

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

Engineering Plan Checklist

Attachment B
 (Rev 12/18)

Project Name: Prairie Song Courtyards

Engineering & Design Firm: TRIO ENGINEERING

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	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide a copy of the WisDOT permit for any work in the State of Wisconsin right of way.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide a copy of the Waukesha County Department of Public Works permit for any work in right of way of Waukesha County.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide a copy of Wisconsin Department of Natural Resources Water Resources Application for Project Permits (WRAPP) for all sites greater than one acre.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide a copy of US Army Corps of Engineers 404 permit.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide cross access agreements for use of entrances.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide off-site utility easements.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide hydraulic gradeline calculations for all storm sewer pipes signed and sealed by a professional engineer licensed in the State of Wisconsin.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plans prepared on sheets measuring 11" high by 17" wide or no larger than 24" high by 36" wide.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary Sewer, watermain and storm sewer system plans for the entire development are included.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plan and profile sheets start and terminate at match lines.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The assumed bearing base, control monuments and stationing reference line(s)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right-of-way limits and easement limits
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Edge of pavement or flange, face and back of curb
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Name of each existing, proposed, and future roadway and any intersecting roadways
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lot lines, lot and block numbers
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Addresses and names of Owners for existing parcels

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All obstructions located within the project limits including, but not limited to: trees, signs, utilities, fences, light poles, structures, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A note warning that underground utilities must be located by "Diggers Hotline" prior to start of construction
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Legend (relevant to each sheet) showing all special symbols, line types and hatch used
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Title block includes at a minimum, the following information: Name and address of engineering (design) firm and owner/developer Date of the drawing and last revision Scale Plan sheet number (# of #) Name and location description of development
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	North to the top or right of the sheet and shown by a north arrow, clearly shown without intrusion.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing surface objects indicated with screened lines and clearly labeled.

Cover Sheet

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project title.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location Map (Proximity to two main streets minimum).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Index of all plan sheets
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	For large or phased subdivisions, a key map of layout and phases.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All permanent or temporary benchmarks and elevations.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A description of the locations of the benchmarks; and the basis or origin of the vertical control network.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date of plan preparation and applicable revision date(s)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The following statement: <i>"All site improvements and construction shown on the plans shall conform to the City of Waukesha <u>Development Handbook & 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."</i>

Roadway

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For all new streets, a site specific geotechnical evaluation and pavement design submitted with the plans.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A separate detail sheet showing typical cross-sections for each roadway standard width and cul-de-sac if applicable.

Plan View

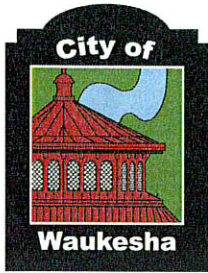
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The assumed bearing base, control monuments and stationing reference line along the centerline of the roadway, including cul-de-sacs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	At least one clearly labeled benchmark or control point per sheet.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pavement and median dimensions.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Final grade elevations at 25' intervals at the right-of-way including at the edge of pavement for rural sections or at the flange of curb for urban sections.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	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 flange of curb for urban sections.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Label all PVC's, PVT's, and PC's, PT's for vertical and horizontal curves. Radii of all intersections (edge of pavement or flange of curb, with note indicating which is referenced).
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Driveways for all lots adjacent to storm inlets and intersections.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks labeled and dimensioned.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing, proposed, future streets and drives labeled and dimensioned.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All roadside ditch locations, flowline elevations at 50' intervals of the ditches.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slope intercepts.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Invert profile for 200' downstream for any existing ditches receiving flow from a proposed road or street.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Limits of any areas which need special stabilization techniques.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Radii of all intersections (edge of pavement or flange of curb, with note indicating which is referenced).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks and accessible ramps labeled and dimensioned.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Right of way corner clips and sight visibility easements.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spot grades as necessary to ensure proper drainage and compliant ADA slopes.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spot grades shall be shown at end of radius for all curb and gutter and the end radius for all back of sidewalk.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Invert elevation of ditches (for rural roadway).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Final subgrade elevation at the centerline of the street or roadway.

