

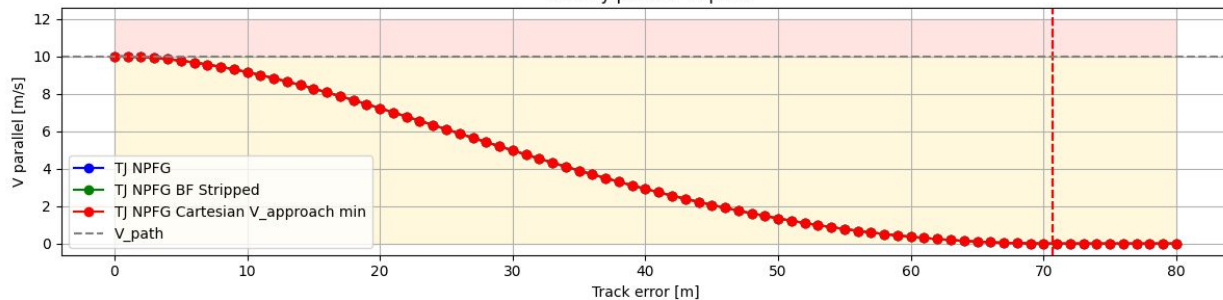
Week 10 Meeting Material

Junwoo Hwang

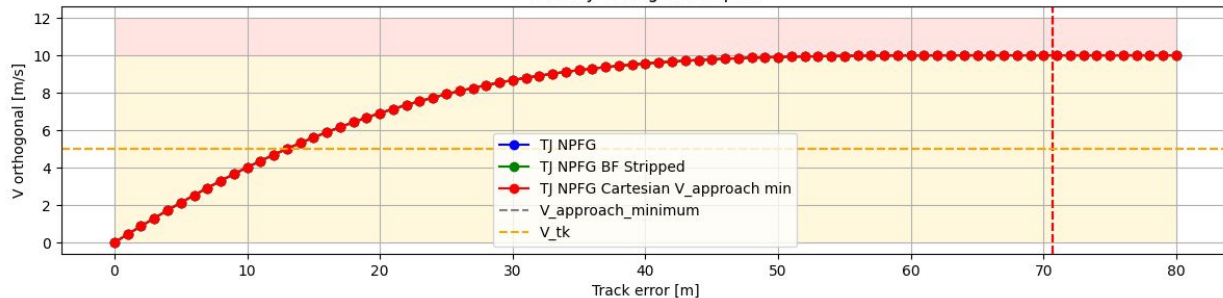
23.01.2023

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

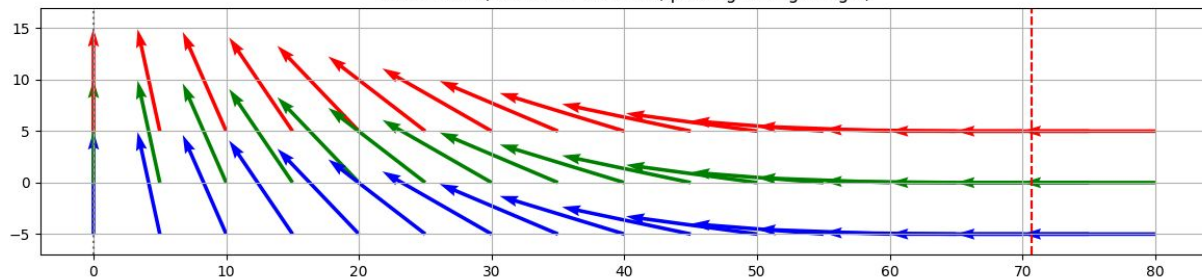
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

