APPROVED MATERIALS LIST
PARKS & OPEN SPACE
FEBRUARY 2021

The following approved materials list applies to all City of Longmont Natural Resource Division related improvements per Section 600 of the City of Longmont Design Standards and Construction Specifications.

Proposed substitutes to the following specific brands and / or models shall be submitted to the City of Longmont Public Works and Natural Resources Department in writing with all necessary technical information needed for analysis. A written approval from Public Works and Natural Resources Department of substitute is REQUIRED for all products.

601.00 CONCRETE BIKEPATHS, BRIDGES AND UNDERPASSES

1. **Control joints**: Zip strip or saw cut.
2. **Expansion joints**: pre-formed compressible bituminous fiber Type M-213, ½" thick with removable 'void cap' to create ½" reveal for sealant. Self-leveling sealant to be Tremco "Tremflex 834, Pecora "unicrylic +60, or Sonolastic "Sonolac".
3. **Bridge decking**: concrete or 2"x8" IPE Ironwood. Decks must be designed with ability to easily replace individual deck boards.
4. **Underpass Lighting**:
   a. Due to the frequent changes amongst lighting suppliers, the City elects not to pre-approve an underpass lighting manufacturer or system. Lighting systems must be vandal resistant and energy efficient (i.e. LED) and should be submitted to Natural Resources for consideration early in the design process.
5. **Root Barrier**: Deep Root 24" barrier.
6. **Underpass Pavement Markings**: Yellow paint – 4" wide solid line at blind corers and through underpasses, as approved by City staff.

602.00 GRADING AND FINE GRADING

1. **Soil Amendment**: Composted aspen humus or other amendments certified as Class I by Rocky Mountain Organics Council. Premium 3 by A-1 Organics is a pre-approved material.

603.00 IRRIGATION

Note: For common open space irrigation systems, equipment equal to these must be used (i.e. commercial-grade and heavy-duty).

1. **Irrigation Flow Meter**: Data Industrial. For 1" – 4" taps use drop-in style model # IR228PV. For 6" taps, use threaded style model # IR220BR.
2. **Backflow Enclosure:** Insulated Strong Box SBBC-30ALI by V.I.T. Products, Inc.
3. **Mainline**:
   a. For pipe sizes 3" and larger - J.M. Ringtite Class 200 PVC pipe.
   b. For Pipe sizes smaller than 3" – Schedule 40 PVC
4. **Joint Restraints:** For all mainline sized 3" and larger - Leemco ductile iron gasketed fittings and Leemco pipe restraints shall be used.

5. **Drip line**: Irritrol blue stripe drip pipe, 80 PSI rated. Centennial drip tubing or Rainbird XT-700 only.
6. **Valves**:
   a. Remote Control Zone Valves:
      1. Potable Water Systems: Rainbird PEB Series or Hunter ICV series.
      2. Raw Water Systems: Hunter ICV with Sentry filter or Rainbird PES-B Series

         NOTE: Pressure regulating function to be used as needed per Section 603.2.5.
   b. Remote Control Master Valves: Tap sizes ¾" – 2.5": Rainbird GB Series (brass). For ¾" taps, use 1" Master Valve with reducing bushings. Taps 3" and larger: use Rainbird 300 BPES master valve.
   c. Drip Remote Control Valves: Rainbird XCZ-PRB-100-COM
   d. Ball Valves (located within vale assemblies): Spears plastic ball valves with tee handle – slip joint (no female threads).
   e. Isolation Gate Valves: MATCO Gate Valve with resilient seat.
   f. Manual Drain Valve: AY McDonald Model # 76101010 1" curb stop.
   g. Quick Coupling Valves: Rainbird 44RC units with rubber cover. Keys Rainbird 44K brass key. Size of all QC valves shall be 1".
7. **Valve Boxes**: Highline (formerly Pentek) or Carson. Jumbo – sized only for remote control valve assemblies. 10" round boxes shall be used for quick couplers, gate vales, wire splices, etc. Use purple lids on all boxes with raw water as the source and green lids for all other systems.
8. **Control System**:
   a. Control System Enclosure: Hoffman Floor Stand (A-FK1212), Latch Kit (A-L2BR), Back Panel (C-P2424) and Enclosure (A-242412LP).
   b. Controller (*for systems not to be maintained by the City of Longmont)*:
      1. Hunter I-Core series controller.
      2. Surge Protection: *(as appropriate).*
   c. Satellite Control Field Unit (*for systems to be maintained by the City of Longmont):*
      1. Satellite control system (one per water tap), size per design plus minimum of three (3) spare zones. System shall include the following specific brand and models in addition to miscellaneous requirements per detail in section 603.00:
         aa. Toro Sentinel control field unit - Toro model #SSAKxxPSI6NS4
         bb. Toro Sentinel Remote Modem Transceiver Assembly with Antenna (Model #SRTA)
         cc. Toro Sentinel Hand-held Radio (Model #SHHR) or Kenwood (#370) Hand-held Radio. **Note:** Radios are to be programmed to frequencies 453.1125, 465.5125 and 453.8875, per the direction of City staff.
9. **Sprinkler heads**:
   a. Gear driven Rotor heads: Rainbird 8005 with stainless steel riser preferred. Rainbird 5000, Hunter I-25, Hunter I-20, Rainbird Falcon 6504 Series, all with

stainless steel riser, may be used with City approval. Stainless steel risers shall be required for sports fields and/or when a head is adjacent to sand or crusher fines.

b. Pop-Up Spray heads: Rainbird 1806 series (6" pop-up riser). NOTE: Hunter MP1000 rotating spray sprinklers may be considered for specific areas where a potable water source is used, provided they are in low quantity and being used for a specific reason. If approved, they must be housed in a Rainbird 1806-SAM-P45 spray body.

