

SHEET INDEX

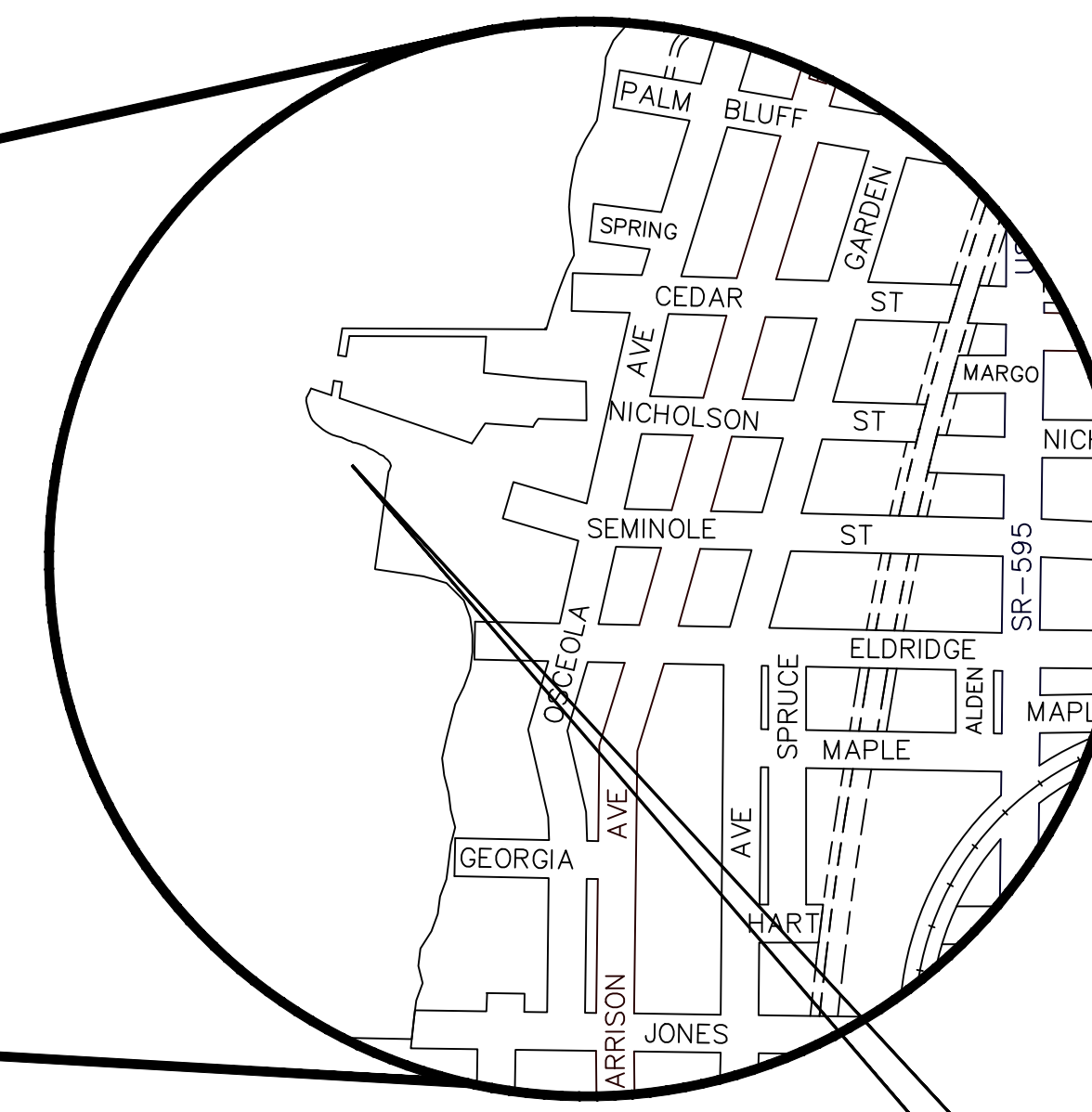
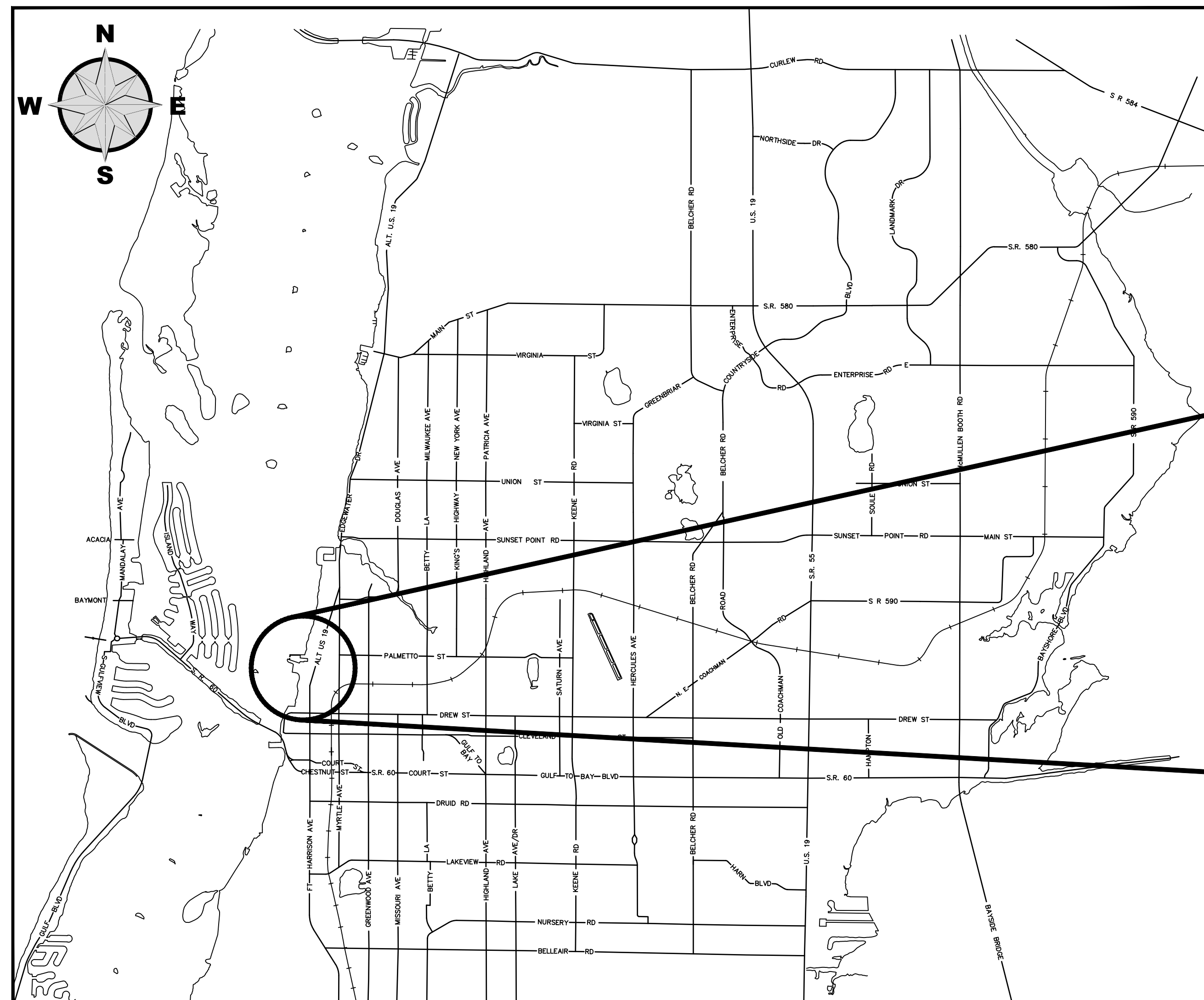
| SHEET # | SHEET DESCRIPTION |
|---------|-------------------------------------|
| S1.1 | GENERAL STRUCTURAL NOTES & SITE MAP |
| S2.1 | REPAIR PLAN |
| S3.1 | CONCRETE REPAIR DETAILS |
| S3.2 | SECTIONS AND DETAILS |



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**SEMINOLE STREET
BOAT RAMP
CLEARWATER, FLORIDA**



Project Location

CITY OFFICIALS

| | |
|--------------------------|----------------------|
| <i>Brian J. Aungst</i> | <i>Mayor</i> |
| <i>Mark Bunker</i> | <i>Councilmember</i> |
| <i>Kathleen Beckman</i> | <i>Councilmember</i> |
| <i>David Allbritton</i> | <i>Councilmember</i> |
| <i>Lina Teixeira</i> | <i>Councilmember</i> |
| <i>Jennifer Poirrier</i> | <i>City Manager</i> |

Tara L. Kivett, P.E.
City Engineer

Approved For
Construction

CITY ENGINEER Tara L. Kivett, P.E. #86611

Date Approved

City Project No. 22-0023-EN
City Plan Set No. TBD

GENERAL STRUCTURAL NOTES

SCOPE OF WORK

1. WORK DETAILED ON THE DRAWINGS AND APPLICABLE ITEMS DESCRIBED IN THE GENERAL STRUCTURAL NOTES.
2. REMOVE AND REPLACE EAST AND WEST WALL CAPS/WALKWAYS. REFER TO 1/S3.2 FOR DETAILS.
3. REMOVE AND REPLACE FOUR (4) SLOPED CONCRETE BOAT LAUNCHING RAMPS IN BETWEEN CONCRETE PIERS. REFER TO 3/S3.2 FOR DETAILS.
4. REMOVE AND REPLACE NORTH PORTIONS OF THREE (3) CONCRETE PIERS. REFER TO 2/S3.2 FOR DETAILS.
5. PERFORM CONCRETE REPAIRS IN SOUTH END OF THREE (3) CONCRETE PIERS. REFER TO S3.1 FOR REPAIR DETAILS.

