

Dallas Makerspace Logistics

2026 Operational Upgrade Plan

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1 Introduction and Rationale

The Dallas Makerspace is a large, volunteer-run, non-profit community workshop offering members 24/7 access to extensive tools and facilities for art, tech, and science projects, with a focus on collaborative learning through classes, events, and shared resources like woodworking, metalworking, 3D printing, electronics, and creative arts studios, all supported by membership fees. It provides a shared lab for makers, artists, and engineers to collaborate and learn, fostering innovation through hands-on experience with equipment and expert guidance. Our thirty-seven thousand square feet (37,000 ft²) mixed space includes classrooms, workshops, computer lab areas, and dedicated spaces for our formed committees (3D Fabrication, Animatronics, Ceramics, Chemistry, Creative Arts, Digital Media, Electronics, Glassworks, Jewelry/Small Metals, Laser, Metal Shop, Machine Shop, Printmaking, Wood Shop, and Vector) and their special interest groups (Artificial Intelligence, Sewing, Digital Arts, Arcade, Dye-Sub, Fine Art, Leather, Maker-Bytes, Multicam, Photography, Plastics, Resin, TableTop, and Coffin Race). The committees have shared support from the Education, PR, IT, and Logistics teams when asked to do so, while the teams themselves handle the general needs of the organization.

This proposal outlines a strategic reinvestment in our physical infrastructure and addresses some of the gaps between DMS long-standing operations in Unit 104 as well as our recent expansion of Unit 102. As our previous building aged and had a period of necessary fiscal restraint, these updates represent a shift from "Deferred Maintenance" to "Proactive Stewardship." By addressing these core areas, the Logistics team would like to achieve these three primary goals:

- **Health and Wellness:** By modernizing our restroom facilities, we can improve hygiene standards and the user experience of our building for members and volunteers. Many female members do not use our restrooms here, with most complaints coming from the cleanliness and overall shape of our restroom facilities.
- **Operational Efficiency:** Moving the PR Closet and reclaiming Purgatory will allow us quicker movement on future Phase II expansion plans when the Board wants to pursue them.
- **Safety and Security:** Strengthening our Makerspace's "backbone" with modernized key control, lighting, and communication licensing.

The Logistics team has also identified a few areas where quick and inexpensive fixes could change the cleanliness of the facilities in general. Finally, some overarching committee-specific changes (adding sconces to Digital Media and can lights for the Game room) to our infrastructure will assist with their overall goals; sconces will reduce the glare on the screen during video editing classes, and the gaming room having adjustable lighting will make the tabletop games feel a bit more immersive during its use, providing a better environment for the affiliated committees. These improvements are not only aesthetic; they are foundational investments that ensure our physical environment supports the high-level work being done within its walls.

2 Proposed Solutions

2.1 Restrooms

To remediate long-standing sanitary issues in Unit 104 and complete the functional integration of Unit 102. This project addresses structural hygiene failures caused by deferred maintenance and brings the South warehouse's units up to modern standards.

2.1.1 South Men’s Room

Due to historical maintenance constraints, moisture and organic waste have compromised the sub-surface area beneath the existing tiles. DMS Logistics team members will remove all legacy tiling and replace it with a seamless silicone floor treatment. This non-porous solution will eliminate areas where bacteria can collect, ensuring a permanent end to the permeated odors. We will have professional plumbers replace the (dated) urinal and toilet to improve water efficiency and flow. We will update the fluorescent lights, fix the gaps in the partition walls, and upgrade the exhaust fan. Finally, the restroom will receive a fresh coat of high-durability, moisture-resistant paint to align the building with the modern standards of our new expansion. Total Estimated cost for South Men’s Room Upgrades: \$3,200.

What	Who	Time	Cost
Replace tile Floor with Silicone Treatment	DMS	4 days	\$750.00
Repaint the Restroom Walls	DMS	5 days	\$450.00
Replace Urinal and Toilet	Plumber	1 day	\$1,500.00
Upgrade Lighting and dividers	DMS	2 days	\$500.00

Table 1: South Men’s Restroom Upgrades

2.1.2 South Women’s Room

Just like the Men’s room in the South Warehouse, moisture and organic waste have compromised the sub-surface area beneath the existing tiles. DMS Logistics team members will remove all legacy tiling and replace it with a seamless silicone floor treatment. This non-porous solution will eliminate areas where bacteria can collect, ensuring a permanent end to the permeated odors. We will have professional plumbers replace the (dated) toilet that is more out of service than in service to improve water efficiency and flow. We will add additional lighting to the Women’s restroom to address the claims that it’s too dim to do makeup and prepare for Cosplay and Sewing events. We will replace the drywall that has rotted from the Utility Sink drain issues. We will update the fluorescent lights, fix the gaps in the partition walls, and upgrade the exhaust fan. Finally, the restroom will receive a fresh coat of high-durability, moisture-resistant paint. Total Estimated cost for South Women’s Room Upgrades: \$3,400.00.

