

# BURNT COAT HARBOR LIGHT SWAN'S ISLAND, MAINE

PHASE 2 - MARITIME HERITAGE GRANT -- MASONRY AND IRON REHABILITATION



OWNER  
TOWN OF SWAN'S ISLAND MAINE



DESIGN  
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GRANT PROGRAM

ADMINISTERED BY  
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BURNT COAT HARBOR LIGHT STATION  
SWAN'S ISLAND, MAINE

PHASE 2 - MARITIME HERITAGE GRANT  
TITLE SHEET

Project # 18-018  
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**GENERAL NOTES**

1. BURNT COAT HARBOR LIGHT STATION IS A STATE OF MAINE HISTORIC SITE AND ACTIVE MUSEUM AND RECREATION SITE. THE SURROUNDING PROPERTY WILL BE OPEN TO THE PUBLIC DURING CONSTRUCTION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ALLOW SAFE PASSAGE OF THE PUBLIC IN PORTIONS OF THE SITE IMMEDIATELY ADJACENT TO THE WORK, COMPLY WITH ALL FEDERAL AND LOCAL SAFETY REQUIREMENTS, AND PROVIDE AND MAINTAIN SIGNAGE AND ANY NECESSARY FENCING/BARRIERS THROUGHOUT THE PROJECT DURATION.
3. THE STRUCTURAL DESIGN OF THESE REPAIRS IS BASED UPON THE FULL INTERACTION OF ALL CONNECTED COMPONENTS. NO PROVISIONS HAVE BEEN MADE FOR ANY TEMPORARY CONDITIONS THAT MAY ARISE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING, AND TEMPORARY BRACING DURING THE PROGRESS OF THE PROJECT.
4. THE CONTRACTOR IS TO HAVE A FULL-TIME SUPERINTENDENT ON SITE DURING THE PROJECT. WHEN WORK ONLY OCCURS BY A SPECIFIC, INSURED SUBCONTRACTOR WORKING ON AN INDIVIDUAL PROJECT COMPONENT, (FOR EXAMPLE, IRONWORK REPAIRS), THAT PROJECT FOREMAN MAY SERVE AS THE SITE SUPERINTENDENT FOR THAT WORK.
5. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE INCLUDED.
6. THE CONTRACTOR SHALL, PRIOR TO WORK, REVIEW WITH RESURGENCE ENGINEERING AND THE TOWN OF SWAN'S ISLAND ASPECTS OF SITE ACCESS, WORK SCHEDULE, AND COORDINATION WITH OTHERS TO ENSURE A SMOOTH PROJECT FLOW.
7. NOTIFY RESURGENCE ENGINEERING OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS THAT MAY AFFECT THE WORK.
8. THE INSTALLATION AND REMOVAL OF PROPOSED MATERIALS SHALL NOT DAMAGE EXISTING COMPONENTS.
9. ANY MODIFICATION OR ALTERATION OF THESE CONSTRUCTION DOCUMENTS OR CHANGES IN CONSTRUCTION FROM THE INTENT OF THESE DRAWINGS BY THE CONTRACTOR OR SUBCONTRACTORS WITHOUT WRITTEN APPROVAL OF RESURGENCE ENGINEERING WILL REMOVE ALL PROFESSIONAL AND LIABILITY RESPONSIBILITY OF RESURGENCE ENGINEERING.
10. DO NOT SCALE FROM THE DRAWINGS.
11. SEE SPECIFICATIONS LISTED ON THE DRAWINGS FOR ADDITIONAL REQUIREMENTS.
12. PROVIDE AT LEAST 72 HOURS NOTICE OF INTENT TO BEGIN WORK ON SPECIFIC ITEMS TO ALLOW RESURGENCE ENGINEERING SUFFICIENT TIME TO COORDINATE SITE OBSERVATIONS.
13. THE TOWN WILL PROVIDE AND PAY FOR NECESSARY PERMITS FROM THE TOWN OF SWAN'S ISLAND BEFORE THE CONTRACTOR BEGINS .

**GENERAL REQUIREMENTS**

1. COORDINATE CONSTRUCTION TO ENSURE EFFICIENT AND ORDERLY INSTALLATION OF EACH PART OF THE WORK.
2. CONDUCT PROGRESS MEETINGS AT SITE AT WEEKLY INTERVALS OR AS NECESSARY WITH OWNER'S REPRESENTATIVE. REQUIRE SUBCONTRACTOR ATTENDANCE AS REQUIRED FOR COORDINATION OF SITE ACTIVITIES.
3. COORDINATE EACH SHOP DRAWING SUBMITTAL WITH FABRICATION, PURCHASING, DELIVERY, AND RELATED ACTIVITIES. SUBMIT THREE COPIES OF EACH SUBMITTAL TO OWNERS REPRESENTATIVE TO PASS ON TO PROJECT ENGINEER. PROVIDE SPACE ON SUBMITTAL TO RECORD REVIEW AND APPROVAL MARKINGS BY ENGINEER.
4. IDENTIFY DEVIATIONS FROM CONTRACT DOCUMENTS ON SUBMITTALS. REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR MUST MARK SUBMITTAL WITH THEIR APPROVAL STAMP, DATE, AND COMMENTS BEFORE SUBMITTING TO OWNER.
5. SUBMIT SAMPLES FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH PROPOSED MATERIAL OR PRODUCT. INCLUDE MANUFACTURER'S NAME AND PRODUCT NAME ON LABEL. DO NOT SUBSTITUTE PRODUCTS.
6. DELIVER, STORE, AND HANDLE PRODUCTS USING MEANS AND METHODS THAT WILL PREVENT DAMAGE, DETERIORATION, AND LOSS, INCLUDING THEFT. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
7. SCHEDULE DELIVERY TO MINIMIZE LONG-TERM STORAGE AT PROJECT SITE AND TO PREVENT OVERCROWDING OF CONSTRUCTION SPACES. DELIVER PRODUCT IN MANUFACTURER'S ORIGINAL SEALED CONTAINER OR PACKAGING, COMPLETE WITH LABELS AND INSTRUCTIONS FOR HANDLING, STORING, UNPACKING, PROTECTING, AND INSTALLING.
8. STORE PRODUCTS THAT ARE SUBJECT TO DAMAGE BY THE ELEMENTS UNDER COVER IN A WEATHERTIGHT ENCLOSURE ABOVE GROUND, WITH VENTILATION ADEQUATE TO PREVENT CONDENSATION.

**BACKGROUND INFORMATION ABOUT PRIOR MASONRY REHABILITATION EFFORTS**

1. IN 1987, THE U.S. COAST GUARD APPLIED A SERIES OF PORTLAND-CEMENT BASED PATCHES TO THE LIGHTHOUSE FOUNDATION AND WALLS. THE OWNER HAS COPIES OF THESE DOCUMENTS AND WILL POST THEM ONLINE AS PART OF THE PROJECT BACKGROUND INFORMATION.
2. IN 1996, THE INTERNATIONAL MASONRY INSTITUTE (IMI) PERFORMED A SERIES OF EXPLORATIONS, REPAIRS, REBUILDING, AND REPOINTING AT THE TOWER. SOME OF THAT WORK IS CHRONICLED AND ATTACHED WITH THE PROJECT MANUAL. IT IS NOT CLEAR EXACTLY HOW MUCH OF THE INTENDED WORK WAS COMPLETED.
3. THE IMI TEAM CONSISTED OF TONY KASSMAN, DENNIS HOLLOWAY, STOKES REDABAUGH AND MARK WICKSTROM. WORK EXECUTED BETWEEN JULY 21 AND AUGUST 4, 1996, CONSISTED OF THE FOLLOWING:
  - A. TOWER MEASURED, DRAWN, AND PHOTOGRAPHED;
  - B. EXISTING CONDITIONS RECORDED AND WORK PERFORMED CHRONICLED;
  - C. PROBE HOLES CUT INTO NW TOWER FACE; CONFIRMED THAT "BULGE" WAS PART OF ORIGINAL CONSTRUCTION;
  - D. AT UPPER-LEFT HAND CORNER ON NW TOWER FACE, WORK DONE TO TREAT CORRODED METAL, AND TO REPAIR AND REPLACE BRICK;
  - E. APPROXIMATELY 50 PERCENT OF NW TOWER WALL JOINTS WERE CUT AND REPOINTED.



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# PROJECT SCOPE

1. PROVIDE NUMBERED AND KEYED INTERIOR AND EXTERIOR PRECONSTRUCTION PHOTOS TO THE OWNER AND ENGINEER. PROTECT EXISTING TOWER INTERIOR AND EXTERIOR SURFACES THAT HAVE ALREADY BEEN REHABILITATED, INCLUDING STAIRS, INTERIOR MASONRY, WOOD FLOORS, AND PAINTED LANTERN INTERIOR SURFACES.
2. INSTALL PIPE SCAFFOLDING AROUND THE TOWER UP TO SEVERAL FEET BELOW THE PLATFORM. SCAFFOLDING SHOULD COMPLY WITH ASCE 37-14, DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION. FOR BIDDING PURPOSES, ASSUME THE USE OF MEDIUM-DUTY SCAFFOLDING, WITH A COMBINED UNIFORMLY DISTRIBUTED LOAD OF 50 POUNDS PER SQUARE FOOT AS STATED IN ASCE 37-14 TABLE 4-4. RESURGENCE ENGINEERING WILL PROVIDE A COPY OF ASCE 37-14 TO BIDDING CONTRACTORS ON REQUEST. SHORING LOADS ARE IN ADDITION TO THE WALKWAY DISTRIBUTED LOADS. NOTIFY SUPERVISORY ENGINEER TO INSPECT IRON ON UNDERSIDE OF CATWALK AS PART OF THEIR FIRST SITE VISIT..
3. REMOVE LOOSE RUST AND CORROSION PRODUCTS ON THE UNDERSIDE OF THE TOWER CATWALK.
4. SURVEY THE LEVEL OF THE CATWALK, UNDERSTANDING THAT THERE IS LIKELY A DESIGN DRAINAGE PITCH TO SHED WATER AWAY FROM THE LANTERN. THE SURVEY GOAL IS TO DETERMINE IF THE CATWALK AND LANTERN ARE OUT OF LEVEL AND PLUMB. A LICENSED SURVEYOR IS NOT REQUIRED, BUT CONTRACTORS SHOULD SUBMIT SURVEY RECORDS AND RESULTS TO THE OWNER AND ENGINEER BEFORE AND AFTER CONSTRUCTION..
5. ALTHOUGH MEANS AND METHODS ARE ULTIMATELY UP TO THE CONTRACTOR, WE SUGGEST PERFORMING MASONRY REPAIR WORK AT THE TOP OF THE TOWER IN STAGES, AT EITHER SIDE OF OPPOSITE CORNERS, OR OPPOSITE SIDES, WHICHEVER IS SHOWN TO BE MOST EFFICIENT AND SAFE AFTER EVALUATING THE TOWER SURVEY DATA FOR LEVEL AND PLUMB. CONDITION. OTHER WORK SUCH AS REPOINTING, COATINGS REMOVAL, AND RE-COATING CAN PROCEED IN LOGICAL ORDER ON MULTIPLE SIDES AT ONCE. REMOVE VENTILATOR BALL, REPAIR, PAINT, AND REINSTALL. REPAINT ROOF SURFACES IMPACTED.
6. USE JACKS AS NEEDED FOR LEVELING LANTERN AND STAGING. TO THE EXTENT POSSIBLE, PROVIDE TEMPORARY SHORING THAT DISTRIBUTES LOADS THROUGH NEEDLE BEAMS TO THE STAGING, SO AS NOT TO LOAD THE TOWER'S WOOD-FRAMED FLOORS.
7. ABATE REMAINING LEAD PAINT FROM UNDERSIDE OF PLATFORM, APPLYING FEDERAL AND STATE LEAD SAFE PRACTICES. REHABILITATE, PRIME, AND PAINT IRON ON UNDERSIDE SURFACE OF THE CATWALK IN CONTACT WITH MASONRY, AFTER REMOVING THE TOP EIGHT COURSES OF THE TOWER WALL TO PROVIDE ACCESS BOTH INSIDE AND OUTSIDE OF THE TOWER.
8. PRIME AND PAINT UNDERSIDE OF CATWALK AND CANTILEVERED IRON MEMBERS WITH SHERWIN-WILLIAMS KEM-BOND HS UNIVERSAL METAL PRIMER AND SHERWIN-WILLIAMS PRO INDUSTRIAL GLOSS URETHANE INDUSTRIAL ENAMEL, GLOSS BLACK. PROTECT REHABILITATED AND REPAINTED TOWER SURFACES TO AVOID DAMAGE BY OTHER OPERATIONS.
9. CLEAN, REPOINT AND REPAIR ALL REMAINING EXISTING EXTERIOR MASONRY AND THE FIRST EIGHT COURSES OF MASONRY UNDER THE CATWALK PLATFORM ON THE INTERIOR WALL USING PRE-MIXED NATURAL CEMENT MORTAR DESIGNATED IN THE HIGHBRIDGE MORTAR ANALYSIS. SEE SHEET S0.2
10. PERFORM MAINTENANCE/CONTAINMENT PAINTING ON PREVIOUSLY PAINTED SURFACES OF THE ROOF, LANTERN, AND CATWALK, IF DAMAGED DURING WORK.
11. COAT ALL RESTORED EXTERIOR MASONRY SURFACES WITH CATHEDRAL STONE MASONRE COATING SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
12. DISMANTLE ALL STAGING, REMOVE ALL SHORING AND PROTECTION, AND REPAIR EXISTING PREVIOUSLY RESTORED SURFACES AND COMPONENTS TO THEIR PRE-CONSTRUCTION CONDITION. LEAVE SITE BROOM CLEAN AND MAGNET SWEEP. REMOVE ALL CONSTRUCTION DEBRIS FROM SITE. PROVIDE NUMBERED AND KEYED POST-CONSTRUCTION PHOTOS, MATCHING COMPOSITION AND DIRECTION OF PRE-CONSTRUCTION PHOTOS, TO THE OWNER AND ENGINEER AFTER CONSTRUCTION COMPLETION.