DRAWINGS AND SPECIFICATIONS

1. DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT GIVEN.
2. ADVISE ENGINEER OF DIMENSIONAL DISCREPANCIES.
3. VERIFY ALL EXISTING FIELD CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
4. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK AT ANY TIME WITHOUT CONTRACT DOCUMENTS OR WHERE REQUIRED, APPROVED SHOP DRAWINGS, PRODUCT DATA OR SAMPLES FOR SUCH PORTION OF THE WORK.

CONSTRUCTION SAFETY

1. THESE DRAWINGS DO NOT INCLUDE PROVISIONS TO SATISFY SAFETY REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING SAFETY DURING CONSTRUCTION AND FOR CONFORMANCE TO ALL APPLICABLE OSHA STANDARDS. JOBSITE VISITS BY ENGINEER SHALL NOT CONSTITUTE APPROVAL, AWARENESS OR LIABILITY FOR ANY HAZARDOUS CONDITIONS.

SHORING AND SUPPORT

1. WHEN REMOVAL OF STRUCTURAL ELEMENTS FOR MODIFICATIONS MAY CAUSE TEMPORARY WEAKNESS, EXCESSIVE DEFLECTIONS OR STRUCTURAL INSTABILITY, SHORING OR OTHER SUITABLE SUPPORTS SHALL BE PROVIDED UNTIL COMPLETION AND ADEQUATE CURING OF MODIFICATIONS.
2. THE CONTRACTOR SHALL SUBMIT CUT SHEETS WITH CERTIFIED CAPACITIES FOR SHORING TO BE USED. SHORING PLANS SHALL BE PREPARED, SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

VALUE ENGINEERING

1. ANY CHANGES TO THE STRUCTURE SHALL HAVE BEEN REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO COMMENCING WORK ON ITEMS AFFECTED.

FIELD MODIFICATIONS

1. ANY CHANGES TO THE STRUCTURE SHALL HAVE BEEN REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO COMMENCING WORK ON ITEMS AFFECTED.
2. ANY CHANGES MADE WITHOUT PRIOR APPROVAL ARE SUBJECT TO REVIEW BY THE ENGINEER. CONTRACTOR SHALL PROVIDE SKETCHES, PHOTOGRAPHS AND WRITTEN DESCRIPTION OF EACH DEVIATION FROM THE PLANS FOR THE ENGINEER'S REVIEW.

BUILDING CODES AND SPECIFICATIONS

1. FLORIDA BUILDING CODE 7TH EDITION (2023).
2. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES ASCE 7-22.
3. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-19.
4. PLANNING AND DESIGN GUIDELINES FOR SMALL CRAFT HARBORS, ASCE MREP NO. 50.
5. UNIFIED FACILITIES CRITERIA (UFC) 4-152 DESIGN: PIERS AND WHARVES.

DESIGN LOADS

1. DEAD LOADS
 - A. TABLE C3-1: MINIMUM DESIGN LOADS, ASCE 7-22
2. LIVE LOADS
 - A. FLOATING DOCK.....25 PSF MINIMUM AND 400 LB CONCENTRATED LOAD APPLIED OVER 1 SQUARE FOOT
 - B. GANGWAY/RAMP.....50 PSF MINIMUM AND 400 LB CONCENTRATED LOAD APPLIED OVER 1 SQUARE FOOT
 - C. FIXED DOCK/PIER.....50 PSF MINIMUM AND 400 LB CONCENTRATED LOAD APPLIED OVER 1 SQUARE FOOT
3. WIND LOAD
 - A. ULTIMATE DESIGN WIND SPEED, VULT.....134 MPH (3 SECOND GUST)
 - B. NOMINAL DESIGN WIND SPEED, VASD.....104 MPH (3 SECOND GUST)
 - C. EXPOSURE CATEGORY.....D
 - D. ASCE 7-22 RISK CATEGORY.....I

PORTLAND CEMENT CONCRETE

1. CONCRETE PROPERTIES
 - A. MINIMUM 28-DAY COMPRESSIVE STRENGTH, $f_c = 4,000$ PSI
 - B. WATER CEMENT RATIO, W/C NOT TO EXCEED 0.50
 - C. 1 1/2" MAX. NOMINAL DIAMETER OF COARSE AGGREGATE
 - D. CEMENT TYPE I OR II
 - E. 3" TO 5" SLUMP
 - F. FLY ASH SHALL NOT EXCEED 20 PERCENT BY WEIGHT OF TOTAL CEMENT, IF USED.
2. CONTRACTOR SHALL STRICTLY ADHERE TO SLUMP LIMITS. SUPERPLASTICIZER MAY BE USED AT THE CONTRACTOR'S OPTION TO INCREASE WORKABILITY.
3. MAXIMUM MIXING TIME (FROM BATCHING TO PLACEMENT)
 - A. AIR TEMPERATURE LESS THAN 85° F: 90 MINUTES
 - B. AIR TEMPERATURE 85° F TO 90° F: 75 MINUTES
 - C. AIR TEMPERATURE OVER 90° F: 60 MINUTES
4. MINIMUM COVER FOR REINFORCEMENT
 - A. 3 INCHES TO UNFORMED SIDES, 2 INCHES TO FORMED SIDES
 - B. OTHER, 2 INCHES TO MAIN REINFORCING, 1 1/2" INCHES TO TIES AND STIRRUPS.
5. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE BY STANDARD ACCESSORIES DURING CONCRETE PLACEMENT.
6. REINFORCEMENT SHALL BE GRADE 60 CONFORMING TO ASTM A615.
7. DETAIL AND FABRICATE REINFORCEMENT IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
8. PROVIDE MINIMUM LAP SPLICES PER ACI 318-11 FOR ALL REINFORCING BARS, UNLESS OTHERWISE NOTED. STAGGER SPLICES IN ADJACENT BARS AT LEAST 24 INCHES, EXCEPT IN BEAMS AND COLUMNS.
9. PROVIDE BENT BARS AT CORNERS AND INTERSECTIONS OF THE SAME NUMBER AND SIZE AS STRAIGHT BARS.



1 SITE MAP
S1.1 NOT TO SCALE

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

billerreinhardt
ENGINEERING GROUP INC.
3434 colwell avenue suite 100, tampa, florida 33614
telephone : 813.908.7203 fax : 813.931.5200
email : info@billerreinhardt.com
State of Florida Certificate of Authorization No. 91149

