## **Curtain Wall-Related Methods**

Curtain walls in VisualARQ are facade systems with frames, mullions, supports, and panel infills. Styles define the grid, components, and defaults. Methods cover creation, path/height/alignment mods, extensions, components (frame, mullion, support, grid assemblies), and checks.

AddCurtainWallStyle

* Signature: Guid AddCurtainWallStyle(String name)
* Description: Creates a new curtain wall style and returns its Guid.
* Example: style\_id = va.AddCurtainWallStyle("MyCurtainWall")
* Notes: Check existence with va.GetAllCurtainWallStyleIds() (returns Guid[]); use va.GetStyleName(id) for names. Use va.IsCurtainWallStyle(id) to verify.

AddCurtainWall

* Signature: Guid AddCurtainWall(Guid styleId, Point3d start, Point3d end)
* Description: Creates a curtain wall from start to end point using the style, returns the wall Guid.
* Example: from Rhino.Geometry import Point3d start = Point3d(0, 0, 0) end = Point3d(10, 0, 0) wall\_id = va.AddCurtainWall(style\_id, start, end)
* Notes: Linear; for curved, use AddCurtainWallsFromCurves.

AddCurtainWallsFromCurves

* Signature: Guid[] AddCurtainWallsFromCurves(Guid styleId, IEnumerable<curve> curves)</curve>
* Description: Creates curtain walls from curves using the style, returns array of wall Guids.
* Example: import rhinoscriptsyntax as rs from Rhino.Geometry import Curve curve\_ids = rs.GetObjects("Select curves", 4) curves = [rs.coercecurve(id) for id in curve\_ids] wall\_ids = va.AddCurtainWallsFromCurves(style\_id, curves)
* Notes: Curves define paths; planar/open preferred.

GetCurtainWallPathCurve

* Signature: Curve GetCurtainWallPathCurve(Guid wallId)
* Description: Gets the path curve of a curtain wall instance.
* Example: path = va.GetCurtainWallPathCurve(wall\_id) rs.AddCurve(path)

SetCurtainWallPathCurve

* Signature: Boolean SetCurtainWallPathCurve(Guid wallId, Curve curve)
* Description: Sets the path curve for a curtain wall instance. Returns True on success.
* Example: new\_curve\_id = rs.AddLine((0,0,0), (15,0,0)) curve = rs.coercecurve(new\_curve\_id) success = va.SetCurtainWallPathCurve(wall\_id, curve)

GetCurtainWallHeight

* Signature: Double GetCurtainWallHeight(Guid wallId)
* Description: Gets the height of a curtain wall instance.
* Example: height = va.GetCurtainWallHeight(wall\_id)

SetCurtainWallHeight

* Signature: Boolean SetCurtainWallHeight(Guid wallId, Double height)
* Description: Sets the height for a curtain wall instance. Returns True on success.
* Example: success = va.SetCurtainWallHeight(wall\_id, 4.0)

GetCurtainWallStyleHeight

* Signature: Double GetCurtainWallStyleHeight(Guid styleId)
* Description: Gets the default height of a curtain wall style.
* Example: height = va.GetCurtainWallStyleHeight(style\_id)

SetCurtainWallStyleHeight

* Signature: Boolean SetCurtainWallStyleHeight(Guid styleId, Double height)
* Description: Sets the default height for a curtain wall style. Returns True on success.
* Example: success = va.SetCurtainWallStyleHeight(style\_id, 4.0)
* Notes: Applies to new walls; existing may need instance set.

GetCurtainWallAlignment

* Signature: CurtainWallAlignment GetCurtainWallAlignment(Guid wallId)
* Description: Gets the alignment of a curtain wall instance.
* Example: alignment = va.GetCurtainWallAlignment(wall\_id)

SetCurtainWallAlignment

* Signature: Boolean SetCurtainWallAlignment(Guid wallId, CurtainWallAlignment alignment)
* Description: Sets the alignment for a curtain wall instance. Returns True on success.
* Example: success = va.SetCurtainWallAlignment(wall\_id, va.CurtainWallAlignment.Center)

GetCurtainWallAlignmentOffset

* Signature: Double GetCurtainWallAlignmentOffset(Guid wallId)
* Description: Gets the alignment offset of a curtain wall instance.
* Example: offset = va.GetCurtainWallAlignmentOffset(wall\_id)

