

# UTILITY LINE PROJECTS

August 2014



## GENERAL OVERVIEW

### BRIEF DESCRIPTION

Construction site plans are required for all utility line projects within the City or its 5-mile ETJ (Extra Territorial Jurisdiction), except for water or sewer taps to an existing main, construction falling under the General Permit, and utility construction related to a subdivision. Construction plans for water and wastewater projects (except for the above) are no longer submitted separately to Water and Wastewater, since the Development Services Department will do the distribution.

### DEVELOPMENT ASSESSMENT

Any person contemplating development of land within the City or its 5-mile ETJ may request a Development Assessment which would include the following:

- An explanation of the procedures and requirements of the Land Development Code.
- Estimated fees.
- Identification of potential major issues for the proposed project.

A development assessment application can be submitted any working day of the week. A written staff response will be provided within 21 calendar days. The assessment does not constitute approval of a project.

### SMALL PROJECTS

If you are proposing to construct a utility line equal to or less than eight inches in diameter and location totally within a public right-of-way, it may qualify as a small project. Small projects qualify for reduced fees, shorter review times and do not require notification. See LDC Section 25-5-3. You need to obtain a small project determination from a Development Assistance engineer prior to submittal.

### SUBMITTAL

Applications may be submitted on any working day at the Intake Center of the Development Services Department on the fourth floor of One Texas Center, 505 Barton Springs Road. General business hours are from 7:45 – 4:45. Telephone: 974-6338 for appointment.

### TIME FRAMES

The Director will approve the site plan 28 days after submittal (nine days for small projects), if the proposed development complies with the LDC, posted rules and State statutes. If the project does not comply, the site plan will be disapproved pending receipt of an update bringing it into compliance.

All updates required to obtain site plan approval must be submitted no later than 180 days from the date of initial application. A 180-day extension may be granted by the Director, if the request is made prior to the deadline.

### BUILDING, DEMOLITION, AND RELOCATION PERMITS

The applicant is responsible for requesting building, demolition, and relocation permits once the site plan is approved. However, the City's Historic Preservation Officer will review all proposed building demolitions and relocations prior to site plan approval.

If a building meets the City's historic criteria, the Historic Landmark Commission may initiate a historic zoning case on the property. Please contact the Historic Preservation Officer at (512) 974-6454 for additional information.

### REVISIONS TO RELEASED SITE PLANS

As described in Sec. 25-5-44, 25-5-61 of the LDC, major revisions to a released site plan shall be processed as a new application. Minor revisions require a 14-day review time.

### FISCAL SURETY INFORMATION

The applicant is responsible for posting adequate fiscal surety for all proposed erosion and sedimentation controls, and for permanent restoration of all disturbed areas.

An Engineer's Cost Estimate for all erosion/sedimentation controls and restoration must be submitted. When the Case Manager has approved the estimate, fiscal surety in a form approved by the Director of Financial Services shall be submitted.

Contact the Fiscal Officer to post cash in an interest-bearing escrow account. If a letter of credit is to be posted, the Fiscal Officer will ensure the proposed financial institution is acceptable under the City's policies and the proper form(s) is utilized.

**PROJECT MANAGEMENT**

A Project Manager is assigned to each application. It is their role to act as your liaison with the City of Austin and your main contact. Once your application has been submitted, all questions, problems, conflicts, etc., should be directed to the Project Manager. If you need to see your Project Manager, it is suggested an appointment be made to ensure the Project Manager is available.

**ETHICS AND FINANCIAL DISCLOSURE INFORMATION**

If you or your agent/representative were City employees or officials within the past 24 months, you may be subject to the Ethics and Financial Disclosure Ordinance (860717-X). Copies of the ordinance are available from the City Clerk's Office.

## SUBMITTAL REQUIREMENTS & INFORMATION

### COMPLETED APPLICATION FORM

**Development Assessment** - If you have received a Development Assessment, indicate the file number and Development Intake Center will apply the credit associated with the assessment to your application fee. The assessment credit is void if not used within six months.

**Primary Project Data** - Check type of application. If you are unsure what is needed, the Development Intake Center can assist you.

#### Other Data

- Fill in the project name.
- Indicate the range of addresses for all streets abutting the property (address information may be obtained from the Infrastructure Support Services Address Section, 2nd floor.
- Fill in the county name.
- Circle the appropriate jurisdiction.

A Property Description is not required for Utility line construction.

**Site Area** - Indicate the length of the project in linear feet .

**Other Project Data** - Watershed, Watershed Class, and Grid Number information is available in Development Intake Center.

Traffic Serial Zones or Tax Parcel Numbers are not required.

**Variations** - When requesting a variance, a letter addressed to the Director and including the project name, address of the site, description, justification, and ordinance or section of the LDC, should accompany the application.

**Ownership/Agent Information** - The type of ownership is not applicable for utility departments or companies. If the ownership is other than sole or community property, see the boxes provided or attach a list of the partners/beneficiaries/principals and their positions.

The current owner must sign the application or attach a written authorization for the agent. Be sure all signatures are legible and address information is correct.

If an agent is designated, this will be the Development Services Department's primary contact.

### FEES

Fee schedules are available at Development Assistance Center.

### TAX PLATS

One blue-line copy of each of the current tax plats, showing all properties within 300 feet of the tract, or limits of construction. Include all maps referenced within the 300 feet. Outline the tract or limits of construction in red. (DO NOT SPLICE MAPS TOGETHER) Tax plats are not required for small projects.

Tax plats are available at the Travis County Tax Appraisal District, Walnut Creek Business Park, 8314 Cross Park Drive (Hwy. 290 East and Cross Park Drive), phone: 834-9317.

For projects located outside of Travis County, submit a list of names and addresses of all property owners within a 300-foot radius of the tract.

**SUBMITTAL VERIFICATION AND INSPECTION AUTHORIZATION** (form included in packet)

### LOCATION MAP

Provide a 4" x 4" location map on a separate 8-1/2" x 11" sheet (not required on small projects).

### ENGINEER'S SUMMARY LETTER (EXHIBIT I)

Provide an original and three copies.

**CONSTRUCTION PLANS (EXHIBIT II)**

Seven complete, 24" x 36" sets of construction plans, folded if less than ten sheets, are required for City utility projects; eight sets if the construction is within State R.O.W. For projects funded by Municipal Utility Districts (muds), add two sets to the above required amounts.

**The construction plans shall consist of the following:**

- Cover Sheet
- Utility Layout Plan
- Plan and Profile Sheet(s)
- Construction Details
- Environmental Plans

**ENVIRONMENTAL REQUIREMENTS (EXHIBIT IV)****REVISION/CORRECTION TABLE (EXHIBIT V)****ACKNOWLEDGEMENT FORM CONCERNING SUBDIVISION PLAT NOTE / DEED RESTRICTIONS**

The applicant should carefully check these records before signing the attached Acknowledgement Form. Plat notes are shown on the face of the subdivision plat. Plats are available at the City or the Courthouse. Deed restrictions are recorded at the Courthouse, if you do not have them in your possession.

## SUBMITTAL REQUIREMENTS

1. **Application**
2. **Submittal Verification**
3. **Inspection Authorization**
4. **Acknowledgement Form**
5. **Exhibit I** Engineer's Summary Letter
6. **Exhibit II** Construction Site Plan Requirements
7. **Exhibit III** General Construction Notes
8. **Exhibit IV** Environmental Submittal Requirements
9. **Exhibit V** Revision/Correction Table

**SITE PLAN APPLICATION  
DEVELOPMENT SERVICES DEPARTMENT**

**DEPARTMENTAL USE ONLY**

Application Date _____	File Number _____
Development Review Type _____	
Case Manager _____	Application Accepted By _____

Process/Project Assessment? <input type="checkbox"/> Yes / <input type="checkbox"/> No / <input type="checkbox"/> Waiver	File Number _____
Development Assessment? <input type="checkbox"/> Yes / <input type="checkbox"/> No	File Number _____

**PRIMARY PROJECT DATA**

Consolidated Administrative Approval? <input type="checkbox"/> Yes / <input type="checkbox"/> No
Small Project? <input type="checkbox"/> Yes / <input type="checkbox"/> No
Basic Site Plan ? <input type="checkbox"/> Yes / <input type="checkbox"/> No
Consolidated Planning Commission Approval? <input type="checkbox"/> Yes / <input type="checkbox"/> No
Project Name _____
Project Street Address (or range) _____
Zip _____
If project address cannot be defined, such as utility lines, provide the following information:
_____ Along the _____ Side of _____
Frontage Rd. N S E W Frontage Road
Approximately _____ From the Intersection with _____
Distance Direction Cross Street
County _____ Jurisdiction - <input type="checkbox"/> Full / <input type="checkbox"/> Limited / <input type="checkbox"/> 2-Mile / <input type="checkbox"/> 5-Mile

**PROPERTY DESCRIPTION**

<b>Provide either subdivision reference or brief legal description</b>
____ 1. Subdivision Reference
Name _____ Approved _____
Block(s) _____ Lot (s) _____ Outlot _____
Plat Book _____ Page Number _____
____ 2. Brief Legal
Description _____
_____

**DEED REFERENCE OF DEED CONVEYING PROPERTY TO THE PRESENT OWNER**

Volume _____ Page (s) _____ Sq.Ft. _____ or
Acres _____

**SITE AREA**

Acres \_\_\_\_\_ or Sq.ft. \_\_\_\_\_

EXISTING ZONING	EXISTING USE	TRACT #	ACRES/SQ FT	PROPOSED USE
_____	_____	_____	____/____	_____
_____	_____	_____	____/____	_____
_____	_____	_____	____/____	_____
_____	_____	_____	____/____	_____