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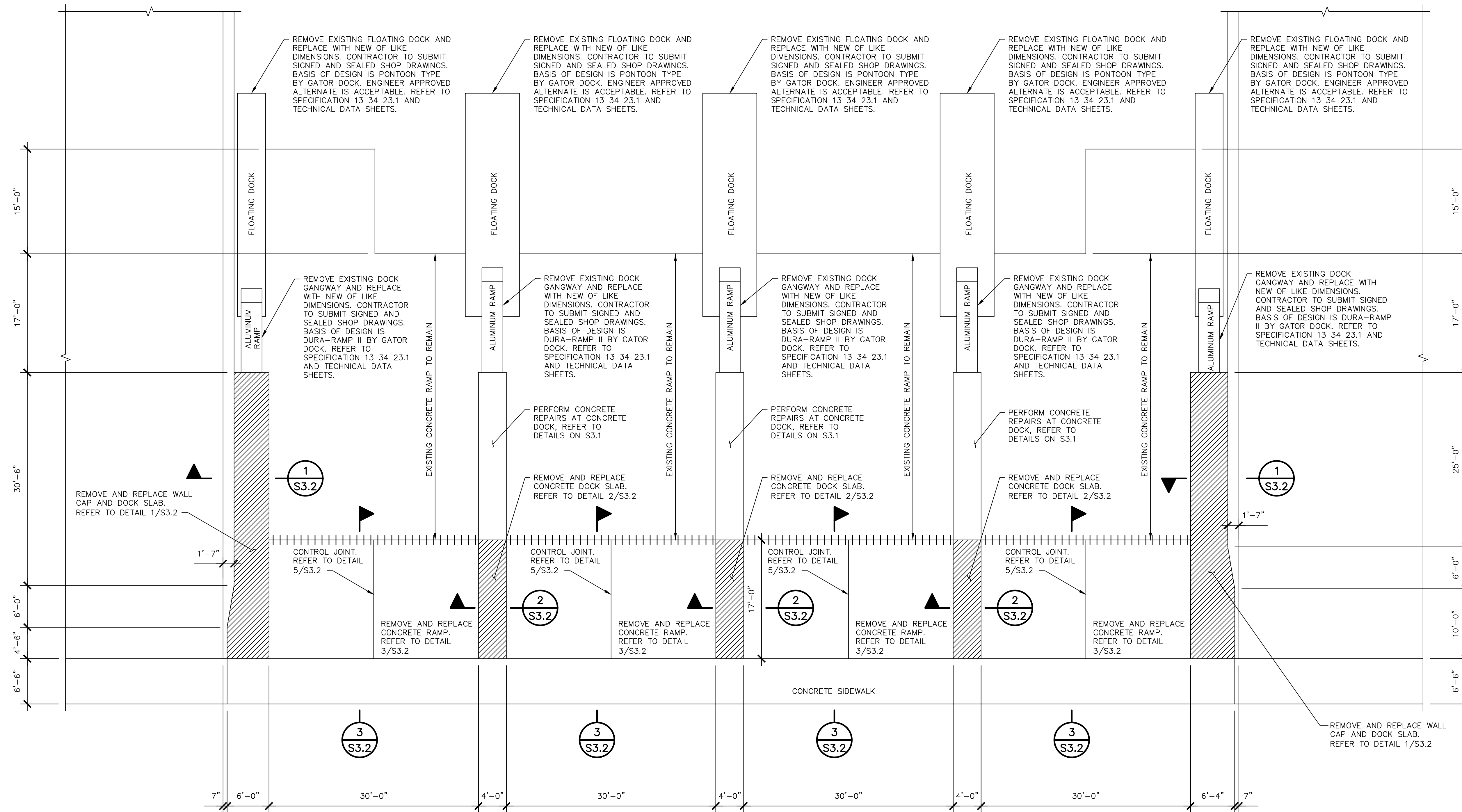
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SEMINOLE STREET BOAT RAMPS
CLEARWATER, FLORIDA
GENERAL STRUCTURAL NOTES AND SITE MAP

| | | | |
|---|-------------------------|---------------------|--------------------------|
| DWG NAME: S1.1 | FIELD BOOK: N/A | SURVEYED BY: N/A | SCALE: VERT: SEE PLAN |
| CONTRACT NO.: 22-0023-EN | DATE DRAWN: 05-23-24 | DRAWN BY: R.M. | HORIZ: SEE PLAN |
| JOB NO.: 22-179 | DESIGNED BY: B.W. | CHECKED BY: B.W. | SHEET NO.: X OF X |
| APPROVED FOR CONSTRUCTION CITY ENGINEER TARA L. RIVETT, P.E. # 86811 | | | |



1 REPAIR PLAN
 S2.1 SCALE: 1/8" = 1'-0"

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billerreinhardt
 ENGINEERING GROUP INC.

3434 Colwell Avenue Suite 100, Tampa, Florida 33614
 Telephone: 813.908.7203 Fax: 813.931.5200
 Email: info@billerreinhardt.com

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 FL P.E. NO. 66538
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 REPAIR PLAN

| | | | |
|---|-------------------------|---------------------|--------------------------|
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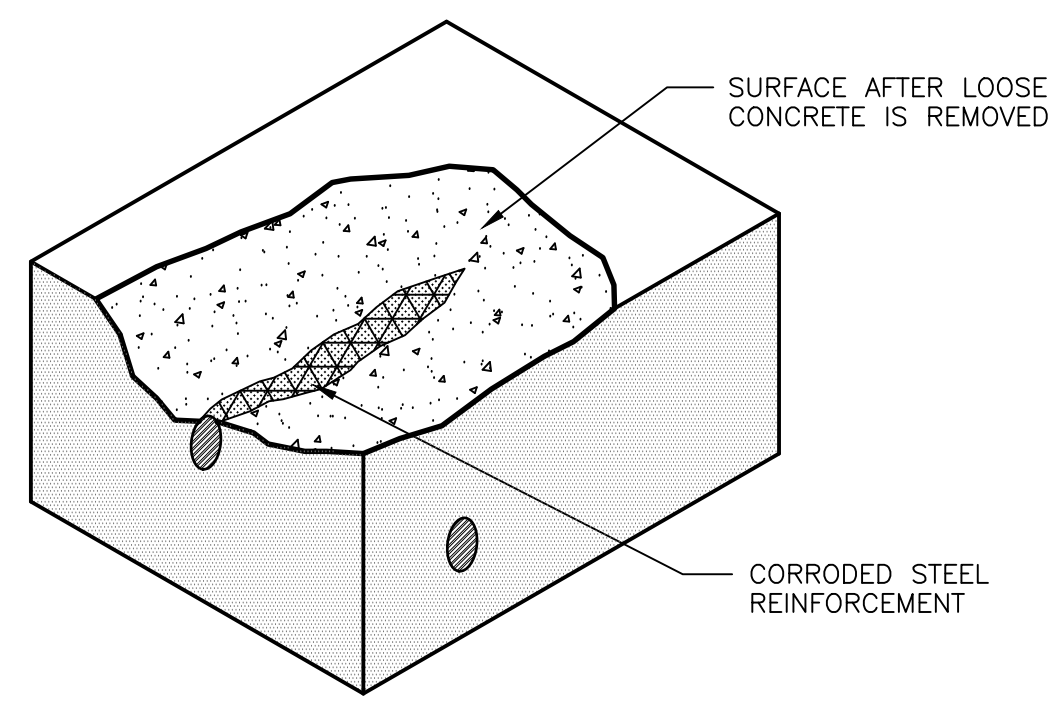


FIGURE 1:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED. REFER TO FIGURES 2 AND 3.

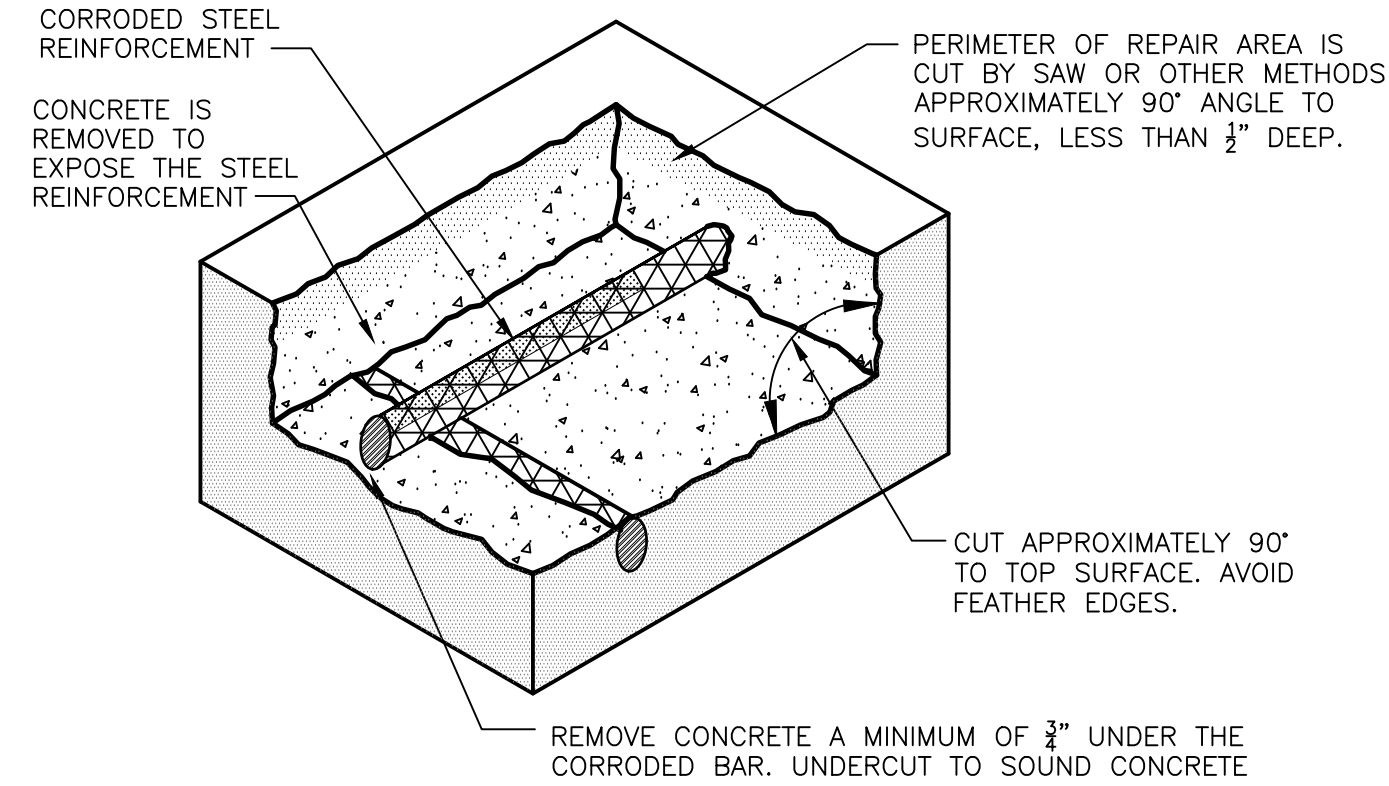


FIGURE 2:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP BARS ONLY. REFER TO FIGURE 4