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# NATURAL CEMENT MORTAR - SPECIFICATIONS, SUBMITTALS, AND INSTALLATION NOTES

## PART 1 - GENERAL

### 1.1 SUMMARY

- A. THE PROJECT INCLUDES HISTORIC TREATMENT WORK USING PRE-PACKAGED NATURAL CEMENT MORTARS. WORK WILL PRIMARILY CONSIST OF REPLACING, REBUILDING, CLEANING, AND REPOINTING EXISTING BRICK MASONRY EXTERIOR AND INTERIOR TOWER SURFACES, SOME SURFACES WHICH ARE IN CONTACT WITH CORRODED IRON.
- B. HIGHBRIDGE MATERIALS CONSULTING, INC. PERFORMED AN ANALYSIS OF THE TOWER MORTAR IN 2013. REFER TO THE BID DOCUMENT APPENDICES FOR A COPY OF THIS REPORT. HIGHBRIDGE GENERALLY CONCLUDED THAT THE EXISTING MORTAR IS A PURE NATURAL CEMENT MORTAR CONTAINING FINE-GRAINED AND NARROWLY GRADED GRANITIC SAND. THE CEMENT TO SAND RATIO IS ESTIMATED TO BE 1:1.2 BY VOLUME.
- C. HIGHBRIDGE MATERIALS ALSO CONCLUDED THAT THE MORTAR MATERIAL IS UNIFORM IN APPEARANCE WITH A GRAYISH-BROWN COLOR (MUNSELL COLOR CODE APPROXIMATELY 10YR 5-6/2). THE COMPONENTS ARE WELL-MIXED AND CONSOLIDATED, WITH AN AIR CONTENT ESTIMATED AT 4 TO 6 PERCENT BY VOLUME.
- D. BRICKWORK ON THIS PROJECT IS LESS THAN FOUR WYTHES TOTAL THICKNESS. TYPICALLY IT IS TWO WYTHES THICK, WITH A VENTILATION AIR GAP, AND A SINGLE-WYTHE INTERIOR SURFACE. LATH AND PLASTER PREVIOUSLY COVERED THE SINGLE-WYTHE INTERIOR SURFACE, BUT THE OWNER DOES NOT PLAN TO REPLACE IT DUE TO MAINTENANCE COSTS.
- E. THE LIMITED MASONRY THICKNESS AND REQUIRED VENTILATION CAVITY IN THE BRICKWORK MEAN THAT RELATIVELY LARGE QUANTITIES OF FILL MORTAR ARE NOT EXPECTED. IT IS IMPORTANT TO KEEP THE VENTILATION CAVITY AS CLEAN AS POSSIBLE DURING CONSTRUCTION WORK.
- F. TEMPORARY SHORING WILL LIKELY BE REQUIRED DURING MASONRY REHABILITATION WORK. DISCUSS MEANS AND METHODS WITH OWNER AND ENGINEER PRIOR TO REMOVING MASONRY.
- G. THE MORTAR MATERIAL IS UNIFORM IN APPEARANCE WITH A GRAYISH-BROWN COLOR (MUNSELL COLOR CODE APPROXIMATELY 10YR 5-6/2) . THE COMPONENTS ARE WELL-MIXED AND CONSOLIDATED, WITH AN AIR CONTENT ESTIMATED AT 4 TO 6 PERCENT BY VOLUME.
- H. MANY GENERATIONS OF REPAIRS MAY HAVE BEEN PERFORMED ON THE TOWER USING NON-ORIGINAL MATERIALS. THE OWNER AND ENGINEER INTEND TO REVERSE THIS TREND BY USING THE TESTED ORIGINAL MORTAR TYPE USED ON THE PROJECT GOING FORWARD. HOWEVER, IT IS NOT REQUIRED TO REMOVE NONCONFORMING MORTARS UNLESS VISUAL EVIDENCE CONCLUDES THAT THEY HAVE HARMED THE BRICK.
- I. THE TOWN OF SWAN'S ISLAND AND RESURGENCE ENGINEERING ENCOURAGE, BUT NOT REQUIRE, BIDDING MASONS TO HIRE AT LEAST ONE LOCAL LABORER/MASON TO TRAIN THEM IN THE USE OF NATURAL CEMENT MORTARS. THIS IS IN ORDER TO ELEVATE THE MASONRY TRADE BY HELPING LOCAL MASONS BECOME FAMILIAR WITH THE USE OF NATURAL CEMENT MORTARS. TRAINING WILL INCREASE SKILLS AND JOB OPPORTUNITIES ON AND OFF-ISLAND FOR ISLAND RESIDENTS.

### 1.2 RELATED DOCUMENTS

- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL CONDITIONS.

### 1.3 SUBMITTALS

- A. SUBMIT THE FOLLOWING TO THE OWNER'S REPRESENTATIVE FOR THE ENGINEER TO REVIEW:
  - PRODUCT DATA, INCLUDING MANUFACTURER'S INSTRUCTIONS, PRODUCT DATA AND MSDS SHEETS.
  - MORTAR MIX DATA INDICATING MIX AND COLOR PROPORTIONS.
  - CURED SAMPLES OF DESIGN MORTAR MIX USED ON PROJECT FOR OWNER AND ENGINEER'S INITIAL REVIEW.
  - MANUFACTURER'S CERTIFICATE THAT CERTIFIES THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.

### 1.4 QUALITY ASSURANCE

- A. BLEND AND PACKAGE CEMENTITIOUS MATERIALS, AGGREGATES AND COLOR ADMIXTURES UNDER FACTORY-CONTROLLED CONDITIONS, REQUIRING ONLY THE ADDITION OF POTABLE WATER ON SITE.
- B. RESTORATION SPECIALIST: WORK MUST BE PERFORMED BY A FIRM HAVING NOT LESS THAN 3 YEARS SUCCESSFUL EXPERIENCE IN COMPARABLE MASONRY RESTORATION PROJECTS AND EMPLOYING PERSONNEL SKILLED IN THE RESTORATION PROCESS AND OPERATIONS INDICATED.
- C. MOCKUP: BEFORE STARTING WORK, PREPARE AND REPOINT A SAMPLE AREA OF NOT LESS THAN TWO FEET HIGHT AND FOUR FEET LONG USING THE PROCEDURES, PROPOSED MORTAR COLORS AND TEXTURE, FINISH AND WORKMANSHIP FOR APPROVAL BY THE OWNER AND ENGINEER.

### 1.6 DELIVERY, STORAGE AND HANDLING

- A. DELIVER PREPACKAGED, DRY-BLENDED MORTAR MIX TO PROJECT SITE IN CLEARLY LABELED PLASTIC LINED BAGS EACH BEARING THE NAME AND ADDRESS OF THE MANUFACTURER , PRODUCTION CODES OR BATCH NUMBERS, AND COLOR OR FORMULA NUMBERS.
- B. STORE MORTAR OFF THE GROUND AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS TO PREVENT CONTAMINATION BY FOREIGN MATERIALS. MAINTAIN PACKAGED MATERIALS IN A CLEAN, DRY STATE PROTECTED AGAINST WEATHER, TRAFFIC, AND FOREIGN MATERIALS.

### 1.7 ENVIRONMENTAL REQUIREMENTS

- A. COLD WEATHER REQUIREMENTS: WHEN AMBIENT AIR TEMPERATURE IS BELOW 40 DEGREES F, HEAT MIXING WATER TO MAINTAIN MORTAR TEMPERATURE BETWEEN 40 AND 120 DEGREES UNTIL PLACED. IF NECESSARY, STORE MATERIALS IN A HEATED AREA TO ALLOW MORTAR TEMPERATURES TO REMAIN ABOVE 40 DEGREES F. THROUGHOUT THE PLACEMENT AND FINISHING CYCLE.
- B. COLD WEATHER MORTAR CURING MAY LIGHTEN THE RESULTING MORTAR COLOR. COLOR CONTROL IS IMPORTANT FOR MORTAR ON THE EXPOSED INSIDE SURFACE OF THE TOWER. COLOR CONTROL MAY REQUIRE PLACING MORTAR ON INTERIOR WYTHE AT TEMPERATURES OF 50 DEGREES AND UP. ANY SUPPLEMENTAL HEAT SHOULD BE GENTLE AND NOT OVERHEAT AREAS IMMEDIATELY ADJACENT TO A HEAT SOURCE. THE HEAT SOURCE SHOULD NOT ACCELERATE MORTAR DRYING UNLESS THE MASON PROVIDES ADDITIONAL MORTAR MISTING TO ENSURE THAT MORTAR STAYS MOIST.
- C. HOT, DRY, AND WINDY WEATHER REQUIREMENTS: USE PROPER BRICK PRE-DAMPENING, WIND AND SUN PROTECTION, AND MOIST CURING PROCEDURES TO KEEP MORTAR MOIST FOR 72 HOURS FOLLOWING FINAL TOOLING.

