

Construction Plan Submittal Requirements.

A "complete" Construction Plan submittal shall include all of the following items in the specified quantities:

1. TAX CERTIFICATE (1 copy)

Tax certificates must be submitted with all construction plan applications. These may be obtained from the Guadalupe County Tax Office and should indicate there are no taxes owed.

2. FEES

Construction plan review is subject to the fee schedule stipulated in this UDC.

3. ENGINEER'S SUMMARY LETTER (2 signed/sealed copies/1 Electronic Copy)

No construction plans will be accepted unless accompanied by a summary letter signed and sealed by the same registered Texas professional engineer who sealed the construction plans. Summary letters for small projects do not require an engineer unless slopes or trenches exceed five feet in depth.

The summary letter should describe the proposed development and might include, but not limited to, the following:

- Acreage to be developed
- Watershed in which project is located
- Type of development
- Explanation of any proposed project phasing
- Methods to be used for handling stormwater runoff, i.e., drainage easements, channels, curb inlets, storm sewers, detention, sedimentation and filtration ponds, water quality control methods, etc.
- Effect the proposed development will have on existing and future drainage systems in the area and on the natural and traditional character of the land and waterways.
- Address the applicable sections of the UDC.
- Address dam safety and landfill certification requirements.
- Include Variance request and a description of the variance and justification, and the applicable ordinance and section.

4. GEOTECHNICAL REPORT (2 signed/sealed copies/1 Electronic Copy)

Pavement design shall be based on City of Cibolo Design and Construction Manual specifications for street pavement thickness and design and provide information regarding pavement structural design and other pertinent engineering design information. Show a legible professional engineer's seal and signature. The City Engineer has authority to follow the recommendations of the Geotechnical Report with respect to the provided engineering design and recommendations when the recommendations of the Geotechnical Report demonstrate that to do so would be in the general interest of the City of Cibolo and be in accordance with generally accepted engineering practices.

5. CONSTRUCTION PLANS (2 signed/sealed copies/1 Electronic Copy)

Plans shall be submittal on 24" x 36" sheets. An additional plan set is required if the project is on a State Highway. The construction plan set shall consist of the following information, in the following order:

- Cover Sheet
- Preliminary Plat
- Erosion and Sedimentation Controls
- Drainage and Utility Layout
- Street Plan and Profile
- Drainage Plan and Profile Sheets

- Detention, Filtration and / or Sedimentation Ponds
- Construction Details

Construction Plans details shall incorporate all of the Standard Construction Plan Notes specified in this UDC, as may be amended from time to time, and the Cibolo Design and Construction Manual, as may be amended from time to time.

Note: Once Construction Plans are approved, three (3) full-size “Approved” sets and one “Approved” half-size set of the signed plans shall be submitted before a Site Development Permit can be released.

6. TRAFFIC CONTROL PLAN (TIA)

Two (2) copies and 1 Electronic Copy of a Traffic Control Plan must be included if the construction is in an existing right-of-way. One (1) additional plan is required if the project is on a State Highway.

7. PAVEMENT STRIPING PLAN (If applicable)

If pavement striping is proposed, two (2) copies of a striping plan is required. One (1) additional plan is required if the project is on a State Highway. 1 Electronic Copy must also be submitted.

8. DRAINAGE REPORT

Two (2) copies & 1 Electronic Copy shall be submitted with the application and shall include the following:

- Source of flood plain information (calculations where applicable)
- Table of contents with index and tabbed appendices
- Calculations supporting adequacy of existing and proposed on-site channels, storm sewers, and drainage structures
- Calculations supporting adequacy of detention pond size
- Calculations for flood plain modifications and cross-sections
- Summary assessment of impact on adjacent properties and drainage structures and an assessment of impact to habitable structures and properties downstream of the development, as determined by the City Engineer
- Signature and seal of professional engineer on report
- Calculations of existing and fully developed flows
- Calculations of off-site flows
- Calculations of capacity of drainage facilities on adjacent properties affecting hydraulic performance in the subdivision

A final report reflecting all changes done during review must be submitted for the project file after all comments have been addressed.

9. ACKNOWLEDGEMENT FORM CONCERNING SUBDIVISION PLAN NOTE/DEED RESTRICTIONS

The applicant should carefully check these records before signing the attached Acknowledgment Form. Plat notes are shown on the face of the subdivision plat. Plats are available at the City or the Courthouse. Deed restrictions are recorded at the Courthouse, if you do not have them in your possession.

