111 RIVERS ST, BOONE, NC 28608

SCO-PROJECT ID CODE 42130 ITEM 305-4A05

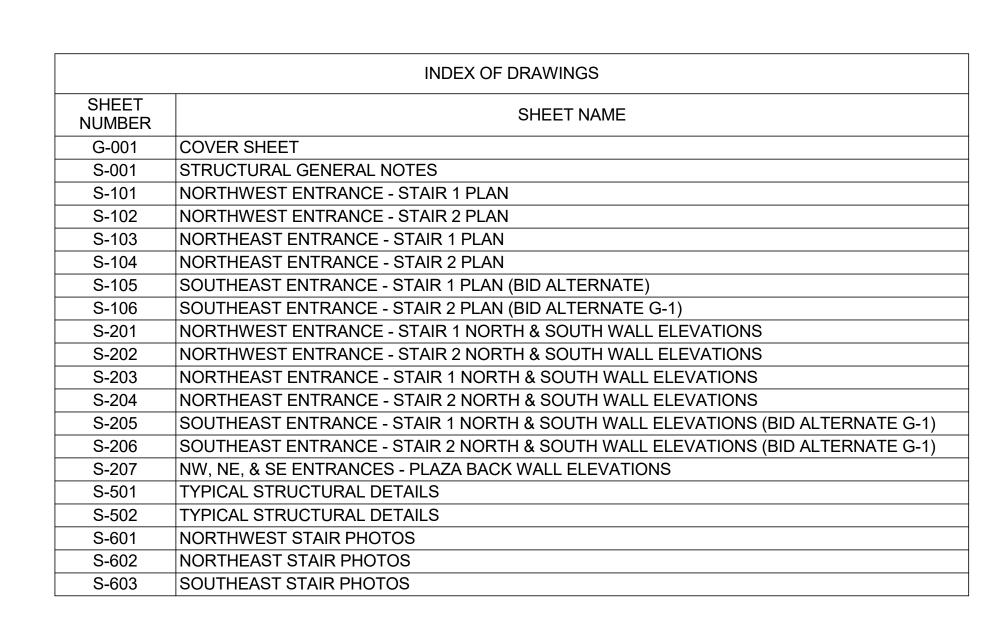
APPALACHIAN STATE UNIVERSITY

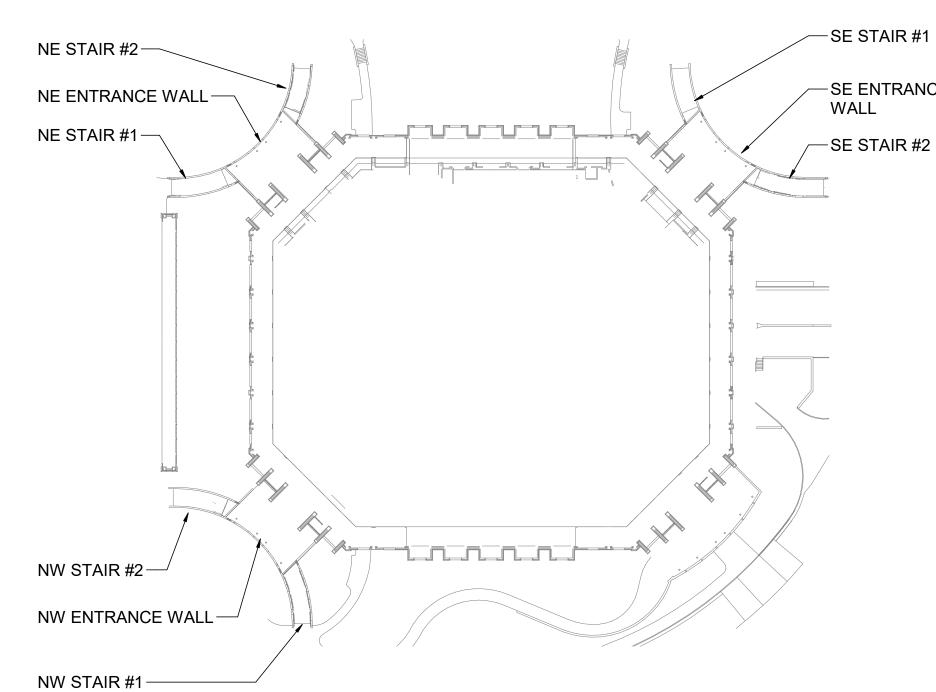
CONSTRUCTION DOCUMENTS JULY 11, 2022



VICINITY MAP

NOT TO SCALE





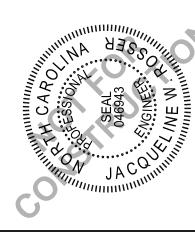
LOCATION MAP

NOT TO SCALE

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Appalachian state university.



HOLMES CONVOCATION
CENTER STAIR REPAIRS
APPALACHIAN STATE
UNIVERSITY

COMM NO: 222079

DATE: 07/11/2022

DRAWN: CAW DESIGN: JWR

CHECK: JMC

COVER SHEET

G-001

SHEET TITLE

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<u>GENERAL</u>

- 1. STRUCTURAL GENERAL NOTES ARE INTENDED TO HIGHLIGHT OR IN SOME CASES SUPPLEMENT PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR COMPLETE WORK COVERAGE.
- 2. GRAVITY DESIGN LOADS ARE AS FOLLOWS:
 STAIR DEAD LOADS STAIRS SELF WEIGHT
 EXISTING STAIR LIVE LOADS 100 PSF

EXISTING

- 3. IMPOSED CONSTRUCTION LOADS, INCLUDING CRANE LOADS DURING FUTURE CONSTRUCTION PROJECTS UNRELATED TO THIS ONE, IN EXCESS OF STATED DESIGN LOADS MUST BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO THE IMPOSITION OF SUCH LOADS.
- 4. THE REPRODUCTION OF THE STRUCTURAL CONTRACT DOCUMENTS IN ANY FASHION AS STRUCTURAL SHOP DRAWING DOCUMENTS IS PROHIBITED.
- 5. SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL INFORMATION ONLY. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED BY DIRECT SCALING OF THE DRAWINGS.
- 6. DETAILS, SECTIONS, AND NOTES SHOWN ON THESE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR CONDITIONS ELSEWHERE UNLESS OTHERWISE SHOWN OR NOTED.
- 7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL RESULTING REVISIONS TO THE STRUCTURAL SYSTEM AS A RESULT OF ACCEPTANCE OF CONTRACTOR PROPOSED ALTERNATIVES OR SUBSTITUTIONS.
- 8. THE GENERAL CONTRACTOR (OR CONSTRUCTION MANAGER) SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS. SHOP DRAWINGS ARE REVIEWED AS A CONVENIENCE TO THE GENERAL CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT. THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS.
- 9. INFORMATION SHOWN REGARDING EXISTING CONDITIONS HAS BEEN OBTAINED BY LIMITED OBSERVATIONS. AREAS NOT VISIBLE HAVE BEEN ASSUMED TYPICAL WITH OBSERVED EXISTING CONDITIONS.
- 10. THE CONTRACTOR SHALL MEASURE AND PROVIDE ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE JOB SITE PRIOR TO CONSTRUCTION AND THE SUBMISSION OF SHOP DRAWINGS AND SHALL NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- 11. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FITTING NEW WORK WITH EXISTING CONSTRUCTION. INFORMATION ON EXISTING BUILDING SHOWN IN THESE DRAWINGS WAS BASED UPON THE INFORMATION SUPPLIED TO WILEY WILSON, INC. THIS INFORMATION IS NOT AS-BUILT DATA AND THE ACTUAL AS-BUILT CONSTRUCTION MAY DIFFER FROM THAT REPRESENTED IN THE DRAWINGS. CONTRACTOR SHALL VERIFY ALL INFORMATION. VARIATIONS FROM THE DIMENSIONS INDICATED ON THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER.
- 12. THE STRUCTURE HAS BEEN DESIGNED FOR THE IN-SERVICE LOADS ONLY. THE METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUPPORTING FORMWORK FOR THE CONCRETE CONSTRUCTION SHALL NOT BE REMOVED BEFORE THE CONCRETE HAS GAINED SUFFICIENT STRENGTH TO SAFELY SUPPORT THE DEAD AND SUPERIMPOSED LOADS WHICH WOULD BE SUBSEQUENTLY APPLIED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- 13. METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBLILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- 14. PRODUCTS LISTED IN DRAWINGS ARE THE BASIS OF DESIGN. AT CONTRACTOR OPTION, ALTERNATIVE PRODUCTS MAY BE SUBMITTED FOR REVIEW AND APPROVAL AS AN EQUAL SUBSTITUTE.

SELECTIVE CONCRETE DEMOLITION

- 1. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AT THE JOB SITE PRIOR TO CONSTRUCTION AND THE SUBMISSION OF SHOP DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER IMMEDIATELY OF ANY DISCREPANCIES. VERIFICATIONS AND NOTIFICATION SHALL PROCEED 4 WEEKS PRIOR TO THE START OF WORK SO THAT ANY NECESSARY CHANGES CAN BE MADE WITHOUT DELAYING THE PROJECT SCHEDULE.
- 2. CONTRACTOR SHALL LOCATE AND VERIFY EXISTING TOP AND BOTTOM REINFORCING STEEL WITH PACHOMETER PRIOR TO DEMOLITION.
- 3. CONTRACTOR SHALL SAW-CUT CONCRETE WHERE NOTED IN PLANS. CONTRACTOR SHALL MINIMIZE DAMAGE TO THE EXISTING STRUCTURE. NO OVER-CUTTING AT CORNERS IS PERMITTED.
- 4. DEMOLITION EQUIPMENT SHALL BE LIMITED TO POWER SAWS, CORE DRILLS AND SMALL CHIPPING HAMMERS (#5).

CONCRETE

- CONCRETE MAY BE USED IN LIEU OF PATCHING MORTAR AT STAIR NOSING REMOVAL WHERE DEPTH IS GREATER THAN 2 INCHES AND TOTAL AREA IS GREATER THAN 10 SQUARE FEET.
- 2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301, ACI 318 AND ACI 302.
- 3. PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 5000 PSI AT 28 DAYS AND A MAXIMUM WATER/CEMENT RATIO OF 0.40. CONCRETE MIX SHALL INCLUDE CORROSION-INHIBITING ADMIXTURE, SUCH AS DCI S OR SIMILAR.

CONCRETE CONT.

- 4. FLY ASH CONFORMING TO ASTM C618, TYPE C OR F MAY BE USED AS TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIX. THE AMOUNT OF PORTLAND CEMENT CONTENT SHALL NOT BE LESS THAN 70 PERCENT OF THE TOTAL AMOUNT OF CEMENTITIOUS MATERIAL IN THE MIX.
- 6. GROUND GRANULATED BLAST-FURNACE SLAG CONFORMING TO ASTM C989, MAY BE USED AS TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIX. THE AMOUNT OF PORTLAND CEMENT CONTENT SHALL NOT BE LESS THAN 70 PERCENT OF THE TOTAL AMOUNT OF CEMENTITIOUS MATERIAL IN THE MIX.
- CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
 REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT UNLESS
 INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL
 ENGINEER.
- DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".
- 8. MIX, TRANSPORT AND PLACE CONCRETE PER THE RECOMMENDATIONS OF ACI 301.
- 9. PROVIDE CONCRETE COVER PROTECTION OF REINFORCEMENT PER ACI 318 SECTION 7.7 WITH STANDARD BAR CHAIRS AND SPACERS REQUIRED TO MAINTAIN MINIMUM CONCRETE PROTECTION. COMMON MINIMUM CONCRETE COVERS APPLYING TO THIS PROJECT:

a.	CAST AGAINST AND PERMANENTLY EXPOSED EARTH	3 INCHES
b.	CONCRETE EXPOSED TO EARTH OR WEATHER	
	1. #6 BARS AND LARGER	. 2 INCHES
	2. #5 BARS AND SMALLER	. 1 1/2 INCHES
C.	CONCRETE NOT EXPOSED TO WEATHER OR GROUND CONTA	ACT
	1. SLABS OR WALLS	
	#14 BARS AND LARGER	. 1 1/2 INCHES
	#11 BARS AND SMALLER	. ¾ INCHES

 TIE DOWELS IN PLACE BEFORE PLACING CONCRETE. DO NOT STAB OR "WET-SET" DOWELS.