## PART 2 - PRODUCTS

### 2.1 NATURAL CEMENT PRE-MIXED MORTAR:

- A. PROVIDE PRE-MIXED NATURAL CEMENT MORTARS CONFORMING TO THE REQUIREMENTS OF THE HIGHBRIDGE REPORT.
  1. CUSTOM-MATCHED, ROSENDALE™ 12m™ PREBLENDED NATURAL CEMENT, MINED IN NEW YORK STATE, BY EDISON COATINGS, INC., PLAINVILLE, CT (860) 747-2220.
  2. RESTORE™ PRE-MIXED MORTAR BY FREEDOM CEMENT, NORTH BROOKFIELD, MA (866)-254-7277

### 2.2 MATERIALS

- A. PRE-PACKAGED NATURAL CEMENT MORTAR: ALL MORTAR SHALL BE PRE-BLENDED, PRE-COLORED AND PREPACKAGED UNDER CONTROLLED FACTORY CONDITIONS. BATCH ALL INGREDIENTS TO WITHIN PLUS OR MINUS 1 PERCENT ACCURACY, EXCEPT PIGMENTS, WHICH SHALL BE WEIGHED TO A PRECISION OF 0.02 PERCENT. CONFORM TO THE PROPORTIONS DESCRIBED IN THE HIGHBRIDGE REPORT. NATURAL CEMENT MORTAR SHALL NOT CONTAIN ARTIFICIAL MIXTURES OF OTHER CEMENTITIOUS MATERIALS, FLY ASH, SLAG, PORTLAND CEMENT, HYDRAULIC LIME OR LIME POZZOLAN.
- B. HYDRATED LIME PER ASTM C207, TYPE S, INCORPORATED AS A FINELY DIVIDED POWDER IN UNIFORM PARTICLE SIZE, FREE OF LUMPS, FLAKES, OR OTHER INCONSISTENCIES.
- C. MORTAR AGGREGATE: ASTM C144 NATURAL SAND BLEND, ROUNDED TO SUB-ANGULAR IN SHAPE, WASHED, SCREENED AND DRIED. SELECT THE AGGREGATE TO MATCH THE COLOR AND TEXTURE OF THE ORIGINAL MORTAR AGGREGATES AS CLOSELY AS POSSIBLE WHILE REMAINING IN COMPLIANCE WITH ASTM C144 GRADING.
- D. MORTAR COLORS: INORGANIC MINERAL OXIDES, COLORED AS DESCRIBED IN THE HIGHBRIDGE REPORT.
- E. NO ADMIXTURES ARE PERMITTED WITHOUT EXPRESSED WRITTEN CONSENT OF THE ENGINEER AND OF THE MORTAR MANUFACTURER.
- F. WATER MUST BE POTABLE. IT SHOULD NOT CONTAIN MINERALS THAT IMPACT MORTAR PERFORMANCE OR APPEARANCE.

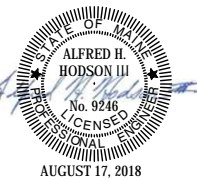
### 2.3 MIXING MORTAR

- A. THOROUGHLY MIX MORTAR IN QUANTITIES NEEDED FOR IMMEDIATE USE, USING MECHANICAL MORTAR MIXER OR PADDLE MIXER. ADD APPROXIMATELY HALF THE REQUIRED WATER AND MIX MORTAR FOR A MINIMUM OF 2 MINUTES, AND THEN SLOWLY ADD WATER AS NEEDED TO REACH THE DESIRED WORKING CONSISTENCY. DO NOT EXCEED MIX TIME OF 5 MINUTES.
- B. ADD ONLY CLEAN, POTABLE WATER AT THE PROJECT SITE. DO NOT ADD SAND, STONE, CEMENT, LIME, BONDING AGENTS, COLORING ADMIXTURES, SET ACCELERATORS, PLASTICIZERS, AIR ENTRAINING ADMIXTURES OR OTHER MATERIALS UNLESS SPECIFICALLY AUTHORIZED IN WRITING.
- C. USE A BATCH TYPE MIXER IN ACCORDANCE WITH ASTM C270, SUBPARAGRAPH 6.3
- D. BECAUSE BRICKWORK ON THIS PROJECT IS LESS THAN FOUR WYTHES THICK, DO NOT USE READY MIX MORTAR (ASTM C1142) AS FILL MATERIAL FOR INNER BRICK WYTHES.
- E. USE MORTAR WITHIN 30 MINUTES OF MIXING, AFTER WHICH UNUSED MORTAR IS TO BE DISCARDED. DO NOT RE-TEMPER MORTARS WHICH HAVE BEGUN TO SET. IF QUICK SETTING MORTAR IS BEING USED, WORKING TIME IS REDUCED TO 15 MINUTES.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. PRE-DAMPEN MASONRY SURFACES TO RECEIVE REPOINTING MORTAR FOR A MINIMUM OF 20 MINUTES PRIOR TO MORTAR PLACEMENT. MASONRY SURFACES SHOULD BE SATURATED BUT FREE OF EXCESS OR STANDING WATER AT TIME OF MORTAR PLACEMENT.
- B. FILL MORTAR COMPLETELY INTO JOINTS, COMPACTING IT INTO THE REAR AND CORNERS OF THE JOINT. BUILD UP THE MORTAR TO THE FULL DEPTH OF THE JOINT IN A WAY THAT MATCHES THE DESIRED SURFACE OF THE SURROUNDING MASONRY WITHOUT INTERRUPTION.
- C. IMMEDIATELY TOOL FILLED JOINT TO THE PROFILE THAT CLOSELY MATCHES THE SURROUNDING BRICKWORK IN A WAY THAT MOST CLOSELY REPLICATES THE ORIGINAL CRAFTSMANSHIP OF THE SURFACES.
- D. NOTE THAT TO AVOID CHANGING THE APPEARANCE OF THE MASONRY, IT MAY BE NECESSARY TO SLIGHTLY RECESS THE MORTAR FROM THE MASONRY SURFACE. DO NOT FLUSH FILL JOINTS IN WORN MASONRY IF THIS RESULTS IN A VISUALLY WIDER JOINT THAN THE ORIGINAL.
- E. REMOVE EXCESS MORTAR AND SMEARS USING A STIFF NATURAL BRISTLE BRUSH AND CLEAN WATER BEFORE IT HAS SET.
- F. WET CURE TOOLED JOINTS AS REQUIRED BY LIGHTLY MISTING WITH CLEAN WATER PERIODICALLY FOR A MINIMUM OF 3 DAYS FOLLOWING INSTALLATION. PROVIDE SHADE AND PROTECTION FROM SUN AND WIND TO MAINTAIN MOIST CURING CONDITIONS. PERFORM MISTING EVERY HOUR OR TWO ON THE FIRST DAY, AS REQUIRED TO MAINTAIN THE MORTAR IN A WET CONDITION. MISTING TIMES MAY BE REDUCED TO EVERY THREE OR FOUR HOURS ON SUBSEQUENT DAYS.
- G. ALLOW MORTAR TO FULLY CURE FOR A MINIMUM OF 28 DAYS BEFORE FINAL CLEANING. LONGER CURE TIMES ARE REQUIRED IN COOLER WEATHER. USE ONLY LOW-PRESSURE CLEANING METHODS TO AVOID DAMAGING NEWLY REPOINTED JOINTS. USE ONLY CLEANING MATERIALS APPROVED BY THE MORTAR MANUFACTURER, AND ONLY AT THE APPROVED RATES OF DILUTION AND DWELL TIME. PERFORM HEAVY CLEANING AND PAINT STRIPPING BEFORE MASONRY REPAIRS AND REPOINTING. LIGHT CLEANING IS ALLOWED BEFORE RECOATING THE STRUCTURE, IF PERMITTED BY THE COATING MANUFACTURER.



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**PHASE 2 - MARITIME HERITAGE GRANT  
NATURAL CEMENT MORTAR NOTES**

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# BRICK MASONRY - SPECIFICATIONS, SUBMITTALS, AND INSTALLATION NOTES

## PART 1 - GENERAL

### 1.1 SUMMARY

- A. THIS PROJECT INCLUDES HISTORIC TREATMENT WORK USING CUSTOM RESTORATION BRICK AND EXISTING BRICK, ALONG WITH NATURAL CEMENT MORTAR MIXES, TO REMOVE, RE-BED, RE-SET AND REPOINT EXISTING INTERIOR AND EXTERIOR BRICK SURFACES. NATURAL CEMENT NOTES AND REQUIREMENTS ARE SPECIFIED ON THE PREVIOUS SHEET AND ABOVE ON THIS SHEET.
- B. TEMPORARY SHORING WILL BE NEEDED DURING MASONRY REHABILITATION WORK. DISCUSS MEANS AND METHODS WITH OWNER AND ENGINEER PRIOR TO REMOVING MASONRY. GENERALLY SPEAKING, RESURGENCE ANTICIPATES THAT THE MASON WILL REMOVE UPPER MASONRY IN QUADRANTS WHILE PROVIDING TEMPORARY ANCHORAGE FOR THE LANTERN TO RESIST UPLIFT FORCES. RESURGENCE AND THE OWNER ARE OPEN TO DISCUSS REMOVING THE TOWER LANTERN RAILINGS IF IT WILL MAKE IT EASIER TO INSTALL TEMPORARY HOLD-DOWN ANCHORS FOR THE LANTERN.
- C. SEE PREVIOUS SHEET FOR SUMMARY OF HIGHBRIDGE MATERIALS CONSULTING, INC. MORTAR ANALYSIS.

### 1.2 RELATED DOCUMENTS

- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL CONDITIONS.

### 1.3 SUBMITTALS - (SEE PREVIOUS SHEET FOR MORTAR MIX SUBMITTALS)

- A. SUBMIT THE FOLLOWING TO THE OWNER'S REPRESENTATIVE FOR THE ENGINEER TO REVIEW:
- PRODUCT DATA, INCLUDING MANUFACTURER'S INSTRUCTIONS, PRODUCT DATA AND MSDS SHEETS FOR ALL BRICK OR BRICK ACCESSORIES, TIES, ETC. INDICATED IN PART 2 BELOW.
  - TWO SAMPLE CASES OF FIVE OF THE SPECIFIED RESTORATION BRICK INDICATING MIX AND COLOR VARIATIONS.
  - MANUFACTURER'S CERTIFICATES CERTIFYING THAT PRODUCTS MEET OR EXCEED SPECIFIED REQUIREMENTS.

### 1.4 QUALITY ASSURANCE

- A. SEE PREVIOUS SHEET UNDER NATURAL CEMENT MORTAR FOR MASON QUALIFICATIONS.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. SEE PREVIOUS SHEET UNDER NATURAL CEMENT MORTAR FOR DELIVERY, STORAGE, AND HANDLING INSTRUCTIONS.