Cross Sections

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right of way limits.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slope intercepts clearly labeled.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Elevations to the nearest 0.01'.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Offset distance (left or right) from the reference line.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross slope of sidewalk, terrace area, and roadway.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Invert elevation of ditches (for rural section)



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Site, Grading and Drainage Plan Conditional Use Permit Checklist

Attachment C
 (Rev 12/18)

Project Name: Prairie Song Courtyards

Engineering & Design Firm: TRIO ENGINEERING

General Requirements

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Applicant's name
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Name and location of development
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Scale and north arrow
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date of original and revisions noted
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	License number and professional seal
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Digital Drawings in AutoCAD format of the site layout & building plan layout
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pay impact fees

Building Plans

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contact Community Development Department

Site Plans

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dimensions of development site
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, footprint, and outside dimensions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed pedestrian access points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed vehicular access points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Parking lots, driveways shown
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Front, side and rear yard setbacks shown and labeled
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, identification and dimensions of all existing or planned easements
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identification of all land to be dedicated
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, elevation, and dimensions of walls and fences
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location of outdoor lighting with lighting design plan and calculations
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sign complies with City Code Book
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of existing and proposed signs

Site Access

YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Legal description or certified survey of property
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Development compatible with its zoning district
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sidewalks to be shown
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site entrance drive dimensions
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Individual development vehicular entrances at least 125 feet apart
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjacent development share driveway where possible
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	At least one vehicular and pedestrian access point to each adjoining site granted by cross easements
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross access to be provided with minimum paved width of 24 feet
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design detail for all new public streets

Parking/Traffic

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5-foot wide (min) paved walkway to building entrance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7-foot parking separation from front of building
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum parking spaces provided
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Service truck parking in designated service areas
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Parking spaces and layout dimensioned
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lot paved with HMA or concrete
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Handicap parking provided
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum required stacking distance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concrete curb and gutter around parking lot

Grading and Drainage Plans

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show existing tree lines and any obstructions (fences, structures, power poles, etc.) within the project limits.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All proposed lot lines and lot numbers or addresses
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lot line dimensions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline of buildable areas for each lot
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Typical setbacks of buildable area to front, side and back lot lines
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All existing buildings, structures and foundations
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All existing drainage channels and watercourses
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency overflow routes
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage clarified by flow arrows, high points, sags, ridges, and valley gutters
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed retaining wall locations with top and bottom of wall elevations at key locations
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	100-year flood plain limit (both pre-and post-project)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100-year storm water surface elevation
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wetlands. Wetland limits labeled with bearings and distances and dimensioned to lot lines. Bearings and distances may be shown in tabulated format.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All environmental corridors, & or environmentally sensitive areas as required by DNR
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All existing and proposed easements.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing topography of the site and all areas within 50 feet of the site shown at a one foot contour interval using City of Waukesha datum. Existing contours shown as thin, dashed screened or grey lines with a readily discernable heavier line used for the 5-foot contour intervals.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed grading shown at a contour interval of 1 foot using City of Waukesha datum. Proposed contour lines shown as solid medium lines, with a discernible heavier line use for the 5-foot contour intervals.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The yard grade and first floor elevation of proposed building and any existing buildings located within 150 feet of the parcel boundary.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed road(s), curb and gutter, all storm sewer grates and storm sewer manholes (or cross-culverts for open ditches). Show any off-road storm inlets and discharge locations with surface entry elevations.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Spot grades as necessary to ensure proper drainage and compliant ADA slopes and routing where applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	At front setback line show a typical house shell on each lot and the proposed yard grade to the nearest tenth of a foot (assumed to be 0.7' below the top of block) for each building. Show proposed finished elevations to the nearest tenth of a foot at all lot corners and alongside lot lines adjacent to the front and back corners of the typical house. Show proposed finished elevations to the nearest tenth of a foot at high and low points along any side or back lot lines, and at high and low points if roads to demonstrate proposed drainage.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The grading plan for any house that will require special design due to topography, clearly show separate grades for the garage and yard grade if extra steps are needed. Separate spot finish elevations shown for rear or side exposure or walkout.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indicate minimum finished floor elevations adjacent to floodplains, ponds, creeks/channels, etc.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed storm inlets shown on each grading plan. Each plan also includes specific details on all applicable retention/detention basins, ponds, overflows, etc. Separate sheets or notes as required.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locations of existing and proposed streets, drives, alleys, easements, right-of-way, parking as required, vehicular and pedestrian access points, and sidewalks
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline of any development stages
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Location and details on any required emergency access roads
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Soil characteristics
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed topography shown for the site and or adjacent properties
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Floodplain, shore land, environmental and wetlands shown
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and dimensions of on-site storm water drainage facilities
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and footprint of all existing buildings
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locations and species of existing trees
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Berm detail
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Lot grades and swales shown
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drainage calculations provided

