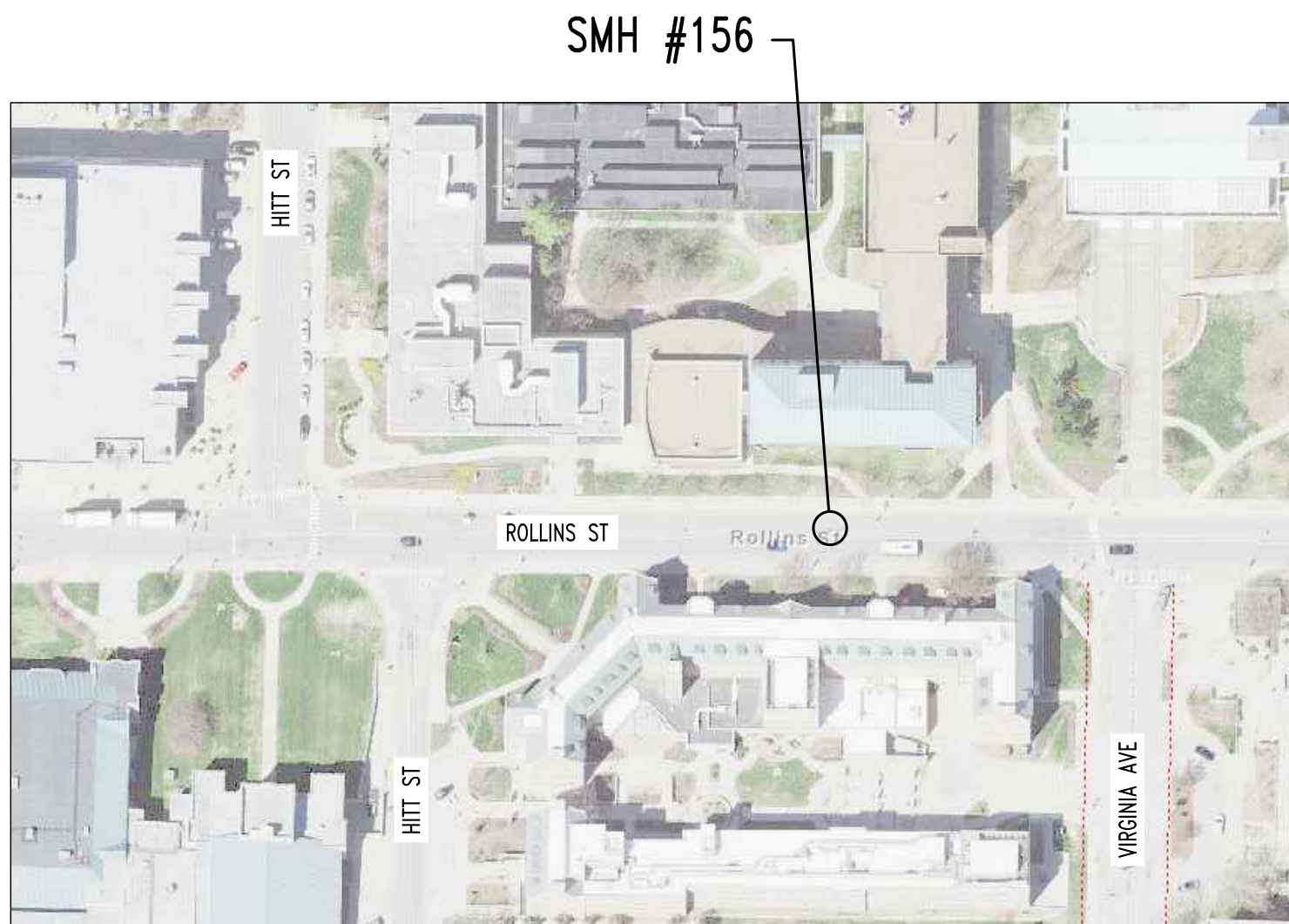
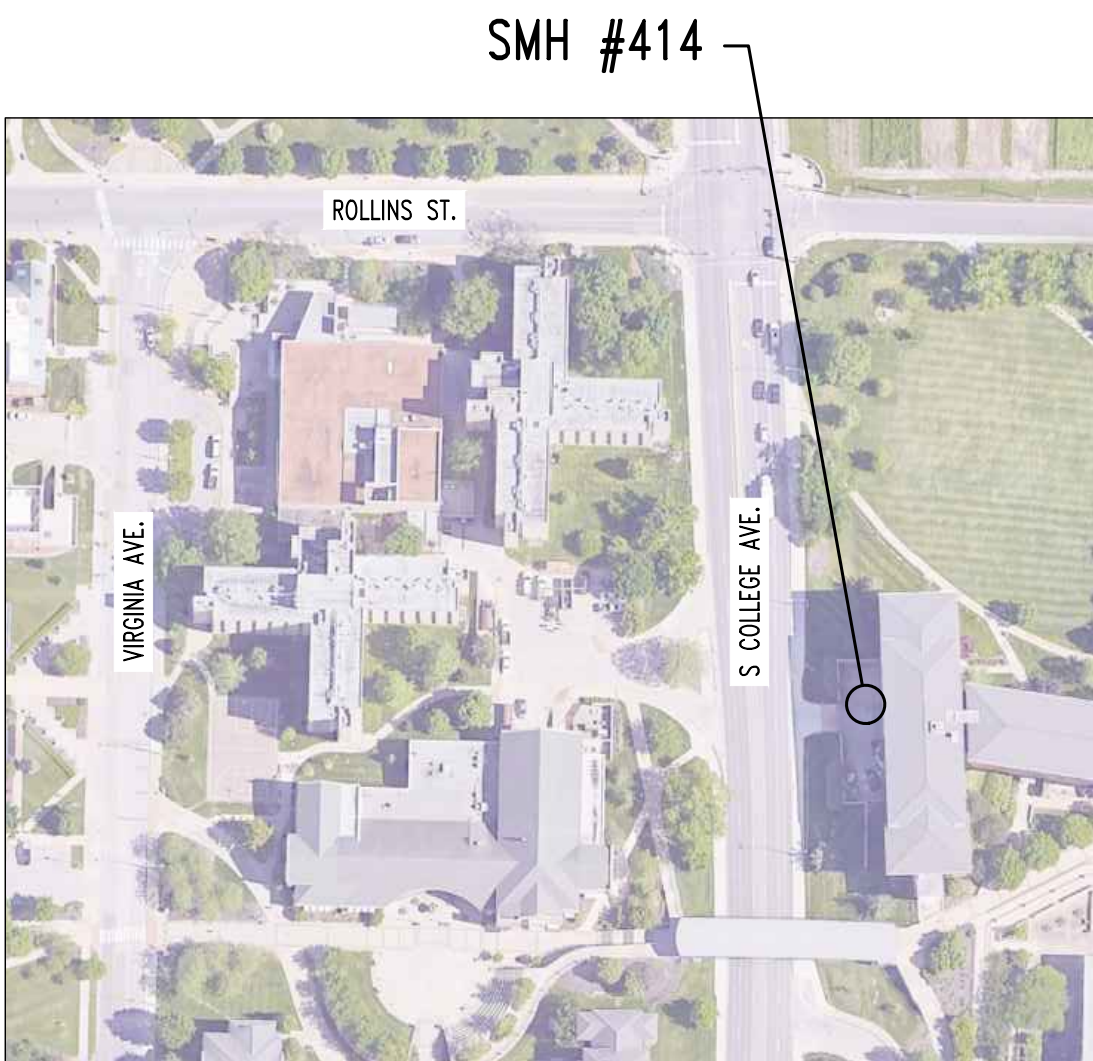


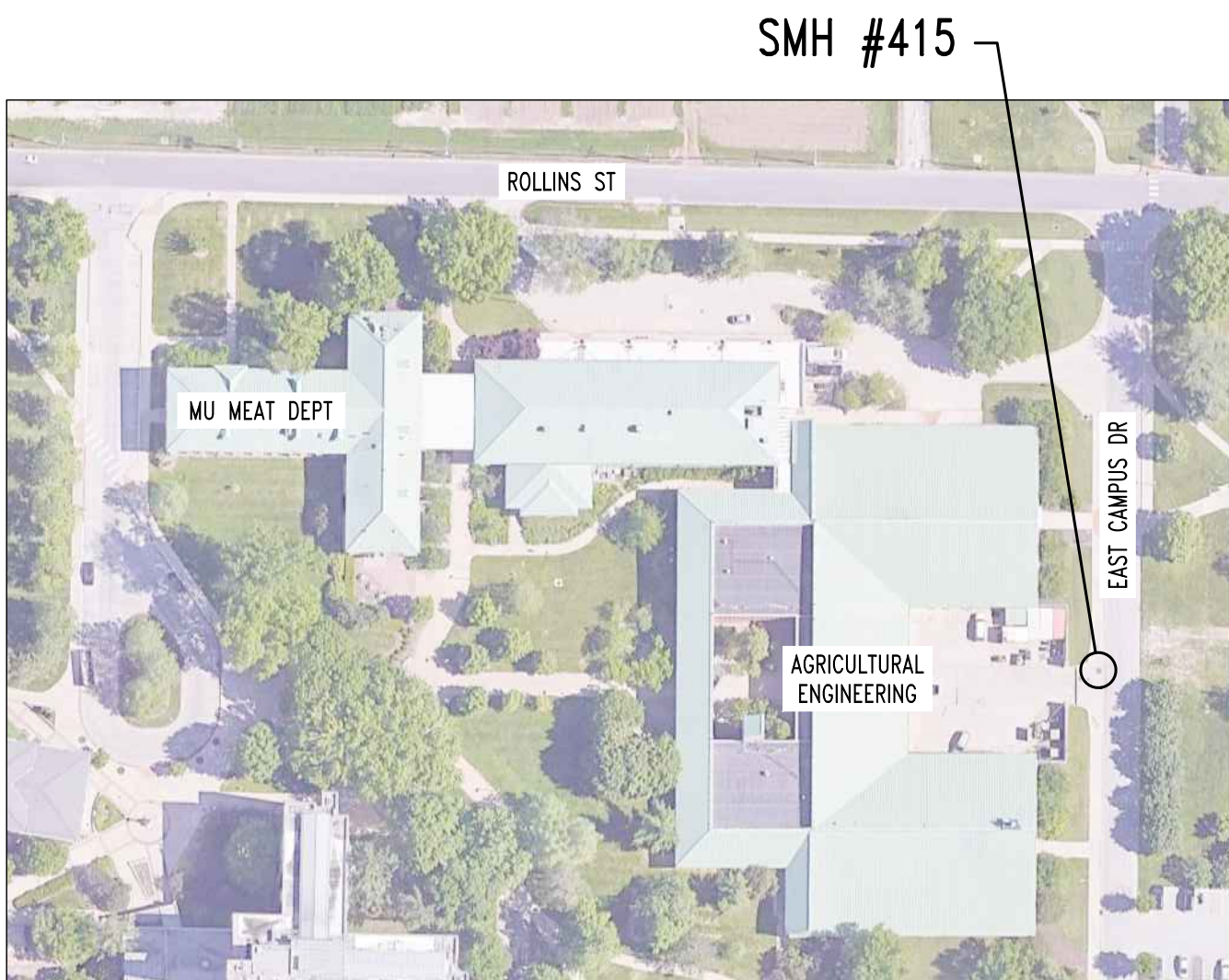
University of Missouri
For
The Curators of the University of Missouri
MU Project Number CP253191
Advertisement Date: January 8, 2026
General Site - Electric & Steam Manholes Concrete Repairs
Columbia, Boone County, Missouri



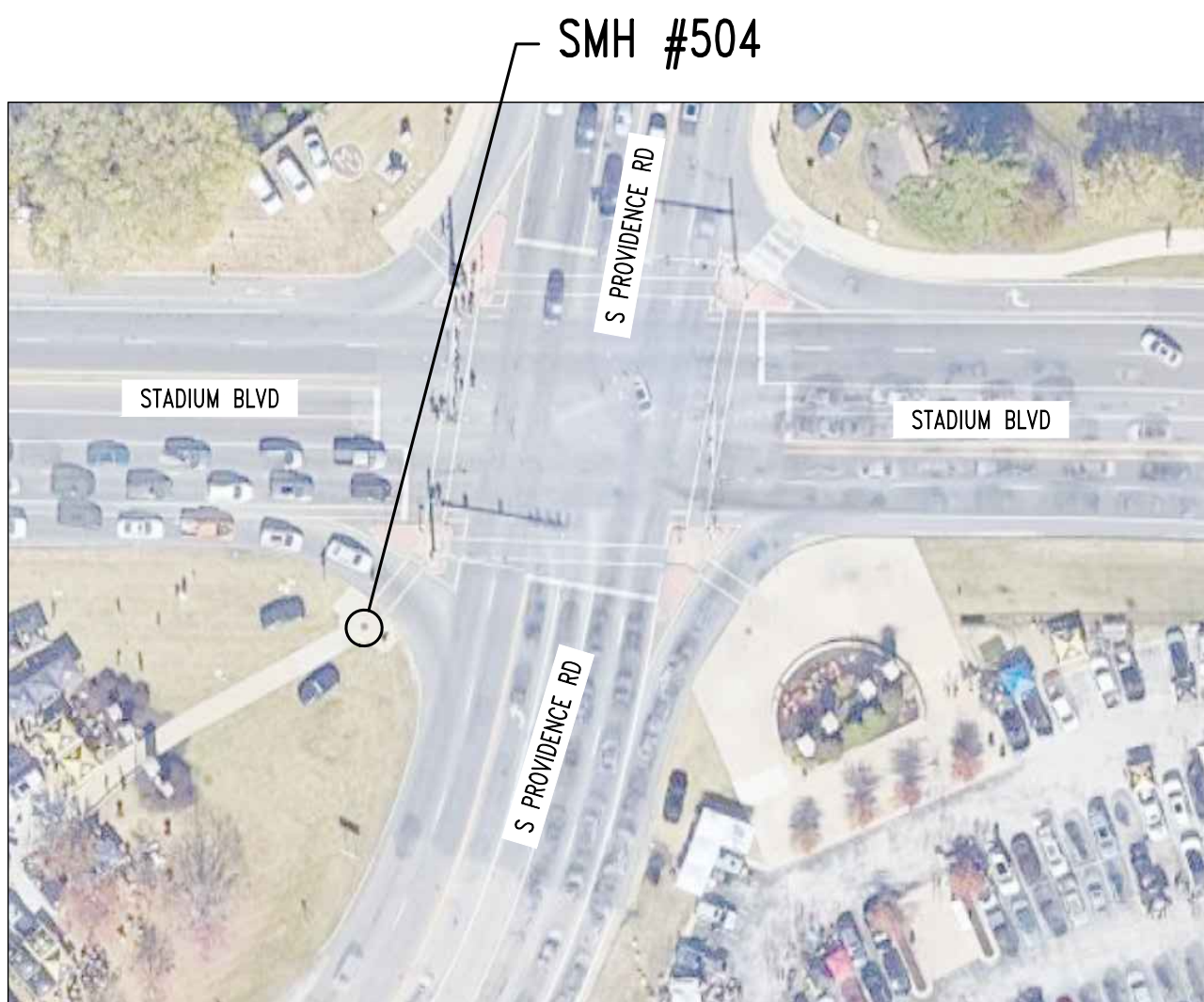
STEAM & ELECTRIC MANHOLE REPAIR SITE PLAN



STEAM MANHOLE REPAIR SITE PLAN



STEAM & ELECTRIC MANHOLE REPAIR SITE PLAN



STEAM MANHOLE REPAIR SITE PLAN



ELECTRIC MANHOLE REPAIR SITE PLAN



CERTIFICATION:
"I HEREBY CERTIFY THESE DRAWINGS AND / OR SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE DRAWINGS AND / OR SPECIFICATIONS ARE AS REQUIRED BY AND IN COMPLIANCE WITH THE BUILDING CODES OF THE UNIVERSITY OF MISSOURI"

SIGNATURE: *Gregory L. Linneman*

CONTRACTOR NOTES:
1. DISTURBANCE OF LANDSCAPE BEDS IS PROHIBITED & WILL BE REPAIRED @ CONTRACTOR'S EXPENSE.
2. CONTRACTOR IS NOT TO DISRUPT TRAFFIC FLOW.

