SUBDIVISION STANDARDS

for the

CITY OF MUSTANG RIDGE Travis and Caldwell Counties, Texas

OFFICIALS

Alfred Vallejo, II

Mayor

Charles Laws
Alisandro Flores
David Bunn
Ronnie Dorsett
Billie Morrison

Councilman Councilman Councilman Councilman Councilman

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City Ordinance # 97-00131, 08/25, 87
City Ordinance # 01-00184, 01/22/01
City Ordinance # 05-00242 06/13/05



SECTION 1 - GENERAL AUTHORITY AND POWER IN THE CITY COUNCIL

1.01 These regulations are and shall be deemed to be an exercise of authority by the City of Mustang Ridge.

SECTION 2 - DEFINITIONS

- 2.01 Alley A public right-of-way which is used only for secondary access to individual properties which have their primary access from an adjacent public street or an approved common or compensating open space or courtyard which has direct access to a public street.
- 2.02 Amended Plat A plat, previously approved by the City Council and duly recorded, which is resubmitted to the City for re-approval and recording which contains dimensional or notational corrections of erroneous information contained in the originally approved and recorded plat. An amending plat is not to be considered as a re-plat or re-subdivision and may not contain any changes or addition to the physical characteristics of the original subdivision, but is intended only to correct errors or miscalculations.
- 2.03 Arterial Street A principal traffic artery, carrying higher volumes of traffic, more or less continuously, which is intended to connect remote parts of the area adjacent thereto and to act as a principal connecting street with State Highways.
- 2.04 **Boundary Street** Any street along the boundaries of a subdivision which would serve any properties outside the plat boundaries or provide a connection directly with a collector street.
- 2.05 Building Line A line beyond which buildings must be set back from the lot or property line.
- 2.06 City Mustang Ridge, Texas.
- 2.07 City Council, or Council The Mustang Ridge City Council
- 2.08 **Designated 100-year Flood Plain** Based on County regulations for Flood Plain Management; the area adjacent to a stream or watercourse which, on the average, has a one percent (1%) chance of being inundated from flood waters in any given year.
- 2.09 **Drainage Control Plan -** A plan for collecting controlling, transporting, and disposing of storm water falling upon, entering, flowing within, and exiting the subject property.
- 2.10 Excavation The mechanical removal of earth material.
- 2.11 **Fill** Any act by which earth, sand, gravel, rock or similarly approved material is deposited, placed, pushed, pulled or transported to a place other than the place from which it is excavated and the materials so placed.
- 2.12 Final Plat A map or drawing of a proposed subdivision prepared in a manner suitable for recording in the County records and prepared in conformance with the conditions of preliminary approval previously granted by the City Council.

- 2.13 **Floodway** The channel of a river, stream, branch, creek, or watercourse, and adjacent land areas required to carry and discharge a flood of given magnitude.
- 2.14 **Industrial Street -** A street or road intended primarily to serve traffic within an area of industrial development or proposed industrial development.
- 2.15 Lot An undivided tract or parcel of land contained within a block and designated on a subdivision plat by numerical identification. Said lot shall have frontage on a dedicated public street.
- 2.16 Neighborhood Collector Street A street or road collecting traffic from other streets and collectors and serving as the most direct route to an arterial, State Highway, or a neighborhood center.
- 2.17 Occupancy To make use for residential, commercial, or industrial purposes.
- 2.18 Organized Disposal System An "organized disposal system" is any public or private system for the collection, treatment and disposal of sewage operated in accordance with the terms and conditions of a permit from the Texas Natural Resource Conservation Commission and the Texas State Department of Health.
- 2.19 Pavement The road bearing surface layer consisting of concrete, asphaltic concrete or two applications of asphaltic material each covered with aggregate and designed for a twenty (20) year life expectancy.
- 2.20 **Pre-application Conference** A meeting between the owner or his agent and the City Council or its designee.
- 2.21 **Pre-construction Clearing** Minimal clearing for the purpose of surveying and testing survey. The disturbance of natural ground cover is held to a minimum.
- 2.22 Preliminary Plan A map or drawing of a proposed subdivision illustrating the features of the development for review and preliminary approval by the City Engineer and City Council, but not suitable for recording in the County records.
- 2.23 **Public Street** A public right-of-way, however designated, dedicated, or acquired, which provides vehicular access to adjacent properties.
- 2.24 **Residential Collector Street** A street or road collecting traffic from a residential street and leading to streets of a higher type classification.
- 2.25 Residential Street A street or road which is intended primarily to serve traffic within a neighborhood or limited residential district, and which is not necessarily continuous through several neighborhood residential districts.
- 2.26 **Revised Plat** A revision of a final plat in accordance with Article 6626, Vernon Annotated Civil Statutes.

- 2.27 **Rural Roadway** A roadway with thirty (30) or less vehicle trips per day determined by a Registered Professional Engineer qualified in Traffic Engineering and approved by the City Engineer.
- 2.28 **State Designated Roadway** A public road funded by the State Department of Highways and Public Transportation for construction and maintenance and designated as a State Road on the General Highway Map of the County.
- 2.29 **Street Dedication Plat -** A map or drawing illustrating only the location of a public street within a specific tract of land.
- 2.30 **Street Width** The shortest horizontal distance between the lines which delineate the right-of-way of the streets.
- 2.31 **Stub Street** A public street not terminated by a permanent circular turnaround, ending adjacent to undeveloped property or acreage and intended to be extended at such time as the adjacent undeveloped property or acreage is subdivided or developed.
- 2.32 **Developer** Any owner or authorized agent thereof proposing to divide or dividing land so as to constitute a subdivision according to the terms and provisions of these regulations.
- 2.33 Subdivision The division of any lot, tract, or parcel of land into two or more lots or sites for the purpose of public sale or building development, whether immediate or future, including re-subdivision of land for which a plat has been filed and recorded.

2.34 Types Of Subdivisions:

- a) Rural Subdivisions
 - 1) Rural Subdivision 1 A subdivision with an average lot size of not less than five (5) acres nor more than ten (10) acres, excluding areas within the 100 year flood plain.
 - 2) Rural Subdivision 2- A subdivision with an average lot size of ten (10) acres or more
- b) **Suburban Subdivision** A subdivision with an average lot size of more than one (1.0) and less than two (2.0) acres, excluding areas within the 100 year flood plain, or a subdivision in which the lot street frontage is less than 150 feet but more than 100 feet.
- c) **Urban Subdivision** A subdivision with an average lot size one (1.0) acre or less, excluding areas within the 100 year flood plain, or a subdivision in which the lot street frontage is less than 100 feet.
- 2.35 **Thoroughfare -** A street providing a continuous connection between multiple neighborhoods and directing traffic to arterial streets.
- 2.36 **Unrecorded Subdivision** A subdivision of land or a description of land for resale that varies from the previous sale description and which subdivision results in the creation of lots

or tracts requiring current or future public access but for which a plan or plat has not been authorized for recording or recorded by the County.

2.37 Watercourse - A natural or man-made channel through which water flows.

SECTION 3 - SUBDIVISION PROCEDURE

3.01 COMPLIANCE REQUIRED

a) No person shall create a subdivision of land either by sale, or lease, or otherwise, without complying with the provisions of these regulations. All plats and subdivisions of any such land shall conform to the rules and regulations set forth. Article 6626C Section 1, 2, VATS, Cowboy Country Estates v. Ellis County (1985, Waco Court of Appeals), 692 S.W. 2nd, 882.

3.02 RULES AND REGULATIONS

- a) The City Council may adopt rules of procedure to govern its actions. After public hearing thereon, the City Council may adopt rules and regulations governing outsiand subdivisions. Such rules shall be consistent with the provisions of this order and shall become effective upon being filed with the City.
- b) Decisions by the City Council concerning the specific interpretation of these regulations shall become a part of these regulations upon the filing with the City to assure uniform enforcement of these regulations throughout Mustang Ridge, Texas.

3.03 DEDICATION AND MAINTENANCE OF STREETS

- a) Disapproval of a plat by the City Council shall be deemed a refusal by the City to accept the offered dedications shown thereon. Approval of a plat shall not be deemed an acceptance of the proposed dedications and shall not impose any duty upon the City concerning the maintenance of or improvements to any such dedicated parts until the City Council has entered an order accepting such improvements for maintenance.
- b) It shall be unlawful for any officer or employee of the City to enter the subdivision for the purpose of maintaining the streets, and the City will not accept or maintain such streets, unless and until such streets have been constructed as per approved plans, and the required utilities and drainage facilities have been installed as per approved plans, and such improvements have been accepted by the City, with such acceptance evidenced, in writing, by written certificate of the City Council. The City Council may authorize the maintenance of streets as specified in Section 14.
- c) Annotation The dedication of streets in a subdivision cannot be revoked by unilateral action of the Developer after the subdivision plat has been filed for record and approved and the dedication accepted. Gambrell v. Chalk Hill Theatre Co., Ltd., 205 S.W. 2:1 126 (Ct. Civ. App. 1947).

3.04 INJUNCTIVE RELIEF

a) In addition to any other remedy provided by law, the City and its officers shall have the right to enjoin any violation of these regulations by injunction issued by a court of competent jurisdiction. Article 6626C, Section 1, 2, VATS, Cowboy Country Estates v. Ellis County (1985, Waco Court of Appeals), 692 S.W. 2nd. 882.

3.05 PRELIMINARY PLAN

a) Timing of Submission

- A Preapplication Conference shall be required for all subdivisions. The owner or agent shall provide a sketch of the proposed layout showing general road patterns and lot configuration at which time the City Council or its designee shall review the layout for compliance with the general subdivision requirements and procedures. The Preapplication Conference shall be for information purposes and shall not be construed as a formal approval or commitment.
- 2) Submission of the preliminary plan shall be prior to, or concurrent with, any preliminary plan submitted to the County exercising authority.
- 3) The preliminary plan shall be submitted to the City Council. The City Council or its designee shall respond within thirty (30) days reporting any noncompliances to the developer.

b) Preliminary Plan Requirements

- 1) A preliminary plan of any proposed subdivision shall be submitted to the City Council for review. The preliminary plan shall consist of a drawing on mylar, twenty-four by thirty-six inches (24" x 36") in size or thirty-six by forty-eight inches (36" x 48") in size (unless a different size is approved by the City Council). The preliminary plan shall be drawn to a scale of one inch to one hundred feet (1"-100') or to a scale greater than one inch to hundred feet (1"-100'), provided that the scale is divisible by ten (10). When the preliminary plan is over one hundred (100) acres, the scale may be reduced to one inch to two hundred feet (1"-200') or to a lesser scale divisible by one hundred (100). The preliminary plan shall show the following information:
 - A) The date of last revision, scale and north point, location map of the tract, the title under which the plat is to be recorded and the name and address of the owner, and person designing the preliminary plan. The preliminary plan shall bear the seal and signature of a Registered Professional Engineer and/or Registered Professional Surveyor, certifying that all requirements have been fulfilled.
 - B) Boundary lines and total acreage of Parent tract and the proposed subdivision.
 - C) The preliminary plan shall show property lines, names and addresses of owners of adjacent properties, deed references to un-subdivided tracts as

- available from current tax records, and lot, block, and recording information for adjacent subdivisions.
- D) The name, location, width, and centerline of existing streets, alleys, railroads, other similar transportation features, easements, lots, blocks, and public areas on or adjoining any part of the land being subdivided.
- E) Contour lines at no greater than 10' intervals based upon NGVD 29, such contour lines shall be not more than one hundred (100) horizontal feet apart, unless spot elevations are provided. Such topographical information, locations and dimensions shall be of sufficient accuracy as to permit the general planning of water lines, sanitary sever lines, storm drainage facilities, streets and other proposed improvements.
- F) The centerline of existing watercourses, boundary of the 100 year return frequency storm, and location, size and flow line of existing drainage structures on the land being subdivided and on adjoining tracts, as per available information.
- G) The name, location, width and dimensions of proposed streets, alleys, easements, building lines, lots, blocks, parks and other public spaces, and uses for all sites.
- The location of city limits and extra-territorial jurisdiction boundaries of incorporated areas as per available public records.
- Approximate acreage and dimensions of each proposed lot in the subdivision.
- When a subdivision is a portion of a larger area planned as a phased and related development, a master development plan of the entire area, showing a schematic layout of the street and land uses shall be submitted with the preliminary plan of the portion first to be subdivided. After final approval of the portion first to be subdivided, all property covered by such master development plan must subsequently, prior to its development, be platted with due regard to the safe, healthful and orderly extension of roads, utilities, drainage and other public facilities.
- When a preliminary plan is submitted for property covered by a previously approved and still valid preliminary plan, the later preliminary plan shall include all the property covered by the previously approved preliminary plan which has not been final platted and the approval of such later preliminary plan shall supersede and render void the effectiveness of the prior preliminary approval; however, the City Council may allow the later preliminary plan to cover less than all the property covered by the previously approved preliminary and may allow such previously approved preliminary plan to remain partially in effect, if the Council finds that the same does not substantially impair the orderly planning of roads, utilities, drainage and other public facilities.

