DEVELOPMENT PLAN SUBMITTAL REQUIREMENTS
Section 18-41

Applications must contain the following information in the format described. Applications will not be accepted if required items are missing or incomplete.

1. **Application Form** – must be signed by property owner or be accompanied by an authorization letter
2. **Application Fee** – refer to the application form
3. **Letter of Intent** – narrative describing the project proposal and including contact information for the development team (planner, engineer, developer, etc.)
4. **Completed Nonresidential Water Use Questionnaire (for Nonresidential Projects)**
5. **Plan Set (Consistent Sheet Sizes, preferrable 22 inches x 34 inches):**
    a. **Site Plan**
    b. **Landscape Plan**
    c. **Architectural Elevations**
    d. **Grading Plan**
    e. **Utility Plan**
    f. **Existing and Proposed Drainage Basin Maps**
    g. **Photometric Plan**
6. **Traffic Impact Study or Traffic Conformance Letter**
7. **Additional Documents if Required by Staff, which may include:**
    a. **Drainage Report****
    b. **Utility Report****

    ****Please verify with staff if these documents will be required for your Development Plan.**
8. **Prairie Dog Relocation Letter – refer to the prairie dog relocation information handout.**

This is a general list of requirements. Some projects may require more or less information. The attached examples may not include each element of the list. However, each element should be reviewed for inclusion on a submittal.

GENERAL REQUIREMENTS (ALL SHEETS)

- Subdivision name
- Legal description
- North arrow

- Legends as necessary
- Project number (provided after first submittal)
- Submittal date and revision numbers and dates, as applicable
- Name of professional design firm/individual who prepared the plans
- 2-inch x 3-inch box or clear space for approval stamp

SITE PLAN

Site Plans Should include the following:

- Vicinity map (scale: one-inch = 600 feet)
- Dimensions of all principal site elements
- Existing and proposed building footprints
- Surrounding buildings/subdivisions
- Height of building(s)
- Easements
- Setback dimensions
- Curb cuts
- Graphic and written scale (base 10)
- Parking spaces/handicap spaces/loading spaces
- Sidewalks/sidepaths
- Driveways
- Lighting/mechanical equipment/transformers
- Property boundary – thick solid line
- Lot lines
- Streets/street names
- Square footage for each lot and/or tract
- Parks and Trails
- Cross section diagrams as needed
- Detention ponds, retention ponds, floodplains, wetlands, and other water bodies
- Retaining walls – location/height/material
- Fences – location/height/material

Site Plans locate and describe all the important boundaries associated with construction projects. Boundaries include more than just political or property lines. They also describe flood plains, rights-of-way, topographical elevations, buildings and so on.

The information that planners need to process different Site Plans depends on the size of the proposed development and the uses involved in the project. Speak to a planner before submitting the final version of a Site Plan.

Site Plans vary in complexity. Several sheets may be required to adequately display all necessary features. Consult a planner to find out which plan features are necessary for your project.
If the project includes Tracts in addition to the Lot(s) include a Tract Table with Size, Use, Ownership and Maintenance responsibility defined.

For multifamily developments, an address plan is required. Include floor plans of each building and an overall site plan with proposed address numbers.

SITE DATA TABLE (EXAMPLE)

SITE DATA TABLE (EXAMPLE)			
Lot Size		(In square feet)	(In acres)
Building Floor Area		(In square feet)	
Building Construction Type		(IBC designation)	
		Existing	**Proposed**
Zoning District			
Land Use			
		Allowed	**Proposed**
Ground Floor Area (square feet)			
		Residential	Non-Residential
Total Floor Area (square feet)			
		Residential	Non-Residential
Building Height			
Setbacks	**North**		
	East		
	South		
	West		
Off-street Parking	**Regular Spaces**		
	Loading Spaces		
	Handicap Spaces		
	Guest Spaces*		

*As required per Section 18-650.

LANDSCAPE PLANS AND DETAILS

The landscape plan is a “final” plan, please be detailed and specific when completing. Landscape plan requirements are outlined in Article 8 of the development code. Review Article 8 of the development code outlining all requirements for the landscape, hydrozone and tree preservation & mitigation plan and the City of Thornton Standards and Specifications Section 104.1, and Section 800.

All submitted plans should be prepared by a trained professional as outlined in 18-613(b) and contain, at a minimum, the following information. Any submittal may require additional items as determined by the Director.