Utility or Storm Sewer Length: \_\_\_\_\_ Linear Feet

Watershed \_\_\_\_\_ WS Class \_\_\_\_\_

Is it subject to the Watershed Protection Regulations?  YES /  NO

In Aquifer Recharge Zone?  YES /  NO

On a Principal Roadway?  YES /  NO      On a Hill Country Roadway?  YES /  NO

Specify Principal or Hill Country Roadway \_\_\_\_\_

Taking access to Principal Roadway?  YES /  NO

Is a TIA required?  YES /  NO      Trips per day \_\_\_\_\_

Traffic Serial Zones \_\_\_\_\_

Grid Number(s) \_\_\_\_\_

Tax Parcel Numbers \_\_\_\_\_

**RELATED CASES**

	FILE NUMBERS
Zoning Case? <input type="checkbox"/> YES / <input type="checkbox"/> NO	_____
Restrictive Covenant? <input type="checkbox"/> YES / <input type="checkbox"/> NO	_____
Subdivision? <input type="checkbox"/> YES / <input type="checkbox"/> NO	_____
Land Status Report? <input type="checkbox"/> YES / <input type="checkbox"/> NO	_____
Existing Site Plan? <input type="checkbox"/> YES / <input type="checkbox"/> NO	_____

**LAND USE SITE PLAN DATA - as applicable**

Subject to Compatibility Standards?  YES /  NO

In Combining District / Overlay Zone? (NCC,CVC, WO, etc.): \_\_\_\_\_

**WAIVER / VARIANCE / BONUS/ ETC. - as applicable**

\_\_\_\_\_ 1. Compatibility Standards Waiver Section(s) \_\_\_\_\_

\_\_\_\_\_ 2. PRA 200ft. Driveway Spacing Section(s) \_\_\_\_\_

\_\_\_\_\_ 3. Hill Country Section(s) \_\_\_\_\_

\_\_\_\_\_ 4. Waterfront Overlay District Section(s) \_\_\_\_\_

\_\_\_\_\_ 5. Off-Site or Remote Parking \_\_\_\_\_

\_\_\_\_\_ 6. Shared Parking Analysis \_\_\_\_\_



FILE NUMBER \_\_\_\_\_

**OWNERSHIP INFORMATION**

Type of Ownership: \_\_\_\_\_ Sole \_\_\_\_\_ Community Property \_\_\_\_\_ Trust \_\_\_\_\_ Partnership \_\_\_\_\_ Corporation

If ownership is other than sole or community property, list the individuals, partners, principals, etc. below or attach a separate sheet.

**OWNER INFORMATION**

Signature \_\_\_\_\_ Name \_\_\_\_\_

Firm Name \_\_\_\_\_ Phone # \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Contact \_\_\_\_\_

**AGENT / PRINCIPAL CONTACT - if applicable**

Signature \_\_\_\_\_ Name \_\_\_\_\_

Firm Name \_\_\_\_\_ Phone # \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Contact \_\_\_\_\_

**DESIGNER /ENGINEER /LARCH / OTHER - Circle 1 or More**

Firm Name \_\_\_\_\_ Phone # \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Contact \_\_\_\_\_

**DESIGNER / ENGINEER/ LAARCH/ OTHER - Circle 1 or More**

Firm Name \_\_\_\_\_ Phone # \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Contact \_\_\_\_\_

**SUBMITTAL VERIFICATION**

My signature attests to the fact that the attached application package is complete and accurate to the best of my knowledge. I understand that proper City staff review of this application is dependent upon the accuracy of the information provided and that any inaccurate or inadequate information provided by me/my firm/etc., may delay the proper review of this application.

**PLEASE TYPE OR PRINT NAME BELOW SIGNATURE AND INDICATE FIRM REPRESENTED, IF APPLICABLE.**

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Name (Typed or Printed)

\_\_\_\_\_  
Firm

**INSPECTION AUTHORIZATION**

As owner or authorized agent, my signature authorizes staff to visit and inspect the property for which this application is being submitted.

**PLEASE TYPE OR PRINT NAME BELOW SIGNATURE AND INDICATE FIRM REPRESENTED, IF APPLICABLE.**

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Name (Typed or Printed)

\_\_\_\_\_  
Firm

# ACKNOWLEDGMENT FORM

## CONCERNING Subdivision Plat Notes, Deed Restrictions, Restrictive Covenants and / or Zoning Conditional Overlays

I, \_\_\_\_\_ have checked the subdivision plat notes, deed restrictions,  
(Print name of applicant)  
restrictive covenants and/or zoning conditional overlays prohibiting certain uses and/or requiring  
certain development restrictions i.e. height, access, screening etc. on this property located at :

\_\_\_\_\_  
(Address or Legal Description)  
\_\_\_\_\_

If a conflict should result with the request I am submitting to the City of Austin due to subdivision plat notes, deed restrictions, restrictive covenants and/or zoning conditional overlays it will be my responsibility to resolve it. I also acknowledge that I understand the implications of use and / or development restrictions that are a result of a subdivision plat notes, deed restrictions, restrictive covenants and/or zoning conditional overlays.

I understand that if requested I must provide copies of any and all subdivision plat notes, deed restrictions, restrictive covenants and/or zoning conditional overlay information which may apply to this property.

\_\_\_\_\_  
(Applicant's signature)

\_\_\_\_\_  
(Date)

## **EXHIBIT I**

### **ENGINEER'S SUMMARY LETTER**

Construction plans will not be accepted unless accompanied by a summary letter signed and sealed by the same registered Texas professional engineer who sealed the construction plans. Summary letters for small projects do not require a professional engineer's seal or signature.

The summary letter should describe the proposed development and might include, but not limited to, the following:

- Maximum width which will be used for construction limits and the absolute minimum width that can be used to avoid environmental damage.
- Watershed in which project is located.
- Type of development and location. Include name of subdivision, if applicable.
- For water transmission mains, indicate point of origin and final destination.
- Explanation of any proposed project phasing.
- Effect the proposed development will have on existing and future drainage systems in the area and on the natural and traditional character of the land and waterways.
- Identify the funding source, i.e., CIP fund, MUD contract bond or private funding, etc.
- Justification the project is exempt from the Watershed Protection Regulations.
- Address the applicable sections of the LDC.
- Variances

**EXHIBIT II**

**CONSTRUCTION SITE PLAN REQUIREMENTS**

**COVER SHEET**

Show the following:

- Project title
- Property owner(s) name, address/telephone number
- Designer(s) company name, address/telephone number
- Ranges of street addresses if not covered in plan and profile sheets
- Indicate if exempt, or not exempt, from the watershed protection regulations.
- Site location map clearly indicating the precise location of the tract (4" x 4" minimum size)
- Legible professional engineer's seal and signature
- Texas Department of Transportation (TxDOT) stationing, if project is located within State-maintained R.O.W. (call 836-8640 for further information on stationing)

Revision/Correction Table as shown in Exhibit V.

**NOTES**

- General Construction Notes (see EXHIBIT III)

**APPROVAL BLOCKS**

- Approval block for the TxDOT, if part of the project is within Texas Department of Transportation R.O.W.

Approved by:

\_\_\_\_\_

For Texas Department of Transportation

\_\_\_\_\_

Date:

- Approval block from the pertinent city utility

Approved by:

\_\_\_\_\_

Water/Wastewater/Electric Utility

\_\_\_\_\_

Date:

- Approval block for Development Services Department (on right-hand side)

Approved

\_\_\_\_\_

for Development Services Department

\_\_\_\_\_

Date:

\_\_\_\_\_

Site Plan/Development Permit Number

**BASE INFORMATION**

The Base Information listed below shall be included on all pertinent sheets excluding the Cover and Construction Detail sheets. SHOW THE FOLLOWING:

- Project Title
- Design engineer's seal and signature
- Designer's company name, address, and telephone numbers
- North arrow
- Existing (natural) and proposed topographical information on the tract to be developed using City of Austin Standards (or U.S.G.S. if these are not available) at 2-foot intervals, unless this interval is not practical
- Location of all proposed structures
- Limits of construction, including any access drives
- All existing and future dedicated easements (drainage, access, conservation, public utility, etc.), including temporary construction easements (provide recording data)
- Use engineering scale between 1" = 10' and 1" = 50' and divisible by ten (if project is too large, a smaller scale may be used, with details at 1" = 20' or less)
- Existing improvements adjacent to the utility
- The centerline of existing creeks, rivers or channels and their 100-year floodplain.

