Pipeline Open Data Standard

Release 4.02 DRAFT

Physical Data Model
Model is subject to change

Physical Data Model
Model: PODS_402
Package:
Diagram: PODS
Author: PODS Association, Inc. Date : 7/25/2007
Version : Release 4.02 DRAFT

Copyright © 1998-2007
PODS Association, Inc.
All Rights Reserved
Worldwide.
www.pods.org

Stationed Centerline

Line

Line_ID	NUMBER(16)	<pk,ak>	not null
Line_GUID	CHAR(38)	<ak>	null
Designator	VARCHAR(32)		not null
Description	VARCHAR(255)		null
Type_CL	VARCHAR(16)	<fk2>	not null
Product_Type_SCL	VARCHAR(16)	<fk3>	null
Product_Subtype_SCL	VARCHAR(16)	<fk3>	null
System_Type_CL	VARCHAR(16)	<fk4>	not null
Interstate_LF	CHAR(1)		null

Line_Hierarchy

Line_Hierarchy_ID	NUMBER(16)	<pk>	not null
Line_Hierarchy_GUID	CHAR(38)		null
Parent_Line_ID	NUMBER(16)	<fk1,fk5>	null
Parent_Line_GUID	CHAR(38)	<fk5>	null
Child_Line_Line_ID	NUMBER(16)	<fk2,fk3>	null
Child_Line_Line_GUID	CHAR(38)	<fk2>	null
Hierarchy_Level_CL	VARCHAR(16)	<fk4>	null

Route

Route_ID	NUMBER(16)	<pk,ak>	not null
Route_GUID	CHAR(38)	<ak>	null
Line_ID	NUMBER(16)	<fk1,fk3>	not null
Line_GUID	CHAR(38)	<fk1>	null
Event_ID	NUMBER(16)		null
Event_GUID	CHAR(38)		null
Location_ID	NUMBER(16)	<fk4,fk8>	not null
Sequence	NUMBER(3)		null
Type_CL	VARCHAR(16)	<fk4>	not null
Operating_Status_GCL	VARCHAR(16)	<fk2>	not null
Current_Indicator_LF	CHAR(1)		not null
Previous_Route_ID	NUMBER(16)	<fk5,fk6>	null
Previous_Route_GUID	CHAR(38)	<fk6>	null
Effective_From_Date	DATE		not null
Effective_To_Date	DATE		null
Original_Coordinate_ID	NUMBER(16)		null
Original_Route_GUID	CHAR(38)		null
PODS_User	VARCHAR(20)		null
Create_Date	DATE		null

Series

Series_ID	NUMBER(16)	<pk,ak>	not null
Series_GUID	CHAR(38)	<ak>	null
Description	VARCHAR(254)		null
Line_ID	NUMBER(16)	<fk2,fk6>	not null
Line_GUID	CHAR(38)	<fk6>	null
Series	NUMBER(16)		not null
Series_Begin	NUMBER(10,2)		not null
Station_End	NUMBER(10,2)		not null
Ascending	NUMBER(2)		null
Route_ID	NUMBER(16)	<fk3,fk4>	not null
Route_GUID	CHAR(38)	<fk3>	null
Previous_Series_ID	NUMBER(16)	<fk1,fk5>	null
Previous_Series_GUID	CHAR(38)	<fk1>	null
Original_Series_ID	NUMBER(16)		null
Original_Series_GUID	CHAR(38)		null
Current_Indicator_LF	CHAR(1)		not null
Effective_From_Date	DATE		not null
Effective_To_Date	DATE		null
PODS_User	VARCHAR(20)		null
Create_Date	DATE		null

Station_Point

Station_ID	NUMBER(16)	<pk,ak>	not null
Station_GUID	CHAR(38)	<ak>	null
Line_ID	NUMBER(16)	<fk7,fk9>	not null
Line_GUID	CHAR(38)	<fk9>	null
Station	NUMBER(10,2)		not null
Station_ID	NUMBER(16)	<fk2,fk3>	not null
Series_GUID	CHAR(38)	<fk2>	null
Location_ID	NUMBER(16)	<fk1,fk4>	not null
Location_GUID	CHAR(38)	<fk1>	null
Type_CL	VARCHAR(16)	<fk5>	not null
Route_ID	NUMBER(16)	<fk6,fk8>	not null
Route_GUID	CHAR(38)	<fk8>	null
Measure	NUMBER(12,2)		not null
PODS_User	VARCHAR(20)		null
Create_Date	DATE		null

