



CITY OF LAKE WORTH

CITY COUNCIL AND PLANNING AND ZONING SPECIAL JOINT MEETING AGENDA

**3805 ADAM GRUBB
LAKE WORTH, TEXAS 76135
TUESDAY, NOVEMBER 12, 2019**

SPECIAL JOINT MEETING: 6:30 PM

Held in the City Council Chambers

A. CALL TO ORDER

A.1 INVOCATION AND PLEDGE OF ALLEGIANCE

A.2 ROLL CALL

A.3 CITIZENS PRESENTATION / VISITOR COMMENTS

The City Council and Planning and Zoning Commission are always pleased to have citizens attend its meetings and welcomes comments during the Citizen/Visitor Comments section of the meeting; however, pursuant to the Texas Open Meetings Act, they cannot deliberate or vote on issues not posted on the agenda. Therefore, those types of items must be posted 72 hours prior to the joint meeting. If it is not posted, no deliberation between members may occur; they may only respond with specific factual information or recite existing policy. Pursuant to Section 551.007 of the Texas Government Code, citizens wishing to address the Council for items listed as public hearings will be recognized when the public hearing is opened. For citizens wishing to speak on a non-public hearing item, they may either address the members during the Citizen Comments portion of the meeting or when the item is considered by the members. Negative or disparaging remarks about City personnel will not be tolerated. If you wish to address the members, speakers are requested to fill out a "Public Meeting Appearance Card" and present it to the City Secretary, prior to the presiding officer calling the meeting to order. Comments will be limited to three (3) minutes per speaker and (6) minutes for those with a translator.

B. PUBLIC HEARINGS

- B.1 Public Hearing to consider Ordinance No. 1169, Planning and Zoning Case No. PZ-2019-28, repealing and replacing the current Comprehensive Zoning Ordinance and adopting a new Comprehensive Zoning Ordinance and authorize the City Manager to make minor grammatical, clerical, and numbering changes.
- B.2 Public Hearing to consider Ordinance No. 1171, Planning and Zoning Case No. PZ-2019-29, changing the zoning district and use classification from Single Family

Residential (SF1), Commercial (C), Planned Commercial (PC) and Planned Industrial (PI) to Public Facilities (PF) zoning district and use classification on approximately seventy-six (76) areas of land, commonly known as the City of Lake Worth Municipal Facilities, Library, Fire Station, Public Parks, Well Sites, and Lift Stations.

- B.3 Public Hearing to consider Ordinance No. 1172, Planning and Zoning Case No. PZ-2019-30, changing the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district on approximately eighty - two (82) acres of land more commonly known as the Lake Worth High School, Effie Morris Elementary School, Lake Worth Administration Building, N.A. Howry Middle School, and Lake Worth Agricultural Site.
- B.4 Public Hearing to consider Ordinance No. 1170, repealing and replacing the current Subdivision Regulations and Design Criteria and Construction Standards (DCCS) Ordinance and adopting a new Subdivision Regulations and Design Criteria and Construction Standards (DCCS) Ordinance and authorize the City Manager to make minor grammatical, clerical, and numbering changes.

C. EXECUTIVE SESSION

The City Council and Planning and Zoning Commission may enter into closed Executive Session as authorized by Chapter 551, Texas Government Code. Executive Session may be held at the end of the Joint Session or at any time during the meeting that a need arises for the City Council or Planning and Zoning Commission to seek advice from the city attorney (551.071) as to the posted subject matter of this joint meeting.

The City Council and Planning and Zoning Commission may confer privately with its attorney to seek legal advice on any matter listed on the agenda or on any matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with Chapter 551, Texas Government Code.

D. EXECUTIVE SESSION ITEMS - CITY COUNCIL AND PLANNING AND ZONING COMMISSION MAY TAKE ACTION ON ANY ITEMS DISCUSSED IN EXECUTIVE SESSION LISTED ON THE AGENDA.

E. ADJOURNMENT

Certification

I do hereby certify that the above notice of the Special Joint Meeting of the Lake Worth City Council and Planning and Zoning Commission was posted on the bulletin board of City Hall, 3805 Adam Grubb, City of Lake Worth Texas in compliance with Chapter 551, Texas Government Code on Friday, November 8, 2019 at 3:00 p.m.

City Secretary

This facility is wheelchair accessible and accessible parking spaces are

available. Requests for accommodations or interpretive services must be made 48 hours prior to this meeting. Please contact the City Secretary's Office at (817) 237-1211 ext. 105 for further information.

Lake Worth City Council Meeting - November 12, 2019

Agenda Item No. B.1

FROM: Stacey Almond, City Manager and Jenifer Reiner, Dunaway & Associates

ITEM: Public Hearing to consider Ordinance No. 1169, Planning and Zoning Case No. PZ-2019-28, repealing and replacing the current Comprehensive Zoning Ordinance and adopting a new Comprehensive Zoning Ordinance and authorize the City Manager to make minor grammatical, clerical, and numbering changes.

SUMMARY:

Comprehensive Land Use Plan:

The 2035 Comprehensive Land Use Plan was adopted by Ordinance No. 1110 on March 20, 2018 by the Planning and Zoning Commission and on April 10, 2018 by the City Council.

The Comprehensive Land Use Plan is designed to implement the intent and desires, and to protect the health, safety and welfare of the present and future residents of Lake Worth. The plan addresses the types and intensities of land uses, roadway systems, community services, utilities, environmental concerns and urban design standards in a manner which is consistent with the City's objective of creating a community which builds on its existing quality commercial developments and residential character.

The plan addresses a multitude of issues and land use in terms of current knowledge and existing conditions, and therefore, as the plan is implemented, and new conditions arise, the plan may be reviewed and, if necessary, modified to reflect the City's informed response to the new circumstances.

The provisions of the plan are organized by subject and geographic area and will be used to guide the establishment regulations or any amendments thereto, pursuant to Texas Local Government Code, Chapter 213.

Zoning Regulations:

After completion of the 2035 Comprehensive Land Use Plan staff requested engagement of Dunaway & Associates in May 2018 to assist with a review and rewrite of the Subdivision and Zoning Regulations Ordinance.

Lake Worth is an established community with very strong commercial/retail base. This makes Lake Worth a large participant in the forecasted growth for the Northwest Tarrant region and the 820 corridors.

Zoning regulations govern the use of land, and the location, size and height of buildings. Zoning divides a jurisdiction into multiple districts, within each district contains a distinct set of regulations that are uniformly applied to all property within the district. Zoning ordinances consist of a text specifying the regulations and a map defining the location of the district.

Zoning enabling legislation is governed by Chapter 211, Local Government Code. The basic purpose is to protect the health, safety and welfare of the municipality. Some elements that we will consider are the text, map, purpose, district regulations (ex: uses, density, heights, setbacks), parking, landscape, architectural, etc. Zoning amendment procedures require proper notice and public hearings before adoption.

The goal of updating the zoning regulations is to maintain quality development, added long-term benefits, ensuring compatible land uses, and constructing adequate infrastructure.

A joint workshop was conducted in June 2019 to allow the Planning and Zoning Commission and the City Council to discuss these documents with staff, provide feedback, comments, and direction.

Staff, along with Dunaway & Associates held a public forum in August 2019 to make presentation to the citizens and all interested parties. All zoning materials have been made available on our website for inspection by the general public to ensure transparency.

The proposed zoning regulations have been updated, based upon feedback, reviewed by staff and the City Attorney and are being forwarded to the Planning and Zoning Commission and City Council for required public hearings and recommendation of adoption.

FISCAL IMPACT:

N/A

ATTACHMENTS:

Ord #1169 - Zoning Ordinance
Ord #1169 - Zoning Ordinance - Exhibit A
Ord # 1169- Zoning Map Exhibit A
Case No. PZ 2019-28 Public Hearing Notice

RECOMMENDED MOTION OR ACTION:

Move to approve Ordinance No. 1169, Planning and Zoning Case No. PZ-2019-28, repealing and replacing the current Comprehensive Zoning Ordinance and adopting a new Comprehensive Zoning Ordinance and authorize the City Manager to make minor grammatical, clerical, and numbering changes.

ORDINANCE NO 1169

AN ORDINANCE OF THE CITY OF LAKE WORTH, TEXAS, REPEALING AND REPLACING THE CURRENT COMPREHENSIVE ZONING ORDINANCE AND ADOPTING A NEW COMPREHENSIVE ZONING ORDINANCE OF THE CITY OF LAKE WORTH; PROVIDING A PENALTY; PROVIDING FOR SEVERABILITY; PROVIDING SAVINGS; PROVIDING ENGROSSMENT AND ENROLLMENT; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER OF THE CITY AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lake Worth ("**City**") is a Home Rule City acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, the City possesses all the rights, powers, and authorities possessed by all home rule municipalities, including the authority to regulate land uses under Chapter 211 of the Texas Local Government Code; and

WHEREAS, the City's current comprehensive zoning ordinance – Ordinance No. 500, as amended ("**Current Zoning Ordinance**")– was adopted in 1987 and, while serving the City well, is in need of revision to create a more user-friendly document and to update certain regulations to better support the goals and objectives of the City's 2018 Comprehensive Plan; and

WHEREAS, a proposed new City of Lake Worth Comprehensive Zoning Ordinance ("**New Zoning Ordinance**"), attached hereto as Exhibit "A", has been prepared by City staff and City planning consultants with the intent that the New Zoning Ordinance will completely replace the Current Zoning Ordinance; and

WHEREAS, the City's Planning and Zoning Commission and the City Council of the City of Lake Worth, Texas in accordance with state law and the ordinances of the City, have given the required notices and have held the required public hearings regarding the adoption of the New Zoning Ordinance; and

WHEREAS, after due deliberations and consideration of the recommendation of the City's Planning and Zoning Commission, and any other information and materials received at the public hearings, the City Council of the City of Lake Worth, Texas, has determined that repeal and replacement of the Current Zoning Ordinance with the New Zoning Ordinance is in the best interest of the public health, safety, and welfare of the residents of the City and that it is the public interest to adopt the New Zoning Ordinance; and

WHEREAS, the City Council of the City of Lake Worth deems it necessary in order to lessen congestion on streets; to secure safety from fire, panic, and other dangers; to promote health, safety and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provisions of transportation, water, sewers, schools, parks and other public requirements; to

conserve the value of property and encourage the most appropriate use of land throughout the City, that this Ordinance should be passed, promulgated and enforced.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LAKE WORTH, TEXAS:

**SECTION 1.
INCORPORATION OF RECITALS**

The above and foregoing recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

**SECTION 2.
ADOPTION OF NEW ZONING ORDINANCE**

That Ordinance No. 500 of the City of Lake Worth, Texas, as amended, the same being the Current Zoning Ordinance, is hereby repealed and replaced in its entirety by and through the adoption of the New Zoning Ordinance, attached hereto as Exhibit "A", which New Zoning Ordinance is hereby adopted.

**SECTION 3.
PENALTY**

Any person, firm, or corporation violating any of the provisions of this Ordinance (which includes the New Zoning Ordinance) shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars (\$2,000) for each offense and each and every day such offense continues shall be deemed to constitute a separate offense.

**SECTION 4.
CUMULATIVE CLAUSE**

This Ordinance shall be cumulative of all provisions of all other ordinances of the City of Lake Worth, Texas except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

**SECTION 5.
SEVERABILITY**

It is hereby declared to be the intention of the City Council of the City of Lake Worth that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared invalid or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such invalid or unconstitutional phrase, clause, sentence, paragraph or section.

**SECTION 6.
SAVINGS**

That all right and remedies of the City of Lake Worth are expressly saved as to any and all violations of the provisions of any Ordinances affecting the development of land, which have accrued at the time of the effective date of the Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such Ordinance, same shall not be affected by the Ordinance but may be prosecuted until final disposition by the courts.

**SECTION 7.
ENGROSS AND ENROLL**

That the City Secretary of the City of Lake Worth is hereby directed to engross and enroll this Ordinance by coping the exact caption and effective date in the minutes of the City Council of the City of Lake Worth and by filing this Ordinance in the Ordinance records of the City.

**SECTION 8.
EFFECTIVE DATE**

This Ordinance shall be in full force and effect from and after its passage and publication as required by law, and it is so ordained.

PASSED AND APPROVED this 12th day of November 2019.

CITY OF LAKE WORTH

By: _____
Walter Bowen, Mayor

ATTEST:

Monica Solko, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Drew Larkin, City Attorney

EXHIBIT A
Lake Worth Comprehensive Zoning Ordinance



CHAPTER 14, ZONING

Update to the Zoning Regulations

11.12.19 PRELIMINARY

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ARTICLE 14.100 GENERAL PROVISIONS

Section 14.101 Title of Ordinance

This ordinance and the regulations herein shall be known and may be cited as the "Zoning Ordinance of the City of Lake Worth."

Section 14.102 Adopted

The comprehensive zoning ordinance, Ordinance No. <to be provided by City Staff>, adopted by the City on <date to be provided by City Staff>, as amended, is hereby repealed and replaced. Due to the nature of the zoning ordinance and the technicalities involved in adopting or amending it, such ordinance is printed herein as enacted, with only nonsubstantive formatting and style changes. Capitalization, punctuation and numbering of articles, sections and subsections have been retained as enacted. Amendments subsequent to this Ordinance No. <to be provided by City Secretary>, will be inserted in their proper place and denoted by a history note following the amended provisions. The absence of a history note indicates the material is unchanged from the original. Obviously misspelled words have been corrected without notation. Any other material added for purposes of clarification is enclosed in brackets.

Section 14.103 Purpose

The zoning regulations and districts as herein established have been made in accordance with an adopted Comprehensive Plan for the purpose of promoting the health, safety, morals and general welfare of the City. They have been designed to lessen the congestion in the streets; to secure safety from fire, panic and other dangers; to insure adequate light and air; to prevent the overcrowding of land, to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements. They have been made with reasonable consideration, among other things, for the character of each district, and their peculiar suitability for the particular uses specified; and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City consistent with the Comprehensive Plan.

Section 14.104 Interpretation Purpose and Conflict

In interpreting and applying the provisions of these regulations, they shall be held to be the minimum requirements for the promotion of safety, health, convenience, comfort, prosperity, or general welfare.

Section 14.105 Scope

It is not intended by these regulations to interfere with or abrogate or annul any easements, covenants or other agreements between parties, provided, however, that where these regulations impose a greater restriction upon the use of buildings or premises or upon the height of buildings, or require larger open spaces than are imposed or required by other ordinances, rules, regulations or by easements, covenants or agreements, the provisions of these regulations shall govern.

ARTICLE 14.100 GENERAL PROVISIONS

Section 14.106 Compliance Required

- A. All land, buildings, structures or appurtenances thereon located within the City of Lake Worth, Texas which are hereafter occupied, used, erected, altered, removed, placed, demolished, or converted shall be occupied, used, erected, altered, removed, placed, demolished or converted in conformance with the zoning regulations prescribed for the zoning district in which such land or building is located as hereinafter provided.
- B. Except as hereinafter provided:
 - 1. Comprehensive Plan.
 Zoning shall conform to the adopted Comprehensive Plan.
 - 2. Land Use.
 No building shall be erected, reconstructed, altered, enlarged, or maintained nor shall any building or land be used for any purpose other than is permitted in the district in which such building or land is located.
 - 3. Height and Bulk of Buildings.
 No building shall be erected, reconstructed, altered, enlarged or maintained to exceed the height, size, or bulk limit herein established for the district in which such building is located.
 - 4. Yards.
 - a. No lot area shall be so reduced or diminished that the yards or other spaces shall be smaller than prescribed by these regulations.
 - b. No yard or other space provided about any building for the purpose of complying with the provisions of these regulations shall be considered as providing a yard or space for any other building; provided further that no yard or open space on an adjoining property shall be considered as providing a yard or open space on a lot whereon a building is to be erected.
 - 5. Building Permit Requirements.
 - a. Building Permit.
 - i. A building permit may be issued by the City for the construction or placing of a dwelling on a lot or tract of land composed of portions of two (2) or more lots as same appear upon the map thereof as recorded in the deed records of Tarrant County, Texas, only when such lot or tract has a street frontage of not less than the street frontage of any lot in the same block.
 - ii. No building permit shall be issued by the City for the construction or placing of, and no person shall construct or place, any building on any lot, tract or parcel of land unless the lot, tract or parcel of land upon which each such structure is to be located, is a lot of record provided that these regulations shall not prohibit the issuance of a building permit for the

ARTICLE 14.100 GENERAL PROVISIONS

construction or placing of any dwelling, located on any tract of land set apart, delineated or defined by a metes and bounds description and recorded in the plat records of Tarrant County, Texas, prior to the effective date of this article, and shown on a plat, giving an accurate location of such tract relative to any existing recorded addition or subdivision, when the only structure (with its permitted appurtenances) which is located, or to be located thereon, faces or fronts upon a public thoroughfare.

b. Plat Required.

Development or construction shall only occur on a legal lot of record.

c. Building Permit Denial.

i. No building permit shall be issued by the City for the erection or placing of any dwelling on a lot, the width or street frontage of which has been decreased from the width or street frontage as originally platted or as replatted and recorded in the plat records of Tarrant County, Texas,

ii. Nor shall a building permit be issued for the erection or placing of any dwelling on the rear yard of any corner lot situated in a residential district or with a residential use.

6. Location.

Every building hereafter erected shall be located on a lot of record and in no case shall there be more than one (1) building on one (1) lot, except as otherwise provided in this article.

Section 14.107 Enforcement

- A. The provisions of this Ordinance shall be administered by the City Manager or the duly authorized representatives as determined by the City Manager.
- B. The City Manager or any duly authorized person shall have the right to enter upon any premises at any reasonable time for the purpose of making inspection of buildings or premises necessary to carry out the enforcement of this Ordinance.

Section 14.108 Pending Litigation and Violations

- A. It is further the intent and declared purpose of this Ordinance that no offense committed, and no liability, penalty, or forfeiture, either civil or criminal, incurred prior to the time the existing zoning ordinance was repealed and this Zoning Ordinance adopted, shall be discharged or affected by such repeal; but prosecutions and suits for such offenses, liabilities, penalties, or forfeitures may be instituted or causes presently pending proceeded with in all respects as if such prior ordinance had not been repealed.
- B. The City shall have and retain the right to seek injunctive relief and/or civil penalties against any person, firm or corporation who is in the process of or about to violate any section, paragraph or part of this Ordinance. Such right for injunctive relief and/or

ARTICLE 14.100 GENERAL PROVISIONS

civil penalties shall exist independent of the other penalty provisions of this Ordinance and not in lieu thereof.

Section 14.109 Penalties for Violation

- A. Any person, firm or corporation who violates, disobeys, omits, neglects or refuses to comply with or who resists the enforcement of any of the provisions of this article shall be fined in accordance with the general penalty provision set forth in the City's Code of Ordinances for each offense. Each day that a violation is permitted to exist shall constitute a separate offense.
- B. The owner or tenant of any building, structure, premises, or part thereof, and any architect, builder, contractor, agent, or other persons who commits, participates in, assists in, or maintains such violation may each be found guilty of a separate offense and suffer the penalties herein provided.
- C. Nothing herein contained shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation, including but not limited to seeking injunctions and civil penalties.

Section 14.110 Limit of Reapplication

- A. When the City Council has denied a proposal with prejudice, no reapplication requesting the same zoning classification shall be accepted by the City or scheduled for consideration by the Planning and Zoning Commission within a period of twelve (12) months.
- B. Exception.
 - 1. An applicant may submit a request stating how circumstances surrounding the property have changed since the prior denial with prejudice.
 - 2. The planning and zoning commission may waive the twelve (12) month waiting period upon a finding that the circumstances surrounding the property have changed sufficiently to warrant the acceptance of a new application for a zoning amendment or change prior to the end of the one-year waiting period. A majority of the planning and zoning commission quorum present and voting shall be required to grant any such request. If the request is granted, compliance with the procedures contained in this ordinance and other applicable rules and regulations of the City shall be required.
 - 3. The applicant may appeal a denial by the planning and zoning commission to the city council by filing a request in writing with the City within ten days of the denial by the planning and zoning commission.
 - 4. The decision of the city council regarding the request for a waiver shall be final.

Section 14.111 Publication

The caption of this Ordinance shall be published in accordance with the City Charter of the City of Lake Worth, Texas and applicable state law, and shall be effective immediately upon its passage and such publication.

ARTICLE 14.100 GENERAL PROVISIONS

Section 14.112 Fee Schedule

- A. The City Council shall, by ordinance, establish a schedule containing the fees and charges for permits, zoning change requests, site plans, Board of Adjustment proceedings and any other matters pertaining to this chapter. The schedule of fees and charges may be altered or amended only by action of the City Council.
- B. Until all applicable fees, charges, and expenses have been paid in full, no action shall be taken on any application or appeal.

Section 14.113 Separability Clause

It is hereby declared to be the intention of the City Council that the phrases, clauses, sentences, paragraphs, and sections of this article are severable, and if any phrase, clause, sentence, paragraph or section of this article shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this article, since the same would have been enacted by the City Council without the incorporation in this article of any such unconstitutional phrase, clause, sentence, paragraph or section.

Section 14.114 Repeal

This section shall be cumulative of all provisions of the Code of Ordinances of the City, except where the provisions of this article are in direct conflict with the provisions of such ordinances, they are hereby repealed. Ordinance No. <to be provided by City Secretary>, as amended, is hereby repealed in its entirety.

Section 14.115 Effective Date

This article shall be in full force and effect from and after its passage and publication as required by law, and it is so ordained.

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ARTICLE 14.200 ADMINISTRATION

Section 14.201 General Administration

- A. Authority to Amend
 - 1. The City Council may from time to time amend, supplement, or change, by ordinance, the boundaries of the districts or the regulations herein established. Request for Zoning Change or Amendment
 - 2. Any person, corporation or group of persons having a proprietary interest in any property, upon proof of such interest, may petition the City Council for a change or amendment to the provisions of this chapter, or the Planning and Zoning Commission may, on its own motion, institute proposals for change and amendment in the public interest. All petitions for the amendment of this chapter shall bear the signature of the owners of all property within the area of request.
- B. Public Hearing Process for Zoning
 - 1. Planning and Zoning Commission
 - a. Before taking action on any such proposed amendment, supplement, or change, the City Council shall submit the same to the Planning and Zoning Commission for its recommendation and report.
 - b. Written notice of all public hearings before the City Planning and Zoning Commission, on a proposed amendment, supplement or change shall be sent to all owners of real property lying within 200 feet of the property on which the change is requested. Such notice shall be given not less than ten (10) days before the date set for hearing, by depositing a notice properly addressed and postage paid in the United States Post Office to such property owners as the ownership appears on the current City tax roll.
 - c. Notice of public hearing shall be posted in a publicly accessible place at City Hall a minimum of 72 hours prior to the hearing.
 - d. Public notification signs stating that a zoning change is requested shall be placed on the subject property ten (10) days prior to the hearing.
 - 2. City Council
 - a. A public hearing shall be held by the City Council before adopting any proposed amendment, supplement, or change, notice of which hearing shall be given by publication one (1) time in the official paper of the City of Lake Worth, stating the time and place of such hearing, which time shall not be earlier than 15 days from the date of publication.
 - b. Notice of public hearing shall be posted in a publicly accessible place at City Hall a minimum of 72 hours prior to the hearing.
 - c. Public notification signs stating that a zoning change is requested shall be placed on the subject property ten (10) days prior to the hearing.

ARTICLE 14.200 ADMINISTRATION

- d. The affirmative vote of at least three-fourths (3/4) of all members of the City Council is also required to overrule a recommendation of the Planning and Zoning Commission that a proposed change to a regulation or boundary be denied.

3. Denial

If such proposed amendment, supplement, or change has been denied by the Planning and Zoning Commission, such amendment shall not become effective except by a three-fourths (3/4) vote of the members of the City Council.

4. Protest

- a. A protest must be written and signed by the owners of at least 20 percent of either the following:
 - i. The area of the lots or land covered by the proposed change, or
 - ii. The area of the lots or land immediately adjoining the area covered by the proposed change and extending 200 feet from that area.
- b. In computing the percentage of land area, the area of streets and alleys shall be included.
- c. If a proposed change to a regulation or boundary is protested in accordance with this section, the proposed change must receive, in order to take effect, the affirmative vote of at least three-fourths of all members of the City Council.

C. Zoning Changes that do not apply to Specific Property

These changes are usually associated with textual changes. When any proposed amendment, supplement, or change of zoning map or text of this zoning chapter does not affect the land use character or zoning classification of specific property, notice of public hearings of the Planning and Zoning Commission and City Council shall be given by publication in a newspaper of general circulation in the City without the necessity of notifying property owners by mail. Such notice shall state the time and place of such hearings and the nature of the subject to be considered. Such notice shall be published not less than 15 days prior to the public hearings.

D. Newly Annexed Territory

All territory hereafter annexed into the City of Lake Worth, Texas, shall conform to the regulations as specified in Article I, Boundaries and Annexation, of the Home Rule Charter of the City of Lake Worth, until permanently zoned by the City Council of the City of Lake Worth. The Planning and Zoning Commission may, after annexation of any territory into the City of Lake Worth, institute proceedings on its own motion to give newly annexed territory a permanent zoning, and the procedure to be followed shall be the same as is provided by law for the adoption of original zoning regulations.

ARTICLE 14.200 ADMINISTRATION

Section 14.202 Planning and Zoning Commission

A. Creation

A Planning and Zoning Commission (Commission) shall be established and have all the powers and authority in accordance with the Charter of the City of Lake Worth and applicable provisions of state law.

B. Statutory Authority

The Commission shall have all powers granted by and be organized and controlled by the provisions of Chapter 211, Local Government Code, the City Charter, and all applicable City ordinances. The Commission is hereby vested with power and authority, and in appropriate cases subject to appropriate conditions and safeguards, to recommend or approve zoning of real property in compliance with the terms of this Ordinance and in conformance with the adopted Comprehensive Plan.

C. Purpose

A Planning and Zoning Commission is hereby created in order to accomplish the following purposes:

1. To identify community needs and to advise the City Council of the short-range effect of these needs on the total development of the City;
2. To recommend achievable community goals for long-range planning and development of the City;
3. To recommend achievable plans, programs and policies that will aid the entire community in achieving defined goals; and
4. To help the public understand the plans, programs and policies adopted by the City Council so that concerned citizens can conduct private activities in harmony with these plans, programs and policies.

D. Membership and Terms of Office

The Planning and Zoning Commission shall be composed of five (5) members and two (2) alternate members who shall be residents and qualified voters of the City of Lake Worth and shall serve without compensation.

E. Organization

Commission members shall be appointed in accordance with the following:

1. All Commissioners will be appointed by a majority vote of the City Council.
 - a. It is the intent of the City Council that members shall, by reason of diversity of their individual occupation, constitute a Commission which is broadly representative of the community.
 - b. Members may be removed by a majority vote of the members of the City Council.
 - c. Commission members may be appointed to succeed themselves.
2. A member of the Commission shall not serve simultaneously as a member of the Board of Adjustment.

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3. The members shall serve for a period of two (2) years or until their successors are duly appointed and qualified.
4. The regular members of the Commission shall be identified by place numbers 1 through 5.
 - a. Places 1, 3 and 5 shall be appointed to serve for two-year terms beginning on January 1 of odd numbered years.
 - b. Places 2 and 4 shall be appointed to serve for two-year terms beginning on January 1 of even numbered years.
5. Vacancies shall be filled for the unexpired terms, as follows:
 - a. Newly appointed members shall serve at the first regular Commission meeting after their appointment.
 - b. Any member of the Commission who misses three (3) consecutive meetings without Commission Chair approval shall be deemed to have vacated his Commission membership.
 - i. The City Council, upon receiving certification of three (3) consecutive absences from the Commission Chair, shall fill the vacancy for the expired term.
 - ii. Six (6) disapproved absences in any 12-month period shall be deemed as grounds for removal from said Commission by the City Council.
 - iii. The Commission shall enter into its minutes a statement either approving or disapproving a given members' absence.
6. The Commission elect a chairperson and vice-chairperson from among its members.
7. The Commission shall meet regularly and shall designate the time and place of its meetings.
8. The members of the Commission shall serve without compensation, except for reimbursement of authorized expenses attendant to the performance of their duties.
9. The Commission shall keep a record of its proceedings consistent with the provisions of this article and the requirements of law.

F. Authority of the Commission

General Duties. The Planning and Zoning Commission is hereby charged with the duty and invested with the authority to:

1. Inspect property and premises at reasonable hours where required in the discharge of its responsibilities under the laws of the State of Texas and the City.
2. Formulate and recommend to the City Council for its adoption a Comprehensive Plan for the orderly growth and development of the City and environs, and from time to time recommend such changes in the plan as it

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finds will facilitate the movement of people and goods, and the health, recreation, safety, and general welfare of the citizens of the City.

3. Formulate a zoning plan as may be deemed best to carry out the goals of the City plan and hold public hearings and make recommendations to the City Council relating to the creation, implementation and amendment of zoning regulations and districts as provided in Chapter 211 of the Texas Local Government Code and the City Charter.
4. Exercise all the powers of a Commission as to approval or disapproval of plans, plats or replats and the vacation of plans, plats and replats as set out in Chapter 212 of the Texas Local Government Code and the City charter.
5. Study and recommend the location, extension and planning of public rights-of-way, parks or other public places, and the vacating or closing of same.
6. Study and recommend the general design and location of public buildings, bridges, viaducts, street fixtures and other structures and appurtenances.
7. Study and recommend the design, alteration, location or relocation of works of art which are, or may become, property of the City.
8. Initiate, in the name of the City, for consideration at public hearings, all proposals:
 - a. For the opening, vacating or closing of public rights-of-way, parks or other public places;
 - b. For the original zoning of annexed areas; and
 - c. For the change of zoning district boundaries on an area-wide basis. No fee shall be required for the filing of any such proposal in the name of the City.
9. Formulate and recommend to the City Council for its adoption policies and regulations consistent with the adopted City plan governing the location and/or operation of utilities, public facilities and services owned or under the control of the City.
10. At the direction of the City Council, study, hold public hearings and submit reports on any topics pertaining to planning, zoning and development that the council deems appropriate.
11. Conduct an ongoing assessment program pertaining to the planning, zoning and development regulations of the City, recommending to the City Council all necessary changes and updates to said ordinance.

G. Conditional Use Permit

1. Purpose

The purpose of the Conditional Use procedure is to allow for review of uses which would not be appropriate generally or without certain restriction throughout a zoning district, but which, if controlled as to the number, area, location or relation to the neighborhood would promote the health, safety, and welfare of the community. The procedure is intended to allow broad public

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review and evaluation of the proposed development and to ensure adequate mitigation of potentially unfavorable impacts.

2. Review and Evaluation Criteria

The Conditional Uses application shall be reviewed and evaluated using the following criteria:

- a. Conformance with applicable regulations and standards established by this Zoning Ordinance.
- b. Compatibility with existing or permitted uses on abutting, adjacent, or adjoining sites in terms of building height, bulk, scale, setbacks, open spaces, landscaping and site development, and access and circulation features.
- c. Potentially unfavorable effects or impacts on other existing or permitted uses on abutting sites, to the extent such impacts exceed those which reasonably may result from use of the site by a permitted use.
- d. Location, lighting, and type of signs and relation of signs to traffic control; external illumination; and adverse effect on adjacent properties.
- e. Safety and convenience of vehicular and pedestrian circulation in the vicinity, including traffic reasonably expected to be generated by the proposed use and other uses anticipated in the area considering existing zoning and land uses.

3. Modifications

- a. Minor modifications of a Conditional Use Permit may be made if the City Manager and/or designee determines that such modifications will not change the intent and effect of the approval by the City Council.
- b. The City Manager and/or designee may require consideration by the Planning and Zoning Commission for modifications that change the intent and effect of the approval.

H. General Procedures

1. Application and Fee

An application for consideration of a zoning change, a conditional use permit and/or amendment to the Future Land Use Plan by the Planning and Zoning Commission for recommendation to the City Council, shall be in writing using forms provided by the City and shall be accompanied by a fee.

2. Notice of Public Hearing

a. Publication

Notice of a public hearing shall be published not less than 15 days prior to the public hearing in the official local newspaper.

b. Notice

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Notice of a public hearing shall be mailed not less than ten (10) days prior to the public hearing to the petitioner and the owners of the property lying within 200 feet of any point of the lot or portion thereof, on an appeal, variance, exception or other action is proposed. Such owners and persons shall be determined according to the current tax rolls of the City and substantial compliance therewith shall be deemed sufficient, provided, however, that the depositing of such written notice in the mail shall be deemed sufficient compliance with the purpose of this matter.

3. Meetings

- a. A quorum for the conduct of business shall consist of three (3) members of the Commission.
- b. The Commission may adopt rules to govern its proceedings, providing, however, that such rules are not inconsistent with the terms of this Ordinance.
- c. All meetings of the Commission shall be open to the public.
- d. Meetings of the Commission shall be held at the call of the Chairman.,
- e. The Commission shall keep minutes of its proceedings, showing the vote upon each question, or, if absent or failing to vote, indicate such fact and shall keep records of its examinations and other official actions, all of which shall be filed in the offices of the City Secretary and kept as public record.
- f. Any party may appear in person or by attorney or agent.

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Section 14.203 Board of Adjustment

A. Creation

A Board of Adjustment (Board or BOA) shall be established and have all the powers and authority in accordance with the Charter of the City of Lake Worth and Section 211.008, Local Government Code, as amended.

B. Statutory Authority

The Board of Adjustment shall have all powers granted by and be organized and controlled by the provisions of Section 211.009, Local Government Code. The Board of Adjustment is hereby vested with power and authority, and in appropriate cases and subject to appropriate conditions and safeguards, to make such exemptions and exceptions to the terms of this Ordinance in harmony with its general purposes and intent in accordance with general or special rules herein contained for the purpose of rendering full justice and equity to the general public.

C. Members and Terms of Office

The Board of Adjustment shall be composed of five (5) members and two (2) alternate members who shall be residents and qualified voters of the City of Lake Worth and shall serve without compensation.

D. Organization

Board members shall be appointed and organized in accordance with the following:

1. All members will be appointed by a majority vote of the City Council. Members may be removed by a majority vote of the members of the City Council, for cause on a written charge after a public hearing. Board members may be appointed to succeed themselves.
2. A member of the Board shall not serve simultaneously as a member of the Planning and Zoning Commission.
3. The members shall serve for a period of two (2) years and until their successors are duly appointed and qualified.
4. The regular members of the Board shall be identified by place numbers 1 through 5.
 - a. Places 1, 3 and 5 and the second alternate member shall be appointed to serve for two-year terms beginning on January 1 of odd numbered years.
 - b. Places 2, 4 and the first alternate member shall be appointed to serve for two-year terms beginning on January 1 of even numbered years.
5. The Board shall elect a chairperson and vice-chairperson from its members.
6. Vacancies shall be filled by an alternate member for the unexpired term of a member whose term becomes vacant.
 - a. Any member absent for two (2) regular consecutive meetings shall be deemed to have vacated such office unless such absences were:
 - i. Due to sickness of the member or the member's family; or

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- ii. With leave being first obtained from the Chairman.
 - b. Vacancies of an alternate member shall be filled by appointment of the City Council by majority vote.
- E. Authority of the Board

The Board of Adjustment shall have the authority, subject to the standards established in Section 211.009 of the Texas Local Government Code, as amended, and those established herein, to exercise the following powers and perform the following duties:

 - 1. Variance
 - a. The Board of Adjustment may authorize a variance from the regulations herein when, in its opinion, undue hardship will result from requiring strict compliance.
 - b. Variances may be granted only when in harmony with the general purpose and intent of this Ordinance so that the public health, safety and welfare may be secured and substantial justice done.
 - c. Pecuniary hardship to the applicant, standing alone, shall not be deemed to constitute undue hardship.
 - d. In granting a variance, the Board shall prescribe only conditions that it deems necessary or desirable to protect the public interest and shall take into account the following:
 - i. The nature of the proposed use of the land involved,
 - ii. Existing uses of land in the vicinity, and
 - iii. The probable effect such variance will have upon traffic conditions and upon the public health, safety, convenience and welfare in the vicinity.
 - e. Findings. No variance shall be granted unless the Board finds:
 - i. That there were special circumstances or conditions affecting the land involved such that the strict application of the provisions of this Ordinance deprive the applicant of reasonable use of his land; and
 - ii. That the variance is necessary for the preservation and enjoyment of a substantial property right of the applicant; and
 - iii. That the granting of the variance will not be detrimental to the public health, safety or welfare, or injurious to other property in the area; and
 - iv. That the granting of a variance will not have the effect of preventing the orderly development of other land in the area in accordance with the provisions of this Ordinance.
 - f. Official Minutes

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Such findings of the Board, together with the specific facts upon which it is based, shall be incorporated into the official minutes of the Board of Adjustment meeting at which such variance is granted.

2. Waiver of Mandatory Yard and Setback Requirements.

- a. The Board of Adjustment may approve a waiver of up to 15 percent of any required yard area or setback without following the notice and hearing requirements specified herein.
- b. The Board of Adjustment may in its discretion delegate to the zoning administrator its authority under this provision for all or a portion of the 15 percent area or setback waiver when such a waiver is necessary due to a surveying or construction error in the placement of the original foundation or site improvement.
- c. The zoning administrator shall not be authorized to approve a waiver under this section until the Board of Adjustment shall have issued a written decision outlining the terms and conditions under which these waivers may be granted.

3. Appeals of Decisions of Administrative Officers

- a. The Board may hear and decide appeals where it is alleged that there is an error in any order, requirement, decision, or determination made by an administrative officer in the enforcement of the development regulations herein.
- b. In exercising its power, the Board may, in conformity with the provisions of Chapter 211, Local Government Code, as amended:
 - i. Reverse, or
 - ii. Affirm, wholly or partly, or
 - iii. Modify the order, requirement, decision or determination as sought to be made.
- c. In exercising its power, the Board shall have all the powers of the officer from whom the appeal is taken and may require such conditions and safeguards as the Board finds necessary to preserve the spirit and intent of the regulations herein.

4. Nonconformity

- a. The Board of Adjustment may permit the reconstruction, extension or enlargement of a building occupied by a pre-existing non-conforming use on the lot occupied by such building provided such reconstruction does not prevent the return of such property to a conforming use.
- b. The Board of Adjustment may require the discontinuance of non-conforming uses under any plan whereby the full value of the structure or use can be amortized within a definite period of time, taking into consideration the general character of the neighborhood and the necessity for all property to conform to the regulations of this Ordinance.

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F. Limitations on Authority of the Board

1. The Board may not grant a variance authorizing a use other than those permitted in the district for which the variance is sought.
2. Although action may be effected by the Board, a variance for any parcel of property or portion thereof upon which a Site Plan, Preliminary Plat, Final Plat, or Zoning Amendment, where required, has not been finally acted upon by both the Planning and Zoning Commission and, where required, by the City Council, will not be deemed to be granted until said final action has been completed. All administrative remedies available to the applicant shall have been exhausted prior to a hearing by the Board of Adjustment. The Board shall have no power to grant a zoning amendment.
3. The listed conditions required to exist on any matter on which the Board of Adjustment is authorized to consider under this article shall be construed as limitations on the powers of the Board to act. Nothing herein shall be construed to empower the Board of Adjustment to effect changes in the zoning districts established by this article or the uses permitted therein.

G. General Procedures

1. Variance

a. Application and Fee

An application for granting a variance, other than an appeal, shall be in writing using forms provided by the City and shall be accompanied by a fee. The application for shall be the same as for a zoning variance.

b. Public Hearing

The Board of Adjustment shall hold a public hearing no later than 45 days after the date the completed application for action is filed.

c. Notice of Public Hearing

- i. Publication of the notice of a public hearing shall be published not less than ten (10) days prior to the public hearing in the official newspaper of general circulation.
- ii. Notice of a public hearing shall be mailed not less than ten (10) days prior to the public hearing to the petitioner and the owners of the property lying within 200 feet of any point of the lot or portion thereof, on an appeal, variance, exception or other action is proposed, and to all persons deemed by the Board of Adjustment to be affected. Such owners and persons shall be determined according to the current tax rolls of the City and substantial compliance therewith shall be deemed sufficient, provided, however, that the depositing of such written notice in the mail by the Board of Adjustment shall be deemed sufficient compliance with the purpose of this matter.

d. Termination of Approval

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Any variance shall terminate automatically when the specified period of the variance has expired, or the use has been abandoned.

2. Appeals

a. Application and Fee

- i. An appeal may be taken from the decision of an administrative officer by a person who filed the application that is the subject of the decision, a person who is the owner or representative of the owner of the property that is the subject of the decision, a person who is aggrieved by the decision and is the owner of real property within 200 feet of the property that is the subject of the decision, or by any officer, department, board or bureau of the municipality affected by the decision.
- ii. The appeal must be in writing and shall be submitted within 20 days after the decision has been rendered by the administrative officer, by filing with the officer from whom the appeal is taken and with the Board of Adjustment, a notice of appeal specifying the grounds thereof. The officer from whom the appeal is taken shall forthwith transmit to the Board of Adjustment all the papers constituting the record upon which the action appealed from was taken.

b. Notice and Public Hearing

The Board shall set a reasonable time for the appeal hearing and shall give public notice of the hearing and due notice to the parties in interest. The board shall decide the appeal at the next meeting for which notice can be provided following the hearing and not later than the 60th day after the date the appeal is filed.

c. Stay of Action

An appeal shall stay all proceeding of the action appealed from unless the officer from whom the appeal is taken certifies to the Board of Adjustment, after the notice of appeal shall have been filed with him, that by reason of facts stated in the certificate a stay would, in his opinion, cause imminent peril to life or property. In such case proceedings shall not be stayed, otherwise, than by restraining order which may be granted by the Board of Adjustment or by a court of record on application, after notice to the officer from whom the appeal is taken on due case shown.

d. Limitation

The same appeal to the Board of Adjustment shall not be allowed on the same piece of property prior to the expiration of one (1) year from a ruling of the Board of Adjustment on any appeal to such body unless other property in the same zoned areas shall have, within such one (1) year period, been altered or changed by ruling of the Board of Adjustment, in which case such change of circumstance shall permit the allowance of an appeal but shall in no way have force in law to

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compel the Board of Adjustment after a hearing to grant such subsequent appeal, but such appeal shall be considered on its merits as in all other cases.

3. Nonconforming Uses

After a public hearing, the Board of Adjustment may require the discontinuance of nonconforming uses under any plan whereby the full value of the structure or use can be amortized within a definite period of time, taking into consideration the general character of the neighborhood and the necessity for all property to conform to the regulations of this article.

4. Hearing

- a. The Board of Adjustment may adopt rules to govern its proceedings with the approval of the City Council, providing, however, that such rules are not inconsistent with the terms of this Ordinance.
- b. All meetings of the Board of Adjustment shall be open to the public.
- c. Meetings of the Board of Adjustment shall be held at the call of the Chairman, who may compel the attendance of witnesses.
- d. The Board of Adjustment shall keep minutes of its proceedings, showing the vote of each member upon each question, or, if absent or failing to vote, indicate such fact and shall keep records of its examinations and other official actions, all of which shall be filed in the offices of the Board of Adjustment and kept as public record.
- e. Any party may appear in person or by attorney or agent.

5. Concurring Vote

The concurring vote of four (4) members of the Board is necessary to:

- a. Reverse an order, requirement, decision, or determination of an administrative official;
- b. Decide in favor of an applicant on a matter on which the Board is required to pass under a zoning ordinance; or
- c. Authorize a variation from the terms of this ordinance.

6. Judicial Review

Any person or persons, jointly or separately, aggrieved by any decision of the Board of Adjustment or any taxpayer or any officer, department or board of the City may present to a court of record, a petition, duly verified, setting forth that such decision is illegal, in whole or in part, specifying the grounds of such illegality. Such petition shall be presented to the district court, county court, or county court at law within ten (10) days of the questioned decision of the Board of Adjustment, and not thereafter, and shall comply in all respects with the requirements set forth in Section 211.011 of the Local Government Code, as amended.

Section 14.204 Certificate of Occupancy

- A. General. No building hereafter erected, converted or structurally altered shall be used or occupied and no land or nonresidential building may be changed in use of a different classification unless or until a certificate of occupancy shall have been issued by the building official of the City stating that the building or proposed use of land or building complies with the provisions of this Ordinance and other building and health laws of the town.
- B. Certificate of Occupancy

Certificates of Occupancy shall be applied for coincident with the application for building permit and shall be issued within ten (10) days after the erection or structural alteration of such building shall have been completed in conformity with the provisions of this ordinance and any other ordinance of the City and approval of all required inspections. Approval of the final building inspection by the Building Development Services department shall serve as a Certificate of Occupancy for all one-family and two-family residential dwelling units.
- C. Certificate of Occupancy for a Legal Nonconforming Use
 - 1. Certificates of Occupancy shall be required for all legal non-conforming uses. Application for Certificate of Occupancy for such non-conforming uses shall be filed within 12 months from the effective date of this Ordinance, accompanied by affidavits of proof that such non-conforming uses were not established in violation of this ordinance, or any previous zoning ordinance. Failure to make such application within 12 months after the nonconformity arises shall be presumptive evidence that the nonconformity is illegal and in violation of this Ordinance.
 - 2. Certificate of Occupancy shall state that the building or proposed use of a building or land, complies with all building and health laws and ordinances and with the provisions of this ordinance. A record of all certificates shall be kept on file in the Building Development Services department, and copies shall be furnished, on request, to any person having a proprietary or tenancy interest in the building affected. (No fee shall be charged for a Certificate of Occupancy for a legal non-conforming use.)
- D. Procedure for New or Altered Buildings
 - 1. Written application for a Certificate of Occupancy for a new building or for an existing building which is to be altered shall be made at the same time as the application for the Building Permit for such building.
 - 2. Said Certificate shall be issued after the City Manager and/or designee orders the building or structure inspected and finds no violations of the provisions of this ordinance or other regulations.
 - 3. Said Certificate shall be issued by the City Manager and/or designee after the erection or alteration of such building or part thereof has been completed in conformity with the provisions of this Ordinance.
- E. Procedure for Vacant Land or a Change in Building Use
 - 1. Written application for a Certificate of Occupancy for the use of vacant land, a change in the use of land or a change in the use of a building, or for a

change from a nonconforming use to a conforming use, shall be made to said City Manager /or designee.

2. If the proposed use is a conforming use, as herein provided, written application shall be made to said City Manager or designee.
3. If the proposed use is found to be in conformity with the provisions of this Ordinance, the Certificate of Occupancy shall be issued after the application for same has been made and all required inspections are completed and approved by the City Manager or designee.

F. Application Required

Every Certificate of Occupancy shall contain the following:

1. Building permit number;
2. The address of the building;
3. The name and address of the owner;
4. A description of that portion of the building for which the Certificate is issued;
5. A statement that the described portion of the building has been inspected for compliance with the requirements of the International Building Code, group and division of occupancy; and
6. The name of the City Manager or designee.

G. Posting

The Certificate of Occupancy shall be posted in a conspicuous place on the premises and shall not be removed except by the City Manager or designee or his authorized agent.

H. Revocation

The City Manager and/or designee may, in writing, suspend or revoke a Certificate of Occupancy issued under the provisions of this ordinance whenever the Certificate is issued in error, or on the basis of incorrect information supplied, or when it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this ordinance or the most current adopted ordinances.

I. Additional Types of Certificate of Occupancies and Compliance

1. Certificate of Occupancy – Temporary

If the City Manager or designee find that no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, a temporary Certificate of Occupancy may be issued for a period not to exceed six (6) months, for the use of a portion or portions of a building or structure prior to the completion of the entire building or structure. Such temporary Certificate shall not be construed as in any way altering the respective rights, duties, or other obligations of the owners/tenants relating to the use or occupancy of the premises or any other provision of this Ordinance.

2. Certificate of Occupancy – Nonconforming

For land, structures, or uses which become nonconforming by action taken by the City Council after the adoption of this ordinance, the owner or occupant of the nonconformity shall register the nonconformity with the City Manager and/or designee within three (3) months after the time it becomes nonconforming. Registration shall be confirmed by the issuance of a "Certificate of Occupancy - Nonconforming," which shall state specifically how the nonconformity was created and how it does not comply with the provisions of this Ordinance or other applicable ordinances. Failure to make such application within three months after the nonconformity arises shall be presumptive evidence that the nonconformity is illegal and in violation of this Ordinance.

3. Certificate of Occupancy – Re-Occupancy

- a. A Certificate of Occupancy—Re-Occupancy is required when a there is change in party or parties occupying a building or a lease space, a change of use or intensification of use is not occurring, and a Certificate of Occupancy is not required under Section 14.205.A. A re-occupancy of the land or building shall not take place until a 'Certificate of Occupancy - Re-Occupancy' has been issued by the City Manager or designees with the approval of the Tarrant County Health Official, as applicable. Certificates of Occupancy - Re-Occupancy shall be required for any of the following:
 - i. Change in tenant;
 - ii. Change in lessee/management;
 - iii. Change in business;
 - iv. Change in party or entity occupying a building or portion of a building;
 - v. Change in interior building layout whereby plumbing, mechanical, electrical or food related apparatuses are modified or relocated.
- b. The Building Official shall determine if a Certificate of Occupancy – Re-Occupancy is required based on the proposed change. If a change occurred to warrant a Certificate of Occupancy – Re-Occupancy, the existing Certificate of Occupancy shall be deemed revoked until such time as necessary improvements or inspections have been made and a Certificate of Occupancy – Re-Occupancy has been issued.

ARTICLE 14.300 DEFINITIONS

Section 14.301 General

Words used in the present tense include the future; words in the singular number include the plural, and words in the plural number include the singular; the word "building" includes the word "structure," the word "shall" is mandatory, and not permissive. The words "used" or "occupied" include the words "intended," "designed," or "arranged to be used or occupied." The word "lot" includes the words "plot" or "parcel."

Section 14.302 Definitions

The following words, terms and phrases, when used in these zoning regulations, shall have the meanings ascribed to them below, except where the context clearly indicates a different meaning:

ABUTTING, ADJACENT, ADJOINING – Contiguous or sharing a common border or boundary with other property. Abutting, adjacent and adjoining shall include property immediately across an alley but shall not include property across a street.

ACCESSORY BUILDING/STRUCTURE – Generally, a subordinate building, located on the same lot as the primary building, and having a use customarily incidental to the primary use of the main building. A building housing an accessory use is considered an integral part of the main building when it has any part of a wall in common with the main building or is under an extension of the roof of the primary structure and is designed as an integral part of the main building. Refer to Section 14.607, Accessory Uses and Buildings.

ACCESSORY USE – An area within the primary building used for a purpose other than the primary use of the principle building on the lot. Also, may be an incidental use in an accessory building on the same lot. Refer to Section 14.607, Accessory Uses and Buildings.

ADMINISTRATIVE OFFICERS - Any office referred to in these zoning regulations shall be the person so retained in this position by the City, or his duly authorized representative. This definition shall also include engineering, planning and other consultants retained by the City to supplement or support existing City staff, as deemed appropriate.

1. **Building Official.** The officer or designated authority charged with the administration and enforcement of the building codes.
2. **City Attorney.** The attorney, or firm of attorney, that has been specifically employed by the City to assist in legal matters. This term shall also apply if the City retains a person to perform the functions of City attorney as an official City employee.
3. **City Engineer.** The registered professional engineer or firm of registered professional consulting engineers that has been specifically employed by the City to perform engineering review, design and related activities. The City Engineer is also the designated Floodplain Administrator.
4. **City Manager.** The person or authorized representative/designee holding the position of the chief executive officer, as appointed by the City council, under the terms of the City Charter.
5. **Planning and Zoning Administrator.** The person designated by the City Manager to oversee zoning and subdivision review procedures, gather all staff comments and recommendations, and convey said recommendations to the Commission, Council and other departments.
6. **City Secretary.** The person or authorized representative holding the office of City Secretary under the terms of the City Charter.
7. **Director of Building and Development Services.** The person designated by the City Manager to oversee permitting and inspections, planning and zoning, code compliance, and environmental services, gather all staff comments and recommendations, and convey said recommendations to the Commission, Council and other departments.
8. **Director of Public Works.** The person designated by the City Manager to oversee compliance with the City Master Thoroughfare Plan and designate an individual to be part of the DRC; may also be City Engineer.

ARTICLE 14.300 DEFINITIONS

AMUSEMENT ARCADE (INDOORS) – A building or part of a building in which pinball machines, video games, amusement machines, or other similar player-operated amusement devices are present and maintained as the primary use. For the purposes of this definition, “primary use” means 51 percent or more of the gross floor area (including player space and aisle space) of the portion of the structure being used (not to include any area of a structure being used as storage).

AMUSEMENT MACHINE – Any machine or device of any kind or character, that is operated by or with coins, metal slugs, tokens, or checks, when such machine dispenses or is used or is capable of being used or operated for amusement or pleasure or when such machine is operated for the purpose of dispensing or affording skill or pleasure, or for any other purpose other than the dispensing or vending of “merchandise or music” or “service” exclusively, as those terms are defined in the Texas Revised Civil Statutes, Title 132, Chapter 8 (section 8801 et seq.), as amended. (An “amusement machine” pursuant to this definition is the same as a “skill or pleasure coin-operated machine” pursuant to the Texas Revised Civil Statutes, Title 132, Chapter 8, Section 8801(5), as amended.) An “amusement machine” shall also include any billiard tables operated for profit, whether operated by or with coins, metal slugs, tokens, or checks inserted into the machine or paid to an attendant. See also, GAMBLING DEVICE.

ANTENNA – Any exterior apparatus designed for telephonic, radio, or television communications through the sending and/or receiving of electromagnetic waves.

ANTIQUE STORE – An establishment offering for sale, within a building articles such as glass, china, furniture or similar furnishings and decorations which have values and significance as a result of age, design, or sentiment.

APARTMENT -- A room or suite of rooms in an apartment house arranged, designed or occupied as a dwelling unit or residence by a single family, individual, or group of individuals. Different types of Apartment uses are defined below:

1. **Apartment, Efficiency or Studio** – An apartment having a combination living and bedroom, including independent cooking facility (no separate bedroom).
2. **Apartment Hotel** - An apartment house which furnishes for the use of its tenants services ordinarily furnished by hotels, but the privileges of which are not primarily available to the public.
3. **Apartment House** – Refer to, DWELLING, MULTI-FAMILY

ASSISTED LIVING FACILITY - A facility providing responsible adult supervision of or assistance with routine living functions of an individual in instances where the individual's condition necessitates that supervision or assistance.

AUTO-RELATED SALES AND SERVICE - An establishment that provides retail sales and services related to automobiles including, but not limited to, cars, tires, batteries, and gasoline.

AUTOMOBILE SALES AREA – An open area or lot used for the display or sale of automobiles, where no repair work is done except minor reconditioning of the cars to be displayed and sold on the premises, and no dismantling of cars or sale or keeping of used car parts or junk on the premises.

BASEMENT – A building story located below the first story and which is partly underground but having at least one-half of its height above the average level of the adjoining ground. A basement shall be counted as a story in computing building height. Refer to, STORY

BICYCLE PARKING SPACE – A four feet wide by six feet long (4 ft wide x 6 ft long) space provided for securing two (2) bicycles to a City approved Bicycle Rack.

BICYCLE RACK – A framework which permits the locking of the bicycle frame and one (1) wheel to the rack and supports the bicycle in a stable position without damage to wheels, frame or components. Bicycle rack design shall adhere to requirements set forth in this Ordinance.

BLOCK – An area enclosed by streets and occupied by or intended for buildings; or if said word is used as a term of measurement, it shall mean the distance along a side of a street between the

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nearest two (2) intersecting streets. In cases where platting is incomplete or disconnected, the City Manager and/or designee shall determine the outline of the block.

BOARD – The Board of Adjustment (BOA) as established in Chapter 2, Administration of the regulations herein.

BOARDING HOUSE – A building other than a hotel, where lodging and meals for five (5) or more persons are served for compensation and conforms to Chapter 260 of the Texas Health and Safety Code and Chapters 508 and 509 of the Texas Government Code, as amended.

BUFFERYARD – A bufferyard is an area of land typically between adjacent properties with different zoning and/or land uses. Additional plantings and/or structures, such as walls or fences, may be required between land uses to eliminate or minimize conflicts between them.

BUILDING – Any structure built for the support, shelter, and/or enclosure of persons, animals, goods/personal items or movable property of any kind. When subdivided in a manner sufficient to prevent the spread of fire each portion so subdivided may be deemed a separate building.

BUILDABLE AREA - The portion of a lot or site, excluding required yard areas, setbacks or open space within which a structure may be built.

BUILDING FACADE LINE - The vertical plane along a lot where the portion of the front facade of the building closest to the street is actually located.

BUILDING FOOTPRINT – The area of the building in contact with the ground.

BUILDING, HEIGHT OF – Refer to HEIGHT OF BUILDING.

BUILDING LINE – A line parallel or approximately parallel to the street right-of-way line at a specific distance marking the minimum distance from the street right-of-way line that a building may be erected.

BUILDING STORY – The height of a single floor of a multi-level building. Refer to, STORY

BUSINESS – Includes retail, commercial, industrial, and manufacturing uses and districts as herein defined.

CALIPER – Diameter of the trunk of a tree measured one foot (1 ft) above ground level. This method of measurement is used for trees that are planted as a requirement of the Zoning and Subdivision Ordinances.

CANOPY TREES - A perennial woody plant (single trunk or multiple trunks) contributing to the uppermost spreading branch layer of a forest and may be commonly referred to as shade trees.

CARPORT – An accessory building which is open-sided shelter for automobiles which may be formed by the extension of a roof from the side of the principle building and which has no more than one (1) of its sides enclosed.

CERTIFICATE OF OCCUPANCY (OR PERMIT) - An official certificate issued by the City through the administrative officer which indicates conformance with or approved conditional waiver from the Building Codes and Zoning Ordinance and authorized legal use and occupancy of the premises for which it is issued.

CITY COUNCIL – The governing body of the City of Lake Worth, Texas.

CLINIC – Medical office(s) for one (1) or more physicians, surgeons, dentists, optometrists, or chiropractors engaged in treating the sick or injured, but not including rooms for the abiding of patients.

COLIVING – An umbrella term for different types of co-housing arrangements; can be loosely defined as a home/dwelling unit where two (2) or more unrelated people live together whereby each person signs their own lease for a private bedroom, and often bathroom, within a residence, and the residents share common facilities, such as a kitchen.

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COMMERCIAL AMUSEMENT CENTER, INDOOR OPERATIONS ONLY – A facility providing for entertainment and amusement. Games contained in the facility may include skilled games or activities such as, but not limited to, shuffle boards, darts, bowling facilities, roller/ice skating rinks or dominoes. Any combination of these games may be used in the facility. Not included in this definition is an AMUSEMENT ARCADE (INDOORS).

COMMERCIAL OR MIXED-USE BUILDING - A building in which the ground floor is built to commercial ready standards and any of the floors are occupied by non-residential or residential uses.

COMMERCIAL READY - A space constructed to the specified standard for the minimum height of the ground floor which may be used for noncommercial uses and/or converted into retail/commercial use. The intent of Commercial-Ready space is to provide the flexibility of occupying a space in accordance with market demand and allowing the use in such space to change to retail/commercial uses accordingly.

COMMUNITY CENTER – A building dedicated to social or recreational activities, serving the City or a neighborhood and owned and operated by the City or by a non-profit organization, and dedicated to promoting the health, safety, morals or general welfare of the City.

COMMUNITY GARDEN - A small to medium size garden (approximately one acre or smaller) cultivated by members of an area for small scale agricultural uses for the benefit of the same people. It may consist of individually tended plots on a shared parcel or may be communal (everyone shares a single plot).

COMMUNITY HOME - A community-based residential home as defined by and which qualifies as a community home pursuant to the Community Homes for Disabled Persons Location Act, Texas Human Resources Code, Chapter 123, as amended.

COMPREHENSIVE PLAN – The Comprehensive Plan of the City of Lake Worth, Texas, as adopted and amended by the City Council of the City of Lake Worth.

CONDITIONAL USE - A use which would not be appropriate generally or without certain restrictions throughout a zoning district, but which, if controlled as to number, area, location or relation to the neighborhood would promote the health, safety, and welfare of the community.

CONDOMINIUM - A multi-family dwelling facility within which designated units or apartments are conveyed fee simple title, with an undivided interest in the building's common elements, to include, but not be limited to, halls, stairs, elevators, roofs, parking space, and the land.

CONVALESCENT HOME – Any structure used for or occupied by persons recovering from illness or suffering from the infirmities of old age.

COTTAGE MANUFACTURING - Small scale assembly and light manufacturing of commodities fully enclosed within the building without producing any noise, noxious odors, gas, or other pollutants. This category may include workshops and studios, electronics, pottery, glass-blowing, metal working, screen printing, sculpture, painting, and weaving.

COURT – An open, unoccupied space, bounded on three (3) or more sides by the walls of a building. An inner court is a court entirely surrounded by the exterior walls of a building. An outer court is a court having one (1) side open to a street, alley, yard or other permanent space.

COURTYARD - A landscaped open space in the center of the block with no street frontage, surrounded by walls or buildings on all sides. It shall be large enough to allow for public activities and have sunlight during midday. It should be designed to connect to adjacent buildings or to the public sidewalk through a pedestrian passage(s).

DAY CARE CENTER - A facility that provides non-medical care and supervision for more than six (6) children, elderly persons or persons with physical and/or mental disabilities. This definition does not include those uses defined as a community home.

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DAY CARE NURSERY – A place where twelve (12) or more children are left for care a part of the twenty-four (24) hours of the day.

DAY CARE HOME, FAMILY – A place meeting the requirements and registered as a Registered Family Home with the Texas Department of Human Services and Chapter 42 of the Human Resource Code where twelve (12) or less children are left for care for less than twenty-four (24) hours a day.

dB(A) - The sound pressure level in decibels. Refers to the “a” weighted scale defined by American National Standards Institute (ANSI). A method for weighting the frequency spectrum to mimic the human ear.

DBH or dbh - Diameter at breast height; the average diameter (outside the bark) of a tree four and one-half feet (4 ½ ft) above mean ground level. This method of measurement is used for measuring existing trees.

DECIBEL - The unit of measure used to express the magnitude of sound pressure and sound intensity. Refer also to SOUND PRESSURE and SOUND PRESSURE LEVEL.

DISTRICT (ZONING) - A section of the City of Lake Worth, Texas, for which the regulations governing the area, height, or use of the land and buildings are uniform.

DRIVE-IN RESTAURANT OR REFRESHMENT STAND – Any place or premises used for sale, dispensing, or serving of food, refreshments, or beverages in automobiles, including those establishments where customers may serve themselves and may eat or drink the food, refreshments, or beverages on the premises.

DWELLING, SINGLE FAMILY – A detached residential dwelling unit other than a mobile home, designed for and occupied by one (1) family only.

DWELLING, SINGLE FAMILY ATTACHED - Single-family attached structures include semi-detached (semi-attached, side-by-side), row houses, duplexes and townhouses. In order for attached units to be classified as single-family structures, each unit must:

- Be separated by a ground-to roof wall,
- Have a separate heating system,
- Have individual meters for public utilities, and
- Have no units located above or below.

A detached residential building containing two (2) dwelling units, designed for occupancy by not more than two (2) families.

DWELLING, MANUFACTURED HOME (HUD) – A structure, constructed on or after June 15, 1976, according to the rules of the United States Department of Housing and Urban Development, transportable in one (1) or more sections, which, in the traveling mode is eight body feet or more in width or forty body feet or more in length (greater than 8 ft by 40 ft), or, when erected on site, is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, including the plumbing, heating, air-conditioning, and electrical systems. The term does not include a recreational vehicle as defined by 24 C.F.R. Section 3282.8(g), as amended.

DWELLING, MOBILE HOME – A structure that was constructed before June 15, 1976, transportable in one (1) or more sections, which, in the traveling abode, is eight body feet or more in width or forty body feet or more in length (greater than 8 ft by 40 ft),, or when erected on site, is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and including the plumbing, heating, air-conditioning, and electrical systems.

DWELLING, MODULAR – A residential structure that is designed for the use and occupancy of one (1) or more families, that is constructed in one (1) or more modules or constructed using one (1) or more modular components built at a location other than the permanent residential site, and

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that is designed to be used as a permanent residential structure when the modules or modular components are transported to the permanent residential site, and are erected or installed on a permanent foundation system. The term includes the plumbing, heating, air-conditioning, and electrical systems. The term does not include any residential structures that are in excess of three (3) stories or 49 feet in height as measured from the finished grade elevation at the building entrance to the peak of the roof. The term shall not mean or apply to: (1) housing constructed of sectional or panelized systems not utilizing modular components; or (2) any ready-built home which is constructed so the entire living area is contained in a single unit or section at a temporary location for the purpose of selling it and moving it to another location.

DWELLING, MULTIFAMILY - Any building, or portion thereof, which is designed, built, rented, leased, let or hired out to be occupied as three (3) or more apartments or dwelling units or which is occupied as the home or residence of three (3) or more families living independently of each other and maintaining separate cooking facilities.

DWELLING UNIT – One (1) room, or rooms connected together, constituting a separate, independent housekeeping establishment for occupancy by one (1) family, owner or renter occupancy, physically separated from other dwelling units which may be in the same structure, and containing independent cooking, living, and sleeping facilities.

EARLY EDUCATION - A facility, public or private, with purpose of providing activities and/or experiences that are intended to effect developmental changes in children prior to their entry into elementary school.

ENCROACHMENT - Any structural or non-structural element such as a sign, awning, canopy, terrace, or balcony that breaks the plane of a vertical or horizontal regulatory limit, extending into a setback, into the public right-of-way, or above a height limit.

ENHANCED PAVEMENT – Any permeable or non-permeable decorative pavement material intended for pedestrian or vehicular use. Enhanced pavement includes brick or stone pavers, grass pavers and stamped or stained concrete.

FAMILY – An individual, or two (2) or more persons related by blood or marriage, including adopted children, or a group of not to exceed five (5) unrelated persons, not all related by blood, marriage, or adoption occupying a premises and living as a single nonprofit housekeeping unit; as distinguished from a group occupying a boarding house or a hotel. unit with single kitchen facilities, on a non-profit cost-sharing basis.

FENCE – A mesh, solid, or systematically spaced and adjoined barrier so positioned as to confine, separate or enclose, regardless of the material of which same is made, constructed or grown, which is not a part of or enclosed within any building. Refer to Chapter 3, Article 3.900, Fences.

FLOODPLAIN – An area identified by the Federal Emergency Management Agency (FEMA) as possibly being flood prone or within the Special Flood Hazard Area (SFHA) or below the base flood, also known as the flood having a 1 percent chance of being equaled or exceeded in any given year or the 100-year flood. The issuance of building permits for construction of any structure within such floodplain is regulated by a separate ordinance (Article 3.1600, Flood Damage Prevention, of the Lake Worth Code of Ordinances, as amended) governing the safeguards, preventive actions against flooding, types of uses permitted in flood prone areas, etc.

FLOOR AREA - The total (gross) square feet of floor space within the outside dimensions of a building including each floor level, but excluding cellars, attics, porches, carports or garages that are not designed for residential or business occupancy.

FLOOR AREA RATIO (FAR) - An indicated ratio between the number of square feet of total floor area in the main building(s) on a lot and the total square footage of land in the lot; it is the number resulting from dividing the main building(s) floor area by the lot area.

FOOD TRUCK - A vehicle establishment that is designed to be readily moveable and from which merchandise is sold or food is sold or served. The term includes, but is not limited to, a commercially manufactured vehicle. Often also called a mobile food establishment.

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FOOD TRUCK PARK - A location at which more than one (1) food truck operates on a regular basis.

FORECOURT - Similar to a courtyard, it is located in the front of a building such that the forecourt is surrounded on two (2) or three (3) sides by a building(s).

FRONTAGE – All the property abutting on one (1) side of the street between two (2) intersecting streets, measured along the street line.

GAMBLING DEVICE - Any electronic, electro- mechanical or mechanical contrivance that for a consideration affords the player an opportunity to obtain anything of value, the award of which is determined solely or partially by chance, even though accompanied by some skill, whether or not the prize is automatically paid by the contrivance. The term includes, but is not limited to, gambling device versions of bingo, keno, blackjack, lottery, roulette, video poker or similar electronic, electromechanical or mechanical games, or facsimiles thereof, that operate by chance or partially so, that as a result of the play or operation of the game award credits or free games, and that record the number of free games or credits so awarded and the cancellation or removal of the free games or credits. See also, AMUSEMENT MACHINE.

GAME ROOM - A building, facility or other place where one (1) or more amusement redemption machines are present.

GALLERY - A roofed walkway or promenade, it is an extension of the main facade of a building that is at or near the front property line. The gallery may overlap the public sidewalk.

GARAGE, PRIVATE – An enclosed accessory building for storage only of motor vehicles, boats, travel trailers, and household goods owned and used by the owners or tenants of the premises.

GARAGE, PUBLIC – A building or portion thereof designed or used for the storage, which is operated for commercial purposes.

GARAGE, STORAGE (PARKING) – A building or portion thereof, other than a private garage, used exclusively for parking or storage of self-propelled vehicles, but with no other services provided except facilities for washing.

GARAGE SALE – An occasional sale at retail open to the public and conducted on a residential premise for the purpose of disposing personal property by a person who does not hold himself out as engaging in, or does habitually engage in, the business of selling such property at retail. The term includes but is not limited to all sales entitled “estate”, “lawn”, “yard”, “room”, “backyard”, “patio”, or “rummage” sale. The term does not include situations where no more than three (3) specific items are offered for sale and all advertisements of such sale specifically name those products to be sold.

GRADE – The measure of vertical elevation relative to some reference point usually mean sea level (msl). Grade is measured as follows:

1. For buildings having walls adjoining one (1) street only, it is the elevation of the sidewalk at the center of the wall adjoining the street;
2. For buildings having walls adjoining more than one (1) street, it is the average of the elevation of the sidewalk at the center of all walls adjoining the street;
3. For buildings having no wall adjoining the street, it is the average level of the finished surface of the ground adjacent to the exterior wall of the building.

Any wall approximately parallel to and not more than five feet (5 ft) from a street line is to be considered as adjoining the street. Where no sidewalk has been constructed, the City Manager and/or designee (s) shall establish such sidewalk level or its equivalent for the purpose of these regulations.

GROUND COVER – Low growing, dense spreading plants typically planted from containers.

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GROUP HOME – A community-based residential home as defined by and which qualifies as a community home pursuant to the Community Homes for Disabled Persons Location Act, Texas Human Resources Code, Chapter 123, as amended.

HALFWAY HOUSE - A facility providing for the housing and rehabilitation or training of adults on probation, parole, early or pre-release or any other form of executive, judicial or administrative release from a penal institution, including without limitation community residential facilities established in accordance with Tex. Code of Criminal Procedure Ann. Art. 42.18, as amended from time to time. A halfway house includes facilities which provide in-patient treatment for chemical dependency to persons on probation, parole, early or pre-release or any other form of executive, judicial or administrative release from a penal institution if such persons are ordered to obtain such treatment for chemical dependency as a condition of release. For purposes of this definition, an adult is a person age eighteen years (18) or older.

HEIGHT OF BUILDING – The vertical distance of a building or structure measured from the highest adjoining sidewalk or ground surface within a 5-foot horizontal distance of the exterior wall to the highest point of the coping of a flat roof or to the deck line of a mansard roof or to the average height of the highest gable of a pitched or hipped roof. Height shall exclude chimneys, cooling towers, ventilators, elevator bulkheads, penthouses, tanks, water towers, radio antennae, ornamental cupolas, domes or spires, belfries, parapet walls or other appurtenances not exceeding ten feet (10 ft) in height above the top of the roof and not intended for human occupancy.

HEIGHT OF YARD OR COURT – The vertical distance from the lowest level of such yard or court to the highest point of any boundary wall.

HIGH INTENSITY LIGHTING – Light, which when measured at 10 feet from the source exceeds eleven thousand (11,000) lumens.

HOME OCCUPATION – An occupation conducted in a dwelling unit in accordance with applicable supplemental regulations. Any occupation which is customarily incidental to the main use of the premises as a dwelling and is conducted by a member of a family residing in the dwelling.

HOTEL – One (1) or more buildings containing individual living or sleeping units specially designed as temporary quarters for transient guests, including provisions for meals and personal services. A hotel includes a tourist hotel, a motor hotel, and a motel, but does not include an apartment hotel.

IMPERVIOUS COVERAGE – The total area of development that creates impervious or partially impervious surfaces, including buildings, pavement, gravel roads, and recreation facilities. Measurements of impervious coverage shall be based upon net project area excluding land within existing street rights-of-way. Impervious means development that is highly resistant to water infiltration.

INDUSTRIAL – Industrial property is a broad category encompassing many different types of buildings, each with different characteristics designed to support different business operations, such as the following major types:

1. **Warehouse/Distribution Buildings**

Warehouse/Distribution buildings are very large, single-story structures used primarily for warehousing and the distribution of business inventory. These buildings range from 50,000 to hundreds of thousands of square feet under roof and have up to 60-foot ceiling heights to accommodate extensive racking and storage systems. These buildings may have a small amount of office space as numerous loading docks, truck doors and large surface parking lots to semi-trailers.

2. **Manufacturing Buildings**

Manufacturing facilities (also called heavy industrial buildings) are designed to house specialized equipment used to produce goods or materials. In addition to providing three-phase high capacity, electric power, these industrial properties may include heavy

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ductwork, pressurized air or water lines, buss ducts, high capacity ventilation and exhaust systems, floor drains, storage tanks and cranes.

3. **Refrigeration/Cold Storage Buildings**

Refrigeration/Cold Storage are specialized industrial buildings that offer large capacity cold storage and/or freezer space. They are often used as a distribution center for food products that require refrigeration/freezing.

4. **Telecom / Data Hosting Centers**

These are highly specialized industrial buildings located in close proximity to major communications trunk lines with access to an extremely large and redundant power supply capable of powering extensive computer servers and telecom switching equipment. These buildings have reinforced floor slabs capable of supporting the weight of the electrical and computer equipment as well as backup generators, and specialized HVAC. They may also include raised flooring to handle cooling and extensive cabling. These buildings may also be called Switching Centers, Cyber Centers, Web Hosting Facilities and Telecom Centers.

5. **Flex Buildings**

This versatile building type (short for "Flexible") covers a broad range of uses and often is used to combine one (1) or more uses in a single facility, including office space, research and development, showroom retail sales, light manufacturing research and development (R&D) and even small warehouse and distribution uses. Because of this versatility, flex buildings are sometimes listed as separate category. Flex buildings typically have ceiling heights under 18 feet and have a higher percentage of office space than larger industrial buildings.

6. **Light Manufacturing Buildings**

Flex buildings can be used for light manufacturing that do not require extensive physical plant and space requirements that heavy industrial buildings provide; such as light assembly.

7. **R&D Buildings**

Flex buildings are popular in high technology industries such as computers, electronics and biotechnology because they effectively support a hybrid of office, manufacturing and warehouse space housed in a single location. Often these types of space users prefer locating in campus-like business parks featuring extensive landscaping, shared architecture design, and lots of surface parking and open space.

8. **Showroom Buildings**

Similar to flex/office buildings in basic construction and layout, showroom buildings combine retail display space with extensive onsite storage and distribution. Typically, up to 50 percent of the interior space in showroom buildings is dedicated to sales.

9. **Biotech (Wet Lab) Buildings**

Biotech buildings are highly specialized flex buildings that support a range of laboratory space where chemicals, drugs or other material or biological matter are tested and analyzed. This type of building requires extensive plumbing and water distribution, direct ventilation and specialized piped utilities. In addition, some may offer accurate temperature and humidity controls, dust control, and heavy power. Often these types of buildings are located together in campus-like fashion with extensive landscaping, extensive surface parking and open space.

JUNK – The term "junk" is defined to mean and shall include scrap iron, scrap tin, scrap brass, scrap copper, scrap lead or scrap zinc and all other scrap metals and their alloys, and bones, rags, used cloth, used rubber, used rope, used tinfoil, used bottles, old cotton, or used machinery, used tools, used appliances, used fixtures, used utensils, used boxes or crates, used pipe or pipe fittings, used automobiles or airplane tires, and other manufactured goods that are so worn, deteriorated or obsolete as to make them unusable in their existing condition; subject to being dismantled for junk.

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JUNKED VEHICLE – Refer to definitions in Chapter 8, Offenses and Nuisances, Article 8.500, Abandoned and Junked Vehicles of Lake Worth Code of Ordinances, as amended.

KENNEL – Refer to definition in Chapter 2, Animal Care and Control of Lake Worth Code of Ordinances, as amended.

LANDSCAPE ARCHITECT – A person registered as a Landscape Architect in the State of Texas pursuant to state law.

LANDSCAPE CONTRACTOR AND/OR DESIGNER – A person knowledgeable in plant materials and landscape design.

LANDSCAPE AREA – An area which is covered by natural grass, ground cover, or other natural plant materials.

LANDSCAPING - Material such as, but not limited to, grass, ground covers, shrubs, vines, hedges, trees and palms, and non-living durable material commonly used in landscaping, such as but not limited to, rocks, pebbles, sand, but excluding paving.

LAWN GRASS – Areas of land planted with grasses, which are maintained at a short height and used for aesthetic and/or recreational purposes. Often used for erosion control. Areas may be sodded, plugged, sprigged or seeded except that solid sod shall be used in swales, berms or other areas subject to erosion.

LEGAL NON-CONFORMING USE, BUILDING OR YARD – A use, building or yard existing legally at the time of the passage of this Ordinance which does not by reason of design, use, or dimensions conform to the regulations of the district in which it is situated. Also, a use, building or yard established after the passage of this Ordinance which does not conform to regulations of the district in which it is situated shall be illegal, unless otherwise registered.

LICENSED IRRIGATOR – A person duly licensed by the State of Texas to design and install irrigation systems.

LIVESTOCK – Animals typical of those that may be kept or raised on a farm or ranch, including but not limited to hooved animals (horses, cows, sheep, goats, etc.), ratites (ostriches, emus, etc.), poultry (chickens, ducks, geese), and fur-bearers (rabbits, minks, etc.) and as regulated by Chapter 2, Animal Care and Control of the Lake Worth Code of Ordinances, as amended.

LIVE-WORK UNIT - A mixed use building type with a dwelling unit that is also used for work purposes. The following standards apply to the work component of the unit:

- Located on the ground floor and at street level;
- Restricted to the uses of professional office, artist's workshop, studio, or other similar uses;
- Constructed to commercial ready standards; and
- Constructed as separate units under a condominium regime or as a single unit.

The 'live' component may be located on the street level (behind the work component) or any other level of the building. Live-work unit is distinguished from a home occupation otherwise defined by this ordinance in that the work use is not required to be incidental to the dwelling unit, non-resident employees may be present on the premises and customers may be served on site.

LODGE - An association of persons meeting regularly for their mutual benefit or for the promotion of some common purpose, supported jointly through payment of membership dues, all members having the right to vote on club policies and business.

LOADING SPACE, OFF-STREET – Space logically and conveniently located for bulk pickups and deliveries, scaled to delivery vehicles expected to be used, and accessible to such vehicles when required off-street parking spaces are filled. Required off-street loading space is not to be included as off-street parking space in computation of required off-street parking space.

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LOT – An undivided tract or parcel of land having frontage on a public street, or upon an approved open space, having direct street access, and which is, or in the future may be, offered for sale, conveyance, transfer, or improvement, which is designated as a distinct and separate tract, and which is identified by a tract or lot number or symbol in a duly approved subdivision plat which has been properly filed or recorded. Refer to LOT OF RECORD.

LOT COVERAGE – The percentage of the total area of a lot occupied by the base (first story or floor) of buildings located on the lot.

LOT FRONTAGE – The length of street frontage between property lines.

LOT LINES – The lines bounding a lot as defined:

1. **Lot Line, Front** – The boundary between a lot and the street on which it fronts.
2. **Lot Line, Rear** – The boundary line which is opposite and most distant from the front street line; except that in the case of uncertainty the City Manager and/or designee shall determine the rear line.
3. **Lot Line, Side** – Any lot boundary line not a front or rear line thereof. A side line may be a party lot line, a line bordering on any alley or place or side street line.

LOT MEASUREMENTS:

1. **Area** of the lot shall be the area of the lot within the lot lines, expressed in square feet or acreage, including easements, and shall not include portions of any public street or alley.
2. **Depth** of a lot shall be considered to be the distance between the midpoints of straight lines connecting the foremost points of the side lot lines in front and the rearmost points of the side lot line in the rear (the mean horizontal distance between the front and rear lot line).
3. **Interior Area** is the area of the lot remaining after subtracting out the area included in the bufferyards.
4. **Width** of a lot shall be considered to be the distance between straight lines connecting front and rear lot lines at each side of the lot, measured across the rear of the required front yard, provided, however, that width between side lot lines at their foremost points (where they intersect with the street line) shall not be less than 80 percent of the required lot width except in the case of lots on the turning circle of cul-de-sacs, where the 80 percent requirement shall not apply.

LOT OF RECORD – A lot which is part of a subdivision recorded in the office of the County Clerk of Tarrant County.

LOT TYPES:

1. **Corner Lot** – A lot abutting upon two (2) or more streets at their intersection. A corner lot shall be deemed to front on that street on which it has its least dimension, unless otherwise specified by the City Manager and/or designee.
2. **Interior Lot** – A lot other than a corner lot with only one (1) street frontage and whose side lot lines do not abut upon any street.
3. **Through Lot** – A lot other than a corner lot with frontage on more than one (1) street. Through lots abutting two (2) streets may be referred to as "double frontage" lots. Such through lot shall provide a front yard on each street.
4. **Cul-de-Sac Lot** – A lot whose frontage is along the turnaround portion of a street that has only one (1) opening and terminates with a turnaround at the closed end.

MAIN (PRINCIPAL) BUILDING – The building on a lot which is occupied by the primary use.

MANUFACTURED HOUSING - Manufactured housing shall contain both mobile homes and HUD-code manufactured homes as defined herein.

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MASONRY MATERIALS – Exterior materials as specified by use below:

1. **Residential:**
 - a. Masonry construction in single family and duplex zoning districts shall be considered as being kiln-fired brick veneer, stone veneer or stucco. Cementitious fiber board and exterior insulating finish system (EIFS) may be used according to the applicable architectural requirements of the zoning district.
 - b. Masonry construction in multifamily zoning districts may include the materials listed in paragraph a. above and split-face concrete masonry units (CMU).
 - c. Concrete or cinder block (except split-faced CMU), exposed or painted cement, or concrete tilt wall systems shall not be considered masonry construction for residential uses.
2. **Commercial:** Masonry materials in commercial and industrial zoning districts shall comply with the supplemental regulations and/or zoning district regulations.

MASSAGE - Any method by which a person utilizes his or her hands, feet or an instrument for treating the superficial parts of a customer's body for medical, hygienic, exercise, entertainment, or relaxation purposes.

MASSAGE PARLOR/THERAPY/SPA - Any commercial, medical or therapeutic practice unrelated to a sexually oriented business operation operated by or employing licensed masseuse, psychologist, physicians, physical therapists, registered nurses, chiropractors, licensed practitioners or athletic trainers engaged in the practice of healing arts and the treatment of disease, ailments and disorders of the body.

MOBILE HOME – Refer to DWELLING, MOBILE HOME.

MOBILE HOME PARK OR SUBDIVISION – A parcel of land upon which mobile homes are placed or located for purposes of occupancy.

MOTEL - A building or group of buildings, not more than two (2) stories in height, containing individual sleeping or living units, specially designed for the convenience of transient motorists, and arranged so that the autos are parked adjacent to the individual rooms by the guests themselves.

MOTOR VEHICLE COLLECTOR - A person who owns one (1) or more antique or special interest vehicles; and acquires, collects or disposes of an antique or special interest vehicle or part of an antique or special interest vehicle for personal use to restore and preserve as an antique or special interest vehicle for historic interest.

NATIVE LANDSCAPE – Cultivated land that is characterized by the use of native plants, including trees, shrubs, groundcover and grasses which are indigenous, or adapted, to the geographic area of land.

NATURAL AREA – Uncultivated land that is undisturbed and allowed to grow in its natural state without direct human intervention. Natural areas are set aside for conservation purposes, as examples of typical and unique plant and/or animal communities, or as examples of natural interest and beauty.

NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE (NAS FW JRB) -

1. **Approach/Departure Clearance Surface (Slope)** – An inclined plane that extends outward from the end of the runway of NAS Fort Worth for a distance of 25,000 feet and rises at a rate of one foot (1 ft) above the runway for every 50 feet from the end of the runway (runway elevation 650 feet msl). The horizontal extent is defined in the latest adopted edition of the Air Installations Compatible Use Zones (AICUZ) report for NAS Fort Worth JRB (2004, or later).
2. **Conical Surface** – An inclined plane that extends outward from the periphery of NAS Fort Worth for a distance of 7,000 feet and rises at a rate of one foot (1 ft) above the runway for every 20 feet from the end of the runway (runway elevation 650 feet msl). The horizontal

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extent is defined in the latest adopted edition of the Air Installations Compatible Use Zones (AICUZ) report for NAS Fort Worth JRB (2004 or later.)

3. **Transitional Surface** – Inclined planes that connect the Approach/Departure Clearance Surface (Slope), the Conical Surface, and the Horizontal Surface (a horizontal plane at 1,150 feet mean sea level). The horizontal extent is defined in the latest adopted edition of the Air Installations Compatible Use Zones (AICUZ) report for NAS Fort Worth JRB (2004 or later.)

NON-CONFORMING USE – A building, structure or use of land lawfully occupied at the time of the effective date of this Ordinance or amendments thereto, and which does not conform to the use regulations of the zoning district in which it is situated.

NURSING AND CARE HOME - An institution considered a commercial use, providing meals and resident care and services for persons who are generally admitted for periods of time exceeding thirty (30) days. Such service includes custodial or attendant care but may or may not provide for routine and regular medical and nursing services. Nursing and care home include homes for the aged, and convalescent and rest homes.

OCCUPANCY – The use or intended use of the land or buildings by proprietors or tenants.

OFF-STREET – Out of the right-of-way of a public street or place.

OPEN SPACE – Area included in any side, rear or front yard or any unoccupied space on the lot that is open and unobstructed to the sky except for the ordinary projections of cornices, eaves or porches.

OVERLAY DISTRICT – A set of zoning requirements that are described in the text, are mapped, and are imposed in addition to those of the underlying zoning district. Development within the overlay zone must conform to the requirements of both the underlying district and the overlay zone, or the more restrictive of the two. The zoning classification will typically be shown as a suffix to the underlying district (e.g. "NAS," Single Family – Naval Air Station Overlay District.)

PARKWAY – That area within the public right-of-way (ROW) between the back of curb or edge of pavement and the right-of-way line.

PARKING SPACE, OFF-STREET – For the purposes of this Ordinance, an off-street parking space shall consist of an indoor or outdoor space adequate for parking an automobile with room for opening doors on both sides, together with properly related access to a public street or alley and maneuvering room.

PERMEABLE PAVEMENT – A paving material that permits water penetration.

PERMITTED USES – Any use allowed in a zoning district and subject to the restrictions applicable to that zoning district.

PERSON – "Person" means an individual, proprietorship, partnership, corporation, association, or other legal entity.

PLANNED DEVELOPMENT - Development of land which is under unified control and is planned and developed as a whole single development operation or programmed series of development and is developed with special zoning standards that are unique to a particular site and which usually vary from those standards required by this article for other zoning districts.

PLANNING AND ZONING COMMISSION – The agency appointed by the City Council as an advisory body to it and which is authorized to recommend changes in the Zoning Ordinance and fulfill the functions authorized by the City Council and State Law.

PLAYGROUNDS - Open spaces designed and equipped for the recreation of children.

PLAT – A plan of a subdivision of land creating building lots or tracts and showing all essential dimensions and other information essential to comply with the subdivision standards of the City of Lake Worth and subject to consideration by the Planning and Zoning Commission and approval by

ARTICLE 14.300 DEFINITIONS

the City Council. Reference to a plat in this Ordinance means an official plat of record that has been approved by City Council and filed in the plat records of Tarrant County.

PREMISES – Land together with any buildings or structures occupying it.

PRIMARY ENTRANCE - The principal entrance to a building expressly utilized for daily pedestrian ingress and egress, typically easily identified due to special architectural treatment.

PRIVATE DRIVE (STREET OR PLACE) – An open, unoccupied space, other than a street or alley, permanently established or reserved or dedicated in private ownership as the principal means of vehicular access to property abutting thereon.

PRIVATE CLUB – An association of persons meeting regularly for their mutual benefit or for the promotion of some common purpose, supported jointly through payment of membership dues, all members having the right to vote on policies and business.

PROHIBITED USES – Any use prohibited in a zoning district and subject to the restrictions applicable to that zoning district.

RECREATIONAL EQUIPMENT, MAJOR – Major recreational equipment is defined to include boats, trailers and boat trailers, travel trailers, pick-up campers or coaches (designed to be mounted on automotive vehicles), motorized dwellings, tent trailers, horse trailers, utility trailers, and the like, and cases or boxes used for transporting recreational equipment, whether occupied by such equipment or not.

RELIGIOUS INSTITUTION – A building used for public worship by a congregation, excluding buildings used exclusively for residential, educational, recreational or other uses not normally associated with worship. Includes churches, chapels, cathedrals, temples and similar designations.

RESIDENCE – When used with the word “district,” an area of residential regulations. Refer to DWELLING.

RESIDENTIAL BUILDING - A building that is built to accommodate only residential uses on all floors of the building such as townhomes, apartment buildings, duplexes, etc.

ROOM – A building or portion of a building which is arranged, occupied or intended to be occupied as living or sleeping quarters, but not including toilet or cooking facilities.

ROOMING HOUSE – A building other than a hotel where lodging for three (3) but not more than twelve (12) persons is provided for definite periods for compensation pursuant to previous arrangements.

SCREENING SHRUBS – Evergreen shrubs that maintain their foliage year-round, and of sufficient mass and spacing to be opaque or that shall become opaque after 12) months and which shall be maintained in an opaque condition.

SETBACK – The distance from the property line to the nearest part of the building, structure or sign, measured perpendicularly to the property line. See also BUILDING LINE.

SEXUALLY ORIENTED BUSINESS – "Sexually Oriented Business" means an adult arcade, adult bookstore or adult video store, adult cabaret, adult motel, adult motion picture theater, adult theater, or nude model studio.

SHELTER - A facility providing temporary housing primarily to indigent, needy, homeless or transient persons and which may also provide ancillary services such as counseling and/or vocational training, bathing, dining and food preparation.

SHOWROOM WAREHOUSE – A sales and office facility for a product that by nature of the bulk dimensions of the product requires a larger than normal storage area ratio to sales and office area to maintain a normal operating product inventory. A showroom warehouse is specifically not intended to be a wholesale distribution center.

SHRUBS - Plants which grow vertically in a multi-branched growth pattern.

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SITE PLAN - A detailed line drawing clearly describing a project and showing sufficient information to determine the nature of the proposed development and providing adequate information to determine compliance with applicable codes and ordinances.

SOUND PRESSURE - The average rate at which sound energy is transmitted through a unit area in a specified direction. The pressure of the sound measured at a receiver.

SOUND PRESSURE LEVEL - The sound pressure mapped to a logarithmic scale and reported in A-weighted decibels (dB(a)).

SPECIAL INTEREST VEHICLE – A motor vehicle of any age that has not changed from original manufacturers' specifications, and because of its historic interest, is being preserved by a hobbyist.

STABLE OR BARN (COMMERCIAL) – A structure or building used for the boarding and quartering of horses, cows or other domestic livestock for a fee or other remuneration basis.

STABLE OR BARN (PRIVATE) – A structure or building used for quartering horses, cows or other domestic livestock of the property owner and not kept for remuneration, hire or sale.

STOREFRONT - A store or other establishment that has frontage on a street or thoroughfare; usually containing display windows.

STORY – That part of a building included between the upper surface of any floor and the upper surface of the floor next above, except that the topmost story shall be that portion of a building included between the upper surface of the topmost floor and the ceiling or roof above. A top story attic is a half story when the main line of the eaves is not above the middle of the interior height of such story. The first story is the highest story having its interior floor surface not more than four feet (4 ft) above the curb level, or the average elevation of the finished grade along the front of the building where it is set back from the street.

STREET – A public way between two (2) right-of-way lines, other than an alley or private drive, which has been dedicated or deeded to the public and accepted by the City for public use and affords a principal means of access (vehicular or otherwise) to property abutting thereon, as well as for utilities and sidewalks.

1. **Street, Private.** A private thoroughfare which affords principal means of access to abutting property.
2. **Street, Public.** A public thoroughfare which affords principal means of access to abutting property.

STREET FRONTAGE – The distance for which a lot line of a lot adjoins a public street, from one (1) lot line intersecting said street to the furthest distant lot line intersecting the same street.

STREET LINE – The right-of-way of a street.

STRUCTURE – Anything constructed or erected with a fixed location on the ground or attached to something having a fixed location on the ground. Among other things, structures include buildings, mobile homes, billboards, and poster panels.

STRUCTURAL ALTERATIONS – Any change in the supporting members of a building, such as bearing walls, columns, beams or girders, or any substantial changes in the roofs or exterior walls, excepting such repair or replacement as may be required for the safety of the building, but not including openings in bearing walls as permitted by the City Building Code.

STUCCO – Stucco shall be considered a masonry material when composed of cementitious ingredients, aggregate and water to create an exterior surface and moisture barrier with the aesthetics consistent with other masonry material of block, brick and/or stone. Stucco shall be applied using a three-step process over galvanized metal lath mesh to a minimum of three-fourths inch (3/4 in.) thickness or by other processes producing comparable cement stucco finish with equal or greater strength and durability. It must meet the requirements of the American Concrete Institute ACI 524, Guide to Portland Cement Plastering and the Portland Cement Association Stucco

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Manual, and the American Society for Testing and Materials (ASTM) specifications for Stucco and Plaster.

TERMINAL, MOTOR FREIGHT - The use of property or buildings for the temporary parking of motor freight vehicles or trucks of common carriers, during loading and unloading and between trips, including necessary warehouse space for storage of transitory freight.

THOROUGHFARE – As defined in the City's latest approved Comprehensive Plan.

TOWER – Any structure that is designed and constructed primarily for the purpose of supporting one (1) or more antennae, including self-supporting lattice towers, guyed towers, or monopole towers. The term includes radio and television transmission towers, microwave towers, common-carrier towers, personal telecommunications towers and similar structures.

TOWNHOUSE – A single family dwelling facility constructed in a series, or group of units having common walls, each on a separate lot of record.

TRAVEL TRAILER – A mobile vehicle built on a chassis and designed and used as a temporary place of dwelling and of such size and design as to be subject to licensing for towing on the highway by a passenger motor vehicle or other prime mover and not requiring a special permit for moving on the highway as contrasted to a mobile home.

UNDERSTORY/ACCENT TREES – Small evergreen or deciduous perennial woody plants which would grow below the top layer of the forest and typically have unique branching, textural or seasonal color characteristics.

UTILITY FACILITIES – Any water supply, water treatment, water pumping, water storage or other water facility; any sewerage treatment or pumping facility; any electrical generating facility, electrical transmission, switching facility, or electrical substation; any telephone exchange or other similar telephone communication facility; any natural gas pumping or storage facility; or any cable television receiving or transmission facility, or any utility or communications concern operating under a franchise approved by the City Council.

VARIANCE – A variance is a relaxation of the terms of the Zoning Ordinance where such variance will not be contrary to the public interest and where, owing to conditions peculiar to the property and not the result of the actions of the applicant, a literal enforcement of the ordinance would result in unnecessary and undue hardship. Except as specifically authorized in Chapter 2, Administration, a variance is authorized only for height, area, size of structure or size of yards, and open spaces. The establishment or expansion of a use otherwise prohibited shall not be allowed by variance except as provided in Chapter 2, nor shall a variance be granted because of the presence of non-conformities in the zoning district or uses in an adjoining zoning district.

WAREHOUSE AND/OR STORAGE:

1. **Mini-Warehouse.** A totally enclosed facility involving one (1) or more buildings and multiple individual units the purpose of which is exclusively for the storage of goods. Retail or wholesale, offices, manufacturing, fabrication, service, repair, or any other type of commercial or business enterprise is expressly prohibited from this type facility. Storage of hazardous and flammable materials as designated by the Fire Marshal is expressly prohibited from this type facility.
2. **Mini Warehouse Storage Facility (Indoor Storage Only).** A commercial facility consisting of a building or group of buildings in a controlled access and fenced compound that contains varying sizes of individual, compartmentalized, and controlled access stalls or lockers for the dead storage of a customer's goods or wares. The rented space shall be for private use only.
3. **Mini Warehouse Storage Facility (with outdoor storage).** An industrial facility consisting of a building or group of buildings and outdoor paved parking surfaces for outdoor storage in a controlled access and fenced compound. The buildings may contain varying sizes of individual, compartmentalized, and controlled-access stalls or lockers for the dead storage

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of a customer's goods or wares. The outdoor paved parking surfaces may be utilized for the storage of recreational vehicles, cars, boats and other items typically stored outdoors. The rented space shall be for private use only.

4. **Portable Storage Container**

A portable and temporary weather-resistant receptacle designed and used for the storage or shipment of household goods, wares, building materials or merchandise. This term shall not include roll-off containers/dumpsters or storage containers having storage capacity of less than 150 cubic feet.

5. **Warehouse**

A large building where raw materials or manufactured goods may be stored in bulk before their export or distribution for sale. A showroom or store may be associated with the warehouse use.

YARD – A required open space, other than a court, unoccupied and unobstructed by any structure or portion of a structure from 30 inches above the general ground level of the graded lot upward, provided however, that fences, walls, poles, posts, and other customary yard accessories, ornaments, furniture, and roof overhangs not exceeding 30 inches, may be permitted in any yard subject to height limitations and requirements limiting obstruction of visibility.

1. **Front Yard**

A yard extending between side lot lines across the front of a lot adjoining a public street. In the case of through lots, unless the prevailing front yard pattern on adjoining lots indicates otherwise, front yards shall be provided on all frontages. Where one (1) of the front yards that would normally be required on a through lot is not in keeping with the prevailing yard pattern, the City Manager and/or designee may waive the requirement for the normal front yard and substitute a special yard requirement which shall not exceed the average of the yards provided on adjacent lots.

In the case of reversed frontage corner lots, a front yard of the required depth shall be provided on either frontage, and a second front yard of the depths required for second front yards in the district shall be provided on the other frontage.

In the case of corner lots with more than two (2) frontages, the City Manager and/or designee shall determine the front yard requirements, subject to the following limitations:

- a. At least one (1) front yard shall be provided having the full depth required generally in the district;
- b. No other front yard on such lot shall have less than the minimum required second front yard for corner lots.

Depth of required front yards shall be measured at right angles to the front lot line.

2. **Side Yard**

A yard extending from the rear line of the required front yard to the front of the required rear yard, or in the absence of any clearly defined rear lot line to the point on the lot farthest from the intersection of the lot line involved with the public street. In the case of through lots, side yards shall extend from the rear lines of front yards required. Width of a required side yard shall be measured in such a manner that the yard established is a strip of the minimum width required by district regulations with its inner edge parallel with the side lot line.

3. **Rear Yard**

A yard extending across the rear of the lot between lot lines. In the case of through lots there will be no rear yards, but only front and side yards. All other lots will have rear yard.

Depth of a required rear yard shall be measured in such a manner that the yard established is a strip of the minimum width required by district regulations with its inner edge parallel with the rear lot line.

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In cases where a rear lot line is not evident, or if evident but not parallel to the front building line, the minimum rear yard requirement shall be the distance from the rear-most point of the lot along a line from that point drawn perpendicular to a line drawn from the foremost points of the two side lot lines, providing that the rear yard is parallel to at least one lot line along the rear of the lot.

4. **Special Yard**

A yard behind any required yard adjacent to a public street, required to perform the same functions as a side or rear yard, but adjacent to a lot line so placed or oriented that neither the term "side yard" nor the term "rear yard" clearly applies. In such cases, the City Manager and/or designee shall require a yard with minimum dimensions as generally required for a side yard or a rear yard in the district, determining which shall apply by the relation of the portion of the lot on which the yard is to be located to the adjoining lot or lots, with due regard to the orientation and location of structures and buildable areas thereon.

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

Section 14.401. Zoning Districts, Generally

- A. In order to regulate and restrict the location of trades and industries and the location of buildings erected, reconstructed, altered or enlarged for specified uses, to regulate and limit the height and bulk of buildings hereafter erected, reconstructed, altered or enlarged, to regulate and determine the area of yards and other open spaces and to regulate and limit the density of population, the City of Lake Worth is hereby divided into 11 zoning districts to be known as follows:

PF	Public Facilities District
SF-7.5	Single-Family 7.5 District
SF-0	Single Family Zero Lot Line District
MH	Manufactured Housing District
MF	Multifamily District
C	Commercial District
HC	Highway Corridor District
LI	Light Industrial District
I	Industrial District
MU-PD	Mixed Use/Planned Development
NAS	Naval Air Station NAS Overlay District

- B. Comparable Zoning District Classifications

<u>New Zoning District</u>	<u>Prior Zoning District</u>
PF, Public Facilities District	None
SF-7.5, Single-Family 7.5 District	"SF-1," Single-Family District
SF-0, Single Family District	"MD," Moderate Density District
MH, Manufactured Housing District	"MH" Manufactured Housing District
C, Commercial District	"C," Commercial District
HC, Highway Corridor District	None
LI, Light Industrial District	None
I, Industrial District	"I," Industrial District
MF, Multifamily	"P-MF," Planned Multi-Family District
None	"P-C," Planned Commercial District
None	"P-I," Planned Industrial District
MU-PD, Mixed Use Planned Development District	"M-PD," Mixed Planned Development District
NAS, NAS Overlay District	None

Zoning districts established by the immediate prior zoning ordinance have been either replaced with or amended as the following zoning districts. As listed, the new districts shall be considered as being comparable to the immediate prior district. The purpose, designation, and area requirements shall be deemed to be unchanged unless otherwise revised by this article.

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

C. Obsolete Zoning Districts

Obsolete districts have been mapped on the official zoning map of the city but are no longer part of the zoning district hierarchy applied to the city. These districts have been retained from the previous version of the land use ordinance and land that is zoned with any of the obsolete district designations will continue to be developable under those use and dimensional regulations applicable to the districts immediately prior to the effective date of this ordinance. Obsolete districts may have a city Planned Development (PD) designation associated with it. If such is the case, the land shall be developed according to the provisions of the approved PD ordinance(s).

Applications for rezoning to these obsolete districts shall not be accepted.

SF-1	Single-Family District
MD	Moderate Density District
P-MF	Planned Multiple-Family District
P-C	Planned Commercial District
P-I	Planned Industrial District
M-PD	Mixed Planned Development District

D. Terms Defined

The term "more restricted district" means one with fewer permitted uses and the term "less restricted district" means one with more permitted uses.

E. Zoning Map

The districts aforesaid, and the boundaries of such districts, shall be as hereinafter described, and as shown upon the map attached hereto and made a part of this Ordinance, said map being designated "City of Lake Worth, Texas Official Zoning Map", and said map and all notations, references, and other information shown thereon shall be a part of this Ordinance the same as if all such matters and information were fully described herein. The original of said map shall bear the date with the passing of this Ordinance and shall be signed by the Mayor and attested by the City Secretary, under the seal of the City of Lake Worth, Texas; said original map shall be kept in the office of the City Secretary in the Lake Worth City Hall, and a replica thereof shall be produced upon paper in such reduced scale as will permit its being attached to this Ordinance.

It shall be the duty of the City Manager and/or designee to keep the official maps and current copies up to date, by entering on such maps any changes that the City Council may from time to time order by amendments to the Zoning Ordinance and Map.

Original, official, and identical copies of the official zoning map are hereby adopted bearing the signature of the Mayor and the attestation of the City Secretary or designee and shall be filed and maintained as follows:

1. One (1) copy shall be filed with the City Manager and/or designee and retained as the original record and shall not be changed in any manner.

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

2. One (1) reproducible copy shall be filed with the City Manager and/or designee and shall be the official zoning map and shall be maintained by posting thereon all changes and subsequent amendments hereafter made by the City Council.
3. Other sectional maps for interpretation purposes may be made as shall be approved by resolution by the city council.
4. Reproductions for information purposes may from time to time be made of the official zoning map.
5. The official zoning map is subject to public inspection in the office of the City Secretary.

F. Boundaries of Districts

Where uncertainty exists with respect to the boundaries of the various districts, as shown on the map accompanying and made a part of this Ordinance, the following rules shall apply:

1. The district boundaries are either streets, alleys, creeks, pipe lines, electric transmission lines, railroads, or other natural or manmade features not likely to change, unless otherwise shown, and where the districts designated on the map accompanying and made a part of this Ordinance are bounded approximately by street or alley lines, said street or alley shall be construed to be the boundary of such district.
2. Where the district boundaries are not otherwise indicated and where the property has been or may hereafter be divided into blocks and lots, the district boundaries shall be construed to be lot lines, and where the districts designated on the map accompanying and made a part of this Ordinance are bounded approximately by lot lines, said lot line shall be construed to be the boundary of such districts unless said boundaries are otherwise indicated on the map.
3. On property that is still a survey tract or has not been subdivided with a recorded final plat, the district boundary lines on the map accompanying and made a part of this Ordinance shall be determined by use of the scale contained on such map, unless dimensions are shown.

G. Newly Annexed Territory

All territory hereafter annexed into the City of Lake Worth, Texas, shall conform to the regulations as specified in Article I, Boundaries and Annexation, of the Home Rule Charter of the City of Lake Worth, until permanently zoned by the City Council of the City of Lake Worth. The Planning and Zoning Commission may, after annexation of any territory into the City of Lake Worth, institute proceedings on its own motion to give newly annexed territory a permanent zoning, and the procedure to be followed shall be the same as is provided by law for the adoption of original zoning regulations.

Section 14.402. Land Uses

It is recognized that new types of land use will develop, and forms of land use not anticipated may seek to locate in the City of Lake Worth. In order to provide for such

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

changes and contingencies, the City Manager or designee may make a preliminary determination of the acceptability of a new use within a certain district. At the next appropriate time, the City Manager or designee shall make recommendations to the Planning and Zoning Commission and City Council for changes to the Zoning Regulations to accommodate new uses.

Section 14.403. Table of Uses

The uses allowable in each District are summarized in table herein and described in detail in the narrative discussion of each district in the chapters herein. In the event of a conflict between the table and the narrative description, the narrative prevails.

