



FROM THE OFFICE OF THE CITY MANAGER

August 11, 2014

To: Mayor and City Council Members
From: Brian Kischnick, City Manger
Subject: City Council Member Questions and Responses

I have discussed questions advanced by Mayor and Council with Staff, and responses are attached. Thank you for asking questions in advance of the meeting.

Subject: E-01 PH FOR ESTABLISHMENT OF AN IDD FOR MAHINDRA NORTH AMERICAN TECHNICAL CENTER - 1055 W SQUARE LAKE RD
E-02 PH FOR THE GRANTING OF AN IFEC FOR MAHINDRA NORTH AMERICAN TECHNICAL CENTER - 1055 W SQUARE LAKE RD

Are we going to have a presentation on the financial impact of this item? The item indicates no impact, but what about future foregone taxes?

Also do these items allow Mahindra to address the parking issues they mentioned to us, or is that going to be a separate situation?

Response:

From: Nino A Licari
Sent: Monday, August 11, 2014 7:23 AM
Subject: RE: E1 & E2

We always have a presentation for tax abatement issues. On the first page of both memos it sets out the financial impact to the City at \$5,692.00.

While that means we would forfeit \$5,692.00 in taxes that we would have received had there been no abatement, it also means that we will receive \$5,692.00 in taxes that we are not receiving, and have not been receiving because the building has been vacant for several years.

It's one of the smallest abatements we have ever granted, and is very short term, only 5 years, also the shortest in years.

The parking issue is totally separate from the abatement, and has no effect on the abatement.

Subject: J-04A SPR1 AWARD TO LOW BIDDER - CONTRACT 14-4 - 2014 HISTORICAL VILLAGE PATHWAY IMPROVEMENTS

My only comment on this item is regarding the wimpiness of stamped colored concrete especially regarding winter clearing and salt applications.

You should send someone over to my home to look at my porch and driveway to see how salt destroys this in short order. It can be sealed, but sealing makes the concrete uber slick regardless of what the coatings people tell you about adding grit to a coating. And the deterioration on my stamped colored concrete occurred even with being coated. Very disappointing material overall.

Responses:

From: William J Huotari

Sent: Monday, August 11, 2014 8:36 AM

Subject: J4 - Stamped Colored Concrete

Attached are the colored concrete specs from the Big Beaver Park project as well as the museum project.

The big difference between the two is Big Beaver required a coloring agent in the concrete meaning it was a "red" color from the top of the slab to the bottom. There was also a surface applied color once the pavement was placed.

The museum project is a surface applied color only. The color is troweled in, so it does penetrate more than just on the surface, but not all the way through the 4" slab.

Both specs require(d) a curing/sealing compound to be applied after texturing/stamping is complete.

The pathway at the museum will be stamped with a brick pattern matching the brick pavers in front of the church or a Fieldstone pattern (random stone) type pattern which will provide more friction than a smooth surface.

Colored concrete, like used on Big Beaver, is much more expensive than just a surface applied color agent as colored concrete requires a special batch be made and on a small project like the museum costs would be increased.

I spoke with Antonio this morning and he has discussed the project with the supplier and is confident that the specs will provide a surface that is more resilient than the brick pavers that are being removed and provide a safe route for the visitors at the museum site.

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FOR
COLORED CONCRETE PAVING

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A. Description:

This work shall consist of furnishing and installing Colored Concrete Paving. This work shall be done in accordance with Section 602 and 803 of the MDOT Interim 2003 Standard Specifications for Construction except as modified, herein.

Submittals.-Submit concrete design mix and color additive. Provide material certificates signed by the product manufacturer's certifying that the product complies with requirements.

Quality Assurance.-Comply with ACI 301, "Specifications for Structural Concrete".

Installer qualifications: an experienced installer who has completed colored concrete paving work similar in material, design, and extent to that indicated for this Project and whose work has resulted with a record of successful performance. Provide examples of three similar projects for review.

Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM 94 requirements for production facilities and equipment.

Pre-Construction Conference: Conduct a meeting to review detailed requirements for applying colored concrete finishes and to determine procedures to achieve satisfactory results. Review requirements for submittals, status of coordinating work, and availability of materials. Request representatives of each entity directly concerned with colored concrete finishes to attend conference, including but not limited to the following:

1. Contractor's Superintendent
2. Concrete Subcontractor
3. Colored concrete system manufacturer
4. Architect and Owner's Representative

B. Materials:

All materials specified shall be as specified and detailed in the Construction Drawings.

