ANN ARBOR BUILDING BOARD OF APPEALS STAFF REPORT

Meeting Date: December 19, 2017

Type of Request: VARIANCE

Building Board of Appeals Request **BBA17-009** at 218 W. Kingsley, ANN ARBOR, MI 48104.

(Parcel Identification Number: 09-09-29-151-016)

DESCRIPTION AND DISCUSSION

Property Owners Name and Address:

Kingsley Condominiums LLC 2433 Oak Valley Drive, Suite 5 Ann Arbor, MI 48103

BACKGROUND

The applicant, J. Bradley Moore AIA has stated that the future building at 218 W. Kingsley should not be considered a high rise, under the 2012 Michigan Building Code. Mr. Moore indicates the 587 square feet area with an enclosed roof-top level space with bathrooms and kitchenette is small in area in comparison with the rest of the building and will only have an occupant load of 38. Other information presented by the applicant indicates:

- 1. Fire Department Vehicular access is less than 55 feet of the adjacent grade at the North and West sides of the building.
- 2. The greatest portion of the building is below 50 feet when not using the roof top floor as the height indicator, for areas outside of the bathrooms and kitchenette roof top amenity.
- 3. The average building height around the structure is 48.1 feet and the height to the highest residentially occupied floor is 47.75 feet This is not using the roof floor height as the height of the building.

Code Interpretation: The building is a High-Rise and must meet the requirement of Section 403 of the MBC 2012. Chapter two definitions provide the definition for a Story and a definition for a High Rise Building. The definition for story helps determine how to measure the height of the building and then it can be determined if it is a High-Rise Building.

The definition of Story is – "**Story**. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above (also see "Basement," "Building height," "Grade plane" and "Mezzanine"). It is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters."

The definition of High Rise Building is – "**HIGH-RISE BUILDING**. "High-rise building" means a building with an occupied floor located more than 55 feet (1 6764 mm) above the lowest level of fire department vehicle access."

While the definition of story would indicate that the roof floor height as being the height of the building it does not take into consideration the amount of roof floor that should be considered. Thus, the height of the roof would be considered the height of the building. With the height of the building at roof floor height it would exceed 55 feet above the lowest level of fire department vehicle access – with exception to the North and West sides of the building.

Please see the attached code sections for reference – Section 403 and Section 202 of the MBC 2012.

Standards for Approval:

PA 230 Section 125.15.15

Specific variance from code: breach of condition; permissible variance. Sec. 15.

- (1) After a public hearing a board of appeals may grant a specific variance to a substantive requirement of the code if the literal application of the substantive requirement would result in an exceptional, practical difficulty to the applicant, and if both of the following requirements are satisfied:
 - a. The performance of the particular item or part of the building or structure with respect to which the variance is granted shall be adequate for its intended use and shall not substantially deviate from performance required by the code of that particular item or part for the health, safety and welfare of the people of this state.
 - b. The specific condition justifying the variance shall be neither so general nor recurrent in nature as to make an amendment of the code with respect to the condition reasonably practical or desirable.
- (2) A board of appeals may attach in writing any condition in connection with the granting of a variance that in its judgement is necessary to protect the health, safety and welfare of the people of this state. The breach of a condition shall automatically invalidate the variance and any permit, license and certificate granted on the basis of it. In no case shall more than a minimum variance from the code be granted than is necessary to alleviate the exceptional, practical difficulty.

DEFINITIONS

[F] HAZARDOUS MATERIALS. Those chemicals or substances that are *physical hazards* or *health hazards* as classified in Section 307 and the *International Fire Code*, whether the materials are in usable or waste condition.

[F] HAZARDOUS PRODUCTION MATERIAL (HPM). A solid, liquid or gas associated with semiconductor manufacturing that has a degree-of-hazard rating in health, flammability or instability of Class 3 or 4 as ranked by NFPA 704 and which is used directly in research, laboratory or production processes which have as their end product materials that are not hazardous.

HEAD JOINT. Vertical mortar joint placed between masonry units within the wythe at the time the masonry units are laid.

[F] HEALTH HAZARD. A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term "health hazard" includes chemicals that are toxic or highly toxic, and corrosive.

HEAT DETECTOR. See "Detector, heat."

HEIGHT, BUILDING. The vertical distance from *grade* plane to the average height of the highest roof surface.

HELICAL PILE. Manufactured steel deep foundation element consisting of a central shaft and one or more helical bearing plates. A helical pile is installed by rotating it into the ground. Each helical bearing plate is formed into a screw thread with a uniform defined pitch.

HELIPAD. A structural surface that is used for the landing, taking off, taxiing and parking of helicopters.

HELIPORT. An area of land or water or a structural surface that is used, or intended for the use, for the landing and taking off of helicopters, and any appurtenant areas that are used, or intended for use, for heliport buildings or other heliport facilities

HELISTOP. The same as "heliport," except that no fueling, defueling, maintenance, repairs or storage of helicopters is permitted.

HIGH-PRESSURE DECORATIVE EXTERIOR-GRADE COMPACT LAMINATE (HPL). Panels consisting of layers of cellulose fibrous material impregnated with thermosetting resins and bonded together by a high-pressure process to form a homogeneous nonporous core suitable for exterior use.

HIGH-PRESSURE DECORATIVE EXTERIOR-GRADE COMPACT LAMINATE (HPL) SYSTEM. An exterior wall covering fabricated using HPL in a specific assembly including joints, seams, attachments, substrate, framing and other details as appropriate to a particular design.

HIGH-RISE BUILDING. "High-rise building" means a building with an occupied floor located more than 55 feet (1 6764 mm) above the lowest level of fire department vehicle access. R 408.30415a

[F] HIGHLY TOXIC. A material which produces a lethal dose or lethal concentration that falls within any of the following categories:

- A chemical that has a median lethal dose (LD₅₀) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
- A chemical that has a median lethal dose (LD₅₀) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
- 3. A chemical that has a median lethal concentration (LC₅₀) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

Mixtures of these materials with ordinary materials, such as water, might not warrant classification as highly toxic. While this system is basically simple in application, any hazard evaluation that is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.

HISTORIC BUILDINGS. Buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate state or local law (see Sections 3409 and 3411.9).

HORIZONTAL ASSEMBLY. A fire-resistance-rated floor or *roof assembly* of materials designed to restrict the spread of fire in which continuity is maintained.

HORIZONTAL EXIT. See "Exit, horizontal."

HOSPITALS AND PSYCHIATRIC HOSPITALS. Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of care recipients that are incapable of self-preservation.

HOUSING UNIT. A dormitory or a group of cells with a common dayroom in Group I-3.

