



City of Plymouth Historic District Commission Regular Meeting Agenda

Wednesday, February 2, 2022 – 7:00 p.m.

Plymouth City Hall & Online Zoom Webinar

City of Plymouth
201 South Main Street
Plymouth, Michigan 48170

www.plymouthmi.gov
Phone 734-453-1234
Fax 734-455-1892

Follow the Link to Join the Zoom Webinar: <https://us02web.zoom.us/j/88333367353>

Webinar ID: 883 3336 7353

Passcode: 223609

Statement of explanation of the reason why the public body is meeting electronically:

On March 10, 2020, the Governor of the State of Michigan declared a State of Emergency across the State of Michigan under section 1 of Article 5 of the Michigan Constitution of 1963, the Emergency Management Act, 1976 PA 390, as amended, MCL 30.401 – 421, and the Emergency Powers of the Governor Act of 1945, 1945 PA 302, as amended, MCL10.31 – 33. These sections provide the governor with broad powers and duties to cope with dangers to this state or to the people of the state.

As a part of the response to the emergency, the Governor has deemed it reasonable and necessary to temporarily suspend rules and procedures relating to physical presence at meetings and hearings of public bodies and other governmental entities in Michigan. These public bodies and entities must continue to conduct public business during this emergency.

1) CALL TO ORDER

2) CITIZENS COMMENTS

3) APPROVAL OF THE MINUTES

- a) Approval of the December 1, 2021, regular meeting minutes

4) APPROVAL OF THE AGENDA

5) ELECTION OF OFFICERS

6) COMMISSION COMMENTS

7) OLD BUSINESS

- a) H21-07, 306 S. Main: Revised exterior alterations, signage, exterior lighting and limestone rehabilitation and repair

8) NEW BUSINESS

- a) 2022 Goals-Discussion

9) REPORTS AND CORRESPONDENCE

10) ADJOURNMENT

Citizen Comments - This section of the agenda allows up to 3 minutes to present information or raise issues regarding items not on the agenda. Upon arising to address the Commission, speakers should first identify themselves by clearly stating their name and address. Comments must be limited to the subject of the item.

Persons with disabilities needing assistance with this should contact the City Clerk's office at 734-453-1234 Monday through Friday from 8:00 a.m. -4:30 p.m., at least 24 hours prior to the meeting. An attempt will be made to make reasonable accommodations.

GOAL AREA ONE - SUSTAINABLE INFRASTRUCTURE

OBJECTIVES

1. Identify and establish sustainable financial model(s) for major capital projects, Old Village business district, 35th District Court, recreation department, and public safety
2. Incorporate eco-friendly, sustainable practices into city assets, services, and policies; including more environmentally friendly surfaces, reduced impervious surfaces, expanded recycling and composting services, prioritizing native and pollinator-friendly plants, encouraging rain gardens, and growing a mature tree canopy
3. Partner with or become members of additional environmentally aware organizations
4. Increase technology infrastructure into city assets, services, and policies
5. Continue sustainable infrastructure improvement for utilities, facilities, and fleet
6. Address changing vehicular habits, including paid parking system /parking deck replacement plan, electric vehicle (EV) charging stations, and one-way street options

GOAL AREA TWO – STAFF DEVELOPMENT, TRAINING, AND SUCCESSION

OBJECTIVES

1. Create a 5-year staffing projection
2. Review current recruitment strategies and identify additional resources
3. Identify/establish flex scheduling positions and procedures
4. Develop a plan for an internship program
5. Review potential department collaborations
6. Hire an additional recreation professional
7. Review current diversity, equity, and inclusion training opportunities
8. Seek out training opportunities for serving diverse communities

GOAL AREA THREE - COMMUNITY CONNECTIVITY

OBJECTIVES

1. Engage in partnerships with public, private and non-profit entities
2. Increase residential/business education programs for active citizen engagement
3. Robust diversity, equity, and inclusion programs
4. Actively participate with multi-governmental lobbies (Michigan Municipal League, Conference of Western Wayne, etc.)

GOAL AREA FOUR - ATTRACTIVE, LIVABLE COMMUNITY

OBJECTIVES

1. Create vibrant commercial districts by seeking appropriate mixed-use development, marketing transitional properties, and implementing Redevelopment Ready Communities (RRC) practices
2. Improve existing and pursue additional recreational and public green space opportunities and facilities for all ages
3. Develop multi-modal transportation plan which prioritizes pedestrian and biker safety
4. Improve link between Hines Park, Old Village, Downtown Plymouth, Plymouth Township, and other regional destinations
5. Maintain safe, well-lit neighborhoods with diverse housing stock that maximizes resident livability and satisfaction
6. Modernize and update zoning ordinance to reflect community vision
7. Implement Kellogg Park master plan



City of Plymouth
Historic District Commission
Regular Meeting Minutes
Wednesday, December 1, 2021 - 7:00 p.m.

City of Plymouth
201 S. Main
Plymouth, Michigan 48170-1637

www.plymouthmi.gov
Phone 734-453-1234
Fax 734-455-1892

Online Zoom Meeting

1. CALL TO ORDER

- a. Chair Colleen Polin called the meeting to order at 7:00 p.m.

Present: Chair Polin, Vice-Chair: Stanley Cole, Members: Gania Kandalajt, Joshua Mrozowski, John Townsend

Excused: Jeremy Borys

Also present: Community Development Director John Buzuvis, City Commission Liaison Suzi Deal

2. CITIZENS COMMENTS

Ellen Elliott, 404 Irvin, thanked the HDC members for their service.

3. APPROVAL OF THE MEETING MINUTES

Mrozowski offered a motion, seconded by Townsend, to approve the minutes of the November 3 meeting as amended with a date and grammar change.

There was a roll call vote.

Yes: Cole, Kandalajt, Mrozowski, Townsend, Polin

MOTION PASSED 5-0

4. APPROVAL OF THE AGENDA

Polin requested to move item 6b to item 7a and to address new business before old business

Townsend offered a motion to approve the agenda for Wednesday, December 1 with the changes requested by the chair. Mrozowski seconded the motion.

There was a roll call vote.

Yes: Cole, Kandalajt, Mrozowski, Townsend, Polin

MOTION PASSED 5-0

5. COMMISSION COMMENTS

Polin congratulated former HDC member Linda Filipczak for being elected to the City Commission, saying she'd be missed on the HDC.

Cole asked whether there was an update on the Greek Islands project. Buzuvis said they are working through their plan and researching options.

6. NEW BUSINESS

- a. H21-09, 320 S. Main: Paint color change

A representative of Shaw Construction explained that the tenant requested that the building façade be painted with a corporate color without realizing color changes in the Historic District need to come before the HDC. Commissioners asked several clarifying questions.

Citizen Comments

Ellen Elliott, 404 Irvin, suggested using an accent color on the detail work.

Commissioner Comments

Commission members expressed their concern that the color in the application subsequently submitted looked markedly different than the color on the building. There was further discussion about the detail work on the façade that is not a historic feature of the building. It was suggested that the applicant select a historic paint color from one of the companies that provide historic color collections of paint

The applicant withdrew his request and plans to re-apply when the tenant chooses a historic color.

7. OLD BUSINESS

a. H21-08, 844 Penniman, The Post Local Bistro: Patio expansion including concrete, lighting, fencing, and landscaping; rear addition, and wall and dumpster enclosure

Citizen Comments

There were no citizen comments.

Commissioner Comments

Commission members expressed appreciation that the information they requested in the November meeting was provided. There was a question about the pergola that was mentioned in the September Planning Commission minutes. Buzuvis said the pergola meets necessary code requirements. The group also discussed what parts of the building were historic.

Cole offered a motion, seconded by Townsend, to issue a certificate of appropriateness for H21-08 based on the following.

Findings of Fact

The proposed work will meet the Secretary of Interior's standards for rehabilitation numbers 1, 2, 3, 4, 5, 9 and 10 and gives consideration and/or significance to City of Plymouth criteria 1, 2, 3 and 4.

There was a roll call vote.

Yes: Cole, Kandalaft, Mrozowski, Townsend, Polin

MOTION PASSED 5-0

8. REPORTS AND CORRESPONDENCE

Buzuvis said that, unless something changes, virtual meetings will no longer be allowed after December 31.

9. ADJOURNMENT

Townsend offered a motion to adjourn at 8:01 p.m. Kandalaft seconded the motion.

There was a roll call vote.

