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** ____ **Minor Plat**
_____ **Final Plat** _____**Replat** ____ **Amending Plat**

Engineering Plan: _____ **Preliminary** ____ **Final**

Storm Water Management: ____**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	Plat in .PDF format (and printed copies as requested)		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	Clear and legible formatting		Yes _____	No _____	N/A _____
4	Variety of line types and weights, with the boldest line weight designating the plat boundary/limits		Yes _____	No _____	N/A _____
5	Title or name of the subdivision preceded by the words: "Preliminary Plat"		Yes _____	No _____	N/A _____
6	Name, address and telephone number of the owner, applicant, survey, and/or engineer		Yes _____	No _____	N/A _____
7	Volume and page, or deed record number of the ownership deed from Denton County Deed Records		Yes _____	No _____	N/A _____
8	Vicinity map and key map, if multiple sheets are needed		Yes _____	No _____	N/A _____
9	Date of preparation, written and graphic scale, and north arrow		Yes _____	No _____	N/A _____
10	Computed gross acreage of the subdivision		Yes _____	No _____	N/A _____
11	Metes and bounds description of the proposed subdivision		Yes _____	No _____	N/A _____
12	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 _____
13	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 _____
14	Town limits (if applicable)		Yes _____	No _____	N/A _____
15	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 _____
16	Show permanent structures or uses that will remain	*	Yes _____	No _____	N/A _____
17	Sizes and flowlines of existing drainage structures, 100-year floodplain and floodway as defined by FEMA.	*	Yes _____	No _____	N/A _____
18	Location, size and type of all existing utilities within or adjacent lot the site	*	Yes _____	No _____	N/A _____
19	Number each proposed lot and block		Yes _____	No _____	N/A _____
20	Existing two (2) foot interval contours referenced to NAD	*	Yes _____	No _____	N/A _____
21	Location and Dimensions of Easements, other public areas and other rights-of-way within the subdivision		Yes _____	No _____	N/A _____
22	Proposed streets, alleys, drainageways, parks, and open spaces	*	Yes _____	No _____	N/A _____
23	Dimensions for all lots		Yes _____	No _____	N/A _____
24	Approximate acreage for areas in residential use		Yes _____	No _____	N/A _____
25	Approximate acreage of streets, parks, and other non-residential uses		Yes _____	No _____	N/A _____
26	Gross acreage for all non-residential lots		Yes _____	No _____	N/A _____
27	Front building setback lines, side and rear building setback lines		Yes _____	No _____	N/A _____
28	Preliminary Plat approval block as described by the Subdivision Regulation Ordinance		Yes _____	No _____	N/A _____
29	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 _____
30	Note for buildings within 1,000 feet from existing oil or gas well as described in the Subdivision Regulation Ordinance		Yes _____	No _____	N/A _____

Additional Required Documents

1	Written Project Narrative	Yes _____	No _____	N/A _____
2	Title Policy or Title Survey	Yes _____	No _____	N/A _____
3	Letter granting Town Staff temporary access to enter the property until acceptance of the improvements	Yes _____	No _____	N/A _____
4	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 _____
5	Preliminary Design Plans (Per Subdivision Ordinance Preliminary Plat Submittal Requirement)	Yes _____	No _____	N/A _____
6	Tree Removal Permit	Yes _____	No _____	N/A _____

