

HIGH DESERT COMMUNITY Wall & Fence Inventory and Report

PREPARED FOR: HIGH DESERT
RESIDENTIAL OWNERS ASSOCIATION
AND HOAMCO

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Project Overview

Project Description

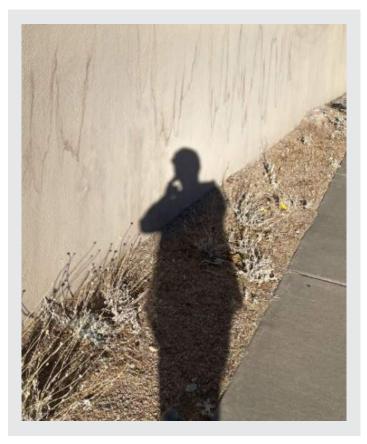
This document is intended to guide the High Desert Residential Owners Association (ROA) Advisory Board, and its community manager (HOAMCO) in tracking existing conditions and projected repairs for the neighborhood's common walls, fences, gates, monument signs, and other common assets. This plan includes summaries of the existing conditions, assessment of rehabilitation needs, and summary recommendations for the planning of common asset repairs. This information is intended to inform the development of short, medium, and long-term repairs that may be structured as made possible by collection of ROA homeowner repair-dedicated fees.

In total there are fifteen villages whose common assets are described in this document: Chaco Ridge, Chamisa Trail, Desert Mountain, Desert Sky, Desert Song, Pinon Point, Solterra, Sunset Ridge, The Aerie, The Canyons, The Enclave, The Legends, The Trillium, Tierra del Oso, and Wilderness Village. Additionally, High Desert common monument signs were assessed, as well as monument signs of outlying High Desert villages where no common walls, fences, or gates are present. Also included in this inventory is the assessment of one pocket park at the northeast corner of Spain Rd. NE and Imperata St. NE., and one monument sign located at High Desert Park.

Intent of Project

The goals of this survey document are as follows:

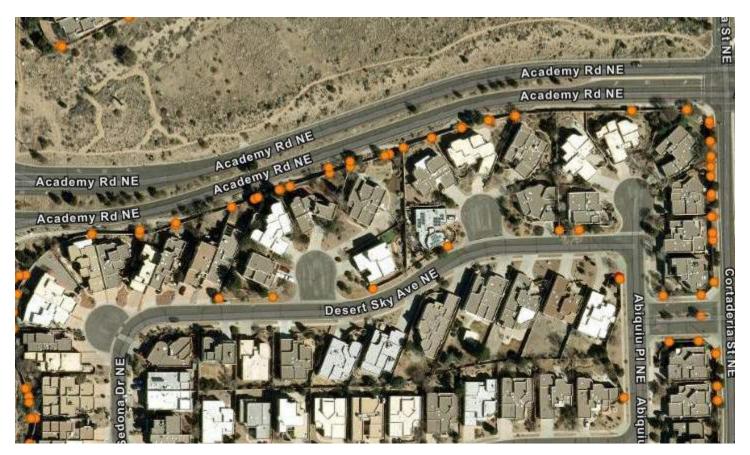
- 1. Identify and describe existing conditions present on all common assets as dictated by the High Desert Residential Owners Association (ROA) Advisory Board, and its community manager (HOAMCO).
- 2. Identify problems due to weathering, subsidence, damage due to vegetation, damage due to irrigation mismanagement and/or potential leaks, and damage resulting from improper construction.
- 3. Identify opportunities for repair.
- 4. Identify priorities for planning of short, medium, and long-term spending projections.
- 5. Develop standards for best repair practices.
- 6. Provide digital mapping for the ongoing maintenance of the neighborhood's assets.
- 7. Provide a spreadsheet for the tracking of repair costs and estimation of expenditures based on dimension and material type.



Field collection of data in FulcrumApp

Assessment Process

The consultant team prepared consolidated spreadsheets of detailed information of all community assets. These spreadsheets include lists of walls and fences defined as individual segments with attributed average height, length, and surface area organized by village. These spreadsheets served as the basis for analysis of the existing conditions, maintenance burdens, and repair cost outlay. From these synopses, the consultant team prepared recommendations for repair with indications of priorities and probable construction costs. The priority recommendations are influenced by visibility, degree of damage, and potential for more costly repair if not addressed in a timely manner. The team also documented the location of all assets digitally including georeferenced images in a GIS based mapping program (Fulcrum). This application is available for the ROA advisory board and community manager to access the digital archives and mapping for use in locating repairs.



Data points represented as orange marker dots in FulcrumApp (Desert Sky Village)

This mapping is also intended to be regularly updated as new projects are constructed or renovations are implemented. The recommendations for repairs and estimated costs are based on consultation with masonry and stucco experts, and metal fence fabricators.

The consultation team used Nearmaps® georeferenced aerial imagery in AutoCAD® to create accurately scaled maps of each High Desert village containing common walls. These maps allowed the team to precisely measure the lengths of all common walls and fences followed up by verification in the field. In these maps, the team represented the materials by color-coded line.

Existing Conditions

Summary of Findings

The High Desert Neighborhood villages began construction in the mid-1990's and construction has continued to the present day. Some villages were built quite rapidly (2-3 years) by individual builders; others such as The Aerie took roughly twenty years to complete and feature homes built by several different builders.

The quality of construction and materials reflect the choices of the assorted builders. They differ from neighborhood to neighborhood, and they also differ within individual neighborhoods.

In addition to construction variation, repairs have been made over time, mostly to stucco, and these repairs vary by quality of materials and method. They also reflect the different approaches by the stucco repair professionals to stucco reinforcement (the choice to use metal lath, woven nylon underlayment, or nylon fiber) and where the vertical extents of the repair were stopped (halfway over the top of the wall, entirely over the wall, or only on the vertical face of the wall).

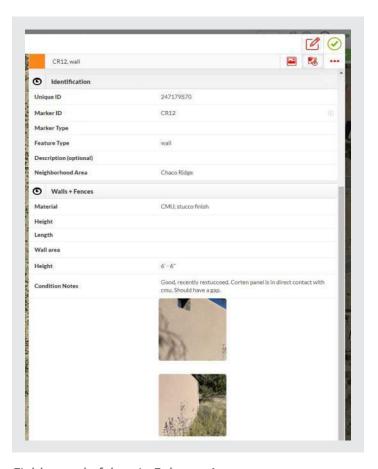
No record of these historic repairs as it pertains to specific wall segments exists, but the field records taken by our team in combination with spreadsheets will also provide a tool for recording them retroactively.

Materials

The features that were most surveyed by the consultant team were walls. Of these, stucco over concrete block (CMU) predominates. Split-face concrete blocks are the second most abundant wall material. Bare concrete block are somewhat uncommon, but comprise the third wall material (mostly in areas of low public visibility). In approximately one fifth of the walls, view-panel inserts made of welded tube steel are integrated into cutouts at regular intervals along the wall. They are attached by tamper-proof fasteners and some utilize a sleeve at the attachment point to allow for expansion and contraction between the different materials.

Fences are also common in High Desert. They are entirely constructed of tube steel and have a painted finish. The fence panels are typically affixed to concrete blocks or pilasters with tamper-proof concrete fasteners. Some of these attached panels are affixed directly; some utilize a sleeve which allows for expansion and contraction.

Pedestrian gates are common in almost all the villages. They are constructed of tube steel and are similar to fences and viewpanel inserts. With one exception, the gate in the Desert Song



Field record of data in Fulcrum App

village, they are all keyed for security.

Automated vehicular gates which limit access to certain villages (Desert Mountain, The Canyons, The Enclave, The Legends, The Trillium, and some inner areas of Chaco Ridge and The Wilderness Village) are constructed of tube steel. They are predominantly painted off-white, apart from The Legends where they are powder coated, and The Wilderness Village where they have been treated to accelerate oxidation.

Monument signs are constructed at the entrances to all the villages as identification markers. They are generally constructed of concrete block and have attached steel or aluminum letters. A few are attached to entry wall panels. One is a tile mosaic adhered to an entry wall (Desert Song). In some cases, the entrances to villages are detailed with ornamental cultured or natural stone veneer. These materials are mortared to underlying concrete block.

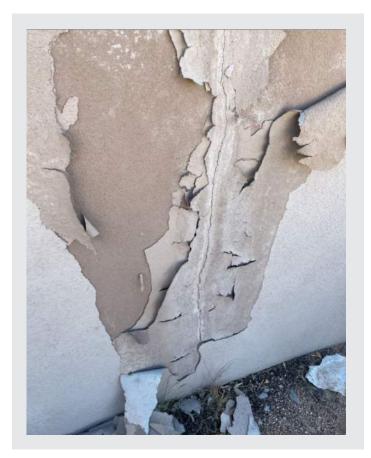
Priority Recommendations

Stucco:

Priority 1: These walls are in the worst condition and require immediate repair. They usually have large sections of deterioration where stucco is missing or delaminating. These walls also typically have stairstep mortar cracks or vertical cracks through entire blocks where settling and shifting have structurally compromised the walls. Some of these walls have been improperly repaired and large swaths of stucco have detached because no underlayment (nylon or metal) was used. Some of these walls are listing outward (toward the public facing side) due to foundation disturbance from large tree, shrub, or vine roots. Additionally, wall sections that are beginning to lean are not tied to their adjacent walls either at pilasters or at expansion joints by continuous rebar. In most of the Priority 1 walls, mortar joints have detached and will require more involved repair prior to re-stucco. Fences assigned a Priority 1 recommendation were most often detached from the CMU to which they were anchored. This is likely due to expansion and contraction due to temperature, and expansion during freeze/thaw of moisture.

Priority 2: These walls typically show significant cracking of stucco but are structurally sound. Mortar joints are occasionally in need of re-mortaring, but most of this damage is restricted to the top courses of block and cap. Often, these walls show hairline cracks of the stucco coat where mortar joints are located. These walls are a priority as their repair is an opportunity to avoid more involved/costly future renovation. Priority 2 fences commonly exhibited bulging and rounding of the square tube-steel pickets where trapped water froze inside the pickets and expanded. Consequently, the paint has flaked off and the underlying metal has rusted.

Priority 3: Walls attributed a Priority 3 rating are mostly just cosmetically damaged. Fine stucco cracks commensurate with age are common, but don't compromise wall integrity. Another common issue of these walls is the delamination of stucco near expansion joints. This damage is not always visible, but tapping the surface revealed voids underneath. Much of this stucco is held together by lath and in these areas, it was impossible to make an accurate condition assessment of the underlying block and mortar condition. Many walls in the Wilderness Village neighborhood are constructed of split-face CMU and are badly effloresced. These walls are not structurally compromised, but where attributed a Priority 3 rating as their cosmetic condition has been significantly affected. Priority 3 fences and viewpanel inserts show some freeze expansion and paint chipping/ rusting, but to a lesser extent than Priority 2 walls. The panel fasteners may be coming loose and may show gaps between the panel and CMU block to which they are secured. These are



Layers of stucco repair and paint without underlayment

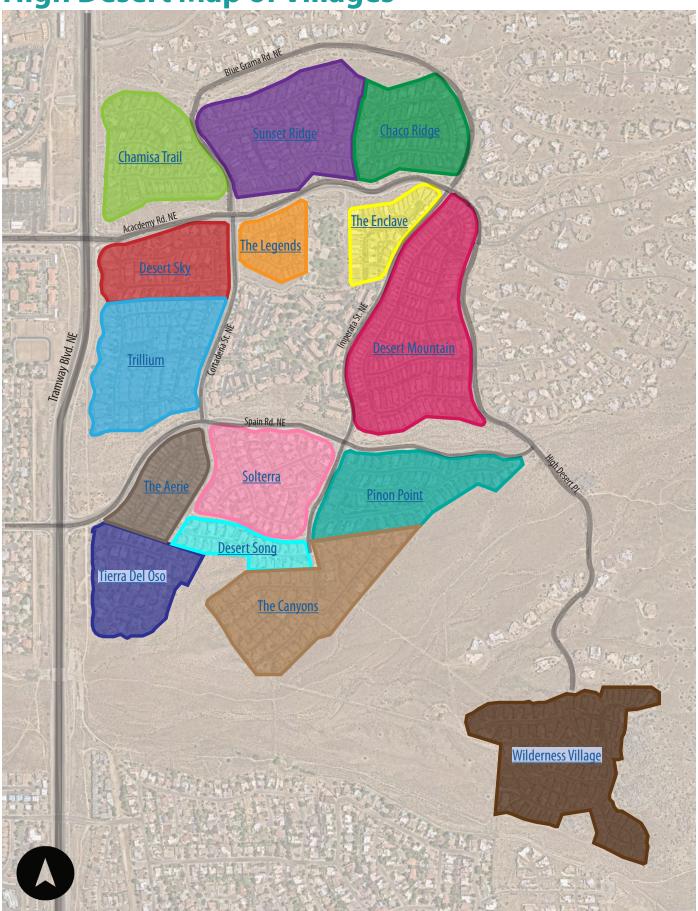
effectively anchored but will need to be repaired eventually.

