SITE DEVELOPMENT ASSESSMENT
Strathmore Mills Redevelopment

Town of Montague

Turners Falls, MA

August 12, 2008

FUSS & O'NEILL
Disciplines to Deliver

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APPENDICES **END OF REPORT**

1.0 INTRODUCTION

Fuss & O'Neill, Inc. (F&O) has prepared this Development Assessment summary report, which provides an evaluation of redevelopment issues for the site. The project site consists of approximately 5.2 acres of land located on the south side of the Connecticut River in Montague. This feasibility study includes the following:

- An Assessment of the Pedestrian Bridge, which discusses two possible development alternatives for the bridge.
- A Utilities Investigation, which includes an evaluation of the existing electrical, wastewater and water utilities.
- A Vehicular Access and Parking Plan, which will identify the parking demands of the proposed mill redevelopment, as well as identify the potential off-site parking alternatives for the proposed redevelopment.
- Structural assessments of the site including an assessment of the pedestrian bridge, a seismic evaluation, and an inspection of each of the buildings included within the site.
- A Revised and Updated Architectural Feasibility Study.

The following is a summary of the observations, design components and possible development alternatives that we concluded about the subject site. An overall key plan Figure 1 is attached.

2.0 PEDESTRIAN BRIDGE ASSESSMENT

In accordance with our agreement, F&O has performed an assessment of the existing steel truss pedestrian bridge over the Turners Falls canal. The purpose of this assessment is to evaluate two options for maintaining pedestrian access to the site from Canal Street:

1. Keep and rehabilitate the existing pedestrian bridge shown in Figure 5.
2. Replace the existing bridge with a new prefabricated steel truss bridge shown in Figure 6.

In order to meet accessibility requirements, the bridge must be raised to the elevation of the next building floor. The Town has requested that a roof be provided on the bridge to protect pedestrians from the elements.

The assessment consisted of the following tasks:

1. A site visit to observe the current condition of the bridge relative to the observations in the May 2005 "Strathmore Mill Feasibility Study" and the 2004 "Strathmore Pedestrian Bridge Inspection".
2. Develop approximate quantities and an opinion of cost for repairing and rehabilitating the existing bridge.
3. Prepare conceptual details of the rehabilitated bridge.
4. Develop a concept for the replacement of the existing bridge with a new prefabricated steel truss bridge.
5. Develop approximate quantities and an opinion of cost for the replacement bridge.

6. Prepare conceptual details of the replacement bridge.

Option 1 – Existing Bridge Rehabilitation

Our field observations of the existing bridge are generally consistent with the observations of the 2004 Inspection Report:

- The timber decking is in poor condition.
- The stair framing at both ends is in very poor condition.
- The truss top chords, diagonals and verticals appear to be in good condition.
- The bottom chords are in fair condition with isolated areas of impacted rust.
- The vertical gussets at the bottom chord panel points are in fair condition.
- Approximately 50% of the horizontal gusset plates at the bottom chord panel points that connect the cross members to the trusses are in poor condition.
- The bearings are in poor condition.
- The utility supports are in fair condition.

Although some of the existing bridge components are in poor condition, it is our opinion that the existing steel truss pedestrian bridge can be repaired and rehabilitated. The work required for this option includes:

- Raise the bridge to the next building floor elevation.
- Modify the north end framing to remove the stairs and add floor framing.
- Remove the south approach span and stairs.
- Repair the deteriorated steel framing components (assume lead paint containment is required).
- Strengthen the existing gussets and chords as required to accommodate the weight of a new roof.
- Add a new roof.
- Install new timber decking.
- Replace the existing south pier.
- Modify the existing north abutment at the building.
- Construct a new south abutment at Canal Street.
- Install a new 60 foot span steel truss south approach span with roof.

The Town has investigated the historic significance of the existing bridge relative to the historic Strathmore Mill complex and has determined that the bridge is not considered part of the complex. Sketches of the rehabilitated bridge (Figure 5) are included at the end of this report.

Based on the scope of rehabilitation work identified above, it is our opinion that the probable cost of construction for this option is approximately $906,000. An itemized Opinion of Cost is included at the end of this report.

Option 2 – Replace Existing Bridge

It is our opinion that the existing main span truss and south approach span should be replaced with a single span prefabricated steel truss bridge. This will eliminate the need to reconstruct the south pier. The work required for this option will include:

- Remove the existing main span, south approach span and south pier.
- Modify the existing north abutment at the building.
- Construct a new south abutment at Canal Street.
- Install a new 210 foot span steel truss bridge with roof.

The prefabricated bridge is assumed to have the following features:

- 10 foot width
- Half-through truss with one diagonal per panel
- Painted steel finish
- Concrete decking
- 65 PSF live load, 1,000 PSF vehicle load and 175 PLF roof covering and snow load
- Roof support members and attachment clips provided

Sketches of the replacement bridge Figure 6 are included at the end of this report.

Based on the scope of rehabilitation work identified above, it is our opinion that the probable cost of construction for this option is approximately $1,067,000. An itemized Opinion of Cost is included at the end of this report.

3.0 UTILITIES INVESTIGATIONS

3.1 Existing Water Utilities

Water

There is an existing fire suppression water line that runs from Turners Falls Road through a backlow preventer located in a concrete vault under the canal access road adjacent to the Southworth mill building. It continues along the face of the Strathmore Mill to provide fire suppression water. A single back flow preventer is located at the corner of the canal bridge on turners falls road with multiple suppression zone feeds teeing off the entrance line. There is an abandoned 8" water line boxed in on the east side of the bridge that formerly provided domestic water to the Strathmore Mill.

The proposed redevelopment can utilize the existing fire suppression water service lines as it is currently being maintained and kept in service. A new 6" water line to provide the mill with a domestic water supply will need to be installed across the pedestrian bridge. The Fire Dept will need to be contacted concerning an emergency cross connection to the fire line (RPZ interconnection). The utilities layout is shown in Figure 7.

3.2 Existing Wastewater Utilities

Wastewater

Three sewer lines cross on the west side of the bridge and will need to be maintained and relocated as required. As shown in Figure 7, the Southworth Paper has two sewer lines, a 4 inch line and 6 inch line, running though the Strathmore buildings with rights to cross the bridge. The Strathmore Mill has a sewer ejector station located outside the northwest corner of Building 4 with a 4" sewer line running across the pedestrian bridge. All three of these lines terminate in a manhole on the south side of the bridge in Canal Road.

After the fire which destroyed Building 10, both operating lines from the Southworth Mill were destroyed. A new 6" insulated line was installed in the lower floor of Building 1 running along the south wall along building 4 and then across the pedestrian bridge. Southworth Paper will be looking to install an additional line parallel to this line to provide secondary service to its wastewater treatment plant. The Southworth Mill had a study performed to evaluate the feasibility of abandoning the sewer lines and installing a gravity line down the canal road to the west as recommended by Bob Tremblay of the town sewer department. This alternative was determined to be economically infeasible.

Once water service and electrical power is established at the Strathmore Mill the need for maintenance repairs for 4 inch sewer line and the existing ejector stations near the building 4 will need to be further evaluated.

3.3 Existing Electrical Systems

Remaining Electrical Systems Figure 8 and 9

All power to the Mills Complex is by way of 13,800 volt lines that span the canal and attach to the upper level of the Swift River Hydro building. Power originates from the Keith substation on Canal Street. Primary switchgear and metering is found in the front area of the Swift River Hydro building. This gear is the same as was reported in the 2005 report.

The remaining Mills Complex electrical systems were stripped of copper a few years ago after the 2005 site analysis report was written. Most of the copper wire was removed from all of the mill buildings except for Building 20, the Swift River Hydro building. Existing on-site electrical transformers, panel boards, disconnects and other devices were recently tested for voltage and all were inactive. Some panel boards have been broken open and copper bus bars removed. Main switchgear throughout the Mills Complex is broken open and missing copper. The core and copper windings of transformers were removed completely. Some panels are intact, but copper feeders are gone. Lights are broken and missing. None are active. Some of the steel conduit remains, but most is gone. The only live power systems observed in the buildings includes:

Fire alarm systems were recently installed and are operational. The fire alarm control panel is found at the entry to the Swift River Hydro building with conduit and wire extending throughout the many buildings. A temporary conduit was run over land to Building 11 after the fire in Building 10. Communication wires run across the footbridge to the main exterior call box and to the fire alarm control panel.

Sprinkler closets were created in three areas where the main sprinkler pipes are located. Sheetrock and stud walls were erected to enclose the immediate areas of the sprinkler pipes. Small 208v heaters keep the areas warm enough to prevent the sprinkler pipes from freezing. The power to two of the closet heaters comes from the refitted GE 8000 line MCC in the Swift River Hydro building. The 480v feed to the Mills Complex buildings is stepped down to 208v with two 15 kva transformers to power the two sprinkler closets. Building 11 has a power line that runs to the 3rd floor from the sewer plant behind it, for sprinkler heaters in a third Mills Complex sprinkler closet.

Telephone lines run across the footbridge with loops around structural members. Only the telephone in the Swift River Hydro Building is active. Most of the other telephone lines in the Mills Complex were stripped out.

All systems inside the Swift River Hydro building were re-fed from a 112.5 KVA transformer, installed in 2006, that steps down the 13.8KV primary voltage to 480 volts. The 480 volts feeds the original GE 8000 line motor control center switchgear, which is now used as distribution switchgear for the Swift River Hydro Building and two sprinkler closets. Most of the circuit breaker buckets have been locked out, with power conductors removed and conduit cut off at the opposite wall of the room. See Sketch 1 and 2 for the existing electrical riser. The riser also shows some electrical circuits that were original Mills Complex feeders, but are now gone. The original 2400v to 13,800 volt transformer attached to the hydroelectric generator is still connected and can be made active when the generator is on line. The Swift River Hydro operation is currently not active due to repairs and the addition of new electrical gear.

3.4 Establishing a New Electrical Distribution Network

During an on-site meeting with representatives from the Town of Montague, the Architect, The Developer (John Anctil), Western Massachusetts Electric Company and the electrical engineer from Fuss & O'Neill, several possible plans for bringing in a new service were discussed. Since all on site power now serves the Swift River Hydro building, it was agreed that the best way to proceed was to bring in a separate electrical service to service the Strathmore Mills Complex. WMECo has agreed to this approach and prefers a new and separate service to the alternative of modifying the existing 13,800 volt system to feed both the Swift River Hydro operations and newly renovated spaces in the Mills Complex. This will leave the existing service to Swift River Hydro completely separate from any new electrical service and systems.

The Mills Complex will require some new 480 volt switchgear after power is stepped down from the 13,800 volt primary. A main disconnect switch, owner metering and tenant metering with disconnects is required. See Sketch 3 for a suggested switchgear lay-out. This equipment will be needed early in the renovation project, since all demolition and construction activities will need power. The existing sprinkler closet heaters can be switched over to the new service once it is installed. As new fire alarm systems are established in the tenant spaces, the existing fire alarm system devices can be removed as new system devices that meet new space code requirements are installed. Eventually, the existing fire alarm system will provide coverage for the Swift River Hydro building only.

The optimum location for the new 480 volt switchgear is in an area northeast of the existing primary transformer pad, in Building 4. This space between the Swift River Hydro building and the transformer pad is approximately 48' wide. Suggestions to locate the 480v switchgear inside

the Swift River Hydro building or on a mezzanine behind it are not feasible. WME Co. will not allow any new switchgear for a new electrical service inside the same building as the existing electrical service. Although the gear could be located on another floor or further back inside the Mill, the issue of voltage drop and spiraling costs due to voltage drop makes the front area described above the best location for the new 480 volt switchgear.

Discussions also centered on where to locate the new 13,800 volt to 480 volt primary transformer, and how to feed it. Two viable plans were discussed.

Option A

Locate the new primary transformer on the existing pad southwest of Building 4. The addition of a new elevator will require the existing 2400 volt Swift River Hydro transformer to be moved south by several feet, but the new power transformer could still be located where the old 1500 KVA Mills Complex primary transformer was located. This plan turns out to be the most cost efficient. Several methods of feeding the new transformer with 13,800 volt primary cables were discussed.

Feeding the transformer from an existing 13,800 volt line that goes to a pole northeast of Building 7 was suggested, but there are plans to remove this pole. The primary cable would have to run underground in concrete encased conduit from the pole to the transformer pad, with crossings at the Swift River Hydro water sluce gate and some drainage pipes. This would be a very costly method. Suggestions to run underground primary feeders in from the southwest were even more complicated and expensive.

Running new lines across the canal from a pole southwest of the footbridge were discussed. These lines would cross existing (but inactive) high voltage lines, a policy which is not allowed by WME Co.

The preferred method is to run new power lines under the renovated existing footbridge, in conduit. Buried lines could be run from the Keith substation on Canal Street to the bridge, across the canal under the bridge, and down to existing transformer pad a few feet southwest of the bridge on the Mills side. The 13,800 volt lines would be in specially designed conduits slung under the footbridge.

Option B

Locate the primary transformer northeast of the mainland side of the footbridge with 480 volt feeders traveling across the footbridge in conduit. This plan will eliminate unsightly overhead wires and will free up a few parking spots in front of the Mills Complex. It will be more costly than placing the primary transformer in front of the Mills Complex. It also may require an easement, since WME Co. records indicate that the land is owned by First Light & Power. A detailed cost analysis of this option is outlined in Appendix A.

Electrical Estimates

The initial estimate of a 2400 amp 480 volt electrical system is based on estimates using .012 amps per square foot of developed space, an average of actual measured power used over many recent Fuss & O'Neill building projects. Using a number of approximately 200,000 square feet

(from the 2005 development plan), this comes to 2400 amps which also coincides with a standard primary transformer size of 2000 KVA. The previous Mills Complex electrical systems operated from a 1500 KVA primary transformer. Recently, discussions included an option to separate Building 11 from the development plan since this has become a separate building after the destruction of Building 10. Once the development plans progress to more concrete spatial planning, a final primary transformer size can be determined. It is very possible a 1500 KVA primary transformer will be more than enough for future plans at the Mills Complex, but the 2000 KVA estimates will remain in this report as a worst case scenario. (A 1500 KVA primary transformer will require an 1800 amp main switch and about 25% less expense for the 480v feeders. Switchgear will be similar in size and cost.).

Once the initial set of 480v switchgear is installed and connected through one of the above plans, new electrical systems of all types can be installed as areas are renovated. Each tenant space will require a main (480v) distribution power panel, probably 400 amps but up to 800 amps is possible for each tenant at 480 volts. Each tenant electrical room will also have a three phase dry transformer to step voltage down to 208v. Other 208v panels can be located throughout the tenant space depending on the amount of square feet involved.

New telephone and communication lines will be required to feed the renovated Mills Complex. They also could be slung under the footbridge in conduit. Existing telephone lines are temporary and must be relocated prior to or during footbridge renovations. Some space in the Main Electrical Room is needed for telephone and communications equipment and possibly security equipment. Each tenant space also needs a wall devoted to their low voltage equipment.

Cost Analysis of New Electrical Services to the Site

Two sites are contemplated for the primary transformer – a location on the mainland side of the footbridge and the existing transformer pad site. It is always more cost effective to bring the primary feeders as close to a building as possible, so the first option is the least costly for the Town.

Option A - The existing transformer pad site is used for the new Mills Complex primary transformer, to be located where the demolished 1500 KVA transformer is now located. It is also possible that the existing pad may have to be replaced with a new one since transformer feeders come up through the pad from below and pads usually are designed for the openings of the specific transformer on it.

