Steven M. Fulop
Mayor

CITY OF JERSEY CITY
DEPARTMENT OF INFRASTRUCTURE
Division of Engineering
Municipal Services Complex
13-15 Linden Avenue East, Jersey City, NJ 07305
Department: 201-547-4727| Division: 201-547-4411

Barkha R Patel
Director

DATE: **August 31, 2023**

TO: **Planning Board**

FROM: **Lichuan Wang, P.E., C.M.E.**

SUBJECT: **New Construction**
421 Central Avenue
Block 2805, Lots 29, 30

This site plan review is based upon plans submitted by Marc S, Leber, P.E. of East Point Engineering, LLC located in Marlboro, NJ 07746.

DESCRIPTION	SHEET NO.	DATE	REVISIONS
• Cover Sheet	1 of 4	5.08.23	----
• Property Owners within 200'	2 of 4	5.08.23	----
• Existing Conditions Plan	3 of 4	5.08.23	----
• Site Improvement Plan	4 of 4	5.08.23	----
• Architecture Plan	Varies	6.07.23	----

PLANS, COMMENTS:

1. Provide a signed and sealed topographic and boundary survey drawing prepared by a licensed surveyor.
2. The following note must appear on the Existing Conditions Plan, Sheet 3 of 4:
   "All demolition material and debris and all items removed from the property and the adjacent public areas, shall be disposed outside the City limits of Jersey City in accordance with the rules and regulations of the City's Environmental Commission and in accordance with the regulations of the NJDEP."
3. This section of Central Avenue has been recently reconstructed under the Central Avenue Streetscape & Roadway Improvements project. Any disturbance to the existing street pavement must be restored by infrared method and be approved by the Division of Engineering. Any damage to the sidewalk area must be restored in kind according to Streetscape project standards.

The specifications for the sidewalk design have been attached. Please revise the design details in the plan accordingly.

4. The note on Site Improvement Plan, Sheet 4 of 4 states that "New Sidewalk Along Central Avenue". Show sidewalk construction limits on the plan. The existing raised concrete curb and cellar entrance abutting the building shall be removed and the sidewalk shall be reconstructed according to note #3.
5. Please remove the existing/proposed tree pit on Central Avenue as the location does not meet Jersey City Forestry Standards 2018 clearance requirements.
6. Adjust the proposed street tree locations on South Street to meet Jersey City Forestry Standards 2018 regarding 15' clearance requirement to the existing street light.
7. Show sidewalk dimensions. The proposed street tree dimensions may need to be revised to 3'x12' to provide a minimum of 5' sidewalk.
8. Show detailed information for all utility mains on the plan.
9. Remove all the notes "... to be determined by the MEP engineer." Show complete information for the sanitary sewer/storm water line (size, material, slope, length, invert elevation, elevation, etc.).
10. Drainage system connection, sanitary sewer and water service connection require JCMUA's review and approval.
11. South Street shall be milled and paved, curb to curb, for the entire street length in front of the subject site.
12. The concrete sidewalk design details shown on Sheet 4 of 4 do not match JCDS and must be revised. Concrete curb detail, sidewalk detail, expansion joint detail, pavement restoration detail, curb ramp design details, all must be shown on the plan and be in conformance with JCDS and the Streetscape project. Tree planting details shall be in conformance with Jersey City Forestry Standards 2018.
13. Street tree species and planting related issues shall be coordinated with the Division of Park Maintenance.
14. Portions of the proposed building encroach onto the public right-of-way along South Street as shown on Architecture plan. Please apply for a franchise ordinance approval from the City Council.

15. Please notify this office in writing at least 72 hours prior to commencement of construction work.
16. Jersey City Division of Engineering reserves the right to inspect the site and impose additional improvements to any damaged areas within the City right-of-way. All improvements must comply with the requirements of City of Jersey City, Division of Engineering Construction Guidelines.
17. Upon completion of construction please provide this office with an as-built plan showing all of the new improvements.

Lichuan Wang, P.E., C.M.E.
Principal Engineer

Paul Russo, P.E.
Municipal Engineer

Cc: Division of Planning
JCMUA
Marc S, Leber, P.E. of East Point Engineering, LLC
LW/File

When necessary to remove portions of HMA sidewalk or driveway, the sidewalk or driveway shall be sawcut to provide a neat straight line.

