

APPENDIX A
CONCEPTUAL DRAINAGE PLAN SUBMITTAL CHECKLIST

CITY OF BASTROP

CONCEPTUAL DRAINAGE PLAN SUBMITTAL CHECKLIST

A. Conceptual Drainage Site Plan

The conceptual drainage site plan shall be submitted at the time of Concept Plan submittal at the same scale as the Concept Plan, preferably one inch is equal to fifty feet (1"=50') and shall include:

1. Project Description.
 - a. Address and legal description of site.
 - b. Vicinity map.
 - c. Land use.
2. Existing Conditions.
 - a. Copy of applicable digital orthophotos showing the proposed project boundaries;
 - b. A topographic map of existing site conditions (no greater than two-foot (2') contour interval) with drainage basin boundaries indicated and project boundaries shown at the same scale as the Sketch Plat;
3. Total area size of development (in acres);
4. Total impervious area as a percentage (%) of total area;
5. Benchmarks used for site control;
6. Perennial and intermittent streams;
7. Map of predominant soils from USDA soil surveys;
8. Boundaries of existing predominant vegetation;
9. Location and boundaries of other natural feature protection and conservation areas, such as wetlands, lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.);
10. Location of existing roads, buildings, parking areas and other impervious surfaces;
11. Existing utilities (e.g., water, sewer, gas, electric) and easements;
12. Location of existing drainage conveyance systems such as grass channels, swales, and storm drains;
13. Flow paths;
14. Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainage systems;
15. Location and dimensions of existing channels, bridges or culvert crossings.

B. Conceptual Site Layout

1. Hydrologic analysis to determine conceptual runoff rates, volumes, and velocities to support selection of stormwater controls.
2. Conceptual site design identifying integrated site design practices used.

3. Conceptual estimates of the three-storm design approach requirements (i.e. 2-year, 25-year and 100-year 24-hour storms)
4. Conceptual selection, location and size of proposed structural stormwater controls.
5. Conceptual limits of proposed grading and clearing.
6. Total proposed impervious area, as a percentage of total area.

APPENDIX B
PRELIMINARY DRAINAGE PLAN SUBMITTAL CHECKLIST

CITY OF BASTROP

PRELIMINARY DRAINAGE PLAN SUBMITTAL CHECKLIST

For a standard plat, this sheet shall be submitted with the preliminary plat and shall be at the same scale as the preliminary plat. For a minor plat, this sheet shall be submitted with the final plat. The preliminary drainage site plan should consist of maps, narrative, and supporting design calculations (hydrologic and hydraulic) for the proposed stormwater management system. The scale of supplementary plans, profiles and cross-sections shall be sufficient to clearly show details, if required to demonstrate the adequacy of existing or proposed facilities. The Preliminary Drainage Plan shall include the following sections:

1. Existing Conditions Hydrologic Analysis. Provide an existing condition hydrologic analysis for stormwater runoff rates, volumes, and velocities which includes:
 - a. Existing conditions data developed in the conceptual drainage site plan;
 - b. All existing stormwater conveyances and structural control facilities;
 - c. Direction of flow and exits from the site;
 - d. Analysis of runoff provided by off-site areas upstream of the project site;
 - e. Methodologies, assumptions, site parameters and supporting design calculations used in analyzing the existing conditions site hydrology.
2. Project Description and Design Considerations. Provide an updated description of the project and the considerations and factors affecting the design approach that have changed between the conceptual and preliminary plans, including:
 - a. A description of the overall project and the site plan showing facility locations, roadways, etc.;
 - b. A discussion of the applicable local criteria and how it will be integrated into the design of the project;
 - c. Evaluate the integrated and low impact design site design practices and their applicability to this site;
 - d. A discussion of any credits for integrated site design being requested;
 - g. Identify hotspot land uses, if applicable, and how runoff will be addressed.
3. Post-Development Hydrologic Analysis. Provide a post-development hydrologic analysis for stormwater runoff rates, volumes, and velocities, which includes:
 - a. A topographic map of developed site conditions (minimum one-foot (1') contour interval recommended) with post development basin boundaries indicated;
 - b. Total area of post development impervious surfaces and other land cover areas for each subbasin affected by the project;
 - c. Runoff calculation for flood control and streambank protection for each subbasin.
 - d. Location and boundaries of proposed natural feature protection and conservation areas;
 - e. Methodologies, assumptions, site parameters and supporting design calculations used in analyzing the post-development conditions site hydrology;