SPECIAL INSPECTIONS
THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.
a. CONCRETE GROUT DESIGN MIX (PERIODIC)
b. PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
c. BOLTS & ANCHORS EMBEDDED IN CONCRETE (PERIODIC)
d. POST INSTALLED ANCHORS IN CONCRETE (CONTINUOUS)
THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

ALTERNATE:
ALTERNATE #1: REPAIR EMH #289 (SEE SHEET S105)

SHEET INDEX:
STRUCTURAL / CIVIL:
COVER - COVER SHEET
S100 - TRAFFIC CONTROL PLAN
S101-S104 - MANHOLE PLANS AND SECTIONS
S105 - MANHOLE PLANS AND SECTIONS (ALTERNATE)
S200 - MANHOLE REPAIR DETAILS

REVISIONS:

| No. | Date |
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STRUCTURAL ENGINEER:
CROCKETT
ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Suite 1
Columbia, Missouri 65203
(573) 447-0992
www.crockettengineering.com
Missouri Certificate of Authority
#2005001013

CLIENT:

UNIVERSITY
OF MISSOURI
225 UNIVERSITY HALL
COLUMBIA, MISSOURI
65211

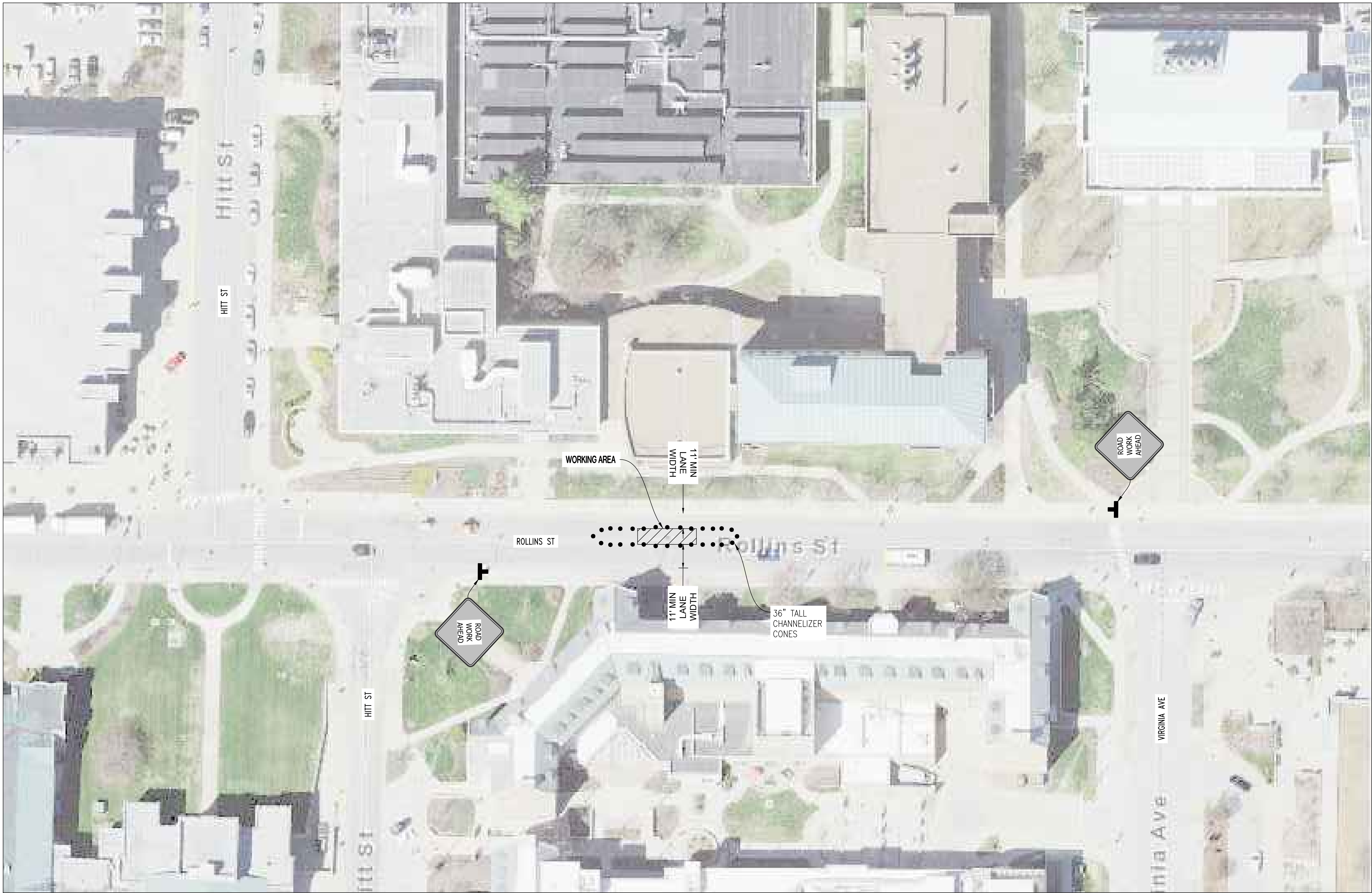
CP253191 - General Site
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COLUMBIA, BOONE COUNTY, MISSOURI

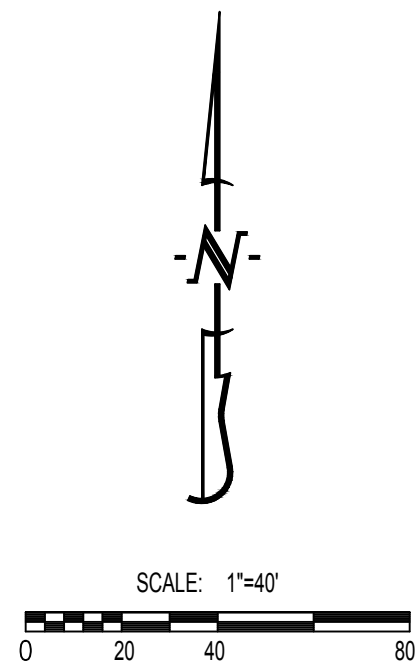
DRAWING INCLUDES:

COVER SHEET

DESIGNED: GLL
DRAWN: TGC
PROJECT NO.: 180016
MU PROJECT NO.: CP253191
SHEET: COVER



PLAN AT SMH #156 (SEE SHEET S101)



GENERAL NOTES

TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE MUTCD.

CONTRACTOR SHALL MAINTAIN A MINIMUM CLEAR LANE WIDTH OF 11' AT ALL TIMES.

CONTRACTOR SHALL REFER TO THE CURRENT EDITION OF THE MCDOT MANUAL OF TRAFFIC CONTROL FOR FIELD OPERATIONS FOR INFORMATION ON THE PROPER DEPLOYMENT OF TRAFFIC CONTROL DEVICES.

BOTH LANES OF TRAFFIC TO REMAIN OPEN AT ALL TIMES.

SCHEDULING OF CLOSURES

ALL WORK IS TO BE DONE BETWEEN MAY 18, 2026 – AUGUST 14, 2026.

CONTRACTOR IS TO SPECIFY EXACT DATES OF WORK

REGULARLY SCHEDULED WORK SHALL BE COMPLETED BETWEEN 7:00AM AND 7:00PM ON WEEKDAYS AND 9:00AM TO 5:00PM ON SATURDAYS. APPLICATION FOR EXTENDED WORK HOURS SHALL BE COMPLETED AND APPROVED BY THE DIRECTOR OF PUBLIC WORKS FOR ANY TIMES OTHER THAN THESE.

THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING CITY OF COLUMBIA SITE DEVELOPMENT AT LEAST ONE WEEK PRIOR TO THE START OF ANY CLOSURE ONCE CLOSURE APPROVAL HAS BEEN GIVEN.

CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE FOLLOWING AGENCIES, AS REQUIRED, IMMEDIATELY PRIOR TO CLOSURE OF STREET, DURING CONSTRUCTION FOR INSPECTIONS AND AGAIN WHEN WORK IS COMPLETE AND STREET IS REOPENED:

| | |
|---|----------|
| SITE DEVELOPMENT (ROW INSPECTIONS) | 874-7474 |
| BUILDING SAFETY (PLUMBING/BUILDING INSPECTIONS) | 874-7474 |
| JOINT COMMUNICATIONS (EMERGENCY SERVICES) | 874-8471 |
| COLUMBIA TRANSIT (CITY BUSES) | 874-7282 |
| PARKING ENFORCEMENT (PARKING METERS) | 874-7674 |
| PUBLIC WORKS STREET DIVISION (STREET PATCHING) | 874-6289 |
| UNIVERSITY OF MISSOURI POLICE DEPARTMENT | 882-7201 |

| TRAFFIC CONTROL DEVICE LEGEND (ALL SIGNS TO BE ORANGE OR FLUORESCENT ORANGE) | | | |
|--|--|--|--|
| | PLACE STANDARD HIGHWAY SIGN (MUTCD SIGN # W20-1 SHOULD READ "ROAD WORK AHEAD"). SIGN SHALL BE 48" X 48" MIN. | | PLACE STANDARD CONE CHANNELIZER WITH REFLECTIVE BAND. CONE SHALL BE 36" MIN. TALL. |
| | VEHICLE TO BE USED WITH WARNING DEVICE TO HELP WARN PASSING TRAFFIC AND CREATE A BARRIER TO WORKING AREA. | | |

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Crockett Engineering Consultants, LLC

Missouri Certificate of Authority

2005001013

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225 UNIVERSITY HALL

COLUMBIA, MISSOURI 65211

CP253191 - General Site

Electric & Steam Manholes Concrete Repairs

UNIVERSITY OF MISSOURI

COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:

TRAFFIC CONTROL PLAN

DESIGNED: GLL

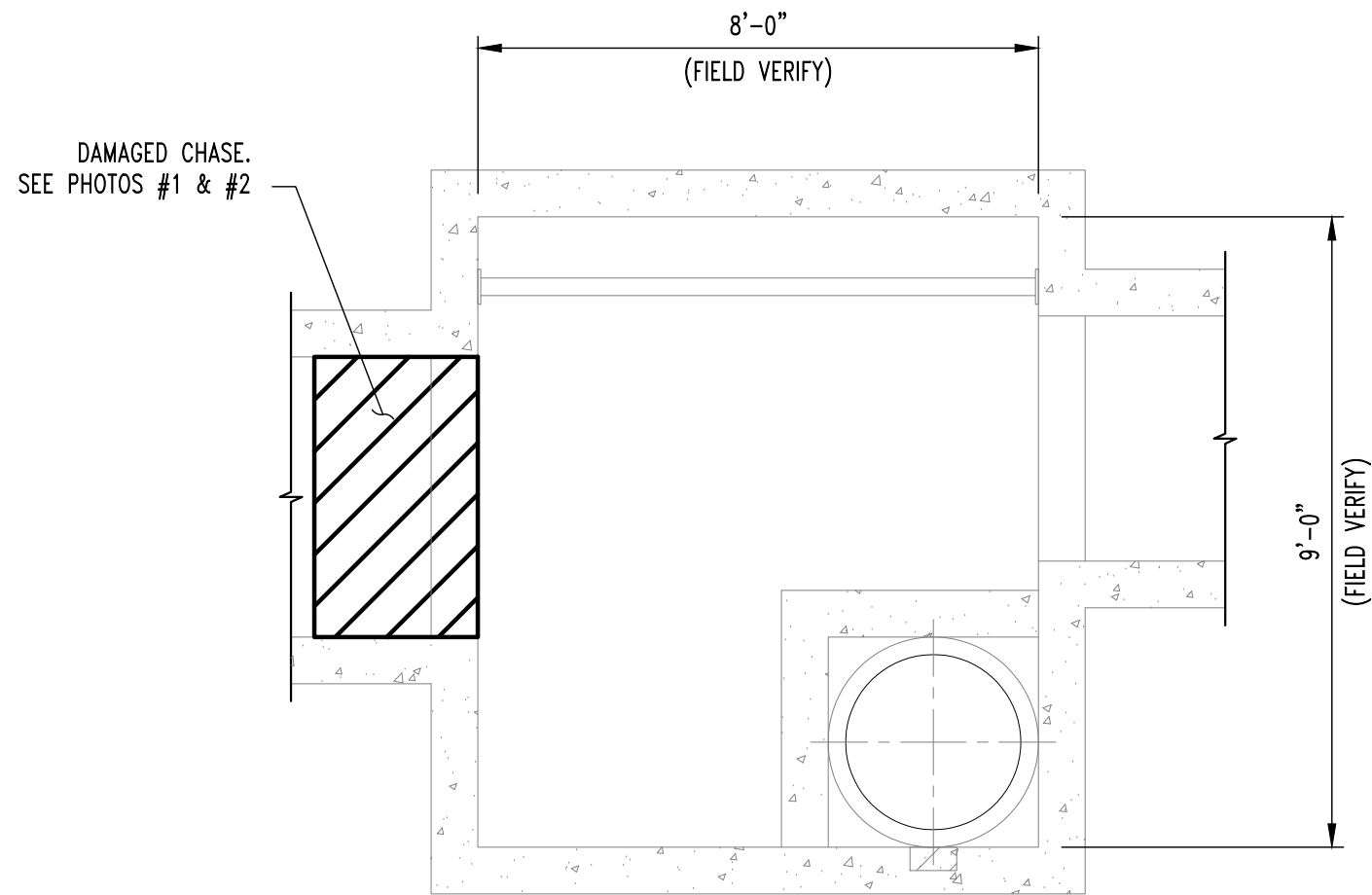
DRAWN: TGC

PROJECT NO.: 180016

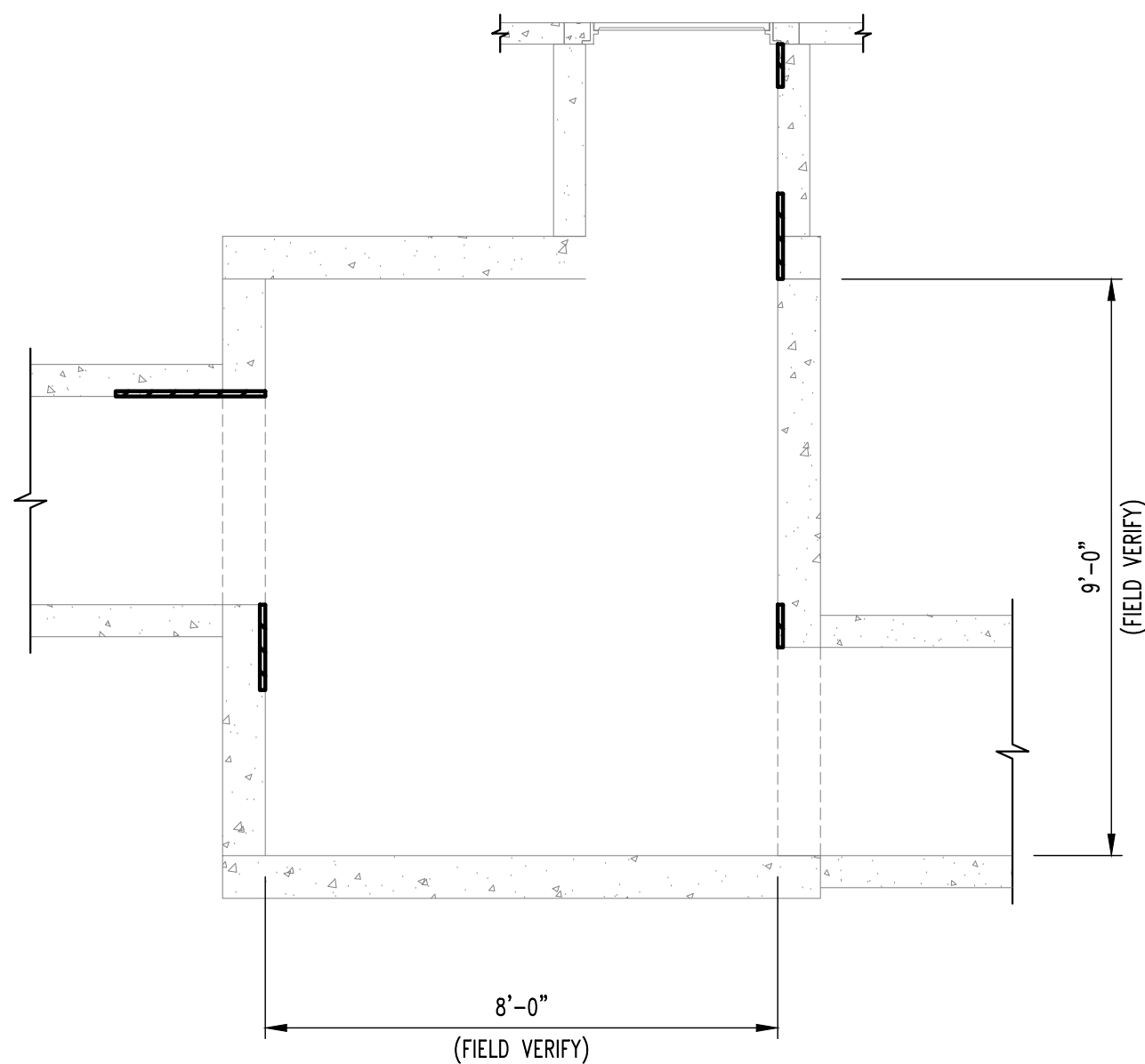
MU PROJECT NO.: CP253191

SHEET:

S100



PLAN VIEW



STEAM MANHOLE #156

SCALE: $\frac{3}{8}'' = 1'-0''$

REPAIR NOTES

SMH #156 (ROLLINS STREET) APPROXIMATE REPAIR AREAS

1. APPROX. 2'-0"x3'-0" CHASE LID SPALLING (EXPECT REPAIR #2).
2. APPROX. 2'-0"x6'-0" PREVIOUS PATCH TO BE REMOVED & REPLACED (EXPECT REPAIR #2).
3. APPROX. 12"x18" SPALLING UNDER MANHOLE LID (EXPECT REPAIR #2).
4. APPROX. 12"x12" SPALLING @ MANHOLE LID TO RISER ON EAST SIDE (EXPECT REPAIR #2).
5. APPROX. 16"x18" SPALLING @ EAST CHASE (EXPECT REPAIR #3).



1 REBAR EXPOSED, WEST CHASE LID. SEE NOTE #1.

SMH #156 - ROLLINS ST.

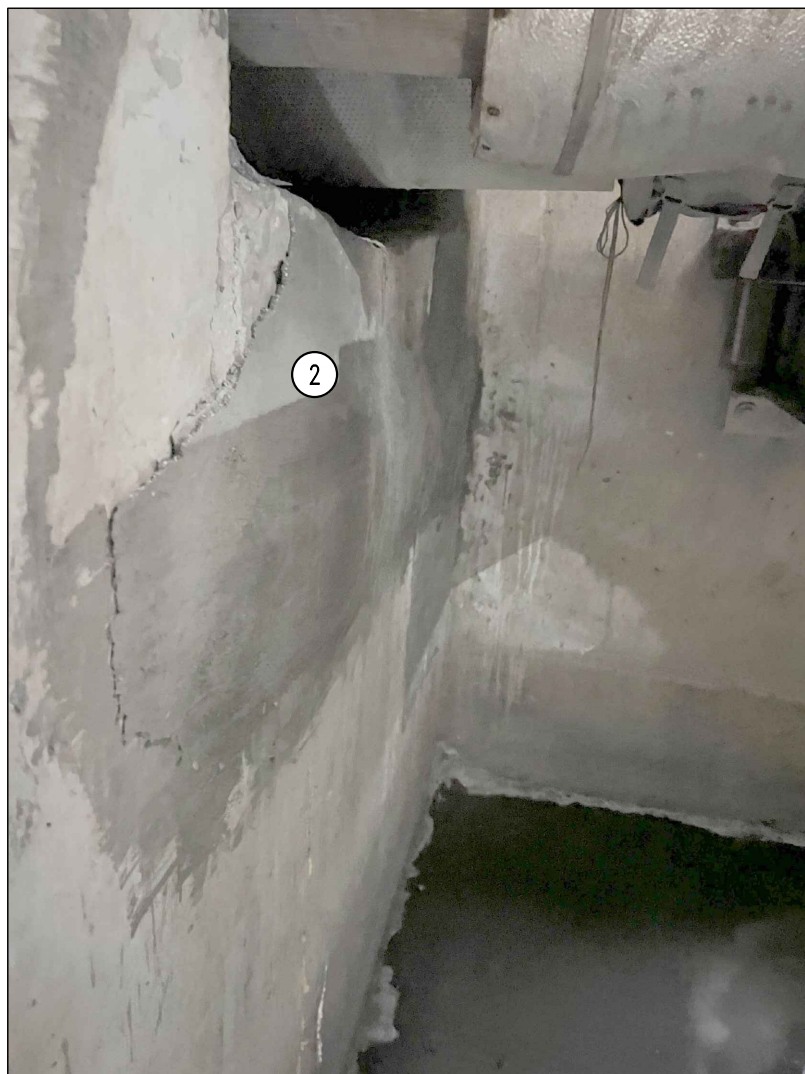
(PHOTO #1)



1 REBAR EXPOSED, WEST CHASE LID. SEE NOTE #1.

SMH #156 - ROLLINS ST.

(PHOTO #2)



2 PREVIOUS PATCH FAILURE UNDER WEST CHASE. SEE NOTE #2.

SMH #156 - ROLLINS ST.

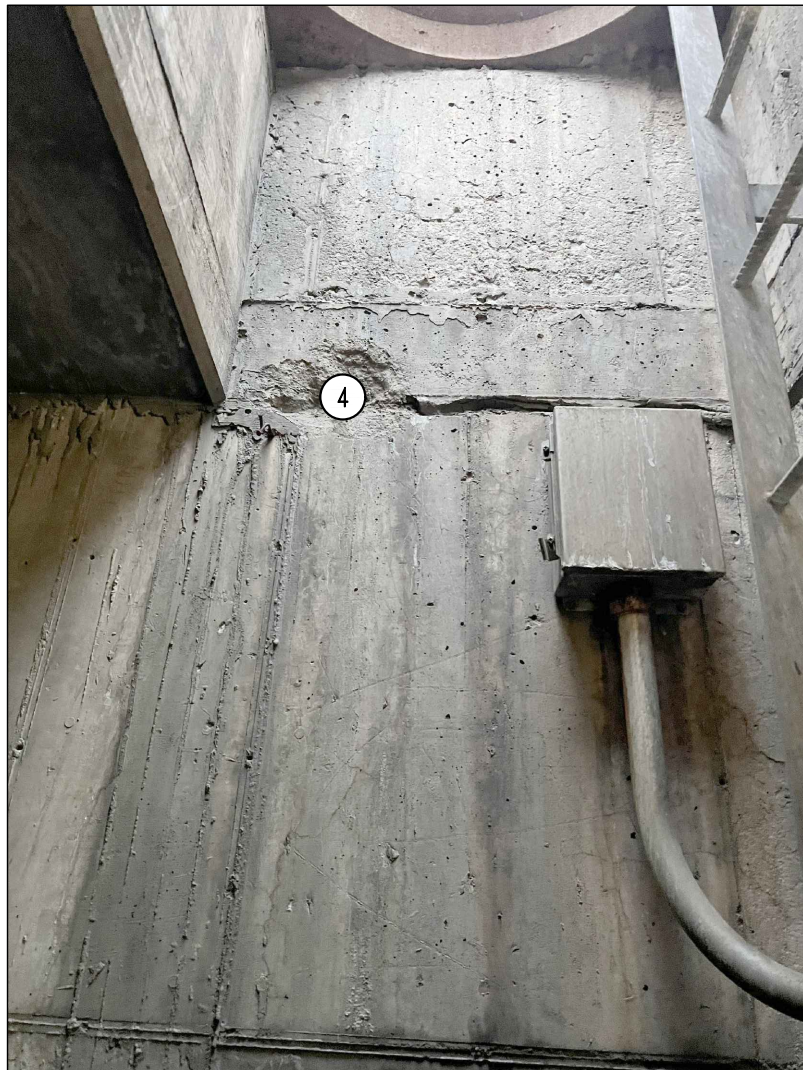
(PHOTO #3)



3 SPALLING UNDER MANHOLE LID. SEE NOTE #3.

SMH #156 - ROLLINS ST.

(PHOTO #4)



4 SPALLING @ MANHOLD RISER. SEE NOTE #4.

SMH #156 - ROLLINS ST.

(PHOTO #5)



5 EAST CHASE SPALLING. SEE NOTE #5.

SMH #156 - ROLLINS ST.

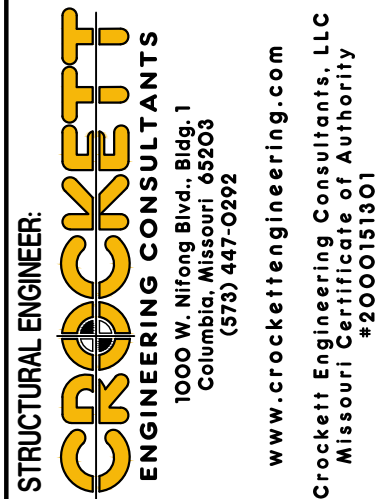
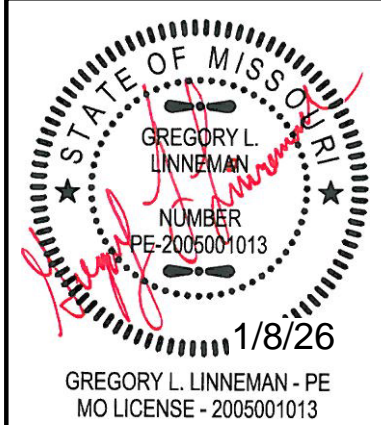
(PHOTO #6)

GENERAL NOTES

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2. ALL CONCRETE PATCHING/REPAIR DETAILS AND NOTES ARE PROVIDED ON SHEET S200.
3. ALL NEW REINFORCING TO BE MMFX/CHROME X REBAR.
4. ALL DAMAGE TO GALVANIZING TO BE REPAIRED w/ HOT GALVANIZING BY CONTRACTOR.
5. ALL EXPOSED STEEL TO BE HOT DIPPED GALVANIZED INCLUDING BOLTS, WASHERS, ETC.
6. COORDINATE ANY REQUIRED UTILITY SHUT DOWNS w/ MU PROJECT MANAGER.

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UNIVERSITY OF MISSOURI
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:

SMH #156
ROLLINS ST.
PLAN & PHOTOS

DESIGNED: GLL

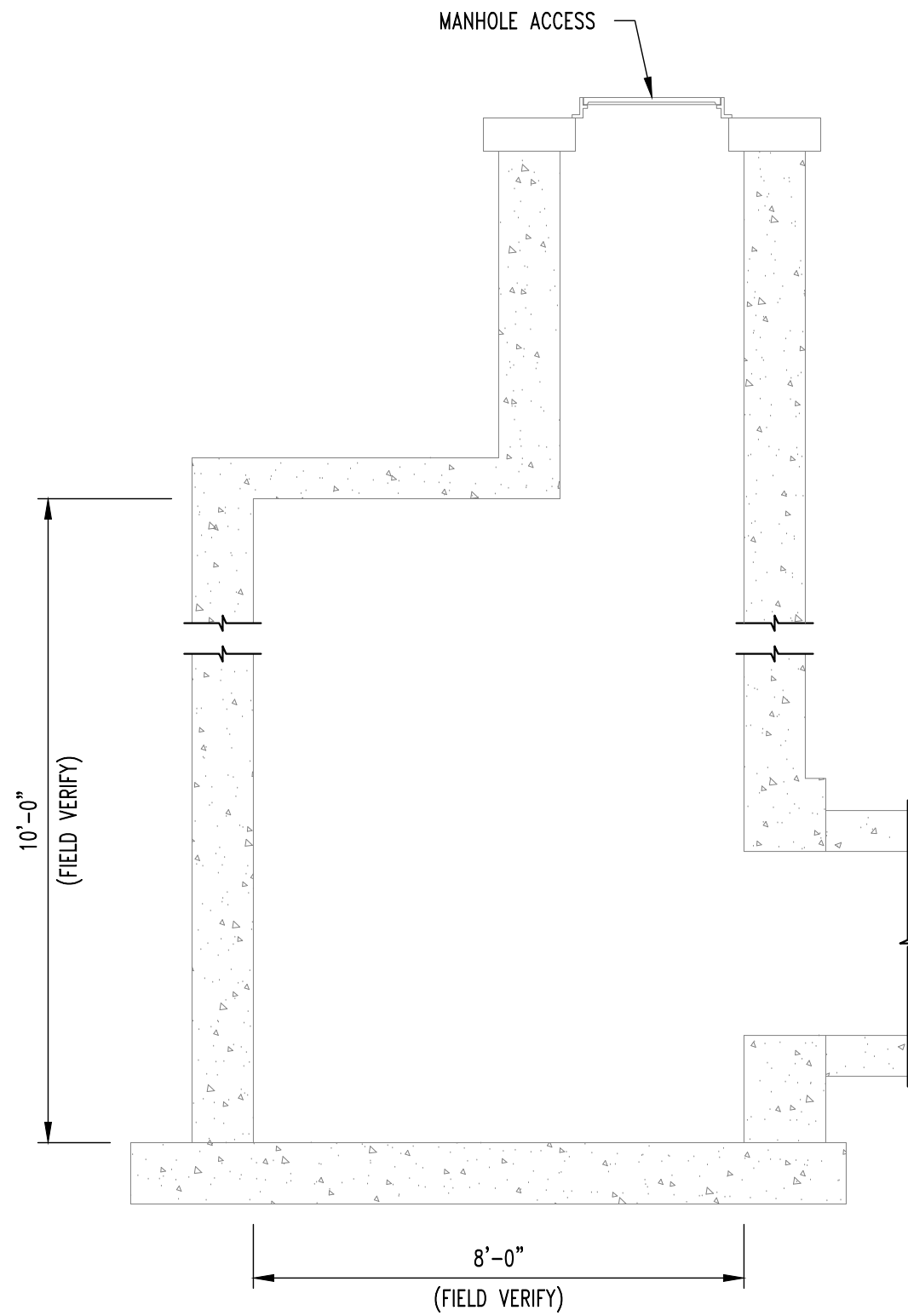
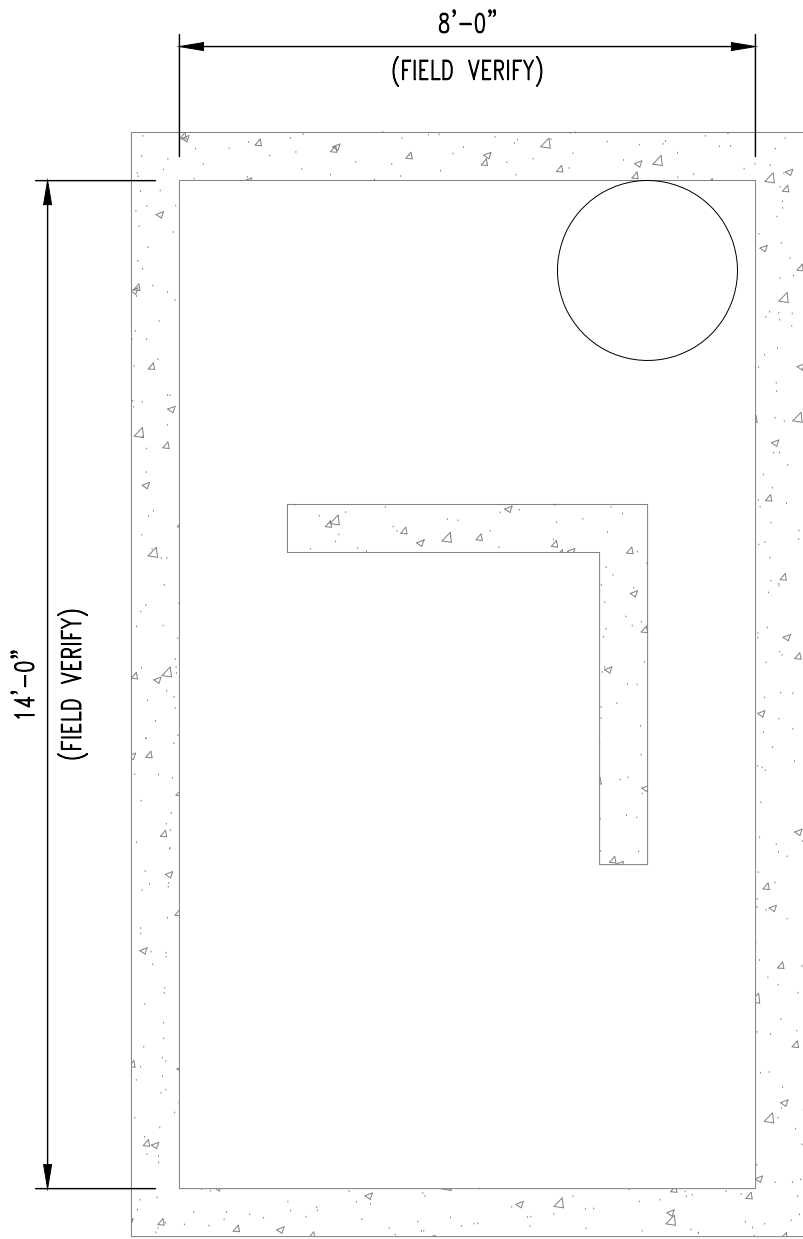
DRAWN: TGC

