

CITY OF LAREDO



STORM WATER MANAGEMENT ORDINANCE

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24.59.1 GENERAL PROVISIONS

24.59.1.1 Purpose and Goals.

The purposes and objectives of this Code are as follows:

1. To protect, maintain, and enhance the public health, safety, and general welfare by establishing minimum requirements and procedures to control the adverse impacts associated with storm water runoff. Proper management of storm water runoff will minimize damage to public and private property, reduce the effects of development on land and stream channel erosion, assist in the attainment and maintenance of water quality standards, reduce local flooding, and maintain after development, as nearly as possible, the pre-development runoff characteristics.
2. To prevent the discharge of contaminated storm water runoff from development and/or redevelopment or construction sites into the Municipal Separate Storm Sewer System (MS4) and natural water within the City of Laredo and its extraterritorial jurisdiction.
3. To facilitate compliance with state and federal water quality standards, limitations, and permits by owners and operators of development and/or redevelopment sites or construction sites within the City of Laredo.
4. To enable the City to comply with all federal and state laws and regulations applicable to storm water discharges.
5. To maintain and improve the quality of surface water and groundwater within the City of Laredo by preventing the introduction of pollutants to the maximum extent practicable (MEP) using best management practices (BMPs).
6. To establish responsibility for the reduction of harmful and damaging effects of development-generated erosion, sedimentation, storm water runoff, and accumulation of debris on other properties and receiving waters.
7. To minimize harm and long-term costs to the community from activities, which may adversely impact, water resources.
8. To encourage the use of Regional Storm Water Detention Facilities.

24.59.1.2 Scope and Jurisdiction.

The application of this Code and the provisions expressed herein shall be the minimum storm water management requirements for development and/or redevelopment of a site within the City of Laredo and its extraterritorial jurisdiction. It shall not be deemed a limitation or repeal of any other powers granted by the State statute. In addition, if site

characteristics indicate that complying with these minimum requirements will not provide adequate designs or protection for local property or residents, it is the designer's responsibility to exceed the minimum requirements as necessary. The City Engineer or his/her authorized representative shall be responsible for the coordination and enforcement of the provisions of this code.

This Code sets development constraints to ensure compliance with the outlines, obligations, and responsibilities of the City of Laredo as specified in agreements, permits and jurisdictional responsibilities of state and federal governmental agencies for storm water management which may include, but are not limited to, the following:

1. TNRCC - dam safety,
2. TNRCC - water rights,
3. EPA-NPDES,
4. TX DOT,
5. U.S. Army Corps of Engineers,
6. State Historical Officer,
7. Parks and Wildlife,
8. IBWC,
9. FEMA.

This Code does not abrogate responsibilities of the City of Laredo or its citizens from compliance with state and federal regulations.

A Storm Water Management Guidance Manual has been developed as a supplement to this Code. The purpose of the Storm Water Management Guidance Manual is to provide specific development and/or redevelopment design standards and criteria and information on best management practices (BMPs) and permanent storm water control mechanisms whose incorporation into a development will ensure compliance with this Code. The manual shall be updated and republished periodically to reflect adopted changes in policies and/or standards.

24.59.1.3 Definitions and Abbreviations.

Adverse Impact means any deleterious effect on wetlands, including their quality, quantity, surface area, species composition, aesthetics, or usefulness for human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interferes with the enjoyment of life or property, including outdoor recreation.

Appeal means a request for a review of the City Engineer's interpretation of any provisions of the storm water management code.

Applicant means any person, firm, or governmental agency who executes the necessary forms to procure official approval of a project or a permit to carry out construction of a project.

Area of Shallow Flooding means a designated AO or AH zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of Special Flood Hazard means the land in the flood plain within a community subject to a one percent or greater chance of flooding.

As-built Plan shall mean a set of engineering or site drawings that delineate the specific permitted storm water infrastructure as actually constructed.

Best Management Practices or “BMP” shall mean schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

City shall mean the City of Laredo, Texas and its jurisdictional territory.

Clearing means the removal of trees and brush from the land but shall not include the ordinary moving of grass.

Commencement of Construction shall mean the initial disturbance of soils associated with clearing, grading, excavating, land filling, and other construction activities.

Construction shall mean any human activity that involves clearing, grading, excavation, land filling, or other placement, movement, removal, or disposal of soil, rock, or other earth materials.

Contaminated shall mean containing a harmful quantity of any substance.

Design Report shall mean the report that accompanies the storm water management plan and includes data used for engineering analysis, results of all analysis, design and analysis calculations (including results from computer programs), and other engineering data that would assist the City Engineering evaluating proposed storm water management facilities.

Detention Structure shall mean a permanent storm water management structure whose purpose is to temporarily store storm water runoff and release the stored runoff at controlled rates.

Development shall generally mean any of the following actions undertaken by a public or private individual or entity:

1. The division of a lot, tract or parcel of land into two (2) or more lots, plots, sites, tracts, parcels or other divisions by plat or deed, or
2. Any land change, including, without limitation, clearing, tree removal, grubbing, stripping, dredging, grading, excavating, transporting and filling of land.

Discharge shall mean any addition or introduction of any pollutant, storm water, or any other substance whatsoever into the municipal separate storm sewer system (MS4) or into waters of the United States.

Discharger shall mean any person who causes, allows, permits, or is otherwise responsible for a discharge, including without limitation, any operator of a construction site or industrial facility.

Drainage Area shall mean that area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridge line.

Easement shall mean a grant or reservation by the owner of land for the use of such land by others for a specific purpose or purposes, and which must be included in the conveyance of land affected by such easement.

Effective Grain Size shall mean the diameter of filter sand or other aggregate that corresponds to the ten (10) percentile finer by dry weight on the grain size distribution curve.

Environmental Protection Agency or EPA shall mean the United States Environmental Protection Agency, the regional office thereof, any Federal department, agency, or commission that may succeed to the authority of the EPA, and any duly authorized official of EPA or such successor agency.

Erosion shall mean the wearing away of land surface by the action of wind, water, gravity, ice or any combination of those forces.

Erosion and Sediment Control shall mean the control of solid material, both mineral and organic, during land disturbing activity to prevent its transport out of the disturbed area by means of air, water, gravity, or ice.

Exemption shall mean those land development activities that are not subject to the Storm Water Management requirements contained in this Code.

Facility shall mean any building, structure, installation, process, or activity from which there is or may be a discharge of a pollutant.

Filtration or “To Filter” shall mean the selective removal of suspended matter from storm water by passing the water through at least 2 feet of suitable fine textured granular media such as porous soil, uniformly graded sand and gravel, or other natural or artificial aggregate, which may be used in conjunction with filter fabric and/or underdrain pipe

Final Stabilization shall mean the status when all soil disturbing activities at a site have been completed, and a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures have been established, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

Fire Department shall mean the Fire Department of the City of Laredo, or any duly authorized representative thereof.

Fire Protection Water shall mean any water, and any substances or materials contained therein, used by any person other than the Fire Department to control or extinguish a fire.

Five-Year Frequency Storm shall mean a storm that is capable of producing rainfall to be equaled or exceeded on the average of once in five (5) years. It may also be expressed as an exceedance probability with a twenty (20%) percent chance of being equaled or exceeded in any given year.

Grading shall mean excavating, filling (including hydraulic fill) or stockpiling of earth material, or any combination thereof, including the land in its excavated or filled condition.

Impervious shall mean the condition of being impenetrable by water.

Imperviousness shall mean the degree to which a site is impervious.

Infiltration shall mean the passage or movement of water into the soil surface.

Land Disturbing Activity shall mean any use of the land by any person that results in a change in the natural cover or topography that may cause erosion and contribute to sediment and alter the quality and/or quantity of storm water runoff.

Land Filling shall mean the depositing of soil and other inert materials on the land to raise its grade and/or smooth its features.

Licensed Professional Engineer or P.E. shall mean a person who has been duly licensed and registered by the State Board of Registration for Professional Engineers to engage in the practice of engineering in the State of Texas.

Maintenance shall mean any action necessary to preserve storm water management facilities in prime working condition, in order to serve the intended purposes set forth in 24.59.7 of this Code and to prevent structural failure of such facilities. Maintenance shall

not include actions taken solely for the purpose of enhancing the aesthetic aspects associated with storm water management facilities.

Manufactured Home means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes, the term “manufactured home” also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days. For insurance purposes, the term “manufactured home” does not include park trailers, travel trailers and other similar vehicles.

Mean Sea Level shall mean the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community’s flood insurance rate map are referenced.

Municipal Separate Storm Sewer System or MS4 shall mean the system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned and operated by the City and designed for collecting or conveying storm water, and which is not used for collecting or conveying sewage.

Natural Waterways shall mean waterways that are a part of the natural topography. They usually maintain a continuous flow during the year and are characterized as being irregular in cross section with a meandering course. Construction channels such as drainage ditches shall not be considered natural waterways.

Non-erodible shall mean a material, e.g. natural rock, riprap, concrete, plastic, etc., that will not experience surface wear due to natural forces of wind, water, ice gravity or a combination of those forces.

Nonpoint Source Pollution shall mean pollution contained in storm water runoff from ill-defined, diffuse sources.

NPDES General Permit for Storm Water Discharges Associated with Industrial Activity or Baseline Industrial General Permit shall mean the Baseline Industrial General Permit issued by EPA on August 27, 1992, and published in Volume 57 of the Federal Register at page 41304 on September 9, 1992, and Volume 63 No. 189 at page 52438 on September 30, 1998 and any subsequent modifications or amendments thereto.

NPDES Permit shall mean a permit issued by EPA or by the State that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable to an individual, group, or general area-wide basis.

Notice of Intent (NOI) shall mean the Notice of Intent that is required by either the Baseline Industrial General Permit, the Construction General Permit or the Multi-Sector General Permit.

Notice of Termination (NOT) shall mean the Notice of Termination that is required by either the Baseline Industrial General Permit, the Construction General Permit or the Multi-Sector General Permit.

Off-Site Storm Water Management Facility means the design and construction of a facility necessary to control storm water from more than one development.

One Hundred Year Frequency Storm shall mean a storm that is capable of producing rainfall expected to be equaled or exceeded on the average of once in 100 years. It also may be expressed as an exceedance probability with a one (1%) percent chance of being equaled or exceeded in any given year.

On-Site Storm Water Management Facility shall mean the design and construction of a facility necessary to control storm water runoff within and for a single development.

Operator shall mean the person or persons who, either individually or taken together, meet either of the following two criteria: (1) they have operational control over the facility specifications (including the ability to make modifications in specifications); or (2) they have the day-to-day operational control over those activities at the facility necessary to ensure compliance with pollution prevention requirements and any permit conditions.

Person means the federal government, the state, any county, municipal corporation, or other political subdivision of the state, or any of their units, or an individual, receiver, trustee, guardian, executor, administrator, fiduciary, or representative of any kind, or any partnership, firm association, public or private corporation, or any other entity.

Person Responsible for the Land Disturbing Activity shall mean:

- a. The person who has or represents having financial or operational control over the land disturbing activity; and/or
- b. The landowner or person in possession or control of the land who directly or indirectly allowed the land disturbing activity or has benefited from it or who has failed to comply with any provision of this Code.

Point Source shall mean any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Post-Development conditions shall mean the conditions, which exist following the completion of the land disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of storm water runoff.

Pre-Developed Conditions shall mean those land use conditions that existed prior to the initiation of the land disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of storm water runoff.

