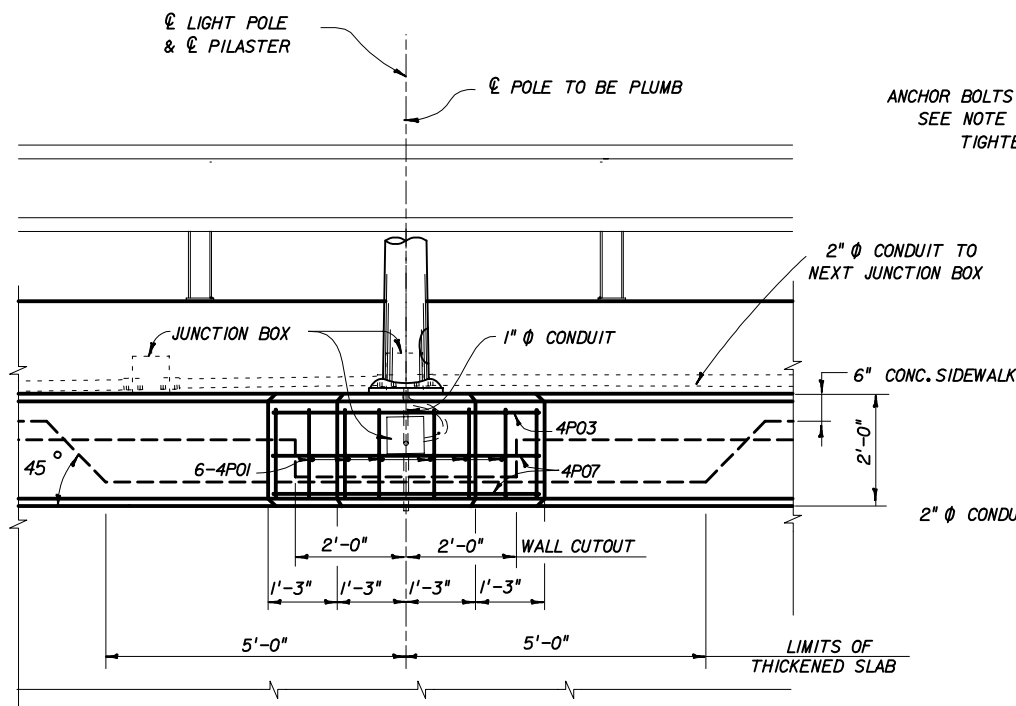


PLAN



LIGHT PILASTER DETAIL

NOTES

1. ADDITIONAL CONCRETE AND REINFORCING STEEL REQUIRED FOR THE CONSTRUCTION OF THE PILASTER SHALL MEET THE SAME REQUIREMENTS AS THAT OF THE PARAPET WALL.

2. TOP OF PILASTER SHALL BE FINISHED TO A TRULY LEVEL AREA.

3. LIGHT POLE PILASTER IS DESIGNED TO RESIST WORKING LOADS (IN ANY DIRECTION) FROM THE LIGHT POLE APPLIED AT THE TOP OF THE PILASTER AS FOLLOWS:

|                     |   |                  |
|---------------------|---|------------------|
| LONGITUDINAL MOMENT | = | 30,000 FT. POUND |
| TRANSVERSE MOMENT   | = | 6,000 FT. POUND  |
| LONGITUDINAL SHEAR  | = | 1,000 POUND      |
| TRANSVERSE SHEAR    | = | 200 POUND        |
| TORSION             | = | 3,000 FT. POUNDS |
| AXIAL               | = | 400 POUNDS       |

IF THE LIGHT POLE PROVIDED APPLIES LOADS THAT ARE IN EXCESS OF THOSE SHOWN ABOVE, THE CONTRACTOR SHALL REDESIGN THE PILASTER AND SUBMIT HIS DESIGN TO THE DEPARTMENT FOR REVIEW. THE CONTRACTOR'S REDESIGN SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA, AND QUALIFIED TO PERFORM THE WORK.

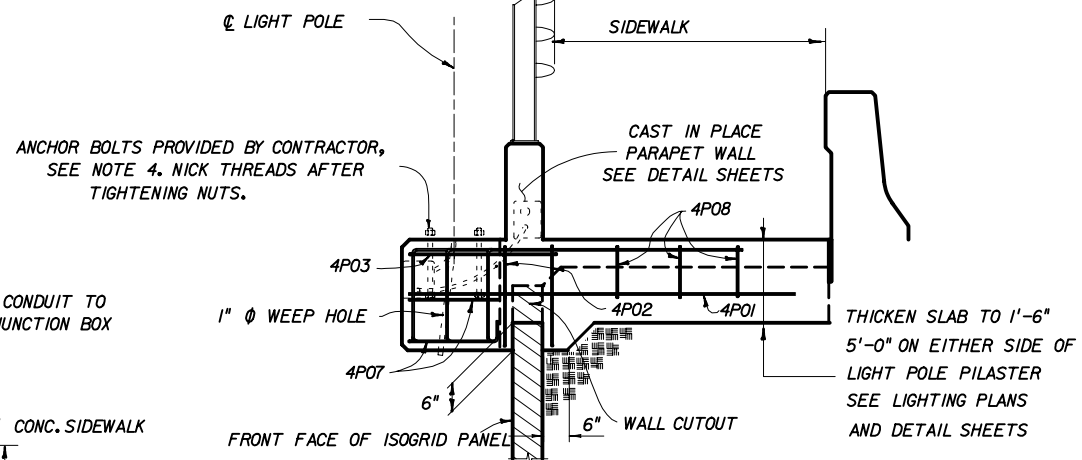
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANCHOR BOLTS THAT EFFECTIVELY TRANSMIT THE LIGHT POLE LOADS TO THE PILASTER AND THAT FIT THE REINFORCING CAGE. CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA SHALL BE SUBMITTED BY THE CONTRACTOR TO THE DEPARTMENT FOR REVIEW AND APPROVAL SHOWING THAT THESE REQUIREMENTS HAVE BEEN MET PRIOR TO CONSTRUCTION.

5. STEEL FOR JUNCTION BOXES SHALL CONFORM WITH ASTM-A36. THE BOXES SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. IN LIEU OF STEEL BOXES THE CONTRACTOR MAY SUBMIT FOR APPROVAL MOLDED P.V.C. BOXES (SCHEDULE 80).

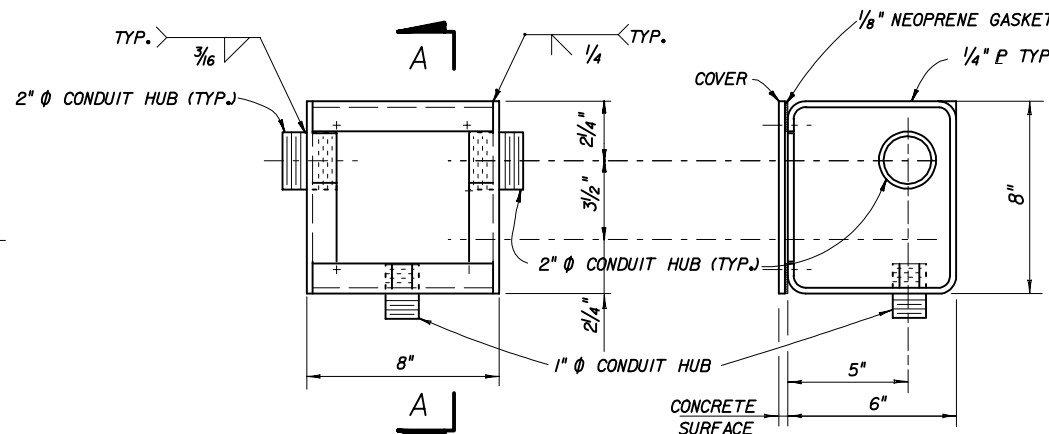
6. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL OR SCHEDULE 80 P.V.C.

7. THE COST OF ANCHOR BOLTS SHALL BE INCLUDED IN THE BID PRICE FOR LIGHT POLES.

8. PAYMENT: THE COST OF ALL LABOR, CONCRETE AND REINFORCING STEEL REQUIRED FOR THE CONSTRUCTION OF THE PILASTERS AND ALL CONDUITS, EXPANSION COUPLINGS, JUNCTION BOXES AND MISCELLANEOUS HARDWARE REQUIRED FOR COMPLETION OF THE ELECTRICAL INSTALLATION WITHIN THE LIMITS SHOWN ON THIS SHEET, SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE FOR THE MSE WALLS.

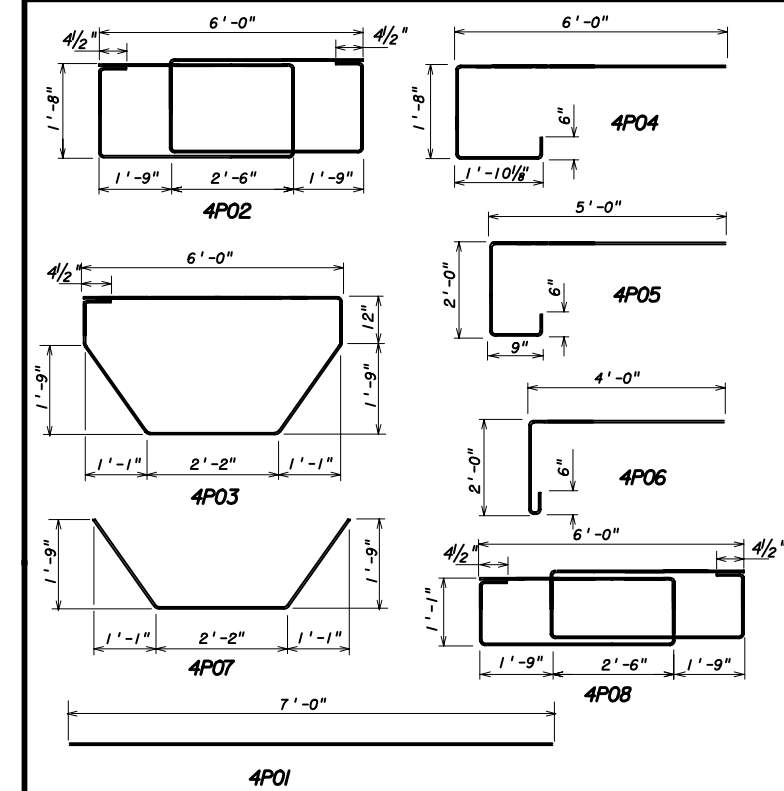


FRONT VIEW OF JUNCTION BOX (COVER REMOVED)



SECTION A-A

BAR BENDING DIAGRAMS



BILL OF REINFORCING STEEL

| MARK | SIZE | NO. REQ'D | LENGTH |
|------|------|-----------|--------|
| 4P01 | 4    | 6         | 7'-0"  |
| 4P02 | 4    | 2         | 24'-5" |
| 4P03 | 4    | 1         | 14'-9" |
| 4P04 | 4    | 4         | 9'-8"  |
| 4P05 | 4    | 2         | 7'-11" |
| 4P06 | 4    | 2         | 6'-2"  |
| 4P07 | 4    | 2         | 6'-4"  |
| 4P08 | 4    | 3         | 22'-1" |

DESIGNER:



