

**CITY OF COWETA**

**SUBDIVISION  
REGULATIONS**

**Ordinance No. 717  
Adopted April 4, 2011**

## **THE SUBDIVISION REGULATIONS OF THE CITY OF COWETA, OKLAHOMA**

This is the publication of the Subdivision Regulations as adopted by Ordinance No. 717 on April 4, 2011. This document will be codified by the City as amendments are adopted by the City Council. Additional copies of this Regulation may be obtained for a reasonable fee at city hall. Supplements to this Regulation will also be available for a reasonable fee at city hall.



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## SUBDIVISION REGULATIONS

CITY OF

COWETA, OKLAHOMA

Adopted by the Coweta City Council  
By Ordinance No. 390  
On September 19, 1988  
Amended April 4, 2011

Prepared for the  
City of Coweta  
By the Membership Services Division  
Indian Nations Council of Governments

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**CITY OF COWETA  
SUBDIVISION REGULATIONS**

**CHAPTER I  
GENERAL PROVISIONS**

**1.1 TITLE AND CODIFICATIONS:**

These regulations and all amendments thereto, shall be known and may be cited as the Subdivision Regulations of the City of Coweta, Oklahoma, and shall be separately codified by the City.

**1.2 PURPOSE AND INTENTIONS:**

**1.2.1 Purpose:**

The arrangement of parcels of land in Coweta for residential, office, commercial and industrial uses and for public needs, such as streets and easements, will to a large degree determine the health, safety, economy and quality of life in the city. Such amenities are a public concern. These Regulations and standards for the subdivision of land are intended to insure the development and maintenance of a safe, healthy, attractive and efficient community and provide for the conservation of its human and physical resources.

**1.2.2 Intentions:**

These Regulations are adopted for the following purposes:

- A.** To provide for the physical development of the City of Coweta in accordance with the Comprehensive Land Use Plan and the Major Street and Highway Plan, Engineering Standards, Stormwater Design Criteria;
- B.** To provide the most beneficial relationship between the uses of land and buildings and the circulation of traffic throughout the City of Coweta, having particular regard to the avoidance of congestion in the streets and highways, and the pedestrian traffic movements appropriate to the various uses of land and buildings, and to provide for the proper location and width of streets and building lines;
- C.** To secure and provide for the proper arrangement of streets or other highways in relation to the existing or planned streets or highways or to the Comprehensive Land Use Plan or plans of the area; for adequate and convenient open spaces for traffic, utilities, access of fire fighting apparatus, parking lots, parks, playgrounds, light and air; and for the avoidance of congestion of populations;
- D.** To establish a subdivision process that is expeditious and as efficient as possible while providing for public health, safety and general welfare.

- E.** To provide for neighborhood conservation and prevent the development of slums and blight.
- F.** To harmoniously relate development of the various tracts of land to the existing community and facilitate the future development of adjoining tracts.
- G.** To provide that the cost of improvements which primarily benefit the tract of land being developed be borne by the owners or developers of the tract, and that cost of improvements which primarily benefit the whole community be borne by the whole community.
- H.** To provide the best possible design for the tract.
- I.** To ensure proper legal descriptions, monumenting of land, adequate and accurate platting records of subdivided land.
- J.** To ensure that public facilities and utilities are available and that they will have sufficient capacity to service the proposed subdivision and for the general community.

**1.3 AUTHORITY:**

These Regulations for land Subdivisions are adopted under the authority granted by Oklahoma State Statutes.

**1.4 JURISDICTION:**

These Regulations shall apply to all subdivision of land located within the corporate limits of the City of Coweta, Oklahoma.

**1.5 SCOPE:**

These subdivision regulations shall not apply to any lot or lots forming a part of a subdivision created and recorded prior to the 4th day of April 2011. Provided that if such land is re-platted, the re-plat will comply with this regulation. Nor is it intended by these regulation to repeal, abrogate, annul, or in any way impair or interfere with existing provisions of other laws or ordinances except those specifically repealed, or with private restriction placed upon property by deed, covenants, or other private agreement, or with restrictive covenants running with the land to which the City is a party. Where this regulation poses a greater restriction than is imposed or required by such existing provisions of law, ordinance, contract or deed, the provisions of this regulation shall control.

**1.6 SUBDIVISION PLAT REQUIREMENT WHEN REZONING AND WAIVER:**

For any land which has been rezoned upon application of a private party, no building permit shall be issued until that portion of the tract on which the permit is sought has been included within a subdivision plat or replat, as the case may be, submitted to and approved by the Planning Commission and City Council and filed of record in the office

of the County Clerk where the property is situated. The City Council, upon a showing that the purposes of these regulations have already been achieved by previous platting, or could not be achieved by a plat or replat, may waive the subdivision plat requirement.

**1.7 PLAT VACATION AND ALTERATIONS:**

No vacation of a plat or any parts thereof, except by action of the District Court, shall be valid or impart notice until after the consent of all of the owners of such platted area is presented to the City Council -and the approval of the Council is entered thereon. All vacations or alterations of a final approved filed plat shall require the approval of the Planning Commission and City Council and the filing of a corrected plat, approved deed or accepted easement. Alterations of a plat without approval shall constitute a violation of these Regulations.

**1.8 VARIANCE OF REGULATIONS:**

Whenever the tract to be subdivided is of such unusual size or shape or is surrounded by such development or unusual conditions that the strict application of the requirements contained in these Regulations result in substantial hardship or inequity, the Planning Commission may vary or modify, except as otherwise indicated such requirements of design but not of procedure or improvements so that the subdivider may develop his property in a 'reasonable manner but so that at the same time, the public welfare and interests of the City are protected and the general intent and spirit of these regulations are preserved. Such modification may be granted upon written request of the subdivider stating the reason for each modification may be waived by three-fourths (3/4) vote of the quorum of the Planning Commission, subject to the acceptance of the plat and the dedications thereon by the City Council. A variance of the Zoning Code must be granted by the Coweta Board of Adjustment.

**1.9 AMENDMENTS OF THESE REGULATIONS:**

For the purpose of providing the public health, safety and general welfare, the City Council may from time to time amend the provisions imposed by these Subdivision Regulations. Public hearings on all proposed amendments shall be held by the City Council in the manner prescribed by law.

**1.10 SEPARABILITY OF PROVISIONS:**

If any section, clause, paragraph, provision or portion of these regulations shall be held invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect any other section, clause, paragraph, provision or portion of these Regulations.

**1.11 PENALTY:**

Any person or persons, firm, or corporation who violates any of these Regulations or fails to comply therewith or with any of these requirements thereof shall be deemed guilty of an offense and be liable for a fine as provided by City Ordinance. Each day such violation is permitted to exist shall constitute a separate offense. In addition to the other remedies provided herein, the City may institute any proper act on or proceedings to enforce these Regulations.

**1.12 TECHNICAL ADVISORY COMMITTEE ON PLATS - CREATED, AND COMPOSITION:**

There is hereby created a Technical Advisory Committee on plats, the membership of which is composed of but not limited to, a representative of each of the following agencies and companies and such other public officials as the City Manager may designate:

- A. The City Manager
- B. The City Engineer
- C. The City Fire Chief
- D. The Director of Public Works
- E. The Wagoner County Health Department
- F. The natural gas company
- G. The electric company
- H. The telephone company
- I. The cable television company

**1.13 TECHNICAL ADVISORY COMMITTEE ON PLATS – DUTIES:**

It shall be the responsibility of the Technical Advisory Committee to meet together on the call of the City Planner, who shall serve as chairman, to review and study all sketch-plats, preliminary plats, and final plats and to submit its findings and recommendations to the Planning Commission.

**1.14 APPLICATION OF THIS REGULATION:**

Except as provided in this regulation, no person shall subdivide any tract of land, which is located within the City nor shall any person create a minor subdivision for any tract of which is located within the City, except in conformity with the provisions of this regulation.

**1.15 ENFORCEMENT:**

**1.15.1 Recording of the Plat:**

No plat of any subdivision shall be entitled to be recorded in the County Clerk's office or to otherwise to have any validity until it shall have been approved in the manner prescribed herein. In the event any such unapproved plat is recorded, it shall be considered invalid, and the City Council may institute legal proceedings to have the plat stricken from the records.

**1.15.2 Sale of land in Subdivision:**

No owner or agent of the owner of any land located within any actual or proposed subdivision shall offer, transfer, sell, agree to sell any land by reference to, exhibit of, by the use of a plan or plat of a subdivision before such plan or plat has been approved and recorded in the manner prescribed herein; unless such agreement to sell is expressly made contingent upon the proper filing of the plat in question in advance of closing. Any sale or transfer contrary to the provisions of this section is void. The description of such lot or parcel by metes and bounds in the instrument of transfer or other document used in the process of selling or

transferring shall not exempt the transaction from the provisions of this regulation.

### **1.15.3 Construction of Improvements:**

**A.** Upon approval of the Preliminary Plat by the Planning Commission, the subdivider of any land located within the City can proceed with the submission of all documents and fees for compliance with the PFPI, Stormwater Design Criteria, Earth Change and all other pertinent ordinances necessary for obtaining construction permits. Upon city staff approval of an Earth Change Permit and/or Building Permit, the subdivider may proceed with any construction work on such proposed subdivision.

1. Permits can be issued based upon individual scopes of work for each improvement (i.e. complete sanitary sewers, water distribution system, storm sewers, earthwork and detention facility) however the final plat cannot be filed of record until the final plat has been submitted and approval by the City Council and:

- a. all improvements are complete and accepted or approved by the City Council and/or;
- b. security has been provided and approved by the City staff for all of the improvements.

2. If the subdivider wishes to file the final plat prior to the completion and acceptance or approval of all construction improvements the final plat must have been approved by the City Council; and the security for all improvements must be submitted and approved by the City staff.

**B.** The Building Official shall not issue building permits for any structure on a lot in a subdivision for which a final plat has not been approved and recorded in the manner prescribed herein, and for which all proposed public improvements have not been accepted by the City Council.

**C.** The city staff shall not sell or authorize to be installed any taps to public water or sewer systems on any lot of a subdivision for which a plat has not been approved and recorded in the manner prescribed herein, and for which all improvements have not been constructed. Provided that all public improvements must be constructed dedicated, and accepted by the City prior to the sale or authorization.

### **1.15.4 Public Services:**

The City will withhold all public services of whatsoever nature other than police and fire protection, but including the maintenance of streets and the furnishing of water or sewer facilities from all subdivisions which have not been approved, and from all areas dedicated to the public which have not been accepted in the manner prescribed herein. It is further the policy of the City to require the owner to

comply with the general principles of design and requirements for subdivisions as set forth herein.

**1.15.5 Revision of Plat after approval:**

No changes, erasures, modifications or revisions shall be made in any plat of a subdivision after approval has been given by the City Council, and endorsed in writing on the plat, unless said plat is first resubmitted to the Planning Commission and to the City Council and receives approval for the changes.

**1.16 HEADINGS:**

Headings are provided for reference purposes and are not to be used as interpretive guides.

**1.17 MINIMUM STANDARDS DESIGN CRITERIA:**

In enacting various provisions of the Coweta Subdivision Regulations, and in promulgating any rules or regulations which may be made necessary in order to carry out the purpose of this regulation, the City of Coweta sets forth certain minimum standards for construction which may not be violated in the construction of any public improvements. By setting forth these minimum design standards, neither the City as an entity nor any of its staff makes any representations, warranties or assurances that these minimum designs are sufficient. Any subdivider within the City Limits of Coweta must rely upon his own design professionals to design facilities, whether Public or private, which are capable of providing services required of such public or private facilities: and which are adequate under all reasonably foreseeable circumstances for the purposes intended. When the City staff examines proposals or construction plans for conformity with these regulations, such review by City staff is to determine whether or not the minimum standards will be met. The approval of these plans does not represent, warrant, or assure any person that the designs are adequate for the purposes intended. Neither the enactment of this regulation nor review of improvements to be constructed or proposed under this regulation shall in any manner create liability for the City of Coweta, to the subdivider, nor to any person affected by the activities of such subdivider.

**CHAPER II**  
**SUBDIVISION APPLICATION PROCEDURES**

**2.1**    **PROCESS:**

**2.1.1**    **Requirement:**

Whenever any subdivision of land is proposed before any contract is made for the sale of any part of the land and before any permit for the erection of a structure in such proposed subdivision shall be granted the owner of the land or his agent shall apply for and secure Planning Commission and City Council approval of such proposed subdivision.

In planning, platting, and developing a subdivision, the subdivider shall comply with the design standards, the minimum requirements set forth in this regulation, City ordinances, and State of Oklahoma statutes.

**2.1.2**    **Procedure:**

Proposed subdivision to be processed as follows:

- A.**    Pre-plat conference and submission of a sketch plan
- B.**    T.A.C review of the sketch plan
- C.**    Application for preliminary plat to the City Planner and submission of construction plans to the City Engineer
- D.**    Technical Advisory Committee (T.A.C.) review of the preliminary plat and construction plans
- E.**    Planning Commission review of the preliminary plat and construction plans
- F.**    Revision of the preliminary plat and construction plans as required
- G.**    Application for the final plat and construction plans
- H.**    T.A.C. review of the final plat and construction plans
- I.**    Planning Commission review of the final plat
- J.**    City Council review and approval of the final plat and construction plans
- K.**    Construction of subdivision improvements in accordance with the approved Construction Plans or submission of performance bonds in lieu of construction and submission of street and public utility AS Built Construction Plans
- L.**    Certification of the final plat
- M.**    Record the certified final plat with the appropriate county officials
- N.**    Application for building permits on the lots in the subdivision

**2.2**    **SKETCH PLAN:**

**2.2.1**    **Purpose:**

The purpose of the sketch plan is to provide the subdivider, the Planning Commission, and city officials an opportunity to identify some of the potential problems concerning the land use, general design and overall approaches to installation of improvements before the preparation of more detailed platting documents. This step in the overall subdivision process is very important because

it is at the initial part of the process when decisions are to be made that can have a great impact on the subdivider and the community.

It is important that all of the land to be included in the proposed subdivision shall be included in the sketch plan so that an overview of an entire area can be accomplished.

**2.2.2 Sketch Plan Conference:**

A conference shall be held between the subdivider and the City Planner to discuss Zoning Code requirements, subdivision design requirements, platting procedures and improvements construction. At the conference the subdivider shall submit to the City Planner 15 copies of the sketch plan. The sketch plan may be submitted in the form of a freehand pencil sketch but shall be a clear and legible product drawn approximately to scale. It need not be certified by a registered engineer or surveyor. A review of the sketch plan will be conducted by the City Planner, the Technical Advisory Committee, and the subdivider at a meeting scheduled by the City Planner (Section 1.13). The comments of the review group shall not be binding on the subdivider, the City Planner, or the Technical Advisory Committee. This step is to be used as a guide to inform the subdivider of the possible conditions that may be imposed upon his development. Comments concerning the sketch plan shall be forwarded to the subdivider or his representative within fifteen (15) working days following the meeting of the Technical Advisory Committee.

**The sketch plan shall contain the following information:**

- A. The general topography of the tract
- B. Existing adjoining development
- C. Existing streams, flood plains, and storm drainage, if any
- D. Existing public and private utilities and easements
- E. The proposed land use such as residential, commercial, parks, schools, drainage detention facilities
- F. The proposed layout of streets, lots and blocks
- G. The proposed subdivision name
- H. The proposed layout of public utilities
- I. The location of every existing or abandoned oil or gas well or dry hole drilled in search of oil or gas as shown by the records of the Oklahoma Corporation Commission
- J. The name, address and telephone number of the property owner and subdivider
- K. Any other pertinent information

**2.3 PRELIMINARY PLAT:**

**2.3.1 Purpose:**

The purpose of the preliminary plat is to provide an interim step in the procedure when the subdivider shall present drawings of the detail features of the

subdivision. It is at this point that the items discussed at the sketch plan stage are shown and the development is examined to see if it is technically functional.