Event_Group_Cross_Ref

Event_ID	NUMBER(16)	<pk,fk1,fk3>	not null
Event_GUID	CHAR(38)	<fk3>	null
Event_Group_ID	NUMBER(16)	<pk,fk2,fk4>	not null
Event_Group_GUID	CHAR(38)	<fk4>	null
Description	VARCHAR(255)		null
Comments	VARCHAR(255)		null

Transform

Transform_ID	NUMBER(16)	<pk,ak>	not null
Transform_GUID	CHAR(38)	<ak>	null
Description	VARCHAR(254)		null

Measure_Transform

Mpas_Trans_ID	NUMBER(16)	<pk,ak>	not null
Mpas_Trans_GUID	CHAR(38)	<ak>	null
Series_ID	NUMBER(16)	<fk2,fk3>	not null
Series_GUID	CHAR(38)	<fk3>	null
Transform_Begin_Station	NUMBER(10,2)		null
Transform_End_Station	NUMBER(10,2)		null
Alt_Measure_Prefix	VARCHAR(16)		null
Scale_Factor	NUMBER(10,2)		null
Offset	NUMBER(10,2)		null
Transform_ID	NUMBER(16)	<fk1,fk4>	null
Transform_GUID	CHAR(38)	<fk4>	null

Network

Network_ID	NUMBER(16)	<pk,ak>	not null
Network_GUID	CHAR(38)	<ak>	null
Description	VARCHAR(254)		null

Network_Junction

Junction_ID	NUMBER(16)	<pk,ak>	not null
Junction_GUID	CHAR(38)	<ak>	null
Junction_Desc	VARCHAR(255)		null
Network_ID	NUMBER(16)	<fk1,fk2>	not null
Network_GUID	CHAR(38)	<fk2>	null

Network_Segment

Event_ID	NUMBER(16)	<pk,fk1,fk4>	not null
Event_GUID	CHAR(38)	<fk4>	null
From_Junction_ID	NUMBER(16)	<fk2,fk4>	not null
From_Junction_GUID	CHAR(38)	<fk4>	null
To_Junction_ID	NUMBER(16)	<fk3,fk5>	not null
To_Junction_GUID	CHAR(38)	<fk5>	null
Description	VARCHAR(254)		null
Comments	VARCHAR(255)		null

Activity_Zone

Event_ID	NUMBER(16)	<pk,fk1,fk4>	not null
Event_GUID	CHAR(38)	<fk4>	null
Zone_CL	VARCHAR(16)	<fk2>	not null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk3>	null
Comments	VARCHAR(255)		null

Grandfather_Pressure

Event_ID	NUMBER(16)	<pk,fk1,fk3>	not null
Event_GUID	CHAR(38)	<fk3>	null
Pressure_Rating	NUMBER(5)		not null
High_Pressure_Date	DATE		null
Determination_Date	DATE		null
Source_GCL	VARCHAR(32)		null
Description	VARCHAR(255)		null
Source_GCL	VARCHAR(16)	<fk2>	null
Comments	VARCHAR(255)		null

Coordinate

Coordinate_ID	NUMBER(16)	<pk,ak,fk1>	not null
Coordinate_GUID	CHAR(38)	<ak>	null
Coordinate_Source_ID	NUMBER(16)	<fk2,fk3>	null
Coordinate_Source_GUID	CHAR(38)	<fk3>	null
Type_CL	VARCHAR(16)	<fk5>	not null
Location_ID	NUMBER(16)	<fk4,fk6>	not null
Location_GUID	CHAR(38)	<fk6>	null
X_Coord	FLOAT(15)		not null
Y_Coord	FLOAT(15)		not null
Z_Coord	FLOAT(15)		null
Point_Indicator_LF	CHAR(1)		not null
Vert_Indicator_LF	CHAR(1)		null
Current_Indicator_LF	CHAR(1)		not null
Previous_Coordinate_ID	NUMBER(16)	<fk8>	null
Previous_Coordinate_GUID	CHAR(38)	<fk8>	null
Effective_From_Date	DATE		not null
Effective_To_Date	DATE		null
Original_Coordinate_ID	NUMBER(16)		null
Original_Coordinate_GUID	CHAR(38)		null
Accuracy_CL	VARCHAR(16)	<fk7>	null
Validity_Tolerance	NUMBER(7,4)		null
Vertical_Datum	CHAR(3)		null
PODS_User	VARCHAR(20)		null