10. **Drip system**:
    a. Emitters: Rainbird XB series with spiral barb emitters.
    b. Flush caps: Agrifim model #CETC-34.
11. **Irrigation Pump Station**
    a. SyncroFlo skid-mounted system (Model to be determined with design). Prefabricated system with vertical turbine pump station designed to meet specified GPM at a discharge pressure of 100 psi. Pump station to include: pumps shafts, bowls, filter screen, motors and associated piping and fittings all mounted on a metal skid. Utilize flow meter for pump station as recommended by manufacturer. The system shall be factory tested and UL listed. Depending on the size and location of the pump station, a Mission Control system may need to be included in the design for the City to effectively monitor water use. For additional information on design parameters and additional equipment required with irrigation pump stations, contact the City for the current Parks Design Standards.
12. **Miscellaneous Irrigation Equipment**:
    a. Waterproof connections: Blazing Snaploc wire connector BVS-2 on all wires.
    b. Elbows: Rainbird SBE-050.
    c. Risers: Funny pipe for pop-up heads; nipples for rotors.
    d. Swing Joints: Fabricate each swing joint – no prefabricated swing joints permitted.
    e. Pipe Glue: WELD-ON 711 grey glue with P70 purple primer
    f. Upon the discretion of the City for large scale projects, a two-wire control system may be utilized. If approved, the two-wire control path wire shall be Page Model P7072D-12 AWG and alterations to the approved controller specification, including decoders, grounding rods, etc., will need to be made to function with this alternate system.

604.00 SEEDING

1. **Pre-approved Dryland Mixes** (for temporary or permanent unmowed and/or non-permanent areas):

    a. **Native Areas of Primary Greenways (typically between the greenway trail and the waterway or on the side of the waterway without the trail):**
    Canada wildrye: 2.84 PLS pounds per acre
    Thickspike wheatgrass (Critana variety): 0.71 PLS lbs. per acre
    Slender wheatgrass (San Luis or Pryor variety): 2.05 PLS lbs. per acre
    Western wheatgrass (Arriba variety): 1.98 PLS lbs. per acre

Little bluestem (Cimarron or Pastura variety): 0.84 PLS lbs. per acre
Switchgrass (Trailblazer, Nebraska 28, or Blackwell variety): 0.28 PLS lbs. per acre
Alkali sacaton (Salado variety): 0.06 PLS lbs. per acre
Sand dropseed: 0.02 PLS lbs. per acre
Side oats grama (Vaughn variety): 1.14 PLS lbs. per acre
Blue grama (Alma, Bad River, or Hachita variety): 0.26 PLS lbs. per acre
Buffalograss: 3.89 PLS lbs. per acre

b. **Native Areas of Primary Greenways between trail and residential area:**
Blue grama (Alma, Bad River, or Hachita variety): 0.40 PLS lbs. per acre
Buffalograss: 5.83 PLS lbs. per acre
Inland saltgrass: 0.42 PLS lbs. per acre
Slender wheatgrass: 1.37 PLS lbs. per acre
Sandberg bluegrass: 0.82 PLS lbs. per acre
Alkaligrass: 0.27 PLS lbs. per acre

c. **Rights of way in areas of future road expansion:**
Inland saltgrass: 1.26 PLS lbs. per acre
Blue Grama (Alma, Bad River, or Hachita variety): 0.40 PLS lbs. per acre
Alkaligrass: 0.64 PLS lbs. per acre
Sandberg bluegrass: 0.47 PLS lbs. per acre

For **all other** dryland and/or non-irrigated seeding on City-owned property, contact the City's Natural Resources Specialist (303-651-8451) for a seed specification. The designer shall provide the site's location, seeding schedule, a soil analysis for each specific soil type on the project site, and the existing weed condition (species and coverage) for the project site when requesting the seed mix specification. Additional soil nutrient test(s) may also be required.

2. **Irrigated Turf Seed Mixes**: Contact the City Natural Resources Division to determine the most appropriate seed mix to use based on the anticipated uses, soil types, slopes, etc.
3. **Mulch**: For slopes steeper than 3:1 and inaccessible areas only: Weyerhauser "Silva-Fiber" mulch. For native areas, certified weed free hay straw or wood straw.
4. **Tackifier**: Guar Gum (Mandatory for all areas being mulched with crimped straw or hydromulched).
5. **Erosion Control Blanket**: For slopes steeper than 3:1, Soil Saver jute netting or approved equal, as specified by the project engineer and approved by the City. No plastic netting is permitted in the blanket.
6. **Road Delineators**: Durapost or SafeHit. White with reflectors.

605.00 SODDING

1. **Pre-approved Sod Mixes**:

a. For Arterial rights-of-way, sod must be grown within 60 miles of the Longmont city limits and be certified as the sod grower as drought tolerant.
b. For sod proposed in any other City owned or maintained area, contact the City Natural Resources Division to determine the most appropriate sod mix to use based on the anticipated uses, soil types, slopes, etc.