**THE NEEL COMPANY**  
8328-D TRAFORD LANE  
SPRINGFIELD, VIRGINIA 22152  
PH: (703) 913-7858  
FX: (703) 913-7859

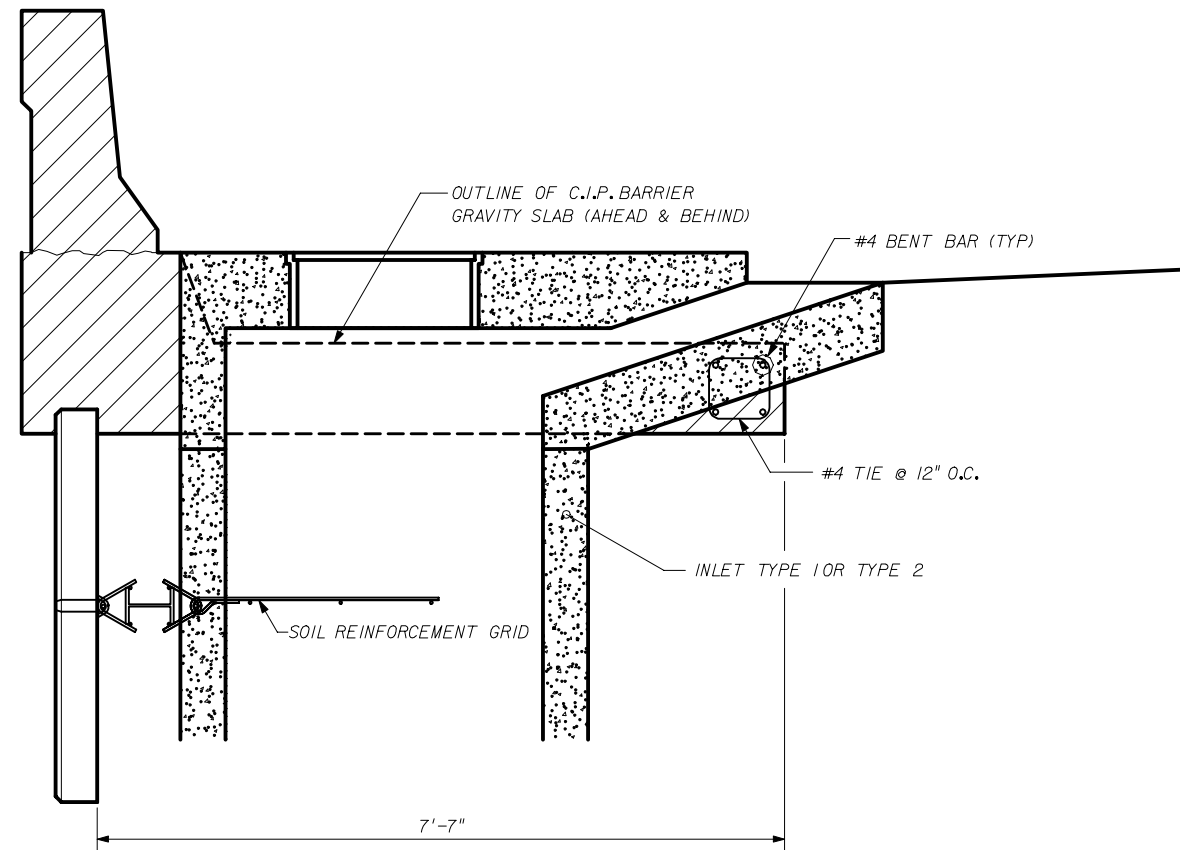
PRECASTER:

**OLDCASTLE PRECAST, INC**  
5995 SOUTEL DR.  
JACKSONVILLE, FL 32219  
PH: (904) 768-7031  
FX: (904) 768-8428

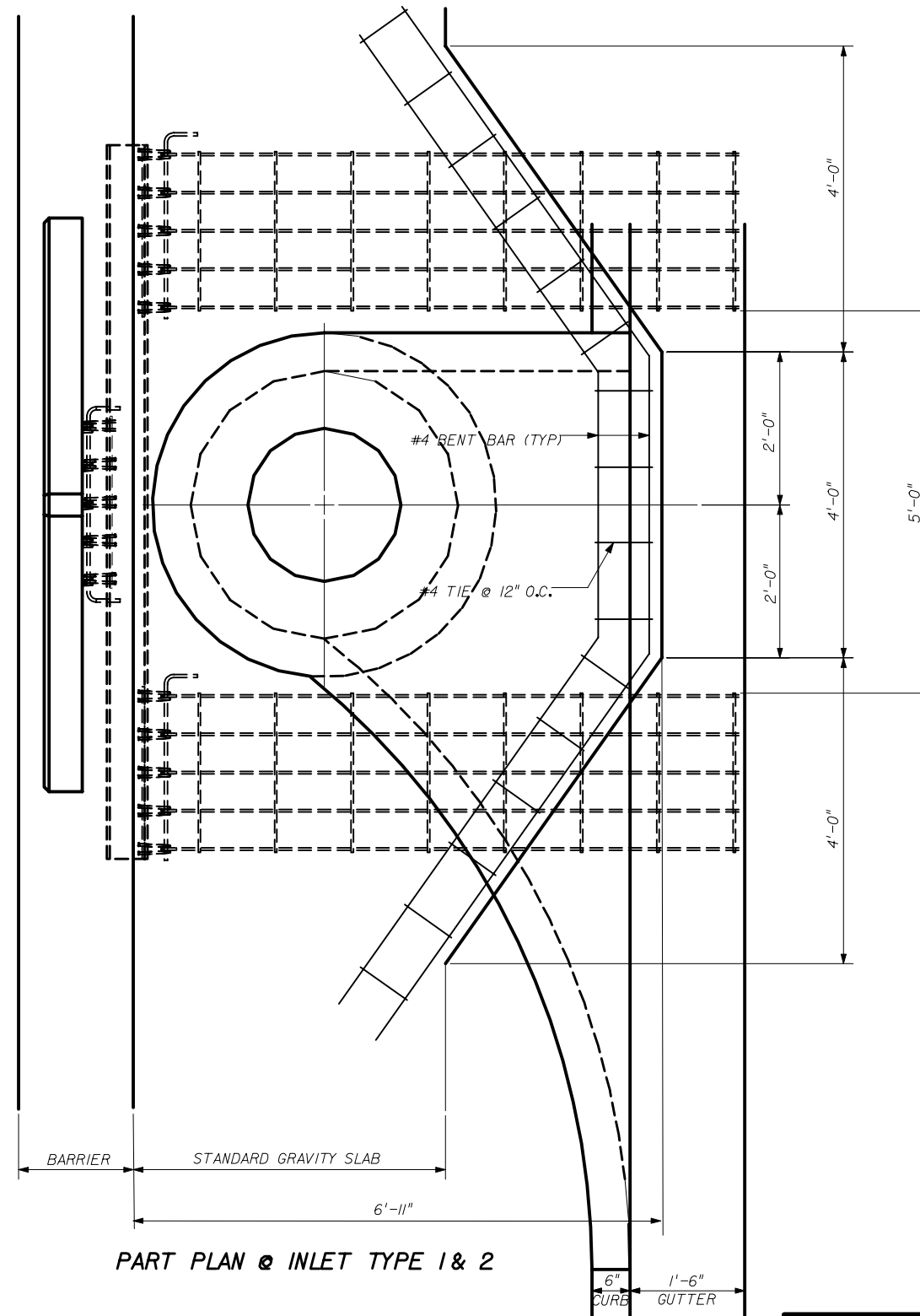
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM  
THE NEEL COMPANY ISOGRID

| Names       | Dates        | Approved By |           |           |
|-------------|--------------|-------------|-----------|-----------|
| Designed By | JMC 10/01/98 | [Signature] |           |           |
| Drawn By    | CAA 10/01/98 |             |           |           |
| Checked By  | JMC 10/01/98 | Revision    | Sheet No. | Index No. |
|             |              | 04          | 11 of 20  | 5012      |



**PART SECTION @ INLET TYPE 1 & 2**  
 NOTE: GRID RELOCATION HARDWARE, SEE SHEET 13 OF 20 FOR DETAILS



**PART PLAN @ INLET TYPE 1 & 2**

**GRAVITY SLAB AT INLET TYPE 1 & 2**

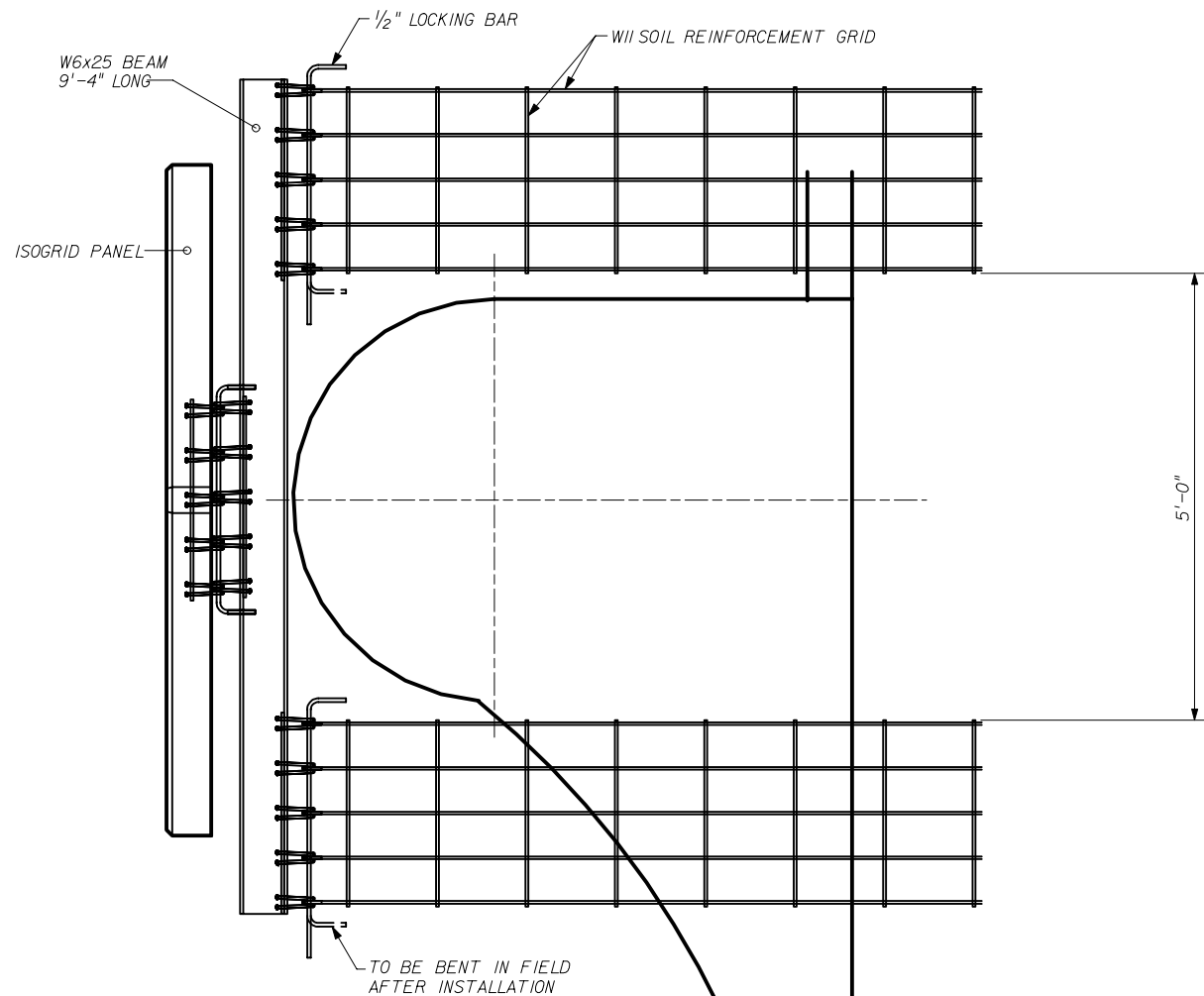
DESIGNER:  
**THE NEEL COMPANY**  
 8328 O TRAFORD LANE  
 SPRINGFIELD, VIRGINIA 22152  
 PH: (703) 913-7858  
 FX: (703) 913-7859

PRECASTER:  
**OLDCASTLE PRECAST, INC.**  
 5995 SOUTHEL DR.  
 JACKSONVILLE, FL 32219  
 PH: (904) 768-7081  
 FX: (904) 768-8428