SetCurtainWallAlignmentOffset

* Signature: Boolean SetCurtainWallAlignmentOffset(Guid wallId, Double offset)
* Description: Sets the alignment offset for a curtain wall instance. Returns True on success.
* Example: success = va.SetCurtainWallAlignmentOffset(wall\_id, 0.05)

GetCurtainWallNormal

* Signatures (Overloads):
  + Vector3d GetCurtainWallNormal(Guid wallId, Point3d point)
  + Vector3d GetCurtainWallNormal(Guid wallId, Double param)
* Description: Gets the normal vector at a point or parameter on the curtain wall.
* Example: normal = va.GetCurtainWallNormal(wall\_id, Point3d(5,0,0)) # At point normal\_param = va.GetCurtainWallNormal(wall\_id, 0.5) # At param

SetCurtainWallNormal

* Signature: Boolean SetCurtainWallNormal(Guid wallId, Vector3d normal)
* Description: Sets the normal vector for the curtain wall. Returns True on success.
* Example: from Rhino.Geometry import Vector3d normal = Vector3d(0,1,0) success = va.SetCurtainWallNormal(wall\_id, normal)

GetCurtainWallNormalAtStart

* Signature: Vector3d GetCurtainWallNormalAtStart(Guid wallId)
* Description: Gets the normal vector at the start of the curtain wall.
* Example: normal\_start = va.GetCurtainWallNormalAtStart(wall\_id)

GetCurtainWallNormalAtEnd

* Signature: Vector3d GetCurtainWallNormalAtEnd(Guid wallId)
* Description: Gets the normal vector at the end of the curtain wall.
* Example: normal\_end = va.GetCurtainWallNormalAtEnd(wall\_id)

GetCurtainWallThickness

* Signature: Double GetCurtainWallThickness(Guid wallId)
* Description: Gets the thickness of a curtain wall instance.
* Example: thickness = va.GetCurtainWallThickness(wall\_id)

GetCurtainWallExtensionObjects

* Signature: Guid[] GetCurtainWallExtensionObjects(Guid wallId, CurtainWallExtendDirection direction)
* Description: Gets array of objects the curtain wall is extended to in the direction.
* Example: objects = va.GetCurtainWallExtensionObjects(wall\_id, va.CurtainWallExtendDirection.ExtendTop)

ExtendCurtainWallToObject

* Signature: Boolean ExtendCurtainWallToObject(Guid wallId, CurtainWallExtendDirection direction, Guid objectId)
* Description: Extends the curtain wall to an object in the direction. Returns True on success.
* Example: success = va.ExtendCurtainWallToObject(wall\_id, va.CurtainWallExtendDirection.ExtendTop, roof\_id)

UnextendCurtainWallFromObject

* Signature: Boolean UnextendCurtainWallFromObject(Guid wallId, Guid objectId)
* Description: Removes extension from a specific object. Returns True on success.
* Example: success = va.UnextendCurtainWallFromObject(wall\_id, roof\_id)
* Notes: Direction not specified; likely removes from any.

UnextendCurtainWallFromAllObjects

* Signature: Boolean UnextendCurtainWallFromAllObjects(Guid wallId)
* Description: Removes all extensions. Returns True on success.
* Example: success = va.UnextendCurtainWallFromAllObjects(wall\_id)
* Notes: For all directions.

IsCurtainWallExtended

* Signature: Boolean IsCurtainWallExtended(Guid wallId, CurtainWallExtendDirection direction)
* Description: Checks if the curtain wall is extended in the direction.
* Example: extended = va.IsCurtainWallExtended(wall\_id, va.CurtainWallExtendDirection.ExtendBottom)

GetCurtainWallStyleId

* Signature: Guid GetCurtainWallStyleId(String name)
* Description: Gets the curtain wall style Guid by name.
* Example: style\_id = va.GetCurtainWallStyleId("MyCurtainWall")

GetAllCurtainWallStyleIds

* Signature: Guid[] GetAllCurtainWallStyleIds()
* Description: Returns array of all curtain wall style Guids.
* Example: style\_ids = va.GetAllCurtainWallStyleIds()

IsCurtainWall

* Signature: Boolean IsCurtainWall(Guid id)
* Description: Checks if the Guid is a curtain wall instance.
* Example: is\_wall = va.IsCurtainWall(id)