PROJECT NO.: 180016

MU PROJECT NO.: CP253191

SHEET:

S101



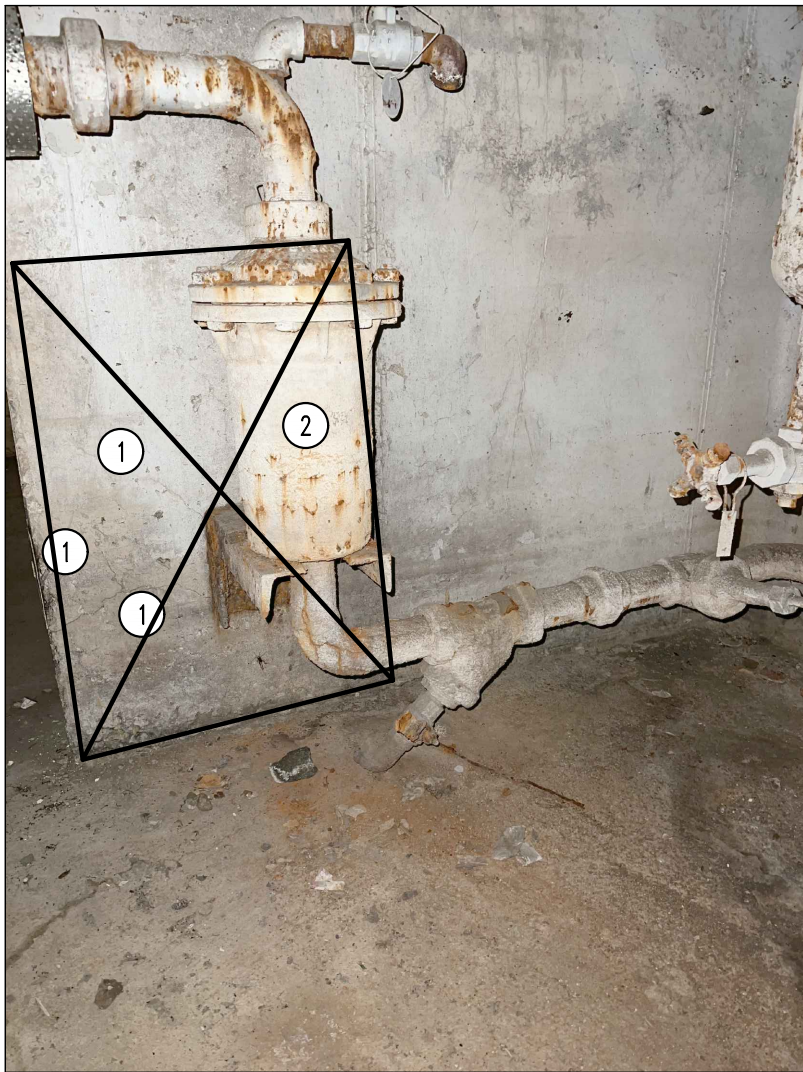
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S102

STEAM MANHOLE #414

SCALE: 3/8" = 1'-0"

REPAIR NOTES

- SMH #414 APPROXIMATE REPAIR AREAS
- 24"x36" CONCRETE REPAIR ON ANCHOR WALL (EXPECT REPAIR #3).
 - SOUTH WALL REPAIR SPALL, 3'-0"x4'-0" AREA (EXPECT REPAIR #2).
 - REBAR ANCHORAGE CONCRETE REPAIR, 1'-0"x2'-0" AREA (EXPECT REPAIR #2).
 - 36"x36" CONCRETE REPAIR ON NORTH WALL (EXPECT REPAIR #2).

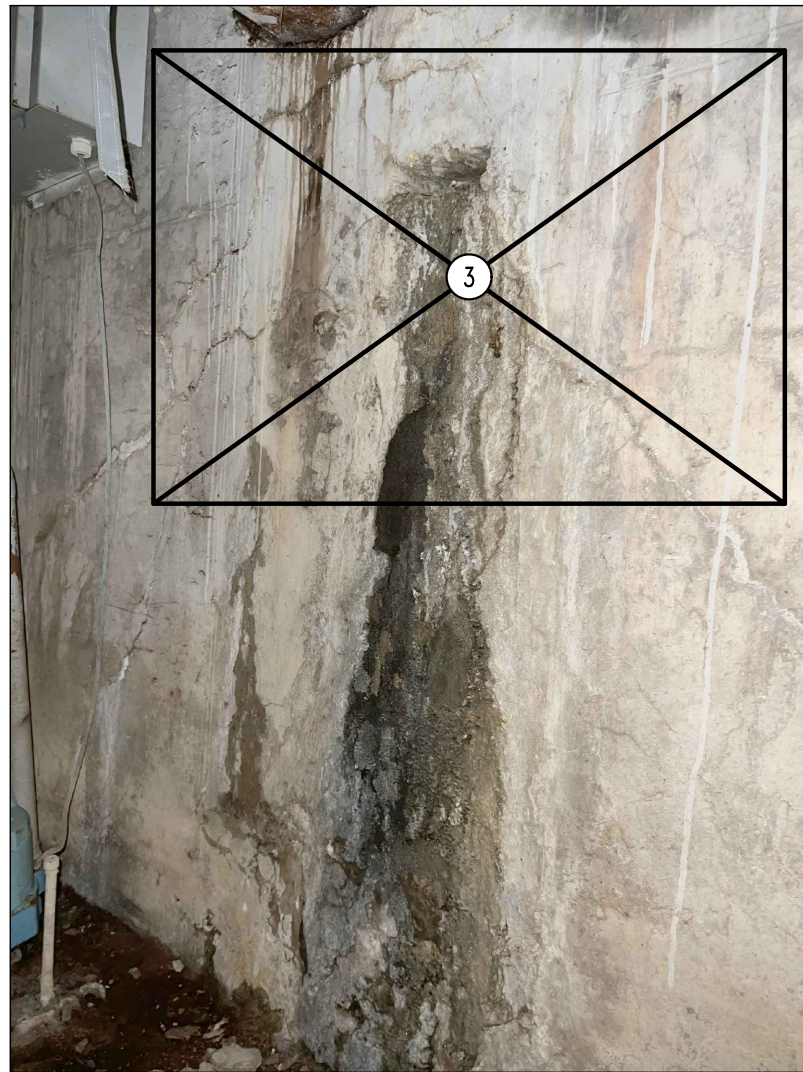


1 CONCRETE SPALLING SOUTH SIDE OF EAST/WEST ANCHOR WALL @ WEST END, SEE NOTE #1.

2 OWNER TO REMOVE PRIOR TO REPAIRS.

SMH #414 - SOUTH COLLEGE AVE.

(PHOTO #1)



3 CONCRETE SPALLING SOUTH WALL OF MANHOLE, SEE NOTE #2.

SMH #414 - SOUTH COLLEGE AVE.

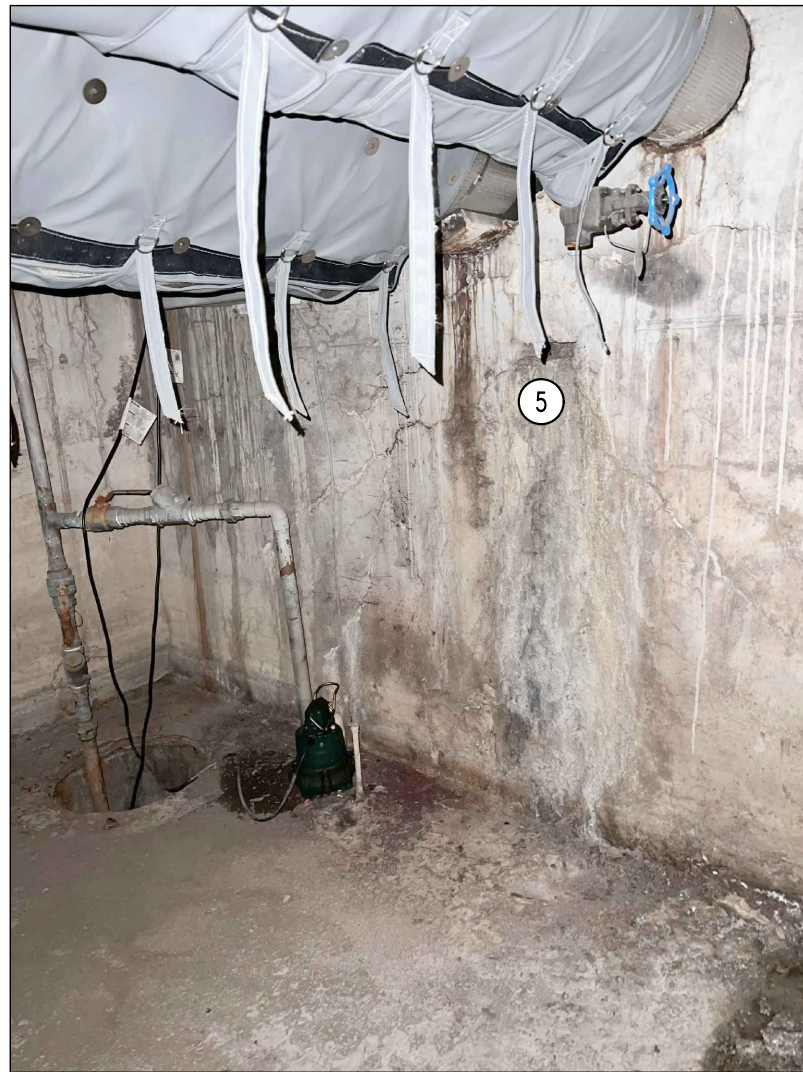
(PHOTO #2)



4 CONCRETE SPALLING WEST SIDE OF NORTH/SOUTH ANCHOR WALL @ SOUTH END, SEE NOTE #3.

SMH #414 - SOUTH COLLEGE AVE.

(PHOTO #3)



5 CONCRETE SPALLING UNDER NORTH CHASE, SEE NOTE #4.

SMH #414 - SOUTH COLLEGE AVE.

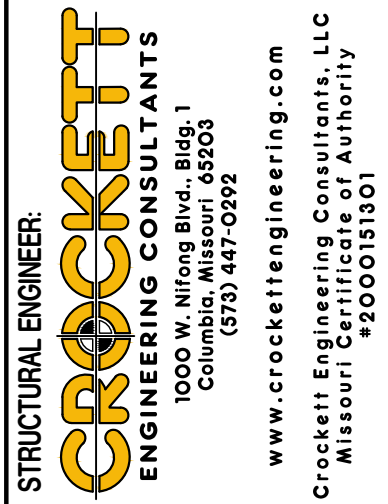
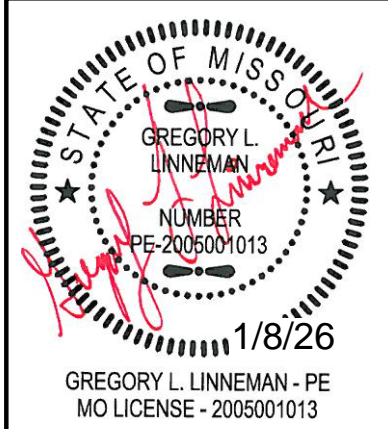
(PHOTO #4)

GENERAL NOTES

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- ALL CONCRETE PATCHING/REPAIR DETAILS AND NOTES ARE PROVIDED ON SHEET S200.
- ALL NEW REINFORCING TO BE MMFX/CHROME X REBAR.
- ALL DAMAGE TO GALVANIZING TO BE REPAIRED w/ HOT GALVANIZING BY CONTRACTOR.
- ALL EXPOSED STEEL TO BE HOT DIPPED GALVANIZED INCLUDING BOLTS, WASHERS, ETC.
- COORDINATE ANY REQUIRED UTILITY SHUT DOWNS w/ MU PROJECT MANAGER.