### 1.6 ENVIRONMENTAL CONDITIONS

SEE PREVIOUS SHEET UNDER NATURAL CEMENT MORTAR FOR ENVIRONMENTAL CONDITIONS INSTRUCTIONS.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. SALVAGED BRICK: EXISTING BRICK FROM THE TOWER, CRACK FREE, CLEAN BRICK WITHOUT FACE CHIPS LARGER THAN 1/2 INCH, SALVAGED FROM REMOVAL OF THE REMOVED FACE BRICK WORK OF THE SAME TYPE.
- B. REPLACEMENT BRICK: BARRINGTON RED WATERSTRUCK, MANUFACTURED BY STILES AND HART OR ENGINEER-APPROVED EQUIVALENT. [www.stilesandhart.com](http://www.stilesandhart.com), (1-800-320-8700) . OR MORIN RESTORATION BRICK [www.morinbrick.com](http://www.morinbrick.com) (207) 784-9375. NOTE THAT EXISTING BRICK ARE LIKELY THINNER (DEPTH) THAN CONTEMPORARY MASONRY.
- C. STAINLESS STEEL HELICAL ANCHORS: HELIFIX "DRY-FIX" ANCHORS, OR HELIFIX "CEM-TIE" ANCHORS, A316 STAINLESS STEEL. PROVIDE ANCHORS OF LENGTH AND DIAMETER AS INDICATED ON DRAWINGS. ANCHORS ARE TYPICALLY EITHER 6mm, 8mm, OR 10mm DEPENDING UPON APPLICATION. COORDINATE WITH THE ENGINEER TIME TO VIEW AND OBSERVE THE FIRST DAY OF STAINLESS STEEL HELICAL ANCHOR INSTALLATION. PROVIDE 72 HOURS NOTICE FOR SCHEDULING PURPOSES.
- D. HELICAL ANCHOR GROUT: HELIBOND CEMENTITIOUS GROUT AS BONDING AGENT FOR "CEM-TIE" ANCHORS.
- E. NYLON DOWELS: THREADED RODS, 1/2 INCH DIAMETER, 13 THREADS PER INCH.
- F. EPOXY: POLY PLUS SF BY HELIFIX, OR ENGINEER-APPROVED EQUIVALENT.

### 2.2 EQUIPMENT

- A. TROWEL AND HAWK, HAMMER AND MASONRY CHISEL, JOINT TOOLS, STIFF NATURAL BRISTLE BRUSHES
- B. TEMPORARY SHORING EQUIPMENT AND PROTECTIVE COVERINGS FOR FLOOR, WALL, WINDOW SURFACES, ETC.
- C. BURLAP, PLASTIC, AND DEBRIS NETTING FOR BRICK AND MORTAR WETTING, MORTAR CURING, AND DUST CONTROL.
- D. GRINDERS ARE PROHIBITED ON THIS PROJECT, WITH THE EXCEPTION OF TROW & HOLDEN PNEUMATIC TOOL SYSTEM, ARBORTEK MASONRY SAWS, OR ENGINEER-APPROVED EQUIVALENT. CONTRACTORS MUST DEMONSTRATE SKILL AND HANDLING OF PNEUMATIC OR ARBORTEK SOOL SYSTEM O A DEMONSTRATION AREA FOR THE ENGINEER AND OWNER TO REVIEW. TOOLS MUST BE USED ON A LIMITED BASIS, WITH FREQUENT BREAKS, TO PREVENT WORKER FATIGUE AND TO DECREASE OPPORTUNITY FOR DAMAGING ADJACENT BRICK, STONE, OR IRON.

## PART 3 - EXECUTION

### 3.1 PROTECTION

- A. SECURE FINE MESH DEBRIS NETTING TO THE OUTSIDE OF SCAFFOLDING OR WORK AREA TO PROTECT THE WORK AREA FROM STRONG WINDS AND SUNLIGHT. SECURELY FIX POLYETHYLENE OVER PLYWOOD SHEETING ON TOP OF THE PROTECTED AREA TO ENSURE THAT RAIN DOES NOT WASH DOWN ON THE FACE OF THE MASONRY. POLYETHYLENE SHALL NEVER COME IN CONTACT WITH THE WORK.
- B. TAKE ACCURATE RECORDS OF THE MINIMUM AND MAXIMUM TEMPERATURES BELOW THE COVERS ON A DAILY BASIS, AND RECORD THESE OVER WEEKENDS AND HOLIDAY BREAKS. TO AVOID RAPID DRYING AND CONSEQUENT HIGH SHRINKAGE, ESPECIALLY IN HOT OR WINDY WEATHER CONDITIONS, KEEP ALL WORK DAMP BY REPEATEDLY APPLYING A FINE MIST OF CLEAN POTABLE WATER, AS SPECIFIED IN THE MORTAR SPECIFICATION.

### 3.2 PREPARATION

- A. SURFACE PREPARATION OF BRICK: PRE-DAMPEN MASONRY SURFACES TO RECEIVE REBUILDING OR POINTING MORTAR FOR A MINIMUM OF 20 MINUTES PRIOR TO MORTAR PLACEMENT. MASONRY SURFACES SHOULD BE SATURATED BUT FREE OF EXCESS OR STANDING WATER AT THE TIME OF MORTAR PLACEMENT.

### 3.3 BRICK MASONRY REMOVAL AND REBUILDING:

- A. BRICK REMOVAL:
- i. AT LOCATIONS INDICATED, CAREFULLY REMOVE ANY DAMAGED, SPALLED, OR DETERIORATED BRICK. REMOVE UNITS FROM JOINT TO JOINT AND IN MANNER TO PERMIT REPLACEMENT WITH FULL-SIZE UNITS.
  - ii. SUPPORT AND PROTECT MASONRY THAT SURROUNDS BRICK TO BE REMOVED.
  - iii. SALVAGE AS MANY WHOLE UNDATED BRICK AS POSSIBLE.
  - iv. REMOVE MORTAR, LOOSE PARTICLES, AND SOIL FROM SALVAGED BRICK. STORE FOR RE-USE.
  - v. CLEAN REMAINING BRICK AT REMOVAL AREA EDGES BY REMOVING MORTAR, DUST, AND LOOSE DEBRIS IN PREPARATION FOR REBUILDING.
- B. BRICK REBUILDING:
- i. INSTALL NEW OR SALVAGED BRICK TO REPLACE REMOVED BRICK. FIT REPLACEMENT UNITS INTO BONDING AND COURSING PATTERN OF EXISTING BRICK.
  - ii. LAY REPLACEMENT BRICK WITH BED, HEAD, AND COLLAR JOINTS. BUTTER ENDS WITH SUFFICIENT MORTAR TO FILL HEAD JOINTS AND SHOVE INTO PLACE. NOTE REQUIREMENT TO KEEP MORTAR JOINTS BACK FROM THE EXPOSED SURFACES OF BRICK AREAS INDICATED. WET BRICK USING WETTING METHODS WHICH ENSURE THAT BRICK ARE NEARLY SATURATED OR SURFACE DRY WHEN LAID. MAINTAIN JOINT WIDTH FOR REPLACEMENT UNITS TO MATCH EXISTING.
  - iii. TOOL EXPOSED MORTAR JOINTS IN REPOINTED AREAS TO MATCH JOINTS OF SURROUNDING EXISTING BRICKWORK. PROVIDE 3/4" MORTAR JOINT DEPTH.
  - iv. DOWEL OVERHEAD BRICK INTO SURROUNDING MASONRY WITH NYLON DOWELS AND EPOXY ANCHORAGE AS DIRECTED BY ENGINEER OR ARCHITECT.
  - v. INSTALL 3'-0" LONG LENGTH OF EXTERIOR WALL CRACK REPAIR FOR VIEWING AND APPROVAL BY ENGINEER
  - w. PRIOR TO PROCEEDING WITH REMAINDER OF WORK. PROVIDE 72 HOURS NOTICE FOR SCHEDULING PURPOSES.
- C. STAINLESS STEEL HELICAL ANCHOR INSTALLATION:
- i. STAINLESS STEEL HELICAL ANCHORS SHALL BE HELIFIX "DRY-FIX" ANCHORS, OR HELIFIX "CEM-TIE" ANCHORS 10mm x 2'-0" LONG, OR AS SPECIFIED ON DRAWINGS. ANCHORS SHALL BE ASTM A316 STAINLESS STEEL.
  - ii. PROVIDE HELIBOND CEMENTITIOUS GROUT FOR BONDING AGENT FOR "CEM-TIE" ANCHORS.
  - iii. COORDINATE WITH ENGINEER TIME TO VIEW AND OBSERVE THE FIRST DAY OF STAINLESS STEEL HELICAL ANCHOR INSTALLATION. PROVIDE 72 HOURS NOTICE FOR SCHEDULING PURPOSES.



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# BRICK MASONRY - SPECIFICATIONS, SUBMITTALS, AND INSTALLATION NOTES (CONTINUED)

## 3.4 REPOINTING EXISTING MASONRY:

### A. JOINT RAKING.

- i. RAKE OUT MORTAR FROM JOINTS TO DEPTHS EQUAL TO 2½ TIMES THEIR WIDTHS, BUT NOT LESS THAN ½" NOR LESS THAN THAT REQUIRED TO EXPOSE SOUND, UNWEATHERED MORTAR.
- ii. REMOVE MORTAR FROM MASONRY SURFACES WITHIN RAKED-OUT JOINTS TO PROVIDE REVEALS WITH SQUARE BACKS AND TO EXPOSE MASONRY FOR CONTACT WITH POINTING MORTAR. BRUSH, VACUUM, OR FLUSH JOINTS TO REMOVE DIRT AND LOOSE DEBRIS.
- i. DO NOT SPALL MASONRY UNIT EDGES OR WIDEN JOINTS. REPLACE MASONRY UNITS WHICH BECOME DAMAGED.
- iv. POWER OPERATED ROTARY HAND SAWS AND GRINDERS ARE PROHIBITED. TROW AND HOLDEN PNEUMATIC MASONRY RESTORATION TOOLS MAY BE USED IF APPROVED BY THE ENGINEER AND ARCHITECT. QUALITY CONTROL PROGRAM SHALL INCLUDE PROVISIONS FOR SUPERVISING PERFORMANCE AND PREVENTING DAMAGE TO WORKER FATIGUE. QUALITY CONTROL PROGRAM WILL ALSO REQUIRE OPERATORS TO DEMONSTRATE ABILITY TO USE TOOLS WITHOUT DAMAGE TO MASONRY. OWNER OR ENGINEER MAY ELECT AT ANY TIME TO SUSPEND USE OF PNEUMATIC TOOLS FOR REMOVING MASONRY.

## 3.5 ADJUSTING AND FINAL CLEANING

- A. AT THE TIME OF POINTING THE BRICK, IMMEDIATELY REMOVE MORTAR, GROUT AND SEALANT FROM THE FACE OF THE MASONRY.
- B. USE ONLY TOOLS AND EQUIPMENT WHICH ARE CLEAN AND FREE OF HARDENED OR PARTIALLY HARDENED MATERIAL.
- C. CLEAN BRICK ONLY WITH FIBER BRISTLE BRUSHES AND WATER. USE NO ACIDS, DETERGENTS, OR OTHER CLEANING AGENTS.
- D. PROCEED WITH CLEANING IN AN ORDERLY MANNER, WORK FROM TOP TO BOTTOM OF EACH AREA AND FROM ONE END OF EACH ELEVATION T THE OTHER.
- E. PERFORM EACH CLEANING METHOD INDICATED IN A MANNER WHICH RESULTS IN UNIFORM COVERAGE OF ALL SURFACES, INCLUDING CORNERS AND CAPS, AND WHICH PRODUCES AN EVEN EFFECT WITHOUT STRAKING OR DAMAGE TO MASONRY SURFACES.
- F. DEFECTIVE WORK: ANY MASONRY POINTING THAT DOES NOT MATCH JOB SAMPLE PANEL AND/OR RESULT IN A CONSISTENT APPEARANCE WITH ADJACENT JOINT SURFACES WILL BE CONSIDERED DEFECTIVE. THE CONTRACTOR WILL CORRECT ALL DEFECTIVE AREAS TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL OCST TO THE OWNER.

