

SITE LOCATION MAP	
ZONING ACTUAL:	B
LOT AREA ACTUAL:	0.30 ACRES
BUILDING SIZE ACTUAL:	3000 s.f.
MATERIALS BRICK, CONCRETE, AND METAL FOR RESTORATION OF STAIRS, HANDRAILS, AND LIGHTING.	
SPACES/COMPONENTS BRICK AND CONCRETE STAIRS METAL HANDRAILS SOLAR LAMPPOSTS SIGNAGE POSTS RESTORATION CONCRETE SEWAGE LIDS	

PROJECT DATA

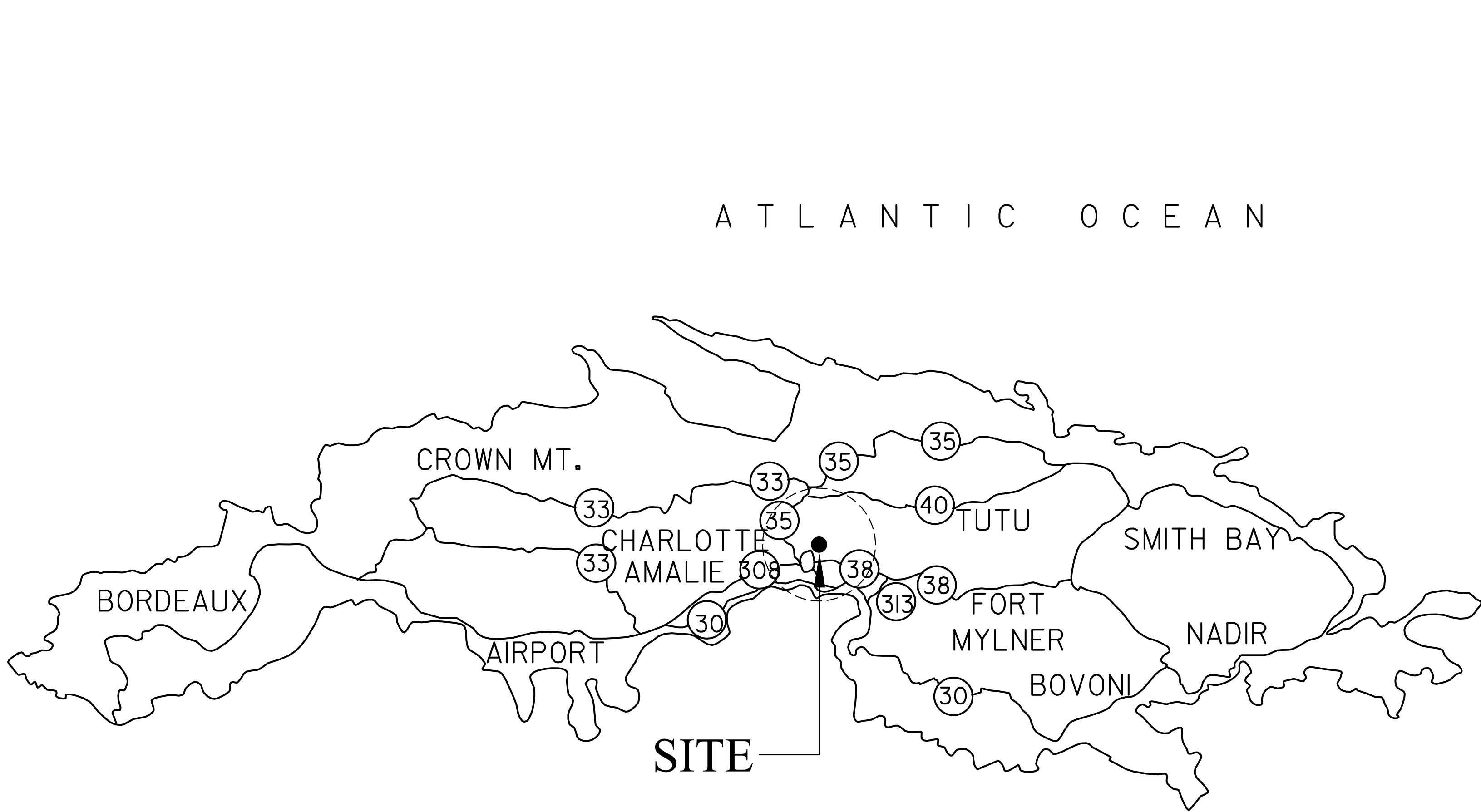
GOVERNMENT OF THE VIRGIN ISLANDS
OF THE UNITED STATES - APPENDIX B

VIRGIN ISLANDS PUBLIC FINANCE AUTHORITY

NINETY-NINE STEPS RENOVATION

STORE TAARNE GADE, KINGS QTR.

ST. THOMAS, U.S. VIRGIN ISLANDS



DRAWING INDEX	
C1	COVER SHEET
A0.1	GENERAL NOTES & GUIDELINES
A1	AS-BUILT PLAN
A2	PROPOSED SITE LAYOUT PLAN
D1	DETAILS

AGENCY PARTNERS	
HON. ALBERT BRYAN	GOVERNOR OF THE VIRGIN ISLANDS OF THE UNITED STATES
HON. LISA ALEJANDRO	ACTING COMMISSIONER DEPARTMENT OF PROPERTY AND PROCUREMENT
HON. NATHAN SIMMONDS	DIRECTOR OF FINANCE AND ADMINISTRATION VIRGIN ISLANDS PUBLIC FINANCE AUTHORITY
HON. DEREK GABRIEL	COMMISSIONER DEPARTMENT OF PUBLIC WORKS

PROJECT SCOPE	
RENOVATE THE EXISTING SITE CONDITIONS TO INCLUDE:	
- REMOVAL OF MORTAR, GRIME, AND DEBRIS ON BRICK STEPS	
- REMOVAL AND REPLACEMENT OF LOOSE/SUNKEN BRICKS ON STEPS	
- REMOVAL AND INSTALLATION OF HANDRAILS	
- INSTALL AND PAINT KNEEWALLS FOR SEATING AND RETAINAGE	
- INSTALL LAMPPOSTS AND ELECTRICAL CONDUIT FOR LIGHTING	
- REMOVAL OF DIRT AND DEBRIS TO IMPROVE DRAINAGE	
- REPLACE EXISTING SEWAGE LIDS	
- PAINT/REFURBISH EXISTING SIGNAGE POLES	
- PRESSURE WASH AND PAINT VIPFA OFFICE BUILDING	

APPLICABLE CODES	
ALL WORK SHALL CONFORM TO ALL APPLICABLE GOVERNING CODES, INCLUDING, BUT NOT LIMITED TO THE LATEST EDITIONS OF THE FOLLOWING:	
BUILDING: 2018 IBC/ VI TITLE 29	
AMERICAN CONCRETE INSTITUTE - ACI	

DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING 8244 SUB BASE ST. THOMAS , U.S. VIRGIN ISLANDS	
APPROVED:	DATE:
DEREK GABRIEL COMMISSIONER DEPARTMENT OF PUBLIC WORKS	
CHECKED BY:	
JERMAINE E. McCLEAN DISTRICT ENGINEER/ARCHITECT DEPARTMENT OF PUBLIC WORKS	

SHEET NO.	
C1 OF 5	

GENERAL CARE

THE CONTRACTOR SHOULD BE MINDFUL OF THE HISTORIC IMPORTANCE OF THE SITE AND CARE MUST BE TAKEN TO PROTECT ALL HISTORIC FEATURES. THEREFORE, THE CONTRACTOR WILL BE REQUIRED TO KEEP THE PROJECT SITE TIDY AND IN A WORKMAN MANNER.

BRICK RESTORATION

FOR THE REPAIR OF THE DAMAGED OR SUNKEN HISTORIC BRICKS, THE BRICKS SHOULD BE CAREFULLY REMOVED AND RESET IN A NEW LIME MORTAR BED. THE PRESERVATION GUIDELINE FOR REPAIRING HISTORIC BRICKS IS NOTED IN 2/A.01. SEE ATTACHED PDF. THE NOTES FOR THE REPLACEMENT OF MISSING HISTORIC BRICKS, RED AND YELLOW, SHOULD PROVIDE GUIDANCE ON SOURCES FOR THESE BRICKS.

