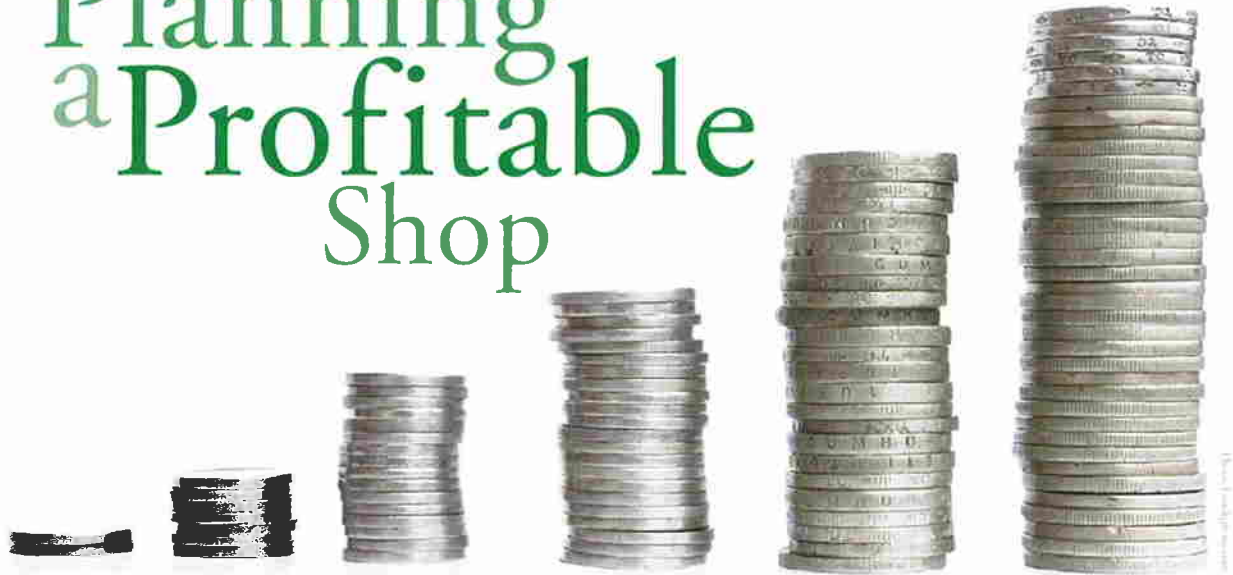


# Planning a Profitable Shop



A profitable shop doesn't happen by accident. Permits, approvals, floor plan, flow through and environment control represent just a few of many critical considerations.

**W**hat makes a "Dream Shop?" Multiple spray booths? Multiple prep-stations? Plenty of space? The latest and greatest products? We can all dream about these things; however, in most cases, reality and the nature of business will determine your dream shop. Good planning leads to *profitable* results!

It has been our experience that we are lucky enough to get involved with the planning/shop design process with less than 10% of our customers. In most cases, we visit existing facilities and try to maximize the opportunities that are already there. Along with our customer, we try to figure out the best location for the new booth or prep-station, and we determine if there are any other new economical upgrades that would enhance these changes even more.

Back in the seventies and eighties, the prevailing thought was "paint and cure." Downdraft booths were going to solve all your shop's production issues. Little thought was given to work flow or design, and inevitably after purchasing and installing the booth,

all the issues that existed before were still there (i.e. poor work flow, not enough space, bottlenecks, etc...) For that matter, our industry was no different than booming towns and cities that did not plan for growth and did not design for efficiency.

Once you know what your guidelines are (budget, square footage, location, business plan, etc...), plan out your facility in the same fashion you developed your business plan. It has been our experience that you should consider the following items before you start delivering vehicles.

## Permits & Approvals

We will not waste a lot of time on this point; however, the most "changed" aspect of collision repair shops over the last 10 years is not the equipment, but the involvement of local and provincial jurisdictions. Most of the issues are quite justifiable, and our industry is now being forced to follow the same standards as others.

We would suggest that when planning your new shop, you first go to your local building department with as much detail as possible (site plan, rough plan view, business overview) and request their direction. This will ensure that no one can shut down construction or your shop during or after construction. Most municipalities require permits for spray booths; provincial authorities have rules with regard to environmental protection, as well as health and safety issues. Once you know the requirements, it makes it easier to evaluate your building budgets as well as your equipment selections (are engineered data and specifica-

tions readily available from the manufacturers/suppliers?). These are important issues in today's environmental and health conscious society.