What	Who	Time	Cost
Replace tile Floor with Silicone Treatment	DMS	4 days	\$750.00
Repaint the Restroom Walls	DMS	5 days	\$450.00
Replace Toilet	Plumber	1 day	\$500.00
Replace Rotted Drywall near Sink	DMS	1 day	\$200.00
Upgrade Lighting and dividers	DMS	2 days	\$500.00

Table 2: South Women’s Restroom Upgrades

2.1.3 South Unisex Restroom

Just like the Men’s room in the South Warehouse, moisture and organic waste have compromised the sub-surface area beneath the existing tiles. DMS Logistics team members will remove all legacy tiling and replace it with a seamless silicone floor treatment. This non-porous solution will eliminate areas where bacteria can collect, ensuring a permanent end to the permeated odors. Finally, the restroom will receive a fresh coat of high-durability, moisture-resistant paint. Total Estimated cost for South Unisex Restroom’s Room Upgrades: \$1,200.00.

What	Who	Time	Cost
Replace tile Floor with Silicone Treatment	DMS	4 days	\$750.00
Repaint the Restroom Walls	DMS	5 days	\$450.00

Table 3: South Unisex Restroom Upgrades

2.1.4 North Lobby South Unisex Restroom

The North Lobby’s restrooms have been included but do not need to be voted on because their upgrades are coming out of the facility improvement for the North Lobby Restroom beautification project that has already been approved. The South lobby will be repainted sometime in Q1 or Q2 of 2026, depending on volunteer availability.

2.1.5 North Common Room Unisex Restroom

The Common Room Restroom’s toilet has a broken flange and organic material has compromised the subsurface beneath the tiles. The Logistics team of DMS will remove all legacy tiling and replacement with a seamless silicone floor treatment. This non-porous solution will eliminate areas where bacteria can collect, ensuring a permanent end to the permeated odors.

What	Who	Time	Cost
Replace tile Floor with Silicone Treatment	DMS	4 days	\$750.00
Replace the Broken Flange and re-seat the toilet	Plumber	1 day	\$1,450.00

Table 4: Common Room Restroom Upgrades

2.1.6 North Printmaking Unisex Restroom

The North Printmaking unisex restroom has some graffiti on the ceiling tiles. The Logistics team will take a single day to replace the broken ceiling tiles and repair the track in that area. This has no cost but will take about a day to complete.

2.2 Common Areas Cleanup

2.2.1 Common Room

The DMS Logistics team will install a seamless silicone floor treatment throughout the common room. This replaces the current high-maintenance surface with a unified, non-porous finish. This floor will not only be more hygienic but will be selected in a finish that helps bounce light upward, brightening the room from the ground up. Since the room lacks natural light, the walls will be repainted with high-reflectance neutral tones. These colors are specifically chosen to maximize the efficiency of our artificial lighting, preventing ”dead spots” and making the room feel significantly more open and less subterranean. We will replace the current TV with a high-lumen commercial display. In a room without windows, the screen often becomes a primary focal point; a modern, crisp display will ensure that safety announcements and community content are easily readable without eye strain.

2.2.2 Utility Sink Area

This area will undergo a complete restoration, including re-drywalling the surrounding surfaces and replacing the utility sink itself to address existing damage and prevent future moisture-related deterioration.

These will be handled by the DMS Logistics Team. A plumber will be brought in to raise the drain into the ceiling area to support condensate pump drains to drain directly into the plumbing and eliminate leaking concerns.

What	Who	Time	Cost
Utility Sink Replacement	DMS	1 day	\$850.00
Drywall Restoration	DMS	2 days	\$350.00
Plumbing/Drain Relocation	Plumber	1 day	\$900.00

Table 5: Utility Sink Area Upgrades

2.2.3 Condensate Drain Line over sewing

The internal pan condensate drain from the #6 Rooftop Unit on 104 has no drop and is effectively a 50-foot run with a 90-degree bend at the end. This will be re-plumbed with a condensate pump that directly drains into a drain shared by the utility sink by a professional plumber or HVAC team.

