

PERSIGO WASTE WATER TREATMENT PLANT ANAEROBIC DIGESTERS REPAIRS

Owner: City of Grand Junction
Grand Junction, Colorado

Owners Representative: Kirsten Armbruster, PE
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Engineer-of-Record: Wiss, Janney, Elstner Associates, Inc. (WJE)
3609 South Wadsworth Boulevard, Suite 400
Lakewood, Colorado 80232

Engineer-of-Record: Mr. Terry McGovern, PE
Representative 303.914.4300
tmcgovern@wje.com

Project Address: Persigo Wastewater Treatment Plant
2145 River Road
Grand Junction, Colorado 81505

ANAEROBIC DIGESTER REPAIR SCOPE

The repairs at the Anaerobic Digesters include, but are not limited to, installation of supplemental mechanical anchors at exterior panels to address noted bowing of isolated panels, concrete repairs, including removal of incipiently spalled concrete, as well as sound concrete, and associated surface preparation of the embed steel elements and concrete surfaces to receive the concrete repairs, and removal and replacement of sealant at all vertical panel joints.

SPECIAL CONSIDERATIONS

The Anaerobic Digesters will remain in-service during the repairs. If closure or temporary blockage of the doors at the east and west elevations is required to perform the concrete or sealant repairs, Contractor shall coordinate with and obtain Owner's approval at least 7 days in advance. The Anaerobic digester's contain flammable gases, use caution when working around these structures and take care to penetrate the walls. When working around the top of the digester, do not perform work that could create sparks. Coordinate safety restrictions with Owner.

DRAWING SUBMITTALS

None.

REQUIRED MOCKUP SUMMARY

1. Installation of helical anchors at one panel where supplemental mechanical anchorage is designated.
2. Two adjacent corner spall repairs.

GENERAL NOTES

- Drawings and associated Specifications (referred to in general as the Construction Documents) apply only to the specific project identified in Titleblock, and shall not be used for any other purpose without specific written consent of Engineer, Engineer's sub-consultants, and Owner. Any unauthorized use of Engineer's work product shall be at user's sole risk and user shall indemnify Engineer against any liability or legal exposure related to the unauthorized use.
- Drawings and Specifications are complementary, are to be taken as a whole, and should include sufficient information necessary for the execution and completion of the work in a manner consistent with the design intent. In the absence of explicit or reasonably inferable information on drawings or in specifications, promptly seek clarification from Engineer as a request for information.
- Contractor is solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work. Engineer has no such responsibilities beyond its own employees.
- In an emergency affecting safety of persons or property, act to prevent or stop further damage, injury, or loss.
- If a hazardous material or substance not addressed in the Construction Documents is encountered, immediately stop work in affected area and notify Owner and Engineer of the condition.
- Temporarily relocate and restore existing equipment and appurtenances (whether or not shown on the drawings) that obstruct access to portions of the Work. Notify and coordinate with Owner prior to doing so.
- Develop, implement, erect, and maintain safeguards to prevent damage, injury, or loss resulting from the work to (a) workers, occupants, passers-by, and other persons; (b) in-progress work, materials, and equipment under care, custody, and control of the contractor (whether on or off site); and (c) other property at the site or adjacent thereto not designated as part of the work for removal, relocation, or replacement. In the event of damage, injury, or loss, promptly notify Engineer and Owner and present proposed remedy. All damage to these elements must be repaired to the satisfaction of the Owner.
- Promptly correct work rejected by Engineer or failing to conform to requirements of the Construction Documents. Associated costs (including additional testing or inspections, cost of uncovering and correction, and compensation for Engineer's services and expenses made necessary thereby) shall be the Contractor's responsibility.
- Dimensions, quantities, and geometries provided for existing construction are based on original drawings and limited field documentation by Engineer. Field verify applicable information prior to submitting a bid, ordering materials, or otherwise committing resources to the Work. Provided dimensions take precedence over scaled dimensions. Dimensions of the new construction shall be adjusted as necessary to fit the existing conditions. The Engineer shall be notified in writing of any significant deviations from the dimensions or conditions shown on these drawings.
- Drawings illustrate the completed work with elements in their final intended positions. Provide shoring, bracing, support, and sequence work as required to maintain the structural integrity of new or existing construction during the work. Provide shoring per 1/3.3. Only two non-adjacent (i.e. one bottom and one top) corner repairs per panel are allowed at the same time.
- Contractor is solely responsible for, and shall have sole control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the work. Engineer has no such responsibilities. Specific instruction that may be given in Construction Documents concerning construction means, methods, techniques, sequences, or procedures shall not relieve contractor of its responsibility for control and coordination.
- Provide labor, materials, equipment, supervision, and coordination directly and incidentally necessary to perform the work in accordance with Construction Documents.
- Promptly report to Engineer as a request for information known or suspected errors, inconsistencies, or omissions within or between Construction Documents, as well as known or suspected variance of the Construction Documents from existing conditions. Await direction from Engineer prior to proceeding with Work. For bidding purposes only, and unless otherwise directed by Engineer, the more stringent requirement or better quality shall take precedence as determined by Engineer.
- Activities or duties of Engineer, or tests, inspections, or approvals required or performed by third parties shall not relieve Contractor of its obligation to perform the Work in accordance with Construction Documents.
- Secure and pay for all permits, fees, licenses, and inspections by government agencies necessary for proper and compliant execution and completion of the work. Contractor shall be properly licensed to perform the specified Work.

Keyed Note Schedule							
Callout	Plan Hatch/Symbol	Name	Unit	Total Estimated Quantity	Description	Reference Specification Section(s)	Reference Detail(s)
3-1		Corner Spall Repair	SF	46	Remove and replace deteriorated and/or delaminated concrete on concrete panel corners. Number adjacent to keyed note indicates the estimated area of replacement. Assume 4 inch repair depth. Prior to proceeding with concrete repairs, sound surface of concrete and notify Engineer and Owner of revised repair quantity prior to proceeding with removal if it exceeds 10 percent more than specified.	03 01 34 03 21 00	1/3.4
3-2		Coping Repair	SF	4	Remove and replace deteriorated and/or delaminated concrete on concrete coping top surfaces. Number adjacent to keyed note indicates the estimated area of replacement. Assume 6 inch repair depth. Prior to proceeding with concrete repairs, sound surface of concrete and notify Engineer and Owner of revised repair quantity prior to proceeding with removal if it exceeds 10 percent more than specified.	03 01 34 03 21 00	2/3.4
3-3	*	Installation of New Mechanical Anchors	Panels	39	Install new stainless steel supplemental mechanical anchors at panels/locations noted on sheet 3.2. New mechanical anchors shall engage the backup structural concrete wall a minimum of 2 inches. Repairs include installation of appropriate filler material following installation of anchor.	03 21 00	3/3.4
3-4					NOT USED		
3-5	None	New Sealant Joint	LF	780	Remove existing sealant and backing materials and install new joint sealant. Number adjacent to keyed note indicates the estimated lineal feet of repair.	07 92 00	4/3.4

ABBREVIATIONS:

CLR	CLEAR
(E)	EXISTING
EA	EACH
FV	FIELD VERIFY
LF	LINEAL FEET
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
PNL	PANEL
RE	REFERENCE
SIM	SIMILAR
SF	SQUARE FEET
TYP	TYPICAL
w/	WITH

INDEX TO DRAWINGS:

3.0	ANAEROBIC DIGESTERS COVER SHEET
3.1	ANAEROBIC DIGESTERS PLAN
3.2	ANAEROBIC DIGESTERS PANEL ELEVATIONS
3.3	ANAEROBIC DIGESTERS WALL SECTION
3.4	ANAEROBIC DIGESTERS REPAIR DETAILS

SYMBOLS LEGEND:

EXISTING FULL HEIGHT WALL

- Comply with and give notices required by laws, statutes, ordinances, codes, rules and regulations, and lawful orders of authorities having jurisdiction applicable to the Work.
- The Work will be performed at an occupied and operational facility. Coordinate construction activities and procedures with Owner to (a) maintain unobstructed existing means of egress from facility; (b) comply with facility's existing security procedures and requirements; and (c) provide not less than 48 hours advance notice to and gain approval from Owner prior to construction activities that will disrupt normal use of facility (including exceptional noise and/or vibrations, uncontrolled dust, obtrusive odors, or interruptions of utilities). Work not coordinated and approved in advance that disrupts the normal use of the facility may be stopped until proper coordination and approval is achieved. Contractor shall be responsible for any costs incurred as a consequence of stoppage.
- Coordinate locations of on-site storage of materials and equipment with Owner so as to not unreasonably encumber facility or site. Do not allow construction materials, equipment, or procedures to overload or exceed the structural capacity of existing construction to remain, partially completed work, or completed work. Make inspections and/or perform analyses and tests necessary to verify that existing elements have adequate capacity to support proposed construction loads.

