CORINTHIAN
CAST STONE, INC

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COLOR MATCHING BULLETIN

Color is an integral aspect of architectural precast concrete, and achieving an accurate match is vital for maintaining design integrity. Although human beings can differentiate approximately 10 million colors, our perception can vary significantly due to factors such as lighting, viewing angles, and even personal mood.

SCIENTIFIC APPROACH TO COLOR MATCHING

To eliminate subjective variables, we adhere to **ASTM D2244 – Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.** This standard provides a precise framework for color matching, ensuring consistency and reliability.

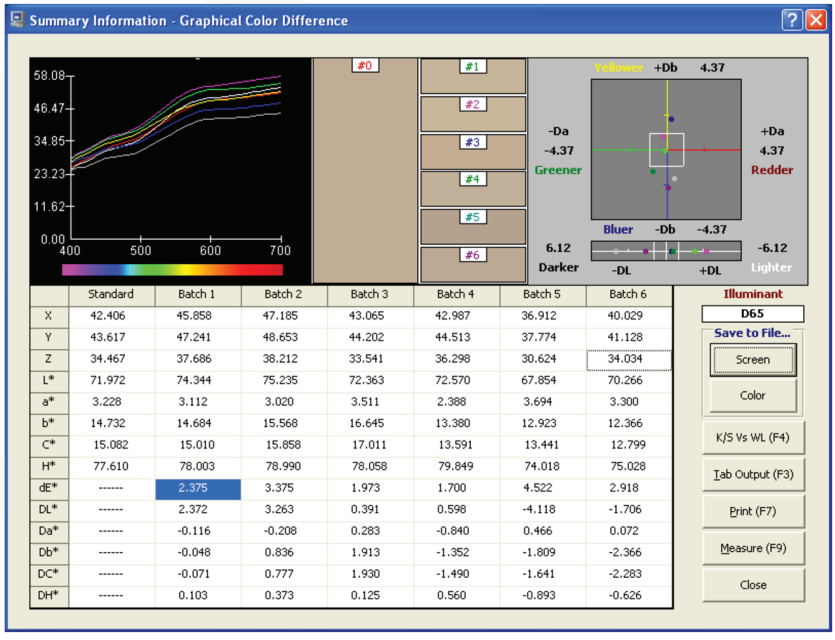
Using advanced instruments such as spectrophotometers, we approach color matching as a measurable science rather than relying on subjective interpretation. These instruments analyze and quantify color differences, providing detailed, objective data to guide the process.

UNDERSTANDING THE COLOR REPORT

The spectrophotometric analysis generates a comprehensive report that visually and numerically compares the selected “standard” color (chosen by the Owner’s Representative) with samples created for approval.

- **Standard Column:** Displays the baseline color agreed upon for the project.
- **Batch Columns (Batch 1 through Batch 6):** Represent test samples produced for matching.
- **dE*:** The key metric in the report, this value quantifies the overall color deviation from the standard. A dE* value under 6 is considered acceptable, ensuring visual consistency.

The report empowers decision-makers to select the most appropriate match based on measurable criteria such as aesthetic conformity and project cost considerations. For example, higher pigment concentrations may result in a closer match but could also increase material costs.



	Standard	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5	Batch 6
X	42.406	45.858	47.185	43.065	42.987	36.912	40.029
Y	43.617	47.241	48.653	44.202	44.513	37.774	41.128
Z	34.467	37.686	38.212	33.541	36.298	30.624	34.034
L*	71.972	74.344	75.235	72.363	72.570	67.854	70.266
a*	3.228	3.112	3.020	3.511	2.388	3.694	3.300
b*	14.732	14.684	15.568	16.645	13.380	12.923	12.366
C*	15.082	15.010	15.858	17.011	13.591	13.441	12.799
H*	77.610	78.003	78.990	78.058	79.849	74.018	75.028
dE*	------	2.375	3.375	1.973	1.700	4.522	2.918
DL*	------	2.372	3.263	0.391	0.598	-4.118	-1.706
Da*	------	-0.116	-0.208	0.283	-0.840	0.466	0.072
Db*	------	-0.048	0.836	1.913	-1.352	-1.809	-2.366
DC*	------	-0.071	0.777	1.930	-1.490	-1.641	-2.283
DH*	------	0.103	0.373	0.125	0.560	-0.893	-0.626

FLEXIBLE COLOR MATCHING SERVICES

To facilitate seamless project execution, we offer flexible color matching options:

- **In-Lab Matching:** Send us physical samples, and our team will analyze and replicate the color in our controlled laboratory environment.
- **On-Site Matching:** When transporting samples is impractical, we bring our spectrophotometric equipment to your project site for real-time color analysis and adjustment.

By employing scientific methods and precision instruments, we ensure that every project achieves accurate, consistent, and cost-effective color matching. For additional information or to schedule a color matching consultation, contact our technical services team.