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CLIENT:

UNIVERSITY OF MISSOURI
225 UNIVERSITY HALL
COLUMBIA, MISSOURI 65211

CP253191 - General Site
Electric & Steam Manholes Concrete Repairs

UNIVERSITY OF MISSOURI
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:

SMH #414
SOUTH COLLEGE AVE.
PLAN & PHOTOS

DESIGNED: GLL

DRAWN: TGC

PROJECT NO.: 180016

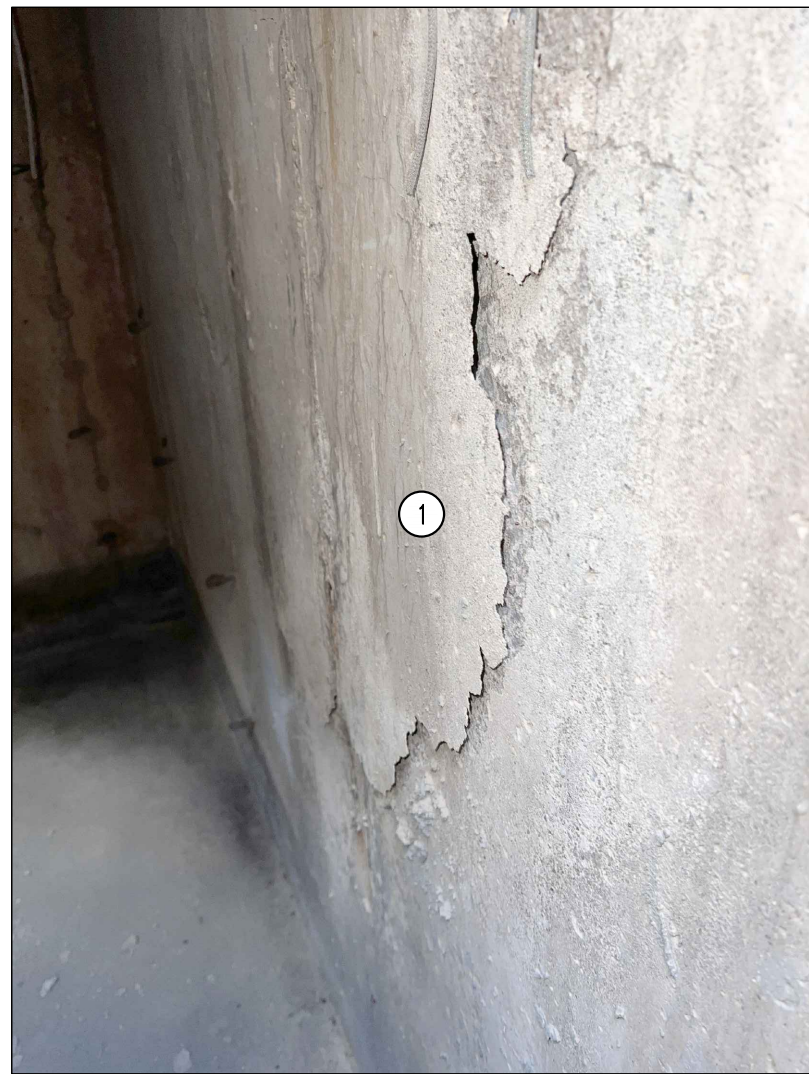
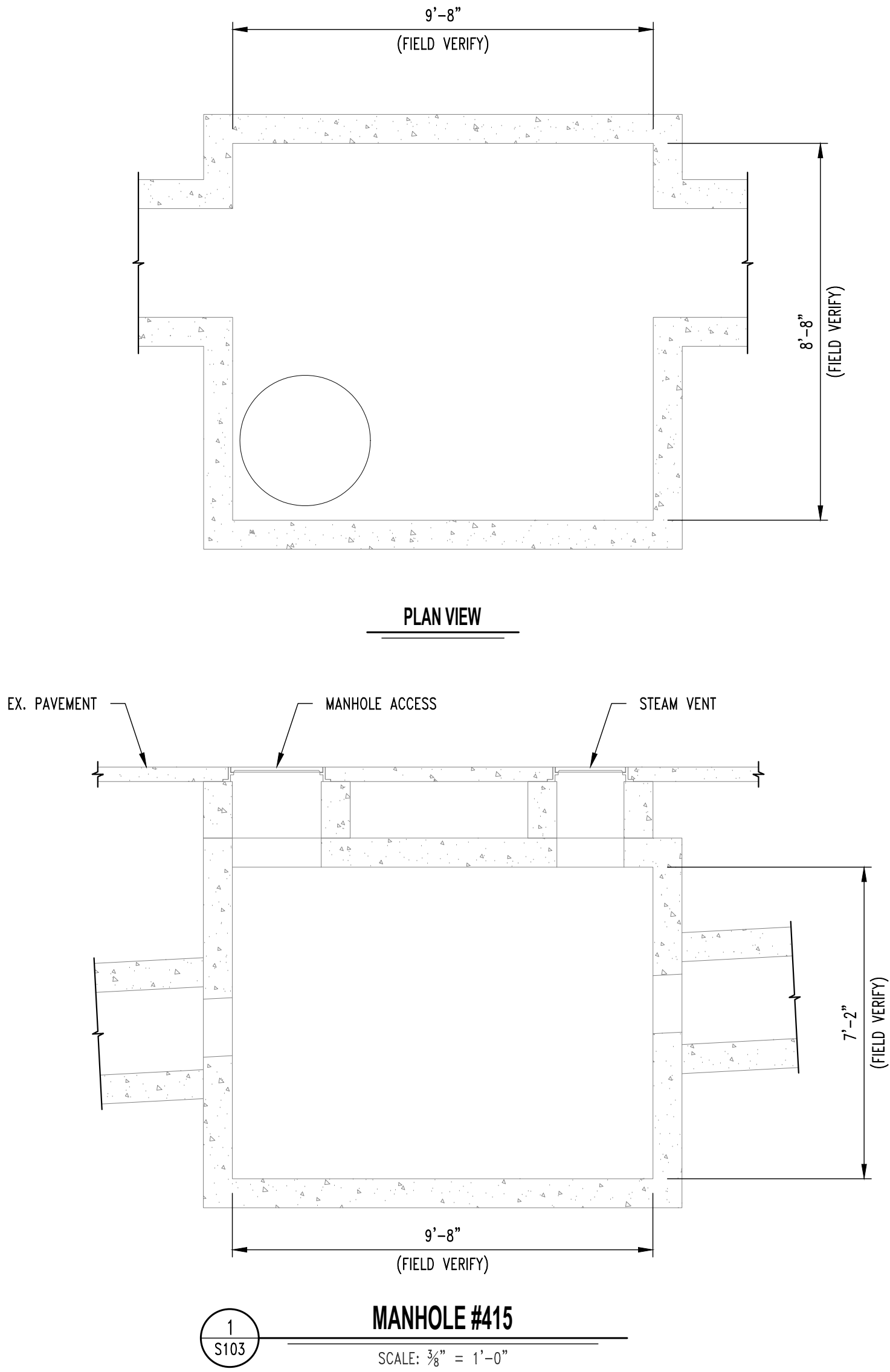
MU PROJECT NO.: CP253191

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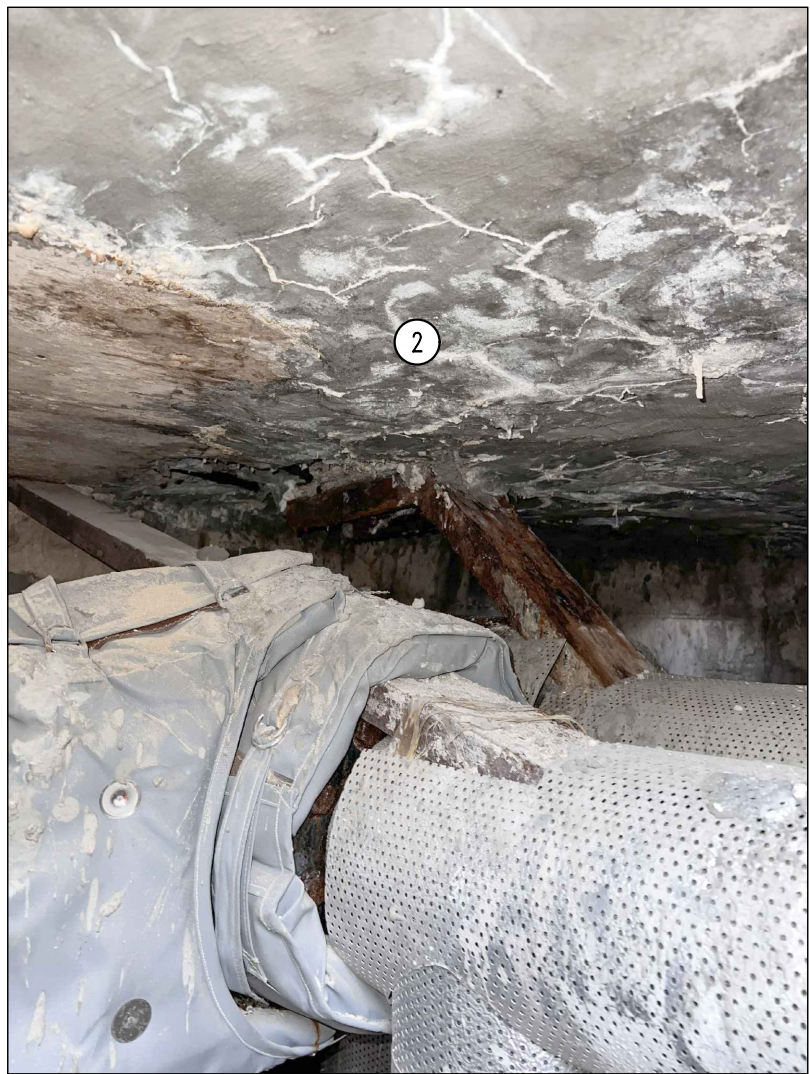
REPAIR NOTES

- SMH #415 APPROXIMATE REPAIR AREAS
- EAST WALL CONCRETE SPALLING 48"x48" (EXPECT REPAIR #2).
 - FULL LID CONCRETE SPALLING & PRIOR PATCHING FAILURE (EXPECT REPAIR #2).
 - SOUTH WALL CONCRETE SPALLING 48"x48" (EXPECT REPAIR #2).
 - WEST CONCRETE ANCHOR SPALLING 30"x48" (EXPECT REPAIR #3). (NOTE: ONLY REMOVE LOOSE MATERIAL & PATCH BACK)
 - EAST CONCRETE ANCHOR SPALLING 30"x48" (EXPECT REPAIR #3). (NOTE: ONLY REMOVE LOOSE MATERIAL & PATCH BACK)
 - NORTH WALL CONCRETE SPALLING 36"x36" (EXPECT REPAIR #2).



1 EAST WALL SPALLING. SEE NOTE #1.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #1)



2 WIDESPREAD LID SPALLING. SEE NOTE #2.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #2)



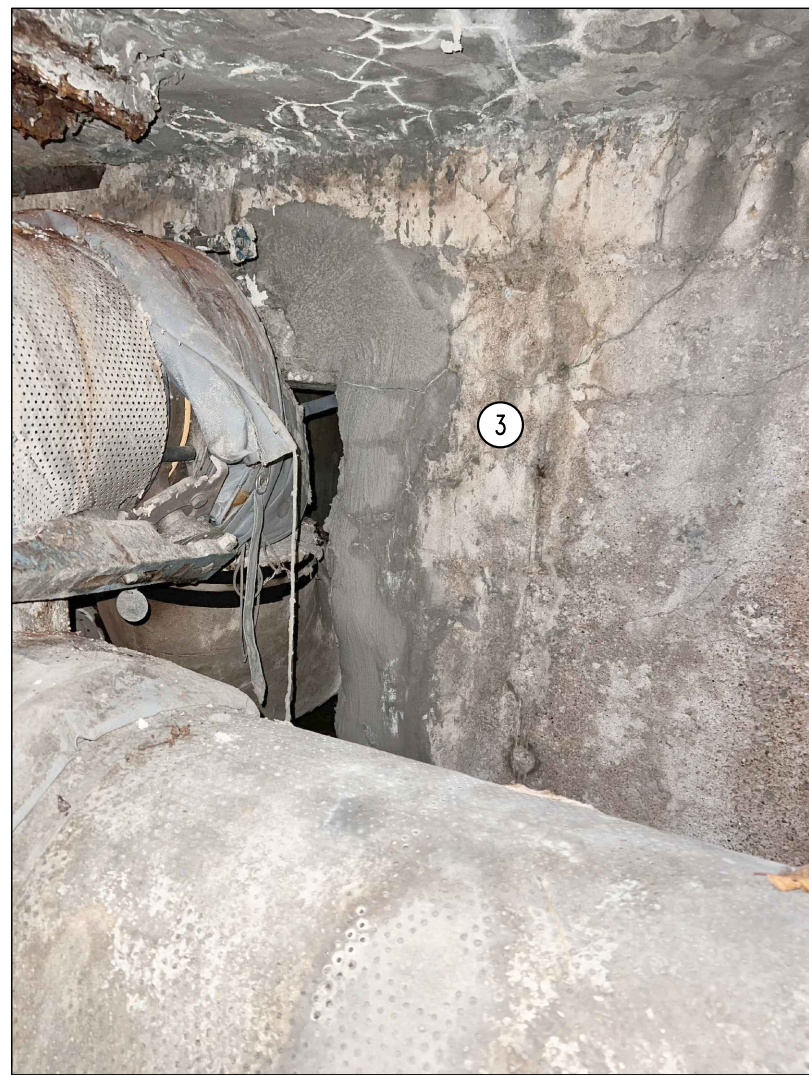
2 WIDESPREAD LID SPALLING. SEE NOTE #2.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #3)



2 WIDESPREAD LID SPALLING. SEE NOTE #2.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #4)



3 SOUTH WALL SPALLING AROUND CHASE. SEE NOTE #3.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #5)



4 WEST CONCRETE ANCHOR SPALLING. SEE NOTE #4.

NOTE:
STEAM LINE WILL REMAIN ACTIVE.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #6)



5 EAST CONCRETE ANCHOR SPALLING. SEE NOTE #5.

NOTE:
STEAM LINE WILL REMAIN ACTIVE.