GENERAL PLAN ELEMENT(S) SHALL INCLUDE:

- Key map (for submittals with multiple plan sheets).
- North arrow, written and graphic scale
- Applicant/project number as assigned.
- Name, contact information and certifications for designer of record (per 18-613, b, 2, a)
- Overall Plan sheet (with matchlines if required for detail plan sheets)
- Label tract/lot/street/ROW width/classification, etc
- Existing Conditions/site elements including but not limited to trees, trails, lakes, wetlands, detention ponds, well sites, structures to remain, etc.
- Proposed site elements including, but not limited to sidewalks/sidepaths, trails, loading areas, retaining walls, water features, tot lots, raised or at grade planters, outdoor art, flag poles, benches, trash containers, bike racks, fencing, signage/monument locations, street lights, hydrants, etc.
- Existing and/or Proposed grading (in light line), intersection visibility triangles and easements that may affect planting
- Legend for any hatches, symbols, or graphic content used
- Other offsite conditions that may impact the site
- Grease pit access, if applicable
- Existing and proposed utility easements.
- Floodway/floodplain, wetlands and/or drainageways including water surface elevations of any proposed water quality/detention pond(s).

TREE PRESERVATION AND MITIGATION PLAN:

- All general plan elements noted above
- Independent consultant/arborist name, contact information and qualifications/credentials as required per the Section 18-590
- Depiction of all existing trees impacted by the proposed development graphically delineating preservation or removal intent in unique symbols or other graphic convention.
- Number/call out each existing tree for reference in the mitigation table.
- Mitigation table on the next page containing a minimum of the information as noted below.

Mitigation Table							
ID	Scientific Name	Common Name	Diameter at breast height (DBH)	Condition rating (Species/ Condition/ Location) Factor As required/noted	Adj Mitigated Value	Preserved Credit (Table 18-591.1)	Removal Penalty (Table 18-592.1)
1	E. angustifolia	R. Olive	12	80% *(restricted plant)*	0	-	-
2	P. deltoides	Cottonwood	48	50% *(50% or less = dead)*	0	-	-
3	P. deltoides	Cottonwood	24	80%	19.2	9.6 TE	
4	P. deltoides	Cottonwood	24	80%	19.2		9.6 TE
Total Tree preservation credits						9.6 TE	
Tree removal penalty							9.6 TE

- If applicable Tree preservation and protection notes and or details to meet requirements as noted in the Standards and Specifications 105.6.

SPECIFIC LANDSCAPE PLAN ELEMENT(S) SHALL INCLUDE:

- Existing plant material to remain and/or preserve in place.
- Existing adjacent landscaping and other offsite conditions that may affect landscape design
- Proposed landscape elements including but not limited to trees, shrub beds, groundcover/seed/sod areas, mulched areas, gravel, and other similar elements.
- Proposed plant material shall be labeled with key/label for plant material located on the sheet it is displayed on, no partial labels located on other sheet.
- All proposed plant material shall be displayed at appropriate sizes to match the mature size of the plant it represents, or represented as a hatch/fill pattern for groundcovers/small or illegible material at presented scale.
- Tree equivalent (TE) calculations following the example below and revised to fit proposed project.
- Plant schedule or plant materials list following the example below and revised to fit proposed project.
- Landscape materials schedule with associated products as proposed, including but not limited to mulch (size, color, etc), boulders, edging, specialty hardscape, and site amenities.

Use the following example of a Tree Equivalent (T.E.) Landscape Requirements table to calculate the required plant material for the site. Include the table on the landscape plan sheet or detail sheet

TREE EQUIVALENT (T.E.) LANDSCAPE REQUIREMENTS (Example)				
Landscape Areas & Buffers (as applicable)	Option/width/other (if applicable)	Square Feet/ Lineal Feet/other	Formula	Total Quantity of T.E. Required
Right-of-Way (ROW) Landscape area	NA	Linear Feet (Figure 18-598.1)	1.5 T.E./50 linear feet	
Street Landscape Buffer	XX feet	Linear Feet	X.X T.E./50 linear feet	
Transition Landscape Area Buffer/Buffer yard	Option X	Linear Feet	X.X T.E./50 linear feet	
Common Area Landscaping	NA	square feet	1 T.E./600 square feet	
Parking Lots	NA	Total number of parking stalls provided/6 x 100 square feet	XX sf / 75 square feet	
Detention and Drainage Channel Areas	NA	square feet	1 T.E./4,000 square feet	
Public and Private Parks	NA	Size	1 TE / 1,000 square feet 1 TE / 2,000 square feet 1 TE / 3,500 square feet	
Mixed-use/Regional Trails		Linear Feet	1 T.E./40 linear feet	
Retaining Wall Landscape Buffer	XX feet Wall Height	Linear Feet	X T.E./100 linear feet	
Median Landscape	NA	Linear Feet	Two T.E./50 linear feet	
Roundabout Landscape	NA	square feet	1 T.E./350 square feet	
TE Subtotal:				
Tree removal penalty				
Total Required TE				
Total Provided TE				

Use the following example of a Plant Material List table to document the plant material used on the plans. Include on the landscape plan sheet or the detail sheet.