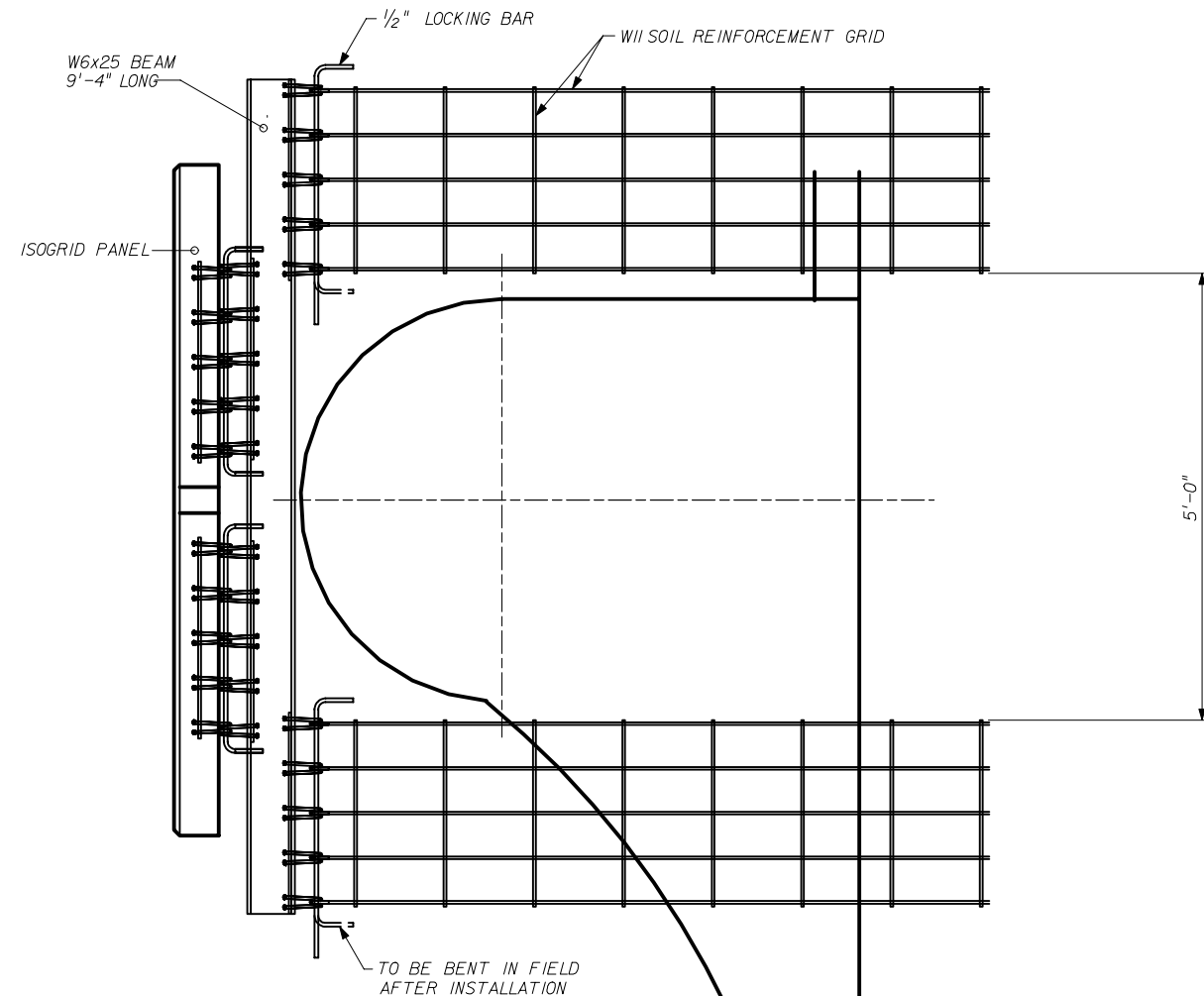
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

**RETAINING WALL SYSTEM  
 THE NEEL COMPANY ISOGRID**

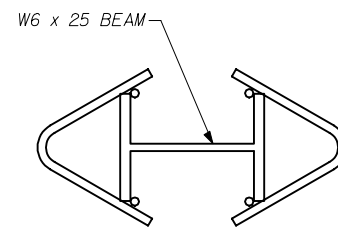
| Names       |     | Dates    | Approved By <i>W. V. [Signature]</i> |           |           |
|-------------|-----|----------|--------------------------------------|-----------|-----------|
| Designed By | JMC | 10/01/98 | State Structures Design Engineer     |           |           |
| Drawn By    | CAA | 10/01/98 |                                      |           |           |
| Checked By  | JMC | 10/01/98 | Revision                             | Sheet No. | Index No. |
|             |     |          | 04                                   | 12 of 20  | 5012      |



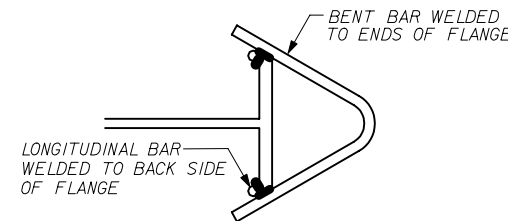
**SOIL GRID RELOCATION HARDWARE FOR SINGLE GRID PANEL**  
(2 ea. REQUIRED)



**SOIL GRID RELOCATION HARDWARE FOR DOUBLE GRID PANEL**  
(3 ea. REQUIRED)



**SECTION THRU BEAM**  
(NO SCALE)



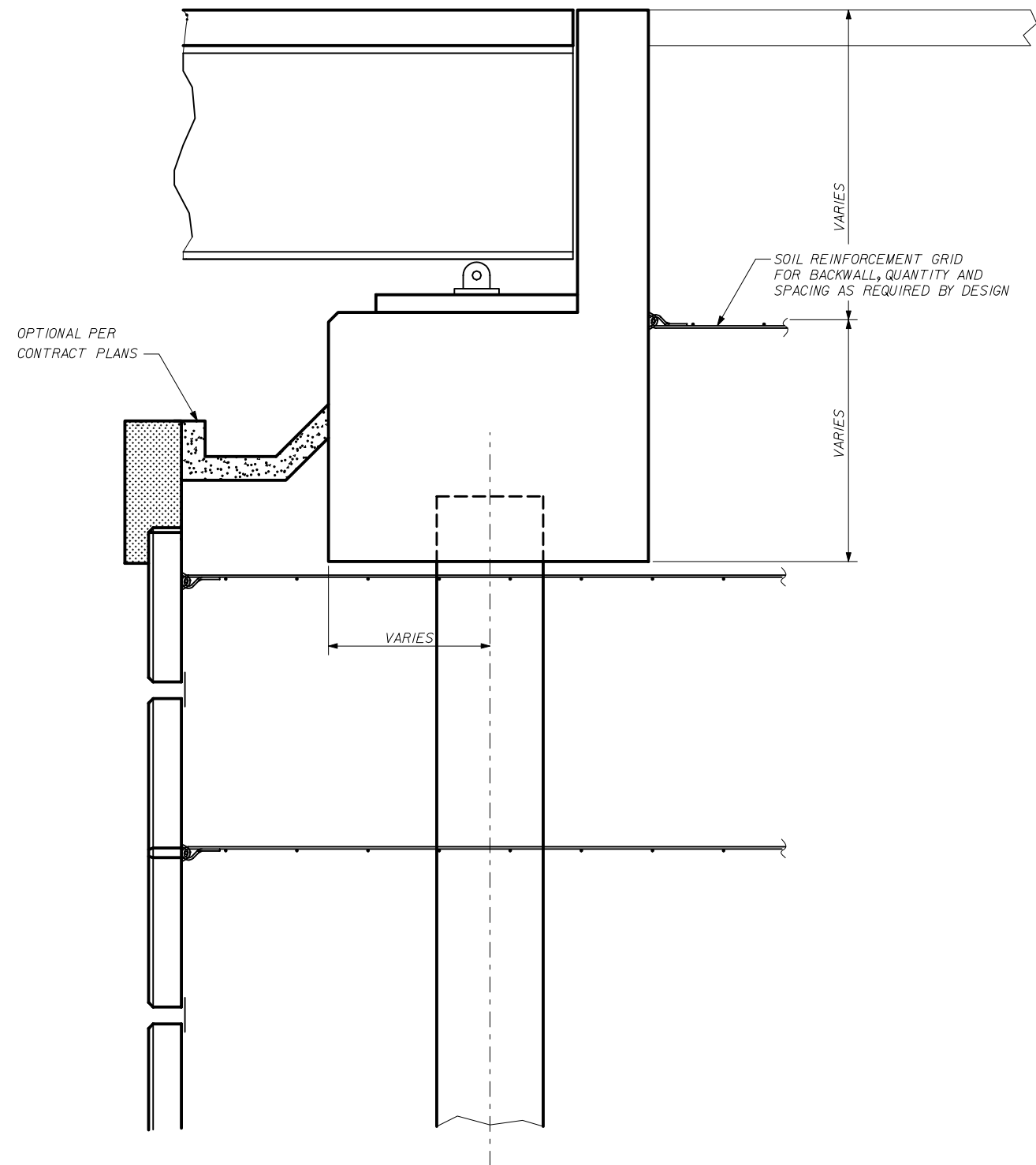
- NOTES:**
- WELDING:**
    - \*CONNECTION INSERTS TO BE WELDED TO W6 x 25 BEAM.
  - GALVANIZATION:**
    - \*AFTER FABRICATION, BEAM/INSERT ASSEMBLY TO BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 (AASHTO M111-80)

|   |          |                                      |           |           |
|---|----------|--------------------------------------|-----------|-----------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION |          |                                      |           |           |
| <b>RETAINING WALL SYSTEM</b>                  |          |                                      |           |           |
| <b>THE NEEL COMPANY ISOGRID</b>               |          |                                      |           |           |
| Names   | Dates    | Approved By <i>W. V. [Signature]</i> |           |           |
| Designed By JMC                               | 10/01/98 | State Structures Design Engineer     |           |           |
| Drawn By CAA                                  | 10/01/98 | Revision                             | Sheet No. | Index No. |
| Checked By JMC                                | 10/01/98 | 04                                   | 13 of 20  | 5012      |

