Corporate Production GIS Metadata

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Layer Name: Sanitary_Pipes

General Information

Layer Name:	Sanitary_Pipes
# of Features:	14745
Status:	ACTIVE
Layer Source:	GIS_DATA.SAN_PIPE
Layer Quality:	Good
Feature Accuracy:	+/- 1m
Type:	POLYLINE
Description:	Inventory of the sanitary pipe network.
Projection:	NAD 83 UTM Zone 17N (EPSG 26917)
Disclaimer:	The City of Kitchener assumes no responsibility for the accuracy of the provided data. Any use of this information is done so at the users risk. Good survey practices must be applied when utilizing this information. The City of Kitchener and its partners have created this data for information purposes on an as-is and as available basis and is under no circumstances a substitute for a Legal Survey. The City does not make any representations or warranty, express or implied, concerning the accuracy, quality, likely results, or reliability of the use of the data. The City of Kitchener assumes no responsibility for any errors and is not liable for any damages of any kind resulting from the use of, or reliance on, the information and material contained in this layer. All information should be verified independently before being used or relied on. Users are encouraged to contact the City of Kitchener to ensure the accuracy of the information provided by Kitchener.

Source and Contraints

Source Map Label:	Sanitary Sewer Pipe Network: Development & Technical Services - Engineering Design Construction (Approx. Sept 2004), Corporate Services - Information Technology - GIS (2004 - current)
History:	August 2004 - Conversion of DGN files maintained by Engineering into SDE September 1 2004 - Conversion of attributes from MS Access database maintained by Engineering into SDE May 2005 QC of convered attributes August 2005 started updating layer based on Service Agreement: DTS - Engineering : Sanitary, Storm Drainage, Road Infrastructure, Sidewalk, Survey Monumentation. Please see Sevice Agreement for details June 2005 Input of new Infrastructure
Original Source:	INS - Engineering
Original Source Process:	
Maintenance:	Service Agreement: DTS - Engineering : Sanitary, Storm Drainage, Road Infrastructure, Sidewalk, Survey Monumentation. Please see Sevice Agreement for details
Current Info Source:	The majority of sewer pipes were mapped using the 1997 aerial photography where manholes were visable in reference to paper as-built drawings. Based on the accuracy of the aerial photography and computer methods, the position of the pipe is expected to be within 1 meter of actual location over 90% of the time.
Outstanding Issues:	Backlog of New Infrastructure from 2002. 1999 Infrastructure with no Attributes, Prior to 1999 Infrastructure Attributes needed QC started.
Update Frequency:	CONTINUOUS

Data Fields & Domain Information

Sanitary_Pipes

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
OBJECTID	OBJECTID	NUMBER	ESRI system maintained integer field used to uniquely identify rows in tables in a geodatabase. Note that OBJECTIID values change upon export or import of the data and should not be used as a primary field for searching or identifying records.			
SANPIPEID	Sanpipe ID	NUMBER	Database maintained field that permanently assigns a unique value for each record. This ID value should be the one referred to when identifying a record.			
PARENTID	Parent ID	NUMBER	Input by GIS staff. Used when an an existing sanitary pipe is split for any number of reasons. The existing record is split into 2 or more individual records. The longest single existing record retains its SANPIPEID value and no value is entered into PARENTID, however for each of the remaining shorter existing records the original SANPIPEID value is copied into the PARENTID field, their SANPIPEID values are deleted and the database generates new SANPIPEIDs for the 2 or more new shorter records. This is done so that information, such as work orders, could be linked back to the records that have new SANPIPEID values.			
START_PIPE	is this the first pipe in a drainage basin	VARCHAR2	Input by GIS staff. Identifies if the sanitary pipe is the first pipe in a drainage basin (the highest elevation pipe in a gravity pipe flow network). Values are codes. The following uses the key 'CODE' ('DESCRIPTION'). The default value is 'X' ('X - TO INPUT'). Valid values are 'N' ('N - NO'), 'Y' ('Y - YES'). The value 'U' ('U - UNKNOWN') indicates that GIS staff do not know if the pipe is the highest elevation pipe.	YesNoOnly	N	No; Yes
SOURCE	Source: EDRA (Electronic Document Registration Application) document number	NUMBER	GIS maintained field. Source EDRA (Electronic Document Registration Application) document number, or name of department or specific staff member that the information came from.			
SOURCE_DATE	Source Date	DATE	GIS maintained field. Date of the source document or information.			
STATUS	Status	VARCHAR2	Indicates the status of feature. A pick list is used for this field - contact GIS for pick list values.	GISStatus	ACTIVE	ACTIVE; HISTORIC; PLANNED; UNKNOWN
CREATE_DATE	Create Date	DATE	Database maintained field. Updates to the current data/time. Update takes place when the feature is created.			
CREATE_BY	Create By	VARCHAR2	Database maintained field. Updates to the user name that created the feature. Update takes place when the feature is created.			
UPDATE_BY	Update By	VARCHAR2	Database maintained field. Updates to the user name that most recently updated either an attribute or the geometry of the feature. Update takes place when the feature is created and/or changed.			
UPDATE_DATE	Update Date	DATE	Database maintained field. Updates to the current data/time when an attribute or the geometry of the feature is changed. Update takes place when the feature is created and/or changed.			