- City limit line when located in or near the project
- State highway R.O.W. limits, when located adjacent to or within a State highway

— **The following note:**

- "All responsibility for the adequacy of these plans remains with the registered professional engineer/architect/landscape architect (as applies) who prepared them. In approving these plans, the City of Austin must rely upon the adequacy of the work of the design engineer/architect/landscape architect."
- Signature block on lower right side

Reviewed by: \_\_\_\_\_  
 Development Services Department Date: \_\_\_\_\_  
 \_\_\_\_\_  
 Site Plan/Development Permit Number

**CONSTRUCTION DETAILS**

Show the following:

- Project Title
- Design engineer's seal and signature
- Designer's company name, address and telephone number
- Include in the construction detail sheets any required structural walls, manholes, lift stations, junction vaults, etc. (some of these may not be necessary for jobs by City crews)
- Show adequate dimensions, layout details, and general notes adjacent to all details
- Provide a traffic control plan, if necessary (Contact Traffic Engineering, Transportation and Public Works, 499-7012 for further information)

**EXHIBIT III**

**GENERAL CONSTRUCTION NOTES**

1. All responsibility for the adequacy of these plans remains with the engineer who prepared them. In reviewing these plans, the City of Austin must rely on the adequacy of the work of the design engineer.
2. Contractor shall call the One Call Center (472-2822) for utility locations prior to any work in City easements or street R.O.W.
3. Contractor shall notify the Department of Public Works and Transportation (DPWT) at 499-7161 at least 24 hours prior to the installation of any drainage facility within a drainage easement or street R.O.W. The method of placement and compaction of backfill in the City's R.O.W. must be approved prior to the start of backfill operations.
4. For slopes or trenches more than five (5) feet in depth, a note must be added to the General Construction Notes stating that: "All construction operations shall be accomplished in accordance with the City of Austin Standard Specifications Item No. 509 and applicable regulations of the U.S. Occupational Safety and Health Administration (OSHA)." Copies of OSHA Standards may be purchased from the U.S. Government Printing Office; Information and Related Reference Materials may be purchased from OSHA, 611 E. 6th Street, Austin, Texas.
5. Developer Information

Owner: \_\_\_\_\_ Address: \_\_\_\_\_  
Phone: \_\_\_\_\_

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS.

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:

## EXHIBIT IV

### ENVIRONMENTAL SITE PLAN SUBMITTAL INFORMATION

This document establishes submittal requirements for all environmental ordinances. Certain requirements may be waived by the Director of the Drainage Utility Department if they are determined by the Director to not be applicable.

A professional engineer's seal, signature, and statement certifying that the plan is complete, correct, and in compliance with the Land Development Code is required for all projects, except those designated by the Development Services Department as small projects.

#### **URBAN WATERSHEDS**

The following environmental requirements apply to all projects that require site plan approval in urban watersheds.

1. **Project Report:** Submit a project report which contains the following information (may be included in the Engineer's Report):
  - An introduction which states project acreage, watershed and classification, a description of proposed development, a description of project phasing, if phasing is proposed.
  - An explanation of and documentation for any special exception or waiver claimed pursuant to LDC Section 25-8-25, 25-8-212.
  - Discussion of the following issues, if applicable to the project:
    - Proposed and existing drainage patterns
    - Proposed method of treating both quantity and quality of stormwater run-off (LDC 25-8-211, 25-8-213, 25-8-215; 25-7-61, 25-7-65)
  - Proposed extent of floodplain modification, if applicable (LCD 25-8-92, 25-8-261, 25-8-262; ECM 1.7.0)
  - Critical Environmental Features within the project and known features within 150 feet of the project (LDC 25-8-281, 25-8-282)
  - Discuss all proposed variances and provide letter of variance request addressing proposed Findings of Fact as shown in Appendix U of the Environmental Criteria Manual. (LDC 25-8-41 through 43)
  - Requests for consideration of alternatives to the requirements of the Environmental Criteria Manual (ECM). These shall include any written requests for consideration of an alternative innovative water quality control which differs from the standards of the ECM, and information to demonstrate that the proposed control provides an equivalent level of water quality as the standard controls in the ECM. (LDC Section 25-8-151).
  - Description and location of any known Underground Storage Tanks within the project boundary. (CCA 14-3-102)
  - Irrevocable letter of credit for erosion and sedimentation controls based on standard City of Austin costs found in Appendix S-1 of the Environmental Criteria Manual. (ECM 1.2.1)
2. **Cover Sheet:** Provide a cover sheet which contains the following information:
  - name of project
  - watershed name and classification
  - application submittal date
  - subject water quality ordinance
  - statement whether site is located over Edward's Aquifer Recharge Zone
3. **Erosion/Sedimentation Control and Tree Protection Plan**

This plan must be on a separate page labeled "Erosion/Sedimentation Control and Tree Protection Plan". This plan must be a topographic map with two-foot contour intervals, at a scale of 1"=50 feet or less, and sealed by a Professional Engineer (LDC 25-8-152). For large projects, the Development Assistance Center may waive the requirement for a 1"=100' scale, and may allow a smaller scale to be submitted. Symbols used to show controls must be clear and distinctive. The plan must contain the following information:

  - Location and type of all proposed temporary erosion controls on a plan view with existing topographic information (LDC 25-8-181 through 184, ECM 1.4.0)
  - Contributing drainage area information for all erosion controls (ECM 1.4.0)
  - Location and type of all permanent erosion and sedimentation controls, permanent water quality controls and flood controls. (LDC 25-8-181 through 184, ECM 1.4.0)
  - Existing and proposed grade(s)
  - Finished floor elevation(s)
  - All proposed development including all utilities proposed to be part of development permit. (LDC 25-8-181 through 184, ECM 1.4.0)
  - Contractor staging area(s) and vehicular use area(s) (ECM 1.4.0)



- Temporary and permanent spoils storage areas; include size, time of use, and ultimate restoration schedules. (LDC 25-8-343, ECM 1.4.0)
- All waterways within the tract or which impact the tract and the location of the 2, 25 and 100 year floodplains and the area of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Location of Critical Water Quality Zone (CWQZ). (LDC 25-8-92, 25-8-261, 25-8-262)
- All proposed floodplain improvements. (LDC 25-8-92, 25-8-261, 25-8-262, ECM 1.7.0)
- Location of all known Underground Storage Tanks.
- Location of all Critical Environmental Features and their required setbacks as defined by LDC Section 25-8-281, 25-8-282.
- Detailed sequence of construction schedule including which phases of construction will be done at which time. Include specific erosion/sedimentation controls and tree protection measures for each phase of the development. Include the required pre-construction meeting. (May be located on general notes sheet). (LDC 25-8-181 through 184, ECM 1.4.0)
- Limit of construction line encompassing all areas to be disturbed, enclosing all areas of natural vegetation on the site which are to be left undisturbed. (ECM 1.4.0)
- Specific locations where special slope stabilization techniques are to be utilized and the extent of slope stabilization to take place and the technique used. (May be located on general notes sheet.) (ECM 1.4.0)
- Restoration plans for all disturbed areas on the site in accordance with requirements of ECM Section 1.4.1(D).
- City of Austin Standard Erosion Control Notes as found in Appendix P-1 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 1.4.0)
- A survey of all trees eight (8) inches in diameter and larger, as applicable based on the requirements of Chapter 25-8, Subchapter B, Article 1 of the Land Development Code, and section 3.3.1 of Environmental Criteria Manual. Trees are to be represented by circles using the formula of one foot of radius for every one inch of trunk diameter. Unbroken circles indicate trees which are to remain. Dashed circles indicate trees proposed for removal. See Environmental Criteria Manual Sections 3.1.0 through 3.6.1 for pertinent survey, graphics, and additional information.
- Location of tree protection fencing (ECM 3.4.5)
- City of Austin Standard Notes for Trees and Natural Area Protection as found in Appendix P-2 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 3.4.5)

#### 4. Water Quality/Drainage Plan

In Urban Watersheds, payment of a fee to the City of Austin in lieu of construction of a water quality pond is allowed. This fee is collected by the City of Austin and used to construct offsite water quality ponds. The form to calculate the fee is located in Appendix T in the Environmental Criteria Manual. If payment of the fee is proposed, submit the form to the environmental reviewer with the information required to determine the fee. (LDC 25-8-214)

##### A. Water Quality Plan and Drainage Area Map

If construction of an onsite water quality control is proposed, a water quality plan containing information on water quality controls and 2-year detention shall be submitted. The plan shall consist of an overall plan view of the proposed project and shall contain, at a minimum, the information listed below. Additional information may be necessary to demonstrate compliance with code requirements. (LDC 25-8-211, 25-8-213, 25-8-215; 25-7-61, 25-7-65)

The plan must be a topographic map with two-foot contour intervals, at a scale of 1"=100 feet or less, and shall be sealed by a Professional Engineer.

- Drainage area to each water quality control and size of drainage acres (ECM 1.6.0)
- All proposed development on the site
- The proposed site grading including:
  - arrows indicating the direction of flow,
  - arrows indicating the direction of roof run-off,
  - stormwater lines and inlets,
  - method used to divert stormwater around site,
- The location of existing and proposed water quality and detention basins
- Location of discharge from water quality and detention basins (ECM 1.4, 1.6.5)
- Location of maintenance access for drainage structures (ECM Section 1.6.5 D.5)
- Drainage and water quality easements (ECM 1.6.5)
- Location of all CWQZ, and/or WQTZ and the 100 year floodplain adjacent 23)
- Water Quality calculations table as found in Appendix R-2, R-3, or R-4 in the Environmental Criteria Manual.