606.00 TREES, PLANTS AND GROUNDCOVER

1. **Tree wrap**: 4" wide Kraft tree wrap.
2. **Weed barrier fabric**: Mirafi geo-textile fabric 140N.
3. **Edging**: Hand dug edging is required within City public areas, unless otherwise approved.
4. **Mulch**:
    a. **Wood Mulch** – Approved in Arterial ROWs, Primary Greenways and Parks: Shredded wood mulch that is fibrous to minimize wind blowing the material away. Material shall not be dyed and not finely ground.
    b. **Cobble Mulch**: Approved in Arterial ROWs or Parks (as approved by the Project Manger): 3”-6” cobble. NOTE: Cobble is not to be used in Primary Greenway areas unless otherwise approved by staff.
5. **Tree Stakes**: Two inch (2”) x six feet (6’) round wooden posts or six foot (6') long, heavy-duty t-bar steel posts with rubber (not plastic) tops.
6. **Tree Guys**: ½” STRAP-X (flat synthetic webbing material) with grommetted tree straps.
7. **Tree Grates**: Cast Iron only. Minimum 40 square feet (4’ x 10’ (comes in two pieces) or 9’ x 5’ (comes in 4 pieces))
8. **Beaver protection**: Galvanized four foot (4') high (2” x 4” openings) fencing or textured paint applications, as approved by the City Open Space staff.

MISCELLANEOUS

1. **Benches**: Webcoat expanded metal six foot bench – surface mount on appropriately sized concrete pad (B6WBRCSM), black color. Textured polyethylene finish.
2. **Trash Receptacles**: Webcoat – 32 gallon (TR32 – TSRM) – surface or in-ground mount as appropriate – black color with DOME32 gray top. Also include 30 gallon galvanized trash can (no lid) inside receptacle.
3. **Recycling Receptacles**: Webcoat – 32 gallon (TR32 – TSRM) – surface or in-ground mount, as appropriate. Black color with blue DOME32 top.
4. **Picnic Tables**: Webcoat T6RC and T8RCHDCP tables – surface mount – black color – Textured Polyethylene Finish, PVC-coated clamps to bolt tables to appropriately sized concrete pad are also required.
5. **Bike racks**: Madrax inverted U-style #U238-SF, surface mount – black color on appropriately sized concrete pad.

Recommended Trees for City of Longmont Regulated Areas - Deciduous Trees

						Acceptable Planting Locations			Site Limiters		
Botanical Name	**Common Name**	**Cultivar or Variety**	**Moisture Requirements**	**Mature Height**	**Mature Spread**	**Street**	**Park**	**Green-way**	**Soil Volume Requirements**	**Plant Under Overhead Utilities**	**Additional Notes**
Acer campestre	Hedge Maple		Low - Medium	40	25	Yes	Yes	Yes	Small	Yes	Tolerates dry alkaline soils
Acer ginnala	Amur Maple	Flame	Medium - High	18	18	No	Yes	Yes	Small	Yes	Chlorosis in alkaline soils; can be single or multi stem
Acer glabrum	Rocky Mountain Maple		Medium	20	15	Yes	Yes	Yes	Small	Yes	Multi stem
Acer grandidentatum	Bigtooth Maple	Manzano, Rocky Mountain Glow	Low	35	23	Yes	Yes	Yes	Small	Yes	Tolerant of dry and alkaline soils
Acer grandidentatum	Bigtooth Maple	Mesa Glow	Low - Medium	28	18	Yes	Yes	Yes	Medium	No	Selection from New Mexico State University
Acer grandidentatum	Bigtooth Maple	Wasatch	Low - Medium	25	20	Yes	Yes	Yes	Small	Yes	Tolerant of dry and alkaline soils; single or multi stem
Acer miyabei	Miyabe Maple	State Street	Low - Medium	35	25	Yes	Yes	Yes	Small	Yes	Tolerant of heat and alkaline soils
Acer negundo	Boxelder Maple	Sensation	Low - Medium	45	35	No	Yes	Yes	Medium	No	Tolerant of alkaline soils; seedless; fast growing
Acer tataricum	Tatarian Maple	Hot Wings, Pattern Perfect	Low	25	20	Yes	Yes	Yes	Small	Yes	Red samaras in summer give an appearance of being in bloom; tolerant of alkaline soils; can be single or multi stem
Acer truncatum	Shangtung Maple		Medium	20	15	No	Yes	Yes	Medium	Yes	Additional pruning needed for street use to maintain shape and structure; heat and drought tolerant
Acer truncatum x platanoides	Shangtung Maple	Crimson Sunset Maple, Pacific Sunset, Norwegian Sunset Maple	Medium	35	25	No	Yes	Yes	Medium	Yes	Possible winter dieback
Aesculus arguta	Texas Buckeye		Low - Medium	50	25	No	Yes	Yes	Medium	No	More heat tolerant than *A.glabra;* large fruit
Aesculus glabra	Ohio Buckeye	Early Glow	Medium	35	35	No	Yes	Yes	Medium	Yes	Possible chlorosis; leaf scorch in hot dry sites; prickly seed pods; seeds poisonous to people
Aesculus flava	Yellow Buckeye		High	50	35	No	Yes	Yes	Large	No	Smooth pods; planting should be restricted to sites with abundant water, but well-drained soils
Amelanchier alnifolia	Saskatoon Serviceberry	Regent, Standing Ovation	Low - Medium	15	15	No	Yes	Yes	Small	Yes	
Amelanchier canadensis	Canada Serviceberry	Rainbow Pillar	Low - Medium	20	6	Yes	Yes	Yes	Small	Yes	Rootstock suckering possible; poor heat tolerance; needs moist, well drained soil; can be single or multi stem
Amelanchier x grandiflora	Autumn Brilliance Serviceberry	Cole's Select, Princess Diana, Robin Hill	Medium	25	15	Yes	Yes	Yes	Small	Yes	Can be single or multi stem
Betula nigra	Eastern River Birch	Heritage	Medium - High	40	30	No	Yes	Yes	Medium	No	Exfoliating bark; multi stem; Planting locations shall be focused to areas with abundant moisture
Betula occidentalis	Western River Birch	Rocky Mountain, Water Birch	High	18	18	No	Yes	Yes	Medium	Yes	Exfoliating bark; multi stem; Planting locations shall be focused to areas with abundant moisture
Carpinus betulus	European Hornbeam	Frans Fontaine, Fastigiata	Medium	40	30	No	Yes	Yes	Medium	No	Heat intolerant; may be short lived; planting on streets restricted to residential streets only
Catalpa erubescens	Hybrid Catalpa	Purple	Low - Medium	40	30	Yes	Yes	Yes	Medium	No	Purple leaves in the spring, mature to dark green in the summer
Catalpa ovata	Chinese Catalpa		Low - Medium	30	30	Yes	Yes	Yes	Medium	No	8-10" long very thin seed pods; large leaves
Catalpa speciosa	Northern/Western Catalpa		Low - Medium	50	40	Yes	Yes	Yes	Medium	No	8-20" long slender seed pods; large heart shaped leaves
Celtis occidentalis	Common Hackberry	Chicagoland	Low	55	45	Yes	Yes	Yes	Large	No	Very susceptible to Nipple Gall, an aesthetic problem
Celtis reticulata	Netleaf Hackberry		Low	25	25	Yes	Yes	Yes	Medium	Yes	Slow growing; small fruit can be messy
Cercis canadensis	Eastern Redbud	Alba, Forest Pansy, Lavender Twist	Medium - High	25	25	Yes	Yes	Yes	Medium	Yes	Shape makes maintaining clearance difficult; large cordate leaves
Cladrastis kentukea	American Yellowwood		Medium	35	35	Yes	Yes	Yes	Small	Yes	3" seed pods; tolerant of alkaline soils; smooth gray bark. Susceptible to freeze and storm damage.

