 26,8    | 22,4 | 716    | 51    | 224                        | 142 | 84  | 67  | 54 | 39 | 28 | 441       | 270                   | 63%                                 | 171 | 81             | 58            | 11            |
| 5         | 1      | 1    |        | 600    | PK 4+00  | 17.05.12 | 21,3           | 26,7    | 22,3 | 701    | 50    | 236                        | 154 | 97  | 79  | 68 | 49 | 37 | 417       | 270                   | 54%                                 | 147 | 82             | 58            | 12            |
| 6         | 1      | 1    |        | 700    | PK 5+00  | 17.05.12 | 21,3           | 26,6    | 22,6 | 693    | 49    | 274                        | 176 | 104 | 87  | 69 | 46 | 33 | 367       | 270                   | 36%                                 | 97  | 99             | 74            | 13            |
| 7         | 1      | 1    |        | 800    | PK 6+00  | 17.05.12 | 21,3           | 26,3    | 22,4 | 699    | 49    | 249                        | 166 | 105 | 86  | 71 | 51 | 37 | 398       | 270                   | 47%                                 | 128 | 84             | 62            | 14            |
| 8         | 1      | 1    |        | 900    | PK 7+00  | 17.05.12 | 21,3           | 26,7    | 22,5 | 702    | 50    | 228                        | 142 | 93  | 77  | 63 | 44 | 31 | 428       | 270                   | 59%                                 | 158 | 87             | 50            | 13            |
| 9         | 1      | 1    |        | 1000   | PK 8+00  | 17.05.12 | 21,3           | 27,1    | 22,5 | 707    | 50    | 329                        | 221 | 132 | 103 | 82 | 52 | 34 | 323       | 270                   | 19%                                 | 53  | 108            | 89            | 18            |
| 10        | 1      | 1    |        | 1100   | PK 9+00  | 17.05.12 | 21,3           | 26,4    | 22,3 | 712    | 50    | 319                        | 196 | 118 | 98  | 77 | 53 | 38 | 332       | 270                   | 23%                                 | 62  | 122            | 78            | 15            |
| 11        | 1      | 1    |        | 1200   | PK 10+00 | 17.05.12 | 21,3           | 26,3    | 22,4 | 692    | 49    | 334                        | 188 | 101 | 78  | 62 | 41 | 28 | 313       | 270                   | 16%                                 | 43  | 149            | 89            | 13            |
| 12        | 1      | 1    |        | 1300   | PK 11+00 | 17.05.12 | 21,3           | 26,4    | 22,4 | 699    | 49    | 317                        | 196 | 113 | 89  | 73 | 47 | 35 | 329       | 270                   | 22%                                 | 59  | 122            | 85            | 13            |
| 13        | 1      | 1    |        | 1400   | PK 12+00 | 17.05.12 | 21,3           | 26,3    | 22,2 | 695    | 49    | 328                        | 196 | 109 | 87  | 71 | 46 | 35 | 318       | 270                   | 18%                                 | 48  | 134            | 88            | 12            |
| 14        | 1      | 1    |        | 1500   | PK 13+00 | 17.05.12 | 21,3           | 27,1    | 22,9 | 709    | 50    | 247                        | 159 | 96  | 78  | 65 | 46 | 34 | 405       | 270                   | 50%                                 | 135 | 88             | 63            | 13            |
| 15        | 1      | 1    |        | 1600   | PK 14+00 | 17.05.12 | 21,3           | 27,4    | 22,9 | 704    | 50    | 241                        | 155 | 93  | 86  | 65 | 47 | 34 | 412       | 270                   | 52%                                 | 142 | 86             | 62            | 13            |
| 16        | 1      | 1    |        | 1700   | PK 15+00 | 17.05.12 | 21,3           | 27,2    | 23,0 | 712    | 50    | 187                        | 108 | 64  | 52  | 42 | 28 | 22 | 507       | 270                   | 88%                                 | 237 | 78             | 44            | 6             |
| 17        | 1      | 1    |        | 1800   | PK 16+00 | 17.05.12 | 21,3           | 27,1    | 23,0 | 703    | 50    | 173                        | 107 | 66  | 52  | 41 | 30 | 22 | 534       | 270                   | 98%                                 | 264 | 67             | 40            | 8             |
| 18        | 1      | 1    |        | 1900   | PK 17+00 | 17.05.12 | 21,3           | 27,4    | 23,0 | 701    | 50    | 224                        | 138 | 81  | 67  | 55 | 40 | 31 | 434       | 270                   | 61%                                 | 164 | 86             | 58            | 9             |
| 19        | 1      | 1    |        | 2000   | PK 18+00 | 17.05.12 | 21,3           | 26,9    | 22,9 | 715    | 51    | 234                        | 142 | 97  | 86  | 69 | 50 | 36 | 426       | 270                   | 58%                                 | 156 | 91             | 44            | 14            |
| 20        | 1      | 1    |        | 2100   | PK 19+00 | 17.05.12 | 21,3           | 27,2    | 23,1 | 696    | 49    | 204                        | 140 | 92  | 76  | 65 | 45 | 33 | 466       | 270                   | 72%                                 | 196 | 64             | 49            | 13            |
| 21        | 1      | 1    |        | 2200   | PK 20+00 | 17.05.12 | 21,3           | 27,1    | 22,9 | 699    | 49    | 223                        | 145 | 94  | 77  | 62 | 46 | 34 | 435       | 270                   | 61%                                 | 165 | 79             | 51            | 12            |
| 22        | 1      | 1    |        | 2300   | PK 21+00 | 17.05.12 | 21,3           | 27,1    | 22,7 | 700    | 49    | 260                        | 174 | 115 | 95  | 77 | 55 | 38 | 385       | 270                   | 43%                                 | 115 | 87             | 59            | 17            |
| 23        | 1      | 1    |        | 2400   | PK 22+00 | 17.05.12 | 21,3           | 27,2    | 22,5 | 702    | 50    | 262                        | 170 | 108 | 89  | 74 | 50 | 37 | 384       | 270                   | 42%                                 | 114 | 93             | 62            | 14            |
| 24        | 1      | 1    |        | 2500   | PK 23+00 | 17.05.12 | 21,3           | 27,6    | 22,4 | 707    | 50    | 189                        | 135 | 93  | 69  | 56 | 44 | 30 | 499       | 270                   | 85%                                 | 229 | 54             | 43            | 14            |
| 25        | 1      | 1    |        | 2600   | PK 24+00 | 17.05.12 | 21,3           | 27,3    | 22,3 | 708    | 50    | 209                        | 140 | 89  | 76  | 62 | 44 | 31 | 462       | 270                   | 71%                                 | 192 | 69             | 50            | 13            |
| 26        | 1      | 1    |        | 2700   | PK 25+00 | 17.05.12 | 21,3           | 27,4    | 22,6 | 704    | 50    | 195                        | 129 | 88  | 72  | 59 | 43 | 31 | 487       | 270                   | 80%                                 | 217 | 66             | 41            | 12            |
| 27        | 1      | 1    |        | 2800   | PK 26+00 | 17.05.12 | 21,3           | 27,3    | 22,4 | 702    | 50    | 209                        | 140 | 89  | 72  | 60 | 42 | 31 | 459       | 270                   | 70%                                 | 189 | 70             | 50            | 11            |
| 28        | 1      | 1    |        | 2900   | PK 27+00 | 17.05.12 | 21,3           | 27,9    | 22,5 | 702    | 50    | 189                        | 134 | 94  | 80  | 66 | 47 | 34 | 498       | 270                   | 84%                                 | 228 | 55             | 40            | 13            |
| 29        | 1      | 1    |        | 3000   | PK 28+00 | 17.05.12 | 21,3           | 27,8    | 22,4 | 703    | 50    | 205                        | 143 | 95  | 83  | 71 | 50 | 36 | 467       | 270                   | 73%                                 | 197 | 62             | 48            | 14            |
| 30        | 1      | 1    |        | 3100   | PK 29+00 | 17.05.12 | 21,3           | 28,4    | 22,2 | 707    | 50    | 214                        | 144 | 93  | 81  | 65 | 46 | 35 | 453       | 270                   | 68%                                 | 183 | 70             | 51            | 11            |
| 31        | 1      | 1    |        | 3200   | PK 30+00 | 17.05.12 | 21,3           | 28,3    | 22,5 | 705    | 50    | 214                        | 152 | 103 | 86  | 71 | 49 | 34 | 452       | 270                   | 67%                                 | 182 | 62             | 49            | 15            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 32        | 1      | 1    |        | 3300   | PK 31+00 | 17.05.12 | 21,3           | 28,7    | 23,0 | 705    | 50    | 240                        | 168 | 105 | 84  | 69 | 47 | 33 | 413       | 270                   | 53%                                 | 143 | 72             | 63            | 13            |
| 33        | 1      | 1    |        | 3400   | PK 32+00 | 17.05.12 | 21,3           | 28,0    | 22,7 | 706    | 50    | 229                        | 168 | 115 | 97  | 82 | 59 | 41 | 429       | 274                   | 57%                                 | 155 | 61             | 53            | 17            |
| 34        | 1      | 1    |        | 3500   | PK 33+00 | 17.05.12 | 21,3           | 28,1    | 22,4 | 696    | 49    | 247                        | 182 | 131 | 112 | 98 | 72 | 54 | 400       | 274                   | 46%                                 | 126 | 66             | 51            | 18            |
| 35        | 1      | 1    |        | 3600   | PK 34+00 | 17.05.12 | 21,3           | 27,9    | 22,5 | 701    | 50    | 170                        | 120 | 88  | 77  | 64 | 47 | 35 | 541       | 274                   | 98%                                 | 267 | 50             | 33            | 12            |
| 36        | 1      | 1    |        | 3700   | PK 35+00 | 17.05.12 | 21,3           | 28,3    | 22,6 | 696    | 49    | 210                        | 147 | 100 | 84  | 71 | 50 | 36 | 454       | 274                   | 66%                                 | 180 | 64             | 48            | 14            |
| 37        | 1      | 1    |        | 3800   | PK 36+00 | 17.05.12 | 21,3           | 28,4    | 22,7 | 692    | 49    | 174                        | 115 | 72  | 61  | 51 | 36 | 28 | 525       | 274                   | 92%                                 | 251 | 60             | 44            | 9             |
| 38        | 1      | 1    |        | 3900   | PK 37+00 | 17.05.12 | 21,3           | 29,0    | 22,5 | 707    | 50    | 181                        | 127 | 87  | 72  | 60 | 43 | 32 | 517       | 274                   | 89%                                 | 243 | 54             | 41            | 12            |
| 39        | 1      | 1    |        | 4000   | PK 38+00 | 17.05.12 | 21,3           | 25,0    | 22,8 | 696    | 49    | 209                        | 130 | 89  | 77  | 62 | 47 | 34 | 455       | 274                   | 66%                                 | 181 | 81             | 42            | 13            |
| 40        | 1      | 1    |        | 4100   | PK 39+00 | 17.05.12 | 23,3           | 28,7    | 22,6 | 689    | 49    | 220                        | 141 | 91  | 75  | 63 | 45 | 34 | 438       | 274                   | 60%                                 | 164 | 82             | 51            | 11            |
| 41        | 1      | 1    |        | 4200   | PK 40+00 | 17.05.12 | 23,3           | 28,5    | 22,1 | 687    | 49    | 246                        | 165 | 105 | 85  | 71 | 48 | 36 | 400       | 274                   | 46%                                 | 126 | 83             | 62            | 13            |
| 42        | 1      | 1    |        | 4300   | PK 41+00 | 17.05.12 | 23,3           | 27,9    | 22,0 | 696    | 49    | 207                        | 140 | 92  | 75  | 63 | 44 | 33 | 464       | 274                   | 69%                                 | 190 | 68             | 49            | 11            |
| 43        | 1      | 1    |        | 4400   | PK 42+00 | 17.05.12 | 23,3           | 28,6    | 22,0 | 703    | 50    | 183                        | 126 | 85  | 70  | 59 | 40 | 30 | 516       | 274                   | 88%                                 | 242 | 57             | 41            | 10            |
| 44        | 1      | 1    |        | 4500   | PK 43+00 | 17.05.12 | 23,3           | 29,8    | 22,4 | 707    | 50    | 176                        | 118 | 81  | 69  | 57 | 42 | 30 | 533       | 274                   | 95%                                 | 259 | 58             | 37            | 11            |
| 45        | 1      | 1    |        | 4600   | PK 44+00 | 17.05.12 | 23,3           | 29,4    | 23,0 | 688    | 49    | 196                        | 121 | 75  | 64  | 50 | 37 | 27 | 480       | 274                   | 75%                                 | 206 | 77             | 48            | 10            |
| 46        | 1      | 1    |        | 4700   | PK 45+00 | 17.05.12 | 23,3           | 29,3    | 23,1 | 697    | 49    | 167                        | 106 | 75  | 63  | 57 | 40 | 28 | 550       | 274                   | 101%                                | 276 | 62             | 31            | 12            |
| 47        | 1      | 1    |        | 4800   | PK 46+00 | 17.05.12 | 23,3           | 29,2    | 23,0 | 704    | 50    | 229                        | 144 | 91  | 72  | 57 | 41 | 30 | 432       | 274                   | 58%                                 | 158 | 86             | 53            | 11            |
| 48        | 1      | 1    |        | 4900   | PK 47+00 | 17.05.12 | 23,3           | 30,5    | 23,6 | 699    | 49    | 198                        | 127 | 82  | 66  | 53 | 39 | 28 | 481       | 274                   | 76%                                 | 207 | 72             | 46            | 11            |
| 49        | 1      | 1    |        | 5000   | PK 48+00 | 17.05.12 | 23,3           | 30,5    | 23,9 | 696    | 49    | 203                        | 139 | 87  | 75  | 57 | 42 | 31 | 471       | 274                   | 72%                                 | 197 | 65             | 53            | 11            |
| 50        | 1      | 1    |        | 5100   | PK 49+00 | 17.05.12 | 23,3           | 30,2    | 24,1 | 691    | 49    | 194                        | 132 | 96  | 78  | 72 | 48 | 37 | 486       | 274                   | 77%                                 | 212 | 63             | 38            | 11            |
| 51        | 1      | 1    |        | 5200   | PK 50+00 | 17.05.12 | 23,3           | 29,6    | 24,2 | 705    | 50    | 159                        | 113 | 82  | 69  | 57 | 40 | 29 | 578       | 274                   | 111%                                | 304 | 46             | 31            | 11            |
| 52        | 1      | 1    |        | 5300   | PK 51+00 | 17.05.12 | 23,3           | 29,5    | 23,9 | 696    | 49    | 190                        | 132 | 90  | 74  | 61 | 41 | 28 | 496       | 274                   | 81%                                 | 222 | 59             | 43            | 13            |
| 53        | 1      | 1    |        | 5400   | PK 52+00 | 17.05.12 | 23,3           | 30,4    | 24,1 | 690    | 49    | 180                        | 128 | 91  | 75  | 65 | 45 | 32 | 515       | 274                   | 88%                                 | 241 | 53             | 37            | 13            |
| 54        | 1      | 1    |        | 5500   | PK 53+00 | 17.05.12 | 23,3           | 29,6    | 24,0 | 691    | 49    | 218                        | 142 | 90  | 76  | 62 | 43 | 33 | 443       | 274                   | 62%                                 | 169 | 77             | 53            | 10            |
| 55        | 1      | 1    |        | 5600   | PK 54+00 | 17.05.12 | 23,3           | 29,5    | 24,1 | 711    | 50    | 178                        | 130 | 94  | 81  | 67 | 50 | 36 | 532       | 274                   | 94%                                 | 258 | 48             | 35            | 14            |
| 56        | 1      | 1    |        | 5700   | PK 55+00 | 17.05.12 | 23,3           | 29,1    | 24,2 | 691    | 49    | 185                        | 134 | 93  | 78  | 67 | 48 | 36 | 503       | 274                   | 84%                                 | 229 | 53             | 42            | 13            |
| 57        | 1      | 1    |        | 5800   | PK 56+00 | 17.05.12 | 23,3           | 29,1    | 24,0 | 706    | 50    | 193                        | 133 | 90  | 74  | 60 | 41 | 32 | 495       | 274                   | 81%                                 | 221 | 60             | 43            | 9             |
| 58        | 1      | 1    |        | 5900   | PK 57+00 | 17.05.12 | 23,3           | 29,3    | 23,9 | 690    | 49    | 188                        | 125 | 85  | 68  | 55 | 37 | 26 | 496       | 274                   | 81%                                 | 222 | 65             | 41            | 11            |
| 59        |        |      |        | 6000   | PK 58+00 | 17.05.12 | 23,3           | 29,8    | 24,1 | 694    | 49    | 203                        | 130 | 77  | 66  | 52 | 32 | 23 | 470       | 274                   | 71%                                 | 196 | 74             | 54            | 9             |
| 60        | 1      | 1    |        | 6100   | PK 59+00 | 17.05.12 | 23,3           | 30,7    | 23,9 | 702    | 50    | 237                        | 153 | 94  | 75  | 62 | 46 | 31 | 420       | 274                   | 53%                                 | 146 | 84             | 59            | 14            |
| 61        | 1      | 1    |        | 6200   | PK 60+00 | 17.05.12 | 23,3           | 30,9    | 23,9 | 701    | 50    | 223                        | 150 | 92  | 77  | 60 | 41 | 30 | 440       | 274                   | 61%                                 | 166 | 74             | 58            | 12            |
| 62        | 1      | 1    |        | 6300   | PK 61+00 | 17.05.12 | 23,3           | 30,1    | 23,8 | 700    | 49    | 198                        | 144 | 92  | 73  | 59 | 40 | 29 | 482       | 274                   | 76%                                 | 208 | 55             | 53            | 12            |
| 63        | 1      | 1    |        | 6400   | PK 62+00 | 17.05.12 | 23,3           | 29,9    | 23,4 | 703    | 50    | 203                        | 152 | 116 | 101 | 88 | 65 | 48 | 475       | 274                   | 73%                                 | 201 | 51             | 37            | 17            |
| 64        | 1      | 1    |        | 6500   | PK 63+00 | 17.05.12 | 23,3           | 30,0    | 23,7 | 703    | 50    | 180                        | 130 | 89  | 72  | 60 | 40 | 27 | 522       | 274                   | 91%                                 | 248 | 50             | 42            | 13            |
| 65        | 1      | 1    |        | 6600   | PK 64+00 | 17.05.12 | 23,3           | 29,9    | 23,8 | 701    | 50    | 184                        | 133 | 92  | 78  | 65 | 46 | 33 | 512       | 274                   | 87%                                 | 238 | 51             | 41            | 13            |
| 66        | 1      | 1    |        | 6700   | PK 65+00 | 17.05.12 | 23,3           | 30,9    | 23,8 | 703    | 50    | 180                        | 129 | 86  | 72  | 60 | 43 | 32 | 523       | 274                   | 91%                                 | 249 | 51             | 43            | 11            |
| 67        | 1      | 1    |        | 6800   | PK 66+00 | 17.05.12 | 23,3           | 30,1    | 23,7 | 704    | 50    | 192                        | 142 | 101 | 86  | 75 | 56 | 44 | 497       | 274                   | 82%                                 | 223 | 50             | 41            | 12            |
| 68        | 1      | 1    |        | 6900   | PK 67+00 | 17.05.12 | 23,3           | 30,0    | 23,8 | 686    | 48    | 195                        | 145 | 104 | 89  | 75 | 54 | 39 | 480       | 274                   | 75%                                 | 206 | 52             | 42            | 15            |
| 69        | 1      | 1    |        | 7000   | PK 68+00 | 17.05.12 | 23,3           | 30,1    | 24,2 | 708    | 50    | 192                        | 130 | 89  | 71  | 57 | 41 | 28 | 499       | 274                   | 82%                                 | 225 | 62             | 41            | 12            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |    |    |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|----|----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3 | D4 | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 70        | 1      | 1    |        | 7100   | PK 69+00 | 17.05.12 | 23,3           | 30,2    | 24,5 | 710    | 50    | 197                        | 134 | 90 | 74 | 59 | 43 | 33 | 490       | 274                   | 79%                                 | 216 | 63             | 43            | 10            |
| 71        | 1      | 1    |        | 7200   | PK 70+00 | 17.05.12 | 23,3           | 29,6    | 24,3 | 703    | 50    | 187                        | 126 | 90 | 73 | 61 | 46 | 35 | 506       | 274                   | 85%                                 | 232 | 62             | 37            | 11            |
| 72        | 1      | 1    |        | 7300   | PK 71+00 | 17.05.12 | 23,3           | 29,6    | 24,1 | 698    | 49    | 180                        | 131 | 95 | 81 | 69 | 52 | 40 | 520       | 274                   | 90%                                 | 246 | 49             | 36            | 12            |

KESKMINE: 460 272 69% 187 72 50 12

Min: 313 16% 43 45 31 6

Max: 578 111% 304 149 89 18

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |     |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|-----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6  | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |     |    |           |                       |                                     |     |                |               |               |
| 73        | 1      | 2    |        | 7300   | PK 71+00 | 17.05.12 | 24,6           | 30,9    | 24,1 | 681    | 48    | 340                        | 277 | 205 | 177 | 154 | 118 | 92 | 309       | 274                   | 13%                                 | 35  | 66             | 74            | 27            |
| 74        | 1      | 2    |        | 7200   | PK 70+00 | 17.05.12 | 24,6           | 31,3    | 24,0 | 694    | 49    | 266                        | 185 | 121 | 102 | 87  | 64  | 51 | 381       | 274                   | 39%                                 | 107 | 82             | 65            | 13            |
| 77        | 1      | 2    |        | 7100   | PK 69+00 | 17.05.12 | 24,6           | 31,4    | 24,2 | 689    | 49    | 271                        | 198 | 143 | 123 | 108 | 82  | 65 | 374       | 274                   | 36%                                 | 100 | 74             | 57            | 17            |
| 78        | 1      | 2    |        | 7000   | PK 68+00 | 17.05.12 | 24,6           | 31,2    | 24,1 | 694    | 49    | 392                        | 293 | 212 | 187 | 159 | 117 | 89 | 280       | 274                   | 2%                                  | 6   | 101            | 83            | 28            |
| 79        | 1      | 2    |        | 6900   | PK 67+00 | 17.05.12 | 24,6           | 31,8    | 24,2 | 682    | 48    | 276                        | 203 | 145 | 123 | 105 | 80  | 62 | 365       | 274                   | 33%                                 | 91  | 75             | 61            | 19            |
| 80        | 1      | 2    |        | 6800   | PK 66+00 | 17.05.12 | 24,6           | 31,4    | 24,1 | 692    | 49    | 193                        | 139 | 94  | 81  | 69  | 52  | 41 | 490       | 274                   | 79%                                 | 216 | 56             | 45            | 12            |
| 81        | 1      | 2    |        | 6700   | PK 65+00 | 17.05.12 | 24,6           | 31,7    | 24,2 | 690    | 49    | 190                        | 130 | 84  | 67  | 54  | 38  | 27 | 495       | 274                   | 81%                                 | 221 | 62             | 47            | 11            |
| 82        | 1      | 2    |        | 6600   | PK 64+00 | 17.05.12 | 24,6           | 32,5    | 24,0 | 688    | 49    | 181                        | 127 | 82  | 66  | 54  | 37  | 27 | 514       | 274                   | 87%                                 | 240 | 56             | 46            | 10            |
| 83        | 1      | 2    |        | 6500   | PK 63+00 | 17.05.12 | 24,6           | 31,9    | 23,9 | 694    | 49    | 197                        | 130 | 78  | 61  | 49  | 32  | 23 | 485       | 274                   | 77%                                 | 211 | 68             | 52            | 9             |
| 84        | 1      | 2    |        | 6400   | PK 62+00 | 17.05.12 | 24,6           | 32,8    | 24,2 | 699    | 49    | 192                        | 136 | 91  | 76  | 63  | 42  | 30 | 497       | 274                   | 81%                                 | 223 | 56             | 46            | 12            |
| 85        | 1      | 2    |        | 6300   | PK 61+00 | 17.05.12 | 24,6           | 32,3    | 24,1 | 699    | 49    | 177                        | 124 | 82  | 65  | 53  | 34  | 23 | 531       | 274                   | 94%                                 | 257 | 53             | 42            | 11            |
| 86        | 1      | 2    |        | 6200   | PK 60+00 | 17.05.12 | 24,6           | 31,3    | 23,6 | 691    | 49    | 165                        | 111 | 76  | 63  | 53  | 36  | 26 | 554       | 274                   | 102%                                | 280 | 56             | 36            | 10            |
| 87        | 1      | 2    |        | 6100   | PK 59+00 | 17.05.12 | 24,6           | 31,1    | 23,5 | 701    | 50    | 236                        | 152 | 95  | 76  | 62  | 42  | 30 | 422       | 274                   | 54%                                 | 148 | 85             | 57            | 12            |
| 88        | 1      | 2    |        | 6000   | PK 58+00 | 17.05.12 | 24,6           | 31,1    | 24,2 | 695    | 49    | 241                        | 164 | 96  | 82  | 65  | 45  | 32 | 412       | 274                   | 50%                                 | 138 | 79             | 69            | 13            |
| 89        | 1      | 2    |        | 5900   | PK 57+00 | 17.05.12 | 24,6           | 31,4    | 24,2 | 698    | 49    | 218                        | 143 | 93  | 78  | 63  | 43  | 30 | 448       | 274                   | 64%                                 | 174 | 76             | 50            | 12            |
| 90        | 1      | 2    |        | 5800   | PK 56+00 | 17.05.12 | 24,6           | 30,7    | 24,1 | 699    | 49    | 175                        | 115 | 82  | 67  | 57  | 40  | 30 | 534       | 274                   | 95%                                 | 260 | 61             | 34            | 10            |
| 91        | 1      | 2    |        | 5700   | PK 55+00 | 17.05.12 | 24,6           | 31,0    | 24,1 | 685    | 48    | 181                        | 125 | 87  | 72  | 61  | 43  | 31 | 512       | 274                   | 87%                                 | 238 | 58             | 39            | 12            |
| 92        | 1      | 2    |        | 5600   | PK 54+00 | 17.05.12 | 24,6           | 30,5    | 24,0 | 683    | 48    | 190                        | 122 | 84  | 70  | 60  | 42  | 31 | 492       | 274                   | 79%                                 | 218 | 70             | 39            | 12            |
| 93        | 1      | 2    |        | 5500   | PK 53+00 | 17.05.12 | 24,6           | 30,9    | 23,5 | 705    | 50    | 237                        | 153 | 93  | 76  | 60  | 42  | 30 | 422       | 274                   | 54%                                 | 148 | 85             | 60            | 12            |
| 94        | 1      | 2    |        | 5400   | PK 52+00 | 17.05.12 | 24,6           | 30,4    | 23,7 | 692    | 49    | 221                        | 147 | 100 | 84  | 75  | 52  | 38 | 441       | 274                   | 61%                                 | 167 | 75             | 48            | 14            |
| 95        | 1      | 2    |        | 5300   | PK 51+00 | 17.05.12 | 24,6           | 31,2    | 23,8 | 694    | 49    | 230                        | 142 | 89  | 76  | 62  | 43  | 30 | 428       | 274                   | 56%                                 | 154 | 90             | 53            | 13            |
| 96        | 1      | 2    |        | 5200   | PK 50+00 | 17.05.12 | 24,6           | 31,4    | 23,3 | 696    | 49    | 220                        | 131 | 83  | 70  | 56  | 40  | 28 | 445       | 274                   | 62%                                 | 171 | 90             | 49            | 12            |
| 97        | 1      | 2    |        | 5100   | PK 49+00 | 17.05.12 | 24,6           | 31,8    | 23,7 | 699    | 49    | 233                        | 151 | 91  | 75  | 62  | 43  | 32 | 426       | 274                   | 56%                                 | 152 | 83             | 60            | 11            |
| 98        | 1      | 2    |        | 5000   | PK 48+00 | 17.05.12 | 24,6           | 31,4    | 23,4 | 695    | 49    | 248                        | 161 | 93  | 75  | 61  | 43  | 31 | 403       | 274                   | 47%                                 | 129 | 89             | 69            | 11            |
| 99        | 1      | 2    |        | 4900   | PK 47+00 | 17.05.12 | 24,6           | 31,4    | 23,5 | 708    | 50    | 249                        | 156 | 92  | 76  | 59  | 41  | 29 | 409       | 274                   | 49%                                 | 135 | 92             | 64            | 12            |
| 100       | 1      | 2    |        | 4800   | PK 46+00 | 17.05.12 | 24,6           | 32,0    | 23,6 | 695    | 49    | 235                        | 145 | 90  | 72  | 58  | 39  | 28 | 421       | 274                   | 54%                                 | 147 | 91             | 56            | 11            |
| 101       | 1      | 2    |        | 4700   | PK 45+00 | 17.05.12 | 24,6           | 31,4    | 23,7 | 691    | 49    | 225                        | 146 | 89  | 72  | 58  | 39  | 28 | 434       | 274                   | 58%                                 | 160 | 81             | 59            | 11            |
| 102       | 1      | 2    |        | 4600   | PK 44+00 | 17.05.12 | 24,6           | 31,7    | 23,8 | 697    | 49    | 244                        | 151 | 90  | 72  | 58  | 38  | 28 | 410       | 274                   | 50%                                 | 136 | 94             | 62            | 11            |
| 103       | 1      | 2    |        | 4500   | PK 43+00 | 17.05.12 | 24,6           | 31,6    | 24,1 | 699    | 49    | 257                        | 156 | 91  | 78  | 61  | 42  | 30 | 394       | 274                   | 44%                                 | 120 | 101            | 66            | 13            |
| 104       | 1      | 2    |        | 4400   | PK 42+00 | 17.05.12 | 24,6           | 31,5    | 24,4 | 694    | 49    | 213                        | 138 | 86  | 70  | 55  | 39  | 27 | 454       | 274                   | 66%                                 | 180 | 77             | 53            | 12            |
| 105       | 1      | 2    |        | 4300   | PK 41+00 | 17.05.12 | 24,6           | 31,7    | 24,1 | 700    | 49    | 204                        | 139 | 87  | 70  | 56  | 40  | 29 | 474       | 274                   | 73%                                 | 200 | 66             | 53            | 11            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 106       | 1      | 2    |        | 4200   | PK 40+00 | 17.05.12 | 24,6           | 31,9    | 24,2 | 698    | 49    | 230                        | 158 | 101 | 86  | 73  | 50 | 35 | 430       | 274                   | 57%                               | 156 | 72             | 58            | 16            |
| 107       | 1      | 2    |        | 4100   | PK 39+00 | 17.05.12 | 24,6           | 31,6    | 24,0 | 696    | 49    | 231                        | 146 | 92  | 75  | 65  | 44 | 31 | 427       | 274                   | 56%                               | 153 | 86             | 55            | 13            |
| 108       | 1      | 2    |        | 4000   | PK 38+00 | 17.05.12 | 24,6           | 30,3    | 24,4 | 693    | 49    | 202                        | 136 | 83  | 71  | 56  | 38 | 27 | 474       | 274                   | 73%                               | 200 | 68             | 54            | 11            |
| 109       | 1      | 2    |        | 3900   | PK 37+00 | 17.05.12 | 24,6           | 32,3    | 24,6 | 688    | 49    | 204                        | 128 | 88  | 71  | 60  | 40 | 29 | 467       | 274                   | 71%                               | 193 | 78             | 41            | 11            |
| 110       | 1      | 2    |        | 3800   | PK 36+00 | 17.05.12 | 24,6           | 32,7    | 24,2 | 705    | 50    | 190                        | 125 | 77  | 64  | 55  | 41 | 31 | 503       | 274                   | 84%                               | 229 | 66             | 48            | 10            |
| 111       | 1      | 2    |        | 3700   | PK 35+00 | 17.05.12 | 24,6           | 32,6    | 24,6 | 689    | 49    | 208                        | 137 | 90  | 77  | 64  | 46 | 33 | 461       | 274                   | 68%                               | 187 | 73             | 48            | 14            |
| 112       | 1      | 2    |        | 3600   | PK 34+00 | 17.05.12 | 24,6           | 32,3    | 24,4 | 713    | 50    | 270                        | 173 | 108 | 90  | 75  | 51 | 39 | 385       | 274                   | 40%                               | 111 | 96             | 64            | 12            |
| 113       | 1      | 2    |        | 3500   | PK 33+00 | 17.05.12 | 24,6           | 32,3    | 24,3 | 694    | 49    | 304                        | 223 | 160 | 135 | 116 | 82 | 59 | 343       | 274                   | 25%                               | 69  | 83             | 64            | 23            |
| 114       | 1      | 2    |        | 3400   | PK 32+00 | 17.05.12 | 24,6           | 32,0    | 24,0 | 695    | 49    | 254                        | 176 | 116 | 96  | 80  | 53 | 39 | 396       | 274                   | 44%                               | 122 | 80             | 60            | 15            |
| 115       | 1      | 2    |        | 3300   | PK 31+00 | 17.05.12 | 24,6           | 32,9    | 24,3 | 697    | 49    | 241                        | 163 | 111 | 89  | 70  | 47 | 31 | 414       | 270                   | 53%                               | 144 | 79             | 53            | 16            |
| 116       | 1      | 2    |        | 3200   | PK 30+00 | 17.05.12 | 24,6           | 32,5    | 23,9 | 695    | 49    | 215                        | 152 | 95  | 82  | 64  | 44 | 31 | 452       | 270                   | 67%                               | 182 | 64             | 59            | 13            |
| 117       | 1      | 2    |        | 3100   | PK 29+00 | 17.05.12 | 24,6           | 33,2    | 24,2 | 691    | 49    | 265                        | 163 | 91  | 78  | 59  | 41 | 31 | 381       | 270                   | 41%                               | 111 | 104            | 74            | 11            |
| 118       | 1      | 2    |        | 3000   | PK 28+00 | 17.05.12 | 24,6           | 32,8    | 24,2 | 692    | 49    | 271                        | 165 | 103 | 84  | 69  | 47 | 35 | 375       | 270                   | 39%                               | 105 | 108            | 63            | 13            |
| 119       | 1      | 2    |        | 2900   | PK 27+00 | 17.05.12 | 24,6           | 32,2    | 24,0 | 686    | 48    | 312                        | 187 | 105 | 84  | 69  | 44 | 32 | 332       | 270                   | 23%                               | 62  | 130            | 84            | 13            |
| 120       | 1      | 2    |        | 2800   | PK 26+00 | 17.05.12 | 24,6           | 31,9    | 23,9 | 689    | 49    | 231                        | 142 | 81  | 61  | 51  | 34 | 24 | 423       | 270                   | 57%                               | 153 | 92             | 62            | 10            |
| 121       | 1      | 2    |        | 2700   | PK 25+00 | 17.05.12 | 27,2           | 31,9    | 23,8 | 701    | 50    | 251                        | 159 | 94  | 77  | 62  | 44 | 32 | 406       | 270                   | 50%                               | 136 | 93             | 66            | 12            |
| 122       | 1      | 2    |        | 2600   | PK 24+00 | 17.05.12 | 27,2           | 31,7    | 24,1 | 703    | 50    | 205                        | 131 | 84  | 66  | 58  | 38 | 27 | 479       | 270                   | 77%                               | 209 | 74             | 47            | 11            |
| 123       | 1      | 2    |        | 2500   | PK 23+00 | 17.05.12 | 27,2           | 33,0    | 24,3 | 694    | 49    | 266                        | 163 | 97  | 77  | 66  | 45 | 36 | 385       | 270                   | 42%                               | 115 | 105            | 68            | 10            |
| 124       | 1      | 2    |        | 2400   | PK 22+00 | 17.05.12 | 27,2           | 32,0    | 24,2 | 700    | 49    | 258                        | 162 | 98  | 83  | 70  | 51 | 37 | 398       | 270                   | 47%                               | 128 | 96             | 65            | 14            |
| 125       | 1      | 2    |        | 2300   | PK 21+00 | 17.05.12 | 27,2           | 31,8    | 24,7 | 698    | 49    | 227                        | 142 | 87  | 72  | 65  | 44 | 33 | 438       | 270                   | 62%                               | 168 | 86             | 56            | 11            |
| 126       | 1      | 2    |        | 2200   | PK 20+00 | 17.05.12 | 27,2           | 32,4    | 24,9 | 691    | 49    | 238                        | 156 | 102 | 85  | 72  | 52 | 39 | 419       | 270                   | 55%                               | 149 | 84             | 55            | 14            |
| 127       | 1      | 2    |        | 2100   | PK 19+00 | 17.05.12 | 27,2           | 32,0    | 25,0 | 712    | 50    | 282                        | 177 | 113 | 93  | 78  | 56 | 42 | 375       | 270                   | 39%                               | 105 | 103            | 64            | 14            |
| 128       | 1      | 2    |        | 2000   | PK 18+00 | 17.05.12 | 27,2           | 31,7    | 25,1 | 697    | 49    | 253                        | 144 | 90  | 75  | 61  | 43 | 32 | 401       | 270                   | 49%                               | 131 | 111            | 55            | 11            |
| 129       | 1      | 2    |        | 1900   | PK 17+00 | 17.05.12 | 27,2           | 31,8    | 25,3 | 713    | 50    | 301                        | 193 | 132 | 106 | 89  | 63 | 45 | 356       | 270                   | 32%                               | 86  | 108            | 60            | 17            |
| 130       | 1      | 2    |        | 1800   | PK 16+00 | 17.05.12 | 27,2           | 31,7    | 25,1 | 713    | 50    | 262                        | 159 | 99  | 76  | 62  | 42 | 29 | 398       | 270                   | 47%                               | 128 | 102            | 60            | 13            |
| 131       | 1      | 2    |        | 1700   | PK 15+00 | 17.05.12 | 27,2           | 32,3    | 24,8 | 700    | 49    | 282                        | 163 | 92  | 73  | 63  | 45 | 30 | 370       | 270                   | 37%                               | 100 | 120            | 72            | 15            |
| 132       | 1      | 2    |        | 1600   | PK 14+00 | 17.05.12 | 27,2           | 32,5    | 24,9 | 691    | 49    | 273                        | 166 | 102 | 81  | 67  | 45 | 33 | 376       | 270                   | 39%                               | 106 | 109            | 66            | 13            |
| 133       | 1      | 2    |        | 1500   | PK 13+00 | 17.05.12 | 27,2           | 32,5    | 24,9 | 686    | 48    | 267                        | 158 | 94  | 77  | 63  | 44 | 33 | 381       | 270                   | 41%                               | 111 | 112            | 66            | 12            |
| 134       | 1      | 2    |        | 1400   | PK 12+00 | 17.05.12 | 27,2           | 32,6    | 24,9 | 687    | 49    | 239                        | 142 | 87  | 71  | 58  | 41 | 31 | 415       | 270                   | 54%                               | 145 | 101            | 56            | 11            |
| 135       | 1      | 2    |        | 1300   | PK 11+00 | 17.05.12 | 27,2           | 32,6    | 24,9 | 690    | 49    | 259                        | 157 | 97  | 77  | 61  | 40 | 28 | 392       | 270                   | 45%                               | 122 | 104            | 62            | 12            |
| 136       | 1      | 2    |        | 1200   | PK 10+00 | 17.05.12 | 27,2           | 32,9    | 25,0 | 695    | 49    | 234                        | 156 | 106 | 90  | 75  | 51 | 36 | 426       | 270                   | 58%                               | 156 | 79             | 51            | 15            |
| 137       | 1      | 2    |        | 1100   | PK 9+00  | 17.05.12 | 27,2           | 34,4    | 25,3 | 687    | 49    | 264                        | 172 | 113 | 92  | 77  | 51 | 35 | 385       | 270                   | 42%                               | 115 | 94             | 61            | 17            |
| 138       | 1      | 2    |        | 1000   | PK 8+00  | 17.05.12 | 27,2           | 34,3    | 25,0 | 687    | 49    | 313                        | 203 | 122 | 98  | 82  | 50 | 35 | 336       | 270                   | 24%                               | 66  | 113            | 83            | 16            |
| 139       | 1      | 2    |        | 900    | PK 7+00  | 17.05.12 | 27,2           | 33,5    | 24,9 | 697    | 49    | 189                        | 118 | 73  | 65  | 54  | 40 | 29 | 506       | 270                   | 87%                               | 236 | 72             | 46            | 12            |
| 140       | 1      | 2    |        | 800    | PK 6+00  | 17.05.12 | 27,2           | 33,0    | 25,0 | 693    | 49    | 206                        | 132 | 86  | 73  | 60  | 43 | 33 | 471       | 270                   | 74%                               | 201 | 75             | 47            | 10            |
| 141       | 1      | 2    |        | 700    | PK 5+00  | 17.05.12 | 27,2           | 34,2    | 25,1 | 711    | 50    | 236                        | 137 | 83  | 66  | 51  | 37 | 27 | 431       | 270                   | 60%                               | 161 | 99             | 53            | 10            |
| 142       | 1      | 2    |        | 600    | PK 4+00  | 17.05.12 | 27,2           | 34,4    | 25,6 | 697    | 49    | 272                        | 178 | 113 | 92  | 76  | 51 | 37 | 380       | 270                   | 41%                               | 110 | 95             | 65            | 15            |
| 143       | 1      | 2    |        | 500    | PK 3+00  | 17.05.12 | 27,2           | 34,0    | 25,8 | 690    | 49    | 236                        | 165 | 112 | 95  | 78  | 52 | 37 | 421       | 270                   | 56%                               | 151 | 73             | 54            | 15            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK      | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|---------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |         |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 144       | 1      | 2    |        | 400    | PK 2+00 | 17.05.12 | 27,2           | 34,7    | 25,7 | 689    | 49    | 421                        | 285 | 174 | 136 | 109 | 73 | 55 | 266       | 270                   | -2%                                 | -4  | 139            | 114           | 19            |
| 145       | 1      | 2    |        | 300    | PK 1+00 | 17.05.12 | 27,2           | 34,7    | 25,4 | 698    | 49    | 245                        | 181 | 122 | 103 | 89  | 65 | 49 | 413       | 270                   | 53%                                 | 143 | 65             | 60            | 16            |
| 146       | 1      | 2    |        | 200    | PK 0+00 | 17.05.12 | 27,2           | 35,4    | 25,6 | 696    | 49    | 288                        | 193 | 132 | 106 | 88  | 63 | 49 | 362       | 270                   | 34%                                 | 92  | 97             | 62            | 14            |

KESKMINE: 421 272 55% 149 85 58 13

Min: 266 -2% -4 53 34 9

Max: 554 102% 280 139 114 28

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 1         | 1      | 1    |        | 200    | PK 0+00  | 20.09.12 | 14,5           | 17,8    | 14,8 | 714    | 50    | 180                        | 139 | 100 | 87  | 75  | 52 | 41 | 460       | 270                   | 70%                               | 190 | 40             | 39            | 12            |
| 2         | 1      | 1    |        | 300    | PK 1+00  | 20.09.12 | 14,5           | 16,4    | 14,8 | 699    | 49    | 169                        | 131 | 97  | 81  | 70  | 50 | 37 | 475       | 270                   | 76%                               | 205 | 38             | 35            | 13            |
| 3         | 1      | 1    |        | 400    | PK 2+00  | 20.09.12 | 14,5           | 16,4    | 14,7 | 705    | 50    | 224                        | 154 | 95  | 77  | 62  | 41 | 29 | 382       | 270                   | 41%                               | 112 | 70             | 58            | 12            |
| 4         | 1      | 1    |        | 500    | PK 3+00  | 20.09.12 | 14,5           | 16,9    | 14,7 | 708    | 50    | 197                        | 128 | 81  | 65  | 52  | 36 | 27 | 425       | 270                   | 57%                               | 155 | 68             | 47            | 9             |
| 5         | 1      | 1    |        | 600    | PK 4+00  | 20.09.12 | 14,5           | 16,5    | 14,9 | 696    | 49    | 215                        | 155 | 101 | 84  | 69  | 48 | 35 | 390       | 270                   | 44%                               | 120 | 61             | 55            | 13            |
| 6         | 1      | 1    |        | 700    | PK 5+00  | 20.09.12 | 14,5           | 16,9    | 14,7 | 702    | 50    | 271                        | 180 | 114 | 87  | 70  | 47 | 32 | 328       | 270                   | 21%                               | 58  | 91             | 67            | 15            |
| 7         | 1      | 1    |        | 800    | PK 6+00  | 20.09.12 | 14,5           | 16,8    | 14,8 | 698    | 49    | 235                        | 162 | 104 | 85  | 70  | 49 | 35 | 365       | 270                   | 35%                               | 95  | 73             | 59            | 14            |
| 8         | 1      | 1    |        | 900    | PK 7+00  | 20.09.12 | 14,5           | 16,9    | 14,5 | 705    | 50    | 198                        | 132 | 88  | 71  | 59  | 42 | 30 | 421       | 270                   | 56%                               | 151 | 66             | 45            | 12            |
| 9         | 1      | 1    |        | 1000   | PK 8+00  | 20.09.12 | 14,5           | 15,6    | 14,3 | 704    | 50    | 227                        | 171 | 113 | 95  | 81  | 50 | 34 | 377       | 270                   | 40%                               | 107 | 56             | 58            | 16            |
| 10        | 1      | 1    |        | 1100   | PK 9+00  | 20.09.12 | 14,5           | 17,0    | 14,8 | 702    | 50    | 283                        | 210 | 143 | 119 | 100 | 67 | 47 | 316       | 270                   | 17%                               | 46  | 73             | 68            | 21            |
| 11        | 1      | 1    |        | 1200   | PK 10+00 | 20.09.12 | 14,5           | 17,0    | 14,7 | 700    | 49    | 220                        | 143 | 88  | 70  | 58  | 38 | 27 | 386       | 270                   | 43%                               | 116 | 77             | 56            | 12            |
| 12        | 1      | 1    |        | 1300   | PK 11+00 | 20.09.12 | 14,5           | 17,0    | 14,4 | 698    | 49    | 289                        | 189 | 113 | 88  | 70  | 49 | 34 | 310       | 270                   | 15%                               | 40  | 101            | 78            | 14            |
| 13        | 1      | 1    |        | 1400   | PK 12+00 | 20.09.12 | 14,5           | 16,9    | 14,5 | 698    | 49    | 253                        | 167 | 101 | 80  | 66  | 44 | 32 | 344       | 270                   | 28%                               | 74  | 87             | 67            | 12            |
| 14        | 1      | 1    |        | 1500   | PK 13+00 | 20.09.12 | 14,5           | 17,3    | 14,1 | 709    | 50    | 213                        | 153 | 101 | 79  | 68  | 46 | 34 | 399       | 270                   | 48%                               | 129 | 60             | 52            | 12            |
| 15        | 1      | 1    |        | 1600   | PK 14+00 | 20.09.12 | 14,5           | 17,2    | 14,0 | 707    | 50    | 219                        | 161 | 97  | 83  | 66  | 47 | 33 | 390       | 270                   | 44%                               | 120 | 58             | 64            | 15            |
| 16        | 1      | 1    |        | 1700   | PK 15+00 | 20.09.12 | 14,5           | 16,5    | 14,1 | 703    | 50    | 152                        | 97  | 60  | 50  | 40  | 27 | 19 | 517       | 270                   | 91%                               | 247 | 56             | 37            | 8             |
| 17        | 1      | 1    |        | 1800   | PK 16+00 | 20.09.12 | 14,5           | 16,3    | 14,1 | 709    | 50    | 141                        | 98  | 67  | 54  | 44  | 32 | 23 | 554       | 270                   | 105%                              | 284 | 43             | 31            | 9             |
| 18        | 1      | 1    |        | 1900   | PK 17+00 | 20.09.12 | 14,5           | 15,6    | 13,8 | 708    | 50    | 198                        | 135 | 83  | 70  | 58  | 39 | 29 | 423       | 270                   | 57%                               | 153 | 63             | 52            | 10            |
| 19        | 1      | 1    |        | 2000   | PK 18+00 | 20.09.12 | 14,5           | 15,7    | 13,6 | 701    | 50    | 203                        | 144 | 94  | 77  | 65  | 45 | 33 | 411       | 270                   | 52%                               | 141 | 59             | 50            | 12            |
| 20        | 1      | 1    |        | 2100   | PK 19+00 | 20.09.12 | 14,5           | 16,0    | 13,4 | 707    | 50    | 198                        | 141 | 85  | 75  | 60  | 43 | 31 | 423       | 270                   | 57%                               | 153 | 56             | 56            | 12            |
| 21        | 1      | 1    |        | 2200   | PK 20+00 | 20.09.12 | 14,5           | 15,8    | 13,3 | 704    | 50    | 194                        | 137 | 93  | 79  | 59  | 44 | 33 | 427       | 270                   | 58%                               | 157 | 57             | 45            | 12            |
| 22        | 1      | 1    |        | 2300   | PK 21+00 | 20.09.12 | 14,5           | 15,5    | 13,3 | 698    | 49    | 222                        | 166 | 112 | 97  | 82  | 57 | 40 | 382       | 270                   | 42%                               | 112 | 56             | 54            | 17            |
| 23        | 1      | 1    |        | 2400   | PK 22+00 | 20.09.12 | 14,5           | 14,9    | 13,2 | 701    | 50    | 214                        | 153 | 99  | 82  | 67  | 48 | 34 | 394       | 270                   | 46%                               | 124 | 62             | 55            | 15            |
| 24        | 1      | 1    |        | 2500   | PK 23+00 | 20.09.12 | 14,5           | 15,0    | 13,1 | 705    | 50    | 161                        | 120 | 78  | 67  | 56  | 42 | 28 | 497       | 270                   | 84%                               | 227 | 41             | 43            | 14            |
| 25        | 1      | 1    |        | 2600   | PK 24+00 | 20.09.12 | 14,5           | 14,4    | 13,1 | 702    | 50    | 168                        | 127 | 83  | 74  | 61  | 42 | 30 | 478       | 270                   | 77%                               | 208 | 42             | 44            | 12            |
| 26        | 1      | 1    |        | 2700   | PK 25+00 | 20.09.12 | 14,5           | 14,9    | 13,3 | 702    | 50    | 170                        | 127 | 90  | 74  | 64  | 45 | 34 | 473       | 270                   | 75%                               | 203 | 43             | 37            | 12            |
| 27        | 1      | 1    |        | 2800   | PK 26+00 | 20.09.12 | 14,5           | 14,5    | 13,2 | 703    | 50    | 181                        | 133 | 91  | 74  | 62  | 43 | 31 | 450       | 270                   | 67%                               | 180 | 49             | 43            | 13            |
| 28        | 1      | 1    |        | 2900   | PK 27+00 | 20.09.12 | 14,5           | 14,4    | 13,4 | 709    | 50    | 172                        | 128 | 91  | 77  | 66  | 48 | 35 | 473       | 270                   | 75%                               | 203 | 44             | 36            | 13            |
| 29        | 1      | 1    |        | 3000   | PK 28+00 | 20.09.12 | 14,5           | 14,1    | 13,5 | 702    | 50    | 164                        | 123 | 89  | 75  | 64  | 47 | 34 | 488       | 270                   | 81%                               | 218 | 41             | 35            | 13            |
| 30        | 1      | 1    |        | 3100   | PK 29+00 | 20.09.12 | 14,5           | 14,9    | 13,7 | 703    | 50    | 182                        | 132 | 91  | 75  | 64  | 45 | 32 | 449       | 270                   | 66%                               | 179 | 50             | 41            | 13            |
| 31        | 1      | 1    |        | 3200   | PK 30+00 | 20.09.12 | 14,5           | 13,8    | 13,6 | 705    | 50    | 179                        | 135 | 95  | 79  | 66  | 44 | 31 | 456       | 270                   | 69%                               | 186 | 44             | 41            | 14            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 32        | 1      | 1    |        | 3300   | PK 31+00 | 20.09.12 | 14,5           | 14,4    | 13,4 | 700    | 49    | 208                        | 150 | 101 | 82  | 67 | 46 | 32 | 403       | 270                   | 49%                               | 133 | 58             | 50            | 14            |
| 33        | 1      | 1    |        | 3400   | PK 32+00 | 20.09.12 | 14,5           | 13,8    | 13,4 | 710    | 50    | 192                        | 147 | 105 | 89  | 76 | 54 | 39 | 434       | 274                   | 58%                               | 160 | 45             | 41            | 15            |
| 34        | 1      | 1    |        | 3500   | PK 33+00 | 20.09.12 | 14,5           | 14,3    | 13,3 | 690    | 49    | 204                        | 167 | 125 | 110 | 99 | 73 | 56 | 404       | 274                   | 48%                               | 130 | 38             | 43            | 17            |
| 35        | 1      | 1    |        | 3600   | PK 34+00 | 20.09.12 | 14,5           | 14,7    | 13,6 | 691    | 49    | 136                        | 106 | 81  | 70  | 61 | 46 | 34 | 558       | 274                   | 103%                              | 284 | 31             | 26            | 11            |
| 36        | 1      | 1    |        | 3700   | PK 35+00 | 20.09.12 | 14,5           | 14,5    | 13,5 | 697    | 49    | 169                        | 128 | 92  | 78  | 65 | 48 | 35 | 473       | 274                   | 73%                               | 199 | 42             | 36            | 13            |
| 37        | 1      | 1    |        | 3800   | PK 36+00 | 20.09.12 | 14,5           | 14,6    | 13,6 | 700    | 50    | 147                        | 106 | 72  | 61  | 51 | 37 | 27 | 530       | 274                   | 94%                               | 256 | 41             | 34            | 10            |
| 38        | 1      | 1    |        | 3900   | PK 37+00 | 20.09.12 | 14,5           | 14,7    | 13,5 | 698    | 49    | 154                        | 114 | 82  | 70  | 59 | 43 | 32 | 509       | 274                   | 86%                               | 235 | 41             | 32            | 11            |
| 39        | 1      | 1    |        | 4000   | PK 38+00 | 20.09.12 | 14,5           | 13,8    | 13,6 | 692    | 49    | 179                        | 128 | 86  | 72  | 61 | 43 | 32 | 450       | 274                   | 64%                               | 176 | 52             | 42            | 12            |
| 40        | 1      | 1    |        | 4100   | PK 39+00 | 20.09.12 | 14,5           | 15,7    | 13,4 | 695    | 49    | 187                        | 132 | 88  | 73  | 61 | 44 | 32 | 436       | 274                   | 59%                               | 162 | 56             | 45            | 12            |
| 41        | 1      | 1    |        | 4200   | PK 40+00 | 20.09.12 | 14,5           | 15,6    | 13,4 | 696    | 49    | 215                        | 149 | 95  | 77  | 62 | 43 | 31 | 391       | 274                   | 43%                               | 117 | 66             | 55            | 12            |
| 42        | 1      | 1    |        | 4300   | PK 41+00 | 20.09.12 | 14,5           | 15,6    | 13,4 | 696    | 49    | 190                        | 129 | 86  | 71  | 59 | 45 | 33 | 430       | 274                   | 57%                               | 156 | 62             | 44            | 12            |
| 43        | 1      | 1    |        | 4400   | PK 42+00 | 20.09.12 | 14,5           | 15,6    | 13,4 | 699    | 49    | 166                        | 117 | 78  | 65  | 54 | 38 | 28 | 482       | 274                   | 76%                               | 208 | 49             | 40            | 10            |
| 44        | 1      | 1    |        | 4500   | PK 43+00 | 20.09.12 | 14,5           | 15,5    | 13,7 | 700    | 49    | 142                        | 105 | 71  | 60  | 52 | 40 | 29 | 544       | 274                   | 98%                               | 270 | 38             | 34            | 12            |
| 45        | 1      | 1    |        | 4600   | PK 44+00 | 20.09.12 | 14,5           | 15,4    | 13,7 | 698    | 49    | 176                        | 113 | 68  | 63  | 49 | 34 | 25 | 458       | 274                   | 67%                               | 184 | 65             | 46            | 10            |
| 46        | 1      | 1    |        | 4700   | PK 45+00 | 20.09.12 | 14,5           | 14,5    | 13,9 | 697    | 49    | 132                        | 98  | 71  | 60  | 51 | 38 | 28 | 575       | 274                   | 110%                              | 301 | 35             | 27            | 10            |
| 47        | 1      | 1    |        | 4800   | PK 46+00 | 20.09.12 | 14,5           | 15,6    | 13,9 | 699    | 49    | 192                        | 139 | 83  | 71  | 57 | 40 | 29 | 429       | 274                   | 57%                               | 155 | 53             | 57            | 11            |
| 48        | 1      | 1    |        | 4900   | PK 47+00 | 20.09.12 | 14,5           | 15,4    | 13,7 | 706    | 50    | 176                        | 128 | 83  | 65  | 51 | 39 | 28 | 462       | 274                   | 69%                               | 188 | 48             | 45            | 11            |
| 49        | 1      | 1    |        | 5000   | PK 48+00 | 20.09.12 | 14,5           | 15,8    | 14,0 | 699    | 49    | 180                        | 128 | 87  | 70  | 56 | 41 | 31 | 451       | 274                   | 65%                               | 177 | 53             | 41            | 10            |
| 50        | 1      | 1    |        | 5100   | PK 49+00 | 20.09.12 | 14,5           | 15,6    | 14,2 | 706    | 50    | 163                        | 121 | 92  | 78  | 68 | 48 | 37 | 492       | 274                   | 79%                               | 218 | 43             | 29            | 11            |
| 51        | 1      | 1    |        | 5200   | PK 50+00 | 20.09.12 | 14,5           | 14,5    | 14,2 | 703    | 50    | 129                        | 94  | 73  | 61  | 55 | 39 | 28 | 592       | 274                   | 116%                              | 318 | 35             | 21            | 11            |
| 52        | 1      | 1    |        | 5300   | PK 51+00 | 20.09.12 | 14,5           | 15,8    | 14,5 | 697    | 49    | 146                        | 109 | 78  | 66  | 55 | 38 | 27 | 532       | 274                   | 94%                               | 258 | 37             | 31            | 11            |
| 53        | 1      | 1    |        | 5400   | PK 52+00 | 20.09.12 | 14,5           | 15,7    | 14,2 | 700    | 49    | 163                        | 126 | 91  | 76  | 65 | 45 | 32 | 490       | 274                   | 79%                               | 216 | 37             | 36            | 13            |
| 54        | 1      | 1    |        | 5500   | PK 53+00 | 20.09.12 | 14,5           | 15,8    | 14,4 | 705    | 50    | 185                        | 136 | 89  | 75  | 63 | 43 | 32 | 445       | 274                   | 63%                               | 171 | 49             | 47            | 12            |
| 55        | 1      | 1    |        | 5600   | PK 54+00 | 20.09.12 | 14,5           | 16,2    | 14,7 | 703    | 50    | 155                        | 111 | 87  | 79  | 64 | 49 | 35 | 509       | 274                   | 86%                               | 235 | 45             | 24            | 14            |
| 56        | 1      | 1    |        | 5700   | PK 55+00 | 20.09.12 | 14,5           | 15,9    | 14,7 | 694    | 49    | 153                        | 115 | 85  | 73  | 63 | 45 | 34 | 509       | 274                   | 86%                               | 235 | 39             | 31            | 11            |
| 57        | 1      | 1    |        | 5800   | PK 56+00 | 20.09.12 | 14,5           | 15,7    | 14,5 | 699    | 49    | 176                        | 129 | 87  | 73  | 62 | 41 | 30 | 458       | 274                   | 67%                               | 184 | 48             | 43            | 11            |
| 58        | 1      | 1    |        | 5900   | PK 57+00 | 20.09.12 | 14,5           | 16,3    | 14,7 | 703    | 50    | 176                        | 116 | 76  | 72  | 57 | 42 | 29 | 462       | 274                   | 69%                               | 188 | 60             | 40            | 13            |
| 59        |        |      |        | 6000   | PK 58+00 | 20.09.12 | 14,5           | 15,8    | 14,8 | 698    | 49    | 172                        | 124 | 81  | 67  | 54 | 36 | 26 | 466       | 274                   | 70%                               | 192 | 49             | 44            | 10            |
| 60        | 1      | 1    |        | 6100   | PK 59+00 | 20.09.12 | 14,5           | 16,7    | 14,7 | 698    | 49    | 210                        | 147 | 99  | 80  | 65 | 44 | 31 | 399       | 274                   | 46%                               | 125 | 63             | 49            | 13            |
| 61        | 1      | 1    |        | 6200   | PK 60+00 | 20.09.12 | 14,5           | 16,4    | 14,7 | 693    | 49    | 185                        | 137 | 91  | 74  | 62 | 41 | 29 | 438       | 274                   | 60%                               | 164 | 49             | 48            | 13            |
| 62        | 1      | 1    |        | 6300   | PK 61+00 | 20.09.12 | 14,5           | 16,8    | 14,7 | 695    | 49    | 182                        | 135 | 91  | 74  | 60 | 43 | 29 | 446       | 274                   | 63%                               | 172 | 47             | 44            | 14            |
| 63        | 1      | 1    |        | 6400   | PK 62+00 | 20.09.12 | 14,5           | 17,0    | 14,3 | 694    | 49    | 149                        | 113 | 89  | 79  | 68 | 52 | 38 | 522       | 274                   | 90%                               | 248 | 37             | 24            | 14            |
| 64        | 1      | 1    |        | 6500   | PK 63+00 | 20.09.12 | 14,5           | 17,1    | 14,4 | 700    | 49    | 169                        | 128 | 90  | 75  | 64 | 44 | 30 | 475       | 274                   | 73%                               | 201 | 41             | 38            | 14            |
| 65        | 1      | 1    |        | 6600   | PK 64+00 | 20.09.12 | 14,5           | 17,0    | 14,9 | 694    | 49    | 178                        | 130 | 90  | 76  | 64 | 46 | 34 | 453       | 274                   | 65%                               | 179 | 49             | 40            | 13            |
| 66        | 1      | 1    |        | 6700   | PK 65+00 | 20.09.12 | 14,5           | 16,0    | 14,7 | 697    | 49    | 150                        | 114 | 82  | 70  | 60 | 43 | 32 | 521       | 274                   | 90%                               | 247 | 37             | 32            | 11            |
| 67        | 1      | 1    |        | 6800   | PK 66+00 | 20.09.12 | 14,5           | 17,7    | 14,9 | 698    | 49    | 173                        | 133 | 96  | 84  | 72 | 54 | 42 | 464       | 274                   | 69%                               | 190 | 41             | 37            | 12            |
| 68        | 1      | 1    |        | 6900   | PK 67+00 | 20.09.12 | 14,5           | 17,2    | 14,9 | 689    | 49    | 219                        | 160 | 103 | 84  | 70 | 48 | 34 | 382       | 274                   | 39%                               | 108 | 61             | 58            | 14            |
| 69        | 1      | 1    |        | 7000   | PK 68+00 | 20.09.12 | 14,5           | 17,4    | 15,0 | 693    | 49    | 158                        | 120 | 83  | 68  | 57 | 39 | 25 | 498       | 274                   | 82%                               | 224 | 38             | 38            | 14            |

## Suund 1: Tallinn-Narva, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |    |    |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|----|----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3 | D4 | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 70        | 1      | 1    |        | 7100   | PK 69+00 | 20.09.12 | 14,5           | 17,5    | 15,1 | 691    | 49    | 159                        | 122 | 86 | 74 | 63 | 45 | 33 | 494       | 274                   | 80%                                 | 220 | 37             | 37            | 12            |
| 71        | 1      | 1    |        | 7200   | PK 70+00 | 20.09.12 | 14,5           | 17,7    | 15,1 | 702    | 50    | 172                        | 132 | 92 | 76 | 64 | 45 | 33 | 469       | 274                   | 71%                                 | 195 | 40             | 40            | 12            |
| 72        | 1      | 1    |        | 7300   | PK 71+00 | 20.09.12 | 14,5           | 18,2    | 15,1 | 705    | 50    | 144                        | 113 | 82 | 71 | 62 | 48 | 37 | 543       | 274                   | 98%                                 | 269 | 31             | 31            | 11            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |    |    |    |    |    | 452       | 272                   | 66%                                 | 180 | 52             | 44            | 12            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |    |    |    |    |    | 310       |                       | 15%                                 | 40  | 31             | 21            | 8             |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |    |    |    |    |    | 592       |                       | 116%                                | 318 | 101            | 78            | 21            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 0+00 - PK 71+00

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |     |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|-----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6  | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |     |    |           |                       |                                     |     |                |               |               |
| 73        | 1      | 2    |        | 7300   | PK 71+00 | 20.09.12 | 15,7           | 18,9    | 16,0 | 688    | 49    | 281                        | 236 | 186 | 164 | 146 | 114 | 91 | 315       | 274                   | 15%                                 | 41  | 47             | 51            | 24            |
| 74        | 1      | 2    |        | 7200   | PK 70+00 | 20.09.12 | 15,7           | 18,7    | 15,8 | 697    | 49    | 231                        | 172 | 113 | 102 | 78  | 60  | 51 | 373       | 274                   | 36%                                 | 99  | 60             | 59            | 10            |
| 77        | 1      | 2    |        | 7100   | PK 69+00 | 20.09.12 | 15,7           | 18,6    | 16,3 | 699    | 49    | 282                        | 222 | 171 | 154 | 132 | 101 | 80 | 319       | 274                   | 16%                                 | 45  | 60             | 52            | 22            |
| 78        | 1      | 2    |        | 7000   | PK 68+00 | 20.09.12 | 15,7           | 18,4    | 16,4 | 698    | 49    | 331                        | 265 | 197 | 170 | 150 | 112 | 84 | 280       | 274                   | 2%                                  | 6   | 67             | 69            | 28            |
| 79        | 1      | 2    |        | 6900   | PK 67+00 | 20.09.12 | 15,7           | 18,8    | 15,8 | 696    | 49    | 252                        | 199 | 145 | 125 | 108 | 83  | 64 | 347       | 274                   | 27%                                 | 73  | 54             | 55            | 20            |
| 80        | 1      | 2    |        | 6800   | PK 66+00 | 20.09.12 | 15,7           | 18,4    | 15,6 | 690    | 49    | 170                        | 128 | 92  | 80  | 69  | 53  | 41 | 472       | 274                   | 72%                                 | 198 | 42             | 37            | 12            |
| 81        | 1      | 2    |        | 6700   | PK 65+00 | 20.09.12 | 15,7           | 18,6    | 15,6 | 683    | 48    | 169                        | 125 | 85  | 69  | 57  | 39  | 28 | 470       | 274                   | 72%                                 | 196 | 45             | 42            | 11            |
| 82        | 1      | 2    |        | 6600   | PK 64+00 | 20.09.12 | 15,7           | 19,2    | 15,8 | 697    | 49    | 167                        | 125 | 88  | 77  | 57  | 41  | 30 | 480       | 274                   | 75%                                 | 206 | 43             | 37            | 11            |
| 83        | 1      | 2    |        | 6500   | PK 63+00 | 20.09.12 | 15,7           | 19,0    | 15,8 | 694    | 49    | 168                        | 118 | 77  | 64  | 50  | 33  | 23 | 478       | 274                   | 74%                                 | 204 | 51             | 42            | 10            |
| 84        | 1      | 2    |        | 6400   | PK 62+00 | 20.09.12 | 15,7           | 19,4    | 15,6 | 697    | 49    | 166                        | 130 | 91  | 75  | 63  | 43  | 30 | 485       | 274                   | 77%                                 | 211 | 36             | 40            | 14            |
| 85        | 1      | 2    |        | 6300   | PK 61+00 | 20.09.12 | 15,7           | 19,6    | 15,7 | 692    | 49    | 147                        | 108 | 76  | 62  | 51  | 34  | 23 | 529       | 274                   | 93%                                 | 255 | 40             | 32            | 12            |
| 86        | 1      | 2    |        | 6200   | PK 60+00 | 20.09.12 | 15,7           | 19,0    | 15,4 | 691    | 49    | 144                        | 108 | 74  | 61  | 52  | 35  | 25 | 539       | 274                   | 97%                                 | 265 | 37             | 34            | 11            |
| 87        | 1      | 2    |        | 6100   | PK 59+00 | 20.09.12 | 15,7           | 19,2    | 15,2 | 696    | 49    | 195                        | 139 | 91  | 74  | 61  | 42  | 29 | 425       | 274                   | 55%                                 | 151 | 57             | 49            | 13            |
| 88        | 1      | 2    |        | 6000   | PK 58+00 | 20.09.12 | 15,7           | 19,2    | 15,6 | 702    | 50    | 229                        | 167 | 111 | 89  | 73  | 49  | 35 | 377       | 274                   | 38%                                 | 103 | 62             | 57            | 14            |
| 89        | 1      | 2    |        | 5900   | PK 57+00 | 20.09.12 | 15,7           | 18,9    | 16,0 | 703    | 50    | 158                        | 123 | 84  | 71  | 58  | 39  | 28 | 506       | 274                   | 85%                                 | 232 | 36             | 39            | 12            |
| 90        | 1      | 2    |        | 5800   | PK 56+00 | 20.09.12 | 15,7           | 18,9    | 15,8 | 692    | 49    | 157                        | 115 | 85  | 73  | 63  | 45  | 32 | 503       | 274                   | 84%                                 | 229 | 43             | 30            | 13            |
| 91        | 1      | 2    |        | 5700   | PK 55+00 | 20.09.12 | 15,7           | 18,5    | 15,4 | 703    | 50    | 160                        | 125 | 89  | 77  | 65  | 47  | 34 | 502       | 274                   | 83%                                 | 228 | 35             | 36            | 13            |
| 92        | 1      | 2    |        | 5600   | PK 54+00 | 20.09.12 | 15,7           | 18,5    | 14,9 | 706    | 50    | 165                        | 123 | 85  | 72  | 62  | 44  | 32 | 492       | 274                   | 80%                                 | 218 | 41             | 38            | 12            |
| 93        | 1      | 2    |        | 5500   | PK 53+00 | 20.09.12 | 16,5           | 19,9    | 15,1 | 696    | 49    | 188                        | 134 | 89  | 72  | 59  | 40  | 28 | 441       | 274                   | 61%                                 | 167 | 54             | 47            | 12            |
| 94        | 1      | 2    |        | 5400   | PK 52+00 | 20.09.12 | 16,5           | 18,5    | 15,3 | 694    | 49    | 183                        | 136 | 99  | 85  | 73  | 52  | 39 | 448       | 274                   | 64%                                 | 174 | 48             | 38            | 14            |
| 95        | 1      | 2    |        | 5300   | PK 51+00 | 20.09.12 | 16,5           | 18,9    | 15,1 | 696    | 49    | 202                        | 143 | 93  | 79  | 64  | 44  | 30 | 416       | 274                   | 52%                                 | 142 | 60             | 50            | 14            |
| 96        | 1      | 2    |        | 5200   | PK 50+00 | 20.09.12 | 16,5           | 18,7    | 15,1 | 716    | 51    | 195                        | 135 | 87  | 72  | 59  | 41  | 29 | 437       | 274                   | 59%                                 | 163 | 59             | 47            | 12            |
| 97        | 1      | 2    |        | 5100   | PK 49+00 | 20.09.12 | 16,5           | 18,8    | 15,3 | 698    | 49    | 203                        | 140 | 91  | 80  | 66  | 44  | 32 | 415       | 274                   | 51%                                 | 141 | 64             | 49            | 12            |
| 98        | 1      | 2    |        | 5000   | PK 48+00 | 20.09.12 | 16,5           | 18,6    | 15,5 | 695    | 49    | 218                        | 160 | 106 | 85  | 71  | 49  | 36 | 391       | 274                   | 43%                                 | 117 | 59             | 56            | 13            |
| 99        | 1      | 2    |        | 4900   | PK 47+00 | 20.09.12 | 16,5           | 18,5    | 15,2 | 698    | 49    | 212                        | 157 | 97  | 76  | 62  | 43  | 29 | 401       | 274                   | 46%                                 | 127 | 55             | 61            | 14            |
| 100       | 1      | 2    |        | 4800   | PK 46+00 | 20.09.12 | 16,5           | 17,5    | 15,3 | 691    | 49    | 191                        | 137 | 89  | 74  | 59  | 41  | 29 | 432       | 274                   | 57%                                 | 158 | 56             | 49            | 12            |
| 101       | 1      | 2    |        | 4700   | PK 45+00 | 20.09.12 | 16,5           | 17,8    | 15,4 | 691    | 49    | 195                        | 141 | 89  | 74  | 61  | 39  | 28 | 425       | 274                   | 55%                                 | 151 | 55             | 53            | 11            |
| 102       | 1      | 2    |        | 4600   | PK 44+00 | 20.09.12 | 16,5           | 17,9    | 15,4 | 699    | 49    | 196                        | 140 | 89  | 75  | 61  | 41  | 28 | 427       | 274                   | 56%                                 | 153 | 56             | 52            | 12            |
| 103       | 1      | 2    |        | 4500   | PK 43+00 | 20.09.12 | 16,5           | 18,0    | 15,2 | 695    | 49    | 195                        | 135 | 89  | 77  | 61  | 42  | 29 | 427       | 274                   | 56%                                 | 153 | 61             | 47            | 13            |
| 104       | 1      | 2    |        | 4400   | PK 42+00 | 20.09.12 | 16,5           | 17,8    | 15,2 | 693    | 49    | 186                        | 129 | 79  | 73  | 52  | 36  | 27 | 442       | 274                   | 61%                                 | 168 | 58             | 51            | 9             |
| 105       | 1      | 2    |        | 4300   | PK 41+00 | 20.09.12 | 16,5           | 18,5    | 15,1 | 695    | 49    | 174                        | 128 | 86  | 72  | 60  | 42  | 30 | 468       | 274                   | 71%                                 | 194 | 46             | 43            | 12            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 106       | 1      | 2    |        | 4200   | PK 40+00 | 20.09.12 | 16,5           | 18,2    | 15,2 | 699    | 49    | 192                        | 138 | 93  | 80  | 65 | 45 | 34 | 435       | 274                   | 59%                               | 161 | 54             | 46            | 11            |
| 107       | 1      | 2    |        | 4100   | PK 39+00 | 20.09.12 | 16,5           | 18,7    | 15,9 | 695    | 49    | 189                        | 137 | 92  | 76  | 63 | 43 | 31 | 438       | 274                   | 60%                               | 164 | 53             | 45            | 13            |
| 108       | 1      | 2    |        | 4000   | PK 38+00 | 20.09.12 | 16,5           | 16,3    | 15,9 | 694    | 49    | 174                        | 116 | 80  | 74  | 51 | 41 | 29 | 466       | 274                   | 70%                               | 192 | 59             | 36            | 13            |
| 109       | 1      | 2    |        | 3900   | PK 37+00 | 20.09.12 | 16,5           | 18,2    | 15,7 | 700    | 49    | 175                        | 122 | 83  | 68  | 53 | 38 | 27 | 469       | 274                   | 71%                               | 195 | 53             | 40            | 11            |
| 110       | 1      | 2    |        | 3800   | PK 36+00 | 20.09.12 | 16,5           | 17,6    | 15,5 | 693    | 49    | 181                        | 120 | 72  | 60  | 50 | 37 | 29 | 452       | 274                   | 65%                               | 178 | 63             | 48            | 9             |
| 111       | 1      | 2    |        | 3700   | PK 35+00 | 20.09.12 | 16,5           | 18,3    | 15,3 | 695    | 49    | 179                        | 128 | 95  | 80  | 67 | 49 | 36 | 457       | 274                   | 67%                               | 183 | 52             | 34            | 13            |
| 112       | 1      | 2    |        | 3600   | PK 34+00 | 20.09.12 | 16,5           | 18,2    | 15,4 | 702    | 50    | 211                        | 158 | 104 | 89  | 74 | 52 | 40 | 405       | 274                   | 48%                               | 131 | 54             | 54            | 13            |
| 113       | 1      | 2    |        | 3500   | PK 33+00 | 20.09.12 | 16,5           | 17,6    | 15,5 | 697    | 49    | 239                        | 183 | 131 | 112 | 95 | 70 | 49 | 364       | 274                   | 33%                               | 90  | 58             | 52            | 21            |
| 114       | 1      | 2    |        | 3400   | PK 32+00 | 20.09.12 | 16,5           | 18,4    | 15,3 | 697    | 49    | 214                        | 161 | 111 | 93  | 79 | 55 | 39 | 397       | 274                   | 45%                               | 123 | 54             | 51            | 17            |
| 115       | 1      | 2    |        | 3300   | PK 31+00 | 20.09.12 | 16,5           | 17,7    | 15,3 | 690    | 49    | 216                        | 165 | 118 | 98  | 82 | 57 | 40 | 392       | 270                   | 45%                               | 122 | 52             | 48            | 17            |
| 116       | 1      | 2    |        | 3200   | PK 30+00 | 20.09.12 | 16,5           | 18,2    | 15,1 | 696    | 49    | 182                        | 131 | 96  | 81  | 64 | 45 | 32 | 451       | 270                   | 67%                               | 181 | 52             | 36            | 13            |
| 117       | 1      | 2    |        | 3100   | PK 29+00 | 20.09.12 | 16,5           | 18,1    | 15,0 | 694    | 49    | 222                        | 148 | 94  | 80  | 68 | 44 | 31 | 384       | 270                   | 42%                               | 114 | 76             | 55            | 13            |
| 118       | 1      | 2    |        | 3000   | PK 28+00 | 20.09.12 | 16,5           | 18,0    | 14,8 | 692    | 49    | 226                        | 164 | 112 | 93  | 77 | 53 | 38 | 379       | 270                   | 40%                               | 109 | 63             | 53            | 16            |
| 119       | 1      | 2    |        | 2900   | PK 27+00 | 20.09.12 | 16,5           | 18,0    | 14,9 | 693    | 49    | 243                        | 165 | 103 | 84  | 67 | 46 | 31 | 358       | 270                   | 33%                               | 88  | 79             | 63            | 16            |
| 120       | 1      | 2    |        | 2800   | PK 26+00 | 20.09.12 | 16,5           | 18,1    | 14,9 | 694    | 49    | 205                        | 141 | 89  | 70  | 60 | 38 | 26 | 409       | 270                   | 52%                               | 139 | 66             | 53            | 12            |
| 121       | 1      | 2    |        | 2700   | PK 25+00 | 20.09.12 | 16,5           | 17,6    | 14,8 | 692    | 49    | 194                        | 136 | 88  | 72  | 60 | 42 | 30 | 427       | 270                   | 58%                               | 157 | 60             | 48            | 12            |
| 122       | 1      | 2    |        | 2600   | PK 24+00 | 20.09.12 | 16,5           | 18,2    | 14,8 | 703    | 50    | 174                        | 121 | 77  | 64  | 52 | 37 | 26 | 471       | 270                   | 75%                               | 201 | 54             | 44            | 10            |
| 123       | 1      | 2    |        | 2500   | PK 23+00 | 20.09.12 | 16,5           | 18,2    | 14,9 | 697    | 49    | 204                        | 138 | 98  | 83  | 65 | 47 | 33 | 413       | 270                   | 53%                               | 143 | 67             | 41            | 14            |
| 124       | 1      | 2    |        | 2400   | PK 22+00 | 20.09.12 | 16,5           | 18,3    | 14,8 | 699    | 49    | 201                        | 136 | 88  | 75  | 64 | 45 | 33 | 418       | 270                   | 55%                               | 148 | 66             | 48            | 13            |
| 125       | 1      | 2    |        | 2300   | PK 21+00 | 20.09.12 | 16,5           | 18,5    | 14,7 | 700    | 49    | 189                        | 130 | 82  | 73  | 56 | 42 | 32 | 439       | 270                   | 63%                               | 169 | 60             | 48            | 11            |
| 126       | 1      | 2    |        | 2200   | PK 20+00 | 20.09.12 | 16,5           | 18,6    | 14,7 | 697    | 49    | 220                        | 153 | 101 | 86  | 72 | 52 | 39 | 389       | 270                   | 44%                               | 119 | 68             | 53            | 13            |
| 127       | 1      | 2    |        | 2100   | PK 19+00 | 20.09.12 | 16,5           | 18,6    | 14,7 | 700    | 49    | 241                        | 173 | 117 | 90  | 73 | 54 | 39 | 363       | 270                   | 35%                               | 93  | 69             | 56            | 16            |
| 128       | 1      | 2    |        | 2000   | PK 18+00 | 20.09.12 | 16,5           | 19,0    | 15,0 | 701    | 50    | 211                        | 138 | 91  | 74  | 62 | 43 | 30 | 404       | 270                   | 50%                               | 134 | 74             | 47            | 13            |
| 129       | 1      | 2    |        | 1900   | PK 17+00 | 20.09.12 | 16,5           | 19,1    | 15,0 | 698    | 49    | 272                        | 198 | 132 | 109 | 94 | 61 | 45 | 329       | 270                   | 22%                               | 59  | 75             | 66            | 17            |
| 130       | 1      | 2    |        | 1800   | PK 16+00 | 20.09.12 | 16,5           | 18,6    | 15,2 | 706    | 50    | 239                        | 163 | 97  | 78  | 65 | 41 | 29 | 368       | 270                   | 36%                               | 98  | 76             | 66            | 12            |
| 131       | 1      | 2    |        | 1700   | PK 15+00 | 20.09.12 | 16,5           | 19,2    | 14,9 | 712    | 50    | 220                        | 142 | 89  | 75  | 58 | 38 | 25 | 395       | 270                   | 46%                               | 125 | 78             | 53            | 13            |
| 132       | 1      | 2    |        | 1600   | PK 14+00 | 20.09.12 | 16,5           | 19,4    | 15,1 | 693    | 49    | 235                        | 162 | 101 | 83  | 68 | 46 | 33 | 367       | 270                   | 36%                               | 97  | 74             | 62            | 13            |
| 133       | 1      | 2    |        | 1500   | PK 13+00 | 20.09.12 | 16,5           | 19,2    | 15,2 | 702    | 50    | 223                        | 143 | 88  | 78  | 57 | 42 | 29 | 387       | 270                   | 43%                               | 117 | 81             | 55            | 13            |
| 134       | 1      | 2    |        | 1400   | PK 12+00 | 20.09.12 | 16,5           | 18,9    | 15,1 | 702    | 50    | 192                        | 132 | 86  | 71  | 60 | 43 | 31 | 436       | 270                   | 61%                               | 166 | 60             | 46            | 11            |
| 135       | 1      | 2    |        | 1300   | PK 11+00 | 20.09.12 | 16,5           | 19,1    | 15,4 | 707    | 50    | 200                        | 140 | 95  | 78  | 65 | 45 | 33 | 424       | 270                   | 57%                               | 154 | 60             | 45            | 13            |
| 136       | 1      | 2    |        | 1200   | PK 10+00 | 20.09.12 | 16,5           | 19,0    | 15,2 | 709    | 50    | 160                        | 115 | 89  | 79  | 65 | 48 | 36 | 506       | 270                   | 88%                               | 236 | 45             | 26            | 12            |
| 137       | 1      | 2    |        | 1100   | PK 9+00  | 20.09.12 | 16,5           | 19,0    | 15,1 | 705    | 50    | 226                        | 151 | 97  | 81  | 67 | 46 | 32 | 384       | 270                   | 42%                               | 114 | 76             | 54            | 14            |
| 138       | 1      | 2    |        | 1000   | PK 8+00  | 20.09.12 | 16,5           | 19,3    | 15,1 | 707    | 50    | 269                        | 193 | 120 | 100 | 79 | 55 | 37 | 336       | 270                   | 24%                               | 66  | 76             | 73            | 19            |
| 139       | 1      | 2    |        | 900    | PK 7+00  | 20.09.12 | 16,5           | 19,2    | 15,3 | 702    | 50    | 143                        | 97  | 67  | 68  | 49 | 39 | 31 | 549       | 270                   | 103%                              | 279 | 47             | 29            | 7             |
| 140       | 1      | 2    |        | 800    | PK 6+00  | 20.09.12 | 16,5           | 19,5    | 15,4 | 705    | 50    | 180                        | 126 | 85  | 70  | 58 | 41 | 30 | 460       | 270                   | 70%                               | 190 | 54             | 41            | 11            |
| 141       | 1      | 2    |        | 700    | PK 5+00  | 20.09.12 | 16,5           | 19,6    | 15,9 | 699    | 49    | 192                        | 133 | 85  | 69  | 57 | 38 | 27 | 435       | 270                   | 61%                               | 165 | 59             | 49            | 12            |
| 142       | 1      | 2    |        | 600    | PK 4+00  | 20.09.12 | 16,5           | 19,8    | 16,0 | 702    | 50    | 224                        | 158 | 104 | 85  | 70 | 48 | 35 | 386       | 270                   | 43%                               | 116 | 66             | 55            | 13            |
| 143       | 1      | 2    |        | 500    | PK 3+00  | 20.09.12 | 16,5           | 20,1    | 16,4 | 701    | 50    | 214                        | 148 | 94  | 76  | 61 | 41 | 28 | 400       | 270                   | 48%                               | 130 | 67             | 54            | 13            |

