



**TOWN OF COPPER CANYON
ENGINEERING DESIGN MANUAL**

CHECKLISTS

Please make sure the plans you are submitting are in accordance with this checklist. The following checklist will be used during the Plan Review.

Plat Application:	Preliminary Plat	Preliminary Replat	
	Final Plat	Final Replat	
Engineering Plan:	Preliminary	Final	
Storm Water Management:	Conceptual	Preliminary	Final

Project Information

- | | |
|--|-------------|
| A. Name of Development: | B. Date: |
| C. Location of Development: | |
| D. Type of Development: | |
| E. Total area (acres): | |
| F. Proposed Land Uses (zoning designations): | |
| G. Anticipated project schedule: | |
| H. Name of Owner: | |
| I. Owner Telephone No.: | J. FAX No.: |
| K. Owner Contact Name: | |
| L. Owner Address: | |
| M. Owner Email Address: | |
| N. Engineer/Surveyor's Name: | |
| O. Engineer/Surveyor's Email Address: | |
| P. Engineer/Surveyor Firm: | |
| Q. Telephone No.: | |

PRELIMINARY PLAT CHECKLIST:

- | | |
|---|---------------------------|
| 1. Ten (10) Sets of Preliminary Plats submitted to the Town | Yes ____ No ____ N/A ____ |
| 2. Preliminary plats shall be placed on maximum 24" x 36" sheets and drawn to a scale of 1" = 100' or 1" = 50' unless approved in advance by the Town. | Yes ____ No ____ N/A ____ |
| 3. Title or name of the subdivision preceded by the words: "Preliminary Plat" | Yes ____ No ____ N/A ____ |
| 4. Name, address and telephone number of the owner, applicant, survey, and/or engineer. | Yes ____ No ____ N/A ____ |
| 5. Volume and page, or deed record number of the ownership deed from Denton County Deed Records. | Yes ____ No ____ N/A ____ |
| 6. Vicinity map and key map, if multiple sheets are needed. | Yes ____ No ____ N/A ____ |
| 7. Date of preparation, written and graphic scale, and north arrow. | Yes ____ No ____ N/A ____ |
| 8. Boundary line of the proposed subdivision drawn with a heavy line. | Yes ____ No ____ N/A ____ |
| 9. Computed gross acreage of the subdivision | Yes ____ No ____ N/A ____ |
| 10. Metes and bounds description of the proposed subdivision. | Yes ____ No ____ N/A ____ |
| 11. Location of the subdivision with respect to a corner of the survey or tract or an original corner of the survey of which it is a part. | Yes ____ No ____ N/A ____ |
| 12. Names of adjoining subdivisions with lots and blocks shown with dashed lines and/or property owners of record for all contiguous unplatted properties. | Yes ____ No ____ N/A ____ |
| 13. Town limits (if applicable). | Yes ____ No ____ N/A ____ |
| 14. Location, dimension, and description and recording information for all existing rights-of-way, railroad rights-of-way, easements or other public ways on or adjacent to the property being developed. | Yes ____ No ____ N/A ____ |
| 15. Show permanent structures or uses that will remain. | Yes ____ No ____ N/A ____ |
| 16. Sizes and flowlines of existing drainage structures, 100-year floodplain and floodway as defined by FEMA. | Yes ____ No ____ N/A ____ |
| 17. Location, size and type of all existing utilities within or adjacent lot the site. | Yes ____ No ____ N/A ____ |

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|--|---------------------------|
| 18. Number each proposed lot and block. Provide the proposed number of lots. | Yes ____ No ____ N/A ____ |
| 19. Existing two (2) foot interval contours referenced to NAD. | Yes ____ No ____ N/A ____ |
| 20. Proposed streets, alleys, drainageways, parks, open spaces, easements, other public areas and other rights-of-way within the subdivision. Dimensions of all easements and rights-of-way. | Yes ____ No ____ N/A ____ |
| 21. Dimensions for all lots. Gross acreage for all non-residential lots. Approximate acreage for areas in residential use. Approximate acreage of streets, parks, and other non-residential uses. | Yes ____ No ____ N/A ____ |
| 22. Front building setback lines, side and rear building setback lines. | Yes ____ No ____ N/A ____ |
| 23. Preliminary Storm Water Management Plan meeting the requirements of the Engineering Design Manual shall be submitted with the Preliminary Plat. (Checklist in App. C) | Yes ____ No ____ N/A ____ |
| 24. Preliminary Plat approval block as described by the Subdivision Regulation Ordinance. | Yes ____ No ____ N/A ____ |
| 25. Where the Preliminary Plat is part of a larger area owned by the Applicant that will be subsequently subdivided, provide a layout of the larger area showing the tentative layout of streets, blocks, drainage, water, sewerage, and other improvements for the larger area. | Yes ____ No ____ N/A ____ |
| 26. Added the note for buildings within 1,000 feet from existing oil or gas well as described by the Subdivision Regulation Ordinance. | Yes ____ No ____ N/A ____ |