Recommended Trees for City of Longmont Regulated Areas - Deciduous Trees

						Acceptable Planting Locations			Site Limiters		
Botanical Name	**Common Name**	**Cultivar or Variety**	**Moisture Requirements**	**Mature Height**	**Mature Spread**	**Street**	**Park**	**Green-way**	**Soil Volume Requirements**	**Plant Under Overhead Utilities**	**Additional Notes**
Corylus colurna	Turkish Filbert		Low - Medium	40	30	Yes	Yes	Yes	Medium	Yes	Adapts to poor soils; may produce small nuts; slow establishment requires regular watering in the first 3-4 years; planting on streets restricted to residential streets only
Crataegus ambigua	Russian Hawthorn		Low	20	15	Yes	Yes	Yes	Small	Yes	Plant only in sites away from playgrounds and at least 5' away from sidewalk and street edges when at maturity, due to large thorns and fruit. In rights-of-ways, only medians are acceptable locations.
Crataegus crusgalli inermis	Thornless Cockspur Hawthorn		Low - Medium	18	18	Yes	Yes	Yes	Small	Yes	Thornless; shape makes maintaining clearance difficult; red fruits, fruit litter can be extensive; can be single or multi stem
Crataegus laevigata	English Hawthorn	Crimson Cloud, Paul's Scarlet	Low - Medium	20	20	Yes	Yes	Yes	Small	Yes	Plant only in sites away from playgrounds and at least 5' away from sidewalk and street edges when at maturity, due to large thorns and fruit. In rights-of-ways, only medians are acceptable locations.
Crataegus x mordenensis	Toba Hawthorn		Low - Medium	20	15	Yes	Yes	Yes	Small	Yes	Plant only in sites away from playgrounds and at least 5' away from sidewalk and street edges when at maturity, due to large thorns and fruit. In rights-of-ways, only medians are acceptable locations.
Crataegus phaenopyrum	Washington Hawthorn		Low - Medium	30	25	Yes	Yes	Yes	Small	Yes	Plant only in sites away from playgrounds and at least 5' away from sidewalk and street edges when at maturity, due to large thorns and fruit. In rights-of-ways, only medians are acceptable locations.
Crataegus viridis	Winter King Hawthorn		Low - Medium	18	23	Yes	Yes	Yes	Small	Yes	Thorns; persistent 1/2" red fruit; can be single or multi stem. In rights-of-ways, only medians are acceptable locations.
Eucommia ulmoides	Hardy Rubber Tree		Low	45	40	Yes	Yes	Yes	Large	No	
Fagus sylvatica	European Beech	Roseomarginata, Tricolor	Medium	35	25	Yes	Yes	Yes	Medium	No	Intolerant to heat
Gleditsia triacanthos inermis	Thornless Honeylocust	Imperial, Moraine, Northern Acclaim, Shademaster, Skyline, Streetkeeper	Low	45	40	Yes	Yes	Yes	Large	No	Susceptible to canker disease
Gymnocladus dioicus	Kentucky Coffeetree	Espresso, Prairie Titan, Stately Manor	Low	60	45	Yes	Yes	Yes	Large	No	Female has fruit litter; other varieties are male clones without fruit
Koelreuteria paniculata	Goldenraintree	Summerburst	Low - Medium	30	30	No	Yes	No	Medium	Yes	Large compound leaves; Chinese lantern like pods in July and persist into winter. Wood wooded and prone to snow damage.
Liriodendron tulipifera	Tulip Tree		Medium	60	35	Yes	Yes	Yes	Large	No	Large root area required; salt sensitive; no arterial road plantings
Maclura pomifera	Osage Orange	White Shield	Low	35	35	Yes	Yes	Yes	Medium	No	Fruitless and thornless
Maackia amurensis	Amur Maackia	MaacNicent, Summertime	Medium	25	35	Yes	Yes	Yes	Medium	No	Tolerant of alkaline soils; wide site required for street tree planting
Malus sp	Apple	Only varieties that are highly resistant to fireblight	Medium	23	23	No	Yes	Yes	Medium	Yes	Edible fruit; plant only varieties with high resistance to fire blight; trees shall be planted so that there is at least a 5' buffer from sidewalks when the tree is at full maturity
Malus sp	Crabapple (fruitless)	Only varieties that are highly resistant to fireblight	Medium	23	23	Yes	Yes	Yes	Medium	Yes	Check with CSU Extension for a current list of crabapples with high resistance to fire blight; trees shall be planted so that there is at least a 5' buffer from sidewalks when the tree is at full maturity