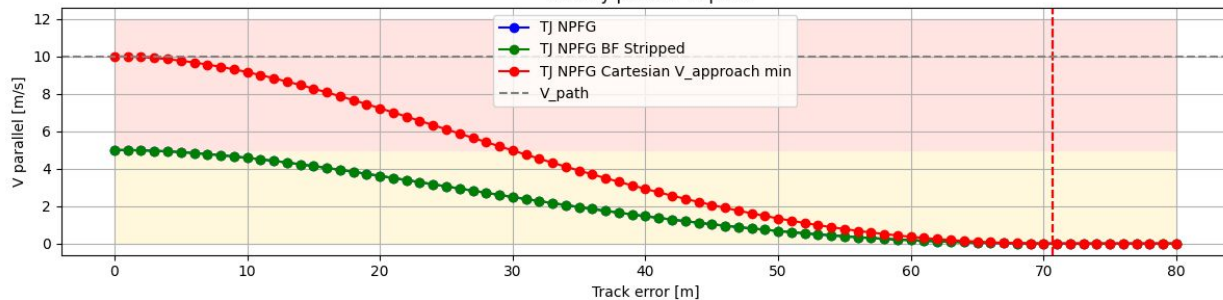


Nominal Case

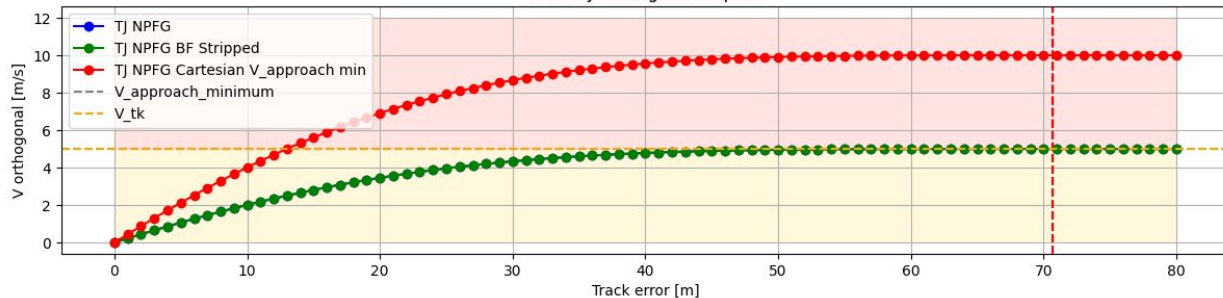
V_nom	10
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 5.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

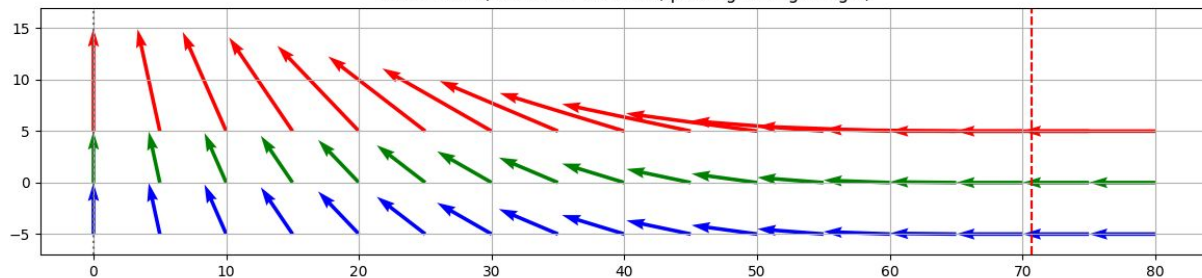
Velocity parallel to path



Velocity orthogonal to path



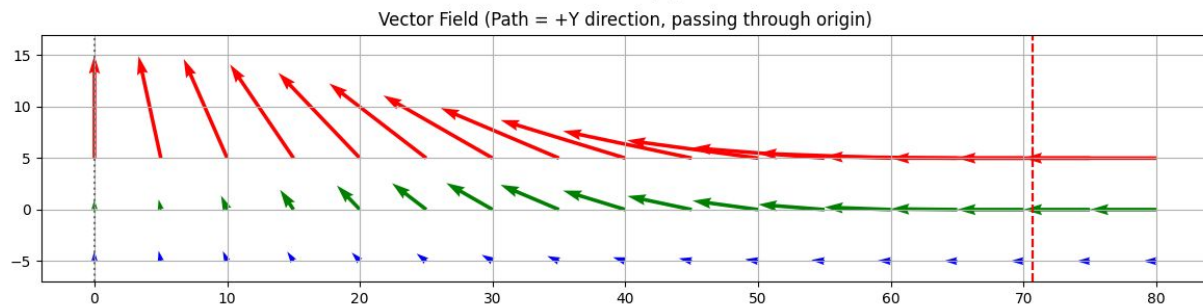
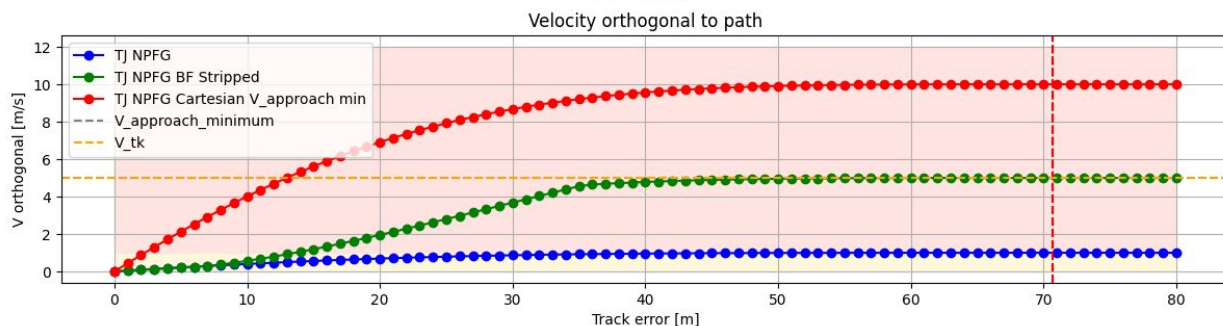
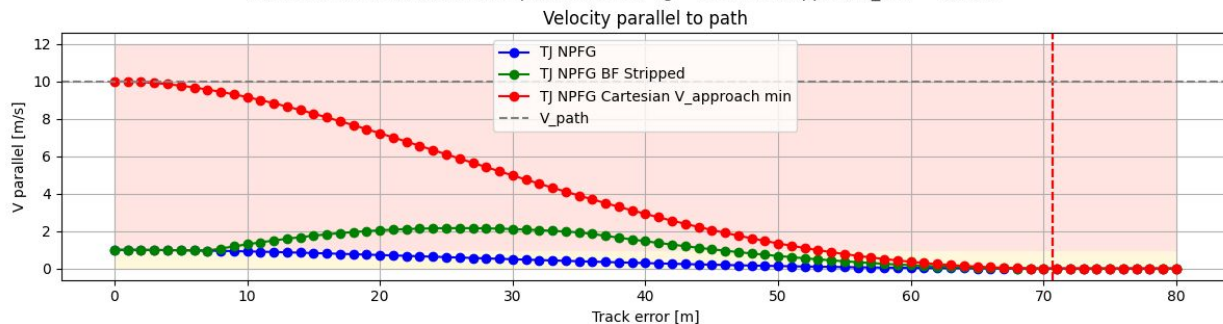
Vector Field (Path = +Y direction, passing through origin)