Erosion Control

YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location Map
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Soils Survey Map
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing Land Use Mapping
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Predeveloped Site Conditions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Existing contours
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Property lines
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Existing flow paths and direction
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Outlet locations
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Drainage basin divides and subdivides
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Existing drainage structures on and adjacent to the site
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Nearby watercourses
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Lakes, streams, wetlands, channels, ditches, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> Limits of the 100-year floodplain
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Practice location/layout/cross sections
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction Details
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Name of receiving waters
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site description/Nature of construction activity
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sequence of construction
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Estimate of site area and disturbance area
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Pre- and post-developed runoff coefficients
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description of proposed controls, including
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Interim and permanent stabilization practices
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Practices to divert flow from exposed soils
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Practices to store flows or trap sediment
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Any other practices proposed to meet ordinance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing topography of the site and all areas within 50 feet of the site shown at a one foot contour interval using City of Waukesha datum. Existing contours shown as thin, dashed screened or grey lines with a readily discernable heavier line used for the 5-foot contour intervals.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed grading shown at a contour interval of 1 foot using City of Waukesha datum. Proposed contour lines shown as solid medium lines, with a discernible heavier line use for the 5-foot contour intervals.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	List the total disturbed acreage including offsite areas.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide free survey in accordance with City Erosion Control Ordinance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed limits of disturbance including proposed tree cutting areas.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location and dimensions of all temporary topsoil and dirt stockpiles.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and dimensions of all appropriate best management practices (BMP).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Phasing of BMP's with the construction activities listed / described.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Schedule of anticipated starting and completion date of each land disturbing and land developing activity, including the installation of the BMP measures that are needed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of all channels, pipes, basins or other conveyances proposed to carry runoff to the nearest adequate outlet, including applicable design assumptions and computations.

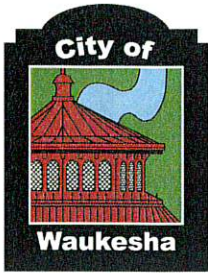
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Areas to be sodded or seeded and mulched or otherwise stabilized with vegetation, describing the type of final vegetative cover.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Areas of permanent erosion control (other than vegetation).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Boundaries of the construction site
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage patterns/slopes after grading activities
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Areas of land disturbance
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locations of structural and nonstructural controls
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drainage basin delineations and outfall locations

Optional Submittals as Determined by Review Authority

YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Traffic impact analysis
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental impact statement
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Soil and Site Evaluation Report per DNR Technical Standard 1002
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plot of effect of exterior illumination on site and adjacent properties
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Description of any unusual characteristics
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Street perspectives showing view corridors
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Historic site
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Economic feasibility study
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Contaminated Waste Site

I hereby certify that I have reviewed the City ordinances and provided one (1) full-sized set of all required information along with all the required reduced copies of plans.

