

Miter Saw + Radial Arm Saw Station

Freestanding · modular · mobile · 192 in. × 30 in. × 36 in.

DESIGN REVIEWED · PROTOTYPE REQUIRED BEFORE CUTTING

What is sound — and what must change

SOUND DECISIONS

- Two equal 96 in. modules simplify relocation and preserve full machine bays.
- Rigid leveling pads unload caster wheels during use.
- Measured carcass-height workflow prevents catalog-dimension errors.
- Locating pins plus machine-thread clamping hardware support repeatable alignment.
- Tracks are routed only after the full 16 ft plane is calibrated.
- Machine surfaces, not storage, control the design.

CRITICAL BLOCKERS

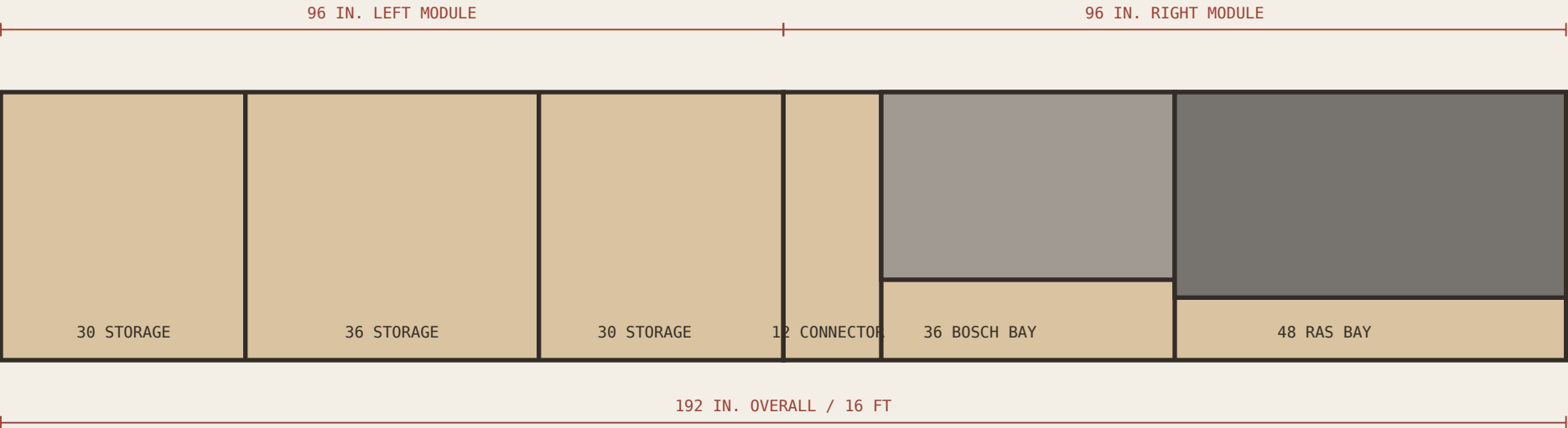
- Orient the RAS toward the cabinet front/operator aisle, with its work table exactly flush to both adjacent top surfaces.
- Calculate each module's loaded weight and verify the selected caster's dynamic/static capacity at the worst-loaded caster line.
- Prototype one caster station; verify foot travel, socket access, pad bearing, and all-wheel unloading.
- Prove the deployed feet resist lateral RAS cutting force with zero station creep.
- Mock up Bosch shelf, adjuster stack, and full bevel/glide envelope before building its carcass.
- Field-map RAS rear projection, crank, carriage, guard, dust hose, and table elevation before cabinet glue-up.
- Fix the 30 in. top's front/rear overhang split and dust path; confirm RAS recall/guard status before use.

RECOMMENDED REFINEMENTS

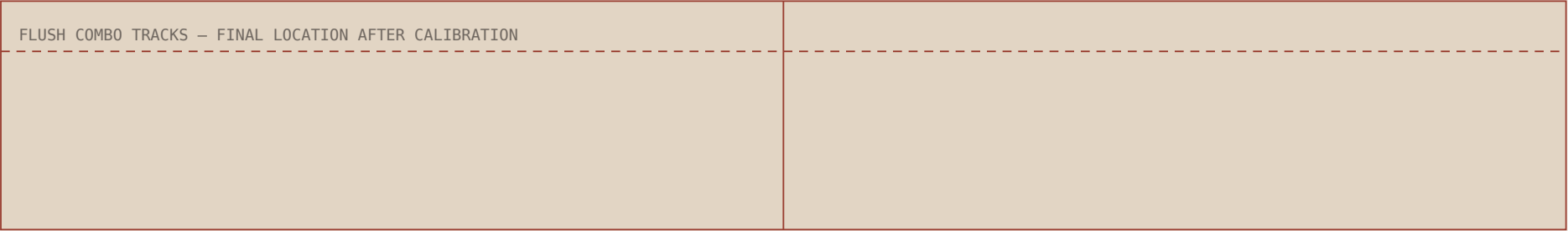
- Add a positive anti-separation feature at the module seam and keep connector bolts accessible after blade storage is installed.
- Add dust and electrical plans before remaining drawer/door design; preserve airflow and cord service loops.
- Check the relocation path, doorway, turning radius, and module weight. Design tops/carcasses to detach if needed.
- Use a torsion-resistant back or stretcher scheme in open machine bays.
- Specify maximum machine and storage loads, caster rating, fastener grade, and bearing surface.
- Provide a replaceable sacrificial RAS table/fence and preserve the manufacturer's safe operating geometry.

