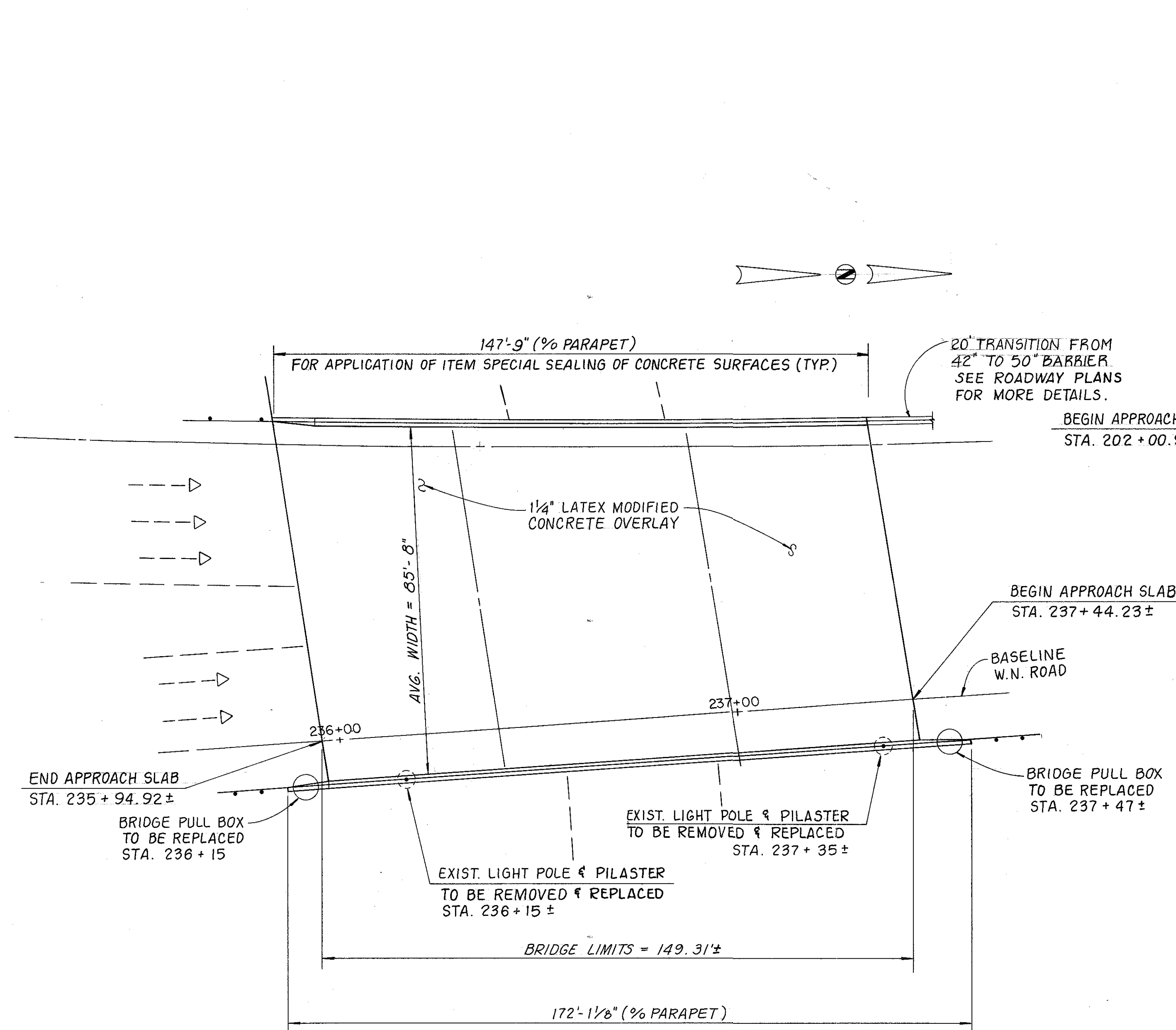
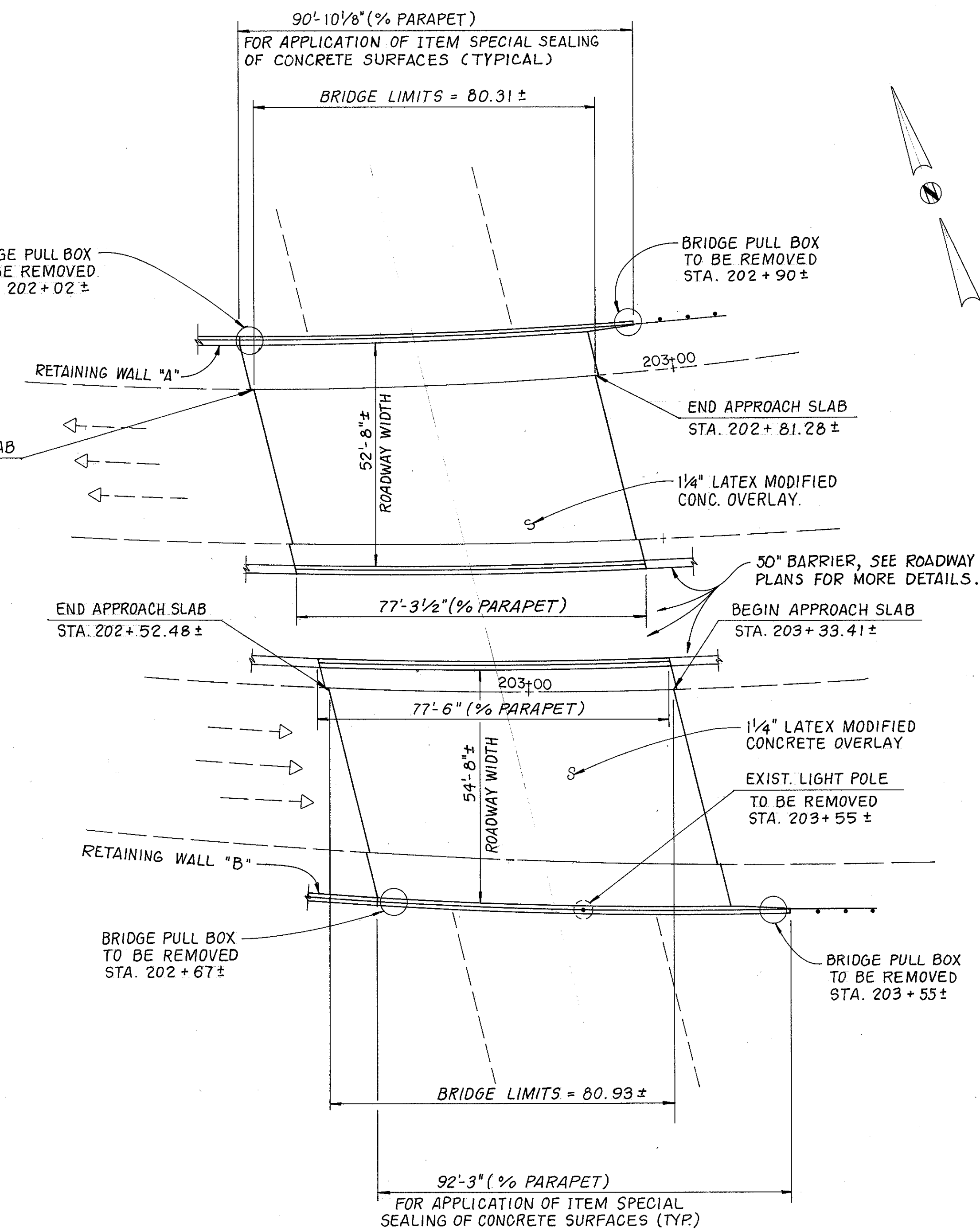


FRA 71-13.21  
 FRA 70-16.83  
 FRA 670-4.40



**TYPICAL PLAN VIEW**  
 FRA 71-1831 R OVER LEONARD AVE.  
 SKEW: VARIES

- WORK TO BE PERFORMED :
- 1 1/4" LMC OVERLAY 10/36
  - NEW PARAPET 16, 17, 20, 21 OF 36
  - BACKWALL REPAIRS 10/36
  - VERTICAL & HORIZONTAL EXPANSION JOINT ADJUSTMENT 18/36
  - PAINTING OF STRUCTURAL STEEL INCLUDING BEARINGS
  - REMOVING & REPLACING EXIST. LIGHT POLES & PILASTERS 25/36