SPECIAL INSPECTIONS

- 1. AN INDEPENDENT AGENCY SHALL PERFORM SPECIAL INSPECTIONS PER THE NORTH CAROLINA STATE BUILDING CODE (2018 EDITION) SECTION 111.2 AND THE INTERNATIONAL BUILDING CODE 2015. IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE SECTION 1704.0, THE RESPONSIBLE INSPECTOR SHALL BE A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE CONSTRUCTION TAKES PLACE. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN SECTION 110. THE INSPECTING AGENCY SHALL PROVIDE REPORTS OF THE SPECIAL INSPECTIONS DIRECTLY TO THE OWNER.
- 2. WRITTEN REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL STATING COMPLIANCE OR NON-COMPLIANCE WITH DESIGN DOCUMENTS AND SPECIFICATIONS. ALL REPORTS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE CONSTRUCTION TAKES PLACE.
- 3. CONTINUOUS: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR HIRED BY THE OWNER WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.
- 4. PERIODIC: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
- FAILURE TO RETAIN AN INDEPENDENT TESTING AGENCY TO PERFORM THE REQUIRED SERVICES SPECIFIED ABOVE, OR FAILURE TO SUBMIT SIGNED AND SEALED REPORTS, INDICATES NON-COMPLIANCE WITH THE CONTRACT DOCUMENTS.

CONCRETE SPECIAL INSPECTIONS

SPECIAL INSPECTION REQUIRED Y/N	VERIFICATION AND INSPECTION TASK	INSPECTION FREQUENCY		CRITERIA REFERENCE	
		CONTINUOUS DURING TASK LISTED	PERIODICALL Y DURING TASK LISTED	IBC REFERENCE	REFERENCED STANDARD
Y	1. INSPECT REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		x	1913.4	ACI 318: 3.5, 7.1-7.7
N	2. INSPECT REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B.				AWS D1.4, ACI 318: 3.5.2
N	3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PROR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	X		1911.5, 1912.1	ACI 318: 8.1.3, 21.2.8
Y	4. INSPECT ANCHORS INSTALLED IN HARDENED CONCRETE.		Х	1912.1	ACI 318: 3.8.6, 8.1.3, 21.2.8
Y	5. VERIFY USE OF REQUIRED DESIGN MIX.		Х	1904.3, 1913.2, 1913.3	ACI 318: CH. 4, 5.2-5.4
Y	6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		1913.10	ASTM C 172, ASTM C31, ACI 318: 5.6, 5.8
Y	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	Х		1913.6, 1913.7, 1913.8	ACI 318: 5.9, 5.10
Y	8. INSPECT MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		Х	1913.9	ACI 318: 5.11-5.13
N	9. INSPECT PRESTRESSED CONCRETE				
	A. APPLICATION OF PRESTRESSING FORCES	Х			ACI 318: 18.20
	B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X			ACI 318: 18.18.4
N	10. ERECTION OF PRECAST CONCRETE MEMBERS		Х		ACI 318: CH. 16
N	11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		X		ACI 318: 6.2
Y	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		Х		ACI 318: 6.1.1

ABBREVIATIONS

APPROX	APPROXIMATELY
ARCH	ARCHITECT/ARCHITECTURA
BOTT	BOTTOM
CFS	COLD FORMED STEEL
CMU	CONCRETE MASONRY UNIT
CJ	CONSTRUCTION JOINT
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
DIA	DIAMETER
EA	EACH
EOD	EDGE OF DECK
EOS	EDGE OF SLAB
EX	EXISTING

EXTERIOR EXT EXY EPOXY FS FOOTING STEP FTG FOOTING HORIZ HORIZONTAL INTERIOR INT JOINT LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LONG LONGITUDINAL LP **LOW POINT** LSL LONG-SLOT OC ON CENTER OPNG OPENING

PL
REINF
REQ'D
SCHEI
SOG
SPL
SSL
CONTAL
CAL
T/
TYP
UNO
VERT
W/
WP

PLATE REINF REINFORCED REQ'D REQUIRED SCHED SCHEDULE SLAB ON GRADE SPECIAL SHORT-SLOT STEEL TOP OF **TYPICAL** UNLESS NOTED OTHERWISE VERTICAL WITH **WORKING POINT** WELDED WIRE FABRIC DIAMETER

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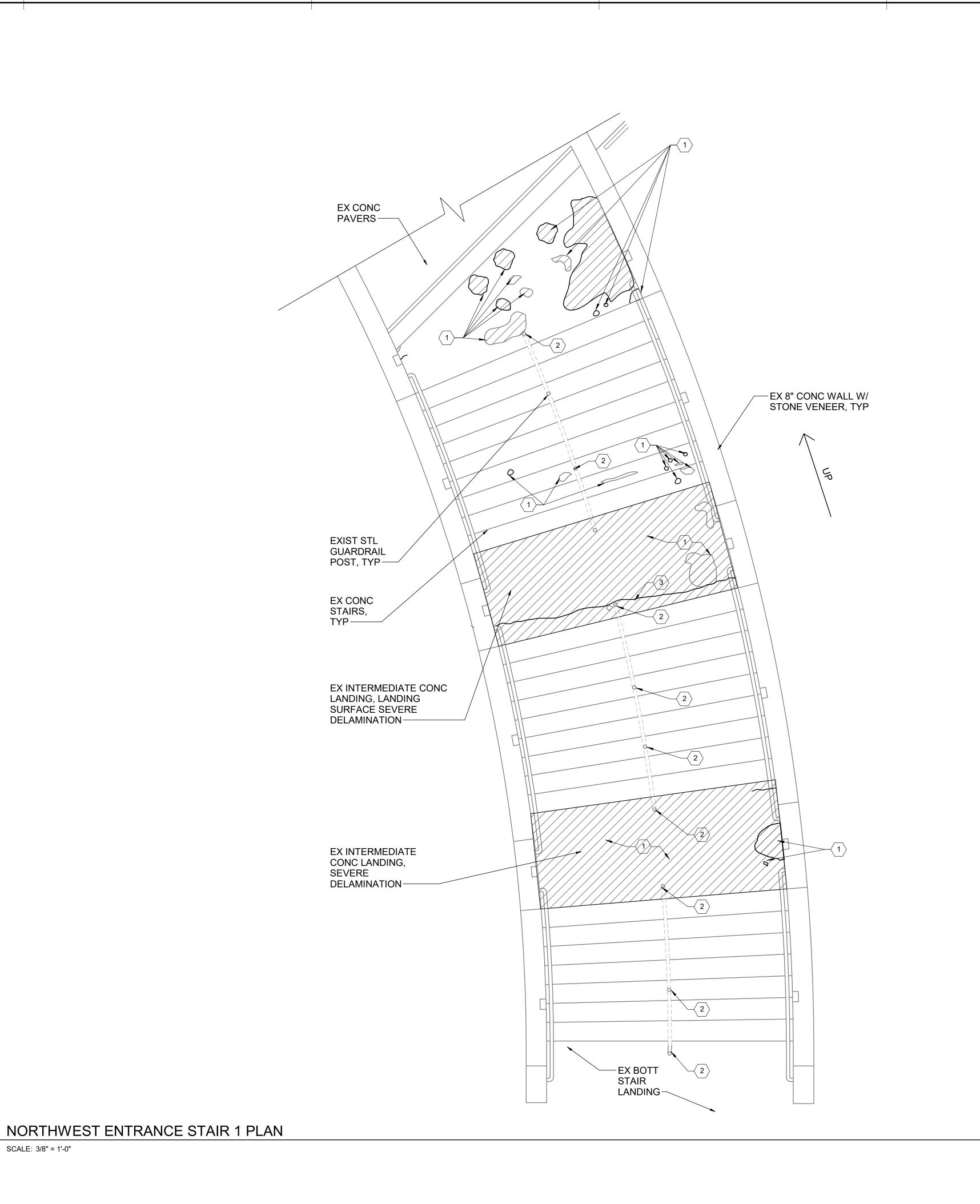
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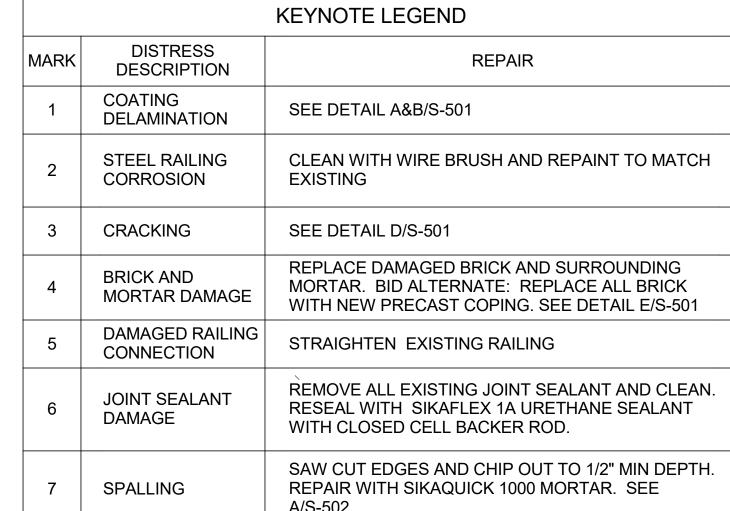
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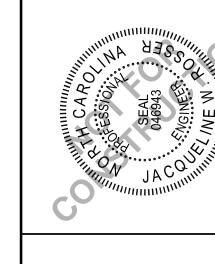
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		KEYNOTE LEGEND
MARK	DISTRESS DESCRIPTION	REPAIR
1	COATING DELAMINATION	SEE DETAIL A&B/S-501
2	STEEL RAILING CORROSION	CLEAN WITH WIRE BRUSH AND REPAINT TO MATCH EXISTING
3	CRACKING	SEE DETAIL D/S-501
4	BRICK AND MORTAR DAMAGE	REPLACE DAMAGED BRICK AND SURROUNDING MORTAR. BID ALTERNATE: REPLACE ALL BRICK WITH NEW PRECAST COPING. SEE DETAIL E/S-501
5	DAMAGED RAILING CONNECTION	STRAIGHTEN EXISTING RAILING
6	JOINT SEALANT DAMAGE	REMOVE ALL EXISTING JOINT SEALANT AND CLEAN. RESEAL WITH SIKAFLEX 1A URETHANE SEALANT WITH CLOSED CELL BACKER ROD.
7	SPALLING	SAW CUT EDGES AND CHIP OUT TO 1/2" MIN DEPTH. REPAIR WITH SIKAQUICK 1000 MORTAR. SEE A/S-502.