BUILDING CODES AND LOADS

- Original Building Code Under Which the Structures were Constructed: Not Specified
 - Original Construction Documents prepared by Henningson, Durham and Richardson (HDR), Inc. dated June 1984, are available for review from Owner's Representative.
- Current Building Code and Basis for Repair Work: The 2018 International Existing Building Code (IEBC), as adopted by the Mesa County Building Inspection Department, shall serve as the Governing Building Code for the Work.

INSPECTIONS AND OBSERVATIONS

- Observations are performed by the Engineer, or licensed design professional.
- Special inspections shall be performed by a qualified Testing Agency or Special Inspector. Additional inspections may be performed by the local building authority.
- All construction shall be subject to review (observation) by the Engineer before it is concealed from view. Coordinate expected review items with the Engineer prior to the start of construction. Provide reasonable notification to the Engineer to allow for such review as the Work proceeds, 48 hours minimum unless noted otherwise.
- Contractor to pay for and provide access for all inspections and observations, regardless of the entity retaining such services.

MATERIAL PROPERTIES

- Original Construction
 - Concrete Compressive Strength (Fc) 5000 psi at 28 days using normal weight aggregate.
 - No. 4 and larger reinforcing steel ASTM A615-76a Grade 40, No 3 stirrups and ties may be Grade 40.
 - All original structural steel: A36.
- Repair Construction
 - Minimum concrete compressive Strength (Fc) 5000 psi at 28 days using normal weight aggregate.
 - All reinforcing steel shall be A615 Grade 60 unless specifically noted otherwise.

SHORING

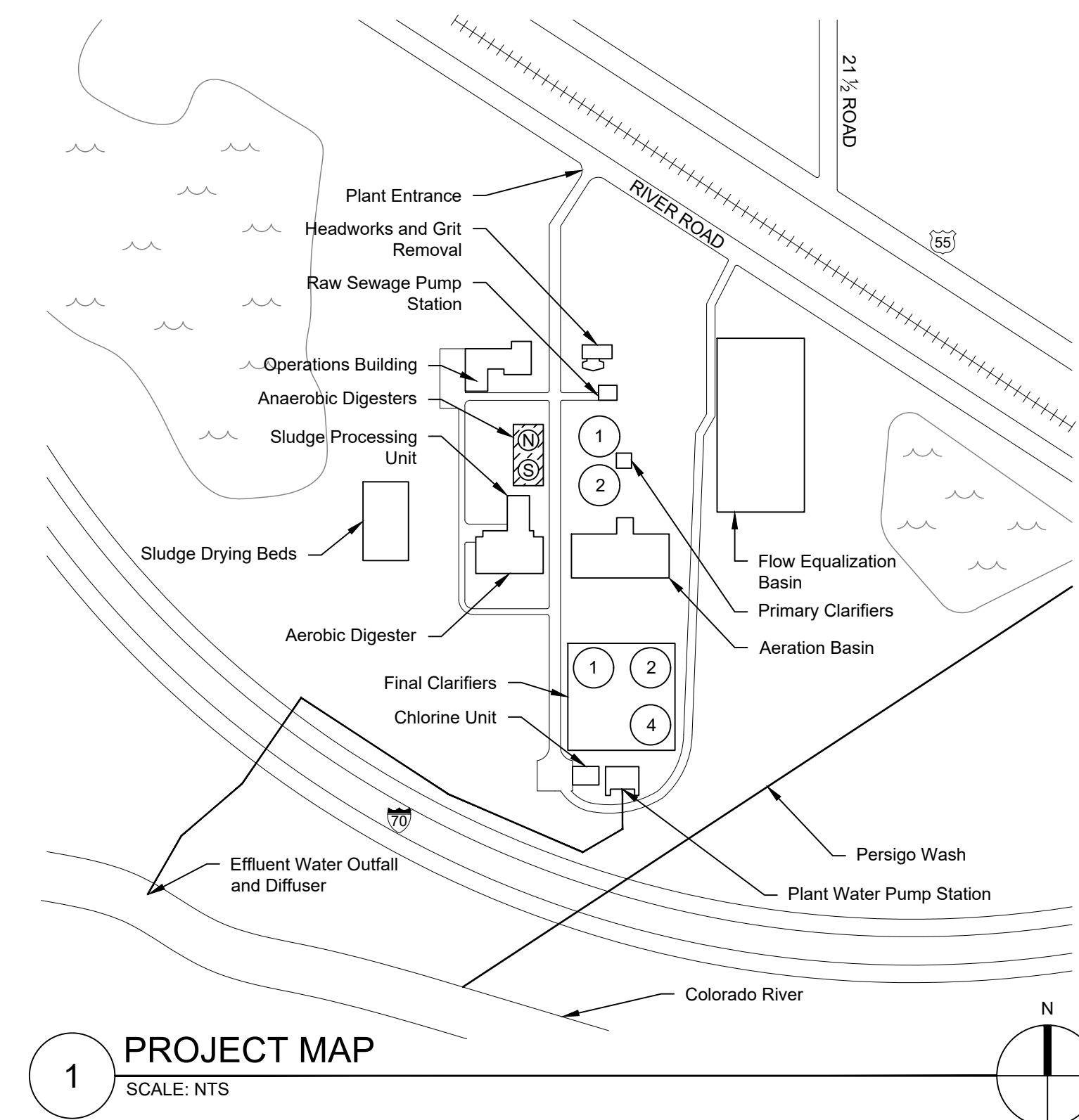
- Reference Section 03 01 01 for additional requirements.
- Shoring shall be designed by a Professional Engineer licensed in Colorado.
- Design Loads (Each Location, Ultimate)
 - Dead Load: Self Weight
 - Construction Live Load: 20 psf minimum.
 - Wind Load: (ASCE 7-16)
 - a. V = 115 mph
 - b. Exposure = C

Special Inspection Schedule			
Verification and Inspection	Frequency	Inspector	Reference Standard(s)
Concrete Construction, Including Concrete Repairs (IBC Table 1705.3)			
Inspection of Reinforcing Steel Preparation and Placement	Prior to Each Placement	Special Inspector	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3
Verifying use of Approved Repair Material	With Fresh Material Testing	Special Inspector	ACI 318 CH 19, 26.4.3, 26.4.4
Fresh Cementitious Material Testing	Once Each Placement Shift	Special Inspector	ASTM C172, ASTM C31, AND ACI 318: 26.5, 26.12
Inspection for Installation and Maintenance of Specified Curing Temperature and Techniques	At each visit for other reasons	Special Inspector	ACI 318: 26.5.3-26.5.5
Compression Strength Testing	Once Each Placement Shift	Special Inspector	ACI 318: 26.12
Mixing, Conveying, Depositing and Curing Concrete or Repair Materials	Once Each Placement Shift	Special Inspector	ACI 318: 26.5.2, 26.5.3

Notes:
1. Reference ACI 318 2014 Edition for Special Inspection Requirements.
2. Concrete inspections shall apply to all pre-packaged repair materials, site batched cementitious repair materials and ready-mix concrete delivered to the site.
3. All special inspections shall be performed by a qualified Testing Agency or Special Inspector Retained by the Owner.
4. All reports shall be provided DIRECTLY to the Owner, Contractor, and Engineer, for information only.

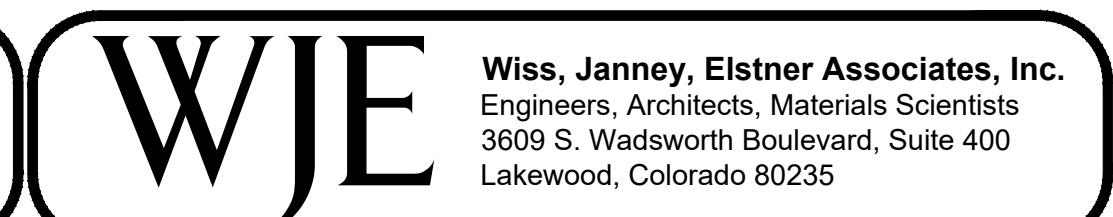
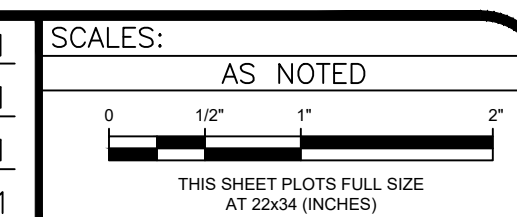
Quality Control Testing Summary			
Item or Test	Keyed Note(s)	Frequency	Reference Specification Section(s)
Sealant Adhesion Testing		Every 250 LF	07 92 00 ASTM C1521

Notes:
1. This testing shall be performed by the Testing Agency or Engineer, with assistance from the Contractor as noted in the Specification Sections.

