



Parkway Fence Replacement Program



Updated August 2011

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Table of Contents

I.	Background	3
II.	Issues	3
III.	Goals.....	3
IV.	Process.....	4
V.	Inventory.....	5
VI.	Fence Condition Ratings	6
VII.	Materials Evaluated.....	6
VIII.	Findings.....	9
IX.	Selected Materials and Design	9
X.	Costs and Funding	10
XI.	Implementation	10
XII.	Policies and Criteria	12
XIII.	Monitoring and Evaluation.....	13
	Parkway Fence Substitution Information	Appendix A

I. Background

Since 1981, more than 41 miles of cedar wood fences have served as the aesthetic backdrop along Highlands Ranch's two, four, and six-lane landscaped parkways adjacent to residential properties. These fences varied somewhat in style from rail fence to five to six-foot solid privacy fences. The solid cedar-wood privacy fences have also varied slightly some with exposed posts and some where the post face is flush with the pickets. The Metro District has allowed the use of masonry columns with the fence in areas like Settler's Village, Cresthill, and the Hearth.

The fence has been stained with an oil-based opaque stain (dune grey) that is subject to a revolving re-staining program every three years. The Metro District's Facilities Section maintains this fence under two separate operations and maintenance accounts, one for annual fence repairs and the other for contracted staining.

All Metro District-owned parkway fences are protected by the Metro District's Rules and Regulations that strictly enforces compliance from residents attaching to or loading against any architectural or landscape elements that could compromise its structural integrity or appearance.

II. Issues

With some of the fence now more than 25-years-old, we are able to identify issues with the existing fence. They are:

- Aging fences not as attractive or structurally sound
- Damage by adjacent homeowner landscape
- Repair vs. replacement of aging fence
- Annual maintenance and staining costs
- Narrow or no landscaping in areas makes fence appearance more important
- Fence in no or narrow landscape areas degrades faster

Some minor issues include:

- Graffiti
- Damage from vehicle accidents
- Damage from snow plowing

III. Goals

1. Inventory and rate condition of all existing fences.
2. Improve appearance of parkway fence
3. Evaluate materials and design for fence replacements
4. Reduce maintenance costs and improve life of fence
5. Develop fence replacement schedule and funding plan

IV. Process

The Metro District has recognized the need to replace aging parkway fence for many years. In 2004 we began planning for fence replacement, and other community assets, with the creation of a major repair fund. In 2005 the Metro District hired a Geographic Information System (GIS) consultant to map and inventory existing fence, documenting length, style, and year the fence was installed. Also in 2005, the Metro District began to evaluate various fence materials including polyvinyl chloride (PVC), polyethylene, composites (Trex), and cedar wood.

In the summer of 2006 several sample sections of fence were placed on Highlands Ranch Parkway to see how they responded to environmental conditions, and for public viewing and input. In January 2007, two Metro District staff attended the Tech Fence 2007 trade conference in Orlando, Florida. In addition to these activities, workshops were held with the Metro District Board in 2006 and 2007. Following these Board sessions, a public meeting was held to explain this plan and seek citizen comments on August 23, 2007.

The agenda for the Parkway Fence Workshop included the following:

- Purpose and use of fence
- Re-visit history and issues
- Replacement considerations
- Alternatives comparisons in durability, appearance, maintenance and cost
- Significance of fence in the parkway landscape (no, narrow, and wide)
- Level of Service (LOS)
- Alternatives cost comparisons graph
- Major Repair Fund alternatives comparisons graph
- Maintenance cost comparisons
- Preliminary recommendation

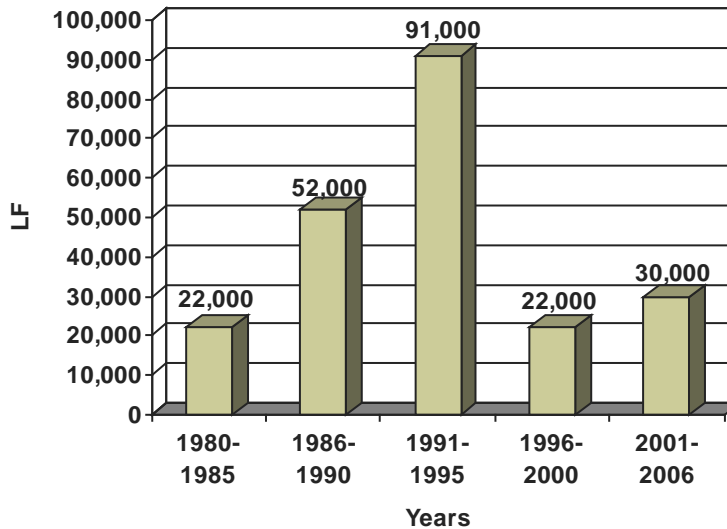
The draft Parkway Fence Replacement Plan was posted on the Metro District's website for citizen review and comment. Citizen comments included support for the overall plan, an interest in the Metro District considering sound attenuation, and an interest in asking voters to consider funding an accelerated time frame for the plan.

V. Inventory

Of the 41 miles of parkway fence, 2680 homes back to parkway fence. That equates to about 8.5% of the 31,893 residential units in Highlands Ranch. Along major roadways in Highlands Ranch there is 14.5 miles of fence along 2-lane roads, 17.5 miles along 4-lane roads, and 9 miles along 6-lane roads that are owned or managed by the Metro District.

After a comprehensive inventory and review of all existing fence, coupled with repair records over the last 20 years, it became obvious that those areas in the worst condition were generally those areas with the oldest fence. Dad Clark Drive, Venneford Ranch Road, Quebec Street, and Highlands Ranch Parkway are all areas that had fence installed in the 1980s and these areas have fences significantly close to or right against the roadway that makes it especially vulnerable to harsh conditions such as high heat, road splash from rain, ice, and snow plowing and salts applied for roadway de-icing.

Lineal Feet installed/5-year period



Existing Fence with Masonry Columns

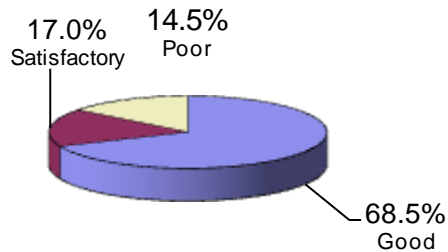
Broadway & Highlands Ranch Parkway	920 LF
Poston Parkway	8,371 LF
Flagstaff Way	850 LF
Spearwood Drive	816 LF
Wildcat Reserve Parkway at Stonebury	1,531 LF
The Hearth on McArthur Ranch Road	3,575 LF
Settler's Village	2,099 LF
University Blvd at White Bay	1,248 LF
Venneford Ranch Road- Timberline Sub-Division	<u>3,381 LF</u>
	22,791 LF or 4.3 miles (10.5%)

VI. Fence Condition Ratings

Condition rating criteria for the fence was based on:

- Age
- Appearance
- Structural integrity

Appearance and structural integrity:



VII. Materials Evaluated

The safest decision for a fence replacement design would be to stay with cedar. This, however, is not consistent with the issues at hand. Alternative fence materials have only recently been used in any large-scale application, typically in master planned communities. The long term goal is to replace the cedar with a material that presents an appeal complementary with the parkway landscape, will be stronger and last longer than wood, and reduces maintenance to a degree at least equivalent to or less than the cost of replacing more frequently with the same cedar materials. Finally, since the replacement process may occur over a twenty to twenty-five year period, it is paramount that the materials chosen today will be unchanged and available twenty-five years from now.

Materials and design evaluation considerations were based on the following:

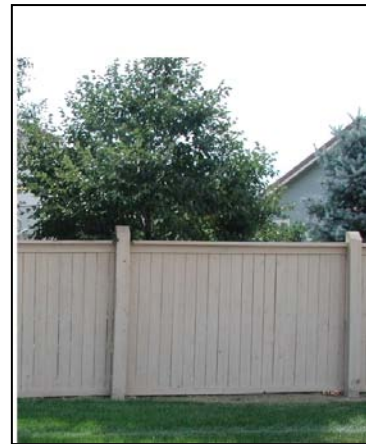
- Appearance
- Life span
- Structural integrity
- Installation and maintenance costs
- Construction logistics and utility conflicts

Fence Materials Evaluated

	Wood	Trex	Peak	Buff Tech	Great Wall
Initial Cost (lf)	\$38-\$40	\$45-\$48	\$43-\$46	\$43-\$46	\$98
40-Year Cost (lf)	\$148	\$104	\$104	\$104	\$110
Life	20 year	40 years	40 years	40 years	60+ years
Warranty	1 year	25 years	25 years	25 years	25 years
Strength	Sound thru 15 years	Sound thru 30+ years	Sound thru 30+ years	Sound thru 30+ years	Sound thru 60+ years
Maintenance	Minor repairs and staining	Graffiti may require replacing some components	None	None	Needs repainting every 15 years
Availability of Materials	Many sources available	Single source from national company	Single source from local company	Single source from national company	Single source from national company



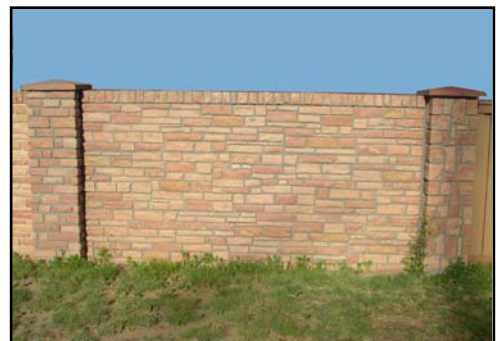
Trex (wood/plastic composite)



Cedar



Peak (polyurethane)



Great Wall (concrete)



Buff Tech (PVC)

Column Materials Evaluated

	Masonry	Concrete	Polyethylene
Initial cost	\$1,500	\$1,000	\$600
40 yr. cost	\$1,500	\$1,063	\$1,200
Life	60+ years	60+ years	40 years
Warranty	25 years	25 years	25 years
Strength	60 + years	60 + years	40 years
Maintenance	None	Needs repainting every 15 years	None
Availability of Materials	Many	Single source from national company	Single source from national company

Polyethylene



Masonry



Concrete



VIII. Findings

Concrete Fence

- Concrete fence is problematic and costly in wide landscape areas.
- Transition to columns may be necessary to tie plastic and concrete fences together.
- Visual impact of concrete fence lessens in wide landscaped areas.
- Significant utility conflicts with concrete columns.
- Concrete must be “stepped” and cannot be “raked” like current fences.

Trex

- Trex product is best for our needs, applications, and budget.
- 65% maintenance savings with Trex.
- Trex is a composite of recycled plastic and reclaimed wood.
- Polyethylene columns are:
 - less expensive than masonry columns,
 - equally as attractive as masonry columns,
 - forty-year cost comparable to masonry columns,
 - smaller footprint reduces utility conflicts.

IX. Selected Materials and Design

Trex Seclusions style fence in Saddle color with Landmark Accents Cobblestone polyethylene columns in Sierra color every 160 feet on all two, four, and six lane roads.



Photo simulation of selected materials and design.

X. Costs and Funding

Estimated Costs

Trex Seclusions Fence	\$14,500,000
Landmark Accents Cobblestone Columns	<u>\$ 1,350,000</u>
Total	\$15,850,000

Note: Estimates do not include repair of landscape damaged during installation and traffic control.

Funding

The Parkway Fence Replacement Program (PFRP) will be funded from the Metro District’s Major Repair Fund (MRF). The MRF includes a variety of capital repair projects, including fence replacement, and is funded from several sources including annual General Fund transfers, interest income from fund balances, and mid-year tax distributions on new properties (HB1006 Funds). The District’s PFRP, as proposed, can be implemented without new or additional taxes.

XI. Implementation

The Parkway Fence Replacement Program was implemented in 2007 and may continue over a 25 year period. The priority for replacement is listed below. The location of these replacements will be determined by fence condition ratings conducted in future years and may change slightly dependent on Board approval.

Parkway Fence Replacement Program Schedule - 2009 - 2031

Location

1. HR Parkway from Northhampton Court east to open space (south side)
2. HR Parkway from Ridgeglen Way to Broadway (north side)
3. HR Parkway from Deer Creek Trail to White Oak (both sides)
4. HR Parkway from Montclair Drive west to open space at Middle Fork Trail (both sides)
5. HR Parkway from Foothills Canyon west to the start of the Spring Gulch open space
6. HR Parkway from Lucent to Wildcat Reserve Parkway (both sides)
7. University from Dad Clark Drive to Venneford Ranch Road (west side)
8. Broadway from HR Parkway to Wildcat Reserve Parkway (both sides)
9. South Ranch Road (both sides)
10. Broadway from Dad Clark Drive to HR Parkway (east side)
11. Cresthill Lane from University to Wildcat Reserve Parkway (both sides)
12. Lincoln from Quebec to end of Highlands Ranch property
13. Quebec from Chestnut Hill to end of Highlands Ranch property (east side)
14. University from Crosspointe Drive to Wildcat Reserve Parkway (both sides)
15. University from East Vista Trail to Colorado Blvd.
16. Dad Clark Drive from University to Broadway (south side)
17. The fence at Settler's Village

Note: This replacement schedule will be evaluated annually and replacement may be deferred based on fence condition and available funding.

XII. Policies and Criteria

1. Substitutions may be made, provided that:
 - a. Proposed substitution must be for purposes other than aesthetics (i.e. sound attenuation).
 - b. Substitution must begin and end at logical points as determined by the Metro District.
 - c. The HOA or neighborhood must demonstrate the ability to fund and maintain the substituted fence.
 - d. The Metro District may contribute to substitutions in an amount not to exceed the cost to install Trex with polyethylene columns.
 - e. All substitutions must be approved by the Metro District Board of Directors.

See Appendix A for Parkway Fence Substitution Information.

2. Adjacent Landscape Repairs Prior to Fence Replacement:

Homeowners living adjacent to parkway fence will be notified 60 days prior to fence replacement scheduled in their area. The notification will reiterate the same instructions staff sends to homeowners that have landscaping or other materials placed against the parkway fence causing damage to it.

The first letter of notification will alert homeowners to make sure the fence is free of obstructions and given 30 days to complete the work. The second letter will be sent to only those that have not removed the obstructions after 30 days and will give them an additional 10 days for compliance. This second notification will inform owners that if they are not in compliance within the second time period, the District may make the needed repair and assess a fee equal to the amount required to correct the violation, plus 20% for administration expenses.

Should the homeowner not make these corrections after receiving the second notice, they will receive a third and final notice, sent via certified mail, informing them when we will make the correction and alert them 24 hours in advance so that they may make arrangements to keep their pets or children from the work area. This process is consistent and authorized by the Highlands Ranch Metro District Rules and Regulations, Section 11.6 and non-compliance may be a violation of Colorado Revised Statutes 18-9-117.

XIII. Monitoring and Evaluation

Following completion of each area replacement, the following process shall occur:

1. Immediately following construction, contractor, material supplier, and owner's representative shall:
 - a. Create a punch list of corrective items not to specifications.
 - b. Verify completion of corrective items within 10-day correction period.
 - c. Owner makes final payment.
 - d. One year workmanship and 25-year materials warranty begins.
2. Six months following construction, the District will:
 - a. Inspect fence for workmanship corrections including movement, settlement, cracking, separation of components, warping, discoloration, or inconsistent fading and report needed corrections to contractor and/or materials supplier.
 - b. Inspect fence for landscape violations and notify homeowner per the Metro District's authorized Rules and Regulations.
3. Prior to one-year warranty expiration date, contractor, materials supplier, and a District representative shall:
 - a. Inspect fence for workmanship corrections including movement, settlement, cracking, separation of components, warping, discoloration, or inconsistent fading and report needed corrections to contractor and/or materials supplier.
 - b. Inspect fence for landscape violations and notify homeowner per the Metro District's authorized Rules and Regulations.
4. Following one-year warranty period, the Metro District will:
 - a. Incorporate area into annual Parkway Fence Maintenance Program including annual visual inspections, and a three-year detailed inspection which will document fence condition and any necessary repairs and/or material defects.
 - b. Inspect for landscape that is adversely impacting parkway fence – a violation of the Metro District's Rules and Regulations.
5. Update the replacement schedule every three years to include new sections to be replaced in a 10-year period, and to re-evaluate sections where replacement could be deferred or needs to be done earlier.