



NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION

GREEN INFRASTRUCTURE



PROCEDURE GOVERNING

LIMITED SURVEY

FOR

GREEN INFRASTRUCTURE

JULY 2017

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Appendix A: ROWB, ROWRG, and ROWIB Limits of Survey

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Limited Survey

1 General

Prior to commencing design for Green Infrastructure, a Limited ROW GI Survey (GI Survey) is required to gather information on topography, surface/subsurface features, trees, utilities, and vaults within the defined survey area.

A licensed New York State Land Surveyor shall carry out the GI Survey and prepare, stamp, and sign the GI Survey Drawings for submittal to BEDC GI.

2 Limits of Survey

GI Survey limits are defined by the following guidelines:

For ROWBs, ROWRGs, and ROWIBs:

The survey area extends 10 horizontal feet in all directions beyond the perimeter of each ROW Practice (see Appendix A: ROWB, ROWRG, and ROWIB Limits of Survey).

For ROWSGSs, ROWPPs, and ROWSBs:

The survey area will be determined on a site-specific basis. The surveyor must coordinate with BEDC GI, DPR, and DOT to establish the boundaries for the GI Survey.

All GI Surveys must also show the following which may be outside of the survey area defined above:

- Distance from the nearest property line to the ROW Practice limits.
- Distance from the building line adjacent to the ROW Practice limits, if any, including locations of all entrances (e.g. doors and gates) that fall within the projection of the survey of the ROW Practice (see Appendix A).
- Street width (property line to property line).
- Roadway width (curb line to curb line).
- Boring and Permeability Test locations

3 Required Survey Information

3.1 Topographic Information

The GI Survey must collect and show the required following information:

- All existing elevations, including high and low points, within the defined survey area (as per **Section 2**). All elevations shall be shown in feet (ft) and referenced as per **Section 4 Requirement for GI Survey Drawings**.
- Contours lines, drawn at 0.5 ft-intervals
- Northing and Easting coordinates at the upstream curb-side corner of each ROW Practice with the exception of ROWSB, where the coordinates should be taken from the center of the practice.

3.2 Surface Features

The GI Survey will identify and show the following features within the survey area (defined in **Section 2**):

- North direction
- Street names
- Legal right-of-way width of the street
- Roadway width (curb to curb)
- Elevations and Street Grades
- Distances to intersections
- Common surface features:
 - Utility castings and overhead utility lines (including but not limited to manholes, fire hydrants, catch basins, etc.)
 - Curb reveal (top of curb/bottom of curb elevations)
 - Curb material
 - Curb condition
 - Existing street furniture (including but not limited to fences, sign poles, traffic signals, light and utility poles, guy wires, muni meters, bike racks, newsstands, etc.)
 - Tree centerline, diameter at breast height (DBH) and drip line locations
 - Tree stump centerline and diameter
 - Tree pit extents
 - Driveways, curb cuts, crosswalks, ramps, and stairwells
 - Existing buildings and structures
 - Building doors, doorways, gates, and building/property entrances
 - Bus stops, bus stop shelters and signs
 - Subway entrances and exits
 - Sidewalk and roadway surface materials
 - Pavement markings

3.3 Sub-surface Features and Utilities

The GI Survey will provide sub-surface information to the maximum extent practicable. This information includes vertical alignment, horizontal alignment, dimensions, type, and cover for utilities, including but not limited to gas lines, electric lines, material communication lines, etc.

Water service tap cards and sewer house connections cards must be requested from the appropriate agency. These records are to be provided to the construction contractors.

3.4 Vaults

A vault or protruded basement investigation shall include the locations and limits of vaults or protruded basements within the survey area. Sub-surface vaults may include utility vaults, basements, basement extensions, etc.

For ROW GI practices sited 7 ft - 10 ft from a building, a vault investigation must be performed. Vault investigation shall consist of a visual inspection and at a minimum captures the following information:

- Basement information (width, depth of slab below street or sidewalk grade, extension into sidewalk beyond building line, etc.).
- Visual signs on walls and slab of existing water damage (especially on the wall adjacent to the street/sidewalk).
- Note regarding presence of and location of a sump pump.
- Location of where service lines enter/exit (includes but not limited to water service, house connection, gas, electrical, etc.).
- A recommendation whether to proceed or reject the GI Practice based on information available.
 - An HDPE barrier installed as per DEP Standards for Green Infrastructure with a 1.0 ft toe, must be installed at the back of the ROW GI (between ROW GI and Building Line).
 - Bioswale is within 7'-10' of the building line -> vault survey -> no water damage -> use HDPE
 - Bioswale is within 7'-10' of the building line -> vault survey -> water damage -> REJECT

4 Requirement for GI Survey Drawings

The GI Survey drawings must:

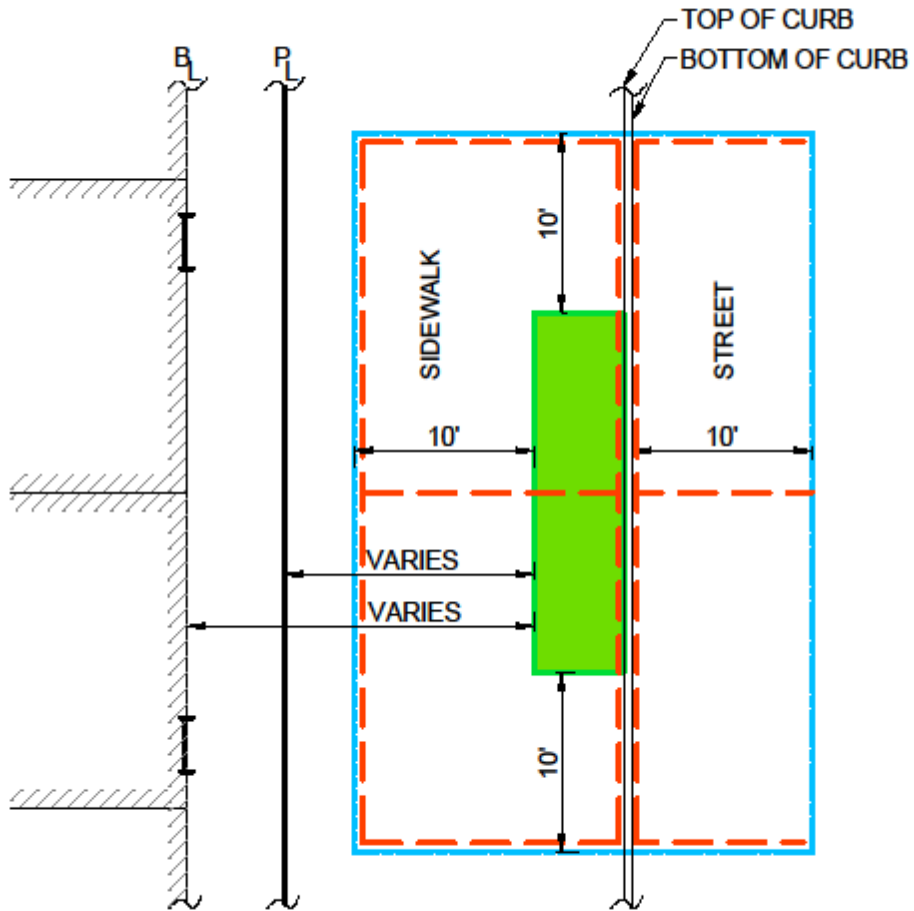
- Include all information from **Section 3**
- Display all information using the symbols in Appendix B: GI Drawing Legend
- Use North America Vertical Datum of 1988 (NAVD 88) for vertical data
- Use NAD 1983 State Plane New York, Long Island FIPS 3104 Feet for horizontal data

- Clearly indicate the datum used and provide a conversion to the local Borough Sewer datum on the contract plans.

All survey drawings must be stamped and signed by a licensed New York State Land Surveyor and submitted to BEDC GI in the two following formats:

- AutoCAD 2008 or higher
- 22" x 34" Mylar (3 mil thick)

Appendix A: ROWB, ROWRG, and ROWIB Limits of Survey



LEGEND



LIMITS OF SURVEY



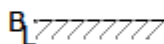
ROWB OR ROWRG



SPOT ELEVATION TRACK LINES



PROPERTY LINE



BUILDING LINE



ENTRANCE

Appendix B: GI Drawing Legend