Another authority you may wish to touch base with prior to final construction or building change is your insurance company. What are the ramifications from your business's insurance standpoint? It has been our experience that "after-the-fact" insurance company audits required further additions or modification. This is not always the case; however, better safe than sorry.

The issues above are not normally considered when we are planning a new facility, but due to the potential for substantial cost increases, you must think about them in order to properly budget your new venture.

## Floor Layout

Now that we know you can build on this lot or make changes in the existing building, and you are comfortable with your business plan, let's look at your floor layout.

Good rules of thumb to follow when allocating shop space are: staff, office, and parts storage areas (20% to 30%), collision repair area (40% to 50%), and paint and prep area (30% to 40%). These are not hard and fast rules, but thinking ahead will avoid squeezing out or improperly compromising important components of a successful shop. These numbers can be adjusted with the help of manufacturers and the use of the newest technologies and equipment available; however, make sure you do your "due diligence," and if you compromise space, do it with sound reason.

Most new shop designs we are involved in examine areas that have not normally been considered in the past. Those areas are:

**A) Drive-in appraisal/delivery**—due to our winters, a clean, well-lit drive-in appraisal stall is becoming the norm. This stall

can also be used for delivery. We live in a drive-thru world, and what is more convenient and familiar to all your potential customers than "drive-thru?" These areas are normally close to the office/appraiser area so the customer can be immediately greeted and made comfortable. Additional considerations include tiled floors (bright and easy to clean), a floor drain (to take away snow, ice, and dirt during winter), and even a hoist (under the vehicle inspection).

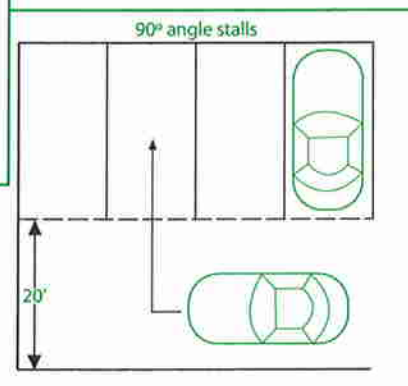
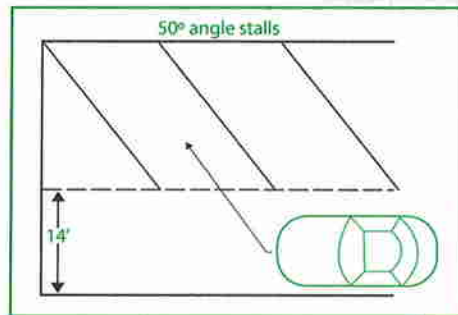
**B) Inviting reception area**—The days of the cramped office with a single chair and some old "Collision Quarterly's" piled on small table are gone. Today's reception areas are more like doctor's offices, with clean, inviting space and furniture. Complimentary coffee/drinks, cable TV and even children's play areas are becoming the norm.

**C) Observation areas**—Windows that look out on the clean-up and detail areas highlight your new equipment and clean, freshly finished vehicles. This leaves a lasting impression on the most discerning client.

We now know how much space we want to consider for each department, and we know what new features are being included in today's shops, so now it's time to move to our design.

*Flow Through*—depending on the

size or shape of our building, how can we move vehicles through our shop, avoiding start-ups, back-ups and bottlenecks? The goal to consider is that the fewer times we move the vehicle, the better. Ideally, the vehicle will go to a collision stall and remain there until it moves on to prep and paint. To accomplish this assembly line-like approach, the bodyman's specific's stall (his tools are all there), and the c/w in-floor systems for frame straightening, allow your bodyman to use the