Priority 4: Stucco-coated Priority 4 walls were found to be in good condition structurally and exhibited only minor damage. Hairline cracks along mortar joints occur, but more seldom than Priority 3 walls. Some chipping, vegetative staining, vegetative abrasion, and minor efflorescence also occur, but there is no urgency to being repaired. Priority 4 split-face walls show efflorescence, but to a lesser extent than Priority 3 walls. Priority 4 tube steel fences, view-panel inserts, and gates have chipped paint, minor rust, and occasionally, a missing, sun-damaged, or cracked plastic cap. They are still securely attached.

Priority 5: Walls attributed a Priority 5 rating were in excellent condition. Stucco has been recently repaired and the surface is almost entirely free of cracks. Where cracks do occur, they are usually associated with the expansion joint and are to be expected. Priority 5 split-face walls are structurally sound and show little to no efflorescence. Tube-steel elements have even, uninterrupted paint or powder coating.

Priority 1 Priority 2 Priority 3 Priority 4 Priority 5 Stucco-coated CMU CT10 example of hairline cracking of stucco DM34 vegetative staining CT04 example of water damage causing SR44 example of water damage DM02 stucco in good condition structural damage **Stucco-coated CMU** with view-panel inserts DM43 example of minor staining due to DM08 example of view-panel insert with CR28 stucco and tube steel with expansion DM30 example of extreme chipping of stucco DM39 example of shifting wall tube steel drainaae overgrown vegetation sleeve in excellent condition CMU (Bare and **Splitface**) TO02 example of detached cap block A03 smooth-face CMU in excellent condition WV07 example of heavy efflorescence CY10 example of moderate efflorescence WV39 smooth CMU structural crack **Fencing** CY16 example of loose anchor bolts and cap CY15 example of bent/damaged tube steel CY11 example of tube steel and CMU with DM53 fence in excellent condition rusting due to freezing of trapped water block detached at mortar joint minor efflorescence

High Desert Map of Villages



Not-to-scale

Asset Materials Legend

CMU Stucco Walls

Total linear feet: 43,050' Total area: 258,760 square feet



CMU Stucco Walls with View-panel Inserts

Total linear feet:14,050' Total area: 77,300 square feet



DM33

Split-face CMU Walls

Total linear feet: 7,990' Total area: 50,340 square feet



Split-face CMU Walls with View-panel Inserts

Total linear feet: 3,960' Total area: 30,900 square feet



Bare CMU Walls

Total linear feet: 910' Total area: 4970 square feet



Smooth-face/Split-face CMU Walls

Total linear feet: 2,570' Total area: 15,490 square feet



Stucco/Smooth-Face CMU Walls

Total linear feet: 500' Total area: 2,680 square feet



LE01

Tube Steel Fences

Total linear feet: 4,400' Total area: 23,760 square feet



Tube Steel / Wrought Iron Pedestrian & Vehicular Gates

Total: 49 Pedestrian:35 Vehicular:14



TRVG/PG

Monument Signs

Total: 29 Freestanding: 23 Attached to walls: 6



CYM1

13

Chamisa Trail

Constructed 2002-2004

Current condition:

Priority 1: 39.8% of wall length (common)

At the time of survey (October 2023) 1,806 linear feet (11,239 square feet) of stucco-coated CMU wall were documented as being in poor condition (Priority 1) and needing repair. The majority of these are northeast facing and are adjacent to Open Space. Many sections of these walls are structurally compromised and badly in need of new stucco and often, structural repair.

Priority 2: 19.5% of wall length (common)

362 linear feet (2,441 square feet) of stucco-coated CMU wall and 520 linear feet (3,120 square feet) of stucco-coated CMU wall with view-panel inserts are in somewhat poor condition. This is mainly due to normal moisture at mortar joints causing cracking during freeze/thaw cycles. At the southwest corner of this neighborhood there is a section of wall that appears to be breaking free of its adjacent segments due to root disturbance at the wall's foundation.

Priority 3: 36.7% of wall length (common)

1,343 linear feet (6,562 square feet) of stucco- coated CMU wall and 319 linear feet (1,803 square feet) of stucco-coated CMU wall with view-panel insert were documented as being in satisfactory condition. Some of the walls' foundations are exposed due to erosion. Hairline cracks are present on the stucco surface and view-panel anchor screws have occasionally detached from the concrete block walls.

Priority 4: 4 % of wall length (common)

183 linear feet (793 square feet) of stucco-coated CMU block wall were recorded as being priority 4. These segments of wall are short, individual segments of wall on the interior of the neighborhood. They all have stucco paint over stucco and show only minor damage. Their segment I.D. numbers are: CT19, CT20, and CT23, and it was unclear whether they are considered common walls.

Priority 5: No walls in Chamisa Trail were considered Priority 5.

There are two pedestrian gates in the Chamisa Trail neighborhood. One was rated a Priority 2 and one was rated a Priority 3 due to chipping, rusting, and freeze/thaw expansion.

The Chamisa Trail monument sign is constructed of split-face CMU block and is uncoated. It is in very good condition and was given a Priority 5 rating.

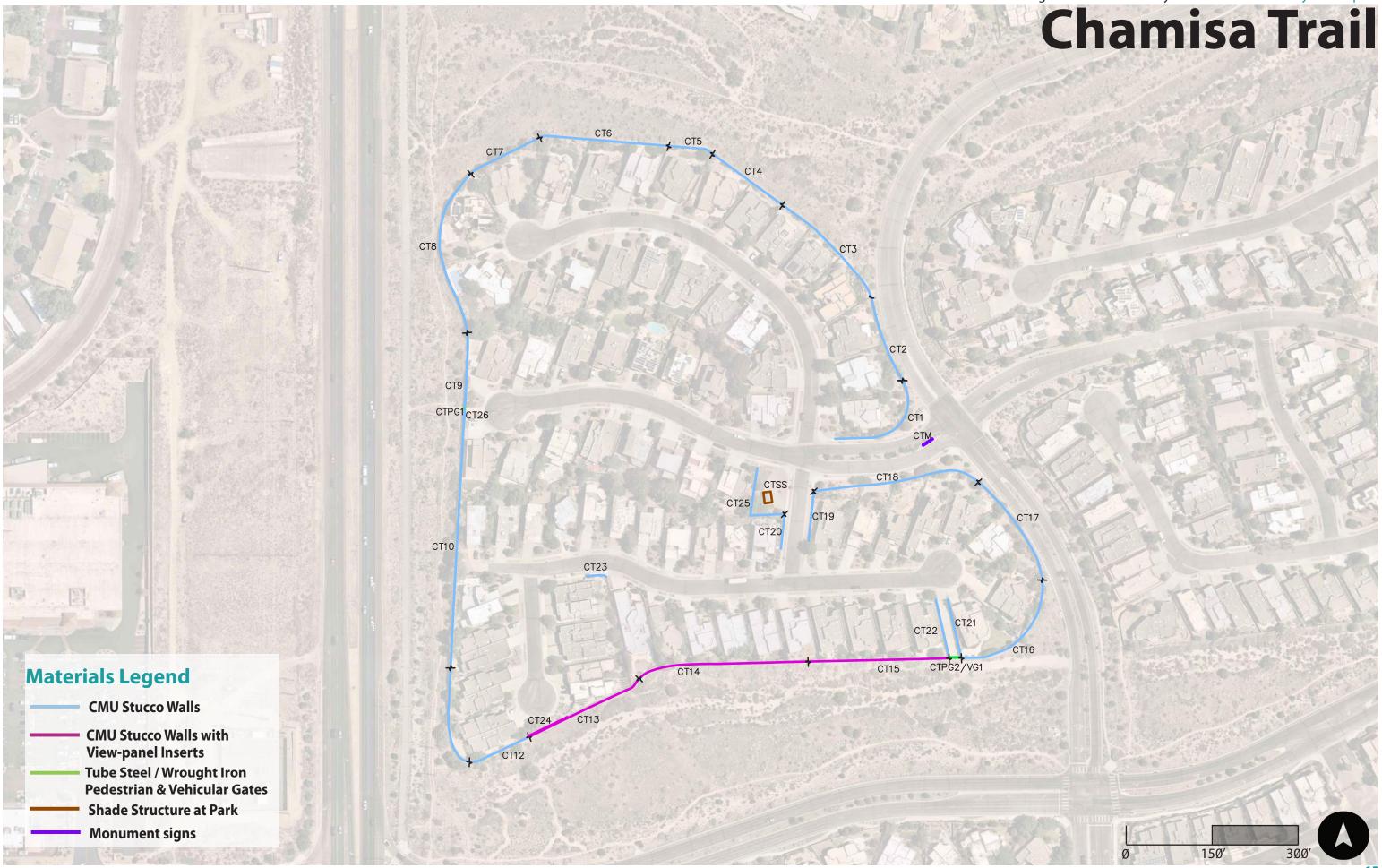


Chamisa Trail total assets

Asset Type	Common(QTY)
Linear feet of walls	4,533
Square feet of walls	25,958
Linear feet of stucco-coated CMU wall	3,694
Square feet of stucco-coated CMU wall	21,035
Linear feet of stucco-coated CMU wall w/ view-panel insert	839
Square feet stucco-coated CMU wall w/view-panel insert	4,923
Pedestrian gates	2
Vehicular gates	1 (manual)
Monument signs	1



Key map





SR25





Key map

Sunset Ridge

Constructed 1996-2015

Current condition:

Priority 1: 36.3% of wall length

At the time of survey (November, 2023) 2,989 linear feet (15,191.5 square feet) of stucco-coated CMU wall with viewpanel insert, and 62 linear feet (558 square feet) of stucco-coated CMU wall in the Sunset Ridge neighborhood were documented as being in poor condition.

Priority 2: 13.6% of wall length

639 linear feet (2,944 square feet) of stucco-coated CMU wall with view-panel insert, and 503 linear feet (2,811.5 square feet) of stucco-coated CMU wall were in somewhat poor condition.

Priority 3: 20% of wall length

At the time of survey 1,596 linear feet (10,884 square feet) of stucco walls and 85 linear feet (595 square feet) of stucco-coated CMU wall with view-panel insert were documented as being in satisfactory condition.

Priority 4: 3.8% of wall length

325 linear feet (1,274.5 square feet) of stucco-coated CMU walls were recorded as being in good condition.