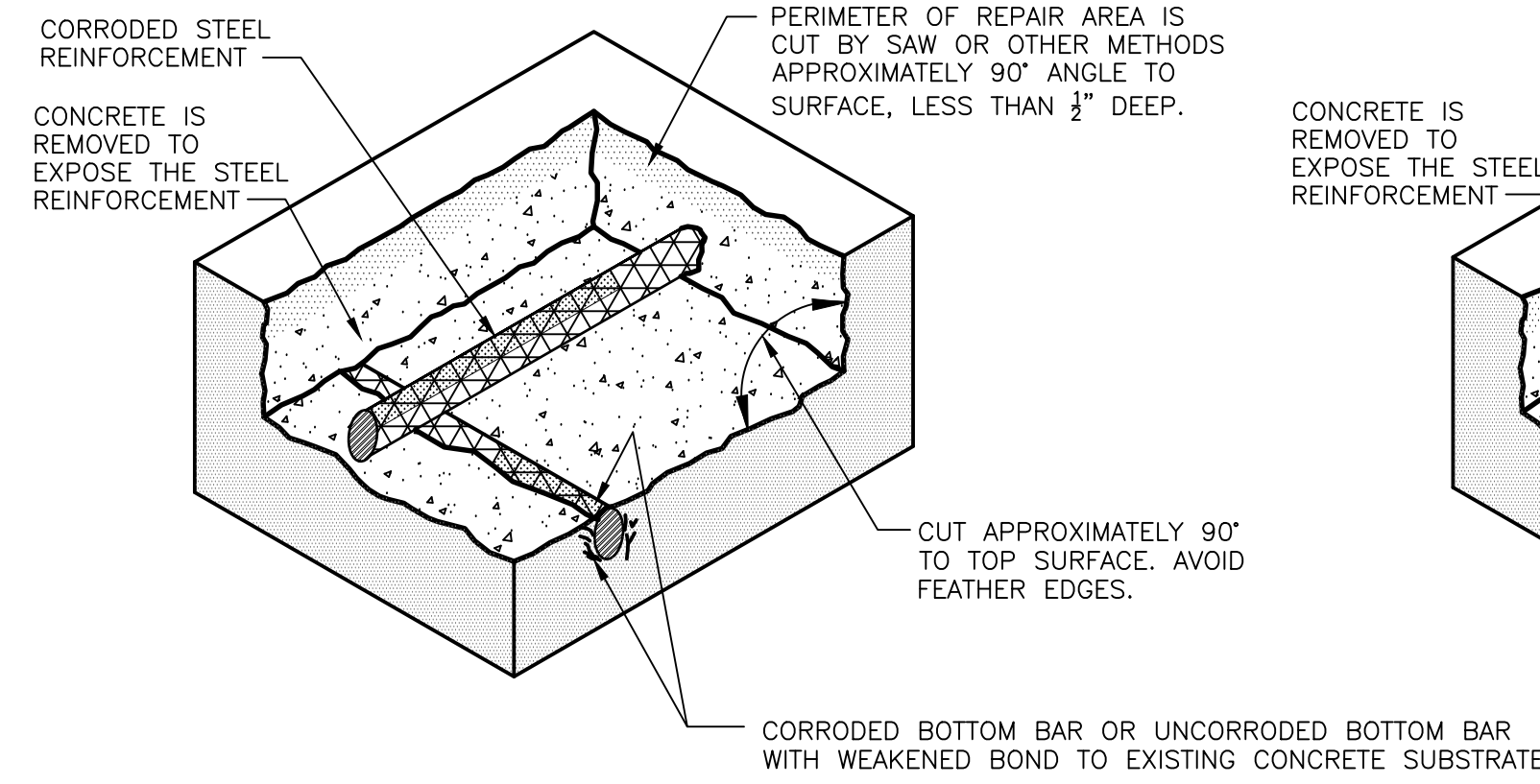


FIGURE 3:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP AND BOTTOM BARS. REFER TO FIGURE 5.

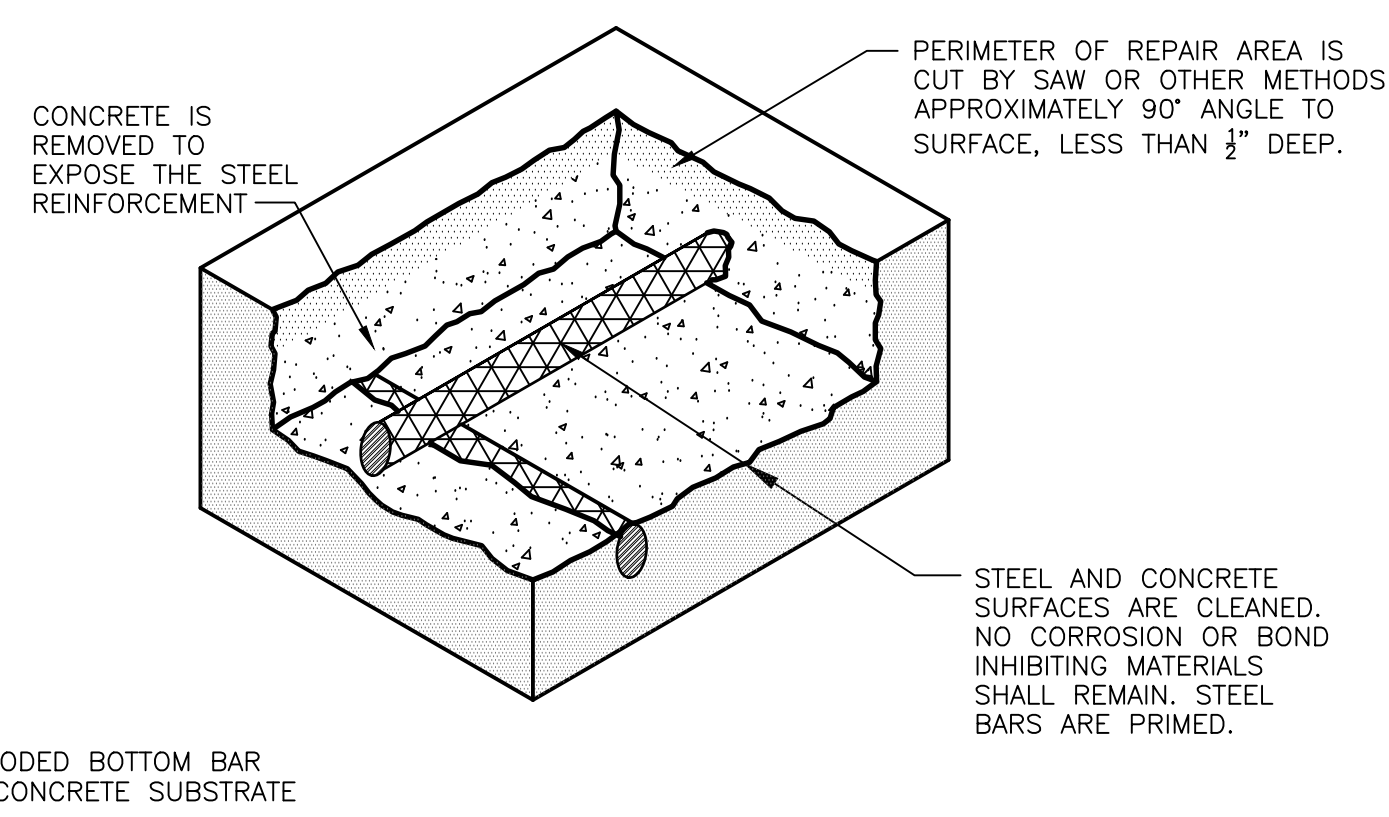


FIGURE 4:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP BARS ONLY.