Yes: Cole, Kandalaft, Mrozowski, Townsend, Polin

MOTION PASSED 5-0



Historic District Commission
201 S. Main Plymouth, MI 48170
Administrative Review of 306 S. Main
Case Number H21-07
Agenda Date: February 2, 2022

Address: 306 S. Main
Year Built: Circa 1920
Historical Significance: Architecture

Proposed Changes: Exterior modifications, exterior lighting, signage, and building cleaning

Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Application Review

The following applicable information has been provided		YES	NO	N/A
Demolition, new construction, additions, and alterations				
1.	Completed application	[X]	[]	[]
2.	Synopsis: description of the project in words	[X]	[]	[]
3.	Materials finish list	[X]	[]	[]
4.	Detailed justification of why the changes are necessary	[X]	[]	[]
5.	Historic photographs of the building	[X]	[]	[]
6.	Photographs of the building and site as they exist today	[X]	[]	[]
7.	Scaled drawings to include existing and proposed site plan including property lines, easements, setbacks, and landscape features	[X]	[]	[]
8.	Scaled drawings to include existing and proposed floor plans	[X]	[]	[]
9.	Scaled drawings to include existing and proposed elevations	[X]	[]	[]
10.	Scaled drawings to include existing and proposed cross sections and other details as needed	[X]	[]	[]
11.	Cut sheets (manufacturer information) for all exterior materials including windows, doors, garage, doors, exterior lighting, fencing, etc.	[X]	[]	[]
12.	Material samples and colors for roofing, siding, and trim	[]	[X]	[]
13.	Statement of impact of the project on surrounding properties and buildings. Statement shall include items such as architectural character, building scale, vehicular and pedestrian traffic, mass, form, proportion, configuration, location on site, landscaping, and visual appearance.	[X]	[]	[]
14.	Time frame for the project including approximate start date and dates for exterior completion, landscaping completion, and final occupancy	[X]	[]	[]
15.	Color rendering of exterior elevation	[X]	[]	[]
16.	New construction requires a streetscape view (to scale) with the proposed project inserted	[X]	[]	[]

The following applicable information has been provided		YES	NO	N/A
Building cleaning				
1.	Completed application	[X]	[]	[]
2.	Synopsis: description of the project in words	[X]	[]	[]
3.	Materials finish list	[X]	[]	[]
4.	Detailed justification of why the changes are necessary	[X]	[]	[]
5.	Historic photographs of the building	[X]	[]	[]
6.	Photographs of the building and site as they exist today	[X]	[]	[]
7.	Description of the cleaning method including the names of chemicals and the pressure of any washes or applications	[X]	[]	[]
8.	Brochure for cleaning agents	[X]	[]	[]
9.	Description of the treatment of the building exterior (surface) after cleaning – painting, sealing, tuck pointing, etc.	[]	[]	[X]

Sign installation

The following applicable information has been provided		YES	NO	N/A
1.	Completed application	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Synopsis: description of the project in words including related work such as soffits, fascia, gutters, and trim	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Materials finish list	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Detailed justification of why signage installation or replacement is necessary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Historic photographs of the building	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Description of the existing signage material including location, size, material, color, and condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Photographs of the building as it exists today	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Scaled and dimensioned front and side elevations showing the size and location of signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Scaled cross-section of building elevation indicating proposed signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Identification of all materials used in the construction of signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Material samples including number, letter, font size, and colors of signage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SAMPLE MOTION LANGUAGE

1. Motion to Approve Application

I move that the Commission issue a Certificate of Appropriateness for application number ___. The Findings of Fact are as follows: (list facts of finding). The work as proposed meets the Secretary of the Interior's Standards for Rehabilitation standard number(s) ___ and would give consideration and/or significance to the City of Plymouth Ordinance review criteria number(s) ___.

Vote "Yes" to approve application. Vote "No" to deny application.

2. Motion to Approve Application with Conditions

I move that the Commission issue a Certificate of Appropriateness for application number ___, provided that the following conditions are met: (list conditions). The Findings of Fact are as follows: (list facts of finding). The work would then meet the Secretary of the Interior's Standards for Rehabilitation, standard number(s) ___ and would give consideration and/or significance to the following City of Plymouth Ordinance review criteria number(s) ___.

Vote "Yes" to approve application with conditions. Vote "No" to deny application with conditions.

3. Motion to Postpone Review

I move that the Commission Postpone Review of application number ___ until the next regular meeting scheduled for ___.

Vote "Yes" to approve postponing the review. Vote "No" to deny postponing the review.

4. Motion to Deny Application

I move that the Commission issue a Certificate of Appropriateness for application number ___. The Findings of Fact are as follows: (list findings of facts that do not warrant the project's approval). The work as proposed does not meet the Secretary of the Interior's Standards for Rehabilitation, standard number(s) ___ and would not give consideration and/or significance to the following City of Plymouth Ordinance review criteria number(s) ___.

Note: Voting "No" to positively framed motion is the easiest way to deny an application's request for a Certificate of Appropriateness. FYI: Making a motion for approval and then voting "No" to deny is the same as making a motion to deny an application and then voting "Yes".

Vote "No" to deny the application. Vote "Yes" to approve the application.

5. Motion to Issue a Notice to Proceed

May be used in special conditions or emergencies.

I move that the Commission issue a Notice to Proceed for application number ___. The Findings of Fact are as follows: (list facts of finding). The work as proposed does (not) meet the Secretary of the Interior's Standards for Rehabilitation, standard number(s) ___ and would (not) give consideration and/or significance to the following City of Plymouth Ordinance review criteria number(s) ___. The work which is approved with this Notice to Proceed is as follows: (list approved work). The work that is not approved/not appropriate requires the following conditions to be met: (list conditions). The proposed work will substantially improve or correct the following: (list notice to proceed options). Additional work desired which is not approved within this Notice to Proceed is to be resubmitted for a Certificate of Appropriateness.

Vote "Yes" to approve notice to proceed. Vote "No" to deny notice to proceed.

January 10, 2022

City of Plymouth
Community Development Department
Historic District Commission
201 South Main Street
Plymouth, Michigan 48170

Ref: Urban Restaurant / Lounge
306 S. Main Street
Plymouth, Michigan 48170

Subject: Resubmittal of Historic District Commission Documents – January 10, 2022

Dear Historic District Commission,

Please find enclosed (below) the following resubmission to the Historic District Commission Submittal per your Historic District Commission comments noted on November 3, 2021. Additionally, please review the added information document prepared regarding the existing limestone base repair/restoration. We are seeking Historic District Commission Approval for the items noted below.

Resubmitted Items Related to HDC

1. **Existing Limestone Base Repair/Restoration (Sheets A-01, A2-02 & Attached Document)**
See attached information document detailing the method for repair/restoration of existing limestone base (see attached information document).
2. **Exterior Signage (Sheet A-02)**
New Exterior Signage shall consist of aluminum lettering secured to an aluminum tube with stainless steel (non-corrosive) fasteners. These stainless steel (non-corrosive) fasteners shall be secured to the existing mortar joints (verified-in-field) of the existing limestone wall (see attached drawings).
3. **Exterior Lighting (Sheet A-03)**
New Exterior Lighting will be provided to illuminate the exterior areas for security and to accentuate the existing architectural features of the building. The New Lighting at the exterior will consist of two light fixtures at each existing window which will direct light up and down onto the walls at each end of the frames. Additionally, there will be two light fixtures above the main entry directing light up and down onto the walls as well as lighting above the door header. No light fixture shall have exposed conduit. All lighting will comply with lighting ordinances as required (see attached drawings & product data).
4. **Existing Exterior Windows Shall Remain (Sheet A-02)**
Proposed New Crown SST-II Hydraulic Bi-Fold Window System shall be removed from scope of work and existing exterior windows shall remain as is (see attached drawings).
5. **Existing Exterior Limestone Wall Cleaned (Sheet A-02)**
We will clean all the existing Limestone surfaces on the building using a solution specified for limestone (see attached product data).
6. **Existing Awnings to be Removed (Sheet A-02)**
We will remove all existing awnings to allow the existing windows to be exposed (see attached drawings).

Constantine George Pappas AIA

Architecture / Planning

1025 S. Washington Ave. Royal Oak, MI 48067

P. 248.629.8998 F. 248.298.3192

We trust that this letter addresses the items related to your review. If you have any questions or require further clarification, please feel free to contact our office.

Sincerely,



Guss G. Pappas, FAIA
Constantine George Pappas Architecture / Planning

3 Finished Condition



Second Coat Application of Stone Product

2 Patch & Repair Condition



Damaged Locations Repaired With Stone Patching Product

1 Existing Condition



Damaged Locations At Existing Building Base

Marquette Building
243 West Congress Street, Detroit, Michigan
Restoration / Repair Example Before & After

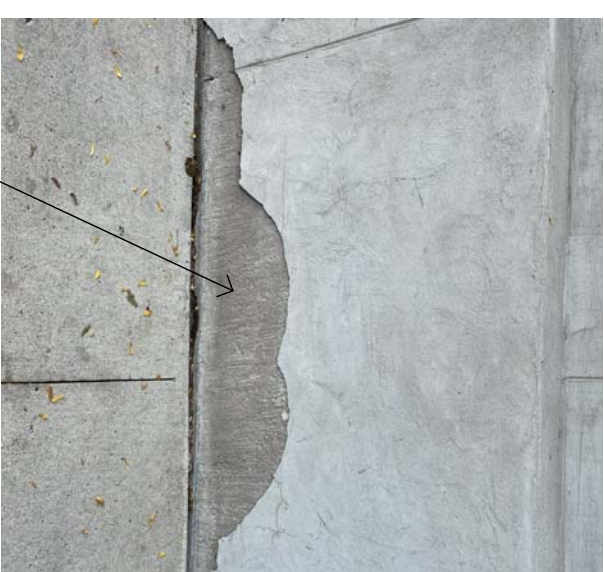
Scale: N.T.S.

← Sample Building

Area of Existing Building Base Repaired/Restored
Total Area: 490 SF +/-



Locations of Deterioration Of Existing Building Base



Urban Restaurant / Lounge
306 South Main Street, Plymouth, Michigan
Existing Building Base - Deterioration Images

Scale: N.T.S.