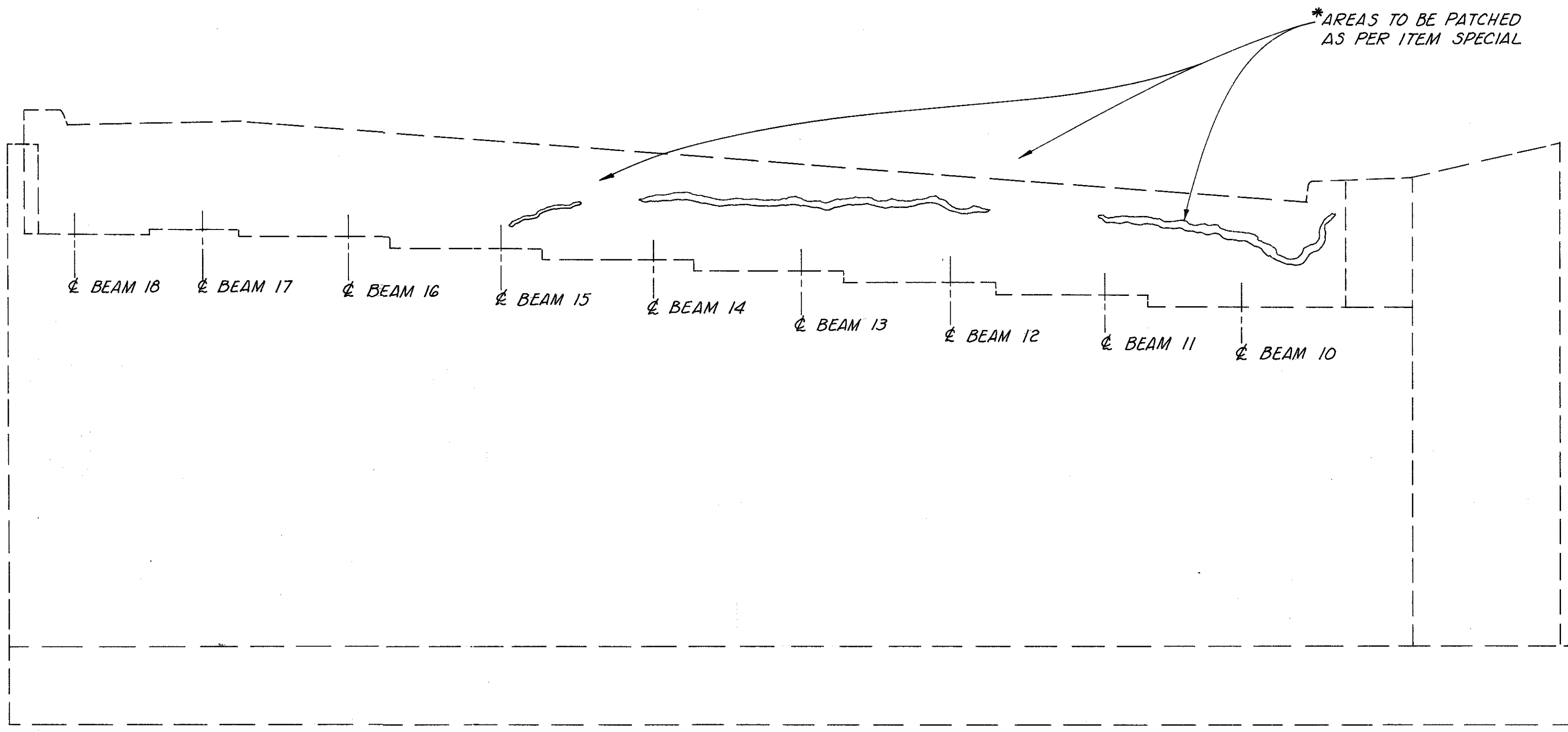


**TYPICAL PLAN VIEW**  
 FRA 670-0460 OVER CLEVELAND AVE.  
 SKEW: VARIES

- WORK TO BE PERFORMED :
- 1 1/4" LMC OVERLAY 10/36
  - NEW PARAPET 16, 17, 26, 27 OF 36
  - BACKWALL REPAIR 11/36
  - VERTICAL & HORIZONTAL EXPANSION JOINT ADJUSTMENT 18/36
  - PAINTING OF STRUCTURAL STEEL INCLUDING BEARINGS

|  |       |        |         |                |         |
|--|-------|--------|---------|----------------|---------|
| R. D. ZANDE & ASSOCIATES, LIMITED      |       |        |         |                | 2/36    |
| CONSULTING ENGINEERS<br>COLUMBUS, OHIO |       |        |         |                |         |
| PLAN VIEW                              |       |        |         |                |         |
| FRA 670-0460 L & R<br>FRA 71-1831 R    |       |        |         |                |         |
| DESIGNED                               | DRAWN | TRACED | CHECKED | REVIEWED DATE  | REVISED |
| P.M.                                   | P.M.  |        | O.H.K.  | G.J.T. 4-21-88 |         |

FRA-71-13.21  
 FRA-70-16.83  
 FRA-670-4.40

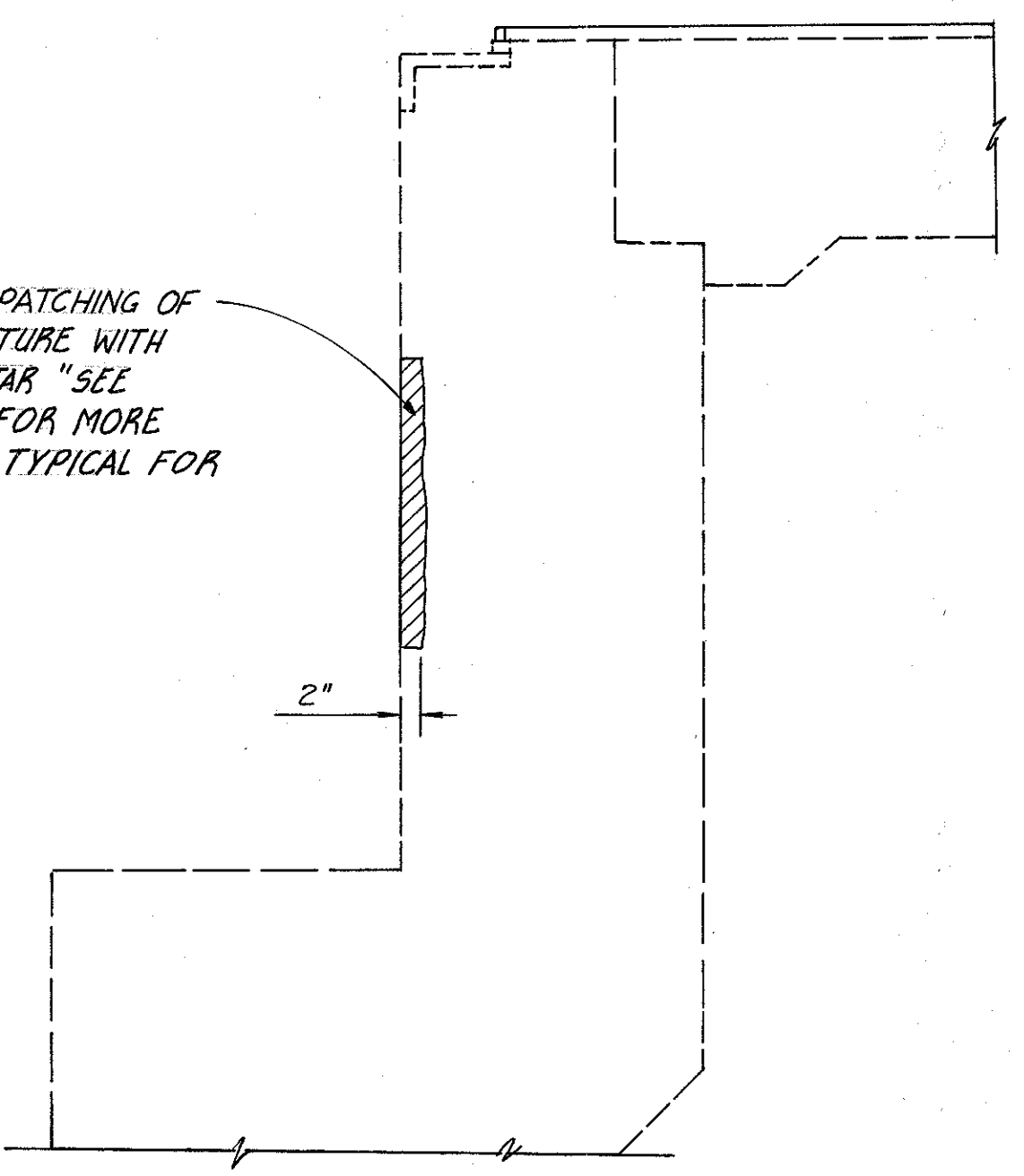


FRA-670-0460 L: AN ADDITIONAL 26 L.F. OF ITEM SPECIAL "EPOXY INJECTION" WAS ADDED TO THE ESTIMATED QUANTITIES FOR VERTICAL CRACKS NOTED IN THE BREAST WALL OF THE EAST AND WEST ABUTMENTS.

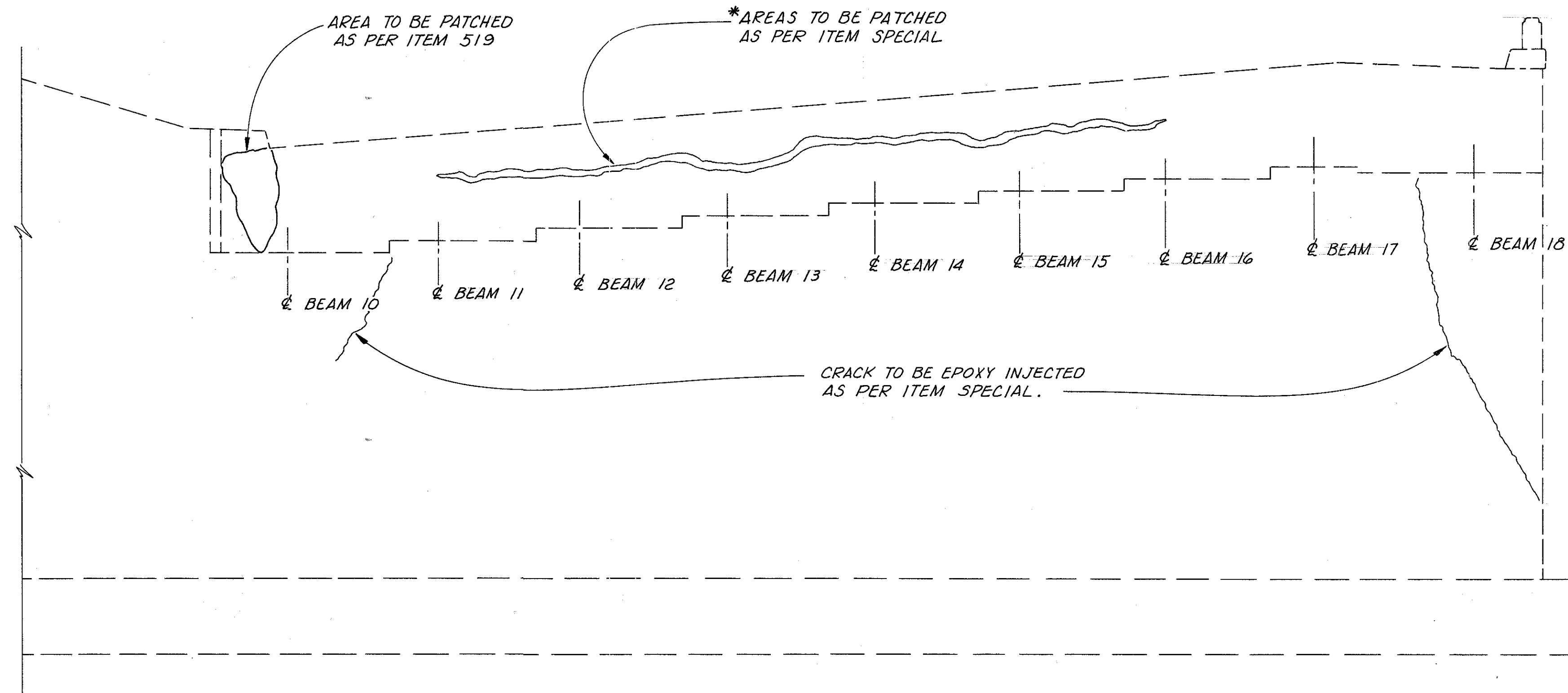
**WEST ABUTMENT**

FRA-670-0460 R  
 \* SEE TYPICAL SECTION THIS SHEET.