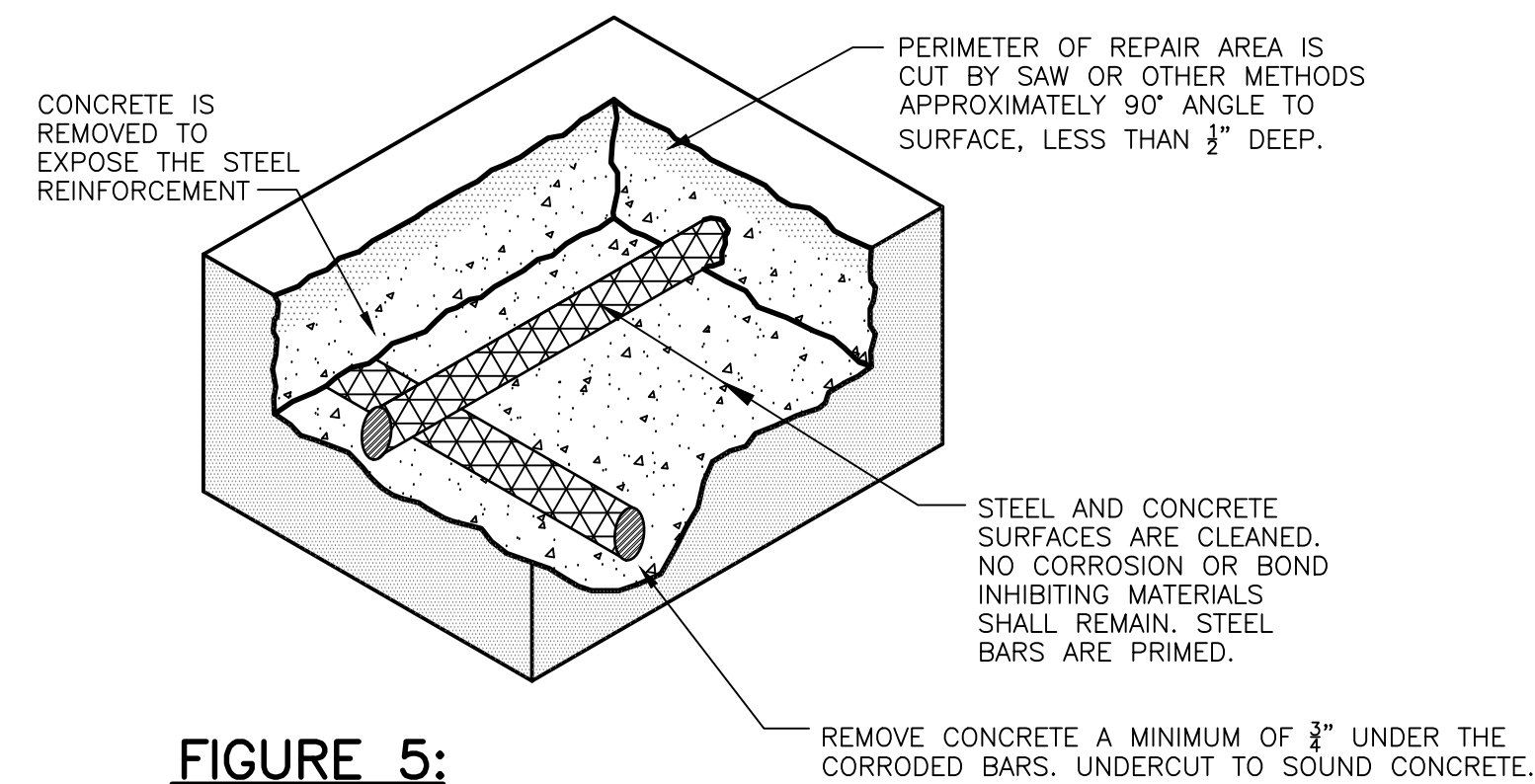
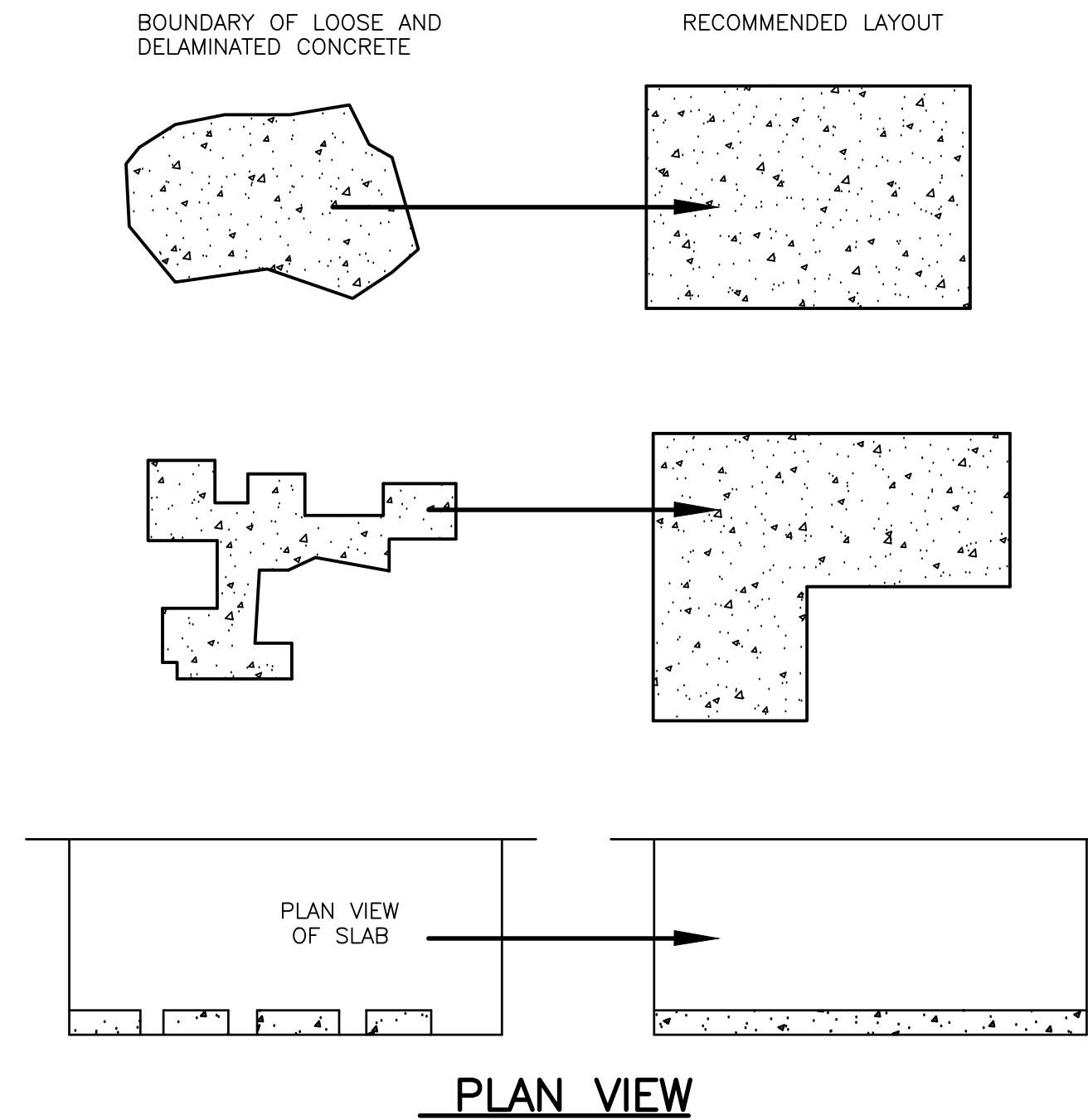


FIGURE 5:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP AND BOTTOM BARS.