**2.3.2 Application:**

The subdivider shall submit twenty-two (22) copies black line or blue line prints (1) half size 11x17 reproducible of the proposed subdivision, of the preliminary plat which have been prepared by a Surveyor or Engineer to the City Planner no later than thirty (30) calendar days prior to the Planning Commission meeting at which the plat will be reviewed. The preliminary plat shall show all the features needed to enable the Planning Commission to determine whether or not the proposed subdivision layout is satisfactory from the standpoint of public interest. The preliminary plat size shall not be less than 22 inches by 34 inches and folded to 8 1/2 inches by 11 inches. The forms for which shall be supplied by the City Planner, and pay an application fee as established by ordinance.

**2.3.3 Preliminary Engineering Construction Plans:**

The subdivider shall submit with the preliminary plat five (5) sets each prepared by an Engineer illustrating the locations of the detention, sanitary sewer and water systems, including off-site systems. The preliminary construction plans shall show horizontal configurations, connections to existing utilities, sizes and locations of proposed lines, proposed sewers, detention or retention facilities, construction details, calculations, and profiles.

**2.3.4 Preliminary Plat Contents:**

The preliminary plat shall be drawn at a scale of one hundred (100) feet to one inch or larger and shall contain or be accompanied by the following information:

- A. The proposed name of the subdivision. The name shall not duplicate or too closely resemble names of existing subdivisions.
- B. The names and addresses of the owner(s) of record, the subdivider(s), and the registered engineer or land surveyor preparing the plat.
- C. An accurate legal description of the property and a complete boundary survey showing the dimensions, distances to the nearest one-hundredth foot, bearings to the nearest second and acreage to the nearest one-hundredth acre.
- D. The scale, north arrow and date.
- E. The key or location map, at a legible scale, showing the locations of subdivisions within the mile section.
- F. The location of adjoining unplatted land and the names of adjoining subdivisions and the location of city limits boundaries if adjoining the subdivision.
- G. The topography with contour intervals of not more than two (2) feet based on United States and Geodetic Survey data and all Flood Plain information.
- H. The location and description of all existing structures.
- I. The locations of all ponds, lakes and streams and the areas subject to flooding based upon the regulatory flood.

- J.** The location, width and name of each existing or proposed street or other public way, railroad, and utility right-of-way, bridge, park and other public open space within or adjacent to the proposed subdivision.
- K.** The location, pipe size and grades of all existing sewers, water mains, gas mains, or other underground installations within or immediately adjacent to the proposed subdivision.
- L.** The locations and widths of easements of all oil, gas and petroleum product pipelines within or adjacent to the proposed subdivision.
- M.** The location of every existing or abandoned oil or gas well or dry hole drilled in search of oil or gas as shown by the records of the Oklahoma Corporation Commission.
- N.** The location of facilities and land to be considered for dedication to public use, or to be reserved for use of all property owners in the subdivision and any conditions of such dedications or reservations.
- O.** All proposed lots consecutively numbered, their dimensions, and building set back lines.
- P.** All blocks consecutively numbered.
- Q.** Any other information as may be deemed by the Planning Commission as reasonably necessary for the full and proper consideration of the proposed subdivision.
- R.** If the subject property has been rezoned in the last 12 months, no notice of the abutting owners is required. If not, the subdivider shall furnish the names and addresses of the property owner(s) which abut the subject tract to the City Planner. This list is to be furnished by an abstracting company.

**2.3.5 Review of Preliminary Plats:**

- A.** fees:  
Upon filing application the owner shall pay all fees to the City as defined herein and as established by ordinance.
- B.** The City Planner upon receipt of the required plats, construction plans and fees shall:
  1. distribute copies of the preliminary plat and construction plans to the Technical Advisory Committee,
  2. set the plat on the T.A.C. and Planning Commission agendas,
  3. review the plat for conformance with the Zoning Code and these Regulations,
  4. prepare recommendations for submission to the T .A.C. and Planning Commission.
- C.** The Technical Advisory Committee shall:
  1. review the preliminary plat and construction plans and make recommendations to the Planning Commission.
- D.** Tentative approval:  
After receipt of the recommendations of staff, the Technical Advisory Committee, other agencies and utility companies, the Planning Commission may tentatively approve the preliminary plat with any modifications or conditions, noting all such modifications on the plat

Upon rejection, or on approval subject to modifications or conditions, the Planning Commission will require the subdivider to submit a revised preliminary plat. Tentative approval of the preliminary plat shall be deemed to be an approval only of design features of the tract; the City Engineer or other officials having justification to modify engineering and construction details, may require modifications as necessary for the protection of the public interest.

**E.** The Planning Commission shall:

1. hold a public hearing on the preliminary plat,
2. the preliminary plat shall be reviewed by the Planning Commission for conformity with the Comprehensive Land Use Plan of the City of Coweta, and for compliance with the standards requirements and principles hereinafter prescribed; and, shall be reviewed by the Planning Commission staff for compliance with all applicable additional requirements of all governmental authorities and agencies, and with all applicable regulations of public utilities.
3. approve, conditionally approve, or disapprove the preliminary plat at such meeting. If the preliminary plat is approved with conditions, the Planning Commission may require the subdivider to submit a revised preliminary plat. The subdivider shall be advised of any amendments required by the Planning Commission to comply with these Regulations. If the preliminary plat is disapproved, the reasons for that action shall be stated.

**2.3.6 Phased Developments:**

The preliminary plat representing the entire proposed development (all phases) must be submitted with the preliminary plat submission for review and approval. Actual phased construction and final platting may be part of the construction plans and final plat reviews.

**2.3.7 Preliminary Plat Expiration:**

The approval of a preliminary plat shall be effective for a period of one (1) year from the date of approval by the Planning Commission at the end of which time approval of the Final Plat must have been obtained from the City Council. Any preliminary plat not receiving Final Plat approval within one year shall be null and void. Every plat shall conform to existing subdivision regulations applicable at the time of approval of the preliminary plat unless modifications have been granted.

**2.4 FINAL PLAT:**

**2.4.1 Application:**

The subdivider shall submit twenty-two (22) full size copies black line or blue line prints (1) half size 11 inches by 17 inches (1) 8½ inches by 11 inches of the final plat and restrictive covenants. The final plat size shall not be less than 22 inches by 34 inches and folded to 8½ inches by 11 inches, and five (5) sets of the

final proposed construction plans prepared by a licensed Engineer, registered in the State of Oklahoma shall be submitted along with all other documents required by these regulations, to the City Planner no later than thirty (30) calendar days prior to the Planning Commission meeting at which the plat will be reviewed. The plans shall reflect any corrections from the preliminary plat review. These construction plans shall include the final information (plans, profiles, details, etc.) concerning hydrology, hydraulics, topography, water distribution systems, wastewater systems, grading (existing and proposed), stormwater drainage, systems, and paving which comply with the requirements of these regulations. The final plat shall be accompanied by an application, the forms for which shall be supplied by the City Planner and a fee as established by ordinance. Requests for exceptions to these Regulations or requirements of the preliminary plat shall be submitted in accordance with these Regulations. Upon final approval of the construction plans by the City Engineer, the developer shall furnish five (5) copies of all water and sewer plans for submittal to The Oklahoma State Department of Environmental Quality for approval, along with the application for permit to construct the facilities, the engineer's report and the appropriate application fee for the Department of Environmental Quality review.

#### **2.4.2 Contents:**

- A.** The name of the subdivision, city, county and state. The subdivision name shall not duplicate or too closely approximate the name of any existing subdivision.
- B.** The name and address of the owner(s) of record, the subdivider(s) and the registered engineer or land surveyor preparing -the plat. Official seals of the engineer or surveyor are required.
- C.** The accurate legal description of the subdivision referenced to section, range and township, based on an accurate traverse, giving angular and linear dimensions which must mathematically close, the allowable error of closure on any portion of a final plat shall be one (1) foot in five thousand (5,000).
- D.** The date of preparation of the plat, north arrow and scale (written and graphic presentation).
- E.** The key or location map showing location and name of subdivisions within the mile section.
- F.** The total acreage and total number of lots of the subdivision shown near the key or location map.
- G.** The names of all adjacent subdivisions and the names, locations and widths of all existing and proposed streets, easements, drainageways, and other public ways adjacent to the property.
- H.** The location of monuments showing reference to existing United States Coastal and Geodetic Survey data or the nearest established street lines, including true angles and distances to such reference points or monuments.
- I.** Location of lots, streets, public highways, alleys, parks, building lines, limits of no access and other features, with accurate dimensions in feet and

decimals of feet and distance, angles and/or bearings. Where these lines follow a curve, the central angle, the radius, point of curvature, length of curve and length of intermediate tangents shall be shown.

- J.** The blocks numbered consecutively throughout the entire subdivision and the lots numbered consecutively through each block.
- K.** Locations and accurate dimensions of all property to be offered for dedication for public use, and all property reserved for the common use of the property owners within the subdivision, with purpose indicated. This includes but is not limited to dedication of streets and alleys, parks, drainageways, or other areas dedicated or reserved for public use.
- L.** The names of all streets to be dedicated.
- M.** The dimensions of all lots and lot lines, and the bearings of those lot lines not parallel or perpendicular to the street right-of-way line.
- N.** Location and dimensions of all easements to be dedicated. All easements shall be denoted by fine dashed lines, clearly identified, and if already on record, the recorded reference of such easements. The width of an easement with sufficient ties to locate it definitely with respect to the subdivision must be shown.
- O.** Easements located outside of the boundaries of the plat, required for plat approval. Proof of executed easements shall be provided to the city upon request of a permit to construct.
- P.** The deeds of dedication for all rights-of-way, easements and other properties and any deed restrictions applicable to the subdivision shall be shown.
- Q.** The location of every existing or abandoned oil or gas well or dry hole drilled in search of oil or gas as shown by the records of the Oklahoma Corporation Commission.
- R.** All lots located in a flood-prone area of special flood hazard including the 100-year flood zone shall have the building pad elevation provided on each lot on a copy of the final plat prior to recording the final plat.
- S.** A copy of any private restrictions affecting the subdivision or any part thereof attached to each plat.
- T.** Reference to any separate instrument which directly affect land being subdivided, including restrictive covenants, filed in the office of the county recorder of deeds.
- U.** Any other information as may be deemed by the Planning Commission as reasonably necessary for the full and proper consideration of the proposed subdivision.
- V.** When individual sewage disposal devices have been installed, the certificate of the County Health Department shall accompany the record plat, and the developer must install city sewer lines to where when the sewer is extended to this area, only a connection to the main sewer line is required.

**2.4.3 Planning Commission Action:**

The Planning Commission shall act upon the final plat after it has been submitted for final approval unless a stipulation for additional time is agreed to by the developer. If the final plat is disapproved, grounds for the refusal shall be stated in writing, a copy of which shall be transmitted to the applicant.

**2.4.4 City Council Action:**

The City Council shall act upon the final plat for approval and for acceptance of public ways and service and utility easements and land dedicated to public use. Approval of the final plat shall in no way be construed as acceptance of the public works improvements. The disapproval of any plat or plan by the City Council shall be deemed a refusal of the proposed dedication shown thereon.

**2.4.5 Drafting:**

The final plat prepared for recording purposes shall be drawn at a scale of at least one (1) inch equals one hundred (100) feet. The size of sheets on which such final plats are submitted shall be a maximum of twenty-four (24) inches by thirty-six (36) inches or a size that can be properly and conveniently folded to said dimensions. The drawing surface of any such plat shall have a binding margin of two (2) inches at the left side of the plat, a margin not less than one (1) inch at the right side and a margin of not less than one and one half (1-1/2) inches at the top and bottom. Where the proposed plat is of unusual size, the final plat may be submitted on two or more sheets of the same dimensions. If more than two sheets are required, an index sheet of the same dimensions shall be filed showing the entire development at a smaller scale.

**2.4.6 Certifications:**

The following certifications shall be required on the final plat filed of record in the office of the county clerk:

- A. Certification signed and acknowledged by all parties having any title interest in the land subdivided, consenting to the preparation and recording of the plat as submitted. All copies of the plat shall carry the original signatures of the owner or owners and notary public.
- B. Certification by the registered land surveyor or registered engineer as to the accuracy of the survey and of the plat, and that the monuments and benchmarks are accurate as to location shown.
- C. Certification by the Planning Commission, Mayor and City Clerk, or Deputy City Clerk, of the approval of the plat by the City Council.

**2.4.7 Prints to be Furnished after Final Approval of the Plat:**

- A. A minimum of eleven (11) copies of the approved final plat shall be furnished for endorsement by the appropriate city officials. Two (2) of these eleven (11) copies shall be on linen, cloth, cronoflex, mylar or other similar durable material suitable for filing at the office of the county clerk.

- B. After the approved final plat is filed of record in the office of the county clerk, the subdivider shall return eight (8) certified plats, one (1) original and seven (7) copies, black line or blue line all with the appropriate stamps, signatures and plat number from the County Clerk's office to the City Planner.
- C. After the final plat has been endorsed by all required officials, the City Planner shall distribute copies to appropriate officials, agencies or departments and retain file copies in the offices of the city clerk and city planner.

**2.4.8 Approval and Recording of Plats Required:**

No plat or other land subdivision instrument shall be filed in the office of the county clerk until it shall have been given final plat approval by the Planning Commission and by the City Council as required. The approved final plat shall remain with the City Planning office until the completion of and acceptance or approval by the City Council on all improvements or all security requirements have been submitted and approved. After acceptance, the Plat will be released for filing / recording by the subdivider. The subdivider shall return a copy of the recorded plat with copies as defined herein. All final plats shall be filed within one year of the approval of the City Council and no lots shall be sold from any plat until recorded. Failure to record the plat within one year of the date of the City Council approval shall void all approvals thereto.

**2.4.9 Letters of Release:**

Letters of release from the utility companies, Corporation Commission or other agencies must accompany the filing of the final plat.

**2.4.10 Permit to Construct:**

Permits to construct any improvements shall be approved by the City Engineer prior to construction. Building permits shall be approved by the Building Inspector for any structure prior to construction.

**2.5 PLANNED UNIT DEVELOPMENT:**

The platting of Planned Unit Developments shall proceed in accordance with Chapters One and Two of these Regulations upon approval of a PUD by the Planning Commission and City Council in accordance with the applicable sections of the Zoning Ordinance.

**CHAPTER III  
MINOR SUBDIVISION**

**3.1 INTENTIONS:**

This chapter is intended to provide for a simplified method of regulation and subdivision of small numbers of lots while still requiring that such subdivision meets all the requirements of applicable ordinances and regulations.

**3.2 JURISDICTION:**

Any resubdivision, reorganization, lot combination, or division of land which shall contain not more than three (3) lots and further shall not adversely affect the development of the remainder of the parcel or adjoining property and shall not be in conflict with any provision or portion of the comprehensive plan, zoning ordinance, or other applicable ordinance or regulation of the city.

**3.3 APPLICATION PROCEDURE:**

The subdivider shall submit the minor subdivision application to the City Planner on forms provided by the planner, pay the application fee in an amount as provided by ordinance, and shall submit drawings of the proposal in accordance with the following requirements:

**3.3.1 Copies:**

Twelve copies of a scaled drawing shall accompany the application.

**3.3.2 Specifications:**

The drawings shall include all existing and proposed lot lines, all existing buildings and improvements and their distances from lot lines, adjacent streets and their widths, a north arrow and scale.

**3.3.3 Size:**

The subdivider is encouraged to limit drawing sizes to 8 ½ inches by 14 inches.

**3.3.4 Legal Description:**

A complete legal description of entire property and properties including original/existing and after minor subdivision.

**3.4 CITY PLANNER REVIEW:**

The City Planner, upon receiving the minor subdivision application, shall:

**3.4.1 Distribute:**

The City Planner shall distribute copies of the application form and drawings to the Technical Advisory Committee.

**3.4.2 Field Check:**

The City Planner shall visually inspect the lots proposed to be subdivided.

**3.4.3 Review:**

The City Planner shall review the application for conformance with the Zoning Code, PUD conditions, Board of Adjustment actions, these Subdivision Regulations, and other city ordinances.

**3.4.4 Recommendations:**

The City Planner shall prepare recommendations including comments of officials, agencies and departments having an interest in the proposal.

**3.4.5 Schedule Hearings:**

The City Planner shall schedule the minor subdivision to be heard before the Technical Advisory Committee.