The greatest cost of a new service is the transformer and cables. The cable costs will be lowest if the transformer is on the Mill side of the canal. If the primary transformer is placed on the existing pad, next to the 2400v Swift River transformer, and the 480v switchgear is located in the Building 4 space between the transformer pad and the Swift River building near the canal, the following cable costs for a 2400 amp service would apply:

70' of wire will cost:	for 350 MCM, $10.92/ft. x 70'	= $24,461 (32 wires)
	for 500 MCM, $15.60/ft. x 70'	= $30,576 (28 wires)
	for 600 MCM, $18.525/ft.x70'	= $31,122 (24 wires)

Option B - Based on discussions with John Anctil, the site developer, he feels it would be better to locate the primary transformer on the mainland side of the footbridge. Measuring the distance from a transformer location near the mainland end of the footbridge to a presumed switchgear site, we calculated the following:

Footbridge = 215'
Mainland side to transformer pad = 25'
Island side of bridge to switchgear = 60'
= Total distance is about 300'

For a 2400A service, wire size for 480v secondary = (6) sets of 600 MCM
(7) sets of 500 MCM
(8) sets of 350 MCM

300' of wire will cost: for 350 MCM, $10.92/ft. x 300' = $104,832 (32 wires)
for 500 MCM, $15.60/ft. x 300' = $131,040 (28 wires)
for 600 MCM, $18.525/ft.x300' = $133,380 (24 wires)

(Cable prices based on 2007 MEANS cost estimating guide x 1.3. The cost of labor to install all systems, costs of conduit and ground wires are in addition to these cable costs). Based on just the cable costs, the costs of locating the transformer on the mainland side of the canal will increase the total electrical costs by approximately $100,000.

Voltage drop Calculations

The NEC recommends 2% voltage drop from the transformer to the local power panels and an additional 3% is allowed for branch circuits at 120 volts from the local power panel to an electrical load. At 400 amps, the size of the average 480v tenant load, a run of 345' is within the 2% voltage drop allowance, without increasing wire size. Wire runs beyond 345' will require increased cable sizes to compensate for voltage drop. (Wire ampacity is based on 75 degree C, NEC table B310.1)

Option A - Voltage drop from the transformer to the switchgear will not be much of a factor if the transformer is near the 480v switchgear, in front of the Strathmore Mill site. Most of the tenant space power panels will be within 345' of the primary transformer, so no additional wire sizes are needed. The total voltage drop to the farthest tenant space will be about 470' which will require increasing cable sizes from the metering switchgear to the tenant space from two sets of 3/0 to two sets of 250 MCM, for an additional cost of $9,042 for that one feeder circuit.

Option B - The smallest wire size applicable to this design (most cost efficient but with the largest voltage drop) from the mainland site transformer to the tenant meter switchgear, the 350 MCM cable, will use up 1.265% of the 2% allowed in voltage drop, leaving 0.735% voltage drop from the meter switchgear to the tenant space, and beyond to the tenant power panels. The longest run will be about 400' from the tenant meters to the tenant space power panels. A 400' run of 400A cables at 480v (without voltage drop considerations) would require (2) sets of 3/0 copper wire (about $17,264 for wire alone), without voltage drop considered. To keep the entire 480v distribution within 2% drop, this 400' feeder will require (2) sets of 600 MCM cable (about $59,280), for an additional cost of $42,016 for that one feeder circuit. Larger amperage feeders or feeders over less distance will require less added expense, but additional cost estimates of

$20,000 to $35,000 should be included for each tenant service under Plan B with the transformer located on the mainland.

Conclusions

If Plan A is adopted (see Figure 10) and the primary transformer is located on the existing pad near Building 4, the voltage drop cost will not be a major concern. Most tenants will not have to upsize cable feeders from the tenant switchgear to their own local panel boards. The tenants in Buildings 3 and 7 will have some increases in cable sizes for a feeder cable cost near $30,000. Other tenants can expect feeder cable costs at less than $20,000.

If Plan B is adopted and the primary transformer is located on the mainland, all tenants will have to upsize their feeder cables at a cost of approximately $20,000 to $40,000 per tenant, in addition to the nominal cable costs of $20,000. This plan will also include an additional cost to the Owner for running larger and more numerous cables across the canal.

4.0 UPDATE VEHICULAR ACCESS AND PARKING PLAN

4.1 Vehicular Access

As conceived in the 19th century, transportation of equipment, machinery, materials, goods and workers to and from the mill site was accomplished by rail, horse drawn conveyance, or on foot. The facilities designed for this purpose have limited utility for modern vehicular activity.

Historically, vehicular access to the mill property has been from the Fifth Street bridge via the Canal Road right of way, consisting of a 10 foot wide railroad right of way and a 12 foot wide access way as originally laid out. Expansion of the industrial facilities and various canal works along Canal Road has resulted in several building extensions and loading docks encroaching on the 12 foot access, resulting in restrictions in the total clear width to less than 15 feet, which is insufficient for two-way traffic. There is also no area for large vehicles to turn around on site, which forces drivers to either trespass on the adjacent Indeck property or reverse the entire length of Canal Road.

There is also an easement over the Esleeck Manufacturing Company property allowing access through a tunnel under the building to the lower level of the mill property. This easement currently serves primarily to provide maintenance access to the Swift River Hydro power turbines.

Visibility at the intersection of Canal Road and Fifth Street is severely restricted looking to the west by the canal bridge superstructure. This would be a significant safety factor in the operation of this facility for general public access. Correction of this deficiency by modifying the bridge or the Esleeck property would be cost prohibitive.

The combination of these constraints makes the provision of safe and efficient vehicular access to the site infeasible for most users. It is our recommendation that vehicular access be restricted to deliveries and services, plus accessible parking adjacent to accessible building entrances.

4.2 Pedestrian Access

Pedestrian access to the mill site has always been provided almost exclusively via the pedestrian bridge connecting the workers housing areas on the east side of the canal with the mill property. The bridge was originally at grade with Canal Road but was replaced at a higher elevation to enter the mill buildings at Level 4 after the turn of the century. With vehicular access restricted to commercial traffic, it is essential to maintain the bridge as the pedestrian access for residents and visitors to the site. It is also still desirable to maintain the grade separation between vehicular and pedestrian traffic to eliminate crossing conflicts. The stairways integrated into the bridge structure at each end to make up the grade difference between Canal Street and Level 4 of the mill are barriers to access by people with disabilities and also a range of other users such as children, the elderly, and people pushing strollers or carts. These barriers should be removed with any reconfiguration of the structure for the redevelopment.

4.3 Emergency Vehicle Access

The proposed emergency vehicle access will be at two locations. The first location for emergency vehicular access to the Strathmore mill will be the canal bridge on Turners Falls Road. The major concern at this location was that the turning radius is not large enough for most vehicles to navigate this easily during an emergency. If the turn was directly negotiated from Turners Falls Road to the Strathmore access road this may be a concern, however the parking lot across from the Southworth Mill currently allows an improved turning area for vehicles to use.

The second access location is the bridge located to the north-east of the Strathmore mill. This is located approximately 450 ft away from the site and is currently owned by First Light and Electric. A meeting was held with town officials where First Light and Electric agreed to allow emergency vehicular access across the bridge, however structural improvements will need to be considered. The bridge will have to be analyzed to determine if it will support a 20,000 lb dual axle vehicle and a 30,000 tri-axle vehicle. Further investigations will need to be made to determine the structural integrity of the bridge, but possible structural improvements may include improved bridge abutments, externally bonded plates, minor rehabilitation, surface repair, etc. There may also need to be improvements to the gravel access road leading to the bridge which will include resurfacing and improved roadway turning radii.

4.3 Parking Demand

Peak parking demand for the new uses programmed for the mill redevelopment has been calculated using industry standard indices from the Institute of Transportation Engineers *Parking Generation* report. Total peak parking demand for the proposed redevelopment program is estimated to be 93 spaces.

Programmed Use	Area (Sq ft)	Standard Use Category	ITE *Parking Generation* Land Use Code		Peak Parking Demand (Spaces)
Artists' Studio:	7,250	Office:	LUC 701	Gen Office	21
Industrial, Commercial:	35,707	Industrial:	LUC 110	Gen light industrial	27
Business Center:	4,230	Office:	LUC 701	Gen Office	12
Warehouse, Archives:	9,036	Industrial:	LUC 150	Warehousing	4

Programmed Use	Area (Sq ft)	Standard Use Category	ITE *Parking Generation* Land Use Code		Peak Parking Demand (Spaces)
Exhibition:	3,000	Institutional:	N/A	Art Gallery	10
Live Work:	27,627	Residential:	LUC 221	16 Units Med Rise Apt	19
Shell Space:	2,540	None			0
Total	**89,390**				**93**

Zoning Requirements

The Montague Zoning Bylaws establish requirements for parking and loading to satisfy demand created by new structures or uses, additions to existing structures or uses, and change of use in existing structure to be accommodated on the premises entirely off-street. According to the Bylaw, the minimum number of spaces should be 341 based on area and number of employees, unless the Board of Appeals allows a reduction upon their determination that a lesser amount will satisfy all parking demand owing to particular circumstances.

Standard Use Category	Parking Spaces Required
Office/Commercial:	287
Employees:	30
Residential:	24
	341

Strict adherence to the Zoning Bylaw parking requirements is not possible due to the lack of any significant land area on site available for parking and also the excessive number of spaces required as compared to actual expected demand.

4.4 Parking Supply

Offsite areas and properties within reasonable walking distance of the pedestrian bridge, estimated to be approximately 300 feet, have been identified and evaluated for feasibility to be developed as potential parking facilities for the project. These areas are shown on Figures 10 and 11. These consist of both public and privately owned parcels, on and off street areas, and existing parking that could be shared or dedicated for project use.

Parking Area A (Primary Lot)

- **Parcels-** 02-0-01
- **Distance to Building-** On Site
- **Number of Potential Spots-** 7 spaces
- **% Demand met by lot-** 2.2 %
- **Constructability-** Some earthwork necessary. Retaining walls will be needed. Line striping and parking striping necessary. Construction cost will be considerable for the size of lot
- **Access (ADA) and Safety Concerns-** Easily Accessible

- **Maintenance-** Easily maintained; there may be concerns with on street parking and snow removal in the winter due to accessibility. Also the parking lot is located very close to the canal which may cause additional snow removal issues.

Parking Area B (Primary Lot)

- **Parcels-** 02-0-01
- **Distance to Building-** On Site
- **Number of Potential Spots-** 14 spaces
- **% Demand met by lot-** 4.4 %
- **Constructability-** Easily Constructed. Line striping and parking striping will be necessary; construction cost will be low
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** Easily maintained; there may be concerns with on street parking and snow removal in the winter due to accessibility. Also, the parking lot is located very close to the canal which may cause additional snow removal issues.

Parking Area C (Primary Lot)

- **Parcels-** Public: 04-0-0280
- **Distance to Building-** 650 ft
- **Number of Potential Spots-** 69 spaces (65 Existing spots)
- **% Demand met by lot-** 21.8% (the lot is currently used by other tenants, but some parking may be directed to this lot)
- **Constructability-** Existing Parking Lot, little to no construction cost
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** Easily Maintained

Parking Area D (Primary Lot)

- **Parcels-** None, on street parking
- **Distance to Building-** 650 ft
- **Number of Potential Spots-** 39 spaces (25 Existing spots)
- **% Demand met by lot-** 12.3%
- **Constructability-** Some earthwork necessary, Line striping and parking striping necessary; very little construction cost
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** Easily maintained; may be concerns with on street parking and snow removal in the winter

Parking Area E (Primary Lot)

- **Parcels-** Private: 02-0-02
- **Distance to Building-** 200 ft
- **Number of Potential Spots-** 34 spaces (20 Existing spots)

- **% Demand met by lot-** 10.8%
- **Constructability-** Some earthwork necessary, Line striping and parking striping necessary; very little construction cost
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** Easily maintained; may be concerns with on street parking and snow removal in the winter

Parking Area F (Primary Lot)

- **Parcels-** Private: 04-0-0047
- **Distance to Building-** 520 ft
- **Number of Potential Spots-** 10 spaces (7 Existing spots)
- **% Demand met by lot-** 2.2 %
- **Constructability-** little construction cost
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** Easily Maintained

Parking Area G (Secondary Lot)

- **Parcels-** Private: 04-0-0049 & 04-0-0050
- **Distance to Building-** 540 ft
- **Number of Potential Spots-** 70 spaces
- **% Demand met by lot-** 22.2%
- **Constructability-** Very high construction costs; the current site is located on ledge and will require extensive earthwork to grade**.**
- **Access (ADA) and Safety Concerns-** Considerable concerns, the site will need to be graded down to street level and provide adequate ADA access to the street
- **Maintenance-** Snow stockpile areas will need to be considered

Parking Area H (Primary Lot)

- **Parcels-** None, on street parking
- **Distance to Building-** 450 ft
- **Number of Potential Spots-** 11 spaces
- **% Demand met by lot-** 3.5 %
- **Constructability-** Some earthwork necessary, Line striping and parking striping necessary; very little construction cost
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** Easily maintained; may be concerns with on street parking and snow removal in the winter

Parking Area I (Primary Lot)

- **Parcels-** Private: 04-0-0178 & 04-0-0179
- **Distance to Building-** 410 ft
- **Number of Potential Spots-** 50 spaces
- **% Demand met by lot-** 15.8%
- **Constructability-** Earthwork necessary, current lot will need to be cleared and paved; considerable construction costs
- **Access (ADA) and Safety Concerns-** Accessibility concerns, possible ramp or separate ADA access will be necessary at this location.
- **Maintenance-** Easily maintained; may be concerns with on street parking and snow removal in the winter

Parking Area J (Secondary Lot)

- **Parcels-** Private: 04-0-0178 & 04-0-0179
- **Distance to Building-** 650 ft
- **Number of Potential Spots-** 80 spaces
- **% Demand met by lot-** 25.3%
- **Constructability-** Very high construction costs; the current site is located on ledge and will require extensive earthwork to grade**.**
- **Access (ADA) and Safety Concerns-** Considerable concerns, the site will need to be graded down to street level and provide adequate ADA access to the street
- **Maintenance-** may be concerns with on street parking and snow removal in the winter

Parking Area K (Secondary Lot)

- **Parcels-** Private: 03-0-007
- **Distance to Building-** 900 ft
- **Number of Potential Spots-** 18 spaces
- **% Demand met by lot-** 5.7 %
- **Constructability-** Earthwork necessary, current site will need to be cleared and paved; some construction costs
- **Access (ADA) and Safety Concerns-** Easily Accessible
- **Maintenance-** may be concerns with on street parking and snow removal in the winter

Parking Area L (Secondary Lot)

- **Parcels-** Private: 03-0-011
- **Distance to Building-** 1100 ft
- **Number of Potential Spots-** 29 spaces
- **% Demand met by lot-** 9.1 %
- **Constructability-** Earthwork necessary, current lot will need to be cleared and paved; some construction costs
- **Access (ADA) and Safety Concerns-** Easily Accessible to road

- **Maintenance-** may be concerns with on street parking and snow removal in the winter

Parking Area M (Secondary Lot)

- **Parcels-** Private: 03-0-027
- **Distance to Building-** 900 ft
- **Number of Potential Spots-** 68 spaces
- **% Demand met by lot-** 21.5%
- **Constructability-** Very high construction costs; the demolition of the current building will be necessary for this parking lot. Also there will be considerable fill that will need to be brought in. The current site is located on ledge and will require extensive excavation
- **Access (ADA) and Safety Concerns-** Easily Accessible to road
- **Maintenance-** Easily Accessible to road

Parking Area N (Secondary Lot)

- **Parcels-** none, on street parking
- **Distance to Building-** 1100 ft
- **Number of Potential Spots-** 25 spaces (25 Existing spots)
- **% Demand met by lot-** 7.9%
- **Constructability-** Existing Parking Lot, little to no construction cost
- **Access (ADA) and Safety Concerns-** Easily Accessible to road, but there is a considerable distance to the nearest pedestrian bridge
- **Maintenance-** Easily Accessible to road

Parking Area O (Secondary Lot)

- **Parcels-** Private: 03-0-032
- **Distance to Building-** 1150 ft
- **Number of Potential Spots-** 63 spaces
- **% Demand met by lot-** 19.9% (lot is currently used by other tenants, but some parking for the Strathmore mills may be directed to this lot
- **Constructability-** considerable construction costs. Most of the current site will need to be cleared and paved. Also there is a ledge outcrop that will need to be excavated in order to put in parking.
- **Access (ADA) and Safety Concerns-** Easily Accessible to road, but there is a considerable distance to the nearest pedestrian bridge
- **Maintenance-** may be concerns with on street parking and snow removal in the winter

Parking Area P (Secondary Lot)

- **Parcels-** Private: 03-0-077
- **Distance to Building-** 1450 ft
- **Number of Potential Spots-** 48 spaces
- **% Demand met by lot-** 15.2 %

- **Constructability-** considerable construction costs. Most of the current site will need to be cleared and paved. Also a ledge outcrop that will need to be excavated in order to put in parking.
- **Access (ADA) and Safety Concerns-** Easily Accessible to road, but there is a considerable distance to the nearest pedestrian bridge
- **Maintenance-** may be concerns with on street parking and snow removal in the winter

5.0 STRUCTURAL ASSESSMENT

5.1 Structural Assessment

In accordance with our contract, Fuss & O'Neill (F&O) performed a structural assessment of buildings #1 and #11 to evaluate the fire damage caused to each of these buildings when Building #10 burned and subsequently collapsed. Our assessment consisted of a visual inspection of the accessible and observable framing members and systems in the vicinity where the fire occurred in each of these buildings. The following is a summary of our observations in each building:

Building #1 Inspection

This building is mostly in fair to good condition; however, we did identify several deficiencies in the west end of the building, in the vicinity of the previous fire, that may compromise the structural integrity of the building. Some of the deficient conditions identified appear to be directly related to the fire, whereas, other deficiencies likely existed before the fire. The deficient conditions that we observed include:

- The 5th and 6th floors received the most fire damage, followed by the 4th and 3rd floors. The 1st and 2nd floors did not appear to be affected by the fire, except for some smoke damage.
- The exterior masonry wall on the west end of the building has shifted horizontally outward at the third, fourth, fifth and sixth floors. During our inspection, we observed cracks in the following locations:
    - Above and below windows along the south face of building in the west corner.
    - Along the west face of building in the south corner.
    - Along the north face of building in the west corner.

