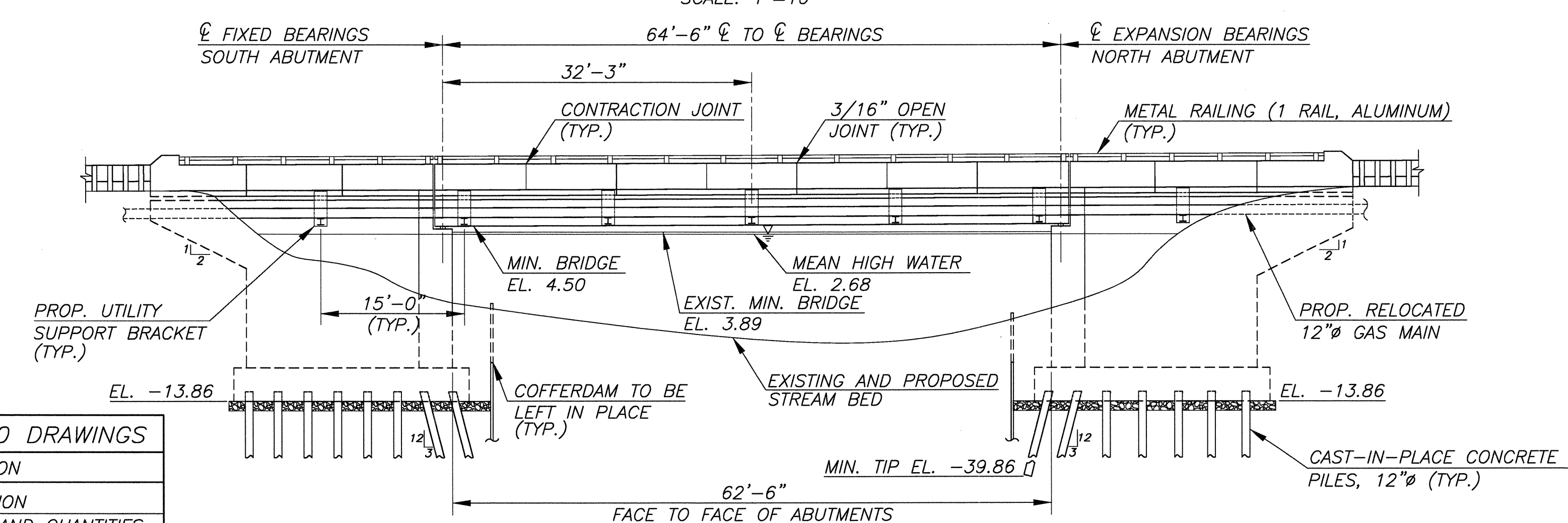


**PLAN**  
SCALE: 1"=10'



**ELEVATION**  
SCALE: 1"=10'

| INDEX OF BRIDGE NO. 45A010 DRAWINGS |  |
|-------------------------------------|--|
| NO.                                 | DESCRIPTION                            |
| B1                                  | GENERAL PLAN AND ELEVATION             |
| B2                                  | SECTION, WORKING POINTS AND QUANTITIES |
| B3                                  | CONSTRUCTION STAGING SECTIONS          |
| B4                                  | CONSTRUCTION STAGING PLAN (1 OF 2)     |
| B5                                  | CONSTRUCTION STAGING PLAN (2 OF 2)     |
| B6                                  | PILE PLAN                              |
| B7                                  | FOOTING PLAN                           |
| B8                                  | SOUTH ABUTMENT                         |
| B9                                  | NORTH ABUTMENT                         |
| B10                                 | WINGWALLS                              |
| B11                                 | SUBSTRUCTURE DETAILS                   |
| B12                                 | FRAMING PLAN                           |
| B13                                 | BII-36 BEAM DETAILS                    |
| B14                                 | BII-48 BEAM DETAILS                    |
| B15                                 | SUPERSTRUCTURE DETAILS                 |
| B16                                 | DECK PLAN AND SECTION                  |
| B17                                 | DECK JOINT DETAILS                     |
| B18                                 | RAILING DETAILS                        |
| B19                                 | PARAPET AND MISCELLANEOUS DETAILS      |
| B20                                 | UTILITY SUPPORT BRACKET DETAILS        |
| B21                                 | PRECAST DECK PLAN & DETAILS            |

