

# VIOLET BANK CEMETERY

STONE WALL CONSERVATION



# UNFORTUNATELY THE NORTH WALL IS COLLAPSING



# BOWS AND LEANS



IN ADDITION TO THE WALL  
LEANING 8 INCHES,

THE BASE STONES ARE  
ROTATING, BUCKLING THE  
WALL AND DUMPING OUT  
MAJOR STONES

# NO ONE WANTED TO STAND NEXT TO THIS ONE



NOTE THE OVERHANG HERE  
AND  
THE ROTATION OF THIS STONE

# NORTH WALL BEFORE

W

E



WALL VIEWED FROM INSIDE OF CEMETERY

E

W



WALL VIEWED FROM OUTSIDE CEMETERY

THE WEST WALL IS ALSO  
LEANING AND

APPEARS TO HAVE COLLAPSED  
IN TWO PLACES THAT HAVE BEEN  
POORLY REBUILT

ANOTHER SIGNIFICANT AREA IS  
BOUND UP IN PORTLAND  
CEMENT



# WEST WALL LEANING



# WEST WALL LOOKING NORTH



PRIOR COLLAPSE  
UNSTABLY LAYED AS A LEANING  
JUMBLE OF STONE



# VIEWED FROM OUTSIDE



# THE OTHER PRIMARY AREA OF COLLAPSE UNSTABLY REBUILT



# UNSTABLE RUBBLE VIEWED FROM THE OUTSIDE



NOTE THESE TWO STONES ARE LEANING OUT ENOUGH TO REQUIRE RE-SETTING

THIS AREA BOUND UP WITH PORTLAND  
CEMENT  
LEANS BUT APPEARS TO BE PRESENTLY  
STABLE



NOTE THE PORTLAND CEMENT SPANS BETWEEN THE TWO RUBBLE AREAS

# WEST WALL BEFORE

S

N



WALL VIEWED FROM INSIDE THE CEMETERY

N

S



WALL VIEWED FROM OUTSIDE THE CEMETERY



# CONSERVATION

- STRAIGHTENING OF THE NORTH WALL  
REQUIRED CRIBBING, JACKING, AND  
GROUTING
- REBUILDING COLLAPSED AND RUBBLE  
AREAS REQUIRED CAREFUL  
REMOVAL OF UNSTABLE MATERIAL  
INCLUDING THE LOOSE SMALL  
RUBBLE FILL

# INTERESTING INFORMATION

- 95 GAL. OF LIME PUTTY

2 TONS OF SAND

2 TONS OF GRAVEL

PRODUCED APPROX. 500 GAL. OF  
GROUT/MORTAR [3 SAND/ 1 LIME]

AND GRAVEL MIXED MORTAR  
[2 GRAVEL/ 1 GROUT]

- THIS WAS ALL PLACED INTO THE WALL

# STRAIGHTENING THE NORTH WALL



THESE POSTS ARE VERY CLOSE TO VERTICAL.

THE CRIBBING IS TEMPORARILY SHIMMED OVER TO THE WALL FOR SUPPORT AND CONTROL.

AS THE WALL IS STRAIGHTENED THE SHIMS ARE REMOVED UNTIL IT IS VERTICAL.

