Quality of Life on a Budget

Maximum return on investment

by Maj Patrick A. Majeski

The *39th Commandant's Planning Guidance* prioritized quality-of-life improvements for our Marines and sailors but cautioned that additional funding is not immediately available due to the Planning, Programming, Budgeting, and Execution process. Budget-friendly ideas are in demand to realize upgrades with what funding is programmed. For the best value and return on investment in morale and performance, these investments should be in the two places Marines spend most of their free time: the barracks and the gym. The former has a problem with quality, and the latter has a problem with capacity; however, enhancements can be made in the near horizon with operations and maintenance funds and improved upon when additional military construction appropriations are allocated for future year initiatives.

>Maj Majeski is an Infantry Officer, currently serving as a Capabilities Integration Officer at Combat Development and Integration, Marine Corps Combat Development Command.

For the best value and return on investment in morale and performance, these investments should be in the two places Marines spend most of their free time: the barracks and the gym.

The Barracks

The problem with the barracks is not mold but the building design that sets conditions for an optimal mold-growing environment. In the 1980s, the Marine Corps pivoted away from open squad bays and built apartment-style housing to improve quality of life. At the time, the privacy of a two-person room with an individual sink, shower, and toilet probably was a huge morale boost. But decades of shower steam, bursting pipes, and condensation without the necessary funding for the increased level of maintenance required produced the mold mansions our Marines live in today. To eliminate the mold, near-term actions and long-term considerations must be made to control moisture.

Near-term, low-cost solutions are terrain denial actions: gut the ceiling and floor in barracks rooms to deny moisture an opportunity to accumulate. First, remove drop-down and drywall ceilings and alternatively embrace an exposed ceiling design. Drop-tiles themselves are collectors of moisture and seldom cleaned resulting in mold growth and a generally unsanitary appearance. An exposed ceiling provides observation and access to mechanical, electrical, and plumbing systems for early detection of leaks, occupant cleaning and drying, and maintenance servicing. In addition to practicality, with a little paint an exposed ceiling can be more aesthetically pleasing and make the room feel bigger. Second, remove carpeting from rooms and replace it with vinyl flooring. Many barracks already have hard surface flooring, which yields a smaller price tag for this upgrade. Carpets, like drop-down ceilings, are disgusting collectors of bacteria, stains, and moisture where mold thrives. Alternatively, vinyl is stain, scratch, and moisture resistant making it ideal to tolerate wear-and-tear imposed by Marines and prevent mold growth. These near-term solutions will combat moisture accumulation, but the long-term solution is to modify and build barracks with a moisture prevention design consideration.

The selection of apartment-style bachelor quarters should have been a non-start from the beginning and instead emulate a college dormitory design with communal bathrooms. Commercial residences are for-profit housing that charge rent at a price point that accounts for the overhead required to maintain in-unit amenities (kitchen, private bathroom, etc). The tenants sign a lease to live there for an extended period, and if the landlord fails to make repairs, the tenant can break the lease, withhold rent, or sue. Options that are not available to Marines. College dormitories are designed to provide sociable and habitable dwellings for students who are gone for months in the summer, which are cheaper for the

school to build and maintain. While there are multiple similarities between the occupants and the features of dorms and barracks—age group, duration of stay, in-room appliances, and shared laundry—a notable difference is communal bathrooms. This is an optimal design for several reasons. First, the cost of piping and fixtures for every room requires more building and labor costs than constructing centrally located facilities. Second, older copper and PVC pipes are apt to condensation, leaking, breaking, or bursting, and more piping accepts greater risk in more areas of the building. Third, commercial ventilation in communal showers extracts steam directly to the exterior of the building, which is far more reliable and effective in reducing moisture than a small toilet fan. Finally, shared heads provide greater access for maintenance personnel to make routine inspections/repairs, particularly when tenants are gone for a month at an integrated training exercise. Overall, adopting communal heads in the barracks is more cost-effective and optimal in preventing mold and preserving the longevity of the building.

The Gym

A common problem at every Marine Corps base is that between 06:00–08:00, 11:00–13:00, and 16:00–18:00 the weight room is always overcrowded with Marines standing around eagerly awaiting their turn on a piece of equipment. Typical base fitness centers are well-maintained, climate-controlled facilities that have task-tailored rooms for weightlifting, racquetball, basketball, aerobics classes, etc. These fitness centers are certainly a valid requirement as they meet the needs of all personnel on base, including families. Building more would increase capacity but also come at the detriment of military construction funds desperately needed for barracks improvements. A low-cost solution that suits the average Marine is nothing more than an open-air K-Span atop a concrete slab with rows of racks and benches. The requirement for the structure is to protect those exercising and the equipment from direct exposure to the elements, less to control the temperature at 72 degrees around the clock. A perfect example is K-Span gym in the 63 Area aboard Camp Pendleton, which after many decades of use is still in service, validating the structures' strength and durability. Many of these expeditionary gyms were built to support deployed service members in the Middle East throughout the Global War on Terror. They were extremely popular because they were cheap, scalable, rigid, and extremely fast to erect. Building materials are not much more than concrete, steel framing, and sheet metal. Fortunately, the Navy Seabees own and operate the Ultimate Building Machines required to form the corrugated sheet metal on site. As a Joint-training opportunity, a squad of Seabees with Marine engineers provided the building materials, could build a 100-foot-wide K-Span within a week and further strengthen Navy-Marine Corps interoperability. Furnishing the building with racks, benches, bars, and weights could come from operations and maintenance or non-appropriated funds. Ultimately, open-air K-Span gyms provide a cost-effective, long-lasting, Gold's Gym-style facility to boost morale and performance while reducing overcrowding.

A K-Span is a low-cost and expedient structure that can be built in a variety of sizes due to its modular design. *(Photo by Petty Officer 2nd Class Michael Lopez.)*

> ***The purpose of this article is not to ... propose creative solutions to complex problems ...***

Conclusion

Accurately defining the requirement and assessing design suitability is critical in constructing facilities that achieve the best value proposition. The well-intended effort to increase privacy in the barracks allowed our moldy adversary to outpace the Planning, Programming, Budgeting, and Execution process and secure a lodgment in our Marines' homes due to a vulnerability in the building design. The idea of what a gym is led to every fitness center being built as brick-and-mortar structures when the average Marine would prefer an expeditionary facility and use the cost savings to fund barracks repairs. The purpose of this article is not to admire the problem but to propose creative solutions to complex problems, which for the Marine Corps will always be how to do more with less.

UBMC