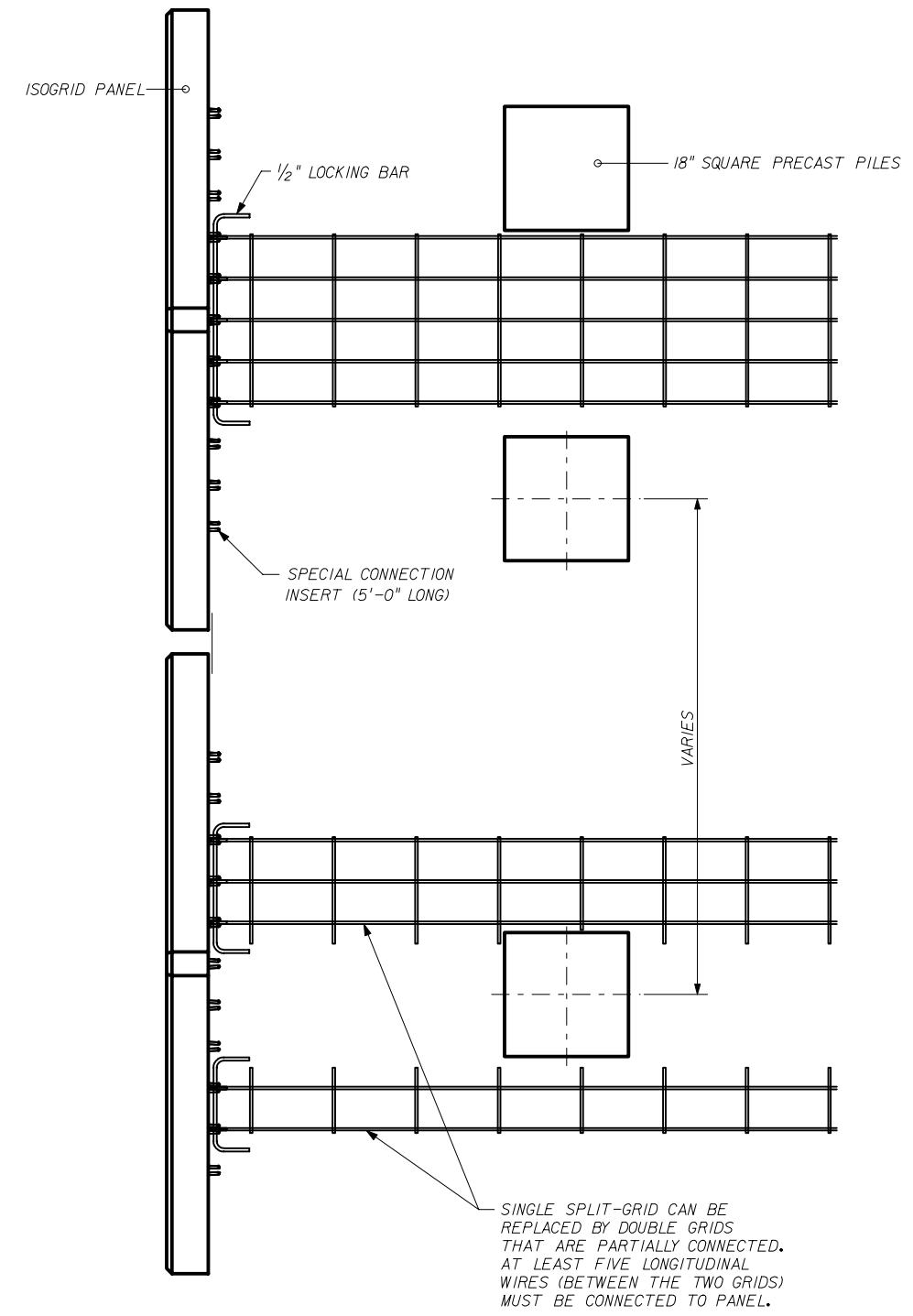
**DESIGNER:**  

**THE NEEL COMPANY**  
 8328-D TRAFORD LANE  
 SPRINGFIELD, VIRGINIA 22152  
 PH: (703) 913-7858  
 FX: (703) 913-7859

**PRECASTER:**  
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SECTION THRU ABUTMENT




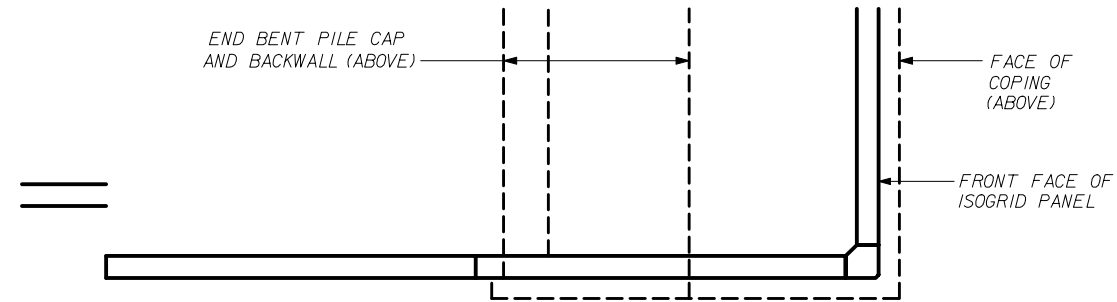
PLAN VIEW OF GRID/PILE ARRANGEMENT

DESIGNER:  

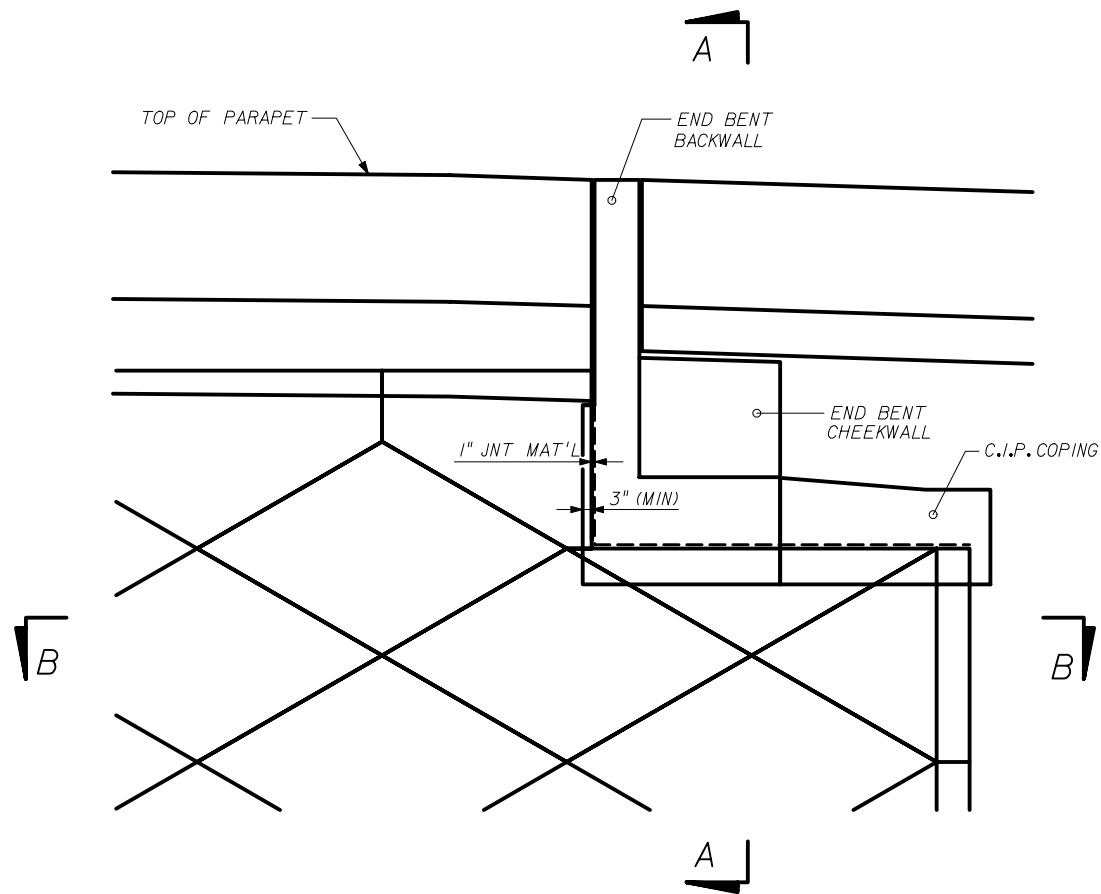
**THE NEEL COMPANY**  
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 SPRINGFIELD, VIRGINIA 22152  
 PH: (703) 913-7858  
 FX: (703) 913-7859

PRECASTER:  
**OLDCASTLE PRECAST, INC**  
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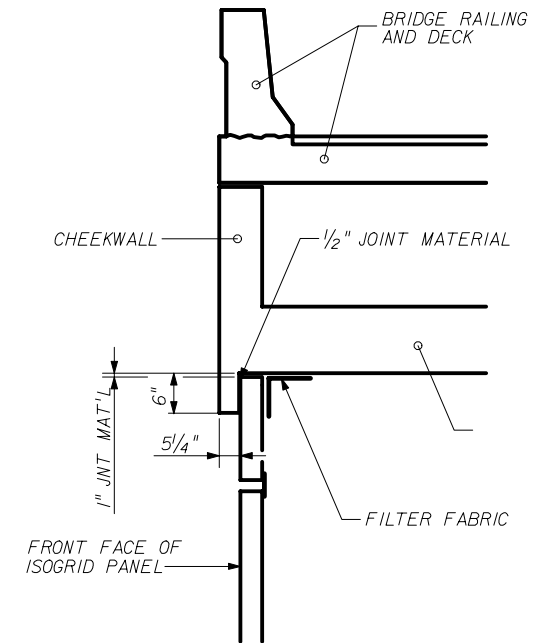
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION |       |   |                                  |                   |
| <b>RETAINING WALL SYSTEM</b>                  |       |   |                                  |                   |
| <b>THE NEEL COMPANY ISOGRID</b>               |       |   |                                  |                   |
| Names   | Dates | Approved By  |                                  |                   |
| Designed By                                   | JMC   | 10/01/98  | State Structures Design Engineer |                   |
| Drawn By                                      | CAA   | 10/01/98  | Revision                         | Sheet No.         |
| Checked By                                    | JMC   | 10/01/98  | 04                               | 14 of 20          |
|   |       |   |                                  | Index No.<br>5012 |



SECTION B-B  
STEM / END BENT PILE INTERFACE



PART ELEVATION SHOWING  
WINGWALL / END BENT INTERFACE




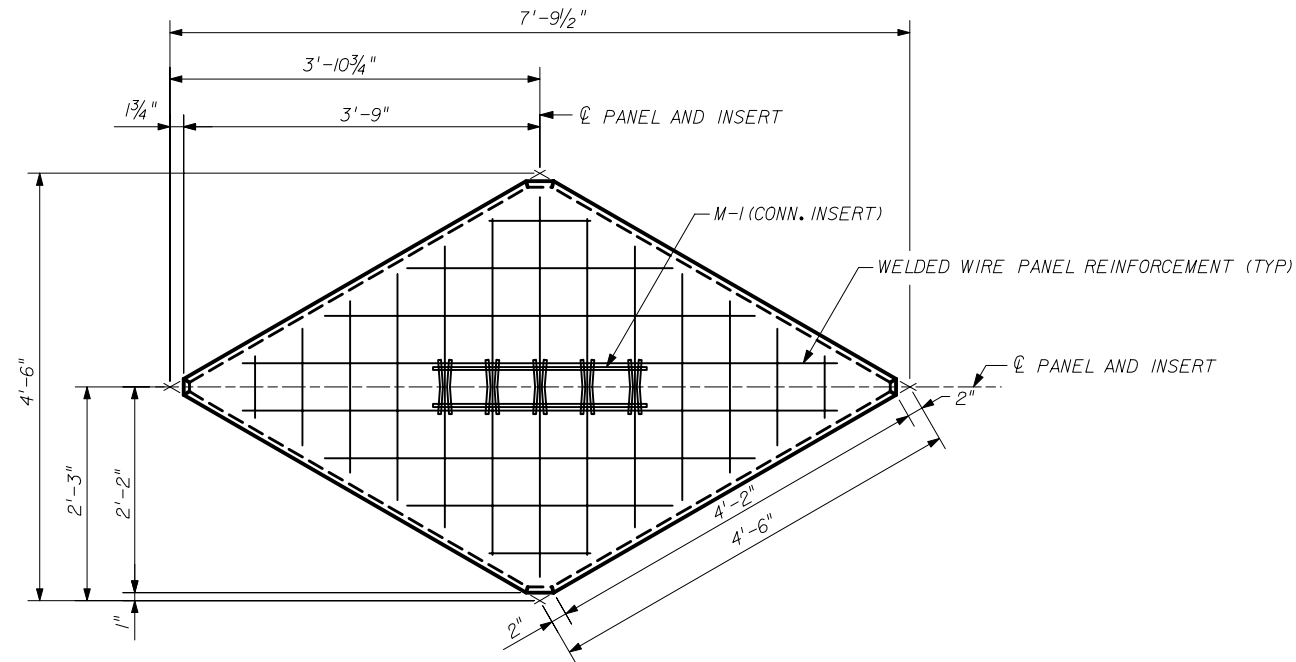
SECTION A-A  
SECTION THRU PILE CAP

DESIGNER:  