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HOLMES CONVOCATION CENTER STAIR REPAIRS APPALACHIAN STA UNIVERSITY

COMM NO: 222079 07/11/2022 DRAWN: CAW DESIGN: JWR CHECK: SHEET TITLE

NORTHWEST ENTRANCE -STAIR 1 PLAN

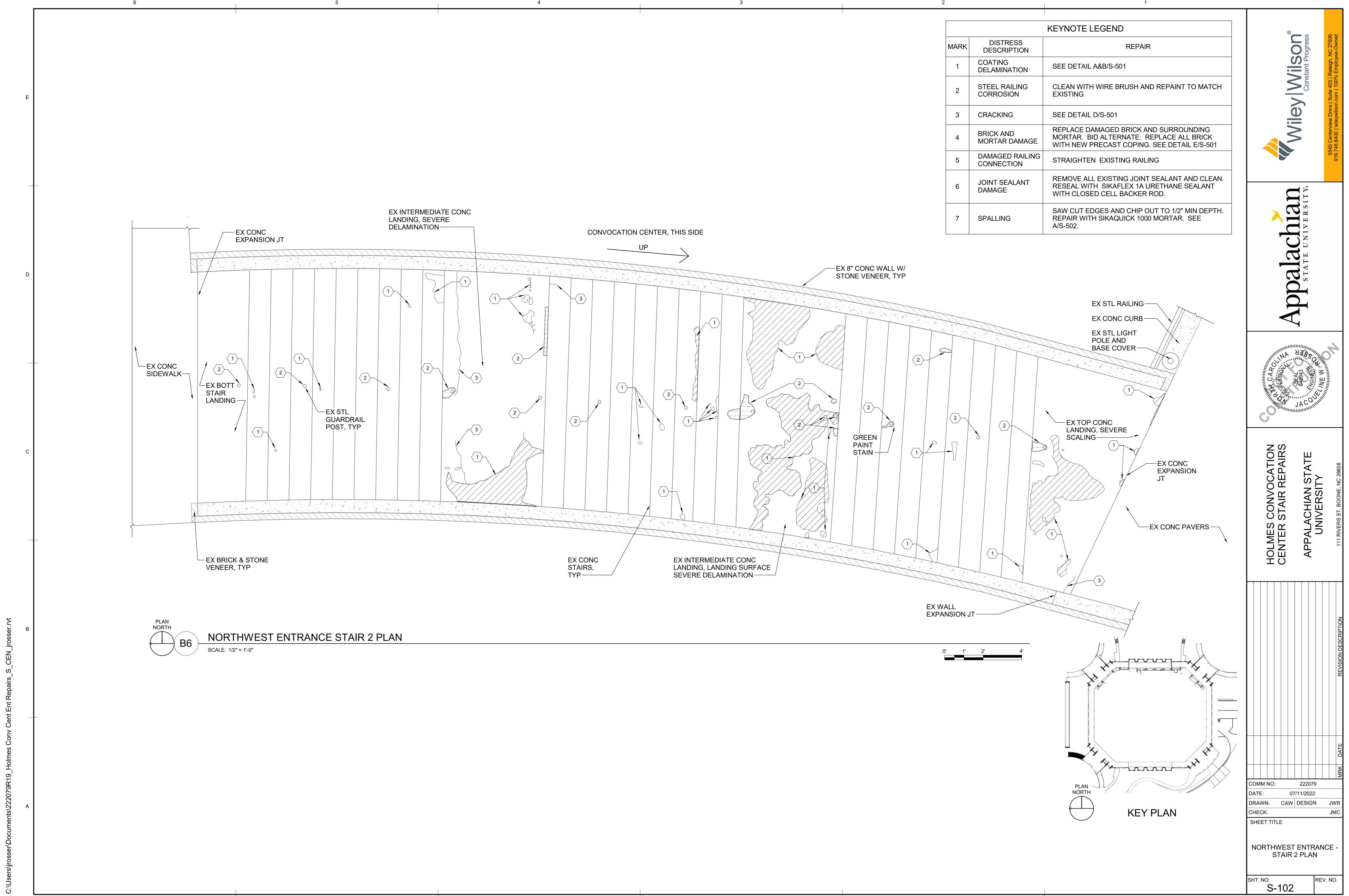
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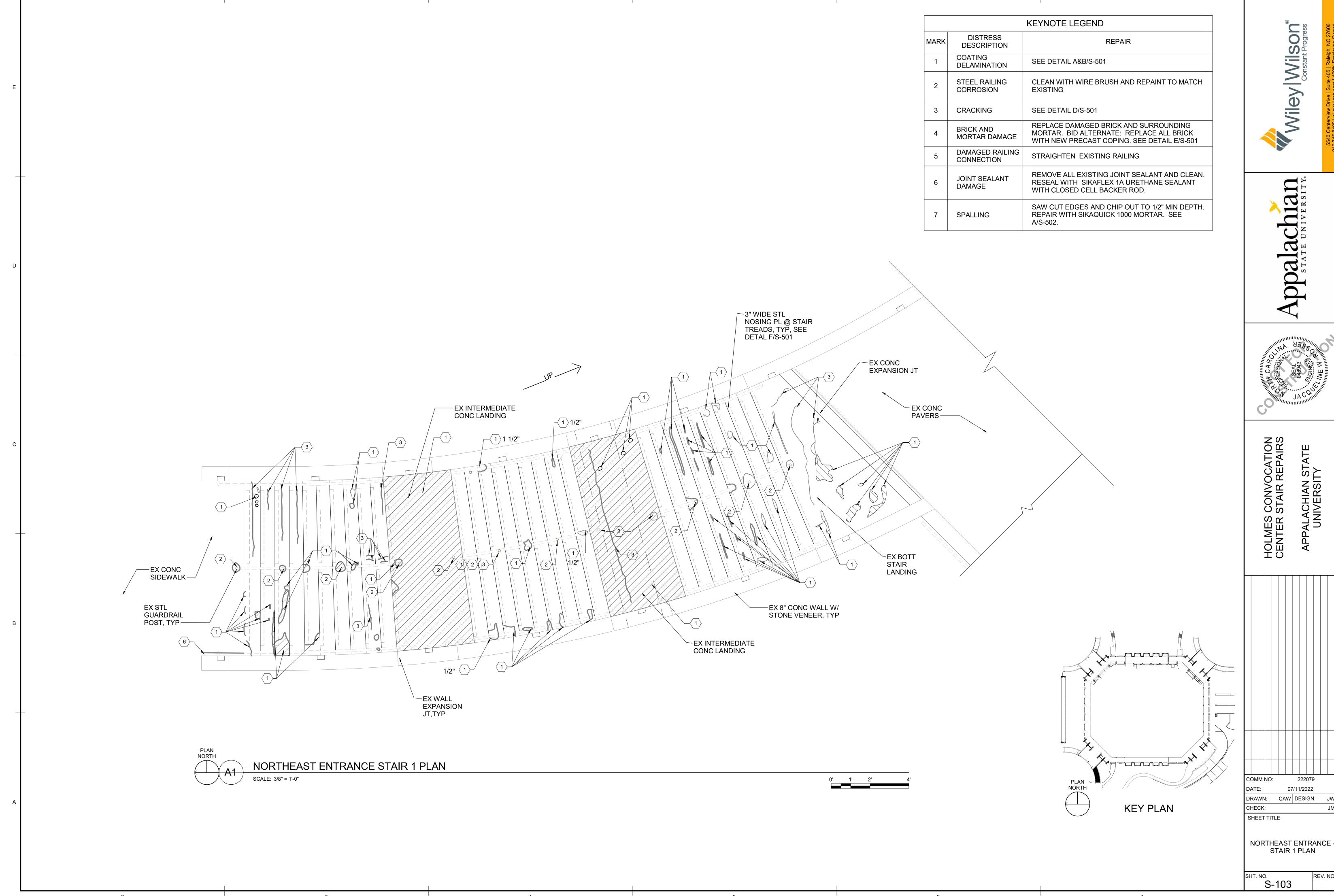
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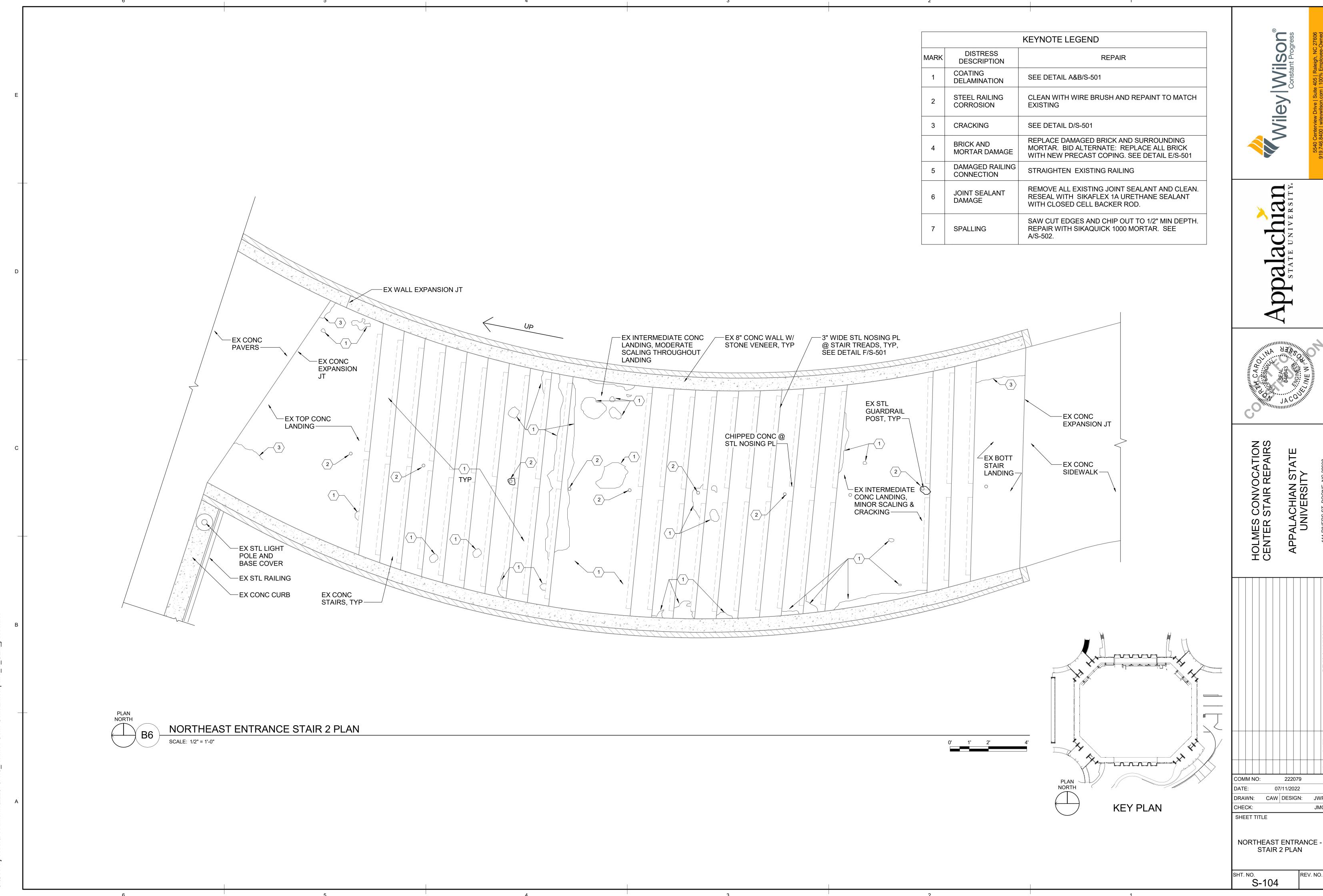
PLAN NORTH

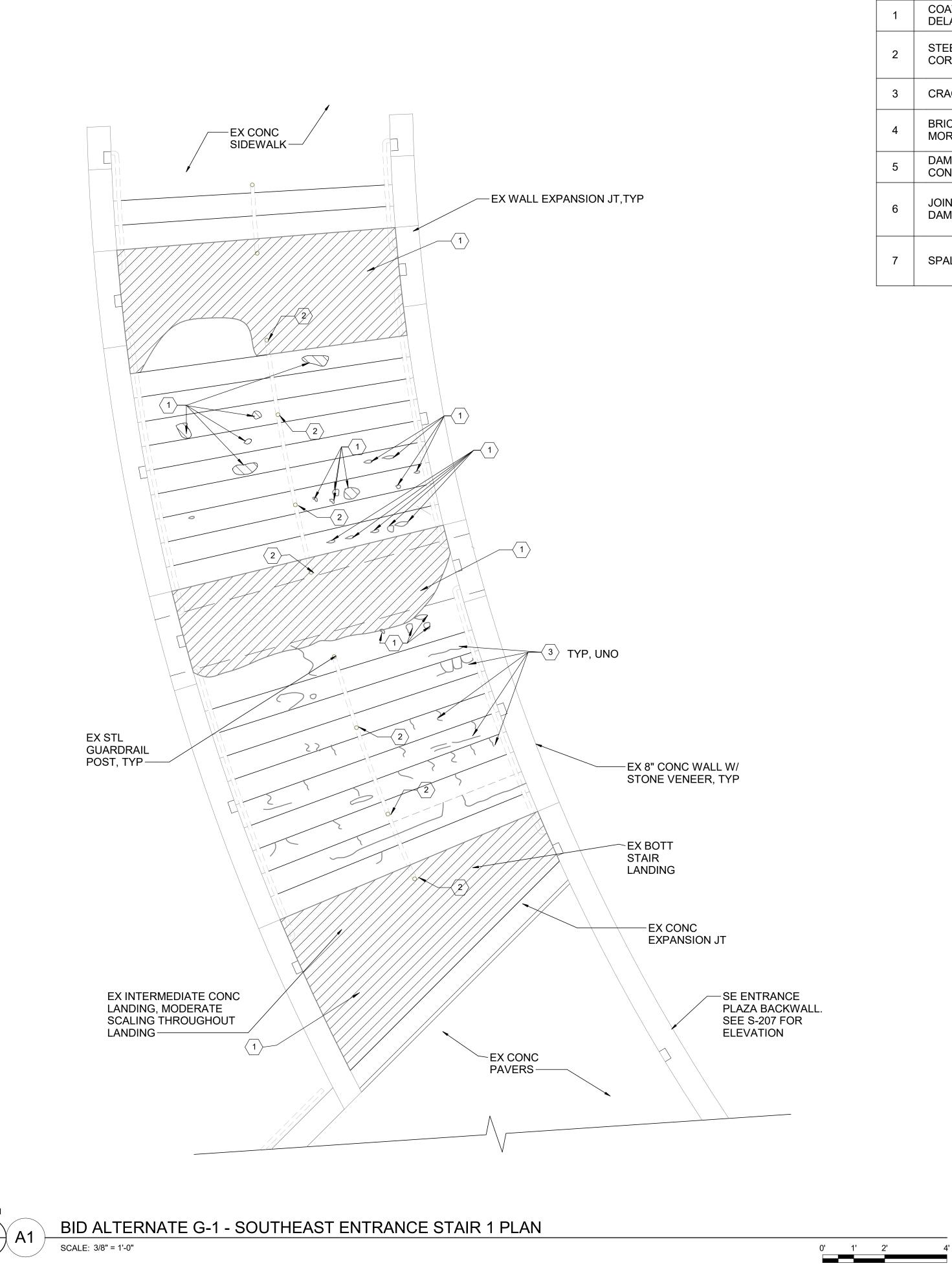
PLAN NORTH

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



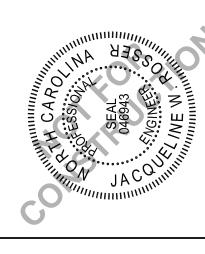






KEYNOTE LEGEND DISTRESS REPAIR DESCRIPTION COATING SEE DETAIL A&B/S-501 DELAMINATION STEEL RAILING CLEAN WITH WIRE BRUSH AND REPAINT TO MATCH CORROSION **EXISTING** SEE DETAIL D/S-501 CRACKING REPLACE DAMAGED BRICK AND SURROUNDING BRICK AND MORTAR. BID ALTERNATE: REPLACE ALL BRICK MORTAR DAMAGE WITH NEW PRECAST COPING. SEE DETAIL E/S-501 DAMAGED RAILING STRAIGHTEN EXISTING RAILING CONNECTION REMOVE ALL EXISTING JOINT SEALANT AND CLEAN. JOINT SEALANT RESEAL WITH SIKAFLEX 1A URETHANE SEALANT DAMAGE WITH CLOSED CELL BACKER ROD. SAW CUT EDGES AND CHIP OUT TO 1/2" MIN DEPTH. SPALLING REPAIR WITH SIKAQUICK 1000 MORTAR. SEE A/S-502.

