

Construction Progression SOP

Texas Drone Company • DJI Mavic 3E • v1.1

Section 1 — On-site arrival & setup

Site arrival protocol

1. Go to the site trailer first. Introduce yourself and tell them you will be flying. This lets them notify heavy machinery operators in the area.
2. Format the SD card before flying — unless you have enough space. Advanced Camera Settings → Format Memory Card.
3. Walk the site. Identify hazards, active machinery, cranes, flag poles, and obstructions before arming the aircraft.
4. Set gimbal to **-23°** and leave it there for the entire job. Gimbal pitch does not change between photo and video modes.

Camera settings — photo baselines (Auto mode)

Camera is set to auto for construction progression. Use these as starting points and adjust on the fly. Always review your first shot before committing to the full sequence.

Condition	ISO	Shutter	Notes
Bright sun	100	1/1500s	Most Texas days — watch for blown highlights on concrete
Partly cloudy	200	1/800s	Good balanced light
Overcast	400	1/500s	Flat shadows — watch exposure on dirt and concrete
Golden hour	400-800	1/400s	Bracket shots — light changes fast

Camera settings — video orbit baselines (4K 30fps)

Condition	ISO	Shutter	ND Filter
Bright sun	100	1/60s	ND64 recommended
Partly cloudy	100	1/60s	ND16
Overcast	200	1/60s	ND8 or none

“ No ND filters? Use 1/1000s shutter — less cinematic motion blur but acceptable for deliverables.

Shot sequence overview

Shot type	Altitude	Gimbal	Count
Context photos (red)	300–400 ft AGL	-23°	4 sides + 4 corners
Building photos (blue)	100–150 ft AGL	-23°	4 sides + 4 corners
Video orbit	CCW · 4K 30fps	-23°	1 per building
360 pano	Aerial: Mavic 3E · Ground: Insta 360	—	When requested

Section 2 — Context photos (red arrows)

Altitude: 300–400 ft AGL · **Gimbal:** -23° · **Camera:** Auto

Purpose

- High altitude shots showing the full site in context of surroundings — roads, neighboring properties, surrounding area.
- These are NOT building shots. Align your frame to the property lines, not the structure itself.

Shot count & coverage

- 4 corners + 4 sides for a rectangular site.
- Odd number of images per side. If site is too large for one shot, use 3.
- Adjust altitude up or down until the frame is completely filled with the subject.

Framing rules

- ☐ Fly parallel to the silt fence or property line — use it as your alignment guide.
- ☐ Rule of thirds: property edge = edge of your frame.
- ☐ Leave room at the bottom for the watermark added in post.
- ☐ Pull back far enough that you could go slightly farther — do not push in tight.
- ☐ Do not frame to the building. Frame to the property lines.
- ☐ Do not push in so far the watermark area gets cropped.
- ☐ Do not leave excessive empty space beyond the property — too far back forces a re-fly.

“ A couple of seconds to readjust framing can save hours of re-flying. Review your first context shot before shooting the full sequence.

Section 3 — Building photos (blue arrows)

Altitude: 100–150 ft AGL · **Gimbal:** -23° · **Camera:** Auto

Purpose

- Low altitude shots with the building as the primary subject.
- Lets clients see construction progress, manage activity, and use for marketing.
- Same 4 corners + 4 sides pattern as context photos, but tight to the structure.

Framing rules

- □ Building dead center in the frame.
- □ Fill the frame with the building — minimize empty space around the structure.
- □ Leave room at the bottom for the watermark added in post.
- □ Odd number of images per side — use 3 if building is too large for one shot.
- □ If restricted airspace limits altitude below 100 ft, adjust framing and note it in your flight log.
- □ Do not push too far back — building should fill the frame, not float in the middle.
- □ Do not leave the subject off-center.

“ LAANC ceiling may limit altitude in controlled airspace. Under 100 ft due to restrictions — adjust framing and log it.

Section 4 — Video orbits

Resolution: 4K 30fps · **Gimbal:** -23° · **Direction:** CCW always

Execution standards

- ☐ Always fly counter-clockwise unless client specifically instructs otherwise.
- ☐ Low, slow, and smooth — constant motion throughout the entire orbit.
- ☐ Fill the frame with the building from start to finish.
- ☐ Scout obstructions before rolling — flag poles, cranes, signage.
- ☐ Video watermark differs from photos — you can push in slightly more than building photos.
- ☐ No choppy yawing or hard breaks — any jerkiness ruins the clip.
- ☐ Do not start recording until you are in position and already moving smoothly.

“ Review your orbit clip on site before packing up. Shaky orbit = re-fly.

360 panos — when requested

- Aerial 360: Mavic 3E — Pano mode. Aircraft spins 360° automatically.
- Ground 360: Insta 360 — still images and video walkthroughs.

Section 5 — Deliverables & file naming

File naming convention

YYYY_MM_DD - Client Name - Job Site

e.g.

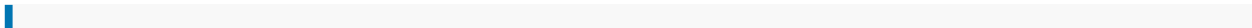
2025_06_14 - Hensley Construction - Fort Worth Logistics Park

Deliverable summary

Deliverable	Format
Context photos	RAW + JPEG
Building photos	RAW + JPEG
Video orbit	MP4 · 4K 30fps
360 aerial pano	When requested
360 ground pano	When requested

Pre-handoff checklist

- ☐ All 4 corners and 4 sides captured for both context and building photos.
- ☐ Framing reviewed — watermark space left at bottom, subject properly centered.
- ☐ Video orbit is smooth, CCW, full building in frame throughout.
- ☐ RAW + JPEG both present for all photo deliverables.
- ☐ Files named: YYYY_MM_DD - Client Name - Job Site.
- ☐ All data backed up before leaving the site.
- ☐ Do not leave the site without reviewing your orbit footage on-site.



Questions on site? Call your lead pilot before improvising. A quick call is faster than a re-fly.

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