ITEM SPECIAL: PATCHING OF CONCRETE STRUCTURE WITH TROWELABLE MORTAR "SEE GENERAL NOTES FOR MORE INFORMATION" (TYPICAL FOR ALL BRIDGES)



**TYPICAL SECTION**



NOTE: ITEM SPECIAL PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR IS FOR AREAS 2" DEEP OR LESS

LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

**EAST ABUTMENT**

FRA-670-0460 R

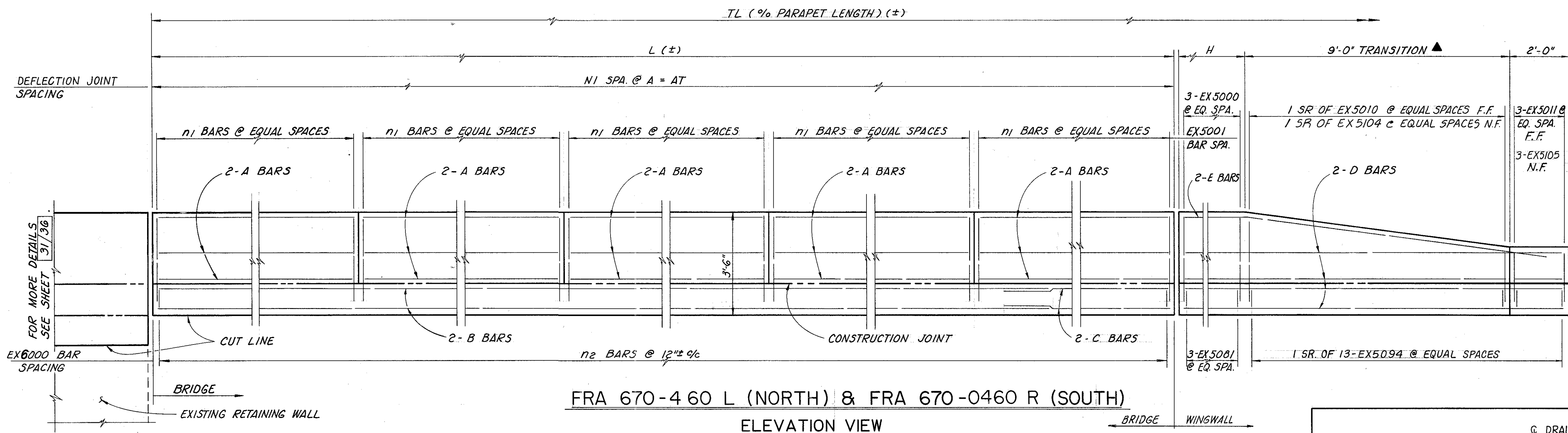
R. D. ZANDE & ASSOCIATES, LIMITED 11/36  
 CONSULTING ENGINEERS  
 COLUMBUS, OHIO

BACKWALL REPAIRS  
 FRA-670-0460 R & L  
 OVER CLEVELAND AVE.

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE | REVISED |
|----------|-------|--------|---------|---------------|---------|
| T.A.A.   | L.M.  |        | O.H.K.  | 04/18/88      |         |

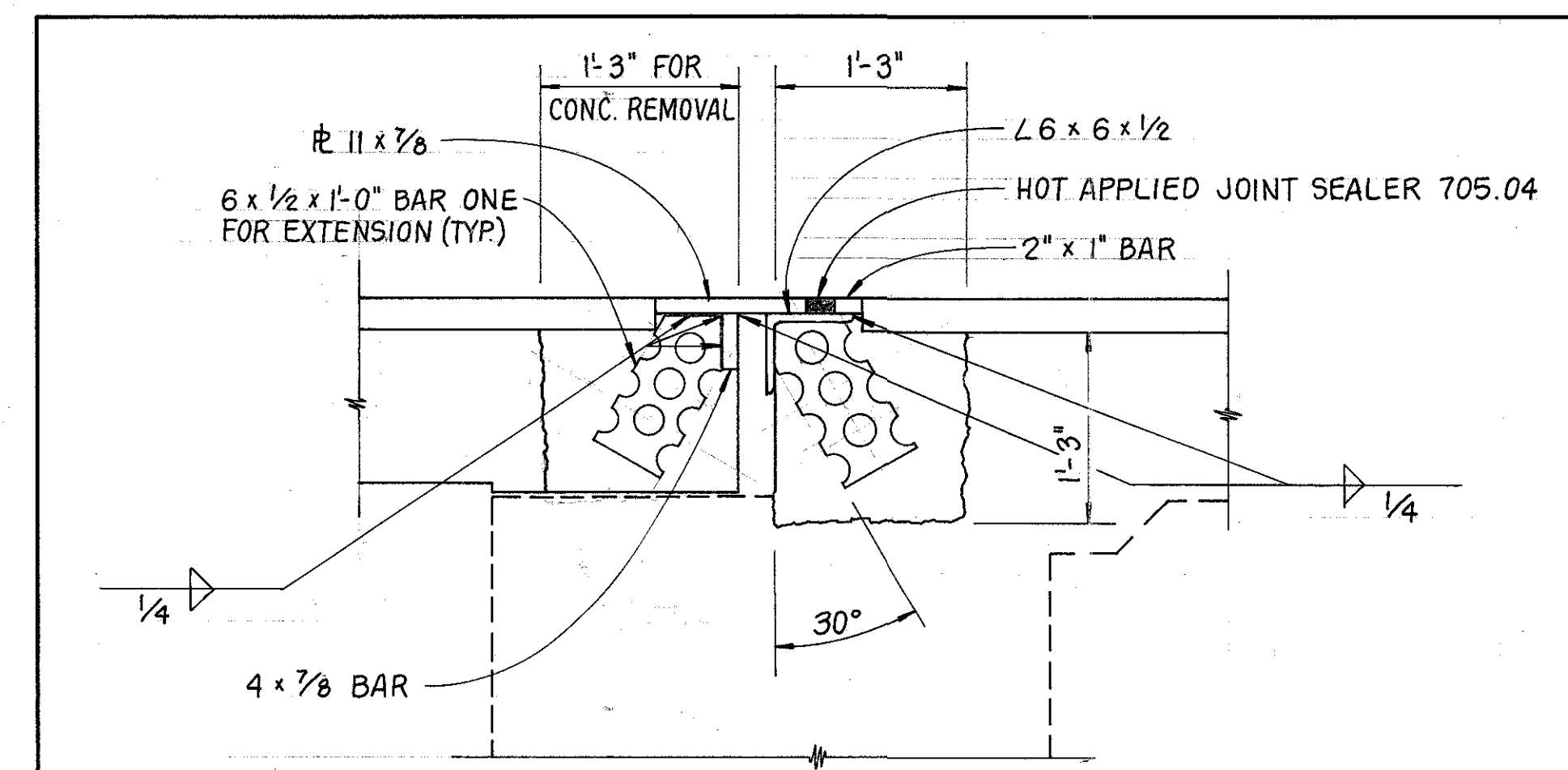
FRA 71-13.21  
FRA 70-16.83  
FRA 670-4.40

| VARIABLE<br>BRIDGE No. | No. of<br>PARA-<br>PET<br>RUNS | L          | TL          | NI | A          | AT         | H     | I | n <sub>1</sub> | n <sub>2</sub> | A-BAR  | B-BAR  | C-BAR  | D-BAR  | E-BAR  |
|------------------------|--------------------------------|------------|-------------|----|------------|------------|-------|---|----------------|----------------|--------|--------|--------|--------|--------|
| FRA-670-0460 L (NORTH) | 1                              | 77'-4 1/8" | 90'-10 1/8" | 5  | 15'-5 5/8" | 77'-4 1/8" | 2'-6" | - | 16             | 78             | EX5049 | EX5004 | EX5050 | EX5052 | EX5053 |
| FRA-670-0460 L (SOUTH) | 1                              | 77'-3 1/2" | 77'-3 1/2"  | 5  | 15'-5 1/2" | 77'-3 1/2" | -     | - | 16             | 78             | EX5049 | EX5004 | EX5050 | -      | -      |
| FRA-670-0460 R (NORTH) | 1                              | 77'-6"     | 77'-6"      | 5  | 15'-6"     | 77'-6"     | -     | - | 16             | 78             | EX5049 | EX5004 | EX5050 | -      | -      |
| FRA-670-0460 R (SOUTH) | 1                              | 78'-9"     | 92'-3"      | 5  | 15'-9"     | 78'-9"     | 2'-6" | - | 16             | 79             | EX5045 | EX5004 | EX5051 | EX5052 | EX5053 |