THE VIRGIN ISLANDS STATE HISTORIC PRESERVATION OFFICERS AND OFFICES HAS A SMALL COLLECTION OF HISTORIC YELLOW BRICKS THAT CAN BE PROVIDED FOR RESTORATION WORK IN THE NEED FOR REPLACING UNSALVAGEABLE AND MISSING BRICKS. THE GOVERNMENT WILL NOT BE CHARGED BY THE CONTRACTOR FOR THE PROVISION OF THESE BRICKS.

FOR THE REPAIR OF THE EXISTING BRICKS, THE CONTRACTOR HAS THE OPTION OF RESTORING SALVAGEABLE BRICKS BY FLIPPING THE BRICKS OVER TO EXPOSE ITS INTACT UNDERSIDE TO THE STEPS' SURFACE. THESE BRICKS MUST BE RESTORED TO THE LEVEL SURFACE OF THE STEPS TREADS.

ALL THE MORTAR JOINT REPAIR WORK MUST BE DONE WITH A LIME BASED MORTAR WITH WHITE CEMENT; NOT GRAY.

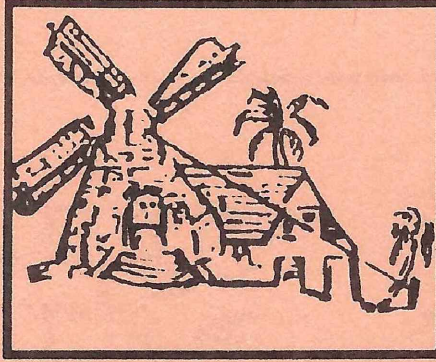
HANDRAIL INSTALLATION

THE NEW HANDRAIL POSTS MUST BE MOUNTED IN THE EXISTING POST HOLES THAT EXIST ON THE WEST SIDE OF THE 99 STEPS. FOR THE EAST SIDE POST HOLES, THE HOLES NEED TO BE CORE DRILLED AND NOT JACKHAMMERED OUT. ALTERNATIVELY, THE POST ON THE EAST SIDE OF THE STEPS CAN BE MOUNTED IN THE DIRT ADJACENT TO THE STEPS.

THE HANDRAIL END CURVE DETAIL MUST BE AT THE START AND END OF ALL THE RAIL RUNS, TO INCLUDE THE SIDE LANDINGS.

SWALES CLEARING

IT IS RECOMMENDED TO APPLY THE USAGE OF HIGH PRESSURE WATER AND VACUUM TRUCKS TO ASSIST WITH THE REMOVAL OF HEAVILY IMPACTED DIRT FROM THE DRAINS AND SWALES TO RESTORE THE FULL FUNCTIONALITY OF DIRECTING STORMWATER RUNOFFS AND DRAINAGE THROUGH THE SITE.

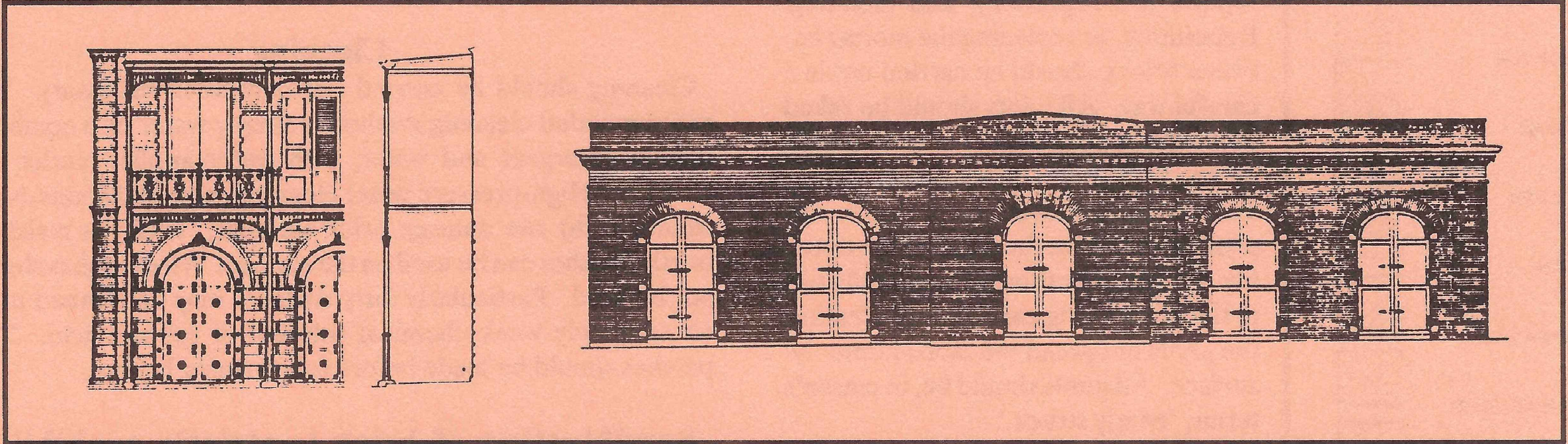


PRESERVATION GUIDELINE 4
Division for Archaeology and Historic Resources
Virgin Islands Department of Planning and Natural Resources

REPAIR, CLEANING, AND REPOINTING OF BRICK WALLS

There are few brick or brick-faced buildings in the Virgin Islands. However, there are a number of outstanding examples of mainly 19th-century brick buildings, mostly located in commercial areas. While problems of treatment come up rarely, greater care than ever must be taken for the preservation of these buildings.

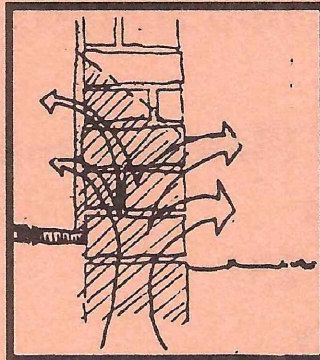
drainage. Badly damaged or deteriorated brick, should be replaced in kind with bricks resembling the original (or in some cases, original bricks can be turned around to expose less deteriorated faces). All mortar joints should be sound and well-maintained.



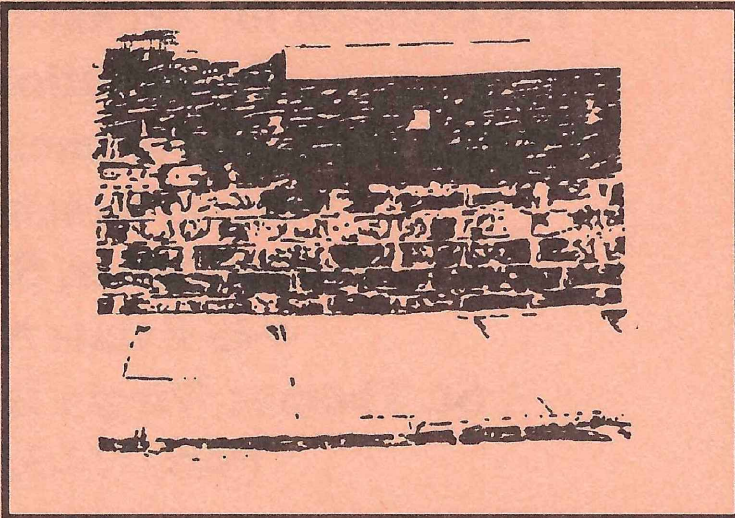
Although brick buildings are rare in the Virgin Islands, there are several outstanding examples. These are both on Kronprindsensgade, in Charlotte Amalie.

General Problems

Brick buildings often consist of brick veneers over rubble masonry cores. Whether all brick or brick-veneer, however, they share many of the characteristics of rubble walls. Initial concerns are water penetration into walls. Walls should be carefully examined for indications of leaking roofs or gutters or damp foundations. Efforts should then be made to correct such problems either by repairing roof problems or providing better



As with rubble walls, brick walls are subject to moisture problems. A damp-proof course can cut down on rising damp.