Proposed Building →

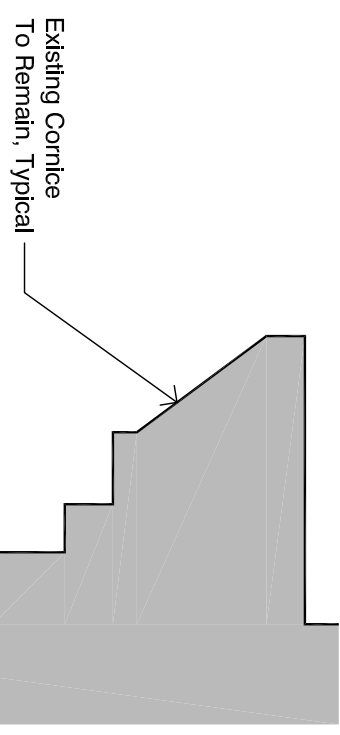
Urban Restaurant / Lounge
306 South Main Street
Plymouth, MI
Project No. 202111
City of Plymouth Resubmitted
Historic District Commission
Submittal - January 10, 2022



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Note:
See Sheet A-02 For
Location of Work

Note: Stainless Steel (Non-Corrosive) Fasteners Shall Be Grouted Into Existing Mortar Joints (Verify-In-Field)



Existing Limestone To Be Cleaned, Typical

Existing Cornice To Remain, Typical

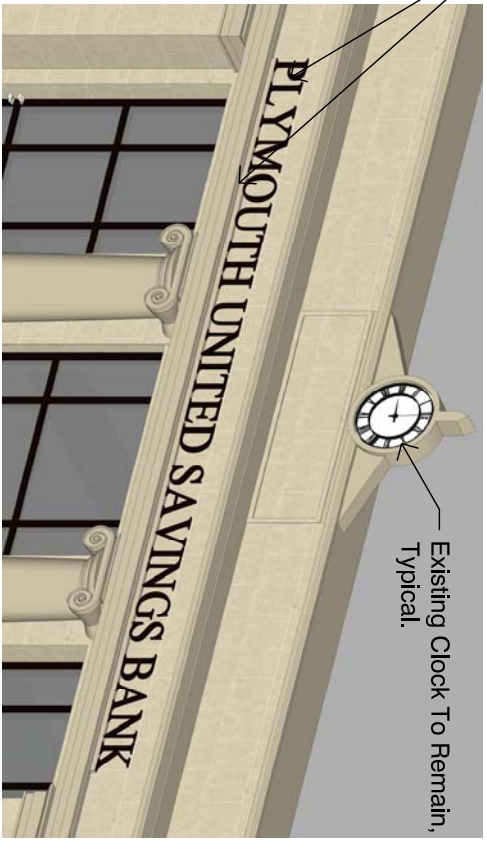
New Aluminum Exterior Sign Lettering (Color - Dark Bronze) Secured to New 2"x2" Aluminum Tube w/ Stainless Steel (Non-Corrosive) Fasteners (Painted - Color To Match Existing Limestone Wall), Typical

New 2"x2" Aluminum Tube (Painted-Color To Match Existing Limestone Wall) w/ Stainless Steel (Non-Corrosive) Fasteners Secured To The Existing Mortar Joints (Verified-In-Field) of Existing Limestone Wall (Drill Depth of Fastener To Be Verified-In-Field), Typical

New Aluminum Exterior Sign Lettering (29 S.F.) Secured To New 2"x2" Aluminum Tube (Painted - Color To Match Existing Limestone Wall) w/ Stainless Steel (Non-Corrosive) Fasteners. New Aluminum Tube Shall Be Secured To Existing Mortar Joints (Verified-In-Field) of Existing Limestone Wall w/ Stainless Steel (Non-Corrosive) Fasteners. Sign To Replicate Historical Significance, Typical.

Exterior Sign Materials	
Sign Lettering:	Aluminum
Sign Lettering Color:	Dark Bronze
Support Tube:	Aluminum
Support Tube Color:	Color To Match Existing Limestone Wall (Powder Coat Paint)

Note: All Locations With Fasteners Shall Be Stainless Steel (Non-Corrosive) Fasteners. These Locations Include New Exterior Sign & All Associated Sign Items And New Exterior Lighting, Typical.



01 Perspective View - New Exterior Sign

Scale: N.T.S.

New Aluminum Exterior Sign Lettering (29 S.F.) Secured To New 2"x2" Aluminum Tube (Painted - Color To Match Existing Limestone Wall) w/ Stainless Steel (Non-Corrosive) Fasteners. New Aluminum Tube Shall Be Secured To Existing Mortar Joints (Verified-In-Field) of Existing Limestone Wall w/ Stainless Steel (Non-Corrosive) Fasteners. Sign To Replicate Historical Significance, Typical.



Existing Window To Remain (New Crown SST-II Hydraulic Bi-Fold Window System Removed From Scope of Work), Typical

New Exterior Light Fixtures (Up & Down) Secured To Frame At Each Existing Window Location (Plaza S3x-No Exposed Conduit), Typical

A Proposed Building Elevation A

Scale: 1/8" = 1'-0"

EXISTING T.O.P. 129'-0" +/-

EXISTING Building Beyond, Typical

EXISTING WINDOW HEAD 121'-0"

Hatch Indicates Existing Limestone Building Base To Be Repaired/Restored, Typical.

EXISTING WINDOW SILL 103'-8"

MAIN LEVEL FINISH FLOOR 100'-0"

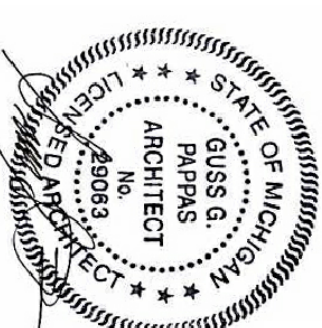
Existing Window Sill To Remain, (Removal of Existing Window Sills Removed From Scope of Work), Typical.



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Consultant George Pappas AIA, Architect/Planner

01 Section - New Exterior Sign

Scale: 1-1/2" = 1'-0"



Note:
See Attached Plaza S3x Technical Information Document

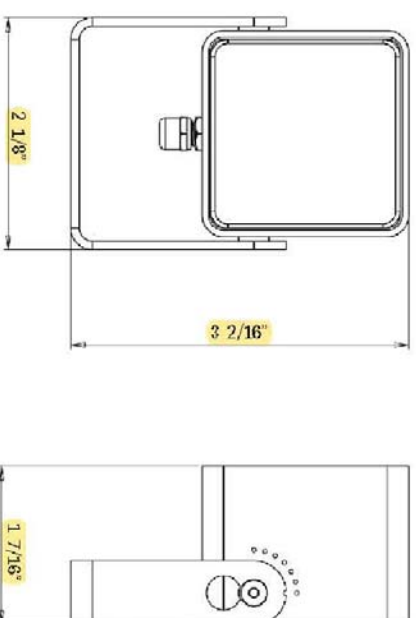
Note:
New Exterior Light Fixtures Installed At Existing Window Locations Shall Be Secured To Existing Window Frame, Typical.

Note:
All New Exterior Light Fixtures Shall Be Mounted & Secured W/ Stainless Steel (Non-Corrosive) Fasteners, Typical.

PLAZA S3x



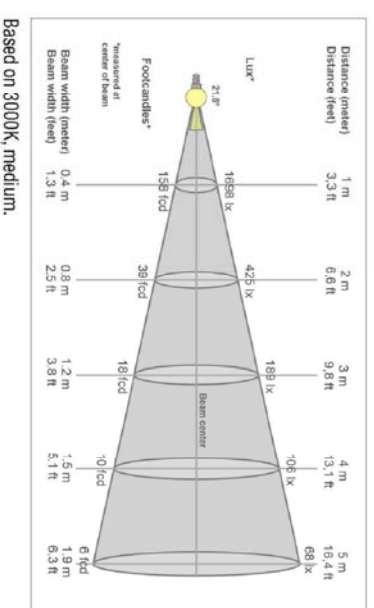
PLAZA S3x



LIGHT SOURCE INFORMATION: PLAZA S3x

Optic	N	M	F	L
Luminaire Lumen Output	376	351	315	386
Luminaire Lumens per Circuit Watt (lm/W)	83	77	70	85
Lifetime L70, Based on TM-21	>50,000			
CRI	80			
Operating Temperature Range	14/104°F			
Power Consumption, (Including 85% efficient driver) - Watts	4.5			
Color Accuracy	2 Step MacAdam ellipse			
Color Temperature	Based on 3000K			

