PROSPECT HILL TOWER

CPA FUNDING APPLICATION PACKET

City of Somerville

Capital Projects and Planning Department

Stephen Vitello, Project Manager – 12/1/14

GENERAL

- Cover Page
- Checklist
- Narratives
- Timeline





CITY OF SOMERVILLE, MASSACHUSETTS COMMUNITY PRESERVATION COMMITTEE FY15 FUNDING APPLICATION

COVER PAGE

PROJECT LOCATION: Munr	oe Street	
	RECORD: City of Somerville	
ONE SENTENCE DESCRIPTION	OF PROJECT: Replace upper lev	vel floor slab, reset parapet stones, restore doors and
ornamental iron stai	rs, repoint facade, repair e	exterior stairwell.
Please indicate (X) the appr	oved category(s) from your Eligibil	ity Determination Form.
		ESTIMATED START DATE: 9/1/15
		ESTIMATED COMPLETION DATE: 12/1/15
		CPA FUNDING REQUEST: \$500,000
	x	
Turner of		TOTAL BUDGET FOR PROJECT: \$532,600
Summer T		TOTAL BUDGET FOR PROJECT: \$332,000
2. APPLICANT INFORMATIO	x	TOTAL BUDGET FOR PROJECT: \$532,000
2. APPLICANT INFORMATION APPLICATION NAME / ORGANI CO-APPLICATION NAME / ORG CONTACT PERSON: Stephe	X Stephen Vitello - S ANIZATION: In Vitello - Project Manage	omerville Capital Projects and Planning Dept.
2. APPLICANT INFORMATION APPLICATION NAME / ORGANI CO-APPLICATION NAME / ORG CONTACT PERSON: Stephe MAILING ADDRESS: 1 France	X Stephen Vitello - S SANIZATION: In Vitello - Project Manage ey Rd. Somerville, MA 0	omerville Capital Projects and Planning Dept. er 2145
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2. APPLICANT INFORMATION APPLICATION NAME / ORGANI CO-APPLICATION NAME / ORGANI CONTACT PERSON: Stephe MAILING ADDRESS: 1 France PHONE: 857-523 3. SIGNATURES I (we) certify that all information which matches and/or the City of	X Stephen Vitello - S SANIZATION: In Vitello - Project Manage By Rd. Somerville, MA 0 Somerville, MA 0 Somerville to obtain verification of	omerville Capital Projects and Planning Dept. er 2145 EMAIL: svitello@somervillema.gov sion is true and correct to the best of my (our) knowledge and been excluded. I (we) authorize the Community Preservation
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CITY OF SOMERVILLE, MASSACHUSETTS COMMUNITY PRESERVATION COMMITTEE FY15 FUNDING APPLICATION

SUBMISSION REQUIREMENTS CHECKLIST

Please check (✓) each item included in your submission, which should include the applicable items in the order listed below.

GENÉRAL: Application Cover Page (form provided)	
Submission Requirements Checklist (this form)	
Narratives (prompts provided)	
Project timeline: a project schedule showing all major milestones (i.e., study, design, environmental, permit construction, etc.), including receipt of other funding sources	ting,
Financial: Dispute Summary (form provided)	
Itemized budget of all project costs, including the proposed source for each cost	
At least two written quotes for project costs. If quotes cannot be secured, detailed cost estimates may be us thorough explanation of the estimates is included.	ed if a
Proof of secured funding (e.g., commitment letters or bank statements), if applicable	
Visual:	
Map of the property location showing all features pertinent to the project, including current or future rapid stations	transit
Photos of the project site (not more than 4 views per site); include digital copies	
Ownership/Operation (non-City):	
Documentation of site control or written consent of the property owner to undertake the project, if the own applicant	er is not the
Certificate of Good Standing from the City, if applicable	
501(c)(3) certification, if operating as a non-profit	
Purchase and sale agreement or copy of current recorded deed, if applicable	
COMMUNITY SUPPORT (RECOMMENDED):	
Letters of support from residents, community groups, other City boards, commissions, or departments, or fro state, or federal officials	m City,
HISTORIC RESOURCES PROJECTS:	
Documentation that the project is listed on the State Register of Historic Places or a written determination from Somerville Historic Preservation Commission that the resource is significant in the history, archeology, architectulture of Somerville.	
Photos documenting the condition of the property	
Report or condition assessment by a qualified professional describing the current condition of the property, if	available.
PLANS AND REPORTS (IF AVAILABLE)	
[if available in 8½ x 11, include in the application. If not, include separately, not bound to the application]	
Renderings, site plans, engineering plans, design and bidding plans, and specifications	
Applicable reports (e.g., 21E, historic structure report, appraisals, survey plans, feasibility studies). Note: for remove than 10 pages, applicant may provide 2 copies, rather than 11	ports of

Prospect Hill Tower CPA Narrative

Project Description

1. THE PROJECT

Prospect Hill Tower is a historic landmark located in a local Historic District on Prospect Hill Parkway in Somerville, MA. The tower commemorates the location as a Revolutionary War encampment and fortification where the first American flag was raised. Currently, the tower is not safely accessible by the public. The proposed project would encompass the replacement of the upper level floor slab and flagpole mounting, resetting of the parapet stones, repointing the stone exterior, restoring the interior iron circular stairs and entrance door, and resetting the granite wall at the exterior stairs.

2. NEEDS AND PUBLIC BENEFITS

Prospect Hill Tower is a significant and beloved landmark that presently cannot be used due to safety concerns. It has not had any significant restoration in its 100+ year life. Prospect Hill Tower and the Powder House in West Somerville are the two most recognizable historic landmarks in the city. Their images are constantly reinforced on letterheads, in publications, and at various events. The preservation of such a local (and national) icon is central to preserving Somerville's public identity. A restored tower would make it accessible to the public once again and solidify the structure for use well into the future.

3. COMPLIANCE WITH CPA PRIORITIES

CPA Priority 1 - Consistency With Community Values

A. Improve Accessibility for All

The Prospect Hill Tower is inaccessible to the public in its present condition because safety issues preventing the use of its tower. The proposed project will address these concerns so that the site can once again be accessible for all.

B. Incorporate Sustainable Practices and Design

The proposed work is a restoration of the existing tower elements. There are no new features being designed. All masonry, concrete and ornamental iron work will mainly consist of refurbishing and stabilizing existing features. The design emphasizes thorough and durable details that maintain original mortar color and stone placement.

C. Endorsements

The Prospect Hill Tower stabilization is endorsed by the mayor and is identified in Somerville's Five Year Capital Improvement Plan. The project is also endorsed by the Somerville Historic Preservation Commission in a letter which is attached to this application.

D. Consistency With Other Goals and Priorities

The Prospect Hill Tower Project is consistent with the mayor's stated goal of making Somerville a great place to live, work, play, and raise a family. The project will give the public the opportunity to access and appreciate a significant landmark commemorating the history of Somerville and the United States. The Tower is the centerpiece of the Prospect Hill Park, which is also identified for restoration in the Somerville Five Year Capital Improvement Plan and complements the CPA's Open Space priority area.

E. Addresses Two or More CPA Focus Areas

The Prospect Hill Tower is a significant historic resource as it sits on a site of strategic importance in the American Revolution. The project is consistent with the CPA's upcoming plan to identify and protect historic resources. Additionally, the tower complements the CPA focus area of Open Space and Recreational Land, since it sits in the middle of Prospect Hill Park, a historic passive recreation area. The completion of the tower stabilization will enhance the entire site and will allow future park improvements to take place without disruption from tower work.

CPA Priority 2 – Strategic Use of CPA Funds

A. Leverage Other Funds, implement Cost-Saving Measures

The City of Somerville has funded the design portion of the Prospect Hill Tower project. It seeks to leverage this expenditure with a commitment from the CPA Committee to fund the restoration.

B. Address Long-Standing or Urgent Needs in the Community

The Prospect Hill Tower is a valuable community resource that is at risk from age and the elements. For several years It has been closed to the public and has had no restoration. There is a need to restore and preserve existing historic resources so they can remain functional and a source of civic identity and pride.

C. Exceptional, Time-Sensitive Opportunities

Undertaking the tower restoration at this time would allow the CPA Committee to take advantage of low interest rates and to capitalize on Somerville's enhanced bond rating. Delaying the work deprives the public of full enjoyment of the tower and exacerbates existing safety issues.

D. Catalyst for Transformative Change

As Somerville continues to experience significant changes in infrastructure, development, and investment, it is important to preserve significant elements of its past. The restored tower would remain strong for the foreseeable future, helping ground any changes in Somerville's historic past.

Financial

1. FUNDING

The City of Somerville has identified the Prospect Hill Tower project in its Five-Year Capital Improvement Plan (CIP). The City has funded the design work and is applying for one time CPA support to enable the tower stabilization and restoration to happen while maximizing the ability to fund as many needed capital improvements as possible.

2. DETERMINATION OF AMOUNT REQUESTED

The \$500,000 CPA funding request represents the construction estimate prepared by the design firm TBA Associates. We added an additional 10% contingency to cover any increases in construction prices at the time of bid. We feel the amount of CPA funding requested is cognizant of the limited CPA funds available compared to the great number of applications submitted.

3. FUNDING REQUIREMENTS

The entire project will be funded at one time, with no funding required over multiple years.

Project Management

1. APPLICANT

The applicant is the Somerville Capital Projects and Planning Department (CPPD), a public entity responsible for the management, maintenance and capital improvements for City buildings.

2. PROJECT EXPERIENCE

Prior CPPD work has encompassed successful renovations as well as new construction of schools, administrative buildings, recreation centers, public safety buildings, and libraries. The design firm associated with the Prospect Hill Tower project has extensive preservation, and historic restoration experience.

3. PARTICIPANTS' ROLES

The Somerville Capital Projects and Planning Department (CPPD) will be responsible for the implementation of the project. CPPD and the designer will monitor the progress and quality of the construction work.

4. FEASIBILITY

The Prospect Hill Tower project is feasible because it is not occupied and it sits in an open area which allows the work area to be clearly delineated and the work to be performed safely within the stated timeline.

5. POTENTIAL BARRIERS

The Prospect Hill Tower project does not face any known or potential barriers to the commencement or completion of the project. The project has received a certificate of non-applicability from the Somerville Historic Commission.