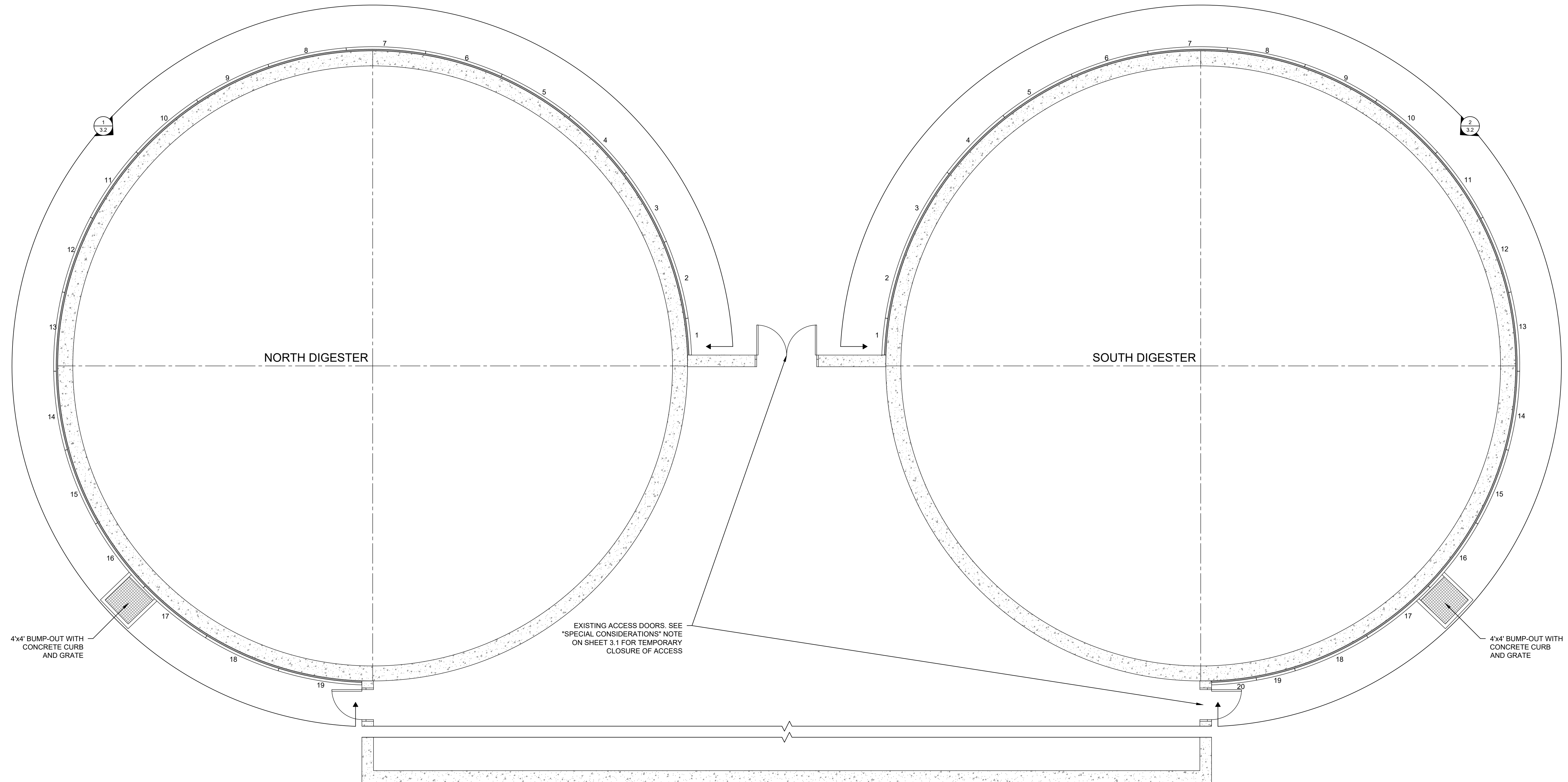


REVISION	DESCRIPTION	DATE
REVISION A		
REVISION B		
REVISION C		
REVISION D		

DRAWN BY	BRS/CRS	DATE	04/07/21
DESIGNED BY	AGL/TMM	DATE	04/07/21
CHECKED BY	SWF/CFL	DATE	04/07/21
APPROVED BY	TMM	DATE	04/07/21



ANAEROBIC DIGESTERS
COVER SHEET

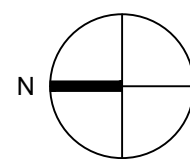


1 North and South Anaerobic Digester Plan

SCALE: 1/4" = 1'-0"

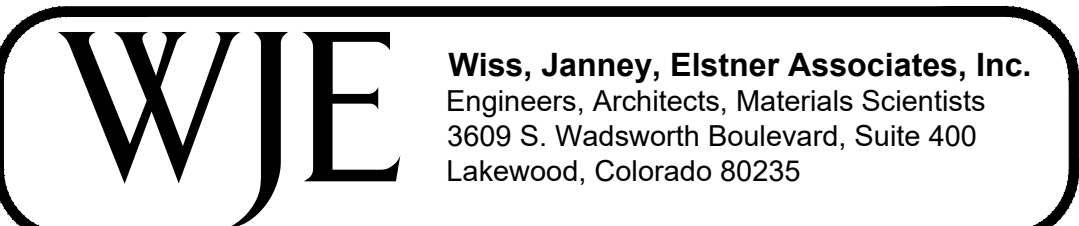
PLAN NOTES:

1. REFERENCE ORIGINAL DRAWING IV-25 AND IV-28 FOR ADDITIONAL INFORMATION.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION Δ			BRS/CRS	04/07/21
REVISION Δ			AGL/TMM	04/07/21
REVISION Δ			SWF/CFL	04/07/21
REVISION Δ			TMM	04/07/21