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
ROADSEGMENTID	Roadsegment ID	NUMBER	Input by GIS staff. ROADSEGMENTID of the GIS_DATA.ROADSEGMENT layer feature that the majority of the sanitary pipe follows . A value of -1 indicates that the feature does not follow a road. Roadsegments must have a CATEGORY value of 'ROAD' or 'ROUNDABOUT' and a STATUS value of 'ACTIVE' , 'PLANNED', or 'REGISTERED'.			
PARCELID	Parcel ID	NUMBER	Reference Parcel ID that the feature is located in. The value is either manually entered or generated from a spatial join process.			
MAP_LABEL	Map Label	VARCHAR2	Database maintained field that combines the GIS length, and the WIDTH, SLOPE and MATERIAL field values.			
UP_SANMANHOLEID	Up Sanmanhole ID: upstream (defined by flow) end of the sanitary pipe flows from	NUMBER	Input by GIS staff. SANMANHOLEID of the GIS_DATA.SANMANHOLE layer feature that the upstream (defined by flow) end of the sanitary pipe flows from . A value of -1 indicates that the sanitary pipe does not have a upstream manhole.			
DN_SANMANHOLEID	Dn Sanmanhole ID: downstream (defined by flow) end of the sanitary pipe flows to	NUMBER	Input by GIS staff. SANMANHOLEID of the GIS_DATA.SANMANHOLE layer feature that the downstream (defined by flow) end of the sanitary pipe flows to . A value of -1 indicates that the sanitary pipe does not have a downstream manhole.			
ROADCONSTLIMITID	Road Construction Limit ID	NUMBER	This field is not being used at this time.			
QUARTER_GRID_ID	Quarter Grid ID	VARCHAR2	Input by GIS staff. GENERAL_GRID_ID value of the GIS_DATA.GRID_STANDARD_QUARTERED layer feature which the center of the sanitary pipe falls within. A value of -1 indicates that the feature does not fall inside a quarter grid.	GridQuarteredID		277-A; 407-C; 586-D; 587-A; 607-A; 607-B; 607-C; 607-D; 608-A; 608-B ...See GIS for a complete list...
TAG1	Tag1	VARCHAR2	Temporary location to store short term data for mapping purposes only.			
TAG2	Tag2	VARCHAR2	Temporary location to store short term data for mapping purposes only.			
TAG3	Tag3	VARCHAR2	Temporary location to store short term data for mapping purposes only.			
GIS_NOTES	Gis Notes	VARCHAR2	Open text field for outlining any problems or to highlight special characteristics of the feature specific to GIS.			
SHAPE	Cross sectional shape of the sanitary pipe.	ST_GEOMETRY	ESRI system maintained field. Stores the geometry type and geometry of the feature.			
CATEGORY	Category	VARCHAR2	Primary mapping field of the layer. Valid category values are:FORCEMAIN,GRAVITY,STUB,SYPHON	SanPipeCategory	GRAVITY	FORCEMAIN; GRAVITY; SLUDGE FORCEMAIN; STUB; SYPHON; UNKNOWN