## Suund 2: Narva-Tallinn, põhirada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK      | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|---------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |         |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 144       | 1      | 2    |        | 400    | PK 2+00 | 20.09.12 | 16,5           | 19,8    | 16,6 | 700    | 49    | 331                        | 248 | 162 | 135 | 111 | 77 | 57 | 282       | 270                   | 4%                                  | 12  | 85             | 87            | 20            |
| 145       | 1      | 2    |        | 300    | PK 1+00 | 20.09.12 | 16,5           | 19,4    | 16,4 | 708    | 50    | 207                        | 166 | 118 | 105 | 84  | 62 | 50 | 413       | 270                   | 53%                                 | 143 | 41             | 48            | 12            |
| 146       | 1      | 2    |        | 200    | PK 0+00 | 20.09.12 | 16,5           | 19,1    | 16,0 | 688    | 49    | 230                        | 172 | 120 | 101 | 85  | 61 | 45 | 372       | 270                   | 38%                                 | 102 | 59             | 54            | 16            |
| KESKMINE: |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 420       | 272                   | 54%                                 | 148 | 58             | 49            | 14            |
| Min:      |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 280       |                       | 2%                                  | 6   | 35             | 26            | 7             |
| Max:      |        |      |        |        |         |          |                |         |      |        |       |                            |     |     |     |     |    |    | 549       |                       | 103%                                | 279 | 85             | 87            | 28            |

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist

Seade: Dynatest FWD-8002

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 1         | 1      | 1    |        | 1550   | PK 13+50 | 19.09.10 | 12,0           | 16,5    | 13,5 | 713    | 50    | 195                        | 143 | 100 | 85  | 73 | 52 | 38 | 422       | 270                   | 56%                               | 152 | 52             | 42            | 14            |
| 2         | 1      | 1    |        | 1650   | PK 14+50 | 19.09.10 | 12,0           | 16,2    | 13,5 | 713    | 50    | 191                        | 136 | 93  | 78  | 66 | 47 | 33 | 429       | 270                   | 59%                               | 159 | 54             | 43            | 14            |
| 3         | 1      | 1    |        | 1750   | PK 15+50 | 19.09.10 | 12,0           | 16,1    | 13,5 | 712    | 50    | 197                        | 130 | 80  | 65  | 53 | 36 | 25 | 418       | 270                   | 55%                               | 148 | 67             | 50            | 11            |
| 4         | 1      | 1    |        | 1850   | PK 16+50 | 19.09.10 | 12,0           | 15,1    | 13,6 | 710    | 50    | 208                        | 144 | 92  | 75  | 63 | 44 | 32 | 400       | 270                   | 48%                               | 130 | 64             | 52            | 12            |
| 5         | 1      | 1    |        | 1950   | PK 17+50 | 19.09.10 | 12,0           | 14,6    | 13,6 | 713    | 50    | 191                        | 139 | 95  | 80  | 67 | 48 | 35 | 430       | 270                   | 59%                               | 160 | 52             | 44            | 13            |
| 6         | 1      | 1    |        | 2050   | PK 18+50 | 19.09.10 | 12,0           | 14,6    | 13,6 | 707    | 50    | 196                        | 140 | 96  | 79  | 66 | 46 | 33 | 418       | 270                   | 55%                               | 148 | 56             | 45            | 14            |
| 7         | 1      | 1    |        | 2150   | PK 19+50 | 19.09.10 | 12,0           | 14,9    | 13,5 | 706    | 50    | 210                        | 144 | 95  | 77  | 63 | 44 | 31 | 395       | 270                   | 46%                               | 125 | 66             | 48            | 12            |
| 8         | 1      | 1    |        | 2250   | PK 20+50 | 19.09.10 | 12,0           | 14,6    | 13,6 | 708    | 50    | 179                        | 128 | 88  | 75  | 64 | 47 | 35 | 450       | 270                   | 67%                               | 180 | 50             | 40            | 12            |
| 9         | 1      | 1    |        | 2350   | PK 21+50 | 19.09.10 | 12,0           | 16,0    | 13,5 | 717    | 51    | 232                        | 168 | 111 | 91  | 77 | 53 | 38 | 370       | 270                   | 37%                               | 100 | 63             | 56            | 15            |
| 10        | 1      | 1    |        | 2450   | PK 22+50 | 19.09.10 | 12,0           | 16,5    | 13,6 | 726    | 51    | 203                        | 141 | 94  | 79  | 65 | 46 | 33 | 414       | 270                   | 53%                               | 144 | 61             | 46            | 13            |
| 11        | 1      | 1    |        | 2550   | PK 23+50 | 19.09.10 | 12,0           | 16,9    | 13,5 | 725    | 51    | 170                        | 122 | 83  | 70  | 58 | 41 | 28 | 477       | 270                   | 77%                               | 207 | 47             | 38            | 13            |
| 12        | 1      | 1    |        | 2650   | PK 24+50 | 19.09.10 | 12,0           | 16,9    | 13,8 | 723    | 51    | 187                        | 134 | 90  | 76  | 63 | 41 | 31 | 441       | 270                   | 63%                               | 171 | 52             | 43            | 10            |
| 13        | 1      | 1    |        | 2750   | PK 25+50 | 19.09.10 | 12,0           | 15,6    | 13,8 | 721    | 51    | 171                        | 123 | 89  | 75  | 64 | 45 | 32 | 474       | 270                   | 75%                               | 204 | 47             | 34            | 13            |
| 14        | 1      | 1    |        | 2850   | PK 26+50 | 19.09.10 | 12,0           | 15,9    | 13,7 | 718    | 51    | 194                        | 138 | 95  | 78  | 66 | 46 | 33 | 427       | 270                   | 58%                               | 157 | 55             | 43            | 13            |
| 15        | 1      | 1    |        | 2950   | PK 27+50 | 19.09.10 | 12,0           | 15,0    | 13,6 | 719    | 51    | 195                        | 146 | 106 | 92  | 78 | 57 | 41 | 424       | 270                   | 57%                               | 154 | 48             | 39            | 16            |
| 16        | 1      | 1    |        | 3050   | PK 28+50 | 19.09.10 | 12,0           | 16,5    | 13,7 | 723    | 51    | 186                        | 136 | 96  | 82  | 70 | 50 | 36 | 444       | 270                   | 64%                               | 174 | 48             | 39            | 14            |
| 17        | 1      | 1    |        | 3150   | PK 29+50 | 19.09.10 | 12,0           | 16,4    | 13,5 | 723    | 51    | 209                        | 155 | 110 | 91  | 76 | 53 | 38 | 404       | 270                   | 50%                               | 134 | 53             | 44            | 15            |
| 18        | 1      | 1    |        | 3250   | PK 30+50 | 19.09.10 | 12,0           | 16,5    | 13,4 | 723    | 51    | 235                        | 174 | 117 | 97  | 80 | 54 | 39 | 368       | 270                   | 36%                               | 98  | 60             | 56            | 15            |
| 19        | 1      | 1    |        | 3350   | PK 31+50 | 19.09.10 | 12,0           | 16,1    | 13,5 | 720    | 51    | 196                        | 145 | 99  | 82  | 68 | 46 | 32 | 424       | 270                   | 57%                               | 154 | 50             | 46            | 14            |
| 20        | 1      | 1    |        | 3450   | PK 32+50 | 19.09.10 | 12,0           | 16,0    | 13,3 | 713    | 50    | 240                        | 180 | 125 | 105 | 87 | 60 | 41 | 358       | 274                   | 31%                               | 84  | 59             | 55            | 19            |
| 21        | 1      | 1    |        | 3550   | PK 33+50 | 19.09.10 | 12,0           | 15,8    | 13,6 | 700    | 50    | 202                        | 156 | 115 | 99  | 85 | 61 | 44 | 404       | 274                   | 47%                               | 130 | 47             | 42            | 18            |
| 22        | 1      | 1    |        | 3650   | PK 34+50 | 19.09.10 | 12,0           | 15,1    | 13,7 | 704    | 50    | 178                        | 136 | 99  | 85  | 74 | 54 | 40 | 449       | 274                   | 64%                               | 175 | 43             | 37            | 14            |
| 23        | 1      | 1    |        | 3750   | PK 35+50 | 19.09.10 | 12,0           | 15,2    | 13,7 | 706    | 50    | 204                        | 154 | 106 | 89  | 75 | 54 | 39 | 404       | 274                   | 47%                               | 130 | 51             | 48            | 15            |
| 24        | 1      | 1    |        | 3850   | PK 36+50 | 19.09.10 | 12,0           | 15,4    | 13,5 | 704    | 50    | 187                        | 141 | 98  | 84  | 70 | 50 | 36 | 432       | 274                   | 58%                               | 158 | 46             | 44            | 14            |
| 25        | 1      | 1    |        | 3950   | PK 37+50 | 19.09.10 | 12,0           | 16,9    | 13,6 | 709    | 50    | 215                        | 159 | 107 | 89  | 73 | 51 | 36 | 389       | 274                   | 42%                               | 115 | 56             | 51            | 15            |
| 26        | 1      | 1    |        | 4050   | PK 38+50 | 19.09.10 | 12,0           | 17,0    | 13,5 | 711    | 50    | 195                        | 140 | 97  | 83  | 69 | 48 | 34 | 422       | 274                   | 54%                               | 148 | 55             | 42            | 14            |
| 27        | 1      | 1    |        | 4150   | PK 39+50 | 19.09.10 | 12,0           | 16,8    | 13,7 | 706    | 50    | 155                        | 111 | 77  | 66  | 55 | 41 | 28 | 503       | 274                   | 83%                               | 229 | 45             | 33            | 13            |
| 28        | 1      | 1    |        | 4250   | PK 40+50 | 19.09.10 | 12,0           | 16,6    | 13,7 | 708    | 50    | 237                        | 166 | 110 | 92  | 76 | 53 | 37 | 360       | 274                   | 31%                               | 86  | 71             | 56            | 16            |
| 29        | 1      | 1    |        | 4350   | PK 41+50 | 19.09.10 | 12,0           | 15,7    | 13,6 | 704    | 50    | 210                        | 153 | 104 | 88  | 73 | 50 | 36 | 394       | 274                   | 44%                               | 120 | 57             | 50            | 14            |
| 30        | 1      | 1    |        | 4450   | PK 42+50 | 19.09.10 | 12,0           | 15,2    | 13,5 | 707    | 50    | 187                        | 131 | 87  | 72  | 60 | 42 | 30 | 435       | 274                   | 59%                               | 161 | 55             | 45            | 12            |
| 31        | 1      | 1    |        | 4550   | PK 43+50 | 19.09.10 | 12,0           | 15,7    | 13,5 | 704    | 50    | 203                        | 139 | 90  | 74  | 60 | 41 | 29 | 405       | 274                   | 48%                               | 131 | 64             | 48            | 12            |

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 32        | 1      | 1    |        | 4650   | PK 44+50 | 19.09.10 | 12,0           | 15,0    | 13,2 | 707    | 50    | 184                        | 133 | 91  | 77  | 64  | 45 | 32 | 438       | 274                   | 60%                                 | 164 | 51             | 42            | 13            |
| 33        | 1      | 1    |        | 4750   | PK 45+50 | 19.09.10 | 12,0           | 15,1    | 13,2 | 709    | 50    | 204                        | 145 | 98  | 82  | 68  | 47 | 32 | 405       | 274                   | 48%                                 | 131 | 59             | 47            | 14            |
| 34        | 1      | 1    |        | 4850   | PK 46+50 | 19.09.10 | 12,0           | 14,5    | 13,2 | 704    | 50    | 188                        | 133 | 91  | 76  | 63  | 44 | 31 | 431       | 274                   | 57%                                 | 157 | 55             | 42            | 13            |
| 35        | 1      | 1    |        | 4950   | PK 47+50 | 19.09.10 | 12,0           | 14,7    | 13,4 | 707    | 50    | 152                        | 115 | 84  | 71  | 60  | 42 | 31 | 511       | 274                   | 87%                                 | 237 | 37             | 31            | 11            |
| 36        | 1      | 1    |        | 5050   | PK 48+50 | 19.09.10 | 12,0           | 15,6    | 13,9 | 712    | 50    | 162                        | 127 | 95  | 82  | 71  | 52 | 39 | 490       | 274                   | 79%                                 | 216 | 34             | 32            | 14            |
| 37        | 1      | 1    |        | 5150   | PK 49+50 | 19.09.10 | 12,0           | 15,3    | 14,0 | 704    | 50    | 158                        | 122 | 91  | 81  | 70  | 52 | 39 | 494       | 274                   | 80%                                 | 220 | 36             | 31            | 13            |
| 38        | 1      | 1    |        | 5250   | PK 50+50 | 19.09.10 | 12,0           | 15,7    | 14,3 | 709    | 50    | 148                        | 114 | 85  | 74  | 63  | 46 | 34 | 523       | 274                   | 91%                                 | 249 | 34             | 29            | 13            |
| 39        | 1      | 1    |        | 5350   | PK 51+50 | 19.09.10 | 12,0           | 15,1    | 13,9 | 712    | 50    | 153                        | 121 | 93  | 81  | 71  | 54 | 40 | 510       | 274                   | 86%                                 | 236 | 32             | 28            | 14            |
| 40        | 1      | 1    |        | 5450   | PK 52+50 | 19.09.10 | 12,0           | 15,4    | 13,5 | 708    | 50    | 185                        | 143 | 103 | 88  | 75  | 53 | 38 | 437       | 274                   | 60%                                 | 163 | 42             | 40            | 15            |
| 41        | 1      | 1    |        | 5550   | PK 53+50 | 19.09.10 | 12,0           | 14,2    | 13,3 | 706    | 50    | 230                        | 187 | 142 | 124 | 107 | 79 | 58 | 368       | 274                   | 34%                                 | 94  | 43             | 45            | 21            |
| 42        | 1      | 1    |        | 5650   | PK 54+50 | 19.09.10 | 12,0           | 15,0    | 13,5 | 710    | 50    | 158                        | 117 | 87  | 75  | 65  | 48 | 35 | 496       | 274                   | 81%                                 | 222 | 41             | 30            | 13            |
| 43        | 1      | 1    |        | 5750   | PK 55+50 | 19.09.10 | 12,0           | 15,0    | 13,5 | 706    | 50    | 155                        | 122 | 89  | 77  | 65  | 47 | 34 | 502       | 274                   | 83%                                 | 228 | 33             | 33            | 13            |
| 44        | 1      | 1    |        | 5850   | PK 56+50 | 19.09.10 | 12,0           | 14,8    | 13,3 | 707    | 50    | 163                        | 126 | 89  | 76  | 63  | 45 | 31 | 485       | 274                   | 77%                                 | 211 | 37             | 37            | 14            |
| 45        | 1      | 1    |        | 5950   | PK 57+50 | 19.09.10 | 12,0           | 14,4    | 13,2 | 708    | 50    | 178                        | 135 | 95  | 80  | 67  | 47 | 32 | 452       | 274                   | 65%                                 | 178 | 43             | 40            | 15            |
| 46        | 1      | 1    |        | 6050   | PK 58+50 | 19.09.10 | 12,0           | 14,3    | 13,1 | 718    | 51    | 174                        | 132 | 93  | 77  | 65  | 44 | 31 | 465       | 274                   | 70%                                 | 191 | 41             | 39            | 13            |
| 47        | 1      | 1    |        | 6150   | PK 59+50 | 19.09.10 | 12,0           | 14,6    | 13,1 | 726    | 51    | 176                        | 127 | 88  | 74  | 61  | 43 | 31 | 464       | 274                   | 69%                                 | 190 | 48             | 38            | 11            |
| 48        | 1      | 1    |        | 6250   | PK 60+50 | 19.09.10 | 12,0           | 14,9    | 13,0 | 726    | 51    | 143                        | 108 | 77  | 65  | 56  | 40 | 28 | 548       | 274                   | 100%                                | 274 | 34             | 31            | 11            |
| 49        | 1      | 1    |        | 6350   | PK 61+50 | 19.09.10 | 12,0           | 13,6    | 12,9 | 722    | 51    | 140                        | 102 | 72  | 61  | 53  | 37 | 26 | 555       | 274                   | 103%                                | 281 | 37             | 29            | 10            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 440       | 272                   | 61%                                 | 168 | 50             | 42            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 358       |                       | 31%                                 | 84  | 32             | 28            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 555       |                       | 103%                                | 281 | 71             | 56            | 21            |

Mõõtmiste tellija: LEMMINKÄINEN EESTI AS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 50        | 1      | 2    |        | 6150   | PK 59+50 | 19.09.10 | 12,0           | 14,2    | 13,0 | 701    | 50    | 174                        | 130 | 88  | 72  | 63 | 42 | 30 | 457       | 274                   | 67%                                 | 183 | 45             | 42            | 12            |
| 51        | 1      | 2    |        | 6050   | PK 58+50 | 19.09.10 | 12,0           | 14,3    | 12,8 | 707    | 50    | 181                        | 140 | 103 | 89  | 76 | 55 | 41 | 446       | 274                   | 63%                                 | 172 | 40             | 37            | 15            |
| 52        | 1      | 2    |        | 5950   | PK 57+50 | 19.09.10 | 12,0           | 13,6    | 12,7 | 704    | 50    | 177                        | 138 | 98  | 84  | 71 | 51 | 37 | 451       | 274                   | 65%                                 | 177 | 40             | 39            | 14            |
| 53        | 1      | 2    |        | 5850   | PK 56+50 | 19.09.10 | 12,0           | 13,2    | 12,9 | 710    | 50    | 140                        | 107 | 81  | 71  | 61 | 46 | 35 | 549       | 274                   | 100%                                | 275 | 32             | 26            | 11            |
| 54        | 1      | 2    |        | 5750   | PK 55+50 | 19.09.10 | 12,0           | 13,2    | 12,8 | 706    | 50    | 142                        | 111 | 86  | 76  | 66 | 49 | 37 | 538       | 274                   | 96%                                 | 264 | 31             | 25            | 12            |
| 55        | 1      | 2    |        | 5650   | PK 54+50 | 19.09.10 | 12,0           | 13,0    | 12,4 | 707    | 50    | 154                        | 121 | 96  | 85  | 74 | 56 | 43 | 507       | 274                   | 85%                                 | 233 | 33             | 24            | 13            |
| 56        | 1      | 2    |        | 5550   | PK 53+50 | 19.09.10 | 12,0           | 13,1    | 12,4 | 709    | 50    | 145                        | 114 | 88  | 77  | 67 | 51 | 38 | 532       | 274                   | 94%                                 | 258 | 31             | 26            | 12            |
| 57        | 1      | 2    |        | 5450   | PK 52+50 | 19.09.10 | 12,0           | 13,3    | 12,5 | 705    | 50    | 168                        | 140 | 111 | 100 | 89 | 70 | 55 | 471       | 274                   | 72%                                 | 197 | 29             | 28            | 15            |
| 58        | 1      | 2    |        | 5350   | PK 51+50 | 19.09.10 | 12,0           | 13,7    | 12,3 | 707    | 50    | 212                        | 163 | 118 | 101 | 86 | 61 | 45 | 393       | 274                   | 43%                                 | 119 | 49             | 45            | 16            |
| 59        | 1      | 2    |        | 5250   | PK 50+50 | 19.09.10 | 12,0           | 13,3    | 12,4 | 714    | 50    | 158                        | 125 | 92  | 78  | 67 | 47 | 33 | 500       | 274                   | 82%                                 | 226 | 33             | 33            | 14            |
| 60        | 1      | 2    |        | 5150   | PK 49+50 | 19.09.10 | 12,0           | 13,2    | 12,6 | 706    | 50    | 172                        | 135 | 100 | 87  | 74 | 53 | 38 | 462       | 274                   | 69%                                 | 188 | 38             | 35            | 15            |
| 61        | 1      | 2    |        | 5050   | PK 48+50 | 19.09.10 | 12,0           | 13,7    | 12,6 | 708    | 50    | 167                        | 133 | 99  | 86  | 74 | 54 | 39 | 474       | 274                   | 73%                                 | 200 | 35             | 34            | 16            |
| 62        | 1      | 2    |        | 4950   | PK 47+50 | 19.09.10 | 12,0           | 13,7    | 12,3 | 712    | 50    | 162                        | 125 | 93  | 80  | 69 | 49 | 35 | 488       | 274                   | 78%                                 | 214 | 37             | 32            | 14            |
| 63        | 1      | 2    |        | 4850   | PK 46+50 | 19.09.10 | 12,0           | 13,0    | 12,1 | 713    | 50    | 191                        | 145 | 102 | 86  | 73 | 51 | 37 | 429       | 274                   | 57%                                 | 155 | 45             | 43            | 14            |
| 64        | 1      | 2    |        | 4750   | PK 45+50 | 19.09.10 | 12,0           | 13,5    | 11,9 | 713    | 50    | 194                        | 148 | 104 | 88  | 74 | 52 | 38 | 424       | 274                   | 55%                                 | 150 | 45             | 44            | 15            |
| 65        | 1      | 2    |        | 4650   | PK 44+50 | 19.09.10 | 12,0           | 13,0    | 11,9 | 711    | 50    | 200                        | 154 | 108 | 91  | 76 | 53 | 38 | 413       | 274                   | 51%                                 | 139 | 45             | 46            | 15            |
| 66        | 1      | 2    |        | 4550   | PK 43+50 | 19.09.10 | 12,0           | 12,8    | 12,0 | 707    | 50    | 223                        | 167 | 113 | 94  | 78 | 54 | 39 | 377       | 274                   | 37%                                 | 103 | 56             | 54            | 15            |
| 67        | 1      | 2    |        | 4450   | PK 42+50 | 19.09.10 | 12,0           | 13,1    | 12,0 | 709    | 50    | 186                        | 142 | 103 | 88  | 75 | 54 | 40 | 436       | 274                   | 59%                                 | 162 | 44             | 39            | 14            |
| 68        | 1      | 2    |        | 4350   | PK 41+50 | 19.09.10 | 12,0           | 13,1    | 12,1 | 708    | 50    | 208                        | 158 | 107 | 90  | 75 | 51 | 36 | 399       | 274                   | 46%                                 | 125 | 50             | 50            | 15            |
| 69        | 1      | 2    |        | 4250   | PK 40+50 | 19.09.10 | 12,0           | 12,7    | 12,2 | 708    | 50    | 186                        | 142 | 102 | 87  | 73 | 51 | 37 | 436       | 274                   | 59%                                 | 162 | 44             | 40            | 14            |
| 70        | 1      | 2    |        | 4150   | PK 39+50 | 19.09.10 | 12,0           | 12,8    | 12,5 | 707    | 50    | 176                        | 133 | 94  | 80  | 67 | 48 | 34 | 456       | 274                   | 66%                                 | 182 | 43             | 39            | 14            |
| 71        | 1      | 2    |        | 4050   | PK 38+50 | 19.09.10 | 12,0           | 13,1    | 12,7 | 709    | 50    | 195                        | 147 | 102 | 86  | 72 | 50 | 35 | 421       | 274                   | 54%                                 | 147 | 48             | 45            | 14            |
| 72        | 1      | 2    |        | 3950   | PK 37+50 | 19.09.10 | 12,0           | 13,0    | 12,6 | 707    | 50    | 172                        | 130 | 93  | 79  | 67 | 48 | 36 | 463       | 274                   | 69%                                 | 189 | 43             | 37            | 12            |
| 73        | 1      | 2    |        | 3850   | PK 36+50 | 19.09.10 | 12,0           | 13,0    | 12,5 | 709    | 50    | 200                        | 149 | 104 | 88  | 75 | 54 | 41 | 412       | 274                   | 50%                                 | 138 | 51             | 45            | 14            |
| 74        | 1      | 2    |        | 3750   | PK 35+50 | 19.09.10 | 12,0           | 12,8    | 12,5 | 710    | 50    | 187                        | 140 | 98  | 84  | 71 | 51 | 38 | 435       | 274                   | 59%                                 | 161 | 47             | 42            | 14            |
| 75        | 1      | 2    |        | 3650   | PK 34+50 | 19.09.10 | 12,0           | 13,0    | 12,4 | 706    | 50    | 218                        | 161 | 109 | 91  | 75 | 51 | 36 | 383       | 274                   | 40%                                 | 109 | 57             | 52            | 15            |
| 76        | 1      | 2    |        | 3550   | PK 33+50 | 19.09.10 | 12,0           | 13,0    | 12,5 | 706    | 50    | 198                        | 154 | 110 | 94  | 79 | 56 | 39 | 413       | 274                   | 51%                                 | 139 | 44             | 44            | 17            |
| 77        | 1      | 2    |        | 3450   | PK 32+50 | 19.09.10 | 12,0           | 13,4    | 12,6 | 708    | 50    | 257                        | 186 | 124 | 102 | 84 | 56 | 38 | 338       | 274                   | 23%                                 | 64  | 71             | 62            | 18            |
| 78        | 1      | 2    |        | 3350   | PK 31+50 | 19.09.10 | 12,0           | 13,6    | 12,6 | 704    | 50    | 236                        | 173 | 118 | 98  | 81 | 54 | 35 | 359       | 270                   | 33%                                 | 89  | 64             | 55            | 18            |
| 79        | 1      | 2    |        | 3250   | PK 30+50 | 19.09.10 | 12,0           | 13,9    | 12,7 | 706    | 50    | 225                        | 172 | 119 | 101 | 84 | 57 | 38 | 375       | 270                   | 39%                                 | 105 | 52             | 53            | 19            |
| 80        | 1      | 2    |        | 3150   | PK 29+50 | 19.09.10 | 12,0           | 13,9    | 12,6 | 707    | 50    | 202                        | 147 | 101 | 84  | 69 | 48 | 33 | 409       | 270                   | 51%                                 | 139 | 55             | 46            | 15            |

## Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |    |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4 | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 81        | 1      | 2    |        | 3050   | PK 28+50 | 19.09.10 | 12,0           | 14,1    | 12,6 | 709    | 50    | 207                        | 149 | 100 | 84 | 70 | 49 | 36 | 401       | 270                   | 48%                               | 131 | 58             | 48            | 13            |
| 82        | 1      | 2    |        | 2950   | PK 27+50 | 19.09.10 | 12,0           | 13,6    | 12,7 | 700    | 49    | 182                        | 129 | 89  | 75 | 63 | 45 | 32 | 440       | 270                   | 63%                               | 170 | 54             | 40            | 13            |
| 83        | 1      | 2    |        | 2850   | PK 26+50 | 19.09.10 | 12,0           | 13,7    | 12,7 | 703    | 50    | 237                        | 171 | 112 | 92 | 76 | 52 | 37 | 358       | 270                   | 33%                               | 88  | 65             | 60            | 15            |
| 84        | 1      | 2    |        | 2750   | PK 25+50 | 19.09.10 | 12,0           | 13,7    | 12,7 | 706    | 50    | 160                        | 121 | 88  | 76 | 65 | 47 | 35 | 490       | 270                   | 81%                               | 220 | 40             | 33            | 11            |
| 85        | 1      | 2    |        | 2650   | PK 24+50 | 19.09.10 | 12,0           | 13,5    | 12,8 | 705    | 50    | 175                        | 131 | 89  | 75 | 63 | 45 | 33 | 456       | 270                   | 69%                               | 186 | 44             | 42            | 12            |
| 86        | 1      | 2    |        | 2550   | PK 23+50 | 19.09.10 | 12,0           | 13,5    | 12,7 | 702    | 50    | 211                        | 148 | 101 | 85 | 71 | 49 | 35 | 392       | 270                   | 45%                               | 122 | 63             | 48            | 14            |
| 87        | 1      | 2    |        | 2450   | PK 22+50 | 19.09.10 | 12,0           | 14,2    | 12,7 | 708    | 50    | 256                        | 166 | 102 | 85 | 71 | 50 | 38 | 338       | 270                   | 25%                               | 68  | 90             | 64            | 13            |
| 88        | 1      | 2    |        | 2350   | PK 21+50 | 19.09.10 | 12,0           | 14,7    | 12,7 | 712    | 50    | 259                        | 179 | 115 | 96 | 79 | 57 | 40 | 337       | 270                   | 25%                               | 67  | 80             | 64            | 16            |
| 89        | 1      | 2    |        | 2250   | PK 20+50 | 19.09.10 | 12,0           | 14,5    | 12,7 | 714    | 50    | 208                        | 146 | 97  | 82 | 69 | 50 | 37 | 402       | 270                   | 49%                               | 132 | 62             | 48            | 14            |
| 90        | 1      | 2    |        | 2150   | PK 19+50 | 19.09.10 | 12,0           | 14,5    | 12,8 | 712    | 50    | 230                        | 165 | 111 | 93 | 78 | 56 | 40 | 370       | 270                   | 37%                               | 100 | 65             | 54            | 16            |
| 91        | 1      | 2    |        | 2050   | PK 18+50 | 19.09.10 | 12,0           | 14,7    | 12,7 | 709    | 50    | 231                        | 159 | 103 | 87 | 73 | 52 | 36 | 368       | 270                   | 36%                               | 98  | 71             | 56            | 16            |
| 92        | 1      | 2    |        | 1950   | PK 17+50 | 19.09.10 | 12,0           | 14,5    | 12,6 | 710    | 50    | 171                        | 114 | 77  | 64 | 54 | 39 | 29 | 468       | 270                   | 73%                               | 198 | 56             | 37            | 10            |
| 93        | 1      | 2    |        | 1850   | PK 16+50 | 19.09.10 | 12,0           | 14,1    | 12,4 | 714    | 50    | 206                        | 146 | 102 | 88 | 76 | 57 | 42 | 405       | 270                   | 50%                               | 135 | 59             | 44            | 14            |
| 94        | 1      | 2    |        | 1750   | PK 15+50 | 19.09.10 | 12,0           | 14,2    | 12,4 | 708    | 50    | 172                        | 124 | 88  | 76 | 64 | 47 | 33 | 463       | 270                   | 72%                               | 193 | 48             | 36            | 14            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |    |    |    |    | 430       | 272                   | 58%                               | 157 | 50             | 43            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |    |    |    |    | 337       |                       | 23%                               | 64  | 29             | 24            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |    |    |    |    | 549       |                       | 100%                              | 275 | 90             | 64            | 19            |

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 1         | 1      | 1    |        | 1550   | PK 13+50 | 13.05.11 | 22,3           | 30,0    | 18,5 | 710    | 50    | 273                        | 182 | 122 | 104 | 87 | 60 | 44 | 382       | 270                   | 41%                                 | 112 | 90             | 60            | 16            |
| 2         | 1      | 1    |        | 1650   | PK 14+50 | 13.05.11 | 22,3           | 30,0    | 18,4 | 709    | 50    | 254                        | 173 | 113 | 95  | 77 | 55 | 35 | 403       | 270                   | 49%                                 | 133 | 81             | 59            | 20            |
| 3         | 1      | 1    |        | 1750   | PK 15+50 | 13.05.11 | 22,3           | 30,0    | 18,3 | 704    | 50    | 235                        | 149 | 87  | 71  | 57 | 39 | 28 | 426       | 270                   | 58%                                 | 156 | 87             | 62            | 11            |
| 4         | 1      | 1    |        | 1850   | PK 16+50 | 13.05.11 | 22,3           | 30,0    | 18,2 | 707    | 50    | 298                        | 191 | 110 | 90  | 73 | 50 | 36 | 354       | 270                   | 31%                                 | 84  | 107            | 80            | 14            |
| 5         | 1      | 1    |        | 1950   | PK 17+50 | 13.05.11 | 22,3           | 30,0    | 18,6 | 705    | 50    | 234                        | 156 | 98  | 81  | 67 | 46 | 35 | 429       | 270                   | 59%                                 | 159 | 78             | 59            | 12            |
| 6         | 1      | 1    |        | 2050   | PK 18+50 | 13.05.11 | 22,3           | 30,0    | 18,5 | 707    | 50    | 270                        | 174 | 105 | 86  | 71 | 50 | 35 | 383       | 270                   | 42%                                 | 113 | 96             | 69            | 15            |
| 7         | 1      | 1    |        | 2150   | PK 19+50 | 13.05.11 | 22,3           | 30,0    | 18,3 | 714    | 50    | 287                        | 191 | 125 | 104 | 88 | 62 | 44 | 368       | 270                   | 36%                                 | 98  | 96             | 65            | 17            |
| 8         | 1      | 1    |        | 2250   | PK 20+50 | 13.05.11 | 22,3           | 30,0    | 18,2 | 709    | 50    | 276                        | 168 | 103 | 87  | 73 | 52 | 40 | 377       | 270                   | 40%                                 | 107 | 108            | 64            | 12            |
| 9         | 1      | 1    |        | 2350   | PK 21+50 | 13.05.11 | 22,3           | 30,0    | 18,2 | 716    | 51    | 324                        | 222 | 140 | 114 | 95 | 65 | 46 | 335       | 270                   | 24%                                 | 65  | 101            | 81            | 19            |
| 10        | 1      | 1    |        | 2450   | PK 22+50 | 13.05.11 | 22,3           | 30,0    | 18,3 | 723    | 51    | 241                        | 156 | 97  | 80  | 66 | 45 | 32 | 426       | 270                   | 58%                                 | 156 | 84             | 57            | 13            |
| 11        | 1      | 1    |        | 2550   | PK 23+50 | 13.05.11 | 22,3           | 30,0    | 18,1 | 721    | 51    | 215                        | 147 | 96  | 81  | 66 | 44 | 31 | 466       | 270                   | 73%                                 | 196 | 67             | 50            | 12            |
| 12        | 1      | 1    |        | 2650   | PK 24+50 | 13.05.11 | 22,3           | 30,0    | 18,1 | 724    | 51    | 223                        | 147 | 92  | 74  | 62 | 41 | 31 | 455       | 270                   | 68%                                 | 185 | 74             | 54            | 10            |
| 13        | 1      | 1    |        | 2750   | PK 25+50 | 13.05.11 | 22,3           | 30,0    | 18,5 | 722    | 51    | 200                        | 135 | 87  | 75  | 61 | 41 | 31 | 495       | 270                   | 83%                                 | 225 | 64             | 47            | 10            |
| 14        | 1      | 1    |        | 2850   | PK 26+50 | 13.05.11 | 22,3           | 30,0    | 18,5 | 718    | 51    | 242                        | 158 | 100 | 86  | 66 | 45 | 30 | 424       | 270                   | 57%                                 | 154 | 82             | 58            | 15            |
| 15        | 1      | 1    |        | 2950   | PK 27+50 | 13.05.11 | 22,3           | 30,0    | 18,9 | 722    | 51    | 234                        | 170 | 116 | 97  | 81 | 56 | 40 | 436       | 270                   | 62%                                 | 166 | 63             | 52            | 16            |
| 16        | 1      | 1    |        | 3050   | PK 28+50 | 13.05.11 | 22,3           | 30,0    | 19,7 | 719    | 51    | 250                        | 168 | 109 | 92  | 76 | 52 | 38 | 413       | 270                   | 53%                                 | 143 | 80             | 58            | 14            |
| 17        | 1      | 1    |        | 3150   | PK 29+50 | 13.05.11 | 22,3           | 30,0    | 19,1 | 717    | 51    | 236                        | 169 | 109 | 93  | 75 | 51 | 34 | 431       | 270                   | 60%                                 | 161 | 67             | 59            | 17            |
| 18        | 1      | 1    |        | 3250   | PK 30+50 | 13.05.11 | 22,3           | 30,0    | 19,4 | 727    | 51    | 279                        | 187 | 114 | 93  | 76 | 50 | 37 | 382       | 270                   | 41%                                 | 112 | 89             | 71            | 12            |
| 19        | 1      | 1    |        | 3350   | PK 31+50 | 13.05.11 | 22,3           | 30,0    | 19,6 | 722    | 51    | 235                        | 164 | 103 | 84  | 68 | 44 | 32 | 435       | 270                   | 61%                                 | 165 | 69             | 60            | 12            |
| 20        | 1      | 1    |        | 3450   | PK 32+50 | 13.05.11 | 22,3           | 30,0    | 19,6 | 712    | 50    | 284                        | 213 | 144 | 120 | 99 | 65 | 45 | 370       | 274                   | 35%                                 | 96  | 71             | 68            | 19            |
| 21        | 1      | 1    |        | 3550   | PK 33+50 | 13.05.11 | 22,3           | 30,0    | 19,5 | 706    | 50    | 277                        | 199 | 130 | 108 | 89 | 59 | 43 | 375       | 274                   | 37%                                 | 101 | 78             | 70            | 16            |
| 22        | 1      | 1    |        | 3650   | PK 34+50 | 13.05.11 | 22,3           | 30,0    | 19,9 | 708    | 50    | 200                        | 140 | 97  | 83  | 71 | 52 | 39 | 487       | 274                   | 78%                                 | 213 | 60             | 43            | 13            |
| 23        | 1      | 1    |        | 3750   | PK 35+50 | 13.05.11 | 22,3           | 30,0    | 20,2 | 705    | 50    | 245                        | 169 | 108 | 89  | 74 | 51 | 37 | 413       | 274                   | 51%                                 | 139 | 77             | 61            | 14            |
| 24        | 1      | 1    |        | 3850   | PK 36+50 | 13.05.11 | 22,3           | 30,0    | 20,3 | 706    | 50    | 228                        | 158 | 102 | 85  | 71 | 49 | 37 | 438       | 274                   | 60%                                 | 164 | 70             | 56            | 12            |
| 25        | 1      | 1    |        | 3950   | PK 37+50 | 13.05.11 | 22,3           | 30,0    | 20,3 | 707    | 50    | 252                        | 179 | 113 | 93  | 76 | 51 | 38 | 405       | 274                   | 48%                                 | 131 | 73             | 66            | 13            |
| 26        | 1      | 1    |        | 4050   | PK 38+50 | 13.05.11 | 22,3           | 30,0    | 20,2 | 709    | 50    | 259                        | 181 | 121 | 103 | 86 | 59 | 43 | 398       | 274                   | 45%                                 | 124 | 77             | 59            | 17            |
| 27        | 1      | 1    |        | 4150   | PK 39+50 | 13.05.11 | 22,3           | 30,0    | 20,3 | 708    | 50    | 212                        | 144 | 96  | 81  | 68 | 46 | 33 | 464       | 274                   | 69%                                 | 190 | 69             | 47            | 13            |
| 28        | 1      | 1    |        | 4250   | PK 40+50 | 13.05.11 | 22,3           | 30,0    | 20,5 | 706    | 50    | 276                        | 184 | 113 | 93  | 76 | 51 | 36 | 376       | 274                   | 37%                                 | 102 | 93             | 71            | 15            |
| 29        | 1      | 1    |        | 4350   | PK 41+50 | 13.05.11 | 22,3           | 30,0    | 20,5 | 709    | 50    | 279                        | 190 | 121 | 99  | 80 | 53 | 37 | 374       | 274                   | 37%                                 | 100 | 89             | 69            | 16            |
| 30        | 1      | 1    |        | 4450   | PK 42+50 | 13.05.11 | 22,3           | 30,0    | 19,9 | 708    | 50    | 248                        | 160 | 101 | 82  | 67 | 46 | 32 | 411       | 274                   | 50%                                 | 137 | 88             | 59            | 14            |
| 31        | 1      | 1    |        | 4550   | PK 43+50 | 13.05.11 | 22,3           | 30,0    | 19,6 | 700    | 50    | 256                        | 165 | 98  | 80  | 64 | 42 | 29 | 397       | 274                   | 45%                                 | 123 | 92             | 68            | 13            |

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 32        | 1      | 1    |        | 4650   | PK 44+50 | 13.05.11 | 22,3           | 30,0    | 20,1 | 705    | 50    | 224                        | 149 | 96  | 79  | 66 | 45 | 32 | 443       | 274                   | 62%                                 | 169 | 75             | 54            | 13            |
| 33        | 1      | 1    |        | 4750   | PK 45+50 | 13.05.11 | 22,3           | 30,0    | 20,1 | 706    | 50    | 258                        | 169 | 104 | 84  | 69 | 46 | 32 | 397       | 274                   | 45%                                 | 123 | 89             | 65            | 14            |
| 34        | 1      | 1    |        | 4850   | PK 46+50 | 13.05.11 | 22,3           | 30,0    | 20,3 | 709    | 50    | 248                        | 162 | 100 | 82  | 67 | 45 | 33 | 411       | 274                   | 50%                                 | 137 | 85             | 62            | 12            |
| 35        | 1      | 1    |        | 4950   | PK 47+50 | 13.05.11 | 23,7           | 31,8    | 20,4 | 706    | 50    | 190                        | 140 | 96  | 83  | 69 | 47 | 36 | 509       | 274                   | 86%                                 | 235 | 50             | 44            | 11            |
| 36        | 1      | 1    |        | 5050   | PK 48+50 | 13.05.11 | 23,7           | 31,8    | 20,6 | 708    | 50    | 203                        | 144 | 100 | 85  | 71 | 51 | 37 | 484       | 274                   | 77%                                 | 210 | 59             | 44            | 14            |
| 37        | 1      | 1    |        | 5150   | PK 49+50 | 13.05.11 | 23,7           | 31,8    | 20,6 | 707    | 50    | 297                        | 206 | 128 | 103 | 84 | 56 | 40 | 358       | 274                   | 31%                                 | 84  | 91             | 78            | 16            |
| 38        | 1      | 1    |        | 5250   | PK 50+50 | 13.05.11 | 23,7           | 31,8    | 19,8 | 708    | 50    | 198                        | 146 | 103 | 89  | 76 | 52 | 37 | 493       | 274                   | 80%                                 | 219 | 52             | 42            | 15            |
| 39        | 1      | 1    |        | 5350   | PK 51+50 | 13.05.11 | 23,7           | 31,8    | 19,4 | 707    | 50    | 212                        | 150 | 103 | 87  | 73 | 50 | 36 | 468       | 274                   | 71%                                 | 194 | 61             | 47            | 14            |
| 40        | 1      | 1    |        | 5450   | PK 52+50 | 13.05.11 | 23,7           | 31,8    | 19,5 | 706    | 50    | 313                        | 220 | 141 | 117 | 95 | 64 | 45 | 343       | 274                   | 25%                                 | 69  | 93             | 79            | 20            |
| 41        | 1      | 1    |        | 5550   | PK 53+50 | 13.05.11 | 23,7           | 31,8    | 19,6 | 708    | 50    | 272                        | 189 | 123 | 103 | 86 | 61 | 45 | 383       | 274                   | 40%                                 | 109 | 83             | 66            | 16            |
| 42        | 1      | 1    |        | 5650   | PK 54+50 | 13.05.11 | 23,7           | 31,8    | 19,7 | 705    | 50    | 214                        | 155 | 109 | 94  | 81 | 58 | 46 | 463       | 274                   | 69%                                 | 189 | 59             | 46            | 11            |
| 43        | 1      | 1    |        | 5750   | PK 55+50 | 13.05.11 | 23,7           | 31,8    | 19,8 | 704    | 50    | 193                        | 131 | 87  | 72  | 60 | 42 | 30 | 502       | 274                   | 83%                                 | 228 | 61             | 45            | 12            |
| 44        | 1      | 1    |        | 5850   | PK 56+50 | 13.05.11 | 23,7           | 31,8    | 19,5 | 710    | 50    | 205                        | 144 | 91  | 75  | 61 | 41 | 30 | 481       | 274                   | 76%                                 | 207 | 61             | 53            | 11            |
| 45        | 1      | 1    |        | 5950   | PK 57+50 | 13.05.11 | 23,7           | 31,8    | 19,7 | 708    | 50    | 246                        | 169 | 108 | 89  | 72 | 48 | 35 | 416       | 274                   | 52%                                 | 142 | 77             | 61            | 13            |
| 46        | 1      | 1    |        | 6050   | PK 58+50 | 13.05.11 | 23,7           | 31,8    | 19,8 | 718    | 51    | 243                        | 168 | 107 | 87  | 71 | 47 | 33 | 424       | 274                   | 55%                                 | 150 | 74             | 60            | 14            |
| 47        | 1      | 1    |        | 6150   | PK 59+50 | 13.05.11 | 23,7           | 31,8    | 20,0 | 723    | 51    | 234                        | 152 | 92  | 74  | 61 | 41 | 29 | 440       | 274                   | 61%                                 | 166 | 80             | 59            | 11            |
| 48        | 1      | 1    |        | 6250   | PK 60+50 | 13.05.11 | 23,7           | 31,8    | 19,9 | 721    | 51    | 221                        | 146 | 89  | 73  | 60 | 41 | 30 | 460       | 274                   | 68%                                 | 186 | 73             | 56            | 11            |
| 49        | 1      | 1    |        | 6350   | PK 61+50 | 13.05.11 | 23,7           | 31,8    | 20,1 | 720    | 51    | 172                        | 114 | 73  | 62  | 52 | 37 | 26 | 560       | 274                   | 104%                                | 286 | 57             | 40            | 11            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 424       | 272                   | 55%                                 | 151 | 78             | 59            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 335       |                       | 24%                                 | 65  | 50             | 40            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 560       |                       | 104%                                | 286 | 108            | 81            | 20            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 50        | 1      | 2    |        | 6150   | PK 59+50 | 13.05.11 | 24,5           | 32,0    | 19,1 | 707    | 50    | 220                        | 153 | 99  | 83  | 69  | 47 | 34 | 454       | 274                   | 66%                                 | 180 | 67             | 54            | 13            |
| 51        | 1      | 2    |        | 6050   | PK 58+50 | 13.05.11 | 24,5           | 32,0    | 19,4 | 709    | 50    | 242                        | 161 | 102 | 84  | 69  | 48 | 36 | 423       | 274                   | 54%                                 | 149 | 80             | 59            | 12            |
| 52        | 1      | 2    |        | 5950   | PK 57+50 | 13.05.11 | 24,5           | 32,0    | 19,8 | 711    | 50    | 242                        | 158 | 97  | 77  | 63  | 42 | 29 | 424       | 274                   | 55%                                 | 150 | 83             | 61            | 12            |
| 53        | 1      | 2    |        | 5850   | PK 56+50 | 13.05.11 | 24,5           | 32,0    | 19,9 | 708    | 50    | 183                        | 130 | 91  | 79  | 66  | 46 | 34 | 527       | 274                   | 92%                                 | 253 | 53             | 39            | 12            |
| 54        | 1      | 2    |        | 5750   | PK 55+50 | 13.05.11 | 24,5           | 32,0    | 19,8 | 712    | 50    | 192                        | 140 | 101 | 86  | 74  | 53 | 38 | 509       | 274                   | 86%                                 | 235 | 52             | 38            | 14            |
| 55        | 1      | 2    |        | 5650   | PK 54+50 | 13.05.11 | 24,5           | 32,0    | 20,0 | 709    | 50    | 211                        | 148 | 102 | 87  | 73  | 53 | 39 | 472       | 274                   | 72%                                 | 198 | 63             | 46            | 14            |
| 56        | 1      | 2    |        | 5550   | PK 53+50 | 13.05.11 | 24,5           | 32,0    | 19,2 | 709    | 50    | 185                        | 133 | 96  | 83  | 70  | 50 | 36 | 522       | 274                   | 91%                                 | 248 | 52             | 37            | 14            |
| 57        | 1      | 2    |        | 5450   | PK 52+50 | 13.05.11 | 24,5           | 32,0    | 19,2 | 706    | 50    | 258                        | 194 | 144 | 126 | 111 | 84 | 63 | 401       | 274                   | 46%                                 | 127 | 63             | 50            | 21            |
| 58        | 1      | 2    |        | 5350   | PK 51+50 | 13.05.11 | 24,5           | 32,0    | 19,1 | 707    | 50    | 267                        | 188 | 127 | 105 | 88  | 61 | 45 | 391       | 274                   | 43%                                 | 117 | 78             | 62            | 16            |
| 59        | 1      | 2    |        | 5250   | PK 50+50 | 13.05.11 | 24,5           | 32,0    | 18,7 | 706    | 50    | 202                        | 146 | 96  | 80  | 65  | 44 | 30 | 487       | 274                   | 78%                                 | 213 | 56             | 50            | 13            |
| 60        | 1      | 2    |        | 5150   | PK 49+50 | 13.05.11 | 24,5           | 32,0    | 18,9 | 707    | 50    | 212                        | 154 | 111 | 96  | 81  | 55 | 40 | 469       | 274                   | 71%                                 | 195 | 58             | 44            | 15            |
| 61        | 1      | 2    |        | 5050   | PK 48+50 | 13.05.11 | 24,5           | 32,0    | 18,6 | 705    | 50    | 208                        | 150 | 105 | 88  | 74  | 51 | 36 | 474       | 274                   | 73%                                 | 200 | 58             | 46            | 15            |
| 62        | 1      | 2    |        | 4950   | PK 47+50 | 13.05.11 | 24,5           | 32,0    | 18,8 | 710    | 50    | 191                        | 138 | 98  | 83  | 71  | 49 | 34 | 511       | 274                   | 87%                                 | 237 | 53             | 40            | 14            |
| 63        | 1      | 2    |        | 4850   | PK 46+50 | 13.05.11 | 24,5           | 32,0    | 19,1 | 708    | 50    | 246                        | 166 | 103 | 83  | 67  | 45 | 31 | 417       | 274                   | 52%                                 | 143 | 79             | 63            | 13            |
| 64        | 1      | 2    |        | 4750   | PK 45+50 | 13.05.11 | 24,5           | 32,0    | 18,9 | 704    | 50    | 229                        | 163 | 103 | 85  | 69  | 48 | 34 | 440       | 274                   | 61%                                 | 166 | 66             | 60            | 14            |
| 65        | 1      | 2    |        | 4650   | PK 44+50 | 13.05.11 | 24,5           | 32,0    | 19,1 | 707    | 50    | 231                        | 162 | 101 | 82  | 68  | 45 | 33 | 438       | 274                   | 60%                                 | 164 | 69             | 61            | 12            |
| 66        | 1      | 2    |        | 4550   | PK 43+50 | 13.05.11 | 24,5           | 32,0    | 18,8 | 708    | 50    | 239                        | 166 | 104 | 85  | 70  | 46 | 33 | 426       | 274                   | 56%                                 | 152 | 73             | 62            | 13            |
| 67        | 1      | 2    |        | 4450   | PK 42+50 | 13.05.11 | 24,5           | 32,0    | 18,8 | 708    | 50    | 228                        | 156 | 100 | 82  | 69  | 47 | 34 | 443       | 274                   | 62%                                 | 169 | 72             | 56            | 13            |
| 68        | 1      | 2    |        | 4350   | PK 41+50 | 13.05.11 | 24,5           | 32,0    | 18,9 | 710    | 50    | 256                        | 175 | 106 | 86  | 69  | 46 | 34 | 405       | 274                   | 48%                                 | 131 | 81             | 69            | 13            |
| 69        | 1      | 2    |        | 4250   | PK 40+50 | 13.05.11 | 24,5           | 32,0    | 19,0 | 708    | 50    | 229                        | 158 | 103 | 86  | 70  | 48 | 34 | 442       | 274                   | 61%                                 | 168 | 71             | 55            | 13            |
| 70        | 1      | 2    |        | 4150   | PK 39+50 | 13.05.11 | 24,5           | 32,0    | 18,7 | 709    | 50    | 258                        | 185 | 121 | 100 | 82  | 53 | 39 | 402       | 274                   | 47%                                 | 128 | 73             | 64            | 15            |
| 71        | 1      | 2    |        | 4050   | PK 38+50 | 13.05.11 | 24,5           | 32,0    | 18,6 | 713    | 50    | 243                        | 172 | 111 | 93  | 76  | 50 | 36 | 423       | 274                   | 54%                                 | 149 | 70             | 60            | 14            |
| 72        | 1      | 2    |        | 3950   | PK 37+50 | 13.05.11 | 24,5           | 32,0    | 18,9 | 709    | 50    | 207                        | 146 | 98  | 80  | 67  | 45 | 33 | 478       | 274                   | 74%                                 | 204 | 61             | 48            | 12            |
| 73        | 1      | 2    |        | 3850   | PK 36+50 | 13.05.11 | 24,5           | 32,0    | 18,7 | 707    | 50    | 231                        | 156 | 99  | 80  | 67  | 47 | 34 | 438       | 274                   | 60%                                 | 164 | 75             | 57            | 12            |
| 74        | 1      | 2    |        | 3750   | PK 35+50 | 13.05.11 | 24,5           | 32,0    | 18,5 | 711    | 50    | 211                        | 151 | 99  | 83  | 69  | 48 | 35 | 473       | 274                   | 73%                                 | 199 | 60             | 51            | 13            |
| 75        | 1      | 2    |        | 3650   | PK 34+50 | 13.05.11 | 24,5           | 32,0    | 18,4 | 706    | 50    | 248                        | 177 | 114 | 95  | 79  | 53 | 41 | 413       | 274                   | 51%                                 | 139 | 72             | 62            | 12            |
| 76        | 1      | 2    |        | 3550   | PK 33+50 | 13.05.11 | 24,5           | 32,0    | 18,4 | 708    | 50    | 263                        | 194 | 135 | 115 | 95  | 65 | 47 | 395       | 274                   | 44%                                 | 121 | 69             | 59            | 18            |
| 77        | 1      | 2    |        | 3450   | PK 32+50 | 13.05.11 | 24,5           | 32,0    | 18,4 | 709    | 50    | 311                        | 213 | 137 | 113 | 93  | 63 | 44 | 346       | 274                   | 26%                                 | 72  | 98             | 76            | 19            |
| 78        | 1      | 2    |        | 3350   | PK 31+50 | 13.05.11 | 24,5           | 32,0    | 18,3 | 706    | 50    | 289                        | 201 | 127 | 103 | 84  | 54 | 36 | 366       | 270                   | 36%                                 | 96  | 88             | 74            | 18            |
| 79        | 1      | 2    |        | 3250   | PK 30+50 | 13.05.11 | 25,5           | 32,5    | 18,6 | 709    | 50    | 260                        | 170 | 108 | 86  | 70  | 45 | 31 | 401       | 270                   | 49%                                 | 131 | 89             | 62            | 14            |
| 80        | 1      | 2    |        | 3150   | PK 29+50 | 13.05.11 | 25,5           | 32,5    | 18,6 | 707    | 50    | 243                        | 169 | 107 | 88  | 71  | 47 | 33 | 422       | 270                   | 56%                                 | 152 | 74             | 62            | 14            |

## Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 81        | 1      | 2    |        | 3050   | PK 28+50 | 13.05.11 | 25,5           | 32,5    | 18,5 | 707    | 50    | 248                        | 160 | 101 | 84  | 68  | 47 | 34 | 416       | 270                   | 54%                                 | 146 | 88             | 59            | 14            |
| 82        | 1      | 2    |        | 2950   | PK 27+50 | 13.05.11 | 25,5           | 32,5    | 18,6 | 703    | 50    | 225                        | 154 | 102 | 85  | 71  | 49 | 35 | 447       | 270                   | 66%                                 | 177 | 71             | 53            | 14            |
| 83        | 1      | 2    |        | 2850   | PK 26+50 | 13.05.11 | 25,5           | 32,5    | 18,4 | 704    | 50    | 293                        | 189 | 111 | 90  | 72  | 48 | 36 | 363       | 270                   | 34%                                 | 93  | 104            | 79            | 13            |
| 84        | 1      | 2    |        | 2750   | PK 25+50 | 13.05.11 | 25,5           | 32,5    | 18,4 | 709    | 50    | 193                        | 133 | 92  | 78  | 65  | 45 | 33 | 509       | 270                   | 88%                                 | 239 | 60             | 41            | 12            |
| 85        | 1      | 2    |        | 2650   | PK 24+50 | 13.05.11 | 25,5           | 32,5    | 18,5 | 708    | 50    | 209                        | 140 | 88  | 73  | 59  | 39 | 29 | 476       | 270                   | 76%                                 | 206 | 69             | 52            | 10            |
| 86        | 1      | 2    |        | 2550   | PK 23+50 | 13.05.11 | 25,5           | 32,5    | 18,4 | 707    | 50    | 265                        | 171 | 105 | 86  | 70  | 47 | 34 | 395       | 270                   | 46%                                 | 125 | 94             | 66            | 14            |
| 87        | 1      | 2    |        | 2450   | PK 22+50 | 13.05.11 | 25,5           | 32,5    | 18,4 | 707    | 50    | 310                        | 185 | 105 | 85  | 71  | 51 | 38 | 348       | 270                   | 29%                                 | 78  | 125            | 80            | 13            |
| 88        | 1      | 2    |        | 2350   | PK 21+50 | 13.05.11 | 25,5           | 32,5    | 18,4 | 710    | 50    | 318                        | 201 | 120 | 99  | 82  | 57 | 42 | 342       | 270                   | 27%                                 | 72  | 117            | 80            | 15            |
| 89        | 1      | 2    |        | 2250   | PK 20+50 | 13.05.11 | 25,5           | 32,5    | 18,5 | 708    | 50    | 250                        | 164 | 105 | 88  | 75  | 52 | 42 | 413       | 270                   | 53%                                 | 143 | 86             | 60            | 10            |
| 90        | 1      | 2    |        | 2150   | PK 19+50 | 13.05.11 | 25,5           | 32,5    | 18,2 | 707    | 50    | 351                        | 244 | 158 | 133 | 111 | 77 | 55 | 315       | 270                   | 17%                                 | 45  | 108            | 86            | 23            |
| 91        | 1      | 2    |        | 2050   | PK 18+50 | 13.05.11 | 25,5           | 32,5    | 18,0 | 710    | 50    | 274                        | 181 | 113 | 94  | 78  | 54 | 39 | 386       | 270                   | 43%                                 | 116 | 92             | 67            | 15            |
| 92        | 1      | 2    |        | 1950   | PK 17+50 | 13.05.11 | 25,5           | 32,5    | 18,1 | 709    | 50    | 216                        | 133 | 82  | 68  | 56  | 40 | 29 | 464       | 270                   | 72%                                 | 194 | 83             | 51            | 10            |
| 93        | 1      | 2    |        | 1850   | PK 16+50 | 13.05.11 | 25,5           | 32,5    | 18,4 | 708    | 50    | 266                        | 181 | 124 | 106 | 93  | 69 | 52 | 393       | 270                   | 46%                                 | 123 | 85             | 57            | 17            |
| 94        | 1      | 2    |        | 1750   | PK 15+50 | 13.05.11 | 25,5           | 32,5    | 18,5 | 708    | 50    | 244                        | 159 | 106 | 90  | 76  | 54 | 39 | 421       | 270                   | 56%                                 | 151 | 85             | 53            | 14            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 429       | 272                   | 58%                                 | 157 | 76             | 58            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 315       |                       | 17%                                 | 45  | 52             | 37            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 527       |                       | 92%                                 | 253 | 125            | 86            | 23            |

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |     | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|-----|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 1         | 1      | 1    |        | 1550   | PK 13+50 | 24.09.11 | 12,3           | 11,9    | 9,9 | 732    | 52    | 183                        | 141 | 101 | 86  | 75 | 54 | 37 | 455       | 270                   | 68%                               | 185 | 40             | 39            | 16            |
| 2         | 1      | 1    |        | 1650   | PK 14+50 | 24.09.11 | 12,3           | 12,0    | 9,9 | 731    | 52    | 185                        | 141 | 99  | 84  | 72 | 51 | 36 | 450       | 270                   | 67%                               | 180 | 42             | 41            | 14            |
| 3         | 1      | 1    |        | 1750   | PK 15+50 | 24.09.11 | 12,3           | 12,0    | 9,7 | 730    | 52    | 181                        | 128 | 81  | 66  | 55 | 37 | 27 | 457       | 270                   | 69%                               | 187 | 52             | 45            | 10            |
| 4         | 1      | 1    |        | 1850   | PK 16+50 | 24.09.11 | 12,3           | 12,0    | 9,7 | 727    | 51    | 261                        | 180 | 111 | 91  | 75 | 51 | 32 | 341       | 270                   | 26%                               | 71  | 79             | 67            | 19            |
| 5         | 1      | 1    |        | 1950   | PK 17+50 | 24.09.11 | 12,3           | 11,9    | 9,7 | 728    | 51    | 207                        | 148 | 97  | 81  | 68 | 46 | 30 | 411       | 270                   | 52%                               | 141 | 57             | 49            | 16            |
| 6         | 1      | 1    |        | 2050   | PK 18+50 | 24.09.11 | 12,3           | 12,0    | 9,6 | 724    | 51    | 223                        | 161 | 105 | 89  | 74 | 49 | 31 | 385       | 270                   | 43%                               | 115 | 60             | 55            | 18            |
| 7         | 1      | 1    |        | 2150   | PK 19+50 | 24.09.11 | 12,3           | 12,0    | 9,6 | 728    | 51    | 235                        | 177 | 124 | 105 | 87 | 64 | 41 | 370       | 270                   | 37%                               | 100 | 56             | 52            | 22            |
| 8         | 1      | 1    |        | 2250   | PK 20+50 | 24.09.11 | 12,3           | 11,9    | 9,6 | 723    | 51    | 197                        | 142 | 96  | 83  | 71 | 51 | 34 | 424       | 270                   | 57%                               | 154 | 54             | 44            | 17            |
| 9         | 1      | 1    |        | 2350   | PK 21+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 729    | 51    | 219                        | 166 | 113 | 95  | 80 | 56 | 35 | 392       | 270                   | 45%                               | 122 | 52             | 51            | 20            |
| 10        | 1      | 1    |        | 2450   | PK 22+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 716    | 51    | 167                        | 123 | 83  | 70  | 58 | 41 | 27 | 479       | 270                   | 78%                               | 209 | 43             | 39            | 14            |
| 11        | 1      | 1    |        | 2550   | PK 23+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 717    | 51    | 165                        | 124 | 85  | 72  | 60 | 41 | 25 | 484       | 270                   | 79%                               | 214 | 41             | 39            | 15            |
| 12        | 1      | 1    |        | 2650   | PK 24+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 719    | 51    | 201                        | 145 | 92  | 76  | 63 | 43 | 26 | 416       | 270                   | 54%                               | 146 | 55             | 52            | 16            |
| 13        | 1      | 1    |        | 2750   | PK 25+50 | 24.09.11 | 12,3           | 11,8    | 9,8 | 715    | 51    | 148                        | 113 | 78  | 68  | 57 | 42 | 27 | 526       | 270                   | 95%                               | 256 | 35             | 35            | 14            |
| 14        | 1      | 1    |        | 2850   | PK 26+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 714    | 50    | 174                        | 131 | 91  | 78  | 65 | 45 | 29 | 463       | 270                   | 71%                               | 193 | 43             | 39            | 17            |
| 15        | 1      | 1    |        | 2950   | PK 27+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 716    | 51    | 182                        | 135 | 97  | 83  | 71 | 50 | 32 | 448       | 270                   | 66%                               | 178 | 46             | 38            | 17            |
| 16        | 1      | 1    |        | 3050   | PK 28+50 | 24.09.11 | 12,3           | 11,8    | 9,8 | 721    | 51    | 175                        | 130 | 92  | 77  | 66 | 47 | 31 | 464       | 270                   | 72%                               | 194 | 45             | 37            | 15            |
| 17        | 1      | 1    |        | 3150   | PK 29+50 | 24.09.11 | 12,3           | 11,9    | 9,7 | 720    | 51    | 189                        | 145 | 101 | 85  | 72 | 50 | 31 | 436       | 270                   | 62%                               | 166 | 44             | 43            | 19            |
| 18        | 1      | 1    |        | 3250   | PK 30+50 | 24.09.11 | 12,3           | 11,9    | 9,6 | 722    | 51    | 224                        | 168 | 111 | 92  | 75 | 50 | 32 | 382       | 270                   | 41%                               | 112 | 55             | 56            | 18            |
| 19        | 1      | 1    |        | 3350   | PK 31+50 | 24.09.11 | 12,3           | 11,8    | 9,5 | 721    | 51    | 178                        | 135 | 92  | 77  | 64 | 43 | 28 | 459       | 270                   | 70%                               | 189 | 42             | 42            | 15            |
| 20        | 1      | 1    |        | 3450   | PK 32+50 | 24.09.11 | 12,3           | 11,8    | 9,6 | 721    | 51    | 250                        | 199 | 136 | 118 | 99 | 66 | 41 | 350       | 274                   | 28%                               | 76  | 51             | 62            | 24            |
| 21        | 1      | 1    |        | 3550   | PK 33+50 | 24.09.11 | 12,3           | 11,9    | 9,6 | 723    | 51    | 192                        | 146 | 103 | 93  | 76 | 57 | 37 | 433       | 274                   | 58%                               | 159 | 44             | 42            | 19            |
| 22        | 1      | 1    |        | 3650   | PK 34+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 725    | 51    | 167                        | 131 | 93  | 81  | 71 | 52 | 38 | 484       | 274                   | 77%                               | 210 | 36             | 36            | 14            |
| 23        | 1      | 1    |        | 3750   | PK 35+50 | 24.09.11 | 12,3           | 11,8    | 9,6 | 722    | 51    | 187                        | 143 | 101 | 86  | 73 | 52 | 34 | 442       | 274                   | 61%                               | 168 | 42             | 41            | 17            |
| 24        | 1      | 1    |        | 3850   | PK 36+50 | 24.09.11 | 12,3           | 11,8    | 9,6 | 723    | 51    | 162                        | 126 | 92  | 78  | 67 | 48 | 31 | 495       | 274                   | 81%                               | 221 | 35             | 34            | 17            |
| 25        | 1      | 1    |        | 3950   | PK 37+50 | 24.09.11 | 12,3           | 12,0    | 9,6 | 727    | 51    | 189                        | 145 | 100 | 84  | 71 | 49 | 31 | 440       | 274                   | 61%                               | 166 | 42             | 44            | 17            |
| 26        | 1      | 1    |        | 4050   | PK 38+50 | 24.09.11 | 12,3           | 12,1    | 9,5 | 725    | 51    | 215                        | 161 | 110 | 92  | 77 | 54 | 36 | 396       | 274                   | 45%                               | 122 | 52             | 50            | 17            |
| 27        | 1      | 1    |        | 4150   | PK 39+50 | 24.09.11 | 12,3           | 11,8    | 9,5 | 723    | 51    | 160                        | 119 | 84  | 72  | 62 | 43 | 30 | 500       | 274                   | 83%                               | 226 | 40             | 34            | 13            |
| 28        | 1      | 1    |        | 4250   | PK 40+50 | 24.09.11 | 12,3           | 12,0    | 9,7 | 726    | 51    | 232                        | 167 | 109 | 90  | 73 | 50 | 32 | 373       | 274                   | 36%                               | 99  | 63             | 57            | 17            |
| 29        | 1      | 1    |        | 4350   | PK 41+50 | 24.09.11 | 12,3           | 12,0    | 9,6 | 724    | 51    | 221                        | 169 | 114 | 95  | 78 | 52 | 32 | 388       | 274                   | 42%                               | 114 | 50             | 54            | 20            |
| 30        | 1      | 1    |        | 4450   | PK 42+50 | 24.09.11 | 12,3           | 11,8    | 9,7 | 725    | 51    | 176                        | 130 | 89  | 76  | 62 | 44 | 28 | 465       | 274                   | 70%                               | 191 | 45             | 40            | 15            |
| 31        | 1      | 1    |        | 4550   | PK 43+50 | 24.09.11 | 12,3           | 12,0    | 9,6 | 725    | 51    | 183                        | 131 | 86  | 72  | 60 | 41 | 29 | 450       | 274                   | 64%                               | 176 | 51             | 44            | 12            |

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 32        | 1      | 1    |        | 4650   | PK 44+50 | 24.09.11 | 12,3           | 11,9    | 9,8  | 725    | 51    | 162                        | 120 | 80  | 68  | 58 | 41 | 32 | 497       | 274                   | 81%                                 | 223 | 41             | 39            | 9             |
| 33        | 1      | 1    |        | 4750   | PK 45+50 | 24.09.11 | 12,3           | 12,0    | 9,8  | 725    | 51    | 179                        | 135 | 91  | 76  | 63 | 43 | 28 | 458       | 274                   | 67%                                 | 184 | 43             | 43            | 15            |
| 34        | 1      | 1    |        | 4850   | PK 46+50 | 24.09.11 | 12,3           | 11,8    | 9,8  | 723    | 51    | 181                        | 135 | 94  | 79  | 67 | 46 | 28 | 453       | 274                   | 65%                                 | 179 | 45             | 40            | 17            |
| 35        | 1      | 1    |        | 4950   | PK 47+50 | 24.09.11 | 12,3           | 11,9    | 9,8  | 725    | 51    | 147                        | 119 | 88  | 76  | 66 | 47 | 31 | 536       | 274                   | 96%                                 | 262 | 27             | 30            | 16            |
| 36        | 1      | 1    |        | 5050   | PK 48+50 | 24.09.11 | 12,3           | 11,9    | 9,9  | 723    | 51    | 160                        | 127 | 93  | 81  | 69 | 50 | 33 | 501       | 274                   | 83%                                 | 227 | 32             | 33            | 16            |
| 37        | 1      | 1    |        | 5150   | PK 49+50 | 24.09.11 | 12,3           | 12,0    | 10,0 | 720    | 51    | 184                        | 141 | 100 | 90  | 73 | 55 | 36 | 447       | 274                   | 63%                                 | 173 | 42             | 40            | 18            |
| 38        | 1      | 1    |        | 5250   | PK 50+50 | 24.09.11 | 12,3           | 12,2    | 10,1 | 723    | 51    | 136                        | 107 | 81  | 70  | 61 | 44 | 29 | 569       | 274                   | 108%                                | 295 | 28             | 26            | 15            |
| 39        | 1      | 1    |        | 5350   | PK 51+50 | 24.09.11 | 12,3           | 12,4    | 10,1 | 726    | 51    | 152                        | 124 | 95  | 84  | 73 | 54 | 35 | 523       | 274                   | 91%                                 | 249 | 27             | 28            | 18            |
| 40        | 1      | 1    |        | 5450   | PK 52+50 | 24.09.11 | 12,3           | 12,3    | 10,1 | 721    | 51    | 236                        | 184 | 128 | 107 | 90 | 62 | 40 | 367       | 274                   | 34%                                 | 93  | 51             | 55            | 22            |
| 41        | 1      | 1    |        | 5550   | PK 53+50 | 24.09.11 | 12,3           | 12,3    | 10,3 | 727    | 51    | 168                        | 133 | 98  | 85  | 73 | 54 | 36 | 484       | 274                   | 77%                                 | 210 | 34             | 34            | 18            |
| 42        | 1      | 1    |        | 5650   | PK 54+50 | 24.09.11 | 12,3           | 12,6    | 10,3 | 727    | 51    | 147                        | 116 | 85  | 75  | 66 | 47 | 32 | 537       | 274                   | 96%                                 | 263 | 30             | 30            | 15            |
| 43        | 1      | 1    |        | 5750   | PK 55+50 | 24.09.11 | 12,3           | 12,4    | 10,4 | 725    | 51    | 141                        | 108 | 78  | 69  | 59 | 42 | 29 | 554       | 274                   | 102%                                | 280 | 32             | 29            | 13            |
| 44        | 1      | 1    |        | 5850   | PK 56+50 | 24.09.11 | 12,3           | 12,5    | 10,5 | 724    | 51    | 156                        | 122 | 86  | 74  | 60 | 42 | 25 | 511       | 274                   | 86%                                 | 237 | 34             | 35            | 17            |
| 45        | 1      | 1    |        | 5950   | PK 57+50 | 24.09.11 | 12,3           | 12,9    | 10,5 | 723    | 51    | 167                        | 133 | 95  | 80  | 68 | 47 | 30 | 483       | 274                   | 76%                                 | 209 | 33             | 38            | 17            |
| 46        | 1      | 1    |        | 6050   | PK 58+50 | 24.09.11 | 12,3           | 13,0    | 10,5 | 722    | 51    | 162                        | 127 | 89  | 76  | 64 | 43 | 35 | 495       | 274                   | 81%                                 | 221 | 34             | 37            | 8             |
| 47        | 1      | 1    |        | 6150   | PK 59+50 | 24.09.11 | 12,3           | 12,9    | 10,3 | 713    | 50    | 163                        | 123 | 85  | 72  | 59 | 42 | 26 | 488       | 274                   | 78%                                 | 214 | 39             | 38            | 16            |
| 48        | 1      | 1    |        | 6250   | PK 60+50 | 24.09.11 | 12,3           | 12,9    | 10,1 | 714    | 50    | 154                        | 117 | 82  | 70  | 59 | 41 | 25 | 511       | 274                   | 86%                                 | 237 | 36             | 35            | 16            |
| 49        | 1      | 1    |        | 6350   | PK 61+50 | 24.09.11 | 12,3           | 12,5    | 10,2 | 714    | 50    | 130                        | 97  | 68  | 57  | 48 | 34 | 22 | 585       | 274                   | 113%                                | 311 | 33             | 29            | 12            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 458       | 272                   | 68%                                 | 186 | 44             | 42            | 16            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 341       |                       | 26%                                 | 71  | 27             | 26            | 8             |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 585       |                       | 113%                                | 311 | 79             | 67            | 24            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 50        | 1      | 2    |        | 6150   | PK 59+50 | 24.09.11 | 12,3           | 12,1    | 11,0 | 724    | 51    | 173                        | 133 | 94  | 80  | 68 | 47 | 31 | 471       | 274                   | 72%                                 | 197 | 39             | 38            | 16            |
| 51        | 1      | 2    |        | 6050   | PK 58+50 | 24.09.11 | 12,3           | 12,2    | 11,2 | 723    | 51    | 169                        | 132 | 93  | 79  | 66 | 47 | 32 | 480       | 274                   | 75%                                 | 206 | 36             | 38            | 15            |
| 52        | 1      | 2    |        | 5950   | PK 57+50 | 24.09.11 | 12,3           | 12,2    | 11,2 | 725    | 51    | 154                        | 120 | 82  | 70  | 59 | 39 | 28 | 516       | 274                   | 88%                                 | 242 | 33             | 37            | 11            |
| 53        | 1      | 2    |        | 5850   | PK 56+50 | 24.09.11 | 12,3           | 12,1    | 11,5 | 721    | 51    | 134                        | 107 | 80  | 71  | 62 | 46 | 32 | 573       | 274                   | 109%                                | 299 | 27             | 26            | 14            |
| 54        | 1      | 2    |        | 5750   | PK 55+50 | 24.09.11 | 12,3           | 12,0    | 11,5 | 725    | 51    | 136                        | 110 | 84  | 74  | 65 | 49 | 33 | 571       | 274                   | 108%                                | 297 | 25             | 25            | 16            |
| 55        | 1      | 2    |        | 5650   | PK 54+50 | 24.09.11 | 12,3           | 12,0    | 11,2 | 723    | 51    | 162                        | 127 | 93  | 81  | 71 | 51 | 35 | 496       | 274                   | 81%                                 | 222 | 34             | 33            | 16            |
| 56        | 1      | 2    |        | 5550   | PK 53+50 | 24.09.11 | 12,3           | 11,9    | 11,1 | 726    | 51    | 134                        | 107 | 84  | 70  | 63 | 47 | 33 | 578       | 274                   | 111%                                | 304 | 26             | 22            | 13            |
| 57        | 1      | 2    |        | 5450   | PK 52+50 | 24.09.11 | 12,3           | 12,0    | 11,3 | 723    | 51    | 181                        | 154 | 121 | 108 | 96 | 74 | 52 | 453       | 274                   | 65%                                 | 179 | 27             | 32            | 22            |
| 58        | 1      | 2    |        | 5350   | PK 51+50 | 24.09.11 | 12,3           | 12,0    | 11,4 | 724    | 51    | 190                        | 155 | 114 | 98  | 84 | 61 | 39 | 437       | 274                   | 59%                                 | 163 | 35             | 40            | 21            |
| 59        | 1      | 2    |        | 5250   | PK 50+50 | 24.09.11 | 12,3           | 12,1    | 11,2 | 725    | 51    | 159                        | 125 | 89  | 75  | 64 | 44 | 27 | 503       | 274                   | 84%                                 | 229 | 34             | 35            | 17            |
| 60        | 1      | 2    |        | 5150   | PK 49+50 | 24.09.11 | 12,3           | 12,1    | 11,3 | 725    | 51    | 173                        | 136 | 99  | 86  | 74 | 52 | 33 | 470       | 274                   | 72%                                 | 196 | 36             | 36            | 19            |
| 61        | 1      | 2    |        | 5050   | PK 48+50 | 24.09.11 | 12,3           | 12,3    | 11,7 | 725    | 51    | 163                        | 131 | 97  | 85  | 72 | 52 | 35 | 493       | 274                   | 80%                                 | 219 | 31             | 33            | 17            |
| 62        | 1      | 2    |        | 4950   | PK 47+50 | 24.09.11 | 12,3           | 12,7    | 11,8 | 725    | 51    | 148                        | 122 | 92  | 80  | 69 | 50 | 32 | 533       | 274                   | 94%                                 | 259 | 25             | 30            | 18            |
| 63        | 1      | 2    |        | 4850   | PK 46+50 | 24.09.11 | 12,3           | 12,7    | 11,8 | 724    | 51    | 183                        | 141 | 96  | 80  | 67 | 46 | 28 | 450       | 274                   | 64%                                 | 176 | 41             | 44            | 17            |
| 64        | 1      | 2    |        | 4750   | PK 45+50 | 24.09.11 | 12,3           | 12,9    | 11,5 | 724    | 51    | 178                        | 137 | 95  | 80  | 66 | 47 | 30 | 460       | 274                   | 68%                                 | 186 | 41             | 41            | 16            |
| 65        | 1      | 2    |        | 4650   | PK 44+50 | 24.09.11 | 12,3           | 12,9    | 11,6 | 722    | 51    | 187                        | 142 | 95  | 78  | 65 | 44 | 28 | 442       | 274                   | 61%                                 | 168 | 44             | 46            | 16            |
| 66        | 1      | 2    |        | 4550   | PK 43+50 | 24.09.11 | 12,3           | 12,8    | 11,2 | 719    | 51    | 217                        | 159 | 102 | 83  | 68 | 45 | 29 | 390       | 274                   | 42%                                 | 116 | 57             | 56            | 16            |
| 67        | 1      | 2    |        | 4450   | PK 42+50 | 24.09.11 | 12,3           | 13,0    | 11,2 | 720    | 51    | 168                        | 130 | 91  | 77  | 66 | 46 | 31 | 478       | 274                   | 75%                                 | 204 | 38             | 38            | 15            |
| 68        | 1      | 2    |        | 4350   | PK 41+50 | 24.09.11 | 12,3           | 12,9    | 11,2 | 719    | 51    | 225                        | 170 | 112 | 92  | 76 | 50 | 31 | 379       | 274                   | 38%                                 | 105 | 54             | 57            | 19            |
| 69        | 1      | 2    |        | 4250   | PK 40+50 | 24.09.11 | 12,3           | 13,1    | 11,3 | 717    | 51    | 185                        | 140 | 96  | 81  | 69 | 48 | 31 | 443       | 274                   | 62%                                 | 169 | 44             | 43            | 17            |
| 70        | 1      | 2    |        | 4150   | PK 39+50 | 24.09.11 | 12,3           | 13,2    | 11,6 | 719    | 51    | 204                        | 159 | 107 | 92  | 76 | 51 | 39 | 411       | 274                   | 50%                                 | 137 | 44             | 51            | 12            |
| 71        | 1      | 2    |        | 4050   | PK 38+50 | 24.09.11 | 12,3           | 13,2    | 11,6 | 718    | 51    | 163                        | 123 | 85  | 73  | 60 | 42 | 25 | 490       | 274                   | 79%                                 | 216 | 39             | 37            | 17            |
| 72        | 1      | 2    |        | 3950   | PK 37+50 | 24.09.11 | 12,3           | 13,2    | 11,7 | 718    | 51    | 152                        | 117 | 80  | 68  | 58 | 40 | 27 | 517       | 274                   | 89%                                 | 243 | 35             | 36            | 13            |
| 73        | 1      | 2    |        | 3850   | PK 36+50 | 24.09.11 | 12,3           | 13,2    | 11,7 | 718    | 51    | 182                        | 142 | 95  | 79  | 67 | 47 | 35 | 449       | 274                   | 64%                                 | 175 | 39             | 47            | 12            |
| 74        | 1      | 2    |        | 3750   | PK 35+50 | 24.09.11 | 12,3           | 12,9    | 11,4 | 719    | 51    | 177                        | 135 | 92  | 79  | 66 | 47 | 32 | 460       | 274                   | 68%                                 | 186 | 41             | 41            | 15            |
| 75        | 1      | 2    |        | 3650   | PK 34+50 | 24.09.11 | 12,3           | 13,0    | 11,6 | 721    | 51    | 208                        | 162 | 113 | 95  | 80 | 55 | 36 | 405       | 274                   | 48%                                 | 131 | 45             | 48            | 19            |
| 76        | 1      | 2    |        | 3550   | PK 33+50 | 24.09.11 | 12,3           | 12,8    | 11,4 | 716    | 51    | 208                        | 165 | 121 | 105 | 90 | 63 | 41 | 402       | 274                   | 47%                                 | 128 | 43             | 43            | 21            |
| 77        | 1      | 2    |        | 3450   | PK 32+50 | 24.09.11 | 12,3           | 12,6    | 11,5 | 721    | 51    | 255                        | 197 | 135 | 113 | 94 | 64 | 40 | 345       | 274                   | 26%                                 | 71  | 56             | 61            | 24            |
| 78        | 1      | 2    |        | 3350   | PK 31+50 | 24.09.11 | 12,3           | 12,6    | 11,7 | 719    | 51    | 233                        | 180 | 123 | 103 | 85 | 57 | 34 | 370       | 270                   | 37%                                 | 100 | 52             | 55            | 22            |
| 79        | 1      | 2    |        | 3250   | PK 30+50 | 24.09.11 | 12,3           | 13,0    | 11,6 | 721    | 51    | 201                        | 153 | 104 | 85  | 71 | 47 | 30 | 417       | 270                   | 54%                                 | 147 | 47             | 48            | 17            |
| 80        | 1      | 2    |        | 3150   | PK 29+50 | 24.09.11 | 12,3           | 13,0    | 11,8 | 721    | 51    | 196                        | 149 | 101 | 84  | 70 | 46 | 31 | 424       | 270                   | 57%                                 | 154 | 46             | 47            | 15            |

## Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 81        | 1      | 2    |        | 3050   | PK 28+50 | 24.09.11 | 12,3           | 13,0    | 12,1 | 719    | 51    | 195                        | 144 | 100 | 85  | 72  | 51 | 37 | 425       | 270                   | 57%                                 | 155 | 50             | 44            | 14            |
| 82        | 1      | 2    |        | 2950   | PK 27+50 | 24.09.11 | 12,3           | 12,5    | 11,9 | 720    | 51    | 175                        | 135 | 95  | 80  | 68  | 47 | 29 | 464       | 270                   | 72%                                 | 194 | 39             | 39            | 17            |
| 83        | 1      | 2    |        | 2850   | PK 26+50 | 24.09.11 | 12,3           | 12,5    | 11,7 | 714    | 50    | 227                        | 165 | 105 | 85  | 70  | 46 | 30 | 375       | 270                   | 39%                                 | 105 | 62             | 59            | 17            |
| 84        | 1      | 2    |        | 2750   | PK 25+50 | 24.09.11 | 12,3           | 12,4    | 11,3 | 717    | 51    | 147                        | 116 | 84  | 73  | 62  | 45 | 29 | 533       | 270                   | 97%                                 | 263 | 30             | 32            | 16            |
| 85        | 1      | 2    |        | 2650   | PK 24+50 | 24.09.11 | 12,3           | 12,4    | 11,1 | 721    | 51    | 178                        | 133 | 90  | 74  | 62  | 42 | 28 | 458       | 270                   | 70%                                 | 188 | 44             | 43            | 14            |
| 86        | 1      | 2    |        | 2550   | PK 23+50 | 24.09.11 | 12,3           | 12,3    | 10,9 | 718    | 51    | 209                        | 157 | 103 | 84  | 69  | 46 | 30 | 402       | 270                   | 49%                                 | 132 | 51             | 54            | 16            |
| 87        | 1      | 2    |        | 2450   | PK 22+50 | 24.09.11 | 12,3           | 12,5    | 11,1 | 717    | 51    | 263                        | 183 | 112 | 91  | 79  | 55 | 39 | 335       | 270                   | 24%                                 | 65  | 78             | 70            | 16            |
| 88        | 1      | 2    |        | 2350   | PK 21+50 | 24.09.11 | 12,3           | 12,7    | 11,2 | 723    | 51    | 230                        | 171 | 114 | 95  | 81  | 57 | 37 | 375       | 270                   | 39%                                 | 105 | 58             | 56            | 19            |
| 89        | 1      | 2    |        | 2250   | PK 20+50 | 24.09.11 | 12,3           | 12,8    | 11,2 | 724    | 51    | 183                        | 136 | 92  | 79  | 68  | 48 | 33 | 450       | 270                   | 67%                                 | 180 | 46             | 43            | 15            |
| 90        | 1      | 2    |        | 2150   | PK 19+50 | 24.09.11 | 12,3           | 12,6    | 11,3 | 717    | 51    | 254                        | 199 | 143 | 122 | 105 | 75 | 46 | 344       | 270                   | 27%                                 | 74  | 55             | 55            | 28            |
| 91        | 1      | 2    |        | 2050   | PK 18+50 | 24.09.11 | 12,3           | 12,6    | 11,2 | 719    | 51    | 193                        | 145 | 100 | 85  | 73  | 52 | 34 | 429       | 270                   | 59%                                 | 159 | 47             | 44            | 18            |
| 92        | 1      | 2    |        | 1950   | PK 17+50 | 24.09.11 | 12,3           | 12,7    | 11,2 | 720    | 51    | 157                        | 112 | 75  | 63  | 53  | 38 | 25 | 505       | 270                   | 87%                                 | 235 | 44             | 37            | 13            |
| 93        | 1      | 2    |        | 1850   | PK 16+50 | 24.09.11 | 12,3           | 12,5    | 11,2 | 716    | 51    | 203                        | 153 | 111 | 95  | 83  | 62 | 43 | 410       | 270                   | 52%                                 | 140 | 49             | 42            | 19            |
| 94        | 1      | 2    |        | 1750   | PK 15+50 | 24.09.11 | 12,3           | 12,6    | 11,2 | 716    | 51    | 181                        | 133 | 94  | 80  | 70  | 51 | 35 | 450       | 270                   | 67%                                 | 180 | 48             | 38            | 16            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 450       | 272                   | 65%                                 | 178 | 43             | 43            | 17            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 335       |                       | 24%                                 | 65  | 25             | 22            | 11            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 578       |                       | 111%                                | 304 | 78             | 70            | 28            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 1         | 1      | 1    |        | 1550   | PK 13+50 | 17.05.12 | 28,5           | 34,6    | 25,9 | 702    | 50    | 276                        | 174 | 116 | 95  | 78 | 54 | 40 | 379       | 270                   | 40%                                 | 109 | 102            | 59            | 15            |
| 2         | 1      | 1    |        | 1650   | PK 14+50 | 17.05.12 | 28,5           | 34,2    | 26,0 | 688    | 49    | 266                        | 170 | 103 | 86  | 71 | 48 | 34 | 384       | 270                   | 42%                                 | 114 | 99             | 68            | 15            |
| 3         | 1      | 1    |        | 1750   | PK 15+50 | 17.05.12 | 28,5           | 33,6    | 26,2 | 710    | 50    | 272                        | 151 | 81  | 66  | 50 | 35 | 24 | 387       | 270                   | 43%                                 | 117 | 120            | 70            | 10            |
| 4         | 1      | 1    |        | 1850   | PK 16+50 | 17.05.12 | 28,5           | 33,4    | 26,3 | 702    | 50    | 290                        | 179 | 108 | 91  | 68 | 48 | 32 | 364       | 270                   | 35%                                 | 94  | 113            | 71            | 15            |
| 5         | 1      | 1    |        | 1950   | PK 17+50 | 17.05.12 | 28,5           | 33,7    | 25,9 | 692    | 49    | 245                        | 147 | 88  | 71  | 59 | 41 | 29 | 411       | 270                   | 52%                                 | 141 | 100            | 61            | 12            |
| 6         | 1      | 1    |        | 2050   | PK 18+50 | 17.05.12 | 28,5           | 34,1    | 25,7 | 697    | 49    | 275                        | 160 | 95  | 81  | 67 | 43 | 31 | 378       | 270                   | 40%                                 | 108 | 117            | 66            | 12            |
| 7         | 1      | 1    |        | 2150   | PK 19+50 | 17.05.12 | 28,5           | 34,3    | 25,5 | 707    | 50    | 311                        | 197 | 132 | 109 | 93 | 62 | 44 | 347       | 270                   | 28%                                 | 77  | 114            | 65            | 19            |
| 8         | 1      | 1    |        | 2250   | PK 20+50 | 17.05.12 | 28,5           | 34,3    | 25,8 | 689    | 49    | 268                        | 158 | 100 | 82  | 67 | 48 | 35 | 382       | 270                   | 41%                                 | 112 | 113            | 60            | 13            |
| 9         | 1      | 1    |        | 2350   | PK 21+50 | 17.05.12 | 28,5           | 34,0    | 26,3 | 709    | 50    | 332                        | 203 | 130 | 105 | 87 | 57 | 41 | 330       | 270                   | 22%                                 | 60  | 129            | 73            | 16            |
| 10        | 1      | 1    |        | 2450   | PK 22+50 | 17.05.12 | 28,5           | 33,9    | 26,0 | 701    | 50    | 234                        | 147 | 88  | 72  | 57 | 38 | 27 | 431       | 270                   | 60%                                 | 161 | 89             | 60            | 11            |
| 11        | 1      | 1    |        | 2550   | PK 23+50 | 17.05.12 | 28,5           | 35,5    | 25,5 | 699    | 49    | 218                        | 137 | 76  | 67  | 52 | 36 | 23 | 455       | 270                   | 69%                                 | 185 | 82             | 62            | 12            |
| 12        | 1      | 1    |        | 2650   | PK 24+50 | 17.05.12 | 28,5           | 34,5    | 25,1 | 699    | 49    | 248                        | 144 | 79  | 64  | 50 | 34 | 24 | 411       | 270                   | 52%                                 | 141 | 106            | 65            | 10            |
| 13        | 1      | 1    |        | 2750   | PK 25+50 | 17.05.12 | 28,5           | 33,7    | 25,0 | 699    | 49    | 213                        | 133 | 85  | 69  | 57 | 38 | 27 | 464       | 270                   | 72%                                 | 194 | 81             | 49            | 12            |
| 14        | 1      | 1    |        | 2850   | PK 26+50 | 17.05.12 | 28,5           | 33,5    | 24,9 | 697    | 49    | 210                        | 129 | 85  | 68  | 55 | 38 | 27 | 469       | 270                   | 74%                                 | 199 | 82             | 45            | 11            |
| 15        | 1      | 1    |        | 2950   | PK 27+50 | 17.05.12 | 28,5           | 34,8    | 24,9 | 696    | 49    | 246                        | 160 | 107 | 88  | 71 | 48 | 34 | 412       | 270                   | 53%                                 | 142 | 87             | 54            | 14            |
| 16        | 1      | 1    |        | 3050   | PK 28+50 | 17.05.12 | 28,5           | 34,2    | 25,0 | 700    | 50    | 258                        | 166 | 102 | 82  | 68 | 47 | 35 | 399       | 270                   | 48%                                 | 129 | 93             | 65            | 13            |
| 17        | 1      | 1    |        | 3150   | PK 29+50 | 17.05.12 | 28,5           | 35,3    | 24,9 | 695    | 49    | 243                        | 148 | 94  | 76  | 59 | 41 | 30 | 416       | 270                   | 54%                                 | 146 | 96             | 55            | 12            |
| 18        | 1      | 1    |        | 3250   | PK 30+50 | 17.05.12 | 28,5           | 34,5    | 24,8 | 699    | 49    | 275                        | 174 | 101 | 81  | 65 | 42 | 30 | 379       | 270                   | 40%                                 | 109 | 102            | 74            | 12            |
| 19        | 1      | 1    |        | 3350   | PK 31+50 | 17.05.12 | 28,5           | 34,9    | 25,1 | 697    | 49    | 244                        | 161 | 99  | 80  | 63 | 41 | 28 | 416       | 270                   | 54%                                 | 146 | 83             | 63            | 13            |
| 20        | 1      | 1    |        | 3450   | PK 32+50 | 17.05.12 | 28,5           | 34,3    | 24,9 | 706    | 50    | 346                        | 216 | 130 | 106 | 81 | 53 | 37 | 318       | 274                   | 16%                                 | 44  | 130            | 86            | 17            |
| 21        | 1      | 1    |        | 3550   | PK 33+50 | 17.05.12 | 28,5           | 34,7    | 24,9 | 699    | 49    | 280                        | 181 | 109 | 90  | 73 | 47 | 35 | 374       | 274                   | 36%                                 | 100 | 100            | 73            | 12            |
| 22        | 1      | 1    |        | 3650   | PK 34+50 | 17.05.12 | 28,5           | 34,0    | 25,0 | 689    | 49    | 199                        | 132 | 93  | 77  | 67 | 48 | 36 | 484       | 274                   | 76%                                 | 210 | 69             | 40            | 13            |
| 23        | 1      | 1    |        | 3750   | PK 35+50 | 17.05.12 | 28,5           | 34,4    | 25,6 | 694    | 49    | 256                        | 157 | 102 | 83  | 71 | 45 | 33 | 399       | 274                   | 46%                                 | 125 | 100            | 56            | 12            |
| 24        | 1      | 1    |        | 3850   | PK 36+50 | 17.05.12 | 28,5           | 34,1    | 25,3 | 703    | 50    | 217                        | 144 | 93  | 77  | 63 | 43 | 31 | 459       | 274                   | 67%                                 | 185 | 73             | 51            | 12            |
| 25        | 1      | 1    |        | 3950   | PK 37+50 | 17.05.12 | 28,5           | 35,4    | 25,2 | 714    | 50    | 262                        | 172 | 105 | 83  | 68 | 45 | 33 | 400       | 274                   | 46%                                 | 126 | 89             | 66            | 12            |
| 26        | 1      | 1    |        | 4050   | PK 38+50 | 17.05.12 | 28,5           | 36,0    | 25,4 | 695    | 49    | 282                        | 172 | 108 | 85  | 71 | 47 | 34 | 369       | 274                   | 35%                                 | 95  | 112            | 65            | 13            |
| 27        | 1      | 1    |        | 4150   | PK 39+50 | 17.05.12 | 28,5           | 35,2    | 25,4 | 696    | 49    | 231                        | 151 | 100 | 84  | 69 | 47 | 33 | 433       | 274                   | 58%                                 | 159 | 81             | 52            | 15            |
| 28        | 1      | 1    |        | 4250   | PK 40+50 | 17.05.12 | 28,5           | 34,0    | 25,2 | 708    | 50    | 288                        | 179 | 103 | 88  | 67 | 48 | 34 | 369       | 274                   | 35%                                 | 95  | 109            | 76            | 14            |
| 29        | 1      | 1    |        | 4350   | PK 41+50 | 17.05.12 | 28,5           | 33,8    | 25,3 | 697    | 49    | 281                        | 180 | 110 | 86  | 71 | 47 | 34 | 372       | 274                   | 36%                                 | 98  | 102            | 71            | 13            |
| 30        | 1      | 1    |        | 4450   | PK 42+50 | 17.05.12 | 28,5           | 34,0    | 25,4 | 698    | 49    | 242                        | 143 | 85  | 77  | 60 | 40 | 29 | 418       | 274                   | 53%                                 | 144 | 101            | 58            | 11            |
| 31        | 1      | 1    |        | 4550   | PK 43+50 | 17.05.12 | 28,5           | 34,5    | 25,6 | 699    | 49    | 255                        | 157 | 90  | 75  | 58 | 40 | 27 | 402       | 274                   | 47%                                 | 128 | 99             | 68            | 12            |

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       |                                     |     |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 32        | 1      | 1    |        | 4650   | PK 44+50 | 17.05.12 | 28,5           | 34,6    | 25,7 | 698    | 49    | 239                        | 159 | 92  | 79  | 67  | 45 | 31 | 423       | 274                   | 54%                                 | 149 | 82             | 67            | 14            |
| 33        | 1      | 1    |        | 4750   | PK 45+50 | 17.05.12 | 28,5           | 35,0    | 25,7 | 697    | 49    | 261                        | 171 | 97  | 83  | 64  | 42 | 29 | 394       | 274                   | 44%                                 | 120 | 91             | 75            | 14            |
| 34        | 1      | 1    |        | 4850   | PK 46+50 | 17.05.12 | 28,5           | 34,9    | 25,5 | 690    | 49    | 242                        | 156 | 96  | 79  | 64  | 43 | 31 | 414       | 274                   | 51%                                 | 140 | 89             | 61            | 12            |
| 35        | 1      | 1    |        | 4950   | PK 47+50 | 17.05.12 | 28,5           | 35,0    | 25,9 | 688    | 49    | 196                        | 136 | 93  | 78  | 63  | 44 | 31 | 489       | 274                   | 79%                                 | 215 | 61             | 45            | 14            |
| 36        | 1      | 1    |        | 5050   | PK 48+50 | 17.05.12 | 28,5           | 34,7    | 26,1 | 699    | 49    | 214                        | 147 | 99  | 85  | 70  | 50 | 38 | 462       | 274                   | 69%                                 | 188 | 68             | 48            | 12            |
| 37        | 1      | 1    |        | 5150   | PK 49+50 | 17.05.12 | 28,5           | 34,6    | 26,6 | 697    | 49    | 261                        | 172 | 105 | 91  | 72  | 51 | 38 | 393       | 274                   | 44%                                 | 119 | 91             | 68            | 13            |
| 38        | 1      | 1    |        | 5250   | PK 50+50 | 17.05.12 | 28,5           | 33,6    | 26,5 | 703    | 50    | 197                        | 134 | 93  | 77  | 63  | 45 | 32 | 495       | 274                   | 81%                                 | 221 | 64             | 41            | 13            |
| 39        | 1      | 1    |        | 5350   | PK 51+50 | 17.05.12 | 28,5           | 34,4    | 25,7 | 689    | 49    | 202                        | 141 | 98  | 83  | 72  | 50 | 35 | 479       | 274                   | 75%                                 | 205 | 62             | 45            | 15            |
| 40        | 1      | 1    |        | 5450   | PK 52+50 | 17.05.12 | 28,5           | 35,4    | 25,3 | 698    | 49    | 263                        | 174 | 111 | 90  | 73  | 49 | 34 | 392       | 274                   | 43%                                 | 118 | 90             | 64            | 15            |
| 41        | 1      | 1    |        | 5550   | PK 53+50 | 17.05.12 | 28,5           | 33,6    | 25,6 | 698    | 49    | 335                        | 255 | 182 | 155 | 131 | 94 | 68 | 323       | 274                   | 18%                                 | 49  | 81             | 74            | 26            |
| 42        | 1      | 1    |        | 5650   | PK 54+50 | 17.05.12 | 28,5           | 34,5    | 25,6 | 695    | 49    | 220                        | 142 | 94  | 82  | 68  | 47 | 34 | 451       | 274                   | 64%                                 | 177 | 79             | 49            | 13            |
| 43        | 1      | 1    |        | 5750   | PK 55+50 | 17.05.12 | 28,5           | 34,7    | 25,7 | 701    | 50    | 230                        | 159 | 101 | 82  | 67  | 46 | 35 | 437       | 274                   | 60%                                 | 163 | 72             | 58            | 12            |
| 44        | 1      | 1    |        | 5850   | PK 56+50 | 17.05.12 | 28,5           | 34,9    | 25,6 | 694    | 49    | 225                        | 145 | 89  | 71  | 57  | 37 | 27 | 442       | 274                   | 61%                                 | 168 | 82             | 57            | 10            |
| 45        | 1      | 1    |        | 5950   | PK 57+50 | 17.05.12 | 28,5           | 35,0    | 25,4 | 696    | 49    | 251                        | 167 | 102 | 82  | 65  | 46 | 31 | 406       | 274                   | 48%                                 | 132 | 85             | 66            | 15            |
| 46        | 1      | 1    |        | 6050   | PK 58+50 | 17.05.12 | 28,5           | 35,3    | 25,8 | 703    | 50    | 242                        | 157 | 99  | 78  | 61  | 42 | 29 | 421       | 274                   | 54%                                 | 147 | 85             | 58            | 13            |
| 47        | 1      | 1    |        | 6150   | PK 59+50 | 17.05.12 | 28,5           | 35,5    | 25,7 | 694    | 49    | 244                        | 154 | 89  | 69  | 53  | 36 | 26 | 414       | 274                   | 51%                                 | 140 | 92             | 66            | 10            |
| 48        | 1      | 1    |        | 6250   | PK 60+50 | 17.05.12 | 28,5           | 35,6    | 25,9 | 692    | 49    | 220                        | 141 | 88  | 72  | 57  | 39 | 27 | 448       | 274                   | 64%                                 | 174 | 81             | 54            | 11            |
| 49        | 1      | 1    |        | 6350   | PK 61+50 | 17.05.12 | 28,5           | 34,5    | 26,0 | 693    | 49    | 183                        | 117 | 77  | 63  | 53  | 36 | 26 | 521       | 274                   | 90%                                 | 247 | 67             | 41            | 11            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 413       | 272                   | 51%                                 | 140 | 92             | 61            | 13            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 318       |                       | 16%                                 | 44  | 61             | 40            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 521       |                       | 90%                                 | 247 | 130            | 86            | 26            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 50        | 1      | 2    |        | 6150   | PK 59+50 | 17.05.12 | 29,3           | 36,1    | 25,1 | 694    | 49    | 240                        | 156 | 101 | 82  | 67  | 45 | 32 | 420       | 274                   | 53%                                 | 146 | 86             | 55            | 13            |
| 51        | 1      | 2    |        | 6050   | PK 58+50 | 17.05.12 | 29,3           | 35,7    | 25,5 | 695    | 49    | 234                        | 151 | 93  | 74  | 61  | 43 | 33 | 430       | 274                   | 57%                                 | 156 | 84             | 59            | 10            |
| 52        | 1      | 2    |        | 5950   | PK 57+50 | 17.05.12 | 29,3           | 35,2    | 25,4 | 702    | 50    | 223                        | 144 | 87  | 69  | 56  | 36 | 26 | 450       | 274                   | 64%                                 | 176 | 79             | 58            | 10            |
| 53        | 1      | 2    |        | 5850   | PK 56+50 | 17.05.12 | 29,3           | 35,1    | 25,4 | 693    | 49    | 186                        | 123 | 85  | 70  | 60  | 40 | 30 | 513       | 274                   | 87%                                 | 239 | 65             | 39            | 10            |
| 54        | 1      | 2    |        | 5750   | PK 55+50 | 17.05.12 | 29,3           | 34,4    | 25,7 | 694    | 49    | 204                        | 148 | 107 | 93  | 78  | 55 | 39 | 478       | 274                   | 74%                                 | 204 | 58             | 42            | 16            |
| 55        | 1      | 2    |        | 5650   | PK 54+50 | 17.05.12 | 29,3           | 34,4    | 25,4 | 685    | 48    | 210                        | 148 | 103 | 87  | 73  | 51 | 37 | 462       | 274                   | 69%                                 | 188 | 64             | 46            | 14            |
| 56        | 1      | 2    |        | 5550   | PK 53+50 | 17.05.12 | 29,3           | 34,4    | 25,2 | 701    | 50    | 187                        | 131 | 95  | 79  | 67  | 47 | 35 | 518       | 274                   | 89%                                 | 244 | 56             | 37            | 13            |
| 57        | 1      | 2    |        | 5450   | PK 52+50 | 17.05.12 | 29,3           | 35,1    | 24,8 | 701    | 50    | 273                        | 197 | 147 | 127 | 111 | 83 | 62 | 383       | 274                   | 40%                                 | 109 | 76             | 50            | 21            |
| 58        | 1      | 2    |        | 5350   | PK 51+50 | 17.05.12 | 29,3           | 34,2    | 24,7 | 695    | 49    | 281                        | 188 | 124 | 101 | 84  | 56 | 40 | 372       | 274                   | 36%                                 | 98  | 94             | 65            | 16            |
| 59        | 1      | 2    |        | 5250   | PK 50+50 | 17.05.12 | 29,3           | 33,3    | 24,6 | 696    | 49    | 215                        | 142 | 90  | 72  | 57  | 38 | 26 | 460       | 274                   | 68%                                 | 186 | 74             | 53            | 12            |
| 60        | 1      | 2    |        | 5150   | PK 49+50 | 17.05.12 | 29,3           | 33,5    | 24,5 | 688    | 49    | 224                        | 155 | 109 | 90  | 75  | 51 | 36 | 441       | 274                   | 61%                                 | 167 | 71             | 47            | 16            |
| 61        | 1      | 2    |        | 5050   | PK 48+50 | 17.05.12 | 29,3           | 33,9    | 24,9 | 698    | 49    | 218                        | 152 | 102 | 83  | 69  | 47 | 34 | 457       | 274                   | 67%                                 | 183 | 67             | 50            | 14            |
| 62        | 1      | 2    |        | 4950   | PK 47+50 | 17.05.12 | 29,3           | 33,7    | 25,1 | 712    | 50    | 221                        | 151 | 106 | 89  | 74  | 50 | 35 | 458       | 274                   | 67%                                 | 184 | 70             | 45            | 15            |
| 63        | 1      | 2    |        | 4850   | PK 46+50 | 17.05.12 | 29,3           | 34,0    | 25,3 | 701    | 50    | 266                        | 166 | 94  | 76  | 62  | 42 | 32 | 391       | 274                   | 43%                                 | 117 | 101            | 72            | 11            |
| 64        | 1      | 2    |        | 4750   | PK 45+50 | 17.05.12 | 29,3           | 33,9    | 25,1 | 691    | 49    | 243                        | 154 | 94  | 74  | 60  | 40 | 28 | 416       | 274                   | 52%                                 | 142 | 90             | 61            | 11            |
| 65        | 1      | 2    |        | 4650   | PK 44+50 | 17.05.12 | 29,3           | 33,3    | 24,8 | 693    | 49    | 281                        | 167 | 96  | 72  | 57  | 37 | 27 | 371       | 274                   | 35%                                 | 97  | 116            | 73            | 11            |
| 66        | 1      | 2    |        | 4550   | PK 43+50 | 17.05.12 | 29,3           | 33,6    | 24,8 | 699    | 49    | 287                        | 168 | 95  | 80  | 59  | 41 | 29 | 367       | 274                   | 34%                                 | 93  | 120            | 74            | 12            |
| 67        | 1      | 2    |        | 4450   | PK 42+50 | 17.05.12 | 29,3           | 33,2    | 24,7 | 693    | 49    | 226                        | 143 | 87  | 74  | 60  | 41 | 32 | 440       | 274                   | 61%                                 | 166 | 85             | 56            | 10            |
| 68        | 1      | 2    |        | 4350   | PK 41+50 | 17.05.12 | 29,3           | 33,4    | 24,8 | 689    | 49    | 285                        | 185 | 108 | 85  | 68  | 44 | 30 | 365       | 274                   | 33%                                 | 91  | 103            | 78            | 14            |
| 69        | 1      | 2    |        | 4250   | PK 40+50 | 17.05.12 | 29,3           | 33,3    | 24,7 | 695    | 49    | 242                        | 154 | 98  | 79  | 62  | 42 | 31 | 419       | 274                   | 53%                                 | 145 | 90             | 57            | 11            |
| 70        | 1      | 2    |        | 4150   | PK 39+50 | 17.05.12 | 29,3           | 33,5    | 24,8 | 696    | 49    | 270                        | 171 | 107 | 91  | 75  | 46 | 33 | 384       | 274                   | 40%                                 | 110 | 101            | 64            | 13            |
| 71        | 1      | 2    |        | 4050   | PK 38+50 | 17.05.12 | 29,3           | 34,0    | 24,9 | 699    | 49    | 261                        | 159 | 105 | 83  | 67  | 45 | 29 | 395       | 274                   | 44%                                 | 121 | 103            | 55            | 16            |
| 72        | 1      | 2    |        | 3950   | PK 37+50 | 17.05.12 | 29,3           | 33,5    | 24,7 | 706    | 50    | 225                        | 140 | 91  | 73  | 59  | 41 | 30 | 449       | 274                   | 64%                                 | 175 | 86             | 48            | 11            |
| 73        | 1      | 2    |        | 3850   | PK 36+50 | 17.05.12 | 29,3           | 33,6    | 24,8 | 692    | 49    | 269                        | 165 | 96  | 77  | 64  | 43 | 32 | 383       | 274                   | 40%                                 | 109 | 106            | 71            | 11            |
| 74        | 1      | 2    |        | 3750   | PK 35+50 | 17.05.12 | 29,3           | 33,4    | 24,9 | 699    | 49    | 235                        | 145 | 90  | 73  | 62  | 42 | 31 | 430       | 274                   | 57%                                 | 156 | 91             | 56            | 12            |
| 75        | 1      | 2    |        | 3650   | PK 34+50 | 17.05.12 | 29,3           | 33,4    | 24,9 | 689    | 49    | 281                        | 187 | 120 | 96  | 79  | 53 | 38 | 369       | 274                   | 35%                                 | 95  | 96             | 69            | 16            |
| 76        | 1      | 2    |        | 3550   | PK 33+50 | 17.05.12 | 29,3           | 32,7    | 24,8 | 692    | 49    | 283                        | 193 | 132 | 109 | 94  | 61 | 42 | 369       | 274                   | 35%                                 | 95  | 91             | 63            | 20            |
| 77        | 1      | 2    |        | 3450   | PK 32+50 | 17.05.12 | 29,3           | 33,3    | 24,6 | 695    | 49    | 337                        | 220 | 132 | 108 | 82  | 53 | 37 | 322       | 274                   | 18%                                 | 48  | 119            | 90            | 17            |
| 78        | 1      | 2    |        | 3350   | PK 31+50 | 17.05.12 | 29,3           | 33,1    | 24,3 | 695    | 49    | 353                        | 224 | 134 | 106 | 83  | 55 | 35 | 310       | 270                   | 15%                                 | 40  | 132            | 92            | 20            |
| 79        | 1      | 2    |        | 3250   | PK 30+50 | 17.05.12 | 29,3           | 34,8    | 24,6 | 698    | 49    | 279                        | 180 | 107 | 85  | 68  | 44 | 30 | 375       | 270                   | 39%                                 | 105 | 100            | 74            | 14            |
| 80        | 1      | 2    |        | 3150   | PK 29+50 | 17.05.12 | 29,3           | 33,4    | 24,4 | 696    | 49    | 275                        | 167 | 109 | 77  | 66  | 43 | 29 | 379       | 270                   | 40%                                 | 109 | 110            | 59            | 14            |

## Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
| 81        | 1      | 2    |        | 3050   | PK 28+50 | 17.05.12 | 29,3           | 33,0    | 24,3 | 688    | 49    | 299                        | 170 | 99  | 80  | 63 | 46 | 34 | 351       | 270                   | 30%                               | 81  | 132            | 73            | 13            |
| 82        | 1      | 2    |        | 2950   | PK 27+50 | 17.05.12 | 29,3           | 33,1    | 24,3 | 692    | 49    | 247                        | 155 | 92  | 78  | 60 | 40 | 30 | 411       | 270                   | 52%                               | 141 | 94             | 64            | 10            |
| 83        | 1      | 2    |        | 2850   | PK 26+50 | 17.05.12 | 29,3           | 33,5    | 24,2 | 691    | 49    | 305                        | 179 | 99  | 76  | 60 | 41 | 31 | 347       | 270                   | 28%                               | 77  | 129            | 82            | 11            |
| 84        | 1      | 2    |        | 2750   | PK 25+50 | 17.05.12 | 29,3           | 33,4    | 24,2 | 692    | 49    | 199                        | 131 | 90  | 73  | 60 | 42 | 30 | 488       | 270                   | 81%                               | 218 | 69             | 42            | 13            |
| 85        | 1      | 2    |        | 2650   | PK 24+50 | 17.05.12 | 29,3           | 33,7    | 24,3 | 697    | 49    | 269                        | 166 | 101 | 76  | 63 | 42 | 31 | 385       | 270                   | 43%                               | 115 | 105            | 67            | 12            |
| 86        | 1      | 2    |        | 2550   | PK 23+50 | 17.05.12 | 29,3           | 33,5    | 24,6 | 698    | 49    | 269                        | 160 | 97  | 79  | 65 | 44 | 32 | 387       | 270                   | 43%                               | 117 | 110            | 64            | 12            |
| 87        | 1      | 2    |        | 2450   | PK 22+50 | 17.05.12 | 29,3           | 33,8    | 24,8 | 702    | 50    | 385                        | 200 | 96  | 80  | 66 | 51 | 37 | 292       | 270                   | 8%                                | 22  | 187            | 105           | 14            |
| 88        | 1      | 2    |        | 2350   | PK 21+50 | 17.05.12 | 29,3           | 33,8    | 25,3 | 692    | 49    | 337                        | 188 | 118 | 94  | 78 | 55 | 40 | 320       | 270                   | 19%                               | 50  | 153            | 71            | 15            |
| 89        | 1      | 2    |        | 2250   | PK 20+50 | 17.05.12 | 29,3           | 33,8    | 25,3 | 699    | 49    | 263                        | 167 | 111 | 96  | 77 | 55 | 41 | 394       | 270                   | 46%                               | 124 | 97             | 57            | 14            |
| 90        | 1      | 2    |        | 2150   | PK 19+50 | 17.05.12 | 29,3           | 33,8    | 25,1 | 698    | 49    | 324                        | 205 | 130 | 105 | 88 | 60 | 43 | 333       | 270                   | 23%                               | 63  | 121            | 76            | 18            |
| 91        | 1      | 2    |        | 2050   | PK 18+50 | 17.05.12 | 29,3           | 32,7    | 25,5 | 699    | 49    | 308                        | 188 | 106 | 90  | 72 | 49 | 35 | 348       | 270                   | 29%                               | 78  | 121            | 83            | 13            |
| 92        | 1      | 2    |        | 1950   | PK 17+50 | 17.05.12 | 29,3           | 33,5    | 25,0 | 696    | 49    | 224                        | 131 | 84  | 69  | 57 | 41 | 31 | 445       | 270                   | 65%                               | 175 | 94             | 48            | 11            |
| 93        | 1      | 2    |        | 1850   | PK 16+50 | 17.05.12 | 29,3           | 32,5    | 24,8 | 694    | 49    | 278                        | 178 | 120 | 101 | 86 | 61 | 45 | 374       | 270                   | 39%                               | 104 | 102            | 59            | 17            |
| 94        | 1      | 2    |        | 1750   | PK 15+50 | 17.05.12 | 29,3           | 33,0    | 24,8 | 694    | 49    | 246                        | 147 | 93  | 76  | 63 | 44 | 31 | 412       | 270                   | 53%                               | 142 | 101            | 55            | 13            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 401       | 272                   | 47%                               | 129 | 98             | 62            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 292       |                       | 8%                                | 22  | 56             | 37            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 518       |                       | 89%                               | 244 | 187            | 105           | 21            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-----------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       | %                                 | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                   |     |                |               |               |
| 1         | 1      | 1    |        | 1550   | PK 13+50 | 20.09.12 | 17,5           | 20,9    | 16,0 | 707    | 50    | 220                        | 156 | 104 | 90  | 76 | 54 | 39 | 395       | 270                   | 46%                               | 125 | 64             | 53            | 15            |
| 2         | 1      | 1    |        | 1650   | PK 14+50 | 20.09.12 | 17,5           | 20,4    | 15,8 | 711    | 50    | 211                        | 148 | 99  | 83  | 69 | 48 | 34 | 411       | 270                   | 52%                               | 141 | 62             | 49            | 14            |
| 3         | 1      | 1    |        | 1750   | PK 15+50 | 20.09.12 | 17,5           | 19,7    | 15,8 | 701    | 50    | 212                        | 130 | 79  | 64  | 50 | 34 | 23 | 404       | 270                   | 50%                               | 134 | 83             | 52            | 11            |
| 4         | 1      | 1    |        | 1850   | PK 16+50 | 20.09.12 | 17,5           | 19,6    | 15,7 | 706    | 50    | 265                        | 172 | 105 | 88  | 68 | 45 | 32 | 340       | 270                   | 26%                               | 70  | 93             | 67            | 14            |
| 5         | 1      | 1    |        | 1950   | PK 17+50 | 20.09.12 | 17,5           | 19,7    | 15,9 | 701    | 50    | 212                        | 146 | 94  | 77  | 60 | 40 | 29 | 405       | 270                   | 50%                               | 135 | 66             | 52            | 11            |
| 6         | 1      | 1    |        | 2050   | PK 18+50 | 20.09.12 | 17,5           | 19,7    | 15,8 | 699    | 49    | 229                        | 153 | 99  | 81  | 63 | 43 | 28 | 380       | 270                   | 41%                               | 110 | 77             | 54            | 15            |
| 7         | 1      | 1    |        | 2150   | PK 19+50 | 20.09.12 | 17,5           | 20,0    | 15,7 | 690    | 49    | 258                        | 174 | 111 | 90  | 74 | 50 | 34 | 342       | 270                   | 27%                               | 72  | 86             | 64            | 16            |
| 8         | 1      | 1    |        | 2250   | PK 20+50 | 20.09.12 | 17,5           | 19,9    | 15,8 | 709    | 50    | 212                        | 145 | 94  | 79  | 67 | 48 | 36 | 409       | 270                   | 51%                               | 139 | 67             | 51            | 12            |
| 9         | 1      | 1    |        | 2350   | PK 21+50 | 20.09.12 | 17,5           | 19,7    | 15,8 | 715    | 51    | 260                        | 179 | 121 | 101 | 79 | 54 | 39 | 350       | 270                   | 30%                               | 80  | 80             | 57            | 15            |
| 10        | 1      | 1    |        | 2450   | PK 22+50 | 20.09.12 | 17,5           | 19,5    | 15,6 | 697    | 49    | 182                        | 127 | 83  | 68  | 55 | 37 | 26 | 455       | 270                   | 69%                               | 185 | 55             | 45            | 11            |
| 11        | 1      | 1    |        | 2550   | PK 23+50 | 20.09.12 | 17,5           | 19,1    | 15,4 | 700    | 49    | 204                        | 136 | 86  | 69  | 57 | 36 | 25 | 417       | 270                   | 54%                               | 147 | 68             | 51            | 12            |
| 12        | 1      | 1    |        | 2650   | PK 24+50 | 20.09.12 | 17,5           | 18,9    | 15,4 | 700    | 49    | 214                        | 142 | 88  | 71  | 57 | 38 | 27 | 401       | 270                   | 49%                               | 131 | 72             | 55            | 11            |
| 13        | 1      | 1    |        | 2750   | PK 25+50 | 20.09.12 | 17,5           | 18,5    | 15,5 | 700    | 49    | 187                        | 127 | 85  | 69  | 58 | 40 | 28 | 447       | 270                   | 66%                               | 177 | 60             | 43            | 12            |
| 14        | 1      | 1    |        | 2850   | PK 26+50 | 20.09.12 | 17,5           | 18,3    | 15,1 | 698    | 49    | 197                        | 135 | 89  | 74  | 60 | 42 | 29 | 427       | 270                   | 58%                               | 157 | 63             | 46            | 13            |
| 15        | 1      | 1    |        | 2950   | PK 27+50 | 20.09.12 | 17,5           | 18,4    | 14,9 | 701    | 50    | 197                        | 136 | 97  | 79  | 67 | 47 | 32 | 428       | 270                   | 59%                               | 158 | 62             | 40            | 14            |
| 16        | 1      | 1    |        | 3050   | PK 28+50 | 20.09.12 | 17,5           | 18,2    | 14,7 | 700    | 50    | 226                        | 156 | 102 | 84  | 70 | 48 | 34 | 384       | 270                   | 42%                               | 114 | 70             | 55            | 14            |
| 17        | 1      | 1    |        | 3150   | PK 29+50 | 20.09.12 | 17,5           | 18,3    | 14,6 | 699    | 49    | 202                        | 148 | 100 | 83  | 69 | 48 | 34 | 420       | 270                   | 56%                               | 150 | 54             | 49            | 14            |
| 18        | 1      | 1    |        | 3250   | PK 30+50 | 20.09.12 | 17,5           | 18,3    | 14,6 | 701    | 50    | 230                        | 164 | 104 | 83  | 67 | 44 | 30 | 379       | 270                   | 41%                               | 109 | 67             | 61            | 13            |
| 19        | 1      | 1    |        | 3350   | PK 31+50 | 20.09.12 | 17,5           | 18,3    | 14,8 | 699    | 49    | 243                        | 171 | 108 | 85  | 68 | 43 | 28 | 362       | 270                   | 34%                               | 92  | 74             | 63            | 15            |
| 20        | 1      | 1    |        | 3450   | PK 32+50 | 20.09.12 | 17,5           | 17,8    | 14,5 | 703    | 50    | 260                        | 192 | 118 | 101 | 82 | 60 | 36 | 345       | 274                   | 26%                               | 71  | 69             | 75            | 24            |
| 21        | 1      | 1    |        | 3550   | PK 33+50 | 20.09.12 | 17,5           | 18,3    | 14,4 | 695    | 49    | 245                        | 179 | 116 | 97  | 83 | 54 | 38 | 358       | 274                   | 31%                               | 84  | 68             | 63            | 16            |
| 22        | 1      | 1    |        | 3650   | PK 34+50 | 20.09.12 | 17,5           | 18,0    | 14,7 | 696    | 49    | 166                        | 120 | 84  | 77  | 66 | 49 | 36 | 489       | 274                   | 78%                               | 215 | 47             | 36            | 13            |
| 23        | 1      | 1    |        | 3750   | PK 35+50 | 20.09.12 | 17,5           | 18,1    | 14,9 | 695    | 49    | 207                        | 146 | 97  | 82  | 66 | 46 | 34 | 410       | 274                   | 49%                               | 136 | 62             | 49            | 13            |
| 24        | 1      | 1    |        | 3850   | PK 36+50 | 20.09.12 | 17,5           | 18,3    | 14,9 | 700    | 49    | 196                        | 143 | 95  | 80  | 62 | 45 | 32 | 430       | 274                   | 57%                               | 156 | 53             | 49            | 13            |
| 25        | 1      | 1    |        | 3950   | PK 37+50 | 20.09.12 | 17,5           | 18,5    | 15,0 | 695    | 49    | 214                        | 159 | 104 | 87  | 69 | 47 | 33 | 398       | 274                   | 45%                               | 124 | 56             | 56            | 14            |
| 26        | 1      | 1    |        | 4050   | PK 38+50 | 20.09.12 | 17,5           | 18,9    | 14,8 | 695    | 49    | 249                        | 169 | 108 | 89  | 71 | 50 | 36 | 354       | 274                   | 29%                               | 80  | 82             | 62            | 14            |
| 27        | 1      | 1    |        | 4150   | PK 39+50 | 20.09.12 | 17,5           | 18,8    | 14,8 | 696    | 49    | 187                        | 134 | 88  | 73  | 62 | 43 | 30 | 444       | 274                   | 62%                               | 170 | 54             | 47            | 13            |
| 28        | 1      | 1    |        | 4250   | PK 40+50 | 20.09.12 | 17,5           | 19,4    | 15,5 | 696    | 49    | 233                        | 164 | 103 | 85  | 68 | 45 | 32 | 374       | 274                   | 36%                               | 100 | 70             | 62            | 14            |
| 29        | 1      | 1    |        | 4350   | PK 41+50 | 20.09.12 | 17,5           | 19,4    | 15,8 | 699    | 49    | 259                        | 175 | 108 | 87  | 70 | 47 | 31 | 344       | 274                   | 26%                               | 70  | 85             | 68            | 16            |
| 30        | 1      | 1    |        | 4450   | PK 42+50 | 20.09.12 | 17,5           | 19,8    | 15,8 | 696    | 49    | 214                        | 149 | 96  | 80  | 65 | 43 | 30 | 399       | 274                   | 46%                               | 125 | 66             | 54            | 13            |
| 31        | 1      | 1    |        | 4550   | PK 43+50 | 20.09.12 | 17,5           | 20,4    | 15,6 | 707    | 50    | 226                        | 148 | 90  | 73  | 59 | 39 | 27 | 387       | 274                   | 41%                               | 113 | 78             | 58            | 12            |

## Suund 1: Tallinn-Narva, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |    |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5 | D6 | D7 |           |                       |                                     |     |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    |           |                       |                                     |     |                |               |               |
| 32        | 1      | 1    |        | 4650   | PK 44+50 | 20.09.12 | 17,5           | 20,4    | 16,2 | 712    | 50    | 173                        | 121 | 80  | 66  | 56 | 38 | 28 | 482       | 274                   | 76%                                 | 208 | 51             | 41            | 11            |
| 33        | 1      | 1    |        | 4750   | PK 45+50 | 20.09.12 | 17,5           | 20,1    | 16,4 | 703    | 50    | 206                        | 136 | 87  | 71  | 61 | 37 | 27 | 415       | 274                   | 51%                                 | 141 | 70             | 49            | 11            |
| 34        | 1      | 1    |        | 4850   | PK 46+50 | 20.09.12 | 17,5           | 19,5    | 16,4 | 692    | 49    | 198                        | 138 | 93  | 75  | 63 | 42 | 29 | 423       | 274                   | 54%                                 | 149 | 61             | 46            | 13            |
| 35        | 1      | 1    |        | 4950   | PK 47+50 | 20.09.12 | 17,5           | 19,8    | 16,1 | 699    | 49    | 157                        | 116 | 84  | 71  | 60 | 43 | 31 | 513       | 274                   | 87%                                 | 239 | 41             | 32            | 12            |
| 36        | 1      | 1    |        | 5050   | PK 48+50 | 20.09.12 | 17,5           | 19,8    | 16,2 | 698    | 49    | 178                        | 133 | 96  | 81  | 70 | 50 | 37 | 462       | 274                   | 69%                                 | 188 | 46             | 37            | 14            |
| 37        | 1      | 1    |        | 5150   | PK 49+50 | 20.09.12 | 17,5           | 19,3    | 16,4 | 710    | 50    | 193                        | 134 | 96  | 81  | 69 | 51 | 38 | 441       | 274                   | 61%                                 | 167 | 59             | 37            | 13            |
| 38        | 1      | 1    |        | 5250   | PK 50+50 | 20.09.12 | 17,5           | 19,4    | 16,3 | 713    | 50    | 154                        | 114 | 80  | 69  | 59 | 41 | 30 | 528       | 274                   | 93%                                 | 254 | 40             | 33            | 11            |
| 39        | 1      | 1    |        | 5350   | PK 51+50 | 20.09.12 | 17,5           | 19,5    | 16,2 | 708    | 50    | 179                        | 132 | 94  | 79  | 68 | 49 | 37 | 466       | 274                   | 70%                                 | 192 | 47             | 38            | 13            |
| 40        | 1      | 1    |        | 5450   | PK 52+50 | 20.09.12 | 17,5           | 18,9    | 15,8 | 699    | 49    | 276                        | 200 | 137 | 111 | 90 | 61 | 42 | 328       | 274                   | 20%                                 | 54  | 76             | 64            | 20            |
| 41        | 1      | 1    |        | 5550   | PK 53+50 | 20.09.12 | 17,5           | 18,9    | 15,6 | 706    | 50    | 192                        | 142 | 100 | 82  | 69 | 51 | 37 | 440       | 274                   | 61%                                 | 166 | 50             | 41            | 14            |
| 42        | 1      | 1    |        | 5650   | PK 54+50 | 20.09.12 | 17,5           | 19,8    | 16,1 | 703    | 50    | 172                        | 127 | 87  | 76  | 65 | 45 | 34 | 478       | 274                   | 74%                                 | 204 | 45             | 40            | 12            |
| 43        | 1      | 1    |        | 5750   | PK 55+50 | 20.09.12 | 17,5           | 19,5    | 16,4 | 699    | 49    | 160                        | 111 | 80  | 68  | 57 | 41 | 31 | 505       | 274                   | 84%                                 | 231 | 49             | 31            | 10            |
| 44        | 1      | 1    |        | 5850   | PK 56+50 | 20.09.12 | 17,5           | 20,2    | 16,2 | 709    | 50    | 189                        | 136 | 90  | 74  | 60 | 41 | 28 | 447       | 274                   | 63%                                 | 173 | 53             | 46            | 13            |
| 45        | 1      | 1    |        | 5950   | PK 57+50 | 20.09.12 | 17,5           | 20,4    | 16,2 | 689    | 49    | 199                        | 145 | 98  | 80  | 67 | 45 | 30 | 419       | 274                   | 53%                                 | 145 | 56             | 48            | 15            |
| 46        | 1      | 1    |        | 6050   | PK 58+50 | 20.09.12 | 17,5           | 20,2    | 16,1 | 712    | 50    | 180                        | 135 | 90  | 74  | 60 | 39 | 28 | 466       | 274                   | 70%                                 | 192 | 45             | 45            | 12            |
| 47        | 1      | 1    |        | 6150   | PK 59+50 | 20.09.12 | 17,5           | 19,8    | 16,0 | 697    | 49    | 183                        | 131 | 85  | 70  | 57 | 39 | 27 | 452       | 274                   | 65%                                 | 178 | 52             | 47            | 12            |
| 48        | 1      | 1    |        | 6250   | PK 60+50 | 20.09.12 | 17,5           | 19,5    | 15,8 | 698    | 49    | 176                        | 122 | 84  | 68  | 57 | 39 | 27 | 467       | 274                   | 71%                                 | 193 | 54             | 39            | 12            |
| 49        | 1      | 1    |        | 6350   | PK 61+50 | 20.09.12 | 17,5           | 19,4    | 16,1 | 697    | 49    | 147                        | 106 | 73  | 63  | 52 | 36 | 26 | 539       | 274                   | 97%                                 | 265 | 42             | 33            | 10            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 420       | 272                   | 54%                                 | 147 | 62             | 50            | 13            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 328       |                       | 20%                                 | 54  | 40             | 31            | 10            |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |    |    |    | 539       |                       | 97%                                 | 265 | 93             | 75            | 24            |

Mõõtmiste tellija: ITS

TEEKONSTRUKTSIOONI KANDEVÕIME MÕÕTMISE TULEMUSED MNT. NR. 1 TALLINN-NARVA  
TEELÕIK PK 13+50 - PK 61+50

Mõõtja: Egon Horg, AS Teede Tehnokeskuse PMS-grupi peaspetsialist  
Seade: Dynatest FWD-8002

Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
|           |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    |           |                       |                                     |     |                |               |               |
| 50        | 1      | 2    |        | 6150   | PK 59+50 | 20.09.12 | 18,0           | 21,0    | 16,2 | 689    | 49    | 187                        | 137 | 92  | 78  | 64  | 44 | 31 | 442       | 274                   | 61%                                 | 168 | 51             | 46            | 13            |
| 51        | 1      | 2    |        | 6050   | PK 58+50 | 20.09.12 | 18,0           | 20,9    | 16,4 | 682    | 48    | 178                        | 131 | 86  | 74  | 62  | 44 | 32 | 456       | 274                   | 66%                                 | 182 | 49             | 46            | 12            |
| 52        | 1      | 2    |        | 5950   | PK 57+50 | 20.09.12 | 18,0           | 20,5    | 16,3 | 697    | 49    | 189                        | 135 | 95  | 79  | 63  | 42 | 30 | 442       | 274                   | 61%                                 | 168 | 55             | 40            | 12            |
| 53        | 1      | 2    |        | 5850   | PK 56+50 | 20.09.12 | 18,0           | 20,2    | 16,5 | 709    | 50    | 161                        | 114 | 83  | 73  | 62  | 46 | 33 | 510       | 274                   | 86%                                 | 236 | 46             | 31            | 13            |
| 54        | 1      | 2    |        | 5750   | PK 55+50 | 20.09.12 | 18,0           | 20,5    | 16,4 | 704    | 50    | 177                        | 132 | 101 | 90  | 78  | 58 | 43 | 469       | 274                   | 71%                                 | 195 | 46             | 31            | 15            |
| 55        | 1      | 2    |        | 5650   | PK 54+50 | 20.09.12 | 18,0           | 19,5    | 16,0 | 715    | 51    | 175                        | 126 | 96  | 81  | 70  | 50 | 37 | 479       | 274                   | 75%                                 | 205 | 49             | 30            | 13            |
| 56        | 1      | 2    |        | 5550   | PK 53+50 | 20.09.12 | 18,0           | 20,1    | 16,3 | 704    | 50    | 162                        | 116 | 86  | 74  | 63  | 46 | 35 | 505       | 274                   | 84%                                 | 231 | 46             | 29            | 12            |
| 57        | 1      | 2    |        | 5450   | PK 52+50 | 20.09.12 | 18,0           | 20,0    | 16,1 | 691    | 49    | 220                        | 174 | 136 | 117 | 100 | 76 | 58 | 390       | 274                   | 42%                                 | 116 | 46             | 39            | 19            |
| 58        | 1      | 2    |        | 5350   | PK 51+50 | 20.09.12 | 18,0           | 20,3    | 15,6 | 702    | 50    | 250                        | 179 | 123 | 102 | 83  | 55 | 40 | 357       | 274                   | 30%                                 | 83  | 71             | 57            | 16            |
| 59        | 1      | 2    |        | 5250   | PK 50+50 | 20.09.12 | 18,0           | 20,0    | 15,7 | 701    | 50    | 197                        | 143 | 91  | 78  | 63  | 41 | 29 | 430       | 274                   | 57%                                 | 156 | 55             | 53            | 13            |
| 60        | 1      | 2    |        | 5150   | PK 49+50 | 20.09.12 | 18,0           | 20,0    | 15,8 | 706    | 50    | 185                        | 135 | 99  | 88  | 70  | 50 | 36 | 455       | 274                   | 66%                                 | 181 | 50             | 37            | 14            |
| 61        | 1      | 2    |        | 5050   | PK 48+50 | 20.09.12 | 18,0           | 19,8    | 16,3 | 699    | 49    | 185                        | 141 | 98  | 82  | 70  | 47 | 33 | 450       | 274                   | 64%                                 | 176 | 45             | 43            | 14            |
| 62        | 1      | 2    |        | 4950   | PK 47+50 | 20.09.12 | 18,0           | 19,2    | 16,3 | 694    | 49    | 172                        | 130 | 97  | 85  | 72  | 50 | 36 | 476       | 274                   | 74%                                 | 202 | 42             | 34            | 15            |
| 63        | 1      | 2    |        | 4850   | PK 46+50 | 20.09.12 | 18,0           | 19,1    | 15,9 | 698    | 49    | 223                        | 156 | 97  | 83  | 68  | 46 | 33 | 389       | 274                   | 42%                                 | 115 | 68             | 59            | 13            |
| 64        | 1      | 2    |        | 4750   | PK 45+50 | 20.09.12 | 18,0           | 18,6    | 15,8 | 699    | 49    | 206                        | 144 | 97  | 78  | 65  | 42 | 30 | 415       | 274                   | 51%                                 | 141 | 62             | 48            | 13            |
| 65        | 1      | 2    |        | 4650   | PK 44+50 | 20.09.12 | 18,0           | 18,7    | 15,7 | 708    | 50    | 241                        | 171 | 103 | 82  | 63  | 39 | 29 | 369       | 274                   | 35%                                 | 95  | 70             | 68            | 10            |
| 66        | 1      | 2    |        | 4550   | PK 43+50 | 20.09.12 | 18,0           | 18,7    | 15,6 | 706    | 50    | 243                        | 172 | 108 | 85  | 67  | 42 | 32 | 367       | 274                   | 34%                                 | 93  | 71             | 64            | 11            |
| 67        | 1      | 2    |        | 4450   | PK 42+50 | 20.09.12 | 18,0           | 18,3    | 15,6 | 700    | 49    | 196                        | 137 | 96  | 77  | 64  | 46 | 33 | 431       | 274                   | 57%                                 | 157 | 60             | 42            | 12            |
| 68        | 1      | 2    |        | 4350   | PK 41+50 | 20.09.12 | 18,0           | 18,9    | 15,7 | 697    | 49    | 242                        | 180 | 121 | 98  | 79  | 51 | 35 | 364       | 274                   | 33%                                 | 90  | 63             | 60            | 17            |
| 69        | 1      | 2    |        | 4250   | PK 40+50 | 20.09.12 | 18,0           | 18,9    | 15,7 | 697    | 49    | 200                        | 146 | 96  | 78  | 64  | 42 | 30 | 423       | 274                   | 54%                                 | 149 | 55             | 51            | 13            |
| 70        | 1      | 2    |        | 4150   | PK 39+50 | 20.09.12 | 18,0           | 18,8    | 16,1 | 706    | 50    | 226                        | 160 | 114 | 92  | 73  | 48 | 35 | 388       | 274                   | 42%                                 | 114 | 66             | 46            | 13            |
| 71        | 1      | 2    |        | 4050   | PK 38+50 | 20.09.12 | 18,0           | 18,9    | 16,0 | 703    | 50    | 219                        | 157 | 97  | 84  | 66  | 47 | 32 | 397       | 274                   | 45%                                 | 123 | 62             | 60            | 15            |
| 72        | 1      | 2    |        | 3950   | PK 37+50 | 20.09.12 | 18,0           | 19,0    | 15,9 | 707    | 50    | 189                        | 139 | 91  | 75  | 62  | 45 | 32 | 447       | 274                   | 63%                                 | 173 | 50             | 48            | 13            |
| 73        | 1      | 2    |        | 3850   | PK 36+50 | 20.09.12 | 18,0           | 18,9    | 15,7 | 700    | 49    | 224                        | 153 | 96  | 81  | 67  | 45 | 35 | 388       | 274                   | 42%                                 | 114 | 71             | 58            | 11            |
| 74        | 1      | 2    |        | 3750   | PK 35+50 | 20.09.12 | 18,0           | 18,3    | 15,7 | 703    | 50    | 208                        | 151 | 93  | 81  | 68  | 43 | 33 | 413       | 274                   | 51%                                 | 139 | 57             | 59            | 10            |
| 75        | 1      | 2    |        | 3650   | PK 34+50 | 20.09.12 | 18,0           | 18,6    | 15,5 | 708    | 50    | 249                        | 178 | 118 | 95  | 80  | 53 | 38 | 359       | 274                   | 31%                                 | 85  | 71             | 60            | 15            |
| 76        | 1      | 2    |        | 3550   | PK 33+50 | 20.09.12 | 18,0           | 18,4    | 15,7 | 697    | 49    | 220                        | 167 | 116 | 103 | 85  | 58 | 41 | 392       | 274                   | 43%                                 | 118 | 54             | 52            | 18            |
| 77        | 1      | 2    |        | 3450   | PK 32+50 | 20.09.12 | 18,0           | 18,5    | 15,6 | 702    | 50    | 296                        | 209 | 134 | 109 | 85  | 59 | 39 | 312       | 274                   | 14%                                 | 38  | 87             | 76            | 20            |
| 78        | 1      | 2    |        | 3350   | PK 31+50 | 20.09.12 | 18,0           | 18,6    | 15,5 | 702    | 50    | 280                        | 202 | 129 | 104 | 85  | 53 | 34 | 326       | 270                   | 21%                                 | 56  | 79             | 74            | 19            |
| 79        | 1      | 2    |        | 3250   | PK 30+50 | 20.09.12 | 18,0           | 19,0    | 15,5 | 696    | 49    | 250                        | 178 | 111 | 96  | 76  | 49 | 33 | 354       | 270                   | 31%                                 | 84  | 73             | 69            | 16            |
| 80        | 1      | 2    |        | 3150   | PK 29+50 | 20.09.12 | 18,0           | 18,4    | 15,5 | 697    | 49    | 239                        | 163 | 102 | 82  | 66  | 42 | 29 | 368       | 270                   | 36%                                 | 98  | 77             | 62            | 14            |

## Suund 2: Narva-Tallinn, lisarada

Mõõtmiskoha aadress ei ole seotud Teeregistriga

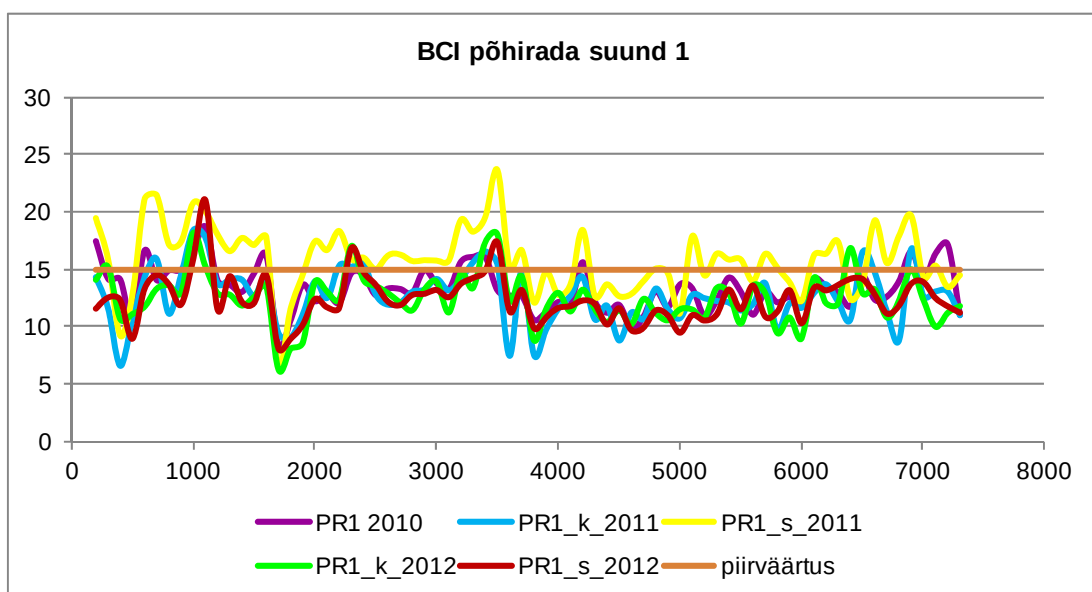
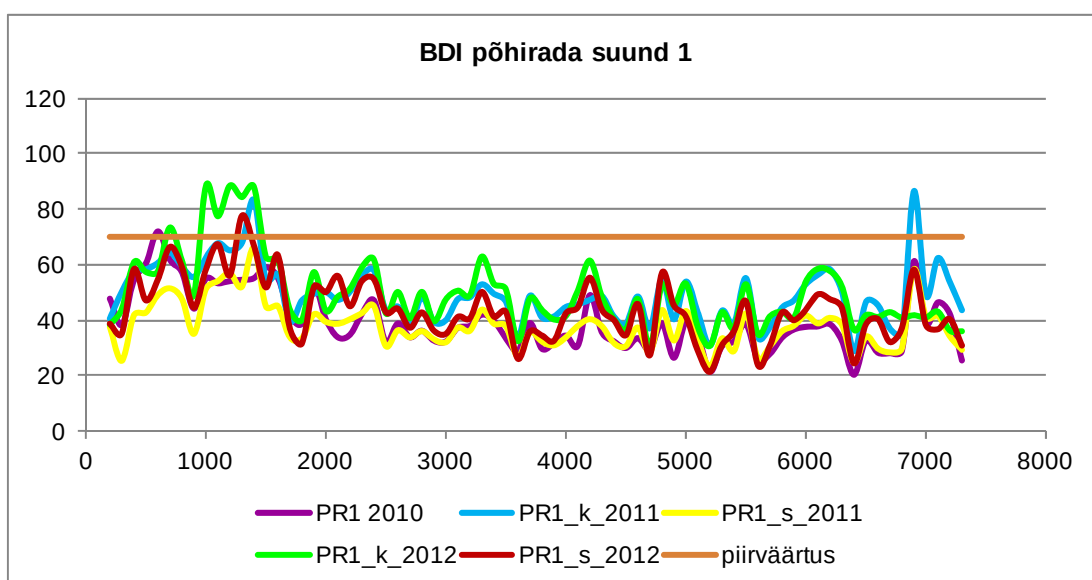
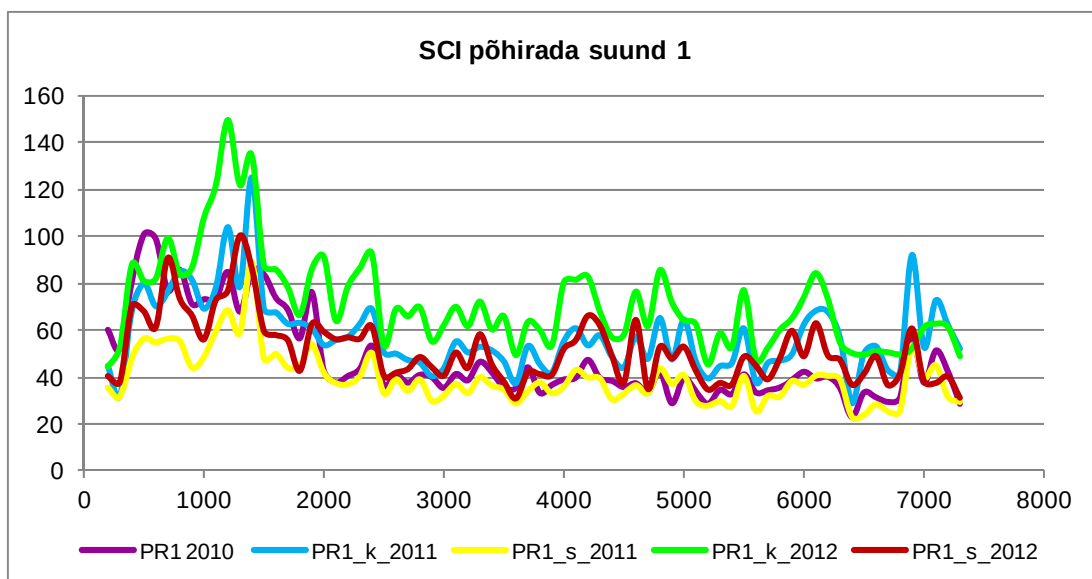
| Punkti nr | Mnt nr | STEE | Teeosa | Kaugus | PK       | Kpv      | Temperatuur, C |         |      | Jõud   |       | Läbivajumine, mikromeetrit |     |     |     |     |    |    | Emod, MPa | Min vajalik Emod, MPa | Mõõdetud Emod-i erinevus arvutatust |     | SCI (piir 140) | BDI (piir 70) | BCI (piir 15) |
|-----------|--------|------|--------|--------|----------|----------|----------------|---------|------|--------|-------|----------------------------|-----|-----|-----|-----|----|----|-----------|-----------------------|-------------------------------------|-----|----------------|---------------|---------------|
|           |        |      |        |        |          |          | Asphalt        | Surface | Air  | Stress | Force | D1                         | D2  | D3  | D4  | D5  | D6 | D7 |           |                       | %                                   | MPa |                |               |               |
| 81        | 1      | 2    |        | 3050   | PK 28+50 | 20.09.12 | 18,0           | 18,5    | 15,3 | 692    | 49    | 266                        | 181 | 114 | 90  | 73  | 49 | 34 | 335       | 270                   | 24%                                 | 65  | 87             | 69            | 16            |
| 82        | 1      | 2    |        | 2950   | PK 27+50 | 20.09.12 | 18,0           | 18,3    | 15,2 | 700    | 50    | 206                        | 144 | 100 | 80  | 64  | 45 | 31 | 415       | 270                   | 54%                                 | 145 | 62             | 45            | 14            |
| 83        | 1      | 2    |        | 2850   | PK 26+50 | 20.09.12 | 18,0           | 18,4    | 15,2 | 706    | 50    | 261                        | 178 | 104 | 82  | 63  | 44 | 31 | 346       | 270                   | 28%                                 | 76  | 83             | 75            | 13            |
| 84        | 1      | 2    |        | 2750   | PK 25+50 | 20.09.12 | 18,0           | 18,0    | 15,0 | 695    | 49    | 165                        | 119 | 89  | 74  | 60  | 43 | 32 | 493       | 270                   | 82%                                 | 223 | 47             | 31            | 11            |
| 85        | 1      | 2    |        | 2650   | PK 24+50 | 20.09.12 | 18,0           | 17,8    | 14,9 | 696    | 49    | 207                        | 145 | 91  | 74  | 59  | 38 | 27 | 412       | 270                   | 53%                                 | 142 | 62             | 54            | 12            |
| 86        | 1      | 2    |        | 2550   | PK 23+50 | 20.09.12 | 18,0           | 18,1    | 14,9 | 709    | 50    | 228                        | 163 | 102 | 81  | 65  | 43 | 31 | 386       | 270                   | 43%                                 | 116 | 65             | 60            | 13            |
| 87        | 1      | 2    |        | 2450   | PK 22+50 | 20.09.12 | 18,0           | 18,4    | 15,0 | 698    | 49    | 288                        | 182 | 102 | 84  | 68  | 44 | 36 | 317       | 270                   | 17%                                 | 47  | 107            | 81            | 9             |
| 88        | 1      | 2    |        | 2350   | PK 21+50 | 20.09.12 | 18,0           | 18,4    | 15,1 | 696    | 49    | 275                        | 182 | 113 | 96  | 78  | 54 | 38 | 329       | 270                   | 22%                                 | 59  | 94             | 70            | 16            |
| 89        | 1      | 2    |        | 2250   | PK 20+50 | 20.09.12 | 18,0           | 18,6    | 15,1 | 712    | 50    | 206                        | 135 | 93  | 79  | 63  | 44 | 34 | 420       | 270                   | 55%                                 | 150 | 71             | 41            | 10            |
| 90        | 1      | 2    |        | 2150   | PK 19+50 | 20.09.12 | 18,0           | 18,5    | 15,1 | 705    | 50    | 295                        | 214 | 146 | 122 | 103 | 72 | 51 | 313       | 270                   | 16%                                 | 43  | 82             | 68            | 21            |
| 91        | 1      | 2    |        | 2050   | PK 18+50 | 20.09.12 | 18,0           | 18,5    | 15,0 | 699    | 49    | 242                        | 166 | 108 | 91  | 77  | 50 | 36 | 364       | 270                   | 35%                                 | 94  | 77             | 59            | 13            |
| 92        | 1      | 2    |        | 1950   | PK 17+50 | 20.09.12 | 18,0           | 17,8    | 15,0 | 706    | 50    | 173                        | 111 | 66  | 60  | 46  | 36 | 25 | 480       | 270                   | 78%                                 | 210 | 62             | 45            | 11            |
| 93        | 1      | 2    |        | 1850   | PK 16+50 | 20.09.12 | 18,0           | 18,4    | 15,0 | 700    | 49    | 221                        | 152 | 104 | 88  | 73  | 52 | 41 | 392       | 270                   | 45%                                 | 122 | 69             | 49            | 11            |
| 94        | 1      | 2    |        | 1750   | PK 15+50 | 20.09.12 | 18,0           | 18,4    | 14,9 | 694    | 49    | 203                        | 141 | 96  | 80  | 65  | 47 | 35 | 416       | 270                   | 54%                                 | 146 | 64             | 46            | 13            |
| KESKMINE: |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 404       | 272                   | 48%                                 | 131 | 64             | 53            | 14            |
| Min:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 312       |                       | 14%                                 | 38  | 42             | 29            | 9             |
| Max:      |        |      |        |        |          |          |                |         |      |        |       |                            |     |     |     |     |    |    | 510       |                       | 86%                                 | 236 | 107            | 81            | 21            |

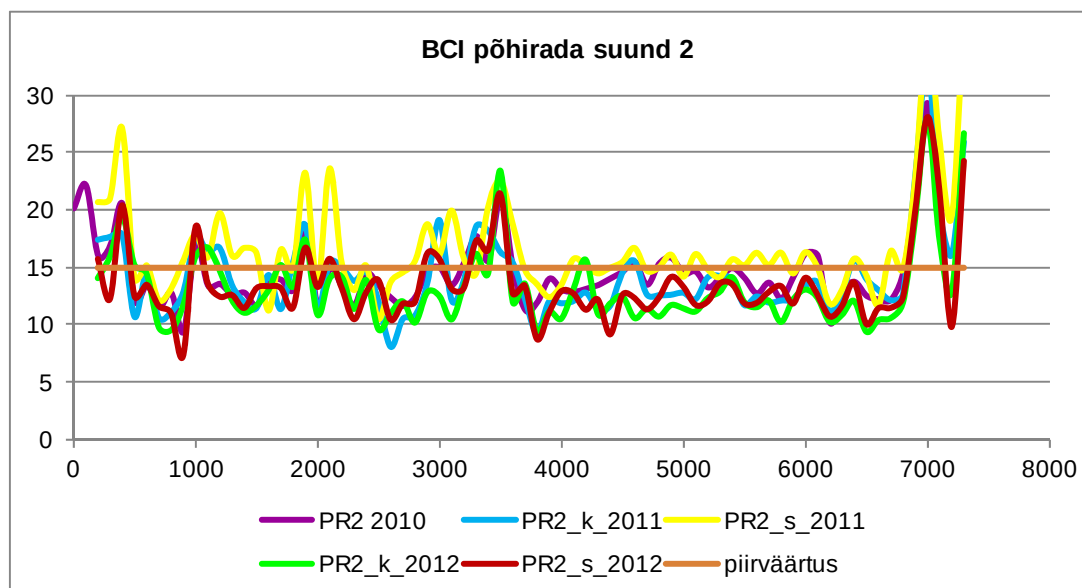
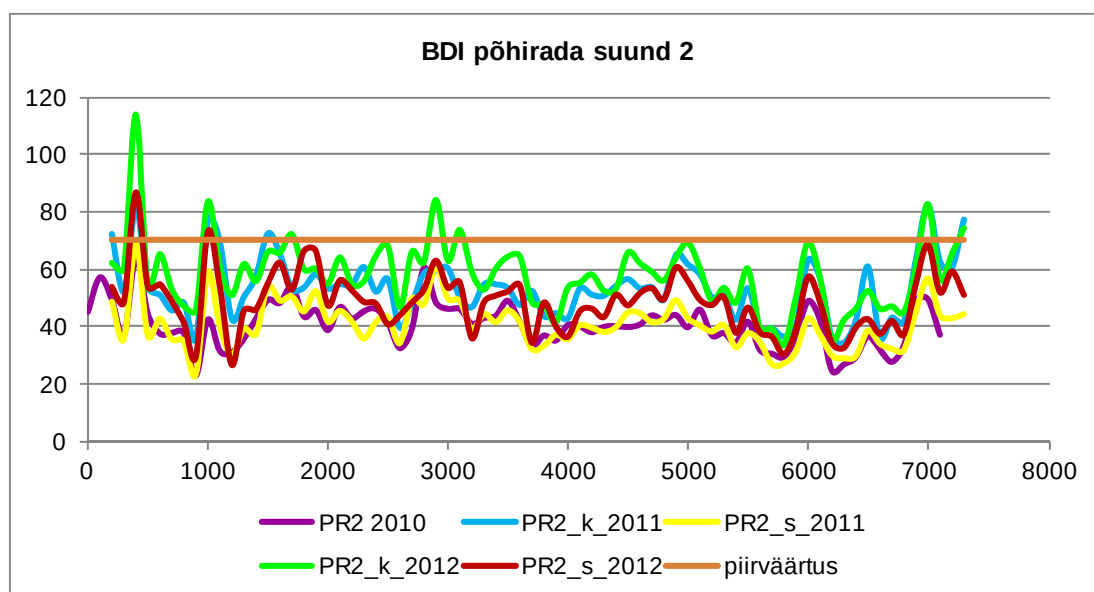
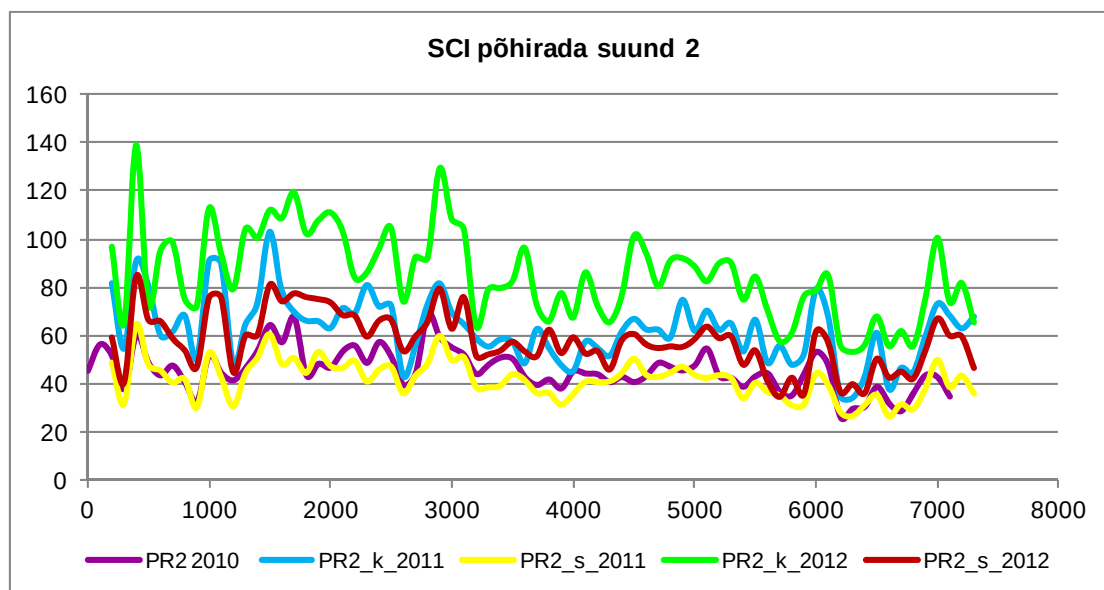
Teekonstruktsiooni kandevõime mõõtmistulemuste kohta on toodud järgmised andmed:

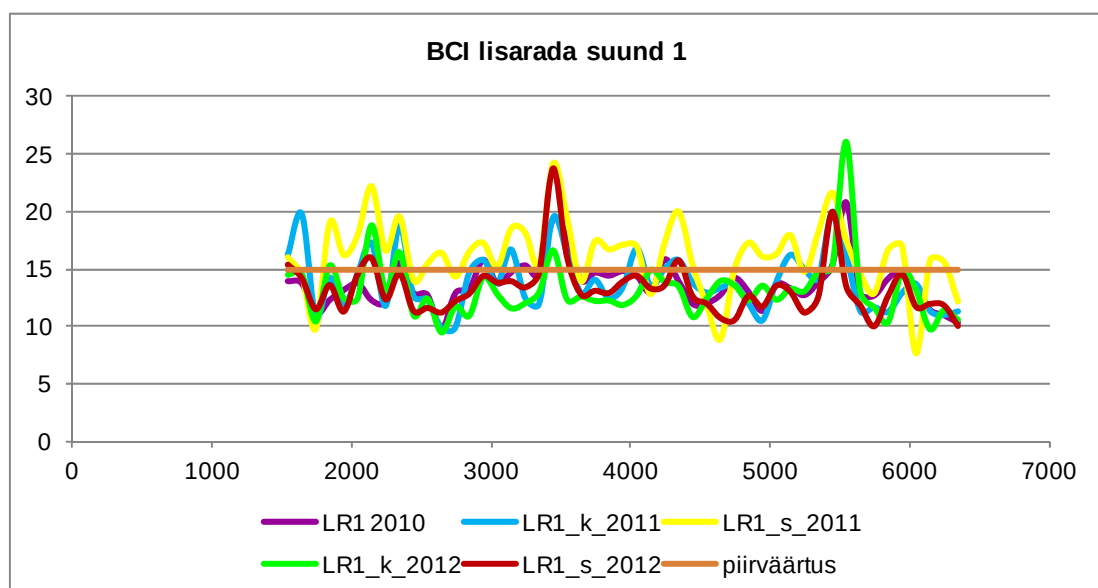
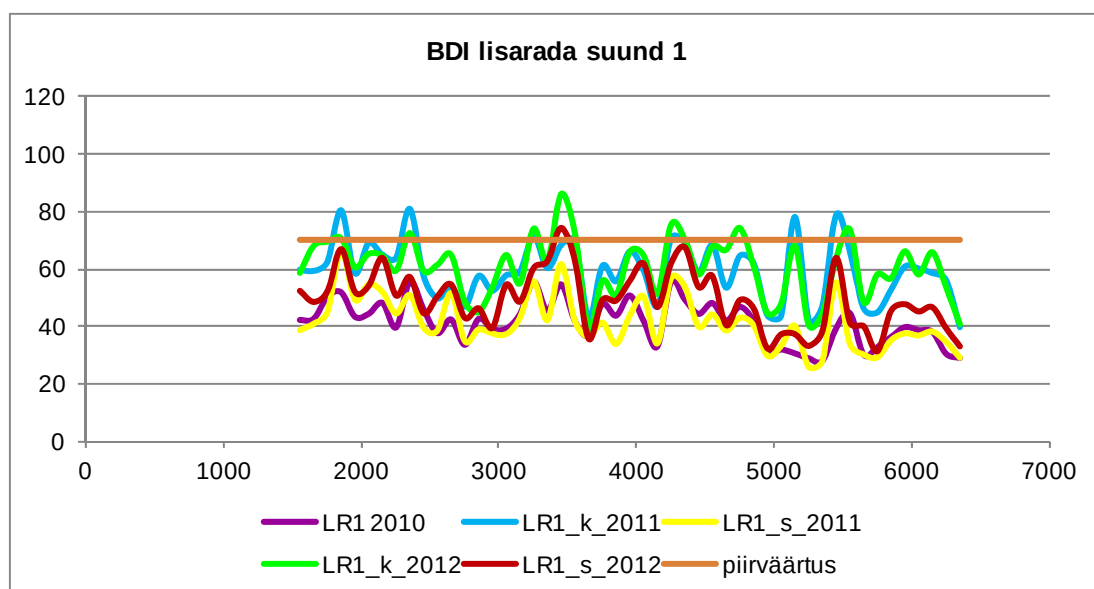
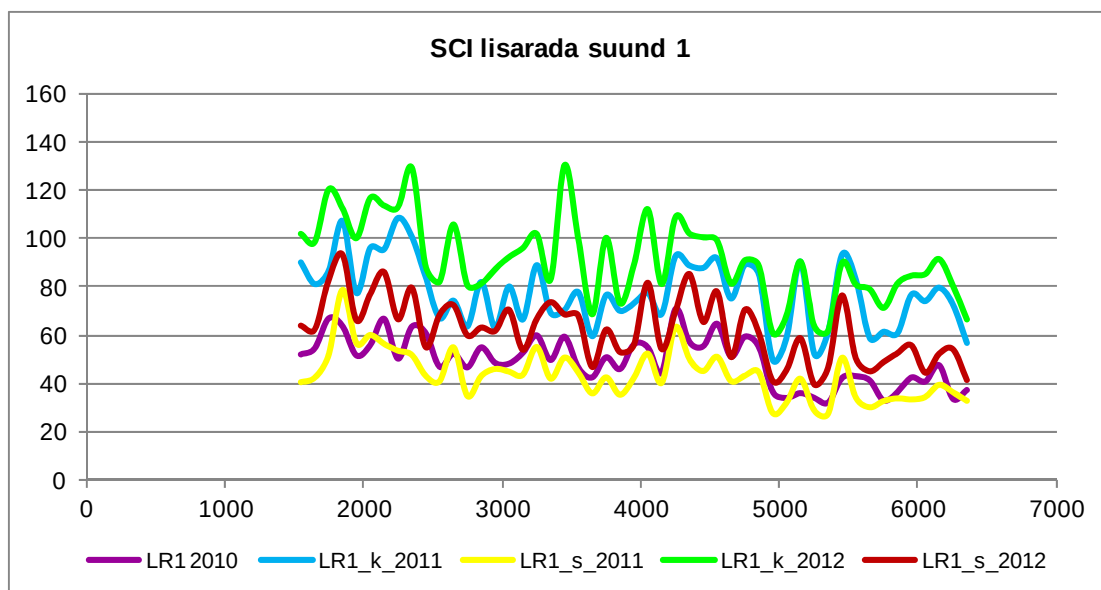
|                                     |                                                                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Punkti nr                           | - Mõõtmispunkti järjekorranumber                                                                                                                                                                                          |
| Mnt nr                              | - Maantee number                                                                                                                                                                                                          |
| STEE                                | - Sõidutee kood                                                                                                                                                                                                           |
| Teeosa                              | - Teeosa number                                                                                                                                                                                                           |
| Kaugus                              | - Mõõtmiskoha kaugus teeosa algusest                                                                                                                                                                                      |
| PK                                  | - Mõõtmiskoht piketaazi põhjal                                                                                                                                                                                            |
| Kpv                                 | - Mõõtmiste teostamise kuupäev                                                                                                                                                                                            |
| Asphalt                             | - Temperatuur teekatte sees, C                                                                                                                                                                                            |
| Surface                             | - Temperatuur teekatte pinnal, C                                                                                                                                                                                          |
| Air                                 | - Õhu temperatuur, C                                                                                                                                                                                                      |
| Stress                              | - Mõõtmisel rakendatud jõud MPa                                                                                                                                                                                           |
| Force                               | - Mõõtmisel rakendatud jõud kN                                                                                                                                                                                            |
| D1                                  | - Läbivajumine esimese anduri kohal, mikromeetrit                                                                                                                                                                         |
| D2                                  | - Läbivajumine teise anduri kohal (kaugusel 300 mm), mikromeetrit                                                                                                                                                         |
| D3                                  | - Läbivajumine kolmanda anduri kohal (kaugusel 600 mm), mikromeetrit                                                                                                                                                      |
| D4                                  | - Läbivajumine neljanda anduri kohal (kaugusel 750 mm), mikromeetrit                                                                                                                                                      |
| D5                                  | - Läbivajumine viienda anduri kohal (kaugusel 900 mm), mikromeetrit                                                                                                                                                       |
| D6                                  | - Läbivajumine kuuenda anduri kohal (kaugusel 1200 mm), mikromeetrit                                                                                                                                                      |
| D7                                  | - Läbivajumine seitsmenda anduri kohal (kaugusel 1500 mm), mikromeetrit                                                                                                                                                   |
| Emod, MPa                           | - Arvutatud teekonstruktsiooni kandevõime, MPa                                                                                                                                                                            |
| Min vajalik Emod, MPa               | - Arvutuslik minimaalne vajalik teekonstruktsiooni kandevõime väärtus, MPa                                                                                                                                                |
| Mõõdetud Emod-i erinevus arvutatust | - Protsentuaalne teekonstruktsiooni kandevõime erinevus mõõdetud väärtuse ja minimaalse vajaliku arvutatud väärtuse vahel                                                                                                 |
| SCI                                 | Pinna kõverustegur ehk SCI (Surface Curvature Index) iseloomustab katendi pealmise kihi tugevust. Arvutatakse läbivajumisandurite D1 ja D2 vahest (d0 – d300). Soovituslik maksimaalne väärtus antud teelõigule on 140    |
| BDI                                 | Aluse vigastatuse tegur ehk BDI (Base Damage Index) iseloomustab katendi alumiste kihtide tugevust. Arvutatakse läbivajumisandurite D2 ja D3 vahest (d300 – d600). Soovituslik maksimaalne väärtus antud teelõigule on 70 |
| BCI                                 | Aluse kõverustegur ehk BCI (Base Curvature Index) iseloomustab aluskihtide tugevust. Arvutatakse läbivajumisandurite D6 ja D7 vahest (d1200 – d1500). Soovituslik maksimaalne väärtus antud teelõigule on 15              |