ACKNOWLEDGMENT FORM CONCERNING
Subdivision Plat Notes, Deed Restrictions or Restrictive Covenants

I, _____ have checked for subdivision plat notes, deed notes, deed restrictions, restrictive covenants and/or UDC conditions prohibiting certain uses and/or requiring certain development restrictions i.e. height, access, screening etc. on this property, located at:

(Address/ Legal Description or Name/Unit of the Subdivision)

If a conflict should result with the request I am submitting to the City of Cibolo due to subdivision plat notes, deed restrictions, or restrictive covenants it will be my responsibility to resolve it. I also acknowledge that I understand the implications of use and/or development restrictions that are a result of a subdivision plat notes, deed restrictions, or restrictive covenants. I understand that if requested I must provide copies of any and all subdivision plat notes, deed restrictions, or restrictive covenant information which may apply to this property.

(Applicant's signature)

(Date)

Standard Construction Plan Requirements & General Notes

1. COVER SHEET

The cover sheet should include the below information:

- Subdivision name on cover sheet in ½ inch or larger letters (use same name as on the final plat)
- Legal description of property (lots, block, subdivision name)
- Name, address and telephone number of owner and engineering firm preparing plans
- Name of watershed
- Location map showing the precise location of the tract (4" x 4" minimum) with north arrow
- TxDOT stationing, for streets intersecting or adjacent to state maintained roadways
- Tabulation sheet index.
- Legible professional engineer's seal, signature, license number and State firm number.
- List granted or proposed variances/waivers from the Cibolo Design and Construction Manual and/or the Unified Development Code.
- The following General Notes:

"Release of this application does not constitute a verification of all data, information and calculations supplied by the applicant. The engineer of record is solely responsible for the completeness, accuracy and adequacy of his/her submittal, whether or not the application is reviewed for Code compliance by the City Engineer."

"All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the City of Cibolo must rely upon the adequacy of the work of the Design Engineer."

- Applicable City of Cibolo General Construction Notes (See Below)
- Tabulation of applicable Special Notes
- Construction Sequencing
- Approval Block for the City Engineer
- A revision block showing the number and date of each revision

2. APPROVED PRELIMINARY PLAT & PROPOSED FINAL PLAT

Following the cover sheet in the Construction Plan set should be the approved Preliminary Plat and proposed Final Plat. A copy of the recorded Final Plat should be included in the final plan set of the approved Construction Plans.

3. GENERAL CONSTRUCTION NOTES

- All construction shall be in accordance with the City of Cibolo Design and Construction Manual and the Unified Development Code, here after referred to the UDC.
- Approval of these construction plans by the City of Cibolo does not constitute a verification of all data, information and calculations supplied by the applicant. The Engineer of Record is solely responsible for the completeness, accuracy and adequacy of his/her submittal whether or not the application is reviewed for code compliance by the City Engineer.
- All responsibility for the adequacy of these plans remains with the engineer who prepared them. In approving these plans, the City of Cibolo must rely on the adequacy of the work of the Engineer.
- Design Procedures are in complete compliance with the City of Cibolo Design and Construction Manual. It is the responsibility of the engineer to request a waiver from any aspect of these plans that do not comply with the UDC.
- A minimum of two existing bench marks tied to City of Cibolo grid should be shown on the plans. In addition two permanent benchmarks per subdivision shall be installed in each subdivision to include description, location, and elevation and tie to City of Cibolo standards when possible.
- Cast bronze survey markers shall be placed in concrete in permanent, accessible locations at the time of construction. The locations of the markers shall be indicated on the construction plans. A minimum of one marker shall be placed for each 20 acres of the project.
- Prior to beginning construction, the owner or his authorized representative shall convene a Pre-Construction Conference between the City of Cibolo, consulting engineer, contractor, and any other affected parties. Notify the City of Cibolo at least 48 hours prior to the time of the conference and 48 hours prior to the beginning of construction.
- The contractor shall give the City a minimum of 48 hours notice before beginning each phase of construction.
- Barricades, built to City of Cibolo specifications, shall be constructed on all dead-end streets and as necessary during construction to maintain job safety. (Streets, etc. may be listed in addition to or instead of note.)
- If blasting is planned by the contractor, a blasting permit must be secured prior to commencement of any blasting.
- Any existing pavement, curbs, and/ or sidewalks damaged or removed will be repaired by the contractor at his expense before acceptance of the subdivision.
- The location of any water and / or wastewater lines shown on the plans must be verified by the Public Works Department.
- Use One Call Utility System: Dial 1-800-344-8377, 48 hours BEFORE you dig.
- All storm sewer pipes to be Class III RCP unless noted otherwise.