**GENERAL NOTES:**

- DESIGN SPECIFICATIONS**
  - 2004 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (3RD EDITION WITH CURRENT INTERIMS) AS MODIFIED BY SECTION 3 OF THE NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES.
- CONSTRUCTION SPECIFICATIONS**
  - 2001 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS.
- LIVE LOAD**

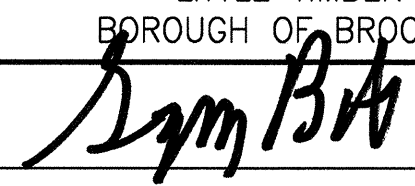

AASHTO LRFD HL-93. VEHICULAR LIVE LOADING OR NJDOT PERMIT VEHICLE, WHICHEVER GOVERNS.
- CONCRETE DESIGN STRESSES**
  - SPECIFIED DESIGN COMPRESSIVE STRENGTH ( $f'_c$ ) (IN ACCORDANCE WITH THE RETEST LIMIT FOR PAY-ADJUSTMENT ITEMS AS SPECIFIED IN TABLE 914-4 OF THE NJDOT STANDARD SPECIFICATIONS AND AS MODIFIED BY THE SPECIAL PROVISIONS).
    - CLASS A.....4,000 PSI
    - CLASS B.....3,000 PSI
 (THE RETEST LIMIT FOR NON-PAY-ADJUSTMENT ITEMS SHALL BE AS SPECIFIED ON THE LAST LINE OF TABLE 914-4 OF THE NJDOT STANDARD SPECIFICATIONS AND AS MODIFIED BY THE SPECIAL PROVISIONS).
  - CLASS DESIGN STRENGTHS (IN ACCORDANCE WITH TABLE 914-3 OF THE NJDOT STANDARD SPECIFICATIONS).
    - CLASS A.....4,600 PSI
    - CLASS B.....3,700 PSI
  - ALLOWABLE STRESSES, EXTREME FIBER IN COMPRESSION ( $f_c$ )
    - CLASS A.....1,600 PSI
    - DECK SLABS OF VEHICULAR BRIDGES.....1,400 PSI
    - CLASS B.....1,200 PSI
  - CONCRETE PROVIDED FOR FOOTINGS, ABUTMENT WALLS AND RETAINING WALLS SHALL BE CLASS B. PRESTRESSED CONCRETE BOX BEAMS SHALL BE CLASS P. ALL OTHER CONCRETE SHALL BE CLASS A.
- REINFORCEMENT STEEL**
  - ASTM A615 (GRADE 60)  $f_s=24,000$  PSI
  - ALL REINFORCEMENT STEEL TO BE HOT-DIP GALVANIZED.
- SUPERSTRUCTURE**
  - DEAD LOAD INCLUDES 25 LBS./S.F. PROVISION FOR FUTURE 2" THICK OVERLAY ON BRIDGE DECK.
  - SEE PRESTRESSED CONCRETE BEAM SHEETS FOR DETAILS AND NOTES.
  - CHAMFER ALL EXPOSED CONCRETE EDGES 3/4"x3/4" UNLESS OTHERWISE NOTED.
- SEISMIC DESIGN**
  - SEISMIC PERFORMANCE CATEGORY (SPC) B
  - ACCELERATION COEFFICIENT  $A=0.15$
  - SITE COEFFICIENT  $S=1.0$
- BORINGS**
  - INDICATES LOCATION OF BORINGS.
  - LOG NO.
- FOUNDATION**
  - ABUTMENTS AND WINGWALLS SHALL BE FOUNDED ON CAST-IN-PLACE CONCRETE PILES, 12" DIAMETER WITH 45 TON ALLOWABLE CAPACITY.
- SURVEY DATUM**
  - HORIZONTAL DATUM: NJ STATE COORDINATE PLANE
  - VERTICAL DATUM: NAVD 88
  - DATUM CONVERSION: NAVD 88+1.17=NGVD 29
- UTILITIES**
  - CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES TO COORDINATE AND SCHEDULE RELOCATION OF UTILITIES.
- EXISTING CONDITIONS**
  - THE CONTRACTOR SHALL EXAMINE AND VERIFY IN THE FIELD ALL EXISTING CONDITIONS AND DIMENSIONS WITH THOSE SHOWN ON THE PLANS. IF FIELD CONDITIONS AND DIMENSIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL USE THE FIELD CONDITIONS AND DIMENSIONS AND MAKE THE APPROPRIATE CHANGES TO THOSE SHOWN ON THE PLANS AS APPROVED BY THE ENGINEER. THE RESULTS OF THIS CHECK OF CONDITIONS AND DIMENSIONS SHALL BE SO NOTED ON THE DRAWINGS AND SUBMITTED FOR APPROVAL.
- COFFERDAM DEWATERING**
  - ALL DISCHARGE FROM THE DEWATERING OF THE SOUTH ABUTMENT COFFERDAM SHALL BE ROUTED INTO THE CAMDEN COUNTY MUNICIPAL UTILITIES AUTHORITY (CCMUA) SANITARY SEWER THROUGH MANHOLES LOCATED AT THE SOUTHEAST EMBANKMENT. NO SPECIAL MEASURES SHALL BE TAKEN FOR THE NORTH ABUTMENT COFFERDAM DEWATERING. FOR ADDITIONAL INFORMATION, SEE SUPPLEMENTARY SPECIFICATIONS.