PLANT MATERIAL LIST (Example)						
Key/Code	**Qty**	**Botanical Name**	**Common Name**	**Size**	**Water Use**	**TE**
Deciduous Shade Trees						
Ornamental Trees						
Evergreen Trees						
Tree TOTAL						
Deciduous Shrubs						
Evergreen Shrubs						
Shrub TOTAL						
Ornamental Grasses/Perennials						
Orn Grasses/Perennial TOTAL						
Sub TOTAL						
Total Tree preservation credits (shall not be more than 30% of required TEs without Director approval)						
TOTAL PROVIDED Tree Equivalents (TE)						

Please alphabetize symbols when completing table.

One T.E. equals: one two-inch caliper deciduous tree or one six-foot evergreen tree or 10 #3-cont. shrubs/ornamental grasses or 20 #1 container ornamental grasses/applicable groundcovers.

Landscape Notes:

- Required minimum soil amendment for all landscape areas = 4 cubic yards/1000 square feet (6 cubic yards /1000 square feet for parks and City maintained areas), or 1,500lbs per acre Biosol (or 2 cubic yards /1000 square feet) for native areas. List total cubic yards required for project, including right-of-way (ROW) landscape area that is outside property boundary.
- Add note that City of Thornton (COT) 'Affidavit of Soil Amendment Installation' is required from contractor.
- State mulch type(s), size and depth.
- State steel bed edging, Ryerson or equal.
- Irrigation: Statement that:
  - 1) Permanent, underground irrigation is required in all landscape areas,
  - 2) Turf areas are zoned separately from bed areas,
  - 3) Controller to include rain shut-off,
  - 4) Indicate that hydrozones will be on separate irrigation zones according to water-demand.
- Statement that property owner or assigns or owners association maintains the landscaped areas, including any adjacent ROW landscape.
- Add note that a pre-construction meeting is required between the landscape contractor, property owner and COT landscape architecture personnel before start of construction
- State type(s) of sod; cultivar(s), mixes or blends with patented names.
- State seed mixes and seeding rates for any native areas.
- Do not include construction bid notes in this Planning document public file or identify them as such and separate them from the required notes listed above.
- Notes specifically defining maintenance delineation for proposed landscape areas

Details:

- For all fence, retaining wall, trail construction etcetera; material details and pictures/drawings. Use COT planting, Regional Trail, three-rail fence, etcetera details found on City web page.
- Show any site amenity details/furniture; play structures, Mutt Mitt or equivalent dog stations, benches, trash receptacles, bike racks, etcetera, including colors, manufacturer and item identification numbers.

Other Considerations

- Vehicle overhang areas do not fulfill landscape area requirements.
- If the entire site does not fit on one sheet at one-inch equals 30 feet engineering scale, provide an overall landscape plan at a smaller engineering scale and break the plan into match-lined sheets at the 30 scale. Provide a key map. (As much as possible do not cut match lines through shrub beds and buildings.)
- Plant material within visibility triangles must adhere to code requirements
- Evaluate the size of planting beds to ensure that plant material will not overgrow. Show deciduous trees minimum six feet and evergreen trees minimum 10 feet (except back of curb) from bed edge, sidewalks and buildings.
- No sod or overhead irrigation is allowed in areas less than 10 feet wide per Code.
- Back of curb areas must be a minimum eight-foot width for tree plantings. Use salt tolerant plants in back of curb along arterial streets where magnesium chloride will be applied in winter.
- Street trees must be located in permanent locations, not in future road lane locations.

- Shade Maples (Acer) require 20-foot width of landscape area due to their extensive surface rooting and moderate to high water needs.
- As much as possible locate evergreen trees in groupings in mulched beds.
- Consider alternative buffers where native areas are adjacent to homeowner lots, sidewalks and/or streets include a mow strip of a traditional or lower water alternative sod to create a transition to the wilder area (10 feet to 30 feet depending on project).
- The top rims and two-thirds down the sides of detention ponds should be planted as sod; the bottom and lower sides can be seeded (depending on size and location).
- Common landscape areas should not drain onto private lots.
- Keep trees from being planted on top of public water or sanitary sewer lines as much as possible.
- Show fire hydrants on the plan and other public meters on buildings where a ‘clear zone’ or access must be maintained. No landscape shall be installed within four feet of any fire hydrants.
- Utility boxes in the ROW and banks of utility meters on buildings shall be screened per Code.
- Screen head-in parking that faces streets.
- Consider snow storage in parking lot landscape areas.
- Ensure tree diversity meets requirements noted in Standards and Specifications based on total number of trees proposed.
- Identification of parking lot landscape area/islands included in proposed site plan.