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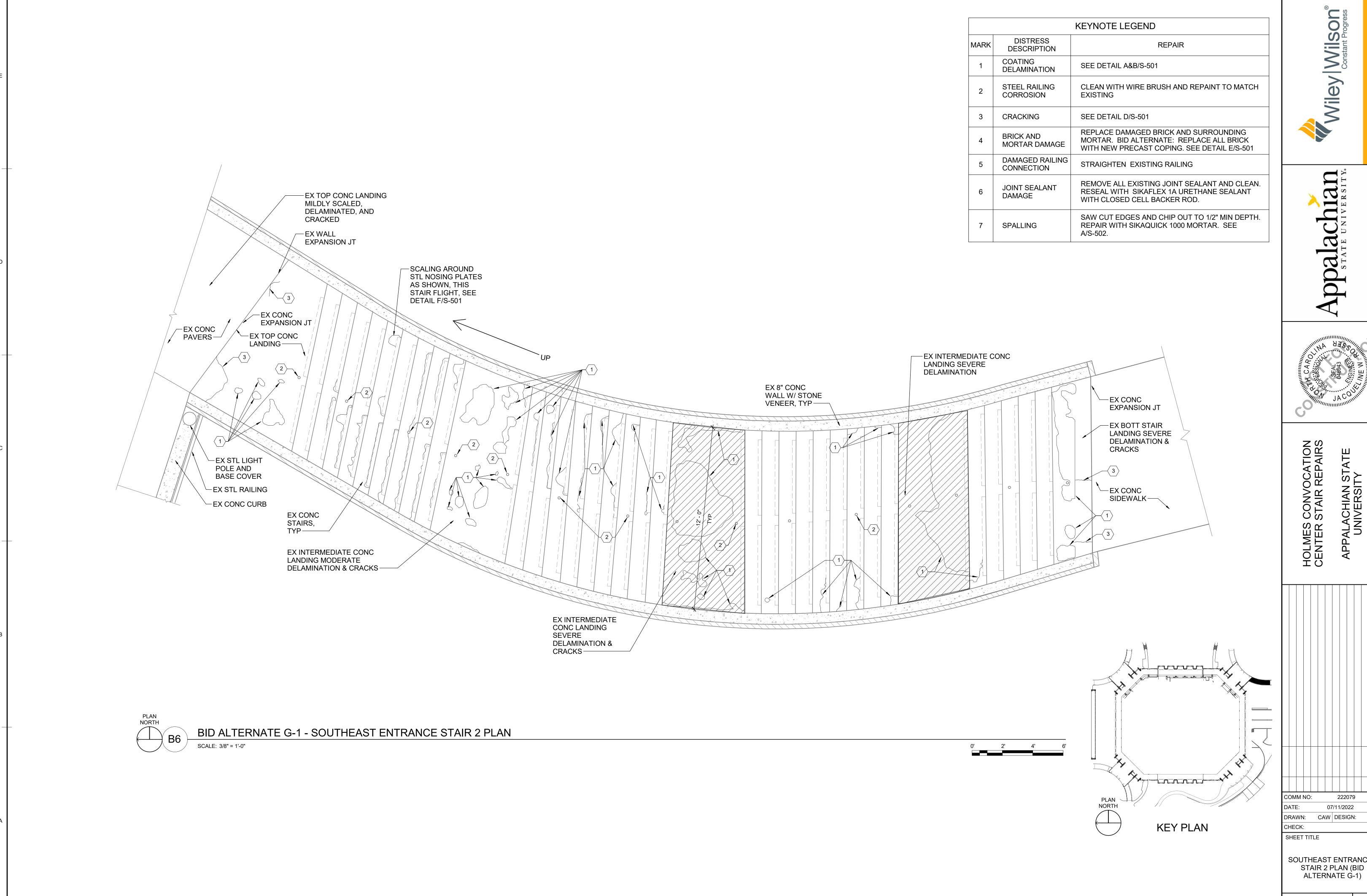
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KEY PLAN

PLAN NORTH

SOUTHEAST ENTRANCE -STAIR 1 PLAN (BID ALTERNATE G-1)

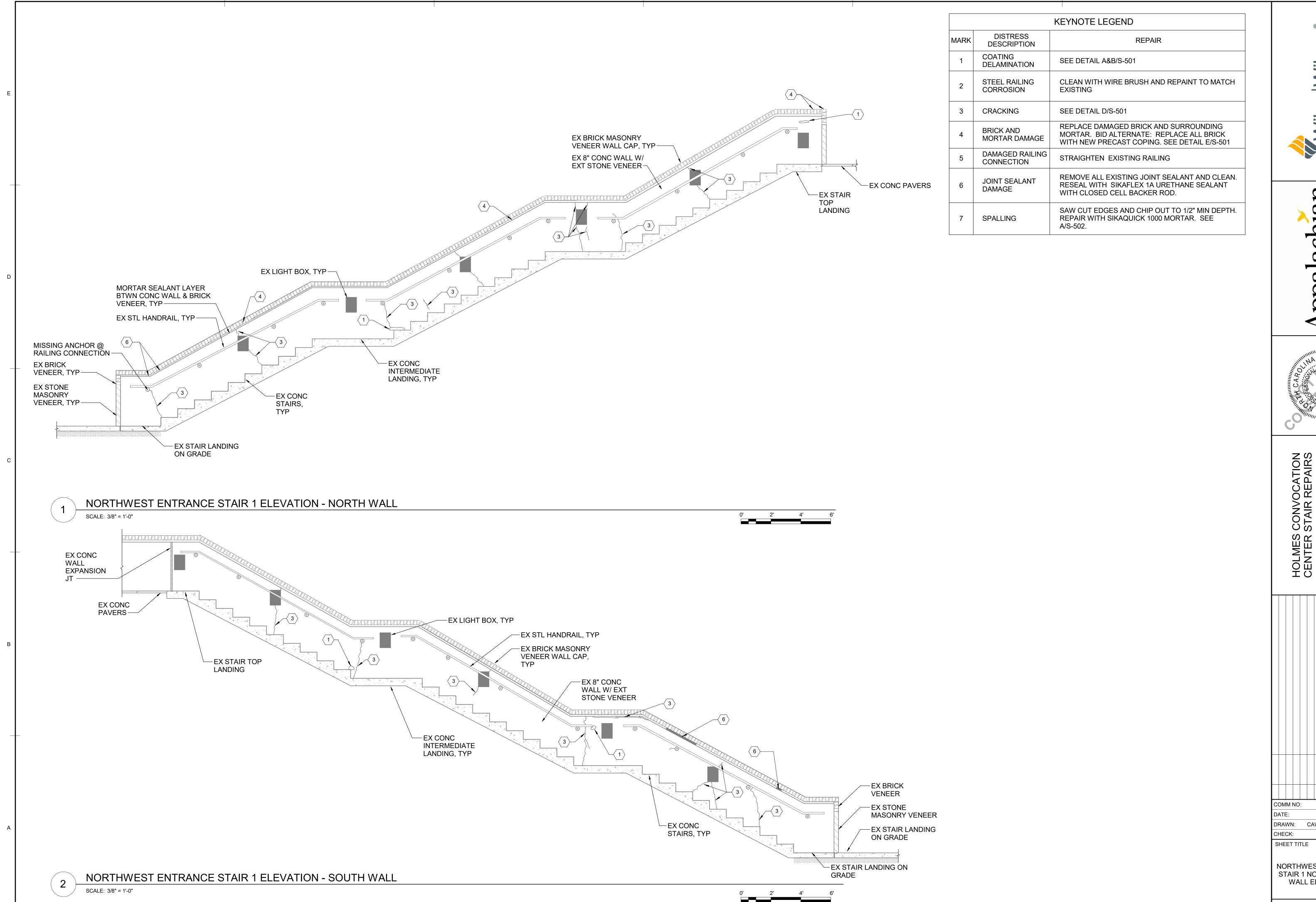
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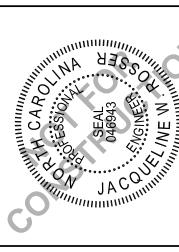
SOUTHEAST ENTRANCE -STAIR 2 PLAN (BID ALTERNATE G-1)

S-106



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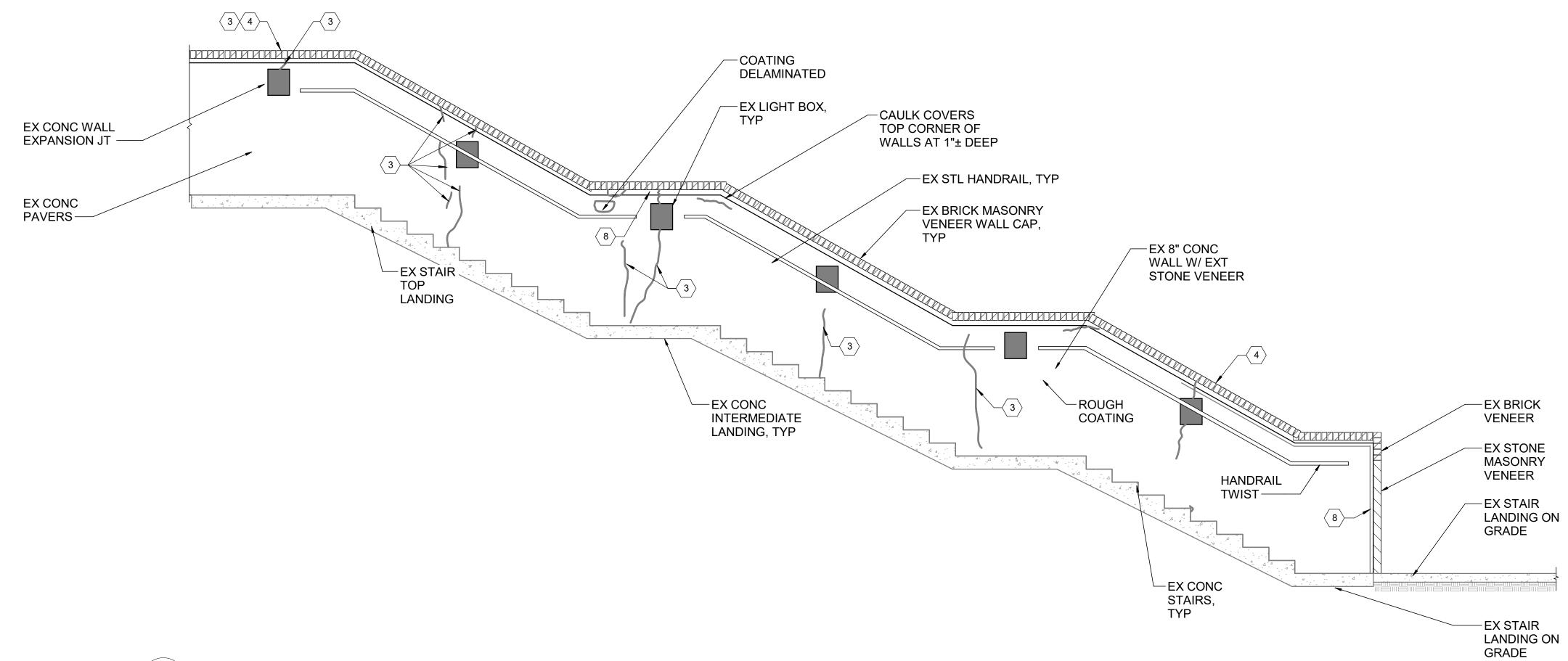
MM NO: 222079
TE: 07/11/2022
AWN: CAW DESIGN: JWF
ECK: JMC

NORTHWEST ENTRANCE -STAIR 1 NORTH & SOUTH WALL ELEVATIONS

r. no. **S-201**

		KEYNOTE LEGEND
MARK	DISTRESS DESCRIPTION	REPAIR
1	COATING DELAMINATION	SEE DETAIL A&B/S-501
2	STEEL RAILING CORROSION	CLEAN WITH WIRE BRUSH AND REPAINT TO MATCH EXISTING
3	CRACKING	SEE DETAIL D/S-501
4	BRICK AND MORTAR DAMAGE	REPLACE DAMAGED BRICK AND SURROUNDING MORTAR. BID ALTERNATE: REPLACE ALL BRICK WITH NEW PRECAST COPING. SEE DETAIL E/S-501
5	DAMAGED RAILING CONNECTION	STRAIGHTEN EXISTING RAILING
6	JOINT SEALANT DAMAGE	REMOVE ALL EXISTING JOINT SEALANT AND CLEAN RESEAL WITH SIKAFLEX 1A URETHANE SEALANT WITH CLOSED CELL BACKER ROD.
7	SPALLING	SAW CUT EDGES AND CHIP OUT TO 1/2" MIN DEPTH REPAIR WITH SIKAQUICK 1000 MORTAR. SEE A/S-502.