Efflorescence, or surface salt deposits - caused by rising damp.

Mortar and Mortar Mixes

It is important that the mortar for repair of deteriorated brick joints match the original. This usually means a high-lime-content mortar following the following specifications:

Mortar

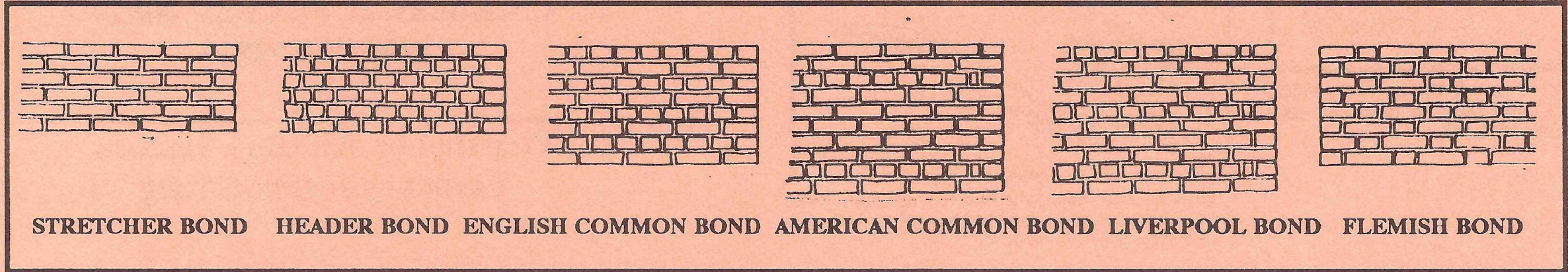
A) Portland cement: ASTM C 150, Type 1, White

B) Lime: ASTM C 207, Type S, high plasticity

C) Sand: ASTM C 144, fine washed

D) Admixture: Use a water reducing and plasticizing agent to reduce water content and drying shrinkage. "Omicron Mortar proofing," a producer of Master Buildings Company or Equivalent. Follow manufacturer's instructions for use.

E) Potable water: Free of impurities and organic material.



Some typical brick bond patterns - created by the way in which the brick was laid. It is important to duplicate the original pattern when repairing or rebuilding brick walls.

Proportioning

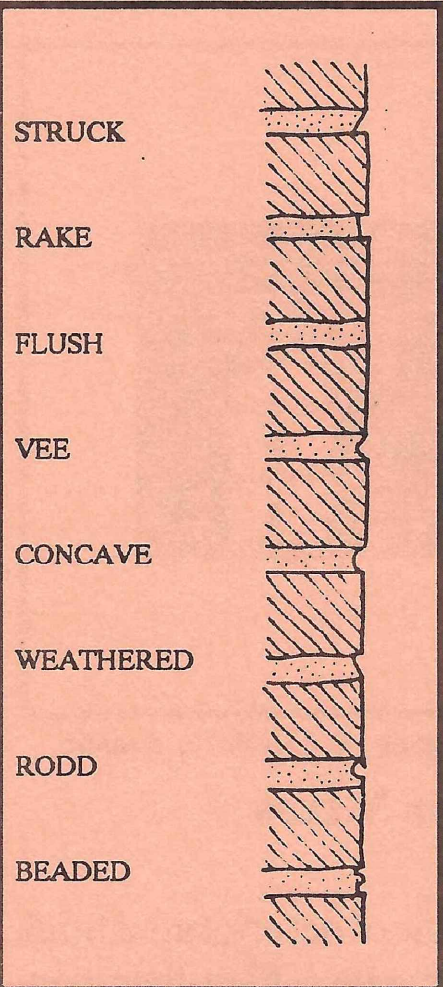
A) 1 part white Portland cement; 5 parts lime; 9-10 parts sand, recommended mix. A higher lime content is also possible and in many cases desirable.

B) Sample areas should be tested and examined by the architect or supervisor prior to settling on the final mix.

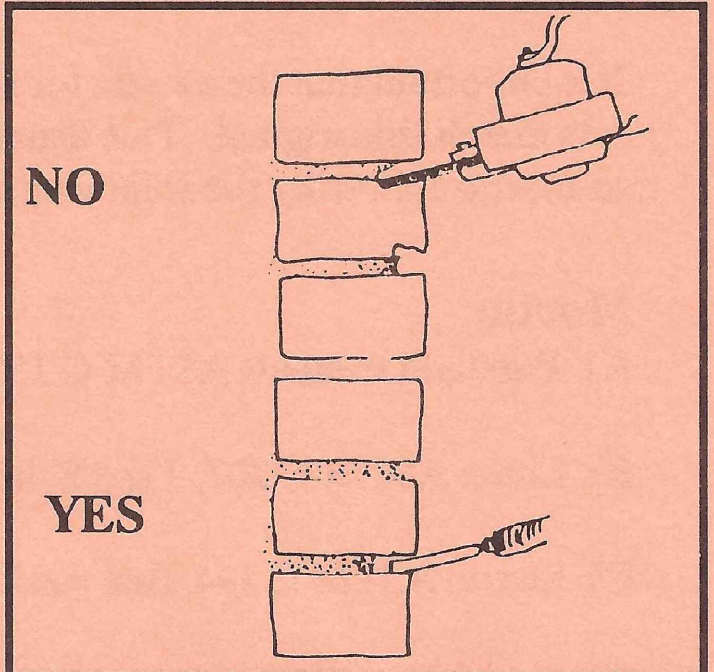
It is recommended always that a test patch be made in areas to be treated. If any doubts exist, the Division for Archaeology and Historic Preservation in the Department of Planning and Natural Resources is available for consultation.

Repointing

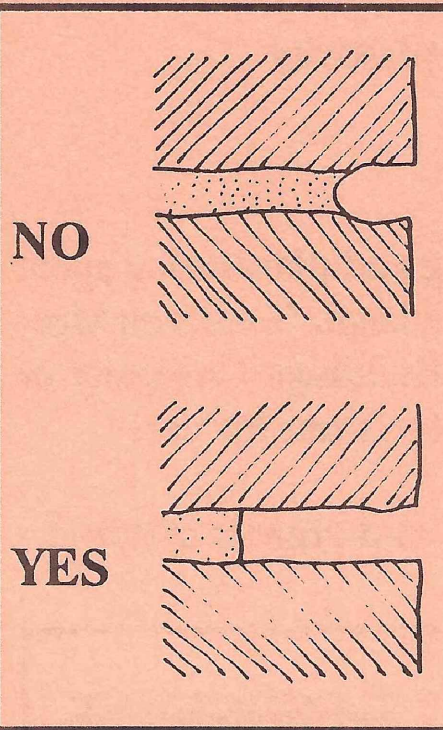
The main concerns for brick wall repairs are repointing and cleaning. Repointing, or replacing the mortar between bricks, should be carried out in a careful way. All joints should be raked by hand and no machines or saws should be used. Using a chisel, loose mortar should be removed to a depth approximately twice the width of the opening. New mortar should be carefully laid in the joints being careful not to feather the joints or spread the mortar onto the surface. All joints should be, in mason's terms, "neatly struck."



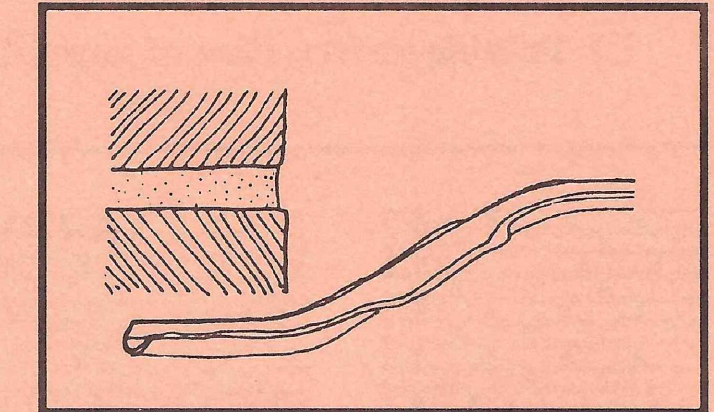
Traditional joint profiles. "Concave" and "Weathered" are probably the most common historic joints in the Virgin Islands. Occasional "Tooled" (either "rodded" or "beaded") are also common historic joints.