SMH #415 - EAST OF AG ENGINEERING
(PHOTO #7)



6 NORTH WALL CONCRETE SPALLING UNDER PIPE. SEE NOTE #6.

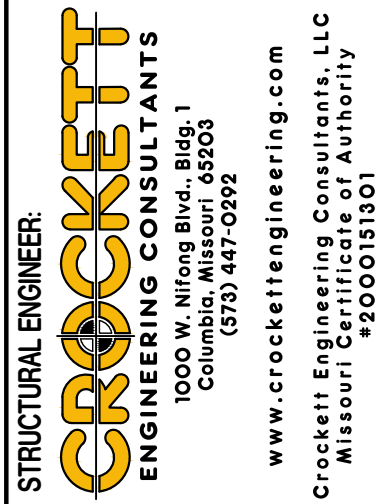
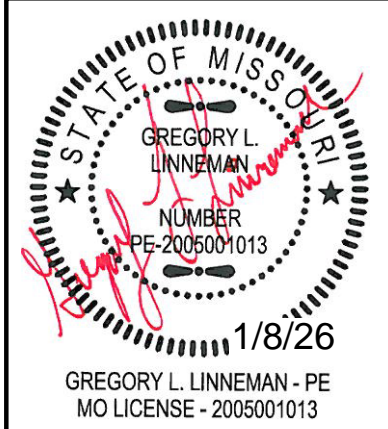
SMH #415 - EAST OF AG ENGINEERING
(PHOTO #8)

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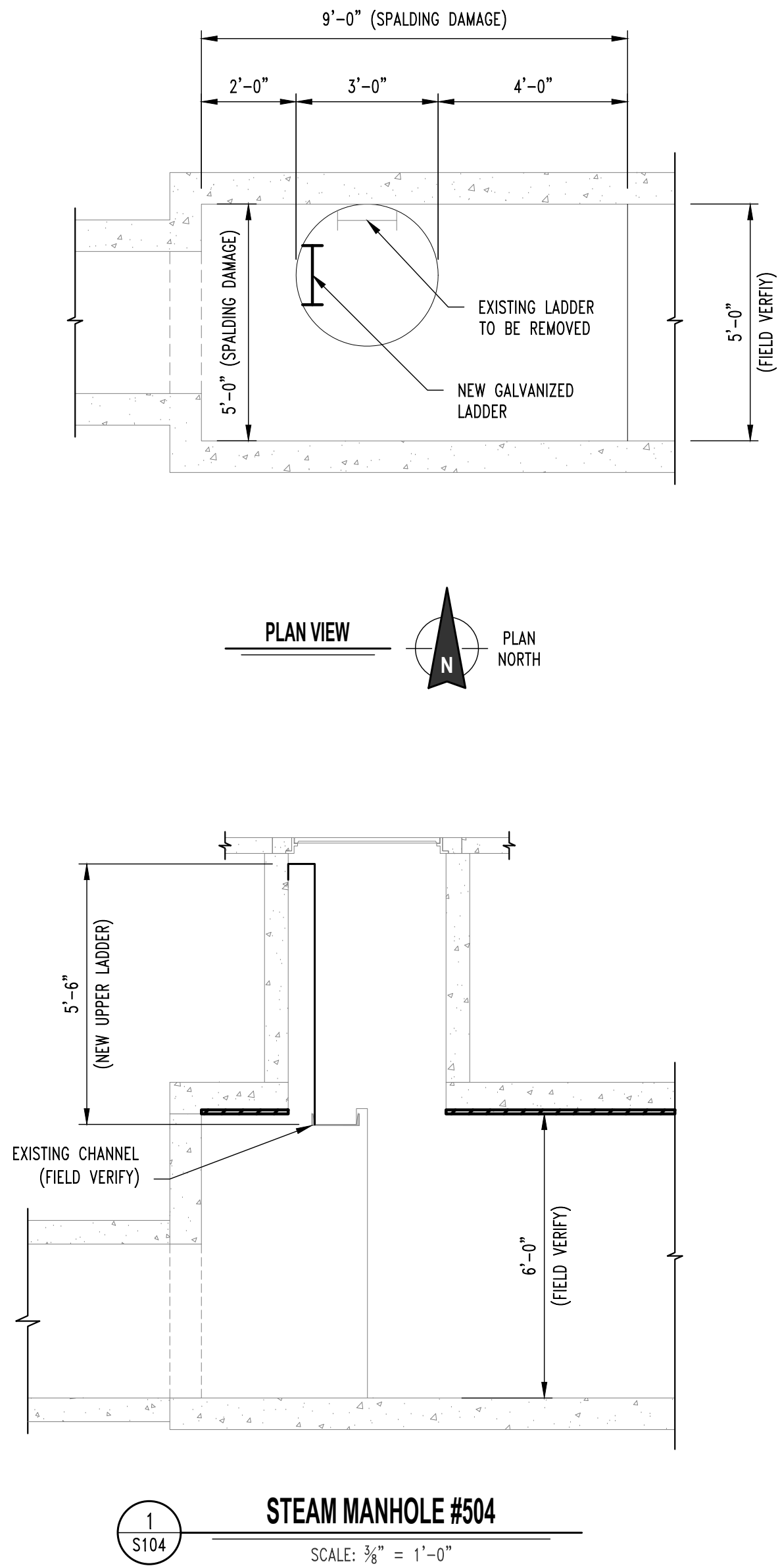
DRAWING INCLUDES:

SMH #415
EAST OF AG
ENGINEERING
PLAN & PHOTOS

| | |
|-----------------|----------|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180016 |
| MU PROJECT NO.: | CP253191 |
| SHEET: | S103 |

REPAIR NOTES

SMH #504 APPROXIMATE REPAIR AREAS
1. ROOF CONCRETE SPALL 5'-0"x9'-0". EXPECT REPAIR #3.



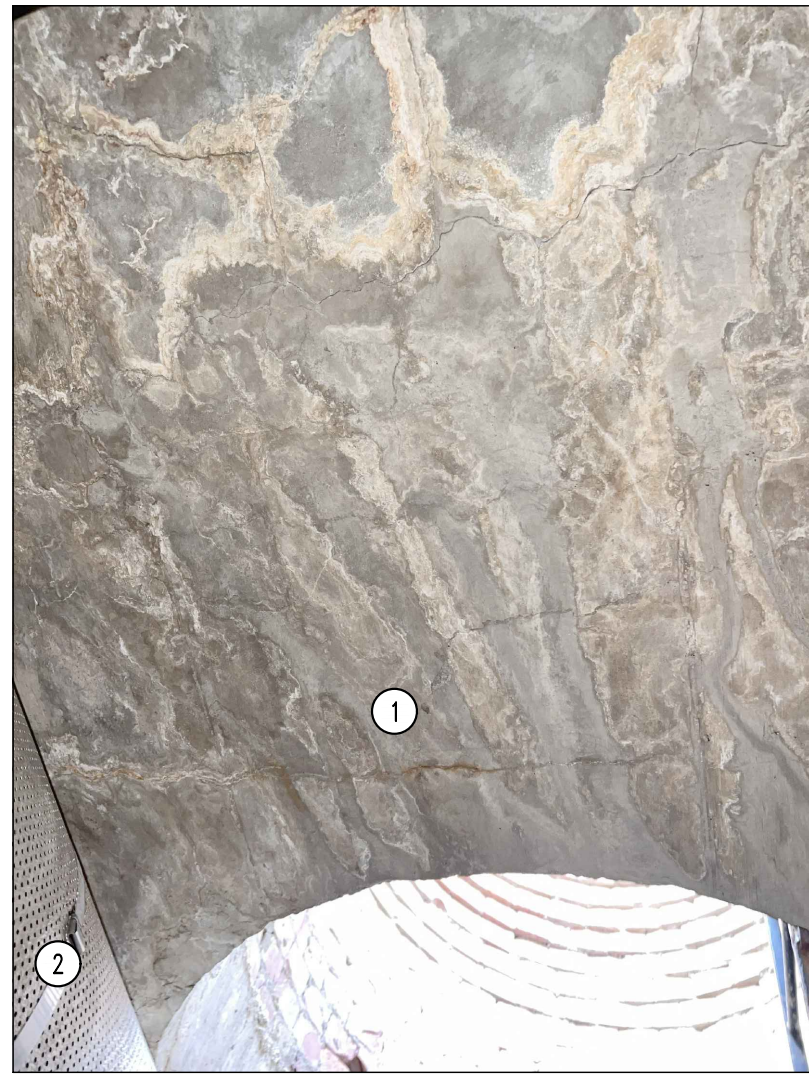
1 LID CONCRETE SPALLING. SEE NOTE #1.

SMH #504 - WEST SIDE OF NORTH PROVIDENCE TUNNEL
(PHOTO #1)



2 REMOVE EXISTING LADDER @ NORTH SIDE.
3 NEW 20" WIDE x 66" TALL GALVANIZED LADDER w/ #6 REBAR RUNGS
INSTALLED ON WEST SIDE OF MANHOLE. PROVIDE 1/2" BENT PLATE & 1/2"Ø
GALVANIZED A307 THREADED ROD w/ 4" HILTI HY-270 EPOXY EMBEDMENT.
TOTAL (4) ANCHORS (FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION).

SMH #504 - WEST SIDE OF NORTH PROVIDENCE TUNNEL
(PHOTO #2)



1 LID EAST SIDE OF RISER CONCRETE SPALL. SEE NOTE #1.
2 PROTECT STEAM PIPE FROM FALLING DEBRIS.

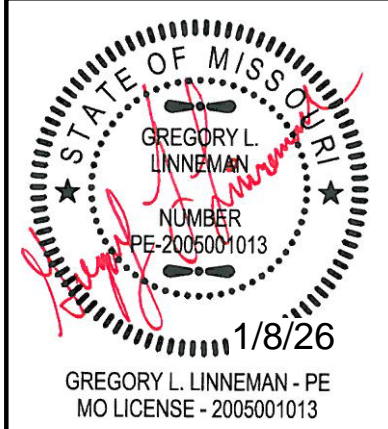
SMH #504 - WEST SIDE OF NORTH PROVIDENCE TUNNEL
(PHOTO #3)

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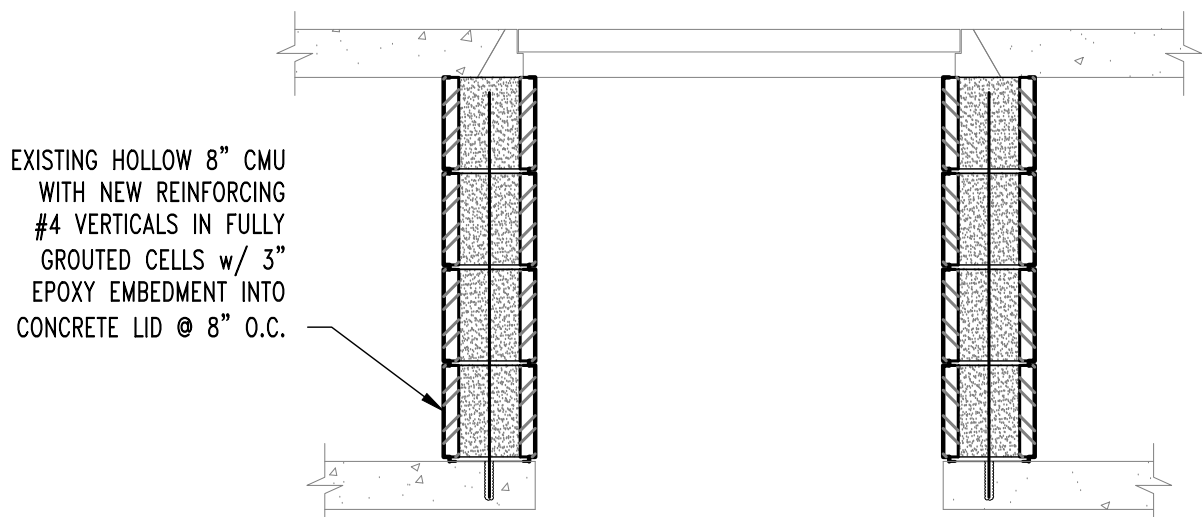
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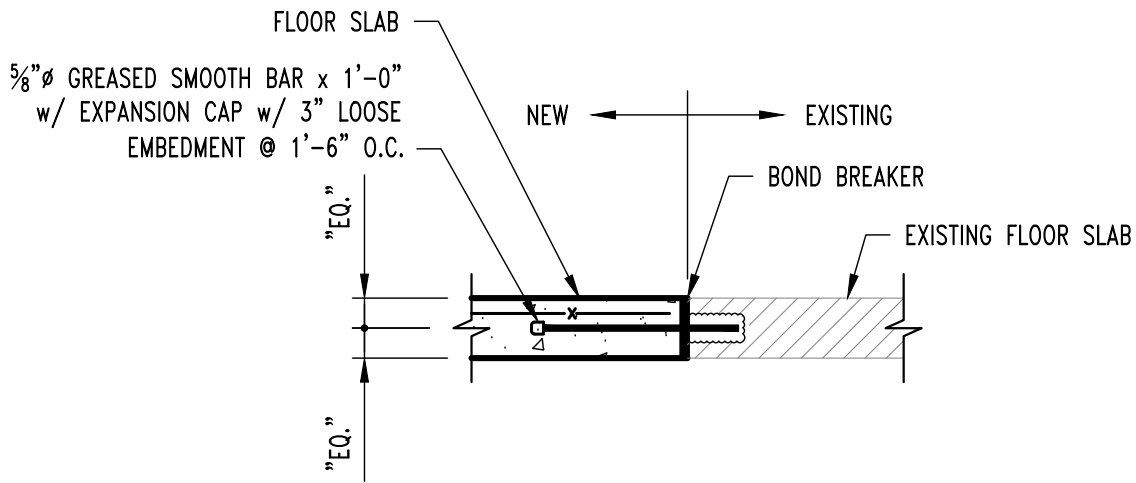
DRAWING INCLUDES:
SMH #504
WEST SIDE OF NORTH
PROVIDENCE TUNNEL
PLAN & PHOTOS

DESIGNED: GLL
DRAWN: TGC
PROJECT NO.: 180016
MU PROJECT NO.: CP253191
SHEET: S104



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S105

ELECTRICAL MANHOLE #289
SCALE: 3/4" = 1'-0"
(ALTERNATE #1)

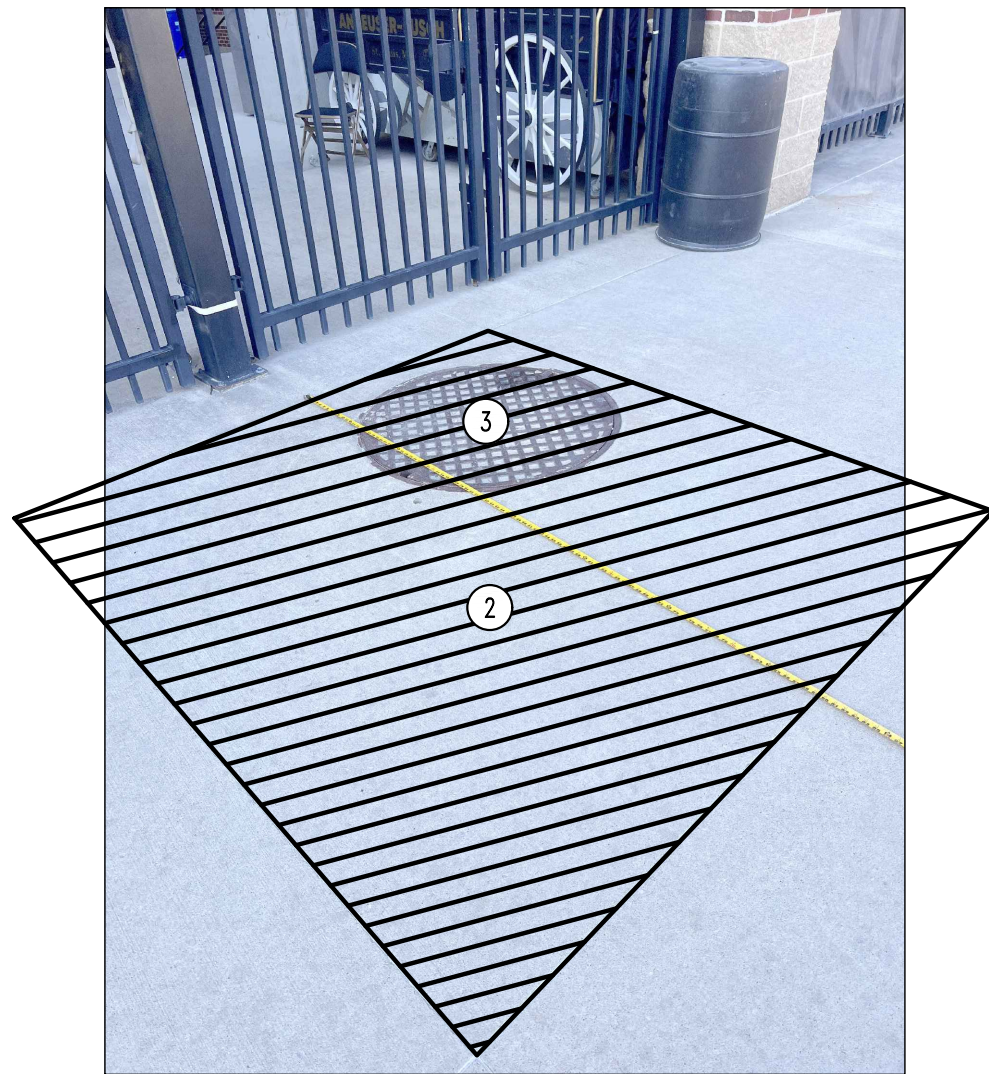


TYPICAL NEW SLAB TO EXISTING SLAB SECTION
(ALTERNATE #1)



1
REMOVE PAVEMENT. REINSTALL CMU, THEN ADD REINFORCEMENT & GROUT INTO EXISTING HOLLOW CMU.

EMH #289 - E OF EAST STADIUM PRESSBOX
(PHOTO #1)
(ALTERNATE #1)



2
7'-6" x 7'-0" OF 8" SIDEWALK REMOVAL & REPLACEMENT. REINSTALL w/ 6x6 W2.9xW2.9 WWF & REINSTALL JOINT FILL @ CONSTRUCTION JOINTS.

