Errata

page 48 (pointed out by Denis R. Bell)
The equation in line -8 should read as

$$E\left|\int_{\tilde{S}_W(\tau)}^{\tilde{S}_W(\tau+R)} \frac{d\xi}{\sigma(\tilde{S}_W(\xi))}\right| \le c\exp\left(-\frac{\delta}{2}\tau\right), \quad \tau,\, R > 0.$$

page 62 (pointed out by Denis R. Bell)

The text after line 10 should be modified as follows.
It remains to prove (4.34). To this end we note the following equations

$$D_\tau Z(t) = D_\tau\left(\frac{D_t\phi}{\|D\phi\|^2}\right) = -\frac{D_\tau\|D\phi\|^2}{\|D\phi\|^4} \times D_t\phi + \frac{D^2_{\tau,t}\phi}{\|D\phi\|^2}\,,$$

$$\|D\phi\|^2 = \int_0^1 |D_s\phi|^2\,ds\,,$$

$$D_\tau\|D\phi\|^2 = 2\int_0^1 D^2_{\tau,s}\phi \times D_s\phi\,ds\,.$$

The norm of the first derivative of the vector field Z satisfies the following inequality

$$\int_0^1\int_0^1 |D_\tau Z(t)|^2\,d\tau dt \le 10\,\frac{\|D^2\phi\|^2(W)}{\|D\phi\|^4(W)}.$$

In fact setting

$$A = \int\left[\frac{D_\tau\|D\phi\|^2}{\|D\phi\|^4} \times D_t\phi\right]^2 d\tau \otimes dt,$$

we have

$$A\,\|D\phi\|^8(W) = \int_0^1 \left[D_\tau\|D\phi\|^2\right]^2\,d\tau \times \int_0^1 [D_t\phi]^2\,dt\,,$$

$$\int \left[D_\tau\|D\phi\|^2\right]^2\,d\tau \le 4\,\|D^2\phi\|^2(W) \times \|D\phi\|^2\,,$$

$$A\,\|D\phi\|^4(W) \le 4\,\|D^2\phi\|^2(W).$$

The proof is then completed as printed in the book and Theorem 4.24 as stated is proved.