FINAL PLAT CHECKLIST

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|--|---------------------------|
| 1. Ten (10) Sets of Final Plats submitted to the Town | Yes ____ No ____ N/A ____ |
| 2. Final plats shall be placed on maximum 24" x 36" sheets and drawn to a scale of 1" = 100' or 1" = 50' unless approved in advance by the Town. | Yes ____ No ____ N/A ____ |
| 3. Title or name of the subdivision preceded by the words "Final Plat" | Yes ____ No ____ N/A ____ |
| 4. Name address and telephone number of the owner, applicant, survey, and/or engineer. | Yes ____ No ____ N/A ____ |
| 5. Vicinity map and key map if multiple sheets are needed. | Yes ____ No ____ N/A ____ |
| 6. Date, written and graphic scale, and north arrow. | Yes ____ No ____ N/A ____ |
| 7. Boundary line of subdivision drawn with a heavy line and with bearings, dimensions and curve data. | Yes ____ No ____ N/A ____ |

8. Names of adjoining subdivisions with lots and blocks shown with dashed lines and/or property owners of record for all contiguous unplatted properties. Yes ____ No ____ N/A ____
9. Town limits, if applicable. Yes ____ No ____ N/A ____
10. Proposed streets, alleys, drainageways, parks, open spaces, easements, other public areas and other rights-of-way within the subdivision including dimensions, bearings and curve data. Yes ____ No ____ N/A ____
11. Location, dimension, description and recording information for all existing rights-of-way, railroad rights-of-way, easements or other public ways on or adjacent to the property being platted. Yes ____ No ____ N/A ____
12. Location and description of all permanent monuments and control points Yes ____ No ____ N/A ____
13. Final Storm Water Management Plan meeting the requirements of the Engineering Design Manual shall be submitted with the Preliminary Plat. (Checklist in App. C) Yes ____ No ____ N/A ____
14. Floodways / Floodplains (FEMA):
- a. Show the ultimate 100-year water surface elevation. Yes ____ No ____ N/A ____
 - b. Show floodplain and floodway boundaries. Yes ____ No ____ N/A ____
 - c. Drainage Floodway easement limits Yes ____ No ____ N/A ____
 - d. Minimum fill and floor elevations specified. Yes ____ No ____ N/A ____
15. Minimum building setback lines. Yes ____ No ____ N/A ____
16. Lot and block numbers. Yes ____ No ____ N/A ____
17. Approval block in the form prescribed by the Subdivision Regulations Ordinance. Yes ____ No ____ N/A ____
18. Abutting property owner names and recording information. Yes ____ No ____ N/A ____
19. Gross acreage of the land being subdivided Yes ____ No ____ N/A ____
27. Added the note for buildings within 1,000 feet from existing oil or gas well as described by the Subdivision Regulation Ordinance. Yes ____ No ____ N/A ____
20. Owner's certificate of deed or dedication with the following: Yes ____ No ____ N/A ____
- a. Metes and bounds description. Yes ____ No ____ N/A ____
 - b. Representation that dedicators own the property. Yes ____ No ____ N/A ____
 - c. Dedication statement. Yes ____ No ____ N/A ____

d. Reference and identification or name of final plat.

Yes ____ No ____ N/A ____

e. Surveyor certification in the form prescribed by the Subdivision Regulation Ordinance.

Yes ____ No ____ N/A ____

21. Certificate showing all taxes have been paid.

Yes ____ No ____ N/A ____

22. A letter fully outlining and alterations from the approved Preliminary Plat.

Yes ____ No ____ N/A ____

ENGINEERING SITE PLAN – Each Engineering Site Plan shall include:

1. Engineering Site plans shall be placed on maximum 22" x 34" sheets and drawn to a scale of 1" = 100' or 1" = 50' unless approved in advance by the Town.

Yes ____ No ____ N/A ____

2. Title block in lower right hand corner including:

a. Subdivision name with lot and block number.

Yes ____ No ____ N/A ____

b. Area in acres.

Yes ____ No ____ N/A ____

c. Metes and bounds description including survey name and abstract number.

Yes ____ No ____ N/A ____

d. Town and County.

Yes ____ No ____ N/A ____

e. Preparation Date.

Yes ____ No ____ N/A ____

3. Name, address and telephone number of the owner, applicant, and surveyor/engineer.

Yes ____ No ____ N/A ____

4. Vicinity map and key map, if multiple sheets are needed.

Yes ____ No ____ N/A ____

5. Written scale, graphic scale and north arrow.

Yes ____ No ____ N/A ____

6. Approximate distance to the nearest street.

Yes ____ No ____ N/A ____

7. Site boundaries, dimensions, lot lines and lot areas.

Yes ____ No ____ N/A ____

8. Legend.

Yes ____ No ____ N/A ____

9. Site data summary table including:

a. Zoning.

Yes ____ No ____ N/A ____

b. Proposed use.

Yes ____ No ____ N/A ____

c. Building area (gross square footage).

Yes ____ No ____ N/A ____

d. Building height (feet and inches).

Yes ____ No ____ N/A ____

e. Area of impervious surface.

Yes ____ No ____ N/A ____

f. Total Parking: Required and provided.