1. Concrete Materials shall be in accordance with Section 02520 Concrete Paving except as modified, herein.
2. Coloring Agents:
 - a. Colored admixture for integrally colored concrete: CHROMIX P Admixture and CHROMIX L; L. M. Scofield Company.

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- b. Admixture shall be a colored, water-reducing, admixture containing no calcium chloride with coloring agents that are limeproof and ultra-violet resistant.
- c. Colored admixture shall conform to the requirements of ACI 303.1, ASTM C979, ASTM C494 and ASSHTO M194.
- d. Dry-shake colored hardener: LITHOCHROME Color Hardener; L.M. Scofield Company, factory proportioned, mixed, and packaged, ready-to-use surface hardener.
- e. Curing and sealing compound: SCOFIELD Cureseal-S (gloss); L. M. Scofield Company. Curing and sealing compound shall comply with ASTM C309 and be of same manufacturer as colored admixture, for use with integrally colored concrete.

3. COLORS:

a. Concrete color:

Cement: Color shall be gray.

Sand: Color shall be locally available natural sand.

Aggregate: Concrete producer's standard aggregate complying with specifications 033000.

Colored admixture for integral colored concrete: Scofield color: Chromix "Sorrento Red," from Scofield color chart A-312.

- b. Curing compound: Color to match integrally colored concrete.
- c. Color for color hardener: Color: Vermillion from Scofield Color Chart A-112.08 Lithochrome Color Hardener.

Contractor shall prepare a 4'x4'x4" thick sample slab on site using processes and techniques intended for use in final product, including texturing and applications of curing compound for Owner approval.

- 4. Concrete Mixes: Prepare design mixes, proportional according to ACI 211.1 and ACI 301, with the following properties:

Compressive Strength (28 Days): 4000 PSI
Maximum Water-Cementitious Materials Ratio: 0.50
Slump Limit: 4 inches
Air Content: 4.5 to 7.5 percent

- 5. Ready Mixed Concrete: Comply with requirements and with ASTM C 94 and ASTM C 1116.

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- a. Do not add water to the mix in the field.
- b. Do not add calcium chloride to mix as it causes mottling and surface discoloration.

C. Construction Methods:

1. Colored concrete placement shall be in accordance with section 02520 Concrete Paving except as modified herein.
2. Joints: Locate and install expansion joints as indicated per Section 079200 Joint Sealants.
3. Concrete Placement to comply with recommendations in ACI 304R for measuring, mixing, transporting and placing concrete. Place concrete in a continuous operation within planned joints or sections. Pour only the amount of area that can be finished while concrete is in a workable state.

Moisten sub-base to provide a uniform dampened condition at time concrete is placed.

Consolidate concrete by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping according to recommendations in ACI 309R.

Screed and initial – float concrete surfaces with darby or bull float before excess moisture or bleed water appears on the surface.

Protect concrete from cold or hot weather during mixing, placing and curing.

1. Dry-shake colored hardener
 - a. Apply 2/3 of specified application rate to freshly floated concrete surface. Bleed water shall not be present during or following application of first and second shake.
 - b. Do not throw dry-shake; distribute evenly by hand or mechanical spreader designed to apply floor hardeners. Consult L.M. Scofield for recommended manufacturers of mechanical spreaders.
 - c. As soon as dry-shake material has absorbed moisture, indicated by uniform darkening of surface, mechanically float concrete surface a second time, just enough to bring moisture from base slab through dry-shake color hardener.
 - d. Immediately following second floating, apply remaining 1/3 of specified application rate. If applied by hand, broadcast in opposite direction of first application for a more uniform coverage. If a mechanical spreader is used, apply the same manner as previously described.
 - e. As soon as dry-shake material has absorbed moisture, mechanically float concrete surface a third time.

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2. Do not add water to the surface.
3. Texturing: Colored concrete shall be textured in accordance with section 602.03 of the MDOT 2003 Standard Specifications for Construction. Surface texture shall be an alternating pattern as shown on the construction drawings to coincide with the existing pavement joints
4. CURING:
 - f. Paving shall be cured with liquid membrane (curing and sealing) compound as recommended by manufacturer.
 - g. Apply immediately after paving surface has hardened sufficiently so that application of curing and sealing compound will not mar surface. Apply uniformly over entire surface at coverage rate recommended by manufacturer and meeting or exceeding the moisture retention requirements of ASTM C309. Apply two (2) coats per manufacturer's guidelines.
 - h. There should be no free water on surface at time of application.
5. Concrete edge: Pull forms on vertical face and tool vertical joints while concrete is still workable.
6. Maintain concrete: Keep concrete free of stains, discoloration, dirt and other foreign material. Sweep stamped concrete pavement not more than two days before date scheduled for substantial Completion.
7. Replace Concrete: Remove and replace concrete that is broken, damaged, or defective or does not meet requirements in this section.