Preliminary Plat shall mean the preliminary plat of a subdivision submitted pursuant to the City's Subdivision Regulations.

Qualified Personnel shall mean persons who possess the appropriate competence, skills, and ability (as demonstrated by sufficient education, training, experience, and/or, when applicable, any required certification or licensing) to perform a specific activity in a timely and complete manner consistent with the applicable regulatory requirements and generally accepted industry standards for such activity.

Regional Storm Water Management shall mean the design and construction of a facility necessary to control storm water runoff within or outside a development and for one or more developments.

Registered Land Surveyor shall mean a land surveyor properly registered and licensed to conduct work within the City of Laredo.

Registered Landscape Architect shall mean a landscape architect properly registered and licensed to conduct work within the City of Laredo.

Release shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing, directly or indirectly, into the municipal separate storm sewer system (MS4) or the waters of the United States.

Responsible Personnel shall mean any foreman, superintendent, or similar individual who is the on-site person in charge of land disturbing activities.

Retention Structure shall mean a permanent structure whose primary purpose is to permanently store a given volume of storm water runoff. Release of the given volume is by infiltration, evaporation and/or irrigation.

Sediment shall mean solid particulate matter, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by water, air, ice, or gravity and has come to rest on the earth's surface either above or below sea level

Site shall mean the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

Stabilization means providing measures, vegetative and/or structural, that will prevent erosion from occurring.

Stage Work or Stage Construction shall mean a plan for the staged construction of storm water facilities where portions of the facilities will be constructed as different stages of the development are started or completed.

Start of Development means the date the storm water management permit was issued, provided the actual start of development, repair, reconstruction, placement or other improvement is within 180 days following the issuance of the permit.

State shall mean the State of Texas.

Storm Water shall mean storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm Water Concept Plan shall mean the preliminary concept plan of the proposed storm water management system intended for preliminary review and comment by the City Engineer.

Storm Water Management Plan shall mean the overall proposal for a storm drainage including storm water management structures, and supporting documentation as specified in the Storm Water Management Design Manual, for each proposed private or public development to the extent permitted by law. Also included are the supporting engineering calculations and results of any computer analysis, if necessary.

Storm Water Discharge Associated with Construction Activity shall mean the construction activity disturbing at least five acres, or construction activity disturbing less than five acres, which is a part of a larger common plan of development or sale with the potential to disturb cumulatively five or more acres according to 40 CFR §122.26(b).

Storm Water Discharge Associated with Industrial Activity shall mean the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant which is within one of the categories of facilities listed in 40 CFR §122.26(b)(14), and which is not excluded from EPA's definition of the same term.

Storm Water Management shall mean the collection, conveyance, storage, treatment and disposal of storm water runoff in a manner to minimize accelerated channel erosion, flood damage, and/or degradation of water quality and in a manner to enhance and ensure the public health, safety, and general welfare, which shall include a system of vegetative or structural measures, or both, that control the increased volume and rate of storm water runoff caused by man made changes to the land.

Storm Water Management Guidance Manual shall mean the manual of design, performance, and review criteria for storm water management practices. List of the approved guidance manuals is available in the City Engineering Department.

Storm Water Management Facilities shall mean those structures and facilities that are designed for the collection, conveyance, storage, treatment and disposal of storm water runoff into and through the drainage system.

Storm Water Management Plan shall mean the set of drawings and other documents that comprise all of the information and specifications for the drainage systems, structure, concepts and techniques that will be used to control water as required by this code and the Storm Water Management Guidance Manual. Also included are the supporting engineering calculations and results of any computer analysis.

Storm Water Management Quality Controls shall mean a system of vegetative structural or other measures that reduce or eliminate pollutants that might otherwise be carried by storm water runoff.

Storm Water Pollution Prevention Plan or SWPPP shall mean a plan required by either the Construction General Permit, the Baseline Industrial General Permit, or the Multi-Sector General Permit and which describes and ensures the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with construction or other industrial activity at the facility.

Storm Water Runoff shall mean the direct response of a watershed to precipitation and includes the surface and subsurface runoff that enters a ditch, stream, storm drain or other concentrated flow during and following the precipitation.

Subdivision shall mean (1) The creation of one or more new streets, alleys or other public ways; or the changing of any rights-of-way of any existing streets, alleys or other public ways. (2) Any division or redivision of lot, tract, or parcel or land, regardless of its prospective use. Such subdivision may be accomplished by platting or by description of metes and bounds or otherwise into two (2) or more lots or other divisions of sale or improvement. The following are not defined as subdivisions.

- a. The combination or recombination of portions of previously platted lots where the total number of lots is not increased and the resultant lots are in accordance with the rules and regulations contained in the City's Subdivision Regulations and with the City's Zoning Ordinance.
- b. Division or sale of land by judicial decree, which shall not be deemed a division for purposes of this code.
- c. The acquisition of land for the purpose of widening or opening of streets when the acquisition and work is done by the City, State or other governmental agency.
- d. The division of land into parcels greater than five (5) acres where no street right-of-way dedication is involved.

Structure means a walled and roofed building or any portion thereof, manufactured homes, gas or liquid storage tanks, roadways and utility mains that are principally aboveground and/or restrict the flow of flood waters.

Swale shall mean a structural measure with a lining of grass, riprap or other material, which can function as a detention structure and convey storm water runoff without causing erosion.

Ten-Year Frequency Storm shall mean a storm that is capable of producing rainfall to be equaled or exceeded on the average of once in 10 years. It may also be expressed as an accedence probability with a 10 percent chance of being equaled or exceeded in any given year.

Uniformity Coefficient shall mean the number representing the degree of homogeneity in the distribution of particle sizes of filter sand or other granular material. The coefficient is calculated by determining the D 10/D60 ratio where D10 and D60 refer to the particle diameter corresponding to the 10 and 60 percentile of the material, which is finer, by dry weight.

Variance shall mean the modification of the minimum storm water management requirements for specific circumstances where strict adherence of the requirements would result in unnecessary hardship and not fulfill the intent of this Code.

Violation means the failure of a structure or other development to be fully compliant with City of Laredo's Code of Ordinances, state laws, and federal laws.

Waiver shall mean the relinquishment from storm water management requirement by the City Engineer for a specific land disturbing activity on a case- by-case basis.

Watercourse means any natural or artificial stream, river, creek, ditch, channel, canal, conduit, culvert, drain, waterway, gully, ravine or wash, in and including any area adjacent thereto, which is subject to inundation by reason of overflow or flood water

Water Quantity shall mean those characteristics of storm water runoff that relate to the rate and volume of the storm water runoff to downstream areas resulting from land disturbing activities.

Watershed means the total drainage area contributing runoff to a single point.

Waters of the United States shall mean all waters which are currently used, were used in the past or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all interstate waters, including interstate wetlands; all other waters the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce; all impoundments of waters otherwise defined as waters of the United States under this definition; all tributaries of waters identified in this definition; all wetlands adjacent to waters identified in this

definition; and any waters within the federal definition of “waters of the United States” at 40 CFR §122.2; but not including any waste treatment systems, treatment ponds, or lagoons designed to meet the requirements of the federal Clean Water Act.

Water Surface Elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, or other datum, where specified, of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas. (Code 1971, §151/2-3)

Wetland shall mean an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, wetlands generally include swamps, marshes, bogs, and similar areas.

24.59.2 ADMINISTRATION AND PERMITTING PROCESS

24.59.2.1 Designated Administrator.

The City Engineer shall implement and enforce the provisions of this Code. Any powers granted to or duties imposed in this Code upon the City Engineer may be delegated by him to other qualified City personnel.

Duties of Administrator are as follows:

1. Review all storm water concept plan applications and storm water management permit applications to determine that the permit requirements of this Code have been satisfied.
2. Review all storm water concept plan applications and storm water management permit applications to determine that all necessary federal, state or local governmental agency approvals have been secured and do not conflict with provisions of this Code.
3. Review all storm water concept plans applications and storm water management permit applications to determine if the proposed development/redevelopment and construction activity is located in a floodway. If located in a floodway ensure that the provisions of 24.69 of the Land Development Code are satisfied.
4. Require an applicant for a storm water management permit to execute an affidavit on behalf of himself, his/her heirs, successors and assigns, agreeing that until such time as the drainage improvements are accepted by the City, applicant shall save and hold harmless the City, its officers, employees and appointed officials for any damages arising from loss of property, personal injury or death, loss of access of property, or other consequential damages as a result of a development permit being granted pursuant to this article; except that City shall indemnify and hold

applicant harmless from any and all actions or proceedings arising out of the sole negligence or willful act of City. Such affidavits shall be filed with the City Secretary.

5. Develop and implement an inspection program for storm water facilities within the City of Laredo and its jurisdictional areas.

24.59.2.2 Applicability.

A Storm Water Management Permit shall be required for all land disturbances of 5 acres or larger in accordance with current Environmental Protection Agency/ National Pollutant Discharge Elimination System requirements (EPA/NPDES) for storm water discharges. This includes permit requirements for land disturbances of some sites under 5-acres in environmentally sensitive areas.

If any other provision or ordinance of the City of Laredo conflicts with this Code, that which provides more environmental protection shall apply unless specifically provided otherwise in this Code. The City Engineer is authorized to adopt written procedures for the purpose of carrying out the provisions of this Code. The Storm Water Management Guidance Manual shall be the repository of all current and effective procedures.

24.59.2.3 Responsibility of Licensed Professional Engineer.

All documents, calculations, plans, etc. submitted to the City Engineer as part of the storm water management review process shall be signed and sealed by a licensed professional engineer unless stated otherwise in this Code. The engineer shall use the best available information and current acceptable level of practice in the design of storm water management systems taking into consideration their potential off-site impacts.

24.59.2.4 Scope of Development Plans.

1. In developing plans for subdivisions, individual lots in a subdivision development shall not be considered to be separate land disturbing activities and shall not require individual permits. Instead, the subdivision development, as a whole, shall be considered to be a single land disturbing activity. Hydrologic parameters that reflect the ultimate subdivision development shall be used in all engineering calculations.

2. If individual lots or sections in a subdivision are being developed by different property owners, all land disturbing activities related to the subdivision shall be covered by the approved storm water management plan permit for the subdivision. Individual lot owners or developers shall sign a certificate of compliance that all activities on that lot will be carried out in accordance with the approved storm water management plan permit for the subdivision.
3. Construction drawings for subdivisions, which have been submitted for approval prior to the effective date of these regulations, are exempt from these requirements. Development of new phases of existing subdivisions, which were not previously approved, shall comply with the provisions of these regulations.

24.59.2.5 Requirements for Permit Exempt Activities.

1. For all land disturbing activities that do not require the issuance of a storm water management permit as outlined in 24.59.2.5, the person responsible for the land disturbing activity shall submit a simplified storm water management control plan meeting the requirements listed below. This plan does not require approval by the City Engineer and does not require preparation or certification by a licensed professional engineer. This plan includes:
 - a. A narrative description of the storm water management facilities to be used.
 - b. A general description of topography and soil conditions of the development site.
 - c. A general description of existing structures, buildings, and other fixed improvements located on adjacent properties.
 - d. A site plan sketch to accompany the narrative, which shall contain:
 - 1) A site location map of the proposed project, indicating the location of the proposed project in relation to roadways, jurisdictional boundaries, streams and rivers;
 - 2) The boundary lines of the site on which the work is to be performed;
 - 3) All areas within the site which will be included in the land disturbing activities shall be identified and the total disturbed area calculated;
 - 4) A topographic map of the site; and

- 5) Anticipated starting and completion dates of the various stages of land disturbing activities and the expected date the final stabilization will be completed.
 - 6) The location of temporary and permanent vegetative and structural storm water management control measures.
- e. The storm water management control plan shall contain certification by the persons responsible for the land disturbing activity that the land disturbing activity will be accomplished in accordance with the plan.
 - f. The storm water management control plan shall contain authorization by the person responsible for the land disturbing activity of the right of the City Engineer to conduct on-site inspections.