- f. Supporting documentation that there is existing streambank protection/reinforcement or that the planned development will provide streambank protection downstream;
- g. Supporting calculations for a downstream peak flow analysis to show safe passage of post-development design flows downstream. Document point downstream at which analysis ends, and how it was determined.
- h. Where a lot is located adjacent to a major drainage course or overflow channel, such that a part of all of the lot lies within the regulatory 100-year flood boundary, the drainage plan shall show proposed building sites and elevations required to put finish floor a minimum of one foot (2') above the 100-year flood level of drainage course or overflow channel as stipulated in the City of Bastrop's Flood Damage Prevention Regulations, as periodically amended.

In calculating runoff volumes and discharge rates, consideration may need to be given to any planned future upstream land use changes. Depending on the site characteristics and given local design criteria, upstream lands may need to be modeled as "existing conditions" or "projected buildout/future condition" when sizing and designing on-site conveyances and stormwater controls.

- 4. Stormwater Management System Design. Provide drawings and design calculations for the proposed stormwater management system, including:
 - a. A drawing or sketch of the stormwater management system including the location of nonstructural site design features and the placement of existing and proposed structural stormwater controls. This drawing should show design water surface elevations, storage volumes available from zero to maximum head, location of inlets and outlets, location of bypass and discharge systems, and all orifice/restrictor sizes;
 - b. Narrative describing that appropriate and effective structural stormwater controls have been selected;
 - c. Cross-section and profile drawings and design details for each of the structural stormwater controls in the system. This should include supporting calculations to show that the facility is designed to the applicable design criteria;
 - d. Hydrologic and hydraulic analysis of the stormwater management system for all applicable design storms (should include stage-storage or outlet rating curves, and inflow and outflow hydrographs);
 - e. Drawings, design calculations and elevations for all existing and proposed stormwater conveyance elements including stormwater drains, pipes, culverts, catch basins, channels, swales and areas of overland flow.
- 5. Plans shall show storm (flood) water routing and all drainage structures with sizes of culverts, retarding and retaining structures, drainage easements with course and distance of centerline and boundaries, lot lines, street layout, proposed inlets, culverts, roadside swales, channel sections and slopes, bridges, channel improvements, levees, or berms, fills necessary to elevate land above flood levels, and remove same from the flood area.
- 6. The limits of the 100-year frequency storm watershed area shall be shown for all water ways, including overflow of structures and related backwater effects. Storm water runoff resulting from a design storm of 100-year frequency shall be contained within the available right-of-way and/or drainage easement. All drainage facilities must be

designed for a capacity to safely contain storm water from a design storm of 25-year frequency and sufficient right-of-way and drainage easements to accommodate the 100-year frequency.

7. The drainage plan shall be prepared by a Licensed Professional Engineer of the State of Texas, whose seal and signature shall appear on the plan.
8. Engineering drainage report to support all drainage designs shall be submitted to the City. Computations shall be complete and orderly and shall clearly state all assumptions and design basis.
9. Profiles, cross-sections, or substantiating data may be required at the City's request as necessary to support flood levels and backwater analysis.