Table of Land Uses

ZONING DISTRICT											
	PF	SF 7.5	SF 0	MF	MH	C	HC	MU PD	LI	I	NAS
<u>AGRICULTURAL</u>											
Agricultural or vacant land (Tarrant Appraisal District)	P	P	P	P	P	P	P	P	P	P	P
<u>RECREATION AND ENTERTAINMENT USES</u>											
Amusement/ Event center (indoor)				X		CUP	P	P	P	P	
Amusement ctr; Game room	X	X	X	X	X	X	X	X	X	CUP	
Entertainment venue (outdoor)						P	P	P	CUP	CUP	CA APZ II
Auditorium, theater, cinema	P					P	P	P	P	P	CA APZ II
Bar, tavern, private club						P	P	P	P	P	X
Golf courses, driving range, miniature golf	CUP					CUP	CUP			CUP	CA APZ II
Restaurant, café, cafeteria	CUP					P	P	P	P	P	X
Sexually-oriented business	X	X	X	X	X	X	X	X	X	P	X
<u>PUBLIC FACILITIES, EDUCATIONAL AND INSTITUTIONAL USES</u>											
Business/trade school	P					P		P	P	P	X
Colleges and universities	P					P		P	P	P	X
Early education, elementary and secondary schools	P					P		P	P	P	X
Day care center (child or adult)	X	CUP	CUP	CUP	X	P	P	P	CUP	X	X
Day care center, religious institution	P					P	P	P	P	P	X
Government offices – local, state or federal	P					P	CUP	P	P	P	X
Independent school district offices/ buildings	P					P		P	P	P	X
Medical care facilities, clinics, hospitals	CUP			X		P		P	P	P	X
Museums, libraries, community centers, private or non-profit organizations	X				X	P	P	P	P	P	X
Public safety facilities, civil defense centers,	P					P		P	P	P	X
Religious institutions, churches	P	P	P	P	P	P	P	P	P	P	X

(P=Permitted use, Blank=Not Permitted, CUP=Conditional Use Permit required, X=Prohibited, CA = NAS review required; P* = Refer to Section 14.600, Supplemental Regulations)

Table of Land Uses

ZONING DISTRICT												
		PF	SF 7.5	SF 0	MF	MH	C	HC	MU PD	LI	I	NAS
<u>RESIDENTIAL</u>												
Household	Single Family dwellings		P	P	P	P			P			X
	Single Family attached			P	P				P			X
	Multifamily dwellings				P				P			X
	Manufactured/ Mobile home					P			X			X
	Modular Home					P			X			X
Group	Assisted living; nursing home	CUP	CUP	CUP	CUP	CUP	P	P	P	X	X	X
	Boarding Home/ Coliving		CUP	CUP	P			CUP				X
	Community Home	CUP	P*	P*	P		P*					X
	Group Home		P	P	CUP		P*					X
	Halfway House	CUP	X	X	CUP						CUP	X
	Shelter	X	X		X					CUP	CUP	X
<u>ACCESSORY BUILDING and/or USES</u>												
Accessory Building or Structure	Accessory bldg; Non-residential	P*	P*	P*	P*	P*	P*	P*	P*	P	P	P*
	Accessory bldg; Residential	CUP	P*	P*			CUP	CUP	P	CUP	CUP	X
	Antennae and towers, ≤ to max. height in district	P	P	P	P	P	P	P	P	P	P	CA
	Antennae and towers > max. height in district	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CA
	Carport	X	P*		P*	P*						P*
	Temporary bldg for construction/ office trailer	P	P	P	P	P	P	P	P	P	P	P*
Accessory Use	ADO - Accessory dwelling unit	P	P	P		P	P*	P*	P	P*	P*	X
	Home Occupations	X	P	P	CUP	P						X
	Outdoor sales/ display (Temporary)	CUP					P*	P*		P*	P*	

(P=Permitted use, Blank=Not Permitted, CUP=Conditional Use Permit required, X=Prohibited,
CA = NAS review required; P* = Refer to Section 14.600, Supplemental Regulations)

Table of Land Uses

ZONING DISTRICT											
	PF	SF 7.5	SF 0	MF	MH	C	HC	MU PD	LI	I	NAS
<u>COMMERCIAL, RETAIL AND SERVICE USES</u>											
Antique shop						P	P	P	P	P	X
Appliance store, supply, repair						P	P	P	P	P	X
Bank/financial institutions						P	P	P	P	P	X
Barber and beauty shops salon						P	P	P	P	P	X
Bicycles shop, repair						P	P	P	P	P	X
Book store, stationary						P	P	P	P	P	X
Caterer or wedding service		CUP	CUP	CUP	CUP	P	P	P	CUP	CUP	X
Cigar, tobacco or vape stores						P	P	P	P	P	X
Contract construction services						P	P	P	P	P	P
Convenience store, no fuel						P	P	P	P	P	X
Convenience store and fuel station						P	P		CUP	CUP	X
Copy store and services; no offset printing						P	P	P	P	P	X
Drug stores/pharmacy						P	P	P	P	P	X
Farm implement sales/ service						CUP	CUP		CUP	CUP	X
Food truck; Food truck park	P*					P*	P*	P	P*	P*	X
Furniture and furnishings						P	P	P	P	P	X
Grocery stores, specialty market						P	P	P	P	P	X
Hardware/home improvement						CUP	CUP		CUP	CUP	X
Health and fitness facility						P	P	P	P	P	X
Hotel, motel, inn				CUP		P	P	P	P	P	
Ice storage/ dispensing						P	P	P		P	P
Laundry service, dry cleaner						P	P	P	P	P	X
Liquor/package store						P	P	P	P		X

(P=Permitted use, Blank=Not Permitted, CUP=Conditional Use Permit required, X=Prohibited, CA = NAS review required; P* = Refer to Section 14.600, Supplemental Regulations)

Table of Land Uses

ZONING DISTRICT											
	PF	SF 7.5	SF 0	MF	MH	C	HC	MU PD	LI	I	NAS
<u>COMMERCIAL, RETAIL AND SERVICE USES</u>											
Merchandise, general						P	P	P	P		X
Merchandise, specialty						P	P	P	P		X
Mini-warehouse; no outside storage						CUP	CUP	P	P	P	P
Mini-warehouse; outside storage						CUP	CUP	P	X	P	P
Mortuaries, funeral homes						P	P	X	P		X
Music instruments and/or lessons						P	P	P			X
Nursery for retail sales						P	P	X			X
Nondepository financial institution	X	X	X	X	X	X	X	X	X	CUP	
Office, health services						P	P	P			X
Offices, professional						P	P	P			X
Office, real estate sales; leasing						P	P	P			X
Pet boarding kennel, day camp						P	P	P			X
Photofinishing, offset printing, lithography						P	P	P			X
Private club, fraternity, lodge						P	P	P			X
Restaurant, café, cafeteria with drive-through	CUP					P	P	P	P	P	X
Restaurant, café, cafeteria	CUP					P	P	P	P	P	X
Spa – beauty, health, massage						P	P	P			X
Sporting goods; gun sales/service						P	P	P			X
Tailor and cobbler						P	P	P			X
Temp. outdoor seasonal sales						P*	P*				P*
Veterinarian, outdoor kennels						CUP	CUP				X
Veterinarian, no outdoor kennels						P	P	P			X

(P=Permitted use, Blank=Not Permitted, CUP=Conditional Use Permit required, X=Prohibited, CA = NAS review required; P* = Refer to Section 14.600, Supplemental Regulations)

Table of Land Uses

ZONING DISTRICT												
		PF	SF 7.5	SF 0	MF	MH	C	HC	MU PD	LI	I	NAS
<u>AUTOMOBILE AND MISCELLANEOUS VEHICULAR USES</u> <u>Automobile, Bicycles, Motorcycles, Boats, Trailers</u>												
Uses associated with Vehicles	Auto parts, retail store						P	P	P	P	P	X
	Vehicle sales and rentals						P	P				X
	Vehicle repair, paint/body shop						CUP	CUP				P
	Car wash						P	CUP				P
	Parking garage or lot; private						P	P	P			P
	Parking garage or lot; commercial						P	P	P			P
<u>INDUSTRIAL, MANUFACTURING AND WAREHOUSING USES</u>												
Light Industrial	Carpet cleaning							P		P	P	P
	Food processing							P		P	P	X
	Flex building							P		P	P	P
	Furniture repair							P		P	P	P
	Light manufacturing									P	P	P
	Outdoor sales and storage						CUP	CUP		P	P	P
	Research and development									P	P	X
	Showroom warehouse						CUP	CUP	X	P	P	P
	Warehouse store (e.g. Costco)							CUP	X	P	P	X
Industrial	Biotech buildings								X	CUP	P	X
	Heavy industrial equipment sales/ auction yard								X		P	P
	Manufacturing buildings								X		P	P
	Refrigeration/cold storage building								X	CUP	P	X
	Packing plant								X		P	P
	Telecom/data hosting center								X	CUP	P	X
	Terminal, truck, freight, or water								X		P	P
	Warehouse and/or distribution								X		P	P

(P=Permitted use, Blank=Not Permitted, CUP=Conditional Use Permit required, X=Prohibited, CA = NAS review required; P* = Refer to Section 14.600, Supplemental Regulations)

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

ZONING DISTRICT											
	PF	SF 7.5	SF 0	MF	MH	C	HC	MU PD	LI	I	NAS
UTILITY AND SERVICE USES											
Utility installations owned by City, County, State or Public Utility	P	CUP	CUP	CUP	CUP	CUP	CUP	CUP	P	P	CA & CUP
Geothermal heat pump systems (Closed-Loop)	P	P	P	CUP		P	P	P	P	P	P
Ground-mounted solar system and solar water heater (less than 1,000 sq ft)	P	P	CUP			X	X				CA & CUP
Ground-mounted solar system and solar water heater (greater than 1,000 sq ft) ¹	CUP	CUP	CUP			X	CUP	CUP	CUP	CUP	X
Roof-mounted solar system and solar water heater (less than 1,000 sq ft)	P	P	P	CUP	CUP	P	P	P			CA & CUP
Roof-mounted solar system and solar water heater (greater than 1,000 sq ft) ¹	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	X
Wind energy systems ²	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	CUP	X

1 - Any Solar Energy System over 1,000 square feet in area requires an approved Conditional Use Permit and a letter of no objection from the Commanding Officer of the Naval Air Station prior to building permit approval.

2 - Any Wind Energy System requires an approved Conditional Use Permit prior to installation and a letter of no objection from the Commanding Office of the Naval Air Station prior to building permit approval.

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USE

Section 14.404. Nonconforming Use(s) Generally

A. Purpose and Intent.

Within the districts established by this article, there may exist buildings or uses of land and buildings which were lawful before this article was passed or amended, but which would be prohibited, regulated or restricted under the terms of this section or future amendments. Such nonconforming buildings or uses of land and buildings may be continued although they do not conform with the provisions of this section, subject to the limitations and conditions set forth in this section. Such nonconforming uses are declared by this section to be incompatible with permitted uses in the districts involved.

B. Amendment to Zoning Regulations.

The provisions of this section shall also apply to uses, yards, or buildings made non-conforming by subsequent amendments to zoning regulations.

C. Certificate of Occupancy

All legal non-conforming uses must apply for a certificate of occupancy.

D. Continuation of Nonconforming Use.

1. The lawful use of land existing at the time of the passing of this Ordinance, although such does not conform to the provisions hereof, may be continued, but if such non-conforming use is discontinued or abandoned, any future use of said premises shall be in conformity with the provisions of the regulations herein.
2. The lawful use of a building or fence existing at the time of this Ordinance may be continued, although such use does not conform with the provisions hereof, and such use may be extended throughout the building provided no structural alterations, except those required by law or ordinance, are made therein.
3. If no structural alterations are made, a non-conforming use of a building may be changed to another non-conforming use of the same or more restricted classification.
4. If such non-conforming building is removed, every future use of such premises shall be in conformity with the provisions of the regulations herein.

E. Repairs and Alterations

1. Repairs and alterations may be made to a legal non-conforming building, provided that no structural alterations shall be made except those required by law or ordinance, unless the building is changed to a conforming use and provided that no additional dwelling units shall be added where the non-conforming use results from there being more dwelling units on the lot than is permissible in the district in which the building is located.
2. The Board of Adjustment shall have the authority after a public hearing to grant extension of a building non-conforming as to uses not to exceed 25 percent of the ground area of the same in case of evident hardship, subject to the yard restrictions herein provided.

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

F. Change of Use

1. A legal non-conforming use, if changed to conforming use, may not thereafter be changed back to a non-conforming use.
2. A legal non-conforming use may not be changed unless to an equal or to a more restricted use.

G. Discontinued or Abandoned

1. A legal non-conforming use, when discontinued or abandoned, shall not be resumed, except that the existing yards for all single-family residences existing at the time of the passage of this Ordinance shall be deemed to be conforming.
2. Discontinuance or abandonment shall be defined as follows:
 - a. When land used for a legal non-conforming use shall cease to be used in a bona fide manner for 60 consecutive calendar days.
 - b. When a building designed or arranged for a non-conforming use shall cease to be used in a bona fide manner as a legal non-conforming use for a continuous period of six (6) consecutive calendar months.
 - c. When a building designed or arranged for a conforming use shall cease to be used in a bona fide manner as a legal non-conforming use for a period of three (3) consecutive calendar months.
 - d. When land or a building used only on a seasonal basis is not used in a bona fide manner as a nonconforming use during such season.
3. Extension

Upon evidence of hardship, the Board of Adjustment shall have the power to extend the time limits in the above not to exceed six (6) months.

H. Destruction of Nonconforming Building

1. If a nonconforming building or a building occupied by a nonconforming use is destroyed by fire, the elements or otherwise, it may not be reconstructed or rebuilt except to conform with the provisions of this article unless the destruction amount is less than 50 percent of its fair market value at the time of destruction.
2. If the destruction is greater than 50 percent and less than total, the Board of Adjustment may, after a public hearing, authorize repair, taking into consideration the property owner's circumstances and the effect on surrounding properties.
3. Upon submission by the owner of sufficient evidence to prove that the destruction amounts to less than 50 percent of the total value of the entire nonconforming use and that the destroyed building or structure constituted an integral part of the nonconforming use without which the nonconforming use cannot be profitably operated, the board of adjustment may permit the reconstruction of such destroyed building or buildings under conditions which reasonably allow the owner to recoup his original investment.

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

4. Notwithstanding anything herein to the contrary, a single-family residence which is destroyed shall be permitted to be reconstructed without Board of Adjustment approval regardless of the extent of destruction, provided that the construction complies with all current building codes and is commenced within six (6) months of the date of destruction. The failure of the owner to start such reconstruction within six (6) months shall forfeit the owner's right to restore or reconstruct the dwelling except in conformance with this article.
5. If the owner of a nonconforming use fails to begin reconstruction of the destroyed building (when permitted to do so by the terms of this article) within six (6) months of the date of destruction or approval by the Board of Adjustment, the nonconforming building or use shall be deemed to be discontinued or abandoned as provided in subsection above.
6. Notwithstanding anything herein to the contrary, the owner of a manufactured home that has been destroyed by fire or natural disaster, may replace the manufactured home, provided that the installation complies with all applicable state or local regulations and the owner applies for a permit and commences installation within six (6) months of the date of destruction. The failure of the owner to start such installation within six (6) months shall forfeit the owner's right to replace the manufactured home except in conformance with this article. In this subsection, the terms "fire" and "natural disaster" shall have the same meanings as the identical terms in Section 1201.008(f) of the Texas Occupations Code.

I. Signs

1. The lawful location and maintenance of commercial signboards and billboards existing at the time of the passage of this Ordinance may be continued, although such use does not conform with the provisions hereof, provided, however, that no alterations are made thereto and provided, however, any sign installed and in use prior to the enactment of this Ordinance will not be restricted by the Ordinance so long as its location, height, basic construction, message and other significant characteristics remain unchanged.
2. Any sign in any zoning district which is rebuilt, relocated, modified, enlarged, extended, altered other than by normal maintenance to the configuration existing at the time of enactment of this Ordinance shall be regulated by this Ordinance.

J. Regulations for Buildings Under Construction

1. Nothing herein contained shall require any change in the plans, construction or designated use of a building for which a legal building permit has been heretofore issued.
2. Nothing herein contained shall require any change in the plans, construction, or designated use of a building actually under construction at the time of passage of this Ordinance.
3. If any amendment to this Ordinance is hereafter adopted changing the boundaries or districts, the provisions of this Ordinance with regard to buildings or premises existing or building under construction or building

ARTICLE 14.400 DISTRICTS, LAND USES, AND NONCONFORMING USES

permits issued in the area affected by such amendment at the time of the passage of such amendment shall not be affected.

K. Acquisition of Public Right-of-Way or Easement

If a building is rendered non-conforming solely because of the acquisition of a public right-of-way or easement, and that building is destroyed by fire or the elements, then the owner may be granted a permit to reconstruct the building provided that the setback and size of the building are identical to the previous non-conforming building, and otherwise conform with all other provisions of this Ordinance.

ARTICLE 14.500 ZONING DISTRICTS

Section 14.501 PF: PUBLIC FACILITIES

A. Purpose

The Public Facilities District is for those institutions, health care facilities and related uses that are established in response to the health, safety, educational and welfare needs of the community. These uses are separated from others in the community due to their unique service and often very special area requirements in the community in relation to the whole. Their replacement should not be arbitrary but should be located to respond to the needs of the community.

B. Use Regulations

In the PF, Public Facilities District, no building or land shall be used and no building shall be hereafter erected, reconstructed, altered or enlarged, except as specified in the Land Use Table.

C. Height and Area Regulations

It is intended by these regulations that development in the PF Public Facilities District shall be compatible with development regulations in the district(s) which it adjoins. The side bar summarizes the regulations.

1. Height.

- a. No building hereafter erected, reconstructed, altered, or enlarged shall exceed two (2) stories, nor shall it exceed thirty-five (35 ft) within one hundred feet (100 ft) of a property zoned or used for residential purposes, measured at the property line.
- b. Any building in excess of one hundred feet (100ft) from these property lines shall not exceed three (3) stories or forty-five feet (45ft), provided that the required side and rear setback are increased by one foot (1ft) for each foot of height in excess of thirty-five feet (35ft).
- c. Exempt. City and franchise utilities towers and structures are exempt from height requirements. Refer also to Sections 14.621, Telecommunications Towers and Antennas, and 14.622, Alternative Energy Systems.

DEVELOPMENT SITE:

Lot Density: NA

Lot coverage: NA

(max. impervious surface)

LOT DIMENSIONS:

Lot size (min): NA

Lot width (min): NA

Lot depth (min): NA

BUILDING PLACEMENT:

Setbacks (min)

Front: 25ft

Side: 5/15ft

Side/Corner: 20ft

Rear: 25ft

BUILDING STANDARDS:

Floor area (min): NA

Height (max):

35ft, 2 stories max. when adjacent to SF

45ft, 3 stories max when greater than 100 feet from adjacent SF

Masonry: 75% all sides

ARTICLE 14.500 ZONING DISTRICTS

2. Front Yard. There shall be a front yard of not less than twenty-five feet (25 ft), or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.
 - a. Corner lots shall have a minimum side yard of twenty feet (20 ft) on the second front yard, the yard generally parallel to the street with the greatest frontage, unless reversed frontage is approved by the City Manager and/or designee.
 - b. If a building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than twenty feet (20 ft), then the platted building line shall be required on the second front yard.
 3. Rear Yard: There shall be a rear yard of not less than twenty-five feet (25 ft).
 4. Side Yard: There shall be a minimum side yard of not less than five feet (5 ft). Where a lot abuts upon the side of a residentially-zoned lot, there shall be a side yard of not less than fifteen feet (15 ft).
- D. Additional Design Requirements
1. Parking: The parking requirements of Section 14.600, Supplemental Regulations, shall apply to all uses established in the PF, Public Facilities District.
 2. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
 3. Site Plan Required
 - a. New development within the PF, Public Facilities District requires a site plan in accordance with Section 14.606, Site Plan Requirements.
 - b. A request for a change of use may be approved by the City Manager and/or designee if the new use preserves the approved site plan and conforms to the regulations herein.

ARTICLE 14.500 ZONING DISTRICTS

Section 14.502 SF-7.5: SINGLE FAMILY 7.5

A. Purpose

This zoning classification should be applied in areas of the City to conserve the traditional neighborhood character typical in Lake Worth. It is not intended that this zoning district be the subject of major alterations except for a possible re-classification in minor areas for a less restrictive residential use for reasonable adjustments necessary for orderly development of vacant lots or the gradual transition from other districts.

B. Use Regulations

In the SF-7.5, Single Family 7.5 District, no building or land shall be used and no building shall be hereafter erected, reconstructed, altered or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

SF-7.5: SINGLE FAMILY 7.5	
Density	6 dwelling units per acre (du/ac)
Lot area (min)	7,500 sq. ft
Lot width (min)	60ft
Lot depth (min)	100ft
Floor area (min)	1,500 square feet habitable living space
Height (max)	35 ft and no more than 2 stories
Setbacks (min)	Front: 25ft Side: 5ft Side (Corner): 20ft Rear: 25ft
Lot coverage (max) (impervious surface)	60%
Masonry (min)	75% all elevations
Roof pitch (min)	6:12

1. Lot Area: The minimum area of a lot shall be 7,500 square feet.
2. Lot Dimensions: The width of a lot shall be a minimum of 60 feet and the depth shall be a minimum of 100 feet.
3. Floor Area: The main residence shall contain a minimum of 1,500 sq. ft of livable floor space, exclusive of garage, porches and breezeways, and incidental storage areas.
4. Height. No building hereafter erected, reconstructed, altered, or enlarged shall exceed two (2) stories nor shall it exceed thirty-five feet (35 ft).
5. Front Yard: There shall be a front yard of not less than twenty-five feet (25 ft), or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.
 - a. Corner lots shall have a minimum side yard of twenty feet (20 ft) on the second front yard, the yard generally parallel to the street with

ARTICLE 14.500 ZONING DISTRICTS

the greatest frontage, unless reversed frontage is approved by the City Manager and/or designee.

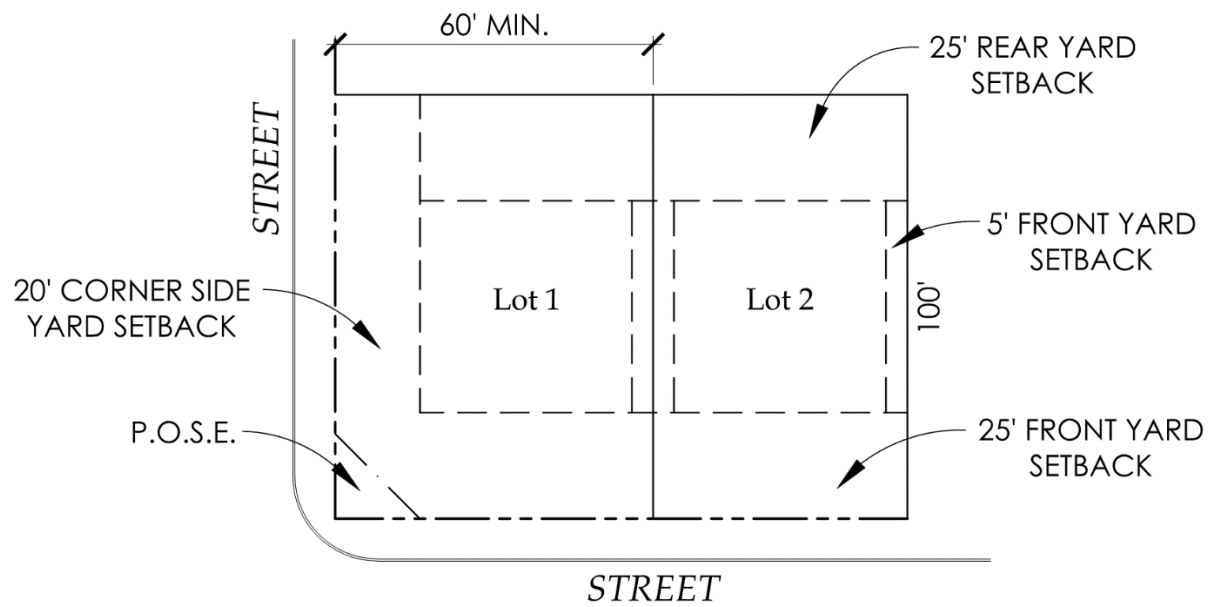
- b. If a second front yard building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than twenty feet (20 ft), then the platted building line shall be required on the second front yard.
 - c. Garage doors shall be located no closer than twenty-five feet (25 ft) from the right-of-way.
- 6. Rear Yard: There shall be a rear yard having a depth of not less than twenty-five feet (25 ft).
 - 7. Side Yard: There shall be a minimum side yard of five feet (5 ft) on side yards adjacent to interior lots.
 - 8. Maximum Lot Coverage: The maximum portion of the lot area which may be covered by the main building and all accessory buildings shall not exceed 60 percent.

D. Additional Design Requirements

- 1. Site and building design shall be provided in accordance with Section 14.600, Supplemental Regulations.
- 2. Off-street parking shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
- 3. Landscaping. Provide lawn grass and one (1) 3-inch caliper tree in the front yard.
- 4. Architectural design: The main residential structure, including additions and attached garages, shall comply with the following:
 - a. Exterior building materials shall comply with Section 14.607, Masonry requirements.
 - b. The minimum roof pitch shall be in 6:12 for the roof of the principal and accessory structures, including attached garages.
 - c. Garage doors shall be located no closer than 25 feet (25ft) from the right-of-way.
 - d. The City Manager and/or designee may authorize encroachments into the required yard of up to twenty square feet (20 sq. ft) for fire places and/or bay windows that do not restrict access for public safety and/or adjacent property.
 - e. Exemptions.

Prefabricated sunrooms, porch and patio roofs, dormers, bay windows, chimney caps, carports, and similar architectural features, unconditioned additions, and accessory buildings are exempt from the exterior material requirements, as regulated in Section 14.600, Supplemental Regulations.

ARTICLE 14.500 ZONING DISTRICTS



SF-7.5: SINGLE FAMILY ZERO

ARTICLE 14.500 ZONING DISTRICTS

Section 14.503 SF-0: SINGLE FAMILY ZERO

A. Purpose

This district is the most restrictive of the single-family districts and is intended for higher density single-family detached, two-family (duplex) and townhome uses, but not apartment home communities. This district is also a suitable zone as a transition between traditional single-family residential uses and multifamily and commercial districts.

B. Use Regulations

In the SF-0, Single Family Zero District, no building or land shall be used, and no building shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

In the SF-0, Single Family Zero District, the height of buildings, the minimum dimension of lots and yards, the minimum lot area, and the minimum floor space per family shall be as follows:

SF-0: SINGLE FAMILY ZERO LOT LINE	
Density	8 dwelling units per acre (du/ac)
Lot area (min)	5,000 sq. ft (SF detached and duplex); 2,500 sq. ft per attached
Lot width (min)	50ft for SF detached and duplex 25ft for townhome
Lot depth (min)	100ft
Floor area (min)	1,200 square feet habitable living space
Height (max)	35 ft and no more than 2 stories
Setbacks (min)	Front: 25ft Side: 5ft Side (Corner): 10ft Interior: 0ft between attached dwelling units Rear: 5ft
Lot coverage (max) (impervious surface)	70%
Masonry (min)	75% all elevations
Roof pitch (min)	6:12

1. Floor Space: Each dwelling shall contain a minimum of 1,200 square feet of livable floor space, exclusive of garage, porches, and breezeways, and incidental storage, for each family to be housed in said dwelling.
2. Height: No building hereafter erected, reconstructed, altered, or enlarged shall exceed two (2) stories nor shall it exceed thirty-five feet (35 ft).
3. Front Yard: There shall be a front yard of not less than twenty-five feet (25 ft), or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.

ARTICLE 14.500 ZONING DISTRICTS

Corner lots shall have a minimum side yard of ten feet (10 ft) on the second front yard, the yard generally parallel to the street with the greatest frontage, unless reversed frontage is approved by the City Manager and/or designee.

If a second front yard building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than ten feet (10 ft), then the platted building line shall be required on the second front yard.

4. Rear Yard: There shall be a rear yard having a depth of not less than five feet (5 ft).

5. Side Yard:

Single-family detached and duplexes: There shall be a side yard having a width of not less than ten feet (10 ft) between detached units, the other parallel side of the lot may be zero feet (0 ft).

Townhomes/Attached: Zero (0) lot line is permitted between attached units. Ten feet (10 ft) is required between buildings.

6. Dimensions of Lot:

Single-family detached and duplexes: The width of a lot shall be a minimum of fifty feet (50 ft) at the building line and the depth shall be a minimum of 100 feet.

Townhomes/Attached: The width of shall be a minimum of twenty-five feet (25 ft) at the building line and the depth shall be a minimum of one hundred feet (100 ft).

7. Lot Areas:

Single-family detached and duplexes: The minimum area of shall be 5,000 square feet.

Townhomes/Attached: The minimum area shall be 2,500 square feet for more than buildings with three (3) or more attached units.

Maximum Lot Coverage: The maximum portion of the lot area that may be covered by the main building and all accessory buildings shall not exceed 65 percent.

D. Additional Design Requirements

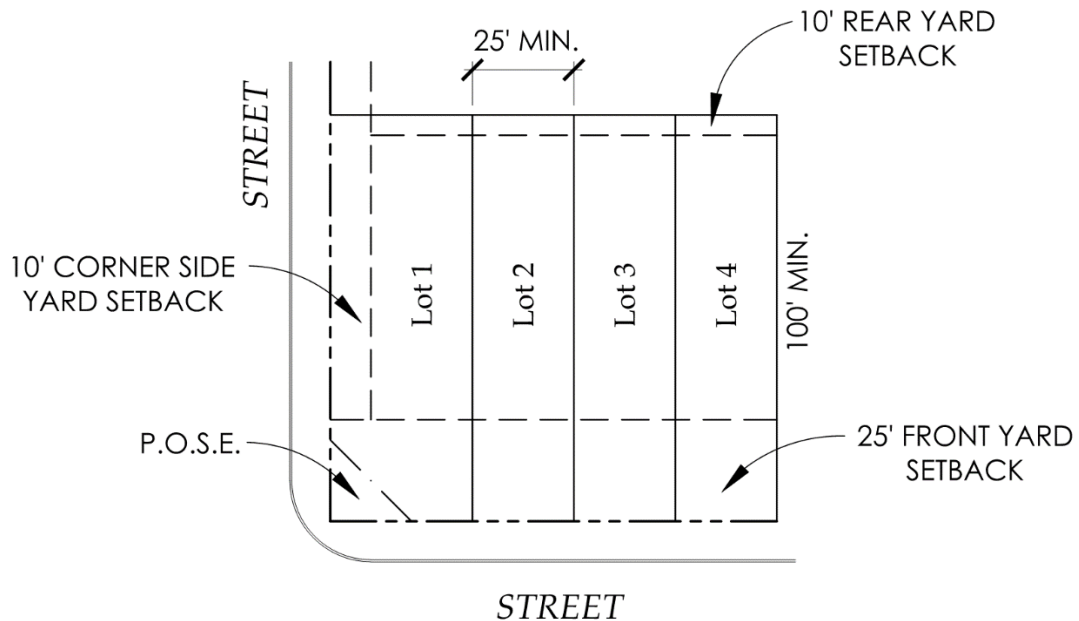
1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the SF-0, Single Family Zero District requires a site plan in accordance with Section 14.606, Site Plan Requirements.
3. Landscaping. Provide lawn grass and one (1) 3-inch caliper tree in the front yard.
4. Off-street parking shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
5. Architectural design: The main residential structure, including additions and

ARTICLE 14.500 ZONING DISTRICTS

attached garages, shall comply with the following:

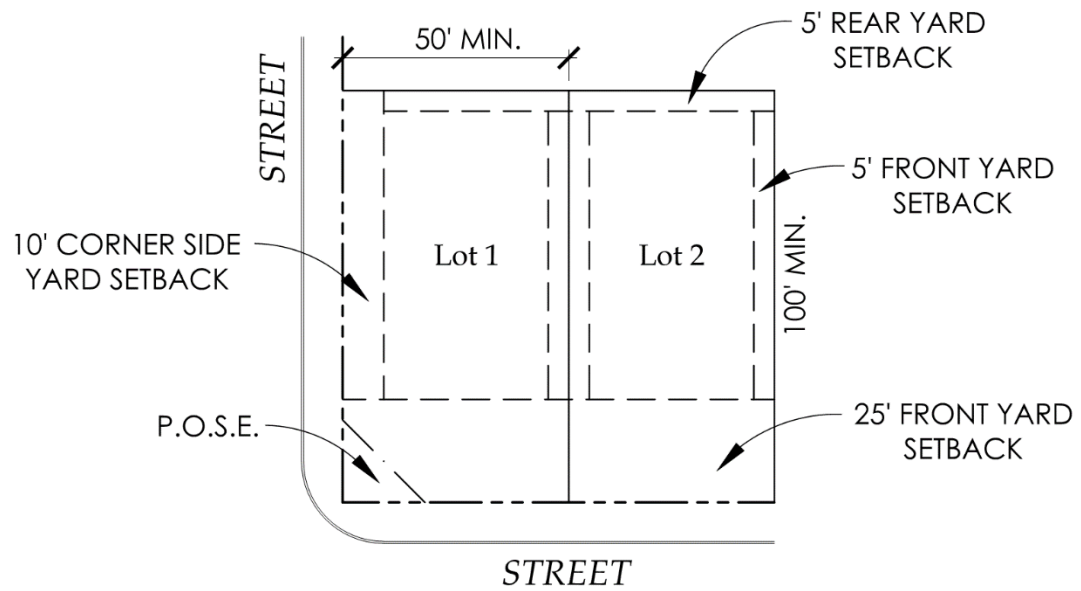
- a. Exterior building materials shall comply with Section 14.607, Masonry requirements.
- b. The minimum roof pitch shall be in 6:12 for the roof of the principal and accessory structures, including attached garages.
- c. Garage doors shall be located no closer than twenty-five feet (25 ft) from the right-of-way.
- d. The City Manager and/or designee may authorize encroachments into the required yards of up to twenty square feet (20 sq. ft) for fire places and/or bay windows that do not restrict access for public safety and/or adjacent property.
- e. Exemptions.

Prefabricated sunrooms, porch and patio roofs, dormers, bay windows, chimney caps, carports, and similar architectural features, unconditioned additions, and accessory buildings are exempt from the exterior material requirements, as regulated in Section 14.600, Supplemental Regulations.



SF-0: SINGLE FAMILY ZERO

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SF-0: SINGLE FAMILY ZERO

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Section 14.504 MH - Manufactured Housing District

A. Purpose.

The purpose of the “MH”- Manufactured Housing district is to provide adequate space and restrictions for the placement of HUD-Code manufactured homes and industrialized housing in the city within designated subdivisions. (This does not include mobile homes as defined in this article). The “MH” District is also established to provide housing densities compatible with existing and proposed neighborhoods by providing alternative housing types both in construction and economy within the “MH” District. No HUD-Code Manufactured Home shall be allowed on any parcel or lot except on parcels or lots within the “MH” District.

B. HUD-Code Manufactured Home/Industrialized Housing Subdivision.

Land within the “MH” District shall be developed as a HUD-Code manufactured home or industrialized housing subdivision. Lots within the “MH” District will be sold to private individuals in strict conformance with the terms and conditions under which the manufactured home or industrialized housing subdivision was approved by the city council. All roadways within a HUD-Code manufactured home or industrialized housing subdivision shall be dedicated to the public. Private interior drives must be approved by the city council. Land zoned “MH” which is not developed as a HUD-Code manufactured home or industrialized housing Subdivision may be developed as “SF-7.5,” so long as it is developed in accordance with the regulations of the “SF-7.5” district. In such case HUD-Code manufactured homes will not be permitted.

C. Use Regulations

In the MH, Manufactured Housing District, no building or land shall be used, and no building shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

D. Height and Area Regulations

In the MH, Manufactured Housing District, the height of buildings, the minimum dimension of lots and yards, the minimum lot area, and the minimum floor space per family shall be as follows:

Lot Density	12 dwelling units per acre (12 du/ac)
Lot area per unit (min)	3 times the area of the unit; minimum of 3,000 sf
Development/Lot size (min)	3 acres
Lot width (min)	NA
Lot depth (min)	NA
Lot coverage (max) (impervious surface)	70%
Setbacks (min)	Front: 25ft Side: 5ft Side (district boundary): 15ft Interior: 20ft between units Rear: NA
Floor area (min per unit)	900 sf
Height (max)	25 ft and no more than 1 story

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E. Development and Installation Standards.

1. Site Plan Requirements. All properties within this district shall be contiguous and shall be totally developed under a unified site plan. No application for a building permit for the construction of a building shall be approved unless a site plan has been approved meeting the conditions provided in Section 14.602.
2. Landscaping Requirements. No requirements.
3. HUD-Code manufactured homes and industrialized homes shall have the axles, wheels, and tow bar or tongue removed and shall be secured to a permanent foundation or footing and piers, all in accordance with manufacturer specifications.
4. HUD-Code manufactured homes must have a minimum of an 18-inch crawl space left under all homes.
5. A concrete, or asphalt surface with good drainage shall cover the area where a home is to be sited.
6. Each HUD-Code Manufactured home site shall have a slab or patio not less than twenty feet in length and six feet in width, comprised of concrete, flagstone, or similar substance installed adjacent to each site.
7. HUD-Code manufactured homes shall have permanent steps installed at all exits.
8. Skirting shall be securely attached between the HUD-Code Manufactured home and the ground on all sides within thirty (30) days of home installation. Skirting materials shall consist of materials which are compatible with design of the home and enhance its appearance. Unpainted or untreated corrugated metal, screen or wire, or lattice type skirting is prohibited.
9. Construction, siting, and installation of the homes shall be in conformance with applicable federal, state, and local codes and standards, and each HUD-Code Manufactured Home shall have affixed a seal of the appropriate federal or state department.
10. Sanitation, fire protection and underground utility services shall be provided to each lot in accordance with the city ordinances and regulations.
11. Ingress and egress to the property shall be provided in accordance with the requirements of the city ordinance standards and regulations.
12. When private drives are provided, drainage and garbage collection right-of-way, fire lanes and utility easements shall be provided as required by the city. Such can be accomplished by designating all private interior drives within the project as easements for vehicular access and service.
13. Soil conditions, groundwater level, drainage, flooding, and topography shall not create hazards to the developed portion of the property or the health and safety of the residents.
14. Any structural alteration or modification of a HUD-Code manufactured home or industrialized home after it is placed on the site must be approved

ARTICLE 14.500 ZONING DISTRICTS

by the building official of the city. All structural additions shall comply with city building codes and ordinances.

- F. Interior Streets and Walkways. Internal streets, no-parking signs, and streets name signs shall be privately owned, built, and maintained, unless dedicated to and accepted by the city. Streets shall be designed for safety and convenient access to all manufactured home spaces and in accordance with the general design standards of city development regulations.
- G. Off-Street Parking. Off-street parking shall be provided in accordance with the provisions of Section 14.603, and all other applicable ordinances of the city.
- H. Screening. A solid, opaque screening wall or fence of not less than six (6) feet in height, shall be provided along all perimeter property lines of a HUD-Code manufactured home and industrialized housing subdivision which do not abut a dedicated street, as indicated on the site plan. Said screening wall or fence shall be of a decorative masonry construction. This requirement can be waived or modified if natural or man-made physical features create an adequate separation or buffer from adjacent uses, as determined by the city council. However, any request to waive this requirement shall be presented as an element of the site plan and shall be subject to approval at that time only.
- I. Water and Sewer. Each HUD-Code manufactured home or industrialized home space or lot shall be served by water and sanitary sewer. Engineering plans for water and sanitary sewer shall be submitted for review by the city council, at the time of site plan approval. Water and Sewer must be in compliance with the City building regulations.
- J. Drainage. Engineering plans for drainage shall be submitted for review by the city council at the time of site plan approval. All applicable requirements of the city shall be complied with.
- K. HUD-Code Manufactured Home or Industrialized Housing Sales. HUD-Code manufactured home or industrialized housing subdivisions shall be for residential purposes only. Sales of these homes shall be limited to those which become available on the market on an individual basis.
- L. Replacement of Manufactured Home by Owner
 - 1. Notwithstanding anything herein to the contrary, the owner of a manufactured home that occupies a lot within the city may remove the manufactured home from its location and place another manufactured home on the same property, provided that the replacement is a newer manufactured home and is at least as large in living space as the prior manufactured home, and provided that the installation complies with all applicable state or local regulations and the owner applies for a permit.
 - 2. Other than in the case of a fire or natural disaster, replacement of a manufactured home in accordance with the regulations herein is limited to a single replacement.

ARTICLE 14.500 ZONING DISTRICTS

Section 14.505 MF: MULTIFAMILY RESIDENTIAL

A. Purpose.

This district allows medium to high density multifamily development of the land and is intended to comprise larger tracts of land designed to provide total residential amenities of open space, recreation space and areas of protected off-street parking. This district is intended to be located near high volume thoroughfares due to the traffic generating probability of medium to high-density dwelling units within this district.

B. Use Regulations

In the MF, Multifamily District, no building or land shall be used and no buildings shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

In the MF, Multifamily District, the height of the buildings, the minimum dimensions of lots and yards, the minimum lot area, and the minimum floor space per family shall be as follows:

MF: MULTIFAMILY	
Lot Density	24 du/ac
Development/Lot size (min)	5 ac for MF development
Lot width (min)	NA
Lot depth (min)	NA
Lot coverage (max) (impervious surface)	65%
Setbacks (min)	Front: 25ft Side: 10ft Side (Corner): 20ft Rear: 20ft
Floor area (min per unit)	Studio: 500 square feet 1 bedroom: 750 square feet 2 bedroom: 900 square feet 3 bedroom: 1,250 square feet
Height (max)	45 ft/3 stories
Masonry (min)	75% all elevations
Roof pitch (min)	6:12 min

1. Development Area: Five (5) acres is the minimum land area for new multifamily development.
2. Floor Space: Each dwelling shall contain a minimum of area of livable floor space, exclusive of garage, porches, and breezeways, and incidental storage, as follows:

ARTICLE 14.500 ZONING DISTRICTS

- a. Studio: 500 square feet
 - b. 1 bedroom: 750 square feet
 - c. 2 bedroom: 900 square feet
 - d. 3 bedroom: 1,250 square feet
3. Height: No building hereafter erected, reconstructed, altered, or enlarged shall exceed three (3) stories nor shall it exceed forty-five feet (45 ft).
 4. Front Yard: There shall be a front yard of not less than twenty-five feet (25 ft), or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.

Corner lots shall have a minimum side yard of twenty feet (20 ft) on the second front yard, the yard generally parallel to the street with the greatest frontage, unless reversed frontage is approved by the City Manager and/or designee.

If a second front yard building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than twenty feet (20 ft), then the platted building line shall be required on the second front yard.

5. Rear Yard: There shall be a rear yard having a depth of not less than twenty feet (20 ft).

6. Side Yard

There shall be a side yard having a width of not less than ten feet (10 ft) on the interior side of corner lots and on both sides of interior lots.

When more than one main building is erected on a lot of record, there shall be a separation of at least ten feet (10ft) between buildings.

7. Maximum Lot Coverage: The maximum portion of the lot area that may be covered by the main building, all accessory buildings, and parking areas shall not exceed 65 percent.

D. Additional Design Requirements

1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the MF, Multifamily District requires a site plan in accordance with Section 14.606, Site Plan Requirements.
3. Off-street parking shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
4. Architectural design: The main residential structure, including additions and attached garages, shall comply with the following:
 - a. Exterior building materials shall comply with Section 14.607, Masonry requirements.
 - b. The minimum roof pitch shall be in 6:12 for the roof of the principal

ARTICLE 14.500 ZONING DISTRICTS

and accessory structures, including attached garages.

- c. Garage doors shall be located no closer than twenty-five feet (25ft) from the right-of-way.
- d. The City Manager and/or designee may authorize encroachments of up to twenty square feet (20 sq. ft) for fire places and/or bay windows that do not restrict access for public safety and/or adjacent property.
- e. Exemptions.

Prefabricated sunrooms, porch and patio roofs, dormers, bay windows, chimney caps, carports, and similar architectural features, unconditioned additions, and accessory buildings are exempt from the minimum roof pitch and exterior material requirements, as regulated in Section 14.600, Supplemental Regulations.

- 5. Open Space – A minimum of one hundred fifty square feet (150 sf) feet shall be provided and maintained for each dwelling unit. For the purpose of the regulations herein, open space must be accessible to all residents and may be fulfilled with such areas, as follows:

- a. Outdoor area and/similar uses permitted as open space:
 - i. Outdoor living area;
 - ii. Pool area;
 - iii. Dog park;
 - iv. Fitness center;
 - v. Business center; and
 - vi. Community room.
- b. Outdoor area and/or similar uses not included as open space
 - i. Private courtyards or balconies;
 - ii. Landscaping as required herein;
 - iii. Parking areas; and
 - iv. Other service areas necessary for maintenance of development.

ARTICLE 14.500 ZONING DISTRICTS

Section 14.506 C: COMMERCIAL

A. Purpose

This district is a commercial category providing a uniform set of standards for small retail and local businesses, including office and general commercial activities. It is intended that this zoning district be served by minor arterials or collectors and accommodate all parking and traffic maneuvering on the commercial site. The principal business activity of any permitted use in this district shall be conducted wholly within an enclosed building with the specific exception of certain outdoor activities that are customary and typically appropriate to the permitted uses listed. It is expressly intended that no residential dwelling be erected in this commercial district and existing dwellings will remain as legal non-conforming dwellings. Permitted uses in this district are intended for use by residents of nearby neighborhood areas to supply daily needs and personal services. This district can be used as a transition district between more intense uses and residential uses. Permitted uses should be compatible with adjacent residential areas.

B. Use Regulations

In the C, Commercial District, no buildings or land shall be used and no buildings shall be hereafter erected, reconstructed, altered or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

In the C, Commercial District, the height of the buildings, the minimum dimensions of lots and yards, and the minimum lot area shall be as follows:

C: COMMERCIAL	
Lot size (min)	7,500 sf
Lot width (min)	60ft
Lot depth (min)	100ft
Setbacks (min)	Front: 25ft Side: 10ft or width of easement Side (Corner): 15ft Rear: 10ft
Height (max)	45 ft/3 stories
Building Coverage	30% maximum
Masonry (min)	75% all elevations

1. Height: No building hereafter erected, reconstructed, altered, or enlarged shall exceed three (3) stories or forty-five feet (45 ft).
2. Front Yard: There shall be a front yard of not less than twenty-five feet (25 ft), or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.

Corner lots shall have a minimum side yard of fifteen feet (15 ft) on the second front yard, the yard generally parallel to the street with the greatest

ARTICLE 14.500 ZONING DISTRICTS

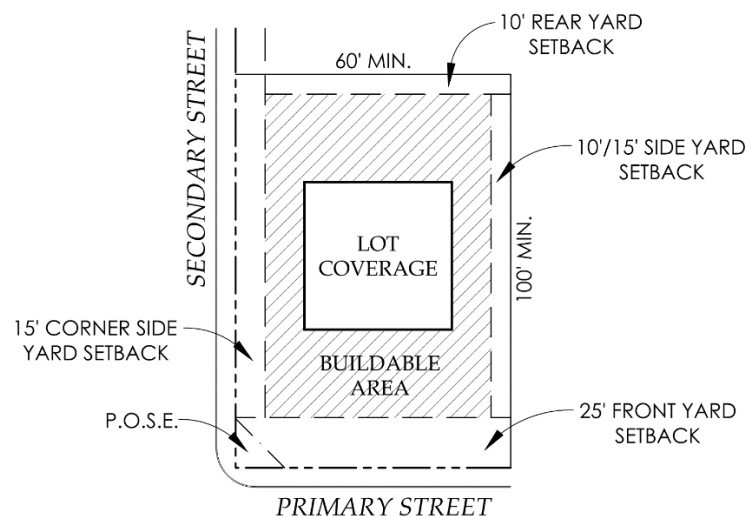
frontage, unless reversed frontage is approved by the City Manager and/or designee.

If a building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than twenty-five feet (25 ft), then the platted building line shall be required on the second front yard.

3. Rear Yard: There shall be a rear yard of not less than ten feet (10 ft) except where the C, Commercial District abuts a residential district there shall be a rear yard of not less than fifteen feet (15 ft).
4. Side Yard: There shall be a minimum side yard of not less than ten feet (10 ft). Where a lot abuts upon the side of a residential district, there shall be a side yard of not less than fifteen feet (15 ft).
5. Width of Lot: The width of a lot shall be a minimum of sixty feet (60 ft) at the building line, provided that where a lot of record and in separate ownership at the time of the passage of this Ordinance has less width than herein required, this Ordinance shall not prohibit its use for commercial purposes.

D. Additional Design Requirements

1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the C, Commercial District requires a site plan in accordance with Section 14.606, Site Plan Requirements.
3. Off-street parking shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
4. Exterior building materials shall comply with Section 14.607, Masonry requirements.



C: COMMERCIAL

ARTICLE 14.500 ZONING DISTRICTS

Section 14.507 HC: HIGHWAY CORRIDOR

A. Purpose

This commercial zoning district is reserved for areas that provide a mix of retail and office uses along major highway corridors. The purpose of this district is to promote economic development and regional retail activity, while promoting traffic circulation and safety, and protecting adjacent residential neighborhoods. It is expressly intended that the only residential dwelling units permitted in this district are associated with mixed use development. Any existing dwellings will remain as legal non-conforming dwellings.

B. Use Regulations

In the HC, Highway Corridor District, no buildings or land shall be used and no buildings shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

In the HC, Highway Corridor District, the height of the buildings, the minimum dimensions of lots and yards, the minimum floor space of buildings shall be as follows:

HC: HIGHWAY CORRIDOR	
Lot size (min)	7,500 sf
Lot width (min)	150ft
Lot depth (min)	NA
Setbacks (min)	Front: 25ft Side: 10ft / 15 ft adjacent to residential district Side (Corner): 15ft Rear: 10ft/ 15 ft adjacent to residential district
Height (max)	45 ft/3 stories
Building Coverage	60% maximum
Masonry (min)	75% all elevations

1. Height: No building hereafter erected, reconstructed, altered, or enlarged shall exceed three (3) stories or forty-five feet (45 ft).
2. Front Yard: There shall be a front yard of not less than twenty-five feet (25 ft) or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.

Corner lots shall have a minimum side yard of fifteen feet (15 ft) on the second front yard, the yard generally parallel to the street with the greatest frontage, unless reversed frontage is approved by the City Manager and/or designee.

Frontage on third streets shall be considered as second front yards.

ARTICLE 14.500 ZONING DISTRICTS

If a building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than twenty-five feet (25 ft), then the platted building line shall be required on the second front yard.

3. Rear Yard: There shall be a rear yard of not less than ten feet (10 ft) except where the HC, Highway Corridor District abuts a residential district there shall be a rear yard of not less than fifteen feet (15 ft).
4. Side Yard: Where a lot abuts a residential district, there shall be a side yard of not less than twenty-five feet (25 ft) otherwise a side yard of ten feet (10ft) shall be required.
5. Width of Lot: The width of a lot with highway frontage shall be a minimum of one hundred fifty feet (150 ft) at the building line; however, the minimum separation of drive approaches shall be in accordance with the Subdivision Regulations.

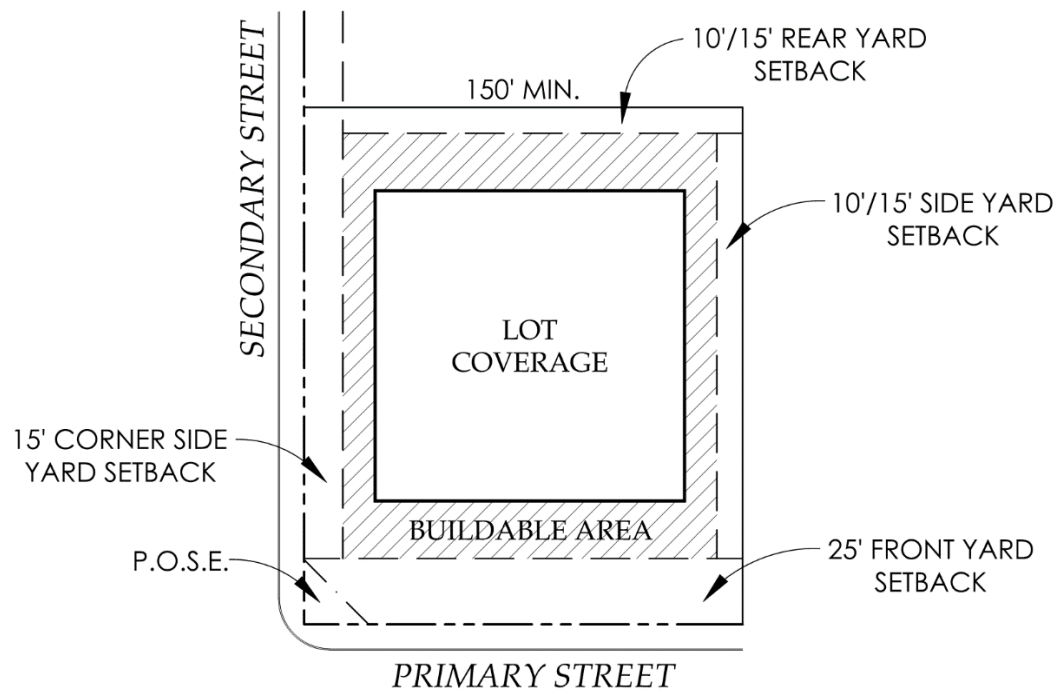
Lots less than three hundred feet (300 ft) in width shall provide for common access with an adjacent lot.

6. Pad sites without direct highway drive approach access, or when such access is provided as part of a larger development, shall have a minimum width of one hundred feet (100 ft). Provided that where a lot of record and in separate ownership at the time of the passage of this Ordinance has less width as herein required, this Ordinance shall not prohibit its use for commercial purposes.

D. Additional Design Requirements

1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the HC, Highway Corridor District requires a site plan in accordance with Section 14.606, Site Plan Requirements.
3. Off-street parking shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
4. Exterior building materials shall comply with Section 14.607, Masonry requirements.

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HC: HIGHWAY CORRIDOR

ARTICLE 14.500 ZONING DISTRICTS

Section 14.508 LI: LIGHT INDUSTRIAL

A. Purpose

The purpose of the LI, Light Industrial district is to provide for a limited range of low-intensity industrial uses, provided the uses are not noxious or offensive due to odors, smoke, dust, noise, fumes or vibrations. This district is intended to serve the entire community.

B. Use Regulations

In the LI, Light Industrial District, no buildings or land shall be used and no buildings shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

LI: LIGHT INDUSTRIAL	
Lot size (min)	7,500 sf
Lot width (min)	60ft
Lot depth (min)	100ft
Setbacks (min)	Front: 25ft Side: 10ft / 15 ft adjacent to residential district Side (Corner): 15ft Rear: 10ft/ 15 ft adjacent to residential district
Height (max)	45 ft/3 stories
Building Coverage	80% maximum
Masonry (min)	75% of facade on public street

1. Height. No building hereafter erected, reconstructed, altered, or enlarged shall exceed three (3) stories or forty-five feet (45 ft).

2. Front Yard.

There shall be a front yard of not less than twenty-five feet (25 ft) or the front yard indicated on a City-approved subdivision plat as filed in the Tarrant County Plat Records, whichever is greater.

Corner lots shall have a minimum side yard of twenty-five feet (15 ft) on the second front yard, the yard generally parallel to the street with the greatest frontage, unless reversed frontage is approved by the City Manager and/or designee.

Frontage on third streets shall be considered as second front yards.

If a building line shown on a City-approved subdivision plat as filed in the Tarrant County Plat Records is greater than twenty-five feet (25 ft), then the platted building line shall be required on the second front yard.

3. Rear Yard.

ARTICLE 14.500 ZONING DISTRICTS

There shall be a rear yard of not less than ten feet (10 ft) except where the LI, Light Industrial District abuts a residential district there shall be a rear yard of not less than fifteen feet (15 ft).

4. Side Yard.

Where a lot abuts a residential district, there shall be a side yard of not less than fifteen feet (15 ft) otherwise a side yard of ten feet (10 ft) shall be required.

7. Width of Lot.

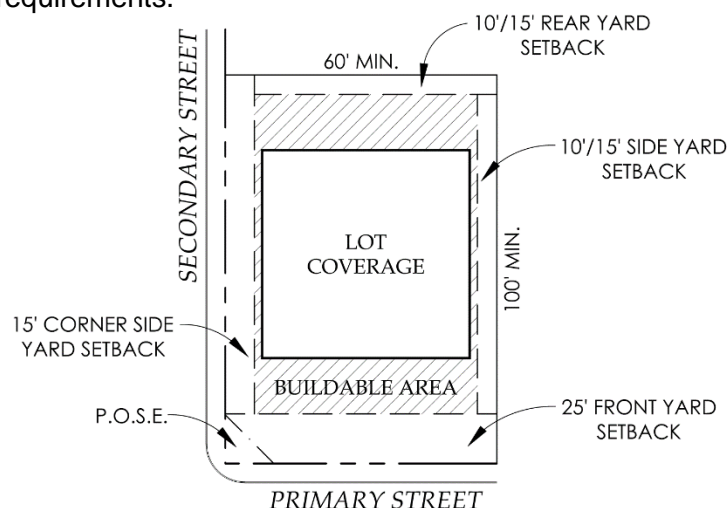
The width of a lot with highway frontage shall be a minimum of one hundred fifty feet (150ft ft) at the building line; however, the minimum separation of drive approaches shall be in accordance with the Subdivision Regulations.

Lots less than three hundred feet (300 ft) in width shall provide for common access with an adjacent lot.

8. Pad sites without direct highway drive approach access, or when such access is provided as part of a larger development, shall have a minimum width of one hundred feet (100 ft). Provided that where a lot of record and in separate ownership at the time of the passage of this Ordinance has less width as herein required, this Ordinance shall not prohibit its use for industrial purposes.

D. Additional Design Requirements

1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the LI, Light Industrial District requires a site plan in accordance with Section 14.606, Site Plan Requirements.
3. Off-street parking shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
4. Exterior building materials shall comply with Section 14.607, Masonry requirements.



ARTICLE 14.500 ZONING DISTRICTS

Section 14.509 I: Industrial District

A. Purpose

The "I" Industrial District is intended to permit a range of assembly, warehousing and service type manufacturing and wholesale uses.

B. Use Regulations

In the I, Industrial District, no buildings or land shall be used and no buildings shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

I: INDUSTRIAL	
Lot size (min)	7,500 sf
Lot width (min)	60ft
Lot depth (min)	100ft
Setbacks (min)	Front: 25ft Side: 10ft or width of easement Side (Corner): 15ft Rear: 10ft
Height (max)	45 ft/3 stories
Building Coverage	80 % maximum
Masonry (min)	75% of facade on public street

D. Additional Design Requirements

1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the I, Industrial District requires a site plan in accordance with Section 14.606, Site Plan Requirements. The site plan application shall include the following information in addition to the requirements of Section 14.606:
 - a. A scale drawing showing the boundary of the tract and topography with a contour interval of not less than two-foot (2ft) intervals, and drainage information.
 - b. The location of each building and the minimum distance between buildings and between buildings and the property lines, street line and/or alley line shall be submitted. The plan shall include all dimensions, all easements, the legal description and zoning of the subject property and all adjacent property.
 - c. A plan indicating the arrangement and provision of off-street parking, off-street loading, outside storage areas, method and location of storage area screening and points of entry from adjoining

ARTICLE 14.500 ZONING DISTRICTS

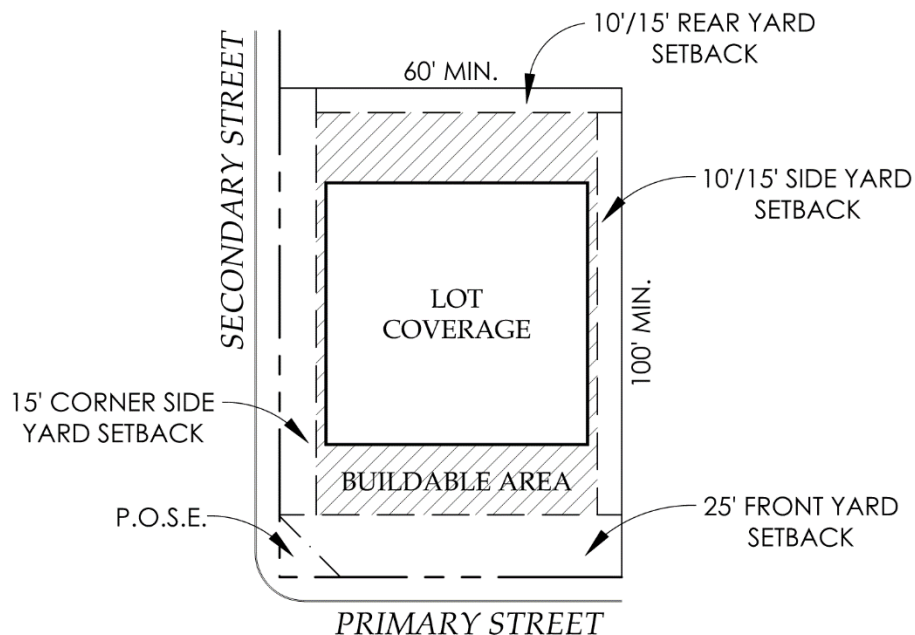
thoroughfares.

- d. A table showing net land area, ratio of building area and outside storage areas to net land area.
 - e. A table of performance standards of the characteristics of the industrial activities to be conducted on the site, if required by the City Manager or designee.
 - f. Scale, north arrow, and names and addresses of owners and/or developers with name(s) and address(es) of those responsible for preparation of the site plan.
 - g. For development projects influenced by or containing major drainage ways or containing areas flood prone by definition of the City Manager or designee, preliminary drainage plan shall become a part of the development site plan. This requirement may be waived only by the recommendation of the City Manager or designee.
 - h. Existing and proposed fire hydrants, sign information, and provisions for external illumination and trash collection.
- 3. Off-street parking and loading shall be provided in accordance with Section 14.610, Vehicle Parking Regulations.
 - 4. Exterior building materials shall comply with Section 14.607, Masonry requirements.
 - 5. Performance Standards.
 - a. Noise: The day-night average sound level at the property line shall not exceed seventy-five decibels (75 db(A)), unless the property line adjoins property zoned for residential uses where the maximum day-night average sound level shall not exceed sixty-five decibels (65 db(A)). The day-night average sound level (Ldn) is the twenty-four (24) hour average sound level, in decibels, obtained after addition of ten decibels (10 db(A)) to sound levels in the night from 10:00 p.m. to 7:00 a.m.
 - b. Smoke, Particulate Matter and Visible Emissions: Smoke or visible emissions emitted from any vent, stack, chimney, skylight, or window shall exceed an opacity of 20 percent averaged over a five (5) minute period. Any emission of air pollutant must be in accordance with the requirements of the State of Texas. Emissions shall not exceed any of the following net ground level concentrations:
 - i. One hundred micrograms (100 µgm) per cubic meter of air sampled, averaged over any five (5) consecutive hours.
 - ii. Two hundred micrograms (200 µgm) per cubic meter of air sampled, averaged over any three (3) consecutive hours.
 - iii. Four hundred micrograms (400 µgm) per cubic meter of air sampled, averaged over any one (1) hour.
 - c. Toxic and Noxious Matter: The handling, processing, storage and

ARTICLE 14.500 ZONING DISTRICTS

disposal of hazardous, toxic, or noxious materials within this District shall be in accordance with applicable State and Federal laws and regulations. In addition, the Planning and Zoning Commission may establish additional performance standards, including setbacks, berms, and buffers, for the siting of facilities which handle, treat, store, or dispose of potentially hazardous or dangerous materials.

- d. Additional Standards: The Planning and Zoning Commission may establish additional performance standards to protect neighboring areas and land uses from potential industrial hazards and nuisances.



I: INDUSTRIAL

ARTICLE 14.500 ZONING DISTRICTS

Section 14.5010 MU-PD: MIXED USE PLANNED DEVELOPMENT

A. Purpose

The purpose of this district is to provide areas with a combination of residential, commercial, office, hospitality and institutional uses in a pedestrian-friendly environment.

B. Use Regulations

In the MU-PD, Mixed Use Planned Development District, no building or land shall be used and no buildings shall be hereafter erected, reconstructed, altered, or enlarged, unless otherwise provided in this Ordinance, except as specified in the Land Use Table.

C. Height and Area Regulations

In the MU-PD, Mixed Use Planned Development District, the maximum height of the buildings and the minimum dimension of yards shall be as follows:

1. Height: No building hereafter erected, reconstructed, altered, or enlarged shall be less than two (2) stories. No building shall exceed three (3) stories, nor shall it exceed forty-five feet (45 ft) within one hundred feet (100 ft) of a property zoned or used for residential use.

Two (2) to three (3) story buildings in the MU-PD, Mixed Use Planned Development District, with second and third stories used for retail, work space, or living areas. Developments that provide only off-street parking shall have a minimum floor area ratio (FAR) of 1.5, while developments that utilize approved on-street parking shall have a minimum FAR of 2.0. Plazas and pedestrian areas shall count as floor area for the purpose of meeting the minimum floor area ratio.

2. Front Yard: There shall be a front yard of not more than ten feet (10 ft). Garage doors and gates meant for vehicle use shall be located no closer than twenty feet (20 ft) from the right-of-way.
3. Rear Yard: There shall be a rear yard of not less than five feet (5 ft), unless additional emergency access is required by the Fire Marshal.
4. Blocks shall have a minimum residential use of 20 percent or more of gross floor area and minimum retail, office, eating uses of 10 percent or more of the building gross floor area.
5. Normal business activities shall not create a sound level at the adjacent property line that exceeds sixty-five decibels (65 dB(A)) from 7:00 AM to 10:00 PM and fifty-five decibels (55 dB(A)) from 10:00 p.m. to 7:00 a.m.

D. Additional Design Requirements

1. Site and building design shall be provided in accordance with this Section, Section 14.600, Supplemental Regulations, and applicable provisions of Chapter 10, Subdivision Regulations of the City Code of Ordinances.
2. Site Plan Required. New development within the MU-PD, Mixed Use Planned Development District requires a site plan in accordance with Section 14.606, Site Plan Requirements. The site plan application shall include the following information in addition to the requirements of Section

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14.606:

- a. Street Trees in accordance with Section 14.613 Street Trees;
- b. Designated Creek Protection and Environmental Buffer Areas:
 - i. Designated stream protection areas shall be considered positive design elements and incorporated in the overall design of a given project.
 - ii. When a creek area is disturbed or without vegetation, native riparian plant materials shall be planted in and adjacent to the creek to enhance the creek habitat.
 - iii. 100-year floodplains shall be preserved to the extent practical.
- c. Access, Parking and Circulation Standards:
 - i. Head-in on-street parking may be provided on most streets that are not designated as collectors or thoroughfares on the Master Thoroughfare Plan.
 - ii. Parking shall be provided for proposed uses in accordance with Chapter 14.610 of this Ordinance, except that the overall requirement may be reduced by 20 percent for mixed use buildings. Adjacent on-street parking may be counted toward the overall total. Required parking may be located offsite if within 500 feet of the proposed use.
 - iii. Pedestrian access: All non-residential buildings shall provide pedestrian access from the street to the building frontage in at least one (1) location. Such pedestrian access shall minimize conflicts with automobiles by such means as sidewalks.
- d. Drive-up Uses: Drive-up uses are prohibited in the MU-PD Mixed Use Planned Development District, unless specifically approved on the with the site plan.
- e. Light and Glare Performance Standards: Lights shall be fully shielded to minimize light trespass on residential zones. "Fully Shielded" means a technique or method of construction or manufacture which does not allow any light dispersion to shine above the horizontal plane from the lowest light emitting point of the light fixture. Any structural part of the light fixture providing this shielding shall be permanently affixed to the light fixture.
- f. Building and Screening Standards:
 - i. Buildings shall incorporate arcades, roofs, alcoves, porticoes and awnings that protect pedestrians from the rain and sun.
 - ii. A minimum of 60 percent of the street frontage shall have buildings within ten feet (10ft) of the front property line.
 - iii. The first floor of each building should provide retail,

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restaurant or service uses where practical.

- iv. Parking lots shall not be located between the structure and street.
- v. Buildings shall be setback not more than 20 feet from a public sidewalk unless the area is used for pedestrian activities such as plazas or outside eating areas.
- vi. Refuse Container Screen. Refuse containers or disposal areas shall be screened from view from any public right of way by placement of a masonry wall from six to eight feet (6ft-8ft) in height in compliance with the City Design Standards and Criteria. All refuse materials shall be contained within the refuse area.
- vii. Service Corridor and Loading Dock Screen. When adjacent to residential uses, commercial and industrial service corridors and loading docks shall be screened. Location and design of such service areas shall reduce the adverse effects of noise, odor and visual clutter upon adjacent residential uses.
- g. The elevations, surface area in square feet, illumination type, height, construction material and style, and locations of all proposed signs for the development.
- h. Architectural elevations for all buildings proposed on the property. Such plans shall indicate the material, color, texture, windows, doors, and other design features of the building, including all visible mechanical equipment, such as for heating and cooling. Elevations shall be submitted drawn to scale of one (1) inch equals ten (10) feet (1 in = 10ft) or greater. In the case of subdivisions which contain attached units or lots of less than ten thousand square feet (10,000 sq. ft), plans for homes which may be built on lots may be submitted without specifying which lot the unit is to be located on, however, building envelopes on the lot must be sufficient to accommodate the units planned for the lot.
- i. Written summary showing the following:
 - i. The total area contained in the area proposed to be developed.
 - ii. The total number of parking spaces.
 - iii. The number of dwelling units in the development (include the units by the number of bedrooms in each unit, e.g. 10 one-bedroom units, 25 two-bedroom units, etc.).
 - iv. Total area and percentage of lot coverage by:
 - Structures.
 - Streets, roads, and alleys.
 - Sidewalks.

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- Recreation areas.
 - Landscaping.
 - Tree canopy at maturity of the trees.
 - Parking areas (and number of spaces).
- j. Traffic Impact Analysis (TIA). Such analysis shall be required as requested by City Manager and or designee and shall be prepared in accordance with Chapter 10, Subdivision Regulations of the City Code of Ordinances, and all other applicable City regulations and ordinances.
- k. Storm Water Management Impact Analysis.____A Preliminary Drainage Plan shall be prepared in accordance with the requirements of the Chapter 10, Subdivision Regulations of the City Code of Ordinances.
- E. Design Specifications Applicable to Single Family Residential Areas and Uses.
1. Buildings shall utilize at least two of the following design features to provide visual relief along the front of the residence:
 - a. Dormers,
 - b. Gables,
 - c. Recessed entries,
 - d. Cupolas,
 - e. Pillars or posts, or
 - f. Bay window (min. 24" projection)
 2. The garage frontage shall not occupy more than 40 percent of the total building frontage.
 3. Garages shall be recessed from the front of the structure by at least ten feet (10ft).
 4. No more than five (5) adjacent detached single-family homes or contiguous groups of attached single family homes may be of the same design and floor plan.
 5. Walls, which face a street other than an alley, must contain at least 20 percent of the wall space in windows or doors.
 6. Primary entries shall be accessed directly from the public street and sidewalk.
 7. Windows shall be provided with trim. Windows shall not be flush with exterior wall treatment. Windows shall be provided with an architectural surround at the jamb.
 8. Flat roofs are permitted only when accompanied by a parapet.
 9. Exterior finishes shall be primarily masonry, stone, horizontal wood, HardyPlank or other high quality wood substitute.
 10. Each attached or detached unit must be built on a lot that is 150 percent of

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the footprint of the unit constructed on the lot.

F. Design Standards for Multifamily areas:

1. Orientation requirements for developments:
 - a. At least 60 percent of the building face shall be within 20 feet of the front lot line.
 - b. Buildings which are located within 40 feet of a front yard property line or 20 feet of any yard adjacent to a street shall have at least 25 percent of the wall facing the street in window or door areas.
 - c. Parking areas shall not be located between buildings and the street.
 - d. Buildings shall be directly accessed from the street and the sidewalk.
 - e. Buildings shall provide a porch or balcony at the street entrance.
 - f. Trash storage areas, mechanical equipment, and similar areas are not permitted to be visible from the street nor are permitted between the building and the street and must be screened in an opaque manner such as masonry or vegetative screening.
2. Block Size: A project may not contain a block of greater than three (3) acres. Projects larger than three (3) acres shall develop a public or private street system that creates blocks of three (3) acres or less.
3. Private Streets shall be required to contain sidewalks and street trees and meet all other public street standards.
4. Streetscape:
 - a. Street trees are required for private internal streets as well as public streets.
 - b. Front yard landscaping shall contain a mixture of ground cover, shrubs, and trees. Pine straw, bark chips, granite chips, gravel and other similar ground cover may not be a major component of the mature landscaping.
 - c. Sidewalks shall be placed along all street frontages and in the interior where appropriate for pedestrian circulation.
5. Open Space:
 - a. An area equal to at least 8 percent of the lot area shall be dedicated to open space for recreation for use by the tenants of the development in Multi-family zones for all projects with greater than twenty (20) dwelling units per acre.
 - b. Areas covered by shrubs, pine straw, bark mulch and other ground covers which do not provide a suitable surface for human use may not be counted toward this requirement.
 - c. Decks, patios, rooftop terraces and similar areas are eligible for open space criteria. Play areas for children are required for projects of greater than twenty (20) units that are not designed as age limited or student housing.

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6. Exterior finishes shall be primarily masonry, stone, horizontal wood, HardyPlank or other high-quality wood substitute.
- G. Special Standards for Large Scale Multifamily (greater than thirty (30) units):

The same exterior design may not be used for more than thirty (30) units in a project. A variety of compatible exterior materials use and type, building styles, massing, composition, and prominent architectural features, such as door and window openings, porches, rooflines, should be used.
- H. Development Standards for Commercial Uses:
 1. Orientation and Scale:
 - a. Buildings shall have their primary orientation toward the street rather than the parking area. Public sidewalks shall be provided adjacent to a public street along the street frontage.
 - b. Trash storage areas, mechanical equipment, and similar areas are not permitted to be visible from the street nor are permitted between the building and the street and must be screened in an opaque manner such as masonry or vegetative screening.
 - c. Gasoline pumps must be screened from the street in accordance with Section 14.613, Bufferyards.
 - d. Off-street loading areas shall be located at the rear or side of a building and shall not be visible from the street.
 - e. Buildings that are open to the public and are within 30 feet of the street shall have an entrance for pedestrians from the street to the building interior. This entrance shall be open to the public during all business hours.
 - f. Building frontages greater than 100 feet in length shall have offsets, jogs, or other distinctive changes in the building façade.
 - g. Any wall which is within 30 feet of the street, plaza or other public open space shall contain at least 40 percent of the wall area facing the street in display areas, windows, or doorways. Windows must allow views into working areas or lobbies, pedestrian entrances or display areas. Blank walls within 30 feet of the street are prohibited. Up to 40 percent of the length of the building perimeter can be exempted from this standard if oriented toward loading or service area.
 - h. Buildings shall incorporate lighting and changes in mass, surface or finish to give emphasis to entrances.
 - g. At least 60 percent of the frontage on a thoroughfare as designated on the Master Thoroughfare Plan shall have buildings within ten feet (10 ft) of the front property line.
 - h. Prominent horizontal lines at levels similar to surrounding buildings shall be maintained along the street-facing side of the building.
 2. Streetscape: Hardscape (paving material), such as concrete, unit masonry, scored and colored concrete, Grasscrete®, or combinations of

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the above, shall be utilized to designate “people” areas.

3. Parking and On-site Circulation:
 - a. Parking areas shall be located behind buildings or on one or both sides.
 - b. Protected, raised walkways shall be installed through parking areas of fifty (50) or more spaces or more than 100 feet in average width or depth.
 - c. Parking lots with fifty (50) spaces or more shall be divided into separate areas landscaped areas or walkways at least ten feet (10ft) in width, or by a building or group of buildings.
 - d. Developments provide a pedestrian circulation plan for each block. Pedestrian walkways shall be directly linked to entrances and the internal circulation of the building.
 - e. Connections shall be made when feasible to any streets adjacent to the property and to any pedestrian facilities that connect with the property unless pedestrian and/or traffic hazards prohibit such connections.
4. Lighting: Lighting shall include adequate lights so that pedestrian areas are illuminated with at least one half-foot candle (1/2 FC) of illumination. Light may not directly illuminate property beyond the development, except for the public right of way.
5. Building Materials:
 - a. Buildings in a commercial use area shall have exterior walls constructed of stone, brick, glass block, tile, cast metal, cast stone, smooth stucco or a combination of those materials.

Brick masonry shall be used on a minimum of 50 percent of elevations along a public street.

Buildings may not be clad in plain concrete block or plain concrete walls if visible from the front or side yard adjacent to a street.
 - b. Metal siding shall not occupy more than 15 percent of the front elevation along the street frontage for MF, Multiple-Family District and must be finished with enamel or anodizing.
 - c. For every 80 feet of building wall there shall be a change in relief, such as columns, cornices, bases, fenestration, and fluted masonry.
6. Signs: Signs shall be regulated in accordance with Article 3.1800, Signs, of the City Code of Ordinances, with the exception that projecting and/or suspended signs may be allowed if approved as part of the Site Plan.
7. Public spaces: One square foot (1 sq. ft) of plaza or public space shall be provided for every 10 square feet of gross floor area used for nonresidential use. Plazas shall incorporate sitting space, sunlight and shade, and trees. Outdoor eating areas, public art and water features are encouraged.

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Section 14.5011 NAS: NAVAL AIR STATION OVERLAY

A. Purpose

The purpose of this overlay district is to acknowledge the recommended compatible land use guidelines associated with aircraft operations at the Naval Air Station Fort Worth Joint Reserve Base (NAS FW JRB). It is equally important to balance these guidelines with the existing development within the City. A majority of the City was developed prior to the establishment of the Accident Potential Zones (APZ) and Day-Night Level (DNL) zones. It is also the purpose of this section to protect the health, safety and general welfare of the public where it is recognized that aircraft accidents and excessive noise have the potential for endangering or harming the lives and or property of users or occupants of land in the vicinity of the airports that serve Fort Worth.

The boundaries of the overlay district apply to Accident Potential Zone I (APZ I) and associated DNL zones. The basis for the determination of the area affected by the NAS overlay district will be the most recently-adopted Air Installation Compatible Use Zone (AICUZ) for NAS FW JRB adopted by the Department of Defense.

B. Use Regulations

In addition to the zoning restrictions contained within the underlying zoning district and notwithstanding any other provisions in the underlying district, no new building or newly-developed land shall be used and no buildings shall be hereafter be erected, reconstructed, altered, or enlarged, within the NAS Overlay District except as specified in the Land Use Table and unless they comply with the following restrictions:

C. Accident Potential Zone I (APZ I). Refer to the zoning map for the area of APZ I.

1. Noise Reduction Required.

- a. Noise level reduction (NLR) measures must be incorporated into the design and construction of the structures.
- b. All new development (residential and nonresidential), including additions and accessory structures, will require sound attenuation measures which reduce indoor noise levels to 55 decibels or less.
 - i. Exception. Nonresidential uses may limit NLR measures to occupied and service areas of the building.

2. Residential Development.

- a. Existing single- and multi-family dwellings that were constructed or occupied on the date of the adoption of this Ordinance may construct or reconstruct within the NAS overlay district provided that construction methods are used to achieve an inside noise level reduction to 65 decibels or less.
- b. New residential uses are prohibited on unplatted land in APZ I zone.
 - i. Exception. Existing tracts of land zoned for residential use may be platted within one (1) year from the adoption of this

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Ordinance.

- c. Residentially zoned tracts or lots may not be subdivided.
 - d. Accessory dwelling units are prohibited.
- 3. Nonresidential Development.
 - a. Existing nonresidential uses and structures that were constructed or occupied on the date of the adoption of this Ordinance may construct or reconstruct for the same nonconforming use within the NAS overlay district provided:
 - i. Construction methods are used to achieve an inside noise level reduction to 55 decibels or less; and
 - ii. The structure contains equal or less square footage of the previous structure, or
 - iii. The occupancy of the structure is less than the occupancy of the previous structure.
 - b. New nonresidential development is limited to the uses permitted in the Land Use Table. Uses designated with in the table with “CA” Conditions Apply require letter of no objection from the Commanding Officer at the NAS FW JRB
 - c. Expansion of an existing nonresidential uses or structures which increases occupancy of the structure is prohibited.
- D. Accident Potential Zone II (APZ II). Refer to the zoning map for the area of APZ II. Noise reduction measures are recommended for all new development and for the expansion or alteration to existing occupied structures.
- E. Additional Requirements
 - 1. Building Permit Required. In addition to the requirements for a building permit, noise level reduction measures to meet the required decibel level must be specified on the permit plans.
 - 2. Communications facilities and electrical interference. No use shall cause electrical interference with navigational signals or radio communications at the airport or with radio or electronic communications between the airport and aircraft. Proposals for the location of new or expanded radio, radio-telephone, television transmission facilities, electrical transmission lines and wind turbines shall be coordinated through the Department of the Navy Representative, FAA Central Service Area prior to approval.
 - 3. Outdoor lighting. No use shall project lighting directly onto an existing runway or taxiway or into existing airport approach and landing paths except where necessary for safe and convenient air travel. Lighting for any new or expanded use shall incorporate shielding into the design to reflect light away from airport approach and landing paths. Control of outdoor lighting shall be achieved primarily through the use of such means as cutoff fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement.
 - 4. Billboards and signs.

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- a. Externally illuminated billboards and signs shall have fixtures mounted at the top of the billboard or sign and aimed downward. The fixtures shall be designed, fitted and aimed to shield the source from off-site view and to place the light output onto and not beyond the sign or billboard. The face of the sign or billboard and the illumination shall not exceed 30-vertical foot-candles during the hours of darkness.
 - b. The light source for internally illuminated signs and billboards shall not exceed 1,000 initial lumens per square foot of sign face.
 - c. Rotating, traveling, pulsing, flashing or oscillating light sources, lasers, beacons, searchlights or strobe lighting shall not be permitted.
 - d. The use of highly reflective signage that creates nuisance glare or a safety hazard is not permitted.
5. Glare. No use shall cause glare by highly reflective materials, including but not limited to unpainted metal or reflective glass, on the exterior of structures located within airport approach and landing paths or on nearby lands where glare could impede the vision of a pilot. Proposed solar arrays shall be coordinated through the Department of the Navy Representative, FAA Central Service Area prior to approval. The control of glare shall meet the following criteria:
6. Emissions. No use shall, as part of its regular operations, cause emissions of smoke, ash, vapor, gas, dust, steam or other emissions that could obscure visibility of pilots or conflict with airport operations.
7. Wildlife attractants. No use shall foster an increase in wildlife population and thereby increase the likelihood of a bird impact problem.
8. Height considerations. 14 C.F.R. Part 77, Subpart C establishes the following imaginary surfaces for airports: approach surface; conical surface; horizontal surface; primary surface; and transitional surface as defined in the applicable airport layout plan.
- a. 14 C.F.R. Part 77, Subpart C establishes the following imaginary surfaces for airports: approach surface; conical surface; horizontal surface; primary surface; and transitional surface as defined in the applicable airport layout plan.
 - i. Structures cannot penetrate Federal Aviation Regulation Part 77 imaginary surfaces and elevation at the site of construction.
 - ii. Construction or alteration requiring notice: any person proposing construction or alteration whether permanent, temporary or of natural growth in the area surrounding any municipal or military airport shall notify the manager, Air Traffic Division of the Federal Aviation Administration (FAA) Regional Office and the manager of the municipal airport or community liaison or other appointee of the NAS FW JRB, as applicable, if such construction or alteration exceeds any of the following height standards.

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- b. When requested by the FAA, any construction or alteration that would be in an instrument approach area and available information indicates the height might exceed any FAA obstruction standard, must be submitted for review.
- c. Notice to FAA: nothing in this section shall be construed as relieving any property owner, sponsor or agent from the requirement for filing a notice of proposed construction or alteration with the appropriate Federal Aviation Administration.
- d. A copy of a determination of no hazard or similar documentation will be required from the FAA, and the NAS FW JRB, as applicable, before release of a building permit by the City of Lake Worth.

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Section 14.601 Development Across City Boundaries

A. Purpose

The requirements of this section are designed to provide for the orderly development of retail facilities that are located both within and outside the City limits of the City and that have primary or secondary access to a roadway with the City.

B. In addition to other parking regulations that apply, parking for a retail facility is permitted only as an accessory use and is allowed only when immediately adjacent to a retail facility that is located within the corporate limits of the City.

C. No access shall be allowed from a retail facility located within an adjacent city to a public street within the City of Lake Worth until a traffic impact analysis (TIA) is submitted for consideration subject to the following process and criteria:

1. Demonstrates that the public street is designed and constructed in accordance with the currently approved master thoroughfare plan as well as City development policies, procedures and standards; and
2. Demonstrates that the public street is designed to accommodate any traffic generated by the retail facility.
3. Consideration and approval by the City Council. A public hearing/meeting is required to formally accept the TIA.

D. The requirements of this section may be waived by the City Council where the retail facility is to be developed pursuant to an interlocal agreement which places development controls on the facility that adequately address traffic impact issues on adjacent public streets and otherwise protect the public health, safety and welfare.

Section 14.602 Uses Generally, Building and Land

A. No building shall hereafter be erected, reconstructed, altered or enlarged, nor shall any building or land be used for any purpose other than is permitted in the district in which such building or land is located.

B. No building shall hereafter be erected, reconstructed, altered or enlarged to exceed the height or bulk limit herein established for the district in which such building is located, nor shall any building be erected, reconstructed or altered as to provide a floor space smaller than the minimum prescribed by this Ordinance.

C. No lot area shall be so reduced or diminished that the yards or other open spaces shall be smaller than prescribed by this Ordinance, nor shall the density of population be increased in any manner except in conformity with the area regulations herein established.

D. Every building hereafter erected shall be located on a lot as herein defined, and in no case shall there be more than one (1) building on one (1) lot, except as herein provided.

Section 14.603 Pre-Existing Platted Lot

Any residentially-zoned lot having less area and/or width than herein required and which was platted of record and in separate ownership at the time of the passage of this Ordinance may be occupied by not more than a single-family structure. Nothing in this Ordinance shall

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prevent the residential use of any lot platted of record prior to the effective date of this Ordinance provided that all front yard, side yard, rear yard, floor area, parking and all provisions other than lot area and/or lot width are met or exceeded.

Section 14.604 Access to Lots and Structures

Every building hereafter erected or moved shall be on a lot adjacent to a public street or with access to an approved private street, and all structures shall be so located on lots as to provide safe and convenient access for servicing, fire protection and required off-street parking. Conformance with Chapter 10, Subdivision Regulations of the City Code of Ordinances is required.

Section 14.605 Visibility at Intersections

On a corner lot in any district, nothing shall be erected, placed, planted or allowed to grow in such a manner as materially to impede vision in accordance to adopted current Subdivision Regulations and Design Criteria and Construction Standards.

Section 14.606 Site Plan Requirements

- A. Purpose. The purpose of the site plan review is:
 - 1. To assure compliance with the Zoning Ordinance, while allowing for design flexibility;
 - 2. To assist in the orderly and harmonious development of the City;
 - 3. To protect adjacent uses from obstructions to light, air, and visibility;
 - 4. To provide protection from fire; and
 - 5. To facilitate the adequate provision of transportation, water, sewage, drainage and other public requirements.
- B. Process
 - 1. A site plan may be reviewed or considered in association with a request for a zoning change or may be reviewed and considered independently. All site plans require approval by the City Council, unless otherwise noted herein.
 - 2. After conducting a public hearing, the Planning and Zoning Commission shall review and make a recommendation to the City Council. The Commission shall consider the site plan as follows:
 - a. The proposed development meets all the minimum standards established in this Ordinance and other applicable ordinances;
 - b. The proposed development conforms to the adopted Comprehensive Plan or the adopted growth policies of the City; and
 - c. the proposed development will not be detrimental to the health, safety, or welfare of the surrounding neighborhood or its occupants, or be substantially or permanently injurious to neighboring property.
 - 3. Council Approval. City council approval of a site plan that accompanies a zoning change request shall become part of the amended ordinance. Hearings held by the council for consideration of approval of such zoning

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change and accompanying site plan shall be conducted in accordance with the provisions of Section 14.703.

4. Requirement Prior to Building Permit. When required by this article, a site plan must be approved prior to issuance of a building permit by the City.
5. Changes to the Site Plan. Changes to the site plan shall be processed in the same manner as the original approved site plan.
 - a. Except as otherwise provided, any site plan that is amended shall require approval of the City Council after review and recommendation by the Planning and Zoning Commission.
 - b. Changes to the site plan which will affect the use of the land shall require either an amendment to a Planned Development or a rezoning of property, whichever applies, and shall require the appropriate public hearings.
 - c. Changes of details within a site plan which do not alter the basic physical relationship of the property to adjacent property, do not alter the uses permitted, do not increase the density, floor area, height, or reduce the yards provided at the boundary of the site as indicated on the approved site plan, may be authorized by the City manager or his/her designee. An aggrieved party may appeal the decision of the City manager or his/her designee to the Board of Adjustment in accordance with the provisions of this section.

C. Site Plan

The site plan shall contain, where applicable, the information listed below and any or all of the required features may be incorporated on a single drawing if such drawing is clear and capable of evaluation by the planning and zoning commission, the City council and the staff personnel required to enforce and interpret this section.

1. The location of all existing and planned structures on the subject property and approximate locations of structures on adjoining property within 100 feet.
2. Design of ingress and egress.
3. Off-street parking and loading facilities, and calculations showing how the quantities were obtained.
4. Height of all structures (in feet and number of stories).
5. Proposed uses.
6. Landscape and bufferyard plan.
7. The location, general size, and type of all major trees or closely grouped trees may be shown in general grouping if necessary.
8. The location and type of all signs, including lighting and heights.
9. Elevation drawings if requested by staff, planning and zoning commission, or City council.
10. Street names on proposed streets.
11. Proposed water, wastewater collection, and storm sewer lines; proposed grading and drainage patterns.

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12. Engineering drawings of all improvements to be dedicated to the City, if the property is not to be final platted or if engineering drawings have not been previously submitted for the site. If the property is to be final platted, these may be provided at that time.
13. Utility and drainage easements for dedicated infrastructure, if required.
14. Location, setbacks, size and construction material of dumpster enclosure.
15. Such additional terms and conditions, including design standards, as the planning and zoning commission and the City council deem necessary.

Section 14.607 Accessory Buildings and Uses

A. Accessory Building and Structure

1. Primary Structure and Use Required.
 - a. No detached accessory building shall be erected on a lot that does not contain a principal structure or use in accordance with the zoning district.
 - b. A building housing an accessory use is considered an integral part of the main building when it has any part of a wall in common with the main building or is under an extension of the roof of the primary structure and is designed as an integral part of the main building. Refer to the regulations herein for Accessory Use.
2. Building Permit Required. Approved plans and building permit are required prior to the construction of an accessory building.
3. Incidental Use. Generally, a subordinate building, located on the same lot as the primary building, and having a use customarily incidental to the primary use of the main building. Specific types of Accessory Buildings are defined below:
 - a. Accessory Building (Multi-Family or Non-Residential). A detached structure that is clearly incidental and subordinate to the main building or use and conforms to the following criteria:
 - i. Not used as an Accessory Dwelling Unit (ADU);
 - ii. One story and maximum of 25 feet.
 - iii. Conforms to the lot coverage regulations for the zoning district;
 - iv. Conforms to the minimum exterior construction regulations herein applicable to the main building, and
 - v. Architecturally compatible in design and use of similar exterior materials to the principal structure.
 - b. Accessory Dwelling Unit (ADU). According to the US Department of Housing and Urban Development (HUD), an accessory dwelling unit (ADU) refers to a habitable living unit added to, created within, or detached from a primary one-unit single family dwelling, which together constitute a single interest in real estate. It is a separate additional living unit, including kitchen, sleeping, and bathroom facilities.

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An area within a single-family dwelling or an area in a detached accessory structure that is clearly incidental and subordinate to the main building or the detached accessory structure and conforms to the following criteria:

- i. Less than or equal in height to that of the main building;
 - ii. Minimum roof pitch of 6:12;
 - iii. Conforms to the minimum exterior construction regulations herein applicable to the main building, and
 - iv. Architecturally compatible in design and use of similar exterior materials to the principal structure.
 - c. Accessory Building (Residential). A detached structure that is clearly incidental and subordinate to the main building or use, not used as an ADU, and that is equal to or lesser in height than the main building. Accessory buildings include garages, storage sheds, gazebos, cabanas, storm shelters, and similar structures.
4. Height and Area Regulations.
- a. Setbacks.
 - i. No accessory building shall be erected in any required yard and/or easement, and
 - ii. No separate accessory building shall be erected within the minimum separation required by the City adopted Building Code.
 - b. Height. Detached accessory buildings may not exceed the existing height of either the principal building or the maximum height permitted in the zoning district.
 - c. Lot Coverage. The additional building in combination with the principal building and all other accessory structures may not exceed the maximum area (lot coverage) permitted in the zoning district.
5. Exceptions.
- a. Storage sheds less than or equal to 120 square feet do not require masonry exterior materials and do not require a building permit.
 - b. Carports are regulated according to Section 14.608.
6. Variance.
- The Board of Adjustment may approve a variance an accessory building which exceeds the height limitation herein for accessory buildings which inherently require a greater height, such as detached garages for motor homes; provided that no such accessory structure shall exceed the maximum height allowed in the zoning district. An accessory building may be constructed as a part of the main building, in which case the regulations controlling the main building shall apply.

B. Accessory Use

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1. Principal Structure Required. No accessory use shall be established on a lot that does not contain a principal structure or use in accordance with the zoning district.
 - a. No accessory use may occur within any structure that does not meet the required regulations of the applicable zoning district and shall conform to all applicable City regulations.
 - b. Accessory uses shall be customarily incidental and appropriately compatible with the principal use of the land and primary building.
2. Home Occupation. An accessory building or area within the primary structure may be used for home occupations. The area used for the accessory use shall be a maximum of three hundred square feet (300 sq. ft.) and/or 20 percent of the primary structure.

Section 14.608 Carports

A. Intent.

It is the intent of the City council that carports be allowed in single-family residential zoning districts subject to the regulations and requirements set forth in this section. Carports are expressly prohibited in any zoning districts of the City with the exception of SF-7.5 and SF-0.

B. Definition.

For purposes of this section, a carport is a structure that is not enclosed by any covering on at least three (3) sides and that serves the purpose of providing cover for off-street parking of private vehicles of the residents of a single-family dwelling.

C. Criteria.

In order to be permitted in SF-7.5 or SF-0 zoning districts, a carport shall meet the following requirements:

1. The carport shall be setback equal to or greater than the primary structure and shall in no case be beyond any property line or into any easement.
2. A side yard shall be required and shall be a minimum of five feet (5 ft) in width from the property line.
3. No carport shall be adjacent to a public or private street.
4. No carport shall exceed 450 square feet in roofed area.
5. No carport shall contain an open-sided area that is in excess of ten feet (10 ft) in height.
6. Support Structure.
 - a. The supporting structural elements in the outside perimeter of the roofed area shall be constructed of 14-gauge or thicker aluminum or steel and conventional wood framed construction meeting the requirements of the City Building Code as adopted by the City of Lake Worth.

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- b. The support posts must be embedded into concrete piers 12-inch in diameter and 24 inches deep or larger. The posts must be embedded the full depth of pier
- 7. For carports with metal roofs, the roof material shall consist of 26-gauge or thicker aluminum or steel with proper protection by paint or other materials to prevent corrosion and oxidation, or by composition shingles applied over approved decking. Corrugated metal and all-fiberglass panels are expressly prohibited.
- D. Building Permit Required.

The construction of carports shall be subject to permit fees as set out in the Lake Worth Fee Schedule.

Section 14.609 Living Quarters in Nonresidential Districts

In districts not intended for residential use and where residential use is not a permitted use, living quarters may be provided for resident managers, resident security and maintenance personnel and the like provided that:

- A. The living quarters is clearly subordinate to the permitted nonresidential use.
- B. The living quarters are only occupied by a manager, security, maintenance or other individual employed with full time duties on the site on which the living quarters are located. This is not intended to preclude the additional occupancy of the living quarters by family members of the full-time individual employed on the site.
- C. The living quarters are incorporated into the design of the permitted use in such a manner that the living quarters are not perceptible as such.
- D. Two (2) off-street parking spaces are provided per living quarter in addition to the required parking for the permitted use.
- E. Not more than one (1) such living quarter shall be authorized per platted lot without prior specific approval of the Planning and Zoning Commission and City Council as a conditional use.

Section 14.610 Vehicle Parking and Loading Requirements

- A. Purpose.

Except hereinafter provided, no building or structure or part thereof shall be erected, altered, or converted for any use permitted in the district in which it is located unless there shall be provided on the lot or tract or on an immediately contiguous lot or tract, or on a lot or tract within 150 feet of such building or structure, vehicle parking in the following ratio of vehicle spaces for the uses specified in the designated districts, except that an established use lawfully existing at the effective date of this article need not provide vehicle parking as hereinafter set forth provided such use is not expanded and that no existing vehicle parking in connection with said uses at the effective date of this article may be reduced below the minimum number of spaces as hereinafter required.
- B. General Regulations.

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Where parking spaces result from the computation of requirements, the requirement shall be construed to be that the fractional space will be treated as another full parking space required.

C. Minimum Dimensions for Off-Street Parking.

1. The design and dimensions of off-street parking shall be in accordance with the following table of minimum dimensions.

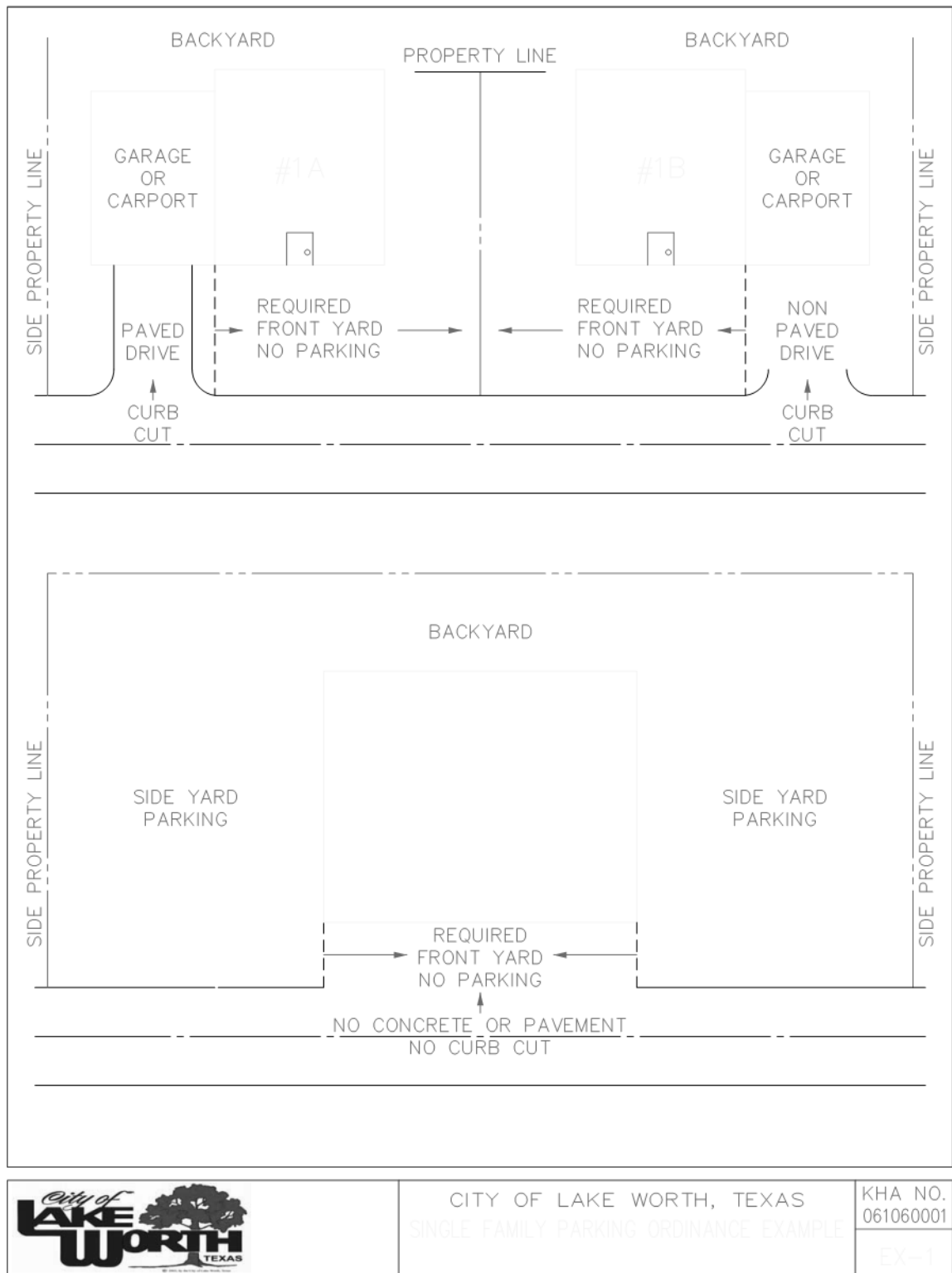
<u>Parking Angle</u>	<u>Stall Width</u>	<u>Stall Length</u>	<u>Maneuvering Space</u>
90 degree	9 feet	18 feet	24 feet
60 degree	9 feet	20.1 feet	20 feet
45 degree	9 feet	19.1 feet	18 feet

2. When off-street parking facilities are provided adjacent to a public alley, the width of said alley may be assumed to be a portion of the maneuvering space requirement.
3. Where off-street parking facilities are provided in excess of the minimum amounts herein specified, or when off-street parking facilities are provided but not required by this article, said off-street parking facilities shall comply with the minimum requirements for parking and maneuvering space herein specified.

D. Special Off-Street Parking Requirements.

1. In computing the parking requirements for any building or development, the total parking requirements shall be the sum of the specific parking space requirements for each class of use included in the building for development.
2. Shared parking agreements and cross access easements are encouraged for developments with a variety of uses. Studies to calculate and justify sufficient parking spaces is required and/or recommended.
3. Residential Development.
 - a. No parking space, garage or carport or other automobile storage space or structure shall be used for the storage of any truck, truck trailer, van, recreational vehicle, or boat exceeding one and one half (1 1/2) ton capacity.
 - b. A minimum of two (2) off-street parking spaces per dwelling unit located behind the front building line; provided, however, that at least two parking spaces shall be located within a private garage.
 - c. Parking spaces and any private driveways shall be constructed of an improved paved surface of concrete or asphalt or other paved surface in accordance with the Subdivision regulations and Design Criteria and Construction Standards, and as approved by the City Manager and/or designee.

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- i. On nonconforming lots without paved parking spaces and driveways, the parking spaces and driveways shall only be located perpendicular to the curb cut or drive approach or in the rear yard as authorized by the regulations herein and may not encroach into any portion of the remaining front yard. (See diagram on previous page.)
 - ii. On nonconforming lots without paved parking spaces and driveways, all vehicles shall be driven and parked so as to completely rest upon the unpaved parking spaces or driveway as provided in this section, or in the side yard adjacent thereto. (See diagram on previous page.)
 - iii. All vehicles parked or stored in the required rear yard of a structure must be placed behind a screening partition of fencing materials or dense vegetation so as to obscure the vehicle from view from a public street or public right-of-way. In addition, the parking or storage area and driveway (from the curb cut or drive approach to the parking or storage area) must be constructed of paved concrete or asphalt or other paved surface approved by the City Manager and/or designee.
- d. A boat or recreational vehicle (RV) may be parked or stored on the residential premises of the owner provided that such boat or RV is:
 - i. Parked on a permanently paved surface when parked in the side yards;
 - ii. Not parked beside a structure in the required side yards;
 - iii. Not parked within three (3) feet of the rear or side property lines when parked in the rear of a structure;
 - iv. Not used for sleeping quarters for more than seven (7) days or nights within any 6-month period; and
 - v. Not parked over the front property line or in the right-of-way except when used in conformance to the regulations herein. For corner lots the RV may not be parked within 15 feet of the property line of the second front yard.
- 4. Nonresidential Development
 - a. Floor area of structures devoted to off-street parking of vehicles shall be excluded in the computing of off-street parking requirements.
 - b. Private access drives to parking lots to serve nonresidential uses shall not be through residential districts.

E. Off Street Loading Requirements

- 1. All retail or wholesale sales, distribution, manufacturing and warehouse uses shall provide and maintain off-street facilities for the loading and unloading of merchandise and goods within the building or on the lot adjacent to a public alley or private service drive to facilitate the movement of traffic on the public street in addition to other parking requirements. Such space shall consist of a minimum area of ten feet by twenty-five feet (10 ft x 25 ft) and be provided as follows:

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Gross Floor Space (sq. ft.)	Loading or Unloading Berths
25,000 or less	1
25,001 to 84,000	2
84,001 to 156,000	3
156,001 to 236,000	4
Each 100,000 additional	1 additional per 100,000 gross floor area

2. In cases of unusual design considerations, exemptions or modifications to the off-street Loading Requirements will be permitted only by approval of the Planning and Zoning Commission.

F. Stacking Space Requirements

1. All business uses containing an automobile drive-in type ordering or service facility, whether manned or unmanned, shall provide automobile stack space in conjunction with the drive-in facility.
2. Stack spaces shall be nine feet wide by eighteen feet long (9 ft wide x 18 ft long) and shall be located in a sequential arrangement oriented to the drive-in ordering or service area.
3. The space occupied by an automobile placing an order or being served shall not be considered as a stack space.
4. Required stack space(s) shall not be on any street right-of-way or alley, any necessary maneuvering area for parking spaces, within the general traffic circulation pattern of a parking lot, or a designated fire lane. Stack spaces may be situated in a straight alignment or in a curved pattern with functional radii.
5. All stack space requirements shall be in addition to all parking space and loading requirements specified herein.

G. Handicap Parking Spaces

1. A portion of the total parking spaces available shall be specifically designed, located and reserved for vehicles licensed by the State for use by the handicapped, and shall be provided according to the following schedule:

Total Spaces in Lot	No. of Handicapped Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2% of total parking spaces
1,001 and over	20 spaces plus 1 per 100 spaces over 1,000 spaces

2. Each parking space designated for use by the handicapped shall consist of a rectangular area not less than nine feet wide by eighteen feet long (9 ft

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wide x 18 ft long), with a vertical clearance of nine and one-half feet (9 ½ ft), shall be located in an area not exceeding 2 percent (2%) slope, and shall be located near and convenient to a level or ramped entrance accessible to handicapped persons. A five-foot (5 ft) wide access aisle shall be provided adjacent to the handicapped parking space, except that for one (1) of every eight (8) spaces, but not less than one (1) space, shall be provided with an eight foot (8 ft) wide access aisle for van access. Parking spaces for the handicapped shall be designated with a vertically mounted or suspended sign in accordance with State law (Texas Accessibility Standards) and restricted for use by the handicapped only.

H. Bicycle Parking

1. Bicycle Parking Requirement

- a. All new non-residential developments and redevelopment shall provide parking spaces for bicycles equivalent to 5 percent of their automobile parking requirement.
- b. In all cases where bicycle parking is required, no fewer than two (2) spaces per rack shall be required.
- c. A reduction in the minimum required automobile parking may be allowed equal to one (1) automobile space for each two (2) bicycle parking spaces provided. Additional bicycle parking spaces provided above the required number may not reduce the required number of automobile parking spaces by more than 25 percent.

2. Locations

- a. Bicycle parking shall be located as close as or closer than the nearest car parking space to the building entrance, other than those spaces for persons with disabilities.
- b. Bicycle parking facilities shall not interfere with accessible paths of travel or accessible parking as required by the Americans with Disabilities Act of 1990.
- c. Bicycle Racks shall not block the building entrance or inhibit pedestrian flow.
- d. Bicycle Racks shall be located in highly visible and well-lit areas to minimize theft and vandalism.
- e. Alternative Locations: In the event that compliance may not be feasible because of demonstrable hardship, the City Manager and/or designee may approve an alternative location according to the following criteria:
 - i. Alternative locations shall be well lit and secure.
 - ii. All Bicycle Parking Spaces shall be located within 100 feet of the primary building entrance.

3. Layout and Design

- a. Bicycle Rack Design - Structures That Require a User-Supplied Locking Device

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- i. Each bike rack shall be designed to accommodate two (2) bike parking spaces using the allowed bike rack designs below.
 - ii. Racks shall be designed to accommodate U-shaped locking devices and support the bicycle in two (2) places.
 - iii. Racks shall be designed to resist cutting, rusting, bending and deformation.
 - iv. The surfacing of such facilities shall be designed and maintained to be mud and dust free.
 - b. Bicycle Parking Space Size, Access Aisles, and Vertical Clearance
 - i. Required bicycle parking spaces shall be at least four feet wide by six feet long (4 ft x 6 ft).
 - ii. An access aisle of at least four feet (4 ft) shall be provided in each bicycle parking facility.
 - iii. Such space shall have a vertical clearance of at least six feet (6 ft).
 - iv. Racks shall be placed on 48-inch on center (48 in oc).
 - c. Bicycle parking shall be located to protect bicycles from damage from automobiles.
 - d. In cases where Bicycle Parking Spaces are not visible from the primary street, signage shall be used to direct cyclists safely to bicycle parking areas (see example next page).
 - e. All Bicycle Racks and lockers shall be securely anchored to the ground using a concrete footing and tamper-proof spike anchors.
 - f. Bicycle parking shall be designed to minimize visual clutter to the extent possible.
- I. Parking Requirements for New or Unlisted Uses

Where questions arise concerning the minimum off-street parking requirements for any use not specifically listed, the requirements may be interpreted as those of a similar use.
- J. Schedule of Minimum Number of Parking Spaces. See attached Table.
 1. In all zoning districts, off-street vehicle parking spaces shall be provided in accordance with the following requirements.
 2. In any case where specific requirements result in a fraction of a parking space the next larger whole number of spaces shall be required.
 3. In any case where specific requirements include the number of persons employed on the premises, the number persons employed in two (2) shifts shall be used for calculating parking requirements when a use customarily exceeds nine (9) hours of operation in a 24-hour period.
 4. Parking spaces shall be required as shown in the table on the following pages.
- K. Aisle Requirements

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1. Ninety-degree spaces (90°):
 - a. For a single row of 90-degree head-in parking, the minimum width for a parking space plus aisle shall be 38 feet.
 - b. For two (2) rows of 90-degree head-in parking using the same aisle, the minimum width for parking spaces plus aisle shall be 56 feet.
2. Sixty-degree spaces (60°):
 - a. For a single row of 60-degree head-in parking, the minimum width for a parking space plus aisle shall be 34 feet.
 - b. For two (2) rows of sixty-degree (60°) head-in parking, using the same aisle, the minimum width for parking spaces plus aisle shall be fifty-two feet (52 ft).
3. Forty-five-degree spaces (45°):
 - a. For a single row of 45-degree head-in parking the minimum width for a parking space plus aisle shall be 30 feet.
 - b. For two (2) rows of 45-degree (45°) head-in parking, using the same aisle, the minimum width for parking spaces plus aisle shall be 48 feet.
4. A single line of parking spaces may be provided parallel to an aisle provided they are at least 22 feet in length and nine feet (9 ft) in width and 22 feet of maneuvering space in front of and diagonal to the front most parallel parking space.
5. When driveways are less than 20 feet in width, marked separate entrances and exits shall be provided so that traffic shall flow in one (1) direction only.
6. Entrances and exits to an alley may be provided, if prior approval is obtained in writing from the City.
7. When more than one (1) aisle is provided, adequate internal circulation shall be provided between the aisles to allow movement between the aisles without using public right-of-way.

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

PARKING REQUIREMENTS				
USE	PARKING	STACKING	BICYCLE	NOTES
RECREATION AND ENTERTAINMENT USES				
Amusement/Event center (indoor), inc. game room	10 min; 1:100 SF + Assembly	Study Required	5 percent of Required Parking As per approved Site Plan	
Bowling alley	4:LANE			
Entertainment venue (outdoor)	1:4 SEATS	Study Required		
Assembly, auditorium, theater, cinema	1:3 SEATS	Study Required		
Bar, tavern, private club	1:2 SEATS			
Golf courses, driving range, miniature golf	5:1 GREEN; 1:1 RANGE TEE			
Sexually-oriented business	1:1 SEATS			
COMMUNITY FACILITIES, EDUCATIONAL AND INSTITUTIONAL USES				
Business/trade school	1:200 SF	1 Min	5 percent of Required Parking As per approved Site Plan	
Colleges and universities	Study Required	Study Required		
Convention Center	Study Required	Study Required		Shared parking preferred
Early education, elementary and secondary schools	1:1 FACULTY 1:1 EMPLOYEE 1:1 BUS	Study Required		
Day care center - child or adult	1:1 EMPLOYEE 1:1 BUS 1:3 ENROLLMENT	4 min at drop off/pick up		
Day care center - religious institution	1:1 EMPLOYEE 1:1 BUS 1:3 ENROLLMENT	4 min at drop off/pick up		
Government offices: local, state or federal	Study required	1 Min		
Independent school district offices/bldgs..	1:1 EMPLOYEE	1 Min		
Medical care facilities, clinics, hospitals	1:250 SF	Study Required		
Museums, libraries, community centers, private or non-profit orgs	Study required	Study Required		
Public safety facilities, civil defense centers	Study required	Study Required		
Religious institutions, churches	1:2 SEATS + Assembly	Study Required		
SF = Square Feet (round up); DU = Dwelling Unit; NA =Not Applicable; P = Prohibited				

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

PARKING REQUIREMENTS					
USE		PARKING	STACKING	BICYCLE	NOTES
<u>RESIDENTIAL USES</u>					
Household	Single Family detached	2:1 DU	NA	NA	Off-street; behind front building line; 2- car in private garage
	Single Family attached	1:1 DU	NA	NA	
	Multifamily dwellings	2:1 DU	NA	NA	Visitors and Additional Parking
	Manufactured/ Mobile home	2:1 DU 1: 2 DUs	NA	NA	Visitors and Additional Parking
	Modular Home	2:1 DU	NA	NA	
Group	Assisted living; nursing home	1:2 Beds	As per approved Site Plan	NA	Based on capacity as per license
	Boarding Home/Coliving	1:2 Beds	Study required	Study required	
	Community Home	1:2 Beds	Study required	Study required	
	Group Home	1:2 Beds	Study required	Study required	
	Halfway House	1:2 Beds	Study required	Study required	
	Shelter	1:2 Beds	Study required	Study required	
ACCESSORY BUILDING and/or USES					
Accessory Building	Accessory bldg; Non-residential	NA	NA	NA	
	Accessory bldg; Residential	1:1 DU	NA	NA	
	Antennae and towers, ≤ to max. height in district	NA	NA	NA	
	Antennae and towers > max. height in district	NA	NA	NA	
	Carport	2:1 DU	NA	NA	
	Temporary bldg. for construction/ office	1:250 SF	NA	NA	
Accessory Use	ADU - Accessory dwelling unit	1:1 DU	NA	NA	
	Home Occupations	Prohibited	NA	NA	
	Outdoor sales/display (Temporary)	NA	NA	NA	May not be located in any required spaces
SF = Square Feet (round up); DU = Dwelling Unit; NA =Not Applicable; P = Prohibited					

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

PARKING REQUIREMENTS				
USE	PARKING	STACKING	BICYCLE	NOTES
<u>COMMERCIAL and RETAIL USES</u>				
Retail/Commercial	Coffee shop with drive through	1:250 SF	13 spaces min	
	Contract construction services	2:Unit	Space for equipment trailer	Behind front building line
	Convenience store	4 min or 1:200 SF store		+ 1:fuel station
	Drive through with any commercial, retail or service use	Refer to List	5 spaces min	Study recommended
	Drug stores/pharmacy	1:250 SF	5 spaces min	
	Farm implement sales/ service	1:700 SF		
	Food truck; Food truck park	2:Food truck		
	Furniture and furnishings	1:1500 SF		
	Grocery stores, specialty market (not in shopping center)	1:200 SF		
	Hardware/home improvement	1:1500 SF		
	Merchandise - general	1:250 SF		
	Merchandise - parts	1:500 SF		
	Merchandise - specialty	1:200 SF		
	Nursery for retail sales	1:1500 SF		
	Private club, fraternity, lodge	1:200 SF		
	Restaurant, bar, café, cafeteria	1:100 SF	NA	
	Restaurant – fast food w/ drive-through	1:100 SF	12 spaces min	
	Shopping Center	1:250 SF		
	Vending – ice dispensing	2 min		
SF = Square Feet (round up); DU = Dwelling Unit; NA =Not Applicable; P = Prohibited				

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

PARKING REQUIREMENTS				
USE	PARKING	STACKING	BICYCLE	NOTES
<u>SERVICE USES</u>				
Service	Bank/financial institutions	1:300 SF	8 spaces min	
	Barber and beauty shops salon	1.5:Chair 1:Employee		
	Bicycle service and repair	1:500 SF		
	Caterer or wedding service	1:Employee		+ Assembly
	Health and fitness facility	1:150 SF		
	Hotel, motel, inn	1:1 Bedroom	4 spaces min at check in	+ Restaurant +Assembly
	Laundry service, dry cleaner	1:200 SF	Study Required	
	Laundromat	1:50 SF		
	Mini-warehouse	1:50 units	2 spaces min gate/entry/exit	
	Mortuaries, funeral homes	1:1500 SF	Study Required	+ Assembly
	Music instruments and/or lessons	1:300 SF 1:Classroom/Studio		
	Office, health services	1:175 SF		
	Offices, professional/service	1:300 SF		
	Veterinarian, with or without kennels	1:200 SF		
SF = Square Feet (round up); DU = Dwelling Unit; NA =Not Applicable; P = Prohibited				

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

PARKING REQUIREMENTS					
USE		PARKING	STACKING	BICYCLE	NOTES
<u>AUTOMOBILE AND MISCELLANEOUS VEHICULAR USES</u> <u>Automobile, Bicycles, Motorcycles, Boats, Trailers</u>					
Auto	Vehicle sales and rentals	1:200 SF	Study Required	As per approved	
	Vehicle repair, paint/body shop	1:200 SF	Study Required		
	Car wash	1:stall	7 spaces min	Site Plan	
<u>INDUSTRIAL, MANUFACTURING and WAREHOUSING USES</u>					
Light Industrial	Flex building/multi-tenant	1:300 SF office 1:5000 SF warehouse	As per approved Site Plan	As per approved Site Plan	
	Light manufacturing	1:300 SF office 1:5000 SF warehouse			
	Research and development	1:300 SF office 1:5000 SF warehouse			
	Showroom warehouse	1:300 SF office 1:7000 SF warehouse			
	Warehouse store (e.g. Costco)	1:300 SF office 1:2000 SF warehouse			
Industrial	Heavy industrial equipment sales/ auction yard	1:300 SF office 1:2000 SF warehouse/yard			
	Manufacturing buildings	1:300 SF office 1:2000 SF warehouse			
	Packing plant	1:300 SF office 1:5000 SF warehouse			
	Telecom/data hosting center	1:300 SF office 1:10000 SF warehouse			
	Terminal, truck, freight, or water	1:2000 SF			
	Warehouse/distribution buildings	1:300 SF office 1:7000 SF warehouse			
<u>UTILITY AND SERVICE USES</u>					
Utility installations owned by City, County, State or Public Utility		As per CUP	As per CUP	As per CUP	
Gas well drilling and operations		As per approved Site Plan	As per approved Site Plan	As per approved Site Plan	
SF = Square Feet (round up); DU = Dwelling Unit; NA =Not Applicable; P = Prohibited					

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

L. General Requirements

1. Maneuvering space shall be completely off the right-of-way of a public street, place or court, unless specifically approved by the Planning and Zoning Commission during site plan review.
2. Parking parallel to the curb on a public street shall not be substituted for off-street requirements, unless specifically approved by the Planning and Zoning Commission.
3. When the occupancy of any building is changed to another use, parking shall be provided to meet the requirements of this section for the new use.
4. For existing buildings that are enlarged, parking spaces shall be required for the overall building.
5. When permanent seating is not provided in any public assembly area, the occupant load shall be computed in accordance with current Fire Code Regulations of the City of Lake Worth as the Fire Code currently exists or may be amended in the future without requiring amendment to this Ordinance. The applicable parking requirement will then be calculated as if each occupant had a permanent seat.