- 4) Preliminary Drainage Plan Requirements:
 - A) A drainage plan shall be submitted with the preliminary. The drainage plan shall be accompanied by a copy of a topographical drawing at the same scale as the preliminary plan, showing the location, type, and size of all required drainage structures, and shall indicate the route of proposed drainage. Where a lot is located adjacent to a major drainage course or overflow channel, such that a part or all of the lot lies within the regulatory 100 year flood boundary, or where building sites are proposed to be located within the proposed regulatory 100 year flood boundary, the drainage plan shall show proposed building sites and elevations required to put finish floor a minimum of one foot (1') above the 100 year flood level of drainage course or overflow channel.
 - (i) Drainage plans shall be drawn to a scale no smaller than the preliminary plan scale. The scale of supplementary plans, profiles, and cross-sections shall be sufficient to clearly show details, if required to demonstrate the adequacy of existing or proposed facilities.
 - (ii) Plans shall show storm (flood) water routing and all drainage structures with sizes of culverts, retarding and retaining structures, drainage easements with course and distance of centerlines and boundaries, lot lines, street layout, proposed inlets, culverts, roadside ditches, channel sections and slopes, bridges, channel improvements, levees, or berms, fills necessary to elevate land above flood levels, and remove same from the flood area.
 - (iii) The limits of the 100 year frequency storm watershed area shall be shown for all waterways, including overflow of structures and related backwater effects. Storm water runoff resulting from a design storm of 100 year frequency shall be contained within the available right-of-way and/or drainage easement. All drainage facilities must be designed for a capacity to safely contain storm water from a design storm of 25 year frequency and sufficient right-of-way and drainage easements to accommodate the 100 year frequency.
 - (iv) The drainage plan shall be prepared by a Registered Professional Engineer of the State of Texas, whose seal, signature and date shall appear on the plan.
 - (v) Engineering drainage report to support all drainage designs shall be submitted to the City. Computations shall be complete and orderly and shall clearly state all assumptions and design basis.
 - (vi) Profiles, cross-sections, or substantiating data may be required at the City's request as necessary to support flood levels and backwater analysis.

c) Preliminary Plan Approval

1) City Council approval of a preliminary plan shall expire one (1) year after the date of approval unless a final plat is submitted for all or part of the area covered by the preliminary plan. The City Council may grant a six-month extension of time to submit a final plat, provided the Developer request such extension in writing showing good cause and prior to the one (1) year expiration date.

3.06 FINAL PLAT

a) Submission of Final Plat

After the preliminary plat has been approved, the final plat shall be produced by use of materials of a permanent nature in general use by the engineering profession. The plat shall be drawn on sheets eighteen inches by twenty-four inches (18" x 24") or twenty-four inches by thirty-six inches (24" x 36") (multiple sheets may be necessary), and shall be submitted to the City Council prior to approval action.

b) Information on Final Plat

- This plat shall be drawn to a scale of one inch to one hundred feet (1"-100"), or to a greater scale provided that the scale is divisible by ten (10), or to one inch to two hundred feet (1"-200") when the plat contains more than one hundred (100) acres or to a lesser scale divisible by one hundred (100) and provided prior approval by incorporated areas is granted where applicable, and shall show the following information:
 - A) The date, subdivision title, scale, location map and north point.
 - B) The name of the subdivision and adjoining subdivisions or the names of the adjoining property owners, with deed references as per current tax records, the names of streets (to conform wherever possible to existing street names whenever extending streets, but not to create new streets with duplicate names), number of lots, linear feet of streets, and a letter designation and description of other open spaces for public or private use, in accordance with a systematic arrangement.
 - C) The lines and names of all proposed streets or other ways or easements, including a statement of the purpose for which such easements are dedicated, and also the lines and names of other open spaces to be dedicated for public use or granted for use by the inhabitants of the subdivision. Show all natural drains and water courses as they exist, or as adjusted, with an easement width as required in these specifications. All easements of record shall be shown.
 - D) Sufficient data to determine readily and reproduce on the ground the location, true bearing and length of every street line and lot line, block, line, and easement line, whether curved or straight. This shall include the

- radius, central angle, tangent distance, and chord distance and bearing for the property lines of curved streets and curved property lines.
- E) The location of all permanent monuments and control points. The monuments and pins shall be delineated in a standard manner with:
 - (i) found monuments shown as a solid square;
 - (ii) set monuments shown as an open square;
 - (iii) found pins as a solid circle;
 - (iv) set pins as an open circle.
- F) Dimensions shall be shown in feet and hundredths of a foot, and angles in degrees, minutes and seconds. All lines and ties to primary control points, existing monuments, and approximate distance to a survey corner shall be shown.
- G) The location of the boundaries of the regulatory 100 year flood for all waterways shall be shown in accordance with the requirements of County Flood Plain Regulations and drainage requirements of this specification. These boundaries shall be established by a Registered Professional Engineer of the State of Texas, whose seal and signature shall appear on the plan. Should the Developer elect to alter the regulatory 100 year flood within a drainage easement, the actual boundaries of the regulatory 100 year flood need not be shown provided that the Engineer certifies that the actual regulatory 100 year flood boundaries are contained within the drainage easement.
- H) The finished floor elevations for buildings on lots, a portion of which lots lie within the regulatory 100 year flood boundary, shall be noted on the plat within the boundaries of the lot or tract to which they apply. The floor elevations shall be determined by a Registered Professional Engineer and shall comply with the requirements of County Flood Plain Regulations.
- One or more benchmarks shall be monumented in subdivisions which contain the regulatory 100 year flood boundary. The distance between benchmarks in these subdivisions shall not exceed twenty-five hundred feet (2500') for areas affected by the 100 year flood plain.
- J) The legal description of the property proposed to be subdivided including name of the County, survey and abstract number, together with reference to the approximate distance to the nearest corner of the original survey of which it is a part and survey-ties across existing street right-of-ways to verify the right-of-way widths.
- K) k. A table showing the driveway design culvert size shall be shown for driveways utilizing other than curb and gutter street designs to convey the 25 year frequency storm.

3.07 CERTIFICATE AND ACKNOWLEDGMENTS

The following certificates and acknowledgments shall appear on the title sheet of the final plat.

- a) Restrictive covenants imposed on the land if desired by the developer.
- b) A statement signed and acknowledged by the owner(s) with current address, dedicating all streets, alleys, easements, parks and other open spaces to public use; or when the Developer has made provisions for dedication to the inhabitants of the subdivision. The acreage subdivided out of each original survey, if out of more than one tract or more than one original survey, shall be separately displayed in tabular form.
- c) Certification by a Registered Public Surveyor to the effect that the plat represents a survey made by him, that all the necessary survey monuments are correctly shown thereon, that all existing easements and right-of-ways are shown according to recorded documents, and that perimeter field notes are accurately tied to an original corner of an original survey.
- d) Certification by a Registered Professional Engineer that the plat satisfies the engineering requirements of these regulations.
- e) Certification for signature by the City indicating the date of Order, and the book and page of the Minutes of the City Council recording the Order authorizing the filing of the plat for records.
- f) Certification for signature by the County attesting to the date and fact of filing for record and also the date, time and fact of recording, and book and page of record in the Plat Records of the County.
- g) Acknowledgment that: "It is understood that on approval of this plat by the City Council, it is understood that the building of all streets, roads and other public thoroughfares delineated and shown on this plat, and all bridges and culverts necessary to be constructed or placed in such streets, roads or other public thoroughfares, or in connection therewith, shall remain the responsibility of the owner and/or developer of the tract of land covered by this plat, in accordance with plans and specifications prescribed by the City Council of Mustang Ridge, Texas. The Council assumes no obligation to build the streets, roads and other public thoroughfares shown on this plat, or of constructing any bridges or culverts in connection therewith."
- h) Acknowledgment that: "The authorization of this plat by the City Council for filing or the subsequent acceptance for maintenance by the City of Mustang Ridge, Texas, of roads and streets in real estate subdivisions does not obligate the City to install street name signs, as this is considered to be a part of the developer's construction; erecting signs for traffic control, such as speed limits and stop and yield signs, shall also be the responsibility of the developer under the direction of the City Council."
- i) If the subdivision is not to be served immediately by a water utility, a restriction prohibiting occupancy of any lot until water satisfactory for human consumption is

available from a source, in adequate and sufficient supply for the proposed use and operation of a private waste disposal system. Plans and specifications for a private supply for subdivisions must be submitted by a Registered Professional Engineer and approved by the Texas Department of Health.

- j) If the subdivision is not to be served immediately by a sewage-collecting system connected to an approved private community disposal facility, or to a public sewer system, and if disposal of domestic sewage through a private individual sewage disposal system has been approved by the appropriate local authority for each lot, the plat shall contain a restriction prohibiting occupancy of any lot until such private individual sewage disposal system has been installed, inspected, and permitted in accordance with the rules and regulations of the Texas Department of Health and the appropriate local authority.
- k) If any portion of any lot shown on a subdivision final plat is located within the 100 year flood plain, the building elevation [a minimum of one foot (1') above the 100 year flood level] for each site so affected shall be determined by a Registered Professional Engineer, and shall be shown on the plat, with the Professional Engineer's certification.
- Certification by the local postmaster that the street names promue continuity with existing streets and do not conflict with identical or similar names.
- m) Certification by the County Health Inspector that lot(s) or sites serviced by individual sewage disposal system(s) satisfy State, County and City requirements for septic systems or that alternative systems will be required.

3.08 OTHER SITE IMPROVEMENT DATA REQUIRED WITH FINAL PLAT

- a) Two copies of detailed construction plans for streets and drainage bearing the seal and signature of a Registered Professional Engineer of the State of Texas shall be submitted with final plat for review and approval of the City Council or its designee. If these plans are not available at the time the final plat is submitted, a copy of a notarized statement may be submitted in lieu thereof signed by the owner(s) declaring that such construction plans shall be submitted at a later date, but prior to the start of any site development. If this latter option is elected, the amount of construction security shall be increased to include cost of preparation of construction plans.
- b) Water and/or Sewer Service Improvement Data:
 - 1) If water and/or sewer services are to be provided by a public corporation or district established under Texas law to provide such services, a written statement shall be required from the authorized officials of the corporation or district to the effect that sufficient water and/or sewage capacity is available for all future subdivision residents and that satisfactory fiscal arrangements have been made with the corporation or district for construction of the facilities in the subdivision by the Developer or that the necessary facilities will be constructed by the corporation or district as development progresses. Where the corporation or district certifies that services will be provided and constructed by them and will be constructed as development progresses, the developer requirement for

- furnishing plans or notarized statement prior to final plat is waived and the corporation or district shall furnish plans as required prior to actual construction.
- If water and/or sewer services by a private supply and/or collection and disposal system have been authorized by the appropriate State regulatory body(s), the Developer shall submit copies of all pertinent authorizing documents including copies of any plans and specifications required by the regulatory body(s) in their approval, and shall also submit detailed information relating to the plans for continuous operation and maintenance of the proposed supply and/or collection and disposal system.
- Where water and/or sewer distribution facilities are to be provided by the developer in accordance with this order, and are to be located within the street right-of-way or within public utility or drainage easements, the Developer shall submit three (3) copies of detailed construction plans and specifications for all such facilities showing proposed pump stations, size, grade, location, inlet elevation and installation details of all main and hydrants, manholes, inlets and other features. If these plans are not available at the time the final plat is submitted, a copy of a notarized statement may be submitted in lieu thereof, signed by the owner(s) declaring that such construction plans sha!! Le submitted at a later date, but prior to the start of any site development. If this latter option is elected, the amount of construction security shall be increased to include the cost of preparation of construction plans.

c) Other Items to Be Submitted with Final Plat

The following additional information shall accompany the final plat:

- 1) A good and sufficient bond or letter of credit for the proper construction of the streets, drainage and monuments and/or such other sureties as may be approved by the Council (A.G.Op. JM-262).
- 2) Documents from any other utility and/or service companies serving the immediate area (electric power, telephone, and gas) which state what service will be available to the subdivision.
- 3) A copy of the restrictions and covenants to be recorded, if any.
- 4) Current tax certificates stating that all taxes (County, City, School) are current.
- Survey closure information for the tract boundary, right-of-ways, blocks, and lots.
- 6) Cost estimates signed by a Registered Professional Engineer for street and drainage improvements estimated quantities, unit prices, and contingencies.
- d) The plat shall be signed and acknowledged by the owner of the land and shall be accompanied by tax certificates showing all taxes being paid to date.