- Demonstrate that 2 year detention is not required, or provide calculations for two year detention pursuant to LDC Section 25-7-61, as amended, including: (ECM 1.6.8.2)
  - pre-development stormwater run-off flow rates
  - developed stormwater run-off flow rates
  - discharge flow rates of detention pond(s)
  - volume required in detention basin
  - maximum water surface elevation for the 2-year storm
  - detail on outflow device used for detention pond
  - detention pond detail with dimensions and elevations as needed for construction
  - other information as necessary to demonstrate compliance with the applicable ordinance

**B. Water Quality Control Plan(s)**

This sheet or sheets should consist of a plan view and details of each proposed control. The information contained on this sheet should include:

- Plan view of water quality control at scale of 1"=20' (scale may be altered upon request), with dimensions, elevations including the splitter, riser, and gabion if applicable. Show proposed and existing grade within this area. (ECM 1.6.5)
- Clearly show the following information in plan view or cross section: ( ECM 1.6.5):
  - slopes provided in sedimentation pond,
  - water quality elevation,
  - top of sand elevation,
  - top of berm,
  - bottom of pond elevations.
- Water surface elevation in receiving drainage system or waterway (ECM 1.6.5)
- Location for liner, if applicable. (ECM 1.6.5)
- Underdrain spacing and cleanouts (ECM 1.6.5)
- Landscape screening, maintenance access, maintenance staging area, ( LDC 25-2-1006, ECM 1.6.5)
- Splitter box detail with dimensions (ECM 1.6.5)
- Riser detail with orifice size, trash rack, gravel and filter fabric shown and specified (ECM 1.6.5)
- Gabion detail with top elevation specified, and gabion specifications, if applicable (ECM 1.6.5)
- Sand detail and specifications (ECM 1.6.5)
- Liner specifications, if applicable (ECM 1.6.5)
- Geotextile membrane specifications (ECM 1.6.5)
- Fence specifications, if applicable (ECM 1.6.5)
- Bollard and chain detail, if applicable (ECM 1.6.5)

**SUBURBAN WATERSHEDS**

**1. Project Report**

Submit a project report using the following submittal requirements:

- An introduction which states project acreage, watershed and classification, a description of proposed development, a description of project phasing, if phasing is proposed.
- An explanation of and documentation for any special exception or waiver claimed pursuant to LDC Section 25-8-25, 25-8-212.
- Drainage area map showing the location of all waterways within the tract or which impact the tract which have a drainage area of 64 acres or more, the location of the 100 year floodplain and the area and acreage of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Discussion of the following issues, if applicable to the project:
  - Proposed and existing drainage patterns
  - Proposed method of treating both quantity and quality of stormwater run-off (LDC 25-8-211, 25-8-213, 25-8-215; 25-7-61, 25-7-65)
- Proposed extent of floodplain modification, if applicable (LDC 25-8-92, 25-8-261, 25-8-262, ECM 1.7.0)
- Critical Environmental Features within the project and known features within 150 feet of the project (LDC 25-8-281, 25-8-282)

- Discuss all proposed variances and provide letter of variance request addressing proposed Findings of Fact as shown in Appendix U of the Environmental Criteria Manual. (LDC 25-8-41 through 43)
- Requests for consideration of alternatives to the requirements of the Environmental Criteria Manual (ECM). These shall include any written requests for consideration of an alternative or innovative water quality control which differs from the standards of the ECM, and information to demonstrate that the proposed control provides an equivalent level of water quality as the standard controls in the ECM. (LDC Section 25-8-151).
- Description and location of any known Underground Storage Tanks within the project boundary.
- Irrevocable letter of credit for erosion and sedimentation controls based on standard City of Austin costs found in Appendix S-1 of the Environmental Criteria Manual. (ECM 1.2.1)
- Explanation of spoil disposal locations or driveway alignments, as required in LDC Sections 25-8-341, 25-8-342, 25-8-343, and 25-8-481.
- Existing and proposed drainage patterns.
- Proposed cut and fill greater than four feet. (LDC 25-8-341, 25-8-342)
- Proposed impervious cover and net site area information in the format as found in Appendix Q-1 and Q-2 in the Environmental Criteria Manual. (LDC 25-8-394)
- Transfer of Development Information using the format in Appendix Q-3 of the ECM. (LDC 25-8-395)

## 2. Cover Sheet

Provide a cover sheet which contains the following information:

- name of project
- watershed name and classification
- application submittal date
- subject water quality ordinance
- statement whether site is located over Edward's Aquifer Recharge Zone

## 3. Erosion/Sedimentation Control Plan and Tree Protection Plan

This plan must be on a separate page labeled "Erosion/ Sedimentation Control and Tree Protection Plan". This plan must be a topographic map with two-foot contour intervals, at a scale of 1"=50 feet or less, and sealed by a Professional Engineer (LDC 25-8-152). For large projects, the Development Assistance Center may waive the requirement for a 1"=100' scale, and may allow a smaller scale to be submitted. Symbols used to show controls must be clear and distinctive. The plan must contain the following information:

- Location and type of all proposed temporary erosion controls on a plan view with existing topographic information (LDC 25-8-181 through 184, ECM 1.4.0)
- Contributing drainage area information for all erosion controls (ECM 1.4.0)
- Location and type of all permanent erosion and sedimentation controls, permanent water quality controls and flood controls. (LDC 25-8-181 through 184, ECM 1.4.0)
- Existing and proposed grade(s) (LDC 25-8-181 through 184, 16)
- Finished floor elevation(s)
- All proposed development including all utilities proposed to be part of development permit. (LDC 25-8-181 through 184, ECM 1.4.0)
- Contractor staging area(s) and vehicular use area(s) (ECM 1.4.0)
- Temporary and permanent spoils storage areas; include size, time of use, and ultimate restoration schedules. (LDC 25-8-343, ECM 1.4.0)
- All waterways within the tract or which impact the tract and the location of the 2, 25 and 100 year floodplains and the area of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Location of Critical Water Quality Zone (CWQZ). (LDC 25-8-92, 25-8-261, 25-8-262)
- All proposed floodplain improvements. (LDC 25-8-92, 25-8-261, 25-8-262; ECM 1.7.0)
- Location of all known Underground Storage Tanks. (CCA 14-3-102)
- Location of all Critical Environmental Features and their required setbacks as defined by LDC Section 25-8-281, 25-8-282.
- Detailed sequence of construction schedule including which phases of construction will be done at which time. Include specific erosion/sedimentation controls and tree protection measures for each phase of the development. Include the required pre-construction meeting. (May be located on general notes sheet). (LDC 25-8-181 through 184, ECM 1.4.0)
- Limit of construction line encompassing all areas to be disturbed, enclosing all areas of natural vegetation on the site which are to be left undisturbed. (ECM 1.4.0)
- Specific locations where special slope stabilization techniques are to be utilized and the extent of slope stabilization to take place and the technique used. (May be located on general notes sheet.) (ECM 1.4.0)
- Restoration plans for all disturbed areas on the site in accordance with requirements of ECM Section 1.4.1(D).

- City of Austin Standard Erosion Control Notes as found in Appendix P-1 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 1.4.0)
- A survey of all trees eight (8) inches in diameter and larger, as applicable based on the requirements of Chapter 25-8, Subchapter B, Article 1 of the Land Development Code, and Section 3.3.1 of the Environmental Criteria Manual. Trees are to be represented by circles using the formula of one foot of radius for every one inch of trunk diameter. Unbroken circles indicate trees which are to remain. Dashed circles indicate trees proposed for removal. See Environmental Criteria Manual Sections 3.1.0 through 3.6.1 for pertinent survey, graphics, and additional information.
- Location of tree protection fencing (ECM 3.4.5)
- City of Austin Standard Notes for Trees and Natural Area Protection as found in Appendix P-2 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 3.4.5)
- The delineation of Water Quality Transition Zone, Upland Zone, as applicable. (LDC 25-8-93, 25-8-393)
- Areas of cut and/or fill greater than four feet. (LDC 25-8-341, 25-8-342)
- Location of all wastewater irrigation areas (LDC 25-8-361)
- The location of wastewater treatment plants and all irrigation fields, if applicable. (LDC 25-8-361)

#### 4. Water Quality/Drainage Plan

##### A. Water Quality Plan and Drainage Area Map

A water quality plan containing information on water quality controls and 2-year detention shall be submitted. The plan shall consist of an overall plan view of the proposed project and shall contain, at a minimum, the information listed below. Additional information may be necessary to demonstrate compliance with code requirements. (LDC 25-8-211, 25-8-213, 25-8-215, 25-7-61, 25-7-65)

The plan must be a topographic map with two-foot contour intervals, at a scale of 1"=100 feet or less, and shall be sealed by a Professional Engineer.