APPENDIX C
FINAL DRAINAGE PLAN SUBMITTAL CHECKLIST

CITY OF BASTROP

FINAL DRAINAGE PLAN SUBMITTAL CHECKLIST

1. Final Drainage Plans. Upon approval of the preliminary drainage study, the developer shall submit detailed plans, specifications and cost projections prepared by a registered professional engineer registered in the State of Texas and experienced in municipal drainage work. Existing and proposed flow lines of all improvements shall be shown. Unless otherwise specified herein, drainage requirements shall be based on the City of Bastrop Stormwater Drainage Design Manual. The Hydraulic Manual prepared and compiled by the Texas Department of Transportation Bridge Division, with current revisions, may be used in cases not covered by the City of Bastrop Stormwater Drainage Design Manual. The following shall be included in the Plans:
 - a. Final drainage site plan, which includes all the revised elements included in the preliminary drainage site plan, plus a construction stormwater pollution prevention plan (SWPPP), a landscaping plan, stormwater maintenance plan, maintenance agreement (if needed), financial guarantee, stormwater permit application, evidence of acquisition of applicable federal and state permits, and any waiver requests.
 - (1) Existing and proposed topographic information, with minimum two-foot contour intervals.
 - (2) Location map.
 - (3) Off-site and on-site drainage area maps.
 - (4) Centerline of watercourses.
 - (5) Regulatory flood elevations and boundaries of flood prone areas, including Floodways where designated.
 - (6) Drainage easements.
 - (7) All street widths and grades.
 - (8) Calculations showing the anticipated stormwater flow, including watershed area, runoff coefficient, and time of concentration. When a drainage structure or storm sewer is proposed, calculations shall be submitted showing basis for design.
 - (9) Storm sewer plans and profiles showing size, grade, and pipe or culvert material. Runoff, inlet, conduit hydraulic grade line calculations are required.
 - b. Final grading and drainage construction plans, indicating one-foot contours. All street width and grades shall be indicated on the plan, and runoff figures shall be indicated on the outlet and inlet side of all drainage ditches and storm sewers, and at all points in the street at changes of grade or where the water enters another street or storm sewer or drainage ditch. Drainage easements shall be indicated. A grading plan shall be prepared for each subdivision and show in sufficient detail grading of all roads, streets, drainage structures, channels, swales, or other drainage related features and provide minimum finished floor elevations, based on an acceptable elevation datum, for proposed structures to assure a minimum of two feet (2') of freeboard to computed flood elevations for the rainfall runoff events for a one hundred (100) year frequency storm.

- c. The location and dimensions of proposed storm drainage easements. The limits of the one hundred-year floodplain shall be shown and encompassed in a dedicated easement (see paragraph gg below). Minimum finished floor elevations at least two feet (2') above the one hundred-year (100-year) water surface elevations shall be shown for any lot within the 100-year and five-hundred-year floodplain, or adjacent to any channel, sump inlets or drainage facilities.

For water courses and easement: Distances to be provided along the side lot lines from the front lot line or the high bank of a stream. Traverse line to be provided along the edge of all large water courses in a convenient location, preferably along a utility easement or drainage if paralleling the easement or stream. The 100-year flood plain easement shall be shown where applicable. A note shall be provided prohibiting construction within the 100-year flood plain except for public streets or roads and utilities.

- d. When a drainage channel or storm sewer is proposed, complete plans, profiles and specifications shall be submitted showing complete construction details. Scales shall be no greater than one inch equals to forty or fifty feet (1" = 40' or 50') horizontally and one inch equal four or five feet (1" = 4' or 5') vertically.
- e. Two (2) copies of detailed cost estimates.
- f. A plan of the development shall be submitted depicting the final grading contours and elevations, earthwork, slopes, retaining walls, minimum finished floor elevations of all affected structures, and any other information considered necessary by the City Engineer at a scale of one inch is equal to one hundred feet (1" = 100') minimum.
- g. Complete detention pond plans and calculations.
- h. All drainage calculations are required to be present on the plans or in an engineering report signed and sealed by an engineer licensed in the State of Texas. Computations shall be complete and orderly and shall clearly state all assumptions and design basis.
- i. The following full statement of restrictions shall be placed in the dedication instrument of any subdivision plat that contains land designated as part of a one hundred-year (100 year) floodplain by FEMA:

"Floodplain Restriction

No construction shall be allowed within a floodplain easement unless specifically approved by the City of Bastrop. Where construction is permitted, all finished floor elevations shall be a minimum of two (2) foot above the base flood elevation (100-year flood or one percent probability flood elevation.)