We noticed that some of the existing paint on the interior faces of these walls extends into the cracks; therefore, it is likely that these cracks existed prior to the fire. The collapse of Building #10 may have caused additional movement of this wall; however, this cannot be confirmed.

- The fourth floor deck is fire damaged, in the immediate vicinity of the south wall (adjacent to the former Building #10). Sections of this floor deck have burned through entirely. One timber floor beam is charred, which has caused some minor section loss through the cross-section of this member.
- Two timber beams on the fifth floor (2nd and 3rd from the west end of the building) are charred. Slightly less than 5% of the cross-sectional areas of these members have burned through. These beams will likely be acceptable without repair because office or

residential loads are much less than manufacturing loads; therefore, they likely contain enough residual capacity with the reduced section.

- The first 3 – 5 feet, from the south wall, of the fifth floor decking is fire damaged. Sections of this floor deck have burned through entirely.
- The mortar in the south wall at the 5th floor was extremely soft and friable. Since the mortar in the remaining exterior walls at this floor level was not as soft and friable, the condition of the mortar in the south wall was likely caused by the extreme heat during the fire. The brickwork in this area will require repairs.
- The first 8 – 12 feet, from the south wall, of the sixth floor decking is fire damaged. The first 3 feet has been repaired with 2x8 decking, but much of the remaining damaged deck is still in poor condition.
- The sixth floor and roof are constructed with timber trusses, bottom chord supports the sixth floor decking and top chord supports the purlins and roof decking. During our inspection, we observed the following conditions in this framing:
    - Almost 25% of the roof decking and purlins have been replaced.
    - The top chord members, that are part of the first four trusses from the west wall, are fire damaged, sustaining between 10-20% section loss.

In addition to the fire damaged areas of this building, we noticed that the stairway in the southeast corner of the building (adjacent to Building #4) is in poor condition. The loadbearing exterior masonry walls have extremely large cracks in them and the wall sections around the cracks are moving (bulging) outward. The condition of the masonry in this stairway is of a significant concern regarding its continued use and should be addressed immediately.

Building #11 Inspection

This building is in relatively good condition; however, we did identify several deficiencies in the west end of the building, in the vicinity of the previous fire, that may compromise the structural integrity of the building. The deficient conditions that we observed include:

- The bricks on the outside face of the exterior masonry wall on the east side of the building (adjacent to the former Building #10) are damaged or missing in several locations. Based on the condition of this wall, it is likely that this damage occurred during the fire or subsequent collapse.
- At the roof level, the first bay of roof framing (wood rafters and sheathing) along the east wall has been replaced.
- Some of the mortar in the east wall at the 3rd floor is soft and friable.
- The framing in the remaining floors appears to have only sustained some smoke damage.

5.2 Seismic Evaluation

In accordance with our contract, Fuss & O'Neill (F&O) performed a Tier 1 Seismic Evaluation, based on the procedure outlined in ASCE/SEI 31-03, for nine (9) existing buildings located at the Strathmore Mills site. The scope of our evaluation was conducted to address a Life Safety level of seismic performance. The following summarizes the results of our evaluation:

General Conclusions

Based on our visual inspection of the buildings, we have identified the buildings as Type URM: Unreinforced Masonry Bearing Walls with Flexible Diaphragms. Even though several of the buildings have some concrete floors, the majority of floor framing consisted of wood planking supported by timber beams. This type of floor system is consisted with a URM building.

We determined that the following systems or elements do not comply with the Basic Structural Checklist for Building Type URM structures for a Tier 1 evaluation in the majority of the buildings:

- Adjacent Buildings: Buildings are required to be separated from other structures by at least 4% of their height. All of these buildings, except building #11, are connected and have a 0 foot separation distance. Most of the building areas share common walls with adjacent areas; therefore, separation of buildings is not possible without removing entire buildings or portions of buildings. Since the overall development plan has not been finalized yet, we treated each building area as a separate structure; however, if the final development plan incorporates the buildings that are still attached to one another, the building separation aspect of a Tier 1 Evaluation can be re-evaluated based on the overall building size consisting of multiple building areas. The larger structures may comply with this provision.
- Masonry Units: We identified cracked, missing or otherwise deteriorated brick in all buildings, except for building #2.
- Unreinforced Masonry Wall Cracks: Diagonal cracks, greater than 1/8-inch wide were identified in various locations throughout all buildings, except for building #2.
- Wall Anchorage: None of the exterior masonry walls were anchored to the diaphragm with mechanical connectors, such as straps or bolted plates.
- Girder/Column Connection: None of the timber beams were anchored to the supporting columns utilizing plates, connection hardware or straps.

We realize that all of the following deficiencies will likely be addressed during the subsequent rehabilitation of the mill complex; however, completion of the Basic Nonstructural Component Checklist is a requirement for a Tier 1 Evaluation, so we have included our findings herein. We determined that the following systems or elements do not comply with the Basic Nonstructural Component Checklist for a Tier 1 evaluation in any of the buildings:

- Emergency Lighting
- Emergency Power
- Hazardous Material Equipment
- Deterioration of anchorage or supports of mechanical or electrical equipment
- Attached Equipment
- Fire Suppression Piping
- Flexible Couplings

Building #1

Based on our visual inspection of the building #1, we have identified the following additional non-compliant items:

- Deterioration of Wood: As previously stated in our structural assessment of this building, we observed fire damage to some of the wood members.
- Masonry Joints: The mortar is soft and friable; therefore, easily scraped away.

Building #2

Based on our visual inspection of the building #2, we have identified the following additional non-compliant items:

- Weak Story: Part of the wall between buildings #2 and #3 has been removed.
- Mass: Some of the floors consist of wood planks, whereas, other floors consist of concrete slabs; therefore, the change in effective mass exceeds 50% from story to story.
- Deterioration of Wood: The roof framing was fire damaged.

Building #3

Based on our visual inspection of the building #3, we have identified the following additional non-compliant items:

- Mezzanines: This building contained an interior mezzanine that was not braced independently from or adequately anchored to the main structure.
- Weak Story: Part of the wall between buildings #2 and #3 has been removed.
- Soft Story: The first floor is about twice the height of the remaining floors.
- Mass: Some of the floors consist of wood planks, whereas, other floors consist of concrete slabs; therefore, the change in effective mass exceeds 50% from story to story.

Building #4

Based on our visual inspection of the building #4, we have identified the following additional non-compliant items:

- Soft Story: The first floor is about twice the height of the remaining floors.
- Mass: Some of the floors consist of wood planks, whereas, other floors consist of concrete slabs; therefore, the change in effective mass exceeds 50% from story to story.
- Deterioration of Wood: Some of the wood framing was decayed, split or otherwise deteriorated.
- Masonry Joints: The mortar is soft and friable; therefore, easily scraped away.

Building #5

Based on our visual inspection of the building #5, we have identified the following additional non-compliant item:

- Deterioration of Wood: Some of the wood framing was decayed, split or otherwise deteriorated.

Building #6

Based on our visual inspection of the building #6, we have identified the following additional non-compliant items:

- Deterioration of Wood: Some of the wood framing was decayed, split or otherwise deteriorated.
- Masonry Joints: The mortar is soft and friable; therefore, easily scraped away.

Building #7

Based on our visual inspection of the building #7, we have identified the following additional non-compliant items:

- Mezzanines: This building contained an interior mezzanine that was not braced independently from or adequately anchored to the main structure.
- Masonry Joints: The mortar is soft and friable; therefore, easily scraped away.

Building #8

Based on our visual inspection of the building #8, we have identified the following additional non-compliant items:

- Weak Story: One side of the building has a concrete foundation wall resisting the lateral forces, whereas, the other side of the building has a brick exterior wall. The concrete wall is much stronger than the brick wall.
- Soft Story: The floor heights vary.

Building #11

Based on our visual inspection of the building #11, we have identified the following additional non-compliant items:

- Soft Story: The bottom two floors vary greatly in height compared to the remaining floors.
- Masonry Joints: The mortar is soft and friable; therefore, easily scraped away.

6.0 UPDATE ARCHITECTURAL FEASIBILITY STUDY

6.1 Existing Structures

Building #1

As Building #10 was physically attached to Building #1, the remaining masonry walls that were part of Building #10 at the south end of Building #1 need to be demolished. They are unstable and no longer serve any structural or building need. The cylindrical, concrete block tank to the south side of Building #1 should be demolished, as well. It is assumed that this masonry demolition will occur as a part of the removal of all Building #10 debris.

There are several areas of Building #1 that were adversely affected by the fire and collapse of Building #10. The elevator tower on the east facade of the building should be demolished as it was found to be structurally deficient by engineers who reviewed the structure. The stair tower on the east façade where Building #1 meets Building #4 was also found to be structurally incapable of meeting current codes with reasonable repairs and is proposed to be demolished.

Significant structural cracks were discovered in the south, southwest and southeast masonry walls within the upper floors of Building #1, but should be repairable. Additional comments regarding the structure can be found within the structural analysis of Building #1, within the Study. Significant masonry damage is apparent on the South gable end of Building #1, just under the roof, where several areas of the intricate corbelled masonry dentil work has badly deteriorated and will need extensive rebuilding and repair. This work is both structurally and historically significant.

This building's masonry is in fair condition for a building of its type and age. Bricks have been laid in a modified running bond (rowlock bricks at every 8th course, instead of the usual 6), but appears to be in relatively good condition overall. It is assumed that there will be extensive masonry rebuilding and repointing at the building walls where the stair and elevator towers are to be removed. At all other areas, extensive repointing will be necessary. Due to the scale of the masonry repointing work, it is assumed that this work will be undertaken in phases over several years. Other than repair of the structurally deficient areas, repointing work is necessary to avoid water infiltration and further masonry deterioration, but is not immediately essential in most areas for building occupancy.

The roof of Building #1 has recently been repaired with all new asphalt shingles and aluminum flashing. There is no need for additional new roofing at this time, except for the areas where stair and elevator towers are to be removed. The roofing used for the recent re-roofing is a common 20 or 25 year asphalt or fiberglass residential roof shingle. It is not clear at this time if the Massachusetts Historical Commission or the National Parks Service would require a new slate roof in order to obtain Historic Tax Credits for this project, but since the current roofing has already been installed prior to tax credits being sought, it is doubtful that they would require it to be removed.

The windows in this building are large, wood, double-hung, 12 over 12 windows with a curved head. They are generally in poor condition. Some of the windows on the lower floors have been replaced with aluminum windows that do not in any way match the originals and have solid infill panels at the curved head. It is assumed that the original windows would need extensive repair or replacement. It is also assumed that the aluminum windows will be replaced to match the originals, if Historic Tax Credits are being considered. All windows have stone sills. Some sills show signs of spalling and/or cracking and will need to be repaired.

Much of the floors were covered with steel plates, warehoused paper materials or debris. Assumptions have been made based on the flooring that was exposed to view. Flooring within Building #1 is typically ¾" hardwood flooring over 1" diagonally laid planks over 2" tongue-in-groove planking that runs over the exposed wood beams. Although several areas are severely damaged or rotted, most of the floors are structurally sound for most common floor loads. Most floors will need new subfloor and possibly underlayment, depending on the use proposed and the level of floor finish planned. For warehouse or storage uses, many areas of floor may only need to be sanded for a rough, but useable floor.

For the uses proposed for this building, extensive renovations will be required throughout most of the building. All MEP systems will need to be updated. Egress requirements will warrant two new stair towers and accessibility regulations as well as marketability requirements will warrant a new elevator. Although some work will be required to alleviate the structural deficiencies and bring the structure into compliance with current seismic codes, the structure as a whole appears sound and will require little more work than a typical building of this type and age. The fire and collapse of Building #10 has added some cost to the necessary renovations, but these costs consist primarily of completing the demolition and removing the debris from Building #10.

Building #11

Building #11 has 7 levels. The first level opens to the rear parking area. The next two levels have extremely low ceilings at approximately 7' each. The fourth level opens to the front access road, which runs along the building's east wall, at the fourth level.

Building #10 was also physically attached to Building #11. The remaining masonry walls that were part of Building #10 at the lowest levels of Building #11 need to be demolished. They are unstable, filled with debris and can no longer serve any purpose. It is assumed that this masonry demolition will occur as a part of the removal of all Building #10 debris.

There are few areas of Building #11 that were adversely affected by the fire and collapse of Building #10. The north wall of the building, where Building 10 collapsed, will require extensive rebuilding of the masonry, as the external-most wythes of brick fell out in some areas. Relative to the size of the building; these areas are fairly small and as the building is several wythes thick, do not seem to affect the building's structural integrity.

The building currently has a large freight elevator. The elevator itself is not in operable condition, nor is it capable of being modified to meet current codes. The elevator shaft appears to be in good condition and is easily large enough to fit a modern, code-compliant elevator. It is recommended that the shaft be removed and a new elevator be installed within it.

The building currently has one stair, adjacent to the elevator. The existing stair does not meet current codes and does not have sufficient space in which to fit a code-compliant stair. It is recommended that the stair tower be enlarged and a new, code-compliant stair be installed. It is also recommended that an additional stair be added to the south side of the building, running from the top to bottom, in order to meet code requirements for a second means of egress from each floor.

Building #11 has two additions to the original structure. One is the loading dock on the east side, which opens directly onto the access road. The other addition is a three and four story addition on the south end of the building. This addition has a structure of steel beams, exposed metal decking and a fake brick façade, made of tin. Due to their incompatibility with the proposed use of the building, it is recommended that both of these additions be demolished.

The windows in Building #11 currently differ in size and configuration throughout. However, it appears that originally, most of the windows were wood, double-hung, 12 over 12 windows with a curved head. They are generally in poor condition. As with Building #1, if Historic Tax

Credits are sought, all windows will need to be repaired or replaced and brought back to their original look and configuration.