- Drainage area to each water quality control and size of drainage in acres (ECM 1.6.0)
- All proposed development on the site
- The proposed site grading including:
  - arrows indicating the direction of flow,
  - arrows indicating the direction of roof run-off,
  - stormwater lines and inlets,
  - method used to divert stormwater around site,
- The location of existing and proposed water quality and detention basins
- Location of discharge from water quality and detention basins (ECM 1.4, 1.6.5)
- Location of maintenance access for drainage structures (ECM Section 1.6.5 D.5)
- Drainage and water quality easements (ECM 1.6.5)
- Location of all CWQZ, and/or WQTZ and the 100 year floodplain adjacent to the water quality control, and flood surface elevation of the waterways. (LDC 25-8-92, 25-8-261, 25-8-262)
- Water Quality calculations table as found in Appendix R-2, R-3, or R-4 in the Environmental Criteria Manual.
- Demonstrate that 2 year detention is not required, or provide calculations for two year detention pursuant to LDC Section 25-7-61, as amended, (ECM 1.6.8.2) including:
  - pre-development stormwater run-off flow rates
  - developed stormwater run-off flow rates
  - discharge flow rates of detention pond(s)
  - volume required in detention basin
  - maximum water surface elevation for the 2-year storm
  - detail on outflow device used for detention pond
  - detention pond detail with dimensions and elevations as needed for construction other information as necessary to demonstrate compliance with the applicable ordinance

##### B. Water Quality Control Plan(s)

This sheet or sheets should consist of a plan view and details of each proposed control. The information contained on this sheet should include:

- Plan view of water quality control at scale of 1"=20' (scale may be altered upon request), with dimensions, elevations including the splitter, riser, and gabion if applicable. Show proposed and existing grade within this area. (ECM 1.6.5)

- Clearly show the following information on plan view or in cross-sections: (ECM1.6.5)
  - slopes provided in sedimentation pond,
  - water quality elevation,
  - top of sand elevation,
  - top of berm,
  - bottom of pond elevations.
- Water surface elevation in receiving drainage system or waterway (ECM 1.6.5)
- Location for liner, if applicable. (ECM 1.6.5)
- Underdrain spacing and cleanouts (ECM 1.6.5)
- Landscape screening, maintenance access, maintenance staging area ( LDC 25-2-1006, ECM 1.6.5)
- Splitter box detail with dimensions (ECM 1.6.5)
- Riser detail with orifice size, trash rack, gravel and filter fabric shown and specified (ECM 1.6.5)
- Gabion detail with top elevation specified, and gabion specifications, if applicable (ECM 1.6.5)
- Sand detail and specifications (ECM 1.6.5)
- Liner specifications, if applicable (ECM 1.6.5)
- Geotextile membrane specifications (ECM 1.6.5)
- Fence specifications, if applicable (ECM 1.6.5)
- Bollard and chain detail, if applicable (ECM 1.6.5)

## 5. Slope and Topographic Map

Submit a slope and topographic map drawn at the same scale as the erosion control and tree protection plan for all sites. The plan shall depict slopes of 0-15%, 15-25%, 25-35%, and over 35%. Slopes shall be calculated based on two foot contour intervals. If there are no slopes greater than 15%, all required information below may be shown on the Erosion/Sedimentation Control Plan.

### Include the following information on this sheet:

- All development or improvements to the site, including adequate building sites exclusive of any required setbacks and easements, assuming an impervious cover limits in Chapter 25-8 of the LDC.
- Net Site Area information, using the format in Appendix Q-1 of the Environmental Criteria Manual. Impervious cover shall include both existing and proposed, given in acreage and as a percent of the Net Site Area. (LDC 25-8-394)
- Calculations of land area in acres for each slope class and each water quality zone within the development. The location, type, acreage, and percentage of impervious cover, including both existing and proposed for each slope category and the totals, using the format in Appendix Q-2 in the Environmental Criteria Manual. (LDC 25-8-301 through 303)
- The location of proposed temporary and permanent spoil disposal sites. (LDC 25-8-343)
- Transfer of Development Rights information, as calculated in Appendix Q-3 in the Environmental Criteria Manual. (LDC 25-8-395)
- Location of all septic drainfields and wastewater irrigation areas (LDC 25-8-361)

## 6. Environmental Assessment Report

### A. Vegetative Element

A tree survey as specified in ECM Section 3.3, LDC 25-8-121 through 124

- A vegetative survey for all commercial and multifamily sites which shows approximate location of and identifies all significant vegetation on the site. (LDC 25-8-121 through 124)
- A discussion explaining how the design of the plan preserves, to the greatest extent reasonable, any significant trees and vegetation on the site and provides maximum erosion control and overland flow benefits from the vegetation. (LDC 25-8-121 through 124)

### B. Geologic Element

- Description of all Critical Environmental Features, as defined by the Land Development Code, with a reference to the topographic map which identifies their location and proposed means for protection of such areas. (LDC 25-8-281, 25-8-282, 25-8-121 through 124)-
- General description of topography, soils, and geology of the site. (LDC 25-8-121 through 124)
- Discussion explaining how the proposed drainage patterns will protect the quality and quantity of recharge points, as required by LDC Section 25-8-281, 25-8-282, and 25-8-121 through 124.

### C. Wastewater Element

- Environmental justification for sewer line locations in Critical Water Quality Zones, if applicable, and a description of the construction techniques and standards for proposed wastewater lines. (LDC 25-8-121 through 124, 25-8-361.)
- A description of alternative wastewater disposal systems to be used over the Edward's Aquifer Recharge Zone, if applicable. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- A description of any proposed on-site collection and treatment systems, treatment levels, and impacts on receiving watercourses, including the Edward's Aquifer, if applicable. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- Information on proposed onsite wastewater treatment levels and status of Texas Natural Resources Conservation Commission Permit, if requirements are different from City requirements. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- Information on the soils in accordance with ECM Section 1.11. (LDC 25-8-121 through 124, 25-8-361)
- Calculations to demonstrate that the wastewater irrigation limitations of LDC Section 25-8-361 have been met, if applicable.

## **WATER SUPPLY WATERSHEDS**

(excluding the Barton Creek Watershed and Barton Springs Contributing Zone)

If the property is located over the South Edward's Aquifer Recharge Zone, or is within the Contributing Area to the South Edward's Aquifer Recharge Zone, refer to requirements for the Barton Creek Watershed and Barton Springs Contributing Zone.

### **1. Project Report** (This may be included in the Engineer's report required by the Development Services Department)

Submit a project report which contains the following information:

- An introduction which states project acreage, watershed and classification, a description of proposed development, a description of project phasing, if phasing is proposed.
- An explanation of and documentation for any special exception or waiver claimed pursuant to LDC Section 25-8-25, 25-8-212.
- Drainage area map showing the location of all waterways within the tract or which impact the tract which have a drainage area of 64 acres or more, the location of the 100 year floodplain and the area and acreage of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Discussion of the following issues, if applicable to the project:
  - Proposed and existing drainage patterns
  - Proposed method of treating both quantity and quality of stormwater run-off (LDC 25-8-211, 25-8-213, 25-8-215, 25-7-61, 25-7-65)
- Proposed extent of floodplain modification, if applicable (LDC 25-8-92, 25-8-261, 25-8-262, ECM 1.7.0)
- Critical Environmental Features within the project and known features within 150 feet of the project (LDC 25-8-281, 25-8-282)
- Discuss all proposed variances and provide letter of variance request addressing proposed Findings of Fact as shown in Appendix U of the Environmental Criteria Manual. (LDC 25-8-41 through 43)
- Requests for consideration of alternatives to the requirements of the Environmental Criteria Manual (ECM). These shall include any written requests for consideration of an alternative or innovative water quality control which differs from the standards of the ECM, and information to demonstrate that the proposed control provides an equivalent level of water quality as the standard controls in the ECM. (LDC Section 25-8-151).
- Description and location of any known Underground Storage Tanks within the project boundary. (CCA 14-3-102)
- Irrevocable letter of credit for erosion and sedimentation controls based on standard City of Austin costs found in Appendix S-1 of the Environmental Criteria Manual. (ECM 1.2.1)
- Explanation of spoil disposal locations or driveway alignments, as required in LDC Sections 25-8-341, 25-8-342, 25-8-343, and 25-8-481.
- Existing and proposed drainage patterns.
- Proposed cut and fill greater than four feet. (LDC 25-8-341, 25-8-342)
- Proposed impervious cover and net site area information in the format as found in Appendix Q-1 and Q-2 in the Environmental Criteria Manual. (LDC 25-8-394)
- Transfer of development information using the format in Appendix Q-3 of the ECM. (LDC 25-8-395)

### **2. Cover Sheet**

Provide a cover sheet which contains the following information:

- name of project
- watershed name and classification

- application submittal date
- statement whether site is located over Edward's Aquifer Recharge Zone

### 3. Erosion/Sedimentation Control and Tree Protection Plan

This plan must be on a separate page labeled "Erosion/Sedimentation Control and Tree Protection Plan". This plan must be a topographic map with two-foot contour intervals, at a scale of 1"=50 feet or less, and sealed by a Professional Engineer (LDC 25-8-152). For large projects, the Development Assistance Center may waive the requirement for a 1"=100' scale, and may allow a smaller scale to be submitted. Symbols used to show controls must be clear and distinctive. The plan must contain the following information:

- Location and type of all proposed temporary erosion controls on a plan view with existing topographic information (LDC 25-8-181 through 184, ECM 1.4.0)
- Contributing drainage area information for all erosion controls (ECM 1.4.0)
- Location and type of all permanent erosion and sedimentation controls, permanent water quality controls and flood controls. (LDC 25-8-181 through 184, ECM 1.4.0)
- Existing and proposed grade(s) (LDC 25-8-341, 25-8-342, 25-8-181 through 184)
- Finished floor elevation(s) (LDC 25-8-181 through 184)
- All proposed development including all utilities proposed to be part of development permit. (LDC 25-8-181 through 184, ECM 1.4.0)
- Contractor staging area(s) and vehicular use area(s) (ECM 1.4.0)
- Temporary and permanent spoils storage areas; include size, time of use, and ultimate restoration schedules. (LDC 25-8-343, ECM 1.4.0)
- All waterways within the tract or which impact the tract and the location of the 2, 25 and 100 year floodplains and the area of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Location of Critical Water Quality Zone (CWQZ). (LDC 25-8-92, 25-8-261, 25-8-262)
- All proposed floodplain improvements. (LDC 25-8-92, 25-8-261, 25-8-262, ECM 1.7.0)
- Location of all known Underground Storage Tanks.
- Location of all Critical Environmental Features and their required setbacks as defined by LDC Section 25-8-281, 25-8-282.
- Detailed sequence of construction schedule including which phases of construction will be done at which time. Include specific erosion/sedimentation controls and tree protection measures for each phase of the development. Include the required pre-construction meeting. (May be located on general notes sheet). (LDC 25-8-181 through 184, ECM 1.4.0)
- Limit of construction line encompassing all areas to be disturbed, enclosing all areas of natural vegetation on the site which are to be left undisturbed. (ECM 1.4.0)
- Specific locations where special slope stabilization techniques are to be utilized and the extent of slope stabilization to take place and the technique used. (May be located on general notes sheet.) (ECM 1.4.0)
- Restoration plans for all disturbed areas on the site in accordance with requirements of ECM Section 1.4.1(D).
- City of Austin Standard Erosion Control Notes as found in Appendix P-1 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 1.4.0)
- A survey of all trees eight (8) inches in diameter and larger, as applicable based on the requirements of Chapter 25-8, Subchapter B, Article 1 and Section 25-8-121 through 124 of the Land Development Code, and Section 3.3.1 of the Environmental Criteria Manual. Trees are to be represented by circles using the formula of one foot of radius for every one inch of trunk diameter. Unbroken circles indicate trees which are to remain. Dashed circles indicate trees proposed for removal. See Environmental Criteria Manual sections 3.1.0 through 3.6.1 for pertinent survey, graphics, and additional information.
- Location of tree protection fencing (ECM 3.4.5)
- City of Austin Standard Notes for Trees and Natural Area Protection as found in Appendix P-2 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 3.4.5)
- The delineation of Water Quality Transition Zone, as applicable. (LDC 25-8-93, 25-8-453).
- Areas of cut and/or fill greater than four feet. (LDC 25-8-341, 25-8-342)
- Location of all wastewater irrigation areas (LDC 25-8-361)
- Downstream buffer zones, as required by sections 25-8-454 of the Land Development Code.
- The location of wastewater treatment plants and all irrigation fields, if applicable. (LDC 25-8-361)
- In addition to the standard eight (8) inch tree survey, in the Hill Country Corridor, a survey of individual trees >6 inches in diameter and clusters with 3 or more trunks down to two (2) inches within 10' of each other as described in LDC Section 25-2-981, 25-2-1021 through 1026 and Environmental Criteria Manual 3.3.4.

### 4. Water Quality/Drainage Plan

#### A. Water Quality Plan and Drainage Area Map

A water quality plan containing information on water quality controls and 2-year detention shall be submitted. The plan shall consist of an overall plan view of the proposed project and shall contain, at a minimum, the information listed below. Additional information may be necessary to demonstrate compliance with code requirements. (LDC 25-8-211, 25-8-213, 25-8-215, 25-7-61, 25-7-65)

The plan must be a topographic map with two-foot contour intervals, at a scale of 1"=100 feet or less, and shall be sealed by a Professional Engineer.

- Drainage area to each water quality control and size of drainage in acres (ECM 1.6.0)
- All proposed development on the site
  
- The proposed site grading including:
  - arrows indicating the direction of flow,
  - arrows indicating the direction of roof run-off,
  - stormwater lines and inlets,
  - method used to divert stormwater around site,
  
- The location of existing and proposed water quality and detention basins
- Location of discharge from water quality and detention basins (ECM 1.4, 1.6.5)
- Location of maintenance access for drainage structures (ECM Section 1.6.5 D.5)
- Drainage and water quality easements (ECM 1.6.5)
- Location of all CWQZ, and/or WQTZ and the 100 year floodplain adjacent to the water quality control, and flood surface elevation of the waterways. (LDC 25-8-92, 25-8-261, 25-8-262)
- Water Quality calculations table as found in Appendix R-2, R-3, or R-4 in the Environmental Criteria Manual.
- Demonstrate that 2 year detention is not required, or provide calculations for two year detention pursuant to LDC Section 25-7-61, as amended, including: (ECM 1.6.8.2)
  - pre-development stormwater run-off flow rates
  - developed stormwater run-off flow rates
  - discharge flow rates of detention pond(s)
  - volume required in detention basin
  - maximum water surface elevation for the 2-year storm
  - detail on outflow device used for detention pond
  - detention pond detail with dimensions and elevations as needed for construction
  - other information as necessary to demonstrate compliance with the applicable ordinance

#### **B. Water Quality Control Plan(s)**

This sheet or sheets should consist of a plan view and details of each proposed control. The information contained on this sheet should include:

- Plan view of water quality control at scale of 1"=20' (scale may be altered upon request), with dimensions, elevations including the splitter, riser, and gabion if applicable. Show proposed and existing grade within this area. (ECM 1.6.5)
  
- Clearly show the following information in plan view or cross-section: (ECM 1.6.5)
  - slopes provided in sedimentation pond,
  - water quality elevation,
  - top of sand elevation,
  - top of berm,
  - bottom of pond elevations.
  
- Water surface elevation in receiving drainage system or waterway (ECM 1.6.5)
- Location for liner, if applicable. (ECM 1.6.5)
- Underdrain spacing and cleanouts (ECM 1.6.5)
- Landscape screening, maintenance access maintenance staging area. (LDC 25-2-1006, ECM 1.6.5)
- Splitter box detail with dimensions (ECM 1.6.5)
- Riser detail with orifice size, trash rack, gravel and filter fabric shown and specified (ECM 1.6.5)
- Gabion detail with top elevation specified, and gabion specifications, if applicable (ECM 1.6.5)
- Sand detail and specifications (ECM 1.6.5)
- Liner specifications, if applicable (ECM 1.6.5)
- Geotextile membrane specifications (ECM 1.6.5)
- Fence specifications, if applicable (ECM 1.6.5)



- Bollard and chain detail, if applicable (ECM 1.6.5)

## 5. Slope Map and Topographic Map

Submit a slope and topographic map drawn at the same scale as the erosion control and tree protection plan for all sites. The plan shall depict slopes of 0-15%, 15-25%, 25-35%, and over 35%. Slopes shall be calculated based on two foot contour intervals. If there are no slopes greater than 15%, all required information below may be shown on the Erosion/Sedimentation Control Plan.

### Include the following information on this sheet:

- All development or improvements to the site, including adequate building sites exclusive of any required setbacks and easements, assuming an impervious cover limits in Chapter 25-8 of the LDC.
- Net Site Area information, using the format in Appendix Q-1 of the Environmental Criteria Manual. Impervious cover shall include both existing and proposed, given in acreage and as a percent of the Net Site Area. (LDC 25-8-454)
- Calculations of land area in acres for each slope class and each water quality zone within the development. The location, type, acreage, and percentage of impervious cover, including both existing and proposed for each slope category and the totals, using the format in Appendix Q-2 in the Environmental Criteria Manual. (LDC 25-8-301 through 303)
- The location of proposed temporary and permanent spoil disposal sites. (LDC 25-8-343)
- Transfer of Development Rights information, as calculated in Appendix Q-3 in the Environmental Criteria Manual. (LDC 25-8-455)
- Location of all septic drainfields and wastewater irrigation areas (LDC 25-8-361)
- Downstream buffer zones, as required by LDC Section 25-8-454.

## 6. Environmental Assessment Report

### A. Vegetative Element

- A tree survey as specified in ECM Section 3.3, LDC 25-8-121 through 124
- A vegetative survey for all commercial and multifamily sites which shows approximate location of and identifies all significant vegetation on the site. (LDC 25-8-121 through 124)
- A discussion explaining how the design of the plan preserves, to the greatest extent reasonable, any significant trees and vegetation on the site and provides maximum erosion control and overland flow benefits from the vegetation. (LDC 25-8-121 through 124)

### B. Geologic Element

- Description of all Critical Environmental Features, as defined by the Land Development Code, with a reference to the topographic map which identifies their location and proposed means for protection of such areas. (LDC 25-8-281, 25-8-282, 25-8-121 through 124)
- General description of topography, soils, and geology of the site. (LDC 25-8-121 through 124)
- Discussion explaining how the proposed drainage patterns will protect the quality and quantity of recharge points, as required by LDC Section 25-8-281, 25-8-282, and 25-8-121 through 124.

### C. Wastewater Element

- Environmental justification for sewer line locations in Critical Water Quality Zones, if applicable, and a description of the construction techniques and standards for proposed wastewater lines. (LDC 25-8-121 through 124, 25-8-361.)
- A description of alternative wastewater disposal systems to be used over the Edward's Aquifer Recharge Zone, if applicable. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- A description of any proposed on-site collection and treatment systems, treatment levels, and impacts on receiving watercourses, including the Edward's Aquifer, if applicable. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- Information on proposed onsite wastewater treatment levels and status of Texas Natural Resources Conservation Commission Permit, if requirements are different from City requirements. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- Information on the soils in accordance with ECM Section 1.11. (LDC 25-8-121 through 124, 25-8-361)
- Calculations to demonstrate that the wastewater irrigation limitations of LDC Section 25-8-361 have been met, if applicable.

## 7. Endangered Species Survey

If the property is located within the areas identified by the City as potential habitat, and the project is not exempt from the endangered species survey ordinance pursuant to LDC Section 25-8-691, submit an endangered species survey with the site plan according to the guidelines established in Section 6 of the Environmental Criteria Manual.