Recommended Trees for City of Longmont Regulated Areas - Deciduous Trees

						Acceptable Planting Locations			Site Limiters		
Botanical Name	**Common Name**	**Cultivar or Variety**	**Moisture Requirements**	**Mature Height**	**Mature Spread**	**Street**	**Park**	**Green-way**	**Soil Volume Requirements**	**Plant Under Overhead Utilities**	**Additional Notes**
Malus sp	Crabapple (fruit-bearing)	Only varieties that are highly resistant to fireblight	Medium	23	23	Yes	Yes	Yes	Medium	Yes	Check with CSU Extension for a current list of crabapples with high resistance to fire blight; trees shall be planted so that there is at least a 5' buffer from sidewalks when the tree is at full maturity. In rights-of-ways, only medians are acceptable locations.
Nyssa sylvatica	Black Tupelo	Northern Splendor	Medium - High	40	25	No	Yes	Yes	Large	No	Dark green glossy leaves
Ostrya virginiana	American Hophornbeam		Medium	25	20	No	Yes	Yes	Medium	No	Hop like fruits
Phellodendron amurense	Amur Corktree	His Majesty, Macho, Shademaster	Medium - High	40	50	No	Yes	Yes	Large	No	Use only male cultivars, as fruit can be messy; needs large root space
Platanus x acerifolia	London Planetree	Bloodgood, Exclamation	Medium	70	55	Yes	Yes	Yes	Large	No	Bark showy and mottled with cream, olive and light brown colors; 1' globe-shaped fruit; large root system
Populus angustifolia	Narrowleaf Cottonwood		Medium - High	55	40	No	Yes	Yes	Large	No	Vigorous suckering; use in native areas only
Populus deltoides	Eastern Cottonwood		Medium - High	80	80	No	Yes	Yes	Large	No	
Populus sargentii	Plains Cottonwood		Medium - High	90	90	No	Yes	Yes	Large	No	
Populus x acuminata	Lanceleaf Cottonwood		Medium - High	50	43	No	Yes	Yes	Large	No	
Prunus americana	American Plum		Low	15	15	No	Yes	Yes	Small	Yes	Tolerate dry alkaline soils; 1" fruit; can be single or multi stem
Prunus cerasifera	Purpleleaf Plum	Newport, Mt. St. Helens	Medium	15	15	Yes	Yes	Yes	Small	Yes	Susceptible to cankers and borers; maroon red foliage
Prunus cerasus	Cherry	Montmorency, North Star	Medium	20	15	No	Yes	Yes	Small	Yes	North Star (dwarf) - 10' x 8', sour cherry fruit; some varieties susceptible to disease issues
Prunus nigra	Canada Plum	Princess Kay Plum	Medium	15	15	Yes	Yes	Yes	Small	Yes	Plant Select species in 2000
Prunus padus	European Birdcherry	Mayday Tree, Bird Cherry	Medium	20	15	No	Yes	Yes	Small	Yes	6" drooping racemes; can be single or multi stem
Prunus virginiana	Common Chokecherry	Canada Red, Shubert, Sucker Punch	Low - Medium	20	20	No	Yes	Yes	Small	Yes	Sucker growth issues; 3"- 6" drooping racemes; new growth green turning to burgundy-red as leaves mature; can be single or multi stem
Prunus x fontanesiana	Cherry	Des Fontaines Cherry	Medium	35	25	No	Yes	Yes	Small	Yes	Flower clusters of 4-10; small deep red fruits
Ptelea trifoliata	Hoptree (Wafer Ash)		Low	18	15	Yes	Yes	Yes	Small	Yes	Tolerates soils with pH of 6-8; multi stem
Pyrus calleryana	Callery Pear	Aristocrat, Autumn Blaze, Capital, Redspire	Medium	35	25	Yes	Yes	Yes	Medium	No	Susceptible to freeze and storm damage; codominant central leads can be an issue; Autumn Blaze is more susceptible to fire blight
Pyrus calleryana	Chanticleer Pear	Chanticleer, Cleveland Select, Stone Hill	Medium	35	15	Yes	Yes	Yes	Medium	No	Susceptible to freeze and storm damage
Pyrus usseriensis	Ussurian Pear	Prairie Gem	Low - Medium	20	20	Yes	Yes	Yes	Small	Yes	
Pyrus communis	Common Pear	Summercrisp	Medium	25	15	No	Yes	No	Small	Yes	Edible fruit
Pyrus fauriei	Korean Sun	Westwood	Low - Medium	15	20	Yes	Yes	Yes	Small	Yes	
Pyrus ussuriensis	Ussurian Pear	Burgundy, Mountain Frost, Prairie Gem	Low	20	20	Yes	Yes	Yes	Small	Yes	Hardiest of all pears; fire blight concerns; Prairie Gem smaller tree at 18 x 15'
Quercus alba	White Oak		Medium	65	65	Yes	Yes	Yes	Large	No	
Quercus bicolor	Swamp White Oak	American Dream	Medium	45	40	Yes	Yes	Yes	Medium	No	Leaves can be winter persistent
Quercus buckleyi	Texas Red Oak		Low	55	35	Yes	Yes	Yes	Large	No	Tolerant of alkaline soils
Quercus coccinea	Scarlet Oak		Medium	60	40	Yes	Yes	Yes	Large	No	May be chlorotic in alkaline soils
Quercus gambelii	Gamble Oak		Low	20	18	Yes	Yes	Yes	Small	No	Tolerant of alkaline soils
Quercus imbricaria	Shingle Oak		Medium	50	40	Yes	Yes	Yes	Large	No	Leaves may be winter persistent
Quercus macrocarpa	Bur Oak		Low	55	40	Yes	Yes	Yes	Large	No	May be susceptible to twig galls
Quercus muehlenbergii	Chinkapin Oak		Low	45	45	Yes	Yes	Yes	Medium	No	Tolerant of alkaline soils
Quercus prinus	Chestnut Oak		Medium	55	43	Yes	Yes	Yes	Large	No	
Quercus robur	English Oak		Medium	55	40	Yes	Yes	Yes	Large	No	May be chlorotic in alkaline soils; leaves tend to be winter persistent
Quercus robur	English Oak	Fastigiata, Skymaster, Skyrocket	Medium	45	18	Yes	Yes	Yes	Small	No	May be chlorotic in alkaline soils; leaves tend to be winter persistent