* May be shown on Preliminary Construction Drawings or lieu of Preliminary Plat

Final Plat/Replat/Minor Plat/ Amending Plat Checklist

1	Plat in .PDF format (and printed copies as requested).	Yes _____	No _____	N/A _____
2	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 _____
3	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 _____
4	Clear and legible formatting.	Yes _____	No _____	N/A _____
5	Variety of line types and weights, with the boldest line weight designating the plat boundary/limits.	Yes _____	No _____	N/A _____
6	Title or name of the subdivision preceded by the type of plat submitted (see Subdivision Ordinance).	Yes _____	No _____	N/A _____
7	Name address and telephone number of the owner, applicant, survey, and/or engineer.	Yes _____	No _____	N/A _____
8	Vicinity map and key map if multiple sheets are needed.	Yes _____	No _____	N/A _____
9	Date, written and graphic scale, and north arrow.	Yes _____	No _____	N/A _____
10	Bearings, dimensions and curve data boundary labels.	Yes _____	No _____	N/A _____
11	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 _____
12	Town limits, if applicable.	Yes _____	No _____	N/A _____
13	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 _____
14	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 _____
15	Location and description of all permanent monuments and control points	Yes _____	No _____	N/A _____
16	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 _____
17	Floodways / Floodplains (FEMA):	Yes _____	No _____	N/A _____
	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 _____
	e. Base Flood Elevations (if available)	Yes _____	No _____	N/A _____
18	Minimum building setback lines.	Yes _____	No _____	N/A _____
19	Lot and block numbers.	Yes _____	No _____	N/A _____
20	Approval block in the form prescribed by the Subdivision Regulations Ordinance.	Yes _____	No _____	N/A _____
21	Abutting property owner names and recording information.	Yes _____	No _____	N/A _____

22	Gross acreage of the land being subdivided	Yes	_____	No	_____	N/A _____
23	Note for buildings within 1,000 feet from existing oil or gas well as described by the Subdivision Ordinance.	Yes	_____	No	_____	N/A _____

Additional Required Documents

1	Written Project Narrative	Yes	_____	No	_____	N/A _____
2	Title Policy or Title Survey	Yes	_____	No	_____	N/A _____
3	Letter granting Town Staff temporary access to enter the property until acceptance of the improvements	Yes	_____	No	_____	N/A _____
4	Certificate showing all taxes have been paid.	Yes	_____	No	_____	N/A _____
5	Letter fully outlining and alterations from the approved Preliminary Plat.	Yes	_____	No	_____	N/A _____
6	Tree Removal Permit	Yes	_____	No	_____	N/A _____

Preliminary Engineering Plans

1	Engineering 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:	Yes	_____	No	_____	N/A	_____
	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:	Yes	_____	No	_____	N/A	_____
	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 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	Yes	_____	No	_____	N/A	_____
21	Locations of dumpsters and trash compactors	Yes	_____	No	_____	N/A	_____
22	Location and sizes of existing and proposed water and sewer mains.	Yes	_____	No	_____	N/A	_____
23	Location of fire hydrants.	Yes	_____	No	_____	N/A	_____
24	Location and sizes of storm drains, culverts, inlets and other drainage features adjacent to the site.	Yes	_____	No	_____	N/A	_____

25	Preliminary storm sewer and drainage infrastructure layout.	Yes	_____	No	_____	N/A	_____
26	Locations, widths, and types of existing and proposed easements.	Yes	_____	No	_____	N/A	_____
27	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	_____

GENERAL

1	North arrow clearly shown on each plan sheet.	Yes	_____	No	_____	N/A	_____
2	Title blocks, title, sheet number and scales shown.	Yes	_____	No	_____	N/A	_____
3	Street names on each sheet.	Yes	_____	No	_____	N/A	_____
4	Property owners and property lines shown.	Yes	_____	No	_____	N/A	_____
5	Submit in .pdf format for review and six (6) sets of plans for presentation at meetings with Town staff.	Yes	_____	No	_____	N/A	_____
6	Prepare plans on 22” x 34” sheets allowing for half size reduction to 11” x 17”.	Yes	_____	No	_____	N/A	_____
7	Text shall be legible on the half size 11” x17” plans.	Yes	_____	No	_____	N/A	_____
8	Existing, proposed and future facilities must clearly be defined.	Yes	_____	No	_____	N/A	_____
9	Project name on right end of plan sheets.	Yes	_____	No	_____	N/A	_____

