

THE NEWLIN GRIST MILL TAILRACE EXISTING CONDITIONS ASSESSMENT

209 SOUTH CHEYNEY ROAD
GLEN MILLS, PA 19342

NOTES:

1. TAILRACE WALL THICKNESS IS UNKNOWN.
2. DISTANCE FROM TOP OF GRADE TO TOP OF TAILRACE ARCH IS UNKNOWN.
3. TYPE AND SIZE OF BUILDING FOUNDATIONS ARE UNKNOWN.
4. PLEASE NOTIFY ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS INDICATED ON THE DRAWINGS.

REPAIR NOTES:

1. DRAIN STANDING WATER AND REMOVE SILT FROM BASE OF TAILRACE, TYP.
2. RESET STONE WITH BEDDING LIME BASED MORTAR, TYP.

DRAWINGS NOTE: MODIFICATIONS WERE MADE TO THE BUILDING PLANS IN AutoCad BECAUSE THE MEASURING TAPE ALONG THE LENGTH OF THE SOUTH SIDE OF THE TAILRACE WAS NOT PULLED COMPLETELY TAUGHT DURING THE INSTALLATION. ADJUSTMENTS WERE NOT MADE TO THE TAILRACE DRAWING BECAUSE THE ASSESSMENT WAS CONDUCTED BY UTILIZING THE STATION MARKERS.

THE DISTANCE BETWEEN THE ARCHIVE BLG AND THE MILL WAS MEASURED TO BE 30'-7" ALONG THE NORTH WALL AND 30'-10" ALONG THE SOUTH WALL. THE LOCATION OF THE BUILDINGS WAS ADJUSTED IN AutoCad SO THAT THE TAILRACE WALLS ALIGN WITH THE HEADWALL IN THE MILL BUILDING. ALSO, TONY SHAHAN PROVIDED MEASUREMENTS OF THE ARCHIVE RELATIVE TO THE CENTER OF THE ARCH AT THE EAST HEADWALL. THE BUILDINGS WERE ADJUSTED TO ALLOW PROPER PLACEMENT OF THE SINK HOLES MEASURED IN THE ARCHIVE BASEMENT AND THE TEST PITS AT GRADE. SHAHAN'S MEASUREMENTS WERE USED AS A GUIDE, BUT ULTIMATELY WERE ADJUSTED TO ALLOW FOR PLACEMENT OF THE BUILDINGS WITHOUT MODIFYING THE STATIONS.

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- S1 - STA 0-75 REPAIRS
- S2 - STA 76-150 REPAIRS
- S3 - STA 151-214 REPAIRS



1 AERIAL VIEW FROM GOOGLE MAPS
CS NTS



The Newlin Grist Mill
Tailrace Existing
Conditions Assessment

219 South Cheyney Road
Glen Mills, PA 19342

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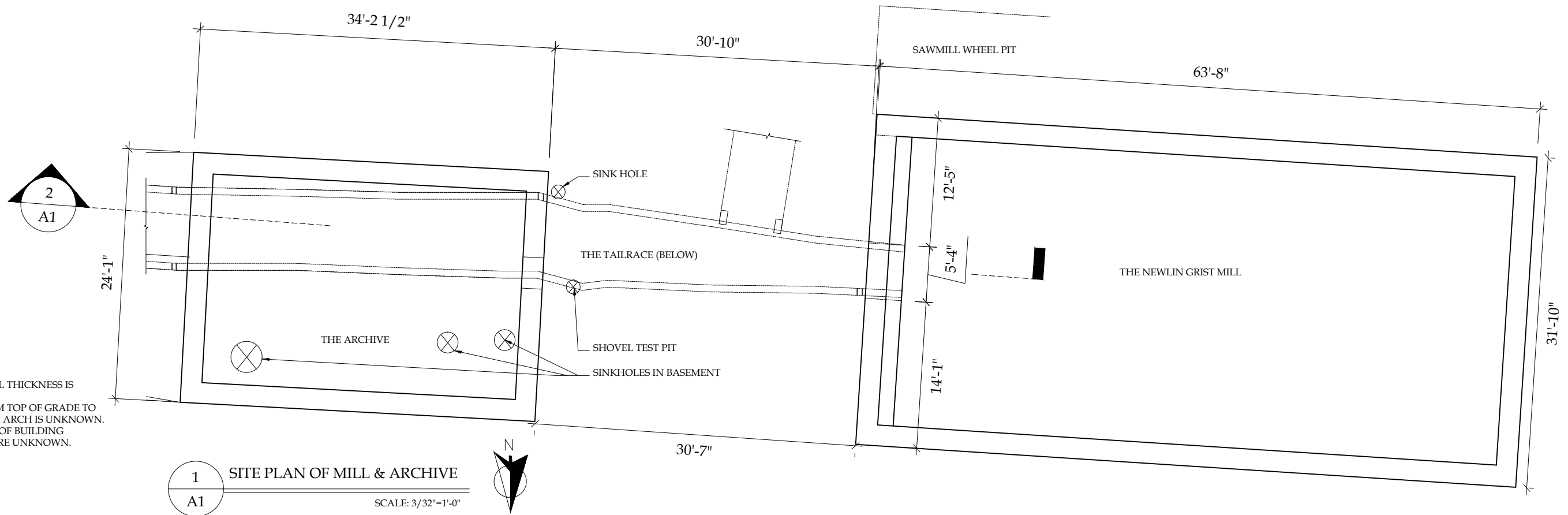
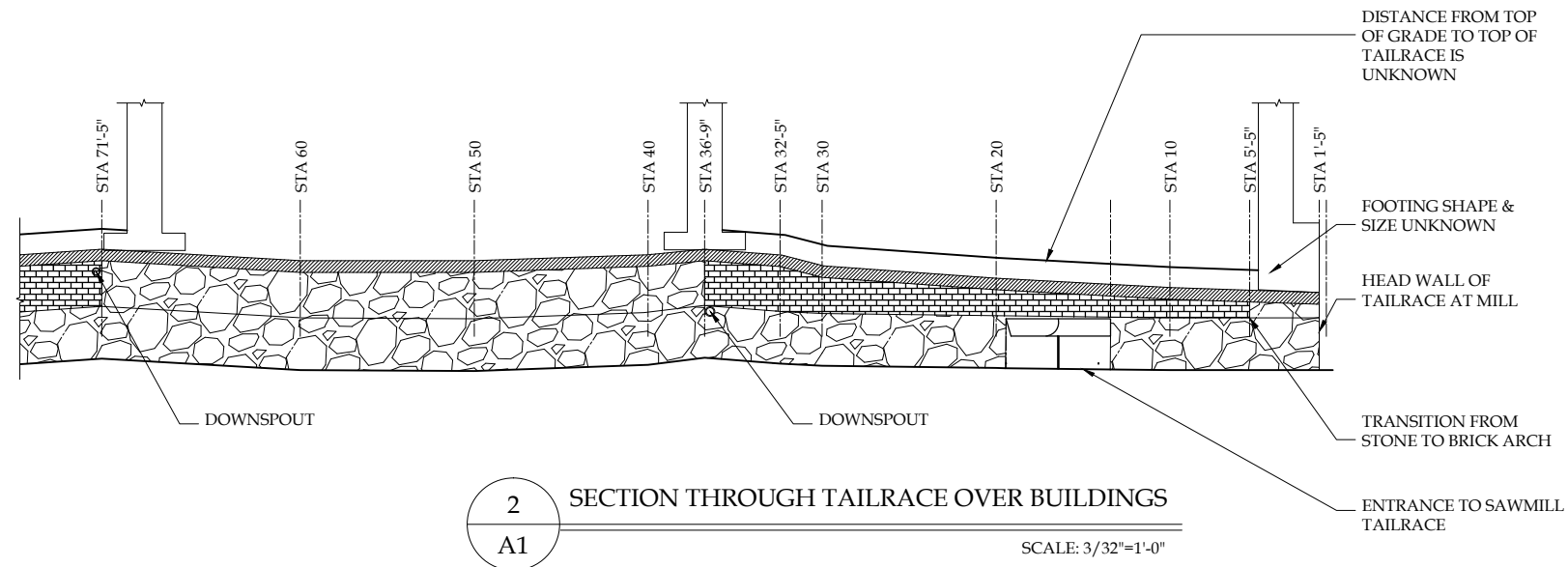
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DATE:
01/30/14