D. Measurement and Payment:

The completed work as measured for the following items will be paid for at the contract unit price for the following pay items:

<u>Contract Item (Pay Item)</u>	<u>Pay Unit</u>
Concrete Pavement, Nonreinf., Colored, 9 ½ inch	syd.
Concrete Pavement, Nonreinf., Colored, 6 inch	syd.

END OF SECTION

**SPECIAL PROVISION FOR
STAMPED CONCRETE PATHWAY**

A. Description

Walks on this project will include 4 inch Stamped Concrete Pathway. Limits of this pathway are shown on the plans and/or detailed on the typical sections. Stamped Concrete Pathway shall conform to the requirements of paving.

To assure a high quality Stamped Concrete Pathway, the contractor should have a minimum of 5 years of experience and at least 10 high quality jobs of similar type for inspection by the engineer.

Prior to the Notice to Proceed on this contract, the contractor will be required to submit a 2 foot by 2 foot sample of the Stamped Concrete Pathway poured on site for approval by the Engineer.

B. Materials

Concrete Mix Design: The concrete shall have a minimum compressive strength of 3,500 psi and include fiber and wire reinforcement. Portland cement shall conform to ASTM C 150, Type I, II, or V. Aggregates shall be non-reactive and conform to ASTM C33. Mixing water shall be fresh, clean and potable. An air-entraining agent conforming with C260 and/or a normal-set or retarded-set water reducing admixture conforming with ASTM C494 may be used. No admixture containing calcium chloride shall be permitted in the mix.

Pattern "A" shall be "Ashler Slate" with a brick red color and a light grey release agent matching (as best as possible) the existing brick pavers in front of the church. Pattern "B" shall be "Fieldstone" aka "Random Stone" with a plain white concrete and a "light grey" or "medium grey" release agent. Regular grade hardener shall be used. Modifications of color during the sample approval process shall not affect bid prices.

The release agent shall be specifically designed to prevent bonding of texturing tools to the concrete surface.

C. Construction

Special concrete mix shall be placed and screened to the proper grade and floated to a uniform surface in the normal manner. The Stamped Concrete Pathway shall be placed on 4 inch graded aggregate base.

Color hardener shall be applied evenly to the plastic surface by the dry-shake method using a minimum of 60 pounds per 100 square feet. It shall be applied in two or more shakes, floated after each, and troweled only after the final floating.

The release agent shall be applied in accordance with manufacturer's instructions.

While concrete is still in the plastic stage of set, the imprinting tools shall be applied to make the desired pattern and texture. The pattern(s) shall be as noted above.

The surface shall be sealed. A penetrating seal of an acrylic polymer in the organic solvent is required as a maintenance material which will provide a moderate gloss and resistance to discoloration, abrasion, water, alcohol, acids and alkalis. Any acid or caustic solution shall not be used on sealed surfaces.

D. Measurement and Payment

Stamped Pathway, Conc, 4 inch (Pattern "A") and (Pattern "B") will be measured and paid for on the square foot basis. The price bid for these work items shall include the removal and hauling away of any excess sod, soil, dirt or debris, setting the grade and elevation, installing forms, 4 inch graded aggregate base, 4 inch fiber and steel wire reinforced concrete with a minimum compressive strength of 3,500 psi at 28 days, colored release agent, stamp new concrete, removal of concrete forms, saw cutting of control joints at pre-determined locations 1-inch in depth, application of sealer, test samples, labor, tools, equipment, and all incidentals necessary to complete these items.

From: Kurt Bovensiep

Sent: Monday, August 11, 2014 10:03 AM

Subject: RE: J4 - Stamped Colored Concrete

With the information Bill provided, I believe it is in the City's best interest to move forward with the installation of stamped concrete at the Museum. Mayor Pro-Tem Henderson's concerns are addressed in the contract to mitigate salt damage and creating a slippery surface. The contract states that the concrete will be sealed along with a curing compound, this is similar to how we specified the concrete sidewalks around City Hall because of the high use of snow melting agents. The specified pattern is also a smaller pattern than what Mayor Pro-Tem Henderson presented to me. The specified pattern will provide more friction than a smooth surface. The stamped concrete will also have a 2 year warranty, which we will hold the contractor responsible for any defects caused by melting agents. The city's snow removal contractor uses ice melting compounds specified by the city that lower the impacts to concrete when compared to regular rock salt.

c: Mark Miller, Director of Economic and Community Development
Lori Grigg Bluhm, City Attorney
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