HYDROZONE PLAN:

- All general plan elements noted above, screened for clarity.
- All landscape plant material proposed, screened for clarity.
- Identify and label the location and proposed size of any proposed irrigation meters/point of connection.
- Graphicly show/hatch all applicable hydrozones using the categories identified in table 18-615.1 of the code.
- Ensure all planting beds are completely contained in one hydrozone and proposed plant material match the assigned hydrozone.
- A hydrozone chart following the example below and revised to fit proposed project, if more than one irrigation point of connection is proposed, a separate hydrozone chart for each irrigation point of connection shall be required.

Hydrozone Chart (Example)

Irrigation Meter/Point of Connection Identifier			
Landscape Area (Category)	Hydrozone Area (square feet)	Calc. gallons of water per square feet per year (per table 18-615.1)	Calc. Water Use (Gallons)
Fine Turf	X,XXX	20	X,XXX
Utility Turf	X,XXX	12	X,XXX
Native Seed	X,XXX	7	X,XXX
Moderate water use plant bed	X,XXX	16	X,XXX
Low water use plant bed	X,XXX	12	X,XXX
Ultra-low water use plant bed	X,XXX	8	X,XXX
Non-irrigated area	X,XXX	0	X,XXX
Total Site landscape area (square feet)	X,XXX	**Total Calculated water use (Gallons)**	X,XXX
	Calc average gallon per square feet water use (total calc. water use / total site landscape area)		XX

ARCHITECTURAL ELEVATIONS

ARCHITECTURAL ELEVATIONS SHOULD INCLUDE:

- Front elevation(s)
- Left side elevation(s)
- Right side elevation(s)
- Rear elevation(s)
- Label the major colors and materials used on the proposed building(s).
- Fence and retaining wall materials/colors/heights. Retaining walls should use materials and colors that are consistent or complimentary to the materials and colors used for the proposed building(s).
- Detail of Trash Enclosures – Need to use same materials in construction as portrayed in material and color samples of proposed building(s).

Please review the Thornton City Code for Design Review Criteria.
Although proposed signs may be shown in Architectural Elevations, please include note: “Signs are subject to a separate review process.”

GRADING PLAN

- Existing and proposed contours (two-foot minimum, Minor and Major Differentiated, with adequate labels)
- Contours 150 feet outside boundary, sites < five acres
- Contours 300 feet outside boundary or as needed, sites > five acres

- Flow Direction Arrows
- Retaining Walls with top of wall and bottom of wall elevations
- Storm drain and inlets

UTILITY PLAN

- Existing utilities
- Proposed Water/sewer Main Locations
- Proposed water/sewer main size
- Proposed Hydrant locations
- Proposed Easements with dimensions
- Dimension horizontal separations between utilities
- Identify water pressure zones. If more than one pressure zone is present on the plan, identify which areas will be served by each pressure zone.
- Identify stub-outs for future connection to adjacent properties

DRAINAGE BASIN MAP

Existing:

- Existing Contours (two-foot intervals) and basin boundaries including all offsite basins tributary to the property.
- Basin symbols and runoff table matching Thornton Standards and Specifications detail 400-1
- Design Points
- Existing water features including, wetlands, irrigation ditches, ponds, streams, etcetera.
- Existing 100 year Floodplain
- Existing storm drain

Proposed:

- Proposed Contours (two-foot intervals) and basin boundaries including all offsite basins tributary to the property.
- Proposed basin symbols and runoff table matching Thornton Standards and Specifications detail 400-1
- Proposed design points
- Proposed storm drains and inlets.
- Proposed stormwater control measures (SCMs).
- If more than one stormwater control measure is proposed on the property, identify which sub-basins drain to each.
- Existing water features to remain
- Proposed water features.
- Proposed 100yr floodplain.

FIRE TRUCK TURNING REQUIREMENTS

Vehicles specifications

- Length = 49.7 feet
- Width = 8.5 feet
- Chassis = 10.5 feet mirror to mirror
- Height = 12.2 feet
- Inside turning Radius = 25 feet
- Outside Turning Radius = 50 feet