**3.5 TECHNICAL ADVISORY COMMITTEE REVIEW:**

The City Planner shall present the application at a regular Technical Advisory Committee meeting where the minor subdivision may be reviewed by the total membership of that Committee, including all utility companies, the County Health Department, the Public Works Director and the City Engineer.

**3.6 ADMINISTRATIVE REVIEW:**

Minor subdivisions meeting all bulk and area requirements of the corresponding zoning district can be administratively approved by Staff.

**3.7 APPROVAL GUIDELINES:**

The minor subdivision applications must meet the minimum Design Standards that are contained in chapter IV.

**3.7.1 Lots:**

- A. Lot dimensions shall conform to Zoning Code standards. In the event that the proposed tract to be subdivided does not lie within the force and effect of the Zoning Code, it is deemed desirable that single-family residential lots be a minimum of sixty (60) feet in width and six thousand (6,000) square feet in area.
- B. If the property to be subdivided is not served by public sanitary sewers and or public water, such lots to be subdivided shall exceed the requirements set forth in 3.7.1 A. above with sufficient additional area to properly accommodate a suitable private sewage disposal devices and have access to a suitable water source, tests shall be made accordingly, with the determination to be made by the County Health Department and reported by it to the City Planner.
- C. Corner lots should have such extra width and area as may be necessary to permit appropriate setbacks on both streets while insuring that adequate build able space remains (see Zoning Code Requirements).

**3.7.2 Easements and Utilities:**

Where a minor subdivision will result in a lot having inadequate access to utilities, dedication of easements shall be required in accordance with the recommendations of the Technical Advisory Committee.

**3.7.3 Access and Streets:**

A. Where a property to be subdivided is controlled by non-access provisions, no lot shall be approved where such provision will preclude access for said lot. An amendment of "limits of no access" on a recorded plat must be approved by the Planning Commission and City Council and filed of record if there is a restricted access provision on a street of the recorded plat on which the property has access. A denial of access change constitutes a denial of the requested minor subdivision.

**3.7.4 Sewage Disposal:**

A. Where a tract to be subdivided abuts a public sanitary sewer, no subdivision should create a lot, which is cut off from said sewer unless the approval of the Water and Sewer Department of the City of Coweta is obtained.

B. Where no sewers are reasonably accessible, each lot shall meet the minimum standards as set forth by the Wagoner County Health Department. The minor subdivision may be approved by the Coweta Planning Commission subject to the approval of a passing perk test by the Wagoner County Health Department.

C. A public water supply serving each lot is required.

D. A passing soil percolation test shall be required for each lot created as required for subdivisions.

**3.7.5 Certificate of Approval:**

Approval shall be shown by certificate on the instrument of transfer as required by state statute. The certification shall be signed by the City Clerk. The subdivider may then file the instrument with the County Clerk, the approval being an official document that will be contained in the abstract of the property being subdivided.

**CHAPTER IV  
SUBDIVISION DESIGN STANDARDS**

**4.1 MASTER PLAN AND OFFICIAL MAPS**

The proposed subdivision shall conform with the Comprehensive Master plan and all official maps of the City.

**4.2 GENERAL DESIGN STANDARDS:**

Subdivision design shall reflect the provisions of the Zoning Code, the Coweta Major Street and Highway Plan, other city ordinances and these Regulations to the end that each subdivision will relate harmoniously with adjacent areas and the community in an orderly, safe, efficient and attractive manner.

**4.3 STREETS:**

The arrangement, character, extent, width, grade, names, and location of all streets shall conform to the major street and highway plan and shall be considered in relation to existing and planned streets, to topographical conditions, to public convenience and safety, and in their appropriate relation to the proposed uses of the land to be served by such streets. Where not shown on the Comprehensive Land Use Plan, the arrangement and other design standards of the street shall conform to the provisions found in this regulation.

**4.3.1 Access:**

- A. Each lot of a subdivision shall have frontage on a public street or approved private street or highway meeting the zoning ordinance in order to assure convenience of the lot owner as well as to provide for the layout of utilities, waste removal, deliveries and emergency services.
- B. Lots shall not generally derive access from major streets. Provisions restricting ingress and egress to streets may be required by the Planning Commission and City Council to assure traffic safety and to relieve congestion at intersections.
- C. Double frontage lots and reversed frontage lots shall be avoided except where necessary to provide separation of residential development from traffic arterials or to overcome specific disadvantages of topography or orientation.

**4.3.2 Street Plan:**

Major streets shall be planned to conform to the Coweta Major Street and Highway Plan.

**4.3.3 Abutting Railroad or Highway Right-of-Way:**

Where a subdivision abuts or contains a railroad right-of-way or limited access highway right-of-way, the Planning Commission and City Council may require a street approximately parallel to and on each side of such right-of-way at a

distance suitable for the appropriate use of the intervening land. Such distances shall also be determined with regard for the requirements of approach grades and grade separation.

**4.3.4 Half Streets Prohibited:**

Whenever a half street is adjacent to a tract to be subdivided, the opposite half of the street shall be platted within said tract. Half streets shall be prohibited, except where essential to the reasonable development of the subdivision in conformity with other requirements of these regulations, and where the Planning Commission finds it will be practical to require the dedication of the other half when the adjoining property is subdivided.

**4.3.5 Limits Of Access:**

Commercial and industrial developments shall have access to arterial or collector streets but may be prohibited by the City access to minor residential streets.

**4.3.6 Access to Streets:**

The subdivider shall provide access to public streets, including necessary crossings of ditches and creeks, in a standard method approved by the City Engineer.

**4.3.7 Hardship to Adjoining Property:**

The street arrangements shall not be such as to cause hardship to owners of adjoining property in platting their own land and providing convenient access to it.

**4.3.8 Private Streets:**

Private streets shall not be approved except when required by state law, or in connection with a Planned Unit Development having appropriate controls.

**4.3.9 Street Interval:**

In general, provisions should be made for a collector street at intervals not exceeding one half (1/2) mile.

**4.3.10 Abutting Arterial Streets:**

Where a subdivision abuts or contains an existing or proposed arterial street, the Planning Commission may require service streets, reverse frontage with screen planting contained in a non-access reservation along rear property line, deep lots or such other treatment as may be necessary for adequate protection of residential properties and to afford separation of through and local traffic.

**4.3.11 Through Traffic:**

Minor streets shall be arranged so that their use by through traffic will be discouraged. Industrial and commercial streets shall not inject non-residential traffic into residential area. The arrangement of streets within a subdivision shall,

except for cul-de-sacs, connect with streets already dedicated in adjoining subdivision or provide for future connections to adjoining unplatted tracts.

**4.3.12 Adjacent Properties:**

Where adjoining areas are not subdivided, the proposed streets shall be constructed to the boundary of the proposed subdivision with provisions made for a temporary right-of-way and the construction of a turn around of a size acceptable to the City Engineer. Permanent barricades shall be installed at dead-end streets. Alignments, grades, drainage, and other appropriate design criteria of all streets within and bordering new subdivisions shall be governed by these regulations, where applicable, and by the Engineering Design Standards of the City.

**4.3.13 Reserve Strips:**

Reserve strips controlling access to streets shall be prohibited except where approved by the Planning Commission and City Council.

**4.3.14 Future Development:**

Where a tract to be subdivided includes only a portion of the tract owned or intended for development by the subdivider, a tentative plan of a proposed future street system for the unsubdivided remainder of the property shall be prepared and submitted by the subdivider.

**4.3.15 Large Lots:**

When a property is subdivided into larger than normal lots, such lots shall be so arranged as to permit the logical location and opening of future streets and easements should the property be resubdivided.

**4.3.16 Street Jogs:**

Street jogs with centerline offsets of less than one hundred fifty (150) feet shall be avoided.

**4.3.17 Dedication of Right-of-Way:**

Whenever a major street is located adjacent to the outer edge of a subdivision, one-half (1/2) of the right-of-way shown on the Coweta Major Street and Highway Plan shall be dedicated, if it is determined by the Planning Commission and City Council that an equal such dedication is equitable and feasible for the other half of the right-of-way from the adjacent property. Half-street dedications on minor streets are prohibited.

**4.3.18 Cul-de-sac Streets:**

All dead-end streets having a length or more than one hundred fifty (150) feet shall terminate in a cul-de-sac which has circular turn-around having a minimum radius of forty (40) feet. No such cul-de-sac street shall be more than six hundred (600) feet in length measured from the entrance to the center of the turn-around.

**4.3.19 Street Names:**

The arrangement for streets and new subdivisions shall make provisions for the continuation of the existing and adjoining areas, and street names shall not duplicate or closely approximate existing street names except where the new streets are extensions of existing streets. All streets shall be platted in such a manner that all resulting lots will conform to the Zoning Code of the City. House numbers shall be assigned in accordance with the house numbering system now in effect in the City. All north and south thoroughfares shall be designated "Avenue". All east and west thoroughfares shall be designated "Street". Street name signs shall be placed at all street intersections within or abutting the subdivision. Such signs shall be approved by the City and shall be placed in accordance with the Engineering Design Standards of the City. City may withhold building permits until street signs are in place. (See Ordinance No. 517)

**4.3.20 Intersections:**

Streets shall be designed to intersect at right angles or as near to right angles as possible. Within subdivisions, three-way intersections are preferable to four-way intersections. Right-of-way corners at minor streets intersections shall have a minimum radius of twenty five (25) feet. Right-of-way corners involving a major street or highway shall have a minimum radius of thirty (30) feet.

**4.3.21 Right-of-Way Widths:**

Minimum right-of-way of all proposed streets shall be of the width specified in the Coweta Major Street and Highway Plan, or if no width is specified therein, the minimum width shall be as follows:

TYPE OF STREET	MINIMUM RIGHT OF WAY WIDTH
Highway	As required by the standards of the Oklahoma Department of Transportation
Primary Arterial	120 feet
Secondary Arterial	100 feet
Commercial or Industrial Collector	80 feet
Residential Collector	60 feet
Residential	50 feet
Frontage or Service	40 feet
Alleys	20 feet
Cul-de-sac Radius	50 feet

**4.3.22 Paving Width:**

The minimum paving width for all streets, measured from curb face to curb face, shall be as follows:

TYPE OF STREET	MINIMUM PAVING WIDTH
Highway	As required by the standards of the Okla. Dept. of Transportation
Primary Arterial	76 feet (6 lanes)
Secondary Arterial	50 feet (4 lanes)
Commercial or Industrial Collector	40 feet (without parking)
Residential Collector	36 feet
Residential	26 feet
Frontage or Service	26 feet
Alleys	15 feet
Cul-de-sac Radius	40 feet

**4.3.23 Grades:**

**A.** The grades of streets shall not exceed the following, except by variance approved by the Planning Commission and City Council as specified in Section 1.7:

TYPE OF STREET	MAXIMUM GRADE
Highway	As required by the standards of the Okla. Dept. of Transportation
All Arterials	5.0 percent
All Collectors	8.0 percent
All Residential	10.0 percent

**B.** All streets shall have a minimum allowable grade of 0.5 percent if composed of Portland Cement and 1.0 percent if composed of asphalt. At intersections, the maximum grade shall be 4.0 percent for a distance of not less than 100 feet from the curb line of the intersecting street.

- C. All changes in grade in excess of one percent shall be connected by a vertical curve of reasonable length assuring adequate visibility. Length of vertical curve shall be determined by using the latest AASHTO criteria for the stopping sight distance.
- D. Whenever practical, street grades shall be established in such a manner to avoid excessive grading or removal of trees.

**4.3.24 Street Alignment:**

The horizontal and vertical alignment of streets shall not exceed the following, except by variance approved by the Planning Commission and City Council as specified in Section 1.7:

**A. Horizontal – Minimum radii of Centerline**

TYPE OF STREET	MINIMUM HORIZONTAL
Highway	As required by the standards of the Okla. Dept. of Transportation
Primary Arterial	600 feet
Secondary Arterial	400 feet
Commercial Collector	400 feet
Residential Collector	200 feet
Residential	100 feet

There shall be a tangent between all reversed curves of a length in relation to the radii of the curves so as to provide for a smooth flow of traffic.

- B. Vertical – Sight distances. All changes in street grade shall be connected by vertical curves of such length as to provide for the minimum sight distance required:

TYPE OF STREET	MINIMUM SIGHT DISTANCE
Highway	As required by the standards of the Okla. Dept. of Transportation
Primary Arterial	750 feet
Secondary Arterial	500 feet
Commercial Collector	500 feet
Residential Collector	200 feet
Residential	100 feet

#### 4.4 **ALLEYS**

##### 4.4.1 **Commercial and Industrial Districts:**

Alleys may be required by the Planning Commission and City Council in commercial and industrial zoned districts to provide service access, off-street loading and unloading, parking and access for police and fire fighting services. Such alleys shall be not less than thirty (30) feet in width of right-of-way.

##### 4.4.2 **Residential:**

Alleys not required for residential zoned properties, but when provided shall not be less than twenty (20) feet in width of right-of-way.

##### 4.4.3 **Dead-end Alleys:**

Dead-end alleys shall be avoided where possible, but where unavoidable, shall be provided with an adequate vehicle turnaround at the terminus as determined by the City Engineer, Planning Commission and City Council.

##### 4.4.4 **Obstructions:**

No obstructions shall be permitted in areas reserved for alleys

#### 4.5 **EASEMENTS:**

##### 4.5.1 **Width:**

The Planning Commission may require easements of a minimum width of twenty-two (22) feet, eleven (11) feet on each rear lot line and along each side lot line, and seventeen and one-half (17.5) feet on the subdivision perimeter, or of a width as specified by the Technical Advisory Committee for poles, wires, conduits, drainage, sanitary sewer, gas, water, power, cable television and other utility lines.

**4.5.2 Continuity:**

Utility easements shall connect with easements established in adjoining properties. These easements, when approved, shall not thereafter be changed without the approval of the City Council, by ordinance, after review and recommendation by the Planning Commission.

**4.5.3 Drainage Easements:**

Drainage easements for storm sewers may be required. Easements for open channel drainage may be required where the cost for the installation of storm sewers is considered to be prohibitive. These easements may be along the side lot lines, but usually the design should be such that the drainage will be carried along the rear of the lots. If open channel is to be carried in the street right-of-way, additional right-of-way, additional right-of-way width shall be provided. All drainage easements shall be of a size to allow equipment access for construction and maintenance of the facility.

**4.5.4 City Approval:**

The location, width, and alignment of all easements shall be subject to review by the Technical Advisory Committee prior to approval by the Planning Commission and City Council.

**4.6 LOTS:**

**4.6.1 Access:**

Every lot shall abut a street dedicated to the public or a private street of an approved Planned Unit Development or other approved access (See Section 4.3.1 A.).

**4.6.2 Double Frontage:**

Subdivisions should be designed so that lots do not front on two parallel streets except where a row of lots is designed to separate residential development from through traffic or overcome specific disadvantages of terrain and orientation (See Section 4.3.1 C).

**4.6.3 Zoning Code Requirements:**

Lot dimensions, yard sizes, lot frontage, building setback line dimensions, and lot area shall conform to the minimum requirements of the Zoning Code.

**4.6.4 Corner Lots:**

Lots at the intersections of streets should exceed minimum Zoning Code area and width requirements to provide adequate building areas and required building setbacks from intersecting streets.

**4.6.5 Large Lots:**

When a tract is subdivided into lots larger than one (1) acre, such subdivision shall be designed so as to permit the opening of future streets and the

establishment of additional utility easements should the land be resubdivided (See Section 4.3.14).

**4.6.6 Long Lots:**

Excessive lot depth in relation to lot width is prohibited. The maximum lot depth shall not be greater than the quotient of the lot width divided by 0.45 (45%). In other words the maximum lot depth = lot width / .45.

**4.6.7 Lot Lines:**

Side lot lines should be approximately at right angles to straight street lines or radial to curved street lines.

**4.6.8 Parking and Loading:**

Commercial and industrial lots should be of an appropriate size and shape so as to provide for adequate off-street parking and loading facilities.

**4.7 BLOCKS:**

The length, width and shape of blocks shall be suited for the planned use of land, consistent with Zoning Code requirements and the need for convenient access, control and safety of street traffic and the limitations of terrain.