24.59.2.6 Storm Water Concept Plans.

The storm water concept plan is designed to allow the City to review the proposed development/redevelopment or construction activities prior to extensive design. This allows the City to ensure that all aspects of the storm water management code have been addressed early in the design process. Additionally, it allows the developer/engineer the opportunity to address all aspects of the design, with regard to this Code, with the City prior to extensive design and plan development.

1. A storm water concept plan for each development/redevelopment and construction activity shall be submitted for review by the City Engineer prior to submission of the storm water management plan and construction plans for the entire development/redevelopment or construction activity, or any portion thereof.
2. All preliminary plats of the development/redevelopment or construction activity shall be consistent with the storm water concept plan required in paragraph (1) above.
3. Upon approval of the concept plan, the applicant shall submit a final storm water management plan (as part of the construction plans) to the City Engineer for review and approval. The City Engineer may accept and submit into the review process a storm water concept plan if it identifies the location and type of facilities to be constructed in sufficient detail to accurately assess proposed impacts and the City Engineer determines that a storm water management plan is not needed. ***If accepted under this provision, the storm water concept plan then becomes the storm water management plan for this development.***
4. Should any storm water management plan involve any storm water management facilities or land to be dedicated to public use, the same information shall also be submitted for review and approval to the department having jurisdiction over the

land or other appropriate departments or agencies identified by the City Engineer for review and approval. Upon approval by all such departments and agencies this storm water management plan shall serve as the basis for all subsequent construction.

5. The developer and his/her engineer shall be responsible for the accuracy of the information furnished in the design of the storm drainage facilities, pertaining to both the development/redevelopment or construction site in question (on-site) and affected (off-site) properties. Permit approval, by the City of Laredo, of the design plans and specifications shall not be construed to relieve any responsibility of the developer/engineer referred to herein.
6. All drainage easements, both on-site and off-site, shall be dedicated to the City of Laredo, with the easement called-out and appropriately identified as an easement to be dedicated to the City of Laredo for drainage purposes. Appropriate drainage easements on designated floodways (HUD-FEMA Maps) shall be properly described.
7. Compliance with Federal Emergency Management Agency (FEMA) regulations is mandatory. All subdivisions shall conform to the "Federal Disaster Protection Act of 1973, Public Law 93-234, passed by the 93rd Congress, H.R. 8449, December 31, 1973 (the latest revision thereof).
8. The storm water concept plan may be reviewed, if needed, with the designer, after City Engineer review, where it will either be approved, approved with changes, or rejected. If rejected, then changes, additional analysis, or other information necessary to approve the next submittal of the concept plan shall be identified. The City Engineer's review of the storm water concept plan will be completed within ten (10) working days from receipt of the plan.
9. Within ten (10) working days from receipt of the storm water concept plan, the City Engineer shall issue a decision either approving, rejecting or conditionally approving the plan with modification.

24.59.2.7 Storm Water Concept Plan Submittal Requirements.

At a minimum, the storm water concept plan shall include the following:

1. A completed application for the storm water management concept plan review. (Application forms are contained within the Storm Water Management Guidance Manual.);
2. A completed Applicant's Affidavit of Ownership and Designation of Agent form. (Forms are contained within the Storm Water Management Guidance Manual.);

3. A vicinity map showing the location of the development site;
4. The existing topography of the development site;
5. Layout of physical improvements on the site, including existing development and proposed development;
6. Delineation of all areas to be disturbed;
7. Delineation of any regulatory flood plain.
8. Preliminary Hydrologic/Hydraulic calculations showing existing pre-development flows and anticipated post-development flows;
9. Preliminary layout of proposed on-site storm water management facilities to include water quantity and quality features;
10. A map indicating any off-site flows draining to the site; and
11. A map indicating any off-site, downstream flow constrictions.

24.59.2.8 Storm Water Management Plan.

The storm water management plan is a report containing calculations, plans, narrative and supplemental information showing the proposed development's/re-development's compliance with this Code and all state and federal laws that affect the development. The storm water management plan is submitted to the City after review of the storm water concept plan. All deficiencies indicated by the City review of the concept plan shall be rectified in the storm water management plan. Upon review and approval of the storm water management plan by the City of Laredo, the City will issue a storm water management permit indicating the development's compliance with this Code and allowing the commencement of construction.

1. The storm water management plan, after City Engineer review, will either be approved, approved with changes, or rejected. If rejected, then changes, additional analysis, or other information necessary to approve the next submittal of the management plan shall be identified. The City Engineer's review of the storm water management plan will be completed within ten (10) working days from receipt of the plan.
2. Within ten (10) working days from receipt of the storm water management plan, the City Engineer shall issue a decision approving, rejecting or conditionally approving the plan with modification.

24.59.2.9 Storm Water Management Plan Submittal Requirements.

Storm water management plans shall include, at a minimum, the following:

1. A completed application for the Storm Water Management Permit. (Application forms are contained within the Storm Water Management Guidance Manual.);
2. A completed Applicant's Affidavit of Ownership and Designation of Agent form. (Forms are contained within the Storm Water Management Guidance Manual.);
3. A vicinity map indicating a north arrow, scale, boundary lines of the site, and other information necessary to locate the development site;
4. The existing and proposed topography of the development/redevelopment or construction site except for individual lot grading plans in single family subdivisions. Existing topography shall be shown by contour lines on a basis of five feet (5') vertical interval unless the shape of the terrain, in the opinion of the City Engineer or his/her authorized designee, warrants two foot (2') vertical intervals; datum shall be that of the United States Coast and Geodetic Survey. The scale shall not be smaller than one inch (1") equals two hundred feet (200') with contour intervals not greater than five feet (5'), unless variation is specifically approved by the City Engineer or his/her authorized designee;
5. Physical improvements on the site, including present development and proposed development/redevelopment or construction activity;
6. Location, dimensions, elevations, and characteristics of all storm water management facilities;
7. All areas within the site which will be included in the land disturbing activities shall be identified and the total disturbed area calculated;
8. The location of temporary and permanent vegetative and structural storm water management control measures;
9. An anticipated starting and completion date of the various stages of land disturbing activities and the expected date the final stabilization will be completed;
10. A determination that no occupied first floor elevation of any structure is below the 100-year plus eighteen (18) inch flood elevation. All development/redevelopment or construction activity shall conform to the "Federal Disaster Protection Act of 1973, Public Law 93-234, passed by the 93rd Congress, H.R. 8449, December 31, 1973 (the latest version thereof);

11. At the reasonable discretion of the City Engineer, for all portions of the drainage system which are expected to carry between 50 and 150 cfs for the 100- year storm, the 100-year plus eighteen (18) inch flood elevation analysis shall be required. To require the 100-year plus eighteen (18) inch flood elevation analysis, the City Engineer should determine that one of the following conditions may exist:
 - a. The estimated runoff would create a hazard for adjacent property or residents; or
 - b. The flood limits would be of such magnitude that adjacent residents should be informed of these limits.
12. For all portions of the drainage system which are expected to carry 150 cfs or more for the 100-year storm, the 100-year plus eighteen (18) inch flood elevation analysis shall be done and flood limits shall be shown on the storm water management plans;
13. Storm water management plans shall include designation of all drainage easements needed for inspection and maintenance of the drainage system and storm water management facilities and shall comply with 24.59.3.3 of this Code;
14. At the reasonable discretion of the City Engineer, a landscape plan for all portions of the drainage system shall be part of the storm water management plan. This landscape plan shall address the following:
 - a. Tree saving and planting plan;
 - b. Types of vegetation that will be used for stream bank stabilization, erosion control, sediment control, aesthetics and water quality improvement; and
 - c. Any special requirements related to the landscaping of the drainage system and efforts necessary to preserve the natural aspects of the drainage system.
15. To improve the water quality aspects of the drainage system, the storm water management plan shall include a storm water pollution prevention plan, as outlined in 24.59.4.2 of this Code, to control the water quality of the runoff during the land disturbing activities and during the life of the development as outlined in this Code.;
16. The storm water management plan shall include all engineering calculations needed to design the system and associated structures including pre- and post-development velocities, peak rates of discharge, and inflow and outflow hydrographs of storm water runoff at all existing and proposed points of discharge

from the site. Computer disks and hard copies of all input and output files are to be submitted if a computer model is used;

17. Description of site conditions around points of all surface water discharge including vegetation and method of flow conveyance from the land disturbing activity;
18. Construction and design details for structural controls;
19. The expected timing of flood peaks through the downstream drainage system shall be assessed when planning the use of detention facilities;
20. At the reasonable discretion of the City Engineer, downstream effects from storm water management structures and the development/ redevelopment or construction activity on receiving streams known to have flooding and erosion problems, hydrologic-hydraulic engineering studies shall extend downstream to a point where the proposed development represents less than ten (10) percent of the total watershed.
21. All storm water management facilities and all major portions of the conveyance system through the proposed development (i.e., channels, culverts) shall be analyzed, using the design and 100-year storms, for design conditions and operating conditions which can reasonably be expected during the life of the facility. The results of the analysis shall be included in the hydrologic-hydraulic study.
22. If the storm water management plan and/or calculations indicate that there may be a drainage or flooding problem at the exit to the proposed development or at any location between the exit point and the 10 percent downstream point, the City Engineer may require:
 - a. Water surface profiles plotted for the conditions of pre- and post-development for the 25-year design storm;
 - b. Water surface profiles plotted for the conditions of pre- and post-development for the 100-year design storm; or
 - c. Elevations of all structures potentially damaged by 25 and/or 100 year flows.
23. All storm water management plans submitted for approval shall contain certification by the person responsible for the land disturbing activity that the land disturbing activity will be accomplished pursuant to the approved plan and that responsible personnel will be assigned to the project;

24. All storm water management submittals shall include a proposed inspection and construction control schedule;
25. All storm water management plans shall contain certification by the person responsible for the land disturbing activity, of the right of the City Engineer to conduct on-site inspections;
26. The storm water management plan shall not be considered approved without the inclusion of an approval stamp with a signature and date on the plans by the City Engineering Department. The stamp of approval on the plans is solely an acknowledgment of satisfactory compliance with the requirements of these regulations. Approval of construction plans by the City of Laredo Engineering Department is not intended to relieve the owner/developer, consultant engineer, and/or contractor from compliance with the subdivision and storm water management ordinance and other City ordinance, state and federal regulations, and any liabilities or responsibilities with respect to the design, construction, or operation of the project;
27. A maintenance schedule for the permanent maintenance of all storm water management facilities; and
28. Approved storm water management plans remain valid for five (5) years from the date of approval. Extensions or renewals of the plan approvals will be granted by the City Engineer upon written request by the person responsible for the land disturbing activity.

24.59.2.10 Storm Water Management Permit Conditions/Suspensions and Revocations.

24.59.2.10.1 Permit Conditions.

- a. No storm water management permit shall be issued or modified without the following:
 - 1) Right of entry by the City for emergency maintenance if necessary;
 - 2) Right of entry by the City for inspections;
 - 3) Any off-site easements needed; and
 - 4) An approved storm water management plan.
- b. The approved storm water management plan shall contain certification by the applicant that all land clearing, construction, development and

drainage will be done according to the storm water management plan or previously approved revisions.