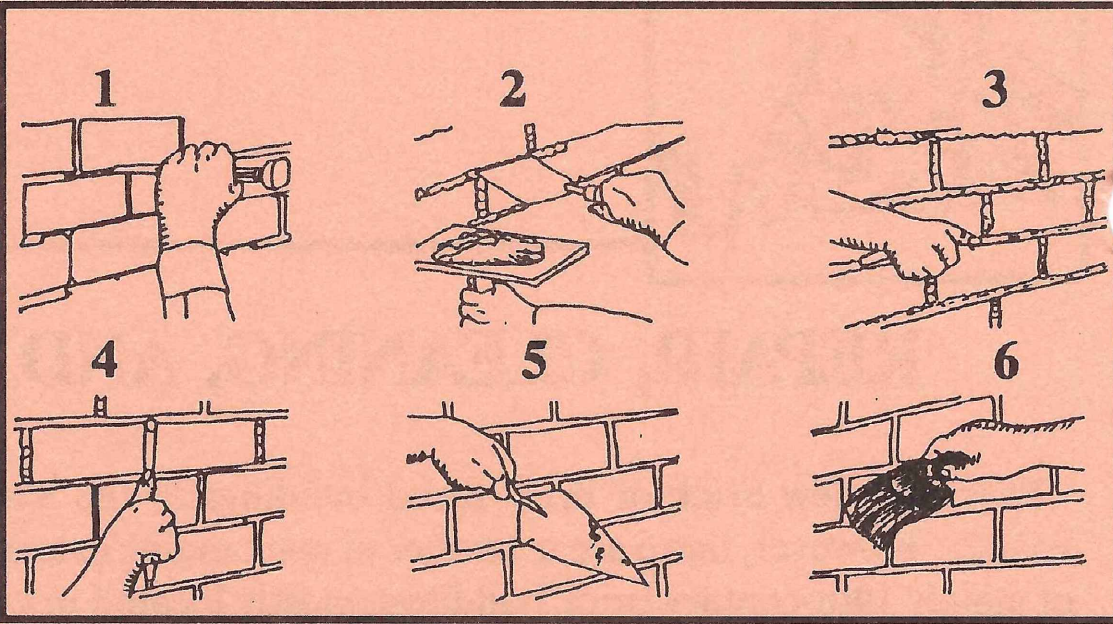
Brick joints should be raked out to 2 1/2 times their width using a chisel. Mechanical means, such as circular masonry saws, can badly damage brick surfaces.



Don't break the surface of the brick. Be sure to rake out to a sufficient depth.



Unless your building had an unusual joint type, a concave joint such as this - obtained with a common jointer - is best.



The six steps for repointing, from top left: 1) remove loose mortar; 2) pack in new mortar following recommended mix; 3) apply jointer to horizontal joints; 4) apply to vertical joints; 5) remove excess mortar; 6) wait 2 hours, then brush and wash clean.

Cleaning

Cleaning should be carried out only when necessary. The recommended cleaning method is simply water or a combination of detergent and water, with water applied under low pressure. High-pressure water cleaning (over 1000 pounds per square inch) can damage brick surfaces. If dirt is resistant, bristle brushes can be used on the surface. Wire brushes should not be used. Particularly dirty surfaces may be cleaned using an extremely weak chemical solution of sulfuric acid. Test patches should be made before full cleaning begins.

Sandblasting of brick is strictly prohibited.

Sandblasting mars the brick surface, altering its character altogether. Extremely porous or soft bricks or bricks that have been previously sandblasted can be treated with a coat of lime wash, following the instructions for plaster walls set out in a separate guideline. Painting with a flat acrylic latex, water-based paint is also recommended.

For further information contact:

The Division for Archaeology and Historic Preservation
Virgin Islands Department of Planning and Natural Resources
Nisky Center, Suite 231
#45 Estate Nisky
St. Thomas, Virgin Islands 00802
(809)774-3320
or
115 Watergut Homes
Christiansted, St. Croix 00820
(809)773-7081