## 3.6 DRILLING AND CORING MASONRY FOR METAL FABRICATION INSTALLATION:

- A. MASONRY CONTRACTOR SHALL COORDINATE HOLE LOCATIONS WITH METAL FABRICATOR. USE TEMPLATES AS REQUIRED TO ACHIEVE TRUE AND STRAIGHT HOLES OF APPROPRIATE DIAMETER FOR ALL METAL INSERTS.
- B. MASONRY CONTRACTOR SHALL PERFORM THE HOLE CORING, PLACEMENT, AND GROUTING OF ANCHORS.

## 3.7 ENGINEER'S OBSERVATION OF WORK:

- A. PRIOR TO BEGINNING SPECIFIC SCOPE ITEMS DESCRIBED HEREIN, PROVIDE TEST AREAS OF EACH SPECIFIC DETAIL FOR ENGINEER TO REVIEW AND APPROVE. APPROVED REPAIR SAMPLES SHALL BE MARKED AND USED AS THE STANDARD FOR CONTINUED WORK FOR EACH INDIVIDUAL DETAIL. PROVIDE AT LEAST 72 HOURS NOTICE OF INTENT TO BEGIN WORK TO ALLOW ENGINEER SUFFICIENT TIME TO COORDINATE SITE OBSERVATIONS.

## 3.8 CLEANING, PREPARATION, AND RE-COATING MASONRY:

- A. MANUFACTURERS: USE COATINGS REMOVAL SYSTEM MANUFACTURED BY MINERAL PAINT COATING MANUFACTURER. REFER TO MANUFACTURER'S INSTRUCTIONS FOR PROPER CLEANING AND SURFACE PREP PRIOR TO RECOATING TOWER.
- B. ALLOWABLE MANUFACTURERS AND PRODUCT SYSTEMS:
  - 1. KEIM SOLADIT EXTERIOR PAINT AND FINISHING SYSTEM (www.KEIM.COM).
  - 2. EDISON COATINGS EVERKOTE 300 SYSTEM (www.EDISONCOATINGS.COM).
  - 3. CATHEDRAL STONE MASON-RE POTASSIUM SILICATE COATING SYSTEM (www.CATHEDRALSTONE.COM).

## 3.9 CAST IRON PAINT AND MASONRY INTERFACE WITH CAST IRON LANTERN AND CATWALK:

- A. ISOLATION OF PAINTED IRON FROM MORTAR AND BRICK: AT CONTACT AREA BETWEEN CAST IRON CATWALK AND MASONRY TOWER BASE, PROVIDE A 0.375" THICK NEOPRENE RUBBER ISOLATION PLANE THAT ALLOWS MODEST DIFFERENTIAL EXPANSION AND CONTRACTION BETWEEN THE BLACK-PAINTED IRON AND THE WHITE-PAINTED MASONRY.
- B. DRILL HOLES INTO EXISTING CAST IRON RIBS TO ALLOW PASSAGE OF AN A316 STAINLESS STEEL TREADED ROD WRAPPED IN PLUMBERS TAPE AT THE CONTACT AREA WITH THE HOLE. BEND ROD TO CREATE A U-BOLT THAT WILL BE ANCHORED INTO STAINLESS STEEL COIL STRAP FASTENED INTO THE INSIDE FACE OF THE OUTER MASONRY WYTHE.
- C. ALLOWABLE MANUFACTURERS AND PRODUCT SYSTEMS:
  - 1. WARCO BILTRITE NEOPRENE FOR NEOPRENE BEARING PADS - AASHTO UNSUPPORTED NEOPRENE BEARING PADS - STYLE 71 -- 0.25" x 48" x 48" SHEET (WWW.BUY.WARCO.COM/OVERSTOCK-INVENTORY-SHEET-RUBBER/)
  - 2. SIMPSON STRONG-TIE FOR MSTA24 SS STAINLESS STEEL COIL STRAPS AND ½" DIAMETER A316 THREADED ROD;
  - 3. SHERWIN-WILLIAMS KEM-BOND HS UNIVERSAL METAL PRIMER AND SHERWIN-WILLIAMS PRO INDUSTRIAL GLOSS URETHANE INDUSTRIAL ENAMEL -- GLOSS BLACK.



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PHASE 2 - MARITIME HERITAGE GRANT  
BRICK MASONRY NOTES 2 OF 2

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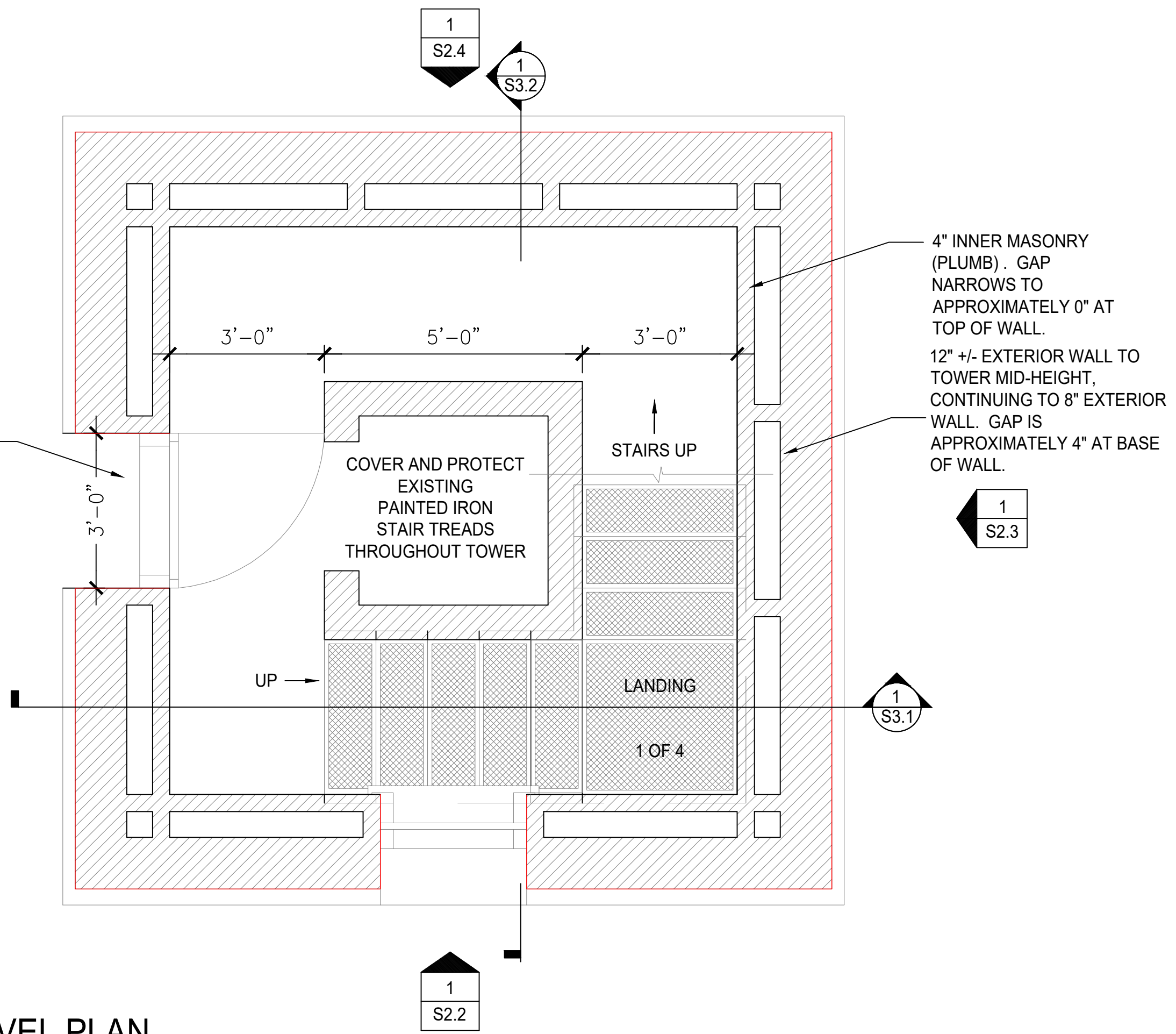
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PHASE 2 - MARITIME HERITAGE GRANT  
GROUND LEVEL PLAN

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SEE ELEVATION FOR DESCRIPTION OF BULGING MASONRY WHERE FORMER COVERED WALKWAY ROOF CONNECTED TO TOWER.

**1** GROUND LEVEL PLAN  
SCALE: 1/2" = 1'-0"



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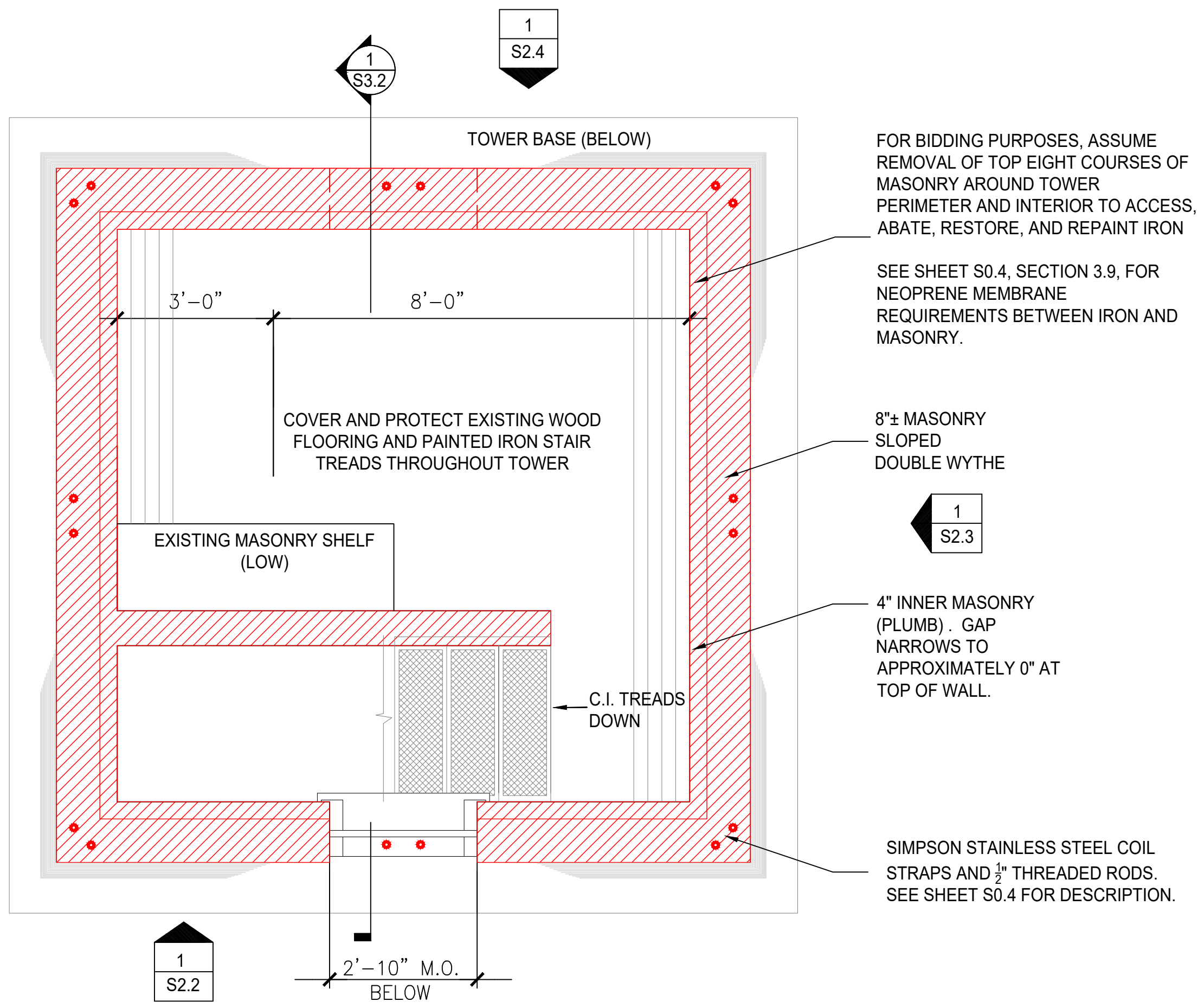
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PHASE 2 - MARITIME HERITAGE GRANT  
WATCH ROOM PLAN