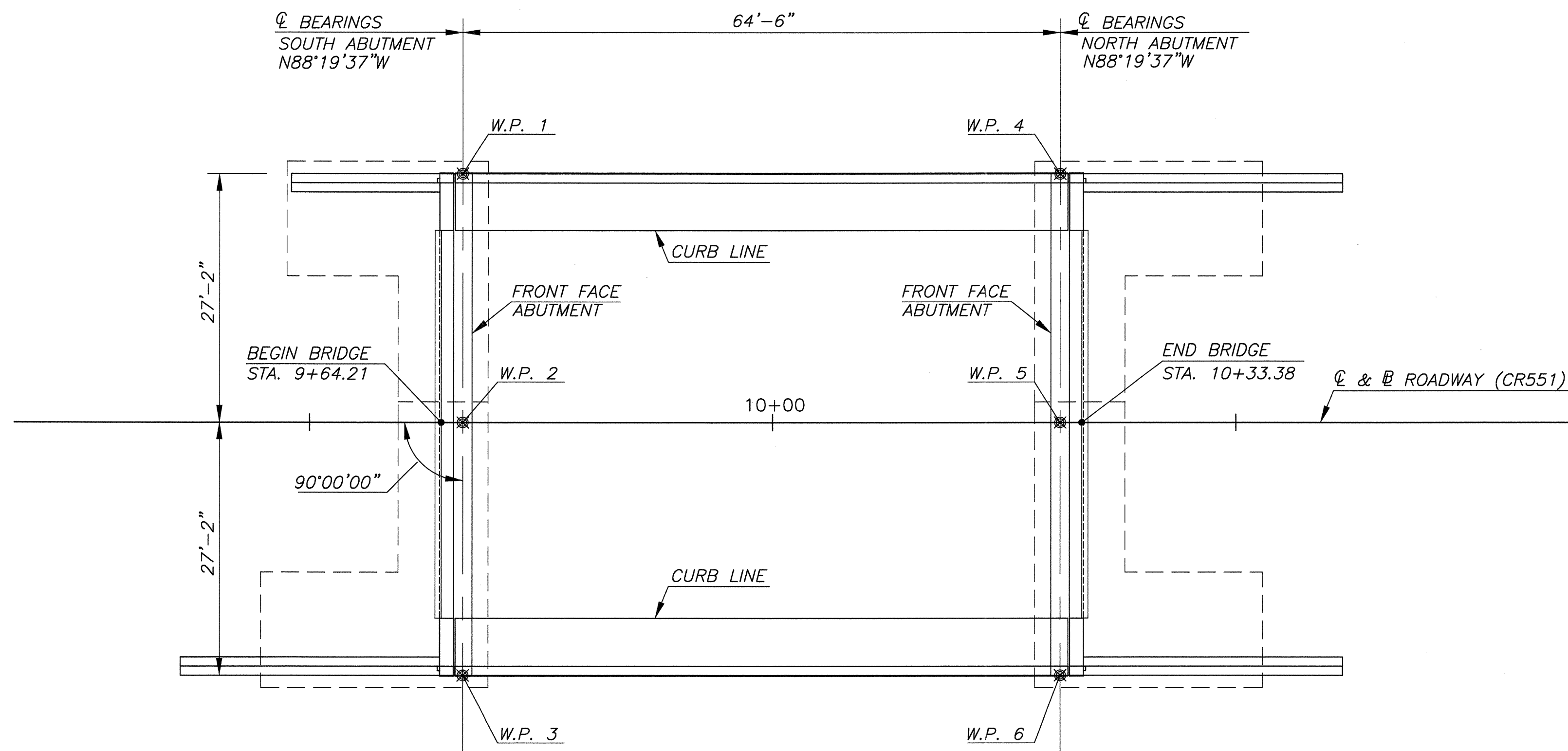
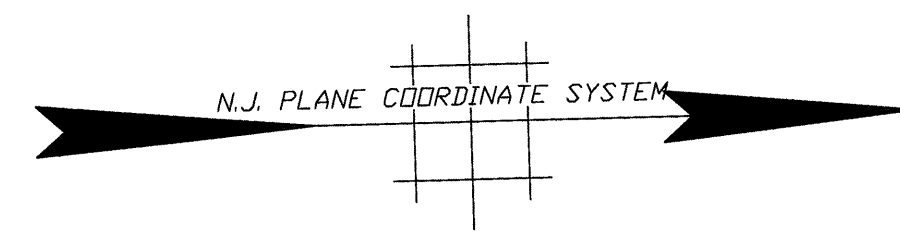
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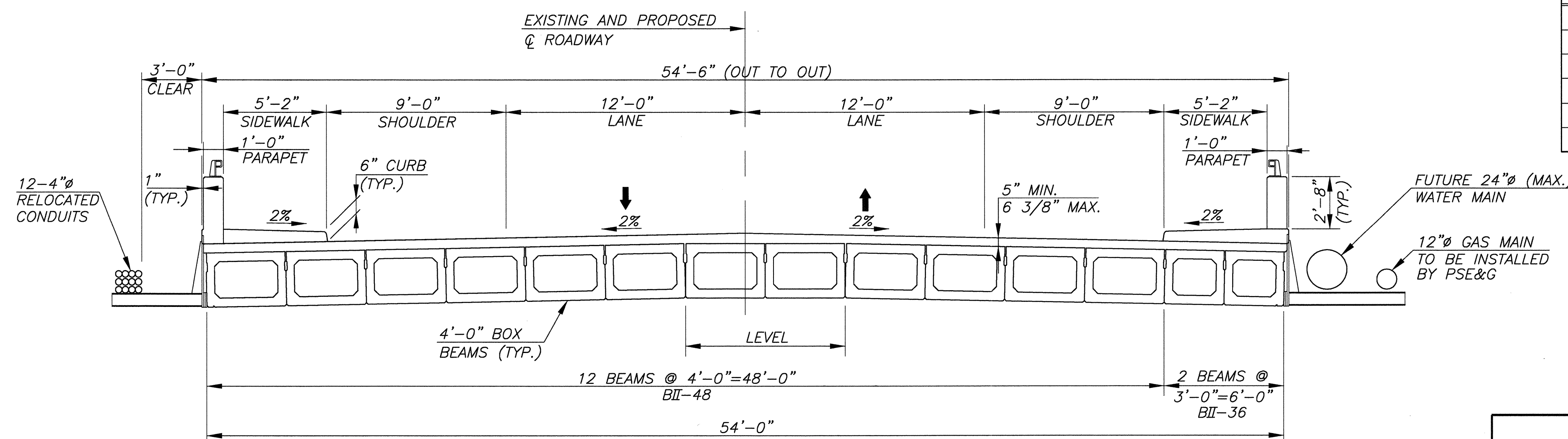
| NO.   | REVISION         | DATE                      | BY                  | CHK. BY               |
|---|------------------|---------------------------|---------------------|-----------------------|
| <b>GENERAL PLAN AND ELEVATION</b>   |                  |                           |                     |                       |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |                  |                           |                     |                       |
| <br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238   |                  |                           |                     |                       |
| <br><b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>30 GIBSON PLACE, SUITE 100<br>FREDERICK, N.J. 07728<br>PHONE (732) 303-8700 FAX (732) 303-8700 |                  |                           |                     |                       |
| SCALE:<br>NOTED   | DATE:<br>08/2011 | DRAWN BY:<br>K.W.         | DSGN. BY:<br>J.M.M. | CHK.'D BY:<br>J.M.C.  |
|   |                  | JOB NUMBER<br>NJ-C-BB-100 |                     | SHEET NO.<br>18 OF 51 |