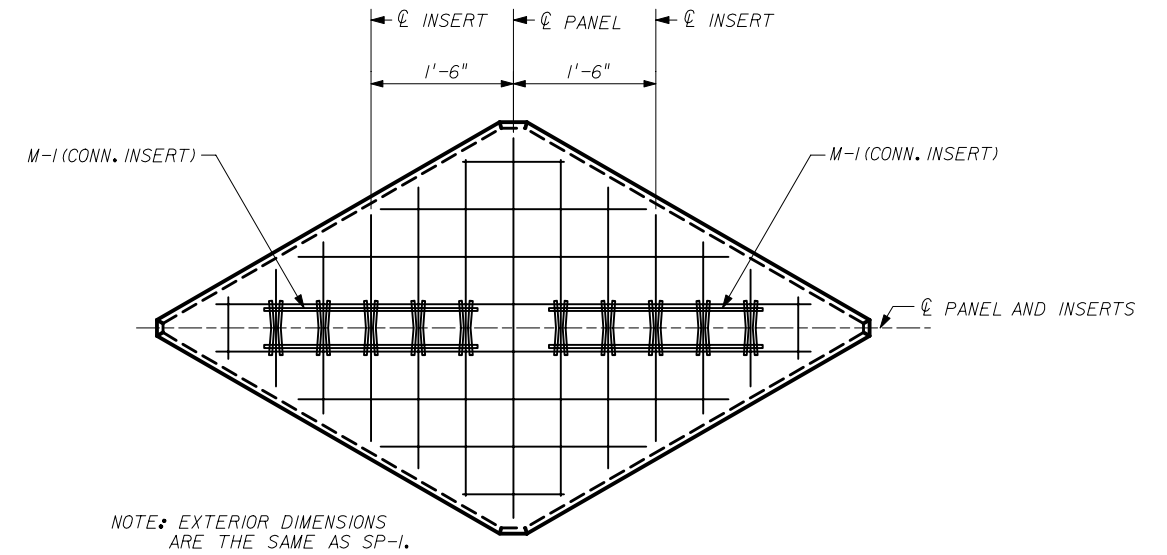
**THE NEEL COMPANY**  
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 SPRINGFIELD, VIRGINIA 22152  
 PH: (703) 913-7858  
 FX: (703) 913-7859

PRECASTER:  
**OLDCASTLE PRECAST, INC**  
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 JACKSONVILLE, FL 32219  
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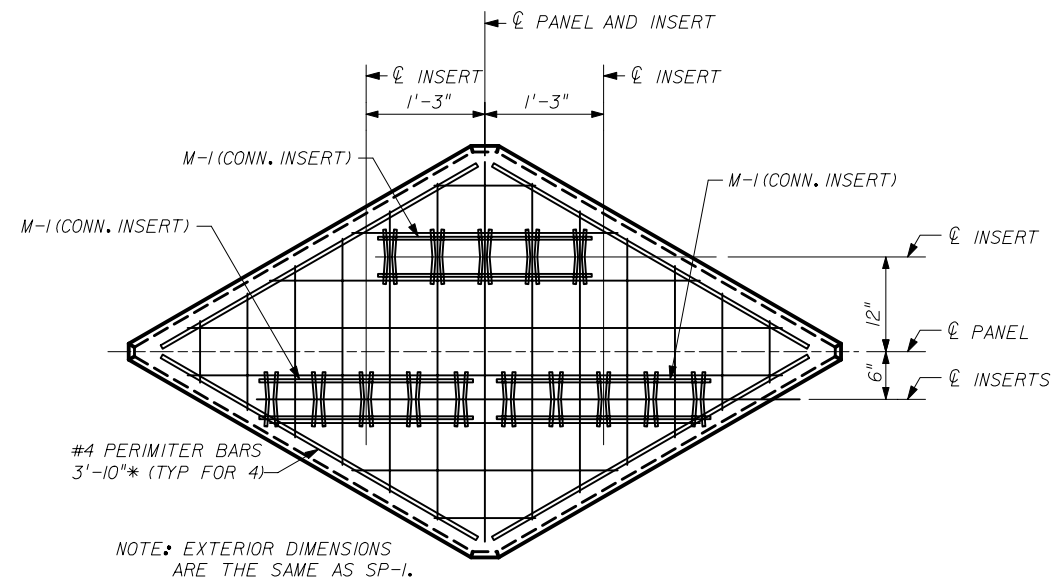
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| RETAINING WALL SYSTEM<br>THE NEEL COMPANY ISOGRID |       |   |                                  |                     |
| Names   | Dates | Approved By  |                                  |                     |
| Designed By                                       | JMC   | 10/01/98  | State Structures Design Engineer |                     |
| Drawn By  | CAA   | 10/01/98  | Revision                         | Sheet No. Index No. |
| Checked By  | JMC   | 10/01/98  | 04                               | 15 of 20 5012       |



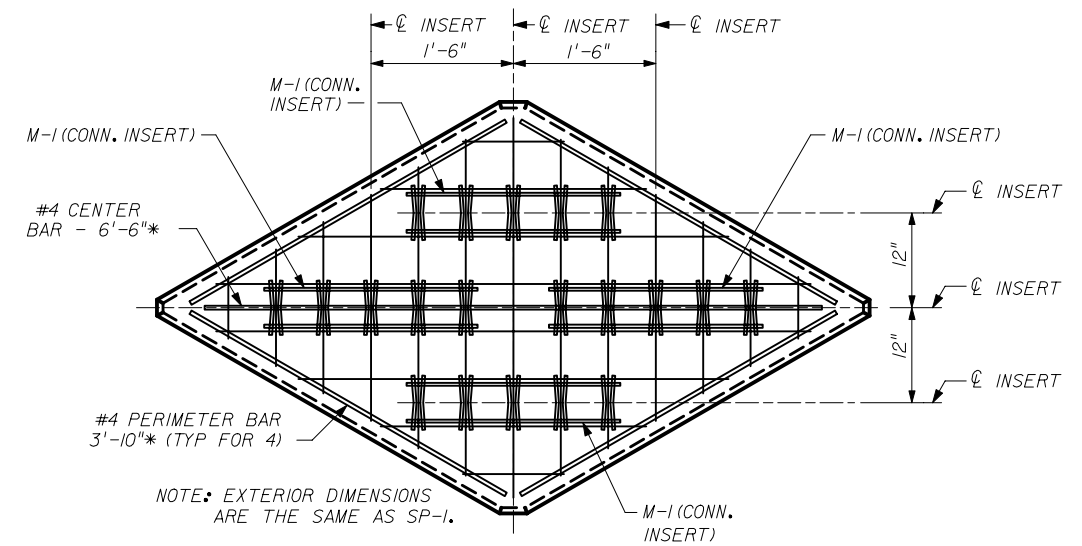
**SP-1**  
FULL-SIZE PANEL - ONE GRID  
ELEVATION (REAR FACE)



**SP-2**  
FULL-SIZE PANEL - TWO GRIDS  
ELEVATION (REAR FACE)



**SP-3**  
FULL-SIZE PANEL - THREE GRIDS  
ELEVATION (REAR FACE)



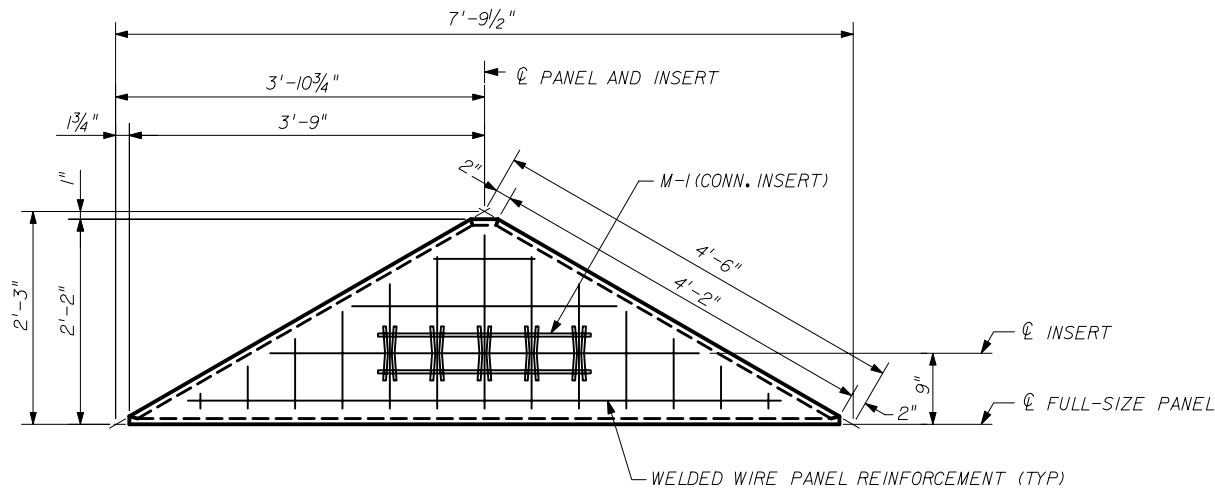
**SP-4**  
FULL-SIZE PANEL - FOUR GRIDS  
ELEVATION (REAR FACE)

DESIGNER:  
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FX: (703) 913-7859

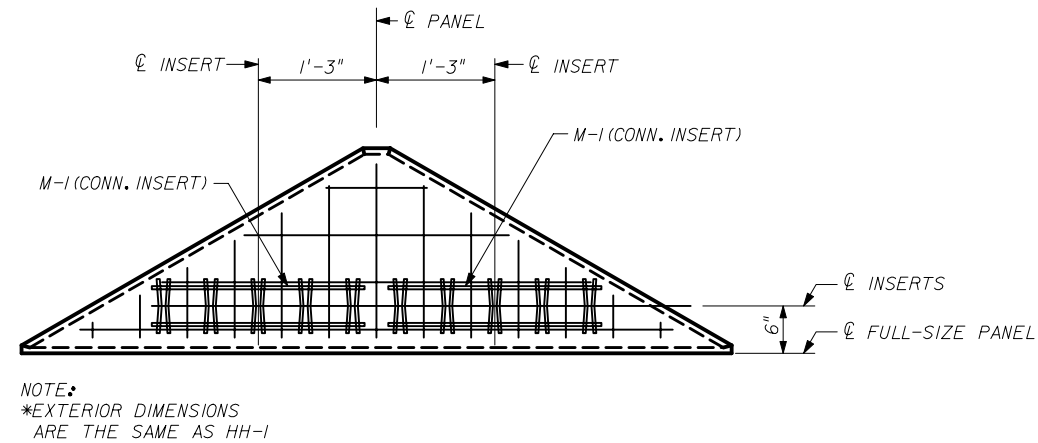
PRECASTER:  
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JACKSONVILLE, FL 32219  
PH: (904) 768-7081  
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NOTE: FOR MATERIALS NOTES, SEE SHEET 2.