Access to the roof of this building was not obtained. However, it is assumed that this building has a roofing membrane that was installed fairly recently. The roof is adequate for the near future, but it is recommended that additional rigid insulation be added for energy efficiency when the building is renovated and a new membrane roof installed.

Much of the floors were covered with materials or debris. Assumptions have been made based on the flooring that was exposed to view. As in Building #1, the conditions of the wood floors appear to vary throughout. Many areas appear to be salvageable and need little more than a thorough sanding and refinishing to provide a rough, but acceptable finish. Other areas have experienced severe damage or decay and need replacement down to the base planking.

Building #11, though in need of significant renovations, appears to have a structure and layout suitable for multi-unit residential use. Even its odd use of short floor heights on levels two and three can work very well by being converted into one floor with lofts that could be very marketable for people in the market for renovated factory-style lofts.

By removing the addition from the south side of the building, an opportunity arises that could allow occupants to use the access road by the canal to access the lower parking area behind the Building. This would require a steep ramp down from the access road to the lower level on the west side, but assuming an agreement could be reached with the neighbor who owns much of the lower level lot, parking for as many as 20 building occupants can be accessed in this manner.

6.2 Proposed Structures

To make this proposed project viable, it has been determined that a new pedestrian bridge is needed to bring project occupants and visitors into the site, while allowing for most of the vehicular parking to be located on the opposite side of the canal.

In order to access as many of the buildings as possible from a single location, it has been determined that the bridge should be built in the same location, but at a higher elevation than the existing bridge. Additional abutment structure will be required alongside Building #4, in order to capture the end of the bridge which would now enter the development at approximately level #5. Visitors would walk across the covered pedestrian bridge, onto a connecting bridge along the south side of Building #4 to a new elevator and stair tower from which visitors can access any level of building #1. From Building #1, they can access all other connected buildings, or take the elevator down to the courtyard and move across to Building #11, the residential building and access all floors of that building from its elevator, within.

Two different versions of the new bridge and elevator tower are shown on the perspective sketches shown within this study (see Figures 5 and 6)

6.3 Proforma

OPERATING BUDGET				
INCOME	Units	Total SF	Rent/SF / Average Rent	Total/Year
Artist's Studios	5	7,500	$3.50	$26,250
Industrial/Commercial	14	35,700	$5.50	$196,350
Business Center	1	1,500	$1,000/mo	$12,000
Warehouse Archives	1	9,000	$2.50	$22,500
Exhibition	1	3,000	$3.00	$9,000
Live/Work Residences	20	27,600	$1,100/mo	$264,000
Vacancy - Live/Work	20%			-$52,800
Vacancy - All Other Uses	10%			-$26,610
NET INCOME/YEAR				**$450,690**
Expenses				
Management & Admin.	5%		Net Rent	$22,535
RE/Sewer Taxes			$19.20/$1,000 value	
Insurance			$550/Unit	$23,100
Salaries			$33,000/each	$33,000
Elevator			$3,300/each	$6,600
Cleaning Supplies			$275/Unit	$4,400
Heating (common areas)			$130/Unit	$11,700
Electrical (common areas)			$38.5/Room	$19,500
Snow Removal			Tenant	$5,500
Painting			$38.5/Room	$4,620
Repairs/Replace			$165/DU	$38,500
Accounting				$550
Legal				$5,500
Fire Protection				$4,400
Misc.				$5,500
Capital Reserve	2%	Net Income		$9,014
TOTAL EXPENSES	43%			**$194,418**
NET AVAILABLE FOR DEBT SERVICE				**$256,272**
Debt Service Coverage Ratio			1.25	$1,025,087
SUPPORTABLE DEBT	7.50%	Interest Rate	30 Year Note	**$2,445,000**
(7.5% assumed as conservative estimate of 2009 rates)				
Source: Strathmore Mill Feasibility Study, dated May 2005				
Revised by Dietz and Company Architects, July, 2008				

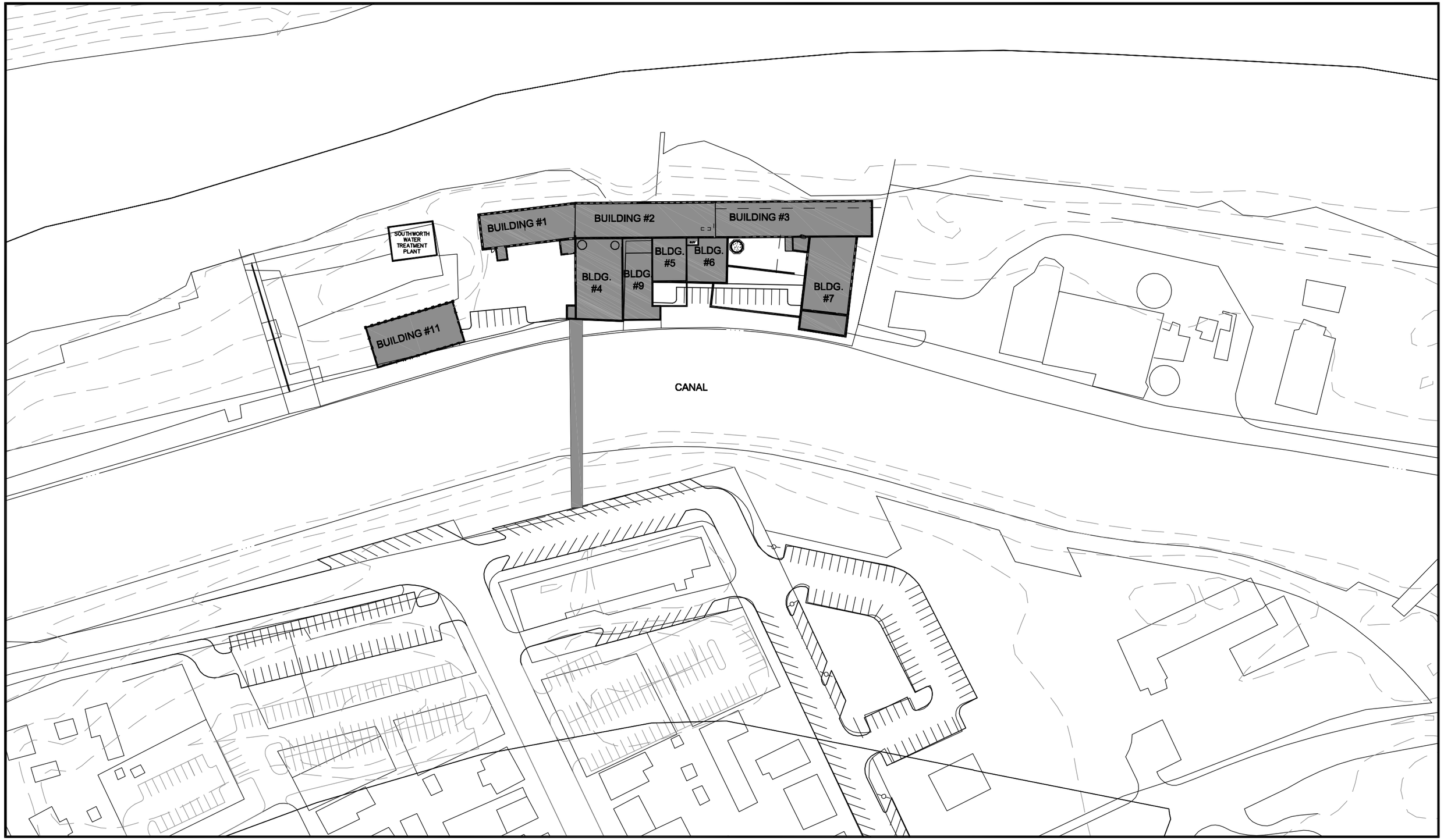
Strathmore Mill Market-Driven Development Program - Revised
July 22, 2008

	Use & Space	Description	Rent Range	Public Sector
Pre-Occupancy		~Building Structural Stabilization		Obtain Zoning Variances for future Parking
		~Hazardous Material Clean-Up		
		~Building 10 Rubble Removal		
		~Removal of Structurally inadequate Stair and Elevator Towers from Building 1		Provide New & Upgrade Existing Access & Roadways
		~Masonry Re-Building and re-pointing at Buildings 1 and 11		
		~Code Upgrades - Egress, Accessibility, Fire		
		~Utility Repairs and Upgrades		
		~New Pedestrian Bridge		New Pedestrian Bridge
		~Fiber Optic Line		Fiber Optic Line
		~Secure Non-Used Portions of Buildings		
Phase I	89,390 nsf Industrial, Commercial & Residential	~14-18 Businesses @ 500-10,000 nsf (35,700 nsf)	$4 - $8/nsf	Provide Primary Parking Across Footbridge
Buildings 1, 4 & 11		~Business "Walk-In" Center (1,500 nsf)	$1000/mo	
		~Warehouse, Archive, Storage (9,000 nsf)	$2 - $3/nsf	
		~Exhibition (3,000 nsf)	$3 - $3.50/nsf	
		~20 live/Work Lofts in Building 11 @ 1,000sf - 1,400 sf (27,600 nsf)	$900 - $1,400/mo	Provide minimum 20 parking spaces
		~5 Studios @ 800 - 2,000 sf (7,500 nsf)	$3 - $6/nsf	
Subsequent Phases	Expand Industrial, Commercial, Office, Studios	Selective Building Demolition		Selective Building Demolition
	Add Education, Museum, Galleries, Conference Spaces			Additional Parking
	Hydropower Facility Exhibit, Ecotourism			

	ORIGINAL STUDY PHASE 1a & 1b	PROPOSED PHASE 1	LATER PHASES
TOTAL AREA	122,400 GSF 102,000 NSF	107,700 GSF 89,390 NSF	142,800 GSF 118,500 NSF
BUILDING 1	22,615 GSF 18,770 NSF	22,615 GSF 18,770 NSF	
BUILDING 4	20,940 GSF 17,380 NSF	20,940 GSF 17,380 NSF	
BUILDING 10	14,715 GSF 12,213 NSF	0 GSF 0 NSF	
BUILDING 11	33,285 GSF 27,627 NSF	33,285 GSF 27,627 NSF	

NET AREAS	**ORIGINAL STUDY PHASE 1a & 1b**	**PROPOSED PHASE 1**	
ARTISTS' STUDIO	7,250 NSF	7,250 NSF	
INDUSTRIAL COMMERCIAL	38,700 NSF	35,707 NSF	
BUSINESS CENTER	4,230 NSF	4,230 NSF	
WAREHOUSE ARCHIVES	9,036 NSF	9,036 NSF	
EXHIBITION	3,000 NSF	3,000 NSF	
LIVE WORK	35,540 NSF	27,627 NSF	(BLDG 11 ONLY)
SHELL SPACE	2,540 NSF	2,540 NSF	
TOTAL NET AREA	102,000 NSF	89,390 NSF	

FIGURES



				PROJ. MANAGER:	
				CHIEF DESIGNER:	
				REVIEWED BY:	DATE
1.					
No.	DATE	DESCRIPTION	BY		
REVISIONS					

SCALE:
HORZ.: 1" = 100'
VERT.:
DATUM:
HORZ.:
VERT.:
0 50 100
GRAPHIC SCALE

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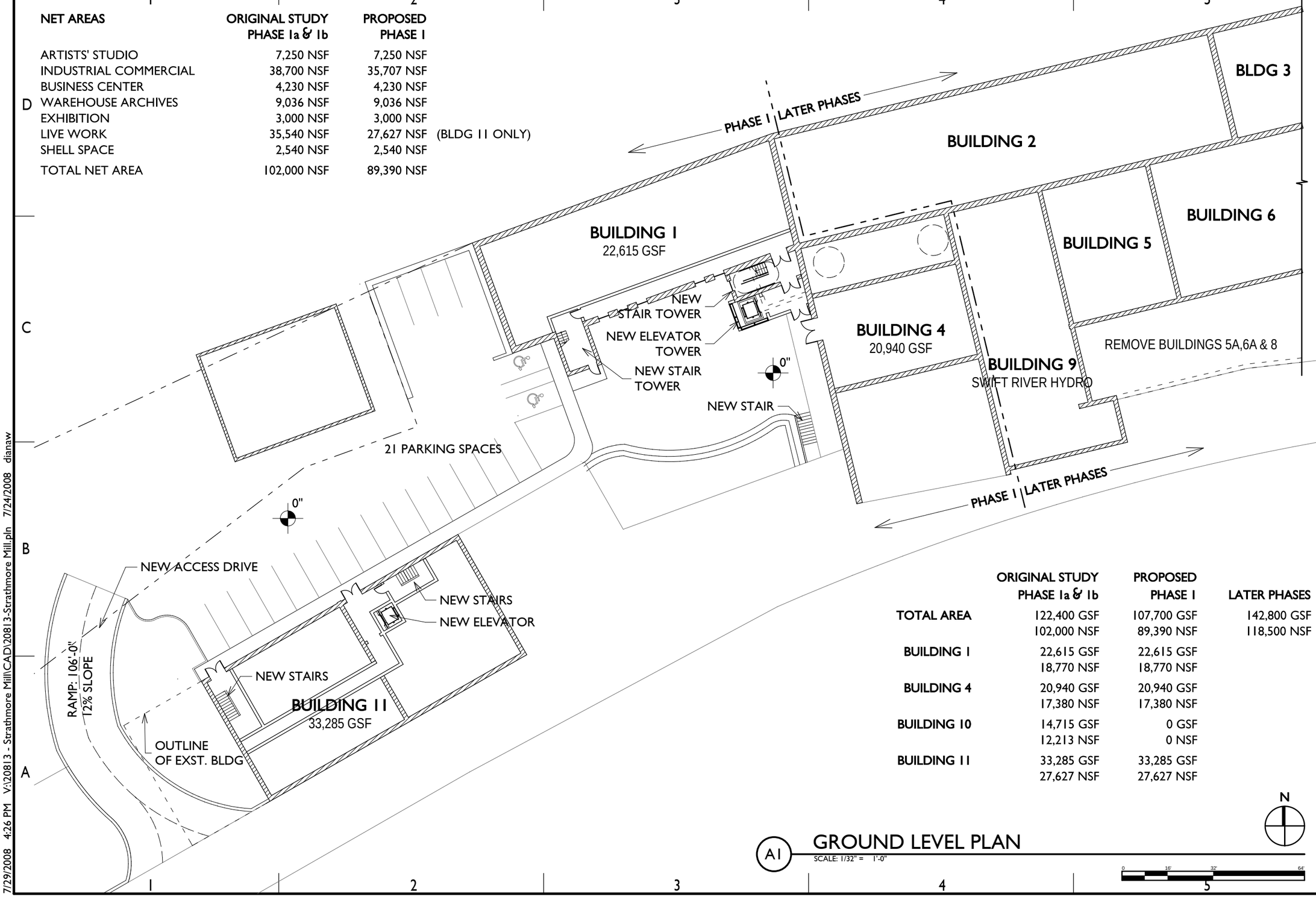
TOWN OF MONTAGUE
OVERALL KEY PLAN
STRATHMORE MILL
MONTAGUE MASSACHUSETTS

PROJ. No.:20080367.A10
DATE: AUGUST 12, 2008

FIG 1

NET AREAS	ORIGINAL STUDY PHASE 1a & 1b	PROPOSED PHASE 1	
ARTISTS' STUDIO	7,250 NSF	7,250 NSF	
INDUSTRIAL COMMERCIAL	38,700 NSF	35,707 NSF	
BUSINESS CENTER	4,230 NSF	4,230 NSF	
WAREHOUSE ARCHIVES	9,036 NSF	9,036 NSF	
EXHIBITION	3,000 NSF	3,000 NSF	
LIVE WORK	35,540 NSF	27,627 NSF	(BLDG 11 ONLY)
SHELL SPACE	2,540 NSF	2,540 NSF	
TOTAL NET AREA	102,000 NSF	89,390 NSF	