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
OWNERSHIP	Ownership	VARCHAR2	Asset Owner: Who owns the feature, Generally Government agencies such as CITY, REGION and MTO and private citizens and businesses shown as PUBLIC. This usually relates to the property the asset sits on.	OwnershipClass	KITCHENER	CAMBRIDGE; DUAL CITY AND REGION; DUAL CITY AND WRDSB; PRIVATE; REGION; SCHOOL BOARD; UNKNOWN; WATERLOO; WELLESLEY; WILMOT ...See GIS for a complete list...
LENGTH	Length (m) from as-built drawing	NUMBER	Provided through as-built plan or digital submission. Length in metres of the sanitary pipe as given on the as-built drawing submitted.			
PIPE_SHAPE	Pipe Shape	VARCHAR2	Provided through as-built plan or digital submission. The cross sectional shape of the sanitary pipe. The default value is 'TO INPUT'. Valid values are 'ELLIPTICAL', 'OVAL', 'ROUND'. The value 'UNKNOWN' indicates that the submaterial of the sanitary pipe was not given or is unknown.	SanPipeShape	ROUND	ELLIPTICAL; OVAL; ROUND
WIDTH	Width (mm): Inside cross-sectional width of the sanitary pipe	NUMBER	Provided through as-built plan or digital submission. Inside cross-sectional width of the sanitary pipe in millimetres. The default value is '0'. Valid values are '50', '100', '125', '150', '200', '225', '250', '255', '300', '325', '350', '375', '400', '450', '500', '525', '600', '675', '750', '800', '825', '865', '900', '975', '1050', '1200', '1350', '1500', '1650', '1800', '2250'. A value of -2 indicates that the width was not given or is unknown.	SanPipeWidthHeight	0	0; 1050; 1200; 1350; 1500; 1650; 1800; 2250; 900; 975 ...See GIS for a complete list...
HEIGHT	Height (mm): Inside cross-sectional height of the sanitary pipe	NUMBER	Provided through as-built plan or digital submission. Inside cross-sectional height of the sanitary pipe in millimetres. The default value is '0'. Valid values are '50', '100', '125', '150', '200', '225', '250', '255', '300', '325', '350', '375', '400', '450', '500', '525', '600', '675', '750', '800', '825', '865', '900', '975', '1050', '1200', '1350', '1500', '1650', '1800', '2250'. A value of -2 indicates that the height was not given or is unknown.	SanPipeWidthHeight	0	0; 1050; 1200; 1350; 1500; 1650; 1800; 2250; 900; 975 ...See GIS for a complete list...
UP_INVERT	Up Invert: Elevation in metres of the upstream (defined by flow) low end of the inside bottom of a sanitary pipe	NUMBER	Provided through as-built plan or digital submission. Elevation in metres of the upstream (defined by flow) low end of the inside bottom of a sanitary pipe. The default value is <null>. Valid values should range between 260 and 450. The value -2 indicates that the down invert was not given or is unknown.			
DN_INVERT	Dn Invert: Elevation in metres of the downstream (defined by flow) low end of the inside bottom of a sanitary pipe	NUMBER	Provided through as-built plan or digital submission. Elevation in metres of the downstream (defined by flow) low end of the inside bottom of a sanitary pipe. The default value is <null>. Valid values should range between 260 and 450. The value -2 indicates that the down invert was not given or is unknown.			

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
SLOPE	Slope (%) of the sanitary pipe	NUMBER	Provided through as-built plan or digital submission. The slope, in percent, of the sanitary pipe. The default value is <null>. A value of -999999 indicates that the slope was not given or is unknown.			
MATERIAL	Material	VARCHAR2	Provided through as-built plan or digital submission. Material that the sanitary pipe is composed of. Values are codes. The following uses the key 'CODE' ('DESCRIPTION'). The default value is 'X' ('X - TO INPUT'). Valid values are 'AC' ('AC - ASBESTOS CEMENT'), 'BR' ('BR - BRICK'), 'CAS' ('CAS - CAST IRON'), 'CT' ('CT - CLAY TILE'), 'CP' ('CP - CONCRETE PIPE (NON-REINFORCED)'), 'CSB' ('CSB - CONCRETE SEGMENTS (BOLTED)'), 'CSU' ('CSU - CONCRETE SEGMENTS (UNBOLTED)'), 'CMP' ('CMP - CORRUGATED METAL PIPE'), 'DIP' ('DIP - DUCTILE IRON PIPE'), 'FRP' ('FRP - FIBERGLASS REINFORCED PIPE'), 'GRC' ('GRC - GLASS REINFORCED CEMENT'), 'HDPE' ('HDPE - HIGH DENSITY POLYETHYLENE'), 'OB' ('OB - PITCH FIBER (ORANGEBURG)'), 'PSC' ('PSC - PLASTIC/STEEL COMPOSITE'), 'PE' ('PE - POLYPROPYLENE'), 'PVC' ('PVC - POLYVINYL CHLORIDE'), 'RCP' ('RCP - REINFORCED CONCRETE PIPE'), 'RPM' ('RPM - REINFORCED PLASTIC PIPE (TRUSS PIPE)'), 'SP' ('SP - STEEL PIPE'), 'TTE' ('TTE - TRANSITE PIPE'), 'VCP' ('VCP - VITRIFIED CLAY PIPE'), 'WD' ('WD - WOOD'), 'ZZZ' ('ZZZ - OTHER'). The value 'XXX' ('XXX - UNKNOWN') indicates that the subtype of the valve was not given or is unknown.	SanPipeMaterial	XXX	AC - ASBESTOS CEMENT; PVC - POLYVINYL CHLORIDE; RCP - REINFORCED CONCRETE PIPE; RPM - REINFORCED PLASTIC PIPE (TRUSS PIPE); SP - STEEL PIPE; TTE - TRANSITE PIPE; VCP - VITRIFIED CLAY PIPE; WD - WOOD; XXX - UNKNOWN; ZZZ - OTHER ...See GIS for a complete list...
MATERIAL_CLASS	Material Class	VARCHAR2	Provided through as-built plan or digital submission. Submaterial that the sanitary pipe is composed of. The default value is 'TO INPUT'. Valid values are '65-D', '100-D', '100-D A257.2', '140-D', '140-D A257.2', '150-D', '160-D', '170-D', '175-D', '200-D', '200-D A257.2', 'ASTM C14', 'ASTM C76', 'CL-3', 'CL60-D A257.2', 'CL140-D A257.2', 'CL160-D A257.2', 'CSA 1824', 'CSA A257.1', 'CSA A257.2', 'DR 11', 'DR 17', 'DR 17 HDPE', 'DR 26', 'DR 35', 'SDR 28 CSA 182.2', 'SDR 35 CSA 182.2'. The value 'UNKNOWN' indicates that the submaterial of the sanitary pipe was not given or is unknown.	SanPipeMaterialClass		65-D; DR 11; DR 17; DR 17 HDPE; DR 21; DR 26; DR 35; SDR 28 CSA 182.2; SDR 35 CSA 182.2; UNKNOWN ...See GIS for a complete list...
LINER_YEAR	Year Liner Installed	NUMBER	Input by GIS staff. Indicates the year the sanitary pipe was lined. The default value is <null>. This data is provided by Engineering to GIS at the end of the reconstruction season.		-9999	
TRUNK_SEWER	Is sanitary pipe a trunk sewer.	VARCHAR2	Provided through as-built plan or digital submission. Indicates if the sanitary pipe is a trunk sewer. Values are codes. The following uses the key 'CODE' ('DESCRIPTION'). The default value is 'X' ('X - TO INPUT'). Valid values are 'N' ('N - NO'), 'Y' ('Y - YES'). The value 'U' ('U - UNKNOWN') indicates that the trunk sewer indication was not given or is unknown.	YesNoOnly	N	No; Yes