PRELIMINARY GRADING – Each grading plan shall include:

1	Horizontal scale for grading plans shall be at 1” = 40’ 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	Preliminary proposed one-foot contours – solid lines and labeled.	Yes	_____	No	_____	N/A	_____
4	Preliminary retaining wall locations	Yes	_____	No	_____	N/A	_____
5	Slope:	Yes	_____	No	_____	N/A	_____
	a. Back of street curb to property line: ¼” 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 ¼” 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	Preliminary utility easements from abutting property owners.	Yes	_____	No	_____	N/A	_____

PRELIMINARY DRAINAGE

1	Pre and Post Development drainage area map	Yes	_____	No	_____	N/A	_____
2	Computation tables showing drainage areas, Runoff coefficients, time of concentration, rainfall intensities, and peak discharge for the required design storms.	Yes	_____	No	_____	N/A	_____
3	Identify detention pond location(s), preliminary volume, and outfall	Yes	_____	No	_____	N/A	_____
4	Identify "zone of influence"	Yes	_____	No	_____	N/A	_____
5	Technical report with supporting calculations	Yes	_____	No	_____	N/A	_____

6	Location of runoff design points	Yes	_____	No	_____	N/A	_____
7	Size & description of outfall drainage facilities and receiving streams	Yes	_____	No	_____	N/A	_____
8	Existing and proposed land use and zoning	Yes	_____	No	_____	N/A	_____
9	FEMA Flood Hazard Areas, if applicable	Yes	_____	No	_____	N/A	_____
10	Preliminary hydrology (2-, 10-, 100-year events) with supporting data & calculations for on-site existing & proposed, & off-site ultimate conditions	Yes	_____	No	_____	N/A	_____
11	Preliminary detention ponds or other storm water controls, with preliminary hydrology for all applicable design storms	Yes	_____	No	_____	N/A	_____
12	Delineate entire zone of influence for all outfalls	Yes	_____	No	_____	N/A	_____
13	Downstream constrictions, flooding, or erosion locations	Yes	_____	No	_____	N/A	_____
14	Information regarding and required Corps of Engineer's Section 404 permits, Conditional Letters of Map Revision (CLOMR), Letters of Map Revision (LOMR) or other permits relating to lakes and streams required by any federal, state, or local authorities	Yes	_____	No	_____	N/A	_____
15	Proposed facilities with private maintenance and identification of entities responsible for maintenance	Yes	_____	No	_____	N/A	_____

PRELIMINARY PAVING PLAN – Each Paving Plan shall include:

1	Horizontal scale for paving plans shall be at 1" = 40' on full size drawings.	Yes	_____	No	_____	N/A	_____
2	Preliminary right-of-way, street, alley, drive and sidewalk layout with general dimensions	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	Gutter flow arrows.	Yes	_____	No	_____	N/A	_____
7	Roadways comply with thoroughfare plan.	Yes	_____	No	_____	N/A	_____
8	Geometrics meet design criteria.	Yes	_____	No	_____	N/A	_____

PRELIMINARY WATER AND WASTEWATER

1	Letter from Cross Timbers Water Supply Corporation indicating that they have performed an initial review of the preliminary water plan and that they intend to provide service to the proposed development.	Yes	_____	No	_____	N/A	_____
2	Letter from the wastewater collection agency (i.e. Flower Mound, Highland Village, Upper Trinity, Private) to which the development proposes to connect to indicating that they have performed an initial review of the preliminary wastewater plan and that they intend to provide service to the proposed development.	Yes	_____	No	_____	N/A	_____
3	Note stating if the development will be utilize On-Site Sewage Facilities (OSSF)	Yes	_____	No	_____	N/A	_____
4	Preliminary water and wastewater plan with enough detail to convey the intended layout and means of water and wastewater service.	Yes	_____	No	_____	N/A	_____