Prepared by William Chapman
Layout by Jeanne Strong

1 GENERAL NOTES

NO SCALE

2 BRICK PRESERVATION GUIDELINE

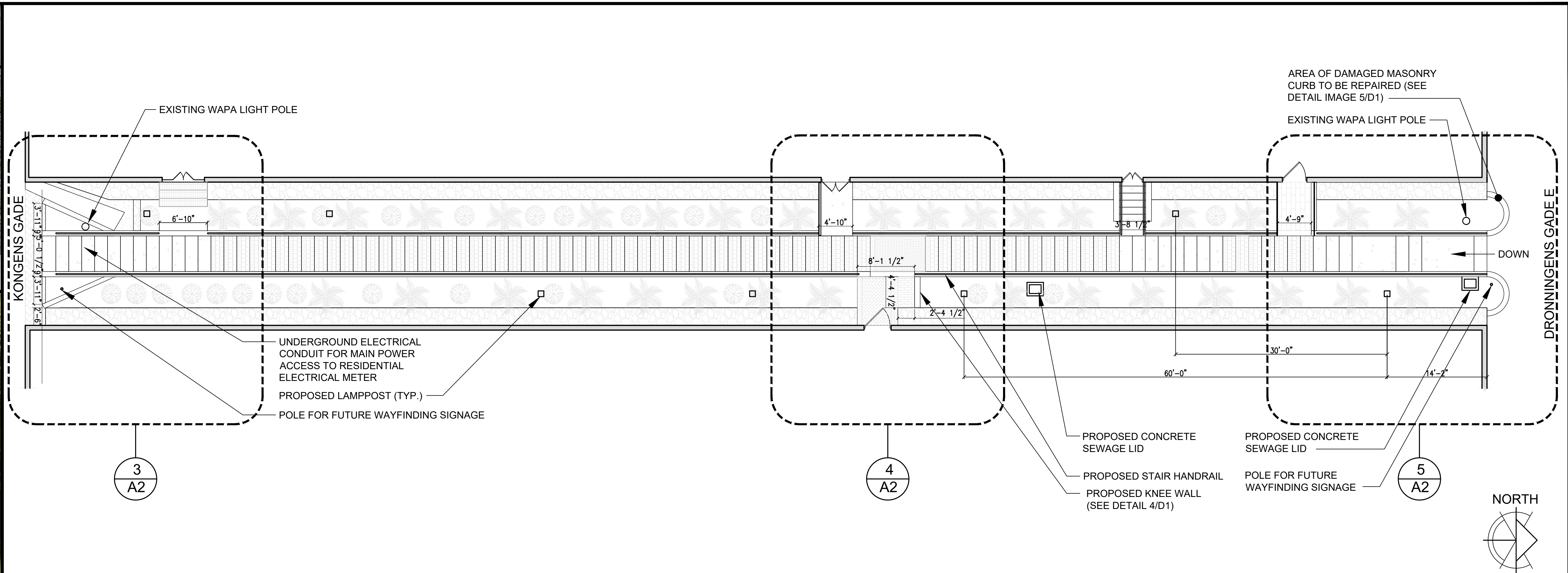
NO SCALE



A STAIR HANDRAIL

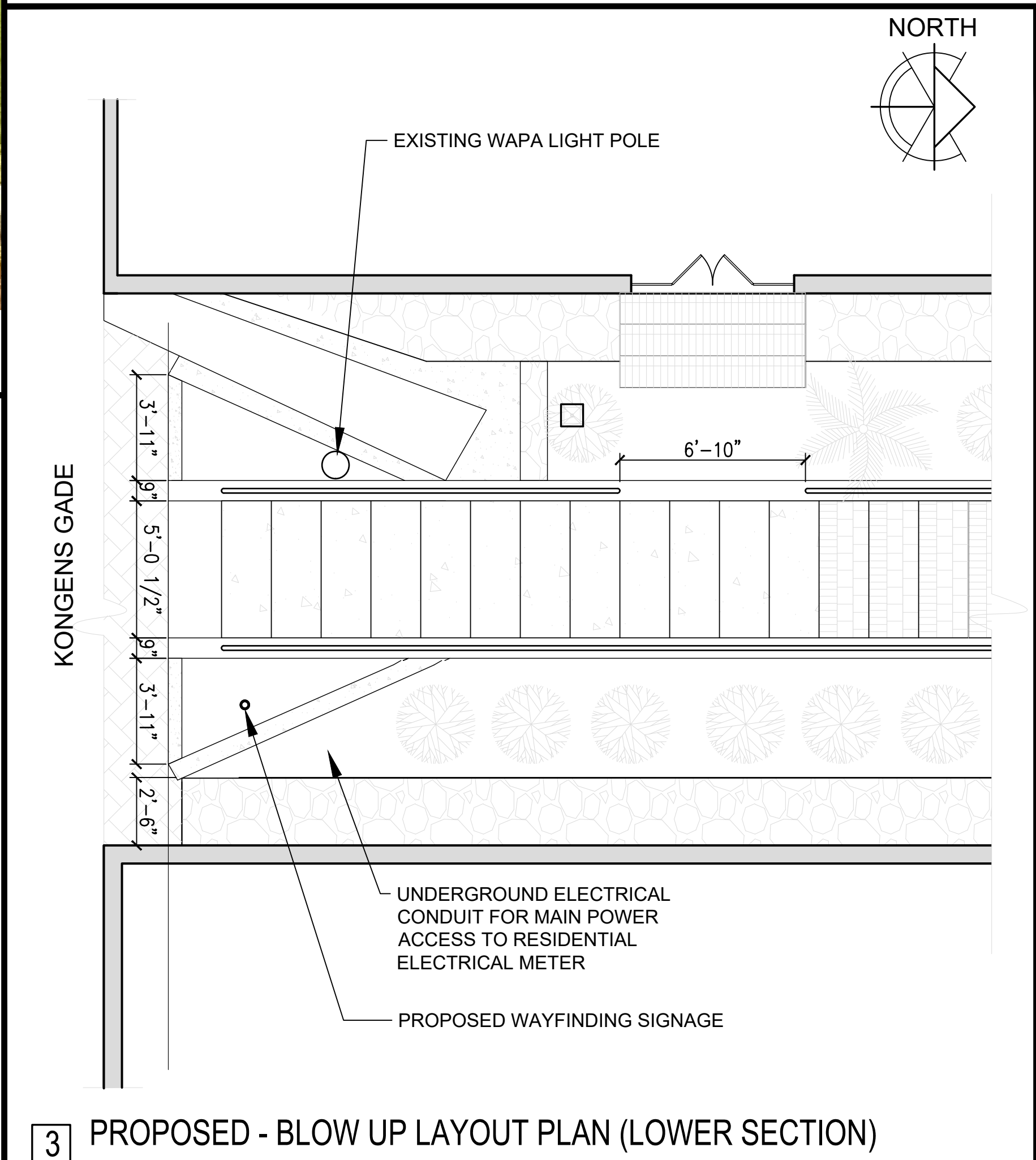


B SOLAR LIGHTING LAMP POST



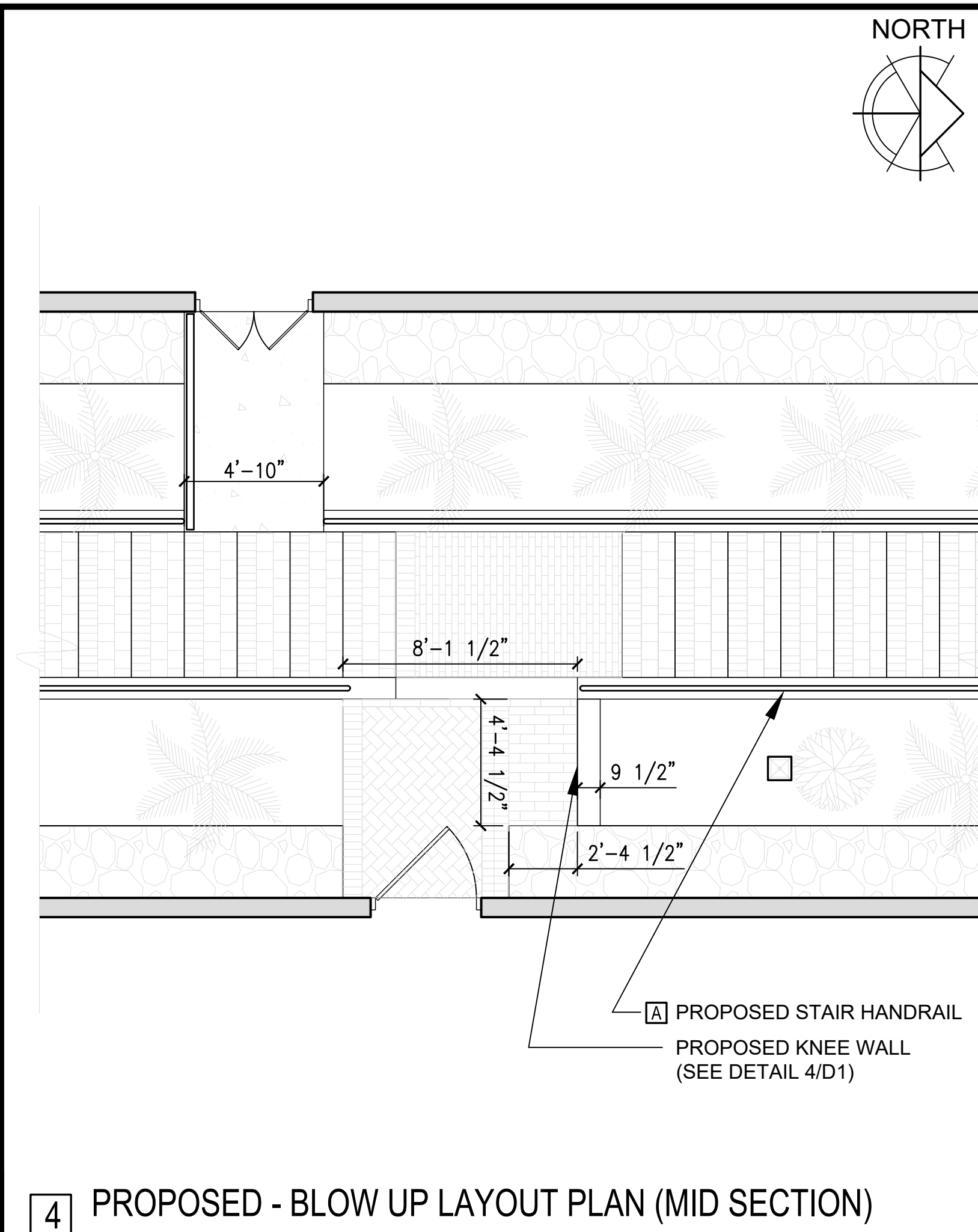
1 PROPOSED - OVERALL LAYOUT PLAN

1/8" = 1'-0"



