

NEW GARDEN TOWN CENTER

Stormwater Management As-Built Plan Requirements

As-Built Plans

Prior to acceptance or occupancy of site improvements, the applicant shall prepare and submit a corrected copy of the construction showing the actual horizontal and vertical locations and dimensions of all features built as part of the project. As-built documents shall be reviewed and approved by the Township prior to dedication or issuance of an occupancy permit.

The digital as-built plans will be subject to the following criteria:

- Buildings

The drawings shall show the buildings and appurtenances including any impervious surfaces by horizontal and vertical location.

- Water lines

- o Placement shall be monitored continuously during construction and the depth from the surface recorded at no greater than 50 foot intervals. Deflections which require thrust blocking shall be located horizontally.
- o All valves shall be located horizontally and the operating stem shall be located vertically to the site datum.

- Sanitary Sewer

- o Force mains:
 - Placement shall be monitored continuously and the depth from the surface recorded at no greater than 50 foot intervals. Deflections shall be located horizontally and vertically.
 - All valves and cleanouts shall be located horizontally and the stem shall be located vertically to the site datum.
 - All high points along the force main shall be located horizontally and vertically.
 - All new and existing utility crossings shall be located horizontally and vertically.
 - As-built information for wet wells and valve pits shall include at a minimum the horizontal location of the covers or hatch, vertical locations of top, inflow inverts and discharge points and bottom elevation.
- o Gravity Lines:
 - Gravity manholes shall be located horizontally with in/out and size called out by direction.
 - Tops, in/out and bottom inverts of all manholes shall be located vertically to site datum
 - All gravity sewers shall be flushed with clean water, CCTV inspected and video taped prior to dedication. CCTV inspection procedures shall be submitted to the Township for approval prior to commencing with the inspection. Tapes of the inspection shall be provided to the Township for review and approval.

Exhibit "Q"

- Storm Sewers:
 - Manholes and inlets shall be located horizontally with in/out and size called out by direction.
 - Tops, in/out and bottom inverts of all manholes shall be located vertically to site datum.
 - Culverts shall be located horizontally and vertically by centerline invert with rise and span noted.
- Stormwater BMPs:
 - Bioretention Areas will be located in terms of horizontal extents, depth and collection/distribution manifolds (size and invert).
 - Information on Water Quality Inlets shall note location, size and manufacturer.
 - Subsurface Infiltration Bed areas will be located in terms of horizontal extents, depth and collection/distribution manifolds (size and invert). Geometry for outlet works shall include a description of the structure, top elevation, outlet pipe size/invert and orifice size and configuration.
 - Detention/Retention Basins shall be as built in enough detail, either by survey or aerial detail to confirm the storage as a function of elevation and the spillway length and elevation. Geometry for outlet works shall include a description of the structure, top elevation, outlet pipe size/invert and orifice size and configuration.
 - Riparian Buffer Restoration shall note locations of work by stream station with number and varieties of plants installed.
 - Stream bank Stability restoration efforts shall be monitored by the design engineer and a representative of the Township during construction. Dimensional measurements shall be recorded after construction in sufficient detail to confirm that the installation meets the design intent.
 - Submit calculations based upon as-built conditions demonstrating that the stormwater BMP will function equivalent to the approved design.
- Plan Content
 - Plans and profiles shall be developed which accurately depict the as-built condition of all features. Pre-existing infrastructure shall be differentiated from new features, and any information which is assumed shall be noted.
 - Plans shall contain a certificate of accuracy for the transfer of construction notes and documentation to the plans by a Professional Engineer and for the surveyed information by a Licensed Surveyor.
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- Landscaping

These as-built drawings shall show any changes in the species and locations.