ACO SlabDrain H100K/H100KS

Subassembly Installation and Reference Guide

User Guide for Autodesk AutoCAD Civil 3D files

Contents

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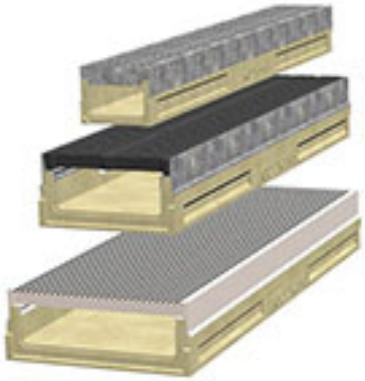
1. Introduction

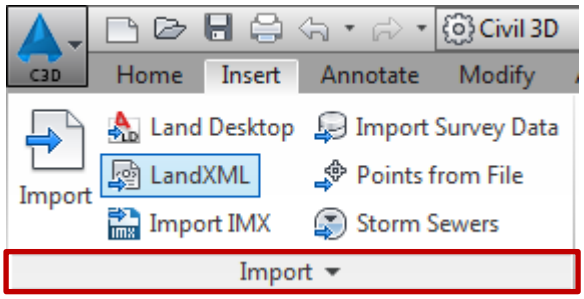
This document describes the installation, configuration and use of the ACO SlabDrain subassembly component for AutoCAD Civil 3D Sub Assembly Composer.



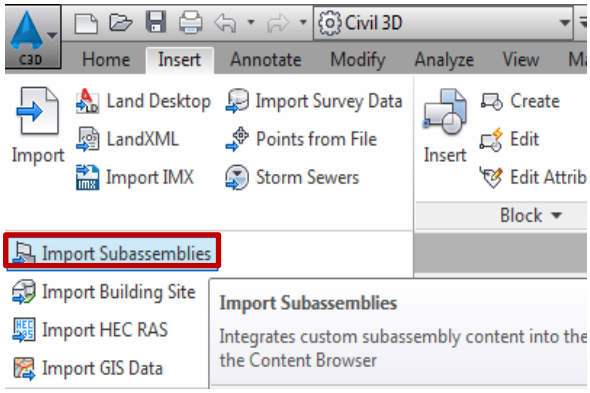
2. Installing the ACO SlabDrain subassembly

The SlabDrain sub-assembly is available as a .pkt file which contains the subassembly .dll file and associated configuration files for installing the subassembly in Civil 3D.

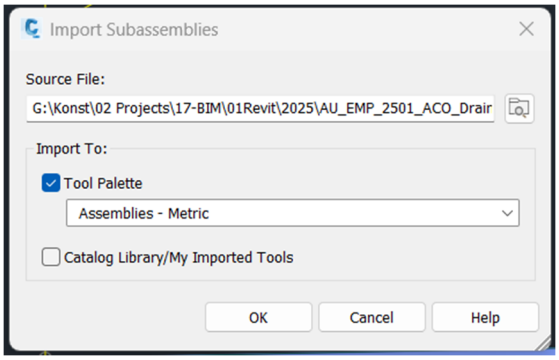
To install the subassembly, click on the Import panel title on the Insert ribbon.