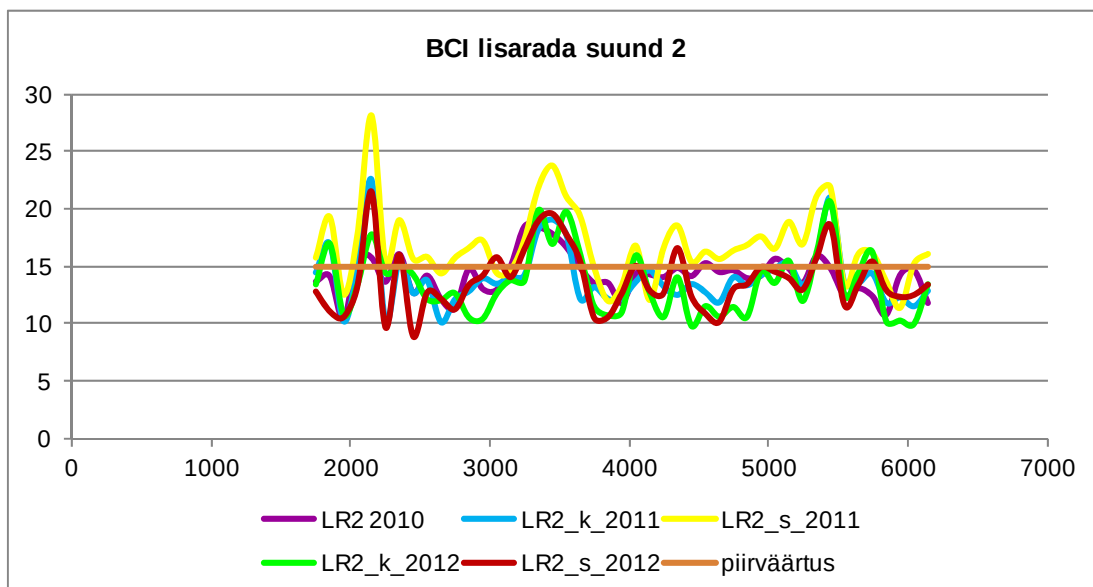
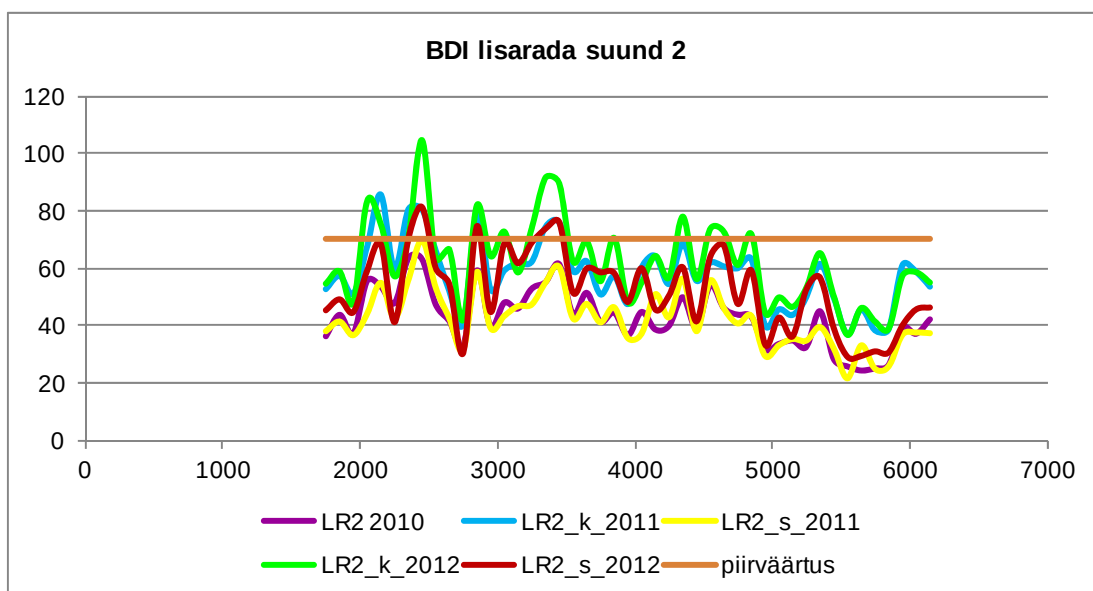
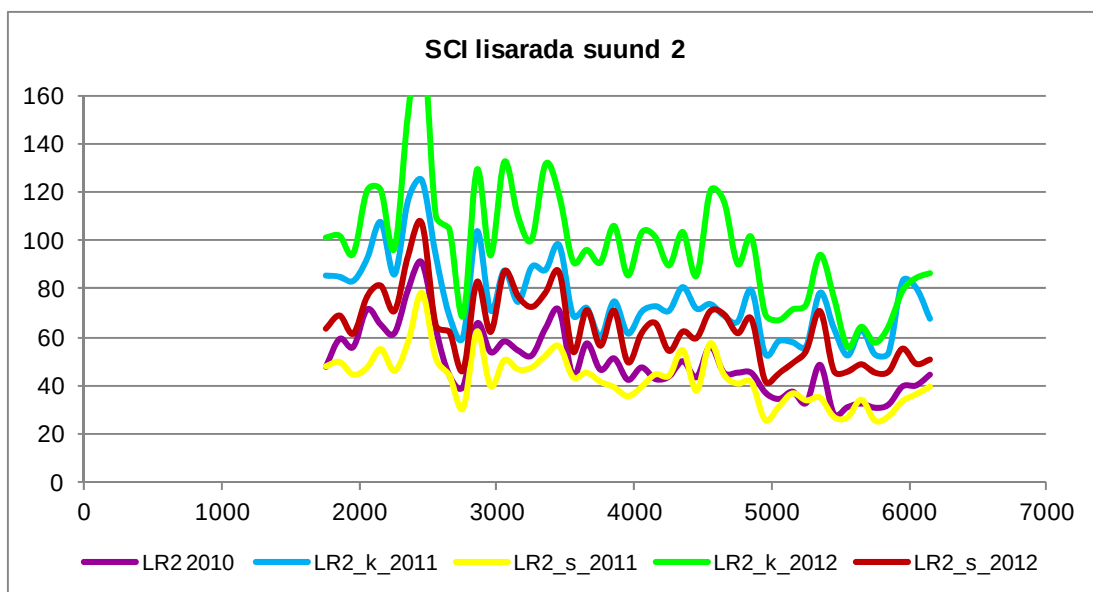
**Lisa 2**

**FWD vajumikausi parameetrite graafikud**









## **Lisa 3**

### **Geodeetiliste mõõdistustööde tehniline aruanne**



ISO 9001 sertifitseeritud firma

Tegevuslitsentsid: 308MA, 311MA-k  
MTR nr EG10194979-0001



**Töö nr 21M2058**  
30.03.2012.a.

**Tallinn – Narva maantee  
Kukruse – Jõhvi teelõigu (km 155,9-163,2)  
vaatlusreeperite nivelleerimine  
IV vaatlus  
Ida-Virumaa Kohtla vald Jõhvi vald**

**Tehniline aruanne**  
Tallinn, 2012

Pitsat

Juhatuse esimees / M.Sarapik /

## SISUJUHT

|     |                                                     |       |
|-----|-----------------------------------------------------|-------|
| 1.  | Tiitelleht                                          | 1     |
| 2.  | Sisujuht                                            | 2     |
| 3.  | Asukoha skeem                                       | 3     |
| 4.  | Seletuskiri                                         | 4-5   |
| 5.  | Lähtereeperite asukoha skeem                        | 6     |
| 6.  | Kõrguste kataloog koos vaatlusandmete vahega        | 7-8   |
| 7.  | Nivelleerimise väliandmed ja tasandamine            | 9-22  |
| 8.  | Nivelliiri ja invarlattice kalibreerimise tunnistus | 23-26 |
| 9.  | Kombineeritud mõõtevahendi kalibreerimistunnistus   | 27-29 |
| 10. | Lõpuleht                                            | 30    |

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## ASUKOHA SKEEM



Objekti asukoht

## *Seletuskiri*

### *1. Üldosa*

Tellija: **AS Teede Tehnokeskus**  
Teostaja: **OÜ Geo S.T. reg 10194979, MTR nr EG10194979-0001, tegevuslitsents 308MA**  
Objekti asukoht: **Ida-Virumaa Kohtla vald, Jõhvi vald**  
Objekti nimetus: **Tallinn – Narva mnt Kukruse – Jõhvi teelõigu (km 155,9-163,2) vaatlusreeperite nivelleerimine, IV vaatlus**  
Tööde täitmise aeg: **Välitööd 27-28.märts 2012.a.  
Kameraaltööd 30.märts 2012.a.**  
Tööde teostajad: **Insener-geodeet T.Bauman (kutsequalifikatsioon Geodeet III)  
Tehnik-geodeet M.Sobak  
Tehnik-geodeet V.Gubchak  
Tehnilise kontrolli juht R. Sõna**  
Kontrollis: **H.Lindeberg (kutsequalifikatsioon Geodeet IV)**

### *2. Tööde üldiseloostus*

Käesolev geodeetiliste tööde aruanne käsitleb Geo S.T. OÜ poolt Tallinn – Narva mnt, Kukruse – Jõhvi teelõigu (155,9-163,2) vaatlusreeperite nivelleerimist, IV vaatlustükkel.

Kõrgus määrati geomeetrilise nivelleerimise meetodil. Geomeetrilise nivelleerimise lähtereeperina kasutati kohaliku geodeetilise põhivõrgu punkti nr 1659 (KUKRUSE). Geomeetrilise nivelleerimise väliandmed ja tasandamine on esitatud lk nr 9-22.

Töö lõpptulemusena koostati vaatlusreeperite tabel (seotuna maantee kilometraažiga), kus on esitatud I, II, III ja IV vaatluse andmed. Lisaks on välja toodud II ja I vaatluse vahed, III ja I vaatluse vahed, IV ja I vaatluse vahed, III ja II vaatluse vahed ning IV ja III vaatluse vahed.

### *3. Lähteandmed*

Lähtepunktide andmed saadud Maa-ameti Andmekogude arhiivi Geodeesia fondist.

Kõrguste süsteem: 1977a. Balti kõrguste süsteem BK77

### *4. Lähtereeper*

**KGPP nr 1659 KUKRUSE (tsentri nr 3324), Riiklik 3.klassi tihendusvõrk. H=72,495m**

Asukohaga Ida-Virumaa, Kohtla vald, Peeri küla, Tallinn – Narva mnt sõidutee läänepoolses ääres märgi tüüp 4434, tunnuspost, kupits, metallkaas.

### *5. Instrumendid ja tarkvara*

Geomeetrilisel nivelleerimisel kasutati digitaalnivelliiri Trimble DiNi 0,3 ja 2 meetri pikkuseid invarlatte Trimble LD12 nr 51545 ja nr 51796.

Nivelliiri tehnilised spetsifikatsioonid on esitatud alljärgnevas tabelis:

|                                     |                         |            |
|-------------------------------------|-------------------------|------------|
| Digitaalnivelliir                   | <b>Trimble DiNi 0,3</b> | s/n 706338 |
| Pikksilma suurendus                 | 32×                     |            |
| Ümarvesiloe tundlikus               | 8'/2mm                  |            |
| Kompensaatori tööpiirkond           | ± 15'                   |            |
| Kompensaatori täpsus                | ± 0,2"                  |            |
| Kõrgusmõõtmise täpsus               | 0,01 mm                 |            |
| Kaugusmõõtmise täpsus               | 1 mm                    |            |
| 1 km edasi-tagasi keskmine ruutviga | ± 1,3 mm                |            |
| Mõõdistamisaeg                      | 3 sek                   |            |

Temperatuuri tööpiirkond - 20°C kuni + 50°C  
Niiskus-ja veekindlus IP55  
Nivelliir koos invarlattidega on kontrollitud ja kalibreeritud. Kontrollakti koopia on esitatud käesolevas aruandes lk 31-34.  
Nivelleerimiskäigud tasandati nivelleeris oleva programmiga „line adjustment”.

Temperatuur ja õhurõhk mõõdeti kombineeritud mõõtevahendiga Delta OHM (tüüp HD 2304.0) seerianumbriga 08008760 (rõhuandur nr 08021074, termoandur nr 08019676). Kombineeritud mõõtevahendi kalibreerimise tunnistus on esitatud käesolevas aruandes lk 35-37.

## 6. Geomeetriline nivelleerimine

6.1 Enne nivelleerimist teostati nivelliirile ja latile järgmised kontrollid

- Nivelliiri ja statiiivi üldise seisukorra kontroll
- Kontrolliti nivelliiri ja latti paigaldamise vesiloodide õigsust
- Nivelliiri viseerimiskiire automaatse horisonteerimise keskmise ruutvea ja kompensaaatori täpsuse määramine (kasutati Nähbauri meetodit)

6.2. Vaatlusreeperite nivelleerimine – IV vaatlus

- Vaatlusreeperite mõõdistamisel kasutati lähtereeperina **Rp Veetorn H=62,134m**
- Nivelleerimisel kasutati meetodit BFBF (tagasi-edasi, tagasi-edasi)
- Vaatlusreeperid mõõdistati ja tasandati kahe eraldi polügonina KÄIK 1 pikkusega 7726.07 m ja KÄIK 2 pikkusega 7676.04 m.

6.3. Vaatlusreeperite nivelleerimise IV vaatlus teostati 27-28.03.2012.a., töögruppi kuulusid Tanel Bauman, Martin Sobak ja Vasyi Gubchak.

## 7. Nivelleerimiskäikude andmed

KÄIK 1

Rp Veetorn – 159,5v kuni 155,9v ja 155,9p kuni 159,5p – Rp Veetorn

Sulgematus 2,86 mm

Lubatud sulgematus  $\pm 13,9 \text{ mm}$  ( $f_{\text{lub}} = \pm 5 \text{ mm} \sqrt{L \text{ km}}$ )

Käigu pikkus  $L = 7,726 \text{ km}$

KÄIK 2

Rp Veetorn – 159,6v kuni 163,2v 163,2p kuni 159,6p – Rp Veetorn

Sulgematus 0,38 mm

Lubatud sulgematus  $\pm 13,9 \text{ mm}$  ( $f_{\text{lub}} = \pm 5 \text{ mm} \sqrt{L \text{ km}}$ )

Käigu pikkus  $L = 7,676 \text{ km}$

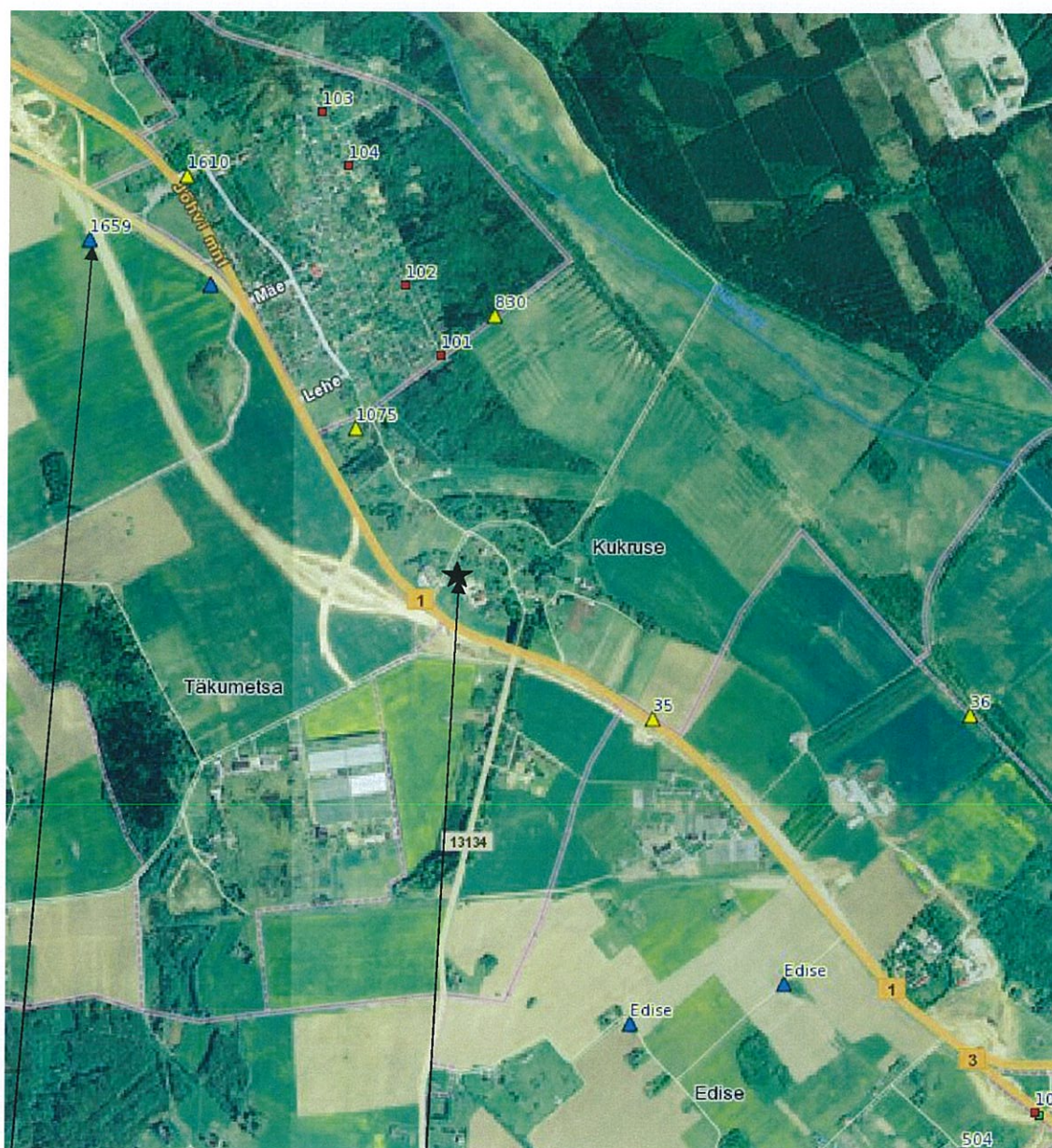
## 8. Üleantavate materjalide loetelu

Tellijä: AS Teede Tehnokeskus - tehniline aruanne 1 eks.  
- digitaalinfo CD-1

30.03.2012

Koostas: T.Bauman

## LÄHTEREAPERITE ASUKOHA SKEEM



Rp Veetorn H=62,134m

KGPP nr 1659 KUKRUSE (tsentri nr 3324)

| Tallinn - Narva mnt. Kukruse - Jõhvi teelõigu (km 155,9-163,2)<br>vaatlusreepäevade nivelleerimine, IV vaatlus |                   |                      |                       |                      |                      |                       |                      |                        |                        |                         |
|----------------------------------------------------------------------------------------------------------------|-------------------|----------------------|-----------------------|----------------------|----------------------|-----------------------|----------------------|------------------------|------------------------|-------------------------|
| Maantee<br>kilometraaž                                                                                         | Vasak pool        |                      |                       |                      |                      |                       |                      |                        |                        | Ehitusaegne<br>piketaaž |
|                                                                                                                | I<br>3.-4.11.2010 | II<br>18.-19.04.2011 | III<br>27.-28.10.2011 | IV<br>27.-28.03.2012 | vajum II - I<br>(mm) | vajum III - I<br>(mm) | vajum IV - I<br>(mm) | vajum III - II<br>(mm) | vajum IV - III<br>(mm) |                         |
| 155.9                                                                                                          | 65.4056           | 65.4051              | Hävinenud             |                      | -0.5                 |                       |                      |                        |                        | -200                    |
| 156.0                                                                                                          | 65.7337           | 65.7354              | 65.7278               | 65.7410              | 1.8                  | -5.9                  | 7.4                  | -7.6                   | 13.2                   | -100                    |
| 156.1                                                                                                          | 66.0045           | 66.0112              | 66.0008               | 66.0137              | 6.7                  | -3.6                  | 9.3                  | -10.4                  | 12.9                   | 0                       |
| 156.2                                                                                                          | 66.3806           | 66.3802              | 66.3762               | 66.3828              | -0.4                 | -4.5                  | 2.2                  | -4.1                   | 6.7                    | 100                     |
| 156.3                                                                                                          | 66.6202           | 66.6251              | 66.6176               | 66.6278              | 4.8                  | -2.6                  | 7.6                  | -7.5                   | 10.2                   | 200                     |
| 156.4                                                                                                          | 66.8628           | 66.8632              | 66.8607               | 66.8630              | 0.3                  | -2.2                  | 0.1                  | -2.5                   | 2.3                    | 300                     |
| 156.5                                                                                                          | 67.1480           | 67.1479              | 67.1464               | 67.1494              | -0.2                 | -1.6                  | 1.4                  | -1.4                   | 2.9                    | 400                     |
| 156.6                                                                                                          | 67.4735           | 67.4714              | 67.4712               | 67.4715              | -2.1                 | -2.3                  | -2.1                 | -0.2                   | 0.3                    | 500                     |
| 156.7                                                                                                          | 67.7553           | 67.7515              | 67.7501               | 67.7487              | -3.8                 | -5.2                  | -6.6                 | -1.4                   | -1.4                   | 600                     |
| 156.8                                                                                                          | 68.1750           | 68.1727              | 68.1707               | 68.1722              | -2.3                 | -4.2                  | -2.8                 | -2.0                   | 1.5                    | 700                     |
| 156.9                                                                                                          | 68.4581           | 68.4613              | 68.4557               | 68.4626              | 3.1                  | -2.4                  | 4.5                  | -5.6                   | 6.9                    | 800                     |
| 157.0                                                                                                          | 68.9757           | 68.9950              | 68.9870               | 68.9946              | uus                  |                       |                      | -8.0                   | 7.6                    | 900                     |
| 157.1                                                                                                          | 70.1009           | 70.1058              | 70.0994               | 70.1058              | 4.8                  | -1.5                  | 4.9                  | -6.3                   | 6.4                    | 1000                    |
| 157.2                                                                                                          | 71.2093           | 71.2091              | 71.2078               | 71.2109              | -0.2                 | -1.5                  | 1.7                  | -1.3                   | 3.1                    | 1100                    |
| 157.3                                                                                                          | 72.0416           | 72.0377              | 72.0400               | 72.0398              | -3.9                 | -1.6                  | -1.9                 | 2.3                    | -0.2                   | 1200                    |
| 157.4                                                                                                          | 72.5422           | 72.5420              | 72.5406               | 72.5462              | -0.2                 | -1.7                  | 4.0                  | -1.4                   | 5.6                    | 1300                    |
| 157.5                                                                                                          | 72.8912           | 72.8905              | 72.8893               | 72.8916              | -0.7                 | -2.0                  | 0.4                  | -1.2                   | 2.3                    | 1400                    |
| 157.6                                                                                                          | 73.1079           | 73.1106              | 73.1047               | 73.1124              | 2.7                  | -3.2                  | 4.5                  | -5.9                   | 7.7                    | 1500                    |
| 157.7                                                                                                          | 73.4316           | 73.4313              | 73.4308               | 73.4328              | -0.4                 | -0.8                  | 1.1                  | -0.5                   | 2.0                    | 1600                    |
| 157.8                                                                                                          | 73.5181           | 73.5228              | 73.5160               | 73.5195              | 4.7                  | -2.1                  | 1.5                  | -6.8                   | 3.6                    | 1700                    |
| 157.9                                                                                                          | 73.3308           | 73.3292              | 73.3287               | 73.3289              | -1.6                 | -2.2                  | -1.9                 | -0.6                   | 0.2                    | 1800                    |
| 158.0                                                                                                          | 73.0241           | 73.0272              | 73.0221               | 73.0254              | 3.1                  | -2.1                  | 1.2                  | -5.2                   | 3.3                    | 1900                    |
| 158.1                                                                                                          | 72.7354           | 72.7387              | 72.7334               | 72.7383              | 3.3                  | -2.1                  | 2.8                  | -5.3                   | 4.9                    | 2000                    |
| 158.2                                                                                                          | 72.4066           | 72.4134              | 72.4061               | 72.4125              | 6.8                  | -0.6                  | 5.9                  | -7.3                   | 6.4                    | 2100                    |
| 158.3                                                                                                          | 72.0804           | 72.0787              | 72.0781               | 72.0794              | -1.8                 | -2.3                  | -1.0                 | -0.5                   | 1.3                    | 2200                    |
| 158.4                                                                                                          | 71.6761           | 71.6724              | 71.6743               | 71.6753              | -3.7                 | -1.8                  | -0.8                 | 1.8                    | 1.0                    | 2300                    |
| 158.5                                                                                                          | 71.2363           | 71.2310              | 71.2313               | 71.2265              | uus                  |                       |                      | 0.3                    | -4.9                   | 2400                    |
| 158.6                                                                                                          | 70.4998           | 70.5082              | 70.5077               | 70.5016              | uus                  |                       |                      | -0.5                   | -6.1                   | 2500                    |
| 158.7                                                                                                          | 69.5555           | 69.5475              | 69.5470               | 69.5435              | uus                  |                       |                      | -0.5                   | -3.5                   | 2600                    |
| 158.8                                                                                                          | 68.3288           | 68.3258              | 68.3263               | 68.3229              | -3.0                 | -2.5                  | -5.9                 | 0.5                    | -3.3                   | 2700                    |
| 158.9                                                                                                          | 66.8843           | 66.8829              | 66.8829               | 66.8836              | -1.4                 | -1.4                  | -0.7                 | 0.0                    | 0.7                    | 2800                    |
| 159.0                                                                                                          | 65.7058           | 65.7052              | 65.7046               | 65.6999              | -0.6                 | -1.2                  | -5.9                 | -0.6                   | -4.7                   | 2900                    |
| 159.1                                                                                                          | 64.7363           | 64.7353              | 64.7332               | 64.7308              | -0.9                 | -3.1                  | -5.5                 | -2.2                   | -2.4                   | 3000                    |
| 159.2                                                                                                          | 64.1127           | 64.1139              | 64.1117               | 64.1132              | 1.2                  | -0.9                  | 0.5                  | -2.1                   | 1.4                    | 3100                    |
| 159.3                                                                                                          | 63.6163           | 63.6189              | 63.6163               | 63.6204              | 2.7                  | 0.0                   | 4.1                  | -2.6                   | 4.1                    | 3200                    |
| 159.4                                                                                                          | 63.4258           | 63.4308              | 63.4226               | 63.4284              | uus                  |                       |                      | -8.2                   | 5.8                    | 3300                    |
| 159.5                                                                                                          | 63.8636           | 63.8730              | 63.8638               | 63.8697              | 9.4                  | 0.3                   | 6.2                  | -9.1                   | 5.9                    | 3400                    |
| 159.6                                                                                                          | 64.3307           | 64.3330              | 64.3300               | 64.3330              | 2.3                  | -0.7                  | 2.3                  | -3.1                   | 3.0                    | 3500                    |
| 159.7                                                                                                          | 64.7448           | 64.7424              | 64.7433               | 64.7465              | -2.4                 | -1.6                  | 1.7                  | 0.8                    | 3.2                    | 3600                    |
| 159.8                                                                                                          | 65.3147           | 65.3138              | 65.3122               | 65.3158              | -1.0                 | -2.5                  | 1.1                  | -1.5                   | 3.6                    | 3700                    |
| 159.9                                                                                                          | 65.7893           | 65.7868              | 65.7856               | 65.7888              | -2.4                 | -3.7                  | -0.5                 | -1.2                   | 3.1                    | 3800                    |
| 160.0                                                                                                          | 66.2536           | 66.2556              | 66.2528               | 66.2609              | 2.0                  | -0.8                  | 7.3                  | -2.8                   | 8.1                    | 3900                    |
| 160.1                                                                                                          | 66.7683           | 66.7646              | 66.7657               | 66.7700              | -3.7                 | -2.6                  | 1.7                  | 1.1                    | 4.3                    | 4000                    |
| 160.2                                                                                                          | 67.2538           | 67.2492              | 67.2517               | 67.2506              | -4.6                 | -2.1                  | -3.1                 | 2.5                    | -1.1                   | 4100                    |
| 160.3                                                                                                          | 67.6941           | 67.6896              | 67.6922               | 67.6906              | -4.5                 | -1.8                  | -3.5                 | 2.7                    | -1.6                   | 4200                    |
| 160.4                                                                                                          | 67.8142           | 67.8094              | 67.8124               | 67.8113              | -4.8                 | -1.8                  | -2.9                 | 3.0                    | -1.2                   | 4300                    |
| 160.5                                                                                                          | 67.6671           | 67.6623              | 67.6646               | 67.6636              | -4.8                 | -2.5                  | -3.5                 | 2.4                    | -1.1                   | 4400                    |
| 160.6                                                                                                          | 67.2947           | 67.2889              | 67.2915               | 67.2902              | -5.8                 | -3.2                  | -4.5                 | 2.7                    | -1.3                   | 4500                    |
| 160.7                                                                                                          | 66.9526           | 66.9480              | 66.9504               | 66.9488              | -4.6                 | -2.3                  | -3.8                 | 2.4                    | -1.5                   | 4600                    |
| 160.8                                                                                                          | 66.5148           | 66.5109              | 66.5132               | 66.5104              | -3.9                 | -1.6                  | -4.4                 | 2.3                    | -2.8                   | 4700                    |
| 160.9                                                                                                          | 66.1416           | 66.1376              | 66.1390               | 66.1375              | -4.0                 | -2.5                  | uus                  | 1.5                    |                        | 4800                    |
| 161.0                                                                                                          | 65.7384           | 65.7352              | 65.7375               | 65.7388              | -3.2                 | -0.9                  | 0.4                  | 2.2                    | 1.3                    | 4900                    |
| 161.1                                                                                                          | 65.3533           | 65.3491              | 65.3519               | 65.3506              | -4.3                 | -1.5                  | -2.7                 | 2.8                    | -1.3                   | 5000                    |
| 161.2                                                                                                          | 64.9272           | 64.9218              | 64.9251               | 64.9232              | -5.3                 | -2.0                  | -4.0                 | 3.3                    | -1.9                   | 5100                    |
| 161.3                                                                                                          | 64.5264           | 64.5211              | 64.5242               | 64.5231              | -5.2                 | -2.2                  | -3.3                 | 3.1                    | -1.1                   | 5200                    |
| 161.4                                                                                                          | 64.2333           | 64.2280              | 64.2303               | 64.2320              | -5.3                 | -3.0                  | -1.3                 | 2.2                    | 1.8                    | 5300                    |
| 161.5                                                                                                          | 64.4194           | 64.4127              | 64.4169               | 64.4174              | -6.7                 | -2.6                  | -2.0                 | 4.1                    | 0.5                    | 5400                    |
| 161.6                                                                                                          | 65.0240           | 65.0188              | 65.0225               | 65.0230              | -5.1                 | -1.5                  | -0.9                 | 3.7                    | 0.5                    | 5500                    |
| 161.7                                                                                                          | 65.6628           | 65.6567              | 65.6611               | 65.6577              | -6.1                 | -1.7                  | -5.2                 | 4.4                    | -3.5                   | 5600                    |
| 161.8                                                                                                          | 65.8654           | 65.8604              | 65.8642               | 65.8633              | -5.0                 | -1.2                  | -2.1                 | 3.9                    | -1.0                   | 5700                    |
| 161.9                                                                                                          | 65.4924           | 65.4856              | 65.4900               | 65.4887              | -6.8                 | -2.4                  | -3.7                 | 4.4                    | -1.3                   | 5800                    |
| 162.0                                                                                                          | 64.7283           | 64.7232              | 64.7258               | 64.7288              | -5.1                 | -2.5                  | 0.5                  | 2.6                    | 3.0                    | 5900                    |
| 162.1                                                                                                          | 64.0640           | 64.0634              | 64.0642               | 64.0661              | -0.6                 | 0.1                   | 2.1                  | 0.7                    | 1.9                    | 6000                    |
| 162.2                                                                                                          | 63.4928           | 63.4879              | 63.4912               | 63.4935              | -4.9                 | -1.6                  | 0.7                  | 3.3                    | 2.3                    | 6100                    |
| 162.3                                                                                                          | 62.7961           | 62.7905              | 62.7942               | 62.7923              | uus                  |                       |                      | 3.7                    | -1.9                   | 6200                    |
| 162.4                                                                                                          | 61.9365           | 62.0889              | 62.0916               | 62.0879              | uus                  |                       |                      | 2.6                    | -3.7                   | 6300                    |
| 162.5                                                                                                          | 61.1818           | 61.1753              | 61.1781               | 61.1754              | -6.5                 | -3.7                  | -6.4                 | 2.8                    | -2.7                   | 6400                    |
| 162.6                                                                                                          | 60.5502           | 60.5459              | 60.5500               | 60.5478              | -4.3                 | -0.2                  | -2.4                 | 4.0                    | -2.2                   | 6500                    |
| 162.7                                                                                                          | 59.8849           | 59.8813              | 59.8833               | 59.8821              | -3.6                 | -1.6                  | -2.9                 | 2.0                    | -1.2                   | 6600                    |
| 162.8                                                                                                          | 59.7541           | 59.7507              | 59.7522               | 59.7515              | uus                  |                       |                      | 1.5                    | -0.7                   | 6700                    |
| 162.9                                                                                                          | 60.0512           | 60.0486              | 60.0499               | 60.0555              | uus                  |                       |                      | 1.3                    | 5.6                    | 6800                    |
| 163.0                                                                                                          | 59.7483           | 59.7444              | 59.7460               | 59.7452              | uus                  |                       | uus                  | 1.6                    |                        | 6900                    |
| 163.1                                                                                                          | 58.7923           | 58.7833              | 58.7850               | 58.7839              | uus                  |                       |                      | 1.7                    | -1.1                   | 7000                    |
| 163.2                                                                                                          | 57.4665           | 57.4648              | 57.4649               | 57.4654              | -1.8                 | -1.6                  | -1.1                 | 0.1                    | 0.5                    | 7100                    |

Kõrgused BK77 süsteemis

| Tallinn - Narva mnt. Kukruse - Jõhvi teelõigu (km 155,9-163,2)<br>vaatlusreeperite nivelleerimine, IV vaatlus |                   |                      |                       |                      |      |                      |                       |                     |                        |                        |                         |
|---------------------------------------------------------------------------------------------------------------|-------------------|----------------------|-----------------------|----------------------|------|----------------------|-----------------------|---------------------|------------------------|------------------------|-------------------------|
| Maantee<br>kilometraaž                                                                                        | Parem pool        |                      |                       |                      |      | vajum II - I<br>(mm) | vajum III - I<br>(mm) | vajum IV- I<br>(mm) | vajum III - II<br>(mm) | vajum IV - III<br>(mm) | Ehitusaegne<br>piketaaž |
|                                                                                                               | I<br>3.-4.11.2010 | II<br>18.-19.04.2011 | III<br>27.-28.10.2011 | IV<br>27.-28.03.2012 |      |                      |                       |                     |                        |                        |                         |
| 155.9                                                                                                         | 65.2858           | 65.2876              | Hävinenud             |                      | 1.8  |                      |                       |                     |                        |                        | -200                    |
| 156.0                                                                                                         | 65.6584           | 65.6597              | 65.6560               | 65.6598              | 1.3  | -2.4                 | 1.4                   | -3.7                | 3.8                    |                        | -100                    |
| 156.1                                                                                                         | 66.0131           | 66.0144              | 66.0095               | 66.0131              | 1.3  | -3.6                 | 0.0                   | -4.9                | 3.6                    |                        | 0                       |
| 156.2                                                                                                         | 66.3549           | 66.3609              | 66.3533               | 66.3601              | 6.0  | -1.6                 | 5.2                   | -7.6                | 6.8                    |                        | 100                     |
| 156.3                                                                                                         | 66.6932           | 66.6949              | 66.6898               | 66.6925              | uus  |                      | uus                   | -5.0                |                        |                        | 200                     |
| 156.4                                                                                                         | 66.9821           | 66.9920              | 66.9828               | 66.9860              | uus  |                      | 3.9                   | -9.2                | 3.2                    |                        | 300                     |
| 156.5                                                                                                         | 67.2257           | 67.2322              | 67.2259               | 67.2346              | uus  |                      | 8.9                   | -6.3                | 8.7                    |                        | 400                     |
| 156.6                                                                                                         | 67.5466           | 67.5537              | 67.5457               | 67.5559              | 7.1  | -1.0                 | 9.2                   | -8.1                | 10.2                   |                        | 500                     |
| 156.7                                                                                                         | 67.8561           | 67.8583              | 67.8533               | 67.8565              | 2.2  | -2.9                 | 0.4                   | -5.1                | 3.3                    |                        | 600                     |
| 156.8                                                                                                         | 68.1744           | 68.1773              | 68.1725               | 68.1762              | 2.9  | -1.9                 | 1.8                   | -4.8                | 3.7                    |                        | 700                     |
| 156.9                                                                                                         | 68.4380           | 68.4511              | 68.4393               | 68.4489              | 13.0 | 1.3                  | 10.9                  | -11.8               | 9.6                    |                        | 800                     |
| 157.0                                                                                                         | 68.9813           | 68.9831              | 68.9795               | 68.9862              | 1.7  | -1.8                 | 4.8                   | -3.6                | 6.7                    |                        | 900                     |
| 157.1                                                                                                         | 70.1056           | 70.1081              | 70.1042               | 70.1100              | 2.5  | -1.4                 | 4.4                   | -3.9                | 5.8                    |                        | 1000                    |
| 157.2                                                                                                         | 71.1878           | 71.1855              | 71.1859               | 71.1910              | -2.3 | -1.9                 | 3.2                   | 0.4                 | 5.1                    |                        | 1100                    |
| 157.3                                                                                                         | 72.0423           | 72.0441              | 72.0414               | 72.0464              | 1.8  | -0.9                 | 4.1                   | -2.7                | 5.0                    |                        | 1200                    |
| 157.4                                                                                                         | 72.4791           | 72.4826              | 72.4771               | 72.4835              | 3.5  | -2.0                 | 4.4                   | -5.5                | 6.4                    |                        | 1300                    |
| 157.5                                                                                                         | 72.8041           | 72.8066              | 72.8025               | 72.8092              | 2.5  | -1.5                 | 5.2                   | -4.1                | 6.7                    |                        | 1400                    |
| 157.6                                                                                                         | 73.1219           | 73.1237              | 73.1207               | 73.1243              | 1.8  | -1.2                 | 2.4                   | -2.9                | 3.6                    |                        | 1500                    |
| 157.7                                                                                                         | 73.4028           | 73.3998              | 73.3999               | 73.4020              | -3.0 | -2.9                 | -0.8                  | 0.1                 | 2.1                    |                        | 1600                    |
| 157.8                                                                                                         | 73.4761           | 73.4773              | 73.4750               | 73.4808              | 1.2  | -1.2                 | 4.7                   | -2.4                | 5.8                    |                        | 1700                    |
| 157.9                                                                                                         | 73.2925           | 73.2924              | 73.2907               | 73.2953              | -0.1 | -1.8                 | 2.8                   | -1.7                | 4.6                    |                        | 1800                    |
| 158.0                                                                                                         | 73.0209           | 73.0213              | 73.0185               | 73.0221              | 0.4  | -2.4                 | 1.2                   | -2.8                | 3.6                    |                        | 1900                    |
| 158.1                                                                                                         | 72.7131           | 72.7169              | 72.7114               | 72.7186              | 3.8  | -1.7                 | 5.5                   | -5.5                | 7.2                    |                        | 2000                    |
| 158.2                                                                                                         | 72.4609           | 72.4642              | 72.4587               | 72.4647              | 3.3  | -2.1                 | 3.8                   | -5.4                | 5.9                    |                        | 2100                    |
| 158.3                                                                                                         | 72.2670           | 72.2631              | 72.2659               | 72.2674              | -3.9 | -1.0                 | 0.5                   | 2.8                 | 1.5                    |                        | 2200                    |
| 158.4                                                                                                         | 71.9676           | 71.9617              | 71.9658               | 71.9655              | -5.9 | -1.7                 | -2.1                  | 4.2                 | -0.4                   |                        | 2300                    |
| 158.5                                                                                                         | 71.4982           | 71.4938              | 71.4949               | 71.4929              | -4.4 | -3.3                 | -5.3                  | 1.1                 | -2.0                   |                        | 2400                    |
| 158.6                                                                                                         | 70.7982           | 70.7949              | 70.7953               | 70.7931              | -3.3 | -2.9                 | -5.1                  | 0.4                 | -2.2                   |                        | 2500                    |
| 158.7                                                                                                         | 69.8276           | 69.8248              | 69.8256               | 69.8226              | -2.8 | -1.9                 | -5.0                  | 0.8                 | -3.1                   |                        | 2600                    |
| 158.8                                                                                                         | 68.6513           | 68.6492              | 68.6506               | 68.6472              | -2.0 | -0.7                 | -4.1                  | 1.4                 | -3.4                   |                        | 2700                    |
| 158.9                                                                                                         | 67.1180           | 67.1173              | 67.1184               | 67.1159              | -0.7 | 0.4                  | -2.1                  | 1.1                 | -2.5                   |                        | 2800                    |
| 159.0                                                                                                         | 65.8756           | 65.8746              | 65.8764               | 65.8723              | -0.9 | 0.8                  | -3.3                  | 1.8                 | -4.1                   |                        | 2900                    |
| 159.1                                                                                                         | 64.9078           | 64.9068              | 64.9075               | 64.9025              | -1.0 | -0.3                 | -5.2                  | 0.7                 | -5.0                   |                        | 3000                    |
| 159.2                                                                                                         | 64.2883           | 64.2887              | 64.2900               | 64.2866              | 0.4  | 1.7                  | -1.6                  | 1.3                 | -3.3                   |                        | 3100                    |
| 159.3                                                                                                         | 63.7965           | 63.7957              | 63.7974               | 63.7935              | -0.8 | 0.9                  | -3.0                  | 1.7                 | -3.9                   |                        | 3200                    |
| 159.4                                                                                                         | 63.4098           | 63.4148              | 63.4126               | 63.4140              | 5.0  | 2.8                  | 4.2                   | -2.2                | 1.4                    |                        | 3300                    |
| 159.5                                                                                                         | 63.7265           | 63.7306              | 63.7265               | 63.7293              | 4.1  | 0.0                  | 2.8                   | -4.1                | 2.8                    |                        | 3400                    |
| 159.6                                                                                                         | 64.2155           | 64.2216              | 64.2170               | 64.2220              | 6.1  | 1.5                  | 6.5                   | -4.6                | 5.0                    |                        | 3500                    |
| 159.7                                                                                                         | 64.7041           | 64.7032              | 64.7036               | 64.7054              | -1.0 | -0.6                 | 1.2                   | 0.4                 | 1.8                    |                        | 3600                    |
| 159.8                                                                                                         | 65.1648           | 65.1656              | 65.1654               | 65.1672              | 0.7  | 0.6                  | 2.4                   | -0.2                | 1.8                    |                        | 3700                    |
| 159.9                                                                                                         | 65.6863           | 65.6908              | 65.6865               | 65.6889              | 4.5  | 0.2                  | 2.6                   | -4.3                | 2.4                    |                        | 3800                    |
| 160.0                                                                                                         | 66.2580           | 66.2597              | 66.2581               | 66.2602              | 1.7  | 0.1                  | 2.2                   | -1.6                | 2.1                    |                        | 3900                    |
| 160.1                                                                                                         | 66.7420           | 66.7415              | 66.7419               | 66.7428              | -0.5 | -0.1                 | 0.8                   | 0.4                 | 0.9                    |                        | 4000                    |
| 160.2                                                                                                         | 67.2509           | 67.2509              | 67.2519               | 67.2534              | 0.0  | 1.0                  | 2.5                   | 1.0                 | 1.5                    |                        | 4100                    |
| 160.3                                                                                                         | 67.6949           | 67.6961              | 67.6961               | 67.7026              | 1.2  | 1.1                  | 7.7                   | -0.1                | 6.5                    |                        | 4200                    |
| 160.4                                                                                                         | 67.8416           | 67.8410              | 67.8425               | 67.8442              | -0.6 | 0.9                  | 2.6                   | 1.6                 | 1.7                    |                        | 4300                    |
| 160.5                                                                                                         | 67.6551           | 67.6556              | 67.6572               | 67.6580              | 0.5  | 2.0                  | 2.9                   | 1.6                 | 0.9                    |                        | 4400                    |
| 160.6                                                                                                         | 67.3234           | 67.3232              | 67.3238               | 67.3247              | -0.2 | 0.4                  | 1.3                   | 0.6                 | 0.9                    |                        | 4500                    |
| 160.7                                                                                                         | 66.8340           | 66.8351              | 66.8349               | 66.8388              | 1.1  | 0.8                  | 4.7                   | -0.3                | 3.9                    |                        | 4600                    |
| 160.8                                                                                                         | 66.4929           | 66.4941              | 66.4943               | 66.5006              | 1.2  | 1.4                  | 7.8                   | 0.2                 | 6.3                    |                        | 4700                    |
| 160.9                                                                                                         | 66.1313           | 66.1313              | 66.1320               | 66.1326              | 0.1  | 0.7                  | 1.3                   | 0.7                 | 0.6                    |                        | 4800                    |
| 161.0                                                                                                         | 65.7316           | 65.7311              | 65.7323               | 65.7335              | -0.5 | 0.7                  | 1.9                   | 1.2                 | 1.2                    |                        | 4900                    |
| 161.1                                                                                                         | 65.3601           | 65.3602              | 65.3612               | 65.3641              | 0.1  | 1.1                  | 4.0                   | 1.0                 | 2.9                    |                        | 5000                    |
| 161.2                                                                                                         | 64.9345           | 64.9351              | 64.9360               | 64.9390              | 0.6  | 1.5                  | 4.6                   | 0.9                 | 3.0                    |                        | 5100                    |
| 161.3                                                                                                         | 64.5222           | 64.5215              | 64.5228               | 64.5263              | -0.7 | 0.6                  | 4.0                   | 1.3                 | 3.5                    |                        | 5200                    |
| 161.4                                                                                                         | 64.2314           | 64.2329              | 64.2318               | 64.2360              | 1.5  | 0.4                  | 4.6                   | -1.1                | 4.1                    |                        | 5300                    |
| 161.5                                                                                                         | 64.4009           | 64.4007              | 64.4010               | 64.4038              | -0.2 | 0.1                  | 2.9                   | 0.3                 | 2.8                    |                        | 5400                    |
| 161.6                                                                                                         | 65.0049           | 65.0057              | 65.0055               | 65.0124              | 0.9  | 0.6                  | 7.5                   | -0.2                | 6.9                    |                        | 5500                    |
| 161.7                                                                                                         | 65.6523           | 65.6509              | 65.6519               | 65.6559              | -1.5 | -0.4                 | 3.5                   | 1.0                 | 3.9                    |                        | 5600                    |
| 161.8                                                                                                         | 65.8422           | 65.8411              | 65.8427               | 65.8442              | -1.1 | 0.5                  | 2.0                   | 1.6                 | 1.6                    |                        | 5700                    |
| 161.9                                                                                                         | 65.4814           | 65.4781              | 65.4818               | 65.4816              | -3.4 | 0.3                  | 0.2                   | 3.7                 | -0.1                   |                        | 5800                    |
| 162.0                                                                                                         | 64.9855           | 64.9820              | 64.9853               | 64.9837              | -3.5 | -0.2                 | -1.8                  | 3.2                 | -1.5                   |                        | 5900                    |
| 162.1                                                                                                         | 64.3343           | 64.3318              | 64.3341               | 64.3328              | -2.5 | -0.2                 | -1.5                  | 2.3                 | -1.3                   |                        | 6000                    |
| 162.2                                                                                                         | 63.6285           | 63.6254              | 63.6280               | 63.6270              | -3.1 | -0.5                 | -1.5                  | 2.6                 | -1.0                   |                        | 6100                    |
| 162.3                                                                                                         | 62.8024           | 62.8043              | 62.8042               | 62.8110              | 1.9  | 1.7                  | 8.6                   | -0.1                | 6.9                    |                        | 6200                    |
| 162.4                                                                                                         | 62.1129           | 62.1094              | 62.1135               | 62.1117              | -3.4 | 0.6                  | -1.2                  | 4.0                 | -1.7                   |                        | 6300                    |
| 162.5                                                                                                         | 61.4145           | 61.4110              | 61.4137               | 61.4122              | -3.5 | -0.7                 | -2.3                  | 2.8                 | -1.6                   |                        | 6400                    |
| 162.6                                                                                                         | 60.6821           | 60.6782              | 60.6811               | 60.6785              | -4.0 | -1.0                 | -3.7                  | 3.0                 | -2.7                   |                        | 6500                    |
| 162.7                                                                                                         | 59.9917           | 59.9892              | 59.9917               | 59.9901              | -2.5 | 0.0                  | -1.6                  | 2.5                 | -1.6                   |                        | 6600                    |
| 162.8                                                                                                         | 59.6606           | 59.6697              | 59.6618               | 59.6791              | 9.1  | 1.1                  | uus                   | -8.0                |                        |                        | 6700                    |
| 162.9                                                                                                         | 60.0039           | 60.0031              | 60.0043               | 60.0053              | -0.8 | 0.4                  | uus                   | 1.2                 |                        |                        | 6800                    |
| 163.0                                                                                                         | 59.6940           | 59.6937              | 59.6941               | 59.6973              | -0.4 | 0.1                  | 3.3                   | 0.5                 | 3.2                    |                        | 6900                    |
| 163.1                                                                                                         | 58.7974           | 58.7968              | 58.7980               | 58.7989              | -0.6 | 0.7                  | 1.6                   | 1.2                 | 0.9                    |                        | 7000                    |
| 163.2                                                                                                         | 57.5088           | 57.5113              | 57.5111               | 57.5132              | 2.4  | 2.3                  | 4.3                   | -0.1                | 2.1                    |                        | 7100                    |

Kõrgused BK77 süsteemis

30.03.2012.a.

Koostas: Tanel Bauman

Nivelleerimiskäigu väliandmed  
KÄIK-1

Töö nr 21M2058

E-nimi: 21M2058\_niv.xls

| J.nr   | P.nr   | Lugem               | S      | H Balti      | Lugem    | Piketaaz (ehitus) |
|--------|--------|---------------------|--------|--------------|----------|-------------------|
| For M5 | Adr 1  | TO 28032012.dat     |        |              |          |                   |
| For M5 | Adr 2  | Tanel               |        |              |          |                   |
| For M5 | Adr 3  | TO Start-Line BFBF+ | 1      |              |          |                   |
| For M5 | Adr 4  | KD1 Veetorn         | 1      |              |          |                   |
| For M5 | Adr 5  | KD1 Veetorn 12.0 C  | 1 1 Rb | 0.64913 m HD | 32.837 m |                   |
| For M5 | Adr 6  | KD1 1 12.0 C        | 1 1 Rf | 0.64313 m HD | 33.084 m |                   |
| For M5 | Adr 7  | KD1 Veetorn 12.0 C  | 1 1 Rb | 0.64888 m HD | 32.819 m |                   |
| For M5 | Adr 8  | KD1 1 11.0 C        | 1 1 Rf | 0.64332 m HD | 33.086 m |                   |
| For M5 | Adr 9  | KD1 1 11.0 C        | 1      |              |          |                   |
| For M5 | Adr 10 | KD1 1##### 10.0 C   | 1 1 Rb | 1.6102 m HD  | 45.132 m |                   |
| For M5 | Adr 11 | KD1 2##### 10.0 C   | 1 1 Rf | 0.18749 m HD | 45.652 m |                   |
| For M5 | Adr 12 | KD1 1##### 10.0 C   | 1 1 Rb | 1.61089 m HD | 45.132 m |                   |
| For M5 | Adr 13 | TO Station rep ed   | 1      |              |          |                   |
| For M5 | Adr 14 | KD1 1##### 9.0 C    | 1 1 Rb | 1.60945 m HD | 45.159 m |                   |
| For M5 | Adr 15 | KD1 2##### 9.0 C    | 1 1 Rf | 0.18769 m HD | 45.65 m  |                   |
| For M5 | Adr 16 | KD1 1##### 9.0 C    | 1 1 Rb | 1.61021 m HD | 45.153 m |                   |
| For M5 | Adr 17 | TO Station rep ed   | 1      |              |          |                   |
| For M5 | Adr 18 | KD1 1 9.0 C         | 1 1 Rb | 1.61037 m HD | 45.139 m |                   |
| For M5 | Adr 19 | KD1 2 9.0 C         | 1 1 Rf | 0.18785 m HD | 45.686 m |                   |
| For M5 | Adr 20 | KD1 1 9.0 C         | 1 1 Rb | 1.61037 m HD | 45.142 m |                   |
| For M5 | Adr 21 | KD1 2 9.0 C         | 1 1 Rf | 0.18772 m HD | 45.842 m |                   |
| For M5 | Adr 22 | KD1 2 9.0 C         | 1      |              |          |                   |
| For M5 | Adr 23 | KD1 2 8.0 C         | 1 1 Rb | 1.63277 m HD | 30.695 m |                   |
| For M5 | Adr 24 | KD1 3##### 8.0 C    | 1 1 Rf | 0.86292 m HD | 30.13 m  |                   |
| For M5 | Adr 25 | TO Measurem peated  | 1      |              |          |                   |
| For M5 | Adr 26 | KD1 3500 8.0 C      | 1 1 Rf | 0.86261 m HD | 30.112 m |                   |
| For M5 | Adr 27 | KD1 2 8.0 C         | 1 1 Rb | 1.63289 m HD | 30.685 m |                   |
| For M5 | Adr 28 | KD1 3500 8.0 C      | 1 1 Rf | 0.86275 m HD | 30.104 m |                   |
| For M5 | Adr 29 | KD1 3500 8.0 C      | 1      |              |          |                   |
| For M5 | Adr 30 | KD1 3500 7.0 C      | 1 1 Rb | 0.89011 m HD | 47.777 m |                   |
| For M5 | Adr 31 | KD1 3400 7.0 C      | 1 1 Rf | 1.3532 m HD  | 51.779 m |                   |
| For M5 | Adr 32 | KD1 3500 7.0 C      | 1 1 Rb | 0.89006 m HD | 47.762 m |                   |
| For M5 | Adr 33 | KD1 3400 7.0 C      | 1 1 Rf | 1.35289 m HD | 51.788 m |                   |
| For M5 | Adr 34 | KD1 3400 7.0 C      | 1      |              |          |                   |
| For M5 | Adr 35 | KD1 3400 7.0 C      | 1 1 Rb | 0.85689 m HD | 49.682 m |                   |
| For M5 | Adr 36 | KD1 3300 7.0 C      | 1 1 Rf | 1.29795 m HD | 50.084 m |                   |
| For M5 | Adr 37 | KD1 3400 7.0 C      | 1 1 Rb | 0.85681 m HD | 49.696 m |                   |
| For M5 | Adr 38 | KD1 3300 7.0 C      | 1 1 Rf | 1.29833 m HD | 50.087 m |                   |
| For M5 | Adr 39 | KD1 3300 7.0 C      | 1      |              |          |                   |
| For M5 | Adr 40 | KD1 3300 7.0 C      | 1 1 Rb | 1.09632 m HD | 49.496 m |                   |
| For M5 | Adr 41 | KD1 3200 6.0 C      | 1 1 Rf | 0.90412 m HD | 50.205 m |                   |
| For M5 | Adr 42 | KD1 3300 6.0 C      | 1 1 Rb | 1.09631 m HD | 49.515 m |                   |
| For M5 | Adr 43 | KD1 3200 6.0 C      | 1 1 Rf | 0.90449 m HD | 50.206 m |                   |
| For M5 | Adr 44 | KD1 3200 6.0 C      | 1      |              |          |                   |
| For M5 | Adr 45 | KD1 3200 6.0 C      | 1 1 Rb | 1.35507 m HD | 50.188 m |                   |
| For M5 | Adr 46 | KD1 3100 6.0 C      | 1 1 Rf | 0.86261 m HD | 49.277 m |                   |
| For M5 | Adr 47 | KD1 3200 6.0 C      | 1 1 Rb | 1.35546 m HD | 50.149 m |                   |
| For M5 | Adr 48 | KD1 3100 6.0 C      | 1 1 Rf | 0.86229 m HD | 49.265 m |                   |
| For M5 | Adr 49 | KD1 3100 6.0 C      | 1      |              |          |                   |
| For M5 | Adr 50 | KD1 3100 6.0 C      | 1 1 Rb | 1.40496 m HD | 50.342 m |                   |
| For M5 | Adr 51 | KD1 3000 6.0 C      | 1 1 Rf | 0.78746 m HD | 49.219 m |                   |
| For M5 | Adr 52 | KD1 3100 6.0 C      | 1 1 Rb | 1.40515 m HD | 50.299 m |                   |
| For M5 | Adr 53 | KD1 3000 6.0 C      | 1 1 Rf | 0.78734 m HD | 49.195 m |                   |
| For M5 | Adr 54 | KD1 3000 6.0 C      | 1      |              |          |                   |
| For M5 | Adr 55 | KD1 3000 5.0 C      | 1 1 Rb | 1.53848 m HD | 49.031 m |                   |
| For M5 | Adr 56 | KD1 2900 5.0 C      | 1 1 Rf | 0.56945 m HD | 49.501 m |                   |
| For M5 | Adr 57 | KD1 3000 5.0 C      | 1 1 Rb | 1.53866 m HD | 49.089 m |                   |
| For M5 | Adr 58 | KD1 2900 5.0 C      | 1 1 Rf | 0.56933 m HD | 49.486 m |                   |
| For M5 | Adr 59 | KD1 2900 5.0 C      | 1      |              |          |                   |
| For M5 | Adr 60 | KD1 2900 5.0 C      | 1 1 Rb | 1.63788 m HD | 49.823 m |                   |
| For M5 | Adr 61 | KD1 2800 5.0 C      | 1 1 Rf | 0.45435 m HD | 49.402 m |                   |
| For M5 | Adr 62 | KD1 2900 5.0 C      | 1 1 Rb | 1.63798 m HD | 49.79 m  |                   |
| For M5 | Adr 63 | KD1 2800 5.0 C      | 1 1 Rf | 0.45411 m HD | 49.389 m |                   |
| For M5 | Adr 64 | KD1 2800 5.0 C      | 1      |              |          |                   |
| For M5 | Adr 65 | KD1 2800 5.0 C      | 1 1 Rb | 1.68313 m HD | 50.108 m |                   |
| For M5 | Adr 66 | KD1 2700 5.0 C      | 1 1 Rf | 0.2436 m HD  | 49.502 m |                   |
| For M5 | Adr 67 | KD1 2800 5.0 C      | 1 1 Rb | 1.68297 m HD | 50.078 m |                   |
| For M5 | Adr 68 | KD1 2700 5.0 C      | 1 1 Rf | 0.24372 m HD | 49.502 m |                   |
| For M5 | Adr 69 | KD1 2700 5.0 C      | 1      |              |          |                   |
| For M5 | Adr 70 | KD1 2700 5.0 C      | 1 1 Rb | 1.63584 m HD | 49.494 m |                   |
| For M5 | Adr 71 | KD1 2600 5.0 C      | 1 1 Rf | 0.41526 m HD | 49.659 m |                   |
| For M5 | Adr 72 | KD1 2700 5.0 C      | 1 1 Rb | 1.63567 m HD | 49.539 m |                   |
| For M5 | Adr 73 | KD1 2600 5.0 C      | 1 1 Rf | 0.41514 m HD | 49.652 m |                   |
| For M5 | Adr 74 | KD1 2600 5.0 C      | 1      |              |          |                   |
| For M5 | Adr 75 | KD1 2600 5.0 C      | 1 1 Rb | 1.52114 m HD | 48.303 m |                   |
| For M5 | Adr 76 | KD1 2500 5.0 C      | 1 1 Rf | 0.56294 m HD | 50.254 m |                   |
| For M5 | Adr 77 | KD1 2600 5.0 C      | 1 1 Rb | 1.52108 m HD | 48.451 m |                   |
| For M5 | Adr 78 | KD1 2500 5.0 C      | 1 1 Rf | 0.56291 m HD | 50.255 m |                   |
| For M5 | Adr 79 | KD1 2500 5.0 C      | 1      |              |          |                   |
| For M5 | Adr 80 | KD1 2500##### 4.0 C | 1 1 Rb | 1.43074 m HD | 48.169 m |                   |
| For M5 | Adr 81 | KD1 2400##### 4.0 C | 1 1 Rf | 0.70544 m HD | 50.033 m |                   |
| For M5 | Adr 82 | KD1 2500##### 4.0 C | 1 1 Rb | 1.43128 m HD | 48.149 m |                   |
| For M5 | Adr 83 | TO Station rep ed   | 1      |              |          |                   |

|        |     |     |     |                 |     |   |   |   |    |         |   |    |        |   |   |          |   |                 |
|--------|-----|-----|-----|-----------------|-----|---|---|---|----|---------|---|----|--------|---|---|----------|---|-----------------|
| For M5 | Adr | 84  | KD1 | 2500            | 4.0 | C | 1 | 1 | Rb | 1.43064 | m | HD | 48.075 | m |   |          |   |                 |
| For M5 | Adr | 85  | KD1 | 2400            | 4.0 | C | 1 | 1 | Rf | 0.70554 | m | HD | 50.085 | m |   |          |   |                 |
| For M5 | Adr | 86  | KD1 | 2500            | 4.0 | C | 1 | 1 | Rb | 1.4306  | m | HD | 48.127 | m |   |          |   |                 |
| For M5 | Adr | 87  | KD1 | 2400            | 4.0 | C | 1 | 1 | Rf | 0.70587 | m | HD | 50.027 | m |   |          |   |                 |
| For M5 | Adr | 88  | KD1 | 2400            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 71.22649 | m | Z 71.2265 2400v |
| For M5 | Adr | 89  | KD1 | 2400            | 4.0 | C | 1 | 1 | Rb | 1.327   | m | HD | 49.102 | m |   |          |   |                 |
| For M5 | Adr | 90  | KD1 | 2300            | 4.0 | C | 1 | 1 | Rf | 0.87817 | m | HD | 50.185 | m |   |          |   |                 |
| For M5 | Adr | 91  | KD1 | 2400            | 4.0 | C | 1 | 1 | Rb | 1.32697 | m | HD | 49.128 | m |   |          |   |                 |
| For M5 | Adr | 92  | KD1 | 2300            | 4.0 | C | 1 | 1 | Rf | 0.87809 | m | HD | 50.209 | m |   |          |   |                 |
| For M5 | Adr | 93  | KD1 | 2300            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 71.6753  | m | Z 71.6753 2300v |
| For M5 | Adr | 94  | KD1 | 2300#####       | 4.0 | C | 1 | 1 | Rb | 1.422   | m | HD | 48.91  | m |   |          |   |                 |
| For M5 | Adr | 95  | KD1 | 2301#####       | 4.0 | C | 1 | 1 | Rf | 1.01757 | m | HD | 50.131 | m |   |          |   |                 |
| For M5 | Adr | 96  | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 97  | KD1 | 2300            | 4.0 | C | 1 | 1 | Rb | 1.42185 | m | HD | 48.77  | m |   |          |   |                 |
| For M5 | Adr | 98  | KD1 | 2200            | 4.0 | C | 1 | 1 | Rf | 1.01762 | m | HD | 50.136 | m |   |          |   |                 |
| For M5 | Adr | 99  | KD1 | 2300            | 4.0 | C | 1 | 1 | Rb | 1.42174 | m | HD | 48.951 | m |   |          |   |                 |
| For M5 | Adr | 100 | KD1 | 2200            | 4.0 | C | 1 | 1 | Rf | 1.01764 | m | HD | 50.119 | m |   |          |   |                 |
| For M5 | Adr | 101 | KD1 | 2200            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 72.07943 | m | Z 72.0794 2200v |
| For M5 | Adr | 102 | KD1 | 2200#####       | 4.0 | C | 1 | 1 | Rb | 1.24358 | m | HD | 50.567 | m |   |          |   |                 |
| For M5 | Adr | 103 | KD1 | 2100#####       | 4.0 | C | 1 | 1 | Rf | 0.91064 | m | HD | 48.99  | m |   |          |   |                 |
| For M5 | Adr | 104 | KD1 | 2200#####       | 4.0 | C | 1 | 1 | Rb | 1.24407 | m | HD | 50.628 | m |   |          |   |                 |
| For M5 | Adr | 105 | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 106 | KD1 | 2200            | 4.0 | C | 1 | 1 | Rb | 1.24417 | m | HD | 50.594 | m |   |          |   |                 |
| For M5 | Adr | 107 | KD1 | 2100            | 4.0 | C | 1 | 1 | Rf | 0.91103 | m | HD | 48.969 | m |   |          |   |                 |
| For M5 | Adr | 108 | KD1 | 2200            | 4.0 | C | 1 | 1 | Rb | 1.24409 | m | HD | 50.601 | m |   |          |   |                 |
| For M5 | Adr | 109 | KD1 | 2100            | 4.0 | C | 1 | 1 | Rf | 0.91103 | m | HD | 48.942 | m |   |          |   |                 |
| For M5 | Adr | 110 | KD1 | 2100            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 72.4125  | m | Z 72.4125 2100v |
| For M5 | Adr | 111 | KD1 | 2100#####       | 4.0 | C | 1 | 1 | Rb | 1.25747 | m | HD | 50.453 | m |   |          |   |                 |
| For M5 | Adr | 112 | KD1 | 2000#####       | 4.0 | C | 1 | 1 | Rf | 0.93114 | m | HD | 49.408 | m |   |          |   |                 |
| For M5 | Adr | 113 | KD1 | 2100#####       | 4.0 | C | 1 | 1 | Rb | 1.25704 | m | HD | 50.496 | m |   |          |   |                 |
| For M5 | Adr | 114 | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 115 | KD1 | 2100            | 4.0 | C | 1 | 1 | Rb | 1.25695 | m | HD | 50.445 | m |   |          |   |                 |
| For M5 | Adr | 116 | KD1 | 2000            | 4.0 | C | 1 | 1 | Rf | 0.93092 | m | HD | 49.374 | m |   |          |   |                 |
| For M5 | Adr | 117 | KD1 | 2100            | 4.0 | C | 1 | 1 | Rb | 1.25684 | m | HD | 50.387 | m |   |          |   |                 |
| For M5 | Adr | 118 | KD1 | 2000            | 4.0 | C | 1 | 1 | Rf | 0.93127 | m | HD | 49.388 | m |   |          |   |                 |
| For M5 | Adr | 119 | KD1 | 2000            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 72.73826 | m | Z 72.7383 2000v |
| For M5 | Adr | 120 | KD1 | 2000#####       | 4.0 | C | 1 | 1 | Rb | 1.23565 | m | HD | 51.006 | m |   |          |   |                 |
| For M5 | Adr | 121 | KD1 | 2001#####       | 4.0 | C | 1 | 1 | Rf | 0.94745 | m | HD | 49.348 | m |   |          |   |                 |
| For M5 | Adr | 122 | TO  | Measurem peated |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 123 | KD1 | 1900#####       | 4.0 | C | 1 | 1 | Rf | 0.94884 | m | HD | 49.501 | m |   |          |   |                 |
| For M5 | Adr | 124 | KD1 | 2000#####       | 4.0 | C | 1 | 1 | Rb | 1.23533 | m | HD | 51.061 | m |   |          |   |                 |
| For M5 | Adr | 125 | KD1 | 1900#####       | 4.0 | C | 1 | 1 | Rf | 0.94841 | m | HD | 49.462 | m |   |          |   |                 |
| For M5 | Adr | 126 | KD1 | 1900#####       | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.02576 | m | Z 73.0258       |
| For M5 | Adr | 127 | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 128 | KD1 | 2000            | 4.0 | C | 1 | 1 | Rb | 1.23573 | m | HD | 51.069 | m |   |          |   |                 |
| For M5 | Adr | 129 | KD1 | 1900            | 4.0 | C | 1 | 1 | Rf | 0.94858 | m | HD | 49.459 | m |   |          |   |                 |
| For M5 | Adr | 130 | KD1 | 2000            | 4.0 | C | 1 | 1 | Rb | 1.23582 | m | HD | 51.02  | m |   |          |   |                 |
| For M5 | Adr | 131 | KD1 | 1900            | 4.0 | C | 1 | 1 | Rf | 0.94867 | m | HD | 49.416 | m |   |          |   |                 |
| For M5 | Adr | 132 | KD1 | 1900            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.02537 | m | Z 73.0254 1900v |
| For M5 | Adr | 133 | KD1 | 1900#####       | 4.0 | C | 1 | 1 | Rb | 1.19456 | m | HD | 49.887 | m |   |          |   |                 |
| For M5 | Adr | 134 | KD1 | 1800#####       | 4.0 | C | 1 | 1 | Rf | 0.8906  | m | HD | 50.211 | m |   |          |   |                 |
| For M5 | Adr | 135 | KD1 | 1900#####       | 4.0 | C | 1 | 1 | Rb | 1.19441 | m | HD | 49.82  | m |   |          |   |                 |
| For M5 | Adr | 136 | KD1 | 1800#####       | 4.0 | C | 1 | 1 | Rf | 0.89099 | m | HD | 50.202 | m |   |          |   |                 |
| For M5 | Adr | 137 | KD1 | 1800#####       | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.32973 | m | Z 73.3297       |
| For M5 | Adr | 138 | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 139 | KD1 | 1900            | 4.0 | C | 1 | 1 | Rb | 1.19456 | m | HD | 49.879 | m |   |          |   |                 |
| For M5 | Adr | 140 | KD1 | 1800            | 4.0 | C | 1 | 1 | Rf | 0.89074 | m | HD | 50.202 | m |   |          |   |                 |
| For M5 | Adr | 141 | KD1 | 1900            | 4.0 | C | 1 | 1 | Rb | 1.19423 | m | HD | 49.859 | m |   |          |   |                 |
| For M5 | Adr | 142 | KD1 | 1800            | 4.0 | C | 1 | 1 | Rf | 0.89095 | m | HD | 50.218 | m |   |          |   |                 |
| For M5 | Adr | 143 | KD1 | 1800            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.32889 | m | Z 73.3289 1800v |
| For M5 | Adr | 144 | KD1 | 1800            | 4.0 | C | 1 | 1 | Rb | 1.17298 | m | HD | 49.293 | m |   |          |   |                 |
| For M5 | Adr | 145 | KD1 | 1700            | 4.0 | C | 1 | 1 | Rf | 0.98231 | m | HD | 50.223 | m |   |          |   |                 |
| For M5 | Adr | 146 | KD1 | 1800            | 4.0 | C | 1 | 1 | Rb | 1.17288 | m | HD | 49.462 | m |   |          |   |                 |
| For M5 | Adr | 147 | KD1 | 1700            | 4.0 | C | 1 | 1 | Rf | 0.98219 | m | HD | 50.153 | m |   |          |   |                 |
| For M5 | Adr | 148 | KD1 | 1700            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.51953 | m | Z 73.5195 1700v |
| For M5 | Adr | 149 | KD1 | 1700#####       | 4.0 | C | 1 | 1 | Rb | 1.02976 | m | HD | 50.95  | m |   |          |   |                 |
| For M5 | Adr | 150 | KD1 | 1600#####       | 4.0 | C | 1 | 1 | Rf | 1.11677 | m | HD | 53.936 | m |   |          |   |                 |
| For M5 | Adr | 151 | KD1 | 1700#####       | 4.0 | C | 1 | 1 | Rb | 1.03015 | m | HD | 50.951 | m |   |          |   |                 |
| For M5 | Adr | 152 | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 153 | KD1 | 1700            | 4.0 | C | 1 | 1 | Rb | 1.03014 | m | HD | 50.998 | m |   |          |   |                 |
| For M5 | Adr | 154 | KD1 | 1600            | 4.0 | C | 1 | 1 | Rf | 1.11683 | m | HD | 53.849 | m |   |          |   |                 |
| For M5 | Adr | 155 | KD1 | 1700            | 4.0 | C | 1 | 1 | Rb | 1.03023 | m | HD | 51.002 | m |   |          |   |                 |
| For M5 | Adr | 156 | KD1 | 1600            | 4.0 | C | 1 | 1 | Rf | 1.117   | m | HD | 53.895 | m |   |          |   |                 |
| For M5 | Adr | 157 | KD1 | 1600            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.43276 | m | Z 73.4328 1600v |
| For M5 | Adr | 158 | KD1 | 1600#####       | 4.0 | C | 1 | 1 | Rb | 0.93071 | m | HD | 50.273 | m |   |          |   |                 |
| For M5 | Adr | 159 | KD1 | 1500#####       | 4.0 | C | 1 | 1 | Rf | 1.25076 | m | HD | 45.917 | m |   |          |   |                 |
| For M5 | Adr | 160 | TO  | Station rep ed  |     |   | 1 |   |    |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 161 | KD1 | 1600            | 4.0 | C | 1 | 1 | Rb | 0.93647 | m | HD | 48.415 | m |   |          |   |                 |
| For M5 | Adr | 162 | KD1 | 1500            | 4.0 | C | 1 | 1 | Rf | 1.25683 | m | HD | 47.724 | m |   |          |   |                 |
| For M5 | Adr | 163 | KD1 | 1600            | 4.0 | C | 1 | 1 | Rb | 0.93661 | m | HD | 48.441 | m |   |          |   |                 |
| For M5 | Adr | 164 | KD1 | 1500            | 4.0 | C | 1 | 1 | Rf | 1.25699 | m | HD | 47.727 | m |   |          |   |                 |
| For M5 | Adr | 165 | KD1 | 1500            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 73.11235 | m | Z 73.1124 1500v |
| For M5 | Adr | 166 | KD1 | 1500            | 4.0 | C | 1 | 1 | Rb | 1.04808 | m | HD | 50.294 | m |   |          |   |                 |
| For M5 | Adr | 167 | KD1 | 1400            | 4.0 | C | 1 | 1 | Rf | 1.26887 | m | HD | 50.388 | m |   |          |   |                 |
| For M5 | Adr | 168 | KD1 | 1500            | 4.0 | C | 1 | 1 | Rb | 1.0482  | m | HD | 50.296 | m |   |          |   |                 |
| For M5 | Adr | 169 | KD1 | 1400            | 4.0 | C | 1 | 1 | Rf | 1.26882 | m | HD | 50.343 | m |   |          |   |                 |
| For M5 | Adr | 170 | KD1 | 1400            | 4.0 | C | 1 |   |    |         |   |    |        |   | Z | 72.89161 | m | Z 72.8916 1400v |
| For M5 | Adr | 171 | KD1 | 1400#####       | 4.0 | C | 1 | 1 | Rb | 0.94475 | m | HD | 49.996 | m |   |          |   |                 |
| For M5 | Adr | 172 | KD1 | 1300#####       | 4.0 | C | 1 | 1 | Rf | 1.28948 | m | HD | 50.24  | m |   |          |   |                 |