Provide a survey for each type of endangered species as specified in Section 6.2.3 - 6.2.5 of the Environmental Criteria Manual. Minimum field time requirements for each group of species (birds, plants, karst features) are exclusive for that group. There are specific seasonal limitations for surveys for some species. An Endangered Species Report shall accompany the plan and shall include:

- Dates of endangered species field surveys, if any, and estimated level of effort. (ECM 6.2.2)
- Names and qualifications (e.g. resumes) of personnel performing field surveys for endangered species. (ECM 6.2.2)
- A brief written description of results including the estimated likelihood of occurrence of endangered species on the tract, especially for birds, if performed outside of the nesting season (see Section 6.2.3 of the Environmental Criteria Manual).

**Provide a map of the site that includes the following:**

- Suitable habitat for any endangered birds. (ECM 6.2.3)
- Occupied territories of endangered birds (see ECM Section 6.2.3, A.4).
- Karst features which may harbor endangered cave invertebrates. (ECM 6.2.4)
- Locations of any endangered plant populations. (ECM 6.2.5)

**BARTON CREEK WATERSHED AND BARTON SPRINGS CONTRIBUTING ZONE**

**1. Project Report** (This may be included in the Engineer's report required by the Development Services Department)

**Submit a project report which contains the following information:**

- An introduction which states project acreage, watershed and classification, a description of proposed development, a description of project phasing, if phasing is proposed.
- An explanation of and documentation for any special exception or waiver claimed pursuant to LDC Section 25-8-25, 25-8-212.
- Drainage area map showing the location of all waterways within the tract or which impact the tract which have a drainage area of 64 acres or more, the location of the 100 year floodplain and the area and acreage of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Discussion of the following issues, if applicable to the project:
  - Proposed and existing drainage patterns
  - Proposed method of treating both quantity and quality of stormwater run-off (LDC 25-8-211, 25-8-213, 25-8-215, 25-7-61, 25-7-65)
- Proposed extent of floodplain modification, if applicable (LDC 25-8-92, 25-8-261, 25-8-262, ECM 1.7.0)
- Critical Environmental Features within the project and known features within 150 feet of the project (LDC 25-8-281, 25-8-282)
- Discuss all proposed variances and provide letter of variance request addressing proposed Findings of Fact as shown in Appendix U of the Environmental Criteria Manual. (LDC 25-8-41 through 43)
- Requests for consideration of alternatives to the requirements of the Environmental Criteria Manual (ECM). These shall include any written requests for consideration of an alternative or innovative water quality control which differs from the standards of the ECM, and information to demonstrate that the proposed control provides an equivalent level of water quality as the standard controls in the ECM. (LDC Section 25-8-151).
- Description and location of any known Underground Storage Tanks within the project boundary. (CCA 14-3-102)
- Irrevocable letter of credit for erosion and sedimentation controls based on standard City of Austin costs found in Appendix S-1 of the Environmental Criteria Manual. (ECM 1.2.1)
- Explanation of spoil disposal locations or driveway alignments, as required in LDC Sections 25-8-341, 25-8-342, 25-8-343, and 25-8-481.
- Existing and proposed drainage patterns.
- Proposed cut and fill greater than four feet. (LDC 25-8-341, 25-8-342)
- Proposed impervious cover and net site area information in the format as found in Appendix Q-1 and Q-2 in the Environmental Criteria Manual. (LDC 25-8-481)
- Transfer of Development Information using the format in Appendix Q-3 of the ECM. (LDC 25-8-484)

For projects receiving approval subject to Ordinance No. 920903-D (the SOS Ordinance):

Section 25-8-514 of the Land Development Code (LDC) requires water quality controls and/or other onsite pollution prevention and assimilation techniques so that no increase occurs in the respective average annual pollutant load of suspended solids, total phosphorous, total nitrogen, chemical oxygen demand, biochemical oxygen demand, total lead, cadmium, fecal coliform, fecal streptococci, volatile organic compounds, total organic carbon, pesticides, and herbicides from the site (See section 1.6.9 of the ECM). To demonstrate compliance with these requirements, the applicant must submit the following additional information in the Engineering Report:

- The methodology and water quality control strategy proposed to achieve the target pollutant load reductions (see section 1.6.9 of the ECM);
- Calculations illustrating the target pollutant loads expected for the proposed development with an accompanying explanation of how these figures were derived; (LDC 25-8-511 through 523, ECM 1.6.9)
- Calculations illustrating expected pollutant load reductions for the controls proposed with an accompanying explanation of how these figures were derived; and, (LDC 25-8-511 through 523, ECM 1.6.9)
- Special conditions approved by the City for installation or maintenance of proposed water quality controls used to achieve the target pollutant load reductions.(LDC 25-8-511 through 523, EM 1.6.9)

For projects receiving approval subject to Ordinance No. 941205-A (the amended Composite Ordinance):

Section 25-8-213 of the Land Development Code require water quality controls and/or other onsite pollution prevention and assimilation techniques so that the post-development stormwater concentrations of total suspended solids, total phosphorus and total nitrogen and total organic carbon in stormwater leaving the development site water quality controls must be no greater than the background stormwater concentrations specified in LDC Section 25-8-213 (D). In addition, LDC Section 25-8-511 through 523 requires that multi family and commercial controls be monitored to verify that discharges do not exceed the concentrations. This section established reductions required, and sets maximum discharge concentrations. To demonstrate compliance with these requirements, the applicant must submit the following additional information in the Engineering Report:

- The methodology and water quality control strategy proposed to achieve the target pollutant concentration reductions (see ECM Section 1.6.8).
- Calculations illustrating the target pollutant concentrations expected for the proposed development with an accompanying explanation of how these figures were derived; (ECM 1.6.8)
- Calculations illustrating expected pollutant concentration reductions for the controls proposed with an accompanying explanation of how these figures were derived; and, (ECM 1.6.8)
- Special conditions approved by the City for installation or maintenance of proposed water quality controls used to achieve the target pollutant concentration reductions. (ECM 1.6.8)
- For commercial sites, pollution reduction measures required by LDC Section 25-8-213, including use of xeriscape with a fertilizer reduction element and spill control/maintenance plan for hydrocarbons. (ECM 1.6.8)

## 2. Cover Sheet

Provide a cover sheet which contains the following information:

- name of project
- watershed name and classification
- application submittal date
- subject water quality ordinance
- statement whether site is located over Edward's Aquifer Recharge Zone
- Statement whether an operating permit for water quality controls is required, and the level of operating permit.

## 3. Erosion/Sedimentation Control and Tree Protection Plan

This plan must be on a separate page labeled "Erosion/ Sedimentation Control and Tree Protection Plan". This plan must be a topographic map with two-foot contour intervals, at a scale of 1"=50 feet or less, and sealed by a Professional Engineer (LDC 25-8-152). For large projects, the Development Assistance Center may waive the requirement for a 1"=100' scale, and may allow a smaller scale to be submitted. Symbols used to show controls must be clear and distinctive. The plan must contain the following information:

- Location and type of all proposed temporary erosion controls on a plan view with existing topographic information (LDC 25-8-181 through 184, ECM 1.4.0)
- Contributing drainage area information for all erosion controls (ECM 1.4.0)
- Location and type of all permanent erosion and sedimentation controls, permanent water quality controls and flood controls. (LDC 25-8-181 through 184, ECM 1.4.0)
- Existing and proposed grade(s) (LDC 25-8-341, 25-8-342)
- Finished floor elevation(s) (LDC 25-8-341, 25-8-342)

- All proposed development including all utilities proposed to be part of development permit. (LDC 25-8-181 through 184, ECM 1.4.0)
- Contractor staging area(s) and vehicular use area(s) (ECM 1.4.0)
- Location of existing or proposed water quality or detention controls.-(ECM 1.4.0)
- Temporary and permanent spoils storage areas; include size, time of use, and ultimate restoration schedules. (LDC 25-8-343, ECM 1.4.0)
- All waterways within the tract or which impact the tract and the location of the 2, 25 and 100 year floodplains and the area of upstream drainage. (LDC 25-8-92, 25-8-261, 25-8-262)
- Location of Critical Water Quality Zone (CWQZ). (LDC 25-8-92, 25-8-261, 25-8-262)
- All proposed floodplain improvements. (LDC 25-8-92, 25-8-261, 25-8-262. ECM 1.7.0)
- Location of all known Underground Storage Tanks.(CCA 14-3-102)
- Location of all Critical Environmental Features and their required setbacks as defined by LDC Section 25-8-281, 25-8-282.
- Detailed sequence of construction schedule including which phases of construction will be done at which time. Include specific erosion/sedimentation controls and tree protection measures for each phase of the development. Include the required pre-construction meeting. (May be located on general notes sheet). (LDC 25-8-181 through 184, ECM 1.4.0)
- Limit of construction line encompassing all areas to be disturbed, enclosing all areas of natural vegetation on the site which are to be left undisturbed. (ECM 1.4.0)
- Specific locations where special slope stabilization techniques are to be utilized and the extent of slope stabilization to take place and the technique used. (May be located on general notes sheet.) (ECM 1.4.0)
- Restoration plans for all disturbed areas on the site in accordance with requirements of ECM Section 1.4.1(D).
- City of Austin Standard Erosion Control Notes as found in Appendix P-1 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 1.4.0)
- A survey of all trees eight (8) inches in diameter and larger, as applicable based on the requirements of Chapter 25-8, Subchapter B, Article 1 and Section 25-8-121 through 124 of the Land Development Code, and Section 3.3.1 of the Environmental Criteria Manual. Trees are to be represented by circles using the formula of one foot of radius for every one inch of trunk diameter. Unbroken circles indicate trees which are to remain. Dashed circles indicate trees proposed for removal. See Environmental Criteria Manual sections 3.1.0 through 3.6.1 for pertinent survey, graphics, and additional information.
- Location of tree protection fencing (ECM 3.4.5)
- City of Austin Standard Notes for Trees and Natural Area Protection as found in Appendix P-2 in the Environmental Criteria Manual. (May be located on general notes sheet.) (ECM 3.4.5)
- The delineation of Water Quality Transition Zone, as applicable. (LDC 25-8-93, 25-8-483)
- Areas of cut and/or fill greater than four feet. (LDC 25-8-341, 25-8-342)
- Location of all wastewater irrigation areas (LDC 25-8-361)
- Downstream buffer zones, as required by sections 25-8-454 of the Land Development Code.
- The location of wastewater treatment plants and all irrigation fields, if applicable. (LDC 25-8-361)
- In addition to the standard eight (8) inch tree survey, all Hill Country roadway projects require a survey of certain species of trees down to six (6) inches in diameter for individual trees and down to two (2) inches in diameter for tree clusters as described in LDC Section 25-2-981, 25-2-1021 through 1026 and Environmental Criteria Manual 3.3.4. for projects located within designated Hill Country Roadway Corridor Areas.
- The erosion control plan must show all water quality controls, and associated appurtenances to scale. (LDC 25-8-181 through 184)
- Additional notes must be included on the erosion control plan found in Appendix P-3 in the Environmental Criteria Manual. (May be located on general notes sheet). (LDC 25-8-181 through 184)
- Sequence of Construction containing at a minimum, the information found in Appendix P-4 in the Environmental Criteria Manual. (May be located on general notes sheet). (LDC 25-8-181 through 184)