SECTION 4 - LAYOUT REQUIREMENTS, STREETS AND DRAINAGE

4.01 GENERAL

a) Preliminary plans and final plats for streets and drainage facilities in subdivisions shall conform to the layout provisions set out below.

4.02 STREET MONUMENTS AND PROPERTY MARKERS

- a) Concrete monuments shall be placed along the boundary of the subdivision at intervals not exceeding thirteen hundred feet (1300'). Such monuments shall be a minimum of eight inches (8") in diameter and eighteen inches (18") deep, except where rock is encountered within fourteen inches (14") of the surface in which case such monuments shall be countersunk in such rock, to achieve a firm interlock. The exact point shall be clearly marked by suitable means.
- b) Intermediate property corners, curve points and angle points shall be marked by iron stakes, not less than eighteen (18) inches in length and one-half (1/2) inch in diameter driven flush with the ground or countersunk if necessary in order to avoid being asturbed.
- c) Survey monuments shall be set in concrete and so noted on the final plat with bearing, and distance ties between the monument and to adjacent property corner or street right-of-way point. The Developer shall, at his expense, cause the monument to be placed and approved in the designated location prior to final acceptance of the subdivision by the City.
- d) All property corners, curve points and angle points shall be marked by a one-half inch (1/2") steel rod or iron pipe driven flush with the ground whether set in sandy clays rocks concrete, or in shallow dirt over rock.

4.03 **EASEMENTS**

a) Utility and Drainage

Easements for utilities and enclosed drainage ways shall be retained on front, side and rear [except where alleys of not less than twenty (20) feet in width are provided in a subdivision] lot lines as required by utility companies and the City Council. Easements across parts of a lot other than as described above shall be required as deemed necessary by the City Council. All such utility and drainage easements shall be so aligned as to permit construction of utilities therein at the minimum cost.

b) <u>Drainage Easements</u>

1) Easements shall be retained along drainage ways, which carry drainage away from roads or which convey main drainage from and through the lots or tracts. Easements shall be a minimum of twenty-five feet (25') wide for open drainage channels, or sized to contain the 100 year flood plain fringe. A suitable note on the plat must restrict all properties within the subdivision insuring that drainage

easements within the plat boundaries shall be kept clear of fences, building, planting that would obstruct the flow of water, and other obstructions to the operations and maintenance of the drainage facility.

c) Commercial and Industrial Services

1) Appropriate service ways for off-street loading and unloading, not less than twenty feet (20') in width, shall be provided to serve commercial and industrial sites and convenient to driveway entrances and exits.

d) Off-site Easements

1) When the City Council finds that easements in areas adjoining a proposed subdivision are necessary to provide adequate drainage thereof or to serve such subdivision with utilities, the Developer shall obtain such easements from the appropriate entity prior to final plat approval.

e) Privately Owned Easements, Fee Strips

- All easements or fee strips created prior to the subdividing of any tract of land must be shown on the subdivision plat with appropriate notations indicating the name of the holder of such easement or fee strip, the purpose of the easement and generally the facilities contained therein, the dimensions of the easement or fee strip tied to all adjacent lot lines, street right-of-way and plat boundary lines and the recording reference of the instruments creating and establishing said easement or fee strip.
- 2) In those instances where easements have not been defined by accurate survey dimensions such as "over and across" type easements, the Developer shall request the owner of such easement to accurately define the limits and location of his easement through the property within the plat boundaries. If the holder of an undefined easement does not define the easement involved and certifies his refusal to define such easement to the City Council, the subdivision plat must provide accurate information as to the centerline location of all existing pipelines or other utility facilities placed in conformance with the easement owner's rights.
- A letter, statement, or other instrument from the owner of any privately owned easement within the plat boundaries must be provided where such easements are proposed to be crossed by streets (either public or private) or public utility or drainage easements, stating that the owner of such easement approves such crossing of his/her private easements for the purposes intended and depicted upon the plat.
- Where an instrument of record is submitted in lieu of a letter or statement from the owner of any such private easement, the City Council shall then refer such instrument to the City Attorney for his/her determination as to whether the conditions in such instrument are sufficient to adequately provide or accommodate the crossings of such private easement by the proposed streets (either public or private) or public utility or drainage easements depicted on the plat.

4.04 STREETS

a) Relationship to Street System

 Streets of new subdivisions shall be in line with existing and/or proposed streets in adjoining property except where, in the opinion of the City Council, topography, requirements of traffic circulation or other considerations make it desirable to depart from such alignment.

b) Access to Lots

- 1) Each lot in a subdivision shall abut on a public street.
- 2) Lot frontage along proposed arterials, State designated highways, farm-to market roads and/or ranch roads shall be not less than three hundred feet (300') unless access is restricted to interior or abutting streets, joint use driveway agreement, or access easements. The City Council may grant lot frontage less than three hundred feet (300') provided a joint use driveway agreement or access easement restricts the number of driveways to fewer than one (1) per three hundred feet (300') of frontage.

c) Boundary Streets

Additional right-of-way dedication may be required as consistent with roadway plans and future traffic demands to the extent of fifty percent (50%) of the total requirement on the subdivision side of the existing or proposed right-of-way centerline as established prior to any additional dedications on the opposite side. The City Council may compensate owners required to dedicate right-of-way in excess of one hundred feet (100') or more than fifty feet (50') from the existing or proposed centerline.

d) Names

 New streets in subdivisions shall be named so as to provide continuity of name with existing streets and so as to prevent conflict with identical or similar names in other parts of the City.

e) Entrance Safety

1) A street may not intersect a City or County road at a point where the sight distance is restricted to less than five hundred feet (500'), except by approval by the City Council or his designee upon the basis of a traffic engineering investigation, unless provision is made (with copies of all pertinent agreements thereto) for removal of the sight restriction.

f) Rural Street Standards

Rural Roadways

Vehicular access, as defined in Section 2, shall be provided to farm, ranch and other rural type tracts that are fifty (50) acres or more in size and where there are no existing public roads. Rural Roadways shall follow a practicable route, convenient to landowners while at the same time avoiding hills, mountains or streams through any and all enclosures.

- A) The minimum right-of-way width for Rural Roadways shall be sixty feet (60'). Rural Roadways connecting to paved City roads shall provide a paved connection of twenty four feet (24') in width from the property line to the existing pavement edge in the public right of way. Culverts shall be required in existing bar ditches in accordance with Section 6 and current City Standards.
- B) Rural Roadways shall provide a minimum surfaced width of twenty two feet (22'), with two foot (2') shoulders and roadside ditches in accordance with Section 6. The typical roadway section shall be in compliance with Figure I of the current City Construction Standards, with the following exception:
 - (i) The lane width is reduced from twelve feet to eleven feet.
- C) Existing Rural Roadway(s) that connect a proposed subdivision development to an Arterial, Collector or classification higher than Rural, as defined herein; that will have increased vehicular traffic (in excess of 30 trips per day), as determined by the City Engineer and/or City Council, shall be re-constructed by the Developer to a condition that will provide a service level represented by the proposed development.
- D) An irrevocable Letter of Credit, or Bond acceptable to the City Council, in the amount of the total estimated subdivision roadway construction cost (including existing roadway reconstruction), as determined by the City Engineer, shall be provided to the City prior to final subdivision plat approval by the City Council.
- 2) Residential Streets shall provide vehicular access to residential lots in a layout restricting the average number of driveways equal to or not exceeding one driveway per one hundred fifty feet (150') of frontage along a block face.
 - A) Driveways accessing a residential street shall not be closer than one hundred feet (100') to a street intersection. Roadway margins along residential streets shall be clear of buildings within twenty-five feet (25') from the right-of-way line.
 - B) The right-of-way width for residential streets shall be minimum sixty feet (60') and contain a minimum of twenty-four feet (24') width of pavement surface with two foot shoulders and roadside ditches in accordance with Section 6.

- C) The City Council may require that residential streets be stubbed out to adjacent undeveloped property in order to provide adequate circulation to adjacent tracts.
- D) The minimum tangents on residential streets shall be one hundred feet (100') between reverse curves and one hundred feet (100') from a curve to a street intersection. Centerline radius on residential streets shall be a minimum of three hundred feet (300').
- E) Cul-de-sacs on a residential street shall not provide access to more than twenty (20) lots and shall provide turnarounds with sixty feet (60') of right-of-way and forty feet (40') of pavement radius. Pavement radii at intersections shall be a minimum of twenty-five feet (25').
- 3) Collector Streets shall collect traffic from residential streets to arterial streets and provide access to residential and nonresidential lots. The number and location of driveway access to nonresidential lots shall be determined by the City Council in order to promote the movement of traffic. In general, the lot layout shall restrict the number of driveways along a sulector street to be equal to or not exceed one (1) driveway per one hundred feet (300') of frontage along a block face.
 - A) Driveways accessing a collector street shall not be closer than one hundred feet (100') to a street intersection. Roadway margins along a collector street shall be clear of buildings within twenty-five feet (25') of the right-of-way line.
 - B) The right-of-way width for a collector shall be seventy to eighty feet (70-80') and contain thirty-six feet (36') of pavement width with two foot shoulders and roadside ditches in accordance with Section 6. The right-of-way and pavement width shall be determined by the City Council upon consideration of the projected traffic volumes and type of vehicles on the street as recommended by a traffic study as prepared by a qualified traffic engineer.
 - C) Collector streets shall be extended to adjacent undeveloped property as determined by the City Council upon consideration of future circulation roads of the area.
 - D) The minimum tangents on collector streets with eighty feet (80') of right-of-way shall be one hundred fifty feet (150') between reverse curves and one hundred feet (100') for seventy-foot (70') right-of-ways. Tangents from a curve to a street intersection shall be a minimum of one hundred feet (100'). Centerline radius in collector streets shall be a minimum of four hundred to five hundred feet (400-500') dependent upon right-of-way width. Pavement radii at intersections shall be a minimum of twenty-five feet (25').

g) Suburban Street Standards

Suburban Roadways shall comply with the street design standards as follows:

- 1) Residential Streets shall provide vehicular access to single family duplex, triplex, fourplex, etc. lots. A lot layout to a residential street with an average number of driveways exceeding one (1) driveway per 150 feet of frontage along a block face, excluding lots fronting a cul-de-sac, shall require a curb and gutter section, with adequate subsurface storm drainage system, to be designed and built in accordance with current City Design Standards (see Figure 2 therein).
 - A) Driveways accessing a residential street shall not be closer than seventyfive feet (75') to a street intersection. Roadway margins along residential streets shall be clear of buildings within twenty-five feet (25') from the rightof-way line.

The layout of residential streets shall consider the natural topography and discourage through traffic in neighborhoods.

- B) The minimum right-of-way width for re .uential streets shall be sixty feet (60') with a minimum width of 24 feet (24') pavement surface, two foot shoulders and roadside ditches complying with Section 6. Where curb and gutter is required in residential right-of-ways, the minimum pavement width shall be twenty-seven feet (27') measured face to face of curb. The right-of-way width may be reduced to fifty feet (50'), if it can be shown that the required storm sewer system will fit within this limit without requiring special considerations.
- C) The City Council may require that residential streets be extended to adjacent undeveloped property in order to provide adequate circulation to adjacent tracts.
- D) The minimum tangents on residential streets shall be fifty feet (50') for fifty feet (50') of right-of-way, and one hundred feet (100') for sixty feet (60') of right-of-way between reverse curves. A minimum of a fifty-foot (50') tangent shall be provided from a curve to a street intersection. Centerline radius on residential streets shall be a minimum of two hundred feet (200') for fifty feet (50') of right-of-way and three hundred feet for sixty feet (60') of right-of-way.
- E) In general, the length of a residential street shall not exceed two thousand six hundred feet (2,600'). A cul-de-sac shall be designed to accommodate a maximum of twenty (20) lots on a residential street, and provide a turnaround with sixty feet (60') right-of-way radius and forty feet (40') pavement radius for sixty-foot (60') street. Turnarounds for fifty foot (50') streets shall provide fifty feet (50') right-of-way radius and forty feet (40') pavement radius. Pavement radius at street intersections shall be a minimum of twenty-five feet (25').