|        |     |         |                 |   |   |    |           |    |          |   |            |   |               |
|--------|-----|---------|-----------------|---|---|----|-----------|----|----------|---|------------|---|---------------|
| For M5 | Adr | 173 KD1 | 1400##### 4.0 C | 1 | 1 | Rb | 0.94449 m | HD | 49.96 m  |   |            |   |               |
| For M5 | Adr | 174 KD1 | 1300##### 4.0 C | 1 | 1 | Rf | 1.28993 m | HD | 50.217 m |   |            |   |               |
| For M5 | Adr | 175 KD1 | 1300##### 4.0 C |   |   |    |           |    |          | Z | 72.54738 m | Z | 72.5474       |
| For M5 | Adr | 176 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 177 KD1 | 1400 4.0 C      | 1 | 1 | Rb | 0.94443 m | HD | 49.964 m |   |            |   |               |
| For M5 | Adr | 178 KD1 | 1300 4.0 C      | 1 | 1 | Rf | 1.29008 m | HD | 50.295 m |   |            |   |               |
| For M5 | Adr | 179 KD1 | 1400 4.0 C      | 1 | 1 | Rb | 0.94459 m | HD | 49.942 m |   |            |   |               |
| For M5 | Adr | 180 KD1 | 1300 4.0 C      | 1 | 1 | Rf | 1.28971 m | HD | 50.214 m |   |            |   |               |
| For M5 | Adr | 181 KD1 | 1300 4.0 C      |   |   |    |           |    |          | Z | 72.54619 m | Z | 72.5462 1300v |
| For M5 | Adr | 182 KD1 | 1300 4.0 C      | 1 | 1 | Rb | 0.88519 m | HD | 50.086 m |   |            |   |               |
| For M5 | Adr | 183 KD1 | 1200 4.0 C      | 1 | 1 | Rf | 1.39172 m | HD | 50.122 m |   |            |   |               |
| For M5 | Adr | 184 KD1 | 1300 4.0 C      | 1 | 1 | Rb | 0.88509 m | HD | 50.123 m |   |            |   |               |
| For M5 | Adr | 185 KD1 | 1200 4.0 C      | 1 | 1 | Rf | 1.39137 m | HD | 50.192 m |   |            |   |               |
| For M5 | Adr | 186 KD1 | 1200 4.0 C      |   |   |    |           |    |          | Z | 72.03975 m | Z | 72.0398 1200v |
| For M5 | Adr | 187 KD1 | 1200 4.0 C      | 1 | 1 | Rb | 0.76347 m | HD | 49.552 m |   |            |   |               |
| For M5 | Adr | 188 KD1 | 1100 4.0 C      | 1 | 1 | Rf | 1.59214 m | HD | 50.207 m |   |            |   |               |
| For M5 | Adr | 189 KD1 | 1200 4.0 C      | 1 | 1 | Rb | 0.76357 m | HD | 49.626 m |   |            |   |               |
| For M5 | Adr | 190 KD1 | 1100 4.0 C      | 1 | 1 | Rf | 1.59244 m | HD | 50.27 m  |   |            |   |               |
| For M5 | Adr | 191 KD1 | 1100 4.0 C      |   |   |    |           |    |          | Z | 71.21094 m | Z | 71.2109 1100v |
| For M5 | Adr | 192 KD1 | 1100##### 4.0 C | 1 | 1 | Rb | 0.55089 m | HD | 50.396 m |   |            |   |               |
| For M5 | Adr | 193 KD1 | 1000##### 4.0 C | 1 | 1 | Rf | 1.65598 m | HD | 49.884 m |   |            |   |               |
| For M5 | Adr | 194 KD1 | 1100##### 4.0 C | 1 | 1 | Rb | 0.55142 m | HD | 50.525 m |   |            |   |               |
| For M5 | Adr | 195 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 196 KD1 | 1100##### 4.0 C | 1 | 1 | Rb | 0.55073 m | HD | 50.522 m |   |            |   |               |
| For M5 | Adr | 197 KD1 | 1000##### 4.0 C | 1 | 1 | Rf | 1.65618 m | HD | 49.96 m  |   |            |   |               |
| For M5 | Adr | 198 KD1 | 1100##### 4.0 C | 1 | 1 | Rb | 0.55119 m | HD | 50.422 m |   |            |   |               |
| For M5 | Adr | 199 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 200 KD1 | 1100 4.0 C      | 1 | 1 | Rb | 0.55134 m | HD | 50.495 m |   |            |   |               |
| For M5 | Adr | 201 KD1 | 1000 4.0 C      | 1 | 1 | Rf | 1.65643 m | HD | 49.973 m |   |            |   |               |
| For M5 | Adr | 202 KD1 | 1100 4.0 C      | 1 | 1 | Rb | 0.55114 m | HD | 50.576 m |   |            |   |               |
| For M5 | Adr | 203 KD1 | 1000 4.0 C      | 1 | 1 | Rf | 1.65619 m | HD | 49.946 m |   |            |   |               |
| For M5 | Adr | 204 KD1 | 1000 4.0 C      |   |   |    |           |    |          | Z | 70.10583 m | Z | 70.1058 1000v |
| For M5 | Adr | 205 KD1 | 1000 5.0 C      | 1 | 1 | Rb | 0.51092 m | HD | 50.644 m |   |            |   |               |
| For M5 | Adr | 206 KD1 | 900 5.0 C       | 1 | 1 | Rf | 1.62236 m | HD | 49.436 m |   |            |   |               |
| For M5 | Adr | 207 KD1 | 1000 5.0 C      | 1 | 1 | Rb | 0.51133 m | HD | 50.686 m |   |            |   |               |
| For M5 | Adr | 208 KD1 | 900 5.0 C       | 1 | 1 | Rf | 1.62226 m | HD | 49.434 m |   |            |   |               |
| For M5 | Adr | 209 KD1 | 900 5.0 C       |   |   |    |           |    |          | Z | 68.99461 m | Z | 68.9946 900v  |
| For M5 | Adr | 210 KD1 | 900##### 4.0 C  | 1 | 1 | Rb | 0.78877 m | HD | 50.753 m |   |            |   |               |
| For M5 | Adr | 211 KD1 | 800##### 4.0 C  | 1 | 1 | Rf | 1.32148 m | HD | 50.648 m |   |            |   |               |
| For M5 | Adr | 212 KD1 | 900##### 4.0 C  | 1 | 1 | Rb | 0.78961 m | HD | 50.73 m  |   |            |   |               |
| For M5 | Adr | 213 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 214 KD1 | 900 4.0 C       | 1 | 1 | Rb | 0.78939 m | HD | 50.716 m |   |            |   |               |
| For M5 | Adr | 215 KD1 | 800 5.0 C       | 1 | 1 | Rf | 1.3212 m  | HD | 50.598 m |   |            |   |               |
| For M5 | Adr | 216 KD1 | 900 4.0 C       | 1 | 1 | Rb | 0.78907 m | HD | 50.759 m |   |            |   |               |
| For M5 | Adr | 217 KD1 | 800 5.0 C       | 1 | 1 | Rf | 1.32112 m | HD | 50.601 m |   |            |   |               |
| For M5 | Adr | 218 KD1 | 800 5.0 C       |   |   |    |           |    |          | Z | 68.46264 m | Z | 68.4626 800v  |
| For M5 | Adr | 219 KD1 | 800##### 5.0 C  | 1 | 1 | Rb | 0.9423 m  | HD | 50.03 m  |   |            |   |               |
| For M5 | Adr | 220 KD1 | 700##### 5.0 C  | 1 | 1 | Rf | 1.23323 m | HD | 50.3 m   |   |            |   |               |
| For M5 | Adr | 221 KD1 | 800##### 5.0 C  | 1 | 1 | Rb | 0.94247 m | HD | 49.942 m |   |            |   |               |
| For M5 | Adr | 222 KD1 | 700##### 5.0 C  | 1 | 1 | Rf | 1.23274 m | HD | 50.274 m |   |            |   |               |
| For M5 | Adr | 223 KD1 | 700##### 5.0 C  |   |   |    |           |    |          | Z | 68.17312 m | Z | 68.1731       |
| For M5 | Adr | 224 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 225 KD1 | 800 5.0 C       | 1 | 1 | Rb | 0.94237 m | HD | 49.992 m |   |            |   |               |
| For M5 | Adr | 226 KD1 | 700 5.0 C       | 1 | 1 | Rf | 1.23282 m | HD | 50.273 m |   |            |   |               |
| For M5 | Adr | 227 KD1 | 800 5.0 C       | 1 | 1 | Rb | 0.9423 m  | HD | 49.975 m |   |            |   |               |
| For M5 | Adr | 228 KD1 | 700 5.0 C       | 1 | 1 | Rf | 1.23265 m | HD | 50.26 m  |   |            |   |               |
| For M5 | Adr | 229 KD1 | 700 5.0 C       |   |   |    |           |    |          | Z | 68.17221 m | Z | 68.1722 700v  |
| For M5 | Adr | 230 KD1 | 700 5.0 C       | 1 | 1 | Rb | 0.9199 m  | HD | 50.631 m |   |            |   |               |
| For M5 | Adr | 231 KD1 | 600 5.0 C       | 1 | 1 | Rf | 1.34328 m | HD | 49.504 m |   |            |   |               |
| For M5 | Adr | 232 KD1 | 700 5.0 C       | 1 | 1 | Rb | 0.92004 m | HD | 50.569 m |   |            |   |               |
| For M5 | Adr | 233 KD1 | 600 5.0 C       | 1 | 1 | Rf | 1.34352 m | HD | 49.472 m |   |            |   |               |
| For M5 | Adr | 234 KD1 | 600 5.0 C       |   |   |    |           |    |          | Z | 67.74874 m | Z | 67.7487 600v  |
| For M5 | Adr | 235 KD1 | 600 5.0 C       | 1 | 1 | Rb | 1.00311 m | HD | 50.571 m |   |            |   |               |
| For M5 | Adr | 236 KD1 | 500 5.0 C       | 1 | 1 | Rf | 1.28019 m | HD | 49.591 m |   |            |   |               |
| For M5 | Adr | 237 KD1 | 600 5.0 C       | 1 | 1 | Rb | 1.00305 m | HD | 50.594 m |   |            |   |               |
| For M5 | Adr | 238 KD1 | 500 5.0 C       | 1 | 1 | Rf | 1.28048 m | HD | 49.625 m |   |            |   |               |
| For M5 | Adr | 239 KD1 | 500 5.0 C       |   |   |    |           |    |          | Z | 67.47145 m | Z | 67.4715 500v  |
| For M5 | Adr | 240 KD1 | 500 5.0 C       | 1 | 1 | Rb | 0.97914 m | HD | 50.666 m |   |            |   |               |
| For M5 | Adr | 241 KD1 | 400 5.0 C       | 1 | 1 | Rf | 1.30126 m | HD | 50.96 m  |   |            |   |               |
| For M5 | Adr | 242 KD1 | 500 5.0 C       | 1 | 1 | Rb | 0.97938 m | HD | 50.698 m |   |            |   |               |
| For M5 | Adr | 243 KD1 | 400 5.0 C       | 1 | 1 | Rf | 1.30131 m | HD | 51.035 m |   |            |   |               |
| For M5 | Adr | 244 KD1 | 400 5.0 C       |   |   |    |           |    |          | Z | 67.14939 m | Z | 67.1494 400v  |
| For M5 | Adr | 245 KD1 | 400##### 5.0 C  | 1 | 1 | Rb | 0.97752 m | HD | 50.4 m   |   |            |   |               |
| For M5 | Adr | 246 KD1 | 300##### 5.0 C  | 1 | 1 | Rf | 1.26466 m | HD | 49.525 m |   |            |   |               |
| For M5 | Adr | 247 KD1 | 400##### 5.0 C  | 1 | 1 | Rb | 0.97805 m | HD | 50.33 m  |   |            |   |               |
| For M5 | Adr | 248 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 249 KD1 | 400##### 5.0 C  | 1 | 1 | Rb | 0.97829 m | HD | 50.276 m |   |            |   |               |
| For M5 | Adr | 250 KD1 | 300##### 5.0 C  | 1 | 1 | Rf | 1.26475 m | HD | 49.485 m |   |            |   |               |
| For M5 | Adr | 251 KD1 | 400##### 5.0 C  | 1 | 1 | Rb | 0.97771 m | HD | 50.414 m |   |            |   |               |
| For M5 | Adr | 252 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 253 KD1 | 400##### 5.0 C  | 1 | 1 | Rb | 0.97756 m | HD | 50.412 m |   |            |   |               |
| For M5 | Adr | 254 KD1 | 300##### 5.0 C  | 1 | 1 | Rf | 1.26473 m | HD | 49.512 m |   |            |   |               |
| For M5 | Adr | 255 KD1 | 400##### 5.0 C  | 1 | 1 | Rb | 0.97805 m | HD | 50.394 m |   |            |   |               |
| For M5 | Adr | 256 TO  | Station rep ed  |   |   |    |           |    |          |   |            |   |               |
| For M5 | Adr | 257 KD1 | 400 5.0 C       | 1 | 1 | Rb | 0.97793 m | HD | 50.451 m |   |            |   |               |
| For M5 | Adr | 258 KD1 | 300 5.0 C       | 1 | 1 | Rf | 1.26441 m | HD | 49.513 m |   |            |   |               |
| For M5 | Adr | 259 KD1 | 400 5.0 C       | 1 | 1 | Rb | 0.97827 m | HD | 50.33 m  |   |            |   |               |
| For M5 | Adr | 260 KD1 | 300 5.0 C       | 1 | 1 | Rf | 1.2645 m  | HD | 49.538 m |   |            |   |               |
| For M5 | Adr | 261 KD1 | 300 5.0 C       |   |   |    |           |    |          | Z | 66.86299 m | Z | 66.8630 300v  |

|        |     |         |                  |        |              |          |   |            |   |         |       |
|--------|-----|---------|------------------|--------|--------------|----------|---|------------|---|---------|-------|
| For M5 | Adr | 262 KD1 | 300 5.0 C        | 1 1 Rb | 0.91525 m HD | 49.581 m |   |            |   |         |       |
| For M5 | Adr | 263 KD1 | 200 5.0 C        | 1 1 Rf | 1.15032 m HD | 50.326 m |   |            |   |         |       |
| For M5 | Adr | 264 KD1 | 300 5.0 C        | 1 1 Rb | 0.91533 m HD | 49.562 m |   |            |   |         |       |
| For M5 | Adr | 265 KD1 | 200 5.0 C        | 1 1 Rf | 1.15055 m HD | 50.331 m |   |            |   |         |       |
| For M5 | Adr | 266 KD1 | 200 5.0 C        | 1      |              |          | Z | 66.62781 m | Z | 66.6278 | 200v  |
| For M5 | Adr | 267 KD1 | 200 5.0 C        | 1 1 Rb | 1.01166 m HD | 50.927 m |   |            |   |         |       |
| For M5 | Adr | 268 KD1 | 100 5.0 C        | 1 1 Rf | 1.25646 m HD | 48.973 m |   |            |   |         |       |
| For M5 | Adr | 269 KD1 | 200 5.0 C        | 1 1 Rb | 1.01156 m HD | 50.935 m |   |            |   |         |       |
| For M5 | Adr | 270 KD1 | 100 5.0 C        | 1 1 Rf | 1.25664 m HD | 49.018 m |   |            |   |         |       |
| For M5 | Adr | 271 KD1 | 100 5.0 C        | 1      |              |          | Z | 66.38284 m | Z | 66.3828 | 100v  |
| For M5 | Adr | 272 KD1 | 100 5.0 C        | 1 1 Rb | 0.9463 m HD  | 49.854 m |   |            |   |         |       |
| For M5 | Adr | 273 KD1 | 0 5.0 C          | 1 1 Rf | 1.31514 m HD | 50.234 m |   |            |   |         |       |
| For M5 | Adr | 274 KD1 | 100 5.0 C        | 1 1 Rb | 0.94594 m HD | 49.81 m  |   |            |   |         |       |
| For M5 | Adr | 275 KD1 | 0 5.0 C          | 1 1 Rf | 1.31521 m HD | 50.224 m |   |            |   |         |       |
| For M5 | Adr | 276 KD1 | 0 5.0 C          | 1      |              |          | Z | 66.01374 m | Z | 66.0137 | 0v    |
| For M5 | Adr | 277 KD1 | 0 6.0 C          | 1 1 Rb | 0.98981 m HD | 49.064 m |   |            |   |         |       |
| For M5 | Adr | 278 KD1 | -100 6.0 C       | 1 1 Rf | 1.26262 m HD | 51.061 m |   |            |   |         |       |
| For M5 | Adr | 279 KD1 | 0 6.0 C          | 1 1 Rb | 0.98994 m HD | 49.018 m |   |            |   |         |       |
| For M5 | Adr | 280 KD1 | -100 6.0 C       | 1 1 Rf | 1.26248 m HD | 51.068 m |   |            |   |         |       |
| For M5 | Adr | 281 KD1 | -100 6.0 C       | 1      |              |          | Z | 65.74103 m | Z | 65.7410 | -100v |
| For M5 | Adr | 282 KD1 | -100 5.0 C       | 1 1 Rb | 1.12963 m HD | 34.075 m |   |            |   |         |       |
| For M5 | Adr | 283 KD1 | 100 6.0 C        | 1 1 Rf | 1.21086 m HD | 32.23 m  |   |            |   |         |       |
| For M5 | Adr | 284 KD1 | -100 5.0 C       | 1 1 Rb | 1.12951 m HD | 34.084 m |   |            |   |         |       |
| For M5 | Adr | 285 KD1 | 100 6.0 C        | 1 1 Rf | 1.21071 m HD | 32.23 m  |   |            |   |         |       |
| For M5 | Adr | 286 KD1 | 100 6.0 C        | 1      |              |          | Z | 65.65979 m | Z | 65.6598 | -100p |
| For M5 | Adr | 287 KD1 | +100##### 5.0 C  | 1 1 Rb | 1.2767 m HD  | 50.26 m  |   |            |   |         |       |
| For M5 | Adr | 288 KD1 | 00000##### 5.0 C | 1 1 Rf | 0.92364 m HD | 49.838 m |   |            |   |         |       |
| For M5 | Adr | 289 KD1 | +100##### 5.0 C  | 1 1 Rb | 1.27676 m HD | 50.17 m  |   |            |   |         |       |
| For M5 | Adr | 290 KD1 | 00000##### 5.0 C | 1 1 Rf | 0.92326 m HD | 49.804 m |   |            |   |         |       |
| For M5 | Adr | 291 KD1 | 00000##### 5.0 C | 1      |              |          | Z | 66.0145 m  | Z | 66.0145 |       |
| For M5 | Adr | 292 TO  | Station rep ed   | 1      |              |          |   |            |   |         |       |
| For M5 | Adr | 293 KD1 | 100 5.0 C        | 1 1 Rb | 1.27657 m HD | 50.201 m |   |            |   |         |       |
| For M5 | Adr | 294 KD1 | 0 5.0 C          | 1 1 Rf | 0.92312 m HD | 49.85 m  |   |            |   |         |       |
| For M5 | Adr | 295 KD1 | 100 5.0 C        | 1 1 Rb | 1.27651 m HD | 50.188 m |   |            |   |         |       |
| For M5 | Adr | 296 KD1 | 0 5.0 C          | 1 1 Rf | 0.92322 m HD | 49.853 m |   |            |   |         |       |
| For M5 | Adr | 297 KD1 | 0 5.0 C          | 1      |              |          | Z | 66.01312 m | Z | 66.0131 | Op    |
| For M5 | Adr | 298 KD1 | 00000##### 5.0 C | 1 1 Rb | 1.27107 m HD | 50.542 m |   |            |   |         |       |
| For M5 | Adr | 299 KD1 | 1000##### 5.0 C  | 1 1 Rf | 0.92311 m HD | 49.15 m  |   |            |   |         |       |
| For M5 | Adr | 300 KD1 | 00000##### 6.0 C | 1 1 Rb | 1.27054 m HD | 50.521 m |   |            |   |         |       |
| For M5 | Adr | 301 TO  | Station rep ed   | 1      |              |          |   |            |   |         |       |
| For M5 | Adr | 302 KD1 | 0 5.0 C          | 1 1 Rb | 1.27061 m HD | 50.537 m |   |            |   |         |       |
| For M5 | Adr | 303 KD1 | 1000 5.0 C       | 1 1 Rf | 0.92387 m HD | 49.204 m |   |            |   |         |       |
| For M5 | Adr | 304 KD1 | 0 5.0 C          | 1 1 Rb | 1.27081 m HD | 50.522 m |   |            |   |         |       |
| For M5 | Adr | 305 KD1 | 1000 6.0 C       | 1 1 Rf | 0.92348 m HD | 49.09 m  |   |            |   |         |       |
| For M5 | Adr | 306 KD1 | 1000 6.0 C       | 1      |              |          | Z | 66.36012 m | Z | 66.3601 | 100p  |
| For M5 | Adr | 307 KD1 | 1000 6.0 C       | 1 1 Rb | 1.26708 m HD | 50.359 m |   |            |   |         |       |
| For M5 | Adr | 308 KD1 | 2000uus 6.0 C    | 1 1 Rf | 0.93437 m HD | 49.289 m |   |            |   |         |       |
| For M5 | Adr | 309 KD1 | 1000 6.0 C       | 1 1 Rb | 1.26687 m HD | 50.355 m |   |            |   |         |       |
| For M5 | Adr | 310 KD1 | 2000uus 6.0 C    | 1 1 Rf | 0.9347 m HD  | 49.254 m |   |            |   |         |       |
| For M5 | Adr | 311 KD1 | 2000uus 6.0 C    | 1      |              |          | Z | 66.69253 m | Z | 66.6925 | 200p  |
| For M5 | Adr | 312 KD1 | 2000uus 6.0 C    | 1 1 Rb | 1.21557 m HD | 50.08 m  |   |            |   |         |       |
| For M5 | Adr | 313 KD1 | 3000 6.0 C       | 1 1 Rf | 0.92206 m HD | 49.237 m |   |            |   |         |       |
| For M5 | Adr | 314 KD1 | 2000uus 6.0 C    | 1 1 Rb | 1.21558 m HD | 50.074 m |   |            |   |         |       |
| For M5 | Adr | 315 KD1 | 3000 6.0 C       | 1 1 Rf | 0.92202 m HD | 49.247 m |   |            |   |         |       |
| For M5 | Adr | 316 KD1 | 3000 6.0 C       | 1      |              |          | Z | 66.98602 m | Z | 66.9860 | 300p  |
| For M5 | Adr | 317 KD1 | 3000##### 6.0 C  | 1 1 Rb | 1.21492 m HD | 50.961 m |   |            |   |         |       |
| For M5 | Adr | 318 KD1 | 400##### 6.0 C   | 1 1 Rf | 0.96597 m HD | 48.714 m |   |            |   |         |       |
| For M5 | Adr | 319 KD1 | 3000##### 6.0 C  | 1 1 Rb | 1.21458 m HD | 50.893 m |   |            |   |         |       |
| For M5 | Adr | 320 KD1 | 400##### 6.0 C   | 1 1 Rf | 0.96558 m HD | 48.725 m |   |            |   |         |       |
| For M5 | Adr | 321 KD1 | 400##### 6.0 C   | 1      |              |          | Z | 67.23658 m | Z | 67.2366 |       |
| For M5 | Adr | 322 TO  | Station rep ed   | 1      |              |          |   |            |   |         |       |
| For M5 | Adr | 323 KD1 | 3000 6.0 C       | 1 1 Rb | 1.2145 m HD  | 50.925 m |   |            |   |         |       |
| For M5 | Adr | 324 KD1 | 400 6.0 C        | 1 1 Rf | 0.96599 m HD | 48.706 m |   |            |   |         |       |
| For M5 | Adr | 325 KD1 | 3000 6.0 C       | 1 1 Rb | 1.21441 m HD | 50.897 m |   |            |   |         |       |
| For M5 | Adr | 326 KD1 | 400 6.0 C        | 1 1 Rf | 0.96576 m HD | 48.735 m |   |            |   |         |       |
| For M5 | Adr | 327 KD1 | 400 6.0 C        | 1      |              |          | Z | 67.23457 m | Z | 67.2346 | 400p  |
| For M5 | Adr | 328 KD1 | 400##### 6.0 C   | 1 1 Rb | 1.24849 m HD | 51.908 m |   |            |   |         |       |
| For M5 | Adr | 329 KD1 | 500##### 6.0 C   | 1 1 Rf | 0.92736 m HD | 48.893 m |   |            |   |         |       |
| For M5 | Adr | 330 KD1 | 400##### 6.0 C   | 1 1 Rb | 1.24897 m HD | 51.951 m |   |            |   |         |       |
| For M5 | Adr | 331 TO  | Station rep ed   | 1      |              |          |   |            |   |         |       |
| For M5 | Adr | 332 KD1 | 400##### 6.0 C   | 1 1 Rb | 1.24884 m HD | 51.903 m |   |            |   |         |       |
| For M5 | Adr | 333 KD1 | 500##### 6.0 C   | 1 1 Rf | 0.92718 m HD | 48.87 m  |   |            |   |         |       |
| For M5 | Adr | 334 KD1 | 400##### 6.0 C   | 1 1 Rb | 1.24889 m HD | 51.916 m |   |            |   |         |       |
| For M5 | Adr | 335 KD1 | 500##### 6.0 C   | 1 1 Rf | 0.92777 m HD | 48.885 m |   |            |   |         |       |
| For M5 | Adr | 336 KD1 | 500##### 6.0 C   | 1      |              |          | Z | 67.55757 m | Z | 67.5576 |       |
| For M5 | Adr | 337 TO  | Station rep ed   | 1      |              |          |   |            |   |         |       |
| For M5 | Adr | 338 KD1 | 400 6.0 C        | 1 1 Rb | 1.2486 m HD  | 51.871 m |   |            |   |         |       |
| For M5 | Adr | 339 KD1 | 500 6.0 C        | 1 1 Rf | 0.92713 m HD | 48.831 m |   |            |   |         |       |
| For M5 | Adr | 340 KD1 | 400 6.0 C        | 1 1 Rb | 1.24855 m HD | 51.91 m  |   |            |   |         |       |
| For M5 | Adr | 341 KD1 | 500 6.0 C        | 1 1 Rf | 0.92739 m HD | 48.875 m |   |            |   |         |       |
| For M5 | Adr | 342 KD1 | 500 6.0 C        | 1      |              |          | Z | 67.55585 m | Z | 67.5559 | 500p  |
| For M5 | Adr | 343 KD1 | 500 6.0 C        | 1 1 Rb | 1.20507 m HD | 50.173 m |   |            |   |         |       |
| For M5 | Adr | 344 KD1 | 600 6.0 C        | 1 1 Rf | 0.90447 m HD | 49.503 m |   |            |   |         |       |
| For M5 | Adr | 345 KD1 | 500 6.0 C        | 1 1 Rb | 1.20506 m HD | 50.172 m |   |            |   |         |       |
| For M5 | Adr | 346 KD1 | 600 6.0 C        | 1 1 Rf | 0.90423 m HD | 49.56 m  |   |            |   |         |       |
| For M5 | Adr | 347 KD1 | 600 6.0 C        | 1      |              |          | Z | 67.85652 m | Z | 67.8565 | 600p  |
| For M5 | Adr | 348 KD1 | 600##### 6.0 C   | 1 1 Rb | 1.2502 m HD  | 50.376 m |   |            |   |         |       |
| For M5 | Adr | 349 KD1 | 700##### 6.0 C   | 1 1 Rf | 0.93096 m HD | 49.088 m |   |            |   |         |       |
| For M5 | Adr | 350 KD1 | 600##### 6.0 C   | 1 1 Rb | 1.25003 m HD | 50.353 m |   |            |   |         |       |

|        |     |         |             |        |   |   |    |           |    |          |  |   |            |  |   |         |       |
|--------|-----|---------|-------------|--------|---|---|----|-----------|----|----------|--|---|------------|--|---|---------|-------|
| For M5 | Adr | 351 KD1 | 700#####    | 6.0 C  | 1 | 1 | Rf | 0.93052 m | HD | 49.122 m |  |   |            |  |   |         |       |
| For M5 | Adr | 352 KD1 | 700#####    | 6.0 C  | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 353 TO  | Station rep | ed     | 1 |   |    |           |    |          |  | Z | 68.17759 m |  | Z | 68.1776 |       |
| For M5 | Adr | 354 KD1 | 600#####    | 6.0 C  | 1 | 1 | Rb | 1.25014 m | HD | 50.359 m |  |   |            |  |   |         |       |
| For M5 | Adr | 355 KD1 | 700#####    | 7.0 C  | 1 | 1 | Rf | 0.93052 m | HD | 49.105 m |  |   |            |  |   |         |       |
| For M5 | Adr | 356 KD1 | 600#####    | 7.0 C  | 1 | 1 | Rb | 1.25009 m | HD | 50.36 m  |  |   |            |  |   |         |       |
| For M5 | Adr | 357 KD1 | 700#####    | 7.0 C  | 1 | 1 | Rf | 0.93096 m | HD | 49.151 m |  |   |            |  |   |         |       |
| For M5 | Adr | 358 KD1 | 700#####    | 7.0 C  | 1 |   |    |           |    |          |  | Z | 68.17759 m |  | Z | 68.1776 |       |
| For M5 | Adr | 359 TO  | Station rep | ed     | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 360 KD1 | 600         | 6.0 C  | 1 | 1 | Rb | 1.25024 m | HD | 50.334 m |  |   |            |  |   |         |       |
| For M5 | Adr | 361 KD1 | 700         | 7.0 C  | 1 | 1 | Rf | 0.93049 m | HD | 49.123 m |  |   |            |  |   |         |       |
| For M5 | Adr | 362 KD1 | 600         | 6.0 C  | 1 | 1 | Rb | 1.25001 m | HD | 50.344 m |  |   |            |  |   |         |       |
| For M5 | Adr | 363 KD1 | 700         | 6.0 C  | 1 | 1 | Rf | 0.93039 m | HD | 49.118 m |  |   |            |  |   |         |       |
| For M5 | Adr | 364 KD1 | 700         | 6.0 C  | 1 |   |    |           |    |          |  | Z | 68.17617 m |  | Z | 68.1762 | 700p  |
| For M5 | Adr | 365 KD1 | 700#####    | 6.0 C  | 1 | 1 | Rb | 1.24096 m | HD | 49.964 m |  |   |            |  |   |         |       |
| For M5 | Adr | 366 KD1 | 800#####    | 6.0 C  | 1 | 1 | Rf | 0.96885 m | HD | 49.517 m |  |   |            |  |   |         |       |
| For M5 | Adr | 367 KD1 | 700#####    | 6.0 C  | 1 | 1 | Rb | 1.24124 m | HD | 49.929 m |  |   |            |  |   |         |       |
| For M5 | Adr | 368 KD1 | 800#####    | 6.0 C  | 1 | 1 | Rf | 0.96835 m | HD | 49.53 m  |  |   |            |  |   |         |       |
| For M5 | Adr | 369 KD1 | 800#####    | 6.0 C  | 1 |   |    |           |    |          |  | Z | 68.4504 m  |  | Z | 68.4504 |       |
| For M5 | Adr | 370 TO  | Station rep | ed     | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 371 KD1 | 700         | 6.0 C  | 1 | 1 | Rb | 1.24115 m | HD | 49.936 m |  |   |            |  |   |         |       |
| For M5 | Adr | 372 KD1 | 800         | 6.0 C  | 1 | 1 | Rf | 0.9686 m  | HD | 49.524 m |  |   |            |  |   |         |       |
| For M5 | Adr | 373 KD1 | 700         | 6.0 C  | 1 | 1 | Rb | 1.24128 m | HD | 49.936 m |  |   |            |  |   |         |       |
| For M5 | Adr | 374 KD1 | 800         | 6.0 C  | 1 | 1 | Rf | 0.96835 m | HD | 49.509 m |  |   |            |  |   |         |       |
| For M5 | Adr | 375 KD1 | 800         | 6.0 C  | 1 |   |    |           |    |          |  | Z | 68.44887 m |  | Z | 68.4489 | 800p  |
| For M5 | Adr | 376 KD1 | 800         | 6.0 C  | 1 | 1 | Rb | 1.35287 m | HD | 49.946 m |  |   |            |  |   |         |       |
| For M5 | Adr | 377 KD1 | 900         | 6.0 C  | 1 | 1 | Rf | 0.81552 m | HD | 49.636 m |  |   |            |  |   |         |       |
| For M5 | Adr | 378 KD1 | 800         | 6.0 C  | 1 | 1 | Rb | 1.35277 m | HD | 49.926 m |  |   |            |  |   |         |       |
| For M5 | Adr | 379 KD1 | 900         | 6.0 C  | 1 | 1 | Rf | 0.81544 m | HD | 49.64 m  |  |   |            |  |   |         |       |
| For M5 | Adr | 380 KD1 | 900         | 6.0 C  | 1 |   |    |           |    |          |  | Z | 68.98618 m |  | Z | 68.9862 | 900p  |
| For M5 | Adr | 381 KD1 | 900         | 6.0 C  | 1 | 1 | Rb | 1.56894 m | HD | 49.898 m |  |   |            |  |   |         |       |
| For M5 | Adr | 382 KD1 | 1000        | 6.0 C  | 1 | 1 | Rf | 0.44492 m | HD | 50.705 m |  |   |            |  |   |         |       |
| For M5 | Adr | 383 KD1 | 900         | 6.0 C  | 1 | 1 | Rb | 1.56893 m | HD | 49.926 m |  |   |            |  |   |         |       |
| For M5 | Adr | 384 KD1 | 1000        | 6.0 C  | 1 | 1 | Rf | 0.44519 m | HD | 50.691 m |  |   |            |  |   |         |       |
| For M5 | Adr | 385 KD1 | 1000        | 6.0 C  | 1 |   |    |           |    |          |  | Z | 70.11002 m |  | Z | 70.1100 | 1000p |
| For M5 | Adr | 386 KD1 | 1000#####   | 6.0 C  | 1 | 1 | Rb | 1.62256 m | HD | 49.586 m |  |   |            |  |   |         |       |
| For M5 | Adr | 387 KD1 | 1100#####   | 6.0 C  | 1 | 1 | Rf | 0.54146 m | HD | 50.295 m |  |   |            |  |   |         |       |
| For M5 | Adr | 388 KD1 | 1000#####   | 6.0 C  | 1 | 1 | Rb | 1.6221 m  | HD | 49.558 m |  |   |            |  |   |         |       |
| For M5 | Adr | 389 TO  | Station rep | ed     | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 390 KD1 | 1000        | 6.0 C  | 1 | 1 | Rb | 1.62248 m | HD | 49.575 m |  |   |            |  |   |         |       |
| For M5 | Adr | 391 KD1 | 1100        | 6.0 C  | 1 | 1 | Rf | 0.54136 m | HD | 50.292 m |  |   |            |  |   |         |       |
| For M5 | Adr | 392 KD1 | 1000        | 6.0 C  | 1 | 1 | Rb | 1.6223 m  | HD | 49.597 m |  |   |            |  |   |         |       |
| For M5 | Adr | 393 KD1 | 1100        | 6.0 C  | 1 | 1 | Rf | 0.54138 m | HD | 50.267 m |  |   |            |  |   |         |       |
| For M5 | Adr | 394 KD1 | 1100        | 6.0 C  | 1 |   |    |           |    |          |  | Z | 71.191 m   |  | Z | 71.1910 | 1100p |
| For M5 | Adr | 395 KD1 | 1100        | 6.0 C  | 1 | 1 | Rb | 1.56769 m | HD | 50.582 m |  |   |            |  |   |         |       |
| For M5 | Adr | 396 KD1 | 1200        | 6.0 C  | 1 | 1 | Rf | 0.71248 m | HD | 49.175 m |  |   |            |  |   |         |       |
| For M5 | Adr | 397 KD1 | 1100        | 6.0 C  | 1 | 1 | Rb | 1.56788 m | HD | 50.521 m |  |   |            |  |   |         |       |
| For M5 | Adr | 398 KD1 | 1200        | 6.0 C  | 1 | 1 | Rf | 0.71216 m | HD | 49.197 m |  |   |            |  |   |         |       |
| For M5 | Adr | 399 KD1 | 1200        | 6.0 C  | 1 |   |    |           |    |          |  | Z | 72.04643 m |  | Z | 72.0464 | 1200p |
| For M5 | Adr | 400 KD1 | 1200        | 6.0 C  | 1 | 1 | Rb | 1.2154 m  | HD | 48.044 m |  |   |            |  |   |         |       |
| For M5 | Adr | 401 KD1 | 1300        | 6.0 C  | 1 | 1 | Rf | 0.77821 m | HD | 52.026 m |  |   |            |  |   |         |       |
| For M5 | Adr | 402 KD1 | 1200        | 6.0 C  | 1 | 1 | Rb | 1.21542 m | HD | 48.052 m |  |   |            |  |   |         |       |
| For M5 | Adr | 403 KD1 | 1300        | 6.0 C  | 1 | 1 | Rf | 0.77836 m | HD | 51.997 m |  |   |            |  |   |         |       |
| For M5 | Adr | 404 KD1 | 1300        | 6.0 C  | 1 |   |    |           |    |          |  | Z | 72.48352 m |  | Z | 72.4835 | 1300p |
| For M5 | Adr | 405 KD1 | 1300        | 6.0 C  | 1 | 1 | Rb | 1.27291 m | HD | 48.135 m |  |   |            |  |   |         |       |
| For M5 | Adr | 406 KD1 | 1200        | 6.0 C  | 1 | 1 | Rf | 0.94718 m | HD | 51.692 m |  |   |            |  |   |         |       |
| For M5 | Adr | 407 KD1 | 1300        | 6.0 C  | 1 | 1 | Rb | 1.27286 m | HD | 48.124 m |  |   |            |  |   |         |       |
| For M5 | Adr | 408 KD1 | 1200        | 6.0 C  | 1 | 1 | Rf | 0.94713 m | HD | 51.659 m |  |   |            |  |   |         |       |
| For M5 | Adr | 409 KD1 | 1200        | 6.0 C  | 1 |   |    |           |    |          |  | Z | 72.80921 m |  | Z | 72.8092 | 1400p |
| For M5 | Adr | 410 KD1 | 1200#####   | 6.0 C  | 1 | 1 | Rb | 1.27442 m | HD | 48.879 m |  |   |            |  |   |         |       |
| For M5 | Adr | 411 KD1 | 1100#####   | 6.0 C  | 1 | 1 | Rf | 0.95939 m | HD | 50.48 m  |  |   |            |  |   |         |       |
| For M5 | Adr | 412 KD1 | 1200#####   | 6.0 C  | 1 | 1 | Rb | 1.27426 m | HD | 48.897 m |  |   |            |  |   |         |       |
| For M5 | Adr | 413 KD1 | 1100#####   | 6.0 C  | 1 | 1 | Rf | 0.95887 m | HD | 50.457 m |  |   |            |  |   |         |       |
| For M5 | Adr | 414 KD1 | 1100#####   | 6.0 C  | 1 |   |    |           |    |          |  | Z | 73.12641 m |  | Z | 73.1264 |       |
| For M5 | Adr | 415 TO  | Station rep | ed     | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 416 KD1 | 1200#####   | 6.0 C  | 1 | 1 | Rb | 1.27419 m | HD | 48.903 m |  |   |            |  |   |         |       |
| For M5 | Adr | 417 KD1 | 1100#####   | 6.0 C  | 1 | 1 | Rf | 0.95901 m | HD | 50.463 m |  |   |            |  |   |         |       |
| For M5 | Adr | 418 KD1 | 1200#####   | 6.0 C  | 1 | 1 | Rb | 1.27401 m | HD | 48.913 m |  |   |            |  |   |         |       |
| For M5 | Adr | 419 KD1 | 1100#####   | 6.0 C  | 1 | 1 | Rf | 0.95974 m | HD | 50.472 m |  |   |            |  |   |         |       |
| For M5 | Adr | 420 KD1 | 1100#####   | 6.0 C  | 1 |   |    |           |    |          |  | Z | 73.12593 m |  | Z | 73.1259 |       |
| For M5 | Adr | 421 TO  | Station rep | ed     | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 422 KD1 | 1200        | 6.0 C  | 1 | 1 | Rb | 1.27364 m | HD | 48.9 m   |  |   |            |  |   |         |       |
| For M5 | Adr | 423 KD1 | 1100        | 6.0 C  | 1 | 1 | Rf | 0.95873 m | HD | 50.436 m |  |   |            |  |   |         |       |
| For M5 | Adr | 424 KD1 | 1200        | 6.0 C  | 1 | 1 | Rb | 1.2739 m  | HD | 48.911 m |  |   |            |  |   |         |       |
| For M5 | Adr | 425 KD1 | 1100        | 6.0 C  | 1 | 1 | Rf | 0.9585 m  | HD | 50.413 m |  |   |            |  |   |         |       |
| For M5 | Adr | 426 KD1 | 1100        | 6.0 C  | 1 |   |    |           |    |          |  | Z | 73.12433 m |  | Z | 73.1243 | 1500p |
| For M5 | Adr | 427 KD1 | 1100        | 5.0 C  | 1 | 1 | Rb | 1.28785 m | HD | 48.521 m |  |   |            |  |   |         |       |
| For M5 | Adr | 428 KD1 | 1600        | 5.0 C  | 1 | 1 | Rf | 1.01038 m | HD | 47.677 m |  |   |            |  |   |         |       |
| For M5 | Adr | 429 KD1 | 1100        | 5.0 C  | 1 | 1 | Rb | 1.28816 m | HD | 48.54 m  |  |   |            |  |   |         |       |
| For M5 | Adr | 430 KD1 | 1600        | 5.0 C  | 1 | 1 | Rf | 1.01025 m | HD | 47.729 m |  |   |            |  |   |         |       |
| For M5 | Adr | 431 KD1 | 1600        | 5.0 C  | 1 |   |    |           |    |          |  | Z | 73.40199 m |  | Z | 73.4020 | 1600p |
| For M5 | Adr | 432 KD1 | 1600#####   | 5.0 C  | 1 | 1 | Rb | 1.19001 m | HD | 54.245 m |  |   |            |  |   |         |       |
| For M5 | Adr | 433 KD1 | 1601#####   | 5.0 C  | 1 | 1 | Rf | 1.11112 m | HD | 48.559 m |  |   |            |  |   |         |       |
| For M5 | Adr | 434 TO  | Measurem    | peated | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 435 KD1 | 1700#####   | 5.0 C  | 1 | 1 | Rf | 1.11085 m | HD | 48.525 m |  |   |            |  |   |         |       |
| For M5 | Adr | 436 KD1 | 1600#####   | 5.0 C  | 1 | 1 | Rb | 1.18934 m | HD | 54.253 m |  |   |            |  |   |         |       |
| For M5 | Adr | 437 TO  | Station rep | ed     | 1 |   |    |           |    |          |  |   |            |  |   |         |       |
| For M5 | Adr | 438 KD1 | 1600#####   | 5.0 C  | 1 | 1 | Rb | 1.18976 m | HD | 54.205 m |  |   |            |  |   |         |       |
| For M5 | Adr | 439 KD1 | 1700#####   | 5.0 C  | 1 | 1 | Rf | 1.11116 m | HD | 48.557 m |  |   |            |  |   |         |       |

|        |     |         |                 |        |           |    |          |   |            |   |               |
|--------|-----|---------|-----------------|--------|-----------|----|----------|---|------------|---|---------------|
| For M5 | Adr | 440 KD1 | 1600##### 5.0 C | 1 1 Rb | 1.18995 m | HD | 54.214 m |   |            |   |               |
| For M5 | Adr | 441 KD1 | 1700##### 5.0 C | 1 1 Rf | 1.11052 m | HD | 48.566 m |   |            |   |               |
| For M5 | Adr | 442 KD1 | 1700##### 5.0 C | 1      |           |    |          | Z | 73.48306 m | Z | 73.4831       |
| For M5 | Adr | 443 TO  | Station rep ed  | 1      |           |    |          |   |            |   |               |
| For M5 | Adr | 444 KD1 | 1600##### 5.0 C | 1 1 Rb | 1.18986 m | HD | 54.247 m |   |            |   |               |
| For M5 | Adr | 445 KD1 | 1700##### 5.0 C | 1 1 Rf | 1.1107 m  | HD | 48.588 m |   |            |   |               |
| For M5 | Adr | 446 KD1 | 1600##### 5.0 C | 1 1 Rb | 1.18974 m | HD | 54.264 m |   |            |   |               |
| For M5 | Adr | 447 KD1 | 1700##### 5.0 C | 1 1 Rf | 1.11115 m | HD | 48.583 m |   |            |   |               |
| For M5 | Adr | 448 KD1 | 1700##### 5.0 C | 1      |           |    |          | Z | 73.48292 m | Z | 73.4829       |
| For M5 | Adr | 449 TO  | Station rep ed  | 1      |           |    |          |   |            |   |               |
| For M5 | Adr | 450 KD1 | 1600 5.0 C      | 1 1 Rb | 1.1897 m  | HD | 54.223 m |   |            |   |               |
| For M5 | Adr | 451 KD1 | 1700 5.0 C      | 1 1 Rf | 1.1111 m  | HD | 48.558 m |   |            |   |               |
| For M5 | Adr | 452 KD1 | 1600 5.0 C      | 1 1 Rb | 1.18987 m | HD | 54.257 m |   |            |   |               |
| For M5 | Adr | 453 KD1 | 1700 5.0 C      | 1 1 Rf | 1.11083 m | HD | 48.58 m  |   |            |   |               |
| For M5 | Adr | 454 KD1 | 1700 5.0 C      | 1      |           |    |          | Z | 73.48077 m | Z | 73.4808 1700p |
| For M5 | Adr | 455 KD1 | 1700 5.0 C      | 1 1 Rb | 1.06847 m | HD | 50.634 m |   |            |   |               |
| For M5 | Adr | 456 KD1 | 1800 5.0 C      | 1 1 Rf | 1.25394 m | HD | 48.998 m |   |            |   |               |
| For M5 | Adr | 457 KD1 | 1700 5.0 C      | 1 1 Rb | 1.06862 m | HD | 50.73 m  |   |            |   |               |
| For M5 | Adr | 458 KD1 | 1800 5.0 C      | 1 1 Rf | 1.25394 m | HD | 48.987 m |   |            |   |               |
| For M5 | Adr | 459 KD1 | 1800 5.0 C      | 1      |           |    |          | Z | 73.29534 m | Z | 73.2953 1800p |
| For M5 | Adr | 460 KD1 | 1800 5.0 C      | 1 1 Rb | 1.01068 m | HD | 49.556 m |   |            |   |               |
| For M5 | Adr | 461 KD1 | 1900 5.0 C      | 1 1 Rf | 1.28397 m | HD | 51.099 m |   |            |   |               |
| For M5 | Adr | 462 KD1 | 1800 5.0 C      | 1 1 Rb | 1.01083 m | HD | 49.58 m  |   |            |   |               |
| For M5 | Adr | 463 KD1 | 1900 5.0 C      | 1 1 Rf | 1.28396 m | HD | 51.105 m |   |            |   |               |
| For M5 | Adr | 464 KD1 | 1900 5.0 C      | 1      |           |    |          | Z | 73.02209 m | Z | 73.0221 1900p |
| For M5 | Adr | 465 KD1 | 1900 5.0 C      | 1 1 Rb | 0.9766 m  | HD | 49.271 m |   |            |   |               |
| For M5 | Adr | 466 KD1 | 2000 5.0 C      | 1 1 Rf | 1.28009 m | HD | 50.982 m |   |            |   |               |
| For M5 | Adr | 467 KD1 | 1900 5.0 C      | 1 1 Rb | 0.97675 m | HD | 49.234 m |   |            |   |               |
| For M5 | Adr | 468 KD1 | 2000 5.0 C      | 1 1 Rf | 1.28018 m | HD | 50.952 m |   |            |   |               |
| For M5 | Adr | 469 KD1 | 2000 5.0 C      | 1      |           |    |          | Z | 72.71859 m | Z | 72.7186 2000p |
| For M5 | Adr | 470 KD1 | 2000 5.0 C      | 1 1 Rb | 0.96748 m | HD | 48.582 m |   |            |   |               |
| For M5 | Adr | 471 KD1 | 2100 5.0 C      | 1 1 Rf | 1.22142 m | HD | 51.415 m |   |            |   |               |
| For M5 | Adr | 472 KD1 | 2000 5.0 C      | 1 1 Rb | 0.96744 m | HD | 48.623 m |   |            |   |               |
| For M5 | Adr | 473 KD1 | 2100 5.0 C      | 1 1 Rf | 1.22126 m | HD | 51.434 m |   |            |   |               |
| For M5 | Adr | 474 KD1 | 2100 5.0 C      | 1      |           |    |          | Z | 72.46467 m | Z | 72.4647 2100p |
| For M5 | Adr | 475 KD1 | 2100 5.0 C      | 1 1 Rb | 1.05156 m | HD | 49.769 m |   |            |   |               |
| For M5 | Adr | 476 KD1 | 2200 5.0 C      | 1 1 Rf | 1.24879 m | HD | 50.553 m |   |            |   |               |
| For M5 | Adr | 477 KD1 | 2100 5.0 C      | 1 1 Rb | 1.05173 m | HD | 49.771 m |   |            |   |               |
| For M5 | Adr | 478 KD1 | 2200 5.0 C      | 1 1 Rf | 1.24896 m | HD | 50.574 m |   |            |   |               |
| For M5 | Adr | 479 KD1 | 2200 5.0 C      | 1      |           |    |          | Z | 72.26741 m | Z | 72.2674 2200p |
| For M5 | Adr | 480 KD1 | 2200##### 5.0 C | 1 1 Rb | 1.09107 m | HD | 51.073 m |   |            |   |               |
| For M5 | Adr | 481 KD1 | 2300##### 5.0 C | 1 1 Rf | 1.39337 m | HD | 49.742 m |   |            |   |               |
| For M5 | Adr | 482 KD1 | 2200##### 6.0 C | 1 1 Rb | 1.09088 m | HD | 51.074 m |   |            |   |               |
| For M5 | Adr | 483 KD1 | 2300##### 6.0 C | 1 1 Rf | 1.39286 m | HD | 49.77 m  |   |            |   |               |
| For M5 | Adr | 484 KD1 | 2300##### 6.0 C | 1      |           |    |          | Z | 71.96755 m | Z | 71.9676       |
| For M5 | Adr | 485 TO  | Station rep ed  | 1      |           |    |          |   |            |   |               |
| For M5 | Adr | 486 KD1 | 2200 6.0 C      | 1 1 Rb | 1.09082 m | HD | 51.069 m |   |            |   |               |
| For M5 | Adr | 487 KD1 | 2300 6.0 C      | 1 1 Rf | 1.39264 m | HD | 49.785 m |   |            |   |               |
| For M5 | Adr | 488 KD1 | 2200 6.0 C      | 1 1 Rb | 1.09075 m | HD | 51.094 m |   |            |   |               |
| For M5 | Adr | 489 KD1 | 2300 6.0 C      | 1 1 Rf | 1.39278 m | HD | 49.753 m |   |            |   |               |
| For M5 | Adr | 490 KD1 | 2300 6.0 C      | 1      |           |    |          | Z | 71.96545 m | Z | 71.9655 2300p |
| For M5 | Adr | 491 KD1 | 2300 6.0 C      | 1 1 Rb | 0.89175 m | HD | 50.695 m |   |            |   |               |
| For M5 | Adr | 492 KD1 | 2200 6.0 C      | 1 1 Rf | 1.36433 m | HD | 50.247 m |   |            |   |               |
| For M5 | Adr | 493 KD1 | 2300 6.0 C      | 1 1 Rb | 0.89184 m | HD | 50.686 m |   |            |   |               |
| For M5 | Adr | 494 KD1 | 2200 6.0 C      | 1 1 Rf | 1.36432 m | HD | 50.326 m |   |            |   |               |
| For M5 | Adr | 495 KD1 | 2200 6.0 C      | 1      |           |    |          | Z | 71.49288 m | Z | 71.4929 2400p |
| For M5 | Adr | 496 KD1 | 2200 6.0 C      | 1 1 Rb | 0.85163 m | HD | 50.387 m |   |            |   |               |
| For M5 | Adr | 497 KD1 | 2100 6.0 C      | 1 1 Rf | 1.55142 m | HD | 50.033 m |   |            |   |               |
| For M5 | Adr | 498 KD1 | 2200 6.0 C      | 1 1 Rb | 0.85186 m | HD | 50.376 m |   |            |   |               |
| For M5 | Adr | 499 KD1 | 2100 6.0 C      | 1 1 Rf | 1.55147 m | HD | 50.08 m  |   |            |   |               |
| For M5 | Adr | 500 KD1 | 2100 6.0 C      | 1      |           |    |          | Z | 70.79314 m | Z | 70.7931 2500p |
| For M5 | Adr | 501 KD1 | 2100##### 6.0 C | 1 1 Rb | 0.54045 m | HD | 50.661 m |   |            |   |               |
| For M5 | Adr | 502 KD1 | 2600##### 6.0 C | 1 1 Rf | 1.51146 m | HD | 49.767 m |   |            |   |               |
| For M5 | Adr | 503 KD1 | 2100##### 6.0 C | 1 1 Rb | 0.54025 m | HD | 50.667 m |   |            |   |               |
| For M5 | Adr | 504 KD1 | 2600##### 6.0 C | 1 1 Rf | 1.51089 m | HD | 49.895 m |   |            |   |               |
| For M5 | Adr | 505 KD1 | 2600##### 6.0 C | 1      |           |    |          | Z | 69.82471 m | Z | 69.8247       |
| For M5 | Adr | 506 TO  | Station rep ed  | 1      |           |    |          |   |            |   |               |
| For M5 | Adr | 507 KD1 | 2100##### 6.0 C | 1 1 Rb | 0.54071 m | HD | 50.716 m |   |            |   |               |
| For M5 | Adr | 508 KD1 | 2600##### 6.0 C | 1 1 Rf | 1.5115 m  | HD | 49.889 m |   |            |   |               |
| For M5 | Adr | 509 KD1 | 2100##### 6.0 C | 1 1 Rb | 0.5408 m  | HD | 50.697 m |   |            |   |               |
| For M5 | Adr | 510 KD1 | 2600##### 6.0 C | 1 1 Rf | 1.51094 m | HD | 49.866 m |   |            |   |               |
| For M5 | Adr | 511 KD1 | 2600##### 6.0 C | 1      |           |    |          | Z | 69.82507 m | Z | 69.8251       |
| For M5 | Adr | 512 TO  | Station rep ed  | 1      |           |    |          |   |            |   |               |
| For M5 | Adr | 513 KD1 | 2100 6.0 C      | 1 1 Rb | 0.54057 m | HD | 50.706 m |   |            |   |               |
| For M5 | Adr | 514 KD1 | 2600 6.0 C      | 1 1 Rf | 1.51094 m | HD | 49.845 m |   |            |   |               |
| For M5 | Adr | 515 KD1 | 2100 6.0 C      | 1 1 Rb | 0.54025 m | HD | 50.717 m |   |            |   |               |
| For M5 | Adr | 516 KD1 | 2600 6.0 C      | 1 1 Rf | 1.51097 m | HD | 49.879 m |   |            |   |               |
| For M5 | Adr | 517 KD1 | 2600 6.0 C      | 1      |           |    |          | Z | 69.82256 m | Z | 69.8226 2600p |
| For M5 | Adr | 518 KD1 | 2600 6.0 C      | 1 1 Rb | 0.51133 m | HD | 49.475 m |   |            |   |               |
| For M5 | Adr | 519 KD1 | 2700 6.0 C      | 1 1 Rf | 1.68671 m | HD | 51.129 m |   |            |   |               |
| For M5 | Adr | 520 KD1 | 2600 6.0 C      | 1 1 Rb | 0.51128 m | HD | 49.466 m |   |            |   |               |
| For M5 | Adr | 521 KD1 | 2700 7.0 C      | 1 1 Rf | 1.68663 m | HD | 51.119 m |   |            |   |               |
| For M5 | Adr | 522 KD1 | 2700 7.0 C      | 1      |           |    |          | Z | 68.64716 m | Z | 68.6472 2700p |
| For M5 | Adr | 523 KD1 | 2700##### 6.0 C | 1 1 Rb | 0.37 m    | HD | 50.7 m   |   |            |   |               |
| For M5 | Adr | 524 TO  | Measurem peated | 1      |           |    |          |   |            |   |               |
| For M5 | Adr | 525 KD1 | 2700 7.0 C      | 1 1 Rb | 0.25201 m | HD | 50.611 m |   |            |   |               |
| For M5 | Adr | 526 KD1 | 2800 7.0 C      | 1 1 Rf | 1.78322 m | HD | 51.52 m  |   |            |   |               |
| For M5 | Adr | 527 KD1 | 2700 7.0 C      | 1 1 Rb | 0.25201 m | HD | 50.648 m |   |            |   |               |
| For M5 | Adr | 528 KD1 | 2800 7.0 C      | 1 1 Rf | 1.78319 m | HD | 51.538 m |   |            |   |               |

|        |     |         |                 |   |      |           |    |            |  |   |            |   |         |             |
|--------|-----|---------|-----------------|---|------|-----------|----|------------|--|---|------------|---|---------|-------------|
| For M5 | Adr | 529 KD1 | 2800 7.0 C      | 1 |      |           |    |            |  | Z | 67.11592 m | Z | 67.1159 | 2800p       |
| For M5 | Adr | 530 KD1 | 2800##### 7.0 C | 1 | 1 Rb | 0.42813 m | HD | 50.03 m    |  |   |            |   |         |             |
| For M5 | Adr | 531 KD1 | 2900##### 7.0 C | 1 | 1 Rf | 1.6721 m  | HD | 50.673 m   |  |   |            |   |         |             |
| For M5 | Adr | 532 KD1 | 2800##### 7.0 C | 1 | 1 Rb | 0.42852 m | HD | 50.005 m   |  |   |            |   |         |             |
| For M5 | Adr | 533 TO  | Station ref ed  | 1 |      |           |    |            |  |   |            |   |         |             |
| For M5 | Adr | 534 KD1 | 2800 7.0 C      | 1 | 1 Rb | 0.42825 m | HD | 49.979 m   |  |   |            |   |         |             |
| For M5 | Adr | 535 KD1 | 2900 7.0 C      | 1 | 1 Rf | 1.67204 m | HD | 50.697 m   |  |   |            |   |         |             |
| For M5 | Adr | 536 KD1 | 2800 7.0 C      | 1 | 1 Rb | 0.42849 m | HD | 50.012 m   |  |   |            |   |         |             |
| For M5 | Adr | 537 KD1 | 2900 7.0 C      | 1 | 1 Rf | 1.67188 m | HD | 50.7 m     |  |   |            |   |         |             |
| For M5 | Adr | 538 KD1 | 2900 7.0 C      | 1 |      |           |    |            |  | Z | 65.8723 m  | Z | 65.8723 | 2900p       |
| For M5 | Adr | 539 KD1 | 2900 7.0 C      | 1 | 1 Rb | 0.60106 m | HD | 50.025 m   |  |   |            |   |         |             |
| For M5 | Adr | 540 KD1 | 3000 7.0 C      | 1 | 1 Rf | 1.5709 m  | HD | 50.354 m   |  |   |            |   |         |             |
| For M5 | Adr | 541 KD1 | 2900 7.0 C      | 1 | 1 Rb | 0.60116 m | HD | 50 m       |  |   |            |   |         |             |
| For M5 | Adr | 542 KD1 | 3000 7.0 C      | 1 | 1 Rf | 1.57083 m | HD | 50.355 m   |  |   |            |   |         |             |
| For M5 | Adr | 543 KD1 | 3000 7.0 C      | 1 |      |           |    |            |  | Z | 64.9025 m  | Z | 64.9025 | 3000p       |
| For M5 | Adr | 544 KD1 | 3000##### 7.0 C | 1 | 1 Rb | 0.80167 m | HD | 50.21 m    |  |   |            |   |         |             |
| For M5 | Adr | 545 KD1 | 3100##### 7.0 C | 1 | 1 Rf | 1.41717 m | HD | 51.029 m   |  |   |            |   |         |             |
| For M5 | Adr | 546 KD1 | 3000##### 7.0 C | 1 | 1 Rb | 0.80126 m | HD | 50.168 m   |  |   |            |   |         |             |
| For M5 | Adr | 547 TO  | Station ref ed  | 1 |      |           |    |            |  |   |            |   |         |             |
| For M5 | Adr | 548 KD1 | 3000 7.0 C      | 1 | 1 Rb | 0.80162 m | HD | 50.218 m   |  |   |            |   |         |             |
| For M5 | Adr | 549 KD1 | 3100 7.0 C      | 1 | 1 Rf | 1.41732 m | HD | 50.823 m   |  |   |            |   |         |             |
| For M5 | Adr | 550 KD1 | 3000 8.0 C      | 1 | 1 Rb | 0.80127 m | HD | 50.187 m   |  |   |            |   |         |             |
| For M5 | Adr | 551 KD1 | 3100 8.0 C      | 1 | 1 Rf | 1.41724 m | HD | 51.003 m   |  |   |            |   |         |             |
| For M5 | Adr | 552 KD1 | 3100 8.0 C      | 1 |      |           |    |            |  | Z | 64.28663 m | Z | 64.2866 | 3100p       |
| For M5 | Adr | 553 KD1 | 3100##### 8.0 C | 1 | 1 Rb | 0.96832 m | HD | 50.414 m   |  |   |            |   |         |             |
| For M5 | Adr | 554 KD1 | 3200##### 8.0 C | 1 | 1 Rf | 1.46201 m | HD | 50.826 m   |  |   |            |   |         |             |
| For M5 | Adr | 555 KD1 | 3100##### 8.0 C | 1 | 1 Rb | 0.96887 m | HD | 50.546 m   |  |   |            |   |         |             |
| For M5 | Adr | 556 TO  | Station ref ed  | 1 |      |           |    |            |  |   |            |   |         |             |
| For M5 | Adr | 557 KD1 | 3100 8.0 C      | 1 | 1 Rb | 0.96886 m | HD | 50.412 m   |  |   |            |   |         |             |
| For M5 | Adr | 558 KD1 | 3200 8.0 C      | 1 | 1 Rf | 1.46213 m | HD | 50.857 m   |  |   |            |   |         |             |
| For M5 | Adr | 559 KD1 | 3100 8.0 C      | 1 | 1 Rb | 0.9689 m  | HD | 50.405 m   |  |   |            |   |         |             |
| For M5 | Adr | 560 KD1 | 3200 8.0 C      | 1 | 1 Rf | 1.46181 m | HD | 50.892 m   |  |   |            |   |         |             |
| For M5 | Adr | 561 KD1 | 3200 8.0 C      | 1 |      |           |    |            |  | Z | 63.79351 m | Z | 63.7935 | 3200p       |
| For M5 | Adr | 562 KD1 | 3200 8.0 C      | 1 | 1 Rb | 0.79352 m | HD | 50.617 m   |  |   |            |   |         |             |
| For M5 | Adr | 563 KD1 | 3300 8.0 C      | 1 | 1 Rf | 1.17306 m | HD | 49.59 m    |  |   |            |   |         |             |
| For M5 | Adr | 564 KD1 | 3200 8.0 C      | 1 | 1 Rb | 0.79374 m | HD | 50.668 m   |  |   |            |   |         |             |
| For M5 | Adr | 565 KD1 | 3300 8.0 C      | 1 | 1 Rf | 1.17313 m | HD | 49.569 m   |  |   |            |   |         |             |
| For M5 | Adr | 566 KD1 | 3300 8.0 C      | 1 |      |           |    |            |  | Z | 63.414 m   | Z | 63.4140 | 3300p       |
| For M5 | Adr | 567 KD1 | 3300 8.0 C      | 1 | 1 Rb | 1.24792 m | HD | 50.238 m   |  |   |            |   |         |             |
| For M5 | Adr | 568 KD1 | 3400 8.0 C      | 1 | 1 Rf | 0.93273 m | HD | 49.875 m   |  |   |            |   |         |             |
| For M5 | Adr | 569 KD1 | 3300 8.0 C      | 1 | 1 Rb | 1.24794 m | HD | 50.3 m     |  |   |            |   |         |             |
| For M5 | Adr | 570 KD1 | 3400 8.0 C      | 1 | 1 Rf | 0.93257 m | HD | 49.836 m   |  |   |            |   |         |             |
| For M5 | Adr | 571 KD1 | 3400 8.0 C      | 1 |      |           |    |            |  | Z | 63.72925 m | Z | 63.7293 | 3400p       |
| For M5 | Adr | 572 KD1 | 3400 9.0 C      | 1 | 1 Rb | 1.36199 m | HD | 49.68 m    |  |   |            |   |         |             |
| For M5 | Adr | 573 KD1 | 3500+ 9.0 C     | 1 | 1 Rf | 0.86975 m | HD | 49.647 m   |  |   |            |   |         |             |
| For M5 | Adr | 574 KD1 | 3400 9.0 C      | 1 | 1 Rb | 1.36192 m | HD | 49.648 m   |  |   |            |   |         |             |
| For M5 | Adr | 575 KD1 | 3500+ 9.0 C     | 1 | 1 Rf | 0.86982 m | HD | 49.575 m   |  |   |            |   |         |             |
| For M5 | Adr | 576 KD1 | 3500+ 9.0 C     | 1 |      |           |    |            |  | Z | 64.22138 m | Z | 64.2214 | 3500p       |
| For M5 | Adr | 577 KD1 | 3500+ 9.0 C     | 1 | 1 Rb | 1.17589 m | HD | 27.636 m   |  |   |            |   |         |             |
| For M5 | Adr | 578 KD1 | 20##### 9.0 C   | 1 | 1 Rf | 1.14711 m | HD | 28.932 m   |  |   |            |   |         |             |
| For M5 | Adr | 579 TO  | Measurem peated | 1 |      |           |    |            |  |   |            |   |         |             |
| For M5 | Adr | 580 KD1 | 20 9.0 C        | 1 | 1 Rf | 1.1215 m  | HD | 27.176 m   |  |   |            |   |         |             |
| For M5 | Adr | 581 KD1 | 3500+ 9.0 C     | 1 | 1 Rb | 1.17586 m | HD | 27.639 m   |  |   |            |   |         |             |
| For M5 | Adr | 582 KD1 | 20 9.0 C        | 1 | 1 Rf | 1.12164 m | HD | 27.192 m   |  |   |            |   |         |             |
| For M5 | Adr | 583 KD1 | 20 9.0 C        | 1 |      |           |    |            |  | Z | 64.27566 m | Z | 64.2757 |             |
| For M5 | Adr | 584 KD1 | 20 9.0 C        | 1 | 1 Rb | 0.28415 m | HD | 30.912 m   |  |   |            |   |         |             |
| For M5 | Adr | 585 KD1 | 21 8.0 C        | 1 | 1 Rf | 1.695 m   | HD | 30.804 m   |  |   |            |   |         |             |
| For M5 | Adr | 586 KD1 | 20 8.0 C        | 1 | 1 Rb | 0.28419 m | HD | 30.918 m   |  |   |            |   |         |             |
| For M5 | Adr | 587 KD1 | 21 8.0 C        | 1 | 1 Rf | 1.69511 m | HD | 30.806 m   |  |   |            |   |         |             |
| For M5 | Adr | 588 KD1 | 21 8.0 C        | 1 |      |           |    |            |  | Z | 62.86476 m | Z | 62.8648 |             |
| For M5 | Adr | 589 KD1 | 21 8.0 C        | 1 | 1 Rb | 0.65619 m | HD | 29.76 m    |  |   |            |   |         |             |
| For M5 | Adr | 590 KD1 | 22 8.0 C        | 1 | 1 Rf | 1.31475 m | HD | 30.032 m   |  |   |            |   |         |             |
| For M5 | Adr | 591 KD1 | 21 8.0 C        | 1 | 1 Rb | 0.65616 m | HD | 29.74 m    |  |   |            |   |         |             |
| For M5 | Adr | 592 KD1 | 22 8.0 C        | 1 | 1 Rf | 1.31475 m | HD | 30.032 m   |  |   |            |   |         |             |
| For M5 | Adr | 593 KD1 | 22 8.0 C        | 1 |      |           |    |            |  | Z | 62.20616 m | Z | 62.2062 |             |
| For M5 | Adr | 594 KD1 | 22 8.0 C        | 1 | 1 Rb | 0.30597 m | HD | 33.649 m   |  |   |            |   |         |             |
| For M5 | Adr | 595 KD1 | Veetorn 9.0 C   | 1 | 1 Rf | 0.37774 m | HD | 31.77 m    |  |   |            |   |         |             |
| For M5 | Adr | 596 KD1 | 22 9.0 C        | 1 | 1 Rb | 0.30589 m | HD | 33.642 m   |  |   |            |   |         |             |
| For M5 | Adr | 597 KD1 | Veetorn 9.0 C   | 1 | 1 Rf | 0.37779 m | HD | 31.76 m    |  |   |            |   |         |             |
| For M5 | Adr | 598 KD1 | Veetorn 9.0 C   | 1 |      |           |    |            |  | Z | 62.1343 m  | Z | 62.1343 |             |
| For M5 | Adr | 599 KD1 | Veetorn         | 1 | Sh   | 0 m       | dz | -0.00286 m |  | Z | 62.1343 m  | Z | 62.1343 | Rp. Veetorn |
| For M5 | Adr | 600 KD2 | Veetorn 80      | 1 | Db   | 3863.58 m | Df | 3862.49 m  |  | Z | 62.1343 m  | Z | 62.1343 | Rp. Veetorn |
| For M5 | Adr | 601 TO  | End-Line        | 1 |      |           |    |            |  |   |            |   |         |             |

Möödistustööd teostati 28.03.2012

Möödistas: T. Bauman  
Kontrollis: M. Sobak

Nivelleerimiskäigu väljandmed  
KÄIK-2

Töö nr 21M2058

E-nimi: 21M2058\_niv.xls

| J.nr   | P.nr       | Lugem            | S              | H Balti     | Lugem | Piketaaz (ehitus) |
|--------|------------|------------------|----------------|-------------|-------|-------------------|
| For M5 | Adr 1 TO   | 27032012.dat     |                |             |       |                   |
| For M5 | Adr 2 TO   | Tanel            |                |             |       |                   |
| For M5 | Adr 3 TO   | Start-Line BFBF  | 1              |             |       |                   |
| For M5 | Adr 4 KD1  | Veetorn          | 1              |             |       |                   |
| For M5 | Adr 5 KD1  | Veetorn## 5.0 C  | 1 1 Rb 0.64678 | m HD 33.929 | m     |                   |
| For M5 | Adr 6 KD1  | 1##### 5.0 C     | 1 1 Rf 0.40322 | m HD 54.711 | m     |                   |
| For M5 | Adr 7 KD1  | Veetorn## 5.0 C  | 1 1 Rb 0.61184 | m HD 33.233 | m     |                   |
| For M5 | Adr 8 TO   | Station rep ed   | 1              |             |       |                   |
| For M5 | Adr 9 KD1  | Veetorn 5.0 C    | 1 1 Rb 0.61196 | m HD 33.227 | m     |                   |
| For M5 | Adr 10 TO  | Start-Line BFBF+ | 2              |             |       |                   |
| For M5 | Adr 11 KD1 | Veetorn          | 2              |             |       |                   |
| For M5 | Adr 12 KD1 | Veetorn## 4.0 C  | 1 2 Rb 0.64758 | m HD 33.933 | m     |                   |
| For M5 | Adr 13 KD1 | 2##### 4.0 C     | 1 2 Rf 0.59678 | m HD 33.805 | m     |                   |
| For M5 | Adr 14 KD1 | Veetorn## 4.0 C  | 1 2 Rb 0.64777 | m HD 33.931 | m     |                   |
| For M5 | Adr 15 KD1 | 2##### 4.0 C     | 1 2 Rf 0.59718 | m HD 33.813 | m     |                   |
| For M5 | Adr 16 KD1 | 2##### 4.0 C     | 2              |             |       |                   |
| For M5 | Adr 17 TO  | Station rep ed   | 2              |             |       |                   |
| For M5 | Adr 18 KD1 | Veetorn 4.0 C    | 1 2 Rb 0.64760 | m HD 33.922 | m     |                   |
| For M5 | Adr 19 KD1 | 2 4.0 C          | 1 2 Rf 0.59670 | m HD 33.798 | m     |                   |
| For M5 | Adr 20 KD1 | Veetorn 4.0 C    | 1 2 Rb 0.64776 | m HD 33.923 | m     |                   |
| For M5 | Adr 21 KD1 | 2 4.0 C          | 1 2 Rf 0.59686 | m HD 33.797 | m     |                   |
| For M5 | Adr 22 KD1 | 2 4.0 C          | 2              |             |       |                   |
| For M5 | Adr 23 KD1 | 2 3.0 C          | 1 2 Rb 1.77633 | m HD 44.577 | m     |                   |
| For M5 | Adr 24 KD1 | 3##### 3.0 C     | 1 2 Rf 0.17561 | m HD 62.844 | m     |                   |
| For M5 | Adr 25 TO  | Measurem peated  | 2              |             |       |                   |
| For M5 | Adr 26 KD1 | 3##### 3.0 C     | 1 2 Rf 0.50288 | m HD 41.681 | m     |                   |
| For M5 | Adr 27 TO  | Measurem peated  | 2              |             |       |                   |
| For M5 | Adr 28 KD1 | 3##### 3.0 C     | 1 2 Rf 0.37607 | m HD 45.170 | m     |                   |
| For M5 | Adr 29 TO  | Measurem peated  | 2              |             |       |                   |
| For M5 | Adr 30 KD1 | 3 3.0 C          | 1 2 Rf 0.40014 | m HD 44.431 | m     |                   |
| For M5 | Adr 31 KD1 | 2 3.0 C          | 1 2 Rb 1.77631 | m HD 44.539 | m     |                   |
| For M5 | Adr 32 KD1 | 3 2.0 C          | 1 2 Rf 0.40014 | m HD 44.442 | m     |                   |
| For M5 | Adr 33 KD1 | 3 2.0 C          | 2              |             |       |                   |
| For M5 | Adr 34 KD1 | 3 2.0 C          | 1 2 Rb 1.71814 | m HD 29.898 | m     |                   |
| For M5 | Adr 35 KD1 | 3500 2.0 C       | 1 2 Rf 0.94668 | m HD 30.677 | m     |                   |
| For M5 | Adr 36 KD1 | 3 2.0 C          | 1 2 Rb 1.71829 | m HD 29.904 | m     |                   |
| For M5 | Adr 37 KD1 | 3500 2.0 C       | 1 2 Rf 0.94651 | m HD 30.675 | m     |                   |
| For M5 | Adr 38 KD1 | 3500 2.0 C       | 2              |             |       |                   |
| For M5 | Adr 39 KD1 | 3500##### 2.0 C  | 1 2 Rb 1.34118 | m HD 56.100 | m     |                   |
| For M5 | Adr 40 TO  | Measurem peated  | 2              |             |       |                   |
| For M5 | Adr 41 KD1 | 3500 2.0 C       | 1 2 Rb 1.31358 | m HD 50.283 | m     |                   |
| For M5 | Adr 42 KD1 | 3600 2.0 C       | 1 2 Rf 0.90020 | m HD 51.037 | m     |                   |
| For M5 | Adr 43 KD1 | 3500 2.0 C       | 1 2 Rb 1.31369 | m HD 50.296 | m     |                   |
| For M5 | Adr 44 KD1 | 3600 2.0 C       | 1 2 Rf 0.90007 | m HD 51.015 | m     |                   |
| For M5 | Adr 45 KD1 | 3600 2.0 C       | 2              |             |       |                   |
| For M5 | Adr 46 KD1 | 3600##### 1.0 C  | 1 2 Rb 1.42669 | m HD 48.335 | m     |                   |
| For M5 | Adr 47 TO  | Measurem peated  | 2              |             |       |                   |
| For M5 | Adr 48 KD1 | 3600 1.0 C       | 1 2 Rb 1.43699 | m HD 50.443 | m     |                   |
| For M5 | Adr 49 KD1 | 3700 1.0 C       | 1 2 Rf 0.86779 | m HD 49.188 | m     |                   |
| For M5 | Adr 50 KD1 | 3600 1.0 C       | 1 2 Rb 1.43735 | m HD 50.480 | m     |                   |
| For M5 | Adr 51 KD1 | 3700 1.0 C       | 1 2 Rf 0.86790 | m HD 49.166 | m     |                   |
| For M5 | Adr 52 KD1 | 3700 1.0 C       | 2              |             |       |                   |
| For M5 | Adr 53 KD1 | 3700##### 1.0 C  | 1 2 Rb 1.37868 | m HD 50.150 | m     |                   |
| For M5 | Adr 54 KD1 | 3800##### 1.0 C  | 1 2 Rf 0.90580 | m HD 50.096 | m     |                   |
| For M5 | Adr 55 KD1 | 3700##### 1.0 C  | 1 2 Rb 1.37910 | m HD 50.163 | m     |                   |
| For M5 | Adr 56 TO  | Station rep ed   | 2              |             |       |                   |
| For M5 | Adr 57 KD1 | 3700 1.0 C       | 1 2 Rb 1.37915 | m HD 50.170 | m     |                   |
| For M5 | Adr 58 KD1 | 3800 1.0 C       | 1 2 Rf 0.90619 | m HD 50.072 | m     |                   |
| For M5 | Adr 59 KD1 | 3700 1.0 C       | 1 2 Rb 1.37909 | m HD 50.140 | m     |                   |
| For M5 | Adr 60 KD1 | 3800 1.0 C       | 1 2 Rf 0.90615 | m HD 50.080 | m     |                   |
| For M5 | Adr 61 KD1 | 3800 1.0 C       | 2              |             |       |                   |
| For M5 | Adr 62 KD1 | 3800 1.0 C       | 1 2 Rb 1.42945 | m HD 49.568 | m     |                   |
| For M5 | Adr 63 KD1 | 3900 1.0 C       | 1 2 Rf 0.95729 | m HD 50.380 | m     |                   |
| For M5 | Adr 64 KD1 | 3800 1.0 C       | 1 2 Rb 1.42938 | m HD 49.562 | m     |                   |
| For M5 | Adr 65 KD1 | 3900 1.0 C       | 1 2 Rf 0.95731 | m HD 50.379 | m     |                   |
| For M5 | Adr 66 KD1 | 3900 1.0 C       | 2              |             |       |                   |
| For M5 | Adr 67 KD1 | 3900 1.0 C       | 1 2 Rb 1.44876 | m HD 50.418 | m     |                   |
| For M5 | Adr 68 KD1 | 3901 1.0 C       | 1 2 Rf 0.93967 | m HD 49.462 | m     |                   |
| For M5 | Adr 69 KD1 | 3900 1.0 C       | 1 2 Rb 1.44891 | m HD 50.408 | m     |                   |
| For M5 | Adr 70 KD1 | 3901 1.0 C       | 1 2 Rf 0.93971 | m HD 49.481 | m     |                   |
| For M5 | Adr 71 KD1 | 3901 1.0 C       | 2              |             |       |                   |
| For M5 | Adr 72 KD1 | 3901 1.0 C       | 1 2 Rb 1.43545 | m HD 50.693 | m     |                   |
| For M5 | Adr 73 KD1 | 3902##### 1.0 C  | 1 2 Rf 0.95492 | m HD 50.137 | m     |                   |
| For M5 | Adr 74 TO  | Measurem peated  | 2              |             |       |                   |
| For M5 | Adr 75 KD1 | 3902 1.0 C       | 1 2 Rf 0.95471 | m HD 50.138 | m     |                   |
| For M5 | Adr 76 KD1 | 3901 1.0 C       | 1 2 Rb 1.43526 | m HD 50.693 | m     |                   |
| For M5 | Adr 77 KD1 | 3902 1.0 C       | 1 2 Rf 0.95471 | m HD 50.137 | m     |                   |
| For M5 | Adr 78 KD1 | 3902 1.0 C       | 2              |             |       |                   |
| For M5 | Adr 79 KD1 | 3902 1.0 C       | 1 2 Rb 1.42846 | m HD 50.405 | m     |                   |
| For M5 | Adr 80 KD1 | 4200 1.0 C       | 1 2 Rf 0.98860 | m HD 50.178 | m     |                   |
| For M5 | Adr 81 KD1 | 3902 1.0 C       | 1 2 Rb 1.42865 | m HD 50.398 | m     |                   |
| For M5 | Adr 82 KD1 | 4200 1.0 C       | 1 2 Rf 0.98855 | m HD 50.186 | m     |                   |
| For M5 | Adr 83 KD1 | 4200 1.0 C       | 2              |             |       |                   |

|        |     |     |     |                 |        |         |   |    |        |   |   |          |   |   |         |       |
|--------|-----|-----|-----|-----------------|--------|---------|---|----|--------|---|---|----------|---|---|---------|-------|
| For M5 | Adr | 84  | KD1 | 4200##### 1.0 C | 1 2 Rb | 1.24109 | m | HD | 50.778 | m |   |          |   |   |         |       |
| For M5 | Adr | 85  | KD1 | 4300##### 1.0 C | 1 2 Rf | 1.12036 | m | HD | 50.327 | m |   |          |   |   |         |       |
| For M5 | Adr | 86  | KD1 | 4200##### 1.0 C | 1 2 Rb | 1.24054 | m | HD | 50.781 | m |   |          |   |   |         |       |
| For M5 | Adr | 87  | TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 88  | KD1 | 4200 1.0 C      | 1 2 Rb | 1.24112 | m | HD | 50.782 | m |   |          |   |   |         |       |
| For M5 | Adr | 89  | KD1 | 4300 1.0 C      | 1 2 Rf | 1.12041 | m | HD | 50.331 | m |   |          |   |   |         |       |
| For M5 | Adr | 90  | KD1 | 4200 1.0 C      | 1 2 Rb | 1.24080 | m | HD | 50.754 | m |   |          |   |   |         |       |
| For M5 | Adr | 91  | KD1 | 4300 1.0 C      | 1 2 Rf | 1.12022 | m | HD | 50.344 | m |   |          |   |   |         |       |
| For M5 | Adr | 92  | KD1 | 4300 1.0 C      | 2      |         |   |    |        |   | Z | 67.81125 | m | Z | 67.8113 | 4300v |
| For M5 | Adr | 93  | KD1 | 4300##### 1.0 C | 1 2 Rb | 1.11571 | m | HD | 50.014 | m |   |          |   |   |         |       |
| For M5 | Adr | 94  | KD1 | 4400##### 1.0 C | 1 2 Rf | 1.26372 | m | HD | 50.285 | m |   |          |   |   |         |       |
| For M5 | Adr | 95  | KD1 | 4300##### 1.0 C | 1 2 Rb | 1.11610 | m | HD | 50.040 | m |   |          |   |   |         |       |
| For M5 | Adr | 96  | KD1 | 4400##### 1.0 C | 1 2 Rf | 1.26329 | m | HD | 50.293 | m |   |          |   |   |         |       |
| For M5 | Adr | 97  | KD1 | 4400##### 1.0 C | 2      |         |   |    |        |   | Z | 67.66340 | m | Z | 67.6634 |       |
| For M5 | Adr | 98  | TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 99  | KD1 | 4300 1.0 C      | 1 2 Rb | 1.11607 | m | HD | 50.023 | m |   |          |   |   |         |       |
| For M5 | Adr | 100 | KD1 | 4400 1.0 C      | 1 2 Rf | 1.26379 | m | HD | 50.297 | m |   |          |   |   |         |       |
| For M5 | Adr | 101 | KD1 | 4300 1.0 C      | 1 2 Rb | 1.11603 | m | HD | 50.041 | m |   |          |   |   |         |       |
| For M5 | Adr | 102 | KD1 | 4400 1.0 C      | 1 2 Rf | 1.26363 | m | HD | 50.291 | m |   |          |   |   |         |       |
| For M5 | Adr | 103 | KD1 | 4400 1.0 C      | 2      |         |   |    |        |   | Z | 67.66359 | m | Z | 67.6636 | 4400v |
| For M5 | Adr | 104 | KD1 | 4400 1.0 C      | 1 2 Rb | 0.98052 | m | HD | 49.613 | m |   |          |   |   |         |       |
| For M5 | Adr | 105 | KD1 | 4500 1.0 C      | 1 2 Rf | 1.35396 | m | HD | 51.013 | m |   |          |   |   |         |       |
| For M5 | Adr | 106 | KD1 | 4400 1.0 C      | 1 2 Rb | 0.98053 | m | HD | 49.604 | m |   |          |   |   |         |       |
| For M5 | Adr | 107 | KD1 | 4500 1.0 C      | 1 2 Rf | 1.35377 | m | HD | 51.017 | m |   |          |   |   |         |       |
| For M5 | Adr | 108 | KD1 | 4500 1.0 C      | 2      |         |   |    |        |   | Z | 67.29024 | m | Z | 67.2902 | 4500v |
| For M5 | Adr | 109 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95043 | m | HD | 49.597 | m |   |          |   |   |         |       |
| For M5 | Adr | 110 | KD1 | 4600##### 1.0 C | 1 2 Rf | 1.29151 | m | HD | 51.013 | m |   |          |   |   |         |       |
| For M5 | Adr | 111 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.94983 | m | HD | 49.612 | m |   |          |   |   |         |       |
| For M5 | Adr | 112 | TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 113 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95026 | m | HD | 49.613 | m |   |          |   |   |         |       |
| For M5 | Adr | 114 | KD1 | 4600##### 1.0 C | 1 2 Rf | 1.29202 | m | HD | 51.036 | m |   |          |   |   |         |       |
| For M5 | Adr | 115 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95026 | m | HD | 49.615 | m |   |          |   |   |         |       |
| For M5 | Adr | 116 | KD1 | 4600##### 1.0 C | 1 2 Rf | 1.29170 | m | HD | 51.067 | m |   |          |   |   |         |       |
| For M5 | Adr | 117 | KD1 | 4600##### 1.0 C | 2      |         |   |    |        |   | Z | 66.94840 | m | Z | 66.9484 |       |
| For M5 | Adr | 118 | TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 119 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95087 | m | HD | 49.595 | m |   |          |   |   |         |       |
| For M5 | Adr | 120 | KD1 | 4600##### 1.0 C | 1 2 Rf | 1.29188 | m | HD | 51.052 | m |   |          |   |   |         |       |
| For M5 | Adr | 121 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95043 | m | HD | 49.602 | m |   |          |   |   |         |       |
| For M5 | Adr | 122 | TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 123 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95018 | m | HD | 49.612 | m |   |          |   |   |         |       |
| For M5 | Adr | 124 | KD1 | 4600##### 1.0 C | 1 2 Rf | 1.29170 | m | HD | 51.063 | m |   |          |   |   |         |       |
| For M5 | Adr | 125 | KD1 | 4500##### 1.0 C | 1 2 Rb | 0.95064 | m | HD | 49.597 | m |   |          |   |   |         |       |
| For M5 | Adr | 126 | TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 127 | KD1 | 4500 1.0 C      | 1 2 Rb | 0.95046 | m | HD | 49.610 | m |   |          |   |   |         |       |
| For M5 | Adr | 128 | KD1 | 4600 1.0 C      | 1 2 Rf | 1.29179 | m | HD | 51.030 | m |   |          |   |   |         |       |
| For M5 | Adr | 129 | KD1 | 4500 1.0 C      | 1 2 Rb | 0.95038 | m | HD | 49.591 | m |   |          |   |   |         |       |
| For M5 | Adr | 130 | KD1 | 4600 1.0 C      | 1 2 Rf | 1.29189 | m | HD | 51.025 | m |   |          |   |   |         |       |
| For M5 | Adr | 131 | KD1 | 4600 1.0 C      | 2      |         |   |    |        |   | Z | 66.94882 | m | Z | 66.9488 | 4600v |
| For M5 | Adr | 132 | KD1 | 4600 1.0 C      | 1 2 Rb | 0.89311 | m | HD | 49.190 | m |   |          |   |   |         |       |
| For M5 | Adr | 133 | KD1 | 4700 1.0 C      | 1 2 Rf | 1.33150 | m | HD | 50.584 | m |   |          |   |   |         |       |
| For M5 | Adr | 134 | KD1 | 4600 1.0 C      | 1 2 Rb | 0.89321 | m | HD | 49.203 | m |   |          |   |   |         |       |
| For M5 | Adr | 135 | KD1 | 4700 1.0 C      | 1 2 Rf | 1.33157 | m | HD | 50.597 | m |   |          |   |   |         |       |
| For M5 | Adr | 136 | KD1 | 4700 1.0 C      | 2      |         |   |    |        |   | Z | 66.51044 | m | Z | 66.5104 | 4700v |
| For M5 | Adr | 137 | KD1 | 4700 1.0 C      | 1 2 Rb | 0.97133 | m | HD | 48.033 | m |   |          |   |   |         |       |
| For M5 | Adr | 138 | KD1 | 4800uus 1.0 C   | 1 2 Rf | 1.34413 | m | HD | 52.668 | m |   |          |   |   |         |       |
| For M5 | Adr | 139 | KD1 | 4700 1.0 C      | 1 2 Rb | 0.97148 | m | HD | 48.037 | m |   |          |   |   |         |       |
| For M5 | Adr | 140 | KD1 | 4800uus 1.0 C   | 1 2 Rf | 1.34449 | m | HD | 52.669 | m |   |          |   |   |         |       |
| For M5 | Adr | 141 | KD1 | 4800uus 1.0 C   | 2      |         |   |    |        |   | Z | 66.13753 | m | Z | 66.1375 | 4800v |
| For M5 | Adr | 142 | KD1 | 4800uus 1.0 C   | 1 2 Rb | 0.94646 | m | HD | 50.157 | m |   |          |   |   |         |       |
| For M5 | Adr | 143 | KD1 | 4900 1.0 C      | 1 2 Rf | 1.34513 | m | HD | 50.300 | m |   |          |   |   |         |       |
| For M5 | Adr | 144 | KD1 | 4800uus 1.0 C   | 1 2 Rb | 0.94657 | m | HD | 50.172 | m |   |          |   |   |         |       |
| For M5 | Adr | 145 | KD1 | 4900 1.0 C      | 1 2 Rf | 1.34537 | m | HD | 50.314 | m |   |          |   |   |         |       |
| For M5 | Adr | 146 | KD1 | 4900 1.0 C      | 2      |         |   |    |        |   | Z | 65.73879 | m | Z | 65.7388 | 4900v |
| For M5 | Adr | 147 | KD1 | 4900 1.0 C      | 1 2 Rb | 0.93661 | m | HD | 50.404 | m |   |          |   |   |         |       |
| For M5 | Adr | 148 | KD1 | 4901##### 1.0 C | 1 2 Rf | 1.32491 | m | HD | 49.708 | m |   |          |   |   |         |       |
| For M5 | Adr | 149 | TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 150 | KD1 | 5000 1.0 C      | 1 2 Rf | 1.32471 | m | HD | 49.718 | m |   |          |   |   |         |       |
| For M5 | Adr | 151 | KD1 | 4900 1.0 C      | 1 2 Rb | 0.93665 | m | HD | 50.386 | m |   |          |   |   |         |       |
| For M5 | Adr | 152 | KD1 | 5000 1.0 C      | 1 2 Rf | 1.32488 | m | HD | 49.708 | m |   |          |   |   |         |       |
| For M5 | Adr | 153 | KD1 | 5000 1.0 C      | 2      |         |   |    |        |   | Z | 65.35062 | m | Z | 65.3506 | 5000v |
| For M5 | Adr | 154 | KD1 | 5000##### 1.0 C | 1 2 Rb | 0.93913 | m | HD | 54.619 | m |   |          |   |   |         |       |
| For M5 | Adr | 155 | TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 156 | KD1 | 5000 1.0 C      | 1 2 Rb | 0.95038 | m | HD | 50.913 | m |   |          |   |   |         |       |
| For M5 | Adr | 157 | KD1 | 5100 1.0 C      | 1 2 Rf | 1.37788 | m | HD | 49.792 | m |   |          |   |   |         |       |
| For M5 | Adr | 158 | KD1 | 5000 1.0 C      | 1 2 Rb | 0.95035 | m | HD | 50.924 | m |   |          |   |   |         |       |
| For M5 | Adr | 159 | KD1 | 5100 1.0 C      | 1 2 Rf | 1.37770 | m | HD | 49.799 | m |   |          |   |   |         |       |
| For M5 | Adr | 160 | KD1 | 5100 1.0 C      | 2      |         |   |    |        |   | Z | 64.92319 | m | Z | 64.9232 | 5100v |
| For M5 | Adr | 161 | KD1 | 5100 1.0 C      | 1 2 Rb | 0.93392 | m | HD | 49.608 | m |   |          |   |   |         |       |
| For M5 | Adr | 162 | KD1 | 5200 1.0 C      | 1 2 Rf | 1.33406 | m | HD | 50.688 | m |   |          |   |   |         |       |
| For M5 | Adr | 163 | KD1 | 5100 1.0 C      | 1 2 Rb | 0.93396 | m | HD | 49.605 | m |   |          |   |   |         |       |
| For M5 | Adr | 164 | KD1 | 5200 1.0 C      | 1 2 Rf | 1.33401 | m | HD | 50.693 | m |   |          |   |   |         |       |
| For M5 | Adr | 165 | KD1 | 5200 1.0 C      | 2      |         |   |    |        |   | Z | 64.52309 | m | Z | 64.5231 | 5200v |
| For M5 | Adr | 166 | KD1 | 5200##### 1.0 C | 1 2 Rb | 0.99609 | m | HD | 40.588 | m |   |          |   |   |         |       |
| For M5 | Adr | 167 | TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |   |         |       |
| For M5 | Adr | 168 | KD1 | 5200 1.0 C      | 1 2 Rb | 0.96612 | m | HD | 49.767 | m |   |          |   |   |         |       |
| For M5 | Adr | 169 | KD1 | 5300 1.0 C      | 1 2 Rf | 1.25721 | m | HD | 50.554 | m |   |          |   |   |         |       |
| For M5 | Adr | 170 | KD1 | 5200 1.0 C      | 1 2 Rb | 0.96620 | m | HD | 49.811 | m |   |          |   |   |         |       |
| For M5 | Adr | 171 | KD1 | 5300 1.0 C      | 1 2 Rf | 1.25721 | m | HD | 50.521 | m |   |          |   |   |         |       |
| For M5 | Adr | 172 | KD1 | 5300 1.0 C      | 2      |         |   |    |        |   | Z | 64.23203 | m | Z | 64.2320 | 5300v |