606.03.02 Concrete Sidewalks, Driveways, and Islands

A. Underlayer Preparation.

THE FOLLOWING IS ADDED:

When necessary to remove portions of concrete sidewalk or driveway, the sidewalk or driveway shall be sawcut to provide a neat straight line

H. Protection and Curing.

THE LAST SENTENCE IS CHANGED TO:

Ensure vehicles and other loads are not placed on sidewalks, islands, and driveways for 72 hours or until the concrete has attained compressive strength of 3000 pounds per square inch, as determined from 2 concrete cylinders field cured according to AASHTO T 23.

THE FOLLOWING SECTION IS ADDED:

J. Colored Concrete for Sidewalks, Driveways & Curbs

1. Pigmenting.

This section describes Pigmented Admixture for Portland cement mixtures.

It shall be certified by the manufacturer that the Pigmented Admixture shall consist of pure synthetic mineral oxide only, and shall comply with ASTM Designation C. 979 and the requirements of ACI 316.

The Pigmented Admixture shall produce a gray color equivalent to L.M. Scofield 'Landmarks Grey' K-157-4 or an approved equivalent.

The Pigmented Admixture manufacturer shall certify that when used at the recommended dosage, the pigmented admixture has no effect on or increases the compressive strength of the concrete by 5-10% when compared with a control batch of the same mix design and slump but without the Pigmented Admixture. Testing shall be done at 28 days after depositing, and shall be measured in pounds per square inch. The test results shall be an average of at least three (3) cores or cylinders per test.

Calcium Chloride shall not be used in the composition of the admixture nor in the composition of the concrete.

The Pigmented Admixture shall be packaged by the manufacturer in incremental amounts by weight for a single cubic yard of concrete, with the designated dosage clearly marked on each package.

Air entraining agent complying with ASTM Designation C 260 shall be used in combination with the Pigmented Admixture.

Water reducing admixtures complying with ASTM Designation C 494 may also be used in combination with the Pigmented Admixture as per the Pigment manufacturer's instructions.

No other agents or admixtures shall be used with the Pigmented Admixture in the concrete unless stated in writing by the manufacturer of the Pigmented Admixture to be of no consequence to the colorfastness of the concrete mixture.

The Pigmented Admixtures shall be mixed and delivered in accordance with ASTM Designation C 94. The quantity of concrete being mixed in a mixer shall be no less than 40% of the capacity of the mixing drum (a minimum of 4 yards in a 10-yard truck). Before placing the Pigmented Admixture in a mixer drum, the drum must be thoroughly cleaned and wetted with approximately 35 gallons of mix water and a portion of the aggregate added. This mixture shall mix for 3-4 minutes while the truck hopper and fins are washed with 5 gallons of water. After adding the remainder of the concrete to the truck, the load shall mix at a mixing speed for a minimum of 80 revolutions or 10 minutes.

At the Contractor's option, Pigmented Admixtures may be added at the site, in which case:

The truck shall be charged and mixed at the plant, as previously specified, with the required cement, aggregate and admixtures (excluding pigment admixtures), but only eighty (80%) percent to ninety (90%) percent of the required water shall be added. The truck shall leave the plan with 0 revolutions on its counter.

Once the truck arrives on site, the remaining water and the Pigmented Admixture shall be added and the load mixed a minimum of 90 revolutions.

Concrete will then be sampled and tested. If the consistency of the mix is not acceptable, additional water may be added not more than twice and mixing resumed for 30 revolutions each time. Once the mix is acceptable, it shall be discharged directly into the forms.

- The total number of revolutions allowable after the truck has left the plant shall not exceed 150 and the mix shall be discharged within 90 minutes from when the truck has left the plant in order to achieve the correct workability.

All pigmented concrete shall be identical, unless otherwise directed. Variations in color/tint/hue will not be acceptable. Therefore, the same type and brand of cement, source of sand and water/cement ratio shall be maintained for each load of concrete used in the entire project.

The slump of the concrete shall remain consistent throughout the project at four (4") inches and should not exceed five (5") inches. If held-back water is added at the job site, the concrete should be mixed at mixing speed for an additional five minutes or 30 revolutions, whichever comes first, after addition of the water as per the above requirements, and before depositing.

Before providing the sample panel(s), the Contractor shall prepare pairs of 6 inch x 6 inch x 4 inch samples of pigmented concrete, one with and one without the color matched curing membrane. As many samples as necessary shall be produced until the color is satisfactory to the Engineer. The Contractor shall then furnish for approval and on site a concrete sampled for each color specified using the Pigmented Admixture. The sample shall be at least 4' x 4' x 4' and shall be given the specified surface texture and cured with the methods specified for the concrete installation. The Contractor shall not order the admixture until the samples are approved by the Engineer. Once approved, the samples shall be used for assessing color conformance of pigmented concrete installed.

