



Town of Zionsville | 1100 West Oak Street | Zionsville, Indiana 46077 | www.zionsville-in.gov

Town of Zionsville Record Drawing and Digital Data Submittal Requirements

March 2022

Purpose:

This document outlines the submittal requirements and process for providing Record Drawings and associated Digital Data to the Town of Zionsville for any new Street, Sanitary Sewer and Stormwater infrastructure that is constructed within the Town of Zionsville.

Submission Requirements:

Within 60 days of final completion of construction, the responsible entity (Developer, Contractor, etc.) or their designee shall submit the required data to the Town of Zionsville, Public Works Department, Engineering Division. The required data shall consist of:

- a. Record Drawings in PDF format
- b. Digital Data for incorporation into the Town's GIS system for all Stormwater infrastructure within the Town Limits and any Sanitary Sewers within the Town's Service area.

Record Drawings:

Record Drawings shall consist of a set of the project Construction Drawings in Adobe PDF format meeting the following requirements:

- a. Each page stamped by the preparer indicating the drawings to be Record Drawings and certifying their accuracy.
- b. The drawings shall be the approved Construction Drawings with legible red-line mark-ups of any changes as made during construction. Changes include any substantive modification in the project such as locations, elevations, slopes, pipe sizes, materials, structure or casting types, or any other aspects of the project that are covered by the plans.
- c. Final elevations and locations shall be as surveyed following construction. The final elevations, lengths and slopes shall be indicated next to marked-out design values on each plan sheet. If locations changed, the new location shall be shown in red and the original location marked-out.
- d. All changes and final elevations shall be red in color on the pdf document.
- e. The submitted .pdf file must be legible, contain all As-Built data including the profile sheets, and be reproducible to scale. The files must be a minimum of 300 dpi and rotated properly.

Stormwater requirements: The Town's Stormwater Ordinance (Sec 50.098) lists specific requirements of information to be included on the "as-built" plans. These include:

1. Pipe size and pipe material;
2. Invert elevations;
3. Top rim elevations;
4. Elevation of the emergency overflow (spillway) for ponds;
5. Grades along the emergency flood routing path(s);
6. Pipe structure lengths;
7. BMP types, dimensions and boundaries/easements;
8. "As-planted" plans for BMPs, as applicable;
9. Data and calculations showing detention basin storage volume;
10. Data and calculations showing BMP treatment capacity; and
11. Certified statement on plans stating the completed storm drainage system and storm water management facilities substantially comply with construction plans and the storm water management permit as approved by the Town. (See certificate in the *Storm Water Technical Standards Manual*.)

Note that if there are any significant discrepancies in the as-built conditions when compared to the design plans, the Town may request that the Design Engineer provide additional supporting documentation indicating that the project will perform in an acceptable manner.

Digital Data:

Digital Data for incorporation into the Town's GIS system shall also be provided. The Digital Data shall have the construction changes incorporated, (as noted in the Record Drawing mark-ups).

- a. The data shall be provided in two formats:
 1. an Autocad Map .dwg file utilizing Object Data Tables. A template drawing with the appropriate Object Data Tables created is included with these standards.
 2. ESRI Shape files. An individual set of shapefiles shall be created for each applicable layer on which data is present.
- b. The object data tables and shape files shall be populated in accordance with the attached Layer and Attribute List which provides definitions and parameters for the attributes on each layer.
- c. The coordinate system for the drawing shall be: Indiana State Plane – West – NAD 83 – US Feet.
- d. Storm - Data shall be provided for all public and private storm drainage systems and BMP's
- e. Sanitary - Data shall be provided for all sanitary sewer facilities served by the Town's wastewater utility.
- f. Infrastructure line work must be continuous polylines with a beginning and ending at a structure insertion point, connecting only two structures per line. Lines must be drawn with the direction of flow.

Attachments:

- Zionsville Digital Data Submission Layer and Attribute List
- TOZ ODT Template 2022.dwg

TOWN OF ZIONSVILLE
Digital Data Submission Layer and Attribute List

In the entries below, the layers to be provided are listed in bold. The attributes to be provided for each layer are listed beneath it along with definitions describing the data to be provided for each.