	ORIGINAL STUDY PHASE 1a & 1b	PROPOSED PHASE 1	LATER PHASES
TOTAL AREA	122,400 GSF 102,000 NSF	107,700 GSF 89,390 NSF	142,800 GSF 118,500 NSF
BUILDING 1	22,615 GSF 18,770 NSF	22,615 GSF 18,770 NSF	
BUILDING 4	20,940 GSF 17,380 NSF	20,940 GSF 17,380 NSF	
BUILDING 10	14,715 GSF 12,213 NSF	0 GSF 0 NSF	
BUILDING 11	33,285 GSF 27,627 NSF	33,285 GSF 27,627 NSF	

A1 GROUND LEVEL PLAN
SCALE: 1/32" = 1'-0"

N

0 16' 32' 64'

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(413) 733-6798

TOWN OF MONTAGUE
STRATHMORE MILL
STUDY
TURNERS FALLS, MA

MARK	DATE	DESCRIPTION
	07/24/2008	STUDY

PROJECT NO: 20813
CAD FILE: 20813-Strathn
DRAWN BY: DW
CHK'D BY: MS

SHEET TITLE
Ground Level Plan

FIG 2

7/29/2008 4:26 PM V:\20813 - Strathmore Mill\CAD\20813-Strathmore Mill.pln 7/24/2008 dianaw

BLDG 3

BUILDING 2

BUILDING 1
A: 4,523.35 sq ft

BUILDING 5

BUILDING 4
20,940 GSF

BUILDING 9
SWIFT RIVER HYDRO

NEW ELEVATOR TOWER

NEW STAIR TOWER

NEW STAIR

9 PARKING SPACES

25'-1"

NEW STAIRS

NEW ELEVATOR

NEW STAIRS

BUILDING 11
33,285 GSF

NEW ACCESS DRIVE

N

0 16' 32' 64'

A1 STREET LEVEL PLAN
SCALE: 1/32" = 1'-0"

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(413) 733-6798

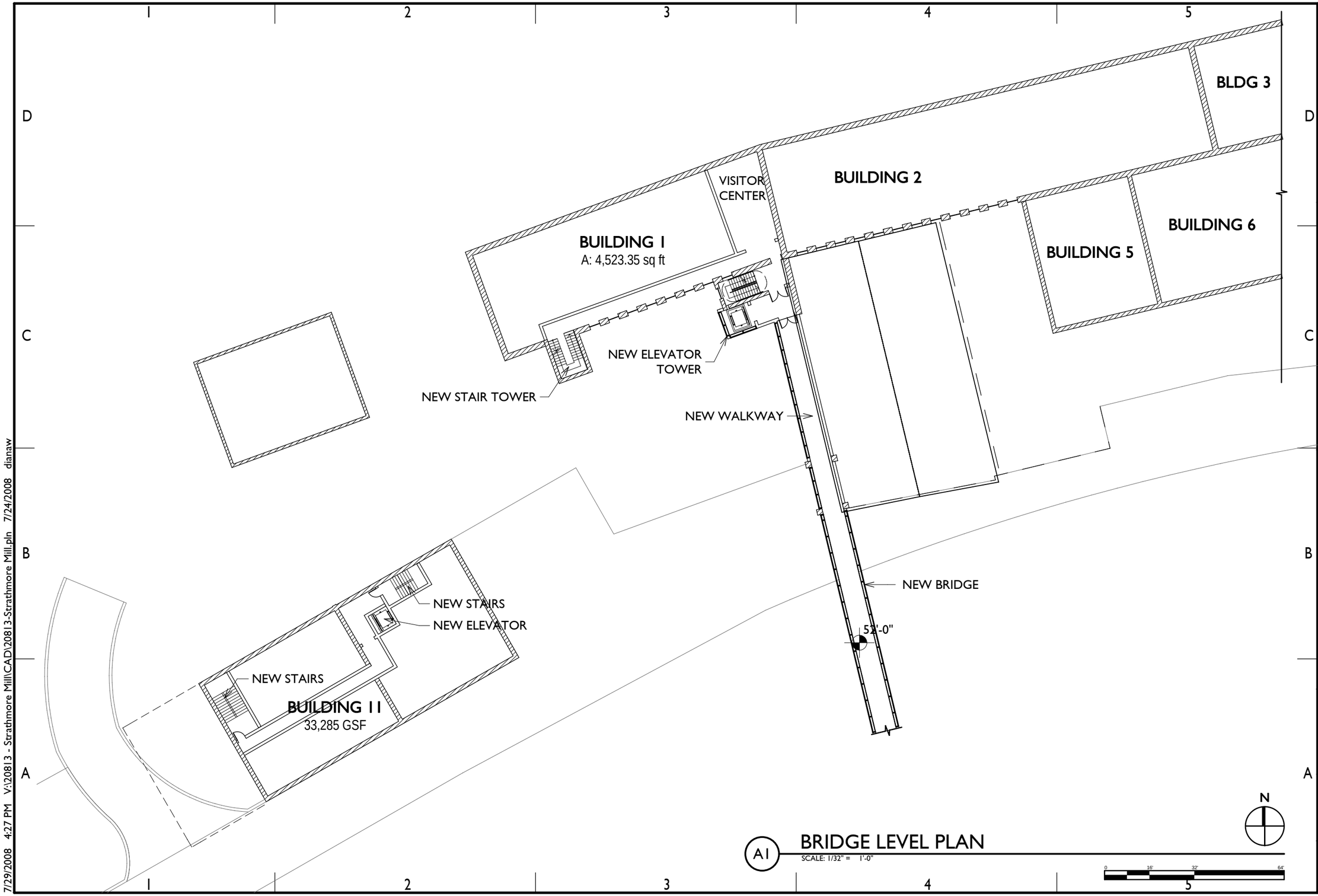
TOWN OF MONTAGUE
STRATHMORE MILL
STUDY
TURNERS FALLS, MA

MARK	DATE	DESCRIPTION
	07/24/2008	STUDY

PROJECT NO: 20813
CAD FILE: 20813-Strathm
DRAWN BY: DW
CHK'D BY: MS

SHEET TITLE
Streel Level Plan

FIG 3



A1 BRIDGE LEVEL PLAN
SCALE: 1/32" = 1'-0"

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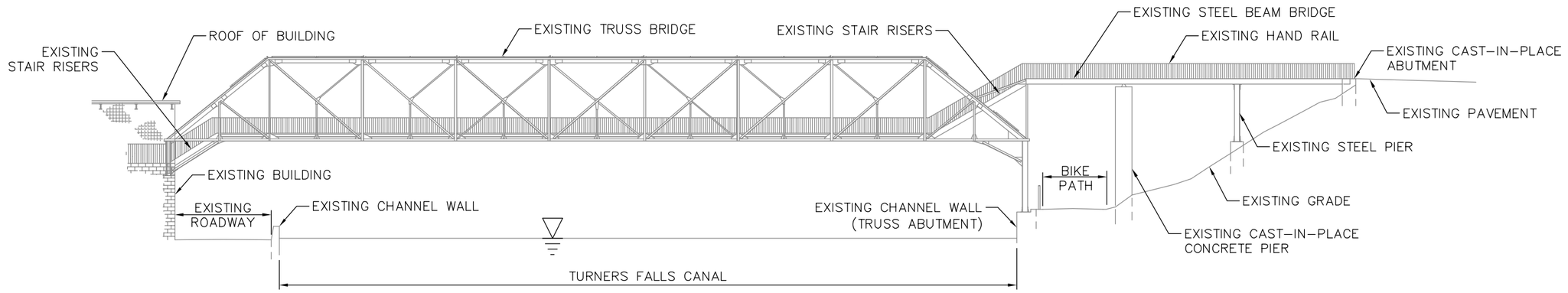
TOWN OF MONTAGUE
STRATHMORE MILL
STUDY
TURNERS FALLS, MA

MARK	DATE	DESCRIPTION
	07/24/2008	STUDY

PROJECT NO: 20813
CAD FILE: 20813-Strathn
DRAWN BY: DW
CHK'D BY: MS

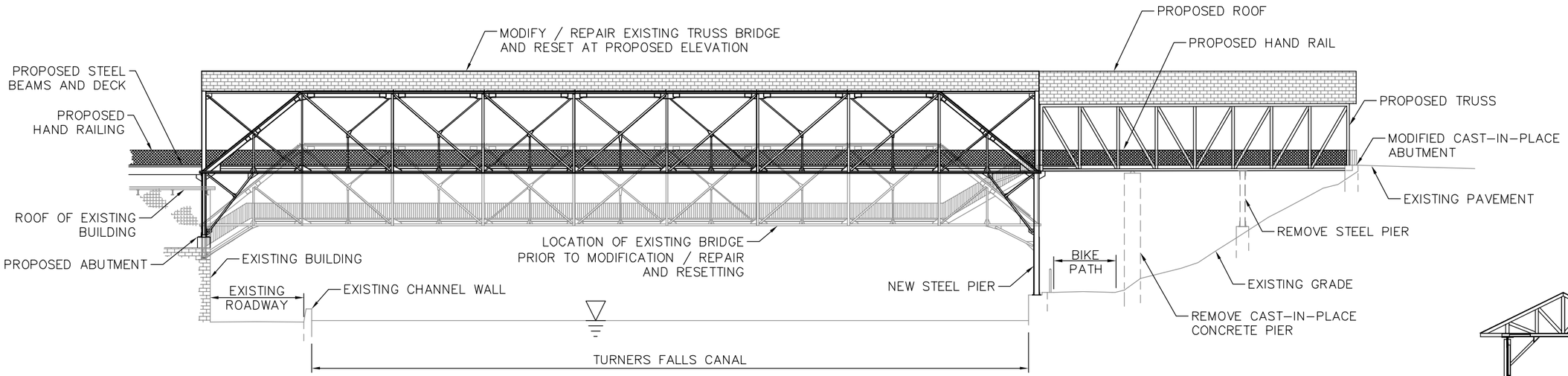
SHEET TITLE
Bridge Level Plan

FIG 4



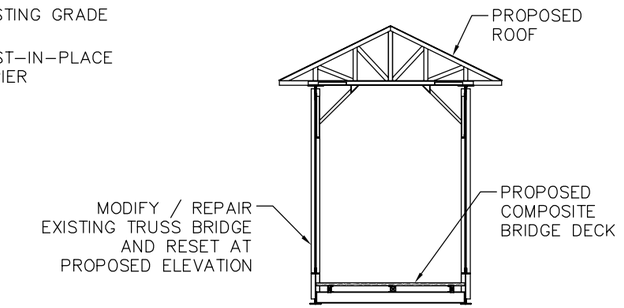
EXISTING ELEVATION

NOT TO SCALE



PROPOSED ELEVATION
OF MODIFIED AND REPAIRED EXISTING BRIDGE

NOT TO SCALE



PROPOSED SECTION
ORIGINAL TRUSS WITH ROOF

NOT TO SCALE

No.	DATE	DESCRIPTION	BY
1.			

REVISIONS

PROJ. MANAGER:
CHIEF DESIGNER:
REVIEWED BY: DATE

SCALE:
HORZ.: N.T.S.
VERT.:
DATUM:
HORZ.:
VERT.:
0 .5 1
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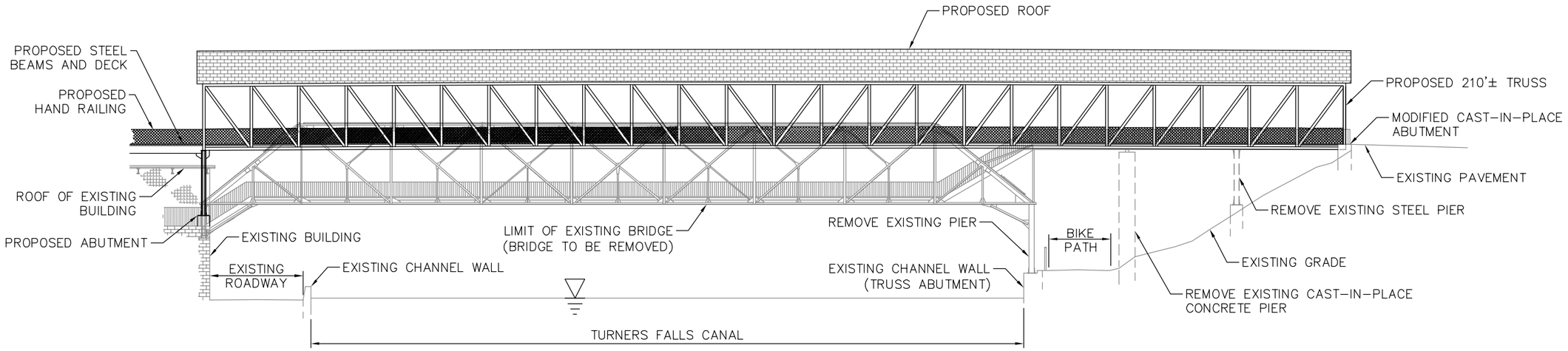
TOWN OF MONTAGUE
MODIFIED / REPAIRED BRIDGE
STRATHMORE MILL COMPLEX
MONTAGUE MASSACHUSETTS

PROJ. No.: 20080367.A10
DATE: AUGUST 12, 2008

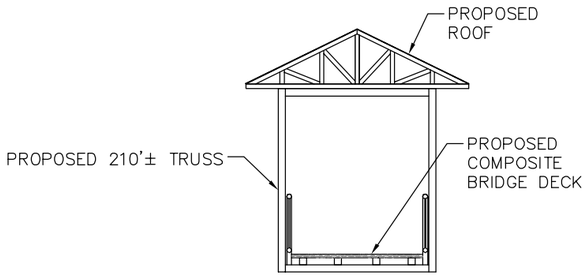
FIG 5

CTB: LMAN: MS VIEW: UCS:



PROPOSED ELEVATION

NOT TO SCALE



PROPOSED TRUSS SECTION WITH ROOF

NOT TO SCALE

				PROJ. MANAGER:	
				CHIEF DESIGNER:	
				REVIEWED BY:	DATE
1.					
No.	DATE	DESCRIPTION	BY		
REVISIONS					

SCALE:
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TOWN OF MONTAGUE
PROPOSED 210'± TRUSS BRIDGE
STRATHMORE MILL COMPLEX
MONTAGUE MASSACHUSETTS

PROJ. No.: 20080367.A10
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FIG 6

PUMP STATION

PROPOSED ADDITIONAL 4" SEWER LINE

SOUTHWORTH WATER TREATMENT PLANT

EXISTING 6" SEWER LINE

4" RISER

STRATHMORE PUMP STATION

BUILDING #1

BUILDING #2

BUILDING #3

BLDG. #4

BLDG. #9

BLDG. #5

BLDG. #6

BLDG. #7

ELEV

8" WATER

8" WATER

BUILDING #11

4" RISER WITH FLOW SWITCH ON L2

8" FIRE SUPPRESSION WATER MAIN

400 FT OF 8" TO DEAD END

EXISTING 8" CEMENT LINED WATER MAIN (BOXED)

CANAL

6" SEWER–SOUTHWORTH

6" ABANDONED SEWER SOUTHWORTH

4" ABANDONED SEWER STRATHMORE

DISCONNECTED WATER LINE TO BE RELOCATED AND RECONNECTED

No.	DATE	DESCRIPTION	BY
1.			