Priority 5: 26.3% of wall length

1,667 linear feet (9,401.5 square feet) of stucco-coated CMU wall, and 547 linear feet (2,463 square feet) of stucco-coated CMU wall with view-panel insert were recorded as being in excellent condition.

The Sunset Ridge monument sign was also documented as being in excellent condition.

Sunset Ridge total assets

Asset Type	Common(QTY)
Linear feet of walls	8,413
Square feet of walls	46,123
Linear feet of stucco-coated CMU wall	4,153
Square feet of stucco-coated CMU wall	24,929.5
Linear feet of stucco-coated CMU wall w/view-panel insert	4,260
Square feet of stucco-coated CMU wall w/view-panel insert	21,193.5
Pedestrian gates	0
Vehicular gates	0
Monument signs	1

Chaco Ridge

Constructed 2002-2004

Current condition:

Priority 1: 21% of wall length (common)

At the time of survey (November 2023) 677 linear feet (3,456.5square feet) of stucco-coated CMU wall were documented as being in poor condition (Priority 1) and needing repair. 530 linear feet (3,520.5 square feet) of stucco-coated CMU wall with view-panel insert were in poor condition (Priority 1). The majority of these are adjacent to Open Space and not highly visible. Many sections of these walls are badly effloresced, both due to homeowner irrigation saturating the wall and due to north-facing aspect, making it difficult to dry.

Priority 2: 7% of wall length (common)

411 linear feet (2,344 square feet) of common stucco-coated CMU wall are in somewhat poor condition and are burdened by efflorescence. This is mainly due to homeowner irrigation/water feature, and secondarily due to common landscape irrigation saturating the walls.

Priority 3: 2% of wall length (common)

104 linear feet (832 square feet) of stucco-coated CMU wall were documented as being in satisfactory condition. This comprises only one segment of wall with a southeast facing aspect. There is moderate efflorescence on its surface from homeowner and common landscape irrigation.

Priority 4: 8% of wall length (gated)

469 linear feet (2,814 square feet) of stucco-coated CMU block wall were recorded as being Priority 4. This segment of wall is north facing and there is minor cracking of stucco, but mortar is in good condition.

Priority 5: 62% of wall length (52% common, 10% gated)

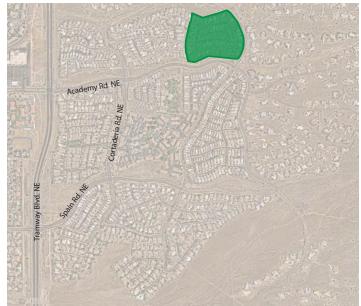
2,295 linear feet (14,247.5 square feet) of common stucco-coated CMU wall and 573 linear feet (3,151.5 square feet) of gated stucco-coated CMU wall in Chaco Ridge were documented as being in good to very good condition. 723 linear feet (4,822 square feet) of common stucco-coated CMU wall with view-panel insert were in excellent condition. Typically, these walls have been re-stuccoed and the repair used a woven nylon underlayment. The repair typically terminates at the midpoint of the cap block.

All pedestrian and vehicular gates were recorded as being in good condition and are the property of the gated community.

The Chaco Ridge monument sign is also in excellent condition (Priority 5), though it showed slight efflorescence on the eastern pilaster, probably due to leaking irrigation.



CRM1



Key map

Chaco Ridge total assets

Asset Type	Common(QTY)	Gated(QTY)
Linear feet of walls	4,740	1,042
Square feet of walls	29,437.00	5,965.50
Linear feet of stucco-coated CMU wall	3,487	1,042
Square feet of stucco-coated CMU wall	20,880.00	5,965.50
Linear feet of stucco-coated CMU wall w/view-panel insert	1,253	0
Square feet stucco-coated CMU wall w/view-panel insert	8,557	0
Pedestrian gates	0	1
Vehicular gates	0	2
Monument signs	1	0

150'



DSM



DS40



Key map

Desert Sky

Constructed 1996-2006

Current condition:

Priority 1:.7% of wall length

At the time of survey (October 2023) 23 linear feet (103.5 square feet) of stucco-coated CMU wall with view-panel insert were documented as being in poor condition (Priority 1) and needing repair.

Priority 2: 7.8% of wall length

229 linear feet (1,467 square feet) of stucco-coated CMU wall and 29 linear feet (130.5 square feet) of stucco-coated CMU wall with view-panel insert were in somewhat poor condition.

Priority 3: 49.3% of wall length

1,442 linear feet (8,265 square feet) of stucco-coated CMU wall and 187 linear feet (841.5 square feet) of stucco-coated CMU wall with view-panel insert were documented as being in satisfactory condition.

Priority 4: 17.9% of wall length

590 linear feet (3,277 square feet) of stucco-coated CMU wall were recorded as being in good condition and given a Priority 4 recommendation.

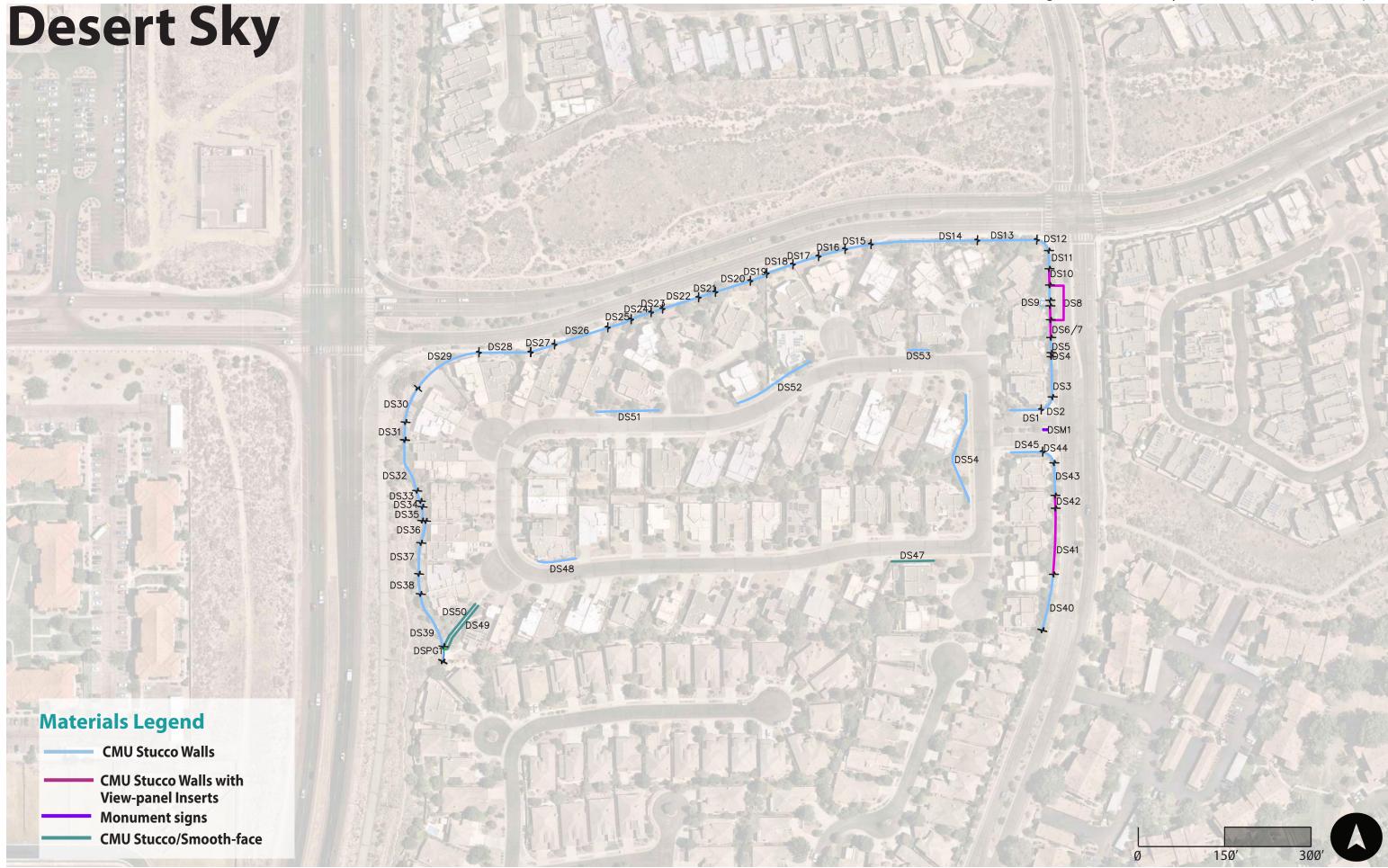
Priority 5: 24.3% of wall length

525 linear feet (2,912 square feet) of stucco-coated CMU wall and 266 linear feet (1,530.5 square feet) of CMU wall, partially stuccoed and partially bare, were recorded as being in excellent condition.

One pedestrian gate, one monument sign, and one decorative weathering steel panel were also recorded as being in excellent condition (Priority 5) in the Desert Sky neighborhood.

Desert Sky total assets

Asset Type	Common(QTY)
Linear feet of walls	3,302
Square feet of walls	18620
Linear feet of stucco-coated CMU wall	2,797
Square feet of stucco-coated CMU wall	16014.5
Linear feet of stucco-coated CMU wall w/view-panel insert	239
Square feet stucco-coated CMU wall w/view-panel insert	1075.5
Linear feet of partially stucco-coated CMU wall	266
Square feet of partially stucco-coated CMU wall	1530.5
Pedestrian gates	1
Vehicular gates	0
Monument signs	1



The Legends

Constructed 2009-2017

Current condition:

Priority 1: 30.6% of wall length (30.6% common, 0% gated)

At the time of survey (October 2023) 811 linear feet (4,576 square feet) of common stucco-coated CMU wall were documented as being in poor condition (Priority 1) and needing repair. One small (54 linear foot (297 square foot)) segment of this wall also has a tube-steel fence attached to the wall which is chipped and missing caps. It was rated a Priority 4.

Priority 2: 11.9% of wall length (8.5% common, 3.5% gated)

99 linear feet (396 square feet) of gated stucco-coated CMU wall, 239 linear feet (1,741 square feet) of common stucco-coated CMU wall were in somewhat poor condition.

Priority 3: 21% of wall length (13.5% common, 7.5% gated)

382 linear feet (2,981 square feet) of common stucco-coated CMU wall and 210 linear feet (1,040 square feet) of gated stucco-coated CMU wall were documented as being in satisfactory condition. One small (43 linear foot) section also has a tube-steel fence mounted on it on the gated side. This segment represents the other face of the segment mentioned in the Priority 1 category.

Priority 4: 6.6 % of wall length (1.7% common, 5.9% gated)

47 linear feet (305.5 square feet) of stucco-coated CMU common wall and 139 linear feet (556 square feet) of stucco-coated CMU gated wall were recorded as being in good condition.

Priority 5: 29.9 % of wall length (26.2 % common, 3.9 % gated)

739 linear feet (5,076 square feet) of common stucco wall and 106 linear feet (479 square feet) of gated stucco wall were recorded as being in excellent condition.

2 pedestrian gates were recorded, one was given a priority 5 rating, and one was rated Priority 4. Both vehicular gates were rated Priority 3 due to repaired welds which need painting to prevent oxidation.

The Legends monument sign was in excellent condition.