Overall station geometry

FRONT ELEVATION • NOT TO SCALE



PLAN



Two modules join at the 96 in. centerline.

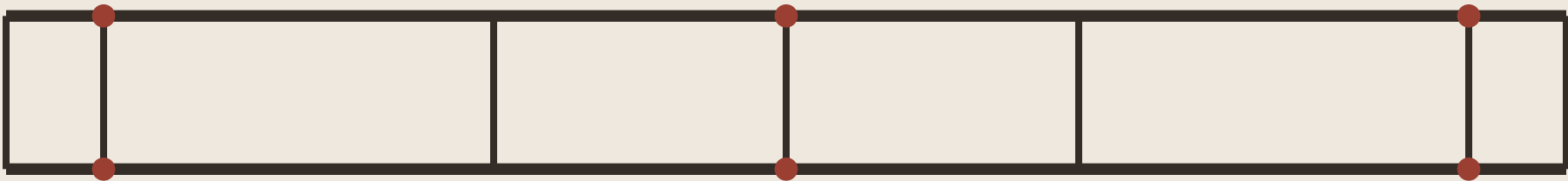
Controlled dimensions & field-fit values

Overall	192 in. × 30 in. × 36 in.	CONTROLLED
Modules	2 × 96 in.	CONTROLLED
Left cabinet widths	30 / 36 / 30 in.	CONTROLLED
Right bay widths	12 / 36 / 48 in.	CONTROLLED
Plinths	96 in. × 24 in.	CONTROLLED
LSL crossmembers	21 in.	CONTROLLED
Worktop stack	3/4 ply + 1/2 MDF + laminate	CONTROLLED
Top-of-carcass elevation	34-3/4 in.	TARGET
Bosch platform elevation	32-1/4 in.	TARGET
Carcass side height	34-3/4 minus measured support-plane height	VERIFY
RAS deck elevation	Set actual table flush at 36 in.	FIELD-FIT
Caster pad / access hole	From prototype hardware and socket	PROTOTYPE

TOLERANCE NOTE
The 36 in. finished plane is the controlling datum. Laminate thickness, adhesive film, actual plywood/MDF thickness, and machine table measurements must be included in final setup—not assumed nominal.

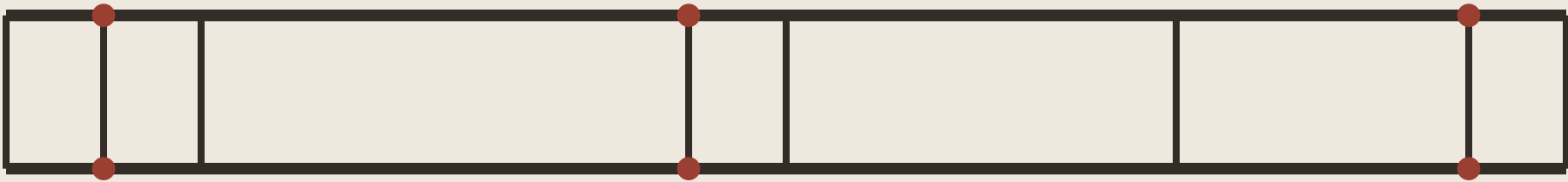
LSL plinth & caster support layouts

LEFT PLINTH • 7 CROSSMEMBERS • 6 CASTERS



CROSSMEMBERS: 0, 6, 30, 48, 66, 90, 96 IN.

RIGHT PLINTH • 8 CROSSMEMBERS • 6 CASTERS



CROSSMEMBERS: 0, 6, 12, 42, 48, 72, 90, 96 IN.

LOAD PATH

Cabinet LSL rails/crossmembers laminated
caster pad leveling pad concrete.

