

LOCAL HISTORIC DISTRICT: Dilworth

PROPERTY ADDRESS: 1309 Lexington Avenue

SUMMARY OF REQUEST: Addition

OWNER: David & Jennifer Reed

APPLICANT: John P. Harmon

This application was continued from January for more information on the column material. This revised application does not include changes to the front dormers.

Details of Proposed Request

Existing Conditions

The existing structure is a one story home constructed in 1953 and listed as a non-contributing structure. The home has a stone entrance, front facing gable and twin dormers.

Proposal

The proposal for Commission review is an addition of a porch roof and columns. The columns are 10" squared constructed in 'Durastone'. See attached design and material specifications.

Policy & Design Guidelines - Additions

Additions to existing structures in Local Historic Districts have a responsibility to complement the original structure. Additions should reflect the design, scale and architectural style of the original structure. The following guidelines are intended to encourage addition designs that are compatible with the existing structure, while not fully mimicking the original design.

1. All additions will be reviewed for compatibility by the following criteria:	
a. Size	<i>the relationship of the project to its site</i>
b. Scale	<i>the relationship of the building to those around it</i>
c. Massing	<i>the relationship of the building's various parts to each other</i>
d. Fenestration	<i>the placement, style and materials of windows and doors</i>
e. Rhythm	<i>the relationship of fenestration, recesses and projections</i>
f. Setback	<i>in relation to setback of immediate surroundings</i>
g. Materials	<i>proper historic materials or approved substitutes</i>
h. Context	<i>the overall relationship of the project to its surroundings</i>

2. Additions must respect the original character of the property, but must be distinguishable from the original construction.
3. All additions to the front or side of existing properties must be of a design that is sensitive to the character and massing of the existing structure.
4. Additions to the front or side of existing structures that are substantially visible from a street must go before the full Commission.

Policy & Design Guidelines – Building Materials, p. 48 – 49

Traditional Building Materials

1. The use of historically traditional building materials is strongly encouraged in all renovation, addition and new construction projects in Local Historic Districts.
2. Historic precedents in the visual context of any project indicate appropriate choices for building materials.
3. All building materials must match the character of the existing structure and/or the streetscape in design, texture and other visual qualities.

Non-Traditional Building Materials

1. The Historic District Commission considers substitute siding to be inappropriate for use in a designated Local Historic District, and does not allow its use on an historic structure within a Local Historic District.
2. The use of the following substitute siding materials is considered incongruous with the overall character of local historic districts, and is prohibited.
 - Vinyl
 - Aluminum or other metal sidings
 - Masonite
3. Cementitious board products are rarely considered appropriate for the main structure on a property. The Historic District Commission will consider these products on a case by case basis.
4. All proposals for the use of other non-traditional building materials for projects in Local Historic Districts will be judged on a case-by-case basis by the full Historic District Commission. The Commission will determine how well the proposed material and its proposed use are contextually appropriate in design, texture and other visual qualities.
5. The use of substitute or replacement building materials will not be considered as an alternative to routine maintenance.

Staff Analysis

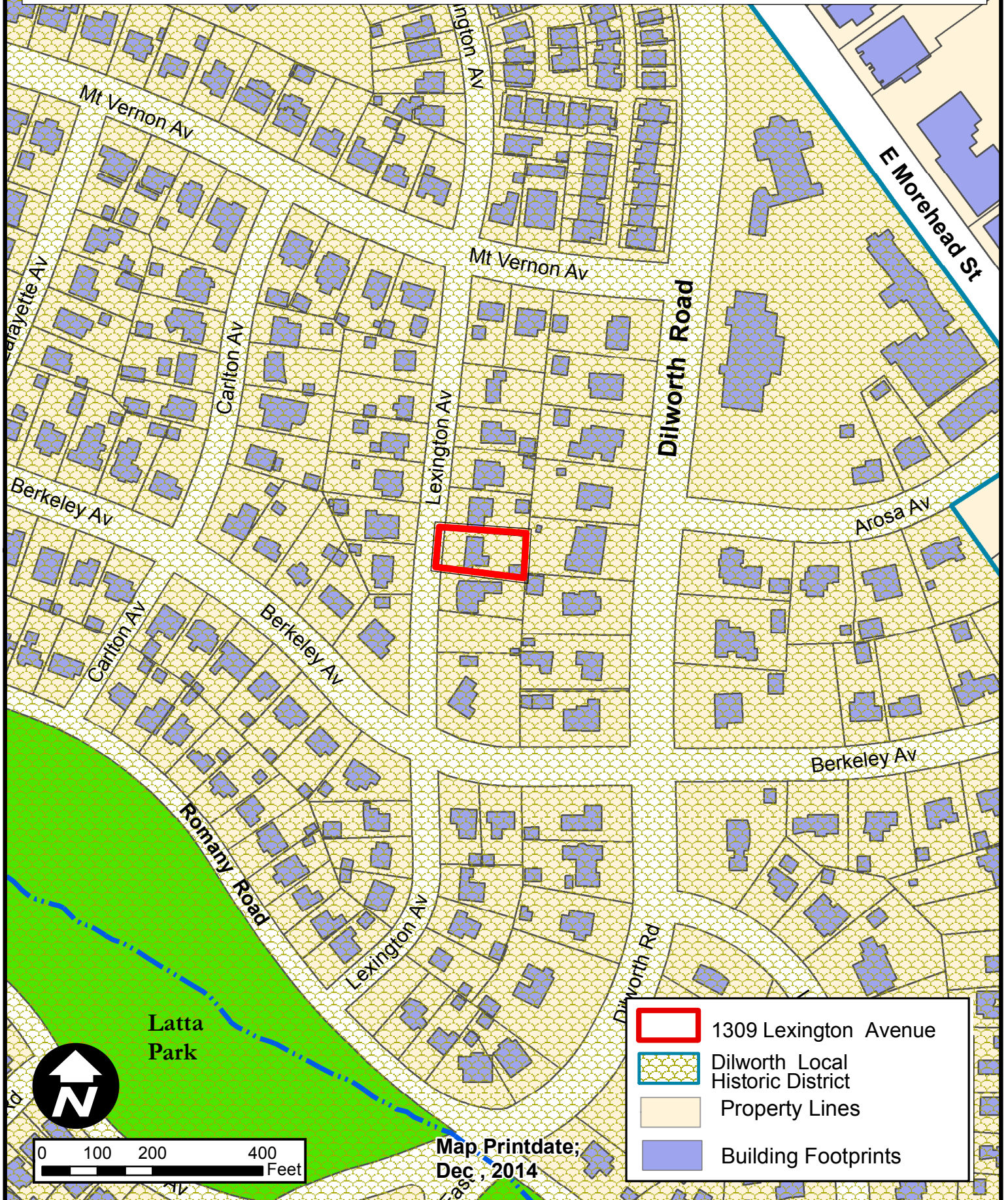
The Commission shall determine if the proposal meets the applicable guidelines for additions, and if the proposed non-traditional building material is appropriate.