PRELIMINARY TRAFFIC IMPACT ANALYSIS

1	Preliminary Traffic Impact Analysis (TIA) as required by the Engineering Design Manual	Yes	_____	No	_____	N/A	_____

Final Engineering Plans - required for every development

1	Engineering 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:	Yes	_____	No	_____	N/A	_____
	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	_____
4	Name, address and telephone number of the owner, applicant, and surveyor/engineer.	Yes	_____	No	_____	N/A	_____
5	Vicinity map and key map, if multiple sheets are needed.	Yes	_____	No	_____	N/A	_____
6	Written scale, graphic scale and north arrow.	Yes	_____	No	_____	N/A	_____
7	Approximate distance to the nearest street.	Yes	_____	No	_____	N/A	_____
8	Site boundaries, dimensions, lot lines and lot areas.	Yes	_____	No	_____	N/A	_____
9	Legend.	Yes	_____	No	_____	N/A	_____
10	Site data summary table including:	Yes	_____	No	_____	N/A	_____
	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	_____
11	Existing improvements within 75' of the subject property.	Yes	_____	No	_____	N/A	_____
12	Land use, zoning, subdivision name, recording information and adjacent owners.	Yes	_____	No	_____	N/A	_____
13	Building locations, sizes, and dimensions.	Yes	_____	No	_____	N/A	_____
14	Distance between buildings on the same lot.	Yes	_____	No	_____	N/A	_____
15	Building lines and setbacks.	Yes	_____	No	_____	N/A	_____
16	Dimensions of all drive lanes and traffic flow arrows.	Yes	_____	No	_____	N/A	_____
17	FEMA floodplains with elevations, and minimum finished floor elevations (include the floodplain note shown on the final plat).	Yes	_____	No	_____	N/A	_____
18	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	_____
19	Distances between existing and proposed driveways.	Yes	_____	No	_____	N/A	_____
20	Loading and unloading areas.	Yes	_____	No	_____	N/A	_____
21	Ramps, crosswalks, sidewalks and barrier-free ramps with dimensions.	Yes	_____	No	_____	N/A	_____
22	Locations of dumpsters and trash compactors with height and material of screening.	Yes	_____	No	_____	N/A	_____

23 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 _____

24 Location and sizes of existing and proposed water and sewer mains. Yes _____ No _____ N/A _____

25 Location of fire hydrants. Yes _____ No _____ N/A _____

26 Location and sizes of storm drains, culverts, inlets and other drainage features on or adjacent to the site. Yes _____ No _____ N/A _____

27 Locations, widths, and types of existing and proposed easements. Yes _____ No _____ N/A _____

28 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 _____

29 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 _____

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 _____

30 2" x 3" blank box in lower right corner for Town use. Yes _____ No _____ N/A _____

31 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 _____

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 in .pdf format for review and six (6) sets of plans for presentation at meetings with Town staff. 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	Slope:	Yes	_____	No	_____	N/A	_____
	a. Back of street curb to property line: ¼" 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 ¼" per foot + 6" from street gutter up to property line.	Yes	_____	No	_____	N/A	_____
5	Letter of approval if grading is proposed on adjacent property.	Yes	_____	No	_____	N/A	_____
6	Utility easement from abutting property owners.	Yes	_____	No	_____	N/A	_____
7	Proposed inlets, label and size.	Yes	_____	No	_____	N/A	_____
8	Proposed pipes, label and size.	Yes	_____	No	_____	N/A	_____
9	Existing inlets and pipes.	Yes	_____	No	_____	N/A	_____

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:	Yes	_____	No	_____	N/A	_____
	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	_____