- c. In addition to the plans and permits required from the City, applicants shall obtain all applicable state and federal permits required for the proposed development prior to issuance of a storm water management permit.
- d. A copy of the approved storm water management plan permit placard shall be posted in clear public view at the construction site from the date of commencement of construction through the date of final stabilization.

24.59.2.10.2 Permit Suspension and Revocation.

- a. A storm water management permit may be suspended or revoked if one or more of the following violations have been committed:
 - 1) Violation(s) of the conditions of the storm water management plan approval;
 - 2) Construction not in accordance with the intent of the approved plans;
 - 3) Noncompliance with correction notice(s) or stop work order(s); or
 - 4) The existence of an immediate danger in a downstream area in the reasonable judgment of the City Engineer.

If one or more of these conditions is found, a written notice of violation shall be served upon the owner or authorize representative and an immediate stop-work order may be issued. The notice shall set forth the measures necessary to achieve compliance with the plan. Correction of these violations must be started immediately or the owner shall be deemed in violation of this Code.

24.59.2.11 Fees.

Reserved.

24.59.2.12 Exemptions from Requirements.

The following development activities are exempt from the provisions of this Code and the requirements of providing storm water management measures.

1. Land disturbing activities on agricultural land for production of plants and animals useful to man, including but not limited to: forages, and sod crops, grains and feed crops, tobacco, cotton, and peanuts; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules, or goats, including the breeding and grazing of these animals; bees; fur animals and aquaculture; except that the construction of an agricultural structure of one or more acres, such as broiler houses, machine sheds, repair shops and other major buildings, which require the issuance of a building permit shall require the submittal and approval of a storm water management plan prior to the start of the land disturbing activity.
2. Land disturbing activities undertaken on forest land for the production and harvesting of timber and timber products.
3. Construction or improvement of single family residences or their accessory buildings (less than 5 acres) which are separately built and not part of a multiple construction of a subdivision development.
4. There will be no exemptions from the requirements imposed upon the City of Laredo as part of its MS4 obligations.
5. The City of Laredo is not exempt from the requirements of this Code.

24.59.2.13 Variances from Requirements.

1. The City Engineer may grant a variance from the requirements of this Code if there are exceptional circumstances applicable to the site such that strict adherence to the provisions of the Code will result in unnecessary hardship and not fulfill the intent of the Code.
2. A written request for a variance shall be required and shall state the specific variance sought and the reasons, with supporting data, for granting said variance. The request shall include descriptions, drawings, calculations and any other information that are necessary to evaluate the proposed variance.
3. Any substantial variance from the storm water management plan or concept plan shall be referred to all agencies which reviewed the original plan.
4. The City Engineer will conduct a review of the request for a variance within ten (10) working days. Failure of the City Engineer to act by the end of the tenth working day will result in the automatic approval of the variance.
5. There will be no variances from the requirements imposed upon the City of Laredo as part of its MS4 obligations.

24.59.2.14 Appeals.

Any person aggrieved by a decision of the City Engineer (including any decision with reference to the granting or denial of a variance from the terms of this Code) may appeal same by filing a written notice of appeal with the City Engineer within thirty (30) calendar days of the issuance of said decision by the City Engineer. The City Engineer can then reverse his/her decision or send this notice to a designated Appeals Board with comments. A notice of appeal shall state the specific reasons why the decision of the City Engineer is alleged to be in error and the City Engineer shall prepare and send to the Appeals Board and Appellant, within fifteen (15) days of receipt of the notice of appeal, a written response to said notice of appeal.

All such appeals shall be heard by the Appeals Board which is hereby granted specific authority to hear and determine such appeals in a quasi-judicial capacity. Said appeal shall be heard by the Appeals Board at its next regularly scheduled meeting date, not to exceed thirty (30) days after receipt, by the Appeals Board, of the notice of appeal, or at such other time as may be mutually agreed upon in writing by the Appellant and the Chairperson of the Appeals Board. The Appeals Board will then render a decision within fifteen (15) days after the appeal has been heard.

Each party to the appeal shall be entitled to a hearing before the Appeals Board under judicial forms of procedure, at which hearing each party shall have the right to present evidence and sworn testimony of witnesses, to cross-examine witnesses, and to cause a transcription of the proceedings to be prepared.

Should either party be dissatisfied with the decision of the Appeals Board, any appeal of said decision may be appealed to the Superior Court by writ of certiorari.

24.59.3 DRAINAGE STANDARDS

24.59.3.1 Design Criteria and Minimum Control Requirements.

24.59.3.1.1 Rainfall Intensity Determination.

Maximum expected rainfall amounts in the Laredo area for various duration and selected recurrence intervals are defined in the Storm Water Management Guidance Manual.

24.59.3.1.2 Method of Computing Runoff.

The basis of computing runoff shall be the rational formula or another method acceptable to the City Engineer. Runoff rates for areas greater than one hundred and thirty acres shall use a unit hydrograph methodology or another method acceptable to the City Engineer.

Where an approved study exists (i.e. FEMA or other regulatory agency) for areas less than one hundred and thirty acres, the methodology shall match that used in the study unless otherwise dictated by the City Engineer.

In all cases, wet antecedent conditions shall be assumed. Run-off rates shall be computed on the basis of ultimate development of the proposed development/redevelopment or construction activity. Flows from off-site contributing areas draining to and/or through the proposed development / redevelopment or construction activity shall be based on the 25-year existing conditions. For determination of time of concentration, times shall be calculated on the basis of an improved drainage system upstream from the area under consideration. Run-off coefficients shall be obtained from information presented in the Storm Water Management Guidance Manual.

24.59.3.1.3 Off-site Drainage.

- a. The owner or developer of property to be developed/redeveloped shall be responsible for accepting all storm drainage flowing onto his/her property. It shall be adequately conveyed through, or around, the property. This responsibility includes all drainage directed to that property by prior development as well as drainage naturally flowing through the property by reason of topography.
- b. Adequate consideration shall be given to determine how the storm water discharge leaving the proposed development will affect downstream property. In determining downstream effects from storm water management structures and the development/ redevelopment or construction activity on receiving streams known to having flooding or erosion problems, the City Engineer may require, at his/her reasonable discretion, the hydrologic-hydraulic engineering studies be extended downstream, to a point where the proposed development/redevelopment or construction activity represents less than (10) percent of the total contributing watershed.
- c. Any construction activity that requires off-site grading or encompasses an area in compliance with current EPA/NPDES storm water permitting provisions, where storm water runoff has been collected or concentrated, whether it be by permanent drainage systems or streets, shall not be permitted to drain onto adjacent property except in existing creeks, channels, storm sewers or streets unless the following is provided:
 - 1) Notarized letter of permission from the affected property owner;
 - 2) Proper drainage easements are obtained;

- 3) If the owner is unable to acquire the necessary off-site easements, he/she shall provide the City with documentation of his/her efforts, including evidence of a reasonable offer made to the adjacent property owner. By written request for assistance, the City may assist the negotiations to acquire off-site easements. If the negotiations are unsuccessful, the request may, at the developer's option, be submitted to the City Council for consideration of acquisition through condemnation. In either case, the total cost of the acquisition and the cost of the easements shall be paid by the owner/developer; or
 - 4) If the developer is unable to obtain either (1) or (2) above and chooses not to seek assistance from the City, as outlined in (3) above, he/she shall provide the City with documentation of his/her efforts. The developer will then execute a notarized letter. Said letter shall be in a form approved by the City Attorney and shall provide that the developer shall agree to save and hold harmless the City of Laredo from any and all claims or suits for damage arising out of the required grading and/or concentrations of flow. The City reserves the right to require the notarized letter of permission or easement from the affected property owner prior to construction.
- d. The subdivider shall pay for the cost of all drainage improvements required for the development of his/her subdivision, including any necessary off-site channels or storm sewers and acquisition of the required easements.

In areas where the proposed off-site improvements are to be made within existing City right-of-way, an estimate of these off-site costs shall be prepared and submitted with the drainage plans.
 - e. Where it is anticipated that additional runoff incident to the construction activity will overload an existing downstream drainage facility, whether natural or man-made, and result in hazardous conditions, the Planning Commission may withhold approval of the activity until appropriate provision has been made to correct the problem. Plans shall be provided which include all necessary off-site improvements including storm sewer systems, channel grading, driveway adjustments, culvert improvements, etc.

24.59.3.1.4 Finished Floor Requirements

When the drainage characteristics of a subdivision are such that a portion of the subdivision is within or adjacent to the 100-year floodplain, the City Building Director may require that minimum finished floor elevations be shown on certain lots contained

within said subdivision. These elevations should be based on the most current flood plain management criteria. The elevations shall be shown on the plat prior to filing the plat for record. The following note shall be added to any plat upon which the City Engineer requires the establishment of minimum finished floor elevations:

"The City of Laredo reserves the right to require minimum finished floor elevations on any lot contained within this addition. The minimum elevations shown are based on the most current information available at the time the plat is filed and may be subject to change. Additional lots, other than those shown, may also be subject to minimum finished floor criteria."

24.59.3.2 Drainage Facilities.

24.59.3.2.1 Streets and Closed Storm Sewer Systems.

Streets may be used for storm water drainage only if the calculated storm water flow does not exceed 10 feet per second. Streets and alleys shall be designed on the basis of a 10-year frequency storm event. Where streets are not capable of carrying storm waters as outlined above, drainage facilities as required by these standards shall be provided.

Where closed storm sewer systems are utilized the entire discharge shall be picked up at the point where the street can no longer handle the runoff flowing curb full.

Closed storm sewer pipe size and grade shall be designed based on the following criteria:

- a. Minimum pipe size shall be 24" in diameter.
- b. Minimum grade shall be no less than 0.004 ft/ft.
- c. Allowable "n" values for design shall be as specified in the Storm Water Management Guidance Manual.
- d. Under normal conditions, pipes shall be designed assuming full flow conditions.
- e. Where conditions or design cause a pipe to flow under pressure, the hydraulic grade line shall be calculated and plotted in profile. In no case shall the hydraulic grade line be closer than 1 (one) foot to finished grade unless specifically authorized by the City Engineer.

24.59.3.2.2 Open Channels.

Open Channels shall be designed for subcritical flow under normal conditions. If supercritical flow exists, energy dissipation will be required to return flow to subcritical flow conditions. Open channels shall be designed to convey, at a minimum, the 25-year frequency design storm event.

The maximum allowable velocities in constructed channels shall be based on the channel type. The following velocity chart shall be used for scour protection and to determine the maximum velocities for a given type of channel lining.

Channel Type	Maximum Velocity
Grass Lined	5 fps
Concrete Lined	> 5 fps

Other methods of bottom and slope protection may be substituted for conditions where concrete lining is required upon approval of the City Engineer. Requests for substitution shall be accompanied by an engineering analysis of the equivalency to concrete, reasons for substitution, and an evaluation of maintenance issues.

Grass-lined channels shall include slope protection in bends unless the radius of curvature is greater than twice the channel top width.

Open channels shall provide a minimum of one (1) foot of freeboard above design flow depth. Additional freeboard shall be provided where design conditions warrant as outlined in the Storm Water Management Guidance Manual. All channels shall have a minimum eight (8) foot bottom width to facilitate maintenance operations.