Centerline_Geo_Cross_Ref

Centerline_Geo_Cross_Ref_ID	NUMBER(16)	<pk,ak>	not null
Centerline_Geo_Cross_Ref_GUID	CHAR(38)	<ak>	null
Coordinate_ID	NUMBER(16)	<fk2,fk5>	not null
Coordinate_GUID	CHAR(38)	<fk5>	null
Centerline_Geo_ID	NUMBER(16)	<fk3,fk4>	not null
Centerline_Geo_GUID	CHAR(38)	<fk4>	null
Previous_CL_Geo_Cross_Ref_ID	NUMBER(16)	<fk1,fk6>	null
Previous_CL_Geo_Cross_Ref_GUID	CHAR(38)	<fk1>	null
Original_CL_Geo_Cross_Ref_ID	NUMBER(16)		null
Original_CL_Geo_Cross_Ref_GUID	CHAR(38)		null
Current_Indicator_LF	CHAR(1)		not null
Effective_From_Date	DATE		not null
Effective_To_Date	DATE		null
PODS_User	VARCHAR(20)		null
Create_Date	DATE		null

Centerline_Geometry

Centerline_Geo_ID	NUMBER(16)	<pk,ak>	not null
Centerline_Geo_GUID	CHAR(38)	<ak>	null
Source_Name	VARCHAR(30)		not null
Purpose	VARCHAR(32)		not null
Create_Date	DATE		null
Comments	VARCHAR(255)		null

Location

Location_ID	NUMBER(16)	<pk,ak>	not null
Location_GUID	CHAR(38)	<ak>	null

Coordinate_Source

Coordinate_Source_ID	NUMBER(16)	<pk,ak1>	not null
Coordinate_Source_GUID	CHAR(38)	<ak1>	null
Source_Sys_ID	NUMBER(16)	<ak2>	not null
Source_Type_CL	VARCHAR(16)	<fk2>	not null
Create_Date	DATE		null
Method_CL	VARCHAR(16)	<fk4>	null
Operator_CL	VARCHAR(16)	<fk5>	null
Accuracy_CL	VARCHAR(16)	<fk6>	null
Coordinate_Sys_ID	NUMBER(16)	<fk1,fk2>	null
Coordinate_Sys_GUID	CHAR(38)	<fk1>	null
Comments	VARCHAR(255)		null

Coordinate_Sys

Coordinate_Sys_ID	NUMBER(16)	<pk,ak>	not null
Coordinate_Sys_GUID	CHAR(38)	<ak>	null
Coordinate_Sys_S	VARCHAR(19)		null
Description	VARCHAR(254)		null
Entity_Type_Name	VARCHAR(40)		null
Geodetic_Datum_CL	VARCHAR(16)	<fk3>	null
Prime_Meridian_CL	VARCHAR(16)	<fk4>	null
R_Axis_Omit_Kind	VARCHAR(40)		null
R_Coord_Sys_Type_Name	VARCHAR(40)		null
R_Display_Omit	VARCHAR(40)		null
R_Map_Proj_Kind	VARCHAR(40)		null
R_Naming_System_Kind	VARCHAR(40)		null
Source_GCL	VARCHAR(16)	<fk1>	null
Source_Reference	VARCHAR(32)		null
Status_CL	VARCHAR(16)	<fk2>	null
Vertical_Datum	VARCHAR(16)		null
Vertex_S	VARCHAR(16)		null
Vertex_T	VARCHAR(16)		null

Transformation_Parameter

Transformation_Parameter_ID	NUMBER(16)	<pk>	not null
Transformation_Parameter_GUID	CHAR(38)	<fk>	null
Parameter_Name	VARCHAR(40)		null
Parameter_Value	NUMBER(16,8)		null
Parameter_Unit	VARCHAR(40)		null