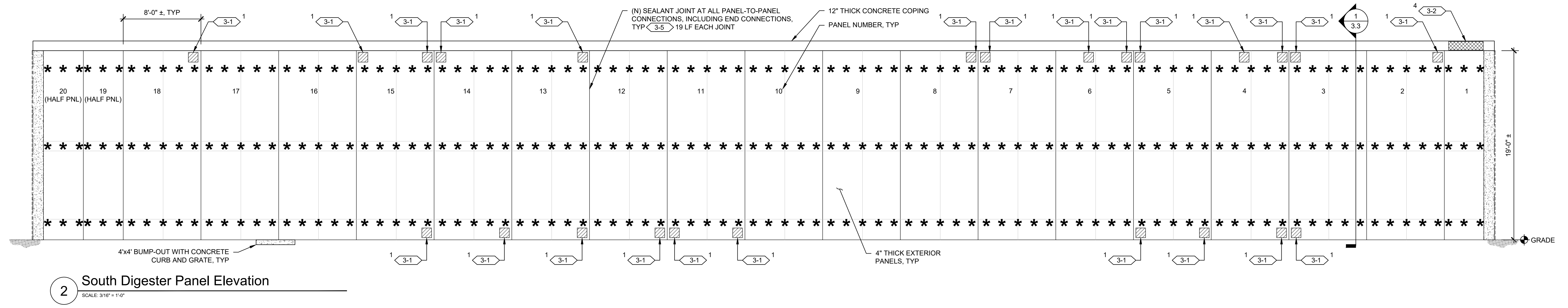
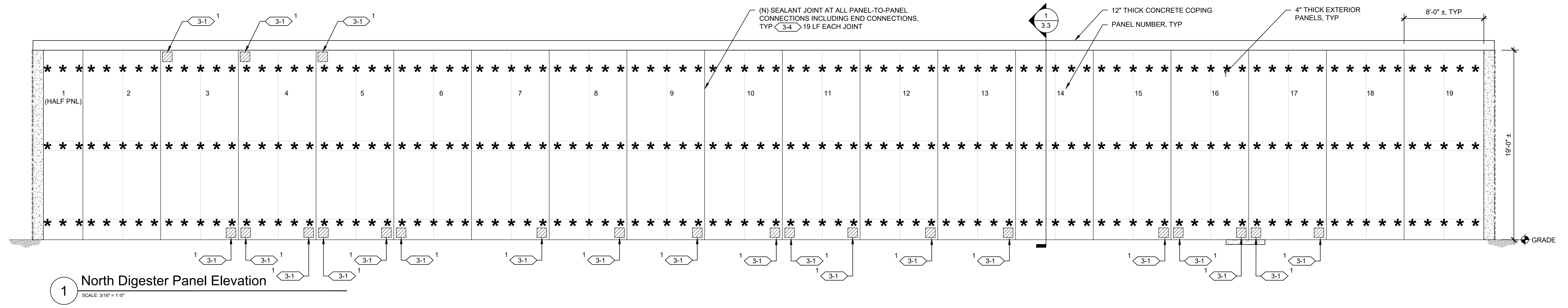
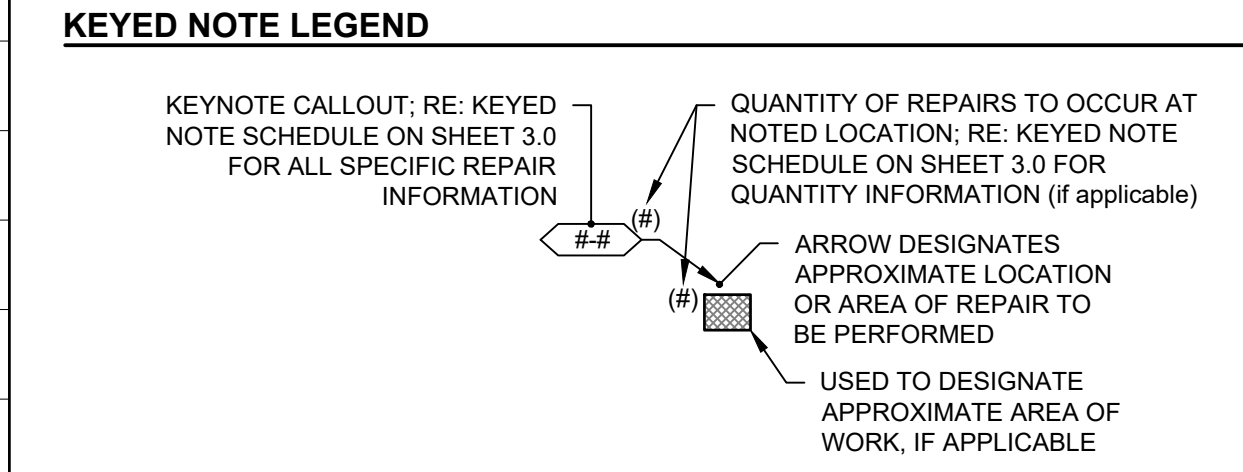
SCALES:
AS NOTED
0 1/2" 1" 2"
THIS SHEET PLOTS FULL SIZE AT 22x34 (INCHES)



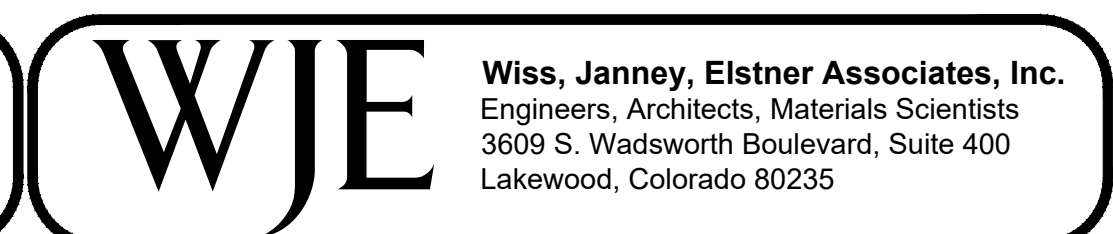
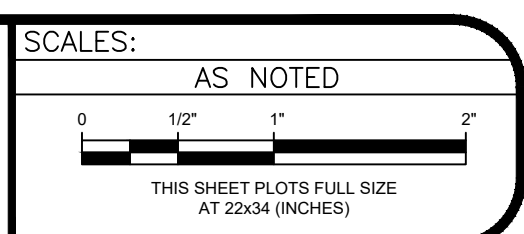
ANAEROBIC DIGESTERS
PLAN

Keyed Note Summary			
Callout	Plan Hatch/Symbol	Name	Total Estimated Quantity (This Sheet)
3-1		Corner Spall Repair	46 sf
3-2		Coping Repair	4 sf
3-3	*	Installation of New Mechanical Anchors	39 PANELS
3-4		NOTE USED	
3-5	NONE	New Sealant Joint	780 lf (41 Joints Total)

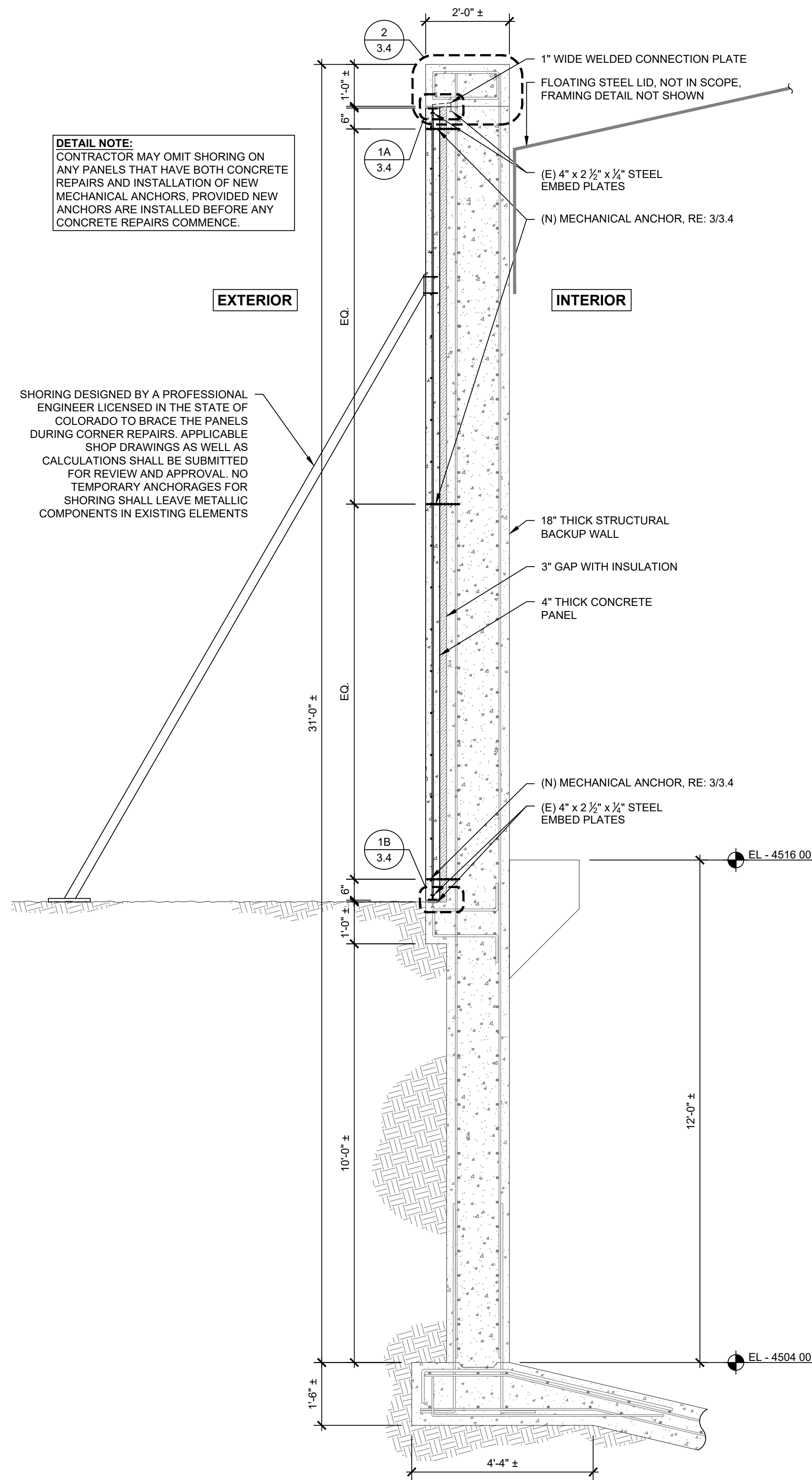
NOTE: SEE KEYED NOTE SCHEDULE ON 3.0.