DRAINAGE

1	Downstream Assessment	Yes	_____	No	_____	N/A	_____
2	Pre and Post Development drainage area map	Yes	_____	No	_____	N/A	_____
3	Computation tables showing drainage areas, Runoff coefficients, time of concentration, rainfall intensities, and peak discharge for the required design storms.	Yes	_____	No	_____	N/A	_____
4	Identify detention pond location(s), volume, and outfall	Yes	_____	No	_____	N/A	_____
5	Detention pond stage-storage tables, outlet rating curve, and pond volume summary	Yes	_____	No	_____	N/A	_____
6	Detention Pond Design Storms: 2-, 10-, and 100-year storm events	Yes	_____	No	_____	N/A	_____
7	Emergency Spillway provided						
8	An emergency spillway shall be provided at the 100-year maximum storage elevation with sufficient capacity to convey the fully urbanized 100-year storm assuming blockage of the closed conduit portion outlet works with minimum six inches of freeboard.	Yes	_____	No	_____	N/A	_____
9	Access to pond provided	Yes	_____	No	_____	N/A	_____
10	Downstream Tailwater impacting pond outlet	Yes	_____	No	_____	N/A	_____
11	Erosion protection provided at pond outfall	Yes	_____	No	_____	N/A	_____

STORM DRAIN DESIGN

1	Conveyance System - Storm Drain Pipe	Yes	_____	No	_____	N/A	_____
2	Conveyance System - Drainage Ditch/Swale	Yes	_____	No	_____	N/A	_____

3	Conveyance System Design Storm: 100-year Fully Developed for Ditches and Driveway Culverts	Yes	_____	No	_____	N/A	_____
4	Conveyance System Design Storm: 25-year closed conduit, 100-year contained in ROW	Yes	_____	No	_____	N/A	_____
5	Roughness 'n' value of 0.015 for concrete pipe	Yes	_____	No	_____	N/A	_____
6	Maximum storm drain velocity: 15 ft/s	Yes	_____	No	_____	N/A	_____
7	Minimum storm drain velocity: 2.5 ft/s	Yes	_____	No	_____	N/A	_____
8	Minimum Pipe Size for main lines: 24" diameter	Yes	_____	No	_____	N/A	_____
9	Minimum Pipe Size for laterals: 18" diameter	Yes	_____	No	_____	N/A	_____
10	Minimum of 2 feet of clearance with all conflicting utilities	Yes	_____	No	_____	N/A	_____
11	Erosion protection provided at storm drain outfall	Yes	_____	No	_____	N/A	_____
12	Proposed Channel	Yes	_____	No	_____	N/A	_____
13	Minimum bottom width at least 8-ft in width	Yes	_____	No	_____	N/A	_____
14	4:1 side slopes	Yes	_____	No	_____	N/A	_____
15	Minimum 1-ft of Freeboard provided for the 100-year fully developed water surface ele	Yes	_____	No	_____	N/A	_____
16	Supercritical flow	Yes	_____	No	_____	N/A	_____
17	Access Ramp provided	Yes	_____	No	_____	N/A	_____
18	Minimum Channel slope of 0.002 ft/ft	Yes	_____	No	_____	N/A	_____
19	New or Existing Culvert/Bridge improvements	Yes	_____	No	_____	N/A	_____
20	100-year fully developed design for new/improved culverts	Yes	_____	No	_____	N/A	_____
21	Minimum 1-ft of Freeboard provided for the 100-year fully developed water surface elevations for all Culverts. Minimum 18" of Freeboard for major thoroughfares.	Yes	_____	No	_____	N/A	_____
22	Minimun 2-ft of Freeboard for provided for the 100-year fully developed water surface elevations to the low chord of the proposed bridge.	Yes	_____	No	_____	N/A	_____

WATER – All water distribution and transmission facilities shall include:

1	Approval letter to connect to the waste line from Cross Timbers 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.	Yes	_____	No	_____	N/A	_____
	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:	Yes	_____	No	_____	N/A _____
	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 _____
20	Include applicable Cross Timbers Standards and Details	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	Manhole at end of all lines.	Yes	_____	No	_____	N/A _____
5	Profile all sewer lines except laterals.	Yes	_____	No	_____	N/A _____
6	Show other utility lines crossing wastewater lines.	Yes	_____	No	_____	N/A _____
7	Label lines to correspond to profile.	Yes	_____	No	_____	N/A _____
8	Concrete encasement at creek crossing.	Yes	_____	No	_____	N/A _____
9	Provide stub outs to adjacent property. Add services for Planned Development Communities.	Yes	_____	No	_____	N/A _____
10	Note benchmark on all sheets.	Yes	_____	No	_____	N/A _____
11	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 AND SEDIMENT CONTROL – All plans shall show the following:

1	The scale for Erosion and Sediment 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 and sediment control BMPs including temporary construction entrance, silt fence, inlet protection, rock berms, seeding, sediment traps, etc.	Yes	_____	No	_____	N/A _____
5	Erosion and sediment 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 Standard Details.	Yes	_____	No	_____	N/A _____

3	Small Sign Details including MUTCD Code, and Dimensions. Name and size for all street name plaques.	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, if applicable

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	_____
2	Lighting and Conduit Layout Plan.	Yes	_____	No	_____	N/A	_____
3	Lighting Standard Details.	Yes	_____	No	_____	N/A	_____

COPPER CANYON TEXAS

ENGINEER'S CHECKLIST FOR PRELIMINARY STORMWATER MANAGEMENT PLAN

Please attach additional sheets as necessary for comments and descriptions.

Following are items to be included in the Preliminary Stormwater Management Plan. In addition to plans showing this information, a drainage report shall be prepared providing technical documentation and assumptions included in the plan. The plan sheets and report combined shall comprise the Stormwater Management Plan. This checklist shall be completed and included with the submission of the Preliminary Stormwater Management Plan.

1. 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 ____

2. 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.	Location of runoff design points	Yes ____ No ____ N/A ____
D.	Size & description of outfall drainage facilities and receiving streams	Yes ____ No ____ N/A ____
E.	Existing and proposed land use and zoning	Yes ____ No ____ N/A ____
F.	FEMA Flood Hazard Areas, if applicable	Yes ____ No ____ N/A ____
G.	Delineation of watershed boundaries with flow arrows	Yes ____ No ____ N/A ____
H.	Proposed modifications to watershed boundaries	Yes ____ No ____ N/A ____
I.	File numbers for existing developments & drainage facilities	Yes ____ No ____ N/A ____
J.	Preliminary hydrology (2-, 10-, 100-year events) with supporting data & calculations for on-site existing & proposed, & off-site ultimate conditions	Yes ____ No ____ N/A ____
K.	Proposed detention ponds or other storm water controls, with summary hydrology for all applicable design storms	Yes ____ No ____ N/A ____
L.	Delineate entire zone of influence for all outfalls	Yes ____ No ____ N/A ____
M.	Downstream constrictions, flooding, or erosion locations	Yes ____ No ____ N/A ____

N. Computation tables showing drainage areas, runoff coefficients, time of concentration, rainfall intensities and peak discharge for required design storms for existing and proposed (ultimate) conditions, at all design points for each component of the stormwater system (streets, pipes, channels, detention ponds, etc.).

Yes ____ No ____ N/A ____

O. Information regarding and required Corps of Engineer's Section 404 permist, Conditional Letters of Map Revision (CLOMR), Letters of Map Revision (LOMR) or other permits relating to lakes and streams required by any federal, state, or local authorities Yes ____ No ____ N/A ____

P. Proposed facilities with private maintenance and identification of entities responsible for maintenance (Maintenance Agreement and Maintenance Plan required for final) Yes ____ No ____ N/A ____

Determination of Adequate Outfalls and Zones of Influence: Describe these and provide supporting methodology: _____

_____

_____

_____

_____

_____

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

_____

_____

_____

_____

4. **Other Comments:**

_____

_____

_____

_____

(seal)	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 _____

COPPER CANYON TEXAS

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 _____

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 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.