**4.7.1 Length:**

Blocks for residential use shall normally not exceed one thousand three hundred twenty (1320) feet length. When such a block exceeds eight hundred (800) feet, the Planning Commission and City Council may require a dedicated easement not less than fifteen (15) feet in width and paved crosswalk not less than four (4) feet in width to provide pedestrian access across the block.

**4.7.2 Width:**

Blocks for residential use shall have sufficient width to provide for two (2) tiers of lots of appropriate depth, except on the boundaries of a proposed subdivision or where it is important to separate residential development from other types of development or through traffic. Blocks intended for commercial, office or industrial uses should be of a width suitable for the intended use, with due allowance for off-street parking and loading facilities. Blocks for such uses should normally not exceed six hundred (600) feet in length.

**4.8 BUILDING LINES:**

**4.8.1 Zoning Code Requirements:**

Building lines shall be provided for all subdivision plats in accordance with the requirements of the Zoning Code district in which the subdivision is located unless varied by the Board of Adjustment.

**4.8.2 Restrictions on Plat:**

Restrictions requiring buildings to be located within the building lines shown on the plat shall be set forth on the plat or on a separate recorded instrument.

**4.9 SEWAGE DISPOSAL AND WATER SUPPLY:**

- A.** The subdivider within the Coweta City Limits, at his/her expense shall provide an internal sanitary sewer collection system available to each lot within the subdivision. Said system shall be designed and constructed as approved by the Oklahoma State Department of Health and in accordance with ordinances of the City of Coweta and duly adopted standards and specification of the City of Coweta Water and Sewer Department.
- B.** Where an approved public sanitary sewer system is not reasonably accessible to the subdivision and in order to allow development during the time required to extend the public sanitary sewer system into those areas without such system, the following shall apply:

  - 1. A central treatment plant may be utilized on a temporary basis, provided that said treatment system meets all applicable water quality criteria and is designed and constructed as approved by the Oklahoma State Department of Health and in accordance with Ordinances of the City of Coweta and duly adopted standards and specifications of the City of Coweta Water and Sewer Department.
- C.** Developers of subdivisions within the City Limits of the City of Coweta where it is planned to initially utilize septic tank sewage disposal systems must:

  - 1. Submit a soil percolation test to the Wagoner County Health Department for each lot in the subdivision to be served by septic tank systems, establishing a percolation test rate of not less than one inch in sixty minutes and providing minimum lot sizes as follows:

    - (a) Minimum lot size of 22,500 square feet, including roadway easements, with a minimum width of 100 feet when the percolation test rate is at least one inch in 30 minutes or less time.
    - (b) Minimum lot size of 43,560 square feet, excluding roadway easements, with a minimum width of 100 feet when the percolation test rate is at lease one inch in 31 to 60 minutes.
  - 2. Dig two core test pits a minimum of six feet deep and two feet in diameter for each ten acres in the subdivision for example the Wagoner County Health Department.
  - 3. Provide and file with the subdivision plat, restrictive covenants relative to the installation and use of individual septic systems.

- (a) The approval and release of the plat of this subdivision does not constitute a guaranty or warranty that each septic tank system will function properly.
- (b) Sewerage is intended to be disposed of by individual septic tank disposal systems, and shall be subject to the regulations of the Wagoner County Health Department. Each lot owner is responsible for the installation and maintenance of the septic system serving the lot, and the lot area containing the lateral lines shall me maintained free of paving, surfacing, swimming pools, lawn sprinkler systems, or any building or other structure which would interfere with the functioning of the lateral lines.

#### **4.10 FLOOD PLAIN AREAS:**

##### **4.10.1 Prohibitions and Exceptions:**

Areas identified by the official flood plain maps of the City of Coweta which are subject to flooding hazards and periodic inundations, shall not be subdivided into lots, tracts or parcels for any use which would be incompatible with such flooding hazards unless:

- A. Improvements meeting the standards and requirements of the City Engineer are designed so as to render such land safe for residential or other uses, or
- B. The intended use of the land is permitted by city ordinances or permitted by variance or special exception as outlined by city ordinance.

#### **4.11 OIL AND GAS WELLS:**

##### **4.11.1 Setback from wells:**

Where there is found to be a producing oil or gas well which is in or within one hundred fifty (150) feet of the boundaries of a proposed subdivision, there shall be a building setback line so placed on the plat so as to prevent the erection of a building within one hundred fifty (150) feet of such well.

**4.11.2** Where there is found to be an abandoned oil or gas well which is not adequately plugged according to the standards established by the state law and the Oklahoma Corporation Commission, which well is within the boundaries of a proposed subdivision or within one hundred fifty (150) feet of said subdivision, said well shall be adequately plugged according to said standards so certified by the Oklahoma Corporation Commission, before the plat of such addition is given final approval. In lieu of plugging such wells, a building setback line shall be so placed on the plat so as to prevent the erection of a building within one hundred fifty (150) feet of such well. In any event, a certificate or clearance shall be obtained from the Oklahoma Corporation Commission as to the existence of any wells reflected in their records.

**4.12 PUBLIC AREA AND OPEN SPACE DEDICATION:**

In the subdivision of land or resubdivision of an existing plat, due consideration shall be given by the subdivider to the dedication or reservation of suitable sites for parks, playgrounds or other public recreational areas or open spaces. All areas to be reserved for or dedicated to public use shall be indicated on the preliminary plat in order that it may be determined when and in what manner such areas will be dedicated or conveyed to the city. Such land must be free and clear of mortgage or liens at the time of such dedication or conveyance.

**4.13 HILLSIDE DEVELOPMENT:**

The development of hillside areas or any area with a slope of greater than ten percent (10%) shall be designed to minimize grading and filling retain natural ground cover. Areas with slope in excess of twenty percent (20%) shall be utilized as open space or developed in accordance with a Planned Unit Development as defined by the Zoning Code.

**4.14 PLANNED UNIT DEVELOPMENT:**

When a subdivision is developed as a Planned Unit Development in accordance with applicable provisions of the Zoning Code, the Planning Commission and City Council may vary the requirements of these regulations in order to allow the subdivider more freedom in the arrangements of the subdivision but at the same time protect the convenience, health, safety, and welfare of the probable future residents of the subdivision as well as the character of the surrounding property and the general welfare of the entire community.

**4.15 CURB AND GUTTER STREETS:**

Curb and Gutter streets are required. Curbs, gutters, drainage and drainage structures shall be provided in accordance with the Engineering Design Standards of the City of Coweta. Such construction shall be subject to inspection and approval of the City Engineer or his designee.

**4.15.1** Curb corners shall be wheelchair accessible according to requirements of the ADA.

**4.15.2** The grade of the curb returns will continue for the full arc on all intersections where a midway opposing break is not provided.

**4.15.3** The minimum grade set along the curb shall be .5 percent. The maximum desirable grade for non arterial streets shall be limited to 8 percent. For situations where topography is unusually hilly, grades will be permitted up to a maximum of 12 percent providing they do not exceed 500 feet from point of tangent to point of curve.

#### **4.16 SIDEWALKS:**

##### **4.16.1 Sidewalk Design Criteria:**

- A.** Sidewalks shall be required on both sides of local and collector streets serving a residential subdivision, except where zoned Agricultural.
- B.** All sidewalks shall be Portland Cement Concrete. Sidewalks shall include pedestrian bridges across creeks and streams where applicable.
- C.** The finished thickness of Portland Cement Concrete sidewalks shall not be less than four (4) inches and the width shall not be less than four (4) feet.
- D.** In general, sidewalks shall be constructed within the dedicated right of way at a distance no less than one foot from the abutting property lines and a green belt of no less than 2 feet between the street pavement and the sidewalk, and except at intersections or as approved by the City, shall be no less than three (3) feet from the outside curb line of the street pavement.
- E.** Sidewalks must provide personal access for safe and convenient movement across curbs of physically handicapped persons, including those persons in wheelchairs. All sidewalks must conform to the Americans with Disabilities Act (ADA) requirements.
- F.** Sidewalks shall be built so that no obstructions block the safe and convenient movement of residents and to facilitate pedestrian access to schools, parks, playgrounds, churches, shopping centers and etc.

##### **4.16.2 Concrete Base Preparation:**

- A.** When constructing sidewalks, the concrete shall be laid on a firm compacted smooth surface at an average depth below finish grade equal to the thickness of the sidewalk.
- B.** All soft and yielding or other unsuitable materials shall be removed and replaced with suitable material before construction of the sidewalk.

##### **4.16.3 Finish and Joints:**

- A.** Sidewalks shall have a non-slip broomed surface.
- B.** Expansion Joints shall be placed at all intersections with curbs and not more than 30 feet apart.
- C.** Transverse cracking joints will normally be tooled or sawed into the finished sidewalk to a depth of one (1) inch.
- D.** Transverse cracking joints shall be placed at intervals not to exceed every 6 feet.

**CHAPTER V.  
IMPROVEMENTS AND IMPROVEMENTS STANDARDS**

**5.1 IMPROVEMENTS SHALL MEET ESTABLISHED STANDARDS:**

All improvements shall be designed and installed in accordance with the Coweta Design Criteria and Technical Specification established by the City Engineer and approved by the City Council. The City Engineer may establish special standards in excess of the Design Criteria and Technical Specifications which are generally applicable to safety accommodate the heavy commercial and industrial use of streets, utilities, water, sewer and other public improvements.

**5.2 IMPROVEMENTS REQUIRED:**

**5.2.1 Street Improvements:**

The subdivider shall design, grade, inspect, test and otherwise improve all streets that are designated on the approved plat or that directly serve the subdivision in accordance with the Design Criteria and Technical Specifications as directed by the City Engineer.

**5.2.2 Street Signs and Names:**

The subdivider shall install street name signs in the subdivision to the specification of the City Engineer. Street names shall be approved by the Planning Commission and City Council.

**5.2.3 Street Lights:**

The subdivider shall provide adequate street lighting in the subdivision to the specifications of the City Engineer and Technical Advisory Committee.

**5.2.4 Monuments and Markers:**

A. Permanent reference markers shall be placed at the intersection of the centerlines of rights-of-way. There shall be in each subdivision a minimum of two such monuments. If no two of the intersection monuments are within line-of-sight of each other, an additional marker shall be placed on a right-of-way centerline so as to establish a straight line which can be seen line-of-sight from one end to the other. An additional such marker shall be placed at the center point of the turn-around in each cul-de-sac. These markers shall be in the form of a non-corrosive metal plate and each shall be stamped with a cross at the point of the intersection and the elevation to the tenth of a foot.

B. Permanent reference markers shall be placed at each turning point in the boundary of the subdivision. Markers shall be a twenty-four (24) inch long iron pipe or bar of at least one-half (1/2) inch diameter, to be set in concrete.

C. Permanent reference markers shall be placed at a minimum of two corners of each lot in an addition. The markers shall be at least twenty-four (24) inches long and at least one half (1/2) inch in diameter made of iron pipe or bar and driven into unexcavated soil.

- D. Permanent reference markers shall be placed at the points of curvature and points of tangency of all inside and outside right-of-way lines, and at the point of intersection of the outside line of a curve in street right-of-way. These markers shall be a twenty-four (24) inch diameter to be driven into unexcavated soil.
- E. The location of all permanent markers shall be shown on the face of the final plat.

**5.2.5 Stormwater Drainage and Detention Facilities:**

The subdivider shall provide a stormwater drainage system that is designed and constructed in accordance with the design criteria and technical specifications.

**5.2.6 Utilities:**

Electric cable, television cable and telephone lines shall be installed as specified by the Technical Advisory Committee in the easements specified on the subdivision plat.

**5.3 PLANS REQUIRED:**

Five (5) sets of prints of the proposed plans and specifications for all improvements required by these regulations with the City Engineer. The City Engineer shall approve or require modification of those construction plans. Following the approval of the construction plans, the subdivider shall complete in a manner satisfactory with the Engineer all required improvements and said improvements shall be free and clear of all liens, claims and encumbrances. The final plat may then be released by the City for filing at the office of the County Clerk.

In lieu of the installation of the required improvements prior to the final plat approval, street paving, public water and sewer utility improvements will not commence until Performance Bonds are received and on file at the City of Coweta, Construction Plans are received and approved by the City Engineer, and Oklahoma Department of Environmental Quality (ODEQ) approval is received and recognized by the Coweta City Council. The subdivider shall guarantee to complete all improvements required by these regulations and other ordinances in a manner satisfactory to the City Engineer. To secure this surety, the subdivider shall provide one of the following guarantees:

**5.4 CONTRACTOR'S BOND AND INSURANCE:**

The subdivider shall guarantee to complete all improvements required by these regulations and other ordinances in a manner satisfactory to the City Engineer. To secure this surety, the subdivider shall provide one of the following guarantees:

**5.4.1 Commercial Surety Performance and Payment Bond:**

The subdivider shall obtain a security bond from a surety bonding company authorized to do business in the State of Oklahoma. The bond shall be filed with the City Clerk and shall be payable to the City of Coweta. The amount of the bond shall be at 100% of the entire cost of the work, as estimated by the subdivider and approved by the City Engineer, of installing all specified

improvements. The duration of the bond shall be until such time as the improvements are accepted by the City in accordance with Section 5.2

**5.4.2 Cash Escrow Account:**

The subdivider shall deposit cash, or other instrument readily convertible into cash at face value, either with the City of Coweta or in escrow with a bank. The use of any instrument other than cash, and, in the case of an escrow account, the bank with which the funds are to be deposited, shall be subject to the approval of the City Council. The amount of the deposit shall be at 100% of the entire cost of the work, as estimated by the subdivider and approved by the City Engineer, of installing all required improvements. If a bank escrow account is used the subdivider shall file with the City Clerk an agreement between the financial bank and himself guaranteeing the following:

- A. that the funds of said escrow account shall be held in trust until released by the City Council when the obligation is complete and may not be used or pledged by the subdivider as security in any other matter during that period, and
- B. that in the case of a failure, as determined by the City Council, on the part of the subdivider to complete said improvements, the bank shall immediately make the funds in said account available to the City for use in the completion of those improvements.

**5.5 INSPECTIONS AND CERTIFICATIONS:**

The City Engineer, or other knowledgeable official appointed by the City Manager, shall inspect for defects the construction of the required improvements. Upon completion of the improvements, the City Engineer shall file with the City Council a statement either certifying that the improvements have been completed in accordance with the Coweta Design Criteria and Technical Specifications or the improvements are defective, listing the defects. Upon completion of the improvements, the subdivider and his engineer shall file with the City Council as-built construction plans and a statement stipulating the following:

- A. that all required improvements are complete,
- B. that the subdivision improvements are in compliance with these regulation and the Coweta Design Criteria and Technical Specifications,
- C. that the subdivider knows of no defects in the improvements,
- D. that the subdivision improvements are free and clear of any encumbrance or lien.

**5.6 AS-BUILT CONSTRUCTION PLANS:**

Five (5) sets of as-built construction plans, certified and signed by a registered engineer shall be filed with the City Planner prior to the acceptance by the City Council of any improvement installed by the subdivider.

**5.7 IMPROVEMENTS ACCEPTANCE OR FORFEITURE:**

The Coweta City Council shall formally accept, by resolution or ordinance, any or all improvements before such improvements become public property, provided that all statements and agreements specified above have been received and that as-built construction plans have been submitted. The two-year maintenance bond shall begin with the approval by the City Council and the approval of the as-built plans shall not be construed to mean that the maintenance bond is void. No building construction shall be permitted on any lot to or on which improvements have not been completed in accordance with the provisions of these regulations and no municipal utility service will be furnished to such lot.

If any portion of the required improvements shall fail to be accepted for dedication as outlined above within two years of the recording of the final plat with the County Clerk, either for reasons of incompleteness or for substandard construction, the City Council shall declare whatever security has been pledged as a guarantee to be forfeited. Where the Council is not already in possession of said guarantee, it shall immediately take the actions necessary to obtain it. Upon receipt of the securities, the Council shall use the, or the proceeds from their sale, to finance the completion of the subdivision improvements or the rebuilding of such improvements to the proper specifications. Any unused portion of these securities shall be returned to the subdivider, the bonding company, or crediting institution as is appropriate.