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			BRS/CRS	04/07/21
REVISION			AGL/TMM	04/07/21
REVISION			SWF/CFL	04/07/21
REVISION			IMM	04/07/21



ANAEROBIC DIGESTERS
PANEL ELEVATIONS



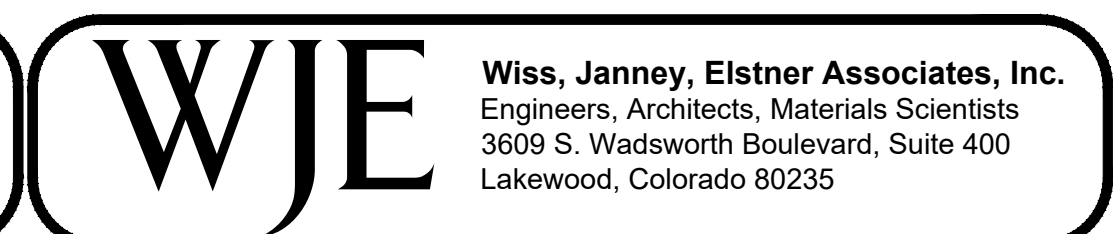
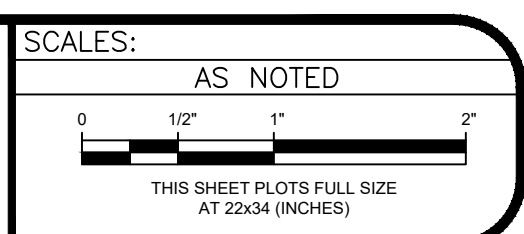
DETAIL NOTE:
CONTRACTOR MAY OMIT SHORING ON ANY PANELS THAT HAVE BOTH CONCRETE REPAIRS AND INSTALLATION OF NEW MECHANICAL ANCHORS, PROVIDED NEW ANCHORS ARE INSTALLED BEFORE ANY CONCRETE REPAIRS COMMENCE.

SHORING DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF COLORADO TO BRACE THE PANELS DURING CORNER REPAIRS. APPLICABLE SHOP DRAWINGS AS WELL AS CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL. NO TEMPORARY ANCHORAGES FOR SHORING SHALL LEAVE METALLIC COMPONENTS IN EXISTING ELEMENTS

1 Anaerobic Digester Wall Section
SCALE: 1/2" = 1'-0"

DETAIL NOTES:
1. REFERENCE ORIGINAL DRAWING IV-28 FOR ADDITIONAL INFORMATION.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION Δ			BRS/CRS	04/07/21
REVISION Δ			AGL/TMM	04/07/21
REVISION Δ			SWF/CFL	04/07/21
REVISION Δ			TMM	04/07/21

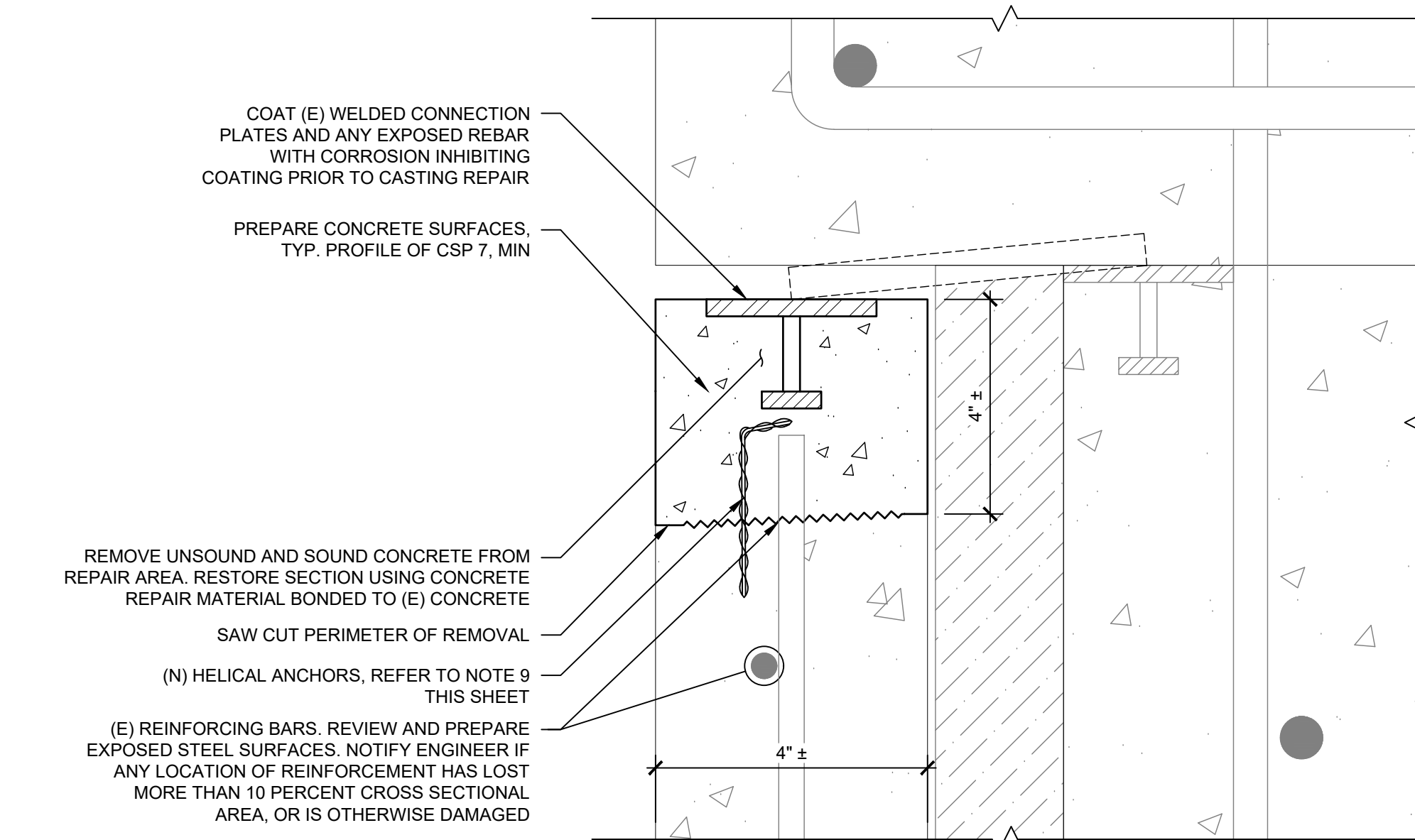


ANAEROBIC DIGESTERS
WALL SECTION

TYPICAL CONCRETE REPAIR NOTES:

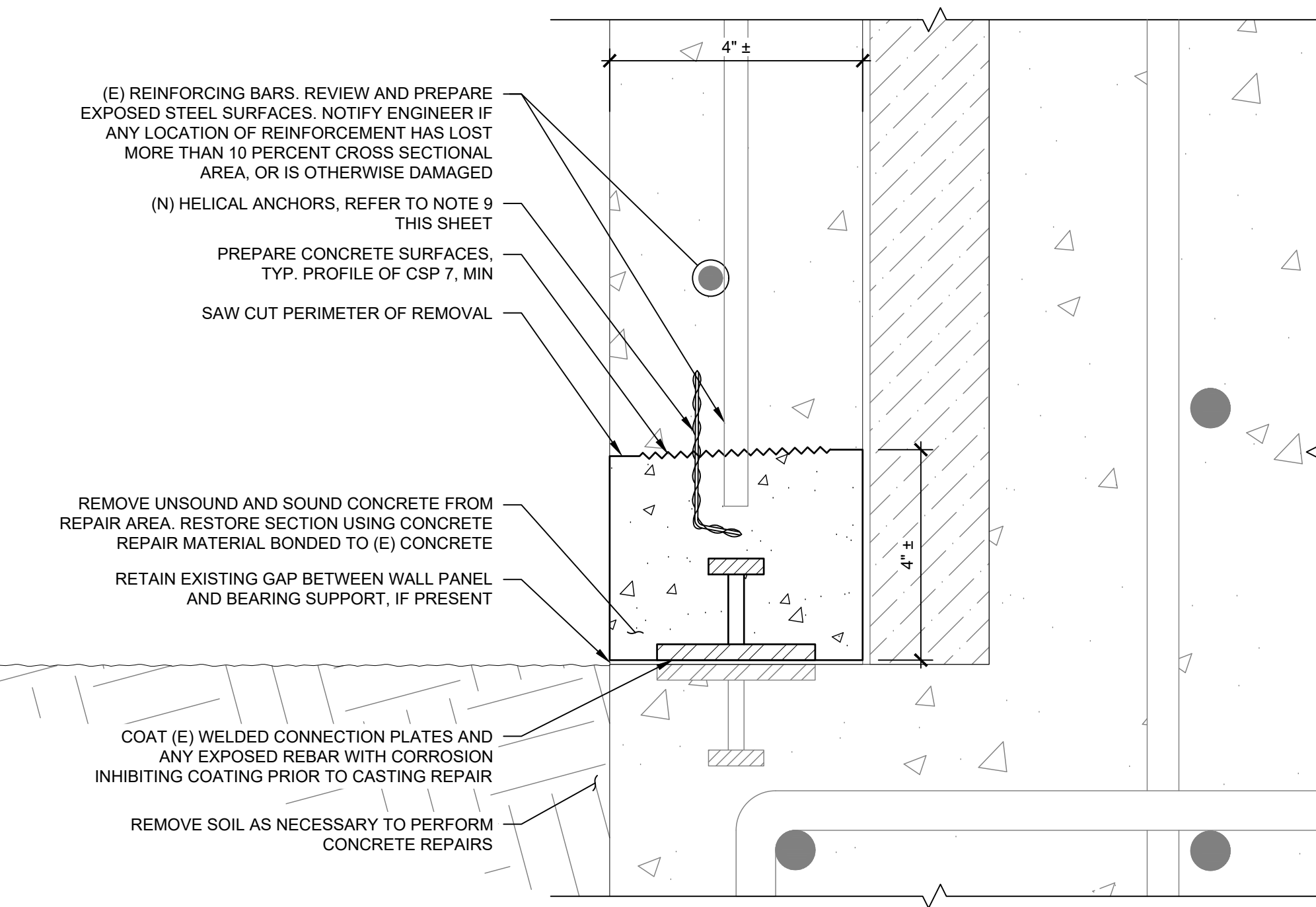
THESE NOTES SHALL APPLY TO ALL CONCRETE REPAIR WORK UNLESS NOTED OTHERWISE ON SPECIFIC DETAILS. THESE NOTES SERVE TO SUPPLEMENT THE SPECIFICATION SECTIONS 03 01 34 AND 03 21 00. REFERENCE THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

- SOUND AND MARK ALL REPAIR AREAS ON CONCRETE SURFACE. NOTIFY ENGINEER AND OWNER OF ANY ADDITIONAL DISTRESSED LOCATIONS. AWAIT APPROVAL PRIOR TO PROCEEDING WITH CONCRETE REMOVAL AT ADDITIONAL LOCATIONS.
- PROVIDE SHORING PER 1/3.3. ONLY TWO NON-ADJACENT (I.E. ONE BOTTOM AND ONE TOP) CORNER REPAIRS PER PANEL ARE ALLOWED AT THE SAME TIME.
- REMOVE ALL LOOSE CONCRETE FROM THE DETERIORATED AREA.
- CONCRETE REMOVAL AREAS:
 - MAKE A SAWCUT AROUND THE ENTIRE PERIMETER OF THE REPAIR AREA. SHAPE SHALL BE RECTANGULAR IN PLAN AND ELEVATION, AND SHALL AVOID RE-ENTRANT CORNERS.
 - EXTEND REMOVAL AND REPLACEMENT AT LEAST 1 INCHES BEYOND EDGE OF UNSOUND CONCRETE.
 - THE CUT SHALL BE MADE TO A DEPTH OF 3/4 INCHES, IF POSSIBLE. IF THERE ARE AREAS AROUND THE PERIMETER OF THE DETERIORATED AREAS WHERE STEEL REINFORCING IS CLOSER TO THE SURFACE THAN NOTED SAWCUT DEPTH, THEN NO SAW CUT SHALL BE MADE IN THOSE AREAS. INSTEAD OF A SAWCUT, THE PERIMETER OF THE AREA SHALL BE CAREFULLY CHIPPED AWAY WITH A LIGHT DUTY CHIPPING HAMMER TO ACHIEVE AS CLOSE TO A SMOOTH UNIFORM EDGE AS POSSIBLE (I.E. SIMULATE A SAWCUT PERIMETER).
- CONCRETE REMOVAL PROCEDURE:
 - REMOVE UNSOUND CONCRETE AND, AS NECESSARY, SOUND CONCRETE USING EITHER 15-LB CHIPPING HAMMER (DETAIL WORK ADJACENT TO AND BENEATH REINFORCING STEEL AND EMBEDS) OR 30-LB CHIPPING HAMMER (REMOVAL OF CONCRETE AT REPAIR AREAS).
 - MINIMUM REMOVAL DEPTH AS SHOWN ON DRAWINGS. AVOID ABRUPT CHANGES IN DEPTH OF REMOVAL.
 - CLEARANCE AROUND REINFORCING BARS OF AT LEAST 3/4 INCHES.
 - TAKE CARE NOT TO EXCESSIVELY VIBRATE THE EXPOSED REINFORCING WITH THE CHIPPING HAMMER, IN ORDER TO AVOID FRACTURING ANY OF THE CONCRETE THAT IS BONDED TO THE REINFORCEMENT OUTSIDE THE PERIMETER OF THE REPAIR.
 - PROVIDE CONCRETE SURFACE PROFILE AS SPECIFIED OR INDICATED ON THE DRAWINGS. SURFACE PROFILES SHALL BE AS DEFINED ICRI 310.2R, AND JUDGED BASED ON COMPARISON TO PROFILE CHIPS SUPPLIED BY ICRI. UNLESS NOTED OTHERWISE, CSP 7, MIN SHALL BE PROVIDED.
 - LIMIT CHIPPING HAMMER SIZE AND IMPACT ANGLE TO MINIMIZE DAMAGE TO SOUND CONCRETE. IMPACT ANGLE SHALL BE NO MORE THAN 60° TO SURFACE.
- REMOVE MICROFRACTURED OR BRUISED CONCRETE BY ABRASIVE BLASTING THE EXPOSED CONCRETE SURFACES WITHIN THE AREA OF THE REMOVAL. BE SURE TO ABRASIVE BLAST THE VERTICAL SAWCUT EDGES AROUND THE PERIMETER.
- PER SSPC SP6, COMMERCIAL BLAST CLEAN THE EXPOSED REINFORCING STEEL BY ABRASIVE BLASTING TO REMOVE ALL RUST SCALE FROM ALL STEEL REINFORCING BARS AND EMBEDDED ITEMS. EXERCISE CARE TO PREPARE UNDERSIDES OF REINFORCING BARS.
 - NOTIFY ENGINEER OF REINFORCING BARS THAT HAVE LESS THAN 1/2 INCH OF CONCRETE COVER.
- CAREFULLY INSPECT THE EXPOSED STEEL REINFORCING BARS FOR LOSS OF SECTION DUE TO CORROSION. THE INSPECTION SHOULD TAKE PLACE AFTER ABRASIVE BLASTING OF THE STEEL REINFORCING. ANY STEEL REINFORCING WITH MORE THAN 10 PERCENT LOSS OF SECTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR POSSIBLE FURTHER REMEDIAL ACTION.
- INSTALL SUPPLEMENTAL MECHANICAL ANCHORS AND/OR REINFORCING BAR AT ANY REPAIR AREA (OR PORTION OF THE REPAIR AREA) IN WHICH THE EXISTING OR NEW REINFORCING IS NOT COMPLETELY ENCAPSULATED WITHIN THE NEW REPAIR MATERIAL, AS FOLLOWS.
 - INSTALL HELICAL ANCHORS PER MANUFACTURER'S INSTRUCTIONS
 - ANCHORS SHALL BE INSTALLED AT THE FOLLOWING MINIMUM FREQUENCIES, WHICHEVER IS GREATER:
 - TWO (2) ANCHORS PER ONE (1) SQUARE FOOT OF REPAIR AREAS, UNIFORMLY SPACED.
 - TWO (2) ANCHORS PER REPAIR AREA, UNIFORMLY SPACED
 - ANCHORS SHALL BE INSTALLED TO MANUFACTURER SPECIFIED MINIMUM EMBEDMENT, OR 1 1/2-INCHES, WHICHEVER IS GREATER.
 - AFTER BEING INSTALLED, THE ANCHORS SHALL BE:
 - BENT INTO AN "L" SHAPE SUCH THAT 1/2 INCH CLEAR IS PROVIDED BETWEEN THE ANCHOR AND THE EXISTING CONCRETE MATERIAL.
 - THE TAIL OF THE "L" SHALL BE A MINIMUM OF 1-INCH LONG.
 - CLEAR COVER FROM THE OUTER EDGE OF THE ANCHOR TO THE FACE OF THE REPAIR SHALL BE 1-INCH MINIMUM.
- CLEAN THE ENTIRE AREA OF THE REPAIR WITH HIGH PRESSURE, OIL FREE, COMPRESSED AIR.
- COAT ALL EXPOSED STEEL REINFORCING WITH TWO COATS OF CORROSION - INHIBITING COATING OR EPOXY. TAKE CARE NOT TO GET ANY OF THE COATING ON THE SURROUNDING CONCRETE SURFACES.
- AS SOON AS THE COATING HAS CURED (AS RECOMMENDED BY MANUFACTURER), FORM AND PLACE THE CONCRETE REPAIR MATERIAL TO RESTORE THE PROFILE OF THE EXISTING SECTION. ENSURE THAT REPAIR AREAS ARE CLEAN AND PROPERLY CONDITIONED PRIOR TO STARTING PLACEMENT. IF SPECIFIED BY THE ENGINEER, BUILD-OUT THE FORM WORK TO ACHIEVE AT LEAST 1 INCH OF COVER OVER THE EXPOSED REINFORCING STEEL.
- PLACE MATERIAL TO ACHIEVE PROPER CONSOLIDATION.
- WET CURE FOR 7 DAYS OR UNTIL MATERIAL HAS ACHIEVED 75 PERCENT OF IT'S REQUIRED 28-DAY COMPRESSIVE STRENGTH; OR LONGER IF SPECIFIED BY MANUFACTURER FOR PROPRIETY MATERIALS.
- PROTECT REPLACEMENT MATERIAL FROM WEATHER AND MAINTAIN ABOVE 55° F FOR A MINIMUM OF 7 DAYS.
- REMOVE THE FORMS AFTER CONCRETE HAS REACHED 75 PERCENT OF REQUIRED STRENGTH. CAREFULLY INSPECT THE REPAIR FOR IMPROPER CONSOLIDATION, CRACKING AROUND THE PERIMETER, OR DEBONDING OF NEW CONCRETE. IF THESE CONDITIONS EXIST, NOTIFY THE ENGINEER FOR POSSIBLE REMEDIAL ACTION OR REPLACEMENT OF THE REPAIR.
- SOUND REPAIR AREAS TO CONFIRM INTEGRITY. DELAMINATED AND/OR DISTRESSED AREAS MUST BE REMOVED AND REPAIRED.
- REMOVE SHORING WHEN CONCRETE HAS REACHED MINIMUM REQUIRED STRENGTH.