Location

GPS_Point

GPS_Point_ID	NUMBER(16)	<pk,ak>	not null
GPS_Point_GUID	CHAR(38)	<ak>	null
Coordinate_GUID	CHAR(38)	<fk1>	null
Surface_Point_LF	CHAR(1)		null
Ref_Event_ID	NUMBER(16)	<fk2,fk4>	null
Ref_Event_GUID	CHAR(38)	<fk4>	null
Type_CL	VARCHAR(16)	<fk6>	null
Description	VARCHAR(255)		null
GPS_Parameters_ID	NUMBER(16)	<fk3,fk7>	null
GPS_Parameters_GUID	CHAR(38)	<fk7>	null
Standard_Dev	FLOAT		null
PDOP	FLOAT		null
HDOP	FLOAT		null
VDOP	FLOAT		null
TDOP	FLOAT		null
HPE	FLOAT		null
VPE	FLOAT		null
SATS	FLOAT		null
GAGE	FLOAT		null
DSIG	FLOAT		null
Date_Collected	DATE		null
Source_GCL	VARCHAR(16)	<fk5>	null
Comments	VARCHAR(255)		null

GPS_Parameters

GPS_Parameters_ID	NUMBER(16)	<pk,ak>	not null
GPS_Parameters_GUID	CHAR(38)	<ak>	null
Description	VARCHAR(50)		null
Date_Collected	DATE		null
Correction_Method_CL	VARCHAR(16)	<fk3>	null
Receiver_Type_CL	VARCHAR(16)	<fk4>	null
Source_GCL	VARCHAR(16)	<fk1>	null
Comments	VARCHAR(255)		null

Monument

Monument_ID	NUMBER(16)	<pk,ak>	not null
Monument_GUID	CHAR(38)	<ak>	null
Coordinate_GUID	CHAR(38)	<fk5>	null
Ref_Event_ID	NUMBER(16)	<fk1,fk3>	null
Ref_Event_GUID	CHAR(38)	<fk3>	null
Type_CL	VARCHAR(16)	<fk4>	not null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk4>	null
Comments	VARCHAR(255)		null

Profile

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Type_CL	VARCHAR(16)	<fk4>	not null
Elevation	NUMBER(8,1)		null
Elevation_OUOM	VARCHAR(16)	<fk3>	not null
Description	VARCHAR(255)		null
Source_GCL	VARCHAR(16)	<fk2>	null
Active_Indicator_LF	CHAR(1)		null
Comments	VARCHAR(255)		null

Road

Event_ID	NUMBER(16)	<pk,fk1,fk3>	not null
Event_GUID	CHAR(38)	<fk3>	null
Smart_Pigable_LF	CHAR(1)		null
Piggable_LF	CHAR(1)		null
Date_Last_Pigged	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk2>	null
Comments	VARCHAR(255)		null

Routing_Note

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Type_CL	VARCHAR(16)	<fk4>	not null
Source_Number	VARCHAR(16)		null
ANG_Degrees	NUMBER(3)		null
ANG_Minutes	NUMBER(2)		null
ANG_Seconds	NUMBER(2)		null
ANG_Direction	VARCHAR(16)		null
BRG_Degrees	NUMBER(3)		null
BRG_Minutes	NUMBER(2)		null
BRG_Seconds	NUMBER(2)		null
BRG_Easting	VARCHAR(21)		null
Scaled_GCL	VARCHAR(16)	<fk3>	null
Description	VARCHAR(255)		null
Source_GCL	VARCHAR(16)	<fk2>	null
Comments	VARCHAR(255)		null

Feature_Table

Feature_ID	VARCHAR(16)	<pk,fk5>	not null
Type_CL	VARCHAR(16)	<fk1>	not null
Category_CL	VARCHAR(16)	<fk2>	not null
Sort_Order	NUMBER(4)		null
Table_Name	VARCHAR(30)		not null
Gap_Rule_CL	VARCHAR(16)	<fk3>	null
Overlap_Rule_CL	VARCHAR(16)	<fk4>	null
History_Type_GCL	VARCHAR(16)	<fk5>	null
Source_GCL	VARCHAR(16)	<fk6>	null
History_Location_CL	VARCHAR(16)	<fk7>	null