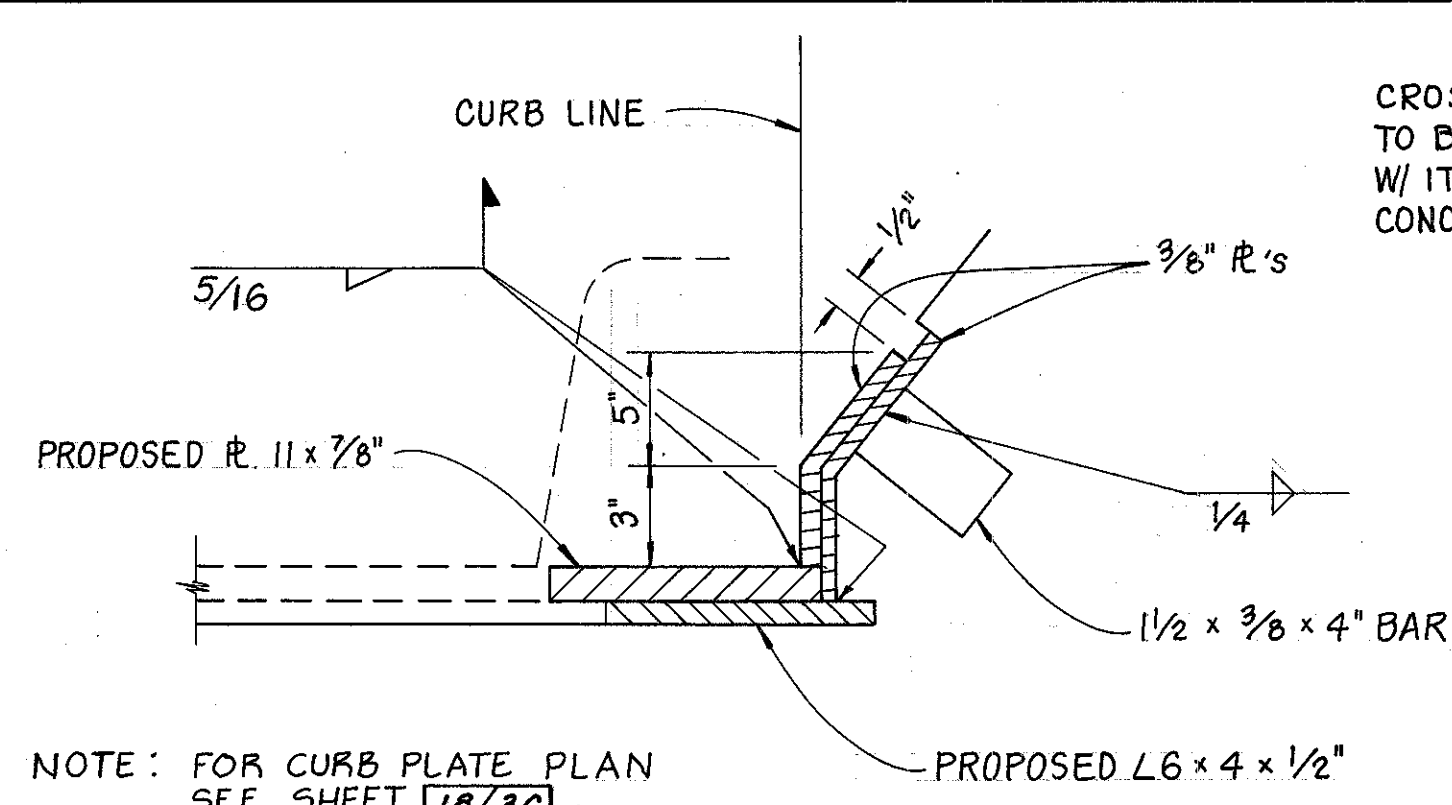


▲ FOR ADDITIONAL TRANSITION DETAILS SEE SHEET 16/36.  
FOR MORE DETAILS, SEE TYPICAL SECTION ①, SHEET 16/36 AND TYPICAL SECTION ③, SHEET 17/36.

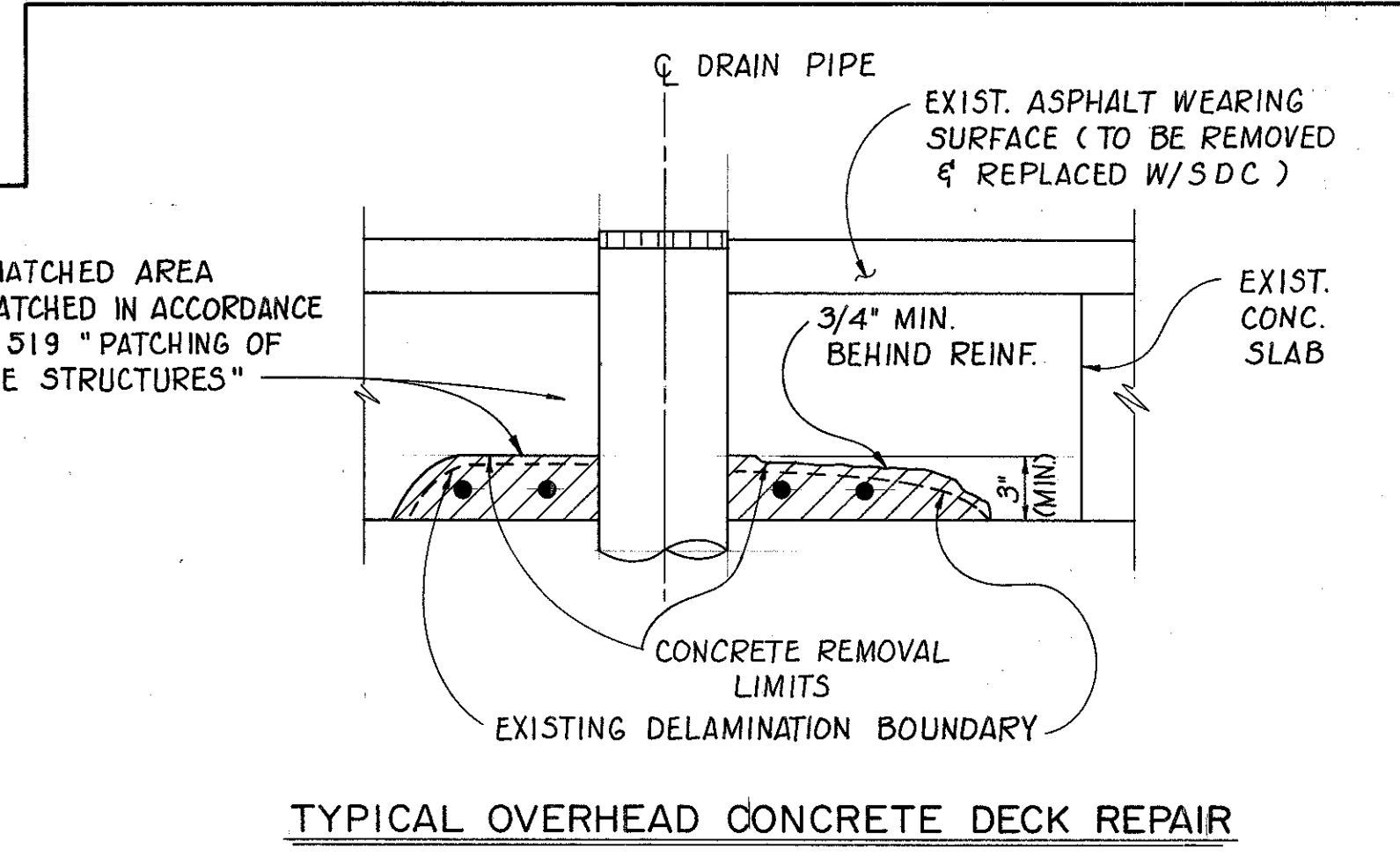
MINIMUM REBAR LAP=1'-8"



PROPOSED END DAM EXTENSION  
INCLUDE CONC. REMOVAL WITH ITEM 516 FOR PAYMENT.



PROPOSED CURB PLATE  
FOR MORE INFORMATION, SEE STD. DWG. SD-1-69



TYPICAL OVERHEAD CONCRETE DECK REPAIR

BROAD STREET ON RAMP DETAILS  
FRA 70A-0530

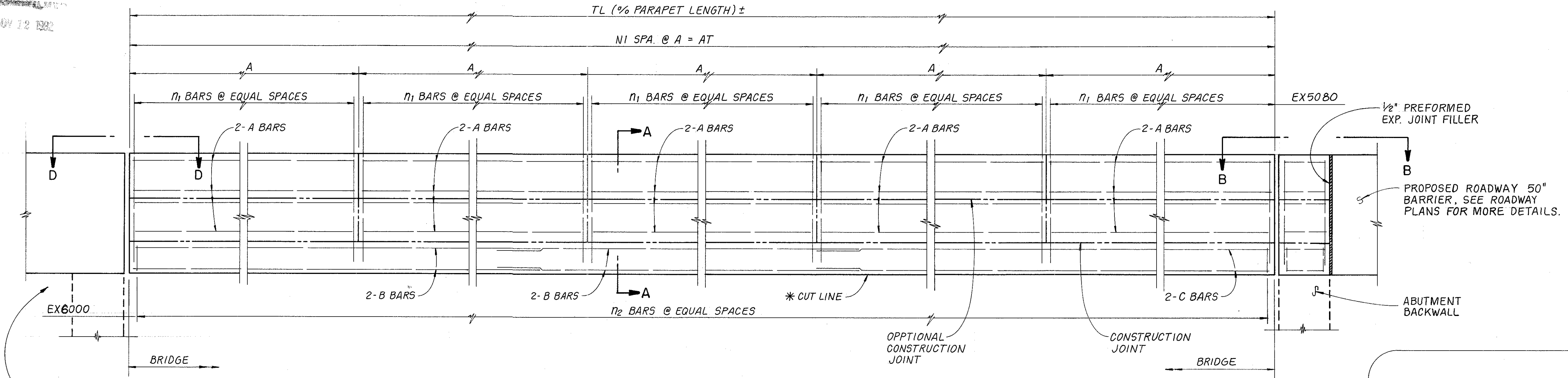
R. D. ZANDE & ASSOCIATES, LIMITED 26/36  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

BRIDGE RAILING DETAILS  
AND MISCELLANEOUS DETAILS  
FRA 670-0460 L & R  
FRA 70A-0530

| DESIGNED | DRAWN | TRACED | CHECKED        | REVIEWED DATE  | REVISED |
|----------|-------|--------|----------------|----------------|---------|
| T.A.A.   | P.M.  | P.M.   | O.H.K.<br>L.C. | G.J.T. 4-21-88 |         |