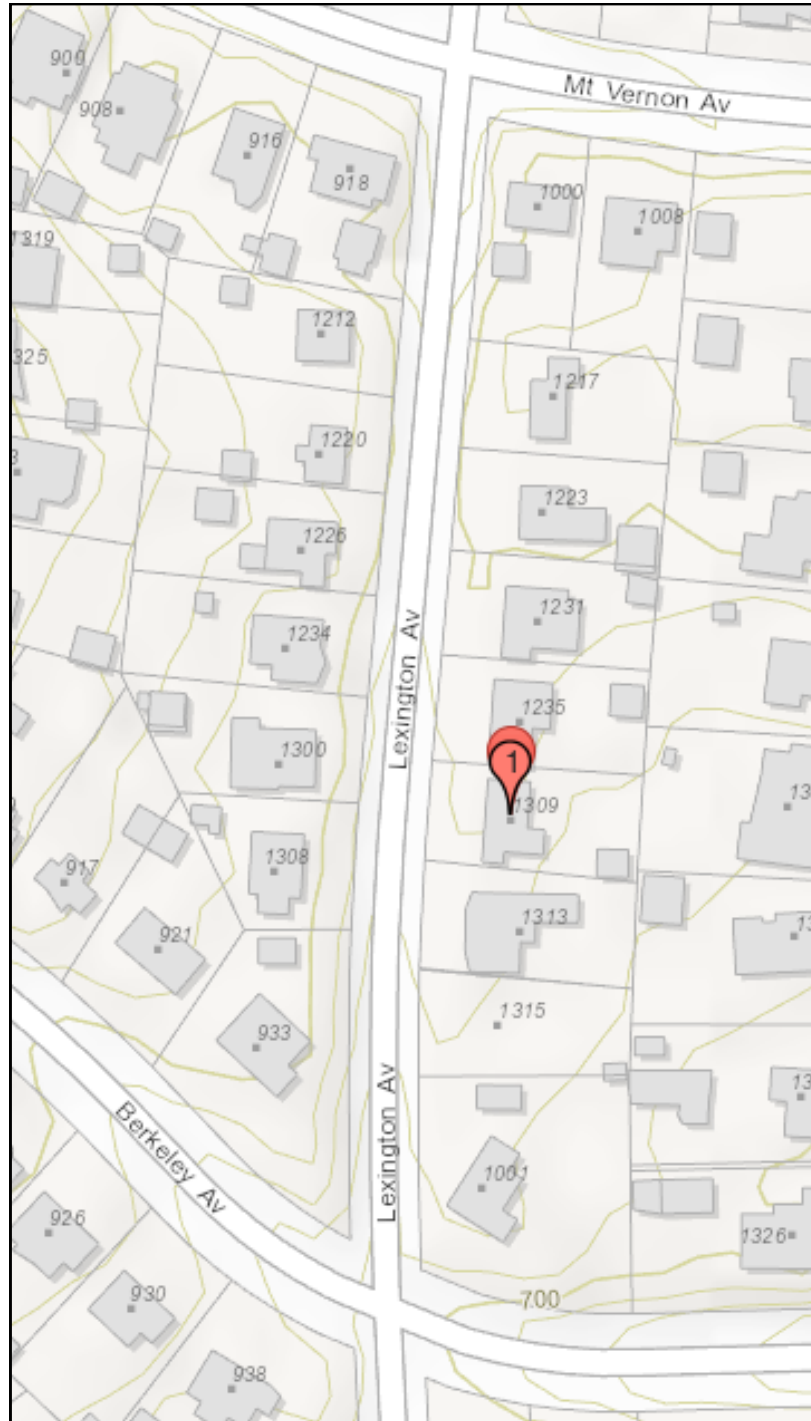


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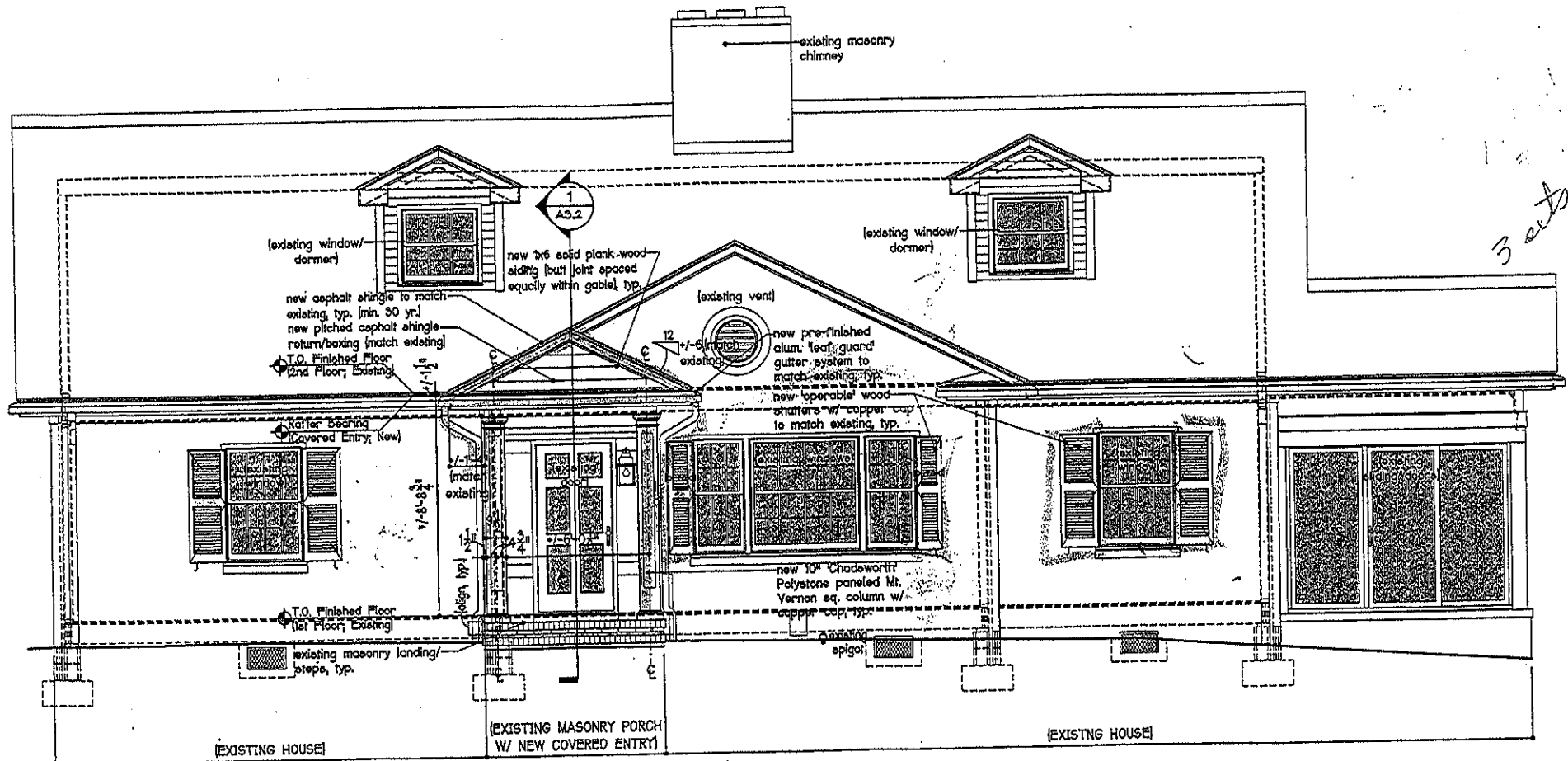
Charlotte Historic District Commission - Case 2014-252

Historic District; Dilworth





3 RIGHT SIDE ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