Pipe_Segment

Event_ID	NUMBER(16)	<pk,fk1,fk12>	not null
Event_GUID	CHAR(38)	<fk12>	null
Manufacturer_CL	VARCHAR(16)	<fk2>	null
Date_Manufactured	DATE		null
Pipe_Mill_Location_GCL	VARCHAR(16)	<fk3>	null
Pipe_Seam_CL	VARCHAR(16)	<fk4>	null
Pipe_Specification_GCL	VARCHAR(16)	<fk5>	null
Pipe_Grade_GCL	VARCHAR(16)	<fk6>	null
SMYS_GCL	NUMBER(8)	<fk11>	null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk9>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk10>	null
Pipe_Length	NUMBER(4)		null
Joint_Type_CL	VARCHAR(16)	<fk7>	null
Material_CL	VARCHAR(16)	<fk8>	null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk1>	null
Comments	VARCHAR(255)		null

Launcher_Receiver

Event_ID	NUMBER(16)	<pk,ak,fk1,fk14>	not null
Event_GUID	CHAR(38)	<ak,fk14>	null
Name	VARCHAR(32)		null
Date_Installed	DATE		null
Closure_Valve_Length	NUMBER(5,2)		null
Closure_Reducer_Length	NUMBER(5,2)		null
Tray_Length	NUMBER(5,2)		null
Tray_Width	NUMBER(5,2)		null
Overbend_Radius	NUMBER(5,2)		null
Workshop_Near_Trap_LF	CHAR(1)		null
Trap_Pressure_Rating	NUMBER(5)		null
Trap_Closure_Type_CL	VARCHAR(16)	<fk6>	null
Trap_Status_CL	VARCHAR(16)	<fk7>	null
Electricity_Available_LF	CHAR(1)		null
Launcher_Receiver_LF	CHAR(1)		null
Trap_Angle	NUMBER(5,2)		null
Trap_Height	NUMBER(5,2)		null
Trap_Valve_Diameter_GCL	NUMBER(8,4)	<fk13>	null
Trap_Valve_Type_GCL	VARCHAR(16)	<fk9>	null
Kicker_Bypass_Location_CL	VARCHAR(16)	<fk10>	null
Kicker_Bypass_Diameter_GCL	NUMBER(8,4)	<fk12>	null
Kicker_Bypass_Length	NUMBER(5,2)	<fk11>	null
Reducer_Valve_Length	NUMBER(5,2)		null
Reducer_Wall_Thickness_GCL	NUMBER(8,4)	<fk10>	null
Reducer_Type_GCL	VARCHAR(16)	<fk8>	null
Reducer_Length	NUMBER(5,2)		null
Axial_Clearance_Width	NUMBER(5,2)		null
Axial_Clearance_Length	NUMBER(5,2)		null
Closure_Bolting_Diameter_GCL	NUMBER(8,4)		null
Closure_Bolting_Length	NUMBER(5,2)		null
Source_GCL	VARCHAR(16)	<fk3>	null
Comments	VARCHAR(255)		null

Branch_Connect

Event_ID	NUMBER(16)	<pk,ak,fk1>	not null
Event_GUID	CHAR(38)	<fk1>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk7>	null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk6>	null
Material_CL	VARCHAR(16)	<fk3>	null
Date_Manufactured	DATE		null
Specification_CL	VARCHAR(16)	<fk4>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Date_Installed	DATE		null
Source_GCL	VARCHAR(16)	<fk5>	null
Comments	VARCHAR(255)		null

Leak_History

Leak_ID	NUMBER(16)	<pk,ak>	not null
Leak_GUID	CHAR(38)	<ak>	null
Event_ID	NUMBER(16)	<fk1>	null
Event_GUID	CHAR(38)	<fk1>	null
Date_Leak	DATE		null
Telephonic_Report_Date	DATE		null
Leak_Rec_Report_Number	VARCHAR(32)		null
Environmental_Remediation_Cost	NUMBER(19,2)		null
Zip	VARCHAR(10)		null
State_GCL	VARCHAR(16)	<fk3>	null
Zip	NUMBER(9)		null
Leak_Report_Date	DATE		null
Planned_Repair_Date	VARCHAR(16)	<fk2>	null
Product_Subtype_SCL	VARCHAR(16)	<fk4>	null
Volume_Lost	NUMBER(16)		null
Leak_Repair_Cost	NUMBER(19,2)	<fk2>	null
Lost_Product_Cost	NUMBER(9,2)		null
Business_Interruption_Cost	NUMBER(9,2)		null
Description	VARCHAR(255)		null
Source_GCL	VARCHAR(16)	<fk4>	null
Comments	VARCHAR(255)		null