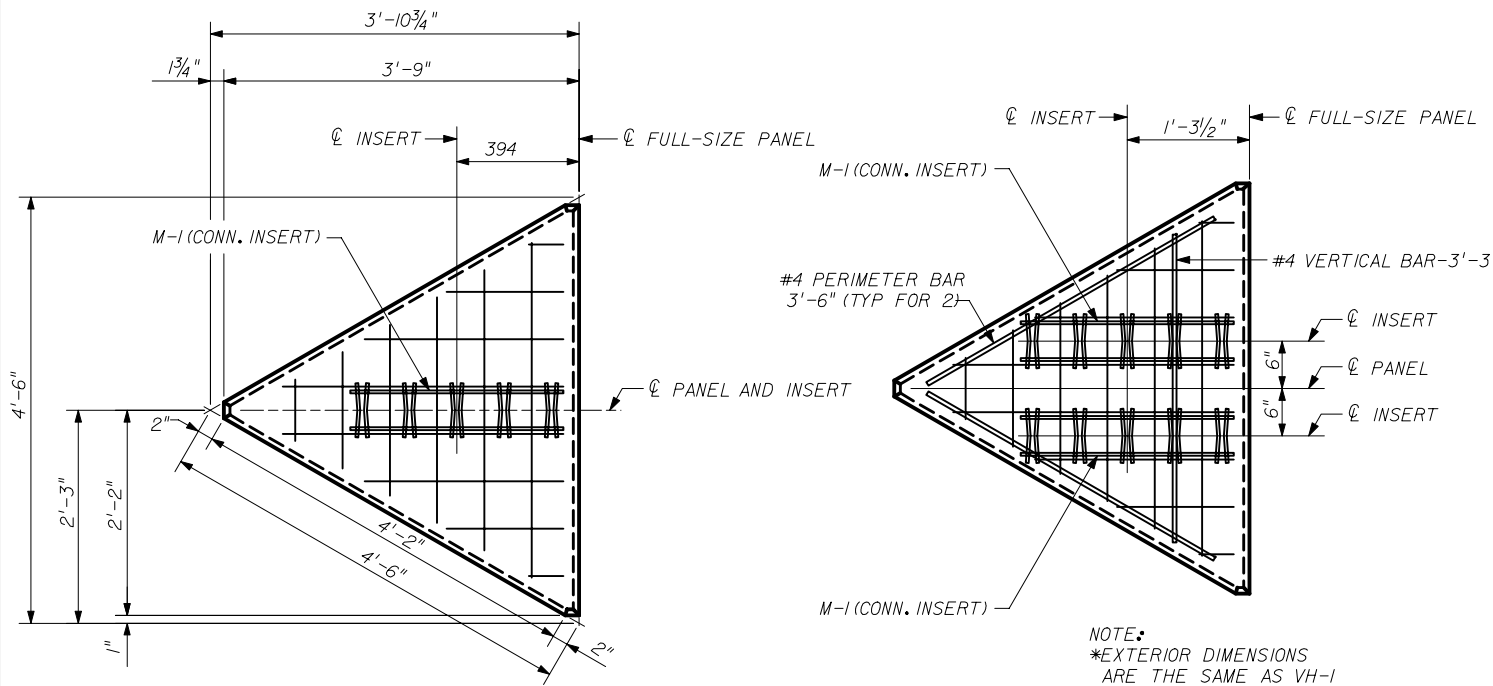
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| RETAINING WALL SYSTEM<br>THE NEEL COMPANY ISOGRID |       |             |                                      |           |
| Names   | Dates | Approved By |                                      |           |
| Designed By                                       | JMC   | 10/01/98    | <br>State Structures Design Engineer |           |
| Drawn By  | CAA   | 10/01/98    |                                      |           |
| Checked By  | JMC   | 10/01/98    | Revision                             | Sheet No. |
|   |       |             | 04                                   | 16 of 20  |
|   |       |             |                                      | Index No. |
|   |       |             |                                      | 5012      |



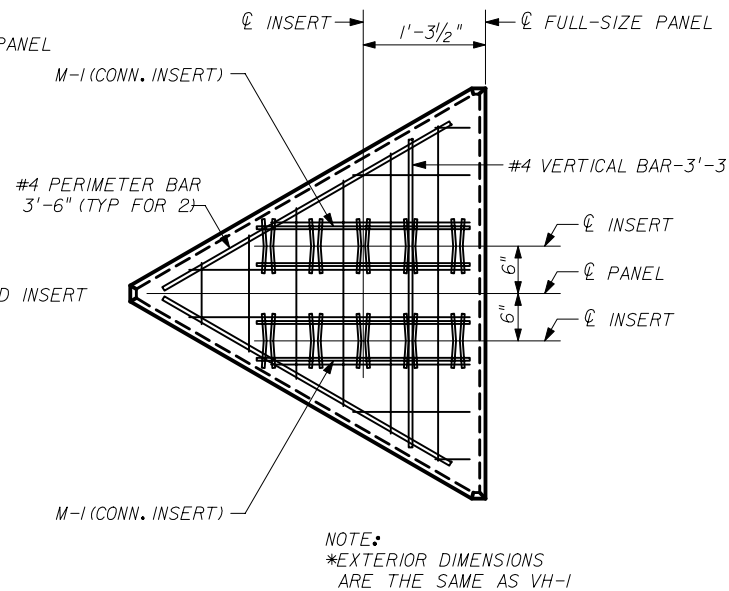
**HH-1**  
HORIZ.-HALF PANEL - ONE GRID  
ELEVATION (REAR FACE)



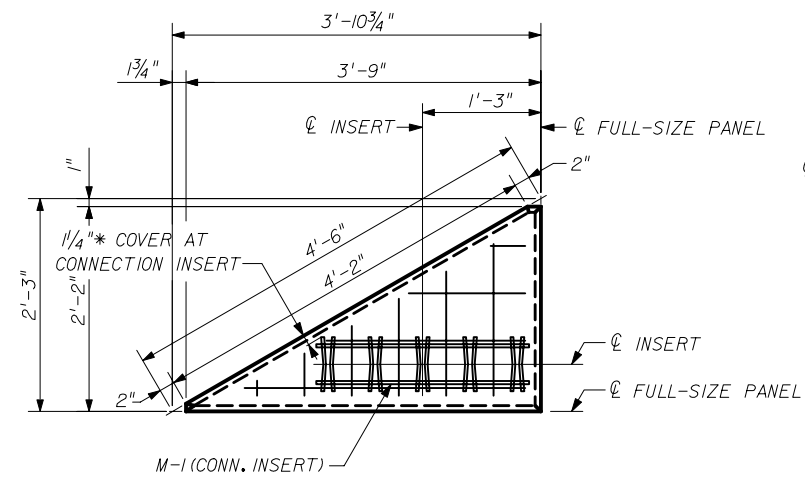
**HH-2**  
HORIZ.-HALF PANEL - TWO GRIDS  
ELEVATION (REAR FACE)



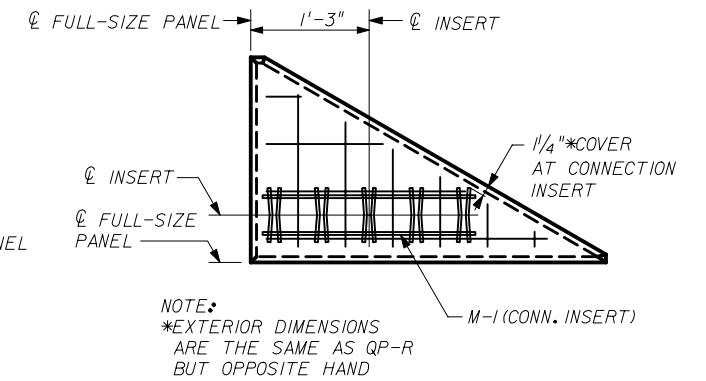
**VH-1**  
VERT.-HALF PANEL - ONE GRID  
ELEVATION (REAR FACE)



**VH-2**  
VERT.-HALF PANEL - TWO GRIDS  
ELEVATION (REAR FACE)



**QP-R**  
TOP RIGHT / BOTTOM LEFT  
QUARTER PANEL - ONE GRID  
ELEVATION (REAR FACE)



**QP-L**  
TOP LEFT / BOTTOM RIGHT  
QUARTER PANEL - ONE GRID  
ELEVATION (REAR FACE)

DESIGNER:  
**THE NEEL COMPANY**  
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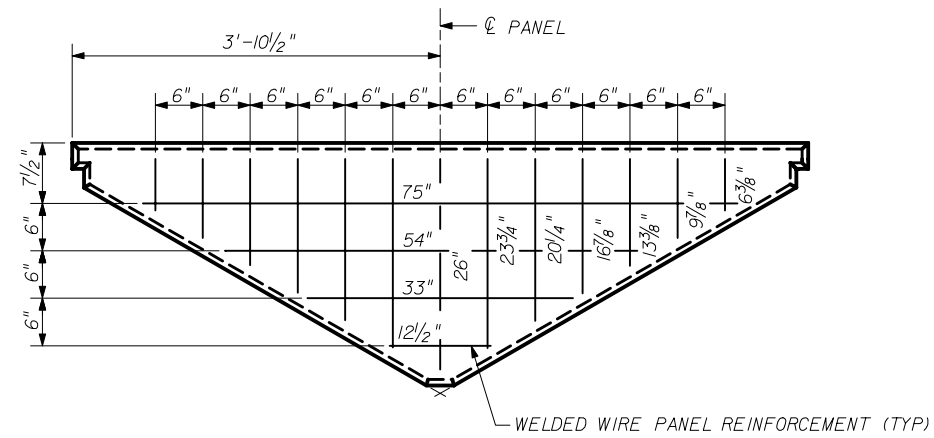
PRECASTER:  
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5995 SOUTEL DR.  
JACKSONVILLE, FL 32219  
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FX: (904) 768-8428

NOTE: FOR MATERIALS NOTES, SEE SHEET 2.

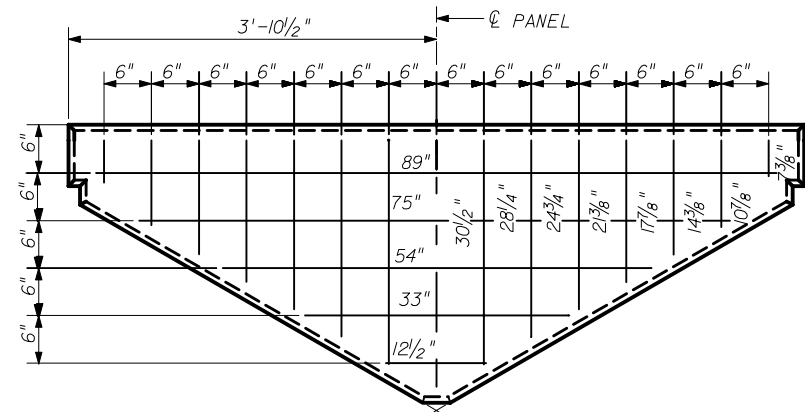
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

RETAINING WALL SYSTEM  
THE NEEL COMPANY ISOGRID

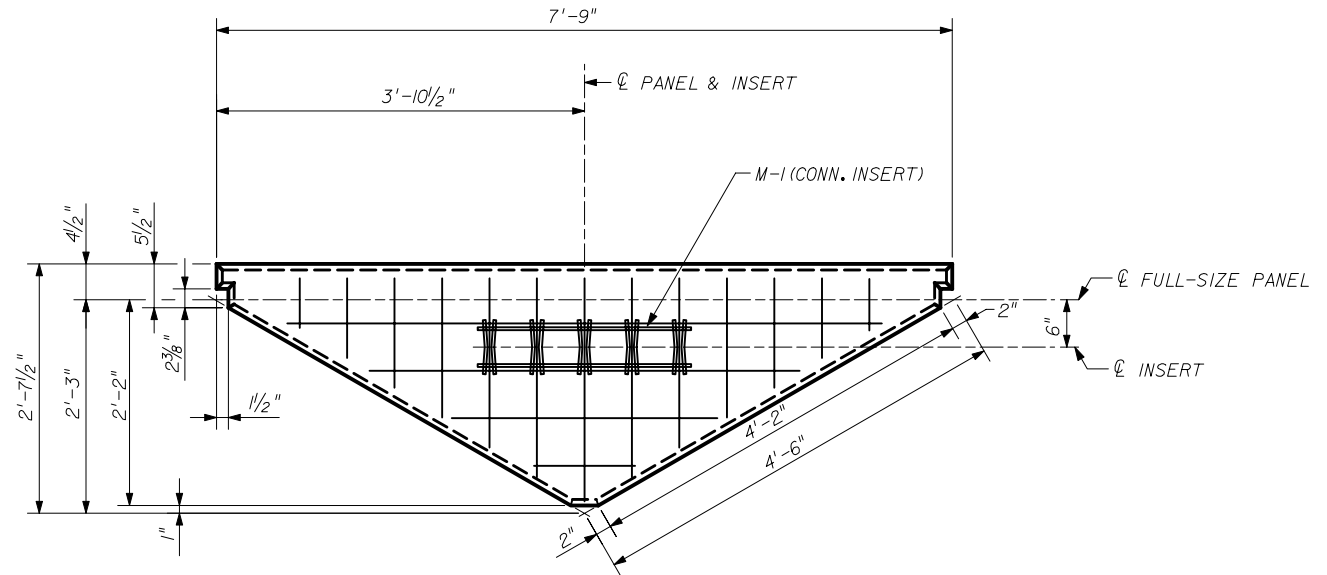
| Names       | Dates | Approved By |                   |                   |
|-------------|-------|-------------|-------------------|-------------------|
| Designed By | JMC   | 10/01/98    | W. J. [Signature] |                   |
| Drawn By    | CAA   | 03/20/98    | Revision          | Sheet No.         |
| Checked By  | JMC   | 10/01/98    | 04                | 17 of 20          |
|             |       |             |                   | Index No.<br>5012 |