**WORKING POINT DIAGRAM**  
SCALE: 1"=10'

| SUMMARY OF QUANTITIES |   |      |                    |                   |
|-----------------------|---|------|--------------------|-------------------|
| PAY ITEM NO.          | DESCRIPTION   | UNIT | ESTIMATED QUANTITY | AS-BUILT QUANTITY |
| 63                    | CLEARING SITE, BRIDGE                                     | LS   | LS                 |                   |
| 64                    | POROUS FILL   | CY   | 620                |                   |
| 65                    | COARSE AGGREGATE LAYER                                    | CY   | 75                 |                   |
| 66                    | FOUNDATION EXCAVATION                                     | CY   | 769                |                   |
| 67                    | FOUNDATION EXCAVATION, REGULATED WASTE                    | CY   | 735                |                   |
| 68                    | COFFERDAMS  | LS   | LS                 |                   |
| 69                    | SOUTH ABUTMENT COFFERDAMS                                 | LS   | LS                 |                   |
| 70                    | CONCRETE IN STRUCTURES, FOOTINGS                          | CY   | 214                |                   |
| 71                    | CONCRETE IN STRUCTURES, RETAINING WALLS                   | CY   | 200                |                   |
| 72                    | CONCRETE IN SUBSTRUCTURES, ABUTMENT WALLS                 | CY   | 234                |                   |
| 73                    | CONCRETE IN SUPERSTRUCTURE, DECK SLABS                    | CY   | 73                 |                   |
| 74                    | CONCRETE IN SUPERSTRUCTURE, SIDEWALKS                     | CY   | 19                 |                   |
| 75                    | CONCRETE IN SUPERSTRUCTURE, PARAPETS                      | LF   | 239                |                   |
| 76                    | REINFORCEMENT STEEL IN STRUCTURES, GALVANIZED             | LB   | 64,000             |                   |
| 77                    | EPOXY WATERPROOFING SEAL COAT                             | SY   | 31                 |                   |
| 78                    | 2 1/2" X 2 1/2" PREFORMED ELASTOMERIC JOINT SEALER        | LF   | 134                |                   |
| 79                    | SAWCUT GROOVED DECK SURFACE                               | SF   | 2,607              |                   |
| 80                    | PRESTRESSED CONCRETE BOX BEAMS, (TYPE BII-36), 36" BY 33" | LF   | 133                |                   |
| 81                    | PRESTRESSED CONCRETE BOX BEAMS, (TYPE BII-48), 48" BY 33" | LF   | 794                |                   |
| 82                    | STRUCTURAL STEEL DECK JOINTS                              | LS   | LS                 |                   |
| 83                    | TEST PILES, DRIVEN  | LF   | 360                |                   |
| 84                    | TEST PILES, FURNISHED                                     | LF   | 360                |                   |
| 85                    | CAST-IN-PLACE CONCRETE PILES, DRIVEN, 12" DIAMETER        | LF   | 5,180              |                   |
| 86                    | CAST-IN-PLACE CONCRETE PILES, FURNISHED, 12" DIAMETER     | LF   | 5,180              |                   |
| 87                    | DYNAMIC PILE LOAD TEST                                    | UNIT | 6                  |                   |
| 88                    | FURNISHING EQUIPMENT FOR DRIVING PILES                    | LS   | LS                 |                   |
| 89                    | METAL RAILING (1 RAIL, ALUMINUM)                          | LF   | 227                |                   |
| 90                    | UTILITY SUPPORT BRACKETS                                  | UNIT | 14                 |                   |
| 91                    | TEMPORARY UTILITY SUPPORTS                                | UNIT | 3                  |                   |
| 92                    | PRECAST PANELS  | LS   | LS                 |                   |
| 93                    | NAME PLAQUE   | UNIT | 1                  |                   |