# GETTING THE CRIBBING IN PLACE



WITH THE LEFT HAND BRACES IN PLACE, IT IS SAFER TO WORK ON THE OUTSIDE OF THE WALL

LEFT HAND CRIBBING IS JUST BEING PLACED

NOTE THE WALL IS LEANING OVER TO MEET THE CHAINLINK POST

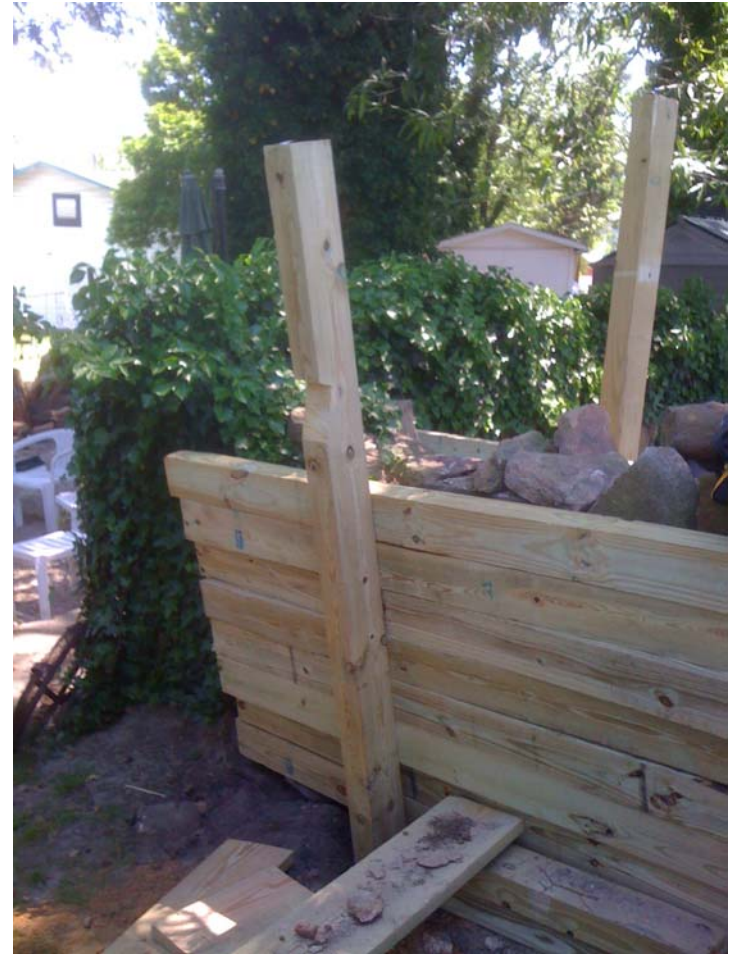
# VOIDS MUST BE FILLED AS CRIBBING GOES UP OR THE WALL WILL COLLAPSE INTO THE VOID WHEN MOVED

THIS STONE WAS  
FOUND IN A NEAR  
BY GARDEN

THIS LEANING POST  
BECOMES THE THIRD  
BRACE



# NOTCHING THE BRACE FOR THE DIAGONAL STRUT



# AND THE LEFT HAND POSTS ARE JACKED FROM LEANING TO VERTICAL



# POSTS ARE NOW PARALLEL AND VERTICAL



WITH THE WALL SANDWICHED IN BETWEEN



# UNPACKING THE CRIBBING TO PROVIDE ACCESS FOR GROUTING



# FILLING THE GROUT GUN



# ADJUSTING THE POSITION OF INDIVIDUAL STONES



# SOMETIMES IT JUST WILL NOT BUDGE



# A LITTLE STONE WORK



THIS STONE DEFIED REPOSITIONING AND FINISHED ROLLING OVER WHEN PRODDED, TAKING THE MAJOR STONES IN THE MIDDLE OF THE WALL WITH IT.

# OH MY!



THIS PHOTO IS TAKEN AFTER THE LARGE CENTER STONE AND THE ONES ON EITHER SIDE WERE REPOSITIONED BACK OVER THE FOOTING [HAVING SLID OFF THE FOOTING IS WHY THE STONE WAS ROTATED] AND THE INTERNAL VOID FILLED WITH MORTAR GRAVEL AND FIST SIZED STONES

# A FEW LITTLE STONES



# FROM THE OTHER SIDE





# SOME STEEL SLIDES HELP



# NOW PUSH



# A LITTLE MORE





EASIER SAID  
THAN DONE





AND FROM THE OTHER SIDE



HAPPILY THIS IS THE SPOT THAT  
HAD COLLAPSED ON THE INSIDE  
AS WELL





# AND BACK



# ONLY ONE WAY TO DEAL WITH UNSTABLE RUBBLE



WEST WALL NORTH END VIEWED FROM OUTSIDE

# CHUCK FUNK WORKING ON THE MASS OF PORTLAND CEMENT AT THE BOTTOM OF THE RUBBLE



# COMING BACK UP



THESE VIEWS  
SHOW THE  
GENERAL  
CONSTRUCTION  
METHOD THAT  
USES PRIMARILY  
FACE STONES  
WITH SMALL  
RUBBLE INFILL.