WELDED WIRE MESH PANEL REINFORCEMENT - X-1 PANEL  
ELEVATION (REAR FACE)

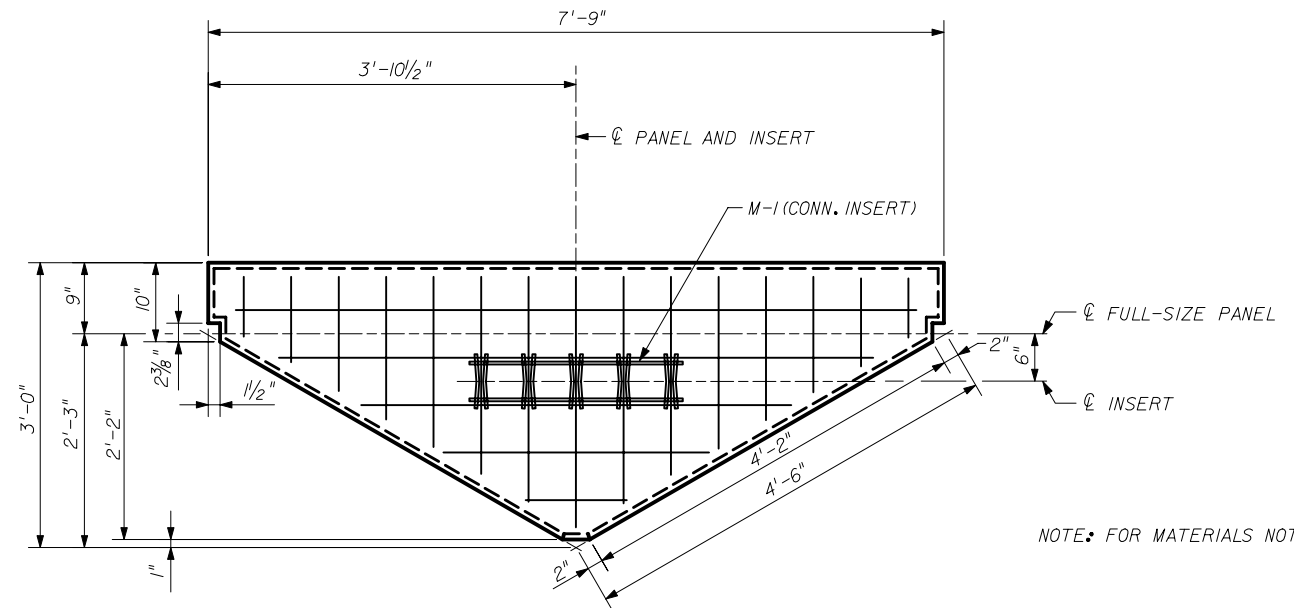


WELDED WIRE MESH PANEL REINFORCEMENT - X-2 PANEL  
ELEVATION (REAR FACE)



X-1  
4 1/2" RISER - ONE GRID

ELEVATION (REAR FACE)



X-2  
9" RISER PANEL - ONE GRID  
ELEVATION (REAR FACE)

NOTE: FOR MATERIALS NOTES, SEE SHEET 2.

DESIGNER:  
 THE NEEL COMPANY  
8328-D TRAFORD LANE  
SPRINGFIELD, VIRGINIA 22152  
PH: (703) 913-7858  
FX: (703) 913-7859

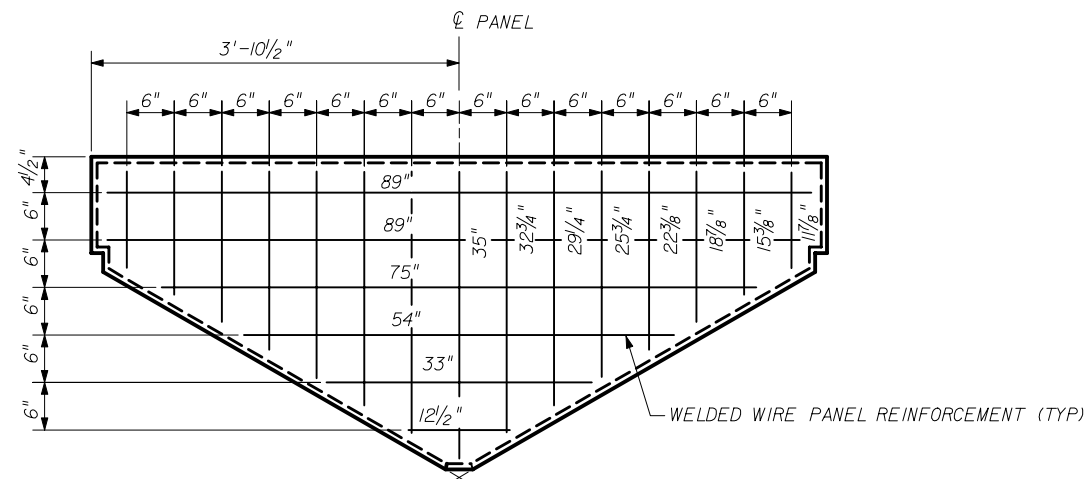
PRECASTER:  
OLDCASTLE PRECAST, INC.  
5995 SOUTEL DR.  
JACKSONVILLE, FL 32219  
PH: (904) 768-7081  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

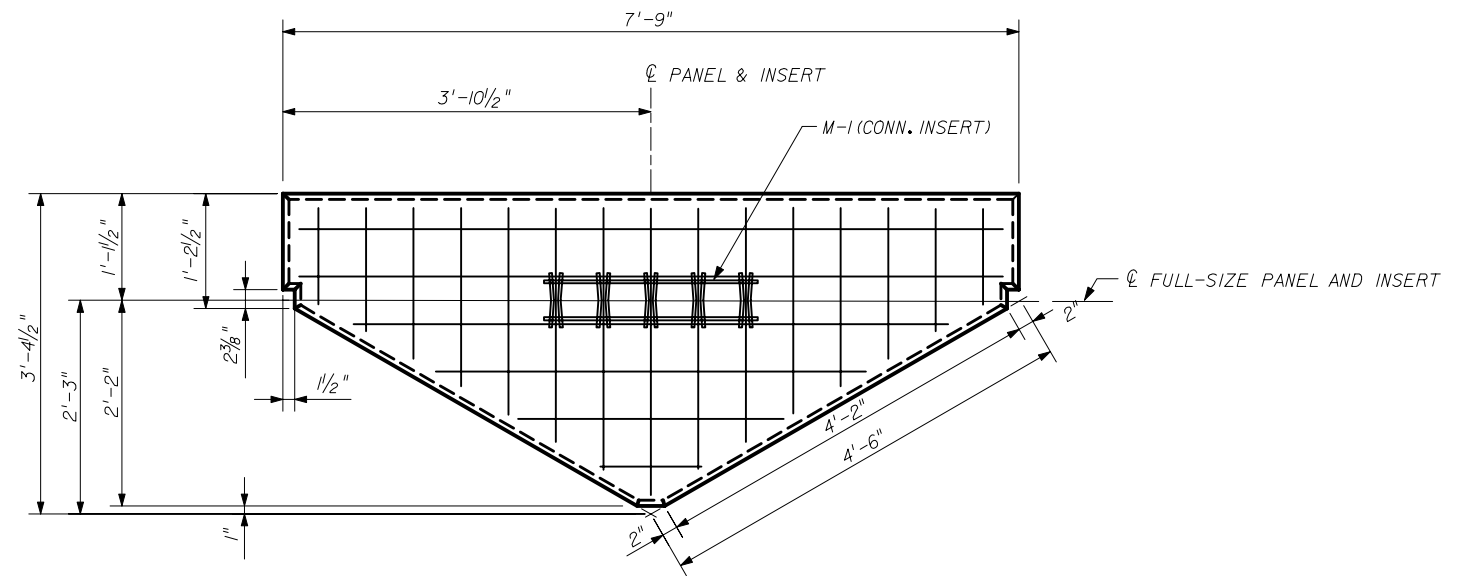
RETAINING WALL SYSTEM  
THE NEEL COMPANY ISOGRID

| Names       | Dates | Approved By |                   |                   |
|-------------|-------|-------------|-------------------|-------------------|
| Designed By | JMC   | 10/01/98    | W. J. [Signature] |                   |
| Drawn By    | CAA   | 10/01/98    | Revision          | Sheet No.         |
| Checked By  | JMC   | 10/01/98    | 04                | 18 of 20          |
|             |       |             |                   | Index No.<br>5012 |

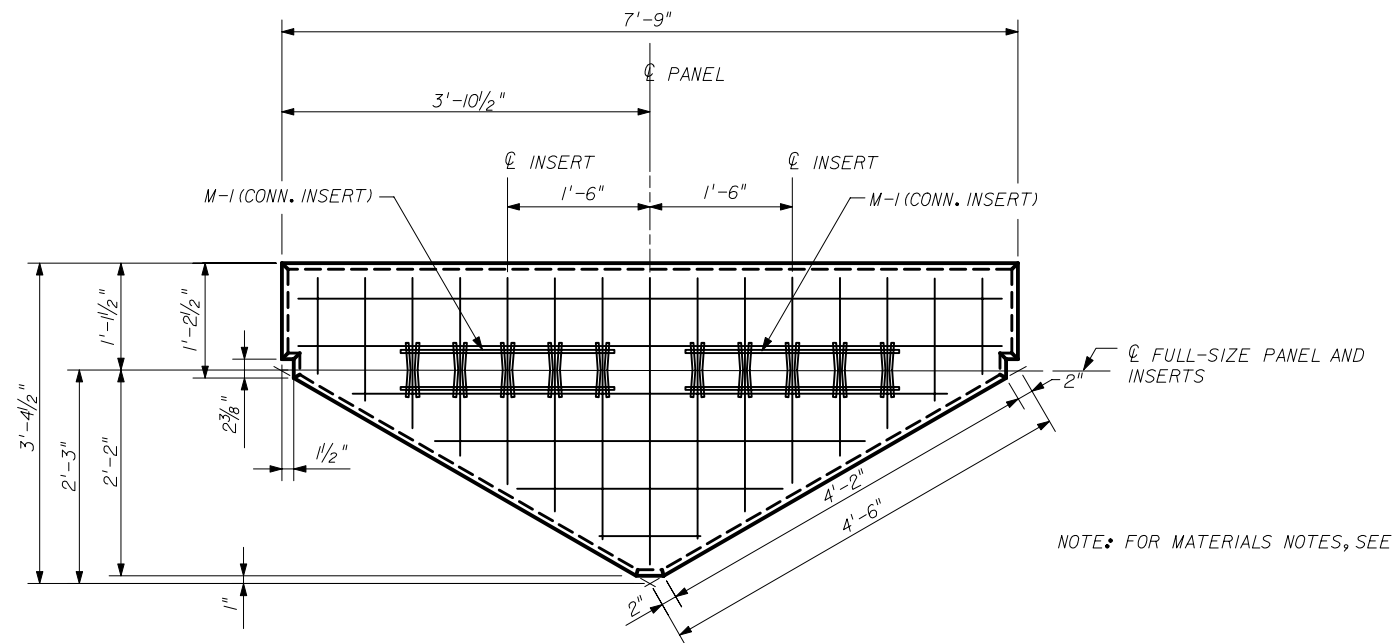




WELDED WIRE MESH PANEL REINFORCEMENT - X-3 AND X-3(2) PANELS  
ELEVATION (REAR FACE)