- 2) Collector Streets shall collect traffic from residential streets to arterial streets and provide access to multifamily, commercial, and industrial lots. The number and location of driveway access to multifamily and commercial lots shall be determined by the City Council in order to minimize the number of driveway entrances and exits and to promote the movement of traffic. Single family, duplex, triplex and fourplex lots accessing collector streets shall provide common or joint use driveways to increase the spacing between driveways to a minimum average of one driveway per two hundred feet (200') along a block face.
 - A) Driveways accessing a collector street shall not be closer than seventy-five feet (75') to a street intersection. Roadway margins along a collector street shall be clear of buildings within twenty-five feet (25') of the right-of-way line.
 - B) The right-of-way width for a collector shall be seventy to eighty feet (70-80') and contain thirty-six to sixty feet (36-40') of pavement width with two foot shoulders and roadside ditches complying with Section 6. The right-of-way and pavement width shall be determined by the City Council apon consideration of the projected traffic volumes and type of vehicles on the street.
 - C) Collector streets shall be extended to adjacent undeveloped property as determined by the City Council upon consideration of future circulation needs of the area and protection of residential area from truck traffic.
 - D) The minimum tangents on seventy-foot (70') collector streets shall be one hundred feet (100') between reverse curves and one hundred fifty feet (150') for eighty-foot (80') streets. The minimum tangents from a curve to an intersection shall be one hundred feet (100'). The minimum centerline radius on collector streets shall be four hundred to five hundred feet (300-400') dependent upon right-of-way width. Pavement radii at intersections shall be a minimum of twenty-five foot (25').
- 3) Arterial streets shall primarily provide the movement of vehicular traffic from collectors to State and County highways. In order to promote the movement of traffic on arterial streets, the spacing of street intersections shall not be less than one thousand three hundred feet (1300'), unless sight-distance or topography dictates a lesser street spacing. Left and right turning lanes shall be provided at street intersections to reduce the effect of turning vehicles on through traffic.
 - A) Arterial streets shall provide access to major traffic generators. The number and location of driveways to major traffic generators shall be determined by the City Council upon consideration of the impact on traffic movement and safety. In general, driveways along arterials to major traffic generators shall not be closer than three hundred feet (300') to a street intersection and provide high driveway design standards including left turn lanes, medians, acceleration and deceleration lanes.

- B) Roadway margins along arterials shall be clear of buildings within twenty-five feet (25') of the right-of-way line. Pavement radii at intersections shall be a minimum of thirty-five feet (35').
- C) The right-of-way width for arterial streets shall be ninety to one hundred twenty feet (90-120') with two (2) pavement sections of thirty-six feet (36') separated by a median of fourteen feet (14'). Additional right-of-way and pavement width may be required by the City Council upon consideration of projected traffic volumes and arterial capacity as detailed in a traffic study prepared by a qualified traffic engineer.
- D) The geometric design of arterial streets shall conform to the formulas, principals and guidelines of the American Association of State Highways and Transportation Rural Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets", 1984 edition or later.

h) <u>Urban-Street Standards</u>

- 1) Residential Streets shall provide vehicular access to single family lots. The lot layout shall restrict the number of drive ways accessing a residential street to not exceed an average of one (1) driveway per fifty feet (50') of frontage along a block face, excluding lots fronting a cul-de-sac. Single family lots accessing residential streets shall be limited to one (1) driveway per fifty feet (50') or two (2) driveways per one hundred feet (100') of frontage for circular driveways. Driveways accessing a residential street shall not be closer than thirty-five feet (35') to a street intersection. Roadway margins along residential streets shall be clear of buildings within twenty-five feet (25') of the right-of-way line of the street providing access and fifteen feet (15') of the right-of-way line of a side street not providing access.
 - A) The layout of residential streets shall consider the natural topography and discourage through traffic in neighborhoods.
 - B) The right-of-way width for residential streets shall be fifty feet (50') and contain twenty seven feet (27') of pavement measured from face of curb to face of curb. Residential streets shall provide stand-up curbs and gutter on both street sides and a four-foot (4') sidewalk along one street side.
 - C) The City Council may require that residential streets be stubbed out to adjacent undeveloped property in order to provide adequate circulation to adjacent tracts.
 - D) The minimum tangents on residential streets shall be fifty feet (50') between reverse curves and fifty feet (50') from a curve to a street intersection. Centerline radius on residential street shall be a minimum of two hundred feet (200').
 - E) In general, the length of a residential street shall not exceed two thousand feet (2000'). A cul-de-sac on a residential street shall not provide access to more than twenty (20) lots and shall provide a turnaround with fifty feet

- (50') right-of-way radius and forty feet (40') pavement radius. Curb return radii shall be a minimum of fifteen feet (15').
- Residential-Collector Street shall provide access to single family, duplex, triplex, and fourplex lots. Residential collector streets shall be provided to single family lots where more than seventy-five (75) lots are being serviced. The lot layout shall restrict the number of driveways along a block face accessing a residential collector street to not exceed one (1) driveway per fifty feet (50') of frontage for single family lots; or one (1) driveway per sixty feet (60') of frontage for duplex lots; or one (1) driveway per seventy feet (70') of frontage for triplex lots; or one (1) driveway per eighty feet (80') of frontage for fourplex lots. Single family, duplex, triplex, and fourplex lots accessing a residential collector street shall be limited to one (1) driveway, or two (2) driveways per eighty feet (80') of frontage for circular driveways.
 - A) Driveways accessing a residential collector street shall not be closer than fifty feet (50") to a street intersection. Roadway margins along a residential collector street shall be clear of buildings within twenty-five feet (25') of the right-of-way line of a street providing access and 15 feet (15') of the right-of-way line of a side street not providing access.
 - B) The right-of-way widths for residential collector streets shall be sixty feet (60') and contain thirty six to forty feet (36-40') of pavement measured from curb face to curb face, with stand-up curbs and gutters on both sides. A four-foot (4') sidewalk shall be required on one side of the street.
 - C) Residential collector streets shall be stubbed out to adjacent undeveloped property at spacing not greater than two thousand five hundred feet (2500') unless topographical or adjacent development constraints dictate a greater distance.
 - D) The minimum tangents on residential streets shall be one hundred feet (100') between reverse curves and sixty feet (60') from a curve to a street intersection. Centerline radius on residential street shall be a minimum of three hundred feet (300').
 - E) In general, the length of a residential collector shall not exceed five thousand feet (5000'). A cul-de-sac on a residential collector street shall not provide access to more than 20 duplex, triplex, fourplex, or multifamily lots and shall provide a turnaround with sixty feet (60') of right-of-way radius and forty feet (40') pavement radius. Curb return radii shall be a minimum of twenty-five feet (25').
- Neighborhood Collector Streets shall provide access to multifamily and commercial lots. The number and location of driveways accessing multifamily and commercial lots shall be determined by the City Council in order to minimize the number of driveway entrances and exits and promote the movement of traffic. Neighborhood collector streets shall be provided to areas servicing more than two hundred (200) single family lots or an equivalent number of traffic generators.

- A) Single family, duplex, triplex and fourplex lots shall not directly access a neighborhood collector street. Rear access and common or joint access easements shall be provided to single family, duplex, triplex and fourplex lots to eliminate driveways or reduce the number of driveways to one (1) driveway per two hundred feet (200') of roadway frontage. In general, single family, duplex, triplex and fourplex lots should not front along a neighborhood collector.
- B) Driveways accessing a neighborhood collector street shall not be closer than seventy feet (70') to a street intersection. Roadway margins along a neighborhood collector street shall be clear of buildings within twenty-five feet (25') of the right-of-way line. The right-of-way widths for neighborhood collectors shall be seventy feet (70') and contain thirty six to forty four feet (36-44') of pavement measured from curb face to curb face with stand-up curbs and gutters on both sides. The pavement width shall be determined by the City Council upon consideration of the projected traffic volumes of the street. A four-foot (4') sidewalk shall be required on one side of the street for residential uses and a six-foot (6') sidewalk for multifamily and commercial uses.
- C) Neighborhood collector streets shall be extended to adjacent undeveloped property as determined by the City Council upon consideration of future circulation needs of the area.
- D) The minimum tangents on neighborhood collector streets shall be one hundred feet (100') between reverse curves and seventy feet (70') from a curve to a street intersection. Centerline radii on neighborhood collector streets shall be a minimum of four hundred feet (400'). Curb return radii shall be a minimum of twenty-five feet (25').
- 4) Industrial Streets shall provide vehicular access to industrial lots. Driveways accessing an industrial street shall not be closer than one hundred feet (100') to a street intersection and a lot layout restricting the average number of driveways to not exceed one (1) driveway per two hundred feet (200') of frontage along a block face. Roadway margins along industrial streets shall be clear of buildings within twenty-five foot (25') of the right-of-way line.
 - A) The right-of-way widths for industrial streets shall be eighty feet (80') and contain sixty feet (60') of pavement with curbs and gutters as measured from curb face to curb face. A six-foot (6') sidewalk shall be required on both sides of the street.
 - B) Industrial streets shall be required to extend to adjacent undeveloped property as determined by the City Council upon consideration of future industrial developments and protection of future residential areas from truck traffic.
 - C) The minimum tangents on industrial streets shall be one hundred fifty feet (150') between reverse curves and one hundred feet (100') from a curve to

- a street intersection. Centerline radii on industrial streets shall be a minimum of five hundred feet (500'). Curb return radii shall be a minimum of thirty-five feet (35').
- D) (4) A cul-de-sac on an industrial street shall not exceed eight hundred feet (800') and shall provide a turnaround with eighty feet (80') right-of-way radius and sixty foot (60') pavement radius.
- 5) Arterial Streets shall primarily provide movement of vehicular traffic from collector and industrial streets to State and County highways.
 - A) In order to promote the movement of traffic on arterial streets, the spacing of signalized street intersections on arterial streets shall not be less than two thousand six hundred feet (2600') unless approved by the City Council upon consideration of a traffic study prepared by a qualified traffic engineer. In general, the spacing of street intersections along an arterial shall not be less than one thousand three hundred feet (1300'), unless sight-distance or topography dictates a lesser street spacing.

Medians may be required along arterials where street intersection spacing is less than one thousand three hundred feet (1300'), or driveway spacing is less than two hundred feet (200'). Median breaks shall be located at intersections with arterials, collectors, industrial streets, and driveways to major traffic generators.

- B) Arterial streets shall provide access to major traffic generators. The number and location of driveways to major traffic generators shall be determined by the City Council upon consideration of the impact on traffic movement and safety. In general, driveways along arterials to major traffic generators shall not be closer than three hundred feet (300') to a street intersection and shall provide high driveway design standards including acceleration and deceleration lanes. Roadway margins along arterials shall be clear of buildings within twenty-five (25') of the right-of-way line.
- C) The right-of-way width for arterial streets shall be ninety to one hundred twenty feet (90-120') with sixty feet (60') of pavement, to two (2) pavement sections of thirty-six feet (36') separated by a median of fourteen feet (14'). Additional right-of-way and pavement widths may be required by the City Council upon consideration of projected traffic volumes and arterial capacity as detailed in a traffic study prepared by a qualified traffic engineer.
- D) The geometric design of arterial streets shall conform to the formulas, principals, and guidelines of the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Design of Urban Highways and Arterial Streets". Curb return radii on arterial street shall be a minimum of thirty-five feet (35').

i) County and State Highways

 Provisions shall be made for the extension or widening of State and County highways, where required by the Commissioners Court of the affected County, in order to protect the safety and welfare of the public.

j) <u>Intersections</u>

Acute angles between streets in subdivisions at their intersection shall be avoided, provided that when intersecting angles sharper than eighty degrees (80') are deemed necessary by the City Council, the property line in the small angle of the intersection shall be rounded so as to permit the construction of curbs having a radius of not less than twenty-five feet (25') without decreasing the normal width of the sidewalk area.

k) <u>Temporary Turnarounds</u>

If proposed street extensions between subdivisions or subdivision sections are approved and platted without cul-de-sac turnarounds at the boundary of the section or subdivision, the right-of-way of that street shall be a minimum of smy feet (60') except where a curbed type street section is to be constructed, and the street design shall include provisions for a temporary turnaround as required in these specifications (Figure 14).