**5.8 MAINTENANCE BOND:**

Regardless of the guarantee chosen by the subdivider to secure the contract to make the subdivision improvements, prior to acceptance of those improvements by the City Council, the subdivider shall obtain a maintenance bond from a surety bonding company authorized to do business in the State of Oklahoma. The bond shall be filed with the City Clerk and shall be payable to the City of Coweta. The amount of the bond shall be equal to one hundred percent (100%) of the entire cost of material for all water lines, sewer lines, paving, grading and drainage improvements. The duration of the maintenance bond shall be two (2) year from the date of acceptance of said improvements by the City Council.

**5.9 TIME LIMIT:**

The required improvements shall be completed within two (2) years from the filing of the subdivision plat with the County Clerk unless extended by the City Council for cause.

**5.10 VACATED PLATS:**

The vacation of a plat by District Court action as provided by State Statute shall remove the obligation to construct subdivision improvements.

## CHAPTER VI USAGE AND DEFINITIONS

### 6.1 **USAGE:**

For the purpose of these Regulations, certain terms and words are to be used and interpreted as defined in this chapter. Where terms are not defined, they shall have their ordinarily accepted meanings or such as the context may imply.

#### 6.1.1 **Tense, Plural and Directives:**

Words used in the present tense shall include the future tense, words in the singular number shall include the plural and words in the plural number shall include the singular, except where the natural construction of the writing indicates otherwise. The word “should” is directory and not mandatory. The word “shall” is mandatory and directory.

#### 6.1.2 **Person, Herein and Regulations:**

A “person” includes an individual, corporation, partnership and an incorporated association of persons such as a club. The word “herein” means in these regulations. The word “regulations” means these Subdivision Regulations for the City of Coweta, Oklahoma.

### 6.2 **DEFINITIONS:**

For the purpose of this section, the following terms, phrases, words, and their derivations shall have the meaning given herein. When not inconsistent with the context, words used in the present tense include the future. Words in the plural number include the singular, and words in the singular number will include plural. The word "shall" is always mandatory; the word "may" is always directory.

**Acceptance by the City:** Acceptance by the City shall mean acceptance by the City Council in a public meeting.

**Alley:** A minor public or private right-of-way which gives a secondary means of access to the rear or side of a property that has primary access to some other street. Alleys may be used for public or private utilities, and public service, emergency or private vehicles.

**All Weather Material:** A hard surface, dust-free material capable, during ordinary use, of withstanding without substantial deterioration, and normal weather conditions. Gravel, rock, or screenings done without the use of a petroleum or cement binder does not meet the definition of an all-weather dust free material.

**As-built construction plan:** Those subdivision construction plans of completed paving, drainage, water, sewer or other public improvements.

**Block:** A parcel of land intended for urban purposes, bounded by streets or by a combination of streets, and public parks, cemeteries, railroad right-of-way, shorelines, waterways or municipal boundaries.

**Board of Adjustment:** The Board of Adjustment of the City of Coweta established in accordance with state law by city ordinance.

**Bond:** Any form of security for surety of performance or maintenance including a cash deposit, surety bond, collateral, property, or instrument of credit in an amount and form satisfactory to the City Council.

**Buffer:** An area of land or open area used to provide a physical separation between, and enhance the compatibility of, different types of land use. Such areas may be devoted to landscaping and fencing.

**Building:** A structure which is permanently affixed to the land, as has one or more floors and a roof, and bounded by either another building with a common wall, open air, or the lot lines of a lot.

**Building Permit:** A permit required by the City of Coweta before any building construction is commenced.

**Building Line Or Setback Line:** A line or lines designating the area outside of which buildings may not be erected. The horizontal distance, from the point measured, from the right-of-way of an abutting street or the boundary line of an abutting zoning district nearest to the building wall.

**City:** The City of Coweta, Oklahoma.

**City Clerk:** The office of the clerk for the City of Coweta.

**City Council:** The governing and approval body for the City of Coweta consisting of a Five (5) member council, which shall consist of one Council member elected from each of the five (5) wards of the City in which resides all powers provided by the City Charter subject to the state constitution and state law.

**City Engineer:** The office of the engineer of the City of Coweta.

**City Manager:** The chief executive officer of the City of Coweta, Oklahoma.

**City Planner:** The office of the City Planner of the City of Coweta.

**City (Officer):** The word "City" followed by the name of any officer means any officer or designee of such officer employed by the City of Coweta to fulfill any of the duties of the office named.

**Collector Street:** A street intended to move traffic from minor to arterial streets, including the principal entrance and circulation street or streets of a development.

**Comprehensive Land Use Plan:** A general development plan based upon the present and the projected future needs of the city as currently adopted or as may be hereafter adopted by the City Council. The Comprehensive Land Use Plan may also be referred to as the Master Plan or the Plan, and constitutes a plan which indicates the general locations recommended for the various functional classes of works, places, and structures, and for the general physical development of the City of Coweta; such designation includes the entire body of such documents, or any unit or part thereof as may be separately adopted including amendments to such plan or parts thereof.

**Construction:** Any activity at the proposed subdivision which includes, but not limited to, earthwork, digging, trenching, backfilling, clearing and grubbing, street work, and/or utility installation.

**Construction Plan:** The maps or drawings prepared by a registered professional engineer accompanying a subdivision plat and showing the specific location and design of improvements to be installed in the subdivision in accordance with the requirements of the City Engineer, Planning Commission and City Council as a condition of the approval of the plat.

**Contractor:** A person, firm or corporation having entered into a contractual agreement with the City, engaged in any aspect of the construction of improvements, including but not limited to street paving.

**County:** The County of Wagoner, Oklahoma.

**County Clerk:** The office of the clerk for Wagoner County, Oklahoma.

**County Health Department:** The Health Department for Wagoner, Oklahoma.

**Cul-de-sac Street:** A minor street with only one outlet and having a terminal for the safe and convenient reversal of traffic movement including all emergency and service vehicles.

**Dedication:** To set apart an portion of the area of a subdivision to a specific use(s) or to the public or to a specific group.

**Deed of Dedication:** That portion of a plat that dedicates an area of a subdivision.

**Design Criteria and Technical Specifications:** Engineering standards used in the design of subdivision improvements

**Developer:** The owner of land proposed to be subdivided or his representative.

**Development:** A tract of land which is subdivided for urban use and provided with all necessary utilities and public improvements.

**District Court:** The District Court of Wagoner County, Oklahoma.

**Double Frontage:** A situation in which a lot has access on two streets so they do not intersect.

**Easement:** Authorization by a property owner for the use by another, and for a specific purpose, of any designated part of his property.

**Engineer:** A registered, professional engineer in good standing with the State of Oklahoma Board of Registration for Professional Engineers and Land Surveyors.

**Engineering Design Standards:** The standard drawings and written technical requirements concerning public improvements as adopted by separate ordinance by the City of Coweta.

**Final Plat:** The final map or record of a subdivision and any accompanying material, as described in these regulations, based on a Preliminary Plat with revisions, if any, to be submitted to the Planning Commission and City Council for approval, denial, or approval with conditions.

**Flood Plan:** That area which has been determined by the best available information to be susceptible to the threat of flooding to the level of probability of one percent (1%) in any given year. This term is also known as the one hundred year flood plain area. Flood Plain areas shall be those as described and delineated on maps maintained by the Federal Emergency Management Agency.

**Floodway:** The channel of a river or other water course and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

**Flood Hazard Area:** The area which is subject to inundation by the regulatory flood. This includes areas of shallow flooding, which occurs where a clearly defined channel does not exist, and where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident. This also includes man-made sumps in the streets as well as areas, which although not presently in a flood area, may be flooded in the future by increased runoff due to urbanization. The flood hazard also exists in diminishing degree with increasing elevation on higher adjacent lands. The flood hazard area shall be determined from the Flood Insurance Rate Map as provided by the Federal Emergency Agency.

**Flood Prone Area:** That area which has been determined by the best available information to be susceptible to the threat of flooding to the level of probability of one percent (1%) in any given year under ultimate urbanization and conditions in the watershed. This term is also known as the one hundred year flood plain area.

**Frontage:** That side of a lot abutting on a street or way to which access is available for the lot.

**Grade:** The slope of a drainage facility, sanitary sewer, street or other public way specified in percent (%) of vertical to horizontal measurement.

**Highways:** See Streets and Alleys.

**Improvements:** Street pavements, with curbs and sidewalks, pedestrian ways, water mains, sanitary and storm sewers, permanent street monuments, and other appropriate items.

**Limits Of No Access:** Areas as defined by the City on the plat in which no access is allowed.

**Local Street:** See Street, Local or Minor

**Lot:** A parcel or portion of land in a subdivision or plat of land, separated by other parcels or portions by description as on a subdivision plat or record of survey map or by metes and bounds, for the purpose of sale or lease to or separate use of another.

**Lot Area:** The total area measured on a horizontal plane, included within the lot boundaries.

**Lot, Corner:** A lot which has at least two (2) adjacent sides abutting for their full lengths on a street; provided, that the interior angle at the intersection of such two sides is less than one hundred thirty-five (135) degrees.

**Lot Depth:** The mean horizontal distance between the front and rear lot lines.

**Lot, Double Frontage:** A lot having frontage on two (2) nonintersecting streets, as distinguished from a corner lot. This shall be the same as a backing lot.

**Lot, Reverse Frontage:** A double frontage lot, which is to be developed with the rear yard abutting a major street and with the primary means of ingress and egress provided on a minor or collector street.

**Master Plan:** The Comprehensive Plan for the City of Coweta, Oklahoma.

**Minor subdivision:** A minor subdivision containing not more than three (3) lots fronting on an existing street, not involving any new street, and not adversely affecting the remainder of the parcel or adjoining property, and not in conflict with any provision or portion of the Major Street and Highway Plan, Zoning ordinance (unless approved by the Board of Adjustment) or these Regulations.

**Major Street and Highway Plan:** The map established by the City Council by ordinance showing area major streets and highways, their required rights-of-way and any amendments or additions adopted by the City Council.

**Major Subdivision:** A subdivision of land into 5 or more lots

**Mayor:** The chief elected official of the City of Coweta

**Monument:** Permanent markers properly located as required in these regulations for the location and identification on the land of reference points in the subdivision, such as, but not limited to, the corners of the subdivision, corners of blocks and radii for street curvature.

**Off-site Improvements:** Any utility, structure, or modification of topography located outside the property to be subdivided.

**Official Map:** The map established by the City Council showing the streets and highways heretofore laid out, adopted and established by law and any amendments or additions thereto adopted by the City Council resulting from the approval of subdivision plats and the subsequent filing of such plats.

**Open Space – Public:** Land which may be dedicated to or reserved for or acquisition for general use by the public, including parks, recreation areas, school, sites, community and public building sites and other similar lands. Open space – public specifically does not include floodway drainage courses, public lakes and ponds or any area within the fully urbanized floodway, but may include other areas in the 100 year fully urbanized floodplain.

**Owner:** A person or any other legal entity having legal title to or sufficient propriety interest in the land sought to be subdivided under these regulations.

**Parking, Off-Street:** An area, enclosed or unenclosed, together with a driveway permitting ingress and egress of an automobile of standard size to a street or alley, affording access thereto.

**Permit to Construct:** A permit required by the City of Coweta before any subdivision improvement construction is commenced.

**Planned Unit Development (PUD):** A discretionary type of development for a tract of land under single ownership or control, based upon an approved development plan permitting flexibility of principal land uses, lot sizes and accessory uses not otherwise available under conventional development standards.

**Planning Commission:** The Coweta Planning Commission established in accordance with state law by city ordinance.

**Preliminary Plat:** The drawing or drawings described in these regulations, indicating the proposed manner or layout of the subdivision to be submitted to the Planning Commission for approval.

**Pre-platting Conference:** A meeting between the subdivider and the City Planner to discuss the procedure for approval of a subdivision plat, provisions of the Zoning Code, requirements as to general layout of streets, reservations of land, street improvements, drainage, sewerage, fire protection, availability of existing services and utilities and similar matters.

**Preliminary Engineering Plans:** Preliminary drawings (plan view) illustrating the locations of water distribution system, wastewater system, stormwater system, streets and other proposed improvements

**Privately Fiananced Public Improvements (PFPI):** Shall mean the construction, reconstruction, replacement or alteration of any street, alley, curb, gutter, ditch, drainage way, channel, detention facility, storm sewer or other similar public works thereto, including sedimentation and erosion control measures, street and sidewalk cuts, sanitary sewers and water mains, located or to be located upon land owned in fee simple by the City of Coweta or upon easements or right-of-ways owned or controlled by or to be dedicated to the City of Coweta.

**Primary Arterial Street:** A thoroughfare designated on the Major Street and Highway Plan that carries a portion of both intraurban and interurban vehicle traffic at a moderate rate of speed with some traffic stops and having a planned right-of-way width of at least 120 feet.

**Public Improvement:** Any street, sidewalk, utility line, drainage way or other facility for which the city may ultimately assume the responsibility for maintenance and operation. Also see Improvement in this section.

**Registered Engineer:** An engineer properly registered and licensed in the State of Oklahoma.

**Registered Land Surveyor:** A land surveyor properly registered and licensed in the State of Oklahoma.

**Required Improvement:** Any improvement required by the Planning Commission and City Council as a condition of approval of a subdivision plat. Also see Improvement this section.

**Restrictive Covenant:** Agreements binding the owners of the lots of a subdivision as shown on the face of a recorded subdivision plat.

**Resubdivision:** Subdivision of land previously subdivided.

**Right-Of-Way:** A parcel of land, usually a strip, occupied or intended to be occupied by a street, crosswalk, railroad, road, electric transmission line, oil or gas pipeline, water line, sanitary or storm sewer facility, or for other special use. The use of the term right-of-way for land platting purposes in connection with these regulations shall mean that every right-of-way hereafter established and shown on a final plat is to be separate and distinct from the lots and parcels adjoining such right-of-way and not included within the dimensions or areas of such lots or parcels. Rights-of-way intended for any use involving maintenance by a public agency shall be dedicated to public use by the owner of the land which is being subdivided.

**Roadway:** That portion of any street so designated for vehicular traffic; and, where curbs are normally placed, means that portion of the street between the curbs.

**Secondary Arterial Street:** A thoroughfare designated on the Major Street and Highway Plan that carries a significant portion of the interurban vehicular traffic having traffic stops and a planned right-of-way width of 100 feet.

**Separate Instrument:** A document that dedicates land or accomplishes some other task and is filed of record separately from the original subdivision plat documents.

**Service Road or Street:** A minor street which is parallel and adjacent to major streets, traffic ways, highways or railroad right-of-way and which provides access to abutting properties and protection from through traffic.

**Setback:** The distance between a building and the nearest street right-of-way line or property line. (See Building Setback Line)

**Sight Triangle:** On a corner lot, a triangle formed by measuring 25 feet along the front and side curb or pavement edge and connecting the points to form a triangle on the area of the lot adjacent to the street intersection.

At all intersections of alleys, driveways, and streets, a site triangle is formed by measuring ten (10) feet along the curb or pavement edge.

**Sketch Plat:** A sketch of a subdivision prepared as the first step in the subdivision process to enable the subdivider to illustrate the nature of the proposed subdivision and save time and expense in reaching general agreement with the Planning Commission as to the form of the plat and the objectives of these regulations and other city ordinances and plans.

**Street:** A public or private right-of-way which affords the primary means of access to abutting property or serves as a thoroughfare for vehicular traffic, or both, but excluding alleys.

**Stop Work Order:** A written order to the contractor or to the owner to stop work, and stating therein the nature of the reason for the issuance of such an order. Such orders may only be signed by the Building Official or the City Manager or designate.

**Stormwater Drainage Criteria:** All stormwater drainage improvements, facilities, structures, and/or conveyance systems, both private and public, shall be designed in accordance with the Stormwater Drainage Criteria adopted by separate ordinance by the City of Coweta.

**Subdivider:** A person undertaking the subdivision or resubdivision of a lot, tract or parcel of land into two or more lots, or other subdivision of land for the purpose of transfer of ownership or development, whether immediate or future, or any resubdivision of land.