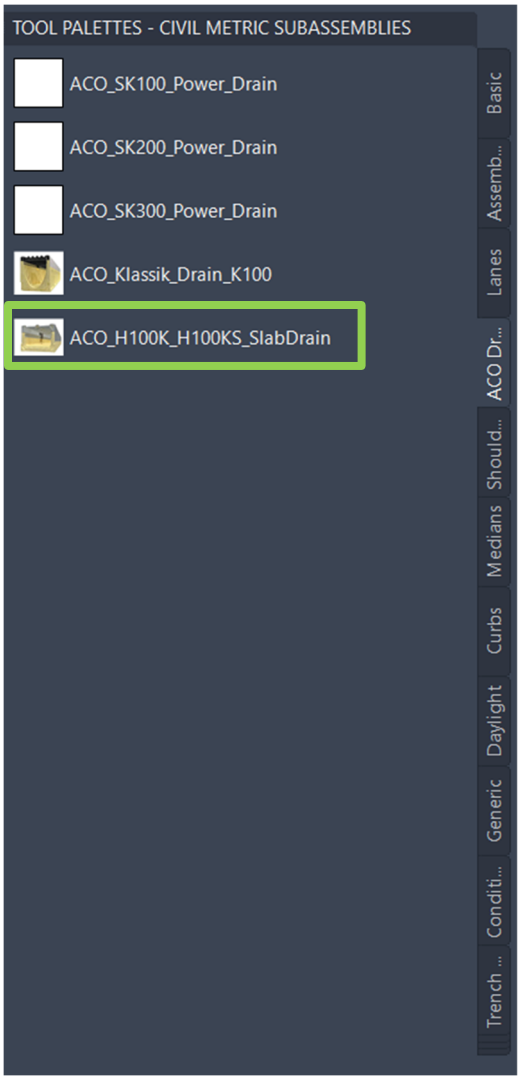


Choose import subassemblies



Browse to the location of the ACO SlabDrain H100K/H100KS.pkt file, and choose a tool palette to import to, or create a new palette. The subassembly can also optionally be added to the user Catalog Library. The tool palette in civil 3D will now show the ACO SlabDrain H100K/H100KS subassembly. Note that by right-clicking in the tool palette, the palette can be customized by creating a separate item for the ACO SlabDrain H100K/H100KS, as shown here.





3. Using the ACO SlabDrain H100K/H100KS subassembly

The ACO SlabDrain subassembly includes definitions for the following Edge rail type:

SlabDrain H100K/H100KS with Edge rail types:-

H100K_60_141803

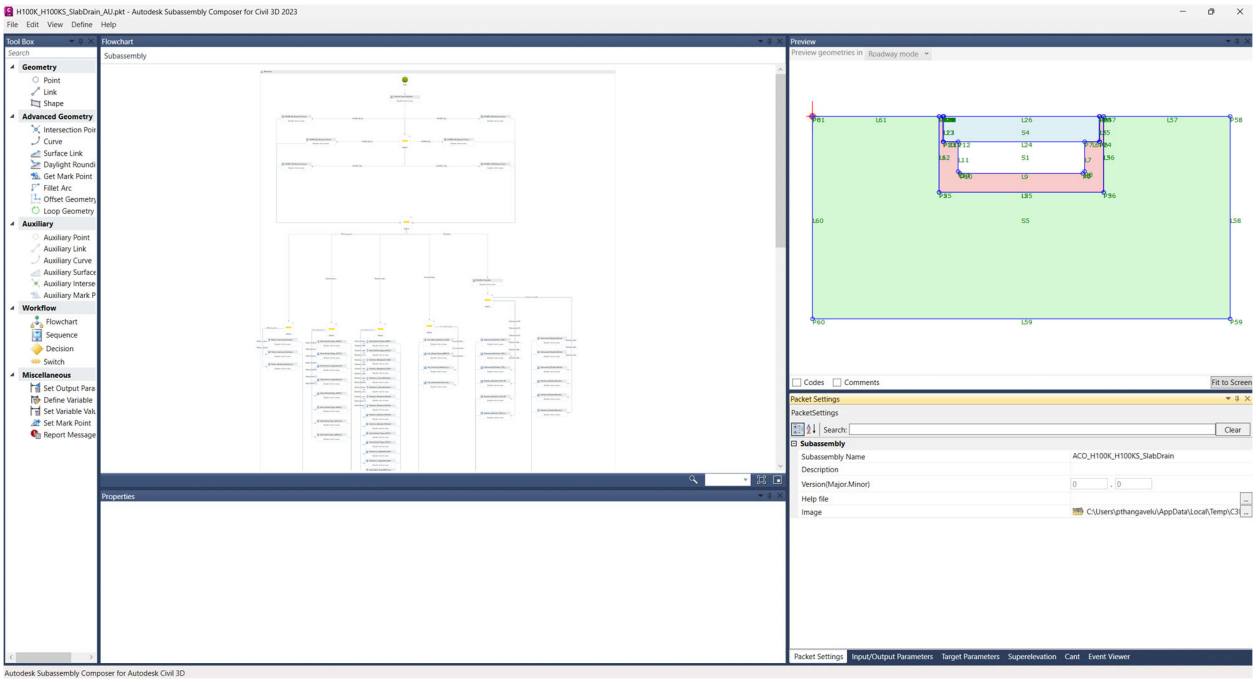
H100K_80_141785

H100K_100_141787

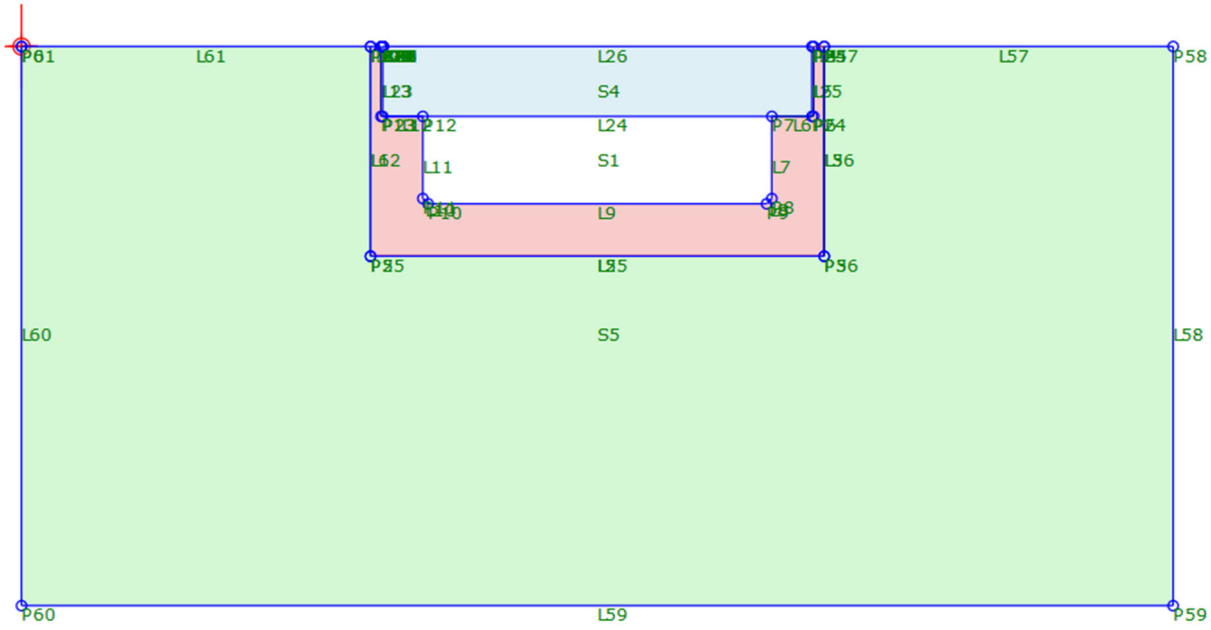
H100KS_60_141804

H100KS_80_141786

H100KS_100_141788



The subassembly also optionally includes haunching detail.



3.1 User Defined Parameter

Input/Output Parameters

Name	Type	Direction	Default Value
Side	Side	Input	Right
Channel_Selection	Channels_Selection	Input	H100K_60_Neutral_Channel_141803
Gratings_material_selection_and_Brickslot_selection	Gratings_Brickslots	Input	Plastic_gratings
Platic_gratings_selection	Plastic_gratings	Input	Plastic_Slotted_Heelsafe_AntiSlip_Type_492D_Black_polyamide_132720
Stainless_steel_gratings_selection	Stainless_Steel_gratings	Input	Steel_Slotted_Type_450D_Grade_304_stainless_12640
Galvanised_steel_gratings_selection	Galvanised_Steel_gratings	Input	Steel_Mesh_Type_406Q_Galvanised_142402
iron_gratings_selection	Iron_Gratings	Input	Iron_Galvanised_Intercept_Heelsafe_AntiSlip_Type_475D_Galvanised_iron_142172
Brickslot_selection	Brickslot	Input	Stainless_Double_Brickslot_100_access_unit_500mm_142475
Haunching	Yes\No	Input	No
Haunching_class_selection	Haunch_Class_Selection	Input	Class_A_B
Haunch_Class_A_B_selection	Haunch_Class_A_B	Input	Concrete_haunch_to_top_class_A_B
Haunch_Class_C_D_selection	Haunch_Class_C_D	Input	Concrete_haunch_to_top_class_C_D

All the default value of the parameter can be edited by end-user. User can able to select their required SlabDrain, Grating and Haunch type.

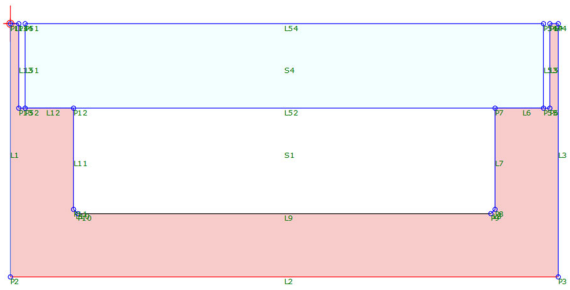
3.2 SlabDrain H100K/H100KS with different Edge rail channel types

User can able to select their required slabDrain channel by using the parameter SlabDrainType which has dropdown menu, with six different types of slabDrain channel.