Recommended Trees for City of Longmont Regulated Areas - Deciduous Trees

						Acceptable Planting Locations			Site Limiters		
Botanical Name	**Common Name**	**Cultivar or Variety**	**Moisture Requirements**	**Mature Height**	**Mature Spread**	**Street**	**Park**	**Green-way**	**Soil Volume Requirements**	**Plant Under Overhead Utilities**	**Additional Notes**
Quercus rubra	Northern Red Oak		Medium	60	50	Yes	Yes	Yes	Large	No	Chlorotic in alkaline soils; susceptible to drippy blight
Quercus shumardii	Shumard Oak		Medium	50	40	Yes	Yes	Yes	Large	No	
Quercus undulata*	Wavyleaf Oak*		Low	15	13	Yes	Yes	Yes	Small	No	Generally a small tree or large shrub
Quercus x macdanielli	Heritage Oak		Low	60	45	Yes	Yes	Yes	Medium	No	Cross between English and Bur oak
Quercus x mazei*	Colorado Foothills Oak*		Low	40	30	Yes	Yes	Yes	Medium	No	Natural hybrid of Q. gambelii x Q. macrocarpa
Quercus robur x alba		Crimson Spire	Medium	45	15	Yes	Yes	Yes	Small	No	Cross between English and White oak
Quercus robur x bicolor		Regal Prince	Low	50	20	Yes	Yes	Yes	Small	No	Cross between English and Swamp White oak
Salix alba	White Willow	Niobe Weeping, Tristis	High	55	45	No	No	Yes	Large	No	Susceptible to wind and snow damage
Salix alba	White Willow	Russian Golden, Vitellina	High	35	30	No	No	Yes	Medium	No	Susceptible to wind and snow damage
Salix amygdaloides	Peachleaf Willow		Medium	35	30	No	No	Yes	Large	No	
Sophora japonica	Japanese Pagodatree	Regent	Medium	40	35	No	Yes	Yes	Medium	No	Susceptible to freeze, wind, and snow damage.
Sorbus scopulina	Native Mountain Ash		Medium	18	17	No	Yes	Yes	Small	Yes	Red persistent fruit; generally a small tree or large shrub
Syringa pekinensis	Pekin Tree Lilac	Summer Charm	Low	15	15	Yes	Yes	Yes	Small	Yes	Bark exfoliates
Syringa reticulata	Japanese Tree Lilac	Ivory Silk	Medium	20	15	Yes	Yes	Yes	Small	Yes	Bark exfoliates; can be single or multi stem
Tilia tomentosa*	Silver Linden	Sterling Silver	Medium	45	30	Yes	Yes	Yes	Large	No	Potential sun scald; Known to have some resistance to Japanese Beetle.
Ulmus americana	American Elm	Choice City, New Harmony	Medium	65	55	Yes	Yes	Yes	Large	No	Winter desiccation may be problematic; listed cultivars show good resistance to Dutch Elm Disease (DED)
Ulmus davidiana	David Elm	David	Medium	45	40	Yes	Yes	Yes	Large	No	High resistance to Dutch Elm Disease and Elm Leaf Beetle
Ulmus japonica	Japanese Elm	Discovery	Medium	35	30	Yes	Yes	Yes	Large	No	High resistance to Dutch Elm Disease and Elm Leaf Beetle
Ulmus parvifolia	Lacebark Elm	Allee, Athena	Medium	40	35	Yes	Yes	Yes	Large	No	High resistance to Dutch Elm Disease and Elm Leaf Beetle
Ulmus wilsoniana	Asian Elm	Prospector	Medium	35	30	Yes	Yes	Yes	Large	No	High resistance to Dutch Elm Disease and Elm Leaf Beetle
Ulmus x	Hybrids	Accolade, Commendation, Homestead, New Horizon, Patriot, Regal, Triumph, Urban, Vanguard	Medium	60	38	Yes	Yes	Yes	Large	No	Accolade, Danada Charm, Homestead, New Horizon, and Pioneer are highly susceptible to elm leaf miner; disease resistant cultivars are generally derived from successional back-crosses between American elm and American-Asian elm hybrids; large glossy leaves, dark green in summer
Ulmus x	Hybrids	Vanguard	Medium	45	40	Yes	Yes	Yes	Large	No	Resistant to Dutch Elm Disease
Xanothceras sorbifolium	Golden Yellowhorn	Clear Creek	Low - Medium	20	15	No	Yes	Yes	Small	Yes	Edible fruit and seeds
Zelkova serrata	Japanese Zelkova	Green Vase, Halka, Village Green	Medium	45	40	Yes	Yes	Yes	Large	No	Susceptible to freeze damage