Applicant's Signature: _____



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

Stormwater Management Plan

Attachment D
 (Rev 12/18)

Project Name: Prairie Song Court yards

Engineer & Design Firm: TRIO ENGINEERING

STORM WATER MANAGEMENT PLAN WORKSHEET

The City of Waukesha requires a Stormwater Management Plan to be submitted with the proposed development plans for site plan review. A Stormwater Management Plan is a document describing the storm water management practices constructed and implemented within the proposed development to ensure compliance with the storm water management criteria, as set forth by the City of Waukesha. The purpose of a Stormwater Management Plan is to protect the safety and health of the public, property and aquatic environment from the threats due to storm water from land development activity. The worksheet will provide a basis to the information that shall be provided when preparing a Stormwater Management Plan for a proposed development. This Plan shall include a set of complete plans and calculations, stamped by a registered professional engineer.

Stormwater Management Plans are required as listed in City Code Book Chapter 32.06(b)

Exemptions for Design and Plan Requirements

YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Site is associated with agricultural or silvicultural activities

Design Requirements: Total Suspended Solids

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site is a New Development – 80% Reduction must be met
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Site is an Infill Development – 80% Reduction must be met
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Site is a Redevelopment – 40% Reduction must be met
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Site has areas of New Development and Redevelopment
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Calculations for % Reduction are included in the plan (WinSLAMM input and output)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Storm water Management Facilities to address TSS removal are designed according to Chapter 32 of the City Code Book and DNR Technical Standards – Check all that apply: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Wet Detention Basin <input checked="" type="checkbox"/> Bio Retention Basin <input checked="" type="checkbox"/> Swales <input type="checkbox"/> Proprietary Devices <input type="checkbox"/> Other (specify): _____

Design Requirements: Peak Discharge

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Storm water Management Facilities to address Peak Discharge are designed according to Chapter 32 of City Code Book and DNR Technical Standards – Check all that apply: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Wet Detention Basin <input checked="" type="checkbox"/> Bio Retention Basin <input checked="" type="checkbox"/> Swales <input type="checkbox"/> Other (specify): _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Downstream Capacity for 2-year, 10-year and 100-year, 24-hour design storms are met
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Calculations of available capacity, proportional share, and proposed utilized capacity under all design storms are included in plan
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Calculations of Peak Discharge are included in the plan

Design Requirements: Infiltration			
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hydraulic Soil Type: <input type="checkbox"/> Soil Type A – Proceed <input checked="" type="checkbox"/> Soil Type B – Proceed <input type="checkbox"/> Exemption or Exclusion – Provide documentation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site and Soil Evaluation Report per DNR Technical Standard 1002
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Low Imperviousness. Ex: low density residential parks, cemeteries Post-Development Infiltration Performance Standards: <input type="checkbox"/> Up to 40% Connected Impervious Surface <input type="checkbox"/> 90% of Pre-Development Infiltration volume met <input type="checkbox"/> 1% of site – Maximum Effective Infiltration Area
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medium Imperviousness. Ex: Medium and high density residential, multi-family, industrial, institutional, office park. Post-Development Infiltration Performance Standards: <input checked="" type="checkbox"/> 40%-80% Connected Impervious Surface <input checked="" type="checkbox"/> 75% of Pre-Development Infiltration volume met <input type="checkbox"/> 2% of site – Maximum Effective Infiltration Area
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	High Imperviousness. Ex: commercial strip malls, shopping centers, commercial downtowns Post-Development Infiltration Performance Standards: <input type="checkbox"/> Greater than 80% Connected Impervious Surface <input type="checkbox"/> 60% of Pre-Development Infiltration volume met <input type="checkbox"/> 2% of site – Maximum Effective Infiltration Area
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site has parking lots and new road construction: <input type="checkbox"/> Pretreatment included <input type="checkbox"/> 10% Infiltration of the runoff from the tow-year, 24-hour design storm with Type II Distribution
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Calculations of Infiltration Volumes are included in the plan and model input and output (WinSLAMM)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Exclusions for Infiltration: <input type="checkbox"/> Tier 1 Industrial Facility <input type="checkbox"/> Storage and Loading Areas of Tier 2 Industrial Facility <input type="checkbox"/> Fueling and Vehicle Maintenance Facility <input type="checkbox"/> Areas within 1,000 feet up gradient of Karst Features <input type="checkbox"/> Areas within 100 feet downgradient of Karst Features <input type="checkbox"/> Areas with < 3 feet of separation from bottom of Infiltration System to seasonal high groundwater or top of bedrock (does not prohibit roof runoff) <input type="checkbox"/> Areas with runoff from industrial, commercial and institutional parking lots and roads with < 5 feet separation from bottom of infiltration system to elevation of seasonal high groundwater or top of bedrock <input type="checkbox"/> Areas within 400 feet of community water system well <input type="checkbox"/> Areas within 100 feet of private well <input type="checkbox"/> Areas where contaminants of concern (defined by NR720.03(2)) are present in the soil through which infiltration will occur) <input type="checkbox"/> Area where soil does not meet any of the following characteristics between bottom of infiltration system and seasonal high groundwater and top of bedrock: <input type="checkbox"/> At least 3-foot soil layer with 20% fines or greater <input type="checkbox"/> At least 5-foot soil layer with 10% fines or greater

YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Exemptions for Infiltration: <ul style="list-style-type: none"> <input type="checkbox"/> Areas where infiltration rate < 0.6 inches/hour <input type="checkbox"/> Parking Areas and Access Roads less than 5,000 square feet for commercial and industrial <input type="checkbox"/> Redevelopment Post-Construction Sites <input type="checkbox"/> Infill Development < 5 acres <input type="checkbox"/> Infiltration during periods when soil on the site is frozen <input type="checkbox"/> Roads in commercial, industrial and institutional land uses <input type="checkbox"/> Arterial Roads in Residential land uses
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Storm water Management Facilities to address Infiltration are designed according to Chapter 32 of the City Code Book and DNR Technical Standards – Check all that apply: <ul style="list-style-type: none"> <input type="checkbox"/> Bioretention Basin (1004) <input type="checkbox"/> Infiltration Basin (1003) <input type="checkbox"/> Infiltration Trench (1007) <input type="checkbox"/> Permeable Pavement (1008) <input checked="" type="checkbox"/> Rain Garden (1000) <input type="checkbox"/> Other (specify): _____

Design Requirements: Protective Areas

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Impervious areas are outside protective area. If not, provide a written explanation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Land disturbing activities are within a protective area. If Yes , check all that apply: <ul style="list-style-type: none"> <input type="checkbox"/> If no impervious area is within protective area, adequate sod or self-sustaining vegetative cover of 70% or greater shall be established. <input type="checkbox"/> Adequate sod or self-sustaining vegetative cover is sufficient for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. <input type="checkbox"/> Non-Vegetative materials are employed on the bank as necessary to prevent erosion (steep slopes, high velocity areas).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Best Management Practices are located within the protective area – Check all that apply: <ul style="list-style-type: none"> <input type="checkbox"/> Filter Strips <input type="checkbox"/> Swales <input type="checkbox"/> Wet Detention Basins <input type="checkbox"/> Other (specify): _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Non-Applicable Areas Apply: <ul style="list-style-type: none"> <input type="checkbox"/> Structures that cross or access surface water (boat landing, bridge, culvert) <input type="checkbox"/> Structures constructed in accordance with Section 59.692(1v) Wisconsin Statutes: <input type="checkbox"/> Post-Construction Runoff does not enter surface water except to the extent that vegetative groundcover necessary for bank stability

Design Requirements: Fuel and Maintenance Facilities

YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are Fuel and Maintenance Facilities on the Site?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are Best Management Practices designed to reduce petroleum within runoff (no visible sheen)?