Street Arrangements

For design of safe residential streets the following rules should be followed wherever possible:

- 1) Use "T" intersections rather than four-way intersections, and intersect all streets at ninety degrees (90). A tangent section of sixty feet (60') at right angles to the street being entered by an intersecting street shall be designed prior to any curve radius on the entering street. If this cannot be done due to topography or other constraint, special approval for the design must be obtained from the City.
- 2) Use curved streets, if appropriate, with a minimum centerline radius as specified in this specification.
- 3) Eliminate continuous streets through neighborhoods, particularly those connecting two arterials by a direct route.
- 4) Offset intersections must be a minimum of one hundred fifty feet (150') centerline to centerline.

m) General Driveway Standards

 Location - No driveway shall be constructed within the curb return of a street intersection or within the radius of the edge of pavement or traveled roadway at an intersection on a curve.

- 2) Width of Residence Driveways Minimum driveway pavement width on the public right-of-way for single family residences shall be twelve (12) feet with a maximum of thirty (30) feet, with fifteen (15) feet most desirable. Driveway base shall be two (2) feet wider than pavement except for dip type drives.
- Width of Multi-Family and Commercial Driveways Multi-family residences and commercial uses shall have driveway pavement widths of twenty feet (20') minimum and forty-five (45') feet maximum, with thirty feet (30') most desirable and a twenty four foot (24') minimum for two way driveways.
- 4) Radii Driveway pavement radii shall be a minimum of five (5) feet into curbed streets and minimum of ten (10) feet into uncurbed streets and shall be a maximum of fifteen (15) feet for either curbed or uncurbed driveways.
- 5) Common Drives Common driveways may be approved provided a permanent access easement has been granted to each property owner to use the portion of driveway on the other lot.
- Number of Driveways On driveway access to any public road or street, a maximum of two (2) driveways will be permitted to any property with more than two hundred feet (200') of adjacent right-of-way frontage (i.e. 400 feet total frontage or more). If total right-of-way frontage is one hundred fifty feet (150') or less, driveway access will be limited to one (1) access only. Where dip type driveway installations are used, two (2) driveways per lot will be allowed regardless of lot frontage.
- 7) Driveway Grades The maximum driveway grade for the portion of driveway constructed in public right-of-way shall be 10%, measured from the edge of shoulder, for residential driveways on rural streets and 6% for commercial driveways. Driveways of both types onto a street or roadway with a higher classification than rural shall have a maximum grade of 3% for the first thirty feet (30') of the edge of pavement of the public street roadway.
- 8) Variances A variance from these standards must receive prior approval from the City Engineer before submission to the City Council for consideration.
- 9) Sight Distances If sight distance problems are anticipated at the location of the proposed driveways, only one (1) driveway will be permitted at a site, to be determined by the City Engineer or his representative, that provides the safest access to the public right-of-way. Where alternate access is possible, access at hazardous locations is prohibited.
- 10) Conveyance Driveway installations requiring conveyance for storm drainage in roadside ditches shall be sized so as to provide adequate area to pass the twenty five year frequency storm, runoff for suburban locations and ten year frequency storm runoff for rural conditions.
 - A) Culvert Pipe Length The length of culvert pipe, where used, shall be sufficient to allow for driveway base width (including radius as applicable)

plus three (3) times the pipe diameter plus three feet (3'), but in any cases no less than twenty feet (20').

11) Driveway Installations

- A) Dip-Type Driveways Properly designed and installed dip-type driveway installations function better to pass roadwise drainage with minimum scour damage to driveway and/or road shoulders or surface and are preferred where terrain will allow economical installation. Standard details are provided in the City Construction Standards for both concrete and asphalt surfaces. Installation of dip-type driveways approved under these standards for subdivision development shall be the responsibility of the Developer. If the Developer does not wish to construct these driveways at the time the roadways and other improvements are constructed or prior to sale of lots, he must provide an irrevocable Letter of Credit in the amount of the driveway construction cost to the City prior to approval of other subdivision improvements.
- B) Culvert Pipe Driveway Installations Installation of culvert pipe driveway entrances for subdivision development approved under these standards shall be the responsibility of the Developer. If the Developer does not wish to construct these driveways at the time the roadways and other improvements are constructed, he must provide an irrevocable Letter of Credit to the City in the amount of the driveway construction cost prior to approval of other subdivision improvements.
- C) For those tracts of land adjacent to accepted City Roads that have not been subdivided since the date of implementation of these ordinances, installation of culvert pipe driveway entrances shall be under the supervision of the City Engineer. The property owner shall install the driveway to meet these standards as directed by the City Engineer and/or City Council.
- D) Installation by City forces shall be at the option of the City Council. Provisions shall have been made in advance with the City Council for reimbursement to the City. Reimbursement to the City shall include cost of the pipe and base material required. City installations will not include driveway pavement or overflow protection required. No inspection or installation will commence until the property owner has an approved driveway application, obtained from the City Engineer or Administrator and has presented same to the City Council.

4.05 LOTS AND BLOCKS

a) Block Lengths

1) Urban Subdivisions - Residential blocks in subdivisions shall not exceed thirteen hundred feet (1300') in length unless such blocks are parallel to and adjacent to an arterial, in which case such blocks shall not exceed seventeen hundred fifty feet (1750') in length. Commercial and industrial block lengths may be up to two

- thousand feet (2000') in length, provided that the requirements of traffic circulation and utility service are met. Block lengths may be varied according to the requirements of circulation, utility services and topography.
- 2) Rural and Suburban Subdivisions Residential blocks in suburban subdivisions shall not exceed two thousand feet (2000') in length. Block sizes in rural subdivisions may exceed two thousand feet (2000') in length, depending on requirements of circulation, topography and other factors.

b) Block Widths

1) Block widths in residential subdivisions shall be such as to allow for two (2) tiers of lots back to back, except where abutting a thoroughfare to which access to the lots is prohibited, or where prevented by topographical conditions or size of the property.

c) <u>Lot Arrangements</u>

1) In general, the side lines of lots in subdivisions shall be approximately at right angles to straight lines c: radial to curved street lines. In general, an arrangement placing adjacent lots at right angles to each other shall be avoided.

d) Lot Size

- 1) All subdivision lots for which on site wastewater disposal is proposed shall be a minimum of one acre in area.
- 2) For subdivisions proposed to be served with by an organized wastewater collection system, i.e., collection mains and wastewater treatment plant approved permitted by the Texas Natural Resource Conservation Commission, lot sizes shall be a minimum of 6,000 square feet in area.
- 3) Lot size requirements set forth by the County Health Regulations shall not supersede an organized disposal system (i.e. sewage treatment) design prepared by a Registered Professional Engineer showing that the system is adequate for the development and meets requirements of the Texas State Department of Health and the Texas Natural Resource Conservation Commission.

SECTION 5 - DRAINAGE REQUIREMENTS

5.01 **GENERAL**

- a) Stormwater drainage systems or facilities are for conveying or allowing for passage of stormwater runoff by use of streets, storm sewers, channels, culverts, bridges, swales, rivers, streams, or other facilities by which flows are accommodated, and it is essential that these be designed or considered in such a manner to minimize or eliminate loss of life or property.
- b) A preliminary drainage plan shall be required (See Section 3(E)2(d)).

5.02 RESPONSIBILITY OF OWNER OR DEVELOPER FOR STORM DRAINAGE

- a) The owner or developer of property to be developed shall be responsible for the conveyance of all storm and flood waters flowing through or abutting subject property. This responsibility includes the drainage directed to that property by prior development as well as the drainage naturally flowing through the property by reasons of topography.
- b) Where the improvement or construction of a storm and flood water drainage facility is required along a property line common to two or more owners, the owner hereafter proposing development or use of his property shall be responsible for all the required improvements on either side of the common property line, regardless of ownership, at the time of development, including the dedication by the legal owner(s) of all necessary right-of-ways or easements, to accommodate the improvements.
- c) The responsibility of the owner or developer shall extend to provision of adequate offsite drainage improvements to accommodate the full effects of the development of his
 property. When the owner/developer certifies by affidavit that a bona fide attempt to
 meet off-site drainage requirements has not been successful, the City may assist, at
 its discretion, in the acquisition of necessary property rights to provide for construction
 of off-site drainage improvements. The owner/developer shall make adequate
 guarantees that he will stand the full cost of acquiring said property rights and shall
 retain full responsibility for construction of the required off-site improvements.

5.03 DRAINAGE DESIGN CRITERIA

- a) All hydrologic and hydraulic design shall be in accordance with as prepared by the Soil Conservation Service, U. S. Department of Agriculture Soils Conservation Service and hereinafter referred to as TR 20, the U.S. Corps of Engineers, Davis California, HEC-1 and HEC-2 and the Hydraulic Manual prepared and compiled by the Texas State Department of Highways and Public Transportation's Bridge Division. Notwithstanding, all designs shall be in accordance with accepted engineering practices and are not to be limited to minimum criteria when it is deemed necessary for the welfare or safety of the public to implement more stringent requirements or criteria.
- b) Enclosed storm drainage improvements shall be designed to convey a 25 year frequency storm and a floodway provided to accommodate the 100 year frequency storm.
- c) Hydrologic design procedures shall conform to the following methods where appropriate and shall assume a fully developed watershed upstream of the proposed development. It may be assumed that the undeveloped area will be developed under the same regulations.
 - 1) Rational Method may be used for drainage areas not exceeding four hundred (400) acres. Criteria should be as defined in the "Hydraulic Manual" as prepared by Texas State Department of Highways and Public Transportation.

- 2) T.R. 55, as prepared by SCS, may be used for drainage areas not exceeding two thousand (2000) acres and with the criteria defined therein.
- 3) For drainage areas exceeding two thousand (2000) acres, either of the following methods is acceptable:
 - A) "Computer Program for Project Formulation-Hydrology" distributed by SCS through Technical Release No. 20 (SCS-TR-20).
 - B) Hydraulic Engineering Center, U.S. Army Corp of Engineers' Flood Plain Hydrologic program (HEC1).
- 4) Hydraulic design procedures shall conform to the following methods where appropriate. The methodology selected is a function of the complexity of the hydraulic design and may not be restricted to only these.
 - A) Manning's Equation for computing normal depths for flows confined to uniform cross-sections with free-surface flow.
 - B) The Hydraulic Gradient Method shall be used for closed conduit systems flowing full.
 - C) The HEC-2, Flood Plain Hydraulics, developed by the U.S. Army Corps of Engineers or WSP2 (Water Surface Profile 2) developed by the Soil Conservation Service will be used for non-uniform channel design or analysis and back water surface profiles.

5.04 INUNDATION BY A 100 YEAR FREQUENCY STORM

- a) Any water course, whether natural or man made, shall have provision to accommodate the rainfall runoff generated by a 100 year frequency storm such that there is no loss of, or be detrimental to, property or to create an undue inconvenience to the public.
- b) Delineation of the limits of areas subject to inundation by a 100 year frequency storm shall be shown on a drainage plan and shall be based on detailed hydrologic and hydraulic computations prepared by a Registered Professional Engineer of the State of Texas or provide a study prepared or approved by the U.S. Army Corps of Engineers.
- c) Easements shall be provided to contain areas inundated by a 100 year frequency storm along natural and man-made drainageways and any additional width necessary to provide sufficient ingress and egress for maintenance purposes.
- d) A grading plan shall be prepared for each urban subdivision, by a Registered Professional Engineer of the State of Texas, and show in sufficient detail grading of all roads, streets, drainage structures, channels, swales, or other drainage related features and provide minimum finished floor elevations, based on an acceptable elevation datum, for proposed structures to assure no inundation of such structures by the rainfall run-off by a 100 year frequency storm. All buildings shall be a minimum of one foot (1') above the theoretical water surface elevation generated by a 100 year frequency storm.

5.05 DRAINAGE STRUCTURES

- a) All drainage structures shall be designed to convey the 25 year frequency storm and in such a manner that no ponding, pooling, erosion, sedimentation or other adverse condition would be created.
- b) All bridges shall be designed to convey a 100 year frequency storm. The water surface profile elevation shall not exceed the bottom of the "low steel" or "low beam" of a bridge structure.
- All culverts shall be designed to convey the 25 year frequency storm, and the headwater surface elevation shall not exceed the minimum road surface elevation. The headwater depth for a 100 year frequency storm shall not exceed one foot (1') over the minimum roadway surface elevation.
- d) Open channels shall meet the criteria of either the Texas State Department of Highways and Public Transportation or S.C.S. TR. No. 25 Design of Open Channels and shall be constructed in accordance with one of the design methods. Design of channels shall consider velocities and shall be shaped, graded, lined, or protected to minimize or prevent scour and erosion from excessive velocities. This requirement shall extend to roadside drainage ditches. Concrete or rock retards shall be used when velocities exceed four (4) feet per second with sandy soil conditions or five (5) feet per second with clay soil conditions. All channels or roadside drainage ditches without a protective lining shall have an established vegetative or grass cover. The depth of the 100 year frequency storm runoff shall not exceed one foot (1') over the minimum roadway surface elevation.
- e) Closed conduits or storm sewers shall be designed to a 25 year frequency storm and provisions made to accommodate a 100 year frequency storm runoff. The 25 year hydraulic grade line shall be at or below the gutter line and shall in no case surcharge back through an inlet or inlets. All storm sewers, inlets, manholes or junctions shall be designed in accordance to Texas State Department of Highways and Public Transportation hydraulic criteria.
- f) Headwalls, wingwalls, ditch checks, inlets or other drainage structures shall be designed in accordance with Texas State Department of Highways and Public Transportation criteria.

