IDALOU DEVELOPMENT POLICY MANUAL

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PREFACE

The purpose of this manual is to provide information to all parties involved in land development activities in the City of Idalou. It is intended to be used by developers, design professionals, contractors, and the citizens of Idalou, as a means of providing for an organized approach to the development of the City. The manual is to be used as a reference for the entire development process, from initial planning through project construction. It presents the several steps required by the development process, and minimum standards for the various parts of the development design.

The manual addresses those issues that are typically encountered in any development project. It does not attempt to answer every possible question that might arise. Some projects will have unique requirements that must be addressed on a case-by-case basis. However, use of the manual should minimize problems and delays in the execution of projects.

Additional regulations and requirements are found in a number of other sources that are referenced in this manual. These include:

- City of Idalou Subdivision Ordinances
- City of Idalou Standard Specifications
- City of Idalou Standard Details
- American Association of State Highways and Transportation Officials (AASHTO) Policy on Geometric Design
- Texas Administrative Code, Title 30, Part 1, Chapter 290, Public Drinking Water
- Texas Administrative Code, Title 30, Part 1, Chapter 317, Design Criteria for Sewage Systems

Some reference material available on City of Idalou website:

Users of this manual are encouraged to submit suggestions at any time. Comments should be directed in writing to one of the following:

Mailing address: City of Idalou, 208 Main Street, Idalou, TX 79329

Physical address: City of Idalou, 208 Main Street, Idalou, TX 79329

1 SUBDIVISION DEVELOPMENT

1.1 GENERAL

This policy delineates the requirements for preparing a Preliminary Plat and a Final Plat. Administrative requirements for the platting process are found in City of Idalou Subdivision Ordinance. This section includes an outline of Idalou's land development process, which summarizes the steps required and identifies points in the process where plans, reports, or other submittal documents are required.

The City shall withhold all City improvements and issuance of building permits from subdivisions not officially approved by the City Council. No improvements should be initiated, nor contracts executed, until approval of the City Council has been given.

1.1.1 Definitions

1) *City* means the City of Idalou, Texas.

2) *Subdivision* is the division of a parcel of land into two (2) or more lots or parcels for the purpose of transfer of ownership or building development, or if a new street is involved, any division of a parcel of land; provided that, a division of land which may be ordered or approved by a court or effected by testamentary or interstate provisions, or a division of land for new agricultural purposes into lots or parcels of ten (10) acres or more and not involving a new street shall not be deemed a subdivision. The term includes re-subdivision, and when appropriate to the context, shall relate to the process of subdividing or to the land subdivided.

3) *City Council* means the elected Mayor and Council members of the City of Idalou, Texas.

4) *Administrator* means the City Administrator or his/her designee for reporting to the City of Idalou.

5) *City Engineer* means the engineer representing the City of Idalou.

1.1.2 Procedures for Subdivision

In order to allow orderly processing of a proposed subdivision, the procedures discussed in the following sections shall be followed. In general, the steps necessary for the subdivision shall include:

1) Annexation by the City Council (if outside of City Limits).

2) Approval of a land study by the City Council.

3) Approval of the preliminary plat and plans by the City Council.

4) Approval of the final plat and plans by the City Council.

5) Approval of the final construction plans by the City Engineer and City Council.

6) Filing of approved plat with the City of Idalou and the County Clerk and the recording of all executed easements, dedications, and other documents required to be filed of record.

7) Completion of construction and acceptance of all improvements by the City and submission of as-built drawings.

This procedure may be varied at the discretion of the City Council. For those areas to be subdivided which lie outside the corporate limits, but are being submitted for review and approval to satisfy the requirements of extraterritorial jurisdiction and Texas Local Government Code Chapter 212, the provisions concerning annexation and zoning may be deleted. All other provisions shall remain in force.

1.2 ANNEXATION

If the property is not within the City limits of Idalou and the owner desires that it be annexed so as to be qualified to receive City services, when available, owner must petition the City for annexation through lawful annexation proceedings.

1.3 LAND STUDY

In the development of a tract 1.25 acres or more to be annexed by the City, either by sections or as one subdivision, the Developer must submit a Land Study to the Administrator. Submittal to the City shall include a letter of transmittal requesting review and payment of the required filing fee.

The purpose of the Land Study is to allow the Administrator and City Engineer to review proposed major thoroughfare and collector street patterns, land use, and the property's relationship to adjoining subdivisions or properties. The study shall be prepared as follows:

1) The study shall be drawn to a scale of one(1) inch equals two hundred (200) feet (1"=200') or larger.

2) The lower right-hand corner shall contain a title block clearly showing the proposed name of the subdivision, anme and address of the subdivider and the Engineer or Surveyor responsible for the design or survey, scale, date the drawing was prepared, and the location of the tract according to the abstract and survey records of Lubbock County, Texas.

3) The study shall clearly show the limits of the tract and scale distances.

4) True North shall be clearly indicated.

5) The study shall show the names of adjacent subdivisions or the name of record or owners of adjoining parcels of un-subdivided land.

6) The study shall contain the location, width and names of all existing or platted streets or other public ways within or adjacent to the tract existing permanent buildings, railroad rights-of-way, and topography with existing drainage channels or creeks, and other important features such as political subdivisions, corporate limits and school district boundaries.

7) The study shall show the layout and width of proposed thoroughfares and collector streets and shall show a general configuration of proposed residential streets.

1.4 PRELIMINARY PLAT

1.4.1 Description

A Preliminary Plat is a planning document that depicts the proposed development layout, including lots, streets, alleys, utilities, and storm water management. The Preliminary Plat will be used to determine if the proposed development in general meets the City's requirements. It will not show construction level detail. It is understood that final construction drawings may vary to some degree from the information shown in the Preliminary Plat. However, any significant departure from the approved Preliminary Plat should be reviewed by City staff prior to submission of final drawings. All features of the development as proposed in the Preliminary Plat must comply with the provisions of this manual, unless the developer wishes to request exception(s) to particular provisions. If exception(s) are to be requested, for example exceptions to minimum water line sizes, the Preliminary Plat must identify the proposed exception(s) and must include justifying explanations and computations.

1.4.2 Format

The Preliminary Plat shall be made at a scale of one (1) inch equals one hundred (100) feet (1" = 100') or larger. The size of the sheets shall be twenty-four (24) inches by thirty-six (36) inches. If it is necessary to place the plat on more than one (1) sheet, an index map shall be included on the first sheet. A vicinity sketch plan showing the location of the area being platted as it relates to the rest of the community, showing major streets in the area shall be included.

1.4.3 Content

1) Proposed name of the development.

2) Name, address and telephone number of developer, surveyor and or design engineer.

3) Date of preparation, scale, and north arrow.

4) Delineation of proposed phases of development, as required.

5) A complete topographic map showing existing structures of the proposed area to be subdivided, including contours at five-foot intervals or less. Contour lines shall be based on the North American Vertical Datum 1988, which shall be noted on the drawing.

6) Designation of areas subject to a fifty (50) and one hundred (100) year floods.

7) Existing zoning classifications for the property, along with all proposed zoning classifications or reclassifications.

8) All proposed land uses designated by type and size either in acreage or number of lots.

9) Total acreage included in the development.

10) Boundary lines of tract, accurate in scale.

11) All parcels of intended to be dedicated for public use or reserve in the deeds for the use of all property owners in the proposed subdivision, together with the purpose of conditions of limitations of such reservation.

12) Names, locations and dimensions of adjacent subdivision or names of record of owners of adjoining parcels, as well as all existing physical features including streets, alleys, easements, buildings, drainage areas, railroad rights-of-way, and other significant features such as section lines, political subdivision or corporate limits, and school district boundaries within or adjacent to the tract to be subdivided.

13) Location and dimensions of all proposed streets, alleys, easements, lot lines, front building setback lines and parks and other areas to be dedicated for public use.

14) The location and size of all culverts and existing utilities within or adjacent to the tract including, without limitation, water, sewer, telephone, electricity and gas (may be placed on a separate plat).

15) Water distribution system, including a water system network analysis.

16) A preliminary layout of the proposed wastewater collection system.

17) A preliminary layout of the proposed street and alley system including proposed street names.

18) A preliminary layout of proposed storm water management facilities and drainage features, along with a storm water management report as described below.

1.4.4 Reports

The proposed water distribution and wastewater collection systems shall be submitted on a drawing(s) at such a scale as to clearly demonstrate the general location of all facilities and their relation to one another, and to street margins and lot lines. Both systems shall be shown on the same drawing(s). Proposed sewer and water line sizes shall be shown. The Preliminary Plat shall include a mathematical model analysis of the proposed water distribution system, using EPANET. If available, the City will supply the developer with system pressure data at proposed connection points. Analyses shall be run using 1000 gallon-per-minute (gpm) fire demands for every 100 lots or fraction thereof. 500 gpm at each of two hydrants. The Preliminary Plat shall include a schematic layout of the proposed network which shows node and pipe numbers. Analysis results shall be reported in tabular form, and shall include as a minimum data for the nodes with the three highest and lowest pressures, and the pipes with the three highest and lowest pressure drops.

The storm water management portion of the Preliminary Plat shall include a preliminary report prepared by the developer's engineer identifying proposed drainage facilities. This report must include basic storm water runoff analysis and proposed solutions. Recommended solutions must comply with the provisions of the City of Idalou Drainage Design Manual. Formal approval of this report by the City Engineer is required as part of the Preliminary Plat approval process.

1.4.5 Processing

Seven (7) copies of the preliminary plat, required supplemental material, and required filing fee shall be presented by the developer to the City Manager. If the plat is in acceptable condition

according to these rules, the City Manager shall receive the plat as filed, mark a copy of the plat "filed" with the date on which the plat is considered filed in acceptable condition and furnish the appropriate departments of the City with copies for their review and comments. The City departments shall have fifteen (15) days from the date they receive the plat to review and return it to the City Manager's office with comments. Upon receipt of comments from these entities, the City Manager or designated agent will complete a written review of the Preliminary Plat and return it to the developer for corrections or additions that may be required.

Within thirty (30) days following the date of receipt of an acceptable revised plat from the developer, it shall be submitted to the Planning and Zoning Commission for review and approval, disapproval, or approval with modifications. Approved preliminary plats shall receive a dated notation stamped on the City's file copy of the plat. The City Manager shall notify the developer in writing of the approval.

Approval of the preliminary plat shall be valid for nine (9) months. An extension of approval time may be granted for a period not to exceed one (1) year by the Plats Coordinator upon application in writing.

All or any portion of an approved preliminary plat may be submitted for Final Plat purposes. In the case of partial submission, the approval of the remaining portion of the preliminary plat shall automatically gain an extension of one (1) year before another phase of the plat must be submitted in final form. The Final Plat should be little changed from the Preliminary Plat. However, minor adjustments providing more precise details regarding the development are allowable.

1.5 FINAL PLAT

1.5.1 Description

The Final Plat may be prepared and submitted only after approval of a Preliminary Plat by the Plats Coordinator. The information on the Final Plat must be geometrically precise and dimensionally correct, as it will be used as the basis for the actual placement of boundary monuments and physical improvements. The plat must comply with the provisions of the General Rules of Procedures and Practices of the Texas Board of Professional Land Surveyors. In addition to the basic information found on the Preliminary Plat, the Final Plat will contain various dedications, assignments, and acknowledgements. The Final Plat will be filed in the Lubbock County records. It will be accompanied with support documentation not intended for filing. These documents include a Storm Water Management Plan and construction plans for streets and alleys, wastewater collection system, potable water distribution system, and drainage facilities system.

1.5.2 Format

All Final Plats shall be made at a scale of one (1) inch equals one hundred (100) feet (1"=100') or larger and drawn on sheets twenty-four (24) by thirty-six (36) inches. Subdivisions requiring more space shall be drawn on multiple sheets using the above sizes only. Pages shall be numbered with the format 1 of 3, 2 of 3, etc. Submissions to the Plats Coordinator for final approval shall include the original drawing with original signatures (returnable to the surveyor), two (2) full-size photographic mylar reproduction produced on Kodak A4 auto-positive film or equivalent, with original signatures (non-returnable), and ten (10) blue line or black line copies of the original (non-returnable).

Electronic copies of all Final Plats and construction plans shall be provided to the City. These shall be in AutoCAD format, versions 2004 or newer. Separate electronic files shall be provided for the plat, potable water distribution system, wastewater collection system, and street/alley system. The Texas State Plane Coordinate System shall be used for each of these files, so that dimensional accuracy is maintained when the files are overlayed with one another. These files will be incorporated into the City's master plat and utility maps. The street/alley system map shall contain three dimensional information in the form of topographic contours and/or three dimensional survey data points from which topographic contours can be generated.

1.5.3 Content

1) Proposed name of subdivision and applicable unit or addition, as well as the name of the City, county and state in which the subdivision is located. The name and address of the record owner or subdivider shall also be provided.

2) Accurate dimensions in feet and hundreds of feet for all lines, angles and curves used to describe boundaries, streets, alleys, easements, areas to be reserved for public use and other important features. All curves shall be circular arcs and shall be defined by the radius, central angle, tangent, arc and/or chord distances and chord bearings. All surveying shall be done in the Texas State Plane Coordinate System. Bearings shall be based on the U.S. State Plane of 1983, Texas North Central Zone – No. 4202. Distances reported shall be ground distances. The bearing basis, a statement that distances are ground distances, and the grid to ground scale factor shall be noted on the plat.

3) The complete boundary description of the property by metes and bounds, section, block, survey, county, and state, including a description of all monuments, both found and set, which mark the boundaries of the property, and a description of all control monuments used in conducting the survey.

4) The perimeter boundary of the subdivision with dimensions, bearings, and overall computed acreage for the development.

5) An indication of all existing platting information for adjacent property with county deed records volume and page numbers.

6) Certification statement, signature, and seal of the Texas Registered Professional Land Surveyor responsible for surveying and preparation of the plat.

7) An accurate location of the area of development with reference to the abstract and survey records of Lubbock County.

8) Identification of all lots, blocks, street names, setback building lines, and private restrictions.

9) The accurate delineation of dimensions and bearings of any area to be dedicated or temporarily reserved for public use or for the use of inhabitants of the subdivision.

10) An acknowledgment by the owner of adoption of the plat and dedication of streets, alleys, easements, and other areas of public concern.

11) An acknowledgment of the owner's signature on the plat by a notary public.

12) The date of the final plat preparation, scale of the map and north arrow.

13) Proper blanks for certification of approval to be filled out by the City Council.

The documents described below shall be submitted for review with the final plat. All plans shall be prepared electronically using AutoCAD Version 2004 or newer. The construction plans shall be reviewed and comments shall be sent by the City to the design engineer and developer within ten working days after the initial date of receipt. All subsequent construction plan reviews shall be completed within five working days after date of receipt. The City may release final plats for approval during the construction plan review process when the construction plans comply with the overall requirements and adequate progress toward plan corrections are underway. These construction plans must be prepared by or under the supervision of a Registered Professional Engineer in the State of Texas and formally approved by the City and the Developers Letter of Agreement executed prior to construction of any improvements. Each plan sheet shall contain a title block including space for the notation of revisions.

1) Storm Water Management Plan: A drainage plan must be submitted for review with the final plat identifying existing and proposed hydrology and hydraulics of the development and the proposed storm water drainage system. The plan, prepared and sealed by a Texas licensed professional engineer, shall provide specific solutions, detailed analysis of the drainage basin, and the capacity of the existing and proposed facilities within the development and adjacent property. The plan shall describe the treatment of drainageways for safety, maintenance and protection of both public and private property. The storm drainage system and all proposed facilities shall comply with the City of Idalou Drainage Design Manual.

2) Wastewater Collection System Plans: A complete set of plan and profile construction plans, prepared and sealed by a Texas licensed professional engineer, that identifies the wastewater collection system including existing and proposed contours, proposed main sizing, manhole invert elevations, and associated appurtenances. A benchmark elevation shall be provided with a location description.

3) Potable Water Distribution System Plans: A complete set of construction plans, prepared and sealed by a Texas licensed professional engineer, that identifies the potable water distribution system including proposed main sizing, locations of valves and fire hydrants and associated appurtenances. A benchmark elevation shall be provided with a location description on plans requiring a waterline profile.

4) Street and Alley System Plans: Street and alley construction plans, prepared and sealed by a Texas licensed professional engineer, shall include geometric layout, longitudinal grades, typical paving sections and widths.

5) Drainage Facilities System Plans: Drainage facilities plans prepared and sealed by a Texas licensed professional engineer shall include geometric layout, longitudinal grades, pipe type and size, inlets, channels and typical section as determined from the drainage plan and street and alley system plan.

6) Grading Plans: Grading plans prepared and sealed by a Texas licensed professional engineer shall include both existing and final design elevations. The grading plan shall show the final design grades at the lot corners. The final design finished floor of each lot needs to be on the grading plan.

7) Construction Specifications: Each set of construction plans shall be accompanied by a complete set of construction specifications, prepared and sealed by a Texas licensed professional engineer. These specifications shall describe all construction materials, methods, and standards in sufficient detail to ensure that the construction work may be carried out in compliance with regulatory requirements and best industry practices. The City of Idalou will provide a set of minimum standards and specifications to be used as a guideline.

1.5.4 Processing

1) Not more than nine (9) months after approval of the preliminary plat, unless an extension is granted, the sub-divider shall submit four (4) copies of the final plat and complete construction plans, on sheets 24”x36”, plus (7) copies of the final plat and the required supplemental material to the administrators office. The final plat shall be presented at least fifteen (30) days prior to a regular City Council Meeting.

2) The final plat shall substantially conform to the approved preliminary plat and shall include all changes specified thereon.

3) After reviewing the final plat to assure its acceptability, the Plats Coordinator shall mark the plat "filed" and annotate the date thereon.

4) The Planning and Zoning Commission shall approve, disapprove or approve the final plat with modifications. If a variance is requested and the commission recommends its approval, it shall forward the final plat with such recommendation to the City Council.

5) In the case of a plat with a variance recommended for approval by the Planning and Zoning Commission, the City Council shall act on the plat within thirty (30) days after the date the plat is approved by the commission. The council shall approve, disapprove or approve the final plat with modifications.

6) Following approval of the final plat by the appropriate authority, the plat shall be signed by the Mayor, as the case may be, and attested by the city secretary. The Plats Coordinator shall then record the plat in the office of the Lubbock County Clerk as required by law. The sub-divider shall furnish to the administrator the required number of filed copies to the City and the recording fee required by the Lubbock County Clerk prior to the recording of the plat.

7) Construction plans shall be reviewed and comments shall be sent by the City to the design engineer and developer within ten working days after the initial date of receipt. All subsequent construction plan reviews shall be completed within ten working days after date of receipt. The City Engineer may release Final Plats for approval during the construction plan review process when the construction plans comply with the overall requirements and adequate progress toward final plan corrections are underway. These construction plans must be formally approved by the City and construction contracts executed prior to construction of any improvements.

8) For the benefit of the developers, plats may be considered by the Plats Coordinator for tentative approval of the design, but without the formal review of plans for streets, alleys, storm water drainage facilities, water distribution system and wastewater collection system. If all code requirements are not met at the time of Final Plat consideration, the plat must formally be denied. State law requires that the City take action on plats within

30 days of submission. Where a Preliminary Plat has been approved, all construction plans shall substantially conform to the general plan of development.

9) All federal and state requirements such as Pollution Prevention Plans, Trench Safety Systems, Storm Water Management Drainage Plans and Erosion Control Plans shall be complied with by the developer, his consulting engineer, and his contractors. The developer is required to obtain all applicable permits and notices of intent for their development.

10) Final plats must be considered in public hearing by the Planning and Zoning Commission, however, the City Manager may approve minor plats to shorten turnaround time in the platting process. Minor plats (short form plats) create four or fewer lots fronting on an existing street and do not require the creation of new streets or alleys or the extension of municipal facilities.

1.5.5 Submittals Required For Construction

Prior to authorizing construction, the City Engineer shall be satisfied that the following conditions have been met:

1) The Final Plt shall be complete to the requirements of the City Council at the time of approval.

2) All required contract documents shall be completed and filed with the City Engineer.

3) All necessary off-site easements or dedications required for City maintained facilities not shown on the Final Plat must be conveyed solely to the City of Idalou, Texas, with proper signature affixed. The original of the documents and filing fees shall be returned to the Engineering Department prior to approval and release of the engineering plans.

4) All Contractors participating in the construction shall be presented with a set of accepted plans bearing the stamp of acceptance of the City Engineer. These plans shall remaind on the job site.

5) If required by the City Engineer, all parties participating in the construction shall meet for a pre-construction conference to discuss the project prior to beginning work.

6) A complete list of the Contractors, their representatives on the site, and telephone numbers where a responsible party may be reached at all times must be submitted to the City Engineer.

7) Manufacturers' drawings for all fabricated appurtenances or special construction time shall be submitted to the City Engineer.

1.5.6 Construction Coordination

1) The developer is responsible for the day to day construction inspection to insure that the construction is progressing and being installed correctly.

2) The City shall provide periodic inspection by the City Engineer. The City Engineer shall be present during all testing and should be notified by the developer or their representative prior to any testing.

3) The developer is responsible to coordinate all utility procurement, installation and project warranty for the improvements within the plat and on adjacent property when required.

4) Franchised, certificated and City utilities shall be contacted by the developer to address project viability, accessibility, and tentative construction schedules. The utility companies shall coordinate their construction with each other and the paving contractor to prevent utility cuts in the completed streets and alleys.

5) Developer shall coordinate all construction required to complete his subdivision development.

6) Developer shall require all utilities be installed to be in accordance with City of Idalou specifications for trenching, backfilling and paving.

7) All lot corners shall be located and marked with one-half (1/2) inch diameter reinforcing bar, eighteen (18) inches long, and shall be place flush with the ground or counter-sunk, if necessary, in order to avoid being disturbed.

8) The developer and contractor(s) shall guarantee maintenance of all improvements during the one-year warranty period. The City will maintain the improvements after the improvements have been accepted and following the warranty period. The Developer shall provide to the City with an executed Maintenance Bond during construction and an executed Warranty Bond after construction is complete.

9) Upon completion of the subdivision, the developer shall provide to the City the total costs, quantities (miles) of the improvements installed.

10) Prior to final acceptance by the City, the developer shall submit to the City Engineer a complete, reproducible set of drawings of paving, drainage, and other improvements showing all changes made in the plans during construction and containing on each sheet an 'As Built' stamp bearing the signature of the Engineer and the date. An electronic file will also be submitted to the City Engineer, in AutoCAD format.

1.6 UTILITY SERVICES

All services for available utilities shall be made available to each lot in such a manner so as to eliminate the necessity for disturbing the street and alley pavement, curb, gutter, sidewalks, and drainage structures when connections are made.

All electric, telephone utilities, street lighting, and cable television shall be underground except where conditions do not warrant underground installations. The use of above-ground utilities may be considered on an individiaul case basis if the services are placed on the rear property line.

All support equipment (transformers, amplifiers, switching devices, etc.) necessary for underground installations shall be pad-mounted or placed underground.

The electric utility company shall be responsible for developing administrative policies and cost reimbursement procedures for the installation and extension of underground electric service.

These policies shall permit the electric company to recover the cost differential between extending and installing overhead and underground service.

The Developer shall furnish all easements and right-of-way necessary for construction of electric, gas, street lighting, telephone and cable television service to the subdivision.

Overhead services will not be permitte to cros public rights-of-way.

1.7 PERMITS, FEES, AND REGULATIONS

1.7.1 Issuance of Building Permits

Generally, building permits will not be issued until the completion of all improvements within the subdivision and acceptance by the City. The City Engineer shall have the authority, after reviewing the progress of construction and other relevant matters, to release a portion of the subdivision for building permits.

1.7.2 Filing Fees

1) The following schedule of fees and charges shall be paid to the City when any plat is submitted to the City Council or any other authorized board of agency of the City. Each of the fees and changes provided herin shall be paid in advance, and the City Council or any other authorized board shall take no action until said fees and charges have been received by the officer designated herein. The City Council or their deputies or assistants, shall calculate the fees and charges in accordance with the following schedule:

   a. Preliminary Plat—$250.00 base fee plus $10 per acre
   (Maximum fee shall be $3,500.00)

   b. Final Plat—$500.00 base fee plus $25 per acre
   (Maximum fee shall be $3,500.00)

   (These fees shall be charged on all plats, regardless of the action taken by the City Council and whether the plat is approved or denied by the City Council.)

2) The City Engineer shall compute the Construction Permit Fee for the development of a subdivision, or parts thereof, and submit the permit to the City of Idalou.

1.7.3 Adoption of Subdivision Regulations

The term “subdivision” means the division of any tract of land situated within the corporate limits of the City or within one-half (1/2) miles thereof, into two or more parts for the purpose of laying out any subdivision of any tract or land or any addition to the City of Idalou, Texas, or for paying Put suburban lots or building lots, or any lots, and streets, alleys or parks or other portions intended for public use, or the use of purchasers or owners of lots fronting thereon or adjacent thereto for the purpose, whether immediate or future, of creating building sites. “Subdivision” includes re-subdivision. “Subdivision” shall also mean a tract of land intended to be built upon and for which a building permit is required.

No person shall create a subdivision of land, as herein defined, within the corporate limits of the City, or within one-half (1/2) miles thereof, without complying with the provisions of these

regulations. All plats and subdivisions of any such land shall conform to the rules and regulations herein adopted.

1.7.4 Repealing Clause

All ordinances or parts of ordinances, inconsistent or in conflict with the provisions of this Ordinance are hereby repealed. However, the repeal of existing ordinance by this Ordinance shall not affect or prevent the prosecution or punishment of any person for any act done or committed prior to the effective date of this Ordinance in violation of any ordinance hereby repealed; and prosecution for such offenses may be instituted and causes presently pending proceeded within all respects as if such prior ordinance or ordinances had not been repealed.

1.7.5 Severability Clause

If any article, paragraph, or subdivision, clause or provision of this Ordinance shall be adjudged invalid or held unconstitutional, the same shall not affect the validity of this Ordinance as a whole or any part or provision thereof, other than the part so decided to be invalid or unconstitutional.

1.7.6 Penalty Clause

Any person, firm, or corporation in violating any of the provision of this Ordinance shall be deemed guilty of a misdemeanor and, upon conviction, shall be punished by al penalty of fine not to exceed the sum of Two Hundred Dollars ($200.00) for each offense, and each and every day such offense is continued shall constitute a new and separate offense. This fine does not apply to a violation in the extraterritorial jurisdiction.

The enforcement of this Ordinance can be by all legal and equitable remedies, including but not limited to the remedy of injunction by a Court of competent jurisdiction.

1.8 CONTACT INFORMATION

Name	Title	Phone
Jeffrey Snyder	City Manager	(806) 892-2531
Brian Baumann	Director of Public Works	(806) 892-2531
OJD Engineering, Inc.	City Engineer	(806) 791-2300
Windstream	Cable/Telephone/Internet	(877) 520-5220
NTS	Cable/Telephone Company	(806) 797-0687
South Plains Electric Cooperative	Electric Company	(806) 775-7766
Excel	Electric Company	(800) 895-4999
Suddenlink	Cable/Telephone/Internet	(806) 793-2222
Atmos Energy	Gas Company	(800) 621-1867

2 WATER AND SANITARY SEWER DESIGN CRITERIA

The criteria set forth in this section is intended to cover most water and sanitary sewer design situations. The Director of Public Works retains the right to require different or other items not specifically stated in this policy. The following documents are among those which may be used for reference. The prices of the City documents are included in the Fee Section of this manual.

1) The most current guidelines, criteria, and regulations published by the Texas Commission on Environmental Quality (TCEQ), formerly known as the Texas Natural Resource Conservation Commission (TNRCC), relating to the design and construction of water and sanitary sewer mains in the State of Texas. The TCEQ should be contacted for a list of sources from which the TCEQ rules may be obtained.

2) The most current City of Idalou Master Plan for the Water Distribution which can be obtained from the City.

3) The most current City of Idalou Standard Specifications which can be obtained from the City.

4) The most current City of Idalou Standard Detail Sheets which can be obtained from the City.

2.1 UTILITY PLANS

Utility plans shall be prepared by, or under the direct supervision of a Texas licensed professional engineer. Final utility plans, including Standard Detail Sheets, shall bear the seal and signature of the engineer as required by the Professional Engineers Board. Final drawing shall be in conformance with generally accepted engineering practices and be of good quality and workmanship. Utility plans for water and sanitary sewer, including all main extensions shall be submitted directly to the City Engineer and shall not be contained with other improvements drawings, such as drainage, paving, or site plans.

2.2 SCALE

Plans and profiles for sanitary sewers, insofar as practical, shall be prepared using one of the following scales:

Horizontal Vertical

- 1 in. = 20 ft. H 1 in. = 2 ft. V or 1 in. = 10 ft. V
- 1 in. = 40 ft. H 1 in. = 4 ft. V or 1 in. =10 ft. V
- 1 in. = 50 ft. H 1 in. = 5 ft. V or 1 in. =10 ft. V

Exceptions to these standards shall be considered on a job specific basis by the City Engineer.

2.3 PROFILE VIEWS

Profile views are required for all sanitary sewer lines. Water lines 12 inches in diameter and larger shall have a profile view. Smaller water mains may also require a profile view at the discretion of the City Engineer.

2.4 FINAL DRAWINGS

Once the City Engineer's review has been completed, one reproducible set of the final drawings shall be submitted to the City Engineer on vellum for signatures. Vellum shall be 100% rag fiber and have medium weight, no less than 16 lbs.

Once the final plans are submitted to the City, the City Manager, Director of Public Works and the City Engineer will sign the title page. The signed vellum will be returned to the developer or developer's design engineer. The electronic drawings shall be submitted to the City in the same format and coordinate system as stated in Section 1.4.2. After being submitted to the City of Idalou, the final drawings become the property of the City and will not be returned to the engineer or developer.

2.5 PROJECT SHEET LAYOUT

The engineer may include water and sewer plans in one set of plans or water plans may be separate from sewer plans. Plan sheets shall be a nominal 24 inches wide by 36 inches long. Exceptions to sheet sizes will be considered on an individual basis. The following sheets will be required, in this order, for all sets of water and sewer plans:

1) A title page with signature blocks and a vicinity map. Signature blocks shall be provide for the City Manager, Director of Public Works and City Engineer.

2) The plat or an overall site plan.

3) Plan and plan/profile sheets.

4) Nonstandard Detail Sheets (if project requires it).

5) Most current applicable City of Idalou Standard Detail Sheets.

At a minimum, the following information shall be included in the detailed plans:

1) All existing and proposed utilities shall be shown in the plan and profile views. The method of determining the elevations shall also be described on the plans, i.e. estimated, field verified, as-built information, calculated, etc. All utilities, existing or proposed, shall be dimensioned off of property/right-of-way lines, and the utilities shall be labeled as existing or proposed.

2) Stations shall be shown for all bends, fittings, air valves, blowoffs, valves, manholes, point of curvature (P.C.), point of tangency (P.T.), point on a curve (P.O.C.), point of reverse curve (P.R.C.), end of line (E.O.L.), begin and end bores, begin and end casing, sewer taps, and other significant features as determined by the Director of Public Works.

3) All existing and proposed easements shall be shown and dimensioned.

4) Significant topographical, cadastral, and planimetric features shall be shown.

5) Existing ground within the right-of-way and easement, proposed or existing street and alley grades shall be shown. Street and alley grades must be those approved by the City Engineer.

6) Curve data for the centerline of the water main or sanitary sewer main shall be shown.

7) Existing and proposed street paving, alley paving, right-of-way (ROW), and easement widths shall be shown.

8) The location and width of proposed and existing sidewalks in the right-of-way and/or easements shall be shown.

9) At least one benchmark shall be clearly described and the elevation given on each plan and plan/profile sheet. The benchmark shall be based on NAVD 88 datum.

10) Existing water and sanitary sewer mains shall have elevations shown on the plans. The method of determining these elevations shall also be described on the plans, i.e. estimated, field verified, as-built information, calculated, etc.

11) A title block must be on each sheet of the plan, plan/profile, and detail sheets and shall include the name of the engineering firm responsible for the design, the page number of the sheet in the set of plans (the title page shall be considered to be Sheet 1), the scale of the drawings, and the name of the project.

12) Symbols and lines shall conform to those shown on the City's Standard Detail Sheets.

13) Stationing shall begin at the low end of sanitary sewer lines and be labeled at 50 ft. station increments. Stationing shall increase from left to right across the plan sheet, except as approved otherwise. Stationing shall use the arc length of a curve. The use of negative stations should be avoided except as approved otherwise. If the previous project stationing can be continued, the stationing may be extended into the new project.

14) All station equations shall be clearly shown on the plans.

15) The plans shall clearly indicate all lot numbers, block numbers, lot distances, street names, etc.

16) Existing storm sewers and other drainage facilities shall have elevations shown on the plans. The method of determining the elevations shall also be described on the plans, i.e. estimated, field verified, as-built information, calculated, etc.

2.6 ENGINEERING DESIGN

2.6.1 Submittal Letter to TCEQ

Before the preconstruction meeting can be held, the design engineer must send a submittal letter to the Wastewater Permits Section. The letter must be sent by certified mail and must be sealed by the design engineer.

The minimum information required in the letter is listed below.

1) The name and address of the design firm.

2) The name, phone number, and fax number of the design engineer.

3) The name of the entity which proposes to own, operate, and maintain the project through its design life.

4) The county(s) in which the project will be located with an identifying name for the project.

5) The permit name and permit number of the relevant wastewater treatment facility.

6) A statement verifying that the plans and specifications are in substantial compliance with all requirements of Chapter 317 - Design Criteria for Sewage Systems.

7) A brief description of the project scope which includes the specifics of the project, a description of deviations from the requirements of Chapter 317, including the use of nonconforming or innovative technology, and an explanation of the reasons for the deviations.

2.6.2 Texas Department of Transportation Permits

Any work performed in State right-of-way will require a permit from the Texas Department of Transportation (TXDOT). It is the responsibility of the engineer to complete the permit. The permit shall be forwarded to the Utilities Division for the signature of the Director of Public Works. The City of Idalou shall be designated as the owner of the proposed utility improvement.

2.6.3 Existing Water and Sewer Mains

Existing water mains, 16 inches and larger, and sanitary sewer mains, 15 inches and larger, may be uncovered by the contractor at the City's discretion. The City will not uncover any main deeper than 15 feet. A private contractor, at the engineer's expense, may uncover all other mains.

It is the responsibility of the engineer to request existing mains to be uncovered, unless the City requests otherwise. The City is providing this as a free service and will schedule these requests as quickly as possible, but it is the engineer's responsibility to schedule these requests in advance to eliminate timing conflicts. Abuses of this service, such as not having the survey crew on-site in a timely manner, will result in suspension of these services. The engineer shall be responsible for providing a survey crew to determine the elevation. In return for the City uncovering the existing lines, a copy of the elevations shall be provided to the City as soon as possible with a sketch clearly indicating the location which the line was uncovered, the type of pipe believed to be involved, the elevation determined, and the benchmark used to determine

the elevation. Failure to provide this information will result in a delay in approval of the plans until the information is received. The City will not be responsible for conflicts in elevation between existing lines and proposed lines.

The engineer shall be responsible for providing all nonstandard details as required. Horizontal field locations of public water and sewer lines may be obtained by contacting the Director of Public Works.

2.6.4 Water

The following design requirements apply:

1) All portions of a residential development shall be within 500 feet of a fire hydrant. All portions of a commercial or industrial development shall be within 250 feet of a fire hydrant. The Director of Public Works may require more hydrants where practical accessibility to fire hydrants is limited. Where fire hydrants are located at the end of a cul-de-sac, a hydrant shall be placed at the entrance of the street as well. Fire codes may require more fire hydrants than this design requirement.

2) Manual blowoffs, automatic air valves, and automatic air/vacuum valves may be required at high points or other locations as determined by the engineer or Director of Public Works. The engineer shall use good judgment when determining the placement of valves. Generally, valves shall be placed to allow for all new sections of mains to be adequately disinfected and pressure tested, but it is likely that more valves will be required. Final valve placement shall be at the discretion of the City Engineer and/or Director of Public Works.

3) All water mains shall have a minimum diameter of 8 inches. Fire hydrant leads, unless excessively long, may be 6 inches in diameter. If approved by the Director of Public Works, smaller mains may be allowed only when mains being tied into are smaller than 8 inches in diameter or other conditions as determined by the Director of Public Works.

4) Connections to existing water mains shall be in line with the existing main or perpendicular to it. Exceptions to this shall be on a project specific basis.

5) Fire hydrants placed in the middle of blocks along streets shall be located at common property lines between two lots.

6) Generally, water mains shall be routed such that they will not be placed in easements. Exceptions to this will be considered on a project specific basis. A water main located in an easement between two lots shall be placed in PVC casing pipe or steel casing pipe the length of the easement. The casing pipe shall be two standard pipe sizes larger than the water main pipe. The Director of Public Works may require other water or sanitary sewer mains be installed in casing as deemed necessary.

7) Dead end mains are not acceptable unless approved by the Director of Public Works.

8) Each square mile section shall have minimum 12 inch mains located at approximately the half section lines running both north-south and east-west.

2.6.5 Sewer

The following design requirements apply:

1) Manholes shall be placed as required by the TCEQ.

2) All sanitary sewer taps shall have a minimum depth at the property, ROW, or easement line of 4 feet minimum and 6 feet maximum. The engineer shall provide for service lines extending to the property, ROW, or easement lines. Taps shall be located in the center of each lot, including the last lot on a line. Taps shall be made perpendicular to the sewer main. The last tap on dead end mains may be made directly into the manhole or installed as a separate tap before the manhole. Exceptions will be considered on a project specific basis.

3) Sanitary sewer lines shall have a minimum diameter of 8 inches. The minimum cover shall be 6 feet except as determined otherwise by the Director of Public Works. Cover less than 6 feet may require the use of pressure class 150 C-900/905 pipe, a concrete cap, or another acceptable method. If approved by the Director of Utilities, smaller mains may be allowed only when mains being tied into are smaller than 8 inches in diameter or other conditions as determined by the Director of Public Works.

4) Sanitary sewer mains that are dead end mains shall extend to the center of the last lot served and a manhole will be required on the end of the line (cleanouts are not acceptable).

5) Lift stations and force mains shall be designed on a project specific basis at the direction of the Director of Public Works.

2.7 SURVEYING/STAKING

All bends, fittings, fire hydrants, air valves, blowoffs, valves, manholes, sewer taps, P.C.'s, P.T.'s, E.O.L.'s, begin and end bores, begin and end casing, and other significant features shall be staked and cuts provided for these items. Centerline points shall be provided at all points of intersection (P.I.) and others as necessary. P.I. points shall require offset hubs in relation to each tangent (i.e. each P.I. point will require two offset hubs, a backward offset hub and a forward offset hub). A staked point generally shall consist of a wooden hub, a wooden guard stake, and a wooden lathe. The station of the point staked shall be clearly labeled on the guard stake. Plastic flagging shall be provided on the wooden lathe.

Points which are in existing concrete or paving shall be marked in a suitable manner. Painting these points shall be carefully limited and shall not remain on the surface for an excessive period of time. Water mains should be flagged in blue, and sewer mains flagged in green. The guard stake and hub shall be painted surveyor's orange. It is the responsibility of the surveyor to make certain all points necessary for construction are in place and to replace those points which have been disturbed or knocked out. The surveyor may be required to meet with the City and/or the contractor to review the staking. Prior to the start of construction to determine when property corners must be staked and marked on the job location, the City Engineer will work with the surveyor. During construction, the surveyor may have to reestablish property corners at the request of the City or the contractor through the developer. The City shall bear no cost for this. Failure to comply may result in unnecessary delays.

Cut sheets/cards shall be provided to the City Engineer prior to issuing a Notice to Proceed letter. The City will then issue the cut sheets/cards to the contractor. No work shall be performed by the contractor prior to the issuance of the Notice to Proceed letter. Cut sheets/cards are required for all sanitary sewer main construction and may also be required, in some instances, for water main construction.

The engineer shall provide to the contractor all finished grades necessary for setting fire hydrants, valve boxes, manholes, etc. The developer and the contractor shall be responsible for coordinating all adjustments and making all adjustments to these items during paving and grading operations. The Director of Public Works must be contacted to inspect these adjustments. Failure to comply may result in the developer having to make these adjustments again after paving work has been performed. Any foreign material in the sanitary sewer and/or water installation from paving operations shall be removed by the developer. The developer shall be responsible for all damages which occur to the water and sanitary sewer systems during paving or other operations.

2.8 PUBLIC UTILITY EASEMENTS

It is the developer and/or surveyor's responsibility to provide the easement description to the City in accordance with the Texas Professional Land Surveying Practices Act. A Texas registered professional land surveyor will be required to affix his/her seal to the easement description if a metes and bounds description is required. For the purposes of easements, the City shall be considered the client and thus monumentation of easements described by metes and bounds shall be required. The developer/surveyor shall submit the easement description to the City who will then use the easement description as an exhibit in the formal easement document, submit it to the City Council for its acceptance, and then file the document with the appropriate county courthouse. In no case shall an easement for a water or sanitary sewer main be narrower than twenty feet (20 ft).

2.9 ACCEPTANCE OF MAINS

Before the City of Idalou will accept a main, the developer must comply with the items listed below.

1) Any deficiencies found by the Director of Public Works or by his agents have been corrected to the Director’s satisfaction.

2) The developer or the developer’s contractor shall post a maintenance bond with the City of Idalou equal to one hundred percent (100%) of the installation contract amount for a one-year period after the date of acceptance. After acceptance of the main, the developer or the developer’s contractor shall replace or repair any defects or failures due to workmanship or materials for a one year period.

3) The developer or the developer’s contractor is also responsible for any adjusting to valves, valve boxes, meter boxes, and manholes to the final pavement grade.

4) The developer shall have paid all costs associated with the installation of the main, including any fees owed to the City, and shall provide the City of Idalou with a copy of the Developer/Contractor Affidavit-of-Bills-Paid.

Note: No manholes shall be allowed on sanitary sewers within a 20 ft. wide easement. Where a manhole is required, a 20 ft. wide utility easement shall be provided and the utility locations shall conform to the requirements for a 20 ft. wide alley.

3 UTILITY EXTENSION & SERVICE TAP POLICY

This policy concerns the extension of water and sanitary sewer mains and the extension of service taps to all newly developed and existing lots. The intent of this policy is to establish the framework for the equitable provision of water and sewer service to all newly developed property and to provide a mechanism for extension of service to older unserved areas.

Although some of the definitions below are also included within the Glossary of this Development Policy Manual, others are definitions that pertain to this section only.

DEVELOPER - Any person, entity, or corporation who improves land, to effect a subdivision of land, or submits a conceptual development plan for City consideration.

DEVELOPMENT - Any tract of land platted or replatted for the purpose of commercial, industrial, institutional or residential use.

EVALUATED COST - The approximate installed cost per foot of each size water and sanitary sewer main as determined by the Director of Public Works

FRONTAGE FEES - Fees paid by developers or customers connecting to existing mains adjacent to their property. The frontage fee shall be based on one half the evaluated costs per foot of a nominal eight inch main times the front footage of the property to be served. Frontage fees are paid only once for the property served regardless of the number of taps made.

FRONT FOOTAGE - The platted distance along the right-of-way containing the main from which service is to be provided. For developments this distance shall included the distance across all alleys, streets and common property platted as part of the development. Minimum frontage shall be 50 feet.

MINIMUM SIZE MAINS - All water and sanitary sewer mains shall be at least eight inch nominal diameter.

OFF SITE MAINS - All mains not adjacent to or within a development or lot to be served.

ON SITE MAINS - All mains within a development and within dedicated right of ways.

OVERSIZE MAIN - A main installed by a developer within the development, which has been increased in size at the request of the Director of Public Works to serve future development of land not owned by the installing developer.

PROGRAM MAINS - Main extensions for which funds have been specifically budgeted.

REBATES - Funds paid to the individual or developer installing a main from which other later customers receive service. Rebates shall be made over a twenty-year period after acceptance by the City.

SANITARY SEWER SERVICE LINE - The pipe extended from the sanitary sewer main to the customer's structure or point of use.

SIDE MAIN - A main installed by a developer which lies adjacent to the developer's property.

TAP FEE - A fee collected by the City to defray the cost of installing individual water or sewer taps to serve a customer.

WATER SERVICE LINE - The pipe extended from the meter to the customer's structure or point of use.

3.1 SERVICE FROM EXISTING MAINS

3.1.1 Mains More than 20 Years Old

Where a main is adjacent to the property to be served and the main is more than twenty years old, no frontage fees will be required and service will be provided after receipt of the appropriate tap fee. Age of the main shall begin to accrue at the end of the calender year in which the main was accepted for service by the City. (i.e. A main accepted in June 1977 shall not be considered more than twenty years old until January, 1998.)

3.1.2 Mains 20 Years Old or Less

Where a main is adjacent to the property to be served and the main is twenty years old or less, service will be provided after receipt of frontage fees and the appropriate tap fee from the customer. The following fees are due before service can be made: frontage fee (50 ft. X ½ evaluated costs of an 8 inch main) and tap fee.

3.1.3 Service at an Alternate Location

Where a customer requests service at a location other than along an adjacent main, the customer shall pay the service tap fee and full cost of the main extension.

3.1.4 Increased Service Demand

Where a customer has a service demand greater than can be provided by the existing main, the customer shall pay the full cost of the extra or enlarged main extension.

3.1.5 Property Adjacent to Highways

Where a lot is located adjacent to a highway or street right-of-way greater than 120 feet in width and a main is located on the opposite side of the right-of-way, that main shall not be considered adjacent to the lot to be served. A main extension will be required in this case.

3.2 NO EXISTING MAINS FOR PREVIOUSLY PLATTED PROPERTY

This section applies to property that is platted but unserved prior to the adoption of this policy. Mains shall be extended to include the frontage of the property to be served. The City will extend the first 100 feet of offsite main free upon receipt of applicable fees covering the remainder of the extension for the lot to be served. The routing and size of any extensions shall be determined by the Director of Public Works. The minimum size main for both water and sewer extension shall be eight inch nominal diameter.

3.2.1 Extensions

Main extensions of non-programmed mains will be made by the City upon receipt of the evaluated cost of the main size determined necessary to serve the property and tap fees.

3.2.2 Rebates

Rebates shall be made annually as new customers are added to the main. Rebates shall be based on collection of frontage fees from new intervening customers adjacent to the main and by the addition of new customers tied to branches from the original main extension. New customers tied to branch mains shall have a rebate value of $200 per customer. Frontage owned by the entity or individual requesting the extension is not eligible for rebate. Rebates shall not exceed the amount of extension fees originally collected less frontage owned by the entity or individual requesting the extension.

3.3 DEVELOPER INSTALLED MAINS

The design, approval and installation of all developer installed mains shall follow the criteria established in the latest edition of the City's Development Policy Manual and Standard Specifications.

3.3.1 Existing Mains

Where existing mains are adjacent to or within a development, the explanation under "SERVICE FROM EXISTING MAINS" applies.

3.3.2 On-Site Mains

All lots within a platted area shall be served by water and sanitary sewer mains. A lot is considered served by a main where the main is adjacent to one side of the lot. The developer shall defray all costs associated with extending the mains within a development except for side mains, oversize mains, and extra depth sewer mains. The rebate for oversize mains, and extra depth sewer mains due developer will be made within sixty days of the written acceptance of the main by the City.

3.3.3 Side Mains

The City will rebate to the developer one half the evaluated cost of an eight inch nominal diameter side main. Rebates will be made annually as frontage fees are received along the opposite side of the main. In order for side main rebates to be made, the property on the opposite side of the side main must be owned by an individual or legal entity not associated with the developer. Side main rebates shall not apply to mains installed by a developer where in the opinion of the Director of Public Works, the main cannot be reasonably accessed from the opposite side. Mains located on four lane divided highways and rights of way greater than 120 feet in width shall not be eligible for side main rebates.

3.3.4 Oversized Mains

The City shall rebate to the developer the difference in evaluated cost between the oversized main and the size main required to serve the development as determined by the Director of Public Works. Oversize mains do not include mains oversized for grade purposes.

3.3.5 Extra Depth Sanitary Sewer Mains

Mains installed at extra depth in order to serve future development of land not owned by developer may be required by the Director of Public Works. Extra depth rebates will be made by the City at the rate of 10% of evaluated cost for each two feet of extra depth over 10 feet.

3.3.6 Off-Site Mains

Off-site mains shall be installed by the developer. Rebates for offsite mains installed by the developer shall be made annually based on collection of frontage fees from new intervening customers along the main and by addition of new customers at the rate of $200 per customer tied to branches from the main extension. Frontage owned by the developer along the main shall not be considered for rebates. Rebates shall not exceed the original cost of the main less frontage owned by the developer.

Where off site mains are installed adjacent to an existing development only frontage fees along the existing development will be rebated to the developer originally installing the main.

3.4 SERVICE TAPS

The tap shall be made at the location requested by the customer where reasonably possible, but not across adjacent property unless the customer has a perpetual private easement filed with the applicable county courthouse prior to service being provided for the service line and the main cannot be reasonably extended in the opinion of the Director of Public Works. Use of a perpetual easement shall not be a means for avoiding frontage fees or fees to extend mains.

The service line shall extend from the main to the right-of-way line or edge of easement perpendicular to the main where possible. The tap will not be made in such a manner that the private service line will run parallel to and within the right-of-way.

Existing taps shall be used where possible. Where the tap cannot be used, the customer shall pay for the abandonment of that tap and the tap fee for a new tap.

Request for additional sanitary sewer taps in excess of any taps currently serving the customer must be approved by the Director of Utilities.

Where existing service lines cross property not owned by the customer, the customer's property is considered served even when a main does not exist adjacent to the property. Should the customer desire to move their tap, the customer shall be required to pay for all main extension costs, abandonment fees and new tap fees.

3.5 FIRE TAPS

The City will make fire taps to existing mains for private fire suppression systems or private on site fire hydrants upon receipt of applicable frontage and fire tap fees. Where possible, taps will be made at the location requested by the customer. The customer shall be responsible for extending the fire line from the tapping valve into the property and providing necessary paving repairs and other repairs to facilities in the right-of-way or easement.

Where fire hydrants are desired on the customer's property, the customer shall own the hydrants and fire line and is responsible for the installation and maintenance of the hydrants and fire line.

Where, in the opinion of the Director of Public Works, property is not receiving adequate standard coverage the City will install necessary fire hydrants in the street right-of- way at no cost to the customer. The City will install additional fire hydrants requested by the customer in street right-orways upon payment of all applicable costs and fees.

3.6 ABANDONMENT OF TAPS

When a service tap is no longer to be used, the customer must pay the cost to plug and abandon the tap at the main. Abandonments will be performed by the City.

3.7 EXISTING AGREEMENTS

All existing agreements and contracts concerning water or sanitary sewer extensions shall remain in effect after this policy is adopted.

3.8 EXISTING DEVELOPED AREAS

This policy will apply to any existing development that requests utility service as though it is a new development seeking utility service.

3.9 PLANNING STANDARDS

To assure the orderly growth of areas outside the City of Idalou, the applicant will prepare a master plan for the development of the area to be served with the utilities. When the area is within a close enough proximity to the city limits of Idalou for the City to consider a potential for the annexation of the area within the next twenty years, then the City will prepare a master plan for the area adjacent to the utility line between the point of service and the city limits. In addition to the master plan requirements, any area requesting City utility service must meet the following minimum requirements:

1) All areas to be provided with utilities must be platted with all necessary easements and dedicated right(s)-of-way provided in accordance with the Development Policy Manual.

2) Where the proposed development is of a size that would normally require the dedication of park space, the developers will dedicate the land for such space to the City for a future park site. Should the City ever determine that the land dedicated for the park site would not be used as a park, it will revert to the original person(s) dedicating the site.

3) All streets within and adjacent to the development must be paved.

4) All manufactured home parks must meet all City of Idalou requirements for manufactured home parks.

5) No manufactured homes will be served that do not meet all requirements for manufactured homes within the City of Idalou.

6) The property must meet all subdivision platting, subdivision improvement, and building code requirements of the City.

7) No development will be served that fails to meet the requirements of the master plan prepared by the City or the developer for the area.

8) Any unified development or proposed development that requests service must have a property owners association or group that has received the legal status thereof to guide the development and continued maintenance of the area.

3.10 UTILITY STANDARDS

1) All utilities will be constructed in accordance with the minimum standards of the City of Idalou.

2) Customers will be required to pay for all costs involving the extension of service including, but not limited to, lift stations, water storage facilities, engineering, construction, and right(s)of-way acquisition. Recovery of capital costs will be through the normal recovery procedure of the Utility Extension Policy.

3) If annexation occurs, no reimbursement will be made for the cost of utility mains.

4) Backflow prevention devices will be installed on all service and will be inspected by the City. The City will set out all code-related inspection costs in the agreement with the person to be served with utilities.

3.11 EXCEPTIONS OR CONFLICTS

Any situation not covered by this policy shall be reviewed by the Director of Public Works. The Director of Public Works shall make a ruling on the resolution of the situation and that ruling shall be final.

3.12 FRONTAGE FEES AND EVALUATED COST

WATER		**SEWER**	
Frontage Fees	$ 6 / ft.	**Frontage Fees**	$ 7 / ft.
Evaluated Costs by pipe size:		**Evaluated Costs by pipe size:**	
6 in.	$11 / ft.	6 in.	$13 / ft.
8 in.	$12 / ft.	8 in.	$14 / ft.
10 in.	$14 / ft.	10 in.	$15 / ft.
12 in.	$17 / ft.	12 in.	$17 / ft.
16 in.	$21 / ft.	15 in.	$19 / ft.

Evaluated costs will be reviewed annually by the Director of Public Works and revised as necessary. Evaluated costs for pipe sizes other than those shown here shall be determined by the Director of Public Works.

4 FLOOD HAZARD AREAS

The City of Idalou and outlying areas are located on relatively flat land, therefore, surface drainage collects in the numerous playas (lakes) within the area. Playas, used for storage of rainfall runoff, vary in size and importance depending on the size and nature of the surrounding area which contributes runoff to the playas. The water collected in the playas eventually evaporates, seeps into the ground, or overflows into a downstream playa lake. All development must be made with full recognition of the importance of surface drainage collection, storage of the lake areas, and flood-prone areas.

In discussing special flood hazard areas, there are two main aspects to consider. One aspect refers to special flood hazard area insurance regulations while the other concentrates on local development regulations enforced by the City.

4.1 NATIONAL FLOOD INSURANCE PROGRAM

In 1968, Congress passed the National Flood Insurance Act and created the National Flood Insurance Program (NFIP) which is administered by the Federal Emergency Management Agency (FEMA). Through this program, federally-subsidized flood insurance is made available to residences and businesses located in special flood hazard areas. Before federal flood insurance can be made available to community residents, the community must adopt a federally-approved flood damage mitigation ordinance. The purpose of the program is to provide sensible floodplain management and to shift part of the cost of flood losses from the taxpayer to those people who choose to build in designated special flood hazard areas. These designated special flood hazard areas are shown on Flood Insurance Rate Maps (FIRM) as prepared by the Federal Emergency Management Agency (FEMA).

4.2 LOCAL PLAYA LAKE REGULATIONS

Refer to the City of Lubbock Playa Lake Policy for development within a playa lake.

5 STORM WATER MANAGEMENT POLICY

These policies shall govern the planning, design, construction, operation and maintenance of all storm water drainage facilities within the City of Idalou and all areas subject to its extraterritorial jurisdiction. Definitions, formulas, criteria, procedures and data presented herein have been developed to support these policies. If a conflict arises between the technical data and these policies, the policies shall govern.

5.1 ADMINISTRATIVE POLICY

5.1.1 Approvals

All storm water drainage related plans, public and private, must have written approval from the City Engineer prior to bidding or beginning construction.

5.1.2 Design Requirements

The design criteria presented in the City of Idalou Drainage Design Manual represent good engineering practice and should be utilized in the preparation of drainage plans and drainage facilities construction plans. The criteria are not intended to be an iron-clad set of rules within which the developer and engineer must work; they are intended to establish guidelines, standards and methods for sound planning and design. Alternative methods of design should be submitted in a timely fashion to the City Engineer for consideration.

The design criteria shall be revised and updated as necessary to reflect advances in the field of urban drainage engineering, urban water resources management, and as water quality and other regulations change.

Drainage plans and drainage facilities plans must be prepared, signed and sealed by a Texas licensed professional engineer. The City of Idalou and engineers will utilize the Manual in the planning of new facilities and in their reviews of proposed works by developers, private parties, and other governmental agencies.

5.2 DESIGN POLICY

5.2.1 Qualifications

An adequate storm sewer system, consisting of inlets, pipes, and other drainage structures, shall be constructed to conform to the current drainage requirements of the City of Idalou. If open channels are usted, side slopes of 4:1 with concrete pilot channels shall be constructed. All drainage related plans shall be designed by a Texas licensed professional engineer. The engineer shall attest that the design is in accordance with the City of Idalou Drainage Design Manual.

5.2.2 Computations

Computations shall be submitted for review to the City Engineer and shall be in accordance with the procedures, standards, and criteria of the City of Idalou Drainage Design Manual.

5.2.3 Drainage Systems and Design Storm Frequencies

Every area shall be evaluated for two separate and distinct drainage systems. The first drainage system to be evaluated is the minor system and the other is the major system as defined below. To provide for orderly urban growth, reduce costs to future generations, and prevent loss of life and major property damage, both systems must be planned and properly designed and implemented.

5.2.4 Minor Storm Provisions

The minor storm water drainage system is necessary to reduce maintenance costs, to provide protection against frequently occurring storms, to implement an orderly urban system, and to provide convenience to the residents. The minor storm water drainage system shall be designed to convey the runoff from a 2-year storm. A 2-year storm is one that has a 50% chance of being equaled or exceeded in any given year.

5.2.5 Major Storm Provisions

In addition to providing storm water drainage facilities for the minor storm runoff, provisions shall be made to prevent significant property damage and loss of life from the major storm runoff. These provisions shall be known as the major drainage system. The major storm water drainage system shall be designed to accommodate a 100-year storm. A 100-year storm is one that has a 1% chance of being equaled or exceeded in any given year. The impact of the major storm shall be investigated and adequate major storm facilities shall be provided. A well-planned major drainage system can reduce the need for minor storm water drainage systems.

The City Drainage Policy requires all development to include planning, design, and construction of minor and major storm water drainage systems in accordance with the Storm Water Management Criteria Manual.

There are many developed areas within the City of Idalou which do not conform to the drainage standards contained in the Manual. It is recognized that the upgrading of these developed areas to conform to all of the policy, criteria, and standards contained in the Manual will be difficult to obtain, short of complete redevelopment or renewal. Therefore, in the planning of drainage improvements and the designation of floodplains for existing developed areas, the use of the criteria and standards contained in the Manual may be varied or waived as determined by the City Engineer in accordance with established variance procedures.

5.2.6 Hydrologic Analysis

The determination of peak runoff magnitude shall be accomplished using either the Rational Method, HEC-1, HMS, or other computer modeling techniques and accepted methods approved by the City Engineer.

Areas Under 200 Acres

Design peak discharges for the minor and major storm water drainage systems for areas less than 200 acres may be computed using the Rational Method.

Areas Over 200 Acres

Design peak discharges for areas over 200 acres may be computed using the HEC-1, HMS, or other approved computer modeling programs. These methods shall be used for designing both the minor and major storm water drainage systems.

Where hydrographs are needed for flood routing through detention basins and other major drainage systems, they shall be computed using a hydrograph modeling technique approved by the City Engineer.

5.2.7 Accuracy

The peak discharges determined by analytical methods are approximations. The drainage system will rarely operate at the design discharge. Flow will always be more or less in actual practice, merely passing through the design flow as it rises and falls. Thus, the engineer should not overemphasize the accuracy of his computed discharges. The Engineer should emphasize the design of a practical and hydraulically balanced system based on sound logic and engineering.

5.2.8 Computer Models

A variety of computer models are available for hydrologic and hydraulic analyses. Approval of the City Engineer must be obtained before using models other than those specifically identified in the City of Idalou Drainage Design Manual. The most recent versions of the chosen model must be used.

5.2.9 Coordination of Planning Efforts

The planning for drainage facilities should be coordinated with planning for open space, transportation, utilities, recreation and solid waste collection. By coordinating these efforts, new opportunities can be identified which will assist in the solution of drainage problems. The planning of drainage facilities in coordination with other urban needs results in more orderly development and lower cost.

Open space may provide significant urban social benefits. Use of natural drainageways is often less costly than constructing and maintaining artificial channels. Combining the open space needs of a community with major drainageways can be a desirable conjunctive use.

The design and construction of new streets, alleys and highways should be fully integrated with drainage needs of the urban area to promote efficient drainage and avoid flooding hazards.

5.2.10 Use of Streets and Alleys

Streets are significant and important in urban drainage and shall be used for storm runoff up to reasonable limits, recognizing that the primary purpose of streets is for traffic. Limits of the use of streets for conveying storm runoff shall be governed by the design criteria in the following table.

An adequate storm sewer system consisting of inlet, pipes and/or excavated channels or natural creeks and other underground drainage structures with approved outlets shall be constructed where run-off of storm water and the prevention of erosion cannot be accomplished satisfactorily by surface drainage facilities. Areas subject to flood doncitions as established by the City will not be considered for development until adequate drainage has been provided.

5.2.11 Open Drainage Channels

In general, underground drainage shall be constructe in streets and alleys. If approved by the City Engineer, the Developer may provide, at his own expense, a right-of-way easement of sufficient width to permit excavation and maintenance of an open channel of satisfactory depth and width. The Developer shall complete all necessary excavation on the channel and shall sod

or seed the channel to prevent erosion. Unless the excavated channel bottom is in Chalk, Limestone, or other similar acceptable rock, a reinforced concrete pilot channel or concrete channel lining may be required by the City to prevent erosion or for access purposes. Location and type of construction of open channel shall be approved by the City Engineer.

Creeks may remain in open natural condition or excavated channels may be constructed provided they meet one of the fllowing requirements:

1. Creeks or excavated channels with side slopes of 4:1 or flatter from bottom of channel to top of bank may be platted as part of the individual lots. Adequate access and floodway easements shall be provided to insure protection of these areas for maintenance purposes.

2. Creeks of drainage ways with banks which have slopes steeper than 4:1 must be maintained by a maintenance entity other than individiaul lot owners. In such cases, the cree or excavated channel shall meet one of the following requirements:

    a. The area of the floodway shall be provided as a park of floodway management area. Prior to acceptance of any drainage way as a floodway management are by the City, the drainage way shall be cleared of all debris, trash and al objectionable underbrush and weeds.

    b. Creekds or drainage ways in any areas which have private maintenance provisions other than individual lot owners, shall not be required as floodway management areas. The creeks or drainage ways in these areas shall not be maintained by the City. Adequate utility access and floodway easements shall be provided to ensure protection of these areas for maintenance purposes.

    c. Lakes, detention ponds, and retention ponds may be constructed in all areas provided they are approved by the City Engineer. The City may assume maintenance responsibilities for this type of facility, if approved by the City Council; however, easements shall be provided to assure protection of these areas for maintenance purposes.

    d. Brick or Masonry Headwalls: Headwalls constructed in Public Road right-of-way are suggested to have brick or stone facing. Safety grates shall be provided on all storm sewers.

    e. Storm sewers may be constructed across the front and sides of all developments other than residential.

    f. Other innovative drainage concepts will be considered if approved by the City Engineer.

Natural drainageways that have carried the storm water prior to development should continue to be used to carry the storm water after development. Natural watercourses, perhaps wet only during and after large rainstorms, generally should not be filled, straightened, or altered significantly. Channelizing a natural waterway tends to reduce natural storage, increase flow velocity and cause higher downstream peaks, often to the detriment of those downstream as well as those adjacent to the channel. Effort must be made to reduce flood peaks and control erosion so that the natural channel is preserved. Therefore, drainage designs which include new

or reconstructed drainage channels should be carefully weighed against the environmental and financial considerations of maintaining a natural drainageway.

Artificial, man-made channels may or may not follow the natural contours, but normally operate more efficiently when the natural contours are used. The design of man-made open channels involves making decisions as to the channel routing, alignment, cross-section and lining to achieve an optimum shape and profile that is aesthetically, politically, environmentally and economically feasible. All open channels should be routed and designed to avoid or minimize safety hazards. Generally speaking, a stabilized natural channel or the artificial, man-made channel which most nearly conforms to the character of a stabilized natural channel is the most efficient and most desirable.

New or reconstructed drainage channels shall convey the 5-year storm on an improved surface other than grass. Concrete riprap is preferable for the improved surface.

A dedicated drainage easement shall be provided with all drainage channels. This easement shall also provide a minimum access width of 20 feet from the channel bank on each side unless otherwise approved by the City Engineer. For some small channels, access may be provided on one side only. The access portion of dedicated easements shall be sufficiently cleared and graded to allow easy access by maintenance equipment.

In reviewing any development, the method of conveying storm water must be reviewed in relation to the impact upon the development and citizens using the development. Some concerns that need to be addressed in determining the appropriate method of drainage in or near a residential development or areas with high citizen usage are:

> the depth and velocity of the channel flow, the method of maintenance of the natural drainageway or artificial channel, and the open space requirements adjacent to the natural drainageway or artificial channel to make them available for purposes other than the conveyance of storm water, purposes which are compatible with periodic inundation.

Developers must work with the Engineering, Parks, and Planning Departments to assure that the needs of the citizens are considered when designing the drainage systems for residential subdivisions. If the developer and City staff cannot reach agreement on the best method of handling storm water drainage, the issue shall be presented to the City Council, who shall be assisted by the City Engineer.

5.2.12 Playa Effect and Tailwater

The depth of flow in the receiving drainageway or playa must be taken into consideration for backwater computations for both the minor and major storm runoff. Backwater computations shall assume a starting elevation greater than or equal to that for the same return period as the minor and major design storms assuming a fully developed watershed.

5.3 FEMA NATIONAL FLOOD INSURANCE PROGRAM

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) which enables property owners to purchase flood insurance at a reduced cost. In return for making flood insurance available for existing structures, the

participating community agrees to regulate new development in Special Flood Hazard Areas (SFHAs). These SFHAs are areas that have special flood and/or flood-related erosion hazards. These regulations are adopted in the form of a Flood Damage Mitigation ordinance.

FEMA publishes Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) showing flood hazard areas and the degree of risk in those areas. An FHBM is based on approximate data and identifies, in general, the Special Flood Hazard Areas within a community. FHBM's are used for floodplain management and insurance purposes during the emergency phase of the NFIP. When a detailed Flood Insurance Study has been conducted the FIRM will show base flood elevations, insurance risk zones and flood plain boundaries and may show floodways in water course locations.

If a flood map is believed to be incorrect, procedures have been established to change or correct a flood map. They include Letter of Map Amendments (LOMA); and Letter of Map Revisions (LOMR). A LOMA results from a technical data or scientific data review submitted to FEMA by the owner who believes their property has been incorrectly included in a designated Special Flood Hazard Area. A LOMR is used to change flood zones, flood delineations, flood elevations, and planimetric features. A LOMR is an amendment to the effective FEMA map and is usually followed by a physical map revision. A physical map revision, initiated through FEMA, is an official republication of a map to effectuate changes to flood insurance zones, floodplain delineations, flood elevations, floodways, and planimetric features.

All developments that require a Storm Water Pollution Prevention Plan (SWPPP) in compliance with the National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act must do so prior to development. The developer and the contractor must prepare the SWPPP and submit the Notice of Intents (NOI) and Notice of Terminations (NOT) in accordance with the Idalou Code of Ordinances.

5.3.1 Playa Management

Refer to the City of Lubbock Playa Lake Policy for development within a playa lake.

5.3.2 Erosion and Sediment Control

The need for sediment and erosion control facilities, either permanent or temporary, shall be determined according to the standards for sediment and erosion control in developing areas as stated in the Storm Water Management Criteria Manual, the NPDES or Texas Pollutant Discharge Elimination System (TPDES) program.

A temporary erosion and sediment control plan is required for all developments. Any temporary erosion and sedimentation control facilities shall be constructed prior to any grading or extensive land clearing. These facilities must be maintained until construction and landscaping are completed and the potential for significant erosion has passed.

5.3.3 Storm Water Transfer

Planning and design of storm water drainage systems should not result in the transfer of drainage problems from one location to another. Channel modifications which create or increase flooding downstream shall be avoided, both for the benefit of the public and to prevent damage to private parties. Erosion and downstream sediment deposition, increase of runoff peaks, and debris transportation should be avoided.

The subdivision development process can significantly alter historical or natural drainage paths. When these alterations result in a subdivision outfall system that discharges back into the natural drainageway at or near the historical location, the alterations are generally acceptable.

Master planning and any conceptual development plan must be based upon potential future upstream development as determined by the City Engineer.

The policy of the City is to avoid transfer of storm water drainage runoff from one basin to another and to maintain historical drainage paths. However, the transfer of drainage from basin to basin is a viable alternative in certain instances and will be reviewed on a case by case basis.

5.3.4 Detention and Retention

Storm water runoff may be stored in detention and retention basins and playas. Such storage reduces the drainage capacity required, thereby reducing the land area and expenditures required downstream. Multipurpose utilization of such storage areas is encouraged. Detention/retention basins shall be analyzed both individually and as a system to assure compatibility with one another and with the overall Master Drainage Plan. All methods of analysis shall be approved by the City Engineer.

Storage of storm water runoff close to the points of rainfall occurrence such as the use of parking lots, ball fields, property line swales, parks, road embankments, borrow pits and on-site ponds is desirable and encouraged.

Parking lots, such as at shopping centers, create rapid runoff with high discharge rates. Parking lots should provide for temporary storage of runoff except where such storage is impractical. Wherever reasonably acceptable, parks should be used for short-term detention of storm runoff to create drainage benefits.

Maintenance of detention and retention basins requires the periodic removal of debris and sediment. Without maintenance, a basin will become unsightly, a social liability and eventually ineffective as a detention or retention basin. Maintenance of public basins will be assumed by the City when such basins are designed and built in accordance with the Storm Water Management Criteria Manual and adequate maintenance provisions, including access, are provided.

5.3.5 Storm Water Runoff Quality

The policy of the City of Idalou is to include water quality considerations in planning for storm water drainage facilities. Sediment and debris must be collected and removed from storm waters by using detention storage or other means. Storm water facilities shall be compatible with the City's National Pollutant Discharge Elimination System (NPDES) permit, if any. The City drainage policy shall require planning for water quality management of storm water runoff. The management of overall water quality of storm water drainage is required of all new developments and must be compatible with the City's NPDES permit, if any. Any construction activity may require a general storm water discharge permit from the Environmental Protection Agency.

5.4 DRAINAGE PLAN REQUIREMENTS

A Drainage Plan shall be prepared for any development within a drainage basin. The purpose of the drainage plan is to identify existing and proposed hydrology and hydraulics of the site and the proposed storm water drainage system. The plan shall also propose specific solutions to drainage problems that would occur as a result of development. Detailed analysis of drainage basin hydrology and hydraulics is required. Alternative solutions to drainage problems shall be noted and the capacity of facilities on and off-site shall be evaluated. Specific improvements including open channels, storm drains, grading, erosion and sediment control, inlets, culverts, detention/retention basins and other improvements shall be located and sized to meet the requirements of the minor and major drainage systems. The plan must describe the general treatment of drainageways, including safety and maintenance, and outline the protection of public facilities and the protection of private property adjacent to the drainageways.

There are many properties within the City of Idalou that offer opportunities for redevelopment or in-fill development. It is recognized that most of the existing developed area around these properties will not conform to the drainage standards established in the City of Idalou Drainage Design Manual. It is also recognized that upgrading the existing developed areas to conform to all the policy, criteria and standards in the City of Idalou Drainage Design Manual will be difficult. Therefore, in planning the drainage improvements and the design of redevelopment or in-fill projects, the use of the criteria and standards contained in the City of Idalou Drainage Design Manual may be varied or waived as appropriate by the City Engineer.

At a minimum, a drainage plan shall be submitted for all developments that certifies that buildings set 18 inches above the highest point, being the curb or the alley, will be protected from the major storm. If there is no curb and gutter, a minimum building floor elevation shall be established for each building site that is at or above the level of the major flood.

5.4.1 Drainage Plan Submittal Standards

Plans and profiles shall be drawn on sheets 24" x 36" or 11" x 17" to a horizontal scale of 1"=50' and to a vertical scale of 1"=2' or 1"=5' (scales may vary on special projects, such as culverts and channel cross sections).

Original drawings shall be presented to the City Engineer prior to receipt of final approval and shall remain the permanent property of the City of Idalou. The City Engineer will make reproducibles and distribute them to the engineer of record the developer, and pertinent City personnel.

Plans for the proposed storm water drainage system shall include property lines, lot and block numbers, dimensions, right-of-way and easement lines, flood plains, street names, paved surfaces (existing or proposed), location, size and type of inlets, manholes, culverts, pipes, channels and related structures, contract limits, outfall details, miscellaneous riprap construction, contours, and title block.

Profiles shall indicate the proposed system (size and material) with elevations, flowlines, gradients, left and right channel bank profiles, station numbers, inlets, manholes, groundline and curbline elevations, typical sections, riprap construction, filling details, minimum permissible building floor elevations within 100-year floodplains and adjacent to open drainage features, pipe crossings, design flow capacities and velocities, and title block.

5.5 OPERATIONS AND MAINTENANCE

Operation and maintenance of storm water drainage facilities and playas is required to ensure that they will perform as designed. Channel bed and bank erosion, drop structures, pipe inlets, and outlets, pumping facilities and overall condition of the facilities shall be routinely observed and repaired as necessary to avoid reduced conveyance capacity, displeasing aesthetics and ultimate failure. Sediment and debris shall be periodically removed from channels, storm drains, detention basins and retention basins. Trash racks and inlets shall also be routinely cleared of debris to maintain system capacity.

The developer shall provide for perpetual maintenance of private drainage facilities. Private drainage facilities are those drainage improvements which remain on private property, are designed to serve only private property and are not owned by the City. The City will provide for perpetual maintenance of public drainage facilities after the warranty period.

The City Drainage Policy requires that access be provided to all storm water facilities for maintenance and observation. Developers shall be responsible for providing system features to facilitate maintenance of minor drainage systems, including inlets, pipes, culverts, channels, ditches, detention basins and retention basins.

6 STREET, ALLEY AND DRAINAGE FACILITIES DESIGN CRITERIA

The criteria discussed in this section is intended to cover most street, alley, and drainage facilities design situations. The Director of Public Works retains the right to require other items not specifically stated in this criteria. Streets, alleys, and storm water drainage facilities must meet the City design and construction standards for developments located inside the City limits and within Idalou's extraterritorial jurisdiction (ETJ), which extends a ½ mile beyond the City limits.

6.1 PAVING POLICY

6.1.1 General Provisions for City bid paving projects

1) For the purpose of this policy, the term "paving" shall include the street paving and concrete curb and gutter or concrete drainage valleys, as applicable.

2) Paving shall be constructed in accordance with plans and specifications expressly approved by the City Engineer.

3) The City will, at the developer's cost, adjust and/or replace improvements such as existing private drives, sidewalks and retaining walls.

4) Adjacent property owners shall be responsible for removal from the construction area (within the public right-of-way) any of their own improvements, such as fences, trees, shrubs, and sprinkler systems prior to construction starting. Otherwise the contractor will remove and dispose of the improvements.

5) The City Engineer will be responsible for review and periodic construction inspection on all paving projects.

6) Paving costs shall include the cost of any required sub-grade and base stabilization.

7) Street paving shall include concrete curb and gutter unless otherwise specifically approved by the City Engineer.

8) Street paving widths shall comply with those widths established by the City Engineer.

9) The planned future use of the abutting property will determine what amount adjacent property owners must contribute to the construction costs.

10) All alley and street paving projects must tie into existing paving at both ends or consist of one or more complete blocks.

11) On paving projects initiated by the City, storm sewer cost will be borne by the City.

6.1.2 Streets

Horizontal and vertical alignment design shall conform to the criteria in "A Policy on Geometric Design of Highways and Streets" as prepared by the American Association of Highway and Transportation Officials (AASHTO) dated 1990 and shall be performed by a Texas licensed

professional engineer. Deviations or variances from these standards will be reviewed and considered for approval on a case-by-case basis.

6.1.3 Street Design

1) Streets constructed within the City shall be classified according to the following criteria:

Minor	50 foot right-of-way
Collector	65 feet right-of-way
Arterial	100+ feet of right-of-way

2) Provision shall be made for the extension of arterial streets in accordance with the transportation plan. Arterial streets shall intersect at 90 degree angles unless otherwise approved by the City. Collector streets shall be provided for the circulation of traffic through a subdivision and connection to the arterials. Adequate local streets shall be provided to accommodate access within the subdivision. Residential streets shall be laid out so that they discourage their use by through traffic. Street alignments with centerline offsets of less than 125 feet shall be prohibited. Refer to the City of Idalou's Standard Details for typical roadway sections.

3) Half-streets shall be prohibited, except when essential to the responsible development of the subdivision and where the City Council finds it will be practical to require the dedication of the other one-half when the adjoining property is subdivided.

4) Strips of privately owned property reserved for the obvious purpose of controlling access to streets shall be prohibited except where control is definitely placed in the City under conditions approved by the City Council.

5) A cul-de sac shall not be longer than 600 feet and at the closed end shall have a turnaround provided, having a minimum outside roadway diameter of 80 feet and a minimum street property line diameter of 100 feet. Parking islands shall be required if on-street parking is desired in the cul-de-sac. If parking islands are included, the diameter of the cul-de-sac shall be designed to facilitate circular movement of traffic around the cul-de-sac.