Yes ____ No ____ N/A ____

- g. Number of handicap parking spaces. Yes ____ No ____ N/A ____
- h. Number of dwelling units and number of bedrooms (multifamily). Yes ____ No ____ N/A ____
10. Existing improvements within 75' of the subject property. Yes ____ No ____ N/A ____
11. Land use, zoning, subdivision name, recording information and adjacent owners. Yes ____ No ____ N/A ____
12. Building locations, sizes, and dimensions. Yes ____ No ____ N/A ____
13. Distance between buildings on the same lot. Yes ____ No ____ N/A ____
14. Building lines and setbacks. Yes ____ No ____ N/A ____
15. Dimensions of all drive lanes and traffic flow arrows. Yes ____ No ____ N/A ____
16. FEMA floodplains with elevations, and minimum finished floor elevations (include the floodplain note shown on the final plat). Yes ____ No ____ N/A ____
17. Public streets, private drives, and fire lanes with pavement widths and including rights-of-way, median openings, turn lanes, existing driveways, adjacent existing driveways with dimensions, radii, and surface. Yes ____ No ____ N/A ____
18. Distances between existing and proposed driveways. Yes ____ No ____ N/A ____
19. Loading and unloading areas. Yes ____ No ____ N/A ____
20. Ramps, crosswalks, sidewalks and barrier-free ramps with dimensions. Yes ____ No ____ N/A ____
21. Locations of dumpsters and trash compactors with height and material of screening. Yes ____ No ____ N/A ____
22. Size, location, dimensions and details of all signs and exterior lighting of signs, including type of standards, locations and radius of light and intensity of foot-candles. All signage are subject to approval by the Building Inspections Department. Yes ____ No ____ N/A ____
23. Location and sizes of existing and proposed water and sewer mains. Yes ____ No ____ N/A ____
24. Location of fire hydrants. Yes ____ No ____ N/A ____
25. Location and sizes of storm drains, culverts, inlets and other drainage features on or adjacent to the site. Yes ____ No ____ N/A ____
26. Locations, widths, and types of existing and proposed easements. Yes ____ No ____ N/A ____
27. Provide an elevation of all four sides of the building including materials, colors and dimensions at an architectural scale of 1"=20'. Yes ____ No ____ N/A ____
28. Landscape plan provided on separate sheet to show the following: Yes ____ No ____ N/A ____
- a. Natural features including tree masses and anticipated tree loss. Yes ____ No ____ N/A ____

b. Floodplains, drainageways and creeks.

Yes ____ No ____ N/A ____

c. Screening walls and fences, retaining walls, headlight screens, and service area screens including height and type of construction.

Yes ____ No ____ N/A ____

d. Existing and preserved trees including location, size, and species.

Yes ____ No ____ N/A ____

e. Landscaping materials including location and size.

Yes ____ No ____ N/A ____

f. Proposed plant materials.

Yes ____ No ____ N/A ____

g. Note to indicate type and placement of irrigation system.

Yes ____ No ____ N/A ____

29. 2" x 3" blank box in lower right corner for Town use.

Yes ____ No ____ N/A ____

30. Additional information as requested to clarify the proposed development.

Yes ____ No ____ N/A ____

COVER SHEET * - The cover sheet shall include:

1. Project title and type of project.

Yes ____ No ____ N/A ____

2. Location map.

Yes ____ No ____ N/A ____

3. Disposal site for excess excavation.

Yes ____ No ____ N/A ____

4. Index of Sheets (if not included on its own sheet).

Yes ____ No ____ N/A ____

5. Approval blocks for Town including Town Engineer and Director of Public Works.

Yes ____ No ____ N/A ____

6. Professional Engineer's seal, signature and date.

Yes ____ No ____ N/A ____

7. "Release for Construction" note.

Yes ____ No ____ N/A ____

* NOTE: If the Cover Sheet is not furnished, information should appear on other sheets.

GENERAL

1. North arrow clearly shown on each plan sheet.

Yes ____ No ____ N/A ____

2. Bench marks shown on each sheet; located on permanent structure outside of construction limits and conveniently spaced (500' +).

Yes ____ No ____ N/A ____

3. Title blocks, title, sheet number and scales shown.

Yes ____ No ____ N/A ____

4. Each sheet must bear the seal of a Licensed Professional Engineer, signature, and date.

Yes ____ No ____ N/A ____

5. Street names on each sheet.

Yes ____ No ____ N/A ____

6. Property owners and property lines shown.

Yes ____ No ____ N/A ____

7. Submit four (4) sets of plans for review on 22" x 34" sheets.

Yes ____ No ____ N/A ____

- | | |
|---|---------------------------|
| 8. Prepare plans on 22" x 34" sheets allowing for half size reduction to 11" x 17". | Yes ____ No ____ N/A ____ |
| 9. Text shall be legible on the half size 11" x17" plans. | Yes ____ No ____ N/A ____ |
| 10. Place standard general notes on plans. | Yes ____ No ____ N/A ____ |
| 11. Existing, proposed and future facilities must clearly be defined. | Yes ____ No ____ N/A ____ |
| 12. Project name on right end of plan sheets. | Yes ____ No ____ N/A ____ |

GRADING * – Each grading plan shall include:

- | | |
|---|---------------------------|
| 1. Horizontal scale for grading plans shall be at 1" = 20' on full size drawings. | Yes ____ No ____ N/A ____ |
| 2. Existing one-foot contours based on an on-the-ground survey or controlled aerial topographic map (dashed lines and labeled) to extend 20 feet from property line onto adjacent property. | Yes ____ No ____ N/A ____ |
| 3. Proposed one-foot contours – solid lines and labeled. | Yes ____ No ____ N/A ____ |
| 4. Show top of curb elevation every 50 feet on streets, alleys, existing and proposed parking lots. | Yes ____ No ____ N/A ____ |
| 5. Slope: | |
| a. Back of street curb to property line: 1/4" per foot. | Yes ____ No ____ N/A ____ |
| b. Parking lot top of curb to property line: Maximum 4 (horizontal) to 1 (vertical). | Yes ____ No ____ N/A ____ |
| c. Any unpaved area to property line: Maximum slope of 4:1. | Yes ____ No ____ N/A ____ |
| d. Show driveways with 1/4" per foot + 6" from street gutter up to property line. | Yes ____ No ____ N/A ____ |
| 6. Letter of approval if grading is proposed on adjacent property. | Yes ____ No ____ N/A ____ |
| 7. Utility easement from abutting property owners. | Yes ____ No ____ N/A ____ |
| 8. Proposed inlets, label and size. | Yes ____ No ____ N/A ____ |
| 9. Proposed pipes, label and size. | Yes ____ No ____ N/A ____ |
| 10. Existing inlets and pipes. | Yes ____ No ____ N/A ____ |

* NOTE: Add statement that grading only is being submitted with these plans.

PAVING PLAN – Each Paving Plan shall include:

- | | |
|--|---------------------------|
| 1. Horizontal scale for paving plans shall be at 1" = 20' on full size drawings. | Yes ____ No ____ N/A ____ |
| 2. Right-of-way, street, alley, drives and sidewalks dimensioned. | Yes ____ No ____ N/A ____ |
| 3. Centerline stations shown. | Yes ____ No ____ N/A ____ |
| 4. Limits of work defined. | Yes ____ No ____ N/A ____ |
| 5. Barrier free ramps at all intersections. | Yes ____ No ____ N/A ____ |
| 6. Pavement transitions. | Yes ____ No ____ N/A ____ |
| 7. Traffic control items; striping, traffic buttons, sign. | Yes ____ No ____ N/A ____ |
| 8. Street lighting. | Yes ____ No ____ N/A ____ |

- | | |
|---|---------------------------|
| 9. Concrete pavement thickness. | Yes ____ No ____ N/A ____ |
| 10. Minimum 3,600 psi in 28 days concrete compressive strength. | Yes ____ No ____ N/A ____ |
| 11. 6" curbs. | Yes ____ No ____ N/A ____ |
| 12. Minimum reinforcement with No. 4 bars 24" o.c. both ways. | Yes ____ No ____ N/A ____ |
| 13. Sidewalks to be 4" thick, 3,600 psi in 28 days, reinforced with No. 3 bars 14" O.C.E.W. | Yes ____ No ____ N/A ____ |
| 14. Expansion joints at intersection and at minimum 600 foot intervals for pavement. | Yes ____ No ____ N/A ____ |
| 15. Saw cut at 15-, 17.5- and 20-foot intervals for 6-inch, 7-inch and 8-inch pavements respectively. | Yes ____ No ____ N/A ____ |
| 16. Radius at corners conform to Table II-2. | Yes ____ No ____ N/A ____ |
| 17. Gutter flow arrows. | Yes ____ No ____ N/A ____ |
| 18. Roadways comply with thoroughfare plan. | Yes ____ No ____ N/A ____ |
| 19. Geometrics meet design speed criteria. | Yes ____ No ____ N/A ____ |
| 20. Is Superelevation required? | Yes ____ No ____ N/A ____ |
| 21. Retaining Walls: | |
| a. Type, beginning and ending locations and wall elevations. | Yes ____ No ____ N/A ____ |
| b. Provide design if non-standard or modified. | Yes ____ No ____ N/A ____ |
| c. Drainage behind walls shown. | Yes ____ No ____ N/A ____ |
| 22. Driveway grades shown. | Yes ____ No ____ N/A ____ |
| 23. Prepare plans and necessary forms for TDLR plans review and field inspection. | Yes ____ No ____ N/A ____ |
| 24. Developer to pay for all review and inspection fees. | Yes ____ No ____ N/A ____ |

PAVING PROFILES AND GRADES – Plans shall include:

- | | |
|--|---------------------------|
| 1. Vertical scale for paving profiles shall be at 1" = 4' on full size drawings. | Yes ____ No ____ N/A ____ |
| 2. Profiles plotted showing ground at proposed property line. | Yes ____ No ____ N/A ____ |
| 3. Top of curb profiles must meet minimum and maximum grade requirements. | Yes ____ No ____ N/A ____ |
| 4. Driveway profile grades. | Yes ____ No ____ N/A ____ |
| 5. Vertical curves must be designed in accordance with Table II-5. | Yes ____ No ____ N/A ____ |
| 6. Contour grading plans for major intersections. | Yes ____ No ____ N/A ____ |

- | | |
|--|---------------------------|
| 7. Spot top of curb elevations in plan view on proposed left turn lanes. | Yes ____ No ____ N/A ____ |
| 8. Check carefully for any place water might pond. Are inlets located at sag points or vertical curves? | Yes ____ No ____ N/A ____ |
| 9. Are grades, crossfall, slopes, etc., consistent with information shown on typical section? | Yes ____ No ____ N/A ____ |
| 10. Check ends of project for drainage. If gutters drain to ditches or field type inlets, are grades and profiles shown? | Yes ____ No ____ N/A ____ |
| 11. Minimum grades maintained to assure complete drainage. | Yes ____ No ____ N/A ____ |

