

VILLAGE OF ROMEOVILLE  
RECORD DRAWINGS CHECKLIST

PART I GENERAL

Record drawings are required to provide a means of schematic verification that the intent of the approved engineering design has been met, thereby substantiating that the health, safety, and welfare aspects of the engineering design have been adequately provided by the construction of the project. Secondly, record drawings serve as a reference tool for future location and maintenance operations. The following requirements will be applied to each set of Record Drawings developed for the Village of Romeoville.

1.1 GENERAL RECORD DRAWING REQUIREMENTS

- A. The first sheet of the set will have a vicinity map in the upper right hand corner.
- B. Record drawings shall be submitted as revisions shown on the original Engineering Plans and as AutoCAD (version 2004) files. Record drawings will have the original data lined through and the Record data added to the drawing. At no time will the original data be accepted as the Record data.
- C. All record drawings for major projects are required to be 24" x 36" and shall bear the name, address, and telephone number of the firm preparing the drawing and the date the record data is added to the original via the revision block.
- D. Surveyor's/Engineer's statement (with embossed or wet seal and with original signature on each sheet) shall verify that the record drawings reflect the true conditions in the field.
- E. Contractor's statement (with original signature on each sheet) shall verify that all construction specifications and product qualities have been met or exceeded.
- F. "Record Drawing" shall be labeled on each sheet in 1-inch high letters.
- G. Street names shall be shown on all streets.
- H. If the utility system is to be private (not to be dedicated to local authority), then indicate on each sheet.
- I. The location and elevation of the benchmarks referenced will be shown on the drawing. If the referenced benchmarks are not within the project limits, then complete descriptions of locations must be provided.
- J. Show all easements within the project limits on the record drawings
- K. All as-constructed elevations must be referenced to the same bench mark datum as the original approved design plans.

## 1.2 WATER SYSTEM RECORD DRAWING REQUIREMENTS

- A. Locate valves, fittings, services (b-boxes), shut-off valves, and fire hydrants in two directions (station and offset).
  - 1. Locations shall be perpendicular to the right-of-way and parallel to the water main.
    - a. Lot lines may be used to locate water services.
    - b. Permanent structures that are properly located may also be used.
    - c. Radial ties are not acceptable.
  - 2. All horizontal distances shall be shown to the nearest foot. All vertical distances shall be shown to the nearest tenth of a foot.
- B. Show all materials, sizes, and types of valves, pipes, and fittings.
- C. Elevations shall be given for the top of all manhole covers and for top of pipe.
- D. Special detail drawings will be required where installations are not shown on approved engineering drawings for whatever reason or where required for clarity.
- E. Show location and elevations for pipes and fittings where changes in direction occur.
- F. Show linear distances along watermain from appurtenance to appurtenance (i.e., valve vault to tee, tee to bend, bend to valve, etc.)
- G. Details for water services deviating from typical installation details of the approved engineering plans shall be noted on the record drawings.

## 1.3 SANITARY SEWER SYSTEM RECORD DRAWING REQUIREMENTS

- A. All piping, wyes, tees, valves, cleanouts, manholes and special cases shall be located in two directions, in the same manner as water locations.
- B. Horizontal dimensions shall be to the nearest foot. Vertical elevations shall be to the nearest hundredth of a foot.
- C. Identify the length, size, material, and slope of all piping( i.e., 300 feet of 8" PVC SDR 35 at 0.4%).
- D. Elevations shall be given for the top of all manhole covers and for the inverts of all pipes entering/exiting each manhole.
- E. Service laterals are to be identified with location of end service / plug (station and offset measured upstream).
- F. Details for drop manholes deviating form the details on the approved engineering plans shall be indicated on the record drawings.
- G. Provide copies of all testing records and video tapes of all sanitary lines.

1.4 FORCE MAINS RECORD DRAWING REQUIREMENTS

- A. Locate all valves, fittings, etc. in two directions in the same manner as water locations.
- B. Locations of fittings shall be shown at all changes in direction.
- C. Elevations shall be given for the top of all manhole covers and for the inverts of all pipes entering/exiting each manhole.
- D. Show all sizes, materials, and types of valves, fittings, pipe, etc.
- E. Special detail drawings will be required where installations are not as shown on the approved drawings for whatever reason.

1.5 PUMP STATION RECORD DRAWING REQUIREMENTS

- A. Wetwell size and location shall be shown along with high and low water levels.
- B. Elevations for top, bottom, inverts, adjacent ground and type and size of lines and fittings for all lines entering or leaving the wetwell.
- C. All schedules which show pump, motor and electrical data shall be amended and shall be submitted with wetwell drawings.
- D. All improvements within the pump station boundaries shall be located horizontally and vertically to the nearest tenth of a foot (i.e., valve pit, pump-out, water spigot, wetwell, control panel, bends, fittings, etc.).
- E. Copies of all Operation and Maintenance Manuals (three copies minimum) including pump curves.

1.6 DRAINAGE SYSTEM RECORD DRAWING REQUIREMENTS

- A. All drainage structures shall be located by station and offset from right-of-way line.
- B. Elevations shall be given for the top of all manhole covers and for the inverts of all pipes entering/exiting each manhole.
- C. Per the Will County Storm Water Ordinance, any on-site field tiles which remain on-site must be identified on record drawings.
- D. Identify size, material, and slope of all piping.
- E. Provide spot elevations and cross sectional information, as well as slope, on all ditches, canals, etc.
- F. "Record" information required on storm water basins shall consist of:
  - 1. Topographic map of the detention area.
  - 2. Spot elevation on top of bank to confirm minimum design bank elevation.