6. ONGOING MAINTENANCE

Upon completion of the work, the building will be maintained by in-house maintenance staff. Specific maintenance duties would include cleaning of the interior and surrounding grounds, repair of any caulking at the exterior stairs, and touch-ups on painted surfaces. The tower will be placed on a preventive maintenance program, undergoing regular inspection of its components, including an annual binocular inspection of the exterior facade and pointing.

Historic Resources Rehabilitation Projects

1. COMPLIANCE WITH U.S. SECRETARY OF INTERIOR STANDARDS

The Prospect Hill Tower project will comply with the U.S. Secretary of the Interior's Standards for Rehabilitation because:

- The property will continue its original and historic use as a public landmark.
- Its historic character will be preserved by developing and implementing a design which keeps distinctive original features.

2. ONGOING COMPLIANCE

The City of Somerville will comply with the U.S. Secretary of the Interior's Standards for Rehabilitation by reviewing them with the designer. The firm has preservation experience and is quite familiar with the property. Their design is attached and it calls for keeping original features. Any new materials such as the concrete floor slab, new mortar, and paint shall be closely monitored throughout the course of the work to be sure they match existing finishes.

PROSPECT HILL TOWER RENOVATIONS

PROJECT MILESTONE SCHEDULE

Design Documents Complete	12/1/14
CPA Construction Funding Award (est.)	5/1/15
Construction Bids Received	6/15/15
Board of Aldermen Approval	8/1/15
Construction Contract Award	8/21/15
Construction Start	9/1/15
Construction Finish	12/1/15

FINANCIAL

- Budget Summary
- Itemized Budget
- Cost Estimates





CITY OF SOMERVILLE, MASSACHUSETTS COMMUNITY PRESERVATION COMMITTEE FY15 FUNDING APPLICATION BUDGET SUMMARY

PROJECT NAME:	Prospect Hill Tower	
APPLICANT:	City of Somerville - Capital Projects and Planning Department	

_			all project expenses, your submis			
	PROPOSED SOURCE	STUDY	SOFT COSTS*	CONSTRUCTION**	TOTAL	
1	Somerville CPA	\$	\$	\$	\$ 500,000	\$ 500,000
2	Design Services		\$32,600		12-/	\$32,600
3						
4						
5			3			
6						
TOTAL PROJECT COSTS		\$	\$32,600	\$	\$500,000	\$532,600

^{**} Construction includes new construction, preservation, rehabilitation, and/or restoration work

EXPLANATION OF FUNDING SOURCES

Please explain the status of each funding source (i.e., submitting application on X date, applied on X date, received award notification on X date, funds on hand, etc.). For sources where funding has been awarded or funds are on hand, please include documentation from the funding source (e.g., commitment letter, bank statement) in application packet

	Source	SECURED? (YES/NO)	STATUS OF FUNDING SOURCE
2	City of Somerville	yes	Secured - contract in place
3			
4			
5			
6			

PROSPECT HILL TOWER

Itemized Budget Summary

IT	EM	AMOUNT	SOURCE
1.	Designer Fees*	\$32,600	City Funded Contract
2.	Construction Costs	\$500,000	Proposed CPA Funding

TOTAL \$532,600

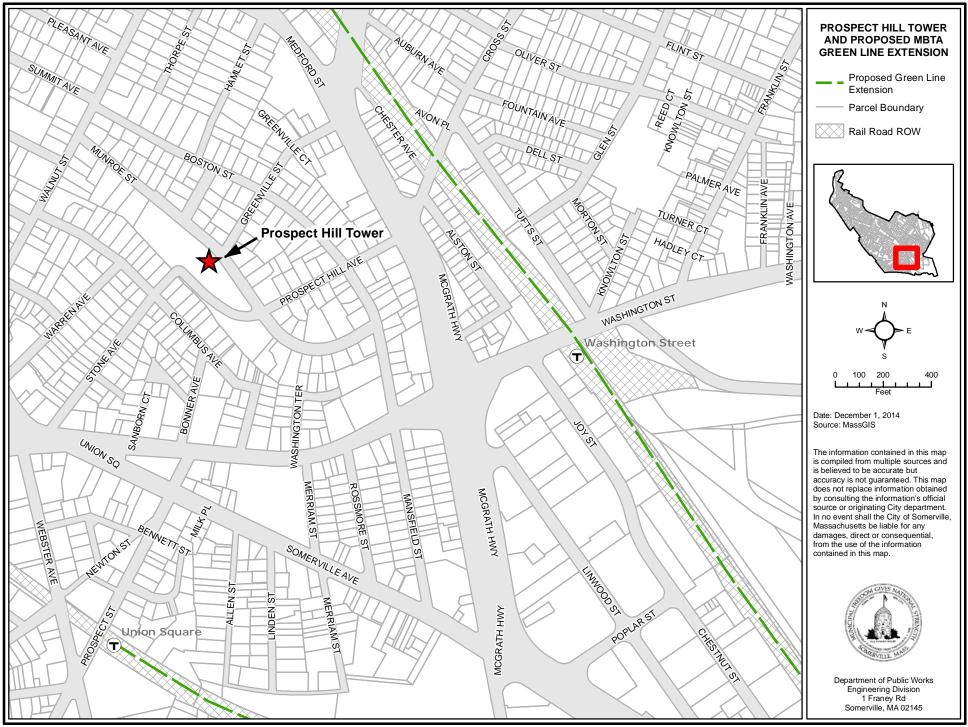
^{*}Designer fees include construction contract administration. City of Somerville Capital Projects and Planning will also perform project management duties.

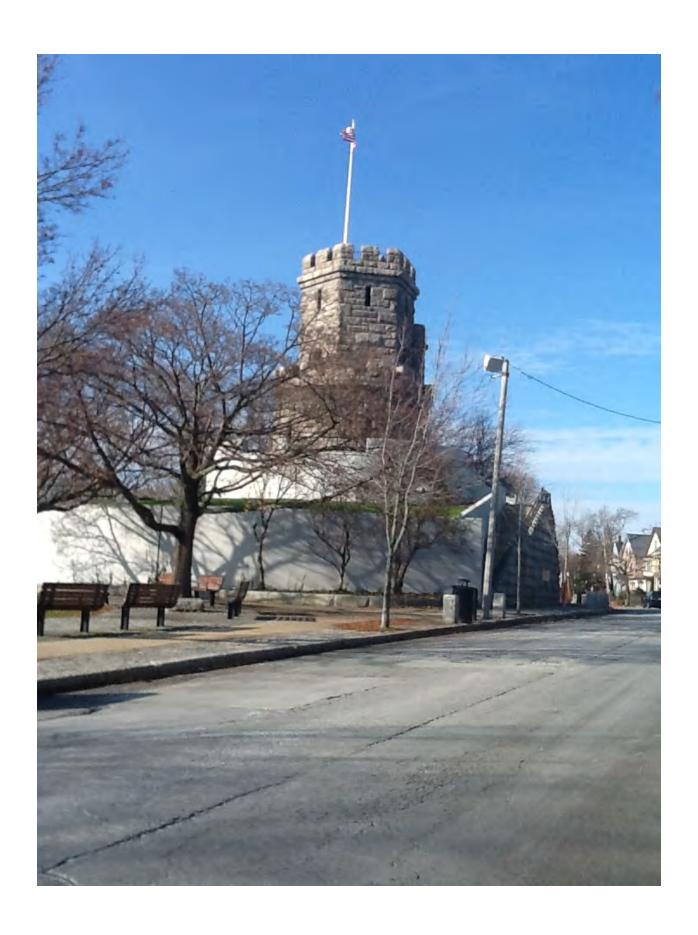
Prospect Hill Tower Stabilization Estimate of Construction Costs

Iniformat Ref. No.	System/Component	Specifications	Unit	No. Units	Unit Cost	Sub Total	Total
D50	Electrical	no work					\$1
	Equipment &						
E	Furnishings						
E10	Equipment						\$2,35
	Flagpole	Removal and reinstallation of flagpole (crane below); storage by city Reinstall existing mounting plate and new galv steel sleeve, level 4	item item	1	\$1,500.00 \$850.00	\$1,500 \$850	
E20	Furnishings	no work					\$
	Other Building						
F	Construction	Not used					
G	Building Sitework						
G20	Site Improvements						\$27,6
	Street Stair Rails	Remove raits, repair and refinish, reset into granite walls	l.f.	65	\$375.00		
	Reset winder stairs	Reset stone steps, infill with new concrete	item	6	\$525.00	41.00	
	Sidewalks	no work				\$0	
	Paving	no work				\$0	
	Landscape	no work				\$0	
ubtotal Cons	truction Subcontracts, Unadju	sted					\$308,050
		A -200	14017			200	\$43,782
Beneral Cond	itions	scaffold	item			\$20,000	
		soils testing	item			\$2,600	
		mortar testing crane	item	6	\$1,750.00	\$5,162 \$10,500	
		other	day		\$1,750.00	\$5,500	
General Cont	ractor's Overhead and Profit		25.09	6			\$76,513
TOTAL ESTIN	MATED CONSTRUCTION COST						\$426,325
Contingency			10.09	16			\$42,632
	DED CONSTRUCTION BUDGE			8			\$469,000

Prospect Hill Tower Stabilization Estimate of Construction Costs

Jniformat Ref. No.	System/Component	Specifications	Unit	No. Units	Unit Cost	Sub Total	Total
A	Substructure						
A10	Foundations						\$71,393
A1010	Standard Foundations						
	Retaining Walls, Concrete	Tieback stabilization per 310503, hand excavation . Concrete patch of cracks, wall surfaces and top, epoxy injection 12 inches, grind, patch both	ltem	1	\$22,500.00	\$22,500	
		ends	I.f.	45	\$28.73	\$1,293	
	Retaining Walls, Stone	Reset stone, stair retaining wall Repoint 100% of stone wall face (alt 1)	manday	36 32	\$700.00 \$700.00	\$25,200 \$22,400	
В	Shell						
B10	Superstructure						\$117,570
B1010	Floor & Wall Construction						
		demolition level 4 slab and steel, reinstallation of 6" thick reinf conc slab, chemical anchor at					
	Floor Slab	perimeter, new steel WF framing, reconnect to stair	8f	169	\$251.48	\$42,500	
	Walls	Rebuild tower stone parapets; scope M1	menday	65	\$700.00	\$45,500	
		Repoint exterior of tower walls, scope M3-(alt 2)	manday	42	\$700.00	\$29,400	
		Chemical reinforcement of cracked stones, scope M2	68	2	\$85.00	\$170	
B20	Exterior Closure						
B2030	Exterior Doors						\$34,45
	Tower doors	Restore steel tower doors in existing frame: new steel handles, hasps, ornaments and hinges, refinish	ea	2	\$17,225.00	\$34,450	
C	Interiors		-			- N2-1	
C20	Staltways						\$52,41
C2010	Stair Construction						
	Wrought Iron Circular Stair	Restore rall and stair, two stories and level four railing	fft.	2	\$16,276.81	\$32,554	
	Level 1 plate stair	Repair rall	Item	1	\$1,145.00		
C2020	Stair Finishes						
	Wrought Iron Circular Stair	Mechanically remove paint, apply-primer and paint	fit.	2	\$8,764.44	\$17,529	
	Level 1 plate stair	Mechanically remove paint, apply primer and paint	fit.	1.	\$1,190.00	\$1,190	
D	Mechanical, Electrica	l and Plumbing					
	Plumbing						\$3
	Waste and Vent Piping	Floor drain in new slab, fed into existing c.i. stack	68	1	\$345.0	0 \$345	
	Mechanical	no work					