Nominal Velocity reduced

V_nom	5
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 1.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

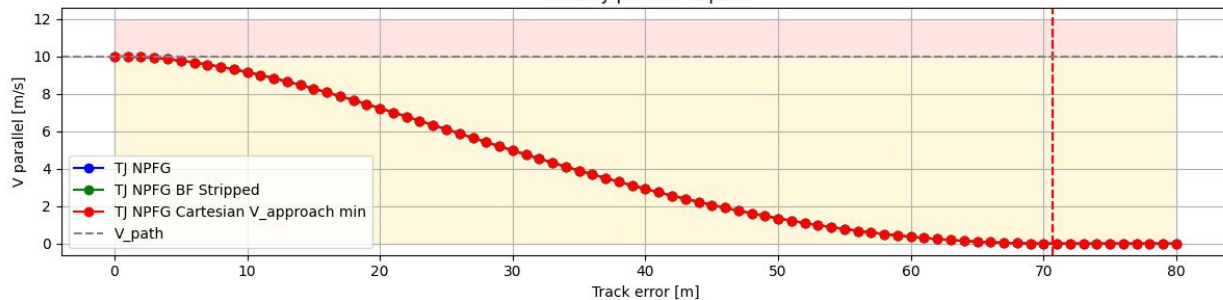


Nominal Velocity reduced further

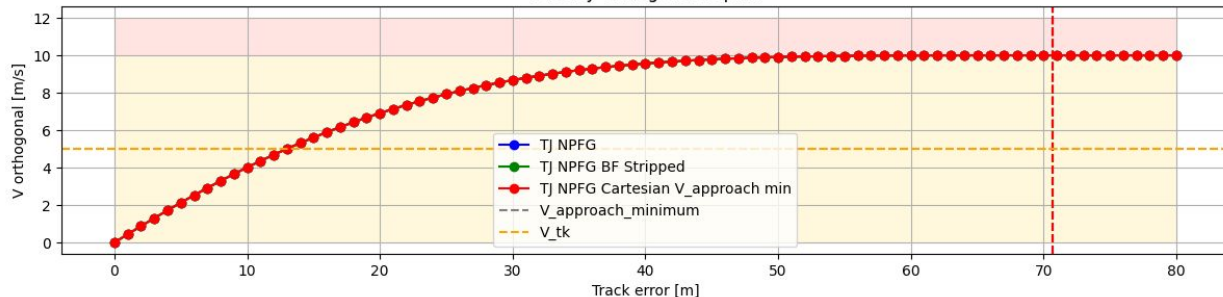
V_{nom}	1
V_{path}	10 (= V_{nom} , for fixed-wing)
$V_{\text{approach min}}$	5 (lower than V_{nom} , won't affect)
V_{ground}	10 (= V_{approach} , arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