CONE DIAGRAM

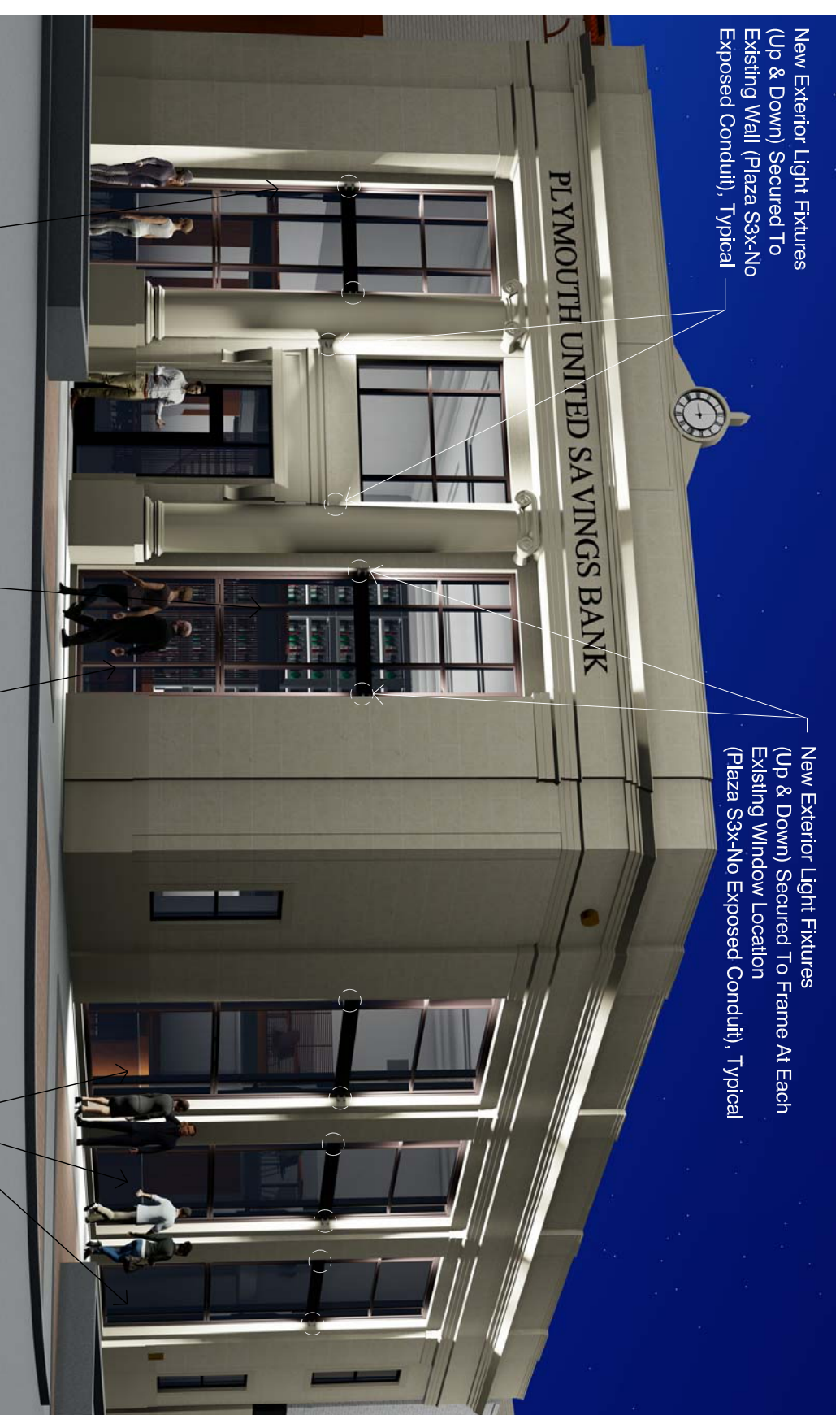


New Exterior Light Fixtures (Up & Down) Secured To Existing Wall (Plaza S3x-No Exposed Conduit), Typical

New Exterior Light Fixtures (Up & Down) Secured To Frame At Each Existing Window Location (Plaza S3x-No Exposed Conduit), Typical

Existing Window To Remain (New Crown SST-II Hydraulic Bi-Fold Window System Removed From Scope of Work), Typical.

Existing Window Sill To Remain, (Removal of Existing Window Sills Removed From Scope of Work), Typical.



Proposed Light Fixture Product Data

Scale: N.T.S.

01 Perspective View - New Exterior Lighting

A-03

Scale: N.T.S.

A-03

Sheet No.



January 7, 2022

Constantine George Pappas Architecture
1025 S. Washington
Royal Oak, Michigan 48067

Attention: Mr. Joe Furtado
jfurtado@cgp-architecture.com

Regarding: Stone Façade Evaluation and Proposed Mock-up
306 S. Main Street
Plymouth, Michigan

Mr. Furtado,

It was a pleasure speaking with both you and Evans Caruso relating to the restoration to the stone façade of the prior back building located at 306 S. Main Street, Plymouth, Michigan. As we discussed, we have done similar projects and we are recommending that we perform a mock-up of the proposed method of repair to the limestone façade.

We are basing our recommendation upon using Conproco stone patching products on the damaged limestone. We are providing you photos of such a repair that was performed at the Marquette Building in Detroit, Michigan in 2019. Together we would select a stone that is approximately six (6) square feet that can be worked on without scaffolding. We would use various methods to remove the cementitious coating, then apply the products necessary to provide a finished product.

As this work is temperature-sensitive, we would perform this work in the spring. Below you will find our pricing to perform a mock-up for you at this location.

RAM will provide all labor, material, equipment, and insurance to complete a 6 s/f restoration mockup to the limestone.

- Various methods to remove the existing coating will be used to establish the best means and methods for the full façade restoration.
- Infilling, patching, and finish coating of the stone, would be performed using Conproco Matrix products. (see attached product data information)

The above mockup can be completed for the lump sum of:..... \$ 3,982.00

Please issue to us a PO or authorization in the amount of \$3,982.00 if you wish for us to proceed with the identified mockup work.

Please note that if awarded the project, we will deduct the price of this work from our contract amount.

Please contact us with any questions and we can make ourselves available for any further discussions.

Respectfully

A handwritten signature in blue ink, appearing to read "Bill VanMarter", is written over a light blue horizontal line.

Bill VanMarter
BVM/kk/22-003



Jul 25, 2019 at 10:46:51 AM
211 W Fort St
Detroit MI 48226
United States



Jul 25, 2019 at 10:41:46 AM
243 W Congress St
Detroit, MI 48226
United States



Jul 26, 2019 at 8:29:44 AM
225 W Congress St
Detroit MI 48226
United States



ARTISAN® Safer Limestone Cleaner

DESCRIPTION

Artisan Safer Limestone is a unique, single step cleaner and restorer for limestone. Artisan is a combination of chelating agents and surfactants. Artisan is most effective on limestone but can also be used on non-polished or non-honed marble and travertine. Use Artisan for both interior and exterior restoration applications.

USES

Artisan can be used without harm to limestone, marble (polished or unpolished), travertine and other similar surfaces.

PREPARATION

Before general application test a Artisan and allow test area to thoroughly dry to determine compatibility and desired results. Protect metal, painted surfaces and all other surfaces this product is not intended. Run-off might clean surrounding areas, protect accordingly.

PROPERTIES

Appearance	Pale yellow liquid
Odor	Slight ammonia
Flash Point	None
pH	11 - 11.5
lbs/gallon	9.5 - 10.0

APPLICATION

Apply Artisan onto a dry surface starting from the bottom and work up. Liberally apply with a brush or low pressure sprayer. Let solution stand for approximately 10-30 minutes, depending on surface and contaminates. Agitate with a stiff brush and rinse thoroughly. Some areas might require a second application.

COVERAGE

Coverage varies depending upon porosity and application method but generally average 100 – 150 square feet per gallon.

PACKAGED

Artisan is available in gallons (4/case), 5 gallon pails and 55 gallon drums.

DISPOSAL

Use completely or dispose of properly. Local requirements vary. Consult your local sanitation department or state designated environmental agency.

STORAGE AND SHELF LIFE

Store in original closed containers. Store in a cool, dry place. Protect from freezing. The shelf life is 36 months in closed, original containers.

SAFETY AND HANDLING

For specific information, please refer to the material safety data sheet. Wear chemical resistant gloves, apron, footwear and goggles. Refer to product label and material safety data sheet for complete safety information. **KEEP OUT OF REACH OF CHILDREN.**

Use only with adequate ventilation. Do not breathe spray mist. Ensure fresh air entry during application and drying. Avoid contact with eyes and prolonged or repeated contact with skin. Avoid exposure to mist by wearing a NIOSH approved respirator during application and clean up. Follow respirator manufacturer's directions for respirator use. Close container after each use. Wash thoroughly after handling.





FIRST AID: In case of eye contact, flush with water for 15 minutes. Get immediate medical attention. In case of contact with skin, wash with soap and water. If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

IN CASE OF SPILL: Absorb with inert material and dispose of properly. **KEEP OUT OF REACH OF CHILDREN.** Refer to Material Safety Data Sheet available for further safety and handling information.

WARRANTY

Information and recommendations for this product are based on research performed by Chemique, Inc. and the research of others, and are believed to be accurate. However, no guarantee of the accuracy is made because we cannot cover every possible application of our products, or can we anticipate every variable that may be encountered regarding types masonry surfaces, job conditions, degradation, weathering, age and methods used. The purchaser and end user must make their own tests to determine the suitability of such products for each particular purpose.

Chemique, Inc. warrants this product to be free from defects. Chemique makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of merchantability or fitness for particular purpose. Chemique, Inc's liability shall be strictly limited to supplying sufficient product to re-clean the specific areas which defective product was applied. Acceptance and use of this product absolves Chemique, Inc. from any and all liability whatsoever, including liability for incidental, consequential or resultant damages whether due to breach of warranty, negligence or strict liability. This warranty may not be altered, modified or extended by representatives of Chemique, Inc., its distributors or dealers.



Artisan Safer Limestone Cleaner

Safety Data Sheet

Section 1. Identification

Product Name: Artisan Safer Limestone Cleaner

Product Code:

Recommended use: Surface Cleaner for Limestone

Restrictions on use: Use only as directed.

Manufacturer Name: Chemique, Inc.
Address: 315 N. Washington Avenue
Moorestown, NJ 08057
Telephone number: (856) 235-4161

Emergency phone number: (800) 535-5053 (Infotrac)

Date of Preparation: September 16, 2013

Section 2. Hazard(s) Identification

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Classification:

Physical	Health
None	Eye Damage Category 1 Carcinogenicity Category 2

Danger!



Hazard statements

Causes serious eye damage.
Suspected of causing cancer.

Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves, protective clothing, eye protection or face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER.
IF exposed or concerned: Get medical attention.
Store locked up.
Dispose of contents and container in accordance with local

and national regulations.

Section 3. Composition / Information on Ingredients

Chemical name	CAS No.	Concentration
Tetrasodium EDTA	64-02-8	20-30%
Surfactant	Proprietary	1-5%
Trisodium Nitritotriacetate	5064-31-3	0.5-1.5%
Sodium Hydroxide	1310-73-2	<1

The specific identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4. First-Aid Measures

Inhalation: Remove victim to fresh air. If breathing has stopped give artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get medical attention.

Skin contact: Wash thoroughly with soap and water until no traces of the chemical remains. Remove contaminated clothing and launder before reuse. Get medical attention if irritation or symptoms of exposure develop.

Eye contact: Immediately flush eyes with water for at least 20 minutes while lifting the upper and lower lids. Get immediate medical attention.

Ingestion: If conscious, give 1 glass of water to dilute. Do not induce vomiting unless directed to by medical personnel. Never give anything by mouth to a person who is unconscious or convulsing. Get immediate medical attention.

Most important symptoms/effects, acute and delayed: Causes severe eye irritation or burns. May cause skin irritation. Inhalation of vapors or mists may cause mucous membrane and upper respiratory irritation. Swallowing may cause irritation of the mouth, throat and stomach with nausea and diarrhea.

Indication of immediate medical attention and special treatment, if necessary: If eye contact occurs, get immediate medical attention.

Section 5. Fire-Fighting Measures

Suitable (and unsuitable) extinguishing media: Use any media appropriate for surrounding fire.

Specific hazards arising from the chemical: None known.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposure containers with water.

Section 6. Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and equipment to prevent eye and skin contact.

Environmental precautions: Avoid release to the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: Dike spill and collect into closable containers for disposal with an inert absorbent. Wash spill site with water.

Section 7. Handling and Storage

Precautions for safe handling: Prevent contact with eyes. Avoid contact with skin and clothing. Avoid breathing vapors or mists. Use only with adequate ventilation. Remove and launder contaminated clothing before re-use. Wash thoroughly after handling and before eating, drinking, smoking or using toilet facilities.

Empty containers retain product residues. Follow all SDS precautions in handling empty containers.

Conditions for safe storage, including any incompatibilities: Store in a cool, well ventilated area away from oxidizers and other incompatible materials. Protect containers from physical damage.

Section 8. Exposure Controls / Personal Protection

Exposure guidelines:

Tetrasodium EDTA	None Established
Surfactant	None Established
Trisodium Nitritotriacetate	None Established
Sodium Hydroxide	2 mg/m ³ Ceiling ACGIH TLV 2 mg/m ³ TWA OSHA PEL

Appropriate engineering controls: Good general room ventilation (equivalent to outdoors) should be adequate under normal conditions. If the recommended exposure limit is exceeded increased mechanical ventilation such as local exhaust may be required.

Personal Protective Equipment:

Respiratory protection: Good general ventilation (equivalent to outdoors) should be adequate under normal conditions. For spray application and for large jobs where the recommended exposure limit may be exceeded an approved particulate may be used. For higher concentrations, a NIOSH approved supplied air respirator (with escape bottle if required) or self-contained breathing apparatus may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

Skin protection: Neoprene rubber or other impervious gloves are recommended to prevent skin contact.

Eye protection: Wear chemical goggles and/or faceshield to prevent eye contact. Do not wear contact lenses.

Other: Impervious apron, boots and other clothing are recommended if needed to prevent contact or if splashing is possible. For operations where contact can occur, a safety shower and an eye wash facility should be available.

Section 9. Physical and Chemical Properties

Appearance (physical state, color, etc.): Yellow Liquid

Odor: Slight ammonical odor.

Odor threshold: Not available	pH: 11
Melting point/freezing point: <0°F	Boiling point: >212°F / >100°C
Flash point: Not flammable	Evaporation rate: Not available
Flammability (solid, gas): Not applicable	
Flammable limits: LEL: Not available	UEL: Not available
Vapor pressure: Not determined	Vapor density: Not available
Relative density: 1.00	Solubility(ies): Completely soluble in water
Partition coefficient: n-octanol/water: Not available	Auto-ignition temperature: Not available
Decomposition temperature: Not available	Viscosity: Not available
VOC: 10g/L	

Section 10. Stability and Reactivity

Reactivity: Not reactive under normal conditions of use.
Chemical stability: Stable
Possibility of hazardous reactions: None known.
Conditions to avoid: Contact with copper, zinc and aluminum may release flammable hydrogen gas.
Incompatible materials: Avoid oxidizing agents.
Hazardous decomposition products: Thermal decomposition may produce carbon and nitrogen oxides.

Section 11. Toxicological Information

Acute effects of exposure:
Inhalation: Inhalation of vapors or mist may cause respiratory irritation with coughing, sneezing and sore throat.
Skin Contact: Contact may cause irritation with redness and swelling.
Eye Contact: Contact may cause severe irritation or burns with redness, pain and tearing. .
Ingestion: Swallowing may cause mucous membrane and gastrointestinal irritation. Large amounts cause gastrointestinal distress and osmotic balance from chelation of metals in the body.
Chronic Effects: Prolonged or repeated exposure may cause skin irritation with redness and swelling. Prolonged overexposure to trisodium nitrilotriacetate has been shown to cause kidney toxicity.
Sensitization: None of the components have been shown to cause sensitization to animals or humans.
Germ Cell Mutagenicity: None of the components have been shown to cause germ cell mutagenicity.
Reproductive Toxicity: Sodium salts of EDTA have been reported to cause birth defects in animals at doses not expected in occupational exposures. These effects were observed only at levels that were toxic to the mother

Carcinogenicity: Nitrilotriacetic acid and its salts have been classified as “possibly carcinogenic to humans” (Group 2B) by IARC. None of the other components are listed as carcinogens or suspected carcinogens by IARC, NTP, ACGIH or OSHA.

Acute toxicity values:
Tetrasodium EDTA: Oral rat LD50 1780mg/kg;
Surfactant: No toxicity data available
Trisodium Nitrilotriacetate: Oral rat LD50 1740 mg/kg; Inhalation rat LC50 >5.0 mg/L/4 hr.
Sodium Hydroxide: No toxicity data available

Section 12. Ecological Information

This product may be harmful to aquatic organisms due to change in pH of water where released.

Ecotoxicity values:

Tetrasodium EDTA: 96 hr LC50 *Lepomis macrochirus* 121 mg/L; 24 hr EC50 *daphnia magna* 652 mg/L;

Surfactant: No data available

Trisodium Nitritotriacetate: No data available

Sodium Hydroxide: 48 hr EC50 *Ceriodaphnia* sp 40.4 mg/L

Persistence and degradability: Tetrasodium EDTA is not considered readily biodegradable. It degrades very slowly in soil or water and the soluble salts rapidly degrade with light.

Bioaccumulative potential: Tetrasodium EDTA has a calculated BSF of 100.

Mobility in soil: No data available.

Other adverse effects: None known.

Section 13. Disposal Considerations

Dispose in accordance with all local, state and federal regulations.

Section 14. Transport Information

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT	N/A	Not Regulated	N/A	N/A	None
TDG	N/A	Not Regulated	N/A	N/A	None

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known

Section 15. Regulatory Information

Safety, health, and environmental regulations specific for the product in question.

CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Acute health, Chronic Health

EPA SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313: None

California Proposition 65: This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity: None

EPA TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

CANADA:

Canadian CEPA: All the components of this product are listed on the Canadian DSL.

Canadian WHMIS Classification: Class D-2-A, Class D-2B

This product has been classified under the CPR and this SDS discloses information elements required by the CPR.

Section 16. Other Information

SDS Revision History: All sections revised. Converted to GHS format.

Date of preparation: 16 September 2013

Date of last revision: 29 January 2011

PLAZA S3x/ PLAZA S7x SPECIFICATION

PLAZA S3x



N.B. These products require clear airflow to maintain the LED junction temperature and lifetime of the product. Please refer to the installation instructions for necessary volumetric air details.

PRODUCT FEATURES

Plaza S3x and Plaza S7x are a family of extremely compact adjustable IP67 surface mounted spotlights for the illumination of architectural façades, feature details, niches and structures.

PLAZA S7x



Simple minimalist design, solid construction: Incredibly small and beautifully designed to blend seamlessly within the architectural environment. Plaza S3x and Plaza S7x are constructed with 6063 grade aluminium and finished in a specialist corrosion resistant powder coat paint, to ensure the long life integrity of the product.

Clean Beam Design (CBD) with wide optic choices: The optics and internal detailing of the luminaire have been designed to ensure outstanding control of the beam angle, and the cleanliness of the overall lit effect, without stray light or unpleasant imaging. We have a multitude of optics from super narrow to flood, plus multiple colour temperature options.

Deep recessed Single Source LED with integral snoot to minimise glare: The 320 and 700 lumen single chip LED is positioned 15mm on the Plaza S3x and 30mm on the Plaza S7x from the front of the luminaire to hide it from view. The matt black integral snoot aids in hiding the source from view to ensure the visual comfort of the luminaire.

Broad Choice as standard, with broad range of colors and optics: Black, white and RAL colors are available, along with a wide range of beam angles and driver options allowing you to position and control the light wherever and however you require.

Materials and finish: Grade 6063 Aluminium housing. Powder coat black and white. RAL colors are available upon request.