COMMUNITY SUPPORT

Letters of Support



CITY OF SOMERVILLE, MASSACHUSETTS OFFICE OF STRATEGIC PLANNING AND COMMUNITY DEVELOPMENT JOSEPH A. CURTATONE MAYOR

HISTORIC PRESERVATION COMMISSION

November 18, 2014

Community Preservation Commission 93 Highland Avenue Somerville, MA 02143

RE: Support for projects funded through the Community Preservation Act

Dear Community Preservation Commission members.

The Somerville Historic Preservation Commission fully supports four projects the City of Somerville has proposed to the Community Preservation Commission. These projects are: 1) restoration of Prospect Hill Tower; 2) restoration of City Hall; 3) renovation of West Branch Library; and 4) National Register nomination for the American Tube Works Complex.

These buildings and complex are historically and architecturally significant to the City of Somerville. Prospect Hill Tower was constructed in the early 20th century to commemorate militia located at this site during the Revolutionary and Civil wars. City Hall was constructed in 1852 as Somerville's first high school; town offices took over the building in 1872. Andrew Carnegie donated \$25,000 in 1907 to construct the West Branch Library, a high and Classical Revival style building. The American Tube Works Company is credited as being the first in America to manufacture seamless tubes; as a collection of buildings, their scale and architecture express the manufacturing purpose and magnitude of the industrial process. Prospect Hill Tower, City Hall and the West Branch Library are local historic districts; the American Tube Works was determined Significant by the HPC in September.

The Historic Preservation Commission hopes the Community Preservation Commission will recognize these to be valuable investments that will benefit the entire community. Thank you for your consideration of these projects.

Sincerely

Dick Bauer, Chairman

Somerville Historic Preservation Commission

CC: George Proakis, Director of Planning, OSPCD

Stephen Vitello, Project Manager, Department of Public Works



HISTORIC RESOURCES

Historic Documentation



2814 MOV 25 P 3: 26

CITY CLERK'S OFFICE SOMERVILLE, MA

CITY OF SOMERVILLE, MASSACHUSETTS OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT JOSEPH A. CURTATONE MAYOR

MICHAEL F. GLAVIN EXECUTIVE DIRECTOR

HISTORIC PRESERVATION COMMISSION

November 19, 2014

Stephen Vitello, Project Manager Capital Projects City of Somerville 93 Highland Avenue Somerville, MA 02143

Re: HPC 2014.075 - Prospect Hill Tower, Somerville

Certificate of Non-Applicability

Mr. Vitello,

The Historic Preservation Commission (HPC) received your application dated September 4, 2014 for a Historic District Property Certificate. After a review of the application and a site visit, Staff made a determination that the Prospect Hill Tower Stabilization as described in the Technical Sections Submittal, and Plan Sheets, A-1.0, A-2.0, A-3.0, A-4.0 by TBA Architects, Inc. dated November 14, 2014 with in-kind and other materials to match the existing are exempt from review by the HPC due to being categorized under ordinary maintenance, repair, or replacement, or not visible from the public right of way. In accordance with the Historic District Ordinance and the Application received, the HPC gramts a Certificate of Non-Applicability to the Applicant, Stephen Vitello, Project Manager.

The scope of work as listed in the Memo prepared by TBA Architects and dated July 17, 2014 details the following in-kind repairs and/or maintenance:

- Construct a new concrete slab on the top level, replace the floor's existing steel support beams, and waterproof the slab surface.
- 2. Repair and water proof the lower level slab.
- 3. Remove and reinstall the flagpole.
- Repair the roof drain system.
- Repair the spiral stair and railings, and repair the lower level steel diamond plate stair rail.
- 6. Rebuild the parapet stones where they have lost their mortar.
- Repair the two tower iron doors and frames.
- 8. Repoint portions of the tower exterior.
- 9. Reset and stabilize the stone wall along the street stair. Repair and reset the wrought iron rail.
- 10. Repair the concrete retaining wall along side of the stair.



CITY HALL • 93 HIGHLAND AVENUE • SOMERVILLE, MASSACHUSETTS 02143 (617) 625-6600 Ext. 2500 • TTY: (617) 666-0001 • FAX: (617) 625-0722 www.somervillema.gov

This scope is detailed on the plan set (Sheets A-1.0, A-2.0, A-3.0, A-4.0 by TBA Architects, Inc. dated November 14, 2014) upon which this Certificate of Non-Applicability is contingent:

 Remove and reset stones on the parapets and main staircase as indicated on Sheets A-1.0, A-2.0, A-3.0 and A-4.0.

a. All stones to be reinstalled in original location.

- Epoxy injection in crack between levels 3 and 4 on the southeast and northwest elevations as indicated on sheets A-1.0, and A-2.0.
- Repoint all exterior stone surfaces, all faces of tower where stones are not reset as indicated on Sheets A-1.0, A-2.0, A-3.0 and A-4.0.
 - a. Mortar to match existing in joint dimension and surface finish. (Alt. 2)

4. Seal cracks on top of retaining wall as indicated on sheet A-2.0.

5. Patch exposed face of concrete retaining wall as indicated on sheet A-3.0.

a. Prime & paint to match existing.

- Wrought iron grilles to be removed and reset with mortar in stone in original locations as indicated on sheets A-2.0 and A-3.0
- Stabilize bottom section of retaining wall south elevation east side as indicated on sheets A-2,0 and A-3.0. See Spec Section 310503.
- Cut existing steel pipe rail at or above existing flanges. Rail to be cut and removed by wrought iron
 restoration subcontractor. Clean, grind to clean metal, weld, prime and paint two coats. Post extenders
 of same diameter to be inset into granite after rebidding as indicated on sheets A-2.0 and A-3.0

9. Front stairway elevation (Plan Sheet A-3.0)

- a. Masonry Detail
 - i. Remove rail sections for refinishing,
 - ii, Reinstall on adjusted posts after granite has been reset.
 - iii. New chemical anchors in two locations, all posts inset in original flanges
 - iv. Patch holes from rail elements
 - v. Mason to drill through flange & into granite 6" deep to receive post
 - vi. Coordinate final location with wrought iron restoration contractor
 - vii. Mortar back bed to stabilize soil & bed to continuous chalk joint

vili. Reset granite as noted on elevations

- ix. Where stones are tight to existing concrete, dig out joint to 2" depth for mortar joint
- x. Continuous mortar joint running along tread and risers

xi. Existing steel flange to remain

- xil. Post pipe to be set into granite with setting cement
- xili. Existing concrete stairs to remain
- xiv. Stabilize soil
- xv. Position railing posts plumb and align with all railing posts (typ.)
- xvi. Fill continuous mortar joint between granite & concrete stairs. Vertical and horizontal joints to be continuous.
- b. Front Stairway Railing
 - i. Cut connections at ornamental filigree to allow rail removal
 - Cut pipe rails top and bottom where connections remain to allow for repair & refinishing

c. Front Rear and Entry Way

- Remove all remaining ornamental plates, hinges, and obsolete hardware devices. Install
 new handle and hasps for locks, top and bottom. Repair and rehang existing 3/8" steel
 plate door Prime & paint (3coats).
- Clean & Scrape existing door, frame & grille, grind rust to bare metal, abrade all paint surfaces, prime & paint (3 coats).
- iii. 2 new 3/8"x1" hasps to fix existing frame
- iv. New "C" shape handle painted to match door

- v. New steel surface mounted bar stock ornamental panels. Bar stock 3/8"x1" thick width and shape to match original. Plug weld to door
- vi. New hinges to match existing, 3/8"x1" thick width and shape to match existing. Bolts to match original in appearance.
- vii. 1'8"x7" and 7"x7" ornamental panels all 3/8"x1" bar stock.
- 10. Illustrative Tower (Plan Sheet A-4.0)
 - a. Remove rebed & reset stones. All stones to be reinstalled in original location. Wrought iron grilles to be removed and reset with mortar in stone in original locations
 - b. Epoxy injection to crack
 - Repoint all exterior stone surfaces of tower where stones are not reset. Mortar to match existing
 in joint dimension and surface finish (Alt.2).
 - d. Cut existing steel pipe rail at or above the existing flanges, rail to be cut and removed by WI, Clean, grind to clean metal, weld, prime & paint two coats, post extenders of same diameter to be inset into granite after rebidding.
 - i. Remove existing rail on level 4, sandblast to bare metal, prime and paint.
 - ii. Remove and reinstall rail base plate on level 4 on new slab.
 - Restored rail to be field welded on reinstallation. Grind smooth, prime & paint (3 costs).
 - iv. Steel & stair support between WF structure & underside of stair platform.
 - v. Existing spiral stair & rail on second and third levels to remain in place. Mechanically scrape & grind to remove loose & flaking paint.
 - vi. Resecure existing railing to stone Wall. Restore structural integrity to rail. Scrape or grind to bare metal at repair. Remove loose & flaking paint, Abrade to receive new paint. Prime & paint rail and stair.
 - i. Eliminate all rust, prime & paint
 - ii. Restore structural integrity to railing (round to plate)
 - iii. Existing steel stairs posts & rail to be scraped, primed and painted.

