

City of Waukesha Department of Public Works 130 Delafield Street Waukesha, WI 53188 Waukesha-wi.gov

# **Engineering Plan Checklist**

Attachment B (Rev 04/18)

Project Name: Montessori School of Waukesha Greenhouse

Engineering & Design Firm: Excel Engineering, Inc

#### **General Information**

Plans shall include the seal and signature of the Wisconsin licensed professional engineer responsible for the preparation of the construction plans on the cover sheet or on each sheet

| YES | NO | N/A |  |
|-----|----|-----|--|
|     |    | X   | Provide a copy of the WisDOT permit for any work in the State of Wisconsin right of way.   |
|     |    | X   | Provide a copy of the Waukesha County Department of Public Works permit for any work in right of way of Waukesha County.                                 |
|     |    | Ø   | Provide a copy of Wisconsin Department of Natural Resources Water Resources Application for Project Permits (WRAPP) for all sites greater than one acre. |
|     |    | X   | Provide a copy of US Army Corps of Engineers 404 permit.   |
|     |    | X   | Provide cross access agreements for use of entrances.  |
|     |    | X   | Provide off-site utility easements.  |
|     |    | X   | Provide hydraulic gradeline calculations for all storm sewer pipes signed and sealed by a professional engineer licensed in the State of Wisconsin.      |
|     |    | X   | Provide a storm water management plan and calculations signed and sealed by a professional engineer licensed in the State of Wisconsin.                  |

#### All Plan Sheets

| YES         | NO | N/A |  |
|-------------|----|-----|--|
|             |    |     | Plans prepared on sheets measuring 11" high by 17" wide or no larger than 24" high by 36" wide.  |
|             |    | ⊠   | Sanitary Sewer, watermain and storm sewer system plans for the entire development are included.  |
|             |    | X   | A profile view is located below a plan view on plan and profile sheets and both views are aligned by stationing whenever possible. In general, stationing is from left to right. |
|             |    | X   | Plan and profile sheets start and terminate at match lines.  |
| $\boxtimes$ |    |     | The assumed bearing base, control monuments and stationing reference line(s)   |
| X           |    |     | Right-of-way limits and easement limits  |
|             |    |     | Edge of pavement or face and back of curb  |
| X           |    |     | Name of each existing, proposed, and future roadway and any intersecting roadways  |
| X           |    |     | Lot lines, lot and block numbers   |
| ×           |    |     | Addresses for existing parcels   |

| × |  | All obstructions located within the project limits including, but not limited to: trees, signs, utilities, fences, light poles, structures, etc.  |
|---|--|---|
| ⊠ |  | A note warning that underground utilities must be located by "Diggers Hotline" prior to start of construction   |
| X |  | Legend (relevant to each sheet) showing all special symbols, line types and hatch used  |
| X |  | Title block includes at a minimum, the following information:<br>Name and address of engineering (design) firm and owner/developer<br>Date of the drawing and last revision<br>Scale<br>Plan sheet number (# of #)<br>Name and location description of development  |
|   |  | North to the top or right of the sheet and shown by a north arrow, clearly shown without intrusion.   |
| X |  | Scale of the plans $1" = 40'$ horizontally and $1" = 8'$ vertically for $11"$ by $17"$ plan sheets and $1" = 20'$ horizontally and $1" = 4'$ vertically for 22" by 34" sheets. Partial site plans have a scale of $1" = 20'$ or larger. The scale of details is such that the detail is clearly shown. The scale is shown with a line scale and text. |
| X |  | Existing surface improvements indicated with screened lines and clearly labeled.  |

## Cover Sheet

| YES | NO | N/A |  |
|-----|----|-----|--|
| X   |    |     | Project title.   |
|     |    |     | Location Map (Proximity to two main streets minimum).  |
|     |    |     | Index of all plan sheets   |
|     |    | X   | For subdivisions, large, or phased developments, a key map of layout and phases.   |
|     |    |     | A minimum of two (2) current SEWRPC reference benchmarks. Survey documentation of tie to Wisconsin State Plane Coordinate System, South Zone (horizontal) and City of Waukesha datum (vertical) provided. Elevations shown based on City of Waukesha datum.  |
|     |    |     | All permanent benchmarks.  |
|     |    |     | A description of the locations of the benchmarks; and the basis or origin of the vertical control network.   |
|     |    |     | Date of preparation and applicable revision date(s)  |
| X   |    |     | The following statement: "All site improvements and construction shown on the plans shall conform to the City of Waukesha <u>Development Handbook &amp; Infrastructure Specifications</u> . Where the plans do not comply, it shall be the sole responsibility and expense of the Developer to make revisions to the plans and/or constructed infrastructure to comply." |