|        |     |         |                 |        |         |   |    |        |   |   |          |   |                 |
|--------|-----|---------|-----------------|--------|---------|---|----|--------|---|---|----------|---|-----------------|
| For M5 | Adr | 173 KD1 | 5300##### 1.0 C | 1 2 Rb | 1.16304 | m | HD | 51.249 | m |   |          |   |                 |
| For M5 | Adr | 174 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 175 KD1 | 5300 1.0 C      | 1 2 Rb | 1.16179 | m | HD | 49.931 | m |   |          |   |                 |
| For M5 | Adr | 176 KD1 | 5400 1.0 C      | 1 2 Rf | 0.97640 | m | HD | 50.520 | m |   |          |   |                 |
| For M5 | Adr | 177 KD1 | 5300 1.0 C      | 1 2 Rb | 1.16174 | m | HD | 49.927 | m |   |          |   |                 |
| For M5 | Adr | 178 KD1 | 5400 1.0 C      | 1 2 Rf | 0.97645 | m | HD | 50.523 | m |   |          |   |                 |
| For M5 | Adr | 179 KD1 | 5400 1.0 C      | 2      |         |   |    |        |   | Z | 64.41737 | m | Z 64.4174 5400v |
| For M5 | Adr | 180 KD1 | 5400##### 1.0 C | 1 2 Rb | 1.37777 | m | HD | 48.845 | m |   |          |   |                 |
| For M5 | Adr | 181 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 182 KD1 | 5400 1.0 C      | 1 2 Rb | 1.38862 | m | HD | 49.961 | m |   |          |   |                 |
| For M5 | Adr | 183 KD1 | 5500 1.0 C      | 1 2 Rf | 0.78307 | m | HD | 50.097 | m |   |          |   |                 |
| For M5 | Adr | 184 KD1 | 5400 1.0 C      | 1 2 Rb | 1.38874 | m | HD | 49.927 | m |   |          |   |                 |
| For M5 | Adr | 185 KD1 | 5500 1.0 C      | 1 2 Rf | 0.78300 | m | HD | 50.103 | m |   |          |   |                 |
| For M5 | Adr | 186 KD1 | 5500 1.0 C      | 2      |         |   |    |        |   | Z | 65.02301 | m | Z 65.0230 5500v |
| For M5 | Adr | 187 KD1 | 5500 1.0 C      | 1 2 Rb | 1.48022 | m | HD | 48.594 | m |   |          |   |                 |
| For M5 | Adr | 188 KD1 | 5600 1.0 C      | 1 2 Rf | 0.84550 | m | HD | 51.206 | m |   |          |   |                 |
| For M5 | Adr | 189 KD1 | 5500 1.0 C      | 1 2 Rb | 1.48012 | m | HD | 48.572 | m |   |          |   |                 |
| For M5 | Adr | 190 KD1 | 5600 1.0 C      | 1 2 Rf | 0.84548 | m | HD | 51.242 | m |   |          |   |                 |
| For M5 | Adr | 191 KD1 | 5600 1.0 C      | 2      |         |   |    |        |   | Z | 65.65768 | m | Z 65.6577 5600v |
| For M5 | Adr | 192 KD1 | 5600 1.0 C      | 1 2 Rb | 1.29592 | m | HD | 50.395 | m |   |          |   |                 |
| For M5 | Adr | 193 KD1 | 5700 1.0 C      | 1 2 Rf | 1.09030 | m | HD | 49.898 | m |   |          |   |                 |
| For M5 | Adr | 194 KD1 | 5600 1.0 C      | 1 2 Rb | 1.29574 | m | HD | 50.395 | m |   |          |   |                 |
| For M5 | Adr | 195 KD1 | 5700 1.0 C      | 1 2 Rf | 1.09022 | m | HD | 49.911 | m |   |          |   |                 |
| For M5 | Adr | 196 KD1 | 5700 1.0 C      | 2      |         |   |    |        |   | Z | 65.86325 | m | Z 65.8633 5700v |
| For M5 | Adr | 197 KD1 | 5700##### 1.0 C | 1 2 Rb | 1.03507 | m | HD | 49.050 | m |   |          |   |                 |
| For M5 | Adr | 198 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 199 KD1 | 5700 1.0 C      | 1 2 Rb | 1.03772 | m | HD | 49.841 | m |   |          |   |                 |
| For M5 | Adr | 200 KD1 | 5800 1.0 C      | 1 2 Rf | 1.41226 | m | HD | 50.141 | m |   |          |   |                 |
| For M5 | Adr | 201 KD1 | 5700 1.0 C      | 1 2 Rb | 1.03771 | m | HD | 49.855 | m |   |          |   |                 |
| For M5 | Adr | 202 KD1 | 5800 1.0 C      | 1 2 Rf | 1.41230 | m | HD | 50.158 | m |   |          |   |                 |
| For M5 | Adr | 203 KD1 | 5800 1.0 C      | 2      |         |   |    |        |   | Z | 65.48868 | m | Z 65.4887 5800v |
| For M5 | Adr | 204 KD1 | 5800 1.0 C      | 1 2 Rb | 0.69752 | m | HD | 49.443 | m |   |          |   |                 |
| For M5 | Adr | 205 KD1 | 5900 1.0 C      | 1 2 Rf | 1.45739 | m | HD | 49.503 | m |   |          |   |                 |
| For M5 | Adr | 206 KD1 | 5800 1.0 C      | 1 2 Rb | 0.69757 | m | HD | 49.459 | m |   |          |   |                 |
| For M5 | Adr | 207 KD1 | 5900 1.0 C      | 1 2 Rf | 1.45742 | m | HD | 49.503 | m |   |          |   |                 |
| For M5 | Adr | 208 KD1 | 5900 1.0 C      | 2      |         |   |    |        |   | Z | 64.72882 | m | Z 64.7288 5900v |
| For M5 | Adr | 209 KD1 | 5900##### 1.0 C | 1 2 Rb | 0.83733 | m | HD | 45.714 | m |   |          |   |                 |
| For M5 | Adr | 210 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 211 KD1 | 5900 1.0 C      | 1 2 Rb | 0.79311 | m | HD | 50.780 | m |   |          |   |                 |
| For M5 | Adr | 212 KD1 | 6000 1.0 C      | 1 2 Rf | 1.45572 | m | HD | 47.580 | m |   |          |   |                 |
| For M5 | Adr | 213 KD1 | 5900 1.0 C      | 1 2 Rb | 0.79291 | m | HD | 50.772 | m |   |          |   |                 |
| For M5 | Adr | 214 KD1 | 6000 1.0 C      | 1 2 Rf | 1.45569 | m | HD | 47.608 | m |   |          |   |                 |
| For M5 | Adr | 215 KD1 | 6000 1.0 C      | 2      |         |   |    |        |   | Z | 64.06612 | m | Z 64.0661 6000v |
| For M5 | Adr | 216 KD1 | 6000##### 1.0 C | 1 2 Rb | 0.89953 | m | HD | 50.873 | m |   |          |   |                 |
| For M5 | Adr | 217 KD1 | 6001##### 1.0 C | 1 2 Rf | 1.47220 | m | HD | 48.494 | m |   |          |   |                 |
| For M5 | Adr | 218 TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 219 KD1 | 6000##### 1.0 C | 1 2 Rb | 0.91054 | m | HD | 49.967 | m |   |          |   |                 |
| For M5 | Adr | 220 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 221 KD1 | 6000 1.0 C      | 1 2 Rb | 0.91066 | m | HD | 49.963 | m |   |          |   |                 |
| For M5 | Adr | 222 KD1 | 6100 1.0 C      | 1 2 Rf | 1.48340 | m | HD | 49.422 | m |   |          |   |                 |
| For M5 | Adr | 223 KD1 | 6000 1.0 C      | 1 2 Rb | 0.91066 | m | HD | 49.956 | m |   |          |   |                 |
| For M5 | Adr | 224 KD1 | 6100 1.0 C      | 1 2 Rf | 1.48323 | m | HD | 49.402 | m |   |          |   |                 |
| For M5 | Adr | 225 KD1 | 6100 1.0 C      | 2      |         |   |    |        |   | Z | 63.49346 | m | Z 63.4935 6100v |
| For M5 | Adr | 226 KD1 | 6100 1.0 C      | 1 2 Rb | 0.75162 | m | HD | 49.554 | m |   |          |   |                 |
| For M5 | Adr | 227 KD1 | 6200 1.0 C      | 1 2 Rf | 1.45262 | m | HD | 49.538 | m |   |          |   |                 |
| For M5 | Adr | 228 KD1 | 6100 1.0 C      | 1 2 Rb | 0.75146 | m | HD | 49.570 | m |   |          |   |                 |
| For M5 | Adr | 229 KD1 | 6200 1.0 C      | 1 2 Rf | 1.45274 | m | HD | 49.507 | m |   |          |   |                 |
| For M5 | Adr | 230 KD1 | 6200 1.0 C      | 2      |         |   |    |        |   | Z | 62.79231 | m | Z 62.7923 6200v |
| For M5 | Adr | 231 KD1 | 6200##### 1.0 C | 1 2 Rb | 0.77064 | m | HD | 50.734 | m |   |          |   |                 |
| For M5 | Adr | 232 KD1 | 6300##### 1.0 C | 1 2 Rf | 1.47493 | m | HD | 47.854 | m |   |          |   |                 |
| For M5 | Adr | 233 TO  | Station rep ed  | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 234 KD1 | 6200 1.0 C      | 1 2 Rb | 0.77843 | m | HD | 49.320 | m |   |          |   |                 |
| For M5 | Adr | 235 KD1 | 6300 1.0 C      | 1 2 Rf | 1.48286 | m | HD | 49.257 | m |   |          |   |                 |
| For M5 | Adr | 236 KD1 | 6200 1.0 C      | 1 2 Rb | 0.77837 | m | HD | 49.294 | m |   |          |   |                 |
| For M5 | Adr | 237 KD1 | 6300 1.0 C      | 1 2 Rf | 1.48276 | m | HD | 49.259 | m |   |          |   |                 |
| For M5 | Adr | 238 KD1 | 6300 1.0 C      | 2      |         |   |    |        |   | Z | 62.08790 | m | Z 62.0879 6300v |
| For M5 | Adr | 239 KD1 | 6300 1.0 C      | 1 2 Rb | 0.75340 | m | HD | 49.951 | m |   |          |   |                 |
| For M5 | Adr | 240 KD1 | 6400 1.0 C      | 1 2 Rf | 1.66571 | m | HD | 49.061 | m |   |          |   |                 |
| For M5 | Adr | 241 KD1 | 6300 1.0 C      | 1 2 Rb | 0.75321 | m | HD | 49.968 | m |   |          |   |                 |
| For M5 | Adr | 242 KD1 | 6400 1.0 C      | 1 2 Rf | 1.66592 | m | HD | 49.049 | m |   |          |   |                 |
| For M5 | Adr | 243 KD1 | 6400 1.0 C      | 2      |         |   |    |        |   | Z | 61.17538 | m | Z 61.1754 6400v |
| For M5 | Adr | 244 KD1 | 6400##### 1.0 C | 1 2 Rb | 0.82006 | m | HD | 47.385 | m |   |          |   |                 |
| For M5 | Adr | 245 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 246 KD1 | 6400 1.0 C      | 1 2 Rb | 0.81693 | m | HD | 49.297 | m |   |          |   |                 |
| For M5 | Adr | 247 KD1 | 6500 1.0 C      | 1 2 Rf | 1.44441 | m | HD | 49.479 | m |   |          |   |                 |
| For M5 | Adr | 248 KD1 | 6400 1.0 C      | 1 2 Rb | 0.81671 | m | HD | 49.289 | m |   |          |   |                 |
| For M5 | Adr | 249 KD1 | 6500 1.0 C      | 1 2 Rf | 1.44439 | m | HD | 49.493 | m |   |          |   |                 |
| For M5 | Adr | 250 KD1 | 6500 1.0 C      | 2      |         |   |    |        |   | Z | 60.54780 | m | Z 60.5478 6500v |
| For M5 | Adr | 251 KD1 | 6500##### 1.0 C | 1 2 Rb | 0.83345 | m | HD | 48.379 | m |   |          |   |                 |
| For M5 | Adr | 252 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 253 KD1 | 6500 1.0 C      | 1 2 Rb | 0.82516 | m | HD | 51.268 | m |   |          |   |                 |
| For M5 | Adr | 254 KD1 | 6501##### 1.0 C | 1 2 Rf | 1.49083 | m | HD | 47.425 | m |   |          |   |                 |
| For M5 | Adr | 255 TO  | Measurem peated | 2      |         |   |    |        |   |   |          |   |                 |
| For M5 | Adr | 256 KD1 | 6600 1.0 C      | 1 2 Rf | 1.49078 | m | HD | 47.459 | m |   |          |   |                 |
| For M5 | Adr | 257 KD1 | 6500 1.0 C      | 1 2 Rb | 0.82507 | m | HD | 51.278 | m |   |          |   |                 |
| For M5 | Adr | 258 KD1 | 6600 1.0 C      | 1 2 Rf | 1.49093 | m | HD | 47.433 | m |   |          |   |                 |
| For M5 | Adr | 259 KD1 | 6600 1.0 C      | 2      |         |   |    |        |   | Z | 59.88205 | m | Z 59.8821 6600v |
| For M5 | Adr | 260 KD1 | 6600 1.0 C      | 1 2 Rb | 0.95223 | m | HD | 51.187 | m |   |          |   |                 |
| For M5 | Adr | 261 KD1 | 6700 1.0 C      | 1 2 Rf | 1.08266 | m | HD | 49.107 | m |   |          |   |                 |

[illegible]

|        |     |         |                    |        |         |   |    |        |   |            |   |   |         |       |
|--------|-----|---------|--------------------|--------|---------|---|----|--------|---|------------|---|---|---------|-------|
| For M5 | Adr | 351 KD1 | 62000 2.0 C        | 2      |         |   |    |        |   | Z 62.81103 | m | Z | 62.8110 | 6200p |
| For M5 | Adr | 352 KD1 | 62000 1.0 C        | 1 2 Rb | 1.63426 | m | HD | 49.770 | m |            |   |   |         |       |
| For M5 | Adr | 353 KD1 | 61000 1.0 C        | 1 2 Rf | 0.81830 | m | HD | 51.073 | m |            |   |   |         |       |
| For M5 | Adr | 354 KD1 | 62000 1.0 C        | 1 2 Rb | 1.63451 | m | HD | 49.746 | m |            |   |   |         |       |
| For M5 | Adr | 355 KD1 | 61000 2.0 C        | 1 2 Rf | 0.81850 | m | HD | 51.052 | m |            |   |   |         |       |
| For M5 | Adr | 356 KD1 | 61000 2.0 C        | 2      |         |   |    |        |   | Z 63.62701 | m | Z | 63.6270 | 6100p |
| For M5 | Adr | 357 KD1 | 61000 1.0 C        | 1 2 Rb | 1.49768 | m | HD | 50.708 | m |            |   |   |         |       |
| For M5 | Adr | 358 KD1 | 60000 1.0 C        | 1 2 Rf | 0.79213 | m | HD | 50.862 | m |            |   |   |         |       |
| For M5 | Adr | 359 KD1 | 61000 1.0 C        | 1 2 Rb | 1.49784 | m | HD | 50.710 | m |            |   |   |         |       |
| For M5 | Adr | 360 KD1 | 60000 1.0 C        | 1 2 Rf | 0.79177 | m | HD | 50.862 | m |            |   |   |         |       |
| For M5 | Adr | 361 KD1 | 60000 1.0 C        | 2      |         |   |    |        |   | Z 64.33282 | m | Z | 64.3328 | 6000p |
| For M5 | Adr | 362 KD1 | 60000 1.0 C        | 1 2 Rb | 1.52253 | m | HD | 50.320 | m |            |   |   |         |       |
| For M5 | Adr | 363 KD1 | 59000 1.0 C        | 1 2 Rf | 0.87171 | m | HD | 51.053 | m |            |   |   |         |       |
| For M5 | Adr | 364 KD1 | 60000 2.0 C        | 1 2 Rb | 1.52281 | m | HD | 50.368 | m |            |   |   |         |       |
| For M5 | Adr | 365 KD1 | 59000 2.0 C        | 1 2 Rf | 0.87180 | m | HD | 51.036 | m |            |   |   |         |       |
| For M5 | Adr | 366 KD1 | 59000 2.0 C        | 2      |         |   |    |        |   | Z 64.98373 | m | Z | 64.9837 | 5900p |
| For M5 | Adr | 367 KD1 | 59000 1.0 C        | 1 2 Rb | 1.34609 | m | HD | 50.526 | m |            |   |   |         |       |
| For M5 | Adr | 368 KD1 | 58000 2.0 C        | 1 2 Rf | 0.84818 | m | HD | 50.337 | m |            |   |   |         |       |
| For M5 | Adr | 369 KD1 | 59000 2.0 C        | 1 2 Rb | 1.34610 | m | HD | 50.495 | m |            |   |   |         |       |
| For M5 | Adr | 370 KD1 | 58000 2.0 C        | 1 2 Rf | 0.84824 | m | HD | 50.337 | m |            |   |   |         |       |
| For M5 | Adr | 371 KD1 | 58000 2.0 C        | 2      |         |   |    |        |   | Z 65.48161 | m | Z | 65.4816 | 5800p |
| For M5 | Adr | 372 KD1 | 58000#### 1.0 C    | 1 2 Rb | 1.36056 | m | HD | 50.550 | m |            |   |   |         |       |
| For M5 | Adr | 373 KD1 | 57000#### 2.0 C    | 1 2 Rf | 0.99792 | m | HD | 49.813 | m |            |   |   |         |       |
| For M5 | Adr | 374 KD1 | 58000#### 2.0 C    | 1 2 Rb | 1.36089 | m | HD | 50.555 | m |            |   |   |         |       |
| For M5 | Adr | 375 TO  | Station rep ed     | 2      |         |   |    |        |   |            |   |   |         |       |
| For M5 | Adr | 376 KD1 | 58000 2.0 C        | 1 2 Rb | 1.36071 | m | HD | 50.516 | m |            |   |   |         |       |
| For M5 | Adr | 377 KD1 | 57000 2.0 C        | 1 2 Rf | 0.99804 | m | HD | 49.697 | m |            |   |   |         |       |
| For M5 | Adr | 378 KD1 | 58000 2.0 C        | 1 2 Rb | 1.36082 | m | HD | 50.526 | m |            |   |   |         |       |
| For M5 | Adr | 379 KD1 | 57000 2.0 C        | 1 2 Rf | 0.99821 | m | HD | 49.694 | m |            |   |   |         |       |
| For M5 | Adr | 380 KD1 | 57000 2.0 C        | 2      |         |   |    |        |   | Z 65.84424 | m | Z | 65.8442 | 5700p |
| For M5 | Adr | 381 KD1 | 57000 1.0 C        | 1 2 Rb | 1.07842 | m | HD | 50.439 | m |            |   |   |         |       |
| For M5 | Adr | 382 KD1 | 57001#### 1.0 C    | 1 2 Rf | 1.26697 | m | HD | 49.483 | m |            |   |   |         |       |
| For M5 | Adr | 383 TO  | Measurement peated | 2      |         |   |    |        |   |            |   |   |         |       |
| For M5 | Adr | 384 KD1 | 56000 1.0 C        | 1 2 Rf | 1.26672 | m | HD | 49.469 | m |            |   |   |         |       |
| For M5 | Adr | 385 KD1 | 57000 2.0 C        | 1 2 Rb | 1.07833 | m | HD | 50.447 | m |            |   |   |         |       |
| For M5 | Adr | 386 KD1 | 56000 1.0 C        | 1 2 Rf | 1.26681 | m | HD | 49.499 | m |            |   |   |         |       |
| For M5 | Adr | 387 KD1 | 56000 1.0 C        | 2      |         |   |    |        |   | Z 65.65585 | m | Z | 65.6559 | 5600p |
| For M5 | Adr | 388 KD1 | 56000#### 1.0 C    | 1 2 Rb | 0.82184 | m | HD | 50.452 | m |            |   |   |         |       |
| For M5 | Adr | 389 KD1 | 55000#### 1.0 C    | 1 2 Rf | 1.46518 | m | HD | 49.513 | m |            |   |   |         |       |
| For M5 | Adr | 390 KD1 | 56000#### 1.0 C    | 1 2 Rb | 0.82150 | m | HD | 50.494 | m |            |   |   |         |       |
| For M5 | Adr | 391 TO  | Station rep ed     | 2      |         |   |    |        |   |            |   |   |         |       |
| For M5 | Adr | 392 KD1 | 56000#### 1.0 C    | 1 2 Rb | 0.82142 | m | HD | 50.492 | m |            |   |   |         |       |
| For M5 | Adr | 393 KD1 | 55000#### 1.0 C    | 1 2 Rf | 1.46511 | m | HD | 49.561 | m |            |   |   |         |       |
| For M5 | Adr | 394 KD1 | 56000#### 1.0 C    | 1 2 Rb | 0.82183 | m | HD | 50.474 | m |            |   |   |         |       |
| For M5 | Adr | 395 TO  | Station rep ed     | 2      |         |   |    |        |   |            |   |   |         |       |
| For M5 | Adr | 396 KD1 | 56000 1.0 C        | 1 2 Rb | 0.82158 | m | HD | 50.468 | m |            |   |   |         |       |
| For M5 | Adr | 397 KD1 | 55000 2.0 C        | 1 2 Rf | 1.46516 | m | HD | 49.501 | m |            |   |   |         |       |
| For M5 | Adr | 398 KD1 | 56000 2.0 C        | 1 2 Rb | 0.82170 | m | HD | 50.453 | m |            |   |   |         |       |
| For M5 | Adr | 399 KD1 | 55000 2.0 C        | 1 2 Rf | 1.46509 | m | HD | 49.522 | m |            |   |   |         |       |
| For M5 | Adr | 400 KD1 | 55000 2.0 C        | 2      |         |   |    |        |   | Z 65.01236 | m | Z | 65.0124 | 5500p |
| For M5 | Adr | 401 KD1 | 55000 1.0 C        | 1 2 Rb | 0.78180 | m | HD | 50.299 | m |            |   |   |         |       |
| For M5 | Adr | 402 KD1 | 54000 1.0 C        | 1 2 Rf | 1.39040 | m | HD | 49.720 | m |            |   |   |         |       |
| For M5 | Adr | 403 KD1 | 55000 1.0 C        | 1 2 Rb | 0.78176 | m | HD | 50.309 | m |            |   |   |         |       |
| For M5 | Adr | 404 KD1 | 54000 1.0 C        | 1 2 Rf | 1.39029 | m | HD | 49.683 | m |            |   |   |         |       |
| For M5 | Adr | 405 KD1 | 54000 1.0 C        | 2      |         |   |    |        |   | Z 64.40379 | m | Z | 64.4038 | 5400p |
| For M5 | Adr | 406 KD1 | 54000 1.0 C        | 1 2 Rb | 0.90404 | m | HD | 50.107 | m |            |   |   |         |       |
| For M5 | Adr | 407 KD1 | 53000 1.0 C        | 1 2 Rf | 1.07169 | m | HD | 49.738 | m |            |   |   |         |       |
| For M5 | Adr | 408 KD1 | 54000 1.0 C        | 1 2 Rb | 0.90375 | m | HD | 50.116 | m |            |   |   |         |       |
| For M5 | Adr | 409 KD1 | 53000 1.0 C        | 1 2 Rf | 1.07171 | m | HD | 49.752 | m |            |   |   |         |       |
| For M5 | Adr | 410 KD1 | 53000 1.0 C        | 2      |         |   |    |        |   | Z 64.23598 | m | Z | 64.2360 | 5300p |
| For M5 | Adr | 411 KD1 | 53000 1.0 C        | 1 2 Rb | 1.19051 | m | HD | 49.501 | m |            |   |   |         |       |
| For M5 | Adr | 412 KD1 | 52000 1.0 C        | 1 2 Rf | 0.90024 | m | HD | 49.989 | m |            |   |   |         |       |
| For M5 | Adr | 413 KD1 | 53000 1.0 C        | 1 2 Rb | 1.19072 | m | HD | 49.520 | m |            |   |   |         |       |
| For M5 | Adr | 414 KD1 | 52000 1.0 C        | 1 2 Rf | 0.90039 | m | HD | 49.962 | m |            |   |   |         |       |
| For M5 | Adr | 415 KD1 | 52000 1.0 C        | 2      |         |   |    |        |   | Z 64.52627 | m | Z | 64.5263 | 5200p |
| For M5 | Adr | 416 KD1 | 52000 1.0 C        | 1 2 Rb | 1.29459 | m | HD | 49.416 | m |            |   |   |         |       |
| For M5 | Adr | 417 KD1 | 51000 2.0 C        | 1 2 Rf | 0.88199 | m | HD | 50.195 | m |            |   |   |         |       |
| For M5 | Adr | 418 KD1 | 52000 1.0 C        | 1 2 Rb | 1.29478 | m | HD | 49.440 | m |            |   |   |         |       |
| For M5 | Adr | 419 KD1 | 51000 2.0 C        | 1 2 Rf | 0.88189 | m | HD | 50.185 | m |            |   |   |         |       |
| For M5 | Adr | 420 KD1 | 51000 2.0 C        | 2      |         |   |    |        |   | Z 64.93901 | m | Z | 64.9390 | 5100p |
| For M5 | Adr | 421 KD1 | 51000 2.0 C        | 1 2 Rb | 1.30070 | m | HD | 50.188 | m |            |   |   |         |       |
| For M5 | Adr | 422 KD1 | 5000 2.0 C         | 1 2 Rf | 0.87552 | m | HD | 49.404 | m |            |   |   |         |       |
| For M5 | Adr | 423 KD1 | 51000 2.0 C        | 1 2 Rb | 1.30064 | m | HD | 50.203 | m |            |   |   |         |       |
| For M5 | Adr | 424 KD1 | 5000 2.0 C         | 1 2 Rf | 0.87562 | m | HD | 49.398 | m |            |   |   |         |       |
| For M5 | Adr | 425 KD1 | 5000 2.0 C         | 2      |         |   |    |        |   | Z 65.36411 | m | Z | 65.3641 | 5000p |
| For M5 | Adr | 426 KD1 | 5000 1.0 C         | 1 2 Rb | 1.24540 | m | HD | 49.785 | m |            |   |   |         |       |
| For M5 | Adr | 427 KD1 | 49000 2.0 C        | 1 2 Rf | 0.87610 | m | HD | 49.780 | m |            |   |   |         |       |
| For M5 | Adr | 428 KD1 | 5000 2.0 C         | 1 2 Rb | 1.24573 | m | HD | 49.785 | m |            |   |   |         |       |
| For M5 | Adr | 429 KD1 | 49000 2.0 C        | 1 2 Rf | 0.87616 | m | HD | 49.787 | m |            |   |   |         |       |
| For M5 | Adr | 430 KD1 | 49000 2.0 C        | 2      |         |   |    |        |   | Z 65.73354 | m | Z | 65.7335 | 4900p |
| For M5 | Adr | 431 KD1 | 49000#### 1.0 C    | 1 2 Rb | 1.28042 | m | HD | 48.732 | m |            |   |   |         |       |
| For M5 | Adr | 432 TO  | Measurement peated | 2      |         |   |    |        |   |            |   |   |         |       |
| For M5 | Adr | 433 KD1 | 49000 1.0 C        | 1 2 Rb | 1.28874 | m | HD | 49.728 | m |            |   |   |         |       |
| For M5 | Adr | 434 KD1 | 48000 2.0 C        | 1 2 Rf | 0.88966 | m | HD | 49.759 | m |            |   |   |         |       |
| For M5 | Adr | 435 KD1 | 49000 2.0 C        | 1 2 Rb | 1.28885 | m | HD | 49.755 | m |            |   |   |         |       |
| For M5 | Adr | 436 KD1 | 48000 2.0 C        | 1 2 Rf | 0.88979 | m | HD | 49.773 | m |            |   |   |         |       |
| For M5 | Adr | 437 KD1 | 48000 2.0 C        | 2      |         |   |    |        |   | Z 66.13260 | m | Z | 66.1326 | 4800p |
| For M5 | Adr | 438 KD1 | 48000 1.0 C        | 1 2 Rb | 1.27648 | m | HD | 49.902 | m |            |   |   |         |       |
| For M5 | Adr | 439 KD1 | 47000 2.0 C        | 1 2 Rf | 0.90853 | m | HD | 50.031 | m |            |   |   |         |       |

|        |     |         |                 |        |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
|--------|-----|---------|-----------------|--------|---------|---|----|--------|---|--|--|--|--|--|--|--|--|--|--|
| For M5 | Adr | 44C KD1 | 48000 2.0 C     | 1 2 Rb | 1.27648 | m | HD | 49.876 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 441 KD1 | 47000 2.0 C     | 1 2 Rf | 0.90842 | m | HD | 50.050 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 442 KD1 | 47000 2.0 C     | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 443 KD1 | 47000 1.0 C     | 1 2 Rb | 1.26763 | m | HD | 49.571 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 444 KD1 | 47001#### 2.0 C | 1 2 Rf | 0.92952 | m | HD | 50.038 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 445 TO  | Measurem peated | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 446 KD1 | 46000 2.0 C     | 1 2 Rf | 0.92941 | m | HD | 50.072 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 447 KD1 | 47000 2.0 C     | 1 2 Rb | 1.26765 | m | HD | 49.555 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 448 KD1 | 46000 2.0 C     | 1 2 Rf | 0.92956 | m | HD | 50.068 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 449 KD1 | 46000 2.0 C     | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 450 KD1 | 46000 1.0 C     | 1 2 Rb | 1.32138 | m | HD | 50.035 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 451 KD1 | 45000 2.0 C     | 1 2 Rf | 0.83550 | m | HD | 50.003 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 452 KD1 | 46000 1.0 C     | 1 2 Rb | 1.32138 | m | HD | 50.016 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 453 KD1 | 45000 2.0 C     | 1 2 Rf | 0.83538 | m | HD | 49.963 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 454 KD1 | 45000 2.0 C     | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 455 KD1 | 45000 1.0 C     | 1 2 Rb | 1.25682 | m | HD | 49.978 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 456 KD1 | 44000 2.0 C     | 1 2 Rf | 0.92356 | m | HD | 49.364 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 457 KD1 | 45000 1.0 C     | 1 2 Rb | 1.25693 | m | HD | 49.968 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 458 KD1 | 44000 2.0 C     | 1 2 Rf | 0.92347 | m | HD | 49.371 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 459 KD1 | 44000 2.0 C     | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 460 KD1 | 44000 1.0 C     | 1 2 Rb | 1.25555 | m | HD | 50.346 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 461 KD1 | 43000 1.0 C     | 1 2 Rf | 1.06935 | m | HD | 49.495 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 462 KD1 | 44000 2.0 C     | 1 2 Rb | 1.25547 | m | HD | 50.326 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 463 KD1 | 43000 1.0 C     | 1 2 Rf | 1.06931 | m | HD | 49.488 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 464 KD1 | 43000 1.0 C     | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 465 KD1 | 43000 1.0 C     | 1 2 Rb | 1.06457 | m | HD | 50.191 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 466 KD1 | 42000 1.0 C     | 1 2 Rf | 1.20611 | m | HD | 49.208 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 467 KD1 | 43000 1.0 C     | 1 2 Rb | 1.06445 | m | HD | 50.212 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 468 KD1 | 42000 1.0 C     | 1 2 Rf | 1.20618 | m | HD | 49.230 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 469 KD1 | 42000 1.0 C     | 2      |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 470 KD1 | 42000 1.0 C     | 1 2 Rb | 0.85871 | m | HD | 50.055 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 471 KD1 | 41000 1.0 C     | 1 2 Rf | 1.30780 | m | HD | 49.831 | m |  |  |  |  |  |  |  |  |  |  |
| For M5 | Adr | 472 KD1 | 42000 1.0       |        |         |   |    |        |   |  |  |  |  |  |  |  |  |  |  |

|        |     |         |                |       |        |         |   |    |          |   |  |   |          |   |                       |
|--------|-----|---------|----------------|-------|--------|---------|---|----|----------|---|--|---|----------|---|-----------------------|
| For M5 | Adr | 529 KD1 | Veetorn##      | 2.0 C | 1 2 Rf | 0.60882 | m | HD | 32.598   | m |  |   |          |   |                       |
| For M5 | Adr | 530 KD1 | 12#####        | 2.0 C | 1 2 Rb | 0.54009 | m | HD | 32.521   | m |  |   |          |   |                       |
| For M5 | Adr | 531 KD1 | Veetorn##      | 2.0 C | 1 2 Rf | 0.60850 | m | HD | 32.588   | m |  |   |          |   |                       |
| For M5 | Adr | 532 KD1 | Veetorn##      | 2.0 C | 2      |         |   |    |          |   |  | Z | 62.13449 | m | Z 62.1345             |
| For M5 | Adr | 533 TO  | Station rep ed |       | 2      |         |   |    |          |   |  |   |          |   |                       |
| For M5 | Adr | 534 KD1 | 12             | 2.0 C | 1 2 Rb | 0.54010 | m | HD | 32.537   | m |  |   |          |   |                       |
| For M5 | Adr | 535 KD1 | Veetorn        | 2.0 C | 1 2 Rf | 0.60894 | m | HD | 32.578   | m |  |   |          |   |                       |
| For M5 | Adr | 536 KD1 | 12             | 2.0 C | 1 2 Rb | 0.54029 | m | HD | 32.546   | m |  |   |          |   |                       |
| For M5 | Adr | 537 KD1 | Veetorn        | 2.0 C | 1 2 Rf | 0.60894 | m | HD | 32.612   | m |  |   |          |   |                       |
| For M5 | Adr | 538 KD1 | Veetorn        | 2.0 C | 2      |         |   |    |          |   |  | Z | 62.13430 | m | Z 62.1343             |
| For M5 | Adr | 539 KD1 | Veetorn        |       | 2 Sh   | 0.00000 | m | dz | -0.00038 | m |  | Z | 62.13430 | m | Z 62.1343 Rp. Veetorn |
| For M5 | Adr | 540 KD2 | Veetorn        | 80    | 2 Db   | 3837.56 | m | Df | 3838.48  | m |  | Z | 62.13430 | m | Z 62.1343 Rp. Veetorn |
| For M5 | Adr | 541 TO  | End-Line       |       | 2      |         |   |    |          |   |  |   |          |   |                       |

Mõõdistustööd teostati 27.03.2012

Mõõdistas: T.Bauman  
Kontrollis: M. Sobak



GEODEETTINEN LAITOS  
KANSALLINEN MITTANORMAALILABORATORIO

GEODETISKA INSTITUTET  
NATIONELLT MÄTNORMALLABORATORIUM

FINNISH GEODETIC INSTITUTE  
NATIONAL STANDARDS LABORATORY

PL 15 (Geodeetinrinne 2), FI-02431 MASALA, FINLAND

**KALIBROINTITODISTUS**  
**KALIBRERINGSBEVIS**  
*Certificate of Calibration*

|                                                                     |                                               |                                                                                                           |      |
|---------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------|------|
| Numero - Nummer:<br><i>Number</i>                                   | 4/2011                                        | Sivu - Sida<br><i>Page</i>                                                                                | 1(2) |
| Tilaaaja - Uppdragsgivare:<br><i>Customer</i>                       | Geo S.T. OÜ, Laki 15, 12915 Tallinn, Estonia  |                                                                                                           |      |
| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | Levelling rod with bar code invar scale       |                                                                                                           |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                       |                                                                                                           |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | LD12                                          |                                                                                                           |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 51796                                         |                                                                                                           |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 14.-25.2.2011                                 |                                                                                                           |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                    |                                                                                                           |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              |                                               |                                                                                                           |      |
|                                                                     | Laboratory Head<br>Special Research Scientist | <br>Jorma Jokela     |      |
|                                                                     | Senior Researcher                             | <br>Paavo Rouhiainen |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 2                                             |                                                                                                           |      |

Kansallisen mittanormaallilaboratorion tehtävänä on pitää yllä kansallista mittanormaalia ja sen jäljitettävyyttä SI-järjestelmän yksiköihin sekä siirtää sille määritelty mittayksikkö muihin korkeatasoisiin mittanormaaleihin. Lain 581/2000 perusteella Geodeettinen laitos ylläpitää geodeettisten ja fotogrammetristen mittausten osalta mittanormaaleja sekä toimii pituuden ja putoamiskiintyvyyden kansallisena mittanormaallilaboratoriona.

De nationella mättnormallaboratorierna har som uppgift att upprätthålla nationella mättnormaler och deras spårbarhet till SI-systemets enheter samt att överföra ifrågavarande enheter till andra noggranna mättnormaler. På grund av lag nr 581/2000 Geodetiska institutet upprätthåller mättnormaler för geodetiska och fotogrammetriska mätningar och opererar som nationellt mättnormallaboratorium av längd och tyngdacceleration.

A National Standards Laboratory is responsible for the maintaining of a national standard and its traceability to SI-units. The Laboratory is also responsible for the dissemination of the units to other reference standards. As prescribed in the Law no. 581/2000, the Finnish Geodetic Institute maintains standards for measurements in geodesy and photogrammetry, and acts as the National Standards Laboratory of Length and Acceleration of Free Fall.

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| Numero - Nummer:<br><i>Number</i>                                   | 5/2011                                        | Sivu - Sida<br><i>Page</i>                                                                                | 1(2) |
| Tilaaja - Uppdragsgivare:<br><i>Customer</i>                        | Geo S.T. OÜ, Laki 15, 12915 Tallinn, Estonia  |                                                                                                           |      |
| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | Levelling rod with bar code invar scale       |                                                                                                           |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                       |                                                                                                           |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | LD12                                          |                                                                                                           |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 51545                                         |                                                                                                           |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 14.-25.2.2011                                 |                                                                                                           |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                    |                                                                                                           |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              |                                               |                                                                                                           |      |
|                                                                     | Laboratory Head<br>Special Research Scientist | <br>Jorma Jokela     |      |
|                                                                     | Senior Researcher                             | <br>Paavo Rouhiainen |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 2                                             |                                                                                                           |      |

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|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|
| Numero - Nummer:<br><i>Number</i>                                   | 6/2011                                                                                                                       | Sivu - Sida<br><i>Page</i> | 1(2) |
| Tilaja - Uppdragsgivare:<br><i>Customer</i>                         | Geo S.T. OÜ, Laki 15, 12915 Tallinn, Estonia                                                                                 |                            |      |
| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | 1) Digital level and 2) bar code invar rod                                                                                   |                            |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                                                                                                      |                            |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | 1) DiNi 0.3 and 2) LD12                                                                                                      |                            |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 1) 706338 and 2) 51796                                                                                                       |                            |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 28.2.-17.3.2011                                                                                                              |                            |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                                                                                                   |                            |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              | <div>Laboratory Head<br/>Special Research Scientist<br/>Jorma Jokela</div> <div>Senior Researcher<br/>Paavo Rouhiainen</div> |                            |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 4                                                                                                                            |                            |      |

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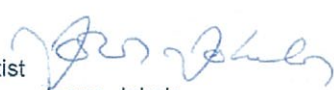
GEODEETTINEN LAITOS  
KANSALLINEN MITTANORMAALILABORATORIO

GEODETISKA INSTITUTET  
NATIONELLT MÄTNORMALLABORATORIUM

FINNISH GEODETIC INSTITUTE  
NATIONAL STANDARDS LABORATORY

PL 15 (Geodeetinrinne 2), FI-02431 MASALA, FINLAND

**KALIBROINTITODISTUS**  
**KALIBRERINGSBEVIS**  
*Certificate of Calibration*

|                                                                     |                                                                                                                                                                                                                                                                                                                  |                            |      |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|
| Numero - Nummer:<br><i>Number</i>                                   | 7/2011                                                                                                                                                                                                                                                                                                           | Sivu - Sida<br><i>Page</i> | 1(2) |
| Tilaja - Uppdragsgivare:<br><i>Customer</i>                         | Geo S.T. OÜ, Laki 15, 12915 Tallinn, Estonia                                                                                                                                                                                                                                                                     |                            |      |
| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | 1) Digital level and 2) bar code invar rod                                                                                                                                                                                                                                                                       |                            |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                                                                                                                                                                                                                                                                                          |                            |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | 1) DiNi 0.3 and 2) LD12                                                                                                                                                                                                                                                                                          |                            |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 1) 706338 and 2) 51545                                                                                                                                                                                                                                                                                           |                            |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 28.2.-17.3.2011                                                                                                                                                                                                                                                                                                  |                            |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                                                                                                                                                                                                                                                                                       |                            |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              | <div>Laboratory Head<br/>Special Research Scientist<br/><br/>Jorma Jokela</div> <div>Senior Researcher<br/><br/>Paavo Rouhiainen</div> |                            |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 4                                                                                                                                                                                                                                                                                                                |                            |      |

Kansallisen mittanormaallaboratorion tehtävänä on pitää yllä kansallista mittanormaalia ja sen jäljitettävyyttä SI-järjestelmän yksiköihin sekä siirtää sille määritelty mittayksikkö muihin korkeatasoisiin mittanormaaleihin. Lain 581/2000 perusteella Geodeettinen laitos ylläpitää geodeettisten ja fotogrammetristen mittausten osalta mittanormaaleja sekä toimii pituuden ja putoamiskiihtyvyyden kansallisena mittanormaallaboratoriona.

De nationella mätnormallaboratorierna har som uppgift att upprätthålla nationella mätnormaler och deras spårbarhet till SI-systemets enheter samt att överföra ifrågavarande enheter till andra noggranna mätnormaler. På grund av lag nr 581/2000 Geodetiska institutet upprätthåller mätnormaler för geodetiska och fotogrammetriska mätningar och opererar som nationellt mätnormallaboratorium av längd och tyngdacceleration.

A National Standards Laboratory is responsible for the maintaining of a national standard and its traceability to SI-units. The Laboratory is also responsible for the dissemination of the units to other reference standards. As prescribed in the Law no. 581/2000, the Finnish Geodetic Institute maintains standards for measurements in geodesy and photogrammetry, and acts as the National Standards Laboratory of Length and Acceleration of Free Fall.

Tämän todistuksen osittainen julkaiseminen on sallittu vain Geodeettisen laitoksen antaman kirjallisen luvan perusteella.

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**METROSERT**

Aru 10 Tallinn 10317

Akrediteeritud kalibreerimislabor  
Accredited Calibration Laboratory  
Aru 10, Tallinn, Tallinna laborAkrediteeritud  
K001**KALIBREERIMISTUNNISTUS**

Calibration Certificate

Kalibreerimistunnistus nr  
Calibration certificate No.**ATLP - 08/0341**Kuupäev  
Date**19.09.2008**Leht  
Page**1(3)**Tellija  
Customer**Ronex OÜ**Address  
Address**Kiisa 8, Tallinn**Mõõtevahend  
Measuring instrument**Kombineeritud mõõtevahend**Valmistaja  
Manufactured by**Delta OHM**Tüüp  
Type**HD 2304.0**Number  
Serial number**08008760 (rõhuandur nr 08021074, termoandur nr 08019676)**Kalibreerimisele esitatud  
Date of receipt**17.09.2008**Kalibreeritud  
Date of calibration**18.09.2008...19.09.2008**Lehti  
Number of pages**3**

K. Tammik

Mõõtmiste eest vastutav isik  
The person responsible for the  
measurementsAllkirjad  
Signatures  
G. Peterson N. RomanovaKalibreeris  
Calibrated byLisad  
Documents attached

Akrediteeritud kalibreerimislabor kalibreerib mõõtevahendeid ja väljastab kalibreerimistunnistusi Eesti Akrediteerimiskeskuse (EAK) akrediteerimisotsuse ulatuses ning sellele vastavates mõõtemääramatuse piirides. Kalibreerimistunnistuses antud tulemused on jälgitavad rahvuslike või rahvusvaheliste etalonideni. EAK on EA (Euroopa Akrediteerimisalane Koostööorganisatsioon) liige ja on ühinenud EA MLA-ga (EA liikmete vaheline vastastikuse tunnustamise lepe).

The measurements carried out and the Certificates of Calibration issued by an Accredited Laboratory comply with the measurement ranges and uncertainties approved by the Estonian Accreditation Centre (EAK). The measurement results issued by the Laboratory are traceable to national or international measurement standards. EAK is a Member of EA (European co-operation for Accreditation) and a signatory to the EA MLA (Multilateral Agreement).

Kalibreerimistunnistust võib paljundada tema täies mahus. Kalibreerimistunnistuse osaline paljundamine on lubatud ainult tunnistust väljastava labori kirjalikul loal.

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Kalibreerimistunnistus nr  
Calibration certificate No.

**ATLP - 08/0341**

Kuupäev  
Date

**19.09.2008**

Leh  
Page

**2(3)**

**1 Kalibreerimisvahendid.** Calibration equipment

Etalonmanomeeter 6100-5L nr 59125

Plaatinatakestustermomeeter 17660-B-090-6-W-1 nr 776324

Multimeeter Agilent 34401A nr MY41010897

**2 Jälgitavus.** Traceability

AS Metrosert rõhu mõõtmised on jälgitavad kuni MIKES (Soome) rõhu etalonini ning temperatuuri mõõtmised on jälgitavad kuni Eesti temperatuuri riigietalonini.

**3 Kalibreerimisjuhend/-metoodika, -meetod; mõõteprotsessi lühikirjeldus.**

Calibration instruction or, -method; short description of the calibration process

MSKJ 037-1995 Kalibreerimisjuhend. Elastse tundliku elemendiga manomeetrite ja vaakummeetrite kalibreerimine. Näitavad seadmed. Registreerivad seadmed.

MDK KJ 303-2002. Kalibreerimisjuhend. Termomeetrid.

Kombineeritud mõõtevahendi kalibreerimisel kasutati võrdlusmeetodit tellija poolt valitud rõhu ja temperatuuri punktides.

Rõhu mõõtmistel tehti neli mõõtmist (kaks rõhu suurendamisel ja kaks rõhu vähendamisel). Näidu on võetud vastavate mõõdiste aritmeetiline keskmine. Mõõtetulemused on toodud tabelis 1.

Temperatuuri mõõtmised teostati õhukambris. Peale keskkonna stabiliseerumist teostati 5 mõõtmist. Mõõtetulemuseks võeti vastavate mõõdiste aritmeetiline keskmine.

Mõõtetulemused on toodud tabelis 2.

**4 Tulemused.** Results

Tabel 1. Rõhu mõõtmise mõõtetulemused

| Rõhu etalonväärtus,<br>hPa | Kalibreeritava mõõtevahendi |                   | Laiendmääramatus,<br>hPa |
|----------------------------|-----------------------------|-------------------|--------------------------|
|                            | keskmine näit, hPa          | näidu parand, hPa |                          |
| 1000,9                     | 1000                        | +1                | 2                        |
| 1020,9                     | 1020                        | +1                | 2                        |
| 1040,9                     | 1040                        | +1                | 2                        |

Tabel 2. Temperatuuri mõõtmise mõõtetulemused

| Etalontermomeetri<br>keskmine näit, °C | Kalibreeritava mõõtevahendi |                  | Laiendmääramatus,<br>°C |
|----------------------------------------|-----------------------------|------------------|-------------------------|
|                                        | keskmine näit, °C           | näidu parand, °C |                         |
| 5,00                                   | 5,1                         | -0,1             | 0,3                     |
| 15,00                                  | 15,1                        | -0,1             | 0,3                     |
| 25,00                                  | 25,0                        | 0,0              | 0,3                     |

*G. P. A. P. A.*

Kalibreerimistunnistus nr  
Calibration certificate No.

ATLP - 08/0341

Kuupäev  
Date

19.09.2008

Leht  
Page

3(3)

**5 Määramatus.** Uncertainty of measurement

Esitatud mõõtmise laiendmääramatus on saadud mõõtmise standardmääramatusest, korrutades se katteteguriga  $k = 2$ , mis normaaljaotuse korral vastab ligikaudu 95% katvustõenäosusele. Kalibreetud mõõtevahendi pikaajaline stabiilsus ei ole arvesse võetud. Mõõtmise standardmääramatust hinnatud kooskõlas EA juhenddokumendiga EA-4/02.

**6 Keskkonnatingimused.** Environmental conditions

**Temperatuur** Temperature:

(22,9...23,3) °C

**Õhu niiskus** Air humidity:

(29...33) %

**Õhu rõhk** Air pressure:

(102,8...102,9) kPa



### *Lõpuleht*

Käesolevas tehnilise aruande toimikus on 30 (kolmkümmend) järjestikku nummerdatud lehte.

30.03.2012.a.

Tehnilise aruande koostas: T.Bauman



ISO 9001 sertifitseeritud firma  
Tegevuslitsentsid: 308MA, 311MA-k  
MTR nr EG10194979-0001



**Töö nr 21M2216**  
02.11.2012.a.

**Tallinn – Narva maantee  
Kukruse – Jõhvi teelõigu (km 155,9-163,2)  
vaatlusreeperite nivelleerimine  
V vaatlus  
Ida-Virumaa Kohtla vald Jõhvi vald**

**Tehniline aruanne**  
Tallinn, 2012

Pitsat

Juhatuse esimees / M.Sarapik /

**Geo S.T. OÜ**  
reg.nr. 10194979  
Laki 15 Tallinn  
12915 Eesti Vabariik  
www.geost.ee

Tel/Fax (+372) 6563856  
GSM (+372) 5066853  
E-mail: geo@geost.ee  
a/a 1120108483 Swedbank AS

## SISUJUHT

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## ASUKOHA SKEEM



Objekti asukoht

## **Seletuskiri**

### **1. Üldosa**

Tellija: **AS Teede Tehnokeskus**  
Teostaja: **OÜ Geo S.T. reg 10194979, MTR nr EG10194979-0001, tegevuslitsents 308MA**  
Objekti asukoht: **Ida-Virumaa Kohtla vald, Jõhvi vald**  
Objekti nimetus: **Tallinn – Narva mnt Kukruse – Jõhvi teelõigu (km 155,9-163,2) vaatlusreeperite nivelleerimine, IV vaatlus**  
Tööde täitmise aeg: **Välitööd 23-26.oktoober 2012.a.  
Kameraaltööd 29.oktoober 2012.a.**  
Tööde teostajad: **Insener-geodeet T.Bauman (kutsekvalifikatsioon Geodeet III)  
Tehnik-geodeet M.Sobak  
Tehnik-geodeet K.Julge  
Tehnilise kontrolli juht R. Sõna**  
Kontrollis: **H.Lindeberg (kutsekvalifikatsioon Geodeet IV)**

### **2. Tööde üldiseloostus**

Käesolev geodeetiliste tööde aruanne käsitleb Geo S.T. OÜ poolt Tallinn – Narva mnt, Kukruse – Jõhvi teelõigu (155,9-163,2) vaatlusreeperite nivelleerimist, IV vaatlustükkel.

Kõrgus määrati geomeetrilise nivelleerimise meetodil. Geomeetrilise nivelleerimise lähtereeperina kasutati kohaliku geodeetilise põhivõrgu punkti nr 1659 (KUKRUSE). Geomeetrilise nivelleerimise väliandmed ja tasandamine on esitatud lk nr 11-24.

Töö lõpptulemusena koostati vaatlusreeperite tabel (seotuna maantee kilometraažiga), kus on esitatud I, II, III, IV ja V vaatluse andmed. Lisaks on välja toodud vaatluse vahed: II-I, III-I, IV-I, V-I, III-II, IV-III, V-IV. Tabelis on näidatud vaatluste erinevused millimeetrites.

### **3. Lähteandmed**

Lähtepunktide andmed saadud Maa-ameti Andmekogude arhiivi Geodeesia fondist.

Kõrguste süsteem: 1977a. Balti kõrguste süsteem BK77

### **4. Lähtereeper**

**KGPP nr 1659 KUKRUSE (tsentri nr 3324), Riiklik 3.klassi tihendusvõrk. H=72,495m**

Asukohaga Ida-Virumaa, Kohtla vald, Peeri küla, Tallinn – Narva mnt sõidutee läänepoolses ääres märgi tüüp 4434, tunnuspost, kupits, metallkaas.

### **5. Instrumendid ja tarkvara**

Geomeetrilisel nivelleerimisel kasutati digitaalnivelliiri Trimble DiNi 0,3 ja 2 meetri pikkuseid invarlatte Trimble LD12 nr 51545 ja nr 51796.

Nivelliiri tehnilised spetsifikatsioonid on esitatud alljärgnevas tabelis:

|                                     |                         |            |
|-------------------------------------|-------------------------|------------|
| Digitaalnivelliir                   | <b>Trimble DiNi 0,3</b> | s/n 706338 |
| Pikksilma suurendus                 | 32×                     |            |
| Ümarvesiloe tundlikus               | 8'/2mm                  |            |
| Kompensaatori tööpiirkond           | ± 15'                   |            |
| Kompensaatori täpsus                | ± 0,2"                  |            |
| Kõrgusmõõtmise täpsus               | 0,01 mm                 |            |
| Kaugusmõõtmise täpsus               | 1 mm                    |            |
| 1 km edasi-tagasi keskmine ruutviga | ± 1,3 mm                |            |
| Mõõdistamisaeg                      | 3 sek                   |            |

Temperatuuri tööpiirkond

- 20°C kuni + 50°C

Niiskus-ja veekindlus

IP55

Nivelliir koos invarlattidega on kontrollitud ja kalibreeritud. Kontrollakti koopia on esitatud käesolevas aruandes lk 25-28.

Nivelleerimiskäigud tasandati nivelliiris oleva programmiga „line adjustment”.

Temperatuur ja õhurõhk mõõdeti kombineeritud mõõtevahendiga Delta OHM (tüüp HD 2304.0) seerianumbriga 08008760 (rõhuandur nr 08021074, termoandur nr 08019676). Kombineeritud mõõtevahendi kalibreerimise tunnistus on esitatud käesolevas aruandes lk 29-31.

## 6. Geomeetriline nivelleerimine

6.1 Enne nivelleerimist teostati nivelliirile ja latile järgmised kontrollid

- Nivelliiri ja statiivi üldise seisukorra kontroll
- Kontrolliti nivelliiri ja latti paigaldamise vesiloodide õigsust
- Nivelliiri viseerimiskiire automaatse horisonteerimise keskmise ruutvea ja kompensatori täpsuse määramine (kasutati Nähbauri meetodit)

6.2. Vaatlusreeperite nivelleerimine – IV vaatlus

- Vaatlusreeperite mõõdistamisel kasutati lähtereeperina **Rp Veetorn** **H=62,134m**
- Nivelleerimisel kasutati meetodit BFBF (tagasi-edasi, tagasi-edasi)
- Vaatlusreeperid mõõdistati ja tasandati kahe eraldi polügonina KÄIK 1 pikkusega 7762,56 m ja KÄIK 2 pikkusega 7674.42 m.

6.3. Vaatlusreeperite nivelleerimise IV vaatlus teostati 23-26.10.2012.a., töögruppi kuulusid Tanel Bauman, Martin Sobak ja Kalev Julge.

## 7. Nivelleerimiskäikude andmed

KÄIK 1

Rp Veetorn – 159,5v kuni 155,9v ja 155,9p kuni 159,5p – Rp Veetorn

Sulgematus 1,37 mm

Lubatud sulgematus  $\pm 13,9 \text{ mm}$  ( $f_{\text{lub}} = \pm 5 \text{ mm} \sqrt{L \text{ km}}$ )

Käigu pikkus  $L = 7,763 \text{ km}$

KÄIK 2

Rp Veetorn – 159,6v kuni 163,2v 163,2p kuni 159,6p – Rp Veetorn

Sulgematus 0,24 mm

Lubatud sulgematus  $\pm 13,9 \text{ mm}$  ( $f_{\text{lub}} = \pm 5 \text{ mm} \sqrt{L \text{ km}}$ )

Käigu pikkus  $L = 7,674 \text{ km}$

## 8. Üleantavate materjalide loetelu

Tellija: AS Teede Tehnokeskus

- tehniline aruanne

1 eks.

- digitaalinfo CD-l

01.11.2012



Koostas: T.Bauman

## LÄHTEREEPERITE ASUKOHA SKEEM



Rp Veetorn H=62,134m

KGPP nr 1659 KUKRUSE (tsentri nr 3324)

| Tallinn - Narva mnt. Kukuruse - Jõhvi teelõigu (km 155,9-163,2)<br>vaatlusreeperite nivelleerimine, IV vaatlus |                   |                      |                       |                      |                    |                      |                       |                      |                     |                        |                        |                      |                         |
|----------------------------------------------------------------------------------------------------------------|-------------------|----------------------|-----------------------|----------------------|--------------------|----------------------|-----------------------|----------------------|---------------------|------------------------|------------------------|----------------------|-------------------------|
| Maantee<br>kilometraaž                                                                                         | Parem pool        |                      |                       |                      |                    |                      |                       |                      |                     |                        |                        |                      | Ehitusaegne<br>piketaaž |
|                                                                                                                | I<br>3.-4.11.2010 | II<br>18.-19.04.2011 | III<br>27.-28.10.2011 | IV<br>27.-28.03.2012 | V<br>23-26.10.2012 | vajum II - I<br>(mm) | vajum III - I<br>(mm) | vajum IV - I<br>(mm) | vajum V - I<br>(mm) | vajum III - II<br>(mm) | vajum IV - III<br>(mm) | vajum V - IV<br>(mm) |                         |
| 155.9                                                                                                          | 65.2858           | 65.2876              | Hävinenud             |                      |                    | 1.8                  |                       |                      |                     |                        |                        |                      | -200                    |
| 156.0                                                                                                          | 65.6584           | 65.6597              | 65.6560               | 65.6598              | 65.6478            | 1.3                  | -2.4                  | 1.4                  | -10.6               | -3.7                   | 3.8                    | -12.0                | -100                    |
| 156.1                                                                                                          | 66.0131           | 66.0144              | 66.0095               | 66.0131              | 66.0016            | 1.3                  | -3.6                  | 0.0                  | -11.5               | -4.9                   | 3.6                    | -11.5                | 0                       |
| 156.2                                                                                                          | 66.3549           | 66.3609              | 66.3533               | 66.3601              | 66.3439            | 6.0                  | -1.6                  | 5.2                  | -11.1               | -7.6                   | 6.8                    | -16.3                | 100                     |
| 156.3                                                                                                          | 66.6932           | 66.6949              | 66.6898               | 66.6925              | 66.6786            | uus                  |                       | uus                  | -14.6               | -5.0                   |                        | -14.0                | 200                     |
| 156.4                                                                                                          | 66.9821           | 66.9920              | 66.9828               | 66.9860              | 66.9722            | uus                  |                       | 3.9                  | -9.9                | -9.2                   | 3.2                    | -13.8                | 300                     |
| 156.5                                                                                                          | 67.2257           | 67.2322              | 67.2259               | 67.2346              | 67.2170            | uus                  |                       | 8.9                  | -8.7                | -6.3                   | 8.7                    | -17.5                | 400                     |
| 156.6                                                                                                          | 67.5466           | 67.5537              | 67.5457               | 67.5559              | 67.5374            | 7.1                  | -1.0                  | 9.2                  | -9.2                | -8.1                   | 10.2                   | -18.5                | 500                     |
| 156.7                                                                                                          | 67.8561           | 67.8583              | 67.8533               | 67.8565              | 67.8448            | 2.2                  | -2.9                  | 0.4                  | -11.3               | -5.1                   | 3.3                    | -11.7                | 600                     |
| 156.8                                                                                                          | 68.1744           | 68.1773              | 68.1725               | 68.1762              | 68.1648            | 2.9                  | -1.9                  | 1.8                  | -9.6                | -4.8                   | 3.7                    | -11.4                | 700                     |
| 156.9                                                                                                          | 68.4380           | 68.4511              | 68.4393               | 68.4489              | 68.4322            | 13.0                 | 1.3                   | 10.9                 | -5.8                | -11.8                  | 9.6                    | -16.6                | 800                     |
| 157.0                                                                                                          | 68.9813           | 68.9831              | 68.9795               | 68.9862              | 68.9724            | 1.7                  | -1.8                  | 4.8                  | -8.9                | -3.6                   | 6.7                    | -13.8                | 900                     |
| 157.1                                                                                                          | 70.1056           | 70.1081              | 70.1042               | 70.1100              | 70.0964            | 2.5                  | -1.4                  | 4.4                  | -9.2                | -3.9                   | 5.8                    | -13.6                | 1000                    |
| 157.2                                                                                                          | 71.1878           | 71.1855              | 71.1859               | 71.1910              | 71.1796            | -2.3                 | -1.9                  | 3.2                  | -8.2                | 0.4                    | 5.1                    | -11.4                | 1100                    |
| 157.3                                                                                                          | 72.0423           | 72.0441              | 72.0414               | 72.0464              | 72.0330            | 1.8                  | -0.9                  | 4.1                  | -9.3                | -2.7                   | 5.0                    | -13.4                | 1200                    |
| 157.4                                                                                                          | 72.4791           | 72.4826              | 72.4771               | 72.4835              | 72.4691            | 3.5                  | -2.0                  | 4.4                  | -10.0               | -5.5                   | 6.4                    | -14.4                | 1300                    |
| 157.5                                                                                                          | 72.8041           | 72.8066              | 72.8025               | 72.8092              | 72.7945            | 2.5                  | -1.5                  | 5.2                  | -9.6                | -4.1                   | 6.7                    | -14.7                | 1400                    |
| 157.6                                                                                                          | 73.1219           | 73.1237              | 73.1207               | 73.1243              | 73.1132            | 1.8                  | -1.2                  | 2.4                  | -8.7                | -2.9                   | 3.6                    | -11.1                | 1500                    |
| 157.7                                                                                                          | 73.4028           | 73.3998              | 73.3999               | 73.4020              | 73.3925            | -3.0                 | -2.9                  | -0.8                 | -10.3               | 0.1                    | 2.1                    | -9.5                 | 1600                    |
| 157.8                                                                                                          | 73.4761           | 73.4773              | 73.4750               | 73.4808              | 73.4672            | 1.2                  | -1.2                  | 4.7                  | -8.9                | -2.4                   | 5.8                    | -13.6                | 1700                    |
| 157.9                                                                                                          | 73.2925           | 73.2924              | 73.2907               | 73.2953              | 73.2828            | -0.1                 | -1.8                  | 2.8                  | -9.7                | -1.7                   | 4.6                    | -12.5                | 1800                    |
| 158.0                                                                                                          | 73.0209           | 73.0213              | 73.0185               | 73.0221              | 73.0105            | 0.4                  | -2.4                  | 1.2                  | -10.4               | -2.8                   | 3.6                    | -11.6                | 1900                    |
| 158.1                                                                                                          | 72.7131           | 72.7169              | 72.7114               | 72.7186              | 72.7031            | 3.8                  | -1.7                  | 5.5                  | -10.0               | -5.5                   | 7.2                    | -15.5                | 2000                    |
| 158.2                                                                                                          | 72.4609           | 72.4642              | 72.4587               | 72.4647              | 72.4502            | 3.3                  | -2.1                  | 3.8                  | -10.7               | -5.4                   | 5.9                    | -14.5                | 2100                    |
| 158.3                                                                                                          | 72.2670           | 72.2631              | 72.2659               | 72.2674              | 72.2580            | -3.9                 | -1.0                  | 0.5                  | -8.9                | 2.8                    | 1.5                    | -9.4                 | 2200                    |
| 158.4                                                                                                          | 71.9676           | 71.9617              | 71.9658               | 71.9655              | 71.9579            | -5.9                 | -1.7                  | -2.1                 | -9.7                | 4.2                    | -0.4                   | -7.6                 | 2300                    |
| 158.5                                                                                                          | 71.4982           | 71.4938              | 71.4949               | 71.4929              | 71.4869            | -4.4                 | -3.3                  | -5.3                 | -11.3               | 1.1                    | -2.0                   | -6.0                 | 2400                    |
| 158.6                                                                                                          | 70.7982           | 70.7949              | 70.7953               | 70.7931              | 70.7863            | -3.3                 | -2.9                  | -5.1                 | -11.9               | 0.4                    | -2.2                   | -6.8                 | 2500                    |
| 158.7                                                                                                          | 69.8276           | 69.8248              | 69.8256               | 69.8226              | 69.8162            | -2.8                 | -1.9                  | -5.0                 | -11.3               | 0.8                    | -3.1                   | -6.3                 | 2600                    |
| 158.8                                                                                                          | 68.6513           | 68.6492              | 68.6506               | 68.6472              | 68.6407            | -2.0                 | -0.7                  | -4.1                 | -10.5               | 1.4                    | -3.4                   | -6.5                 | 2700                    |
| 158.9                                                                                                          | 67.1180           | 67.1173              | 67.1184               | 67.1159              | 67.1082            | -0.7                 | 0.4                   | -2.1                 | -9.8                | 1.1                    | -2.5                   | -7.8                 | 2800                    |
| 159.0                                                                                                          | 65.8756           | 65.8746              | 65.8764               | 65.8723              | 65.8658            | -0.9                 | 0.8                   | -3.3                 | -9.8                | 1.8                    | -4.1                   | -6.5                 | 2900                    |
| 159.1                                                                                                          | 64.9078           | 64.9068              | 64.9075               | 64.9025              | 64.8953            | -1.0                 | -0.3                  | -5.2                 | -12.4               | 0.7                    | -5.0                   | -7.2                 | 3000                    |
| 159.2                                                                                                          | 64.2883           | 64.2887              | 64.2900               | 64.2866              | 64.2791            | 0.4                  | 1.7                   | -1.6                 | -9.2                | 1.3                    | -3.3                   | -7.6                 | 3100                    |
| 159.3                                                                                                          | 63.7965           | 63.7957              | 63.7974               | 63.7935              | 63.7860            | -0.8                 | 0.9                   | -3.0                 | -10.5               | 1.7                    | -3.9                   | -7.6                 | 3200                    |
| 159.4                                                                                                          | 63.4098           | 63.4148              | 63.4126               | 63.4140              | 63.4011            | 5.0                  | 2.8                   | 4.2                  | -8.7                | -2.2                   | 1.4                    | -12.9                | 3300                    |
| 159.5                                                                                                          | 63.7265           | 63.7306              | 63.7265               | 63.7293              | 63.7134            | 4.1                  | 0.0                   | 2.8                  | -13.1               | -4.1                   | 2.8                    | -15.9                | 3400                    |
| 159.6                                                                                                          | 64.2155           | 64.2216              | 64.2170               | 64.2220              | 64.2059            | 6.1                  | 1.5                   | 6.5                  | -9.6                | -4.6                   | 5.0                    | -16.1                | 3500                    |
| 159.7                                                                                                          | 64.7041           | 64.7032              | 64.7036               | 64.7054              | 64.7012            | -1.0                 | -0.6                  | 1.2                  | -2.9                | 0.4                    | 1.8                    | -4.2                 | 3600                    |
| 159.8                                                                                                          | 65.1648           | 65.1656              | 65.1654               | 65.1672              | 65.1635            | 0.7                  | 0.6                   | 2.4                  | -1.3                | -0.2                   | 1.8                    | -3.7                 | 3700                    |

|       |         |         |         |         |         |      |      |      |      |      |      |       |      |
|-------|---------|---------|---------|---------|---------|------|------|------|------|------|------|-------|------|
| 159.9 | 65.6863 | 65.6908 | 65.6865 | 65.6889 | 65.6848 | 4.5  | 0.2  | 2.6  | -1.5 | -4.3 | 2.4  | -4.1  | 3800 |
| 160.0 | 66.2580 | 66.2597 | 66.2581 | 66.2602 | 66.2559 | 1.7  | 0.1  | 2.2  | -2.1 | -1.6 | 2.1  | -4.3  | 3900 |
| 160.1 | 66.7420 | 66.7415 | 66.7419 | 66.7428 | 66.7392 | -0.5 | -0.1 | 0.8  | -2.8 | 0.4  | 0.9  | -3.6  | 4000 |
| 160.2 | 67.2509 | 67.2509 | 67.2519 | 67.2534 | 67.2494 | 0.0  | 1.0  | 2.5  | -1.5 | 1.0  | 1.5  | -4.0  | 4100 |
| 160.3 | 67.6949 | 67.6961 | 67.6961 | 67.7026 | 67.6940 | 1.2  | 1.1  | 7.7  | -0.9 | -0.1 | 6.5  | -8.6  | 4200 |
| 160.4 | 67.8416 | 67.8410 | 67.8425 | 67.8442 | 67.8398 | -0.6 | 0.9  | 2.6  | -1.8 | 1.6  | 1.7  | -4.4  | 4300 |
| 160.5 | 67.6551 | 67.6556 | 67.6572 | 67.6580 | 67.6548 | 0.5  | 2.0  | 2.9  | -0.3 | 1.6  | 0.9  | -3.2  | 4400 |
| 160.6 | 67.3234 | 67.3232 | 67.3238 | 67.3247 | 67.3211 | -0.2 | 0.4  | 1.3  | -2.3 | 0.6  | 0.9  | -3.6  | 4500 |
| 160.7 | 66.8340 | 66.8351 | 66.8349 | 66.8388 | 66.8319 | 1.1  | 0.8  | 4.7  | -2.1 | -0.3 | 3.9  | -6.9  | 4600 |
| 160.8 | 66.4929 | 66.4941 | 66.4943 | 66.5006 | 66.4921 | 1.2  | 1.4  | 7.8  | -0.8 | 0.2  | 6.3  | -8.5  | 4700 |
| 160.9 | 66.1313 | 66.1313 | 66.1320 | 66.1326 | 66.1294 | 0.1  | 0.7  | 1.3  | -1.9 | 0.7  | 0.6  | -3.2  | 4800 |
| 161.0 | 65.7316 | 65.7311 | 65.7323 | 65.7335 | 65.7295 | -0.5 | 0.7  | 1.9  | -2.1 | 1.2  | 1.2  | -4.0  | 4900 |
| 161.1 | 65.3601 | 65.3602 | 65.3612 | 65.3641 | 65.3590 | 0.1  | 1.1  | 4.0  | -1.0 | 1.0  | 2.9  | -5.1  | 5000 |
| 161.2 | 64.9345 | 64.9351 | 64.9360 | 64.9390 | 64.9332 | 0.6  | 1.5  | 4.6  | -1.2 | 0.9  | 3.0  | -5.8  | 5100 |
| 161.3 | 64.5222 | 64.5215 | 64.5228 | 64.5263 | 64.5198 | -0.7 | 0.6  | 4.0  | -2.4 | 1.3  | 3.5  | -6.5  | 5200 |
| 161.4 | 64.2314 | 64.2329 | 64.2318 | 64.2360 | 64.2287 | 1.5  | 0.4  | 4.6  | -2.7 | -1.1 | 4.1  | -7.3  | 5300 |
| 161.5 | 64.4009 | 64.4007 | 64.4010 | 64.4038 | 64.3981 | -0.2 | 0.1  | 2.9  | -2.8 | 0.3  | 2.8  | -5.7  | 5400 |
| 161.6 | 65.0049 | 65.0057 | 65.0055 | 65.0124 | 65.0024 | 0.9  | 0.6  | 7.5  | -2.5 | -0.2 | 6.9  | -10.0 | 5500 |
| 161.7 | 65.6523 | 65.6509 | 65.6519 | 65.6559 | 65.6471 | -1.5 | -0.4 | 3.5  | -5.3 | 1.0  | 3.9  | -8.8  | 5600 |
| 161.8 | 65.8422 | 65.8411 | 65.8427 | 65.8442 | 65.8385 | -1.1 | 0.5  | 2.0  | -3.7 | 1.6  | 1.6  | -5.7  | 5700 |
| 161.9 | 65.4814 | 65.4781 | 65.4818 | 65.4816 | 65.4777 | -3.4 | 0.3  | 0.2  | -3.7 | 3.7  | -0.1 | -3.9  | 5800 |
| 162.0 | 64.9855 | 64.9820 | 64.9853 | 64.9837 | 64.9813 | -3.5 | -0.2 | -1.8 | -4.2 | 3.2  | -1.5 | -2.5  | 5900 |
| 162.1 | 64.3343 | 64.3318 | 64.3341 | 64.3328 | 64.3302 | -2.5 | -0.2 | -1.5 | -4.1 | 2.3  | -1.3 | -2.6  | 6000 |
| 162.2 | 63.6285 | 63.6254 | 63.6280 | 63.6270 | 63.6241 | -3.1 | -0.5 | -1.5 | -4.5 | 2.6  | -1.0 | -3.0  | 6100 |
| 162.3 | 62.8024 | 62.8043 | 62.8042 | 62.8110 | 62.8002 | 1.9  | 1.7  | 8.6  | -2.2 | -0.1 | 6.9  | -10.8 | 6200 |
| 162.4 | 62.1129 | 62.1094 | 62.1135 | 62.1117 | 62.1088 | -3.4 | 0.6  | -1.2 | -4.1 | 4.0  | -1.7 | -2.9  | 6300 |
| 162.5 | 61.4145 | 61.4110 | 61.4137 | 61.4122 | 61.4088 | -3.5 | -0.7 | -2.3 | -5.7 | 2.8  | -1.6 | -3.4  | 6400 |
| 162.6 | 60.6821 | 60.6782 | 60.6811 | 60.6785 | 60.6763 | -4.0 | -1.0 | -3.7 | -5.8 | 3.0  | -2.7 | -2.2  | 6500 |
| 162.7 | 59.9917 | 59.9892 | 59.9917 | 59.9901 | 59.9869 | -2.5 | 0.0  | -1.6 | -4.8 | 2.5  | -1.6 | -3.2  | 6600 |
| 162.8 | 59.6606 | 59.6697 | 59.6618 | 59.6791 | 59.6573 | 9.1  | 1.1  | uus  |      | -8.0 |      | -21.8 | 6700 |
| 162.9 | 60.0039 | 60.0031 | 60.0043 | 60.0053 | 59.9984 | -0.8 | 0.4  | uus  |      | 1.2  |      | -6.9  | 6800 |
| 163.0 | 59.6940 | 59.6937 | 59.6941 | 59.6973 | 59.6901 | -0.4 | 0.1  | 3.3  | -3.9 | 0.5  | 3.2  | -7.2  | 6900 |
| 163.1 | 58.7974 | 58.7968 | 58.7980 | 58.7989 | 58.7938 | -0.6 | 0.7  | 1.6  | -3.5 | 1.2  | 0.9  | -5.1  | 7000 |
| 163.2 | 57.5088 | 57.5113 | 57.5111 | 57.5132 | 57.5072 | 2.4  | 2.3  | 4.3  | -1.6 | -0.1 | 2.1  | -5.9  | 7100 |

Kõrgused BK77 süsteemis

02.11.2012.a.