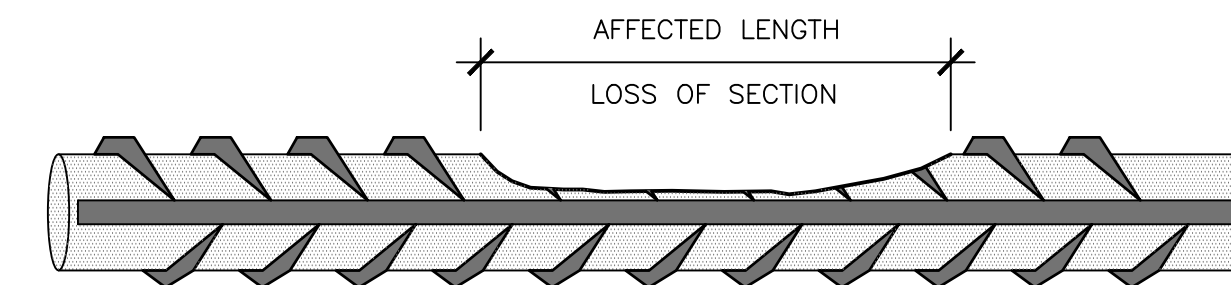
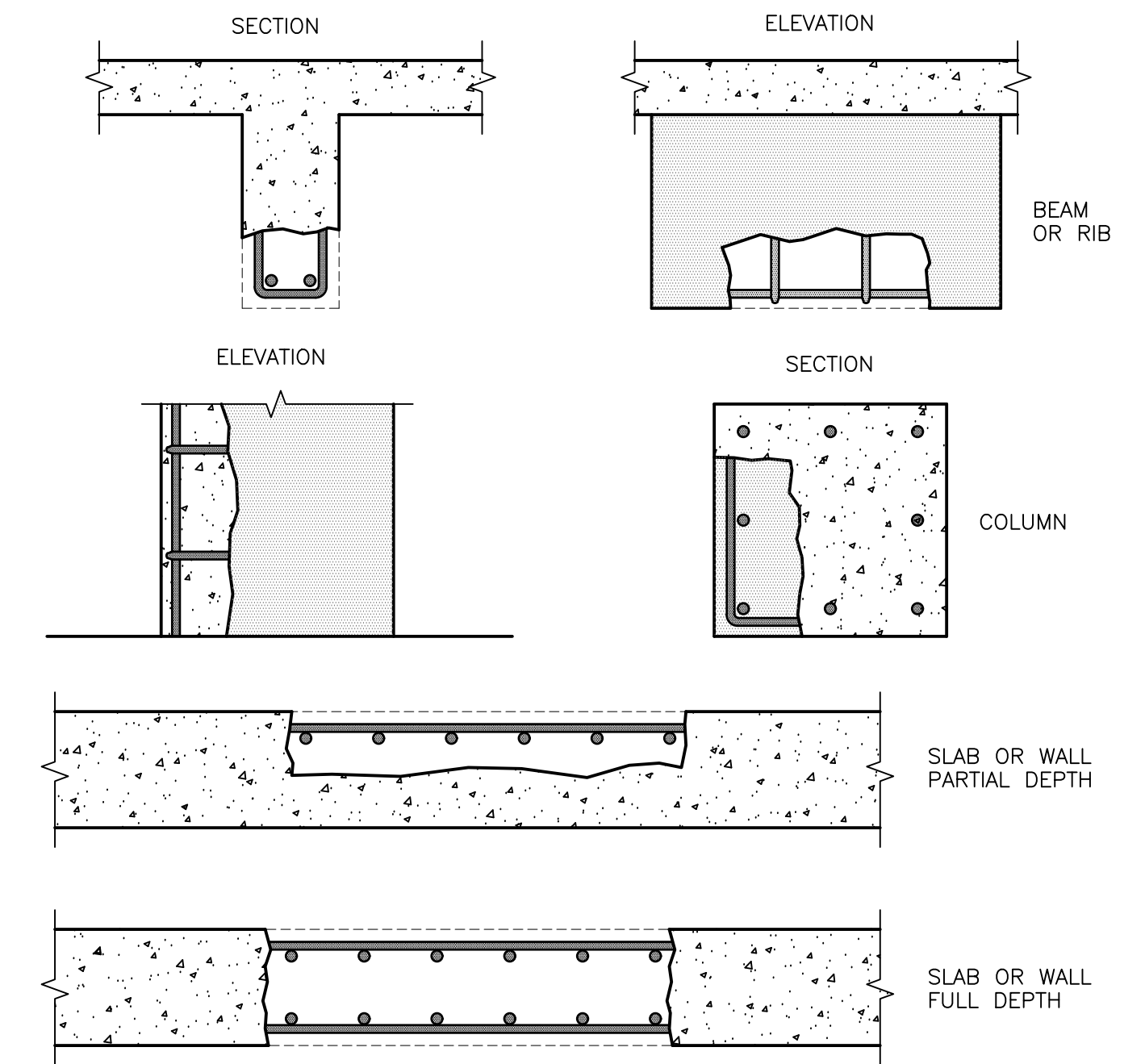
1 SURFACE PREPARATION DETAILS
S3.1 NOT TO SCALE

NOTES FOR FIGURES 1-5:

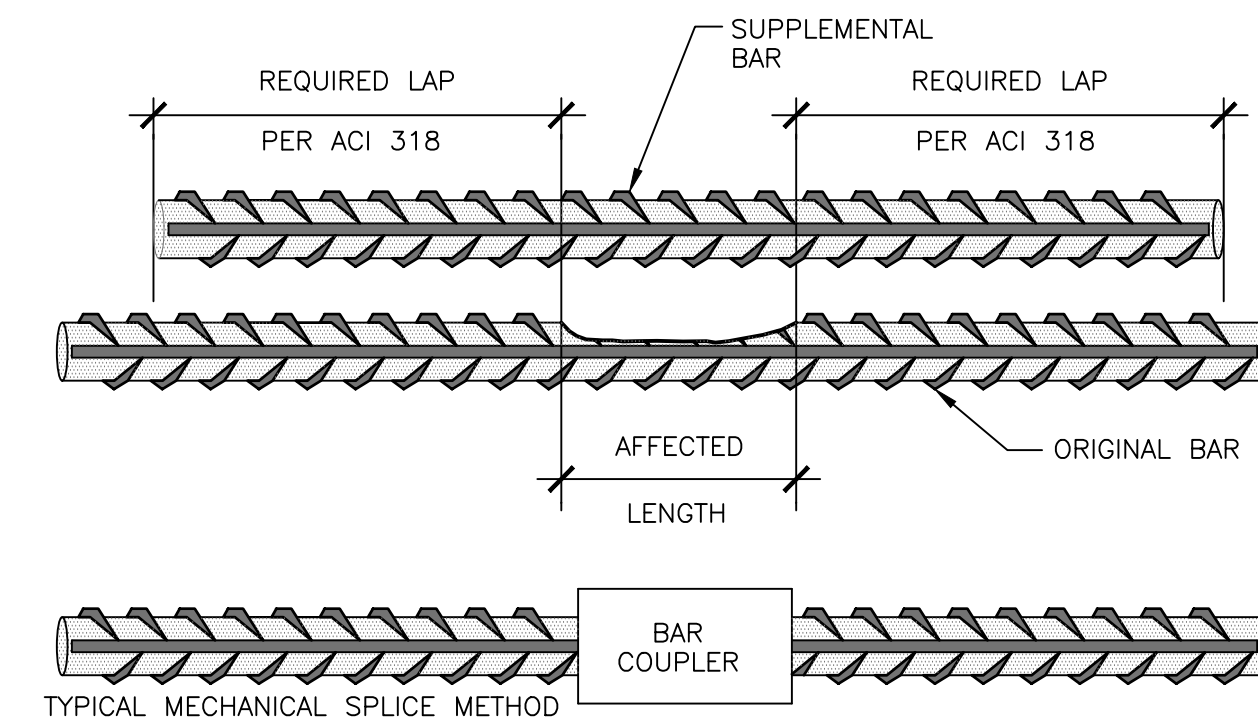
- EXPOSE CORRODED STEEL REINFORCEMENT UNTIL UNOXIDIZED, UNCORRODED STEEL WITH SOUND BOND TO THE EXISTING CONCRETE SUBSTRATE IS ENCOUNTERED.
- CLEARANCE BETWEEN UNDERCUT STEEL REINFORCEMENT AND SOUND CONCRETE SUBSTRATE SHALL BE 3/8" MINIMUM OR 1/4" LARGER THAN THE LARGEST AGGREGATE IN THE CONCRETE REPAIR MORTAR.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING PRIOR TO CONCRETE DEMOLITION.



2 GEOMETRY OF CONCRETE REPAIRS
S3.1 NOT TO SCALE



- IF THE REINFORCING STEEL HAS LOST MORE THAN 25% OF ITS CROSS SECTION (OR 20% IF TWO OR MORE ADJACENT BARS ARE AFFECTED), THEN REINFORCING STEEL REPAIR IS REQUIRED.
- WHEN DAMAGE TO REINFORCING STEEL IS UNCOVERED, CONSULT WITH THE STRUCTURAL ENGINEER.
- IF REPAIRS ARE REQUIRED FOR THE REINFORCING STEEL, ONE OF THE FOLLOWING METHODS SHOULD BE USED:
 - SUPPLEMENTAL BAR OVER AFFECTED LENGTH. NEW BAR MAY BE MECHANICALLY SPLICED TO AFFECTED BAR OR PLACED PARALLEL TO EXISTING BAR.
 - COMPLETE BAR REPLACEMENT.