The Legends total assets

Asset Type	Common(QTY)	Gated(QTY)
Linear feet of walls	2,272	554
Square feet of walls	14,977	2,471
Linear feet of stucco-coated CMU wall	2,218	511
Square feet of stucco-coated CMU wall	14,680	2,213
Linear feet of stucco-coated CMU wall w/ view-panel inserts	54	43
Square feet of stucco-coated CMU wall w/ view-panel inserts	297	258
Pedestrian gates	0	2
Vehicular gates	0	1
Monument signs	0	1



LE17



LE22



Key map

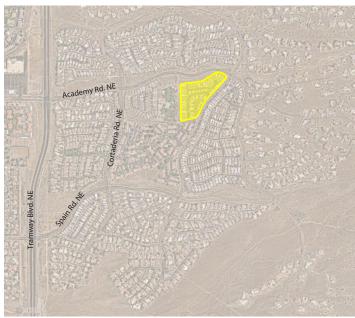




EN05



EN09



Key map

The Enclave

Constructed 1996-2004

Current condition:

Priority 1: 10.7% of wall length (0% common, 10.7% gated)

At the time of survey (December 2023) 475 linear feet (3,997.5 square feet) of stucco-coated CMU wall were documented as being in poor condition (Priority 1) and needing repair.

Priority 2: 23.4% of wall length (19% common, 4.4% gated)

193 linear feet (1,277 square feet) of gated stucco-coated CMU wall, 844 linear feet (6,354 square feet) of common stucco-coated CMU wall were in somewhat poor condition.

Priority 3: 34.6 % of wall length (19.4% common, 15.5% gated)

862 linear feet (5,732.5 square feet) of common stucco-coated CMU wall and 628 linear feet (4,393.5 square feet) of gated stucco-coated CMU wall were documented as being in satisfactory condition. One small 42 linear feet (378 square feet) of gated painted CMU wall, was also categorized as Priority 3.

Priority 4: 0 % of wall length

Priority 5: 31.3 % of wall length (24.4 % common, 6.9 % gated)

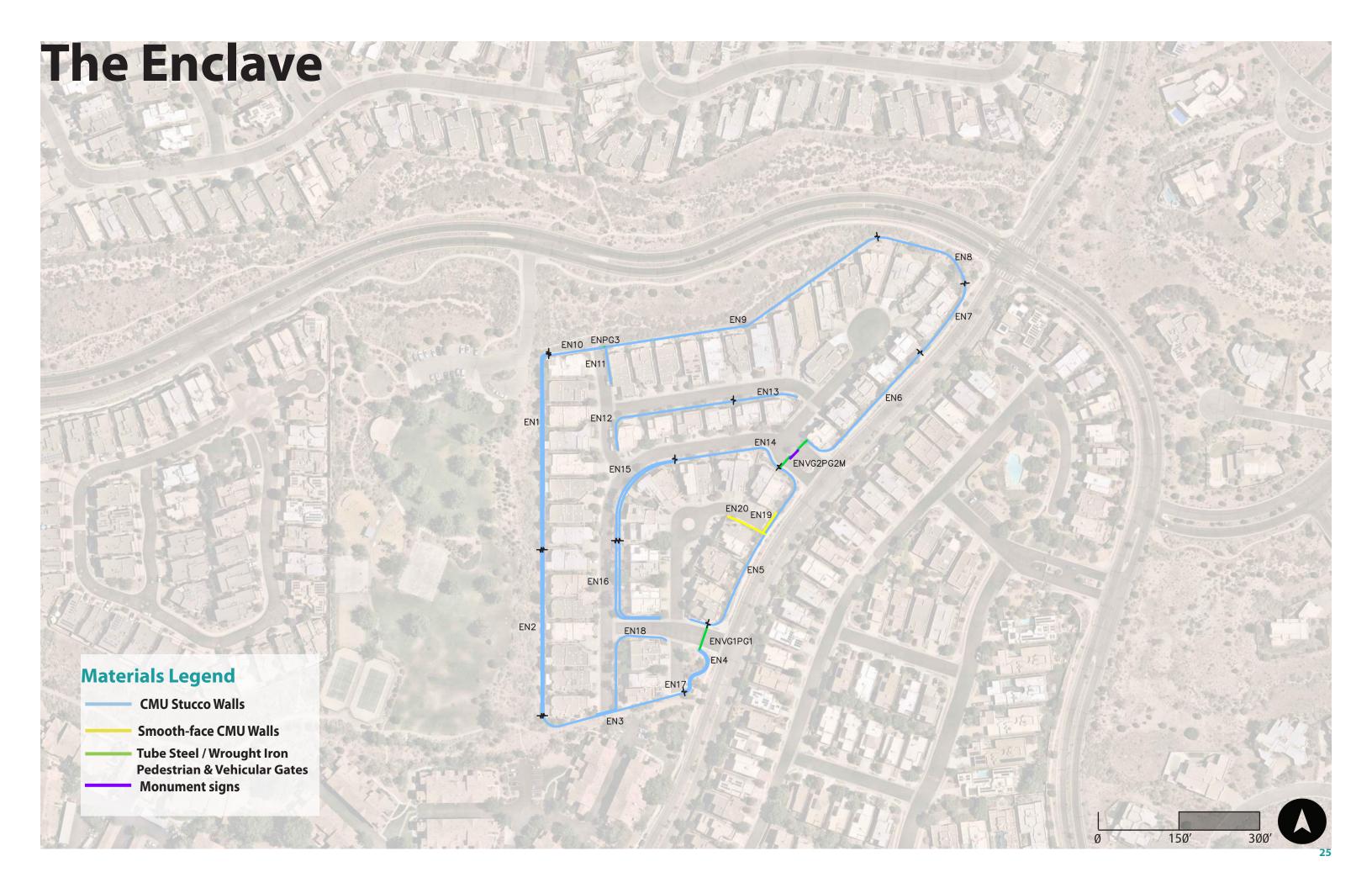
1,082 linear feet (6,563 square feet) of common stucco-coated CMU wall and 306 linear feet (2,688 square feet) of gated stucco-coated CMU wall were recorded as being in excellent condition.

Three pedestrian gates were recorded, one was given a Priority 3 rating and two were rated Priority 4. Two vehicular gates were recorded, one as Priority 3 and one as a Priority 4.

The Enclave monument sign showed some minor stucco cracking and was given a priority 4 rating.

The Enclave total assets

Asset Type	Common(QTY)	Gated(QTY)
Linear feet of walls	2,788	1,644
Square feet of walls	18,650	12,734
Linear feet of stucco-coated CMU wall	2,788	1,602
Square feet of stucco-coated CMU wall	18,650	12,356
Linear feet of smooth faceCMU wall (painted)	0	42
Square feet of smooth-face CMU wall (painted)	0	378
Pedestrian gates	0	3
Vehicular gates	0	2
Monument signs	0	1



Trillium

Constructed 1996-2006

Current condition:

Priority 1: 13.8% of wall length (common)

At the time of survey (October 2023) 731 linear feet (4,020.5 square feet) of stucco-coated CMU common wall were documented as being in poor condition (Priority 1) and needing repair.

Priority 2: 13.4% of wall length (6.3% common, 7.1% gated)

335 linear feet (1842.5 square feet) of common stucco-coated CMU wall, 180 linear feet (1,080 square feet) of gated stucco-coated CMU wall, 101 linear feet (505 square feet) of common stucco-coated CMU/tube-steel wall/fence, and 96 linear feet (624 square feet) of gated stucco-coated CMU /tube-steel wall/fence were in somewhat poor condition.

Priority 3: 29.4 % of wall length (21% common, 8.4% gated)

959 linear feet (4,859 square feet) of common stucco-coated CMU wall and 143 linear feet (929.5 square feet) of gated stucco-coated wall were documented as being in satisfactory condition. 154 linear feet (842 square feet) of stucco-coated CMU/tube-steel common wall/fence and 66 linear feet (363 square feet) of gated stucco-coated CMU/tube-steel wall/fence were in satisfactory condition. 131 linear feet (851.5 square feet) of gated bare CMU/stucco-coated CMU/tube-steel wall/fence, and one section of 105 linear feet (630 square feet) of painted plain CMU wall in the gated portion of Trillium were also recorded as being in satisfactory condition. There is also a shade structure that was documented as being a Priority 3 repair at the park in the gated portion of Trillium.

Priority 4: 17.8% of wall length (3.4% common, 14.4% gated)

104 linear feet (468 square feet) of stucco-coated CMU common wall and 566 linear feet (3,322 square feet) of stucco-coated gated wall were recorded as being in good condition. 115 linear feet (632.5 square feet) of gated stucco-coated CMU/tube-steel wall/fence, and 80 linear feet (400 square feet) of gated bare brown CMU wall were also recorded as being in good condition.

Priority 5: 24.1% of wall length (11.4% common, 12.7% gated)

238 linear feet (971.5 square feet) of common stucco-coated CMU wall and 609 linear feet (4,424 square feet) of gated stucco-coated CMU wall were recorded as being in excellent condition. 63 linear feet (346.5 square feet) of gated bare CMU wall was also recorded as being in excellent condition. 368 linear feet (1,913 square feet) of common stucco-coated CMU/tube steel wall/fence were also recorded in Trillium.

2 pedestrian gates were recorded as being in satisfactory condition due to paint chipping and rust, two pedestrian gates were in excellent condition. The vehicular entry/exit gates were given a Priority 4 rating.

The Trillium monument sign was in good condition.