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HORZ.: 1" = 40'
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DATUM:
HORZ.:
VERT.:
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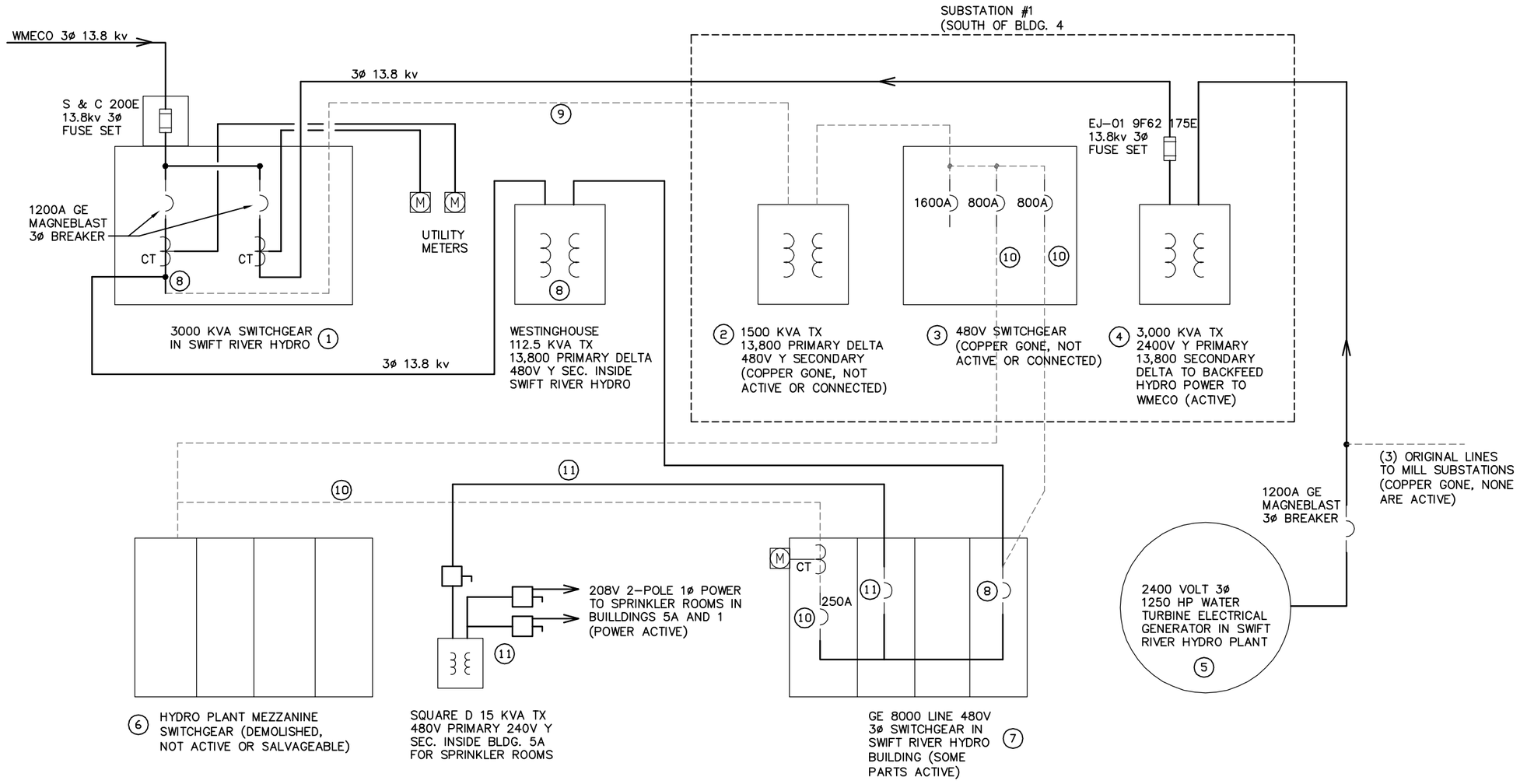
TOWN OF MONTAGUE
SEWER AND WATER UTILITY LAYOUT
STRATHMORE MILL
MONTAGUE MASSACHUSETTS

PROJ. No.:20080367.A10
DATE: AUGUST 12, 2008

FIG 7



CTB: FO_STANDARD
LMAN:
MS VIEW:
UCS:

No.	DATE	DESCRIPTION	BY
1.			

REVISIONS

PROJ. MANAGER:
CHIEF DESIGNER:
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SEAL

SCALE: NOT TO SCALE
HORZ.:
VERT.:
DATUM:
HORZ.:
VERT.:
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TOWN OF MONTAGUE
STRATHMORE MILLS COMPLEX
EXISTING ELECTRICAL RISER
TOWN OF MONTAGUE FEASIBILITY STUDY
TURNERS FALLS MASSACHUSETTS

PROJ. No.: 20080367.A10
DATE: AUGUST 12, 2008

FIG 8

ELECTRICAL SYSTEMS STATUS – JUNE 2008

(1) 3000 KVA SWITCHGEAR – ORIGINAL EQUIPMENT TO THE MILLS COMPLEX, PROVIDING THE METERING OF THE 13,800V INCOMING POWER AND DISTRIBUTION TO (2) 1200A 13,800V MAGNEBLAST CIRCUIT BREAKERS. IT IS LOCATED INSIDE BUILDING 20, SWIFT RIVER HYDRO PLANT.

(2) 1500 KVA PRIMARY UTILITY TRANSFORMER, 13,800V TO 480V. THIS TRANSFORMER PRESENTLY IS PARTIALLY DEMOLISHED, WITH THE COPPER CORE GONE.

(3) 480V SWITCHGEAR, ORIGINAL EQUIPMENT THAT DISTRIBUTED 480V TO THREE CENTRAL SWITCHGEAR AREAS INSIDE THE MILLS COMPLEX. IT IS LOCATED OUTSIDE BUILDING #4 BETWEEN THE TWO LARGE PAD MOUNTED TRANSFORMERS.

(4) 3000 KVA PRIMARY TRANSFORMER, 2400V PRIMARY TO 13,800V SECONDARY. THIS PAD MOUNTED TRANSFORMER IS OWNED BY SWIFT RIVER HYDRO AND ALLOWS THE HYDROELECTRIC GENERATOR TO FEED 13,800V POWER TO THE WEMCO POWER GRID. IT IS PRESENTLY OPERATIONAL.

(5) 2400V 1250 HP HYDROELECTRIC TURBINE, PROVIDES 2400V POWER FOR SWIFT RIVER HYDRO TO SELL TO WMECO.

(6) MEZZANINE SWITCHGEAR – CURRENTLY THIS GEAR IS IN PIECES, WITH COPPER STRIPPED OUT. THE POWER FEED FROM THE 8000 LINE GE SWITCHGEAR IS DISCONNECTED. THIS GEAR WAS ONE OF THE THREE ORIGINAL MILLS COMPLEX SWITCHGEAR CABINETS TO FEED THE MILL BUILDINGS FROM THE 480V SWITCHGEAR LOCATED BETWEEN THE TWO ORIGINAL PRIMARY TRANSFORMERS.

(7) GE 8000 LINE SWITCHGEAR – LOCATED ON THE NE WALL OF THE SWIFT RIVER HYDRO PLANT, THIS IS AN ORIGINAL MOTOR CONTROL CENTER THAT FED MANY MILL BUILDING PUMPS AND LARGE MOTORS. MOST OF THE ORIGINAL MOTORS AND PUMPS ARE DISCONNECTED, BUT IN RECENT YEARS IT HAS BEEN USED AS 480V DISTRIBUTION SWITCHGEAR, WITH SMALLER CIRCUIT BREAKERS INSTALLED INSIDE THE ORIGINAL CABINET. IT CURRENTLY IS ACTIVE, AND FEEDS LIVE 2–POLE 208V CIRCUITS TO SPRINKLER CLOSETS, AND SOME HYDRO PLANT CIRCUITS.

(8) IN 2006 THE 112.5 KVA DRY TRANSFORMER (13,800V TO 480V) WAS INSTALLED BY POIRIER ELECTRIC, INSIDE THE SWIFT RIVER HYDRO BUILDING, TO PROVIDE POWER TO THEIR BUILDING. THIS SEPARATED THE HYDRO PLANT FROM THE MILLS ELECTRICAL DISTRIBUTION SYSTEM. THE GE 8000 LINE MOTOR CONTROL CENTER WAS RE–FED DIRECTLY FROM THE NEW 112.5 KVA TRANSFORMER. A SMALLER FEEDER (250 MCM) WAS INSTALLED (WITH A SEPARATE METER) TO RE–FEED THE MEZZANINE SWITCHGEAR FROM THE GE 8000 LINE MCC, ALLOWING SOME MILL COMPLEX ELECTRICAL SYSTEMS TO REMAIN ACTIVE. THE SWIFT RIVER BUILDING PANELS WERE THEN RE–FED FROM THE GE 8000 LINE MCC, NOW USED AS A DISTRIBUTION PANEL.

(9) AFTER THE 112.5 KVA TRANSFORMER WAS ACTIVATED, THE PAD MOUNTED SWITCHGEAR AND 1500 KVA TRANSFORMER WERE DISCONNECTED FROM THE 3000 KVA PRIMARY SWITCHGEAR. BOTH THE 480V PAD MOUNTED SWITCHGEAR AND THE 1500 KVA PAD MOUNTED TRANSFORMER WERE THEN STRIPPED OF COPPER AND REMAIN INACTIVE.

(10) EVENTUALLY THE MEZZANINE DISTRIBUTION SWITCHGEAR AND ALL OTHER MILLS COMPLEX SWITCHGEAR WERE DISCONNECTED AND STRIPPED OF COPPER, LEAVING NO POWER TO ANY PART OF THE MILLS COMPLEX.

(11) TWO SINGLE PHASE 2–POLE 208V CIRCUITS WERE BROUGHT INTO BUILDINGS #1 AND #5A TO POWER HEATERS IN SMALL SPRINKLER CLOSETS, SO SPRINKLER LINES WOULD NOT FREEZE. THESE TWO CIRCUITS ARE CURRENTLY THE ONLY LIVE ELECTRICAL POWER TO THE MILLS BUILDINGS.

No.	DATE	DESCRIPTION	BY
		REVISIONS	

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CHIEF DESIGNER:
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SCALE: NOT TO SCALE
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DATUM:
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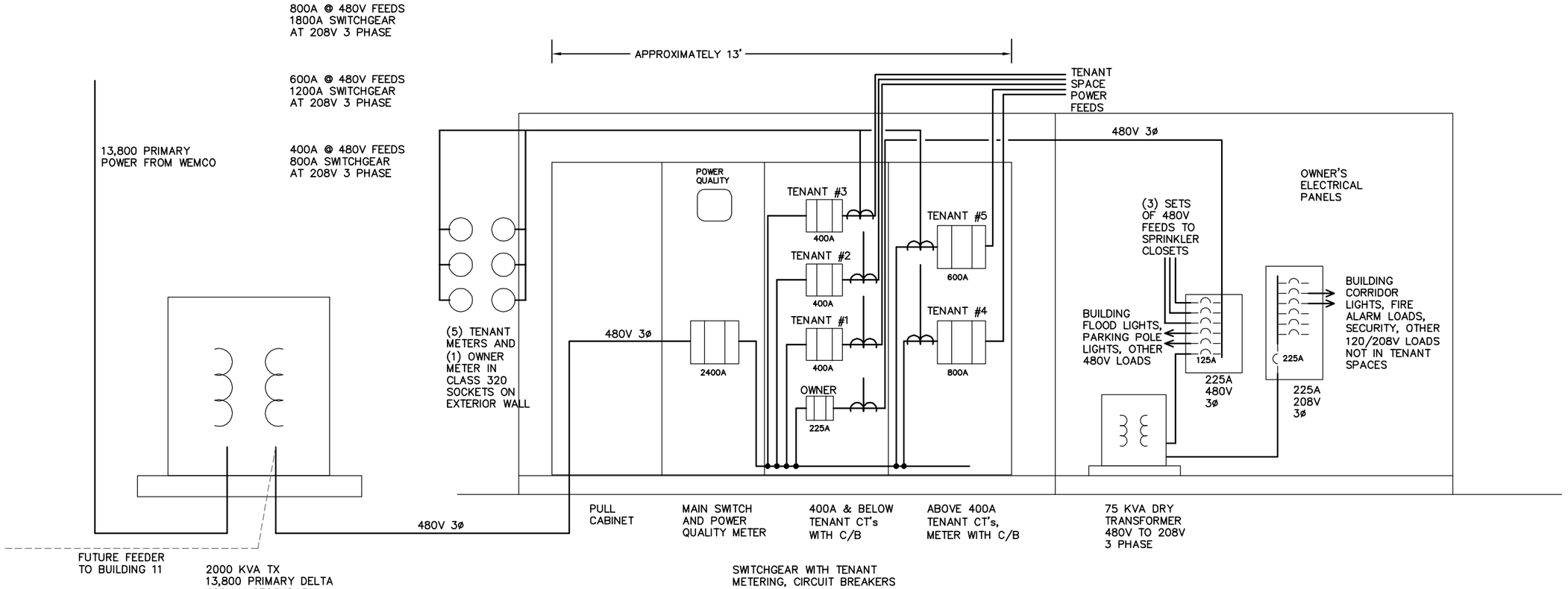
TOWN OF MONTAGUE
STRATHMORE MILLS COMPLEX
NOTATIONS FOR RISER
TOWN OF MONTAGUE FEASIBILITY STUDY
TURNERS FALLS MASSACHUSETTS

PROJ. No.: 20080367.A10
DATE: AUGUST 12, 2008

FIG 9

CTB: FO_STANDARD
LMAN:
MS VIEW:
UCS:



CTB: FO_STANDARD
LMAN:
MS VIEW:
UCS:

No.	DATE	DESCRIPTION	BY
1.			

REVISIONS

PROJ. MANAGER:
CHIEF DESIGNER:
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SCALE: NOT TO SCALE
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DATUM:
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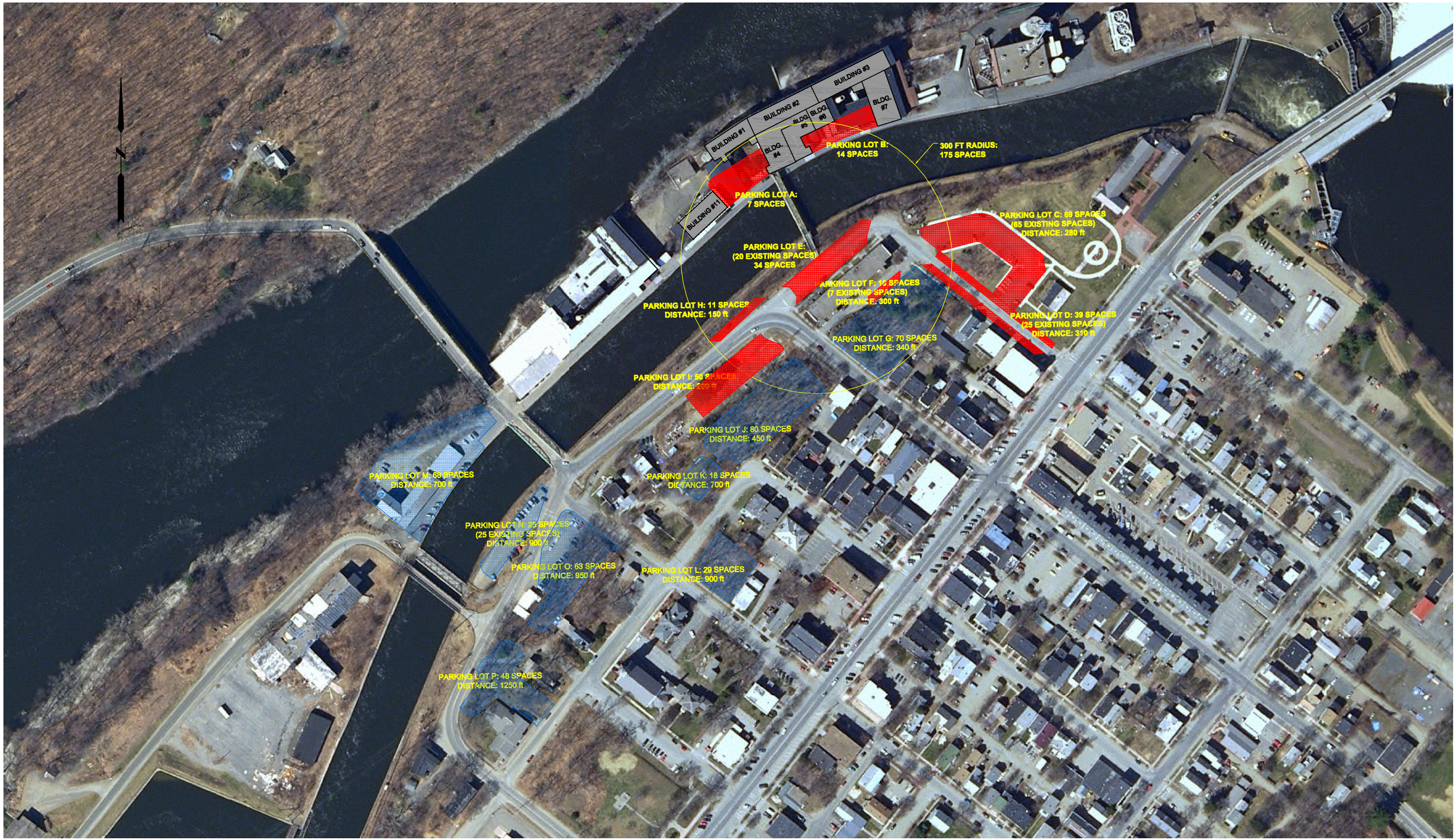
TOWN OF MONTAGUE
STRATHMORE MILLS COMPLEX
PROPOSED ELECTRICAL DISTRIBUTION
TOWN OF MONTAGUE FEASIBILITY STUDY
TURNERS FALLS MASSACHUSETTS

PROJ. No.: 20080367.A10
DATE: AUGUST 12, 2008

FIG 10



No.	DATE	DESCRIPTION	BY
1.			