Koostas: Tanel Bauman

Tallinn - Narva mnt. Kukruse - Jõhvi teelõigu (km 155,9-163,2)  
vaatlusreeperite nivelleerimine, IV vaatlus

| Maantee<br>kilometraaž | Vasak pool        |                      |                       |                      |                    |                      |                       |                      |                   |                        |                        |                    | Ehitusaegne<br>piketaaž |
|------------------------|-------------------|----------------------|-----------------------|----------------------|--------------------|----------------------|-----------------------|----------------------|-------------------|------------------------|------------------------|--------------------|-------------------------|
|                        | I<br>3.-4.11.2010 | II<br>18.-19.04.2011 | III<br>27.-28.10.2011 | IV<br>27.-28.03.2012 | V<br>23-26.10.2012 | vajum II - I<br>(mm) | vajum III - I<br>(mm) | vajum IV - I<br>(mm) | vajum V-I<br>(mm) | vajum III - II<br>(mm) | vajum IV - III<br>(mm) | vajum V-IV<br>(mm) |                         |
| 155.9                  | 65.4056           | 65.4051              | Hävinenud             |                      |                    | -0.5                 |                       |                      |                   |                        |                        |                    | -200                    |
| 156.0                  | 65.7337           | 65.7354              | 65.7278               | 65.7410              | 65.7191            | 1.8                  | -5.9                  | 7.4                  | -14.6             | -7.6                   | 13.2                   | -21.9              | -100                    |
| 156.1                  | 66.0045           | 66.0112              | 66.0008               | 66.0137              | 65.9923            | 6.7                  | -3.6                  | 9.3                  | -12.1             | -10.4                  | 12.9                   | -21.4              | 0                       |
| 156.2                  | 66.3806           | 66.3802              | 66.3762               | 66.3828              | 66.3677            | -0.4                 | -4.5                  | 2.2                  | -13.0             | -4.1                   | 6.7                    | -15.2              | 100                     |
| 156.3                  | 66.6202           | 66.6251              | 66.6176               | 66.6278              | 66.6093            | 4.8                  | -2.6                  | 7.6                  | -10.9             | -7.5                   | 10.2                   | -18.5              | 200                     |
| 156.4                  | 66.8628           | 66.8632              | 66.8607               | 66.8630              | 66.8514            | 0.3                  | -2.2                  | 0.1                  | -11.4             | -2.5                   | 2.3                    | -11.6              | 300                     |
| 156.5                  | 67.1480           | 67.1479              | 67.1464               | 67.1494              | 67.1389            | -0.2                 | -1.6                  | 1.4                  | -9.2              | -1.4                   | 2.9                    | -10.5              | 400                     |
| 156.6                  | 67.4735           | 67.4714              | 67.4712               | 67.4715              | 67.4638            | -2.1                 | -2.3                  | -2.1                 | -9.7              | -0.2                   | 0.3                    | -7.6               | 500                     |
| 156.7                  | 67.7553           | 67.7515              | 67.7501               | 67.7487              | 67.7439            | -3.8                 | -5.2                  | -6.6                 | -11.5             | -1.4                   | -1.4                   | -4.9               | 600                     |
| 156.8                  | 68.1750           | 68.1727              | 68.1707               | 68.1722              | 68.1640            | -2.3                 | -4.2                  | -2.8                 | -11.0             | -2.0                   | 1.5                    | -8.3               | 700                     |
| 156.9                  | 68.4581           | 68.4613              | 68.4557               | 68.4626              | 68.4504            | 3.1                  | -2.4                  | 4.5                  | -7.7              | -5.6                   | 6.9                    | -12.3              | 800                     |
| 157.0                  | 68.9757           | 68.9950              | 68.9870               | 68.9946              | 68.9799            | uus                  |                       |                      | 4.2               | -8.0                   | 7.6                    | -14.7              | 900                     |
| 157.1                  | 70.1009           | 70.1058              | 70.0994               | 70.1058              | 70.0938            | 4.8                  | -1.5                  | 4.9                  | -7.1              | -6.3                   | 6.4                    | -12.0              | 1000                    |
| 157.2                  | 71.2093           | 71.2091              | 71.2078               | 71.2109              | 71.2018            | -0.2                 | -1.5                  | 1.7                  | -7.5              | -1.3                   | 3.1                    | -9.2               | 1100                    |
| 157.3                  | 72.0416           | 72.0377              | 72.0400               | 72.0398              | 72.0344            | -3.9                 | -1.6                  | -1.9                 | -7.2              | 2.3                    | -0.2                   | -5.4               | 1200                    |
| 157.4                  | 72.5422           | 72.5420              | 72.5406               | 72.5462              | 72.5343            | -0.2                 | -1.7                  | 4.0                  | -7.9              | -1.4                   | 5.6                    | -11.9              | 1300                    |
| 157.5                  | 72.8912           | 72.8905              | 72.8893               | 72.8916              | 72.8825            | -0.7                 | -2.0                  | 0.4                  | -8.7              | -1.2                   | 2.3                    | -9.1               | 1400                    |
| 157.6                  | 73.1079           | 73.1106              | 73.1047               | 73.1124              | 73.0983            | 2.7                  | -3.2                  | 4.5                  | -9.6              | -5.9                   | 7.7                    | -14.1              | 1500                    |
| 157.7                  | 73.4316           | 73.4313              | 73.4308               | 73.4328              | 73.4258            | -0.4                 | -0.8                  | 1.1                  | -5.8              | -0.5                   | 2.0                    | -7.0               | 1600                    |
| 157.8                  | 73.5181           | 73.5228              | 73.5160               | 73.5195              | 73.5111            | 4.7                  | -2.1                  | 1.5                  | -7.0              | -6.8                   | 3.6                    | -8.4               | 1700                    |
| 157.9                  | 73.3308           | 73.3292              | 73.3287               | 73.3289              | 73.3245            | -1.6                 | -2.2                  | -1.9                 | -6.4              | -0.6                   | 0.2                    | -4.4               | 1800                    |
| 158.0                  | 73.0241           | 73.0272              | 73.0221               | 73.0254              | 73.0168            | 3.1                  | -2.1                  | 1.2                  | -7.3              | -5.2                   | 3.3                    | -8.5               | 1900                    |
| 158.1                  | 72.7354           | 72.7387              | 72.7334               | 72.7383              | 72.7281            | 3.3                  | -2.1                  | 2.8                  | -7.4              | -5.3                   | 4.9                    | -10.2              | 2000                    |
| 158.2                  | 72.4066           | 72.4134              | 72.4061               | 72.4125              | 72.4012            | 6.8                  | -0.6                  | 5.9                  | -5.4              | -7.3                   | 6.4                    | -11.3              | 2100                    |
| 158.3                  | 72.0804           | 72.0787              | 72.0781               | 72.0794              | 72.0739            | -1.8                 | -2.3                  | -1.0                 | -6.5              | -0.5                   | 1.3                    | -5.5               | 2200                    |
| 158.4                  | 71.6761           | 71.6724              | 71.6743               | 71.6753              | 71.6710            | -3.7                 | -1.8                  | -0.8                 | -5.1              | 1.8                    | 1.0                    | -4.3               | 2300                    |
| 158.5                  | 71.2363           | 71.2310              | 71.2313               | 71.2265              | 71.2271            | uus                  |                       |                      | -9.2              | 0.3                    | -4.9                   | 0.6                | 2400                    |
| 158.6                  | 70.4998           | 70.5082              | 70.5077               | 70.5016              | 70.5011            | uus                  |                       |                      | 1.3               | -0.5                   | -6.1                   | -0.5               | 2500                    |
| 158.7                  | 69.5555           | 69.5475              | 69.5470               | 69.5435              | 69.5405            | uus                  |                       |                      | -15.0             | -0.5                   | -3.5                   | -3.0               | 2600                    |
| 158.8                  | 68.3288           | 68.3258              | 68.3263               | 68.3229              | 68.3212            | -3.0                 | -2.5                  | -5.9                 | -7.6              | 0.5                    | -3.3                   | -1.7               | 2700                    |
| 158.9                  | 66.8843           | 66.8829              | 66.8829               | 66.8836              | 66.8777            | -1.4                 | -1.4                  | -0.7                 | -6.6              | 0.0                    | 0.7                    | -5.9               | 2800                    |
| 159.0                  | 65.7058           | 65.7052              | 65.7046               | 65.6999              | 65.6991            | -0.6                 | -1.2                  | -5.9                 | -6.7              | -0.6                   | -4.7                   | -0.8               | 2900                    |
| 159.1                  | 64.7363           | 64.7353              | 64.7332               | 64.7308              | 64.7265            | -0.9                 | -3.1                  | -5.5                 | -9.8              | -2.2                   | -2.4                   | -4.3               | 3000                    |
| 159.2                  | 64.1127           | 64.1139              | 64.1117               | 64.1132              | 64.1071            | 1.2                  | -0.9                  | 0.5                  | -5.6              | -2.1                   | 1.4                    | -6.0               | 3100                    |
| 159.3                  | 63.6163           | 63.6189              | 63.6163               | 63.6204              | 63.6117            | 2.7                  | 0.0                   | 4.1                  | -4.6              | -2.6                   | 4.1                    | -8.7               | 3200                    |
| 159.4                  | 63.4258           | 63.4308              | 63.4226               | 63.4284              | 63.4176            | uus                  |                       |                      | -8.2              | -8.2                   | 5.8                    | -10.8              | 3300                    |
| 159.5                  | 63.8636           | 63.8730              | 63.8638               | 63.8697              | 63.8580            | 9.4                  | 0.3                   | 6.2                  | -5.6              | -9.1                   | 5.9                    | -11.8              | 3400                    |
| 159.6                  | 64.3307           | 64.3330              | 64.3300               | 64.3330              | 64.3259            | 2.3                  | -0.7                  | 2.3                  | -4.8              | -3.1                   | 3.0                    | -7.1               | 3500                    |
| 159.7                  | 64.7448           | 64.7424              | 64.7433               | 64.7465              | 64.7400            | -2.4                 | -1.6                  | 1.7                  | -4.8              | 0.8                    | 3.2                    | -6.5               | 3600                    |
| 159.8                  | 65.3147           | 65.3138              | 65.3122               | 65.3158              | 65.3087            | -1.0                 | -2.5                  | 1.1                  | -6.0              | -1.5                   | 3.6                    | -7.1               | 3700                    |

|       |         |         |         |         |         |      |      |      |       |      |      |       |      |
|-------|---------|---------|---------|---------|---------|------|------|------|-------|------|------|-------|------|
| 159.9 | 65.7893 | 65.7868 | 65.7856 | 65.7888 | 65.7818 | -2.4 | -3.7 | -0.5 | -7.5  | -1.2 | 3.1  | -7.0  | 3800 |
| 160.0 | 66.2536 | 66.2556 | 66.2528 | 66.2609 | 66.2489 | 2.0  | -0.8 | 7.3  | -4.7  | -2.8 | 8.1  | -12.0 | 3900 |
| 160.1 | 66.7683 | 66.7646 | 66.7657 | 66.7700 | 66.7623 | -3.7 | -2.6 | 1.7  | -6.0  | 1.1  | 4.3  | -7.7  | 4000 |
| 160.2 | 67.2538 | 67.2492 | 67.2517 | 67.2506 | 67.2482 | -4.6 | -2.1 | -3.1 | -5.6  | 2.5  | -1.1 | -2.5  | 4100 |
| 160.3 | 67.6941 | 67.6896 | 67.6922 | 67.6906 | 67.6891 | -4.5 | -1.8 | -3.5 | -4.9  | 2.7  | -1.6 | -1.5  | 4200 |
| 160.4 | 67.8142 | 67.8094 | 67.8124 | 67.8113 | 67.8087 | -4.8 | -1.8 | -2.9 | -5.5  | 3.0  | -1.2 | -2.6  | 4300 |
| 160.5 | 67.6671 | 67.6623 | 67.6646 | 67.6636 | 67.6604 | -4.8 | -2.5 | -3.5 | -6.7  | 2.4  | -1.1 | -3.2  | 4400 |
| 160.6 | 67.2947 | 67.2889 | 67.2915 | 67.2902 | 67.2873 | -5.8 | -3.2 | -4.5 | -7.4  | 2.7  | -1.3 | -2.9  | 4500 |
| 160.7 | 66.9526 | 66.9480 | 66.9504 | 66.9488 | 66.9458 | -4.6 | -2.3 | -3.8 | -6.8  | 2.4  | -1.5 | -3.0  | 4600 |
| 160.8 | 66.5148 | 66.5109 | 66.5132 | 66.5104 | 66.5089 | -3.9 | -1.6 | -4.4 | -5.9  | 2.3  | -2.8 | -1.5  | 4700 |
| 160.9 | 66.1416 | 66.1376 | 66.1390 | 66.1375 | 66.1364 | -4.0 | -2.5 | uus  | -5.2  | 1.5  |      | -1.2  | 4800 |
| 161.0 | 65.7384 | 65.7352 | 65.7375 | 65.7388 | 65.7334 | -3.2 | -0.9 | 0.4  | -5.0  | 2.2  | 1.3  | -5.3  | 4900 |
| 161.1 | 65.3533 | 65.3491 | 65.3519 | 65.3506 | 65.3479 | -4.3 | -1.5 | -2.7 | -5.5  | 2.8  | -1.3 | -2.8  | 5000 |
| 161.2 | 64.9272 | 64.9218 | 64.9251 | 64.9232 | 64.9203 | -5.3 | -2.0 | -4.0 | -6.8  | 3.3  | -1.9 | -2.9  | 5100 |
| 161.3 | 64.5264 | 64.5211 | 64.5242 | 64.5231 | 64.5194 | -5.2 | -2.2 | -3.3 | -6.9  | 3.1  | -1.1 | -3.7  | 5200 |
| 161.4 | 64.2333 | 64.2280 | 64.2303 | 64.2320 | 64.2261 | -5.3 | -3.0 | -1.3 | -7.2  | 2.2  | 1.8  | -6.0  | 5300 |
| 161.5 | 64.4194 | 64.4127 | 64.4169 | 64.4174 | 64.4124 | -6.7 | -2.6 | -2.0 | -7.1  | 4.1  | 0.5  | -5.0  | 5400 |
| 161.6 | 65.0240 | 65.0188 | 65.0225 | 65.0230 | 65.0181 | -5.1 | -1.5 | -0.9 | -5.9  | 3.7  | 0.5  | -4.9  | 5500 |
| 161.7 | 65.6628 | 65.6567 | 65.6611 | 65.6577 | 65.6565 | -6.1 | -1.7 | -5.2 | -6.3  | 4.4  | -3.5 | -1.1  | 5600 |
| 161.8 | 65.8654 | 65.8604 | 65.8642 | 65.8633 | 65.8601 | -5.0 | -1.2 | -2.1 | -5.3  | 3.9  | -1.0 | -3.2  | 5700 |
| 161.9 | 65.4924 | 65.4856 | 65.4900 | 65.4887 | 65.4853 | -6.8 | -2.4 | -3.7 | -7.1  | 4.4  | -1.3 | -3.4  | 5800 |
| 162.0 | 64.7283 | 64.7232 | 64.7258 | 64.7288 | 64.7218 | -5.1 | -2.5 | 0.5  | -6.5  | 2.6  | 3.0  | -7.0  | 5900 |
| 162.1 | 64.0640 | 64.0634 | 64.0642 | 64.0661 | 64.0594 | -0.6 | 0.1  | 2.1  | -4.7  | 0.7  | 1.9  | -6.7  | 6000 |
| 162.2 | 63.4928 | 63.4879 | 63.4912 | 63.4935 | 63.4869 | -4.9 | -1.6 | 0.7  | -5.9  | 3.3  | 2.3  | -6.6  | 6100 |
| 162.3 | 62.7961 | 62.7905 | 62.7942 | 62.7923 | 62.7895 | uus  |      |      | -6.6  | 3.7  | -1.9 | -2.8  | 6200 |
| 162.4 | 61.9365 | 62.0889 | 62.0916 | 62.0879 | 62.0848 | uus  |      |      | 148.4 | 2.6  | -3.7 | -3.1  | 6300 |
| 162.5 | 61.1818 | 61.1753 | 61.1781 | 61.1754 | 61.1720 | -6.5 | -3.7 | -6.4 | -9.8  | 2.8  | -2.7 | -3.3  | 6400 |
| 162.6 | 60.5502 | 60.5459 | 60.5500 | 60.5478 | 60.5461 | -4.3 | -0.2 | -2.4 | -4.1  | 4.0  | -2.2 | -1.7  | 6500 |
| 162.7 | 59.8849 | 59.8813 | 59.8833 | 59.8821 | 59.8784 | -3.6 | -1.6 | -2.9 | -6.5  | 2.0  | -1.2 | -3.7  | 6600 |
| 162.8 | 59.7541 | 59.7507 | 59.7522 | 59.7515 | 59.7464 | uus  |      |      | -7.7  | 1.5  | -0.7 | -5.1  | 6700 |
| 162.9 | 60.0512 | 60.0486 | 60.0499 | 60.0555 | 60.0437 | uus  |      |      | -7.5  | 1.3  | 5.6  | -11.9 | 6800 |
| 163.0 | 59.7483 | 59.7444 | 59.7460 | 59.7452 | 59.7409 | uus  |      | uus  | -7.4  | 1.6  |      | -4.3  | 6900 |
| 163.1 | 58.7923 | 58.7833 | 58.7850 | 58.7839 | 58.7797 | uus  |      |      | -12.6 | 1.7  | -1.1 | -4.2  | 7000 |
| 163.2 | 57.4665 | 57.4648 | 57.4649 | 57.4654 | 57.4597 | -1.8 | -1.6 | -1.1 | -6.8  | 0.1  | 0.5  | -5.7  | 7100 |

Kõrgused BK77 süsteemis

02.11.2012.a.

Koostas: Tanel Bauman

| J.nr P.nr, temperatuur |     |    |                       | Lugemid   | Kaugused | H Balti  | Piketaaz (ehitus) |
|------------------------|-----|----|-----------------------|-----------|----------|----------|-------------------|
| For M5                 | Adr | 6  | KD1 Veetorn 24 13. Rb | 0.75060 m | HD       | 31.387 m |                   |
| For M5                 | Adr | 7  | TO Start-Line BFE     |           |          |          |                   |
| For M5                 | Adr | 8  | KD1 Veetorn 24        |           |          | Z        | 62.134 m          |
| For M5                 | Adr | 9  | KD1 Veetorn 24 12. Rb | 0.75066 m | HD       | 31.382 m |                   |
| For M5                 | Adr | 10 | KD1 1 12.0 C Rf       | 0.78474 m | HD       | 33.880 m |                   |
| For M5                 | Adr | 11 | KD1 Veetorn 24 12. Rb | 0.75066 m | HD       | 31.378 m |                   |
| For M5                 | Adr | 12 | KD1 1 12.0 C Rf       | 0.78475 m | HD       | 33.876 m |                   |
| For M5                 | Adr | 13 | KD1 1 12.0 C          |           |          | Z        | 62.100 m          |
| For M5                 | Adr | 14 | KD1 1 11.0 C Rb       | 1.72659 m | HD       | 38.149 m |                   |
| For M5                 | Adr | 15 | KD1 2 10.0 C Rf       | 0.73461 m | HD       | 37.076 m |                   |
| For M5                 | Adr | 16 | KD1 1 10.0 C Rb       | 1.72638 m | HD       | 38.142 m |                   |
| For M5                 | Adr | 17 | KD1 2 10.0 C Rf       | 0.73445 m | HD       | 37.071 m |                   |
| For M5                 | Adr | 18 | KD1 2 10.0 C          |           |          | Z        | 63.092 m          |
| For M5                 | Adr | 19 | KD1 2 9.0 C 1 Rb      | 1.65083 m | HD       | 34.775 m |                   |
| For M5                 | Adr | 20 | KD1 3500 9.0 C Rf     | 0.41678 m | HD       | 41.011 m |                   |
| For M5                 | Adr | 21 | KD1 2 9.0 C 1 Rb      | 1.65085 m | HD       | 34.785 m |                   |
| For M5                 | Adr | 22 | KD1 3500 9.0 C Rf     | 0.41679 m | HD       | 41.020 m |                   |
| For M5                 | Adr | 23 | KD1 3500 9.0 C        |           |          | Z        | 64.326 m          |
| For M5                 | Adr | 24 | KD1 3500 8.0 C Rb     | 1.27734 m | HD       | 50.755 m | 3+500             |
| For M5                 | Adr | 25 | KD1 3600 8.0 C Rf     | 0.86326 m | HD       | 50.613 m |                   |
| For M5                 | Adr | 26 | KD1 3500 8.0 C Rb     | 1.27734 m | HD       | 50.761 m |                   |
| For M5                 | Adr | 27 | KD1 3600 8.0 C Rf     | 0.86328 m | HD       | 50.607 m |                   |
| For M5                 | Adr | 28 | KD1 3600 8.0 C        |           |          | Z        | 64.740 m          |
| For M5                 | Adr | 29 | KD1 3600 8.0 C Rb     | 1.43791 m | HD       | 51.039 m | 3+600             |
| For M5                 | Adr | 30 | KD1 3700 8.0 C Rf     | 0.86904 m | HD       | 48.568 m |                   |
| For M5                 | Adr | 31 | KD1 3600 8.0 C Rb     | 1.43770 m | HD       | 51.042 m |                   |
| For M5                 | Adr | 32 | KD1 3700 8.0 C Rf     | 0.86914 m | HD       | 48.564 m |                   |
| For M5                 | Adr | 33 | KD1 3700 8.0 C        |           |          | Z        | 65.309 m          |
| For M5                 | Adr | 34 | KD1 3700 7.0 C Rb     | 1.38106 m | HD       | 50.232 m | 3+700             |
| For M5                 | Adr | 35 | KD1 3800 7.0 C Rf     | 0.90800 m | HD       | 49.997 m |                   |
| For M5                 | Adr | 36 | KD1 3700 7.0 C Rb     | 1.38109 m | HD       | 50.226 m |                   |
| For M5                 | Adr | 37 | KD1 3800 7.0 C Rf     | 0.90797 m | HD       | 49.974 m |                   |
| For M5                 | Adr | 38 | KD1 3800 7.0 C        |           |          | Z        | 65.782 m          |
| For M5                 | Adr | 39 | KD1 3800 7.0 C Rb     | 1.35878 m | HD       | 49.742 m | 3+800             |
| For M5                 | Adr | 40 | KD1 3900 7.0 C Rf     | 0.89173 m | HD       | 50.182 m |                   |
| For M5                 | Adr | 41 | KD1 3800 7.0 C Rb     | 1.35911 m | HD       | 49.747 m |                   |
| For M5                 | Adr | 42 | KD1 3900 7.0 C Rf     | 0.89195 m | HD       | 50.167 m |                   |
| For M5                 | Adr | 43 | KD1 3900 7.0 C        |           |          | Z        | 66.249 m          |
| For M5                 | Adr | 44 | KD1 3900 7.0 C Rb     | 1.37461 m | HD       | 49.735 m | 3+900             |
| For M5                 | Adr | 45 | KD1 4000 7.0 C Rf     | 0.86104 m | HD       | 50.100 m |                   |
| For M5                 | Adr | 46 | KD1 3900 7.0 C Rb     | 1.37438 m | HD       | 49.748 m |                   |
| For M5                 | Adr | 47 | KD1 4000 7.0 C Rf     | 0.86112 m | HD       | 50.110 m |                   |
| For M5                 | Adr | 48 | KD1 4000 7.0 C        |           |          | Z        | 66.762 m          |
| For M5                 | Adr | 49 | KD1 4000 7.0 C Rb     | 1.36854 m | HD       | 50.825 m | 4+000             |
| For M5                 | Adr | 50 | KD1 4100 7.0 C Rf     | 0.88264 m | HD       | 50.007 m |                   |
| For M5                 | Adr | 51 | KD1 4000 7.0 C Rb     | 1.36862 m | HD       | 50.819 m |                   |
| For M5                 | Adr | 52 | KD1 4100 7.0 C Rf     | 0.88274 m | HD       | 49.982 m |                   |
| For M5                 | Adr | 53 | KD1 4100 7.0 C        |           |          | Z        | 67.248 m          |
| For M5                 | Adr | 54 | KD1 4100##### 7.( Rb  | 1.40524 m | HD       | 50.417 m | 4+100             |
| For M5                 | Adr | 55 | KD1 4200##### 7.( Rf  | 0.96389 m | HD       | 50.041 m |                   |
| For M5                 | Adr | 56 | KD1 4100##### 7.( Rb  | 1.40460 m | HD       | 50.368 m |                   |
| For M5                 | Adr | 57 | TO Station repeated   |           |          |          |                   |
| For M5                 | Adr | 58 | KD1 4100 7.0 C Rb     | 1.40469 m | HD       | 50.385 m |                   |
| For M5                 | Adr | 59 | KD1 4200 7.0 C Rf     | 0.96378 m | HD       | 50.051 m |                   |
| For M5                 | Adr | 60 | KD1 4100 7.0 C Rb     | 1.40473 m | HD       | 50.403 m |                   |
| For M5                 | Adr | 61 | KD1 4200 7.0 C Rf     | 0.96373 m | HD       | 50.041 m |                   |
| For M5                 | Adr | 62 | KD1 4200 7.0 C        |           |          | Z        | 67.689 m          |
| For M5                 | Adr | 63 | KD1 4200 6.0 C Rb     | 1.22611 m | HD       | 50.140 m | 4+200             |
| For M5                 | Adr | 64 | KD1 4300 6.0 C Rf     | 1.10667 m | HD       | 50.978 m |                   |
| For M5                 | Adr | 65 | KD1 4200 6.0 C Rb     | 1.22622 m | HD       | 50.135 m |                   |
| For M5                 | Adr | 66 | KD1 4300 6.0 C Rf     | 1.10657 m | HD       | 50.973 m |                   |
| For M5                 | Adr | 67 | KD1 4300 6.0 C        |           |          | Z        | 67.809 m          |
| For M5                 | Adr | 68 | KD1 4300 6.0 C Rb     | 1.10820 m | HD       | 49.893 m | 4+300             |
| For M5                 | Adr | 69 | KD1 4400 6.0 C Rf     | 1.25645 m | HD       | 50.430 m |                   |
| For M5                 | Adr | 70 | KD1 4300 6.0 C Rb     | 1.10810 m | HD       | 49.902 m |                   |
| For M5                 | Adr | 71 | KD1 4400 6.0 C Rf     | 1.25640 m | HD       | 50.408 m |                   |
| For M5                 | Adr | 72 | KD1 4400 6.0 C        |           |          | Z        | 67.660 m          |
| For M5                 | Adr | 73 | KD1 4400 6.0 C Rb     | 0.95967 m | HD       | 50.600 m | 4+400             |
| For M5                 | Adr | 74 | KD1 4500 6.0 C Rf     | 1.33266 m | HD       | 49.964 m |                   |
| For M5                 | Adr | 75 | KD1 4400 6.0 C Rb     | 0.95966 m | HD       | 50.608 m |                   |

|        |     |     |     |                      |           |           |          |          |   |          |       |
|--------|-----|-----|-----|----------------------|-----------|-----------|----------|----------|---|----------|-------|
| For M5 | Adr | 76  | KD1 | 4500                 | 6.0 C Rf  | 1.33289 m | HD       | 49.946 m |   |          |       |
| For M5 | Adr | 77  | KD1 | 4500                 | 6.0 C     |           |          |          | Z | 67.287 m | 4+500 |
| For M5 | Adr | 78  | KD1 | 4500                 | 6.0 C Rb  | 0.93837 m | HD       | 50.126 m |   |          |       |
| For M5 | Adr | 79  | KD1 | 4600                 | 6.0 C Rf  | 1.27970 m | HD       | 50.620 m |   |          |       |
| For M5 | Adr | 80  | KD1 | 4500                 | 6.0 C Rb  | 0.93836 m | HD       | 50.139 m |   |          |       |
| For M5 | Adr | 81  | KD1 | 4600                 | 6.0 C Rf  | 1.27991 m | HD       | 50.603 m |   |          |       |
| For M5 | Adr | 82  | KD1 | 4600                 | 6.0 C     |           |          |          | Z | 66.946 m | 4+600 |
| For M5 | Adr | 83  | KD1 | 4600                 | 6.0 C Rb  | 0.86960 m | HD       | 50.022 m |   |          |       |
| For M5 | Adr | 84  | KD1 | 4700                 | 6.0 C Rf  | 1.30637 m | HD       | 49.985 m |   |          |       |
| For M5 | Adr | 85  | KD1 | 4600                 | 6.0 C Rb  | 0.86934 m | HD       | 50.031 m |   |          |       |
| For M5 | Adr | 86  | KD1 | 4700                 | 6.0 C Rf  | 1.30639 m | HD       | 49.968 m |   |          |       |
| For M5 | Adr | 87  | KD1 | 4700                 | 6.0 C     |           |          |          | Z | 66.509 m | 4+700 |
| For M5 | Adr | 88  | KD1 | 4700                 | 6.0 C Rb  | 0.94277 m | HD       | 49.380 m |   |          |       |
| For M5 | Adr | 89  | KD1 | 4800                 | 6.0 C Rf  | 1.31522 m | HD       | 51.459 m |   |          |       |
| For M5 | Adr | 90  | KD1 | 4700                 | 6.0 C Rb  | 0.94274 m | HD       | 49.356 m |   |          |       |
| For M5 | Adr | 91  | KD1 | 4800                 | 6.0 C Rf  | 1.31543 m | HD       | 51.424 m |   |          |       |
| For M5 | Adr | 92  | KD1 | 4800                 | 6.0 C     |           |          |          | Z | 66.136 m | 4+800 |
| For M5 | Adr | 93  | KD1 | 4800                 | 6.0 C Rb  | 0.89103 m | HD       | 54.274 m |   |          |       |
| For M5 | Adr | 94  | KD1 | 4900                 | 6.0 C Rf  | 1.29388 m | HD       | 46.269 m |   |          |       |
| For M5 | Adr | 95  | KD1 | 4800                 | 6.0 C Rb  | 0.89084 m | HD       | 54.257 m |   |          |       |
| For M5 | Adr | 96  | KD1 | 4900                 | 6.0 C Rf  | 1.29382 m | HD       | 46.255 m |   |          |       |
| For M5 | Adr | 97  | KD1 | 4900                 | 6.0 C     |           |          |          | Z | 65.733 m | 4+900 |
| For M5 | Adr | 98  | KD1 | 4900##### 6.0 C Rb   | 0.89890 m | HD        | 58.188 m |          |   |          |       |
| For M5 | Adr | 99  | TO  | Measurement rejected |           |           |          |          |   |          |       |
| For M5 | Adr | 100 | KD1 | 4900                 | 6.0 C Rb  | 0.95418 m | HD       | 49.440 m |   |          |       |
| For M5 | Adr | 101 | KD1 | 5000                 | 6.0 C Rf  | 1.33979 m | HD       | 50.779 m |   |          |       |
| For M5 | Adr | 102 | KD1 | 4900                 | 6.0 C Rb  | 0.95434 m | HD       | 49.462 m |   |          |       |
| For M5 | Adr | 103 | KD1 | 5000                 | 6.0 C Rf  | 1.33987 m | HD       | 50.769 m |   |          |       |
| For M5 | Adr | 104 | KD1 | 5000                 | 6.0 C     |           |          |          | Z | 65.348 m | 5+000 |
| For M5 | Adr | 105 | KD1 | 5000                 | 6.0 C Rb  | 0.89439 m | HD       | 50.454 m |   |          |       |
| For M5 | Adr | 106 | KD1 | 5100                 | 6.0 C Rf  | 1.32184 m | HD       | 50.468 m |   |          |       |
| For M5 | Adr | 107 | KD1 | 5000                 | 6.0 C Rb  | 0.89423 m | HD       | 50.458 m |   |          |       |
| For M5 | Adr | 108 | KD1 | 5100                 | 6.0 C Rf  | 1.32186 m | HD       | 50.474 m |   |          |       |
| For M5 | Adr | 109 | KD1 | 5100                 | 6.0 C     |           |          |          | Z | 64.920 m | 5+100 |
| For M5 | Adr | 110 | KD1 | 5100                 | 6.0 C Rb  | 0.91563 m | HD       | 50.492 m |   |          |       |
| For M5 | Adr | 111 | KD1 | 5200                 | 6.0 C Rf  | 1.31640 m | HD       | 50.051 m |   |          |       |
| For M5 | Adr | 112 | KD1 | 5100                 | 6.0 C Rb  | 0.91542 m | HD       | 50.503 m |   |          |       |
| For M5 | Adr | 113 | KD1 | 5200                 | 6.0 C Rf  | 1.31642 m | HD       | 50.073 m |   |          |       |
| For M5 | Adr | 114 | KD1 | 5200                 | 6.0 C     |           |          |          | Z | 64.519 m | 5+200 |
| For M5 | Adr | 115 | KD1 | 5200                 | 5.0 C Rb  | 0.95198 m | HD       | 50.410 m |   |          |       |
| For M5 | Adr | 116 | KD1 | 5300                 | 5.0 C Rf  | 1.24544 m | HD       | 49.959 m |   |          |       |
| For M5 | Adr | 117 | KD1 | 5200                 | 6.0 C Rb  | 0.95220 m | HD       | 50.397 m |   |          |       |
| For M5 | Adr | 118 | KD1 | 5300                 | 6.0 C Rf  | 1.24549 m | HD       | 49.955 m |   |          |       |
| For M5 | Adr | 119 | KD1 | 5300                 | 6.0 C     |           |          |          | Z | 64.226 m | 5+300 |
| For M5 | Adr | 120 | KD1 | 5300                 | 5.0 C Rb  | 1.15513 m | HD       | 50.204 m |   |          |       |
| For M5 | Adr | 121 | KD1 | 5400                 | 5.0 C Rf  | 0.96863 m | HD       | 50.321 m |   |          |       |
| For M5 | Adr | 122 | KD1 | 5300                 | 5.0 C Rb  | 1.15507 m | HD       | 50.212 m |   |          |       |
| For M5 | Adr | 123 | KD1 | 5400                 | 5.0 C Rf  | 0.96896 m | HD       | 50.357 m |   |          |       |
| For M5 | Adr | 124 | KD1 | 5400                 | 5.0 C     |           |          |          | Z | 64.412 m | 5+400 |
| For M5 | Adr | 125 | KD1 | 5400                 | 5.0 C Rb  | 1.38751 m | HD       | 50.059 m |   |          |       |
| For M5 | Adr | 126 | KD1 | 5500                 | 5.0 C Rf  | 0.78172 m | HD       | 50.171 m |   |          |       |
| For M5 | Adr | 127 | KD1 | 5400                 | 5.0 C Rb  | 1.38757 m | HD       | 50.060 m |   |          |       |
| For M5 | Adr | 128 | KD1 | 5500                 | 5.0 C Rf  | 0.78193 m | HD       | 50.160 m |   |          |       |
| For M5 | Adr | 129 | KD1 | 5500                 | 5.0 C     |           |          |          | Z | 65.018 m | 5+500 |
| For M5 | Adr | 130 | KD1 | 5500                 | 5.0 C Rb  | 1.46171 m | HD       | 50.015 m |   |          |       |
| For M5 | Adr | 131 | KD1 | 5600                 | 5.0 C Rf  | 0.82314 m | HD       | 49.831 m |   |          |       |
| For M5 | Adr | 132 | KD1 | 5500                 | 5.0 C Rb  | 1.46159 m | HD       | 50.018 m |   |          |       |
| For M5 | Adr | 133 | KD1 | 5600                 | 5.0 C Rf  | 0.82324 m | HD       | 49.804 m |   |          |       |
| For M5 | Adr | 134 | KD1 | 5600                 | 5.0 C     |           |          |          | Z | 65.657 m | 5+600 |
| For M5 | Adr | 135 | KD1 | 5600                 | 5.0 C Rb  | 1.33040 m | HD       | 50.345 m |   |          |       |
| For M5 | Adr | 136 | KD1 | 5700                 | 5.0 C Rf  | 1.12681 m | HD       | 49.884 m |   |          |       |
| For M5 | Adr | 137 | KD1 | 5600                 | 5.0 C Rb  | 1.33041 m | HD       | 50.338 m |   |          |       |
| For M5 | Adr | 138 | KD1 | 5700                 | 5.0 C Rf  | 1.12688 m | HD       | 49.887 m |   |          |       |
| For M5 | Adr | 139 | KD1 | 5700                 | 5.0 C     |           |          |          | Z | 65.860 m | 5+700 |
| For M5 | Adr | 140 | KD1 | 5700                 | 5.0 C Rb  | 0.99594 m | HD       | 50.473 m |   |          |       |
| For M5 | Adr | 141 | KD1 | 5800                 | 5.0 C Rf  | 1.37090 m | HD       | 49.591 m |   |          |       |
| For M5 | Adr | 142 | KD1 | 5700                 | 5.0 C Rb  | 0.99615 m | HD       | 50.442 m |   |          |       |
| For M5 | Adr | 143 | KD1 | 5800                 | 5.0 C Rf  | 1.37081 m | HD       | 49.588 m |   |          |       |
| For M5 | Adr | 144 | KD1 | 5800                 | 5.0 C     |           |          |          | Z | 65.485 m | 5+800 |
| For M5 | Adr | 145 | KD1 | 5800                 | 5.0 C Rb  | 0.70542 m | HD       | 49.481 m |   |          |       |
| For M5 | Adr | 146 | KD1 | 5900                 | 5.0 C Rf  | 1.46877 m | HD       | 49.529 m |   |          |       |
| For M5 | Adr | 147 | KD1 | 5800                 | 5.0 C Rb  | 0.70546 m | HD       | 49.454 m |   |          |       |

|        |     |         |                  |           |           |    |          |   |          |       |
|--------|-----|---------|------------------|-----------|-----------|----|----------|---|----------|-------|
| For M5 | Adr | 14E KD1 | 5900             | 5.0 C Rf  | 1.46907 m | HD | 49.592 m |   |          |       |
| For M5 | Adr | 14S KD1 | 5900             | 5.0 C     |           |    |          | Z | 64.722 m | 5+900 |
| For M5 | Adr | 15C KD1 | 5900             | 5.0 C Rb  | 0.79062 m | HD | 49.450 m |   |          |       |
| For M5 | Adr | 15J KD1 | 6000             | 5.0 C Rf  | 1.45293 m | HD | 48.925 m |   |          |       |
| For M5 | Adr | 15Z KD1 | 5900             | 5.0 C Rb  | 0.79048 m | HD | 49.463 m |   |          |       |
| For M5 | Adr | 15S KD1 | 6000             | 5.0 C Rf  | 1.45295 m | HD | 48.954 m |   |          |       |
| For M5 | Adr | 154 KD1 | 6000             | 5.0 C     |           |    |          | Z | 64.059 m | 6+000 |
| For M5 | Adr | 15S KD1 | 6000             | 5.0 C Rb  | 0.94304 m | HD | 49.449 m |   |          |       |
| For M5 | Adr | 15E KD1 | 6100             | 5.0 C Rf  | 1.51562 m | HD | 49.862 m |   |          |       |
| For M5 | Adr | 157 KD1 | 6000             | 5.0 C Rb  | 0.94304 m | HD | 49.432 m |   |          |       |
| For M5 | Adr | 15E KD1 | 6100             | 5.0 C Rf  | 1.51552 m | HD | 49.858 m |   |          |       |
| For M5 | Adr | 15S KD1 | 6100             | 5.0 C     |           |    |          | Z | 63.487 m | 6+100 |
| For M5 | Adr | 16C KD1 | 6100             | 5.0 C Rb  | 0.78507 m | HD | 49.386 m |   |          |       |
| For M5 | Adr | 16J KD1 | 6200             | 5.0 C Rf  | 1.48247 m | HD | 49.652 m |   |          |       |
| For M5 | Adr | 16Z KD1 | 6100             | 5.0 C Rb  | 0.78513 m | HD | 49.378 m |   |          |       |
| For M5 | Adr | 16S KD1 | 6200             | 5.0 C Rf  | 1.48239 m | HD | 49.642 m |   |          |       |
| For M5 | Adr | 164 KD1 | 6200             | 5.0 C     |           |    |          | Z | 62.790 m | 6+200 |
| For M5 | Adr | 16S KD1 | 6200##### 5.C Rb | 0.80360 m | HD        |    | 49.247 m |   |          |       |
| For M5 | Adr | 16E KD1 | 6300##### 5.C Rf | 1.50853 m | HD        |    | 49.231 m |   |          |       |
| For M5 | Adr | 167 KD1 | 6200##### 5.C Rb | 0.80401 m | HD        |    | 49.276 m |   |          |       |
| For M5 | Adr | 16E TO  | Station repeated |           |           |    |          |   |          |       |
| For M5 | Adr | 16S KD1 | 6200             | 5.0 C Rb  | 0.80374 m | HD | 49.245 m |   |          |       |
| For M5 | Adr | 17C KD1 | 6300             | 5.0 C Rf  | 1.50849 m | HD | 49.238 m |   |          |       |
| For M5 | Adr | 17J KD1 | 6200             | 5.0 C Rb  | 0.80359 m | HD | 49.266 m |   |          |       |
| For M5 | Adr | 17Z KD1 | 6300             | 5.0 C Rf  | 1.50826 m | HD | 49.228 m |   |          |       |
| For M5 | Adr | 17S KD1 | 6300             | 5.0 C     |           |    |          | Z | 62.085 m | 6+300 |
| For M5 | Adr | 174 KD1 | 6300             | 5.0 C Rb  | 0.71196 m | HD | 49.120 m |   |          |       |
| For M5 | Adr | 17S KD1 | 6400             | 5.0 C Rf  | 1.62465 m | HD | 49.868 m |   |          |       |
| For M5 | Adr | 17E KD1 | 6300             | 5.0 C Rb  | 0.71197 m | HD | 49.126 m |   |          |       |
| For M5 | Adr | 177 KD1 | 6400             | 5.0 C Rf  | 1.62484 m | HD | 49.882 m |   |          |       |
| For M5 | Adr | 17E KD1 | 6400             | 5.0 C     |           |    |          | Z | 61.172 m | 6+400 |
| For M5 | Adr | 17S KD1 | 6400             | 5.0 C Rb  | 0.78070 m | HD | 49.409 m |   |          |       |
| For M5 | Adr | 18C KD1 | 6500             | 5.0 C Rf  | 1.40662 m | HD | 49.302 m |   |          |       |
| For M5 | Adr | 18J KD1 | 6400             | 5.0 C Rb  | 0.78062 m | HD | 49.449 m |   |          |       |
| For M5 | Adr | 18Z KD1 | 6500             | 5.0 C Rf  | 1.40659 m | HD | 49.342 m |   |          |       |
| For M5 | Adr | 18S KD1 | 6500             | 5.0 C     |           |    |          | Z | 60.546 m | 6+500 |
| For M5 | Adr | 184 KD1 | 6500             | 5.0 C Rb  | 0.79592 m | HD | 49.963 m |   |          |       |
| For M5 | Adr | 18S KD1 | 6600             | 5.0 C Rf  | 1.46351 m | HD | 48.613 m |   |          |       |
| For M5 | Adr | 18E KD1 | 6500             | 5.0 C Rb  | 0.79567 m | HD | 49.959 m |   |          |       |
| For M5 | Adr | 187 KD1 | 6600             | 5.0 C Rf  | 1.46349 m | HD | 48.614 m |   |          |       |
| For M5 | Adr | 18E KD1 | 6600             | 5.0 C     |           |    |          | Z | 59.878 m | 6+600 |
| For M5 | Adr | 18S KD1 | 6600             | 5.0 C Rb  | 0.87370 m | HD | 50.615 m |   |          |       |
| For M5 | Adr | 19C KD1 | 6700             | 5.0 C Rf  | 1.00577 m | HD | 49.561 m |   |          |       |
| For M5 | Adr | 19J KD1 | 6600             | 5.0 C Rb  | 0.87394 m | HD | 50.621 m |   |          |       |
| For M5 | Adr | 19Z KD1 | 6700             | 5.0 C Rf  | 1.00574 m | HD | 49.572 m |   |          |       |
| For M5 | Adr | 19S KD1 | 6700             | 5.0 C     |           |    |          | Z | 59.746 m | 6+700 |
| For M5 | Adr | 194 KD1 | 6700             | 5.0 C Rb  | 1.32002 m | HD | 50.148 m |   |          |       |
| For M5 | Adr | 19S KD1 | 6800             | 5.0 C Rf  | 1.02284 m | HD | 49.636 m |   |          |       |
| For M5 | Adr | 19E KD1 | 6700             | 5.0 C Rb  | 1.32004 m | HD | 50.121 m |   |          |       |
| For M5 | Adr | 197 KD1 | 6800             | 5.0 C Rf  | 1.02277 m | HD | 49.632 m |   |          |       |
| For M5 | Adr | 19E KD1 | 6800             | 5.0 C     |           |    |          | Z | 60.044 m | 6+800 |
| For M5 | Adr | 19S KD1 | 6800             | 5.0 C Rb  | 1.07774 m | HD | 50.494 m |   |          |       |
| For M5 | Adr | 20C KD1 | 6900             | 5.0 C Rf  | 1.38056 m | HD | 49.890 m |   |          |       |
| For M5 | Adr | 20J KD1 | 6800             | 5.0 C Rb  | 1.07779 m | HD | 50.492 m |   |          |       |
| For M5 | Adr | 20Z KD1 | 6900             | 5.0 C Rf  | 1.38058 m | HD | 49.881 m |   |          |       |
| For M5 | Adr | 20S KD1 | 6900             | 5.0 C     |           |    |          | Z | 59.741 m | 6+900 |
| For M5 | Adr | 204 KD1 | 6900             | 5.0 C Rb  | 0.73931 m | HD | 50.078 m |   |          |       |
| For M5 | Adr | 20S KD1 | 7000             | 5.0 C Rf  | 1.70046 m | HD | 50.035 m |   |          |       |
| For M5 | Adr | 20E KD1 | 6900             | 5.0 C Rb  | 0.73905 m | HD | 50.084 m |   |          |       |
| For M5 | Adr | 207 KD1 | 7000             | 5.0 C Rf  | 1.70013 m | HD | 50.021 m |   |          |       |
| For M5 | Adr | 20E KD1 | 7000             | 5.0 C     |           |    |          | Z | 58.780 m | 7+000 |
| For M5 | Adr | 20S KD1 | 7000             | 5.0 C Rb  | 0.45668 m | HD | 49.346 m |   |          |       |
| For M5 | Adr | 21C KD1 | 7100             | 6.0 C Rf  | 1.77672 m | HD | 50.822 m |   |          |       |
| For M5 | Adr | 21J KD1 | 7000             | 6.0 C Rb  | 0.45682 m | HD | 49.339 m |   |          |       |
| For M5 | Adr | 21Z KD1 | 7100             | 6.0 C Rf  | 1.77685 m | HD | 50.819 m |   |          |       |
| For M5 | Adr | 21S KD1 | 7100             | 6.0 C     |           |    |          | Z | 57.460 m | 7+100 |
| For M5 | Adr | 214 KD1 | 7100             | 6.0 C Rb  | 1.20078 m | HD | 6.169 m  |   |          |       |
| For M5 | Adr | 21S KD1 | 710              | 6.0 C Rf  | 1.15325 m | HD | 5.873 m  |   |          |       |
| For M5 | Adr | 21E KD1 | 7100             | 6.0 C Rb  | 1.20084 m | HD | 6.165 m  |   |          |       |
| For M5 | Adr | 217 KD1 | 710              | 6.0 C Rf  | 1.15328 m | HD | 5.874 m  |   |          |       |
| For M5 | Adr | 21E KD1 | 710              | 6.0 C     |           |    |          | Z | 57.507 m | 7+100 |
| For M5 | Adr | 21S KD1 | 710              | 5.0 C Rb  | 1.81573 m | HD | 50.751 m |   |          |       |

|        |     |         |     |       |    |           |    |          |   |          |       |
|--------|-----|---------|-----|-------|----|-----------|----|----------|---|----------|-------|
| For M5 | Adr | 220 KD1 | 700 | 6.0 C | Rf | 0.52916 m | HD | 49.360 m |   |          |       |
| For M5 | Adr | 221 KD1 | 710 | 6.0 C | Rb | 1.81566 m | HD | 50.748 m |   |          |       |
| For M5 | Adr | 222 KD1 | 700 | 6.0 C | Rf | 0.52908 m | HD | 49.336 m |   |          |       |
| For M5 | Adr | 223 KD1 | 700 | 6.0 C |    |           |    |          | Z | 58.794 m | 7+000 |
| For M5 | Adr | 224 KD1 | 700 | 6.0 C | Rb | 1.65632 m | HD | 49.800 m |   |          |       |
| For M5 | Adr | 225 KD1 | 690 | 6.0 C | Rf | 0.76006 m | HD | 50.222 m |   |          |       |
| For M5 | Adr | 226 KD1 | 700 | 6.0 C | Rb | 1.65616 m | HD | 49.803 m |   |          |       |
| For M5 | Adr | 227 KD1 | 690 | 6.0 C | Rf | 0.75983 m | HD | 50.234 m |   |          |       |
| For M5 | Adr | 228 KD1 | 690 | 6.0 C |    |           |    |          | Z | 59.690 m | 6+900 |
| For M5 | Adr | 229 KD1 | 690 | 6.0 C | Rb | 1.40490 m | HD | 49.424 m |   |          |       |
| For M5 | Adr | 230 KD1 | 680 | 6.0 C | Rf | 1.09661 m | HD | 50.413 m |   |          |       |
| For M5 | Adr | 231 KD1 | 690 | 6.0 C | Rb | 1.40499 m | HD | 49.402 m |   |          |       |
| For M5 | Adr | 232 KD1 | 680 | 6.0 C | Rf | 1.09673 m | HD | 50.417 m |   |          |       |
| For M5 | Adr | 233 KD1 | 680 | 6.0 C |    |           |    |          | Z | 59.998 m | 6+800 |
| For M5 | Adr | 234 KD1 | 680 | 6.0 C | Rb | 1.05827 m | HD | 49.546 m |   |          |       |
| For M5 | Adr | 235 KD1 | 670 | 6.0 C | Rf | 1.39938 m | HD | 50.387 m |   |          |       |
| For M5 | Adr | 236 KD1 | 680 | 6.0 C | Rb | 1.05820 m | HD | 49.554 m |   |          |       |
| For M5 | Adr | 237 KD1 | 670 | 6.0 C | Rf | 1.39933 m | HD | 50.434 m |   |          |       |
| For M5 | Adr | 238 KD1 | 670 | 6.0 C |    |           |    |          | Z | 59.657 m | 6+700 |
| For M5 | Adr | 239 KD1 | 670 | 6.0 C | Rb | 1.01757 m | HD | 46.890 m |   |          |       |
| For M5 | Adr | 240 KD1 | 660 | 6.0 C | Rf | 0.68802 m | HD | 53.001 m |   |          |       |
| For M5 | Adr | 241 KD1 | 670 | 6.0 C | Rb | 1.01787 m | HD | 46.898 m |   |          |       |
| For M5 | Adr | 242 KD1 | 660 | 6.0 C | Rf | 0.68818 m | HD | 53.067 m |   |          |       |
| For M5 | Adr | 243 KD1 | 660 | 6.0 C |    |           |    |          | Z | 59.987 m | 6+600 |
| For M5 | Adr | 244 KD1 | 660 | 6.0 C | Rb | 1.56267 m | HD | 49.751 m |   |          |       |
| For M5 | Adr | 245 KD1 | 650 | 5.0 C | Rf | 0.87304 m | HD | 51.221 m |   |          |       |
| For M5 | Adr | 246 KD1 | 660 | 6.0 C | Rb | 1.56221 m | HD | 49.746 m |   |          |       |
| For M5 | Adr | 247 KD1 | 650 | 6.0 C | Rf | 0.87298 m | HD | 51.248 m |   |          |       |
| For M5 | Adr | 248 KD1 | 650 | 6.0 C |    |           |    |          | Z | 60.676 m | 6+500 |
| For M5 | Adr | 249 KD1 | 650 | 5.0 C | Rb | 1.53911 m | HD | 50.877 m |   |          |       |
| For M5 | Adr | 250 KD1 | 640 | 5.0 C | Rf | 0.80667 m | HD | 50.398 m |   |          |       |
| For M5 | Adr | 251 KD1 | 650 | 5.0 C | Rb | 1.53899 m | HD | 50.807 m |   |          |       |
| For M5 | Adr | 252 KD1 | 640 | 5.0 C | Rf | 0.80644 m | HD | 50.389 m |   |          |       |
| For M5 | Adr | 253 KD1 | 640 | 5.0 C |    |           |    |          | Z | 61.409 m | 6+400 |
| For M5 | Adr | 254 KD1 | 640 | 5.0 C | Rb | 1.59131 m | HD | 51.192 m |   |          |       |
| For M5 | Adr | 255 KD1 | 630 | 5.0 C | Rf | 0.89128 m | HD | 50.260 m |   |          |       |
| For M5 | Adr | 256 KD1 | 640 | 5.0 C | Rb | 1.59128 m | HD | 51.180 m |   |          |       |
| For M5 | Adr | 257 KD1 | 630 | 5.0 C | Rf | 0.89133 m | HD | 50.245 m |   |          |       |
| For M5 | Adr | 258 KD1 | 630 | 5.0 C |    |           |    |          | Z | 62.109 m | 6+300 |
| For M5 | Adr | 259 KD1 | 630 | 5.0 C | Rb | 1.56321 m | HD | 50.136 m |   |          |       |
| For M5 | Adr | 260 KD1 | 620 | 5.0 C | Rf | 0.87171 m | HD | 51.720 m |   |          |       |
| For M5 | Adr | 261 KD1 | 630 | 5.0 C | Rb | 1.56322 m | HD | 50.114 m |   |          |       |
| For M5 | Adr | 262 KD1 | 620 | 5.0 C | Rf | 0.87182 m | HD | 51.723 m |   |          |       |
| For M5 | Adr | 263 KD1 | 620 | 5.0 C |    |           |    |          | Z | 62.800 m | 6+200 |
| For M5 | Adr | 264 KD1 | 620 | 5.0 C | Rb | 1.68227 m | HD | 50.656 m |   |          |       |
| For M5 | Adr | 265 KD1 | 610 | 5.0 C | Rf | 0.85833 m | HD | 50.195 m |   |          |       |
| For M5 | Adr | 266 KD1 | 620 | 5.0 C | Rb | 1.68245 m | HD | 50.626 m |   |          |       |
| For M5 | Adr | 267 KD1 | 610 | 5.0 C | Rf | 0.85872 m | HD | 50.143 m |   |          |       |
| For M5 | Adr | 268 KD1 | 610 | 5.0 C |    |           |    |          | Z | 63.624 m | 6+100 |
| For M5 | Adr | 269 KD1 | 610 | 5.0 C | Rb | 1.59525 m | HD | 51.333 m |   |          |       |
| For M5 | Adr | 270 KD1 | 600 | 5.0 C | Rf | 0.88932 m | HD | 50.417 m |   |          |       |
| For M5 | Adr | 271 KD1 | 610 | 5.0 C | Rb | 1.59545 m | HD | 51.320 m |   |          |       |
| For M5 | Adr | 272 KD1 | 600 | 5.0 C | Rf | 0.88909 m | HD | 50.433 m |   |          |       |
| For M5 | Adr | 273 KD1 | 600 | 5.0 C |    |           |    |          | Z | 64.330 m | 6+000 |
| For M5 | Adr | 274 KD1 | 600 | 5.0 C | Rb | 1.54892 m | HD | 50.102 m |   |          |       |
| For M5 | Adr | 275 KD1 | 590 | 5.0 C | Rf | 0.89781 m | HD | 51.305 m |   |          |       |
| For M5 | Adr | 276 KD1 | 600 | 5.0 C | Rb | 1.54893 m | HD | 50.087 m |   |          |       |
| For M5 | Adr | 277 KD1 | 590 | 5.0 C | Rf | 0.89789 m | HD | 51.308 m |   |          |       |
| For M5 | Adr | 278 KD1 | 590 | 5.0 C |    |           |    |          | Z | 64.981 m | 5+900 |
| For M5 | Adr | 279 KD1 | 590 | 5.0 C | Rb | 1.39780 m | HD | 50.495 m |   |          |       |
| For M5 | Adr | 280 KD1 | 580 | 5.0 C | Rf | 0.90127 m | HD | 50.251 m |   |          |       |
| For M5 | Adr | 281 KD1 | 590 | 5.0 C | Rb | 1.39767 m | HD | 50.488 m |   |          |       |
| For M5 | Adr | 282 KD1 | 580 | 6.0 C | Rf | 0.90133 m | HD | 50.238 m |   |          |       |
| For M5 | Adr | 283 KD1 | 580 | 6.0 C |    |           |    |          | Z | 65.478 m | 5+800 |
| For M5 | Adr | 284 KD1 | 580 | 5.0 C | Rb | 1.37755 m | HD | 50.430 m |   |          |       |
| For M5 | Adr | 285 KD1 | 570 | 5.0 C | Rf | 1.01690 m | HD | 49.626 m |   |          |       |
| For M5 | Adr | 286 KD1 | 580 | 6.0 C | Rb | 1.37783 m | HD | 50.434 m |   |          |       |
| For M5 | Adr | 287 KD1 | 570 | 6.0 C | Rf | 1.01683 m | HD | 49.621 m |   |          |       |
| For M5 | Adr | 288 KD1 | 570 | 6.0 C |    |           |    |          | Z | 65.839 m | 5+700 |
| For M5 | Adr | 289 KD1 | 570 | 6.0 C | Rb | 1.10651 m | HD | 50.573 m |   |          |       |
| For M5 | Adr | 290 KD1 | 560 | 6.0 C | Rf | 1.29788 m | HD | 49.301 m |   |          |       |
| For M5 | Adr | 291 KD1 | 570 | 6.0 C | Rb | 1.10634 m | HD | 50.553 m |   |          |       |

|        |     |         |                  |       |    |           |    |          |   |          |       |
|--------|-----|---------|------------------|-------|----|-----------|----|----------|---|----------|-------|
| For M5 | Adr | 292 KD1 | 560              | 6.0 C | Rf | 1.29791 m | HD | 49.365 m |   |          |       |
| For M5 | Adr | 293 KD1 | 560              | 6.0 C |    |           |    |          | Z | 65.647 m | 5+600 |
| For M5 | Adr | 294 KD1 | 560              | 6.0 C | Rb | 0.82598 m | HD | 50.772 m |   |          |       |
| For M5 | Adr | 295 KD1 | 550              | 6.0 C | Rf | 1.47056 m | HD | 49.476 m |   |          |       |
| For M5 | Adr | 296 KD1 | 560              | 6.0 C | Rb | 0.82579 m | HD | 50.781 m |   |          |       |
| For M5 | Adr | 297 KD1 | 550              | 6.0 C | Rf | 1.47047 m | HD | 49.452 m |   |          |       |
| For M5 | Adr | 298 KD1 | 550              | 6.0 C |    |           |    |          | Z | 65.002 m | 5+500 |
| For M5 | Adr | 299 KD1 | 550              | 6.0 C | Rb | 0.82304 m | HD | 50.423 m |   |          |       |
| For M5 | Adr | 300 KD1 | 540              | 6.0 C | Rf | 1.42725 m | HD | 49.714 m |   |          |       |
| For M5 | Adr | 301 KD1 | 550              | 6.0 C | Rb | 0.82293 m | HD | 50.417 m |   |          |       |
| For M5 | Adr | 302 KD1 | 540              | 6.0 C | Rf | 1.42729 m | HD | 49.696 m |   |          |       |
| For M5 | Adr | 303 KD1 | 540              | 6.0 C |    |           |    |          | Z | 64.398 m | 5+400 |
| For M5 | Adr | 304 KD1 | 540              | 6.0 C | Rb | 0.97936 m | HD | 50.340 m |   |          |       |
| For M5 | Adr | 305 KD1 | 530              | 6.0 C | Rf | 1.14884 m | HD | 49.245 m |   |          |       |
| For M5 | Adr | 306 KD1 | 540              | 6.0 C | Rb | 0.97936 m | HD | 50.370 m |   |          |       |
| For M5 | Adr | 307 KD1 | 530              | 6.0 C | Rf | 1.14883 m | HD | 49.238 m |   |          |       |
| For M5 | Adr | 308 KD1 | 530              | 6.0 C |    |           |    |          | Z | 64.229 m | 5+300 |
| For M5 | Adr | 309 KD1 | 530#####         | 6.0   | Rb | 1.25379 m | HD | 49.628 m |   |          |       |
| For M5 | Adr | 310 KD1 | 520#####         | 6.0   | Rf | 0.96150 m | HD | 49.798 m |   |          |       |
| For M5 | Adr | 311 KD1 | 530#####         | 6.0   | Rb | 1.25369 m | HD | 49.626 m |   |          |       |
| For M5 | Adr | 312 KD1 | 520#####         | 6.0   | Rf | 0.96241 m | HD | 49.987 m |   |          |       |
| For M5 | Adr | 313 KD1 | 520#####         | 6.0   |    |           |    |          | Z | 64.521 m |       |
| For M5 | Adr | 314 TO  | Station repeated |       |    |           |    |          |   |          |       |
| For M5 | Adr | 315 KD1 | 530              | 6.0 C | Rb | 1.25369 m | HD | 49.553 m |   |          |       |
| For M5 | Adr | 316 KD1 | 520              | 6.0 C | Rf | 0.96271 m | HD | 49.874 m |   |          |       |
| For M5 | Adr | 317 KD1 | 530              | 6.0 C | Rb | 1.25395 m | HD | 49.563 m |   |          |       |
| For M5 | Adr | 318 KD1 | 520              | 6.0 C | Rf | 0.96267 m | HD | 49.883 m |   |          |       |
| For M5 | Adr | 319 KD1 | 520              | 6.0 C |    |           |    |          | Z | 64.520 m | 5+200 |
| For M5 | Adr | 320 KD1 | 520              | 6.0 C | Rb | 1.33308 m | HD | 49.954 m |   |          |       |
| For M5 | Adr | 321 KD1 | 510              | 6.0 C | Rf | 0.91959 m | HD | 49.664 m |   |          |       |
| For M5 | Adr | 322 KD1 | 520              | 6.0 C | Rb | 1.33305 m | HD | 49.947 m |   |          |       |
| For M5 | Adr | 323 KD1 | 510              | 6.0 C | Rf | 0.91964 m | HD | 49.687 m |   |          |       |
| For M5 | Adr | 324 KD1 | 510              | 6.0 C |    |           |    |          | Z | 64.933 m | 5+100 |
| For M5 | Adr | 325 KD1 | 510              | 6.0 C | Rb | 1.34177 m | HD | 50.846 m |   |          |       |
| For M5 | Adr | 326 KD1 | 500              | 6.0 C | Rf | 0.91580 m | HD | 48.740 m |   |          |       |
| For M5 | Adr | 327 KD1 | 510              | 6.0 C | Rb | 1.34173 m | HD | 50.872 m |   |          |       |
| For M5 | Adr | 328 KD1 | 500              | 6.0 C | Rf | 0.91606 m | HD | 48.780 m |   |          |       |
| For M5 | Adr | 329 KD1 | 500              | 6.0 C |    |           |    |          | Z | 65.359 m | 5+000 |
| For M5 | Adr | 330 KD1 | 500              | 6.0 C | Rb | 1.29172 m | HD | 49.906 m |   |          |       |
| For M5 | Adr | 331 KD1 | 490              | 6.0 C | Rf | 0.92129 m | HD | 49.541 m |   |          |       |
| For M5 | Adr | 332 KD1 | 500              | 6.0 C | Rb | 1.29180 m | HD | 49.894 m |   |          |       |
| For M5 | Adr | 333 KD1 | 490              | 6.0 C | Rf | 0.92129 m | HD | 49.544 m |   |          |       |
| For M5 | Adr | 334 KD1 | 490              | 6.0 C |    |           |    |          | Z | 65.730 m |       |
| For M5 | Adr | 335 KD1 | 490#####         | 6.0   | Rb | 1.31226 m | HD | 49.687 m |   |          |       |
| For M5 | Adr | 336 KD1 | 480#####         | 6.0   | Rf | 0.91234 m | HD | 50.010 m |   |          |       |
| For M5 | Adr | 337 KD1 | 490#####         | 6.0   | Rb | 1.31174 m | HD | 49.685 m |   |          |       |
| For M5 | Adr | 338 TO  | Station repeated |       |    |           |    |          |   |          |       |
| For M5 | Adr | 339 KD1 | 490              | 6.0 C | Rb | 1.31220 m | HD | 49.707 m |   |          | 4+900 |
| For M5 | Adr | 340 KD1 | 480              | 6.0 C | Rf | 0.91229 m | HD | 50.012 m |   |          |       |
| For M5 | Adr | 341 KD1 | 490              | 6.0 C | Rb | 1.31211 m | HD | 49.711 m |   |          |       |
| For M5 | Adr | 342 KD1 | 480              | 6.0 C | Rf | 0.91225 m | HD | 50.016 m |   |          |       |
| For M5 | Adr | 343 KD1 | 480              | 6.0 C |    |           |    |          | Z | 66.129 m | 4+800 |
| For M5 | Adr | 344 KD1 | 480              | 6.0 C | Rb | 1.30538 m | HD | 50.098 m |   |          |       |
| For M5 | Adr | 345 KD1 | 470              | 6.0 C | Rf | 0.94279 m | HD | 49.797 m |   |          |       |
| For M5 | Adr | 346 KD1 | 480              | 6.0 C | Rb | 1.30535 m | HD | 50.090 m |   |          |       |
| For M5 | Adr | 347 KD1 | 470              | 6.0 C | Rf | 0.94260 m | HD | 49.799 m |   |          |       |
| For M5 | Adr | 348 KD1 | 470              | 6.0 C |    |           |    |          | Z | 66.492 m | 4+700 |
| For M5 | Adr | 349 KD1 | 470              | 6.0 C | Rb | 1.29052 m | HD | 49.820 m |   |          |       |
| For M5 | Adr | 350 KD1 | 460              | 6.0 C | Rf | 0.95071 m | HD | 49.715 m |   |          |       |
| For M5 | Adr | 351 KD1 | 470              | 6.0 C | Rb | 1.29065 m | HD | 49.787 m |   |          |       |
| For M5 | Adr | 352 KD1 | 460              | 6.0 C | Rf | 0.95076 m | HD | 49.702 m |   |          |       |
| For M5 | Adr | 353 KD1 | 460              | 6.0 C |    |           |    |          | Z | 66.832 m | 4+600 |
| For M5 | Adr | 354 KD1 | 460              | 6.0 C | Rb | 1.36335 m | HD | 50.045 m |   |          |       |
| For M5 | Adr | 355 KD1 | 450              | 6.0 C | Rf | 0.87418 m | HD | 49.919 m |   |          |       |
| For M5 | Adr | 356 KD1 | 460              | 6.0 C | Rb | 1.36336 m | HD | 50.053 m |   |          |       |
| For M5 | Adr | 357 KD1 | 450              | 6.0 C | Rf | 0.87408 m | HD | 49.916 m |   |          |       |
| For M5 | Adr | 358 KD1 | 450              | 6.0 C |    |           |    |          | Z | 67.321 m | 4+500 |
| For M5 | Adr | 359 KD1 | 450              | 5.0 C | Rb | 1.29538 m | HD | 49.428 m |   |          |       |
| For M5 | Adr | 360 KD1 | 440              | 6.0 C | Rf | 0.96161 m | HD | 49.861 m |   |          |       |
| For M5 | Adr | 361 KD1 | 450              | 6.0 C | Rb | 1.29524 m | HD | 49.436 m |   |          |       |
| For M5 | Adr | 362 KD1 | 440              | 6.0 C | Rf | 0.96159 m | HD | 49.860 m |   |          |       |
| For M5 | Adr | 363 KD1 | 440              | 6.0 C |    |           |    |          | Z | 67.655 m | 4+400 |

|        |     |         |                  |       |           |           |          |          |   |          |       |
|--------|-----|---------|------------------|-------|-----------|-----------|----------|----------|---|----------|-------|
| For M5 | Adr | 364 KD1 | 440              | 5.0 C | Rb        | 1.27704 m | HD       | 49.797 m |   |          |       |
| For M5 | Adr | 365 KD1 | 430              | 5.0 C | Rf        | 1.09214 m | HD       | 50.072 m |   |          |       |
| For M5 | Adr | 366 KD1 | 440              | 5.0 C | Rb        | 1.27704 m | HD       | 49.768 m |   |          |       |
| For M5 | Adr | 367 KD1 | 430              | 6.0 C | Rf        | 1.09200 m | HD       | 50.059 m |   |          |       |
| For M5 | Adr | 368 KD1 | 430              | 6.0 C |           |           |          |          | Z | 67.840 m | 4+300 |
| For M5 | Adr | 369 KD1 | 430              | 5.0 C | Rb        | 1.08304 m | HD       | 50.666 m |   |          |       |
| For M5 | Adr | 370 KD1 | 420              | 5.0 C | Rf        | 1.22882 m | HD       | 48.746 m |   |          |       |
| For M5 | Adr | 371 KD1 | 430              | 5.0 C | Rb        | 1.08287 m | HD       | 50.625 m |   |          |       |
| For M5 | Adr | 372 KD1 | 420              | 5.0 C | Rf        | 1.22870 m | HD       | 48.749 m |   |          |       |
| For M5 | Adr | 373 KD1 | 420              | 5.0 C |           |           |          |          | Z | 67.694 m | 4+200 |
| For M5 | Adr | 374 KD1 | 420              | 5.0 C | Rb        | 0.91611 m | HD       | 49.632 m |   |          |       |
| For M5 | Adr | 375 KD1 | 410              | 5.0 C | Rf        | 1.36068 m | HD       | 50.235 m |   |          |       |
| For M5 | Adr | 376 KD1 | 420              | 5.0 C | Rb        | 0.91619 m | HD       | 49.625 m |   |          |       |
| For M5 | Adr | 377 KD1 | 410              | 5.0 C | Rf        | 1.36078 m | HD       | 50.189 m |   |          |       |
| For M5 | Adr | 378 KD1 | 410              | 5.0 C |           |           |          |          | Z | 67.249 m | 4+100 |
| For M5 | Adr | 379 KD1 | 410              | 5.0 C | Rb        | 0.89337 m | HD       | 49.846 m |   |          |       |
| For M5 | Adr | 380 KD1 | 411#####         | 5.0   | Rf        | 1.40344 m | HD       | 50.075 m |   |          |       |
| For M5 | Adr | 381 TO  | Measurement ref  |       |           |           |          |          |   |          |       |
| For M5 | Adr | 382 KD1 | 400              | 5.0 C | Rf        | 1.40323 m | HD       | 50.039 m |   |          |       |
| For M5 | Adr | 383 KD1 | 410              | 5.0 C | Rb        | 0.89305 m | HD       | 49.858 m |   |          |       |
| For M5 | Adr | 384 KD1 | 400              | 6.0 C | Rf        | 1.40357 m | HD       | 50.085 m |   |          |       |
| For M5 | Adr | 385 KD1 | 400              | 6.0 C |           |           |          |          | Z | 66.739 m | 4+000 |
| For M5 | Adr | 386 KD1 | 400              | 5.0 C | Rb        | 0.86194 m | HD       | 49.555 m |   |          |       |
| For M5 | Adr | 387 KD1 | 390              | 5.0 C | Rf        | 1.34540 m | HD       | 49.697 m |   |          |       |
| For M5 | Adr | 388 KD1 | 400              | 5.0 C | Rb        | 0.86207 m | HD       | 49.537 m |   |          |       |
| For M5 | Adr | 389 KD1 | 390              | 5.0 C | Rf        | 1.34527 m | HD       | 49.726 m |   |          |       |
| For M5 | Adr | 390 KD1 | 390              | 5.0 C |           |           |          |          | Z | 66.256 m | 3+900 |
| For M5 | Adr | 391 KD1 | 390              | 5.0 C | Rb        | 0.83165 m | HD       | 50.632 m |   |          |       |
| For M5 | Adr | 392 KD1 | 380              | 5.0 C | Rf        | 1.40282 m | HD       | 49.343 m |   |          |       |
| For M5 | Adr | 393 KD1 | 390              | 5.0 C | Rb        | 0.83150 m | HD       | 50.600 m |   |          |       |
| For M5 | Adr | 394 KD1 | 380              | 6.0 C | Rf        | 1.40251 m | HD       | 49.308 m |   |          |       |
| For M5 | Adr | 395 KD1 | 380              | 6.0 C |           |           |          |          | Z | 65.685 m | 3+800 |
| For M5 | Adr | 396 KD1 | 380              | 5.0 C | Rb        | 0.84844 m | HD       | 49.862 m |   |          |       |
| For M5 | Adr | 397 KD1 | 370              | 5.0 C | Rf        | 1.36968 m | HD       | 50.059 m |   |          |       |
| For M5 | Adr | 398 KD1 | 380              | 5.0 C | Rb        | 0.84848 m | HD       | 49.852 m |   |          |       |
| For M5 | Adr | 399 KD1 | 370              | 5.0 C | Rf        | 1.36972 m | HD       | 50.037 m |   |          |       |
| For M5 | Adr | 400 KD1 | 370              | 5.0 C |           |           |          |          | Z | 65.164 m | 3+700 |
| For M5 | Adr | 401 KD1 | 370#####         | 5.0   | Rb        | 0.94562 m | HD       | 46.969 m |   |          |       |
| For M5 | Adr | 402 KD1 | 360#####         | 5.0   | Rf        | 1.40729 m | HD       | 53.049 m |   |          |       |
| For M5 | Adr | 403 KD1 | 370#####         | 5.0   | Rb        | 0.94574 m | HD       | 46.949 m |   |          |       |
| For M5 | Adr | 404 KD1 | 360#####         | 5.0   | Rf        | 1.40782 m | HD       | 53.075 m |   |          |       |
| For M5 | Adr | 405 KD1 | 360#####         | 5.0   |           |           |          |          | Z | 64.702 m |       |
| For M5 | Adr | 406 TO  | Station repeated |       |           |           |          |          |   |          |       |
| For M5 | Adr | 407 KD1 | 370              | 5.0 C | Rb        | 0.94556 m | HD       | 46.952 m |   |          |       |
| For M5 | Adr | 408 KD1 | 360              | 5.0 C | Rf        | 1.40792 m | HD       | 53.050 m |   |          |       |
| For M5 | Adr | 409 KD1 | 370              | 5.0 C | Rb        | 0.94567 m | HD       | 46.952 m |   |          |       |
| For M5 | Adr | 410 KD1 | 360              | 5.0 C | Rf        | 1.40793 m | HD       | 53.054 m |   |          |       |
| For M5 | Adr | 411 KD1 | 360              | 5.0 C |           |           |          |          | Z | 64.701 m | 3+600 |
| For M5 | Adr | 412 KD1 | 360              | 5.0 C | Rb        | 0.94930 m | HD       | 47.956 m |   |          |       |
| For M5 | Adr | 413 KD1 | 350              | 5.0 C | Rf        | 1.43757 m | HD       | 52.588 m |   |          |       |
| For M5 | Adr | 414 KD1 | 360              | 5.0 C | Rb        | 0.94933 m | HD       | 47.956 m |   |          |       |
| For M5 | Adr | 415 KD1 | 350              | 5.0 C | Rf        | 1.43761 m | HD       | 52.563 m |   |          |       |
| For M5 | Adr | 416 KD1 | 350              | 5.0 C |           |           |          |          | Z | 64.213 m | 3+500 |
| For M5 | Adr | 417 KD1 | 350              | 5.0 C | Rb        | 1.32976 m | HD       | 13.865 m |   |          |       |
| For M5 | Adr | 418 KD1 | 350ABI           | 5.0 C | Rf        | 1.21664 m | HD       | 10.371 m |   |          |       |
| For M5 | Adr | 419 KD1 | 350              | 5.0 C | Rb        | 1.32976 m | HD       | 13.877 m |   |          |       |
| For M5 | Adr | 420 KD1 | 350ABI           | 5.0 C | Rf        | 1.21669 m | HD       | 10.371 m |   |          |       |
| For M5 | Adr | 421 KD1 | 350ABI           | 5.0 C |           |           |          |          | Z | 64.326 m |       |
| For M5 | Adr | 422 KD1 | 350ABI           | 5.0 C | Rb        | 0.51150 m | HD       | 39.161 m |   |          |       |
| For M5 | Adr | 423 KD1 | 11               | 5.0 C | Rf        | 1.74473 m | HD       | 36.766 m |   |          |       |
| For M5 | Adr | 424 KD1 | 350ABI           | 5.0 C | Rb        | 0.51146 m | HD       | 39.159 m |   |          |       |
| For M5 | Adr | 425 KD1 | 11               | 5.0 C | Rf        | 1.74461 m | HD       | 36.777 m |   |          |       |
| For M5 | Adr | 426 KD1 | 11               | 5.0 C |           |           |          |          | Z | 63.093 m |       |
| For M5 | Adr | 427 KD1 | 11               | 5.0 C | Rb        | 0.65754 m | HD       | 37.090 m |   |          |       |
| For M5 | Adr | 428 KD1 | 12               | 5.0 C | Rf        | 1.66137 m | HD       | 39.077 m |   |          |       |
| For M5 | Adr | 429 KD1 | 11               | 5.0 C | Rb        | 0.65759 m | HD       | 37.086 m |   |          |       |
| For M5 | Adr | 430 KD1 | 12               | 5.0 C | Rf        | 1.66132 m | HD       | 39.088 m |   |          |       |
| For M5 | Adr | 431 KD1 | 12               | 5.0 C |           |           |          |          | Z | 62.089 m |       |
| For M5 | Adr | 432 KD1 | 12               | 5.0 C | Rb        | 0.60502 m | HD       | 34.652 m |   |          |       |
| For M5 | Adr | 433 KD1 | VEETORN 24 5     | Rf    | 0.56006 m | HD        | 29.602 m |          |   |          |       |
| For M5 | Adr | 434 KD1 | 12               | 5.0 C | Rb        | 0.60501 m | HD       | 34.649 m |   |          |       |
| For M5 | Adr | 435 KD1 | VEETORN 24 5     | Rf    | 0.56011 m | HD        | 29.610 m |          |   |          |       |



|        | J.nr | P.nr | temperatuur         | Lugemid   | Kaugused    | H Balti     | Piketaaz (ehitus) |
|--------|------|------|---------------------|-----------|-------------|-------------|-------------------|
| For M5 | Adr  | 1    | TO 26102012.dat     |           |             |             |                   |
| For M5 | Adr  | 2    | TO TANEL            |           |             |             |                   |
| For M5 | Adr  | 3    | TO Start-Line BFE   |           |             |             |                   |
| For M5 | Adr  | 4    | KD1 VEETORN         |           |             | Z 62.1340 m |                   |
| For M5 | Adr  | 5    | KD1 VEETORN##### Rb | 0.64817 m | HD 31.373 m |             |                   |
| For M5 | Adr  | 6    | KD1 1##### 14.0 Rf  | 0.69968 m | HD 32.921 m |             |                   |
| For M5 | Adr  | 7    | KD1 VEETORN##### Rb | 0.64849 m | HD 31.395 m |             |                   |
| For M5 | Adr  | 8    | TO Station repeated |           |             |             |                   |
| For M5 | Adr  | 9    | KD1 VEETORN 14. Rb  | 0.64851 m | HD 31.365 m |             |                   |
| For M5 | Adr  | 10   | KD1 1 14.0 C Rf     | 0.69974 m | HD 32.925 m |             |                   |
| For M5 | Adr  | 11   | KD1 VEETORN 14. Rb  | 0.64863 m | HD 31.372 m |             |                   |
| For M5 | Adr  | 12   | KD1 1 14.0 C Rf     | 0.69952 m | HD 32.913 m |             |                   |
| For M5 | Adr  | 13   | KD1 1 14.0 C        |           |             | Z 62.0830 m |                   |
| For M5 | Adr  | 14   | KD1 1 12.0 C Rb     | 1.76681 m | HD 39.030 m |             |                   |
| For M5 | Adr  | 15   | KD1 2 11.0 C Rf     | 0.72489 m | HD 39.940 m |             |                   |
| For M5 | Adr  | 16   | KD1 1 11.0 C Rb     | 1.76673 m | HD 39.037 m |             |                   |
| For M5 | Adr  | 17   | KD1 2 11.0 C Rf     | 0.72504 m | HD 39.943 m |             |                   |
| For M5 | Adr  | 18   | KD1 2 11.0 C        |           |             | Z 63.1248 m |                   |
| For M5 | Adr  | 19   | KD1 2 10.0 C Rb     | 1.54699 m | HD 32.298 m |             |                   |
| For M5 | Adr  | 20   | KD1 3 9.0 C 1 Rf    | 0.35277 m | HD 40.577 m |             |                   |
| For M5 | Adr  | 21   | KD1 2 9.0 C 1 Rb    | 1.54689 m | HD 32.299 m |             |                   |
| For M5 | Adr  | 22   | KD1 3 9.0 C 1 Rf    | 0.35266 m | HD 40.566 m |             |                   |
| For M5 | Adr  | 23   | KD1 3 9.0 C         |           |             | Z 64.3190 m |                   |
| For M5 | Adr  | 24   | KD1 3 8.0 C 1 Rb    | 1.43323 m | HD 10.285 m |             |                   |
| For M5 | Adr  | 25   | KD1 350 8.0 C Rf    | 1.54631 m | HD 13.964 m |             |                   |
| For M5 | Adr  | 26   | KD1 3 8.0 C 1 Rb    | 1.43322 m | HD 10.282 m |             |                   |
| For M5 | Adr  | 27   | KD1 350 8.0 C Rf    | 1.54647 m | HD 13.960 m |             |                   |
| For M5 | Adr  | 28   | KD1 350 8.0 C       |           |             | Z 64.2059 m | 3+500             |
| For M5 | Adr  | 29   | KD1 350 7.0 C Rb    | 0.94887 m | HD 49.461 m |             |                   |
| For M5 | Adr  | 30   | KD1 340 7.0 C Rf    | 1.44116 m | HD 49.819 m |             |                   |
| For M5 | Adr  | 31   | KD1 350 7.0 C Rb    | 0.94878 m | HD 49.458 m |             |                   |
| For M5 | Adr  | 32   | KD1 340 7.0 C Rf    | 1.44147 m | HD 49.818 m |             |                   |
| For M5 | Adr  | 33   | KD1 340 7.0 C       |           |             | Z 63.7134 m | 3+400             |
| For M5 | Adr  | 34   | KD1 340 5.0 C Rb    | 1.01590 m | HD 50.602 m |             |                   |
| For M5 | Adr  | 35   | KD1 330 5.0 C Rf    | 1.32841 m | HD 49.415 m |             |                   |
| For M5 | Adr  | 36   | KD1 340 5.0 C Rb    | 1.01620 m | HD 50.574 m |             |                   |
| For M5 | Adr  | 37   | KD1 330 5.0 C Rf    | 1.32836 m | HD 49.408 m |             |                   |
| For M5 | Adr  | 38   | KD1 330 5.0 C       |           |             | Z 63.4011 m | 3+300             |
| For M5 | Adr  | 39   | KD1 330##### 5.0 Rb | 1.21997 m | HD 50.399 m |             |                   |
| For M5 | Adr  | 40   | KD1 320##### 5.0 Rf | 0.83488 m | HD 49.984 m |             |                   |
| For M5 | Adr  | 41   | KD1 330##### 5.0 Rb | 1.21930 m | HD 50.267 m |             |                   |
| For M5 | Adr  | 42   | TO Station repeated |           |             |             |                   |
| For M5 | Adr  | 43   | KD1 330 4.0 C Rb    | 1.21975 m | HD 50.408 m |             |                   |
| For M5 | Adr  | 44   | KD1 320 5.0 C Rf    | 0.83500 m | HD 49.999 m |             |                   |
| For M5 | Adr  | 45   | KD1 330 4.0 C Rb    | 1.22000 m | HD 50.389 m |             |                   |
| For M5 | Adr  | 46   | KD1 320 5.0 C Rf    | 0.83500 m | HD 50.009 m |             |                   |
| For M5 | Adr  | 47   | KD1 320 5.0 C       |           |             | Z 63.7860 m | 3+200             |
| For M5 | Adr  | 48   | KD1 320 4.0 C Rb    | 1.50304 m | HD 50.424 m |             |                   |
| For M5 | Adr  | 49   | KD1 310 4.0 C Rf    | 1.00986 m | HD 50.870 m |             |                   |
| For M5 | Adr  | 50   | KD1 320 4.0 C Rb    | 1.50286 m | HD 50.400 m |             |                   |
| For M5 | Adr  | 51   | KD1 310 4.0 C Rf    | 1.00983 m | HD 50.892 m |             |                   |
| For M5 | Adr  | 52   | KD1 310 4.0 C       |           |             | Z 64.2791 m | 3+100             |
| For M5 | Adr  | 53   | KD1 310 4.0 C Rb    | 1.53098 m | HD 51.468 m |             |                   |
| For M5 | Adr  | 54   | KD1 300 4.0 C Rf    | 0.91489 m | HD 49.868 m |             |                   |
| For M5 | Adr  | 55   | KD1 310 4.0 C Rb    | 1.53109 m | HD 51.467 m |             |                   |
| For M5 | Adr  | 56   | KD1 300 4.0 C Rf    | 0.91477 m | HD 49.875 m |             |                   |
| For M5 | Adr  | 57   | KD1 300 4.0 C       |           |             | Z 64.8953 m | 3+000             |
| For M5 | Adr  | 58   | KD1 300 3.0 C Rb    | 1.72183 m | HD 50.288 m |             |                   |
| For M5 | Adr  | 59   | KD1 290 3.0 C Rf    | 0.75121 m | HD 50.191 m |             |                   |
| For M5 | Adr  | 60   | KD1 300 3.0 C Rb    | 1.72153 m | HD 50.309 m |             |                   |
| For M5 | Adr  | 61   | KD1 290 3.0 C Rf    | 0.75127 m | HD 50.178 m |             |                   |
| For M5 | Adr  | 62   | KD1 290 3.0 C       |           |             | Z 65.8658 m | 2+900             |
| For M5 | Adr  | 63   | KD1 290 3.0 C Rb    | 1.84235 m | HD 50.710 m |             |                   |
| For M5 | Adr  | 64   | KD1 280 3.0 C Rf    | 0.59973 m | HD 50.197 m |             |                   |
| For M5 | Adr  | 65   | KD1 290 3.0 C Rb    | 1.84207 m | HD 50.735 m |             |                   |
| For M5 | Adr  | 66   | KD1 280 3.0 C Rf    | 0.59991 m | HD 50.188 m |             |                   |
| For M5 | Adr  | 67   | KD1 280 3.0 C       |           |             | Z 67.1082 m | 2+800             |
| For M5 | Adr  | 68   | KD1 280 2.0 C Rb    | 1.84564 m | HD 51.376 m |             |                   |
| For M5 | Adr  | 69   | KD1 270 2.0 C Rf    | 0.31315 m | HD 50.722 m |             |                   |
| For M5 | Adr  | 70   | KD1 280 2.0 C Rb    | 1.84579 m | HD 51.403 m |             |                   |
| For M5 | Adr  | 71   | KD1 270 2.0 C Rf    | 0.31321 m | HD 50.733 m |             |                   |

