

CITY OF ORONOGO, MISSOURI
Stormwater Plan Submittal Checklist

DATE: _____

A. Name of Project: _____

B. Location of Project: _____

C. Name of Owner: _____

D. Name and Company of Engineer: _____

E. Checklist

- Applicant information including name, legal address, and telephone number
- Common address and legal description of site
- Signature and seal of registered engineer/surveyor
- Design/owner certification
- Vicinity map
- Project narrative (in the Drainage Report, usually)

E.1 Existing and proposed mapping and plans (recommended scale of 1" = 50' or greater detail), which illustrate at a minimum:

- Existing and proposed topography (minimum of 2-foot contours recommended)
- Drainage area map showing watershed and subbasin boundaries, labeled with unique identifiers and areas, for both pre-project and post-project conditions.
- Perennial and intermittent streams.
- Mapping of predominant soils from USDA soil surveys as well as location of any site-specific borehole investigations that may have been performed.
- Boundaries of existing predominant vegetation and proposed limits of clearing
- Location and boundaries of resource protection areas such as wetlands, lakes, ponds, and other setbacks (e.g., stream buffers, drinking water well setbacks, septic setbacks)
- Location of existing and proposed roads, buildings, and other structures
- Minimum finished floor elevations for structures adjacent to drainage features
- Location of existing and proposed utilities (e.g., water, sewer, gas, electric) and easements
- Location of existing and proposed conveyance systems such as grass channels, swales, and storm drains
- Flow paths
- Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainages
- Location and dimensions of proposed channel modifications, such as bridge or culvert crossings
- Location, size, maintenance access, and limits of disturbance of proposed structural stormwater management practices

E.2 Representative cross-section and profile drawings and details of structural stormwater.

E.3 Management practices and conveyances (i.e., storm drains, open channels, swales, etc.) which include:

- Existing and proposed structural elevations (e.g., invert of pipes, manholes, etc.)
- Design water surface elevations
- Structural details of outlet structures, embankments, spillways, stilling basins, grade control structures, conveyance channels, etc.
- Logs of borehole investigations that may have been performed along with supporting geotechnical report.

E.4 Hydrologic and hydraulic analysis for all structural components of stormwater system (e.g., storm drains, open channels, swales, management practices, etc.) for applicable design storms including:

- If detention is required, then calculations must be based on undeveloped conditions (Section 6 of the Stormwater Management Design Manual). [If detention is *not* required, then the Engineer is to perform a pre-project condition analysis for time of concentrations, runoff rates, volumes, velocities, and water surface elevations showing methodologies used and supporting calculations.]
- Huff's Quartile Rainfall Distributions are to be used for developing the necessary set of hydrographs for consideration (City code 410.15.2.b).
- Summary table of subbasins including area, curve numbers/runoff coefficient, percent impervious, times of concentration.
- Post-project condition analysis for time of concentrations, peak runoff rates, times to peak, volumes, velocities, water surface elevations, and routing showing the methodologies used and supporting calculations.
- Summary table of results including peak discharges for all durations and annual probabilities analyzed, maximum stages, with controlling events highlighted.
- Final sizing calculations for structural stormwater management practices including, contributing drainage area, storage, and outlet configuration.
- Stage-discharge or outlet rating curves and inflow and outflow hydrographs for storage facilities (e.g., stormwater ponds and wetlands)
- Detention basin(s), wet or dry, designed for proper safety, stability, access, and ease of maintenance. (Section 6.4 of the Stormwater Management Design Manual).
- Analysis of potential downstream impact/effects of project, where necessary.

E.5 Erosion and sediment control plan that at a minimum meets the requirements of the Stormwater Management Design Manual.

- Sequence of construction
- Construction entrances
- BMP locations and details
- Identify permanent and temporary BMPs

E.6 Water Quality

- Does the Grading Plan indicate the designer has minimized the amount of direct runoff into the drainage systems? Are the directly connected impervious areas minimized?
- Does the Grading Plan indicate the designer has maximized the runoff's contact with grass and soil? (Vegetated BMPs in series are recommended.)

E.7 Maintenance Plan for Permanent BMPs

The Maintenance Plan shall include the following:

- Name, address, and phone number of responsible parties for maintenance.
- Map of site with all Permanent BMPs labeled, structural (detention, grass swales, etc.) or non-structural (buffer zones for streams/wetlands, tree protection, etc.)
- Description of annual maintenance tasks.
- Description of applicable easements.
- Description of funding source.
- Minimum vegetative cover requirements.
- Access and safety issues.
- Testing and disposal of sediments that will likely be necessary.
- Evidence of acquisition of all applicable permits.
- Evidence of acquisition of all necessary legal agreements (e.g., easements, covenants, land trusts).
- Waiver requests

F. Signatures and Certifications

1. As the Owner (Applicant) and Engineer of Record, we understand that the review by the City is only for verification that the proposed improvements generally conform to the Stormwater Management Design Manual and applicable stormwater codes. The City is not approving the design or the suitability of the design for the application. The review does not relieve the applicant from complying with all rules, regulations, ordinances, laws or statutes that are in effect at the time of design or construction.

The applicant shall retain full responsibility for any damages, which may result from any construction activity.

It is understood that approval of the plan submitted with this application shall be valid only for the duration of the initial project approval granted by the City. In no case shall the approval extend beyond three and one half years at which time resubmission and certification will be required. It is further understood that all documents, site plans, design reports etc. submitted to the City shall be made available to the public (upon request) pursuant to The Sunshine Law.

(Owner's Printed Name)	(Owner's Signature)	(Date)
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(Engineer's Printed Name)	(Engineer's Signature)	(Date)
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2. One copy of the SWPPP, design plans, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of the city's Stormwater Management Design Manual and stormwater codes.

Project:

Property Address:

(Engineer's Seal, Signature and Date)

3. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to the local implementing agency the right of access to the site at all times for the purpose of on-site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity.

(Signature of Project Owner/Operator)