Storm Sewers

Storm Pipes	Object Type - POLYLINE
Number	Unique ID# to be assigned by TOZ - Leave Blank
Diameter	Nominal Pipe Diameter in Inches
Material	Pipe Material. RCP, PVC, HDPE, CMP, DI - If other, use most common abbreviation
Length	Nominal Length of Pipe in Whole Feet
Calc_Lnth	Length of Pipe as drafting program
Location	Description of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Condition	Leave Blank for New Infrastructure
Slope	The slope of the pipe - digits only as percent slope - 0.4% slope to be written as 0.4 in table
Upstr_Inv	Invert Elevation of the Upstream End of Pipe. XXX.XX
Dwnstr_Inv	Invert Elevation of the Downstream End of Pipe. XXX.XX
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Date_Inst	Date of Installation - MM/DD/YYYY
Storm Structures	Object Type - POINT
Str_Number	Unique ID# to be assigned by TOZ - Leave Blank
Arch_Number	ID# of structure on construction plans
Lid_Type	Grate or Solid
Str_Type	Manhole or Inlet
Str_Material	Structure Material - Precast, Cast-in-Place, Brick, Block, Other
Str_Dim	Structure Dimensions - round structures: 48" DIAM; Squire or Rect: 30" x 30"
Str_Depth	Structure Depth in Inches - XX.X
Sump	Is the structure sumped - Yes or No
Cast_Type	Casting Type - Model Number or INDOT Casting No.
Cast_Dim	Nominal Dimensions of Casting in inches
Location	Description of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Condition	Leave Blank for New Infrastructure
Condition Rating	Leave Blank for New Infrastructure
Rim_Elev	Rim Elevation in Feet - XXX.XX
Inv_1_Out	Invert Elevation of Pipe leaving the Structure - XXX.XX
Inv_2	Add additional Invert Elevations of incoming Pipes listed clockwise from the outlet pipe - XXX.XX
Inv_3	
Inv_4	
Inv_5	
Curb_Elev	Leave Blank for New Infrastructure
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Str_Found	Leave Blank for New Infrastructure
Date_Inst	Date of Installation - MM/DD/YYYY
Latitude	Leave Blank for New Infrastructure
Longitude	Leave Blank for New Infrastructure

Storm Outfalls	Object Type - POINT
Number	Unique ID# to be assigned by TOZ - Leave Blank
Drawing Number	Drawing Number where Outfall is shown in Plan Set
Material	Pipe Material. RCP, PVC, HDPE, CMP, DI - If other, use most common abbreviation
Diameter	Nominal Pipe Diameter in Inches
Invert	Invert Elevation - XXX.XX
Location	Description of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Descr	Description of Outfall - "Outlet to Pond No. 3" or "Outlet to Eagle Creek", etc.
Condition	Leave Blank for New Infrastructure
End_Sect	End Section Present - Yes or No.
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Latitude	Provide in decimal format to 6 digits XX.XXXXXX
Longitude	Provide in decimal format to 6 digits XX.XXXXXX
Subsurface Drains	Object Type - POLYLINE
Number	Unique ID# to be assigned by TOZ - Leave Blank
Diameter	Nominal Pipe Diameter in Inches
Material	Pipe Material. PVC or HDPE If other, use most common abbreviation
Length	Nominal Length of Pipe in whole Feet
Calc_Lenth	Length of Pipe as drafting program
Location	Description of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure
Condition	Leave Blank for New Infrastructure
Slope	The slope of the pipe - digits only as percent slope - 0.4% slope to be written as 0.4 in table
Upstr_Inv	Invert Elevation of the Upstream End of Pipe. XXX.XX
Dwnstr_Inv	Invert Elevation of the Downstream End of Pipe. XXX.XX
Ownership	Responsible Entity - Zionsville, Boone County, or Private
Date_Inst	Date of Installation - MM/DD/YYYY
Storm Cleanouts	Object Type - POINT
Number	Unique ID# to be assigned by TOZ - Leave Blank
Description	Description of Location - Subdivision and/or Street Name
Stormwater BMP's	Object Type - POINT for individual structures; POLYLINE outline for ponds
Number	Unique ID# to be assigned by TOZ - Leave Blank
Project Name	Name of Project or Subdivision
Address/Location	Closest Street Addresss or "Common Property"
Ownership	Public or Private
Type	Type of BMP - Wet Detention, Dry Detention, Sump/Snout Catch, Hydrodynamic Separator, Bio-Retention, etc. Use names as included in the Indiana Storm Water Quality Manual as applicable.
Model	Model Number if Manufactured Unit
Contact Name	Name of Contact Responsible for Maintenance
Owner Name	Association, Company or Individual
Owner Address 1	Mailing Address of Owner
Owner Address 2	City, State and Zip of Owner
Year Installed	Year of Installation
Inspection Date	Leave Blank for New Infrastructure
Maintenance Date	Leave Blank for New Infrastructure
Comments	Leave Blank for New Infrastructure
O&M On File	Yes or No
Str_Number	Cross Reference to Drainage Structure No. if Applicable, Leave Blanks
Normal Pool Elev	Normal Pool Elevation if Wet Detention - XXX.XX
100 Yr Elev	100 yr Pool Elevation if Wet or Dry Detention - XXX.XX
Top of Bank Elev	Top of Bank Elevation if Wet or Dry Detention - XXX.XX