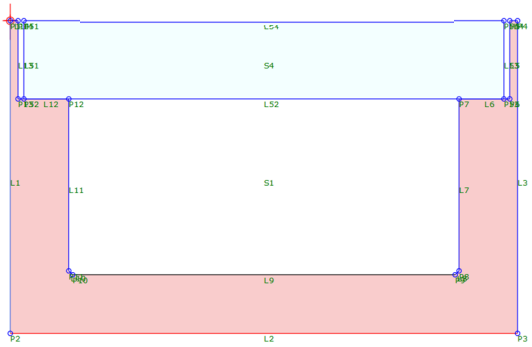
Input/Output Parameters

Name	Type	Direction	Default Value
Side	Side	Input	Right
Channel_Selection	Channels_Selection	Input	H100K_60_Neutral_Channel_141803
Gratings_material_selection_and_Brickslot_selection	Gratings_Brickslots	Input	H100K_60_Neutral_Channel_141803
Platic_gratings_selection	Plastic_gratings	Input	H100K_80_Neutral_Channel_141785
Stainless_steel_gratings_selection	Stainless_Steel_gratings	Input	H100K_100_Neutral_Channel_141787
Galvanised_steel_gratings_selection	Galvanised_Steel_gratings	Input	H100KS_60_Neutral_Channel_141804
iron_gratings_selection	Iron_Gratings	Input	H100KS_80_Neutral_Channel_141786
Brickslot_selection	Brickslot	Input	H100KS_100_Neutral_Channel_141788
Haunching	Yes\No	Input	No
Haunching_class_selection	Haunch_Class_Selection	Input	Class_A_B
Haunch_Class_A_B_selection	Haunch_Class_A_B	Input	Concrete_haunch_to_top_class_A_B
Haunch_Class_C_D_selection	Haunch_Class_C_D	Input	Concrete_haunch_to_top_class_C_D