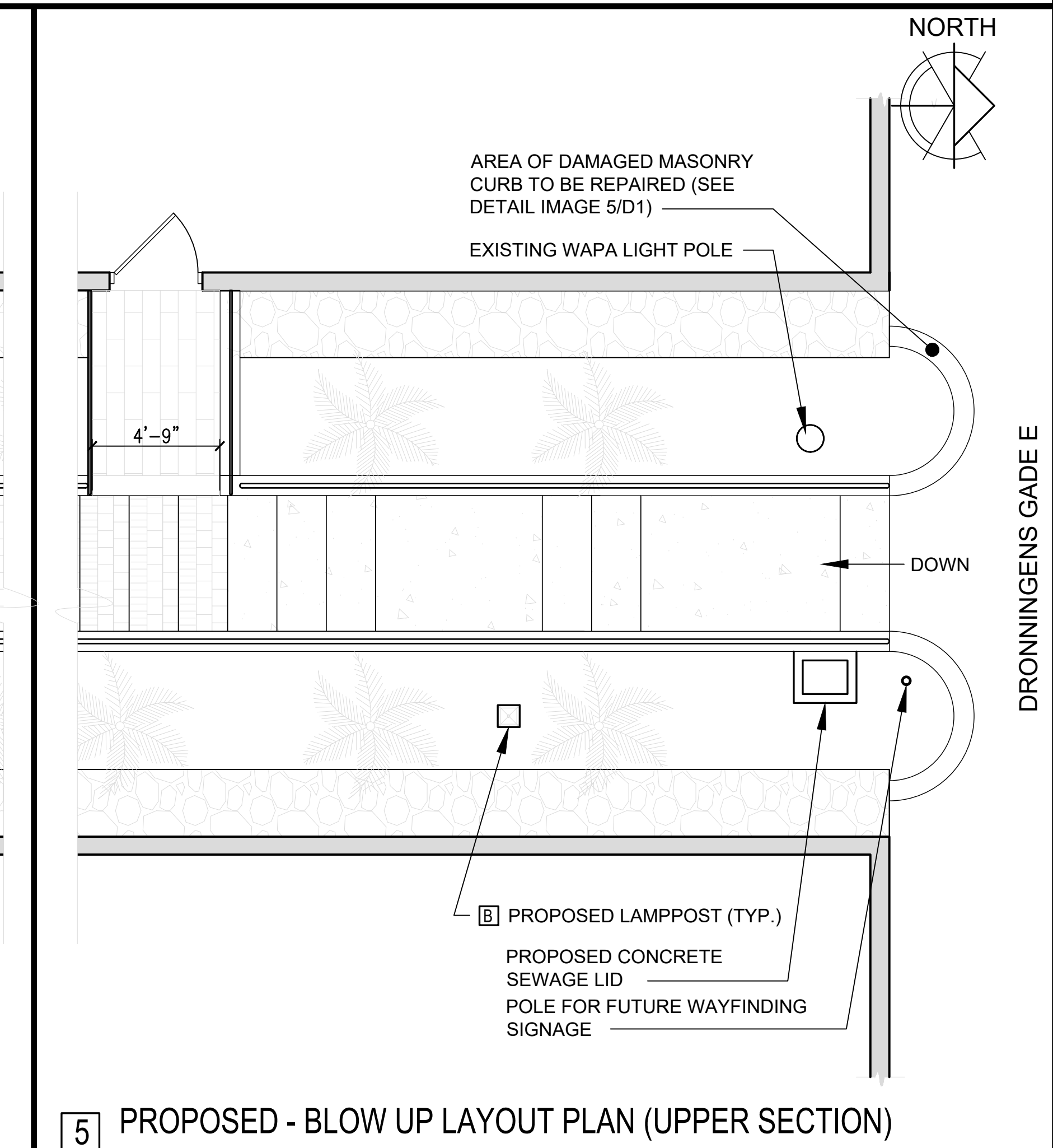
3 PROPOSED - BLOW UP LAYOUT PLAN (LOWER SECTION)

1/4" = 1'-0"



4 PROPOSED - BLOW UP LAYOUT PLAN (MID SECTION)

1/4" = 1'-0"



5 PROPOSED - BLOW UP LAYOUT PLAN (UPPER SECTION)

1/4" = 1'-0"