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CS



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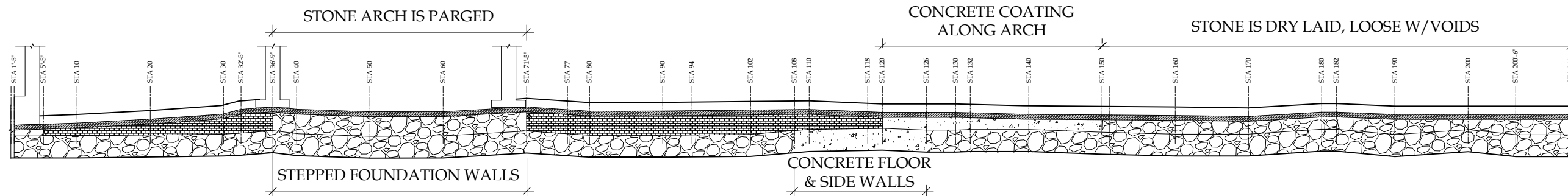
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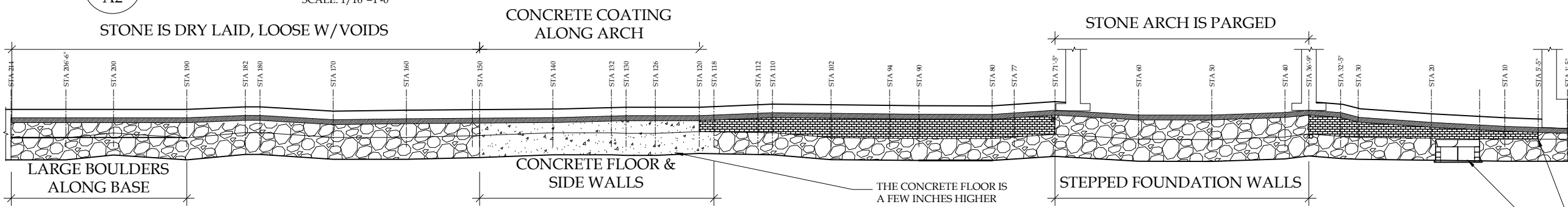
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BUILDING PLANS
 DATE: 01/30/14
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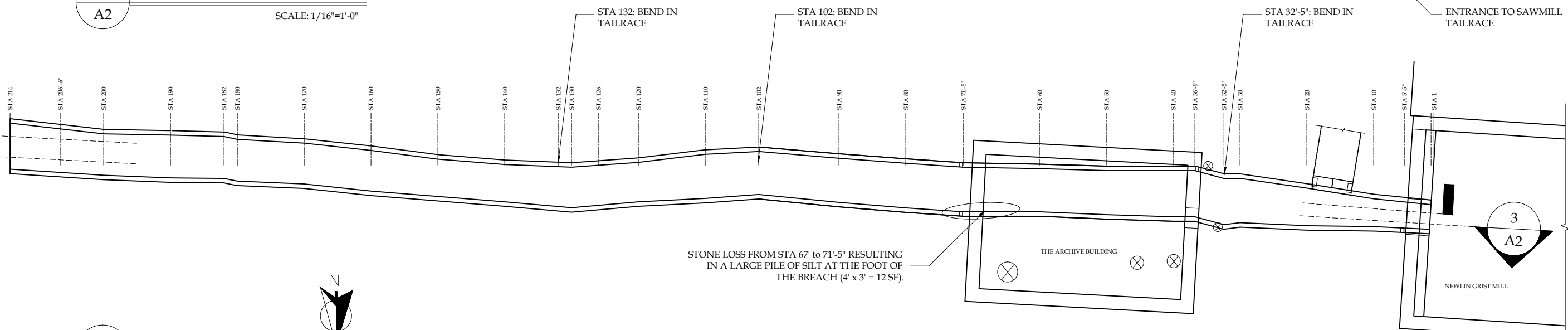
A1



3 NORTH ELEVATION WALL
A2
SCALE: 1/16"=1'-0"



2 SOUTH ELEVATION WALL
A2
SCALE: 1/16"=1'-0"



1 TAILRACE PLAN
A2
SCALE: 1/16"=1'-0"



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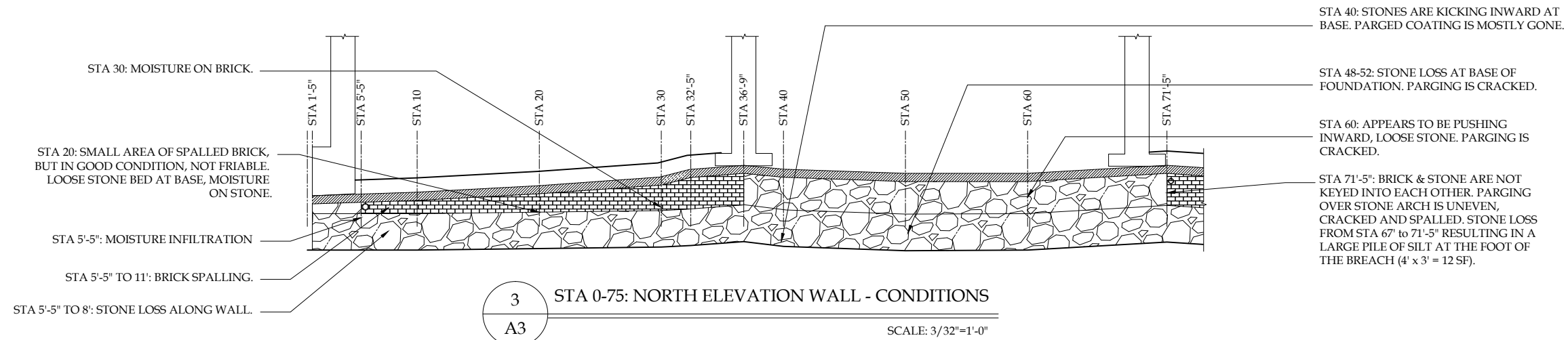
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TAILRACE PLAN,
NORTH & SOUTH WALLS