24.59.3.2.3 Culvert and Bridge Crossings.

All roadway culvert crossings shall be designed for a 25-year frequency storm event. Crossings located within flood hazard zones shall be designed to ensure compliance with FEMA regulations. The hydraulic capacity of proposed culverts shall be such that headwater depth is at least one (1) foot below the minimum roadway elevation. Proposed bridges shall have a low chord elevation at least one (1) foot above the design storm water surface elevation. All culverts located or expected to be located under paving and bridges shall be structurally designed for an HS-20 loading. Hydrologic and Hydraulic calculations for all crossings must be included in the permit application to ensure compliance with this Code.

24.59.3.2.4 Hydraulic Structures - Energy Dissipation.

Where hydraulic structures are included in the design of storm water drainage systems, energy dissipation shall be included in the structure as outlined in the Storm Water Management Guidance Manual. Hydraulic structures may include, but are not limited to: pipe outlets, spillways, drop structures, and culvert headwalls. All energy dissipators should be designed to facilitate maintenance. The design of outlet structures in or near parks or residential areas at the reasonable discretion of the City Engineer must give special consideration to aesthetics.

24.59.3.2.5 Retention/Detention Facilities.

The following are minimum criteria for detention facilities within the City of Laredo and its extraterritorial jurisdiction. These criteria do not supersede or replace requirements established by the State of Texas for dam safety, dam construction plan review, and/or the impoundment of State Waters. Where State of Texas requirements apply, the owner/developer and/or engineer shall provide evidence of compliance prior to final approval of the facility by the City of Laredo.

24.59.3.2.5.1 Allowable Discharge - (Pre/Post Analysis for Retention/Detention Facilities).

The ultimate 50-year design storm event shall be used in determining the required retention/detention volume for the development site. The discharge rate from the facility shall be such that the pre-development discharge rate from the site is not exceeded in the post-developed condition for the design storm event. The precondition discharge rate shall be calculated assuming the site is in a natural state.

24.59.3.2.5.2 Storage.

The design storage shall be the volume of the design storm event hydrograph that exceeds the allowable discharge rate noted above. Basins without upstream detention areas and with drainage areas of 130 acres or less may calculate storage using the Modified Rational Method as described in the Storm Water Management Guidance Manual. Basins with drainage areas greater than 130 acres or where the Modified Rational Method is not applicable shall be designed using an approved method as described in the Storm Water Management Guidance Manual.

24.59.3.2.5.3 Impoundment Design Criteria.

The steepest side slope permitted shall be 4:1 for a vegetated earth embankment, 2:1 for a rock dam, or as determined by a geotechnical

investigation that is certified by a licensed professional engineer and approved by the City Engineer.

Earth embankments used to temporarily impound the required detention volume shall be constructed according to standard specifications for fill. These specifications should be, at a minimum, adequate for levee embankments and be based on the City of Laredo standard specifications for embankment, topsoil, sodding, and seeding.

Where permanent impoundment is to be provided a geotechnical investigation is required. Based on the geotechnical report more stringent specifications may be required.

Embankments, spillways and other appurtenances shall be designed to withstand the pressures of the impounded storm water.

Excavated detention facilities must provide positive drainage with a minimum bottom grade of 0.3% (0.003 /ft). A low flow pilot channel shall also be provided.

24.59.3.2.5.4 Freeboard and Emergency Spillway.

The top of the embankment shall be a minimum of two (2) feet above the 50-year maximum design elevation. An emergency spillway or overflow area shall be provided above the maximum design elevation to ensure that the State of Texas Dam Safety overflow requirements or the 100-year frequency event, whichever is more stringent, does not overtop the embankment.

If the emergency spillway capacity is to be provided over the embankment, the spillway will be structurally designed to prevent erosion and consequent loss of structural integrity. The spillway or the dam portion of the pond shall be constructed of reinforced concrete or with concrete lining. Alternate materials may be approved by the City Engineer.

24.59.3.2.5.5 Outflow Structure.

Where the outflow structure conveys flow through the embankment in a conduit, the conduit shall be reinforced concrete or other material to be approved by the City Engineer designed to support the external loads with an adequate factor of safety. It shall withstand the internal hydraulic pressures without leakage under full external load or settlement. It must convey water at the designed velocity without damage to the interior surface of the conduit.

24.59.3.2.5.6 Fence.

- 1) Security fencing with a minimum height of six (6) feet shall encompass the detention and maintenance area when required, as determined by the City Engineer, due to potential safety hazards created by prolonged storage of floodwater.
- 2) Design shall be such that it does not restrict the inflow or outfall of the basin.
- 3) Adequate access for maintenance equipment shall be provided.
- 4) In basins to be used for recreation areas during dry periods, pedestrian access may be provided with the approval of the City Engineer.

24.59.3.2.5.7 Floatable Controls.

All detention facilities shall incorporate some type of floatable controls (baffles, skimmers, etc.) to ensure that discharge of floatables from the facility is limited to the maximum extent practicable. As part of the ongoing detention facility maintenance, the detention facilities shall be regularly checked and any floatables removed. A maintenance regimen for the removal of floatables shall be part of the maintenance schedule submitted for permit review and approval.

24.59.3.2.5.8 Maintenance Access Requirements.

A minimum fifteen (15) foot wide maintenance area shall be provided around the detention facility. The crown (top of berm) shall have a minimum width of ten (10) feet unless used for primary maintenance of the detention facility, in which case it shall have a minimum width of fifteen (15) feet.

Access must be provided into detention basins designed for periodic desilting and debris removal. Basins with permanent storage must include dewatering facilities to provide for maintenance.

24.59.3.2.5.9 Municipality Participation.

When the City Engineer determines that additional storage capacity beyond that required by the applicant for on-site storm water management is necessary in order to enhance or provide for the public health, safety and general welfare, to correct unacceptable or undesirable existing conditions or to provide protection in a more desirable fashion for future development, the City Engineer may:

- 1) Require that the applicant grant any necessary easements over, through or under the applicant's property to provide access to or drainage for such a facility;
- 2) Require that the applicant attempt to obtain from the owners of property over, through or under where the storm water management facility is to be located, any easements necessary for the construction and maintenance of same (and failing the obtaining of such easement the City may, at its option assist in such matter by purchase, condemnation, dedication or otherwise, and subject to paragraph (3) below, with any cost incurred thereby to be paid by the City); and/or
- 3) Participate financially in the construction of such facility to the extent that such facility exceeds the required on-site storm water management as determined by the City Engineer.
- 4) The City may assume maintenance of the facility as a storm water management facility.

To implement this provision both the municipality and developer must be in agreement with the proposed facility that includes the additional storage capacity and jointly develop a cost sharing plan which is agreeable to all parties.

24.59.3.2.6 Regional Storm Water Management Facilities.

For the purposes of this Code a regional storm water management facility shall be any facility constructed on a channel or waterway whose total drainage area is greater than 130 acres and serves more than one development. Regional storm water management facilities may be maintained by the City.

The design of regional storm water management facilities shall assume that all contributing areas are fully developed in accordance with approved future land use plans. A plan of the contributing area will be submitted as part of the permitting process indicating conveyance easements through the property being developed sufficient to convey post development flows to the facility. If the proposed development is upstream of the regional storm water management facilities, pass through conveyance systems shall be included in the design of the development.

24.59.3.2.7 Retaining Walls in Waterways.

1. All retaining structures/walls located within a 100-year floodplain shall be constructed of reinforced concrete or other materials approved as designed for the specific on-site conditions. Special structural designs shall be submitted with supporting calculations to the City Engineer for approval.

2. Retaining walls shall be designed to achieve a minimum factor of safety of 2 against overturning and 1.5 against sliding.
3. The criteria/parameters used in considering the adequacy of the retaining wall design shall be as outlined in the Storm Water Management Guidance Manual.
4. Any wall taller than four (4) feet in height will require a building permit and an engineer's certification that the wall is structurally sound and built as per plan specifications.

24.59.3.3 Easements.

Property development/redevelopment that includes detention and/or drainage facilities shall dedicate easements to the City. The minimum width of easements shall be determined by the City Engineer, based on the examples set out in the Storm Water Management Guidance Manual. Final plats shall contain standard language addressing the easements and management areas, and on-ground monumentation as outlined below:

1. Floodway easements are to be dedicated for open waterways in nonresidential areas. They will be maintained by the property owner.
2. Drainage easements are to be dedicated for manmade drainage channels, closed storm sewer systems or drainage structures in areas not owned by the City but to be maintained by the City.
3. Detention basins shall be maintained in detention area easements. Detention basins constructed through private development activities shall be maintained by the property owner or neighborhood association. Detention basins constructed for the City, or constructed as a regional facility approved by the City, shall be maintained by City personnel.
4. All detention easements and drainage easements shall include provisions for adequate maintenance such as dedicated and maintained access easements. These access easements shall be sufficient to provide ingress and egress for maintenance. The minimum width shall be fifteen (15) feet. Access easements are needed only when the area to be maintained does not border a public right-of-way.

24.59.4 TEMPORARY EROSION AND SEDIMENT CONTROL.

24.59.4.1 General Requirements.

1. All operators of construction sites shall use best management practices (BMPs) to control and reduce the discharge, to the MS4 and to waters of the United States, of

sediment, silt, earth, soil, and other material associated with clearing, grading, excavation, land filling, and other construction activities to the maximum extent practicable. Any best management practices (BMPs) capable of installation and/or implementation prior to commencement of construction (for example, structural measures) shall be installed and/or implemented prior to commencement of construction at the site or in compliance with a schedule for installation and/or implementation in an applicable Storm Water Pollution Prevention Plan (SWPPP). The best management practices (BMPs) used at construction sites may include, but are not limited to, the following measures:

- a. Ensuring that existing vegetation is preserved where feasible and that disturbed portions of the site are stabilized as soon as practicable in portions of the site where construction activities have stopped for fourteen days, and no further construction is anticipated for an additional seven days, or have permanently ceased;
- b. Use of structural practices to divert flows from exposed soils, to store flows, or to otherwise limit runoff and the discharge of pollutants from the site to the maximum extent practicable;
- c. Minimization of the tracking of sediments off-site by vehicles, the generation of dust, and the escape of other windblown waste from the site;
- d. Prevention of the discharge of building materials, including cement, lime, concrete, asphalt, or mortar, to the MS4 or waters of the United States;
- e. Measures to prevent and contain spills of paints, solvents, fuels, septic waste, and other hazardous chemicals and pollutants associated with construction, and to assure proper cleanup and disposal of any such spills in compliance with state, federal, and local requirements;
- f. Implementation of proper waste disposal and waste management techniques, including covering waste materials, minimizing ground contact with hazardous chemicals and trash, and installing and maintaining covered receptacles for rubbish and garbage to assure that such waste materials are not blown or carried by rainfall runoff from the site;
- g. Timely maintenance of vegetation, erosion and sediment control measures, and other best management practices (BMPs) to maintain them in good and effective operating condition; and
- h. Installation of structural measures during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable. Such installed structural measures may include, but are not limited to, the following: storm water detention structures

(including wet ponds); storm water retention structures; flow attenuation by use of open vegetative swales and natural depressions; other velocity dissipation devices; infiltration of runoff on site; and sequential systems which combine several practices. Operators of construction sites are only responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site, and are not responsible for maintenance after storm water discharges associated with construction activity have terminated.

