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INTERLOCKING CONCRETE PAVERS
CONSTRUCTION CHECKLIST

PRE-CONSTRUCTION MEETING

Meeting should be conducted with the owner, engineer, general contractor and paver installer.

- ☐ Verify site layout conforms to Site Plan.
- ☐ Determine when pavement is scheduled in the construction sequence.
- ☐ Designate material storage area(s). Identify access routes and delivery truck unloading area(s).
- ☐ Verify that the subgrade soil meets the project specifications including compaction requirements.
- ☐ Review Physical Mock Up (where required) and verify approval.
- ☐ Verify laying pattern for pavers, including borders and colors, match approved mock-up.
- ☐ Determine method for tagging and numbering concrete unit bundles delivered to the site (particularly important for large projects).
- ☐ Review Submittals (where required) and verify approval.

CONFIRM RESPONSIBILITIES

- ☐ Subgrade inspection and approval. By: _____
- ☐ Excavation and disposal of site soils. By: _____
- ☐ Installation of curbs and/or edge restraints. By: _____
- ☐ Installation of geotextiles/subbase/base & drainage components. By: _____
- ☐ Base approval. By: _____
- ☐ Installation of bedding layer and pavers. By: _____

PRODUCT DELIVERY

Verify proper materials have been received and are in good condition.

Pavers: Type:_____ ☐
Finish:_____ ☐
Size:_____ ☐
Thickness:_____ ☐
Color:_____ ☐
Paver Supplier:_____

Jointing Material (loose): ☐ Size: _____ ☐ Supplier: _____
Jointing Material (bagged): ☐ Size:_____ ☐ Supplier: _____
Jointing Material Color: _____
☐ Gradation Results Meets Spec. ☐ Aggregate angularity confirmed

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Begging Layer Material (loose): ☐ Size: _____ ☐ Supplier: _____
Bedding Layer Material (bagged): ☐ Size:_____ ☐ Supplier: _____
Jointing Material Color: _____
☐ Gradation Results Meets Spec. ☐ Aggregate angularity confirmed

Geotextile (if required): ☐ Brand/Type:_____ ☐ Roll Size:_____

Note: Utilize geotextiles and/or barriers to prevent loose aggregates (e.g. bedding sand) from becoming contaminated. Cover aggregate piles with waterproof tarps.

MOBILIZATION

- ☐ Mark construction area with paint and/or stakes.
- ☐ Verify utilities have been located and marked by local services.
- ☐ Ensure linear sediment barriers (if used) are properly installed, free of accumulated liter, and built up sediment.
- ☐ Rope off area to prevent unauthorized access.

EXCAVATION

- ☐ Excavate to the grades and elevations shown on the drawings.
- ☐ Inspect soil subgrade and remove any roots, rocks or other debris.
- ☐ Confirm no groundwater seepage and/or standing water is present at subgrade.
- ☐ Proof roll soil subgrade to determine presence of soft spots or localized pockets of objectionable materials.
- ☐ Conduct soil compaction measurements per specifications. Subgrade compaction should be at least 98% of Standard Proctor density.
- ☐ Bottom of excavation to be within +/- 0.1 feet of the specified grades.
- ☐ Confirm design subgrade slope requirements are met.

GEOTEXTILE INSTALLATION

- ☐ Roll out geotextile as required. Geotextile to be applied to the bottom and sides of the excavation with overlapping joints a minimum of 12 inches.
- ☐ Overlap to follow down slope.
- ☐ Do not allow wrinkles; pull taught and secure in place (use stakes or sandbags).
- ☐ Inspect geotextile to verify no tears or holes.

BASE COURSE INSTALLATION

- ☐ Install any perforated drains as shown on the drawings. Surround with minimum 3 in. of No 57 stone or similar. Wrap stone with geotextile.
- ☐ Spread (not dumped) with a front-end loader to avoid aggregate segregation.

- ☐ Compact base aggregate in uniform layers not to exceed 6 inch lose thickness. Conduct soil compaction measurements per specifications.
- ☐ Final surface tolerance shall not deviate more than 3/8 inch from the bottom edge of a 10-foot straight edge laid in any direction.
- ☐ Final surface elevation to be within +/- 1/4 inch of the specified grades.
- ☐ The upper surface of the base shall be sufficiently well graded and compacted to prevent infiltration of the bedding sand into the base both during construction and throughout its service life. Segregated areas of the granular base shall be blended by the application of crushed fines that have been watered and compacted into the surface.

Note: Attention will be paid to providing proper compaction near curbs, grade beams, concrete collars around utility structures, lights standards, tree wells, building edges and other protrusions as applicable to the project. In areas not accessible to large compaction equipment, compact to specified density with mechanical tampers (jumping jacks).

EDGE RESTRAINT INSTALLATION

Adequate edge restraint shall be provided along the perimeter of all paving as specified.

- ☐ Confirm the face of the edge restraint, where it abuts pavers, is vertical.
- ☐ Verify concrete edge restraints are constructed to dimensions specified and are supported on a compacted subbase not less than 6 inch thick.
- ☐ Verify concrete used for the construction of edge restraints meets air-entrainment and compressive strength requirements as specified. All poured concrete shall be in accordance with ASTM C-94 requirements.

INSTALLATION BEDDING SAND

- ☐ Verify the bedding sand to be installed are clean and not contaminated.
- ☐ Confirm bedding sand is spread evenly over the base course and loose screed to a nominal 1-inch thickness.
- ☐ Bedding sand should not be used to compensate for an uneven base.

Note: DO NOT disturb screeded sand. Cover any spread bedding sand with plastic sheets overnight if not closed with cut and compacted pavers.