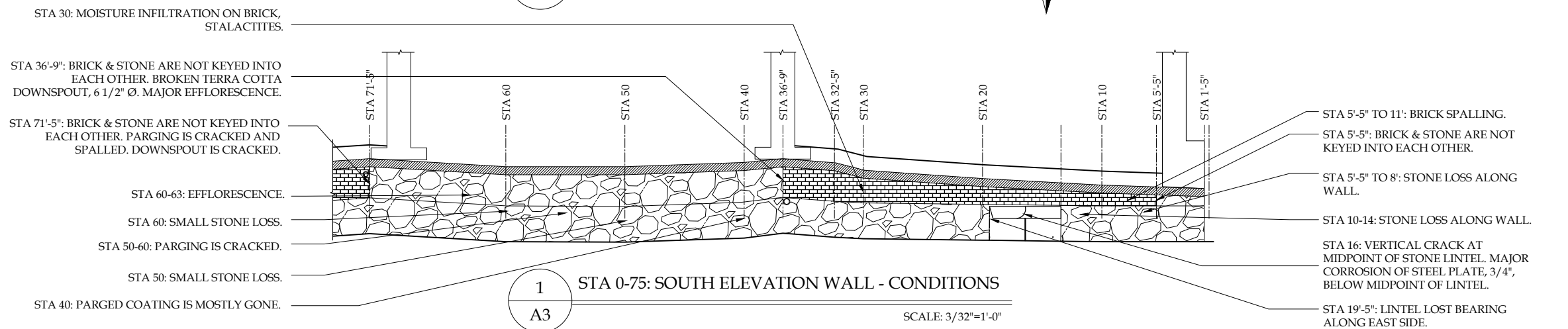
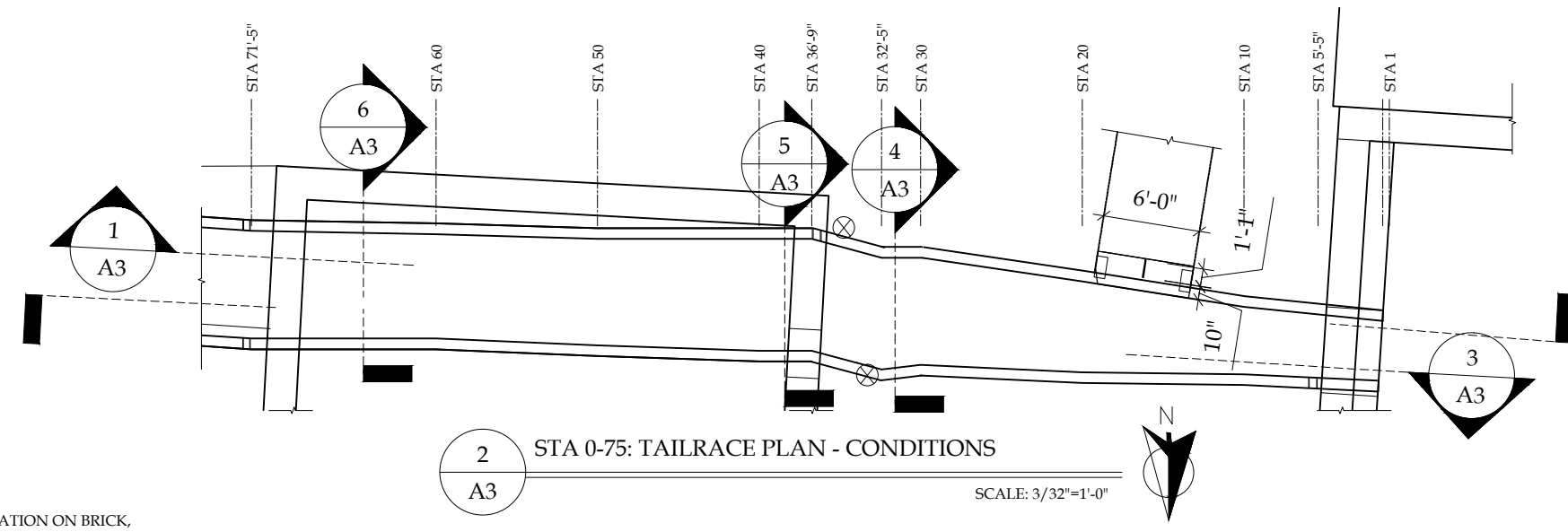
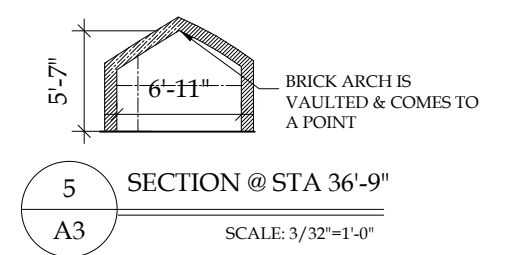
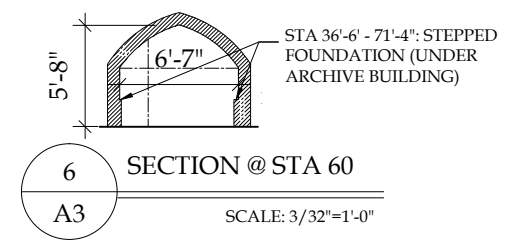
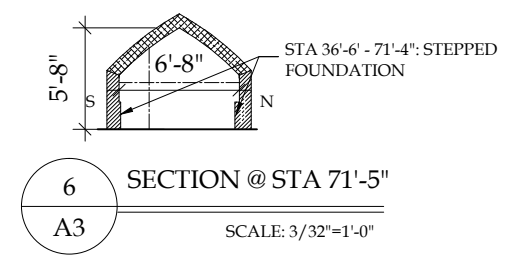
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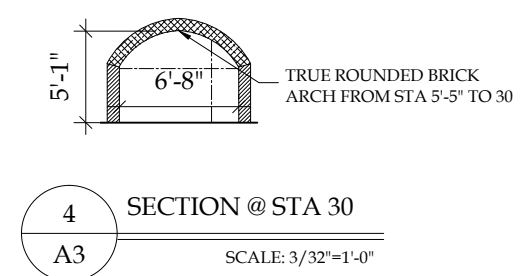
A2



3 STA 0-75: NORTH ELEVATION WALL - CONDITIONS
A3 SCALE: 3/32"=1'-0"



1 STA 0-75: SOUTH ELEVATION WALL - CONDITIONS
A3 SCALE: 3/32"=1'-0"



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STA 0-75
CONDITIONS

DATE:
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A3



#19 STA 71'-5": TRANSITION BETWEEN BRICK & STONE IS NOT KEYED INTO EACH OTHER



#139 STA 30 (LOOKING WEST): BRICK VAULT IS IN VERY GOOD CONDITION



#129 STA 16 SOUTH (ENTRANCE TO SAWMILL TAILRACE): STEEL SUPPORT PLATE IS SEVERELY CORRODED



#125 STA 10: OVERHEAD BRICKS ARE IN GOOD CONDITION



#24 STA 60: OVERHEAD PARGING IS CRACKED



#133 STA 19'-5" SOUTH": EAST END OF STONE LINTEL IS UNSUPPORTED



#126 STA 16 SOUTH (ENTRANCE TO SAWMILL TAILRACE): VERTICAL CRACK AT MIDPOINT OF STONE LINTEL



#121 STA 5'-5" NORTH ELEVATION: TERRA COTTA DOWNSPOUT

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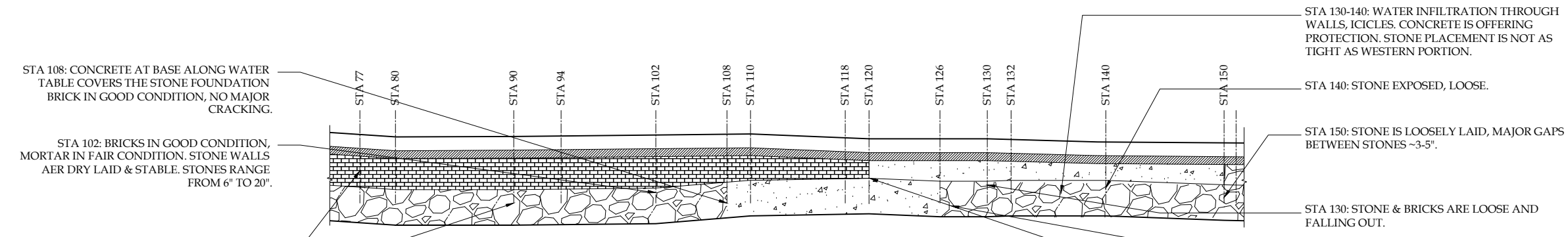
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STA 0-75 PHOTOGRAPHS

