

# MAINTAINING THE P.O.S.T. SYSTEM

## Chapter 7

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The quality of the Town of Frederick's park, open space, and trail maintenance will ultimately establish the public's overall impression of the system. This statement is supported by the public's response to a questions posed in the P.O.S.T. public opinion survey where "overall maintenance of parks" ranked third on the list of the community's three highest P.O.S.T. priorities. Therefore, it is critical that the scale of Frederick's P.O.S.T. system is kept in balance with the ability to provide adequate maintenance.



Figure 7-1: Maintenance is critical for user safety.

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## 7.1 CURRENT APPROACH TO MAINTENANCE

One variable that sets Frederick apart from other Front Range communities is that many of the Town’s P.O.S.T. assets, especially recent additions, are maintained by the relevant homeowners association or metropolitan district as required by the Land Use Code. This means that the cost of maintaining the parks, open space, and trails in a new subdivision will be the responsibility of the residents who gain the greatest benefit. To the degree that this system functions as envisioned, it greatly reduces the impact of new P.O.S.T. facilities on the Town. Therefore, new P.O.S.T. assets developed under this system do not need to be limited by the Town’s capabilities. However, the Town may want to monitor maintenance of HOA and metro district maintained P.O.S.T. facilities.

- ✦ One particular area of concern is play equipment safety. The play equipment in an HOA or metro district park should be inspected yearly by a certified play equipment safety inspector and all repairs made by the HOA or Metro District. Similar inspections should be made for sidewalks, site furnishings, and other potential safety hazards.
- ✦ In order to encourage well maintained parks, the Town may want to establish a “Best Maintained” award that would be given to the HOA or metro district facility which is maintained at the highest level.
- ✦ Where a neighborhood park is built within a quarter section to serve two or more residential subdivisions that are constructed by different developers, agreements for sharing the cost of maintenance should be established as part of the Town approval process.

### 7.1.1 TOWN-MAINTAINED P.O.S.T. FACILITIES

The Town of Frederick is responsible for maintaining most of the older parks, trails, open space areas, and landscape medians in Frederick along with all of the Town’s public buildings. The Town will need monitor its maintenance responsibilities and should not construct new Town-maintained facilities without providing the proper level of maintenance staffing. The Public Works Department should adopt an on-going system to monitor and predict maintenance needs for existing and new parks, open space, trails, grounds, and ROW landscapes to ensure that budgeting for all new facilities includes adequate provisions for maintenance.

Public Works is staffed with 7 full-time, year-round employees. Because the year-round employees maintain the Town’s street and utility infrastructure, it is difficult to identify what portion of their time is dedicated to P.O.S.T. facility maintenance. In the summer of 2010 Public Works employed 6 seasonal staff members who worked full-time during the summer

months primarily focused on maintaining P.O.S.T. facilities. While the seasonal workers could be assigned to other duties for short periods, two seasonal workers typically focused on maintaining open space and drainage areas and four on maintaining parks. It is worth noting that the Town was late in hiring seasonal workers due to a backlog in the Human Resources Department. This staffing delay was noticed by the community and is likely reflected in the responses and comments regarding maintenance in the P.O.S.T. public opinion survey.

Table 7-1: Currently, Public Works maintains the following P.O.S.T. assets:

P.O.S.T. FACILITY	ACRES
<b>Parks</b>	
Frederick Recreation Area (Open Space)	60.81
Frederick Recreation Area (Active Park Area and Parking Lot)	4.70
Frederick Recreation Area (Reservoir)	63.0
Centennial Park (Active Park Area and Parking Lot)	18.25
Centennial Park (Detention Basin and Reservoir)	19.60
James M. Crist Park	1.76
Firefighters Park	1.50
Savannah Park	4.30
Coal Ridge Park	6.06
Fox Run Park	13.54
Countryside Park Green (Excludes Play Equipment Area)	3.44
No Name Park	0.68
Summit View Estates Park	1.46
The Softball Field (3.14 Acres - Maintained by CVRD)	0
<b>TOTAL</b>	<b>199.01</b>
<b>Open Space / Trails by Subdivision</b>	
Eagle Valley	50.5
No Name Creek	38.46
Savannah	31.02
Fox Run	18.56
Miner's Town Centre	16.97
Prairie Greens	12.04
Bear Industrial Park	8.92

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Old Town	7.79
Rinn Valley Ranch	4.99
Summit View	4.53
Coal Ridge Estates	2.86
Maplewood	2.65
Centennial Park	2.56
New Frederick / Angel View	1.68
Carriage Hills 2	1.38
Village at Frederick	0.54
Roche 1	0.13
Moore Farm	0.09
Maple Ridge	0.06
Frederick High School	0.05
Del Camino South	0.04
<b>Subtotal</b>	<b>205.83</b>
Bulrush Wetlands Park (Contracted)	80.25
<b>TOTAL</b>	<b>286.09</b>

Based on this evaluation, Public Works maintains 199.01 acres of park land and 205.83 acres of open space. The open space figure does not include Bulrush Wetlands Park which is maintained by a contracted wetlands specialist. If only the employees who are typically dedicated to maintaining the P.O.S.T. facilities (the 6 seasonal workers) are considered, the Town is maintaining:

- ✿ 49.78 acres of parkland per seasonal employee.
- ✿ 102.91 acres of open space and drainage ways per seasonal employee.