IsCurtainWallStyle

* Signature: Boolean IsCurtainWallStyle(Guid id)
* Description: Checks if the Guid is a curtain wall style.
* Example: is\_style = va.IsCurtainWallStyle(id)

AddCurtainWallFrame

* Signature: Guid AddCurtainWallFrame(Guid curtainWallStyleId, Double verticalWidth, Double verticalDepth, Double horizontalWidth, Double horizontalDepth)
* Description: Adds a frame to the curtain wall style, returns the frame Guid.
* Example: frame\_id = va.AddCurtainWallFrame(style\_id, 0.05, 0.1, 0.05, 0.1)

GetCurtainWallStyleFrame

* Signature: Guid GetCurtainWallStyleFrame(Guid styleId)
* Description: Gets the frame Guid for a curtain wall style.
* Example: frame\_id = va.GetCurtainWallStyleFrame(style\_id)

AddCurtainWallMullion

* Signature: Guid AddCurtainWallMullion(Guid curtainWallStyleId, Double verticalWidth, Double verticalDepth, Double horizontalWidth, Double horizontalDepth)
* Description: Adds a mullion to the curtain wall style, returns the mullion Guid.
* Example: mullion\_id = va.AddCurtainWallMullion(style\_id, 0.03, 0.08, 0.03, 0.08)

GetCurtainWallStyleMullion

* Signature: Guid GetCurtainWallStyleMullion(Guid styleId)
* Description: Gets the mullion Guid for a curtain wall style.
* Example: mullion\_id = va.GetCurtainWallStyleMullion(style\_id)

AddCurtainWallSupport

* Signature: Guid AddCurtainWallSupport(Guid curtainWallStyleId, Guid profileId, Boolean applyToEnds, Boolean applyToInteriorGrid)
* Description: Adds a support to the curtain wall style, returns the support Guid.
* Example: support\_id = va.AddCurtainWallSupport(style\_id, profile\_id, True, False)

GetCurtainWallStyleSupports

* Signature: Guid[] GetCurtainWallStyleSupports(Guid styleId)
* Description: Gets array of support Guids for a curtain wall style.
* Example: supports = va.GetCurtainWallStyleSupports(style\_id)

GetCurtainWallSupportType

* Signature: CurtainWallSupportType GetCurtainWallSupportType(Guid supportId)
* Description: Gets the type of a curtain wall support.
* Example: support\_type = va.GetCurtainWallSupportType(support\_id)

SetCurtainWallSupportType

* Signature: Boolean SetCurtainWallSupportType(Guid supportId, CurtainWallSupportType type)
* Description: Sets the type of a curtain wall support. Returns True on success.
* Example: success = va.SetCurtainWallSupportType(support\_id, va.CurtainWallSupportType.Vertical)

GetCurtainWallSupportProfile

* Signature: Guid GetCurtainWallSupportProfile(Guid supportId)
* Description: Gets the profile Guid of a curtain wall support.
* Example: profile\_id = va.GetCurtainWallSupportProfile(support\_id)

SetCurtainWallSupportProfile

* Signature: Boolean SetCurtainWallSupportProfile(Guid supportId, Guid profileId)
* Description: Sets the profile for a curtain wall support. Returns True on success.
* Example: success = va.SetCurtainWallSupportProfile(support\_id, new\_profile\_id)

GetCurtainWallSupportRotation

* Signature: Double GetCurtainWallSupportRotation(Guid supportId)
* Description: Gets the rotation of a curtain wall support.
* Example: rotation = va.GetCurtainWallSupportRotation(support\_id)

SetCurtainWallSupportRotation

* Signature: Boolean SetCurtainWallSupportRotation(Guid supportId, Double rotation)
* Description: Sets the rotation for a curtain wall support. Returns True on success.
* Example: success = va.SetCurtainWallSupportRotation(support\_id, math.pi / 2)

GetCurtainWallSupportLongitudinalOffset

* Signature: Double GetCurtainWallSupportLongitudinalOffset(Guid supportId)
* Description: Gets the longitudinal offset of a curtain wall support.
* Example: offset = va.GetCurtainWallSupportLongitudinalOffset(support\_id)