WATER – All water distribution and transmission facilities shall include:

- | | |
|---|---------------------------|
| 1. Approval letter to connect to the waste line from Bartonville Water Supply Corporation | Yes ____ No ____ N/A ____ |
| 2. Horizontal scale for plan views shall be at 1" = 20' on full size drawings. | Yes ____ No ____ N/A ____ |
| 3. Vertical scale for profile views shall be at 1" = 4' on full size drawings. | Yes ____ No ____ N/A ____ |
| 4. Loop water mains. | Yes ____ No ____ N/A ____ |
| 5. Valves on fire hydrant leads. | Yes ____ No ____ N/A ____ |
| 6. Valves on main lines between each fire hydrant. | Yes ____ No ____ N/A ____ |
| 7. Maximum distance between each fire hydrant. | |
| a. Residential – 500' c-c on street. | Yes ____ No ____ N/A ____ |
| b. Multifamily – 400' c-c on street. | Yes ____ No ____ N/A ____ |
| c. Office, retail, commercial, industrial 300' c-c on street. | Yes ____ No ____ N/A ____ |
| 8. All portions of building within 300' radius of a fire hydrant in commercial. | Yes ____ No ____ N/A ____ |
| 9. All portions of building within 400' radius of a fire hydrant in multifamily. | Yes ____ No ____ N/A ____ |
| 10. All portions of buildings within 500' radius of a fire hydrant in single family and duplex residential. | Yes ____ No ____ N/A ____ |
| 11. Maximum length non-looped line serving a fire hydrant is 150 feet. | Yes ____ No ____ N/A ____ |
| 12. Lateral service (min. 1" copper) from main line to two feet from ROW. | Yes ____ No ____ N/A ____ |
| 13. Water main extended to opposite property line or tied to existing main. | Yes ____ No ____ N/A ____ |
| 14. Profile mains 12" and larger. | Yes ____ No ____ N/A ____ |
| 15. Show other utility lines crossing wastewater lines. | Yes ____ No ____ N/A ____ |
| 16. Show location of water meters: | |
| a. Domestic. | Yes ____ No ____ N/A ____ |

- | | |
|---|---------------------------|
| b. Irrigation. | Yes ____ No ____ N/A ____ |
| c. Fire line. | Yes ____ No ____ N/A ____ |
| 17. Show size of water meters. | Yes ____ No ____ N/A ____ |
| 18. Note minimum pipe covers (attach water and standard details and general notes). | Yes ____ No ____ N/A ____ |
| 19. Dedicate water line easements up to and including fire hydrants and water meters for lines off ROW. | Yes ____ No ____ N/A ____ |

WASTEWATER – All wastewater plans shall include:

- | | |
|--|---------------------------|
| 1. Approval letter to connect to the wastewater collection agency (i.e. Flower Mound, Highland Village, Upper Trinity, Private) | Yes ____ No ____ N/A ____ |
| 2. Horizontal scale for plan views shall be at 1" = 20' on full size drawings. | Yes ____ No ____ N/A ____ |
| 3. Vertical scale for profile views shall be at 1" = 4' on full size drawings. | Yes ____ No ____ N/A ____ |
| 4. 8" minimum, PVC SDR-35 (unless 6-inch approved by Town). | Yes ____ No ____ N/A ____ |
| 5. Manhole at end of all lines. | Yes ____ No ____ N/A ____ |
| 6. Manholes at change of pipe size, tees and bends. | Yes ____ No ____ N/A ____ |
| 7. 500' maximum distance between manholes on lines 21" and smaller.
800' maximum distance between manholes on lines 24" and larger. | Yes ____ No ____ N/A ____ |
| 8. Minimum slopes: | |
| a. 6" – 0.50% (Pipe size as approved by Town). | Yes ____ No ____ N/A ____ |
| b. 8" – 0.33%. | Yes ____ No ____ N/A ____ |
| c. 10" – 0.25%. | Yes ____ No ____ N/A ____ |
| d. 12" – 0.20%. | Yes ____ No ____ N/A ____ |
| e. 15" – 0.14%. | Yes ____ No ____ N/A ____ |
| f. 18" – 0.12%. | Yes ____ No ____ N/A ____ |
| 9. Maximum slope such that velocity is less than 10 fps. | Yes ____ No ____ N/A ____ |
| 10. Sewer laterals 10' downstream from water service or to center of lot. | Yes ____ No ____ N/A ____ |
| 11. Minimum lateral size: | |
| a. Residential, 4". | Yes ____ No ____ N/A ____ |
| b. Apartment, retail or commercial – 6". | Yes ____ No ____ N/A ____ |
| c. Manufacturing or industrial – 8". | Yes ____ No ____ N/A ____ |

- | | |
|---|---------------------------|
| 12. Profile all sewer lines except laterals. | Yes ____ No ____ N/A ____ |
| 13. Show other utility lines crossing wastewater lines. | Yes ____ No ____ N/A ____ |
| 14. Label lines to correspond to profile. | Yes ____ No ____ N/A ____ |
| 15. Concrete encasement at creek crossing. | Yes ____ No ____ N/A ____ |
| 16. Provide stub outs to adjacent property. Add services for Planned Development Communities. | Yes ____ No ____ N/A ____ |
| 17. Note benchmark on all sheets. | Yes ____ No ____ N/A ____ |
| 18. 10' utility easement provided for lines not in ROW. | Yes ____ No ____ N/A ____ |