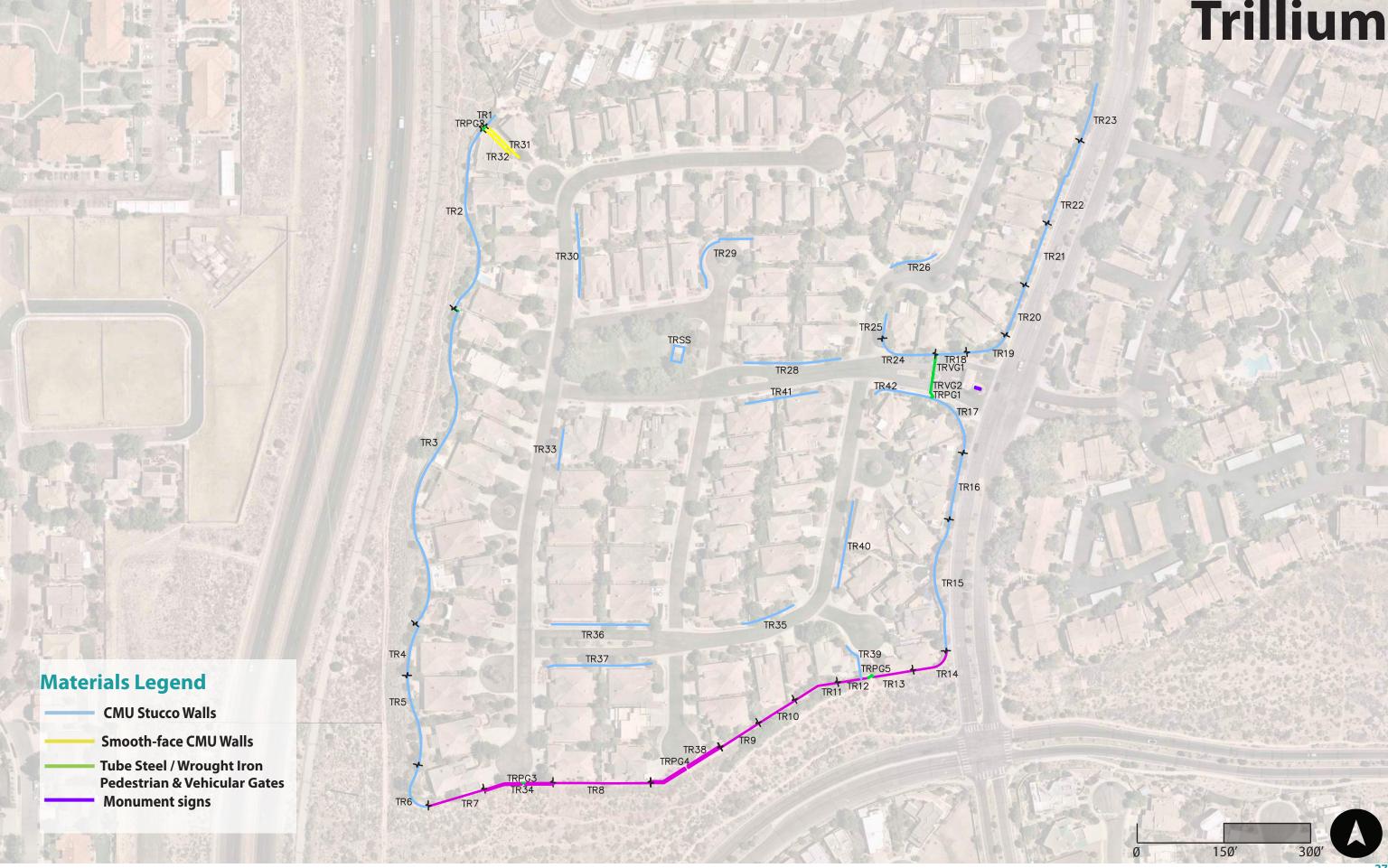
TR02

Trillium total assets

Asset Type	Common (QTY)	Gated(QTY)
Linear feet of walls/fences	3,068	2,154
Square feet of walls/fences	15,811.5	13,603
Linear feet of stucco-coated CMU	2,367	1,498
Square feet of stucco-coated CMU	12,161.5	9,755.5
Linear feet of stucco-coated CMU/tube steel fence	701	277
Square feet of stucco-coated CMU/tube steel fence	3,650	1,619.5
Linear feet of smooth-face CMU block wall	0	248
Square feet of smooth-face CMU block wall	0	1,376.5
Linear feet of smooth-face CMU/CMU stucco/tube steel	0	131
Square feet of smooth-face CMU/CMU stucco/tube steel	0	851.5
Pedestrian gates	0	4
Vehicular gates	0	1
Monument signs	0	1



Key map



Desert Mountain total assets

Asset type	Common(QTY)	Gated(QTY)
Linear feet of walls/fences	5997	3,718
Square feet of walls/fences	32973.5	22,607
Linear feet of stucco-coated CMU wall	544	2,720
Square feet of stucco-coated CMU wall	2,983	16,475
Linear feet of stucco-coated CMU wall w/view-panel inse	5,413	463
Square feet of stucco-coated CMU wall w/view-panel ins-	29790.5	2,568
Linear feet of fence	40	417
Square feet of fence	200	2,202
Pedestrian gates	0	6
Vehicular gates	0	2
Monument signs	2	0



Academy Rd.NE

Key map

Desert Mountain

Constructed 2002-2004

Current condition:

Priority 1: 10.0% of wall length (9.6% common, .4% gated)

At the time of survey (October-December 2023) no common stucco-coated CMU walls were documented as being in poor condition (Priority 1) and needing immediate repair. 936 linear feet (5,093 square feet) of common stucco-coated CMU walls with view-panel insert and 41 linear feet (164 square feet) of gated stucco-coated CMU walls with view-panel insert were described as being in poor condition (Priority 1).

Priority 2: 6.8% of wall length (4.1% common, 2.7 gated)

259 linear feet (1,547 square feet) of gated stucco-coated CMU wall, 399 linear feet (2,194.5 square feet) of common stucco-coated CMU wall with view-panel insert were in somewhat poor condition.

Priority 3: 36.1 % of wall and fence length (31.1% common, 5.0% gated)

2,762 linear feet (15,426.5 square feet) of common stucco-coated CMU wall with view-panel insert and 294 linear feet (1,764 square feet) of gated stucco-coated CMU wall with view-panel insert were documented as being in satisfactory condition. 258 linear feet (1,267 square feet) of common stucco-coated CMU wall, and 110 linear feet (660 square feet) of gated stucco-coated CMU wall were in satisfactory condition. One 84 linear foot (504 square feet) section of gated fence was also categorized as Priority 3.

Priority 4: 19.8 % of wall and fence length (12.0% common, 7.8% gated)

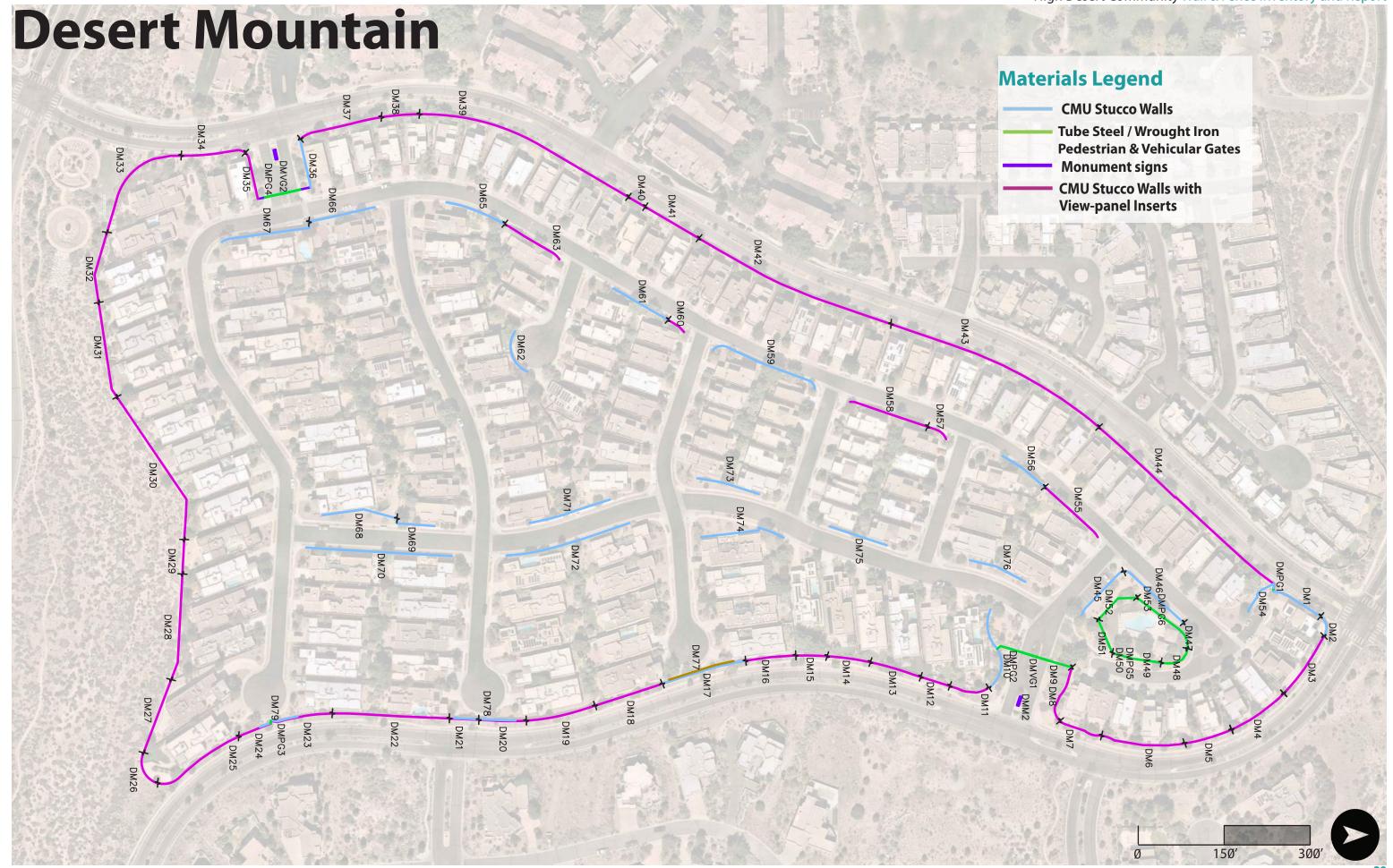
1,168 linear feet (6,350 square feet) of common stucco-coated block wall with a view-panel insert were recorded as being Priority 4. 545 linear feet (3,381 square feet) of gated stucco-coated CMU wall were recorded as being Priority 4. 118 linear feet (1,062 square feet) of gated split-face CMU and 95 linear feet (570 square feet) of gated tube-steel fence were also recorded as being in good condition with only minor damage.

Priority 5: 27.3 % of wall and fence length (4.9 % common, 22.4 % gated)

286 linear feet (1,716 square feet) of common stucco-coated CMU wall and 1,806 linear feet (10,887 square feet) of gated stucco-coated CMU wall were recorded as Priority 5. 148 linear feet (726 square feet) of common stucco-coated CMU wall with view-panel insert and 128 linear feet (640 square feet) of gated stucco-coated CMU wall with view-panel insert were recorded as Priority 5. 40 linear feet (200 square feet) of common tube-steel fence and 238 linear feet (1,428 square feet) of gated tube-steel fence were also recorded as being in excellent condition.

3 pedestrian gates were recorded as Priority 4 and 3 pedestrian and 2 vehicular gates were recorded as Priority 5. All are the property of the gated community.

The Desert Mountain monument signs were both in excellent condition.



The Aerie

Constructed 1996-2015

Current condition:

Priority 1: 10% of wall length

At the time of survey (December 2023) 339 linear feet (1,727 square feet) of stucco-coated CMU wall were documented as being in poor condition (Priority 1) and needing repair.

Priority 2: 5.6% of wall length

188 linear feet (1,147 square feet) of stucco-coated CMU wall were in somewhat poor condition.

Priority 3: 5.5% of wall length

185 linear feet (925 square feet) of stucco-coated CMU wall were documented as being in satisfactory condition.

Priority 4: 11.7% of wall length

71 linear feet (532.5 square feet) of stucco-coated CMU wall, and 161 linear feet (1,005 square feet) of split-face CMU wall with view-panel insert, and 162 linear feet (648 square feet) of bare CMU wall were recorded as being Priority 4 and not needing immediate repair.

Priority 5: 67.2% of wall length

1,951 linear feet (11,286.5 square feet) of stucco-coated CMU wall and 312 linear feet (1,716 square feet) of bare CMU wall were recorded as being in excellent condition.

One pedestrian gate, and one monument sign, were also recorded as being in excellent condition (Priority 5) in The Aerie neighborhood and one pedestrian gate was recorded as being a Priority 1 and needing immediate attention.

The Aerie total assets

Asset Type	Common(QTY)
Linear feet of walls	3,369
Square feet of walls	18,987
Linear feet of stucco-coated CMU wall	2,734
Square feet of stucco-coated CMU wall	15,618
Linear feet of smooth-face CMU wall	474
Square feet of smooth-face CMU wall	2,364
Linear feet of split-face CMU w/view-panel insert	161
Square feet of split-face CMU w/view-panel insert	1,005
Pedestrian gates	2
Vehicular gates	0
Monument signs	1



AM1



422



Key map





SAM1



SA07



Key map

Solterra

Constructed 1996-2009

Current condition:

Priority 1:0% of wall length

At the time of survey (December, 2023) no walls in the Solterra neighborhood were documented as being in poor condition.

Priority 2: 19% of wall length

722 linear feet (3,971 square feet) of stucco-coated CMU wall were in somewhat poor condition.

Priority 3: 0 0.9% of wall length

At the time of survey, 33 linear feet (165 square feet) of stucco-coated CMU wall were documented as being in satisfactory condition.

Priority 4: 44.3% of wall length

1,680 linear feet (9,781 square feet) of stucco-coated CMU wall were recorded as being Priority 4.