This Certificate of Non-Applicability is in accordance with the Somerville Historic District Ordinance Section 10, Limited Coverage, which states, "Nothing in this ordinance shall be construed to prevent the ordinary maintenance, repair, or replacement of any exterior architectural feature within a historic district which does not involve a change in design, material, color or the outward appearance thereof ..." Further, the Ordinance states that Section 2.f, Definitions, which states, "Exterior architectural feature means such portion of the exterior of a building or structure as open to view from a public street, public way, public park or public body of water...."

This Certificate is granted upon the condition that the work authorized herein is commenced within one year after the date of issue. If the work authorized by this Certificate is not commenced within one year after the date of issue, or if work is suspended in significant part for a period of one year after it has begun, this Certificate shall expire.

Please take this letter to Somerville Inspectional Services located at DPW, 1 Francy Road to determine if a Building Permit is required for this approval.

Sincerely, bush bush

Kristenna P. Chase Preservation Planner

Cc: Paul Nonni, Sr. Building Inspector, Inspectional Services Division. George Proakis, Director, Planning Division

J. Brandon Wilson, Executive Director, Historic Preservation Commission

John Long, City Clerk



CITY OF SOMERVILLE, MASSACHUSETTS OFFICE OF STRATEGIC PLANNING AND COMMUNITY DEVELOPMENT JOSEPH A. CURTATONE MAYOR

HISTORIC PRESERVATION COMMISSION

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Dear Community Preservation Commission members,

The Somerville Historic Preservation Commission fully supports four projects the City of Somerville has proposed to the Community Preservation Commission. These projects are: 1) restoration of Prospect Hill Tower; 2) restoration of City Hall; 3) renovation of West Branch Library; and 4) National Register nomination for the American Tube Works Complex.

These buildings and complex are historically and architecturally significant to the City of Somerville. Prospect Hill Tower was constructed in the early 20th century to commemorate militia located at this site during the Revolutionary and Civil wars. City Hall was constructed in 1852 as Somerville's first high school; town offices took over the building in 1872. Andrew Carnegie donated \$25,000 in 1907 to construct the West Branch Library, a high and Classical Revival style building. The American Tube Works Company is credited as being the first in America to manufacture seamless tubes; as a collection of buildings, their scale and architecture express the manufacturing purpose and magnitude of the industrial process. Prospect Hill Tower, City Hall and the West Branch Library are local historic districts; the American Tube Works was determined Significant by the HPC in September.

The Historic Preservation Commission hopes the Community Preservation Commission will recognize these to be valuable investments that will benefit the entire community. Thank you for your consideration of these projects.

Sincerely

Dick Bauer, Chairman

Somerville Historic Preservation Commission

CC: George Proakis, Director of Planning, OSPCD

Stephen Vitello, Project Manager, Department of Public Works





MEMORANDUM

TO: STEPHEN VITELLO

FROM: RUSSEL FELDMAN

PROJECT: PROSPECT HILL TOWER STABILIZATION

SUBJECT: APPLICATION FOR A CERTIFICATE OF NON-APPLICABILITY

DATE: OCTOBER 16, 2014

In support of your application to the Somerville Historic Preservation Commission for a Certificate of Non-Applicability, I offer the following:

We are preparing plans and specifications for procurement of construction to repair and stabilize the Prospect Hill Tower. Work is planned for spring 2015 based on our proposed scope of work of July 15, 2014.

The work involves repair and replacement in kind of portions of the Tower and the stairs leading from the street to the tower approach. More specifically:

Work will include:

- Construct a new concrete slab on the top level, replace the floor's existing steel support beams, and waterproof the slab surface. This work replaces the existing in kind.
- Repair and waterproof the lower level floor slab to limit deterioration of the concrete exposed to weather from above.
- Remove and reinstall the flagpole. We will support the flagpole with pipes and connectors on the new upper and existing lower slabs as we had done previously. This will replicate the existing condition and will not affect the appearance of the pole.
- Repair the roof drain system. This involves patching existing piping and replacing the cast-in-place floor drain. This involves no change in piping location or size.
- 5. Repair the spiral stair and railings, which runs from the level 2 to level 4 in the attached elevation, and repair the lower level steel diamond plate stair rail which runs from level 1 to level 2. All work will take place in situ. Work includes spot welding of the existing to assure secure connections, sandblasting existing surfaces to remove deteriorated paint, priming and repainting. The work also includes replacement of connections to the concrete and steel structure.
- Rebuild the parapet stones where they have lost their mortar. This will involve repositioning parapet stones where they have become displaced and injection of epoxy adhesives where stones have cracked under the steel slab support

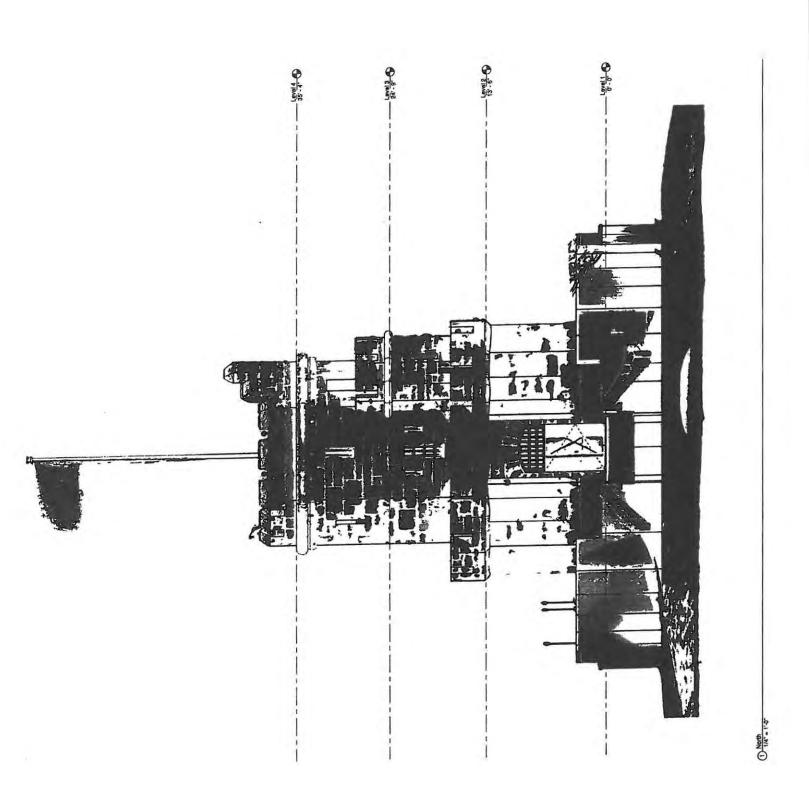
Mr. Vitello CNA Application, Prospect Hill Tower October 16, 2014 Page 2

- structure. No removal of stone will be required. New mortar will match existing in composition and appearance.
- Repair the two tower iron entry doors and frames. Any new material will match the existing. The doors will be reset level, sandblasted and repainted.
- Reset and stabilize the stone wall along the street stair. This will involve
 repositioning existing stones and sealing the joints between the stone retaining
 wall and the stair to avoid water infiltration.
- Repair and reset the existing decorative wrought iron rail. This will include repair
 of rotted posts and resetting into the relocated stones, replacement of missing
 ornamental elements to match existing, sandblasting and repainting.
- 10. Repair of the concrete retaining wall alongside the stair. This involves patching of the 1950's vintage retaining wall to eliminate exposed steel and stabilize the wall. Work will include epoxy injection in cracks, removing rust and scale from reinforcing steel, and patching the surfaces to match the existing.
- 11. Repoint portions of the Tower exterior. As for all similar work above, new mortar will match existing in composition and appearance. This work may be an add alternate in the bid documents.

There will be no demolition of any elements of the Tower or stair except as required to replace in kind. There will be no alteration or addition to the existing structure. This scope is intended to stabilize the building and street stair and prevent continuing deterioration.