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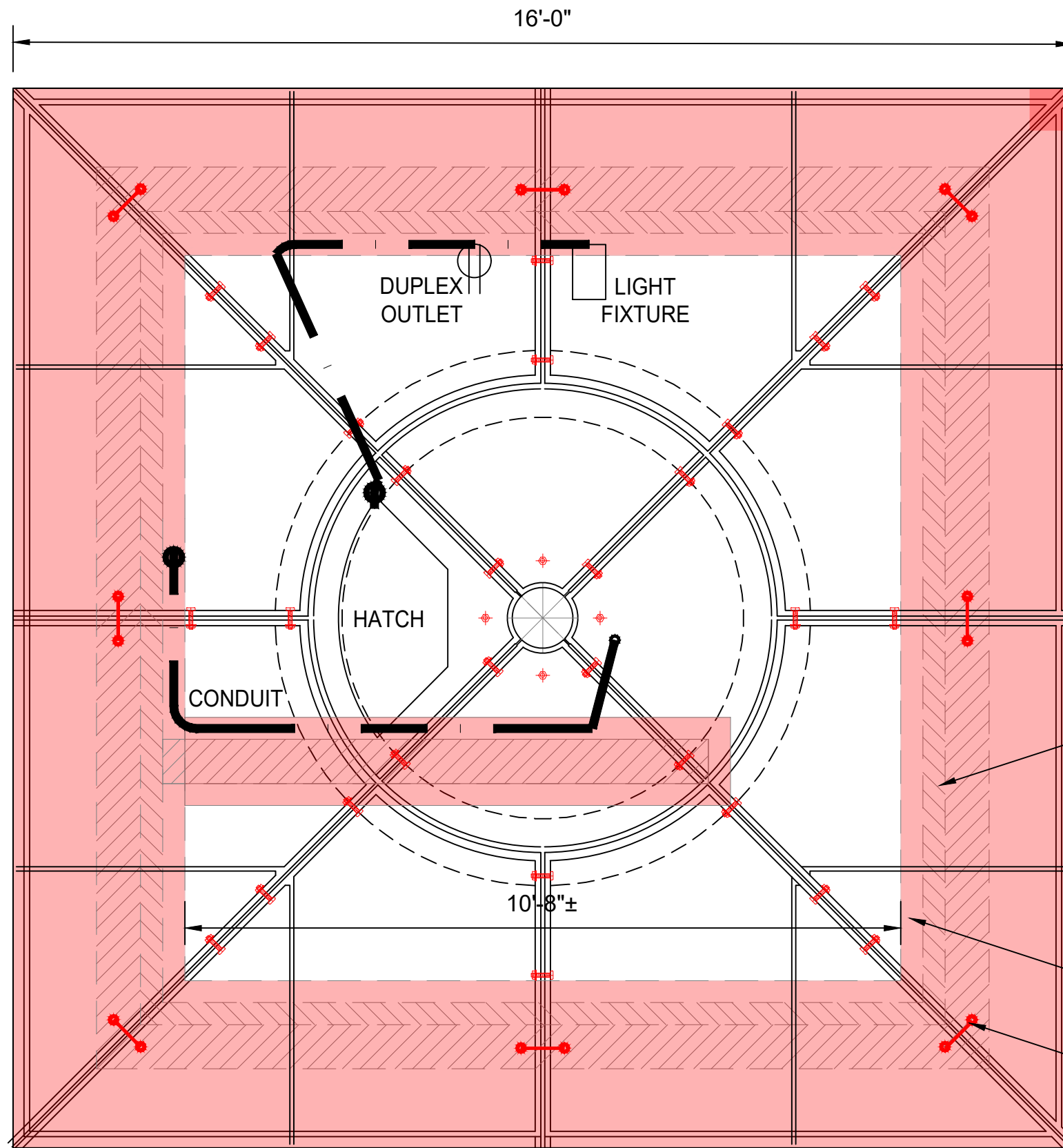
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**1** WATCH ROOM PLAN  
SCALE: 1/2" = 1'-0"





NOTES:

1. SCRAPE EXISTING LANTERN UNDERSIDE TO SSPC-SP3 REQUIREMENTS. USE POWER TOOLS WITH CAUTION TO MINIMIZE DAMAGE TO EXISTING SURFACES.
2. REPLACE BROKEN OR MISSING BOLTS IN KIND, BUT PROVIDE NYLON WASHERS EACH SIDE AND WRAP THREADS IN PLUMBER'S TAPE.
3. USE PRIMER AND PAINT SYSTEM PREVIOUSLY USED BY OWNER ON THE UNDERSIDE OF THE TOWER AND ON EXPOSED EXTERIOR SURFACES OF THE TOWER. NOTE THAT EXPOSED INTERIOR IRON IS FINISH PAINTED WHITE; WHILE EXPOSED EXTERIOR IRON IS FINISH PAINTED GLOSS BLACK.
4. NOTIFY ENGINEER ONE WEEK BEFORE BEGINNING WORK TO ALLOW TIME TO PLAN TRIP TO SITE.

SYMBOL KEY:

BRICK IN CONTACT WITH IRON  
PROVIDE NEOPRENE BARRIER  
BETWEEN BRICK AND IRON

SQUARE HEADED  
NUTS AND BOLTS  
CONFIRM CONDITION,  
REPLACE IF REQUIRED

AREA TO BE TREATED , WITH  
4" OVERLAP CONSIDERED

MASONRY TIE DETAIL WITH  
NEW HOLE DRILLED THROUGH RIBS



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PHASE 2 - MARITIME HERITAGE GRANT  
UNDERSIDE PLAN OF WALKWAY

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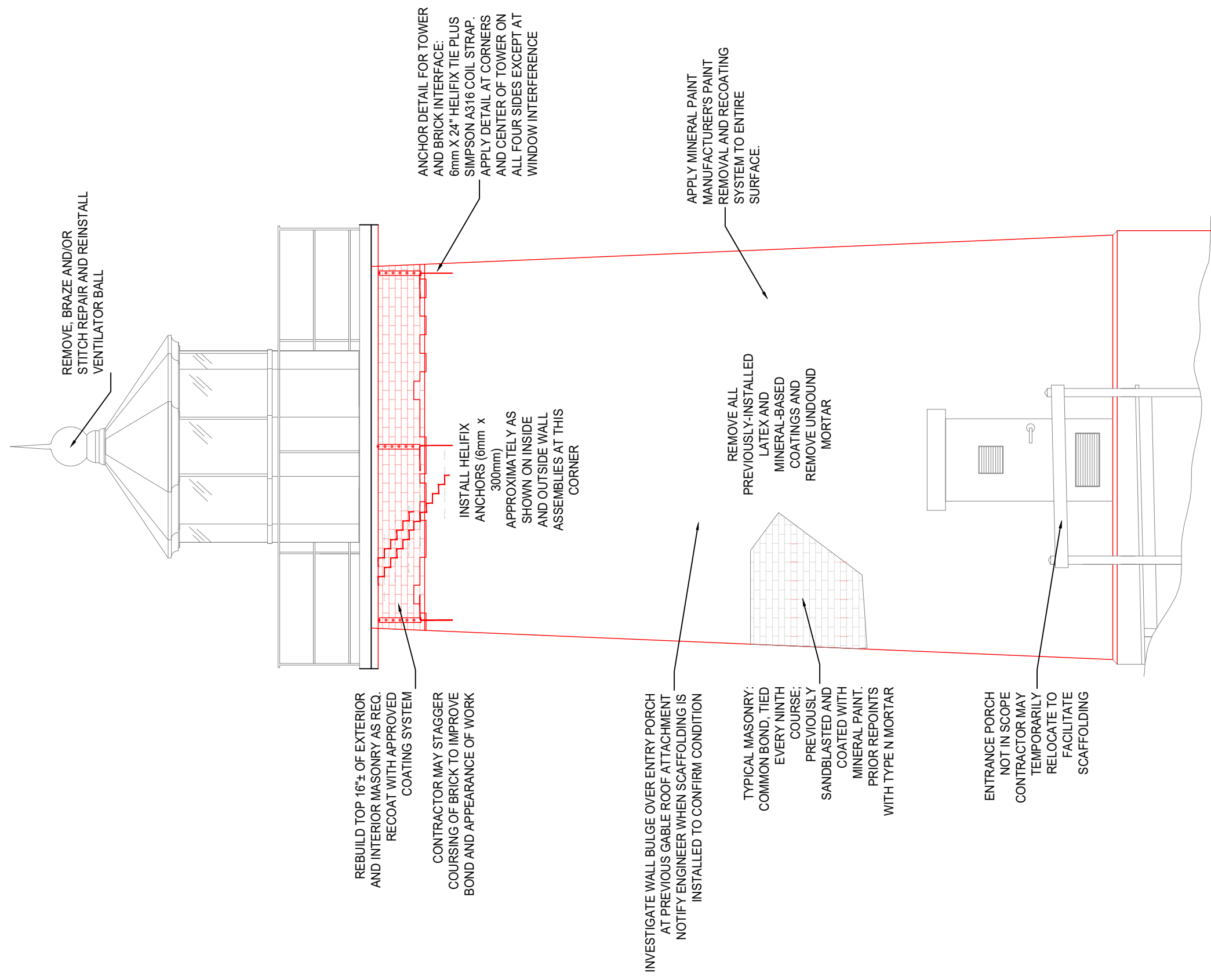
**1** UNDERSIDE PLAN OF WALKWAY AND WATCH ROOM REFLECTED CEILING PLAN

SCALE: 1/2" = 1'-0"

1

# WEST ELEVATION

SCALE: 1/2" = 1'-0"