Any existing creeks, lakes, reservoirs, or drainage channels traversing along or across portions of this addition, will remain as an open channel at all times and will be maintained by the individual owners of the lot or lots that are traversed by or adjacent to the drainage courses along or across said lots. The City of Bastrop will not be responsible for the maintenance and operation of said drainage ways or for the control of erosion. Each property owner shall keep the natural drainage channels traversing adjacent to their property clean and free of debris, silt, or any substance which would result in unsanitary conditions and the City shall have the right of ingress and egress for inspection

and supervision of maintenance work by the property owner to alleviate any undesirable conditions which may occur. The natural drainage channel, as in the case of all-natural drainage channels, is subject to storm water overflow and natural bank erosion to an extent that cannot be defined definitively. The City of Bastrop shall not be liable for damages of any nature resulting from the occurrence of these natural phenomena, nor resulting from a failure of any structures within the natural drainage channels. The natural drainage channel crossing each lot is shown by the floodplain easement line as shown on the plat.”

**GENERAL INFORMATION
STORMWATER MANAGEMENT PERMIT APPLICATION**

Send Application to:

City of Bastrop
1311 Chestnut Street, P.O. Box 427
Bastrop, Texas 78602

Official Use Only

Date Received	_____
Number	_____
Fee Received	_____
Reviewer	_____

This application applies to the any of the following:

1. Any development that results in 10,000 square feet or more of land disturbing activity.
2. Any development that results in the addition of 5,000 square feet or more of impervious area.
3. A subdivision plat.

Instructions: Please type or print. Read all instructions before completing application. Refer to the Fee Schedule adopted by the City Council for applicable fees. Submit 2 hard copies and 1 digital copy on CD or jump drive.

Name of Project: _____

Applicant/Entity Receiving Permit

Name of Applicant: _____

First Name: _____ Last Name: _____

Street (1): _____

Street (2): _____

City: _____ State: _____ Zip Code: _____

Telephone Number: (____) _____

Fax Number: (____) _____

Property Owner

First Name: _____ Last Name: _____

Street (1): _____

Street (2): _____

City: _____ State: _____ Zip Code: _____

Telephone Number: (____) _____

Parcel Identification Number(s): _____

Engineer

Name of Firm: _____

First Name: _____ Last Name: _____

Street (1): _____

Street (2): _____

City: _____ State: _____ Zip Code: _____

Telephone Number: (____) _____

Fax Number: (____) _____

APPENDIX E
STORMWATER MANAGEMENT PERMIT

CITY OF BASTROP
STORMWATER MANAGEMENT PERMIT NO. _____

Date of Application _____
Site Address _____
Plat Name _____

I have reviewed and understand Chapter 16 of the City of Bastrop general ordinances regarding stormwater drainage and I shall implement the stormwater management plan for this project as approved by the City.

General Conditions:

- (a) All storm water management measures shall be installed in accordance with the approved storm water management plan and this permit.
- (b) The City shall be notified at least 3 business days before commencing any work in conjunction with the storm water management plan, and within 3 business days upon completion of the storm water management practices.
- (c) Practice installations shall be certified "as built" by a licensed professional engineer. Completed storm water management practices must pass a final inspection by the City or its designee to determine if they are in accordance with the approved storm water management plan and ordinance.
- (d) The City shall be notified of any significant proposed modifications to an approved storm water management plan.
- (e) All storm water management practices shall be maintained in accordance with the storm water management plan until the practices either become the responsibility of the City of Bastrop, or are transferred to subsequent private owners as specified in the approved stormwater maintenance agreement.
- (f) The City of Bastrop is authorized to perform any work or operations necessary to bring storm water management measures into conformance with the approved storm water management plan, and consent to a special assessment, or to charging such costs against the financial guarantee posted under Sec. 16.01.008.
- (g) If so directed by the City, all damage to adjoining facilities and drainage ways caused by runoff, where such damage is caused by activities that are not in compliance with the approved storm water management plan shall be repaired at the permittee's expense.
- (h) Access is permitted to the City or its designee for the purpose of inspecting the property for compliance with the approved storm water management plan and this permit.