4. SPECIAL NOTES FOR PLANS WHEN APPLICABLE:

- The subgrade material in (name of subdivision) was tested by (name of professional soil lab) in (day, month, and year) and the street section designed according to City of Cibolo Design and Construction Manual.
- Street sections are to be constructed as follows:
 - Provide street names, width of R.O.W., or other methods to identify proposed design of different pavement thickness. In writing or graphically, describe the street section(s) to be constructed.

- Manhole frames, covers, and water valve covers will be raised to finished pavement grade at the owner's expense by a qualified contractor with City inspection. All utility adjustments shall be completed prior to final paving construction.
- Crowns of intersecting streets will culminate in a distance of 40' from the intersecting curb line unless otherwise noted. Inlets on the intersecting street shall not be constructed within 40 feet of the valley gutter, unless otherwise noted.
- Prior to final acceptance of a street outside the City limits, street name signs conforming to County standards shall be installed by developer.
- Sidewalk requirements (give street name and location of required sidewalk, i.e., north, south, east, or west side).
- A curb lay down is required at all points where the proposed sidewalk intersects the curb.
- When using lime stabilization of subgrade, it shall be placed in slurry form.
- Inside the Cibolo city limits, sidewalks shall be completed prior to acceptance of any driveway approaches and /or issuance of a Certificate of Occupancy. When outside the Cibolo city limits, a Letter of Credit may be posted or other suitable financial arrangements may be made to insure construction of the sidewalks. In either case, sidewalks adjacent to "common areas", parkways, or other locations on which no building construction will take place, must be constructed prior to final acceptance of the subdivision.
- A license agreement for landscaping maintenance and irrigation in street R.O.W. shall be executed by the developer in party with the City of Cibolo prior to final acceptance of the subdivision.

5. CONSTRUCTION SEQUENCING (List Process on Construction Plan Set)

- Call the Community Development Services Department 48 hours prior to beginning any work and schedule a Preconstruction Meeting with the City and all affected utility providers, the General Contractor, the Developer and the Developer's Engineer.
- Obtain a Site Development Permit from the Community Development Services Department.
- Provide the Community Development Services Department with evidence all TCEQ licenses and requirements are up to date.
- Install temporary erosion controls and tree protection fencing prior to any clearing and grubbing. Notify the City when installed.
- Rough-cut all required or necessary ponds. Either the permanent outlet structure or a temporary outlet must be constructed prior to development of any embankment or excavation that leads to ponding conditions. The outlet system must consist of a low-level outlet and an emergency overflow meeting the requirements of the UDC. The outlet system shall be protected from erosion and shall be maintained throughout the course of construction until final restoration is achieved.
- Deliver approved rough cut sheets to the City Engineer prior to clearing and grubbing.
- Rough grade streets. No development of embankment will be permitted at this time.
- Install all utilities to be located under the proposed pavement or within the road right-of-way.
- Deliver storm sewer cut sheets to the City Engineer.
- Begin installation of storm sewer lines. Upon completion, restore as much disturbed area as possible, particularly channels and large open areas.
- Deliver final grade cut sheets to the City Engineer.
- Re-grade streets to sub-grade.
- Ensure that underground utility crossings are completed. Lay 1st course base material on streets.
- Install curb and gutter.
- Lay final base course on all streets.
- Lay asphalt.
- Complete final grading and restoration of detention, sedimentation / filtration ponds.
- Complete permanent erosion control and restoration of site vegetation.
- Remove and dispose of temporary erosion controls.
- Complete any necessary final dress up of areas disturbed.