SetCurtainWallSupportLongitudinalOffset

* Signature: Boolean SetCurtainWallSupportLongitudinalOffset(Guid supportId, Double offset)
* Description: Sets the longitudinal offset for a curtain wall support. Returns True on success.
* Example: success = va.SetCurtainWallSupportLongitudinalOffset(support\_id, 0.05)

GetCurtainWallSupportTransversalOffset

* Signature: Double GetCurtainWallSupportTransversalOffset(Guid supportId)
* Description: Gets the transversal offset of a curtain wall support.
* Example: offset = va.GetCurtainWallSupportTransversalOffset(support\_id)

SetCurtainWallSupportTransversalOffset

* Signature: Boolean SetCurtainWallSupportTransversalOffset(Guid supportId, Double offset)
* Description: Sets the transversal offset for a curtain wall support. Returns True on success.
* Example: success = va.SetCurtainWallSupportTransversalOffset(support\_id, 0.03)

GetCurtainWallSupportApplyToEnds

* Signature: Boolean GetCurtainWallSupportApplyToEnds(Guid supportId)
* Description: Checks if the support applies to ends.
* Example: apply\_ends = va.GetCurtainWallSupportApplyToEnds(support\_id)

SetCurtainWallSupportApplyToEnds

* Signature: Boolean SetCurtainWallSupportApplyToEnds(Guid supportId, Boolean applyToEnds)
* Description: Sets whether the support applies to ends. Returns True on success.
* Example: success = va.SetCurtainWallSupportApplyToEnds(support\_id, True)

GetCurtainWallSupportApplyToInteriorGrid

* Signature: Boolean GetCurtainWallSupportApplyToInteriorGrid(Guid supportId)
* Description: Checks if the support applies to interior grid.
* Example: apply\_interior = va.GetCurtainWallSupportApplyToInteriorGrid(support\_id)

SetCurtainWallSupportApplyToInteriorGrid

* Signature: Boolean SetCurtainWallSupportApplyToInteriorGrid(Guid supportId, Boolean value)
* Description: Sets whether the support applies to interior grid. Returns True on success.
* Example: success = va.SetCurtainWallSupportApplyToInteriorGrid(support\_id, False)

GetCurtainWallStylePanelStyle

* Signature: CurtainWallPanelStyle GetCurtainWallStylePanelStyle(Guid styleId)
* Description: Gets the panel style for a curtain wall style.
* Example: panel\_style = va.GetCurtainWallStylePanelStyle(style\_id)

SetCurtainWallStylePanelStyle

* Signature: Boolean SetCurtainWallStylePanelStyle(Guid styleId, CurtainWallPanelStyle style)
* Description: Sets the panel style for a curtain wall style. Returns True on success.
* Example: success = va.SetCurtainWallStylePanelStyle(style\_id, va.CurtainWallPanelStyle.Glazed) # Assuming enum

SetCurtainWallStylePanelAligment

* Signature: Boolean SetCurtainWallStylePanelAligment(Guid styleId, CurtainWallPanelAlignment alignment)
* Description: Sets the panel alignment for a curtain wall style. Returns True on success.
* Example: success = va.SetCurtainWallStylePanelAligment(style\_id, va.CurtainWallPanelAlignment.Center)
* Notes: Method name has typo in DLL (Aligment instead of Alignment).

AddCurtainWallStyleAssemblyInfill

* Signatures (Overloads):
  + Guid AddCurtainWallStyleAssemblyInfill(Guid curtainWallStyleId, Int32 verticalCount, Int32 horizontalCount)
  + Guid AddCurtainWallStyleAssemblyInfill(Guid curtainWallStyleId, Double cellWidth, Double cellHeight)
* Description: Adds a grid assembly infill to the curtain wall style, returns the assembly Guid.
* Example:  
   Count-based  
   assembly\_id = va.AddCurtainWallStyleAssemblyInfill(style\_id, 5, 3)  
   Size-based  
   assembly\_id2 = va.AddCurtainWallStyleAssemblyInfill(style\_id, 1.0, 2.0)

GetCurtainWallStyleGridAssemblyInfills

* Signature: Guid[] GetCurtainWallStyleGridAssemblyInfills(Guid styleId)
* Description: Gets array of grid assembly infill Guids for a curtain wall style.
* Example: infills = va.GetCurtainWallStyleGridAssemblyInfills(style\_id)