M. Auxiliary Parking

1. Auxiliary parking may be used if sufficient parking to meet the requirements under paragraph A above is available on the premises. A private parking lot may be provided within five hundred feet (500 ft), either on property zoned for that purpose or as approved by the Planning and Zoning Commission under the following restrictions:
 - a. The parking must be subject to the front yard setback requirements of the district in which it is located.
 - b. The parking area must be hard surfaced and dust free.
 - c. A minimum five foot (5 ft) high screen type fence or planting must be provided on all sides for the protection of the adjacent properties zoned for residential use.
 - d. Area lights must be directed away from adjacent properties and adjacent roadways.

N. Safety Standards

1. Safety barriers, protective bumpers or curbing shall be provided to prevent encroachment onto adjoining public or private property.
2. Visibility of and between pedestrians, bicyclists, and motorists shall be assured when entering individual parking spaces, when circulating within a parking facility, and when entering and exiting a parking facility.
3. Internal circulation patterns, and the location and traffic direction of all access drives, shall be designed and maintained in accordance with accepted principles of traffic engineering and traffic safety.

O. Lighting

Lights provided to illuminate any parking facility or paved area shall, to the maximum extent feasible, be designed to reflect away from any residential use.

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

P. Parking Lot Landscaping Standards

Planter islands shall be provided in parking areas on the basis of 20 square feet of landscape area for each parking stall provided (approximately one (1) island per eight (8) stalls.) Each row of parking stalls shall provide the required landscape area. The Building Official may modify the island requirement for each row in situations where it would be beneficial to combine islands into a larger island. Planter islands shall have a minimum width of eight feet (8 ft) back to back, if curbed, or nine feet (9 ft) edge to edge if no curb is provided. Parking lot landscaping does not count toward the total required interior landscape area.

1. Existing Trees: The Building Official may approve variations to the planter island requirements to preserve existing trees in interior parking areas. For existing trees, the minimum width of the planter island shall be as follows:

<u>Caliper</u>	<u>Width</u>
6" dbh or less	8 ft minimum width
6" to 12" dbh	12 ft minimum width
More than 12" dbh	18 ft minimum width

2. Planting Requirements: A minimum of 90 percent of all planter islands in parking areas shall contain a minimum of one (1) canopy tree with the remaining area in shrubs, ground cover, grasses or seasonal color. Planter islands shall not be combined with light poles.

Q. Screening

Additional landscaping and bufferyards shall be provided in accordance with the regulations herein.

R. Maintenance

All parking and loading facilities shall be maintained to assure desirability and usefulness of the facility. Such facilities shall be maintained free of refuse, debris, or other accumulated matter and shall at all times be available for the off-street parking or loading use for which they are required or intended.

S. Drainage

All parking facilities shall be graded and provided with permanent storm drainage facilities, meeting the construction specifications set by the City Engineer. Surfacing, curbing, and drainage improvements shall be sufficient to preclude the free flow of water onto adjacent properties or public streets or alleys, and to provide adequate drainage.

T. Recreational Vehicle Parking

1. No more than one (1) recreational vehicle shall be parked in any required front yard:
 - a. The total length of the recreational vehicle shall not measure more than 35 feet in length, including any transport accessory.
 - b. The recreational vehicle shall not under any circumstances extend into or upon any right-of-way or public access easement.

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- c. The recreational vehicle shall be parked on an asphalt or concrete surface not less than nine feet wide by eighteen feet long (9 ft wide by 18 ft long) in size, free of litter, debris, weeds, or other objectionable material or objects. Use of an alternate all-weather hard surface may be approved only by the City Engineer.
 - d. The vehicle and transport accessory must be totally operational and ready for use and have current license plates and inspection certificate.
 - e. No such equipment shall be used for living, sleeping or housekeeping purposes when parked or stored on a residential lot or any location not approved for such use.
2. Parking of recreational vehicles will be permitted behind the front building line; however, such vehicles shall be currently licensed and in good repair and be parked on a concrete or asphalt surface at least nine feet wide by eighteen feet long (9 ft wide by 18 ft long) in size.
 3. Recreational vehicles shall be parked in accordance with Article 12.1400, Stopping, Standing and Parking Restrictions.

U. Parking and Storage of Certain Vehicles

1. Automotive vehicles or trailers meeting the definition of "junked vehicle" shall not be parked or stored on any property other than completely enclosed in a building in a lawful manner and is not visible from the street or other public or private property.
2. Antique or special interest vehicles may be parked by a motor vehicle collector on the collector's property behind the front building line provided that the vehicle is parked on a concrete or asphalt surface at least nine feet wide by eighteen feet long (9 ft wide by 18 ft long) in size, the area is maintained in an orderly manner and not a health hazard, and that the area is screened from ordinary public view by not less than a six foot (6 ft) solid fence.
3. Covering of a junked, antique or special interest vehicle by a tarp or other fabric cover alone is not sufficient to comply with the screening requirement herein.
4. Parking or storage of all licensed trailers shall conform to requirements of major recreational equipment. All automotive vehicles or trailers of any kind shall be parked on a concrete or asphalt surface not less than nine feet wide by eighteen feet long (9 ft wide by 18 ft long).
5. The temporary parking (not exceeding 48 hours) of automotive vehicles or trailers on a surface other than concrete or asphalt at special community events hosted or authorized by the City may be approved on a case-by-case basis by the City Manager or designee.

Section 14.611 Access and Driveways

Site access and driveways shall conform to Chapter 10, Subdivision Regulations, of the Code of Ordinances, and the adopted Design Criteria and Construction Standards.

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Section 14.612 Landscaping Requirements

- A. Purpose
 - 1. This section establishes landscaping requirements in nonresidential zoning districts, including Planned Development districts.
 - 2. It is the intent of this section to reduce the negative effects of glare, noise, erosion and sedimentation caused by expanses of impervious and unvegetated surfaces within the urban environment.
 - 3. It is also the intent of this section to preserve and improve the natural and urban environment by recognizing that the use of landscaping elements can contribute to the processes of air purification, oxygen regeneration, groundwater recharge, abatement of noise, glare and heat, provision of habitats for wildlife, and enhance the overall beauty of the City.
- B. Landscape Installation Required
 - 1. Residential Lots and/or Uses in Planned Development
 - a. No building permit shall be issued after the effective date of this article for the construction of any new building in residential zoning districts unless a landscaping plan has been approved in accordance with this article.
 - b. Each residential lot shall be landscaped as follows (minimum):
 - i. Sod required in the front yard.
 - ii. One (1) 3-inch caliper tree in the front yard.
 - 2. Nonresidential
 - a. No building permit shall be issued after the effective date of this article for the construction of any new building in nonresidential zoning districts unless a landscaping plan has been approved in accordance with this article.
 - b. Except as otherwise provided in this article, a minimum of 20 percent of the total area of the lot on which the new building is constructed shall be landscaped.
 - c. This 20 percent requirement may be reduced by as much as 50 percent through the application of credits granted in the manner described in herein.
 - 3. The landscaping requirements in this article shall not apply to any lot for which a site plan, plot plan or landscaping plan has previously been approved by the City in conjunction with zoning or other development approval, provided that no substantive revisions are made to such approved plan.
 - 4. If only a portion of a large tract or lot is being developed, 20 percent of the area being developed, as determined by the City Manager and/or designee according to the submitted site plan, will be required to be landscaped.

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C. Landscaping Plan Required

1. A landscaping plan shall be submitted to the City for approval. The landscape plan may be submitted as a part of the site plan.
2. The landscape plan shall contain the following information:
 - a. Minimum scale of one-inch equals fifty feet (1 in = 50 ft);
 - b. Location of all trees to be preserved; method of preservation during the construction phase of development shall be approved by the director of parks and recreation.
 - c. Location of all plants and landscaping material to be used including paving benches, screens, fountains, statues, or other landscape features;
 - d. Species of all plant material to be used;
 - e. Size of all plant material to be used;
 - f. Spacing of plant material where appropriate;
 - g. Layout and description of irrigation, sprinkler or water system, including placement of water sources;
 - h. Description of maintenance provisions of the landscape plan; and
 - i. Persons responsible for the preparation of the landscape plan.

D. Locational Criteria

1. Not less than 40 percent of the total landscaping required by this article shall be located in the designated front yard.
2. All landscape material shall comply with visibility requirements of the City Code of Ordinances.

E. Credits Toward Landscaping Requirements

Credits toward the landscaping requirements set forth in subsection (b) above may be granted in the following manner:

	<u>Additional Enhancement</u>	<u>Credit</u>
(1)	3-inch tree (trunk diameter measured 12" above grade)	200 sq. ft.
(2)	6-inch tree (trunk diameter measured 12" above grade)	400 sq. ft.
(3)	10, one (1) gallon shrubs	100 sq. ft.
(4)	25 square feet flower bed	100 sq. ft.
1.	In no instance shall the total amount of landscaping on a lot be reduced through credits by more than 50 percent of the landscaped area required by this section.	
2.	A flower bed is any area where the soil has been specifically prepared for the planting of flowering plants. In addition, in order to be considered for credit calculations at least 80 percent of the prepared area must be	

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covered with flowering plant material at the time of peak growth.

F. Installation and Maintenance

1. All required landscaped area shall be permanently landscaped with living plant material and shall have either an irrigation system installed or shall be accessible to a bibcock, faucet, or other water source on the same lot or parcel. Synthetic or artificial lawn or plant material shall not be used to satisfy the requirements of this article.
2. Landscaped areas shall be kept free of trash, litter, weeds, and other such material or plants not a part of the landscaping.
3. All plant materials shall be main lined in a healthy and growing condition as is appropriate for the season of the year.
4. Plant materials which die shall be replaced with plant material of similar variety and size within a 6-month period, with a one-time extension not exceeding six (6) months being provided upon approval of the City Manager and/or designee.

G. Certificate of Occupancy

1. All landscaping shall be completed and installed in accordance with the approved landscape plan within six (6) months of a certificate of occupancy being granted. A one-time extension not to exceed six (6) months may be granted upon approval of the City Manager and/or designee
2. If these requirements have not been satisfied within the 6-month period from when the certificate of occupancy is issued, the property owner shall be considered in violation of this article and shall be subject to the penalties established herein.

H. Nonconforming Uses and/or Structures

All uses that are in existence at the time of the adoption of this section, which do not meet the landscaping requirements provided herein, will be considered as being legal nonconforming to these landscape requirements.

I. Modification, Variances and Appeal

1. Modifications. Whenever there are practical difficulties involved in complying with the provisions of this article relating to landscaping such as the presence of existing facilities or unusual topography, the City Manager and/or designee may grant modifications in individual cases, provided he shall first find that a special individual circumstance makes strict compliance with this article impractical; that the modification is in conformity with the intent and purpose of this article; and that the proposed modification is at least the equivalent of the requirements prescribed by this article. Such modification may only be made upon written application filed with the City Manager and/or designee and the details of any action granting the modification shall be recorded and entered into the files of the City. In order to be considered for a modification, the applicant shall provide to the City manager or his designee an alternative landscape plan for review and approval. The landscape plan must illustrate a plan to landscape as much area as

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available and shall provide for irrigation of landscaped areas and a phasing schedule for completing the landscaping. All landscaping improvements must be approved by the City Manager and/or designee.

2. Variances and Appeals. Any applicant who desires a variance or elimination of the requirements herein or who desires to appeal a decision of the City Manager and/or designee shall file a written appeal with the Board of Adjustment. Such appeal shall be accompanied by adequate graphic reproductions a written summary of the request and justification for the request. The Board of Adjustment shall have the authority to grant an interpretation or variance to the requirements of this article if it determines that a literal enforcement of the regulations will create an unnecessary hardship or practical difficulty in the development of the property, that the situation causing the unnecessary hardship or practical difficulty is unique to the affected property and is not self-imposed, that the variance will not injure and will be wholly compatible with the use and permitted development of adjacent properties, and that the granting of the variance will be in harmony with the intent and purpose of this article. The decision of the Board of Adjustment shall be final.

Section 14.613 Bufferyards

A. Purpose.

Bufferyards shall be required in accordance with this Section to:

1. Separate different land uses from each other;
2. To eliminate or minimize potential nuisances such as dirt, litter, noise, glare of lights, signs, and unsightly buildings or parking areas; or
3. To provide spacing to reduce adverse impacts of noise, odor or danger from fire or explosions.

B. Location

1. Bufferyards shall be located within and along the outer perimeter of the developing lot or boundary line.
2. Bufferyards may overlap drainage and/or utility easements; however, plantings should not impede the flow of water within a drainage easement.
3. Bufferyards shall not be located on any portion of an existing or dedicated public street or right-of-way.

C. Bufferyard Requirements

1. Width. A minimum width of ten feet (10 ft) is required between nonresidential and residential development and uses.
2. Landscaping Required: Plantings shall be provided within the Bufferyard as follows:
 - a. One (1) ornamental and/or evergreen tree every 100 feet.
 - b. Shrubs to create a continuous mature screen planted between trees.
 - c. Irrigation shall be installed and maintained.

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D. Uses of Bufferyards:

A bufferyard may be used for passive recreation, such as pedestrian, bike or equestrian trails, provided that no plant material is eliminated and the total width of the bufferyard is maintained.

Section 14.614 Street Trees

A. Location for Street Trees:

Street trees shall be located behind the sidewalk except in cases where there is a designated planting strip in the right-of-way, or the sidewalk is greater than eight feet (8 ft) wide and designed to accept trees in tree wells. Street trees shall include irrigation, root barriers, and generally conform to the standard established by the City of Lake Worth.

B. Spacing, Placement, and Pruning of Street Trees: All tree spacing may be made subject to special site conditions, which may, for reasons such as safety, affect the decision. Any such proposed special condition shall be subject to the review and approval of the City Manager and/or designee. The placement, spacing, and pruning of street trees shall be as follows:

1. Street trees shall be placed at the rate of one (1) tree for every 50 feet of street frontage; however, they shall not unduly compromise visibility triangles at intersections and non-residential driveways.
2. Trees shall not be planted closer than 25 feet from the curb line of intersections of streets or alleys, and not closer than ten feet (10 ft) from private driveways (measured at the back edge of the sidewalk), fire hydrants, or utility poles.
3. Street trees shall not be planted closer than 20 feet to light standards. Except for public safety, no new light standard location shall be positioned closer than ten feet (10 ft) to any existing street tree, and preferably such locations will be at least 20 feet distant.
4. Trees shall not be planted closer than six feet (6 ft) from the face of the curb except at intersections where it shall be five feet (5 ft) from the curb, in a curb return area.
5. Where there are overhead power lines, tree species are to be chosen that will not interfere with those lines.
6. Trees shall not be planted within four feet (4 ft) of any permanent hard surface paving or walkway. Sidewalk cuts in concrete for trees shall be at least 64 square inches; however, larger cuts are encouraged because they allow additional air and water into the root system and add to the health of the tree. Space between the tree and hard surface may be covered by permeable non-permanent hard surfaces such as grates, bricks on sand, or paver blocks.
7. Trees, as they grow, shall be pruned to provide at least eight feet (8 ft) of clearance above sidewalks and 15 feet above street roadway surfaces. Responsibility for pruning will fall on the person responsible for maintenance of the land on which the tree is planted.

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8. Existing trees may be used as street trees if there will be no damage from the development which will kill or weaken the tree. Sidewalks of variable width and elevation may be utilized to save existing street trees, subject to approval by the City Manager and/or designee.
9. Replacement of Street Trees: Existing street trees removed by development projects shall be replaced by the developer. The placement trees shall be of size and species similar to the trees that are approved by the City Manager and/or designee.

Section 14.615 Architectural Standards

A. Exterior Materials.

1. Masonry material will consist of brick, stone, tile, rock, stucco, cement, concrete tilt wall or, if approved by City council, concrete block, or other masonry materials of similar characteristics.
2. In general, unless specifically provided below, the masonry requirements set forth shall be applicable to all residential and nonresidential districts.

a. Residential.

All exterior wall surface of all permanent structures shall consist of 75 percent masonry. Exterior wall surface is the area between the wall corners, extending from the finished floor level of the foundation to the door or window header height of the first floor, whichever is greater. The calculation of the minimum masonry requirements will not include windows, doors, glass construction materials, or sidewalk or walkway covers.

b. Nonresidential.

All exterior wall surface of all permanent structures shall consist of 75 percent masonry. Exterior wall surface is the area between the wall corners, extending from the finished floor level of the foundation to the door or window header height of the top floor, whichever is greater. This requirement shall apply to all of the minimum masonry requirements will not include windows, doors, glass construction materials, or sidewalk or walkway covers.

c. Any enlargement of an existing permanent residential or nonresidential structure shall match percentage of masonry on the adjacent surface of the existing permanent residential or nonresidential structure.

d. Any one-story detached accessory building in single-family and multifamily zoning, used as a tool/storage shed of less than 120 square feet does not require a building permit and will not have to meet the minimum masonry requirement.

e. Any permanent one story detached accessory building of 120 square feet or less in single family and multifamily zoning, that is used for storage will not have to meet the minimum masonry requirement, as long as new materials, including factory

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finished/painted steel and all materials used in residential construction are used in the construction.

- f. A permanent accessory building cannot meet or exceed the total square footage of the primary structure/residence, nor have a height exceeding the primary structure/residence.
 - g. All detached accessory buildings not in a residential zoning district shall meet the minimum masonry requirements.
 - h. In case of damage of more than 50 percent to a nonconforming structure the owner can apply for a variance of the masonry requirement to the Board of Adjustment.
 - i. The minimum roof pitch, as regulated by the adopted Building Code, is required for buildings and structures that may be exempt from the minimum roof pitch specified herein.
- B. Materials for all nonresidential buildings exceeding one thousand two hundred square feet (1,200 sq. ft.).
- 1. All building facades that are visible from adjoining properties and/or public streets shall be masonry in accordance with this section.
 - 2. Glazing doors, windows and door frames, roof system trim, mansards, and similar visible exterior treatments shall be made of materials which complement construction materials.
 - 3. Accessory buildings shall be constructed of materials that complement the main structure.
 - 4. When rear facades are visible from adjoining properties and/or a public right-of-way, they shall be of a finished quality and consist of colors and materials that blend with the remainder of the building's primary facades.
 - 5. All surfaces shall be low-reflectance, subtle, neutral or earth tone colors (such as white, tan, brown and gray.) Metallic or fluorescent colors are prohibited.
- C. Ground-Mounted and Roof Top Mechanical Equipment:
- 1. All ground-mounted equipment shall be screened from view with masonry construction similar to the primary structure.
 - 2. All roof-mounted equipment including, but not limited to, fans, vents, air conditioning units, cooling towers, and alternative energy systems (installed on a flat roof) shall be screened so as not to be visible at ground level from adjacent properties and/or public rights-of-way.
 - a. The overall screening height shall be the height of the highest element of roof-mounted equipment.
 - b. The outside of the screening device, if independent of the building facade, shall be painted or otherwise finished in a similar color to the color of the building facade, trim, or roof surface, whichever color is more effective in minimizing the visibility of the equipment

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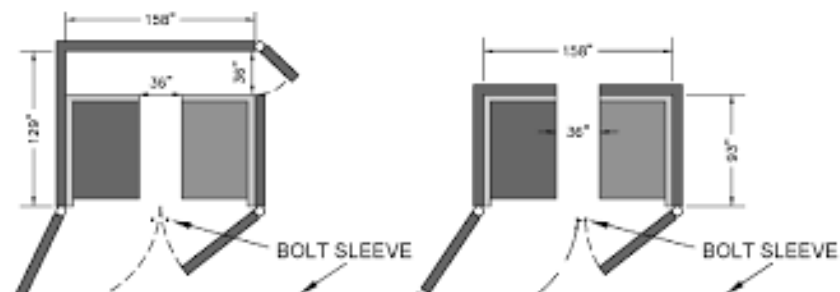
and screen from ground level.

D. Outdoor Storage, Service and Loading Areas:

1. Areas for outdoor storage, truck parking, trash collection/ compaction, loading and unloading, or other such uses shall not be visible from abutting streets, adjacent non-industrial properties and/or public/private streets.
 - a. Service areas including, but not limited to, loading docks and truck courts shall be oriented away from the view of any freeway or public streets or adjacent residential zoning district or use unless screened by an 8-foot masonry wall extending the entire length of the service area.
 - b. Such service areas shall have additional screening along the exterior side of the masonry wall in the form of evergreen landscaping which must be opaque and eight feet (8 ft) in height within 18 months of planting.
2. Permanent outdoor display, sales and storage: Merchandise may be stored or displayed for sale to customers in areas contiguous to the front or side of the building. This area shall be enclosed by a minimum 8-foot wall of like appearance to the building or a base of like appearance to the building topped by wrought iron or tubular steel fencing with the minimum total height being eight feet (8 ft). The masonry base enclosing this area shall be at least three feet (3 ft) in height.
3. Shopping cart storage: Shopping carts may be stored outside the front of the building provided there are no more than two (2) cart storage areas (one on each side of the entryway). The cart storage area shall be screened with building materials substantially similar to the building facade.

E. Trash Receptacle Screening:

1. Trash receptacles shall not be placed between the primary structure and the street and shall not be located within a street yard.
2. Trash receptacles shall be fully screened by an 8-foot screen constructed of like and similar materials to those of the primary structure on three (3) sides and an opaque gate on one (1) side.



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Section 14.616 Home Occupations

A home occupation may be conducted in a dwelling unit, provided that it complies with the following:

- A. A home occupation shall be permitted only when it is an accessory use to a dwelling unit;
- B. A home occupation shall not involve any external structural alteration of the main building;
- C. The use of the dwelling unit for the home occupation shall be clearly incidental and subordinate to its use for residential purposes by its occupants, and not more than 20 percent of the total floor area of the dwelling unit shall be used in the conduct of the home occupation;
- D. Only one (1) employee other than occupants of the residence may be employed in the home occupation. A person who receives a wage, salary or percentage of the profits directly related to the home occupation shall be considered an employee for the purposes of this section, provided that this definition shall not include the coordination or supervision of employees who do not regularly visit the dwelling for purposes related to the business;
- E. No outdoor storage of materials, goods, supplies or equipment shall be allowed;
- F. A person who engages in a home occupation shall not place a sign or display on the premises;
- G. A home occupation shall not involve more than one (1) patron on the premises at one time;
- H. Any outdoor activities associated with a home occupation shall be screened from the neighboring property by a solid fence of at least six feet (6 ft) in height.
- I. A home occupation may include the sale of products on the premises provided that the business has a valid sales tax permit and that compliance is maintained with all other conditions specified herein; and
- J. A home occupation shall produce no offensive noise, vibration, smoke, electrical interference, dirt, odors, heat, or solid waste in excess of that normally found in residential areas. No toxic, explosive, flammable, combustible, corrosive, radioactive, or other hazardous materials shall be used or stored on the site for business purposes.

Section 14.618 Game Room and Amusement Machines

An amusement arcade/center (indoors) requiring an approved Conditional Use Permit shall comply with the Chapter 4.1400 of the Lake Worth Code of Ordinances, as amended.

Section 14.601 Temporary Uses and Events

- A. Purpose.
Certain temporary uses of land are essential to the full development and utilization of the land and are deemed to promote the health, safety and general

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welfare of the City. Temporary uses and special events are allowed only as enumerated herein.

B. Permitted Temporary Uses and Special Events.

The permissible temporary uses and special events, the conditions of use and the zoning districts wherein the uses are permitted are as follows:

1. Temporary outdoor sales are permitted on nonresidential property only for the purposes of the existing occupants of existing businesses. The City Manager and/or designee may grant permission for the temporary use upon the application and granting of a temporary use permit.
2. No temporary building, tent or similar structure shall be erected in any required setbacks or designated easements.
 - a. Tents shall conform to the International Fire Code.
 - b. No tent or similar structure shall be erected without first obtaining a permit.
 - c. No temporary building shall be moved on any lot, tract, or parcel of land without first obtaining a permit. No business shall be conducted from temporary building, tent, or similar structure until all inspections have been completed to the satisfaction of the City.
 - d. No outside use of property for sales will be allowed except by the existing occupants of the property. This includes parking of vehicles for a purpose other than conducting business on the premises.
 - e. All temporary building, tents, or similar structures shall be removed from the property at the end of the permitted period of operation.
3. In no event shall temporary uses be allowed for more than 90 consecutive days or more than once per year for any lot, parcel or tract of land. There will be no extension of the 90 days. All sales shall meet the special conditions, if any, imposed by the City Manager and/or designee and/or the Fire Marshal for the protection of the public interest and the welfare of the community.
4. The temporary outdoor sale of Christmas trees may be permitted on those properties zoned commercial, industrial, mixed use and multi-family use for a period of 40 days prior to Christmas Day.
 - a. Hours of operation will be from 8:00 a.m. to 10:00 p.m., seven (7) days a week.
 - b. The City Manager and/or designee may issue a permit for such sale when he/she finds that there is available adequate off-street parking area, either improved or unimproved, and that location and layout of drives, parking areas, lighting, and sale signs will not constitute a hazard to public travel on the abutting public streets.
 - c. The City Manager and/or designee shall establish the terms and conditions for the temporary use at the time of approval.

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- d. In the event that a sponsor is dissatisfied with the decision of the City Manager and/or designee, the sponsor may appeal the requested use to the City Council.
 - e. Trees, stands, equipment, trash, signs, lighting and shelters shall be removed by the permit holder no later than January 4th following Christmas.
- 5. Carnivals, circuses and special fundraising events sponsored by a public entity, civic or non-profit organization located within the City may be allowed as a temporary use for a period not exceeding seven (7) consecutive days.
 - a. Except for churches and public or semi-public school sponsored events on their property, such events shall be on a site containing not less than two (2) acres in a nonresidential zoning district.
 - b. Except for churches, public or semi-public schools, only one (1) permit for a carnival, circus or special fundraising event shall be issued to the same civic or non-profit organization within a 180-day period.
 - c. Adequate parking and sanitary facilities shall be made available to the satisfaction of the City Manager and/or designee.
 - d. The City Manager and/or designee shall establish the terms and conditions for the temporary use at the time of approval.
 - e. In the event that a sponsor is dissatisfied with the decision of the City Manager and/or designee, the sponsor may appeal the requested use to the City Council.
- 6. The temporary sale of snow cones may be permitted on properties zoned for nonresidential use, including planned development zoning, for a period from April 1 to September 30.
 - a. Hours of operation are from 10:00 a.m. to 10:00 p.m.
 - b. The City Manager and/or designee may issue a permit for such sale when it is found that there is available adequate off-street parking area, either improved or unimproved, as determined by the City Manager and/or designee, and that location and layout of drives, parking areas, lighting and sale signs will not constitute a hazard to public travel on the abutting public street.
 - c. All structures, stands, trash, signs, lighting, or anything associated with the temporary use shall be removed at the end of the period of permitted use.
- 7. The temporary sales of pumpkins may be permitted on properties zoned for nonresidential use, including planned development zoning, for a period of forty (40) days between the months of October and November.
 - a. Hours of operation are from 8:00 a.m. to 10:00 p.m.
 - b. The City Manager and/or designee shall establish the terms and

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conditions for the temporary use at the time of approval.

- c. In the event that a sponsor is dissatisfied with the decision of the City Manager and/or designee, the sponsor may appeal the requested use to the City Council.
- d. All pumpkins, stands, structures, trash, signs, lighting, or anything associated with the temporary use shall be removed at the end of the period of permitted use.

C. Temporary Uses Not Permitted.

The outdoor sale of furniture, home furnishings, clothes, plants, flowers, pottery, statues, decorative items, paintings, toys, papers or magazines, vehicles, farm and garden equipment, tools, fencing lumber, building supplies, animals, livestock, or foods and drink, except as may be permitted herein.

Section 14.619 Day Care

Any adult or child day care facility must comply with federal, state and local regulations. Refer to 14.300, Definitions.

Section 14.620 Telecommunications Towers and Antennas

A. Purpose. The purpose of this article is to:

- 1. Establish regulations for the siting of towers and antennas;
- 2. Minimize the total number of towers throughout the community;
- 3. Encourage the joint use of new and existing tower sites;
- 4. Encourage users of towers and antennas to locate them, to the extent possible, in areas where the adverse impact on the community is minimal;
- 5. Encourage users of towers and antennas to configure them in a way that minimizes the adverse visual impact of the towers and antennas;
- 6. Encourage using existing facilities as primary option sites for new antennas; and
- 7. Enhance the ability of the providers of telecommunications services to provide services to the community quickly, effectively, and efficiently.

B. Definitions. As used in this section:

- 1. Antenna. Any exterior apparatus designed for telephonic, radio, or television communications through the sending or receiving or electromagnetic waves.
- 2. FAA. The Federal Aviation Administration. FCC. The Federal Communications Commission. City Council. The City Council of the City.
- 3. Height. When referring to a tower or other structure, the distance measured from ground level to the highest point on the tower or other structure, even if the highest point is an antenna.

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4. Monopole. A support structure for an antenna composed of a single spire; guide wires shall not be permitted upon such structures.
 5. Tower. Any structure that is designed and constructed primarily for the purpose of supporting one or more antennas, including self-supporting lattice towers, guy towers, or monopole towers. The term includes radio and television transmission towers, microwave towers, common-carrier towers, cellular telephone towers and similar structures.
- C. Applicability.
1. Generally. The requirements of this article govern the location of towers that exceed, and antennas that are installed at a height in excess of, the height limitations specified for the zoning district in which the tower or antenna is to be located.
 2. Exemptions. Except for the requirements below, this section does not apply to:
 - a. Antennas or towers located on property owned, leased, or otherwise controlled by the City; provided, a license or lease authorizing the antenna or tower has been approved by the City Council;
 - b. Amateur radio and TV antennas, including ham radio and CB's; however, commercial use shall not be permitted, and the height of the antenna shall not be more than 10 feet higher than the building it is attached to;
 - c. A tower or antenna for which a permit has been properly issued prior to the effective date of this article, which is referred to in this article as a "preexisting tower" or "preexisting antenna."
- D. Site Plan.
1. Requirement.

An approval for constructing any telecommunications tower or antenna shall require submission of a site plan to the City Council.
 2. Factors Considered in Approving Site Plan.

In addition to the factors listed herein the City Council shall consider the following factors in determining whether to approve a site plan:

 - a. Height of the proposed tower;
 - b. Capability of the tower to structurally accommodate the number of shared users proposed by the applicant as certified by a licensed professional engineer;
 - c. Proximity of the tower to residential structures and residential district boundaries;
 - d. Nature of uses on adjacent and nearby properties;
 - e. Surrounding topography;
 - f. Surrounding tree coverage and foliage;

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- g. Design of the tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness;
- h. Proposed ingress and egress;
- i. Availability of suitable existing towers and other structures as discussed in the regulations herein, and
- j. Compliance with this article and other applicable ordinances of the City.

When approving a site plan, the City Council may impose conditions to the extent the City Council concludes that conditions are necessary to minimize any adverse effects of the proposed tower antenna or adjoining properties. The City Council may also waive or reduce the burden on the applicant of one or more of these criteria if the City Council concludes that the purposes of this article are better served thereby.

3. Written Report Upon Denial of Site Plan.

The City shall document in writing any denial of a site plan to place, construct, or modify personal wireless service facilities, stating the reason for denial and including substantial evidence that supports the denial.

E. Requirements for the Installation of Towers and Antennas.

1. Availability of Suitable Existing Towers or Other Structures.

No new tower shall be permitted unless the applicant demonstrates to the reasonable satisfaction of the City Council that no existing tower or structure can accommodate the applicant's proposed antenna. Evidence submitted to demonstrate that no existing tower or structure can accommodate the applicant's proposed antenna may consist of any of the following:

- a. No existing towers or structures are located within the geographic area required to meet applicant's engineering requirements.
- b. Existing towers or structures are not of sufficient height to meet applicant's engineering requirements.
- c. Existing towers or structures do not have sufficient structural strength to support the applicant's proposed antenna and related equipment.
- d. The applicant's proposed antenna would cause electromagnetic interference with the antenna on the existing towers or structures, or the antenna on the existing towers or structures would cause electromagnetic interference with the applicant's proposed antenna.
- e. The fees, costs, or contractual provisions required by the owner in order to share an existing tower or structure or to adapt an existing tower or structure for sharing are unreasonable. Costs exceeding new tower development are presumed to be unreasonable.
- f. Other limiting factors that render existing towers and structures

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

unsuitable.

2. Setbacks and Separation.

The following setbacks and separation requirements shall apply to all towers:

- a. Towers must be set back a distance equal to the height of the tower from any off-site residential structure.
- b. Towers, guys, and accessway facilities must satisfy the minimum zoning district setback requirements.
- c. Towers over 90 feet in height shall not be located within one-quarter of a mile (1/4 mile) from any existing tower that is also over 90 feet in height. Distances shall be measured in a straight line between the nearest points on the bases of the towers.
- d. Only one (1) tower shall be permitted upon each platted lot.

The City Council may reduce the setbacks and separation requirements if the purposes of this article would be better served thereby.

3. Height Restrictions.

A tower must meet the following height and usage criteria:

- a. For a single user, a tower may be no higher than 90 feet in height;
- b. For two (2) users, a tower may be no higher than 120 feet in height; and
- c. For three (3) or more users, a tower may be no higher than 150 feet in height.

4. Security Fencing.

Towers shall be enclosed by security fencing not less than six feet (6 ft) in height and shall also be equipped with an appropriate anti-climbing device.

5. Landscaping.

The following requirements shall govern the landscaping surrounding towers:

- a. Tower facilities shall be landscaped with a buffer of plant materials that effectively screens the view of the tower compound from adjacent residential property. The standard buffer shall consist of a landscaped strip at least four feet (4 ft) wide outside the perimeter of the compound.
- b. In locations where the visual impact of the tower would be minimal, the landscaping requirement may be reduced or waived.
- c. Existing mature tree growth and natural land forms on the site shall be presented to the maximum extent possible. In some cases, such as towers sited on large, wooded lots, natural growth around the property perimeter may be a sufficient buffer.

6. Visual Characteristics.

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

- a. Towers shall be maintained with either a galvanized steel finish or, subject to any applicable standards of the FAA, be painted a neutral color, so as to reduce visual obtrusiveness.
- b. At a tower site, the design of the buildings related structures shall, to the extent possible, be maintained with materials, color, textures, screening, and landscaping that will blend the tower facilities to the natural setting and built environment.
- c. If an antenna is installed on a structure other than a tower, the antenna and supporting electrical and mechanical equipment must be of a neutral color that is identical to, or closely compatible with, the color of the supporting structure so as to make the antenna and related equipment as visually unobtrusive as possible.
- d. Towers shall not be artificially lighted, unless required by the FAA or other applicable authority. If lighting is required, the City may review the available lighting alternatives and approve the design that would cause the least disturbance to the surrounding views.
- e. Advertisement signs, flags, and banners shall be prohibited from towers.

7. Federal Requirements.

All towers must meet or exceed current standards and regulations of the FM, the FCC, and any other agency of the federal government with the authority to regulate towers and antennas. If applicable federal standards and regulations are changed, then the owners of the towers and antennas governed by this article shall bring the towers and antennas into compliance with the revised standards and regulations within six months of the effective date of the standards and regulations, unless a more stringent compliance schedule is mandated by the controlling federal agency. Failure to bring towers and antennas into compliance with such revised standards and regulations shall constitute grounds for the removal of the tower or antenna at the owner's expense.

8. Building Codes, Safety Standards.

To ensure the structural integrity of towers, the owner of a tower shall construct and maintain the tower in compliance with standards contained in applicable local building codes and the applicable standards for towers that are published by the Electric Industries Association, as amended from time to time. If upon inspection the City concludes that a tower fails to comply with those codes and standards and constitutes a danger to persons or property, then upon notice being provided to the owner of the tower, the owner shall have 30 days to bring the tower into compliance with the standards. If the owner fails to bring the tower into compliance within 30 days, the City may remove the tower at the owner's expense.

F. Removal of Abandoned Antennas and Towers.

1. Any antenna or tower that is not operated for a continuous period of 12 months shall be considered abandoned.
2. The owner of the antenna or tower shall remove it within 90 days of receipt

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

of notice from the City notifying the owner of the abandonment.

3. If the antenna or tower is not removed within the 90 days, the City may remove the antenna or tower at the owner's expense.
4. If there are two (2) or more users of a single tower, then this provision shall become effective when all users cease using the tower.

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Section 14.621 ALTERNATIVE ENERGY SYSTEMS

Alternative energy systems, including wind, solar, and geothermal, may be used where allowed within a zoning district, provided that they also comply with the following conditions:

A. Wind Energy Systems.

1. General Regulations.

The following general regulations apply to all wind energy systems located within an approved district.

- a. Utility grid wind energy systems are prohibited within the City.
- b. Primary Structure Required on Lot: A wind energy system may be erected on a lot only after a primary structure has been constructed on the lot.

c. Vertical or Tower System.

i. Maximum Height.

The maximum height shall be the height at the highest point of the tower or structure of the system including the height of any blades when attached thereto. The maximum height shall not exceed the maximum building height allowed within the zoning district plus five (5) feet, or as permitted by a Conditional Use Permit. Additionally, no tower height shall exceed the tower height recommended by the manufacturer or the distributor of the wind energy system. Any tower that exceeds 100 feet in height must obtain a letter of no objection from the Commanding Officer of the NAS Fort Worth JRB.

ii. Location and Setbacks.

No wind energy system shall be allowed in or extend into any front yard. The wind energy system may be no closer to the side and rear property line than a distance equal to the allowed maximum height of the system.

d. Horizontal or Building System.

i. Maximum Height.

The maximum height shall be the height at the highest point of the structure of the system including the height of any blades or encasement when attached thereto. The maximum height of the structure and the attached system shall not exceed the maximum building height allowed within the zoning district plus five feet (5 ft), or as permitted by a Conditional Use Permit.

ii. Location and Setbacks.

The wind energy system shall be wholly attached to a permitted structure and shall not extend beyond the

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

structure into any required setbacks.

e. Signs.

No advertising or other signs shall be allowed on a wind energy system.

f. Building Permit Required.

A building permit must be obtained prior to the construction or installation of a wind energy system. A complete application includes:

- i. The appropriate permit fee as established in the City's Fee Schedule and submitted once the application for the building permit has been approved.
- ii. A survey and legal description of the property on which the proposed wind energy system will be installed.
- iii. A plan view layout of the proposed wind energy system at a scale of one-inch equals thirty feet (1 in = 30 ft) or larger on a single sheet not exceeding twenty-four inches by thirty-six inches (24 in by 36 in) clearly showing:
 - a) North arrow and scale;
 - b) Orientation and dimension of all property lines;
 - c) Location of all existing structures on the site;
 - d) Location of all components of the system in respect to the structure and/or property on which the system will be built;
 - e) Distance from the system to all property lines and easements;
 - f) Required setbacks for the structures and the system;
 - g) Maximum reach of any blade in any position;
 - h) Identification of adjoining property;
 - i) Adjacent land uses and zoning designations; and
 - j) Natural features such as watercourses and trees.
- iv. Elevation drawings of the proposed wind energy system drawn to scale clearly showing:
 - a) Elevation of the system structure and/or elevation of the structure on which the system will be installed with the highest point of the structure dimensioned;
 - b) Dimension the maximum height of system;
 - c) Detailed drawings of all system components.
- v. Standard Details.

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Standard installation drawings of the system including the wind turbine structure, tower, base, footings, fasteners, bracing and/or guyed wires, as applicable.

vi. Electrical Plan Required.

Building permit applications for wind energy systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the City adopted version of the National Electric Code.

vii. Certification by engineer.

The application shall include standard details, engineer analysis of the system, and certification by a professional engineer (engineer's seal) demonstrating compliance of the system with the City's building code (International Building Code) in effect at the time of construction. An engineering analysis shall be provided and certified by a registered professional engineer in the State of Texas. This analysis is frequently supplied by the manufacturer. Wet stamps shall not be required.

viii. Evidence of notice to the City's franchised electric utility for transmission and distribution, informing the electric utility of the customer's intent to install a grid-connected customer-owned wind energy system and that the customer's system meets the utility's approved specifications for interconnection.

2. Construction Standards:

A wind energy system must be installed according to the manufacturer's recommendations and under the seal of a professional engineer registered in the State of Texas. All components of a wind energy system shall comply with applicable state and Lake Worth building codes.

a. Sound Pressure Levels.

Sound Pressure Levels shall not exceed fifty decibels (50 dB(A)) between the hours of 7:00 a.m. and 10:00 p.m. and 35 decibels (35 dB(A)) between the hours of 10:00 p.m. and 7:00 a.m. as measured from the property line closest to the wind energy system.

b. Lights.

All lighting not required by the Federal Aviation Administration (FAA) is prohibited. When obstruction lighting is required by the FAA, such lighting shall not exceed the minimum requirements of said agency. Upward lighting, flood lights or other lighting not strictly required by the FAA is prohibited.

c. Building Codes/Safety Standards.

To ensure the structural integrity of a wind energy system, the owner of such system must maintain the system in compliance with

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all provisions of the City of Lake Worth's building code and zoning regulations. If, upon inspection, the City concludes that a wind energy system fails to comply with such codes and regulations and/or constitutes a danger to persons or property, then upon written notice to the owner of the wind energy system, the owner shall have 30 calendar days to bring such system into compliance with applicable standards. Failure to bring such system into compliance shall constitute grounds for the removal of the wind energy system at the owner's expense. This notice requirement shall not preclude immediate action by the City Manager and/or designee as allowed by law if public safety requires such action.

d. Compliance with State and Federal Requirements.

All wind energy systems must meet or exceed current standards and regulations of the FAA and any other agency of the state or federal government with the authority to regulate wind energy systems at the date of permitting. If such standards and regulations are changed, and if the controlling state or federal agency mandates compliance, then the owners of the wind energy system governed by this Ordinance shall bring such wind energy system into compliance with the revised standards and regulations within six (6) months of the effective date of such standards and regulations, unless a different compliance schedule is mandated by the controlling state or federal agency.

e. Maintenance.

A wind energy system shall be maintained at all times, including, but not limited to, painting and maintaining structural integrity.

f. Upgrades and/or Modifications to an Existing System.

Any upgrades, modifications or changes that materially alter the size or placement of an existing wind energy system shall comply with the provisions of this section.

g. Removal of Unsafe Wind Energy System.

Wind energy systems that have, due to damage, lack of repair, or other circumstances, become unstable, lean significantly out-of-plumb, or pose a danger of collapse shall be removed or brought into repair within 60 days following notice given by the City Manager and/or designee. If the wind energy system is not made safe or removed within 60 days of notification from the City, the City may remove the wind energy system and place a lien upon the property for the costs of the removal. The City Manager and/or designee may order immediate action to prevent an imminent threat to public safety or property.

h. Abandonment.

- i. At such time as an owner plans to abandon or discontinue, or is required to discontinue, the operation of a wind energy system, such owner must notify the City by certified U.S.

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mail of the proposed date of abandonment or discontinuation of operations. Such notice shall be given no less than 30 days prior to abandonment or discontinuation of operations.

- ii. In the event that an owner fails to give such notice, the wind energy system shall be considered abandoned if the wind energy system is not operated for a continuous period of 12 months, unless the owner of said wind energy system provides proof of continued maintenance on a quarterly basis.
- iii. Upon abandonment or discontinuation of use, the person who constructed the wind energy system or the person who operated the wind energy system or the property owner shall physically remove the wind energy system within 90 days from the date of abandonment or discontinuation of use. "Physically remove" shall include, but not be limited to:
 - a) Removal of the tower, turbine and all other components of the wind energy system;
 - b) Transportation of the tower, turbine and all other components of the wind energy system to an appropriate disposal site;
- iv. The owner of the wind energy system shall be responsible for all site reclamation including costs deemed necessary and reasonable to return the site to its pre-construction condition.
- v. If a party as stated in Subsection (g) above herein fails to remove a wind energy system in accordance with this Section, the City shall have the authority to enter the subject property and physically remove the wind energy system. Costs for the removal of the wind energy system shall be charged to the landowner of record in the event the City must remove the wind energy system, and the City may place a lien on the property for such costs of removal.
- vi. Failure to remove an abandoned wind energy system as required by this Section shall constitute a violation and be subject to the penalties prescribed herein.

B. Solar Energy Systems.

1. General Regulations.

The following general regulations apply to solar energy systems located within an approved district.

a. Primary Structure Required on Lot:

A solar energy system may be erected on a lot only after a primary structure has been constructed on the lot.

b. Ground-Mounted Systems.

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- i. Height.

The height of system shall not exceed eight feet (8 ft) above the existing grade at the location of the installed system.
- ii. Placement.
 - a) Front Yard.

No system shall be located forward of the primary structure on the lot or within the front yard setback.
 - b) Side and Rear Yard.

No system shall be located less than ten feet (10 ft) from any side or rear property line.
- c. Roof-Mounted Systems.
 - i. Height.
 - a) Front and Side.

System shall be installed parallel to the roof of the structure with no greater than six inches (6 in) clearance between the bottom of the panel and the roof material.
 - b) Rear.

System may be installed with no greater than 12 inches clearance between the bottom of the panel and the roof material and may be angled to increase efficiency.
 - ii. Placement.
 - a) Flat roof.

No portion of the system shall extend beyond the roof edges and shall be screened in accordance with the screening from view of a public street.
 - b) Pitched roof.

No portion of the system shall extend beyond or above the roof ridge or edges.
- d. Any solar energy system that exceeds 1,000 square feet in surface area must apply for a Conditional Use Permit and obtain a letter of "no objection" from the Commanding Officer of the NAS Fort Worth JRB.
- e. Building Permit Required.

A building permit must be obtained prior to the construction or installation of a wind energy system. A complete application includes:

 - i. The appropriate permit fee as established in the City's Fee Schedule and submitted once the application for the

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

- building permit has been approved.
- ii. A survey and legal description of the property on which the proposed solar energy system will be installed.
 - iii. A plan view layout of the proposed solar energy system at a scale of one-inch equals thirty feet (1 in = 30 ft) or larger on a single sheet not exceeding twenty-four inches by thirty-six inches (24 in by 36 in) clearly showing:
 - a) North arrow and scale;
 - b) Orientation and dimension of all property lines;
 - c) Location of all existing structures on the site;
 - d) Location of all components of solar energy system in respect to the structure and/or property on which the system will be built;
 - e) Distance from the system to all property lines and easements;
 - f) Required setbacks for the structures and system;
 - g) Identification of adjoining property;
 - h) Adjacent land uses and zoning designations; and
 - i) Natural features such as watercourses and trees.
 - iv. Elevation drawings of the proposed solar energy system drawn to scale clearly showing:
 - a) Elevation of the system and/or elevation of the structure on which the system will be installed with the highest point of the structure dimensioned;
 - b) Dimension the maximum height of system;
 - c) Dimension the clearance(s) of a roof mounted system between the bottom of the panel and the roof material; and
 - d) Detailed drawings of all system components.
 - v. Electrical Plan Required.

A line drawing of the electrical components of the solar energy system in sufficient detail to allow for a determination that the manner of installation conforms to the National Electric Code.
 - vi. Standard Details.

Standard installation drawings of the solar energy system and its structure, including a copy of the manufacturing specifications demonstrating compliance of the system with the City's building code (International Building Code) in effect at the time of construction.

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vii. Certification by engineer.

The application shall include a standard drawing and engineer analysis by professional engineer (engineer seal) providing certification of the roof structure. If the proposed installation causes the roof load to exceed the requirements of the International Residential Code or International Building Code, an engineered design is required.

2. Construction Standards.

Any solar energy system must be installed according to the manufacturer's recommendations and under the seal of a professional engineer registered in the State of Texas. All components of a solar energy system shall comply with applicable state and Lake Worth building codes.

a. Upgrades and/or Modifications to an Existing System.

Any upgrades, modifications or changes that materially alter the size or placement of an existing solar energy system shall comply with the provisions of this section.

b. Abandoned.

If a solar energy system (ground- or roof-mounted) has been abandoned meaning not in operation for a period of six (6) months or is defective or is deemed to be unsafe by the City Manager and/or designee, the solar energy system shall be required to be repaired by the owner to meet federal, state and local safety standards, or be removed by the property owner within the time period allowed by the City Manager and/or designee. If the owner fails to remove or repair the defective or abandoned solar energy system, the City may pursue legal action to the system removed at the owner's expense.

c. Compliance with State and Federal Requirements.

All solar energy systems must meet or exceed current standards and regulations of any other agency of the state or federal government with the authority to regulate solar energy systems at the date of permitting. If such standards and regulations are changed, and if the controlling state or federal agency mandates compliance, then the owners of the solar energy system governed by this Ordinance shall bring such solar energy system into compliance with the revised standards and regulations within six (6) months of the effective date of such standards and regulations, unless a different compliance schedule is mandated by the controlling state or federal agency.

C. Geothermal Heat Pump Systems

1. General Regulations.

The following general regulations apply to all geothermal heat pump systems located within an approved district.

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- a. Open-loop systems shall be prohibited.
- b. Placement: No portion of a closed-loop system may be constructed within five feet (5 ft) of a property line or within a dedicated easement without obtaining written permission from the City and/or all franchised utilities.

- c. Building Permit Required.

A building permit must be obtained prior to the construction or installation of a closed-loop geothermal heat pump system. A complete application includes:

- i. The appropriate permit fee as established in the City's Fee Schedule and submitted once the application for the building permit has been approved.
- ii. A survey and legal description of the property on which the proposed system will be installed.
- iii. A plan view layout of the proposed system at a scale of one-inch equals thirty feet (1 in = 30 ft) or larger on a single sheet not exceeding twenty-four inches by thirty-six inches (24 in by 36 in) clearly showing:
 - a) North arrow and scale;
 - b) Orientation and dimension of all property lines;
 - c) Location of all existing structures on the site;
 - d) Location of all components of system in respect to the primary structure and/or property on which the system will be built;
 - e) Distance from the system to all property lines and easements;
 - f) Required setbacks for the structures and the system;
 - g) Identification of adjoining property;
 - h) Adjacent land uses and zoning designations; and
 - i) Natural features such as soils, watercourses and trees.
- iv. Electrical Plan Required.

A line drawing of the electrical components of the system in sufficient detail to allow for a determination that the manner of installation conforms to the City adopted version of the National Electric Code.
- v. Standard Details.

Standard installation drawings of the closed loop geothermal installation, including a copy of the manufacturing specifications demonstrating compliance of

ARTICLE 14.600 SUPPLEMENTAL REGULATIONS

the system with the City's building code (International Building Code) in effect at the time of construction.

2. Construction Standards.

Any closed-loop geothermal heat pump system must be installed according to the manufacturer's recommendations and under the seal of a professional engineer registered in the State of Texas. All components of a closed-loop geothermal heat pump system shall comply with applicable state and Lake Worth building codes.

a. All closed-loop geothermal heat pump systems must be constructed in accordance with all applicable State regulations, including regulations of the Texas Department of Licensing and regulation for water well drillers.

b. Compliance with State and Federal Requirements.

All geothermal energy systems must meet or exceed current standards and regulations of any other agency of the state or federal government with the authority to regulate geothermal energy systems at the date of permitting. If such standards and regulations are changed, and if the controlling state or federal agency mandates compliance, then the owners of the geothermal energy system governed by this Ordinance shall bring such geothermal energy system into compliance with the revised standards and regulations within six (6) months of the effective date of such standards and regulations, unless a different compliance schedule is mandated by the controlling state or federal agency.

c. Upgrades and/or Modifications to an Existing System.

Any upgrades, modifications or changes that materially alter the size or placement of an existing closed-loop geothermal heat pump system shall comply with the provisions of this section.

d. Abandoned.

If a closed-loop geothermal heat pump system has been abandoned meaning not in operation for a period of six (6) months or is defective or is deemed to be unsafe by the City Manager and/or designee, the closed-loop geothermal heat pump system shall be required to be repaired by the owner to meet federal, state and local safety standards, or be removed by the property owner within the time period allowed by the City Manager and/or designee in accordance with federal, state and local regulations. If the owner fails to remove or repair the defective or abandoned closed-loop geothermal heat pump system, the City may pursue legal action to the system removed at the owner's expense.

APZ2

APZ1

Lake Worth

City of Lake Worth

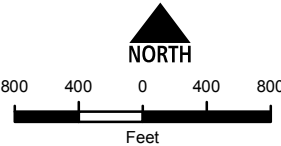
Proposed Zoning Map
November 2019

LEGEND

- Public Facilities
- City Limits
- Accidental Potential Zones

Parcels_Lake_Worth_2019

- Current Zoning
- Mixed Use Planned Development MU-PD
- Single Family Residential
- Commercial
- Industrial
- Manufactured Housing
- Mixed Planned Development
- Planned Multi-Family
- Planned Commercial
- Planned Industrial
- Comm_Azle_ave



CITY OF LAKE WORTH
NOTICE OF PUBLIC HEARING
PLANNING AND ZONING COMMISSION
AND CITY COUNCIL

REPEAL AND REPLACE ORDINANCE NO. 500, AS AMENDED,
CHAPTER 14 COMPREHENSIVE ZONING ORDINANCE
PLANNING & ZONING CASE #PZ-2019-28

The Planning and Zoning Commission of the City of Lake Worth, Texas, will conduct the first of two public hearings at 6:30 p.m. on Tuesday, November 12, 2019, at the Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider recommendations regarding an ordinance repealing and replacing in its entirety Ordinance No. 500, as amended, Chapter 14 Comprehensive Zoning Ordinance. The City Council will conduct a second Public Hearing at 6:30 p.m. on Tuesday, November 12, 2019, at the Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider the proposed ordinance repealing and replacing in its entirety Ordinance No. 500, as amended, Chapter 14 Comprehensive Zoning Ordinance. All interested parties are encouraged to attend.

Lake Worth City Council Meeting - November 12, 2019

Agenda Item No. B.2

FROM: Suzanne Meason, Planning and Zoning Administrator and Stacey Almond, City Manager

ITEM: Public Hearing to consider Ordinance No. 1171, Planning and Zoning Case No. PZ-2019-29, changing the zoning district and use classification from Single Family Residential (SF1), Commercial (C), Planned Commercial (PC) and Planned Industrial (PI) to Public Facilities (PF) zoning district and use classification on approximately seventy-six (76) areas of land, commonly known as the City of Lake Worth Municipal Facilities, Library, Fire Station, Public Parks, Well Sites, and Lift Stations.

SUMMARY:

The City is in the process of rezoning approximately 10% of the City's current zoning districts to replace older zoning districts with new Comprehensive Zoning Districts.

City staff, along with our consultant, developed draft regulations and associated maps containing recommended changes that were presented to the Lake Worth Planning and Zoning Commission and the City Council for review in June of 2019.

Changes provided by the boards at the joint meeting were provided for on the proposed map and proposed regulations and were presented to the public at a town forum held in August 2019.

- COLW property to be rezoned to Public Facilities (PF) is approx. 76 acres or 4.2% of City; and
- LWISD property to be rezoned to Public Facilities (PF) is approx. 82 acres or 1.2 % of City.

Public Input:

On Friday, November 1, 2019 as required by State law, the city mailed out four hundred eighty-eight (488) letters of Notification for Public Hearing to all property owners within two hundred (200') feet of the subject sites. Notice was also published in the City's newspaper of record, the Fort Worth Star Telegram on Saturday, October 26, 2019.

Staff had received no public comment forms as of the packet preparation date.

FISCAL IMPACT:

N/A

ATTACHMENTS:

Ord #1171 - COLW Rezoning Ordinance - FINAL
COLW Zoning Change - Exhibit A

COLW Zoning Change - Exhibit B
COLW Public Hearing Notice
Public Comment Form
Development Application - COLW Zoning

RECOMMENDED MOTION OR ACTION:

Move to approve Ordinance No. 1171, Planning and Zoning Case No. PZ-2019-29, changing the zoning district and use classification from Single Family Residential (SF1), Commercial (C), Planned Commercial (PC) and Planned Industrial (PI) to Public Facilities (PF) zoning district and use classification on approximately seventy-six (76) areas of land, commonly known as the City of Lake Worth Municipal Facilities, Library, Fire Station, Public Parks, Well Sites, and Lift Stations.

ORDINANCE NO 1171

AN ORDINANCE OF THE CITY OF LAKE WORTH, TEXAS, CHANGING THE ZONING DISTRICT AND USE CLASSIFICATION FROM SINGLE FAMILY RESIDENTIAL (SF1) TO PUBLIC FACILITIES (PF) USE CLASSIFICATION, ON APPROXIMATELY 76 ACRES OF LAND, MORE COMMONLY KNOWN AS THE CITY OF LAKE WORTH MUNICIPAL FACILITIES, LIBRARY, FIRE STATION, PUBLIC PARKS, WELLSITES AND LIFT STATIONS; ADOPTING AN AMENDMENT TO THE CITY'S OFFICIAL ZONING MAP; PROVIDING A PENALTY; PROVIDING FOR SEVERABILITY; PROVIDING SAVINGS; PROVIDING ENGROSSMENT AND ENROLLMENT; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER OF THE CITY AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lake Worth is initiating a change in the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district and use classification on approximately 76 acres of land legally described in **Exhibit "A"** and generally depicted in the map in **Exhibit "B"**, both of which are attached hereto and incorporated herein by reference (hereinafter, "the Property"); and

WHEREAS, on November 12, 2019, the Planning and Zoning Commission, in compliance with the laws of the State of Texas, after giving the requisite notices by publication and otherwise, and after holding a public hearing, has recommended approval 7-0 of the change in the zoning district and use classification for the Property; and

WHEREAS, on November 12, 2019, the City Council likewise conducted a public hearing as required by law and upon consideration, the City Council hereby finds that the request is consistent with the Lake Worth Comprehensive Land Use Plan, and state and local law; and

WHEREAS, the Planning and Zoning Commission and the City Council, in considering the change in the zoning district and use classification, have determined that the proposed change is in the best interest of the health, safety, and general welfare of the City of Lake Worth and its citizens; and

WHEREAS, the City Council of the City of Lake Worth finds that the change in zoning district and use classification should be granted as set forth herein.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LAKE WORTH, TEXAS:

**SECTION 1.
INCORPORATION OF RECITALS**

The above and foregoing recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2.

The zoning district and use classification for the Property is hereby changed from Single Family Residential (SF1) to Public Facilities (PF) zoning district and use classification.

SECTION 3.

The City's official zoning map is hereby amended to show the zoning district and use classification.

**SECTION 4.
PENALTY**

Any person, firm, or corporation violating any of the provisions of this Ordinance shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars (\$2,000) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

**SECTION 5.
CUMULATIVE CLAUSE**

This Ordinance shall be cumulative of all provisions of all other ordinances of the City of Lake Worth, Texas except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

**SECTION 6.
SEVERABILITY**

It is hereby declared to be the intention of the City Council of the City of Lake Worth that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared invalid or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such invalid or unconstitutional phrase, clause, sentence, paragraph or section.

**SECTION 7.
SAVINGS**

That all right and remedies of the City of Lake Worth are expressly saved as to any and all violations of the provisions of any Ordinances affecting the development of land, which have accrued at the time of the effective date of the Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such Ordinance, same shall not be affected by the Ordinance but may be prosecuted until final disposition by the courts.

**SECTION 8.
ENGROSS AND ENROLL**

That the City Secretary of the City of Lake Worth is hereby directed to engross and enroll this Ordinance by coping the exact caption and effective date in the minutes of the City Council of the City of Lake Worth and by filing this Ordinance in the Ordinance records of the City.

**SECTION 9.
EFFECTIVE DATE**

This Ordinance shall be in full force and effect from and after its passage and publication as required by law, and it is so ordained.

PASSED AND APPROVED this 12th day of November 2019.

CITY OF LAKE WORTH

By: _____
Walter Bowen, Mayor

ATTEST:

Monica Solko, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Drew Larkin, City Attorney

EXHIBIT A

**LAKE WORTH CITY PROPERTY
ZONING DISTRICT CHANGE
LEGAL DESCRIPTIONS**

**EXHIBIT B
ZONING MAP**

**LAKE WORTH CITY PROPERTY
ZONING DISTRICT CHANGE
EXHIBIT "A"**

PROPERTY ADDRESS	BLOCK/ABSTRACT	LOT/TRACT	SUBDIVISION/SURVEY	COMMONLY KNOWN AS
3805 Adam Grubb	1	1R1	Lake Worth Municipal Complex	Lake Worth City Hall & Police Dept.
7400 Apache Trail	33	5 & 6	Indian Oaks Subdivision	Vacant Land
4242 Boat Club Road	157	1R02	Crawford Brown Survey	City Well Site
6600 Charbonneau Road	1552	2PPPPP	Moses Townsend Survey	City Lift Station
6801 Charbonneau	34	11	Indian Oaks Subdivision	Charbonneau Park
6917 Charbonneau Road	1552	2PP	Moses Townsend Survey	Vacant Land
7005 Charbonneau Road	1	1	Charbonneau Addition	Lake Worth Multi-Purpose Facility/Senior Center/Library
7301 Charbonneau Road	17	1	Lake Worth Heights Subdivision	Vacant Land
7209 Comanche Trail	33	14R	Indian Oaks Subdivision	Lake Worth Animal Shelter
7321 Comanche Trail	33	19B	Indian Oaks Subdivision	Vacant Land
7413 Comanche Trail	33	3R	Indian Oaks Subdivision	Vacant Land
3209 Dakota Trail	36	19R	Indian Oaks Subdivision	Keenum-Shelton Dog Park
7029 Edgemere Place	1	1	Edgemere Addition	City Lift Station
4200 Fewell Drive	1	1	Lake Worth Public Works Addition	Public Works Facility
3801 Fire Hall Lane	1	1	Firehall Addition	Fire Department
4200 Hodgkins Road		4	Vivian White Estates	Hodgkins Park
4212 Hodgkins Road	4	12	C G Wallis Subdivision	Vacant Land
6300 Lakeside Drive	3	4R	Boat Club Estates	Grand Lake Park
4200 Lakeview Drive	13RA	8R	Highland Lake Addition	Vacant Land
4152 Lakewood Drive		6 & 7	Hodgkins Highlands Addition	Vacant Land
4218 Lakewood Drive		19	Hodgkins Highlands Addition	Vacant Land
3500 Marina Drive	1	1	Reynolds Park Addition	Reynolds Park
3700 Marina Drive	15	3R	Lake worth Heights Subdivision	City Lift Station
3600 NW Jim Wright Freeway	157	1	Crawford Brown Survey	City Well Site
3600 NW Jim Wright Freeway	157	1N	Crawford Brown Survey	Vacant Land
3601 NW Jim Wright Freeway	157	1B	Crawford Brown Survey	Lake Worth Park
2900 Pueblo Trail	17	20R	Indian Oaks Subdivision	Navajo Park
3402 Pueblo Trail	15	30R	Indian Oaks Subdivision	Rayl Family Park
3501 Roberts Cut Off Road	1786	2D	J C Donalson Survey	Lake Worth Park
6052 Rocky Point Trail	1	2R1B	Ritchie Brothers Addition	City Well Site
3412 Shawnee Trail	34	6A	Indian Oaks Subdivision	Vacant Land
3413 Shawnee Trail	33	10B & 11B	Indian Oaks Subdivision	Vacant Land
3420 Shawnee Trail	34	5B	Indian Oaks Subdivision	Vacant Land
7500 Telephone Road	1	1	Lake Worth Heights Park Addition	Telephone Road Park

APZ 2

APZ 1

Lake Worth

City of Lake Worth

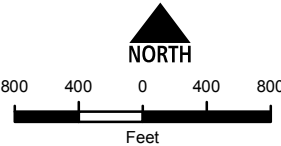
Proposed Zoning Map
November 2019

LEGEND

- Public Facilities
- City Limits
- Accidental Potential Zones

Parcels_Lake_Worth_2019

- Current Zoning
- Mixed Use Planned Development MU-PD
- Single Family Residential
- Commercial
- Industrial
- Manufactured Housing
- Mixed Planned Development
- Planned Multi-Family
- Planned Commercial
- Planned Industrial
- Comm_Azle_ave



CITY OF LAKE WORTH
NOTICE OF PUBLIC HEARING
PLANNING AND ZONING COMMISSION
AND CITY COUNCIL

ZONING DISTRICT AND USE CLASSIFICATION CHANGE REQUEST
PLANNING & ZONING CASE #PZ-2019-29

The Planning and Zoning Commission of the City of Lake Worth, Texas, will conduct the first of two public hearings at 6:30 p.m. on Tuesday, November 12, 2019, at Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider recommendations regarding an Ordinance changing the zoning district and use classifications from Single Family Residential (SF1), Commercial (C), Planned Commercial (PC) and Planned Industrial (PI) to Public Facilities (PF) zoning district and use classification on approximately seventy-six (76) acres of land, more commonly known as the City of Lake Worth Municipal Facilities, Library, Fire Station, Public Parks, Well Sites, and Lift Stations, by amending the Official Zoning Map to reflect such changes. The City Council will conduct a second Public Hearing at 6:30 p.m. on Tuesday, November 12, 2019, at Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider an Ordinance changing the zoning district and use classifications from Single Family Residential (SF1), Commercial (C), Planned Commercial (PC) and Planned Industrial (PI) to Public Facilities (PF) zoning district and use classification on approximately seventy-six (76) acres of land, more commonly known as the City of Lake Worth Municipal Facilities, Library, Fire Station, Public Parks, Well Sites, and Lift Stations. All interested parties are encouraged to attend.



Building Development Services
Planning & Zoning Department
3805 Adam Grubb
Lake Worth, Texas 76135
817-255-7922 or smeason@lakeworthtx.org

RECEIVED
(DATE STAMP)

NOV 06 2019

PUBLIC COMMENT FORM

Please type or fill in information requested below if you would like to have your support and/or opposition of this item made part of the public record for the case. *(Phone numbers and emails will be redacted for privacy.)*

☒ I am **FOR** the proposed rezoning as explained on the attached public notice for Case #PZ-2019-29 (City of Lake Worth Properties Rezoning).

☐ I am **AGAINST** the proposed rezoning as explained on the attached public notice for Case #PZ-2019-29 (City of Lake Worth Properties Rezoning).

Property Owner Name: Charles Underwood
(Please print)

Mailing Address: 4309 Lakeview Dr, Lake Worth 76135

Phone: 817-781-9720 Email: woody-su@hotmail.com

Signature: Chh Underwood Date: 11/4/2019

Property Address(s) (within 200' of subject property): _____

COMMENTS:

I am for making the area into a city park.

PUBLIC COMMENT FORMS MAY BE TURNED IN AT ANYTIME UP TO AND INCLUDING THE PUBLIC HEARING, HOWEVER ONLY FORMS TURNED IN BY AGENDA PACKET PREPARATION WILL MAKE IT INTO THE PACKET.



BUILDING DEVELOPMENT SERVICES
PLANNING & ZONING DIVISION
3805 ADAM GRUBB, LAKE WORTH, TEXAS 76135
817-255-7922 OR SMEASON@LAKEWORTHTX.ORG

FOR OFFICE USE ONLY
Case No: PZ-2019-29
Date Submitted: 9-16-2019

APPLICATION FOR DEVELOPMENT APPROVAL

(CHECK ALL THAT APPLY)

☒ ZONING CHANGE ☐ LAND USE ☐ SITE PLAN ☐ SITE PLAN AMENDMENT

PROPERTY ADDRESS multiple addresses (see attached)

CURRENT LEGAL DESCRIPTION multiple legal descriptions (see attached)

CURRENT ZONING CLASSIFICATION & LAND USE SF1 - Single Family Residential, PC-Planned Commercial, C-Commercial, and PI-Planned Industrial

PROPOSED ZONING CLASSIFICATION & LAND USE PF - Public Facilities

TOTAL ACRES approx 76 # OF LOTS multiple

APPLICANT/DEVELOPER INFORMATION

NAME City of Lake Worth - Stacey Almond, City Manager

ADDRESS 3805 Adam Grubb CITY Lake Worth

STATE Texas ZIP 76135 EMAIL salmond@lakeworthtx.org

PHONE 817-237-1211 x 100 FAX 817-237-1333

PROPERTY OWNER INFORMATION

NAME City of Lake Worth

ADDRESS 3805 Adam Grubb CITY Lake Worth

STATE Texas ZIP 76135 EMAIL salmond@lakeworthtx.org

PHONE 817-237-1211 x 100 FAX 817-237-1333

SURVEYOR/ARCHITECT/ENGINEER INFORMATION

NAME N/A

ADDRESS _____ CITY _____

STATE _____ ZIP _____ EMAIL _____

PHONE _____ FAX _____

I hereby certify that I am the owner of the property described above and further certify that the information provided on this development application is true and correct. I further understand that the public hearing for this project will not be scheduled until the application fee(s) have been paid and the plans have been reviewed and accepted by City staff. IF APPLICATION IS SIGNED BY SOMEONE OTHER THAN THE OWNER, THEN AN OWNER AUTHORIZATION FORM MUST BE COMPLETED AND TURNED IN WITH APPLICATION.

must be original signature

SIGNATURE OF OWNER, AGENT, OR APPLICANT

9-16-19

DATE

GENERAL INFORMATION

Civil construction plan submittals shall meet the following general sheet requirements and order:

1. Cover Sheet with Vicinity Map (Project Name, Address, Legal Description, Type of Plan(s), and Current Date shall be shown on cover)
2. Final Plat
3. Site Layout
4. Dimensional Control Plan
5. Paving Plan and Profile
6. Grading Plan
7. Drainage Area Map
8. Storm Sewer Layout
9. Storm Sewer Plan and Profile
10. Water Layout
11. Water Plan and Profile
12. Sanitary Sewer Layout
13. Sanitary Sewer Plan and Profile
14. Storm Water Pollution Prevention Plan (Erosion Control Plan)
15. Traffic Control Plan
16. Standard Construction Details

Construction plans must be 100% complete at the time of submittal. Any incomplete sets of construction plans shall be returned unreviewed.

SUBMITTAL CHECKLIST

The following items must be turned in for the subdivision plat application to be accepted and processed by this department:

- X DEVELOPMENT APPLICATION
N/A OWNER AUTHORIZATION FORM (IF APPLICABLE)
N/A APPLICATION FEE (VERIFY WITH P&Z ADMINISTRATOR)
N/A FOUR (4) HARD COPIES OF DEVELOPMENT PLAN, CIVIL CONSTRUCTION PLANS OR SITE PLAN AMENDMENT PLAN (WHICHEVER IS APPLICABLE) (**ACCEPTED SIZE 24" x 36"**)
N/A ELECTRONIC VERSION (.pdf) OF THE PLANS EMAILED TO SMEASON@LAKEWORTH.TX.ORG

OFFICE USE ONLY

Fee: N/A - City Project
Date Paid: N/A
Receipt #: N/A
Ownership Verified:
☒ YES ☐ NO
Taxes Paid:
☒ YES ☐ NO
Liens Paid:
☒ YES ☐ NO

Public Hearing Newspaper Notice Deadline Date: 10-28-19
Public Hearing 200' Notification Deadline Date: 11-2-19
P&Z Commission Meeting Date: 11-12-2019
City Council Meeting Date: 11-12-2019
Approval Date: _____
Ordinance Number: _____
Instrument #: _____

**LAKE WORTH CITY PROPERTY
ZONING DISTRICT CHANGE
EXHIBIT "A"**

PROPERTY ADDRESS	BLOCK/ABSTRACT	LOT/TRACT	SUBDIVISION/SURVEY	COMMONLY KNOWN AS
3805 Adam Grubb	1	1R1	Lake Worth Municipal Complex	Lake Worth City Hall & Police Dept.
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6917 Charbonneau Road	1552	2PP	Moses Townsend Survey	Vacant Land
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7301 Charbonneau Road	17	1	Lake Worth Heights Subdivision	Vacant Land
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7321 Comanche Trail	33	19B	Indian Oaks Subdivision	Vacant Land
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3413 Shawnee Trail	33	10B & 11B	Indian Oaks Subdivision	Vacant Land
3420 Shawnee Trail	34	5B	Indian Oaks Subdivision	Vacant Land
7500 Telephone Road	1	1	Lake Worth Heights Park Addition	Telephone Road Park

Lake Worth City Council Meeting - November 12, 2019

Agenda Item No. B.3

FROM: Suzanne Meason, Planning and Zoning Administrator and Stacey Almond, City Manager

ITEM: Public Hearing to consider Ordinance No. 1172, Planning and Zoning Case No. PZ-2019-30, changing the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district on approximately eighty - two (82) acres of land more commonly known as the Lake Worth High School, Effie Morris Elementary School, Lake Worth Administration Building, N.A. Howry Middle School, and Lake Worth Agricultural Site.

SUMMARY:

The City is in the process of rezoning approximately 10% of the City's current zoning districts to replace older zoning districts with new Comprehensive Zoning Districts.

City staff, along with our consultant, developed draft regulations and associated maps containing recommended changes that were presented to the Lake Worth Planning and Zoning Commission and the City Council for review in June of 2019.

Changes provided by the boards at the joint meeting were provided for on the proposed map and proposed regulations and were presented to the public at a town forum held in August 2019.

- COLW property to be rezoned to Public Facilities (PF) is approx. 76 acres or 4.2% of City; and
- LWISD property to be rezoned to Public Facilities (PF) is approx. 82 acres or 1.2 % of City.

City staff meet with the LWISD Superintendent and her staff in May of 2019 to discuss the proposed zoning changes and to gain support of the ISD. Staff, along with our consultant, identified the LWISD parcels proposed for rezoning along with information about the proposed Public Facilities (PF) district and provided a presentation to the LWISD School Board in June of 2019 at a regular Board meeting.

The city requested the LWISD School Board consider and take official action at their July 2019 meeting giving the city their support of the rezoning process. Staff attended the meeting to be available for questions received from the board.

In August of 2019 staff received a request from the LWISD staff, on behalf of the School Board, to provided the following definitions, per our proposed zoning/subdivision regulations:

Easement: The word "easement" shall mean an area for restricted use on private property upon which a public entity or utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other improvements or growths which in any way endanger or interfere with the construction, maintenance, or efficiency of its respective systems on or under any

of these easements. The public entity or utility shall at all times have the right of ingress and egress to and from and upon the said easements for the purpose of construction, reconstructing, inspecting, patrolling, maintaining, and adding to or removing all or part of its respective systems without the necessity at any time of procuring the permission of anyone

Setback: The distance from the property line to the nearest part of the building, structure, sign, measured perpendicularly to the property line.

In addition, staff provided a side-by-side zoning comparison (see attached) from Single Family Residential (SF1) to Public Facilities (PF) for the LWISD Board in response to additional questions they had about easements and future construction projects at various schools. This zoning item was discussed at the August 2019 LWISD Board Meeting. Staff was informed after the August meeting that the LWISD Board was not going to take official action on the rezoning item as they didn't believe the city needed the districts approval to make changes.

Public Input:

On Wednesday October 30, 2019 as required by State law, the City mailed out one hundred fifty-nine (159) letters of Notification for Public Hearing to all property owners within two hundred (200') feet of the subject sites. Notice was also published in the City's newspaper of record, the Fort Worth Star Telegram on Saturday, October 26, 2019.

Staff had received no public comment forms as of the packet preparation date.

FISCAL IMPACT:

N/A

ATTACHMENTS:

Ord #1172 - LWISD Rezoning Ordinance - FINAL
LWISD Zoning Change - Exhibit A
LWISD Zoning Change - Exhibit B
LWiSD - Public Hearing Notice
Comparison Zoning - LWISD
Development Application - LWISD Properties

RECOMMENDED MOTION OR ACTION:

Move to approve Ordinance No. 1172, Planning and Zoning Case No. PZ-2019-30, changing the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district on approximately eighty - two (82) acres of land more commonly known as the Lake Worth High School, Effie Morris Elementary School, Lake Worth Administration Building, N.A. Howry Middle School, and Lake Worth Agricultural Site.

ORDINANCE NO 1172

AN ORDINANCE OF THE CITY OF LAKE WORTH, TEXAS, CHANGING THE ZONING DISTRICT AND USE CLASSIFICATION FROM SINGLE FAMILY RESIDENTIAL (SF1) TO PUBLIC FACILITIES (PF) USE CLASSIFICATION, ON APPROXIMATELY 82 ACRES OF LAND, MORE COMMONLY KNOWN AS LAKE WORTH HIGH SCHOOL, EFFIE MORRIS ELEMENTARY SCHOOL, LAKE WORTH ADMINISTRATION BUILDING, N.A. HOWRY MIDDLE SCHOOL, AND LAKE WORTH AGRICULTURAL SITE; ADOPTING AN AMENDMENT TO THE CITY'S OFFICIAL ZONING MAP; PROVIDING A PENALTY; PROVIDING FOR SEVERABILITY; PROVIDING SAVINGS; PROVIDING ENGROSSMENT AND ENROLLMENT; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER OF THE CITY AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lake Worth is initiating a change in the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district and use classification on approximately 82 acres of land legally described in **Exhibit "A"** and generally depicted in the map in **Exhibit "B"**, both of which are attached hereto and incorporated herein by reference (hereinafter, "the Property"); and

WHEREAS, on November 12, 2019, the Planning and Zoning Commission, in compliance with the laws of the State of Texas, after giving the requisite notices by publication and otherwise, and after holding a public hearing, has recommended approval 7-0 of the change in the zoning district and use classification for the property; and

WHEREAS, on November 12, 2019, the City Council likewise conducted a public hearing as required by law and upon consideration, the City Council hereby finds that the request is consistent with the Lake Worth Comprehensive Land Use Plan, and state and local law; and

WHEREAS, the Planning and Zoning Commission and the City Council, in considering the change in the zoning district and use classification, have determined that the proposed change is in the best interest of the health, safety, and general welfare of the City of Lake Worth and its citizens; and

WHEREAS, the City Council of the City of Lake Worth finds that the change in zoning district and use classification should be granted as set forth herein.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LAKE WORTH, TEXAS:

**SECTION 1.
INCORPORATION OF RECITALS**

The above and foregoing recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

SECTION 2.

The zoning district and use classification for the Property is hereby changed from Single Family Residential (SF1) to Public Facilities (PF) zoning district and use classification.

SECTION 3.

The City's official zoning map is hereby amended to show the zoning district and use classification.

**SECTION 4.
PENALTY**

Any person, firm, or corporation violating any of the provisions of this Ordinance shall be punished by a penalty of a fine not to exceed the sum of Two Thousand Dollars (\$2,000) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

**SECTION 5.
CUMULATIVE CLAUSE**

This Ordinance shall be cumulative of all provisions of all other ordinances of the City of Lake Worth, Texas except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

**SECTION 6.
SEVERABILITY**

It is hereby declared to be the intention of the City Council of the City of Lake Worth that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared invalid or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such invalid or unconstitutional phrase, clause, sentence, paragraph or section.

**SECTION 7.
SAVINGS**

That all right and remedies of the City of Lake Worth are expressly saved as to any and all violations of the provisions of any Ordinances affecting the development of land, which have accrued at the time of the effective date of the Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such Ordinance, same shall not be affected by the Ordinance but may be prosecuted until final disposition by the courts.

**SECTION 8.
ENGROSS AND ENROLL**

That the City Secretary of the City of Lake Worth is hereby directed to engross and enroll this Ordinance by copying the exact caption and effective date in the minutes of the City Council of the City of Lake Worth and by filing this Ordinance in the Ordinance records of the City.

**SECTION 9.
EFFECTIVE DATE**

This Ordinance shall be in full force and effect from and after its passage and publication as required by law, and it is so ordained.

PASSED AND APPROVED this 12th day of November 2019.

CITY OF LAKE WORTH

By: _____
Walter Bowen, Mayor

ATTEST:

Monica Solko, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Drew Larkin, City Attorney

EXHIBIT A

**LWISD PROPERTY
ZONING DISTRICT CHANGE
LEGAL DESCRIPTIONS**

EXHIBIT B
ZONING MAP

**LAKE WORTH INDEPENDENT SCHOOL DISTRICT PROPERTY
ZONING DISTRICT CHANGE
EXHIBIT "A"**

PROPERTY ADDRESS	BLOCK/ABSTRACT	LOT/TRACT	SUBDIVISION/SURVEY	COMMONLY KNOWN AS
4210 Boat Club Road	1	1	Lake Worth High School Addition	Lake Worth High School
6700 Charbonneau Road	1	1	Lake Worth Agricultural Farm	Lake Worth Agricultural Farm
6801 Charbonneau Road	1552	2KKKK	Moses Townsend Survey	Lake Worth Agricultural Farm
3800 Dakota Trail	2	A	Lake Worth School Addition	Effie Morris Elementary School
6800 Telephone Road	1552	2TTT01	Moses Townsend Survey	Lake Worth ISD Operations
6800 Telephone Road	1552	2RRR	Moses Townsend Survey	Lake Worth ISD Operations
6800 Telephone Road	1552	2TTT02	Moses Townsend Survey	Lake Worth ISD Operations
6800 Telephone Road	1	A	Lake Worth School Addition	N. A. Howry Intermediate School

APZ 2

APZ 1

Lake Worth

City of Lake Worth

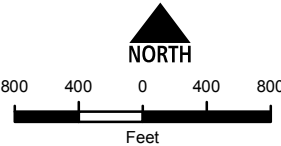
Proposed Zoning Map
November 2019

LEGEND

- Public Facilities
- City Limits
- Accidental Potential Zones

Parcels_Lake_Worth_2019

- Current Zoning
- Mixed Use Planned Development MU-PD
- Single Family Residential
- Commercial
- Industrial
- Manufactured Housing
- Mixed Planned Development
- Planned Multi-Family
- Planned Commercial
- Planned Industrial
- Comm_Azle_ave



CITY OF LAKE WORTH
NOTICE OF PUBLIC HEARING
PLANNING AND ZONING COMMISSION
AND CITY COUNCIL

ZONING DISTRICT AND USE CLASSIFICATION CHANGE REQUEST
PLANNING & ZONING CASE #PZ-2019-30

The Planning and Zoning Commission of the City of Lake Worth, Texas, will conduct the first of two public hearings at 6:30 p.m. on Tuesday, November 12, 2019, at Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider recommendations regarding an Ordinance changing the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district and use classification on approximately eighty-two (82) acres of land, more commonly known as the Lake Worth High School, Effie Morris Elementary School, Lake Worth Administration Building, N.A. Howry Middle School, and Lake Worth Agricultural Site, by amending the Official Zoning Map to reflect such change. The City Council will conduct a second Public Hearing at 6:30 p.m. on Tuesday, November 12, 2019, at Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider an Ordinance changing the zoning district and use classification from Single Family Residential (SF1) to Public Facilities (PF) zoning district and use classification on approximately eighty-two (82) acres of land, more commonly known as the Lake Worth High School, Effie Morris Elementary School, Lake Worth Administration Building, N.A. Howry Middle School, and Lake Worth Agricultural Site. All interested parties are encouraged to attend.

Comparison of current SF1 Single Family Residential zoning district to new PF Public Facilities zoning district.

District Regulations	Current SF1	Proposed PF
Density	None	None
Minimum Lot Area	5,000 sq. ft.	None
Minimum Lot Width	60 ft.	None
Minimum Lot Depth	None	None
Maximum Lot Coverage (impervious surface)	None	None
Height Maximum	35 ft. or 2 stories	35 ft./2 stories – abuts Residential 45 ft./3 stories – doesn't abut residential
Front Building Setback	25 ft.	25 ft.
Side Building Setback	5 ft.	5 feet – abuts Residential 15 feet – doesn't abut Residential
Side Building Setback (Corner Lot)	20 ft.	20 ft.
Rear Building Setback	None	25 ft.
Minimum Floor Area	None	None
Masonry (each elevation)	75%	75%



BUILDING DEVELOPMENT SERVICES
PLANNING & ZONING DIVISION
3805 ADAM GRUBB, LAKE WORTH, TEXAS 76135
817-255-7922 OR SMEASON@LAKEWORTHTX.ORG

FOR OFFICE USE ONLY
Case No: PZ-2019-30
Date Submitted: 9-16-2019

APPLICATION FOR DEVELOPMENT APPROVAL

(CHECK ALL THAT APPLY)

☒ ZONING CHANGE ☐ LAND USE ☐ SITE PLAN ☐ SITE PLAN AMENDMENT

PROPERTY ADDRESS multiple addresses (see attached)

CURRENT LEGAL DESCRIPTION multiple legal descriptions (see attached)

CURRENT ZONING CLASSIFICATION & LAND USE SF1 - Single Family Residential

PROPOSED ZONING CLASSIFICATION & LAND USE PF - Public Facilities

TOTAL ACRES approx 82 # OF LOTS multiple

APPLICANT/DEVELOPER INFORMATION

NAME City of Lake Worth - Stacey Almond

ADDRESS 3805 Adam Grubb CITY Lake Worth

STATE Texas ZIP 76135 EMAIL salmond@lakeworthtx.org

PHONE 817-237-1211 x 100 FAX 817-237-1333

PROPERTY OWNER INFORMATION

NAME Lake Worth Independent School District

ADDRESS 6805 Telephone Road CITY Lake Worth

STATE Texas ZIP 76135 EMAIL

PHONE FAX N/A

SURVEYOR/ARCHITECT/ENGINEER INFORMATION

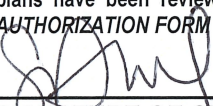
NAME N/A

ADDRESS CITY

STATE ZIP EMAIL

PHONE FAX

I hereby certify that I am the owner of the property described above and further certify that the information provided on this development application is true and correct. I further understand that the public hearing for this project will not be scheduled until the application fee(s) have been paid and the plans have been reviewed and accepted by City staff. IF APPLICATION IS SIGNED BY SOMEONE OTHER THAN THE OWNER, THEN AN OWNER AUTHORIZATION FORM MUST BE COMPLETED AND TURNED IN WITH APPLICATION.


must be original signature
SIGNATURE OF OWNER, AGENT, OR APPLICANT
ON BEHALF OF COLW.

9-16-19

DATE

GENERAL INFORMATION

Civil construction plan submittals shall meet the following general sheet requirements and order:

1. Cover Sheet with Vicinity Map (Project Name, Address, Legal Description, Type of Plan(s), and Current Date shall be shown on cover)
2. Final Plat
3. Site Layout
4. Dimensional Control Plan
5. Paving Plan and Profile
6. Grading Plan
7. Drainage Area Map
8. Storm Sewer Layout
9. Storm Sewer Plan and Profile
10. Water Layout
11. Water Plan and Profile
12. Sanitary Sewer Layout
13. Sanitary Sewer Plan and Profile
14. Storm Water Pollution Prevention Plan (Erosion Control Plan)
15. Traffic Control Plan
16. Standard Construction Details

Construction plans must be 100% complete at the time of submittal. Any incomplete sets of construction plans shall be returned unreviewed.

SUBMITTAL CHECKLIST

The following items must be turned in for the subdivision plat application to be accepted and processed by this department:

- ☒ DEVELOPMENT APPLICATION
☐ OWNER AUTHORIZATION FORM (IF APPLICABLE)
☐ APPLICATION FEE (VERIFY WITH P&Z ADMINISTRATOR)
☐ FOUR (4) HARD COPIES OF DEVELOPMENT PLAN, CIVIL CONSTRUCTION PLANS OR SITE PLAN AMENDMENT PLAN (WHICHEVER IS APPLICABLE) (**ACCEPTED SIZE 24" x 36"**)
☐ ELECTRONIC VERSION (.pdf) OF THE PLANS EMAILED TO SMEASON@LAKEWORTHTX.ORG

OFFICE USE ONLY

Fee: N/A - City Project

Date Paid: N/A

Receipt #: N/A

Ownership Verified:

☒ YES ☐ NO

Taxes Paid:

☒ YES ☐ NO

Liens Paid:

☒ YES ☐ NO

Public Hearing Newspaper Notice Deadline Date: 10-28-19

Public Hearing 200' Notification Deadline Date: 11-2-19

P&Z Commission Meeting Date: 11-12-2019

City Council Meeting Date: 11-12-2019

Approval Date:

Ordinance Number:

Instrument #:

**LAKE WORTH INDEPENDENT SCHOOL DISTRICT PROPERTY
ZONING DISTRICT CHANGE
EXHIBIT "A"**

PROPERTY ADDRESS	BLOCK/ABSTRACT	LOT/TRACT	SUBDIVISION/SURVEY	COMMONLY KNOWN AS
4210 Boat Club Road	1	1	Lake Worth High School Addition	Lake Worth High School
6700 Charbonneau Road	1	1	Lake Worth Agricultural Farm	Lake Worth Agricultural Farm
6801 Charbonneau Road	1552	2KKKK	Moses Townsend Survey	Lake Worth Agricultural Farm
3800 Dakota Trail	2	A	Lake Worth School Addition	Effie Morris Elementary School
6800 Telephone Road	1552	2TTT01	Moses Townsend Survey	Lake Worth ISD Operations
6800 Telephone Road	1552	2RRR	Moses Townsend Survey	Lake Worth ISD Operations
6800 Telephone Road	1552	2TTT02	Moses Townsend Survey	Lake Worth ISD Operations
6800 Telephone Road	1	A	Lake Worth School Addition	N. A. Howry Intermediate School

Lake Worth City Council Meeting - November 12, 2019

Agenda Item No. B.4

FROM: Stacey Almond, City Manager and Jenifer Reiner, Dunaway & Associates

ITEM: Public Hearing to consider Ordinance No. 1170, repealing and replacing the current Subdivision Regulations and Design Criteria and Construction Standards (DCCS) Ordinance and adopting a new Subdivision Regulations and Design Criteria and Construction Standards (DCCS) Ordinance and authorize the City Manager to make minor grammatical, clerical, and numbering changes.

SUMMARY:

Comprehensive Land Use Plan:

The 2035 Comprehensive Land Use Plan was adopted by Ordinance No. 1110 on March 20, 2018 by the Planning and Zoning Commission and on April 10, 2018 by the City Council.

The Comprehensive Land Use Plan is designed to implement the intent and desires, and to protect the health, safety and welfare of the present and future residents of Lake Worth. The plan addresses the types and intensities of land uses, roadway systems, community services, utilities, environmental concerns and urban design standards in a manner which is consistent with the City's objective of creating a community which builds on its existing quality commercial developments and residential character.

The plan addresses a multitude of issues and land use in terms of current knowledge and existing conditions, and therefore, as the plan is implemented, and new conditions arise, the plan may be reviewed and, if necessary, modified to reflect the City's informed response to the new circumstances.

The provisions of the plan are organized by subject and geographic area and will be used to guide the establishment regulations or any amendments thereto, pursuant to Texas Local Government Code, Chapter 213.

Subdivision Regulations:

After completion of the 2035 Comprehensive Land Use Plan staff requested engagement of Dunaway & Associates in May 2018 to assist with a review and rewrite of the Subdivision and Zoning Regulations Ordinance.

Subdivision regulations govern the division of land in to two or more parts. The regulations specify the standards for drawing and recording a plat, and requirements for public improvements necessary to make the property suitable for development.

Subdivision enabling legislation is governed by Chapter 212, Local Government Code. The basic purpose is to oversee the division of land and its relationship to the Comprehensive Land Use Plan. Within the Subdivision regulations are types of plats (ex. Sketch, preliminary, final, minor,

replat, development, etc), street patterns, lot configurations, plan review, etc.

The goal of updating subdivision and zoning regulations is to maintain quality development, added long-term benefits, ensuring compatible land uses, and constructing adequate infrastructure.

A joint workshop was conducted in June 2019 to allow the Planning and Zoning Commission and the City Council to discuss these documents with staff, provide feedback, comments, and direction.

Staff, along with Dunaway & Associates held a public forum in August 2019 to make presentation to the citizens and all interested parties. All zoning materials have been made available on our website for inspection by the general public to ensure transparency.

The proposed subdivision regulations have been updated, based upon feedback, reviewed by staff, City Attorney, and the City Engineer and are being forwarded to the City Council for required public hearing and adoption.

FISCAL IMPACT:

N/A

ATTACHMENTS:

Ord #1170 - Subdivision Regulations and DCCS

Ord #1170 - Subdivision and DCCS - Exhibit A

Case No. PZ 2019-27 - Public Hearing Notice

RECOMMENDED MOTION OR ACTION:

Move to approve Ordinance No. 1170, repealing and replacing the current Subdivision Regulations and Design Criteria and Construction Standards (DCCS) Ordinance and adopting a new Subdivision Regulations and Design Criteria and Construction Standards (DCCS) Ordinance and authorize the City Manager to make minor grammatical, clerical, and numbering changes.

ORDINANCE NO 1170

AN ORDINANCE OF THE CITY OF LAKE WORTH, TEXAS, REPEALING AND REPLACING THE CURRENT SUBDIVISION REGULATIONS AND DESIGN CRITERIA AND CONSTRUCTION STANDARDS ORDINANCE AND ADOPTING A NEW SUBDIVISION REGULATIONS AND DESIGN CRITERIA AND CONSTRUCTION STANDARDS ORDINANCE OF THE CITY OF LAKE WORTH; PROVIDING A PENALTY; PROVIDING FOR SEVERABILITY; PROVIDING SAVINGS; PROVIDING ENGROSSMENT AND ENROLLMENT; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER OF THE CITY AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Lake Worth ("City") is a Home Rule City acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and

WHEREAS, the City possesses all the rights, powers, and authorities possessed by all home rule municipalities, including the authority to regulate subdivisions under Chapter 212 of the Texas Local Government Code; and

WHEREAS, the City's current subdivision regulations and design criteria and construction standards ordinance – Ordinance No. 589, as amended ("Current Subdivision Ordinance")– was adopted in 1999 and, while serving the City well, is in need of revision to create a more user-friendly document and to update certain regulations to better support the city's goals and objectives; and

WHEREAS, a proposed new City of Lake Worth Subdivision Regulations and Design Criteria and Construction Standards Ordinance ("New Subdivision Ordinance"), attached hereto as Exhibit "A", has been prepared by City staff and City planning consultants with the intent that the New Subdivision Ordinance will completely replace the Current Subdivision Ordinance; and

WHEREAS, the City Council of the City of Lake Worth, Texas in accordance with state law and the ordinances of the City, has held the required public hearing regarding the adoption of the New Subdivision Ordinance; and

WHEREAS, the City Council of the City of Lake Worth, Texas, has determined that repeal and replacement of the Current Subdivision Ordinance with the New Subdivision Ordinance is in the best interest of the public health, safety, and welfare of the residents of the City and that it is the public interest to adopt the New Subdivision Ordinance; and

WHEREAS, the City Council of the City of Lake Worth finds that the New Subdivision Ordinance promote the health, safety, morals, or general welfare of the City and the safe, orderly, and healthful development of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LAKE WORTH, TEXAS:

**SECTION 1.
INCORPORATION OF RECITALS**

The above and foregoing recitals are true and correct and are incorporated herein and made a part hereof for all purposes.

**SECTION 2.
ADOPTION OF NEW ZONING ORDINANCE**

That Ordinance No. 589 of the City of Lake Worth, Texas, as amended, the same being the Current Subdivision Ordinance, is hereby repealed and replaced in its entirety by and through the adoption of the New Subdivision Ordinance, attached hereto as Exhibit "A", which New Subdivision Ordinance is hereby adopted.

**SECTION 3.
PENALTY**

Any person, firm, or corporation violating any of the provisions of this Ordinance (which includes the New Zoning Ordinance) shall be punished by a penalty of a fine not to exceed the sum of Five Hundred Dollars (\$500) for each offense and each and every day such offense shall continue shall be deemed to constitute a separate offense.

**SECTION 4.
CUMULATIVE CLAUSE**

This Ordinance shall be cumulative of all provisions of all other ordinances of the City of Lake Worth, Texas except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

**SECTION 5.
SEVERABILITY**

It is hereby declared to be the intention of the City Council of the City of Lake Worth that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared invalid or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such invalidity or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such invalid or unconstitutional phrase, clause, sentence, paragraph or section.

**SECTION 6.
SAVINGS**

That all right and remedies of the City of Lake Worth are expressly saved as to any and all violations of the provisions of any Ordinances affecting the subdivision of land, which have accrued at the time of the effective date of the Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such Ordinance, same shall not be affected by the Ordinance but may be prosecuted until final disposition by the courts.

**SECTION 7.
ENGROSS AND ENROLL**

That the City Secretary of the City of Lake Worth is hereby directed to engross and enroll this Ordinance by coping the exact caption and effective Date in the minutes of the City Council of the City of Lake Worth and by filing this Ordinance in the Ordinance records of the City.

**SECTION 8.
EFFECTIVE DATE**

This Ordinance shall be in full force and effect from and after its passage and publication as required by law, and it is so ordained.

PASSED AND APPROVED this 12th day of November 2019.

CITY OF LAKE WORTH

By: _____
Walter Bowen, Mayor

ATTEST:

Monica Solko, City Secretary

APPROVED AS TO FORM AND LEGALITY:

Drew Larkin, City Attorney

EXHIBIT A
Lake Worth Subdivision Regulations and
Design Criteria and Construction Standards (DCCS)



CHAPTER 10, SUBDIVISION

Update to the Subdivision Regulations

11.12.19 PRELIMINARY

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ARTICLE 10.100 GENERAL PROVISIONS

Section 10.101. Authority

- A. This Ordinance is adopted under the authority of the Constitution and laws of the State of Texas, including Chapters 43 and 212, Texas Local Government Code, as amended
- B. The following rules and regulations are hereby adopted as the Subdivision Regulations of the City of Lake Worth, Texas (sometimes hereinafter referred to as "City"), and shall be applicable to the development of property, the subdivision of land and the filing of plats and plans, as defined herein and in Chapter 212 of the Texas Local Government Code. The City shall have all remedies and rights provided by said Chapter 212 with regard to the control and approval of subdivisions and plats both within the City. The regulations herein shall apply within the corporate limits of the City, as they may be from time to time adjusted by annexation or disannexation.

Section 10.102. Jurisdiction

The provisions contained in the following sections of these subdivision regulations shall apply to any of the following forms or types of land subdivision and development activity within the City limits:

- A. The division of land into two or more tracts, lots, sites or parcels.
- B. All subdivisions of land whether by metes and bounds division or by plat, which were outside the jurisdiction of the City subdivision regulations in Tarrant County, Texas and which subsequently came within the jurisdiction of the City and its subdivision regulations through annexation.
- C. The division of land previously subdivided or platted into tracts, lots, sites or parcels subject to and not in accordance with adopted City Subdivision Regulations in effect at the time of such subdividing or platting and having occurred on or after Month Day, Year. (adoption date of current ordinance)
- D. The combining of two or more contiguous tracts, lots, sites or parcels for the purpose of creating one or more legal lots except as otherwise provided herein.
- E. When a building permit is required on property for the following reasons but not limited to:
 - 1. New construction; or
 - 2. Additions, such as increasing the square footage of an existing building by more than 20 percent of its gross floor area; or
 - 3. Moving of a primary structure onto vacant property.
- F. For tracts where any public improvements are proposed.
- G. Whenever a property owner proposes to divide land lying within the City into two (2) or more tracts for purpose of development, that results in parcels or lots all greater than five (5) acres in size, or in the event that development of any such tract is intended, and where no public improvement is proposed to be dedicated, he shall first obtain approval of a concept plan and meet with the Development Review Committee (DRC). See Section 3.4.1 of this Ordinance for requirements for Concept Plans.

ARTICLE 10.100 GENERAL PROVISIONS

Section 10.103. Purpose

- A. These Subdivision Regulations are intended to protect, promote, improve and provide for the public health, safety, and general welfare of the citizens of the City of Lake Worth through minimum standards which provide:
1. Equitable, harmonious, and efficient development and distribution of population and land uses;
 2. Effective transportation system providing facilities for efficient circulation for all modes of transportation – pedestrian, bicycle, and vehicular modes;
 3. Adequate public facilities – communication, transportation, drainage, water, wastewater, schools, parks, public safety and recreational facilities, and other public facilities and services;
 4. Protection and preservation of places of historical, cultural, natural or architectural importance and significance to the community;
 5. Safe, orderly, and efficient development and expansion of the City, in accordance with and pursuant to its adopted regulations and ordinances; and
 6. Encouragement of the development of a stable, prospering economic environment.

Section 10.104. Application of Regulations

A. Purpose

To carry out the purposes hereinabove stated, it is determined that:

1. Land must not be platted until proper provision has been made for adequate public facilities for roadways, drainage, water, wastewater, public utilities, capital improvements, parks, recreation facilities, and rights-of-way for streets.
2. Proposed plats, or subdivisions which do not conform to the policies and regulations shall be denied, or, in lieu of denial, disapproved conditioned on conformance with conditions, and;
3. There shall be an essential nexus between the requirement to dedicate rights-of-way and easements and/or to construct public improvements in connection with a new subdivision and the need to offset the impacts on City public facilities systems created by such new development.
4. No lots within a subdivision may be sold until a plat has been considered and acted on by the Planning & Zoning Commission, and approved by the City Council, or approved by the appropriate Administrative Officers, whichever the case may be.

B. Approval Required

1. Land Development

Before any plat within the City is recorded with the County Clerk, it shall first be approved for conformity with the provisions of this Ordinance.

ARTICLE 10.100 GENERAL PROVISIONS

2. Permits

Unless otherwise exempt by the terms of these Subdivision Regulations, no building permit, certificate of occupancy, plumbing permit, electrical permit, utility tap or certificate of acceptance for required public improvements shall be issued by the City for any parcel until:

- i. A plat has been approved in accordance with these regulations;
- ii. All water, wastewater, streets, drainage, electrical, public utilities and park improvements, whether they are public or private, as required by these regulations, have been constructed and accepted by the City of Lake Worth in accordance with this Ordinance, adopted Plans, or other applicable regulations; and
- iii. Bonds or security for completion of improvements have been provided in accordance with this Ordinance.

C. Violations

1. No transfer of land in the nature of a subdivision as defined herein shall be exempt from the provisions of this Ordinance unless otherwise specified, even though the instrument or document of transfer may describe land so subdivided by metes and bounds.
2. The filing of any plan or plat with the County Clerk without complying with the requirements of this Ordinance shall be deemed a violation of the provisions of this Ordinance and is hereby prohibited.
3. The transfer of any land by the delivery of or by the filing of any instrument in the nature of a conveyance without having first complied with the requirements set forth herein shall be deemed a violation of the provisions of this Ordinance and is hereby prohibited.

D. Exception

There is, however, excepted from the provisions of this Ordinance any conveyance transferring any land or interest in land to or from the State of Texas or City of Lake Worth, Texas.

E. Note

Minimum standards for development are contained in the Zoning Ordinance, the adopted Building Code and in this Ordinance. However, the Comprehensive Plan and Thoroughfare Plan contain policies designed to achieve an optimum quality of development. Subdivision design should be of a quality to carry out the purpose and spirit of the policies expressed in these plans, the regulations specified in this ordinance, and is encouraged to exceed the minimum standards required herein.

Section 10.105. Exemptions

The provisions of these subdivision regulations shall not apply to:

- A. Land legally platted and approved prior to the effective date of these subdivision regulations except as otherwise provided for herein (construction of facilities shall conform to construction standards in effect at the time of construction); or

ARTICLE 10.100 GENERAL PROVISIONS

- B. Existing cemeteries complying with all State and local laws and regulations (does not apply to new cemeteries or expansion of existing cemeteries); or
- C. Divisions of land created by order of a court of competent jurisdiction; or
- D. When a building permit is requested for unplatted or already platted parcels for the following activities:
 - 1. Replacement or reconstruction of an existing primary single-family or duplex structure but not to exceed the square footage of the original structure.
 - 2. Additions (increase in square footage of structure) to the primary structure but do not exceed more than 50 percent of the gross floor area of the original structure.
 - 3. Accessory buildings and/or structures in compliance with current adopted Building Code.
 - 4. Remodeling or repair that does not include electrical work (no expansion of square footage) and in compliance with the current adopted Building Code.
 - 5. Moving a structure off a lot or parcel or for demolition permits.

Section 10.106. Interpretation, Conflict and Separability

A. Interpretation

In their interpretation and application, the provisions of these regulations shall be held to be the minimum requirements for the promotion of the public health, safety and general welfare. These regulations shall be construed broadly to promote the purposes for which they are adopted.

B. Conflict with Other Laws

These regulations are not intended to interfere with, abrogate, or annul any other ordinance, rule or regulation, statute or other provision of law except as provided in these regulations. Where any provision of these regulations imposes restrictions different from those imposed by any other provision of these regulations, or other provision of law, the provision which is more restrictive or imposes higher standard shall control.

Section 10.107. Owner Consent

Written consent of the owner of any tract of land to be developed is required for any application relating to or for a plat, replat, pre-application conference, plat amendment, or any application to be reviewed by the Development Review Committee. A representative for the owner may provide the required written consent in place of the owner if the representative has, in a form acceptable to the City Attorney, express written authority to act on behalf of the owner. Written consent is required in accordance with this Section, regardless of whether these regulations refer to the party making application as "owner," "subdivider," "person" "developer" or "applicant".

ARTICLE 10.100 GENERAL PROVISIONS

Section 10.108. Applicability of Pending Plat Approval

All applications for plat approval, including final plats, pending on the effective date of these regulations and which have not lapsed shall be reviewed under regulations in effect immediately preceding the date of adoption of these regulations.

Section 10.109. Superseding Regulations

Upon the adoption of these regulations according to law, all Subdivision Regulations of the City of Lake Worth previously in effect are hereby superseded, except as provided in the regulations herein, Exemptions and Applicability.

Section 10.110. Amendment

For the purpose of protecting the public health, safety and general welfare, the Planning and Zoning Commission and City Council may from time to time propose amendments to these regulations which shall then be approved or disapproved by the City Council at a public meeting.

Section 10.111. Enforcement, Violations, and Penalties

A. Violations and Penalties

Any person, firm or corporation who violates, disobeys, omits, neglects or refuses to comply with or who resists the enforcement of any of the provisions of this article shall be fined in accordance with the general penalty provision set forth in Section 1.109 of the City Municipal Code for each offense. Each day that a violation is permitted to exist shall constitute a separate offense.

B. Civil Enforcement

Appropriate civil actions and proceedings may be maintained in law or in equity to prevent unlawful construction, to recover damages, to impose additional penalties, to restrain, correct, or abate a violation of these regulations, whether such violation occurs with respect to lands within the corporate boundaries of the City. These remedies shall be in addition to the penalties described above.

Section 10.112. Payment of All Indebtedness

No person who owes delinquent taxes, delinquent assessments, delinquent fees, or any other delinquent debts or obligations to the City, and which are directly attributable to a piece of property, shall be allowed to record an approved plat until the taxes, assessments, debts or obligations directly attributable to said property and owed by the property owner or a previous owner thereof shall have been first fully discharged by payment, or until an arrangement satisfactory to the City has been made for the payment of such debts or obligations. It shall be the applicant's responsibility to provide evidence or proof that all taxes, assessments, debts or obligations have been paid before any plat is filed.

Section 10.113. Right to Deny Hearing

The City shall have the right to deny a hearing if the person or applicant proposing a subdivision of land does not:

ARTICLE 10.100 GENERAL PROVISIONS

- A. Submit all the information necessary and required for a pre-application conference and/or plat application by the required deadlines;
- B. Pay the required application fees (non-refundable);
- C. Fail to provide any other items or information as prescribed by this and other applicable ordinances.

Section 10.114. Schedule of Fees

Fees and charges for the filing of plats shall be as established by separate ordinance of the City Council from time to time.

ARTICLE 10.200 DEFINITIONS

The following words, terms and phrases, when used in these Subdivision Regulations, shall have the meanings ascribed to them below, except where the context clearly indicates a different meaning:

Abandonment. Relinquish the public interest, claim, or title to a public right-of-way, easement, public way, or other public property.