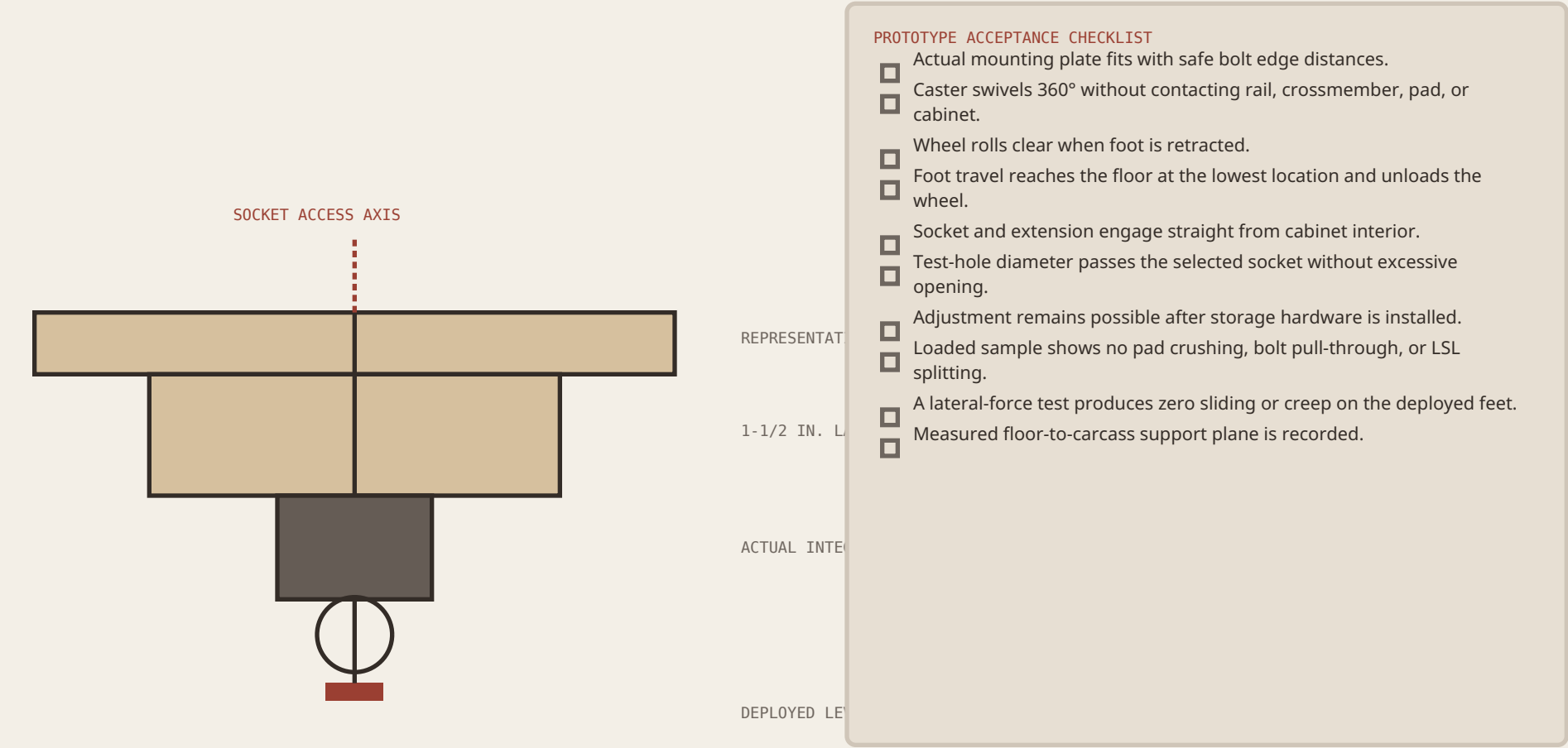
SIX-FOOT CAUTION

Level gently. Avoid forcing one pad down enough
to twist the plinth or open the module seam.

CASTER SPECIFICATION

Select by total station weight, dynamic margin, plate
geometry, foot travel, and floor conditions.

Build one caster station first



STOP Do not batch-cut carcass sides, caster pads, or 12 access holes until this prototype passes.

Left storage & right machine module

LEFT MODULE • 30 / 36 / 30



RIGHT MODULE • 12 / 36 / 48



CARCASS CONSTRUCTION

- 3/4 in. prefinished birch sides and bottoms.
- 1/2 in. backs where compatible with machine access.
- Top stretchers under continuous worktops.
- Bolt or screw into solid LSL/blocking—not plywood edges.