REVISIONS

PROJ. MANAGER:
CHIEF DESIGNER:
REVIEWED BY: DATE

SCALE:
HORZ.: 1" = 200'
VERT.:
DATUM:
HORZ.:
VERT.:
0 100 200
GRAPHIC SCALE

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TOWN OF MONTAGUE

PARKING CONCEPT PLAN ORTHOPHOTO

STRATHMORE MILL

MONTAGUE MASSACHUSETTS

PROJ. No.: 2008 0367.A10
DATE: AUGUST 12, 2008

FIG 11

APPENDIX A

OPINION OF COST NO. 1

FUSS & O'NEILL, INC.

78 Interstate Drive
West Springfield, MA 02347

OPINION OF COST	DATE PREPARED 6/30/2008	SHEET 1 OF 1
PROJECT : Montague Ped. Bridge	BASIS :	
LOCATION : Montague, MA		
DESCRIPTION: **Rehabilitate/Modify Existing Pedestrian Bridge**		
PROJECT NO. :	ESTIMATOR : PDB	CHECKED BY :

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s') methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

ITEM NO.	ITEM DESCRIPTION	UNIT MEAS.	NO. UNITS	PER UNIT	TOTAL COST
1	Remove/Reset the existing main truss span	L.S.	1.00	$55,000.00	$55,000.00
	- Includes the cost of mobilizing a crane twice to remove truss and				
	again to reset truss, rigging, setting up staging area, and excavator				
	to assist crane				
2	Mod. north framing/remove stairs/add floor framing	L.S.	1.00	$20,000.00	$20,000.00
	- Includes the cost to demo the existing framing and stairs,				
	supply material, equip. and labor to install new framing				
3	Remove/demo the south approach span and stairs	L.S.	1.00	$24,000.00	$24,000.00
	- Includes the cost of excavator and labor, disposal of steel				
	and misc. materials for steel pier bent, span, concrete pier and stairs				
4	Repair the deteriorated steel framing components	L.S.	1.00	$95,000.00	$95,000.00
	(Assume lead pain containment is required)				
	- Includes $50,000 for the removal of lead paint & assumes				
	half of horizontal gussets and 6 members need repair)				
5	Strengthening the existing chords/gussets	L.S.	1.00	$200,000.00	$200,000.00
	(To accommodate the dead load from a new roof)				
	- Assumes only bottom gussets require strengthening				
6	Prepare and Paint truss	L.S.	1.00	$8,000.00	$8,000.00
	- Assumes painting of truss will be done in staging area				
7	Add a new roof for existing and proposed trusses	L.S.	1.00	$30,000.00	$30,000.00
	- Assumes wooden truss with metal roof				
8	Replace decking on the existing truss	L.S.	1.00	$15,000.00	$15,000.00
9	Replace existing south steel pier of main truss	L.S.	1.00	$20,000.00	$20,000.00
	- Includes cost to demo existing steel abut., materials, and				
	erection of new steel abut.				
10	Mod. existing north abutment located at the building	L.S.	1.00	$14,000.00	$14,000.00
	- Includes cost to demo existing steel abut., materials, and				
	and erection of new steel abut.				
11	Mod. existing south abutment for approach span	L.S.	1.00	$13,000.00	$13,000.00
	- Includes selective demo of existing concrete abutment				
	and modification for new approach span				
12	New 60' steel truss south approach span	L.S.	1.00	$105,000.00	$105,000.00
	- Includes the cost of the bridge and delivery to the site				
13	Install a new 60' steel truss south approach span	L.S.	1.00	$20,000.00	$20,000.00
	- Includes the cost of mobilizing a crane, rigging,				
	setting up staging area, and excavator to assist crane)				
	TOTAL COST (ROUNDED TO NEAREST $1,000)				**$619,000**

Notes: **The cost estimate provided above is a "Opinion of Cost". This estimate is a conceptual cost estimate made with limited engineering data. This cost estimate should considered accurate to within plus 50% or minus 30%.**

Plus 50% = $928,500.00
Minus 30% = $433,300.00

APPENDIX B

OPINION OF COST NO. 2

FUSS & O'NEILL, INC.

78 Interstate Drive
West Springfield, MA 02347

OPINION OF COST

DATE PREPARED 6/30/2008 | SHEET 1 OF 1

PROJECT : Montague Ped. Bridge

LOCATION : Montague, MA

DESCRIPTION: **Replace Existing Pedestrian Bridge with New Bridge**

BASIS :

PROJECT NO. :

ESTIMATOR : PDB

CHECKED BY :

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s') methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

ITEM NO.	ITEM DESCRIPTION	UNIT MEAS.	NO. UNITS	PER UNIT	TOTAL COST
1	Remove existing main truss span and set in staging area	L.S.	1.00	$25,000.00	$25,000.00
	- Includes the cost of mobilizing a crane, rigging, setting up staging				
	area, and excavator to assist crane				
2	Demo existing main truss span, south approach span,	L.S.	1.00	$60,000.00	$60,000.00
	and all substructure elements				
	- Includes the cost to demo main truss after being set in staging				
	area and remove debris from site				
3	Modify the existing north abutment at the building	L.S.	1.00	$15,000.00	$15,000.00
	- Includes demo/modification of existing concrete abutment, pier bent,				
	new concrete and misc. materials for steel pier bent				
4	Construct a new south abutment at roadway	L.S.	1.00	$20,000.00	$20,000.00
	- Includes demo of existing concrete abutment, construction of new				
	stub abutment (no-piles)				
5	New 210' steel truss	L.S.	1.00	$501,000.00	$501,000.00
	- Cost includes delivery to site (single span truss in 5 sections with a				
	total weight of 217,100 lbs)				
6	Assembly of steel truss sections on site	L.S.	1.00	$15,000.00	$15,000.00
	- Includes the cost of steel workers, equipment (excavator) to assist				
	assembly of truss sections in staging area				
7	Add a new roof for existing and proposed trusses	L.S.	1.00	$25,000.00	$25,000.00
	- Assumes wooden truss with metal roof				
8	Install a new 210' steel truss span	L.S.	1.00	$50,000.00	$50,000.00
	- Includes the cost of mobilizing 2-cranes, rigging,				
	setting up staging area, and excavator to assist crane				
	TOTAL COST (ROUNDED TO NEAREST $1,000)				**$711,000**

Notes: **The cost estimate provided above is a "Opinion of Cost". This estimate is a conceptual cost estimate made with limited engineering data. This cost estimate should considered accurate to within plus 50% or minus 30%.**