Access. Ingress and egress between the site and a paved public street, private street, or approved access easement.

Addition. One or more lot, tract or parcel of land created for the purpose of development. Refer also to *Subdivision* and *Plat*.

Adequacy. It is the policy of the City that every development and subdivision shall be served by the applicable and appropriate public facilities (e.g. water, sanitary sewer, roads, access, drainage facilities, parks, and public safety), as determined by the City Manager or designee (City Engineer).

Administrative Officers. Any office referred to in these Subdivision Regulations shall be the person so retained in this position by the City, or his duly authorized representative. This definition shall also include engineering, planning and other consultants retained by the City to supplement or support existing City staff, as deemed appropriate.

1. **Building Official.** The officer or designated authority charged with the administration and enforcement of the building codes.
2. **City Attorney.** The attorney, or firm of attorney, that has been specifically employed by the City to assist in legal matters. This term shall also apply if the City retains a person to perform the functions of City attorney as an official City employee.
3. **City Engineer.** The registered professional engineer or firm of registered professional consulting engineers that has been specifically employed by the City to perform engineering review, design and related activities. The City Engineer is also the designated Floodplain Administrator.
4. **City Manager.** The person or authorized representative/designee holding the position of the chief executive officer, as appointed by the City council, under the terms of the City Charter.
5. **Planning and Zoning Administrator.** The professional land planner, or firm of professional land planners, that has been specifically employed by the City to assist in planning- and zoning-related matters. This term shall also apply if the City retains a person to perform the functions of City planner as an official City employee.
6. **City Secretary.** The person or authorized representative holding the office of City Secretary under the terms of the City Charter.
7. **Director of Building Development.** The person designated by the City Manager to oversee the subdivision review process, gather all staff comments and recommendations, and convey said recommendations to the Commission, Council and other departments.
8. **Director of Public Works.** The person designated by the City Manager to oversee compliance with the City Master Thoroughfare Plan and designate an individual to be part of the DRC; may also be City Engineer.

Agent. Any authorized person acting on behalf of the property owner during the land development process.

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Agreement. Written contractual agreement between the City, the applicant or developer, and/or other public or private agencies including the following:

1. **Cross Access Easement Agreement.** A reciprocal contract entered into by adjacent property owners and/or the City and to be recorded in the county real property records, by which the property owners agree to shared access and maintenance of drive approaches and/or parking areas.
2. **Developer Agreement.** A contract entered into by the applicant and the City, by which, among other things, the applicant promises to complete the required public improvements within the subdivision or addition within a specified time period following final plat approval.

Appeal. Review of a decision or act by a higher approving authority or court of law.

Applicant. A person or entity that submits a formal application for an approval required by this ordinance. Also, referred to as "developer", "subdivider", or other similar term.

Application. A written request for an approval required by this ordinance.

Approving Authority. The Governing Body, appointed Commissions, Committees and Boards; Administrative Officers; and/or designees granted with the power to make land development and subdivision decisions in accordance with the City Charter, City ordinances and regulations, and state law..

Block. One or more lots, tracts or parcels of land bounded by streets, railroads, or subdivision boundary lines, or a combination thereof. Further, it is an area of land enclosed by streets and occupied by or intended for building.

1. **Block Length.** The length of a block shall be considered to be the distance from property corner to property corner measured along the property line of the block face:
 - a. The block face with the greatest dimension, or
 - b. The block face with the greatest number of lots.
1. **Block Width.** The width of a block shall be considered to be the distance from property corner to property corner measured along the property line of the block face between intersecting streets, and shall be the side with one of the following criteria:
 - a. The block face with the least dimension, or
 - b. The block face with the fewest number of lots.

City. The City of Lake Worth, Texas.

City Council. The duly elected governing and legislative body of the City of Lake Worth, Texas. See also, *Governing Body*.

City Standards. See *Design Criteria and Construction Standards*.

Construction Documents or Plans. Refer to *Plans, Engineered Plans or Documents*.

Commission. See also, *Planning and Zoning Commission*.

Commencement of Construction. After receipt of the appropriate approvals and permits, it is the initial disturbance of soils associated with land development including but not limited to clearing, grading, excavating activities, or other construction activities.

Comprehensive Plan. The general plan of the City, as recommended by the Planning and Zoning Commission and adopted by the City Council, including all its revisions and plan elements

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(including, but not limited to, the future land use plan, thoroughfare plan, parks and open space plan, etc.). This plan indicates the general locations recommended for various land uses, transportation routes, public and private buildings, streets, parks, water and wastewater facilities, and other public and private developments and improvements. The following plans or documents are associated with or incorporated into the Comprehensive Plan.

1. **Future Land Use Plan.** The element of the Comprehensive Plan that sets the direction of land use public policy in Lake Worth and intended to depict the future land use pattern.
2. **Parks Master Plan.** An element of the Comprehensive Plan which supports the stated community vision and depicts the existing parks, recreation areas, and open space within the municipality and guides the dedication and/or development of future public parks, recreational facilities and open space.
3. **Master Thoroughfare Plan.** An element of the Comprehensive Plan which is coordinated with the Future Land Use Plan to guide the provision of the transportation network to facilitate development and redevelopment objectives. Streets are typically classified as follows:
 - a. **Freeways.** A highway intended to move large volumes of traffic around and across the city without direct access to adjacent land.
 - b. **Arterial.** A street that interconnects and augments the principal arterial system with more land access at a lower level of traffic mobility.
 - c. **Collector Streets.** Also, known as feeder streets or secondary thoroughfares, which provide vehicular circulation within neighborhoods, and from local streets to major thoroughfares. May be continuous through several neighborhoods. Collects and distributes traffic from local access streets, as in residential neighborhoods or commercial developments, to the major arterial network.
 - d. **Local or Residential Street.** Local residential streets, also known as minor thoroughfares or streets, which primarily provide direct vehicular access to abutting residential property Internal streets within a neighborhood that provide access to residential lots and building sites and should be arranged to discourage most through traffic, except that which is directly related to the area.

Dedication. The deliberate appropriation of land by an owner for any general and public use. The transfer of title to, and responsibility for, public improvements to the local government from the owner of a development subject to an improvements and exactions ordinance.

Deed Restriction (Restrictive Covenant). Written agreement which restricts or limits the use or activities that may take place on a property within a subdivision.

Design Criteria and Construction Standards. The standards and specifications for the construction of subdivision improvements. A copy is maintained and available for inspection at the City Hall, and which is incorporated herein by reference.

Development. Refer to *Land Development*.

Development Review Committee (DRC). The review body comprised of representatives from City departments tasked with the oversight of subdivision and land development. The DRC shall be responsible for reviewing any development proposals, vacation, plans, plats, preliminary engineering design plans and any other items deemed necessary which are associated with development.

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Dwelling Unit. Also refer to the Zoning Ordinance. Any building or portion thereof, which is designed or used as living quarters for one or more families. The area of a structure set aside for single-family living; a single-family residence is one dwelling unit; a duplex is two (2) dwelling units; and each apartment is a separate dwelling unit within an apartment home complex.

Engineer. Refer to *Professional Engineer*.

Escrow. A conveyance or monetary deposit to the City to be retained until the occurrence of a contingency or performance of a condition, such as construction of public improvements in accordance to the approved engineering documents.

Filing Date. The date that the appropriate Administrative Officer determines that the application satisfies all requirements of these Subdivision Regulations and all other applicable ordinances, except for requested variances, and all applicable fees have been paid.

Floodplain Management. – A decision-making process that aims to reduce flood losses and protection of the natural resources and function within the floodplains. Administered by the City Engineer in accordance with Article 3.1600, *Flood Damage Prevention*, of the Lake Worth Code of Ordinances.

Guarantee. A pledge, guarantee, or confidence in the form of an executed document provided by a surety company or a guarantor to pay one party (the obligee) a certain amount if a second party (the principal) fails to meet the terms of the agreement and/or satisfactorily complete the project. Types of financial guarantee provided for land development are as follows:

1. **Bond.** A type of surety used by investors in construction projects to protect against an adverse event that causes disruptions, failure to complete the project due to insolvency of the builder(s), or the failure to meet contract specifications. Any form of a surety bond in an amount and form satisfactory to the City.
2. **Escrow.** A deposit of cash with the City in accordance with City policies.
3. **Letter of Credit.** An irrevocable letter of credit on a form acceptable to the City and approved by the City Attorney.

Improvements or Facilities:

1. **Off-site Improvements or Facilities.** Existing or proposed facilities or improvements required for service to the site but not located within the boundaries of the plat.
2. **On-site Improvements or Facilities.** Existing or proposed facilities or improvements constructed within the property boundaries of the plat. These include streets, water lines, sewer lines, storm drainage, curb and gutter, and any other construction or reconstruction to serve the property.
3. **Public Improvements or Facilities.** Existing or proposed facilities constructed to City standards, dedicated for public use, and maintained by the City.

Land Development. Any new construction, including any building, structure or improvement of any nature (residential or nonresidential), or the enlargement of any external dimension of any building, structure, or improvement. Any mining, excavation, landfill or land disturbance is also considered land development.

Land Use. The purpose or activity, for which a parcel of land, a building or structure is designed, arranged or intended, or for which it is occupied or maintained. Refer to *Zoning Regulations*.

Lot or Lot of Record. A divided or undivided tract or parcel of land having frontage on a public street and which is or in the future may be offered for sale, conveyance, transfer or improvement;

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which is designated as a distinct and separate tract; and which is identified by a tract or lot number or symbol in a duly approved subdivision plat which has been properly filed of record.

Person. any individual, association, firm, corporation, governmental agency, political subdivision, partnership, corporation, or other legal entity authorized by law, its or their successors or assigns, or the agent of any of the aforesaid.

Plan. The following are documents often referenced when developing property within the City:

1. **Concept Plan.** A sketch drawing of initial development ideas superimposed on a topographic and/or aerial map to indicate the general plan of development.
2. **Construction Plans or Documents.** Refer to *Engineered Plans or Documents* (below).
3. **Drainage Plan.** A general plan for handling the storm water affecting property proposed for development. Refer to the Design Criteria and Construction Standards for requirements of the drainage plan, as applicable.
4. **Engineered Plans or Documents.** The maps or drawings accompanying a plat and showing the specific location and design of public improvements to be installed in the subdivision in accordance with the requirements of the City as a condition of approval of the plat. These drawings are signed and sealed by a professional engineer.

Plat. A plan, map or chart of a quantity of land with actual or proposed features (as lots); the land represented; *also*, to make a plat.

The following are types of plats associated with the legal creation of a subdivision of land and/or development on property within the City limits as established and provided for in this Ordinance:

1. **Amending Plat.** Generally, any plat created for at least one of the purposes listed in this Ordinance and, specifically, as described in *Texas Local Government Code § 212.016*.
2. **Final Plat** (aka File or Record Plat). A subdivision plat that is presented to the proper review authority for approval and intended to be recorded with the county clerk after proper certification. Note: minor plats, short form, amending plats and replats are also final plats.
3. **Preliminary Plat.** An initial plat of the proposed plan for subdividing, improving, and developing a tract, including supporting data such as topographic features, existing and proposed drainage features and facilities, street layout and direction of curb flow, water and wastewater utility layout, and other pertinent features with notations sufficient to substantially identify the general scope and detail of the proposed development. The plat of any lot or lots of record that is not to be recorded of record but is only a proposed division of land for review and study by the city.
4. **Replat.** A plat (replat) of all or part of an existing subdivision, that may be recorded and is controlling over the preceding plat without vacating that plat in accordance with this Ordinance and *Texas Local Government Code § 212.014*.
5. **Recorded Plat.** Any plat that has been duly recorded in the plat records of Tarrant County.
6. **Subdivision Plat.** A plat that divides a tract in two (2) or more parts to
 - a. Lay out a subdivision of the tract, including an addition to a municipality,
 - b. Lay out suburban, building, or other lots, or

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- c. Lay out streets, alleys, squares, parks, or other parts of the tract intended to be dedicated to public use or for the use of purchasers or owners of lots fronting on or adjacent to the streets, alleys, squares, parks, or other parts.

A division of a tract includes a division regardless of whether it is made by using metes and bounds description in a deed of conveyance or in a contract for a deed, by using a contract of sale or other executory contract to convey, or by using any other method.

7. **Vacating Plat.** An instrument (approved and recorded in the same manner as the original plat) that references a plat, or any part of a plat, that once executed and recorded causes the referenced plat to have no effect.

Platting. Below are definitions pertaining to the process of platting property:

1. **Minor Platting.** A subdivision of land involving four (4) or fewer lots fronting on an existing street which does not require the creation of any new street(s) or the extension of municipal facilities; amending plats; and certain replats described in *Texas Local Government Code §212.0065*. The process includes final short form plat.
2. **Plat Approval.** Granted by the appropriate governing body or administrative officers when the plat document is prepared in accordance to City standards.
3. **Plat Certification.** Executed statement(s) on the face of the plat provides evidence that the document is prepared, reviewed and approved according to City standards and State law.
4. **Plat Filing.** The term used when an approved and certified plat is recorded with the County Clerk.

Planning and Zoning Commission - The Planning and Zoning Commission of the City of Lake Worth, Texas.

Power of Attorney. A document used to appoint an agent to represent or make decisions on behalf of another person or organization.

Pre-application Conference. The meeting with City staff required prior to filing any formal plat applications.

Professional Engineer. A person who has been duly authorized and licensed under the provisions of the Texas Engineering Practice Act and/or by the Texas Board of Professional Engineers to engage in the practice of engineering in the State of Texas. Also, known as Engineer, Registered Engineer, Registered Professional Engineer, or Licensed Engineer.

Professional Land Planner. A person, other than a surveyor or engineer, who also possess and can demonstrate a valid proficiency in the planning of residential, commercial, industrial and other related developments; such a proficiency often having been acquired by education in the field of landscape architecture or other specialized planning curriculum and/or by actual experience and practice in the field of land planning, and may be certified by the American Institute of Certified Planners (AICP).

Professional Land Surveyor. A registered professional land surveyor, as authorized by the State statutes to practice the profession of surveying.

Property Owner. Also, known as "applicant" or "subdivider" or "developer." Any person or firm, association, syndicate, general or limited partnership, corporation, trust or other legal entity, or any agent thereof, that has sufficient proprietary interest in the land sought to be subdivided to commence and maintain proceedings to subdivide the same under this ordinance. In any event,

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the term "property owner" shall be restricted to include only the owner(s) or authorized agent(s) of such owner(s), such as a developer, of land sought to be subdivided.

Public Improvements. Facilities, infrastructure and other appurtenances built to City standards, and ultimately owned and maintained by the City. Public improvements provide a public service (such as wastewater collection and treatment and water storage and distribution), and which protect the general health, safety, welfare and convenience of the citizens of Lake Worth, including efficiency in traffic circulation and access for emergency services.

Public Facilities System. The operation and maintenance of water, wastewater, roadway, drainage or park facilities owned or operated by or in behalf of the City for the purposes of providing services to the public, including existing and new developments.

Public Infrastructure Improvement. A water, wastewater, roadway, drainage or park facility that is a part of one or more of the City public facilities systems.

Public Open Space Easement (POSE). An easement located at street intersections to promote visibility at the intersection.

Public Park. Land dedicated to the City specifically for development and use as a public open space and/or recreational area.

Phased Development. Development that will occur in phases over time.

Review. A review of an application for a development permit based on documents, materials, and reports.

Right-of-Way (ROW). A use of land dedicated by plat or metes and bounds to and for use by the public and which right-of-way is separate and distinct from the lots, parcel abutting it, and not included within the dimensions or areas of such lots or parcels.

The following are types of rights-of-way and/or design standards that may be established/associated with the creation of a subdivision:

1. **Alley.** A minor public right-of-way not intended to provide the primary means of access to abutting lots, which is used primarily for vehicular service access to the back or sides of properties otherwise abutting on a street.
2. **Parkway.** The area between the curb or edge of pavement and the property line of the abutting lot which is used for street improvements. See also *Street Improvements*.
3. **Public Street.** A public right-of-way, however designated, designed to City standards and maintained by the City, which provides vehicular access to adjacent land and in accordance with the Thoroughfare Plan.
4. **Street Improvements.** This means any street or thoroughfare, together with all appurtenances required by City regulations to be provided with such street or thoroughfare, and including but not limited to curbs and gutters, walkways (sidewalks), drainage facilities to be situated in the right-of-way for such street or thoroughfare, traffic control devices, street lights and street signs, for which facilities the City will ultimately assume the responsibility for maintenance and operation. Also, referred to as *Parkway*.
5. **Street Right-of-Way.** The width of the right-of-way for any roadway is the shortest perpendicular distance between the lines which delineate the rights-of-way of the street.

Rough Proportionality. A term used to describe the nature and extent of required public improvements or facilities corresponding to the scale and type of proposed development; the portion of costs of a public improvement.

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Shall, may. The word "shall," wherever used in this ordinance, will be interpreted in its mandatory sense; the word "may" shall be interpreted as permissive.

Street(s). A way for vehicular traffic, whether designated as a street, highway, road, avenue, boulevard, lane, place or other name. "Street" does not include a path or an alley. The design of streets within a development or improved with redevelopment shall comply with the approved Master Thoroughfare Plan. See also, *Plan, Master Thoroughfare Plan*.

1. **Access or Frontage Road.** A street or road that provides access to adjacent properties along a freeway or expressway.
2. **Approach street.** A new or existing street not adjacent to a subdivision being developed but which provided access or improved access to such subdivision.
3. **Cul-de-sac.** A street having but one outlet to another street and terminated on the opposite end by a vehicular turnaround.
4. **Dead End Street.** A street, other than a cul-de-sac, with only one outlet.
5. **Street Width.** The portion of the right-of-way constructed and designated for vehicular traffic. The shortest distance between the opposite edges of a paved surface or where curbs exist, the distance measured from face of curb to face of curb.
6. **Standard Street.** A standard street is a street or road that meets or exceeds the minimum **Street Improvements**. This means any street or thoroughfare, together with all appurtenances required by City regulations to be provided with such street or thoroughfare, and including but not limited to curbs and gutters, walkways (sidewalks), drainage facilities to be situated in the right-of-way for such street or thoroughfare, traffic control devices, street lights and street signs, for which facilities the City will ultimately assume the responsibility for maintenance and operation.

Subdivider. Any person or any agent thereof, dividing or proposing to divide land so as to constitute a subdivision as that term is defined herein. In any event, the term "subdivider" shall be restricted to include only the owner, equitable owner, or authorized agent of such owner or equitable owner, such as a developer, or land sought to be subdivided.

Subdivision. Refer to *Addition*. A division or redivision of any tract of land situated within the corporate limits for the purpose of transfer of ownership, layout of any subdivision of any tract of land or any addition, or for the layout out of building lots, or streets, alleys or parts of other portions for public use or the use of purchasers or owners of lots fronting thereon or adjacent thereto.

Tract. An unplatted parcel of land described by metes and bounds and typically recorded in the county deed records.

U.S. Army Corps of Engineers. The branch of the U.S. Army that plans, engineers, and manages national water resource projects and facilities.

Utility. Water, sanitary sewer, electric, gas, telephone, cable TV or any other such item of service either for public or private use.

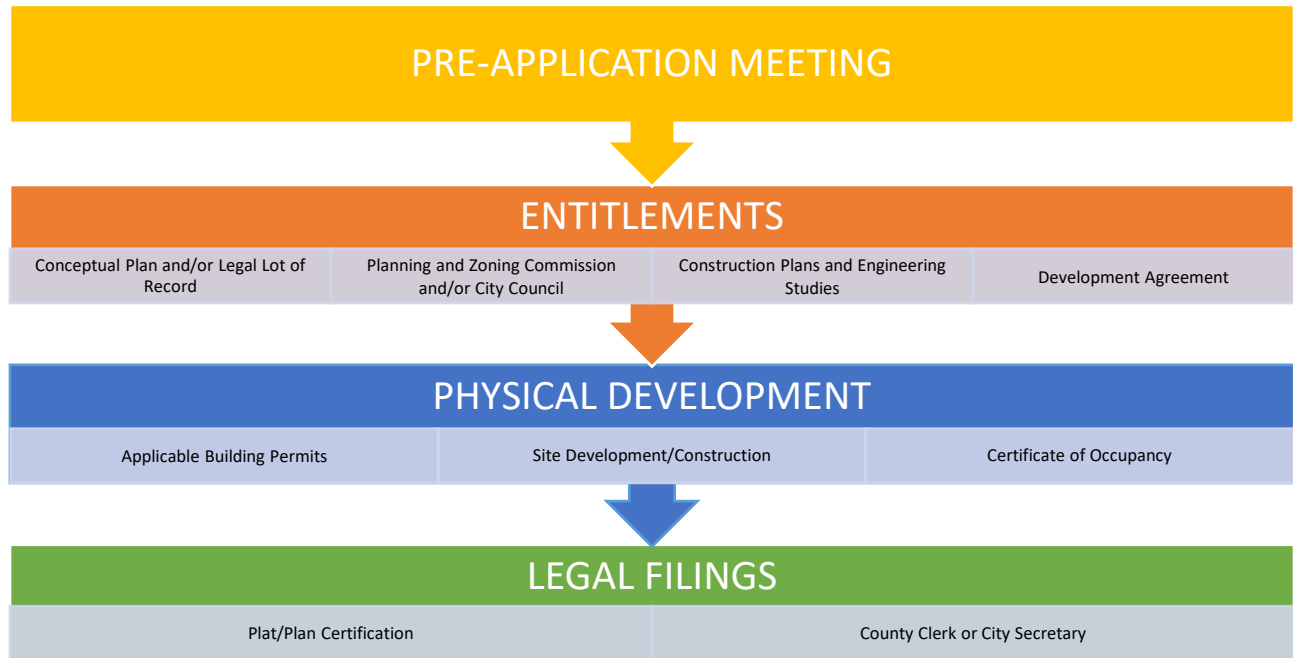
Public Utility. An entity that provides an essential commodity or service, such as electric, gas distribution, and local telephone, and that is generally under government regulation. A service provided to the public by either a private or a public agency.

Waiver. As a part of the discretionary review process, the developer or applicant requests certain regulations not apply to the subdivision.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

Section 10.301. Overview of Site Development Process

No final plat shall be approved by the City Council, and no completed improvements shall be accepted by the City or its representatives, unless and until such plat and improvements conform to all applicable regulations and standards as prescribed by the City of Lake Worth. All improvements, including, but not limited to streets, alleys, sidewalks, parking lots, drainage ways, water and sewer lines and improvements shall be designed, placed and constructed according to the procedures and policies herein and with the criteria and details in Appendix B, Design Criteria and Construction Standards.



A. Pre-application Meeting

The conceptual phase of the development process includes informal review of any development proposal with staff and/or with the Development Review Committee (DRC) during a Pre-application Meeting. Required forms, if applicable, are available from the Planning and Zoning Department, and appointments should be made with Building and Development Services. The plan or plat required for this phase is not an official plat and does not constitute and shall not be construed as the submission of or filing of a plat within the meaning of this Ordinance or within the meaning of the laws of the State of Texas or of the United States, including, without limitation, Texas Local Government Code Chapter 212, as amended.

B. Entitlements

The review and approval process by the City varies by the type of subdivision or land development proposal and may also include zoning actions.

1. Plats

The applicable Administrative Officers and/or Approving Authority reviews the plat and plans for compliance with City regulations and approves, approves with conditions, or disapproves the plat and plans. Refer to Section 10.303, Specific Plats and Procedures.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

2. Engineered Construction Plans and Engineering Studies

Engineered studies and construction documents bearing the seal and signature of a professional engineer licensed in the State of Texas, and cost estimates with the applicable development agreement are typically submitted to the Planning and Zoning Department for distribution to the DRC with an approved preliminary plat and prior to application for a final plat or replat. All plans shall be in accordance with the regulations herein and with Appendix B, Design Criteria and Construction Standards.

3. Guarantee of Public Improvements

All required public improvements and facilities will be constructed prior to the legal filing of the plat or shall be guaranteed with an approved agreement and the provision of surety in accordance with these Subdivision Regulations, and with Appendix B, Design Criteria and Construction Standards.

C. Physical Development

The technical review process varies by the type of subdivision or land development proposal. Applicable approvals including, but not limited to, zoning and plat are required prior to proceeding to the physical development. The applicable Administrative Officers review the construction documents and engineering studies for compliance with City regulations.

1. Building Permit

An original complete application is required to be submitted to the Planning and Zoning Department. The following approvals are required prior to permit approval:

- a. Preliminary plat;
- b. Final plat;
- c. Engineered construction plans;
- d. Engineering studies; and
- e. Off-site easements and dedications.

2. Certificate of Occupancy

Upon final inspection and completion of the project constructed in conformity with approved plans, the City Manager and/or designee may issue a certificate of occupancy.

D. Legal Filings

1. Plat Certification.

The certification on the face of the approved plat or plan shall be executed by the applicable Approving Authorities prior to filing with the City Secretary or the Tarrant County Clerk in accordance with the regulations herein and all applicable state law requirements.

2. Filing of Approved Plat

Submit the required number of blackline copies, fees, tax certificate and other copies, as may be required by City staff and the Tarrant County Clerk.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

Section 10.302. General Plat Review Procedures

A. Intent of Required Procedures and Required Improvements

The requirements of these Subdivision and Development Regulations are designed and intended to assure that:

1. All purchasers of property within the subdivision shall have a usable, buildable parcel of land;
2. The impacts of new development are mitigated through contributions of rights-of-way, easements and construction of capital improvements;
3. The City can provide for the orderly and economical extension of public facilities and services which are:
 - a. Provided at the earliest stage of the development process;
 - b. Constructed and installed properly;
 - c. Required only according to the proportionate share of the costs; and
 - d. The new development and the required public facilities and services conform to the adopted Comprehensive Plan, other adopted City plans, and applicable capital improvements plans.

B. Role of Development Review Committee (DRC)

The Development Review Committee (DRC) is responsible for reviewing all development proposals for compliance with these regulations and to:

1. Fairly and efficiently enforce the provisions of these regulations, including information not evidenced on the plat or plan, and
2. Facilitate cooperation between the City and the applicant so that the application is complete and in proper form.

C. Pre-Application Meeting

1. The Development Review Committee (DRC) will review sketches, plans, and or plats with the applicant to determine what may be required for the proposed development. No formal application is required, but sketches and plans should be submitted to the Planning and Zoning Department in advance of the meeting.
2. Prior to submitting a formal application all DRC review comments from the Pre-Application Meeting must be addressed.

D. Plat Determination

1. Based on the information provided at the pre-application conference and/or DRC meeting, determination will be made regarding the type of plat or plan which is best suited for the type of development proposed.
2. The name of the proposed subdivision and the street names shall be unique and not duplicate the name of an existing plat or subdivision. The City will review and prohibits duplication of an existing plat or subdivision. In such case, another name will be required. Refer to Article 10.400, Minimum Design Standards.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

E. Formal Plat Application

City staff is authorized to create and require the use of subdivision and platting application forms, which are available on the City website or may be received in hard copy form from the Planning and Zoning Department. The application forms specify all the elements required for submittal.

F. Complete Application Required

1. A complete application must be submitted to the City to be considered.
2. No required application shall be accepted by the City for processing unless it is accompanied by all documents required by and prepared in accordance with the requirements of these Subdivision Regulations, all applicable City regulations, and the application form.
3. A determination of completeness shall not constitute a determination of compliance with the substantive requirements of these Subdivision Regulations and any applicable City regulations.
4. Within ten (10) business days after the submittal of the formal application, the applicant will be notified of the application status, which may be one of the following:

a. Incomplete Application

- i. An application which is lacking required information and/or fee and will not be reviewed by the appropriate Administrative Officers, departments and/or agencies. The determination shall specify the documents or other information needed to complete the application and shall state the date the application will expire if the documents or other information is not provided.
- ii. If the Planning Administrator issues two (2) incomplete determinations, the applicant shall pay a re-submittal fee before any additional application is approved by the City Council. The fee shall be in the amount of the professional fees, including engineering; and legal fees, if required, for the review of the application and supporting documents and issuance of comments plus an administrative fee of 20 percent of the total professional fees.
- iii. The applicant shall be deemed to have been notified if the City has sent the applicant and/or the designated representative a written explanation sent by USPS mail and/or email as specified on the application.

b. Complete Application

- i. An application that includes all the required information, documents, and fees will be deemed complete, and distributed for review by the appropriate administrative officers, departments, and/or agencies.
- ii. The applicant will be provided a fee receipt by the City.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

G. Application Expiration

1. An application shall expire on the forty-fifth (45th) day after submittal if:
 - a. The applicant fails to provide documents or other information necessary to comply with the City's requirements relating to the required application;
 - b. The City has provided to the applicant, not later than the tenth (10th) business day after the date the application is submitted, unless otherwise specified, written notice that specifies the necessary documents or other information, and the date the application will expire if the documents or other information is not provided; and
 - c. The applicant fails to provide the specified documents or other information within the time provided in the notification. If the required application is not completed by the forty-fifth (45th) day after the application is submitted to the appropriate Administrative Officers, the required application will be deemed to have expired and it will be returned to the applicant together with any accompanying information.
2. No vested rights accrue solely from the filing of an application that has expired pursuant to this section, or from the filing of a complete application that is subsequently denied.

H. Filing Date

1. For the purpose of these Subdivision Regulations, the filing date of an application for approval of a plat or plan shall be the date that the appropriate Administrative Officers determine that the application satisfies all requirements of these Subdivision Regulations and all other applicable ordinances, except for requested variances, and all applicable fees have been paid.
2. The statutory period requiring formal approval or disapproval of the plat or plan shall commence on the filing date.
3. Action shall be taken by the Planning and Zoning Commission within 30 days of the filing date unless a waiver is requested by the applicant.
4. A plat or plan shall be submitted to the City Council within 30 days after the date the plat is approved or disapproved by the Planning and Zoning Commission unless a waiver is requested by the applicant.

I. Certification Required

1. In accordance with the regulations herein and Texas Local Government Code § 212.009, as amended, when approved, all plans and plats shall include a certificate of approval of endorsed (signature and date) by the Chair of the Planning and Zoning Commission and the Mayor or Mayor Pro Tem and attested by the City Secretary.
2. The certificate shall be on the face of the plan or plat document (Refer to Appendix A, Plat and Plan Requirements).

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

- J. Documentation of Approved Plat.
 - 1. City Clerk

As specified herein by plat type, submit one (1) hard copy and one (1) electronic version of the approved plat.
 - 2. Tarrant County Clerk

Submit the required number of blackline copies, electronic version, fees, tax certificate and other copies, as may be required for by City staff and the Tarrant County Clerk for official filing of the approved subdivision.
- K. Miscellaneous Reviews Procedures
 - 1. Phased Development
 - a. If the subdivider intends to develop the subdivision in phases or sections, the plat shall include only those sections or phases of the subdivision that the subdivider intends for immediate development.
 - b. The subdivider shall provide an illustration (hard copy and/or electronic version) showing all phases of the development shall be provided to City staff to review for substantial conformity.
 - 2. Simultaneous Submission of Plats

An applicant may simultaneously submit both preliminary and final plat applications for review and approval.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

Section 10.303. Specific Plats and Procedures

A. Preliminary Plat

1. Purpose and Authority

- a. The preliminary plat serves as a guide in the preparation of a final plat, and in the engineering plans to serve the final plat. The plat is not to be recorded and is only a proposed division of land for review and study by the City.
- b. The preliminary plat is not contemplated by the Texas Local Government Code but is regulated herein.

2. Process and Applicability

The preliminary plat will be reviewed by the Planning and Zoning Commission and considered by the City Council.

3. Complete Application Submittal Required

An applicant must submit the completed application form, fee, additional documents, if required, and plat prepared in accordance with the Appendix A, Plat and Plan Requirements.

- a. Additional copies of the preliminary plat may be required if revisions or corrections are necessary.
- b. Waivers may be requested in accordance with Section 10. 302, General Plat Review Procedures.
- c. Engineering studies may be required by the City Engineer in accordance with these Subdivision Regulations and the Design Criteria and Construction Standards.

4. Notice. Written notification is not required. Notice of scheduled public meetings will be made as required by state law, as amended

5. Criteria for Approval

No preliminary plat shall be reviewed by the Planning and Zoning Commission and considered by the City Council, unless the following standards have been met:

- a. Acceptance of preliminary engineering studies and analysis by the City Engineer as provided by the applicant to:
 - i. Confirm the adequacy of the existing utility and/or roadway system to serve the proposed development; and
 - ii. Show the comprehensive drainage area and plan.
- b. The plat conforms to the Comprehensive Plan, including, but not limited to, all adopted water, sewer, future land uses, and thoroughfare plans.
- c. The plat conforms to applicable zoning and other regulations.
- d. The plat meets all other requirements of these Subdivision Regulations.

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6. Determination

a. Recommendation of Commission

The Planning and Zoning Commission shall review the preliminary plat and recommend approval, approval with conditions, or disapproval of the plat within 30 days of the filing date of the preliminary plat application.

b. City Council Action

- i. Following the recommendation of the Commission, the City Council shall make a decision to approve, approve with conditions or disapprove the preliminary plat application within 30 days of the recommendation by the Commission.
- ii. If the City Council conditionally approves or disapproves the preliminary plat application, the Administrative Officers shall provide the applicant a written statement of the conditions for the conditional approval or reasons for disapproval that clearly articulates each specific condition for the conditional approval or reason for disapproval, including a citation to the law that is the basis for the conditional approval or disapproval, if applicable.

c. Applicant Response

- i. If the City Council conditionally approves or disapproves a preliminary plat, the applicant may submit to the Administrative Officers a written response that satisfies each condition for the conditional approval or remedies each reason for disapproval provided to the applicant.
- ii. There is no deadline for when the applicant may submit the response.
- iii. If the applicant submits a response under this section, the response shall be reviewed by the Administrative Officers and forwarded to the City Council for action within 15 days of the date the response is submitted.
- iv. The City Council shall take action to approve or disapprove of the applicant's previously conditionally approved or disapproved preliminary plat.
- v. The City Council shall approve the preliminary plat if the applicant's response adequately addresses each condition of the conditional approval or each reason for disapproval.
- vi. The City Council shall disapprove the preliminary plat if the applicant's response fails to adequately address each condition of the conditional approval or each reason for the disapproval.
- vii. The City Council may only disapprove the preliminary plat for a specific condition or reason previously provided to the applicant. If the City Council disapproves the preliminary

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

plat, the Administrative Officers shall provide the applicant a written statement of the reasons for disapproval that clearly articulates each specific reason for disapproval, including a citation to the law that is the basis for the disapproval, if applicable. If the preliminary plat is disapproved after the applicant files a response under this section, the disapproval is final.

d. Approval

Approval of the preliminary plat application by the City Council shall also constitute approval of plans and any other documents or information submitted with the preliminary plat application.

7. Certification

Refer to Section 10.302, General Plat Review Procedures.

9. Documentation of Approved Plat

An approved and certified preliminary plat will be filed with the City Secretary.

10. Exception

For subdivisions less than five (5) acres which contain four (4) lots or less, the requirement for a preliminary plat may be waived in writing by the City Manager or the designated administrative official if no public improvements are being proposed and if the development has access to a public street.

11. Commencement of Development

No construction activities or development activity shall commence, nor shall any building permit, utility connection permit, electrical connection permit or similar permit be issued, for any development or land division subject to this Section, until a final plat has been approved by the applicable Approval Authority.

12. Extension and Reinstatement Procedure

An approved preliminary plat shall be valid for 12 months after the date of City Council approval. If no action is taken within 12 months, the subdivider will be required to file a new pre-application meeting for DRC review and pay all applicable fees.

Actions include submission of the following:

a. Submittal of engineered construction documents and/or engineering studies or a complete application for final plat approval.

b. Extension Request

A one-time, six (6) month extension may be granted by the DRC, provided that a written request for an extension is signed and submitted to the Planning and Zoning Department 60 days prior to the expiration date.

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c. Reinstatement Request

An approved preliminary plat may be reinstated by the DRC, provided that a written request is signed and submitted to the Planning and Zoning Department 60 days prior to the expiration date.

d. Determination

The decision of the DRC shall be in writing and may grant a six-month extension or reinstate the plat or deny the request. If the request is denied, the applicant or property owner must submit a new application for approval and pay all applicable fees. In determining whether to grant a request for extension or reinstatement, the DRC shall take into account the following:

- i. Reasons for lapse,
- ii. The ability of the property owner to comply with any conditions attached to the original approval, and
- iii. The extent to which newly adopted subdivision regulations shall apply to the plat or study.

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B. Final Plat

1. Complete Application Submittal Required

An applicant must submit the completed application form, fee, additional documents, if required, and plat prepared in accordance with the Appendix A, Plat and Plan Requirements.

- a. An application for final plat shall not be accepted by the City if a preliminary plat has expired and become void.
- b. A certificate from the County Clerk shall be submitted with the application which shows the payment all taxes with no delinquent taxes against the subject property.

2. Notice. Written notification is not required. Notice of scheduled public meetings will be made as required by state law, as amended.

3. Criteria for Approval

No final plat shall be approved unless the following standards have been met:

- a. The final plat shall conform with the preliminary plat, as approved, incorporating all conditions, changes, directions and additions.
- b. Approval of the preliminary plat is required prior to submittal and review of the final plat, unless waived in accordance to Section 10.303.B.10, Exception.
- c. An executed Public Improvements Agreement, as applicable, and provision of security is provided to the Administrative Officers for consideration by the City Council.

4. Determination

a. Recommendation of Commission

The Planning and Zoning Commission shall review the preliminary plat and recommend approval, approval with conditions, or disapproval of the plat within 30 days of the filing date of the preliminary plat application.

b. City Council Action

- i. Following the recommendation of the Commission, the City Council shall make a decision to approve, approve with conditions or disapprove the preliminary plat application within 30 days of the recommendation by the Commission.
- ii. If the City Council conditionally approves or disapproves the preliminary plat application, the Administrative Officers shall provide the applicant a written statement of the conditions for the conditional approval or reasons for disapproval that clearly articulates each specific condition for the conditional approval or reason for disapproval, including a citation to the law that is the basis for the conditional approval or disapproval, if applicable.

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c. Applicant Response

- i. If the City Council conditionally approves or disapproves a preliminary plat, the applicant may submit to the Administrative Officers a written response that satisfies each condition for the conditional approval or remedies each reason for disapproval provided to the applicant.
- ii. There is no deadline for when the applicant may submit the response.
- iii. If the applicant submits a response under this section, the response shall be reviewed by the Administrative Officers and forwarded to the City Council for action within 15 days of the date the response is submitted.
- iv. The City Council shall take action to approve or disapprove of the applicant's previously conditionally approved or disapproved preliminary plat.
- v. The City Council shall approve the preliminary plat if the applicant's response adequately addresses each condition of the conditional approval or each reason for disapproval.
- vi. The City Council shall disapprove the preliminary plat if the applicant's response fails to adequately address each condition of the conditional approval or each reason for the disapproval.
- vii. The City Council may only disapprove the preliminary plat for a specific condition or reason previously provided to the applicant. If the City Council disapproves the preliminary plat, the Administrative Officers shall provide the applicant a written statement of the reasons for disapproval that clearly articulates each specific reason for disapproval, including a citation to the law that is the basis for the disapproval, if applicable. If the preliminary plat is disapproved after the applicant files a response under this section, the disapproval is final.

d. Approval

Approval of the preliminary plat application by the City Council shall also constitute approval of plans and any other documents or information submitted with the preliminary plat application.

5. Certification

Refer to Section 10.302, General Plat Review Procedures.

6. Documentation of Approved Plat

An approved and certified final plat will be filed with the Tarrant County Clerk.

ARTICLE 10.300 SITE DEVELOPMENT PROCEDURES - PLAT

C. Minor Plat

1. Complete Application Submittal Required

An applicant must submit the completed application form, fee, additional documents, if required, and plat prepared in accordance with the Appendix A, Plat and Plan Requirements.

a. Applicability

An application for approval of a minor plat may be filed only when all of the following circumstances apply:

- i. The proposed division results in four (4) or fewer lots;
- ii. All lots in the proposed subdivision front onto an existing public street and the construction or extension of a street or alley is not required; and
- iii. The plat does not require the extension of any municipal facilities or public improvements to serve any lot within the subdivision.

- b. A certificate from the County Clerk shall be submitted with the application which shows the payment all taxes with no delinquent taxes against the subject property.

2. Notice. Written notification is not required.

3. Criteria for Decision

The City Manager or designee shall approve a minor plat application when it meets the following criteria:

- a. The minor plat application is consistent with all zoning requirements for the property and all other requirements of this Ordinance;
- b. All lots to be created by the plat are already adequately served by all required utilities and services; and
- c. The plat does not require the extension of any municipal facilities or public improvements to serve any lot within the subdivision; and
- d. The applicant has submitted a completed application form, associated documents, fee, and the minor plat containing the required information specified in the Appendix A, Plat and Plan Requirements.
- e. The Administrative Officers may, for any reason, elect to present a minor plat for approval to the Planning and Zoning Commission and then to the City Council.
- iv. The Administrative Officers shall not disapprove a minor plat and shall refer any minor plat which the Administrative Officers refuses to approve to the Planning and Zoning Commission and then to the City Council within the time periods specified in Section 212.009, Texas Local Government Code.

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- v. If a minor plat is referred to the Planning and Zoning Commission and then to the City Council, the approval process shall comply with the processes provided for a final plat, as applicable.
- 4. Certification
Refer to Section 10.302, General Plat Review Procedures.
- 7. Documentation of Approved Plat
An approved and certified minor plat will be filed with the Tarrant County Clerk.

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D. Amending Plat

1. Complete Application/Submittal Required

An applicant is required to submit the completed application form; associated documents; fee, as applicable; and the plat containing the required information specified in the Appendix A, Plat and Plan Requirements.

2. Notice. Written notification is not required. Notice of scheduled public meetings will be made as required by state law, as amended

3. Criteria for Approval

The City Manager or designee may approve an amending plat, which may be recorded and is controlling over the preceding plat without vacation of the preceding plat, if the amending plat is signed by the applicants only and is solely for one or more of the following purposes:

- a. To correct an error in a course or distance shown on the preceding plat;
- b. To add a course or distance that was omitted on the preceding plat;
- c. To correct an error in a real property description shown on the preceding plat;
- d. To indicate monuments set after the death, disability, or retirement from practice of the engineer or surveyor responsible for setting monuments;
- e. To show the location or character of a monument that has been changed in location or character or that is shown incorrectly as to location or character on the preceding plat;
- f. To correct any other type of scrivener or clerical error or omission previously approved, including lot numbers, acreage, street names, and identification of adjacent recorded plats;
- g. To correct an error in courses and distances of lot lines between two adjacent lots if:
 - i. Both lot owners join in the application for amending the plat;
 - ii. Neither lot is abolished;
 - iii. The amendment does not attempt to remove recorded covenants or restrictions; and
 - iv. The amendment does not have a material adverse effect on the property rights of the other owners in the plat;
- h. To relocate a lot line to eliminate an inadvertent encroachment of a building or other improvement on a lot line or easement;
- i. To relocate one (1) or more lot lines between one (1) or more adjacent lots if:
 - i. The owners of all those lots join in the application for amending the plat;

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- ii. The amendment does not attempt to remove recorded covenants or restrictions; and
 - iii. The amendment does not increase the number of lots;
 - j. To make necessary changes to the preceding plat to create six (6) or fewer lots in the subdivision or a part of the subdivision covered by the preceding plat if:
 - i. The changes do not affect applicable zoning and other regulations of the City;
 - ii. The changes do not attempt to amend or remove any covenants or restrictions; and
 - iii. The area covered by the changes is located in an area that the Planning and Zoning Commission and City Council has approved, after a public hearing, as a residential improvement area; or
 - k. To replat one (1) or more lots fronting on an existing street if:
 - i. The owners of all those lots join in the application for amending the plat;
 - ii. The amendment does not attempt to remove recorded covenants or restrictions;
 - iii. The amendment does not increase the number of lots; and
 - iv. The amendment does not create or require the creation of a new street or make necessary the extension of municipal facilities.

4. Determination

The City Manager and/or designee may approve an amending plat that complies with these regulations and does not require a waiver; provided, however, the City Manager may, for any reason, elect to present an amending plat for approval to the Planning and Zoning Commission and then to the City Council.

- a. The City Manager shall not disapprove an amending plat and shall refer any amending plat which the City Manager refuses to approve to the Planning and Zoning Commission and then to the City Council within the time periods specified in Section 212.009, Texas Local Government Code.
- b. If an amending plat is referred to the Planning and Zoning Commission and then to the City Council, the approval process shall comply with the processes provided for a final plat, as applicable.

5. Certification

Refer to Section 10.302, General Plat Review Procedures.

8. Documentation of Approved Plat

An approved amending plat will be filed with the Tarrant County Clerk.

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E. Replat.

1. Complete Application Submittal Required

An applicant must submit the completed application form, fee, additional documents, if required, and plat prepared in accordance with the Appendix A, Plat and Plan Requirements.

a. Requirements

A replat of a subdivision is controlling over the preceding plat without vacation of the plat if the plat:

- i. Is signed and acknowledged by only the owners of the property being replatted;
- ii. Is approved by the City Council;
- iii. Does not attempt to amend or remove any covenants or restrictions; and
- iv. When applicable, in compliance with subsection E.2. below.

b. A certificate from the County Clerk shall be submitted with the application which shows the payment all taxes with no delinquent taxes against the subject property.

2. Notice

a. Written notification is not required, unless the following applies.

b. Replat for Residential Lots. Notice shall be provided if the replat meets the following:

- i. If any of the proposed property to be replatted, within the immediate preceding five (5) years, was limited by any interim or permanent zoning classification to residential use for not more than two (2) residential units per lot, or
- ii. If any lot in the approved subdivision was limited by deed restriction to residential use for not more than two (2) residential units per lot.
- iii. Notice of the public hearing shall be given by publication in an official newspaper or a newspaper of general circulation and by written notice forwarded to the owners of lots that are in the original subdivision and that are within 200 feet of the lots to be replatted, as indicated on the most recently approved county tax roll of the property upon which the replat is requested.

3. Process

The application process, approval process, criteria for approval, and recordation of a replat shall comply with the processes as provided for a final plat, as applicable.

4. Certification

a. Refer to Section 10.302, General Plat Review Procedures.

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b. Note on Plat. A replat shall contain a note describing the purpose of the change or modification framed in a bold line so as to be distinctly visible on the face of the plat.

5. Documentation of Approved Plat

An approved replat will be filed with the Tarrant County Clerk.

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F. Residential Replat.

1. Complete Application Submittal Required

An applicant must submit the completed application form, fee, additional documents, if required, and plat prepared in accordance with the Appendix A, Plat and Plan Requirements.

2. Applicability

a. A replat without vacation of the preceding plat must conform to the requirements of this section if:

- i. During the preceding five (5) years, any of the area to be replatted was limited by an interim or permanent zoning classification to residential use for not more than two residential units per lot; or
- ii. Any lot in the preceding plat was limited by deed restrictions to residential use for not more than two (2) residential units per lot.

b. If a proposed replat described above requires a variance or exception, a public hearing must be held by the City Council.

3. Notice

Notice of the public hearing required by Section G.2. shall:

- a. Be given no less than 15 days prior to the date of the public hearing in an official newspaper and
- b. By written notice, with a copy of any special conditions, sent to the owners, as indicated on the most recently approved ad valorem tax roll of the City, of lots that are in the original subdivision within 200 feet of the lots to be replatted. The written notice may be delivered by depositing the notice, properly addressed with postage prepaid, in a post office or postal depository within the boundaries of the City.

4. Determination

a. Variance. If the proposed replat requires a variance and is protested in accordance with this subsection:

- i. The proposed replat must receive, in order to be approved, the affirmative vote of at least three-fourths ($\frac{3}{4}$) of the members present of the Planning and Zoning Commission and City Council.
- ii. For a legal protest, written instruments signed by the owners of at least 20 percent of the area of the lots or land immediately adjoining the area covered by the proposed replat and extending 200 feet from that area, but within the original subdivision, must be filed with the Planning and Zoning Commission and City Council prior to the close of the public hearing.

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- b. If a proposed replat described by Section G.1. does not require a variance or exception:
 - i. The City shall, not later than the 15th day after the date the replat is approved, provide written notice by mail of the approval of the replat to each owner of a lot in the original subdivision that is within 200 feet of the lots to be replatted according to the most recent City or County tax roll.
 - ii. This Section does not apply to a proposed replat if the Planning and Zoning Commission or the City Council holds a public hearing and gives notice of the hearing in the manner provided by Section G.4.a.

5. Process

Except for public hearing, notice, and protest procedures as described above, the application process, approval process, criteria for approval, and recordation of a replat described by this Section shall comply with the processes as provided for a final plat, as applicable.

6. Certification

Refer to Section 10.302, General Plat Review Procedures.

9. Documentation of Approved Plat

An approved replat will be filed with the Tarrant County Clerk.

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G. Vacating Plat.

1. Complete Application/Submittal Required

Application/Submittal Required. Submit the completed application form, associated documents, and the vacating plat containing the required information specified in Appendix A, Plat and Plan Requirements.

2. Process and Applicability

- a. The Vacating Plat will be considered by City Council with a recommendation from the Planning and Zoning Commission.
- b. By property owner. The property owner of the tract covered by a plat may vacate, upon review by the Planning and Zoning Commission and approval by the City Council, the plat at any time before any lot in the plat is sold. The plat is vacated when a signed, acknowledged instrument declaring the plat vacated is approved and recorded in the manner prescribed for the original plat (instrument language is available from the city, upon request).
- c. By all lot owners. If some or all of the lots covered by the plat have been sold, the plat, or any part of the plat, may be vacated on the application of all the owners of lots in the plat with approval obtained in the manner prescribed for the original plat.

3. Criteria for Approval

- a. The Planning and Zoning Commission shall review, and the City Council may approve, the petition for vacation on such terms and conditions as are in accordance with Texas Local Government Code § 212.013, as amended, and as are reasonable to protect the public health, safety and welfare.
- b. As a condition of vacation of the plat, the City Council may direct the petitioners to prepare and seek approval of a revised final plat in accordance with this ordinance such that the property does not become "unplatted."

4. Determination

The Planning and Zoning Commission shall recommend approval, and the City Council shall approve, the plat vacation only if the criteria and conditions cited above are satisfied.

5. Certification.

Refer to Section 10.302., General Plat Review Procedures.

6. Documentation of Approved Plat

- a. If the City Council approves vacating a plat, the City Secretary shall record a copy of the plat vacation instrument in the office of the County Clerk of Tarrant County along with an exhibit showing a drawing of the area or plat vacated.

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- b. The County Clerk shall write legibly on the vacated plat the word "vacated" and shall enter on the plat a reference to the volume and page at which the vacating instrument is recorded.
- c. If the City Council vacates only a portion of a plat, it shall cause a revised final plat drawing to also be recorded that shows that portion of the original plat that has been vacated and that portion that has not been vacated.
- d. On the execution and recording of the vacating instrument the vacated plat (or the vacated portion of the plat) has no effect.

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Section 10.304. Additional Requirements for Plat Approval

A. Waivers

1. Purpose and Authority

- a. The City Council may approve waivers to these subdivision regulations so that substantial justice may be done, and the public interest secured when it finds that unreasonable hardships or difficulties may result from strict compliance with these regulations, and/or the purposes of these regulations may be served to a greater extent by an alternative proposal. Any waiver granted shall not have the effect of nullifying the intent and purpose of these regulations.
- b. Waivers are regulated herein and in accordance with Section 10.101, Authority.

2. Process and Applicability

- a. Waivers may be granted only when in harmony with the general purpose and intent of the adopted Comprehensive Land Use Plan and these regulations so that the public health, safety and welfare may be secured, and substantial justice done.
- b. Alternative standards. Waivers to the regulations herein and contained in Appendix B, Design Criteria and Construction Standards may only be granted based on evidence provided by the design engineer and acknowledged by the City Manager and/or designee, that the alternative standards provide the same degree of protection that the original standards would provide.
- c. Waivers should be submitted with the application for preliminary plat. If a waiver is submitted after approval of the preliminary plat, a separate application and fee and review process will be required.

3. Criteria for Approval

In granting a waiver, the City Council shall prescribe only conditions that it deems necessary or desirable to protect the public interest. In making the findings hereinbelow required, the City Council shall consider:

- a. The nature of the proposed land use(s),
- b. Existing adjacent land uses of land,
- c. The number of persons who will reside or work in the proposed subdivision, and
- d. The probable effect of such waiver upon traffic conditions and upon the public health, safety, convenience, and welfare in the vicinity.
- e. Pecuniary hardship standing alone shall not be deemed to constitute undue hardship.

4. Determination

No waiver shall be granted unless the City Council finds:

1. That there are special circumstances or conditions affecting the land involved such that the strict application of the provisions of

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these regulations would deprive the applicant of the reasonable use of the land;

2. That the waiver is necessary for the preservation and enjoyment of a substantial property right of the applicant;
3. That the granting of the waiver will not be detrimental to the public health, safety, or welfare, or injurious to other property in the area; and
4. That the granting of the waiver will not have the effect of preventing the orderly subdivision of other land in the area in accordance with the adopted Comprehensive Land Use Plan and the provisions of these regulations; or
5. That the waiver is necessary as a result of the determination regarding the rough proportionality of an exaction requirement.

5. Official Record

Such findings, together with the specific facts, shall be incorporated into the official minutes of the City Council meeting at which such waiver is granted.

B. Traffic Study

1. Traffic Impact Analysis (TIA) are required for developments which include and/or generate:
 - a. 50 or more dwelling units; or
 - b. 500 or more one-way trips per day; or
 - c. Collector or Arterial Streets not included in the Master Thoroughfare Plan (MTP).

At any time during the pre-application proposal or plat application process, the City Manager or designee (City Engineer) may require a sight-distance study and/or a traffic impact analysis for any portion of the tract to be subdivided.

2. The plat or any related development application which requires a traffic impact analysis or study shall be held as 'incomplete' by the City and not scheduled for consideration until the results of the completed study or traffic impact analysis have been reviewed by the City Engineer and any affected public agency [such as the State of Texas, if required].
3. Based on the study or analysis, the City Manager and/or designee may impose stricter standards on the proposed plat in order to accommodate increased traffic because of the proposed development.

C. Development Agreement

1. Agreement Required

As a condition to plat approval, the subdivider shall execute a contract with the City providing for the installation of public improvements required by the development regulations of the City.

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- a. This agreement shall be considered by the City Council at a regularly scheduled meeting.
- b. This agreement, entitled "Development Agreement," shall constitute a covenant which will run with the land and will be binding upon any assignee or owner in the chain of title. The Development Agreement shall be in the form provided in, Appendix B, Design Criteria and Construction Standards.

2. Revisions

After execution of the Development Agreement by the subdivider and the City, any changes in the contract or the plans or specifications that alter the scope of the project must be recommended by the City Engineer, approved by the City Attorney, and considered by the City Council at a regularly scheduled meeting. Upon approval, an addendum to the Development Agreement shall be executed by the subdivider and the City.

D. Adequacy of Specific Facilities

1. Purpose and Authority

- a. All lots to be platted shall be connected to the City public facility systems, as follows:
 - i. A public water system which has capacity to provide water for domestic use and emergency purposes, including adequate fire protection.
 - ii. An approved means of wastewater collection and treatment. The City Manager and/or designee shall be responsible for determining the approved means of wastewater collection and treatment.
 - iii. Proposed roads shall provide a safe, convenient and functional system for vehicular, bicycle and pedestrian circulation and shall be properly related to the approved Master Thoroughfare Plan. New subdivisions shall be supported by a thoroughfare network having adequate capacity, and safe and efficient traffic circulation. Each development shall have adequate access to the thoroughfare network.
 - iv. Drainage improvements serving new development shall be designed to prevent overloading the capacity of the downstream drainage system. The City may require the use of control methods such as retention or detention, the construction of off-site drainage improvements, or drainage impact fees in order to mitigate the impacts of the proposed subdivision.

2. Process and Applicability

a. Minimum Design Standards

Article 10.400 of these regulations provides for the minimum requirements for development plans within the City. Additional

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technical standards are provided in the Appendix B, Design Guidelines and Construction Standards.

b. Adequacy

The City Manager and/or designee shall review the development for adequacy of the proposed and existing public improvements necessary to support the subdivision or development.

E. Rough Proportionality

1. Authority

Rough Proportionality is adopted pursuant to Texas Local Government Code, § 212.904, as amended.

2. Process and Applicability

a. Plat application

The City Manager and/or designee shall review the plat application and prepare a written statement affirming that each exaction requirement to be imposed as a condition of approval is roughly proportionate to the demand created by the subdivision or development on the applicable City public facility systems, taking into consideration the following:

- i. Current categorical findings and recommendations made by the North Central Texas Council of Government (NCTCOG) in developing standard specifications for public infrastructure improvements and storm water management;
- ii. Proposed and potential use of the land;
- iii. Timing and sequence of development in relation to availability of adequate levels of public facilities systems;
- iv. Engineering studies specific to the development including, but not limited to, impact fee studies, traffic impact studies, drainage studies, fire protection consumption and irrigation water needs, and solid or liquid waste collection or disposal;
- v. Level of service and functionality of both on-site and off-site public infrastructure improvements in serving the proposed subdivision or development;
- vi. Degree to which public infrastructure improvements necessary to serve the proposed subdivision are supplied by other developments;
- vii. Anticipated participation by the City in the costs of necessary public infrastructure improvements;
- viii. Degree to which acceptable private infrastructure improvements to be constructed and maintained by the applicant will offset the need for public infrastructure improvements;

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- ix. Any reimbursements for the costs of public infrastructure improvements for which the proposed subdivision is eligible; and/or
 - x. Any other information relating to the impacts created by the proposed subdivision or development on the City public facility systems.
 - b. The City Manager and/or designee may require that the applicant, at its expense, submit any information or studies that may assist in making the proportionality determination.
 - c. Rough proportionality will be considered in conjunction with the development application by City Council with a recommendation from the Planning and Zoning Commission.
- 3. Determination
 - a. The Planning and Zoning Commission and City Council shall consider the report concerning the proportionality of the exaction requirements in making a decision on a plat application and may grant a waiver to the requirements herein or make a decision to participate in the costs of improvements.
 - b. The Administrative Official responsible for issuing a permit for which an exaction requirement is imposed as a condition of approval shall consider the report concerning the proportionality of the exaction requirements in making its decision as to whether to grant the permit or to modify or waive an exaction requirement.
- 4. Rough Proportionality Appeal
 - a. An applicant may file an appeal to contest any exaction requirement, other than impact fees, imposed as a condition of approval or in which the failure to comply is grounds for denying the application pursuant to the regulations herein.
 - b. The purpose of a proportionality appeal is to assure that an exaction requirement imposed as a condition of approval does not result in a disproportionate cost burden on the applicant, taking into consideration the nature and extent of the demands created by the proposed subdivision or development on the City public facility systems.
- 5. Appeals Procedure
 - a. An applicant shall file a written appeal with the City Secretary within 10 days of the date the Planning and Zoning Commission or the City Administrative Officer responsible for issuing the permit takes action applying the exaction requirement. This may include denial of the permit or plat. The applicant shall submit 15 copies of the appeal.
 - b. A separate appeal form shall be submitted for each exaction requirement for which relief is sought. The City Secretary shall forward the appeal to the City Council for consideration.

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- c. The applicant may request postponement of consideration of the plat application by the City Council pending preparation of the study and/or appeal, in which case the applicant shall also waive any the statutory period for acting upon the application for the time necessary for the City Council to decide the appeal.
- d. No Development Agreement may be executed by the City:
 - i. Until the time for appeal has expired unless the applicant agrees in writing that the rough proportionality determination of the is reasonable and accurate and that no appeal will be filed; or,
 - ii. If an appeal is filed, until the City Council has made a determination with respect to the appeal.
- e. The appeal shall state the reasons that application of the exaction requirement is not roughly proportional to the nature and extent of the impact created by the proposed subdivision or development on the City public facility systems and does not reasonably benefit the proposed subdivision or development.
- f. The appellant shall submit 15 copies of a study in support of the appeal that includes, with respect to each specific exaction requirement appealed, the following information within 30 days of the date of appeal, unless a longer time is requested:
 - i. Total capacity of the City water, wastewater, roadway, drainage, or park system, as applicable, to be utilized by the proposed subdivision or development, employing standard measures of capacity and equivalency tables relating the type of development proposed to the quantity of system capacity to be consumed by the subdivision. If the proposed subdivision is to be developed in phases, such information also shall be provided for the entire development, including any phases already developed.
 - ii. Total capacity to be supplied to the city's public facilities systems for water, wastewater, roadway, drainage or parks, as applicable, by the exaction requirement. This information shall include any capacity supplied by prior exaction requirements imposed on the development.
 - iii. Comparison of the capacity of the applicable City public facility systems to be consumed by the proposed subdivision or development with the capacity to be supplied to such systems by the proposed exaction requirement. In making this comparison, the impacts on the city's public facilities systems from the entire subdivision or development shall be considered.
 - iv. The amount of any City participation in the costs of oversizing the public infrastructure improvements to be constructed by the applicant in accordance with City requirements.

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- v. Comparison of the minimum size and capacity required by City standards for the applicable public facility systems to be utilized by the proposed subdivision or development with the size and capacity to be supplied by the proposed exaction requirement.
 - vi. Any other information that shows the alleged disproportionality between the impacts created by the proposed development and the exaction requirement imposed by the City.
 - g. The City Manager and/or designee shall evaluate the appeal and supporting study and shall make a recommendation to the City Council based upon analysis of the information contained in the study and utilizing the same factors considered by the engineer in making the original proportionality determination.
- 6. City Council Decision of Appeal
 - a. The City Council shall decide the appeal within 30 days of the date of final submission of any evidence by the applicant.
 - b. Upon receipt of the final submission of evidence from the applicant, the City Secretary shall schedule a time and date for the City Council to consider the appeal and shall cause the applicant to be notified at the address specified in the appeal form of the time, date and location at which the City Council shall consider the appeal.
 - c. The applicant shall be allotted time, not to exceed 30 minutes, to present testimony at the City Council meeting.
 - d. The Council shall base its decision on the criteria listed herein and may:
 - i. Deny the appeal and impose the exaction requirement in accordance with the report and recommendation of the City Manager and/or designee or the decision of the Planning and Zoning Commission; or
 - ii. Grant the appeal, and waive in whole or in part an exaction requirement to the extent necessary to achieve proportionality; or
 - iii. Grant the appeal, and direct that the City participate in the costs of acquiring land for or constructing the public infrastructure improvement.
 - e. In deciding an appeal, the City Council shall determine whether application of the exaction requirement is roughly proportional to the nature and extent of the impact created by the proposed subdivision on the City public facility systems for water, wastewater, roadway, drainage, or park facilities, as applicable, and reasonably benefits the subdivision. In making such determination, the Council shall consider:
 - i. The evidence submitted by the applicant;

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- ii. The City Manager and/or designee report and recommendation; and
 - iii. If the property is adjacent to a state or county road, any recommendations from the county or State.
 - f. The City Council may require the applicant or the City Administrative Officers to submit additional information that it deems relevant in making its decision.
 - g. The applicant shall not be deemed to have prevailed in the event that the City Council modifies the exaction requirement.
7. Action Following Decision of City Council
- a. If the City Council finds in favor of the applicant and waives the exaction requirement as a condition of plat approval, or modifies the exaction requirement to the extent necessary to achieve rough proportionality, the applicant shall resubmit the plat application to the Planning and Zoning Commission or City Administrative Officer responsible for issuing the permit within 30 days of the date the City Council takes action, with any modifications necessary to conform with the City Council decision. Failure to do so will result in the expiration of any relief granted by the City Council.
 - b. If the City Council finds in favor of an applicant for any other permit and waives the exaction requirement as a condition of permit approval, or modifies the exaction requirement to the extent necessary to achieve rough proportionality, the applicant shall resubmit the permit application to the responsible official within 30 days of the date the City Council takes action, with any modifications necessary to conform the application with the City Council decision. Failure to do so will result in the expiration of any relief granted by the City Council.
 - c. If the City Council denies the appeal and the applicant has executed a waiver of the statutory period for acting upon a plat, the City shall place the plat application on the agenda of the Planning and Zoning Commission within 30 days of the City Council decision.
 - d. If the plat application is modified to increase the number of residential dwelling units or the intensity of non-residential uses, the City Manager and/or designee may require a new study to validate the relief granted by the City Council.
 - e. If the plat application for which relief was granted is denied on other grounds, a new appeal shall be required on any subsequent application.
8. Appeal of City Council Decision
- a. An applicant may appeal the decision of the City Council to the county or district court of the county in which the development is located within 30 days of the date that the Council issues its final decision.

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- b. In the event that the applicant prevails in such action, the applicant will be entitled to attorneys' fees and costs, including expert witness fees.

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ARTICLE 10.400 SITE DEVELOPMENT PROCEDURES – PUBLIC IMPROVEMENTS

Section 10.401 General Procedures

A. Engineering Requirements

1. Approved Preliminary Plat Required. An approved preliminary plat is required prior to submitting an application for site development which is available from the Department of Building and Development. Engineering Plans and Construction Documents will be considered concurrently with the final plat process.
2. Engineering Plans and Documents
 - a. Complete Application Required

An applicant must submit the completed application form, fee, engineering/ construction documents prepared in accordance with applicable City regulations and Appendix B, Design Criteria and Construction Standards, and additional documents, if required, by the City Manager and/or designee.
 - b. Engineering Plans/Construction Documents

Requirements for complete submittal are available on the appropriate application available online at www.lakeworthtx.org or at City Hall.
 - c. Cost Estimates

Itemized cost estimates for public infrastructure facilities required.
 - d. Development Agreement

An applicant must submit an executed copy of the applicable agreement required and as approved by City Council.
 - e. Rough Proportionality determination, if applicable, made by City Manager and/or designee.
 - f. Off-site Easements and Dedications
 - i. The City will advise a subdivider of any potential on-site of off-site requirement for oversized improvements. The City may participate in the cost of any improvements required to serve land areas and improvements outside the subdivision, including oversized utility lines.
 - ii. All necessary off-site easements and dedications required for city-maintained facilities and not shown on the plat must be conveyed solely to the City prior to submitting an application for a site development, such as by filing of a separate instrument, with the proper signatures affixed. The original of the documents and the appropriate fees for filing the documents at the county (per Tarrant County requirements and the City submission guidelines, as may be amended from time to time) shall be returned to the City Secretary prior to approval and release of the engineering plans.

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B. Pre-Construction Procedures

1. Building and Construction Permit(s)

Approved engineering plans, associated documents, and the applicable permit application(s) are required prior to the start of any construction on site and/or any development that requires floodplain management, erosion control, storm drainage, grading, and/or vegetation or tree removal.

2. Final Plans. The developer shall submit the final-approved engineering plans prior to construction, as follows:

- a. Three (3) full-size set of plans;
- b. Half-size set(s), as requested, and
- c. One (1) electronic version.

3. Inspection Fees

Payment of the inspection fees as specified and approved by the City Council are required prior to scheduling the required pre-construction conference.

4. Pre-construction Conference

All contractors participating in the construction shall be presented with a set of approved plans bearing the stamp of release of the City Manager and/or designee, as appropriate. At least one (1) set of these plans shall remain on the job site at all times.

C. Expiration After City Approval

Approved construction plans shall be valid for a period of 12 months after approval by the applicable Approving Authority - Director of Building and Development Services and the City Engineer. A one-time, 6-month extension may be granted by the above prior to the date of expiration. Submit the request for extension 60 days prior to expiration.

D. Guarantee of Public Improvements

1. Development Agreement

- a. The subdivider/developer shall guarantee the public improvements will be constructed by executing the applicable Development Agreement, as specified by the City Manager and/or designee.
- b. The City Manager and/or designee may approve the applicable Development Agreement when the total project cost is less than \$25,000.

2. Guarantee

- a. The developer shall guarantee 125 percent of the estimated developer's share of the cost of the required public improvements by one of the methods discussed herein.

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- b. The developer shall provide a guarantee for maintenance for a period of two (2) years in the amount of 125 percent of the actual cost of the required public improvements by one (1) of the methods discussed herein and as specified in the Appendix B, Design Criteria and Construction Standards.
 - c. Where City participation is necessary or agreed upon, the developer shall guarantee 100 percent (100%) of the estimated City's share of the cost of the required public improvements by one (1) of the methods discussed herein.
 - 3. Developer shall furnish a financial guarantee in one (1) of the following ways:
 - a. Payment and Performance Bond.
 - i. Furnish the City with a performance and payment bond executed by a surety company authorized to do business in the State of Texas.
 - ii. The bonds shall be subject to the approval of the City Attorney and must be executed by a corporate surety in conformance with Texas law; or
 - b. Escrow or Interest-bearing Account
 - i. Assign an interest-bearing account, with a financial institution which is insured by the Federal Deposit Insurance Corporation or Federal Savings and Loan Insurance Corporation, in an amount equal to the percentage discussed below.
 - ii. If an interest-bearing account is utilized, the developer shall execute three (3) copies of a letter, approved by the City Attorney, assigning the account to the City and authorizing the City to withdraw funds and requiring authorization by the City before the developer may withdraw funds.
 - iii. Any arrangement involving an interest-bearing account shall be accepted in writing by the financial institution.
 - c. Letter of Credit

Deposit a certified check, Irrevocable Letter of Credit or cash with the City in an amount equal to the percentage as discussed herein.
- E. Inspection during Construction of Improvements
 - 1. Periodic construction inspections, as required, shall be conducted by the City Manager or designee. Said inspections shall ensure that construction is in accordance with the approved engineering plans.
 - 2. Upon completion of each inspection, a written report shall be forwarded to the City Manager that fully documents the inspection conducted, the tests completed, specific items that are in compliance or noncompliance, actions that must be taken to bring the construction into compliance, and any other information required by the City Engineer. The City of Lake Worth may

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either require reinspection or conduct its own independent inspection as required by the City Manager or designee.

3. The City will not deem required public improvements satisfactorily completed until the applicant's engineer or surveyor provides certification to the City Manager or designee by submittal of detailed sealed as-built drawings which indicate all public improvements and their locations, dimensions, materials and other information required by the City Engineer, and until all required public improvements have been completed in accordance with approved plans.

F. Improvements Required Prior to Acceptance

1. Provision of the following improvements, as applicable, designed and constructed in accordance with the regulations herein and with Appendix B, Design Criteria and Construction Standards, are required prior to acceptance by the City into its public infrastructure system:

- a. Streets,
- b. Street lights,
- c. Street signs,
- d. Alleys,
- e. Easements,
- f. Required landscaping,
- g. Monuments and markers,
- h. Traffic control signs, and
- i. Utility, water and wastewater, and storm drainage facilities.

2. Provision of Maintenance Guarantee

The subdivider/developer shall guarantee the required improvements will be maintained for a 2-year period by providing the following as specified in the regulations herein and/or by the City Manager and/or designee:

- a. Applicable Development Agreement with the City designated as the beneficiary, and
- b. Acceptable form of financial guarantee as outlined in the regulations herein and in Appendix B, Design Criteria and Construction Standards.

G. Acceptance of Improvements

1. The City shall inspect the installation of all required improvements to insure compliance with City requirements and the approved engineering plans and/or construction documents.
2. When all required improvements have been satisfactorily completed, the City shall either accept, in writing, the improvements as having been satisfactorily completed, or shall issue a punch list to the developer denoting items remaining to be completed.

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3. The City shall not accept dedications of required improvements nor release a performance bond or other guarantee, until:
 - a. All improvements have been satisfactorily completed in compliance with the approved plans;
 - b. Approved "as built" plans have been submitted to and accepted by the City;
 - c. The required maintenance guarantee surety as specified in the Design Criteria and Construction Details has been provided;
 - d. Receipt of affidavit of payment, as required by City Manager and/or designee; and
 - e. Any and all other requirements identified in this ordinance or other City codes and ordinances have been satisfied.
 4. Acceptance of the development shall mean that the developer transfers all rights to all the public improvements to the City for use and maintenance.
 5. Upon acceptance of the required public improvements, the City Manager and/or designee shall submit a certificate to the developer stating that all required public improvements have been satisfactorily completed.
- H. Withholding Services and/or Improvements
- Until the subdivision construction is accepted, the City will withhold ALL CITY SERVICES AND/OR IMPROVEMENTS of whatsoever nature, including the maintenance of streets, the furnishing of water, wastewater service and electric service.
- I. Building Permit
1. Building Permit Required
- No building permit may be issued for any building or structure on a newly subdivided parcel of land until all the requirements of these subdivision regulations have been met and public improvements have been installed and accepted, including filing of final plat and all water, wastewater, storm drainage, sidewalks and street improvements.
2. Exception
 - a. With the approval of the Development Review Committee, the Building Official may release building permits for up to 10 percent of the lots within the subdivision and/or development, provided that all public improvements and utilities relating to said land are complete.
 - b. Final inspections or certificates of occupancy will not be issued until final acceptance of the subdivision and the public improvements, and the filing of the final plat.
- J. Final Acceptance – New Subdivisions
1. When installation of the street, alley, storm drainage, water and wastewater improvements provided by the developer have been completely performed

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on the part of the contractor, the contractor shall notify the City that the improvements are ready for final inspection.

2. If the work is satisfactory and in accordance with the approved final construction plans, then the City will issue a letter of acceptance to the developer with a copy to the contractor.
3. No Certificate of Occupancy shall be issued by the City nor shall any permanent utility services be granted to the site unless all final inspections have been completed, the "Letter of Acceptance" has been written, and any required maintenance bond has been filed with the City.
4. The City of Lake Worth may, at its sole discretion, disconnect any utility services until the requirements of this ordinance have been met.

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Section 10.402 Design Standards

City policy regarding the minimum design and construction requirements for public infrastructure installed with development is specified herein. Both the regulations herein and Appendix B, Design Criteria and Construction Standards are intended to be used for design of the subdivision and public improvements.

A. Basis for Standards

1. Minimum Design Standards

The design standards established herein for development are in support of the Comprehensive Plan and Master Thoroughfare Plan.

2. Appendix B, Design Criteria and Construction Standards

Design standards and technical standard details are specified in the appendix, as adopted by City Council (Ordinance No. _____).

Amendments to the Appendix A, Concept Plan and Plat Requirements, and Appendix B, Design Criteria and Construction Standards may be considered at a regular meeting of the City Council.

B. Minimum Standards

It is the intent of these regulations that no development occurs until and unless these minimum levels of service and/or standards are met. Therefore, each subdivision in the City shall be required to dedicate, construct and/or upgrade required facilities and infrastructure to a capacity that meets these minimum levels.

1. Conform with Adopted Plans

The minimum standards herein support the vision of the adopted Comprehensive Plan, Master Thoroughfare Plan, and/or other adopted City plans, as provided by the City Manager and/or designee.

2. Minimum Level of Service

Certain minimum requirements and sizes for utilities, roadways, and other facilities are specified that have been determined by the City Council to be necessary in order to protect or promote the public health, safety.

3. Minimum Standards for Public Infrastructure.

These minimum standards take into consideration the soil conditions and topographic configuration of the City, the use and impact analyses of the North Central Texas Council of Governments in developing standard specifications for public works installation, and other historical use and performance metrics associated with public infrastructure within the City.

C. Dedication Required

The City may require the dedication of easements and rights-of-way for or construction of on-site or off-site public improvements and facilities to serve a proposed subdivision.

D. Adequacy of Public Facilities

1. Every subdivision of land shall be adequately served by improved streets, water and wastewater facilities.

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2. If adequate levels of public facilities and services cannot be provided concurrent with the schedule of development proposed, the City may deny the subdivision until the public facilities and services can be provided or may require that the development be phased so that the availability and delivery of facilities and services coincides with the demands for the facilities created by the development.

E. Additional Requirements

Whenever the City Council determines that levels of service in excess of these minimum standards are necessary in order to promote the orderly development of the City, the owner shall qualify for reimbursement for any costs in excess of the minimum levels of service through City participation, to the extent funds are available through the determination of proportionality outlined in Chapter 10.300 or other means adopted by the City.

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Section 10.403 Site Development

A. General

The minimum criteria for the physical improvement of each site is established to provide safe, orderly and sustainable growth.

B. Site Grading

The building pad and foundation elevation shall be graded to the most recent City adopted Building Code Standards and conform with applicable restrictions in the floodplain.

C. Restrictions in the Floodplain

Site design shall conform to the regulations in Article 3.1600 of the Lake Worth Code of Ordinances and in Appendix B, Design Criteria and Construction Standards.

D. Monument and Markers

Permanent Survey Markers. All boundary corners, block corners, etc., as established in the process of creating a subdivision plat shall comply with the Texas Board of Professional Land Surveying Practices Act and General Rules of Procedures and Practices, (663.17 Monumentation).

E. Easements

1. Easements shall be provided on final plat and coordinated with the construction plans (refer to Appendix B, Design Criteria and Construction Standards), and may include, but are not limited to the following types of easements:
 - a. Utility,
 - b. Floodplain,
 - c. Fire Lane,
 - d. Drainage,
 - e. Detention and/or
 - f. Public Open Space.
2. Unless by agreement approved by the City Council, no building or structure shall be constructed over or into an easement. If any building, structure of physical improvement is within an easement, it shall be the sole responsibility of the property owner to remove or abate the obstruction immediately at their sole cost.

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Section 10.404 Subdivision Layout

- A. General
The minimum criteria for the design of each new subdivision is established to promote access and connectivity and sustain community character.
- B. Lots
The size shape and orientation of lots shall be appropriate to the type and location of the proposed development.
- C. Building Lines
Building lines for each lot shall be shown on the final plat and shall be consistent with the development standards specified in Chapter 14, Zoning in the Lake Worth Code of Ordinances and in Appendix B, Design Criteria and Construction Standards.
- D. Blocks
Generally, the length, width, and shapes of blocks shall:
 - 1. Conform to the zoning requirements for lot size, setbacks and lot dimensions;
 - 2. Provide an adequate building site suitable for the type of use;
 - 3. Address site specific topographic conditions, and
 - 4. Provide access, circulation, and control and safety of street traffic.
- E. Access
Provide vehicular and pedestrian access in accordance with the Appendix B, Design Criteria and Construction Standards.
- F. Access Management
Joint and cross access easements/agreements promote connections between existing and new development and manages traffic flow between businesses along a corridor. The intent of the joint-access and cross-access provisions is to limit access connections to arterials and collectors and to help meet the spacing guidelines between driveways in accordance with the adopted Appendix B, Design Criteria and Construction Standards.
- G. Driveways
Driveway design shall conform to the Appendix B, Design Criteria and Construction Standards.
- H. Parking
 - 1. Required to be On-site. All parking shall be off-street, meaning that all vehicle maneuvering is done on the subject parcel and not in the street right-of-way. Refer to Appendix B, Design Criteria and Construction Standards.
 - 2. Conformance with Zoning Ordinance Required. Location and number of required parking spaces must conform to the Chapter 14, Zoning of the Lake Worth Code of Ordinances.
- I. Planned Development
All proposed planned developments shall comply with the provisions relating thereto and contained within Chapter 14, Zoning of the Lake Worth Code of

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Ordinances. All streets not dedicated to the public shall be constructed in accordance with Appendix B, Appendix B, Design Criteria and Construction Standards and shall be maintained by means of the property owner(s) or other means as approved by the Planning and Zoning Commission.

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Section 10.405 Infrastructure in the Right-of-Way

A. General

All public facilities shall be designed and constructed in accordance with the most current adopted City regulations, technical specifications and standard details. Public facilities typically located within the public right-of-way include sidewalks, driveways, street lights, street signs, streets and alleys.

B. Sidewalks

1. Purpose

Proposed sidewalks shall provide safe and convenient pedestrian circulation and shall be properly related to the Comprehensive Plan and the Master Thoroughfare Plan.

2. General

- a. Sidewalks shall be constructed for all lots adjoining dedicated streets, along major thoroughfares where lots do not adjoin the street, across power line easements, and in other areas where pedestrian walkways are necessary.
- b. Every new subdivision, or re-subdivision, shall be required to install sidewalks, with appropriate barrier free ramps, within the public street right-of-way.
 - i. All sidewalks shall conform to the latest ADA and Texas Accessibility Standards (TAS) requirements.
 - ii. Barrier free ramps shall be provided for access across streets per Appendix B, Design Criteria and Construction Standards.
- c. Sidewalk construction may be delayed until development of lots but must be constructed for each lot prior to completion of any primary structure. In locations not adjacent to lots and across bridges and culverts, the sidewalk shall be constructed with the other improvements to the subdivision.

3. Required for Certificate of Occupancy

The City may withhold a Certificate of Occupancy for a commercial use and final inspection approval for a residential structure if sidewalks are not properly installed, inspected and accepted by the City Manager and/or designee.

C. Street Lights

A Street Lighting Plan shall be required by the City as a part of the plat application process. Street light design shall conform to Appendix B, Design Criteria and Construction Standards.

D. Street Names and Signs

1. Street Names

- a. New street names shall not duplicate or cause confusion with the names of existing streets.

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- b. New streets which are an extension of existing streets shall bear the names of existing streets.
 - 2. Street name signs shall be City approved and furnished and installed by the Subdivider/Developer for all intersections within or abutting the subdivision and shall be designed and constructed in accordance with City requirements and Appendix B, Design Criteria and Construction Standards.
- E. Traffic Control Signs

Install the appropriate type and number of traffic control signs, as specified in Appendix B, Design Criteria and Construction Standards, to promote vehicular and pedestrian safety.
- F. Streets
 - 1. Purpose

Proposed streets shall provide a safe, convenient and functional system for vehicular, bicycle, and pedestrian circulation and shall be properly related to the Master Thoroughfare Plan and/or Comprehensive Plan, and shall be appropriate for the particular traffic characteristics of each proposed subdivision or development
 - 2. Conform to Master Thoroughfare Plan

Proposed streets shall provide a safe, convenient and functional system for traffic circulation; shall be properly related to the adopted Master Thoroughfare Plan, road classification system, Comprehensive Plan and any amendments thereto; and shall be appropriate for the particular traffic characteristics of each development.

 - a. The arrangement, character, extent and location of all streets shall be considered in their relation to:
 - i. Existing and planned streets or driveways,
 - ii. Topographical conditions,
 - iii. Drainage constraints,
 - iv. Public safety, and
 - v. Existing and planned land use(s).
 - b. Amendment Required

Any land study or subdivision plat involving a change to a proposed alignment shown on the Master Thoroughfare Plan must be approved through the amendment process.
 - c. When a street is not shown on the Master Thoroughfare Plan, the arrangement of streets in a subdivision shall:
 - i. Provide for continuation or appropriate projection of existing streets in surrounding areas,
 - ii. Conform to a plan for the neighborhood approved or adopted by the City to meet a particular situation where

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topographical or other conditions make continuance or conformity to existing streets impracticable,

- iii. Provide for future access to adjacent vacant areas which will likely develop under a similar zoning classification.
- iv. Not conflict in any way with existing or proposed driveway openings.
- v. Allow for the appropriate dedication and/or improvement on each plat application to meet the minimum street construction and right-of-way standards.

3. Responsibility

The property owner shall assure that the subdivision is adequately served by improved streets and thoroughfares and shall be responsible for the costs of rights-of-way and street improvements, in accordance with the following policies and standards, and may be required to participate in the cost of provision of oversized facilities.

G. Pavement Types and Markings

- 1. Pavement construction standards shall comply with Appendix B, Design Criteria and Construction Standards.
- 2. Pavement Markings: Pavement markings shall conform to the Texas Manual on Uniform Traffic Control Devices (TMUTCD) and Appendix B, Design Criteria and Construction Standards.

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Section 10.406 Utilities in the Right-of-Way

A. General

1. All subdivision plats and engineering plans shall provide location and design of public utilities prepared in accordance to franchise requirements and Appendix B, Design Criteria and Construction Standards.
2. All distribution lines, cables, etc. for utilities other than those specified below shall be installed below ground within the subdivision.
3. Transmission lines or major cables to provide utilities such as electric, telephone, and cable television to the area as a whole may be located above ground on the perimeter of the subdivision being served. The installation of these utilities shall conform to commonly accepted construction standards and be subject to review by the City Manager and/or designee.

B. Utility Services

1. Design and Location. Utility services, such as electrical, gas, telephone, and cable TV utility lines shall be shown on the final plat and the engineering plans.
2. Review. All easements shown on the final plat will be reviewed by both the utility companies and the City prior to granting final approval for all residential subdivisions affected by this section
3. Approval. Acceptance of easement locations and widths shall be provided prior to final plat approval.
4. Nothing in this section shall be construed to require any existing facilities in place prior to the effective date of this section to be placed underground.

C. Electric, Telephone and Cable Services

1. Utility lines for electric service, telephone service and cable television service shall be installed underground in any new subdivision platted after approval of this Ordinance.
2. Service to all street light poles shall be underground.

D. Water and Wastewater Facilities.

1. Design. Water and wastewater facilities shall be shown on the engineering plans.
2. Review. Easements for water and wastewater facilities shown on the final plat will be reviewed by prior to granting approval of the final plat and/or engineering plans.
3. Approval.
 - a. Acceptance of easement locations and widths shall be provided prior to final plat approval.
 - b. Acceptance of installed facilities shall be provided prior to filing of the final plat.
4. Extension of all utilities shall be as follows:

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- a. When adjacent to an existing subdivision, the utilities shall extend along the entire frontage of the subdivision adjacent to the street or thoroughfare.
- b. If the subdivision is not adjacent to a thoroughfare, the extension of utilities shall be accomplished in a manner to allow future connection to new subdivisions. If new subdivisions will never be constructed beyond a developing subdivision due to physical constraints, the City Manager and/or designee may waive the requirement for adjacent utility line construction.

E. Storm Drainage Facilities

1. Design and Location

Storm drainage improvements shall be designed in accordance with the Chapter 14, Zoning of the Lake Worth Code of Ordinances, the Comprehensive Plan and Appendix B, Design Criteria and Construction Standards, and for the ultimate development of the area within the watershed, whether inside or outside the subdivision or addition, since the runoff tends to increase in direct proportion to the amount of impervious area such as sidewalks, pavements, buildings, etc.

2. Review

Easements for storm drainage facilities shown on the final plat will be reviewed by prior to granting approval of the final plat and/or engineering plans.

3. Approval

- a. Acceptance of easement locations and widths shall be provided prior to final plat approval.
- b. Acceptance of installed facilities shall be provided prior to filing of the final plat.

APPENDIX A

To Chapter 10,
Subdivision Regulations

PLAN AND PLAT REQUIREMENTS

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APPENDIX A –PLAN AND PLAT REQUIREMENTS

CHAPTER 1. REQUIREMENTS FOR CONSTRUCTION DOCUMENTS and ENGINEERING PLANS

A. Plan Set Order

A civil construction plan submittal shall meet the following general sheet requirements and order.

1. Cover Sheet with Vicinity Map
2. General Notes
3. Final Plat
4. Site Layout
5. Dimensional Control Plan
6. Paving Plan and Profile
7. Grading Plan
8. Drainage Area Map
9. Storm Sewer Layout
10. Storm Sewer Plan and Profile
11. Channel and/or Culvert Plan and Profile
12. Retaining Wall
13. Water Layout
14. Water Plan and Profile
15. Sanitary Sewer Layout
16. Sanitary Sewer Plan and Profile
17. Storm Water Pollution Prevention Plan (Erosion Control Plan)
18. Traffic Control Plan and Details including pavement markings and signage
19. Standard Construction Details

B. Sheet Size

1. The Construction Plans shall be submitted on standard 22"x34" sheets or on a size as specified by City Manager or designee.
2. Half-size plans may be required for inspection(s) or as specified by City Manager or designee.

C. Sheet Layout

Each sheet of the Construction Plans shall include the following:

1. Date
2. North arrow
3. Scale

(Scale shall be 1 inch equal 20, 40 or 50 feet horizontally and 1 inch equal 2, 4, or 5, feet vertically.)

4. Date
5. Benchmark description to sea level datum
6. Seal and signature of the Licensed Professional Engineer in the State of Texas who prepared the plans
7. Title block, including space for the notation of revisions
(This space is to be completed with each revision to the plan sheet and shall clearly note the nature of the revision and the date that the revision was made.)

APPENDIX A –PLAN AND PLAT REQUIREMENTS

CHAPTER 2. REQUIREMENTS FOR PLAT DOCUMENTS

(Information and items required to be shown on the face of the document.)

A. PRELIMINARY PLAT

All preliminary plats shall be submitted in a legible format and drawn to a minimum scale of one-inch equals one- hundred feet or larger (1" =100'). The required copies or prints, as specified on the application shall, at a minimum, show the following information:

1. Names and contact information for the applicant, property owner, land planner, engineer and/or surveyor.
2. Location of subdivision on vicinity map.
3. Scale, north arrow, date and other pertinent data oriented to the bottom or right side of the sheet.
4. Proposed name of the subdivision.
5. Title Block including:
 - a. Total number of units per acre,
 - b. Total number of lots per phase or for the entire development, and
 - c. Number of dwelling units, the acreage, and the gross residential density by housing type.
6. Boundaries and property lines of proposed subdivision, including abstract lines, survey lines and corporate boundaries with bearings and distances sufficient to locate the exact area proposed for the subdivision.
7. Layout of the subdivision within the entire tract of land, including remainder tracts, in accordance with the approved Concept Plan.
8. Proposed phases of development.
9. Location and dimension of any existing structures, fences, paved areas, cemeteries, or other existing features within the proposed subdivision.
10. Location of all existing or abandoned oil or gas wells, oil or gas pipelines and other appurtenances associated with the extraction, storage, production and distribution of natural gas or petroleum products, and all related easements on the site or on immediately adjacent property.
11. Name, zoning, and location of all adjacent properties and property owners, including existing adjoining developments and tracts of land.
12. Existing lot and block numbers and date recorded.
13. Proposed arrangement of individual lots, including dimensioned property lines, lot area, lot and block number, and building lines.
14. Minimum finished floor elevations of building foundations shall be shown for lots.

APPENDIX A –PLAN AND PLAT REQUIREMENTS

15. Proposed location, dimensions, area and arrangement of all parcels to be set aside for public or private parks, playgrounds or other common use of property, including area set aside for common use by the home owners association.
16. Existing sewer or water mains, gas mains or other underground structures, easements of record or other existing features within the area proposed for subdivision.
17. A declaration confirmed by engineering analysis (if required by the City Engineer) and prepared by an engineer professionally licensed in the State of Texas, stating that the existing utility main(s) serving a proposed subdivision is adequate.
18. The applicant shall also provide copies of letters from applicable local utility companies stating that the utility company has reviewed the plat and stated any requirements.
19. Location and width of all proposed and existing streets, alleys, rights-of-ways, sidewalks and easements providing access to and within the proposed subdivision.
20. Proposed and existing street names and block numbers.
21. Proposed on-site and off-site dedications of land or rights-of-way for public improvements for each proposed phase of the subdivision.
22. Any proposed supplemental transportation systems, showing the layout and dimensions of walkways, sidewalks, bike trails, and other related improvements.
23. Typical cross-section of proposed street improvements and rights-of-way.
24. Contours at five-foot intervals and except on terrain with less than a two percent grade, in which event, contours at two-foot intervals are required. The source of contour information will be placed on the plat. Contours are to be based on the Texas North Central Zone (4202) State Plane Coordinates (SPC). All easements or rights-of-way necessary for drainage within or without the boundaries of the subdivision shall be reflected upon the preliminary drainage plan.
25. Location and size of all physical features pertinent to drainage:
 - a. Natural topographical and drainage features, such as water courses and waterbodies;
 - b. Floodplains according to Federal Emergency Management Agency (FEMA) information, floodways, and flood hazard areas;
 - c. Army Corps of Engineers flowage easement(s) requirements;
 - d. Drainage area in acres or area draining into the proposed subdivision; and
 - e. Outline of major wooded areas, stands of trees, or the location of significant individual trees.
26. Locations proposed for drainage discharge from the site shall be shown by directional arrows.
27. Notes on the Face of the Plat:
 - a. Special Notice (Required):

APPENDIX A –PLAN AND PLAT REQUIREMENTS

Selling a portion of this addition by metes and bounds is a violation of city ordinance and state law and is subject to fines and withholding of utilities and building permits.

b. Access easements (to be used if applicable):

The undersigned does covenant and agree that the access easement may be utilized by any person or the general public for ingress and egress to other real property, and for the purpose of general public vehicular and pedestrian use and access, and for fire department and emergency use in, along, upon and across said premises, with the right and privilege at all times of the City of Lake Worth, its agents, employees, workmen and representatives having ingress, egress, and regress in, along, upon and across said premises.

c. Drainage Easement Restriction (to be used if applicable):

No construction or filling, without the written approval of the City of Lake Worth shall be allowed within a drainage easement. Then only after detailed engineering plans and studies show that no flooding will result; that no obstruction to the natural flow of water will result; and subject to all property owners of the property affected by such construction becoming a part of the request may any construction take place. Where construction is permitted, all finished floor elevations shall be a minimum of two (2) feet above the ultimate 100-year flood elevations based on land use.

d. Drainage and Detention Easement (Above Ground Detention)

This plat is hereby adopted by the Owners and approved by the City of Lake Worth (Called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors and assigns: The area or areas shown on the plat as "Drainage and Detention Easement" shall remain accessible at all times and shall be maintained by Owners of the lot or lots that are traversed by, or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of the drainage facilities within the Drainage and Detentions Easement or for any damage to private property or person that results from conditions within the Drainage and Detention Easement. No obstruction to the natural flow of storm water run-off shall be permitted by construction of any within the Drainage and Detention Easement, unless approved by the City Manager and/or designee. Each property owner shall keep the portion Drainage and Detention Easement traversing or adjacent to their property clean and free of debris, silt, and any materials which would result in unsanitary conditions or obstruct the flow of water. The City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner. The City shall not be held liable for any damages of any nature resulting from failure of facilities within the Drainage and Detention Easement. The City shall have the right to enter upon the Drainage and Detention Easement at any point, or points, to investigate, survey, construct and maintain any drainage facility deemed necessary for drainage purposes. The minimum finished floor elevation for each lot shall be as shown on the plat.

APPENDIX A –PLAN AND PLAT REQUIREMENTS

e. Drainage and Detention Easement (Underground Detention)

This plat is hereby adopted by the Owners and approved by the City of Lake Worth (Called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors and assigns:

the area or areas shown on the plat is called "Drainage and Detention Easement shall remain accessible at all times and shall be maintained by the Owners of the lot or lots that are traversed by, or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of the drainage facilities within the Drainage and Detention Easement or for any damage to private property or person that results from conditions within the Drainage and Detention Easement. No obstruction to the natural flow of storm water run-off shall be permitted by construction of any type within the Drainage and Detention Easement, unless approved by the City Manager and/or designee. Each property owner shall keep the Drainage and Detention Easement traversing or adjacent to their property clean and free of debris, silt, and any materials that would result in unsanitary conditions or obstruct the flow of water, The City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner. The City shall not be held liable for any damages of any nature resulting from the failure of facilities within the Drainage and Detention Easement. The City shall have the right to enter upon the Drainage and Detention Easement at any point, or points, to investigate, survey or construct and maintain any drainage facility deemed necessary for drainage purposes.

f. Fire lanes (to be used if applicable):

That the undersigned does hereby covenant and agree that he (they) shall construct upon the fire lane easements, as dedicated and shown hereon, a hard surface in accordance with the City of Lake Worth paving standards for fire lanes, and that he (they) shall maintain the same in a state of good repair at all times and keep the same free and clear of any structures, fences, trees, shrubs, or other improvements or obstruction, including but not limited to the parking of motor vehicles, trailers, boats or other impediments to the accessibility of fire apparatus. The maintenance of paving on the fire lane easements is the responsibility of the owner, and the owner shall post and maintain appropriate signs in conspicuous places along such fire lanes, stating "Fire Lane, No Parking." The local law enforcement agency(s) is hereby authorized to enforce parking regulations within the fire lanes, and to cause such fire lanes and utility easements to be maintained free and unobstructed at all times for the Fire Department and emergency use.

g. Floodway Easement (to be used if applicable):

No construction or filling, without the written approval of the City of Lake Worth shall be allowed within a floodway easement. Then only after detailed engineering plans and studies show that no flooding will result; that no obstruction to the natural flow of water will result; and subject to all property owners of the property affected by such construction becoming a part of the request may any construction take place. Where construction

APPENDIX A –PLAN AND PLAT REQUIREMENTS

is permitted, all finished floor elevations shall be a minimum of two (2) feet above the ultimate 100-year flood elevations based on land use.

h. Public Open Space Easement (POSE)/Visibility Triangle:

No structure, object, or plant of any type may obstruct vision from a height of 30 inches to a height of ten (10) feet above the top of curb, including, but not limited to buildings, fences, walks, signs, trees, shrubs, cars, trucks, etc., in the public open space easement as shown on the plat.

i. Utility easements (to be used if applicable):

Any public utility, including the City of Lake Worth, shall have the right to move and keep moved all or part of any building, fences, trees, shrubs, other growths or improvements which in any way endanger or interfere with the construction, maintenance, or efficiency of its respective systems on any of the easements shown on the plat; and any public utility, including the City of Lake Worth, shall have the right at all times of ingress and egress to and from and upon said easements for the purpose of construction, reconstruction, inspection, patrolling, maintaining and adding to or removing all or part of its respective systems without the necessity at any time of procuring the permission of anyone.

28. The following shall be included on the plat. Examples are provided herein:

- a. Owner's Dedication. An executed and notarized statement that the applicant legally owns the area as described in the legal description.
- b. Legal Description. An accurate legal description, such as by metes and bounds, by bearings and distances (including necessary curve and line data), accurate to the nearest one-hundredth of a foot, for all boundary, block and lot lines, with descriptions correlated to a permanent survey monument.
- c. Surveyor's Certificate: A statement, signed and sealed, certifying the plat was prepared by a Registered Professional Land Surveyor (RPLS) in the State of Texas.

29. Plat approval: Approval date and signatures of the Chair of the Commission and the Mayor of the City of Lake Worth, attested by the City Secretary signifying approval of the plat.

APPENDIX A –PLAN AND PLAT REQUIREMENTS

B. FINAL PLAT

The final plat shall include only that portion of the approved preliminary plat which the subdivider proposes to record and then develop, provided, however, that such portion conforms to all the requirements of these criteria and specifications.

All final plats shall be submitted in a legible format and drawn to a minimum scale of one inch equals one hundred feet or larger (1" =100'). The required copies or prints, as specified on the application shall, at a minimum, show the following information:

1. All information that is required for a preliminary plat shall be shown on the final plat, except physical features, such as topography, buildings, utility structures, water bodies and tree cover.
2. The final plat shall contain a title block in the lower right corner of the page. The words "Final Plat", the name of the addition or subdivision, the name of the owners, their address and telephone number, and the address and legal description of the project shall be shown in the title block.
3. Provide a place for the County Clerk of Tarrant County to stamp the date and location where the plat will be filed in the lower right-hand corner of all sheets of the plat drawing near the title block:
4. Instrument No. _____, Date _____ in the lower right-hand corner of all sheets of the plat drawing near the title block.
5. The final plat shall provide the name of the engineer/surveyor, date of preparation and date of revisions. The plat shall be signed and sealed.
6. All aspects of the final plat shall conform to the standards of Tarrant County for plats with respect to clarity, sheet size, lettering size and reproducibility, and the county's formatting requirements for same shall control if different from this ordinance. It is the applicant's responsibility to be familiar with the county's standards for filing plats and to comply with same.
7. The exterior boundary of the subdivision shall be indicated by a distinct bold solid line and corner markers by individual symbols.
8. Special Notes regarding Flood Plain Restrictions:
 - a. If a flood plain easement is required or proposed, the following full statement of restriction shall be placed in the dedication instrument on the subdivision plat.

FLOOD PLAIN RESTRICTION

No construction shall be allowed within the flood plain easement, without the prior written approval of the City. In order to secure approval, detailed engineering plans and/or studies for the improvements, satisfactory to the City, shall be prepared and submitted by the party or parties wishing to construct within the flood plain. Where construction is permitted, all finished floor elevations shall be a minimum of two (2) feet above the 100-year ultimate floodplain. Any construction approved within the flood plain shall not increase the 100-year design frequency storm elevation.

- b. The following statement shall be required when an unlined improved drainage channel, in a drainage easement, or when a floodplain easement is proposed.

APPENDIX A –PLAN AND PLAT REQUIREMENTS

FLOODPLAIN/DRAINAGEWAY MAINTENANCE

The existing creeks, streams, or ponds (drainage ways) traversing along or across portions of this addition, will remain unobstructed at all times and will be maintained by the individual lot owners, homeowner's association or approved maintenance entity whose lots are traversed by or adjacent to the drainage ways. The City of Lake Worth will not be responsible for the maintenance, erosion control, and/or operation of said drainage ways. Property owners shall keep the adjacent drainage ways traversing their property clean and free of debris, silt or other substances which would result in unsanitary conditions, and the City shall have the right of entry for the purpose of inspecting the maintenance work performed by the property owners. The drainage ways are occasionally subject to storm water overflow and/or bank erosion that cannot be defined. The City of Lake Worth shall not be liable for any damages resulting from the occurrence of these phenomena, nor the failure of any structure(s) within the drainage ways. The drainage way crossing each lot is contained within the flood plain easement lines as shown on the plat.

- c. If a floodway easement is required or proposed, the following full statement of restriction shall be placed in the dedication instrument of the subdivision plat.

FLOODWAY RESTRICTION

No encroachment, including fill, new construction or improvements shall be allowed within the floodway easement.

- a. The following shall be included on the plat. Examples are provided herein:
 - a. Owner's Dedication. An executed and notarized statement that the applicant legally owns the area as described in the legal description.
 - b. Legal Description - An accurate legal description, such as by metes and bounds, by bearings and distances (including necessary curve and line data), accurate to the nearest one-hundredth of a foot, for all boundary, block and lot lines, with descriptions correlated to a permanent survey monument.
 - c. Surveyor's Certificate: A statement, signed and sealed, certifying the plat was prepared by a Registered Professional Land Surveyor (RPLS) licensed in the State of Texas.
- b. Plat approval: Date of approval and signatures of the Chair of the Commission and the Mayor of the City of Lake Worth, attested by the City Secretary signifying approval of the plat.

C. MINOR PLAT

All minor plats shall be submitted on sheets no larger than eighteen inches by twenty-four inches (18" x 24") and to a scale of not less than one hundred feet to the inch (1" = 100') or larger. Where more than one sheet is required to encompass the subdivision, eighteen inches by twenty-four inches (18" x 24") shall be filed showing the entire subdivision together with the complete dedication, attests, dates, titles and seals, on one (1) sheet.

The face of the minor plat shall include all the requirements for a final plat.

D. REPLAT

All replats shall be submitted on sheets no larger than eighteen inches by twenty-four inches (18" x 24") and to a scale of not less than one hundred feet to the inch (1" = 100') or larger. Where more than one sheet is required to encompass the subdivision, eighteen inches by twenty-four inches (18"x24") shall be filed showing the entire subdivision together with the complete dedication, attests, dates, titles and seals, on one (1) sheet.

The face of the replat shall include all the requirements for a final plat, and the items below:

Any replat which adds or deletes lots must include the original subdivision boundaries.

The title on the face of the plat shall identify the document as

Lot No(s). _____, being a replat of Lots _____ of Block _____
of the _____ Subdivision.

E. AMENDING PLAT

All amending plats shall be submitted on sheets no larger than eighteen inches by twenty-four inches (18" x 24") and to a scale of not less than one hundred feet to the inch (1" = 100') or larger. Where more than one sheet is required to encompass the subdivision, eighteen inches by twenty-four inches (18" x 24") shall be filed showing the entire subdivision together with the complete dedication, attests, dates, titles and seals, on one (1) sheet.

The face of the amending shall include all the requirements for a final plat.

F. VACATING PLAT

All vacating plats shall be submitted on sheets no larger than eighteen inches by twenty-four inches (18" x 24") and to a scale of not less than one hundred feet to the inch (1" = 100') or larger. Where more than one sheet is required to encompass the subdivision, eighteen inches by twenty-four inches (18" x 24") shall be filed showing the entire subdivision together with the complete dedication, attests, dates, titles and seals, on one (1) sheet.

The face of the vacating plat shall include all the requirements for a final plat.

APPENDIX B

To Chapter 10,
Subdivision Regulations

DESIGN CRITERIA
AND
CONSTRUCTION STANDARDS

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APPENDIX B – DESIGN CRITERIA AND CONSTRUCTION STANDARDS

CHAPTER 1. GENERAL TERMS AND CONDITIONS

A. Purpose

The following Design Criteria and Construction Standards are intended to provide the minimum specifications for design of development with the City and will primarily be used by the design engineer. There may be special circumstances which dictate requirements in excess of those outlined. In most cases, these exceptions will be requested by City staff during the review process and will also be apparent to the design engineer while preparing the Construction Plans and Specifications for the subdivision.

B. Compliance Required

No final plat shall be approved by the City Council, and no completed improvements shall be accepted by the City or its representatives, unless and until such improvements conform to the Lake Worth Design Criteria and Construction Standards, and all other applicable standards, as prescribed by the City of Lake Worth. All improvements, including, but not limited to streets, alleys, sidewalks, parking lots, drainage ways, water and sewer lines and improvements shall be designed, placed and constructed in accordance with the Design Criteria and Construction Standards herein.

Design and construction of all public improvements shall conform to the following:

1. City of Lake Worth Subdivision Regulations as specified in Chapter 10, Subdivision of the Lake Wroth Code of Ordinances,
2. City of Lake Worth Zoning Regulations as specified in Chapter 14, Zoning of the Lake Worth Code of Ordinances, and
3. North Central Texas Council of Government Standard Specification for Public Works Construction.

The latest version of "Standard Specifications for Public Works Construction, North Central Texas" of the North Central Texas Council of Governments (NCTCOG), with all amendments thereto, shall govern and shall constitute the technical specifications for all improvements to be dedicated to the City of Lake Worth except as amended by the Lake Worth Design Criteria and Construction Standards and is made a part thereof, but is not physically bound within this document.

4. Any and all applicable, as may be amended, Federal law and US Federal regulatory agencies, including, but not limited to Federal Emergency Management Agency (FEMA) and United States Army Core of Engineers (USACE).

C. Construction by Developer

1. The improvements, whether on-site or off-site, including streets, water lines, sanitary sewer lines, drainage, sidewalks, traffic signals (if warranted by a developer funded traffic engineering study), street lighting (by arrangement by the developer with the electric company), street signs (by payment to the City for installation cost), and all other required improvements for the subdivision, shall be installed by the developer at no cost to the City, unless otherwise provided herein, and

2. Shall be in accordance with the subdivision regulations and all specifications and regulations of the City, and the engineering plans as approved by the City Manager or designee or his agent.
3. The developer shall submit three (3) sets of final-approved engineering plans prior to construction.

D. Construction Contractor

1. The developer shall employ a construction contractor that meets the following:
 - a. City and statutory requirements for being bonded and insured;
 - b. Acceptable prior work experience approved by the City Manager or designee,
 - c. Has financial resources which would enable the contractor to be capable of performing the work; and
 - d. Is qualified in all respects to bid on public projects and do work on public streets.
2. The developer shall notify the City Manager or designee of the contractor selected and provide a copy of the signed contract bid, along with all supporting documents.
3. The improvements shall be installed within all applicable time frames agreed to by the City.

E. Civil Engineer

The developer shall employ a civil engineer licensed to practice in the State of Texas for the design and preparation of the plans and specifications (hereinafter referred to as the "engineering plans") for the construction of the improvements. The engineering plans shall include any engineering studies, plan/profile sheets, and other construction documents for the improvements.

F. Preconstruction Conference

Construction of the improvements shall not be initiated until a pre-construction conference has been conducted regarding the proposed construction. Further, the developer will give a minimum of 48 hours written notice to the City Manager or designee, indicating the time and date that construction will commence.

G. Inspection by the City

1. The developer shall not backfill or cover any sanitary sewer, storm drain, or water pipes unless a City inspector is present and gives his consent to proceed.
2. Further, no service lines of water or sewer mains shall be connected to any building until the water and sewer mains have been completed, inspected, and accepted by the City.
3. The developer will reimburse the City for overtime worked by City personnel in performing project inspection.

H. Review by City Manager or designee

Construction of all public improvements shall be subject to routine review by the City Manager or designee to evaluate conformance with the engineering plans,

project specifications, and City standards. However, such review and evaluation shall not relieve the developer, its engineer, and/or agent of responsibility for the design, construction, and maintenance of the improvements. Refer to definition of City Engineer in Article 10.200, Definitions.

I. Final Walk Through

A final walk through is required. A punch list will be prepared by the City and all items shall be addressed prior to final acceptance. A final walk through will not be scheduled until the City performs an initial review of the site/development/improvements to ensure that the majority of the items are complete.

J. As-Built Plans or Record Drawings

Upon completion of construction of the improvements that are required by this contract and the subdivision regulations, the developer shall deliver to the City the following items of as-built construction plans for the improvements constructed or engineered by the developer.

1. One (1) set of as-built plans;
2. One (1) electronic version of all sheets in plans, and
3. One (1) set of as-built reproducible plans.

K. Construction Bonds

Prior to initiating any construction of the improvements, the developer's contractors shall provide the City with one (1) original and one (1) quality copy of a construction and maintenance guarantees in accordance with Article 10.400 of Chapter 10, Subdivision Regulations and shall name the City (or developer as noted) as beneficiary.

L. Where specific topographic or other conditions make variance from these standards necessary in order to achieve the best overall design, these standards may be modified by the City Manager, upon recommendation from the Director of Public Works and/or City Manager or designee.

M. Where the appropriate use of the neighboring property will not be substantially injured, the City Manager, after consultation with the City Manager or designee, may in specific cases, and subject to appropriate conditions and safeguards, authorize waivers to the specifications herein in order to permit reasonable development and improvement of property where literal enforcement of these values would result in an unnecessary hardship. Waivers require approval by the City Council. More information is provided in Chapter 3 of the Subdivision Regulations.

N. Interruption of Services.

1. The developer and/or a representative of the developer shall provide a minimum of 72-hour notice to the City with required plans and/or documentation prior to interruption of service, such as utilities and road closure. The City may, at its discretion, require a meeting prior to disruption of services.

2. In the event that existing utility service is to be interrupted during construction, official notice as well as meeting with the City and all other applicable parties shall be held 72 hours prior to interruption.

APPENDIX B – DESIGN CRITERIA AND CONSTRUCTION STANDARDS

CHAPTER 2. REQUIREMENTS FOR PLAN DOCUMENTS

A. Plan Set Order

A civil construction plan submittal shall meet the following general sheet requirements and order.

1. Cover Sheet with Vicinity Map
2. General Notes
3. Final Plat
4. Site Layout
5. Dimensional Control Plan
6. Paving Plan and Profile
7. Grading Plan
8. Drainage Area Map
9. Storm Sewer Layout
10. Storm Sewer Plan and Profile
11. Channel and/or Culvert Plan and Profile
12. Retaining Wall
13. Water Layout
14. Water Plan and Profile
15. Sanitary Sewer Layout
16. Sanitary Sewer Plan and Profile
17. Storm Water Pollution Prevention Plan (Erosion Control Plan)
18. Traffic Control Plan and Details (including pavement markings and signage)
19. Standard Construction Details (Appendix B-6)

B. Sheet Size

1. The Construction Plans shall be submitted on standard 22" x 34" sheets or on a size as specified by City Manager or designee.
2. Half-size plans may be required for inspection(s) or as specified by City Manager or designee.