UTILITIES – All plans shall show the following:

- | | |
|---|---------------------------|
| 1. Existing and proposed facilities shown in plan and profiles views. | Yes ____ No ____ N/A ____ |
| 2. Underground facilities close to or in conflict with proposed construction located by actual ties and elevations. | Yes ____ No ____ N/A ____ |
| 3. Caution notes shown when construction operations come close to existing utilities. Telephone number of utility contact shall be shown. | Yes ____ No ____ N/A ____ |

EROSION CONTROL – All plans shall show the following:

- | | |
|--|---------------------------|
| 1. The scale for Erosion Control Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings. | Yes ____ No ____ N/A ____ |
| 2. Existing and Proposed Grading. | Yes ____ No ____ N/A ____ |
| 3. Existing and Proposed Drainage Features. | Yes ____ No ____ N/A ____ |
| 4. Erosion features including temporary construction entrance, silt fence, inlet protection, rock berms, seeding, etc. | Yes ____ No ____ N/A ____ |
| 5. Erosion control standard details. | Yes ____ No ____ N/A ____ |

PAVEMENT MARKINGS AND SIGNAGE

- | | |
|---|---------------------------|
| 1. The scale for Pavement Marking Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings. | Yes ____ No ____ N/A ____ |
| 2. Pavement Markings and Signage Plan in accordance with MUTCD. | Yes ____ No ____ N/A ____ |
| 3. Pavement Markings Standard Details. | Yes ____ No ____ N/A ____ |

TRAFFIC CONTROL PLAN

- | | |
|--|---------------------------|
| 1. The scale for Traffic Control Plans may vary however shall be prepared on sheets no smaller than 1" = 200' on full size drawings. | Yes ____ No ____ N/A ____ |
| 2. Traffic Control Plan in accordance with MUTCD. | Yes ____ No ____ N/A ____ |

3. Traffic Control Standard Details.

Yes ____ No ____ N/A ____

4. Traffic Control Phasing as necessary.

Yes ____ No ____ N/A ____

LANDSCAPE AND IRRIGATION PLANS

1. The scale for Landscape and Irrigation Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings.

Yes ____ No ____ N/A ____

2. Landscape Plan showing rights-of-way and proposed back of curbs, sidewalk, existing; and proposed utilities and other features pertinent to the plan.

Yes ____ No ____ N/A ____

3. Planting details.

Yes ____ No ____ N/A ____

4. Irrigation Plans including metering, back flow prevention, and provision for electrical service and controllers.

Yes ____ No ____ N/A ____

5. Irrigation details.

Yes ____ No ____ N/A ____

STREET LIGHTING

1. The scale for Street Lighting Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings.

Yes ____ No ____ N/A ____

1. Lighting and Conduit Layout Plan.

Yes ____ No ____ N/A ____

2. Lighting Standard Details.

Yes ____ No ____ N/A ____



ENGINEER'S CHECKLIST FOR CONCEPTUAL STORM WATER MANAGEMENT PLAN

Please attach additional sheets as necessary for comments and descriptions.

1. Planning Concerns

- | | |
|---|---------------------------|
| A. Have any previous drainage or watershed plans been completed in the watershed? (If yes, describe) | Yes ____ No ____ N/A ____ |
| B. Is there any known history of flooding downstream? (If yes, describe conditions and locations) | Yes ____ No ____ N/A ____ |
| C. Is there any known history of excessive erosion downstream? (If yes, describe conditions and locations) | Yes ____ No ____ N/A ____ |
| D. Are there any known downstream drainage constrictions such as undersized culverts or channels? Size? | Yes ____ No ____ N/A ____ |
| E. Are there any FEMA 100-year floodplains which will need flood studies, CLOMRs, LOMRs, etc., for this project? | Yes ____ No ____ N/A ____ |
| F. Are there any known or suspected wetlands areas, mitigation areas, 404 permit areas, or other natural habitat features which require special consideration? | Yes ____ No ____ N/A ____ |
| G. Are there any existing dams over six feet in height which are or will be subject to TCEQ regulations? | Yes ____ No ____ N/A ____ |
| H. Are there any existing impoundments subject to TCEQ water rights permitting? (Livestock ponds are not exempt when converted to other uses.) | Yes ____ No ____ N/A ____ |
| I. Are there any existing environmental concerns on the site requiring special treatment or design consideration (i.e. fuel stations, vehicle maintenance, auto recycling, illegal dump sites, outdoor material storage, loading and transfer areas, landfills, industrial facilities, etc.)? | Yes ____ No ____ N/A ____ |

2. Existing Conditions Map(s) showing the following information on or adjacent to the development site:

- | | |
|--|---------------------------|
| A. Digital ortho-photography showing project boundaries | Yes ____ No ____ N/A ____ |
| B. Existing topography (normally 2-foot contours) | Yes ____ No ____ N/A ____ |
| C. Soil types from USDA soil surveys and/or soil borings | Yes ____ No ____ N/A ____ |
| D. Perennial or intermittent streams | Yes ____ No ____ N/A ____ |
| E. Boundaries of existing predominant vegetation | Yes ____ No ____ N/A ____ |
| F. Delineation of current FEMA floodplains and floodways | Yes ____ No ____ N/A ____ |
| G. Locations of steep slopes (>15%) | Yes ____ No ____ N/A ____ |
| H. Locations of wetlands and natural habitat areas if known. | Yes ____ No ____ N/A ____ |
| I. Locations of all dams and impoundments | Yes ____ No ____ N/A ____ |
| J. Existing paved roads, buildings, and other impervious areas | Yes ____ No ____ N/A ____ |
| K. Environmental concerns identified in (2.H) above | Yes ____ No ____ N/A ____ |
| L. Existing major utilities, pipelines, and easements | Yes ____ No ____ N/A ____ |