Prior to making any field samples and the placing of any colored concrete, the Contractor, concrete supplier, Engineer-in-charge, and/or City representative shall meet and discuss methods of handling the colored concrete.

Prior to the mix design being made, the cement intended for use shall be checked to determine that its lightness/darkness is similar to the cement used in the original sample. The Pigmented Admixture shall be added in the standard proportion specified by the manufacturer. No fly ash or other admixtures (including, but not limited to, calcium chloride) shall be used except an air-entraining agent complying with ASTM Designation C 260, when directed by the Engineer.

Prior to commencing the placement of concrete, but after accepetance and approval fo the pre-construction field sample, the Contractor shall submit property labeled and identified samples of materials used in the approved sample as follows:

Coarse Aggregate	20 pounds
Fine Aggregate	20 pounds
Cement	20 pounds
Pigmented Admixture	1 pint
Joint sealer	2 linear feet
Surface sealer	1 pint
Mix design	1 certified copy
Silicon Carbide Aggregate	20 pounds

These samples shall be stored where directed by the Engineer and shall constitute material standards for the project. During construction, one (1) pint of cement from each load of cement delivered to the plant to be used in this specific job shall be retained and, after comparison with retained master sample, dated and stored with other retained samples. Aggregate source shall also be checked periodically, as directed by the Engineer, and compared with retained samples.

Water must not be sprinkled or otherwise added to the surface of the slab during finishing. Evaporation retardants may be fog sprayed provided they are not detrimental to the finished color of the concrete.

Curing Membrane. If the concrete is pigmented as per this Section, the curing membrane shall be of the liquid-membrane forming type and shall be color matched to the pigmented concrete. Additionally, the curing membrane shall be of a type recommended by the Pigmented Admixture manufacturer and shall conform to both ASTM C 309 and all local, State and Federal regulations concerting volatile organic compounds (VOC). Plastic sheeting, burlap, paper, or other unspecified material shall not be used as a curing membrane.

2. Silicon Carbide Surface Finish.

In addition to the other finishing requirements contained within these specifications, the top surface of sidewalk shall have silicon carbide applied at the rate of 20 to 25 lbs./100S.F., as follows, unless otherwise directed by the manufacturer.

Immediately after substrate surface has been leveled and wood floated, before bleed water has appeared, the silicon carbide shall be applied evenly while there is sufficient moisture in the slab to saturate at least two dust-on coats. Troweling must be started early enough to complete all operations without use of additional water on the surface. Distribute the silicon carbide crystals uniformly (at the rate of 20 – 25 lbs, per 100 sq. ft.) either by hand or mechanical spreader over prepared wet slab. Crystals shall be applied in three separate shake coats. Use one-third (1/3) of th required quantity of crystals for the first application. Apply second application slightly after first application is floated. Do not throw the crystals or broadcast them with a shovel. Use an evenly distributed hand broadcast.

Trowel crystals uniformly into surface after each shake coat. After the second shake coat of crystals have been troweled once, sprinkle third coat over the surface. The surface must be uniformly coated. Use a steel trowel to leave grains at surface covered with a thin film of cement paste.

The final finish may be lightly troweled to produce a smooth surface free from defects or blemishes. Finish troweling shall be delayed until surface has set sufficiently to avoid burying the crystals, but must be accomplished before finish has hardened.

Exposure of the silicon crystals shall be accomplished with either of the following methods provided it results in a satisfactory finish:

a) Water and a soft broom, or sponge. Allow concrete surface to set sufficiently so that light scrubbing will not cause pitting; or,

b) A light 5% to 10 % Muratic acid washing to expose grains after the concrete is at least 2 weeks old. Acid shall be removed from the finished surface with clean water within 15 minutes after application; or,

c) Other methods, as approved by the Engineer.

606.03.03 Detectable Warning Surfaces

THE FOLLOWING IS ADDED:

Detectable Warning Surfaces shall be of the type which can be set into uncured cast-in-place concrete. Glue/stick-on type warning surfaces shall not be allowed.

606.04 Measurement And Payment

THE FOLLOWING IS ADDED:

Item	Pay Unit
Concrete Sidewalk, ___" Thick, Colored	SY
Concrete Driveway, Reinforced, ___" Thick, Colored	SY

THE SECOND PARAGRAPH IS CHANGED TO:

When the RE directs undercutting of unstable material in the excavation area, the Department will make payment, for the additional excavation. The Department will also make payment, for the additional bedding if there is not an excess of excavation available.