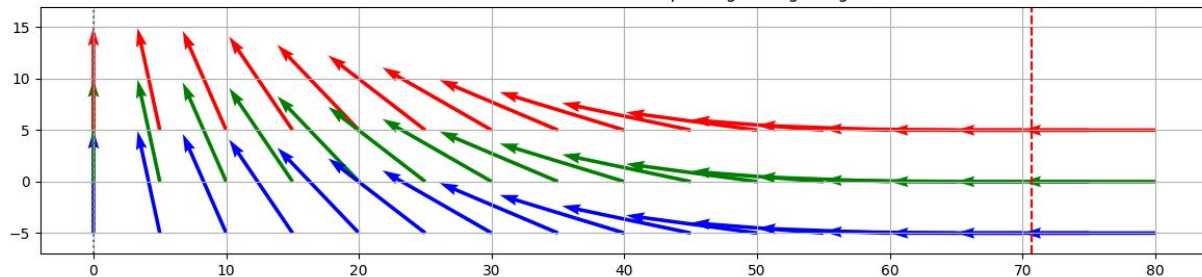
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

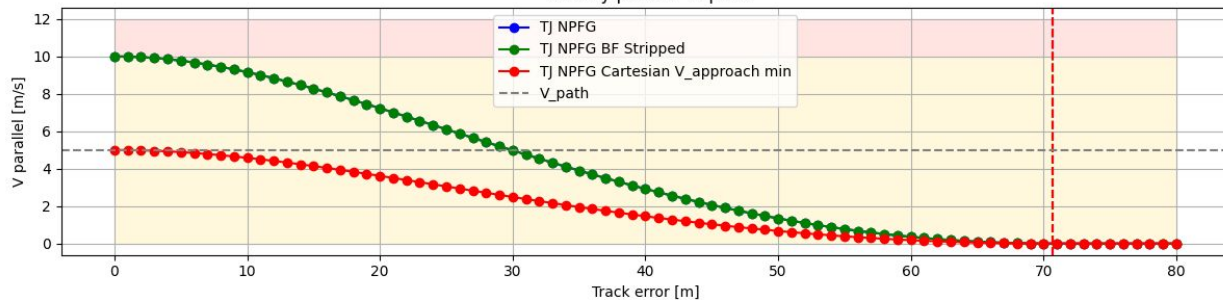


Nominal Case (Again)

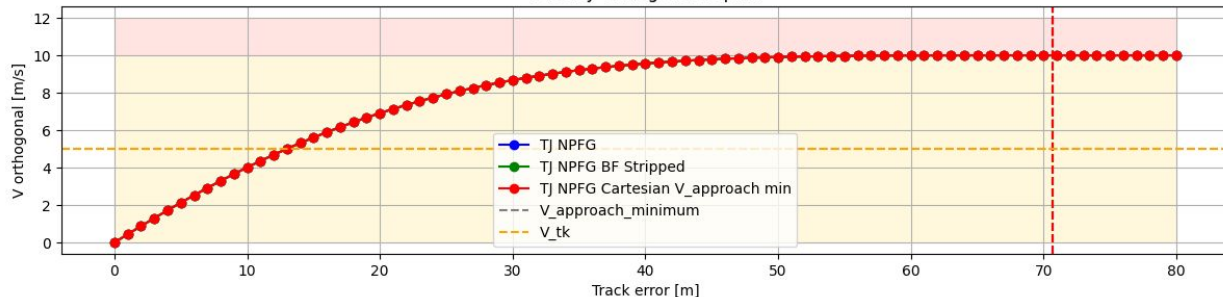
V_nom	10
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 5.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

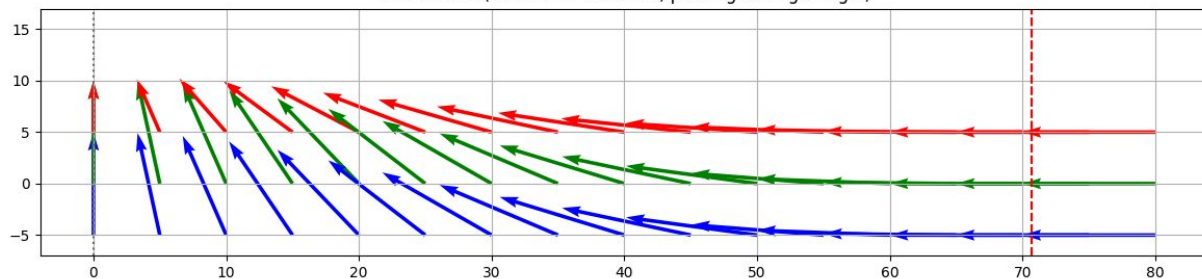
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

