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Install Sub-Slab Drainage Network (Horizontal) Checklist

Install sub-slab drainage network (horizontal) with an interactive checklist—commentable and export as PDF/Excel. Verify layout, slopes, outlets, and cleanouts for durable, dry slabs.

Project:	
Date:	
Filled by:	

Pre-Installation & Layout	
1	Confirm latest approved drawings, shop details, and drainage schedule are issued for construction; mark planned laterals and collectors on grid-referenced plans; obtain superintendent sign-off and upload dated markup.
2	Verify the scope excludes perimeter drains; highlight the building line on the plan and confirm all runs remain internal; capture photo evidence and notation “per approved project specifications and authority requirements.”
3	Establish benchmark and transfer control to subgrade; check subgrade elevation at 10 m grid intervals with laser level; tolerance ±5 mm; record readings in the checklist table.
4	Stake lateral and collector alignments with paint and flags at 2 m spacing; label chainage and run ID; upload overview photos covering at least two gridlines per image.
5	Clash-check trench routes against footings, conduits, sumps, and reinforcement zones; adjust alignments as needed; attach coordination sketch and foreman approval.

Materials & Components	
6	Verify pipe type and size per submittal (e.g., 100 mm perforated HDPE, slot pattern per spec); capture delivery tickets, batch/lot numbers, and photos showing markings.
7	Confirm non-woven geotextile filter class per approved project specifications; record roll numbers and manufacturer certificates; photograph labels before installation.
8	Check washed aggregate grading 10–20 mm with fines ≤1%; attach supplier certification and a clear photo of material cleanliness at point of use.
9	Inspect cleanout assemblies, threaded caps, boxes/sleeves, and identifiers; confirm compatibility with slab embedment and load class; attach approved submittal and packaging photos.

Trenching & Bedding	
10	Excavate trenches to width ≥3× pipe OD (minimum 300 mm) with smooth bottoms; verify depth allows design slope; upload tape/rod measurements and trench photos.
11	Install 100 mm bedding of compacted sand or fine aggregate; achieve uniform support along full pipe length; compaction to 95% MDD; attach compaction log or density test.
12	Grade trench to achieve designed slope; tolerance ±0.1%; confirm with laser receiver every 2 m; record start/end invert elevations and intermediate checks.
13	Stabilize soft or wet subgrade with working platform or additional bedding; prevent pumping/rutting; add before/after photos and note remedial thickness used.

Pipe Installation & Slope	
14	Lay perforated pipe with slot orientation per approved project specifications (commonly down or lateral); keep orientation consistent; take close-up orientation photo per run.
15	Join pipes using approved couplers/gaskets; ensure full insertion to witness marks; verify straightness; document with a photo of each joint type and count.
16	Achieve run slope per design (typ. 0.5–1.0%); acceptance ±0.1%; measure invert at start/end and at 5 m intervals; upload slope calculation sheet.
17	Connect laterals to collectors with 45° wyes; avoid 90° bends; verify minimum 1× pipe diameter straight approach; photo each connection with tape for scale.
18	Restrain pipes against floatation or displacement using stakes/sandbags at ≤2 m spacing; record locations and provide overview photos before cover.

Cleanouts & Outlets	
19	Install cleanouts at lateral ends and direction changes >45°; fit threaded caps; record a plan showing each cleanout ID and grid reference.
20	Set cleanout risers vertical in sleeves; top 50–75 mm below finished slab; position tolerance ±10 mm; upload level check and elevation note.
21	Connect collectors to internal sump/collector with required backflow prevention; provide air gap if specified; verify outlet invert prevents reverse flow; log RLs and attach photo.
22	Label all outlets and cleanouts; update as-built plan with run IDs, chainage, and gridlines; attach PDF and native file export.

Encasement, Cover & Protection	
23	Place washed aggregate to 150 mm above pipe crown; hand-tamp around haunches; avoid displacing slope; upload cross-section photo with measuring staff.
24	Wrap pipe and aggregate with geotextile; overlap seams ≥300 mm; secure to prevent gaps; provide close-up photos of overlaps and ties.
25	Coordinate vapor retarder placement per approved project specifications; avoid puncturing; seal any penetrations; photo each penetration before cover is placed.
26	Protect network during reinforcement installation with walkway boards and barriers; perform daily condition checks; log and repair any damage with photos.

Testing, Commissioning & Handover	
27	Flush each lateral using a hose ≥20 L/min for 2 minutes; confirm free flow at outlet without backup; record video or photo of discharge.
28	CCTV or borescope each run end-to-end; verify continuity and no obstructions; save footage with chainage notes and run ID.
29	Spot-verify elevations every 5 m post-backfill; reconcile with initial slope logs; document any corrections and re-test evidence.
30	Compile as-builts, materials certificates, test logs, and photo index; obtain superintendent and inspector digital signatures; archive package with QR-secured link.

Comments:

Filled by:

Signature:

Introduction	How to use this checklist
Install sub-slab drainage network (horizontal) is a focused scope for building interiors that ensures under-slab drainage laterals, collectors, outlets, and cleanouts are accurately placed and sloped to move water away from the slab. This checklist targets under-slab drainage, sub-slab dewatering lines, and horizontal drainage laterals beneath slabs-on-grade or mat foundations, while explicitly excluding perimeter drains outside the foundation line. By validating design layout, slope continuity, connection integrity, and accessibility of cleanouts, you prevent water accumulation, slab heave, and moisture-related defects. The outcome is a dry, durable base ready for reinforcement and vapor retarder installation without conflict or rework. You will confirm materials (perforated pipe, washed aggregate, and geotextile), verify trench grades with laser controls, and document outlets to sumps or internal collectors per approved project specifications and authority requirements. Launch interactive mode to tick items, add comments, attach photos, and export the signed record to PDF or Excel via QR-secured sharing.	1. Preparation: Gather approved drawings, slope design, submittals, laser level, tape/rod, compaction tools, washed aggregate, geotextile, perforated pipe, PPE, borescope, and a hose. Confirm site access, sump readiness, and safe, dry subgrade conditions. 2. Using the Interactive Checklist: Start interactive mode, assign runs to team members, tick each item as verified, attach photos/videos and elevation logs, add comments for deviations, and export progress snapshots to PDF/Excel for coordination. 3. Sign-Off: Compile evidence, finalize as-builts, and obtain digital signatures from responsible parties. Distribute the QR-authenticated export to stakeholders and archive with project records for traceability and maintenance planning.