END

Encl: Tower elevation, 1 page





CITY OF SOMERVILLE

JOSEPH A. CURTATONE, MAYOR

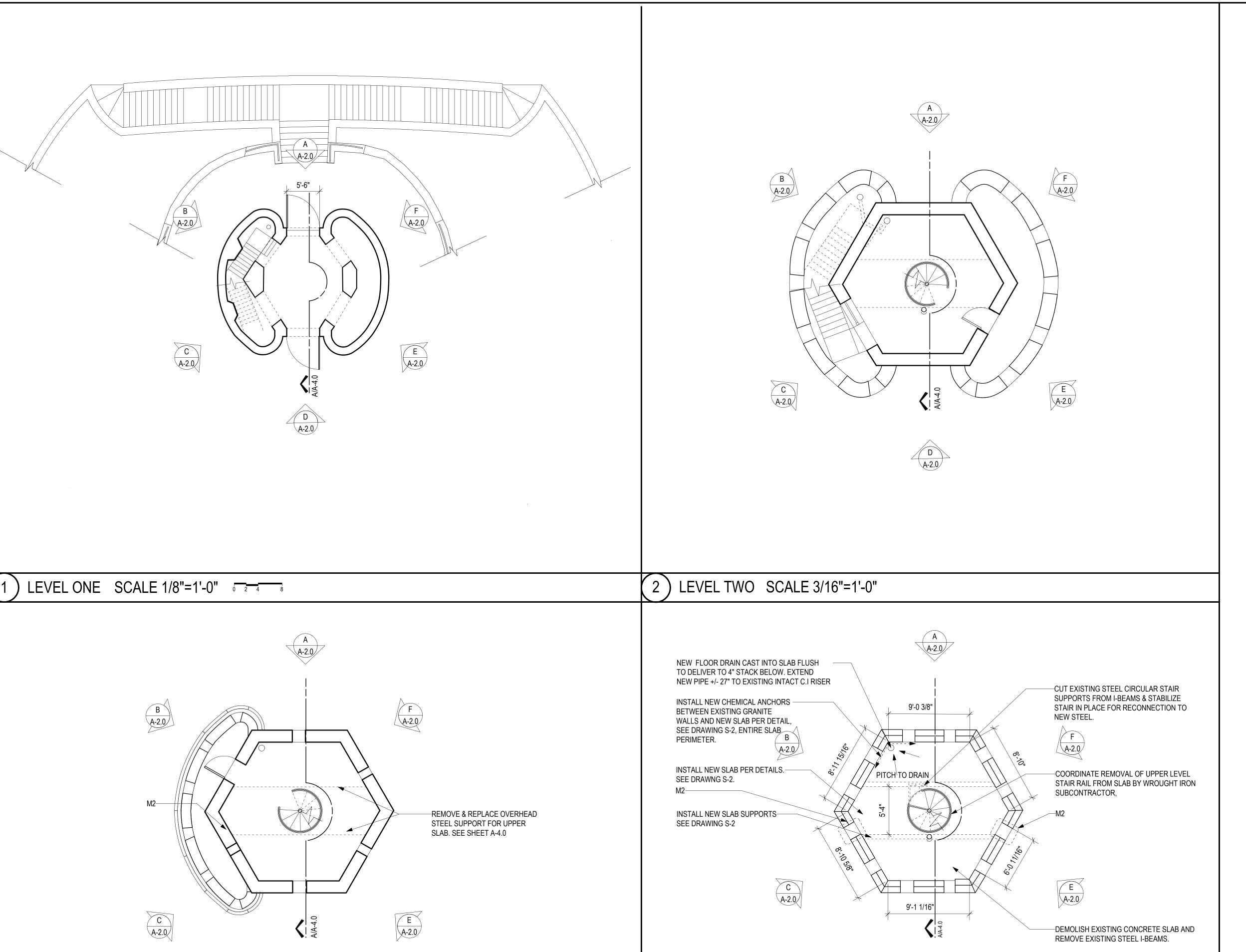
PROSPECT HILL TOWER STABILIZATION SOMERVILLE, MASSACHUSETTS



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NOVEMBER 14, 2014

ARCHIT	ECTURAL ABBREVIA	TIONS				MATERIAL INDICATIONS	GRAPHIC SY	MBOLS	GENERAL INFO	LOCI MAP	
ADD ALT ALUM APPROX & @ BLDG BLKG BRK CB CL CLKG CLR CO CONC CONC CONST CONT CONTR D DBL	ADDITION, ADDENDUM ALTERNATE ALUMINUM APPROXIMATE AND AT BUILDING BLOCKING BRICK CATCH BASIN CENTER LINE CAULKING CLEAR CENTRAL OFFICE CONCRETE CONSTRUCTION CONTINUOUS CONTRACTOR DEEP, DEPTH DOUBLE	EQ EX/EXIST FIN FL FLASH GA GALV GC GL GWB H HORIZ IN INSUL LF MAX MECH MIN MISC MO	EQUAL EXISTING FINISH FLOOR FLASHING GAUGE GALVANIZED GENERAL CONTRACTOR GLASS, GLAZING GYPSUM WALL BOARD HIGH, HEIGHT HORIZONTAL INCHES INSULATION LINEAR FOOT MAXIMUM MECHANICAL MINIMAL MISCELLANEOUS MASONRY OPENING	O.S.C.I. P PTD PLYWD QR QUAN REF REINF REQD REV RO S SECT SF SHT SIM SPEC SQ SQIN	OWNER SUPPLIED CONTRACTOR INSTALLED PAINT PAINTED PLYWOOD QUARTER ROUND QUANTITY REFERENCE REINFORCED REQUIRED REVISED ROUGH OPENING SOUTH SECTION SQUARE FOOT SHEET SIMILAR SPECIFICATION SQUARE SQUARE INCH	PLYWOOD STEEL BRICK CONCRETE BLOCK RIGID INSULATION FIBERGLASS INSULATION CONCRETE	C-C/A3.0 SEC	EAK LINE EVATION MARKER CTION MARKER TAIL MARKER VISION NUMBER ERIOR ELEVATION	BUILDING CODE SUMMARY All work shall comply completely with the Massachusetts State Building, 780 CMR, Eighth Edition, as ammended & 521 CMR MAAB. All work classified as repairs per Section 402. 402.1 Scope. Repairs, as defined in Chapter 2, include the patching or restoration or replacement of damaged materials, elements, equipment or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements. EXISTING CONDITIONS These drawings have been compiled from the best available information and are not intended to limit the scope of work. All investigation was done by visual or best available documents provided by the City of Somerville. Any conditions to the contrary or not explicitly stated herein shall be considered latent and architect must be notified prior to any work not as outlined in these documents. It will be assumed that the contractor has inspected the site prior to construction and verified the information herein supplied. All directions stated throughout documents are by Project North.		DRAWING LIST COVER SHEET ARCHITECTURAL DRAWINGS A-1.0 PLANS A-2.0 TOWER ELEVATIONS A-3.0 STREET STAIR & RAIL ELEVATIONS & DETAILS A-4.0 TOWER SECTION STRUCTURAL DRAWINGS S-1.1 GENERAL NOTES & ABBREVIATIONS S-1.1 STRUCTURAL PLANS & SECTIONS TBA PROJECT #: 1210.1
DEMO DET DIA DIM DIV DS DWG E EA EL	DEMOLITION DETAIL DIAMETER DIMENSION DIVISION DOWN SPOUT DRAWING EAST EACH ELEVATION	MO MTL MUL N NO NOM OF NOM OF OF OP OP OP MOM OP OP OP OP OP OP MO OP OP OP MO OP OP OP MO OP OP MO OP OP MO	MAIN OFFICE METAL MULLION NORTH NUMBER NOMINAL NOT TO SCALE ON CENTER OPERABLE OPENING	SS STD STL THK TYP VERT W W/ WD	STAINLESS STEEL STANDARD STEEL THICK TYPICAL VERTICAL WIDE, WEST WITH WOOD WEIGHT	FINISHED WOOD CONTINUOUS WOOD WOOD BLOCKING	NAME # ROCC SPR NEV	OR NUMBER HT FIXTURE OM NAME/ NUMBER CUPANCY @ 1:20 SF RINKLER W - NEW HEAD L - RELOCATE	GENERAL NOTES The General Contractor shall be responsible for all construction means, methods, co-ordination of other trades and techniques to produce a sound quality building. All dimensions, elevations and conditions must be verified by the General Contractor or responsible trade. * Apply for, obtain and pay for all required permits. Submit copies of permits to City of Somerville within 3 days of receipt and prior to commencing work. * Request schedule and attend all inspections required by the authorities having jurisdiction.		SET#



LEVEL THREE SCALE 3/16"=1'-0"

SEE ENLARGED PLAN SHEET A-4.0

LEVEL FOUR SCALE 3/16"=1'-0"

KEY TO SCOPE NOTES:

REMOVE, REBED & RESET STONES. ALL STONES TO BE REINSTALLED IN ORIGINAL LOCATION. WROUGHT IRON GRILLES TO BE REMOVED AND RESET WITH MORTAR IN STONE, IN ORIGINAL LOCATIONS.

EPOXY INJECTION TO CRACK.

REPOINT ALL EXTERIOR STONE SURFACES, ALL FACES OF TOWER WHERE STONES ARE NOT RESET. MORTAR TO MATCH EXISTING IN JOINT DIMENSION AND SURFACE FINISH (ALT. 2)

CUT EXISTING STEEL PIPE RAIL AT OR ABOVE EXISTING FLANGES. RAIL TO BE CUT AND REMOVED BY WROUGHT IRON RESTORATION SUBCONTRACTOR. CLEAN, GRIND TO CLEAN METAL, WELD, PRIME & PAINT TWO COATS. POST EXTENDERS OF SAME DIA TO BE INSET INTO GRANITE AFTER REBEDDING.

REMOVE

MASONRY SUBCONTRACTOR

WROUGHT IRON SUBCONTRACTOR

TBA ARCHITECTS, INC. **ARCHITECTURE** PLANNING PROJECT MANAGEMENT 43 BRADFORD STREET CONCORD, MA 01742 TEL (781)893-5828 FAX (781)893-5834 www.tbaarchitects.com

PROSPECT HILL **TOWER** STABILIZATION

MUNROE STREET SOMERVILLE, MA

CLEINT: CITY OF SOMERVILLE JOSEPH CURTATONE, MAYOR

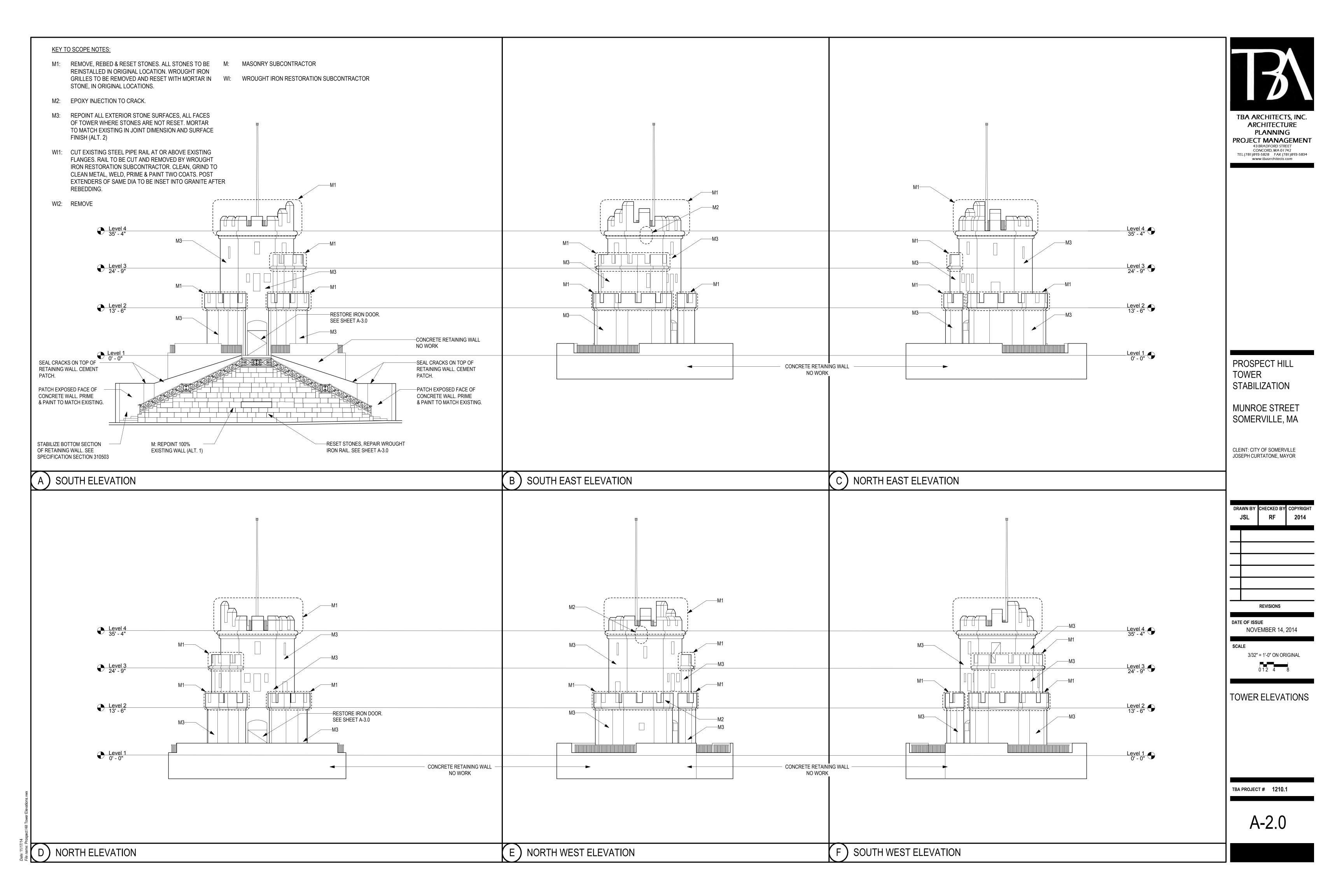
REVISIONS DATE OF ISSUE NOVEMBER 14, 2014 SCALE