6. DRAINAGE LAYOUT SHEETS

Show the following on Construction Plans and/or Drainage Report:

- Drainage layout of subdivision (scale: 1" = 100') with north arrow to top or right of sheet and show limits of construction as a distinguishable line.
- Existing adjoining street layout or other property adjacent to project (show adjacent subdivision names)
- Street names lot and block numbers, and R.O.W. lines
- Location of all existing drainage structures on or adjacent to project
- Existing contours at two-foot minimal intervals Individual drainage areas and upstream drainage areas based on improvements and final grading (distinguish these areas by heavy dashed lines)
- Size in acres, C, I, T, C and Q for 10, 25 and 100-year storm event for each specific sub-drainage area.
- Arrows indicating flow direction for all streets and lots
- Summation of Q's at pertinent points (street intersections, inlets, passing inlets, headwalls, channel outfalls, control outlet structures, etc.)
- All low and high points
- All street and lot fill areas (usually done by shading)
- Proposed drainage facilities (including but not limited to: the layout of storm sewer with line designation, size of lines, pond(s) and pond designation, outfalls and Q10, 25 & 100 shown for outfalls.)
- All existing and proposed drainage easements, as per final plat or by separate instrument, with all recording information provided.
- Q 10,25 & Q 100 leaving proposed streets onto surrounding property and Q 10, 25 & 100 entering proposed streets from surrounding property
- Existing and proposed 100-year flood plains for all waterways
- Minimum building slab elevations for lots on which the 100-year flood plain encroaches (only if elevations are not shown on approved / released final plat included with plans)
- Provide the following for each drainage area:
 1. Runoff Calculations:
 - T.C. (time of concentration-in minutes), A (drainage area)
 - I10, C10, Q10, I25, C25, Q25, I 100, C100, Q100
 2. For inlet design provide an inlet flow calculation table
- For storm sewer design:
 1. T.C.'s, areas,
 2. Composite "C" value (if a uniform time of concentration for the system is not used)
- Greenspace Preservation and Buffers and related drainage criteria described in Article 19.10 shall be depicted.
- Clearly show limits of construction and match lines with station equations for storm sewer and channel 'tie-ins' to existing or proposed
- Legible professional engineer's seal, signature, and date of signing
- All proposed waivers to City of Cibola Design and Construction Manual and other policies
- Include signature block on right hand side of all inside sheets.

7. STREET PLAN AND STREET PROFILE SHEETS

Street plans must show the following:

- The street name and sheet number in the right corners
- North arrow to top and right of sheets
- Stationing south to north or west to east with street layout directly over the profile stationing
- Scale: 1"=20', or 1"=40' for very large projects
- R.O.W. and paving dimensions (face to face of curb)

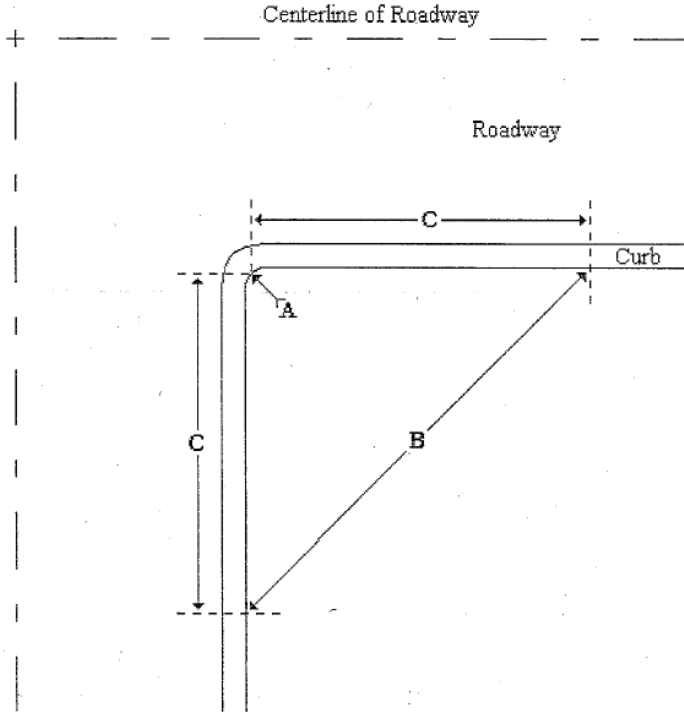
- Lot numbers, block numbers and frontage dimensions (dimensions required only if approved/released final plat is not included with the review plans)
- Street names within respective R.O.W.
- Existing or proposed easements (w/ recording information) and intersecting R.O.W.
- Sidewalks and assignments as per City of Cibolo and final plat requirements
- Centerline "TIC" marks, every 50 feet
- Drainage facilities within or intersecting R.O.W. and indicate stationing on both sides of inlets (show inlet type and label storm sewer lines, i.e. LINE "A", M.H., etc.)
- Existing drainage facilities (w/ pipe sizes and material indicated) as dashed lines
- Drainage flow arrows, high and low points
- Match lines on street plan sheets and storm sewer plans for continuation of streets on other sheets
- As a minimum, a 50' extension of proposed streets and show proposed tie-in to existing streets
- Sheet numbers for intersecting streets, show full intersection, provide dimensions & street names
- Stations equation along CL (centerline) intersections of streets
- Barricades if required
- Plan view must transpose directly above profile stationing when possible (otherwise, center the midpoint of the curve on the sheet) (limits shown on the plan view must be the same as the limits shown on the profile)
- Labeled asphalt valley gutter or concrete valley gutter (required if % grade <1.2%) at intersections where appropriate
- Clearly show the beginning and ending of project
- Limits of gutter depression by shading and showing stationing or dimensioning
- Clearly show all PC, PT, CC, or PRC stations
- All fill areas
- Horizontal curves conforming to the most recent City of Cibolo Street Standards
- Legible professional engineer's seal, signature, and date of signing