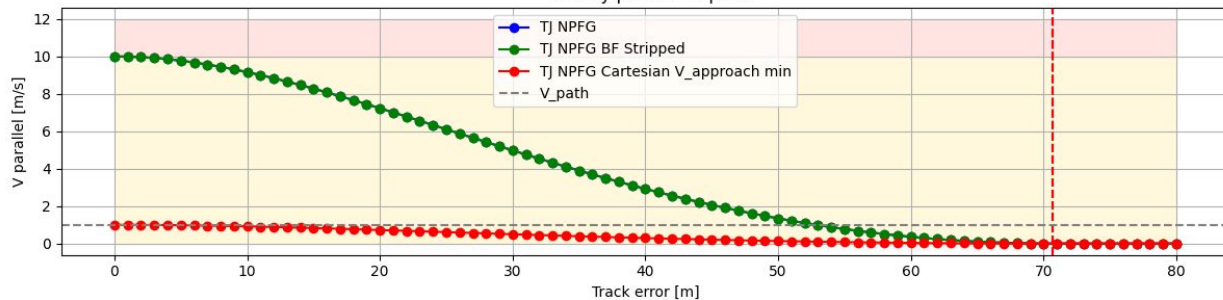


Path Velocity reduced

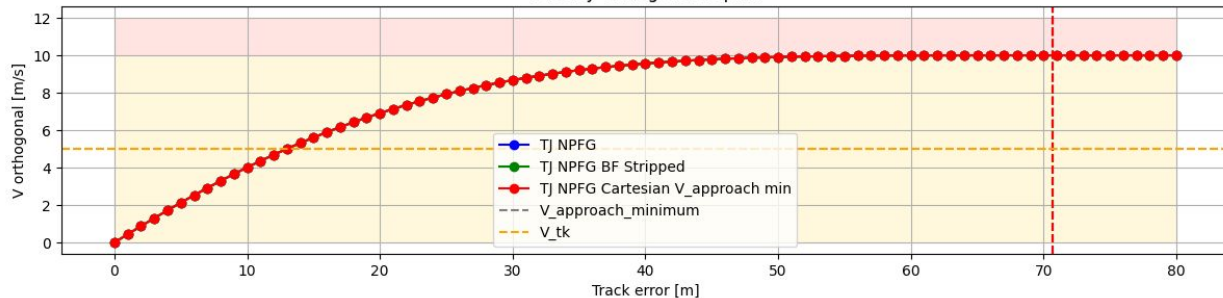
V_nom	10
V_path	5
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 1.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

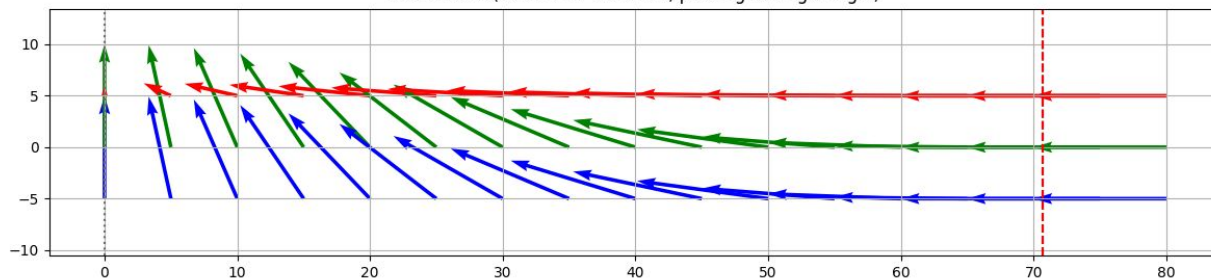
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