1 RENOVATED/ADDITION
A2.1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

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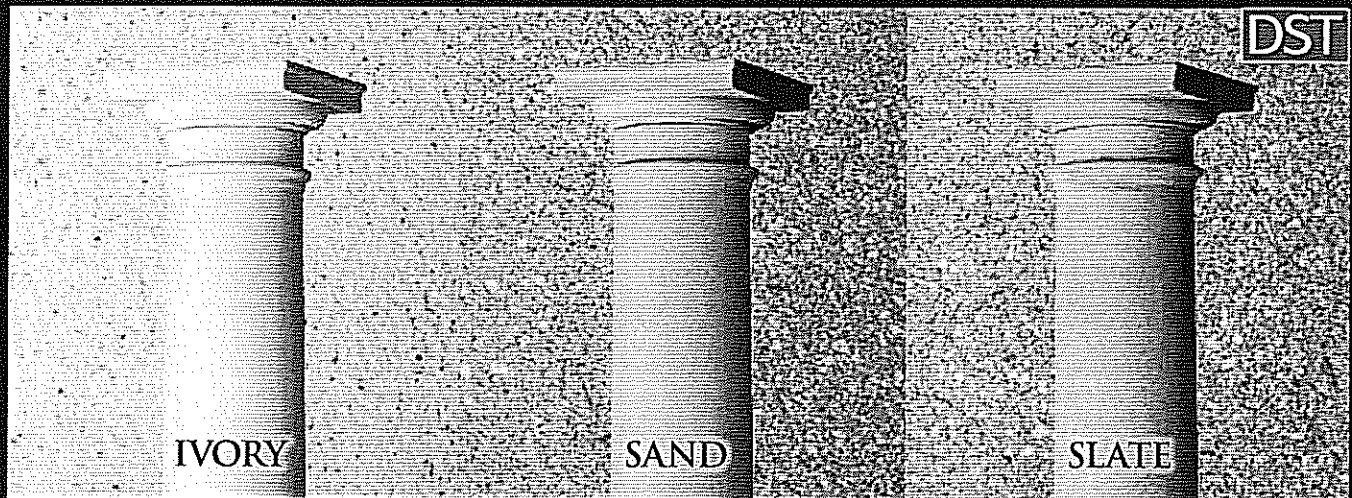
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POLY-CLASSIC® *DuraStone*™