Plus 50% = $1,066,500.00
Minus 30% = $497,700.00

APPENDIX C

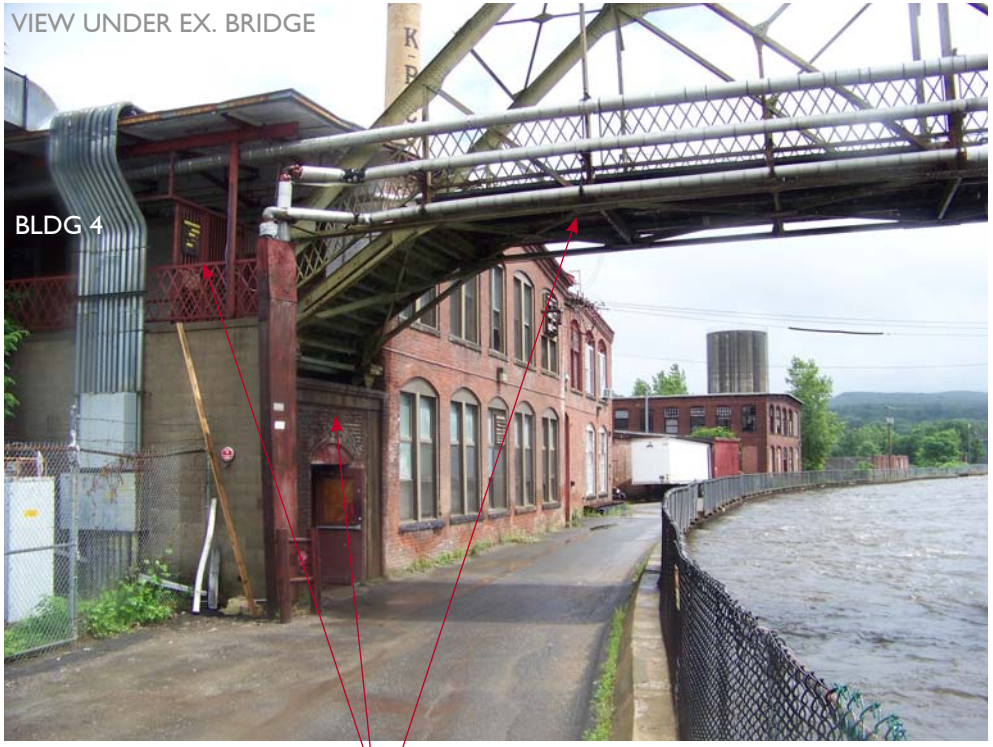
EXISTING CONDITIONS PROPOSAL

PROPOSED BUILDING MODIFICATIONS

REMOVE ADDITION
TO BUILDING 7

REMOVE BUILDINGS
5A, 6A & 8

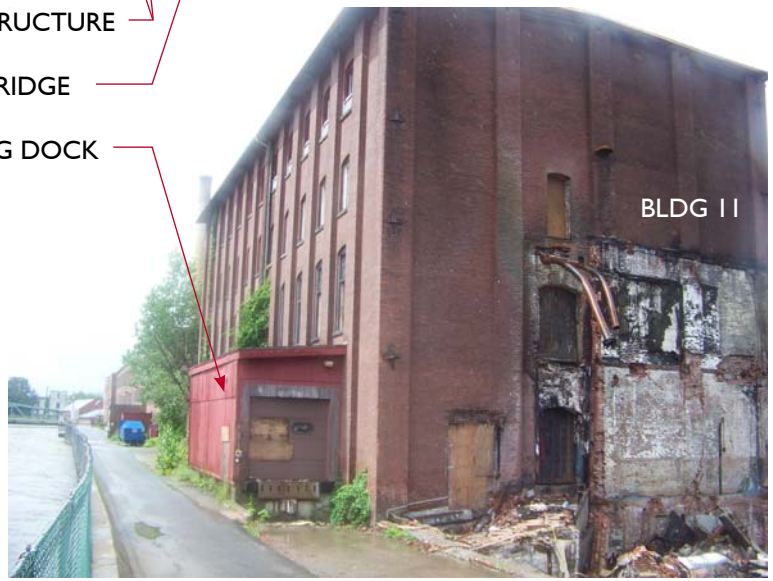
VIEW UNDER EX. BRIDGE



PROVIDE NEW STRUCTURE

RAISE EXISTING BRIDGE

REMOVE LOADING DOCK



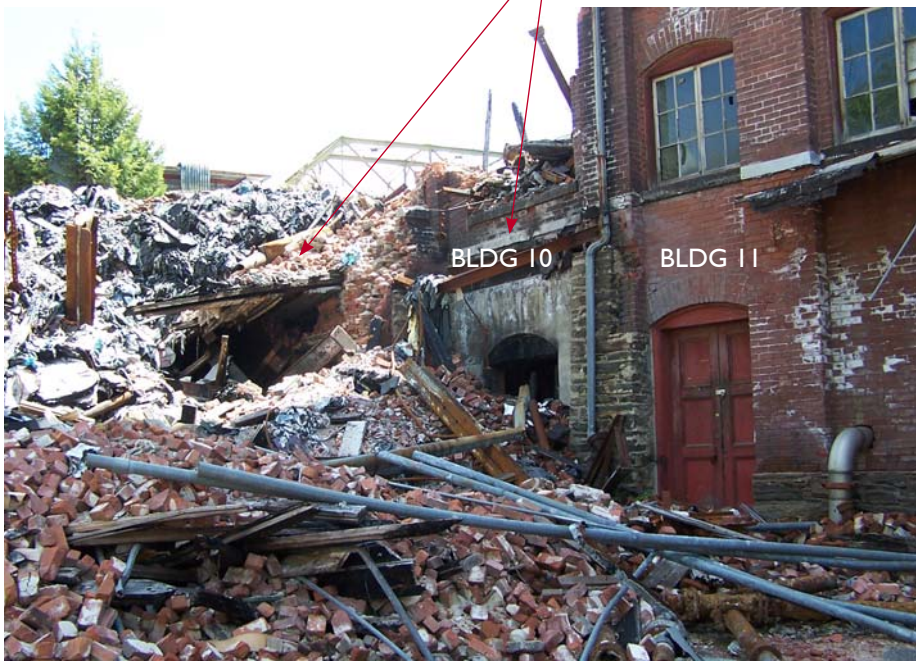
STRATHMORE MILL STUDY
EXISTING CONDITIONS PROPOSAL

BUILDING 10 FIRE REPAIR

REPAIR MASONRY
AT GABLES

DEMOLISH REMAINING
OF BUILDING 10

REMOVE DEBRIS



STRATHMORE MILL STUDY
EXISTING CONDITIONS PROPOSAL

STAIR & ELEVATOR TOWER: EXISTING/PROPOSED

EX. ELEVATOR TOWER: REMOVE STRUCTUALLY DEFICIENT TOWER, PROVIDE NEW EGRESS STAIR TOWER

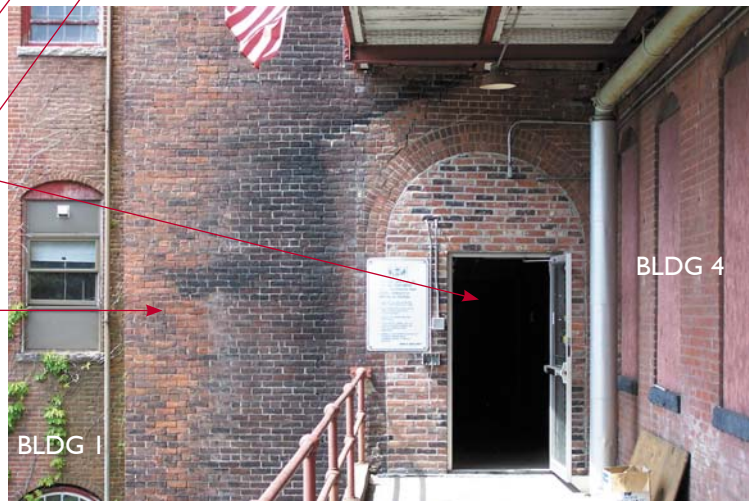
MOVE ACCESS DOORS TO SWIFT RIVER HYDRO TO ALLOW FOR NEW ELEVATOR TOWER

LOCATION OF NEW STAIR & ELEVATOR TOWER

NEW WALKWAY LEVEL

EXISTING ENTRANCE TO STAIR TOWER FROM LEVEL 3

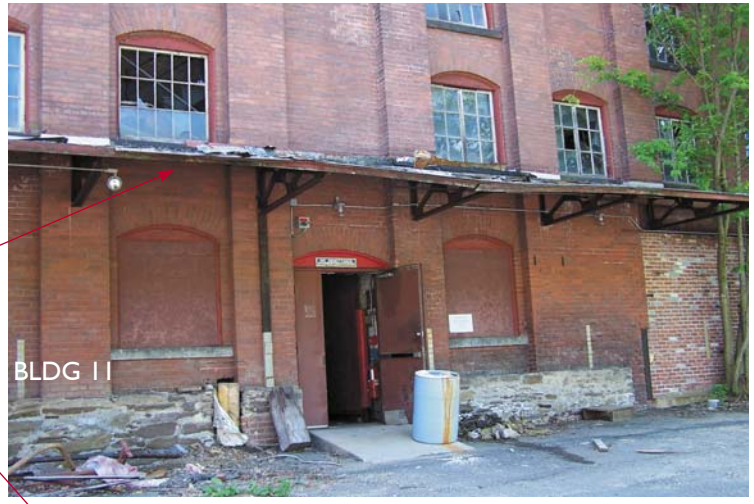
REMOVE STRUCTURALLY DEFICIENT TOWER, PROVIDE NEW ELEVATOR & STAIR TOWER



STRATHMORE MILL STUDY

EXISTING CONDITIONS PROPOSAL

BUILDING 11 MODIFICATIONS



DEMOLISH EXISTING ROOF.
CREATE NEW MAIN BUILDING
ENTRANCE WITH NEW CANOPY

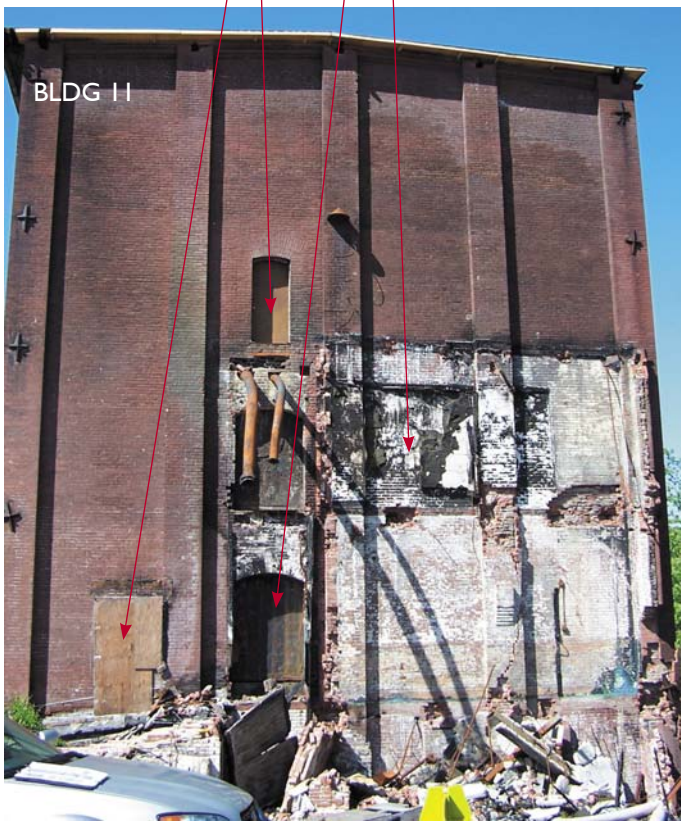
CHANGE DOORS TO WINDOWS

CREATE NEW BUILDING
ENTRANCE

NEW RAMP FROM UPPER ROAD

REPAIR FIRE DAMAGE

NEW PARKING AREA



STRATHMORE MILL STUDY
EXISTING CONDITIONS PROPOSAL

BUILDING 11 MODIFICATIONS

DEMOLISH ADDITION ON SOUTH SIDE TO ALLOW FOR PARKING RAMP

COMBINE 2 FLOORS WITH 7' CEILING HEIGHTS TO CREATE ONE LEVEL OF HIGH LOFTS

STRATHMORE MILL STUDY

EXISTING CONDITIONS PROPOSAL

APPENDIX D

STRATHMORE MILL MARKET-DRIVEN DEVELOPMENT PROGRAM

Strathmore Mill Market-Driven Development Program - Revised

July 22, 2008

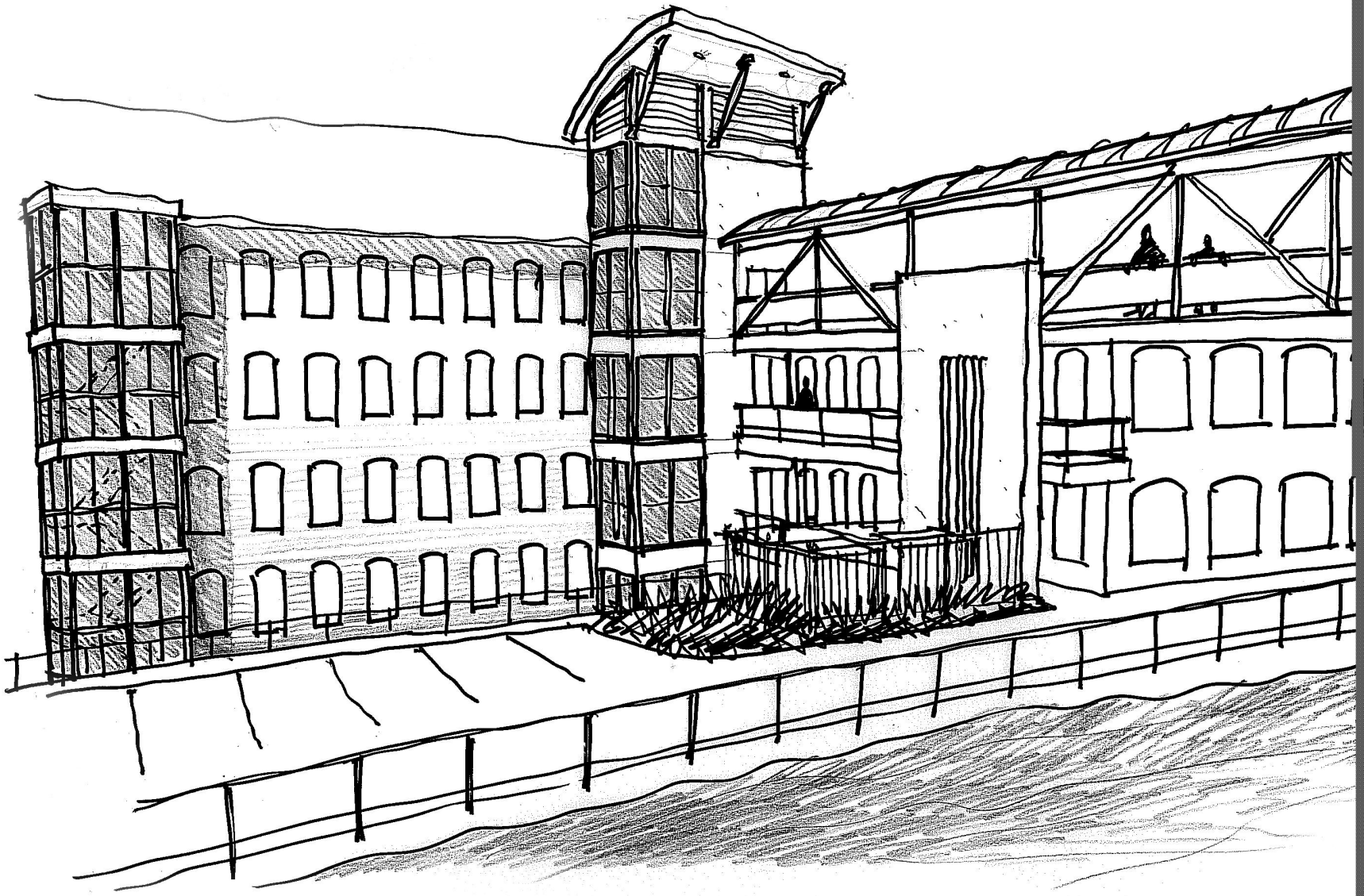
	Use & Space	Description	Rent Range	Public Sector
Pre-Occupancy		~Building Structural Stabilization		Obtain Zoning Variances for future Parking
		~Hazardous Material Clean-Up		
		~Building 10 Rubble Removal		
		~Removal of Structurally inadequate Stair and Elevator Towers from Building 1		Provide New & Upgrade Existing Access & Roadways
		~Masonry Re-Building and re-pointing at Buildings 1 and 11		
		~Code Upgrades - Egress, Accessibility, Fire		
		~Utility Repairs and Upgrades		
		~New Pedestrian Bridge		New Pedestrian Bridge
		~Fiber Optic Line		Fiber Optic Line
		~Secure Non-Used Portions of Buildings		
Phase I	89,390 nsf Industrial, Commercial & Residential	~14-18 Businesses @ 500-10,000 nsf (35,700 nsf)	$4 - $8/nsf	Provide Primary Parking Across Footbridge
Buildings 1, 4 & 11		~Business "Walk-In" Center (1,500 nsf)	$1000/mo	
		~Warehouse, Archive, Storage (9,000 nsf)	$2 - $3/nsf	
		~Exhibition (3,000 nsf)	$3 - $3.50/nsf	
		~20 live/Work Lofts in Building 11 @ 1,000sf - 1,400 sf (27,600 nsf)	$900 - $1,400/mo	Provide minimum 20 parking spaces
		~5 Studios @ 800 - 2,000 sf (7,500 nsf)	$3 - $6/nsf	
Subsequent Phases	Expand Industrial, Commercial, Office, Studios	Selective Building Demolition		Selective Building Demolition
	Add Education, Museum, Galleries, Conference Spaces			Additional Parking
	Hydropower Facility Exhibit, Ecotourism			

	ORIGINAL STUDY PHASE 1a & 1b	PROPOSED PHASE 1	LATER PHASES
TOTAL AREA	122,400 GSF 102,000 NSF	107,700 GSF 89,390 NSF	142,800 GSF 118,500 NSF
BUILDING 1	22,615 GSF 18,770 NSF	22,615 GSF 18,770 NSF	
BUILDING 4	20,940 GSF 17,380 NSF	20,940 GSF 17,380 NSF	
BUILDING 10	14,715 GSF 12,213 NSF	0 GSF 0 NSF	
BUILDING 11	33,285 GSF 27,627 NSF	33,285 GSF 27,627 NSF	

NET AREAS	**ORIGINAL STUDY PHASE 1a & 1b**	**PROPOSED PHASE 1**	
ARTISTS' STUDIO	7,250 NSF	7,250 NSF	
INDUSTRIAL COMMERCIAL	38,700 NSF	35,707 NSF	
BUSINESS CENTER	4,230 NSF	4,230 NSF	
WAREHOUSE ARCHIVES	9,036 NSF	9,036 NSF	
EXHIBITION	3,000 NSF	3,000 NSF	
LIVE WORK	35,540 NSF	27,627 NSF	(BLDG 11 ONLY)
SHELL SPACE	2,540 NSF	2,540 NSF	
TOTAL NET AREA	102,000 NSF	89,390 NSF	

APPENDIX E

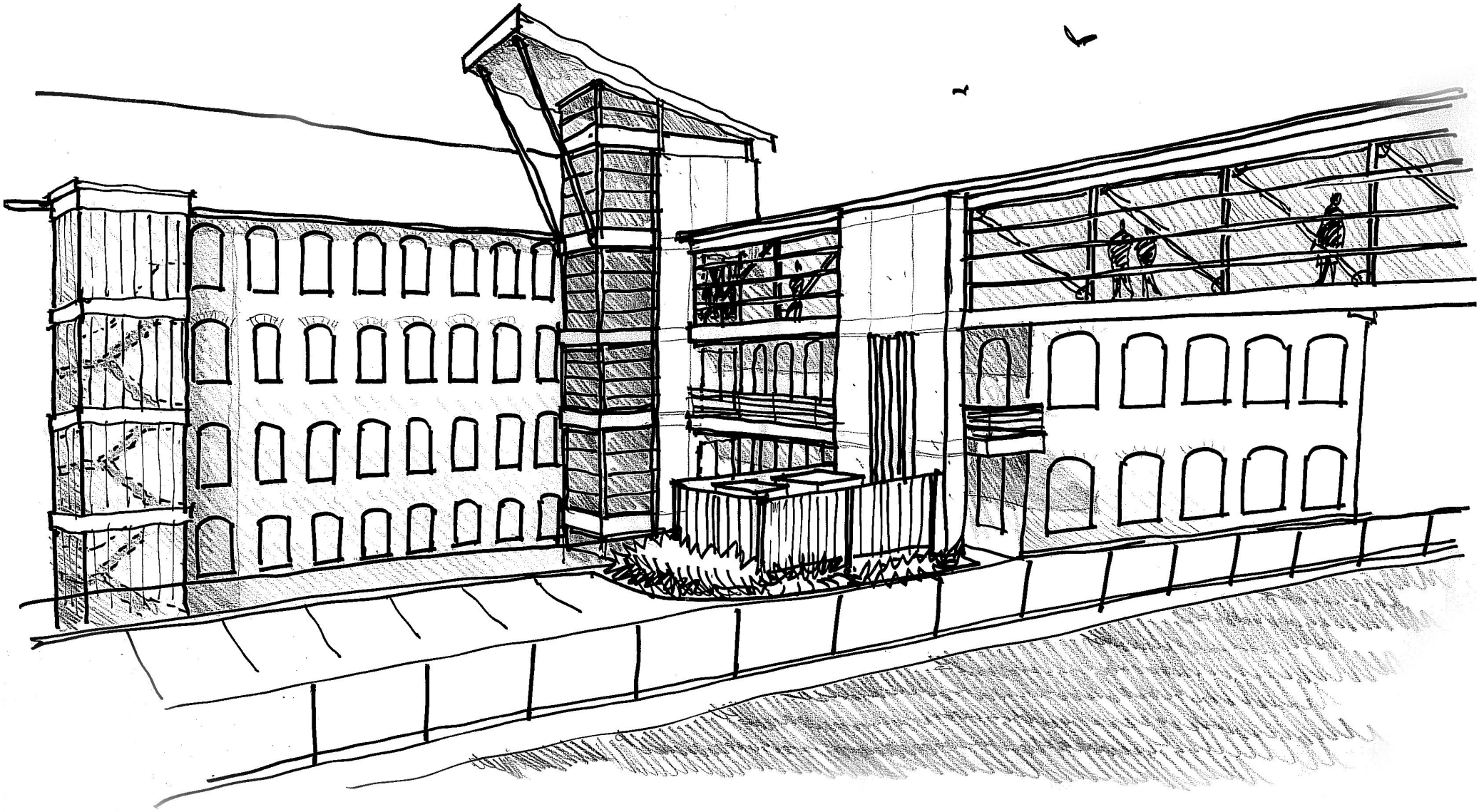
CONNECTOR SCHEME A



Connector Scheme A

APPENDIX F

CONNECTOR SCHEME B



Connector Scheme B