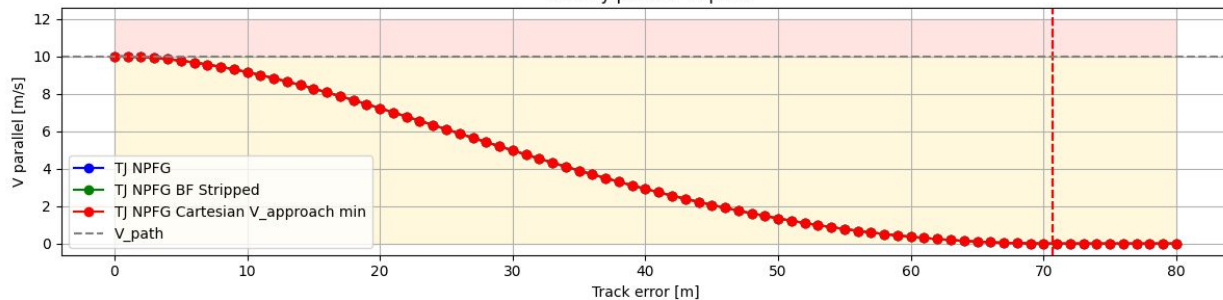


Path Velocity reduced further

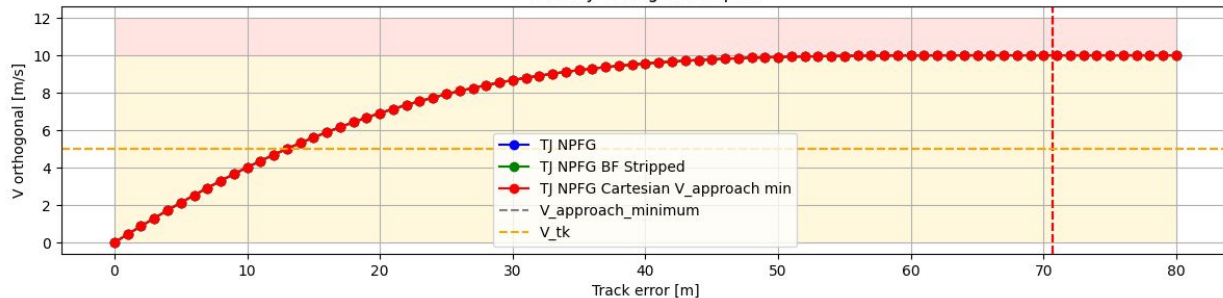
V_nom	10
V_path	1
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

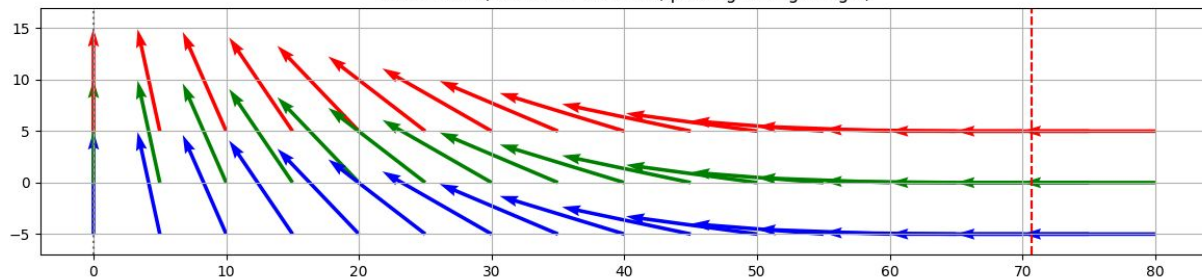
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

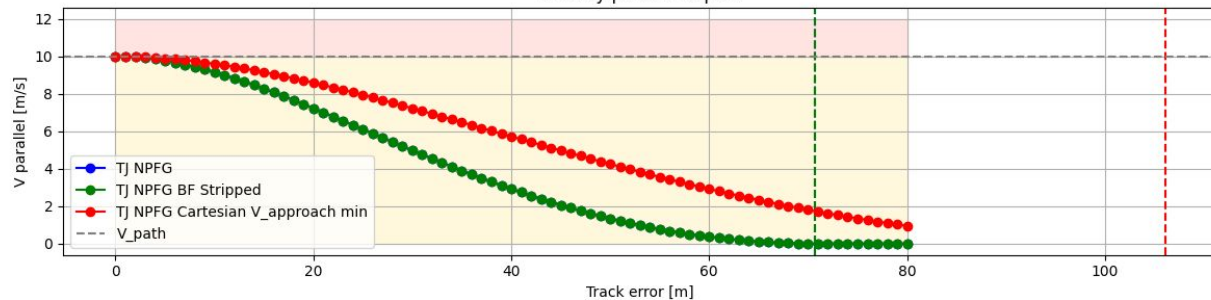


Nominal Case (Again)

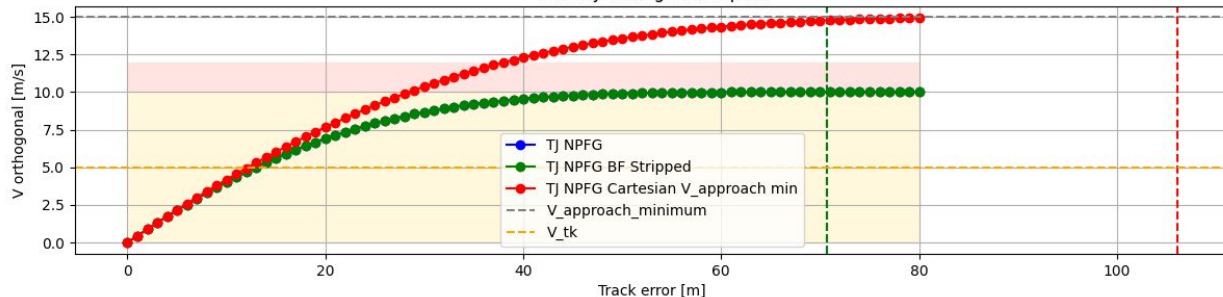
V_nom	10
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 15.0m/s