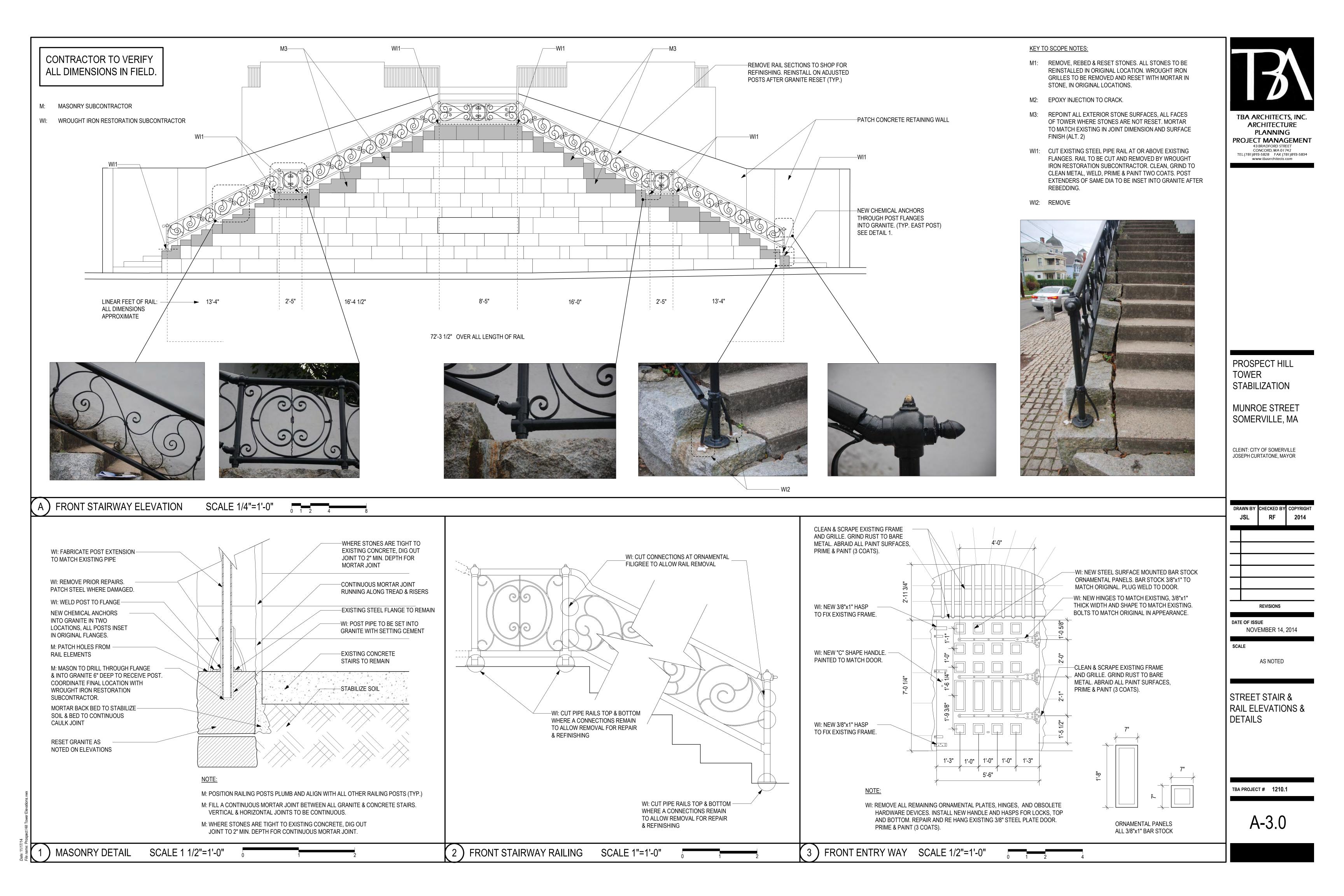
3/16" = 1'-0" ON ORIGINAL

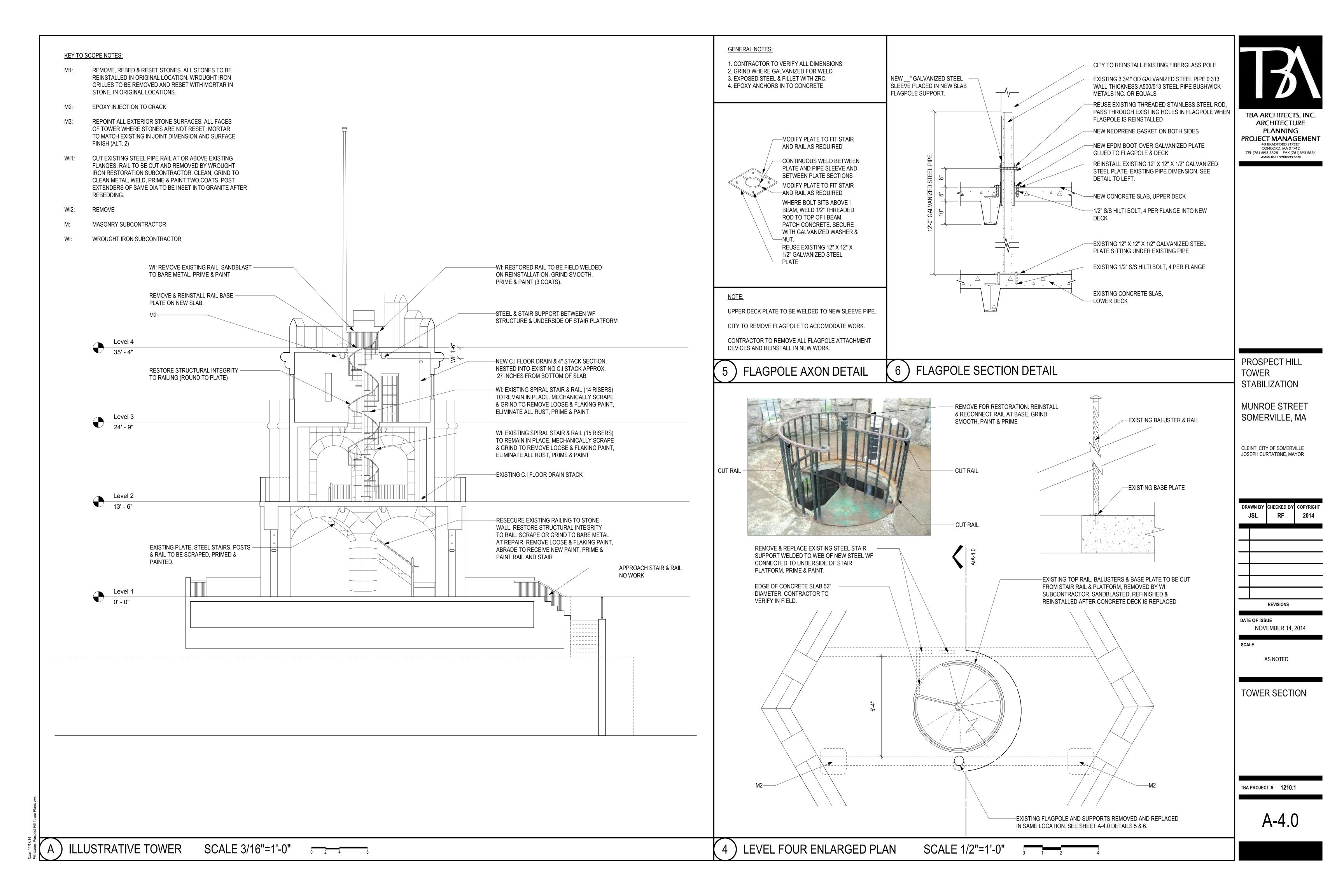
PLANS

TBA PROJECT # 1210.1

CALLED NORTH







GENERAL

- 1. Structural work shall conform to the requirements of the Commonwealth of Massachusetts State Building Code, 8th Edition, 2009 International Building Code w/Massachusetts Amendments, 2009 International Existing Building Code w/Massachusetts Amendments.
- Examine architectural, mechanical, plumbing and electrical drawings for verification of location and dimensions of chases, inserts, openings, sleeves, washes, drips, reveals depressions and other project requirements not shown on
- structural drawings.

 3. Contractor shall verify and coordinate all dimensions on the project.
- 4. Openings in slabs or walls less than 12 inches in diameter are generally not shown. Openings shown on structural drawings shall not be revised without written approval from the engineer.
- 5. Openings in slabs, walls and roof deck in addition to those shown on the structural drawings shall be incorporated into the work as required by the architectural contract documents.
- 6. Details not specifically shown shall be similar to those shown for the most nearly similar situation as determined by the engineer.
- 7. unless noted elsewhere in the contract documents, requirements noted below shall apply.

CONCRETE

- 1. Concrete work shall conform to ACI 318-08 "Building Code Requirements for Structural Concrete and ACI 301-08 "Specifications for Structural Concrete for Buildings
- 2. Concrete shall be controlled concrete, proportioned, mixed and placed under the supervision of an approved testing agency.