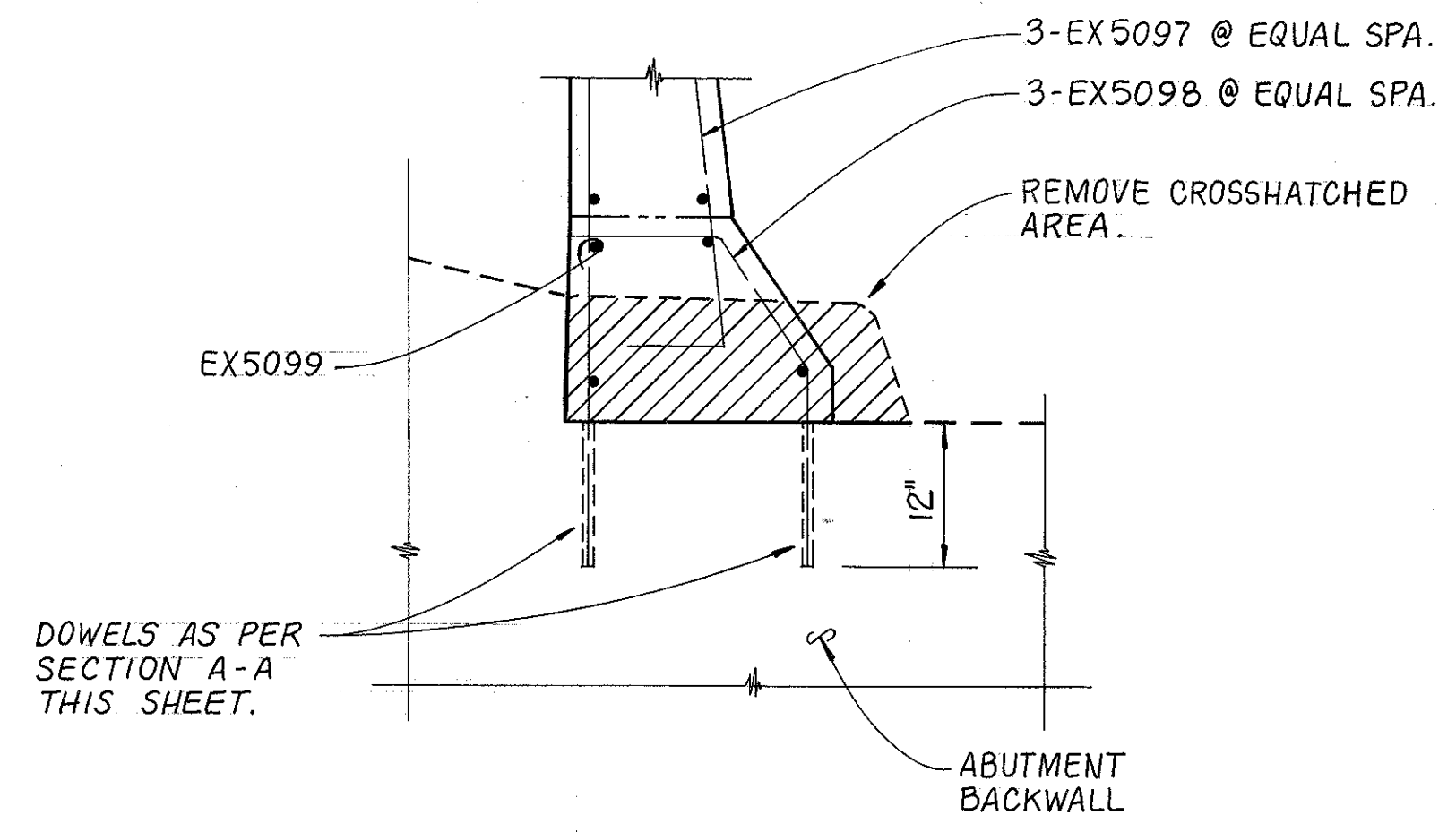
NOV 12 1982

FRA 71-13.21  
FRA 70-16.83  
FRA 670-4.40

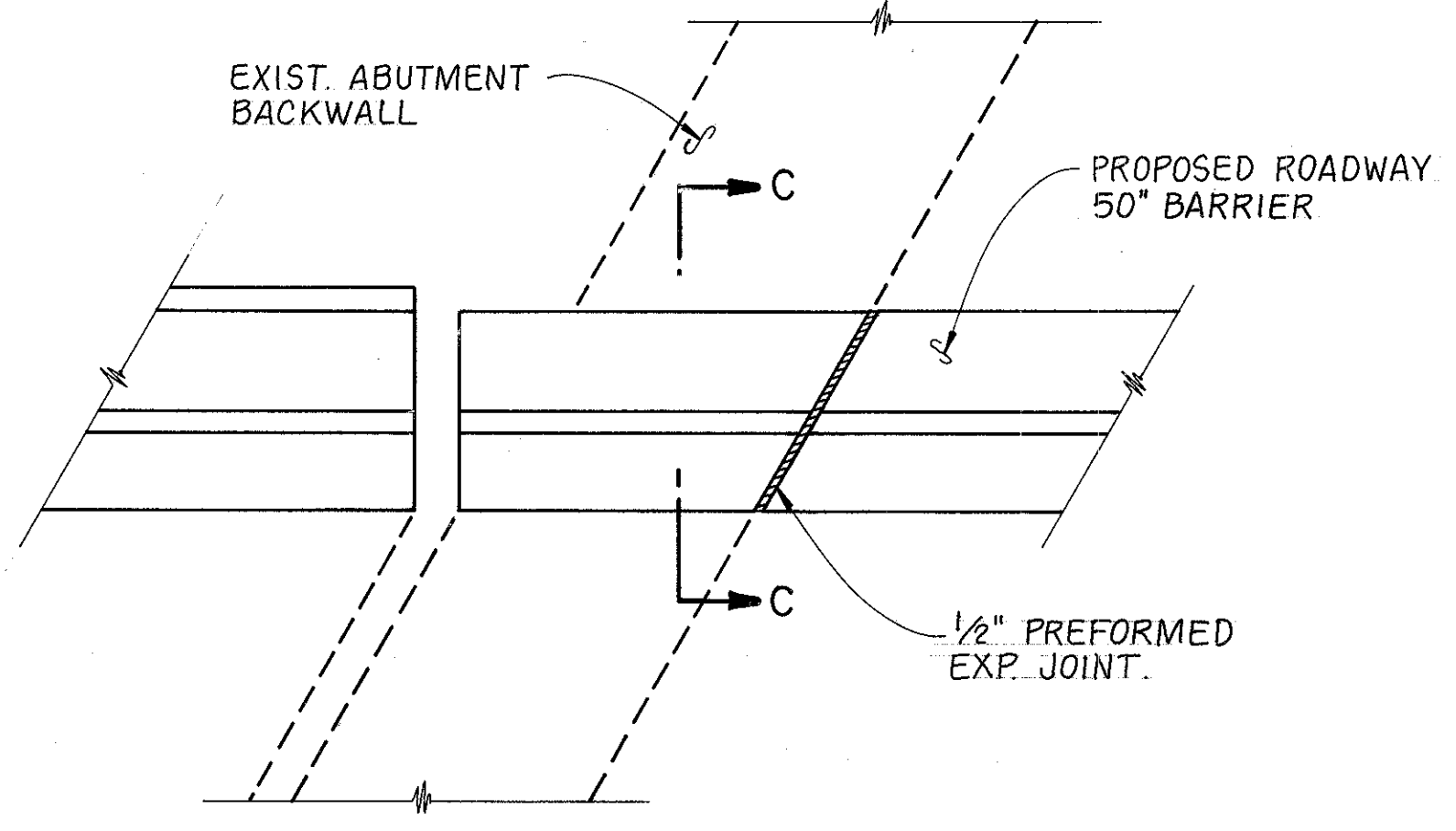


**FRA 670-0460 L(SOUTH) & FRA 670-0460 R(NORTH)**

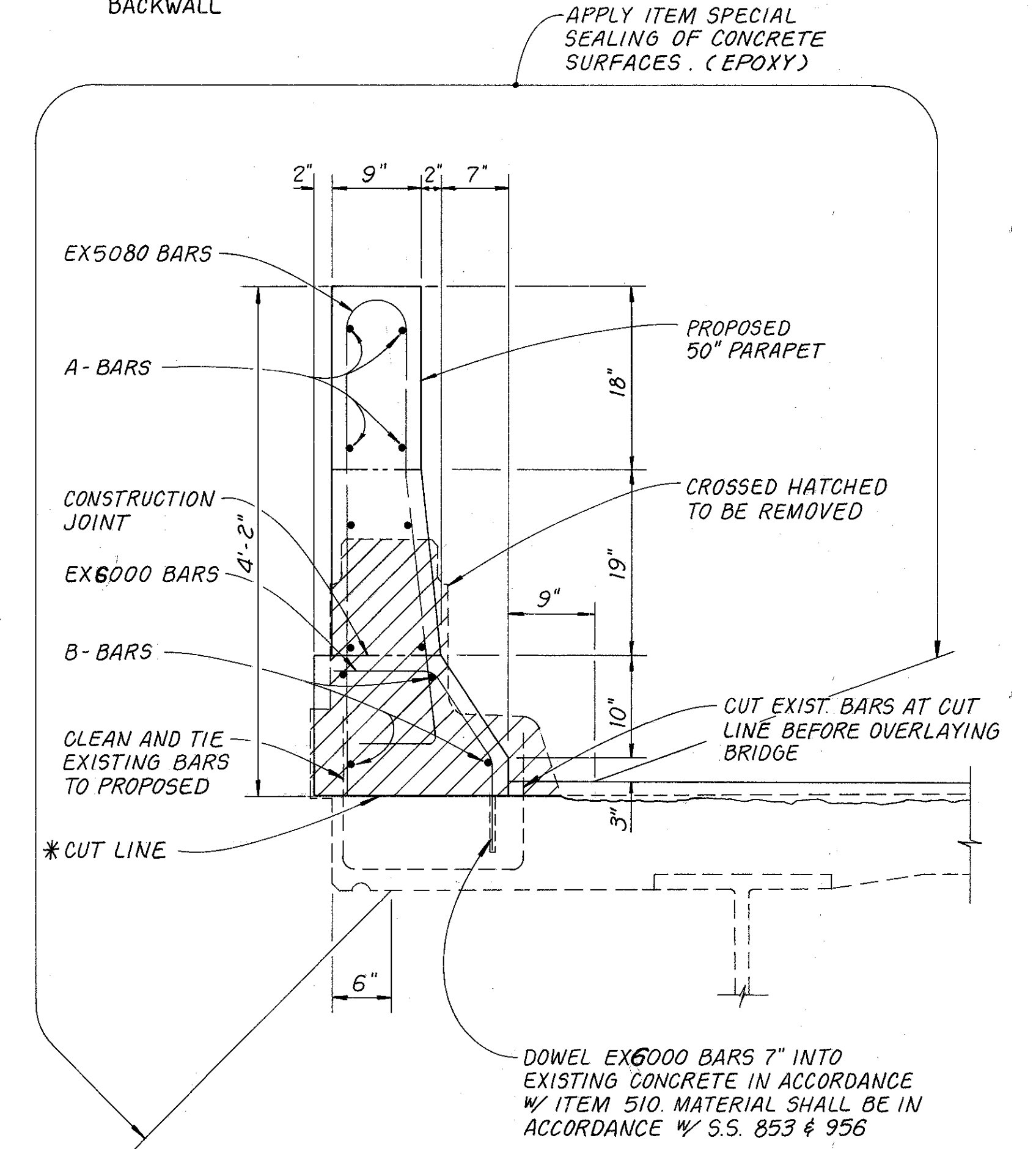
FOR DIMENSION SEE SHEET 26/36  
MINIMUM LAP = 1'-8"



SECTION C-C



VIEW B-B & VIEW D-D (REVERSED)