GetGridAssemblyDivisionType

* Signature: GridAssemblyDivisionType GetGridAssemblyDivisionType(Guid assemblyId)
* Description: Gets the division type of a grid assembly.
* Example: div\_type = va.GetGridAssemblyDivisionType(assembly\_id)

SetGridAssemblyDivisionType

* Signature: Boolean SetGridAssemblyDivisionType(Guid assemblyId, GridAssemblyDivisionType orientation)
* Description: Sets the division type of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyDivisionType(assembly\_id, va.GridAssemblyDivisionType.FixedWidth)

GetGridAssemblyDivisionCount

* Signature: Int32 GetGridAssemblyDivisionCount(Guid assemblyId)
* Description: Gets the division count of a grid assembly.
* Example: count = va.GetGridAssemblyDivisionCount(assembly\_id)

SetGridAssemblyDivisionCount

* Signature: Boolean SetGridAssemblyDivisionCount(Guid assemblyId, Int32 count)
* Description: Sets the division count of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyDivisionCount(assembly\_id, 4)

GetGridAssemblyFixedWidth

* Signature: Double GetGridAssemblyFixedWidth(Guid assemblyId)
* Description: Gets the fixed width of a grid assembly.
* Example: width = va.GetGridAssemblyFixedWidth(assembly\_id)

SetGridAssemblyFixedWidth

* Signature: Boolean SetGridAssemblyFixedWidth(Guid assemblyId, Double width)
* Description: Sets the fixed width of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyFixedWidth(assembly\_id, 1.5)

GetGridAssemblyByPercentageWidthValue

* Signature: Boolean GetGridAssemblyByPercentageWidthValue(Guid assemblyId)
* Description: Checks if the grid assembly uses percentage width.
* Example: by\_percent = va.GetGridAssemblyByPercentageWidthValue(assembly\_id)

SetGridAssemblyByPercentageWidthValue

* Signature: Boolean SetGridAssemblyByPercentageWidthValue(Guid assemblyId, Boolean value)
* Description: Sets whether the grid assembly uses percentage width. Returns True on success.
* Example: success = va.SetGridAssemblyByPercentageWidthValue(assembly\_id, True)

GetGridAssemblyCustomDivision

* Signature: Boolean GetGridAssemblyCustomDivision(Guid assemblyId, Double[]& widths, Boolean[]& byPercentage, Guid[]& childAssemblyIds)
* Description: Gets custom division data for a grid assembly.
* Example: widths = [] # Out params; use arrays by\_percent = [] child\_ids = [] success = va.GetGridAssemblyCustomDivision(assembly\_id, widths, by\_percent, child\_ids)

SetGridAssemblyCustomDivision

* Signature: Boolean SetGridAssemblyCustomDivision(Guid assemblyId, Double[]& widths, Boolean byPercentage)
* Description: Sets custom division for a grid assembly. Returns True on success.
* Example: widths = [1.0, 2.0] success = va.SetGridAssemblyCustomDivision(assembly\_id, widths, True)

GetGridAssemblyCustomWidth

* Signature: Double GetGridAssemblyCustomWidth(Guid assemblyId)
* Description: Gets the custom width of a grid assembly.
* Example: width = va.GetGridAssemblyCustomWidth(assembly\_id)

SetGridAssemblyCustomWidth

* Signature: Boolean SetGridAssemblyCustomWidth(Guid assemblyId, Double width, Double byPercentage)
* Description: Sets the custom width for a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyCustomWidth(assembly\_id, 1.5, 50.0) # Percentage as double?

GetGridAssemblyFitType

* Signature: GridAssemblyFitType GetGridAssemblyFitType(Guid assemblyId)
* Description: Gets the fit type of a grid assembly.
* Example: fit = va.GetGridAssemblyFitType(assembly\_id)

SetGridAssemblyFitType

* Signature: Boolean SetGridAssemblyFitType(Guid assemblyId, GridAssemblyFitType type)
* Description: Sets the fit type of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyFitType(assembly\_id, va.GridAssemblyFitType.TrimCell)

GetGridAssemblyStartEndFit

* Signature: GridAssemblyStartEndFit GetGridAssemblyStartEndFit(Guid assemblyId)
* Description: Gets the start/end fit of a grid assembly.
* Example: fit = va.GetGridAssemblyStartEndFit(assembly\_id)