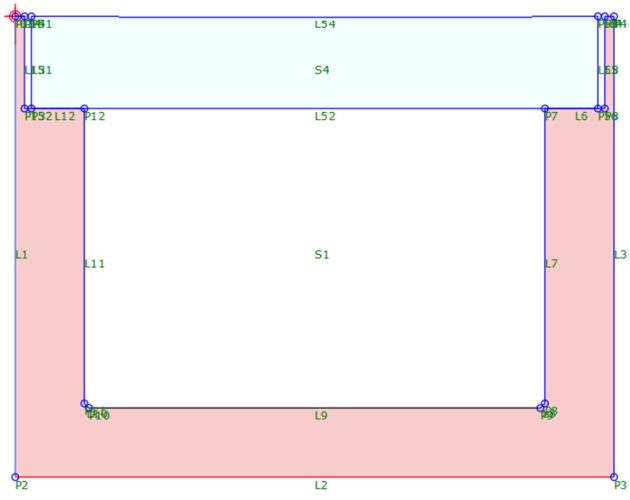
H100K-60/H100KS-60



H100K-80/H100KS-80

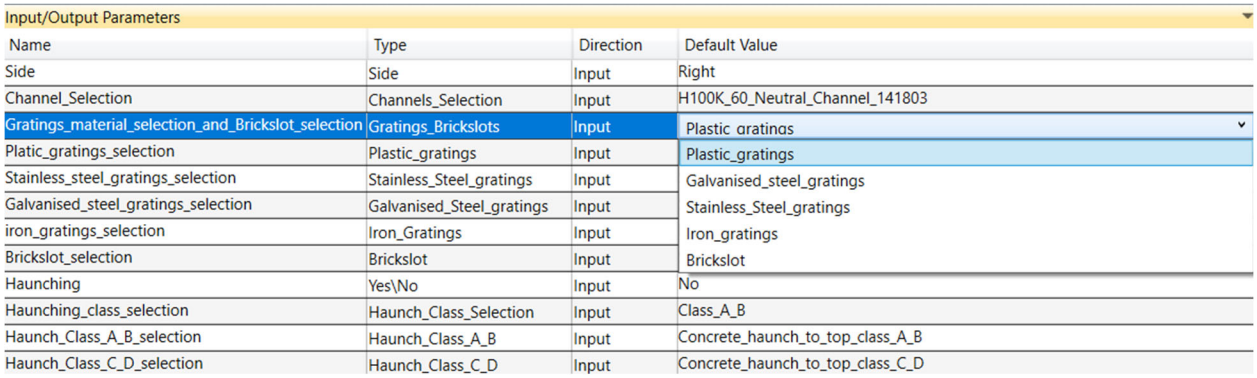


H100K-100/H100KS-100

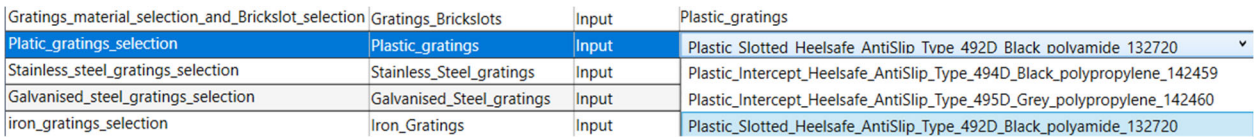


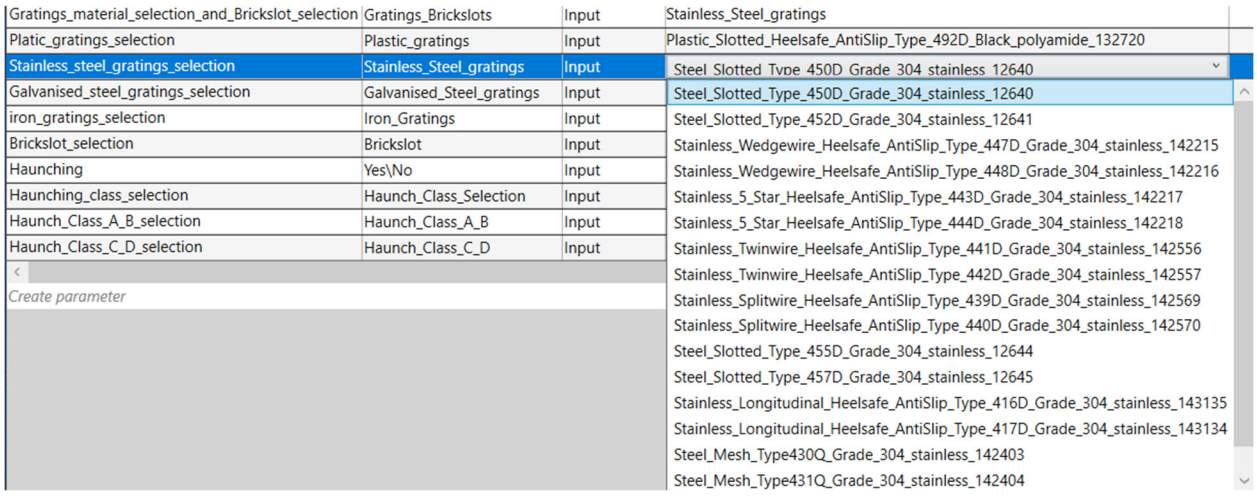
3.3 SlabDrain H100K/H100KS grating types

Users be able to select their required gratings; gratings have been segregated as per material due to enumeration restriction in SAC. In parameter table there is a parameter with drop down menu “Grating material selection and Brikslot” from this user can select their required grating material and brickslot.



After Selection of material and brickslot just below that with preferred selection there will be a parameter. From that user can able to select their preferred gratings.





Gratings_material_selection_and_Brickslot_selection	Gratings_Brickslots	Input	Galvanised_steel_gratings
Platic_gratings_selection	Plastic_gratings	Input	Plastic_Slotted_Heelsafe_AntiSlip_Type_492D_Black_polyamide_132720
Stainless_steel_gratings_selection	Stainless_Steel_gratings	Input	Steel_Slotted_Type_450D_Grade_304_stainless_12640
Galvanised_steel_gratings_selection	Galvanised_Steel_gratings	Input	Steel_Mesh_Type_406Q_Galvanised_142402
iron_gratings_selection	Iron_Gratings	Input	Steel_Slotted_Type_420D_Galvanised_12610
Brickslot_selection	Brickslot	Input	Steel_Slotted_Type_421D_Galvanised_12611
Haunching	Yes\No	Input	Galvanised_Longitudinal_Heelsafe_AntiSlip_Type_438D_Galvanised_132555
Haunching_class_selection	Haunch_Class_Selection	Input	Galvanised_Longitudinal_Heelsafe_AntiSlip_Type_437D_Galvanised_132550
Haunch_Class_A_B_selection	Haunch_Class_A_B	Input	Steel_Slotted_Type_425D_Galvanised_12614
Haunch_Class_C_D_selection	Haunch_Class_C_D	Input	Steel_Slotted_Type_426D_Galvanised_12615
			Steel_Mesh_Type_405Q_Galvanised_142401
Create parameter			Steel_Mesh_Type_406Q_Galvanised_142402