3. Observed water elevation at date of the record drawing for wet bottom basins.
4. Include record detail of the outlet control structure including elevations of the top of the control structure, throat, faces, orifices, or underdrain.
5. Location of top of bank and existing water edges at time and date of taking elevations.
6. Spot elevations on the bottom of dry bottom basins, or, if requested by the Village Engineer for wet bottom basins.
7. A stage/storage table showing the design and as-constructed pond volumes and release rates.
8. A signed/sealed statement by a Profession Engineer that the detention pond(s) provides the required detention storage and does not exceed the allowable outflow rate(s) per the approved construction plans and hydrology study. If significantly different than the approved drawings (as determined by the Village Engineer), the engineer must submit a revised hydrology study using the as-constructed conditions in order to document this statement.
9. Provide copies of all testing records and video tapes of all storm lines.

#### 1.7 GRADING RECORD DRAWING REQUIREMENTS

- A. Include elevations for property corners, the high or low points, or major break points on all lot lines, and swales.
- B. Include spot elevations on the side property lines at the front and rear lines of the structure extended.
- C. Show contours at a one-foot contour interval. Flat grading may require intermediate contour lines to define swales and drainage patterns.
- D. Locate the lowest adjacent grades (LAGs) to any openings along rear-yard and side-yard swales.
- E. Provide cross-sections, at a maximum spacing of 50 feet, along all 100-year overland flood routes located outside street pavements.

#### 1.8 STRUCTURE RECORD DRAWING REQUIREMENTS

- A. Include as-constructed top of foundation elevations, including all steps in the foundation.
- B. Include as-constructed elevations of basements or walk-outs if present.

#### 1.9 STREET LIGHTING RECORD DRAWING REQUIREMENTS

- A. Provide horizontal ties for light foundations and control cabinets as referenced to the approved plan stationing or coordinates.
- B. Service cables and service transformers shall be depicted in schematic form.

1.10 ELECTRONIC FILE RECORD DRAWING REQUIREMENTS

- A. Include AutoCAD (v.2004) compatible version of all record information.
- B. Provide separate layers for all utilities.

1.11 ACCEPTANCE OF RECORD DRAWING

- A. No final occupancy permits, or acceptance of the public utilities by the Village of Romeoville will proceed until the record drawings have been submitted and approved by the Village Engineer.

END OF SECTION

## **CADD/GIS Digital Map Data Requirements for Developer Submissions**

### **Purpose of Specifications**

The purpose for these data requirements is to communicate the minimum needs to successfully utilize the data submittals from developers. This data will be used to provide ongoing updates of atlases and GIS layers. The goal is to minimize the cost to the municipality for this update process. Electronic files shall be submitted when submitting final copies of:

- Final Plats of Survey & Subdivision
- Public Improvement Engineering Plans
- Development Plans
- As-Built Construction Plans

### **Media Type**

Files may be submitted on the following media types, which are IBM and Microsoft compatible:

- CD-ROM
- DVD
- Portable USB Thumb Drives

It would also be acceptable to send the files by email or via. ftp download sites.

### **File Types**

All submissions must be in a drawing file format (\*.DWG) compatible with AutoCAD. If the drawing file is in a micro station format (\*.DGN) then a text file must accompany the drawing. This text file must reference the micro station layer number and give a corresponding definition for that layer. ESRI shape files or personal geodatabases are also acceptable.

### **General Drawing Requirements**

The drawing must be drafted at full scale and will contain all existing and proposed objects that are contained in the plans or plats. Whenever possible draw the plans using the State Plane coordinates, Illinois east zone with units of feet.

All needed files shall be included for submittals. Check that x-referenced or attached files are also submitted.

All utility structures will be drawn as a block with an insertion point. All utility structures shall have a unique block name for the different types of structures.

Layers will be descriptive and numerous enough as to separate utility types as well as determining proposed from existing.

All utilities, which include a direction of flow, will be drafted in the direction of that flow.

All pipes will be drafted such that a single line is drawn and snapped from the center of structure to the center of next structure. Break pipes at structures. The only exception to this rule is don't break water mains at valves only where it connects to another main.

All pipes connected to other pipes without a structure shall also be snapped.

All pipe sizes are to be included as text labels or on or near the pipe

## **Specific Utility Requirements**

### ***Storm or Combined Sewer***

Detention & retention areas as closed polygons  
Pipes with size  
Ditches and culverts

Include the following structures as blocks in addition to the storm pipe:

Manhole  
Inlet  
Catch Basin  
Cleanout  
Flared End Section

### ***Sanitary Sewer***

Pipes with size  
Include and differentiate gravity and forced sewer pipes.

Include the following structures as blocks in addition to the sanitary pipe:

Manhole  
Grease Trap  
Air Release Valve  
Lift Stations  
Cleanouts

### ***Water System***

Pipes with size  
Include and differentiate distribution or service pipes and structures.  
Differentiate with respect to public or private pipes and structures.

Include the following structures as blocks in addition to the water pipe:

Valve  
Reducer  
Hydrant  
Meter Vaults  
Wells

### ***Parcels***

Parcels drawn as closed polygons and snapped to adjacent parcels as needed.  
Easements and setbacks included as a separate layer

Addresses and PIN (parcel ID number) text each on its own layer included as needed.

### ***Lights***

Include the following structures as blocks in addition to the electrical wire runs that connect them:  
Light Pole  
Control Box