

# Norwegian Athletic Federation

Ullevaal stadion  
Sognsveien 75 J, 0840 Oslo, NORWAY  
E-mail: [friidrett@friidrett.no](mailto:friidrett@friidrett.no)  
Phone: +47 94 83 33 26

Half Marathon – 21 km  
Egersund, Norway  
02.March 2024

## COURSE MEASUREMENT REPORT

### - REPORT FOR INTERNATIONAL CERTIFIED COURSE –

INFORMATION ABOUT EVENT AND COURSE
<b>Event:</b> Egersund Half Marathon
<b>Technical Organiser:</b> Egersund Idrettsklubb Friidrettsavdeling
<b>City/Place:</b> Egersund, Norway
<b>Date of Arrangement:</b> 02.March 2024
<b>Date and time for measurement:</b> 31.Oct 2023, 1 pm – final adjustment 06.Nov, 10:30 am
<b>Measured distance(s):</b> 21 km (including turning point at 5 km for 10 km race)
<b>Length of calibration course:</b> 300,0 m
<b>Terrain:</b> Flat <input type="checkbox"/> Slightly hilly <input type="checkbox"/> Hilly <input checked="" type="checkbox"/> Terrain <input type="checkbox"/>
<b>Type of course route:</b> Closed loop <input type="checkbox"/> Back and forth <input checked="" type="checkbox"/> A to B <input type="checkbox"/> Other <input type="checkbox"/>
<b>Race surface:</b> Asphalt
<b>Elevation Start - Finish:</b> Zero (same start/finish)
<b>Description of start:</b> Espeland Hallen, outside, permanent mark on ground
<b>Description of finish:</b> Same as start
<b>Distance, in a straight line, between start &amp; finish:</b> Zero
<b>Start and Finish marked:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Km-markings:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 5 km marked
<b>Measurement direction:</b> Running direction <input checked="" type="checkbox"/> Opposite running direction <input type="checkbox"/>
<b>National record can be approved:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

CONTACT INFORMATION		
	<b>Measured by:</b>	<b>Organizer:</b>
<b>Contact person:</b>	Erling Hiorth	Gunnar Kvassheim
<b>Phone:</b>	+47 91337338	+47 46808961
<b>Email:</b>	Erling.hiorth@lyse.net	gkvassheim@gmail.com

It is hereby confirmed that the course has been measured by an A- or B certified international certified course measurer from Norwegian Athletics. The course is measured in accordance with AIMS and Norwegian athletics regulations, and the distance(s) has the minimum reported length(s). The survey is valid for 5 years, except if the route is changed.

10.november 2023     *Erling Hiorth*

Date	Signature by Course measurer	Date	Signature by AIMS
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CALIBRATION COURSE AND PROCEDURE	
Length of measuring tape (steel measuring tape only)	50 m
Length of calibration course 1st measurement	300,00 m
Length of calibration course 2nd measurement	300,01 m
Possible 3rd measure (max. 1 cm diff per 100m 1 <sup>st</sup> and 2 <sup>nd</sup> )	No
Average of measurements before adjustments	300,005 m
Temperature (road or measuring tape)	5 degree
Adjustment cf. $D-(D*(1+(temp-20)*0,0000115))$	- 0,052 m temp
Measured calibration distance after adjustment	300,003 m (+5 cm on ground)
Distance from start/finish to calibration distance	1,1 km

CALIBRATION INFORMATION - (max 8 counts difference of 1000 m between 4 measurements, ie 2 counts of 300m and 3 count of 400m)						
	Pre-measurement:			Post measurement:		
	Date and Time: 31.Oct 13:20			Date and Time: 31.Oct 15:30		
	Start	End	Diff.	Start	End	Diff.
1st measure	11400	14861	3461	12600	16063	3463
2nd measure	14861	18323	3462	16063	19527	3464
3rd measure	18323	21786	3463	19527	22990	3463
4th measure	21786	25248	3462	22990	26454	3464

	Pre measurement	Post measurement	
Average (1+2+3+4) / 4	3462,0	3463,5	Today's constant. Either highest or average of before and after measurement
Constant 1 km	11539,875	11554,875	
Addn. +1‰	11,54	11,54	
Measurement constant (rounded)	11551,415	11556,42	11554