#### 4. Water Quality/Drainage Control Plan

##### A. Water Quality Plan and Drainage Area Map

A water quality plan containing information on water quality controls and 2-year detention.-The plan shall consist of an overall plan view of the proposed project and shall contain, at a minimum, the information listed below. Additional information may be necessary to demonstrate compliance with code requirements.

The plan must be a topographic map with two-foot contour intervals, at a scale of 1"=100 feet or less, and shall be sealed by a Professional Engineer with experience in water quality design, and shall contain the following information:

— Drainage area to each water quality control and size of drainage in acres.

- Proposed grading plan including:
  - arrows indicating the direction of flow,
  - stormsewer lines and inlets,
  - method used to divert stormwater around site,
  - creeks, open drainageways within subdivision.
- Location of existing and proposed water quality and detention basins.
- Location of discharge from water quality and detention basins (ECM 1.6.5)
- Location of maintenance access roads for drainage structures (ECM section 1.6.5 D.5)
- Drainage and water quality easements (ECM 1.6.5)
- Location of all CWQZ, and/or WQTZ and the 100 year floodplain adjacent to the water quality control, and flood surface elevation of the waterways. (25-8-92, 25-8-261, 25-8-262)
- Demonstrate that 2 year detention is not required, or provide calculations for two year detention pursuant to LDC section 25-7-61, as amended, including: (ECM 1.6.8.2)
  - pre-development stormwater run-off flow rates
  - developed stormwater run-off flow rates
  - discharge flow rates of detention pond(s)
  - volume required in detention basin
  - maximum water surface elevation for the 2-year storm
  - detail on outflow device used for detention pond
  - detention pond detail with dimensions and elevations as needed for construction
  - other information as necessary to demonstrate compliance with the applicable ordinance

#### B. Water Quality Control Plan(s)

Section 25-8-183 of the Land Development Code (LDC) requires that all applications for development include a water quality control plan. This water quality plan must be a construction plan sheet or sheets designated as the "Water Quality Control Plan" and sealed by a registered, professional engineer with experience in water quality design. The plan shall include the following:

- The location of proposed water quality controls, as described in the Project Report, which are necessary to meet the pollutant reduction requirements, indicating whether or not the design is a structural control;
- Details of proposed water quality controls referenced specifically to the water quality methodology contained in the Water Quality Report (These details may be provided on a separate plan sheet, if necessary, with appropriate references and cross-sections provided on the Water Quality Control Plan); (ECM 1.6.8,9)
- Impervious cover calculations based on net site area, and within the drainage area to the control;(ECM 1.6.8,9)
- Specific notes that address the following requirements: (May be located on general notes sheet). (ECM 1.6.8,9)
  1. Pollution prevention measures proposed to satisfy requirements of Section 25-8-213 or Section 25-8-514 of the LDC and the appropriate enforcement mechanisms used (covenants, restrictions, etc.); and,
  2. Special conditions required as a result of a "limited adjustment" approved by the City Council, if applicable.

#### 5. Slope Map and Topographic Map

Submit a slope and topographic map drawn at the same scale as the erosion control and tree protection plan for all sites. The plan shall depict slopes of 0-15%, 15-25%, 25-35%, and over 35%. Slopes shall be calculated based on two foot contour intervals. If there are no slopes greater than 15%, all required information below may be shown on the Erosion/Sedimentation Control Plan.

##### **Include the following information on this sheet:**

- All development or improvements to the site, including adequate building sites exclusive of any required setbacks and easements, assuming an impervious cover limits in Chapter 25-8 of the LDC.
- Net Site Area information, using the format in Appendix Q-1 of the Environmental Criteria Manual. Impervious cover shall include both existing and proposed, given in acreage and as a percent of the Net Site Area. (LDC 25-8-481)
- Calculations of land area in acres for each slope class and each water quality zone within the development. The location, type, acreage, and percentage of impervious cover, including both existing and proposed for each slope category and the totals, using the format in Appendix Q-2 in the Environmental Criteria Manual. (LDC 25-8-301 through 303)
- The location of proposed temporary and permanent spoil disposal sites. (LDC 25-8-343)

- Transfer of Development Rights information, as calculated in Appendix Q-3 in the Environmental Criteria Manual. (LDC 25-8-484)
- Location of all septic drainfields and wastewater irrigation areas (LDC 25-8-361)
- Downstream buffer zones, as required by LDC Section 25-8-481.

## 6. Environmental Assessment Report

### A. Vegetative Element

- A tree survey as specified in ECM Section 3.3 (LDC 25-8-121 through 124)
- A vegetative survey for all commercial and multifamily sites which shows approximate location of and identifies all significant vegetation on the site (LDC 25-8-121 through 124).
- A discussion explaining how the design of the plan preserves, to the greatest extent reasonable, any significant trees and vegetation on the site and provides maximum erosion control and overland flow benefits from the vegetation. (LDC 25-8-121 through 124)

### B. Geologic Element

- Description of all Critical Environmental Features, as defined by the Land Development Code, with a reference to the topographic map which identifies their location and proposed means for protection of such areas. (LDC 25-8-281, 25-8-282, 25-8-121 through 124)
- General description of topography, soils, and geology of the site. (LDC 25-8-121 through 124)
- Discussion explaining how the proposed drainage patterns will protect the quality and quantity of recharge points, as required by LDC Section 25-8-281, 25-8-282, and 25-8-121 through 124.

### C. Wastewater Element

- Environmental justification for sewer line locations in Critical Water Quality Zones, if applicable, and a description of the construction techniques and standards for proposed wastewater lines. (LDC 25-8-121 through 124, 25-8-361)
- A description of alternative wastewater disposal systems to be used over the Edward's Aquifer Recharge Zone, if applicable. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- A description of any proposed on-site collection and treatment systems, treatment levels, and impacts on receiving watercourses, including the Edward's Aquifer, if applicable. (LDC 25-8-121 through 124, 25-8-361, ECM 1.11)
- Information on proposed onsite wastewater treatment levels and status of Texas Natural Resources Conservation Commission Permit, if requirements are different from City requirements. (LDC 25-8-121 through 124, 25-8-361)
- Information on the soils in accordance with ECM Section 1.11. (LDC 25-8-121 through 124)
- Calculations to demonstrate that the wastewater irrigation limitations of LDC Section 25-8-361 have been met, if applicable.

## 7. Endangered Species Survey

If the property is located within the areas identified by the City as potential habitat, and the project is not exempt from the endangered species survey ordinance pursuant to LDC Section 25-8-691, submit an endangered species survey with the site plan according to the guidelines established in Section 6 of the Environmental Criteria Manual.

Provide a survey for each type of endangered species as specified in Section 6.2.3 - 6.2.5 of the Environmental Criteria Manual. Minimum field time requirements for each group of species (birds, plants, karst features) are exclusive for that group. There are specific seasonal limitations for surveys for some species. An Endangered Species Report shall accompany the plan and shall include:

- Dates of endangered species field surveys, if any, and estimated level of effort. (ECM 6.2.2)
- Names and qualifications (e.g. resumes) of personnel performing field surveys for endangered species. (ECM 6.2.2)
- A brief written description of results including the estimated likelihood of occurrence of endangered species on the tract, especially for birds, if performed outside of the nesting season (see Section 6.2.3 of the Environmental Criteria Manual).

### Provide a map of the site that includes the following:

- Suitable habitat for any endangered birds. (ECM 6.2.3)
- Occupied territories of endangered birds (see ECM Section 6.2.3, A.4).
- Karst features which may harbor endangered cave invertebrates. (ECM 6.2.4)
- Locations of any endangered plant populations. (ECM 6.2.5)

