BridgeTunnelFord Builder Prime

BridgeTunnelFord Builder Prime is a toolbar with buttons that will generate bridge, tunnel, or ford curves coincident to valid TDS transportation features in the active selection (road, cart track, trail, railway, railway sidetrack).

Bridges

-Bridges can be created for trails, cart tracks, roads, railways, and railway sidetracks.
-The supporting transportation feature is updated to [RLE = Raised] and [SBB = True].
-The generated bridge is attributed with an appropriate RTY and is given the ZI026_CTUU of the supporting transportation feature. Its remaining attributes are set to defaults for a fixed slab bridge, as shown below:

fcsubtype	BRIDGE_C	Feature Code Subtype	BRIDGE_C
bot	Fixed	Bridge Opening Type	Fixed
bsc	Slab	Bridge Structure Type	Slab
pcf	Intact	Physical Condition	Intact
rfd	FALSE	Roofed	FALSE

-The bridge width (WID) will be populated as follows:
Bridges supporting cart tracks, trails, railways, and railway sidetracks will be populated with WID = 5
Bridges supporting roads will be populated with the road's [Route Minimum Travelled Way Width (ZI016_WD1) + 2].
If road's ZI016_WD1 is unpopulated, bridges will be populated with WID = -999999

Tunnels

-Tunnels can be created for roads, railways, and railway sidetracks.
-The supporting transportation feature is updated to [RLE = Not Applicable] and [LOC = Completely Below Ground Surface]
-The generated tunnel is attributed with an appropriate RTY and is given the ZI026_CTUU of the supporting transportation feature. Its remaining attributes are set as follows:

fcsubtype	TUNNEL_C	Feature Code Subtype	TUNNEL_C
tra	FALSE	Pedestrian Traversable	FALSE
pcf	Intact	Physical Condition	Intact

-The tunnel width (WID) will be populated as follows:
Tunnels supporting railways and railway sidetracks will be populated with WID = 5
Tunnels supporting roads will be populated with the road's [Route Minimum Travelled Way Width (ZI016_WD1) + 2].
If road's ZI016_WD1 is unpopulated, tunnels will be populated with WID = -999999

Fords

-Fords can be created for trails, cart tracks, and roads.

-The supporting transportation feature is updated to [LOC= On Waterbody Bottom]. Roads are updated to [RLE = Not Applicable] while cart tracks and trails are given [RLE=Level]

fcsubtype	FORD_C	Feature Code Subtype	FORD_C
zi016_roc	Unimproved	Route Pavement Information : F	Unimproved
pcf	Intact	Physical Condition	Intact

Installation and Use

Step 1: Install BridgeTunnelFord Builder Prime by double-clicking the add-in file in File Explorer and choosing Install Add-In from the pop-up.

Step 2: Close all open ArcMap sessions

Step 3: Open ArcMap with relevant data and start an editing session.

If the toolbar is not visible, it can be turned on by clicking Customize > Toolbars > BridgeTunnelFord Builder Prime Alternatively, just the button can be added to the current interface from Customize > Customize Mode and by then navigating to the Bridge Builder Prime category.

Step 4: Select transportation features that require bridges and click the appropriate button to generate them

Note: If the bridge is not a fixed slab bridge, its attributes (BOT, BSC) will need to be manually adjusted. Additionally, the width (WID) of both bridges and tunnels may need to be updated to imagery if it differs significantly from the default values set by the tool.