2 PROPOSED - IMAGES

NO SCALE



A LOW MASONRY CURB TO BE REPAIRED



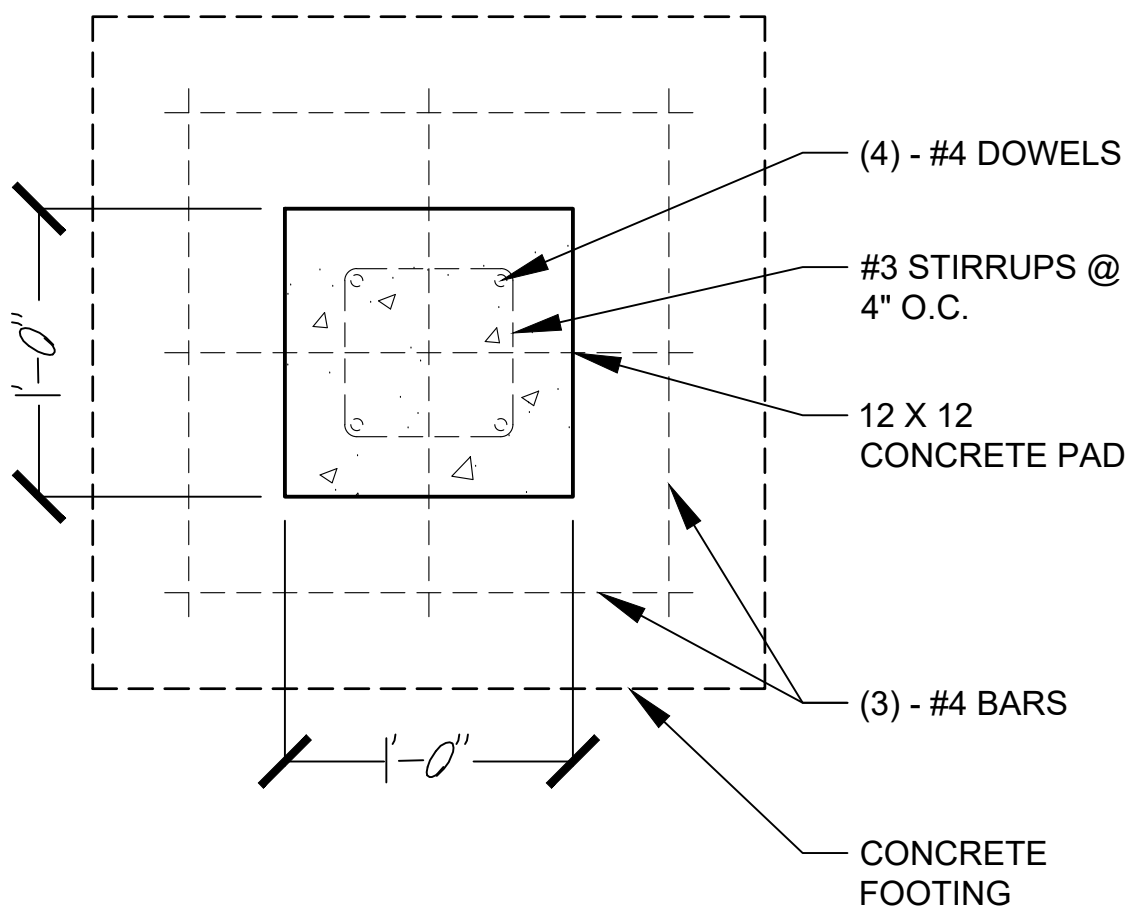
B SAMPLE AREA FOR MORTAR LAYER REMOVAL TO RESTORE NATURAL BRICK APPEARANCE

MATERIAL STRENGTHS

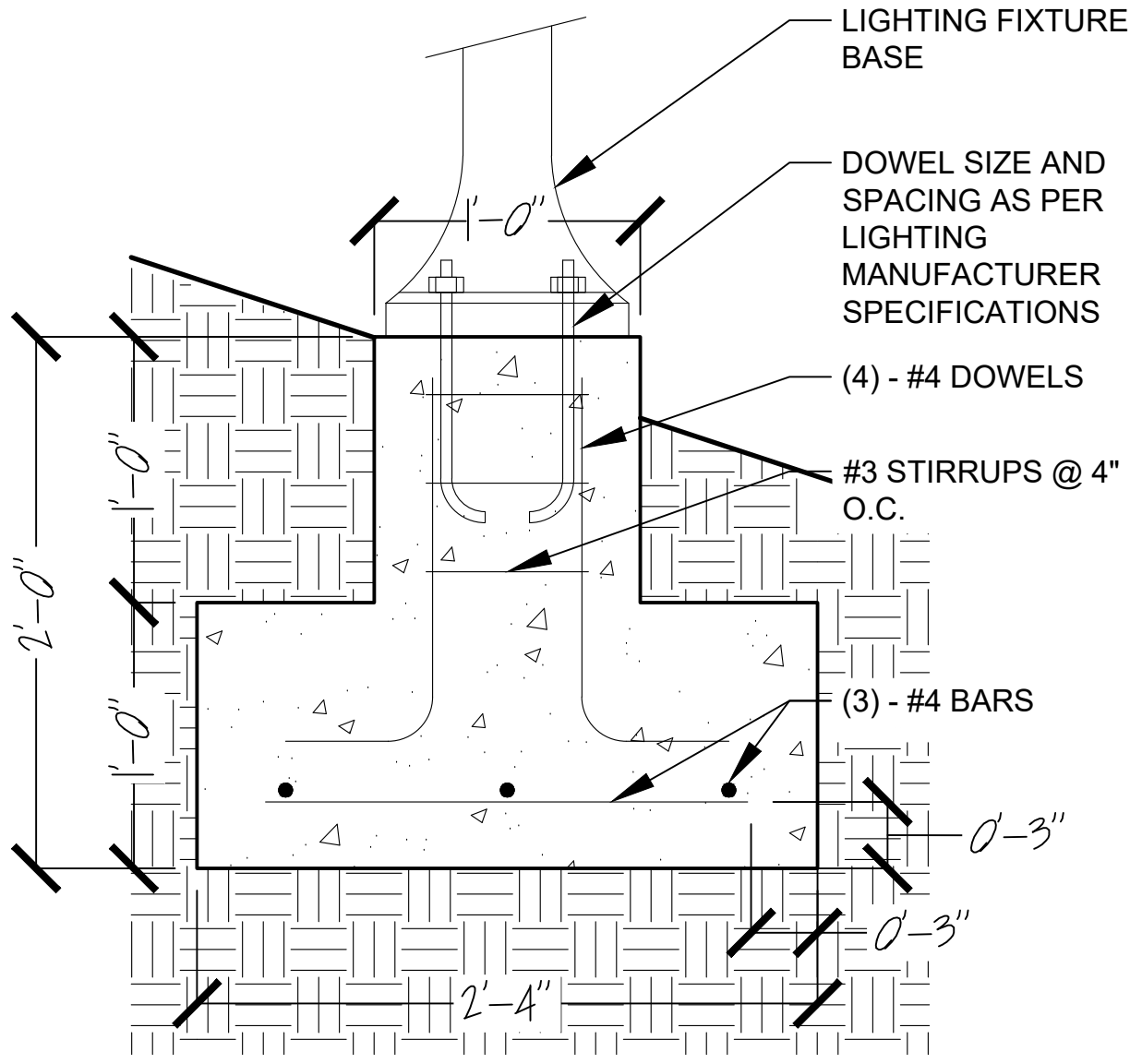
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF ($F'_c = 3,000$ PSI).
2. ALL REINFORCING STEEL SHALL BE GRADE 60 ($F_y = 60,000$ PSI). TIES AND STIRRUPS SHALL BE GRADE 40 ($F_y = 40,000$ PSI).
3. ALL FRAMING LUMBER SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE NO. 2 DENSE WITH MAXIMUM BENDING STRESS $F_b = 1,400$ PSI FOR REPETITIVE MEMBERS AND $F_b = 1,200$ PSI FOR SINGLE MEMBERS, $F_c = 660$ PSI.
4. ALL STRUCTURAL PLYWOOD SHALL BE PRESSURE TREATED STRUCTURAL I EXTERIOR GRADE.

