I. Introduction

At the request of Jeff Kurtz, Dranoff Properties, and on behalf of Universal Companies, Keast & Hood completed a follow-up walk-through of the Royal Theater with Jeff Kurtz, Dranoff Properties. The Royal Theater is located at 1524-1534 South Street in Philadelphia, Pennsylvania (see Picture 1). The first walk-through was completed on 3 November, 2013; the follow-up walk-through was completed by the undersigned on 4 March 2015. The Royal Theater, c. 1919, has been vacant since the theater closed in 1970.

II. Background

After the first walk-through, three future development options were discussed. They include: renovating the existing building with its current configuration; renovating the north two-story building, demolishing the auditorium, and constructing a new building to the south of the renovated three-story building; and shore for reuse the north façade to incorporate into a new building constructed to the south. The day of the second site visit, the weather was a light rain occurring after a significant snow fall.

III. Existing Framing

The existing building can be divided into two distinct sections: the north two-story building with basement and the auditorium with no basement or crawlspace. The wall and ceiling finishes in both the north building and the auditorium consists of plaster.

A. North Building: The north two-story building consists of brick masonry bearing walls supported on stone masonry foundation walls. The floor framing consists of concrete encased steel beams spanning north south between masonry bearing walls and elevated concrete slabs spanning between concrete encased steel beams. The north masonry bearing wall has three large arched openings that are flanked by two additional openings on the first floor; at the second floor, there are five window openings. Communicating stairs were located along the east and west walls down to the basement and up to the second floor. The south masonry bearing wall has three large arched openings that are in line with the north wall openings; at the second floor, there are a few small openings that were used for the theater projection. A mezzanine is located above a portion of the second floor. The mezzanine framing consists of steel beams spanning north-south between the brick masonry bearing walls. A portion of the mezzanine framing consists a concrete slab; the remaining portion consists of interlocking gypsum planks. The mezzanine was not accessible; therefore the roof framing was not observed.

B. Auditorium: The auditorium portion consists of tall brick masonry bearing walls supporting steel roof trusses spanning east-west between the east and west bearing walls; the roof trusses are only visible in the auditorium through two ceiling openings. The perimeter walls include a parapet, which is capped with terra cotta copping tiles. The existing roof framing between the steel trusses was not observed since the attic space is not accessible. Below each truss, brick masonry piers were constructed integral with brick bearing walls; the piers are constructed on the interior and exterior

sides of the wall. The auditorium floor slab slopes from the north building down towards the south wall; where a small stage is located.

IV. Existing Conditions

A. North Building: The mortar joints in the basement stone and brick foundation walls exhibit minor mortar loss (see Picture 2). The first floor concrete encased steel beams exhibit cracking and spalling of the encasement, and severe corrosion of the steel beam and encasement reinforcing bars (see Picture 3). The first floor concrete slab between encased beams appears in good condition. The north facing brick bearing wall exhibits minor mortar loss in the interior and limited mortar loss on the exterior. The east and west facing brick bearing walls exhibit extensive mortar loss, through wall voids, and significant wall cracks. On the east elevation, some mortar joints have completely eroded through the full thickness of the wall; daylight can be seen through the wall in various locations. In the southeast corner, a large tree/vine has caused a complete through wall crack for the approximate full height of the wall (see Picture 4); additionally, there is a significant outward bulge in this area of the wall (see Pictures 5 & 6). The south facing brick bearing wall (also the north auditorium wall) exhibits mortar loss. Pipe/conduit chases have been cut into the face of the wall and are located directly adjacent or below beam bearing locations. The majority of the existing plaster ceiling finishes had fallen to the floor (see Picture 7); this indicates ongoing moisture concerns.

The second floor concrete encased steel beams exhibit cracking and spalling of the encasement, and severe corrosion of the steel beam and encasement reinforcing bars (see Picture 7). The second floor concrete slab between encased beams exhibits corroding slab reinforcing. Access to the second floor was not possible during the second visit due to icy conditions from the current roof and wall leaks (it was accessible during the first site visit – see Picture 8). The mezzanine framing exhibits extensive surface corrosion. The mezzanine concrete slab portions exhibit spalling and corroded reinforcing; the mezzanine gypsum plank portions exhibit extensive corrosion and deterioration (see Picture 9).

B. Auditorium: The roof trusses are only visible in two locations; where they are visible, the trusses exhibits extensive corrosion. In one location, a large steel delamination is visible from the floor (see Picture 10); in a second location, a portion of delamination was observed on the floor. During the second site visit, extensive roof leaks were occurring in two locations along the east wall (see Picture 11); both locations were adjacent to steel roof trusses and corresponded to the roof drains, visible on the east elevation. The existing concrete slab-on-grade exhibits cracking in various locations. Large sections of the existing plaster ceiling finishes had fallen to the floor; this indicates ongoing moisture concerns (see Picture 12).

The east and west brick masonry bearing walls exhibit extensive mortar loss (see Picture 13). Both walls also exhibited extensive cracking caused by large vine growths (see Picture 14); the vines typically start near the base of the walls interior face and extended up the wall adjacent to the brick masonry piers (the vines have been previously cut above the floor slab). Near the top of the wall, the vines grew into existing cracks or open joints in the brick walls. As the vines grew and expanded within the wall thickness, they caused extensive cracking of the brick and brick loss along the exterior face of the wall (see Picture 14). In many locations, the vines grew horizontally within the

wall thickness and came through the masonry at weak points; this has also caused extensive brick loss along the top of the walls. The locations of the cracks and brick loss are unfortunately located near the roof truss bearing locations; this wall section loss has caused inherited weak points in the masonry walls. At the south end of the east wall, a large portion of the upper section of wall and south corner were previously reconstructed with CMU (see Picture 15). There is a crack at the center of the CMU portion; also, there are deteriorated and missing bricks at the base of the CMU. A vertical crack extends down to grade in the southeast corner from the reconstructed section above; the crack was previously repointed and parged. However, the crack has reopen through the parging and has extended through new sections of the brick wall (see Picture 16).

At the top of the walls, many of the masonry piers exhibit a combination of a bulge, vine growth, and/or missing bricks. At one pier on the west elevation, the end of the steel roof truss is visible where the brick veneer is missing (see Picture 17). At another pier, there is only a bulge; there are no visible vines or missing brick (see Picture 18). With the bulge being the only wall distress present, this is an indicator of corrosion occurring at the truss end causing rust jacking (an outward force on the brick caused by the corroding steel). Corrosion at the truss ends is major structural concern due to the significant brick loss and open mortar joints, which is a major source of water into the wall.

The south brick masonry bearing wall exhibits extensive open mortar joints. The south wall parapet is missing sections of the terra cotta copings.

V. Repair Recommendations

As stated at the beginning of the report, there were originally three options being considered for the redevelopment of the property. They included: renovating the existing building with its current configuration; renovating the north two-story building, demolishing the auditorium, and constructing a new building to the south of the renovated two-story building; and shore for reuse the north façade to incorporate into a new building constructed to the south. Due to the existing conditions of the existing structure, the first two options will require significant amount of repairs, reconstruction, and reinforcements to allow their reuse in the redeveloped site.

The following is an immediate structural concern.

- The crack on the east elevation at the intersection of the north building and the auditorium. The current size of the crack appears larger than during the 2013 visit. Access to the interior and exterior of this section of the building should be prohibited until permanent repairs can be completed.

The following is a summary of recommended repairs. The lists are brief and non-exhaustive.

Option 1: Renovate the existing building with current configuration

- Repoint **all** masonry mortar joints on the interior and exterior surfaces of all masonry walls; this will require the existing joints to be cut out to sound mortar and repointed with a mortar to match the existing in color and texture.
- Repair all deteriorated areas of the masonry walls; assume 25% of the walls will require some type of repair or infill.
- Rebuild east and west walls of the auditorium from the truss bearing elevation to the top of the wall

- Repair/reinforce the existing roof trusses; this will require an extensive field survey of **all** the existing trusses and an analysis of each truss to determine the required reinforcements.
- Replace the existing slab on grade in the auditorium; provide structural fill to create a level floor.
- Replace all floor framing of the north three-story building; wall bracing will be required.

Option 2: Renovate two-story building; construct new building to south

- Demolish the three walls of the auditorium, protecting the south wall of the two-story building.
- Repoint **all** masonry mortar joints on the interior and exterior surfaces of the two-story building; this will require the existing joints to be cut out to sound mortar and repointed with a mortar to match the existing in color and texture.
- Repair all deteriorated areas of the masonry walls; assume 25% of the walls will require some type of repair or infill.
- Replace all floor framing; wall bracing will be required.
- Construct new building to the south.

Option 3: Shore north façade for reuse in new building to south

- Prior to demolition, install a temporary wall bracing structure for north wall; including temporary foundations. The temporary structure would be in the north side of the north façade.
- Repoint **all** masonry mortar joints on the north wall; this will require the existing joints to be cut out to sound mortar and repointed with a mortar to match the existing in color and texture.
- Repair all deteriorated areas of the north wall; assume 10% of the wall will require some type of repair or infill.
- Construct new building to the south incorporating the restored north wall.

Again, the above list is a non-exhaustive list of repairs; it was meant to provide a general idea of the types of repairs required for each of the three discussed redevelopment options to develop a cost estimate.

VI. Conclusion

The existing condition of the Royal Theater is in poor condition, with a small portion of the building being in fair condition. The portion in fair condition is the portion of the building that appears to have been receiving regular maintenance since the building was closed in 1970; that portion is the historic north façade facing South Street. With significant repairs, reconstruction and reinforcements, the entire existing building in its current configuration can be renovated for reuse. However, this would require substantial resources.

VII. Limitations

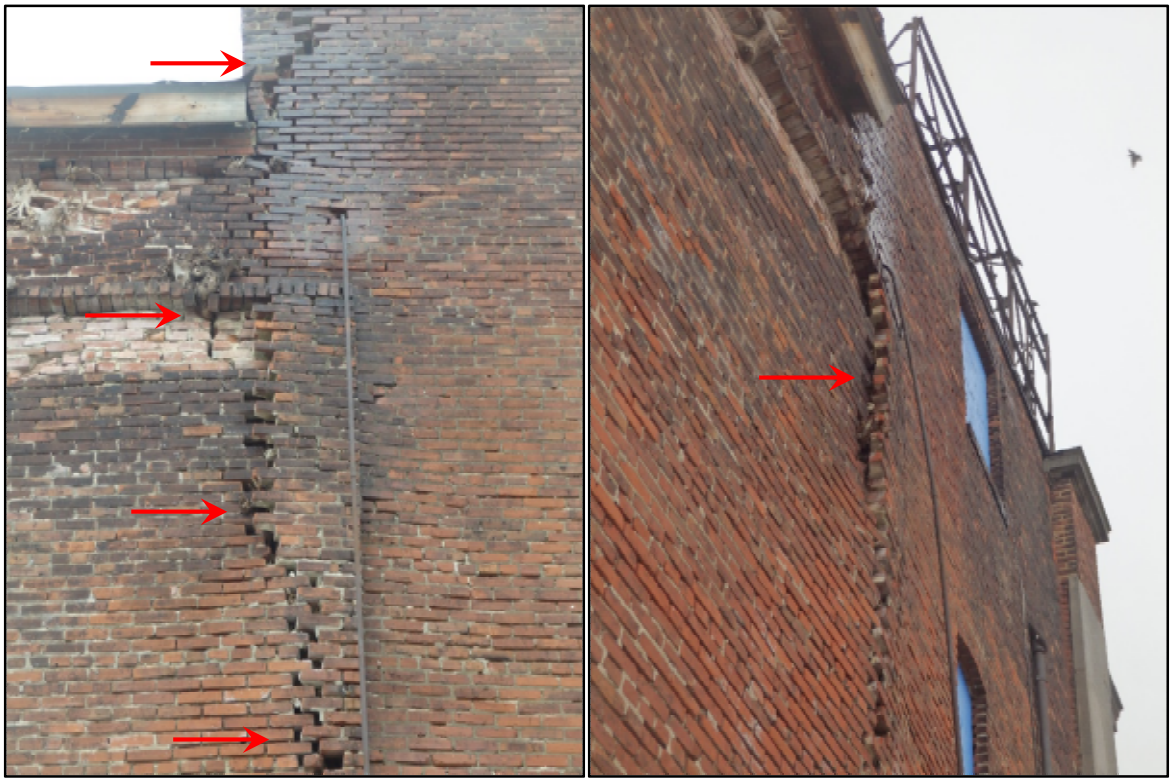
Users of this report should understand that its scope is limited to observations and conclusions drawn from a purely visual condition assessment. This exercise was not exhaustive; rather, it was preliminary in nature and was intended to provide an experienced, initial assessment of the facility. Probes to uncover and assess hidden structural elements and conditions were beyond the scope of this study as was the identification of hazardous materials including lead paint, asbestos containing materials, mold, fungi and other hazardous materials that might possibly be present.

Picture 1: North elevation of the Royal Theater.

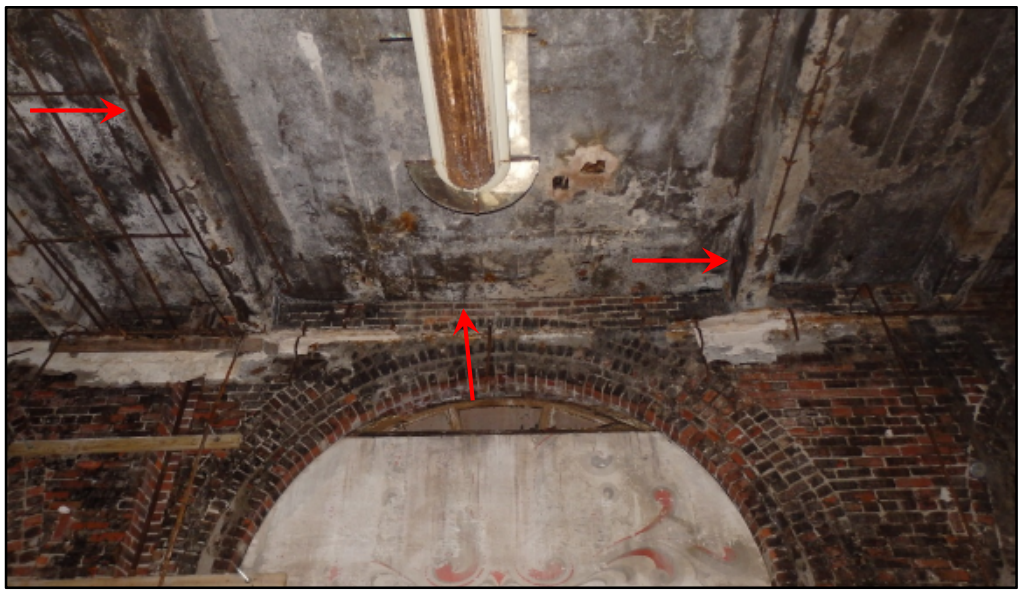
Picture 2: North Building – The north interior face of the foundation wall.

Picture 3: North Building – The concrete encasement has extensive spalling and first floor beams exhibit severe corrosion.

Picture 4: North Building/Auditorium – A large extensive crack is located in the southeast corner of the north building (east elevation). A large vine has grown up that corner and into the wall to cause the crack.



Picture 5 & 6: North Building/Auditorium – A large crack has opened on the east elevation. A portion of the wall at the crack has shifted outward.



Picture 7: North Building – The concrete encasement on the second floor framing has spalled in many locations; this has exposed corroded steel beams. Also, sections of corroding slab reinforcing is visible.

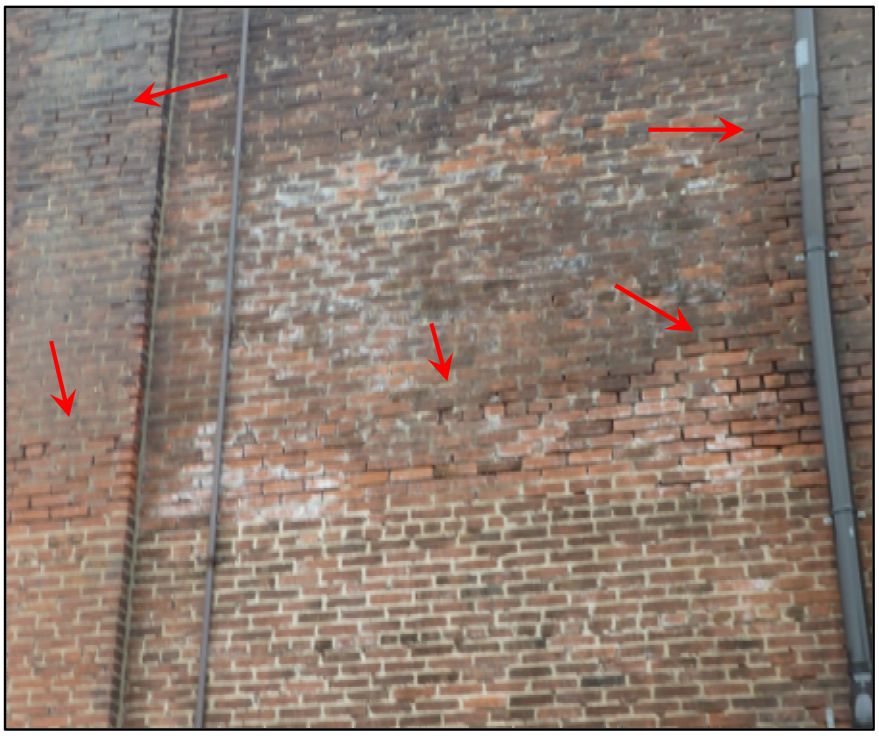
Picture 8: North Building – During the second visit, ice had formed on the wall and steps.

Picture 9: North Building – Portion of the mezzanine framing consists of interlocking gypsum planks, which are in deteriorated condition.

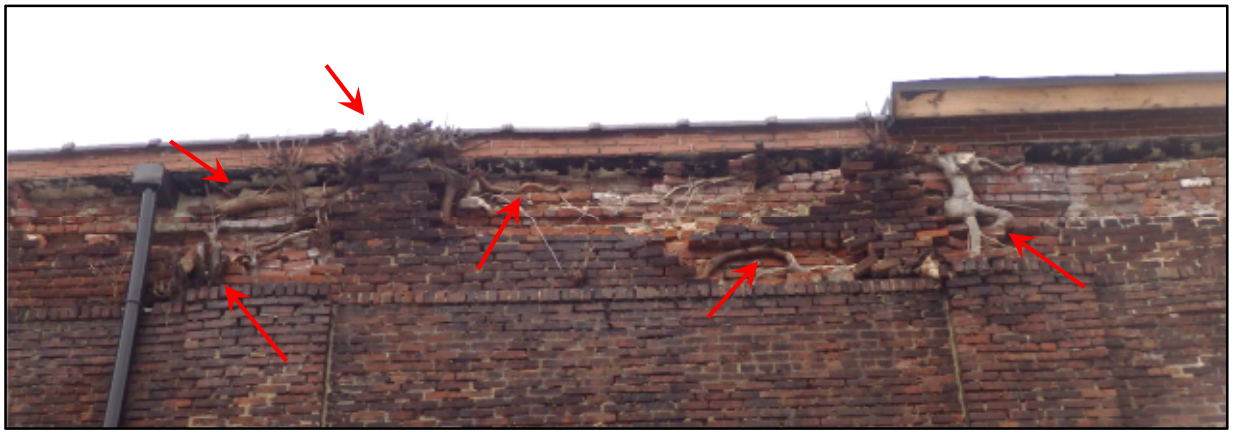
Picture 10: Auditorium – The west end of a truss is visible through a ceiling opening. Water from a roof leak is visible on the wall. Also, a section of delaminating steel is hanging off the bottom chord of the truss.

Picture 11: Auditorium – In multiple locations, roof leaks were evident by the continuous stream of water coming from the ceiling. The leaks are at or adjacent to existing roof trusses; the continuous water infiltration at the trusses typically would indicate extensive steel corrosion in those locations.

Picture 12: Auditorium – Approximately 50% of the plaster ceiling has fallen to the floor, indicating an ongoing moisture issue.



Picture 13: Auditorium – Along the exterior of the building, there are large sections of open mortar joints.



Picture 14: Auditorium – The extensive vine growth over the years have extensive damage to the top of the walls. The vines climbed the interior face of the walls and began to grow within the wall thickness.

Picture 15: Auditorium – A portion of the east wall was previously reconstructed with CMU. There is a crack at the center of the CMU section and deteriorated and missing bricks near the base of the CMU.

Picture 16 (to left): Auditorium – There is a crack in the southeast corner of the building on the east elevation.

Picture 17 (below): Auditorium – At the top of one of the piers on the west elevation, the end of the steel truss is visible and exposed to the weather. The large wall opening in this location, allows water into the wall at the truss bearing.

Picture 18: Auditorium – There is a bulge in the brick at the top of a masonry pier right at a truss bearing location. This may indicate corroding steel and rust jacking.