C. Sheet Layout

Each sheet of the Construction Plans shall include the following:

1. Date
2. North arrow
3. Scale
(Scale shall be 1 inch equal 20, 40 or 50 feet horizontally and 1 inch equal 2, 4, or 5, feet vertically.)

4. Benchmark description to sea level datum
5. Seal and signature of the Licensed Professional Engineer in the State of Texas who prepared the plans
6. Title block, including space for the notation of revisions
(This space is to be completed with each revision to the plan sheet and shall clearly note the nature of the revision and the date that the revision was made.)

APPENDIX B – DESIGN CRITERIA AND CONSTRUCTION STANDARDS

CHAPTER 3. DESIGN STANDARDS – SITE DEVELOPMENT

City policy regarding the minimum design for subdivisions and the construction requirements for public infrastructure installed with development is specified herein, Article 10.400, Site Development Procedures – Public Improvements, of Chapter 14, Subdivision Regulations, of the City Code of Ordinances, and North Central Texas Council of Government Standard Specification for Public Works Construction, as amended.

SECTION 3.1. Site Grading

The building pad and foundation elevation shall be graded to the most recent City adopted Building Code Standards and conform with applicable restrictions in the floodplain.

SECTION 3.2. Monument Markers

A. Permanent Survey Markers

All boundary corners, block corners, etc., as established in the process of creating a subdivision plat shall comply with the Texas Board of Professional Land Surveying Practices Act and General Rules of Procedures and Practices, (663.17 Monumentation).

B. SPC Coordinates

A minimum of two (2) monuments at prominent locations (block corners, boundary corners, etc.) within a subdivision shall have Texas North Central Zone (4202) State Plane Coordinates (SPC) in U.S. Survey Feet noted on the subdivision plat. The Texas North Central Zone (4202) State Plane Coordinate (SPC) shown on the subdivision plat shall have the appropriate metadata listed.

C. Elevation Data

A minimum of two (2) monuments at prominent locations (block corners, boundary corners, etc.) within a subdivision of which require minimum finished floor elevations on all or part of the lots shall have the mean sea level elevations noted on the subdivision plat. The mean sea level elevations shown on the subdivision plat shall have the appropriate metadata listed.

D. Lot Markers

1. Lot markers shall be iron pins not less than one-half inch (1/2") in diameter and no less than 18 inches long and shall be set flush with the ground at each lot corner.
2. All lot corners shall be set prior to the acceptance of public improvements and shall be marked in a way that is traceable to the responsible registrant or associated employer.

SECTION 3.3. Easements

A. Utility Easements

1. Where not adjacent to a public right-of-way, easements at least 15 feet wide for utility construction, service, and maintenance shall be provided where necessary in locations approved by the City Council.

2. Easements at least 15 feet wide for utility construction, service, and maintenance shall be provided for lots, which have frontage along state highways.
3. Easements of at least ten (10) feet in width shall be provided on each side and rear lot lines, where necessary, for utilities such as electric, telephone, and gas.
4. Easements having greater width dimensions may also be required along or across lots where engineering design or special conditions make it necessary for the installation of utilities outside public rights-of-way.
5. The following statement of restrictions shall be placed in the dedication instrument:

Utility Easement Restriction

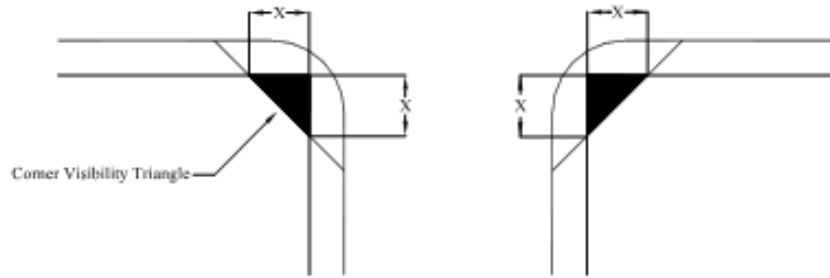
Any public utility, including the City of Lake Worth, shall have the right to move and keep moved all or part of any building, fence, tree, shrub, or growths or improvements which in any way endanger or interfere with the construction, maintenance, or efficiency of its respective systems on any of the easements shown on the plat; and any public utility, including the City of Lake Worth, shall have the right at all times of ingress and egress to and from and upon said easements for the purpose of construction, reconstruction, inspection, patrolling, maintaining, and adding to or removing all or part of its respective systems without the necessity at any time of procuring the permission of anyone.

B. Fire Lane Easement

1. Emergency access and fire lane easements shall be provided in locations required by the Chief of the Lake Worth Fire Department.
2. These easements shall have a minimum width of 24 feet and a minimum height clearance of 15 feet.
3. Any emergency access and fire lane easement more than 100 feet in length shall either connect at each end to a dedicated public street or be provided with a cul-de-sac having a minimum diameter of 80 feet with an additional distance of ten (10) feet on all sides clear of permanent structures.
4. These easements shall be constructed in accordance with the criteria and standards herein for concrete street sections as shown in the Construction Details (Appendix B-6) and approved by the City Manager and/or designee.
5. These easements shall be maintained by means of a Homeowner's Association, the property owner granting the easement or other means, as approved by the City.

C. Public Open Space Easement (POSE)/Sight Visibility

1. The POSE shall be shown on the plat and/or plan as follows:



2. A triangular POSE is required on corner lots at the intersection of two (2) streets in accordance with the following table (in feet):

	Alley	Local	Collector	Arterial	Freeway
Alley	25 ft x 25 ft	15 ft x 15 ft	--	--	--
Local	20 ft x 20 ft	20 ft x 20 ft	25 ft x 25 ft	25 ft x 25 ft	--
Collector	--	20 ft x 20 ft	25 ft x 25 ft	25 ft x 25 ft	--
Arterial	--	25 ft x 25 ft	25 ft x 25 ft	45 ft x 45 ft	--
Freeway	--	--	--	*	*

-- = Not permitted

* As required by TXDOT

Note: The above table is provided by guidance only.

3. Visibility triangles shall meet American Association of State Highway and Transportation Officials (AASHTO) requirements.
4. The City will review each site layout to review sight distances, clearances, stopping sight distances, and obstructions.
5. The following full statement of restrictions shall be placed in the dedication instrument or on the face of the plat:

Public Open Space Easement

No structure, object, or plant of any type may obstruct vision from a height of 30 inches to a height of ten (10) feet above the top of the curb, including, but not limited to buildings, fences, walks, signs, trees, shrubs, cars, trucks, etc., in the public open space easement shown on the plat.

D. Drainage and Detention Easements

1. Floodway easements shall be provided along natural drainageways and lakes or reservoirs. Floodway easements shall encompass all areas beneath the water surface elevation of the base flood, plus such additional width as may be required to provide ingress and egress to allow maintenance of the banks and for the protection of adjacent property, as determined and required by the City Manager or designee.
2. The following applicable statement(s) of restriction(s) shall be placed in the dedication instrument of the subdivision plat:

Drainage and Detention Easement (Above Ground Detention)

This plat is hereby adopted by the Owners and approved by the City of Lake Worth (Called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors and assigns: The area or areas shown on the plat as "Drainage and Detention Easement" shall remain accessible at all times and shall be maintained by Owners of the lot or lots that are traversed by, or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of the drainage facilities within the Drainage and Detentions Easement or for any damage to private property or person that results from conditions within the Drainage and Detention Easement. No obstruction to the natural flow of storm water run-off shall be permitted by construction of any within the Drainage and Detention Easement, unless approved by the City Manager and/or designee. Each property owner shall keep the portion Drainage and Detention Easement traversing or adjacent to their property clean and free of debris, silt, and any materials which would result in unsanitary conditions or obstruct the flow of water. The City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner. The City shall not be held liable for any damages of any nature resulting from failure of facilities within the Drainage and Detention Easement. The City shall have the right to enter upon the Drainage and Detention Easement at any point, or points, to investigate, survey, construct and maintain any drainage facility deemed necessary for drainage purposes. The minimum finished floor elevation for each lot shall be as shown on the plat.

Drainage and Detention Easement (Underground Detention)

This plat is hereby adopted by the Owners and approved by the City of Lake Worth (Called "City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors and assigns:

The area or areas shown on the plat is called "Drainage and Detention Easement shall remain accessible at all times and shall be maintained by the Owners of the lot or lots that are traversed by, or adjacent to the Drainage and Detention Easement. The City will not be responsible for the maintenance and operation of the drainage facilities within the Drainage and Detention Easement or for any damage to private property or person that results from conditions within the Drainage and Detention Easement. No obstruction to the natural flow of storm water run-off shall be permitted by construction of any type within the Drainage and Detention Easement, unless approved by the City Manager and/or designee. Each property owner shall keep the Drainage and Detention Easement traversing or adjacent to their property clean and free of debris, silt, and any materials that would result in unsanitary conditions or obstruct the flow of water, The City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner. The City shall not be held liable for any damages of any nature resulting from the failure of facilities within the Drainage and Detention Easement. The City shall have the right to enter upon the Drainage and Detention Easement at any

point, or points, to investigate, survey or construct and maintain any drainage facility deemed necessary for drainage purposes.

3. Maintenance Required

- a. Existing creeks, lakes, reservoirs, or drainage channels traversing along or across portions of this addition, will remain as an open channel at all times and will be maintained by the individual owners of the lot or lots that are traversed by or adjacent to the drainage courses along or across said lots.
- b. The City of Lake Worth will not be responsible for the maintenance and operation of said drainageways or for the control of erosion.
- c. Each property owner shall keep the natural drainage channels traversing or adjacent to his property clean and free of debris, silt, or any substance which would result in unsanitary conditions and the City shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the property owner to alleviate any undesirable conditions which may occur.

4. The natural drainage channel, as in the case of all-natural drainage channels, are subject to storm water overflow and natural bank erosion to an extent that cannot be definitely defined. The City of Lake Worth shall not be liable for damages of any nature resulting from the occurrence of these natural phenomena, nor resulting from a failure of any structure(s) within the natural drainage channels.

SECTION 3.4. Lots

The size, shape and orientation of lots shall be appropriate to the type and location of the proposed development.

A. Lot Design

1. Lot design shall provide adequate width, depth, and shape to provide open area, and to be appropriate for the location of the subdivision for the type of development and use contemplated, and in accordance with the Zoning Ordinance.
2. No lot shall have less width at the building line than is required by the Zoning Ordinance.
3. All side lines of lots shall be at approximately right angles to straight street lines and radial to curved street lines except where a variation to this rule will provide a better street and lot layout.

B. Street Frontage Required

1. Every lot shall have frontage on, and access to, a public street in compliance with the Zoning Ordinance. Regulations for access and driveways from lots onto streets is provided herein.
2. Double frontage and reverse frontage lots should be avoided except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of topography and orientation.

3. Where single family or duplex uses abut an existing or proposed Arterial or Collector roadway, the plat or dedication instrument shall provide:
 - a. Lots with property lines along the roadway shall include a statement restricting access to the Arterial or Collector; or
 - b. Lots with frontage on two (2) streets (aka reverse frontage) providing screening along the Arterial or Collector, and including a statement restricting access to the Arterial or Collector), or
 - c. Lots with screened rear alleys, or
 - d. Other treatment as may be necessary or required for adequate protection of adjoining properties, and as approved by the City Council after taking into consideration the proposed method of off-street parking and maneuvering which will restrict access to the Arterial or Collector.

C. Large Lots

1. Where the area is divided into larger lots than for required by the applicable zoning district and, in the opinion of the City, any or all of the tracts may be re-subdivided, the original subdivision shall be laid out such that the alignment of future street dedications may conform to the general street layout in the surrounding area and the Master Thoroughfare Plan map.
2. Larger lots shall be configured such that future subdivision conforms with the requirements of this ordinance and the minimum standards specified by the Zoning Ordinance.

SECTION 3.5. Building Lines

- A. The shorter dimension across a residential lot, adjacent to a street, shall designate the front yard orientation of the lot, unless otherwise specified on the face of the plat.
- B. Building lines for each lot shall be shown on the final plat and shall be consistent with the Zoning Ordinance.
- C. If a variance was granted, the date and case number of the variance shall also be listed on the face of the plat.

SECTION 3.6. Blocks

A. Block Width

The width of a block shall be considered to be the distance from property corner to property corner measured along the property line of the block face between intersecting streets, and shall be the side with one of the following criteria:

1. The block face with the least dimension, or
2. The block face with the fewest number of lots.

B. Block Length

1. The length of a block shall be considered to be the distance from property corner to property corner measured along the property line of the block face:
 - a. The block face with the greatest dimension, or
 - b. The block face with the greatest number of lots.
2. Where an existing plat or connection to existing streets controls, the block lengths shall not exceed 1,600 feet in length.
3. Where no existing plat or subdivision layout controls, the blocks shall a minimum of 500 feet and a maximum of 1,600 feet in length.
4. In cases where physical barriers or property ownership creates conditions where it is appropriate that these standards be varied, the length may be increased or decreased to meet the existing conditions having due regard for connecting streets, circulation of traffic and public safety as determined by the City Manager and/or designee(s).

C. Block Configuration

The length, width and shapes of blocks shall be determined with due regard to:

1. Provision of adequate building sites suitable to the type of use;
2. Zoning requirements for minimum lot size and dimensions;
3. Provision of adequate access and circulation;
4. Control and safety of street traffic; and
5. Limitations and/or opportunities of topography.

SECTION 3.7. Access

Provide vehicular and pedestrian access as follows:

A. Pedestrian Access.

1. When new development or redevelopment occurs on a platted lot within ¼ mile of a school, park or shopping center, the City Council may require a public walkway to be constructed to provide pedestrian access to the development.
2. Location. The access may be provided:
 - a. In the middle of the proposed subdivision block, or
 - b. Opposite a street that terminates between the streets at the ends of the block.
3. If required, the concrete walkway shall not be less than five (5) feet nor more than ten (10) feet in width, through the block from sidewalk to sidewalk, or curb to curb, or if no street, to the property line adjacent to school, park, or shopping center and shall meet barrier free requirements in accordance with ADA and Texas Accessibility Standards.

B. Vehicular Access to Subdivisions

1. Vehicular access to subdivisions shall be by means of a public street constructed to standards and specifications herein.

2. One- and Two-Family Subdivisions:
 - a. Subdivisions containing more than 30 one- or two-family dwelling units shall have a platted and constructed secondary ingress and egress to a public street.
 - b. Subdivisions with more than 30 but less than 40 one- or two-family dwelling units may be permitted with one (1) access point if a platted and constructed secondary entrance will connect to future development.
3. Multi-family developments of 100 dwelling units or more shall have a platted and constructed secondary ingress and egress to a public street.
4. Phased construction of any type of subdivision, including residential units, shall provide all residential units with a platted and constructed secondary entrance when more than 30 residential units are proposed in a single phase.

SECTION 3.8. Access Management

Joint- and cross-access easements/agreements promote connections between existing and new development and manage traffic flow between businesses along a corridor. The intent of the joint- and cross-access provisions is to limit access connections to arterials and collectors and to help meet the spacing guidelines between driveways in accordance with the TXDOT standards and the specifications herein.

- A. Joint and cross access shall be determined during the platting and/or permit process. The design of the joint access facilities must be agreed to by all the interested parties and all property owners involved and approved by the City Manager or designee.
- B. Types of Development
 1. Shared access does not apply to single-family residential development.
 2. Adjoining commercial or office properties and major traffic generators, e.g. shopping plazas, must provide a cross-access drive and accessible pedestrian connection (not necessarily in the same place) to allow circulation between adjoining properties. These connections must be accompanied by supporting public access easements.
 3. Public access easements and associated connections must be in place prior to issuance of a building permit for planned development and/or mixed-use development.
- C. Requirements
 1. Adjoining parcels with driveways that can reasonably be shared (as determined by the City Manager or designee) must share access points.
 2. The easement shall extend to the edges of the property lines of the development site under consideration.

3. If the easement is required, the physical connection must be built to said property lines. It must be visually obvious that abutting properties may tie in to the easement and connection in the future. Abutting properties must be required to continue the public access easement and connection as they develop or redevelop in accordance with the requirements of this policy.
4. The easement and connection may be provided to the front, side, or rear of the site or across the site where it connects to a public roadway.
5. If the public access easement is intended to function as a City street and not a driveway, it must be constructed to adopted street standards.

D. Filing Required

1. Property owners must record all necessary easements and agreements, including:
 2. Any easement allowing joint-access serving more than one (1) property,
 3. Any easement allowing cross-access to and from the adjacent properties,
 4. Any agreement to close driveways provided for access in the interim after construction of the joint access driveway(s) or public access easements system, and
 5. Any joint maintenance agreement defining maintenance responsibilities of property owners that share the joint-access driveway and cross-access system. The property owner must also agree to close any pre-existing curb cuts after the construction of both sides of a joint-access driveway.

E. Waiver of Requirement

Joint- and cross-access requirements may be waived when, in the judgement City Manager or designee, such a waiver is warranted based on the following:

1. Incompatible land uses,
2. Significant physical constraints, such as topography, and
3. Other unique site condition and/or determinant, as specified by City Manager.

SECTION 3.9. Driveways

A. Process and Applicability

1. Driveways shall be determined during the platting, site plan, and/or permit process.
2. Any driveway proposed to connect to TxDOT facilities must be permitted through TxDOT and a copy of the signed permit will be required prior to approval of construction plans and issuance of a building permit.

B. Number and Location

The number of driveways allowed per lot is limited according to functional street classification and the traffic volume generated by the development proposal. The number and location of driveways shall be located in accordance to the type of development and the street classification as specified on the Master Thoroughfare Plan map:

1. Residential Development
 - a. Local Street

One driveway is permitted per residential use/lot from local streets. Two driveways may be permitted if the lot width is greater than the minimum as specified for the zoning district and with approval by City Manager and/or designee.
 - b. Collector Street

Residential driveway access to Collector Streets will only be allowed when design conditions do not permit any other possibility as determined by the City Manager or designee.
 - c. Arterial and TXDOT Facilities

No new residential driveways may access Arterials or Freeways as identified on the Master Thoroughfare Plan map.
2. Non-residential Development
 - a. TXDOT Facilities
 - i. All driveways and access proposed to connect to a TXDOT facility shall conform to the current TXDOT Access Management Manual, TXDOT Roadway Design Manual and the adopted City Design Criteria and Construction Standards.
 - ii. Any driveway proposed to connect to TxDOT facilities must be permitted through TxDOT and a copy of the signed permit will be required prior to issuance of a building permit.
 - b. Arterials

Driveways off of arterial streets shall be located at an existing or proposed median opening. Median openings shall be planned such that driveways on opposite sides of an arterial street are served by the same median opening.
 - c. Collectors and Local Streets

If medians are proposed on collector, local or private streets, the separation between the driveway at the median opening and the next driveway shall be located to discourage drivers from attempting a wrong- direction entry or exit.
3. Additional driveways shall only be permitted in accordance to the following:
 - a. An approved traffic impact analysis (TIA), and/or
 - b. As a recommendation of a trip generation report.

4. Where a site is served by two (2) streets (corner lot), access shall be from the lesser of the two (2) streets, with the following permissible exceptions:
 - a. Infill development/redevelopment

A lot may be permitted to access the higher classified roadway if the lesser classified street serves exclusively as an entry point into an existing single-family subdivision. This provision is made to acknowledge existing travel patterns.
 - b. New development

Where connectivity to neighborhood services is important, consideration shall be given to design such that neighborhood uses access the lesser classified street.

C. Design of Driveways and Approaches

1. General Design
 - a. The driveway shall begin at the street curb and extend to the right-of-way line or to a point ten (10) feet from the face of curb, whichever is greater.
 - b. The angle of the driveway approach with the curb line shall be 90 degrees.
 - c. Driveways shall be kept at a minimum of five (5) feet away from obstructions such as street light poles, fire hydrants, traffic signal poles, etc.
2. Width
 - a. Residential driveway approaches shall not be less than 11 feet in width, nor more than 18 feet wide measured at the property line.
 - b. Commercial and industrial driveway approaches shall not be less than 24 feet in width, nor more than 35 feet wide measured at the property line.
3. Parking
 - a. Residential driveways shall provide a minimum of 18 feet between the property line and any garage door, gate, or other obstruction to provide for safe parking or stack space out of the public right-of-way and completely on the property.
 - b. Nonresidential driveway approaches shall not be constructed or designed for parking of vehicles or for use as angle parking and shall be located entirely within the frontage of the premises they serve except for driveways serving joint and/or cross access.
4. Construction Standards
 - a. The driveway shall be 6-inch thick, Class A (per NCTCOG) concrete, reinforced with #3 steel bars on 18-inch centers each way.
 - b. The drive approach at the right-of-way line, with a normal ten (10) foot parkway, shall be 0.2 feet higher than the top of curb as per the

City Standard Details. The elevation at this location may be lower provided that barrier free ramps are provided to bring the sidewalk down to the driveway grade.

- c. Driveways shall be graded at a 2% maximum longitudinal slope in areas where sidewalks cross, so that the sidewalk crossing is at a 2% maximum cross slope.
- d. Radius
 - i. Residential driveways shall be constructed with return curbs having a rolled face disappearing at the sidewalk and joining the street curb with a minimum 5-foot radius and a maximum 10-foot radius.
 - ii. Commercial and industrial driveways shall have a minimum 25-foot radius and a maximum 30-foot radius.

D. Connection Spacing

1. Measurement

- a. Driveway connection spacing shall be defined as the distance between connections or between driveways and roadways.
- b. Spacing is measured from the closest edge of pavement of the first connection to the closest edge of pavement of the second connection along the edge of the traveled roadway.

2. The following table details the minimum connection spacing criteria along Collector and Arterial roadways.

POSTED SPEED (mph)	MINIMUM SPACING (between driveways)
≤ 30	200 feet
35	250 feet
40	305 feet
45	360 feet
≥ 50	425 feet

- 3. Spacing shall conform to the most current TXDOT Manual Access Management Manual.
- 4. Deviation from these guidelines will be considered only for cases where not granting the deviation would deny reasonable access to the property.

SECTION 3.10. Off-Street Parking

The following outlines the minimum construction standards for off-street parking:

- A. Parking lots shall be constructed of a minimum of 3,600 pounds per square inch (psi) reinforced concrete with a minimum thickness of six (6) inches or four (4) inches of Type “B” and 2 inches of type “D” HMA.

- B. The subgrade thickness and content shall be determined from a geotechnical report sealed by a Licensed Professional Engineer in the State of Texas provided by the Developer.
- C. Standard curb and gutter as shown in Construction Standards shall be placed around all landscaping areas and the external boundary of the parking lot.
- D. All off-street parking areas shall be striped in accordance with the latest version of the Manual for a Traffic Control Devices (MUTCD) published by the Texas Department of Transportation.
- E. The following minimum dimensions apply for off-street parking:

Parking Angle	Stall Width	Stall Length	Maneuvering Space
90 degrees	9 feet	18 feet	24 feet
60 degrees	9 feet	18 feet	20 feet
45 degrees	9 feet	18 feet	18 feet

CHAPTER 4. DESIGN STANDARDS – PUBLIC INFRASTRUCTURE

SECTION 4.1. General Requirements for Public Infrastructure and Utilities

- A. All public utilities and infrastructure shall be designed and constructed in accordance with the most current adopted City regulations, technical specifications and standard details.
 - 1. Public facilities typically located within the public right-of-way include sidewalks, driveways, street lights, street signs, streets and alleys.
 - 2. Public utilities typically located within the public right-of-way include electric, water, sanitary sewer, storm sewer, telephone and cable services.
- B. All subdivision plats and engineering plans shall provide location and design of public utilities prepared in accordance to franchise requirements and the adopted standards herein.
- C. All distribution lines, cables, etc. for utilities other than those specified below shall be installed below ground within the subdivision.
- D. Additional utility easements may be required beyond the right-of-way based on the design of the subdivision.
- E. Transmission lines or major cables to provide utilities such as electric, telephone, and cable television to the area as a whole may be located above ground on the perimeter of the subdivision being served. The installation of these utilities shall conform to commonly accepted construction standards and be subject to review by the City Manager and/or designee.

SECTION 4.2. Sidewalks

- A. Purpose

Proposed sidewalks shall provide safe and convenient pedestrian circulation and shall be properly related to the Comprehensive Plan and the Master Thoroughfare Plan.
- B. General
 - 1. Sidewalks shall be constructed for all lots adjoining dedicated streets, along major thoroughfares where lots do not adjoin the street, across power line easements, and in other areas where pedestrian walkways are necessary.
 - 2. Every new subdivision, or re-subdivision, shall be required to install sidewalks, with appropriate barrier free ramps, within the public street right-of-way.
 - a. All sidewalks shall conform to the latest ADA and Texas Accessibility Standards (TAS) requirements.
 - b. Barrier free ramps shall be provided for access across streets per the Design Criteria and Construction Standards.
 - 3. Sidewalk construction may be delayed until development of lots but must be constructed for each lot prior to completion of any primary structure. In locations not adjacent to lots and across bridges and

culverts, the sidewalk shall be constructed with the other improvements to the subdivision.

4. Required for Certificate of Occupancy

The City may withhold a Certificate of Occupancy for a commercial use and final inspection approval for a residential structure if sidewalks are not properly installed, inspected and accepted by the City Manager and/or designee.

5. Sidewalks shall be constructed in accordance to detail included herein.

At a minimum, sidewalks shall be constructed of Class A (per Item 303 of NCTCOG) concrete reinforced with #3 reinforcing steel at 18-inch centers each way and shall have a width of not less than five (5) feet and a minimum thickness of four (4) inches.

SECTION 4.3. Street Lights

A Street Lighting Plan shall be required by the City as a part of the plat application process. Street lights are a combination of poles, fixtures, and systems owned and maintained by the TXDOT, ONCOR Electric and the City.

A. Poles

1. Street light poles shall be installed within the parkway between the back of curb and the sidewalk at the property line.
2. Poles must be approved by the City or by a public electric utility holding a City franchise and by the City Manager and/or designee.
3. Poles shall be contracted and paid for by the developer during the construction phase of the development and before building permits are issued.
4. Poles not purchased through a public electric utility holding a City franchise, shall be certified by a Licensed Professional Engineer in the State of Texas as meeting the specifications as required by a public utility company holding a City franchise, and shall be approved by the City Manager and/or designee prior to purchase.

B. Location

The location of street lights shall be as follows:

1. At all intersections;
2. Where a new street intersects an existing street;
3. In proximity to fire hydrants, whenever possible;
4. Every 300 feet or mid-block, whichever is the shortest distance;
5. If more than one (1) mid-block street light is required, spacing of installed street lights shall create an equal balance of light throughout the entire block length; and/or
6. At the end of the cul-de-sac block if the street is 400 feet or longer.

C. Illumination

Street light illumination levels shall conform to the agreement with ONCOR, and the AASHTO Roadway Lighting Design Guide, as amended. LED lighting is preferred.

SECTION 4.4. Street Names and Signs

- A. Street Names
 - 1. New street names shall not duplicate or cause confusion with the names of existing streets.
 - 2. New streets which are an extension of existing streets shall bear the names of existing streets.
- B. Street name signs shall be City approved. The developer shall furnish and install signs at all intersections within or abutting the subdivision in accordance with the regulations herein.

SECTION 4.5. Traffic Control Signs

The following signs are the minimum required to be shown on the Signage Plan and installed within a subdivision, as applicable:

- A. Stop signs,
- B. Street name signs,
- C. Speed limit signs,
- D. Slow children at play signs,
- E. Weight limit 6 tons signs, and
- F. Other as determined by the layout of the development.

SECTION 4.6. General Street Design

- A. Purpose

Proposed streets shall provide a safe, convenient and functional system for vehicular, bicycle, and pedestrian circulation and shall be properly related to the Master Thoroughfare Plan and Comprehensive Plan and shall be appropriate for the particular traffic characteristics of each proposed subdivision or development.
- B. Conform to Master Thoroughfare Plan

Proposed streets shall provide a safe, convenient and functional system for traffic circulation and shall be properly related to the adopted Street Classification design criteria included in the Master Thoroughfare Plan.

 - 1. The arrangement, character, extent and location of all streets shall be considered in their relation to:
 - a. Existing and planned streets or driveways,
 - b. Topographical conditions,
 - c. Drainage constraints,
 - d. Public safety, and
 - e. Existing and planned land use(s).

2. When a street is not shown on the Master Thoroughfare Plan, the arrangement of streets in a subdivision shall:
 - a. Provide for continuation or appropriate projection of existing streets in surrounding areas;
 - b. Conform to a plan for the neighborhood approved or adopted by the City to meet a particular situation where topographical or other conditions make continuance or conformity to existing streets impracticable;
 - c. Provide for future access to adjacent vacant areas which will likely develop under a similar zoning classification;
 - d. Not conflict in any way with existing or proposed driveways and/or access; and
 - e. Allow for the appropriate dedication and/or improvement to meet the minimum street construction and right-of-way standards.
3. Amendment Required.

Any land study or subdivision plat involving a change to a proposed alignment shown in the Master Thoroughfare Plan and/or map must be approved through the amendment process outlined in the Plan.

C. Design Criteria

1. All dedicated public streets shall conform to the design criteria and cross-sections provided in the Master Thoroughfare Plan and in the Standards and specifications herein, as well as to the following items.
2. All proposed streets shall be planned, designed and constructed based on their anticipated function, traffic volumes, adjacent land use and system continuity.
3. Any and all new streets which an extension of existing streets are shall be dedicated at equal or greater widths than the existing streets.
4. All streets shall be designed to coordinate with existing streets in adjoining subdivisions.
5. Streets shall be platted to avoid double frontage lots.
6. Any roadway design criteria not addressed in City regulations or Master Thoroughfare Plan shall conform to the latest edition of the American Association of State Highway and Transportation Officials. (AASHTO) Geometric Design of Highways and Streets and the Texas Manual on Uniform Traffic Control Devices (TMUTCD).
7. Right-of Way Dedication and/or Improvement Required

In the case of existing roads adjacent or abutting the proposed development or subdivision, the City may require that the entire right-of-way be dedicated and/or improved to the adopted standards and specifications herein, based upon factors including:

 - a. The impact of the proposed subdivision on the road;

- b. Safety to the traveling public;
- c. Conditions and life expectancy of the road;
- d. The impact of the proposed subdivision on other roads;
- e. Timing of this development in relation to need for improving road; and
- f. The impact of the traffic on the specific road segment (s) as well as the City transportation system.

D. General Standards by Street Classification

Refer to Master Thoroughfare Plan map, the tables on the next pages and the standards and specifications herein.

Street Classification	Designation on MTP	Min. Right-of-Way (feet)	Min. Roadway Width (feet)	Travel Lanes		Parking Lanes		Median Width (feet)	Parkway Width (feet)	Sidewalks Required (Yes/No)
				Number of Lanes	Width of Lane (feet)	Number	Width (feet)			
Major Thoroughfare (Arterial)	P6D	120	(2) 36	6	12	None	28	28	10	Yes
	P6U	92	72	6	12	None	None	None	10	Yes
	P7U	104	84	7	12	None	None	None	10	Yes
Major Collector	M4D	100	(2) 26	2	12	None	28	28	10	Yes
				2	14	None	28	28	10	Yes
	M4U	68	48	4	12	None	None	None	10	Yes
	M5U	80	60	5	12	None	None	None	10	Yes
Minor Collector	C	60	40	2	12	2	8	None	10	Yes
				2	8	2	8	None	10	Yes
Local	L	50	30	1	14	2	8	None	10	Yes
				2	8					

To be updated with update to Master Thoroughfare Plan

1. Freeway. Facilities regulated and maintained by TXDOT.
2. Arterials
 - a. Connectivity. Arterials typically connect with streets designated as Freeway or Collector.
 - b. Driveway connection spacing criteria are specified in the Standards and specifications herein.
3. Collectors
 - a. Connectivity. Collectors typically intersect with Arterials and may connect with Freeways.
 - b. Street layout shall provide for continuation of Collector roadways in areas between Arterials.
 - c. Where single family or duplex uses abut an existing or proposed Collector street, the plat or dedication instrument shall provide information as specified in the above paragraph:
4. Residential/Local Streets
 - a. Local streets generally shall not intersect with Arterials. Connection shall only be permitted where design conditions do not permit any other possibility.
 - b. Residential streets shall be so laid out that their use by through traffic will be discouraged, but access is provided to adjacent subdivisions.
 - c. Those local streets designated by the Planning and Zoning Commission shall be extended through the tract to the tract boundary to provide future connection with adjoining unplatted lands. In general, these extensions should be at such intervals as necessary to facilitate internal vehicular circulation with adjoining unplatted lands.

Street Classification	Minimum Design Speed (MPH)	Maximum Percent Grade	Minimum Percent Grade	Minimum Centerline Radius (without superlevation)
Local	20	10	0.6	200 ft
Collectors	30	8	0.6	450 ft
Arterials	45	6	0.6	1,100 ft

5. Intersections

- a. Street intersections should be laid out so as to intersect at right angles and shall not vary by more than 5 degrees.
- b. Horizontal curves are required for deflection angles of 1 degree or more.
- c. At an intersection, the vertical profile of the higher classification roadway (or roadway that will carry more traffic) shall be smooth and continuous through the intersection. The cross slope of the intersecting street shall transition from its normal crown section to match the longitudinal vertical profile of the street which it intersects. The length of this cross-slope transition shall be designed per AASHTO criteria based on design speed, cross slope grade differential, width of rotated section, and number of lanes rotated.
- d. Corner radii at the intersection of two Local roadways shall be twenty-five (25) feet radius minimum. Larger radii may be required for intersections of higher classification roadways per AASHTO design criteria.
- e. A 5-foot x 5-foot minimum triangular right-of-way corner clip dedication is required at roadway intersections to be able to accommodate sidewalk barrier free ramps (see Standard Details). This corner clip may need to be increased for larger intersection corner radii and at skewed intersections.
- f. Roadway profiles shall be designed so that they are graded at 2% maximum where crosswalks are (or will be) located.
- g. The intersection sight distance for all street intersections shall be analyzed by the design engineer per the latest edition of the AASHTO Geometric Design of Highways and Streets. The approach and departure sight triangles shall be plotted on the construction plans in order to ensure that no obstructions are constructed within these areas.
- h. Public Open Space Easement. All street intersections shall comply with the POSE easement standards established herein.

6. Additional Engineering Studies

- a. Process. At any time during the pre-application proposal or preliminary plat application process, the City Manager or designee may require a sight-distance study and/or a traffic impact analysis for any portion of the tract to be subdivided with regard to level of service and/or adequacy.
- b. The preliminary plat or any related development application which requires a traffic impact analysis or study shall be held as 'incomplete' by the City and not scheduled for a public hearing until the results of the completed study or traffic impact analysis have been reviewed by the City Manager and/or designee and any affected public agency, such as the State of Texas, is required.

- c. Based on the study or analysis, the City Manager and/or designee may impose stricter standards on the proposed plat which will be provided to the applicant in writing.
- d. The City Manager or designee shall forward a report on the traffic impact analysis or study to the Planning & Zoning Commission and/or Council at the next available public hearing to assist in their determination of the impact of the development to the existing and proposed roadway infrastructure, as well as assess any safety concerns.
- e. Traffic Impact Analysis (TIA) will be required for developments which include and/or generate:
 - i. 50 or more dwelling units; or
 - ii. 500 or more one-way trips per day; or
 - iii. Collector or Arterial Streets not included in the City adopted Comprehensive Plan.

7. Additional Right-of-Way

- a. Additional right-of-way may be required at high-volume driveways and intersections for turning lanes.
- b. Additional right-of-way will be determined by the City during the design phase of the street system and before submittal of the final plat.
- c. Additional right-of-way dedication (other than that required along roadways designated on the Master Thoroughfare Plan) shall not be required from a previously platted property where:
 - i. The plat of such property is being modified by an amending plat.
 - ii. The plat of such property is being modified by a replat.
 - a) The property is occupied by a building or buildings; and
 - b) The sole purpose of the replat is to remove previously platted fire lanes, easements, mutual access easements, or delineate the legal boundaries of ownership of the property; and
 - c) No additional development rights will be conveyed to the property as a result of the replat.

SECTION 4.7. Design Criteria by Street Type

A. Public Streets

Responsibility. The property owner shall assure that the subdivision is adequately served by improved streets and thoroughfares and shall be responsible for the costs of rights-of-way and street improvements, in accordance with the following policies and standards, and may be required to participate in the cost of provision of oversized facilities.

B. Private Streets

1. All streets not dedicated to the public shall be constructed in accordance with the standards herein and shall be maintained by means of the property owner(s) or other means as approved by the Commission.
2. Any request to dedicate a private street as a public street shall be approved only if arrangements are made to bring the street into conformity with all City standards and regulations in effect at the time of dedication at the cost of affected property owners.
3. All private streets that intersect with public streets shall be constructed with standard drive approaches. In cases where an unusual condition exists, the City Manager or designee may approve standard intersection approaches when requested prior to the preparation of the plans.
 - a. Private streets will be named and shown on the plat.
 - b. Street signs for said private streets shall be erected and maintained by the property owner(s).

C. Alleys

Alleys are not encouraged by the City and will only be approved on a case by case basis by the City Manager.

Alleys, where provided, shall be dedicated on the plat for public ingress and egress.

1. The minimum distance between an alley/street intersection and a street/street intersection shall be the width of at least one (1) lot.
2. Alleys should intersect streets at right angles or radially to curved streets.
3. Maximum alley length between access points to a street shall be 600 feet. A length of between 600 feet and 1,600 feet without access to a public street may be approved by the City Council if it finds unusual conditions or limiting factors. In no case shall an alley length exceed 1,600 feet between street access points.
4. Private and dead-end alleys are prohibited.
5. Alleys shall not intersect streets that are designated as Collectors or Arterials as designated on the Master Thoroughfare Plan.
6. In cases where two (2) alleys intersect or turn a sharp angle, lot corners shall be platted so that a triangular area of 25 feet x 25 feet or greater, is dedicated as part of the alley for the purpose of providing a minimum radius of 30 feet to the inside edge of the alley paving.
7. Grading. Alley paving should have a minimum grade of 0.5% and a maximum grade of 10.0%.
8. Design by Type of Development
 - a. Commercial and Industrial

Alleys, or loading courts, may be provided in lieu of off-street loading space.

Alleys must have a minimum paved width of 20 feet.

b. Residential

Alleys are not required in residential areas except as extended from an existing development with alleys.

c. Single-Family and Duplex

- i. Alleys serving single family residential and duplex areas shall have a minimum right-of-way width of 20 feet.
- ii. Alleys shall have a minimum width of 12 feet exclusive of any curbs.
- iii. Alley turnouts shall be paved to the right-of-way of the street in which the alley intersects and shall be 12 feet wide at that point.
- iv. A uniform transition in alley pavement widths shall be made for a minimum distance of 20 feet.

D. Half Streets

1. Half streets shall be prohibited, except divided Arterial streets where essential to the reasonable development of the subdivision in conformity with the other requirements of these regulations, and where the Planning and Zoning Commission finds it will be reasonable to require the dedication of the other half when the adjoining land is subdivided. The other half of the street shall be platted within the adjacent tract at the time it is platted.
2. Construction of half streets shall be prohibited, except:
 - a. When essential to the reasonable development of the subdivision in conforming with the requirements of this ordinance and the Master Thoroughfare Plan, and
 - b. Where the City finds it will be practical to require the dedication of the other one-half when the adjoining property is subdivided.
3. If the owner or subdivider is responsible for one-half (1/2) of the street, the owner or subdivider shall escrow the amount of the construction cost of the facility, unless the City participates in the construction of the facility.
4. Whenever a partial street has been previously platted along a common property line, the other portion of the street shall be dedicated.
5. Improvements shall be made to all on-site facilities as defined herein

E. Cul-de-Sac

1. The cul-de-sac shall be measured from the centerline of the intersecting street to the centerline of cul-de-sac turnaround.
2. Streets designated to be dead-ended permanently shall be platted and constructed with a paved cul-de-sac.
3. A street ending permanently in a cul-de-sac shall not be longer than 600 feet unless a turnaround with a minimum outside roadway diameter of 80 feet is provide. and a street property line diameter of at least 100 feet.
4. If necessary, the City may draw from the surety in order to construct the permanent cul-de-sac prior to the term of the filed surety expiring.

5. Temporary Cul-de Sac

- a. A street ending in a temporary cul-de-sac to allow for subsequent phasing of the development or continuation of a road at a later date may be used.
- b. The dead end shall have a temporary turnaround outside roadway diameter of at least 80 feet with the roadway base, materials and design thickness to be approved by the City Manager or designee.
- c. Proper easements and/or dedications shall be in place to allow for the public usage of the temporary cul-de-sac.
- d. The developer shall provide surety in the amount to cover a standard cul-de-sac design meeting the standard specifications of the City for a permanent cul-de-sac.

F. Dead End Streets

1. Prohibited. Dead end streets are not allowed except:

- a. To provide access to adjacent land areas, and
- b. Shall be more than 250 feet in length or equal to one lot depth, whichever is greater.

2. Turnaround Required

- a. Any permanent or temporary dead-end street longer than 250 feet, shall have a hard-surfaced turning area 80 feet in diameter for a cul-de-sac.
- b. Where adjacent property contains an existing dead-end street over 250 feet in length without a cul-de-sac which abuts the proposed subdivision, the City Manager and/or designee shall require the developer to construct a cul-de-sac as provided above.

3. Other Dead-End Streets

- a. Streets which dead end at power lines or similar rights-of-way, and which are intended for future extension across these rights-of-way, shall be constructed in the right-of-way for half the distance across the rights-of-way.
- B. Streets which dead end at railroad rights-of-way shall not be required to be constructed over the railroad right-of-way by the subdivider but an agreement must be reached regarding the timing and construction of the crossing by the railroad owner.

SECTION 4.8. Pavement Types by Street Classification

A. The Developer shall provide the minimum thicknesses as specified below:

1. Alleys and Driveways

Six (6) inches of reinforced concrete on eight (8) inches of lime or cement stabilized subgrade.

2. Private Streets

Six (6) inches reinforced concrete on a minimum of eight (8) inches of lime or cement stabilized subgrade.

3. Local Streets

- a. Six (6) inches reinforced concrete on a minimum of eight (8) inches of lime or cement stabilized subgrade is preferred.
- b. Asphalt pavement may be used upon the approval of the City Manager.

4. Collector Streets

Seven (7) inches of reinforced concrete on eight (8) inches of lime or cement stabilized subgrade.

5. Arterial Streets

Eight (8) inches of reinforced concrete on ten (10) inches lime or cement stabilized subgrade

6. TXDOT Streets, including Freeways

As per approved by TXDOT according to TXDOT standards.

- B. A geotechnical report sealed by a Licensed Professional Engineer in the State of Texas shall provide recommendations for pavement and subgrade thickness and lime or cement content.
- C. All concrete streets shall be constructed with a minimum compressive strength of 3,600 pounds per square inch (psi) at 28 days.
- D. Spacing and construction joints shall conform to the parabolic street pavement.
- E. Pavement Markings

Pavement markings shall be thermoplastic and shall conform to the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) and the adopted criteria and specifications herein, unless otherwise directed by City Manager or designee.

SECTION 4.9. GENERAL CRITERIA FOR PUBLIC FACILITIES

- A. All public utilities and infrastructure shall be designed and constructed in accordance with the most current adopted City regulations, technical specifications and standard details. Public utilities typically located within the public right-of-way include electric, water, sanitary sewer, storm sewer, telephone and cable services.
- B. All subdivision plats and engineering plans shall provide location and design of public utilities prepared in accordance to franchise requirements and the adopted standards herein.
- C. All distribution lines, cables, etc. for utilities other than those specified below shall be installed below ground within the subdivision.
- D. Additional utility easements may be required beyond the right-of-way based on the design of the subdivision.
- E. Transmission lines or major cables to provide utilities such as electric, telephone, and cable television to the area as a whole may be located above ground on the perimeter of the subdivision being served. The installation of

these utilities shall conform to commonly accepted construction standards and be subject to review by the City Manager and/or designee.

SECTION 4.10. ELECTRIC, TELEPHONE AND CABLE SERVICES

Refer to Article 10.400 of the Subdivision Regulations and the standards and specifications herein.

SECTION 4.11. WATER FACILITIES

A. General

1. This section pertains to general design requirements for water distribution system construction in the City of Lake Worth.
2. All water lines shall be sized and designed in accordance with the City of Lake Worth Water Distribution System Master Plan or as determined by the City Manager or designee. In the absence of specific standards, all water supply, distribution, pumping, and storage improvements shall be designed in accordance with the most current standards of the American Water Works Association, the Standard Specifications for Public Works Construction of the North Central Texas Council of Governments, and criteria adopted by the Texas Administrative Code, Chapter 290, "Water Hygiene".
3. Water lines for multi-family, commercial and industrial fire protection lines shall be private and isolated from the public system by a double detector check placed at the property line. All water lines shall be 6 inches minimum diameter and looped when possible. Dead end lines shall not exceed 50 feet on multi-family, commercial, or industrial sites. All public water lines located on private property shall be centered in a 15-foot minimum easement. Larger easements may be required by the City Manager or designee to provide adequate space for maintenance. Water lines shall not be located under paved surfaces where possible.

Multi-family developments may be supplied fire protection and domestic service by the same water line provided that a fire-rated master meter is used along with a double detector check at the looped end of the water line.

If residential developments require fire suppression systems, the developer is responsible for the design and specification of said fire suppression system.
4. The developer shall furnish, install, construct, or extend, at his own expense, water distribution facilities necessary for the proper development of the subdivision. The water system shall provide individual service to every lot in the subdivision. All water mains constructed within a proposed subdivision shall be extended to the perimeter of the proposed subdivision to allow for future extension of the water system into adjacent properties. The water system shall be designed and constructed in accordance with the specifications contained in these Standards.
5. All components of the water system must comply with ANSI/NSF Standard 61.

B. Water Line Sizing

1. Standard water line diameters are as follows:

- a. Six (6) inch (minimum),
- b. Eight (8) inch,
- c. Twelve (12) inch, and
- d. Sixteen (16) inch diameter.

Other sizes must be approved by the City Manager or designee.

2. All water lines shall be looped except in cul-de-sacs.

3. Dead end lines shall not exceed 50 feet on multi-family, commercial, or industrial sites.

C. Water Line Location

1. Water lines shall be located in the parkway.

2. Along State Highways, water lines are required to be constructed on both sides of roadway.

3. New water lines crossing existing streets shall be placed by boring.

4. A casing shall be required under major and minor collector roadways.

5. Open cut excavation will not be allowed to cross existing streets, unless approved by the City Manager or designee.

6. All public water lines located on private property shall be centered in an easement.

7. Water lines shall not be located under paved surfaces where possible.

8. Easements for water line construction shall meet the following requirements:

a. The easement width shall be a minimum of 15 feet.

b. If the water line is less than 12 feet deep, the outside diameter of the water line shall be located a minimum distance of 6 feet from the edge of the easement, and if other utilities are located in the same easement, the outside diameter of the water line shall be located a minimum distance of 3 feet from the outside diameter of the other utilities.

c. If the water line is greater than 12 feet deep, the outside diameter of the water line shall be located a minimum distance of 9 feet from the edge of the easement, and if other utilities are located in the same easement, the outside diameter of the water line shall be located a minimum distance of 6 feet from the outside diameter of the other utilities.

9. All piping with mechanical couplings, push-on, or similar joints subject to internal pressure shall be designed with blocking, anchors, and restraining harnesses to preclude separation of joints.

D. Polyvinyl **Chloride (PVC) Pipe**

1. PVC pipe shall be designed, manufactured, and tested in accordance with the applicable requirements of AWWA C-900 (6 inch through 12 inch water pipe), AWWA C-905 (16 inches and larger water pipe), and AWWA M-23.
2. All PVC water pipe shall be blue in color.
3. 6 inch through 12 inches water pipe shall be pressure class 150, DR 18. Pressure class 200, DR 14 pipe may be required by the City Manager or designee in areas of high distribution system pressure.
4. Fittings
 - a. Fittings shall be ductile iron in accordance with AWWA C110 or AWWA C153.
 - b. Fittings: ANSI/AWWA C111/A21.11, except gaskets shall be neoprene or other synthetic rubber and factory installed. Natural rubber will not be acceptable.
 - c. All buried metal shall be wrapped in polyethylene Tube Wrap: ANSI/AWWA C105/A21.5

E. Installation

1. General
 - a. All installations shall conform to the latest NCTCOG Specifications, as amended by these standards.
 - b. Separations – Water line installations shall conform with the separation criteria outlined in the Texas Administrative Code, Chapter 290.44, “Water Distribution.”
 - c. Cover
 - i. All 6-inch and 8-inch water pipe shall be installed with a minimum of 42 inches of cover over top of pipe.
 - ii. All 12-inch water pipe shall be installed with a minimum of 48 inches cover.
 - iii. All pipe 16 inches and larger water pipe shall be installed with a minimum of 60 inches of cover over top of pipe.
 - d. The amount of trench excavation shall not exceed 200 feet from the end of the pipe laying operations, and no more than 300 feet of total open trench will be allowed.
 - e. At the end of each work day, all trench excavation shall be backfilled to the end of the pipe laying operation.
 - f. Backfill must contain no large rocks or clumps larger than three (3) inches in diameter.
 - g. Barricades and lights will be required around any open trench left overnight.
 - h. All connections to existing water mains shall be made under pressure unless dry connections will not cause any loss of service.

- i. Under special conditions connections that cause an interruption of service may be performed with approval of the City Manager or designee.
 - j. Coated tracer wire shall be installed in the embedment material above the PVC pipe with the tracer wire terminating outside valve boxes accessible by City Staff. Install a test station. Blue underground water line tape of a minimum 4-inch width shall be installed above the embedment material.
 - k. Density tests shall be taken every 150 feet. The density reports shall be submitted daily to the City's inspector.
 - l. All density reports shall be completed and delivered to the City's inspector before paving is allowed to begin.
 - 2. PVC Water Pipe

PVC water pipe and appurtenances shall be installed as specified in AWWA Manual M-23 and in accordance with the pipe manufacturer's recommendations.
 - 3. Fittings
 - a. Fittings shall be installed in accordance with AWWA C-600.
 - b. All mechanical joint bends, tees, and reducers which require blocking shall be additionally restrained with EBAA megalug retainer gland or approved equal.
 - c. All fittings that are concrete blocked must be polyethylene wrapped.
- F. Fire Hydrants
- 1. Location by Type of Development
 - a. Commercial and Industrial

Locate fire hydrants at street intersections and/ not more than 300 feet apart.
 - b. Residential

Locate fire hydrants at street intersections and not more than 400 feet apart.
 - c. Multifamily

Locate fire hydrants at street intersections and/ not more than 300 feet apart.
 - 2. Materials
 - a. Fire hydrants shall be manufactured in accordance with AWWA C-502, Dry-Barrel Fire Hydrants.
 - b. Hydrants shall be manufactured such that all maintenance and adjustments can be performed without excavation and such that hydrants may be faced in any direction in relation to base.
 - c. The hydrant nozzle arrangement shall be three-way, consisting of two 2½ inch hose nozzles and one 4 inch pumper nozzle. The two

hose nozzles are 180 degrees apart with the pumper nozzle in between and on the same horizontal plane. Centerline of outlet nozzle shall be a minimum of 18 inches above the ground/hydrant bury line.

- d. Outlet nozzles shall be fastened into the nozzle section by threads or mechanical means and secured in place by a pin, a set screw or other acceptable method to prevent the nozzle from turning or backing out. Connecting the nozzle to hydrant by leading is not acceptable.
- e. Nozzle cap harnessing and gaskets shall be furnished.
- f. Threads on hose and pumper nozzles shall meet the requirements of National Fire Protection Association, NFPA 1963, "Standard for Screw Threads and Gaskets for Fire Hose Couplings" as follows:

HOSE NOZZLE	PUMPER NOZZLE
Nominal Size of Coupling Waterway	2 1/2", 4"
Number of Threads Per Inch	7 1/2", 4"
Thread Designation (NH = Fire House)	2.5-7.5 NH 4 – 4 NH
Approximate Outside Diameter of External Thread	3 1/16", 5"
Length of Nipple	1', 1 1/4"
Length of Pilot to Start of Second Thread	1/4", 7/16"
Depth of Coupling	15/16", 1 3/16"
Diameter of Gasket Seat in Coupling	3 3/16", 5 1/8"
Length of Coupling Internal Thread	1 1/16", 7/8"
From Face of Coupling to Start of Second Thread	3/16", 3/8"

- 3. Shut off:
 - a. The hydrants shall be of the compression type, with the main valve opening against the pressure and closing with the pressure.
 - b. The valve action shall provide positive shut-off at minimum closing torque.
 - c. Wedge action closing gates shall not be used.
 - d. All hydrants shall open by turning the operating-stem nut to the RIGHT (CLOCKWISE). A clearly visible CURVED ARROW and the word "OPEN" shall be cast in relief on the top of the hydrant to indicate the direction of opening.
 - e. The fire hydrant operating nut shall be square in shape. The square nut shall measure 1 inch at the base, and 7/8 inch at the top with all

faces tapered uniformly. The nut shall be so designed as to protect the working mechanism from the moisture and dirt.

4. Bury Length

The standard fire hydrant bury length from ground to bottom of the connecting pipe shall be 3 feet 6 inches. The hydrant shall be of a design that will permit extensions without disturbing the bottom section of the hydrant.

5. Hub Type

Inlet connection shall be mechanical joint unless otherwise specified and shall be for 6-inch ductile iron pipe. The nominal diameter of the fire hydrant main valve opening is to be 5¼ inches.

6. Hydrant Body

The body of the hydrant between the elbow and the top cap must be made in two parts connected by a swivel flange, or breakable flange which will permit facing of the nozzles in any desired direction in increments of 45 degrees or less. The complete hydrant shall be of such design that when the hydrant barrel is broken through traffic collision or otherwise, it may be replaced without disturbing the bottom section of the hydrant. Extension sections, where required, shall include barrel extension section, extension rod with connectors provided for lengthening the complete unit. These units shall be available in increments of six (6) inches in length.

7. The fire hydrant body shall be painted a high gloss alkyd fire hydrant red.

8. Ballards shall be placed around fire hydrants in high traffic areas. The ballards shall be placed at 45-degree angles to the fire hydrant with a minimum spacing of 30 inches.

9. Location Markers

A location marker shall be placed in the center of the roadway opposite the fire hydrant. If the fire hydrant is located near the intersection of at least two streets a marker shall be placed on all streets. The installation of this reflector shall be in accordance with the manufacturer's recommendation. Location markers shall be Stemsonite 1-88-55A or approved equal.

10. Manufacturers

Approved fire hydrants manufacturers are as follows:

- a. Mueller (Super Centerion 200)
- b. M&H (Model 129)

G. Valves

1. Resilient seated gate valves shall be used for 6 inch through 16 inch water lines. Butterfly valves shall be allowed for 16 inches and larger water lines when approved by the City Manager or designee.

2. Valves of approved design shall be installed at the intersections of all water mains so as to provide for proper maintenance and operation of the system and to provide a means of shutting off the supply to portions of the system for repairs. Valves shall be spaced such that only one fire hydrant is out of

service at any one time. Three (3) valves shall be used on a four-way water line intersection and a minimum of two (2) valves shall be used on a three-way intersection.

3. Materials

a. Resilient Seated Gate Valves

- i. Resilient seated gate valves 3 inches through 16 inches shall meet or exceed the latest revisions of AWWA C509 and shall meet or exceed the requirements of these standards.
- ii. Resilient seated gate valves for buried service shall be furnished with a square 2 inch operating nut. The valve box shall be Tyler Pipe 6850 series or approved equal. The valve box lid shall be painted safety blue. The paint shall be Glidden or approved equal.

b. Butterfly Valves

Butterfly valves shall meet or exceed the latest revision of AWWA Standard C504 for Class 150B butterfly valves and shall meet or exceed the requirements of this specification. All valve components shall conform to Underwriters Laboratories classification in accordance with ANSI/NSF Standard 61.

4. Installation

- a. Valves shall be furnished with extensions, such that the working nut is a maximum of 48 inches below grade.
- b. Adjustable valve boxes shall be furnished and set on each valve in accordance with these standards. Valves that are deeper than 48 inches, AWWA C900 PVC pipe shall be used for stacks, as long as the adjustable valve box is used at the top.
- c. After the final clean-up and alignment has been complete, the contractor shall cast in place a concrete block, 24 inches by 24 inches around all valve box tops at the finish grade. See Construction Details in Appendix B-6.
- d. Valves located within a right-of-way shall be indicated on the face of the curb, or where curbs do not exist, on a conspicuous location adjacent to the valve location. Markings are to be the stamping of a four (4) inch high letter "V" with the point of the "V" pointing towards the valve location. Once stamped, the "V" shall be painted blue.
- e. Valve markers shall be provided in rural areas.

5. Manufacturers

- a. Approved manufacturers of 3 inch through 12-inch resilient seated gate valves are as follows:
 - i. Mueller
 - ii. M & H

- iii. U.S. Pipe
 - iv. CLOW
 - v. American Flow Control
 - b. Approved manufacturers of 16 inches resilient seated gate valves are as follows:
 - i. Mueller
 - ii. M & H
 - iii. American Flow Control
 - c. Approved manufacturers of 16" and larger butterfly valves are as follows:
 - i. Dezurik
 - ii. Clow
 - iii. Keystone
- 6. Air Release and Flushing Valves
 - a. Adequate air relief, and flushing valves shall be provided for flushing, disinfection, daily operation requirements, and repairs when required by the City Manager or designee. Air release valves shall be required on 12 inches and larger water lines. Water lines shall be designed so that each section of the water line can be flushed at its lowest and highest points.
 - b. All dead-end lines shall have a fire hydrant installed for flushing purposes and a sampling station. Sampling station shall be an Eclipse No. 88 or approved equal.
 - c. A fire hydrant shall be required at high points on water lines smaller than 12 inches for air relief and flushing.
 - d. Air release valves and air/vacuum valves shall meet or exceed the latest revision of AWWA C512.

H. Tapping Sleeve

A tapping sleeve and valve shall be used when connecting a new water line to an existing line. A resilient seated gate valve shall be flanged to the tapping sleeve. The tapping sleeve shall be a Smith-Blair type 664-665 stainless steel tapping sleeve or approved equal.

I. Water Service

- 1. The water meter box and water service shall be in accordance with Detail W-5. If no curb is present, the water service shall be located at the property line, no more than 12 inches deep, covered with a meter box in place at grade. Along roadways without a curb the water service line shall be constructed at a minimum of 18 inches below the ditch flow line. All water services crossing beneath streets must be encased in four (4) inches diameter PVC casing.

- a. Casing needs to be installed at least to the meter box or 12 inches behind curb.
 - b. Casing needs to be sealed to prevent debris to enter piping.
 - c. One (1) water service per casing.
- 2. Meter and service sizes will be determined by the developer prior to requesting service from the City. The minimum water service size between the water main and the meter shall be one (1) inch and the minimum meter size shall be one (1) inch.
- 3. Water services on undeveloped lots shall be located at the property line. Each service shall be one (1) inch minimum. Each lot shall have its own service and meter.
- 4. Backflow

All installations shall conform with the backflow regulations outlined in the Texas Administrative Code, Chapter 290.44(h), "Backflow, Siphonage" as well as City of Lake Worth ordinances.
- 5. Materials
 - a. Service saddle shall be double strap bronze with brass body or stainless-steel double bolt wide straps with stainless steel body. Minimum size tap shall be one (1) inch diameter.
 - b. Service lines shall be one (1) inch minimum diameter, Type K copper as specified in ASTM B88.
 - c. Corporation and Curb Stops
 - i. Corporation stop shall be a ball type, size to be determined based upon service type, with compression outlet fitting, designed for a minimum working pressure of 200 pounds per square inch (psi).
 - ii. Curb stop shall be set with compression inlet fitting and lock ring.
 - d. See Standard Construction Details (Appendix B-6) for meter box for meters two (2) inches and smaller.
- 6. Installation
 - a. General
 - i. All water service shall be installed in accordance with these standards.
 - ii. Each individual service location shall be saw cut into the face of the curb with a four (4) inch high blue "W" painted by the Contractor.
 - iii. If no curb exist a similar mark should be placed in the pavement near the edge of the roadway.
 - b. Residential Meters

All residential meters shall be manufactured by Badger Meters with latest technology.

- c. Commercial Meters (3 inches and larger)
 - i. See Standard Construction Detail.
 - ii. The developer shall purchase from the manufacturer a Badger Meter (model to be specified by the City).
 - iii. The meter shall be installed by a utility contractor or plumber.
 - iv. All meters in this size class are required to have a strainer prior to the meter.

7. Acceptable Manufacturers for Corporation Stops, Curb Stops, and Service Saddles:

- a. Ford
- b. Mueller
- c. Smith-Blair

J. Flushing Valves

- 1. Corporation stop shall be 2-inch ball type with compression outlet fitting, designed for a minimum working pressure of 200 pounds per square inch (psi).
- 2. Two (2) inch curb stop shall be ball type with compression inlet fitting with tee head shut off.
- 3. Pipe shall be two (2) inches diameter, Type K copper as specified in ASTM B88.

K. Water Line Bore

- 1. Casing
 - a. Minimum casing thickness shall be one-quarter (1/4) inch.
 - b. Casings shall be required under collectors and major thoroughfares, highway crossings, and railroad crossings.
 - c. Casings may also be required were deemed necessary by the City Manager or designee.
 - d. The construction bore pit shall be located at a minimum distance of four (4) feet behind the back of curb or edge of pavement where no curb is present.
 - e. Bores need to be marked to identify locations, either in curb line marking or fiber glass stakes.
 - f. Trace wire to be installed on bores.
- 2. The design engineer shall design the water line pipe casing for the following loading conditions and applicable combinations thereof:
 - a. Cooper's E-80 Railway loading or AASHTO HS20 loading as applicable

- b. Earth loading with the height of fill above the casing as shown on the plans
- c. Loads applied during jacking, including axial load from jacking
- d. All other applicable loading conditions, including loads applied during transportation and handling.

3. Materials

- a. Steel Casing Pipe - Steel casing pipe shall be new (or used if approved by the City Manager or designee) and suitable for the purpose intended and shall have a minimum yield strength of 35,000 pounds per square inch (psi). Casing shall meet ASTM A-36, ASTM A-570, ASTM A-135, ASTM A-139, or approved equal. Pipe shall be coated with coal tar epoxy (15 mils min.) in accordance with AWWA C-210. Pipe joints shall be welded in accordance with AWWA C-206. After pipe is welded, coating shall be repaired.
- b. Cement Mortar - Cement mortar shall consist of one (1) part cement to two (2) parts clean sand with sufficient water to make a thick, workable mix.
- c. Pressure Grout Mix - Grout shall be comprised of 1 cubic foot of cement and 3.5 cubic feet of clean fine sand with sufficient water added to provide a free-flowing thick slurry. If desired to maintain solids in the mixture in suspension, one cubic foot of commercial grade bentonite may be added to each twelve to fifteen cubic feet of the slurry.
- d. Casing Insulators (Spacers) - Use casing insulators for any type of carrier pipe. Insulators shall be high density polyethylene. Insulators shall fit snug over the carrier pipe and position the carrier pipe approximately in the center of the casing pipe to provide adequate clearance between the carrier pipe bell and the casing pipe. Insulators shall be manufactured by "Recon" and be Racci Type or approved equal.

4. Installation

- a. Excavation and Backfill of Access Pits
 - i. Do not allow excavation over the limits of the bore or tunnel as specified. Trench walls of access pits adjacent to the bore or tunnel face shall be truly vertical. Shore the trench walls as necessary to protect workmen, the public, structures, roadways, and other improvements.
 - ii. Excavations within the right-of-way and not under surfacing shall be backfilled and consolidated by mechanical methods as specified in these standards for compaction of trenches under roadways. Surplus material shall be removed from the right-of-way and the excavation finished to original grades. Backfill pits immediately after the installation of the carrier pipe is completed. If carrier pipe is not installed immediately after casing pipe installation, the City may

require the access pits be temporarily backfilled until installation of carrier pipe.

- iii. Where seeding or sodding is disturbed by excavation or backfilling operations, such areas shall be replaced by seeding or sodding as specified.

SECTION 4.12. WASTEWATER FACILITIES

A. General

1. This section pertains to general design requirements for wastewater collection system construction in the City of Lake Worth. All sewer lines shall be sized and designed in accordance with the City of Lake Worth Wastewater System Master Plan or as determined by the City Manager or designee. In the absence of specific standards, all collection, treatment, and disposal systems shall be designed in accordance with the most current criteria adopted by the Texas Administrative Code, Chapter 317, "Design Criteria for Sewerage Systems".
2. All sewers shall be designed with consideration for serving the full drainage area subject to collection by the sewer in question; the drainage area may be modified with the concurrence of the City Manager or designee because of the projected rate of development or the financial feasibility of the proposed extension.
3. Sewers should be designed with straight alignment whenever possible. When horizontal curvatures must be used, the maximum joint deflection should be in accordance with the pipe manufacturer's recommendations.
4. The developer shall furnish, install, construct, or extend, at his own expense, wastewater collection facilities necessary for the proper development of the subdivision. The wastewater collection system shall provide individual service to every lot in the subdivision. All sewer mains constructed within a proposed subdivision shall be extended to the perimeter of the proposed subdivision to allow for future extension of the wastewater collection system into adjacent properties. The wastewater collection system shall be designed and constructed in accordance with the specifications contained in these Standards.
5. All sewers shall be designed with hydraulic slopes sufficient to give mean velocities, when flowing full or half full, of no less than two (2) feet per second on Kutter's or Manning's formulas using an "n" value of 0.013. Slopes shall also conform to TAC Chapter 317, Sewage Collection System.
6. When a 150 pounds per square inch (psi) rated sewer line is required due to its proximity to a water line, the 150 pounds per square inch (psi) rated pipe shall terminate at a manhole on each end. The pipe shall be extended to the interior wall of the manhole. No external boot connection will be allowed.

B. Sanitary Sewer Line Sizing

1. Standard sewer line sizes are:
 - a. Six (6) inches,
 - b. Eight (8) inches,

- c. Twelve (12) inches,
 - d. Fifteen (15) inches, and
 - e. Eighteen (18) inches in diameter;
 - f. Other sizes must be approved by the City Manager or designee.
 - 2. Sewer lines shall be a minimum of six (6) inches in diameter.
- C. Sanitary Sewer Line Location
- 1. Sewer lines shall be constructed at a minimum depth of 4 feet. They shall be located in the parkway and are required to be constructed on both sides of a State Highway. No sewer lines will be allowed to cross a State highway.
 - 2. Easements for sewer line construction shall meet the following requirements:
 - a. The easement width shall be a minimum of 15 feet.
 - b. If the sewer line is less than 12 feet deep, the outside diameter of the sewer line shall be located a minimum distance of six (6) feet from the edge of the easement, and if other utilities are located in the same easement, the outside diameter of the sewer line shall be located a minimum distance of three (3) feet from the outside diameter of the other utilities.
 - c. If the sewer line is greater than 12 feet deep, the outside diameter of the sewer line shall be located a minimum distance of nine (9) feet from the edge of the easement, and if other utilities are located in the same easement, the outside diameter of the sewer line shall be located a minimum distance of six (6) feet from the outside diameter of the other utilities.
- D. Sanitary Sewer Line Materials
- 1. All sanitary sewer pipes shall be PVC pipe type SDR-26.
 - 2. PVC pipe will not be allowed for depths greater than 24 feet unless approved by City Manager or designee.
 - 3. If service connections are needed on sewer pipe constructed below 15 feet in depth, a parallel line shall be constructed at a shallower depth, specifically for service connections.
 - 4. All PVC sanitary sewer pipe shall be green in color.
 - 5. PVC sewer pipe and fittings shall conform to the current ASTM Designation D 3034 for four (4) inches through 15 inches and ASTM Designation F 679 for greater than 15 inches.
- E. Installation
- 1. General
 - a. All installations shall conform to ASTM Designation D2321, and the latest NCTCOG Specifications as amended by these standards.

- b. Sewer lines shall not be installed within nine (9) feet horizontally of any water main or fire hydrant.
- c. Construction shall begin at the downstream end of project and continue upstream with the bell facing upstream.
- d. No upstream piping shall be installed before downstream piping unless approved by the City Manager or designee.
- e. All concrete and clay lines will be brought up to current design standards which are located inside the developer's scope of work.

2. Excavation and Backfill

- a. When PVC pipe is used, green marker tape with the wording "Buried Sanitary Sewer" shall be installed in the backfill material no more than 12 inches above the top of the pipe.
- b. The amount of trench excavation shall not exceed 200 feet from the end of the pipe laying operations, and no more than 300 feet of total open trench will be allowed.
- d. At the end of each workday, all trench excavation shall be backfilled to the end of the pipe laying operation. Backfill must contain no large rocks or clumps larger than three (3) inches in diameter.
- c. Barricades and lights will be required around any open trench left overnight.
- d. Density tests shall be taken every 150 feet. The density reports shall be submitted daily to the City's inspector.
- e. All density reports shall be completed and delivered to the City's inspector before paving is allowed to begin.

F. Inspection

- 1. All air tests and flow tests will follow NCTCOG Standards.
- 2. All sanitary sewer lines shall be inspected using television inspection methods prior to acceptance by the City.
 - a. The Contractor is responsible for cleaning the sewer pipe. If the inspection shows debris or evidence that the line has not been properly cleaned, the review will cease, and the tape will be returned to the Contractor.
 - b. A City representative shall be present during the television inspection, unless otherwise authorized in writing.
 - c. The televised inspection shall commence only after the line has passed both air and mandrel test.
- 3. Televised Inspection Criteria
 - a. All sanitary sewer mains must be flushed with water just prior to televised inspection. Water is to be provided at the Contractor's expense. A City representative shall be present during the flushing of the main.

- b. All television equipment used shall have a minimum of 220 lines of horizontal resolution. The picture shall be in color.
- c. All video shall be digitally recorded and placed on a DVD or detachable storage drive.
- d. As a title heading on the tape and during the televising, the operator must:
 - i. Note the project name and Contractor name.
 - ii. Note the name of the company and the operator performing the video inspection.
 - iii. Note line size and material, joint type and length.
 - iv. Line segment to be televised including beginning and ending station numbers.
 - v. Note page of plans used and year plans were stamped.
 - vi. Note date and time of inspection.
 - vii. A footage counter must be displayed on the tape during the filming.
 - viii. Show the above title block before and after each line segment. Show the title block at 100-foot intervals while filming the line segment.
 - ix. All defects should be shown on film for a minimum of 10 seconds before proceeding with the televising.
- e. The Contractor shall supply a log sheet used in conjunction with the DVD or digital storage device. All written information gathered must be legible and clearly understandable.
 - i. Note the project name, Contractor name and contract number.
 - ii. Note the name of the company and the operator performing the video inspection.
 - iii. Note pipe size and material, joint type and length between joints.
 - iv. Note the video footage counter, start to end.
 - v. Note line segment to be televised, station numbers from and station numbers to length of line segment as indicated on plans.
 - vi. Note page of plans used and year plans were stamped.
 - vii. Note date and time of inspection.
 - viii. Indicate by sketch the line segment to be videoed in relation to surrounding road intersections and street addresses. Identify manhole station numbers. Show direction of flow with arrows and direction the camera is going. Indicate direction of north on the sketch.

- ix. Note the water depth at the beginning, every 50-foot station, every change in grade, and at the end of the line segment.
 - x. Identify the clock location, direction, size and type of laterals entering main. Indicate laterals as saddles, punched, or glued fittings.
 - xi. Indicate final footage videoed at end of the log sheet.
- f. One (1) video per visual televised inspection project shall be furnished to the City Manager or designee.
- g. All videos and run sheets shall be submitted to the City. All videos and log sheets shall become the property of the City.
- 4. Criteria for Repair
 - a. The Contractor shall make repairs if the inspection reveals any deficiency in the sewer line. If repairs are required, another television inspection shall be made after the repairs are complete on a new tape from manhole to manhole at the Contractor's expense.
 - b. Repairs shall be made to the satisfaction of the City Manager or designee and City Manager or designee.

G. Manholes

- 1. Manholes shall be located at all intersections of sewer lines and at intermediate spacing along the line. Generally, the maximum spacing should not exceed 500 feet.
- 2. Manholes should be located at all changes in grade and at the ends of all sewer lines that will be extended.
- 3. A manhole is required at the junction of sewer lines with different inside pipe diameters.
- 4. A drop of at least 0.1 feet is required through the manhole when a change in flow direction occurs.
- 5. The flow line into a manhole should not be greater than six (6) inches above the flow line out of the manhole. Where the flow line in is greater than two (2) feet above the flow line out, a drop manhole is required.
- 6. Minimum manhole inside diameter is four (4) feet.
- 7. Drop-connection manholes shall have a minimum inside diameter of five (5) feet, with an interior drop connection if line size is greater than eight (8) inches.
- 8. Minimum cast in place manhole wall thickness is eight (8) inches. For depths greater than 12 feet add an extra four (4) inches of thickness for each additional six (6) feet of depth.
- 9. Minimum pre-cast wall thickness is five (5) inches.
- 10. A manhole is required where a sanitary sewer line enters and exits private property.
- 11. All manholes shall be constructed of concrete.

12. No new connection to brick manholes will be allowed. Brick manholes must be brought to current standards.
13. All brick manholes will be replaced to new standards that are inside the developer's scope of work.
14. Installation

Use the following table to determine sanitary sewer manhole sizes:

Pipe Sizes	Depth of Cover (feet)	Minimum Diameter of Manhole (feet)	Number of Pipe Connections Allowed in Manhole
Under 12 inches	<12	4	3
	>12-20	5	3
12 in to 18 in	<12	5	3
	>12-20 (See Note #1)	6	4

Note: 1. If the proposed design requires the sewer line to be placed at depths greater than shown above, the design will require approval by the City Manager or designee.

15. Cast-in-place
 - a. Cast-in-place manholes shall accommodate the City's specified manhole cover.
 - b. The manhole foundation shall be poured on undisturbed soil and shall have a minimum thickness of eight (8) inches.
 - c. The inlet and outlet pipes shall be poured into the foundation of the manhole. The pipe shall extend one and one-half (1½) inches into the manhole. When straight through flow occurs, the pipe shall not be laid continuously through the manhole.
 - d. The invert shall be shaped and smoothed so that no projections will exist, and the invert shall be self-cleaning. The invert floor shall have a minimum slope of one (1) inch per foot.
 - e. Concrete work shall conform to all requirements of ACI 301, Standard Specification for Structural Concrete, published by the American Concrete Institute, except as modified herein.
 - f. Detailing of concrete reinforcement and accessories shall be in accordance with ACI Publication 315.
 - g. Portland Cement shall be Type II, low-alkali and conform to ASTM Designation C-150.
 - h. The manhole shall not be backfilled within 12 hours after the concrete placement.
 - i. The face of curb shall be sawed with an "MH" to mark the location of all manholes. The "MH" shall be painted green. The location of the stamp shall be a line that intersects the center of the manhole

cover and the curb perpendicular to the centerline of the street. For manholes located in intersections, the curb shall be stamped at the closest location to the manhole. If no curb exist a similar mark should be placed in the pavement near the edge of the roadway.

16. Precast Manhole

- a. All precast manholes shall accommodate the City's specified manhole covers.
- b. Manhole base shall have a spread footing and be placed on a minimum of twelve (12) inches of crushed rock.
- c. The face of curb shall be sawed with an "MH" to mark the location of all manholes. The "MH" shall be painted green. The location of the stamp shall be a line that intersects the center of the manhole cover and the curb perpendicular to the centerline of the street. For manholes located in intersections, the curb shall be stamped at the closest location to the manhole. If no curb exist a similar mark should be placed in the pavement near the edge of the roadway.

17. Manufacturers. Approved precast manhole manufacturers are as follows:

- a. Hydro-conduit
- b. Gifford Hill American

18. Manhole Frame and Cover

- a. Cover-shall be per the City's specified manhole cover in the Standard Construction Details in Appendix B-6.
- b. Materials. All manhole covers shall conform to the Standard Specifications for Grey Iron Castings, ASTM A-48, Class 30 B.
- c. Installation
 - i. All manhole covers shall be 30 inches in diameter.
 - ii. All manhole covers shall have two (2) integrally cast pick bars.

19. Manufacturers-see Standard Construction Details in Appendix B-6.

20. Frames-see Standard Construction Detail in Appendix B-6.

- a. Materials. All manhole frames shall conform to the Standard Specifications for Grey Iron Castings, ASTM A-48, Class 30 B.
- b. Installation. All manhole frames shall accommodate the City's manhole cover.
- c. Manufacturers-see Standard Construction Detail

21. Extension Ring-see Standard Construction Detail

- a. Materials. All precast reinforced concrete extension rings shall conform to ASTM C-478.
- b. Installation

- i. The number of extension ring sections shall be kept to a minimum (i.e. use 1-12-inch extension ring instead of 2-6 inch extension rings).
- ii. A 1-inch by 3 1/2-inch bitumastic gasket shall be used to seal the extension ring at both joints.
- iii. No more than a twelve (12) inch rise can be installed.

22. Rain Pan

- a. Materials. Rain pans shall be high density polyethylene plastic.
- b. Manufacturers. Knutson or approved equal.

H. Sewer Service

- 1. No sewer service line (lateral) shall be less than four (4) inches in nominal diameter.
- 2. Commercial sewer laterals shall be 6 inches minimum diameter. Where the 6 -inch line connects to the system, a manhole shall be provided.
- 3. Sewer laterals shall be located at the center of the lot and extended to the property line and be a minimum of 10 feet downstream of the water service.
- 4. Sewer service laterals shall have no more than six (6) feet of cover at the property line.
- 5. A cleanout shall be located on the service lateral at the right-of-way line.
- 6. Materials
 - a. All lateral sewer service lines shall be PVC pipe type SDR-26.
 - b. All PVC sanitary sewer pipe used for lateral services shall be green in color.
- 7. All service laterals shall be installed in accordance with the sanitary sewer embedment and backfill standards.
- 8. Sanitary sewer service locations shall be indicated by a stamped "S", painted green.

I. Cleanouts

- 1. All cleanouts are to be constructed of PVC pipe type SDR-26.
- 2. All PVC sanitary sewer pipe shall be green in color.
- 3. PVC sewer pipe and fittings shall conform to the current ASTM Designation D 3034 for four (4) inches through 15 inches and ASTM Designation F 679 for greater than 15 inches.

J. Main Line Cleanouts

Main line cleanouts shall be located on dead end sewer mains at a distance no greater than 250' from the preceding manhole. If the distance is greater than 250', a manhole shall be installed at the end of the line.

K. Aerial Sewer

1. The piers for the aerial crossing shall be designed in accordance with the guide lines of the Ductile Iron Pipe Research Association.
2. Aerial sewer crossing shall be located in areas where the sewer line cannot be constructed with the appropriate minimum cover. The design engineer shall design the aerial crossing in accordance with these standards and as approved by the City Manager or designee.
3. Pier placement and spacing shall be determined according to soils analysis performed by a geotechnical engineer. Piers shall be placed at a maximum span distance as indicated by the design engineer's calculations.
4. Pier placement and spacing along with a soils report shall be submitted to the City Manager or designee.
5. All above ground sewer installations shall be ductile iron, minimum Class 150, utilizing restrained joints and shall have a wall thickness required for the size and span as designed. The pipe shall have an internal polyurethane coating.
6. The aerial pipe shall be connected to the sanitary sewer pipe by means of a manhole on each side of the aerial crossing.
7. Piers to be constructed with a minimum of Class A (per Item 303 NCTCOG) reinforced concrete.
8. The design engineer shall submit a pipe design for approval by the City Manager or designee.
9. The design engineer shall submit a pier design for approval by the City Manager or designee.

L. Sewer Line Boring

1. The design engineer shall design the sewer line pipe casing for the following loading conditions and applicable combinations thereof:
 - a. Cooper's E-80 Railway loading or AASHTO HS20 loading as applicable.
 - b. Earth loading with the height of fill above the casing as shown on the plans.
 - c. Loads applied during jacking, including axial load from jacking.
 - d. All other applicable loading conditions, including loads applied during transportation and handling.
 - e. Bore will be marked to show location of bore.
2. Materials
 - a. Steel Casing Pipe - Steel casing pipe shall be new (or used if approved by the City Manager or designee) and suitable for the purpose intended and shall have a minimum yield strength of 35,000 pounds per square inch (psi). Casing shall meet ASTM A-36, ASTM A-570, ASTM A-135, ASTM A-139, or approved equal. Pipe shall be coated with coal tar epoxy (15 mils min.) in accordance with AWWA C-210. Pipe joints shall be welded in

accordance with AWWA C-206. After pipe is welded, coating shall be repaired.

- b. Cement Mortar - Cement mortar shall consist of one (1) part cement to two (2) parts clean sand with sufficient water to make a thick, workable mix.
- c. Pressure Grout Mix - Grout shall be comprised of 1 cubic foot of cement and 3.5 cubic feet of clean fine sand with sufficient water added to provide a free-flowing thick slurry. If desired to maintain solids in the mixture in suspension, one cubic foot of commercial grade bentonite may be added to each twelve to fifteen cubic feet of the slurry.
- d. Casing Insulators (Spacers) - Use casing insulators for any type of carrier pipe. Insulators shall be high density polyethylene. Insulators shall fit snug over the carrier pipe and position the carrier pipe approximately in the center of the casing pipe to provide adequate clearance between the carrier pipe bell and the casing pipe. Insulators shall be manufactured by "Recon" and be Racci Type or approved equal.

3. Installation

- a. Tolerances
 - i. All bores shall be installed at a grade no less than the minimum indicated by TAC, Chapter 317 for the desired pipe size.
 - ii. All bores shall maintain grade enough to ensure desired clearance distances between existing utilities and bore.
- b. Excavation and Backfill of Access Pits
 - i. Bore pits must be a minimum of four (4) feet from the back of curb when located for boring under roadways.
 - ii. Do not allow excavation over the limits of the bore or tunnel as specified.
 - iii. Trench walls of access pits adjacent to the bore or tunnel face shall be truly vertical. Shore the trench walls as necessary to protect workmen, the public, structures, roadways, and other improvements.
 - iv. Excavations within the right-of-way and not under surfacing shall be backfilled and consolidated by mechanical methods as specified in these standards for compaction of trenches under roadways.
 - v. Surplus material shall be removed from the right-of-way and the excavation finished to original grades.
 - vi. Backfill pits immediately after the installation of the carrier pipe is completed. If carrier pipe is not installed immediately after casing pipe installation, the right-of-way Owner may

require the access pits be temporarily backfilled until installation of carrier pipe.

- vii. Where seeding or sodding is disturbed by excavation or backfilling operations, such areas shall be replaced by seeding or sodding, as specified.

M. Lift Stations

1. Minimum requirements, plans and specs submitted for approval by City Manager or designee. Lift Stations must be designed in accordance with 30 TAC, 317.3.
2. Instrumentation and Control
 - a. The voltage supplied for pump operation shall be 3 phase, 480 volts. Converting single phase power to three phase power using additional mechanical equipment shall not be allowed.
 - b. Wet-well level control shall be achieved through the use of an ultrasonic level indicating transmitter.
 - c. A main disconnect shall be installed on power supply between the meter and control panel.
 - d. All lift stations dedicated to the City of Lake Worth shall have SCADA telemetry equipment installed, at the expense of the Developer, that interfaces with the City's SCADA system and meets the City's protocol and specifications.
 - e. Submersible pumps shall be provided with moisture and motor over-temperature sensors.
3. Site Requirements
 - a. A concrete pad will be required at the front of the control cabinet. The pad shall provide a 3-foot working area away from the face of the cabinet and extend the width of the enclosure mounting structure. Pad depth shall be a typical 4 inches.
 - b. A 1-inch minimum potable water service is required. The water service may be set in a standard 18-inch galvanized water meter box with a 1-inch brass angle stop.
 - c. The site shall be graded to drain away from the station to prevent stormwater inflow or infiltration into the wet-well.
 - d. The site shall be located outside of the 100-year floodplain.
 - e. The site shall not be located within 100 feet of an existing or proposed residence, if possible.
 - f. If applicable the lift station site driveway shall include driveway area for maintenance vehicles to park off public roadway while performing maintenance, the minimum driveway length shall be 15 feet.
 - g. A concrete driveway turning area is required where access drives extend more than 20 feet from main roads. The driveway area shall

be "T" shaped with the applicable turning radius. The minimum driveway width shall be 15 feet.

SECTION 4.13. STORM DRAINAGE FACILITIES

A. General

The purpose of this Section is to establish standard principles and practices for the design and construction of storm drainage facilities within the City of Lake Worth. The design factors, formulas, graphs, and procedures described in the following pages are intended to serve as guidelines for the design of the storm drainage facilities provided for developments within the City. Responsibility for the actual design remains with the design engineer. Deviation from the requirements of this Criteria must be approved by the City Council.

All materials, construction, and testing shall be in conformance with the City of Lake Worth Design Standards and the NCTCOG Standard Specifications for Public Works Construction.

B. Hydrology

a. Drainage Area Delineation

- i. The size and shape of each watershed and associated sub-basins (on-site and off-site) shall be determined for each drainage facility. The determination should be based on topographic maps, at a scale of 1 inch = 200 feet (1 in = 200 ft) or greater.
- ii. Inlet placement should also be taken into account during the delineation of drainage areas. Each proposed inlet shall have an independent drainage area.

b. Rainfall

The Intensity-Duration-Frequency (IDF) curve shows anticipated rainfall rates for storm durations from five (5) minutes to 24 hours.

This curve has been prepared using the information derived from Technical Paper No. 40 (Soil Conservation Service, May 1961).

c. Storm Frequency

The drainage system shall provide overflow at all low points and identify the overflow path on the plans and on the plat as applicable. The term "positive overflow" means that when the inlets do not function properly or when the design capacity of the conduit is exceeded, the excess flow can be conveyed overland along a grassed or paved course. Normally, this would mean along a street or alley. If not, the excess flow path shall require the dedications of drainage easements on private property.

The following guidelines shall be followed to determine the storm frequency to be used to design a storm drainage system.

Drainage Facility	Design Recurrence Interval
Closed Storm Sewer Systems	10-year with 100-year positive overflow for inlets on grade in streets such that the depth of flow in the street does not exceed the top of curb. For inlets at low points or in a roadway sag, the 100-year flow must be captured within the curb.
Culverts and Bridges	100-year
Concrete-lined Channels	100-year
Earthen Channels	100-year
Detention Facilities	100-year

C. Runoff Calculations

1. Methodology

- a. The selection of method to be used to calculate runoff depends upon the size of the contributing drainage area at the most downstream point of the project.
- b. The Rational Method is acceptable for designing projects with drainage areas of less than 100 acres.
- c. A Unit Hydrograph method is required for projects with larger drainage areas.
- d. Regardless of the method used, runoff computations shall be based upon fully developed conditions in accordance with the ultimate land use assumption in the current Comprehensive Land Use Plan for the City of Lake Worth. The design engineer shall size drainage facilities by disregarding the detention effects of upstream properties and calculating runoff as if the off-site property was developed without any detention. If an approved regional detention/retention facility is in operation, the design engineer may size downstream drainage facilities based on consideration of the detention effects of the regional facility.

2. Procedure for drainage areas less than 100 acres

a. Methodology

The Rational Method is based on the principle that the maximum rate of runoff from a given drainage area for an assumed rainfall intensity occurs when all parts of the area are contributing to the flow at the point of discharge. Therefore, the duration of the storm used is equivalent to the time of concentration of the basin.

The formula for calculation of runoff by the Rational Method is:

$$Q = CIA$$

where, Q = the maximum rate of discharge (cfs)

C = Coefficient of runoff, based on topography, soil, land use, and moisture content of the soil at the time the rainfall producing runoff occurs

I = Intensity of rainfall for the time period it takes for flow from the most hydraulically distant point of the drainage area to reach the point of design (in/hr)

A = Drainage area contributing to the runoff at the specified concentration point/outfall (acres)

b. Runoff Coefficient

The runoff coefficient "C" in the Rational Method equation is dependent on the character of the soil and the degree and type of development in the drainage area. Normally, as a drainage area develops the amount of runoff increases in proportion to the amount of impervious area. The runoff coefficient shall be based on the ultimate land use as recommended in the current City of Lake Worth Comprehensive Plan.

c. Time of Concentration

The time of concentration is the longest time, without interruption of flow by detention devices, for a drop of water to flow from the most hydraulically distant point of the drainage area to the point of concentration (point of design) of the basin. Note that this is not necessarily the point at the longest physical distance from the point of concentration, but the point from which it will take runoff the longest time to reach the concentration point.

SCS methodology is recommended to determine the time of concentration (T_c). This method separates the flow through the watershed into three regimes: sheet flow, shallow concentrated flow, and open channel flow.

i. Sheet Flow

Sheet flow is flow over plane surfaces. It occurs in the uppermost area of the defined basin. The time of concentration in minutes for sheet flow is determined using the following equation:

$$T_{c_{SheetFlow}} = 60 \frac{D}{V}$$

where, D = distance along the flow path (feet)

V = velocity (feet per second)

T_c = time of concentration (minutes)

The longest flowpath for the water is determined for each basin begins at the most hydraulically distant point in the basin and ends at the concentration point

for the basin. The sheet flow length is then measured along this flowpath from the uppermost part of the basin for a length no more than three hundred (300) feet (At a maximum distance of three hundred (300) feet, sheet flow typically changes to shallow concentrated flow).

A slope should be estimated along this length of flow. A velocity corresponding to this slope was determined using the upland method graph found in Appendix B-1.

ii. Shallow Concentrated Flow

Shallow concentrated flow typically begins where sheet flow ends. A projected slope should be established along the flowline for the shallow concentrated flow length. A velocity corresponding to this slope is determined from the shallow concentrated flow graph in Appendix B-1. The time of concentration in minutes for shallow concentrated flow is determined by the following equation:

$$T_{C_{ShallowConcentratedFlow}} = 60 \frac{D}{V}$$

where, D = distance along the flow path (feet)

V = velocity (feet per second)

T_c = time of concentration (minutes)

iii. Open Channel Flow

Open channel flow is applicable for large channel sections (and closed storm sewers in some cases). In most cases, it is not applicable for the Rational Method (since large channels indicate large watersheds where a Unit Hydrograph Method is applied in the City of Lake Worth). The time of concentration for open channel flow is determined using the following equations:

$$T_{C_{ChannelFlow}} = 60 \frac{D}{V}$$

where, D = distance along the flow path (feet)

V = velocity (feet per second)

T_c = time of concentration (minutes)

Where V is estimated using a combination of the continuity equation and Manning's equation:

$$V = \frac{1.486}{n} (R)^{2/3} (S)^{1/2}$$

where, n = Manning's "n"

R = A/P = hydraulic radius (feet)

A = area (square feet)

P = wetted perimeter (feet)

S = slope (ft/ft)

iv. Resulting Time of Concentration

The time of concentration is the sum of the sheet flow, shallow flow, and open channel flow segments.

$$T_c = T_{c_{SheetFlow}} + T_{c_{ShallowConcentratedFlow}} + T_{c_{ChannelFlow}}$$

v. Resulting Time of Concentration of Inlets.

When designing inlets and laterals, the time of concentration is equal to the inlet time. The design engineer shall compare the specified inlet times in the table below to the actual calculated inlet time by computing the flow time overland and along the gutter to the first inlet. In no case shall a shorter inlet time or time of concentration be used than the times specified in the table below.

The following table includes the values for coefficient of runoff and minimum inlet time for different land uses in the City.

Land Use	"C"	Inlet Time (min)
Park Areas – No Developed Land	0.30	15
Developed Park Sites	0.40	15
Single Family Residential	0.55	15
Duplex	0.60	15
Multiple Family	0.80	10
Schools	0.70	10
Churches	0.70	10
Neighborhood Commercial	0.80	10
Office Commercial	0.80	10
Commercial	0.90	10
Industrial	0.90	10

vi. Travel Time

The travel time in a conduit or channel from the inlet to the point of design shall be determined through the use of Manning's equation. When attempting to determine offsite fully developed flow for a currently undeveloped area, or single-family flow for the proposed on-site detention design, travel time can be estimated by assuming an average flow velocity of six (6) feet per second from the inlet to the point of concentration.

d. Procedures for Drainage Areas greater than 100 acres

i. Methodology

A Unit Hydrograph Method is required for drainage areas in excess of 100 acres. The use of a unit hydrograph calculation will be based upon standard and accepted engineering principles subject to the approval of the City Manager or designee. The recommended Unit Hydrograph models are HEC-1 or HEC-HMS.

ii. Rainfall

When using a Unit Hydrograph Method to determine the peak runoff of a basin, a 24-hour storm duration is to be used with a SCS Type II distribution. Rainfall values can be determined using the City of Lake Worth IDF curve, found in Appendix B-1.

iii. Loss Rate

To determine the loss rate of the basin, the SCS Curve Number (CN) method shall be used. CN values shall be taken from TR-55 and should in general correspond with the C factors used in the Rational Method.

iv. Time of Concentration

The time of concentration for use in Unit Hydrograph applications shall be developed using SCS methods. That methodology is described in the Rational Method section of this Ordinance.

v. Routing

The method used for routing of the Unit Hydrograph through the system depends on the system in question. For artificial channels and storm drainage systems, stream routing can be performed using the Muskingum Cunge method. That method uses the Manning's coefficient, reach length, channel slope, and shape of the channel to determine the storage of the channel reach.

In ponds and natural channels, the Modified Puls Routing method should be used. The Modified Puls method uses a stage-storage-discharge method to determine the storage necessary in a channel reach to produce a given discharge.

D. Detention

1. Definition

Storm water detention basins are used to temporarily detain storm water, thereby reducing peak discharge rates. Detention basins in the City of Lake Worth are required to provide adequate volume and discharge to reduce the 100-year peak discharge rate from newly developed areas one acre or larger to that of a single family development of the same size ($C = 0.55$) to satisfy the following requirements: compliance with City ordinances, preservation of existing floodplains along major creeks, prevention of overloading inadequate downstream storm drainage facilities, and prevention of erosive conditions in water courses. Either regional detention/retention ponds or on-site detention/retention ponds may be used to provide the required detention.

2. Methodology

Basins without upstream regional detention ponds or upstream private detention ponds routed through the site and with drainage areas 100 acres or less can be designed using the Modified Rational Method. Routed Unit Hydrographs must be used in the design of basins with drainage areas greater than 100 acres or basins where the Modified Rational Method may not be applied. The hydrograph routings through the detention basin are to be done using the Modified Puls Method.

3. Criteria

- a. The 100-year inflow and allowable outflow will be determined using the methodology described in the "Hydrology" section of these standards.
- b. A maintenance plan, approved by the City Manager or designee and the Director of Public Works, is required for all detention facilities and shall meet the standards given in this section.
- c. The minimum amount of storage volume of the detention basin shall be that volume required to reduce the 100-year runoff rate to an equivalent single-family rate. In addition, detention basins are required to include one (1) foot of freeboard.
- d. An emergency spillway or overflow area shall be provided at the maximum 100-year pool level. From the spillway, a conveyance path must be provided to the nearest right-of-way or drainage channel.
- e. The outflow structure shall discharge flows into natural streams or unlined channels at a non-erosive rate.
- f. Detention basins shall provide positive drainage throughout the pond with a minimum pond bottom slope of 0.30%. The maximum side slope permitted around the detention pond is 4(H):1(V).
- g. The Developer/Owner shall use low maintenance vegetation for vegetative cover, as approved by the Director of Public Works prior to planting. The selection of materials shall comply with the current

ground cover listing for North Central Texas furnished through the Texas Agricultural Extension Service.

- h. A pilot channel shall be used within detention ponds with a bottom width five (5) feet or greater
- i. The design of detention facilities shall include provisions for collecting and removing sediment deposited after collecting and releasing storm water.
- j. The City does not assume maintenance for private detention ponds. All detention ponds must be placed in a private drainage easement dedicated on the final plat. Public storm sewer infrastructure draining to or away from a private detention must be placed in a public drainage easement. In cases where a private detention pond will be used by owners platting separate lots, a Joint Detention Agreement must be in place between the property owners and must be accepted by the City prior to the property being final platted.
- k. Detention is allowed in parking lots. Detention in parking lots may not be deeper than six (6) inches in depth at any location. The exception to the six (6) inch depth is a nine (9) inch maximum in areas designated as truck parking only. Parking spaces inundated by detained storm water may not be counted toward required parking ratios for the development. Warning signs must be placed on the site designating that the area may be inundated in an extreme storm event.
- l. Detention facilities shall be designed to empty in less than 48 hours, unless it is also serving as a sediment control facility.
- m. Detention facilities shall not be counted as an erosion control measure unless:
 - n. the basins are designed to empty a minimum of 24 hours from the storm event, and
 - o. adequate sediment storage areas in the basin have been set aside and are maintained.
- p. The property owner shall maintain all detention facilities. A maintenance plan must be included on the final construction plans outlining these minimum measures:
- q. Facilities shall be mowed at least twice a year to control weeds and discourage woody growth.
- r. Debris, litter, and accumulated sediment shall be removed from detention facilities at least twice a year. Particular attention should be given to removal of debris, litter, and sediment around outlet structures.
- s. Conformance with the maintenance plan as approved by the City Manager or designee is the responsibility of the owner of the detention facility.
- t. An example of the calculations for sizing a detention pond using the Modified Rational Method can be found in Appendix B-5.

- u. Erosion control measures shall be installed in detention ponds to prevent erosion and displacement of sediment to downstream facilities. Erosion control measure shall remain in place until the Director of Public Works determines a vegetative cover is established in the detention pond. Sediment control measures shall be approved by the Director of Public Works.

E. Hydraulics

1. Refer also to Section 3.2.
2. Property shall be developed so that the rate of runoff created by the development as it leaves the property does not exceed the rate of runoff that would have been created if the property had been developed as a single-family residential property. Detention shall be designed in accordance with the "Detention" section of this document.
3. Runoff calculations must be based on the proposed lot grading for the development. Runoff contributed from off-site sources must be considered in the calculations. All off-site drainage must be calculated at the proposed ultimate land use (fully developed conditions) according to the current City of Lake Worth Comprehensive Land Use plan. Each on-site inlet shall have one contributing drainage area. The terms "ultimate" and "fully developed" are interchangeable with respect to the drainage sections of this Ordinance.
4. All drainage systems must be sized for ultimate conditions without the effects of detention facilities. If an approved regional detention facility is in operation, the design engineer may size drainage facilities based on consideration of the detention effects of the regional facility.
5. All drainage systems shall provide for positive overflow at all low points. Positive overflow means that when the inlets do not function properly or when the design capacity of the conduit is exceeded, the excess flow can be conveyed overland. Additional guidelines for positive overflow are included in the "Hydrology" section.
6. When adjacent to the floodplain, the finished floor (FF) elevation of commercial buildings shall be a minimum of one (1) foot above the 100-year fully-developed water surface elevation (WSE) of the adjacent floodplain. The FF elevation of residential buildings shall be a minimum of two (2) feet above the 100-year fully-developed WSE of the adjacent floodplain.

F. Open Channel

1. General Criteria
 - a. Open channels may be used instead of enclosed systems when the drainage area of the contributing flow is greater than one hundred (100) acres. Open channels shall not be permitted when the drainage area is less than 100 acres. An exception to this guideline is a development draining directly to a receiving creek or open channel.

- b. Improved open channels shall provide a cross section which reduces all velocities to six (6) feet per second or below for grass-lined channels.
- c. For channel sections with velocities ranging from six (6) to 15 feet per second, a lined section must be specified for the channel. Lining types such as concrete and gabions may be used upon approval of the City Manager or designee. Channel velocities greater than 15 feet per second will not be permitted.
- d. The Developer/Owner shall use low maintenance vegetation for vegetative cover, as approved by the Director of Public Works prior to planting. The selection of materials shall comply with the current ground cover listing for North Central Texas furnished through the Texas Agricultural Extension Service.
- e. A pilot channel shall be used in open channels with a bottom width five (5) feet or greater.
- f. In cases when the property boundary follows the centerline of the channel or incorporates only a portion of the channel cross sections, the Developer/Owner shall construct all improvements required on their property for the ultimate channel design. If channel lining is required, the Developer/Owner shall coordinate with adjacent owners in order to construct these features in their entirety at the time of the channel improvements.
- g. At the discretion of the City Manager or designee, fencing and/or guardrails shall be provided for the benefit of public safety along open channels, creek sections, and detention ponds.
- h. Flumes and curb cuts are not recommended. Use of curb cuts and flumes may not be within a public drainage easement. Flumes on private property must be designed to limit erosion at the end of the flume.

2. Design Methodology

- a. Major channels or channels where backwater effects occur must be modeled using a standard backwater model. The U.S. Army Corps of Engineer's HEC-RAS model is preferred. Other models may be used that meet FEMA and standard engineering criteria, if approved by the City Manager or designee.
- b. For collector channels and swales, Manning's equation can be used to determine water surface elevations and velocities, where backwater effects from major channels or creeks are deemed to be negligible.

3. Hydraulic Design Criteria

- a. Improved channels must be designed to convey the 100-year ultimate flow within the channel banks with one (1) foot of freeboard. In bends in the channel, the superelevation of the water must be estimated and added to the freeboard of the channel on the outside of the bend. Calculations to determine the superelevation in the channel can be found in Appendix B 2.

- b. All channels must be designed to have subcritical flow. The maximum allowable Froude number for channel flow is 0.86. The calculation to determine the Froude number in the channel can be found in Appendix B-2. Hydraulic jumps are to be avoided, except at bridges and culverts. When a hydraulic jump is predicted at a bridge or culvert, the channel bottom and side slopes must be protected from erosion with a channel lining.
- c. The preferred channel shape is a trapezoidal section. Unless shown to be feasible in a soils report sealed by a Licensed Professional Engineer in the State of Texas, and approved by the City Manager or designee, improved channels shall have side slopes no steeper than:
 - i. Four (4) feet horizontal to one (1) foot vertical for earthen, grass-lined side slopes.
 - ii. 1.5 feet horizontal to one (1) foot vertical for concrete-lined side slopes.
- d. All unpaved channels shall have sufficient gradient to avoid ponding in low flow conditions. A minimum slope of 0.40% is required for all unpaved channels and swales except those used as part of a wetlands area. A concrete pilot channel shall be included in all improved major earthen channels.
- e. All channel radii shall be a minimum of three (3) times the top width of flow. If the natural channel radius is smaller than three (3) times the top width, care should be provided in the design to protect any structures from channel migration or flooding.

G. Bridges

Design Criteria

- 1. One (1) foot of freeboard is required between the 100-year water surface elevation and the low chord of the bridge. Exceptions to this requirement must be approved by the City Manager or designee in writing.
- 2. The skew of the bridge piers and abutments shall be oriented parallel to the normal or flood direction of flow, resulting in an angle of skew as close to zero degrees as possible.
- 3. Bridges shall be designed using standard methods. If the bridge is located across a major channel or a channel where backwater effects occur, the bridge must be included in the standard backwater model of the channel. If the HEC-2 backwater model is used, the normal bridge option shall be used for bridges without interior piers. The special bridge option shall be used for bridges with interior piers, and for situations where pressure flow and/or weir flow occurs.

H. Culverts

Design Criteria

- 1. One (1) foot of freeboard is required between the 100-year water surface elevation and the top of road elevation. Exceptions to this requirement must be approved by the City Manager or designee.

2. Culverts shall be designed in accordance with the Federal Highway Administration (FHWA) HDS-5 manual. Standard charts from that manual are provided in Appendix B-4. Standards in the City of Lake Worth will take precedence over the FHWA manual in cases of conflict.
3. The culverts shall be oriented such that the impacts due to the flood and normal flow angles of skew on the structure are minimized.
4. Culverts can be designed in supercritical flow for hydraulic efficiency. However, the outlet of the culvert shall be evaluated for erosion concerns, and the hydraulic jump must be forced at the outlet of the culvert, whether by design grades or an energy dissipater.
5. The maximum allowable velocity of flow through a culvert shall be fifteen (15) feet per second. The maximum allowable discharge velocity for a storm sewer system shall not exceed the permitted velocity of the receiving channel or conduit to prevent erosion. The maximum outfall velocity of a conduit in partial flow shall be computed for partial depth and shall not exceed the maximum permissible velocity of the receiving channel unless controlled by an appropriate energy dissipater (e.g. stilling basins, impact basins, and/or riprap protection). Minimum flow within a culvert during a design event is two (2) feet per second.

I. Storm Sewer Systems

1. Materials

All storm sewer conduits within dedicated public drainage easements or public right-of-way are to be constructed using reinforced concrete pipe. Other materials are not permitted unless prior approval is obtained from the City Manager or designee.

2. Storm Sewer Design

- a. Storm Frequency - Closed storm sewer systems shall be sized as designated in the "Hydrology" section of these guidelines.
- b. Velocities and Grades in Storm Sewers
 - i. The minimum allowable velocity in a storm sewer conduit shall be 2.5 feet per second.
 - ii. The maximum allowable velocity in a storm sewer conduit is 12.5 feet per second.
 - iii. The maximum allowable discharge velocity for a storm sewer system shall not exceed the permitted velocity of the receiving channel or conduit to prevent erosion. The maximum outfall velocity of a conduit in partial flow shall be computed for partial depth and shall not exceed the maximum permissible velocity of the receiving channel unless controlled by an appropriate energy dissipater (e.g. stilling basins, impact basins, and/or riprap protection).
 - iv. The minimum slopes for various pipe sizes that will maintain the minimum velocity are given in Appendix B-3.

- v. A minimum of two (2) feet of separation is required (outside of pipe to outside of pipe) between storm sewer and other public utilities, except as required by TCEQ regulations. Separation closer than two (2) feet requires concrete or steel encasement of the water or sanitary sewer line.
- c. Hydraulic Gradient of Storm Sewers
- i. The Hydraulic Grade Line (HGL) shall be established for all storm drainage design and included in the profile of the storm sewer. The 10-year and 100-year HGLs must be shown on the profiles of public storm sewer systems.
 - ii. When performing hydraulic analyses for storm drainage system design, the starting HGL elevation shall be based on the following criteria:
 - When the ratio of the drainage area of the receiving creek (at the confluence location) to the drainage area of the system being designed is 15:1 or greater, the 10-year water surface of the receiving creek shall be used as the starting 100-year HGL elevation for HGL calculations.
 - When the ratio of the drainage areas is less than 15:1, the 100-year elevation on the receiving creek shall be used as the starting water surface for design calculations.
 - iii. If a system is discharging into an existing downstream storm drain, the HGL shall be tied into the HGL for the 10-year or 100-year event (as applicable) in the downstream storm drain. It is the design engineer's responsibility to evaluate all data employed in the analysis, including any data used from existing plans or provided by the City. If the existing downstream system is undersized, downstream flooding cannot be increased (this may require additional detention than that required by these guidelines) and the proposed system should be designed to accommodate future downstream drainage improvements.
 - iv. Computation of the hydraulic grade line shall proceed from downstream to upstream in a manner consistent with typical engineering methods.
 - v. If at any time the storm sewer system enters partial flow, the HGL at the next most upstream structure (wyse, manhole, etc.) will begin again at the top of pipe elevation.
 - vi. Friction head loss throughout the system during pressure flow shall be determined by direct application of Manning's Equation. A Manning's 'n' value of 0.013 is to be used for these calculations when concrete storm sewer is used.
 - vii. The design event flow (cfs), velocity (fps), velocity head (ft), and hydraulic slope (ft/ft) for each portion of the storm

drainage system in pressure flow is to be shown on the profile of the system. The design event flow, velocity, depth of flow (ft), and flow capacity of the system for each portion of the storm drainage system in partial flow is to be shown on the profile of the system.

viii. In addition to friction losses, minor head losses at points of turbulence shall be calculated and included in the computation of the hydraulic gradient. The following minor losses shall be accounted for in the storm sewer system design. Equations to determine these head losses are located in Appendix B-2.

- Entrance Losses – Entrance losses to a closed storm sewer system from an open channel, pond, or inlet shall be calculated. The resulting hydraulic grade line shall be compared to inlet control conditions for the storm sewer. The higher of the two values shall be used as the controlling upstream hydraulic grade line.
- Expansion and Contraction Losses – For locations within the storm sewer system where the flow area available increases or decreases, expansion and contraction head loss shall be calculated.
- Manhole and Bend Losses – Head losses associated with manholes used for pipe direction changes and bends in pipes of equal diameter shall be calculated.
- Junction Losses – Head losses associated with wye connections or manholes with branch laterals entering the main line shall be calculated.

d. Inlet Design

i. Inlet Placement

- Storm sewer inlets shall be located along paved streets at intervals that do not allow the 100-year storm to exceed the top of curb elevation and allow the roadway to meet the required lane opening criteria.
- Inlets shall be generally placed upstream of intersections. A maximum of five (5) cfs will be allowed to cross intersections of residential streets in the 100-year event. However, only one street shall be crossed with surface drainage at any one intersection, and this street shall be the lower classified street. No surface drainage will be permitted to cross a Collector or Arterial roadway.
- When an alley intersects a street, inlets shall be placed in the alley to prevent flow from that alley

from causing the capacity of the intersecting street to be exceeded.

- When a driveway (residential or commercial) intersects a street, a maximum of five (5) cfs will be allowed to be discharged into the street. Inlets shall be placed in the driveway whenever flow down that driveway would cause the capacity of the intersecting street to be exceeded.

ii. Inlet Capacity and Size

- The minimum inlet size shall be five (5) feet. Curb inlets shall be five (5), ten (10), fifteen (15), and twenty (20) feet in length. No more than twenty (20) feet of inlet shall be placed along a gutter at any one location.
- The minimum lateral pipe size shall be eighteen (18) inches for use with five (5) foot inlets, 21-inch laterals for use with ten- and fifteen-foot and drop inlets, and 24-inch laterals for use with 20-foot inlets. Where laterals tie into trunk lines, place the laterals on a 60-degree angle with the trunk line and connect them so that the longitudinal centers intersect.
- Curb inlets may not be utilized as junction boxes.
- At sags, the flow into a curb inlet shall be one (1) cfs per linear foot of inlet.
- Additional inlet sizing equations can be found in Appendix B-2.

iii. Design

- City standard curb inlets are required on all public storm sewer systems.
- Slotted drains and combination inlets are not allowed unless approval is obtained from the City Manager or designee.
- Drop (wye) and grate inlets may be used in specific situations with the prior approval of the City Manager or designee.
- All storm drain inlets shall be sized in accordance with the State of Texas Department of Highways and Public Transportation Hydraulic Design Manual Chapter 10 – Storm Drains

e. Outfall Design

- i. The flow lines of storm sewer conduits that discharge into open channels shall match the flow line of the channel unless the outfall is submerged beneath the normal water surface elevation or the channel is fully lined.

- ii. Flumes are not permitted to convey discharge to the flow line of earthen creeks.
- iii. Pipes may intersect with major creeks at angles not to exceed 60 degrees.
- iv. Pipes may intersect with minor creeks at angles not to exceed 90 degrees only if the City Manager or designee deems that an angle of intersection greater than 60 degrees will not cause an erosive condition, otherwise the angle may not exceed 60 degrees.

f. Access

- i. Access points to a storm drain shall be no greater than 600 feet apart in storm drains less than 24 inches in diameter and no greater than 1200 feet apart in larger conduits.
- ii. Manhole structures shall be rectangular and as specified in the construction details of these standards (Appendix B-6).

J. Roadway Drainage

1. Design Storm Frequencies – Street sections must be designed to contain the 100-year storm event within the curb.
2. Permissible Spread of Water – The spread of water on the roadway shall be limited to prevent the street from losing its effectiveness as a traffic carrier, which is an important concern in the case of emergency vehicles which may not be able to traverse an inundated roadway. The following table lists the allowable encroachment limits.

