

REHOME™

Restoring Homes to Optimize Military Excellence

a five year plan to modernize military housing

Addendums

Pro-forma Budget

This section sets out a hypothetical budget that further clarifies key elements of the REHOME Plan.

Bottom Line — \$5.5B Spend

Total spend is calculated over the five year period of execution to be between \$4.5B and \$5.5B, based on an assumption of 200,000 homes to be acted upon across 300 domestic military bases. The cost components consist of materials and labor used in implementing the Level 1, 2, and 3 Upgrades; training and operations of assessment and supervisory teams; and implementation of executive oversight functions of both cultural (Education) and implementation (Leadership) initiatives.

	Year 1	Year 2	Year 3	Year 4	Year 5
Volumes					
Repaired homes	50,611	49,329	33,360	33,360	33,340
<i>EOY % of goal</i>	25.3%	50.0%	66.7%	83.3%	100.0%
Costs (\$m)					
Assessment	9.1	8.9	6.0	6.0	6.0
Repair	1,252.3	1,130.9	661.7	661.7	661.4
Total	1,261.4	1,139.8	667.7	667.7	667.4

It is contemplated these costs must be augmented by up to \$1.1B for replacement of personal property in the most affected homes. This action mitigates the transference of harmful molds and other materials into the new or upgraded home, as discussed further below. The majority of costs for personal property replacement will occur in the first 2 years as the most impacted homes are proposed to be the first to be upgraded.

These figures are expected to change as details of the implementing program(s) materialize through passed legislation, subsequent policy development and review, and the final orders in furtherance of compliance to the above from military command at its various levels.

Cost of Labor

This Five Year Plan contemplates several layers of human resource application, as noted above. The following table estimates annual costs per level.

	Year 1	Year 2	Year 3	Year 4	Year 5
Administration					
Headcount	468	443	295	295	295
Cost (\$m)	34.0	32.1	20.7	20.7	20.7
Implementation					
Headcount	17,375	16,405	10,476	10,476	10,476
Cost (\$m)	1,010.1	953.9	610.5	610.5	610.5

The above costs are estimated regardless of whether personnel is reassigned from current headcount or recruited and trained into the task pool. These illustrative cost calculations would change little in terms of real costs, regardless of the relative proportion of these headcount categories

Job Creation

This Five Year Plan implies a significant number of jobs to fulfill the various functions required in its several phases: planning, execution, assessment, oversight, and continuing improvement.

	Year 1	Year 2	Year 3	Year 4	Year 5
Executive Councils					
Leadership	15	15	15	15	15
Education	12	12	12	12	12
Total	27	27	27	27	27
Education					
Assessors	5	5	5	5	5
Inspectors	6	6	6	6	6
Improvement	5	5	3	3	3
Designers	10	9	6	6	6
Contractors	104	98	62	62	62
Laborers	311	293	186	186	186
Total	441	416	268	268	268
Supervisory					
Assessors	80	80	80	80	80
Inspectors	160	160	160	160	160
Improvement	130	122	77	77	77
Total	370	362	317	317	317
Implementation					
Designers	162	153	97	97	97
Contractors	1,296	1,222	774	774	774
Laborers	15,548	14,668	9,288	9,288	9,288
Total	17,006	16,043	10,159	10,159	10,159

These figures are approximate annual averages, as headcount in each category will likely vary over time as phases ramp up and down in response to recruitment and training timelines; the vagaries of scheduling construction and other work; and other budgetary and operation considerations.

Savings

The following table sets out the estimated savings in a variety of categories directly related to the improvements described in this Five Year Plan.

	Year 1	Year 2	Year 3	Year 4	Year 5
Estimated Savings					
Health costs					
Avoided costs	147.8	425.4	525.8	575.9	626.1
Readiness					
Absenteeism	32.6	99.0	142.9	178.4	213.8
Productivity	63.1	193.8	289.2	370.7	452.2
Retention					
Recruitment	38.9	119.3	175.1	220.3	265.5
Training	216.4	663.3	973.6	1,224.9	1,476.2
Other					
Daycare	5.9	17.0	21.0	23.0	25.0
Energy	10.6	32.8	49.2	62.9	76.5
Carbon	4.2	13.1	19.7	25.1	30.6
Total	519.7	1,563.6	2,196.5	2,681.3	3,166.0

The various sections of this table are discussed below.

Health Cost Savings

Estimated savings from improved health outcomes are based on statistical work carried out by Hayward Score over the past three years. From this corpus, specific results were extracted to estimate healthcare spend triggered by unhealthy home conditions as well as the quantitative impact of these conditions and outcomes in terms of dollars spent by insurance and individuals.

The dollar-denominated benefits of the remedial actions recommended in this Five Year Plan fall into categories defined by the remediation level into which each housing unit would be categorized.

The proportion of housing units falling into each category, again, follows from analyses of Hayward Score’s data corpus containing housing characteristics, habitat systems (such as heating and air purification systems), and self-reported condition, symptom, and cost data from occupants of each home.

Readiness & Retention Savings

Impacts to readiness due to housing-related health concerns are based on both absenteeism and loss of productivity.

Quantification of the first factor, absenteeism, is based on Bureau of Labor Statistics (BLS) studies of absenteeism due to illness, which indicate the degree to which job performance is diminished across the national labor pool. These results are taken as indicative within military job categories, to a first approximation.

The second readiness factor, productivity, is derived from published estimates by the Centers for Disease Control (CDC) of the impact on productivity of illness, again across the national labor pool. Once again, these estimates are assumed to align substantially across military job categories, to a first approximation.

Remediated costs of retention estimates are derived from Government Accountability Office (GAO) estimates of the cost of recruitment and training of new troops. These estimates responded to the potential loss of troops by mechanism of a policy decision (ending “don’t ask, don’t tell”), but are not inherently inapplicable to attrition due to any other factors, such as adverse health conditions as considered here.

Energy & Carbon Savings

Estimates of energy savings are based on annual average residential energy consumption and average residential cost per energy statistics compiled by the U.S. Energy Information Administration (EIA). Carbon savings are taken in proportion to energy savings.

Actual cost savings will vary by geography, energy sources, and actual consumption patterns. Again, these figures strive to be indicative of the patterns of impact of the activities envisioned in this Five Year Plan.

Other Savings

Several additional categories of direct and indirect savings can be cited. The table includes the example category of daycare, which is proportional to the absenteeism. This estimate, as well as others in this category, can benefit from additional analysis and published formulas for cost impact of health related perturbations.

Personal Contents Replacement

In the case of particularly affected homes — specifically where molds, pests, or other infestations are present — an effectual remediation of health impact with respect to occupants may entail complete or partial replacement of household goods (soft furnishings) and personal effects (non-washable personal items). For these cases, we must add the cost of replacement of such items to the cost of the healthy home upgrade process. This additional cost was mentioned in the first section above.

The extent of replacement necessary and the list of approved replaceable items must be developed as a matter of policy. This will necessarily only happen after the start date of the implementation of this Five Year Plan, in whatever form. Therefore, these numbers are based on reasonable estimates of the average (or expected) value of household contents and the proportion of such contents to be replaced or upgraded.