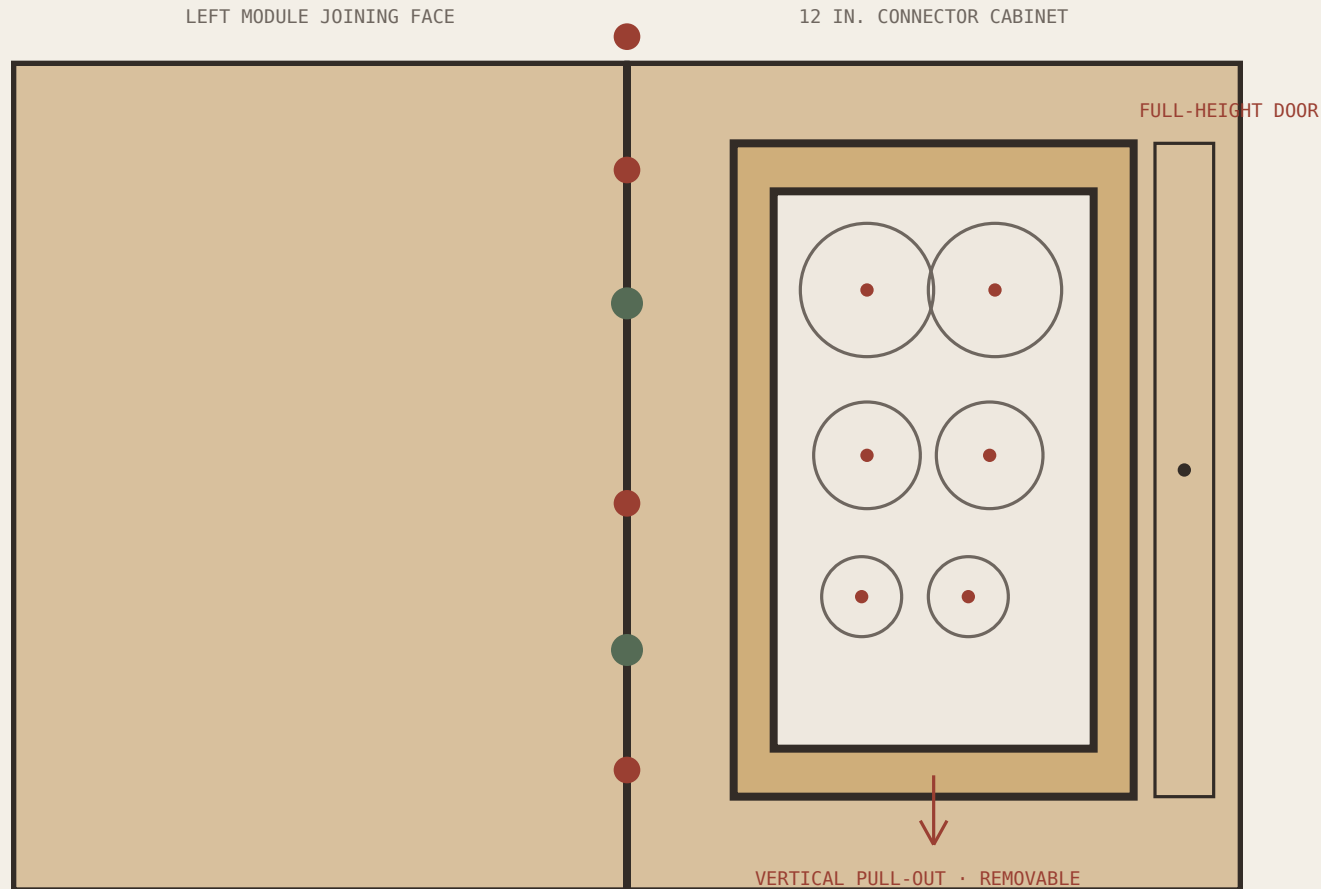
RIGIDITY DETAIL

- Open machine bays need backs, gussets, or deep stretchers to resist racking.
- Keep service panels removable.
- Do not let drawers block feet, connector bolts, cords, or dust hoses.

RELOCATION CHECK

- Confirm doorway and turning path.
- Estimate each complete module's weight.
- Prefer removable tops and separable cabinet boxes if the 96 in. assemblies cannot be handled safely.