What	Who	Time	Cost
Condensate Pump Installation	HVAC	1 day	\$1,500.00
Re-plumbing 50-foot Drain Line	HVAC	3 days	\$6,000.00

Table 6: Condensate Drain Line Upgrades

2.2.4 North Warehouse Area Logistics Area

The upgrades for this area include adding additional pallet racking from Automotive (or new pallet racking, tbd) and then moving the cabinets from ceramics to the back side of the pallet rack and moving the IT, Infrastructure, and Logistics cabinets to this area, freeing up space in the common room. We will add secure racking panels to the pallet racking so that Logistics can have a dedicated, caged storage space for purgatory items, facility storage for replacement tools, and other high-value item storage. Additionally, we will add a dryer vent for the dryer so that aprons can be washed and dried by the ceramics teams and an additional fill hose for the floor scrubber on the 102 side.

What	Who	Time	Cost
Secure Racking Panels/Caged Storage	DMS	3 days	\$800.00
Dryer Vent	DMS	1 day	\$150.00
Floor Scrubber Fill Hose	DMS	1 day	\$100.00

Table 7: North Warehouse Logistics Area Upgrades

2.2.5 Purple Classroom

The purple room is the only classroom at the Makerspace that gets an abundance of natural light. The north wall of the warehouse is painted purple, giving the classroom its name. Unfortunately, due to the abundance of light's, Purple is basically unusable 5 or 6 months out of the year. Attempts to re-balance the air conditioning in the room with RDRC have made the room arguably worse, but, the Logistics team is hopeful that a mixture of thermal full length curtains as a way to control the amount of light and temperature that are in the classroom.

In order to bring Purple to its full potential, the Logistics team would like to do the following:

- Ensure that the windows gets thermal curtains before the busy season.
- Paint the rest of the walls purple.
- Clean up/de-clutter the room.
- Add some additional outlets near the end of the room.
- Add some additional lighting to the classroom
- Re-mount the TV and add additional supports so that the tv mount can be 'hidden' (put the 2x4's in the wall).

What	Who	Time	Cost
Wall Repainting (Purple)	DMS	3 days	\$400.00
Commercial Window Covering	Contractor	2 days	\$6,000.00 ¹
Add additional outlets near the end of the room	DMS	1 week	\$450.00 ²
Re-mount the TV and add hide the TV Mount	DMS	3 days	\$250.00 ³
Add additional lighting to the classroom	DMS	3 days	\$1,500

Table 8: Purple Classroom Upgrades

2.2.6 Purgatory

We will empty purgatory and prep the room so that it can be utilized as part of the Phase 2 Expansion.

2.2.7 Moving Hatchers and PR Closets

We will empty Hatchers and move the items in Hatchers to secure storage, and move the PR Closet to where Hatchers is currently at.

2.3 Facility Improvement

2.3.1 Split Unit Replacement and Addition

Digital Media's purchase of computers has increased the thermal workload in that area, and our existing shared HVAC systems do not play well with the computers: in the summer the room is warm, and in the winter the room is incredibly warm. Logistics would like to purchase a new mini-split system for this committee and replace the vents in the ceiling with appropriately sized tiles. This would then be installed by our HVAC contractor, RDRC, and maintained with our Quarterly PM schedule.

2.3.2 Lighting

The glare on the overhead lights in Digital Media and the Computer lab make taking classes in these areas difficult for those who have sensitivities to those lights. Logistics will design custom wall sconces for Digital Media and the Computer lab and will power these with low-voltage RGBWW lights that can be dimmed and have online controls. The estimated costs for these lights will be under \$200.00 for the Digital Media room and under \$100 for the computer lab.

2.3.3 Locks and Key Control

Our current key locker contains an unmanaged “litany” of keys, yet we lack keys for several locked assets and doors across the facility. This lack of standardization creates security vulnerabilities and operational delays when immediate access is required. We will implement a comprehensive facility-wide re-keying project. This initiative will standardize all locks and ensure that a complete, mapped set of keys exists for every secured area and cabinet in both Unit 102 and Unit 104. To maintain high-level security and accountability, all master keys will be kept under tight control and stored within the IT Office. Access to these keys will be restricted to authorized personnel only. Modernizing key control is a foundational part of our goal to strengthen the Makerspace’s “backbone.” The first phase would include re-keying all exterior and interior doors, then the second phase would include re-keying the mailbox, cabinets, and other tool chests with committee-specific bits. The COO is a former locksmith and would perform all of the work and can easily obtain a restricted keyway so that should a key leave the facility, it could not be easily copied by a layperson. The keyway would remain the property of the Makerspace and supplies can be easily acquired by any officer or director once the current COO leaves.