Street Classification	Allowable Encroachment (during the 100-yr event)
Local	Maximum depth of six (6) inches or top of curb.
Collector	One twelve (12) foot lane must remain open.
Thoroughfare	One twelve (12) foot lane of traffic in each direction must remain open.

3. Calculation of Flow Depth in Gutters – The flow of storm water in curb and gutter sections is classified as open channel flow. As such, the design calculations are based on a modified form of Manning's equation. The modified Manning's equation to determine gutter discharge is included in Appendix B-2.
4. Alley Flows
 - a. The flow created by the 100-year storm shall be contained within the limits of pavement of all paved alleys.
 - b. Curbs are required for at least ten-feet on either side of an inlet in an alley.

- c. Design flow in alleys shall be calculated by using the same equation to calculate gutter flow for a straight crown calculated in two triangular sections.

K. Residential Grading and Drainage

1. Surface runoff from residential lots shall cross no more than one additional lot before being directed toward the street or a dedicated drainage system. When the flow reaches the second lot, side lot swales shall be in place to direct the flows to the street or to a dedicated City drainage system within an easement in the rear yard. Where lot to lot drainage occurs, the lot lines shall be aligned and a dedicated private drainage easement shall be provided.
2. Three (3) General Categories of residential lot grading and drainage plans are anticipated within the City of Lake Worth, as shown in Figure No. 1. Specific deviations from these three plans will be considered on an individual basis.
3. When adjacent to the floodplain, the finished floor (FF) elevation of commercial buildings shall be a minimum of 1 foot above the 100-year fully-developed water surface elevation (WSE) of the adjacent floodplain. The FF elevation of residential buildings shall be a minimum of 2 feet above the 100-year fully-developed WSE of the adjacent floodplain.

SECTION 4.14. Development in the Floodplain

Site design shall conform to the criteria and standards herein and the regulations in Article 10.400 of the Lake Worth Code of Ordinances and the regulations herein.

A. Development within the Fully Developed Floodplain

1. All development near the Special Flood Hazard Area (SFHA) shall require the approval of the City Manager or designee.
2. The City Manager or designee should be contacted for information on approved floodplain hydraulic models for fully developed watershed conditions for the channels in the City. If a hydraulic model is not available from the City, then it must be provided by the developer of the property.
3. Prior to the approval for preliminary grading for proposed development near the FEMA regulated floodplain, a floodplain study must be submitted to and approved by the City. The floodplain study must verify the 100-year existing and ultimate floodplain limits, as well as the proposed alterations to the floodplain. The floodplain study shall demonstrate that the improvements will not increase the 100-year fully developed floodplain elevation at any location along the channel. No development within the floodway or floodplain will be allowed unless approved by the City Manager. This report must contain the following items:
 - a. Written report describing the project and summarizing the effects of the floodplain study. This narrative should contain tables comparing the pre-and post-project flood elevations.
 - b. A hydraulic model of the existing condition of the floodplain. This model should be produced using the United States Army Corps of

Engineers HEC-RAS modeling program. The City will accept any version of HEC-RAS that is accepted by the Federal Emergency Management Agency (FEMA). The cross sections within the modeling must be based on FEMA datum (NGVD 29).

- c. A hydraulic model of the proposed condition of the floodplain. This model shall take into consideration any changes that are proposed to take place within the floodplain.
- d. Stream profiles and cross sections generated by the hydraulic modeling software.
- e. Existing and proposed conditions floodplain work maps. These work maps shall be based on a minimum of 2-foot topographic contours. The topographic contours should be based on FEMA vertical datum. The proposed condition floodplain work map must include the proposed grading to take place within the floodplain and the limits of the proposed development within the floodplain.
- f. If the 100-year fully developed flow is not available from the City, or if the Developer wishes to update the 100-year fully developed flow for the channel, the report must document the generation of the fully developed peak flow value. The methodology required to determine these flows is the same as that describe in the "Hydrology" section of this manual.

B. Development within the FEMA Floodplain

- 1. Development within the FEMA Floodplain is not allowed unless the design engineer can demonstrate that the FEMA floodplain is not accurate, and the development will be located outside the 100-year fully developed floodplain.
- 2. A Letter of Map Revision (LOMR) submittal to FEMA must be submitted to the City upon completion of the construction. This submittal must follow the criteria set forth by FEMA. The National Flood Insurance Program (NFIP) guidelines 65.3 and associated references are hereby incorporated by reference.
- 3. A Conditional Letter of Map Revision (CLOMR) may be required for developments that do not encroach upon the FEMA floodway at the City Manager or designee's discretion. If a CLOMR has been required by the City, then the City will not grant a building permit for the subject tract until, at a minimum, the CLOMR has been approved by the City.
- 4. The CLOMR and LOMR must have properly completed FEMA forms that specify that the City will not perform maintenance within the floodplain.
- 5. Any development within the floodplain shall only operate with an approved US Army Corps of Engineers jurisdictional determination USACE AJD).

CHAPTER 5. CONSTRUCTION REQUIREMENTS AND STANDARD DETAILS

SECTION 5.1. CONSTRUCTION REQUIREMENTS

A. Trench Safety

1. In conformance with House Bills 662 and 665 as passed by the Seventieth Legislative Regular Session of the State of Texas, all construction projects within the City of Lake Worth or its extraterritorial jurisdiction is provided by the Municipal Annexation Act (Article 9700, Vernon's Texas Civil Statutes) shall contain provisions for trench safety.
2. On construction projects in which trench excavation will exceed a depth of five (5) feet, the uniform set of general conditions must require that the bid documents and the contract include detailed plans and specifications for adequate safety systems that meet Occupational Safety and Health Administration standards and that these plans and specifications include a pay item for these same safety systems.

B. Erosion Control Plan

1. An erosion control plan or Storm Water Pollution Prevention Plan (SWPPP) shall be provided with each construction plan submitted for review by the City Manager and/or designee.
2. Each erosion control plan shall clearly identify all erosion and sediment control measures to be installed and maintained throughout the duration of the project.
3. The erosion control plan or SWPPP shall meet the requirements outlined in the most recent versions of the NCTCOG *Integrated Stormwater Management Technical and Criteria Manuals* and the EPA *Stormwater Phase II Rule*.

C. Traffic Control Plan

1. A traffic control plan shall be submitted whenever traffic is disrupted as defined in the latest version of the *Texas Manual for Uniform Traffic Control* by the Texas Department of Transportation.
2. It shall be submitted at least 72 hours prior to any activities affecting traffic.

D. Utility Service Interruption

1. The developer and/or a representative of the developer shall provide a minimum of 72-hour notice to the City with required plans and/or documentation prior to interruption of service, such as utilities and road closure. The City may, at its discretion, require a meeting prior to disruption of services.
2. In the event that existing utility service is to be interrupted during construction, official notice as well as meeting with the City and all other applicable parties shall be held 72 hours prior to interruption.

APPENDIX B-1: HYDROLOGY



Drainage and Stormwater

APPENDIX B-1



APPENDIX B-1

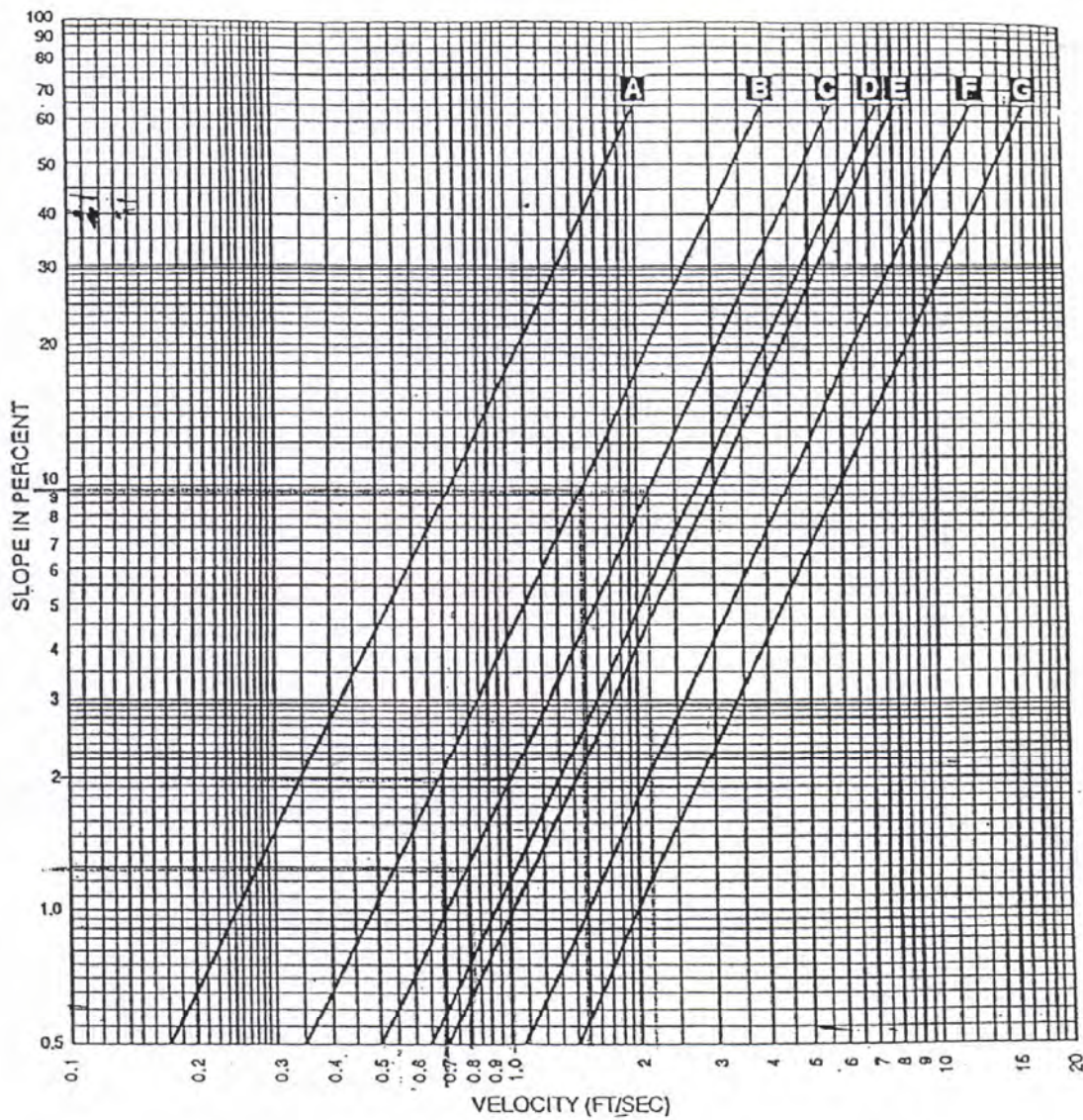
Hydrology

T_c Graph for Sheet Flow (Upland Method)

T_c Graph for Shallow Concentrated Flow

Lake Worth IDF Curve

SCS Curve Numbers



- A** Forest with heavy ground litter & hay meadow (overland flow)
- B** Trash fallow or minimum tillage cultivation; contour or strip cropped & woodland (overland flow)
- C** Short grass pasture (overland flow)
- D** Cultivated, straight row (overland flow)
- E** Nearly bare and untilled (overland flow); alluvial fans western mountain regions
- F** Grassed waterway
- G** Paved area (sheet flow); small upland gullies

FIGURE 2.2-14

Overland Flow Velocities for Upland Method of Estimating T_c

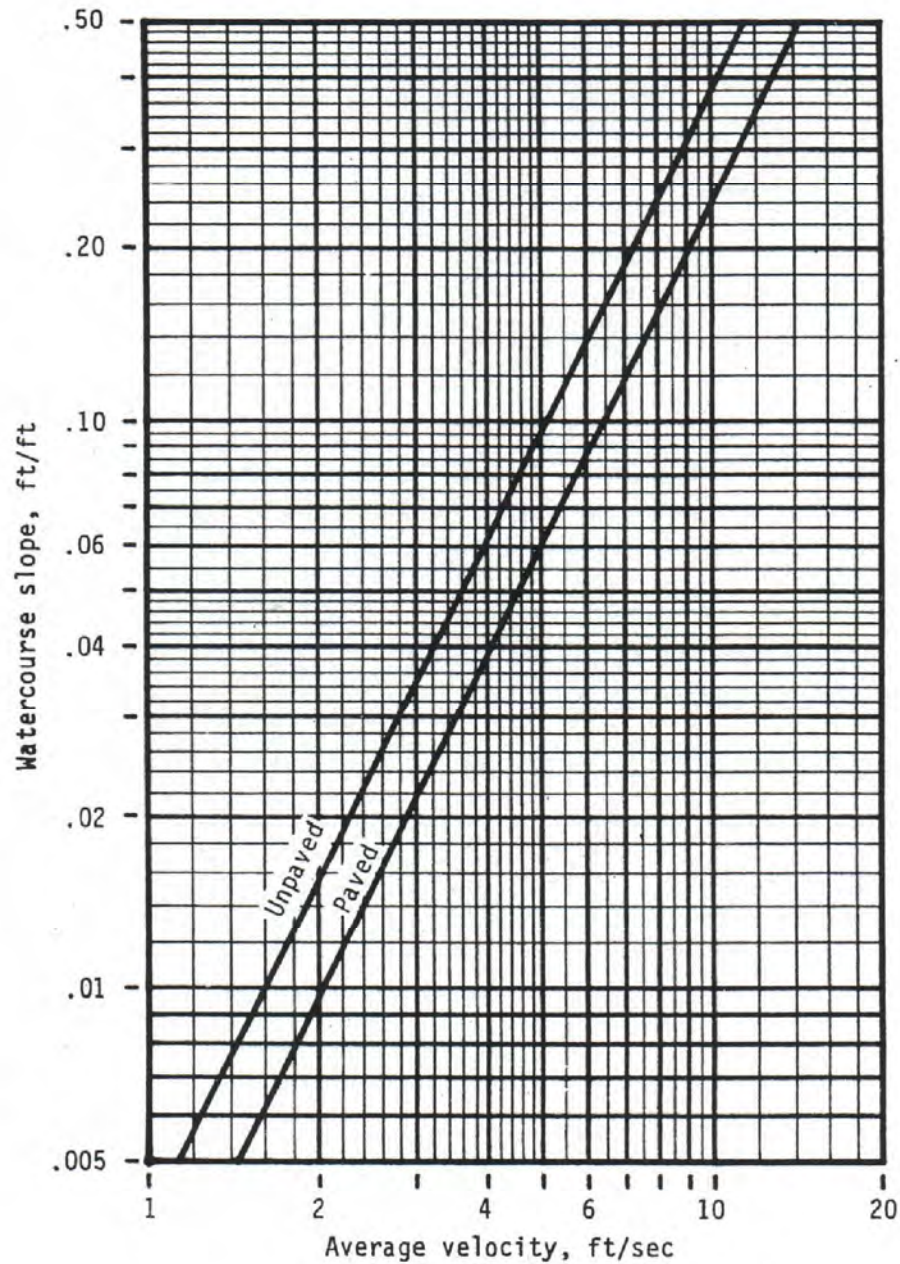


Figure 3-1.—Average velocities for estimating travel time for shallow concentrated flow.

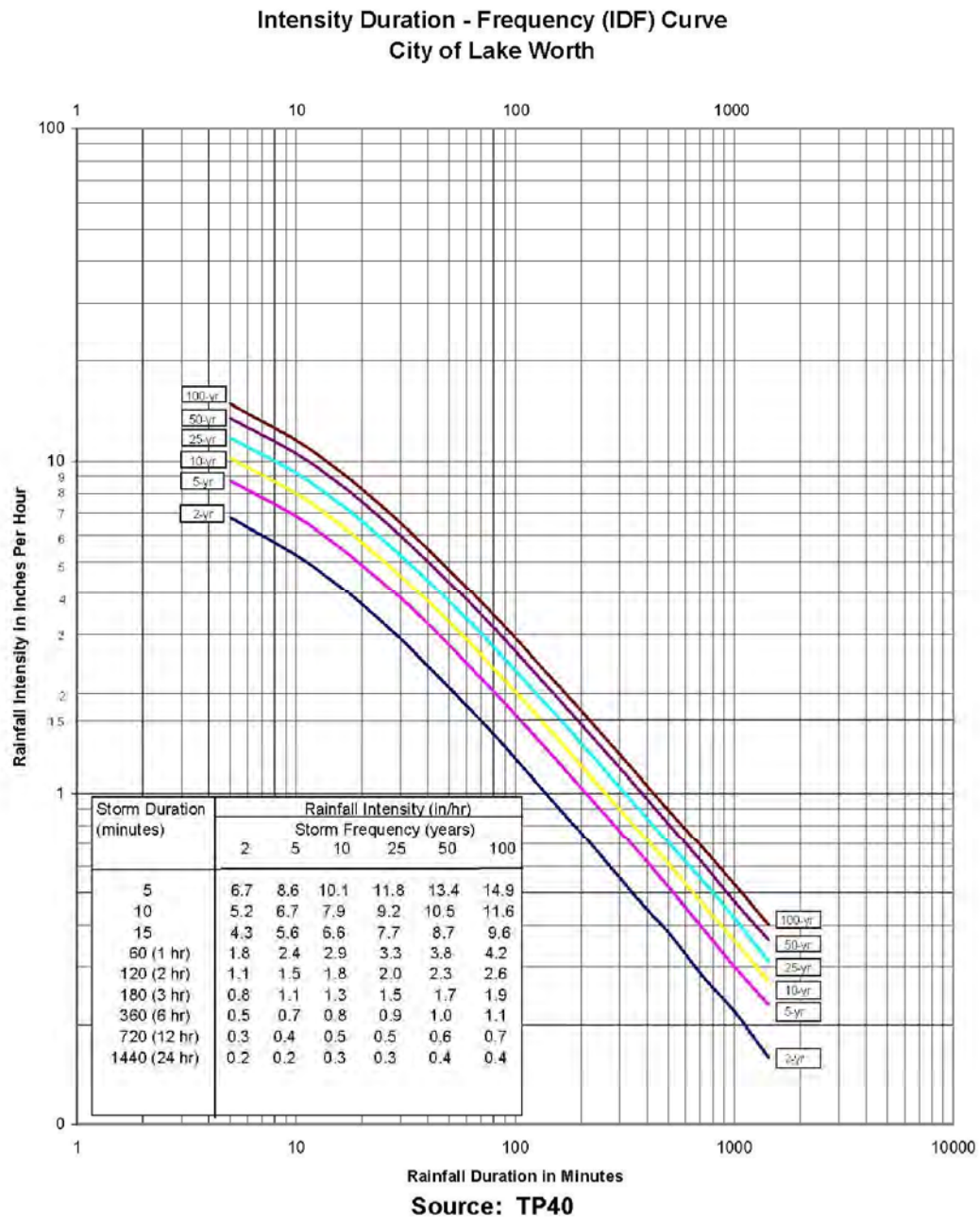


FIGURE 2 - IDF CURVE

Table 2-2a.—Runoff curve numbers for urban areas¹

Cover description		Curve numbers for hydrologic soil group—			
Cover type and hydrologic condition	Average percent impervious area ²	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ³ :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc., (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

¹Average runoff condition, and $I_a = 0.2S$.

²The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

³CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

⁴Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

⁵Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2b.—Runoff curve numbers for cultivated agricultural lands¹

Cover description			Curve numbers for hydrologic soil group—			
Cover type	Treatment ²	Hydrologic condition ³	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
Small grain	C&T + CR	Poor	65	73	79	81
		Good	61	70	77	80
	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
Close-seeded or broadcast legumes or rotation meadow	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T + CR	Poor	60	71	78	81
		Good	58	69	77	80
	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

¹Average runoff condition, and $I_A = 0.2S$.

²Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

³Hydrologic condition is based on combination of factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes in rotations, (d) percent of residue cover on the land surface (good $\geq 20\%$), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

Table 2-2c.—Runoff curve numbers for other agricultural lands¹

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. ²	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. ³	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	⁴ 30	48	65	73
Woods—grass combination (orchard or tree farm). ⁵	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. ⁶	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	⁴ 30	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

¹Average runoff condition, and $I_a = 0.2S$.

²*Poor*: <50% ground cover or heavily grazed with no mulch.

Fair: 50 to 75% ground cover and not heavily grazed.

Good: >75% ground cover and lightly or only occasionally grazed.

³*Poor*: <50% ground cover.

Fair: 50 to 75% ground cover.

Good: >75% ground cover.

⁴Actual curve number is less than 30; use CN = 30 for runoff computations.

⁵CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

⁶*Poor*: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

Fair: Woods are grazed but not burned, and some forest litter covers the soil.

Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Table 2-2d.—Runoff curve numbers for arid and semiarid rangelands¹

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition ²	A ³	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

¹Average runoff condition, and $I_a = 0.2S$. For range in humid regions, use table 2-2c.

²Poor: < 30% ground cover (litter, grass, and brush overstory).

Fair: 30 to 70% ground cover.

Good: > 70% ground cover.

³Curve numbers for group A have been developed only for desert shrub.

APPENDIX B-2: HYDRAULIC EQUATIONS



Drainage and Stormwater

APPENDIX B-2



APPENDIX B-2

Hydraulic Equations

Manning's Equation

Gutter Discharge

On Grade Curb Inlet Capacity

Grate Inlet Capacity

Height of Superelevation of Water in a Bend

Minor Head Loss Equations

Froude Number Calculation

Manning's Equation

The following is the Manning's Equation:

$$Q = \frac{1.486}{n} AR^{2/3} S_f^{1/2}$$

where,

- Q = Total Discharge (cfs)
- n = Coefficient of roughness (Manning's n)
- A = Cross Section area of flow (SF)
- R = A/P = Hydraulic radius of the flow (ft)
- P = Wetted perimeter (ft)
- S_f = Slope of the frictional gradient (ft/ft)

When combined with the continuity equation (Q = VA), the Manning's Equation can solve for velocity:

$$V = \frac{1.486}{n} R^{2/3} S_f^{1/2}$$

Gutter Discharge

For streets with straight crowns, the gutter section will resemble a triangular channel. The equation to determine gutter discharge is as follows:

$$Q = 0.56 \left(\frac{Z}{n} \right) (S^{1/2}) (Y^{1/2})$$

where,

- Q = Gutter Discharge (cfs)
- Z = Reciprocal of the crown slope (ft/ft)
- n = Coefficient of roughness (Manning's n)
- S = Longitudinal street or gutter slope (ft/ft)
- Y = Depth of flow at curb (ft)

The following table includes values for Manning's 'n' for use in the gutter discharge equation:

Type of Gutter	Manning's 'n'
Concrete gutter with asphalt pavement rough	0.015
Concrete pavement broom finish	0.016

Capacity of Curb Inlet on Grade

To determine the capacity of a curb inlet on grade, first determine the ratio of the flow in the locally depressed gutter section to the total flow in the road.

$$E_o = 1 / \left\{ 1 + \frac{S_w}{S_x} \left[\left(1 + \frac{S_w/S_x}{(T/W) - 1} \right)^{2.67} - 1 \right]^{-1} \right\}$$

where,

E_o = Ratio of flow in the depressed gutter to the total flow

S_w = Gutter cross slope (ft/ft)

S_x = Roadway cross slope (ft/ft)

T = Width of flow in roadway (ft)

W = Width of depressed gutter section (ft)

Then calculate the equivalent cross slope at the depressed curb inlet opening.

$$S_e = S_x + \frac{a}{W} E_o$$

where,

S_e = Equivalent cross slope (ft/ft)

S_x = Roadway cross slope (ft/ft)

a = Gutter Depression Depth (ft)

W = Width of depressed gutter section (ft)

E_o = Ratio of flow in the depressed gutter to the total flow

Then calculate the inlet length required to capture 100% of the gutter flow.

$$L_T = 0.60Q^{0.42} S_L^{0.3} \left(\frac{1}{nS_e} \right)^{0.6}$$

where,

L_T = Required length of inlet (ft)

Q = Total flow in the roadway (cfs)

S_L = Roadway longitudinal slope (ft/ft)

n = Manning's 'n' value

S_e = Equivalent cross slope (ft/ft)

The efficiency of a curb inlet opening shorter than L_T is:

$$E = 1 - \left(1 - \frac{L}{L_T}\right)^{1.8}$$

where,

E = Inlet Efficiency

L = Length of the curb inlet opening (ft)

L_T = Required length of inlet to capture 100% of the roadway flow (ft)

The total flow captured by the curb inlet is:

$$Q_i = EQ$$

where,

Q_i = Flow capture by inlet (cfs)

E = Inlet Efficiency

Q = Total flow in the roadway (cfs)

Grate Inlet Capacity in a Sag

A grate inlet in a sag will either act as a weir or an orifice, depending upon the depth of ponding at the grate. The total flow captured by a grate inlet is equal to the lesser total of these two equations.

$$Q_{iw} = 3.0Pd^{1.5}$$

where,

Q_{iw} = Flow captured by inlet (cfs)

P = Perimeter of the grate ($2W+2L$ -width of bars in grate) (ft)

d = Depth of ponding at the grate (ft)

$$Q_{io} = 0.67A_g(2gd)^{0.5}$$

where,

Q_{io} = Flow captured by inlet (cfs)

A_g = Clear opening of the grate (SF)

P = Perimeter of the grate (ft)

d = Depth of ponding at the grate (ft)

The smaller of these two flow values shall be used to determine the flow captured by a grate inlet. Whichever equation is used, the flow value shall be halved, to take potential grate blockage into account.

Height of Superelevation of Water in a Bend

An equation that can be used to determine the height of the superelevation of the water in a bend is:

$$H_s = \frac{cV^2w}{gr}$$

where,

H_s = height of superelevation of the water around a bend (ft)

c = Coefficient, see table below

V = Velocity around the bend (fps)

w = Top width of flow (ft)

g = Gravity constant, (32.2 ft/s/s)

r = Radius in the bend (ft)

Table for Coefficient, c

Flow Type	Channel Cross-Section	Type of Curve	Value of C
Tranquil	Rectangular	Simple Circular	0.5
Tranquil	Trapezoidal	Simple Circular	0.5
Rapid	Rectangular	Simple Circular	1.0
Rapid	Trapezoidal	Simple Circular	1.0
Rapid	Rectangular	Spiral Transitions	0.5
Rapid	Trapezoidal	Spiral Transitions	1.0
Rapid	Rectangular	Spiral Banked	0.5

Minor Head Loss Equations

Entrance Losses

$$HL = K_e \frac{V_1^2}{2g}$$

where,

HL = Head loss (feet)

V₁ = Velocity in the downstream pipe (fps)

K_e = Head loss coefficient

g = Gravitational acceleration (32.2 ft/sec/sec)

Expansion Losses

$$HL = \frac{(1 - D_1^2)^2}{(D_2)} \frac{V_1^2}{2g}$$

where,

HL = Head loss (feet)

V₁ = Velocity in the upstream pipe (fps)

D₁ = Upstream pipe diameter (ft)

D₂ = Downstream pipe diameter (ft)

g = Gravitational acceleration (32.2 ft/sec/sec)

Bend Losses

Head losses associated with bends in pipes of equal diameter shall be calculated using:

$$HL = K_b \frac{V_2^2}{2g}$$

where,

HL = Head loss (feet)

K_b = Head loss coefficient

V₂ = Velocity in the downstream pipe (fps)

g = Gravitational acceleration (32.2 ft/sec/sec)

Junction Losses

$$HL = \frac{V_2^2}{2g} - \frac{K_j(V_1^2)}{2g}$$

where,

HL = Head loss (feet)

V_1 = Velocity in the upstream pipe (fps)

V_2 = Velocity in the downstream pipe (fps)

K_j = Head loss coefficient

g = Gravitational acceleration (32.2 ft/sec/sec)

Froude Number

The Froude Number can be calculated using the following equation:

$$Fr = \frac{V}{(gy)^{1/2}}$$

where,

Fr = Froude number

V = Velocity (fps)

g = Gravitational acceleration (32.2 ft/sec/sec)

y = Depth of flow (ft)

The Froude Number is used to define the flow regime. The following table gives regime type based on the Froude Number and range for design purposes.

Flow Regime	Fr	Fr for design
Subcritical	$Fr < 1$	$Fr < 0.86$
Critical	$Fr = 1$	NA
Supercritical	$Fr > 1$	NA

APPENDIX B-3: HYDRAULIC TABLES



Drainage and Stormwater

APPENDIX B-3



APPENDIX B-3

Hydraulic Tables

Minimum Slopes in Concrete Pipes

Maximum Permissible Velocities in Conduits Flowing Full and Channels

Entrance Loss Coefficients

Junction or Structure Loss Coefficients

Head Loss Coefficients due to Sudden Expansions and Contractions

Head Loss Coefficients due to Obstructions



Minimum Slopes for Concrete Pipes

to produce a velocity of 2.5 fps or greater (in partial flow conditions)

Pipe Diameter (inches)	Slope (Feet/100 Feet)		Pipe Diameter (inches)	Slope (Feet/100 Feet)
18	.180		42	.056
21	.150		45	.052
24	.120		48	.048
27	.110		51	.045
30	.090		54	.041
33	.080		60	.036
36	.070		66	.032
39	.062		72	.028

Maximum Velocities in Conduits Flowing Full and Channels

	Maximum Flow Velocity (fps)
Culverts	15
Inlet Laterals	10
Storm Sewers	12.5
Earthen Channels	6
Lined Channels	15



Entrance Loss Coefficients

$$HL = K_e \frac{V_1^2}{2g}$$

Type of Structure and Design of Entrance	Coefficient K_e
Concrete Pipe	
Projecting from fill, socket-end (groove-end)	0.2
Projecting from fill, square cut end	0.5
Headwall or headwall and wingwalls	
Socket end of pipe (groove-end)	0.2
Square-edge	0.5
Rounded (radius = 1/12D)	0.2
Mitered to conform to fill slope	0.7
End-section conforming to fill slope	0.5
Beveled edges, 33° to 45° bevels	0.2
Side- or slope-tapered inlet	0.2
Pipe or Pipe-Arch Corrugated Metal	
Projecting from fill (no headwall)	0.9
Headwall or headwall and wingwalls square edged	0.5
Mitered to conform to fill slope, paved or unpaved slope	0.7
End-section conforming to fill slope	0.5
Beveled edges, 33° to 45° bevels	0.2
Side- or slope-tapered inlet	0.2
Box, Reinforced Concrete	
Headwall parallel to embankment (no wingwalls)	
Square-edged on 3 edges	0.5
Rounded on 3 edges to radius of 1/12 barrel dimension or beveled on 3 sides	0.2
Wingwalls at 30° to 75° to barrel	
Square-edged at crown	0.4
Crown edge rounded to radius of 1/12 barrel dimension, or beveled top edge	0.2
Wingwall at 10° to 25° to barrel	
Square-edged at crown	0.5
Wingwall parallel (extension of sides)	
Square-edged at crown	0.7
Side- or slope-tapered inlet	0.2

**Junction or Structure Loss Coefficients**

Description of Condition	K_j
Inlet on Main Line	0.50
Inlet on Main Line with Lateral	0.25
Manhole on Main Line with 22-1/2° Lateral	0.75
Manhole on Main Line with 45° Lateral	0.50
Manhole on Main Line with 60° Lateral	0.35
Manhole on Main Line with 90° Lateral	0.25
45° Wye Connection or Cut-In	0.75
60° Wye Connection or Cut-In	0.70
Inlet or Manhole at Beginning of Line	1.25

Conduit on Curves	K_b			
	Degree of Pipe Bend			
	90°	60°	45°	22.5°
Pipe Radius = Diameter	0.50	0.43	0.35	0.20
Pipe Radius = 2x to 8x Diameter	0.25	0.21	0.18	0.10
Pipe Radius = 8x to 20x Diameter	0.40	0.34	0.28	0.16

Head Loss Coefficient Due To Sudden Enlargements and Contractions

D_2/D_1^*	Sudden Contractions
	K_j
1.2	0.08
1.4	0.18
1.6	0.25
1.8	0.33
2.0	0.36
2.5	0.40
3.0	0.42
4.0	0.44
5.0	0.45
10.0	0.46
∞	0.47

* D_2/D_1 = Ratio of larger to smaller diameter.



Head Loss Coefficients Due to Obstructions

A/A_0 *	K_i		A/A_0 *	K_i
1.0	0.10		3.0	15.0
1.0	0.21		4.0	27.3
1.2	0.50		5.0	42.0
1.4	1.15		6.0	57.0
1.6	2.40		7.0	72.5
1.8	4.00		8.0	88.0
2.0	5.55		9.0	104.0
2.2	7.05		10.0	121.0
2.5	9.70			

A/A_0 = Ratio of area of pipe to area of opening at obstruction.

APPENDIX B-4: HYDRAULIC FIGURES



Drainage and Stormwater

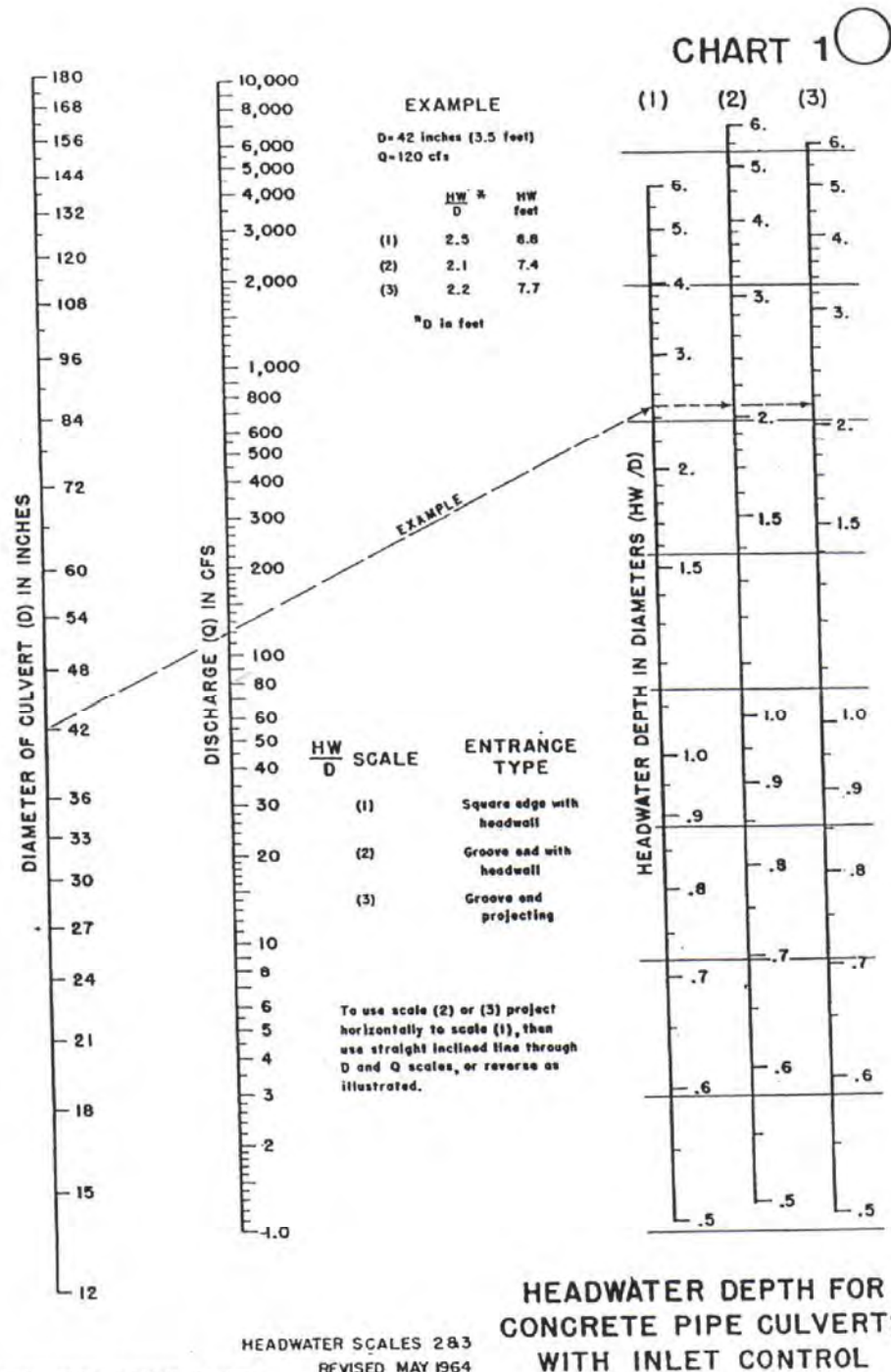
APPENDIX B-4



APPENDIX B-4

Hydraulic Figures

US DOT Culvert Design Charts

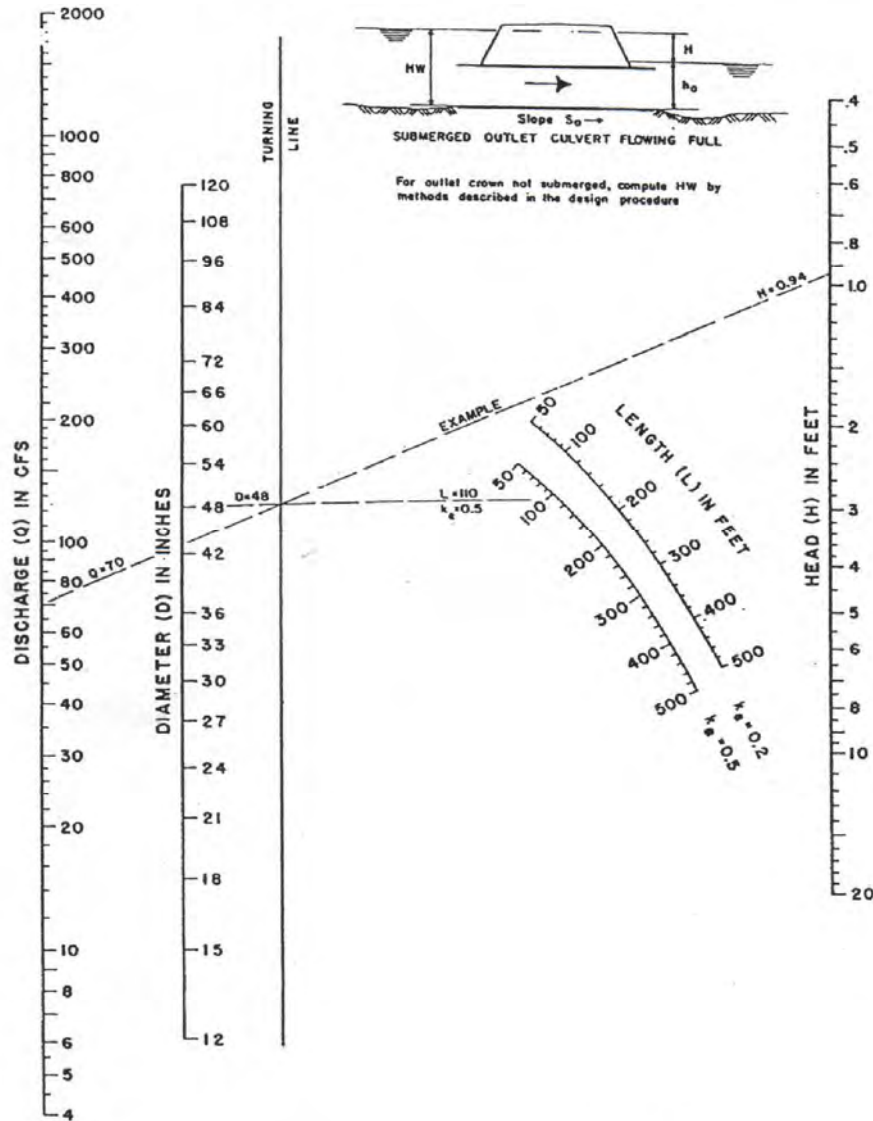


**HEADWATER DEPTH FOR
CONCRETE PIPE CULVERTS
WITH INLET CONTROL**

HEADWATER SCALES 2&3
REVISED MAY 1964

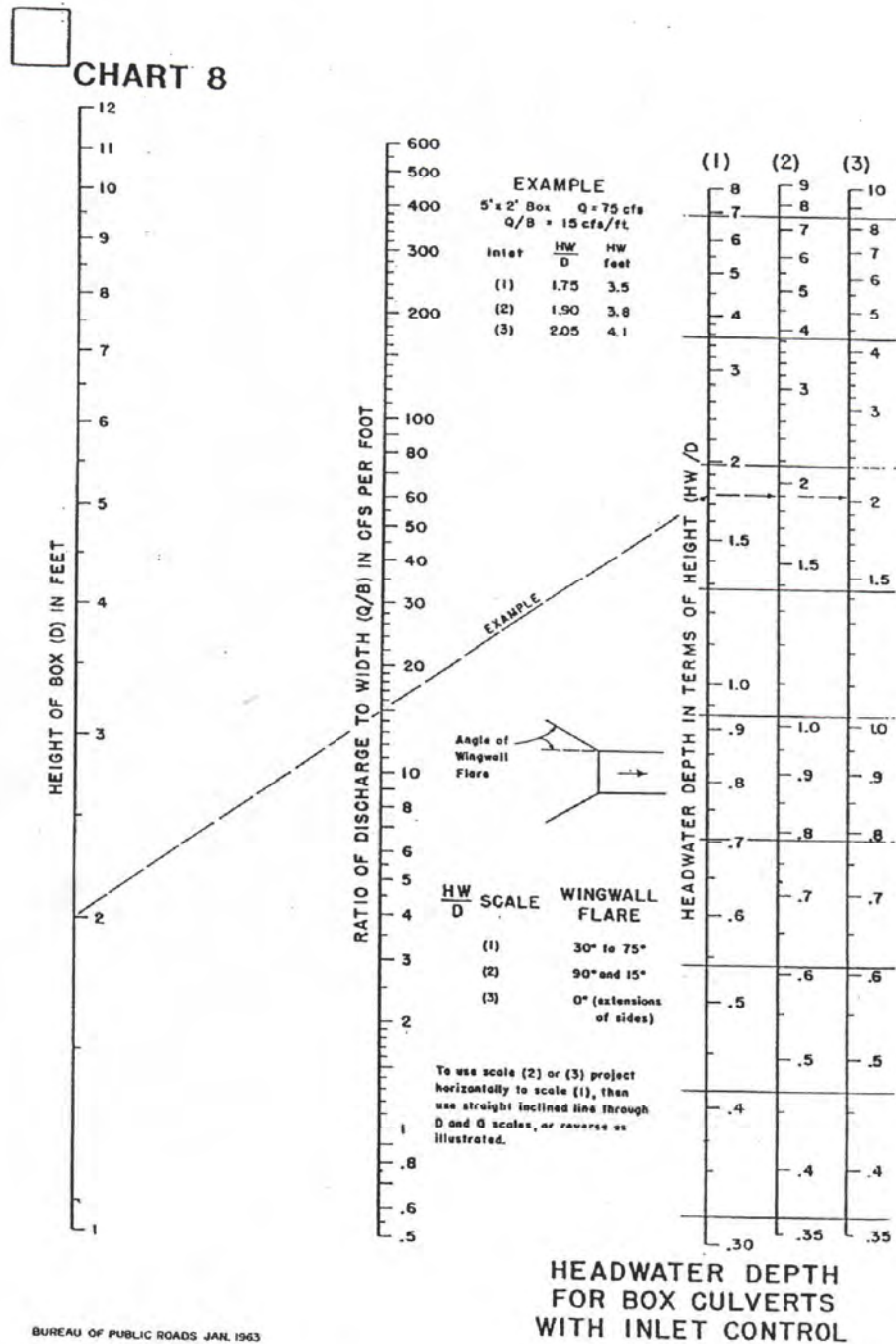
BUREAU OF PUBLIC ROADS JAN. 1963

CHART 5



BUREAU OF PUBLIC ROADS JAN. 1963

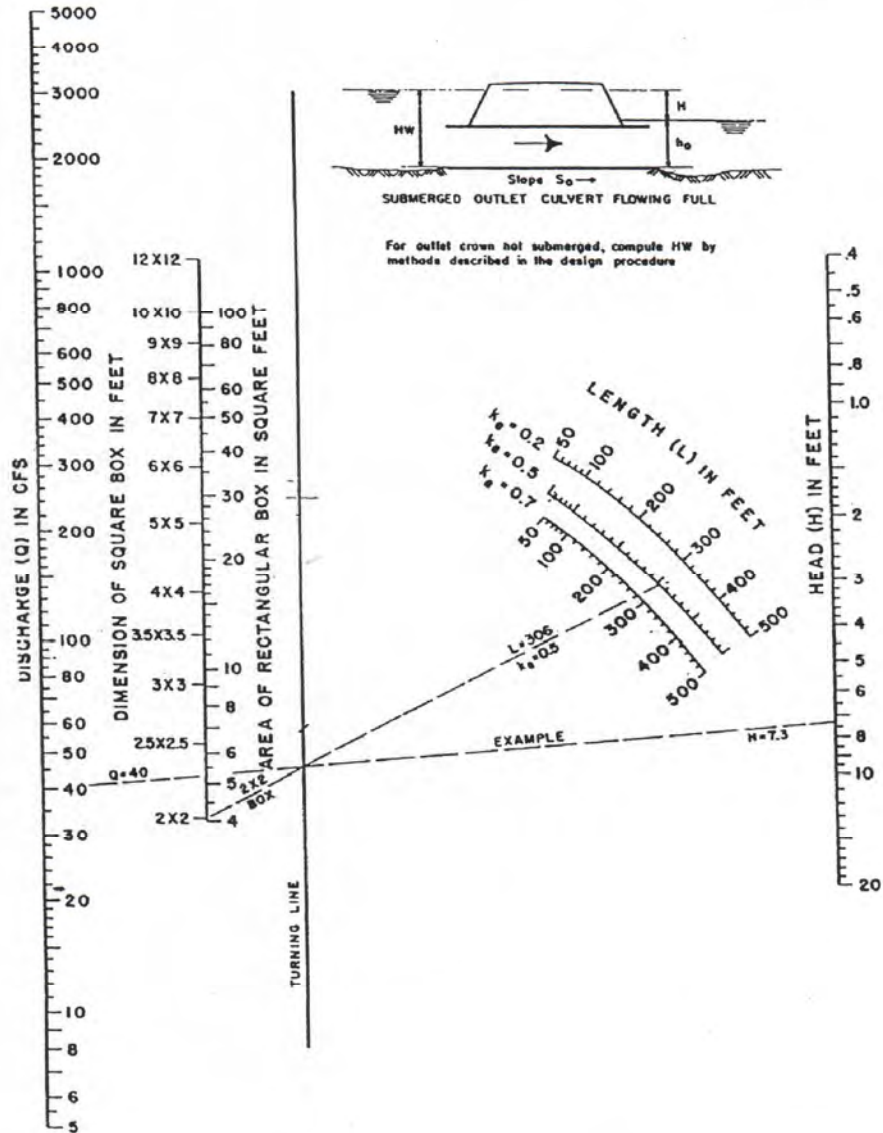
HEAD FOR
CONCRETE PIPE CULVERTS
FLOWING FULL
 $n = 0.012$



BUREAU OF PUBLIC ROADS JAN. 1963



CHART 15



HEAD FOR
CONCRETE BOX CULVERTS
FLOWING FULL
 $n = 0.012$

AU OF PUBLIC ROADS JAN, 1963

APPENDIX B-5: SAMPLE DETENTION CALCULATIONS



Drainage and Stormwater

APPENDIX B-5



APPENDIX B-5

Sample Detention Calculations

Modified Rational Method to Determine Detention Volume Sample Calculation

The following is an example of the calculations of the sizing of a detention pond using the Modified Rational Method:

GIVEN: A 10-acre site is to be developed for Neighborhood Commercial. The entire site contributes to the drainage area of the proposed detention basin.

DETERMINE: Maximum release rate and required detention storage.

SOLUTION:

1. Determine the 100-year peak runoff rate for the site in single family conditions. This is the maximum release rate from the site after development.
2. Determine inflow hydrograph for storms of various durations in order to determine the maximum volume required with the release rate determined in Step 1.

Step 1

Single Family Conditions

$$C = 0.55$$

$$T_c = 15 \text{ minutes}$$

$$I_{100} = 9.6 \text{ in/hr}$$

$$A = 10 \text{ acres}$$

$$Q_{100} = 0.55 \times 9.6 \times 10 = 52.8 \text{ cfs (Maximum release rate)}$$

Step 2

Ultimate Conditions (Neighborhood Commercial)

$$C = 0.80$$

$$T_c = 10 \text{ minutes}$$

$$I_{100} = 11.6$$

$$A = 10 \text{ acres}$$

$$Q_{100} = 0.80 \times 11.6 \times 10 = 81.2 \text{ cfs}$$

Check various duration storms

15 min	$I = 9.6$	$Q = .80 \times 9.6 \times 10 = 76.8 \text{ cfs}$
20 min	$I = 8.2$	$Q = .80 \times 8.2 \times 10 = 65.6 \text{ cfs}$
30 min	$I = 6.6$	$Q = .80 \times 6.6 \times 10 = 52.8 \text{ cfs}$
40 min	$I = 5.5$	$Q = .80 \times 5.5 \times 10 = 44.0 \text{ cfs}$
50 min	$I = 4.8$	$Q = .80 \times 4.8 \times 10 = 38.4 \text{ cfs}$
60 min	$I = 4.2$	$Q = .80 \times 4.2 \times 10 = 33.6 \text{ cfs}$



Maximum storage volume is determined by deducting the volume of runoff released during the time of inflow from the total inflow for each duration.

Inflow = Storm duration x respective peak discharge x 60 sec/min.

Outflow = Half of the respective inflow duration x control release discharge x 60 sec/min

15 min storm	Inflow $15 \times 76.8 \times 60 \text{ sec/min}$	= 69,120 cf
	Outflow $0.5 \times 25 \times 52.8 \times 60 \text{ sec/min}$	= <u>39,600 cf</u>
	Storage	= 29,520 cf
20 min storm	Inflow $20 \times 65.6 \times 60 \text{ sec/min}$	= 78,720 cf
	Outflow $0.5 \times 30 \times 52.8 \times 60 \text{ sec/min}$	= <u>47,520 cf</u>
	Storage	= 31,200 cf
30 min storm	Inflow $30 \times 52.8 \times 60 \text{ sec/min}$	= 95,040 cf
	Outflow $0.5 \times 40 \times 52.8 \times 60 \text{ sec/min}$	= <u>63,360 cf</u>
	Storage	= 31,680 cf
40 min storm	Inflow $40 \times 44.0 \times 60 \text{ sec/min}$	= 105,600 cf
	Outflow $0.5 \times 50 \times 52.8 \times 60 \text{ sec/min}$	= <u>79,200 cf</u>
	Storage	= 26,400 cf
50 min storm	Inflow $50 \times 38.4 \times 60 \text{ sec/min}$	= 115,200 cf
	Outflow $0.5 \times 60 \times 52.8 \times 60 \text{ sec/min}$	= <u>95,040 cf</u>
	Storage	= 20,160 cf
60 min storm	Inflow $60 \times 33.6 \times 60 \text{ sec/min}$	= 120,960 cf
	Outflow $0.5 \times 70 \times 52.8 \times 60 \text{ sec/min}$	= <u>110,880 cf</u>
	Storage	= 10,080 cf

The maximum volume required is 22,500 cf at the 30 minute storm duration.

APPENDIX B-6: STANDARD CONSTRUCTION DETAILS**APPENDIX B-6: STANDARD CONSTRUCTION DETAILS**

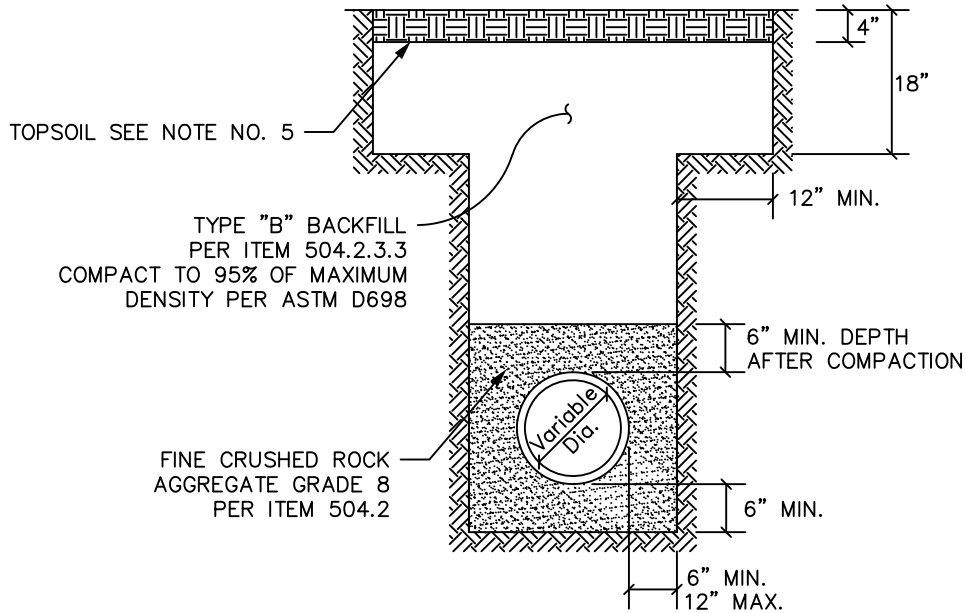
PAVING DETAIL	DETAIL NO.	REVISION DATE
CONCRETE STREET SECTIONS	P-1	MAY 2006
STEEL LAYOUT PLAN	P-2	MAY 2006
INTERSECTION JOINT SPACING	P-3A	MAY 2006
CONCRETE PAVEMENT JOINTS	P-3B	MAY 2006
CONCRETE PAVEMENT JOINTS	P-3C	MAY 2006
STANDARD CURB AND GUTTER	P-4	MAY 2006
LAYDOWN CURB AND RESIDENTIAL DRIVEWAY	P-5A	MAY 2006
LAYDOWN CURB AND COMMERCIAL DRIVEWAY	P-5B	MAY 2006
STREET HEADER	P-6	MAY 2006
TYPICAL ALLEY SECTION	P-7	MAY 2006
WHEELCHAIR RAMP	P-8	MAY 2006
CONCRETE SIDEWALK	P-9	MAY 2006
MANHOLE AND WATER VALVE BOXOUT	P10-A	MAY 2006
MANHOLE AND WATER VALVE BOXOUT	P10-B	MAY 2006
CURB AND GUTTER, SIDEWALK, AND DRIVEWAY TYPICAL JOINT LAYOUT	P-11	MAY 2006
MEDIAN NOSE	P-12	MAY 2006
LEFT TURN LANE IN MEDIAN	P-13	MAY 2006
RIGHT TURN LANE WITHOUT CHANNELIZATION	P-14	MAY 2006
RIGHT TURN LANE WITH CHANNELIZATION	P-15	MAY 2006
CONCRETE VALLEY	P-16	MAY 2006
DEAD END BARRICADE	P-17	MAY 2006
METAL BEAM GUARDRAIL	P-18	MAY 2006
STANDARD WOODEN FENCE	P-19	MAY 2006
STANDARD MASONRY FENCE	P-20A	MAY 2006
STANDARD MASONRY FENCE	P-20B	MAY 2006

Minor Update - City Staff or City Engineer to update page numbers in Appendices B-1 through B-6, detail sheet numbers and dates for all tables once updated regulations are approved.

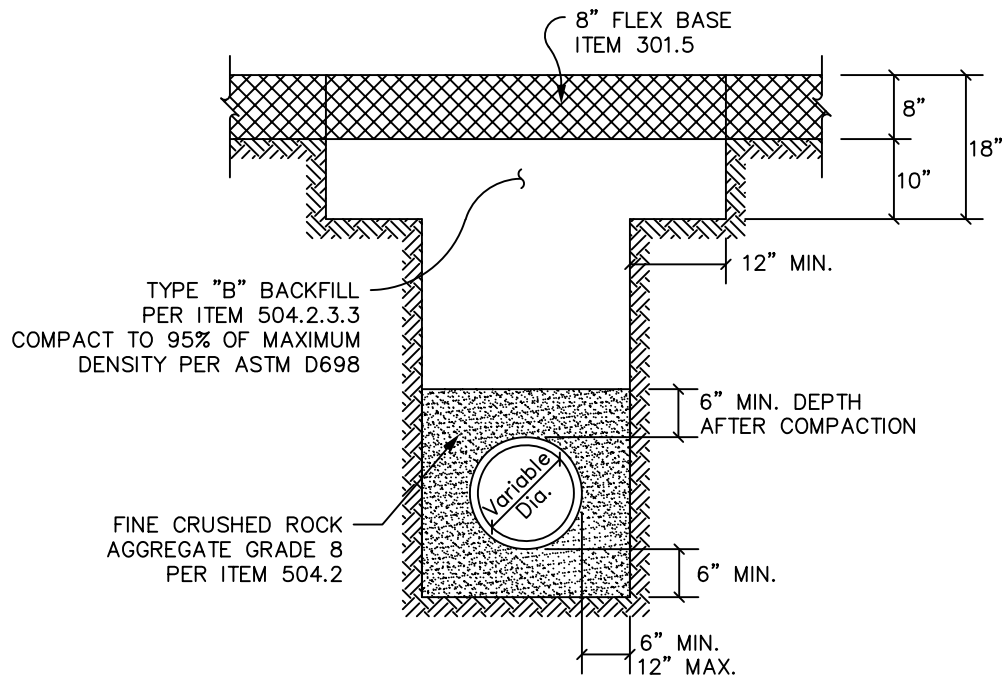
WATER DETAIL	DETAIL NO.	REVISION DATE
STANDARD WATER LINE EMBEDMENT AND BACKFILL	W-1A	May 2006
STANDARD WATER LINE EMBEDMENT AND BACKFILL	W-1B	May 2006
FIRE HYDRANT INSTALLATION	W-2	May 2006
GATE VALVE INSTALLATION	W-3	May 2006
AIR RELEASE VALVE ASSEMBLY (TYPE 1)	W-4A	May 2006
AIR RELEASE VALVE ASSEMBLY (TYPE 2)	W-4B	May 2006
1 INCH THROUGH 2 INCH WATER SERVICE ASSEMBLY	W-5	May 2006
FLUSHING VALVE INSTALLATION	W-6	May 2006
HORIZONTAL AND VERTICAL (DOWNWARD) THRUST BLOCKING	W-7	May 2006
VERTICAL THRUST BLOCK	W-8	May 2006
CONCRETE CRADLE AT VERTICAL BENDS	W-9	Deleted in December 2001
TYPICAL RING CONNECTION	W-10	May 2006
WATER LINE BORE AND CASING DETAIL	W-11	May 2006
3 INCH AND LARGER METER VAULT	W-12	May 2006
BLOW-OFF SUMP MANHOLE INSTALLATION	W-13	May 2006
SERVICE LINE ENCASEMENT	W-14	May 2006
CONCRETE ENCASEMENT	W-15	May 2006

SANITARY SEWER DETAIL	DETAIL NO.	REVISION DATE
STANDARD SANITARY SEWER EMBEDMENT AND BACKFILL	S-1A	May 2006
STANDARD SANITARY SEWER EMBEDMENT AND BACKFILL	S-1B	May 2006
PRECAST SANITARY SEWER MANHOLE	S-2	May 2006
CAST-IN-PLACE SANITARY SEWER MANHOLE	S-3	May 2006
DROP SANITARY SEWER MANHOLE	S-4	May 2006
MANHOLE FRAME AND COVER	S-5	May 2006
EXTENSION RING INSTALLATION	S-6	May 2006
4 INCH SANITARY SEWER SERVICE	S-7	May 2006
SANITARY SEWER MAIN LINE CLEANOUT	S-8	May 2006
ABANDONMENT OF EXISTING MANHOLE	S-9	May 2006
CONCRETE ENCASEMENT	S-10	May 2006
SANITARY SEWER LINE BORE AND CASING	S-11	May 2006

STORM SEWER DETAIL	DETAIL NO.	REVISION DATE
STORM SEWER EMBEDMENT AND BACKFILL	D-1	MAY 2006
STORM SEWER EMBEDMENT AND BACKFILL	D-2	MAY 2006
STORM SEWER EMBEDMENT AND BACKFILL	D-3	MAY 2006
STORM SEWER SUBSURFACE DRAIN	D-4	MAY 2006
STORM SEWER INLET GENERAL NOTES	D-5	MAY 2006
STORM SEWER CURB INLET	D-6	MAY 2006
STORM SEWER RECESSED CURB INLET	D-7	MAY 2006
STORM SEWER CURB INLET	D-8	MAY 2006
STORM SEWER DROP INLET	D-9	MAY 2006
STORM SEWER STORM DRAIN MANHOLE	D-10	MAY 2006
STORM SEWER REINFORCED CONCRETE COLLAR	D-11	MAY 2006
STORM SEWER CURBED FLUME AND PILOT CHANNELS	D-12	MAY 2006
STORM SEWER CONCRETE RIPRAP	D-13	MAY 2006
STORM SEWER SLOPING HEADWALL	D-14	MAY 2006
STORM SEWER VERTICAL HEADWALL	D-15	MAY 2006
STORM SEWER CULVERT SAFETY END TREATMENTS	D-16A	MAY 2006
STORM SEWER SAFETY END TREATMENT RUNNERS	D-16B	MAY 2006



UNPAVED AND FUTURE PAVED AREAS



NOTES:

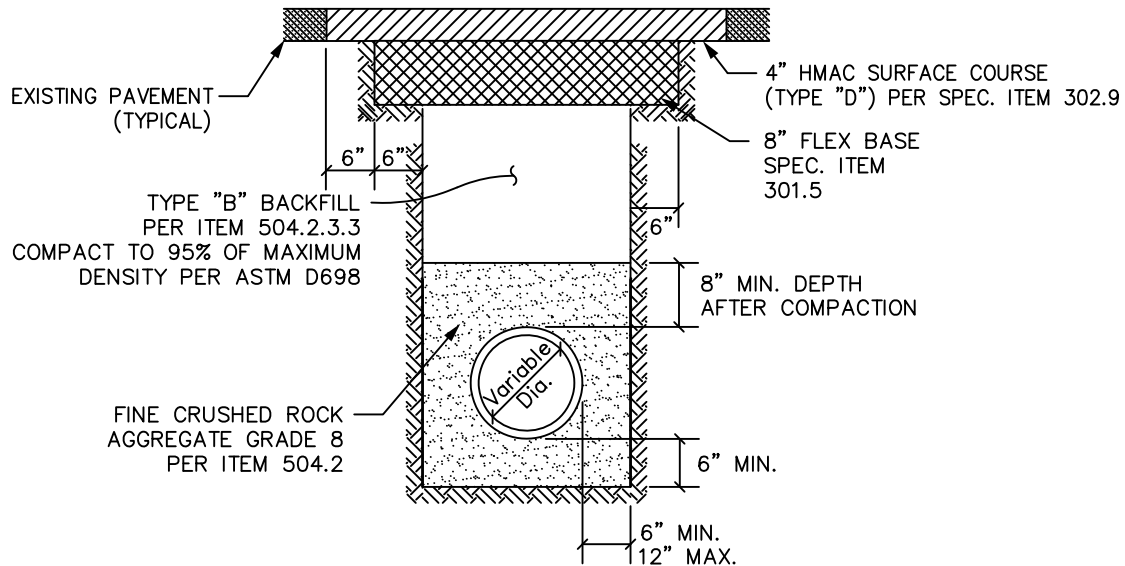
EXISTING FLEXBASE SURFACE

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY & TXDOT R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC ITEM 504. ROCKS GREATER THAN 4" IN DIAMETER SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC ITEM 402.3.
4. A MAXIMUM OF 200-FT OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.
5. TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION.

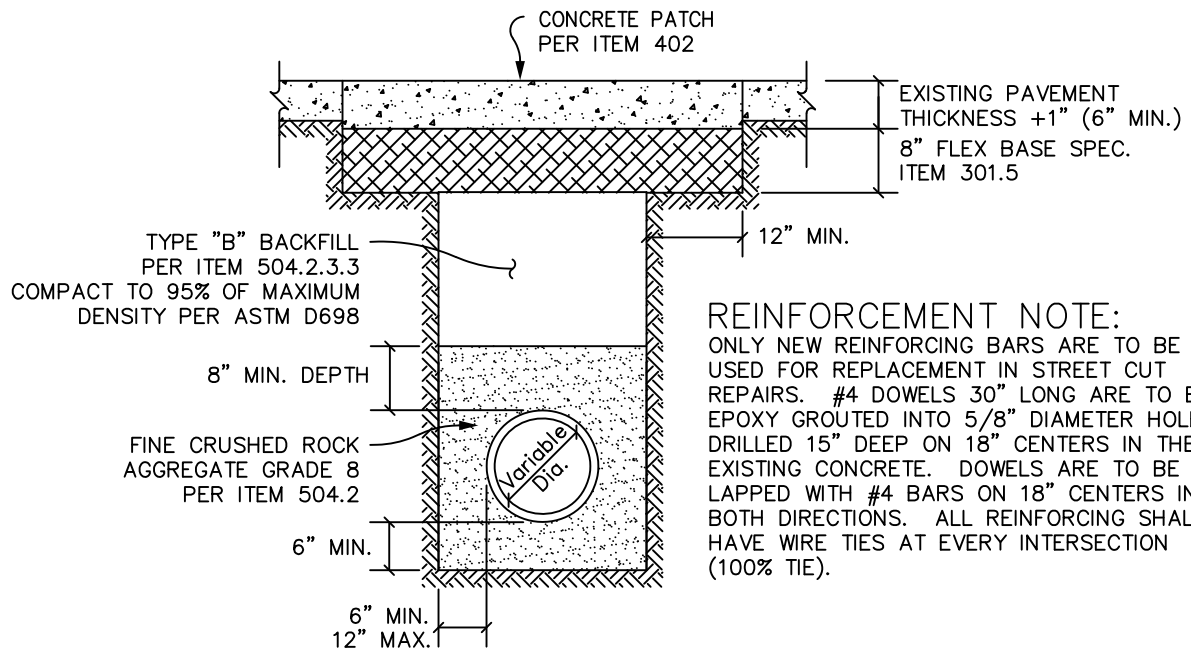


SEWER SYSTEM CONSTRUCTION DETAILS STANDARD SANITARY SEWER EMBEDMENT AND BACKFILL

REVISED MAY 2019
SCALE: 1/2" = 1'
SHEET: S-1A



EXISTING ASPHALT PAVEMENT



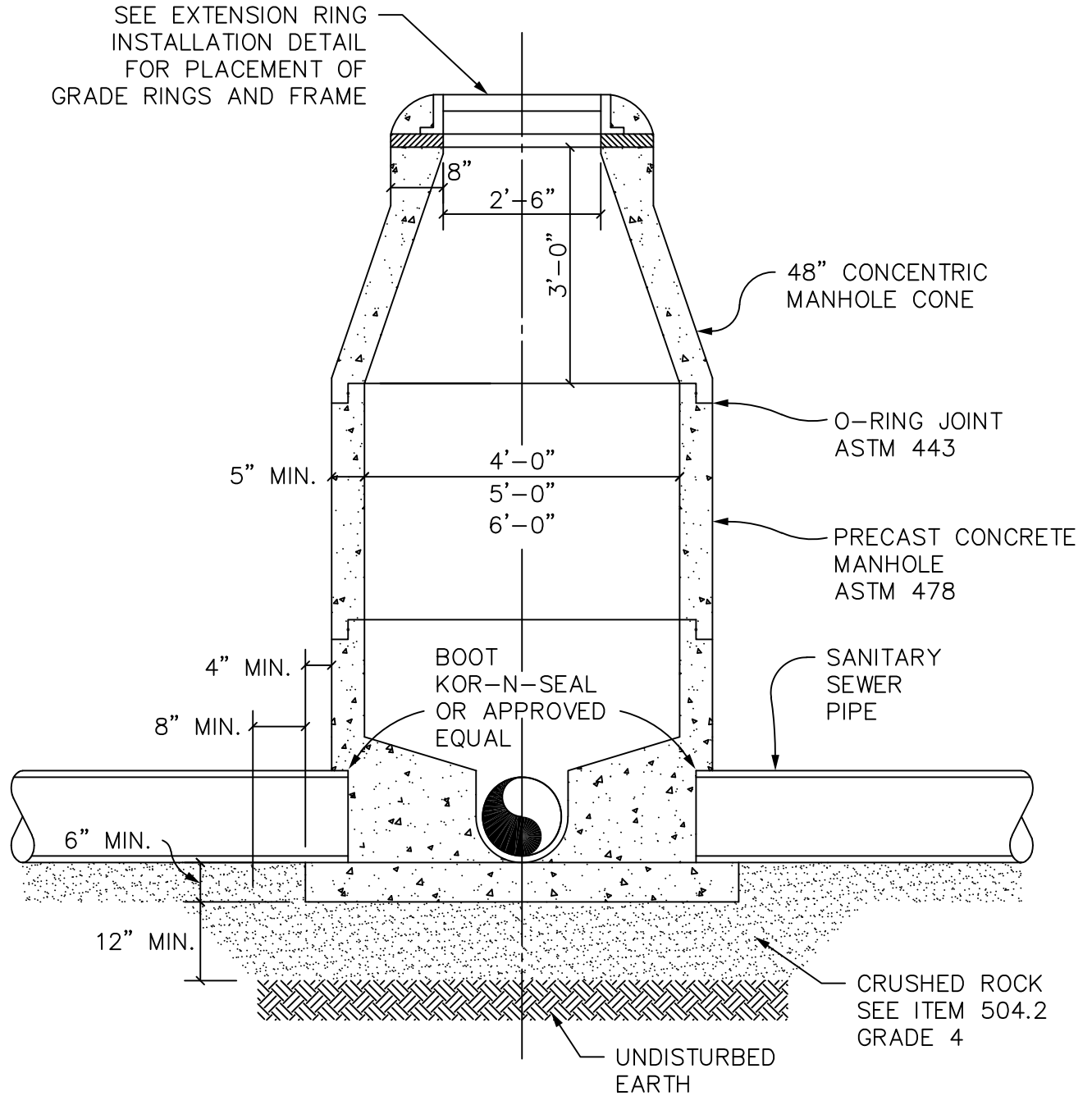
REINFORCEMENT NOTE:

ONLY NEW REINFORCING BARS ARE TO BE USED FOR REPLACEMENT IN STREET CUT REPAIRS. #4 DOWELS 30" LONG ARE TO BE EPOXY GROUTED INTO 5/8" DIAMETER HOLES DRILLED 15" DEEP ON 18" CENTERS IN THE EXISTING CONCRETE. DOWELS ARE TO BE LAPPED WITH #4 BARS ON 18" CENTERS IN BOTH DIRECTIONS. ALL REINFORCING SHALL HAVE WIRE TIES AT EVERY INTERSECTION (100% TIE).

NOTES:

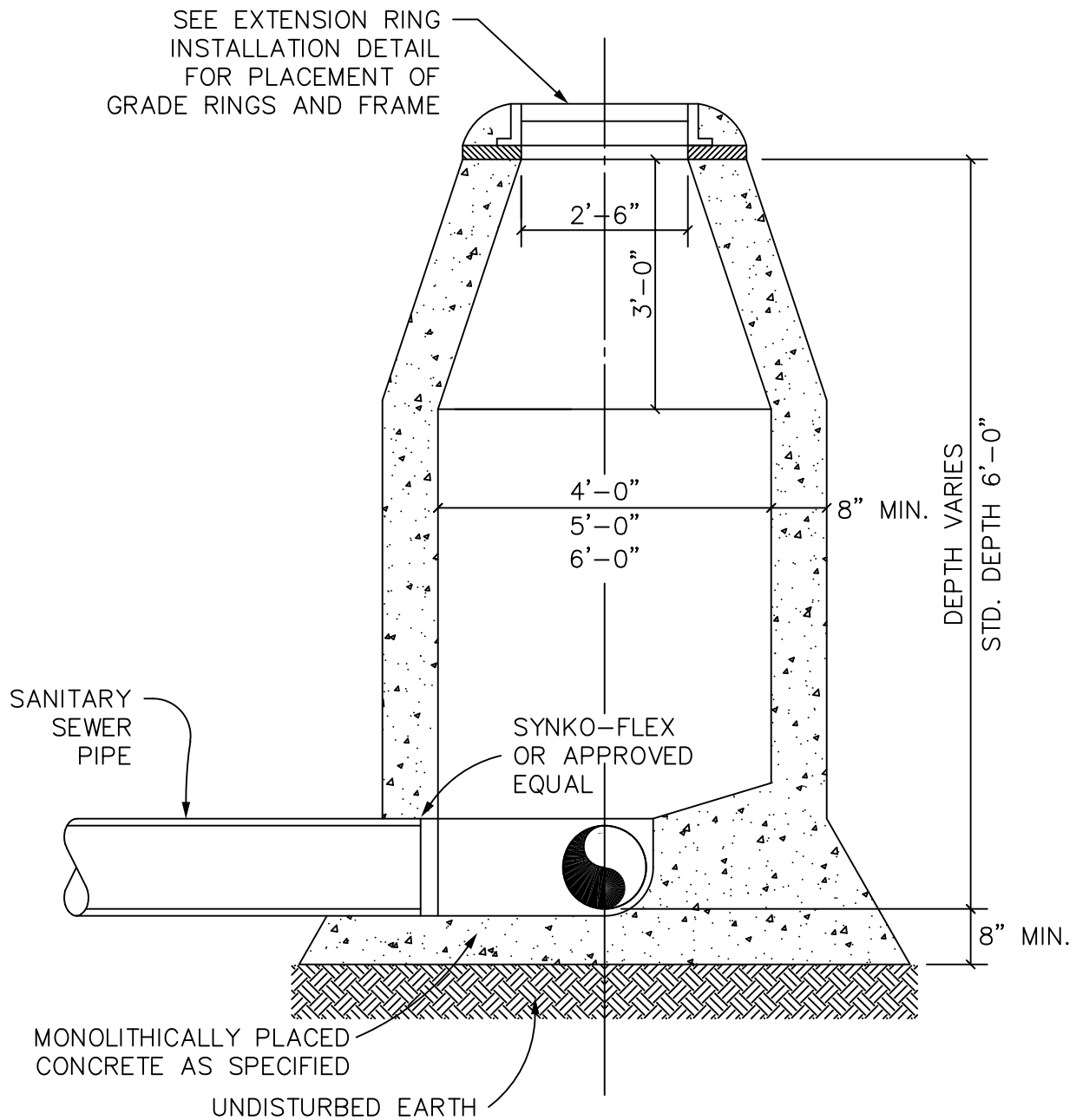
EXISTING CONCRETE PAVEMENT

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY & TXDOT R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC ITEM 504. ROCKS GREATER THAN 4" IN DIAMETER SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC ITEM 402.3.
4. A MAXIMUM OF 200-FT OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.



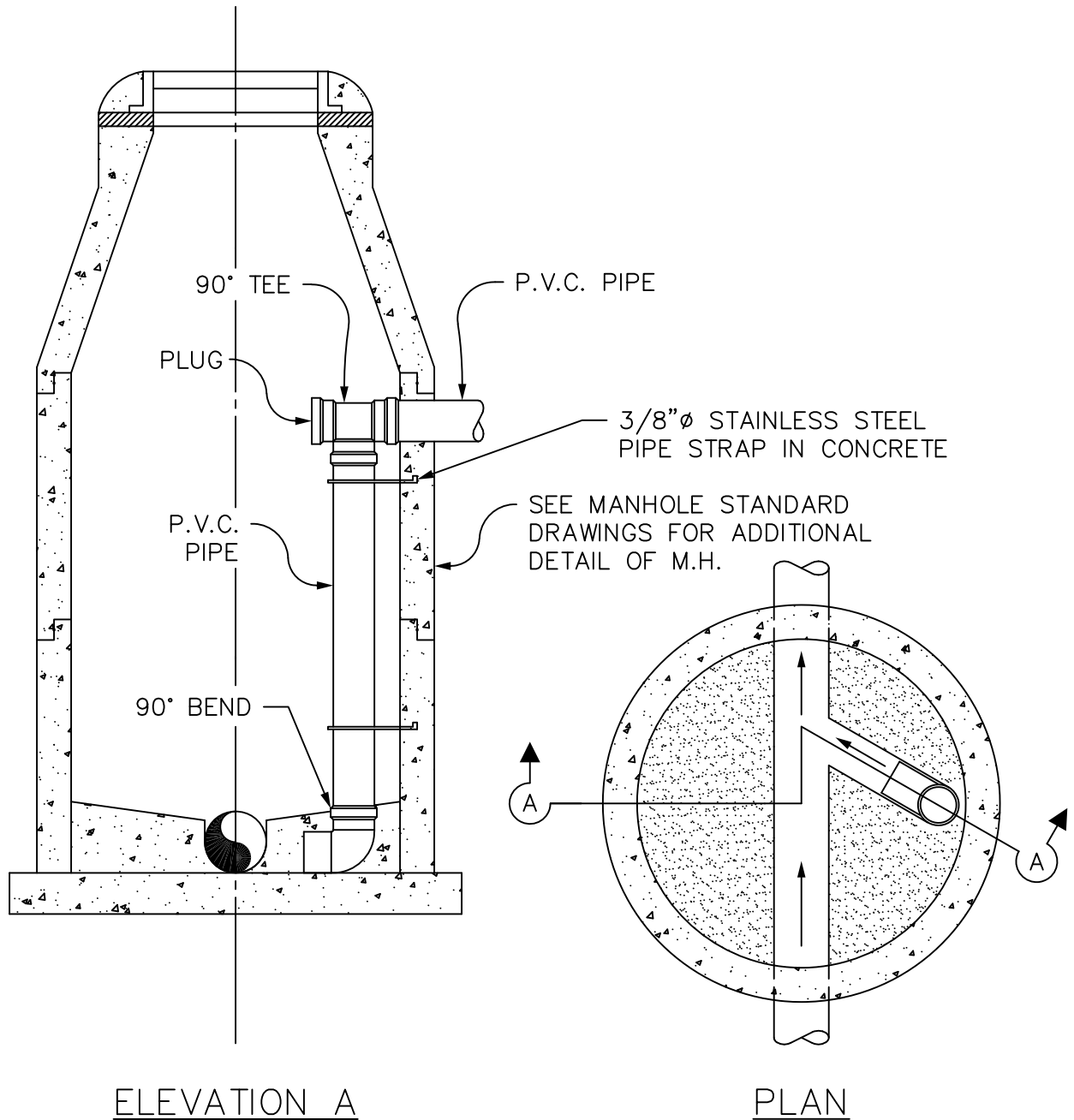
NOTES:

1. MAXIMUM CHIMNEY HEIGHT SHALL BE 12".
2. MANHOLES SHALL BE CONCENTRIC UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
3. TRANSITIONS TO 5' AND 6' BARREL DIAMETERS SHALL OCCUR JUST BELOW THE CONE SECTION.
4. INVERTS SHALL BE EQUAL TO OR GREATER THAN THE PIPE DIAMETER.



NOTES:

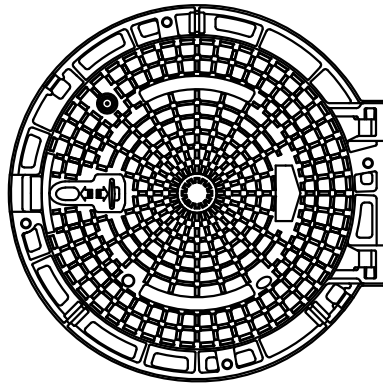
1. MAXIMUM CHIMNEY HEIGHT SHALL BE 12".
2. MANHOLES SHALL BE CONCENTRIC UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
3. INVERTS SHALL BE EQUAL TO OR GREATER THAN THE PIPE DIAMETER.
4. FOR MANHOLE DEPTHS GREATER THAN 12 FEET ADD AN ADDITIONAL 4" INCHES OF CONCRETE TO THE WALL THICKNESS FOR EACH ADDITIONAL 6 FEET OF DEPTH.



NOTES:

1. P.V.C. PIPE WITHIN MANHOLE SHALL BE SDR-26.
2. MANHOLE MAY BE EITHER PRECAST OR MONOLITHIC TYPE.
3. CL OF SURCHARGE LINE NORMALLY PLACED AT TOP OF EXISTING WASTEWATER LINE UNLESS NOTED OTHERWISE ON PLANS.

MANHOLE COVER
AND FRAME

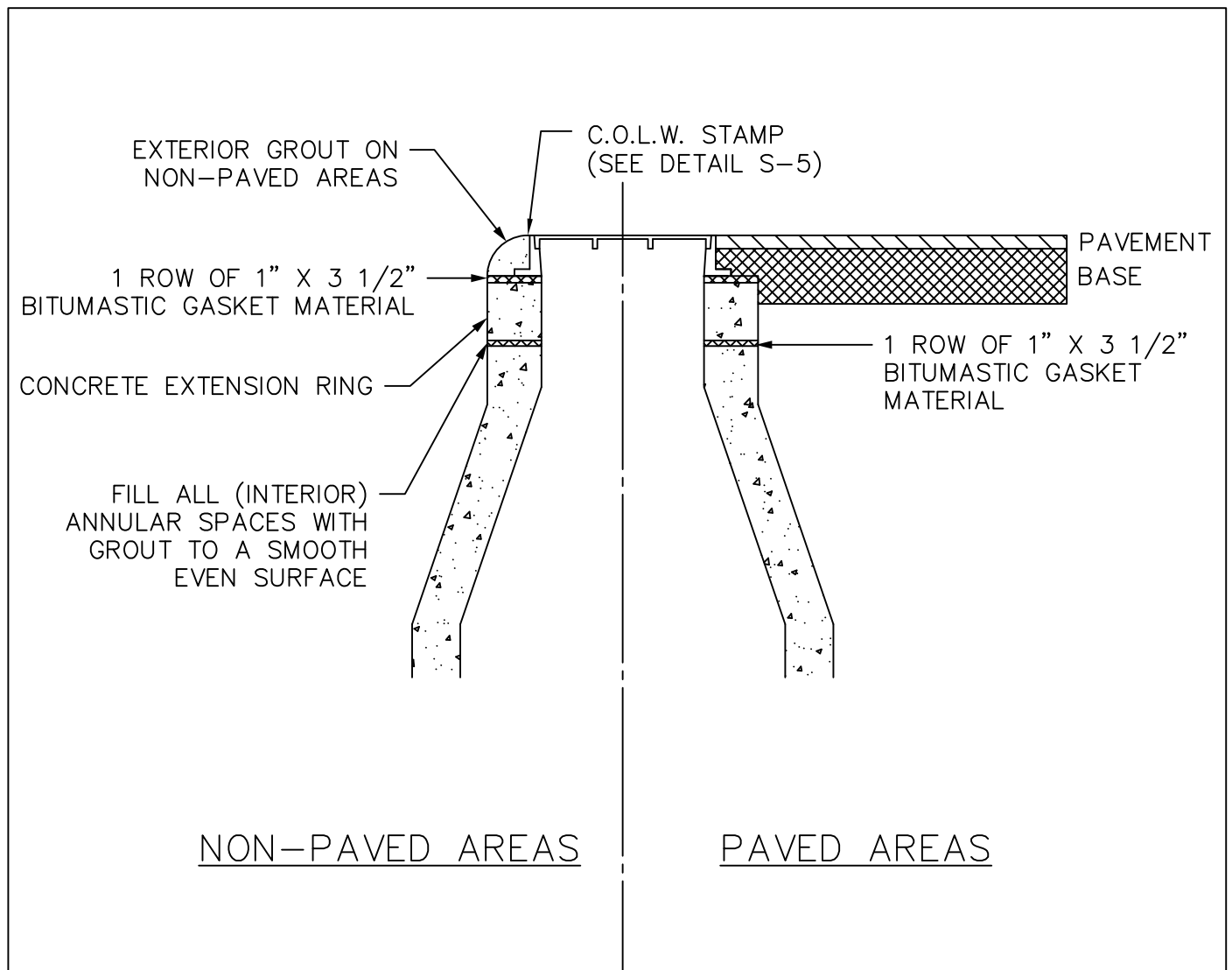


FRAME WEIGHT = 107 LBS.
COVER WEIGHT = 162 LBS.
TOTAL WEIGHT = 269 LBS.



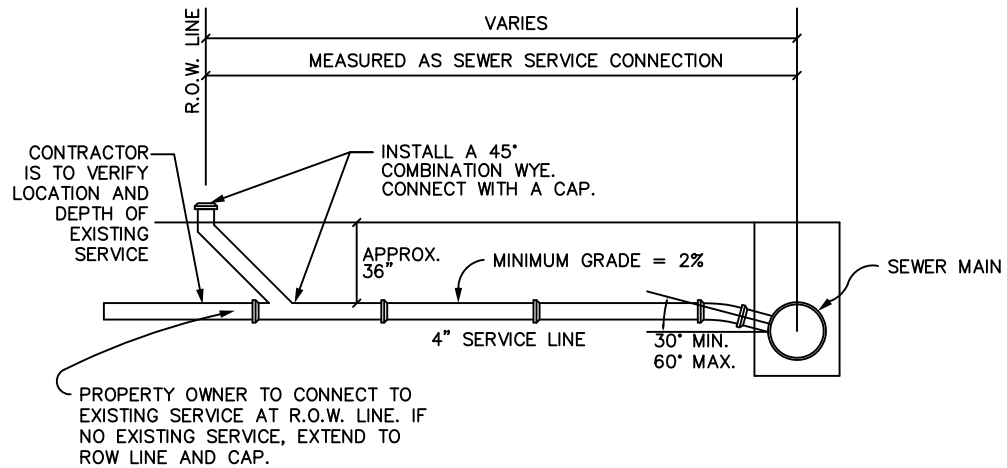
NOTES:

1. MANHOLE COVER AND FRAME SHALL BE PAMREX OR APPROVED EQUAL. COVER AND FRAME SHALL BE MANUFACTURED FROM DUCTILE IRON.
2. COVERS SHALL BE DUALY HINGED AND INCORPORATE A 90° BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE.
3. ALL COMPONENTS SHALL BE COATED BLACK.
4. MANHOLE LID SHALL BE INSTALLED SUCH THAT THE HINGED SIDE IS UPSTREAM WITH RESPECT TO TRAFFIC FLOW.
5. NO WATERTIGHT MANHOLE INSERT IS REQUIRED WITH THIS LID.



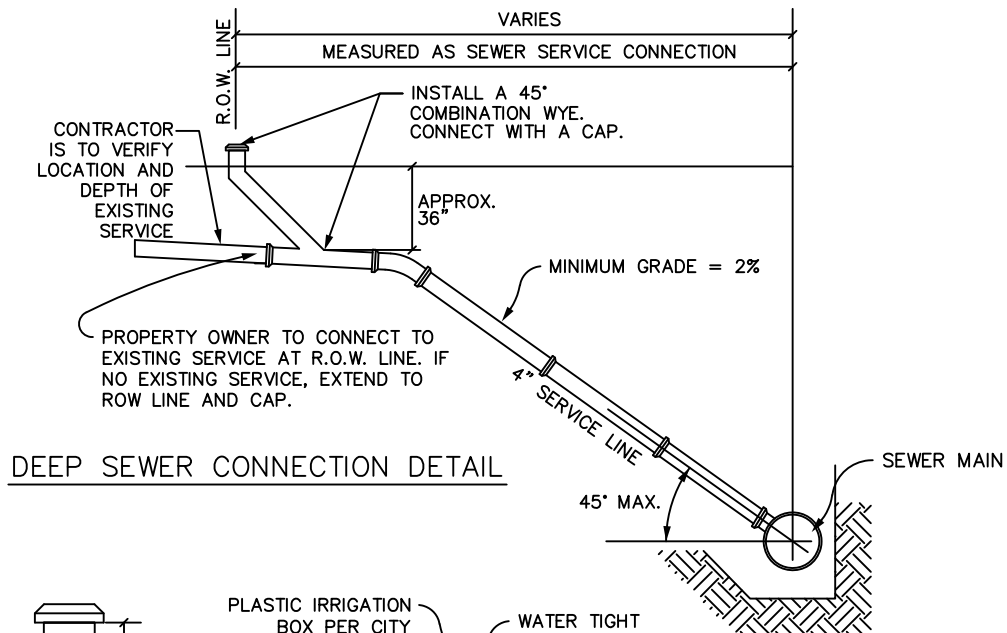
NOTES:

1. NO GAPS WILL BE ALLOWED IN BITUMASTIC GASKET.
2. THERE SHALL BE SMOOTH TRANSITION BETWEEN THE FRAME AND CONE OR GRADE RING, OR THE GRADE RING AND THE CONE.
3. CONCRETE EXTENSION RINGS MAY BE PRECAST OR CAST-IN-PLACE. BRICK EXTENSION RINGS WILL NOT BE ALLOWED.
4. STANDARD EXTENSIONS SHALL BE 2", 3", 4", 6", AND 12". EXTENSIONS SHALL BE SIZED TO MINIMIZE THE NUMBER REQUIRED TO RAISE THE MANHOLE. NO MORE THAN 1-2" EXTENSION WILL BE ALLOWED ON ANY MANHOLE.

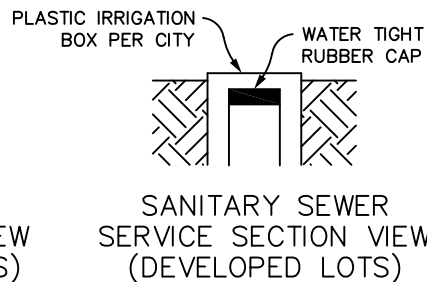
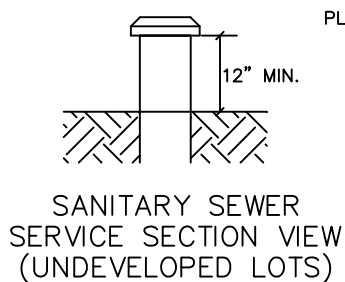


STANDARD SEWER CONNECTION DETAIL

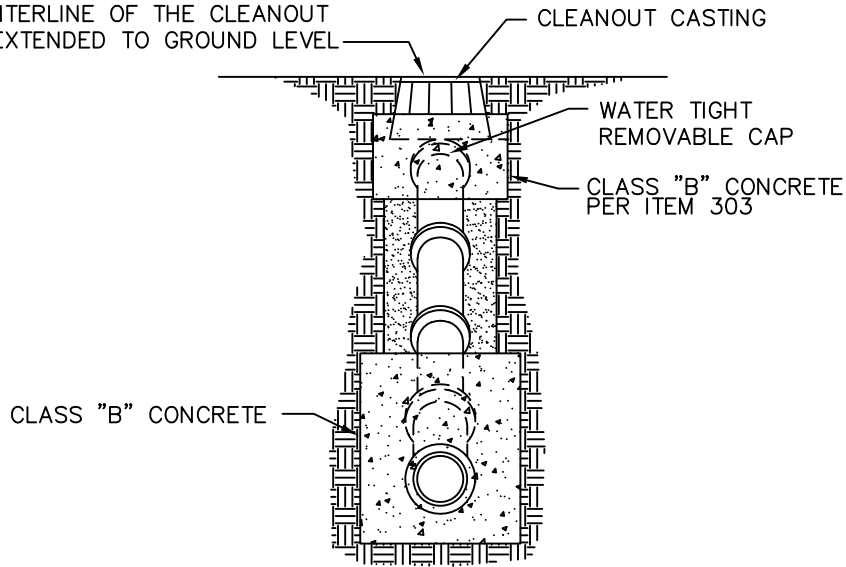
NOTE: EITHER WYE FITTING OR WYE SADDLE MAY BE USED FOR CONNECTION. NO TEES WILL BE ALLOWED. ALL PIPE AND FITTINGS REQUIRED SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "SEWER SERVICE CONNECTIONS". NO DEDUCTION FROM THE LENGTH OF SEWER MAIN WILL BE MADE FOR THE LENGTH OF WYE, IF INSTALLED. CONNECTIONS TO SEWER MAINS FROM 0' TO 7' DEEP SHALL CONFORM TO THE STANDARD SEWER CONNECTION DETAIL. CONNECTIONS TO SEWER MAINS DEEPER THAN 7' SHALL CONFORM TO THE DEEP SEWER CONNECTION DETAIL. ALL CONNECTIONS SHALL BE COUNTED AS "SEWER SERVICE CONNECTIONS" REGARDLESS OF DEPTH.



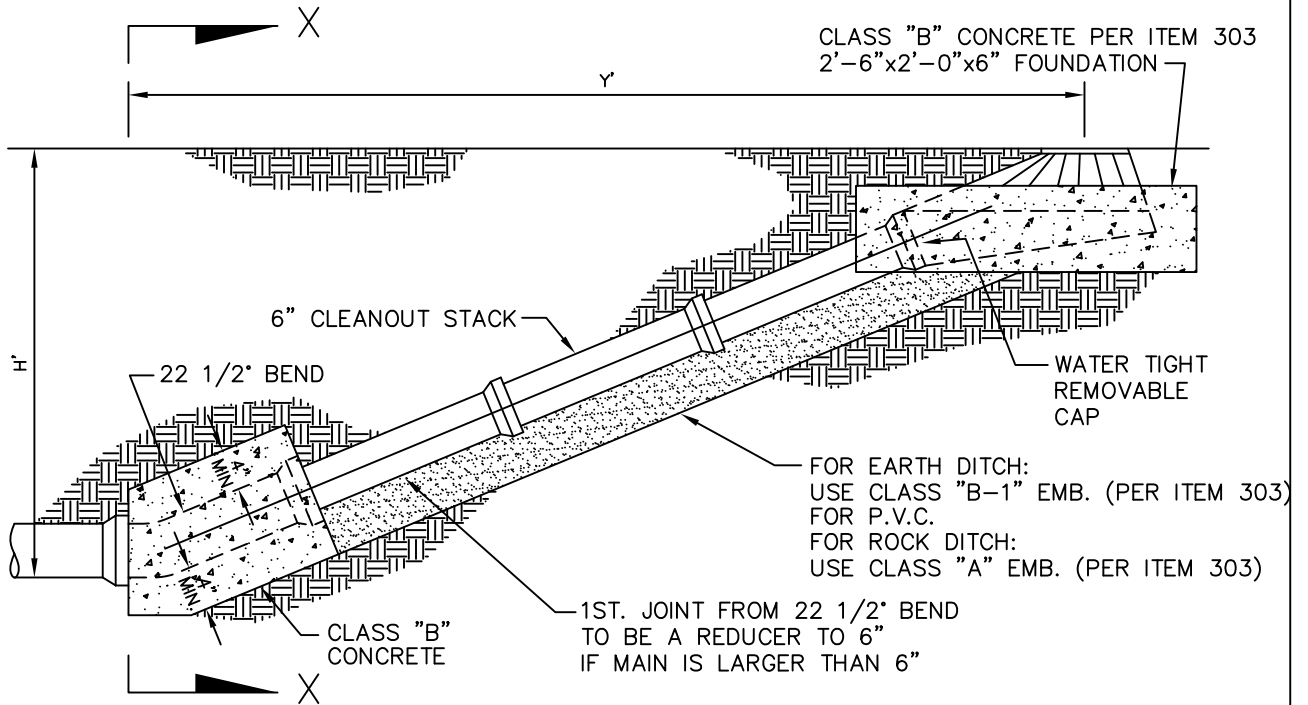
DEEP SEWER CONNECTION DETAIL



CLEANOUT CASTING OPENING TO
BE INSTALLED CENTERED OVER
THE CENTERLINE OF THE CLEANOUT
STACK EXTENDED TO GROUND LEVEL



SECTION "X-X"



PROFILE VIEW

H'	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	H'
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'

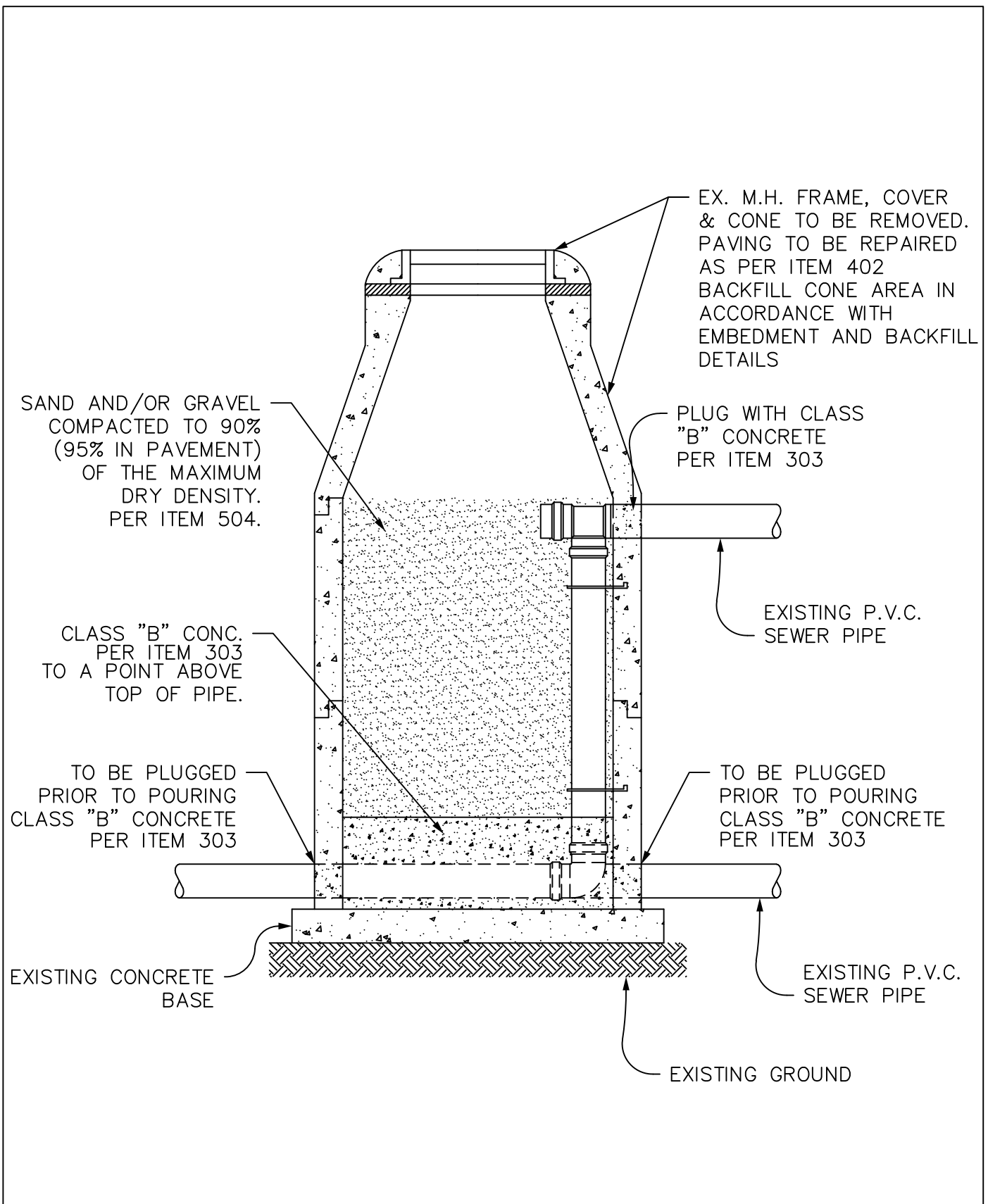


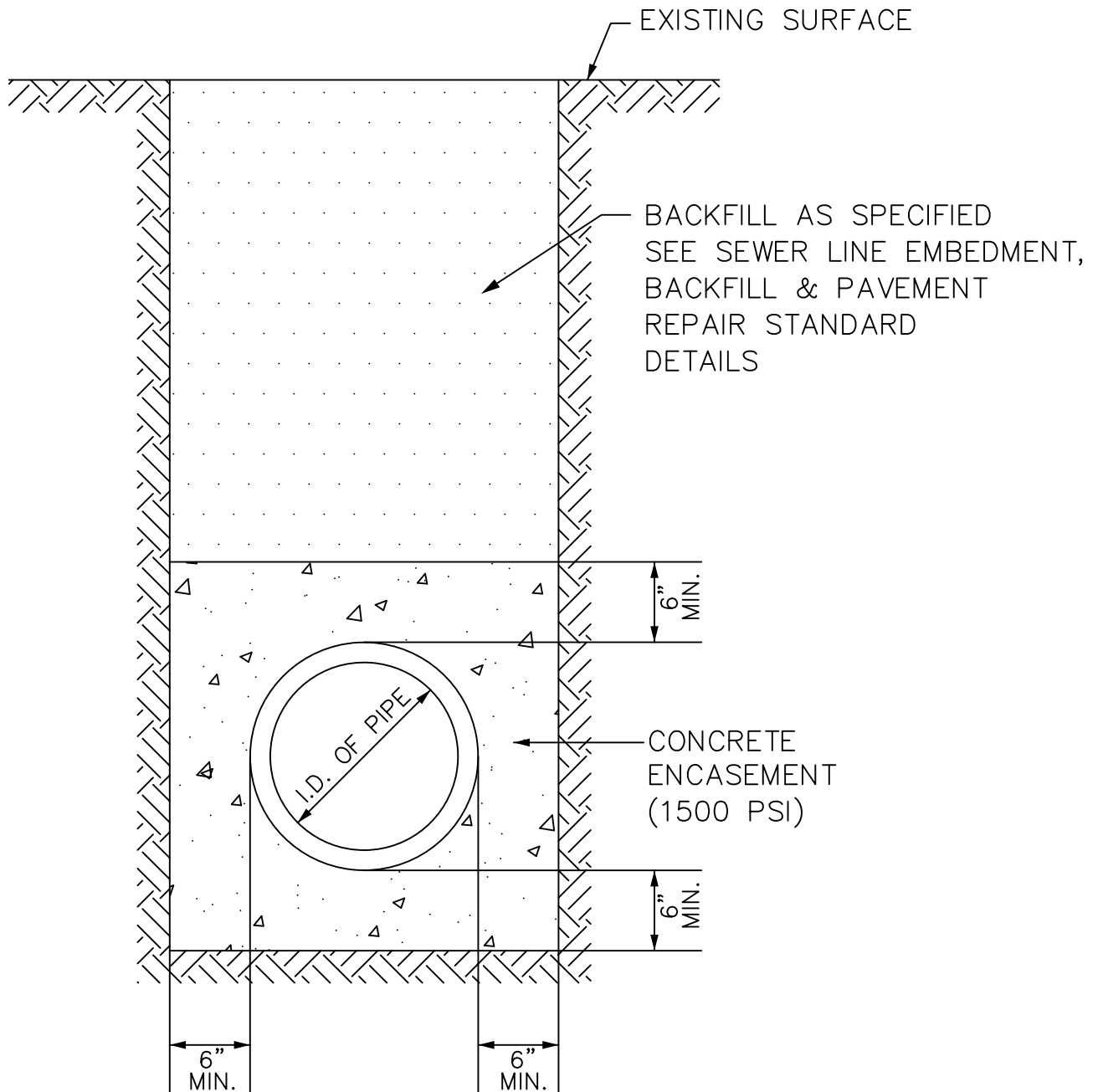
SEWER SYSTEM CONSTRUCTION DETAILS
SANITARY SEWER MAIN LINE
CLEANOUT

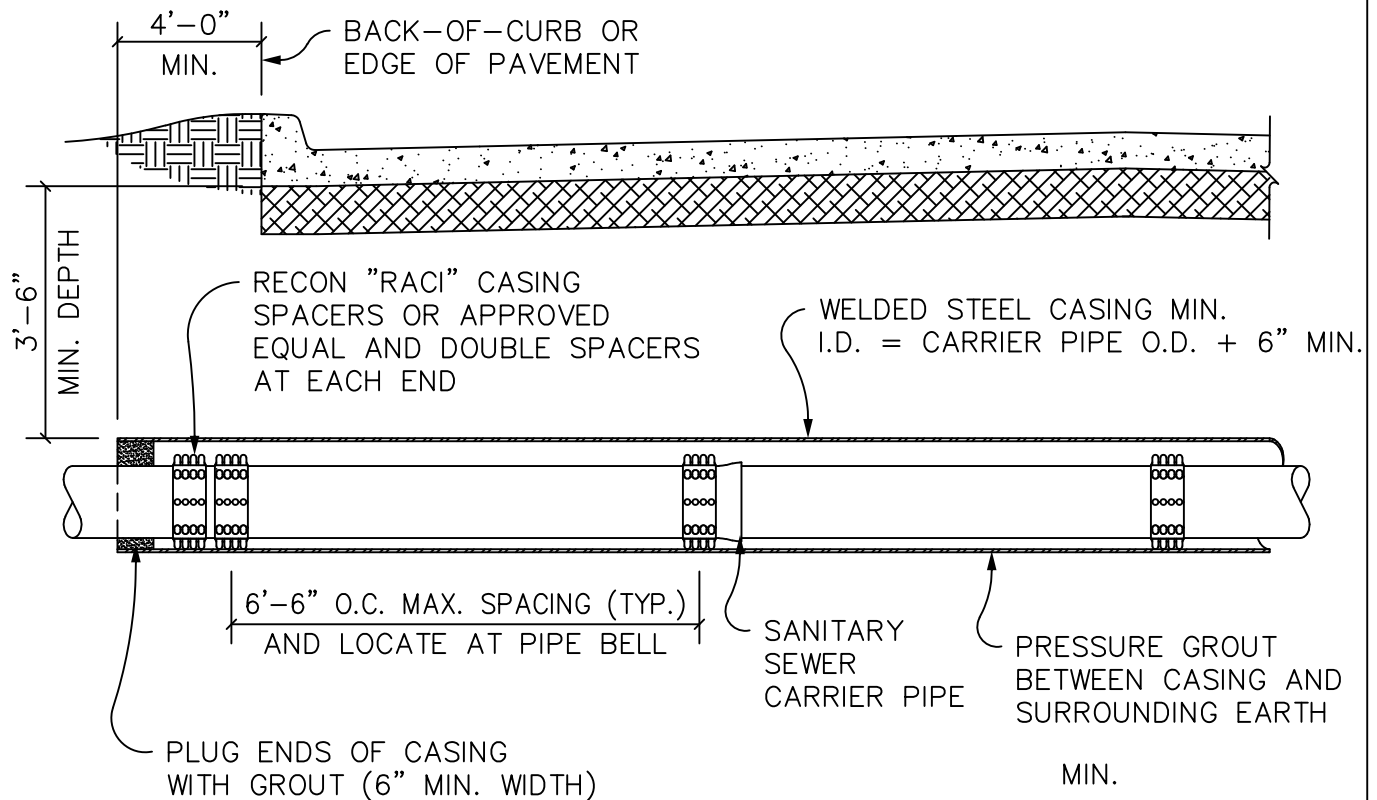
REVISED MAY 2019

SCALE: N.T.S.

SHEET: S-8







CASING DIAMETER	MIN. WALL THICKNESS
12" OR LESS	0.25"
OVER 12" - 18"	0.3125"
OVER 18" - 22"	0.375"
OVER 22" - 28"	0.4375"
OVER 28" - 34"	0.5"
OVER 34" - 42"	0.5625"
OVER 42" - 48"	0.625"
OVER 48" - 60"	0.6875"

NOTES:

1. WHERE A BORE PIT EXCEEDS 5 FEET IN DEPTH THE CONTRACTOR SHALL INSTALL SHORING OF THE PIT WALLS AS REQUIRED BY OSHA.
2. WHERE A BORE IS TO BE PARTIALLY OR COMPLETELY ABANDONED, SAID BORE SHALL BE COMPLETELY FILLED WITH HYDRAULICALLY PLACED CEMENT GROUT.
3. CASING SHALL BE EXTENDED TO THE RIGHT-OF-WAY LINE FOR STATE HIGHWAY AND RAILROAD CROSSINGS.
4. THE EDGE OF BORE PIT SHALL BE A MINIMUM OF 4' BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.
5. STEEL CASING PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 35 KSI.

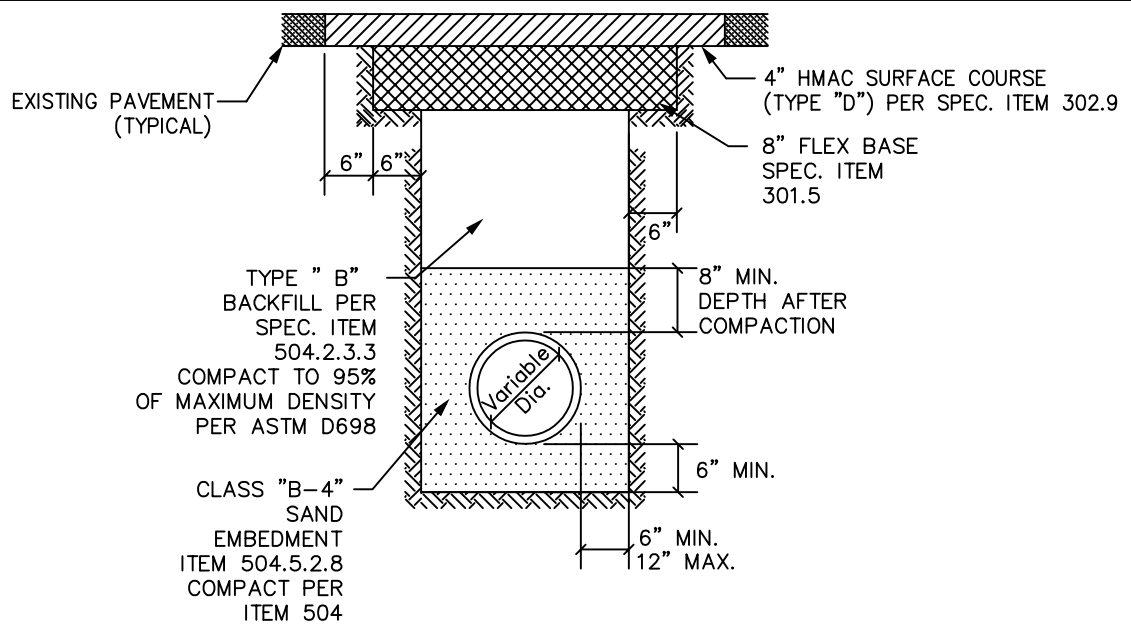


SEWER SYSTEM CONSTRUCTION DETAILS SANITARY SEWER LINE BORE AND CASING

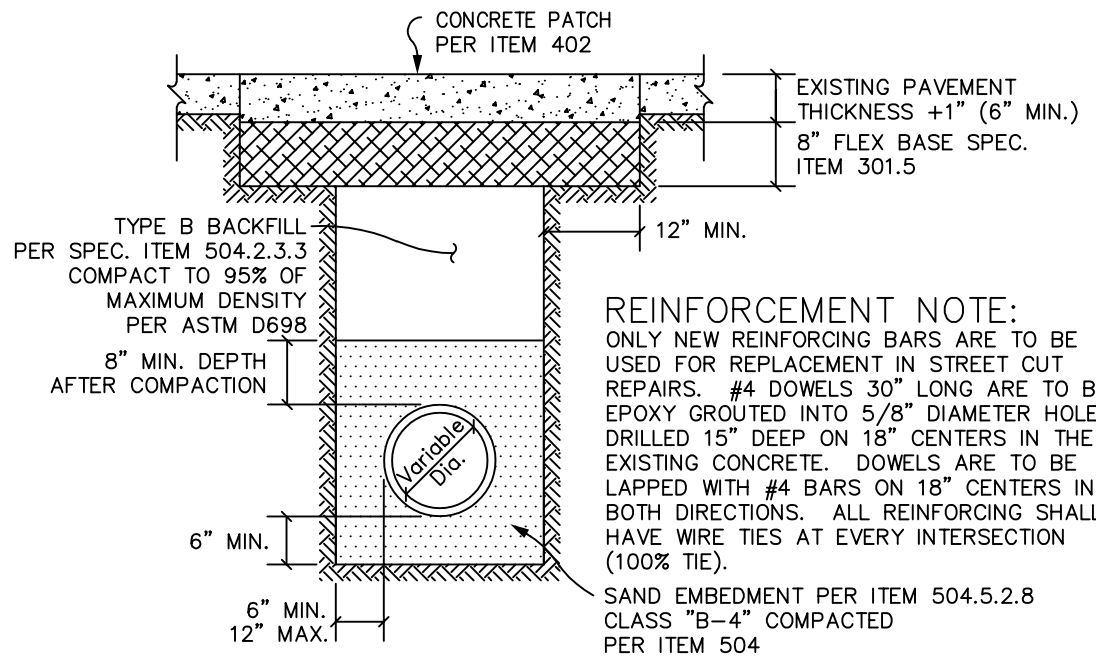
REVISED MAY 2019
SCALE: 3/8" = 1'
SHEET: S-11



EXISTING FLEXBASE SURFACE



EXISTING ASPHALT PAVEMENT



REINFORCEMENT NOTE:
ONLY NEW REINFORCING BARS ARE TO BE USED FOR REPLACEMENT IN STREET CUT REPAIRS. #4 DOWELS 30" LONG ARE TO BE EPOXY GROUTED INTO 5/8" DIAMETER HOLES DRILLED 15" DEEP ON 18" CENTERS IN THE EXISTING CONCRETE. DOWELS ARE TO BE LAPPED WITH #4 BARS ON 18" CENTERS IN BOTH DIRECTIONS. ALL REINFORCING SHALL HAVE WIRE TIES AT EVERY INTERSECTION (100% TIE).