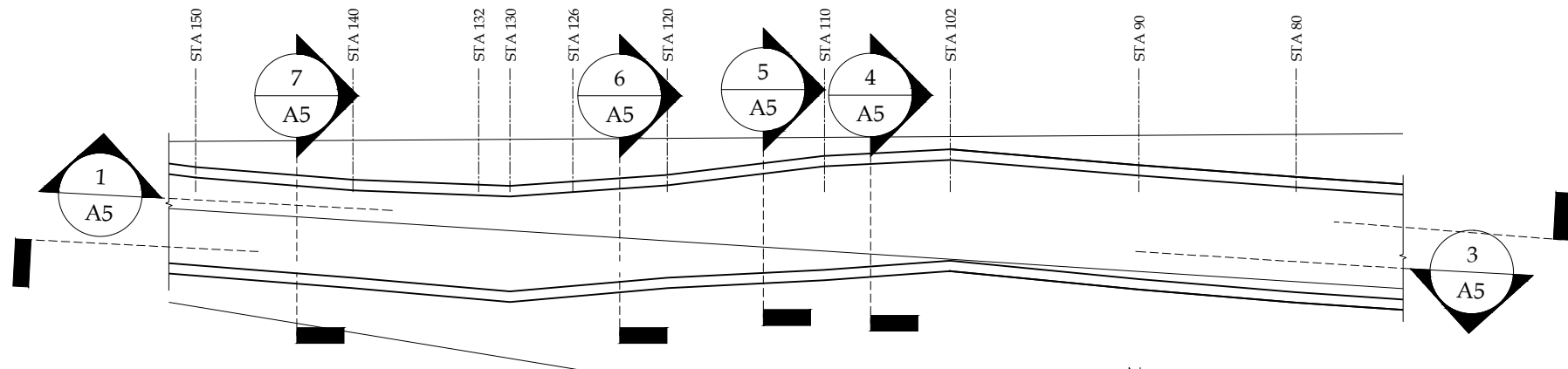
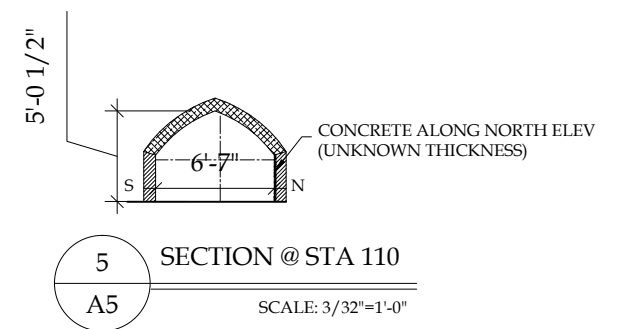
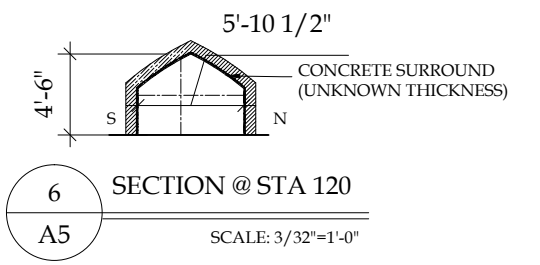
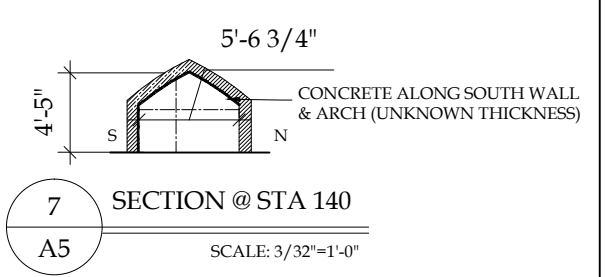
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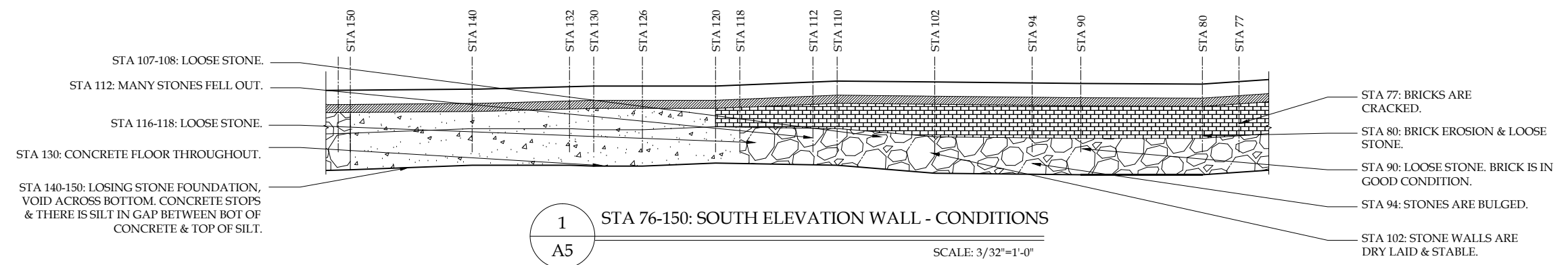
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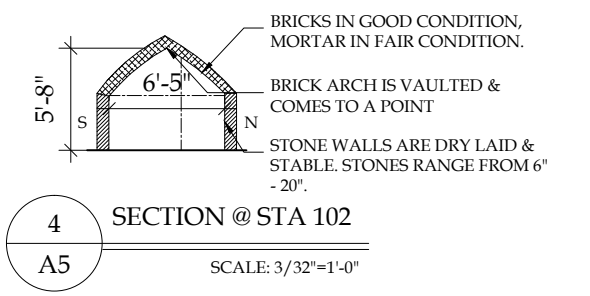
3 STA 76-150: NORTH ELEVATION WALL - CONDITIONS
A5
SCALE: 3/32"=1'-0"