2. Qualified personnel (provided by the operator of the construction site) shall inspect disturbed areas of any construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site, at least once every seven (7) calendar days and within twenty-four (24) hours of the end of a storm that is 0.5 inches or greater. All erosion and sediment control measures and other identified best management practices (BMPs) shall be observed in order to ensure that they are operating correctly and are effective in preventing significant impacts to receiving waters and the MS4. Based on the results of the inspection, best management practices (BMPs) shall be modified as appropriate, and as soon as is practicable.
3. Any owner of a site of construction activity, whether or not he/she is an operator, is jointly and severally responsible for compliance with the requirements in this 24.59.4.1 of the Code.
4. Any contractor or subcontractor on a site of construction activity, who is not an owner or operator, but who is responsible under his/her contract or subcontract for implementing a best management practices (BMPs) control measure, is jointly and severally responsible for any willful or negligent failure on his/her part to adequately implement that control measure.

24.59.4.2 Storm Water Pollution Prevention Plan (SWPPP) Submittal and Review.

All operators of sites of construction activity, including clearing, grading, excavation, and land filling activities, that result in the disturbance of five (5) or more acres of total land area, or that is part of a common plan of development or sale within which five (5) or more acres of total land area are disturbed, or who are required to obtain an NPDES permit for storm water discharges associated with construction activity, shall comply as a minimum with the following requirements (in addition to those in 24.59.4.1 of this Code and those requirements defined in the most current EPA/NPDES storm water permit):

1. Any operator who intends to obtain coverage for storm water discharges from a construction site under the NPDES General Permit for Storm Water Discharges From Construction Sites ("the Construction General Permit") shall submit a signed copy of the Notice of Intent (NOI) to the City Engineer, at least fifteen (15) calendar days prior to the commencement of construction activities. If the

construction activity is already underway upon the effective date of this Chapter, the NOI shall be submitted within thirty (30) calendar days. For storm water discharges from construction sites where the operator changes, a revised NOI shall be submitted at least two (2) calendar days prior to when the new operator commences work at the site.

2. A SWPPP shall be prepared and implemented prior to the beginning of construction activities in accordance with the requirements of the Construction General Permit or any individual NPDES permit issued for storm water discharges from the construction site, and with any additional requirement imposed by or under this Code and any other City Code.
3. The SWPPP shall be prepared, dated, signed, and sealed by a licensed professional engineer. The signature and seal of the licensed professional engineer shall constitute his/her attestation that the SWPPP fully complies with the requirements of the Construction General Permit, or with any applicable individual NPDES permit issued for storm water discharges from the construction site, and with any additional requirement imposed by or under this Code. The SWPPP shall contain the name, title, and business address of the licensed professional engineer signing it.
4. The SWPPP shall be updated and modified as appropriate and as required by the Construction General Permit and this Code. Any update or modification to the SWPPP shall be prepared, signed, and sealed by a licensed professional engineer.
5. The SWPPP shall be prepared and submitted to the City Engineer at least fifteen (15) calendar days prior to the commencement of construction activities. If the construction activity is already underway upon the effective date of this Code, the SWPPP shall be submitted within thirty (30) calendar days.

The SWPPP shall be prepared and submitted to the City Engineer in conjunction with the Storm Water Management Permit and Building Permit application. A Storm Water Management Permit shall be issued prior to commencement of construction activity.

6. A copy of any SWPPP that is required by 24.59.4.2 of this Code shall be submitted to the City in conjunction with any application for a building permit, and Storm Water Management Permit, and any other City approval necessary to commence or continue construction at the site.
7. If, upon the City Engineer's review of the SWPPP (or any modification to the SWPPP) and any site inspection that the City Engineer may conduct, the City Engineer determines that the SWPPP does not comply with the requirements of the Construction General Permit, any individual NPDES permit issued for storm water discharge from the construction site, or any additional requirement imposed by or under this Code, the City Engineer may issue an order prohibiting the

commencement, or the continuation, of any construction activity at the site. Also, if at any time the City Engineer determines that the SWPPP is not being fully implemented, the City Engineer may similarly issue an order prohibiting the continuation of any construction activity at the site. Any order issued by the City Engineer under the authority of this paragraph may be in the form of a Compliance Order under 24.59.8.5, an Emergency Cease and Desist Order under 24.59.8.7, or a Stop Work Order under 24.59.8.8 of this Code.

8. Upon review of the SWPPP and any site inspection that is conducted, the City may deny approval of any building permit, Storm Water Management Permit, or any other City approval necessary to commence or continue construction, or to assume occupancy, on the grounds that the SWPPP does not comply with the requirements of the Construction General Permit, any individual or group NPDES permit issued for storm water discharge from the construction site, or any additional requirement imposed by or under this Code. Also, if at any time the City determines that the SWPPP is not being fully implemented, the City may similarly deny approval of any building permit, storm water management plan permit, or any other City approval necessary to commence or continue construction, or to assume occupancy, at the site.
9. All contractors and subcontractors identified in a SWPPP shall sign a copy of the following certification statement before conducting any professional service identified in the SWPPP:

“I certify under penalty of law that I understand the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.”

The certification must include the name and title of the person providing the signature; the name, address, and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

10. The SWPPP, with the licensed professional engineer's signature, seal, and date affixed, and the certifications of contractors and subcontractors required by 24.59.4.2 of this Code, and with any modifications attached, shall be retained at the construction site from the date of commencement of construction through the date of final stabilization.
11. The operator shall make a copy of the SWPPP and any modification thereto available to the City Engineer and any other authorized City inspector at the construction site upon request (as well as to EPA and State inspectors).
12. The City Engineer may notify the operator at any time that the SWPPP does not meet the requirements of the Construction General Permit, any applicable individual NPDES permit issued for storm water discharges from the construction

site, or any additional requirement imposed by or under this Code. Such notification shall identify those provisions of the permit or code which are not being met by the SWPPP, and identify which provisions of the SWPPP require modifications in order to meet such requirements. Within seven (7) calendar days of such notification from the City Engineer, the operator shall make the required changes to the SWPPP and shall submit to the City Engineer a written certification that the requested modifications have been made.

13. The operator shall modify the SWPPP whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the MS4 or to the waters of the United States, and which has not otherwise been addressed in the SWPPP, or if the SWPPP proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objective of controlling pollutants in storm water discharges associated with construction activity. In addition, the SWPPP shall be modified to identify any new contractor and/or subcontractor that will implement a measure in the SWPPP. All modifications to the SWPPP shall be submitted to the City Engineer within seven (7) calendar days of a change, determination of ineffectiveness (self or City inspection), or effective date of changes in contractor and/or subcontractor.
14. Qualified personnel (provided by the operator of the construction site) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site, at least once every seven (7) calendar days and within twenty-four (24) hours of the end of any storm that is 0.5 inches or greater. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters or the MS4. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.
15. Based on the results of the inspections required by the 24.59.4.2 item 14 of this Code, the site description and/or the pollution prevention measures identified in the SWPPP shall be modified as appropriate, but in no case later than seven (7) calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP within seven (7) calendar days following the inspection. All modifications to the SWPPP shall be submitted to the City Engineer within seven (7) calendar days of the date of inspection.

16. A report log summarizing the scope of any inspection required by the 24.59.4.2 item 15 of this Code, and the name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken shall be made and retained as part of the SWPPP for at least three years from the date that the site is finally stabilized. Such report shall identify any incidence of noncompliance. Where a report does not identify any incidence of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP, the facility's NPDES permit, and this Code. The report shall be certified and signed by the person responsible for making it.
17. The operator shall retain copies of any SWPPP and all reports required by this Code or by the NPDES permit for the site, and records of all data used to complete the NOI, for a period of at least three years from the date that the site is finally stabilized.
18. Where a site has been finally stabilized and all storm water discharges from construction activities that are authorized by this Code and by the NPDES permit for those construction activities are eliminated, or where the operator of all storm water discharges at a facility changes, the operator of the construction site shall submit to the City Engineer, a Notice of Termination (NOT).
19. Upon final stabilization of the construction site, the owner (or the duly authorized representative thereof) shall submit to the City Engineer written certification by a licensed professional engineer that the site has been finally stabilized. The City may withhold occupancy or use of permits for any premises constructed on the site until such certification of final stabilization has been filed and the City Engineer has determined, following any appropriate inspection, that final stabilization has, in fact, occurred and that any required permanent structural controls have been completed.

24.59.5 STORM WATER QUALITY MANAGEMENT

24.59.5.1 Applicability.

- a) Except as provided in subparagraph (2) of this paragraph, a site specific storm water quality management plan is required for all residential, commercial, and industrial development and/or redevelopment of five acres or more within the City of Laredo and its jurisdictional areas.
 - 1) For the purpose of this section, the area of the development must include all contiguous land owned by the responsible party, regardless of the amount of land that will be affected by the development activity.

- 2) A storm water quality management plan is not required when a portion of a previously developed tract of land is redeveloped, unless the redevelopment will result in the conversion of more than ¼ acre from a porous surface to an impervious surface.
- b) The storm water quality plan must be submitted at the time of preliminary plat submission, or submission of a site plan with an application for a building permit (if the site is more than 5 acres).
- c) The storm water quality management plan must identify the location of the ultimate outfall from the City's MS4 into the receiving water and any environmentally sensitive areas that will receive any pollutants carried by storm water pollution from the site.
- d) The storm water quality management plan must state whether an NPDES storm water pollution prevention plan or a pollution control plan will be submitted to the City Engineer.
- e) The storm water quality management plan must be signed and sealed by a professional engineer licensed to practice engineering in the State of Texas.

24.59.5.2 Special Land Use Requirements.

A storm water quality management plan and any plans submitted for a building permit for the development of property that will be used for one of the below listed uses must identify the appropriate best management practices (BMPs) to prevent pollutants being discharged into the City's MS4. The owner of a site within City that is currently being used for one of the activities described below is not required to physically alter the existing facility to comply with this section, unless alterations or repairs to the facility require the facility to be brought into compliance with the current City of Laredo building code. The uses are as follows:

1. Fueling stations.
2. Vehicle/equipment washing and steam cleaning facilities.
3. Facilities engaged in harmful liquid materials loading and unloading.
4. Facilities engaged in harmful liquids storage in aboveground storage tanks.
5. Facilities engaged in container storage of harmful liquids (such as oil, chemical, & hazardous substances), food wastes, and hazardous wastes.
6. Facilities engaged in outdoor storage of raw materials that are subject to leaching and transport by erosion and sedimentation, such as gravel, sand, topsoil,

compost, sawdust, wood chips, building materials, including lumber, which are subject to leaching; and concrete and metal products, which are subject to chemical erosion, corrosion, and leaching.

24.59.5.3 General Requirements.

24.59.5.3.1 Preliminary Plan (Platting).

A layout of the proposed water quality management system and calculations showing it meets the requirements of 24.59.5.4 below shall be submitted with the other requirements as outlined in 24.59.2.

24.59.5.3.2 Final Construction Plans.

Final construction plans and specifications, and calculations showing that the water quality management system meets the requirements of 24.59.5.4 below shall be submitted with the other requirements as outlined in 24.59.2.

24.59.5.4 Design Criteria.

24.59.5.4.1 Quality Management Criteria.

The criteria of the water quality management for the new development and redevelopment is that the water quality effects of the development should not be significantly different from the water quality effects of the same site before construction. Development/redevelopment within the City of Laredo shall provide, at the minimum, one of the following methods for storm water treatment, provided that the discharges meet the requirements of the City's storm water NPDES permit and state water quality criteria. More stringent treatment methods may be required by the City Engineer if discharges fail to meet water quality goals. The drainage area for determining treatment volumes shall include all areas draining to the facility (on-site and off-site). If off-site flows are not commingled with on-site flows prior to treatment, they should not be included in the treatment volume.