Connection & enclosed blade storage



GREEN = LOCATING PINS • RED = CLAMP BOLTS

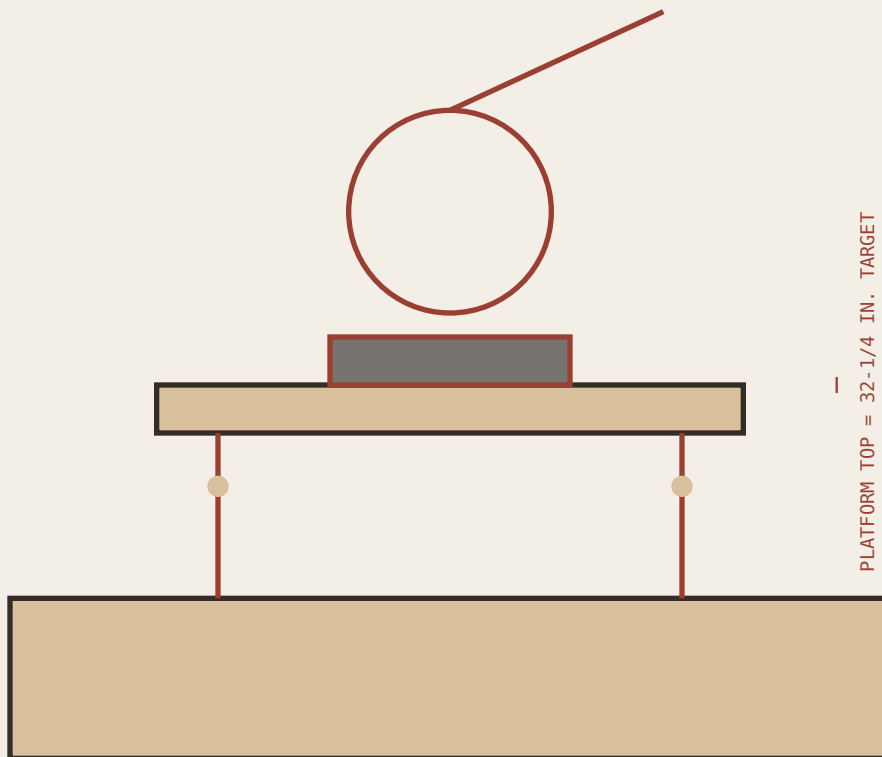
CONNECTION HARDWARE

- 2 locating pins: one upper, one lower.
- 4 machine-threaded clamp bolts through reinforced blocking.
- Cross-dowels or robust inserts; avoid repeated screws into plywood.
- Full-height cabinet door conceals a removable vertical blade pull-out.
- Blade pull-out carries no structural joining load.

ASSEMBLY RULE

Bring modules level and aligned before final bolt torque. After tightening, recheck the 16 ft plane. Keep all six fasteners reachable with the blade organizer installed.

Bosch Glide adjustable platform



FOUR-POINT ADJUSTMENT

- Separate 3/4 in. plywood platform.
- Four independent threaded adjusters with large bearing washers.
- Correct overall height, left/right tilt, and front/back tilt.
- Lock final setting with jam nuts.