- NEVER NEEDS PAINT
- COLORED THROUGHOUT
- READY TO INSTALL
- SAME LOAD CAPACITIES AS THE FRP COLUMNS
- AVAILABLE IN IVORY, SAND AND SLATE
- LIMITED LIFETIME WARRANTY
- LOW MAINTENANCE
- CUSTOM COLORS AVAILABLE ON LARGE QUANTITY ORDERS



POLY-CLASSIC® DURASTONE™ COLUMNS

Get the strength and durability of our popular Poly-Classic® FRP columns in a natural stone finish. DuraStone™ columns are designed to simulate natural stone and just like in nature, the color and texture may vary slightly. DuraStone™ columns are available in all the same sizes as our paint grade FRP columns with Tuscan caps and bases. (Roman Doric caps are not available). We also have a limited selection of decorative capitals to match the columns. The bases on the larger columns (18" and over) will come in two pieces; when installed the assembly seam will be visible. For specifications and other information please refer to the Poly-Classic® FRP column specifications on pages 13-19.

READY TO INSTALL

Poly-Classic® DuraStone™ Columns do not need to be primed or painted. Simply cut to length and install. Poly-Classic® DuraStone™ Columns have the same load-bearing capacity as our standard Poly-Classic® FRP Columns.

MAINTENANCE-FREE

Poly-Classic® DuraStone™ Columns are colored throughout utilizing UV inhibitors that will minimize color fade over time. (Turncraft warrants that during the first ten years following the date of installation, the degree of color change will not exceed 17 delta.) Because there is no need for primer or paint, there is also no need for touch-ups. The non-porous design makes the columns impervious to moisture damage.

DURASTONE® QUICK-FIT CAPITALS FOR ROUND TAPERED COLUMNS



Greek Erectheum



Roman Ionic



Roman Corinthian

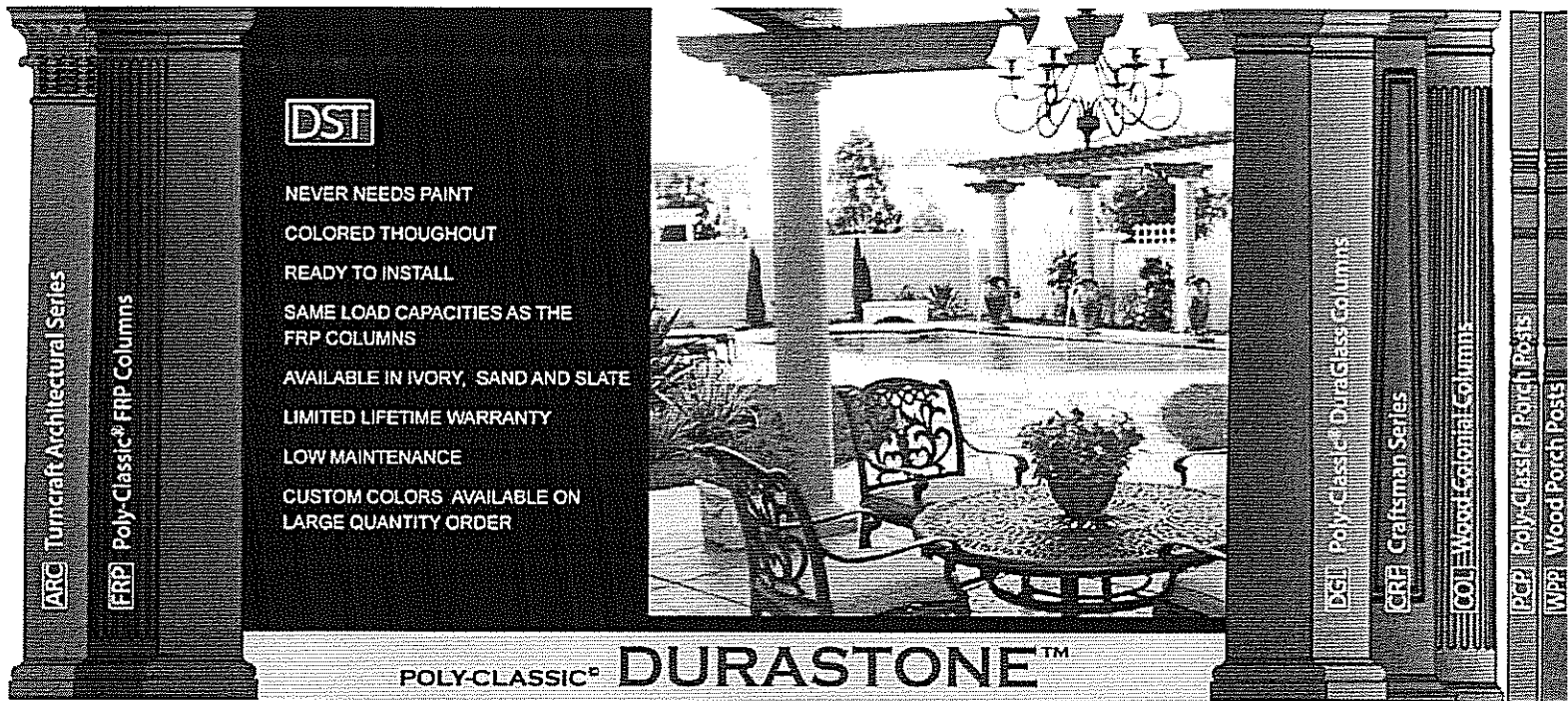


Scamozzi

Shaft nominal bottom diameter	Greek Erectheum				Roman Ionic			
	Capital height	Abacus width	Scroll width	Height adjust *	Capital height	Abacus width	Scroll width	Height adjust *
6"	3 1/4"	6 1/2"	8 3/4"	+3/8"	2 3/4"	6"	8"	-1/8"

* Height Adjust is based on trimming the shaft at the architecturally correct location.

Shaft nominal bottom diameter	Roman Corinthian				Scamozzi			
	Capital height	Abacus width	Scroll width	Height adjust *	Capital height	Abacus width	Scroll width	Height adjust *
6"	8 1/4"	11"	n/a	+5 1/8"	2 3/4"	8 3/4"	8 1/2"	-7/8"
8"	11 3/8"	14 3/8"	n/a	+7 3/8"	3"	11"	10 1/4"	-1 3/4"
10"	14 3/8"	18 3/8"	n/a	+9 3/8"	4 1/4"	14 1/2"	14 3/8"	-3/8"
12"	17"	21 3/4"	n/a	+12 1/4"	4 3/4"	17"	16 3/4"	+1/8"



DST

NEVER NEEDS PAINT
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READY TO INSTALL
SAME LOAD CAPACITIES AS THE
FRP COLUMNS
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LARGE QUANTITY ORDER

POLY-CLASSIC® **DURASTONE™**

ARC Turncraft Architectural Series

FRP Poly-Classic® FRP Columns

DGL Poly-Classic® DuraGlass Columns

CRF Craftsman Series

COL Wood Colonial Columns

PCP Poly-Classic® Porch Posts

WPP Wood Porch Posts

[Click Column Series for more information](#)

POLY-CLASSIC DURASTONE COLUMNS

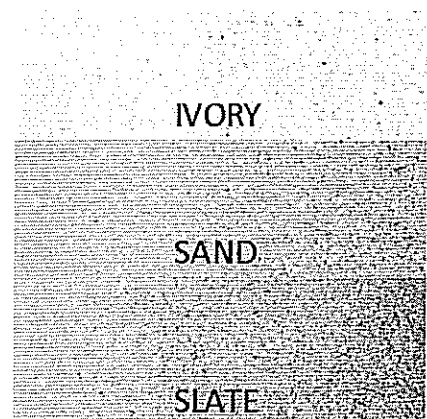
Poly-Classic® Durastone™ Columns are maintenance-free fiberglass columns constructed by combining marble dust with fiberglass and color, and treated with a unique natural finish that looks and feels like real stone.

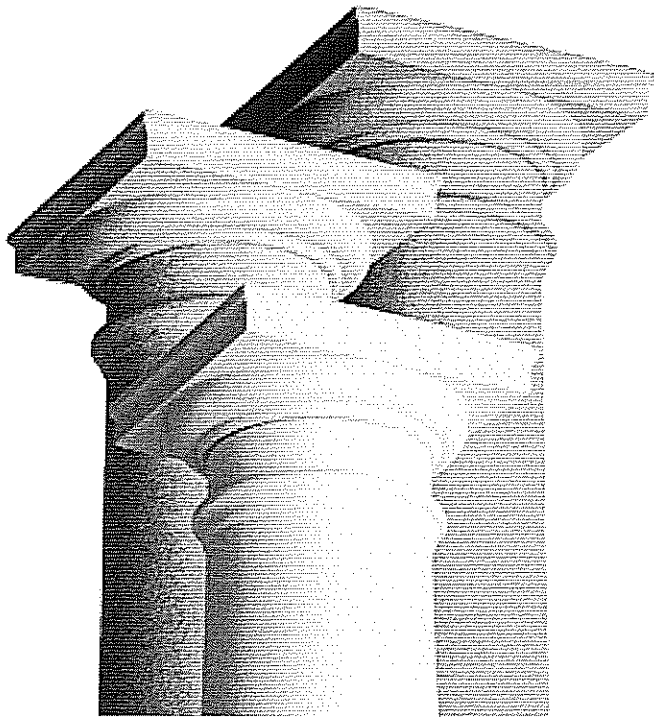
[PDF Product Catalog Section](#)

[PDF Durastone Installation Instructions](#)

[PDF Durastone Warranty](#)

[PDF MSDS Poly-Classic](#)





Call for your nearest dealership
(800) 423-6311

PO Box 2429, White City, Oregon 97505

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MATERIAL SAFETY DATA SHEET
PolyClassic™

Section I - General Information

Date of Issue: 12/22/94

CWO-MSDS # 0900011

Revised Date: 3/05/98

Revised Date: 6/25/02

Revised Date: 9/2010

Revised Date: 9/2011

Manufacturer's Name & Address:

CW Ohio, Inc.
1209 Maple Avenue
Conneaut, Ohio 44030

Emergency Phone Number:

(440) 593-5800

Chemical Name:

Cured Stone Filled Polyester Column

Trade Name:

PolyClassic™

Section II - Material Identification

Chemical Family:

Cured Thermoset Polyester Resin
(FRP Composite)
Calcium Sulfate
Hydrated Alumina
Glass Fiber
Titanium Dioxide

NOT HAZARDOUS AS AN ARTICLE

Section III - Physical/Chemical Characteristics

Boiling Point:

N/A Solid

Vapor Density, Vapor Pressure:

N/A Solid

Specific Gravity:

~2.03 g/cc

Appearance:

Solid Gray-Beige Color

Odor:

None

Section IV - Fire and Explosion Hazard Data

Flash Point:

N/A

Extinguishing Media:

Foam, CO2, Dry Chemical, Water

Special Firefighting Procedures:

Wear approved self-contained
breathing apparatus.

Unusual Fire and Explosion Hazards:

Dust is combustible when exposed to heat or
flame and may form explosive mixtures with
air.

Section V - Reactivity Data

Stability:	Unstable - NO Stable - Yes
Conditions to Avoid:	Do not generate airborne dusts in the presence of an ignition source when cutting or grinding.
Hazardous Decomposition Products:	CO ₂ , CO, Monomer Fumes
Hazardous Polymerization:	None will occur.

Section VI - Health Hazard Data

Ingestion:	If the person is conscious, give 2-3 glasses of water, then see a physician. Never give anything to an unconscious person.
Skin:	Wash with soap and water.
Inhalation:	Breathe fresh air, oxygen if needed.
Threshold Limit:	N/A
Effects of Overexposure (Dust):	May cause irritation to eyes or skin with prolonged exposure.
Emergency Procedures:	Flush irritated or affected area with cold water, especially eyes, or cleanse skin with soap and cold water. Consult physician if irritation continues.

Section VII - Control and Protective Measures

Respiratory Protection:	Use protective filter mask when cutting or sanding.
Eye Protection:	Use goggles or safety glasses.
Ventilation:	Use adequate ventilation when cutting or sanding.
Other Protective Equipment:	None

Section VIII - Precautions for Safe Handling and Disposal

Waste Disposal Method:	Disposal in accordance with local, state, and federal regulations for disposal of solid waste.
Special Precautions:	Avoid dust in eyes and prolonged skin contact. May cause irritation in some individuals.
NFPA Rating	Health - 1 (due to dust from cutting or sanding) Flammability - 1 (due to dust from cutting or sanding) Reactivity - 0

While this information set forth is believed to be accurate as of date set forth, CW Ohio, Inc. makes no warranty hereto and disclaims liability from reliance therein.

Nick Nierzejewski Noirot



ICC Evaluation Service, Inc.
www.icc-es.org

Business/Regional Office # 5360 Workman Mill Road, Whittier, California 90601 # (562) 699-0543
Regional Office # 900 Montclair Road, Suite A, Birmingham, Alabama 35213 # (205) 599-9800
Regional Office # 4051 West Flossmoor Road, Country Club Hills, Illinois 60478 # (708) 799-2305

Legacy report on the BOCA® National Building Code/1999

DIVISION: 06—WOOD AND PLASTICS

Section: 06500—Structural Plastics

EVALUATION SUBJECT:

POLY-CLASSIC® FRP COLUMNS

REPORT HOLDER:

CASCADE OHIO, INC. dba CW OHIO, INC.
1209 MAPLE AVENUE
CONNEAUT, OHIO 44030

EVALUATION SCOPE

Compliance with the following code:

BOCA® National Building Code/1999

Section 1604.1 Safe support required

Section 2203.1 General

1.0 DESCRIPTION OF EVALUATION

This report evaluates rotocast fiberglass reinforced polymer columns as structural columns supporting vertical concentric and eccentric compression loads.

2.0 DESCRIPTION AND USE OF PRODUCT

2.1 GENERAL DESCRIPTION

Poly-Classic® FRP Columns are available in fluted and non-fluted round, tapered shafts in sizes ranging from 6 inches (152 mm) to 24 inches (460 mm) in diameter with lengths ranging from 8 feet (2.44 m) to 24 feet (7.32 m), in round non-tapered columns from 8 inches (203 mm) to 14 inches (356 mm) in diameter ranging from 10 feet (3.05 m) to 14 feet (4.27 m) long, and in square, non-tapered columns from 6 inches (152 mm) to 12 inches (305 mm) square ranging from 8 feet (2.44 m) to 16 feet (4.88 m) long. The columns are of a single piece construction and are trimmed with either a Tuscan Cap and Base or with an optional Attic Base installed around the column (see manufacturer's literature for examples of cap and optional base). Structural load bearing columns are limited to the size and dimensions shown in Tables 1. Non-load-bearing columns are permitted in any size and length produced.

2.2 USE AND APPLICATION

Poly-Classic® FRP Columns are used as exterior and interior columns, both load-bearing and non-load-bearing, in buildings of combustible construction.

2.2.1 Structural

The Poly-Classic® FRP Columns are capable of supporting the respective concentric and eccentric axial loads provided in Table 1 of this report. Allowable design capacities for the structural columns are based upon proper installation as described in the manufacturer's published installation instructions and this report. For the concentric loads shown in Table 1 of this report, the column shall be installed with a bearing top plate that symmetrically distributes the load across the entire cross-section of the column. Where the eccentric loading values shown in Table 1 of this report are utilized, the beam shall bear directly on both walls of the column with a maximum offset of "e" as shown in the table. The base of the column shall bear entirely on a flat surface that provides suitable anchorage for the column and is capable of transferring all loads to the foundation. Where the installation instructions differ from this report, the performance of the structural column is outside the scope of this report. Non-structural columns shall be installed in accordance with the manufacturer's published installation instructions.

2.2.2 Surface-Burning Characteristics

The Poly-Classic® FRP Columns with a minimum thickness of $\frac{3}{8}$ inch (9.5 mm) have a flame spread index of less than 25 and a smoke-developed index of less than 450.

3.0 CONDITIONS OF USE

This report is limited to the applications and products as stated in this report. The ICC-ES Subcommittee on National Codes intends that the report be used by the code official to determine that the report subject complies with the code requirements specifically addressed, provided that this product is installed in accordance with the following conditions:

- 3.1** Allowable design capacities for the Poly-Classic® FRP Columns are based upon installation as described in the manufacturers published installation instructions and this report. Where the installation instructions differ from this report, the performance of the structural column is outside the scope of this report. Non-structural columns shall be installed in accordance with the manufacturer's published installation instructions.
- 3.2** Permit applications specifying the Poly-Classic® FRP Columns shall be accompanied by structural calculations which indicate that the concentric or eccentric axial applied load exerted on the columns is less than or equal to the allowable axial capacity specified in Table 1 of this report. The individual preparing such

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documents shall be competent and qualified in the application of the structural design principles involved, and shall possess the registration or license in accordance with the professional registration laws of the state in which the project is constructed.

- 3.3 Poly-Classic® FRP Columns have not been evaluated for decay resistance. The ability of this product to resist decay is outside the scope of this report.
- 3.4 Design loads shall be determined using Chapter 16 of BOCA® *National Building Code/1999*. The columns have been evaluated for gravity loads only. Other loads, such as lateral loads, applied in shear to the column are outside the scope of this evaluation report.
- 3.5 Loads for a given column length shall not exceed the allowable design loads given in Table 1 of this report.
- 3.5 The maximum amount of eccentricity for an axial applied load is limited to the values shown in Table 1 of this report. Eccentricities larger than this are outside the scope of this report.
- 3.7 Installations of Poly-Classic® FRP Columns, which will be directly exposed to the weather, shall receive an additional coat of paint, enamel or other approved protective coatings.
- 3.8 The Poly-Classic® FRP Columns shall be limited to use with buildings of Type 5 construction which do not exceed three stories or 40 feet in height.
- 3.9 Special Inspections of the structural column installation shall be provided for columns used other than in Use Group R-3 buildings. The inspections shall be conducted by a special inspector provided by the owner of the building under construction. The special inspector shall be qualified to perform the inspections and approved by the code official. The inspections shall be of a nature, and conducted at such frequency, as is necessary to ensure the Poly-Classic® FRP Columns compliance with the requirements of Code Section 1705.1.2 of the BOCA® *National Building Code/1999*.
- 3.10 This report is subject to periodic re-examination. For information on the current status of this report, contact the ICC-ES.

4.0 INFORMATION SUBMITTED

- 4.1 A Southwest Research Institute report titled, *Investigation of the Surface Burning Characteristics of a 0.375 Inch Thick Polyester Resin Column Castings, Tested over 1.0 inch wide Flat Metal Bars Every 24 Inches*, Report No. 01.04913.01.154a, dated March 4, 2002.
- 4.2 Architectural Testing, Inc. Report No. 01-43277.02, dated November 10, 2003, titled *Performance Test Report*, and contains test results establishing the effects on the flexural strength of the columns as a result of extreme temperature ranges and 2000 hours of accelerated weathering.
- 4.3 Metals & Materials Engineer Test Report No. 12262 for CW Ohio, titled *Report of Fiberglass Column Characterization for Accreditation Through the ICC*, dated November 28, 2003 containing various testing for Freeze-Thaw resistance and Fastener Withdrawal.
- 4.4 American Testing Laboratory, Inc. Test Report titled *Load Testing of Columns*, dated June 3, 2003, containing axial load compression test results.

4.5 Cerny & Ivey Engineers, Inc. Test Report titled *Concentric Compression Testing Round Composite Columns*, Report No. 23397-2, dated December 3, 2003.

4.6 Cerny & Ivey Engineers, Inc. Test Report titled *Eccentric Compression Testing Round Composite Columns*, Report No. 23397-1, dated December 3, 2003.

4.7 CW Ohio, Inc. Quality Control Manual with revision date February 24, 2004.

4.8 Signed third-party testing agreement between CW Ohio and Intertek Test Services NA, Ltd. (Warnock Hersey) dated January 20, 2004, effective April 5, 2004.

5.0 INFORMATION REQUIRED ON CONSTRUCTION DOCUMENTS

To aid in the use of this report, the following represents the minimum level of information to be reflected on construction documents in order to determine compliance with this report.

- 5.1 The language, "See ICC-ES Legacy Report No. 22-26."
- 5.2 All permit applications utilizing Poly-Classic® FRP Columns shall be accompanied by structural calculations performed by a registered design professional. The calculations shall include, but not be limited to, the following:
 - 5.2.1 The applied loads imposed upon the column by the components it supports.
 - 5.2.2 The ability of the Poly-Classic® FRP Columns to sustain the applied loads consistent with Table 1 of this report.
 - 5.2.3 The ability of all connections between the column and the components framing into it to properly bear on the Poly-Classic® FRP Columns and transfer all the imposed applied loads from the components supported by the column to the column, and from the column to its supporting footing.
 - 5.2.4 The design of the footing which will support the Poly-Classic® FRP Columns.
- 5.3 Satisfactory evidence that the Poly-Classic® FRP Columns have been installed with the appropriate special inspection described in Section 3.9 of this report.
- 5.3 The manufacturer shall provide the user of this report with complete instructions on the proper installation of Poly-Classic® FRP Columns.

6.0 PRODUCT IDENTIFICATION

All Poly-Classic® FRP Columns manufactured in accordance with this report or the column packaging shall be labeled at the plant with the manufacturer's name and/or trademark, the product identification, the and the identifying language "See ICC-ES Legacy Report No. 22-26." Additionally, each Poly-Classic® FRP Column or column packaging shall have a permanent label containing the mark of the third-party inspection agency, Intertek Testing Services NA, Ltd (Warnock Hersey).

TABLE 1—ALLOWABLE LOADS POLY-CLASSIC COLUMNS

Columns Type and Nominal Size (in) ¹	Maximum Length (ft-in)	Allowable Load (lbf) Concentric ²	Eccentric Loadings	
			Maximum "e" (in) ³	Allowable Load (lbf)
6 - Round	8 - 0	6000	$\frac{3}{4}$	6000
8 - Round	10 - 0	10000	$1\frac{5}{8}$	6600
10 - Round	12 - 0	14000	$2\frac{5}{8}$	10720
12 - Round	16 - 0	18000	$3\frac{3}{8}$	13200
14 - Round	16 - 0	20000	4	11520
16 - Round	20 - 0	20000	$4\frac{1}{4}$	13200
18 - Round	24 - 0	20000	$4\frac{1}{4}$	9040
20 - Round	20 - 0	20000	$4\frac{1}{4}$	18960
24 - Round	20 - 0	20000	$4\frac{1}{4}$	13200
8 - Round non-tapered	10 - 0	10000	$2\frac{1}{8}$	8240
10 - Round non-tapered	10 - 0	14000	3	11520
12 - Round non-tapered	12 - 0	18000	$4\frac{1}{8}$	11520
14 - Round non-tapered	14 - 0	20000	5	18120
6 × 6 Square	10 - 0	6000	$1\frac{1}{4}$	6000
8 × 8 Square	10 - 0	10000	$2\frac{1}{4}$	10000
10 × 10 Square	10 - 0	12800	$3\frac{1}{4}$	12800
12 × 12 Square	16 - 0	18000	$4\frac{1}{4}$	17320

SI Units: 1 inch = 25mm; 1 lbf = 4.45 N

Notes to Table 1:

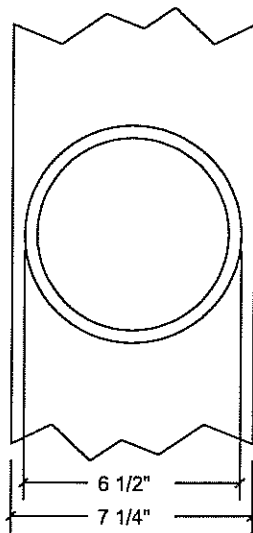
1. Round columns include plain and fluted.
2. For the concentric loads, the column shall be installed with a bearing top plate which symmetrically distributes the load across the entire cross-section of the column.
3. Maximum "e" (in) is eccentricity measured from the centerline of the top of the column. The eccentric load simulated a nominal 4-inch (102 mm) wide wood beam ($3\frac{1}{2}$ -inch (89 mm) actual width) bearing on a top plate offset at the top end.

ADDENDUM: TABLE 2—ALLOWABLE LOADS POLY-CLASSIC COLUMNS*

Columns Type and Nominal Size (in)	Maximum Lenth (ft-in)	Allowable Load (lbf) Concentric	Eccentric Loadings	
			Maximum "e" (in)	Allowable Load (lbf)
16 - Round non-tapered	10 - 0	20000	4 1/4	13200
18 - Round non-tapered	11 - 0	20000	4 1/4	9040
20 - Round non-tapered	11 - 0	20000	4 1/4	18960
24 - Round non-tapered	15 - 0	20000	4 1/4	13200
14 × 14 Square	16 - 0	18000	4 1/4	17320

*ICC-ES Legacy Report data not available for these sizes.

Example of Concentric Loading
(8" tapered column, 8x beam):



Install columns with concentric loading to achieve maximum load bearing capacity. This means the overhead beam or surface must completely cover the top of the column shaft.

Example of eccentric loading:
(8" tapered column, 4x beam):