Street profiles must show the following:

- Legend and scale (scale: H: 1" = 20' and V: 1" = 2')
- Heavyweight lines at every 100 ft station
- Heavyweight lines at every 2 ft vertical elevation line.
- Even elevation in right and left margins
- Street profile for minimum of 150 feet beyond end of project, including property lines and proposed future grade and/or existing street grade
- Existing centerline, left and right R.O.W. profiles
- Proposed centerline profiles a minimum of two line widths to stand out from other profile lines
- Proposed TC elevations (clearly identify right and left for curb splits)
- Identify & give elevations at all PC, PT, PRC, PCC, PVC, PVI, or PVT stations by circle or heavy dot
- Vertical curves with the following information: curve length, PVI stations and elevation, tangent intercept, tangents and tangent grades (show elevations every 25 feet maximum along vertical curves)
- Curb returns PC, MID PT, PT, with tangent and grade past point of return
- Elevations every 50 feet (i.e. +00 and +50) along the street profile
- Maximum curb split of 2% (30' street = 0.60', 44' street = 0.88') if applicable
- Vertical curves conforming to latest City of Cibolo Design and Construction Standards
- Submit letter of understanding for street lighting in sag curves and confirmation of availability of fixed source lighting when applicable.
- Show clear site triangle at all subdivision entrances per the below graphic, with Point A defined as the point of measurement farthest from the centerline; Point B being the sight line establishing the visibility triangle and Point C as a length of 25 feet measured along the street or road edge. At the

intersection of arterial streets, the City Engineer may increase the clear site distance up to 50-feet for Point C where necessary to ensure public health and safety.

Clear Site Triangle



8. DRAINAGE PLAN

Show the following on Construction Plans and/or Drainage Report:

- Show contours, drainage features and street layout and name, lot layout and lot and block numbers (where storm drainage occurs)
- Indicate limits of 100 year flood plain for fully developed upstream conditions and denote FEMA 100 year floodplain if different from the fully developed condition.
- Drainage easements. Indicate recording information. (Show recording number or if by plat, indicate "by Plat")
- Storm drainage facilities. Label and give sizes (i.e.: line "A-18" RCP, channel "B"-r' FB (Flat bottom), 2-10' x 6' MBC, etc.
- All horizontal PI PC, PT, BEGIN and END stations and pipe and/or channel intersection equations
- All inlets, Q at inlets, Q passing inlets, and flow lines
- PI deflection angle in degrees
- North arrow to top or right of sheet and show scale (scale: 1"=50")
- Any storm sewer assignments off R.O.W. or centerline
- Channel and/or pipe riprap and type of headwalls (show erosion control measures (dissipater blocks, rock riprap, etc.)
- Beginning, end stations, for erosion control material used for channels (label type of material to be used, i.e. dry stacked or mortared rock, etc.)
- Note 100-year overflow swales over pipe system (when used) and provide a typical detail
- Open channels with a minimum flat bottom width of six feet

- Greenspace Preservation and Buffers and related drainage criteria described in Article 19.10 shall be depicted.
- Legible professional engineer's seal and signature
- Any waivers to City of Cibola UDC or other policies
- Include room for City Engineer stamp or signature block on right hand side of all inside sheets

9. DRAINAGE PROFILE

Show the following on Construction Plans and/or Drainage Report:

- Scales: horizontal (same as Plan, Vertical, 1/10th of horizontal scale)
- Stationing proceeding from low end to high end from left to right for channels or storm sewer lines
- Existing ground profile at proposed channel locations
- Top of bank left and right, and fill areas for channels
- All stations and elevations at points of intersecting drainage lines, grade breaks, riprap, drop sections, toe of splash pads, toe of slope, beginning of slope, and beginning of riprap
- D10, Q10, V10, HGL10, D25, Q25, V25, HGL25, D100, Q100, V100, HGL100 and Head losses (H), for each segment of channel
- Channel bottom width, side slopes, concrete trickle or pilot channel, height of channel lining if used, maximum and minimum depth of channel, Manning's "n" value used, and typical channels cross-sections to scale
- Clearly show the beginning and end of construction and show stations for channels
- Flowline elevation every 50 feet maximum (i.e. 0+00, 0+50)
- T.C. elevations at inlets on storm sewer lines
- Grade of flow line (in %), and pipe sizes (label all pipes as RCP/ Class for storm sewer lines)
- D10, Q10, V10, HGL10, D25, Q25, V25, HGL25, D100, Q100, V100, HGL100 and Head losses (H), and df (when pipe is flowing full) for storm sewer lines
- Stations and elevations at PI, PC, PT, grade breaks, intersecting lines, and beginning and end of construction for storm sewer lines
- All riprap, headwalls, etc. at pipe ends
- Full channel section at pipe ends when appropriate
- Existing and finished ground line and fill areas at pipe centerline for storm sewer lines

10. DETENTION PLAN

Show the following on Construction Plans and/or Drainage Report:

- Include drainage area map for detention ponds in plans
- Typical cross-section(s) of ponds and section, through the inlet and outlet structures. Show the 10/25/100 year WSELs
- Indicate pond bottom and side slopes and ramp slopes and top width of berms
- Summary table of supportive calculations for hydrology, hydraulics, control outlet structures, etc.
- Stage/Storage/Discharge Table (also indicate 10, 25 and 100 year storm events)
- Indicate staging area, access drives(including Type II driveway approaches), ramps, gates, fences, perimeter access strips, signs, setbacks, and setback easements per DCM 1.2.4.E.
- Construction details (including complete structural details) for the pond improvements
- Delineate easements with recording information.
- Show all trees and utilities and other improvements within the pond area
- Add dam safety certification to cover sheet when applicable.
- Greenspace Preservation and Buffers and related drainage criteria described in Article 19.10 shall be depicted.

11. WATER QUALITY PLAN

- Pond plans and appropriate cross sections with existing and proposed grading

- Sizing of facility
- Stage/storage for each chamber and total.
- Construction details including City of Cibolo UDC details and criteria
- Liner details (also show protective and planting layer when applicable)
- Provide complete QA/QC plans for pond liners when required.
- Irrigation field plans imposed on the tree plan for re-irrigation ponds
- Vegetative bench planting sheet for wet ponds
- Intake structure/ wet wells and pump details and specs
- Greenspace Preservation and Buffers and related drainage criteria described in Article 19.10 shall be depicted.

12. PAVEMENT STRIPING AND SIGNS PLAN

- Sheet to be reasonable scale, show curb and gutter, driveways, sidewalks and accessibility routes within 150 ft of the project
- All pavement striping and sign plans shall be in accordance with the Texas Manual of Uniform Traffic Control Devices and City of Cibolo standards
- Sight distance analysis for stop signs
- Stop signs, stop bars in relationship to sidewalk ramps.
- Assumption of any all way stop or signal locations needs to be supported by warrant study as per the Texas Manual of Uniform Traffic Control Devices
- Include warning signs as needed with advisory speed plates.
- Show speed limit signs in accordance with the assumed design speeds, with exception of the local streets which should be designed at 25 MPH and shall be posted.
- Show any proposed parking restricted areas.
- Non-standard pavement striping and signs details will need to be approved by the City Engineer.
- Show street name signs in accordance with all Cibolo standards.

13. CONSTRUCTION DETAILS

- Use City of Cibolo Design and Construction Manual for all work in the Right of Way & Easements.
- Show the following:
 - Manhole or junction box detail
 - Pipe end riprap or headwall details
 - Channel lining
 - Construction plans and details for proposed reinforced concrete box culverts, bridges and related structures may be adaptations of TxDOT standards.
 - Traffic/pedestrian railing and fencing details
 - Retaining wall construction drawings in accordance with Cibolo standards
 - Other details as needed for construction

14. FILL MANGEMENT DETAILS & REPORT

- Construction plans, reports and analysis demonstrating compliance with the fill requirements of this UDC.