2 STA 76-150: TAILRACE PLAN - CONDITIONS
A5
SCALE: 3/32"=1'-0"



1 STA 76-150: SOUTH ELEVATION WALL - CONDITIONS
A5
SCALE: 3/32"=1'-0"



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STA 76-150
CONDITIONS

DATE: 01/30/14

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A5



#71 STA 150: OVERHEAD STONE IS DRY LAID



#59 STA 130 NORTH: LOOSE STONES, BRICKS FALLING OUT FROM WALL



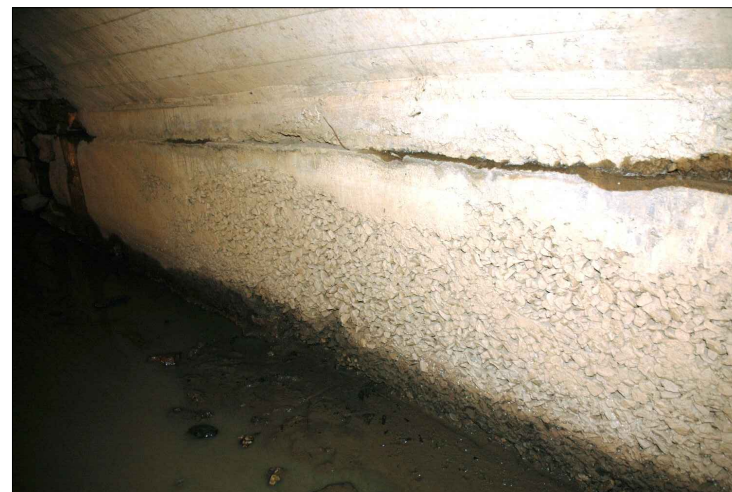
#47 STA 112 SOUTH: MANY STONES FELL OUT AT BASE OF WALL



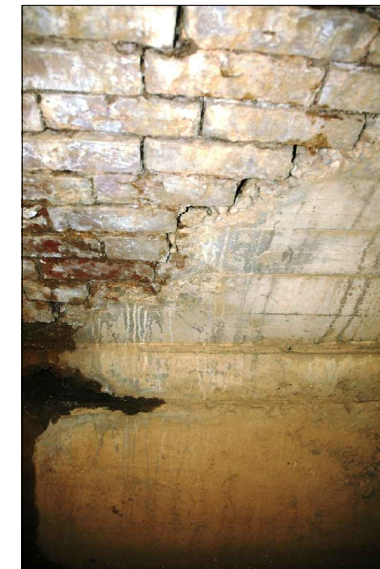
#06 STA 102 (LOOKING EAST): BRICK ARCH IS VAULTED & COMES TO A POINT



#62 STA 140 NORTH: LOOSE STONE



#52 STA 120 NORTH: QUALITY OF CONCRETE AT WATER TABLE IS POOR



#45 STA 110 NORTH: CONCRETE AT BASE ALONG WATER TABLE COVERS STONE FOUNDATION



#11 STA 94 SOUTH: STONES ARE BULGED

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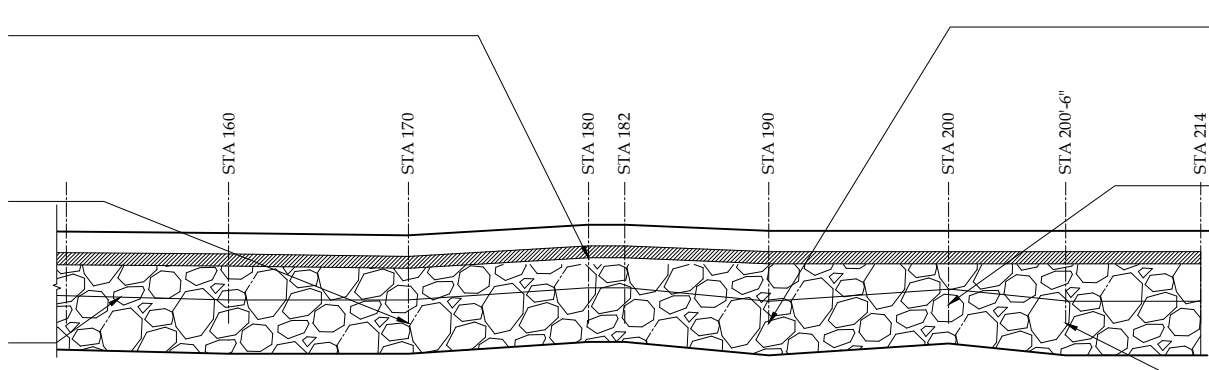
STA 76-150
PHOTOGRAPHS
DATE: 01/30/14
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A6

STA 180: TWO VOIDS OVERHEAD. MAJOR EFFLORESCENCE. VERY LARGE STONES, 36"-38" LENGTH.

STA 170: MAJOR EFFLORESCENCE. VERY LARGE STONES, 36"-38" LENGTH.

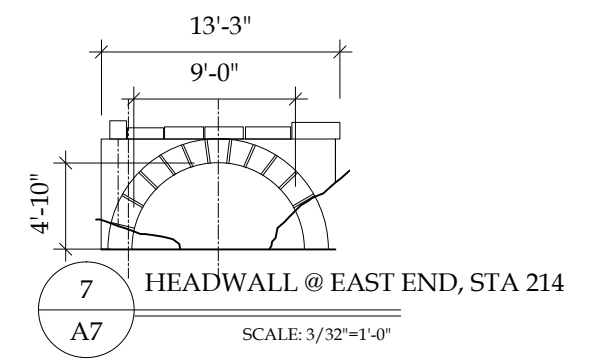
STA 153: MAJOR STONE COLLAPSE, 24" WIDE STONE FELL.



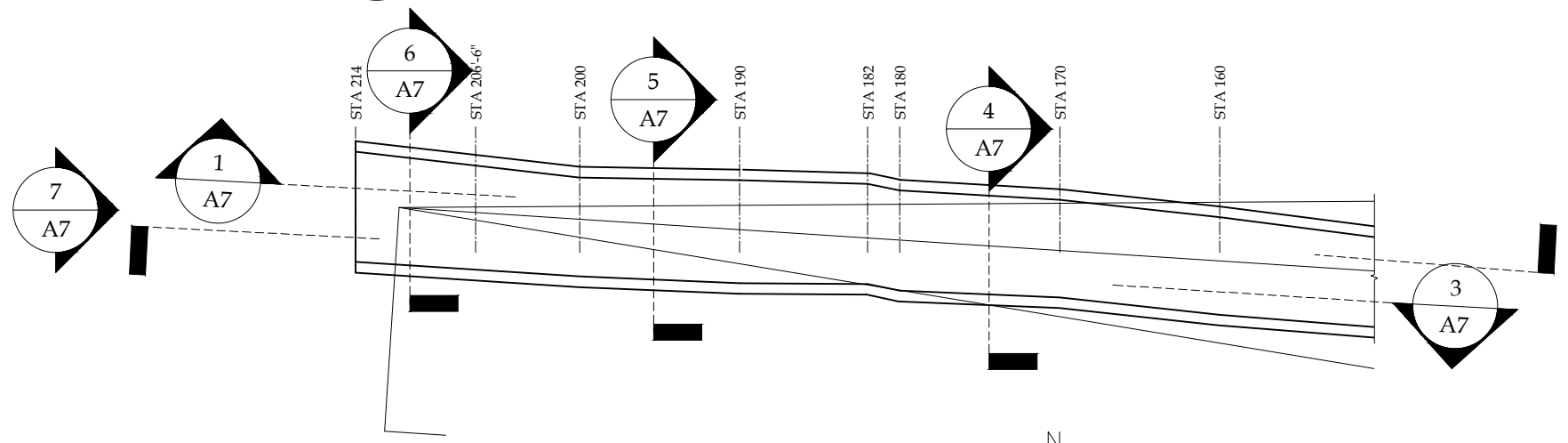
STA 190: SMALLER STONES AT BASE, LARGE BOULDERS AT MIDPOINT, LOOSELY LAID. ICICLES OVERHEAD.

STA 200: SMALLER STONES AT BASE, NOTCHED STONE INDICATES THAT THIS PARTICULAR STONE WAS SALVAGED FROM ANOTHER SOURCE/BUILDING.

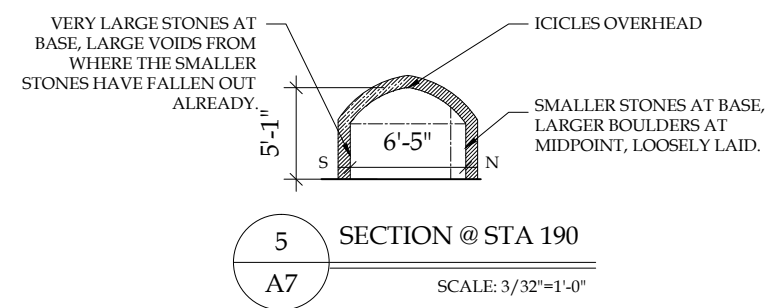
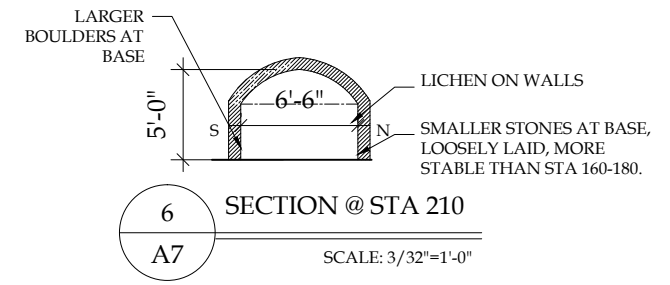
STA 200-214 LICHEN ON WALLS. SMALLER STONES AT BASE, LOOSELY LAID, MORE STABLE THAN STA 160-180.