Further, the Logistics team would like to integrate the Amazon Key for Business so that Amazon and other trusted delivery partners can use the front lobby area as a safe space to store and install packages. Since there is no additional cost other than the cost of purchasing and setting up the Key for Business device, and since that device is under the threshold of what is required for purchasing, (\$450.00), the Logistics Officer has went ahead and purchased this device in hopes that it will help solve the issue of the makerspace losing packages.

2.3.4 Itinerant Radio License

DMS runs numerous indoor and outdoor events that require high levels of logistical coordination. Proper radios will ensure effective, clear, and proper communication between all staff and volunteers. This license will specifically allow the Motorsports group to have secure, more powerful, legal communication during racing events. This provides a distinct competitive advantage and ensures safety during high-speed operations. Once we acquire the license (around \$200 and 6-8 weeks), members of the Amateur Radio SIG can identify radios and provide programming support so there would be no additional costs associated by the space except renewal every 10 years.

2.3.5 Power Monitoring and Rebalancing

When the Makerspace expanded and we re-arranged the committee locations, we left a lot of legacy power in the South warehouse. As part of this project, the Logistics team would like to go through the circuits, identify where we have extra capacity, and add real-time monitoring to our power usage.

While we can build our own power monitoring product using ESP32 and other similar technology, for insurance purposes, the recommendation is to purchase 3 phase power monitoring equipment that has a UL Certification and can handle our workloads. In selecting these sensors, this will allow us to expand as we need to in order to monitor HVAC items and other critical sensors for our space.

Total Estimated cost for Power Monitoring and Rebalancing: \$2,000.00. For a detailed breakdown, please see Table 9.

What	Quantity	Cost
Three Phase Current Meter - 500 Amp	2	\$ 675.00
Ethernet Bridge	2	\$ 402.00

Table 9: Electricity Monitoring

2.3.6 Carpeting

The carpeting on the South Warehouse area (and the arcade in the North warehouse area) is old and past its service life. We have approximately 3,200 square feet (3,200 ft²) of carpet, and there has been a strong preference around replacing the carpet with latex or silicon flooring.

Direct replacement of the carpeting, burnishing the adhesive, and replacing the removed carpeting with silicon flooring can be done on a per-area basis (to not overload the Logistics staff) and for the same estimated cost as carpeting – around \$1.10 per square foot – for an estimated cost of \$3,500.

3 Workflow & Budget Allocation

The project will follow a phased implementation to ensure minimal disruption to member activities:

- **Phase 1:** Critical hygiene remediation (restrooms) and foundational security (key control).
- **Phase 2:** Common area upgrades and logistics optimization (Common Room, Utility area, warehouse).
- **Phase 3:** Committee-specific environmental improvements (HVAC additions, lighting).

4 Budget Breakdown

Project Area	Estimated Cost
South Men’s Restroom Upgrades	\$3,200.00
South Women’s Restroom Upgrades	\$3,400.00
South Unisex Restroom Upgrades	\$1,200.00
Common Room Restroom Upgrades (North)	\$2,200.00
HVAC Condensate Drain Line (Sewing Area)	\$7,500.00
Utility Sink Replacement & Plumbing	\$1,500.00
Digital Media Split HVAC System	\$4,500.00
Purple Classroom Painting & Tinting	\$900.00
Digital Media & Computer Lab Lighting	\$300.00 ⁴
Locks and Key Control (Restricted Keyway)	\$475.00 ⁵
Itinerant Radio License (10-Year)	\$650.00
Electricity Rebalancing and Monitoring	\$2,000.00
Carpeting	\$3,500.00
Total Proposed Budget	\$31,350.00

Table 10: 2026 Operational Upgrade Budget Summary

5 Business Model

Modern facilities (specifically restrooms) are cited as a primary complaint for female members. Improving these increases member retention. Reclaiming “Purgatory” and moving the PR closet prepares the footprint for the Phase II expansion.

6 Conclusion

This proposal represents a transition from reactive maintenance to proactive stewardship. By investing in the “backbone” of Dallas Makerspace—our hygiene, our security, and our shared environment—we ensure that our 37,000 square foot facility remains a world-class destination for innovation and community.

Notes

¹This was previously approved by the BoD and does not need additional voting.

²This is within the COO’s approval limit and will be completed in 2026.

³This is within the COO’s approval limit and will be completed in 2026.

⁴This is within the COO's approval limit and will be completed in early March.

⁵This is within the COO's approval limit and will be completed in early March.