SECTION A-A  
\* SAWCUT PRIOR TO REMOVAL

|   |        |        |         |                |         |
|---|--------|--------|---------|----------------|---------|
| R. D. ZANDE & ASSOCIATES, LIMITED 27/36 |        |        |         |                |         |
| CONSULTING ENGINEERS<br>COLUMBUS, OHIO  |        |        |         |                |         |
| BRIDGE RAILING DETAILS                  |        |        |         |                |         |
| FRA 670-0460 L & R                      |        |        |         |                |         |
| DESIGNED                                | DRAWN  | TRACED | CHECKED | REVIEWED DATE  | REVISED |
| O.H.K.                                  | O.H.K. | L.A.M. | T.A.A.  | G.J.T. 4-21-88 |         |

KEY PLAN PRINT CO. INSPR



# REINFORCING STEEL LIST

FRA - 71 - 13.21  
FRA - 70 - 16.83  
FRA - 670 - 4.40

\* REINFORCING STEEL LIST FOR RETAINING WALLS A & B ARE LISTED WITH FRA 670-460 N. OVER CLEVELAND AVE.

| BAR MARK | NO. OF BARS                                      |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   | TOTAL | LENGTH | WEIGHT | TYPE | DIM A | DIM B | DIM C | DIM D | DIM E | INC. |                        |    |  |
|----------|--|--|--|--|--|--|--|--|---|-----------------------------|-----------------------------|------------------------------|-------------|---|---|---|---|-------|--------|--------|------|-------|-------|-------|-------|-------|------|------------------------|----|--|
|          | FRA 71-1703 EAST OVER ROADWAY S.B. 71 TO E.B. 70 | FRA 71-1703 WEST OVER ROADWAY S.B. 71 TO E.B. 70 | FRA 71-1801 EAST OVER ROADWAY S.B. 71 TO E.B. 70 | FRA 71-1801 WEST OVER ROADWAY S.B. 71 TO E.B. 70 | FRA 71-1831 EAST OVER LEONARD AVE. (R) | FRA 71-1831 WEST OVER LEONARD AVE. (R) | FRA 70-1361 NORTH S. EXPI. OVER C&D RAILROAD | FRA 70-1361 SOUTH S. EXPI. OVER C&D RAILROAD | FRA 70-1361 MEDIAN S. EXPI. OVER C&D RAILROAD | FRA 70-1379 NORTH SHORT ST. | FRA 70-1379 SOUTH SHORT ST. | FRA 70-1379 MEDIAN SHORT ST. | FRA 670-484 | FRA 670-460 NORTH OVER CLEVELAND AVE. (L) | FRA 670-460 SOUTH OVER CLEVELAND AVE. (L) | FRA 670-460 NORTH OVER CLEVELAND AVE. (R) | FRA 670-460 SOUTH OVER CLEVELAND AVE. (R) |       |        |        |      |       |       |       |       |       |      | RETAINING WALL C & D * |    |  |
|          | SUPERSTRUCTURE                                   |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5001   | 271  | 325  | 294  | 281  | 145                                    | 159                                    | 361  | 361  |   |                             |                             | 120                          | 126         |   |   |   |   | 2032  | 974    |        |      |       |       |       |       |       |      |                        |    |  |
| EX5002   | 54   |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5003   | 72   | 72   | 84   | 84   | 48                                     | 48                                     | 102  | 102  | 168   | 36                          | 36                          | 73                           | 576         |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5004   | 32   | 32   | 32   | 32   | 20                                     | 20                                     | 44   | 44   | 88  | 16                          | 16                          | 24                           | 244         | 8   | 8   | 8   | 8   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5005   | 4  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5006   | 10   | 10   |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5007   | 2  | 2  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5008   | 2  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5009   | 10   |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
|          | 2SR  | 2SR  | 2SR  | 2SR  | 1SR                                    | 2SR                                    | 2SR  | 2SR  |   |                             |                             |                              | 2SR         | 2SR                                       |   |   |   |       | 4SR    | 2SR    |      |       |       |       | 1SR   | 4SR   | 30SR | 2-2                    |    |  |
| EX5010   | OF   | OF   | OF   | OF   | OF                                     | OF                                     | OF   | OF   | OF  | OF                          | OF                          | OF                           | OF          | OF  | OF  | OF  | OF  | OF    | OF     | OF     | OF   | OF    | OF    | OF    | OF    | OF    | OF   | OF                     | OF |  |
|          | 10   | 10   | 10   | 10   | 10                                     | 10                                     | 10   | 10   | 10  | 10                          | 10                          | 10                           | 10          | 10  | 10  | 10  | 10  | 10    | 10     | 10     | 10   | 10    | 10    | 10    | 10    | 10    | 10   | 10                     | 10 |  |
| EX5011   | 6  | 6  | 6  | 6  | 6                                      | 6                                      | 6  | 6  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5012   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
|          |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5013   |  | 72   |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5014   |  | 4  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5015   |  | 12   |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5016   |  | 12   |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5017   |  | 6  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5018   |  | 10   |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5019   |  | 2  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5020   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5021   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5022   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5023   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5024   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5025   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5026   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5027   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5028   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5029   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5030   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5031   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5032   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5033   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5034   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5035   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5036   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5037   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5038   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5039   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5040   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5041   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5042   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5043   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5044   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5045   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5046   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5047   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5048   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5049   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5050   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5051   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5052   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5053   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5054   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5055   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
|          |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5056   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5057   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5058   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5059   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |
| EX5060   |  |  |  |  |  |  |  |  |   |                             |                             |                              |             |   |   |   |   |       |        |        |      |       |       |       |       |       |      |                        |    |  |

### REINFORCING STEEL SAMPLES

REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08.

#### NOTE

THE LETTER "E" BEFORE A BAR MARK DENOTES AN EPOXY COATED REINFORCING BAR. PAYMENT FOR THESE BARS SHALL BE UNDER ITEM 509 "EPOXY COATED REINFORCING STEEL, GRADE 60".

BENDING DIAGRAM

R. D. ZANDE & ASSOCIATES, LIMITED 33 / 36  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

### REINFORCING STEEL LIST

FRA-71-1321  
FRA-70-1683  
FRA-670-440

|          |       |        |         |                |         |
|----------|-------|--------|---------|----------------|---------|
| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE  | REVISED |
| T.A.A.   | VANGO | VANGO  | L.A.M.  | G.J.T. 4/21/88 |         |