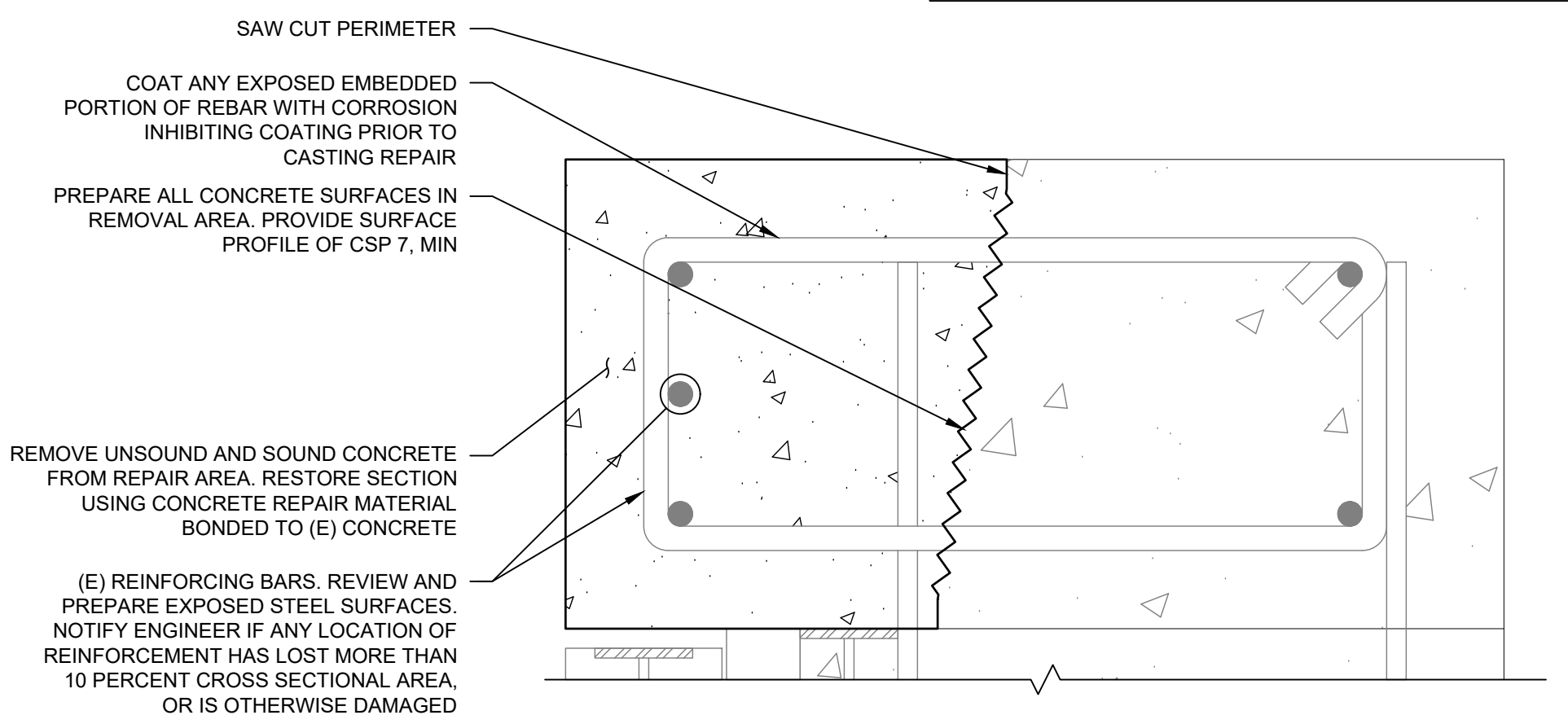
DETAIL NOTES:
1. PREPARE EXISTING CONCRETE AND STEEL SURFACES PER CONCRETE REPAIR NOTES ON THIS SHEET.
2. ENSURE MECHANICAL ANCHORAGE OF THE NEW MATERIAL AT ≥ 75 PERCENT OF REPAIR AREA. IF THIS IS NOT POSSIBLE, SUPPLEMENTAL MECHANICAL ANCHORAGE TO BE INSTALLED PER CONCRETE REPAIR NOTES ON THIS SHEET.