Method Treatment Volume and Recovery Rate

- a. **Wet Detention:** Wet detention treatment volume shall be, at a minimum, the first one (1) inch of runoff. No more than 1/2 of the volume may be discharged in the first 24 hours.
- b. **Off-line Retention:** Off-line retention diverts the first flush of storm water runoff to a facility separated from the main line storm water conveyance system. The treatment volume for off-line retention shall be one-half (1/2) inch of runoff. The treatment volume shall again be available within a minimum of 24 hours and a maximum of 72 hours following a storm event, with appropriate on-site soils test submitted to verify the infiltration rate.

- c. **On-line Retention or Detention:** For on line retention or detention with under drained filtration, treatment volume shall be provided equal to one (1) inch of runoff. Only bottom underdrain systems planted with grass that are capable of recovering the treatment volume within 24 hours shall be allowed, to the satisfaction of the City Engineer, to exceed the capabilities of such a bottom underdrain system.

Design criteria and design specifications for the water quality treatment methods described above are outlined in the Storm Water Management Guidance Manual

24.59.5.4.2 Floatable Controls.

All detention facilities shall incorporate floatable controls (baffles, etc.) to ensure that no floatables are discharged from the facility. The detention facilities shall be regularly checked and any floatables removed as part of the ongoing detention facility maintenance.

24.59.5.4.3 Spill Control.

All detention facilities shall incorporate in the design of their discharge structures a method for stopping all discharges in case of an accidental spill occurring within the detention facilities drainage area. This discharge control device shall be periodically checked to ensure its continued operation as part of the ongoing detention facility maintenance.

24.59.5.4.4 BMPs.

For residential development/redevelopment areas of more than (5) acre, and with the approval of the City Engineer or his/her authorized representative, the water quality requirements as stated in 24.59.5.4 may be waived in favor of a series of permanent BMPs, i.e., swales, vegetated buffers, small impoundments, etc. that are shown to provide sufficient water quality enhancements to meet the intent of 24.59.4

24.59.5.4.5 Discharges to the Rio Grande.

For sites discharging directly into the Rio Grande the runoff amounts used for the determination of water quality treatment volume will be 50% greater than those indicated in 24.59.4. The only treatment method for water quality shall be off-line retention unless otherwise approved by the City Engineer and the IBWC.

24.59.6 INSPECTION

24.59.6.1 Inspection Schedule and Reports.

1. Prior to the issuance of a storm water management permit, the developer will submit to the City Engineer a proposed inspection and construction control schedule. The City of Laredo or its authorized representative shall conduct inspections and file reports for periodic inspections necessary during construction of storm water management systems to ensure compliance with the approved plans.
2. No work shall proceed until the City Engineer or his/her authorized representative inspects and approves the work previously completed and furnishes the developer with the results of the inspection reports as soon as possible after completion of each required inspection.
3. Any portion of the work which does not comply must be promptly corrected by the developer, after written notice from the City Engineer or his/her authorized representative. The notice shall set forth the nature of corrections required and the time within which corrections will be made.
4. The developer shall notify the City Engineer before commencing any work in conjunction with the storm water management plan and upon completion of the project when a final inspection will be conducted.

24.59.6.2 Inspection Requirements During Construction.

After commencing initial site operations, regular inspections shall be made at the following specified stage of construction:

1. Infiltration systems at the commencement, during, and upon completion of construction.
2. Flow attenuation devices, such as open vegetated swales, upon the completion of construction.
3. Retention and detention structures at the following stages:
 - a. Upon completion of excavation to sub-foundation and where required, installation of structural supports or reinforcement for structures, including but not limited to:
 1. Core trenches for structural embankments;
 2. Inlet-outlet structures and anti-seep structures, watertight connectors on pipes; and

3. Trenches for enclosed storm drainage facilities.
 - b. During placement of structural fill, concrete, and the installation of catch basins;
 - c. During backfill of foundations and trenches;
 - d. During embankment construction; and
 - e. Upon completion of final grading and the establishment of permanent stabilization.

24.59.6.3 Final Inspection Reports.

A final inspection shall be conducted by the City Engineer or his/her authorized representative upon completion of the storm water management facility to determine if the completed work is constructed in accordance with the approved plan and this Code. "As-built" certification by a licensed professional engineer licensed in the State of Texas is also required to certify that the facility has been constructed as shown on the "As-built" plans and is substantially compliant with plans and specifications. The developer will receive written notification of the results of the final inspection. The City Engineer shall maintain a permanent file of inspection reports.

24.59.6.4 Inspection for Prevention Maintenance.

1. Preventive maintenance shall be ensured through inspection of all infiltration systems, retention, or detention structures by the City Engineer or his/her authorized representative. The inspection shall occur during the first year of operation and at least once every three years thereafter.
2. Inspection reports shall be maintained by the City Engineer or his/her authorized representative for all storm water management facilities.
3. Inspection reports for retention and detention facilities shall include the following:
 - a. The date of inspection;
 - b. Name of inspector;
 - c. The condition of the following:
 1. Vegetation;
 2. Fences;
 3. Spillways;
 4. Embankments;
 5. Reservoir area;
 6. Outlet channels;
 7. Underground drainage;
 8. Sediment load; or

9. Any other item that could affect the proper function of the storm water management system.
 - d. Description of needed maintenance.
4. If, after an inspection by the City Engineer or his/her authorized representative, the condition of a storm water management facility presents an immediate danger to the public health or safety, because of an unsafe condition or improper maintenance, the City Engineer or his/her authorized representative shall take such action as may be necessary to protect the public and make the facility safe.

24.59.7 MAINTENANCE

24.59.7.1 Maintenance Agreement.

1. Prior to the issuance of any building permit for which storm water management is required, the City Engineer shall require the applicant or owner to execute **under oath**, an inspection and maintenance agreement binding on all subsequent owners of land served by the private storm water management facility. Such agreement shall provide for access to the facility at reasonable times for regular inspections by the City Engineer or his/her authorized representative and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any provision established.
2. The agreement shall be recorded by the applicant and/or owner in the deed records of Webb County, Texas.
3. The agreement shall also provide that, if after the notice by the City Engineer to correct a violation requiring maintenance work, satisfactory corrections are not made by the owner(s) within a reasonable period of time (thirty (30) days maximum), the City Engineer may perform all necessary work to place the facility in proper working condition. The owner(s) of the facility shall be assessed the cost of the work and any penalties. This may be accomplished by placing a lien on the property, which may be placed on the tax bill and collected as ordinary taxes by the City.

24.59.7.2 Maintenance Responsibility.

1. All water quality controls and their appurtenances required for commercial or multifamily development shall be maintained by the owner of the commercial or multifamily development.
2. All water quality controls and drainage required for single family or duplex residential development shall be maintained by the City for **two (2) years** after the final acceptance for the entire development. The City will not accept any drainage structure which is not complete according to the requirements of this Code.

3. The owner of the property on which work has been done pursuant to this Code for private storm water management facilities, or any other person or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and sediment control measures, and other protective devices and remove and properly dispose of all floatables. Such repairs or restoration and maintenance shall be in accordance with approved plans.
4. A maintenance schedule shall be developed for the life of any storm water management facility and shall state the maintenance to be completed, the time period for completion, and who shall perform the maintenance. This maintenance schedule shall be printed on the storm water management plan.

24.59.8 ADMINISTRATIVE ENFORCEMENT REMEDIES

24.59.8.1 Warning Notice.

When the City Engineer finds that any person has violated, or continues to violate, any provision of this Code, or any order issued hereunder, the City Engineer may serve upon that person a written Warning Notice, specifying the particular violation believed to have occurred and requesting the discharger to immediately investigate the matter and to seek a resolution whereby any offending discharge will cease. Investigation and/or resolution of the matter in response to the Warning Notice in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the Warning Notice. Nothing in this subsection shall limit the authority of the City Engineer to take any action, including emergency action or any other enforcement action, without first issuing a Warning Notice.

24.59.8.2 Notification of Violation.

When the City Engineer finds that any person has violated, or continues to violate, any provision of this Code, or any order issued hereunder, the City Engineer may serve upon that person a written Notice of Violation. Within ten (10) calendar days of the receipt of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention of recurrence thereof, to include specific required actions, shall be submitted by the alleged violator to the City Engineer. If the alleged violator denies that any violation occurred and/or contends that no corrective action is necessary, an explanation of the basis of any such denial or contention shall be submitted to the City Engineer within ten (10) calendar days of receipt of the notice. Submission of an explanation and/or plan in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the Notice of Violation (NOI). Nothing in this section shall limit the authority of the City Engineer to take any action, including emergency action or any other enforcement action, without first issuing a Notice of Violation (NOV).

24.59.8.3 Consent Orders.

The City Engineer may enter into Consent Orders, assurances of voluntary compliance, or other similar documents establishing an agreement with any person responsible for noncompliance with any provision in this Code or any order issued hereunder. Such documents may include specific actions to be taken by the person to correct the noncompliance within a time period specified by the document. Such documents shall have the same force and effect as the administrative orders issued pursuant to 24.59.8.5, 24.59.8.6, and 24.59.8.7 of this Code and shall be judicially enforceable.

24.59.8.4 Show Cause Hearing.

The City Engineer may order any person who has violated, or continues to violate, any provision of this Code, or any order issued hereunder, to appear before the City Engineer and show cause why a proposed enforcement action should not be taken. Notice shall be served on the alleged violator specifying the time and place for the hearing, the proposed enforcement action, the reasons for such action, and a request that the alleged violator show cause why the proposed enforcement action should not be taken. The notice of the hearing shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) calendar days prior to the hearing. Such notice may be served on any authorized representative of the alleged violator. The hearing shall be conducted pursuant to the rights and procedures specified in 24.59.9.1 of this Code. A show cause hearing shall not be a bar against, or prerequisite for, taking any other action against the alleged violator.

24.59.8.5 Compliance Orders.

When the City Engineer finds that any person has violated, continues to violate, or threatens to violate, any provision of this Code, or any order issued hereunder, the City Engineer may issue an order to the violator directing that the violator come into compliance within a specified time limit, prior to commencement or continuance of operation, or immediately. Compliance orders may also contain other requirements to address the noncompliance, including additional self-monitoring, and management practices designed to minimize the amount of pollutants discharged to the MS4 and waters of the United States. A compliance order may not extend the deadline for compliance established by a state or federal standard or requirement, nor does a compliance order relieve the person of liability for any violation, including any continuing violation. Issuance of a compliance order shall not be a bar against, or a prerequisite for, taking any other action against the violator.

24.59.8.6 Remediation, Abatement, and Restoration Orders.

When the City Engineer finds that a person has violated, or continues to violate, any provision of this Code, or any order issued hereunder, and that such violation has adversely affected the MS4, or the waters of the United States, the City Engineer may issue an order to the violator directing him or her to undertake and implement any

appropriate action to remediate and/or abate any adverse effects of the violation upon the MS4, or the waters of the United States, and/or to restore any part of the MS4, or the waters of the United States. Such remedial, abatement, and restoration actions may include, but are not limited to: monitoring, assessment, and evaluation of the adverse effects and determination of the appropriate remedial, abatement, and/or restoration action; confinement, removal, cleanup, treatment, and disposal of any discharged or released pollution or contamination; prevention, minimization, and/or mitigation of any damage to the public health, welfare, or the environment that may result from the violation; and restoration or replacement of City property or natural resources damaged by the violation. The order may direct that the remediation, abatement, and/or restoration be accomplished on a specified compliance schedule and/or be completed within a specified period of time. An order issued under this Subsection does not relieve the violator of liability for any violation, including any continuing violation. Issuance of an order under this Subsection shall not be a bar against, or a prerequisite for, taking any other action against any responsible party.