SetGridAssemblyStartEndFit

* Signature: Boolean SetGridAssemblyStartEndFit(Guid assemblyId, GridAssemblyStartEndFit fit)
* Description: Sets the start/end fit of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyStartEndFit(assembly\_id, va.GridAssemblyStartEndFit.CenterAlign)

GetGridAssemblyOrientation

* Signature: GridAssemblyOrientation GetGridAssemblyOrientation(Guid assemblyId)
* Description: Gets the orientation of a grid assembly.
* Example: orient = va.GetGridAssemblyOrientation(assembly\_id)

SetGridAssemblyOrientation

* Signature: Boolean SetGridAssemblyOrientation(Guid assemblyId, GridAssemblyOrientation orientation)
* Description: Sets the orientation of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyOrientation(assembly\_id, va.GridAssemblyOrientation.Vertical)

GetGridAssemblyInfillType

* Signature: GridAssemblyInfillType GetGridAssemblyInfillType(Guid infillId)
* Description: Gets the infill type of a grid assembly.
* Example: infill\_type = va.GetGridAssemblyInfillType(infill\_id)

SetGridAssemblyInfillType

* Signature: Boolean SetGridAssemblyInfillType(Guid infillId, GridAssemblyInfillType type)
* Description: Sets the infill type of a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyInfillType(infill\_id, va.GridAssemblyInfillType.SinglePanel)

GetGridAssemblyInfillStyleId

* Signature: Guid GetGridAssemblyInfillStyleId(Guid infillId)
* Description: Gets the infill style Guid of a grid assembly.
* Example: style\_id = va.GetGridAssemblyInfillStyleId(infill\_id)

SetGridAssemblyInfillStyleId

* Signature: Boolean SetGridAssemblyInfillStyleId(Guid infillId, Guid curtainWallStyleId)
* Description: Sets the infill style for a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyInfillStyleId(infill\_id, other\_style\_id)

GetGridAssemblyInfillPanelWidth

* Signature: Double GetGridAssemblyInfillPanelWidth(Guid infillId)
* Description: Gets the infill panel width of a grid assembly.
* Example: width = va.GetGridAssemblyInfillPanelWidth(infill\_id)

SetGridAssemblyInfillTypePanelWidth

* Signature: Boolean SetGridAssemblyInfillTypePanelWidth(Guid infillId, Double width)
* Description: Sets the infill panel width for a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyInfillTypePanelWidth(infill\_id, 1.0)

GetGridAssemblyInfillGapDistanceX

* Signature: Double GetGridAssemblyInfillGapDistanceX(Guid infillId)
* Description: Gets the X gap distance for infill in a grid assembly.
* Example: gap\_x = va.GetGridAssemblyInfillGapDistanceX(infill\_id)

GetGridAssemblyInfillGapDistanceY

* Signature: Double GetGridAssemblyInfillGapDistanceY(Guid infillId)
* Description: Gets the Y gap distance for infill in a grid assembly.
* Example: gap\_y = va.GetGridAssemblyInfillGapDistanceY(infill\_id)

SetGridAssemblyInfillGapDistance

* Signature: Boolean SetGridAssemblyInfillGapDistance(Guid infillId, Double gapX, Double gapY)
* Description: Sets the gap distances for infill in a grid assembly. Returns True on success.
* Example: success = va.SetGridAssemblyInfillGapDistance(infill\_id, 0.02, 0.02)

IsCurtainWallFrame

* Signature: Boolean IsCurtainWallFrame(Guid id)
* Description: Checks if the Guid is a curtain wall frame.
* Example: is\_frame = va.IsCurtainWallFrame(id)

IsCurtainWallMullion

* Signature: Boolean IsCurtainWallMullion(Guid id)
* Description: Checks if the Guid is a curtain wall mullion.
* Example: is\_mullion = va.IsCurtainWallMullion(id)

IsCurtainWallSupport

* Signature: Boolean IsCurtainWallSupport(Guid id)
* Description: Checks if the Guid is a curtain wall support.
* Example: is\_support = va.IsCurtainWallSupport(id)

IsGridAssembly

* Signature: Boolean IsGridAssembly(Guid id)
* Description: Checks if the Guid is a grid assembly.
* Example: is\_assembly = va.IsGridAssembly(id)