3. **Does this development provide opportunities for Low-Impact Design?**

- | | |
|---|---------------------------|
| A. Preserve floodplains and natural valley storage? | Yes ____ No ____ N/A ____ |
| B. Preserve natural streams and drainage patterns? | Yes ____ No ____ N/A ____ |
| C. Preserve steep slopes? | Yes ____ No ____ N/A ____ |
| D. Preserve trees and undisturbed natural vegetation? | Yes ____ No ____ N/A ____ |
| E. Preserve wetlands and other natural features? | Yes ____ No ____ N/A ____ |
| F. Drain runoff to pervious areas? | Yes ____ No ____ N/A ____ |
| G. Utilize natural drainage vs. storm drain systems? | Yes ____ No ____ N/A ____ |
| H. Reduce pavement and other impervious covers? | Yes ____ No ____ N/A ____ |

4. **Conceptual analysis of hydrologic and hydraulic impacts of the proposed development:**

- | | |
|--|---------------------------|
| A. Hydrologic analysis to determine conceptual rates of runoff, volumes, and velocities to support decisions related to flood control and erosion protection downstream. | Yes ____ No ____ N/A ____ |
| B. Conceptual estimates of the three (3) storm design approach requirements. | Yes ____ No ____ N/A ____ |
| C. Conceptual selection, location, and size of proposed storm water structural controls. | Yes ____ No ____ N/A ____ |
| D. Conceptual limits of proposed clearing and grading. | Yes ____ No ____ N/A ____ |

5. **Conceptual Drainage Area Map(s) showing the following information for the development site:**

- | | |
|--|---------------------------|
| A. Conceptual street layout (scale 1"=200') | Yes ____ No ____ N/A ____ |
| B. All off-site drainage areas with topography (reduced scale) | Yes ____ No ____ N/A ____ |
| C. Delineation of watershed boundaries with flow arrows | Yes ____ No ____ N/A ____ |
| D. Reference info (file number, etc.) for previous drainage studies or existing developments & drainage facilities | Yes ____ No ____ N/A ____ |
| E. Approximate zone of influence for all outfalls | Yes ____ No ____ N/A ____ |
| F. Downstream constrictions, flooding, or erosion locations | Yes ____ No ____ N/A ____ |
| G. Location of proposed structural storm water controls, if any | Yes ____ No ____ N/A ____ |

I certify that this Conceptual Storm Water Management Plan, including this checklist, required attachments, and additional comments, was prepared under my responsible supervision and that the information presented on this checklist and attachments is correct to the best of my knowledge. I also understand that an acceptance of this plan by the Town does not waive any Town standards or requirements unless a specific waiver request has been submitted and approved.

Signed _____ Date _____

Print Name: _____ PE No _____

ENGINEER'S CHECKLIST FOR PRELIMINARY STORM WATER MANAGEMENT PLAN

Please attach additional sheets as necessary for comments and descriptions.

1. **Changes or Modifications to Conceptual Site Plan** (May be reprinted with changes tracked or highlighted)

2. **Preliminary Project Layout Map(s) shows the following information on or adjacent to the development site:**

A. Digital ortho-photography showing project boundaries	Yes ____	No ____	N/A ____
B. Existing topography (normally 2-foot contours)	Yes ____	No ____	N/A ____
C. Preliminary street and lot layout	Yes ____	No ____	N/A ____
D. Benchmarks used for site control	Yes ____	No ____	N/A ____
E. Construction phasing plan, if applicable	Yes ____	No ____	N/A ____
F. Limits of proposed clearing and grading	Yes ____	No ____	N/A ____
G. Proposed dams > 6' high (attach Dam Safety Checklist)	Yes ____	No ____	N/A ____
H. Proposed FEMA floodplains with flood study reference info	Yes ____	No ____	N/A ____
I. Proposed ponds subject to TCEQ water rights permits	Yes ____	No ____	N/A ____
J. If yes, has water rights permit been applied for?	Yes ____	No ____	N/A ____

3. **Preliminary Drainage Area Map(s) shows the following information for the development site:**

A. Preliminary street and lot layout (scale 1"=200')	Yes ____	No ____	N/A ____
B. All off-site drainage areas with topography (reduced scale)	Yes ____	No ____	N/A ____
C. Delineation of watershed boundaries with flow arrows	Yes ____	No ____	N/A ____
D. Proposed modifications to watershed boundaries	Yes ____	No ____	N/A ____
E. File numbers for existing developments & drainage facilities	Yes ____	No ____	N/A ____
F. Zoning or Comp Plan info to document off-site land use	Yes ____	No ____	N/A ____
G. Preliminary hydrology with supporting data & calculations for on-site existing & proposed, & off-site ultimate conditions	Yes ____	No ____	N/A ____
H. Proposed detention ponds or other storm water controls, with summary hydrology for all applicable design storms	Yes ____	No ____	N/A ____
I. Delineate entire zone of influence for all outfalls	Yes ____	No ____	N/A ____