6) At the intersection of a new subdivision street with an existing boulevard arterial, the Developer of the subdivision shall construct a median opening in the boulevard, unless otherwise directed by the City.

7) Blocks shall be platted to allow two tiers of lots. All lots shall be adjacent to a dedicated street to which access is allowed. Where a tract of land is subdivided into parcels that are larger than normal building lots, such parcels shall be arranged to permit the opening of future streets and a logical ultimate re-subdivision. Block lengths, generally, should not exceed 1,200 feet in length as measured from street centerlines.

8) Escrows for Adjacent Streets:

   a. When a proposed subdivision of land abuts on both sides of an existing substandard road according to the then-existing current City of Idalou standards, the Developer shall be required to improve the existing road to bring the same to the City of Idalou standards. Any reimbursement, if due, to the Developer by the City will be made when funds become available.
   b. If the proposed subdivision is located along only one side of a substandard road, and when in the City Council's judgment, it is not feasible to reconstruct said substandard road at the time of developemtn of said substandard road at the time of development of said subdivision, the City Council may permit the Developer to pay into escrow an amount equal to the Developer's share of the cost of said improvements as a condition for the approval of the final plat of the subdivision. The amount of escrow shall be determined by a "pro rata" charge as prescribed by the City and shall be payable prior to approval of plans by the City Engineer.
   c. When funds have been provided and placed in escrow with the City of Idalou for the development of a substandard road and the road is reconstructed by others at no cost to the City, the escrowed funds and accrued interest, if any, shall be refunded to the Developer after completion and acceptance of the improvements. In the event that a portion of the cost is borne by the City, the escrowed funds and accrued interest, if any, shall be refunded to the Developer after completion and acceptance of the improvements. In the event that a portion of the cost is borne by the City, the difference between the Developer's actual proportionate cost and the escrowed funds, including accrued interest, if any, shall be refunded to the Developer after completion and acceptance of the improvements.
   d. Whenever under any of the provisions of this section, funds are required to be escrowed for the cost of future improvements to substandard roads, the form of such escrow shall be cash or its equivalent.

6.1.4 Drainage Facilities

Storm water drainage facilities shall conform to the criteria in the latest edition of the City of Idalou Drainage Design Manual.

6.1.5 Alleys

Alleys shall be designed to accommodate required utilities, storm water from adjacent lots and tracts and expected vehicular traffic. Alleys are required in all residential subdivision blocks. Alleys shall have a minimum right-of-way width of twenty (20) feet. Alleys of a minimum width of 24 feet of paved surface or adequate off-street loading space shall be provided in business blocks.

6.1.6 All Projects

1) Projects shall have a Storm Water Pollution Prevention Plan (SWPPP).

2) Street, alley and drainage projects shall be coordinated with other utility, communications and development projects to prevent construction conflicts.
3) The project engineer shall contact all affected utility companies and other companies who have facilities or easements within the project site.

6.2 PLANS

Plans shall be prepared by or under the direct supervision of a Texas licensed professional engineer. Final plans shall bear the seal and signature of the engineer as required by the Professional Engineers Board. This requirement includes the Standard Detail Sheet(s).

6.3 SCALE

Plans and profiles for streets, alleys and drainage facilities, insofar as practical, shall be prepared using one of the following scales:

Horizontal Vertical

- 1 in. = 20 ft. H 1 in. = 2 ft. V or 1 in. = 10 ft. V
- 1 in. = 40 ft. H 1 in. = 4 ft. V or 1 in. =10 ft. V
- 1 in. = 50 ft. H 1 in. = 5 ft. V or 1 in. =10 ft. V

Exceptions to these standards will be considered on a job specific basis by the City Engineer.

6.4 PROFILE VIEWS

All streets, alleys and drainage facilities shall have a profile view shown.

6.5 FINAL DRAWINGS

Once the City Engineer's review has been completed, one reproducible set of the final drawings shall be submitted to the City Engineer on vellum for signatures. Vellum shall be 100% rag fiber and have medium weight, no less than 16 lbs.

Once the final plans are submitted to the City, the City Manager, Director of Public Works and the City Engineer will sign the title page. The signed vellum will be returned to the developer or developer's design engineer. The electronic drawings shall be submitted to the city in the same format and coordinate system as stated in Section 1.4.2. After being submitted to the City of Idalou, the final drawings become the property of the City and will not be returned to the engineer or developer.

6.6 PROJECT SHEET LAYOUT

The engineer may include water and sewer plans in one set of plans or water plans may be separate from sewer plans. Plan sheets shall be a nominal 24 inches wide by 36 inches long. Exceptions to sheet sizes will be considered on an individual basis. The following sheets will be required, in this order, for all sets of water and sewer plans:

1) A title page with signature blocks and a vicinity map. Signature blocks shall be provide for the City Manager, Director of Public Works and City Engineer.

2) The plat or an overall site plan.

3) Plan and plan/profile sheets.

4) Nonstandard Detail Sheets (if project requires it).

5) Most current applicable City of Idalou Standard Detail Sheets.

At a minimum, the following information shall be shown on all drawings:

1) All existing and proposed utilities shall be shown on each sheet in both plan and profile views. All utilities, existing or proposed, shall be dimensioned off of property/right-of-way lines.

2) Stations shall be shown for all significant utility facilities and features as determined by the Director of Public Works or his representative.

3) All existing and proposed easements shall be shown.

4) Significant topographical, cadastral and planimetric features shall be shown.

5) Existing ground within the right of way, proposed or existing street or alley grades shall be shown. Street, alley and drainage facility grades must be those approved by the Public Works Division. Minimum street curb and gutter and alley grades are 0.4 percent with valleys being 0.5 percent or greater. The minimum percent grade for curb and gutter curves leading into and around cul-de-sacs shall be 0.6 percent. Percent grades around curb and gutter radii at street intersections shall be minimum 1.5 percent and maximum 5 percent.

6) Curve data for the centerline of the streets and alleys shall be shown.

7) Existing and proposed street, alley, and right-of-way (ROW) widths shall be shown.

8) The location and width of proposed and existing sidewalks in the right-of-way shall be shown.

9) At least one benchmark per plan and profile sheet shall be clearly described and the elevation shown. The datum must be identified, NAVD 88.

10) Existing water mains, sanitary sewer lines, storm sewer lines, natural gas lines, underground electrical cable, telephone cable, traffic signal cable, petroleum product lines and other product transmission lines shall have elevations shown on the plans. The methods of determining these elevations shall also be on the plan and profile sheets.

11) A title block must be shown on each sheet of the plans which shall include the name of the engineering firm responsible for the design, the page number of the sheet in the set

of plans (the title page shall be considered to be Sheet 1), the scale of the drawings and the name of the project.

12) Symbols and lines shall conform to those shown on the City's Standard Detail Sheets.

13) Stationing shall begin at the point the new street, alley or drainage facility intersects with an existing street, alley or drainage facility. Stationing shall increase from left to right across the plan sheet, except as approved otherwise. Stationing shall use the arc length of a curve. The use of negative stations should be avoided except as approved otherwise. If the previous project stationing can be continued, the stationing shall be extended into the new project.

14) All horizontal alignment equations shall be clearly shown on the plan and profile sheets. Additional layout information is required where profile grades do not parallel station lines (culde-sacs).

15) The vertical alignment of existing streets and alleys shall continue into the new project. Exceptions shall be on a project specific basis.

16) The plans shall clearly indicate all lot numbers, block numbers, lot distances, street names, etc.

17) Lot distances along the project boundaries shall be shown.

18) The field book number and its pages or diskette and filename that contain the recorded survey information shall be shown on each plan and profile sheet.

19) Each existing and proposed street and alley shall be properly dimensioned.

20) The distance from proposed back of curb to the property/right-of-way line shall be shown.

21) Existing driveways and walks shall be dimensioned and laydown widths shall be shown.

22) The driveways and walks elevations shall be shown in the profile view.

23) Existing paving and curb and gutter shall be shown.

24) All curb and gutter radii shall be shown.

25) All existing and proposed valleys with direction of storm water flow shall be shown.

26) All horizontal ties to existing streets, alleys and lot corners shall be shown.

27) Top of curb elevation at each station, points of curvature (P.C.), points of tangency (P.T.), vertical points of intersection (V.P.I.) and end of separate curbs shall be shown. Curb returns and other critical points where construction may temporarily terminate shall be shown.

28) Typical paving and cross sections shall be shown on the detail sheets.

29) All horizontal alignment information shall be shown.

30) If the project requires bid items with volume calculations, the cross sections will be included in the plans on separate sheets.

31) The project shall have a proposal detailing the construction by acceptable bid items.

32) A construction cost estimate prepared by the engineer of record shall accompany the project plans unless the developer requests otherwise.

33) At least one plan and profile sheet shall show the standard legend.

34) When a street incorporates curves into its length, stationing can remain along the center line or be presented along each back of curb and then a station equation at the point of tangency.

35) In cul-de-sacs, stationing shall be along the back of curb.

6.7 SPECIFICATIONS

The latest edition of the City of Idalou's Standard Specifications shall govern all construction items incorporated into the project. Alternatives can be made to the standard specifications. However, alternatives must be approved by the City Engineer prior to incorporation into plans. The engineer of record will provide full construction details and specifications for all approved alternatives.

6.8 ENGINEERING DESIGN

6.8.1 Approval From City Engineer

The engineer shall submit the project design report, drainage plan and construction plans to the City Engineer for review and approval.

6.8.2 Texas Department of Transportation Permits

Any work performed in State right of way will require a permit from the Texas Department of Transportation (TXDOT). The design engineer must obtain this permit. As a minimum, the City and the Contractor shall receive a copy of this permit prior to the start of construction. Construction shall not begin until a copy of all proper permits have been received by the Director of Public Works.

6.8.3 Existing Water And Sewer Mains

Existing water and sanitary sewer mains will be uncovered by the City at the engineer's request and with City approval. It will be the engineer's decision to uncover existing mains, unless the City requests otherwise. The City is providing this as a free service and will schedule these requests as quickly as possible, but it is the engineer's responsibility to schedule these requests in advance to eliminate timing conflicts. The engineer shall be responsible for providing a survey crew to determine the elevation. In return for the City uncovering the existing lines, a copy of the elevations shall be provided to the City as soon as possible with a sketch clearly indicating the location which the line was uncovered, the elevation determined, and the

benchmark used to determine the elevation. The City will not be responsible for conflicts in elevation between existing lines, proposed lines and proposed travelways.

6.9 CONSTRUCTION STAKING

The horizontal and vertical control and other significant features shall be staked and cut/fill sheets shall be provided to the Contractor and affected utilities after City approval. A staked point generally shall consist of a wooden hub and wooden guard stake or lathe. The station of the point staked shall be clearly labeled on the guard stake. Plastic flagging of the appropriate color shall be provided on the wooden lathe. The guard stake and hub shall be painted the appropriate color. It is the responsibility of the developer to make certain all points necessary for construction are in place and to replace those points which have been disturbed or knocked out. A sufficient number of property corners must be monumented and marked to aid construction staking. The City Engineer and surveyor are to meet prior to construction to work out the details regarding monumentation and staking of property corners.

Cut/fill sheets prepared by the engineer or surveyor shall be provided to the City Engineer at least two working days prior to the start of construction. The City will then issue the cut/fill sheets to the contractor, surveyor, and the utility companies. No work shall be performed by the contractor prior to the issuance of cut/fill sheets unless directed otherwise by the City Engineer.

The engineer and surveyor shall provide to the contractor all finished grades necessary for the project that are shown on the project plans. All grades must be approved by the City prior to any distribution. The contractor shall be responsible for making all adjustments to these items during later construction operations.

The surveyor shall provide metes and bounds description of all easements. A registered professional land surveyor shall verify that all rules and regulations have been met by affixing his/her seal to this document. The City will then prepare the easement document, send to the City Council for acceptance, and file this with the appropriate courthouse.

6.10 CONSTRUCTION OBSERVATION

The City of Idalou will provide periodic inspection by the City Engineer. The day-to-day construction inspection shall be the responsibility of the developer. The City Engineer shall be present during all field testing. It is the responsibility of the developer that the City Engineer is notified at least 48 hours prior to any testing.

7 DRIVEWAYS AND PARKING LOTS

7.1 DRIVEWAYS

The efficiency and safety of a roadway facility without control of access depends to a large extent upon the amount and character of roadside interference, most of which originates in vehicle movements to and from businesses, residences, or other development along the roadway. Interference resulting from indiscriminate roadside development and uncontrolled driveway connections results in lowered capacity and increased hazard. Accordingly, regulation and overall control of driveway connections are necessary to provide efficient and safe operation of the roadway.

7.2 PERMIT

A driveway permit shall be obtained from the City of Idalou before any person removes, alters, or constructs any curb, approach, or gutter on any public property. One of the requirements in obtaining a permit is the submission of a scaled plot plan showing the location of property lines, streets, alleys, proposed construction, proposed and/or existing off-street striped-off parking, and all existing buildings or structures on the lot. If the driveway is part of new construction, the driveway permit may be considered as part of the building permit obtained from the Building Inspection Department.

The City Engineer has the authority to prohibit a driveway in a requested location as long as there is adequate access to the property.