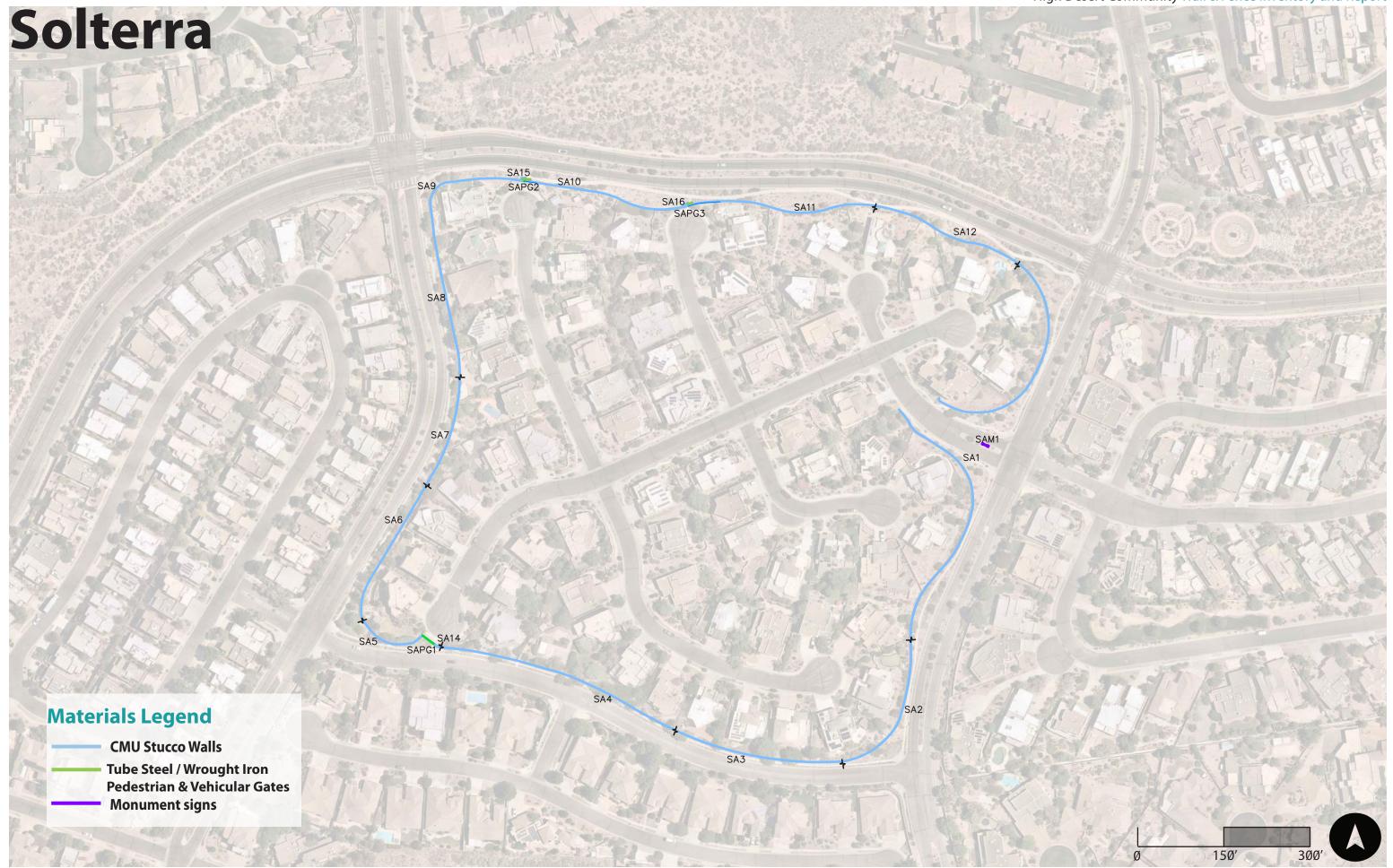
Priority 5: 35.7 % of wall length

1,354 linear feet (7,559.5square feet) of stucco-coated CMU wall were recorded as being in excellent condition.

Two pedestrian gates were recorded as being in satisfactory condition (priority 3), one pedestrian gate was in good condition (priority 4). The Solterra monument sign was recorded as being in excellent condition.

Solterra total assets

Asset Type	Common(QTY)
Linear feet of walls	3,789
Square feet of walls	21,476
Linear feet of stucco-coated CMU wall	3,789
Square feet of stucco-coated CMU wall	21,476
Linear feet of stucco-coated CMU wall w/view-panel insert	0
Square feet of stucco-coated CMU wall w/view-panel insert	0
Pedestrian gates	3
Vehicular gates	1(maintenance access)
Monument signs	1



Pinon Point

Constructed 1996-2012

Current condition:

Priority 1: 42.2% of wall length

At the time of survey (October-December 2023) 1,927 linear feet (11,877 square feet) of stucco-coated CMU wall and 825 linear feet (4,826.5 square feet) of low stucco-coated CMU wall/tube-steel fence were documented as being in poor condition (Priority 1) and needing repair.

Priority 2: 6.3% of wall length

206 linear feet (1,620 square feet) of stucco-coated CMU wall and 205 linear feet (1,025 square feet) of low stucco-coated CMU wall with tube-steel fence were in somewhat poor condition.

Priority 3: 3.8 % of wall length

248 linear feet (1651 square feet) of stucco-coated CMU wall were documented as being in satisfactory condition.

Priority 4: 1.9% of wall length

127 linear feet (1,016 square feet) of stucco-coated CMU wall were recorded as being Priority 4.

Priority 5: 45.7 % of wall length

2,042 linear feet (13,260.5 square feet) of stucco-coated CMU wall and 935 linear feet (7,480 square feet) of split -face CMU/stucco-coated CMU wall were recorded as being in excellent condition.

One pedestrian gate, and one monument sign, were also recorded as being in excellent condition (Priority 5) in the Pinon Point neighborhood. One pedestrian gate was recorded as being in satisfactory condition (Priority 3).

Pinon Point total assets

Asset Type	Common(QTY)	
Linear feet of walls	6,515	
Square feet of walls	42,756	
Linear feet of stucco-coated CMU wall	4,435	
Square feet of stucco-coated CMU wall	28,455	
Linear feet of stucco-coated CMU low wall/ tube steel fe	er 1,030	
Square feet stucco-coated CMU low wall/tube steel fend	cı 5,852	
Pedestrian gates	1 9	shared with The Canyons
Vehicular gates	0	
Monument signs	1 8	attached to wall segment PP19



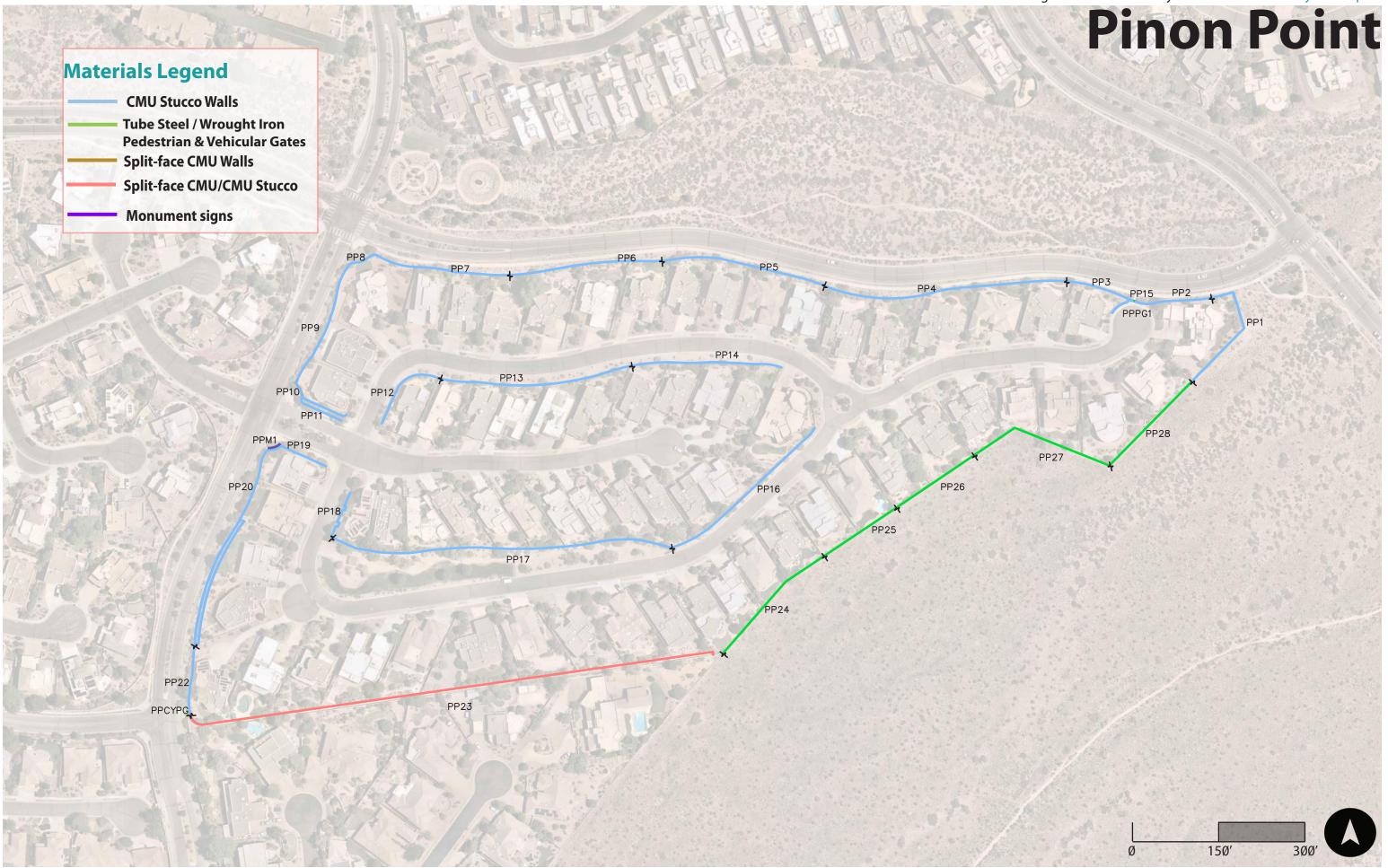
PP19



PP04



Key map





TOM01



TO10



Key map

Tierra del Oso

Constructed 1996-2015

Current condition:

Priority 1:0% of wall length

At the time of survey (December, 2023) no assets in the Tierra del Oso neighborhood were documented as being in poor condition.

Priority 2: 20.1% of wall length

739 linear feet (3,724 square feet) of tube-steel fence were in somewhat poor condition.

Priority 3: 11 % of wall length

At the time of survey 405 linear feet (2,430 square feet) of stucco-coated CMU wall were documented as being in satisfactory condition.

Priority 4: 24.8% of wall length

598 linear feet (3,588 square feet) of stucco-coated CMU wall, 152 linear feet (836 square feet) of split-face CMU wall, and 160 linear feet (880 square feet) of combination split-face/stucco-coated CMU wall were recorded as being in good condition.

Priority 5: 44.1% of wall length

887 linear feet (4,680 square feet) of split-face CMU wall, 588 linear feet (2,979 square feet) of split-face CMU/tube steel fence combination, and 145 linear feet (1,015 square feet) of stucco-coated CMU wall were recorded as being in excellent condition

One pedestrian gate was recorded as being in good condition (Priority 4), one pedestrian gate was in excellent condition (Priority 5), and one manual vehicular maintenance gate was recorded as being in excellent condition. The Tierra del Oso monument sign was recorded as being in excellent condition with minor efflorescence on its surface. The foundation of the monument sign appears to have been stucco-coated at one time and it has since sloughed off the eastern side.