Sanitary Sewers

San Pipes	Object Type - POLYLINE
Facility ID	Unique ID# to be assigned by TOZ = to Upstream MH Number - Leave Blank
Arch_Number	ID# of upstream MH structure on construction plans
Ownership	Public or Private
Size	Nominal Pipe Diameter in Inches
Type	Pipe Material. PVC, HDPE, DI - If other, use most common abbreviation
Calculated Length	Length of Pipe as drafting program
Date Installed	Date of Installation - MM/DD/YYYY
CIPP	Leave Blank for New Infrastructure
Comments	Leave Blank for New Infrastructure
Location	Description of Location - Subdivision and/or Street Name
Basin	Leave Blank - To be Populated by TOZ
Checked	Leave Blank for New Infrastructure
Source Length	Nominal Length of Pipe in Whole Feet
Slope	The slope of the pipe - digits only as percent slope - 0.4% slope to be written as 0.4 in table
Downstream ID	To be assigned by TOZ - Leave Blank
Class	Indicate Pipe Thickness - PVC SDR 35 or SDR 26, HDPE DR XX,
Avg Depth	Average Depth in Feet - X.X
Upstream Inv	Invert Elevation of the Upstream End of Pipe. XXX.XX
Downstream Inv	Invert Elevation of the Downstream End of Pipe. XXX.XX
Project	Name of Project or Subdivision
Source	For new infrastructure fill in - Record Drawings
Ver Ref	Leave Blank for New Infrastructure
Eng Comp	Design Engineering Company Name
San Force Main	Object Type - POLYLINE
Facility ID	Unique ID# to be assigned by TOZ = to Upstream MH Number - Leave Blank
Ownership	Public or Private
Diameter	Nominal Pipe Diameter in Inches
Material	Pipe Material. PVC, HDPE, DI - If other, use most common abbreviation
Class	Indicate Pipe Thickness - PVC SDR 35 or SDR 26, HDPE DR XX,
Length (calc)	Nominal Length of Pipe in Whole Feet
Location	Description of Location - Subdivision and/or Street Name
Comments	Leave Blank for New Infrastructure