7.3 PROHIBITED LOCATIONS

No driveway will be permitted to encompass or encroach upon any utility or municipal facility. The relocation of utilities and municipal facilities may be authorized by the City of Idalou; however, such relocation will be made at the expense of the person requesting the permit.

7.4 DEFINITIONS

For the purpose of this section of the manual, the following definitions of driveway types shall apply:

Residential Driveway - one providing access to a single family residence or a duplex.

Commercial Driveway - one providing access to an office, retail, or institutional building or to an apartment building having three or more dwelling units. Such buildings are customarily serviced by trucks but as an incidental rather than as a principal driveway use. Industrial plant driveways whose principal function is to serve administrative or employee parking lots are also considered to be Commercial Driveways.

Industrial Driveway - one directly serving substantial numbers of truck movements to and from loading docks of an industrial facility, warehouse or truck terminal. A centralized retail development, such as a community

or regional shopping center, may have one or more driveways specially designed, signed and located to provide access for trucks. They are classified as Industrial Driveways.

7.5 DRIVEWAY FREQUENCY

In order to insure safe and efficient operation of the Idalou street system, the frequency of direct access driveways for each functional classification of street shall be as follows:

FREQUENCY OF DRIVEWAYS

Functional Classification	Frequency (excludes circular driveways)	
	Residential Driveways	Commercial and Industrial Driveways
Primary Arterial	Prohibit	Up to two per 300' frontage
Secondary Arterial	Special Cases Only	Up to two per 200' frontage
Collector	One per frontage	Up to two per 100' frontage
Local	Up to two per frontage	Up to two per 100' frontage

All streets not designated with these classifications are considered Local streets. Frontage roads along expressways and freeways will be considered as Collector streets.

Where special circumstances warrant, an additional driveway may be permitted. Applicants should contact the Director of Public Works concerning special cases or any case not covered by the frequency standards.

7.6 DESIGN STANDARDS

Refer to the City of Idalou's Standard Details.

Based on a traffic engineering study, the City Engineer or his appointed agent shall have the authority to override the driveway design standards where application of these standards would impose excessive restrictions on the property owner. The minimum and maximum dimensions shown allow some flexibility in the layout and design of driveways. High-volume driveways which serve such land uses as large shopping centers, industrial plants, drive-in movies, etc., require a special high type design based on expected traffic volumes and turning movements. Engineering judgment will override recommended dimensions if warranted by specific traffic conditions.

Driveways will be designed with no abrupt changes in grade. Such grades force vehicles to drive at low speeds, creating the possibility of rear-end collisions, and allow the potential for damage to the undersides of vehicles.

Under special circumstances, such as one-way driveways on one-way streets, driveway alignment angles of less than 90 might be feasible; however, 90 alignments are considered most desirable. All commercial, industrial and public parking lots shall comply with the design standards for driveways and parking lots. Public Parking lots shall include parking facilities that have spaces leased to the public or provided by employers for their employees.

A residential driveway on a street classified as "local" may be placed adjacent to the corner or alley curb return as long as the corner or alley curb return is left intact and is in no way encroached upon. On collector and arterial streets, the residential driveway shall be a minimum of five feet from the corner curb return, but may be adjacent to the alley curb return.

7.7 CONSTRUCTION OF DRIVEWAYS

All driveways are to be constructed of reinforced Portland cement concrete according to City specifications and will extend at least to the end of the driveway curb radii. Where design standards would require a driveway to encroach upon a sidewalk, the section of sidewalk affected shall be completely removed for the entire depth of the sidewalk. The driveway and the section of sidewalk that was removed shall then be constructed monolithically.

It is desirable from a maintenance and structural standpoint to completely remove the existing curb and gutter and install monolithically the new curb, gutter and approach. Where the City of Idalou removes the curb, gutter and existing driveway for street improvements such as widening or paving, the City will replace the existing curb, gutter and driveway with similar ones at no expense to the property owner. If the property owner wants a driveway in a new location or wants to upgrade the existing driveway to City standards, the owner will have to conform to the requirements in this section and pay all costs for the new driveway. Whenever a driveway curb crosses or is extended across a sidewalk, the sidewalk shall be ramped down to the driveway level.

8 PARKING LOTS

The internal circulation and parking patterns on a piece of property are very important considerations in properly locating driveways to provide adequate access to that property. The purpose of the parking lot portion of this section is to provide general principles and minimum standards for the layout and design of off-street parking facilities and their associated driveways. The parking layout for a particular lot or area is best selected by a trail-and-error process, tailoring the pattern to the dimensions, area and shape of the parcel available, with consideration for the various controlling factors which will be discussed below.

8.1 PERMIT

A building permit will be obtained from the Building Inspection Department of the City of Idalou for any new parking space or change in any existing paved off-street parking space. For new construction, this permit may be considered part of the building permit for the structure. The advisory information provided in Parking Layout Guidelines, discussed below, will be used in reviewing parking lot layout plans.

8.2 PARKING LAYOUT GUIDELINES

For any parking facility, the aisle and travel pattern, as well as the parking pattern, must be tailored to the dimensions, area and shape of the property available. The tendency when designing parking areas is to crowd as many spaces as possible into the allotted space by reducing standards, such as narrower parking stalls and narrower aisles. However, the parking standards in this section are minimum standards and any deviation should be through increasing rather than reducing them. The best design should give full consideration to every design factor that improves access to and from the street: internal circulation, location of entrances and exits, convenience of patrons and security of vehicles.

In cases where the provision of a driveway for access to a parking area would cause too many driveways to be located along a street, consideration should be given to the provision of a legally documented access easement across adjacent property(s). Such easements should also be considered to insure future circulation is provided for development on either side of the lot.

8.2.1 Design

1) The internal circulation and entrance/exit arrangement of a parking facility is a mixture of design and operational elements. Circulation aisles should be laid out to reduce travel distance and the number of turns. A poorly designed system of aisles, which requires excessive travel and turning to find an empty parking stall, creates confusion and is a hazard. In large lots it is preferable, where possible, to have parking on transverse aisles only, keeping the main aisles clear for movement.

2) The most desirable internal circulation pattern is one in which each potentially vacant parking stall within a small lot or section of a larger lot must be passed once by the incoming driver seeking a space. This ideal is seldom attained, and most parking facilities are arranged so that a driver must circulate on a random basis until they find a

vacant space. On exiting the parking lot, the driver should have to pass only a minimum number of occupied spaces.

3) Circulation patterns should be designed so that a driver does not enter the street to get to an adjacent aisle. Dead-end aisles will not be permitted unless an adequate turnaround area is provided.

4) The design should provide for adequate reservoir capacity so that cars waiting to enter a facility do not obstruct the adjacent street. This is most significant when associated with such land uses as drive-in banks, theaters, restaurants, car washes, and attendant parking facilities. Reservoir requirements should reflect the differing peak characteristics of individual facilities.

5) Locating a parking facility should include consideration of the major traffic routes over which traffic approaches the area, as well as the streets immediately adjacent to the proposed site. In locating entrances and exits, it is necessary to consider not only the traffic volumes and capacities of each street, but also the capacities of nearby intersections. It is generally not in the public interest to allow construction of a parking facility whose access requirements would overload the adjacent streets and intersections. In this respect, the number and location of access points are of prime importance.

6) The number of driveway lanes required to service a given parking facility is dependent on: (1) expected traffic flow rates of entering and exiting vehicles, (2) method of fee collection (if any), (3) sidewalk conflicts with pedestrians, and (4) available gaps in street traffic. Along two-way streets, the gaps across both directions of traffic flow to accommodate left-turn exits must be checked separately from the near-side flow that is involved only with right-turn exits from the parking facility.

7) Changes are sometimes made in traffic flow patterns. Two-way streets become one-way, and directional reversals may be required at some future date. The location and design of parking facilities should be kept sufficiently flexible so that they may be operated even when unforeseen street changes take place.

8) Another street regulation subject to change is the prohibition of intersection turns. The left turn is usually the one that is controlled, and such restriction may strongly affect either the approach to or departure from the parking facility. A flexible operating design is essential in order to retain access in the event of turn prohibitions.

8.2.2 Layout

1) Ideally, parking lots should be rectangular with cars parked on both sides of access aisles with the aisles parallel to the long dimension of the lot. The most efficient layout in large lots is a 90^{o} layout covering as much of the available area as possible. This rectangular arrangement fits better into rectangular areas with minimum space wastage and permits the aisle to be used for travel in both directions. Much of the alleged difficulty with 90^{o} parking has stemmed from inadequate aisle dimensions. However, where proper measurements are used, a smooth and efficient operation can be achieved.

2) When 90° parking is used, cars can exit parking spaces to the right or left and may use the aisle in either direction. Two-way aisles reduce travel distance; that is, parking and unparking cars can take the most direct route to their destinations. However, generally two-way configurations complicate traffic circulation patterns and result in a larger number of conflict points.

3) While the 90° parking pattern is the simplest to lay out, the 45° and 90° angle stalls are much easier for drivers to enter, are preferred by them, and require narrower aisles. However, acute angle parking provides fewer spaces for any length of aisle, requires deeper stalls and relatively wastes more space. When space economy is not a prime consideration and convenience is, as in many suburban parking lots, acute angle parking is commonly used. Frequently, available parking areas are too narrow to allow the use of 90° parking, but are wide enough for one of the acute angles. Further, the use of angle parking in any aisle normally requires one-way travel in that aisle, and therefore, the entire layout must consider the position of entrances, exits and the desired travel paths to produce the most efficient design.

4) Parking facilities with angled stalls require continuous aisles because cars leaving spaces are always headed in their original direction. The best aisle-plan for such facilities is a series of continuous one-way aisles that alternate in direction. One-way aisles are desirable because they conserve space and eliminate head-on and side-swipe accidents. Drivers can also be restricted to moving only in certain directions, however, an angle of 75° or less should be used to prevent drivers from unintentionally going the wrong way.

5) An aid to preserving the proper internal circulation pattern is the provision of curbed islands at the end of parking rows. These islands: (1) help delineate turning patterns, (2) eliminate the improper use of aisle-end areas, (3) provide good sight distance at intersections of cross aisles and access aisles, and (4) offer opportunities for landscaping, placing light poles and signs, and pedestrian safety zones.

6) Parking spaces shall not be located adjacent to a public street or alley such that ingress and/or egress from these spaces encroaches on the street except in accordance with Section 4-10211 (3)(g) of the Municipal Code of Ordinances.

8.2.3 Access

1) Entrances and exits to parking lots should be minimized to reduce conflicts between vehicle and pedestrian traffic. The access points should be placed as far as possible from street intersections to avoid traffic backups and located so as to avoid left turns or crossing movements. In cases where the only access is to and from a two-way street, the exit and entrance should be separated as far as possible to minimize confusion, and placed so that inbound cars will not cross outbound cars. Ideally, parking lot openings should be oriented to favor right-hand turns for entering and exiting traffic. Where such design is not possible and there is considerable street traffic, prohibiting left turns into and out of the parking lot may be necessary.

2) At entrances, care should be taken to prevent traffic backups onto the street. Some of the principal causes of entry delay are sidewalk conflict with pedestrians, parking or unparking maneuvers close to the entrance, and conflicting internal circulation.

3) Serious effect of traffic control near the facility is often the backup of vehicles waiting at signals or stop signs. Such backups tend to reach maximum at the same time that peak exit demand occurs at the parking facility. Such conditions indicate that driveways should generally exit only on lower volume streets and at maximum practical distance from controlled intersections.

9 STREET LIGHTING AND SIGNAGE

Street lighting within neighborhoods and along major streets is for traffic safety purposes. A residential development can be enhanced by providing a hierarchy of lighting that corresponds to the different roadways and land uses. For example, a section-line arterial street requires a different type and frequency of street lights than does a local street lined with residences. Since street lighting is expensive to install and requires significant amounts of energy, unnecessary lighting should be avoided. The policies described below are intended to provide sufficient illumination to enhance traffic safety while minimizing glare into residences.

9.1 RESIDENTIAL STREET STANDARDS

All street lighting within new subdivisions will be steel or fiberglass poles with underground feed. The City provides residential street lighting based on South Plains Electric Cooperative rate. Developers desiring metal or fiberglass poles and/or underground feeds need to work directly with South Plains Electric Cooperative for a developer contribution.

The developer shall work directly with South Plains Electric Cooperative to design the proposed street lighting layout. The design shall place a street light at all intersections, at sharp curves, and at the end of cul-de-sacs over 400 feet long. The Director of Public Works will review the proposed street lighting design and will make the final determination regarding the design.

9.2 ARTERIAL STREET STANDARDS

The provision of street lighting along arterial streets is the responsibility of the City of Idalou. Arterial lighting will be installed as development progresses. Lighting will consist of 400 watt high pressure sodium lamps on wood poles at 240 ft. spacing and be designed to provide uniform lighting levels along the arterial. Interim lights may be provided at intersections.

9.3 STREET SIGNS

The Developer shall pay the City for street signs for the subdivision. There shall be one sign for each three-way intersection and two signs for each four-way intersection. The signs will be ordered by the City and Developer billed a fixed fee for each sign. The fee shall include cost of the sign assembly and the pole.