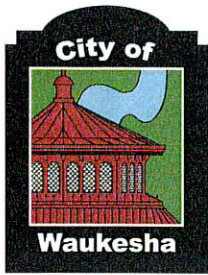
Design Requirements: Swale Treatment for Transportation Facilities			
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Does the site use swales for runoff conveyance and pollutant removal for transportation facilities? If Yes, must have the following:</p> <p><i>Groundcover:</i></p> <p><input checked="" type="checkbox"/> Vegetated</p> <p><input type="checkbox"/> Non-Vegetated where appropriate to prevent erosion or provide runoff treatment (riprap, check dams)</p> <p><i>Swale Velocity Control:</i></p> <p><input checked="" type="checkbox"/> Swale is 200 feet or more in length with a velocity no greater than 1.5 feet per second for the two-year, 24-hour design storm or two-year storm with duration equal to time of concentration</p> <p><input type="checkbox"/> Swale is 200 feet or more in length with velocity > 1.5 feet per second then velocity is reduced to maximum extent practicable. Written explanation stating why requirement of > 1.5 feet per second cannot be met</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Exemptions Apply:</p> <p>Average Daily Vehicles > 2,500 and initial surface water of the state that runoff directly enters is any of the following:</p> <p><input type="checkbox"/> An outstanding resource of water (ORW)</p> <p><input type="checkbox"/> An exceptional resource water (ERW)</p> <p><input type="checkbox"/> Water is listed in Section 303(d) of the Federal Clean Water Act and is identified as impaired in whole or in part due to non-point source impacts</p> <p><input type="checkbox"/> Water where targeted performance standards are developed under NR 151.004 of the Wisconsin Administrative Code to meet water quality standards</p>
Plan Requirements			
YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide permit application form, including contact information (name, address, telephone number) for the landowner, developer, land operator, certified project engineering, responsible party for installation of storm water management practices, responsible party for long-term maintenance of the storm water management practices.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Legal Description of proposed development.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Narrative describing the proposed development.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brief summary of Design Criteria and methods used for development of Storm Water Management Practices.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Storm Water Management Maintenance Agreement shall be included with the Storm Water Management Plan (see Storm Water Management Maintenance Agreement template for additional information required).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Certification by a Wisconsin registered professional engineer.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Financial Guarantee.

Description and Site Characteristics for Pre/Post Development conditions shall be delineated by one (1) or more site maps at a scale of not less than one (1") inch equals two hundred (200') feet. The map(s) shall include, at minimum, the following information:

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site Location and Legal Description.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and revised topography by contours related to USGS survey datum or other datum approved by City. The topographic contours of the site shall not exceed 2 feet. The topography shall extend at minimum 100 feet outside the site boundaries to show runoff patterns onto, through and from the site.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	One hundred (100) year Floodplain boundary, shore land, environmental corridors, and wetland boundaries shall be delineated if applicable
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All lakes, streams, and other water bodies illustrated on map shall be named as defined on a USGS 7.5 minute topographic map.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Predominant Soil Types and Hydraulic Soil Group Classifications per NRCS
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Coordinates of all manhole and inlets with reference to two nearest reference point monuments which shall be Section or ¼ Section corners.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, capacity, and dimensions/details of on-site Pre-developed and Post-developed storm water management facilities such as, but not limited to, the following: manholes, pipes, curbs, gutters, curb inlets, filter strips, swales, detention basins, curb cuts, and drainage gates.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location, extent, detailed drawings, typical cross sections and slope ratios of all pre-developed and post-developed storm water retention and detention areas and drainage ways – list inlet/outlet elevations, permanent water surface elevation, high water surface elevation, and emergency spillway elevation, if applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and Elevations at top and bottom of pre-developed and post-developed buildings and structures.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Locations and names of pre-developed and post-developed streets and intersections and the location of parking lots, sidewalks, bike paths and impervious surfaces (excluding single family residences). Map(s) shall clearly differentiate pre-developed and post-developed surfaces.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Delineation and dimensions of all pre-developed and post-developed property boundaries, easements, right-of-way, building setbacks, maintenance easements, and other restrictions.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and post-developed land use boundaries, including cover type and condition.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Post-developed land use cover totals for Impervious and Pervious areas as well as permanent water surface area of all storm water management facilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Delineation of pre-developed and post-developed watershed and sub-watershed boundaries used in determination of Peak flow discharges and discharge volumes from the site. (If the watershed extends beyond the site boundaries, a separate watershed map can be supplied).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of the pre-developed and post-developed discharge points.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre/Post developed directional Flow Paths used to calculate existing/proposed time of concentrations.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of the Emergency Overland Flow.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Location of any Regional Treatment Options (if applicable).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify all pre-developed land cover features, such as, natural swales, natural depressions, native soil infiltrating capacity and natural groundwater recharge areas.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Location of any protective areas within the site.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Location of wells located within 1,200 feet of pre-developed and post-developed Storm Water Detention Basins, Infiltration Basins, or Infiltration Trenches.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Delineation of Wellhead protection areas defined under NR 811.16