**Subdivision:**

1. The division of a parcel of land shown as a unit or contiguous units on the last preceding tax roll into four (4) or more lots or parcels for the purpose of transfer of ownership or building development;

2. If a new public street is involved, any division of a parcel of land; or,
3. The improvement of one or more parcels of land for residential, commercial, office, or industrial structures or groups of structures involving the division or allocation of land for the opening, widening, or extension of any street or streets (except internal private streets); the division or allocation of land as open spaces for common use by owners, occupiers or lease holders, or as easements for the extension and maintenance of public utilities or facilities;
4. Provided that a division of land which may be ordered or approved by a court or effected by testamentary or interstate provisions, or a division of land for agricultural purposes into lots or parcels, or the exchange of parcels of land between owners of adjacent property to resolve common boundary disputes, where new lots are not thereby created and where neither of the lots resulting are reduced below the minimum size of a lot required by law shall not be deemed a subdivision. The term includes re-subdivision, and when appropriate in context, shall relate to the process of subdividing land or to the land so subdivided.

**Surveyor:** A registered land surveyor in good Standing with the State of Oklahoma Board of Registration for Professional Engineers and Land Surveyors.

**Technical Advisory Committee (T.A.C.):** A committee composed of public officials and utility company representatives to review and study all plats and minor subdivision proposals and make recommendations concerning those subdivisions to the Planning Commission.

**Zoning Code:** A city ordinance regulating land use in the city.

## **CHAPTER VII**

### **MINIMUM REQUIREMENTS FOR SUBDIVISIONS STREETS FOR ACCEPTANCE AS CITY MAINTENANCE AND STORM SEWER AND STORM WATER RUNOFF AND STORM SEWER AND STORM WATER RUNOFF AND DETENTION CRITERIA**

#### **Procedures**

1. Engineering plans showing all grades and drainage must be submitted to the city before construction.
2. Road is built according to approved methods and under the supervision of the consulting engineer.
3. Road is accepted subject to a one-year maintenance bond in the amount of half the construction costs.
4. At the end of the one-year period, the road is inspected again, if meets inspection, accepted for maintenance.
5. Traffic control signs and mailboxes to be placed according to applicable statutes and regulations.
6. Roads are to be constructed in compliance with the minimum requirements for the city as outlined in this chapter.
7. Storm sewer and storm water runoff and detention criteria for the city are set forth in chapter Annex B.

#### **Road Specifications**

1. All new subdivisions in the city must be surveyed, and drainage of streets or roadways approved by a Certified Consulting Engineer. Report from Engineer shall show size and type of drainage at all approaches. Ditch size, width, and depth must be shown, also area map must be attached to show where water will drain to.
2. Subgrade or road base must be a material accepted to state highway standards. This can be no less than 6" after compaction to meet state road specifications. This base material can have no less than 3" of 1-1/2" rock and 3" crusher run. These 2 layers after compaction shall constitute the road base or bed. Additional asphalt or concrete cover shall be in addition to the base.
3. Cover material shall be no less than specifications:  
Asphalt                      3" minimum  
Concrete                     6" minimum
4. Developer shall pay in advance for and the city will install all street signs and stop signs.

5. All mailboxes shall be installed in compliance with Federal Regulations and are not to obstruct maintenance of roads or ditches. The stand for mailbox to be installed on owners property and installed on swivel so box can be removed from stand or swivel out of way for maintenance of road or street.
6. At the end of the one-year period from date of completion, Developers shall repair any defects that might have occurred in streets. This is to be done before the city inspection for acceptance into the city road system.

### **STORM SEWER AND STORM WATER RUNOFF AND DETENTION CRITERIA**

It is the purpose of these criteria to establish public policy for the control of storm water runoff and detention.

It is the city's intent to implement the best most equitable methods of storm water runoff control so that land development within any drainage area will not adversely affect upstream or downstream properties within the drainage basin. The formulae for determining the hydrological parameters will be those as established by the city council.

1. All storm water runoff shall be subject to review and approval by the appropriate public authority with regard to analysis, design and construction of drainageway facilities and the appropriate public authority shall have the right to maintain or to cause to be maintained the drainageway system for its intended purposes.

Drainageway facilities, both public and private, shall consist of all elements necessary to convey storm water runoff from its initial contact with the earth to its disposition.

2. All public storm water drainageway systems shall be on dedicated easements or rights-of-way: privately owned systems may consist of roof drains, building drains, and parking lot drainageways.
3. The easement width required for a closed storm sewer shall be that necessary for proper maintenance with a minimum width being the width of the structure plus five (5) feet on either side.
4. The easement width for an improved channel shall be that width necessary for the construction of the facility combined with the width which is necessary for proper access and maintenance. The minimum width shall be as shown on adopted City Standards.
5. The easement for an unimproved drainageway left in a natural state shall be equal to the FD width or that width required to pass a 100-year frequency rainstorm under full urbanization whichever is greater together with adequate vehicular ingress or egress to said easement for maintenance purposes. A permanently visible monument shall be set on each property line at its intersection with the easement or FD line to identify the limits of the drainageway. Said monuments to conform to adopted city standards.
6. Storm water drainageway systems shall consist of trunk and collector systems. Trunk systems are defined as any part of the system having a capacity of 400 c.f.s. or greater.

All storm water drainageway systems with a capacity of less than 400 c.f.s. shall be defined as a collector system.

7. The trunk storm water drainageway system shall be designed to pass the runoff from a 100-year frequency rainstorm under existent urbanization conditions. The entire flow shall be confined within the said storm water drainageway system.
8. Fencing shall be required where necessary for safety.
9. The discharge velocity of a storm water drainage way system constructed for the development of a tract of land will not be greater than the velocity that existed in the drainageway at that point under natural conditions, nor will the velocity of the discharging water exceed the erodible limit of the soil in place at the point of discharge; whichever velocity if the least shall govern.

If the discharge from the storm water drainageway system is being made into a concrete lined channel, then the velocity of the discharging water shall not exceed the normal velocity of the channel.

10. Detention facilities will be required for all land developments where the impervious area will amount to more than 20% of the gross area.
11. The requirements for the storage and controlled release of storm water runoff shall be as follows:

The peak release rate of storm water runoff from the development shall not exceed the peak storm water runoff rate from the area in its natural, undeveloped state for all rainstorm intensities up to and including the 100-year frequency for all durations of rainfall.

The required volume for storm water detention shall be calculated on the basis of the runoff from a 100-year frequency rainstorm. The detention volume required shall be that necessary to handle the runoff from a 100-year frequency rainstorm to fully urbanized conditions, for any and all durations, less that volume discharged during the same duration at the release rate as specified above.

12. The ownership and maintenance responsibility for detention facilities shall remain with the private sector if the facility is an integral usable part of the development. In all other cases, the detention facility will be dedicated to the public and the public will be responsible for the maintenance thereof. In the event the detention facility, as a result of drainageway improvements, becomes unnecessary, the facility by action of the City Council shall revert to the person, firm or corporation making such dedication or his heirs, successor or assignees.
13. The City Council may grant in a particular instance such variance or modification of the foregoing criteria as will not cause detriments to the public good or impair the spirit, purposes, and intent of the criteria.

**CHAPTER VIII  
CITY OF COWETA DESIGN CRITERIA FOR DRAINAGE, DETENTION, STREETS  
AND EARTH CHANGE**

- 8.0 DESIGN CRITERIA CONTENTS**
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Note: The following design criteria was taken from the “Criteria, Standards and Specifications for Storm Drainage, Streets and Earth Change” Engineering Department, City of Coweta. This section of that document has been included within these Regulations for information purposes only. The Engineering Department should be consulted for possible changes to the included section and for detailed design standards and specifications.

**8.0 DESIGN CRITERIA FOR DRAINAGE, DETENTION, STREETS AND EARTH CHANGE**

**8.1 General**

1. Where on a particular tract, the standards and specifications set forth herein are not necessary or applicable by reason of topography, soils or other conditions peculiar to such tract, other standards may be used with the prior approval of the City Engineer.
2. For any item of work not covered by the adopted standards and specifications of the City of Coweta, the Consulting Engineer shall include two copies of the design, specifications and/or special provision with his first submittal for review and approval by the City Engineer.
3. Approval of the plans by the City Engineer does not release the Consulting Engineer from his responsibility to meet the planning and design of the project as required by the City engineer and/or other departments of the City.

4. All of the plan sheets and the cover sheet of the calculation report shall be signed, sealed and dated by a Professional Engineer, registered in the State of Oklahoma, prior to submitting the plans to the City Engineer for review.
5. Directly above the title block and signature of the Professional Engineer, registered in the State of Oklahoma, the first sheet of the plans shall contain the following statement:

“I hereby certify that I am familiar with the adopted ordinances and regulations of the City of Coweta governing drainage, detention and earth change; that these plans have been prepared under my direct supervision; the above and foregoing drainage plans comply with all governing ordinances and the adopted standards of the City of Coweta pertaining to drainage, detention and earth change to the best of my knowledge, information and belief.”
6. All developments with private streets and drainage facilities shall contain the following statement on the first sheet of the plans directly above the title block and signature of the Professional Engineer, registered in the State of Oklahoma.

“These plans comply with all governing ordinances and the adopted criteria of the City of Coweta pertaining to drainage, detention and earth change to the best of my knowledge, and information and belief.”
7. Construction pay items and Engineer’s cost estimate for each item of work covered by the standard specifications and/or special provisions shall be rounded off to the nearest unit and listed in the proposal clearly indicating the basis for payment.

## **8.2 Drafting**

1. Construction plans shall be drawn on a transparent reproducible medium (paper velum, linen or Mylar).
2. Standard sheets shall be 34: wide by 22” high having a margin of 1 ½” along the left border and ½” along the top, bottom and right border.
3. North shall be oriented to the top or right hand side of all sheets.
4. A City of Coweta Standard Title Block shall be located in the lower right hand corner of each sheet.
5. All plan sheets shall use the City of Coweta Standard Title Block for all Privately Financed Public Improvement Projects.
6. All plan sheets for private streets and/or storm sewer design will use City of Coweta Standard Title Block for private paving and storm sewer plans.

7. All line work shall be of sufficient density to be reproducible by current division reproduction processes. Any line work which does not reproduce satisfactorily may be cause for rejection of the plans by the division.
8. Freehand lettering shall be no smaller than the No. 4 setting on the Ames lettering guide (0.12" minimum height). Mechanical lettering shall be at least comparable to the 100 Leroy guide (0.10" minimum height) except mechanical lettering on plats or records reproduced in the plans may be comparable to the 80 Leroy guide (0.08" minimum height). Typing shall be at least 0.10" minimum height. Adhesive or transfer lettering shall have a minimum height of 0.10". These lettering sizes are minimum. Sizes greater than these are desirable and suggested.
9. "Record" drawings shall be either India ink or linen or .003 Mylar base black line autopositive matte both sides not reversed. (Diaz processes will be acceptable.) "Stick-on" will not be acceptable.
10. The sheets shall be arranged in the following order:
  - a. The front sheet shall contain existing topography (maximum 2' contour intervals), City of Coweta Title Block, north arrow, index to sheets, street layout, lot layout, off site adjacent structures, location map, project number, description, symbol legend, owner's and engineer's name, address and telephone number, bench mark, PE seal and signature, certified statement and PFPI description.
  - b. Preliminary clearing, leveling and grading plan identifying areas where erosion and sediment control is needed.
  - c. Soils map, type of erosion and sediment control measures needed, a timing schedule indicating the anticipated starting and completion dates of developments construction sequence.
  - d. Drainage areas for inlet design with flow arrows indicating areas, Q100, Q15 and time of concentration. Summation tabular column of drainage areas and flows to respective inlet.
  - e. Layout of streets with stations, cul-de-sacs, elbows and intersections numbered with cross reference to plan detail.
  - f. Storm sewer layout (may be included with paving plans).
  - g. Final grading plan showing final grades and minimum pad elevations for lots close to sump areas, for areas where pad is lower than the curb, and for lots adjacent to floodplain areas, permanent erosion and sediment control practices.

- h. Large scale drawing of cul-de-sacs, intersections, elbows showing drainage system.
- i. Detention pond(s) showing existing and proposed topography cross sections thru the pond including 5 and 100 year water levels, details of inlet and outlet structures, a back water profile for the existing and proposed topography if located in a floodplain area subject to mapping and indicate if privately or publicly maintained.
- j. Details of structures, both standard and special.
- k. Drawings of all dam structures.

### **8.3 Bench Marks**

- 1. All elevations shown on the plans shall be based on USGS or USC&GS datum.
- 2. The permanent benchmark location and description used to extend level datum to the projects shall be noted on the front sheet of the plans.
- 3. All temporary benchmarks used for control of the project shall be designated on the plans stating elevation, location and description. The nearest such benchmark shall be shown on each sheet.
- 4. Prior to commencement of construction, a permanent bench mark shall be established on the project. This permanent bench mark will be a brass cap set in concrete. The cap shall read "City of Coweta Bench Mark" together with a letter and/or numerical designation assigned it by the City Engineer from the master file of benchmarks maintained by the City Engineer. The location, description and elevation of the permanent benchmark shall be shown on the front sheet of the plans.
- 5. Level notes shall be provided to the City Engineer for all permanent and temporary benchmarks. All levels notes shall be of closed loop survey.

### **8.4 Typical Sections**

- 1. Typical sections shall be drawn at the same horizontal and vertical scale.
- 2. Typical sections shall show dimensions, type of materials, layer details, reserve topsoil, temporary and permanent erosion control, compacted thickness, etc.
- 3. All typical sections or notes that are necessary to clearly reflect the design shall be included.

## 8.5 Cross Sections

1. Cross sections may be required by the City Engineer as a part of the construction plans when necessary to reflect more clearly the intent of the design.
2. All cross sections for street rights-of-way shall be drawn to scale showing existing ground and proposed construction from building line to building line.
3. Typical cross sections shall be shown for each street if the slope to the property line exceeds one quarter inch per foot.
4. Each section shall be stationed clearly.
5. The beginning and ending points of a project shall be stationed and cross sections for both the stations shall be drawn.
6. Maximum distance between cross sections shall be 100' when  $\frac{1}{4}$ " per foot of slope to the right-of-way is exceeded.
7. Sufficient information shall be furnished to show that water is not ponded behind curbs or in ditches
8. Scale for cross sections shall not be less than:

Channels	1" = 10' Horizontal	1" = 5' Vertical
Streets	1" = 5' Horizontal	1" = 5' Vertical
9. Cross section will be required on plans at center line of each lot when the slope to right-of-way exceeds twelve (12%) percent.

## 8.6 Plan Sheets and Profiles

1. All property lines shall be shown, dimensioned and locations referenced thereto. This includes rights-of-way, easements, building lines, etc.
2. All intersections, cul-de-sacs, and other critical locations shall be shown in large plan detail, including direction of drainage, top of curb elevation at PC's, PT's and high or low points. All curve information shall be shown in detail.
3. All drainage areas shall be clearly marked on the drainage area plan sheet; showing acreage, run-off and off-site pickup points.
4. A site plan showing proposed locations and elevations of all utilities shall accompany the street and storm sewer plans.
5. The profile may be either three separate profiles or one single profile.

- a. Three separate profiles: When using three separate profiles, the top and bottom shall show existing property line and proposed top of curb. The middle profile shall show only existing center line profile. Stationing shall be along center line.
  - b. One single profile: When using one single profile both property lines shall be shown along with the proposed top of curb. The center line profile shall not be shown. Stationing shall be along center line.
6. All fill areas within the street right-of-way and beneath storm drainage structures, shall be cross hatched on the profile and notation shall be made that the fill area shall be compacted to a minimum of 95% standard proctor density.
  7. A list of construction pay items and estimate of quantities shall be shown on the plans.
  8. Curb returns with elevations shall be clearly labeled on profile.
  9. Vertical curves in profile shall give the top of curb elevations at the PC, PI, PT and high or low point, at a minimum of 50' intervals.
  10. All structures (manholes, junction boxes, inlets, headwalls, etc.) shall be numbered and labeled both in plan and in profile and detailed on plans.
  11. Scale shall not be less than 1" = 50' horizontal, and 1" = 5' vertical on profile sheets. Minimum scales shall be 1" – 100' on plan sheets.
  12. Storm sewer lines shall be identified on both plan and profile sheets by letter or number.
  13. Storm sewers shall be located along centerline of streets unless otherwise approved by City Engineer.