NORTHWEST ENTRANCE STAIR 2 ELEVATION - NORTH WALL C1 SCALE: 3/8" = 1'-0"



NORTHWEST ENTRANCE STAIR 2 ELEVATION - SOUTH WALL SCALE: 3/8" = 1'-0"

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NORTHWEST ENTRANCE -STAIR 2 NORTH & SOUTH WALL ELEVATIONS

SHEET TITLE

SHT. NO. REV. NO. S-202



KEYNOTE LEGEND

SEE DETAIL A&B/S-501

SEE DETAIL D/S-501

STRAIGHTEN EXISTING RAILING

WITH CLOSED CELL BACKER ROD.

EXISTING

A/S-502.

REPAIR

CLEAN WITH WIRE BRUSH AND REPAINT TO MATCH

REPLACE DAMAGED BRICK AND SURROUNDING

MORTAR. BID ALTERNATE: REPLACE ALL BRICK

WITH NEW PRECAST COPING. SEE DETAIL E/S-501

REMOVE ALL EXISTING JOINT SEALANT AND CLEAN.

SAW CUT EDGES AND CHIP OUT TO 1/2" MIN DEPTH.

REPAIR WITH SIKAQUICK 1000 MORTAR. SEE

RESEAL WITH SIKAFLEX 1A URETHANE SEALANT

DISTRESS

DESCRIPTION

DELAMINATION

STEEL RAILING

CORROSION

CRACKING

BRICK AND

CONNECTION

JOINT SEALANT

DAMAGE

SPALLING

MORTAR DAMAGE

DAMAGED RAILING

COATING



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NORTHEAST ENTRANCE -STAIR 1 NORTH & SOUTH WALL ELEVATIONS

EX BRICK MASONRY VENEER WALL EX 8" CONC WALL CAP, TYP-W/ EXT STONE VENEER-EX CONC **PAVERS** EX STAIR TOP LANDING

	EX LIGHT BOX, TYP HAIRLINE, TYP 3 TYP	
EX ST HAND TYP—	DRAIL,	
EX BR VENE TYP—	EER, — EX CONC	
EX ST MASC VENE TYP —	ONRY EER, 3 COATING ONLY	
	TAIR STATE S	

NORTHEAST ENTRANCE STAIR 1 SECTION-NORTH WALL SCALE: 3/8" = 1'-0"

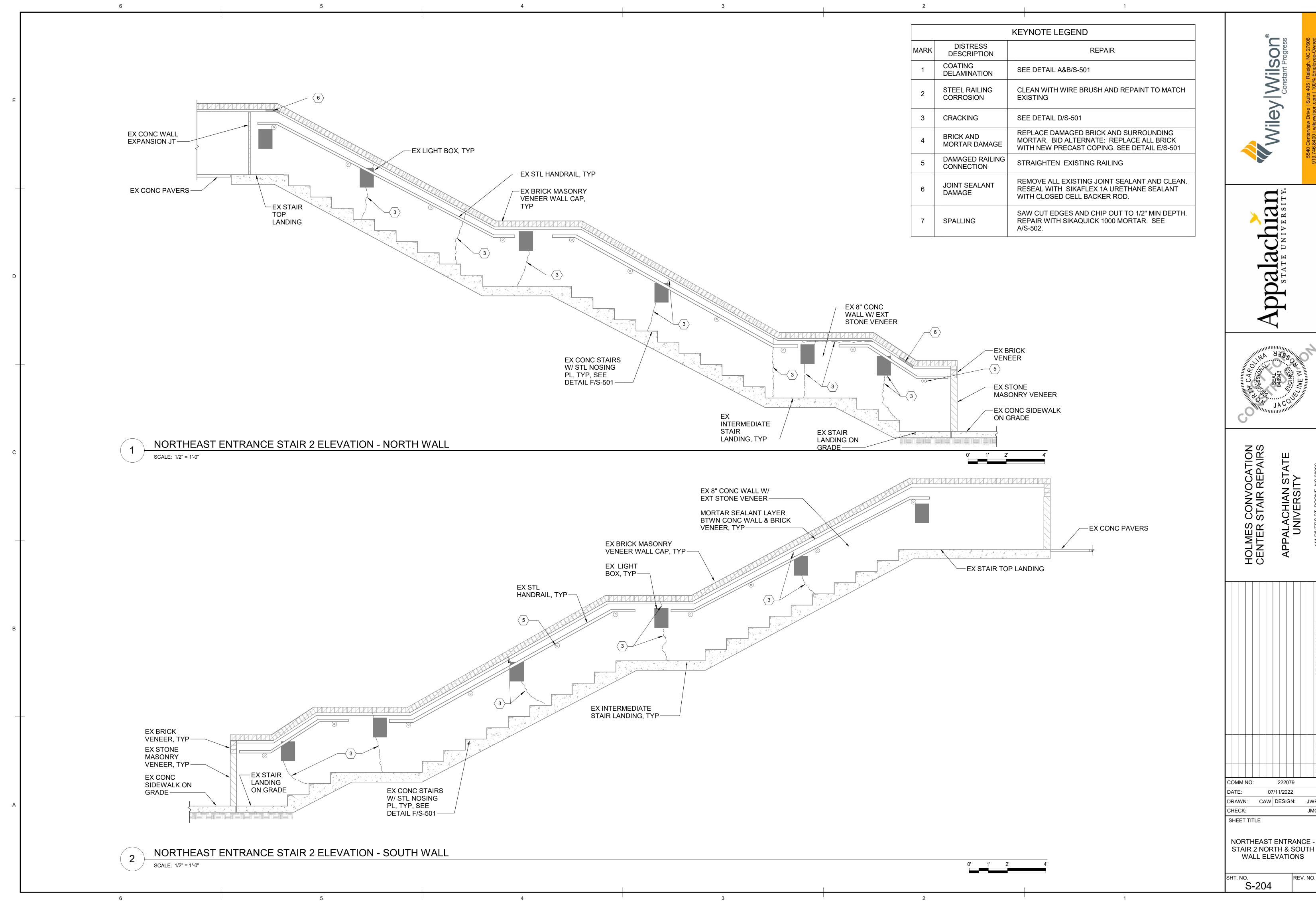
VENEER JOINT CRACKING ON OTHER SIDE EX LIGHT BOX, TYP BELOW JOINT EX 8" CONC WALL W/ EXT -NO PARGE COAT EX STAIR TOP LANDING-STONE VENEER -EX BRICK MASONRY VENEER WALL CAP, TYP EX INTERMEDIATE STAIR LANDING, TYP— 6 LARGE JT EX BRICK
VENEER HAIRLINE, TYP -EX STONE MASONRY EX CONC STAIRS VENEER W/ STL NOSING PL, TYP, SEE DETAIL F/S-501 EX STAIR
LANDING ON GRADE EX STAIR LANDING ON GRADE———

NORTHEAST ENTRANCE STAIR 1 SECTION-SOUTH WALL

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

S-203

DRAWN: CHECK:



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NORTHEAST ENTRANCE -

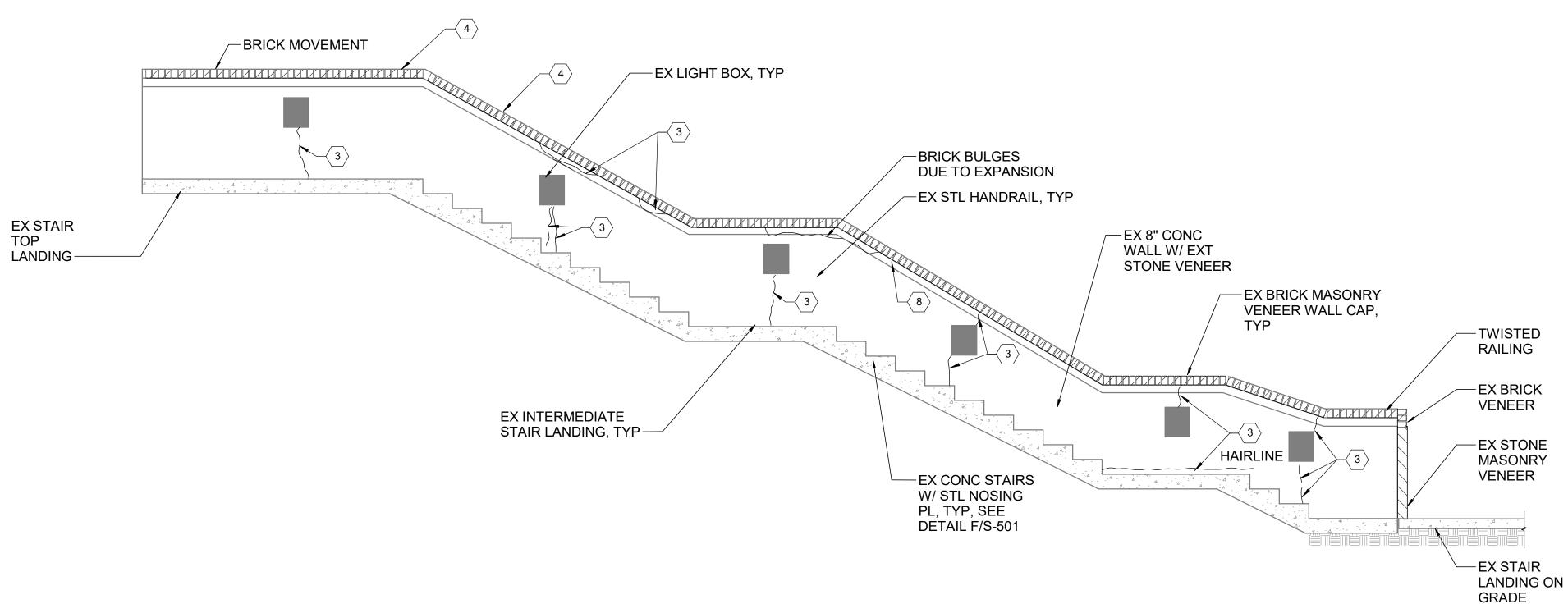
S-204

A/S-502.

SPALLING

SAW CUT EDGES AND CHIP OUT TO 1/2" MIN DEPTH.

REPAIR WITH SIKAQUICK 1000 MORTAR. SEE



SOUTHEAST ENTRANCE STAIR 1 ELEVATION- NORTH WALL

BID ALTERNATE G-1

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

MAJOR BRICK EXP & DISPLACEMENT **EX BRICK** MASONRY VENEER WALL CAP, TYP-EX 8" CONC WALL W/ EXT STONE VENEER--EX CONC PAVERS SPALL @ LIGHTBOX— UNDER JOINT 6 EX STAIR TOP HAIRLINE (3) LANDING MORTAR SEALANT LAYER BTWN CONC WALL & BRICK VENEER, TYP EX STL HANDRAIL, EX STL HANDRAIL, EXPANSION JOINT — TYP-TYP-3 EX STONE MASONRY VENEER,

> SOUTHEAST ENTRANCE STAIR 1 ELEVATION SOUTH WALL **BID ALTERNATE G-1**

EX LIGHT

BOX, TYP

Wiley | Wilson



HOLMES CONVOCATION CENTER STAIR REPAIRS ALACHIAN ST, UNIVERSITY

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222079 07/11/2022 CAW DESIGN:

SOUTHEAST ENTRANCE -STAIR 1 NORTH & SOUTH WALL ELEVATIONS (BID ALTERNATE G-1)

REV. NO.