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**PHASE 2 - MARITIME HERITAGE GRANT**  
**WEST ELEVATION**

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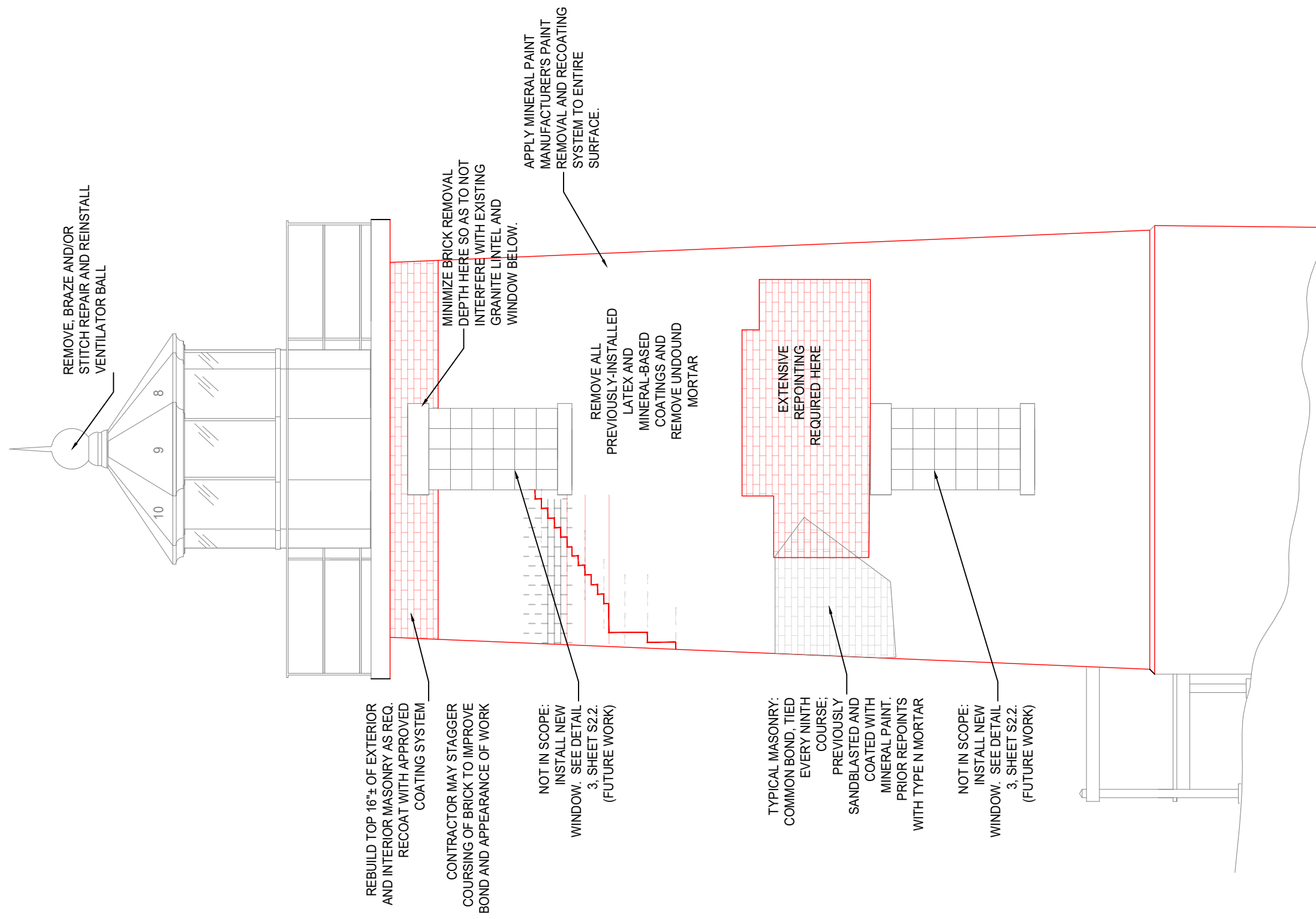
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# SOUTH ELEVATION

SCALE: 1/2" = 1'-0"



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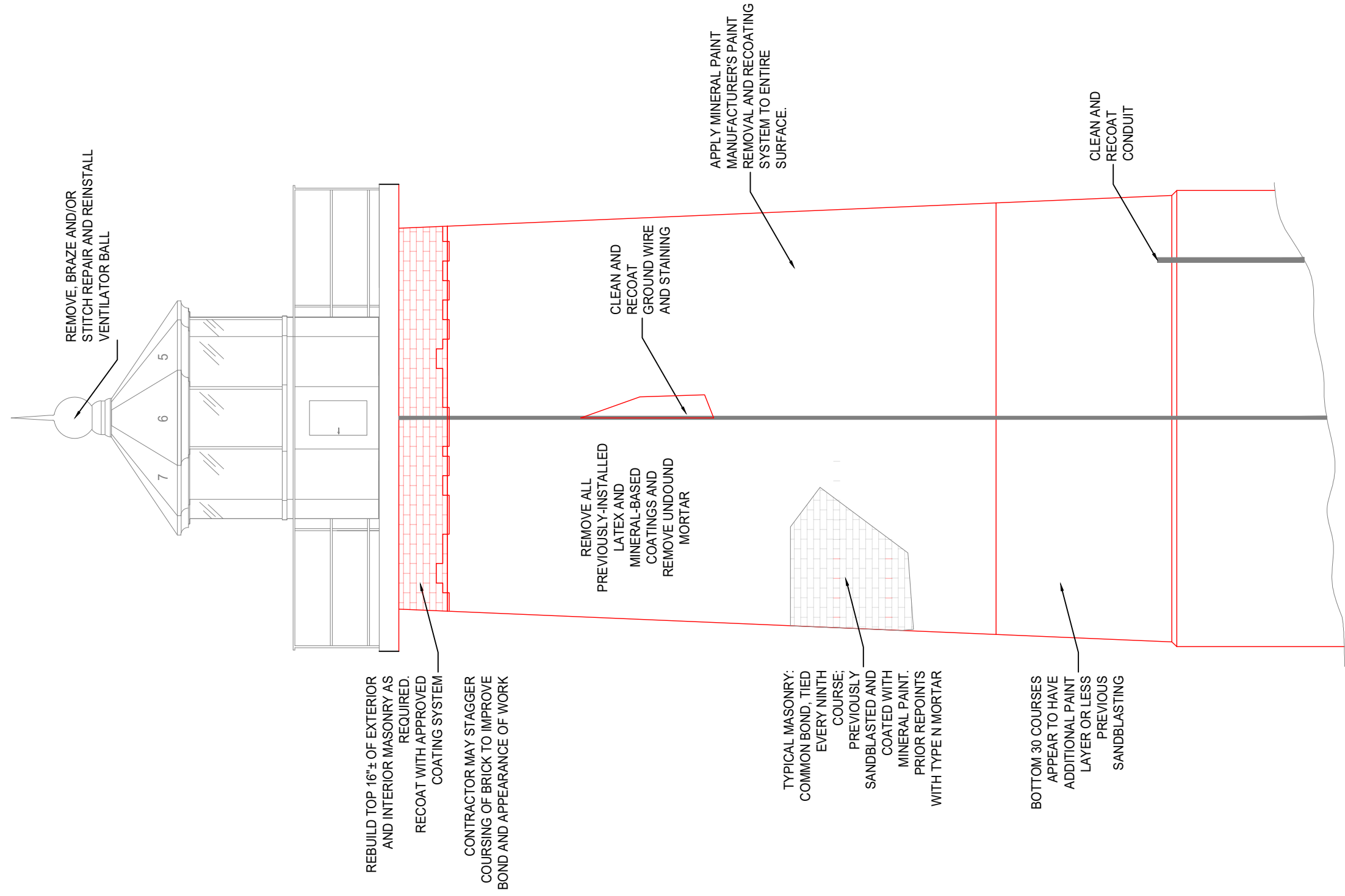
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# EAST ELEVATION

SCALE: 1/2" = 1'-0"



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**EAST ELEVATION**

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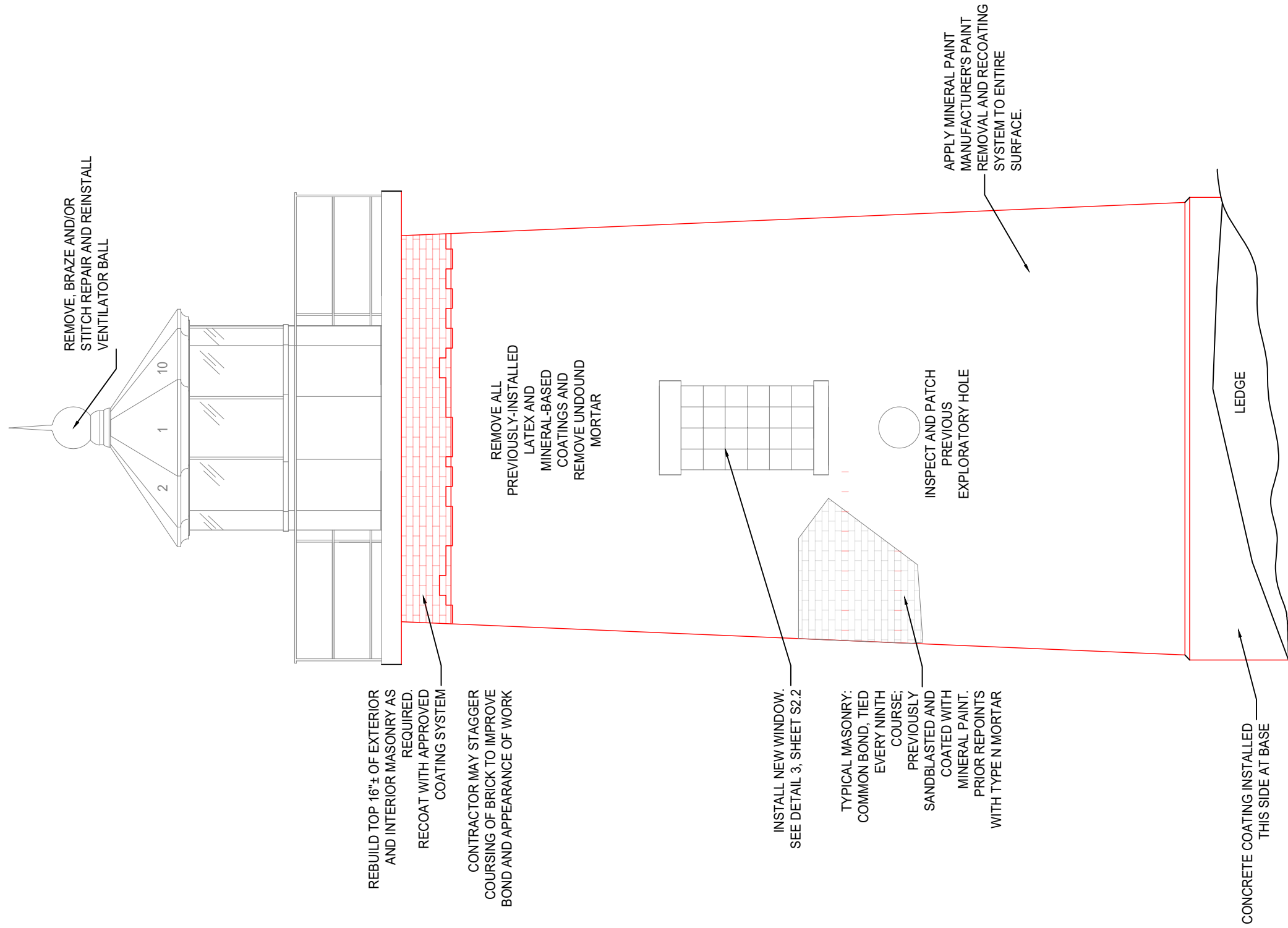
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# NORTH ELEVATION

SCALE: 1/2" = 1'-0"