5.06 STORMWATER DETENTION

a) Stormwater detention facilities shall be required when it is determined that adverse downstream flooding would occur due to a proposed development. The facilities shall be designed in accordance with SCS-TR-20 or by other approved methods.

SECTION 6 - STREET DESIGN STANDARDS

6.01 DESIGN STANDARDS

Design standards, unless specifically called out below, shall be standards that are found in common usage by the Texas State Department of Highways and Public Transportation. Design guidelines shall follow the American Association of State Highway Transportation Official's Geometric Design for Local Roads and Streets, and a Policy on Geometric Design of Rural Highways.

a) Road Grades

The maximum sustained street grade allowed shall be fifteen percent (15%) for residential streets (not to exceed three hundred feet (300')), twelve percent (12%) for collector streets, and six percent (6%) for arterial streets. Minimum grade for curb and gutter streets shall be four-tenths percent (0.4%).

b) Road Cross-Sections

- 1) Rural residential street sections shall have a pavement width of wenty-four feet (24') and two-foot (2') shoulders. Rural collector street sections shall have a pavement width of twenty-six feet (26') and a two-foot (2') shoulder on the cut side and a four-foot (4') shoulder on the fill side. Both sections shall have a maximum foreslope of four (4) horizontal to one (1) vertical and a maximum backslope of two (2) horizontal to one (1) vertical.
- Suburban residential street sections with average driveway spacing exceeding one hundred fifty feet (150') shall conform to rural residential street. Residential streets with an average driveway spacing less than one hundred fifty feet (150') and more than one hundred feet (100') shall provide ribbon curb with two-foot (2') shoulders. Residential streets with less than one hundred feet (100') average driveway spacing shall provide fifty feet (50') of right-of-way with twenty-eight (28') of pavement and curb and gutter.
 - A) Suburban collector street shall have a pavement width of thirty-six feet (36') and two-foot (2') shoulder on the cut side and a four-foot (4') shoulder on the fill side.
 - B) Maximum foreslope and backslope for residential and collector street shall conform to rural street cross-section.
- 3) Suburban and urban arterial street cross-sections shall be determined by the City Council upon consideration of a traffic study prepared by a traffic engineer acceptable to the City Council.
- 4) Urban street cross-sections shall conform to the standards shown Figure 1B of the Street Design and Construction Standards for the City of Mustang Ridge

c) Roadside Drainage Ditches

1) Roadside drainage ditches shall conform to the following:

| A) | Minimum grade | 1.0 % |
|----|------------------------------|-------|
| B) | Maximum grade in sandy soils | 5.0% |
| C) | Maximum gradein clay soils | 7.0% |

d) Roadside Ditch Design Details

- 1) Roadside design details include rock retards, riprap retards, entrance and exit structures for culverts, special design roadside ditches, retaining walls, etc.
- 2) Rock or riprap retards shall be used to control the erosive characteristics of drainage in roadside ditches on steep slopes. Retards shall be designed to reduce drainage water velocity to an acceptable level and to prevent drainage water from encroaching on the driving surface. Retards shall not project onto shoulder surfaces and shall blend into ditch lines so that normal roadside ditch maintenance is possible.
- 3) Headwalls, catch basins or other culvert structures shall be designed in accordance with the drainage requirements of these specifications, and the Typical Construction Details of the Texas Department of Highways and Public Transportation or these specifications whichever is applicable. No headwall, wingwall or other structural member shall protrude above the surface of the traveled roadway. Flush headwalls at three to one (3:1) maximum or flatter slopes are preferred for any culverts parallel to streets (driveways, etc.)
- 4) All special design of roadside ditches, retaining wall, etc., require the specific approval of the City.

e) Design Speed

1) For use with Design Guidelines (Geometric Design Guide for Local Roads and Streets - AASHTO, 1984), design speeds for residential streets (rural and subdivisions) shall be assumed to be thirty (30) miles per hour and for collectors, forty (40) miles per hour, unless otherwise approved by the City. Design speed for higher type streets and main City roads shall be State standard speed limits, unless otherwise approved by the City. (See Table 2.)

f) Vertical Alignment

1) Changes in grades of more than percent (1.0 %) shall be connected by vertical curves.

2) Vertical Curves: Minimum length (L) Of vertical curves shall be fifty feet (50') or shall conform to the formula:

L=KA (whichever is the greater)

Where A is the algebraic difference in the tangent approach grades expressed as a whole number, and K is established in accordance with the Design Guidelines "Geometric Design for Local Roads and Streets", for sag and crest vertical curves, with credit given to the use of proper street lighting.

3) Special consideration shall be given to streets where the horizontal alignment overhead obstructions, or the presence of cross traffic or other natural or man made conditions exist such that stopping sight distance would become the controlling parameter as it relates to the determination of a minimum length of vertical curve.

g) Horizontal Alignment

1) Generally, the minimum centerline radius permissible is:

```
200 ft. for streets of 50 ft. right-of-way (curb and gutter) 300 ft. for streets of 60 ft. right-of-way. 400 ft. for streets of 70 ft. right-of-way 500 ft. for streets of 80 ft. right-of-way 600 ft. for streets of 90 ft. right-of-way
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2) The minimum tangent between reverse curves:

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50 ft. for streets of 50 ft. right-of-way
100 ft. for streets of 60-70 ft. right-of-way
150 ft. for streets of 80 ft. right-of-way
200 ft. for streets of 90-100 ft. right-of-way
300 ft. for streets of 120 ft. right-of-way
```

Increased radius may be required where the street grades, street cuts, or other natural or man made obstacles limit stopping sight distance on the curve to below that required by the design speed.

- 3) Superelevation may be used to control surface drainage and centrifugal forces, but not to reduce the minimum centerline radius.
- 4) Design for horizontal curves including stopping sight distance and superelevation shall conform to the formula, principles, and guidelines of the American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Rural Highways.

h) Intersections

- 1) General
 - A) Intersections shall be designed for the control of traffic generated by the project, control of existing traffic that might use the project for access to some other area, and the future safety of the public.
- 2) Offset Intersection
 - A) Centerlines of offset intersections shall be a minimum of one hundred fifty feet (150') apart.
- 3) Four-way Intersections
 - A) Four-way or cross intersections are discouraged except where such an intersection is determined desirable by the City from the standpoint of access, traffic flow, or safety.
- 4) Grades
 - A) Approach grades on an intersecting street should be limited to three percent (3%) for at least fifty feet (50') unless sight distances are in excess of the AASHTO Design Guide minimums for stopping on a grade level, in which case the approach grades should not be greater than six percent (6%).
- Major Intersections
 - A) Streets intersecting federal routes, State highways, or Farm to Market Roads shall require approval of the Texas State Department of Highways and Public Transportation.
- 6) Intersections of Curbed Streets with Uncurbed Streets
 - A) Curbed to uncurbed street intersections shall be designed with appropriate concern for the interfacing of the differing drainage systems.
 - (i) Where a curbed street intersects a continuing uncurbed street, standard curb and gutter shall terminate at the property line or as necessary to allow drainage from the curbed street to enter the uncurbed street bar ditch without erosion to shoulder areas. Concrete riprap or mortared rock riprap may be required to protect the shoulder area.
 - (ii) Where an uncurbed street intersects a continuing curbed street, the curb line shall be cut and removed and a standard urban curb return designed into the uncurbed street with the curb face at the ditch centerline of the uncurbed street. A concrete riprap transition shall be constructed to convey drainage out of or into the uncurbed ditch

line. The concrete riprap transition may be eliminated for discharge into the uncurbed street from the curbed street if transition grades are less than two percent (2%) or if an inlet is located within one hundred feet (100') of the intersection. For drainage from uncurbed street into the curbed street, for grades less than five percent (5%) on the uncurbed street, two ditch checks at ten feet (10') and thirty feet (30') from end of curb return may be used in lieu of riprap transition.

- (iii) Care shall be taken in installation to match existing pavement.
 Curbed street crown will be full crown (unless cross spilling) to at least fifty feet (50') from curb and to assure flow of drainage enters bar ditch.
- (iv) For a curbed street discharging into uncurbed street, surface drainage that has been carried by the curb and gutter from a point more than two hundred feet (200') in distance from the intersection with the uncurbed street shall be removed by the use of inlets draining to the drainage pipe required at the intersection so as not to interrupt the flow of drainage in the bar ditch of the uncurbed street.
- (v) (5) The above item may be deleted if the surface drainage from the urban street can be directed from the ends of the curb and gutter to the bar ditch of the street without surcharge of the curb and gutter, provided there is no reduction in carrying capacity and provided adequate erosion control can be maintained.

6.02 PAVEMENT DESIGN

a) The developer shall submit pavement designs by a qualified Professional Engineer, currently Registered to practice Engineering in the State of Texas. Total flexible pavement thickness (T.F.P.T.) design shall be based on soil type, traffic loading and a twenty (20) year minimum design life.

6.03 MAJOR DRAINAGE STRUCTURES AND BRIDGES

- Design of structures of this nature shall conform to the Texas Department of Highways and Public Transportation, 1982 Standard Specifications for Construction of Highways, Streets and Bridges.
- b) Bridge design loading and widths for residential roads and streets shall conform to the standards set forth in the Design Guidelines. Bridge widths for higher type roads shall conform to Design Standards for Farm to Market Roads, secondary roads division, TDHPT, or as directed by the City. Structures of this nature require the specific approval of the City.

SECTION 7 - CONSTRUCTION DRAWINGS

7.01 SUBMISSION REQUIRED

a) Detailed plans for construction of streets and drainage facilities for all subdivisions shall be submitted to the City Council for approval.

7.02 DRAWINGS REQUIRED AND STANDARDS

a) General Standards

- 1) Plans shall contain a signature block for approval by the City in addition to all other typical information found on construction plans and all other data necessary for actual construction.
- 2) Plans shall also contain a print of the subdivision plat reduced to a size and a scale divisible by ten (10) to conform to the scales of construction drawings.
- 3) In the case of plans submitted which include construction not located on or adjacent to the subdivision, a location map for the off-site construction shall also be included in the plans.
- 4) Drawing features not specifically mentioned herein shall be those normally found in use by engineers designing facilities for use by the Texas Department of Highways and Public Transportation.

b) Street Plans

- 1) Design details for the construction of streets and drainage facilities shall conform to the requirements of these regulations and shall be of a scale ratio no larger than one inch to fifty feet (1"-50') horizontal and one inch to five feet (1"-5') vertical
- 2) Existing ground line and finished grade profiles shall be shown at the centerline of the right-of-way. In addition, cross-sections shall be drawn for each street. Cross-sections will be at each one hundred foot (100') station on land whose maximum ground slope is ten percent (10%), at two hundred feet (200') for land whose maximum ground slope is between ten percent (10%) and five percent (5%), and at three hundred feet (300') for land whose maximum ground slope is less than five percent (5%), and at points of special interest. Alternatively, finish grade and ground line profiles shall be shown for road shoulders and for ditch lines where the latter vary significantly from standard and are not shown elsewhere on drainage plans.
- 3) All existing and proposed drainage and utility appurtenances shall be shown in plan and profile.
- 4) Typical cross-sections shall be shown for all sections of roadway having similar drainage and/or traffic carrying requirements.