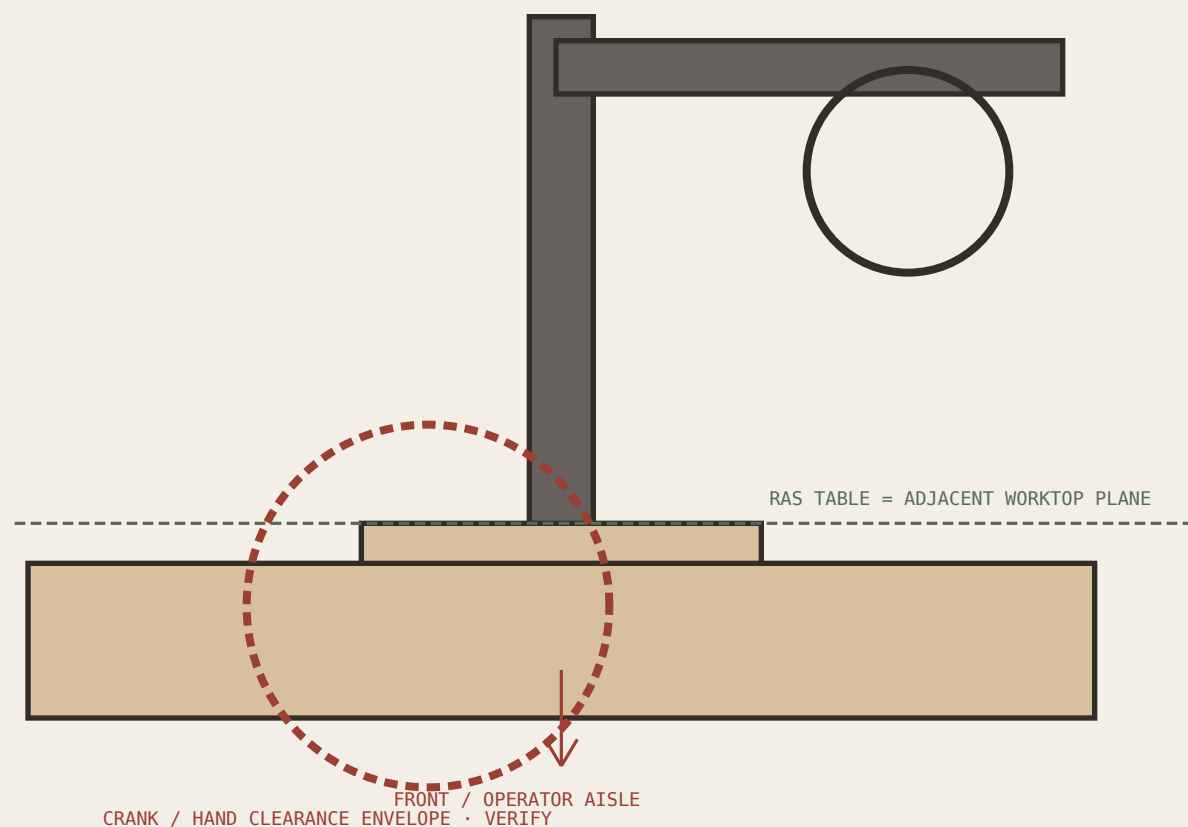
CALIBRATION ORDER

- ☐ Level and connect both modules.
- ☐ Install and level finished tops.
- ☐ Mount saw using manufacturer hardware.
- ☐ Adjust saw table coplanar to adjacent worktops.
- ☐ Lock adjusters; recheck after test cuts.

VERIFY BEFORE CUTTING

Platform length/depth and all saw-clearance cutouts come from the actual Bosch footprint and full miter/bevel travel.

Front-facing Craftsman RAS · flush table



FIELD MEASUREMENTS

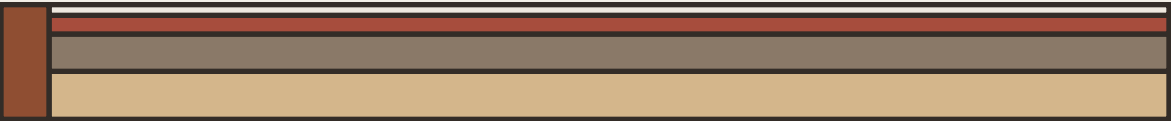
- ☐ Confirm saw faces cabinet front / operator aisle.
- ☐ Base bottom to table surface.
- ☐ Elevation-crank center and complete sweep.
- ☐ Hand clearance at all elevations.
- ☐ Carriage and blade travel envelope.
- ☐ Rear column and dust-hose clearance.
- ☐ Replaceable table/fence geometry.

SAFETY GATE

Before use, identify the saw's blade size and serial/model eligibility, then verify that the proper full blade guard or approved remedy is present. Model 113.199250 appears in public recall discussions; the CPSC recall covered Craftsman radial arm saws sold without a guard covering the entire blade. Treat the official CPSC/Emerson determination as controlling.

DO NOT ENERGIZE UNTIL GUARD/RECALL STATUS IS CONFIRMED

Laminated top, edge & track sequence



CONTACT ADHESIVE FILM
WILSONART LAMINATE
1/2 IN. MDF
3/4 IN. PLYWOOD STRUCTURAL CORE

CHERRY EDGE ~1-1/4 IN. FINISHED

LEFT TOP

Finished 96 × 30 in. With 3/4 in. cherry on all four edges, the nominal core is 94-1/2 × 28-1/2 in. Verify actual edging thickness and final overhang.

RIGHT SURFACES

Field-fit around the 12 in. connector, Bosch platform, and RAS support/table. Do not treat the right side as one uninterrupted rectangle.

TRACK SEQUENCE

Route the three 48 in. Combo Tracks only after modules, tops, Bosch table, and RAS table are connected, leveled, and checked over the full 16 ft plane.

IMPORTANT The track is a flush horizontal stop system—not a tall rear fence. Final locations remain VERIFY.

Materials & controlled cut schedule

PLANNING QUANTITIES

2×4×8 ft LSL	8 required / 12 owned
3/4 prefinished birch ply	~6 sheets / 4 oversized owned
1/2 birch ply	~2 sheets
3/4 structural/Baltic birch	≥2 sheets / availability conflict noted
1/2 MDF	~2 sheets
Wilsonart laminate	~2 full sheets
Cherry edging	~60 linear ft
Integrated leveling casters	12
Woodpeckers Combo Tracks	3 × 48 in. owned