## **8.7 Streets**

1. All arterial street designs shall be furnished by the City of Coweta Engineering Division.
2. The centerline of paving shall be the centerline of right-of-way where dedication has been made according to the major street plan. All other cases shall be determined by the City Engineering Division.
3. The minimum grade set along the curb shall be .5%. The maximum desirable grade for non-arterial streets shall be limited to 8%. For situations where the topography is unusually hilly, grades will be permitted up to a maximum of 12% providing they do not exceed 500-feet in length from PT to PC.

4. The grade of the curb returns will continue for the full arc on all intersections where a midway opposing break is not provided.
5. Sag vertical curves shall be designed according to AASHTO Specifications using the criteria of headlight site distance and drainage control. Crest vertical curves shall be designed according to the current AASHTO Specifications using the criteria of safe stopping sight distances.
6. Vertical curves shall be the minimum length available for the two grades entering into a sump area as defined by the AASHTO publication titled. "A POLICY ON DESIGN OF URBAN HIGHWAYS AND ARTERIAL STREETS".
7. Design speed shall be 25 miles per hour on all residential streets and 30 miles per hour on all collector streets.
8. The minimum centerline radius on street alignment shall be 125-feet.
9. The minimum radius on returns at residential intersections shall be 25-feet. At intersections of a residential and arterial street, the minimum radius on returns shall be 30-feet. The minimum radius on the returns for industrial districts shall be 40-feet.
10. Soil tests will be required for all areas to be paved. Soil tests will be submitted to the City Engineering Division for approval. If soil tests indicate that the soil has a plasticity index of 10 or greater, a minimum of 6" of subgrade shall be modified with a minimum of 5% lime by weight. If the soil tests indicate that the soil is granular and unstable, the method of stabilization shall be approved by the City Engineering Division. If desired, subgrade may be built of an approved borrow material.
11. The maximum grade of a residential street when intersecting an arterial shall be 2% for a minimum of 100-feet from the curb line of the arterial. No vertical curve shall begin any closer than 50-feet from the curb line of the arterial. The maximum grade of residential streets at intersections shall be 4%.
12. Industrial pavement sections shall be a minimum of 10-inch asphaltic concrete or 8-inch PC Concrete. Residential pavement sections shall be a minimum of 6 1/2" asphaltic concrete or 6-inch PC Concrete.
13. A proposed and existing profile shall be shown beyond the end of all dead end streets for a minimum of 200-feet to determine a satisfactory grade for future development.
14. Cross slope may be 1/4-inch or 3/8-inch per foot; however, crown will be flattened off so that crown never exceeds curb height.

## **8.8 Structures and Specific Details**

1. All special structures will be detailed.
2. When standards are used, standard sheets shall be included as part of project plans.
3. Special structures shall be drawn to scale; unless noted otherwise.
4. Sufficient details, dimensions and related notes shall be provided for all structures.
5. All structures subject to vehicular traffic shall be designed for H-20 loading.
6. All bridge design shall meet the requirements in the latest edition of Standard Specifications for Highway Bridges prepared by AASHTO.

## **8.9 Easement and Right-of-Way**

1. Easements and rights-of-way shall be clearly dimensioned in the plans.
2. All overland restricted drainage easements will be shown detailed on the “Plans” and “Final Plat”, as well as described in the conditions and restrictions of the plat.
3. Additional overland drainage easements may require “Separate Instruments” as shown in Appendix.
4. An unimproved drainageway left in a natural state shall be dedicated to the public, either by title or easement, and platted with a minimum width equal to the floodplain width required to pass the regulatory flood. Dedicated drainageway shall be provided with adequate vehicular ingress and egress for maintenance purposes. If said drainageway width is less than 150’ the minimum width required will be the floodplain plus an additional width of 15’ on each side of the floodplain. A permanently visible monument shall be set on each property line at its intersection with the easement of right-of-way line to identify the limits of the drainageway. Said monuments to conform to adopted City Standards. Said dedication may have an ownership reverter provision.
5. City may accept dedication of the entire floodplain area for an unimproved channel.
6. Adequate restrictive easements for dedicated right-of-way must be provided for access and maintenance.

7. The minimum width for all storm sewer easements shall be the outside diameter of pipe plus 10', and the pipe shall be laid in the center of easement.

## **8.10 Drainage**

1. All stormwater run-off shall be subject to review and approval by the appropriate public authority with regard to analysis, design and construction of drainageway facilities and the appropriate public authority shall have the right to maintain or to cause to be maintained the drainageway system for its intended purposes.

Drainageway facilities, both public and private, shall consist of all elements necessary to convey stormwater run-off from its initial contact with the earth to its disposition in either the Arkansas River or Coweta Creek. The drainageway system, both public and private, shall consist of storm sewers (which are closed conduits); improved channels constructed in conformity with adopted City Standards; unimproved drainageways left in their natural condition; the areas covered by restricted drainageway easements for the purpose of providing overland flow; and all appurtenances to the above including inlets, manholes, junction boxes, headwalls, dissipators, culverts, etc. All portions of the drainageway system that exist on dedicated right-of-way or restricted drainageway easements shall be owned and maintained by the City of Coweta.

2. The stormwater drainageway system shall be designed to receive and pass the run-off from a 100-year frequency rainstorm with full urbanization. The collector system shall be designed either:
  - a. to pass a minimum of 15-year frequency storm in a pipe network with overland flow capacities so that the combination of the two will pass the run-off from a 100-year frequency rainstorm under fully urbanized conditions. Or,
  - b. pass the entire 100-year flood in the pipe network. The overland flow portion of the collector system shall be continued to dedicated right-of-way, or restricted drainage easements to assure that stormwater can pass through the development without inundating the lowest level of any building, dwelling or structure.
3. The stormwater drainageway system shall be designed to pass the run-off from a 100 year frequency rainstorm under full urbanization. The entire flow shall be confined within the said stormwater drainageway system.
4. The rational method of runoff analysis shall be used for the design of the closed pipe networks of the storm sewer system up to discharge of 400 cfs. For discharges over 400 cfs a hydrograph method will be used.

5. The Rainfall Intensity Curves prepared from TP-40 and National Weather Service HYDRO-35 (June, 1977) shall be used for design when using the rational method (Refer Appendix).
6. The Oklahoma Department of Highways Technical Manual dated April, 1970, shall be used for determining the basic "C" values. (Refer Appendix). A weighted 'C' value shall be determined with minimum values of .45 for residential (RS & RD), .65 for multifamily (RM) and .90 for industrial and commercial areas. Unplatted areas within 300' either side of an arterial shall be either considered commercial or shall be in accordance with the comprehensive plan in estimating runoff co-efficients.
7. The time of concentration (Tc) shall be determined by first reading the velocity from the slope-velocity graph included in Appendix and computing by the formula:

$$T_c = \frac{\text{(Length of Reach (ft.))}}{\text{(60 (Sec./Min.) X Velocity (Ft./Sec.))}} \text{ Minutes}$$

8. A maximum time of concentration of 10 minutes to the first inlet shall be used for single and multifamily residential areas.
9. A maximum time of concentration of 5 minutes to the first inlet shall be used for commercial and industrial areas.
10. The distance between inlets shall be determined so that gutterflow for the 15-year storm will not exceed gutter capacity. The water depth in the street on slopes shall not be deeper than the curb of the street for the 100-year design rainfall. Distance between inlets shall not exceed 600 feet. The water depth at sump locations shall not exceed more than 1' above the top of curb for the 100-year design rainfall.
11. Inlets at intersections shall be located in such a manner that no part of the inlet will encroach upon the return. The flowing and top of curb elevations shall be on all inlets. Inlets shall not be placed on main storm sewer lines.
12. Where possible, run off from large areas outside the roadway shall be collected before it reaches the roadway. Parking lots shall have internal drainage systems so as to reduce concentrated flow into streets.
13. Drainage areas and the 15 year and 100-year flows to the respective inlets shall be summarized and tabulated on the plans as shown in Appendix. The summary table shall also be a part of the calculations.

14. Grates and curb inlets shall be sized in accordance with the grate throat chart in this chapter.
15. Gutter flow shall be computed by using the “Nomograph for flow in triangular channels”.
16. Calculations for inlets, pipes and gutter flow shall be summarized as illustrated in this chapter.
17. Borrow ditches along arterial streets shall not exceed 3 feet in depth. Culverts shall be sized to handle the 15-year or larger storm.
18. All off roadway inlets up to 24” will be of the standard drop inlet design. The standard inlets larger than 24” may be used upon special review and approval by the City Engineer.
19. Manholes and catch basins shall be stationed on plan sheet using centerline of street stationing. Inlets with grates shall be stationed at the centerline of the grated section. Inlets without grates shall be stationed at the centerline of the throats.
20. Storm sewer systems shall be closed conduit up to 60” diameter pipe or its hydraulic equivalent. Exceptions may be made to this requirement for lands being developed for park purposes which will be under the jurisdiction of the Mayor and Board of Commissioners.  
  
Stormwater drainageway systems that must carry a flow greater than the capabilities of a 60” closed conduit system may be a closed system, an improved channel constructed in accordance with adopted City Standards and adopted floodplain policies, or in accordance with adopted floodplain zoning ordinances.
21. Roughness coefficient for drainage design will be as listed in tables 5-5 and 5-6, figure 5-5, pages 109 through 123, of “Open Channel Hydraulics” by Ven Te Chow, published by McGraw-Hill Book Company, 1959.
22. Minimum Velocity in a drainageway system, having a roughness coefficient less than or equal to 0.015, shall be 2.5 fps to avoid sedimentation.
23. Pipes shall be sized using either Kutters or Mannings charts for design flow. The slope used for design shall be the slope of the invert of the pipe.
24. No pipe shall be installed downstream having a diameter smaller than the pipe from which it is receiving water.
25. Concrete pipe shall not be less than C-76 Class III. Corrugated metal pipes shall meet Oklahoma State Highway Department gauge requirements for fill heights.

26. Junctions between different pipe sizes shall be made with the top inside of the downstream pipe no higher than the top inside of the upstream pipe.
27. A manhole or junction box shall be required at all changes of grade, changes in alignment, and junctions between two or more different size pipes.
28. The horizontal distance between pipes being placed in the same trench shall be a minimum of 2' or one-third the diameter of the largest pipe, whichever is greater. This would include multiple pipe crossings for culvert purposes.
29. Radius pipes will not be used on storm sewers having a diameter less than 36". Radius pipes will be used on storm sewers larger than 36". The radius of the curve shall be no less than 5 times the diameter of pipe. The degree of deflection shall be no more than 7-1/2° per joint of radius pipe.
30. Manholes of 4' inside diameter shall be used whenever possible. If the diameter of the manhole exceeds 4', junction boxes will be used. Junction boxes must be used whenever manholes can not be used. The rim elevation shall be indicated on all manholes and junction boxes. Manhole and junction boxes may be precast or cast in place.
31. Drainage pipes shall not enter manholes with 4' inside diameter in the Corbel (neckdown) section. The size of pipe entering or leaving a 4' diameter manhole shall not exceed 24".
32. A minimum of 6" cover shall be provided over pipes and box culverts to the bottom of the subgrade except when box culverts are built with the top at grade.
33. All storm sewers shall be shown in profile, showing flowline, size type, grade and the design discharge. Profiles shall show the natural and proposed ground line at the center line of the storm sewer.
34. The radius of curve for a culvert shall be a minimum of 3 times the maximum width of the culvert.
35. Box culverts and bridges shall have adequate capacity to pass 100-year fully urbanized flows with 1' freeboard. Backwater analysis shall be provided by the consulting engineer to illustrate compliance with this requirement.
36. All headwalls shall be broken back design except for culverts; under roadway embankment where purpose of headwall is primarily to retain earth.
37. Pipes discharging at a steep gradient into drainageways and detention facilities shall be provided with a slope wall.

38. All open channels shall conform to the City of Coweta's standards. The centerline radius of a curve on an improved channel shall be a minimum of 3 times the maximum of 3 times the maximum top width at the design flow depth.
39. All improved channels shall be provided with a minimum of 1' of freeboard.
40. When storm sewers are constructed in fill areas, all materials in fill areas shall be compacted to a 95% standard proctor density prior to the laying of the pipe.
41. Maximum spacing between manholes or junction boxes shall not exceed 300'.

### **8.11 Detention Facilities**

1. Detention is required for all RS development of 10 acres or more and for all other developments of 2 acres or more except as provided in items 2 and 3 below. Peak release rates from the developments should not exceed the natural run-off that occurred before developments for all storms up to and including 100-year storm. Item 11 below will be used to determine the peak release rate.
2. RS development less than 10 acres and all other developments less than 2 acres may also be required by the City Engineer to have detention if the location of the developmental site with respect to the watershed and its inherent flooding problems warrants it.
3. Detention will not be required for a developmental site that has 100-year full urbanization drainageway capacity to either the Arkansas River or Coweta Creek.
4. The detention storage requirements shall be that excess run-off generated due to urbanization resulting in less impervious area and alteration of times of concentration due to storm sewerage of the area, overland flows on rights-of-way and alteration of the drainage patterns as a result of earth change, etc., for a 100-year frequency storm.
5. Snyder Synthetic unit hydrograph method, the Soil Conservation Service derivative thereof, the Storm Water Management Model, the Stanford Watershed Model, or Massachusetts Institute of Technology Catchment Model shall be used for the design of all detention facilities.
6. U.S. Weather Bureau Technical Paper No. 40 and National Weather Service HYDRO-35 (June, 1977) shall be used for rainfall information. (Refer Appendix)
7. The duration of the storm used for design shall not be less than two times the time of concentration. The time of concentration is defined as the time for run-off to travel from the furthestmost point in the watershed to the point in question.

8. The time increment used in developing the rainfall distribution and in reading off the ordinates of the unit hydrograph may be rounded off to the nearest whole time interval or to the nearest time increment.
9. The rainfall excess shall be critically arranged in such a way that the largest increment is located one time interval past the center of the duration of the rainfall excess.
10. The loss rates in determining the runoff hydrograph shall be an initial loss of 0.5 inches and a uniform loss of 0.08 inches/hr. for the subsequent hours once the initial losses are satisfied.
11. To determine peak release rate a minimum of 5 and 100-year storm frequencies under natural site conditions shall be investigated.
12. All calculations for detention facilities shall be submitted for review by the City Engineering Division to include hydrographs, outflow structures and time phase analysis thru the facility.
13. Floodplain areas and detention pond locations shall be identified at the preliminary plat stage to illustrate how these areas will be managed during and after construction.
14. If a tract of land under development as a floodplain area within its boundary, the information that must be furnished before the final plat is filed, shall include:
  - a. A backwater analysis on the existing drainageway system.
  - b. A backwater analysis on the proposed drainageway system.
15. Detention facilities should not be located in undesirable non-reusable areas that would demand continued high maintenance costs to the City of Coweta. Each facility shall incorporate methods to minimize erosion and other maintenance reducing designs.
16. Detention facilities located in non-reusable locations where soil or other conditions exist that would require continued high maintenance costs after the facility may no longer be needed will be required to have a dual storm sewer system.
17. A dual storm sewer system will not be required for a detention facility. However, the developer should carefully consider any advantages to him that would result from the immediate installation of a dual storm sewer system which would be realized by him upon reversion of ownership.
18. Detention facilities may be located in the Floodplain area or Floodway area when the elimination of the facility could be easily accomplished, thereby returning the

site to its natural state, providing the Floodplain area and the Floodway area are determined with the facility in place and that no rise in the water surface offsite of the development results from the installation of the facility except that permitted by the adopted Floodplain Development Permit Ordinance or adopted Floodplain Zoning Ordinance.