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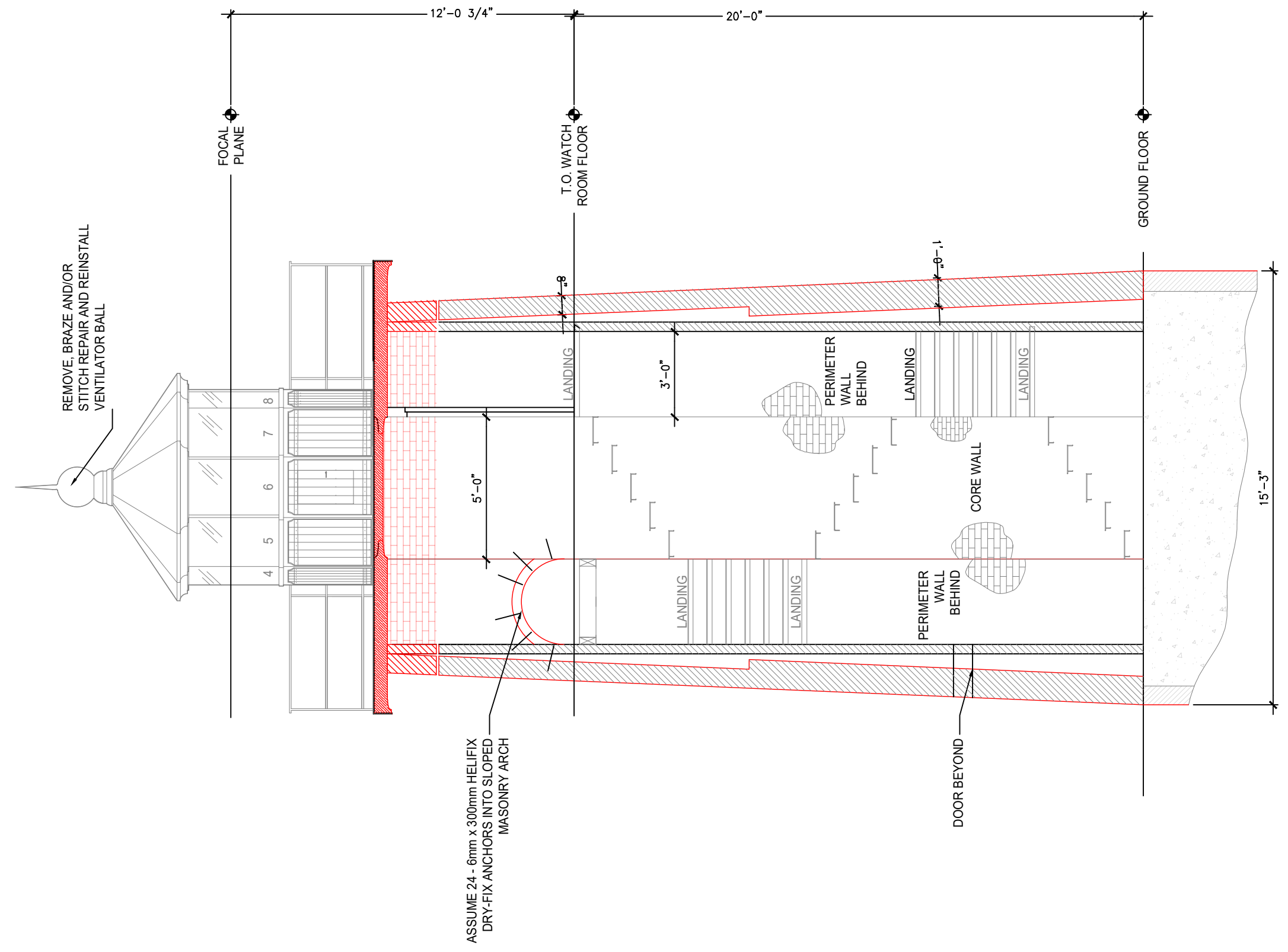
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**PHASE 2 - MARITIME HERITAGE GRANT**  
**NORTH - SOUTH SECTION**

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△	MM-DD-YY

SHEET  
**S3.1**  
SHEET 14 OF 16



**1** NORTH - SOUTH SECTION  
SCALE: 1/2" = 1'-0"





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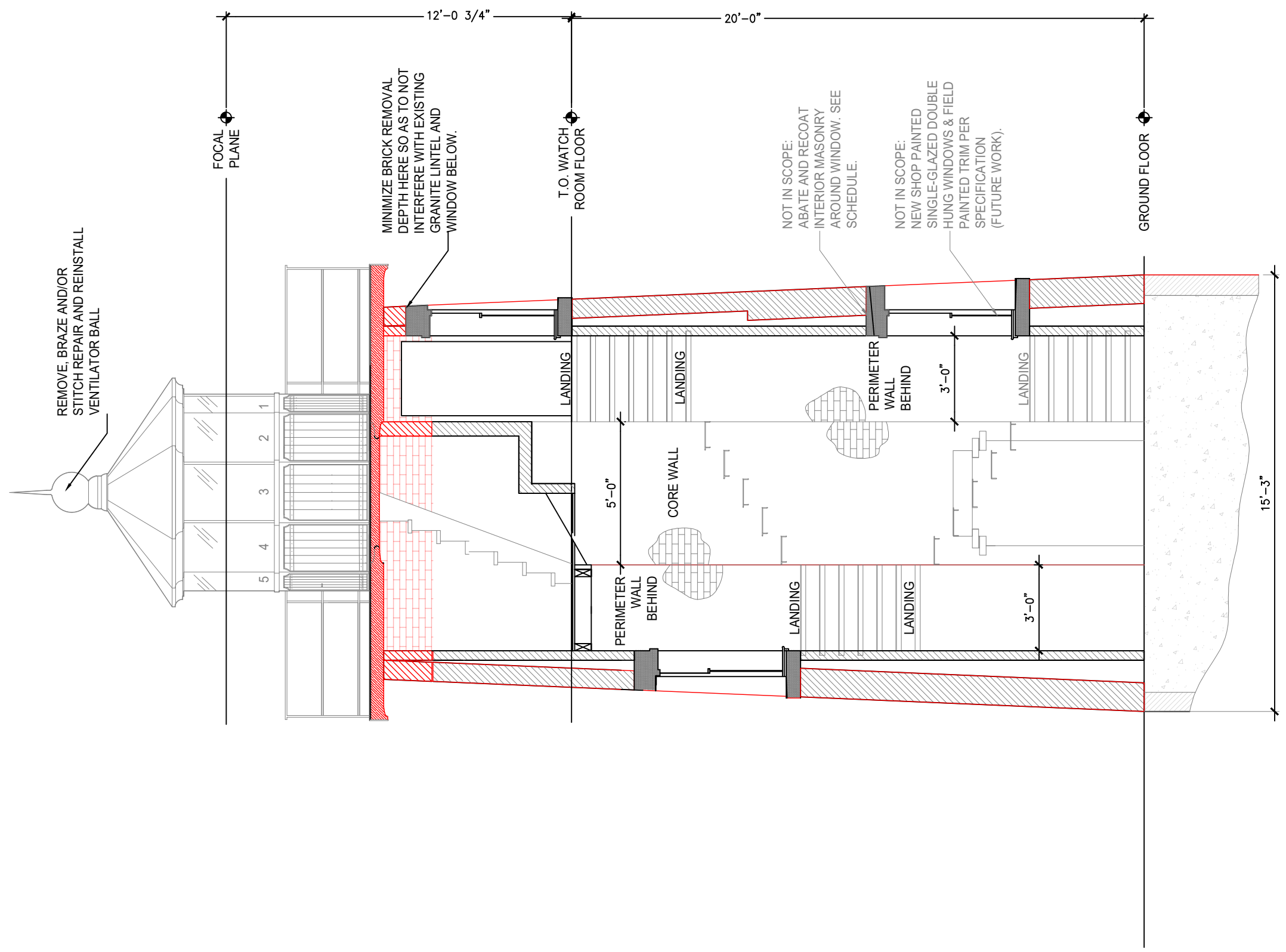
BURNT COAT HARBOR LIGHT STATION  
SWAN'S ISLAND, MAINE

PHASE 2 - MARITIME HERITAGE GRANT  
EAST - WEST SECTION

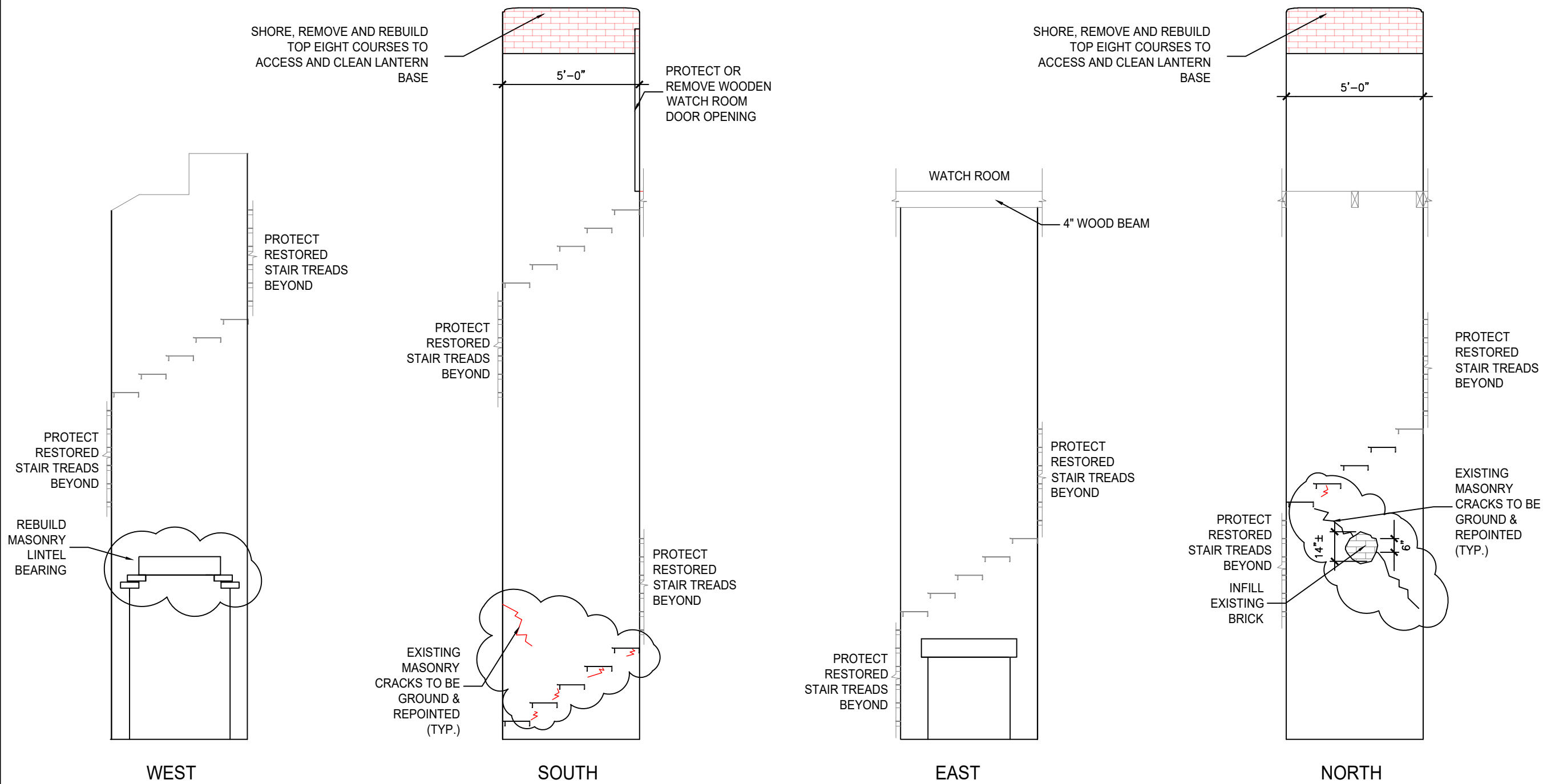
Project # 18-018  
Date: 08/17/18  
Issued for: BIDDING

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SHEET  
**S3.2**  
SHEET 15 OF 16



**1 EAST - WEST SECTION**  
SCALE: 1/2" = 1'-0"



**1** **INTERIOR CORE ELEVATIONS**  
 SCALE: 1/2" = 1'-0"