Gratings_material_selection_and_Brickslot_selection	Gratings_Brickslots	Input	Iron_gratings
Platic_gratings_selection	Plastic_gratings	Input	Plastic_Slotted_Heelsafe_AntiSlip_Type_492D_Black_polyamide_132720
Stainless_steel_gratings_selection	Stainless_Steel_gratings	Input	Steel_Slotted_Type_450D_Grade_304_stainless_12640
Galvanised_steel_gratings_selection	Galvanised_Steel_gratings	Input	Steel_Mesh_Type_406Q_Galvanised_142402
iron_gratings_selection	Iron_Gratings	Input	Iron_Galvanised_Intercept_Heelsafe_AntiSlip_Type_475D_Galvanised_iron_142
Brickslot_selection	Brickslot	Input	Iron_Wave_Heelsafe_AntiSlip_Type_480D_Ductile_iron_142461
Haunching	Yes\No	Input	Iron_Slotted_Type_460D_Ductile_iron_12670
Haunching_class_selection	Haunch_Class_Selection	Input	Iron_Intercept_Heelsafe_AntiSlip_Type_476D_Ductile_iron_142171
Haunch_Class_A_B_selection	Haunch_Class_A_B	Input	Iron_Galvanised_Intercept_Heelsafe_AntiSlip_Type_475D_Galvanised_iron_142172

Gratings_material_selection_and_Brickslot_selection	Gratings_Brickslots	Input	Brickslot
Platic_gratings_selection	Plastic_gratings	Input	Plastic_Slotted_Heelsafe_AntiSlip_Type_492D_Black_polyamide_132720
Stainless_steel_gratings_selection	Stainless_Steel_gratings	Input	Steel_Slotted_Type_450D_Grade_304_stainless_12640
Galvanised_steel_gratings_selection	Galvanised_Steel_gratings	Input	Steel_Mesh_Type_406Q_Galvanised_142402
iron_gratings_selection	Iron_Gratings	Input	Iron_Galvanised_Intercept_Heelsafe_AntiSlip_Type_475D_Galvanised_iron_142172
Brickslot_selection	Brickslot	Input	Stainless_Double_Brickslot_100_access_unit_500mm_142475
Haunching	Yes\No	Input	Galvanised_Brickslot_100_1000mm_142790
Haunching_class_selection	Haunch_Class_Selection	Input	Galvanised_Brickslot_100_500mm_142791
Haunch_Class_A_B_selection	Haunch_Class_A_B	Input	Galvanised_Brickslot_100_access_unit_500mm_142466
Haunch_Class_C_D_selection	Haunch_Class_C_D	Input	Stainless_Brickslot_100_1000mm_142792
			Stainless_Brickslot_100_500mm_142793
Create parameter			Stainless_Brickslot_100_access_unit_500mm_142469
			Galvanised_Double_Brickslot_100_1000mm_142470
			Galvanised_Double_Brickslot_100_500mm_142471
			Galvanised_Double_Brickslot_100_access_unit_500mm_142472
			Stainless_Double_Brickslot_100_1000mm_142473
			Stainless_Double_Brickslot_100_500mm_142474
			Stainless_Double_Brickslot_100_access_unit_500mm_142475

3.4 Haunch types

To include Haunching we have provided decision option so user can select yes/or from the parameter Haunching. There are two defferent classes for haunching A-B and C-D

Haunching	Yes\No	Input	Yes

There are two defferent classes for haunching A-B and C-D it can be decide by user, using Haunch class parameter drop down menu.

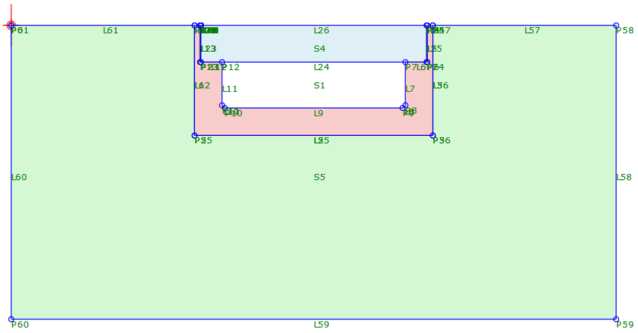
Haunch_Class	Haunch_Class_	Input	Class_C_D
Haunch_Class_A_B_selection	Haunch_Class_	Input	Class_A_B
Haunch_Class_C_D_selection	Haunch_Class_	Input	Class_C_D

Haunch class A-B which has four type of haunch and C-D which have five types of haunch user can easily select their haunch type with provided parameters.