19. A dual stormwater drainageway system may be required for the development of a tract of land lying within an area where a Master Drainage Plan exists and a regional detention facility is being implemented until the regional detention facility is completed and in operation.
20. Additional detention storage, in excess of the required storage for a drainage area, can be provided to satisfy the detention requirements for a tract of land downstream of the detention facility, providing the detention facility is constructed prior to the development of the downstream tract.
21. All detention facilities will be designed “dry” unless a special maintenance agreement in writing has been negotiated with the City of Coweta.
22. A minimum number of detention facilities is encouraged for each development.
23. If runoff has a natural tendency to drain in several directions for a given developmental tract of land where detention is required, then detention storage shall be provided for the biggest drainage area. Additional detention storage may be provided, at the same facility, to satisfy detention requirements for a separate drainage area on the same development, provided that;
  - a. The whole development tract of land is in the same watershed.
  - b. The smaller drainage area(s) that, has/have been compensated for does/do not, either singly or in combination, adversely impact the health, welfare and safety of the general public downstream.
24. If a tract of land being developed is located in more than one watershed, grading work to divert flows from one watershed to another will not be permitted and compensatory storage will not be permitted in one watershed for that required in another.
25. Detention facilities may be used for compensatory storage when encroaching into the Floodplain area provided that the overall drainageway system does not:
  - a. Cause a rise in the water surface elevation beyond the extent of the developmental tract of land.
  - b. Adversely impact adjacent properties by an increase in velocity.
26. All dikes and spillways on detention facilities will show typical cross sections on plans.

27. Access road, with grade of 10% or less, shall be provided to the detention areas for maintenance purposes.
28. Side slopes on detention facilities shall not be steeper than 4:1.
29. Detention facilities shall be provided with a trickle channel from the inlet to the outlet structure to transmit low flows and the trickle channel shall be constructed in accordance with City standards.
30. Storm sewer outlets in the slope of the detention pond shall be protected by a Standard Slopewall.
31. Erosion and sediment control practices in and around detention facilities shall be in conformance with the earth change criteria.
32. The detention area shall be identified as a separate platted area; as appropriate, it may consist of one or more platted lots, a separate block, or it may be identified as a reserve area.
33. Dedication of the detention facility shall not appear among the plat's restrictive covenants; the format of the dedication shall be consistent with the dedication of public streets.
34. Every plat dedication shall contain an ownership reverter provision. Whether the reverter shall run in favor of the subdivider, an identified third party, or to a designated abutting property shall be determined as follows:
  - a. If the detention area meets all applicable subdivision regulation/zoning requirements (area, street frontage, etc.), so as to permit its subsequent redevelopment upon reverter of ownership, at the option of the subdivider, reverter may be in favor of any designated party or one or more abutting properties.
  - b. If the detention area fails to meet all applicable subdivision regulation/zoning requirements and appropriate variances/special exceptions are not approved by the Coweta Board of Adjustment which would permit its proper redevelopment upon reverter of ownership, reverter shall run only in favor of an identified abutting property or properties; if all deficiencies receive variance/special exception approval, reverter shall be governed by paragraph 34a (above).
35. Every plat shall provide an access way at least 20 feet wide to any required detention area. Access may be provided by frontage on a dedicated public street or by the platting of an access easement from a dedicated public street to the detention area.

36. If the detention facility is approved by the City to serve areas outside the subdivision in which it is located, such additional areas shall be specifically identified in the dedication.
37. In designing the dams for detention facilities, the book titled “DESIGN OF SMALL DAMS” by U.S. Department of the Interior, Bureau of Reclamation shall be used. An analysis shall be furnished of any proposed earthen dam construction soil. A boring of the foundation for the earthen dam may be requested.
38. The ownership and maintenance responsibility for detention facilities shall remain with the private sector if the facility is an integral usable part of the development. In all other cases, the detention facility will be dedicated to the public and the public will be responsible for the maintenance thereof. In the event the detention facility, as a result of drainageway improvements, becomes unnecessary, the facility by action of the City Council shall revert to the person, firm or corporation making such dedication or his heirs, successor or assignees.

## **8.12 Earth Change, Soil Erosion and Sedimentation**

### **1. Introduction**

The principles of erosion and sedimentation control can be successfully formulated and implemented by understanding the basic processes of soil erosion and sedimentation.

There is a certain amount of erosion and sedimentation that occurs in nature. The process of natural erosion and sedimentation is greatly accelerated due to construction activity. If the accelerated process is not accounted for at the time of construction, the adverse effects, possible are:

- a. A large increase in area exposed to storm water runoff and soil erosion.
- b. Increased volumes of storm runoff, accelerated soil erosion and sediment yield and higher peak flows caused by:
  1. Removal of protective vegetative cover.
  2. Exposure of underlying soil or geologic formations less pervious and/or more erodible than original soil surface.
  3. Reduced capacity of exposed soils to absorb rainfall due to compaction caused by heavy equipment.
  4. Enlarged drainage areas caused by grading operations, diversions and street construction.

5. Shortened times of concentration of surface runoff caused by altering steepness, distance and surface roughness and installation of improved storm drainage facilities.
  6. Increased impervious surfaces associated with the construction of streets, buildings, sidewalks and paved driveways and parking lots.
- c. Alteration of the groundwater regime that may adversely affect drainage systems, slope stability and survival of existing and/or newly established vegetation.
  - d. Creation of exposures facing south and west that may hinder plant growth due to adverse temperature and moisture conditions.
  - e. Exposure of subsurface materials that are rocky, acidic, droughty or otherwise unfavorable to the establishment of vegetation.
  - f. Adverse alteration of surface runoff patterns by construction and development.
2. General Applicability

Earth change permit applications shall be required for areas as determined by the City Engineer.

3. Minimum Approval Requirements

The plans and specifications accompanying the permit application shall contain the following data as deemed applicable by the City Engineer:

- a. A vicinity sketch at the scale of 1-inch to 200 feet indicating the site location as well as the adjacent properties within 500-feet of the site boundaries.
- b. A boundary line survey of the site on which the work is to be performed.
- c. A plan of the site at a minimum scale of 1-inch to 100-feet showing:
  1. Name, address and telephone number of the legal land owner, developer and petitioner.
  2. A timing schedule indicating the anticipated starting and completion dates of the developments construction sequence and the time of exposure of each area prior to the completion of effective erosion and sediment control measures.

3. Estimate of the quantity of excavation and fill involved.
  4. Existing topography at a maximum of 2-foot contour intervals.
  5. Proposed topography at a maximum of 2-foot contour intervals.
  6. Location of any structure or natural feature on the site.
  7. Location of any structure or natural feature on the land adjacent to site and within 50-feet of the site boundary line.
  8. Location of any proposed additional structures or development on site.
  9. Plans of all drainage provisions, retaining walls, cribbing, planting erosion control measures, or other temporary or permanent soil erosion control measures to be constructed in connection with, or as a part of the proposed work together with a map showing the drainage area of land tributary to the site and estimated runoff of the area served by any drains.
- d. The estimated total cost of the required temporary and permanent soil erosion control measures shall be provided.
  - e. Other information or data that may be required by the City Engineer such as a soil investigation report which shall include but not be limited to, data regarding the nature, distribution and supporting ability of existing soils and rock on the site.
4. Principles of Applying Erosion and Sediment Control Criteria
    - a. Plan the development to fit the particular topography, soils, water ways and natural vegetation at a site.
    - b. Expose the smallest practical area of land for the shortest possible time.
    - c. Apply “soil erosion” control practices as a first line of defense against on-site damage.
    - d. Apply “sediment” control practices as a perimeter protection to prevent off-site damage.
    - e. Implement a thorough maintenance and follow up operation.
  5. Temporary Structural Practices

- a. Dikes:
  - 1. Diversion dike.
  - 2. Interceptor dike.
  - 3. Perimeter dike.
- b. The design drainage area for dikes shall not exceed 5 acres.
- c. The minimum dimensions shall be in accordance with the adopted standards.
- d. Swales:
  - 1. Interceptor swale.
  - 2. Perimeter swale.
- e. The design drainage area for swales shall not exceed 5 acres.
- f. The minimum dimensions shall be in accordance with the adopted standards.
- g. Straw Bale Dike:

Where no other practice is feasible a temporary barrier with a life expectancy of three months or less can be installed across or at the toe of a slope for contributing drainage areas less than half acre, in accordance with the adopted standards.
- h. A stabilized construction entrance shall be built in accordance with the adopted standards to reduce or eliminate the tracking or flowing of sediment onto public rights-of-way.
- i. A stone outlet structure shall be constructed in areas where the entire drainage area to the structure is not stabilized or where there is a need to dispose runoff at a protected outlet or where concentrated flow for the duration of the period of construction needs to be diffused. The structure shall be in accordance with adopted standards.
- j. A grade stabilization structure in the form of a paved chute or flume shall be constructed to prevent erosion, where concentrated flow of surface runoff to be conveyed down a slope, in accordance with the adopted standards. The maximum allowable drainage area upstream of such a structure shall not exceed 36 acres.
- k. A grade stabilization structure in the form of a pipe slope drain shall be constructed to prevent erosion, where concentrated flow of surface runoff

is to be conveyed down a slope, in accordance with the adopted standards. The maximum allowable drainage area upstream of such a structure shall not exceed 5 acres.

- l. Storm water detention facilities may be used temporarily as sediment basins. A temporary outlet structure for the storm water detention facility to work as a sediment pond shall be constructed. At the end of the construction activity, the developer shall make sure that the outlet structure shall meet the design requirements of a storm water detention facility.
  - m. Condition of the detention facility that is used as a sediment pond during construction, shall meet the following requirements at the time of acceptance.
    1. It shall be completely cleaned by the developer and be rid of any immediate maintenance.
    2. It shall meet all design standards.
6. Permanent Structural Practices
- a. Depending on the development layout, a diversion shall be constructed across a slope less than 15% to:
    1. Prevent runoff from higher areas which have a potential for causing erosion and thereby interfere with the establishment of vegetation on lower areas.
    2. Reduce the length of slopes to minimize soil loss.
  - b. Diversions need be constructed only below stabilized or protected areas in conformance with standards.
  - c. Outlets from diversions shall be constructed to discharge in such a manner as not to cause erosion.
  - d. Outlets shall be constructed and stabilized prior to the operation of diversion.
  - e. Storm drain outlet protection shall be provided when converting pipe flow to channel flow. The reduction in velocity shall be consistent with the roughness co-efficient of the receiving waterway. The reduction in velocity may be accomplished by:
    1. Providing mortared riprap, stabilization:
    2. Providing energy dissipaters;

3. Providing permanent vegetation, depending on the site specific needs.

7. Vegetative Practices

Vegetative practices can be applied very effectively to control erosion. The practice can be either temporary or permanent erosion. The practice can be either temporary or permanent depending on the site-specific needs. The specifications for establishing vegetation both temporary and permanent are briefly outlined below.

a. Temporary Practices

Small grains like oats, rye and wheat, and sudans and sorghums are the most feasible temporary vegetation to control erosion for the Coweta area. This practice is effective for areas where soil is left exposed for a period of 6 to 12 months. The time period may be shorter during periods of erosion rainfall.

1. Prior to seeding, needed erosion control practices such as diversions, grade stabilization structures, berms, dikes, etc. shall be installed.
2. Temporary vegetative practice is usually applied prior to the completion of final grading of the site.
3. If the area to be seeded has been recently loosened to the extent that an adequate seedbed exists, no additional treatment is required. However, if the area to be seeded is packed, crusted and hard, the top layer of soil shall be loosened by other suitable means.
4. Fertilizer shall be applied at a rate of 600 pounds per acre or 15 pounds per 1000 square foot using 10-20-10 or equivalent.
5. Soils known to be highly acidic shall be lime treated.
6. Seeding requirements shall be as specified in the following:

Plant	Per Acre	Per 1000 Sq. Ft.	Planting Date	Depth of Seeding
Annual Ryegrass	40 Lbs.	0.9 Lbs.	9/15 – 11/30	¼ Inch
Elbon Rye	2 Bu.	3.0 Lbs.	8/15 – 11/30	2 Inches
Wheat	2 Bu.	3.0 Lbs.	8/15 – 11/30	2 Inches
Oats	3 Bu.	2.5 Lbs.	8/15 – 11/30	2 Inches
Sorghum	60 Lbs.	1.4 Lbs.	3/1 – 9/15	2 Inches
Sudan Grass	40 Lbs.	0.9 Lbs.	4/1 – 9/15	2 Inches

7. Seeds shall be drilled uniformly.

8. Seeding implements should be used at right angles to the general slope to minimize erosion.
9. After 2 to 3 months of planting the seeded site shall be top dressed with 8 pounds per 1000 square feet or 350 pounds per acre of 33-0-0.
10. Areas that are not well covered shall be replanted.
11. The seeded area shall be watered when feasible and needed.

b. Permanent Practices

Bermuda grass, Kentucky 31 Tall Fescue and Weeping Lovegrass are some of the types of permanent vegetation that could be effectively used to control erosion.

1. Prior to seeding, needed erosion control practices such as dikes, swales, diversions, etc. shall be installed.
2. The subgrade shall be loosened evenly to a depth of 2 to 3 inches and 10-20-10-fertilizer (10 pounds per 1000 square feet or 450 pounds per acre) shall be mixed with the loosened surface soil by discing or other suitable means.
3. Soils known to be high acidic shall be lime treated.
4. Planting rate requirements shall be as specified in the following table:

Plant	Per Acre	Per 1000 Sq. Ft.	Planting Date	Depth of Seeding
Bermuda Grass	10 Lbs.	0.25 Lbs.	4/1 - 8/15	0-1/2 Inch
Fescue	40 Lbs.	0.90 Lbs.	9/1 - 11/1	0-1/2 Inch
Lovegrass	5 Lbs.	0.10 Lbs.	4/1 - 6/30	0-1/2 Inch

5. Seeds shall be drilled uniformly.
6. Seeding implements should be used at right angles to the general slope to minimize erosion.
7. Mulch will be used where needed.
8. The area shall be watered daily or as often as necessary to maintain adequate soil moisture until the plants grow about 1/2 - 1 inch.

## 8.13 Floodplain Area Maps

1. Initial Maps
  - a. The City Commission shall adopt initial floodplain area maps, developed by the City Engineer, identifying lands subject to flooding hazards and periodic inundation, based on the best available information.
  - b. Sources of available information include but are not limited to:
    1. Federal Insurance Administration (FIA) Zone A designated areas, with and without flood elevation;
    2. High water marks from previous floods;
    3. Engineering studies, and
    4. Flood prone soils maps.
2. Map Revisions
  - a. As new information becomes available, maps will be updated by the City Engineer and adopted by the City Commission.
  - b. The regulatory flood will be used in Engineering analyses to determine the floodplain area. Analysis will also include delineation of the floodway.
  - c. The regulatory flood will be computed based upon full potential urbanization of the contributing watershed, considering the Comprehensive Plan, adopted Floodplain Management Policies and the Watershed Drainage Plan where adopted.
  - d. In calculations of the degrees of watershed urbanization to be considered in floodflow routing:
    1. Natural floodplains and those which can be reasonably expected to remain unaltered by man-made changes may be considered as remaining in their natural states.
    2. Floodplains altered by existing or anticipated man-made changes shall be considered as having the natural channel eliminated.
    3. Where an adopted Watershed Drainage Plan exists, the effects of urbanization shall be determined in accordance with that plan's floodplain development guidelines. '.
  - e. Floodplain area maps shall be limited to delineating those floodplains where the contributing drainage area is approximately 40 acres or more.
  - f. Mapping of Floodway Zoning Districts (FD) shall be limited to delineating those floodplains where the contributing drainage area is approximately 640 acres or more.

#### **8.14 Determination of Floodway**

1. The floodway is comprised of the channel of a watercourse plus those portions of the adjoining floodplain which are reasonably required to carry and discharge the regulatory flood.
2. A floodplain has two basic functions:
  - a. Carrying and discharging the flood flows (f100dway);
  - b. Temporarily storing flood water (floodplain).
3. Any appreciable change in either function of the floodplain can result in an increase in flood heights and/or an increase in velocity.
4. Floodway boundaries shall be determined so that:
  - a. Sufficient area is reserved to carry and convey the regulatory flood.
  - b. Existing floodplain storage capacity is maintained.
  - c. No measurable increase occurs in flood flows, flood heights or potential flood damage and danger to off-site properties.