- J. Downstream constrictions, flooding, or erosion locations Yes ____ No ____ N/A ____
- K. Proposed facilities with private maintenance (Maintenance Agreement and Maintenance Plan required for final) Yes ____ No ____ N/A ____

4. **Determination of Adequate Outfalls and Zones of Influence:** Describe these and provide supporting methodology:

5. **Description of Any Proposed Waiver Requests:** (for informational purposes only; all Waiver Requests must follow published procedures)

6. **Other Comments:**

I certify that this Preliminary Storm Water Management Plan, including this checklist, required attachments, and additional comments, was prepared under my responsible supervision and that the information presented on this checklist and attachments is correct to the best of my knowledge. I also understand that an acceptance of this plan by the Town does not waive any Town standards or requirements unless a specific waiver request has been submitted and approved.

Signed _____ Date _____

Print Name: _____ PE No _____

(seal)



ENGINEER'S CHECKLIST FOR FINAL STORM WATER MANAGEMENT PLAN

Please attach additional sheets as necessary for comments and descriptions.

1. **Changes or Modifications to Preliminary Storm Water Management Plan** (May be reprinted with changes tracked or highlighted)

2. **Additional Study Attachments (include if applicable)**

- | | |
|---|---------------------------|
| A. Dam Safety Checklist | Yes ____ No ____ N/A ____ |
| B. Storm Water Pollution Prevention Plan (SWPPP) | Yes ____ No ____ N/A ____ |
| C. Executed Maintenance Agreement (with Maintenance Plan) | Yes ____ No ____ N/A ____ |
| D. Landscaping Plan (for Storm Water controls) | Yes ____ No ____ N/A ____ |
| E. Copy of approved Waiver Request | Yes ____ No ____ N/A ____ |

3. **Applicable Local, State and Federal Permits** (Indicate acquired or application pending)

- | | |
|-----------------------------|---------------------------|
| A. CLOMR, LOMR or LOMA | Yes ____ No ____ N/A ____ |
| B. TCEQ water rights permit | Yes ____ No ____ N/A ____ |
| C. 404 permit | Yes ____ No ____ N/A ____ |
| D. Other: _____ | Yes ____ No ____ N/A ____ |
| E. Other: _____ | Yes ____ No ____ N/A ____ |

4. **Hydrologic Analysis and Storm Water Management Design Plan** (separate Attachment, either A or B and C)

- | | |
|--|---|
| A. Approved Infrastructure Plans.
Attach a copy of the signed cover sheet. | Yes ____ No ____ N/A ____
Plan File No.: |
| B. Site SWM Plan showing final hydrology, Identification of all storm water controls with summary calculations, delineation of adequate outfalls, zones of influence, required mitigation, and structural details and specifications as required | Yes ____ No ____ N/A ____ |
| C. Digital Copy of final hydrologic and hydraulic models | Yes ____ No ____ N/A ____ |

(seal)	I certify that this Final Storm Water Management Plan, including this checklist, required attachments, and additional comments, was prepared under my responsible supervision and that the information presented on this checklist and attachments is correct to the best of my knowledge. I also understand that an acceptance of this plan by the Town does not waive any Town standards or requirements unless a specific waiver request has been submitted and approved. Signed _____ Date _____ Print Name: _____ PE No _____
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Variance Procedure – Town of Copper Canyon Storm Water Management Design Manual

Good engineering practice and practical considerations are necessary when developing storm water management plans and preparing construction drawings for specific projects. The criteria in this manual cannot cover every possibility.

The closer the criteria are followed, the more likely the plan or drawing will be approved and the construction accepted. For those situations where varying from the criteria is warranted, a variance process is described below.

Submit variance request in writing on the Request for Variance from Town of Copper Canyon – Storm Water Form (CT-7) as early as possible. The variance request must include the following:

- The specific criteria that you want to vary.
- Why the criteria needs to be varied.
- How the basis for the criteria will still be satisfied or why the criteria is not applicable.
- Indicate if there are no criteria for the proposed analysis, design, or feature in this manual.
- Appropriate technical information supporting the variance request, such as calculations, excerpts from the drainage or design plan, and/or construction drawings.

Note: Submittals with insufficient technical information to support the variance request will be returned without review.

The town will either approve or reject the variance in writing on the variance request form. If it is rejected, a written explanation will be provided.

REQUEST FOR VARIANCE FROM TOWN OF COPPER CANYON – STORM WATER – FORM CT-7

Submitted by: _____ Phone: _____ Email: _____

Company: _____ Date: _____

Proposed Project Description

Name: _____

Type: _____

Location: _____ (include map)

Existing Condition (show information on map or drawing)

Existing Site: _____

Existing Right-of-Way: _____

Topography: _____

Other Pertinent Data Related to Variance Request:

Variance Request

Specific criteria you want to vary: _____

Explain why the criteria needs to be varied or is not applicable: _____

Explain how the basis for the criteria will be satisfied: _____

List attachments supporting variance request (preliminary design report excerpt, construction drawings,

calculations, photographs, map, etc.):

Town of Copper Canyon fills in this area

Justification of Decision:

Approval of Final Decision:

Date: