

MEMORANDUM

To: Ipswich Public Safety Facility
Committee

Date: October 28, 2019

From: Janet M. Slemenda

Project: Feasibility Study
Ipswich Fire and Police
Stations

Job No: 21831

Subject: Draft Synopsis of Fire and Police Station Needs and Existing Conditions

The Fire Department

The Central Fire Station, a masonry structure built in 1890 and designed for horse drawn apparatus, consists of 10,285 gross square feet on three levels. The main apparatus level with some office space is 4,333 gsf, the living quarters and offices on the 2nd level are 2,976gsf and a basement level is 2,976gsf. A pre-engineered metal building was added to house additional vehicles and equipment and is connected directly to the rear of the main structure. A fabric covered aluminum frame tent for additional equipment has collapsed.

The main fire station is in fair condition with some isolated areas of brick in poor condition, particularly on the north side. Areas of brick on north, west, south and east sides have been repaired/repointed with some repointing better than others with various grout colors that do not match in color or tooling of joints. Minimal flashings are visible and appear in poor condition with deteriorating brick/mortar and repointing suggesting flashing that is in poor shape or non-existent. Precast trim is in fair/poor condition with some repairs attempted. Painted wood soffits and trim at overhanging eaves appears to be in fair/poor condition with the condition of wood unknown. Insulation is also unknown but interior brick finish may indicate multiple wythe of bricks and no or negligible insulation. Vinyl replacement windows are approximately 5 years old. The asphalt shingle roofing is approximately 30 years and one gutter and downspout visible at northwest corner only over fire escape.

The pre-engineered metal building, including walls and roof, are in good condition with some signs of damage at lower portion of building where metal meets grade, or at corners and near overhead doors. "Bag" insulation sandwiched between girt and outer building material is visible and includes tears and deterioration of bag material. This building has metal windows. The metal roof includes gutters and downspouts and various mechanical penetrations through roof. Connector to existing masonry building entry has metal roof and shingle roof at roof extension to cover door.

The Central Fire Station overhead sectional doors are 10' x 12' with steel man doors with transoms. The pre-engineered metal building includes insulated overhead doors at 14' x 14 with steel solid panel man doors. A fire escape on the original building appears to be in good condition. However, no guard rails, fall protection or security enclosure is in place. Site paving is in poor condition with site mounted mechanical systems protected with bollards. 12 parking spaces are available, none accessible.

The interior of the Fire Station includes a concrete basement floor with gravel at perimeter drains. A concrete floor, with some cracking visible, has been poured over the original wood floor in the apparatus bays with floor drains located underneath vehicles. Other floor finishes include vinyl composition tile (or VAT), carpet and wood floors. The attic is unfinished except for some plywood has been placed on framing to create storage spaces for records.

The basement consists of unpainted brick and stone foundation walls and columns. Stone foundation walls, to approximately 4' to 8', are visible with remainder of walls constructed of brick. The first and second floors have painted brick, plywood or pre-finished paneling and painted GWB. These surfaces are in good to fair condition. Ceilings include a tin ceiling in poor condition in apparatus bays; acoustic tile and wood ceilings in other areas of first and second floors that are in good to fair condition. Painted wood and metal doors are in fair to good condition.

Other areas of note include:

- Toilet/Shower/Dorm Rooms: There are no separate facilities for men and women and limited fixtures for clean-up of contaminated individuals clothing and equipment
- Training classroom and areas for physical training are non-existent.
- Stairs: There is a wood winding stair to second level with wood balustrade, a wood stair to basement with rail on one side, a concrete stair to bulkhead door on north side of basement and a pull down stair provides access to the attic. Stair to basement/upper floor do not have a code compliant guardrail assembly.
- More than 90 columns, made of wood and concrete and raised on concrete bases populate the basement area.
- Areaways are filled in with CMU.
- The basement is wet with perimeter drains and sumps that have been installed.
- Casework in a number of locations was observed to be in fair to good condition.
- Accessibility: First floor Fire Prevention office is not accessible, first level doors have lever hardware, some upper level doors have lever hardware and others have non-compliant hardware. Entire upper and basement levels are not accessible. There is no elevator in the building. Second floor has no public spaces. There are no accessible toilets.
- There are 2 means of egress from basement/upper floor. Second floor exits via open stair and through Fire Prevention office or via fire escape. Basement has one exit through bulkhead and one exit up staircase and onto apparatus floor. Building has 2 exit doors on east side of building, one from apparatus bay and one through Fire Prevention office and two door exits out of pre-engineered portion of building.
- MEP/FP systems were not reviewed but systems are operational and maintained. A fire sprinkler systems is recommended. Any equipment over 20 years old can be maintained but may require full replacement in a major renovation. An assessment from another source describes a copper supply and cast iron waste and venting with an electric water heater in fair condition. A central system with boiler, hydronic baseboard radiators and cabinets, ductless split-systems, suspended gas unit heaters and vehicle exhaust fan unit is in fair condition. Source and distribution via a main switchboard with T-8 in fair condition. A natural gas generator is in fair condition. The Fire Alarm system includes back-up emergency lights, and exit signs in fair condition.

In conjunction with the architectural assessment of the Central Fire Station, programming for department needs was completed to determine if the building and site could provide adequate, safe and accessible operations areas for both the current and future needs of at least 20 years. Following completion of a detailed questionnaire by personnel and in-person interviews the following program was developed for either a stand-alone Fire Station or a joint Public Safety Facility with the Police Department. The department, along with responding to fire calls, provides emergency medical services, marine rescue/firefighting, hazardous materials responses, technical rescues, fire prevention inspections, code enforcement and permitting, Student Awareness programs, Seniors SAFE education, car seat inspections and compliance, SCBA maintenance, in-house training and small equipment repair.

A Stand-Alone Fire Station would consist of the following:

- Public spaces including entry, lobby, public toilet and training/community room requires 2,373 gsf.
- Staff Support including Fitness requires 719 gsf.
- Administration spaces including offices for command staff, conference room, archive document storage, supplies/copy requires 2,205 gsf.
- Staff support including dorm rooms, toilet/shower rooms, locker rooms, kitchen and day room, report writing/on-line training requires 2,496 gsf.
- Operations areas including apparatus bays, gear laundry, workshop, medical cleaning/decontamination, SCBA fill room, oxygen storage, air compressor, Haz Mat and medical supply storage rooms, bulk storage, triage and training area requires 12,348 gsf.
- Building support areas including server, mechanical, electrical, fire protection/plumbing and vertical circulation require 3,283 gsf.
- Total for Stand-Alone Fire Station = 24,516 gsf

The current facility of 10,285 gsf, built in 1890 with the pre-engineered addition, no longer supports the needs of a modern fire department. Up-to-date equipment and the supplies needed to support modern firefighting barely fits within the building allowing little room to safely maneuver during calls. In addition the entire process of returning from a call with contaminated equipment cannot be addressed in the current configuration, therefore contaminated gear and equipment is brought into the building without a clear pathway for removal and cleaning. Staff support spaces, for sleeping, eating and showering, are inadequate and the building does not provide suitable office and work space to complete daily work efforts. Storage space for records and supplies is makeshift and much equipment and supplies are stored in absement subject to water infiltration.

The Police Department

The Police Station, a masonry structure built in 1900 as a warehouse for the Water Department, consists of 9,097 gross square feet on three levels. The main level is 5,210 gsf, the basement level is 2,976 gsf and an attic level of 2,457 gsf.

The police station is in fair condition with some isolated areas of brick in poor condition. Some areas of brick have been repaired/repointed, some repointing with various grout colors that do not match in color or tooling of joints. No weep holes or open head joints observed particularly on the north side. Minimal copper step flashing visible appears in poor condition

with suggestion of flashing over steel lintels at windows. Precast trim at sills, water table and panelized decorative trim is in fair condition with some visible damage on south elevation near where cars are parked. Painted wood soffits and trim are in poor to fair condition. There are no reported issues with the windows including original steel windows on garage portion of building although they should be replaced. Exterior painted trim is in fair condition. Gable construction with asphalt shingle and flat construction with single-ply EPDM membrane are in good condition. Aluminum coping overlaps original precast coping. Gutter and downspouts along eave sides of building are of various ages and colors. Downspout as "scupper" on south elevation of flat roof garage. Wall insulation is unknown but some interior finish is brick therefore assume multiple wythe of bricks and no or negligible insulation. The entry on Elm Street includes a painted wood panel door with lever hardware and divided lite sidelights and transom. The accessible steel entry door is on west side. There are several kinds of overhead sectional doors with some wood and some insulated steel. Doors are in fair condition with several overhead doors in good condition.

Site paving is in poor condition. 9 parking spaces are available, none accessible.

The interior of the Police Station includes a concrete basement floor with ceramic tile at toilet/shower area and resilient at remainder. Floor finishes on the main floor include recessed mats, vinyl treads, resilient flooring, carpet, rubber flooring, concrete and resilient flooring in booking and cell block areas and ceramic tile in toilet rooms. The attic includes unfinished wood plank flooring with steel structural framing set approximately 12" above finished elevation. The attic has always been used for storage and floor openings with remains of lifting mechanism are still in place. Flooring is in fair to good condition.

The basement consists of painted brick, CMU and concrete, and painted gypsum wall board and ceramic tile in toilet rooms. The first floor has painted brick and CMU, painted plywood, finished wood paneling, painted gypsum wall board and ceramic tile in toilet rooms. plywood or pre-finished paneling and painted GWB. These surfaces are in good to fair condition. Ceilings include acoustic tile and painted GWB ceilings, exposed roof framing and plywood in attic with batt insulation between rafters. Ceilings are in good to fair condition with plaster on lath in poor condition. Painted wood and metal doors with wood frames and trim and hollow metal frames are in good condition.

Other areas of note include:

- There are (2) 8x40 permanent trailers on site storing equipment.
- Booking and Cell Block Area: Movement of detainee from entry to cell includes arrival in sally port that is also used for storage, up a set of stairs to a booking area that is broken into several areas requiring moving detainee to complete processing, to cell block area. Cellblocks include 3 in one area and one in a sight/sound separation area, bars that have been covered with plexiglas, penal fixtures, restraint cell, audio and video surveillance, lockers for personal belongings, and various handcuff benches and handrails.
- Casework in a number of locations was observed to be in fair condition
- Stair to basement has railings on both sides and vinyl treads. Stairs to attic are unfinished but have rails on both sides. Stair to basement/attic do not have a code compliant guardrail assembly.
- Generators (2) and other mechanical equipment protected with bollards or located behind telephone poles which provides minimal protection.

- Fabric covered aluminum frames tent in poor condition.
- Accessibility: Main door is not accessible and has no protected curbed sidewalk. First floor is accessible by way of ramp on west elevation which has a door bell. Accessible ramp has spalling concrete and rusting posts at rails. Most first level doors have lever hardware, although none in booking area. Basement and attic level doors do not. There is no elevator in the building.
- No public toilets. Toilets on first level appear accessible.
- There is 1 means of egress from basement and attic floors. Building has 1 exit door each on north, west and south sides of building. Stair from attic and basement exits via open stair to main level.
- Main lobby and booking area have steps leading into spaces located directly adjacent to door. Raised steel structure in attic are tripping hazards.
- MEP/FP systems were not reviewed but systems are operational and maintained. A fire sprinkler systems is recommended. Any equipment over 20 years old can be maintained but may require full replacement in a major renovation. An assessment from another source describes a copper supply and cast iron waste and venting with an electric water heater in fair condition. A central system with electric resistance units, ductless split-systems, suspended electric unit heaters in fair condition. Source and distribution via a main switchboard with T-8 in fair condition. A diesel generator is in fair condition though undersized. The Fire Alarm system includes alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs in fair condition.

In conjunction with the architectural assessment of the Police Station, programming for department needs was completed to determine if the building and site could provide adequate, safe and accessible operations areas for both the current and future needs of at least 20 years. Following completion of a detailed questionnaire by personnel and in-person interviews the following program was developed for either a stand-alone Police Station or a joint Public Safety Facility with the Fire Department. The department provides full law enforcement services including patrol functions, evidence storage, records keeping, firearms license processing, mooring requests, detectives division, School Resource Office, DARE, Community Resource Unit (CRU), IT officer, Marine patrol, and Emergency Management. The PD also sees the addition of a traffic enforcement division patrolled via motorcycle and a K9 team. The ECC is located within the Police Station at the public entrance and serves as the main lobby and first public contact point. The PD also requires operational spaces including training and small meetings.

A Stand-Alone Police Station would consist of the following:

- Public spaces including entry, lobby, public toilet and training/community room requires 1,834 gsf.
- Communications including the Emergency Communications Center (ECC) with office requires 765 gsf.
- Staff Support including Fitness requires 719 gsf.
- Administration spaces including offices for command staff, detectives office and interview room, conference room, archive document storage, supplies/copy requires 2,629 gsf.
- Operations areas including sergeant and shared offices, roll call, report writing, evidence prep and storage, bulk evidence and armory require 2,155 gsf.

- Staff support including lunch rooms, toilet/shower/locker rooms requires 2,011 gsf.
- Detention areas including sally port impound and vehicle bays, booking and detention cells, interrogation room and lab, requires 3,601 gsf.
- Building support areas including server, mechanical, electrical, fire protection/plumbing and vertical circulation require 3,283 gsf.
- Total for Stand-Alone Police Station = 16,997 gsf

The current facility of 9,097 gsf, built in 1900 for the water department, no longer supports the needs of a modern police department. Modern policing is very different than when this building was renovated for the PD. Personnel have increased and available space to support all of those needs is not available in this facility. The building is not accessible at the front door and where a pathway has been provided it is not near staff who can reply quickly. There is no safe haven for individuals under duress. Staff support spaces are extremely limited and overlapping, therefore not providing appropriate workspaces for police officers and command staff. Storage space for records and supplies has recently been relocated to better house them but even that area does not provide a modern workspace.

If taken together a joint facility would require 34,500 gsf of space with public spaces being shared, including the training/community room, as well as fitness and building support spaces as well as parking.