NOTES:

EXISTING CONCRETE PAVEMENT

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY & TXDOT R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC ITEM 504. ROCKS GREATER THAN 4" IN DIAMETER SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES PER SPEC ITEM 402.3.
4. COATED TRACER WIRE (MIN. 10-GAUGE) SHALL BE INSTALLED IN THE EMBEDMENT MATERIAL ABOVE THE PVC PIPE WITH THE TRACER WIRE TERMINATING IN IN-LINE GATE VALVE BOXES ACCESSIBLE BY CITY STAFF. BLUE UNDERGROUND WATER LINE WARNING TAPE OF MIN. 4" WIDTH SHALL BE INSTALLED ABOVE THE EMBEDMENT MATERIAL.
5. A MAXIMUM OF 200-FT OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.

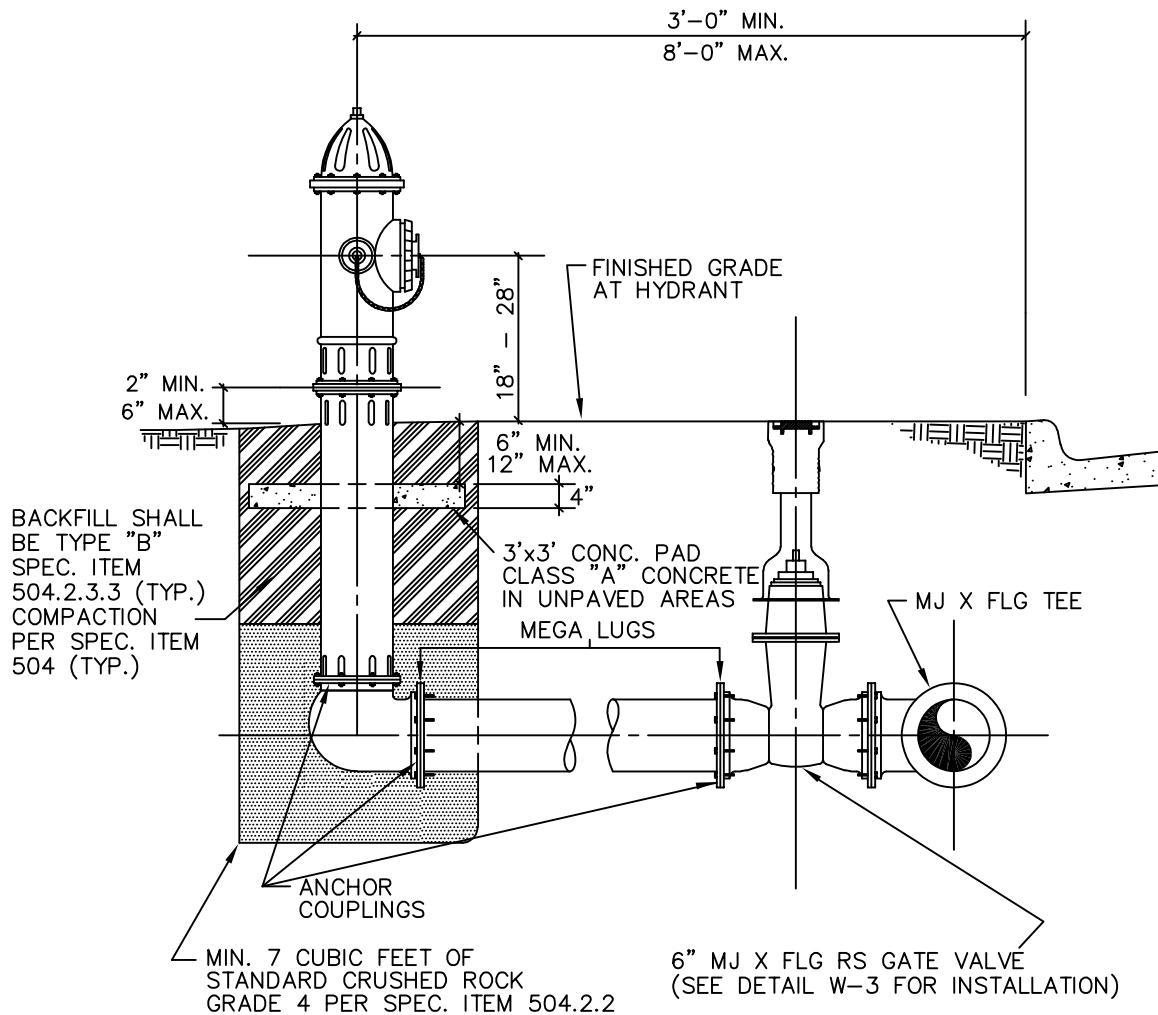


WATER SYSTEM CONSTRUCTION DETAILS STANDARD WATER LINE EMBEDMENT AND BACKFILL

REVISED MAY 2019

SCALE: 1/2" = 1'

SHEET: W-1B



NOTES:

1. ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN VALVE OPENING AND AN INSIDE BARREL DIAMETER OF APPROXIMATELY 7". ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
3. FIRE HYDRANT NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS. (TYPICAL)
4. BURY DEPTH SHALL NOT EXCEED 7-FEET.
5. FIRE HYDRANT SHALL BE PLACED ON THE EXTENDED LOT LINE WHEN POSSIBLE.
6. ALL BELOW GROUND IRON ASSEMBLES SHALL BE WRAPPED IN POLYETHYLENE ACCORDING TO AWWA C105.
7. FIRE HYDRANT SHALL BE LOCATED A MINIMUM OF 1 FOOT OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADIUS AT THE INTERSECTIONS.
8. FIRE HYDRANT SHALL BE AT LEAST 42-INCHES FROM ANY ABOVE GROUND OBSTRUCTIONS, SUCH AS GUARDRAILS, RETAINING WALLS, BOLLARDS, ETC.
9. ALL FIRE HYDRANTS SHALL BE MANUFACTURED BY M&H OR MULLER (M&H MODEL 129, OR MULLER SUPER CENTERION 200).
10. ALL HYDRANTS SHALL OPEN BY TURNING THE OPERATING-STEM NUT TO THE RIGHT (CLOCKWISE). A CLEARLY VISIBLE CURVED ARROW AND THE WORD "OPEN" SHALL BE CAST IN RELIEF ON TOP OF THE HYDRANT TO INDICATE THE DIRECTION OF OPENING.

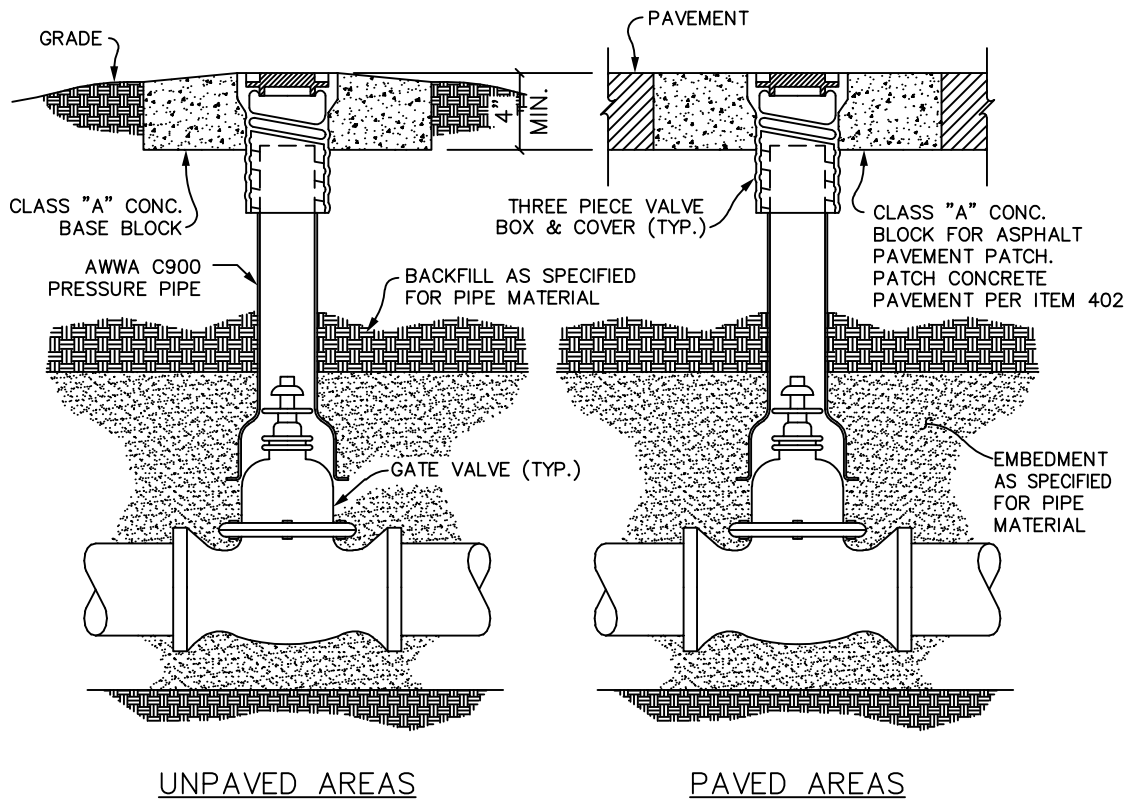
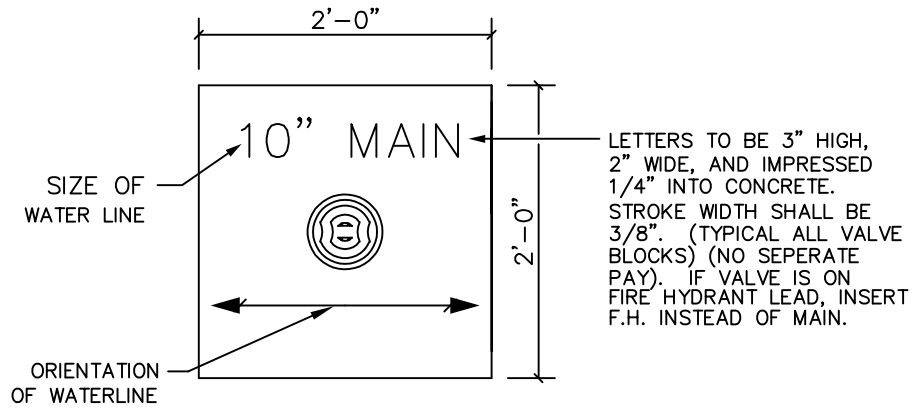


WATER SYSTEM CONSTRUCTION DETAILS
FIRE HYDRANT
INSTALLATION

REVISED MAY 2019

SCALE: 3/8" = 1'

SHEET: W-2



NOTES:

1. THE VALVE AND JOINT ASSEMBLIES SHALL BE WRAPPED IN POLYETHYLENE ACCORDING TO AWWA C105.
2. THE JOINT TYPE SHALL BE MECHANICAL JOINT UNLESS OTHERWISE SPECIFIED IN THE PLANS.
3. VALVE BOX SHALL BE TYLER PIPE 6850 SERIES OR APPROVED EQUAL.
4. GATE VALVE SHALL BE RESILIENT SEAT TYPE WITH A NON RISING STEM AND A 2-INCH SQUARE OPERATOR. RESILIENT SEAT GATE VALVE SHALL CONFORM TO AWWA C509.
5. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WITH AN OPERATING NUT LOCATED IN EXCESS OF 4 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE SUFFICIENT LENGTH TO ENSURE THAT ITS TOP IS WITHIN 4 FEET OF VALVE BOX LID.
6. 16" AND LARGER GATE VALVES REQUIRE CONCRETE BLOCK UNDER THE VALVE BODY.
7. ALL VALVE COVERS SHALL BE PAINTED BLUE.
8. A "V" SHALL BE SAW CUT IN THE CURB AT ALL VALVE LOCATIONS AND PAINTED BLUE.
9. REFERENCE DESIGN CRITERIA FOR ALLOWABLE GATE VALVE MANUFACTURERS.



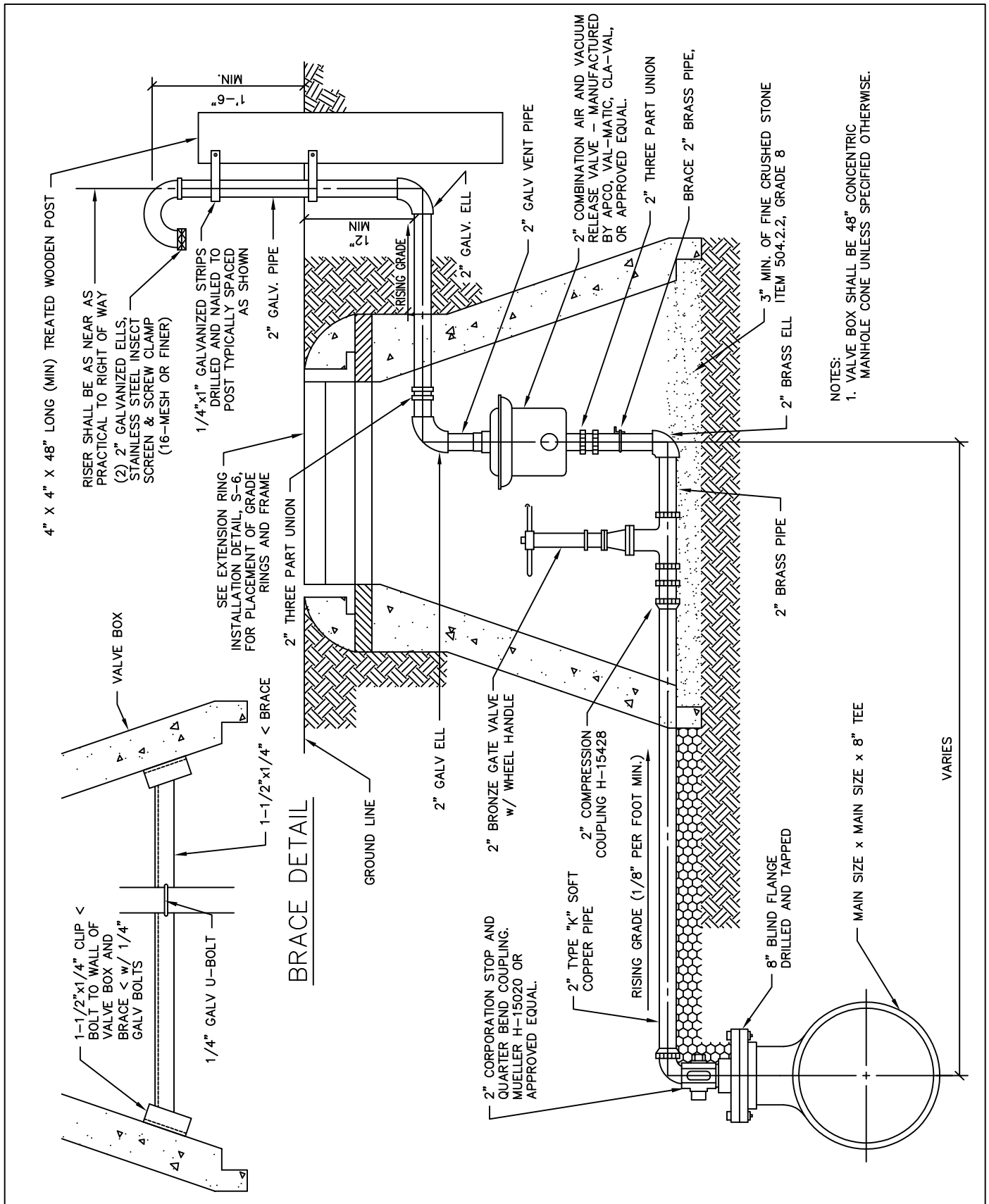
WATER SYSTEM CONSTRUCTION DETAILS

GATE VALVE INSTALLATION

REVISED MAY 2019

SCALE: 3/4" = 1'

SHEET: W-3



- NOTES:
1. VALVE BOX SHALL BE 48" CONCENTRIC MANHOLE CONE UNLESS SPECIFIED OTHERWISE.

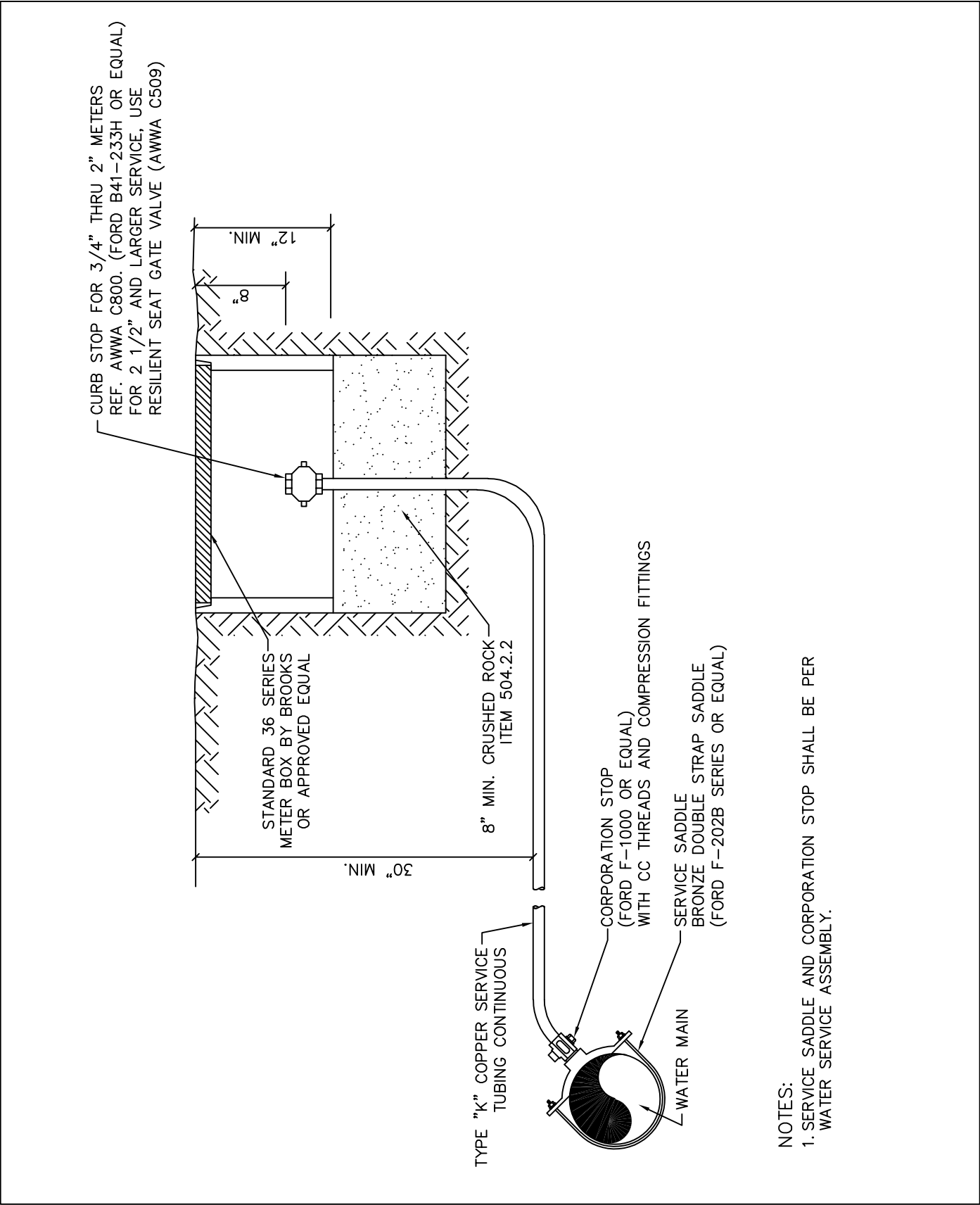


WATER SYSTEM CONSTRUCTION DETAILS
AIR RELEASE VALVE ASSEMBLY
TYPE 1

REVISED MAY 2019
SCALE: 3/4" = 1'
SHEET: W-4A



SHEET: W-4B

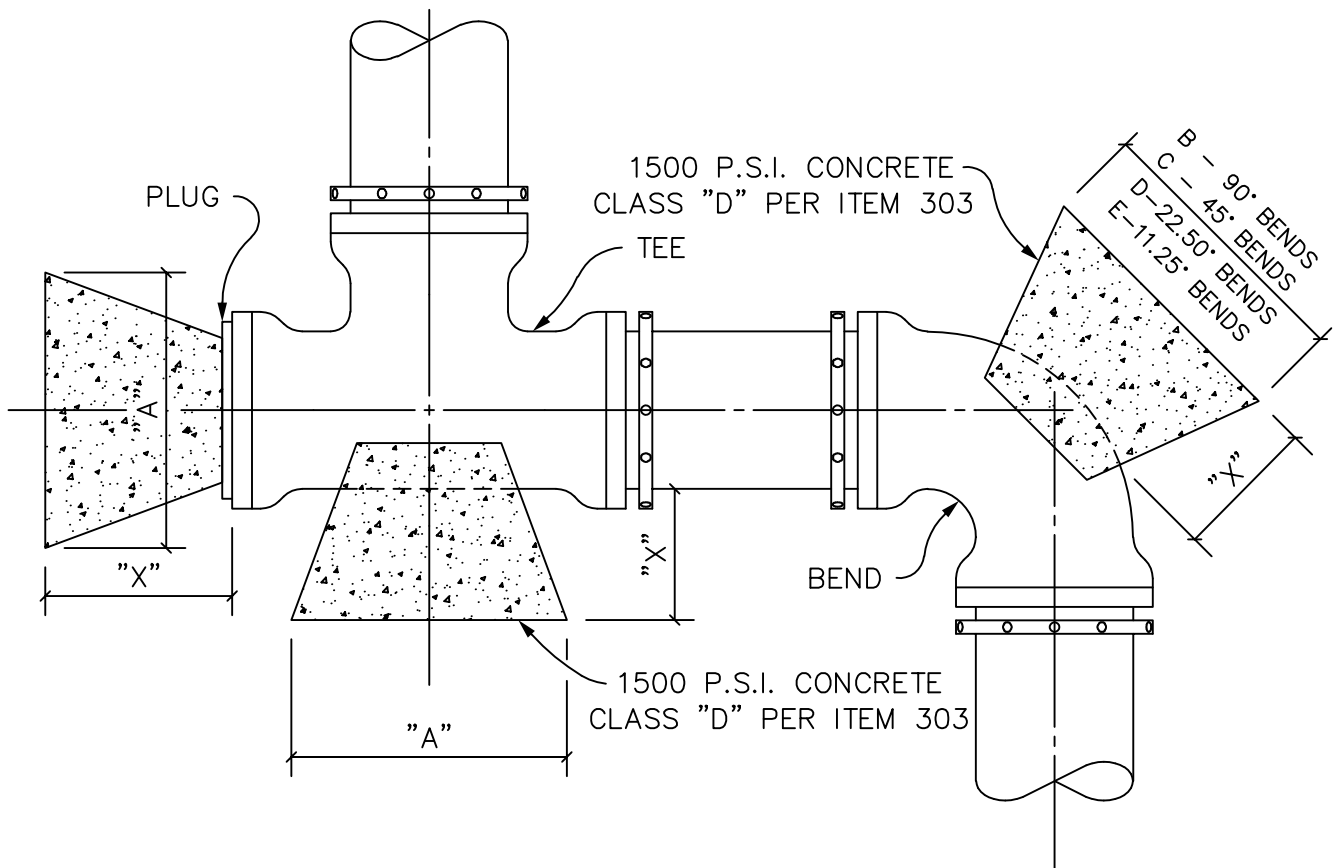


WATER SYSTEM CONSTRUCTION DETAILS FLUSHING VALVE INSTALLATION

REVISED MAY 2019

SCALE: 1" = 1'

SHEET: W-6



HORIZONTAL BLOCKING TABLE

DIMENSION "X" TO BE A MINIMUM OF (1) FOOT, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

PIPE SIZE	"X" DIM.	PLUGS & TEES		90° BENDS		45° BENDS		22.50° BENDS		11.25° BENDS	
		"A"	MIN. AREA sf	"B"	MIN. AREA sf	"C"	MIN. AREA sf	"D"	MIN. AREA sf	"E"	MIN. AREA sf
6"	1'-6"	1'-0"	1.06	1'-2"	1.50	1'-0"	.83	1'-0"	.83	1'-0"	.83
8"	1'-6"	1'-3"	1.89	1'-6"	2.66	1'-3"	1.44	1'-0"	.83	1'-0"	.83
10"	1'-6"	1'-9"	2.95	2'-0"	4.17	1'-6"	2.26	1'-3"	1.15	1'-0"	.83
12"	1'-6"	2'-0"	4.25	2'-3"	6.00	1'-9"	3.25	1'-3"	1.65	1'-0"	.83
16"	2'-0"	2'-7"	7.54	3'-0"	10.65	2'-3"	5.76	1'-8"	2.94	1'-2"	1.48

NOTES:

1. BEARING AREAS SHOWN ARE BASED ON 150 PSI TEST PRESSURE AND 3000 PSF ALLOWABLE SOIL BEARING PRESSURE.
2. WRAP ALL BELOW GROUND IRON ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
3. ALL TEES, BENDS, PLUGS, ETC. SHALL BE MECHANICALLY RESTRAINED BY MEGALUG OR APPROVED EQUAL.

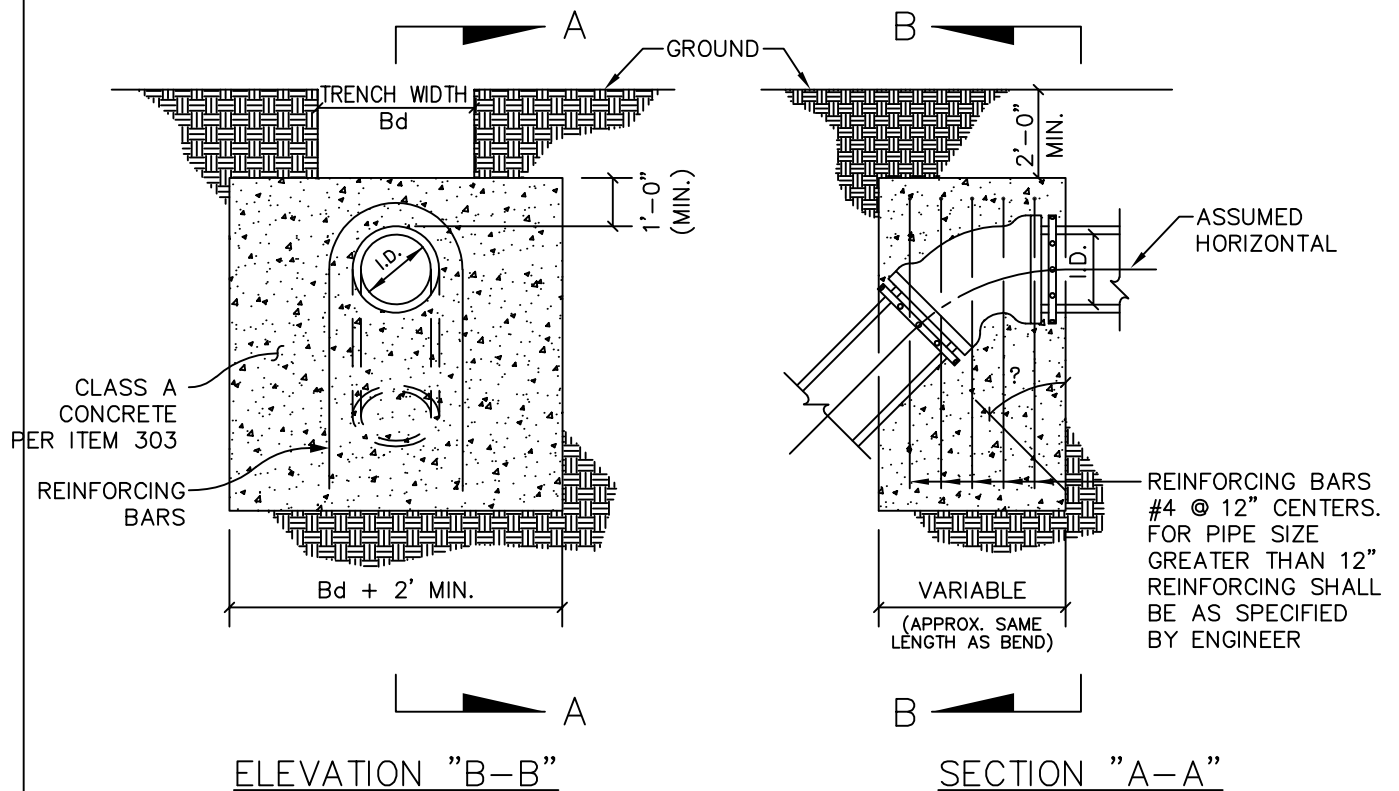


WATER SYSTEM CONSTRUCTION DETAILS
HORIZONTAL AND VERTICAL (DOWNWARD)
THRUST BLOCKING

REVISED MAY 2019

SCALE: N.T.S.

SHEET: W-7



VERTICAL THRUST BLOCK TABLE

△→	11.25'		22.50'		30.00'		45.00'		67.50'		90.00'		←△
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12

NOTES:

1. WRAP ALL BELOW GROUND IRON ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
2. ALL TEES, BENDS, PLUGS, ETC. SHALL BE MECHANICALLY RESTRAINED BY MEGALUG OR APPROVED EQUAL.



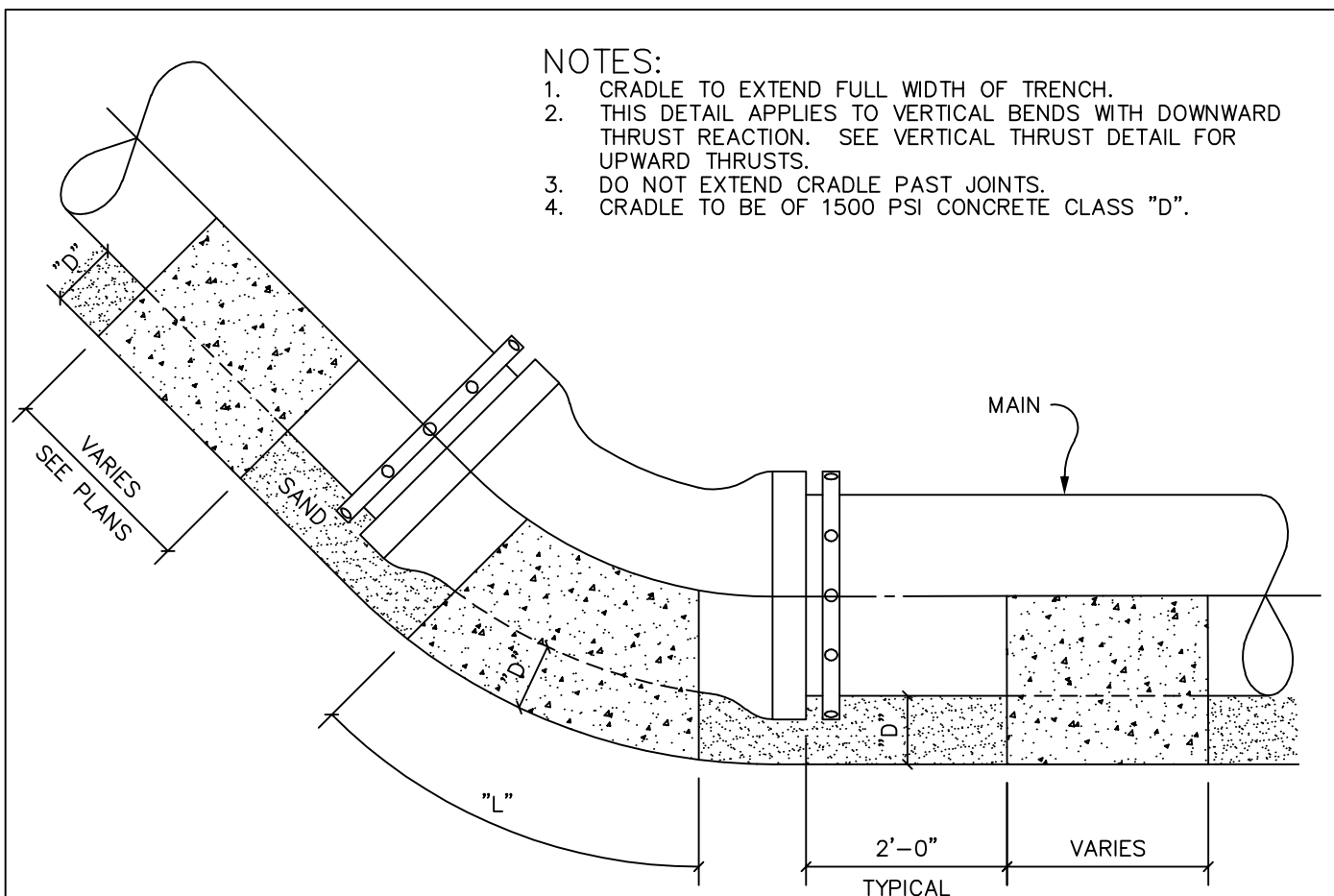
WATER SYSTEM CONSTRUCTION DETAILS

VERTICAL THRUST BLOCK

REVISED MAY 2019

SCALE: N.T.S.

SHEET: W-8



NOTES:

1. CRADLE TO EXTEND FULL WIDTH OF TRENCH.
2. THIS DETAIL APPLIES TO VERTICAL BENDS WITH DOWNWARD THRUST REACTION. SEE VERTICAL THRUST DETAIL FOR UPWARD THRUSTS.
3. DO NOT EXTEND CRADLE PAST JOINTS.
4. CRADLE TO BE OF 1500 PSI CONCRETE CLASS "D".

"D" = 6" MINIMUM OR
TO UNDISTURBED SOIL

CONCRETE CRADLE TABLE

PIPE SIZE	90° BENDS		45° BENDS		22.50° BENDS		11.25° BENDS	
	"L"	MIN. AREA sf	"L"	MIN. AREA sf	"L"	MIN. AREA sf	"L"	MIN. AREA sf
6"	6"	1.50	1'-0"	.83	1'-0"	.83	1'-0"	.83
8"	1'-6"	2.66	1'-3"	1.44	1'-0"	.83	1'-0"	.83
10"	2'-0"	4.17	1'-6"	2.26	1'-3"	1.15	1'-0"	.83
12"	2'-3"	6.00	1'-9"	3.25	1'-3"	1.65	1'-0"	.83
16"	3'-0"	10.65	2'-3"	5.76	1'-8"	2.94	1'-2"	1.48

NOTES:

1. BEARING AREAS SHOWN ARE BASED ON 150 PSI TEST PRESSURE AND 3000 PSF ALLOWABLE SOIL BEARING PRESSURE.
2. WRAP ALL BELOW GROUND IRON ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
3. ALL TEES, BENDS, PLUGS, ETC. SHALL BE MECHANICALLY RESTRAINED BY MEGALUG OR APPROVED EQUAL.

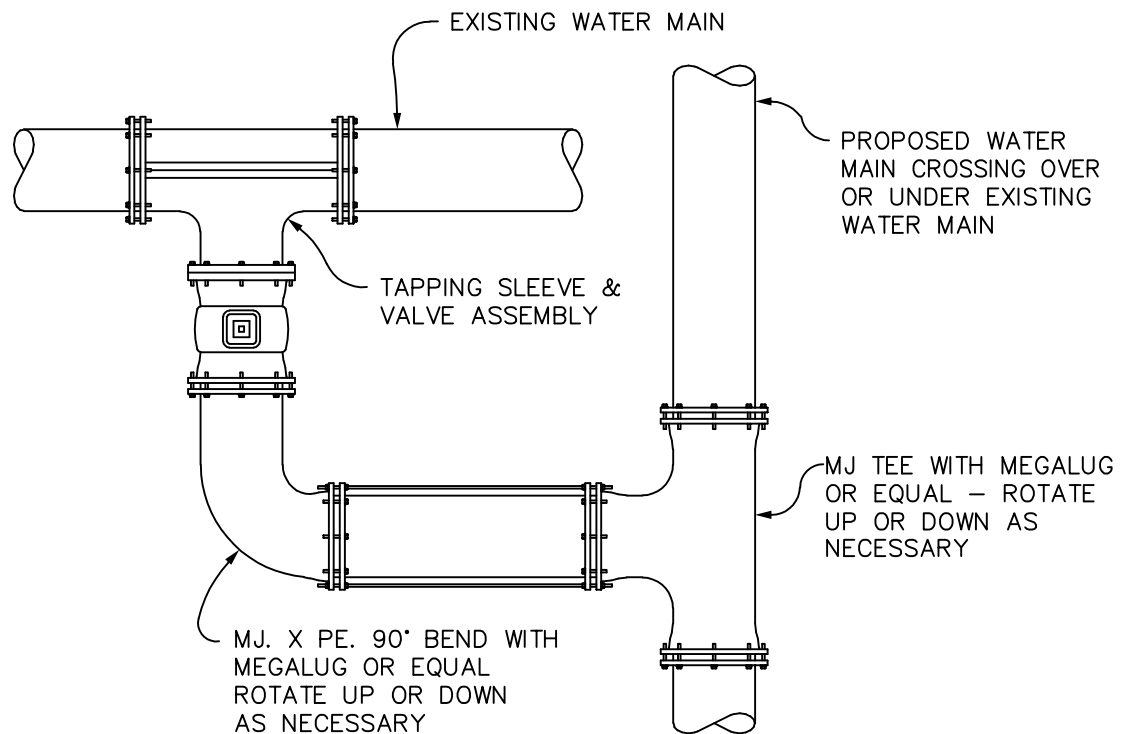


WATER SYSTEM CONSTRUCTION DETAILS CONCRETE CRADLE AT VERTICAL BENDS

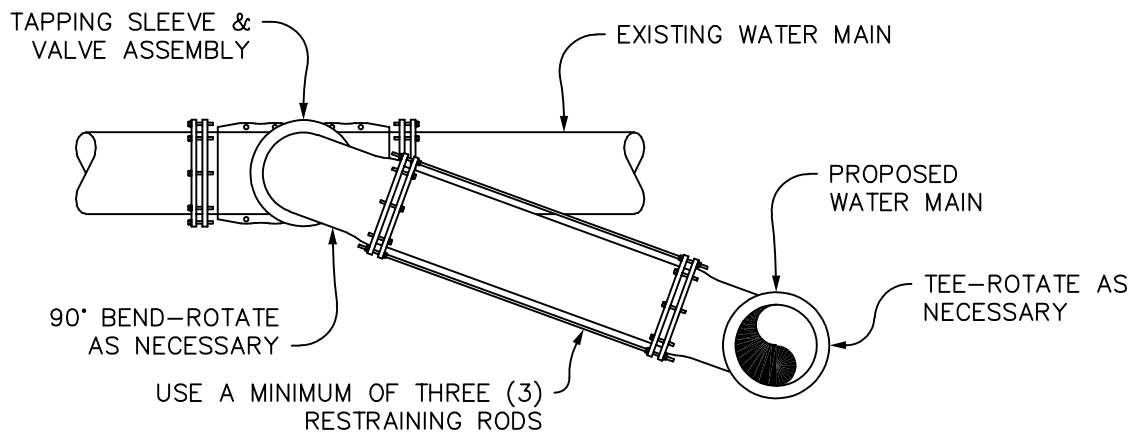
REVISED MAY 2019

SCALE: N.T.S.

SHEET: W-9



PLAN



SECTION

NOTES:

1. WRAP ALL BELOW GROUND ASSEMBLIES IN POLYETHYLENE ACCORDING TO AWWA C105.
2. THE DIAMETER OF THE CONNECTING PIPE BETWEEN THE PROPOSED AND EXISTING WATER MAINS SHALL HAVE A DIAMETER EQUAL TO THE SMALLER OF THE TWO MAINS TO BE CONNECTED THROUGH THE PROPOSED RING CONNECTION.

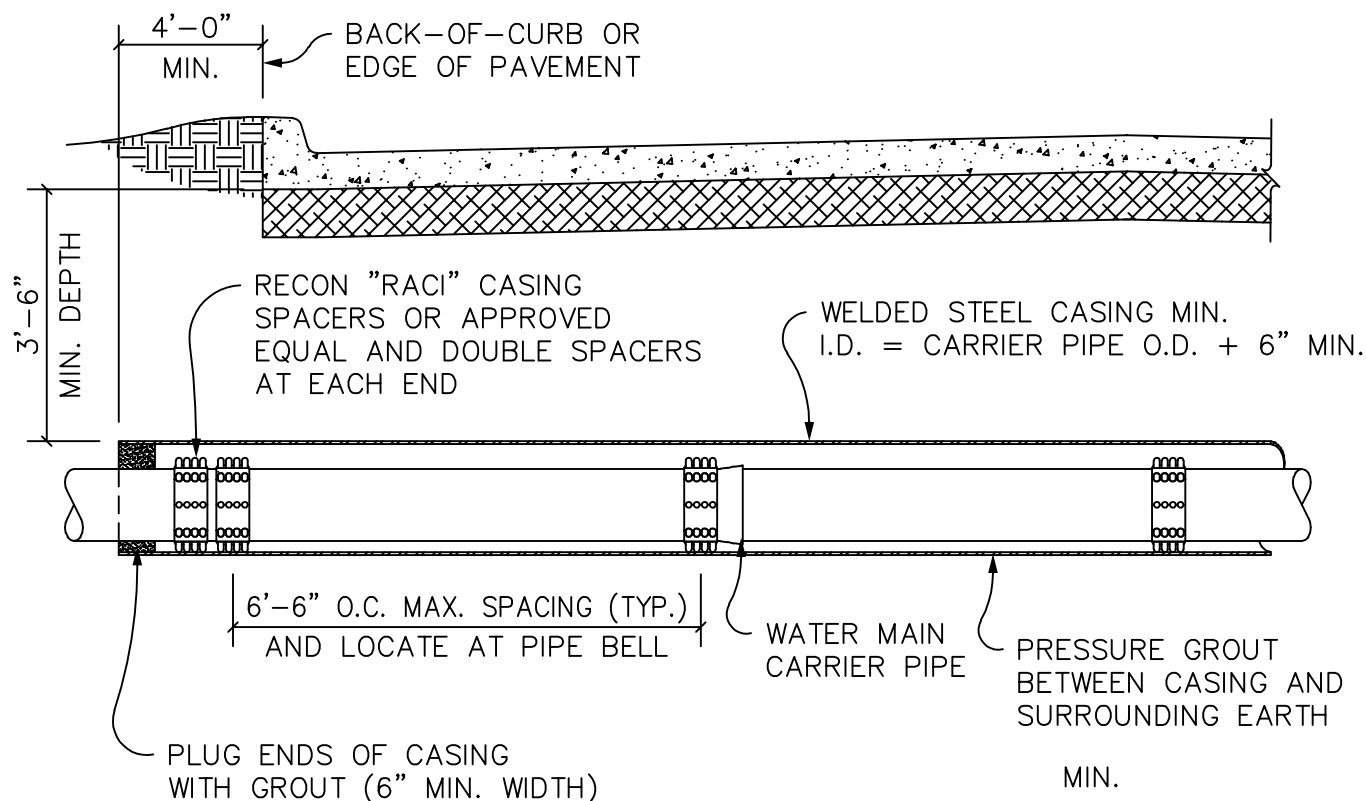


WATER SYSTEM CONSTRUCTION DETAILS
TYPICAL RING CONNECTION

REVISED MAY 2019

SCALE: N.T.S.

SHEET: W-10



CASING DIAMETER	MIN. WALL THICKNESS
12" OR LESS	0.25"
OVER 12" - 18"	0.3125"
OVER 18" - 22"	0.375"
OVER 22" - 28"	0.4375"
OVER 28" - 34"	0.5"
OVER 34" - 42"	0.5625"
OVER 42" - 48"	0.625"
OVER 48" - 60"	0.6875"

NOTES:

1. WHERE A BORE PIT EXCEEDS 5 FEET IN DEPTH THE CONTRACTOR SHALL INSTALL SHORING OF THE PIT WALLS AS REQUIRED BY OSHA.
2. WHERE A BORE IS TO BE PARTIALLY OR COMPLETELY ABANDONED, SAID BORE SHALL BE COMPLETELY FILLED WITH HYDRAULICALLY PLACED CEMENT GROUT.
3. CASING SHALL BE EXTENDED TO THE RIGHT-OF-WAY LINE FOR STATE HIGHWAY AND RAILROAD CROSSINGS.
4. THE EDGE OF BORE PIT SHALL BE A MINIMUM OF 4' BEHIND THE BACK OF CURB OR EDGE OF PAVEMENT.
5. STEEL CASING PIPE SHALL HAVE A MINIMUM YIELD STRENGTH OF 35 KSI.

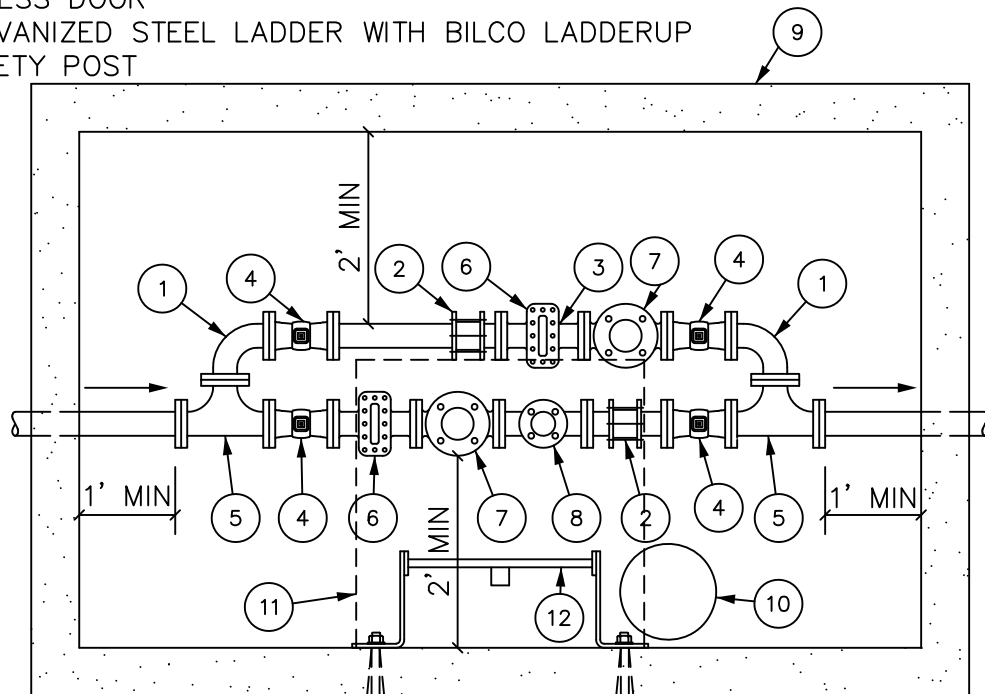


MATERIALS LIST:

- 1 – D.I. 90° BEND FLG. x FLG.
- 2 – RESTRAINED COUPLING OR EXPANSION JOINT
- 3 – BYPASS LINE
- 4 – GATE VALVE OS&Y W/ CHAIN & LOCK FLG. X FLG.
- 5 – D.I. TEE FLG. X FLG.
- 6 – STRAINER
- 7 – COMPOUND OR TURBINE METER
- 8 – TESTING TEE FLG. X FLG. WITH 2" GATE VALVE AND FLG. X THREADED END DISCHARGE PIPE
- 9 – PRECAST METEER VAULT
- 10 – 12" SUMP x 24" DEEP (12" R.C.P. OR EQUAL)
- 11 – ACCESS DOOR
- 12 – GALVANIZED STEEL LADDER WITH BILCO LADDERUP SAFETY POST

MINIMUM VAULT SIZE

METER	VAULT
3 INCH	6'X8'
4 INCH	6'X8'
6 INCH	8'X10'



NOTES:

1. A J-4AL BILCO DOOR (3'x3') SHALL BE SPECIFIED FOR 3" AND 4" METER VAULTS. A JD-2AL BILCO DOOR (4'x4') SHALL BE SPECIFIED FOR 6" AND 8" METER VAULTS OR APPROVED EQUAL. DOOR SHALL BE DESIGNED FOR AASHTO H-20 WHERE APPLICABLE.
2. ALL VAULTS SHALL BE BROOKS, AMERICAN OR APPROVED EQUAL AND DESIGNED FOR AASHTO H-20 OR H-20-44 LIVE LOADS.
3. DOOR DRAIN SHALL BE PLUMBED TO OUTSIDE OF VAULT.
4. ALL WALL PENETRATIONS SHALL BE SEALED WITH LINK SEAL OR APPROVED EQUAL.
5. PIPE AND FITTINGS SHALL BE CONSTRUCTED A MIN. OF 1' ABOVE THE VAULT FLOOR. A CONCRETE PEDESTAL SHALL BE INSTALLED AT THE MID POINT OF THE PIPING ASSEMBLY FOR HORIZONTAL SUPPORT.
6. BYPASS LINE SHALL BE SAME SIZE AS MAIN LINE.
7. METERS SHALL BE BADGER SPECIFIED BY THE CITY.



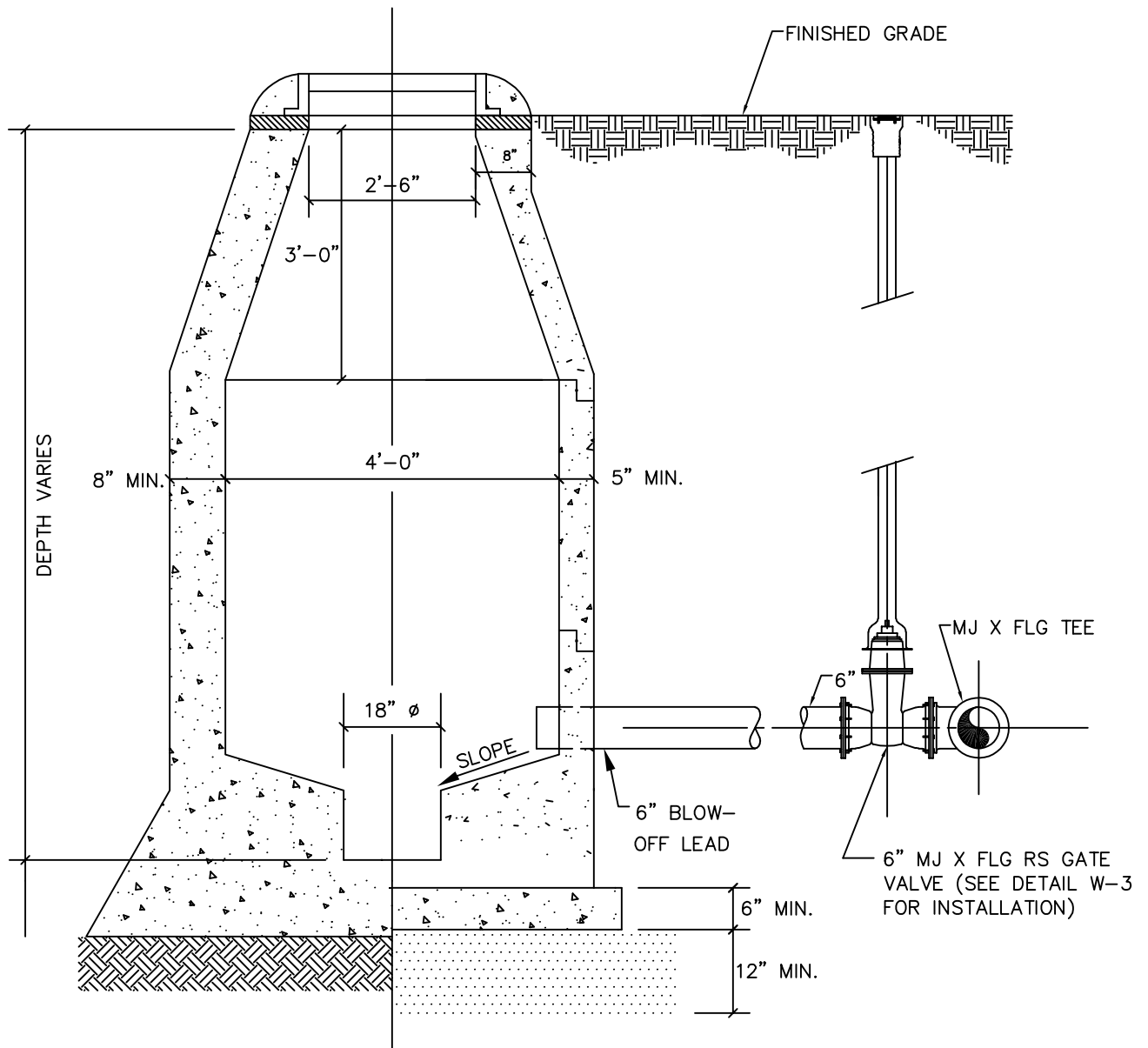
WATER SYSTEM CONSTRUCTION DETAILS

3" AND LARGER METER VAULT

REVISED MAY 2019

SCALE: 1/2" = 1'

SHEET: W-12



CAST-IN-PLACE

1/2 SECTION

SEE DETAIL S-3, CAST-IN-PLACE
SANITARY SEWER MANHOLE

PRECAST

1/2 SECTION

SEE DETAIL S-2, PRECAST
SANITARY SEWER MANHOLE

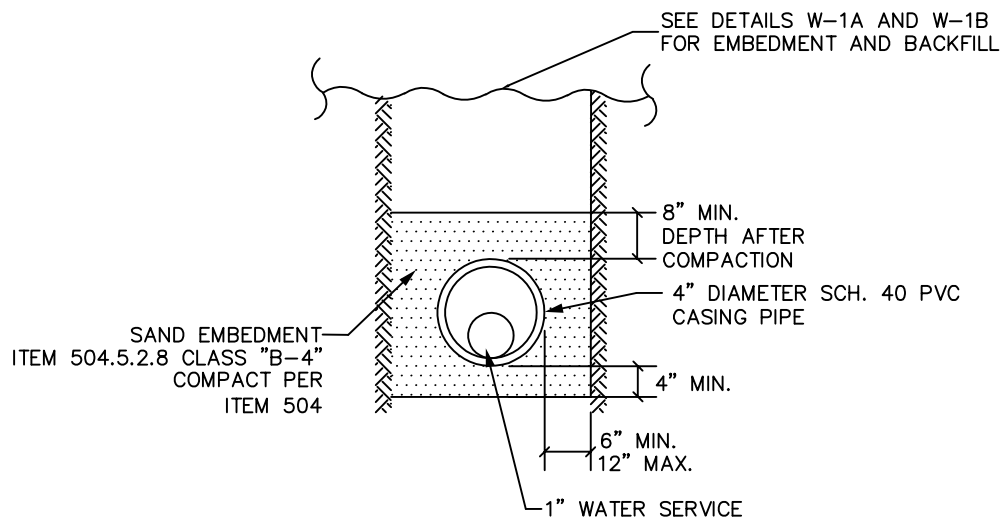
NOTES:

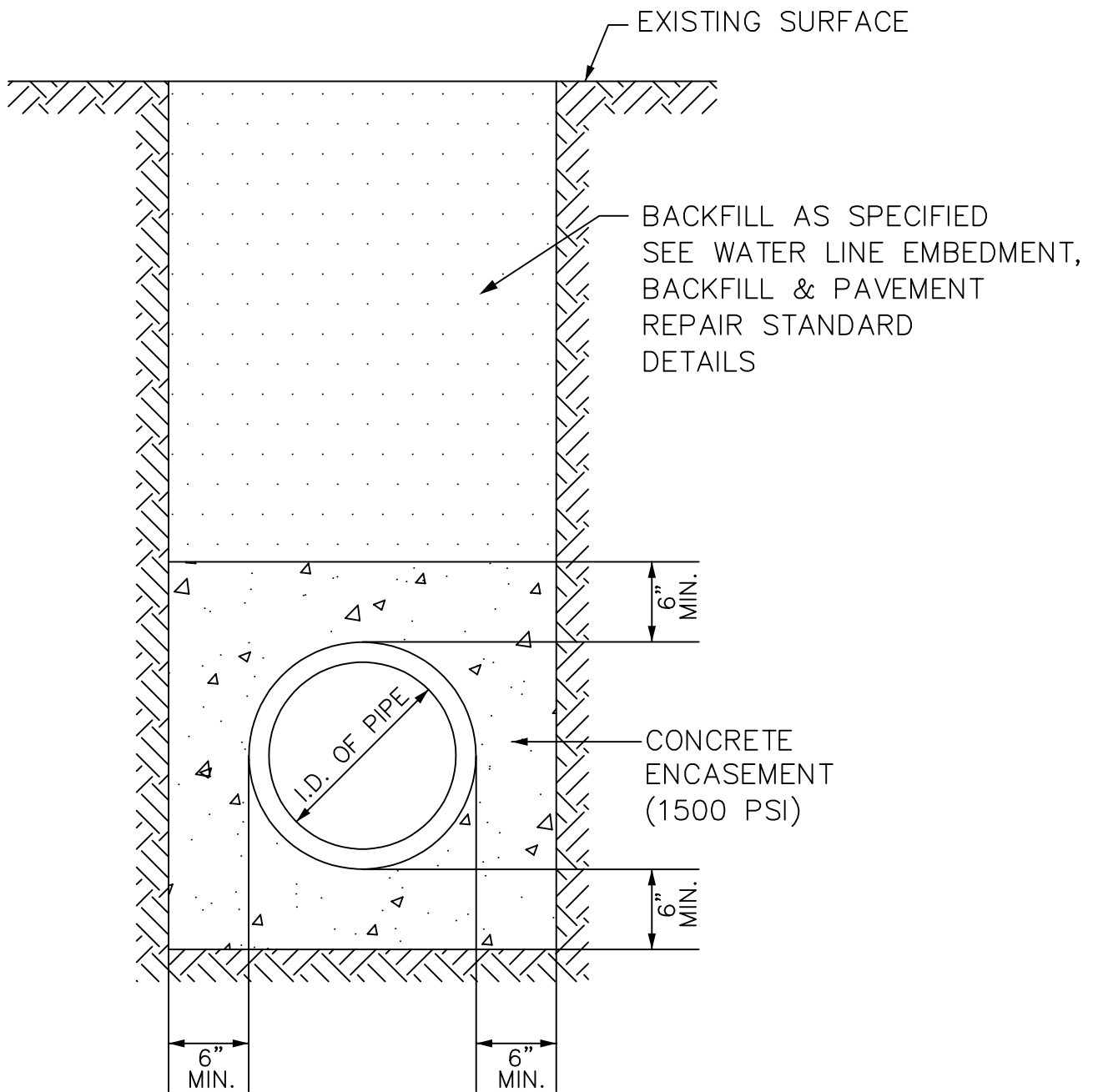
1. LOCATE THE BLOW-OFF SUMP MANHOLE NEAR PROPERTY LINE WITHOUT DISRUPTION TO SERVICE LINES.
2. ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF THE WATER MAIN.



WATER SYSTEM CONSTRUCTION DETAILS
BLOW-OFF SUMP MANHOLE INSTALLATION

REVISED MAY 2019
SCALE: 3/4" = 1'
SHEET: W-13





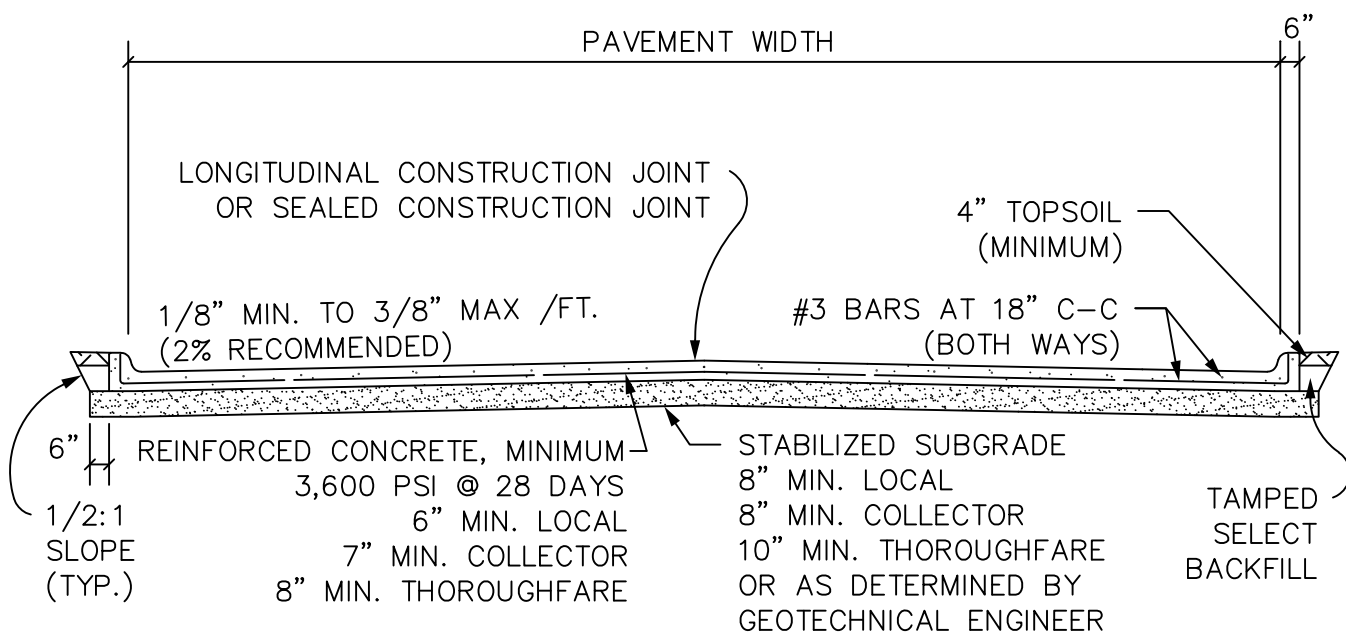
WATER SYSTEM CONSTRUCTION DETAILS

CONCRETE ENCASEMENT

REVISED MAY 2019

SCALE: N.T.S.

SHEET: W-15



TYPICAL URBAN SECTION (CURB AND GUTTER)

NOTE: SEE STANDARD CURB & GUTTER DETAIL. ASPHALT PAVEMENT MAY BE ALLOWED UPON APPROVAL OF CITY STAFF.

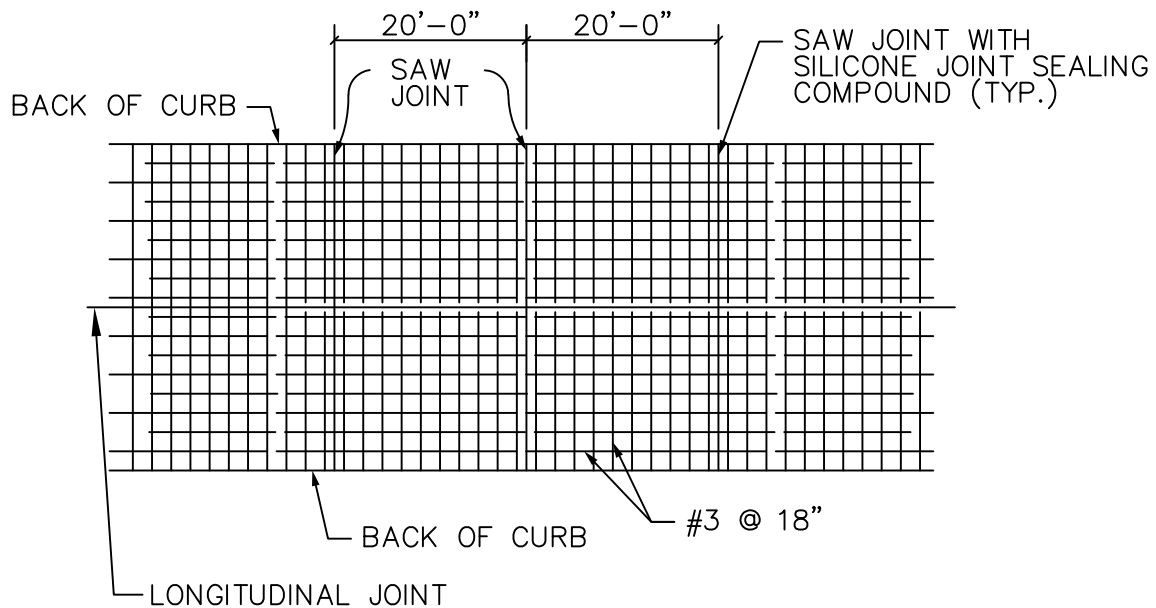


PAVING CONSTRUCTION DETAILS CONCRETE STREET SECTIONS

REVISED MAY 2019

SCALE: 1" = 5'

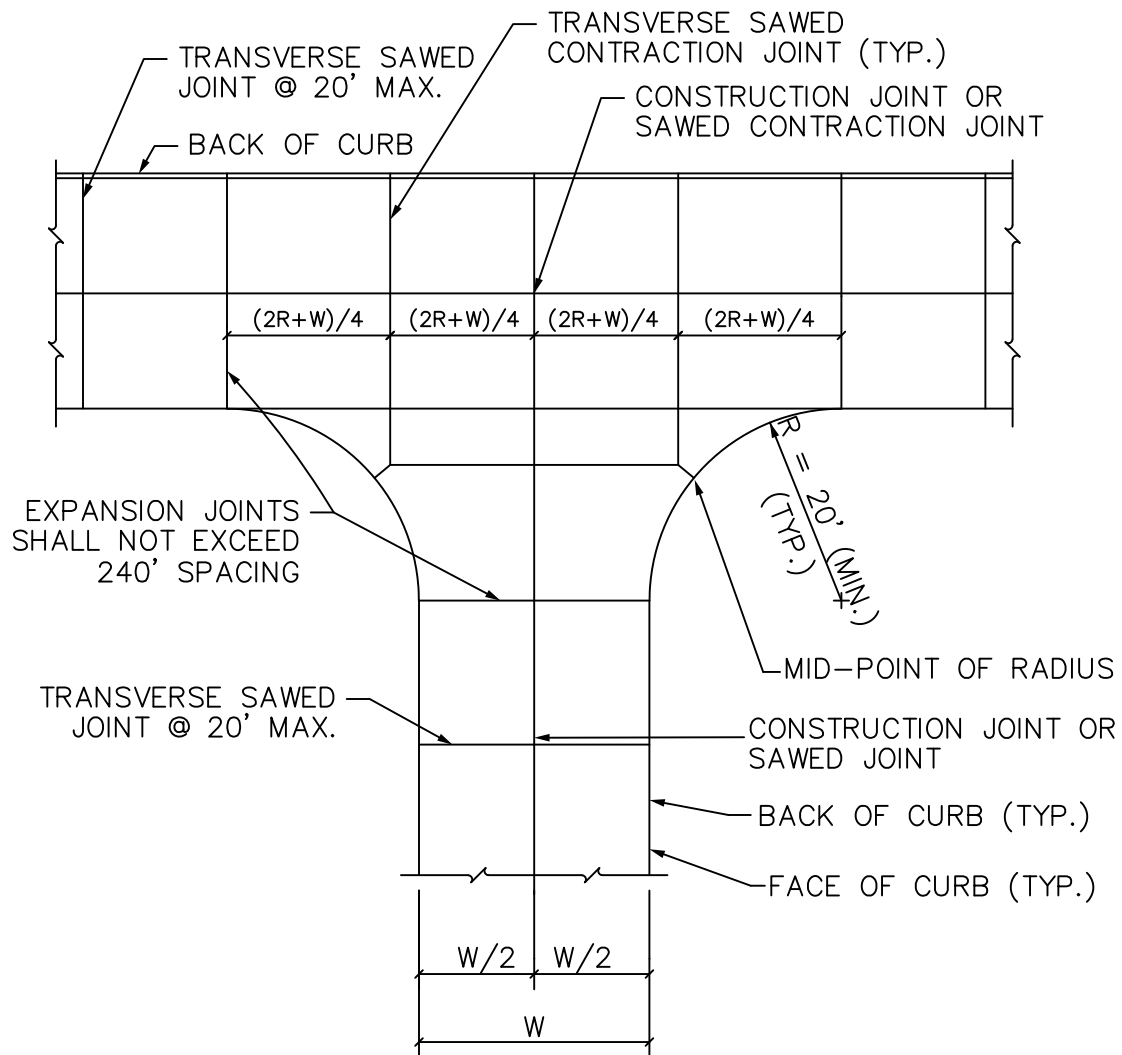
SHEET: P-1

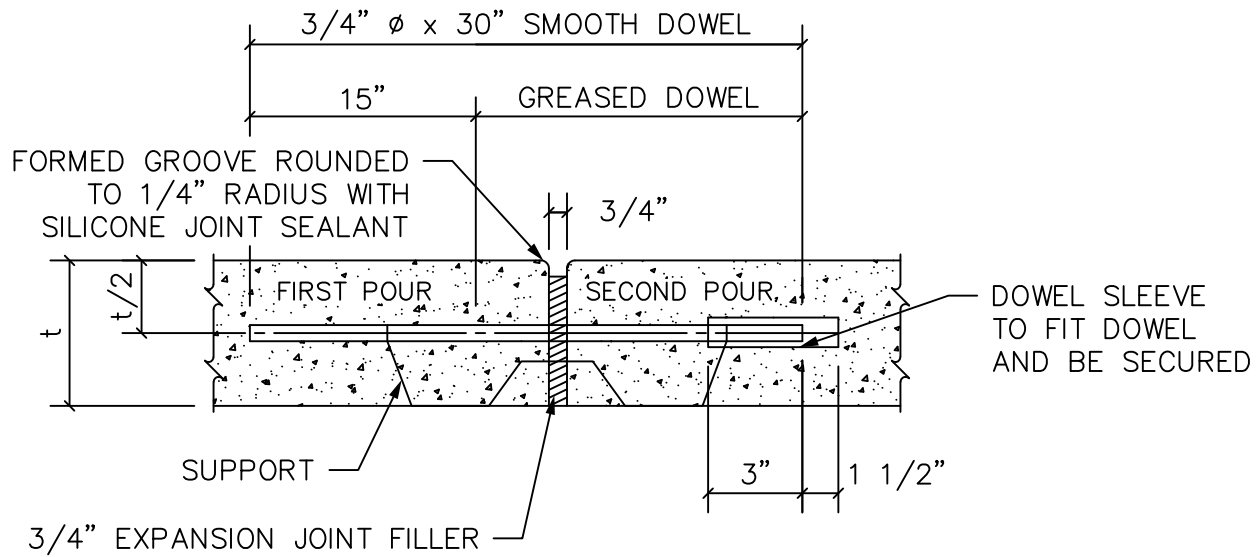


PLAN

NOTES:

1. CONSTRUCT SAW JOINTS AT 20' (MAX).
2. EXPANSION JOINTS TO BE AT INTERSECTIONS, BRIDGES AND OTHER STRUCTURES.
3. EXPANSION JOINT SPACING SHALL NOT EXCEED 240'.
4. ALL JOINTS TO BE PROPERLY SEALED WITH SILICONE JOINT SEALING COMPOUND. SILICONE JOINT SEALING SHALL BE DOW CORNING 890SL, OR APROVED EQUAL.
5. MONOLITHIC CURB SHALL BE USED WITH THIS TYPE OF PAVING.
6. LONGITUDINAL SAW JOINT REQUIRED FOR EACH LANE SEPERATION.

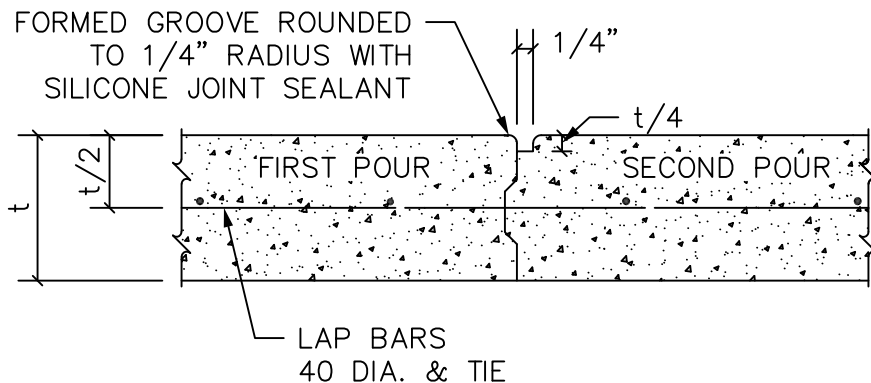




EXPANSION JOINT

NOTE:

1. ALL DOWEL BARS SHALL BE INSTALLED PERPENDICULAR TO JOINT @ 18" SPACING.
2. SILICONE JOINT SEALANT SHALL BE DOW CORNING 890 SL, OR APPROVED EQUAL.



CONSTRUCTION JOINT

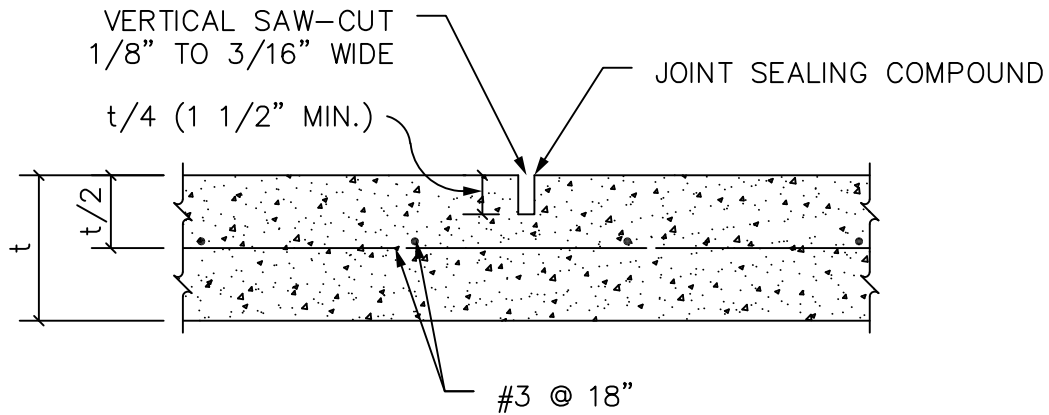


PAVING CONSTRUCTION DETAILS
CONCRETE PAVEMENT JOINTS

REVISED MAY 2019

SCALE: N.T.S.

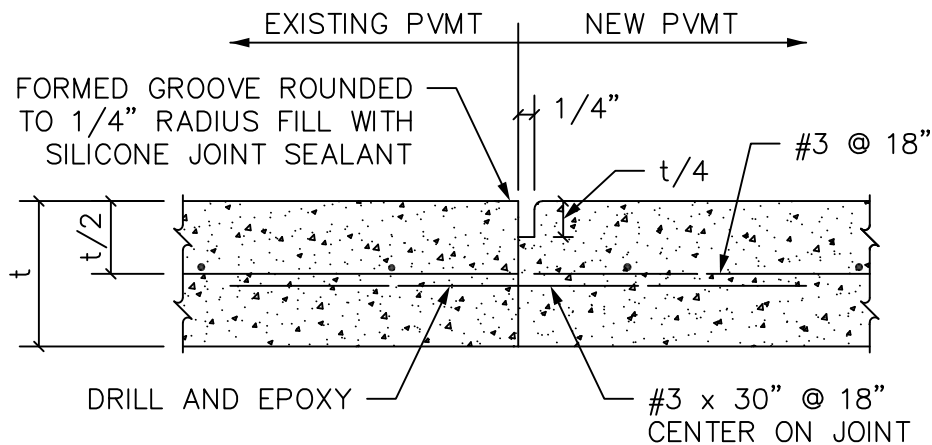
SHEET: P-3B



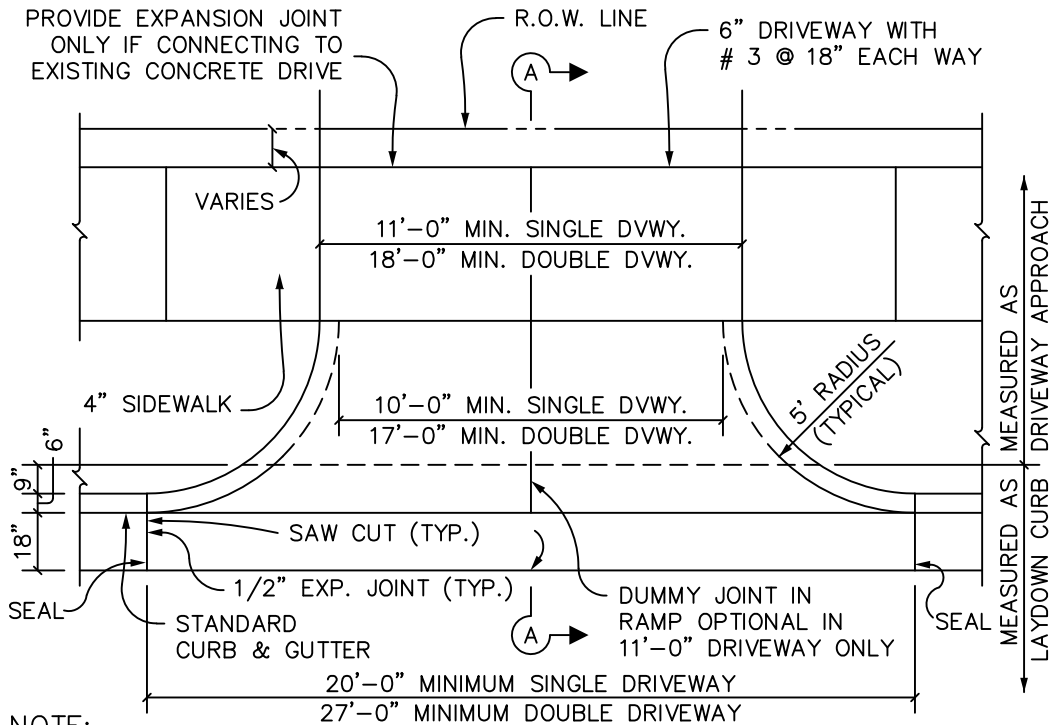
SAW JOINT

NOTE:

1. ALL DOWEL BARS SHALL BE INSTALLED PERPENDICULAR TO JOINT @ 18" SPACING.
2. SILICONE JOINT SEALANT SHALL BE DOW CORNING 890 SL, OR APPROVED EQUAL.

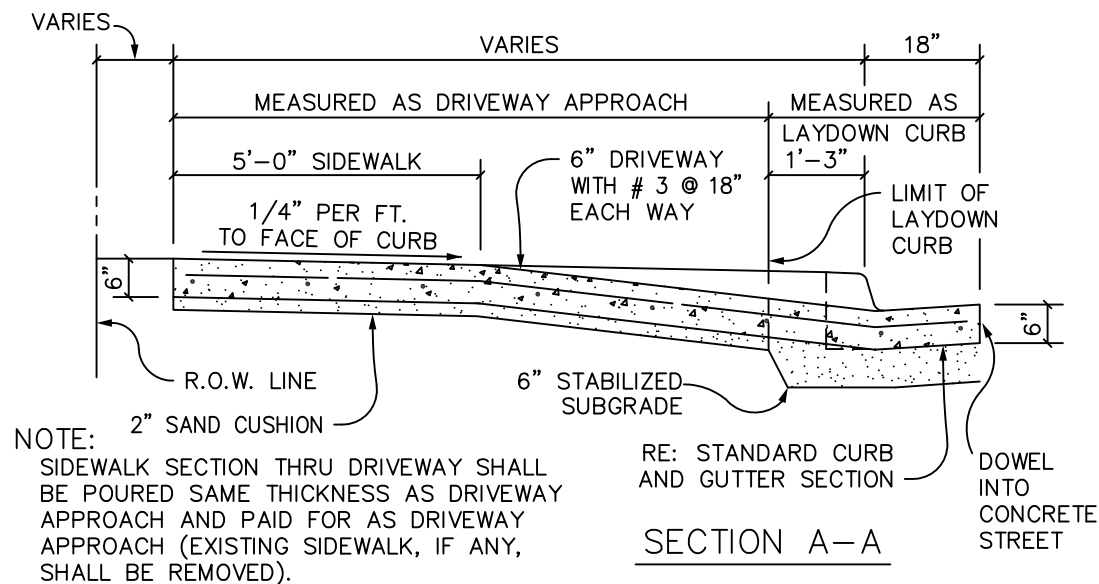


SAWED CONSTRUCTION JOINT



NOTE:
EXISTING CURB AND GUTTER, IF ANY, MUST
BE SAW CUT AS DIRECTED BY THE ENGINEER.

SCALE: 1" = 5'



NOTE:
SIDEWALK SECTION THRU DRIVEWAY SHALL
BE POURED SAME THICKNESS AS DRIVEWAY
APPROACH AND PAID FOR AS DRIVEWAY
APPROACH (EXISTING SIDEWALK, IF ANY,
SHALL BE REMOVED).

SCALE: 1" = 2.5'



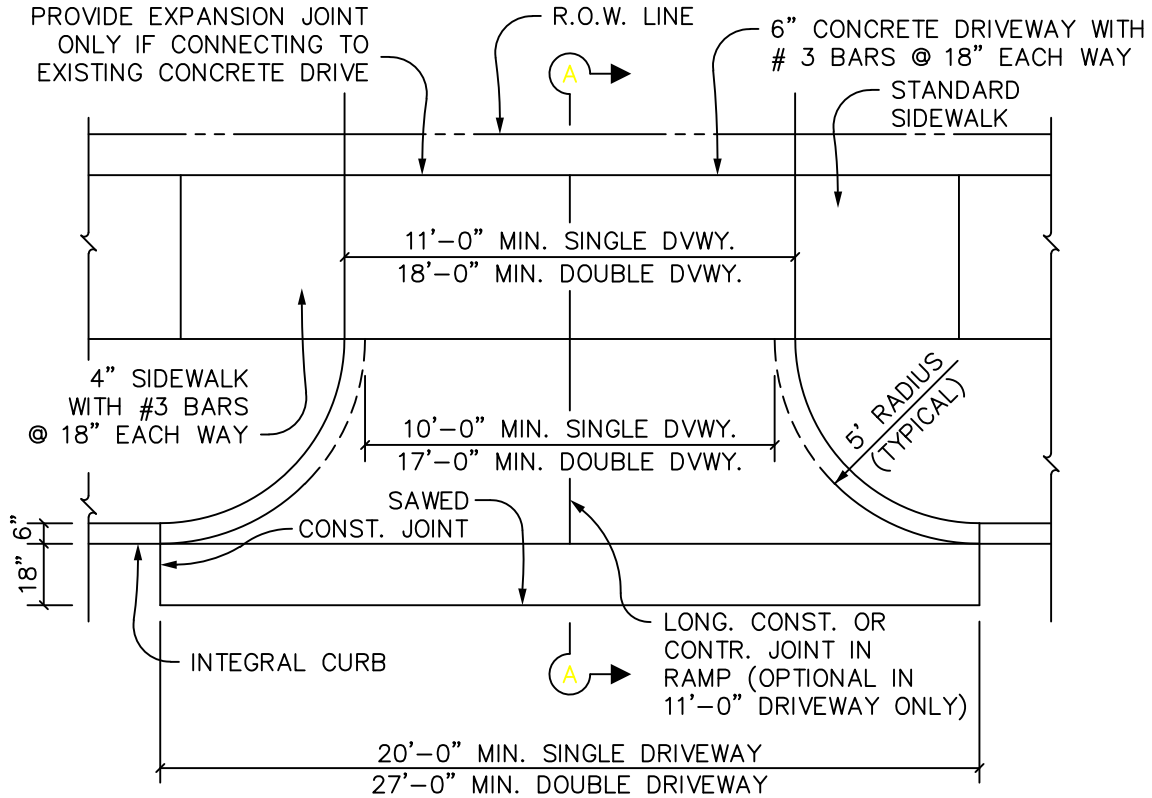
PAVING CONSTRUCTION DETAILS LAYDOWN CURB AND DRIVEWAY

REVISED MAY 2019

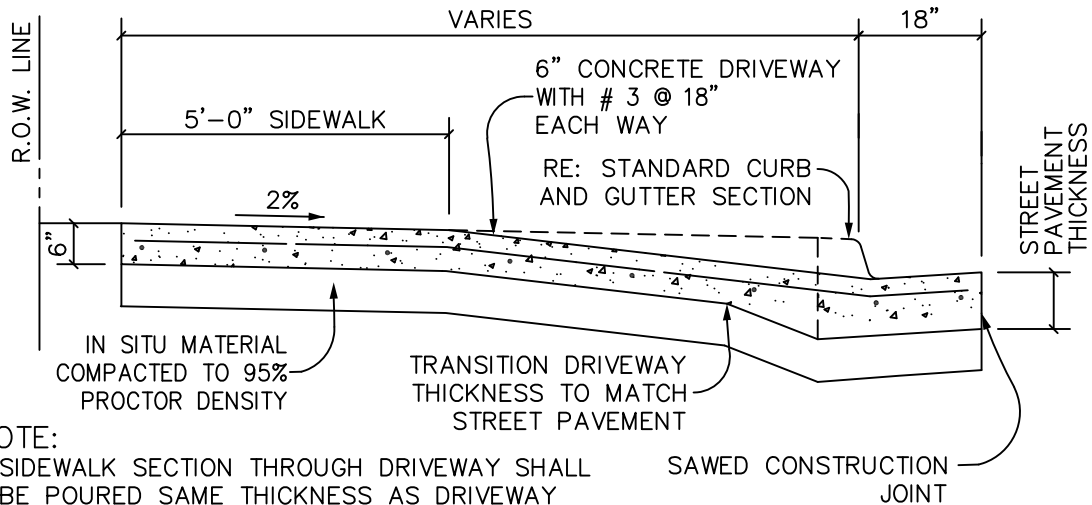
SCALE: AS MARKED

SHEET: P-5

CONCRETE SHALL BE CLASS 'A'
IN ACCORDANCE WITH ITEM 303
(PER NCTCOG)



NOTE: EXISTING CURB AND GUTTER SHALL BE VERTICALLY SAWCUT.
HORIZONTAL SAWCUTTING OF CURB NOT ALLOWED.



NOTE:
SIDEWALK SECTION THROUGH DRIVEWAY SHALL BE POURED SAME THICKNESS AS DRIVEWAY APPROACH (EXISTING SIDEWALK, IF ANY, SHALL BE REMOVED AND REPLACED)

SECTION A-A



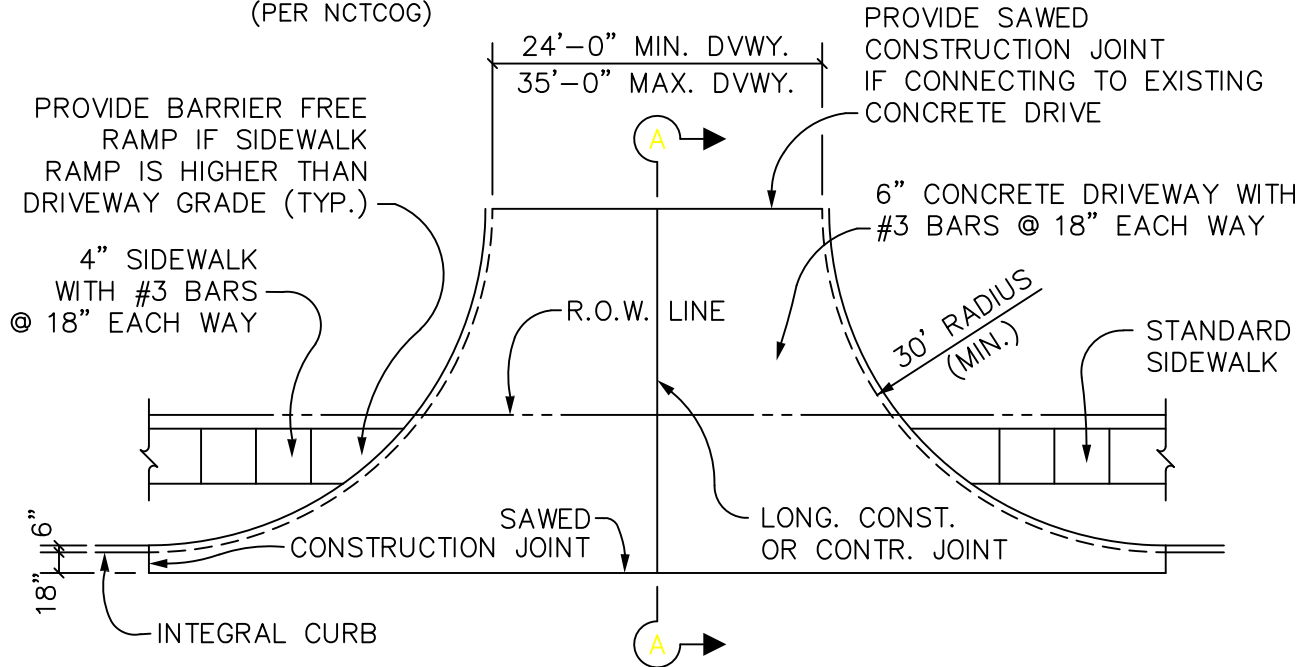
PAVING CONSTRUCTION DETAILS RESIDENTIAL DRIVEWAY

REVISED MAY 2019

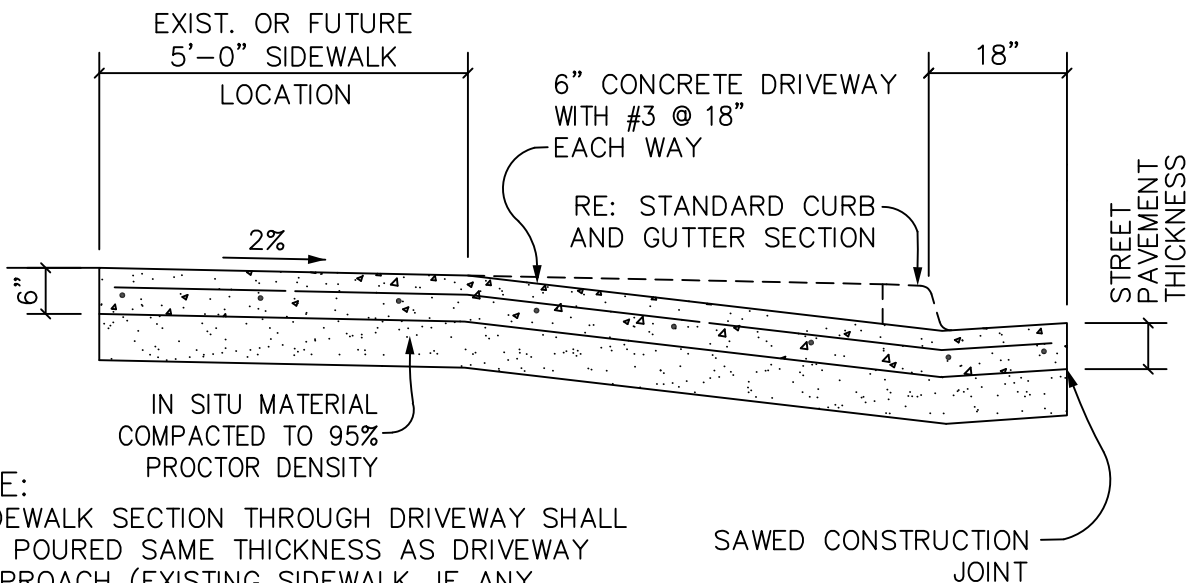
SCALE: N.T.S.

SHEET: P-5A

CONCRETE SHALL BE CLASS 'A'
IN ACCORDANCE WITH ITEM 303
(PER NCTCOG)



NOTE: EXISTING CURB AND GUTTER SHALL BE VERTICALLY SAWCUT.
HORIZONTAL SAWCUTTING OF CURB NOT ALLOWED.



NOTE:
SIDEWALK SECTION THROUGH DRIVEWAY SHALL
BE POURED SAME THICKNESS AS DRIVEWAY
APPROACH (EXISTING SIDEWALK, IF ANY,
SHALL BE REMOVED AND REPLACED)

SECTION A-A

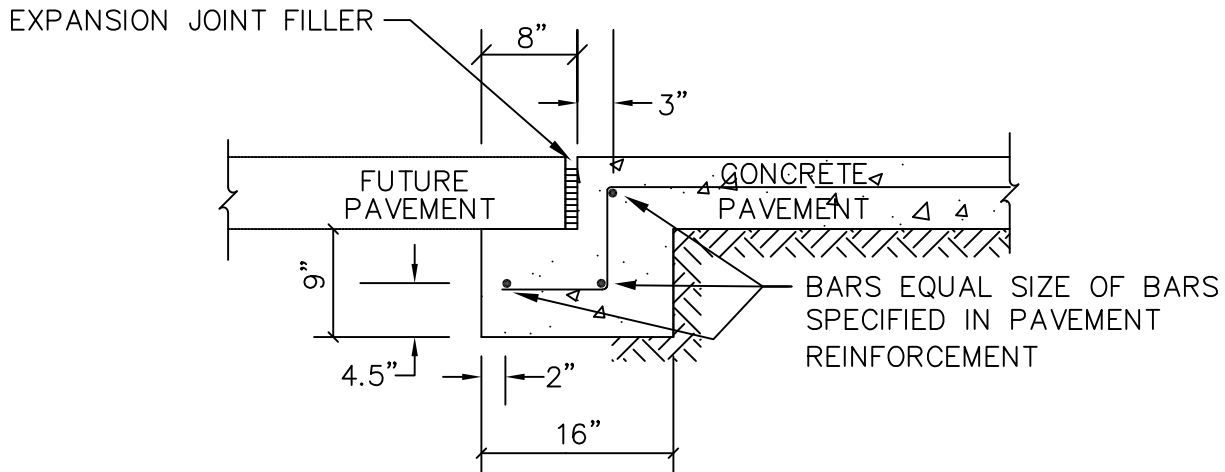


PAVING CONSTRUCTION DETAILS
COMMERCIAL DRIVEWAY

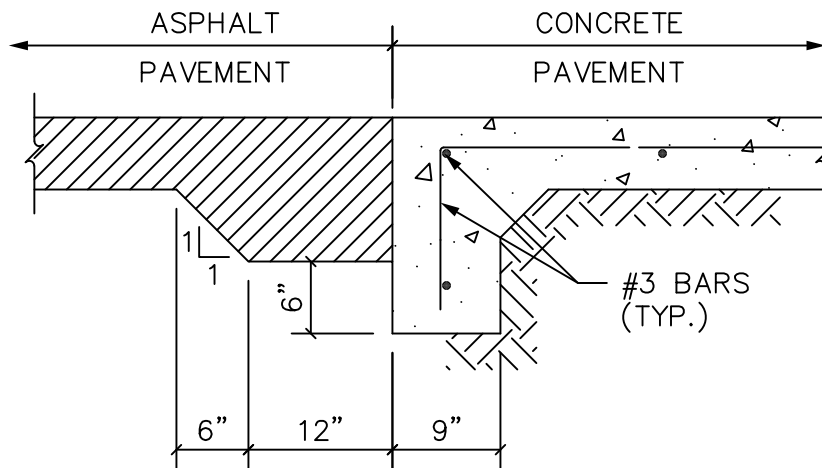
REVISED MAY 2019

SCALE: N.T.S.

SHEET: P-5B



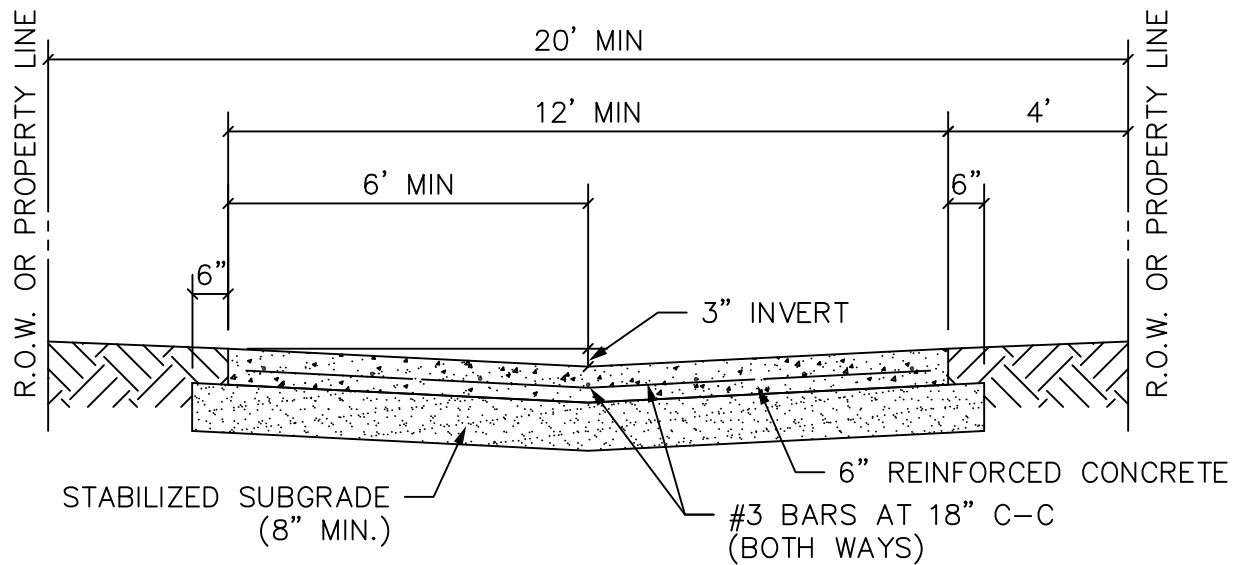
STREET HEADER FOR FUTURE PAVEMENT



ASPHALT TO CONCRETE HEADER

NOTES

1. PAVEMENT BARS TO BE BENT DOWN INTO HEADER.
2. HEADER AND PAVEMENT TO BE MONOLITHIC.



NOTES:

1. CONSTRUCT TRANSVERSE SAWED JOINTS @ 20' (MAX.)
2. REINFORCED WITH #3 BARS AT 18" C-C BOTH WAYS.
3. ALTERNATE REINFORCEMENT - #4 BARS AT 30" C-C BOTH WAYS.
4. EXPANSION JOINTS TO BE PLACED AT ALL INTERSECTIONS AND NOT TO EXCEED 240' BETWEEN JOINTS.
5. CONCRETE FOR ALLEYS SHALL BE MINIMUM 3,600 PSI @ 28 DAYS.

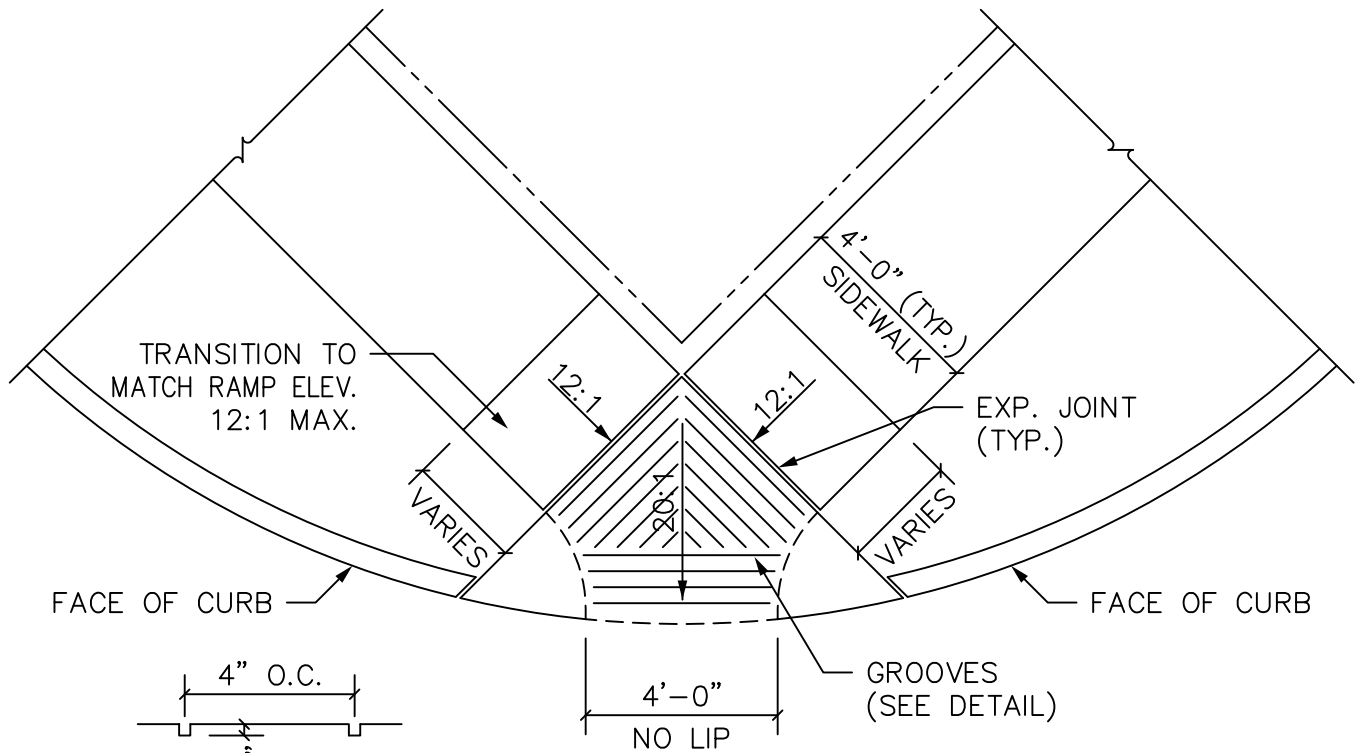


PAVING CONSTRUCTION DETAILS
TYPICAL ALLEY SECTION

REVISED MAY 2019

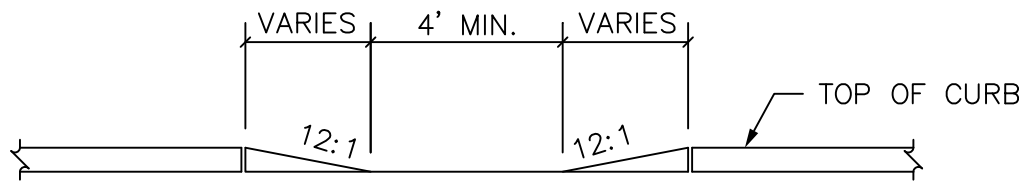
SCALE: 3/8" = 1'

SHEET: P-7



PLAN

GROOVES SECTION



ELEVATION

NOTES:

1. INSTALL 1/2" ϕ X 18" SMOOTH DOWELS @ 18" (GREASE ON ONE SIDE) THROUGH EXPANSION JOINTS.
2. 20:1 SLOPE ON WHEELCHAIR RAMP AND 12:1 SLOPE ON RAMP WINGS.
3. RAMPS SHALL HAVE A HEAVY BROOM FINISH WITH GROOVES ALIGNED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
4. ALL RAMPS SHALL COMPLY WITH THE REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT.
5. CONCRETE FOR RAMPS SHALL BE MINIMUM 3,600 PSI @ 28 DAYS.

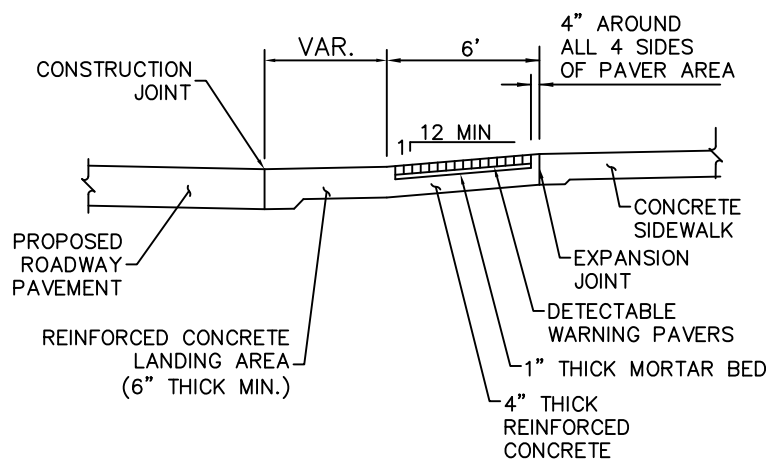
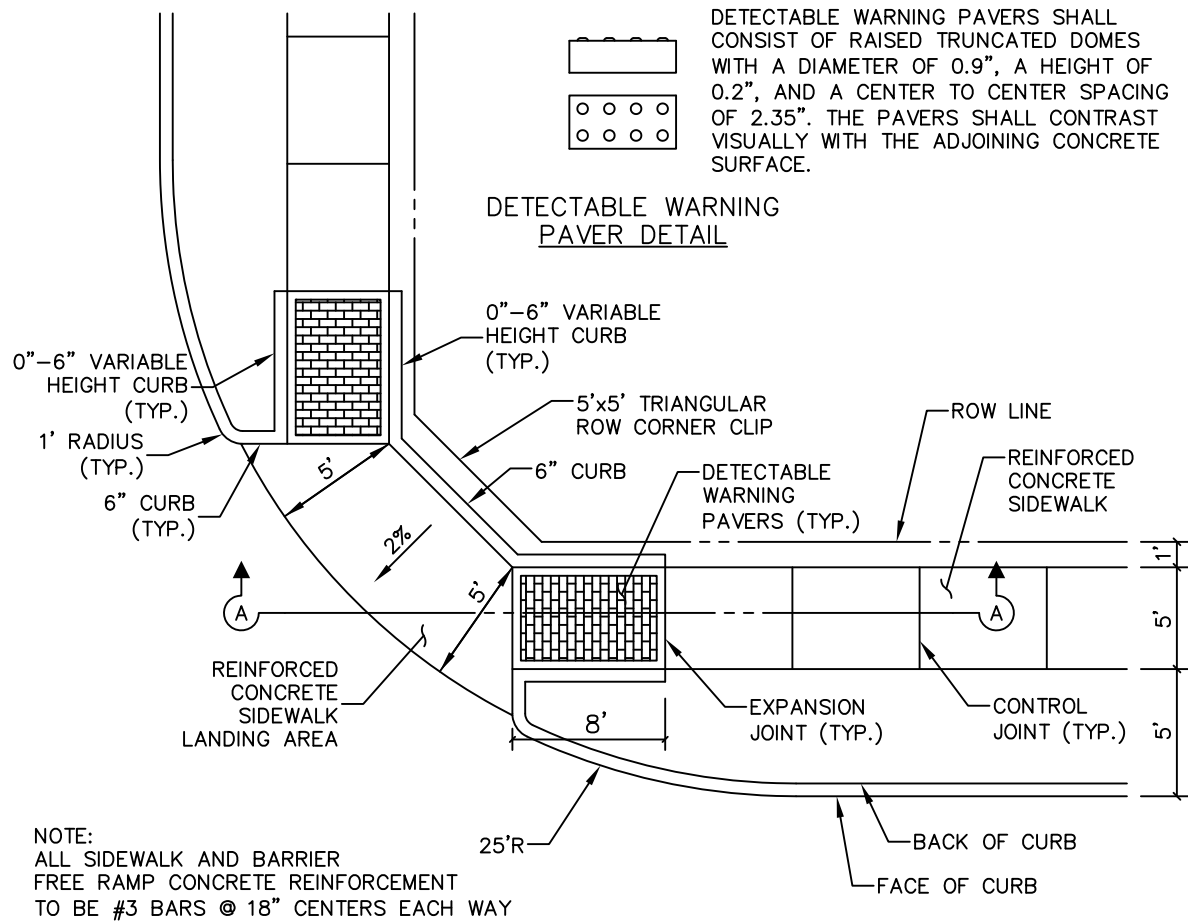


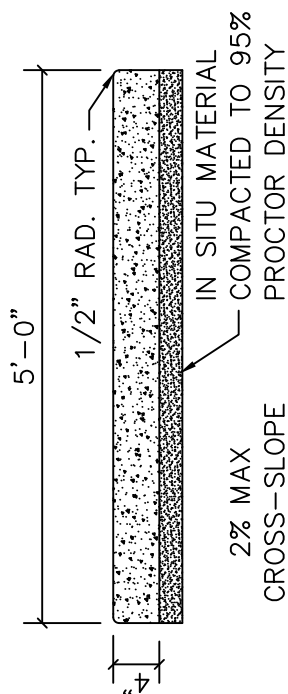
PAVING CONSTRUCTION DETAILS WHEELCHAIR RAMP

REVISED MAY 2019

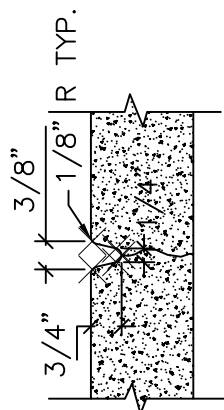
SCALE: 1" = 4'

SHEET: P-8





SECTION B-B



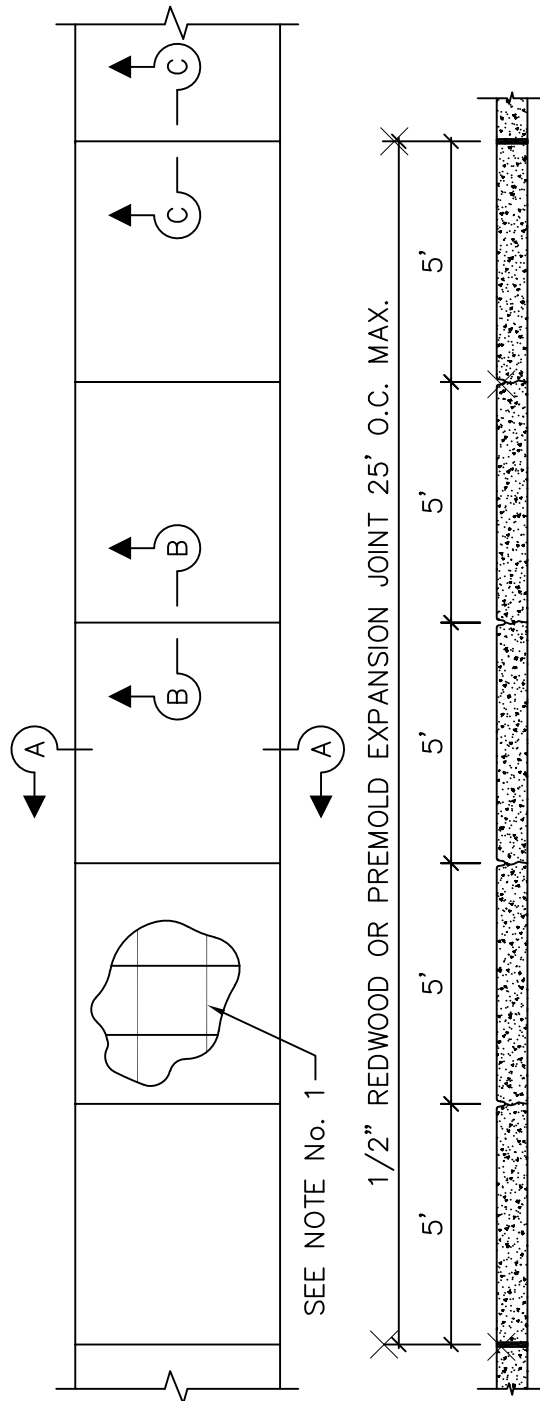
1/2" REDWOOD
OR PREMOLD

#4 x 18" LONG
@ 18" CENTERS
SMOOTH DOWEL
(GREASE ONE END)

1/2" MIN.