Pipe_Bend

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Type_CL	VARCHAR(16)	<fk3>	not null
Technique_CL	VARCHAR(16)	<fk4>	null
Bend_Radius	NUMBER(5,1)		null
Horiz_Angle	NUMBER(5,3)		null
Vert_Angle	NUMBER(5,3)		null
Fabricator_Name_CL	VARCHAR(16)	<fk2>	null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk6>	null
Comments	VARCHAR(255)		null

Flange

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Type_CL	VARCHAR(16)	<fk3>	not null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk7>	null
Manufacturer_CL	VARCHAR(16)	<fk2>	null
Date_Manufactured	DATE		null
Specification_CL	VARCHAR(16)	<fk4>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Material_CL	VARCHAR(16)	<fk5>	null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk6>	null
Comments	VARCHAR(255)		null

Test_Pressure

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Test_Type_CL	VARCHAR(16)	<fk2>	not null
Test_Date	DATE		null
Test_Medium_CL	VARCHAR(16)	<fk3>	not null
Test_Pressure	NUMBER(5)		null
Duration_Hours	NUMBER(3)		null
Test_Station	NUMBER(10,1)		null
Test_Station_Elev	NUMBER(5)		null
Max_Elevation	NUMBER(5)		null
Min_Elevation	NUMBER(5)		null
Test_Distance	NUMBER(9,1)		null
Min_Pressure	NUMBER(5)		null
Max_Pressure	NUMBER(5)		null
Description	VARCHAR(50)		null
Reason_CL	VARCHAR(16)	<fk4>	null
Pressure_Number	VARCHAR(16)		null
Source_GCL	VARCHAR(16)	<fk6>	null
Comments	VARCHAR(255)		null

Extrusion

Event_ID	NUMBER(16)	<pk,fk1,fk11>	not null
Event_GUID	CHAR(38)	<fk11>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Date_Manufactured	DATE		null
Nominal_Diameter_Inlet_GCL	NUMBER(8,4)	<fk9>	null
Nominal_Diameter_Outlet_GCL	NUMBER(8,4)	<fk10>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk7>	null
Nominal_Wall_Thick_Out_GCL	NUMBER(8,4)	<fk8>	null
Specification_CL	VARCHAR(16)	<fk4>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Material_CL	VARCHAR(16)	<fk5>	null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk6>	null
Comments	VARCHAR(255)		null

Fabrication

Event_ID	NUMBER(16)	<pk,fk1,fk4>	not null
Event_GUID	CHAR(38)	<fk4>	null
Fabricator_Name	VARCHAR(32)		null
Location_CL	VARCHAR(16)	<fk2>	null
Fabrication_Date	DATE		null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk3>	null
Comments	VARCHAR(255)		null

Extrusion_Opening

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk3>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk4>	null
Series_Brand	NUMBER(10)		null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk2>	null
Comments	VARCHAR(255)		null

Tee

Event_ID	NUMBER(16)	<pk,fk1,fk11>	not null
Event_GUID	CHAR(38)	<fk11>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Nominal_Diameter_Inlet_GCL	NUMBER(8,4)	<fk9>	null
Nominal_Diameter_Outlet_GCL	NUMBER(8,4)	<fk10>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk7>	null
Nominal_Wall_Thick_Out_GCL	NUMBER(8,4)	<fk8>	null
Specification_CL	VARCHAR(16)	<fk4>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Material_CL	VARCHAR(16)	<fk5>	null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk6>	null
Comments	VARCHAR(255)		null

Closure

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Date_Manufactured	DATE		null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk8>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk7>	null
Specification_CL	VARCHAR(16)	<fk4>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Material_CL	VARCHAR(16)	<fk6>	null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk1>	null
Comments	VARCHAR(255)		null