Installation and mounting: Surface or wall mounted on adjustable bracket. Ground spike and tree strap accessories available. Can be adjusted on site by +90/-120 degrees. Plaza S3x is individually pre wired. Plaza S7x features an internal junction box for through wiring.

Application: Suitable for flood lighting on building façades and surroundings, and highlighting objects in the public realm. They are suitable for outdoor applications with IP67 protection and for ambient environments up to 104°F.

Drivers: Switched and 0-10v drivers are available, capable of powering up to 4 Plaza S3x and 4 Plaza S7x luminaires.

Optics:

PLAZA S3x - Narrow = 15°

Medium = 22°

Flood = 35°

Linear = 46° x 11°

PLAZA S7x - Super Narrow = 10°

Narrow = 13°

Medium = 29°

Flood = 36°

Specification text: To specify state: IP67 Surface Mounted Adjustable LED Spotlight with simple minimalist design. Deep recessed single LED with integral snoot with CBD to ensure minimal glare and light spill. Solid construction from 6063 grade aluminium with Black and White powder coat paint finish. Delivered Lumen package in the region of 700 lumens for Plaza S7x. 320 lumens for Plaza S3x with optic choice of super narrow (S7x), narrow, medium, flood, and linear (S3x). Single source LED binned to 2 step MacAdam Ellipses with color temperature of 2700K/3000K/4000K and CRI >80. Lifetime of 50 000 hours @ L70 Ta 50°C. Plaza S3x and Plaza S7x acdc.

SPECIFICATION CODES

PRODUCT		LIGHT ENGINE		OPTICS		FINISH		CABLE	IP
PLAZA S3x 320	PLAZA S3x 320	80CRI 2700K	-827	NARROW	N	WHITE	WH	2M FLYING LEAD	67
		80CRI 3000K	-830	MEDIUM	M	BLACK	BL		
		80CRI 4000K	-840	FLOOD	F	RAL	RAL		
				LINEAR HORIZONTAL	LH				
				LINEAR VERTICAL	LV				
PLAZA S3x 320		-827		N		WH		2M	67

ACCESSORIES	
TREE STRAP	21903362 TREE STRAP
GROUND SPIKE	21100170 SPIKE 1796

*VERIFY RAL/CUSTOM COLOR TO MATCH COLOR OF EXTERIOR STONE.

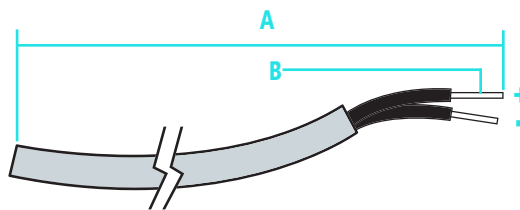
PRODUCT		LIGHT ENGINE		OPTICS		FINISH		CABLE	IP
PLAZA S7x 700	PLAZA S7x 700	80CRI 2700K	-827	SUPER NARROW	SN	WHITE	WH	STD NONE	67
		80CRI 3000K	-830	NARROW	N	BLACK	BL		
		80CRI 4000K	-840	MEDIUM	M	RAL	RAL		
				FLOOD	F				
PLAZA S7x 700		-827		N		WH		STD	67

DRIVER OPTIONS

Driver options								
Protocol type	Product	Driver Order Code	No of products driven per driver	Max watts	Current mA	Primary Voltage	Dimming %	Enclosure Dimensions
Switched	Plaza S3x	DR-LEDR-035-006-UNV-S	1	6W	350mA	120-277v	N/A	1 7/8" x 3 9/16" x 7 7/8"
		DR-LEDR-035-017-UNV-S	1-4	17W	350mA	120-277v	N/A	1 7/8" x 3 9/16" x 7 7/8"
	Plaza S7x	DR-LEDR-070-033-UNV-S	1-3	33W	700mA	120-277v	N/A	1 7/8" x 2 5/16" x 8 7/8"
0-10v	Plaza S3x	DR-LEDR-035-030-UNV-D010	1-4	30W	350mA	120-277v	1%	1 7/8" x 3 9/16" x 7 7/8"
	Plaza S7x	DR-LEDR-070-030-UNV-D010	1-3	30W	700mA	120-277v	1%	1 7/8" x 3 9/16" x 7 7/8"

WIRING: PLAZA S3x

PLAZA S3x	A	B	CHANNEL 1	
			+	-
	2000mm	0.22mm	RED	BLUE



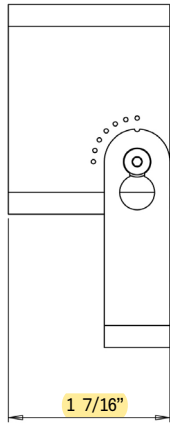
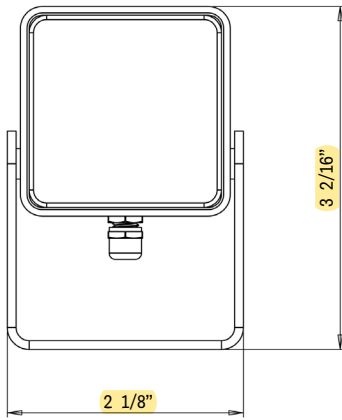
WIRING: PLAZA S7x

Contractor must wire with cable between 3-6mm OD (outer diameter). 2 core cable with 0.5mm-0.75mm CSA.

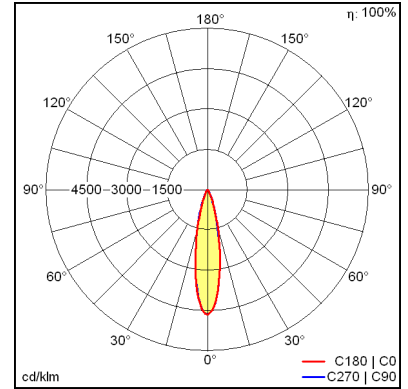


DIMENSIONAL DRAWINGS (MM)

PLAZA S3x

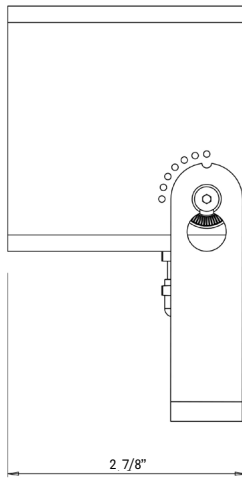
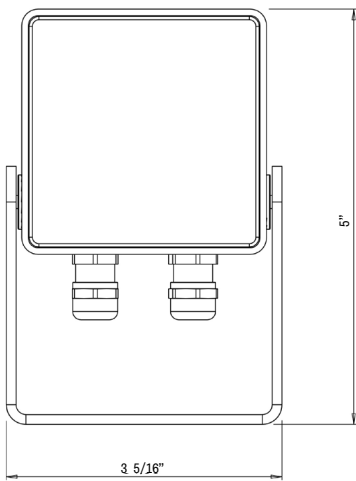


POLAR DIAGRAM

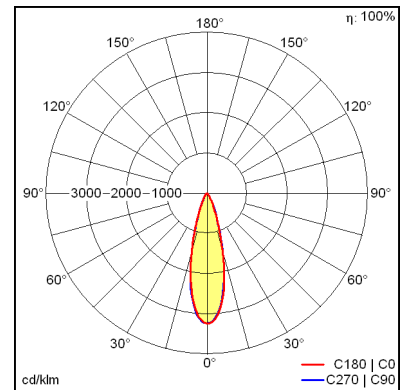


Based on 3000K, medium.

PLAZA S7x

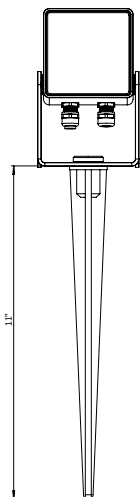


POLAR DIAGRAM

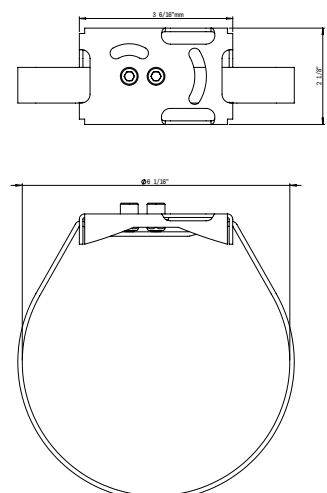


Based on 3000K, medium.