[F] HPM FLAMMABLE LIQUID. An HPM liquid that is defined as either a Class I flammable liquid or a Class II or Class IIIA combustible liquid.

[F] HPM ROOM. A room used in conjunction with or serving a Group H-5 occupancy, where HPM is stored or used and which is classified as a Group H-2, H-3 or H-4 occupancy

HURRICANE-PRONE REGIONS. Areas vulnerable to hurricanes defined as:

- 1. The U.S. Atlantic Ocean and Gulf of Mexico coasts where the ultimate design wind speed, V_{ulr} for Risk Category II buildings is greater than 115 mph (51.4 m/s); and
- Hawaii, Puerto Rico, Guam, Virgin Islands and American Samoa.

[F] HYDROGEN CUTOFF ROOM. A room or space that is intended exclusively to house a gaseous hydrogen system.

ICE-SENSITIVE STRUCTURE. A structure for which the effect of an atmospheric ice *load* governs the design of a

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attached to and radiating from a minimum-diameter supporting column.

[F] STANDPIPE SYSTEM, CLASSES OF. Standpipe classes are as follows:

Class I system. A system providing 2¹/₂-inch (64 mm) hose connections to supply water for use by fire departments and those trained in handling heavy fire streams.

Class II system. A system providing $1^{1}/_{2}$ -inch (38 mm) hose stations to supply water for use primarily by the building occupants or by the fire department during initial response.

Class III system. A system providing $1^{1}/_{2}$ -inch (38 mm) hose stations to supply water for use by building occupants and $2^{1}/_{2}$ -inch (64 mm) hose connections to supply a larger volume of water for use by fire departments and those trained in handling heavy fire streams.

[F] STANDPIPE, TYPES OF. Standpipe types are as follows:

Automatic dry. A dry standpipe system, normally filled with pressurized air, that is arranged through the use of a device, such as dry pipe valve, to admit water into the system piping automatically upon the opening of a hose valve. The water supply for an automatic dry standpipe system shall be capable of supplying the system demand.

Automatic wet. A wet standpipe system that has a water supply that is capable of supplying the system demand automatically.

Manual dry. A dry standpipe system that does not have a permanent water supply attached to the system. Manual dry standpipe systems require water from a fire department pumper to be pumped into the system through the fire department connection in order to meet the system demand.

Manual wet. A wet standpipe system connected to a water supply for the purpose of maintaining water within the system but does not have a water supply capable of delivering the system demand attached to the system. Manualwet standpipe systems require water from a fire department pumper (or the like) to be pumped into the system in order to meet the system demand.

Semiautomatic dry. A dry standpipe system that is arranged through the use of a device, such as a deluge valve, to admit water into the system piping upon activation of a remote control device located at a hose connection. A remote control activation device shall be provided at each hose connection. The water supply for a semiautomatic dry standpipe system shall be capable of supplying the system demand.

START OF CONSTRUCTION. The date of issuance for new construction and substantial improvements to existing structures, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufac-

tured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a basement, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main building. For a substantial improvement, the actual "start of construction" means the first alteration of any wall, ceiting, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

STEEL CONSTRUCTION, COLD-FORMED. That type of construction made up entirely or in part of steel structural members cold formed to shape from sheet or strip steel such as roof deck, floor and wall panels, studs, floor joists, roof joists and other structural elements.

STEEL JOIST. Any steel structural member of a building or structure made of hot-rolled or cold-formed solid or openweb sections, or riveted or welded bars, strip or sheet steel members, or slotted and expanded, or otherwise deformed rolled sections.

STEEL MEMBER, STRUCTURAL. Any steel structural member of a building or structure consisting of a rolled steel structural shape other than cold-formed steel, or steel joist members.

STEEP SLOPE. A roof slope greater than two units vertical in 12 units horizontal (17-percent slope).

STONE MASONRY. Masonry composed of field, quarried or cast stone units bonded by mortar.

Ashlar stone masonry. Stone masonry composed of rectangular units having sawed, dressed or squared bed surfaces and bonded by *mortar*.

Rubble stone masonry. Stone masonry composed of irregular-shaped units bonded by mortar.

[F] STORAGE, HAZARDOUS MATERIALS. The keeping, retention or leaving of hazardous materials in closed containers, tanks, cylinders, or similar vessels; or vessels supplying operations through closed connections to the vessel

STORM SHELTER. A building, structure or portions thereof, constructed in accordance with ICC 500 and designated for use during a severe wind storm event, such as a hurricane or tornado.

Community storm shelter. A storm shelter not defined as a "Residential Storm Shelter."

Residential storm shelter. A storm shelter serving occupants of dwelling units and having an occupant load not exceeding 16 persons.

STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above (also see "Basement," "Building height," "Grade plane" and "Mezzanine"). It is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the

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top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.

STORY ABOVE GRADE PLANE. Any story having its finished floor surface entirely above grade plane, or in which the finished surface of the floor next above is:

- 1. More than 6 feet (1829 mm) above grade plane; or
- More than 12 feet (3658 mm) above the finished ground level at any point.

STRENGTH (For Chapter 21).

Design strength. Nominal strength multiplied by a strength reduction factor.

Nominal strength. Strength of a member or cross section calculated in accordance with these provisions before application of any strength-reduction factors.

Required strength. Strength of a member or cross section required to resist *factored loads*.

STRENGTH (For Chapter 16).

Nominal strength. The capacity of a structure or member to resist the effects of *loads*, as determined by computations using *specified* material strengths and dimensions and equations derived from accepted principles of structural mechanics or by field tests or laboratory tests of scaled models, allowing for modeling effects and differences between laboratory and field conditions.

Required strength. Strength of a member, cross section or connection required to resist *factored loads* or related internal moments and forces in such combinations as stipulated by these provisions.

Strength Design. A method of proportioning structural members such that the computed forces produced in the members by factored loads do not exceed the member design strength [also called "load and resistance factor design" (LRFD)]. The term "strength design" is used in the design of concrete and masonry structural elements.

STRUCTURAL COMPOSITE LUMBER. Structural member manufactured using wood elements bonded together with exterior adhesives. Examples of structural composite lumber are:

Laminated strand lumber (LSL). A compsite of wood strand elements with wood fibers primarily oriented along the length of the member, where the least dimension of the wood strand elements is 0.10 inches (2.54 mm) or less and their average lengths are a minimum of 150 times the least dimension of the wood strand elements.

Laminated veneer lumber (LVL). A composite of wood veneer sheet elements with wood fibers primarily oriented along the length of the member, where the veneer element thicknesses are 0.25 inches (6.4 mm) or less.

Oriented strand lumber (OSL). A composite of wood strand elements with wood fibers primarily oriented along the length of the member, where the least dimension of the wood strand elements is 0.10 inches (2.54 mm) or less and their average lengths are a minimum of 75 times and less than 150 times the least dimension of the wood strand elements.

Parallel strand lumber (PSL). A composite of wood strand elements with wood fibers primarily oriented along the length of the member where the least dimension of the wood strand elements is 0.25 inches (6.4 mm) or less and their average lengths are a minimum of 300 times the least dimension of the wood strand elements.

STRUCTURAL GLUED-LAMINATED TIMBER. An engineered, stress-rated product of a timber laminating plant, comprised of assemblies of specially selected and prepared wood laminations in which the grain of all laminations is approximately parallel longitudinally and the laminations are bonded with adhesives.

STRUCTURAL OBSERVATION. The visual observation of the structural system by a *registered design professional* for general conformance to the *approved construction documents*. Structural observation does not include or waive the responsibility for the inspection required by Section 110, 1705 or other sections of this code.

STRUCTURE. "Structure" means that which is built or constructed, an edifice or building of any kind, or a piece of work artificially built up or composed of parts joined together in some definite manner.

Structure does not include a structure incident to the use for agricultural purposes of the land on which the structure is located and does not include works of heavy civil construction, including without limitation, any of the following:

- (a) A highway.
- (b) A bridge
- (c) A dam.
- (d) A reservoir.
- (e) A lock.
- (f) A mine.
- (g) A harbor.
- (h) A dockside port facility.
- (i) An airport landing facility.
- (j) A facility for the generation, or transmission, or distribution of electricity.

Structure shall be construed as though followed by the words "or part or parts of the structure and all equipment in the structure," unless the context clearly indicates otherwise. R 408.30415a

R 408.30415a

SUBDIAPHRAGM. A portion of a larger wood *diaphragm* designed to anchor and transfer local forces to primary *diaphragm* struts and the main *diaphragm*.

SUBSTANTIAL DAMAGE. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the

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ing spaces served by a single exit or 50 or more persons occupying spaces served by more than one exit.

- The doors or grilles shall be openable from within without the use of any special knowledge or effort where the space is occupied.
- Where two or more exits are required, not more than one-half of the exits shall be permitted to include either a horizontal sliding or vertical rolling grille or door.

SECTION 403 HIGH-RISE BUILDINGS

403.1 Applicability. The provisions of this section shall apply to buildings having the occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

Exception: The provisions of this section shall not apply to the following buildings and structures:

- Airport traffic control towers in accordance with section 412 of the code.
- Open parking garages in accordance with section 406.3 of the code.
- Buildings with an occupancy in group A-5 in accordance with section 303.1 of the code.
- Low-hazard special industrial occupancies in accordance with section 503.1.1 of the code.
- Buildings with an occupancy in group H-1, H-2, or H-3 in accordance with section 415 of the code.
- 6. Existing buildings having occupied floor levels not more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access where the local unit of government complies with both of the following:
 - 6.1. The local unit of government has a municipal fire department with an ISO rating of 3 or lower, employing a full-time career firefighting staff.
 - 6.2. The governing body of the local unit of government has passed a resolution affirming the use of this exception and filed that resolution with the department of energy, labor, and economic growth, bureau of construction codes.

R 408.30429

403.2 Construction. The construction of *high-rise buildings* shall comply with the provisions of Sections 403.2.1 through 403.2.4.

403.2.1 Reduction in fire-resistance rating. The *fire-resistance-rating* reductions listed in Sections 403.2.1.1 and 403.2.1.2 shall be allowed in buildings that have sprinkler control valves equipped with supervisory initiating devices and water-flow initiating devices for each floor.

403.2.1.1 Type of construction. The following reductions in the minimum *fire-resistance rating* of the

building elements in Table 601 shall be permitted as follows:

1. For buildings not greater than 420 feet (128 000 mm) in building height, the fire-resistance rating of the building elements in Type IA construction shall be permitted to be reduced to the minimum fire-resistance ratings for the building elements in Type IB.

Exception: The required *fire-resistance rating* of columns supporting floors shall not be permitted to be reduced.

- In other than Group F-1, M and S-1 occupancies, the fire-resistance rating of the building elements in Type IB construction shall be permitted to be reduced to the fire-resistance ratings in Type IIA.
- The building height and building area limitations
 of a building containing building elements with
 reduced fire-resistance ratings shall be permitted
 to be the same as the building without such
 reductions.

403.2.1.2 Shaft enclosures. For buildings not greater than 420 feet (128 000 mm) in building height, the required fire-resistance rating of the fire barriers enclosing vertical shafts, other than exit enclosures and elevator hoistway enclosures, is permitted to be reduced to 1 hour where automatic sprinklers are installed within the shafts at the top and at alternate floor levels.

403.2.2 Seismic considerations. For seismic considerations, see Chapter 16.

403.2.3 Structural integrity of interior exit stairways and elevator hoistway enclosures. For high-rise buildings of Risk Category III or IV in accordance with Section 1604.5, and for all buildings that are more than 420 feet (128 000 mm) in building height, enclosures for interior exit stairways and elevator hoistway enclosures shall comply with Sections 403.2.3.1 through 403.2.3.4.

403.2.3.1 Wall assembly. The wall assemblies making up the enclosures for *interior exit stairways* and elevator hoistway enclosures shall meet or exceed Soft Body Impact Classification Level 2 as measured by the test method described in ASTM C 1629/C 1629M.

403.2.3.2 Wall assembly materials. The face of the wall assemblies making up the enclosures for *interior exit stairways* and elevator hoistway enclosures that are not exposed to the interior of the enclosures for *interior exit stairways* or elevator hoistway enclosure shall be constructed in accordance with one of the following methods:

 The wall assembly shall incorporate no fewer than two layers of impact-resistant construction board each of which meets or exceeds Hard Body Impact Classification Level 2 as measured by the test method described in ASTM C 1629/C 1629M.

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- The wall assembly shall incorporate no fewer than one layer of impact-resistant construction material that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C 1629/C 1629M.
- The wall assembly incorporates multiple layers of any material, tested in tandem, that meets or exceeds Hard Body Impact Classification Level 3 as measured by the test method described in ASTM C 1629/C 1629M.
- **403.2.3.3** Concrete and masonry walls. Concrete or masonry walls shall be deemed to satisfy the requirements of Sections 403.2.3.1 and 403.2.3.2.
- 403.2.3.4 Other wall assemblies. Any other wall assembly that provides impact resistance equivalent to that required by Sections 403.2.3.1 and 403.2.3.2 for Hard Body Impact Classification Level 3, as measured by the test method described in ASTM C 1629/C 1629M, shall be permitted.
- **403.2.4** Sprayed fire-resistant materials (SFRM). The bond strength of the SFRM installed throughout the building shall be in accordance with Table 403.2.4.

TABLE 403.2.4 MINIMUM BOND STRENGTH

HEIGHT OF BUILDING*	SFRM MINIMUM BOND STRENGTH
Up to 420 feet	430 psf
Greater than 420 feet	1,000 psf

For SI: 1 foot = 304.8 mm, 1 pound per square foot (psf) = 0.0479 kW/m^2 . a. Above the lowest level of fire department vehicle access.

[F] 403.3 Automatic sprinkler system. Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 903.3.5.2.

Exception: An *automatic sprinkler system* shall not be required in spaces or areas of:

- Open parking garages in accordance with Section 406.5.
- 2. Telecommunications equipment buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 or not less than 2-hour horizontal assemblies constructed in accordance with Section 711, or both.
- [F] 403.3.1 Number of sprinkler risers and system design. Each sprinkler system zone in buildings that are more than 420 feet (128 000 mm) in building height shall be supplied by no fewer than two risers. Each riser shall supply sprinklers on alternate floors. If more than two risers are provided for a zone, sprinklers on adjacent floors shall not be supplied from the same riser.

[F] 403.3.1.1 Riser location. Sprinkler risers shall be placed in *interior exit stairways* and ramps that are remotely located in accordance with Section 1015.2.

[F] 403.3.2 Water supply to required fire pumps. Required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through no fewer than one of the connections.

- [F] 403.3.3 Fire pump room. Fire pumps shall be located in rooms protected in accordance with Section 913.2.1.
- [F] 403.4 Emergency systems. The detection, alarm and emergency systems of *high-rise buildings* shall comply with Sections 403.4.1 through 403.4.9.
 - **[F] 403.4.1 Smoke detection.** Smoke detection shall be provided in accordance with Section 907.2.13.1.
 - [F] 403.4.2 Fire alarm system. A fire alarm system shall be provided in accordance with Section 907.2.13.
 - [F] 403.4.3 Standpipe system. A high-rise building shall be equipped with a standpipe system as required by Section 905.3.
 - **[F] 403.4.4 Emergency voice/alarm communication system.** An emergency voice/alarm communication system shall be provided in accordance with Section 907.5.2.2.
 - [F] 403.4.5 Emergency responder radio coverage. Emergency responder radio coverage shall be provided in accordance with Section 510 of the *International Fire Code*.
 - [F] 403.4.6 Fire command. A fire command center complying with Section 911 shall be provided in a location approved by the fire department.
 - **403.4.7 Smoke removal.** To facilitate smoke removal in post-fire salvage and overhaul operations, buildings and structures shall be equipped with natural or mechanical *ventilation* for removal of products of combustion in accordance with one of the following:
 - Easily identifiable, manually operable windows or panels shall be distributed around the perimeter of each floor at not more than 50-foot (15 240 mm) intervals. The area of operable windows or panels shall be not less than 40 square feet (3.7 m²) per 50 linear feet (15 240 mm) of perimeter.

Exceptions:

 In Group R-1 occupancies, each sleeping unit or suite having an exterior wall shall be permitted to be provided with 2 square

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- feet (0.19 m²) of venting area in lieu of the area specified in Item 1.
- Windows shall be permitted to be fixed provided that glazing can be cleared by fire fighters.
- Mechanical air-handling equipment providing one exhaust air change every 15 minutes for the area involved. Return and exhaust air shall be moved directly to the outside without recirculation to other portions of the building.
- Any other approved design that will produce equivalent results.
- [F] 403.4.8 Standby power. A standby power system complying with Chapter 27 and Section 3003 shall be provided for standby power loads specified in 403.4.8.2. Where elevators are provided in a high-rise building for accessible means of egress, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1007.4, 3007 or 3008, as applicable.
 - [F] 403.4.8.1 Special requirements for standby power systems. If the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. System supervision with manual start and transfer features shall be provided at the *fire command center*.
 - **[F] 403.4.8.2 Standby power loads.** The following are classified as standby power loads:
 - Power and lighting for the fire command center required by Section 403.4.6;
 - Ventilation and automatic fire detection equipment for smokeproof enclosures; and
 - 3. Elevators.
- **[F] 403.4.9 Emergency power systems.** An emergency power system complying with Chapter 27 shall be provided for emergency power loads specified in Section 403.4.9.1.
 - **[F] 403.4.9.1 Emergency power loads.** The following are classified as emergency power loads:
 - Exit signs and means of egress illumination required by Chapter 10;
 - 2. Elevator car lighting;
 - Emergency voice/alarm communications systems:
 - 4. Automatic fire detection systems;
 - 5. Fire alarm systems; and
 - 6. Electrically powered fire pumps.
- **403.5 Means of egress and evacuation.** The *means of egress* in *high-rise buildings* shall comply with Sections 403.5.1 through 403.5.6.

- 403.5.1 Remoteness of interior exit stairways. Required interior exit stairways shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the interior exit stairways. In buildings with three or more interior exit stairways, no fewer than two of the interior exit stairways shall comply with this section. Interlocking or scissor stairs shall be counted as one interior exit stairway.
- 403.5.2 Additional exit stairway. For buildings other than Group R-2 that are more than 420 feet (128 000 mm) in building height, one additional exit stairway meeting the requirements of Sections 1009 and 1022 shall be provided in addition to the minimum number of exits required by Section 1021.1. The total width of any combination of remaining exit stairways with one exit stairway removed shall be not less than the total width required by Section 1005.1. Scissor stairs shall not be considered the additional exit stairway required by this section.
 - **Exception:** An additional *exit stairway* shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.
- 403.5.3 Stairway door operation. Stairway doors other than the exit discharge doors shall be permitted to be locked from the stairway side. Stairway doors that are locked from the stairway side shall be capable of being unlocked simultaneously without unlatching upon a signal from the fire command center.
 - 403.5.3.1 Stairway communication system. A telephone or other two-way communications system connected to an approved constantly attended station shall be provided at not less than every fifth floor in each stairway where the doors to the stairway are locked.
- **403.5.4 Smokeproof exit enclosures.** Every required stairway serving floors more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall comply with sections 909.20 and 1022.9 of the code.
- R 408.30429
 - **403.5.5** Luminous egress path markings. Luminous egress path markings shall be provided in accordance with Section 1024.
 - **403.5.6 Emergency escape and rescue.** Emergency escape and rescue openings required by Section 1029 are not required.
- **403.6 Elevators.** Elevator installation and operation in *high-rise buildings* shall comply with Chapter 30 and Sections 403.6.1 and 403.6.2.
 - 403.6.1 Fire service access elevator. In buildings with an occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access, no fewer than two fire service access elevators, or all elevators, whichever is less, shall be provided in accordance with Section 3007. Each fire service access elevator shall have a capacity of not less than 3500 pounds (1588 kg).

2012 MICHIGAN BUILDING CODE

403.6.2 Occupant evacuation elevators. Where installed in accordance with Section 3008, passenger elevators for general public use shall be permitted to be used for occupant self-evacuation.

SECTION 404 ATRIUMS

404.1 General. In other than Group H occupancies, and where permitted by Section 712.1.6, the provisions of Sections 404.1 through 404.9 shall apply to buildings or structures containing vertical openings defined as "Atriums."

404.1.1 Definition. The following term is defined in Chapter 2:

ATRIUM.

404.2 Use. The floor of the *atrium* shall not be used for other than low fire hazard uses and only *approved* materials and decorations in accordance with the *International Fire Code* shall be used in the *atrium* space.

Exception: The *atrium* floor area is permitted to be used for any *approved* use where the individual space is provided with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

[F] 404.3 Automatic sprinkler protection. An approved automatic sprinkler system shall be installed throughout the entire building.

Exceptions:

- That area of a building adjacent to or above the atrium need not be sprinklered provided that portion of the building is separated from the atrium portion by not less than 2-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both
- 2. Where the ceiling of the *atrium* is more than 55 feet (16 764 mm) above the floor, sprinkler protection at the ceiling of the *atrium* is not required.

[F] 404.4 Fire alarm system. A fire alarm system shall be provided in accordance with Section 907.2.14.

404.5 Smoke control. A smoke control system shall be installed in accordance with Section 909.

Exception: Smoke control is not required for atriums that connect only two stories.

404.6 Enclosure of atriums. Atrium spaces shall be separated from adjacent spaces by a 1-hour fire barrier constructed in accordance with Section 707 or a horizontal assembly constructed in accordance with Section 711, or both.

Exceptions:

- A fire barrier is not required where a glass wall forming a smoke partition is provided. The glass wall shall comply with all of the following:
 - 1.1. Automatic sprinklers are provided along both sides of the separation wall and doors,

or on the room side only if there is not a walkway on the atrium side. The sprinklers shall be located between 4 inches and 12 inches (102 mm and 305 mm) away from the glass and at intervals along the glass not greater than 6 feet (1829 mm). The sprinkler system shall be designed so that the entire surface of the glass is wet upon activation of the sprinkler system without obstruction:

- 1.2. The glass wall shall be installed in a gasketed frame in a manner that the framing system deflects without breaking (loading) the glass before the sprinkler system operates; and
- 1.3. Where glass doors are provided in the glass wall, they shall be either self-closing or automatic-closing.
- A fire barrier is not required where a glass-block wall assembly complying with Section 2110 and having a ³/₄-hour fire protection rating is provided.
- A fire barrier is not required between the atrium and the adjoining spaces of any three floors of the atrium provided such spaces are accounted for in the design of the smoke control system.

[F] 404.7 Standby power. Equipment required to provide smoke control shall be connected to a standby power system in accordance with Section 909.11.

404.8 Interior finish. The *interior finish* of walls and ceilings of the *atrium* shall be not less than Class B with no reduction in class for sprinkler protection.

404.9 Travel distance. In other than the lowest level of the atrium, where the required means of egress is through the atrium space, the portion of exit access travel distance within the atrium space shall be not greater than 200 feet (60 960 mm). The travel distance requirements for areas of buildings open to the atrium and where access to the exits is not through the atrium, shall comply with the requirements of Section 1016.

SECTION 405 UNDERGROUND BUILDINGS

405.1 General. The provisions of Sections 405.2 through 405.10 apply to building spaces having a floor level used for human occupancy more than 30 feet (9144 mm) below the finished floor of the lowest *level of exit discharge*.

Exception: The provisions of Section 405 are not applicable to the following buildings or portions of buildings:

- One- and two-family dwellings, sprinklered in accordance with Section 903.3.1.3.
- Parking garages provided with automatic sprinkler systems in compliance with Section 405.3.
- 3. Fixed guideway transit systems.
- Grandstands, bleachers, stadiums, arenas and similar facilities.

2012 MICHIGAN BUILDING CODE

BBA17-009

APPLICATION FOR VARIANCE BUILDING BOARD OF APPEALS

Section 1: Applicant Information							
Name of Applicant: I BRADLEY HORE & ASSOCIATES AREHITECTS, INC							
Address of Applicant: 4844 Jackson RD #190 Aw Dreson M. 4803							
Daytime Phone: 08916: 7349301600 CEL: 734 649 3404							
Fax: 724 994 1610							
Email: OFFICE @ JERAN EXTOCATE. CON							
Applicant's Relationship to Property: Apolitical							
Section 2: Property Information							
Address of Property: ZIB W. KINGSLEY							
Zoning Classification: R-4D							
Tax ID# (if known): 09-09-29-151-016							
Section 3: Request Information							
☐ Variance							
Chapter(s) and Section(s) from REQUIRED dimension: PROPOSED dimension: which a variance is requested:							
SEE SATURATED 55 BLOG DIM DIVERAGE AT							
SECT'N 403.1 of THE FROM GRADE TO TO HIGHEST OCC.							
Zol2 HBC OCCUPIED FLER. FLR: 48.1 Example: 2003 Building Code, Sec 5:26 Example: 7' Ceiling Clearance Example: 6'5" under landing							
Give a detailed description of the work you are proposing and why it will require a variance (attach additional sheets if necessary) SEE ATTACHER							
Section 4: Variance Request (If not applying for a variance, skip to section 5)							
The City of Ann Arbor Building Board of Appeals has the powers granted by State law and Building Codes. A variance may be granted by the Building Board of Appeals only in cases involving practical difficulties or unnecessary hardships when ALL of the following is found TRUE . Please provide a complete response to each item below. These responses, together with the required materials in Section 5 of this application, will form the basis for evaluation of the request by staff and the Building Board of Appeals.							
1. Are there hardships or practical difficulties to complying with the Code? Are these hardships or practical difficulties an exception or unique to the property compared to other properties in the City?							
WE RELIEVE THE BUILDING AS DESIGNED SHOULD NOT							
BE CONSIDERED A HIGH-RISE DESPUTE THE PRACTICAL							
DIFFICULTIES OF THE SITE CONTAVING & FLOODPLAND							
# HIGH WATER TABLE							
2. Are the hardships or practical difficulties more than mere inconvenience, inability to obtain a higher financial return, or both? (explain)							
FLOOSING OF THE BUILDING HUST BE ANDIDED							
FILL CANNOT BE PLACED IN THE FLOOPLAIN							
(continued)							

3. What effect will granting the variance have on the neighboring properties?
4. What physical characteristics of your property in terms of size, shape, location or topography
prevent you from using it in a way that is consistent with the Code? WE BELIEVE IT IS CODE COMPLENT
FLOODRAM TOPOGRAPHY IS CRITICAL COMPONER
5. Is the condition which prevents you from complying with the ordinance self-imposed? How did the condition come about?
NO CONDITIONS PREDATED THE BULLING
NO, CONDITIONS PREDATED THE BULLING
Section 5: Required Materials
The following materials are required for all variance requests. Failure to provide these materials will result in an incomplete application and will delay staff review and Building Board of Appeals consideration of the request. The materials listed below must accompany the application and constitute an inseparable part of the application.
All materials must be provided on 8 ½" by 11" sheets. If incomplete, you will be scheduled for the NEXT MEETING DATE ON THE FOLLOWING MONTH.
State proposed use of the property, size of lot and size and type of proposed changes.
Building floor plans showing interior rooms, including dimensions.
Photographs of the property and any existing buildings involved in the request.
Any other graphic or written materials that support the request.
Section 7: Acknowledgement
SIGNATURES I, the applicant, request a variance from the above named Chapter(s) and Section(s) of the State of Michigan Building Residential/Commercial Code(s) for the stated reasons, in accordance with the materials attached hereto.
124 920 1600
Phone Number Signature
THE SPRAN AT TWEE COM
Email Address Print Name
STAFF USE ONLY
Date Submitted: Fee Paid:



December 13, 2017

City of Ann Arbor **Building Board of Appeals** Larcom City Hall 301 E. Huron St., first floor Ann Arbor, MI 48104

Re: Kingsley Condominiums LLC's Authorization of J. Bradley Moore & Associates Architects, Inc. as Owner's Agent

Dear Members of the Board -

May this letter serve as authorization for Bradley Moore and J. Bradley Moore & Associates Architects, Inc. to act as the Owner's Agent for Kingsley Condominiums LLC for the purpose of submitting a Building Board of Appeals application for the Kingsley Condominiums project located at 218 W. Kingsley Street in Ann Arbor.

Should you have any questions, please feel free to contact either myself or the project lead and Director of Asset Management, Anthony Toth (anthony@promanas.com or (734) 358 – 3828). Thank you.

Sincerely,

John Bogdasarian President/Manager Kingsley Condominiums LLC

c/o The Promanas Group

john@promanas.com

(734)477 - 9400



December 12, 2017

Dear Board Members,

I am hereby requesting that the Ann Arbor Building Board of Appeals make a determination that the proposed Kingsley Condominium Building not be classified as High-Rise under the 2012 Michigan Building Code.

Building organization and summary:

The proposed Kingsley Condominium Building is designed with a principle use of R-2, multifamily residential units, along with ancillary accessory uses. The first floor of the building is mostly on-grade parking but also includes the main building lobby entrance and some accessory use areas such as mailboxes and an exercise room – there are no residential uses on this level. The parking level cannot be pushed lower due to the building being located adjacent to the Allen Creek floodplain and a high water table under the site.

The residential units, comprising up to 51 dwelling units, are located on the second through fifth floors representing the primary and continual use of the building. The fifth floor (where less than a fourth of the units reside) is between 44.95 and 47.75 feet above the level of fire department vehicle access – below the trigger height for high-rise designation. Fire department vehicular access is provided on all of the south, east and north sides of the building as well as along a portion of the west side (more than required by code).

There is a small roof-top level accessory intermittent use area consisting of two bathrooms and a wet bar at the very northern end of the building at the top of the north stairwell and elevator. This enclosed space is adjacent to and serves a roof-top patio with an occupancy of 38. The enclosed rooftop level space with the bathrooms and kitchenette is approximately 587 s.f. in contrast to the 21,585 s. f. of the fifth through second floors below.

An access area has been provided for fire department vehicles to a portion of the north and west side of the building, near the small roof-top level, (see attached) that is 54 foot 10 inches below the roof top level (also below the 55 foot trigger height). The average building height

around structure is only 48.1 feet and the height to the highest residentially occupied floor is just 47.75 feet

Since there is fire department vehicular access to the roof-top level within 55 feet of the adjacent grade at the north and west sides of the building and since the greatest occupied portion of the building is below 50 feet I respectfully request that it not be classified as a high-rise.

Please also note the following:

The building will have an automatic sprinkler system throughout.

The rooftop level has two independent means of egresses in opposite directions.

The past and present fire marshal have indicated that the fire department ladder truck can access the roof top level from areas south, east and north of the building since the city's ladder trucks can reach to levels well above 55 feet.

Sincerely,

J Bradley Moore, AIA

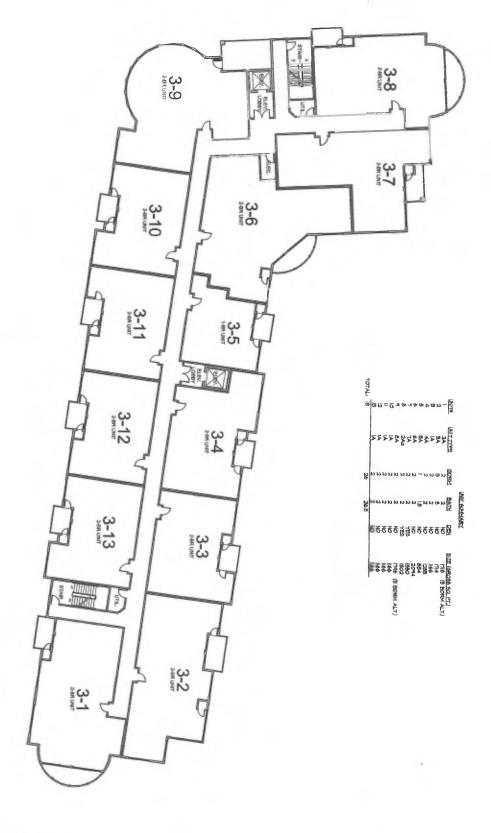
President, J Bradley Moore & Associates, Architects, Inc.

Kingsley Condominiums

LADDER					
TRUCK	SECTION#				(ht, x linear ft.)
ACCESSIBLE	IN PLAN	ELEVATION	HEIGHT	LINEAR FT	PRODUCT
via					
5TH FLOOR	1	783.5	46.75	36	1683.00
5TH FLOOR	2	782.5	47.75	25	1193.75
5TH FLOOR	3	784.0	46.25	66	3052.50
5TH FLOOR	4	784.5	45.75	77	3522.75
5TH FLOOR	5	784.5	45.75	192	8784.00
5TH FLOOR	6	785.3	44.95	66	2966.70
ROOF	7	785.88	57.67	37	2133.79
ROOF	8	787.5	54.17	119	6446.23
5TH FLOOR	9	787.5	42.75	11	470.25
		•		629	30252.97
			Building Average Height:		48.1 ft.
5TH FLOOR	1	783.5	46.75	36	1683.00
5TH FLOOR	2	782.5	47.75	25	1193.75
5TH FLOOR	3	784.0	46.25	66	3052.50
5TH FLOOR	4	784.5	45.75	77	3522.75
5TH FLOOR	5	784.5	45.75	192	8784.00
5TH FLOOR	6	785.3	44.95	66	2966.70
5TH FLOOR	9	787.5	42.75	11	470.25
				473	21672.95

Fifth Floor Average Height:





213490 213490 THIRD FLOOR PLAN

Kingsley Condominiums 221 Felch Stree, Ann Arbor, MI

Third Floor Plan





December 13, 2017

City of Ann Arbor Building Board of Appeals Larcom City Hall 301 E. Huron St., first floor Ann Arbor, MI 48104

Re: Kingsley Condominiums Avoidance of High Rise Classification and Issuance of Building Permit

Dear Members of the Board -

I am the Manager of Kingsley Condominiums, LLC, the developer of the Kingsley Condominiums project that is under construction located at 218 W. Kingsley Street. The purpose of this letter, along with the submitted Application for Variance as submitted by our architect, Bradley Moore of J. Bradley Moore and Associates Architects, Inc., is to request that the Kingsley Condominium building not be classified as a High Rise. Section 4 of the Variance Request Application asks for any practical difficulties or unnecessary hardships that the project would experience if the building was deemed a high rise. The below detail thoroughly explains the hardships that would result in the High Rise classification and provides you with a detailed background of the situation.

Our project team has participated in prior recent meetings with Ms. Lisha Turner-Tolbert, Mr. Glen Dempsey, Mr. Craig Strong, and Ms. Kathleen Summersgill on October 17, November 13, and December 11 to discuss issues that are delaying the issuance of the building permit for the project. Through these meetings, we have not been able to come to any resolution regarding the critical issue of whether or not the building is deemed a High Rise. This issue, if not resolved, will place the project in jeopardy.

To provide you a thorough background of the situation:

The project was site plan approved, and rezoning approved, by City Council on August 4, 2016. Following our site plan approval, many discussions took place between our architect, Brad Moore, the then interim building official and the now former fire marshal, as a pro-active measure knowing that both of those positions would soon be filled by new individuals, even though the retirement of the fire marshal was unforeseen at that time. The pivotal reason for why we contacted the interim building official was to determine whether or not the practices of the city under the previous building official would remain consistent. Under the tenure of the previous building official, buildings with accessible roof-top patios (and attendant access spaces), where the height of the walking surface was just a few feet above the 55-foot height enumerated in the building code (for high-rise buildings) were not deemed "high-rises" so long as there were no primary building functions (i.e. dwelling units) at the roof-top level. Based on



these conversations that were had, it was our understanding that roof-top patios (and their attendant access spaces) would not be considered "Occupied Floors" thus not triggering the "high-rise" designation and we had no reason to believe otherwise.

As a result of the aforementioned details and direction that we received from the city and its officials, we proceeded with the final construction drawings, permit applications, recording of condominiums documents, sales of 21 of the condominium units, and construction of the project. Construction is well underway as we have received the demolition and foundations permits. Please note that the foundation permit was submitted and approved with the full set of drawings showing the height of the of building included in the set of plans. It was not until recently, that the "high-rise" designation was made an issue. We have agreed to change some design of the building as requested by the now building official, Mr. Glen Dempsey, by adding additional bathrooms to the rooftop patio area and we have solved those issues. However, we now seem to have found ourselves in a stand-still regarding the "high-rise designation issue.

The timing of the solution to this issue is critical. As previously mentioned, we have sold more than half of the condominiums to buyers that have non-refundable deposits. These buyers purchased their units in the building based on the design and construction as approved by the prior building officials. If it is determined that Kingsley Condos will be designated as a "high-rise" there are design elements to the building that we would be forced to change that would delay the project, significantly increase costs, drastically effect sold units and would certainly result in the loss of those sales. It is important to note that a specific number of sold units is a condition of closing for the construction loan for this project, and if any lost sales occur then we would not be able to close our construction loan and the future completion of this project would quickly become in jeopardy. Additionally, we cannot close our construction loan and continue building this project without the issuance of the building permit.

Thank you for your time in reading this letter. Though lengthy, I felt it was important for you to understand the full background of this issue and we look forward to discussing it further during the Board of Appeals meeting on Tuesday, December 19th.

Sincerely,

John Bogdasarian President/Manager

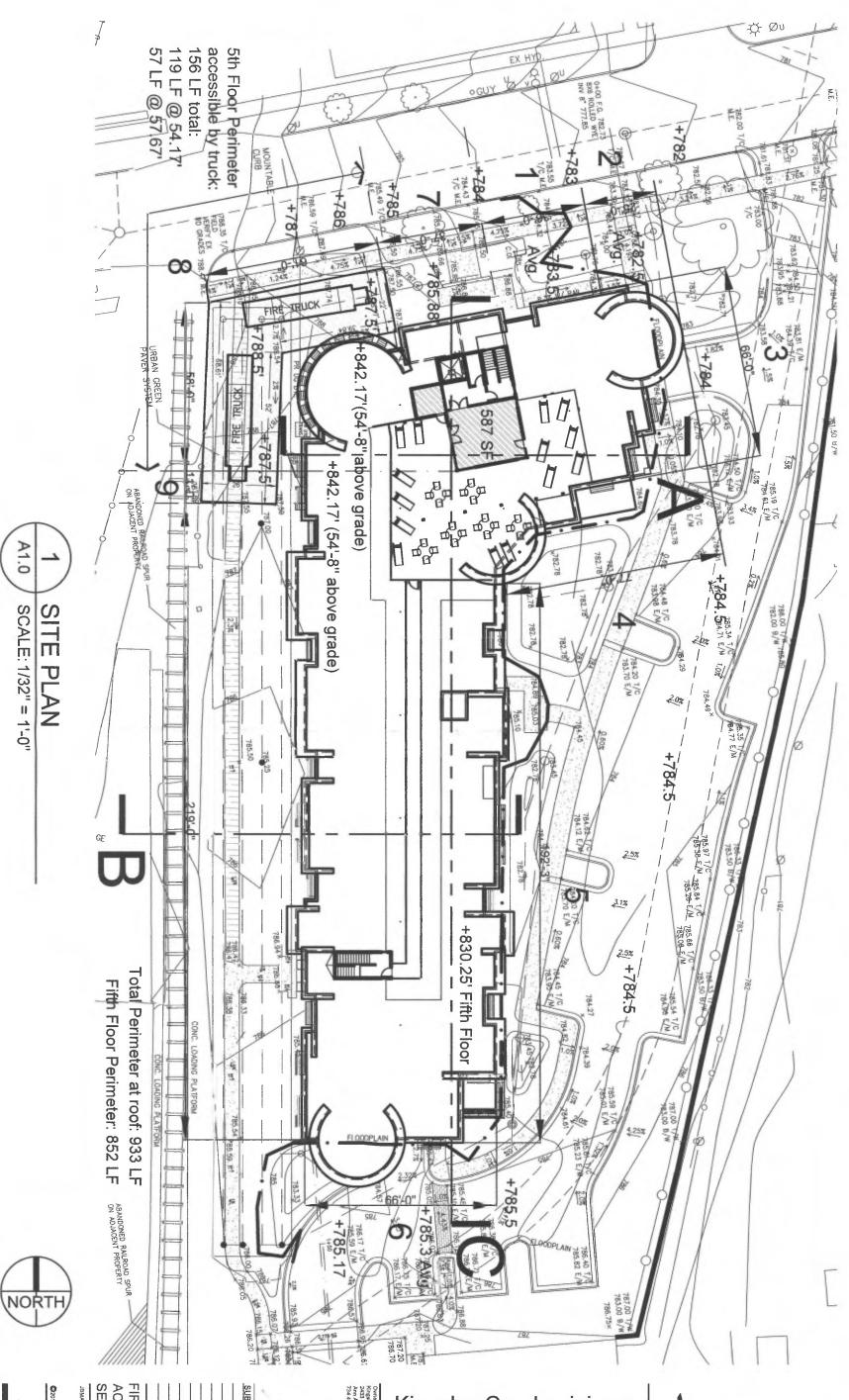
Kingsley Condominiums LLC

c/o The Promanas Group

john@promanas.com

(734)477 - 9400

PROMANAS.COM



A1.0

ACCESSIBLE SECTIONS

JBMA Project No.
216400

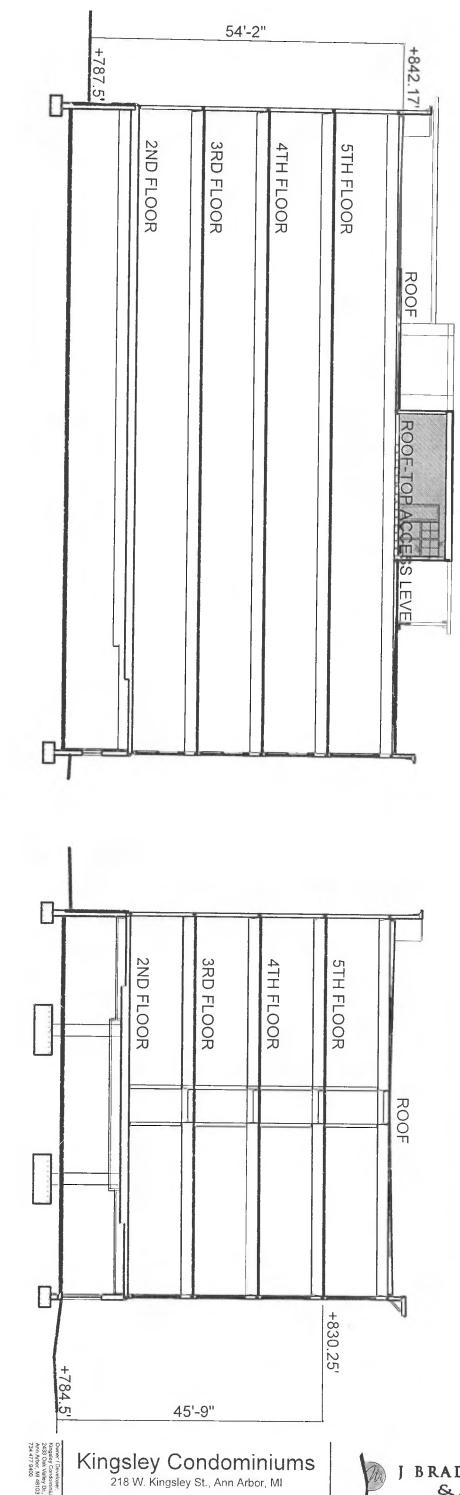


Cwiter, Cassaders, Calley Dr., Suite 1 2433 Oak Valley Dr., Suite 1 Ann Arbor, MI 48103 734 477,9400

Kingsley Condominiums
218 W. Kingsley St., Ann Arbor, MI



4844 Jackson Road #150 • Ann Arbor, MI 48103 • (734) 930-1500



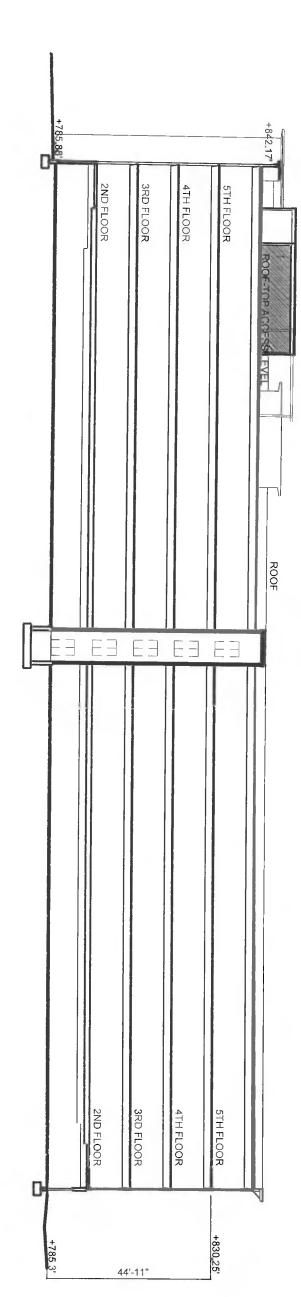
A2.0 SCALE: 1/16" = 1'-0" SECTIONS A & B

> SECTION שַ<u>ּ</u>

SECTION "A"

J BRADLEY MOORE & ASSOCIATES 4844 Jackson Road #150 • Ann Arbor, MI 48103 • (734) 930-1500

FIRE TRUCK ACCESSIBLE SECTIONS



A2.1 SCALE: NTS

SECTION C

216400





SECTION "C"

Kingsley Condominiums 218 W. Kingsley St., Ann Arbor, MI