# REINFORCING STEEL LIST

FRA - 71 - 13.21  
FRA - 70 - 16.83  
FRA - 670 - 4.40

| BAR MARK       | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | TOTAL | LENGTH | WEIGHT | TYPE | DIM A | DIM B | DIM C | DIM D | INC. B | INC. A |       |  |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|------|-------|-------|-------|-------|--------|--------|-------|--|
| SUPERSTRUCTURE |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       |        |        |      |       |       |       |       |        |        |       |  |
| EX5061         |             |             |             |             |             |             |             |             |             |             |             | 8           |             |             |             |             |             |       | 8      | 18-2   | 152  | STR   |       |       |       |        |        |       |  |
| EX5062         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 24          |             |       | 28     | 25-11  | 757  | STR   |       |       |       |        |        |       |  |
| EX5063         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 18    | 9-3    | 174    | STR  |       |       |       |       |        |        |       |  |
| EX5064         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 10    | 6-6    | 68     | STR  |       |       |       |       |        |        |       |  |
| EX5065         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 12    | 9-9    | 122    | STR  |       |       |       |       |        |        |       |  |
| EX5066         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 12-5   | 78     | STR  |       |       |       |       |        |        |       |  |
| EX5067         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 29-8   | 124    | STR  |       |       |       |       |        |        |       |  |
| EX5068         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 36-4   | 152    | STR  |       |       |       |       |        |        |       |  |
| EX5069         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2     | 20-5   | 43     | 7    | 10-11 | 9-6   | 7-9   |       |        |        |       |  |
| EX5070         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 7-4    | 31     | STR  |       |       |       |       |        |        |       |  |
| EX5071         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 30    | 12-6   | 391    | STR  |       |       |       |       |        |        |       |  |
| EX5072         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 8-8    | 54     | STR  |       |       |       |       |        |        |       |  |
| EX5073         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 18    | 10-10  | 203    | STR  |       |       |       |       |        |        |       |  |
| EX5074         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 10    | 7-0    | 73     | STR  |       |       |       |       |        |        |       |  |
| EX5075         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 8     | 13-7   | 113    | STR  |       |       |       |       |        |        |       |  |
| EX5076         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 20-3   | 84     | STR  |       |       |       |       |        |        |       |  |
| EX5077         |             |             |             |             |             |             |             |             |             |             |             |             | 8           |             |             |             |             | 8     | 21-4   | 356    | STR  |       |       |       |       |        |        |       |  |
| EX5078         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2     | 13-4   | 28     | 7    | 10-7  | 2-9   | 7-9   |       |        |        |       |  |
| EX5079         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 17-4   | 72     | STR  |       |       |       |       |        |        |       |  |
| EX5080         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 80     | 8-0    | 1335 | 11    | 3-1   | 1-4   | 2-5   |        |        |       |  |
| EX5081         | 22          | 60          | 26          | 13          |             |             |             |             |             |             |             |             |             |             |             |             |             | 3     | 2-6    | 331    | 15   | 0-7   | 0-7   | 1-0   | 0-8   |        |        |       |  |
| EX5082         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 886   | 3-3    | 6569   | 15   | 0-7   | 0-7   | 1-9   | 0-8   |        |        |       |  |
| EX5083         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2     | 27-5   | 229    | 7    | 10-7  | 16-10 | 7-9   |       |        |        |       |  |
| EX5084         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 22    | 31-8   | 727    | STR  |       |       |       |       |        |        |       |  |
| EX5085         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2     | 31-5   | 66     | 7    | 10-7  | 20-10 | 7-9   |       |        |        |       |  |
| EX5086         |             |             |             |             |             |             |             |             |             |             |             |             | 9           |             |             |             |             | 9     | 2-6    | 47     | 14   | 0-10  | 0-9   | 0-6   | 0-8   |        |        |       |  |
| EX5087         |             |             |             |             |             |             |             |             |             |             |             |             | 9           |             |             |             |             | 9     | 2-3    | 42     | 24   | 0-9   | 0-9   | 0-10  | 0-9   |        |        |       |  |
| EX5088         |             |             |             |             |             |             |             |             |             |             |             |             | 2           |             |             |             |             | 2     | 2-3    | 9      | STR  |       |       |       |       |        |        |       |  |
| EX5089         |             |             |             |             |             |             |             |             |             |             |             |             | 2           |             |             |             |             | 2     | 3-4    | 14     | STR  |       |       |       |       |        |        |       |  |
| EX5090         |             |             |             |             |             |             |             |             |             |             |             |             | 2           |             |             |             |             | 2     | 3-11   | 16     | 3    | 1-8   | 0-10  | 1-8   |       |        |        |       |  |
| EX5091         |             |             |             |             |             |             |             |             |             |             |             |             | 9           |             |             |             |             | 9     | 5-11   | 111    | 3    | 2-8   | 0-10  | 2-8   |       |        |        |       |  |
| EX5092         |             |             |             |             |             |             |             |             |             |             |             |             | 9           |             |             |             |             | 9     | 3-4    | 63     | 16   | 0-10  | 1-3   | 1-3   | 0-1   |        |        |       |  |
| EX5093         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 8     | 19-7   | 163    | STR  |       |       |       |       |        |        |       |  |
| EX5094         |             |             |             |             |             |             |             |             |             |             |             |             |             | 1 SR        | 1 SR        |             |             |       | 1 SR   |        |      | 1 SR  |       |       |       |        |        |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             | OF          | OF          |             |             |       | OF     | TO     |      | OF    | TO    | 1-3   | 0-8   | 0-5    | 0-2    |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             | 13          | 13          |             |             |       | 13     | 2-11   |      |       | 0-9   | 0-7   |       |        |        |       |  |
| EX5095         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 108   | 3-4    | 751    | 15   | 1-0   | 0-6   | 1-5   | 0-9   |        |        |       |  |
| EX5096         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 24    | 26-0   | 651    | STR  |       |       |       |       |        |        |       |  |
| EX5097         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 9-1    | 114    | 11   | 4-8   | 3-3   | 0-8   |       |        |        |       |  |
| EX5098         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 2-9    | 34     | 15   | 0-7   | 0-7   | 1-3   | 0-8   |        |        |       |  |
| EX5099         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 24    | 1-5    | 71     | STR  |       |       |       |       |        |        |       |  |
| EX5100         |             |             |             |             |             |             |             |             |             |             |             |             |             | 2 SR        | 2 SR        | 2 SR        |             |       |        | 7 SR   | 1-11 |       | 0-7   | 0-2   |       |        |        |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             | OF          | OF          | OF          |             |       |        | OF     | TO   |       | TO    | 1-0   | 0-9   | 0-4    | 0-2    |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             | 13          | 13          | 13          |             |       |        | 13     | 2-7  |       | 0-9   | 0-6   |       |        |        |       |  |
| EX5101         | 2 SR        | 2 SR        | 2 SR        | 2 SR        |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8 SR   | 3-1    |      | 0-7   | 0-2   |       |       |        |        |       |  |
|                | OF          | OF          | OF          | OF          |             |             |             |             |             |             |             |             |             |             |             |             |             |       | OF     | TO     |      | TO    | TO    | 1-9   | 0-9   | 0-4    | 0-2    |       |  |
|                | 13          | 13          | 13          | 13          |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 13     | 3-5    |      | 0-9   | 0-7   |       |       |        |        |       |  |
| EX5102         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 1 SR   | 2-2    |      | 0-7   | 0-2   |       |       |        |        |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | OF     | TO     |      | TO    | TO    | 0-10  | 0-9   | 0-4    | 0-2    |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 13     | 2-5    |      | 0-9   | 0-6   |       |       |        |        |       |  |
| EX5103         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 1 SR   | 2-3    |      | 0-8   | 0-4   |       |       |        |        |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | OF     | TO     |      | TO    | TO    | 0-10  | 0-9   | 0-8    | 0-4    |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 4      | 2-5    |      | 0-9   | 0-6   |       |       |        |        |       |  |
| EX5104         | 2 SR        | 1 SR        | 2 SR        | 2 SR        | 1 SR        | 2 SR        | 2 SR        | 2 SR        |             |             |             |             |             |             |             |             |             |       | 4 SR   | 2-9    |      | 2-2   |       |       |       |        |        |       |  |
|                | OF          | OF          | OF          | OF          | OF          | OF          | OF          | OF          |             |             |             |             |             |             |             |             |             |       | OF     | TO     |      | TO    | TO    |       |       |        |        | 1-5/8 |  |
|                | 10          | 10          | 10          | 10          | 10          | 10          | 10          | 10          |             |             |             |             |             |             |             |             |             |       | 10     | 4-0    |      | 3-5   |       |       |       |        |        |       |  |
| EX5105         | 6           | 6           | 6           | 6           | 3           | 6           | 6           | 6           |             |             |             |             |             |             |             |             |             |       | 12     | 2-9    | 258  | 23    | 2-2   |       |       |        |        |       |  |
| EX5106         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       |        | 1 SR   | 2-2  |       | 0-7   | 0-2   |       |        |        |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | OF     | TO     |      | TO    | TO    | 0-10  | 0-9   | 0-3    | 1-1/2  |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 9      | 2-3    |      | 0-8   | 0-4   |       |       |        |        |       |  |
| EX5107         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 1 SR   | 3-1    |      | 0-7   | 0-2   |       |       |        |        |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | OF     | TO     |      | TO    | TO    | 1-9   | 0-9   | 0-4    | 0-2    |       |  |
|                |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 13     | 3-4    |      | 0-9   | 0-6   |       |       |        |        |       |  |

|   |       |        |         |                |         |       |
|---|-------|--------|---------|----------------|---------|-------|
| R. D. ZANDE & ASSOCIATES, LIMITED         |       |        |         |                |         | 34/36 |
| CONSULTING ENGINEERS<br>COLUMBUS, OHIO    |       |        |         |                |         |       |
| REINFORCING STEEL LIST                    |       |        |         |                |         |       |
| FRA-71-1321<br>FRA-70-1683<br>FRA-670-440 |       |        |         |                |         |       |
| DESIGNED                                  | DRAWN | TRACED | CHECKED | REVIEWED DATE  | REVISED |       |
| T.A.A.                                    | VANGO | VANGO  | L.A.M.  | G.J.T. 4/21/88 |         |       |



# REINFORCING STEEL LIST

FRA - 71 - 13.21  
FRA - 70 - 16.83  
FRA - 670 - 4.40

| BAR MARK       | Location    |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | TOTAL | LENGTH | WEIGHT | TYPE | DIM A | DIM B | DIM C | DIM D | DIM E | INC. |  |  |  |  |  |  |  |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|------|-------|-------|-------|-------|-------|------|--|--|--|--|--|--|--|
|                | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS |       |        |        |      |       |       |       |       |       |      |  |  |  |  |  |  |  |
| SUPERSTRUCTURE |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       |        |        |      |       |       |       |       |       |      |  |  |  |  |  |  |  |
| EX801          |             |             |             |             |             |             |             |             | 12          |             |             |             |             |             |             |             |             |             |             | 12    | 24     | 3-3    | 208  | 12    | 0-9   | 0-10  |       |       |      |  |  |  |  |  |  |  |
| EX802          |             |             |             |             |             |             |             |             | 12          |             |             |             |             |             |             |             |             |             |             | 12    | 24     | 2-7    | 165  | 7     | 1-7   | 1-0   | 0-2   |       |      |  |  |  |  |  |  |  |
| EX803          |             |             |             |             |             |             |             |             | 12          |             |             |             |             |             |             |             |             |             |             | 12    | 24     | 4-0    | 256  | 13    | 0-10  | 1-7   |       |       |      |  |  |  |  |  |  |  |
| EX804          |             |             |             |             |             |             |             |             | 9           |             |             |             |             |             |             |             |             |             |             | 9     | 18     | 1-6    | 72   | STR   |       |       |       |       |      |  |  |  |  |  |  |  |
| EX805          |             |             |             |             |             |             |             |             | 9           |             |             |             |             |             |             |             |             |             |             | 9     | 18     | 2-4    | 112  | STR   |       |       |       |       |      |  |  |  |  |  |  |  |
| EL500          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 10     | 10     | 2-6  | 26    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL501          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 5-9  | 48    | 15    | 1-10  | 1-8   | 1-8   | 1-7  |  |  |  |  |  |  |  |
| EL502          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 2-3  | 19    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL503          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 2-6  | 21    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL504          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 2-9  | 23    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL505          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 5-1  | 42    | 3     | 1-8   | 2-0   | 1-8   |      |  |  |  |  |  |  |  |
| EL506          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 4-1  | 34    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL507          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 10     | 10     | 6-10 | 71    | 21    | 0-7   | 2-0   | 2-2   |      |  |  |  |  |  |  |  |
| EL508          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 16     | 16     | 5-1  | 85    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL509          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 3-4  | 28    | STR   |       |       |       |      |  |  |  |  |  |  |  |
| EL510          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       | 8      | 8      | 4-3  | 35    | 3     | 0-7   | 3-4   | 0-7   |      |  |  |  |  |  |  |  |

\* SEE SHEET 36 FOR MORE REINFORCING STEEL QUANTITIES.

## REINFORCING STEEL LIST

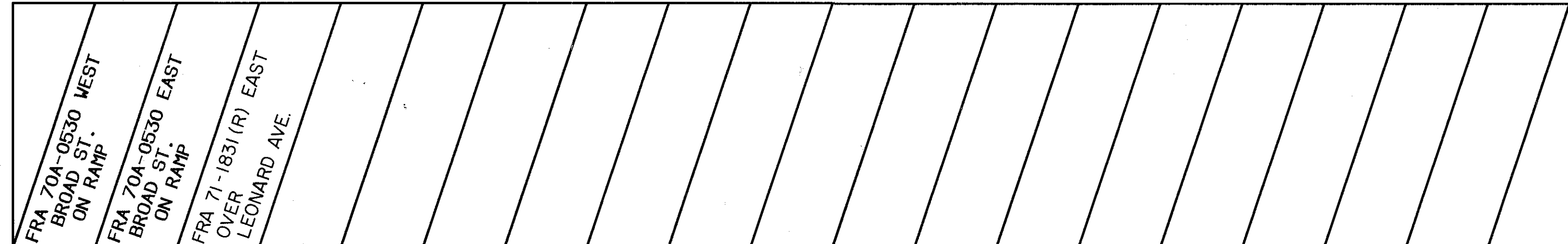
FRA-71-1321  
FRA-70-1683  
FRA-670-440

# REINFORCING STEEL LIST

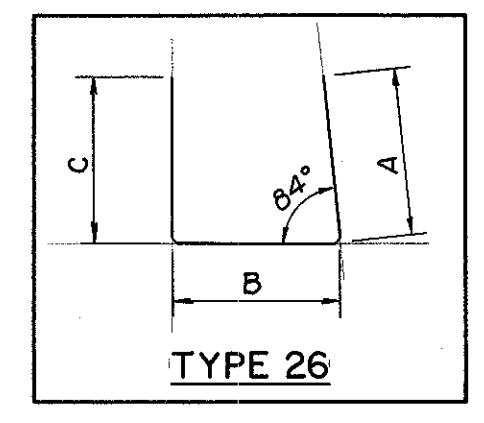
|  |                  |
|--|------------------|
|  | OHIO             |
|  | FHWA<br>REGION 5 |