IsGridAssemblyInfill

* Signature: Boolean IsGridAssemblyInfill(Guid id)
* Description: Checks if the Guid is a grid assembly infill.
* Example: is\_infill = va.IsGridAssemblyInfill(id)

Enums/Options Reference for Curtain Walls

* CurtainWallAlignment: Left (0), Center (1), Right (2), ByStyle (3)
* CurtainWallExtendDirection: AnyExtension (0), ExtendTop (1), ExtendBottom (3)
* CurtainWallPanelAlignment: Interior (0), Center (1), Exterior (2)
* CurtainWallSupportType: Vertical (0), Horizontal (1)
* GridAssemblyDivisionType: None (0), DivisionCount (1), FixedWidth (2), Horizontal (3), Vertical (4)
* GridAssemblyFitType: TrimCell (0), ExtendCell (1)
* GridAssemblyStartEndFit: CenterAlign (0), TrimAtEnd (1), TrimAtStart (2)
* GridAssemblyOrientation: Vertical (0), Horizontal (1), Undefined (-1)
* GridAssemblyInfillType: ByParent (0), SinglePanel (1), Empty (2), CurtainWall (3)
* CurtainWallPanelStyle: [To confirm; likely Glazed, Solid, etc. – from SetCurtainWallStylePanelStyle param 1, inspect enum if needed in next script]

GetCurtainWallFrameVerticalWidth

* Signature: Double GetCurtainWallFrameVerticalWidth(Guid frameId)
* Description: Gets the vertical width of a curtain wall frame.
* Example: width = va.GetCurtainWallFrameVerticalWidth(frame\_id)

GetCurtainWallFrameVerticalDepth

* Signature: Double GetCurtainWallFrameVerticalDepth(Guid frameId)
* Description: Gets the vertical depth of a curtain wall frame.
* Example: depth = va.GetCurtainWallFrameVerticalDepth(frame\_id)

GetCurtainWallFrameHorizontalWidth

* Signature: Double GetCurtainWallFrameHorizontalWidth(Guid frameId)
* Description: Gets the horizontal width of a curtain wall frame.
* Example: width = va.GetCurtainWallFrameHorizontalWidth(frame\_id)

GetCurtainWallFrameHorizontalDepth

* Signature: Double GetCurtainWallFrameHorizontalDepth(Guid frameId)
* Description: Gets the horizontal depth of a curtain wall frame.
* Example: depth = va.GetCurtainWallFrameHorizontalDepth(frame\_id)

GetCurtainWallMullionVerticalWidth

* Signature: Double GetCurtainWallMullionVerticalWidth(Guid mullionId)
* Description: Gets the vertical width of a curtain wall mullion.
* Example: width = va.GetCurtainWallMullionVerticalWidth(mullion\_id)

GetCurtainWallMullionVerticalDepth

* Signature: Double GetCurtainWallMullionVerticalDepth(Guid mullionId)
* Description: Gets the vertical depth of a curtain wall mullion.
* Example: depth = va.GetCurtainWallMullionVerticalDepth(mullion\_id)

GetCurtainWallMullionHorizontalWidth

* Signature: Double GetCurtainWallMullionHorizontalWidth(Guid mullionId)
* Description: Gets the horizontal width of a curtain wall mullion.
* Example: width = va.GetCurtainWallMullionHorizontalWidth(mullion\_id)

GetCurtainWallMullionHorizontalDepth

* Signature: Double GetCurtainWallMullionHorizontalDepth(Guid mullionId)
* Description: Gets the horizontal depth of a curtain wall mullion.
* Example: depth = va.GetCurtainWallMullionHorizontalDepth(mullion\_id)

GetCurrentCurtainWallStyle

* Signature: Guid GetCurrentCurtainWallStyle()
* Description: Gets the current/default curtain wall style Guid.
* Example: current\_id = va.GetCurrentCurtainWallStyle()

SetCurrentCurtainWallStyle

* Signature: Boolean SetCurrentCurtainWallStyle(Guid styleId)
* Description: Sets the current/default curtain wall style. Returns True on success.
* Example: success = va.SetCurrentCurtainWallStyle(style\_id)

Enums/Options Reference for Curtain Walls (Updated)