PAVER INSTALLATION

- ☐ Inspect pavers for chipped, damaged, or discoloration prior to installation. NOTE: mechanical installation may not comply with discoloration aspect for individual layers and should be addressed with Mock up review and approval.
- ☐ Confirm that the pavers are installed in the pattern(s) as shown on the drawings.
- ☐ Verify proper color blending, by ensuring installer draws from a minimum of 3 cubes for manual installation and 6 cubes for mechanical installation.

- ☐ Joints between the individual pavers, and between pavers and the edge restraints, buildings, collars, or other protrusions/edging, on average shall be between 1/16 in. and 3/16 in. wide.
- ☐ Fill gaps greater than 3/16 in. wide with cut pavers or edge units. Do not install cut pavers smaller than one-third of a whole paver along edges subject to vehicular traffic – trim two pavers to fit.
- ☐ Confirm all pavers are cut using a masonry saw.
- ☐ Confirm installer uses a low amplitude plate compactor capable of at least 5,000 lbs. (22 kN) compaction at a frequency of 75 hz –100 hz, to compact the pavers into the bedding aggregate.

Note: The pavers shall be compacted to achieve consolidation of the bedding layer and brought to level and profile by not less than three passes. Initial compaction should proceed as closely as possible following the installation of the paving units and prior to the acceptance of any traffic or application of sweeping sand. Any paver units that are structurally damaged during compaction shall be immediately removed and replaced.

JOINTING SAND INSTALLATION

- ☐ Confirm installer sweeps dry joint sand into paver openings and vibrate until they are full. Note: this will require at least two or three passes with the compactor.
- ☐ Confirm installer does not compact within 6 ft. of the unrestrained edges of the paving units.
- ☐ Confirm installer sweeps off excess aggregates when the job is complete.

FINAL PAVER SURFACE TOLERANCES

- ☐ Verify that final surface elevations do not deviate by more than 3 /8 in. under a 10 ft. long straightedge.
- ☐ Verify that the surface elevation of the pavers are 1/8 to 1/4 in. above adjacent drainage inlets, concrete collars or channels in pedestrian areas. Note: Vehicular areas may be 3/8” above similar penetrations.
- ☐ Verify lippage is not greater than 1/8 in. between adjacent pavers.
- ☐ Verify paver bond lines for paver courses are +/- ½ in. over a 50 foot string line.
- ☐ Verify final surface slopes are a minimum of 1.5% (for roads, minimal longitudinal slopes should be 1% with a minimum cross slope of 2%).

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Construction Tolerances for Segmental Concrete Pavement Systems

This guideline applies to construction of interlocking concrete pavements (concrete pavers), permeable interlocking concrete pavements (PICP), and precast concrete paving slabs.

Setting Bed Materials	**Attribute**	**Construction Tolerances**
Sand setting beds for concrete pavers and paving slabs	Joint width between adjacent units (See Figure 1)	1/16 in. (2 mm) to 3/16 in. (5 mm)
Bituminous setting beds for concrete pavers and paving slabs	Joint width between adjacent units (See Figure 1)	1/16 in. (2 mm) to 3/16 in. (5 mm)
Mortar setting beds for concrete pavers and paving slabs	Joint width between paving units with no chamfers (See Figure 1)	Maximum 3/8 in. (10 mm) – Joints between individual paver units shall be mortared flush with adjacent pavers.
Mortar setting beds for concrete pavers and paving slabs	Joint width between paving units with chamfers (See Figure 1)	Maximum 3/8 in. (10 mm) – The surface of the mortared joint meets the bottom of the chamfers between adjacent pavers.
Open-graded aggregates for PICP	Joint width between paving units (See Figure 1)	0 to +3/16 in. (5 mm) of the paver manufacturer's recommended joint width dimension
Pedestals for supporting precast concrete paving slabs (i.e., 12 x 12 in. (300 x 300 mm) and larger length x width)	Joint width between paving slabs resting on pedestals (See Figure 1)	0 to +1/8 in. (3 mm) of paving slab manufacturer's recommended joint width dimension for pedestal setting materials
All Setting Bed Materials		
Attribute	**Segmental Concrete Paving Products**	**Construction Placement & Surface Tolerances**
Joint or bond lines	Horizontal deviation	Maximum ±1/2 in. (15 mm) horizontal deviation from either side of a 50 ft (15 m) string line pulled over a joint or bond line
Laying Pattern	Concrete pavers and PICP: Concrete paving slabs:	90 degree herringbone Stack bond or running bond

Slope in direction of travel	All segmental concrete paving products: Maximum 7.83 percent	+0.5 percent, no requirement for minus
Slope perpendicular to direction of travel	All segmental concrete paving products: Maximum 2.0 percent	+0.5 percent, no requirement for minus
Surface smoothness	All segmental concrete paving products: Variation in height between adjacent units (lippage)	Maximum 1/8 in. (3 mm)
Surface flatness	All segmental concrete paving products: Surface tolerance	±3/8 in. (10 mm) over 10 feet (3 m), noncumulative

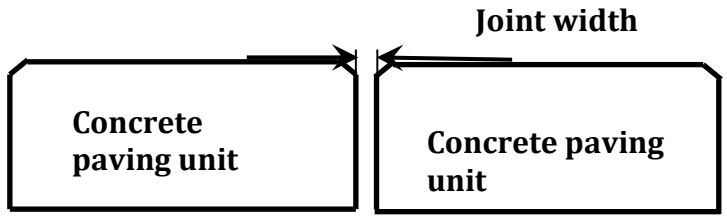

Figure 1. Concrete paving