|        |     |         |                  |           |           |    |   |         |   |       |
|--------|-----|---------|------------------|-----------|-----------|----|---|---------|---|-------|
| For M5 | Adr | 72 KD1  | 270              | 2.0 C     |           |    | Z | 68.6407 | m | 2+700 |
| For M5 | Adr | 73 KD1  | 270#####         | 2.0 Rb    | 1.67855 m | HD |   | 49.915  | m |       |
| For M5 | Adr | 74 KD1  | 260#####         | 2.0 Rf    | 0.50267 m | HD |   | 50.692  | m |       |
| For M5 | Adr | 75 KD1  | 270#####         | 2.0 Rb    | 1.67801 m | HD |   | 49.948  | m |       |
| For M5 | Adr | 76 TO   | Station repeated |           |           |    |   |         |   |       |
| For M5 | Adr | 77 KD1  | 270              | 2.0 C Rb  | 1.67826 m | HD |   | 49.955  | m |       |
| For M5 | Adr | 78 KD1  | 260              | 2.0 C Rf  | 0.50283 m | HD |   | 50.715  | m |       |
| For M5 | Adr | 79 KD1  | 270              | 2.0 C Rb  | 1.67834 m | HD |   | 49.959  | m |       |
| For M5 | Adr | 80 KD1  | 260              | 2.0 C Rf  | 0.50282 m | HD |   | 50.694  | m |       |
| For M5 | Adr | 81 KD1  | 260              | 2.0 C     |           |    | Z | 69.8162 | m | 2+600 |
| For M5 | Adr | 82 KD1  | 260#####         | 2.0 Rb    | 1.63792 m | HD |   | 50.604  | m |       |
| For M5 | Adr | 83 KD1  | 250#####         | 2.0 Rf    | 0.66801 m | HD |   | 50.071  | m |       |
| For M5 | Adr | 84 KD1  | 260#####         | 2.0 Rb    | 1.63838 m | HD |   | 50.581  | m |       |
| For M5 | Adr | 85 TO   | Station repeated |           |           |    |   |         |   |       |
| For M5 | Adr | 86 KD1  | 260              | 2.0 C Rb  | 1.63801 m | HD |   | 50.622  | m |       |
| For M5 | Adr | 87 KD1  | 250              | 2.0 C Rf  | 0.66787 m | HD |   | 50.109  | m |       |
| For M5 | Adr | 88 KD1  | 260              | 2.0 C Rb  | 1.63827 m | HD |   | 50.609  | m |       |
| For M5 | Adr | 89 KD1  | 250              | 2.0 C Rf  | 0.66819 m | HD |   | 50.076  | m |       |
| For M5 | Adr | 90 KD1  | 250              | 2.0 C     |           |    | Z | 70.7863 | m | 2+500 |
| For M5 | Adr | 91 KD1  | 250              | 1.0 C Rb  | 1.52874 m | HD |   | 50.164  | m |       |
| For M5 | Adr | 92 KD1  | 240              | 1.0 C Rf  | 0.82834 m | HD |   | 50.322  | m |       |
| For M5 | Adr | 93 KD1  | 250              | 1.0 C Rb  | 1.52889 m | HD |   | 50.164  | m |       |
| For M5 | Adr | 94 KD1  | 240              | 1.0 C Rf  | 0.82823 m | HD |   | 50.313  | m |       |
| For M5 | Adr | 95 KD1  | 240              | 1.0 C     |           |    | Z | 71.4869 | m | 2+400 |
| For M5 | Adr | 96 KD1  | 240              | 1.0 C Rb  | 1.40703 m | HD |   | 50.595  | m |       |
| For M5 | Adr | 97 KD1  | 230              | 1.0 C Rf  | 0.93608 m | HD |   | 50.403  | m |       |
| For M5 | Adr | 98 KD1  | 240              | 1.0 C Rb  | 1.40704 m | HD |   | 50.601  | m |       |
| For M5 | Adr | 99 KD1  | 230              | 1.0 C Rf  | 0.93603 m | HD |   | 50.405  | m |       |
| For M5 | Adr | 100 KD1 | 230              | 1.0 C     |           |    | Z | 71.9579 | m | 2+300 |
| For M5 | Adr | 101 KD1 | 230#####         | 1.0 Rb    | 1.37071 m | HD |   | 50.927  | m |       |
| For M5 | Adr | 102 KD1 | 220#####         | 1.0 Rf    | 1.07043 m | HD |   | 49.963  | m |       |
| For M5 | Adr | 103 KD1 | 230#####         | 1.0 Rb    | 1.37017 m | HD |   | 50.941  | m |       |
| For M5 | Adr | 104 TO  | Station repeated |           |           |    |   |         |   |       |
| For M5 | Adr | 105 KD1 | 230              | 1.0 C Rb  | 1.37056 m | HD |   | 50.943  | m |       |
| For M5 | Adr | 106 KD1 | 220              | 1.0 C Rf  | 1.07041 m | HD |   | 49.931  | m |       |
| For M5 | Adr | 107 KD1 | 230              | 1.0 C Rb  | 1.37066 m | HD |   | 50.930  | m |       |
| For M5 | Adr | 108 KD1 | 220              | 1.0 C Rf  | 1.07054 m | HD |   | 49.956  | m |       |
| For M5 | Adr | 109 KD1 | 220              | 1.0 C     |           |    | Z | 72.2580 | m | 2+200 |
| For M5 | Adr | 110 KD1 | 220              | 1.0 C Rb  | 1.26947 m | HD |   | 50.668  | m |       |
| For M5 | Adr | 111 KD1 | 210              | 1.0 C Rf  | 1.07736 m | HD |   | 49.749  | m |       |
| For M5 | Adr | 112 KD1 | 220              | 1.0 C Rb  | 1.26947 m | HD |   | 50.676  | m |       |
| For M5 | Adr | 113 KD1 | 210              | 1.0 C Rf  | 1.07739 m | HD |   | 49.738  | m |       |
| For M5 | Adr | 114 KD1 | 210              | 1.0 C     |           |    | Z | 72.4502 | m | 2+100 |
| For M5 | Adr | 115 KD1 | 210              | 0.0 C Rb  | 1.21611 m | HD |   | 50.971  | m |       |
| For M5 | Adr | 116 KD1 | 200              | 0.0 C Rf  | 0.96324 m | HD |   | 49.068  | m |       |
| For M5 | Adr | 117 KD1 | 210              | 0.0 C Rb  | 1.21592 m | HD |   | 50.969  | m |       |
| For M5 | Adr | 118 KD1 | 200              | 0.0 C Rf  | 0.96299 m | HD |   | 49.074  | m |       |
| For M5 | Adr | 119 KD1 | 200              | 0.0 C     |           |    | Z | 72.7031 | m | 2+000 |
| For M5 | Adr | 120 KD1 | 200              | 0.0 C Rb  | 1.25802 m | HD |   | 52.161  | m |       |
| For M5 | Adr | 121 KD1 | 190              | 0.0 C Rf  | 0.95056 m | HD |   | 48.173  | m |       |
| For M5 | Adr | 122 KD1 | 200              | 0.0 C Rb  | 1.25802 m | HD |   | 52.182  | m |       |
| For M5 | Adr | 123 KD1 | 190              | 0.0 C Rf  | 0.95061 m | HD |   | 48.171  | m |       |
| For M5 | Adr | 124 KD1 | 190              | 0.0 C     |           |    | Z | 73.0105 | m | 1+900 |
| For M5 | Adr | 125 KD1 | 190              | 0.0 C Rb  | 1.21522 m | HD |   | 50.697  | m |       |
| For M5 | Adr | 126 KD1 | 180              | 0.0 C Rf  | 0.94283 m | HD |   | 50.181  | m |       |
| For M5 | Adr | 127 KD1 | 190              | 0.0 C Rb  | 1.21510 m | HD |   | 50.699  | m |       |
| For M5 | Adr | 128 KD1 | 180              | 0.0 C Rf  | 0.94287 m | HD |   | 50.170  | m |       |
| For M5 | Adr | 129 KD1 | 180              | 0.0 C     |           |    | Z | 73.2828 | m | 1+800 |
| For M5 | Adr | 130 KD1 | 180              | 0.0 C Rb  | 1.23392 m | HD |   | 49.465  | m |       |
| For M5 | Adr | 131 KD1 | 170              | 0.0 C Rf  | 1.04954 m | HD |   | 50.191  | m |       |
| For M5 | Adr | 132 KD1 | 180              | 0.0 C Rb  | 1.23366 m | HD |   | 49.443  | m |       |
| For M5 | Adr | 133 KD1 | 170              | 0.0 C Rf  | 1.04936 m | HD |   | 50.192  | m |       |
| For M5 | Adr | 134 KD1 | 170              | 0.0 C     |           |    | Z | 73.4672 | m | 1+700 |
| For M5 | Adr | 135 KD1 | 170              | 0.0 C Rb  | 1.11089 m | HD |   | 50.960  | m |       |
| For M5 | Adr | 136 KD1 | 160              | 0.0 C Rf  | 1.18568 m | HD |   | 51.801  | m |       |
| For M5 | Adr | 137 KD1 | 170              | 0.0 C Rb  | 1.11098 m | HD |   | 50.937  | m |       |
| For M5 | Adr | 138 KD1 | 160              | 0.0 C Rf  | 1.18565 m | HD |   | 51.811  | m |       |
| For M5 | Adr | 139 KD1 | 160              | 0.0 C     |           |    | Z | 73.3925 | m | 1+600 |
| For M5 | Adr | 140 KD1 | 160              | -1.0 C Rb | 0.98300 m | HD |   | 46.628  | m |       |
| For M5 | Adr | 141 KD1 | 150              | -1.0 C Rf | 1.26232 m | HD |   | 49.823  | m |       |
| For M5 | Adr | 142 KD1 | 160              | -1.0 C Rb | 0.98296 m | HD |   | 46.626  | m |       |
| For M5 | Adr | 143 KD1 | 150              | -1.0 C Rf | 1.26228 m | HD |   | 49.827  | m |       |

|        |     |         |                    |           |           |    |   |         |   |           |
|--------|-----|---------|--------------------|-----------|-----------|----|---|---------|---|-----------|
| For M5 | Adr | 144 KD1 | 150                | -1.0 C    |           |    | Z | 73.1132 | m | 1+500     |
| For M5 | Adr | 145 KD1 | 150                | -1.0 C Rb | 0.93758 m | HD |   | 50.535  | m |           |
| For M5 | Adr | 146 KD1 | 140                | -1.0 C Rf | 1.25645 m | HD |   | 48.862  | m |           |
| For M5 | Adr | 147 KD1 | 150                | -1.0 C Rb | 0.93778 m | HD |   | 50.543  | m |           |
| For M5 | Adr | 148 KD1 | 140                | -1.0 C Rf | 1.25631 m | HD |   | 48.867  | m |           |
| For M5 | Adr | 149 KD1 | 140                | -1.0 C    |           |    | Z | 72.7945 | m | 1+400     |
| For M5 | Adr | 150 TO  | Intermediate sigf  |           |           |    |   |         |   |           |
| For M5 | Adr | 151 KD1 | PP                 | -1.0 C Rz | 1.56228 m | HD |   | 16.361  | m | Z 72.4886 |
| For M5 | Adr | 152 TO  | End of interm. sig |           |           |    |   |         |   |           |
| For M5 | Adr | 153 KD1 | 140                | -1.0 C Rb | 0.94595 m | HD |   | 50.111  | m |           |
| For M5 | Adr | 154 KD1 | 130                | -1.0 C Rf | 1.27151 m | HD |   | 49.600  | m |           |
| For M5 | Adr | 155 KD1 | 140                | -1.0 C Rb | 0.94622 m | HD |   | 50.108  | m |           |
| For M5 | Adr | 156 KD1 | 130                | -1.0 C Rf | 1.27149 m | HD |   | 49.604  | m |           |
| For M5 | Adr | 157 KD1 | 130                | -1.0 C    |           |    | Z | 72.4691 | m | 1+300     |
| For M5 | Adr | 158 KD1 | 130                | -1.0 C Rb | 0.86924 m | HD |   | 50.438  | m |           |
| For M5 | Adr | 159 KD1 | 120                | -1.0 C Rf | 1.30527 m | HD |   | 49.654  | m |           |
| For M5 | Adr | 160 KD1 | 130                | -1.0 C Rb | 0.86888 m | HD |   | 50.441  | m |           |
| For M5 | Adr | 161 KD1 | 120                | -1.0 C Rf | 1.30504 m | HD |   | 49.665  | m |           |
| For M5 | Adr | 162 KD1 | 120                | -1.0 C    |           |    | Z | 72.0330 | m | 1+200     |
| For M5 | Adr | 163 KD1 | 120                | -1.0 C Rb | 0.72911 m | HD |   | 50.856  | m |           |
| For M5 | Adr | 164 KD1 | 110                | -1.0 C Rf | 1.58245 m | HD |   | 49.020  | m |           |
| For M5 | Adr | 165 KD1 | 120                | -1.0 C Rb | 0.72893 m | HD |   | 50.869  | m |           |
| For M5 | Adr | 166 KD1 | 110                | -1.0 C Rf | 1.58244 m | HD |   | 49.055  | m |           |
| For M5 | Adr | 167 KD1 | 110                | -1.0 C    |           |    | Z | 71.1796 | m | 1+100     |
| For M5 | Adr | 168 KD1 | 110                | -1.0 C Rb | 0.55966 m | HD |   | 49.601  | m |           |
| For M5 | Adr | 169 KD1 | 100                | -1.0 C Rf | 1.64297 m | HD |   | 50.395  | m |           |
| For M5 | Adr | 170 KD1 | 110                | -1.0 C Rb | 0.55969 m | HD |   | 49.582  | m |           |
| For M5 | Adr | 171 KD1 | 100                | -1.0 C Rf | 1.64283 m | HD |   | 50.410  | m |           |
| For M5 | Adr | 172 KD1 | 100                | -1.0 C    |           |    | Z | 70.0964 | m | 1+000     |
| For M5 | Adr | 173 KD1 | 100                | -1.0 C Rb | 0.47289 m | HD |   | 49.851  | m |           |
| For M5 | Adr | 174 KD1 | 090                | -1.0 C Rf | 1.59696 m | HD |   | 50.761  | m |           |
| For M5 | Adr | 175 KD1 | 100                | -1.0 C Rb | 0.47300 m | HD |   | 49.821  | m |           |
| For M5 | Adr | 176 KD1 | 090                | -1.0 C Rf | 1.59700 m | HD |   | 50.743  | m |           |
| For M5 | Adr | 177 KD1 | 090                | -1.0 C    |           |    | Z | 68.9724 | m | 0+900     |
| For M5 | Adr | 178 KD1 | 090                | -2.0 C Rb | 0.80557 m | HD |   | 49.617  | m |           |
| For M5 | Adr | 179 KD1 | 080                | -1.0 C Rf | 1.34574 m | HD |   | 49.958  | m |           |
| For M5 | Adr | 180 KD1 | 090                | -1.0 C Rb | 0.80575 m | HD |   | 49.634  | m |           |
| For M5 | Adr | 181 KD1 | 080                | -1.0 C Rf | 1.34598 m | HD |   | 49.937  | m |           |
| For M5 | Adr | 182 KD1 | 080                | -1.0 C    |           |    | Z | 68.4322 | m | 0+800     |
| For M5 | Adr | 183 KD1 | 080                | -2.0 C Rb | 0.97488 m | HD |   | 49.982  | m |           |
| For M5 | Adr | 184 KD1 | 070                | -2.0 C Rf | 1.24235 m | HD |   | 49.429  | m |           |
| For M5 | Adr | 185 KD1 | 080                | -2.0 C Rb | 0.97485 m | HD |   | 49.988  | m |           |
| For M5 | Adr | 186 KD1 | 070                | -2.0 C Rf | 1.24232 m | HD |   | 49.478  | m |           |
| For M5 | Adr | 187 KD1 | 070                | -2.0 C    |           |    | Z | 68.1648 | m | 0+700     |
| For M5 | Adr | 188 KD1 | 070                | -2.0 C Rb | 0.91861 m | HD |   | 49.524  | m |           |
| For M5 | Adr | 189 KD1 | 060                | -2.0 C Rf | 1.23860 m | HD |   | 50.054  | m |           |
| For M5 | Adr | 190 KD1 | 070                | -2.0 C Rb | 0.91865 m | HD |   | 49.511  | m |           |
| For M5 | Adr | 191 KD1 | 060                | -2.0 C Rf | 1.23863 m | HD |   | 50.060  | m |           |
| For M5 | Adr | 192 KD1 | 060                | -2.0 C    |           |    | Z | 67.8448 | m | 0+600     |
| For M5 | Adr | 193 KD1 | 060                | -2.0 C Rb | 0.94088 m | HD |   | 48.911  | m |           |
| For M5 | Adr | 194 KD1 | 050                | -2.0 C Rf | 1.24809 m | HD |   | 50.786  | m |           |
| For M5 | Adr | 195 KD1 | 060                | -2.0 C Rb | 0.94070 m | HD |   | 48.828  | m |           |
| For M5 | Adr | 196 KD1 | 050                | -2.0 C Rf | 1.24832 m | HD |   | 50.743  | m |           |
| For M5 | Adr | 197 KD1 | 050                | -2.0 C    |           |    | Z | 67.5374 | m | 0+500     |
| For M5 | Adr | 198 KD1 | 050                | -2.0 C Rb | 0.88682 m | HD |   | 49.231  | m |           |
| For M5 | Adr | 199 KD1 | 040                | -2.0 C Rf | 1.20703 m | HD |   | 51.629  | m |           |
| For M5 | Adr | 200 KD1 | 050                | -2.0 C Rb | 0.88664 m | HD |   | 49.186  | m |           |
| For M5 | Adr | 201 KD1 | 040                | -2.0 C Rf | 1.20718 m | HD |   | 51.702  | m |           |
| For M5 | Adr | 202 KD1 | 040                | -2.0 C    |           |    | Z | 67.2170 | m | 0+400     |
| For M5 | Adr | 203 KD1 | 040#####           | -2.0 C Rb | 0.92655 m | HD |   | 48.423  | m |           |
| For M5 | Adr | 204 TO  | Measurement rej    |           |           |    |   |         |   |           |
| For M5 | Adr | 205 KD1 | 040                | 13.0 C Rb | 0.89530 m | HD |   | 48.672  | m |           |
| For M5 | Adr | 206 KD1 | 041#####           | 13.0 C Rf | 1.14019 m | HD |   | 50.856  | m |           |
| For M5 | Adr | 207 TO  | Measurement rej    |           |           |    |   |         |   |           |
| For M5 | Adr | 208 KD1 | 030                | 13.0 C Rf | 1.14017 m | HD |   | 50.858  | m |           |
| For M5 | Adr | 209 KD1 | 040                | 12.0 C Rb | 0.89545 m | HD |   | 48.689  | m |           |
| For M5 | Adr | 210 KD1 | 030                | 12.0 C Rf | 1.14032 m | HD |   | 50.850  | m |           |
| For M5 | Adr | 211 KD1 | 030                | 12.0 C    |           |    | Z | 66.9722 | m | 0+300     |
| For M5 | Adr | 212 KD1 | 030                | 11.0 C Rb | 0.83645 m | HD |   | 48.852  | m |           |
| For M5 | Adr | 213 KD1 | 020                | 11.0 C Rf | 1.12994 m | HD |   | 50.330  | m |           |
| For M5 | Adr | 214 KD1 | 030                | 11.0 C Rb | 0.83662 m | HD |   | 48.862  | m |           |
| For M5 | Adr | 215 KD1 | 020                | 10.0 C Rf | 1.13041 m | HD |   | 50.315  | m |           |

|        |     |         |                  |           |           |    |   |         |   |        |
|--------|-----|---------|------------------|-----------|-----------|----|---|---------|---|--------|
| For M5 | Adr | 216 KD1 | 020              | 10.0 C    |           |    | Z | 66.6786 | m | 0+200  |
| For M5 | Adr | 217 KD1 | 020              | 9.0 C Rb  | 0.86158 m | HD |   | 49.252  | m |        |
| For M5 | Adr | 218 KD1 | 010              | 9.0 C Rf  | 1.19614 m | HD |   | 50.409  | m |        |
| For M5 | Adr | 219 KD1 | 020              | 9.0 C Rb  | 0.86137 m | HD |   | 49.244  | m |        |
| For M5 | Adr | 220 KD1 | 010              | 9.0 C Rf  | 1.19628 m | HD |   | 50.421  | m |        |
| For M5 | Adr | 221 KD1 | 010              | 9.0 C     |           |    | Z | 66.3439 | m | 0+100  |
| For M5 | Adr | 222 KD1 | 010              | 7.0 C Rb  | 0.84684 m | HD |   | 49.739  | m |        |
| For M5 | Adr | 223 KD1 | 000              | 7.0 C Rf  | 1.18919 m | HD |   | 49.957  | m |        |
| For M5 | Adr | 224 KD1 | 010              | 7.0 C Rb  | 0.84675 m | HD |   | 49.677  | m |        |
| For M5 | Adr | 225 KD1 | 000              | 7.0 C Rf  | 1.18893 m | HD |   | 49.969  | m |        |
| For M5 | Adr | 226 KD1 | 000              | 7.0 C     |           |    | Z | 66.0016 | m | 0+000  |
| For M5 | Adr | 227 KD1 | 000#####         | 6.0 Rb    | 0.94739 m | HD |   | 49.604  | m |        |
| For M5 | Adr | 228 KD1 | -010#####        | 6.0 Rf    | 1.30119 m | HD |   | 50.258  | m |        |
| For M5 | Adr | 229 TO  | Station repeated |           |           |    |   |         |   |        |
| For M5 | Adr | 230 KD1 | 000              | 5.0 C Rb  | 0.94789 m | HD |   | 49.616  | m |        |
| For M5 | Adr | 231 KD1 | -010             | 5.0 C Rf  | 1.30172 m | HD |   | 50.278  | m |        |
| For M5 | Adr | 232 KD1 | 000              | 5.0 C Rb  | 0.94752 m | HD |   | 49.613  | m |        |
| For M5 | Adr | 233 KD1 | -010             | 5.0 C Rf  | 1.30140 m | HD |   | 50.269  | m |        |
| For M5 | Adr | 234 KD1 | -010             | 5.0 C     |           |    | Z | 65.6478 | m | -0+100 |
| For M5 | Adr | 235 KD1 | -010             | 4.0 C Rb  | 1.30162 m | HD |   | 50.267  | m |        |
| For M5 | Adr | 236 KD1 | -100             | 4.0 C Rf  | 1.23033 m | HD |   | 51.413  | m |        |
| For M5 | Adr | 237 KD1 | -010             | 4.0 C Rb  | 1.30166 m | HD |   | 50.229  | m |        |
| For M5 | Adr | 238 KD1 | -100             | 4.0 C Rf  | 1.23029 m | HD |   | 51.383  | m |        |
| For M5 | Adr | 239 KD1 | -100             | 4.0 C     |           |    | Z | 65.7191 | m | -0+100 |
| For M5 | Adr | 240 KD1 | -100             | 3.0 C Rb  | 1.24170 m | HD |   | 50.491  | m |        |
| For M5 | Adr | 241 KD1 | +0000            | 3.0 C Rf  | 0.96845 m | HD |   | 49.573  | m |        |
| For M5 | Adr | 242 KD1 | -100             | 3.0 C Rb  | 1.24154 m | HD |   | 50.493  | m |        |
| For M5 | Adr | 243 KD1 | +0000            | 3.0 C Rf  | 0.96843 m | HD |   | 49.554  | m |        |
| For M5 | Adr | 244 KD1 | +0000            | 3.0 C     |           |    | Z | 65.9923 | m | 0+000  |
| For M5 | Adr | 245 KD1 | +0000            | 2.0 C Rb  | 1.25770 m | HD |   | 47.659  | m |        |
| For M5 | Adr | 246 KD1 | 100              | 2.0 C Rf  | 0.88219 m | HD |   | 52.463  | m |        |
| For M5 | Adr | 247 KD1 | +0000            | 2.0 C Rb  | 1.25736 m | HD |   | 47.649  | m |        |
| For M5 | Adr | 248 KD1 | 100              | 2.0 C Rf  | 0.88217 m | HD |   | 52.472  | m |        |
| For M5 | Adr | 249 KD1 | 100              | 2.0 C     |           |    | Z | 66.3677 | m | 0+100  |
| For M5 | Adr | 250 KD1 | 100              | 2.0 C Rb  | 1.21116 m | HD |   | 50.915  | m |        |
| For M5 | Adr | 251 KD1 | 200              | 2.0 C Rf  | 0.96945 m | HD |   | 49.127  | m |        |
| For M5 | Adr | 252 KD1 | 100              | 2.0 C Rb  | 1.21082 m | HD |   | 50.907  | m |        |
| For M5 | Adr | 253 KD1 | 200              | 2.0 C Rf  | 0.96923 m | HD |   | 49.113  | m |        |
| For M5 | Adr | 254 KD1 | 200              | 2.0 C     |           |    | Z | 66.6093 | m | 0+200  |
| For M5 | Adr | 255 KD1 | 200              | 1.0 C Rb  | 1.16464 m | HD |   | 53.296  | m |        |
| For M5 | Adr | 256 KD1 | 300              | 1.0 C Rf  | 0.92253 m | HD |   | 46.658  | m |        |
| For M5 | Adr | 257 KD1 | 200              | 1.0 C Rb  | 1.16478 m | HD |   | 53.261  | m |        |
| For M5 | Adr | 258 KD1 | 300              | 1.0 C Rf  | 0.92275 m | HD |   | 46.643  | m |        |
| For M5 | Adr | 259 KD1 | 300              | 1.0 C     |           |    | Z | 66.8514 | m | 0+300  |
| For M5 | Adr | 260 KD1 | 300#####         | 1.0 Rb    | 1.22586 m | HD |   | 52.847  | m |        |
| For M5 | Adr | 261 KD1 | 400#####         | 1.0 Rf    | 0.93809 m | HD |   | 47.175  | m |        |
| For M5 | Adr | 262 KD1 | 300#####         | 1.0 Rb    | 1.22518 m | HD |   | 52.839  | m |        |
| For M5 | Adr | 263 TO  | Station repeated |           |           |    |   |         |   |        |
| For M5 | Adr | 264 KD1 | 300#####         | 1.0 Rb    | 1.22538 m | HD |   | 52.849  | m |        |
| For M5 | Adr | 265 KD1 | 400#####         | 1.0 Rf    | 0.93749 m | HD |   | 47.161  | m |        |
| For M5 | Adr | 266 KD1 | 300#####         | 1.0 Rb    | 1.22617 m | HD |   | 52.823  | m |        |
| For M5 | Adr | 267 TO  | Station repeated |           |           |    |   |         |   |        |
| For M5 | Adr | 268 KD1 | 300              | 1.0 C Rb  | 1.22594 m | HD |   | 52.861  | m |        |
| For M5 | Adr | 269 KD1 | 400              | 1.0 C Rf  | 0.93847 m | HD |   | 47.138  | m |        |
| For M5 | Adr | 270 KD1 | 300              | 1.0 C Rb  | 1.22573 m | HD |   | 52.859  | m |        |
| For M5 | Adr | 271 KD1 | 400              | 1.0 C Rf  | 0.93839 m | HD |   | 47.169  | m |        |
| For M5 | Adr | 272 KD1 | 400              | 1.0 C     |           |    | Z | 67.1389 | m | 0+400  |
| For M5 | Adr | 273 KD1 | 400              | 0.0 C Rb  | 1.25019 m | HD |   | 52.499  | m |        |
| For M5 | Adr | 274 KD1 | 500              | 0.0 C Rf  | 0.92546 m | HD |   | 49.431  | m |        |
| For M5 | Adr | 275 KD1 | 400              | 0.0 C Rb  | 1.25061 m | HD |   | 52.507  | m |        |
| For M5 | Adr | 276 KD1 | 500              | 0.0 C Rf  | 0.92543 m | HD |   | 49.429  | m |        |
| For M5 | Adr | 277 KD1 | 500              | 0.0 C     |           |    | Z | 67.4638 | m | 0+500  |
| For M5 | Adr | 278 KD1 | 500              | 0.0 C Rb  | 1.23196 m | HD |   | 50.693  | m |        |
| For M5 | Adr | 279 KD1 | 600              | 0.0 C Rf  | 0.95159 m | HD |   | 49.559  | m |        |
| For M5 | Adr | 280 KD1 | 500              | 0.0 C Rb  | 1.23174 m | HD |   | 50.664  | m |        |
| For M5 | Adr | 281 KD1 | 600              | 0.0 C Rf  | 0.95205 m | HD |   | 49.564  | m |        |
| For M5 | Adr | 282 KD1 | 600              | 0.0 C     |           |    | Z | 67.7439 | m | 0+600  |
| For M5 | Adr | 283 KD1 | 600              | -1.0 C Rb | 1.30332 m | HD |   | 50.616  | m |        |
| For M5 | Adr | 284 KD1 | 700              | -1.0 C Rf | 0.88319 m | HD |   | 49.488  | m |        |
| For M5 | Adr | 285 KD1 | 600              | -1.0 C Rb | 1.30287 m | HD |   | 50.590  | m |        |
| For M5 | Adr | 286 KD1 | 700              | -1.0 C Rf | 0.88289 m | HD |   | 49.470  | m |        |
| For M5 | Adr | 287 KD1 | 700              | -1.0 C    |           |    | Z | 68.1640 | m | 0+700  |

|        |     |         |                  |           |           |    |          |   |                 |
|--------|-----|---------|------------------|-----------|-----------|----|----------|---|-----------------|
| For M5 | Adr | 28E KD1 | 700              | -1.0 C Rb | 1.21045 m | HD | 51.572 m |   |                 |
| For M5 | Adr | 28S KD1 | 800              | -1.0 C Rf | 0.92380 m | HD | 48.713 m |   |                 |
| For M5 | Adr | 29C KD1 | 700              | -1.0 C Rb | 1.21003 m | HD | 51.530 m |   |                 |
| For M5 | Adr | 29J KD1 | 800              | -1.0 C Rf | 0.92388 m | HD | 48.684 m |   |                 |
| For M5 | Adr | 29Z KD1 | 800              | -1.0 C    |           |    |          | Z | 68.4504 m 0+800 |
| For M5 | Adr | 29E KD1 | 800              | -1.0 C Rb | 1.25274 m | HD | 51.997 m |   |                 |
| For M5 | Adr | 29A KD1 | 900              | -1.0 C Rf | 0.72315 m | HD | 49.455 m |   |                 |
| For M5 | Adr | 29S KD1 | 800              | -1.0 C Rb | 1.25289 m | HD | 52.019 m |   |                 |
| For M5 | Adr | 29F KD1 | 900              | -1.0 C Rf | 0.72347 m | HD | 49.439 m |   |                 |
| For M5 | Adr | 297 KD1 | 900              | -1.0 C    |           |    |          | Z | 68.9799 m 0+900 |
| For M5 | Adr | 29E KD1 | 900              | -1.0 C Rb | 1.59613 m | HD | 50.918 m |   |                 |
| For M5 | Adr | 29S KD1 | 1000             | -1.0 C Rf | 0.48204 m | HD | 49.153 m |   |                 |
| For M5 | Adr | 30C KD1 | 900              | -1.0 C Rb | 1.59585 m | HD | 50.958 m |   |                 |
| For M5 | Adr | 30J KD1 | 1000             | -1.0 C Rf | 0.48216 m | HD | 49.155 m |   |                 |
| For M5 | Adr | 30Z KD1 | 1000             | -1.0 C    |           |    |          | Z | 70.0938 m 1+000 |
| For M5 | Adr | 30E KD1 | 1000             | -2.0 C Rb | 1.61430 m | HD | 50.084 m |   |                 |
| For M5 | Adr | 30A KD1 | 1100             | -2.0 C Rf | 0.50641 m | HD | 50.371 m |   |                 |
| For M5 | Adr | 30S KD1 | 1000             | -2.0 C Rb | 1.61455 m | HD | 50.075 m |   |                 |
| For M5 | Adr | 30F KD1 | 1100             | -2.0 C Rf | 0.50657 m | HD | 50.367 m |   |                 |
| For M5 | Adr | 307 KD1 | 1100             | -2.0 C    |           |    |          | Z | 71.2018 m 1+100 |
| For M5 | Adr | 30E KD1 | 1100##### -2. Rb |           | 1.49614 m | HD | 50.628 m |   |                 |
| For M5 | Adr | 30S KD1 | 1200##### -2. Rf |           | 0.66383 m | HD | 49.386 m |   |                 |
| For M5 | Adr | 31C KD1 | 1100##### -2. Rb |           | 1.49669 m | HD | 50.638 m |   |                 |
| For M5 | Adr | 31J TO  | Station repeated |           |           |    |          |   |                 |
| For M5 | Adr | 31Z KD1 | 1100##### -2. Rb |           | 1.49631 m | HD | 50.633 m |   |                 |
| For M5 | Adr | 31E KD1 | 1200##### -2. Rf |           | 0.66409 m | HD | 49.405 m |   |                 |
| For M5 | Adr | 31A KD1 | 1100##### -2. Rb |           | 1.49682 m | HD | 50.625 m |   |                 |
| For M5 | Adr | 31S TO  | Station repeated |           |           |    |          |   |                 |
| For M5 | Adr | 31E KD1 | 1100             | -2.0 C Rb | 1.49674 m | HD | 50.629 m |   |                 |
| For M5 | Adr | 317 KD1 | 1200             | -2.0 C Rf | 0.66411 m | HD | 49.407 m |   |                 |
| For M5 | Adr | 31E KD1 | 1100             | -2.0 C Rb | 1.49666 m | HD | 50.630 m |   |                 |
| For M5 | Adr | 31S KD1 | 1200             | -2.0 C Rf | 0.66406 m | HD | 49.399 m |   |                 |
| For M5 | Adr | 32C KD1 | 1200             | -2.0 C    |           |    |          | Z | 72.0344 m 1+200 |
| For M5 | Adr | 32J KD1 | 1200             | -2.0 C Rb | 1.35187 m | HD | 50.728 m |   |                 |
| For M5 | Adr | 32Z KD1 | 1300             | -2.0 C Rf | 0.85205 m | HD | 49.626 m |   |                 |
| For M5 | Adr | 32E KD1 | 1200             | -2.0 C Rb | 1.35210 m | HD | 50.774 m |   |                 |
| For M5 | Adr | 32A KD1 | 1300             | -2.0 C Rf | 0.85211 m | HD | 49.627 m |   |                 |
| For M5 | Adr | 32S KD1 | 1300             | -2.0 C    |           |    |          | Z | 72.5343 m 1+300 |
| For M5 | Adr | 32E KD1 | 1300             | -2.0 C Rb | 1.28240 m | HD | 50.563 m |   |                 |
| For M5 | Adr | 327 KD1 | 1400             | -2.0 C Rf | 0.93434 m | HD | 49.804 m |   |                 |
| For M5 | Adr | 32E KD1 | 1300             | -2.0 C Rb | 1.28242 m | HD | 50.561 m |   |                 |
| For M5 | Adr | 32S KD1 | 1400             | -2.0 C Rf | 0.93408 m | HD | 49.774 m |   |                 |
| For M5 | Adr | 33C KD1 | 1400             | -2.0 C    |           |    |          | Z | 72.8825 m 1+400 |
| For M5 | Adr | 33J KD1 | 1400             | -2.0 C Rb | 1.25286 m | HD | 50.011 m |   |                 |
| For M5 | Adr | 33Z KD1 | 1500             | -2.0 C Rf | 1.03729 m | HD | 50.708 m |   |                 |
| For M5 | Adr | 33E KD1 | 1400             | -2.0 C Rb | 1.25292 m | HD | 49.996 m |   |                 |
| For M5 | Adr | 33A KD1 | 1500             | -2.0 C Rf | 1.03700 m | HD | 50.715 m |   |                 |
| For M5 | Adr | 33S KD1 | 1500             | -2.0 C    |           |    |          | Z | 73.0983 m 1+500 |
| For M5 | Adr | 33E KD1 | 1500             | -3.0 C Rb | 1.23828 m | HD | 51.576 m |   |                 |
| For M5 | Adr | 337 KD1 | 1600             | -3.0 C Rf | 0.91078 m | HD | 44.745 m |   |                 |
| For M5 | Adr | 33E KD1 | 1500             | -3.0 C Rb | 1.23828 m | HD | 51.557 m |   |                 |
| For M5 | Adr | 33S KD1 | 1600             | -3.0 C Rf | 0.91085 m | HD | 44.740 m |   |                 |
| For M5 | Adr | 34C KD1 | 1600             | -3.0 C    |           |    |          | Z | 73.4258 m 1+600 |
| For M5 | Adr | 34J KD1 | 1600             | -3.0 C Rb | 1.11540 m | HD | 54.212 m |   |                 |
| For M5 | Adr | 34Z KD1 | 1700             | -3.0 C Rf | 1.02972 m | HD | 50.557 m |   |                 |
| For M5 | Adr | 34E KD1 | 1600             | -3.0 C Rb | 1.11515 m | HD | 54.285 m |   |                 |
| For M5 | Adr | 34A KD1 | 1700             | -3.0 C Rf | 1.03020 m | HD | 50.552 m |   |                 |
| For M5 | Adr | 34S KD1 | 1700             | -3.0 C    |           |    |          | Z | 73.5111 m 1+700 |
| For M5 | Adr | 34E KD1 | 1700             | -3.0 C Rb | 0.97979 m | HD | 50.510 m |   |                 |
| For M5 | Adr | 347 KD1 | 1800             | -3.0 C Rf | 1.16608 m | HD | 48.951 m |   |                 |
| For M5 | Adr | 34E KD1 | 1700             | -3.0 C Rb | 0.97935 m | HD | 50.530 m |   |                 |
| For M5 | Adr | 34S KD1 | 1800             | -3.0 C Rf | 1.16635 m | HD | 48.916 m |   |                 |
| For M5 | Adr | 35C KD1 | 1800             | -3.0 C    |           |    |          | Z | 73.3245 m 1+800 |
| For M5 | Adr | 35J KD1 | 1800             | -3.0 C Rb | 0.91981 m | HD | 49.648 m |   |                 |
| For M5 | Adr | 35Z KD1 | 1900             | -3.0 C Rf | 1.22744 m | HD | 50.409 m |   |                 |
| For M5 | Adr | 35E KD1 | 1800             | -3.0 C Rb | 0.91997 m | HD | 49.644 m |   |                 |
| For M5 | Adr | 35A KD1 | 1900             | -3.0 C Rf | 1.22766 m | HD | 50.367 m |   |                 |
| For M5 | Adr | 35S KD1 | 1900             | -3.0 C    |           |    |          | Z | 73.0168 m 1+900 |
| For M5 | Adr | 35E KD1 | 1900             | -3.0 C Rb | 0.94446 m | HD | 49.921 m |   |                 |
| For M5 | Adr | 357 KD1 | 2000             | -3.0 C Rf | 1.23325 m | HD | 50.547 m |   |                 |
| For M5 | Adr | 35E KD1 | 1900             | -3.0 C Rb | 0.94453 m | HD | 49.917 m |   |                 |
| For M5 | Adr | 35S KD1 | 2000             | -3.0 C Rf | 1.23334 m | HD | 50.534 m |   |                 |

|        |     |         |                  |           |           |    |   |          |   |       |
|--------|-----|---------|------------------|-----------|-----------|----|---|----------|---|-------|
| For M5 | Adr | 36C KD1 | 2000             | -3.0 C    |           |    | Z | 72.7281  | m | 2+000 |
| For M5 | Adr | 361 KD1 | 2000             | -3.0 C Rb | 0.92672 m | HD |   | 51.019 m |   |       |
| For M5 | Adr | 362 KD1 | 2100             | -3.0 C Rf | 1.25363 m | HD |   | 48.911 m |   |       |
| For M5 | Adr | 363 KD1 | 2000             | -3.0 C Rb | 0.92661 m | HD |   | 51.062 m |   |       |
| For M5 | Adr | 364 KD1 | 2100             | -3.0 C Rf | 1.25336 m | HD |   | 48.884 m |   |       |
| For M5 | Adr | 365 KD1 | 2100             | -3.0 C    |           |    | Z | 72.4012  | m | 2+100 |
| For M5 | Adr | 366 KD1 | 2100             | -3.0 C Rb | 0.89402 m | HD |   | 50.065 m |   |       |
| For M5 | Adr | 367 KD1 | 2200             | -3.0 C Rf | 1.22141 m | HD |   | 49.609 m |   |       |
| For M5 | Adr | 368 KD1 | 2100             | -3.0 C Rb | 0.89432 m | HD |   | 50.078 m |   |       |
| For M5 | Adr | 369 KD1 | 2200             | -3.0 C Rf | 1.22156 m | HD |   | 49.597 m |   |       |
| For M5 | Adr | 37C KD1 | 2200             | -3.0 C    |           |    | Z | 72.0739  | m | 2+200 |
| For M5 | Adr | 371 KD1 | 2200             | -3.0 C Rb | 0.98304 m | HD |   | 51.653 m |   |       |
| For M5 | Adr | 372 KD1 | 2300             | -3.0 C Rf | 1.38575 m | HD |   | 47.493 m |   |       |
| For M5 | Adr | 373 KD1 | 2200             | -3.0 C Rb | 0.98267 m | HD |   | 51.584 m |   |       |
| For M5 | Adr | 374 KD1 | 2300             | -3.0 C Rf | 1.38592 m | HD |   | 47.495 m |   |       |
| For M5 | Adr | 375 KD1 | 2300             | -3.0 C    |           |    | Z | 71.6710  | m | 2+300 |
| For M5 | Adr | 376 KD1 | 2300##### -3. Rb |           | 0.89569 m | HD |   | 50.074 m |   |       |
| For M5 | Adr | 377 KD1 | 2400##### -3. Rf |           | 1.33995 m | HD |   | 49.207 m |   |       |
| For M5 | Adr | 378 KD1 | 2300##### -3. Rb |           | 0.89637 m | HD |   | 50.073 m |   |       |
| For M5 | Adr | 379 TO  | Station repeated |           |           |    |   |          |   |       |
| For M5 | Adr | 38C KD1 | 2300             | -3.0 C Rb | 0.89648 m | HD |   | 50.068 m |   |       |
| For M5 | Adr | 381 KD1 | 2400             | -3.0 C Rf | 1.34047 m | HD |   | 49.232 m |   |       |
| For M5 | Adr | 382 KD1 | 2300             | -3.0 C Rb | 0.89654 m | HD |   | 50.078 m |   |       |
| For M5 | Adr | 383 KD1 | 2400             | -3.0 C Rf | 1.34033 m | HD |   | 49.211 m |   |       |
| For M5 | Adr | 384 KD1 | 2400             | -3.0 C    |           |    | Z | 71.2271  | m | 2+400 |
| For M5 | Adr | 385 KD1 | 2400##### -3. Rb |           | 0.76165 m | HD |   | 48.510 m |   |       |
| For M5 | Adr | 386 KD1 | 2500##### -3. Rf |           | 1.48849 m | HD |   | 49.716 m |   |       |
| For M5 | Adr | 387 KD1 | 2400##### -3. Rb |           | 0.76246 m | HD |   | 48.497 m |   |       |
| For M5 | Adr | 388 TO  | Station repeated |           |           |    |   |          |   |       |
| For M5 | Adr | 389 KD1 | 2400             | -3.0 C Rb | 0.76247 m | HD |   | 48.497 m |   |       |
| For M5 | Adr | 39C KD1 | 2500             | -3.0 C Rf | 1.48828 m | HD |   | 49.727 m |   |       |
| For M5 | Adr | 391 KD1 | 2400             | -2.0 C Rb | 0.76224 m | HD |   | 48.510 m |   |       |
| For M5 | Adr | 392 KD1 | 2500             | -3.0 C Rf | 1.48839 m | HD |   | 49.712 m |   |       |
| For M5 | Adr | 393 KD1 | 2500             | -3.0 C    |           |    | Z | 70.5011  | m | 2+500 |
| For M5 | Adr | 394 KD1 | 2500             | -3.0 C Rb | 0.63519 m | HD |   | 49.470 m |   |       |
| For M5 | Adr | 395 KD1 | 2600             | -3.0 C Rf | 1.59588 m | HD |   | 49.384 m |   |       |
| For M5 | Adr | 396 KD1 | 2500             | -3.0 C Rb | 0.63524 m | HD |   | 49.464 m |   |       |
| For M5 | Adr | 397 KD1 | 2600             | -3.0 C Rf | 1.59597 m | HD |   | 49.405 m |   |       |
| For M5 | Adr | 398 KD1 | 2600             | -3.0 C    |           |    | Z | 69.5405  | m | 2+600 |
| For M5 | Adr | 399 KD1 | 2600             | -3.0 C Rb | 0.40083 m | HD |   | 49.481 m |   |       |
| For M5 | Adr | 40C KD1 | 2700             | -3.0 C Rf | 1.62010 m | HD |   | 49.585 m |   |       |
| For M5 | Adr | 401 KD1 | 2600             | -3.0 C Rb | 0.40120 m | HD |   | 49.496 m |   |       |
| For M5 | Adr | 402 KD1 | 2700             | -3.0 C Rf | 1.62039 m | HD |   | 49.625 m |   |       |
| For M5 | Adr | 403 KD1 | 2700             | -3.0 C    |           |    | Z | 68.3212  | m | 2+700 |
| For M5 | Adr | 404 KD1 | 2700##### -2. Rb |           | 0.33669 m | HD |   | 48.771 m |   |       |
| For M5 | Adr | 405 KD1 | 2800##### -2. Rf |           | 1.77974 m | HD |   | 51.024 m |   |       |
| For M5 | Adr | 406 KD1 | 2700##### -2. Rb |           | 0.33612 m | HD |   | 48.770 m |   |       |
| For M5 | Adr | 407 TO  | Station repeated |           |           |    |   |          |   |       |
| For M5 | Adr | 408 KD1 | 2700##### -2. Rb |           | 0.33618 m | HD |   | 48.766 m |   |       |
| For M5 | Adr | 409 KD1 | 2800##### -3. Rf |           | 1.77955 m | HD |   | 51.033 m |   |       |
| For M5 | Adr | 41C KD1 | 2700##### -2. Rb |           | 0.33669 m | HD |   | 48.754 m |   |       |
| For M5 | Adr | 411 TO  | Station repeated |           |           |    |   |          |   |       |
| For M5 | Adr | 412 KD1 | 2700             | -2.0 C Rb | 0.33619 m | HD |   | 48.770 m |   |       |
| For M5 | Adr | 413 KD1 | 2800             | -2.0 C Rf | 1.77997 m | HD |   | 51.035 m |   |       |
| For M5 | Adr | 414 KD1 | 2700             | -2.0 C Rb | 0.33653 m | HD |   | 48.787 m |   |       |
| For M5 | Adr | 415 KD1 | 2800             | -2.0 C Rf | 1.77996 m | HD |   | 51.052 m |   |       |
| For M5 | Adr | 416 KD1 | 2800             | -2.0 C    |           |    | Z | 66.8777  | m | 2+800 |
| For M5 | Adr | 417 KD1 | 2800             | -2.0 C Rb | 0.30796 m | HD |   | 48.281 m |   |       |
| For M5 | Adr | 418 KD1 | 2900             | -2.0 C Rf | 1.48650 m | HD |   | 50.808 m |   |       |
| For M5 | Adr | 419 KD1 | 2800             | -2.0 C Rb | 0.30824 m | HD |   | 48.319 m |   |       |
| For M5 | Adr | 42C KD1 | 2900             | -2.0 C Rf | 1.48680 m | HD |   | 50.771 m |   |       |
| For M5 | Adr | 421 KD1 | 2900             | -2.0 C    |           |    | Z | 65.6991  | m | 2+900 |
| For M5 | Adr | 422 KD1 | 2900             | -2.0 C Rb | 0.51562 m | HD |   | 48.398 m |   |       |
| For M5 | Adr | 423 KD1 | 3000             | -2.0 C Rf | 1.48852 m | HD |   | 50.429 m |   |       |
| For M5 | Adr | 424 KD1 | 2900             | -2.0 C Rb | 0.51596 m | HD |   | 48.391 m |   |       |
| For M5 | Adr | 425 KD1 | 3000             | -2.0 C Rf | 1.48838 m | HD |   | 50.426 m |   |       |
| For M5 | Adr | 426 KD1 | 3000             | -2.0 C    |           |    | Z | 64.7265  | m | 3+000 |
| For M5 | Adr | 427 KD1 | 3000             | -2.0 C Rb | 0.71950 m | HD |   | 49.198 m |   |       |
| For M5 | Adr | 428 KD1 | 3100             | -2.0 C Rf | 1.33887 m | HD |   | 50.249 m |   |       |
| For M5 | Adr | 429 KD1 | 3000             | -2.0 C Rb | 0.71975 m | HD |   | 49.181 m |   |       |
| For M5 | Adr | 43C KD1 | 3100             | -2.0 C Rf | 1.33915 m | HD |   | 50.286 m |   |       |
| For M5 | Adr | 431 KD1 | 3100             | -2.0 C    |           |    | Z | 64.1071  | m | 3+100 |

|        |     |         |                  |            |    |           |             |       |
|--------|-----|---------|------------------|------------|----|-----------|-------------|-------|
| For M5 | Adr | 432 KD1 | 3100##### -2. Rb | 0.79722 m  | HD | 49.277 m  |             |       |
| For M5 | Adr | 433 KD1 | 3200##### -2. Rf | 1.29219 m  | HD | 49.897 m  |             |       |
| For M5 | Adr | 434 KD1 | 3100##### -2. Rb | 0.79688 m  | HD | 49.281 m  |             |       |
| For M5 | Adr | 435 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 436 KD1 | 3100##### -2. Rb | 0.79671 m  | HD | 49.304 m  |             |       |
| For M5 | Adr | 437 KD1 | 3200##### -2. Rf | 1.29236 m  | HD | 49.909 m  |             |       |
| For M5 | Adr | 438 KD1 | 3100##### -2. Rb | 0.79743 m  | HD | 49.310 m  |             |       |
| For M5 | Adr | 439 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 440 KD1 | 3100 -2.0 C Rb   | 0.79744 m  | HD | 49.310 m  |             |       |
| For M5 | Adr | 441 KD1 | 3200 -2.0 C Rf   | 1.29299 m  | HD | 49.856 m  |             |       |
| For M5 | Adr | 442 KD1 | 3100 -2.0 C Rb   | 0.79744 m  | HD | 49.316 m  |             |       |
| For M5 | Adr | 443 KD1 | 3200 -2.0 C Rf   | 1.29283 m  | HD | 49.888 m  |             |       |
| For M5 | Adr | 444 KD1 | 3200 -2.0 C      |            |    |           | Z 63.6117 m | 3+200 |
| For M5 | Adr | 445 KD1 | 3200##### -2. Rb | 0.87608 m  | HD | 48.694 m  |             |       |
| For M5 | Adr | 446 KD1 | 3400##### -2. Rf | 1.06981 m  | HD | 51.161 m  |             |       |
| For M5 | Adr | 447 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 448 KD1 | 3200##### -2. Rb | 0.87637 m  | HD | 48.700 m  |             |       |
| For M5 | Adr | 449 KD1 | 3300##### -2. Rf | 1.07027 m  | HD | 51.211 m  |             |       |
| For M5 | Adr | 450 KD1 | 3200##### -2. Rb | 0.87581 m  | HD | 48.689 m  |             |       |
| For M5 | Adr | 451 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 452 KD1 | 3200 -2.0 C Rb   | 0.87638 m  | HD | 48.706 m  |             |       |
| For M5 | Adr | 453 KD1 | 3300 -2.0 C Rf   | 1.07052 m  | HD | 51.184 m  |             |       |
| For M5 | Adr | 454 KD1 | 3200 -2.0 C Rb   | 0.87654 m  | HD | 48.707 m  |             |       |
| For M5 | Adr | 455 KD1 | 3300 -2.0 C Rf   | 1.07056 m  | HD | 51.208 m  |             |       |
| For M5 | Adr | 456 KD1 | 3300 -2.0 C      |            |    |           | Z 63.4176 m | 3+300 |
| For M5 | Adr | 457 KD1 | 3300##### -2. Rb | 1.19592 m  | HD | 45.833 m  |             |       |
| For M5 | Adr | 458 KD1 | 3400##### -2. Rf | 0.75650 m  | HD | 54.150 m  |             |       |
| For M5 | Adr | 459 KD1 | 3300##### -2. Rb | 1.19685 m  | HD | 45.819 m  |             |       |
| For M5 | Adr | 460 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 461 KD1 | 3300 -3.0 C Rb   | 1.19684 m  | HD | 45.843 m  |             |       |
| For M5 | Adr | 462 KD1 | 3400 -2.0 C Rf   | 0.75646 m  | HD | 54.130 m  |             |       |
| For M5 | Adr | 463 KD1 | 3300 -2.0 C Rb   | 1.19668 m  | HD | 45.831 m  |             |       |
| For M5 | Adr | 464 KD1 | 3400 -2.0 C Rf   | 0.75636 m  | HD | 54.145 m  |             |       |
| For M5 | Adr | 465 KD1 | 3400 -2.0 C      |            |    |           | Z 63.8580 m | 3+400 |
| For M5 | Adr | 466 KD1 | 3400##### -2. Rb | 1.24996 m  | HD | 47.087 m  |             |       |
| For M5 | Adr | 467 KD1 | 3500##### -2. Rf | 0.78303 m  | HD | 52.304 m  |             |       |
| For M5 | Adr | 468 KD1 | 3400##### -2. Rb | 1.25056 m  | HD | 47.098 m  |             |       |
| For M5 | Adr | 469 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 470 KD1 | 3400 -2.0 C Rb   | 1.25051 m  | HD | 47.101 m  |             |       |
| For M5 | Adr | 471 KD1 | 3500 -2.0 C Rf   | 0.78297 m  | HD | 52.315 m  |             |       |
| For M5 | Adr | 472 KD1 | 3400 -2.0 C Rb   | 1.25069 m  | HD | 47.085 m  |             |       |
| For M5 | Adr | 473 KD1 | 3500 -2.0 C Rf   | 0.78313 m  | HD | 52.314 m  |             |       |
| For M5 | Adr | 474 KD1 | 3500 -2.0 C      |            |    |           | Z 64.3255 m | 3+500 |
| For M5 | Adr | 475 KD1 | 3500##### -2. Rb | 0.37810 m  | HD | 39.911 m  |             |       |
| For M5 | Adr | 476 KD1 | 01##### -2.0 Rf  | 1.69860 m  | HD | 40.122 m  |             |       |
| For M5 | Adr | 477 KD1 | 3500##### -2. Rb | 0.37828 m  | HD | 39.923 m  |             |       |
| For M5 | Adr | 478 KD1 | 01##### -2.0 Rf  | 1.69801 m  | HD | 40.085 m  |             |       |
| For M5 | Adr | 479 KD1 | 01##### -2.0     |            |    |           | Z 63.0041 m |       |
| For M5 | Adr | 480 TO  | Station repeated |            |    |           |             |       |
| For M5 | Adr | 481 KD1 | 3500 -2.0 C Rb   | 0.37839 m  | HD | 39.912 m  |             |       |
| For M5 | Adr | 482 KD1 | 01 -2.0 C Rf     | 1.69844 m  | HD | 40.082 m  |             |       |
| For M5 | Adr | 483 KD1 | 3500 -2.0 C Rb   | 0.37842 m  | HD | 39.921 m  |             |       |
| For M5 | Adr | 484 KD1 | 01 -2.0 C Rf     | 1.69843 m  | HD | 40.091 m  |             |       |
| For M5 | Adr | 485 KD1 | 01 -2.0 C        |            |    |           | Z 63.0055 m |       |
| For M5 | Adr | 486 KD1 | 01 -2.0 C Rb     | 0.79815 m  | HD | 36.462 m  |             |       |
| For M5 | Adr | 487 KD1 | 02 -2.0 C Rf     | 1.65368 m  | HD | 33.525 m  |             |       |
| For M5 | Adr | 488 KD1 | 01 -2.0 C Rb     | 0.79826 m  | HD | 36.459 m  |             |       |
| For M5 | Adr | 489 KD1 | 02 -2.0 C Rf     | 1.65362 m  | HD | 33.528 m  |             |       |
| For M5 | Adr | 490 KD1 | 02 -2.0 C        |            |    |           | Z 62.1501 m |       |
| For M5 | Adr | 491 KD1 | 02 -2.0 C Rb     | 0.60029 m  | HD | 36.131 m  |             |       |
| For M5 | Adr | 492 KD1 | VEETORN -2. Rf   | 0.61651 m  | HD | 30.558 m  |             |       |
| For M5 | Adr | 493 KD1 | 02 -2.0 C Rb     | 0.60058 m  | HD | 36.142 m  |             |       |
| For M5 | Adr | 494 KD1 | VEETORN -2. Rf   | 0.61654 m  | HD | 30.554 m  |             |       |
| For M5 | Adr | 495 KD1 | VEETORN -2. Rf   |            |    |           | Z 62.1340 m |       |
| For M5 | Adr | 496 KD1 | VEETORN Sh       | -0.00000 m | dz | 0.00137 m | Z 62.1340 m |       |
| For M5 | Adr | 497 KD2 | VEETORN 8C Db    | 3886.26 m  | Df | 3876.30 m | Z 62.1340 m |       |
| For M5 | Adr | 498 TO  | End-Line         |            |    |           |             |       |



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**KALIBROINTITODISTUS**  
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|                                                                     |                                                                                                                              |                            |      |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|
| Número - Nummer:<br><i>Number</i>                                   | 4/2011                                                                                                                       | Sivu - Sida<br><i>Page</i> | 1(2) |
| Tilaaaja - Uppdragsgivare:<br><i>Customer</i>                       | Geo S.T. OÜ, Laki 15, 12915 Tallinn, Estonia                                                                                 |                            |      |
| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | Levelling rod with bar code invar scale                                                                                      |                            |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                                                                                                      |                            |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | LD12                                                                                                                         |                            |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 51796                                                                                                                        |                            |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 14.-25.2.2011                                                                                                                |                            |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                                                                                                   |                            |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              | <div>Laboratory Head<br/>Special Research Scientist<br/>Jorma Jokela</div> <div>Senior Researcher<br/>Paavo Rouhiainen</div> |                            |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 2                                                                                                                            |                            |      |

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| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                                                                                                      |                            |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | LD12                                                                                                                         |                            |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 51545                                                                                                                        |                            |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 14.-25.2.2011                                                                                                                |                            |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                                                                                                   |                            |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              | <div>Laboratory Head<br/>Special Research Scientist<br/>Jorma Jokela</div> <div>Senior Researcher<br/>Paavo Rouhiainen</div> |                            |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 2                                                                                                                            |                            |      |

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| Número - Nummer:<br><i>Number</i>                                   | 6/2011                                                                                                                                                                                                                                                                                                           | Sivu - Sida<br><i>Page</i> | 1(2) |
| Tilaaaja - Uppdragsgivare:<br><i>Customer</i>                       | Geo S.T. OÜ, Laki 15, 12915 Tallinn, Estonia                                                                                                                                                                                                                                                                     |                            |      |
| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | 1) Digital level and 2) bar code invar rod                                                                                                                                                                                                                                                                       |                            |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                                                                                                                                                                                                                                                                                          |                            |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | 1) DiNi 0.3 and 2) LD12                                                                                                                                                                                                                                                                                          |                            |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 1) 706338 and 2) 51796                                                                                                                                                                                                                                                                                           |                            |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 28.2.-17.3.2011                                                                                                                                                                                                                                                                                                  |                            |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                                                                                                                                                                                                                                                                                       |                            |      |
| Allekirjoitukset - Underskrifter:<br><i>Signatures</i>              | <div>Laboratory Head<br/>Special Research Scientist<br/>Jorma Jokela<br/></div> <div>Senior Researcher<br/>Paavo Rouhiainen<br/></div> |                            |      |
| Liitteitä - Bilagor:<br><i>Documents attached</i>                   | 4                                                                                                                                                                                                                                                                                                                |                            |      |

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| Kalibroinnin kohde - Kalibrerat objekt:<br><i>Calibrated object</i> | 1) Digital level and 2) bar code invar rod                                                                                                                                                                                                                                                                       |                            |      |
| Valmistaja - Tillverkare:<br><i>Manufactured by</i>                 | Trimble                                                                                                                                                                                                                                                                                                          |                            |      |
| Tyyppi - Typ:<br><i>Model</i>                                       | 1) DiNi 0.3 and 2) LD12                                                                                                                                                                                                                                                                                          |                            |      |
| Sarjanumero - Serienummer:<br><i>Serial number</i>                  | 1) 706338 and 2) 51545                                                                                                                                                                                                                                                                                           |                            |      |
| Kalibrointipäivä - Kalibreringsdatum:<br><i>Date of calibration</i> | 28.2.-17.3.2011                                                                                                                                                                                                                                                                                                  |                            |      |
| Päiväys - Datum:<br><i>Date</i>                                     | 2011-05-20                                                                                                                                                                                                                                                                                                       |                            |      |
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Calibration certificate No.**ATLP - 08/0341**Kuupäev  
Date**19.09.2008**Leht  
Page**1(3)**Tellija  
Customer**Ronex OÜ**Aadress  
Address**Kiisa 8, Tallinn**Mõõtevahend  
Measuring instrument**Kombineeritud mõõtevahend**Valmistaja  
Manufactured by**Delta OHM**Tüüp  
Type**HD 2304.0**Number  
Serial number**08008760 (rõhuandur nr 08021074, termoandur nr 08019676)**Kalibreerimisele esitatud  
Date of receipt**17.09.2008**Kalibreeritud  
Date of calibration**18.09.2008...19.09.2008**Lehti  
Number of pages**3**  
**K. Tammik**Mõõtmiste eest vastutav isik  
The person responsible for the  
measurements  
**G. Peterson**Kalibreeris  
Calibrated by  
**N. Romanova**Allkirjad  
SignaturesLisad  
Documents attached

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# **1 Kalibreerimisvahendid.** Calibration equipment

Etalonmanomeeter 6100-5L nr 59125

Plaatinatakistustermomeeter 17660-B-090-6-W-1 nr 776324

Multimeeter Agilent 34401A nr MY41010897

## **2 Jälgitavus.** Traceability

AS Metrosert rõhu mõõtmised on jälgitavad kuni MIKES (Soome) rõhu etalonini ning temperatuuri mõõtmised on jälgitavad kuni Eesti temperatuuri riigietalonini.

## **3 Kalibreerimisjuhend/-metoodika, -meetod; mõõteprotsessi lühikirjeldus.**

Calibration instruction or, -method; short description of the calibration process

MSKJ 037-1995 Kalibreerimisjuhend. Elastse tundliku elemendiga manomeetrite ja vaakummeetri kalibreerimine. Näitavad seadmed. Registreerivad seadmed.

MDK KJ 303-2002. Kalibreerimisjuhend. Termomeetrid.

Kombineeritud mõõtevahendi kalibreerimisel kasutati võrdlusmeetodit tellija poolt valitud rõhu ja temperatuuri punktides.

Rõhu mõõtmisel tehti neli mõõtmist (kaks rõhu suurendamisel ja kaks rõhu vähendamisel). Näidud on võetud vastavate mõõdiste aritmeetiline keskmine. Mõõtetulemused on toodud tabelis 1.

Temperatuuri mõõtmised teostati õhukambris. Peale keskkonna stabiliseerumist teostati 5 mõõtmist. Mõõtetulemuseks võeti vastavate mõõdiste aritmeetiline keskmine.

Mõõtetulemused on toodud tabelis 2.

## **4 Tulemused.** Results

Tabel 1. Rõhu mõõtmise mõõtetulemused

| Rõhu etalonväärtus,<br>hPa | Kalibreeritava mõõtevahendi |                   | Laiendmääramatus,<br>hPa |
|----------------------------|-----------------------------|-------------------|--------------------------|
|                            | keskmine näit, hPa          | näidu parand, hPa |                          |
| 1000,9                     | 1000                        | +1                | 2                        |
| 1020,9                     | 1020                        | +1                | 2                        |
| 1040,9                     | 1040                        | +1                | 2                        |

Tabel 2. Temperatuuri mõõtmise mõõtetulemused

| Etalontermomeetri<br>keskmine näit, °C | Kalibreeritava mõõtevahendi |                  | Laiendmääramatus,<br>°C |
|----------------------------------------|-----------------------------|------------------|-------------------------|
|                                        | keskmine näit, °C           | näidu parand, °C |                         |
| 5,00                                   | 5,1                         | -0,1             | 0,3                     |
| 15,00                                  | 15,1                        | -0,1             | 0,3                     |
| 25,00                                  | 25,0                        | 0,0              | 0,3                     |

*G. P. A. Prang*

Kalibreerimistunnistus nr  
Calibration certificate No.

ATLP - 08/0341

Kuupäev  
Date

19.09.2008

Leht  
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### 5 Määramatus. Uncertainty of measurement

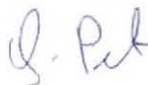
Esitatud mõõtmise laiendmääramatus on saadud mõõtmise standardmääramatusest, korrutades se katteteguriga  $k = 2$ , mis normaaljaotuse korral vastab ligikaudu 95% katvustõenäosusele. Kalibreeritud mõõtevahendi pikaajaline stabiilsus ei ole arvesse võetud. Mõõtmise standardmääramatust hinnatud kooskõlas EA juhenddokumendiga EA-4/02.

### 6 Keskkonnatingimused. Environmental conditions

Temperatuur Temperature: (22,9...23,3) °C

Õhu niiskus Air humidity: (29...33) %

Õhu rõhk Air pressure: (102,8...102,9) kPa



### *Lõpuleht*

Käesolevas tehnilise aruande toimikus on 33 (kolmkümmend kolm) järjestikku nummerdatud lehte.

02.11.2012.a.

Tehnilise aruande koostas: T.Bauman



**Lisa 4**

**Põlevkiviaherainest muldkeha ehitamise juhised**

## Põlevkiviaherainest muldkehade ehitamise juhised

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### 1. Sissejuhatus

Käesolev juhised on koostatud Maanteeameti poolt tellitud uurimistöö „Põlevkiviaheraine kasutusvõimaluste uurimine tee muldkeha ehitamisel“ käigus saadud kogemuste ja tulemuste põhjal. Juhise koostas AS Teede Tehnokeskus ja selles osalesid Jüri Kivi, Luule Kaal ja Janar Tükk.

Eesti jäätmevaldkorra üks peamine pikaajaline eesmärk on vähendada ladestatavate jäätmete kogust läbi jäätmetekke vältimise ja taaskasutuse suurendamise. Toetamaks taaskasutuse osakaalu kasvu, on jäätmeseaduses sätestatud piirangud prügilasse ladestatavatele jäätmetele. Ida-Virumaale on aastakümnetega tekkinud hulgaliselt põlevkiviaherainest koosnevaid tehismägesid, kuna aherainet pole osatud eriti palju kasutada. Mägedesse on kuhjatud sadu miljoneid tonne erineva kvaliteediga aherainet. Praeguse põlevkivi kaevandamise mahu juures (ca 15 mln tonni aastas) tekib ligi 6 miljonit tonni aherainet.

Maanteeameti andmetel on võimalik teedeehitusel kasutada põlevkiviaherainet ka alustes tingimusel, et sellest valmistatud killustiku vastab „Killustikust katendikihtide ehitamise juhendile“. Kuna aheraine ei ole kõrgkvaliteetne ja seegi kvaliteet kõigub kihtide ja kaevanduste kaupa, on kindlasti oluline leida lahendused, kuidas madalama kvaliteediga materjalide kasutamist mulletes siiski laiendada, kasutades erinevaid tugevdus- ja sideaineid, olgu selleks kas siis põlevkivituhk või tsemendi klinkritolm vms.

Käesoleva juhise aluseks olev uurimistöö keskendus aheraine kasutusvõimalustele tee muldkeha ehitusel. Seetõttu ei ole käesolevas juhises kajastatud põlevkiviaherainest valmistatava killustiku kasutusvõimalusi alustes.

## **2. Lähteandmed**

Aheraineiks nimetatakse karjäärist või ka maa-alt kaevandatud põlevkivist eraldatud jääki, mida siiani on peamiselt ladestatud aherainemägedele.

Praegu kasutatakse rikastamisel peamiselt jahvatatud rauamineraalide vesilahust, mille tihedus on kergema põlevkivi ja raskema paekivi vahepealne – seega teoreetiliselt jääb põlevkivi pinnale, paas vajub põhja. Kuna paljud kaevisetükid koosnevad mõlemast, siis paratamatult satub nii paasi põlevkivi hulka, ja vastupidi.

Põlevkiviaheraine koosneb lubjakivist ja põlevkivist, mis on tekkinud rikastamise tulemusena. Aheraine koostis sõltub rikastusvabriku protsesside efektiivsusest. Aheraine fraktsioonid on 25/100, 100/300 või 0/100 mm. Põlevkivi rikastamine seisneb lubjakivi eraldamises, see põhineb lubjakivi märksa suuremal tihedusel ( $2,5 \text{ g/cm}^3$ ) võrreldes põlevkiviga ja toimub separaatorites raske suspensiooni keskkonnas. Suspensiooniks on peeneksjahvatatud magnetiidipulber vees. Suspensiooni tiheduseks on võetud  $2,1 \text{ g/cm}^3$ . Separatori vannis olevas suspensioonis ujuvad kõik kaevisetükid, mille keskmine tihedus on väiksem kui  $2,1 \text{ g/cm}^3$ , pinnal, andes nii kontsentraadi. Raskemad tükid aga vajuvad põhja ja moodustavad rikastamisjäägi. Rikastamisjääk (aherkivim) veetakse kallurautodes kaevanduse aherainepuistangusse. See ongi põlevkiviaheraine, mille kasutusvõimaluste uurimine peaks andma edaspidi märkimisväärset majanduslikku efekti.

Uurimistöö „Põlevkiviaheraine kasutusvõimaluste uurimine tee muldkeha ehitamisel“ lähteülesandes oli Maanteeameti poolt ette antud rida tingimusi, millele vastavalt Kukruse-Jõhvi teelõigu muldkehas tuli kasutada põlevkiviaherainet. Need tingimused olid järgmised:

1. Maksimaalne aheraines lubatud põlevkivi sisaldus kuni 10%.
2. Aheraine ja liiva vahekord on 1:1.
3. Aherainet võib kasutada arvutuslikust veetasemest 0,3 m võrra kõrgemates kihtides.
4. Muldkeha põhjast alates kuni arvutuslikust veetasemest 0,3 m võrra kõrgemal kiht tuleb ehitada drenliivast.
5. Kui aheraine ja liiva segu filtratsioonitegur määratuna SojuzDORNII meetodil on  $>0,5$  m/ööpäevas, siis arvutuslikust veetasemest 0,3 m võrra kõrgemal võib kasutada piiranguteta, kui  $<0,5$  m/ööpäevas, siis ainult arvutuslikust veetasemest 0,3 m võrra kõrgemal ja katte pinnast 1,5 m võrra madalamates kihtides.

Ettenähtud oli muldkeha ehitada Estonia kaevanduse või Aidu karjääri aheraine ja liiva segust ja esitatud tingimustest on näha, et need on püstitatud eesmärgiga tagada kindlasti muldkeha püsivus. Tingimuste koostamisel võttis Maanteeamet arvesse varasemaid praktilisi kogemusi ja tehtud vigu (vt Sissejuhatus). Samuti arvestati ka seda, et ehitatav teelõik on põhimaanteel ja küllalt suure liiklussagedusega.

Ehitamisel kasutati Estonia ja Viru kaevanduste aherainet fraktsioonidega 0/100 ja 100/300 mm. Nende kaevanduste rikastamistehnoloogia on kaasaegsem ja jätab aherainesse kuni 10% põlevkivi. Aherainemägedes on aheraine põlevkivisisaldus kuni 20%.

Kuna uuringu tulemused võimaldavad väita, et Kukruse-Jõhvi teelõik on muldkeha osas esimesed aastad hästi vastu pidanud, siis on käesolevas juhises kehtestatavate nõuete osas lähtutud selle teelõigu ehitamisel saadud uurimistulemustest.

### **3. Põlevkiviaheraine ja liiva omadused**

#### **3.1. Põlevkiviaheraine põlevkivisisaldus**

Aheraine põlevkivisisaldus võib teede mulletes kasutamisel olla kuni 10%, mis väljendub orgaanilise aine sisaldust kaaluliselt aheraine kogumassist. Põlevkivisisaldus tuleb laboratoorselt määrata iga kasutatava aheraine 5000 tonni kohta ja vähemalt ühel korral enne tarnija poolt pakutava partii kasutuselevõttu.

#### **3.2. Põlevkiviaheraine tühiklikkus**

Aheraine tühiklikkus määrab segamiseks vajaliku liiva koguse mahuliselt. Katseliselt on saadud tulemuseks, et tühiklikkus on ligi 40% nii fraktsiooni 0/100 kui ka 100/300 mm puhul. Arvestades liiva ja aheraine segamise tehnoloogiast tulenevat segamistäpsust, on soovituslik vahetegur liiv/aheraine 50:50 kuni 60:40, et oleks igal juhul tagatud kõikide tühikute täitumine liivaga. Aheraine tühiklikkus tuleb laboratoorselt määrata valitud aheraine fraktsiooni kasutuselevõtu eel, et määratleda vajaliku liiva kogus.

#### **3.3. Põlevkiviaheraine veeimavus**

Aheraine veeimavus on oluline tegur aheraine asukoha määramisel muldes. Võrreldes lubjakiviga on aheraine veeimavus ligikaudu kaks ja enam korda suurem (lubjakivi veeimavus on ~2 %). Veeimavus näitab materjali püsivust ja ilmastikukindlust. Suur veeimavus vähendab oluliselt kivimaterjali külmakindlust. Seetõttu ei ole lubatav aherainet kasutada veega kokkupuutuvates kihtides. Aherainet sobib muldes kasutada eelkõige 1. niiskuspakkonnas ja 2. niiskuspakkonnas juhul kui projekteerija on ette näinud meetmed pinnasevee eemale juhtimiseks. Arvestada tuleb võimalusega, et aheraine on juba objektile saabumisel veega küllastunud olekus.

#### **3.4. Põlevkiviaheraine purunemiskindlus**

Aheraine purunemiskindlus peab jääma muldes kasutamiseks tasemele LA<sub>40</sub>. Seda tuleb kontrollida sagedusega, nagu kontrollitakse muid muldkeha materjale – iga 3000 m<sup>3</sup> muldesse paigaldatud aheraine kohta.

#### **3.5. Põlevkiviaheraine terakoostis**

Aheraine terakoostis vastab tavaliselt EVS-EN ISO 14688-1:2002 pinnaste liigituse kohaselt rahnude (Bo), veeriste (Co) ja jämekruusa (CGr) klassifikatsioonile, kuid üksteisega segatuna.

Terakoostist tuleb kontrollida fraktsiooni 0/100 mm kasutamisel iga 3000 m<sup>3</sup> muldesse paigaldatud aheraine kohta.

Aheraine fraktsiooni 100/300 mm kasutamisel piisab tühiklikkuse kontrollimisest, kuna seal on muldele ohtu kujutavaid peenosiseid oluliselt vähem.

### **3.6. Põlevkiviaheraine peenosiste sisaldus**

Aheraine peenosiste sisaldus jääb tavaliselt  $f_4$  piiridesse ja mulde ehitamisel liivaga segatuna olulist rolli ei mängi ning eraldi kontrollimist ei vaja.

### **3.7. Liiva terakoostis, peenosiste sisaldus ja filtratsioon**

Liiva terakoostis, peenosiste sisaldus ja filtratsioon on olulised näitajad, millest otseselt sõltub mulde vastupidavus. Aheraine tühikute täitmisel on filtratsioon olulise tähtsusega. Nõutavad näitajad tuleb kirjeldada projektis.

## **4. Tehnoloogia**

Põlevkiviaheraine kasutamise peab ette nägema projektis. Arvestama peab asukoha niiskuspäikkonda, aheraine kasutamiseks sobiva kihi asukohta muldes ja eeluuringute põhjal eeldatavat liivaga segamise vahekorda. Uuringute kohaselt võib eeldatav aheraine/liiva vahekord olla 50:50. Segamise õige vahekord selgitatakse eelnevalt p.3.2. alusel.

Aheraine kasutamine on võimalik ka ilma liivaga segamata, kuid siis tuleb samuti tagada, et ei oleks püsivat kokkupuudet veega ja et aheraine pealispind saaks kiilunud killustikuga (või aherainekillustikuga), vältimaks drenikihi materjali hilisemat segunemist aherainega. Selline kasutusviis on lubatav kergliiklusteede, jalgteede ja sõiduautode parklate muldkehas, samuti teedel, mille liiklussagedus on kuni 300 autot/ööpäevas ja katendi ülakihiks on vähemalt pindamine. Talihooldse seisunditase peab olema sellistel teedel 1. Paraku pole selliseid konstruktsioone veel põhjalikumalt uuritud. Seetõttu on järgnevad nõuded tulenenud aheraine ja liiva segu kasutamise uuringu tulemustest.

Kui eelnevalt on välja selgitatud aheraine ja liiva segamise proportsioonid, tuleb leida sobiv koht segamiseks. Kindlasti on vajalik arvestada segamise võimalikku ebatäpsust, mis katseliselt on olnud piirides  $\pm 5\%$  mahuliselt. Segamine võib toimuda nii vahelaos kui ka otse teetrassil. Teetrassil võib toimuda segamine nagu vahelaos edasise autoveoga või kohapealse planeerimisega.

#### **4.1. Ehitatava mulde kihi paksus**

Ehitatava mulde iga kihi paksus sõltub kasutatavast aheraine fraktsioonist, järgides „Muldkeha pinnaste tihendamise ja tiheduse kontrolli juhiseid“ (kinnitatud Maanteeameti peadirektori 29.12.2006 käskkirjaga nr.264), tähelepanu tuleb eriti pöörata juhise punktidele p.2.2.4.7 ja p.2.3.4.3.

Praktika on näidanud, et aheraine fraktsioon 100/300 mm sisaldab ka oluliselt suuremaid tükke, mistõttu see fraktsioon ei sobi 40...50 cm paksuse kihi ehitamiseks. Suuremad kihipaksused nõuavad võimsamaid tihendusmasinaid ja kui töövõtjal selliseid pole, ei ole ka 100/300 fraktsiooni kasutamine võimalik. Fraktsiooni 0/100 mm puhul eelpool mainitud probleemi pole.

#### **4.2. Põlevkiviaheraine ja liiva segamine**

Segamiseks veetakse vahelattu või teele pinnaühiku kohta mahuproportsioone arvestavad kogused aherainet ja liiva. Segamine võib toimuda ekskavaatoriga või frontaallaaduriga mitmekordse läbitõstmise abil. Vahelaost on võimalik ka selline materjali väljavedu, et kalluri kasti laaditakse kordamööda õhukeste kihtidena aherainet ja liiva lähtudes mahuproportsioonidest. Kallurist muldesse kallutamisel materjalid segunevad ja edasisel laiali laotamisel segunemine jätkub. Teel segamise korral tuleb segatud materjal paigutada selliselt, et seda saab vastavalt kihi paksusele laotada buldooseriga või greideriga. Visuaalselt peab kiht saama ühtlane ja **tühimikud täielikult täidetud**.

#### **4.3. Muldkeha tihendamine**

Tihendamisel tuleb juhinduda projekti nõuetest ning tihendamise ja tiheduse kontrolli juhenditest. Kui visuaalselt ilmneb, et tihendamise käigus on tekkinud ebaühtlaselt segunenud kohad, siis tuleb need välja kaevata ja taastäita korralikult segunenud aheraine-liiva seguga. Planeeritud ja tihendatud kiht peab olema projektsete kalletega ja tasetasusega, et oleks tagatud vete äravool muldkeha pinnalt.

#### **4.4. Muldkeha ehituse vastuvõtmine**

Mulde vastuvõtmine toimub tavapärastele vastuvõtunõuetele vastavalt. Sadeveed ja pinnaseveed peavad olema aheraine sisaldusega muldest eemale juhitud.