3 STA 151-214: NORTH ELEVATION WALL - CONDITIONS
SCALE: 3/32"=1'-0"



2 STA 151-214: TAILRACE PLAN - CONDITIONS
SCALE: 3/32"=1'-0"

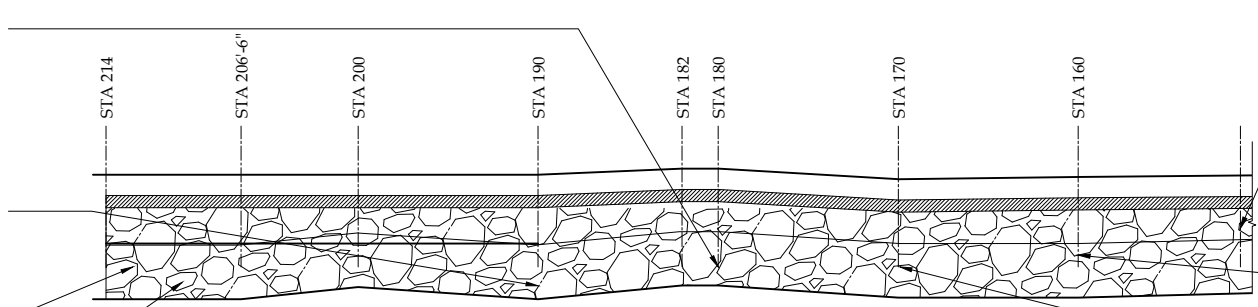


STA 180: STONE LOSS AT BASE OF FOUNDATION ~14". STONES ARE LARGE IN THE AREA, LOOSE & DRY PACKED.

STA 190: VERY LARGE STONES AT BASE. LARGE VOIDS FROM WHERE THE SMALLER STONES HAVE FALLEN OUT ALREADY.

STA 200-214: LICHEN ON WALLS.

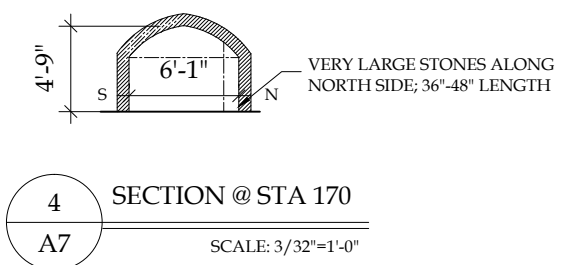
STA 190-214: VERY LARGE BOULDERS AT BASE OF WALL.



STA 151: STONE COLLAPSE ~16".

STA 160-162: STONE COLLAPSE ~30".

STA 170: STONES COMING OUT, LOOSE & HANGING.



1 STA 151-214: SOUTH ELEVATION WALL - CONDITIONS
SCALE: 3/32"=1'-0"

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STA 151-214
CONDITIONS

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A7



#103 STA 214: HEAD WALL, EAST SIDE OF TAILRACE



#96 STA 200 NORTH: STONES ARE DRY LAID, VOIDS BETWEEN STONES



#82 STA 170 SOUTH: LOOSE STONES AND VOIDS



#73 STA 153 NORTH: STONE COLLAPSE, ~24"



#102 STA 210 (LOOKING WEST): LICHEN ALONG WALLS, ICICLES FROM WATER INFILTRATION, CHANNEL ALONG TAILRACE BASE



#83 STA 180 SOUTH: STONE LOSS AT BASE, ~14"



#77 STA 160 SOUTH: STONE COLLAPSE, ~30"



#72 STA 151 SOUTH: STONE COLLAPSE, ~16"

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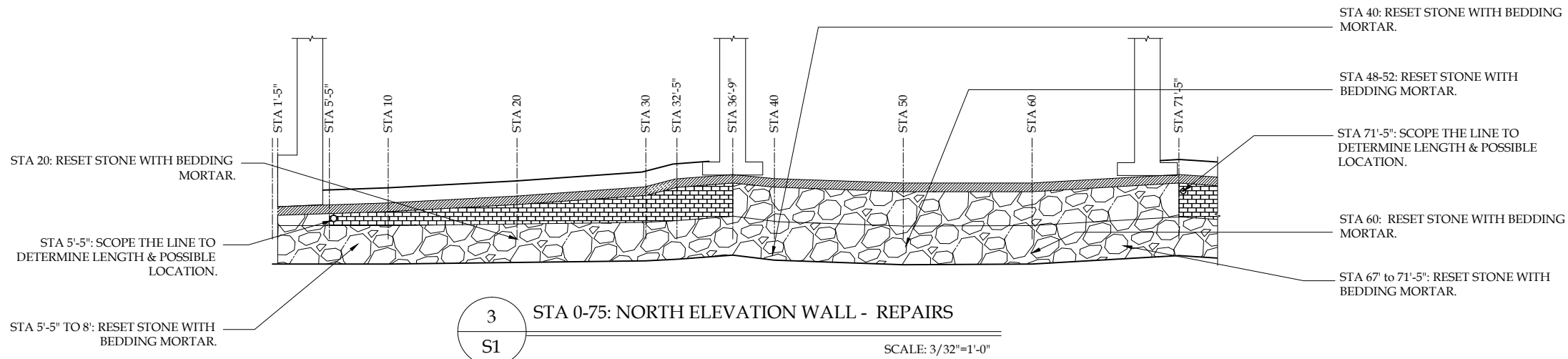
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STA 151-214 PHOTOGRAPHS	
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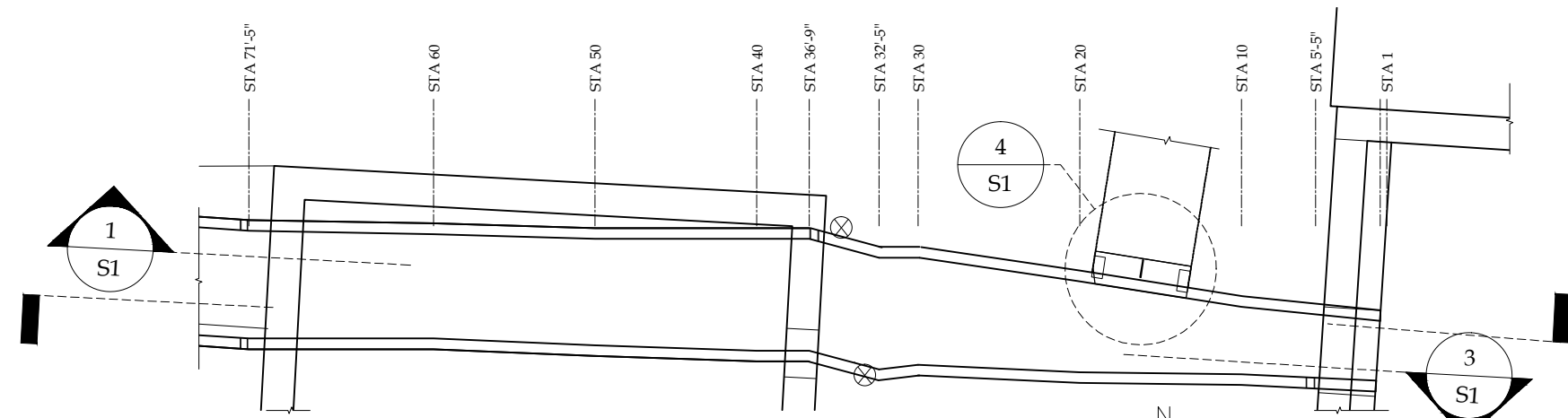
A8