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MEASUREMENT PROCEDURE		
Measurement constant	11554	
Measured Distance	Counter	Description of place
	50000	Start outside Espeland Hallen
178,6	52063	Intermediate mark 1a – corner (see note 1)
4.820,6	107760	5 km – turning point 10 km race
5.474,8	171016	Traffic sign at roundabout
5.477,2	234300	5 km – turning point 10 km race
4.815,8	289942	Intermediate mark 1b – corner
181,7	292041	Finish – same as start (see note 1)
<b>20.948,7 m</b>		<b>Total measured without adjustments</b>
	13000	Measured 6.Nov – Constant 11568 (see last page)
+ 128,4	14485	New sidetrack at rest area
- 100,5	15648	Original course on road
+ 128,4		Both ways
- 100,5		Both ways
3,1	-178,6m+181,7m	Note 1 – Return, changed crossing over road
50	Steel tape	Adjusted start line
50	Steel tape	Adjusted finish line
<b>158,9 m</b>		<b>Total measured adjustments</b>
<b>21.107,6</b>		<b>Total measured course</b>

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## CONCLUSION OF MEASUREMENT

1. General information about race course and start/finish
  - Main measurement 31.Oct. with reqd. adjustments 06.Nov.
  - The course has turning point half way and same course back to start/finish
  - Number of participants in 2023 was 200 runners
2. Measurement of calibration course
  - 1,1 km in straight line from start/finish, straight/flat cycle path on asphalt
  - Measured in accordance with procedure, 2 persons
  - Marked at both ends, adjusted for temperature and adjusted +5cm on ground
3. Calibration of bicycle
  - Calibrated in accordance with procedure, 4 measures, deviation 2 count ok
4. Measurement of the course
  - Started from pre-set start to turning point half way and returned to start=finish
5. Post calibration of bicycle
  - Same procedure, 4 measures, deviation 1 count ok
6. Course adjustments
  - Crossing of road 100m after start, straight over to walking path, 3,1m x1
  - New sidetrack at rest area after 9,5 km added to add reqd length, 27,9 m x2
  - Start/finish line adjusted by 50m, adding 100 m to the course
7. Overall length of the course
  - The course is not shorter than half marathon
8. Additional info
  - The organizer will set up fences 1<sup>st</sup> 150 m to walking path
  - Pedestrian crossing to be used after 500 m
  - Cycle path to be used 1<sup>st</sup> 3,1 km
  - From 3,1 km to turning point at 10,5 km, the course is to follow left side of main road, same side of road both ways. Measurement is done 0,3 m from white side line / edge of road both ways.
  - Plan for guards and cones along the road from 3,1 km to turning point at 10,5 km attached

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## CALIBRATION COURSE MAP





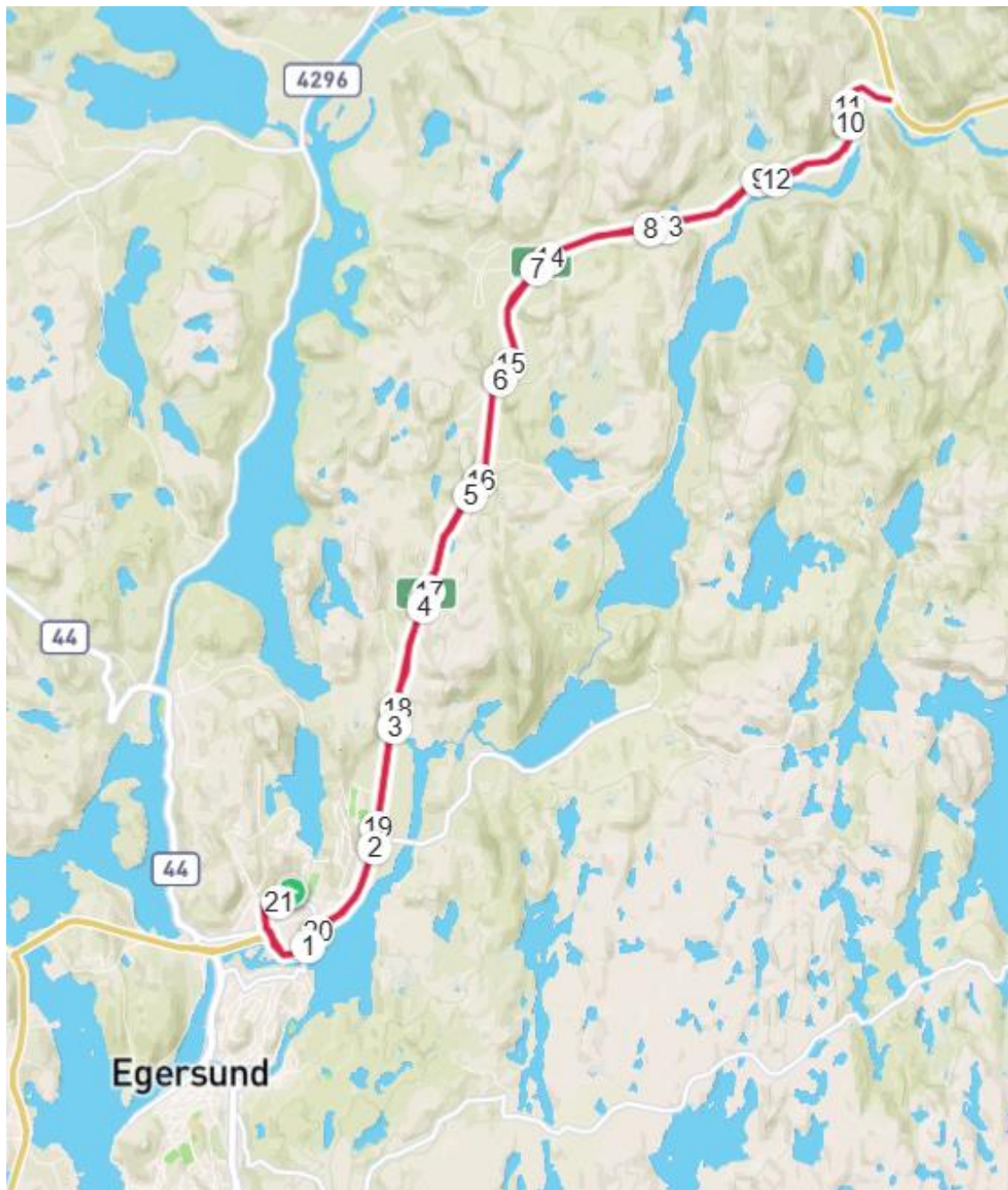
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## COURSE MAP & DESCRIPTION