* CurtainWallPanelStyle: FlatPanels (0), FitPathPanels (1)

GetCurtainWallFrameVerticalWidth

* Signature: Double GetCurtainWallFrameVerticalWidth(Guid frameId)
* Description: Gets the vertical width of a curtain wall frame.
* Example: width = va.GetCurtainWallFrameVerticalWidth(frame\_id)

GetCurtainWallFrameVerticalDepth

* Signature: Double GetCurtainWallFrameVerticalDepth(Guid frameId)
* Description: Gets the vertical depth of a curtain wall frame.
* Example: depth = va.GetCurtainWallFrameVerticalDepth(frame\_id)

GetCurtainWallFrameHorizontalWidth

* Signature: Double GetCurtainWallFrameHorizontalWidth(Guid frameId)
* Description: Gets the horizontal width of a curtain wall frame.
* Example: width = va.GetCurtainWallFrameHorizontalWidth(frame\_id)

GetCurtainWallFrameHorizontalDepth

* Signature: Double GetCurtainWallFrameHorizontalDepth(Guid frameId)
* Description: Gets the horizontal depth of a curtain wall frame.
* Example: depth = va.GetCurtainWallFrameHorizontalDepth(frame\_id)

GetCurtainWallMullionVerticalWidth

* Signature: Double GetCurtainWallMullionVerticalWidth(Guid mullionId)
* Description: Gets the vertical width of a curtain wall mullion.
* Example: width = va.GetCurtainWallMullionVerticalWidth(mullion\_id)

GetCurtainWallMullionVerticalDepth

* Signature: Double GetCurtainWallMullionVerticalDepth(Guid mullionId)
* Description: Gets the vertical depth of a curtain wall mullion.
* Example: depth = va.GetCurtainWallMullionVerticalDepth(mullion\_id)

GetCurtainWallMullionHorizontalWidth

* Signature: Double GetCurtainWallMullionHorizontalWidth(Guid mullionId)
* Description: Gets the horizontal width of a curtain wall mullion.
* Example: width = va.GetCurtainWallMullionHorizontalWidth(mullion\_id)

GetCurtainWallMullionHorizontalDepth

* Signature: Double GetCurtainWallMullionHorizontalDepth(Guid mullionId)
* Description: Gets the horizontal depth of a curtain wall mullion.
* Example: depth = va.GetCurtainWallMullionHorizontalDepth(mullion\_id)

DeleteStyleComponent

* Signature: Boolean DeleteStyleComponent(Guid componentId)
* Description: Deletes a style component (e.g., frame, mullion, support). Returns True on success.
* Example: success = va.DeleteStyleComponent(frame\_id)
* Notes: May fail if component in use.

RenameStyleComponent

* Signature: Boolean RenameStyleComponent(Guid componentId, String newName)
* Description: Renames a style component. Returns True on success.
* Example: success = va.RenameStyleComponent(frame\_id, "NewFrame")

GetStyleComponentName

* Signature: String GetStyleComponentName(Guid componentId)
* Description: Gets the name of a style component.
* Example: name = va.GetStyleComponentName(frame\_id)

GetParentStyleComponent

* Signature: Guid GetParentStyleComponent(Guid componentId)
* Description: Gets the parent component Guid (e.g., style for frame).
* Example: parent\_id = va.GetParentStyleComponent(frame\_id)

GetSubStyleComponents

* Signature: Guid[] GetSubStyleComponents(Guid componentId)
* Description: Gets array of sub-component Guids (e.g., for assemblies).
* Example: subs = va.GetSubStyleComponents(assembly\_id)

GetCurtainWallStyleId

* Signature: Guid GetCurtainWallStyleId(String name)
* Description: Gets the curtain wall style Guid by name.
* Example: style\_id = va.GetCurtainWallStyleId("MyCurtainWall")

GetCurrentCurtainWallStyle

* Signature: Guid GetCurrentCurtainWallStyle()
* Description: Gets the current/default curtain wall style Guid.
* Example: current\_id = va.GetCurrentCurtainWallStyle()

SetCurrentCurtainWallStyle

* Signature: Boolean SetCurrentCurtainWallStyle(Guid styleId)
* Description: Sets the current/default curtain wall style. Returns True on success.
* Example: success = va.SetCurrentCurtainWallStyle(style\_id)