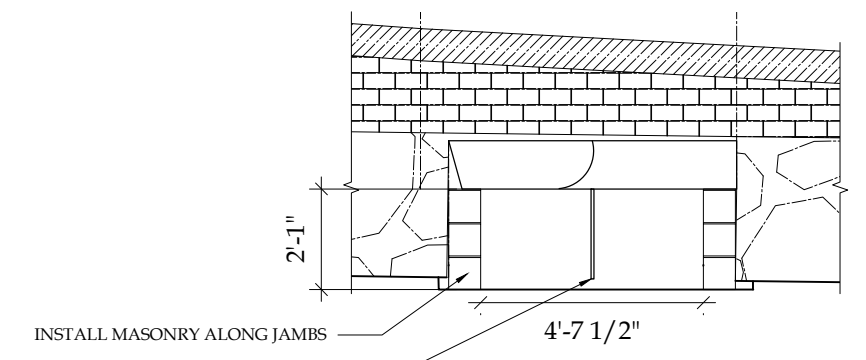
3
S1
STA 0-75: NORTH ELEVATION WALL - REPAIRS
SCALE: 3/32"=1'-0"

REPAIR NOTES:
 1. DRAIN STANDING WATER AND REMOVE SILT FROM BASE OF TAILRACE, TYP.
 2. RESET STONE WITH BEDDING LIME BASED MORTAR, TYP.

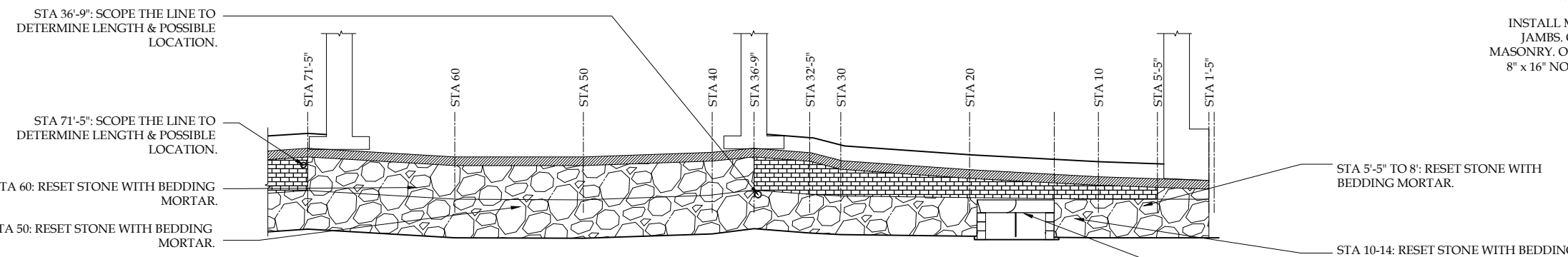
PROCEDURE FOR STONE LINTEL SUPPORT DETAIL, STA 13'-5"-19'-5":
 1. DRAIN STANDING WATER AND REMOVE SILT FROM BASE OF TAILRACE.
 2. VACUUM DEBRIS ALONG BASE, JUST BELOW LINTEL, FOR CLEAN SURFACE. NOTIFY ENGINEER OF ANY NEW CONDITIONS ONCE BASE IS VISIBLE.
 3. INSERT STONE MASONRY ALONG JAMBS AS INDICATED IN DETAIL 4/S1. (OPTION A: UTILIZE SCHIST MASONRY STONES. OPTION B: UTILIZE CMU).
 4. REMOVE CORRODED STEEL PLATE AT MIDLINE AFTER STONE MASONRY HAS SET.



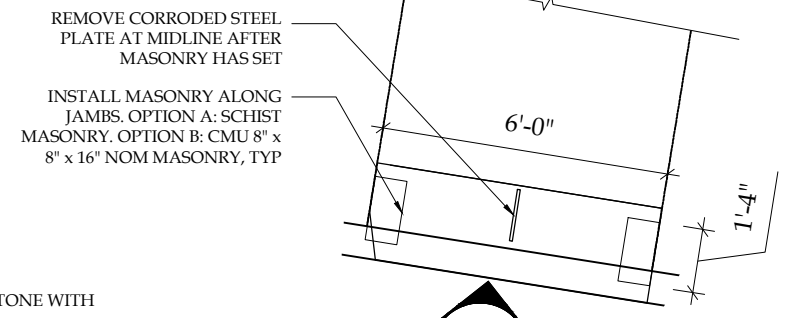
2
S1
STA 0-75: TAILRACE PLAN - REPAIRS
SCALE: 3/32"=1'-0"



5
S1
STONE LINTEL SUPPORT DETAIL, ELEVATION
SCALE: 1/4"=1'-0"



1
S1
STA 0-75: SOUTH ELEVATION WALL - REPAIRS
SCALE: 3/32"=1'-0"



4
S1
STONE LINTEL SUPPORT DETAIL, PLAN
SCALE: 1/4"=1'-0"

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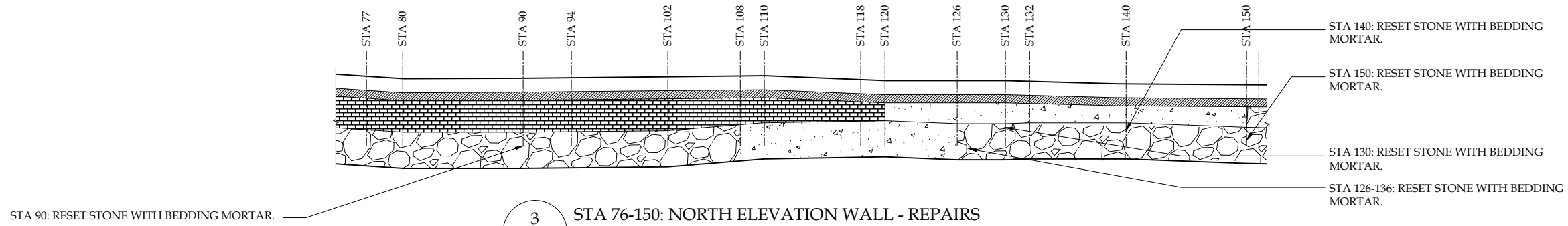
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**STA 0-75
REPAIRS**

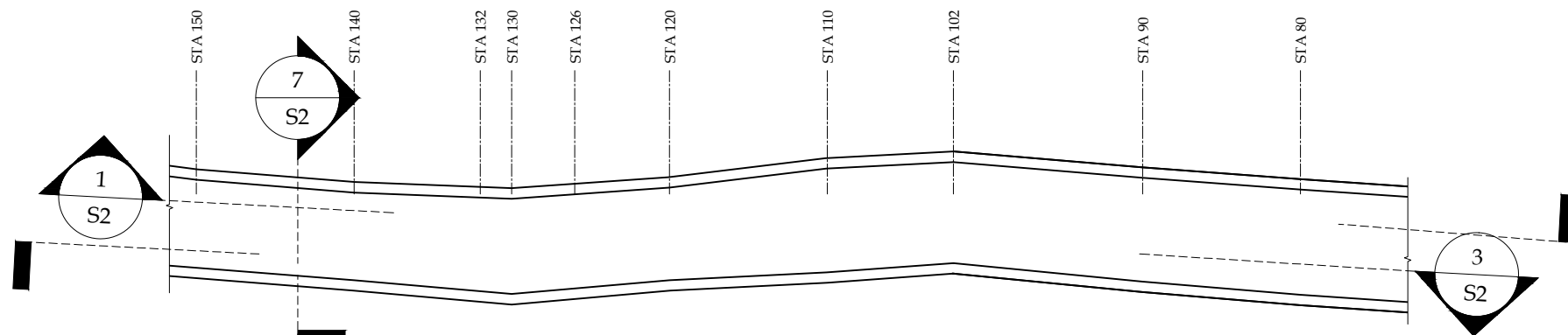
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S1