Left side of road to be used on 1<sup>st</sup> half, and the same side of the road to be used on return (ie right side on return).

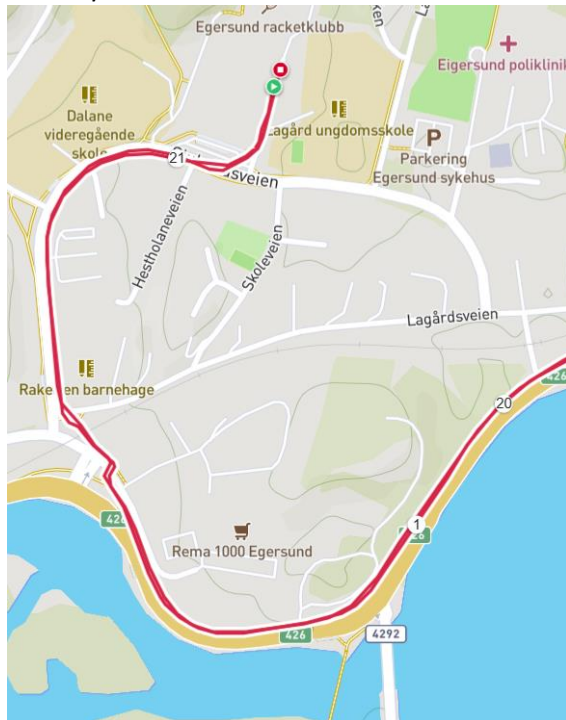


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## Start / finish area



## Start / finish – marked on ground



## Turning point 100 m from start/finish





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Adjusted course length with new sidetrack at rest area after 10 km