SHEET TITLE

EX CONC

INTERMEDIATE LANDING, TYP

EX BRICK VENEER, TYP-

TYP—

EX STAIR LANDING ON GRADE-

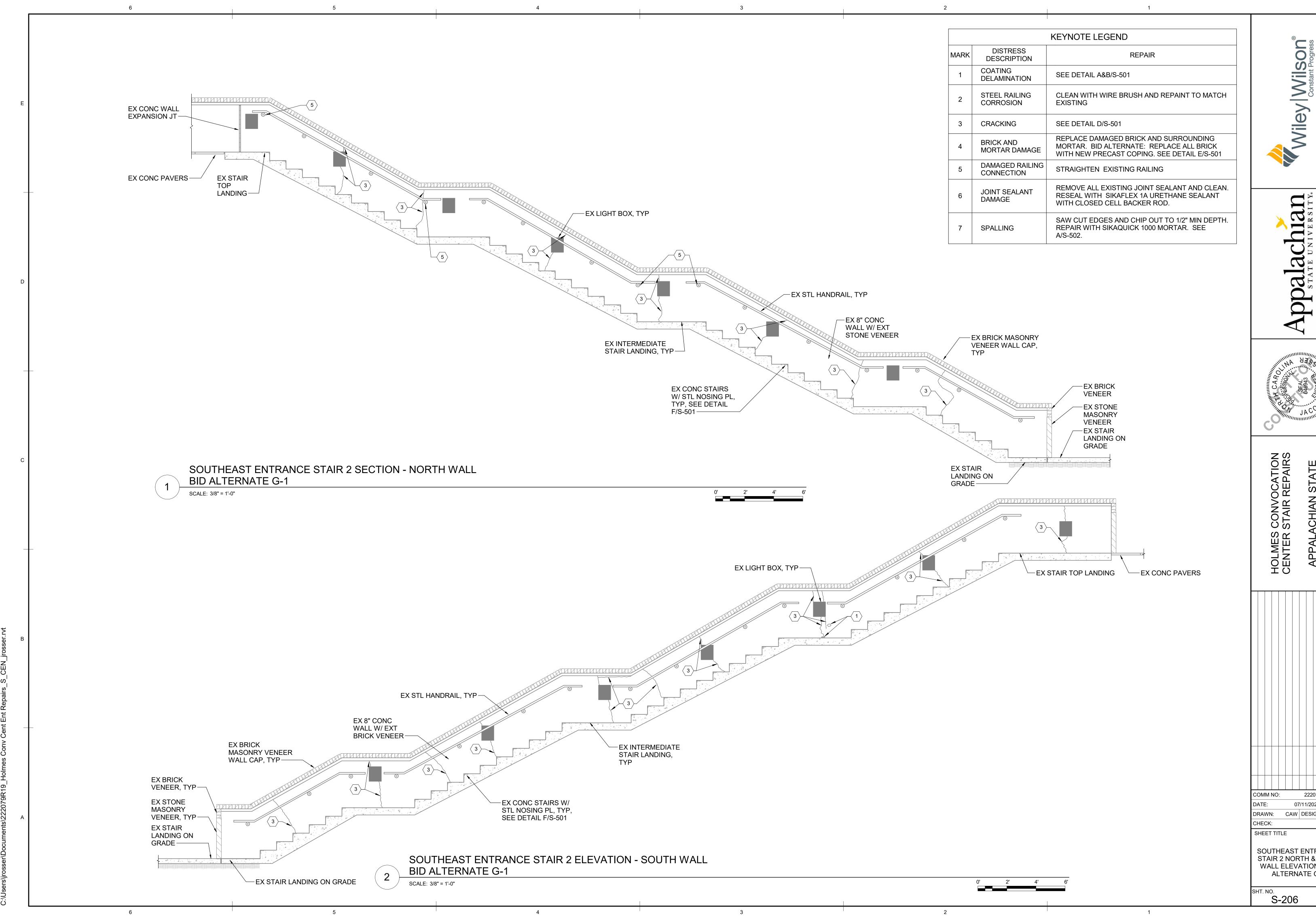
SCALE: 3/8" = 1'-0"

DRAWN: CHECK:

SHT. NO. S-205

-EX CONC STAIRS,

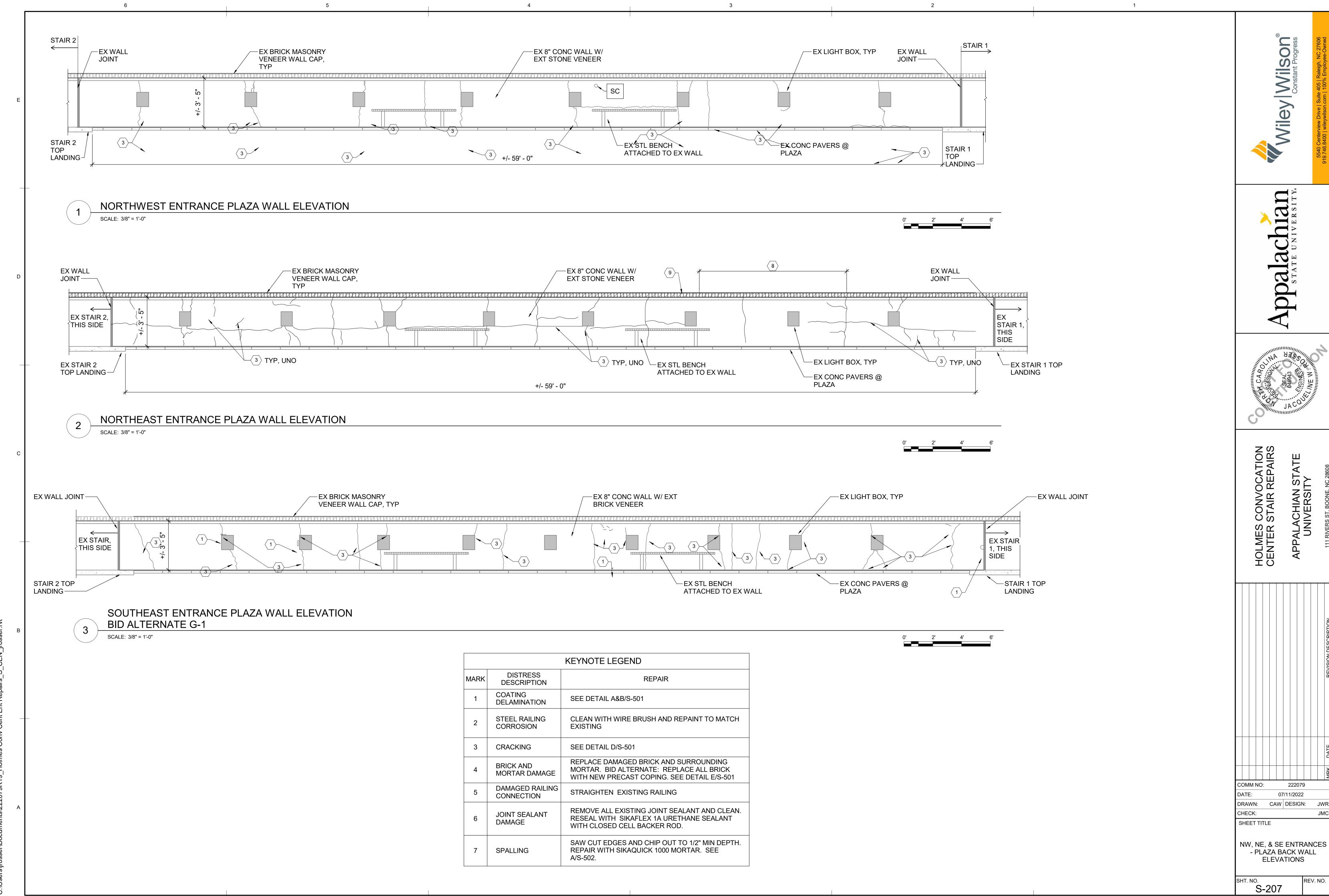
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PALACHIAN STA

222079 07/11/2022 CAW DESIGN:

SOUTHEAST ENTRANCE -STAIR 2 NORTH & SOUTH WALL ELEVATIONS (BID ALTERNATE G-1)

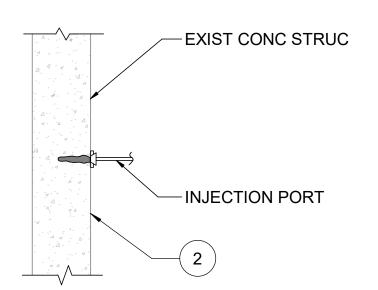


- 1. CHIP OUT OR CUT OUT EXISTING DELAMINATED PATCH UNTIL SOUND CONCRETE IS MET.
- 2. CLEAN SURFACE AS REQUIRED PER MANUFACTURER'S SPECIFICATIONS AND PROCEDURES.
- 3. PRE-WET CONCRETE SURFACE TO SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION. APPLY SCRUB COAT TO SUBSTRATE, FILLING ANY PORES AND VOIDS.
- 4. WHILE SCRUB COAT IS STILL WET, APPLY SIKAQUICK 1000.



REPAIR FOR PATCH DELAMINATED NOT SPALLED CONCRETE

NOT TO SCALE



REPAIR PROCDURE:

HORIZONTAL SURFACE

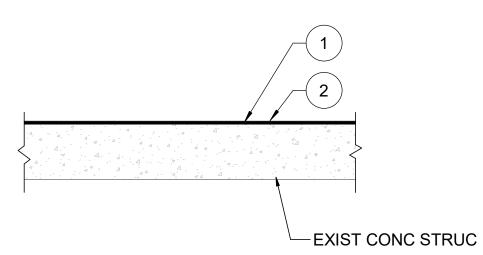
- 1. ROUTE ALONG CRACK WITH GRINDER TO FORM A V-NOTCH 1/2" WIDE X 1/2" DEEP.
- 2. MARK EXTENTS OF OF CRACK WITH SPRAY PAINT AND DOCUMENT EXTENT FOR OWNER. 3. BLOW OUT THE V-NOTCH WITH OIL-FREE COMPRESSED AIR.
- 4. FILL V-NOTCH WITH TWO COMPONENT LOW-VISCOSITY EPOXY RESIN ADHESIVE, BASIS
- OF DESIGN IS SIKA CRACK FIX.
- 5. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR EPOXY RESIN ADHESIVE.

- VERTICAL SURFACE 1. CLEAN SURFACE OF CONCRETE ALONG LENGTH OF CRACK TO REMOVE ALL OIL, DIRT,
- 2. INSTALL INJECTION PORTS AT SPACING RECOMMENDED BY MANUFACTURER. 3. SEAL PORTS AND SURFACE OF CRACK WITH SIKADUR 31, HI-MOD GEL OR SIKADUR 33.
- 4. INJECT SIKADUR CRACK FIX WITH SLOW STEADY PRESSURE STARTING AT THE LOWEST
- 5. WHEN SIKADUR CRACK FIX BEGINS TO FLOW OUT NEXT LOWEST INJECTION PORT, CAP
- OFF LOWEST INJECTION PORT AND MOVE UP TO NEXT PORT, REPEATING PROCEDURE. 6. WHEN ALL PORTS HAVE BEEN FILLED AND ADEQUATE CURE TIME HAS TAKEN PLACE, CUT OFF PORTS AND GRIND DOWN SURFACE SEALER FLUSH TO FACE OF ADJACENT
- 7. FOLLOW ALL MANUFACTURERS INSTRUCTIONS FOR EPOXY RESIN ADHESIVE AND
- SEALANT.



REPAIR FOR CRACKED CONCRETE (UP TO 1/4" WIDTH)

NOT TO SCALE

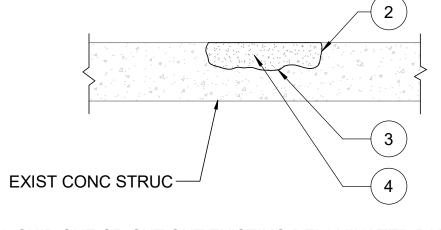


- 1. REMOVE EXISTING COATING ON DELAMINATED LANDING OR TREAD.
- 2. CLEAN SURFACE AS REQUIRED PER MANUFACTURER'S SPECIFICATIONS AND PROCEDURES.
- 3. APPLY SIKAGARD FLEXCOAT CEMENTITOUS COATING.
- 4. AFTER CURING, TOP COATING WITH SIKAGARD FLEXCOAT ATC IN SPEEDWAY GRAY.