A drainage map showing all appropriate drainage areas, times of concentration, and flows used in the design of the street drainage, storm sewer system, and culverts shall be included in the plan.

c) <u>Detailed Drainage Construction Plans</u>

- 1) Construction plans shall be submitted for the modification of natural drainageways, creeks, or rivers; location, size, type and invert elevations of all culverts; the channelization of design storm runoff in excess of thirty cubic feet per second (30 cfs); the conveyance of storm runoff in storm sewer pipe; dams, and retention and detention systems.
- 2) Drainage construction plans shall conform to drainage requirements of these specifications.
- 3) Channel or watercourse cross-sections shall be included at a sufficient spacing, scale and dimension to adequately determine or delineate the water surface profile, velocity, and other necessary parameters of the design flow under consideration.
- 4) Plans shall show the design in plan and profile on the same sheet and be of a scale ratio no larger than one inch to fifty feet (1"-50') horizontal and one inch to five feet (1"-5') vertical.
- 5) Included on the plan sheets or in a separate document shall be the design basis and calculations pertinent to the facility. They shall be legible and progress clearly and logically to a conclusion.

d) <u>Utility Plans</u>

- Plans for the installation of sanitary sewer collection lines, water lines, electric lines, storm sewer lines, or any other similar underground service line are required to have the approval of the incorporated governmental agencies, Texas Department of Health, the Texas Natural Resource Conservation Commission, water supply corporation, water district, or any other governing body having rightful jurisdiction. These plans are then to be submitted to the City for final approval of location and alignment, depth of bury, type and method of backfill, restoration of surfaces after installation, location of valves, controls of manholes and other features projecting to the surface, and other utility features which can be expected to affect the public roads and streets in the proposed subdivision as well as outside the subdivision. Review of such features shall include design details for all items covered in statutory authorities granted to City Council.
- Plans showing the lines and grades in both plan and profile are required for the installation of water lines in excess of twelve inches (12") in diameter. Smaller lines may be shown in plan only if typical details are provided which will clearly show depth of bury under streets, drainage ditches and culverts, other utilities, etc.

- 3) Plans for the installation of storm sewer and sanitary sewer lines shall show the lines and grades of said lines in both plan and profile.
- 4) Location and installation of utilities within the same easement as drainage shall be allowed only when no other practical alternative exists. A separate utility easement, outside that required for the floodway shall be provided wherever possible.

e) <u>Erosion Control Plan</u>

1) A plan for both temporary and permanent erosion control shall be in accordance with Erosion & Sediment Control Guidelines for Developing Areas in Texas, Publication No. 4-35700-11-76, prepared by USDA, Soils Conservation Service.

f) Time of Submission and Approval

1) Plans shall be reviewed by the City Council or its designee and if found satisfactory, will be approved within thirty (30) days of submission or will be returned for correction if not found satisfactory. Construction shall not commence until plans are approved.

SECTION 8 - CONSTRUCTION STANDARDS

8.01 SEE MUSTANG RIDGE CONSTRUCTION STANDARDS

SECTION 9 - SUBDIVISION INSPECTION AND RELEASE OF SECURITY

9.01 NOTICE OF START OF CONSTRUCTION

a) The developer or his contractor shall notify the City Council forty-eight (48) hours prior to time of start of construction of streets and drainage in the subdivision. Start of clearing shall be defined as clearing of road right-of-way only.

9.02 PRE-CONSTRUCTION MEETING

a) The developer and his contractor shall request and shall attend a pre-construction meeting at the office of the City Council. Schedule of construction and frequency and type of field inspections and source and number of field tests shall be determined at this meeting. If on-site or local unprocessed base material is proposed, and/or if "density control" is specified, a representative of the developer's and/or contractor's field control lab shall also attend the pre-construction meeting.

9.03 FIELD INSPECTIONS AND FIELD CONTROL TESTS

- a) Field inspections and field control tests shall include but not be limited to the following:
 - 1) Utility installation backfill and density tests as required.

- 2) Bedding and backfill of culverts and storm drains and density tests as required.
- 3) Pre-construction inspection of any on-site or local sources of base material. If directed by the City, the testing laboratory shall make site investigations at the developer's expense to determine that quantity of material expected to be produced from the source or sources meets gradation and Atterberg's Limits specifications at the developer's expense.
 - A) Alternatively, ten percent (10%) of expected quantity shall be excavated and stockpiled and test samples taken from stockpile. One sample shall be taken and tested for every seven hundred cubic yards (700 CY) or fraction thereof stockpiled. The testing laboratory shall certify that the samples selected are representative. After fifty percent (50%) of the quantity expected to be produced has been excavated, a second ten percent (10%) stockpile shall be created and the sampling and testing procedure repeated. Test reports shall be submitted to the City. Tests and reports required by these specifications shall be at the expense of the developer.
 - B) Satisfactory test reports from on-site or local sources and/or a stockpiles shall not preclude rejection of material which, when placed on grade, fails to meet specification requirements.
- Subgrade preparation includes fills, cuts, ditch excavation and subgrade sterilization. Density tests are required in fills and other areas as determined by the City Council or its agent. A minimum of one density test is required for each lift of fills and for each five hundred linear feet (500 LF) of subgrade. Approval is required prior to base placement.
- Placement and compaction of base material as required. When "density control" is required, density tests shall be performed at a minimum of every five (5) stations of the final lift and at least five (5) additional locations per mile of road for each lift placed. Required density tests shall be taken by an approved testing laboratory with copies furnished to the City prior to paving. The contractor shall provide at least five (5) days notice to the City for approval of base to allow time for any City tests of density and/or thickness. Approval can be obtained in twenty-four (24) hours provided the contractor has notified the City at start of base placement and has provided his schedule for completion. Deficiencies found shall be corrected before any pavement is placed.
- Pavement of roads and streets as required. The contractor shall notify the City at least twenty-four (24) hours prior to start of paving after base is approved. He shall provide any required data on pavement mixes, tests to be performed, etc., at least five (5) days prior to start of paving. Pavement placement and consolidation may be inspected at the option of the City.

9.04 FINAL INSPECTION

a) The contractor or developer shall request final inspection in writing. Inspection shall be performed by an inspector qualified and approved by the City Council. The City shall

make the requested inspection no later than ten (10) days following the receipt of the written request. A written "punch list" listing all deficiencies noted on the final inspection and uncorrected deficiencies from previous field inspections shall be provided to the contractor within five (5) days following the final inspection, and if requested, also provided to the developer.

9.05 PARTIAL APPROVAL

a) Unless prior arrangement has been made with the City and approved by the City Council, no partial acceptance will be approved. In any case, partial acceptance shall be allowed only after consideration of access, drainage, and other matters related to the well being and safety of the public.

9.06 CORRECTION OF DEFECTS

a) Defects noted during final inspection shall be corrected within thirty (30) days. Written request for reinspection for correction of defects will be required unless specifically waived by the City Council.

9.07 PLL COMPLETION REQUIRED FOR RELEASE

a) Release from the full obligation of Construction Bend or other Construction Security except as noted for partial/periodic reduction of construction security, shall not be granted until the entire subdivision has been inspected and found acceptable by the City Council or its agent, and has been approved for release by the City Council. The City shall have full rights to require construction under the terms of the Warranty Bond obligation for any portion of streets or drainage facilities accepted under partial completion, but the period of the Warranty Bond obligation shall not be assumed to have started until the City Council has authorized full release of construction obligation for work completed.

9.08 RELEASE STATEMENT/FINAL ACCEPTANCE

a) The City Council shall authorize acceptance and shall cause to be issued a release statement releasing the owner and surety from further obligation under the construction bond.

9.09 PARTIAL/PERIODIC REDUCTION OF CONSTRUCTION SECURITY

a) Where estimated costs for construction exceed Fifty Thousand Dollars (\$50,000), partial or periodic reductions of construction security may be allowed. Partial or periodic reductions cannot exceed ninety percent (90%) of the security as authorized by the City Council. Requests for periodic reductions must be accompanied by Lender's certified statements of amounts paid for completed work, Professional Engineer certification of quantities of work completed and contractor's receipt of payment for work completed.

SECTION 10 - CONSTRUCTION BOND AND MAINTENANCE BOND OR OTHER APPROVED SECURITY

10.01 CONSTRUCTION AND MAINTENANCE BOND

a) Construction Bond

In order to assure that the streets alleys, drainageways and other public improvements are constructed in a timely manner and in accordance with the preceding specifications, the owner of the subdivision shall file a Construction Bond, executed by a Surety Company authorized to do business in this State, and made payable to the City of Mustang Ridge, Texas, in the amount of 100% of the cost of construction including drainage structures.

b) Maintenance Bond

In order to guarantee that streets, alleys, drainageways, and other public improvements are maintained to the satisfaction of the City Engineer and/or the City Council or its agent, in good condition for one (1) year following approval of construction, the owner/developer shall file a Maintenance Bond executed by a Surety Company authorized to do business in this State, and made payable to the City of Mustang Ridge, Texas, in the amount not to exceed 10% of the construction cost of the approved improvements.

c) Combined Bond

The owner of the subdivision may, at his option, file a single Bond instrument in lieu of separate bond instruments, as indicated above. A form for this single bond instrument, called a Combined Performance Bonds is included in the Appendix. The amount, conditions, collection, enforceability, recovery, and release of a Combined Bond shall be the same as if separate instruments were provided.

d) Amount of Bond

The amount of the bond or bonds shall not exceed the estimated cost of construction of the streets, alleys, drainageways and other public improvements required in the development of the subdivision, or other maximum amount subsequently established by the Texas State Legislature.

e) Combined Bond Amount

Unit costs for normal road and drainage construction will be based on current costs for such work developed by the City Engineer from City, County and State bid results and from information provided by local suppliers. Quantities will be as shown on the plans provided or developed from the plans required. Estimates shall be on forms similar to those shown in the Appendix. Costs of large or unusual structures, such as bridges, will be based on current costs for similar structures in the area.

f) Form of Bonds

1) The form of Surety bonds to be filed shall be as shown in the Appendix.

g) When Bond Required

1) Bonds shall be filed with the City Council prior to approval of a subdivision plat for recording, or shall be provided as directed if no plat is filed.

h) Condition and Period of Construction Bond

The condition of the Construction Bond shall be such that the owner of the subdivision shall begin construction of streets, alleys, drainageways and other public improvements shown on the subdivision plat or otherwise located as soon as possible after date of approval of the plat by the City Council or as directed and shall prosecute and complete such construction in accordance with the foregoing specifications within a period agreed on between the owner and the City Engineer, not to exceed two years. The Construction Bond shall remain in full force and in effect until all the streets, alleys, drainageways and other public improvents its in the subdivision have been completed to the satisfaction of the City Engineer and the City Council or its agent and the obligation has been released by official action of the City Council.

i) Collection on Construction Bond

1) In the event the owner refuses to correct defects in improvements called to his attention in writing by said City Engineer the unfinished improvements shall be completed at the cost and expense of obligees as provided.

j) Condition of Maintenance Bond

The condition of the Maintenance Bond shall be such that the owner shall guarantee to maintain, to the satisfaction of the City Engineer and the City Council or its agent, all of the streets, alleys, drainageways and other public improvements as shown on an approved subdivision plat, or otherwise located, which have been constructed to specifications with Construction Security released by official action of the City Council in a good state of repair for the period of one (1) year from the date of official release of Construction Security.

k) Period of Maintenance Bond

The Maintenance Bond by its terms shall provide that liability the reunder being on any or all of the streets and alleys, drainageways and other public improvements in the subdivision and shall remain in full force and effect for the period of one (1) year thereafter from the date of the official release of the Construction Security on each street or portion thereof, by the City Council of Mustang Ridge, Texas.

Collection on Maintenance Bond

Periodic inspection of all streets and alleys for which Maintenance Security is held will be made by the City Engineer during the period of liability covered by the Maintenance Bond; and in the event any or all of the streets, alleys, drainageways and other public improvements are not being maintained in a good state of repair, the owner will be so advised in writing and if, after a reasonable time, he fails or refuses to properly maintain said streets, alleys, drainageways and other public improvements, they shall then be maintained at the cost and expense of obligees as in said orders provided.

m) Enforceability of Bonds

1) Each of said bonds shall provide that should the same be unenforceable as a statutory bond, the obligees shall be bound by their contract as a common law obligation.

n) Repeated Recovery

1) Recovery on said Bonds shall not be limited or exhausted by one or more recoveries less than the total amount of such bonds.