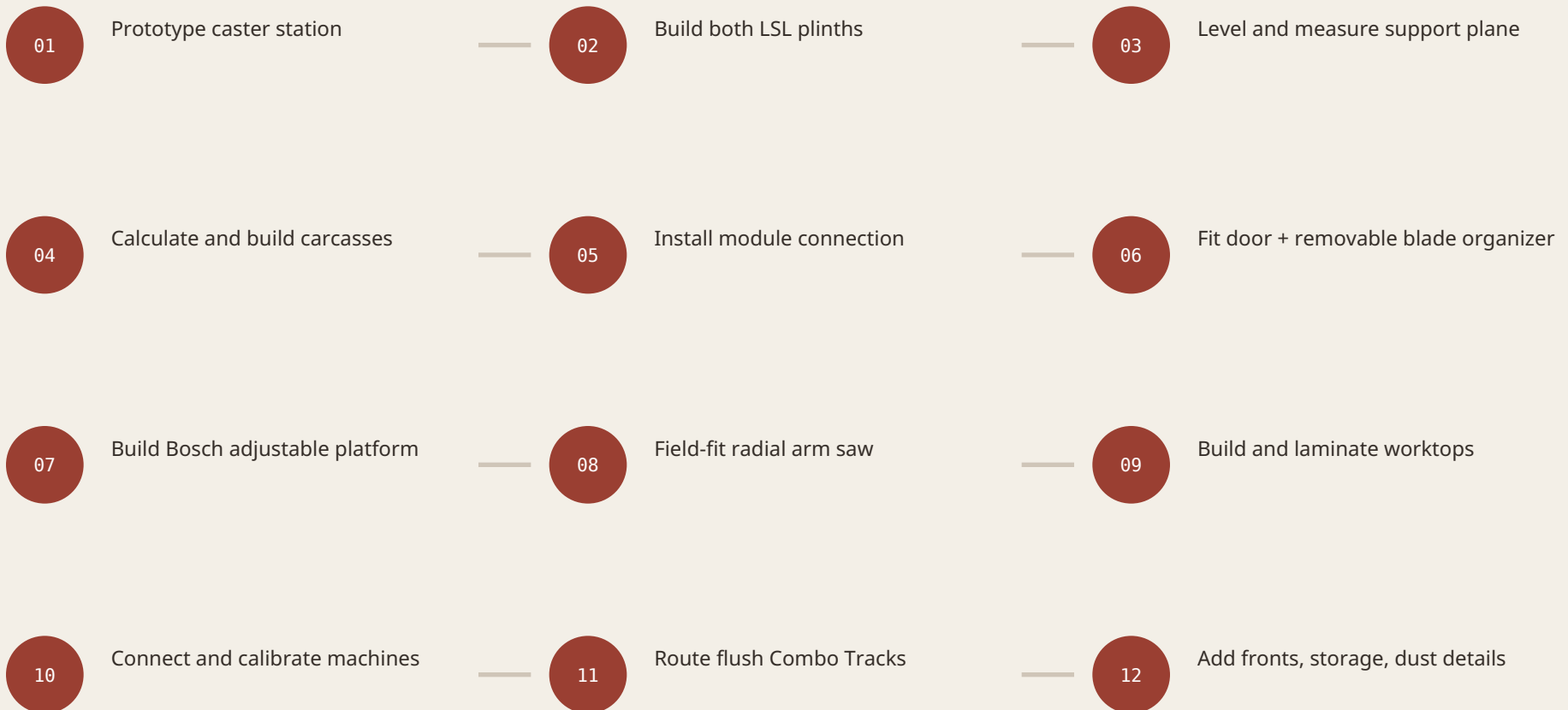
CUT SCHEDULE STATUS

Plinth long rails	4	96 in.	CONTROLLED
Plinth crossmembers	15	21 in.	CONTROLLED
Left top core	1	94-1/2 × 28-1/2	VERIFY EDGE
Cabinet side panels	TBD	height from prototype	HOLD
Bosch platform	1	actual footprint	FIELD-FIT
RAS deck	1	actual geometry	FIELD-FIT
Caster pads	12	actual plate/bolts	PROTOTYPE
Access holes	12	actual socket O.D.	PROTOTYPE

HARDWARE TO SPECIFY

- Caster plate through-bolts, large washers, and locknuts sized after prototype.
- 2 locating pins + 4 machine-thread connector bolts with reinforced inserts/cross-dowels.
- 4 Bosch platform adjusters with bearing washers and jam nuts.
- Machine mounting bolts; structural carcass-to-LSL screws/bolts; removable access plugs.
- Dust fittings, hose supports, electrical outlets/cord management, and RAS guard components remain unresolved.

Twelve-phase build sequence



GATE LOGIC

A phase does not authorize the next if its measured inputs remain unresolved. In particular: Phase 1 controls Phases 3–4; Phase 8 controls the RAS work surface; Phase 10 controls track routing and storage-front completion.