REPAIR FOR TOP COATING

NOT TO SCALE



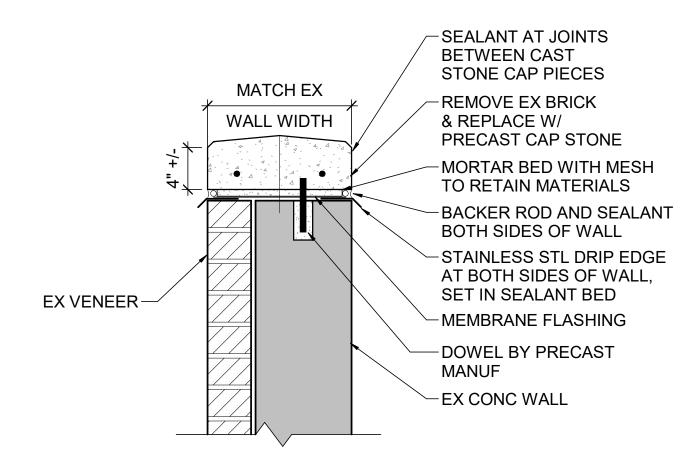
- 1. CHIP OUT OR CUT OUT EXISTING DELAMINATED PATCH UNTIL SOUND CONCRETE IS MET.
- 2. CLEAN SURFACE AS REQUIRED PER MANUFACTURER'S SPECIFICATIONS AND PROCEDURES.
- 3. PRE-WET CONCRETE SURFACE TO SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION. APPLY SCRUB COAT TO SUBSTRATE, FILLING ANY PORES AND VOIDS.
- 4. WHILE SCRUB COAT IS STILL WET, APPLY SIKAQUICK 1000.



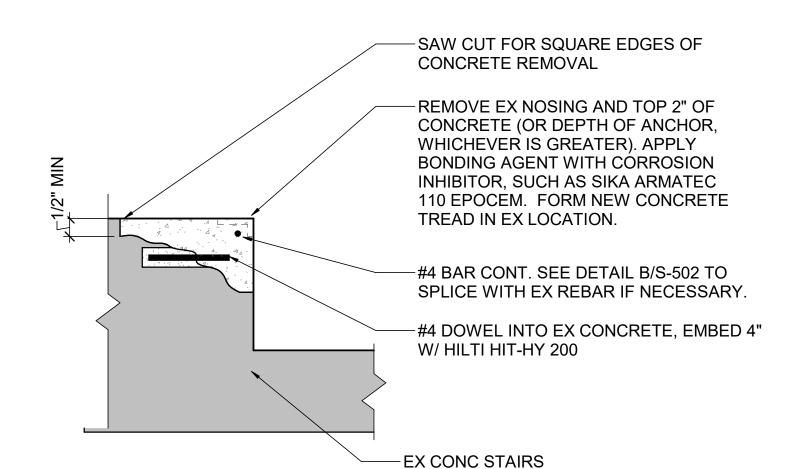
REPAIR FOR SPALLED CONCRETE

NOT TO SCALE





PRECAST CAP DETAIL - BID ALTERNATE G-2 NOT TO SCALE



STAIR NOSING REPAIR DETAIL NOT TO SCALE

COMM NO: 222079 07/11/2022 CAW DESIGN: JWR DRAWN:

TYPICAL STRUCTURAL

DETAILS

CHECK:

SHEET TITLE

S-501

REV. NO.

2. REINFORCING DEPTH AND LOCATION SHALL BE DETERMINED PRIOR TO ANY SAW CUTTING TO AVOID CUTTING REINFORCING. SAW CUT (FIRST CUT) PERIMETER OF REPAIR FORMING A RECTANGLE AROUND THE AREA OF DELAMINATION MAINTAINING A MINIMUM OF 1" FROM EDGE OF CONCRETE DISTRESS. CORE DRILL CORNERS 1" DEEP WITH 2" DIA MIN BIT TO PREVENT OVER-CUTTING. DEPTH OF THE FIRST SAW CUT SHALL BE NO MORE THAN HALF OF THE DETERMINED CLEAR COVER OF EXISTING STEEL

3. AT THE CONTRACTOR'S DISCRETION, TO ASSIST IN CONTAINING ANY RESIDUAL DAMAGE FROM REMOVING THE DISTRESSED CONCRETE INSIDE THE FIRST CUT, SAW CUT AN OPTIONAL SECOND CUT OUTSIDE OF PERIMETER OF FIRST CUT A MINIMUM 1" FROM FIRST CUT. CORE DRILL CORNERS 1" DEEP WITH 2" DIA MIN BIT TO PREVENT OVER-CUTTING. DEPTH OF SECOND SAW CUT SHALL MATCH FIRST CUT. IF OPTIONAL SECOND CUT IS NOT USED, RE-CUT PATCH EDGES IF CHIPPING OR SPALLING OCCURS DURING REMOVAL.

4. REMOVE DISTRESSED CONCRETE WITHIN FIRST SAW CUT BY APPROVED METHODS (HYDRODEMOLITION AND OR 15 LB HAMMER) CREATING THE SURFACE PROFILE AS RECOMMENDED BY THE REPAIR PRODUCT MANUFACTURER

5. REMOVE CONCRETE BETWEEN FIRST AND SECOND SAW CUT. CAUTION SHALL BE TAKEN NOT TO DAMAGE EDGE OF "SOUND" CONCRETE. NOT APPLICABLE IF SECOND CUT IS NOT USED.

6. PREPARE AND CLEAN CONCRETE CAVITY USING HIGH-PRESSURE WATER OR ABRASIVE BLASTING TO REMOVE LOOSE AND BOND INHIBITING MATERIALS AND GENERATE/MAINTAIN THE SPECIFIED SURFACE PROFILE AS RECOMMENDED BY THE REPAIR PRODUCT MANUFACTURER.

7. APPLY PRIMER OR BONDING AGENT AS SPECIFIED OR REQUIRED BY MATERIAL MANUFACTURER.

8. INSTALL REPAIR MATERIAL WITH CORROSION INHIBITOR PER REPAIR PRODUCT MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

9. INSTALL REPAIR MATERIAL INTO PREPARED AND APPROVED CAVITY. FINISH SURFACE PER COATING PRODUCT MANUFACTURER'S RECOMMENDATIONS OR TO MATCH EXISTING HIGH PROFILES.

10. CURE REPAIR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS SPECIFIED. WATER CURING IS REQUIRED, SEE SPECIFICATION.

11. AFTER ADEQUATE CURING TIME, HAMMER SOUND REPAIR/PATCH MATERIAL TO ENSURE BONDING TO SUBSTRATE. IF PATCH IS "SOUNDED HOLLOW" INDICATING DEBONDING FROM THE SUBSTRATE, REMOVE AREA OF DELAMINATION AND RE-PATCH BEGINNING WITH STEP 1.

NOTE: REPAIR DETAILS ON THIS SHEET ARE TYPICAL AND APPLY TO HORIZONTAL AND VERTICAL CONDITIONS

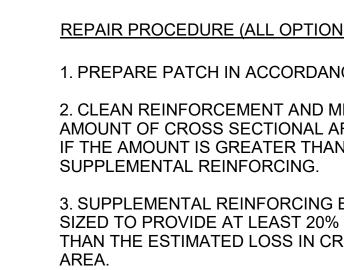
REPAIR PROCEDURE (ALL OPTIONS)

1. PREPARE PATCH IN ACCORDANCE WITH DETAIL A.

2. CLEAN REINFORCEMENT AND MEASURE THE AMOUNT OF CROSS SECTIONAL AREA LOSS. IF THE AMOUNT IS GREATER THAN 10% ADD

3. SUPPLEMENTAL REINFORCING BARS SHALL BE SIZED TO PROVIDE AT LEAST 20% MORE AREA THAN THE ESTIMATED LOSS IN CROSS SECTIONAL

4. SPLICE NEW REINFORCING BAR TO REPLACE CORRODED REINFORCING BAR PER ONE OF THE METHODS IN THE REINFORCING BAR SPLICE DETAILS. PROVIDE THE MINIMUM LAP LENGTHS AS REQUIRED PER ACI 318.



5. WHEN FEASIBLE, SETTING THE SUPPLEMENTAL REINFORCING BARS WITH 90 DEGREE DOWEL BARS WILL REDUCE THE REQUIRED SIZE OF THE PATCH AREA.

NEW SUPPLEMENTAL

DEVELOP HOOKED

REINFORCING BAR

ELEVATION VIEW 2

OPTION 2 - HOOK

REINFORCING BAR (BEYOND)

EPOXY ADHESIVE. EMBED.

WITH 90 DEGREE HOOKS SET IN

DEPTH PER MANUFACTURER'S

RECOMMENDATION TO FULLY

PATCH DEPTH

SEE DETAIL D

THIS SHEET

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COMM NO: 222079 07/11/2022 CAW DESIGN: DRAWN: CHECK: SHEET TITLE

TYPICAL STRUCTURAL

DETAILS

REV. NO.

-REPAIRED AREA, SEE OTHER DETAILS AND SPECIFICATIONS FOR ADDITIONAL CLARIFICATION AND

TENSION LAP LENGTH PAST-

AREA OF CORROSION

EXPOSED

SURFACE

CORRODED

CLEANING-

REINFORCING

CLEANED OF ALL

LOOSE RUST, SCALE

AND DELAMINATIONS

SECTION LOSS DUE TO

AND WITH GREATER

CORROSION AFTER

THAN 10% CROSS

OPTIONAL SECOND CUT

DURING DEMOLITION

-FIRST CUT

USED TO PROTECT EDGES

-AREA OF DISTRESS

CORE DRILL CORNERS 1"

PREVENT OVER-CUTTING

DEEP WITH 2" DIA MIN BIT TO

NEWLY DEMOLISHED SECTION

REQUIREMENTS

-AREA OF CORROSION WITH

GREATER THAN 10% CROSS

SECTION LOSS AFTER CLEANING

SUPPLEMENTAL

REINFORCING

BAR (BEYOND)

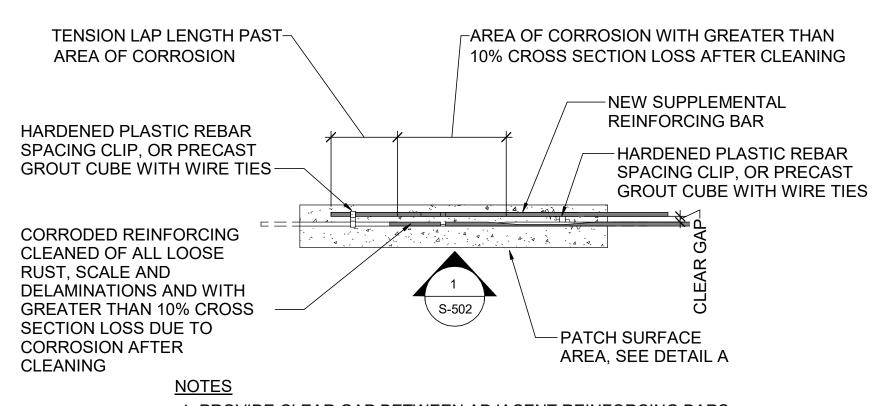
- PATCH DEPTH,

SEE DETAIL D

THIS SHEET

GENERAL REPAIR PATCH PREP AND PLACEMENT DETAIL

NOT TO SCALE

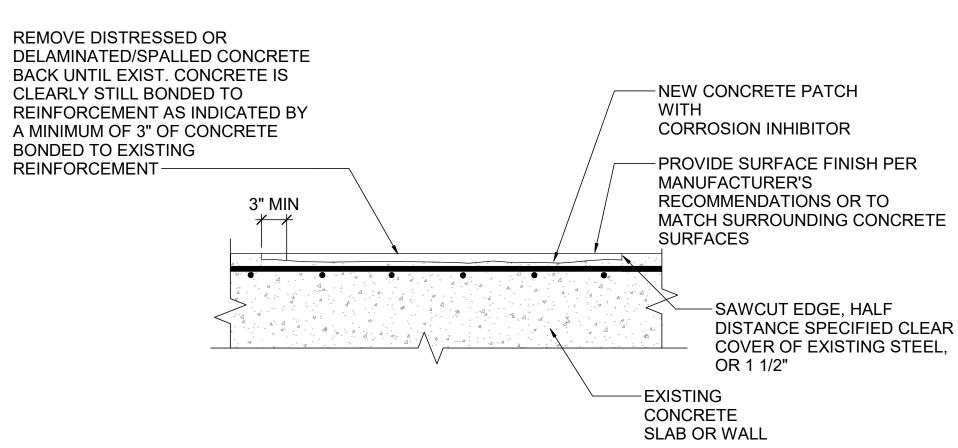


1. PROVIDE CLEAR GAP BETWEEN ADJACENT REINFORCING BARS AS THE GREATER OF 3/4" OR 1.5x LARGEST AGGREGATE SIZE USED FOR THE PATCH

> **PLAN VIEW - HORIZONTAL SURFACE** (ELEVATION VIEW - VERTICAL SURFACE)

GENERAL REINFORCING REPLACEMENT SPLICING DETAIL

NOT TO SCALE



GENERAL REPAIR PATCH DETAIL FOR REPAIRS THINNER THAN THE CONCRETE COVER

NOT TO SCALE

REPAIR PROCEDURE

NOTES

THE SPECIFICATIONS.