ENOUGH  
THROUGH  
STONES ARE  
NECESSARY TO  
BIND THE FACES  
TOGETHER

# TAKING OUR CUES FROM THE GOOD PORTIONS OF THE ORIGINAL WALL



MAJOR FACE STONES RUN  
IN HORIZONTAL BANDS MAINTAINING  
THROUGH MORTAR JOINTS



# TAKING SHAPE



# BROUGHT BACK WITH PROPER COURSING





# AND FROM THE INSIDE



# STABILIZING AND STRAIGHTENING THE AREA ADJACENT TO THE OTHER RUBBLE HOLE



# RELAYING THE AREA FOLLOWING THE COURSES OF THE WALL



# AND FROM THE INSIDE



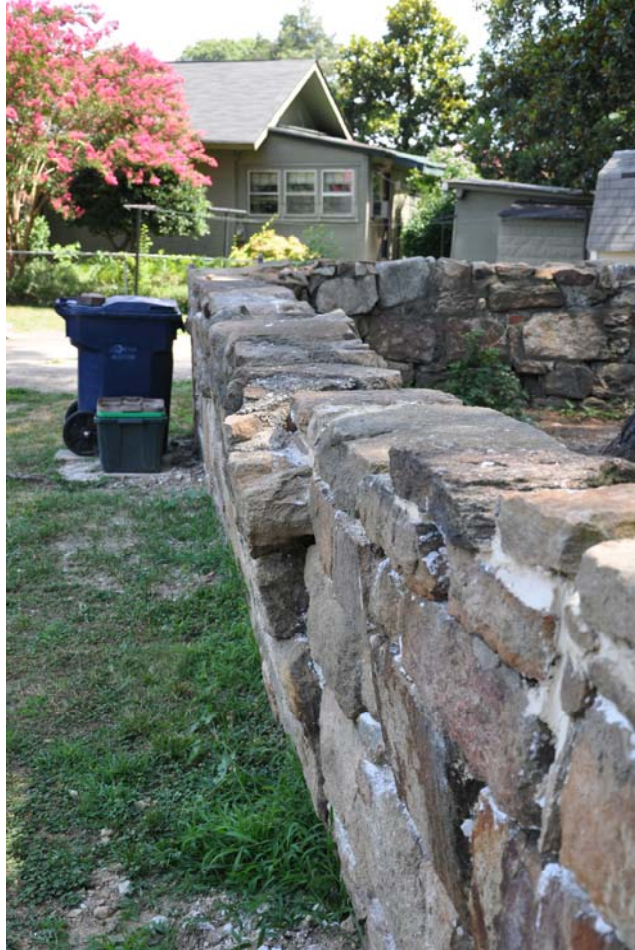
NOW THAT THE WALL ON EITHER  
SIDE IS STRAIGHT THE PORTLAND  
SECTION LOOKS WORSE