24.59.8.7 Emergency Cease and Desist Orders.

When the City Engineer finds that any person has violated, continues to violate, or threatens to violate, any provision of this Code, or any order issued hereunder, or that the person's past violations are likely to recur, and that the person's violation(s), or threatened violation(s), have caused or contributed to an actual or threatened discharge to the MS4 or waters of the United States which reasonably appears to present an imminent or substantial endangerment to the health or welfare of persons or to the environment, the City Engineer may issue an order to the violator directing it to immediately cease and desist all such violations and directing the violator to:

1. Immediately comply with all requirements of this Code; and
2. Take such appropriate preventive action as may be needed to properly address a continuing or threatened violation, including immediately halting operations and/or terminating the discharge.

Any person notified of an emergency order directed to it under this Subsection shall immediately comply and stop or eliminate its endangering discharge. In the event of a discharger's failure to immediately comply voluntarily with the emergency order, the City Engineer may take such steps as deemed necessary to prevent or minimize harm to the MS4 or waters of the United States, including immediate termination of a facility's water supply, sewer connection, or other municipal utility services. The City Engineer may allow the person to commence or recommence its discharge when it has demonstrated to the satisfaction of the City Engineer that the period of endangerment has passed, unless further termination proceedings are initiated against the discharger under this Code. A person that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful discharge and the measures taken to prevent any future occurrence, to the City Engineer within ten (10) calendar days of receipt of the emergency order. Issuance of an

emergency cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the violator.

24.59.8.8 Stop Work Orders.

Whenever the City Engineer finds that any operator of a construction site has violated, threatens to violate, or continues to violate, any provision of this Code, or any order issued hereunder, the City Engineer may issue a Stop Work Order to the operator, and require that a copy of the Stop Work Order be posted at the construction site and distributed to all City departments and divisions whose decisions affect any activity at the site. Unless express written exception is made by the City Engineer, the Stop Work order shall prohibit any further construction activity, or any commencement of construction activity, at the site and shall bar any further inspection or approval by the City associated with a building permit, grading permit, or any other City approval necessary to commence or continue construction or to assume occupancy at the site. Issuance of a Stop Work Order shall not be a bar against, or a prerequisite for, taking any other action against the violator.

24.59.9 RIGHT TO RECONSIDERATION, HEARING, AND APPEAL

24.59.9.1 Reconsideration and Hearing.

1. Any person subject to a Compliance Order under 24.59.8.5, a Remediation, Abatement, or Restoration Order under 24.59.8.6, an Emergency Cease and Desist Order under 24.59.8.7, or a Stop Work Order under 24.59.8.8, of this Code may petition the City Engineer to reconsider the basis for his/her order within fifteen (15) calendar days of the affected person's notice of issuance of such an order.
2. Failure to submit a timely written petition for reconsideration shall be deemed to be a waiver of any further right to administrative reconsideration or review of the order.
3. In its petition, the petitioning party must indicate the provisions of the order objected to, the reasons for the objection(s), any facts that are contested, the evidence that supports the petitioner's view of the facts, any alternative terms of an order that the petitioner would accept, and whether the petitioning party requests a hearing on its petition.
4. The effect of any Compliance Order under 24.59.8.5, Remediation, Abatement, or Restoration Order under 24.59.8.6, and any Stop Work Order under 24.59.8.8 shall be stayed pending the City Engineer's reconsideration of the petition, and any hearing thereon, unless the City Engineer expressly makes a written determination to the contrary. The effectiveness of any Emergency Cease and Desist Order under 24.59.8.7 shall not be stayed pending the City Engineer's reconsideration, or

any hearing thereon, unless the City Engineer expressly and in writing stays his/her emergency order.

5. Within thirty (30) calendar days of the submittal of a petition for reconsideration, the City Engineer shall either (1) grant the petition and withdraw or modify the order accordingly; (2) deny the petition, without hearing if no material issue of fact is raised; or (3) if a hearing has been requested and a material issue of fact has been raised, set a hearing on the petition.
6. Written notice of any hearing set by the City Engineer pursuant to 24.59.9.1 item 5 shall be served on the petitioning party personally or by registered or certified mail (return receipt requested) at least ten (10) calendar days prior to the hearing. Such notice may be served on any authorized representative of the petitioning party.
7. The City Engineer may conduct the hearing and take evidence, or may designate any employee of the City or any specially-designated attorney or engineer to:
 - a. Issue in the name of the City notices of hearing requesting the attendance and testimony of witnesses and the production of evidence relevant to any matter involved in the hearing;
 - b. Take evidence; and
 - c. Transmit a report of the evidence and hearing, including transcripts and other evidence, together with recommendations to the City Engineer for action thereon.

At any hearing held pursuant to this Subsection, testimony taken shall be under oath and recorded. Any party is entitled to present his/her case or defense by oral or documentary evidence and to conduct such cross-examination as may be required for a full and true disclosure of the facts. A transcript will be made available to any party to the hearing upon payment of the usual charges thereof.

8. After the City Engineer has reviewed the evidence, he/she shall either (1) grant the petition; (2) deny the petition; or (3) grant the petition in part and deny it in part. The City Engineer may modify his/her order as is appropriate based upon the evidence and arguments presented at the hearing and his/her action on the petition. Further orders and directives as are necessary and appropriate may be issued.

24.59.9.2 Appeal.

Any person whose petition for reconsideration by the City Engineer has not been granted in its entirety and who remains adversely affected by the City Engineer's order, or who is subject to an order of the City Engineer issued following a Show Cause Hearing under

24.59.8.4, may challenge the final action of the City Engineer in an appropriate court of competent jurisdiction.

24.59.10 JUDICIAL ENFORCEMENT REMEDIES

24.59.10.1 Civil Remedies.

24.59.10.1.1 Whenever it appears that a person has violated, or continues to violate, any provision of this Code that relates to:

- a. The preservation of public safety, relating to the materials or methods used in construction of any structure or improvement of real property;
- b. The preservation of public health or to the fire safety of a building or other structure or improvement;
- c. The establishment of criteria for land subdivision or construction of buildings, including street design;
- d. Dangerously damaged or deteriorated structures or improvements;
- e. Conditions caused by accumulations of refuse, vegetation, or other matter that creates breeding and living places for insects and rodents; or
- f. Point source effluent limitations or the discharge of a pollutant, other than from a non point source, into the MS4,

City may invoke Sections 54.011 - 54.017 of the Texas Local Government Code and petition the State district court or the county court-at-law of Webb County, through the City Attorney, for either the injunctive relief specified in 24.59.10.1.2 or the civil penalties specified in 24.59.10.1.3 below, or both the specified injunctive relief and civil penalties.

24.59.10.1.2 Pursuant to Section 54.016 of the Texas Local Government Code, the City may obtain against the owner or the operator of a facility a temporary or permanent injunction, as appropriate, that:

- a. Prohibits any conduct that violates any provision of this Code that relates to any matter specified in 24.59.10.1.1.a-f above; or
- b. Compels the specific performance of any action that is necessary for compliance with any provision of this Code that relates to any matter specified in 24.59.10.1.1.a-f above.

24.59.10.1.3 Pursuant to Section 54.017 of the Texas Local Government Code, the City may recover a civil penalty of not more than \$1,000 per day for each violation of any provision of this Code that relates to any matter specified in 24.59.10.1.1.a-e above, and a civil penalty of not more than \$5,000 per day for each violation of any provision of this Code that relates to any matter specified in 24.59.10.1.1.f above, if the City proves that:

- a. The defendant was actually notified of the provisions of the Code; and
- b. After the defendant received notice of the Code provisions, the defendant committed acts in violation of the Code or failed to take action necessary for compliance with the Code.

24.59.10.2 Criminal Penalties.

1. Any person who has violated any provision of this Code, or any order issued hereunder, shall be strictly liable for such violation, regardless of the presence or absence of a culpable mental state, and shall, upon conviction, be subject to a fine of not more than \$2,000 per violation, per day.
2. Any person who has knowingly made any false statement, representation, or certification in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to this Code, or any order issued hereunder, or who has falsified, tampered with, or knowingly rendered inaccurate any monitoring device or method required under this Code shall, upon conviction, be subject to a fine of not more than \$2,000 per violation, per day.
3. In determining the amount of any fine imposed hereunder, the court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the violation, corrective actions by the violator, the compliance history of the violator, the knowledge, intent, negligence, or other state of mind of the violator, and any other factor as justice requires.

24.59.10.3 Civil Suit Under the Texas Water Code.

Whenever it appears that a violation or threat of violation of any provision of Section 26.121 of the Texas Water Code, or any rule, permit, or order of the Texas Natural Resource Conservation Commission, has occurred or is occurring within the jurisdiction of the City of Laredo, inclusive of its extraterritorial jurisdiction, the City may have a suit instituted in a state district court through its City Attorney for the injunctive relief or civil penalties or both authorized in Subsection (a) of Section 26.123 of the Texas Water Code, against the person who committed or is committing or threatening to commit the violation. This power is exercised pursuant to Section 26.124 of the Texas Water Code.

In any suit brought by the City under this section, the Texas Natural Resource Conservation Commission is a necessary and indispensable party.

24.59.10.4 Remedies Nonexclusive.

The remedies provided for in this Code are not exclusive of any other remedies that the City may have under state or federal law or other City ordinances. The City may take any, all, or any combination of these actions against a violator. The City is empowered to take more than one enforcement action against any violator. These actions may be taken concurrently.

24.59.11 SUPPLEMENTAL ENFORCEMENT ACTION

24.59.11.1 Performance and Maintenance Bonds.

The City Engineer may, by written notice, order any owner or operator of a source of storm water discharge associated with construction or industrial activity to file a satisfactory bond, payable to the City, in a sum not to exceed a value determined by the City Engineer to be necessary to achieve consistent compliance with this Code, any order issued hereunder, any required best management practice (BMP), and/or any SWPPP provision, and/or to achieve final stabilization of the site. The City may deny approval of any building permit, grading permit, subdivision plat, site development plan, or any other City permit or approval necessary to commence or continue construction or any industrial activity at the site, or to assume occupancy, until such a performance or maintenance bond has been filed.

24.59.11.2 Liability Insurance.

The City Engineer may, by written notice, order any owner or operator of a source of storm water discharge associated with construction or industrial activity to submit proof that it has obtained liability insurance, or other financial assurance, in an amount not to exceed a value determined by the City Engineer, that is sufficient to remediate, restore, and abate any damage to the MS4, the waters of the United States, or any other aspect of the environment that is caused by the discharge.

24.59.11.3 Public Nuisances.

A violation of any provision of this Code, or any order issued hereunder, is hereby declared a public nuisance and shall be corrected or abated as directed by the City Engineer. ***Any person(s) creating a public nuisance shall be subject to the provisions of the Nuisance Ordinance of the Code of the City of Laredo, including requirements to reimburse the City for any costs incurred in removing, abating, or remedying said nuisance.***