- 5. Concrete to be exposed to weather in the finished project shall be air-entrained.
- 6. The use of construction joints where shown on the drawings is mandatory. Omissions, additions or changes shall not be made except with the submission of a written request together with drawings of the proposed joint locations for approval by the architect.
- 7. Where construction joints are not shown, drawings showing location of construction joints and concrete placing sequence shall be submitted to the engineer for approval prior to preparation of the reinforcement shop drawings.8. Concrete slabs, including slabs on steel deck, shall be cast so that the slab
- thickness is at no point less than that indicated on the drawings.
- 9. Concrete shall be placed without horizontal construction joints except where shown or noted.

REINFORCEMENT

- 1. Detailing, fabrication and erection of reinforcement shall conform to ACI 318-08 "Building Code Requirements for Structural Concrete" and ACI 315-05 "Manual of Standard Practice for Detailing Reinforced Concrete Structures".
- 2. Steel reinforcement shall conform to ASTM 615 Grade 60 (yield stress = 60,000 psi)
- Welded wire fabric reinforcement shall conform to ASTM 185
- 4. Provide and schedule on shop drawings all necessary accessories to hold reinforcement securely in position. minimum requirements shall be: high chairs, 3'-0" on center; #5 support bar on high chairs; slab bolsters, 3'-0" on center.
- 5. Minimum concrete cover for reinforcement unless otherwise noted shall be as
 - Unformed surfaces in contact with ground or exposed to weather (footings, slabs on grade)
 - Formed surfaces in contact with ground or exposed to weather.

 2"
 Interior slabs
 1.5"

STRUCTURAL STEEL

- 1. Structural steel work shall conform to 2010 AISC "Specification for Structural Steel buildings", 2010 AISC "Code of Standard Practice for Steel Buildings and Bridges" and 2010 AWS D1.1 "Structural Welding Code Steel".
- 2. Structural steel shall be detailed in accordance with the AISC "Detailing for Steel Construction" (AISC-2009) and designed in accordance with references noted above.
- 3. Structural steel shall be new steel conforming to the following:

	_	•
(a) Unless otherwise noted	ASTM A992	Grade $50 ext{ (Fy} = 50 ext{ KSI)}$
(b) Angles, channels, Tee, etc.	ASTM A36	Grade 36 (Fy = 36 KSI)
(c) Tubes	ASTM A500	Grade B (Fy = 46 KSI)
(d) Pipes	ASTM A501	Type or S, Grade B or
ASTM A53		•

- (e) Anchor Bolts ASTM F1554 Grade 50
 (f) High strength bolts ASTM A325
- 4. Bolted connections shall be as follows:
- a) Minimum bolt diameter -3/4", two bolts minimum.
- b) Standard, oversized or horizontal short slotted holes in webs of beams.
- c) Simple shear connections shall be capable of end rotation per AISC requirements for "Unrestrained Members"
- 5. Welded connections shall be made by approved certified welders using filler metal conforming to E70XX or F7X-EXXX with low hydrogen.
- 6. Welds shall develop full strength of the materials being welded unless otherwise noted.
- 7. Welding shall conform to the American Welding Society code (AWS). All fillet welds shall be made with a return leg on the weld end. The minimum size of fillet welds shall be determined in accordance with the AISC specifications for structural steel buildings. Provide backing bars and or spacers as required for satisfactory welding.
- 8. Anchor bolts, leveling plates, or bearing plates shall be located and built into connecting work, preset by templates or similar methods. plates shall be set in full beds of non-shrink grout. wet setting shall not be allowed.
- 9. All steel exposed to weather shall be hot dipped galvanized.
- 10. Structural steel details not specifically shown shall be similar to those shown for most nearly similar situations as determined by the engineer.
- 11. Field cutting of structural steel or any field modifications to structural steel shall not be made without approval by the engineer for each specific case.
- 12. Structural steel framing shall be true and plumb before connections are finally bolted or welded.
- 13. Temporary erection bracing and supports shall be provided to hold structural steel framing securely in position. such temporary bracing and supports shall not be removed until permanent bracing has been installed and floor slabs have attained 75 percent of specified concrete strength.

DESIGN LOADS

Loads shall conform to the requirements of the Massachusetts State Building Code, 8th Edition W/Amendments to IBC 2009

1. Floor live loads

Floors 100 psf

2. Roof live loads

Observation Deck 100 psf

3. Wind loads

Basic wind speed (three-second gust): v = 110 mph Importance factor: (Iw) = 1.0 Occupancy category: III Wind exposure category: b

. Seismic

Importance factor: I = 1.0, Occupancy category III

Mapped spectral response accelerations: Ss = 0.29, S1 = 0.068

Site class: ????

Spectral response coefficients: SDS = 0.40

Seismic design category: D

Basic seismic force resisting system: Ordinary plain masonry shear walls.

Response modification factor: R = 1.5

Analysis procedure: Per Appendix A1, Section A110 - IEBC

ABBREVIATIONS

ABBREVIATION	WORD	K	KIP (1000 POUNDS)
ASD	ALLOWABLE STRESS DESIGN	LE	LEFT END
ALT AASHTO	ALTERNATE AMERICAN ASSOCIATION OF STATE HIGHWAY	LW	LIGHTWEIGHT
A C I	& TRANSPORTATION OFFICIALS AMERICAN CONCRETE INSTITUTE	LWC LRFD	LIGHTWEIGHT CONC LOAD & RESISTANCE FACTOR DESIGN
ACI AIA	AMERICAN CONCRETE INSTITUTE AMERICAN INSTITUTE OF ARCHITECTS	LOC	LOCATION
AISC	AMERICAN INSTITUTE OF STEEL	LLV LP	LONG LEG VERTICAL LOW POINT
AITC	CONSTRUCTION AMERICAN INSTITUTE OF TIMBER	LL	LOWER LAYER
ADCH	CONSTRUCTION	MFR	MANUFACTURER
ARCH ASCE	ARCHITECTURAL AMERICAN SOCIETY OF CIVIL ENGINEERS	MAS	MASONRY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	MATL MECH	MATERIAL MECHANICAL
AWS AB	AMERICAN WELDING SOCIETY ANCHOR BOLT	MEP	MECHANICAL, ELECTRICAL, PLUMBING
@	AT RATE OF	MEZZ MID	MEZZANINE MIDDLE
BAL	BALANCE	MID-PT	MIDPOINT
BM BRG	BEAM BEARING	NFoPA	NATIONAL FOREST PRODUCTS ASSOCIA
BLK	BLOCK	NF NN/C	NEAR FACE
B OR BOT	BOTTOM	NWC NIC	NORMALWEIGHT CONCRETE NOT IN CONTRACT
BEW BRKT	BOTTOM EACH WAY BRACKET	NTS	NOT TO SCALE
BLDG	BUILDING	NO OR #	NUMBER
CIP	CAST-IN-PLACE	OSHA	OCCUPATIONAL SAFETY & HEALTH
CG	CENTER OF GRAVITY	OC	ADMINISTRATION ON CENTER
CTRD CO	CENTERED CLEAN OUT	OPNG	OPENING
С	CENTERLINE	OH OD	OPPOSITE HAND OUTSIDE DIAMETER
CLR COL	CLEAR COLUMN		
CONC	CONCRETE	PC PL	PILE CAP PLATE
CMU CRSI	CONCRETE MASONRY UNIT CONCRETE REINFORCING STEEL INST.	PT	POINT
CONN	CONNECTION	PVC PCA	POLYVYNYL CHLORIDE PORTLAND CEMENT ASSOCIATION
CONST	CONSTRUCTION	P/T	POST TENSIONED
CONST JT OR C CONT	CONSTRUCTION JOINT CONTINUOUS	PSF	POUNDS PER SQUARE FOOT
CJ	CONTROL JOINTS	PSI P/C	POUNDS PER SQUARE INCH PRECAST CONCRETE
DEPR	DEPRESSION	PCI	PRECAST CONCRETE INSTITUTE
DET	DETAIL	PTW P/S	PRESSURE TREATED WOOD PRESTRESSED
DL DIA OR Ø	DEVELOPMENT LENGTH DIAMETER		
DIM	DIMENSION	R REF	RADIUS REFERENCE
DIR DO	DIRECTION DITTO	REINF	REINFORCE or REINFORCEMENT/ING
DWLS	DOWELS	REM RETG	REMAINDER RETAINING
DN DWG	DOWN DRAWING	RET	RETURN
	-	RE RD	RIGHT END ROOF DRAIN
EA EE	EACH EACH END		
EF	EACH FACE	SECT SC	SECTION SHEAR CONNECTOR
ES EW	EACH SIDE EACH WAY	SHT	SHEET
EL	ELEVATION	SLV SIM	SHORT LEG VERTICAL SIMILAR
ELEV EC	ELEVATOR EPOXY COATED	SOG	SLAB ON GRADE
EQ	EQUAL	SPA SPECS	SPACES SPECIFICATIONS
EXP BOLT EXP JT	EXPANSION BOLT EXPANSION JOINT	SL	SPLICE LENGTH
EXT	EXTERIOR	SQ SS	SQUARE STAINLESS STEEL
FF	FAR FACE	STD	STANDARD
FT	FEET OR FOOT	STL SDI	STEEL STEEL DECK INSTITUTE
FIN	FINISH FLOOR	SJI	STEEL DECK INSTITUTE STEEL JOIST INSTITUTE
FIN FL FPRF	FINISHED FLOOR FIREPROOF	SF	STEP FOOTING
FL FD	FLOOR FLOOR DRAIN	STIFF STR	STIFFENER STRUCTURAL
FTG	FOOTING	SP	SUMP PIT
FND	FOUNDATION	SUP SYM	SUPPORT SYMMETRICAL
GALV	GALVANIZED	TEMP	TEMPERATURE
GA	GAGE OR GAUGE	THK	THICK OR THICKNESS
GR GB	GRADE GRADE BEAM	THRD	THREADED
		TB TIM	TIE BEAM TIMBER
HT HP	HEIGHT HIGH POINT	Т	TOP
HS	HIGH STRENGTH	T&B TOC	TOP & BOTTOM TOP OF CONCRETE
H OR HORIZ HEF	HORIZONTAL HORIZONTAL EACH FACE	TOS	TOP OF STEEL
HIF	HORIZONTAL INSIDE FACE	TOW TYP	TOP OF WALL TYPICAL
HOF	HORIZONTAL OUTSIDE FACE		
IN	INCH	UNO UL	UNLESS NOTED OTHERWISE UPPER LAYER
INCL INFO	INCLUSIVE OR INCLUDING INFO	U.L.	UNDERWRITERS LABORATORIES
ID	INSIDE DIAMETER	V OR VERT	VERTICAL
INSUL IBC	INSULATION INTERNATIONAL BUILDING CODE	VEF	VERTICAL EACH FACE
INV	INVERT	VIF VOF	VERTICAL INSIDE FACE VERTICAL OUTSIDE FACE
JT	JOINT	v OI	
O I	OON T	WPG WWF	WATERPROOFING WELDED WIRE FABRIC