Column Name	Alias	Data Type	Comments	Domain Name	Default value	Domain Values
TRUNK_SEWER_NAME	Trunk Sewer Name (if applicable)	VARCHAR2	Provided through as-built plan or digital submission. The name of the trunk sewer. The default value is <null>. If the TRUNK_SEWER field value is 'Y' then a name is needed in this field. If the TRUNK_SEWER field value is 'N' then this field should be blank.			
INSTALLATION_YEAR	Installation Year	NUMBER	Year the asset was installed. Usually a database maintained field.			
ACQUISITION	how the city received or acquired the feature	VARCHAR2	Input by GIS staff. Identification of how the city received or acquired the feature. If the feature came through the subdivision process it is considered 'DONATED' and if not it is 'PURCHASED'	PSABAcquisition		DONATED; PURCHASED
ISSUE_NOTES	Issue Notes	VARCHAR2	Input by GIS staff. Open text field that is used to identify or list data issues of records.			
ENGINEERING_NOTES	Engineering Notes	VARCHAR2	Input by Engineering staff. Open text field for notes.			
CONSULTANT	Name of consultant that submitted drawings	VARCHAR2	Provided through as-built plan or digital submission. Open text field used to indicate the consultant that submitted drawings using the digital submission process set up in 2011.			
INSTALLATION_DATE	Installation Date	DATE	Date the feature was installed			
SAN_SUB_DRAINAGE_AREA	San Sub Drainage Area	VARCHAR2		SanSubDrainageArea		BIEHN; BRIDGEPORT; LOWER SCHNEIDER - UPPER DOON; NONE; UNKNOWN; UPPER SCHNEIDER - SHOEMAKER DIRECT; UPPER SCHNEIDER - UPPER SCHNEIDER DIRECT; UPPER SCHNEIDER - VICTORIA; UPPER SCHNEIDER - VOISON; UPPER SCHNEIDER - WESTMOUNT DIRECT ...See GIS for a complete list...
CTSPEC_HYPERLINK	CTSPEC_HYPERLINK	VARCHAR2				
PUMPING_STATION_DESTINATION	Pumping station destination	VARCHAR2				

*Layer Quality:
SCHEMATIC - spatial representation of features are not to scale and not in accurate relative position to other features on other layers.
GENERALIZED - position of features are approximate, should not be used in conjunction with base layers (parcel fabric or Ortho-imagery)
GOOD - position of features are usually based on relative position to base layers (Ortho-imagery or parcel fabric)

Note: Dataset may not include all fields: Open Data layers will only include fields approved for sharing as open data

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