10.02 CASH SECURITY AGREEMENT OR IRREVOCABLE LETTER OF CREDIT (in lieu of bond)

a) Substitution of Cash Security or Irrevocable Letter of Credit For Bond

1) The City Council may accept an offer of cash or a cashier's check or Irrevocable Letter of Credit in lieu of bonds for the purpose of insuring a developer's promise to construct and maintain the streets, alleys, drainage facilities and other public improvements in a subdivision in Mustang Ridge. The offer of cash in lieu of Bond shall be accompanied by a CASH SECURITY AGREEMENT, filled out and signed by the developer or his agent. On the date that the City Council approves the Cash Security in lieu of Bond, a copy of shall go to the developer and a copy to official records.

b) Amount

If a Cash Security or Irrevocable Letter of Credit is accepted in lieu of a Bond, the amount of the security required to be posted shall be equal to the estimated cost of construction of the streets, alleys, drainageways and other public improvements required in development of the subdivision as determined by a Registered Professional Engineer and submitted to the City Engineer and/or City Council for approval.

c) Forms

1) The form of Cash Security Agreement and of irrevocable Letter of Credit shall be as shown in the Appendix.

d) When Securities Required

 Cash Security or irrevocable Letter of Credit are in lieu of Bonds and are required under the same conditions as Bonds.

e) Conditions of Cash Agreement and Irrevocable Letter of Credit

The conditions of both the Cash Security Agreement and the Irrevocable Letter of Credit are as stated on the forms provided in the Appendix. The general conditions of the Cash Security Agreement and Irrevocable Letter of Credit are the same as those stated for Construction and for Maintenance Bonds. In addition, a specific notice period is required prior to collection under various circumstances, the Period of Instruments is made negotiable, and the Letter of Credit is given a maximum time limit.

f) Period of Cash Security Agreement and Letter of Credit

- 1) Two (2) years are allowed for construction of facilities before securities are eligible for collection. The maintenance period is one (1) year following approval of construction with notice of mease of construction security. The construction period can be extended past the normal period by mutual agreement of the City Council lender and/or developers provided the extended agreement includes increase in the amount to cover cost increases since the date of the original agreement, (see CONDITION THREE).
- 2) The Irrevocable Letter of Credit has a maximum period of three (3) years unless extended by mutual agreement.

g) Collection of Securities

1) Request for collection of securities must be approved by the City Council in the case of collection for constructions only after it has been determined that failure to complete construction or correct deficiencies is not due to weather, acts of God, strikes or other reasons beyond the developer's control. Where collection is being considered due to failure to maintain or due to deficiencies in construction rather than failure to construct, a ten (10) day notice by registered mail return receipt requested to the lender and/or developer is required before proceeding to request collection of funds to complete construction and/or maintenance.

h) Repeat Recovery

1) The recovery on the Cash Security Agreement or Mustang Ridge Subdivision Regulation irrevocable Letter of Credit shall not be limited or exhausted by one or more recoveries less than the total amount of cash or Letter of Credit.

SECTION 11 - STREET SIGNS

11.01 STREET NAMES

a) Street names for new subdivision streets may be suggested by the Subdivision owner/developer. If these names are reasonable and are not similar to existing names of streets in the City of Mustang Ridge, then they will be recommended to the City Council for approval on the final plat. Suggested names shall be submitted to the City Council for preliminary approval prior to final plat submission and forwarded to the local postmaster for review.

11.02INSTALLATION OF STREET SIGNS REQUIRED

a) The developer of a subdivision shall install the street name signs on new streets when they are constructed in accordance with the standards listed in this section of these specifications. The proper installation of these signs is a part of the required construction standards of Mustang Ridge, and will be inspected for approval prior to the release of the Construction Bond or other security.

11.03 INSTALLATION OF TRAFFIC SIGNS REQUIRED

a) The developer of a subdivision shall be required to install any traffic control sign or devices in accordance with Texas Department of Highway and Public Transportation, Manual for Traffic Control and reviewed by the City Council prior to installation. The installation of such control signs or devices shall be the responsibility of the developer.

11.04 STREET NAME SIGN STANDARDS

a) Street name sign assemblies shall be post-mounted with at least one assembly at each intersection of roadways.

b) Sign Faces

Sign blanks shall be double faced so as to indicate street names on both sides. They shall be a minimum of six inches (6") high and eighteen inches (18") to thirty inches (30") in length as needed to adequately space four-inch (4") series "C" lettering. They shall be 0.80 gauge aluminum blanks with alodine finish and covered with green reflective sheeting with silver (white) copy and optional three-eighths inch (3/8") silver (white) borders. Designations such as Street (St), Road (Rd), etc., shall be standard abbreviations as indicated below.

c) Standard-Abbreviations

1) Standard abbreviations listed shall be used. Periods, hyphens, commas, and question marks are not to be included on standard faces.

| ALLEY | ALLEY | NORTHWEST | NW |
|-----------|-------|-----------|------|
| AVENUE | AVE | PARKWAY | PKWY |
| BOULEVARD | BLVD | PLACE | PL |
| CIRCLE | CIR | PLAZA | PLZ |

| | | | î |
|-----------|------|-----------|-----|
| COURT | CT | ROAD | RD |
| DRIVE | DR | SOUTH | S |
| EAST | E | SOUTHEAST | SE |
| FREEWAY | FRWY | SOUTHWEST | SW |
| HIGHWAY | HWY | SQUARE | SQ |
| HILL | HILL | STREET | ST |
| JUNCTION | JCT | TERRACE | TER |
| LANE | LN | THRUWAY | TWY |
| NORTH | N | TRAIL | TR |
| NORTHEAST | NE | WAY | WAY |
| | | WEST | W |
| | | | |

d) Copy

1) Copy, both letters and numbers, shall be four-inch (4") size series "C" stroke as conforms to the "Standard Alphabet for Highway Signs" Manual and in accordance with the accompanying drawings. Block numbers, if desired, shall be placed in the upper right-hand corner of the sign face as shown in the drawings. (See Figure 11)

e) Mounting Hardware

The hardware shall consist of two (2) standard cast aluminum street name sign brackets, one post cap (lower) bracket for the more important roadway name and one crosspiece (upper) bracket for the less important roadway name. Bracket hardware shall lock securely to post and to sign blanks with Allen-type screws. Sign blanks shall be positioned when mounted so as to have their faces parallel to the roadway they name.

f) Posts

1) Posts shall be two-inch (2") galvanized steel pipe of sixty-five thousandths (.065) minimum gauge securely set and tamped or cemented in place with top of post seven feet (7') above the edge of roadway surface.

g) Placement

1) The street name sign assembly should be placed on a post and located two feet (2') behind the curb on curbed roadways or six to ten feet (6-10') beyond the edge of the pavement on noncurbed roadways. It should be placed as near as possible to the tangent point of the edge of the less important roadway with the radius of the curve at the intersection.

SECTION 12 - VACATIONS

12.01 FEE

- a) A fee will be charged to process vacation actions. This fee will be in an amount specified by the City Council and will be submitted in full prior to submitting a request to place the vacation item on the Work Session Agenda to be considered by the City Council.
- b) An application form will be required to initiate a request for any vacation. This form must be filled out and signed by the person(s) requesting the vacation, or their agent.

12.02 RIGHT-OF-WAY VACATION

- a) The person making a request for right-of-way vacation shall submit a letter to the City Council. The letter should state the reason for the request.
- b) The following documents should be attached to the letter:
 - 1) Approval or concurrence with the request by all adjacent and abutting property owners.
 - 2) Letter (or standard form) from all utility companies (electric, telephone, cable, water and wastewater, gas, etc.) serving the area stating they have no need for the right-of-way requested for vacation for the installation of utilities or a sketch and field notes on any required easement to remain for utilities.
 - 3) Sketch and field notes on the right-of-way to be vacated.
- The request for vacation will be placed on the agenda for consideration by the City Council.

12.03 DRAINAGE EASEMENT VACATION

- a) The person(s) making a request for a drainageway vacation shall submit a letter to the City Council. The letter should state the reason for the request.
- b) The following documents should be attached to the letter:
 - 1) Sketch and field notes on the easement to be vacated.
 - The request for drainage easement vacation will be investigated and a recommendation made by the City Council prior to the Public Hearing.
- c) The request for vacation will be placed on the agenda for consideration by the City Council.
- d) If the request is considered favorably by the City Council in Work Session, a public bearing will be scheduled for City Council on a date no earlier than the second Monday of a month following the third Monday after the Work Session. This will allow time for

posting notices in the Courthouse and in the local newspaper for a period of three (3) weeks and for the public hearing to be held on a Regular Session (second Monday of the month) as required by Texas law. Following the public hearing, the City Council may take action on the request on the same date.

12.04 VACATION REQUEST FOR OTHER THAN RIGHT-OF-WAY AND DRAINAGE

a) Vacation requests for private streets or for reserves must be made to the property owner.

SECTION 13 - FEES

13.01 FEES TO BE CHARGED

- a) Fees will be charged for reviewing preliminary plans. Final plats and construction plans, and inspecting the construction of street and drainage improvements. These fees are to recover the cost for plan and plat review, on-site inspections and preparation of documents and recommendations to the City Council. These fees are not to be considered fees for the approval of a subdivision plat, and are not rerundable if the plat is not approved by the City Council. The base and minimum review fees shall be paid upon submittal of the plan or plat to the City Council. Additional review fees shall be paid prior to plan or plat approval.
- b) Fees for final plat linens and mylars shall be paid prior to final plat approval.

 Inspection fees shall be paid prior to final plat approval and deposited in an escrow account to be drawn upon to pay for inspections. The balance of the inspection fee remaining after final inspection shall be returned to the developer within thirty (30) days of acceptance.
- c) These fees will be reviewed annually by the City Council and adjusted to recover the cost of reviewing and inspecting subdivisions submitted to the City.

SECTION 14 - MAINTENANCE OF NONCONFORMING SUBDIVISIONS

14.01 REQUIREMENTS FOR CITY MAINTENANCE.

- a) Nonconforming subdivisions, or subdivisions platted prior to January 1, 1997, that do not comply with the standards and specifications as required in these regulations, may apply for City maintenance of the roadways. The City Council may authorize the maintenance of the roadways in nonconforming subdivisions provided:
 - 1) The roads have been dedicated a public right-of-way.
 - 2) More than fifty percent (50%) of the lots along the roadway are occupied by dwellings:
 - 3) The owners and/or developer of the subdivision shall donate material costs
 - 4) All driveway drain pipes have been installed to existing dwellings; and

5) The owners of the subdivision shall donate funds for the installation of street and traffic control signs as required.

14.02 AUTHORIZATION OF ENGINEERING REPORT.

a) The City Council may authorize an engineering report to study upgrading a nonconforming subdivision to current regulations and providing cost estimates for road and drainage improvements. The maintenance of a roadway in a nonconforming subdivision shall not constitute an acceptance nor hold the City liable for other roads in the subdivision not authorized for maintenance.

14.03 ADDITIONAL RIGHT-OF-WAY DEDICATION.

- a) The developer and/or owners of the subdivision may be required to dedicate additional right-of-way and donate additional funds to offset the City's cost of maintenance when the City Council determines:
 - 1) The maintenance will serve to primarily benefit the owners and not other City residents;
 - 2) The existing conditions do not warrant an environmental, health or safety hazard or emergency.

SECTION 15 · VARIANCES

15.01 The City Council may grant a variance from these regulations if an applicant requests it in writing and the City Council finds that, because of special circumstances applicable to the property involved, a strict application deprives such property of privileges or safety enjoyed by other similarly situated property with similarly timed development. Where such conditions are found, the variance permitted shall be the minimum departure from the terms of this division necessary to avoid such deprivation of privileges enjoyed by such other property and to facilitate a reasonable use. The City Council may not grant a variance if it would provide the applicant with any special privileges not enjoyed by other similarly situated properties with similarly timed development, or if based on a special or unique condition which was created as a result of the method by which a person voluntarily subdivides land after the adoption date of these regulations.

15.02 No variance shall be granted regarding bonding, engineering, or compaction test.

SECTION 16 - SEVERABILITY

16.01 If any section, subsection, sentence, clause, or phrase of these regulations are for reason held to be unconstitutional, void, or invalid, the validity of the remaining portion of these regulations shall not be affected thereby, it being the intent of the City Council in adopting these regulations that no portion thereof, or provision or regulation contained herein shall become inoperative or fail by reason of the unconstitutionality or invalidity of any section, subsection, sentence, clause, phrase, or provisions of these regulations.

SECTION 17 - EXEMPTIONS

17.01 Subdivisions with an approved preliminary and final plat prior to the effective date of these regulations shall comply with the requirements of the Mustang Ridge City Subdivision Regulations in effect at the time of their approval.

17.02 Unrecorded subdivisions shall comply with the requirements of these regulations.

PASSED by an affirmative vote of all members of the City Council this the 13th day of June, 2005.

Mayor Alfred Vallejo, I

ATTEST Sheri Wash

Sheri Mack, City Secretary