Tierra del Oso total assets

Asset Type	Common(QTY)
Linear feet of walls	3,674
Square feet of walls	20,132.5
Linear feet of stucco-coated CMU wall	1,148
Square feet of stucco-coated CMU wall	7,033
Linear feet of split-face CMU w/insert	222
Square feet of split-face CMU w/insert	1,332
Linear feet of split-face CMU wall	1,039
Square feet of split-face CMU wall	4,680
Linear feet of tube-steel fence/split-face pilaster	765
Square feet of tube-steel fence/split-face pilaster	3,841.5
Linear feet of tube-steel fence	340
Square feet of tube-steel fence	1,530
Linear feet of split-face/stucco CMU wall	160
Square feet of split face/stucco CMU wall	880
Pedestrian gates	2
Vehicular maintenance gate	1
Monument signs	1



Desert Song

Constructed 1996-2009

Current condition:

Priority 1:0% of wall length

At the time of survey (December, 2023) no segments of wall or fence were recorded as being in need of immediate repair.

Priority 2: 18.7% of wall length

99 linear feet (544.5 square feet) of stucco-coated CMU wall and 341 linear feet (2216.5 square feet) of stucco-coated CMU wall with view-panel insert were in somewhat poor condition.

Priority 3: 37.3 % of wall length

876 linear feet (4,560.5 square feet) of stucco-coated CMU with view-panel insert were documented as being in satisfactory condition.

Priority 4: 13.5 % of wall length

249 linear feet (1,512.5 square feet) of stucco-coated block wall and 69 linear feet (276 square feet) of tube-steel fence were recorded as being Priority 4.

Priority 5: 34.2% of wall length

668 linear feet (3,573.5 square feet) of stucco-coated CMU wall and 135 linear feet (1012.5 square feet) of stucco-coated CMU wall with view-panel inserts were recorded as being in excellent condition.

One wrought iron pedestrian gate was recorded as being in satisfactory condition (Priority 3), and one tile mosaic monument sign was recorded as being in excellent condition (Priority 5).

Desert Song total assets

Asset Type	Common(QTY)
Linear feet of walls/fences	2,347
Square feet of walls/fences	13,696
Linear feet of stucco-coated CMU wall	1,016
Square feet of stucco-coated CMU wall	5,630.50
Linear feet of stucco-coated wall w/view-panel insert	1,352
Square feet stucco-coated wall w/view-panel insert	7,789.50
Linear feet of tube-steel fencing	69
Square feet of tube-steel fencing	276
Pedestrian gates	1
Vehicular gates	0
Monument signs	1



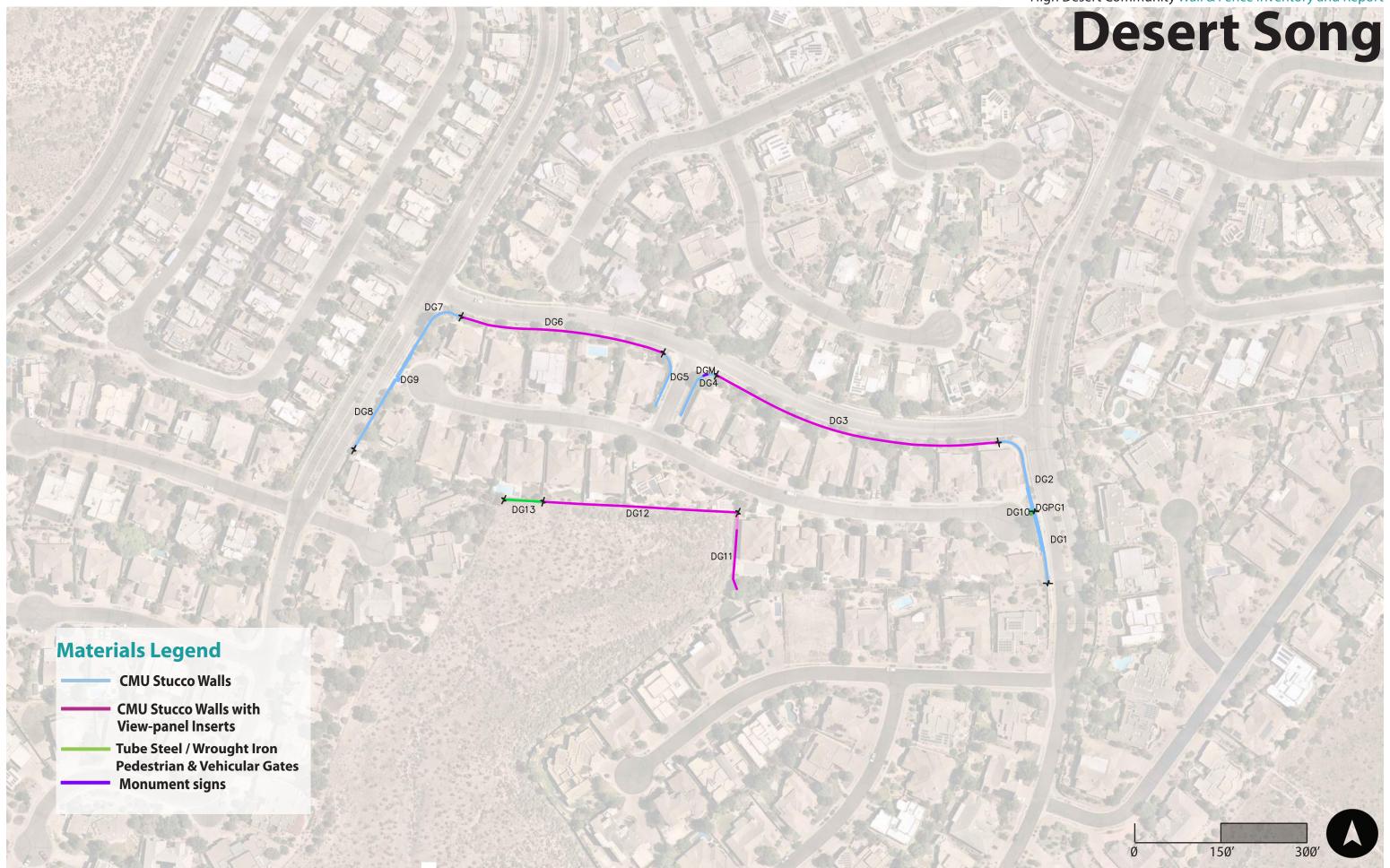
DG04



DG12



Key map



The Canyons total assets

Asset Type	Common(QTY)	Gated(QTY)
Linear feet of walls	4,721	891
Square feet of walls	29,572	5806.5
Linear feet of stucco-coated CMU wall	435	648
Square feet of stucco-coated CMU wall	2,610	4,470
Linear feet of stucco-coated CMU wall/tube-steel fence	441	0
Square feet of stucco-coated wall/tube-steel fence	2,426	0
Linear feet of split-face CMU wall/tube-steel fence	908	0
Square feet of split-face CMU wall/tube-steel fence	8,080	0
Linear feet of split-face/stucco/unfinished CMU	946	0
Square feet of split-face/stucco/unfinished CMU	5,676	0
Linear feet of tube-steel fence	1896	0
Square feet of tube-steel fence	10,211	0
Linear feet of smooth-face CMU/tube-steel fence	95	0
Square feet of smooth-face CMU/tube-steel fence	570	0
Pedestrian gates	1	2
Vehicular gates	0	1
Monument signs	0	1



CYM



Key map

The Canyons

Constructed 1996-2012

Current condition:

Priority 1: 4.1% of wall length (common)

At the time of survey (December 2023) 229 linear feet (1,259.5 square feet) of stucco-coated low CMU wall/tube-steel fence were documented as being in poor condition (Priority 1) and needing immediate repair.

Priority 2: 33.4% of wall length (common)

1,875 linear feet (11,836 square feet) of wall/fence. All these priority 2 segments of wall are bordering Open Space and consist of tube-steel/CMU block. Most of the block is split-face CMU, however there is one 95-foot-long segment that is constructed of bare CMU and one segment of 212-foot length is tube-steel fence attached to a low stucco-coated CMU wall. Typical of this peripheral wall/fence, is the bulging of vertical pickets due to freeze expansion. Also common in these priority 2 walls is fracture of block where the tube-steel fence or view panels are anchored to CMU block.

Priority 3: 20 % of wall length (common)

1,120 linear feet (7,146.5 square feet) of wall/fence bordering Open Space were recorded as being in satisfactory condition. These segments of tube-steel fencing attached to split-face CMU pilasters or walls exhibited the same type of damage as the Priority 2 segments, however, to a less severe degree.

Priority 4: 5.6% of wall length (3.6% gated, 2% common)

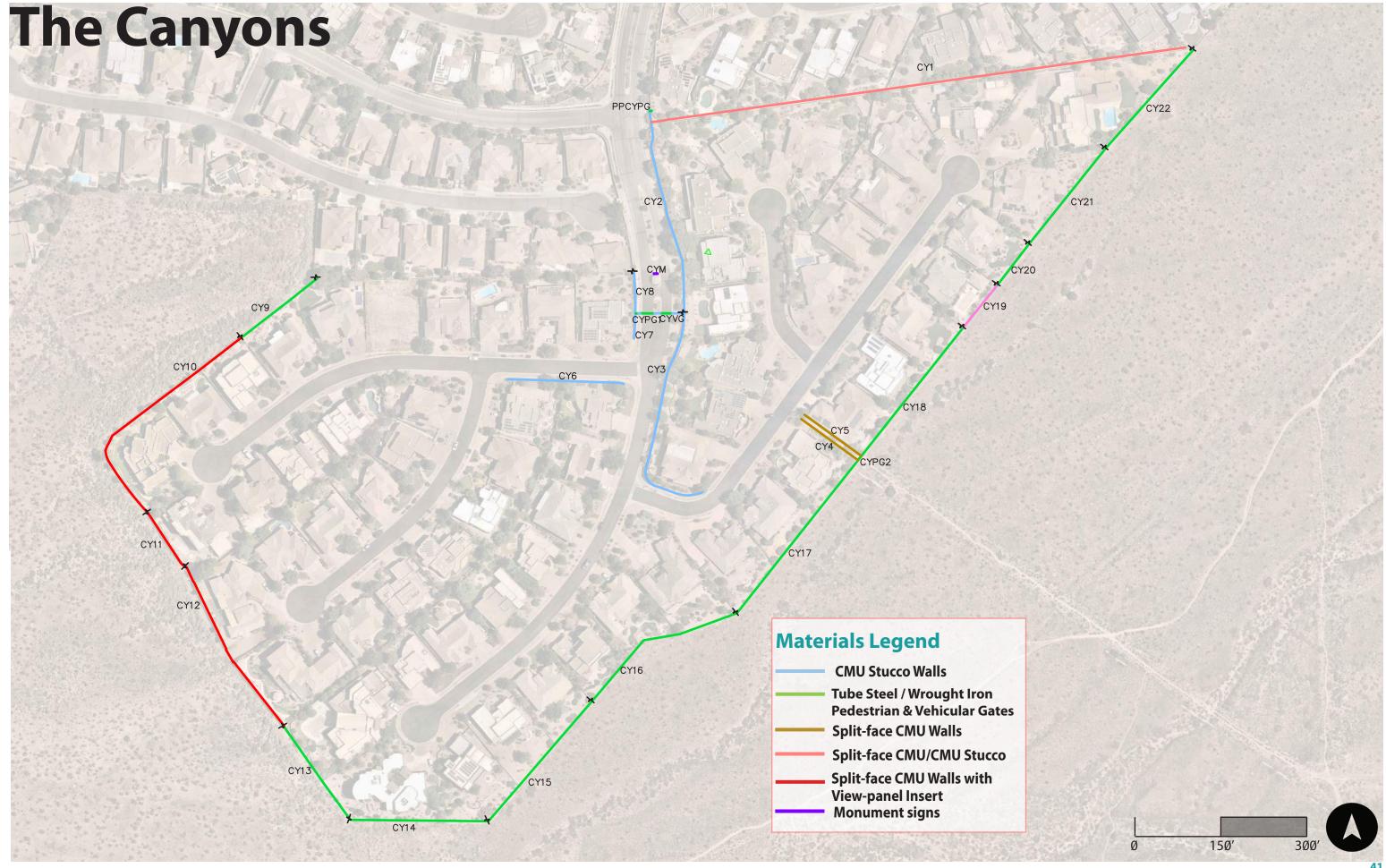
200 linear feet (1,200 square feet) of stucco-coated CMU block wall within the gated portion of The Canyons were recorded as being Priority 4. 116 linear feet (1,044 square feet) of split-face CMU common wall with tube-steel panel attached were in good condition. The stucco-coated CMU wall exhibited minor cracking and the split-face CMU block section shows significant efflorescence, however, this section of tube-steel panel appears to be quite new and possibly was undertaken as a homeowner repair.