Recommended Trees for City of Longmont Regulated Areas - Coniferous Trees

						Acceptable Planting Locations			Site Limiters			
Botanical Name	Common Name	Cultivars	Moisture Requirements	Mature Height	Mature Spread	Street	Park	Green way	Soil Volume Requirements	Plant Under Overhead Utilities	Form/Color	Additional Notes
Abies concolor	White Fir		Medium	55	25	No	Yes	Yes	Large	No	Conical, soft blue-green needles	Needs moist, well drained area; chlorosis issues
Cedrus libani	Cedar of Lebanon		Medium	50	30	No	Yes	Yes	Medium	No	Conical when young, decurrent maturity	Cold hardiness issues; limited availability
Juniperus chinensis	Juniper	Blue Point, Spartan	Low - Medium	12	6	No	Yes	Yes	Low	Yes	Erect, typically narrow, conical with blue-green foliage	Certain varieties have cold hardiness and soil compatibility issues
Juniperus monosperma	One-Seed Juniper		Low	28	18	No	Yes	Yes	Low	Yes	Rounded, sometimes multi stem	Requires a dry site; limited availability
Juniperus osteosperma	Utah Juniper		Low	18	13	Yes	Yes	Yes	Low	Yes	Rounded, sometimes multi stem	Requires a dry site; limited availability
Juniperus scopulorum	Rocky Mountain Juniper	Welchii, Gray Gleam, Cologreen, Sky Rocket, Wichita Blue, Moonglow, Medora	Low	25	10	Yes	Yes	Yes	Low	Yes	Natural, pyramidal habit with blue-green foliage	Both native species and cultivars do well in landscape situations
Juniperus virginiana	Eastern Red Cedar	Hillspire, Idyllewild, Blue Arrow, Taylor	Low - Medium	40	15	No	Yes	Yes	Medium	No	Upright form, cultivars vary by color from dark green to blue-green	Exceptional cold hardiness; protect from breakage during heavy snows and limit exposure to winds
Larix decidua	European Larch		Medium - High	65	33	No	Yes	Yes	Large	No	Typically upright, single stem with gray scaly bark, golden fall color	Deciduous evergreen
Larix laricina	Tamarack		Medium - High	50	25	No	Yes	Yes	Large	No	Typically upright, single stem with gray scaly bark, golden fall color	Deciduous evergreen
Metasequoia glyptostroboides	Dawn Redwood		Medium	55	23	No	Yes	Yes	Medium	No	Typically upright, single stem with reddish stringy bark, golden fall color	Loses needles over winter; forms large buttress roots at maturity. Susceptible to freeze
Picea abies	Norway Spruce		Medium	50	28	No	Yes	Yes	Large	No	Upright form, branch tips point up	Needs protected site; will not take high winds
Picea glauca	Black Hills Spruce	Densata	Medium	30	20	Yes	Yes	Yes	Large	No	Upright single stem, blue-green needles	Protect from winter winds; limited availability
Picea glauca	Dwarf Alberta Spruce	Conica	Medium - High	8	5	No	Yes	Yes	Small	Yes	Dense, conical, bright green needles	Protect from winter winds and heavy snows
Picea omorika	Serbian Spruce		Medium - High	55	23	No	Yes	Yes	Medium	No	Needles have bi-color appearance	Cold hardiness and soil compatibility issues
Picea pungens	Colorado Blue Spruce		Medium - High	70	30	No	Yes	Yes	Large	No	Dense pyramidal	Tussock moth in large trees can be a concern
Picea pungens	Bacheri Spruce		Medium	30	18	No	Yes	Yes	Small	No	Small, wide, conical, bright blue needles	Fast growing; adaptable to various soils
Picea pungens glauca	Colorado Blue Spruce	Baby Blue Eyes, Baken, Fastigata, Fat Albert, Hoopsi, Colorado Weeping, Sester's Dwarf, Globosa,	Medium - High	22	13	Yes	Yes	Yes	Small	Yes	Varied form	
Pinus aristata	Bristlecone Pine		Low	25	18	Yes	Yes	Yes	Small	Yes	Bushy irregular habit, bottlebrush foliage	Slow growing; soil adaptability issues
Pinus cembra	Swiss Stone Pine		Medium	33	20	No	Yes	Yes	Small	No	Conical young, open flat-top with age	Cold hardiness issues
Pinus contorta	Lodgepole Pine		Low	45	18	No	Yes	Yes	Medium	No	Long slender trunk, high thin crown	Chlorosis below 6000ft; Mountain Pine Beetle concern
Pinus edulis	Pinyon Pine		Low	25	15	Yes	Yes	Yes	Small	Yes	Slow growing, rounded, green needles	Pitch borer, tip moth, and Mountain Pine Beetle concerns
Pinus flexilis	Limber Pine	Vanderwolf's Pyramid	Low	40	20	Yes	Yes	Yes	Medium	No	Dense, compact, pyramid, blueish-green foliage	Adaptable; low-maintenance
Pinus heldreichii (leucodermis)	Bosnian Pine		Low	20	13	No	Yes	Yes	Small	Yes	Slow growing, densely branched, pyramidal with dark green needles	Leucodermis does well; tree needs protected site from wind
Pinus monophylla	Singleleaf Pinyon Pine		Low	25	20	Yes	Yes	Yes	Small	Yes	Slow growing, rounded, green needles	Limited availability
Pinus mugo	Mugo Pine	Big Tuna, Tannebaum	Low	23	8	Yes	Yes	Yes	Small	Yes	Shrubby, varies in form and size	Mountain Pine Beetle concern