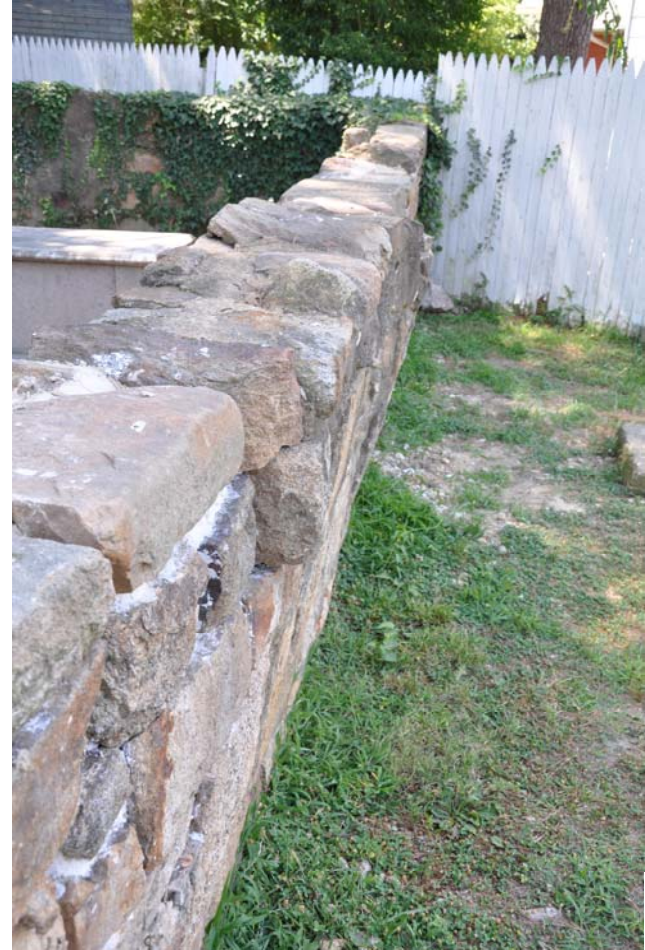
# THE PORTLAND CEMENT BOUND AREA LEFT LEANING AS IT WAS FOUND



# AS A REMINDER AND DOCUMENTATION OF THE EXTENT OF LEAN IN THE PORTLAND SECTION



OUTSIDE LOOKING NORTH



OUTSIDE LOOKING SOUTH

# BEFORE AND AFTER

## NORTH WALL VIEWED FROM INSIDE



BEFORE



AFTER



# BEFORE AND AFTER

## NORTH WALL VIEWED FROM OUTSIDE

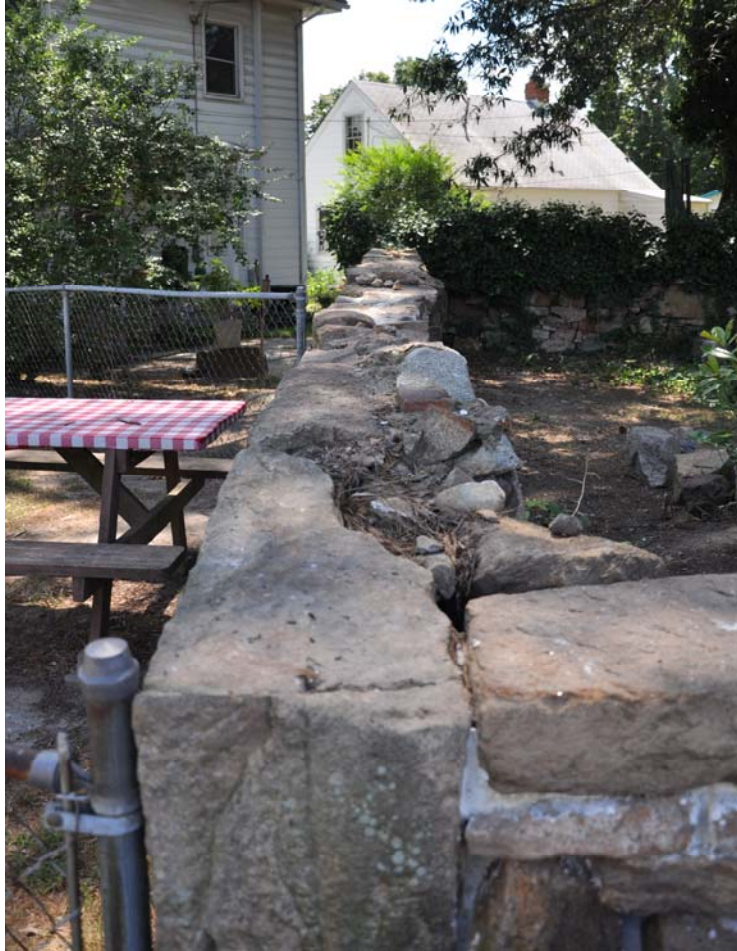


BEFORE



AFTER

# STRAIGHT AND UPRIGHT NORTH WALL



STRAIGHT



UPRIGHT

NOTE THE WALL  
NO LONGER  
LEANS OVER TO  
THE CHAINLINK  
POST BEYOND  
THE TABLE

# BEFORE AND AFTER WEST WALL VIEWED FROM INSIDE



BEFORE



AFTER

# BEFORE AND AFTER

## WEST WALL VIEWED FROM OUTSIDE



BEFORE



AFTER

# BACK TO STRAIGHT\* WEST WALL



\*EXCEPT THE PORTLAND SECTION

# SO WHAT DID WE DO?



# ACKNOWLEDGEMENTS

- FUNDING

MRS. NATHAN VANMETER HENDRICKS III

- CONSERVATORS

- CHARLES A PHILLIPS, ARCHITECT/CONSERVATOR

- CHARLES FUNK, MASON

- ALEXANDRA VANCKO, CONSERVATOR ARCHAEOLOGIST

- PHOTOGRAPHY

- ALEXANDRA VANCKO, WHO DID AS MUCH WORK AS ANYONE BUT  
MANAGED TO NOT BE IN ANY OF THE PHOTOS.