X-3  
13 1/2" RISER - ONE GRID  
ELEVATION (REAR FACE)




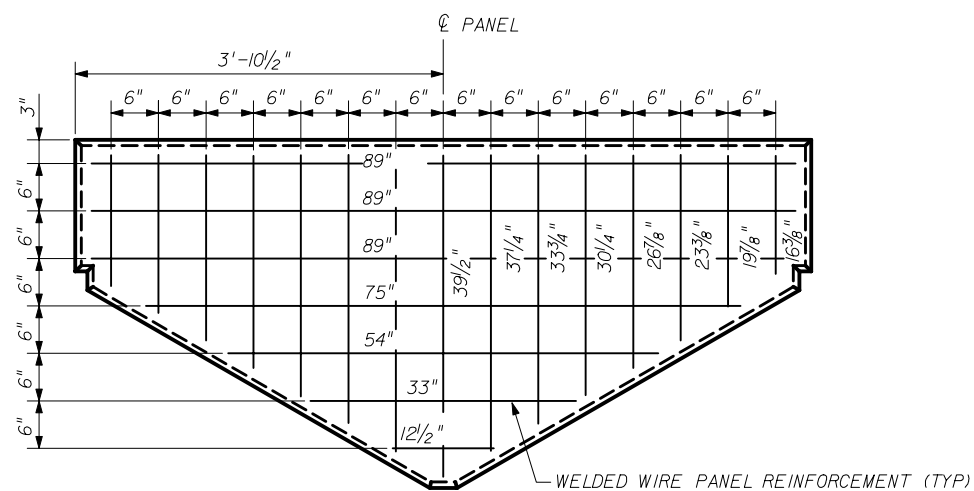
X-3 (2)  
13 1/2" RISER - TWO GRIDS  
ELEVATION (REAR FACE)

NOTE: FOR MATERIALS NOTES, SEE SHEET 2.

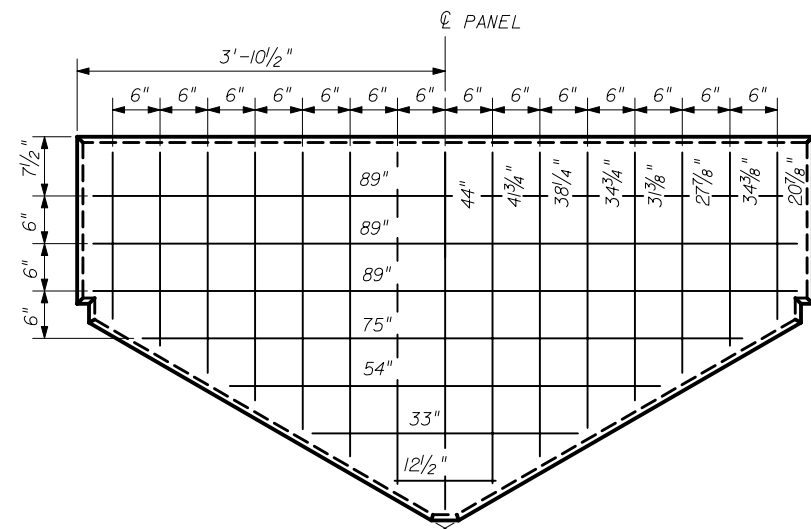
DESIGNER:  
**THE NEEL COMPANY**  
8328-D TRAFORD LANE  
SPRINGFIELD, VIRGINIA 22152  
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FX: (703) 913-7859

PRECASTER:  
**OLDCASTLE PRECAST, INC**  
5995 SOUTEL DR.  
JACKSONVILLE, FL 32219  
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FX: (904) 768-8428

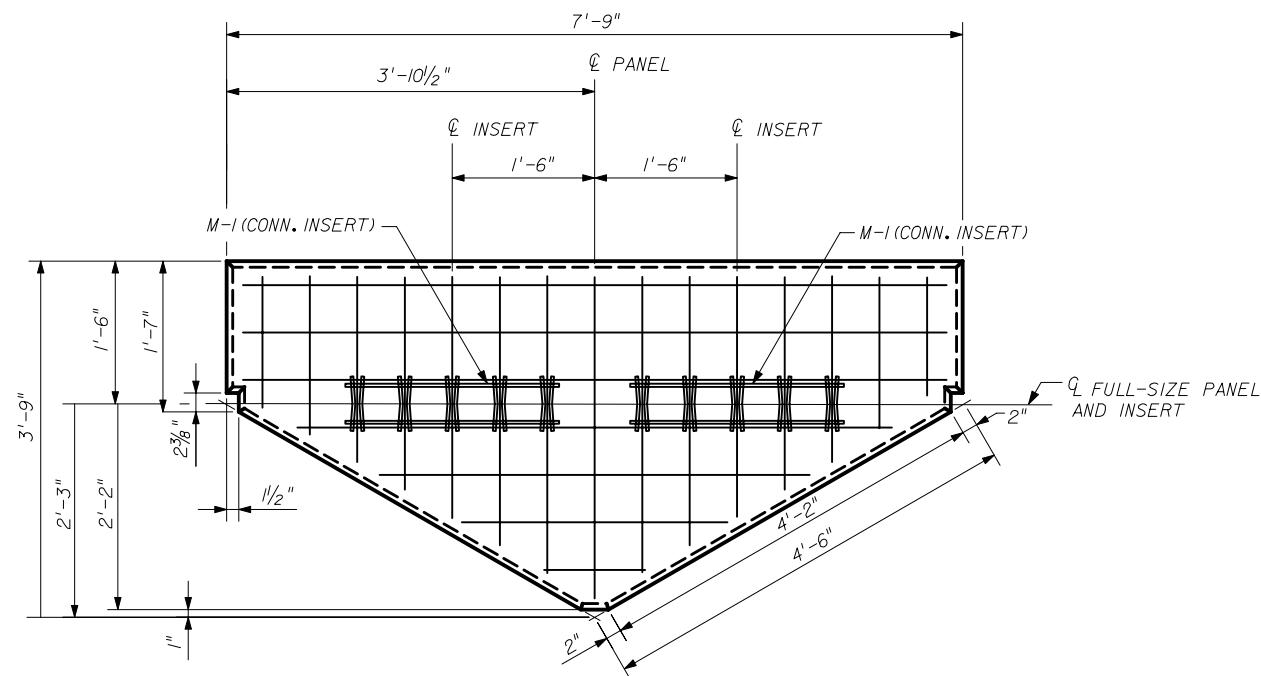
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|---|-------|-------------|---|-----------|
| RETAINING WALL SYSTEM<br>THE NEEL COMPANY ISOGRID |       |             |   |           |
| Names   | Dates | Approved By |   |           |
| Designed By                                       | JMC   | 10/01/98    | <br>State Structures Design Engineer |           |
| Drawn By  | CAA   | 10/01/98    |   |           |
| Checked By  | JMC   | 10/01/98    |   |           |
| Revision  | 04    | 19 of 20    | Sheet No.   | Index No. |
|   |       |             |   | 5012      |



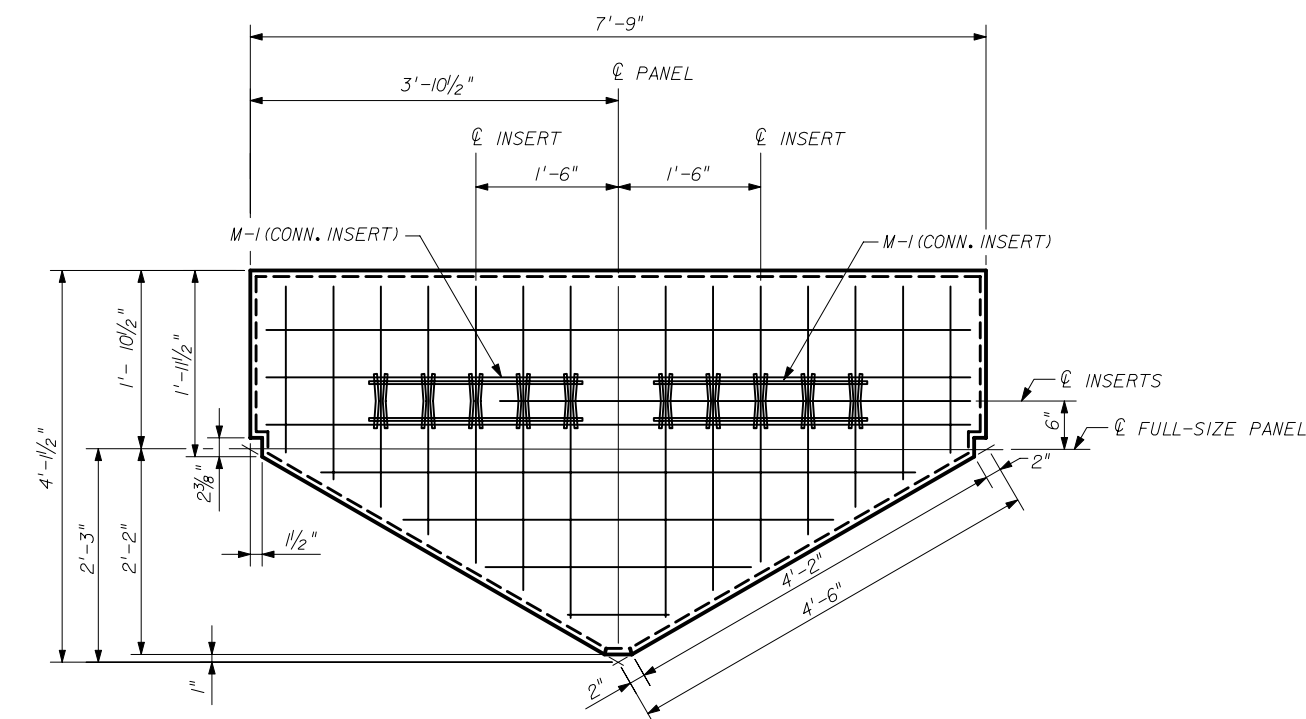
WELDED WIRE MESH PANEL REINFORCEMENT - X-4 PANEL  
ELEVATION (REAR FACE)




WELDED WIRE MESH PANEL REINFORCEMENT - X-5 PANEL  
ELEVATION (REAR FACE)



X-4  
18" RISER - TWO GRIDS  
ELEVATION (REAR FACE)




X-5  
22 1/2" RISER - TWO GRIDS  
ELEVATION (REAR FACE)

DESIGNER:  
 THE NEEL COMPANY  
8328-D TRAFORD LANE  
SPRINGFIELD, VIRGINIA 22152  
PH: (703) 913-7858  
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PRECASTER:  
OLDCASTLE PRECAST, INC  
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JACKSONVILLE, FL 32219  
PH: (904) 768-7081  
FX: (904) 768-8428

NOTE: FOR MATERIALS NOTES, SEE SHEET 2.

|   |       |   |                                  |           |
|---|-------|---|----------------------------------|-----------|
| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION     |       |   |                                  |           |
| RETAINING WALL SYSTEM<br>THE NEEL COMPANY ISOGRID |       |   |                                  |           |
| Names   | Dates | Approved By  |                                  |           |
| Designed By                                       | JMC   | 10/01/98  | State Structures Design Engineer |           |
| Drawn By  | CAA   | 10/01/98  | Revision                         | Sheet No. |
| Checked By  | JMC   | 10/01/98  | 04                               | 20 of 20  |
|   |       |   | Index No.                        | 5012      |