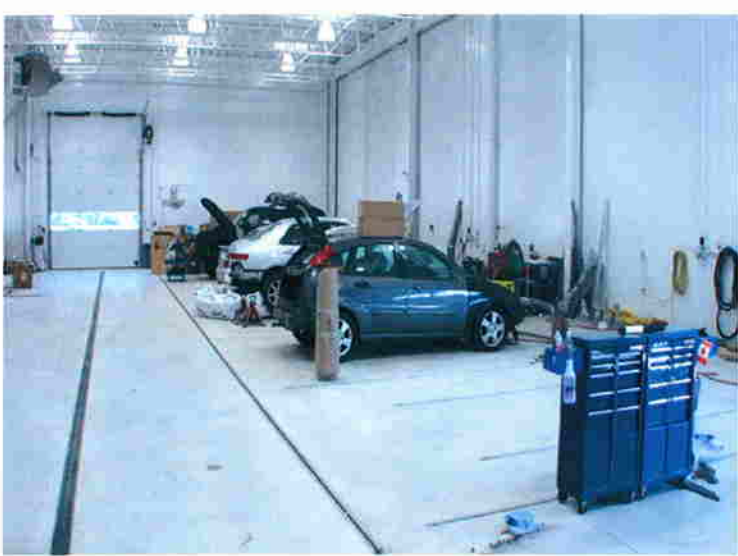


Well-planned space is profitable space.



Drive-thru appraisal area.





**Bodyman specific stalls come with floor rails.**



**CTOF prep station comes with IRT infra-red rail.**

same stall for light or heavy repair. Your employee takes ownership of the stall, and *all* the vehicles that enter it. He is focused and equipped to do whatever he may have to do. Once the vehicle is placed in the stall, it does *not* move until it is ready to go to paint.

Once the bodywork is complete, the vehicle can move into a properly sized lane to be moved to prep and paint. We do not want to clutter our lanes with vehicles or tools so the transition can be made easily and efficiently. A good size for a stall is 12' X 24' and "turning comfortable" lane sizes can range from 14' wide (50 degree turn angles) to 20' (90 degree turning angles). *Please note—considered angled stalls if space is limited.*

Once in the prep and paint area, the same principles should apply; the vehicle stays in its prep stall until it is ready to move to a booth. It is worth noting that more than two prep-station stalls per booth will create a bottleneck in your paint booth area. A way to alleviate this is paint and cure-capable prep stalls. New prep-stations, c/w force dry burners and infrared rail systems can be used for sanding, priming and curing. These closed-top open-face prep stations are built for efficiency and speed, and they will take a lot of the burden off your paint booth, as it will now *only* be used for base coat and clear coat applications.

Under NFPA 33, CTOF prep-stations can also be used for unlimited spraying, therefore allowing them to be used for small blow-ins and paint jobs without concern for amount of material sprayed (standard preps are limited to one gallon per day). Fast drying primers can be cured in the prep-station in minutes instead of hours, increasing *flow through*. We must mention that CTOF prep-stations have a clear definition (in NFPA 33), and walls and fire curtains *must* be included in the design or your local jurisdiction may not recognize them as such.

Many of today's new booths offer accelerated curing options. GFS has their patented "Smart Cure," which is a program that is *specific* to the paint manufacturer's specifications, depending on the materials used. This program will run the booth through a

cure cycle that hits all the parameters (i.e. temperature, time, flash off, cool down) that the paint companies have pre-determined to maximize curing times.

Other acceleration methods include high flow/high CFM (16,000 cfm +) booths, as well as controlled turbulence towers (GFS Advance Cure, Junair QADS). It is worth noting that these last two acceleration techniques developed out of work done on properly curing waterbornes. This will be useful should waterborne materials take over our markets.

## Environment Control

Using the above principles, we want to consider the best possible work environment. Collision repair shops usually have two areas: *Frame Repair*, which is a contamination generator, and *Paint Shop*, where we want to limit contamination. It is great if

we can separate the two areas with a wall. If a wall is not possible, curtains are a terrific and economic alternative.

**These are not hard and fast rules, but thinking ahead will avoid squeezing out or improperly compromising important components of a successful shop.**

## In Closing

We would highly recommend that you talk to your local paint rep, booth rep and equipment suppliers about new ideas and new equipment or techniques that we may have not mentioned above. There are many terrific resources available to you when planning your new shop—use them! The paint companies have terrific planning departments, and the Internet is an amazing place with unlimited resources. Good luck, and remember: Good planning will lead to profitable results!

*By Jim Macdonald*

*Jim became North American Service Manager for DeVilbiss when they created the separate Spray Booth Division in late 80s. He went on to become Canadian Sales Manager for DeVilbiss Spray Booth Products, which became Team Blowtherm in 1997. He spent 4 years with Team Blowtherm and joined Ontario Spray Booth as partner/sales manager in 2002.*