If there was a method for tracking the time spent by the year-round and seasonal employees on P.O.S.T. facility maintenance, more accurate figures could be developed. For the purposes of this analysis it is assumed that the time that year-round Public Works staff spends on P.O.S.T. facilities is essentially offset by the time spent by the seasonal workers on other Town maintenance activities. As more parks, open space, and trails are added to the system, the Town may want to consider creating a P.O.S.T. maintenance division within Public Works to better manage the maintenance of the Town's P.O.S.T. assets. In the future, the Town may want to consider tracking P.O.S.T. facility maintenance time to establish a base-line of data for defining future maintenance needs.

### 7.1.2 MAINTENANCE STAFFING IN OTHER COMMUNITIES

There is no one established method for calculating how much park or open space land one full-time employee can maintain. Some communities track tasks by time allocations and expense while others use a per acre figure. The following summary lists the per acre figures three Front Range communities use to determine maintenance needs:

**Longmont:** One FTE per 17 acres of Neighborhood Parkland (in three sites)

One FTE per 20 – 40 acres for Community Parkland (at one site)

If one takes the high range for Community Park acres together with the Neighborhood Park acres, Longmont plans two FTE's to maintain 57 acres -- which equals 28.5 acres of park land per one FTE.

**Thornton:** In a 2003 study Thornton established the following staffing levels:

One FTE for 35 acres of park land

One FTE for 350 acres of Open Space/Open Lands

**Brighton:** One FTE per 25 acres for parks (Classified as Service Level #1 and #2 in Brighton's system)

One FTE per 35 acres of parkway, drainages, ROW's, and open space (Service Level #3 and #4)

Based on these figures, Frederick appears to be maintaining more parkland per FTE than the reference communities: Frederick +/- 50.56 acres / FTE vs. an average of 29.5 acres per FTE for the reference communities. It is more difficult to make a comparison on open space maintenance. This is probably a reflection of the range in the levels of open space maintenance performed by each community. However, Frederick does appear to be in the middle range of the figures used by Thornton and Brighton for acres open space maintained by one FTE.

## 7.2 *PATH MAINTENANCE*

### 7.2.1 *ROUTINE PATH MAINTENANCE*

Effective path and trail maintenance is critical to the overall success and safety of Frederick trail system. Maintenance activities typically include path/trail stabilization, landscape maintenance, facility upkeep, sign replacement, and litter removal. A successful maintenance program requires continuity and often involves a high level of citizen participation. Routine maintenance on a year-round basis will not only improve path and trail safety, but will also prolong the life of the facility. The benefits of a good maintenance program are far-reaching and may include:

- ⌘ A high standard of maintenance is an effective advertisement to promote the path as a local and regional recreational resource.
- ⌘ Good maintenance can be an effective deterrent to vandalism, litter and encroachments.
- ⌘ A regular maintenance routine is necessary to preserve positive public relations between the adjacent land owners.
- ⌘ Good maintenance can make enforcement of regulations on the path more efficient. Local clubs and interest groups will take pride in "their" path and will be more apt to assist in protection of the path.
- ⌘ A proactive maintenance policy will help improve safety along the path.

Ongoing path maintenance likely includes some, if not all, of the following activities: vegetation management, surface repair and sweeping, irrigation maintenance, removal of litter and dumped materials, signage repair and debris removal after storm events.

### 7.2.2 *VEGETATION MANAGEMENT*

In general, visibility between trailside trees and landscaping buffers should be maintained to avoid creating a feeling of enclosure. This will also give path users clear views of their surroundings, enhancing the aesthetic experience. Selection and placement of trees should minimize vegetative litter on the path as well as root uplifting of the trail surface. Vertical clearance along the path should be periodically checked, and any overhanging branches should be pruned to a minimum vertical clearance of eight to ten feet.

Measures should be taken to protect the path, including mowing as needed along the path to prevent invasion of plants into the pavement and shoulder areas. Vegetation along trails should be mowed on a regularly scheduled basis. However, special consideration should be

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made for the grass species planted to help establish a healthy cover. It is recommended that a stubble height should be left that will promote healthy plant growth to assist with weed control and to hold in moisture. The recommended time of year for mowing is fall and spring. Wherever possible, vegetation control should be accomplished by mechanical means or hand labor.