3
REMOVE & RESET EXISTING LID.

EMH #289 - E OF EAST STADIUM PRESSBOX
(PHOTO #2)
(ALTERNATE #1)

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| BID SET | 01/08/2026 |
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STATE OF MISSOURI

GREGORY L. LINNEMAN

NUMBER PE-2005001013

1/8/26

GREGORY L. LINNEMAN - PE
MO LICENSE - 2005001013

STRUCTURAL ENGINEER

CROCKETT

ENGINEERING CONSULTANTS

1000 W. Nifong Blvd., Suite 1
Columbia, Missouri 65203
(573) 447-0992

www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2005010101

CLIENT:

UNIVERSITY
OF MISSOURI
225 UNIVERSITY HALL
COLUMBIA, MISSOURI
65211

CP253191 - General Site

Electric & Steam Manholes Concrete Repairs

UNIVERSITY OF MISSOURI
COLUMBIA, BOONE COUNTY, MISSOURI

DRAWING INCLUDES:

EMH #289
E OF EAST STADIUM
PRESSBOX
PLAN & PHOTOS
(ALTERNATE #1)

DESIGNED: GLL

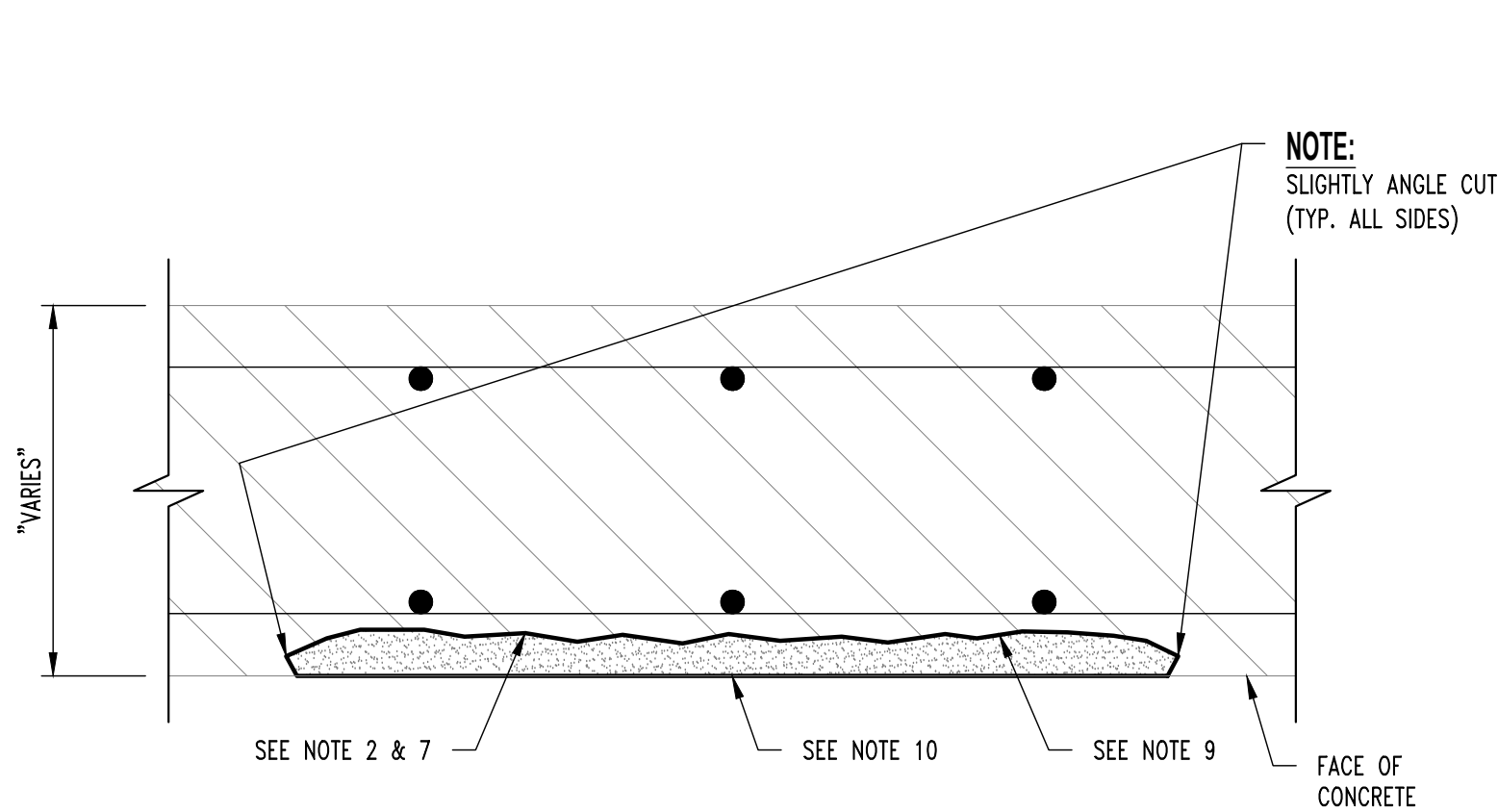
DRAWN: TGC

PROJECT NO.: 180016

MU PROJECT NO.: CP253191

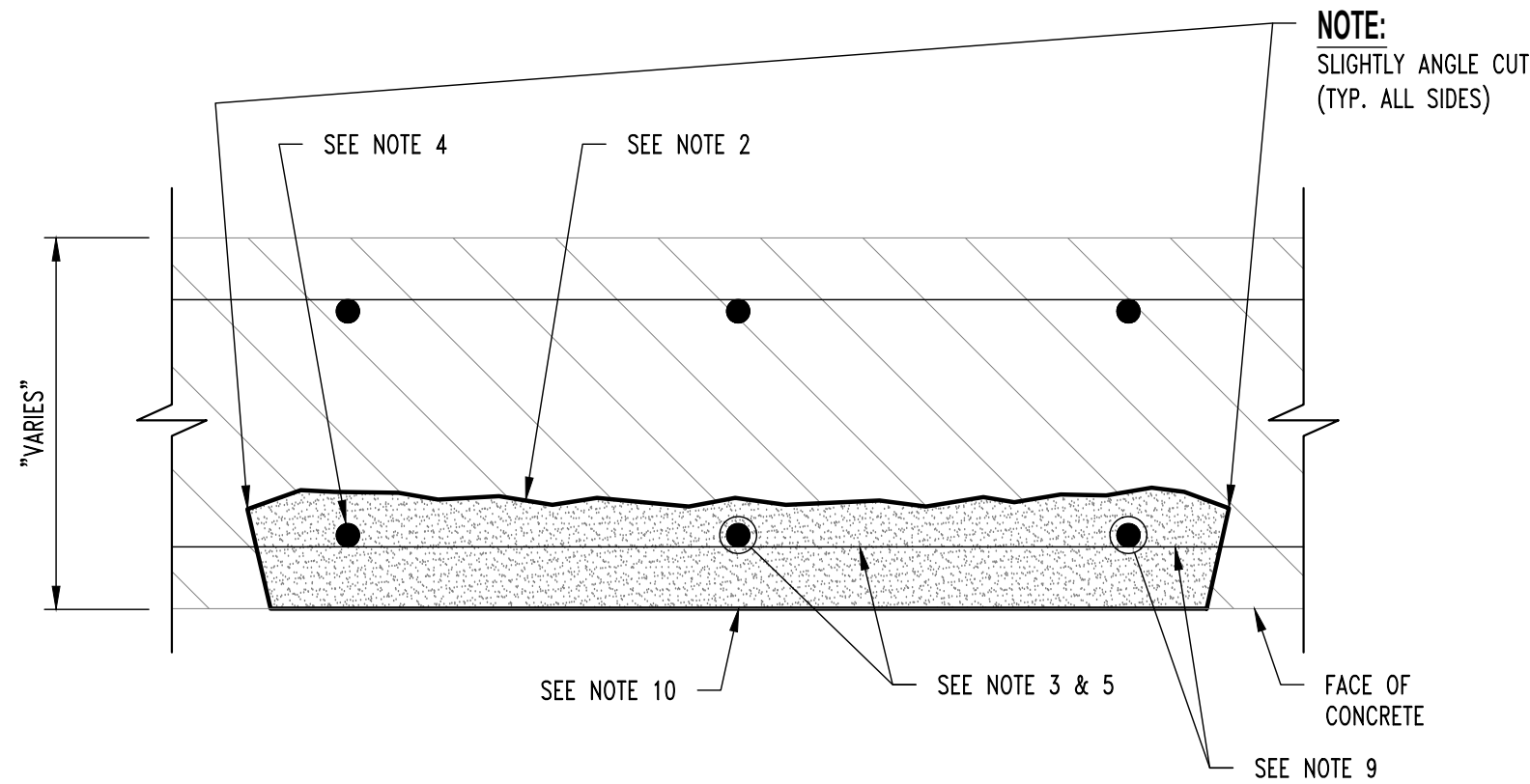
SHEET:

S105



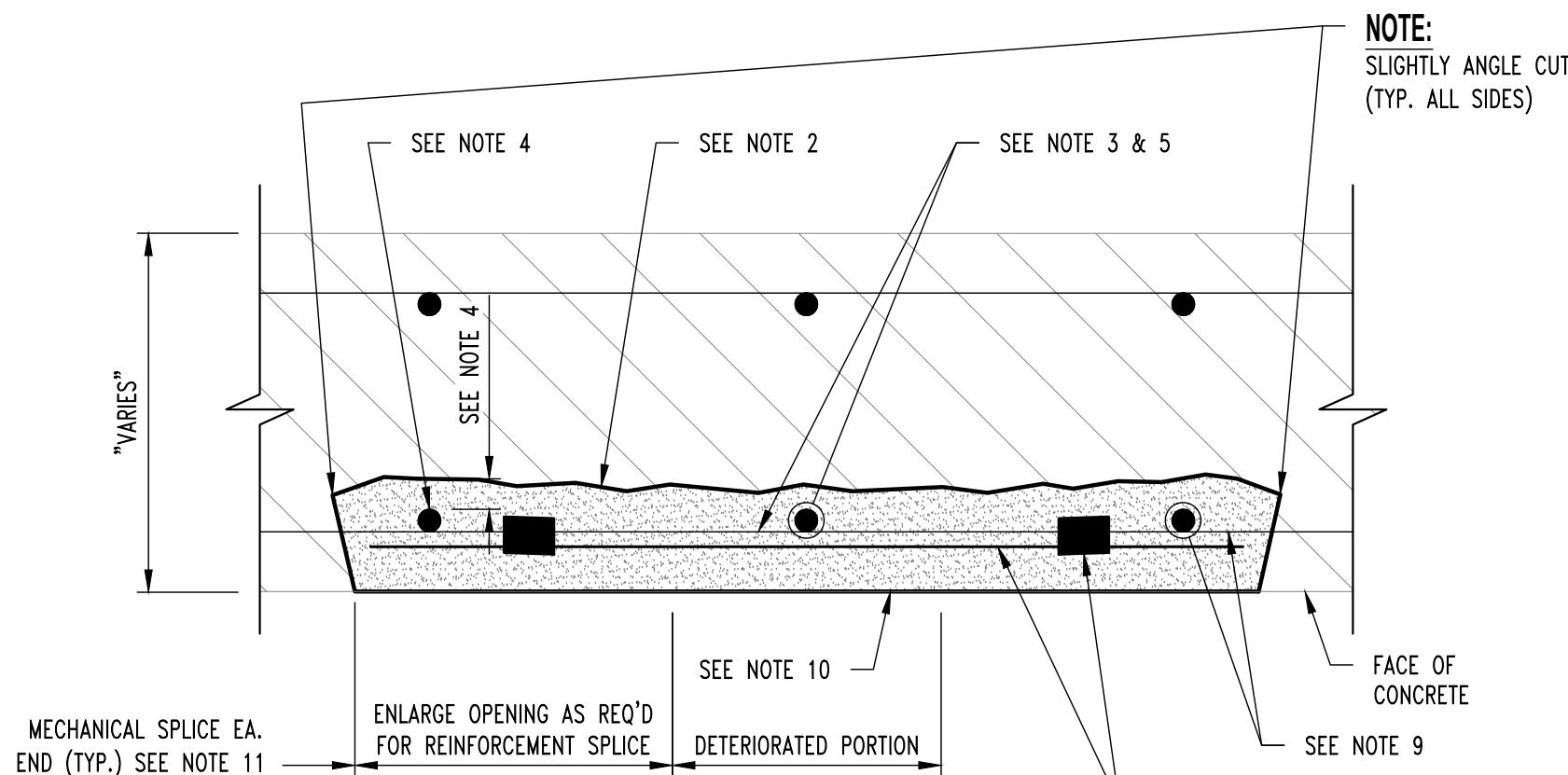
SURFACE SPALL REPAIR
REPAIR #1

NOTE:
DETAIL APPLIES TO SURFACE SPALLS WITH NO REINFORCEMENT EXPOSED.