C MATERIAL STRENGTH S NOTES

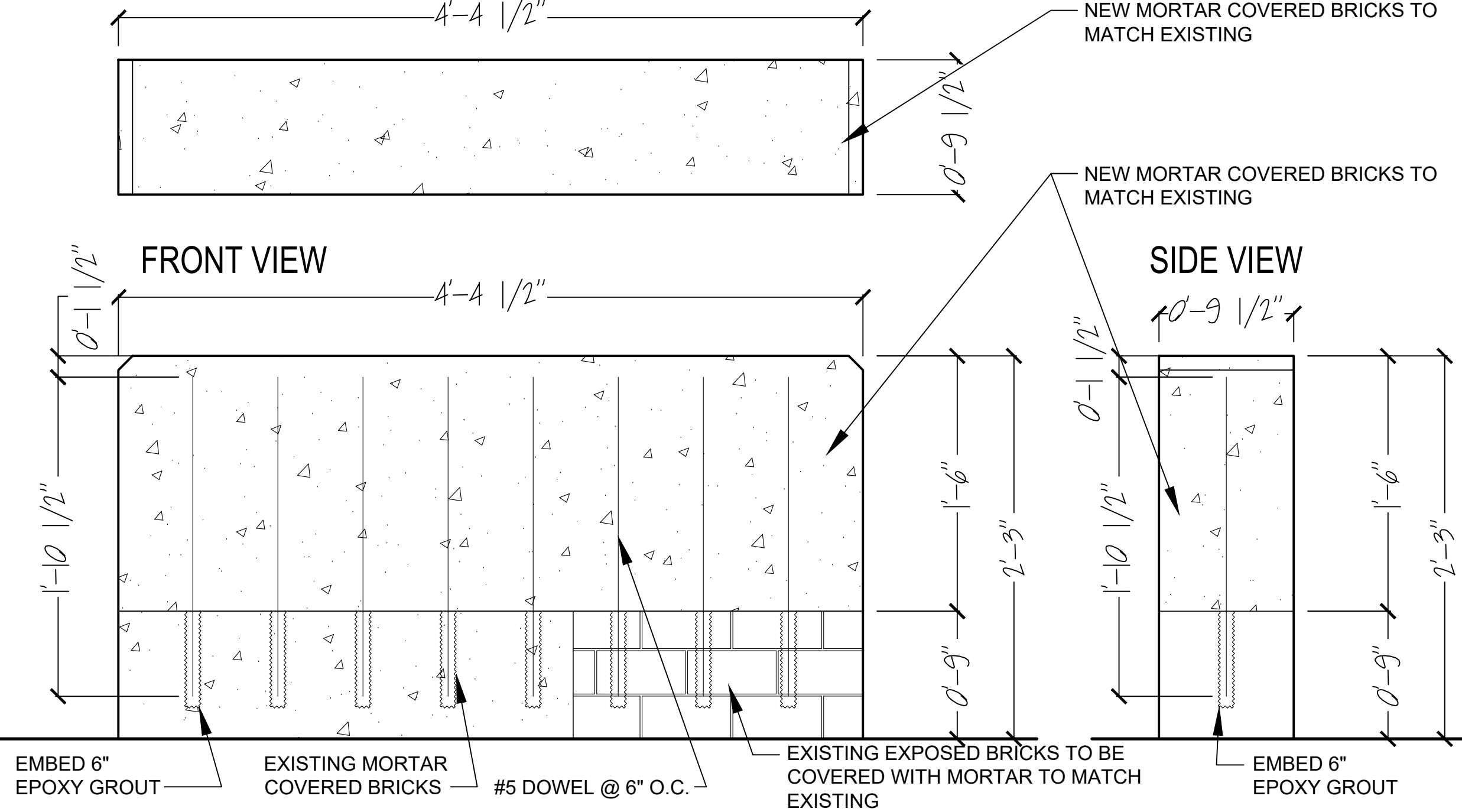
PLAN VIEW



SECTION VIEW

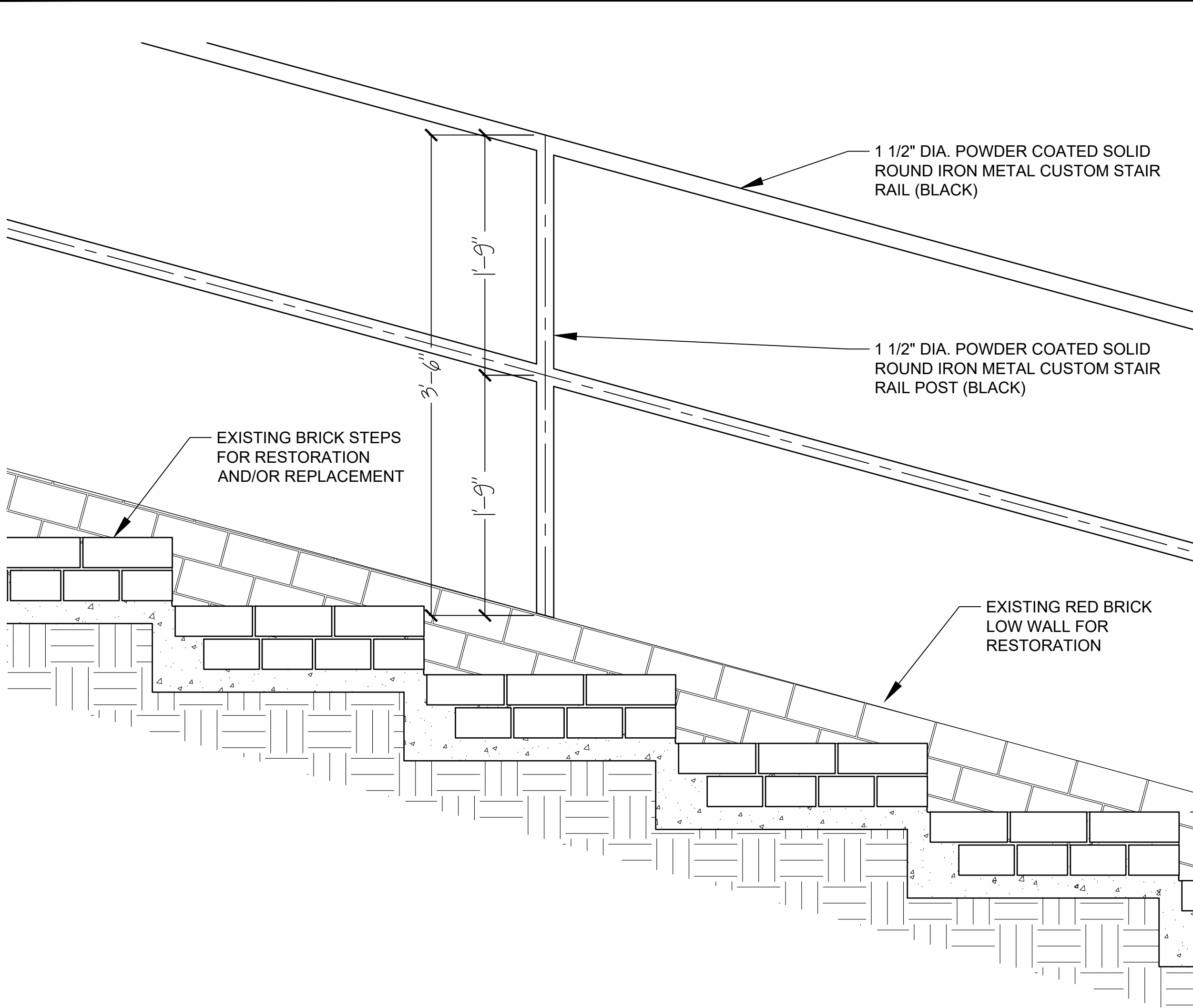


PLAN VIEW



3 DETAILS - CONCRETE PAD FOR SOLAR LAMPOSTS

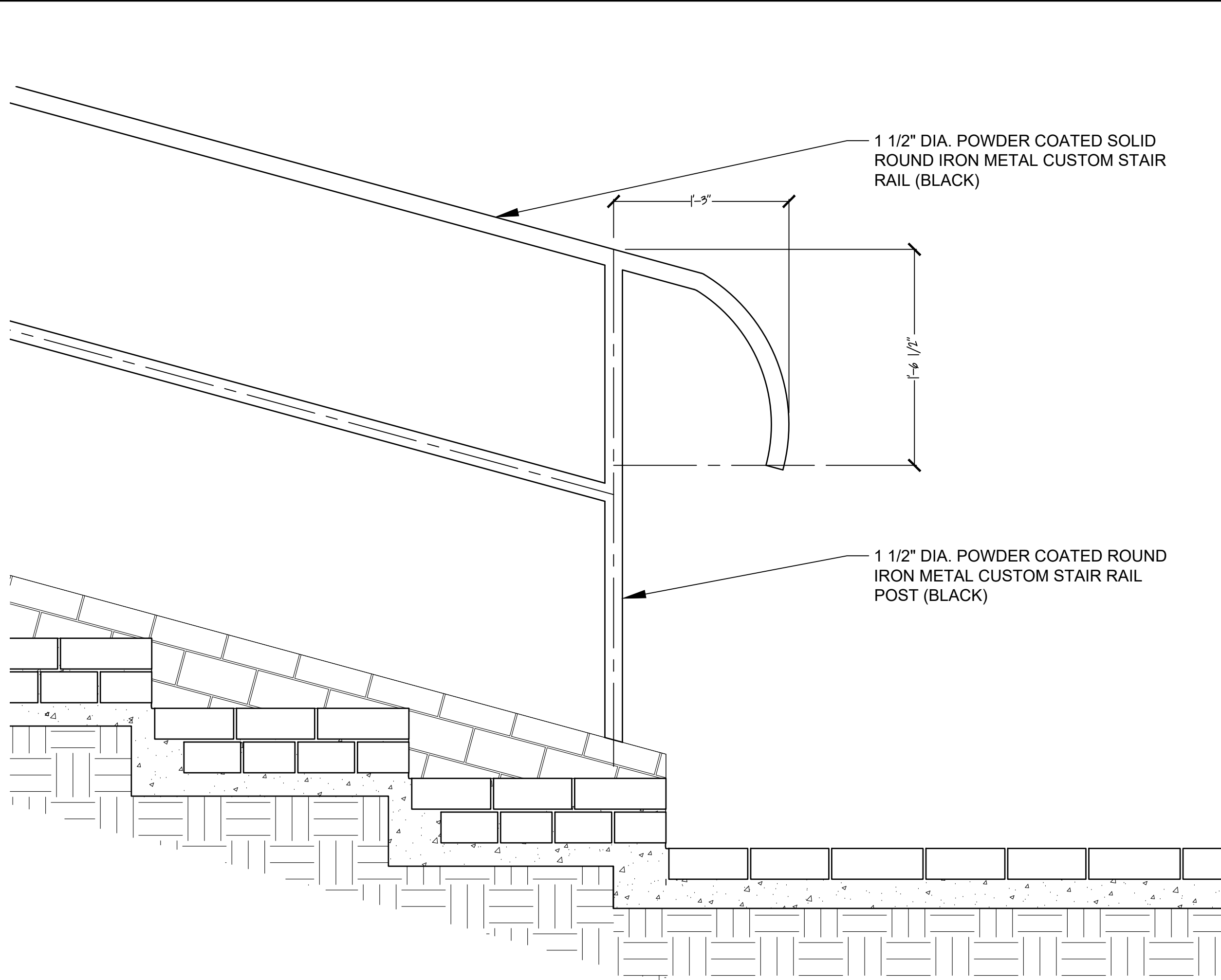
1 1/2" = 1'-0"



NOTE: SEE SHEET A0.1 FOR GENERAL NOTES ON THE INSTALLATION OF THE HANDRAILS.

4 DETAILS - KNEE WALL FOR SEATING/REST AREA

1 1/2" = 1'-0"



NOTE: SEE SHEET A0.1 FOR GENERAL NOTES ON THE HANDRAIL END DETAIL.

5 IMAGES AND NOTES

NO SCALE

1 DETAIL - STAIRS AND HANDRAIL

1 1/2" = 1'-0"

2 DETAIL - HANDRAIL END

1 1/2" = 1'-0"