Priority 5: 36.9 % of wall length (12.3% gated, 24.6% common)

448 linear feet (3,270 square feet) of stucco-coated CMU wall and 243 linear feet (1,336.5 square feet) of split-face CMU wall were recorded as being in excellent condition in the gated portion of the community. 435 linear feet (2,610 square feet) of stucco-coated CMU wall in the common portion of The Canyons were recorded as being in excellent condition.

One very long segment of wall (946 linear feet (5,676 square feet)) containing CMU without finish, split-face CMU, and a small length of stucco-coated CMU block, was recorded in the drainage corridor adjacent to the Pinon Point neighborhood. This wall was in good condition at the time of survey. There was one small portion therein showing significant efflorescence and in one small section, a homeowner has anchored to the wall. This segment of wall was recorded as being under the ownership of the ROA.

One pedestrian gate (shared with Pinon Point), two pedestrian gates, one vehicular gate, and one monument sign, were also recorded as being in excellent condition (priority 5) in The Canyons neighborhood.



Wilderness Village

Constructed 2004-present

Current condition:

Priority 1: 1.9% of wall length (common)

At the time of survey (November 2023) 229 linear feet (1,145 square feet) of stucco-coated CMU wall were documented as being in poor condition (Priority 1) and needing repair.

Priority 2: 6.4% of wall length (5.2% common, 1.2% gated)

240 linear feet (720 square feet) of common stucco-coated CMU wall, 383 linear feet (2,298 square feet) of common split-face CMU wall, 39 linear feet (195 square feet) of bare CMU wall, and 108 linear feet (648 square feet) of combination bare CMU/split-face CMU were in somewhat poor condition

Priority 3: 22.3% of wall/fence length (19.6% common, 2.7% gated)

1,916 linear feet (18,090 square feet) of common split-face CMU wall and 226 linear feet (2,260 square feet) of gated split-face CMU wall were documented as being in satisfactory condition. 435 linear feet (4,244 square feet) of common split-face CMU wall with view-panel insert, as well as one 91 foot long (273 square foot) tube-steel fence/vehicular maintenance gate in a gated area were also recorded as Priority 3 recommendation

Priority 4: 15.3 % of wall length (14% common, 1.3% gated)

596 linear feet (2,830 square feet) of split-face common wall and 163 linear feet (1,304 square feet) of gated split-face CMU wall, 1,039 linear feet (8,328 square feet) of common split-face CMU wall with view-panel insert, and 33 linear feet (198 square feet) of tube-steel fence were recorded as being in good condition.

Priority 5: 54 % of wall length (46.3 % common, 7.7 % gated).

3,066 linear feet (18,708.5 square feet) of common split-face wall and 800 linear feet (6,433 square feet) of gated split-face wall were recorded as being in excellent condition. 109 linear feet (654 square feet) of bare CMU block wall in a gated area was in excellent condition.

45 linear feet (292.5 square feet) of tube-steel fence, and 1,516 linear feet (9,163.5 square feet) of common combination split-face/bare CMU wall were also in excellent condition

The most common maintenance burden observed in The Wilderness Village was efflorescence occurring on split-face CMU block. This is the result of water from common and private landscape irrigation wicking into the wall. Rarely this moisture has loosened upper course blocks and cap blocks due to freeze/thaw cycles.

4 pedestrian gates were recorded, 2 automatic vehicular gates and 2 manual vehicular maintenance gates were recorded.
3 monument signs were surveyed as well. All were given a Priority 5 rating except for one manual vehicular maintenance gate (WVVG3) which showed some chipping of paint. It was given a Priority 4 rating.

Wilderness Village total assets

Asset Type	Common(QTY)	Gated(QTY)
Linear feet of walls	10,404	1,536
Square feet of walls	67,859	9,536
Linear feet of split-face CMU wall	5,961	1,189
Square feet of split-face CMU wall	39,666.5	7,766
Linear feet of split-face CMU w/ view-panel insert	2,280	0
Square feet of split-face CMU w/ view-panel insert	16,673.5	0
Linear feet of stucco-coated CMU wall	229	0
Square feet of stucco-coated CMU wall	1,145	0
Linear feet of tube-steel fence	78	91
Square feet of tube-steel fence	490.5	273
Linear feet of smooth-face CMU wall	0	148
Square feet of smooth-face CMU wall	0	849
Pedestrian gates	0	4
Vehicular gates	1	2
Monument signs	1	2





Key map

15Ø'

4. Treatment Recommendations

Stucco

General:

Moisture management should be a top priority in stucco maintenance. Hairline cracks allow moisture intrusion into the stucco coat which, if left unrepaired, will eventually widen and stucco delamination will necessitate remediation. If treated early, cracks less than 1/8" wide can be sealed and repaired using a fog coat. A fog coat, like stucco, is a cement-based product that can refresh and re-color stucco walls without re-stuccoing. Contrary to paint which doesn't allow stucco to breathe, a fog coat allows moisture to escape and can prolong the life of the underlying stucco. The lifespan of a fog coat is also much longer than paint; manufacturers estimate it to be about 15 years.

Application of a fog coat is achieved by mixing the cementbased fog coat powder with water in an airless sprayer, and spraying it on the stucco surface. Finer detailing is accomplished using a paintbrush.

Fog coats are limited in that the color of the stucco can't be changed, but, by bonding with the underlying stucco rather than covering it as paint would, a much more durable and long lasting repair is achieved.

This treatment is only intended to be applied to cement based stucco, and is not to be applied to synthetic stucco, painted, or acrylic finishes.

We do not recommend painting over stucco as a repair technique or to achieve uniform color over a repair.

Stucco remediation:

The consultant team recommends first clearing the area around the wall segment to be repaired. A small trench should be dug at the base of the wall, three to four inches below finished grade. This allows a seamless finish and cuts down on the possibility of seeing previous layers of stucco should minor erosion occur.

Second, the wall surface needs to be cleaned, most often with a pressure washer, to remove any dirt and loose or spalling stucco. Wire brushes can also be used to remove delaminating stucco.

Next, repair of underlying damage takes place. If cracks in mortar are minor and blocks are still adhered, an acrylic nonsag crack filler is used to coat the surface thereby sealing and weatherproofing any visible cracks. If mortar joints have broken



Hairline cracks can be repaired with a fog coat

apart, we recommend using an angle grinder to remove the remaining mortar, cleaning the surface and re-packing and repointing the mortar joints.

Once the wall is structurally sound, nylon mesh or metal lath underlayment is applied with resin to the wall surface. The lath or mesh serves to reinforce the stucco coat and prevent delamination and cracking.

Primer is then applied to the wall to ensure an even color, followed by the application of the final stucco coat.

CMU

Efflorescence is the most common maintenance concern with CMU walls observed at High Desert. Efflorescence is caused by a buildup of naturally occurring mineral salts (mostly calcium carbonate) and exposure to moisture. Calcium carbonate buildup can be effectively removed by dry brushing and rinsing with clean water. In some stubborn cases agricultural vinegar or muriatic acid can be applied to the mineral buildup as an effective means to dissolve it.

The back sides of CMU walls can be excavated and sealed using a masonry sealant such as *Resistain* to prevent saturation from water, however, in scenarios where retaining walls are already in contact with soils of significant depth, excavation may not be practical. Where excavation is possible, or where new construction is to occur, the consultant team recommends a moisture barrier be installed between soil and concrete block.

Efflorescence is a significant problem in the High Desert villages and it is most pronounced where irrigation water has been saturating one side of the CMU wall or where poor drainage exists. Shaded wall segments are more severely effloresced than segments that are in direct sunlight.

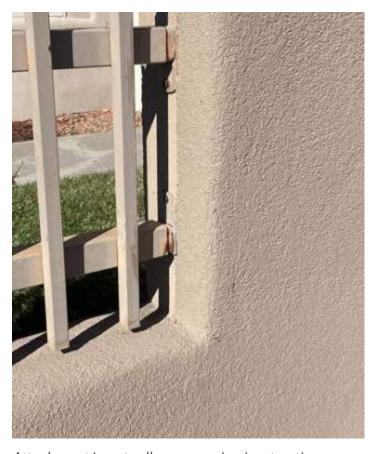
A decrease of efflorescence can be accomplished by decreasing irrigation water in proximity to walls. Our consultant team recommends an irrigation audit be performed by a licensed contractor where common irrigation is present. Additionally, drip system checks of common irrigation should be performed by landscape maintenance crews with every visit as exposed lines, emitters, and fittings routinely break or get chewed by ground squirrels, rabbits, and packrats.

Tube Steel

Tube-steel view-panel inserts are common in the High Desert Villages. In most cases they are anchored to concrete block directly using masonry coarse-thread screws. Due to differing expansion and contraction rates of the different materials, the fasteners have commonly loosened or broken free from the CMU block. The most elegant solution observed during our field survey was the retrofitting of a sleeve insert into the attachment point of the view-panel. These allow for some movement to occur between the view panel and CMU block independently of one another.

Attendant problems from the view-panel inserts arise from the dripping of water from the tube steel onto the stucco of the cap block. This accelerates the breakdown of the stucco coat and consequently, the underlying masonry. The consultant team recommends the application of two coats of a stucco sealer such as *Rainguard* to these areas as a preventative measure.

The tube-steel fences in the High Desert development frequently display freeze expansion due to water getting trapped in the vertical pickets which collects and cannot drain. Expansion of the steel causes the painted finish to crack and rusting and degradation to occur. As a minimum solution before re-painting, we recommend drilling a small ~1/8" weep hole in the picket base to prevent this from recurring.



Attachment inserts allow expansion/contraction

When tube-steel fences are replaced, we recommend that care be taken to install the fence panels so that the pickets have open bottoms allowing them to drain.

In some locations such as the Open-Space facing fences of Pinon Point and The Canyons, anchoring tube steel posts are cemented directly into the tops of CMU pilaster blocks. Often these, like the smaller pickets, have expanded due to trapped water freezing within. This expansion has caused significant cracking of the pilaster as well. In these areas we recommend a redesign of the construction that allows for drainage of the fencing and doesn't anchor the fence within the concrete fill of the pilaster.

If possible, where tube steel sections need to be replaced, the consultant team recommends a redesign of the wall/fence and wall/vew-panel insert interface so that it is not directly situated over a wall parapet. As the stucco on the parapet directly below the fence or panel insert receives frequent water dripping from condensation on the pickets, this is a common site for cracking and water intrusion.