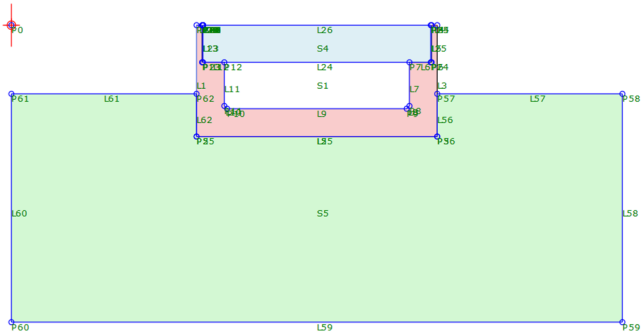
Haunch_Class_A_B_selection	Haunch_Class_	Input	Pavers_to_edge_class_A_B
Haunch_Class_C_D_selection	Haunch_Class_	Input	Grass_haunch_to_top_Class_A_B
AntiSlipGrateShapeCode	String	Input	Pavers_to_edge_class_A_B
BrickSlotShape	String	Input	Asphalt_sloped_haunch_class_A_B
DrainBaseLink	String	Input	Concrete_haunch_to_top_class_A_B

Haunch_Class_C_D_selection	Haunch_Class_	Input	Asphalt_haunch_to_top_class_C_D
AntiSlipGrateShapeCode	String	Input	Pavers_to_edge_class_C_D
BrickSlotShape	String	Input	Pavers_haunch_to_top_class_C_D
DrainBaseLink	String	Input	Asphalt_sloped_haunch_class_C_D
			Asphalt_haunch_to_top_class_C_D
			Concrete_haunch_to_top_class_C_D