EXISTING BARS AND/OR NEW SUPPLEMENTAL REINFORCEMENT BARS (PER THE OPTIONS SHOWN IN DETAIL B, THIS SHEET). CLEAN AND APPLY BONDING AGENT PER MANUFACTURER'S RECOMMENDATIONS. REMOVE DISTRESSED OR -ROUGHENED SURFACE TO 1/4" AMPLITUDE DELAMINATED/SPALLED CONCRETE BACK UNTIL EXIST. CONCRETE IS **CLEARLY STILL BONDED TO** -NEW CONCRETE PATCH WITH CORROSION INHIBITOR REINFORCEMENT AS INDICATED BY A MINIMUM OF 3" OF CONCRETE BONDED TO EXISTING REINFORCEMENT -MATCH EXISTING 3" MIN **COVER**, 1-1/2" MIN 1-1/2" MIN CLEARANCE-**EXIST CONCRETE BELOW REINFORCEMENT**

ELEVATION VIEW 1

OPTION 1 - TENSION LAP

SLAB OR WALL-

GENERAL REPAIR PATCH DETAIL FOR REPAIRS THICKER THAN THE CONCRETE COVER

1. PREPARE AND PATCH IN ACCORDANCE WITH DETAIL A THIS SHEET. 2. INSTALL AND CURE CONCRETE PATCH REPAIR MATERIAL PER MANUFACTURER'S REQUIREMENTS, SPECIFICATIONS, AND OTHER DETAILS. 3. INSTALL TOP COATING IF APPLICABLE.

1. INSTALL ALL MATERIAL PER MANUFACTURER'S WRITTEN INSTALLATION REQUIREMENTS AND

-SAWCUT EDGE, HALF DISTANCE OR SPECIFIED CLEAR COVER OF EXISTING STEEL, OR 1-1/2"

PROVIDE SURFACE FINISH PER MANUFACTURER'S

RECOMMENDATIONSOR TO MATCH SURROUNDING CONCRETE

HOOK DEVELOPMENT TO OCCUR-

EXTERIOR

EXPOSED

SURFACE-

CORRODED REINFORCING

DELAMINATIONS AND WITH

SECTION LOSS DUE TO

CORROSION AFTER

SURFACES

CLEANING-

GREATER THAN 10% CROSS

CLEANED OF ALL LOOSE

RUST, SCALE AND

PAST AREA OF CORROSION

D

S-502

NOT TO SCALE

AREA OF DISTRESS,

HOOK DEVELOPMENT TO-

OCCUR PAST AREA OF

CORRODED REINFORCING

DELAMINATIONS AND WITH

CROSS SECTION LOSS DUE

<u>NOTES</u>

USED FOR THE PATCH

CLEANED OF ALL LOOSE

RUST, SCALE AND

GREATER THAN 10%

CLEANING-

TO CORROSION AFTER

CORROSION

SET EQUAL TO DEPTH

1ST SAWCUT-

2ND SAWCUT

FIRST OR

OPTIONAL

NEW SUPPLEMENTAL

BAR WITH 90 DEGREE

-PATCH SURFACE AREA,

SEE DETAIL A THIS SHEET

REINFORCING

HOOKS

S-502 /

1. PROVIDE CLEAR GAP BETWEEN ADJACENT REINFORCING BARS

PLAN VIEW - HORIZONTAL SURFACE

(ELEVATION VIEW - VERTICAL SURFACE)

AS THE GREATER OF 3/4" OR 1.5x LARGEST AGGREGATE SIZE

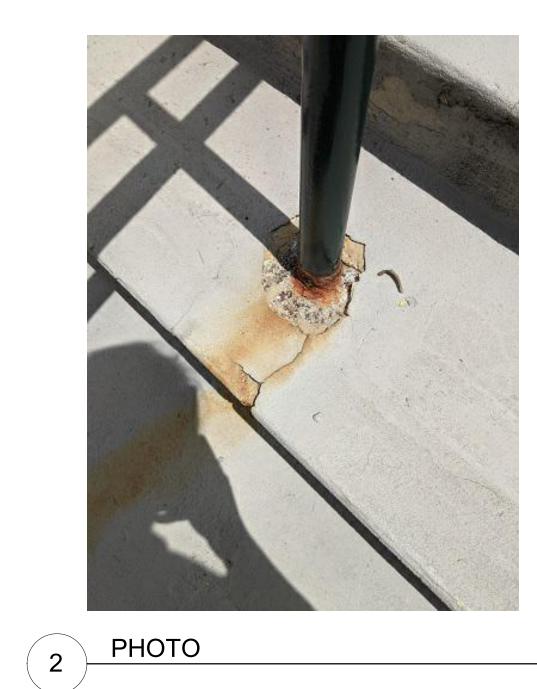
3 A A ...

SECOND CUT

OF SAWCUT

SPALL OR

DELAMINATION



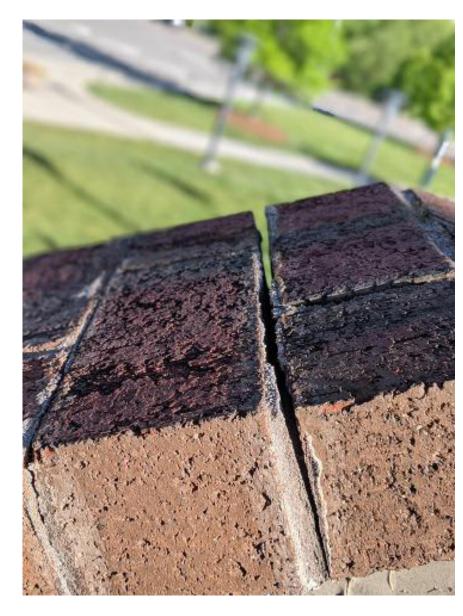


5 PHOTO



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APPALACHIAN STA UNIVERSITY 222079 DRAWN: CAW DESIGN: JWR CHECK: SHEET TITLE

HOLMES CONVOCATION CENTER STAIR REPAIRS

Wiley | Wilson Constant Progress

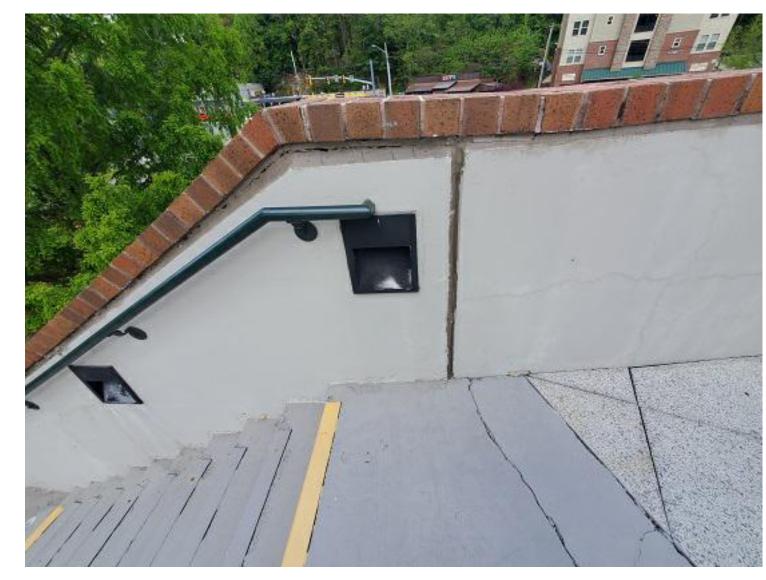
NORTHWEST STAIR PHOTOS

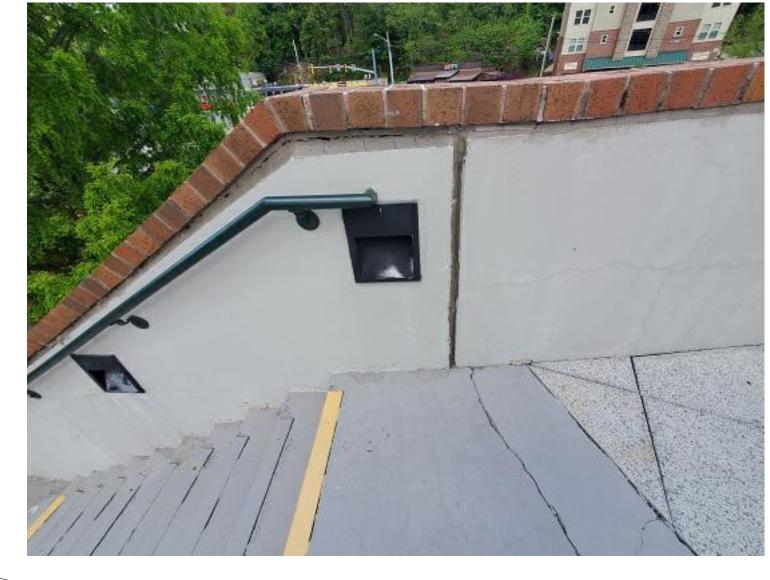
SHT. NO. **S-601**

PHOTO

9 PHOTO



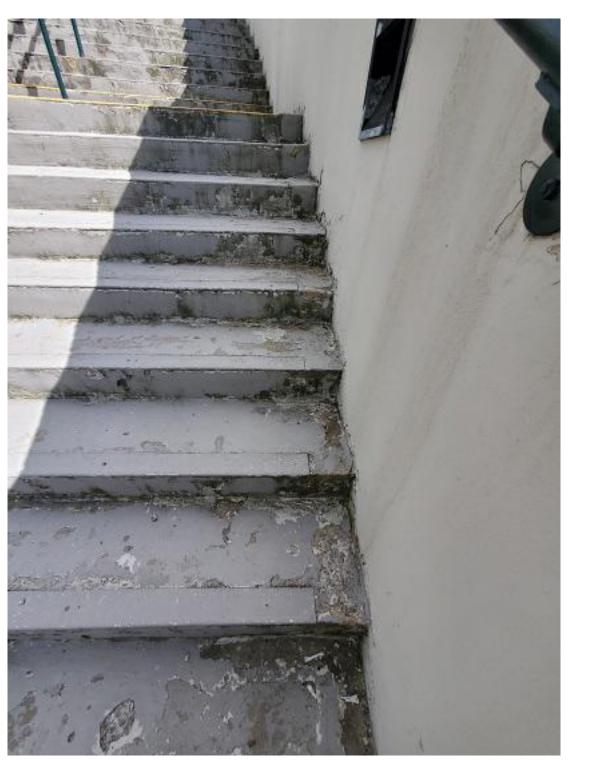




3 PHOTO





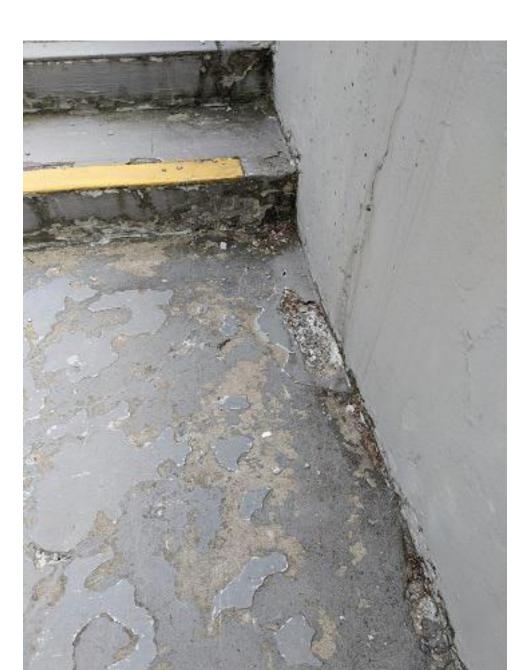


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SHT. NO. **S-602**

HOLMES CONVOCATION CENTER STAIR REPAIRS

APPALACHIAN STA UNIVERSITY

NORTHEAST STAIR PHOTOS

HOLMES CONVOCAT

DRAWN: CAW DESIGN: JWR

SOUTHEAST STAIR PHOTOS

CHECK: SHEET TITLE

SHT. NO. **S-603** APPALACHIAN STAUNIVERSITY

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