**APPLICANT
MUST FILL
IN BOXED
AREA**

Owner _____
(please print or type full name)

Address _____

Signature or Owner or Authorized Representative

Land Disturbing Activity Area (Square Feet) _____

Net Additional Impervious Area (Square Feet) _____

SPECIAL CONDITIONS: _____

CONDITIONAL APPROVAL: _____
Administrative Authority Title Date

Permit VALID for a period of twelve (12) months from date of issuance by City and all work must be completed prior to the expiration unless authorized in writing from the City.

This permit applies to the any of the following:

1. Any development that results in 10,000 square feet or more of land disturbing activity.
2. Any development that results in the addition of 5,000 square feet or more of impervious area.
3. A subdivision plat.

**City of Bastrop
Stormwater Management Plan**

Financial Guarantee

To: [permit holders name]
Date:
Subject: **Financial Guarantee** in the Amount of \$ _____
Check # _____ Received by (staff initials): _____

Project Name: _____

Location: Section [no.], Town of [public land survey township name]

This memo shall serve as a receipt for the above noted Financial Guarantee and as an agreement of the purpose and conditions for release by the City of Bastrop (herein referred to as the "City").

Authority.

The authority of the City to collect and hold this Financial Guarantee is stated in Chapter 16, **Section 16.01.008** of the City of Bastrop Code of Ordinances – Drainage Ordinance (herein referred to as the "Ordinance").

Purpose.

The purpose of this Financial Guarantee is to ensure compliance with Ordinance Section **16.01.008**, and the terms and conditions of a Stormwater Management Permit issued for the above noted project and location.

Conditions for Release.

Terms for release of the Financial Guarantee shall include all of the following:

1. Construction Certification. A professional engineer licensed in Texas shall certify that construction of all stormwater management practices comply with the approved plans and the technical standards of the City. "As-built" plans shall be submitted for stormwater management practices showing actual location, elevations, GPS locations, materials, construction methods and other items as deemed necessary by the City to determine compliance.
2. Maintenance Agreement. A copy of an approved maintenance agreement for all stormwater management practices associated with this project must be provided to the City. The agreement shall be stamped by the Register of Deeds, showing that it has been recorded for all applicable properties.
3. Final Inspection. The City shall complete a final inspection of the property and certify compliance with the stormwater management permit and all provisions of the Drainage Ordinance.

If the City should use any portion of the Financial Guarantee to complete permit activities, due to default or improper action by the permit holder, the City shall withhold any amounts owed for this work, in accordance with the Drainage Ordinance.

APPENDIX G
SAMPLE STORMWATER MAINTENANCE AGREEMENT

AGREEMENT TO MAINTAIN STORMWATER FACILITIES
BY AND BETWEEN THE CITY OF BASTROP AND

Whereas, the upkeep and maintenance of stormwater facilities and the implementation of pollution source control best management practices (BMPs) is essential to the protection of water resources in the City of Bastrop; and

Whereas, all property owners are expected to conduct business in a manner that minimizes impacts of stormwater runoff; and

Whereas, this Agreement contains specific provisions with respect to maintenance of stormwater facilities; and

Whereas, the authority to require maintenance and pollution source control is provided in the City of Bastrop Stormwater Drainage Ordinance, Chapter 16 of the City Code of Ordinances; and

Whereas, Owner has constructed improvements, including but not limited to, buildings, pavement, and stormwater facilities on the property described in Attachment A. (Note: Attachment A shall identify the stormwater facilities and designate the drainage area served by those facilities.)

In order to further the stormwater management goals of the City of Bastrop, the City and Owner hereby enter into this Agreement. This Agreement is effective on the date of the last to execute below, (the "Effective Date").

The responsibilities of each party to this Agreement are identified below.