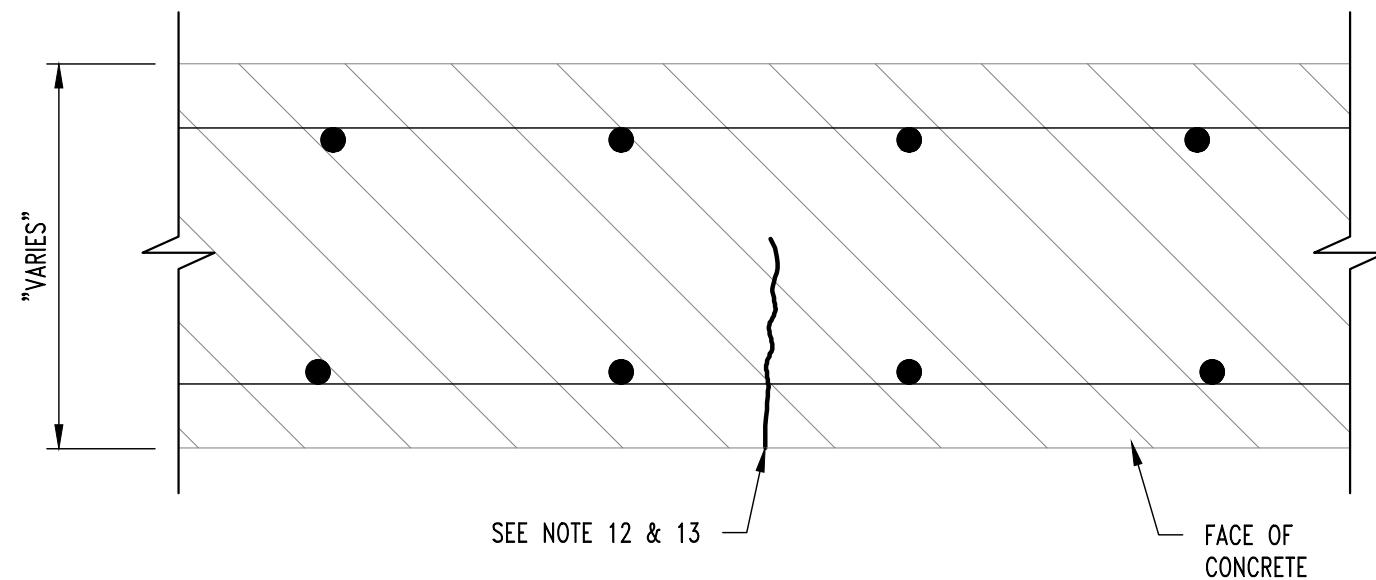
DEEP SPALL w/ REINFORCEMENT
SECTION LOSS LESS THAN OR EQUAL TO 25%
REPAIR #2

NOTE:
DETAIL APPLIES TO SURFACE SPALLS WITH REINFORCEMENT EXPOSED.



DEEP SPALL w/ REINFORCEMENT
SECTION LOSS GREATER THAN OR EQUAL TO 25%
REPAIR #3

NOTE:
DETAIL APPLIES TO SURFACE SPALLS WITH REINFORCEMENT EXPOSED.



CRACK REPAIR
REPAIR #4

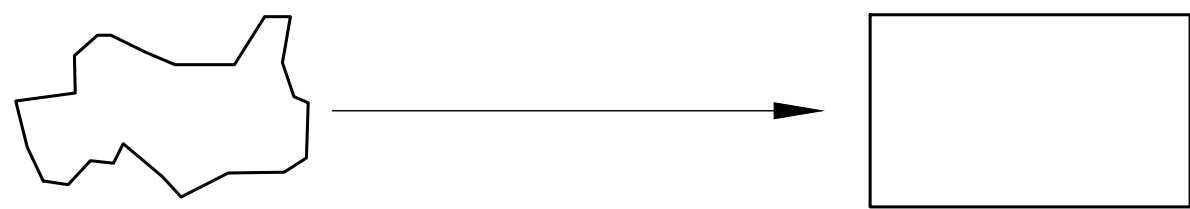
NOTE:
DETAIL APPLIES TO CRACKS LARGER THAN 0.03".

| BAR SIZE | NOMINAL DIAMETER (IN.) | MINIMUM ALLOWABLE DIAMETER (IN.) |
|----------|------------------------|----------------------------------|
| #3 | 0.375 | 0.325 |
| #4 | 0.500 | 0.433 |
| #5 | 0.625 | 0.541 |
| #6 | 0.750 | 0.650 |
| #7 | 0.875 | 0.758 |
| #8 | 1.000 | 0.866 |
| #9 | 1.128 | 0.977 |
| #10 | 1.270 | 1.100 |

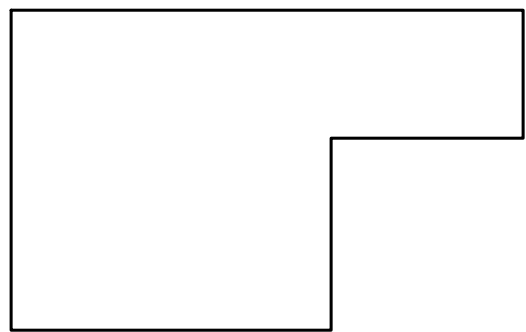
REINFORCING BAR DIAMETER TABLE

CONCRETE REPAIR NOTES

- 1 PRIOR TO PERFORMING ANY CONCRETE REPAIRS, CONTRACTOR SHALL EXAMINE THE ENTIRE CONCRETE SURFACE BY SOUNDING TO DETECT ANY DEFICIENCIES NOT SHOWN ON THE CONTRACT DOCUMENTS. IF DEFICIENCIES ARE DETECTED, MARK OUTLINE ON CONCRETE SURFACE AND NOTIFY OWNER'S REPRESENTATIVE. PROVIDE OWNER'S REPRESENTATIVE WITH APPROXIMATE SIZE AND LOCATION OF EACH DEFICIENCY NOTED.
- 2 REMOVE ALL LOOSE AND DETERIORATED CONCRETE WHERE INDICATED ON PRINTS. CHIP OUT AND PATCH AREA 1/2" MIN. BEYOND SPALLED SURFACE. AT BOUNDARIES OF DETERIORATED CONCRETE, SAWCUT BOUNDARY TO A MINIMUM DEPTH OF 3/4" WITHOUT CUTTING REINFORCING. DO NOT FEATHER EDGES.
- 3 CARE SHOULD BE EXERCISED NOT TO DAMAGE EXISTING REINFORCING STEEL DURING CONCRETE REMOVAL. CONCRETE REMOVAL SHALL EXTEND TO WHERE BAR IS WELL BONDED TO SURROUNDING SOUND CONCRETE. CARE SHALL BE EXERCISED NOT TO DAMAGE THE BAR'S BOND TO SURROUNDING CONCRETE. IF BOND BETWEEN BAR AND CONCRETE IS BROKEN, UNDERCUTTING OF THE BAR IS REQUIRED AS SPECIFIED IN ITEM 4 BELOW.
- 4 IF HALF OF THE THICKNESS OF THE REINFORCEMENT BAR OR MORE IS EXPOSED PROVIDE A MINIMUM OF 1/2" CLEARANCE BETWEEN EXPOSED REINFORCEMENT AND SURROUNDING CONCRETE FOR HAND APPLIED REPAIR MATERIALS AND A MINIMUM OF 1" CLEARANCE FOR SPRAY APPLIED REPAIR MATERIALS.
- 5 MECHANICALLY CLEAN STEEL BY SANDBLASTING OR WIRE BRUSH TO WHITE METAL CONDITION TO REMOVE CORROSION. AFTER CLEANING REINFORCING STEEL, MEASURE DIAMETER AT NARROWEST POINT. IF SECTION LOSS IS GREATER THAN 25% (SEE "REINFORCING BAR DIAMETER TABLE" ON THIS SHEET) ADD NEW REINFORCING BAR MATCHING SIZE OF EXISTING. MAINTAIN A MINIMUM OF 1/2" CONCRETE COVER AT ALL NEW AND EXISTING REINFORCEMENT, ANY REINFORCEMENT TO BE DRILLED AND GROUTED INTO EXISTING CONCRETE SHALL USE HILTI HIT HY 200 MAX EPOXY ADHESIVE (OR APPROVED EQUAL).
- 6 SCARIFY CONCRETE SURFACE TO OBTAIN CONCRETE SURFACE PROFILE ROUGHENED.
- 7 MINIMUM DEPTH OF PATCH TO BE 3/8".
- 8 SUBSTRATE SHOULD BE SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING PATCH APPLICATION.
- 9 APPLY CONCRETE PRIMER TO SUBSTRATE PER MANUFACTURERS SPECIFICATIONS. APPLY TWO COATS OF ANTI-CORROSION COATING PER MANUFACTURERS SPECIFICATIONS TO ALL EXPOSED REINFORCEMENT ALLOWING TO PROPERLY DRY BETWEEN COATS. SIKAFERROGARD 901 OR APPROVED EQUAL.
- 10 WHILE CONCRETE PRIMER IS STILL WET, APPLY PATCH MATERIAL PER MANUFACTURERS SPECIFICATIONS. FOR APPLICATIONS GREATER THAN 1" IN DEPTH, APPLY PATCH MATERIAL IN LIFTS. SCORE THE TOP SURFACE OF EACH LIFT AND ALLOW EACH LIFT TO REACH FINAL SET THEN REPEAT FROM STEP 8.
- 11 PROVIDE MECHANICAL SPLICE CAPABLE OF DEVELOPING 125% Fy. MAINTAIN A MINIMUM OF 1/2" CONCRETE COVER AT ALL NEW AND EXISTING REINFORCEMENT.
- 12 CLEAN CRACK SURFACES AND REMOVE ANY FOREIGN MATTER AND DEPOSITS.
- 13 INSTALL POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL PER MANUFACTURERS SPECIFICATION AND TOOL SURFACE TO MATCH SURROUNDING SURFACE. SIKATOP-123 OR APPROVED EQUAL.
- 14 LID REPAIRS REQUIRE SHORING TO BE INSTALLED PRIOR TO DAMAGED CONCRETE BEING REMOVED. SHORING SHALL PROVIDE ADEQUATE SUPPORT TO STRUCTURE UNTIL PATCH IS INSTALLED AND CURED.
- 15 ALL UTILITIES IN AREA OF MANHOLE WILL REMAIN ACTIVE DURING THE DURATION OF THE PROJECT INCLUDING THE STEAMLINES INSIDE THE MANHOLE. ALL INSULATION, PIPING EQUIPMENT, STEAM CONDENSATE, ETC. NEEDS TO BE PROTECTED AS TO NOT DAMAGE DURING CONSTRUCTION. ANY DAMAGED MATERIALS WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.



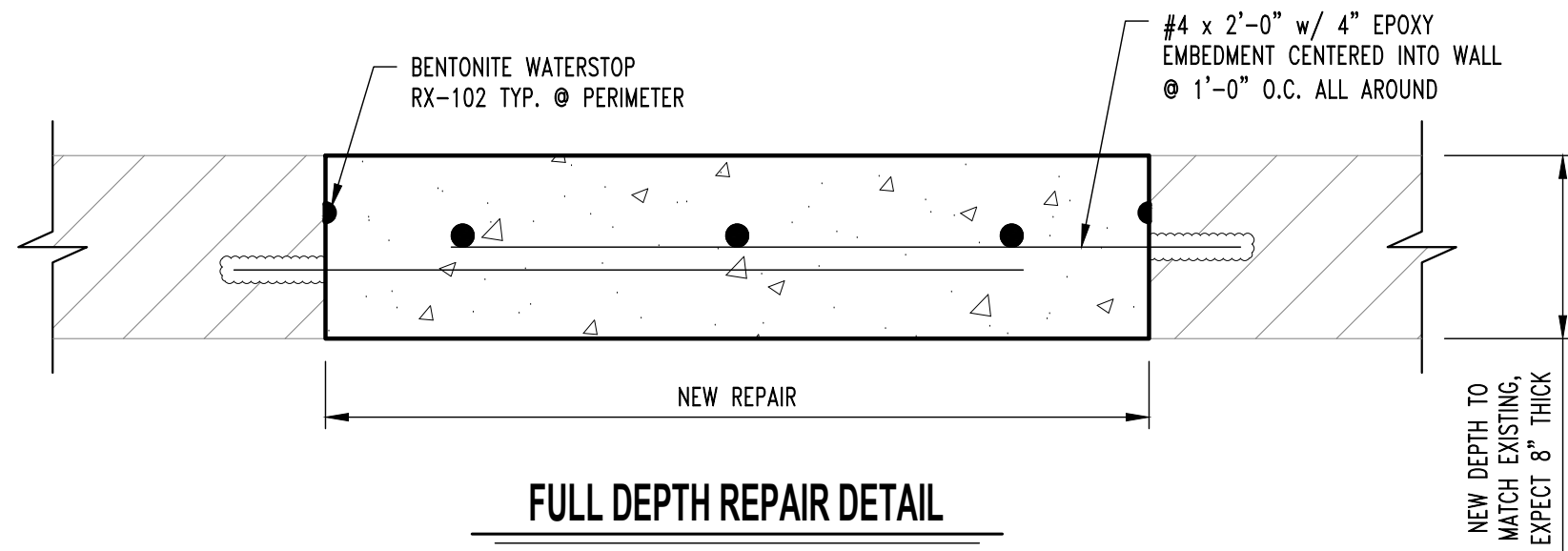
EXISTING BOUNDARY OF LOOSE, SPALLED, OR DELAMINATED CONCRETE



RECOMMENDED LAYOUT

DETERIORATED CONCRETE SURFACE REPAIR

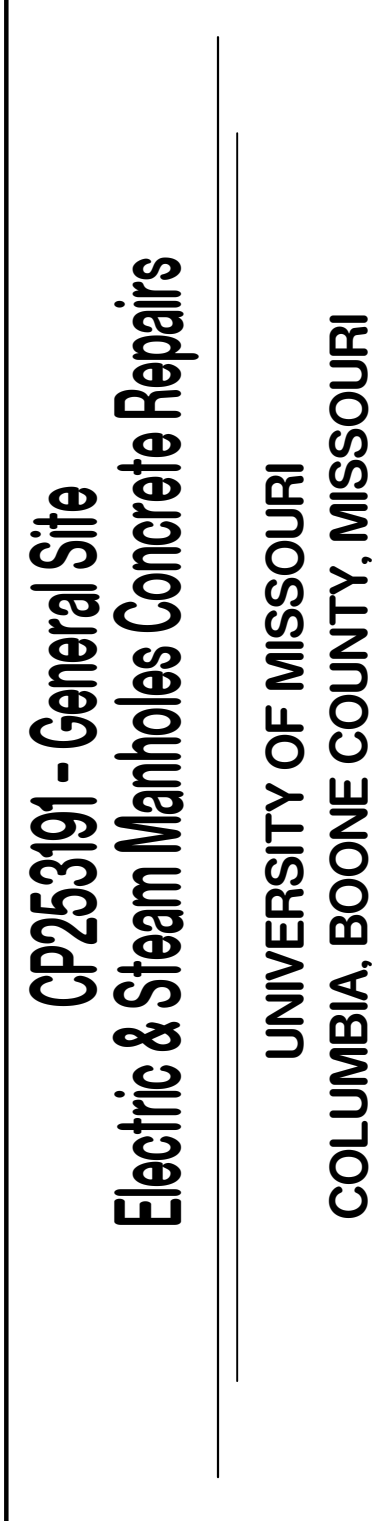
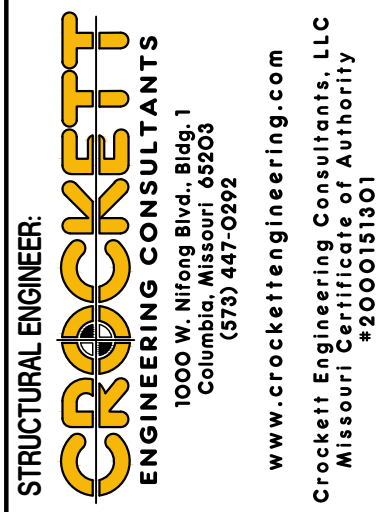
- NOTE:**
1. REPAIR CONFIGURATIONS TO BE KEPT AS SIMPLE AS POSSIBLE.
 2. CORNERS MUST BE SQUARED TO AVOID FEATHERED EDGES.



FULL DEPTH REPAIR DETAIL

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DRAWING INCLUDES:

REPAIR DETAILS & NOTES

| | |
|-----------------|----------|
| DESIGNED: | GLL |
| DRAWN: | TGC |
| PROJECT NO.: | 180016 |
| MU PROJECT NO.: | CP253191 |
| SHEET: | S200 |