Leveling & coplanarity procedure

PROCEDURE

- ☐ Retract all leveling pads and roll modules into final position.
- ☐ Engage locating pins; install four connector bolts only finger-tight.
- ☐ Lower each pad until it just contacts concrete.
- ☐ Use three widely spaced pads to establish each module's plane; bring remaining pads into firm shared contact without lifting/twisting.
- ☐ Confirm every caster wheel is unloaded and foot travel remains within manufacturer limits.
- ☐ Match both module support planes in elevation; then tighten connector bolts.
- ☐ Install tops and check the entire 192 in. surface with laser and long straightedge.
- ☐ Adjust Bosch platform to coplanar; lock jam nuts.
- ☐ Face the RAS toward the cabinet front/operator aisle; field-fit and shim/adjust its table flush and coplanar with both adjacent tops while retaining all control clearances.
- ☐ Recheck seam, diagonals, machine alignment, and all feet after tightening.
- ☐ Route tracks only after the plane remains stable through test cuts and recheck.

RECORD THESE VALUES

Floor high point: _____

Floor low point: _____

Required foot travel: _____

Support-plane height: _____

Carcass side height: _____

Seam deviation: _____

Full-plane deviation: _____

ACCEPTANCE

- ☐ No wheel carries load during operation.
- ☐ All pads carry load; no rocking.
- ☐ Connector seam closes without forcing.
- ☐ Machine tables are coplanar to tops.
- ☐ Feet remain accessible with storage installed.
- ☐ Recheck after initial operating cycles.

Pre-use & periodic inspection

BEFORE FIRST USE

- ☐ CPSC/Emerson recall and guard status confirmed for RAS.
- ☐ Correct guards, anti-kickback devices, fences, and tables installed per machine manuals.
- ☐ Caster plates tight; no pad crushing, bolt pull-through, or LSL splitting.
- ☐ All 12 wheels visibly unloaded before either saw runs.
- ☐ Modules rigid, level, connected, and seam closed.
- ☐ Bosch table/platform locked and coplanar.
- ☐ RAS faces the cabinet front; its table is flush with both adjacent worktops; controls, crank, carriage, column, blade, and hose move without collision.

BEFORE EACH SESSION / AFTER RELOCATION

- ☐ Electrical supply, breaker capacity, cord routing, and battery/charger locations are safe and serviceable.
- ☐ Dust hoses cannot snag a carriage, crank, or moving saw head.
- ☐ Combo Tracks sit flush; stops cannot contact blades.
- ☐ Connector door latches closed; vertical blade pull-out cannot open into a machine control or blade path.
- ☐ Work supports are clear for the longest intended stock.
- ☐ Test cuts confirm fences are straight and square.
- ☐ Fasteners and calibration rechecked after relocation or heavy impact.

Do not cut yet register

P-01	Final caster model and rated capacity	PROTOTYPE
P-02	Mounting plate and through-bolt geometry	PROTOTYPE
P-03	Installed rolling height and foot travel	PROTOTYPE
P-04	Mounting-pad plan size	PROTOTYPE
P-05	Socket size and access-hole diameter	PROTOTYPE
P-06	Exact carcass side height	MEASURE
P-07	Door / pull-out / blade clearances	VERIFY
P-08	Bosch platform plan dimensions	FIELD-FIT
P-09	RAS deck height and movement envelope	FIELD-FIT
P-10	RAS recall / full guard status	VERIFY
P-11	Dust collection and electrical routing	DESIGN
P-12	Final track positions	AFTER CALIBRATION
P-13	Drawer/door layout and service access	AFTER STRUCTURE

RELEASE RULE

Close each hold point with a recorded measurement, selected part number, sketch, or photograph before dependent parts are cut.

Definition of done

COMMISSIONING CHECKLIST

- ☐ Both 96 in. modules are square, rigid, and free of twist.
- ☐ All 12 pads are adjustable from above and wheels unload when pads deploy.
- ☐ Pins and bolts repeatedly return the seam to alignment.
- ☐ The full 192 in. working plane passes straightedge/laser checks.
- ☐ The tall connector cabinet has a full-height door; its removable vertical blade pull-out stores blades with protected tooth spacing and clears all machine controls.
- ☐ Modules separate without damage and can be moved through the verified relocation path.
- ☐ Baseline measurements and photos are saved for future reassembly.
- ☐ Each module rolls cleanly with leveling pads fully retracted.
- ☐ Modules level independently without rocking or frame distortion.
- ☐ Bosch and RAS work surfaces are flush and coplanar with adjacent tops; the RAS faces the cabinet front/operator aisle.
- ☐ Combo Tracks are flush and aligned only after calibration.
- ☐ No machine control, blade path, crank, carriage, cord, or dust hose is obstructed.
- ☐ All guard/recall requirements and manufacturer instructions are satisfied.