3 REINFORCING STEEL REPAIR - SECTION LOSS DETAIL
S3.1 NOT TO SCALE

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billerreinhardt
ENGINEERING GROUP INC.
3434 colwell avenue suite 100, tampa, florida 33614
telephone : 813.908.7203 fax : 813.931.5200
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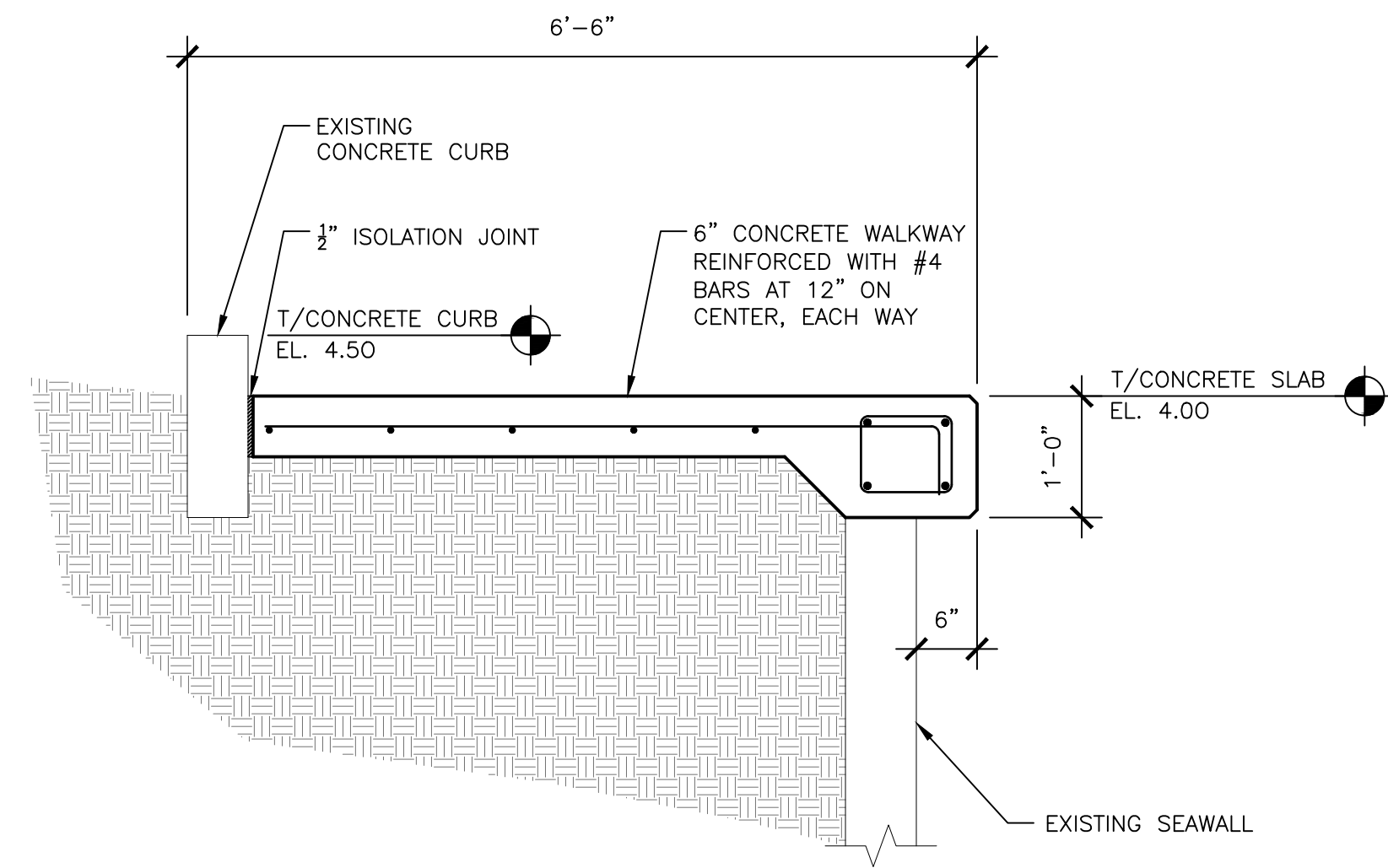
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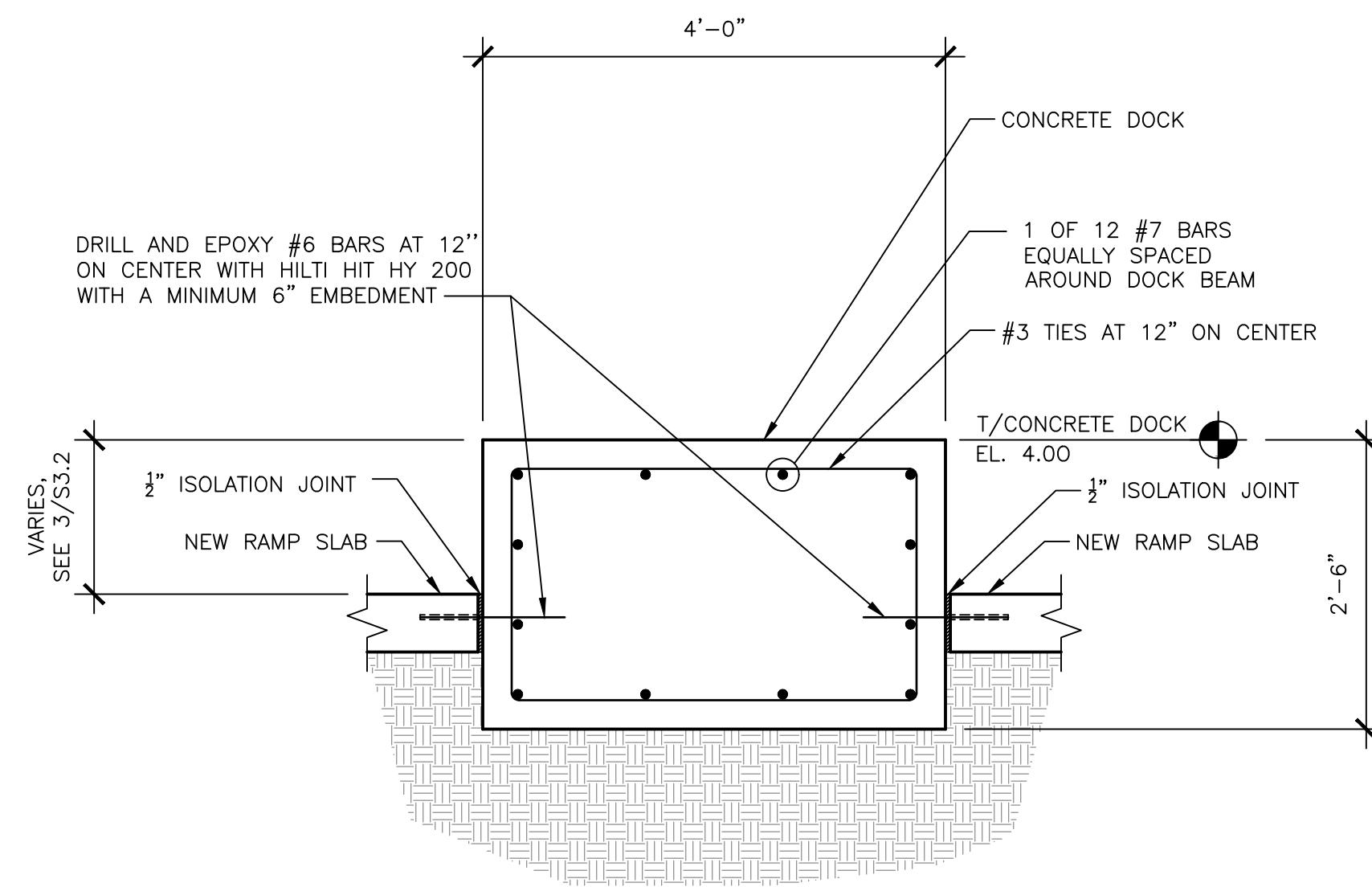
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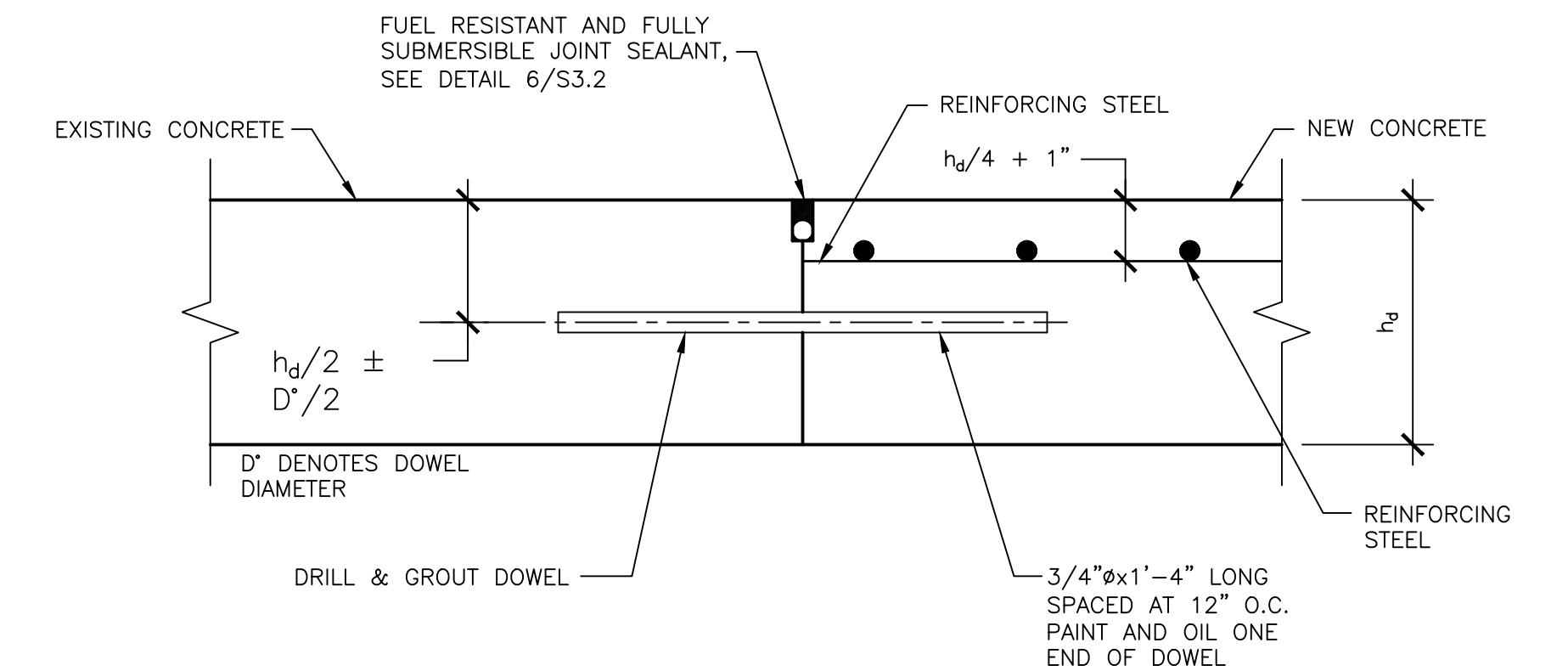
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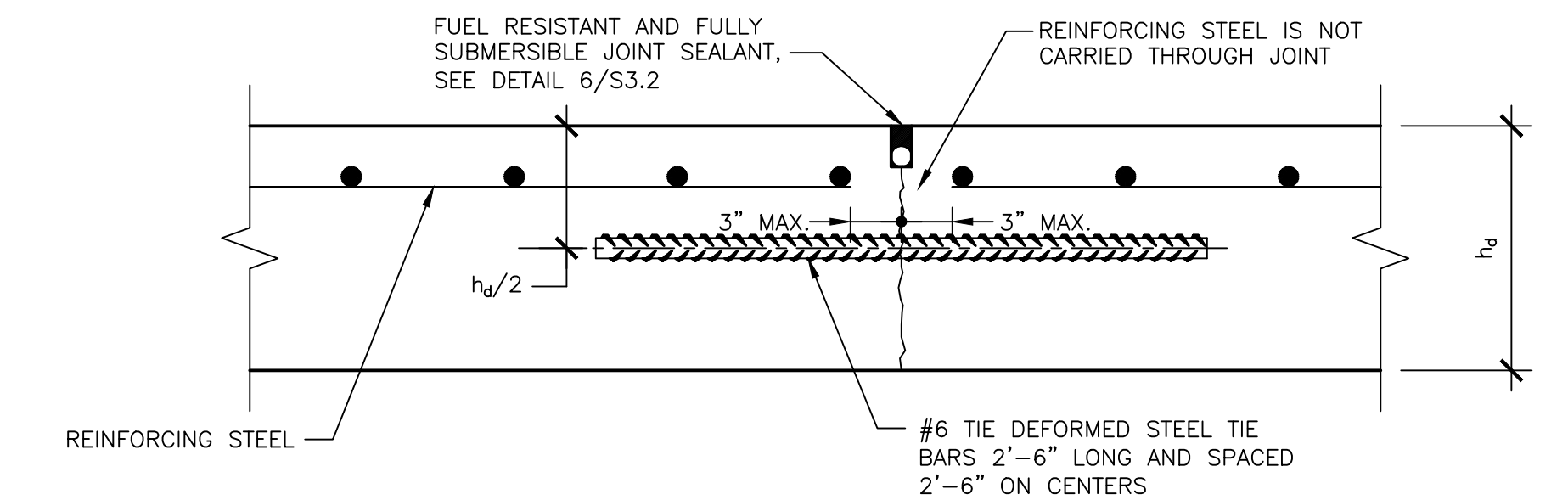
1 SECTION
S3.2 SCALE: 3/4" = 1'-0"