San Manhole	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ = to Upstram MH Number - Leave Blank
Arch_Number	ID# of structure on construction plans
Ownership	Public or Private
Curb Elev.	Leave Blank for New Infrastructure
T.C.	Rim Elevation in Feet - XXX.XX
Numb Inverts	Total number of pipes entering and Leaving the structure.
Invert .1	Invert Elevation of Pipe leaving the Structure - XXX.XX
Invert .1 Dir	Direction of Pipe Leaving the Structure (N,W,S,E, etc)
Invert .2	Add additional Invert Elevations and Direction of incoming Pipes listed clockwise from the outlet pipe - XXX.XX
Invert .2 Dir	
Invert .3	
Invert .3 Dir	
Invert .4	
Invert .4 Dir	
Ground Elev.	Elevation of Ground at MH if different than Rim XXX.XX
Frame Bolt Down	Yes or No
Lid	For new Infrastructure - "Closed"
Structure Type	Structure Material - Precast, Cast-in-Place, Brick, Block, Other
Steps	Yes or No
Condition of Steps	Leave Blank for New Infrastructure
Condition of MH	Leave Blank for New Infrastructure
MH Found	Leave Blank for New Infrastructure
Date Installed	Date of Installation - MM/DD/YYYY
Comments	Leave Blank for New Infrastructure
Location	Description of Location - Subdivision and/or Street Name
Depth Measure Down	Leave Blank for New Infrastructure
Barrel Diameter	Interior Diameter of MH in Inches
Barrel Material	Indicate MH Material - Should be RCP for new MH's
Wall	Entries in existing say "No"
Wall Type	Leave Blank for New Infrastructure
Prop Manhole	Leave Blank for New Infrastructure
Rehabbed	Leave Blank for New Infrastructure
Rehab Date	Leave Blank for New Infrastructure
MH Depth Calc	Difference between Rim Elevation and Lowest Invert in feet - X.X
MH Depth Measured	Leave Blank for New Infrastructure
Drop MH	Yes or No
San Laterals	Object Type - POLYLINE
Facility ID	Unique ID# to be assigned by TOZ - Leave Blank
Ownership	Public or Private
LOT_NUM	Subdivision Lot Number Served
ADDRESS	Address Served
TYPE	Residential, Commercial, Industrial or Other
MAIN_ID	To be assigned by TOZ = to upstram MH number
DIST_BACK	Distance of Lateral From Downstream MH
PIPE_LEN	Lateral Length in Feet from Main
DIAMETER	Nominal Pipe Diameter in Inches
MATER	Pipe Material. PVC, HDPE, DI - If other, use most common abbreviation
CONNECT	Connection Type - WYE or TEE
ENG_CMPY	Design Engineering Company Name
AB_ID	Name of Record Drawing Plan Set
DEVELOPER	Name of Developer
Comments	Leave Blank for New Infrastructure

San Cleanouts	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ - Leave Blank
Cleanout ID	Leave Blank for New Infrastructure
Ownership	Public or Private
Comments	Plan Set Where the Cleanout is Shown.
Sanitary Valve	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ - Leave Blank
Ownership	Public or Private
Feature Name	Number or Label on Design Plans - ARV-01, etc.
Type	Valve Type - ARV, Plug Valve, Check Valve, etc.
T.C.	Rim Elevation in Feet - XXX.XX
Inv.	Invert of Pipe at Valve - XXX.XX
Location	Description of Location - Subdivision and/or Street Name
Source	For new infrastructure fill in - Record Drawings
Comment	Leave Blank for New Infrastructure
Lift Stations	Object Type - POINT
Facility ID	Unique ID# to be assigned by TOZ = to Upstream MH Number - Leave Blank
Lift Station Name	Name of Lift Station - Consult with Town
Address/Nearest Int	Closest Street Address or Street Intersection
Ownership	Public or Private
Type	Lift Station Type - Submersible, Dry Pit, Etc.
Number of pumps	Indicate All Information as Available
Pump Manufacturer	
Pump Model	
Impeller	
SN1	
SN2	
HP	
Voltage	
Phase	
Force Main Size(in)	
Install Date	Date of Installation - MM/DD/YYYY
Gen. Mfg.	Generator Manufacturer
Gen. Model	Generator Model No.
SN3	Serial Number of 3rd Pump, if applicable
SN4	Serial Number of 4th Pump, if applicable
SN5	Serial Number of 5th Pump, if applicable
Designed Pump Rate	Design Pumping Rate in GPM
TDH	Total Dynamic Head Rating at Design Pumping Rate - FT
Wet Well Diameter	Wet Well Diameter in Inches
Inv 1 Measure Down	Indicate Invert Elevation of Incoming Sewer No. 1
Inv 2 Measure Down	Indicate Invert Elevation of Incoming Sewer No. 2, if applicable
Wet Well Depth	Depth in Feet from Rim to Floor - X.X
RPM	Pump Motor RPM
Comments	Indicate other Pertinent Information - Are Pumps on VFD's