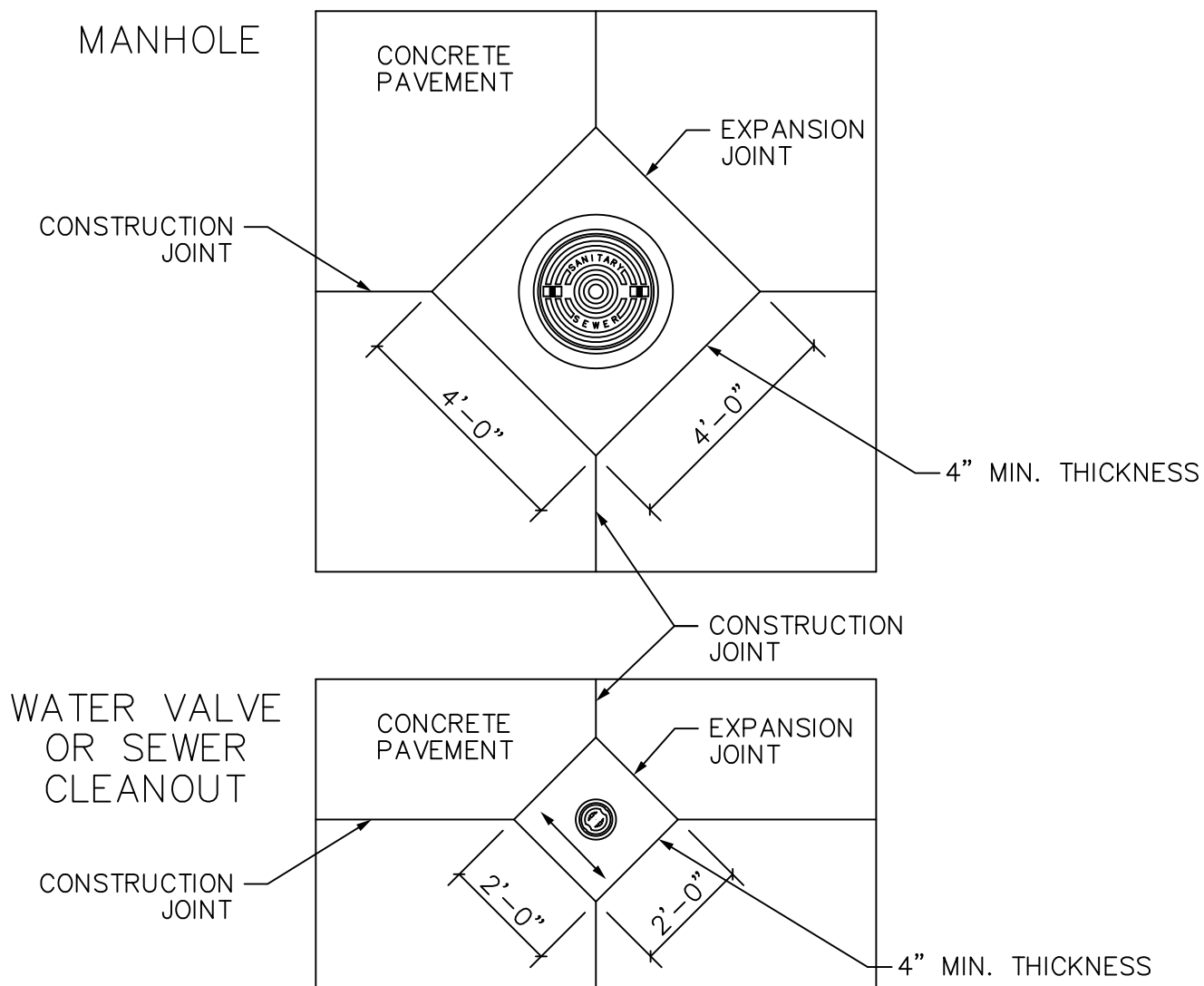
JOINT SEALING
COMPOUND

SECTION C-C



NOTE:

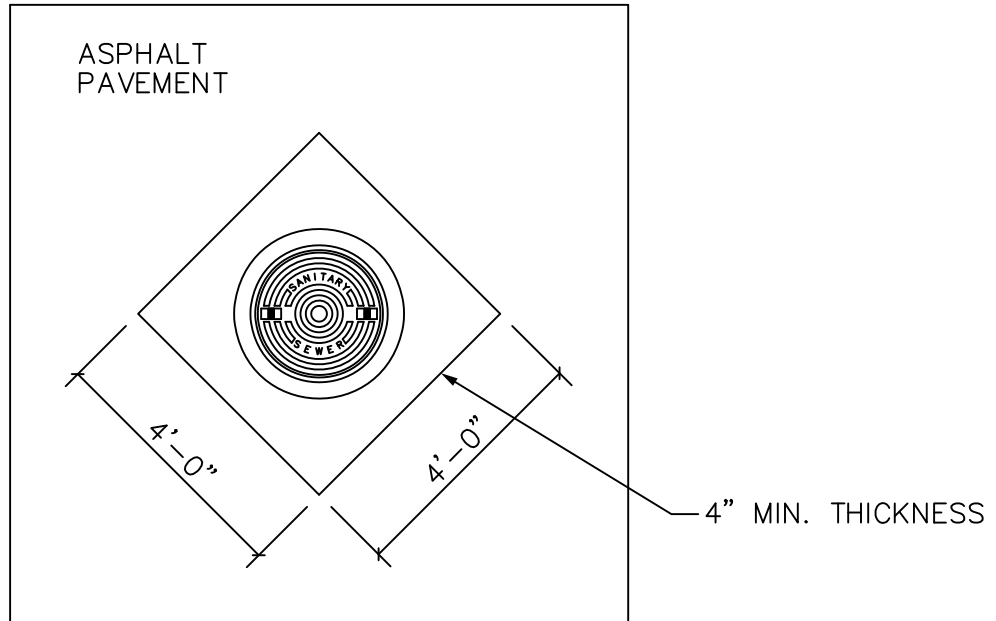
1. REINFORCEMENT SHALL BE #3 BARS @ 18" EACH WAY
2. PROVIDE EXPANSION JOINTS ALSO WHEN CONNECTING TO EXISTING SIDEWALKS, DRIVEWAYS, CURBS AND GUTTER.
3. PROVIDE 5'x5' SIDEWALK PASSING AREAS PER T.A.S. REQUIREMENTS AT REASONABLE INTERVALS NOT TO EXCEED 200' ALONG SIDEWALK.



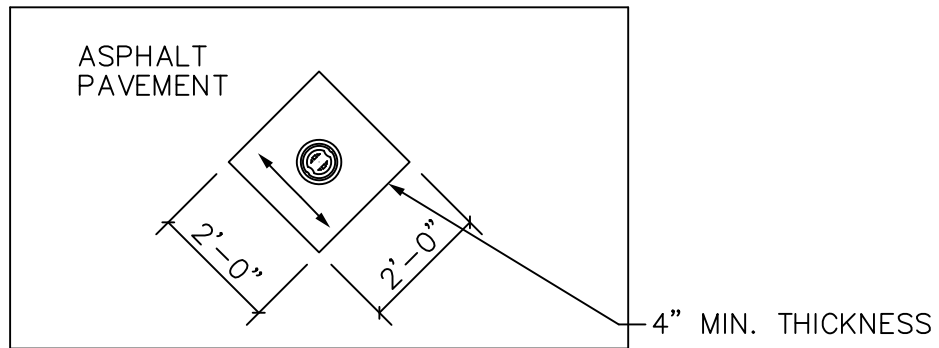
NOTES:

1. ALL CONCRETE PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES.
2. MANHOLE BOXOUT REQUIRED FOR ALL MANHOLES (STORM AND SANITARY) AND CLEANOUTS LOCATED IN THE STREET.
3. SEE SHEET P-3 FOR JOINT DETAILS.
4. SEE SHEET W-3 FOR WATER VALVE DETAIL.
5. SEE SHEET S-8 FOR SANITARY SEWER CLEANOUT DETAIL.

MANHOLE

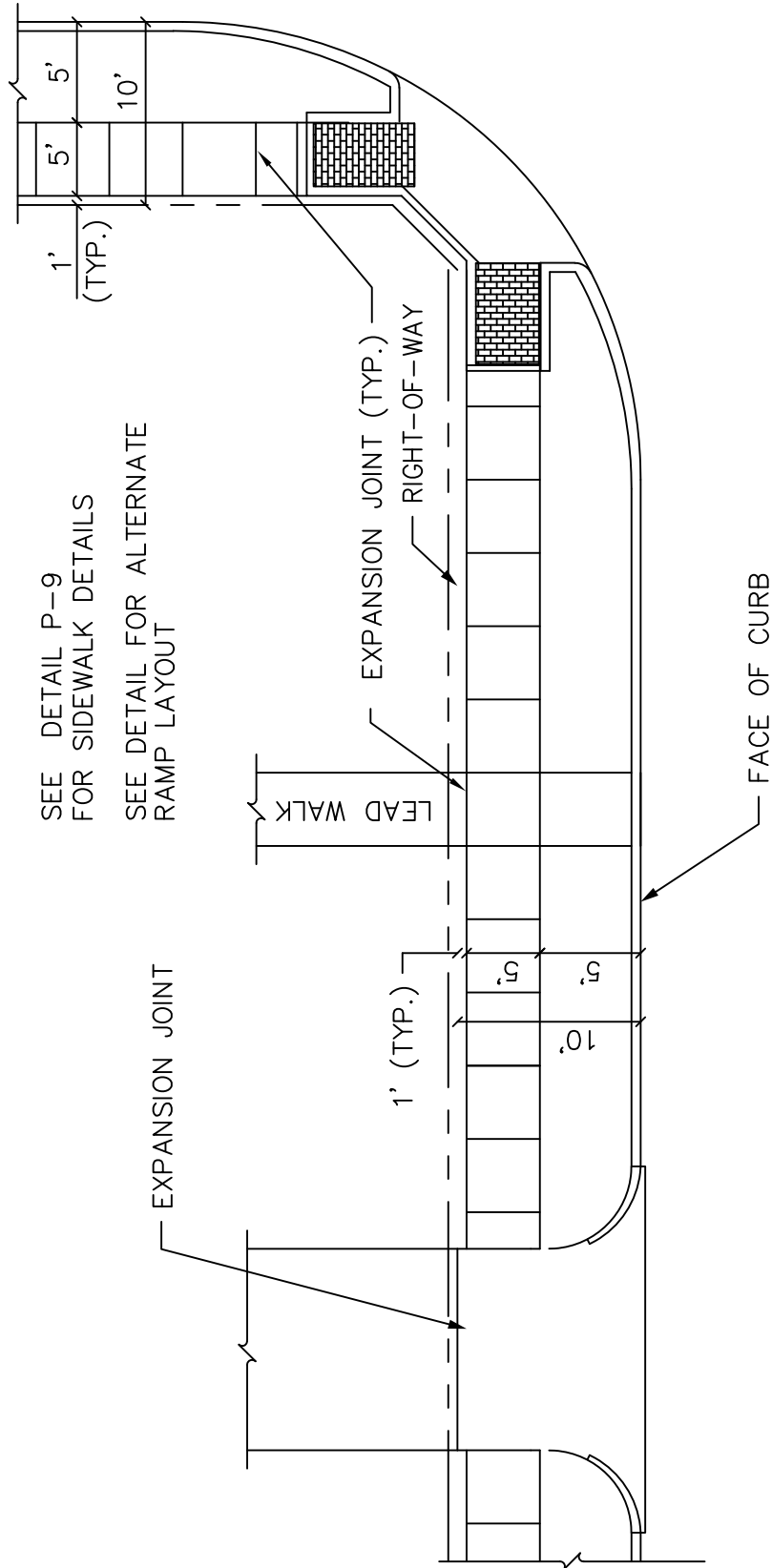


WATER VALVE OR SEWER CLEANOUT



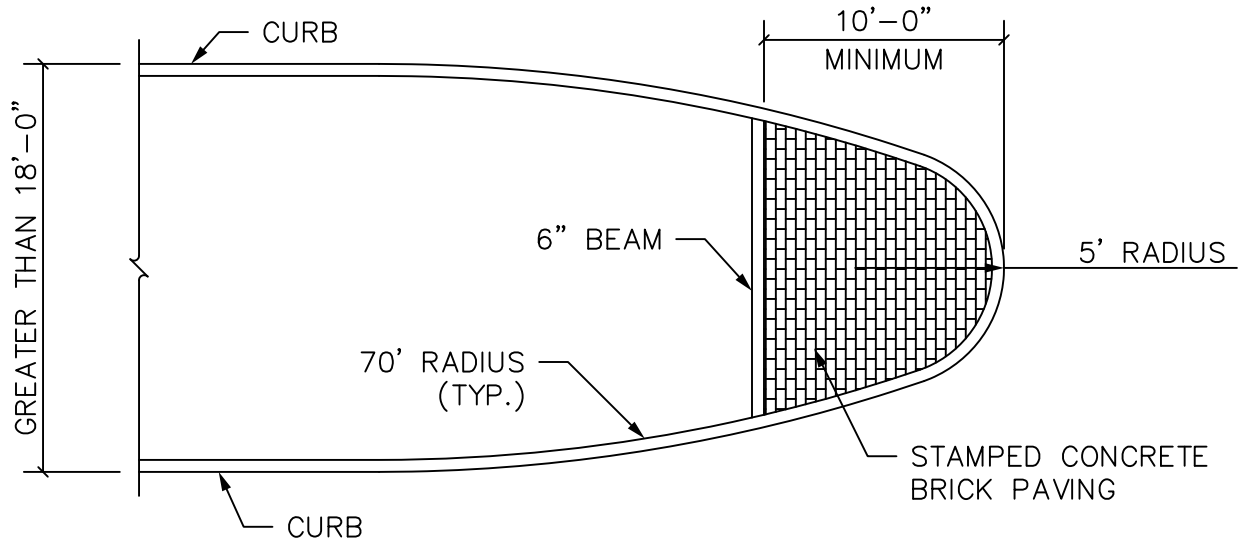
NOTES:

1. ALL ASPHALT PAVEMENT SHALL BE REMOVED ALONG NEAT SAW CUT LINES.
2. MANHOLE BOXOUT REQUIRED FOR ALL MANHOLES (STORM AND SANITARY) AND CLEANOUTS LOCATED IN THE STREET.
3. SEE SHEET P-3 FOR JOINT DETAILS.
4. SEE SHEET W-3 FOR WATER VALVE DETAIL.
5. SEE SHEET S-8 FOR SANITARY SEWER CLEANOUT DETAIL.

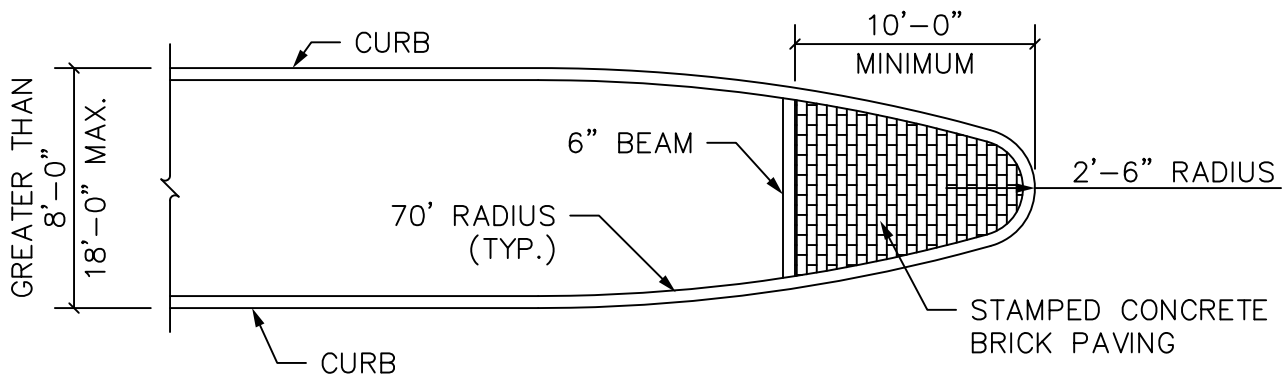


NOTES:

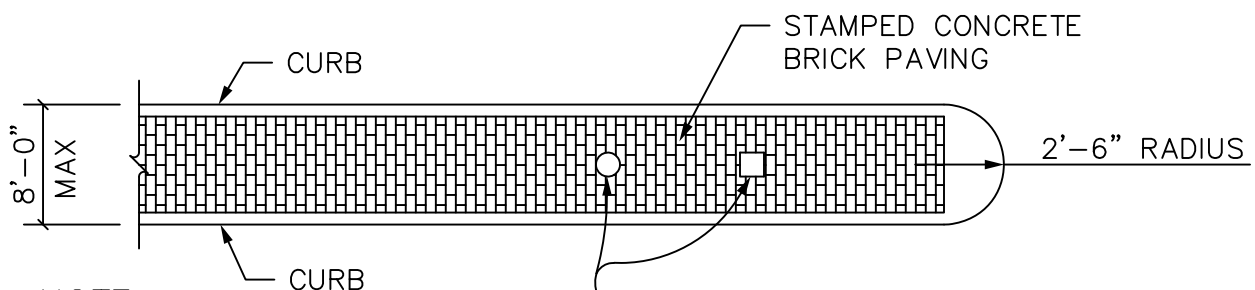
1. REINFORCE ALL SIDEWALKS WITH #3 BARS @ 18" C-C
2. INSTALL #4 X 18" DOWELS @ 18" WHEN CONNECTING TO EXISTING CONCRETE.
3. INSTALL 1/2" ϕ X 18" SMOOTH DOWELS @ 18" (GREASE ONE END) THROUGH EXPANSION JOINTS.
4. CURB AND GUTTER PLACED MONOLITHICALLY WITH PAVEMENT SHALL BE REINFORCED AND JOINTED IN ACCORDANCE WITH PAVEMENT DETAILS.



MEDIAN NOSE TYPE "C"



MEDIAN NOSE TYPE "B"



NOTE:

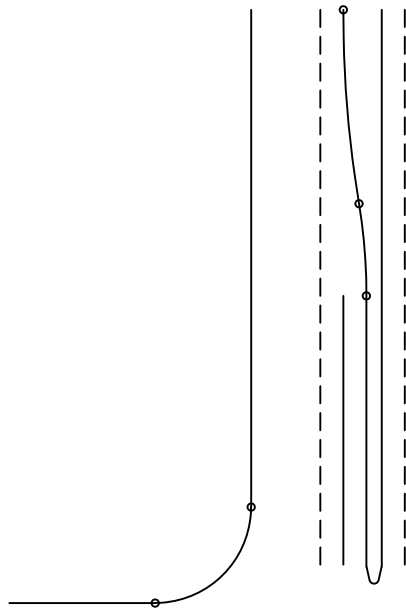
- PAVING IS TO BE EXTENDED TO THE P.R.C. OF THE MEDIAN IN LEFT TURN LANES.

BLOCKOUT MEDIAN PAVING FOR TRAFFIC SIGNAL BASE/FOUNDATION, PULL BOX, OR LUMINARY BASE (IF LOCATIONS ARE KNOWN AND NOT INSTALLED WITH PAVING)

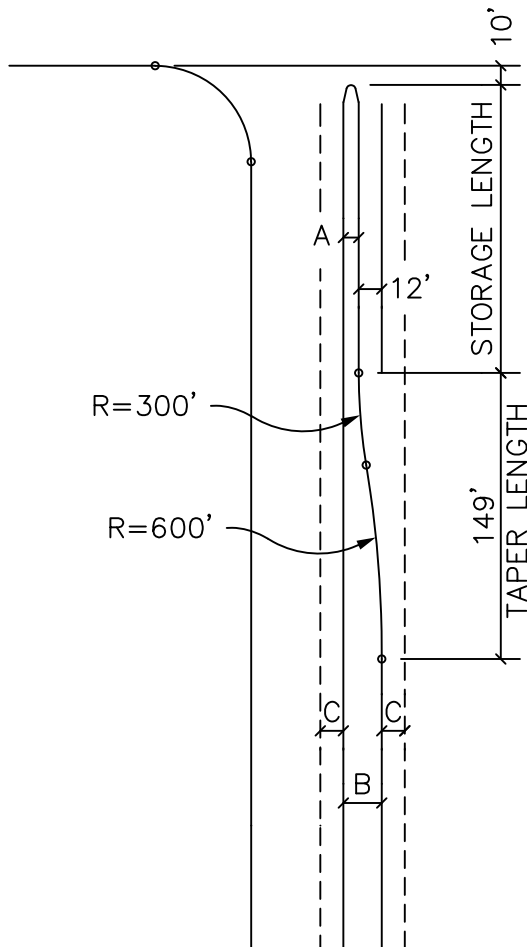
MEDIAN NOSE TYPE "A" (STANDARD LEFT TURN LANE MEDIAN)

NOTES:

1. ONLY MAJOR THOROUGHFARES AND MAJOR COLLECTORS MAY USE MEDIANS FOR LEFT TURN LANES.
2. THE NUMBER OF LANES VARIES BY STREET CLASSIFICATION.
3. MINIMUM REQUIRED STORAGE LENGTH IS BASED ON CROSS STREET CLASSIFICATION.
4. MEDIAN NOSE SHALL BE IN ACCORDANCE WITH MEDIAN NOSE DETAIL SHEET P-12.



CROSS STREET



CROSS STREET

MINIMUM STORAGE LENGTH

MAJOR THOROUGHFARE	200'
MAJOR COLLECTOR	150'
MINOR COLLECTOR	100'
LOCAL	60'

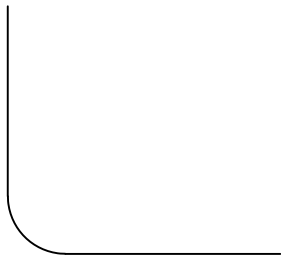


PAVING CONSTRUCTION DETAILS
LEFT TURN LANE IN MEDIAN

REVISED MAY 2019

SCALE: 1" = 100'

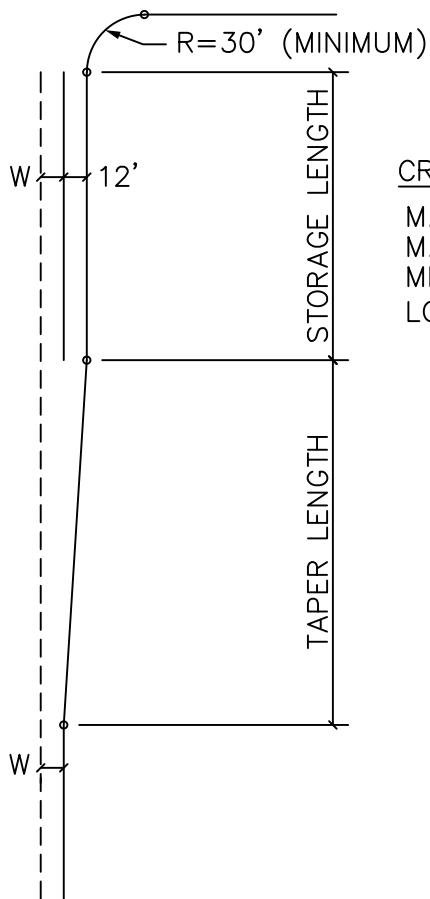
SHEET: P-13



NOTES:

1. THE NUMBER OF ADJACENT LANES VARIES WITH STREET CLASSIFICATION.
2. MINIMUM REQUIRED STORAGE LENGTH IS BASED ON CROSS STREET CLASSIFICATION.

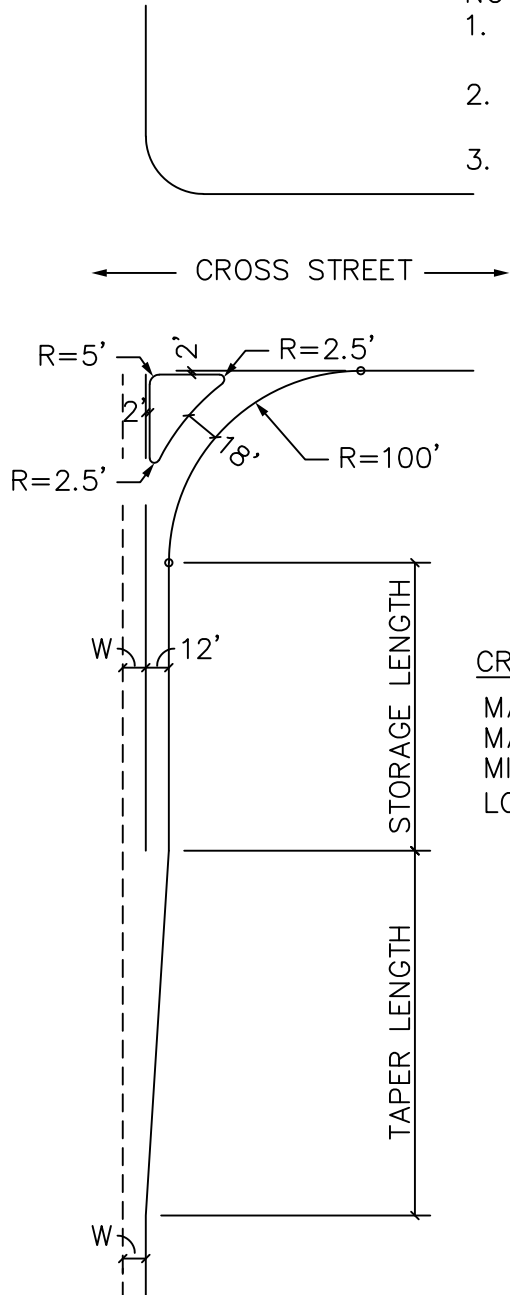
← CROSS STREET →



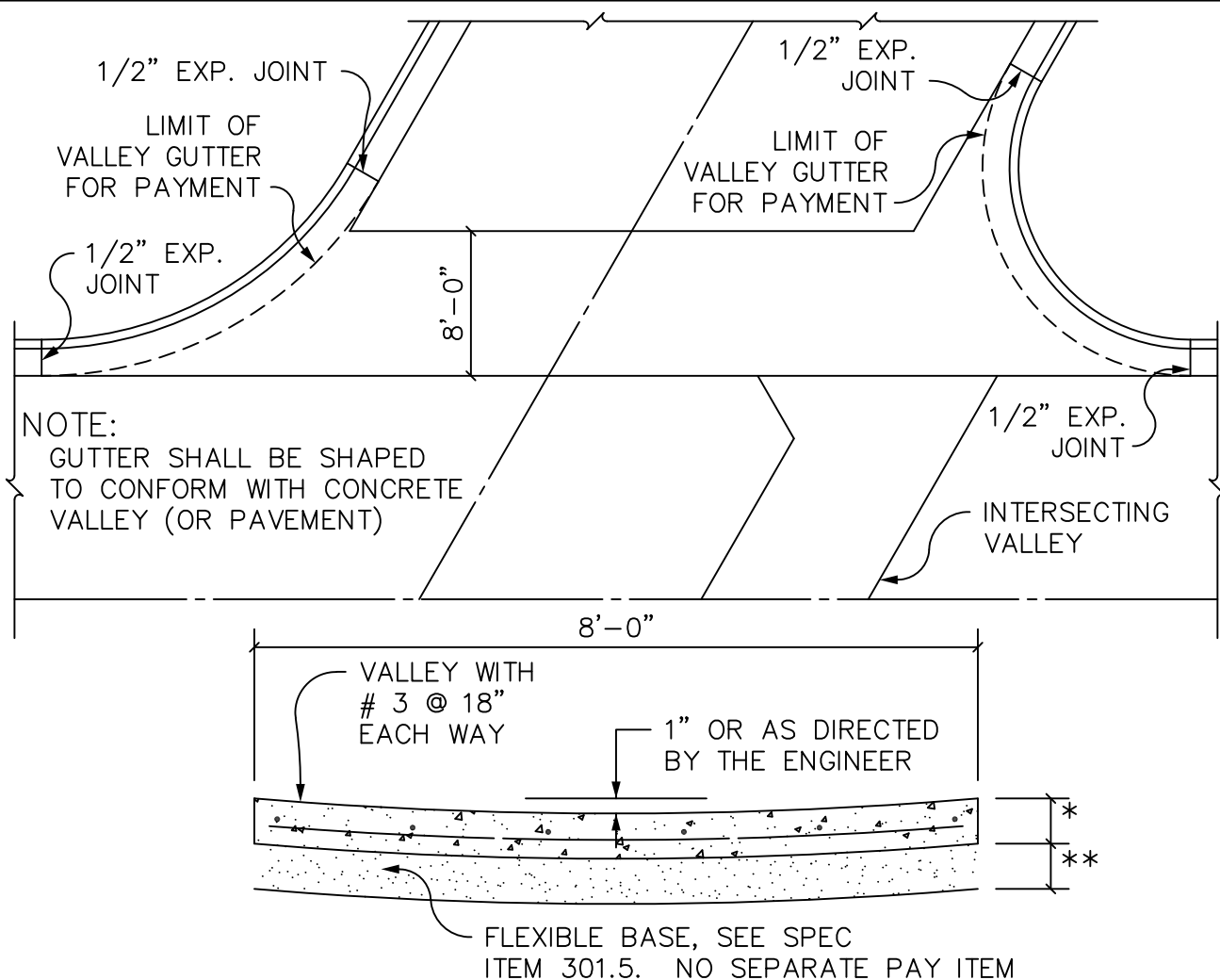
CROSS STREET	MIN. STORAGE LENGTH
MAJOR THOROUGHFARE	200'
MAJOR COLLECTOR	150'
MINOR COLLECTOR	100'
LOCAL	60'

NOTES:

1. ONLY MAJOR THOROUGHFARES AND MAJOR COLLECTORS MAY UTILIZE CHANNELIZED RIGHT TURN LANES.
2. THE NUMBER OF ADJACENT LANES VARIES WITH STREET CLASSIFICATION.
3. MINIMUM REQUIRED STORAGE LENGTH IS BASED ON CROSS STREET CLASSIFICATION.



CROSS STREET	MINIMUM STORAGE LENGTH
MAJOR THOROUGHFARE	200'
MAJOR COLLECTOR	150'
MINOR COLLECTOR	100'
LOCAL	60'



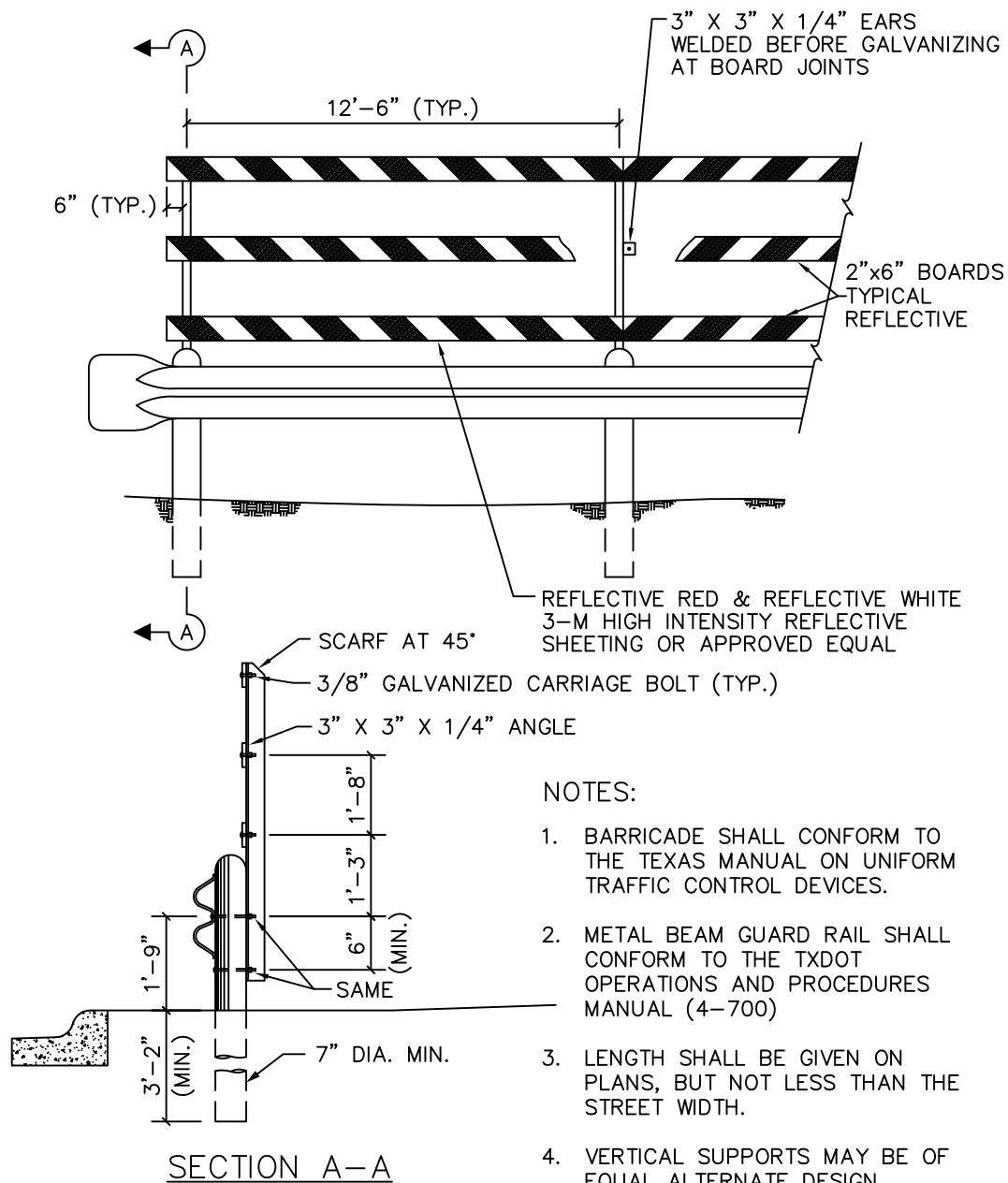
THE REINFORCED CONCRETE VALLEY SHALL REPLACE THE TOP OF THE PAVEMENT WITH THE REMAINING PORTION OF THE PAVEMENT TO BE CONSTRUCTED INCLUDING SUBGRADE TREATMENT, IN ACCORDANCE WITH THE TYPICAL PAVING SECTION. THE CONCRETE VALLEY WILL BE GOVERNED ACCORDING TO CITY STANDARDS FOR CONCRETE CURB AND GUTTER.

TRANSITION SECTION FOR VALLEYS CROSSING MAJOR STREETS	
DIST. FROM CL OF DIP	CROWN
0 FT	0.000 FT
5 FT	0.041 FT
10 FT	0.083 FT
20 FT	0.208 FT
30 FT	0.333 FT
40 FT	0.458 FT
50 FT	0.500 FT

* 6" FOR LOCAL STREETS
7" FOR COLLECTOR STREETS
8" FOR THOROUGHFARE STREETS

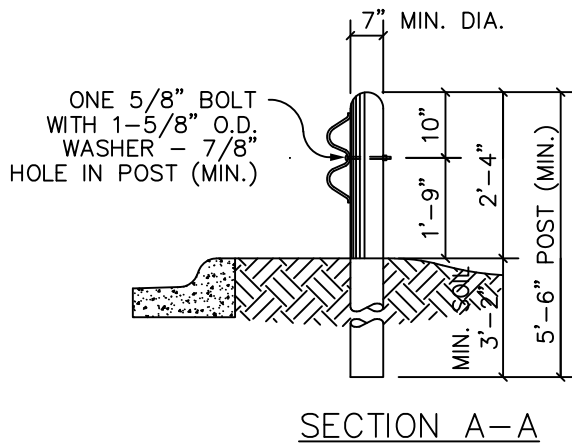
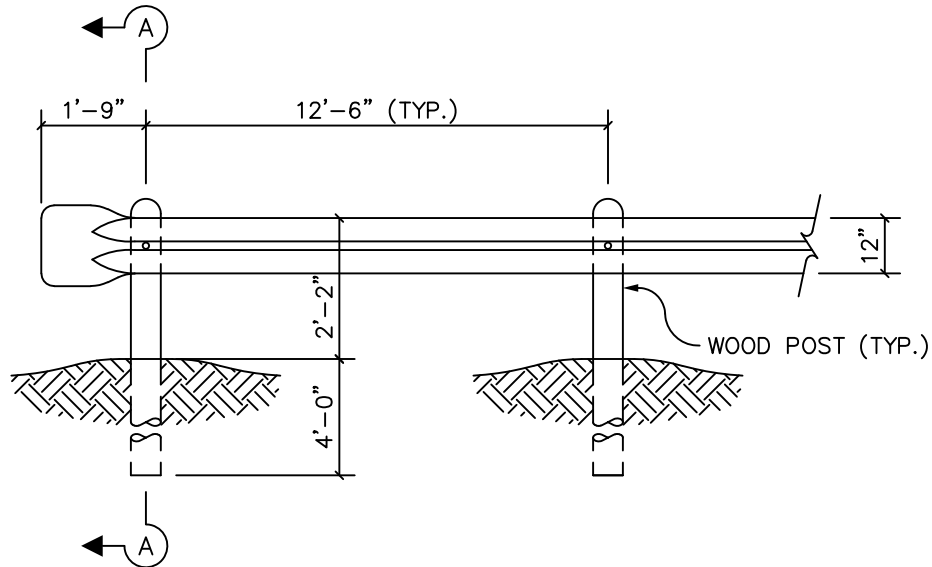
** 8" FOR LOCAL STREETS
8" FOR COLLECTOR STREETS
10" FOR THOROUGHFARE STREETS
OR AS DETERMINED BY
GEOTECHNICAL ENGINEER





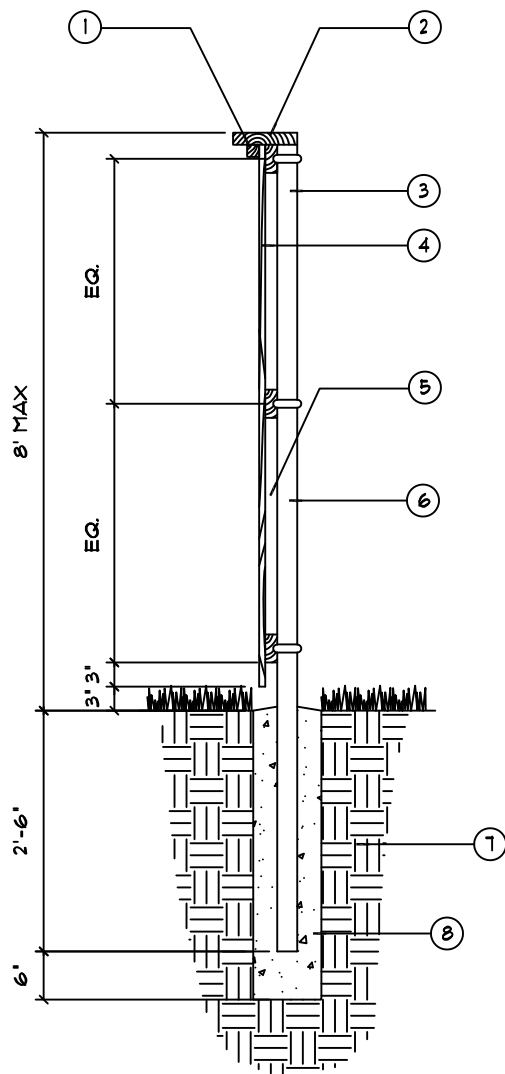
NOTES:

1. BARRICADE SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. METAL BEAM GUARD RAIL SHALL CONFORM TO THE TXDOT OPERATIONS AND PROCEDURES MANUAL (4-700)
3. LENGTH SHALL BE GIVEN ON PLANS, BUT NOT LESS THAN THE STREET WIDTH.
4. VERTICAL SUPPORTS MAY BE OF EQUAL ALTERNATE DESIGN APPROVED BY THE CITY ENGINEER.



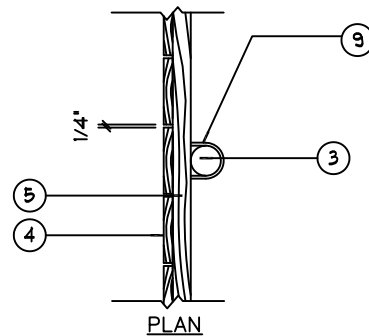
NOTES:

1. METAL BEAM GUARD RAIL SHALL CONFORM TO THE TxDOT OPERATIONS AND PROCEDURES MANUAL (4-700).
2. VERTICAL SUPPORTS MAY BE OF EQUAL ALTERNATE DESIGN APPROVED BY THE CITY ENGINEER.
3. END POST SHALL BE 8" DIA. INTERMEDIATE POST ARE 7" DIA.



NOTES:

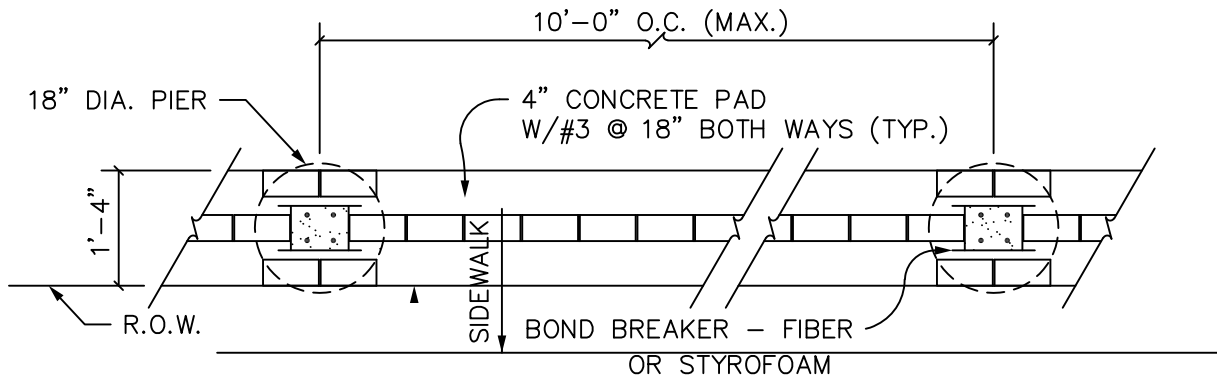
1. FENCE TO BE REDWOOD OR CEDAR
2. HARDWARE TO BE HOT DIPPED GALV.
3. FENCE STAIN TO BE DETERMINED.



- ① 2"x2" TRIM
- ② 2"x8" CAP (TOP OF FENCE TO BE LEVEL)
- ③ 2" DIA. ~ S.S. 20 GALV. POST WITH CAP. POST SHALL BE FLUSH WITH BOTTOM OF 2"x6" CAP.
- ④ 1"x6" PICKET
NOTE: TO BE 3" ABOVE FINISH GRADE TYP.
- ⑤ (3) 2"x4" RAILS.
- ⑥ WACKER CLAMPS WITH COUNTER-SINK NUTS.
- ⑦ COMPACTED SOIL.
- ⑧ 12" DIA. CONCRETE FOOTING.
- ⑨ "U" BOLTS

COLUMN DESIGN:

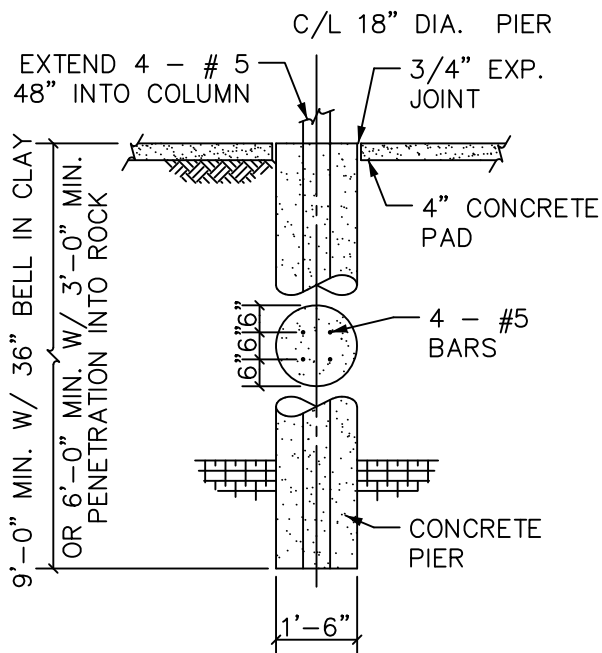
1. BRICK COLUMNS SHALL BE SPACED @ 32' ON CENTER MAX.
2. BRICK COLUMNS SHALL BE PLACED ON 18" DIA. DRILLED PIERS REINFORCED WITH 4-#4 BARS (BARS ARE TO BE CONTINUOUS THROUGH BRICK COLUMN) #2 SPIRAL REINFORCING WITH 12" PITCH (PIERS ONLY).
3. COLUMN CAP SHALL BE PERMANENTLY ATTACHED TO THE BRICK COLUMN BY THE USE OF STANDARD MASONRY ANCHORS.



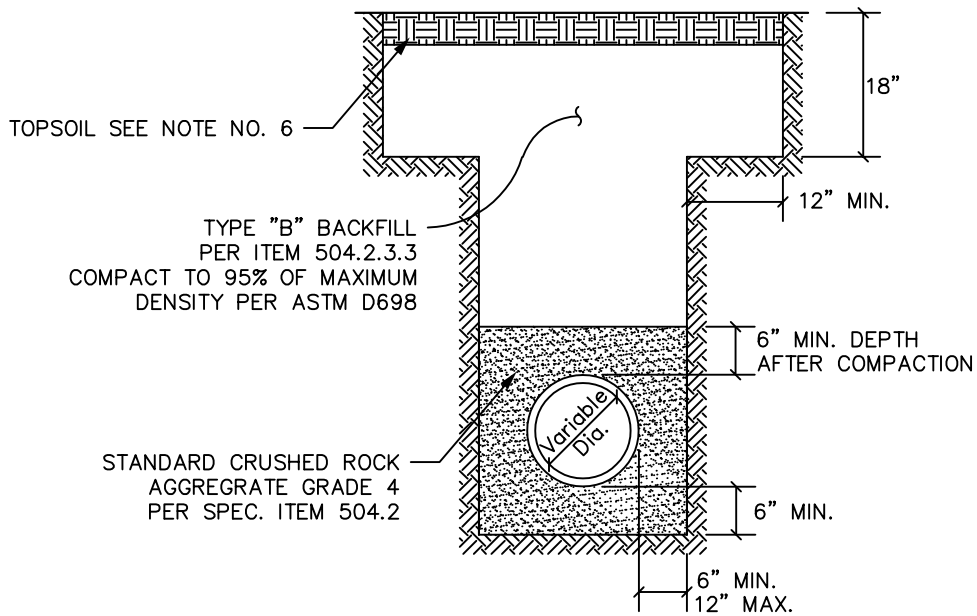
TYPICAL WALL & COLUMN LAYOUT PLAN

GENERAL NOTES:

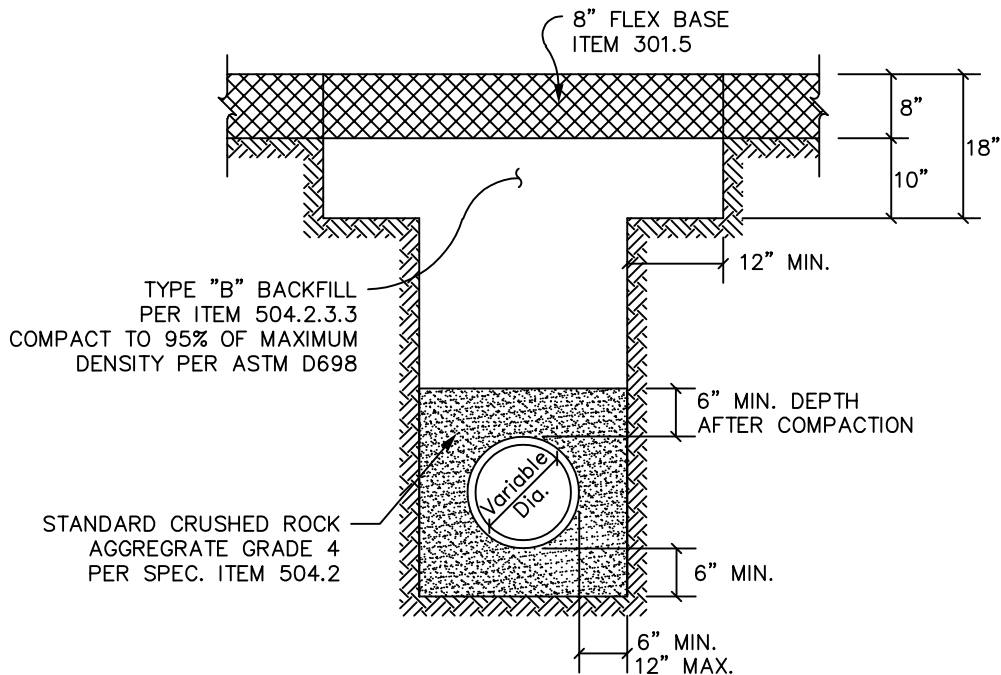
1. CONCRETE SHALL BE CLASS "A" PER ITEM 303.
2. ALL CONCRETE REINFORCING STEEL SHALL BE OF DOMESTIC MANUFACTURE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.
3. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315.
4. COMPLETE PIER INSTALLATION, INCLUDING DRILLING, SETTING REBAR, AND PLACING CONCRETE, WITHIN 8 HOURS.
5. BRICK MASONRY SHALL BE ASTM C216, GRADE SW.
6. MORTAR SHALL BE ASTM C270, TYPE "S".
7. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "RECOMMENDED PRACTICE FOR ENGINEERED BRICK MASONRY" - BRICK INSTITUTE OF AMERICA.
8. ALL MASONRY (WALL & COLUMN) SHALL BE REINF. W/ 9 GAUGE, MILL GALVANIZED, HORIZONTAL WIRE REINF. (TRUSS TYPE) EVERY COURSE.
9. DESIGN WIND PRESSURE - 20 P.S.F.
10. SCREENING WALL DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.



Pier DETAIL



UNPAVED AND FUTURE PAVED AREAS



NOTES:

EXISTING FLEXBASE SURFACE

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY & TxDOT R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC. ITEM 504. ROCKS GREATER THAN 4" IN DIA. SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW-CUT LINES PER SPEC. ITEM 402.3.
4. A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.
5. IN SANDY SOILS THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.
6. TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION.

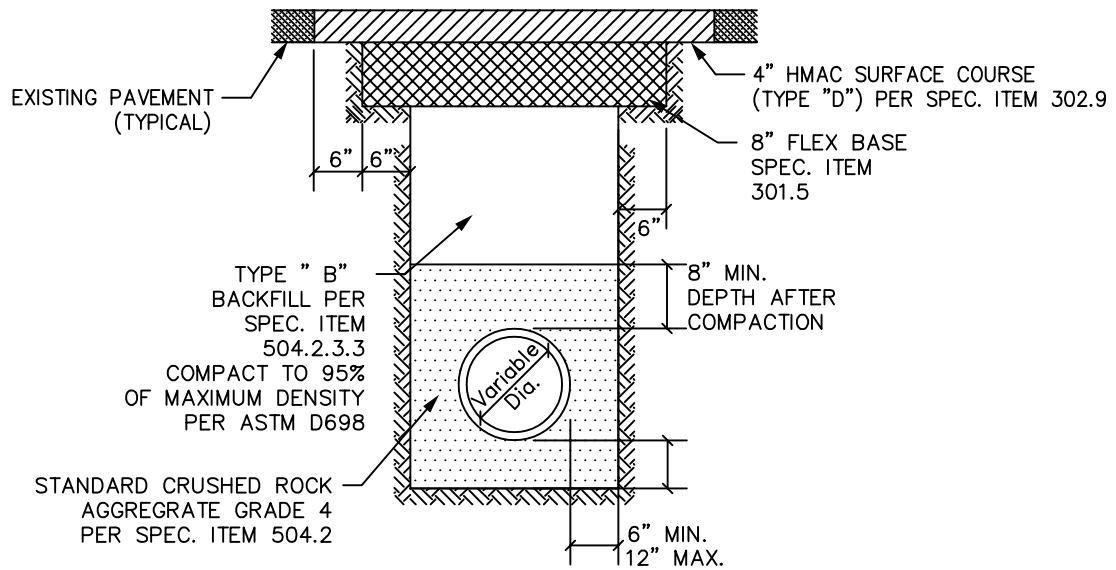


DRAINAGE SYSTEM CONSTRUCTION DETAILS STORM SEWER EMBEDMENT & BACKFILL

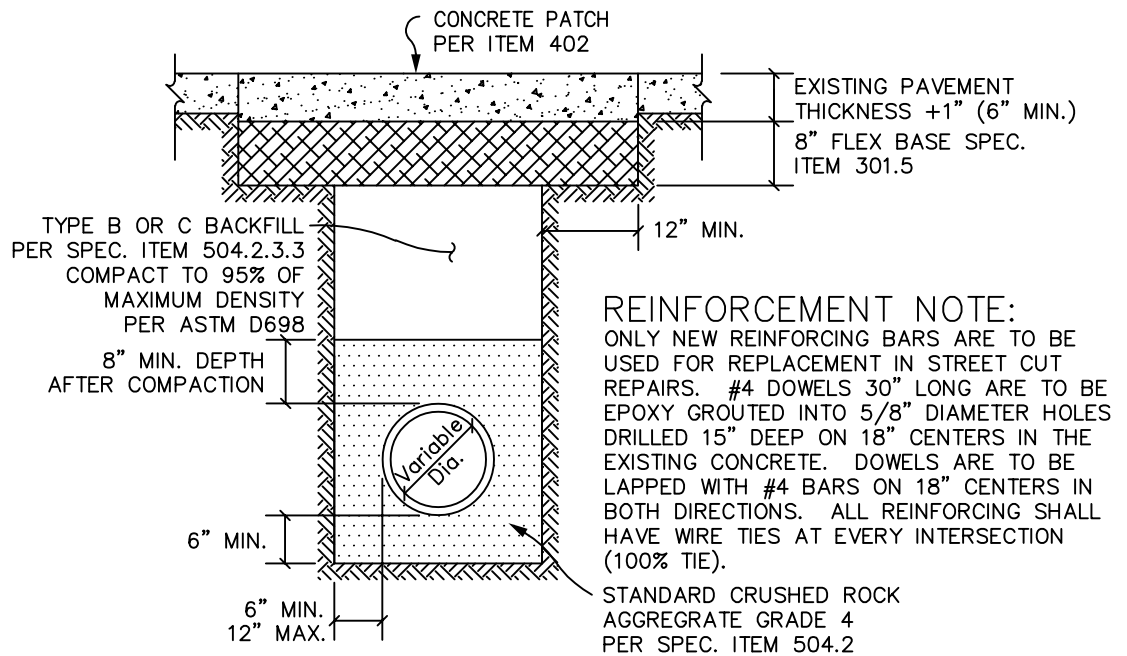
REVISED MAY 2019

SCALE: 1" = 2'

SHEET: D-1



EXISTING ASPHALT PAVEMENT



EXISTING CONCRETE PAVEMENT

NOTES:

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY & TxDOT R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC. ITEM 504. ROCKS GREATER THAN 4" IN DIA. SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW-CUT LINES PER SPEC. ITEM 402.3.
4. A MAXIMUM OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.
5. IN SANDY SOILS THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.

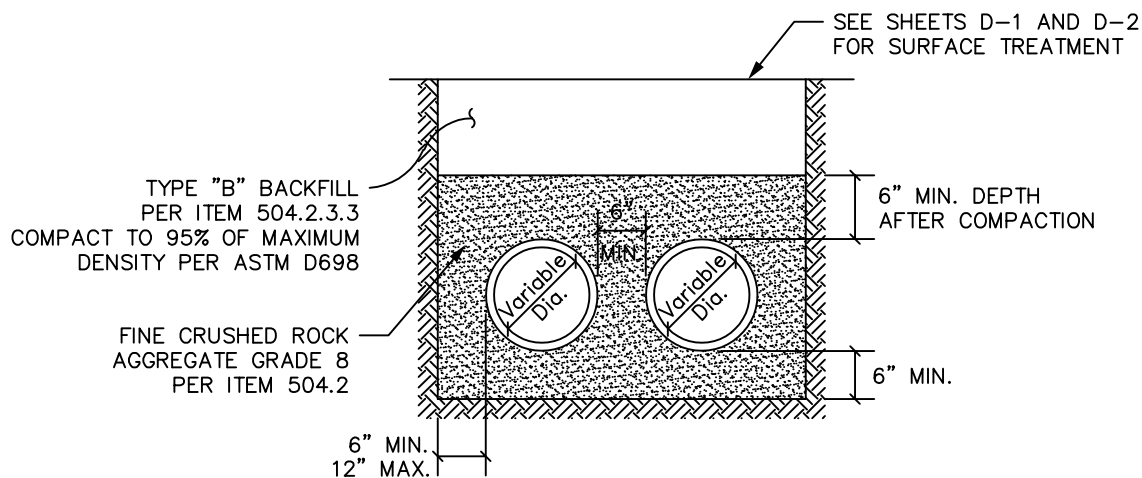


DRAINAGE SYSTEM CONSTRUCTION DETAILS STORM SEWER EMBEDMENT & BACKFILL

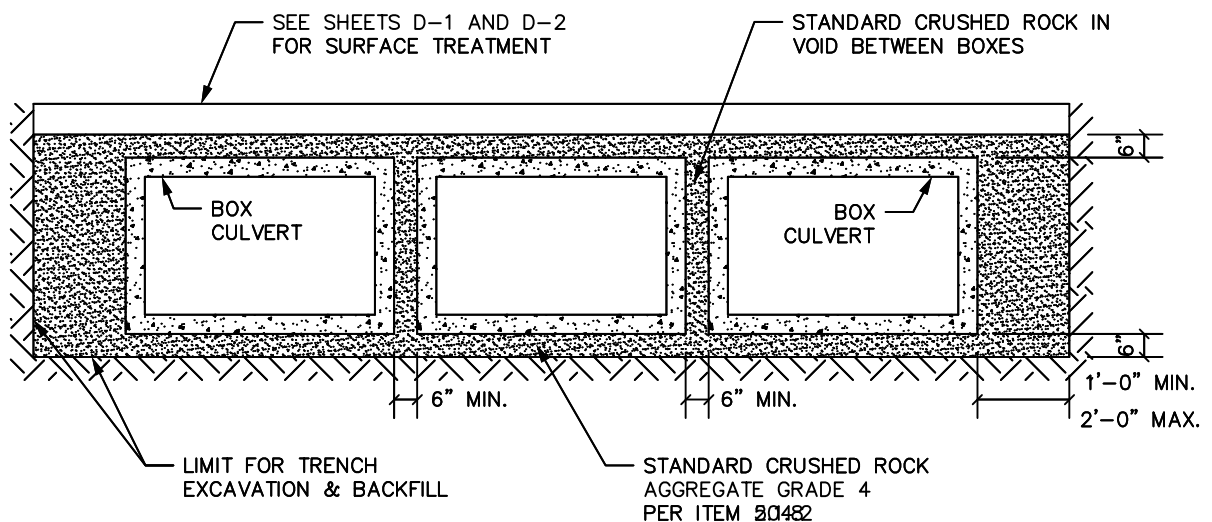
REVISED MAY 2019

SCALE: 1" = 2'

SHEET: D-2



MULTIPLE PIPE EMBEDMENT



MULTIPLE BOX EMBEDMENT

NOTES:

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY & TxDOT R.O.W. UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC. ITEM 504 AND SHALL BE COMPACTED PER SPEC. ITEM 504. ROCKS GREATER THAN 4" IN DIA. SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW-CUT LINES PER SPEC. ITEM 402.3.
4. A MAX. OF 200 FT. OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.
5. IN SANDY SOILS THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.
6. TOPSOIL SHALL BE 4 INCHES IN DEPTH AND SHALL BE LOOSE AND FREE OF ROCKS OR CLODS GREATER THAN 1/4" IN DIAMETER. ALL TOPSOIL SHALL BE APPROVED BY THE OWNER PRIOR TO INSTALLATION.

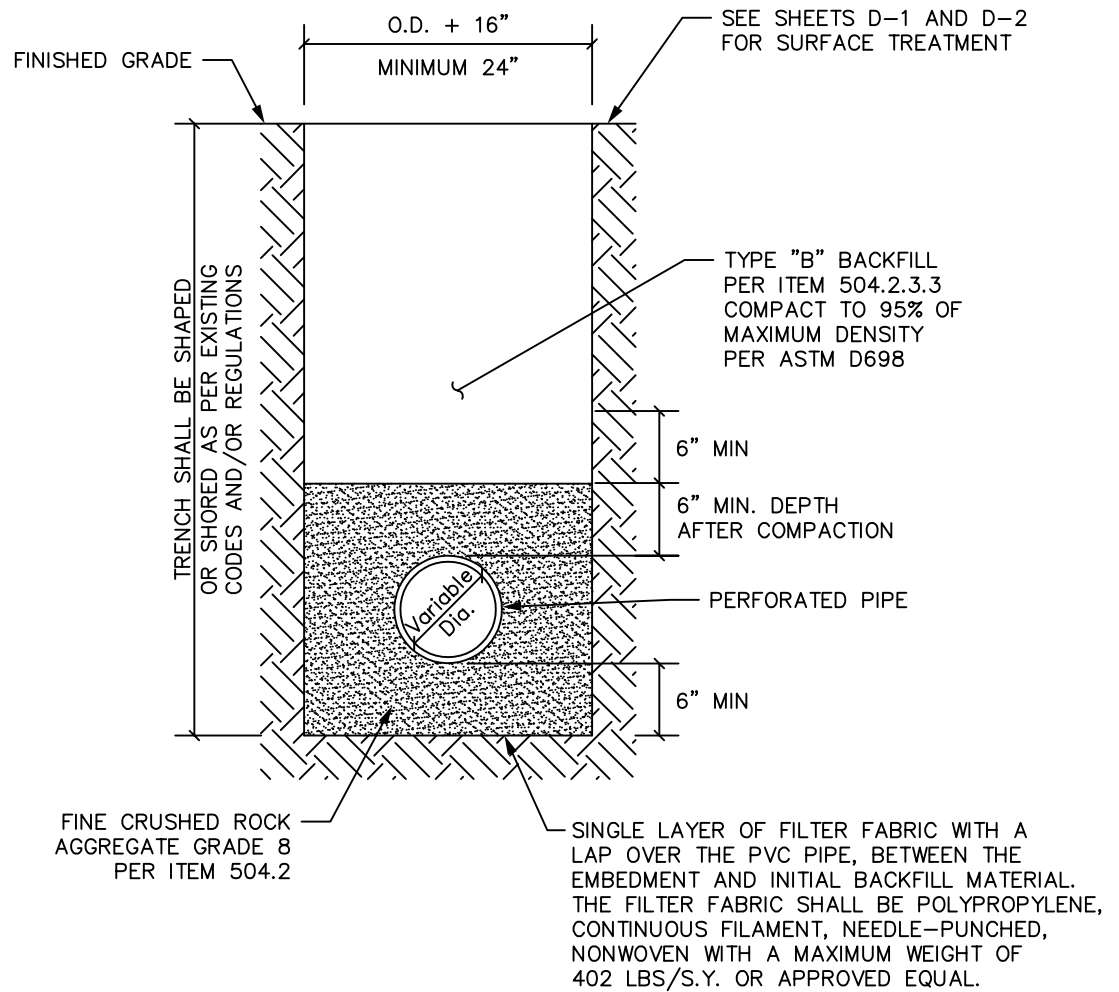


DRAINAGE SYSTEM CONSTRUCTION DETAILS STORM SEWER EMBEDMENT & BACKFILL

REVISED MAY 2019

SCALE: 1" = 2'

SHEET: D-3



NOTES:

1. WHERE THE CONTRACTOR ENCOUNTERS UNDERGROUND WATER, A SUBSURFACE DRAINAGE SYSTEM SHALL BE INSTALLED, WITH THE DISCHARGE OF SAID SYSTEM BEING CARRIED TO THE NEAREST STORM DRAIN SYSTEM OR NATURAL WATER SHED SYSTEM.
2. THE SUBSURFACE DRAINAGE SYSTEM SHALL BE CONSTRUCTED WITH A MINIMUM SIZE OF SIX (6) INCH DIAMETER TYPE PS-46 PVC PIPE, OR APPROVED EQUAL. THE PIPE SHALL MEET ALL CURRENT ASTM F758 REQUIREMENTS, AND SHALL HAVE GASKET TYPE JOINTS. THE PERFORATED AND CONDUCTING PIPES SHALL BE WHITE IN COLOR.
3. IN SANDY SOILS THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.
4. CLEANOUTS SHALL BE INSTALLED AT THE END OF EACH PIPING SYSTEM.
5. FRENCH DRAINS SHALL BE SHOWN ON ALL RECORD DRAWINGS.



DRAINAGE SYSTEM CONSTRUCTION DETAILS STORM SEWER SUBSURFACE DRAIN

REVISED MAY 2019

SCALE: 3/4" = 1'

SHEET: D-4

GENERAL NOTES:

1. IN GENERAL, INLET REINFORCING STEEL SHALL BE #4 BARS ON 12" CENTERS BOTH WAYS FOR GUTTER, BOTTOM SLAB ENDS, FRONT AND BACK WALLS, AND #4 BARS ON 6" CENTERS BOTH WAYS FOR TOP SLAB. AN ADDITIONAL #6 BAR SHALL BE PLACED IN THE FRONT EDGE OF THE TOP SLAB IN THE INLETS AND ADDITIONAL REINFORCING STEEL SHALL BE PLACED AROUND MANHOLES AS SHOWN.
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. ALL CONCRETE SHALL BE CLASS "A" PER ITEM 303. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
4. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" TO THE CENTERS OF THE BARS.
5. 10'-0" OF EXISTING CURB AND GUTTER UPSTREAM AND 10'-0" OF EXISTING CURB AND GUTTER DOWNSTREAM SHALL BE REMOVED AND REPOURED INTEGRALLY WITH EACH INLET.
6. ALL BACK FILLING SHALL BE IN ACCORDANCE WITH ITEM 504 TO 95% STANDARD PROCTOR DENSITY.
7. CENTER BEAM IS REQUIRED FOR ALL INLET OPENINGS GREATER THAN 10'-0".
8. TWO MANHOLE FRAMES AND COVERS ARE REQUIRED WHEN INLET OPENING IS GREATER THAN 10'-0".
9. ALL INLET FLOORS ARE TO HAVE A 2% SLOPE TOWARDS THE OUTLET PIPE.
10. MINIMUM INLET OPENING SIZE IS 5'-0".
11. MAXIMUM INLET OPENING SIZE IS 20'-0".
12. OUTLET PIPE TO BE PLACED AT LOWEST END OF FLOOR INLET. MANHOLE COVER TO BE PLACED ABOVE OUTLET END OF INLET.
13. MANHOLE FRAME AND COVER SHALL BE CAST IRON, VULCAN V-1874 OR BASS AND HAYES PATTERN 103 OR APPROVED EQUAL.
14. MANHOLE COVERS SHALL HAVE CHAINS ATTACHED TO PREVENT COVERS FROM BEING WASHED AWAY DURING FLOOD CONDITIONS.

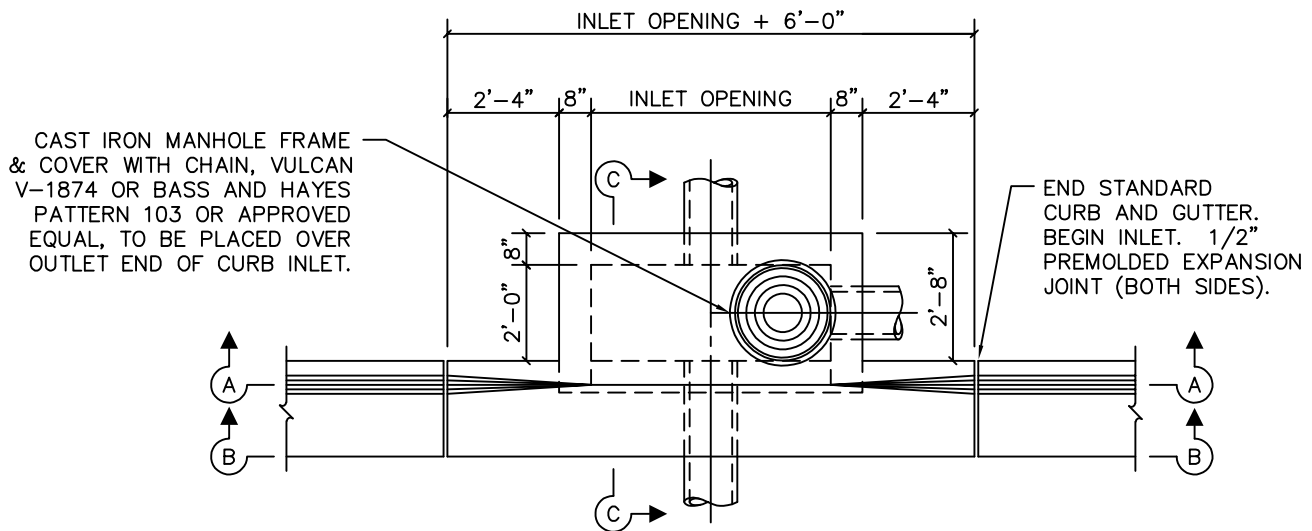


DRAINAGE SYSTEM CONSTRUCTION DETAILS STORM SEWER INLET GENERAL NOTES

REVISED MAY 2019

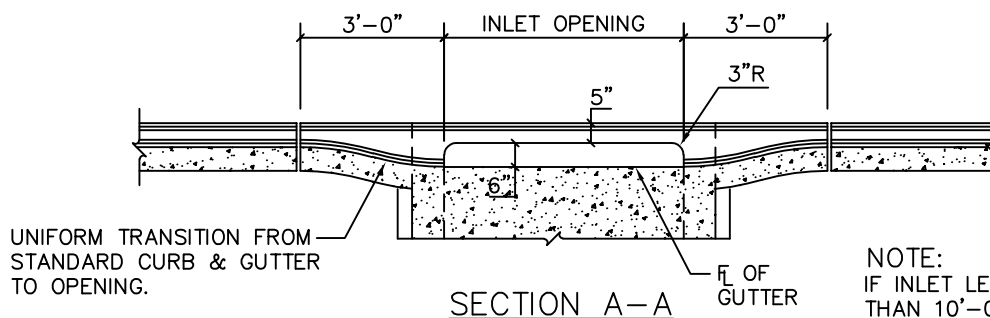
SCALE: N/A

SHEET: D-5



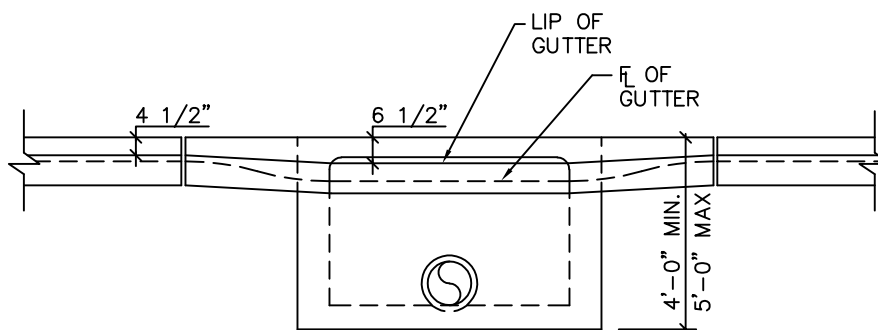
SEE SHEET D-8 FOR SECTION C-C

PLAN VIEW



SECTION A-A

NOTE:
IF INLET LENGTH IS GREATER THAN 10'-0", PLACE TWO (2) MANHOLE FRAMES AND COVERS ON TOP OF INLET BOX.



SECTION B-B

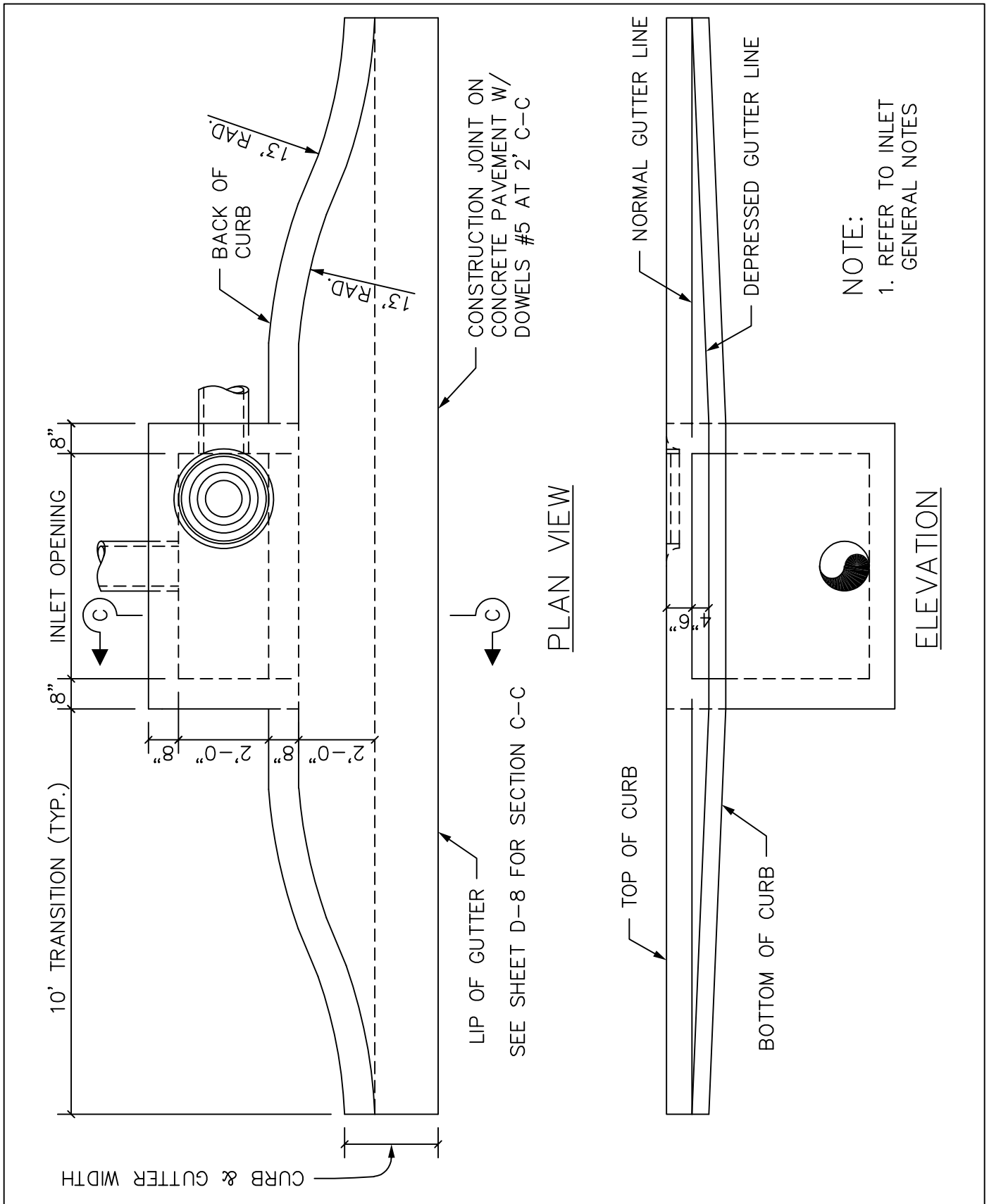


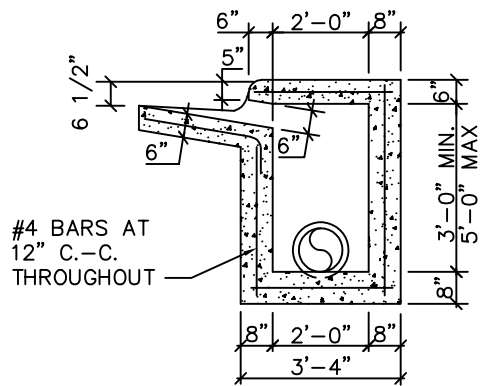
DRAINAGE SYSTEM CONSTRUCTION DETAILS
STORM SEWER CURB INLET

REVISED MAY 2019

SCALE: 1/4" = 1'

SHEET: D-6

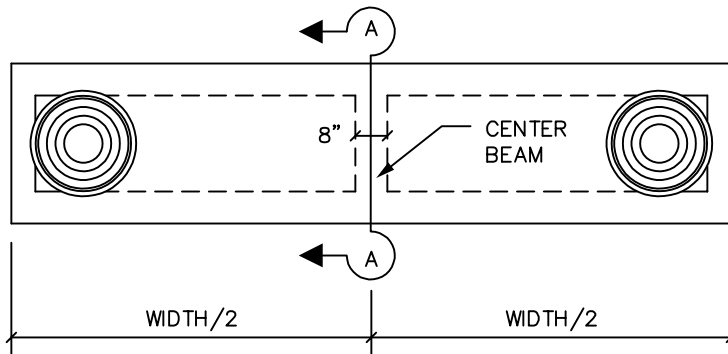




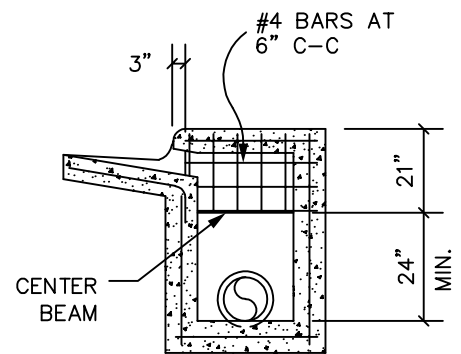
SECTION C-C

NOTE

SEE SHEET D-5 FOR GENERAL INLET INFORMATION

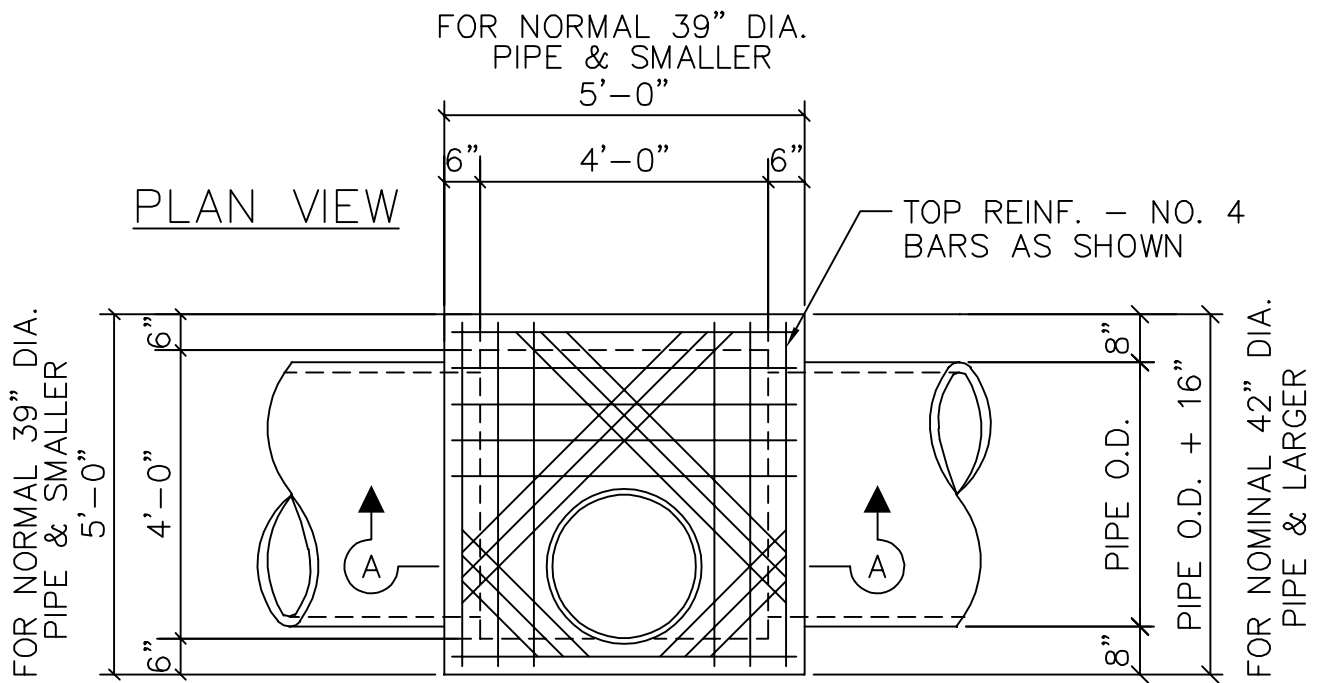


PLAN VIEW



SECTION A-A

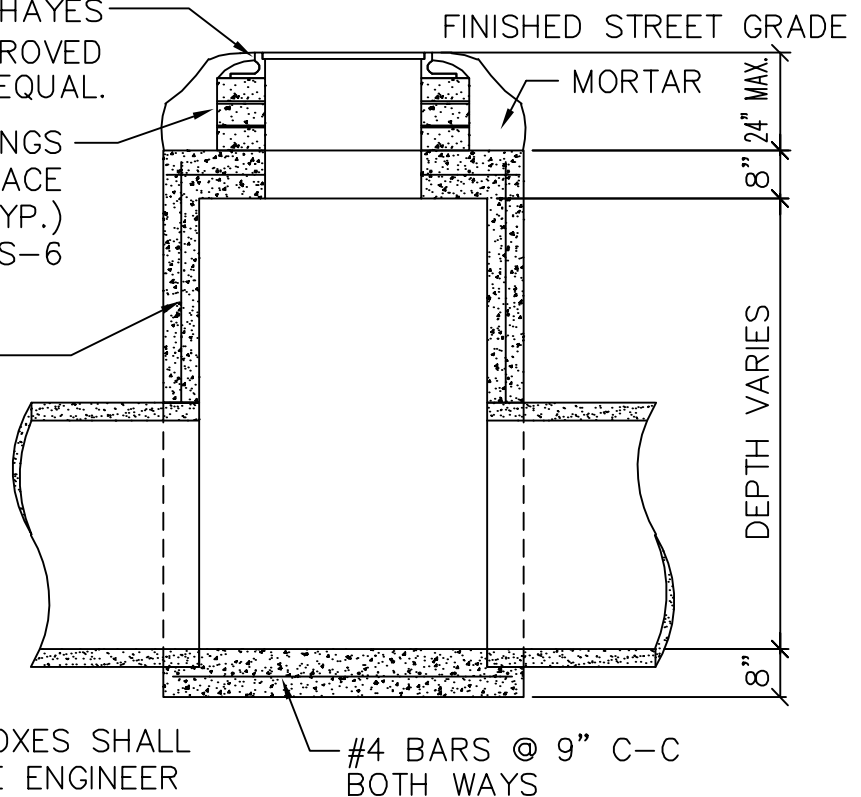
CENTER BEAM DETAIL



MANHOLE FRAME AND COVER SHALL BE CAST IRON VULCAN V-1874 OR BASS AND HAYES PATTERN 103 OR APPROVED EQUAL.

CONCRETE EXTENSION RINGS PRECAST OR CAST IN PLACE (8" WIDTH TYP.) SEE SHEET S-6

#4 BARS @ 9" C-C BOTH WAYS



NOTES:

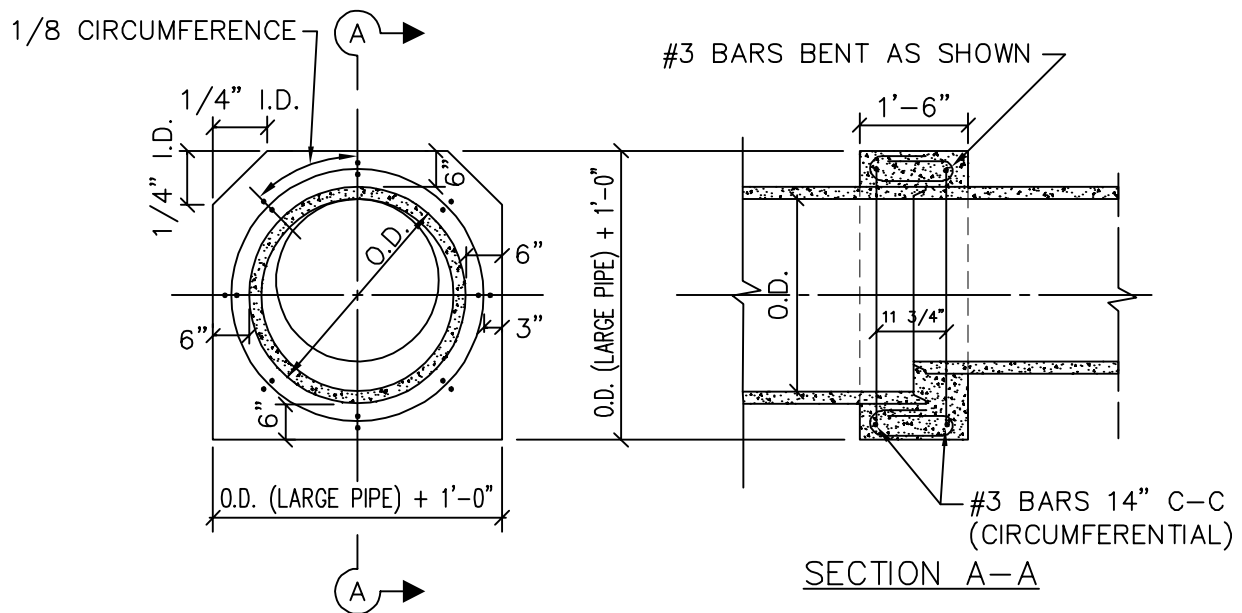
1. LARGER JUNCTION BOXES SHALL BE DESIGNED BY THE ENGINEER AND SUBMITTED TO THE CITY ENGINEER FOR REVIEW.

SECTION A-A



DRAINAGE SYSTEM CONSTRUCTION DETAILS
STORM SEWER MANHOLE

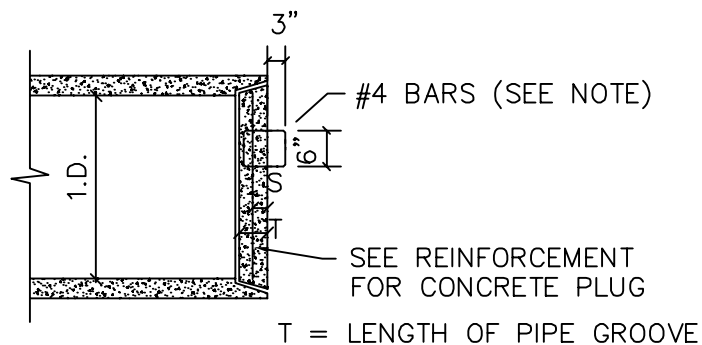
REVISED MAY 2019
SCALE: 3/8" = 1'
SHEET: D-10



REINFORCED CONCRETE COLLAR

NOTE:

COLLARS MAY ONLY BE USED TO REDUCE THE DIAMETER ONE PIPE SIZE.
A JUNCTION BOX IS REQUIRED FOR REDUCING MORE THAN ONE PIPE SIZE.



REINFORCED CONCRETE PIPE PLUG

PIPE SIZE	REINF. BAR	DISTANCE C-C BOTH WAYS	S
18"-33"	# 2	12"	1/2 T
36"-54"	# 3	12"	1/3 T
60"	# 4	12"	1/4 T

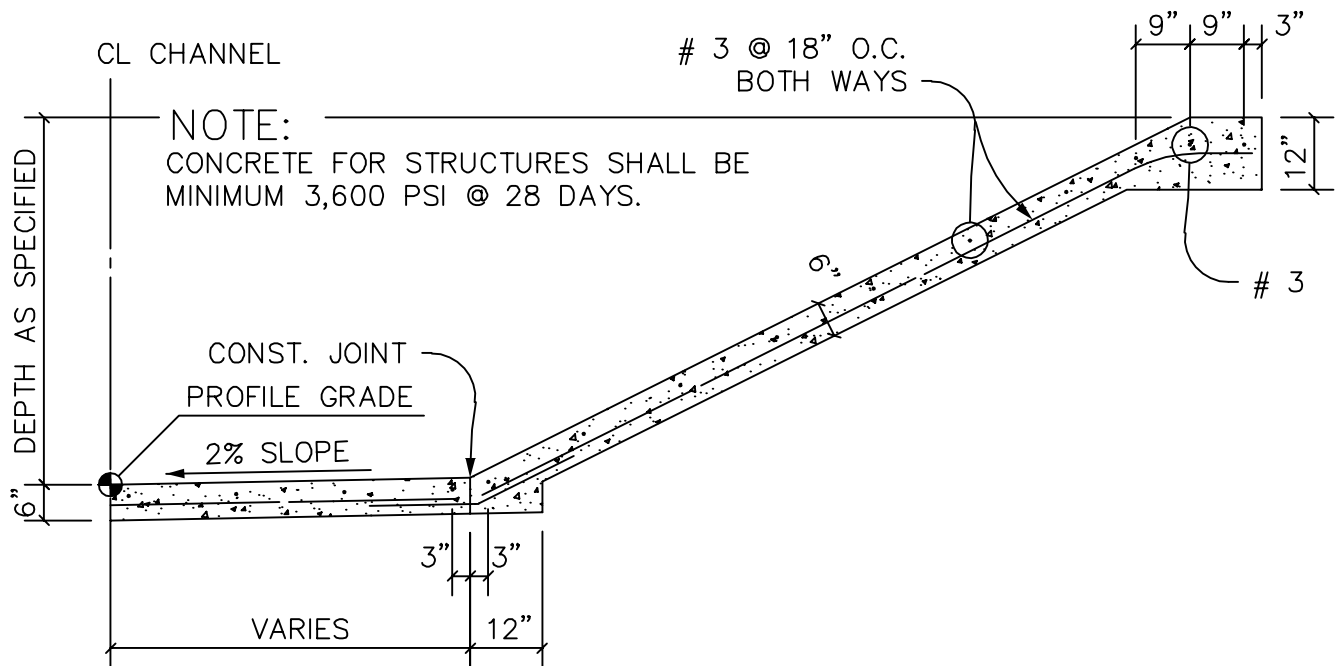
NOTE:

STEEL HANDLE FOR REINFORCED CONCRETE PIPE PLUG SHALL BE LOCATED 1/4 I.D. ABOVE CENTER POINT OF PLUG. TWO (2) STEEL HANDLES WILL BE REQUIRED ON PLUGS OF 36" DIA. PIPES OR LARGER AND SHALL BE PLACED 1/4 I.D. APART AND 1/4 I.D. ABOVE CENTER OF PLUG.



DRAINAGE SYSTEM CONSTRUCTION DETAILS
STORM SEWER REINFORCED
CONCRETE COLLAR

REVISED MAY 2019
SCALE: 3/8" = 1'
SHEET: D-11

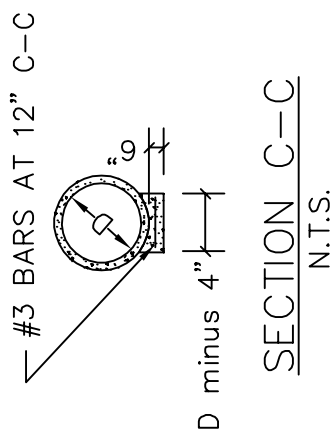
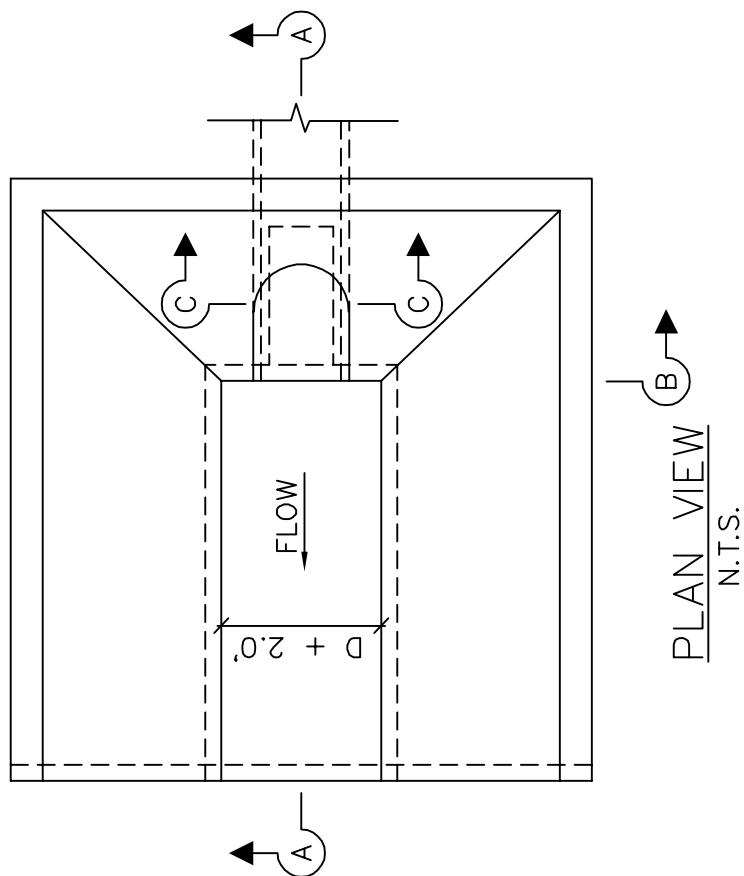


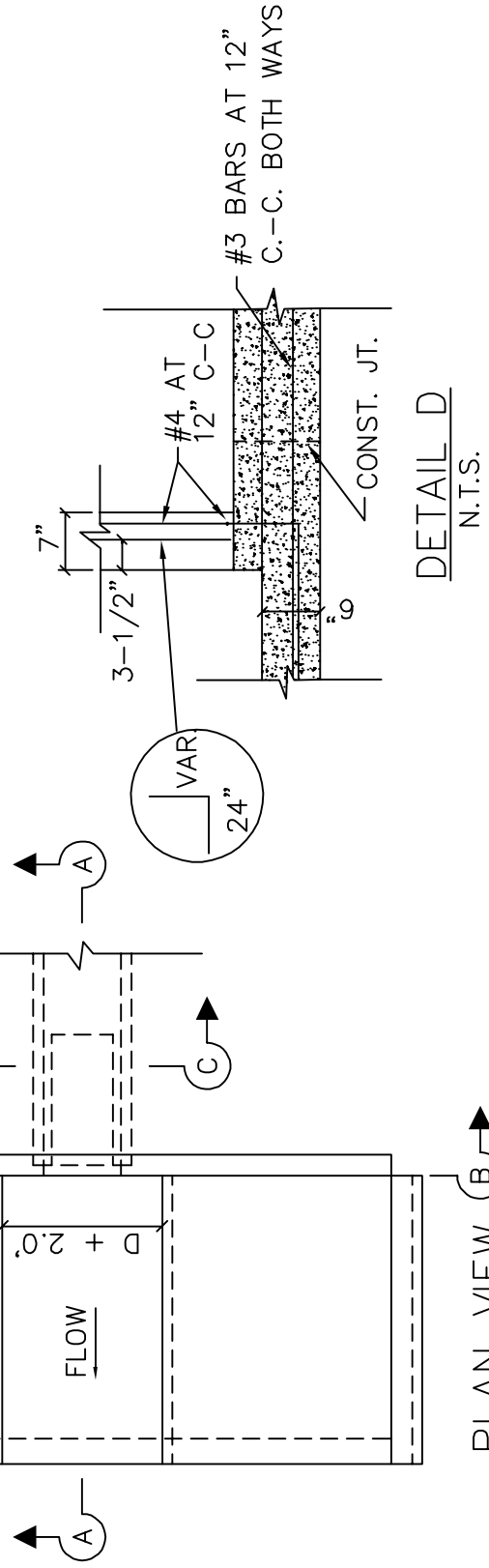
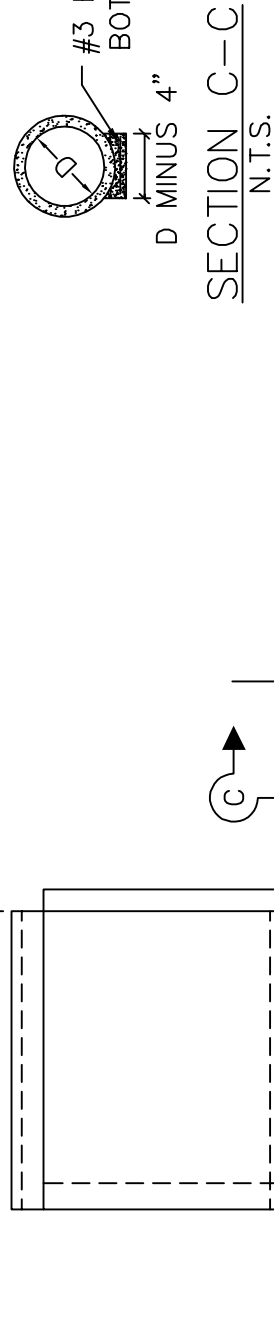
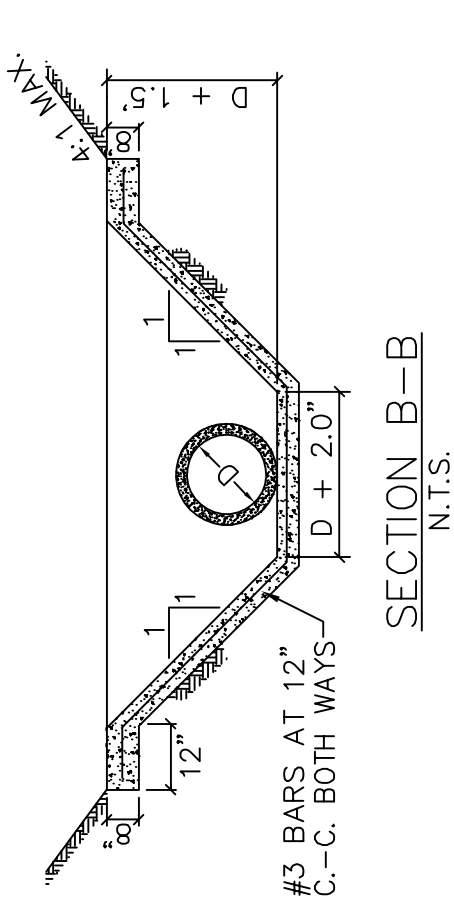
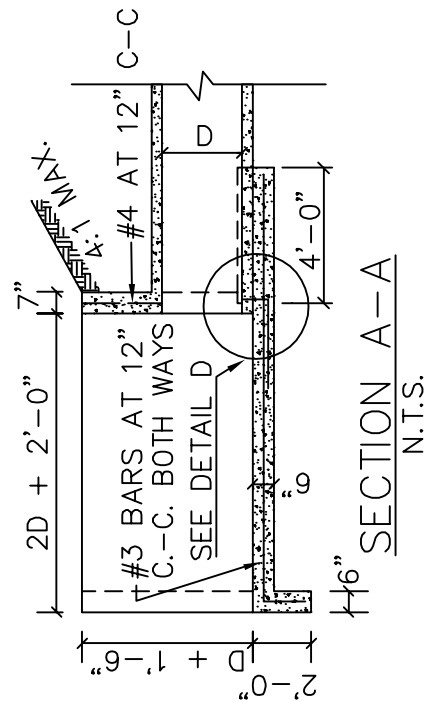
NOTE:
RIPRAP TO BE FORMED ON UNDISTURBED
SOIL CUT TO GRADE. IF TO BE PLACED ON
FILL, ALL FILL SHALL BE PLACED ON BENCHES
CUT IN UNDISTURBED SOIL AND FILLED IN
8" LOOSE LIFTS, EACH COMPACTED TO 95%
STANDARD PROCTOR DENSITY. THE FILL SO
COMPACTED SHALL THEN BE CUT TO GRADE.



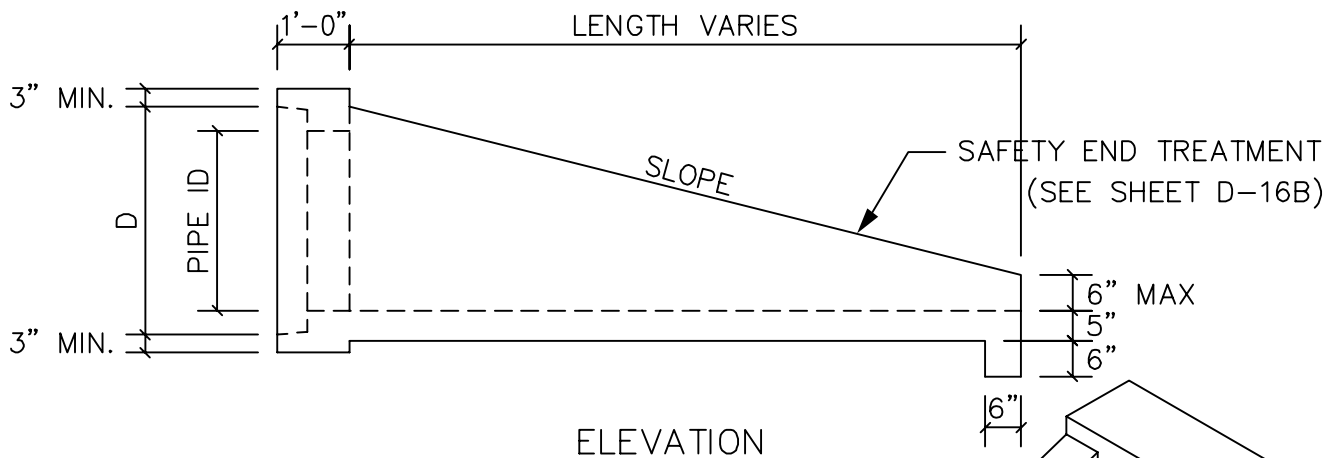
DRAINAGE SYSTEM CONSTRUCTION DETAILS
STORM SEWER CONCRETE RIPRAP

REVISED MAY 2019
SCALE: 3/8" = 1'
SHEET: D-13



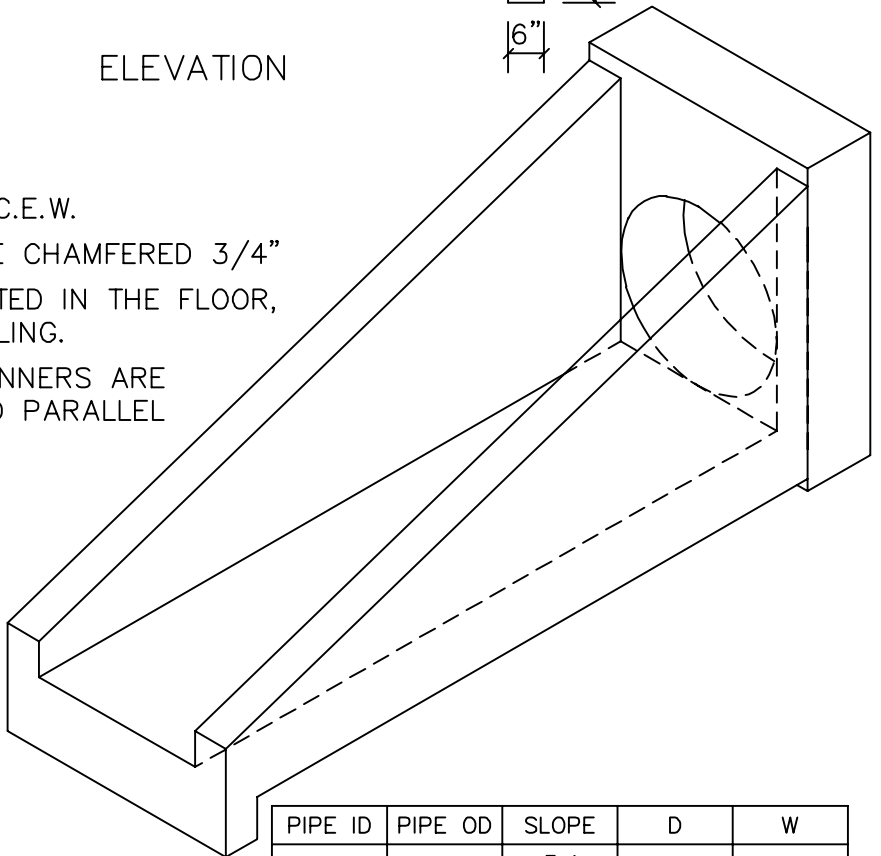
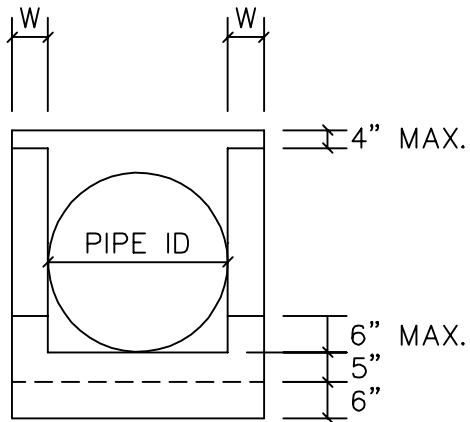


DETAIL D
N.T.S.



NOTES:

1. 4500 PSI CONCRETE
2. #4 GRADE 60 REBAR 9" O.C.E.W.
3. ALL EXPOSED CORNERS ARE CHAMFERED 3/4"
4. SWIFT LIFT ANCHORS, LOCATED IN THE FLOOR, SHALL BE USED FOR HANDLING.
5. GALVANIZED STEEL PIPE RUNNERS ARE AVAILABLE FOR CROSS AND PARALLEL DRAINAGE APPLICATIONS.



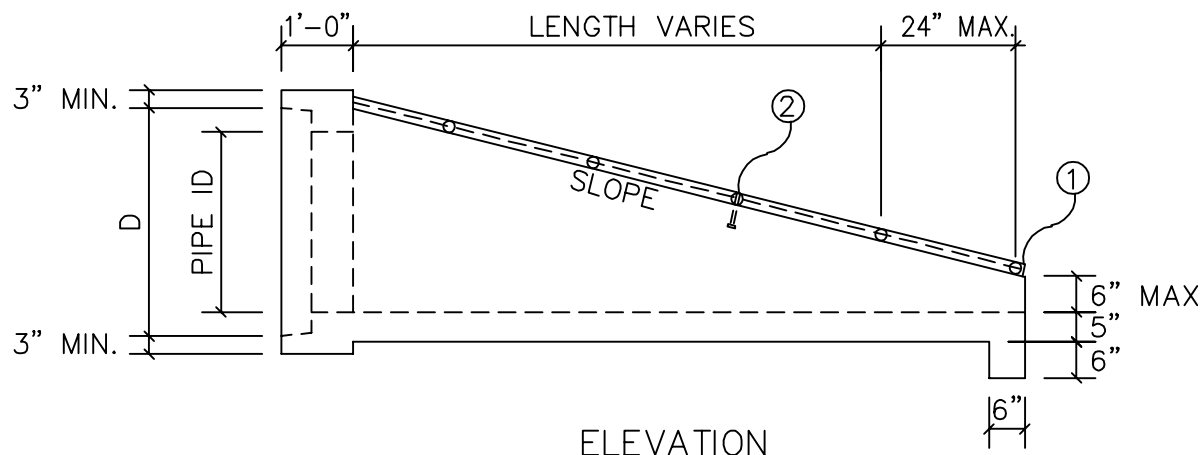
PIPE ID	PIPE OD	SLOPE	D	W
30"	37"	3:1	38"	6"
		4:1		
		6:1		
36"	44"	3:1	45-1/2"	6"
		4:1		
		6:1		
42"	51"	3:1	52-3/4"	8"
		4:1		
		6:1		
48"	58"	3:1	60"	8"
		4:1		
		6:1		
54"	65"	3:1	67"	8"

PIPE ID	PIPE OD	SLOPE	D	W
18"	23"	3:1	24"	5"
		4:1		
		6:1		
24"	30"	3:1	31"	5"
		4:1		
		6:1		

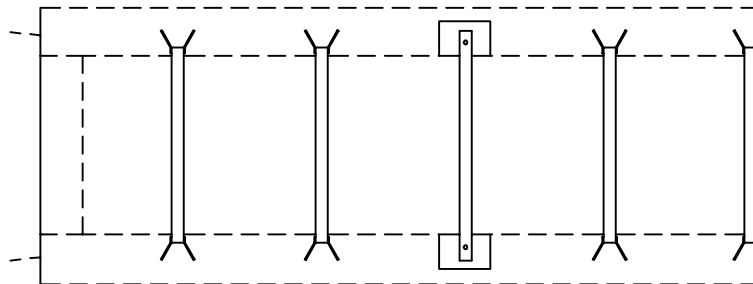


DRAINAGE SYSTEM CONSTRUCTION DETAILS
CULVERT SAFETY END TREATMENTS

REVISED MAY 2019
SCALE: 3/8" = 1'
SHEET: D-16A



- ① TOP OF SAFETY PIPE RUNNER (TYP)
- ② THIRD PIPE RUNNER SHALL ALWAYS HAVE BOLTED CONNECTION FOR CLEAN OUT ACCESS



NOTES:

1. SAFETY END PIPE SHALL BE 2" DIAMETER.
2. PIPE AND BOLTS SHALL BE GALVANIZED STEEL.

CITY OF LAKE WORTH
NOTICE OF PUBLIC HEARING
PLANNING AND ZONING COMMISSION
AND CITY COUNCIL

REPEAL AND REPLACE ORDINANCE NO. 589 & 689, AS AMENDED,
CHAPTER 10 SUBDIVISION AND DEVELOPMENT REGULATIONS AND THE
DESIGN CRITERIA AND CONSTRUCTION STANDARDS
PLANNING & ZONING CASE #PZ-2019-27

The Planning and Zoning Commission of the City of Lake Worth, Texas, will conduct the first of two public hearings at 6:30 p.m. on Tuesday, November 12, 2019, at the Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider recommendations regarding an ordinance repealing and replacing in its entirety Ordinance No. 589 & 689, as amended, Chapter 10 Subdivision and Development Regulations and the Design Criteria and Construction Standards. The City Council will conduct a second Public Hearing at 6:30 p.m. on Tuesday, November 12, 2019, at the Lake Worth City Council Chambers, 3805 Adam Grubb, Lake Worth, Texas 76135 to hear public comment and consider the proposed ordinance repealing and replacing in its entirety Ordinance No. 589 & 689, as amended, Chapter 10 Subdivision and Development Regulations Ordinance and the Design Criteria and Construction Standards. All interested parties are encouraged to attend.