GROUND SPIKE



TREE STRAP

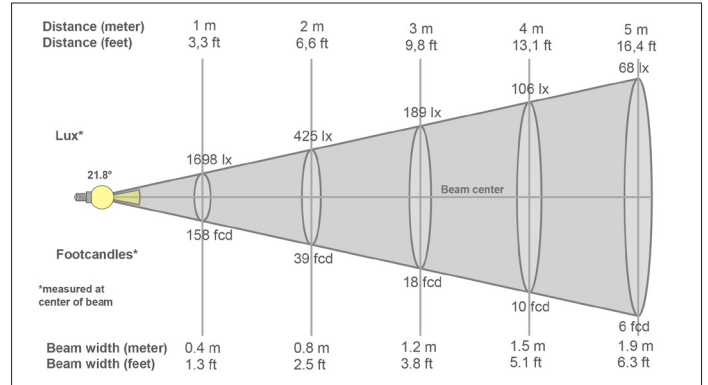


PERFORMANCE SUMMARY

LIGHT SOURCE INFORMATION: PLAZA S3x

Optic	N	M	F	L
Luminaire Lumen Output	376	351	315	386
Luminaire Lumens per Circuit Watt (lm/W)	83	77	70	85
Lifetime L70. Based on TM-21	>50,000			
CRI	80			
Operating Temperature Range	14/104°F			
Power Consumption. (Including 85% efficient driver) - Watts	4.5			
Color Accuracy	2 Step MacAdam ellipse			
Color Temperature	Based on 3000K			

CONE DIAGRAM

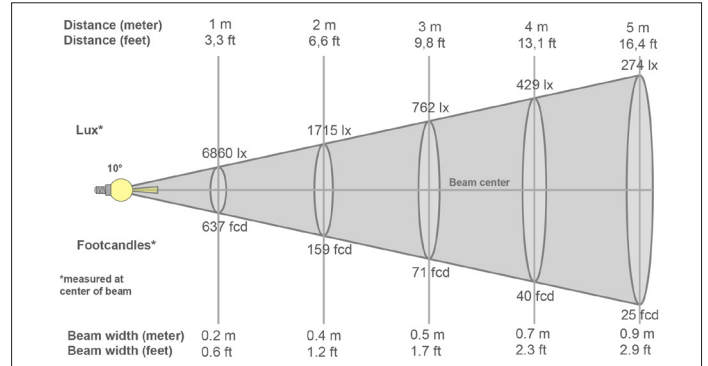


Based on 3000K, medium.

LIGHT SOURCE INFORMATION: PLAZA S7x

Optic	SN	N	M	F
Luminaire Lumen Output	287	545	768	772
Luminaire Lumens per Circuit Watt (lm/W)	32	60	85	86
Lifetime L70. Based on TM-21	>50,000			
CRI	80			
Operating Temperature Range	14/104°F			
Power Consumption. (Including 85% efficient driver) - Watts	9			
Color Accuracy	2 Step MacAdam ellipse			
Color Temperature	Based on 3000K			

CONE DIAGRAM



Based on 3000K, super narrow.

All acdc products are independently tested in line with LM80 standards, 50,000 hours lifetime with lumen maintenance at L70 to guarantee product performance. Output data figures stated are typical values.



Matrix Superfine

Trowel applied, composite repair mortar, formulated to be compatible with the color and physical properties of parent material.

WHERE TO USE

Repair and reconstruct natural and cast stone, terracotta, and brick when a very smooth finish is required.

Performance Characteristics

Low shrinkage

- Maintains integrity of repair, resists cracking.

Thermal compatibility

- Prevents delamination due to temperature change.

Durable

- Resistant to weathering action, excellent freeze/thaw stability and abrasion resistance.

Very low permeability

- Resistant to deicing salts, chloride, and chemical attack, and environmental pollution.

Breathability

- Will not cause damage to structure by restricting moisture vapor flow.

Shaveable

- Recreate sharp edges and architectural details. Long "carving" window while mortar cures.

Single component

- Easy to batch in less than full pail quantities.

On-site color matching

- Great matches, no wait for factory samples.

Surface Preparation

- Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper bond.
- Saw cut edges with a diamond blade at a 90° angle to eliminate feather edging. Avoid polishing the edges, as this will inhibit bond.
- Avoid bruising or micro cracking during surface preparation. Refer to ICRI Surface Preparation Guide 03732.
- Repair zone must be a minimum of 1/2 inch deep, of simple geometry, with no complex edge conditions.
- Avoid long narrow repairs; these have a greater tendency to crack.
- Apply Conpro Start where a consolidant is of benefit.

- Saturate substrate with clean water, (saturated surface dry/SSD), with no standing water during Priming or Application.
- Remove cast stone/concrete from corroded steel and several inches beyond to expose non-corroded steel.
- Provide a 3/4 inch clearance between the substrate and any steel elements.
- Damaged reinforcing steel should be examined by a qualified engineer and appropriate action taken.

Priming

Embedded Metal and Steel

- Remove all scaling rust from embedded metal and steel.
- Apply ECB anti-corrosion coating.

Stone, Terracotta and Concrete

- Prime the prepared substrate including all edges with a bond coat of Matrix Superfine just prior to starting application. Work the bond coat into the substrate to ensure intimate contact and establish bond (about 1/16" – 1/8"). The repair mortar must be applied into the plastic bond coat. If the bond coat dries, remove and re-apply.

Mixing

- Measure Matrix Superfine powder and water to achieve a 4 part powder to 1 part water ratio.
- Pour measured water into a clean container suitable for mixing.
- Place 1/2 of measured Matrix Superfine into mixing container with water and mix until uniform. Add remaining 1/2 Matrix Superfine to the mixing container and mix until fully blended to a uniform, lump free consistency.
- Mechanically mix using a low speed drill (400 – 600 rpm) and mixing paddle or mortar mixer.

- Additional water may be added to achieve desired consistency for placement of the Matrix Superfine. Over watering the mix will affect final color.
- For multiple batches, the additional water should be added in a uniform fashion to avoid color shift.
- Insufficient water will not hydrate the material and it will not achieve full strength. Mix only as much material as can be placed in 15 -20 minutes.
- Do not over mix, as this will entrain air.
- Do not retemper, this will affect color.

Application

- At the time of application, surfaces should be saturated surface dry (SSD) but hold no standing water.
- Follow instructions for Priming.
- Force the material against the edges of the repair, working from right to left or left to right.
- Over build repair zone by 1/4 inch.
- Shave to final form with Mitre Rod up to 2+ hours (longer in cold temperatures) after application.
- Do not overwork the finish.

Curing

- Ensure repair zone stays properly hydrated. This may vary depending on ambient conditions. If hydration is not maintained, the repair may flash dry and not achieve full strength. Refer to ACRI 308R-01 for detailed curing recommendations. If the repair is inaccessible, tape polyethylene over area to retain moisture. Do not allow polyethylene to contact the material.
- Protect repair from direct sunlight, wind, rain and frost during curing period.

Clean Up

- Clean tools and equipment with water immediately after use.
- Cured material must be removed mechanically.

Matrix Superfine

Theoretical Yield

Yield per Pail	Repair Depth	Square Feet
0.5 cubic feet	1/2 Inch	12.00
0.5 cubic feet	1 Inch	6.00
0.5 cubic feet	1.5 Inches	4.50
0.5 cubic feet	2 Inches	3.00

Product Handling

Packaging

- 5 gallon plastic pails – 50 lbs.

Shelf Life

- 18 months when properly stored.

Storage

- Transport and store in cool, clean, dry conditions in unopened containers.
- High temperature or high humidity will reduce shelf life.

Limitations

- Do not apply unless substrate and ambient temperature can be maintained at a minimum of 40°F for 24 hours. Refer to ACI Cold Weather Application Guidelines.
- Cold mixing water and low temperatures will retard set. Hot

and high temperatures will accelerate set.

- Protect application from precipitation and high wind for at least 24 hours.
- Do not add more water than specified.
- Do not re-temper, as this will affect color.
- Avoid overworking material during placement as this will affect color and cause surface (map) cracking.
- Do not allow polyethylene or burlene to touch surface while curing as this will cause whitening of the material.

Health and Safety

- Product is alkaline.
- Do not ingest.
- Avoid breathing dust.

- Avoid contact with skin and eyes.
- Refer to Safety Data Sheet (SDS) for additional information.

First Aid

- In case of skin contact, wash thoroughly with soap and water.
- For eye contact, flush immediately with a high volume of water for at least 15 minutes and contact a medical professional.
- For respiratory problems, remove person to fresh air.

Disposal

- Dispose of material in accordance with local, state and federal regulations.

Technical Data

Physical state and appearance		Dry, pigmented powder
Base		Portland cement
pH	Wet mix	>12
Water/dry material ratio		0.20
Dry bulk density	ASTM C188	92 lbs./ft. ³
Density	Hardened	118 lbs./ft. ³
Setting time by vicat needle	ASTM C191	240 minutes
Percent air – pressure method	ASTM C231	4%
Water absorption	ASTM C140	11%
Water vapor transmission	ASTM E96	10.07 perms
Length change	ASTM C157	<500 µstrains @28 days
Modulus of elasticity	ASTM C469	2.6 X 10 ⁶
Slant shear bond strength – epoxy	ASTM C882	1800 psi
		7 Days 14 Days 28 Days
Compressive strength – psi	ASTM C109	2900 3000
Tensile strength – psi	ASTM C307	400 480 560

FOR PROFESSIONAL USE ONLY

Conproco warrants this product for one year from the date of manufacture to be free from manufacturing defects and to meet the technical properties on the current technical data sheet if used as directed within shelf life. User determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product, exclusive of labor or cost of labor. September 29, 2020.

NO OTHER WARRANTIES EXPRESSED OR IMPLIED SHALL APPLY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. CONPROCO CORP SHALL NOT BE LIABLE UPON ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES.

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Matrix TR

Brush applied, polymer modified, cementitious repair mortar for thin repairs to natural and cast stone.

WHERE TO USE

Thin, protective repairs to brownstone, sandstone, limestone, cast stone, terracotta and concrete.

Performance Characteristics

Low shrinkage

- Maintains integrity of repair, resists cracking.

Thermal compatibility

- Prevents delamination due to temperature change.

Durable

- Resistant to weathering action, excellent freeze/thaw stability and abrasion resistance.

Very low permeability

- Resistant to deicing salts, carbonation, chloride, and chemical attack.

Breathability

- Will not cause damage to structure by restricting moisture vapor flow.

Complete kit

- Pre-measured, two component system in one container.

Extensive color spectrum

- Available in 11 standard colors and custom color matching.