1A Corner Repair (Top) 3-1
SCALE: 6" = 1'-0"



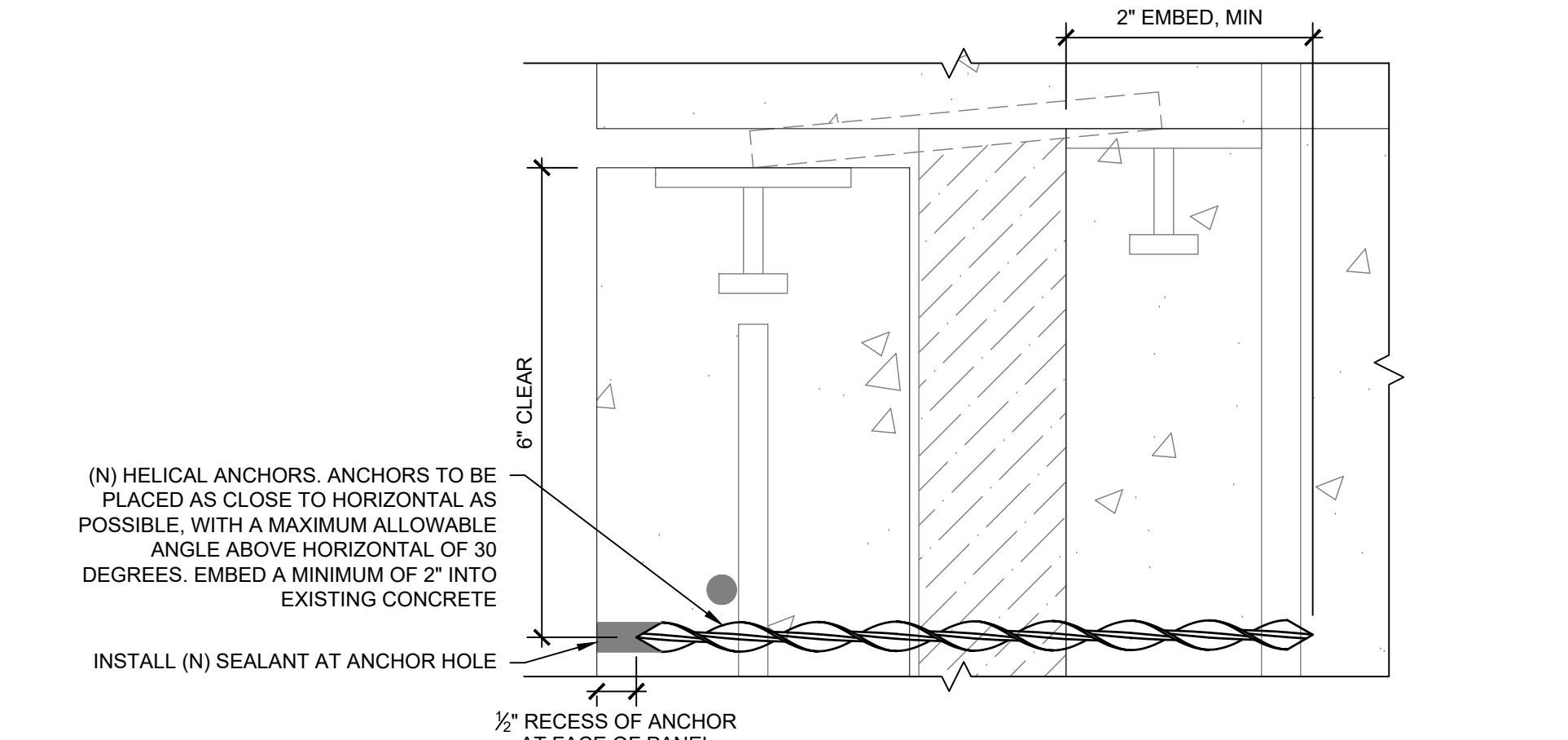
DETAIL NOTES:
1. PREPARE EXISTING CONCRETE AND STEEL SURFACES PER CONCRETE REPAIR NOTES ON THIS SHEET.
2. ENSURE MECHANICAL ANCHORAGE OF THE NEW MATERIAL AT ≥ 75 PERCENT OF REPAIR AREA. IF THIS IS NOT POSSIBLE, SUPPLEMENTAL MECHANICAL ANCHORAGE TO BE INSTALLED PER CONCRETE REPAIR NOTES ON THIS SHEET.

1B Corner Repair (Bottom) 3-1
SCALE: 6" = 1'-0"



DETAIL NOTES:
1. PREPARE EXISTING CONCRETE AND STEEL SURFACES PER CONCRETE REPAIR NOTES ON THIS SHEET.
2. ENSURE MECHANICAL ANCHORAGE OF THE NEW MATERIAL AT ≥ 75 PERCENT OF REPAIR AREA. IF THIS IS NOT POSSIBLE, SUPPLEMENTAL MECHANICAL ANCHORAGE TO BE INSTALLED PER CONCRETE REPAIR NOTES ON THIS SHEET.

2 Top Surface Coping Repair 3-2
SCALE: 3" = 1'-0"



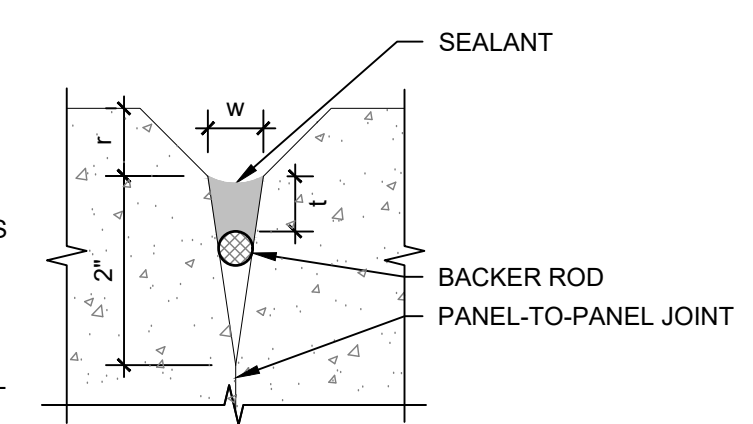
DETAIL NOTES:
1. DIAMETER OF PILOT HOLE TO BE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
2. INSTALL NEW HELICAL ANCHORS IN THREE LOCATIONS:
A. TOP OF PANEL
B. MID-HEIGHT OF PANEL
C. BOTTOM OF PANEL
3. CONTRACTOR TO ENSURE THAT PILOT HOLE, AND INSTALLATION OF NEW ANCHOR, DOES NOT PENETRATE FULL THICKNESS OF 18-INCH STRUCTURAL SUBSTRATE WALL.
4. INSTALL ANCHORS WITH 6" MINIMUM CLEARANCE FROM PANEL PERIMETERS AND EMBED PLATES.
5. INSTALL 5 ANCHORS PER ROW, SPACED EQUIDISTANT (~24" OC HORIZONTALLY).
6. DO NOT INSTALL ANCHORS WITHIN EXISTING FORMBOARD JOINTS.

3 Supplemental Mechanical Anchor Installation 3-3
SCALE: 6" = 1'-0"

DETAIL NOTES:
THESE NOTES SHALL APPLY TO ALL SEALANT JOINT WORK UNLESS NOTED OTHERWISE ON A SPECIFIC DETAIL. THESE NOTES SERVE TO SUPPLEMENT THE SPECIFICATIONS. REFERENCE SPECIFICATION SECTION 07 92 00 FOR ADDITIONAL INFORMATION.

- ABBREVIATIONS: w = JOINT WIDTH, t = SEALANT THICKNESS, r = RECESS OF JOINT.
- REMOVE ALL GROUT, SEALANT, BACKER ROD, BOND BREAKER TAPE, ETC. IN JOINT OR CRACK.
- SLIGHTLY GRIND THE CONCRETE SURFACES WITHIN THE JOINT WITH A GRINDING WHEEL HAVING A PROFILE APPROXIMATELY THE SAME AS THE JOINT.
- PROVIDE PROPER JOINT DEPTH PER DETAILS.
- AFTER GRINDING, CLEAN DEBRIS FROM THE JOINT USING A STIFF BRUSH AND OIL-FREE COMPRESSED AIR. VACUUM THE JOINT AND SURFACES WITHIN 6 INCHES OF JOINT.
- INSTALL PRIMER ON ALL SURFACES. POROUS SURFACES SHALL BE PRIMED REGARDLESS OF MANUFACTURER RECOMMENDATIONS TO EXCLUDE PRIMER.
- INSTALL BACKER ROD OR BOND BREAKER TAPE WHERE INDICATED AND SEALANT PER MANUFACTURER'S WRITTEN RECOMMENDATIONS AND THESE DOCUMENTS.
- CONFIRM REQUIREMENTS OF SEALANT MANUFACTURER PRIOR TO SUBMITTING BID. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN THESE DOCUMENTS AND MANUFACTURER'S TYPICAL DETAILS. WRITTEN RECOMMENDATIONS, OR INSTRUCTIONS. ENGINEER SHALL DETERMINE WHICH APPLY.

KEY:
w = 1/2" ±
t = (1/2)w
r = 1/2" (SEE NOTE 1)



4 Sealant Profiles 3-5
SCALE: NOT TO SCALE

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION A			BRS/CRS	04/07/21
REVISION B			AGL/TMM	04/07/21
REVISION C			SWF/CFL	04/07/21
REVISION D			TMM	04/07/21