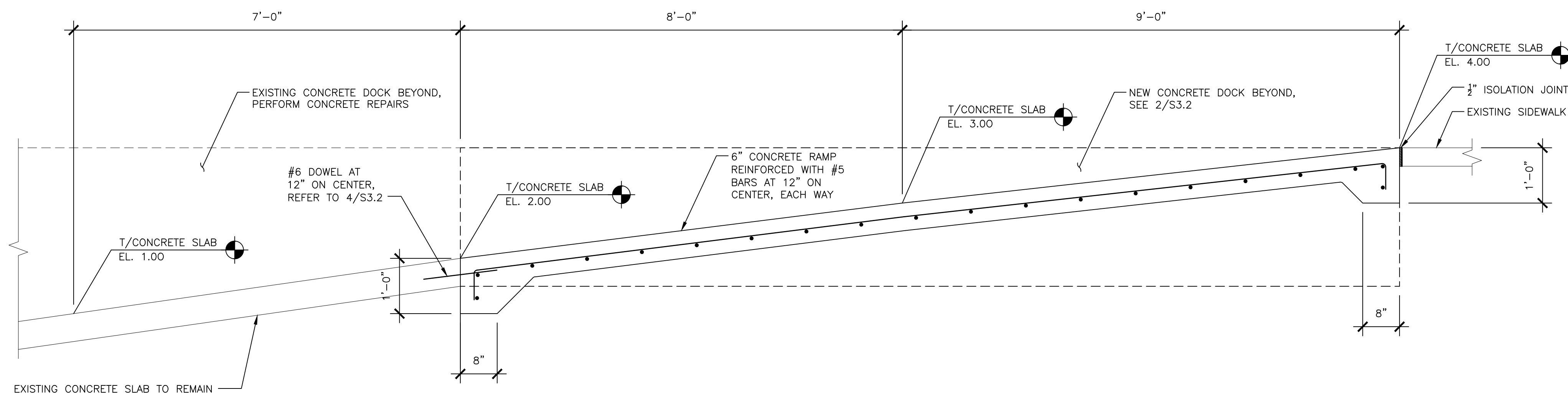
2 SECTION
S3.2 SCALE: 3/4" = 1'-0"



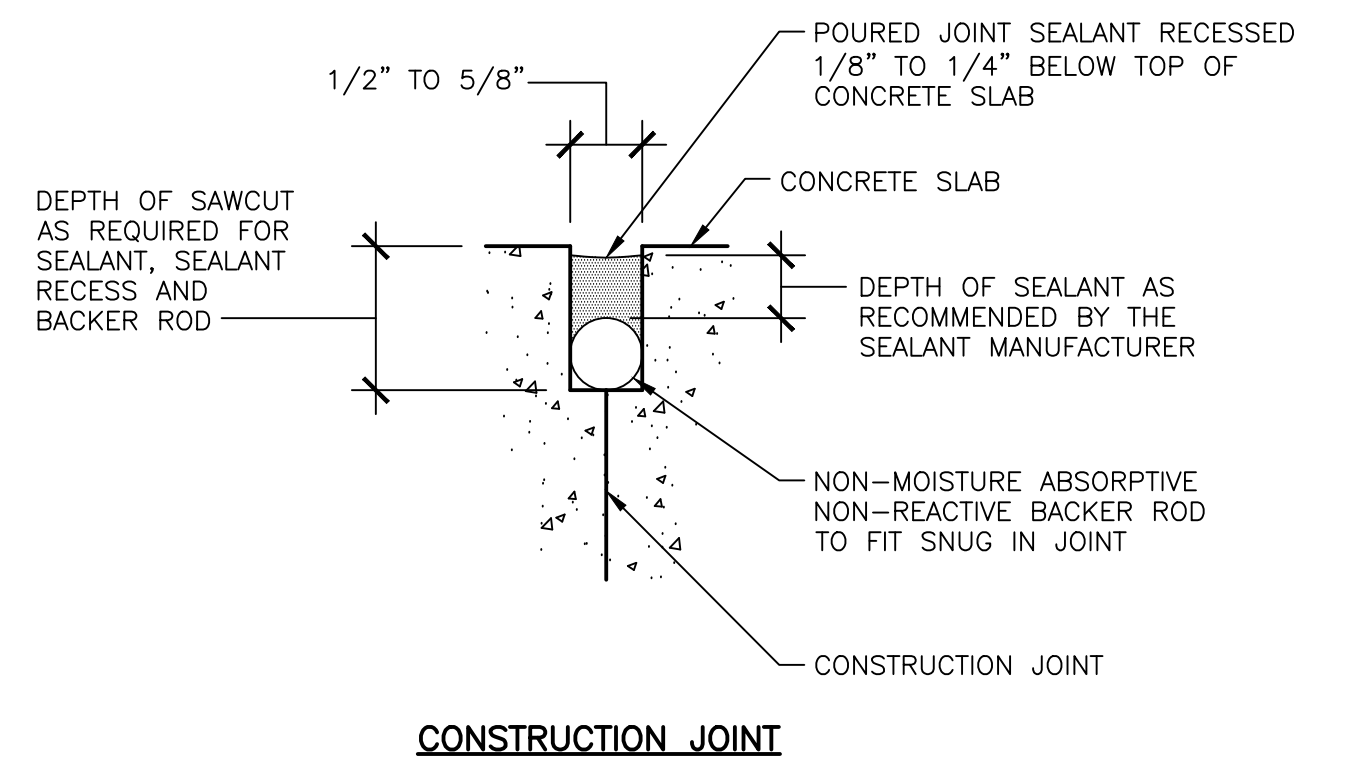
4 SECTION
S3.2 NOT TO SCALE



5 SECTION
S3.2 NOT TO SCALE



3 RAMP SLAB SECTION
S3.2 SCALE: 3/4" = 1'-0"



6 SECTION
S3.2 NOT TO SCALE

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