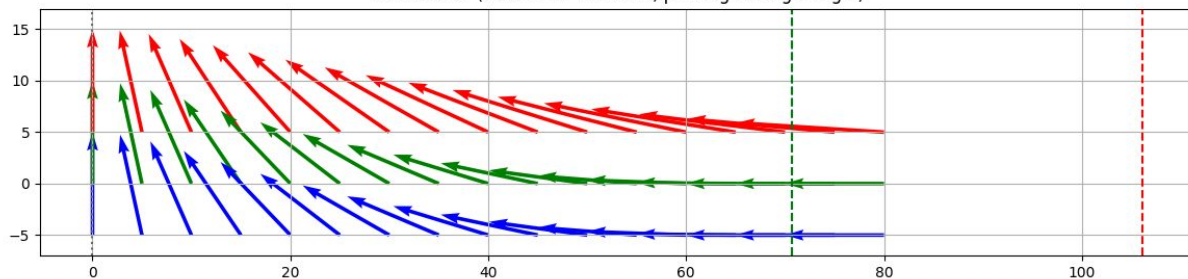
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

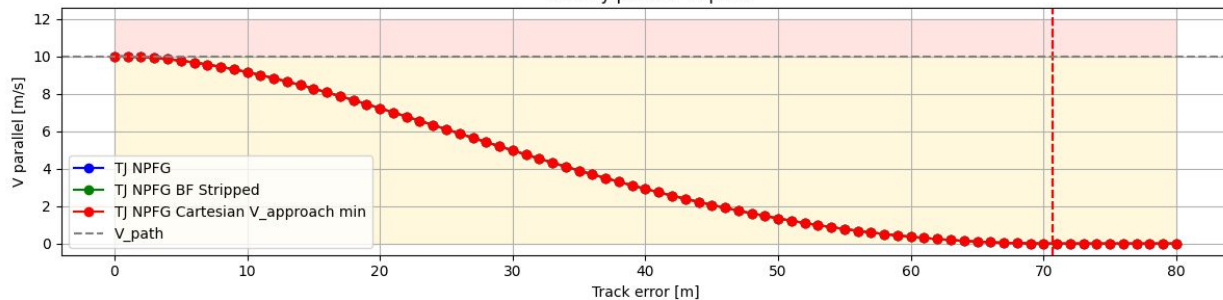


Approach Velocity increased

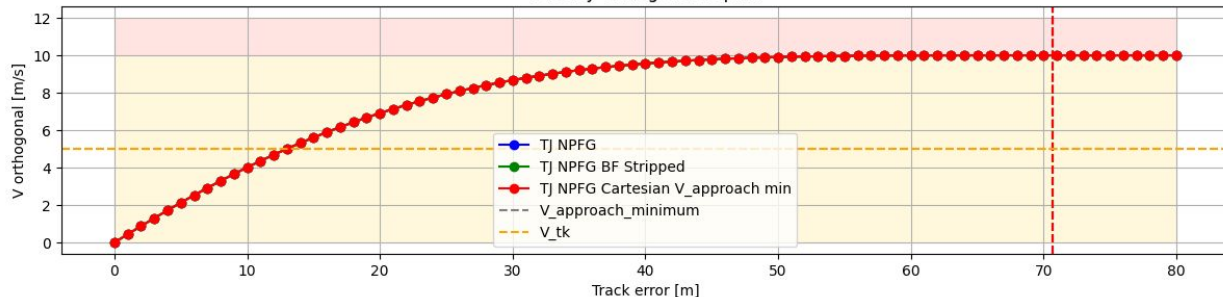
V_nom	10
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	15
V_ground	10 (= V_approach, arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 10.0m/s, Vapproach_min = 5.0m/s