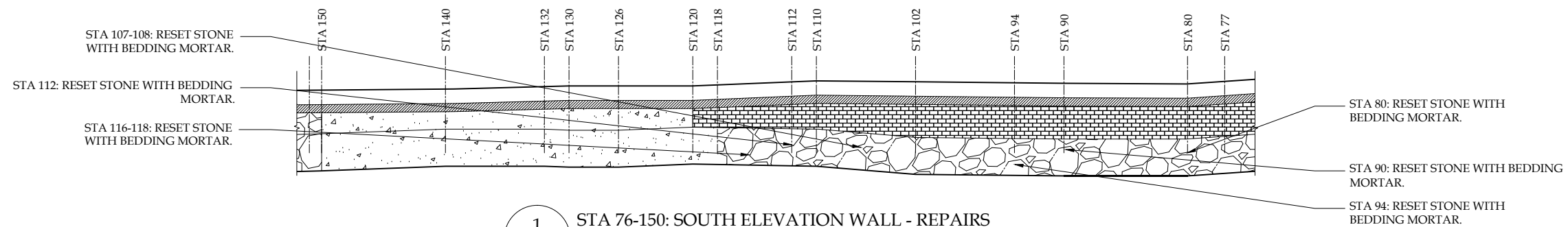
REPAIR NOTES:
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 2. RESET STONE WITH BEDDING LIME BASED MORTAR, TYP.



3
S2
STA 76-150: NORTH ELEVATION WALL - REPAIRS
SCALE: 3/32"=1'-0"



2
S2
STA 76-150: TAILRACE PLAN - REPAIRS
SCALE: 3/32"=1'-0"



1
S2
STA 76-150: SOUTH ELEVATION WALL - REPAIRS
SCALE: 3/32"=1'-0"

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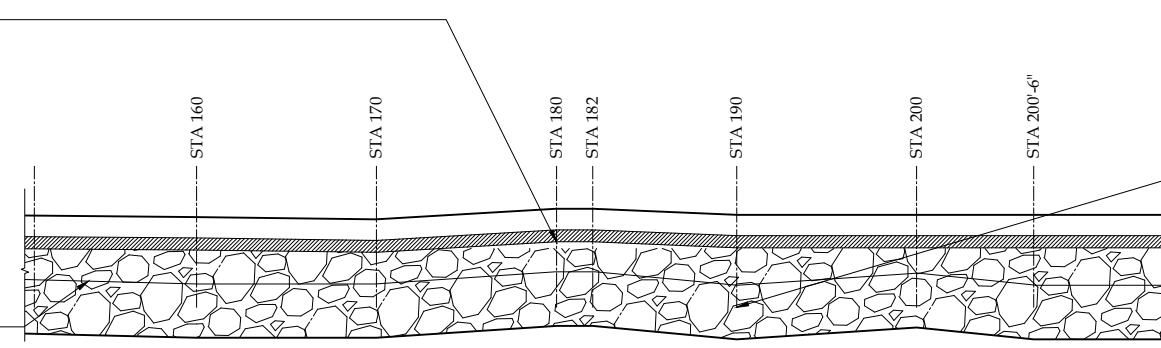
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STA 76-150
 REPAIRS
 DATE:
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S2

STA 180: RESET STONE WITH BEDDING MORTAR.

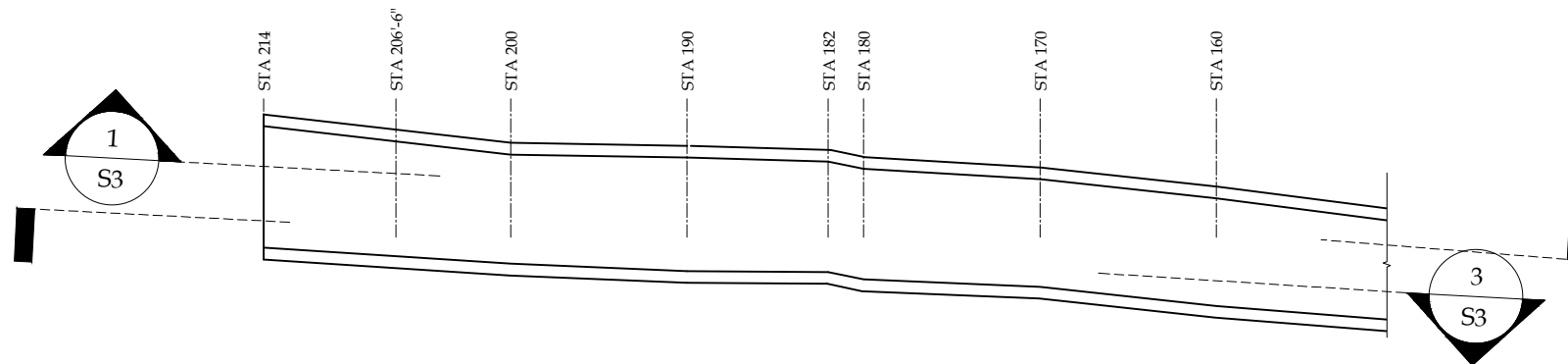
STA 153: RESET STONE WITH BEDDING MORTAR.



STA 190: RESET STONE WITH BEDDING MORTAR.

REPAIR NOTES:
 1. DRAIN STANDING WATER AND REMOVE SILT FROM BASE OF TAILRACE, TYP.
 2. RESET STONE WITH BEDDING LIME BASED MORTAR, TYP.

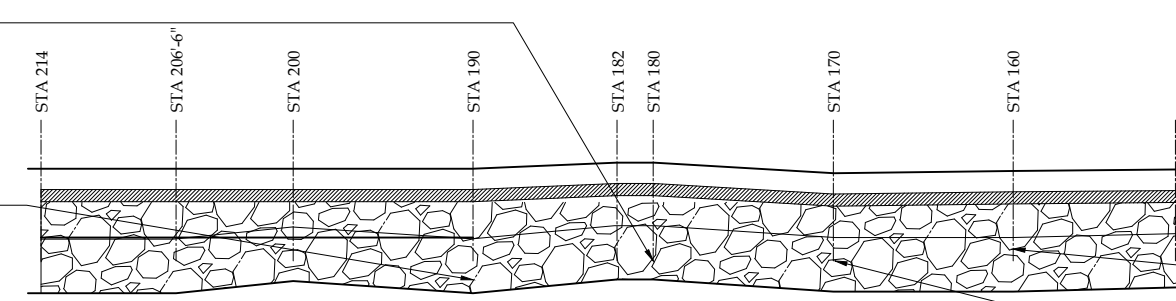
3
S3
STA 151-214: NORTH ELEVATION WALL - REPAIRS
SCALE: 3/32"=1'-0"



2
S3
STA 151-214: TAILRACE PLAN - REPAIRS
SCALE: 3/32"=1'-0"

STA 180: RESET STONE WITH BEDDING MORTAR.

STA 190: RESET STONE WITH BEDDING MORTAR.



STA 151: RESET STONE WITH BEDDING MORTAR.

STA 160-162: RESET STONE WITH BEDDING MORTAR.

STA 170: RESET STONE WITH BEDDING MORTAR.

1
S3
STA 151-214: SOUTH ELEVATION WALL - REPAIRS
SCALE: 3/32"=1'-0"

The Newlin Grist Mill
Tailrace Existing
Conditions Assessment

219 South Cheyney Road
Glen Mills, PA 19342

J&M PRESERVATION
STUDIO

105 RUTGERS AVENUE, #244
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REVISIONS:		
NO.	REVISION / ISSUE	DATE

STA 151-214
REPAIRS

DATE:
01/30/14

DRAWN BY: J&M
REVIEWED BY: MKR

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