### 7.2.3 *HERBICIDES, FERTILIZERS, PEST CONTROL, NOXIOUS WEEDS*

Maintaining the vegetation along the trails is an important aspect of trail maintenance. Although most of this work is seasonal based on the regular growing season, it requires consistent attention especially in the spring and fall.

Weed control along trails should be performed to target problematic vegetation (such as the Puncturevine "goathead" thorns along trail edges) in addition to the species that are identified as noxious weeds under the statutes of Colorado. Environmentally safe weed removal methods should be used, especially along waterways. The trail ways can provide an opportunity to help educate the public about the local environment including the invasive species of noxious and nuisance weeds. Weed management requires a continuous effort as they are hardy plants that are sometimes difficult to eradicate. Weed seeds can be spread by trail users on their clothing and shoes as well as by animals and birds. Many of the trails are along riparian areas, and the creeks and waterways provide a constant and increasing amount of weed seeds that can work their way up the stream banks and inland. Informational material on noxious weeds should be made available to trail users at kiosks, trail heads or at specific infestation sites. Crews of volunteers could help by pulling and clearing out some of the invasive weeds.

### 7.2.4 *SURFACE REPAIR AND SWEEPING*

The path surface should be kept free of debris, especially broken glass and other sharp objects, loose gravel, leaves and stray branches. Path surfaces should be swept monthly in problem areas or as needed. Soft shoulders should be well maintained to maximize usability. Cracks, ruts and water damage will need repair periodically. Where drainage problems exist along the path, ditches and drainage structures will need to be kept clear of debris to maintain positive drainage flow.

### 7.2.5 *REMOVAL OF LITTER AND DUMPED MATERIALS*

Staff or volunteers should remove litter along the paths and trails. Litter receptacles should be placed at primary access points such as at the major intersections. Neighborhood



volunteers, friends groups, and other service organizations should be considered in addition to maintenance staff.

### 7.2.6 SIGNAGE REPAIR

Signs should be replaced along the path on an as-needed basis.

### 7.2.7 REMOVAL OF DEBRIS AFTER STORM EVENTS

Portions of the path may be subjected to periodic flooding. When flood waters recede, deposits of debris such as tree branches, leaves, mud and trash may remain on the path. Debris accumulated on the path surface should be removed after each recession of water.

### 7.2.8 SNOW REMOVAL

Snow removal along the trail network is needed after major snow events (defined as 4 inches or greater snowfall) or as needed to maintain a surface that is free of snow/ice buildup. For trails, smaller specialized vehicles are needed for snow removal such as ATVs fitted with blade or rotating brush attachments. Snow clearing or grooming machine operators, who are most familiar with the segments in their care, should identify and report any additional maintenance needs while they are in the field. Salt, sand, or de-icing solution should only be used if special circumstances warrant; such as severe ice buildup or freeze thaw cycles on the trail surface. If the trail is difficult to locate under snow, delineator stakes should be used along all paths intended for clearing in order to ensure that only the paved surface is cleared.

### 7.2.9 ROUTINE TRAIL MAINTENANCE FREQUENCIES

Table 7-2 summarizes the maintenance recommendations. Typical maintenance vehicles for the path will likely be light pick-up trucks and Kobodas. A mechanical sweeper is recommended to keep the path clear of loose gravel and other debris. Care should be taken when operating heavier equipment on the path to warn path users and to avoid breaking the edge of the path surface.



Table 7-2: Routine Trail Maintenance Frequencies

ITEM	SUGGESTED FREQUENCY
Lighting replacement / repair	As needed
Remove fallen trees	As needed
Irrigate plants/trees/shrubs	As needed
Sign replacement/repair	As needed
Trash disposal	As needed, once a week
Graffiti removal	Weekly/or as reported
Weed control	Monthly
Pavement sweeping	Monthly, or as needed
Snow removal	Snowfalls > 4 inches
Planted Tree or Shrub trimming/fertilization	6 months / 1 year
Debris removal	Bi-annually or as needed
Clean drainage system	Annual
Maintain irrigation lines / replace sprinklers	Annual
Pavement marking replacement	As needed
Pruning to maintain vertical clearance	1-4 years
Pavement sealing/repairs	5-10 years
* Additional maintenance may be required	

### 7.3 MAINTENANCE AND PERFORMANCE LEVELS

In addition to their duties for maintaining P.O.S.T. facilities which are the Town's responsibility, the Public Works Department also maintains the Town's public infrastructure (roads, public utilities, etc.), all Town buildings and grounds, and Town-owned landscaped road medians. Given their long list of responsibilities, it would be easy for Public Works staff to become overwhelmed as new P.O.S.T. assets are added to the system.

Maintenance levels for P.O.S.T. facilities are related to a variety of factors: use level (wear and tear on the facility), visibility and desired appearance, age and condition of furnishings and equipment (e.g. irrigation system, playground equipment), and the availability of funding.

To provide a basis for comparing maintenance levels and staff commitments, Public Works staff worked with the Master Plan Team to prepare standards for park maintenance that include expectations for appearance and performance. The Performance Levels table

(Table 7-3) defines levels of use and expectations about appearance of the facility, while the Maintenance Levels table (Table 7-4) includes standards for care. The number of maintenance or performance levels can be adjusted to better meet the Town’s conditions and capabilities. Versions of these tables have been used successfully in other communities to establish maintenance expectations for park, open space, and trail amenities.

In this example, for turf sites (e.g. Sports Complexes, Community Parks, Neighborhood Parks) there are three Maintenance Levels and three Performance Levels. For non-turf sites (e.g. landscaped medians, natural parks, trails) there are two Maintenance Levels and two Performance Levels. Maintenance Levels and Performance Levels don’t necessarily have to correspond with each other because maintenance requirements may be less in some areas to achieve the desired results due to mitigating factors such as use, wear and tear, etc. It is worth noting that 90% of the respondents to the on-line survey said they “would like a mix of parks that incorporate both native and manicured park types”, indicating a willingness to accept parks where not every area is maintained as the typical manicured high water-use Bluegrass landscape.

Table 7-3: Performance Levels

	Turf			Non-Turf	
	1	2	3	1	2
<b>Turf</b>	Well-manicured, healthy, vibrant free (less than 1%) of unwanted vegetation or weeds.	Appears healthy and maintained, but may contain low levels (1%+) of weeds and unwanted vegetation.	Some dry, discolored turf due to irrigation programming or malfunction. Weed infestations.	Good aesthetic appearance of trees and shrubs. Landscaped areas generally free of weeds.	Fair aesthetic appearance of trees and shrubs. Some weeds.
<b>Litter</b>	Little or none	Little or no litter, except for weekends Oct - March	Frequently found, vandalism also	Minimal litter evident.	Some litter present most of the time.
<b>Trees/ Shrubs</b>	Manicured, pruned, well-maintained	Same as Level 1, except slower response - no daily staff visits.		See Turf category above	See Turf category above
<b>Restrooms</b>	Clean, stocked, open at all times, accessible, well-maintained in good condition.	Same as Level 1 except slower response time - no daily staff visits to site.	No restrooms available, except through scheduled activities	N/A	N/A
<b>Amenities</b>	Good condition and appearance, replacements in a timely manner	Same as level 1 except slower response time - no daily staff visits to site.	Less than adequate condition, or closed for repairs.	Amenities in good working order. Paths and trails in good condition, no erosion problems.	Paths have ruts and erosion. Amenities often closed for repairs
<b>Snow and Ice</b>	Hard surfaces cleared within 24 hours of snowfall	Same as Level 1 except weekend accumulation cleared on Mondays	Some areas of parks may be inaccessible due to snow	Snow and ice cleared within 24 hours	Same as Level 1, except weekend snows removed on Mondays

Table 7-4: Maintenance Levels

	Turf			Non-Turf	
	1	2	3	1	2
<b>Mowing</b>	2x per week	1x per week	1x per 2 weeks	N/A	N/A
<b>Aerating</b>	4x per year	3x per year	0 to 1x per year	N/A	N/A
<b>Irrigation</b>	Automatic, w/ central control, repair 24 hours	Automatic, some central control, repair 48 hours	Minimal, not automated, repair: 7 days	Inspected 1x per 2 weeks, repair: 48 hours	Inspected 1x per month, repair: 72 hours
<b>Weed Control</b>	6x per year	4x per year	Variable	2x per year	1x per year
<b>Fertilizing</b>	3x per year	2x per year	Variable	2x per year	1x per year
<b>Pruning</b>	2x per year	2x per year	1x per year		
<b>Mulch</b>	1x per year				
<b>Play Equipment</b>	Inspected 2x per year	Inspected 2x per year	Inspected 2x per year	N/A	N/A
<b>Litter</b>	1x per day	1x per day	1x per week	2x per week	1x per week
<b>Restrooms</b>	Cleaned 1x per day	Cleaned 1x per day	Open only for events	N/A	N/A
<b>Amenities</b>	Inspected frequently, repair: as needed	Inspected frequently, repair: as needed	Varies, may be closed for repairs	Inspected 1x per 2 weeks, repair: 24-48 hours	Inspection varies, may be closed for repairs
<b>Snow Removal</b>	24 hours	24 hours, parks = weekdays; buildings = 7 days per week	48-72 hours, weekdays	24 hours, 7 days per week	24 hours, weekdays
<b>Vandalism Mitigated</b>	24 hours	24 hours	Varies	24 hours	48 hours