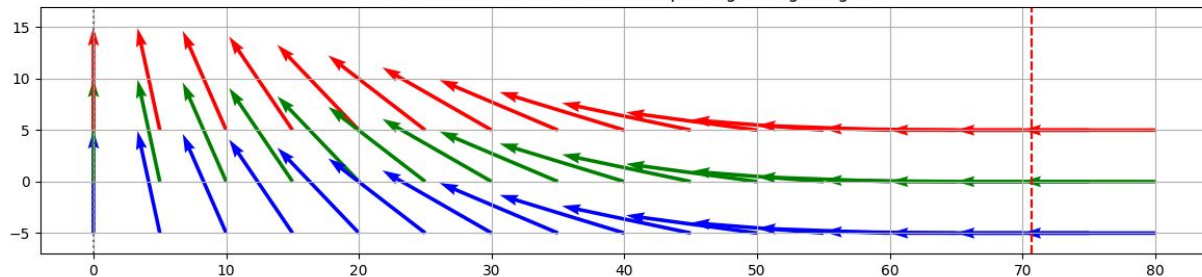
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)

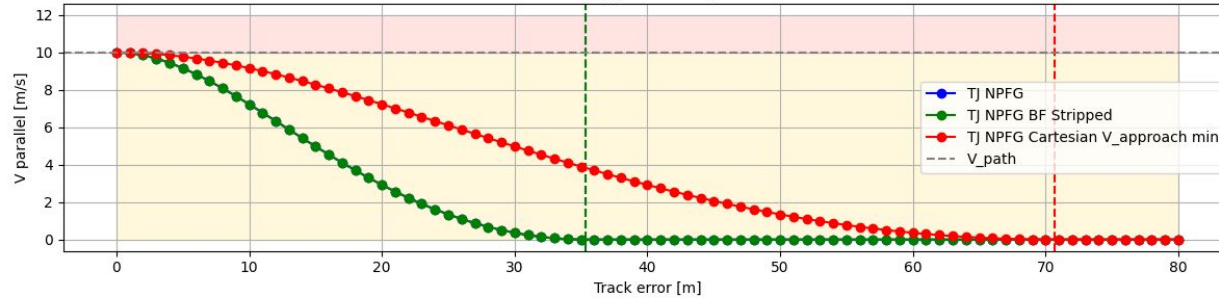


Nominal Case (Again)

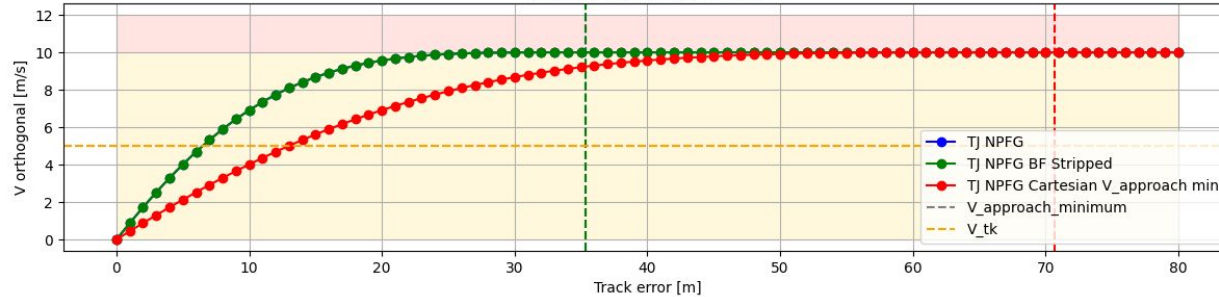
V_nom	10
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	5 (lower than V_nom, won't affect)
V_ground	10 (= V_approach, arbitrarily match)

Vnom 10.0m/s, Vmax 12.0m/s, Vpath 10.0 m/s, Vg = 5.0m/s, Vapproach_min = 5.0m/s

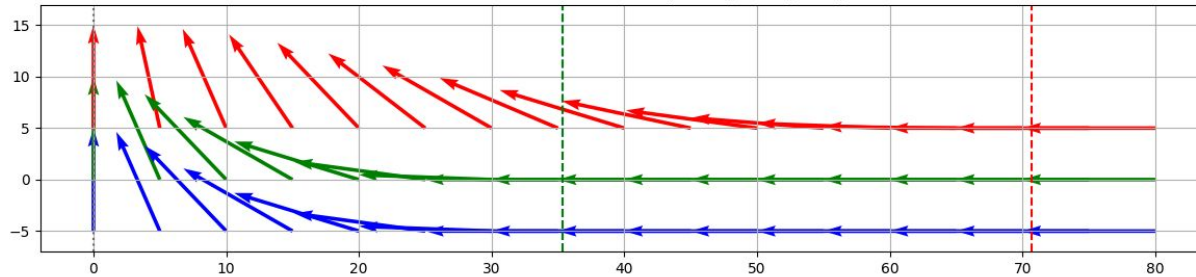
Velocity parallel to path



Velocity orthogonal to path



Vector Field (Path = +Y direction, passing through origin)



Ground Velocity reduced

V_nom	10
V_path	10 (= V_nom, for fixed-wing)
V_approach_min	10
V_ground	5