Recommended Trees for City of Longmont Regulated Areas - Coniferous Trees

						Acceptable Planting Locations			Site Limiters			
Botanical Name	Common Name	Cultivars	Moisture Requirements	Mature Height	Mature Spread	Street	Park	Green way	Soil Volume Requirements	Plant Under Overhead Utilities	Form/Color	Additional Notes
Pinus nigra	Austrian Pine		Low - Medium	45	25	Yes	Yes	Yes	Medium	No	Pyramidal young, flat top and open older	
Pinus ponderosa	Ponderosa Pine		Low	65	28	Yes	Yes	Yes	Large	No	Upright oval, becomes round open later	Sheds low limbs; Mountain Pine Beetle concern
Pinus strobiformis	Southwestern White Pine		Low - Medium	45	25	No	Yes	Yes	Medium	No	Broad, conical shape with layered branches with blue-green needles	Susceptible to white pine blister rust
Pinus sylvestris	Scotch Pine		Medium	45	25	Yes	Yes	Yes	Medium	No	Irregular crown	Sun scald young age; Mountain Pine Beetle concern; exfoliating salmon bark
Pseudotsuga menziesii	Douglass Fir		Medium	60	25	No	Yes	Yes	Large	No	Upright pyramidal, becomes open later	May not tolerate urban soils; multiple insects concerns
Sequoiadendron giganteum	Giant Sequoia	Hazel Smith	Medium - High	63	30	No	Yes	Yes	Small	No	Single-stem, conical shape with green needles and stringy	Cold hardiness and wind/sun exposure issues; exfoliating bark
Taxodium distichum	Baldcypress	Frio River, Shawnee Brave	Medium - High	60	30	Yes	Yes	Yes	Medium	No	Pyramidal crown young that gradually becomes flat-topped with age	Cold hardiness issues; loses needles in winter
Thuja occidentalis	Northern White Cedar - Eastern Arborvitae	Emerald, Techny, Degroots Spire	Medium - High	15	6	No	Yes	Yes	Small	Yes	Typically single stem, columnar with scale-like foliage usually in flat fan shape	Needs more protected site from wind, also protect from heavy snows
Thuja plicata	Western Red Cedar		Medium - High	35	18	No	Yes	Yes	Medium	No	Single stem, columnar with scale-like foliage in flat fan shape	Limited availability; needs protected site; stringy bark
Thuja stanishii x Thuja plicata	Green Giant Cedar		Medium - High	50	18	No	Yes	Yes	Medium	No	Vigorously growing, pyramidal form with rich green color on scale-like foliage	Limited availability; needs protected site

Site Limiters

	Scale	Description
Moisture Requirements	Low	Trees with low moisture requirements are suitable for dryland planting sites without long-term irrigation. Weekly irrigation is required for the first 2-3 years during establishment, with approximately 30 gallons of slow soil penetrating watering. After the establishment period weekly watering may be reduced to 15-20 gallons per week.
	Medium	Similar to trees with high moisture requirements, but the suitable sites may be generally more dry. Drip irrigation or manual watering of 30 gallons of slow soil penetrating watering is required weekly.
	High	Trees with high moisture requirements are only suitable for sites with permanent overhead irrigation or drip irrigation. Typical sites include areas with mowed turf. Drip irrigation that supplies 15-20 gallons per week in addition to turf iffigation is preferred.
Soil volume requirements	Large	Soil volume shall be greater than 1500 CUFT with a depth of at least 36".
	Medium	Soil volume shall be greater than 1000 CUFT with a depth of at least 36".
	Small	Soil volume shall be greater than 300 CUFT with a depth of at least 36".