#### <u>Roadway</u>

| YES | NO | N/A |  |
|-----|----|-----|--|
|     |    |     | For all new streets, a site specific geotechnical evaluation and pavement design submitted with the plans. |
|     |    | X   | A separate detail sheet showing typical cross-sections for a roadway and cul-de-sac if applicable.         |

## <u>Plan View</u>

| YES | NO | N/A         |  |
|-----|----|-------------|--|
|     |    | ⊠           | The assumed bearing base, control monuments and stationing reference line along the centerline of the roadway, including cul-de-sacs.  |
|     |    |             | At least one clearly labeled benchmark or control point.   |
|     |    | $\boxtimes$ | Width of pavement and median.  |
|     |    | X           | Final grade elevations at 25' intervals at the right-of-way including at the edge of pavement for rural sections or at the top of curb for urban sections.                         |
|     |    |             | Final grade elevations for cul-de-sacs at 25' intervals at the right-of-way including at the edge of pavement for rural sections or at the top of curb for urban sections.         |
|     |    |             | Label all PVC's, PVT's, and PC's, PT's for vertical and horizontal curves Radii of all intersections (edge of pavement or back of curb, with note indicating which is referenced). |
|     |    |             | Driveways for all lots adjacent to storm inlets and intersections.   |
|     |    |             | Sidewalks labeled and dimensioned.   |
|     |    | X           | Existing, proposed, future streets and drives labeled and dimensioned.   |
|     |    | X           | All roadside ditch locations, flowline elevations (based on City of Waukesha datum) at 100' intervals of the ditches.  |
|     |    |             | Slope intercepts.  |
|     |    |             | Invert profile for 200' downstream for any existing ditches receiving flow from a proposed road or street.   |
|     |    | X           | Limits of any areas which need special stabilization techniques.   |
|     |    | X           | Specific details of all existing connected roadways. Pavement, shoulders, ditches, curb alignment, and grades shall be shown as needed to adequately make the transition.          |

## **Intersection Details**

| YES | NO | N/A         |  |
|-----|----|-------------|--|
|     |    | ⊠           | Radii of all intersections (edge of pavement or back of curb, with note indicating which is referenced).   |
|     |    | X           | Sidewalks and accessible ramps labeled and dimensioned.  |
|     |    | X           | Right of way corner clips and sight visibility easements.  |
|     |    | $\boxtimes$ | Spot grades as necessary to ensure proper drainage and compliant ADA slopes.   |
|     |    |             | Spot grades shall be shown at end of radius for all curb and gutter and the end radius for all back of sidewalk.   |
|     |    | X           | Drainage clarified by flow arrows, high points, sags, ridges, etc. Slope intercepts shall be clearly labeled by station, elevation to the nearest 0.1', and offset distance (left or right) from the reference line. |
|     |    | X           | Invert elevation of ditches (for rural roadway).   |
|     |    | X           | Final subgrade elevation at the centerline of the street or roadway.   |

### **Cross Sections**

| YES | NO | N/A |  |
|-----|----|-----|--|
|     |    | X   | Right of way limits.   |
|     |    | X   | Slope intercepts clearly labeled.  |
|     |    | X   | Elevations to the nearest 0.01'.   |
|     |    | X   | Offset distance (left or right) from the reference line.   |
|     |    | X   | Final grade elevations at back of walk, face of walk, top of curb, flange elevation (edge of pavement for rural section), and the centerline of the street or roadway. |
|     |    | X   | Cross slope of sidewalk, terrace area, and roadway.  |
|     |    | X   | Invert elevation of ditches (for rural section)  |