WWF

WWPA

WELDED WIRE FABRIC

WORKING POINT

WATERSTOP

WESTERN WOOD PRODUCTS ASSOCIATION



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RWM ENGINEERING, INC. STRUCTURAL ENGINEERS 1220 ADAMS ST. SUITE 316 BOSTON, MA 02124 P: (617) 296-0227 F: (617) 296-0229

PROSPECT HILL TOWER STABILIZATION

MUNROE STREET SOMERVILLE, MA

CLEINT: CITY OF SOMERVILLE JOSEPH CURTATONE, MAYOR CLIENT:

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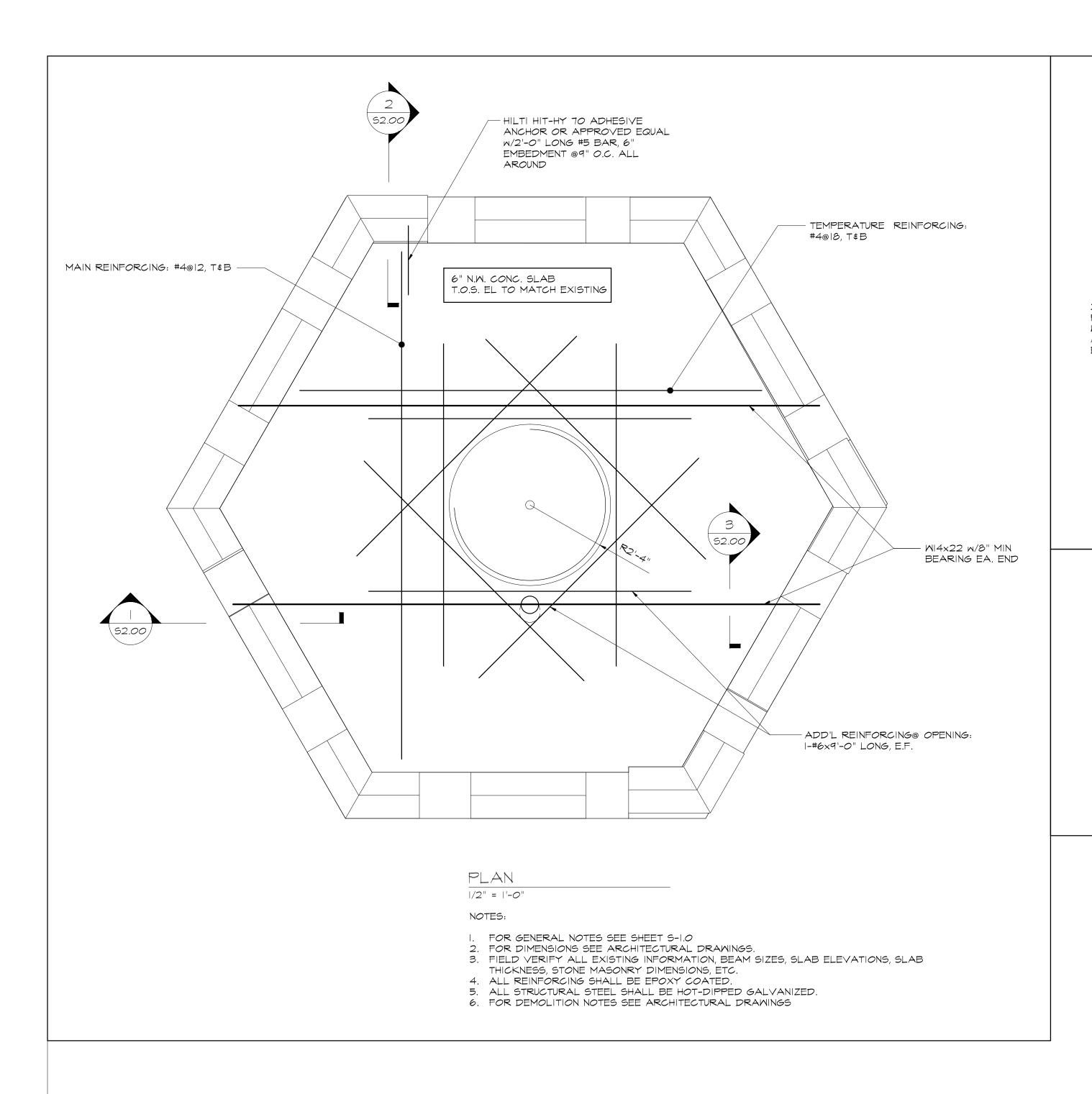
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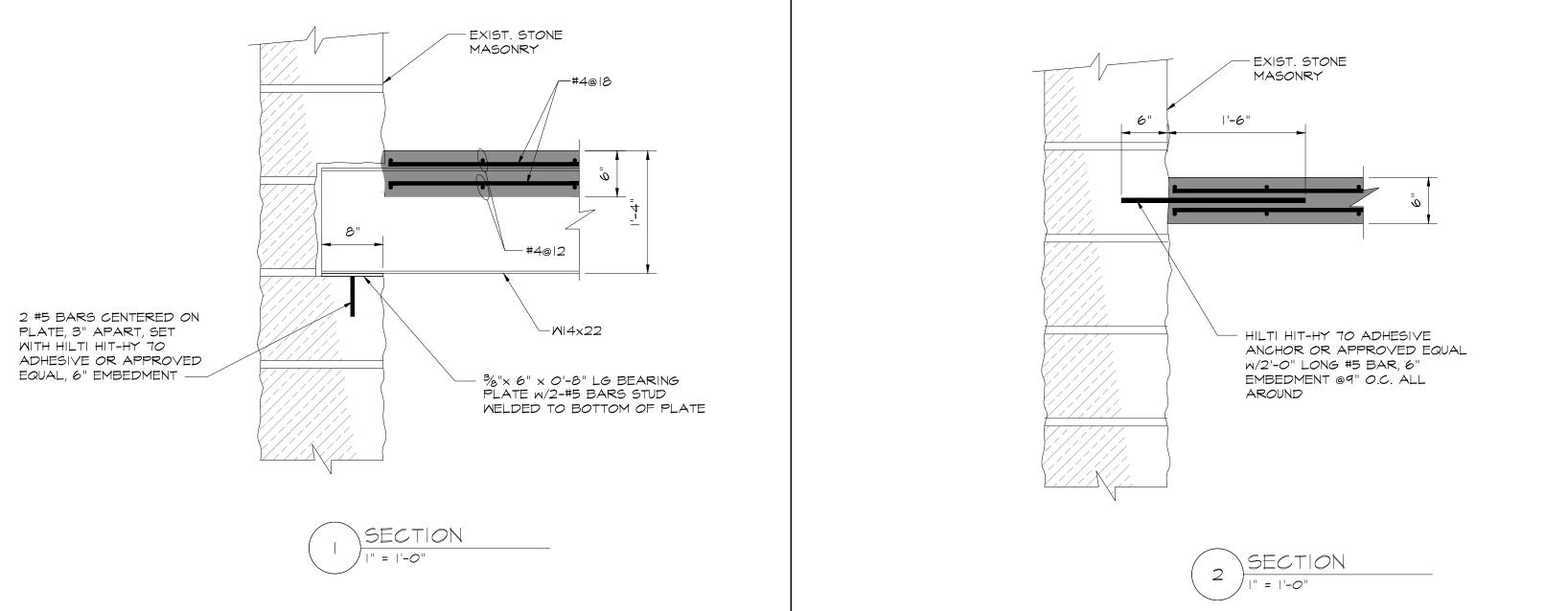
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GENERAL NOTES & ABBREVIATIONS

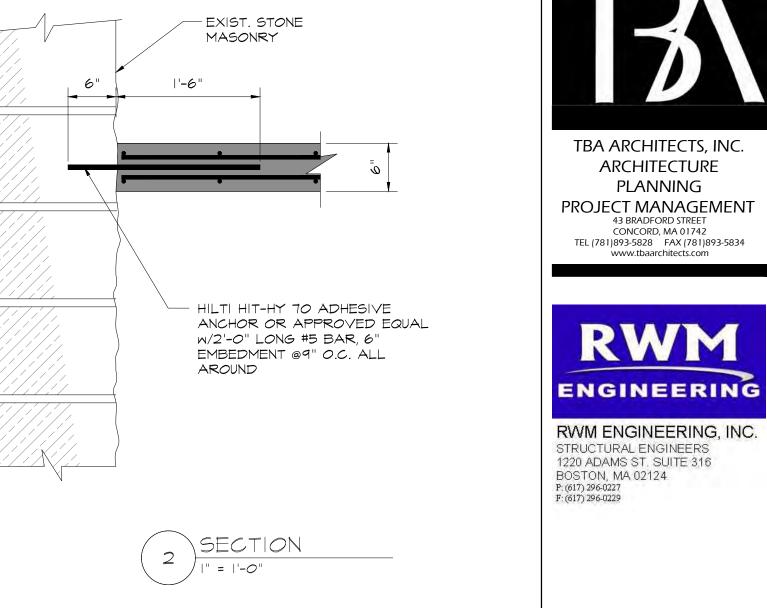
TBA PROJECT # 1210.1

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PROSPECT HILL **TOWER** STABILIZATION

TBA ARCHITECTS, INC. ARCHITECTURE

PLANNING

43 BRADFORD STREET CONCORD, MA 01742

MUNROE STREET SOMERVILLE, MA

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DATE OF ISSUE **NOVEMBER 14, 2014**

SCALE

AS NOTED

LEVEL FOUR PLAN AND SECTIONS

TBA PROJECT # 1210.1