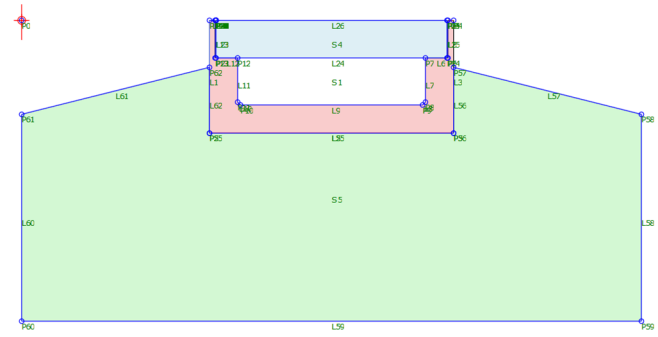
Create parameter



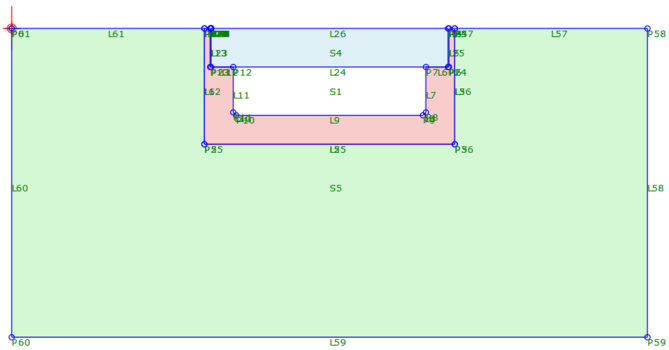
Grass haunch to top



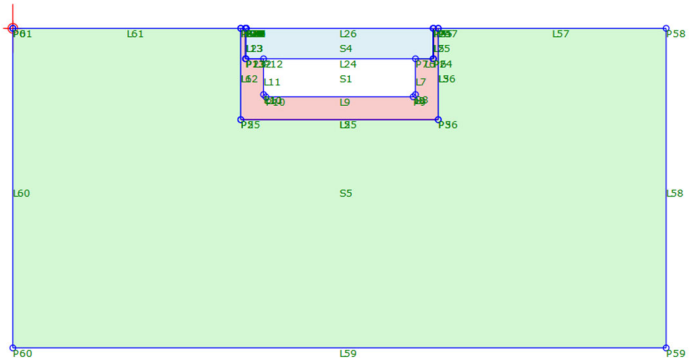
Pavers to edge



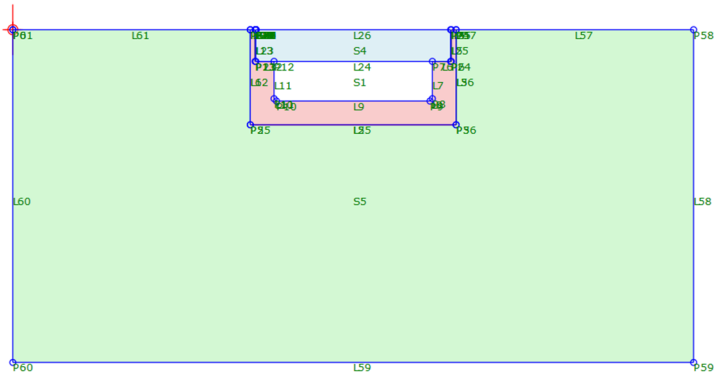
Asphalt sloped haunch



Concrete haunch to top



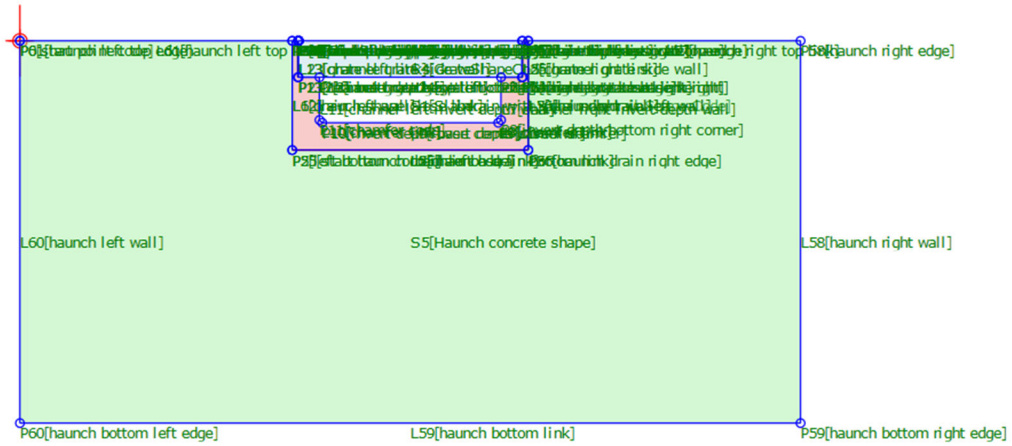
Pavers haunch to top



Asphalt haunch to top

3.5 Point Codes

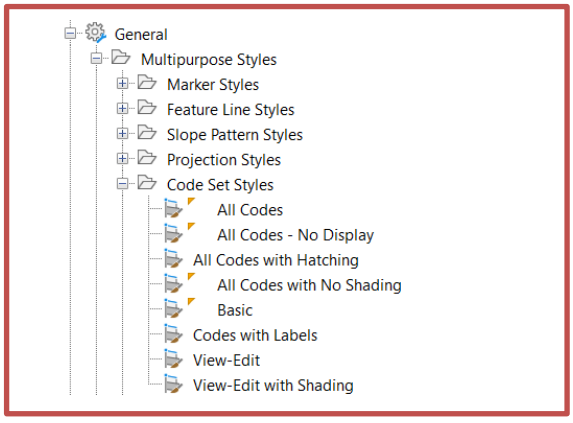
The point codes can be used in the code set styles to generate featurelines at the specific positions on the subassembly. The link codes can be used to display the outline of the subassembly in cross-sections, and also to create surface from the codes. The default values supplied with the subassembly include the standard codes of Top and Formation which are used universally to indicate a Top surface of the corridor model or a Formation surface of the corridor model respectively. The SlabDrain is indicated by the default link code of SlabDrain, and the default shape code of SlabDrain. The grating is indicated by the default link code of edge rail, and the default shape code of edge rail .The haunching is indicated by the default link code of Haunch, and the default shape code of Haunch. All of these codes can be over-ridden by the user. The shape codes are used to enable hatching to be applied in the cross-section views, and also to enable volumes of materials to be generated.



4. Code Set Styles

Code Set Styles are used to control the appearance and labeling of the individual point, link, and shape components of the subassemblies. The many styles required are grouped into Code Sets. Code Set settings are located in the General collection on the Settings tab of the Tool space.

Different code set styles used in the SlabDrain Code set style template as shown here.



4.1 Import Code Set Styles from one drawing to another

Open the drawing in which SlabDrain Code Set style has to be imported.

- Run command IMPORTSTYLESANDSETTINGS
- Browse to the location of SlabDrain Code Set Style template
- Select Styles as desired, check "Import Settings" toggle and click OK
- Warning will be displaying informing that duplicates styles may be overwritten
- Drawing will import styles and settings from SlabDrain Code Set Style template to this template