OWNER SHALL:

- (1) Implement and complete the requirements of the "Final Drainage Plan" included herein as Appendix C.
- (2) Submit an inspection report prepared by an engineer licensed in the State of Texas to the Engineering Department along with a \$25.00 filing fee to the City of Bastrop every two years.
- (3) Allow the City or designee to access the property to conduct inspections of stormwater management practices as necessary to ascertain that the practices are being maintained and operated in accordance with the agreement.
- (4) Undertake corrective actions required by the City within a reasonable time frame as set by the City.
- (5) Maintain a record of steps taken to implement the programs referenced in (1) and (2) above. Record shall be available for inspection by City staff at Owners business during normal business hours. The record shall catalog the action taken, who took it, when it was done, how it was done, and any problems encountered, or follow-up actions recommended.
- (6) Notify the City of any changes in ownership or contact information within ten (10) business days of such a change.

City of Bastrop, 09/09/2025

THE CITY OF BASTROP SHALL:

- (1) Provide technical assistance to Owner in support of its operation and maintenance activities conducted pursuant to its maintenance and source control programs. Said assistance shall be provided upon request, and as City time and resources permit.
- (2) Maintain public records of the results of the site inspections, inform the party responsible for maintenance of the inspection results, and specifically indicate any corrective actions required to bring the storm water management practice into proper working condition.
- (3) Notify the Owner of maintenance problems that require correction or repair.

REMEDIES:

- (1) If corrective actions required by the City are not completed within the time set by the City, written notice will be sent to Owner stating that the City intends to perform such maintenance and will bill the Owner for all incurred expenses.
- (2) If at any time the City determines that the existing system creates any imminent threat to public health or welfare, the City may take immediate measures to remedy said threat. No notice to the persons listed in (1), above, shall be required under such circumstances.
- (3) The Owner grants unrestricted authority to the City for access to any and all stormwater system features for the purpose of performing maintenance or repair as may become necessary under Remedies (1) and (2).
- (4) The Owner shall assume all responsibility for the cost of any maintenance and for repairs to the stormwater facility. Such responsibility shall include reimbursement to the City within 30 days of the receipt of the invoice for any such work performed. Overdue payments will require payment of interest at the current legal rate for liquidated judgments. If legal action ensues, any costs or fees incurred by the City will be borne by the parties responsible for said reimbursements.
- (5) The City is authorized to take any action allowed by law to enforce this Agreement and Chapter 16 of the City of Bastrop Code of Ordinances, as amended.

This Agreement is intended to protect the value and desirability of the real property described above and to benefit all the citizens of the City. It shall run with the land and be binding on all parties having or acquiring from Owner or their successors or assigns any right, title, or interest in the property or any part thereof, as well as their title, or interest in the property or any part thereof, as well as their heirs, successors, and assigns. They shall inure to the benefit of each present or future successor in interest of said property or any part thereof, or interest therein, and to the benefit of all citizens of the City.

PARTY RESPONSIBLE FOR MAINTENANCE OF THE INSPECTION RESULTS

Name: _____

Company: _____

Address: _____

Electronic Mail Address: _____

Phone: _____

Notices under this agreement shall be sent to:

FOR THE CITY OF BASTROP:

City of Bastrop
P.O. Box 427
Bastrop, Texas 78602
Attn: City Manager

With copy to: Charles Zech
Denton Navarro Rodriguez Bernal Santee & Zech, P.C.
2500 W. William Cannon, Suite 609
Austin, Texas 78745

FOR THE OWNER:

Name: _____

Company: _____

Address: _____

Electronic Mail Address: _____

Phone: _____

IN WITNESS WHEREOF, the parties have executed this Agreement as indicated below.

CITY OF BASTROP

By: _____
Sylvia Carrillo
City Manager

Date: _____

ATTEST

Michael Muscarello
City Secretary

OWNER

By: _____
Name: _____
Title: _____

Date: _____

STATE OF TEXAS)
)
COUNTY OF BASTROP)

On this _____ day of _____, 20____, personally appeared before me, a Notary Public in and for the State of Texas duly commissioned and sworn, personally appeared _____, to me known to be the _____ of _____ and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that _____ is authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal the day and year first above written.

Notary Public in and for the State of
Texas, residing in _____

My Commission Expires: _____