306  
308

FRA - 71 - 13.21  
FRA - 70 - 16.83  
FRA - 670 - 4.40



| BAR MARK       | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | NO. OF BARS | TOTAL | LENGTH | WEIGHT | TYPE | DIM A | DIM B | DIM C | DIM D | DIM E | INC.  |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|------|-------|-------|-------|-------|-------|-------|
| SUPERSTRUCTURE |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |       |        |        |      |       |       |       |       |       |       |
| EX5001         | 264         | 250         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 514   | 7-10   | 4199   | 11   | 3-5   | 3-3   | 0-8   |       |       |       |
| EX5002         |             | 10          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 10    | 15-4   | 160    | STR  |       |       |       |       |       |       |
| EX5003         |             | 4           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 4-0    | 17     | 22   | 2-0   | 2-0   | 140   |       |       |       |
| EX5004         | 32          | 32          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 64    | 30-0   | 2003   | STR  |       |       |       |       |       |       |
| EX5005         |             | 6           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 14-8   | 92     | STR  |       |       |       |       |       |       |
| EX5006         |             | 6           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 8-6    | 53     | STR  |       |       |       |       |       |       |
| EX5007         | 8           | 8           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 16    | 2-5    | 40     | STR  |       |       |       |       |       |       |
| EX5008         |             | 4           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 14-8   | 61     | STR  |       |       |       |       |       |       |
| EX5009         | 1 SR        | 1SR         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2 SR  | 2-0    |        |      |       |       |       |       |       |       |
|                | OF          | OF          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | OF    | 10     | 55     | STR  |       |       |       |       |       | 1-5/8 |
|                | 10          | 10          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 10    | 3-3    |        |      |       |       |       |       |       |       |
| EX5010         | 2           | 2           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 2-7    | 11     | 23   | 2-0   |       |       |       |       |       |
| EX5011         | 2           | 2           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 2-0    | 8      | STR  |       |       |       |       |       |       |
| EX5012         | 198         | 162         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 360   | 7-2    | 2692   | STR  |       |       |       |       |       |       |
|                | 1 SR        | 1 SR        |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2 SR  | 2-7    |        |      | 2-0   |       |       |       |       |       |
| EX5013         | OF          | OF          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | OF    | 10     | 67     | 23   | 10    |       |       |       |       | 1-5/8 |
|                | 10          | 10          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 10    | 3-10   |        |      | 3-3   |       |       |       |       |       |
| EX5014         | 6           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 6     | 8-1    | 51     | STR  |       |       |       |       |       |       |
| EX5015         | 4           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 4     | 29-0   | 121    | STR  |       |       |       |       |       |       |
| EX5016         |             | 8           | 8           |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 16    | 4-10   | 81     | 3    | 1-8   | 1-9   | 1-8   |       |       |       |
| EX5017         |             | 12          | 12          |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 24    | 3-10   | 96     | STR  |       |       |       |       |       |       |
| EX5018         |             | 10          | 10          |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 20    | 6-5    | 134    | 22   |       |       |       |       |       |       |
| EX5019         |             | 4           | 4           |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 8     | 9-2    | 76     | 26   | 3-10  | 1-9   | 3-10  |       |       |       |
|                | 1 SR        | 1 SR        |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 2 SR  | 2-6    |        |      | 0-6   |       |       |       |       |       |
| EX5020         | OF          | OF          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | OF    | 10     | 65     | 15   | 0-9   | 10    | 0-10  | 0-9   |       | 1/2   |
|                | 13          | 13          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 13    | 2-4    |        |      | 0-1   |       |       |       |       |       |
| EX6000         | 247         | 249         |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | 496   | 2-5    | 745    | 15   | 0-9   | 0-6   | 0-10  | 0-9   |       |       |



|  |       |        |         |                |         |         |
|--|-------|--------|---------|----------------|---------|---------|
| R. D. ZANDE & ASSOCIATES, LIMITED  |       |        |         |                |         | 36 / 36 |
| CONSULTING ENGINEERS   |       |        |         |                |         |         |
| COLUMBUS, OHIO   |       |        |         |                |         |         |
| <h2 style="margin: 0;">REINFORCING STEEL LIST</h2> <p style="margin: 5px 0 0 0;">FRA-71-1321<br/>FRA-70-1683<br/>FRA-670-440</p> |       |        |         |                |         |         |
| DESIGNED   | DRAWN | TRACED | CHECKED | REVIEWED DATE  | REVISED |         |
| T.A.A.   | VANGO | VANGO  | L.A.M.  | G.J.T. 4/21/88 |         |         |

KEY BLUE PRINT CO. 100317



# REINFORCING STEEL LIST

OHIO  
FHWA  
REGION 5

306A  
308

FRA - 71 - 13.21  
FRA - 70 - 16.83  
FRA - 670 - 4.40

| BAR MARK       | NO. OF BARS                                     |   |   |   |   |   |   |   |  |  |  |   |              | TOTAL | LENGTH | WEIGHT | TYPE | DIM A | DIM B | DIM C | DIM D | DIM E | INC. |  |  |  |  |                      |      |     |     |     |  |  |
|----------------|---|---|---|---|---|---|---|---|--|--|--|---|--------------|-------|--------|--------|------|-------|-------|-------|-------|-------|------|--|--|--|--|----------------------|------|-----|-----|-----|--|--|
|                | FRA 71-17-03 EAST OVER ROADWAY S.B.71 TO E.B.70 | FRA 71-17-03 WEST OVER ROADWAY S.B.71 TO E.B.70 | FRA 71-18-01 EAST S.B.71 OVER E.B.670 TO S.B.71 | FRA 71-18-01 WEST S.B.71 OVER E.B.670 TO S.B.71 | FRA 71-18-31 WEST OVER LEONARD AVE. (R) | FRA 71-18-31 EAST OVER LEONARD AVE. (R) | FRA 70-13-61 NORTH S. EXPN. OVER C&D RAILROAD | FRA 70-13-61 SOUTH S. EXPN. OVER C&D RAILROAD | FRA 70-13-61 MEDIAN S. EXPN. OVER C&D RAILROAD | FRA 70-13-79 NORTH I-70 OVER SHORT ST. | FRA 70-13-79 SOUTH I-70 OVER SHORT ST. | FRA 70-13-79 MEDIAN I-70 OVER SHORT ST. | FRA 670-4-84 |       |        |        |      |       |       |       |       |       |      | FRA 670-4-60 NORTH OVER CLEVELAND AVE. (L) | FRA 670-4-60 SOUTH OVER CLEVELAND AVE. (L) | FRA 670-4-60 NORTH OVER CLEVELAND AVE. (R) | FRA 670-4-60 SOUTH OVER CLEVELAND AVE. (R) | RETAINING WALL C & D |      |     |     |     |  |  |
| SUPERSTRUCTURE |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       |      |  |  |  |  |                      |      |     |     |     |  |  |
| ES400          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       | 136   |      | 136  | 30-0                                       | 2725                                       | STR  |                      |      |     |     |     |  |  |
| ES401          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 4    |  | 4  | 5-0  | 13   | STR                  |      |     |     |     |  |  |
|                | 233   | 251   | 256   | 252   | 137                                     | 147                                     | 330   | 330   |  | 114                                    | 119                                    |   |              | 1927  | 78     | 78     | 78   | 79    |       |       |       | 4409  | 2-5  | 15496                                      | 15   | 0-9  | 0-6  | 0-10                 | 0-8  |     |     |     |  |  |
| ES600          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 36   |  | 36   | 30-0                                       | 1622                                       | STR                  |      |     |     |     |  |  |
| ES601          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 169  |  | 169  | 8-9  | 2221                                       | STR                  |      |     |     |     |  |  |
| ES602          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 169  |  | 169  | 4-2  | 1059                                       | STR                  |      |     |     |     |  |  |
| ES603          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 18   |  | 18   | 15-0                                       | 406  | STR                  |      |     |     |     |  |  |
| ES604          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 2    |  | 2  | 8-4  | 25   | STR                  |      |     |     |     |  |  |
| ES605          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 2    |  | 2  | 5-8  | 17   | STR                  |      |     |     |     |  |  |
| ES606          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 2    |  | 2  | 4-3  | 13   | STR                  |      |     |     |     |  |  |
| ES607          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 12   |  | 12   | 6-0  | 108  | STR                  |      |     |     |     |  |  |
| ES701          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 169  |  | 169  | 8-9  | 3023                                       | STR                  |      |     |     |     |  |  |
| ES702          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 169  |  | 169  | 4-2  | 1439                                       | STR                  |      |     |     |     |  |  |
| EA501          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 140  |  | 140  | 3-3  | 475  | STR                  |      |     |     |     |  |  |
| EA502          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 8    |  | 8  | 5-0  | 42   | STR                  |      |     |     |     |  |  |
| EA503          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 6    |  | 6  | 31-11                                      | 200  | STR                  |      |     |     |     |  |  |
| EA504          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 6    |  | 6  | 27-11                                      | 175  | STR                  |      |     |     |     |  |  |
| EA505          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 6    |  | 6  | 28-9                                       | 180  | STR                  |      |     |     |     |  |  |
| EA506          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 6    |  | 6  | 31-8                                       | 198  | STR                  |      |     |     |     |  |  |
| EA507          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 6    |  | 6  | 28-3                                       | 177  | STR                  |      |     |     |     |  |  |
| EA508          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 6    |  | 6  | 29-1                                       | 182  | STR                  |      |     |     |     |  |  |
| EA500          |   |   |   |   |   |   |   |   |  |  |  |   |              |       |        |        |      |       |       |       |       |       | 140  |  | 140  | 7-5  | 1560                                       | 2                    | 1-11 | 1-3 | 1-3 | 3-2 |  |  |

R. D. ZANDE & ASSOCIATES, LIMITED 36A/36  
CONSULTING ENGINEERS  
COLUMBUS, OHIO

## REINFORCING STEEL LIST

FRA-71-1321  
FRA-70-1683  
FRA-670-440

| DESIGNED | DRAWN | TRACED | CHECKED | REVIEWED DATE  | REVISED |
|----------|-------|--------|---------|----------------|---------|
| T.A.A.   | VANGO | VANGO  | O.H.K.  | O.H.K. 7/18/88 |         |

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