Supportive Information and Calculation summaries shall be supplied for all storm water management requirements as dictated in the checklist under Design Requirements:

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and post-developed watershed, sub-watersheds, and land use areas (acres, watershed shall be delineated by property lines).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and post-developed impervious areas (acres).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and post-developed Runoff Curve Numbers.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and post-developed Time of Concentration.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pre-developed and post-developed peak flows for the 2-year, 10-year and 100-year, 24-hour storm events for each discharge point.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Total suspended solids removal computations to show compliance.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design computations for the runoff volume of the pre-developed and post-developed conditions to show compliance with the infiltration requirements.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design computations for all storm water drainage facilities such as, but not limited to, inflow/outflow rates, hydrographs, water surface elevations, outlet design computations, runoff discharge volume, velocities, and stage/storage data.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design computations for the 10-year Rational Method flows for all proposed storm conveyance systems.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Computation of the available downstream capacity flowing full, overflow level of ditches and the top of the upstream end of the pipe for any culverts.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Computation of the downstream capacity using the 5-year rational storm.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tail water analysis included in storm water design for 2-year, 10-year and 100-year storm events.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design computations to illustrate compliance with pollutant loading criteria (Storm Water Quality Management practices) with pre- and post-storm water management facilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Narrative describing all assumptions that were deemed appropriate for design.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Explanation of provisions to preserve and use natural topography and land cover features.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Explanation of restrictions on Storm Water Management practices by wellhead protection plans (if applicable).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Results of investigations of soil and groundwater required for installation of Storm Water Management practices.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Impact assessment results on Wetland Functional Values (if applicable).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Storm Water Management practices installation schedule.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cost estimate for the construction, operation and maintenance of each Storm Water Management practice.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Any additional information that the City, or designee, may need to evaluate the impacts of the storm water discharge quality and quantity on the existing area and existing utilities.



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

Sewer Plan Review Checklist

Attachment H
 (Rev 12/18)

Project Name: Prairie Song Courtyards
 Engineering & Design Firm: TRIO ENGINEERING

Sanitary System

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimum 4" sanitary sewer lateral from the main to the property line, PVC SDR 26 or 35 conforming to ASTM standards D 3034 with rubber gasket joints
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary sewer laterals shall have a green #12 locator wire installed along the entire length. Locator wire shall be brought to the surface at the edge of the building and enclosed in a curb box with "sewer" on the cover.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sampling manhole required for all food service developments (or developments with the potential to become food service) and industrial/manufacturing facilities.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Industrial facilities must complete an industrial discharge form.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Outside drop manhole connection required where drop is greater than 24 inches.
Sanitary Plan View			
YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ghost existing utilities and lateral locations in screened format. Label the pipe size of existing utilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label the proposed sewer and laterals with length, size, and material type
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Material and size of the existing sanitary sewer being connected to.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label the stub-outs with length, size, slope, and invert elevations (if not profiled).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dimensions showing offset from right-of-way to the sewer and separation distance between other utilities.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Show type and size of encasement where needed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Show flow directions of all proposed mains.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Length of each sewer lateral and height of any lateral risers. Label proposed invert elevations at right-of-way lines.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Distance from downstream manhole to each upstream sewer lateral.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed manholes and cleanouts labeled with a design plan number. Existing manholes labeled with numbers obtained from City records.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rim and invert elevations at each manhole, based on City of Waukesha datum (for private sewer if not profiled)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show and label all easements
Sanitary Profile View			
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stationing.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed surface profiles and elevations over the sewer.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All utility crossings. Label elevations if known.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pipe material / class, size, length, and percent grade to two (2) decimal places.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Material and size of the existing sanitary sewer being connected to.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Length, type, and size of encasement as needed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed manholes. Indicate type and diameter.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Label station, rim, and invert elevations, based on City of Waukesha datum, and design plan number for each manhole and cleanout. Existing manholes to be labeled with numbers obtained from City records.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Limits of gravel and/or slurry backfill.
Sanitary for Subdivisions/Large Developments			
<i>(Complete copies of City specifications for sanitary sewer are available upon request.)</i>			
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each parcel should have a separate sanitary sewer lateral.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary sewer – 8 ft. horizontal separation from water main per DNR requirements. 8" diameter minimum size, PVC SDR 26 for depths up to 25 ft.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary sewer manhole at every change of direction and a maximum distance of 400 ft.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A chimney seal shall be required on all manholes.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Provide copies of all approved WDNR/WDOC submittals, including sewer sizing calculation worksheet and the area served.