Surface Preparation

- Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper bond.
- Apply *Conpro Start* where a consolidant is of benefit.
- Pre-treat static cracks and voids with *Matrix TR*.
- Saturate substrate with clean water, (saturated surface dry/SSD).
- Mechanically prepare surface to be open-pored and textured (CSP 3). Refer to ICRI Surface Preparation Guide 03732 for information about surface preparation.

Priming

- No priming is required under normal circumstances.

Mixing

- Mechanically mix using a low speed drill (400-600 rpm) and mixing paddle.
- Thoroughly shake *K-88 Admix* to disperse the pigment.
- Pour all of the *K-88 Admix* into a clean mixing vessel and slowly add all of the powder.
- Mix continuously for 3 minutes to a uniform, lump-free consistency.
- Allow to "breathe" for 1 minute and remix for 1 minute. This will improve workability and open time.
- Do not overmix, as this will entrain excess air.
- Do not re-temper.

Application

- At the time of application, surfaces should be saturated surface dry (SSD) but hold no standing water.
- Apply material with a stiff bristle brush or sponge float.
- Work material into substrate to promote proper adhesion.
- Coat individual stones (not continuous over mortar joints) a maximum thickness of 1/16 inch.
- Finish with a sponge float or trowel.
- Do not overwork the finish.

Curing

- Protect repair from direct sunlight, wind, rain condensation and frost during curing period.

Clean Up

- Clean tools and equipment with water immediately after use.
- Cured material must be removed mechanically.

Matrix TR

Coverage/Yield

- **10 lb. kit** - 20 ft² @ 1/16 inch.

Product Handling

Packaging

- 10 lb. kit contains 8.36 lbs. of powder and 2.1 lbs. of K-88 Admix in plastic pails.

Shelf Life

- 18 months when properly stored.

Storage

- Transport and store in cool, clean, dry conditions in unopened containers.
- High temperature or high humidity will reduce shelf life.
- Protect K-88 Admix from freezing.

Limitations

- Do not apply unless substrate and ambient temperature can be maintained at a minimum of 45°F for 24 hours. Refer to ACI Cold Weather Application Guidelines.
- Protect application from precipitation condensation and high wind for at least 24 hours.
- Do not re-temper, polymer modified materials.
- Avoid overworking material during placement.
- Do not apply curing compounds.
- Do not allow polyethylene or burlene to touch surface while curing as this will cause whitening of the material.

Health and Safety

- Product is alkaline.
- Do not ingest.
- Avoid breathing dust.
- Avoid contact with skin and eyes.
- Refer to Safety Data Sheet (SDS) for additional information.

First Aid

- In case of skin contact, wash thoroughly with soap and water.
- For eye contact, flush immediately with a high volume of water for at least 15 minutes and contact a medical professional.
- For respiratory problems, remove person to fresh air.

Disposal

- Dispose of material in accordance with local, state and federal regulations.

Technical Data

Physical state and appearance		Dry pigmented powder and liquid		
Base		Portland cement		
Powder		Acrylic polymer		
Liquid admix				
pH	Wet mix	>12		
Liquid/dry material ratio		0.33		
Dry bulk density	ASTM C188	93 lbs./ft. ³		
Density	Hardened	118 lbs./ft. ³		
Setting time @ 1/8 inch thickness	ASTM C953	Initial 15 minutes – Final 30 minutes		
Durometer hardness	ASTM D2240	70		
Water vapor transmission	ASTM E96	5.1 perms		
Accelerated weathering	ASTM G154	2000 hours – excellent – no effect		
		7 days	14 Days	28 days
Compressive strength - psi	ASTM C109	4000	5100	6200
Tensile strength – psi	ASTM C307	200	250	350

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Matrix

Trowel applied, cementitious repair mortar, formulated to be compatible with the color and physical properties of parent material.

WHERE TO USE
Repair and reconstruct natural and cast stone, terracotta, and brick. Unique on-site color matching by trained, certified technicians.

Performance Characteristics

Low shrinkage

- Maintains integrity of repair, resists cracking.

Thermal compatibility

- Prevents delamination due to temperature change.

Durable

- Resistant to weathering action, excellent freeze/thaw stability and abrasion resistance.

Very low permeability

- Resistant to deicing salts, chloride, and chemical attack, and environmental pollution.

Breathability

- Will not cause damage to structure by restricting moisture vapor flow.

Shaveable

- Recreate sharp edges and architectural details.

Single component

- Easy to batch in less than full pail quantities.

On-site color matching

- Great matches, no wait for factory samples.

Surface Preparation

- Remove loose and deteriorated material, laitance, dirt, dust, oil and any surface contaminants that will inhibit proper bond.
- Saw cut edges with a diamond blade at a 90° angle to eliminate feather edging. Avoid polishing the edges, as this will inhibit bond.
- Avoid bruising or micro cracking during surface preparation. Refer to ICRI Surface Preparation Guide 03732.
- Repair zone must be a minimum of 1/2 inch deep, of simple geometry, with no complex edge conditions.
- Avoid long narrow repairs; these have a greater tendency to crack.
- Apply *Conpro Start* where a consolidant is of benefit.
- Saturate substrate with clean water, (saturated surface dry/SSD), with no standing water during *Priming* or *Application*.

- Remove concrete from corroded steel and several inches beyond to expose non-corroded steel.
- Provide a 3/4 inch clearance between the concrete and steel.
- Damaged reinforcing steel should be inspected by a qualified engineer and appropriate action taken.

Priming

Stone, Terracotta and Concrete

- Prime the prepared substrate including all edges with a bond coat of *Matrix*. Work the bond coat into the substrate to ensure intimate contact and establish bond. The repair mortar must be applied into the plastic bond coat. If the bond coat dries, remove and re-apply.

Embedded Metal and Steel

- Remove all scaling rust from embedded metal and steel.
- Apply *ECB* anti-corrosion coating.

Mixing

- Measure Matrix powder and water to achieve a 4 to 4.5 parts powder to 1 part water ratio (or approximately 1 gallon per 50 lb unit of Matrix).
- Pour measured water into a clean container suitable for mixing.
- Place 1/2 of measured Matrix into mixing container with water and mix until uniform. Add remaining 1/2 Matrix to the mixing container and mix until fully blended to a uniform, lump free consistency.
- Mechanically mix using a low speed drill (400 - 600 rpm) and mixing paddle or mortar mixer.
- Additional water may be added to achieve desired consistency for placement of the Matrix. Over watering the mix will affect final color.
- For multiple batches, the additional water should be added in a uniform fashion to avoid color shift.
- Insufficient water will not hydrate the material and it will not achieve full strength. Mix only as much material as can be placed in 15 - 20 minutes.

- Do not over mix, as this will entrain excess air.
- Do not re-temper, this will affect color.

Application

- At the time of application, surfaces should be saturated surface dry/damp (SSD) but hold no standing water.
- Follow instructions for *Priming*.
- Force the material against the edges of the repair, working from right to left or left to right.
- Over-build repair zone by 1/4 inch.
- Shave to final form with Mitre Rod up to 2 hours (longer in cold temperature) after application.
- Do not overwork the finish.

Curing

- Ensure repair zone stays properly hydrated. This may vary depending on ambient conditions. If hydration is not maintained, the repair may flash dry and not achieve full strength. Refer to ACI 308R-01 for detailed curing recommendations. If the repair is inaccessible, tape polyethylene over area to retain moisture. Do not allow polyethylene to contact the material.
- Protect repair from direct sunlight, wind, rain and frost during curing period.

Clean Up

- Clean tools and equipment with water immediately after use. Cured material must be removed mechanically.

Matrix

Theoretical Yield

Yield per Pail	Repair Depth	Square Feet
0.5 cubic feet	1/2 Inch	12.00
0.5 cubic feet	1 Inch	6.00
0.5 cubic feet	1.5 Inches	4.50
0.5 cubic feet	2 Inches	3.00

Product Handling

Packaging

- 5 gallon plastic pails – 50 lbs.

Shelf Life

- 18 months when properly stored.

Storage

- Transport and store in cool, clean, dry conditions in unopened containers.
- High temperature or high humidity will reduce shelf life.

Limitations

- Do not apply unless substrate and ambient temperature can be maintained at a minimum of 40°F for 24 hours. Refer to ACI Cold Weather Application Guidelines.
- Cold mixing water and low temperature will retard set. Hot water and high temperature will accelerate set.
- Protect application from precipitation and high wind for at least 24 hours.
- Do not add more water than specified.
- Do not re-temper, as this will affect color.
- Avoid overworking material during placement as this will affect color and cause surface checking.
- Do not allow polyethylene or burlene to touch surface while curing as this will cause whitening of the material.

Health and Safety

- Product is alkaline.
- Do not ingest.
- Avoid breathing dust.
- Avoid contact with skin and eyes.
- Refer to Material Safety Data Sheet (MSDS) for additional information.

First Aid

- In case of skin contact, wash thoroughly with soap and water.
- For eye contact, flush immediately with a high volume of water for at least 15 minutes and contact a medical professional.
- For respiratory problems, remove person to fresh air.

Disposal

- Dispose of material in accordance with local, state or federal regulations.

Technical Data

Physical state and appearance	Dry, pigmented powder		
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Modulus of elasticity	ASTM C469	2.6 x 10 ⁶	
Slant shear bond strength – epoxy	ASTM C882	1800 psi	
		7 Days	14 Days
Compressive strength – psi	ASTM C109	2900	3000
Tensile strength – psi	ASTM C307	400	480
			28 Days
			560

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