East direction



North direction



New sidetrack outside of asphalt road + Turning point halfway, roundabout





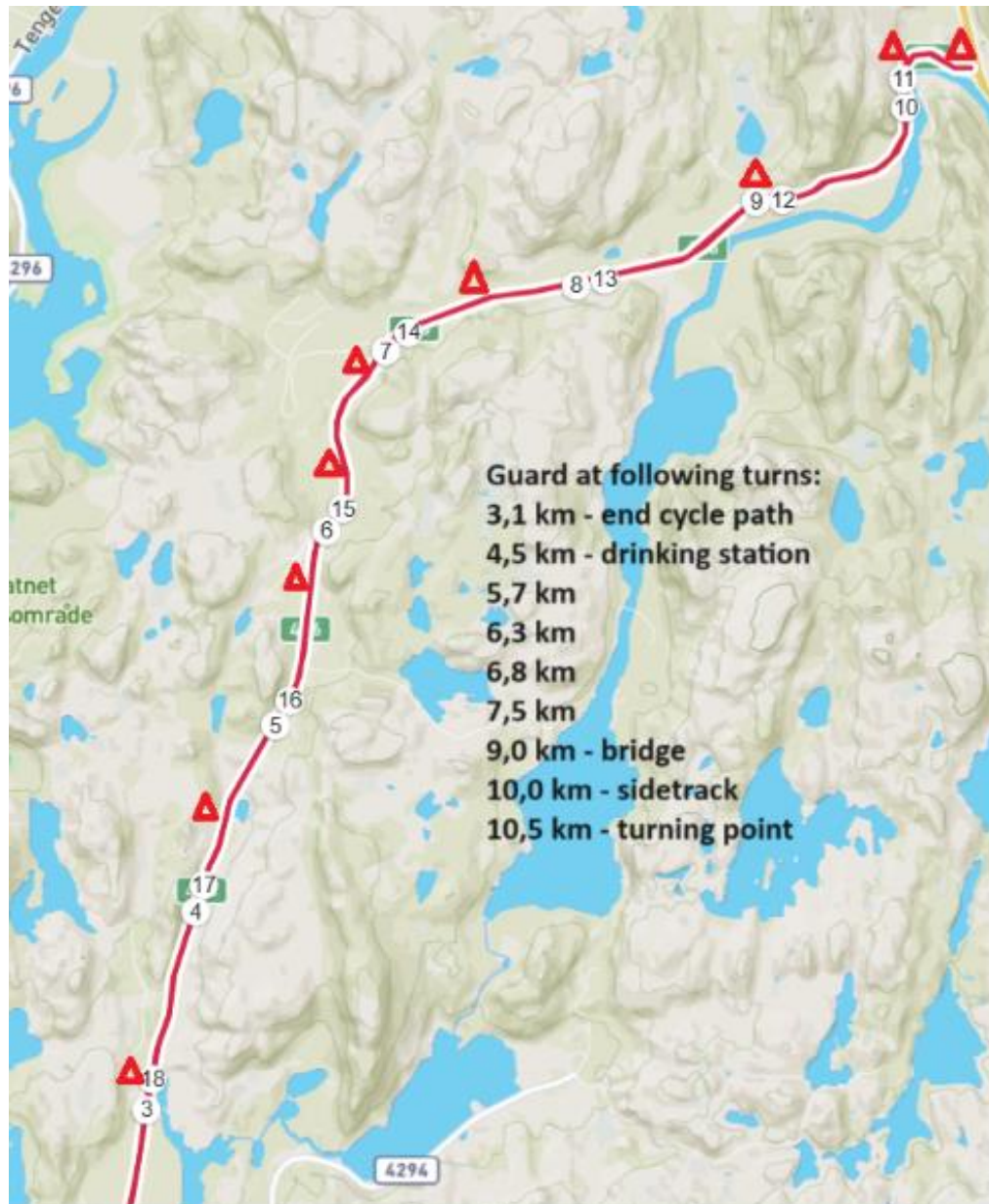
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After 3,1 km on cycle path, all runners shall keep the left side of the road towards the turning point, and stay on the same side on return. This is for safety precaution due to open traffic and in accordance with measured course.

Guards and cones are to be placed at the below places to ensure no road crossing nor short cuts are taken.



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## Attachment

### Back-up documentation - Post-measurement performed 06.November 2023

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	Pre-measurement:			Post measurement:		
	Date and Time: 06.Nov – 10:30			Date and Time: 06.Nov – 11:30		
	Start	End	Diff.	Start	End	Diff.
1st measure	93400	96867	3467	17800	21266	3466
2nd measure	96867	100334	3467	21266	24733	3467
3rd measure	100334	103801	3467	24733	28200	3467
4th measure	103801	107268	3467	28200	31667	3467

	Pre measurement	Post measurement	
Average (1+2+3+4) / 4	3467	3466,75	Today's constant. Either highest or average of before and after measurement
Constant 1 km	11556,54	11555,708	
Addn. +1‰	11,557	11,556	
Measurement constant (rounded)	11568,098	11567,264	11568

MEASUREMENT PROCEDURE		
Measurement constant	11568	
Measured Distance	Counter	Description of place
	13000	Pre-marked start/finish at both ends of sidetrack
+ 128,4	14485	New sidetrack at rest area
- 100,5	15648	Original course on road