Pipe_Segment

Event_ID	NUMBER(16)	<pk,fk1,fk12>	not null
Event_GUID	CHAR(38)	<fk12>	null
Manufacturer_CL	VARCHAR(16)	<fk2>	null
Date_Manufactured	DATE		null
Pipe_Mill_Location_GCL	VARCHAR(16)	<fk3>	null
Pipe_Seam_CL	VARCHAR(16)	<fk4>	null
Pipe_Specification_GCL	VARCHAR(16)	<fk5>	null
Pipe_Grade_GCL	VARCHAR(16)	<fk6>	null
SMYS_GCL	NUMBER(8)	<fk11>	null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk9>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk10>	null
Pipe_Length	NUMBER(4)		null
Joint_Type_CL	VARCHAR(16)	<fk7>	null
Material_CL	VARCHAR(16)	<fk8>	null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk1>	null
Comments	VARCHAR(255)		null

Vent_Pipe

Event_ID	NUMBER(16)	<pk,fk1,fk11>	not null
Event_GUID	CHAR(38)	<fk11>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Date_Manufactured	DATE		null
Pipe_Mill_Location_GCL	VARCHAR(16)	<fk4>	null
Mill_Test_Pressure	NUMBER(5)		null
Material_CL	VARCHAR(16)	<fk10>	null
Pipe_Specification_GCL	VARCHAR(16)	<fk5>	null
Pipe_Grade_GCL	VARCHAR(16)	<fk6>	null
SMYS_GCL	NUMBER(8)	<fk9>	null
Nominal_Diameter_GCL	NUMBER(8,4)	<fk7>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk8>	null
Pipe_Long_Seam_GCL	VARCHAR(16)	<fk11>	null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk1>	null
Comments	VARCHAR(255)		null

Reducer

Event_ID	NUMBER(16)	<pk,fk1,fk11>	not null
Event_GUID	CHAR(38)	<fk11>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Nominal_Diameter_Outlet_GCL	NUMBER(8,4)	<fk8>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk9>	null
Nominal_Diameter_Inlet_GCL	NUMBER(8,4)	<fk7>	null
Nominal_Wall_Thick_In_GCL	NUMBER(8,4)	<fk10>	null
Specification_CL	VARCHAR(16)	<fk4>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Material_CL	VARCHAR(16)	<fk5>	null
Date_Manufactured	DATE		null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk6>	null
Comments	VARCHAR(255)		null

Valve

Event_ID	NUMBER(16)	<pk,fk1,fk11>	not null
Event_GUID	CHAR(38)	<fk11>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Nominal_Diameter_Inlet_GCL	NUMBER(8,4)	<fk7>	null
Nominal_Diameter_Outlet_GCL	NUMBER(8,4)	<fk8>	null
Type_CL	VARCHAR(16)	<fk4>	null
Model	VARCHAR(32)		null
Manufacturer_CL	VARCHAR(16)	<fk2>	null
Date_Manufactured	DATE		null
Mill_Test_Pressure	NUMBER(5)		null
Specification_CL	VARCHAR(16)	<fk3>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Nominal_Pressure_Rating_Inlet	NUMBER(5)		null
Nominal_Pressure_Rating_Outlet	NUMBER(5)		null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Joint_Type_CL	VARCHAR(16)	<fk5>	null
Material_CL	VARCHAR(16)	<fk6>	null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk1>	null
Comments	VARCHAR(255)		null

Elbow

Event_ID	NUMBER(16)	<pk,fk1,fk5>	not null
Event_GUID	CHAR(38)	<fk5>	null
Nominal_Diameter_Inlet_GCL	NUMBER(8,4)	<fk9>	null
Nominal_Diameter_Outlet_GCL	NUMBER(8,4)	<fk10>	null
Nominal_Wall_Thickness_GCL	NUMBER(8,4)	<fk7>	null
Type_CL	VARCHAR(16)	<fk2>	not null
Angle	NUMBER(5,3)		null
Radius	NUMBER(8,4)		null
Manufacturer_CL	VARCHAR(16)	<fk3>	null
Date_Manufactured	DATE		null
Specification_CL	VARCHAR(16)	<fk8>	null
Nominal_Pressure_Rating	NUMBER(5)		null
Mill_Test_Pressure	NUMBER(5)		null
Date_Installed	DATE		null
Description	VARCHAR(50)		null
Source_GCL	VARCHAR(16)	<fk4>	null
Comments	VARCHAR(255)		null

Offline_Feature

Feature_ID	VARCHAR(16)	<pk,fk5>	not null
Type_CL	VARCHAR(16)	<fk1>	not null
Category_CL	VARC