Storm System

Storm Plan View			
YES	NO	N/A	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ghost existing utilities and lateral locations in screened format. Pipe size of existing utilities labeled.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed sewer and laterals with length, size, and material type clearly labeled.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material and size of the existing storm sewer being connected to.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Stub-outs labeled with length, size, slope, and invert elevations (if not profiled).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dimensions showing offset from right-of-way to the sewer and separation distance between other utilities.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Type and size of encasement where needed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Length of any sewer lateral. Label proposed invert elevations at right-of-way lines.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed inlets, manholes, and other drainage structures.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proposed drainage structures labeled with a design plan number. Existing drainage structures labeled with numbers obtained from City records.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Details of outfall or ditch inlet protection requirements such as rip-rap, end sections or headwalls as needed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Details of detention facilities, outfall, overflow and control structures as needed.
Storm Profile View			
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Stationing.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Existing and proposed surface profiles and elevations over the sewer.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All utility crossings. Label elevations if known.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pipe material / class, size, length, and percent grade to two (2) decimal places.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material and size of the existing storm sewer being connected to
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Length, type, and size of encasement as needed.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proposed inlets, manholes, and other drainage structures. Label type and size.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Label station, rim, and invert elevations, based on City of Waukesha datum, at each manhole, catch basin, inlet, and detention control structure.

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proposed drainage structures labeled with a design plan number. Existing drainage structures to be labeled with numbers obtained from City records.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cross-section of open channels and detention facilities, including outfall, overflow, and control structures.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Limits of gravel and/or slurry backfill.

General System

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show all easements, public or private.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No structures allowed within a public easement.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plantings or signs within public easements, if permitted by City, shall be at least 5 feet from the utilities.

General for Subdivisions/Large Developments

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide plans sealed by Registered Professional Engineer
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show benchmark, north arrow and scale.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Show existing/proposed sewer and water utilities.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sewer to be installed by the developer under the terms of a Development Agreement.

Utility Plans

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of all utilities: storm and sanitary sewers, water mains, fire hydrants, electrical, natural gas, and communication (cable television, telephone, etc.) lines
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Exterior lighting for parking and other outdoor areas, outdoor signs, and building exteriors.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location of waste and trash collection, and indicate plans for snow removal.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and footprint of any and all buildings
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and names of existing and proposed streets
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and size of existing and proposed storm sewer, sanitary sewer, and water utility systems shown
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Electric, gas, telephone, and cable lines shown
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All new utilities are underground
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Exterior lighting detail provided
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of all utility and private fire hydrants
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sampling manhole shown (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Grease interceptor shown (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location and size of existing and proposed water meters

Include the following notes on the Utility Plan:

YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All sanitary sewer to be installed in accordance with City of Waukesha standards.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All applications and fees for sanitary sewer must be completed and paid prior to connection to sewer systems.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Any utility work in the right-of-way and all sanitary sewer connections to be inspected by City. Notify City 72 hours in advance of connecting to sewer.

The above list contains items that are commonly missed on Utility Plans. For subdivisions or other large or complex projects, a complete plan review includes many more checks too numerous to list here. Please call (262) 524-3600 for additional information. City typical sewer details can be provided upon request.

Note: For water main, contact Waukesha Water Utility at (262) 521-5272