| WORKING POINTS |             |           |          |           |
|----------------|-------------|-----------|----------|-----------|
| W.P. NO.       | COORDINATES |           | STATION  | OFFSET    |
|                | NORTHING    | EASTING   |          |           |
| 1              | 382978.91   | 317937.79 | 9+66.54  | 27.17' L. |
| 2              | 382978.17   | 317964.94 | 9+66.54  | 0.00'     |
| 3              | 382977.32   | 317992.01 | 9+66.54  | 27.17' R. |
| 4              | 383043.38   | 317939.67 | 10+31.04 | 27.17' L. |
| 5              | 383042.59   | 317966.83 | 10+31.04 | 0.00'     |
| 6              | 383041.80   | 317993.98 | 10+31.04 | 27.17' R. |



**TYPICAL SECTION**  
SCALE: 1/4"=1'-0"



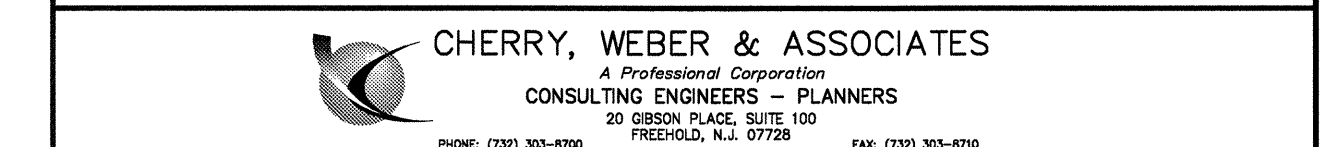
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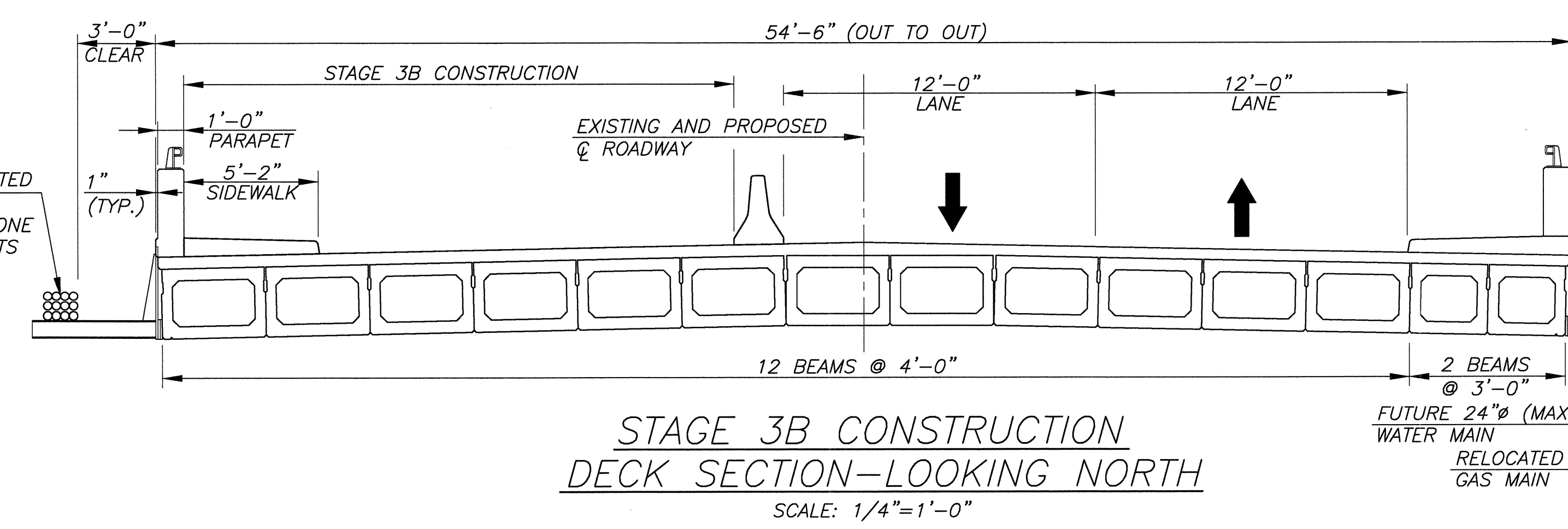
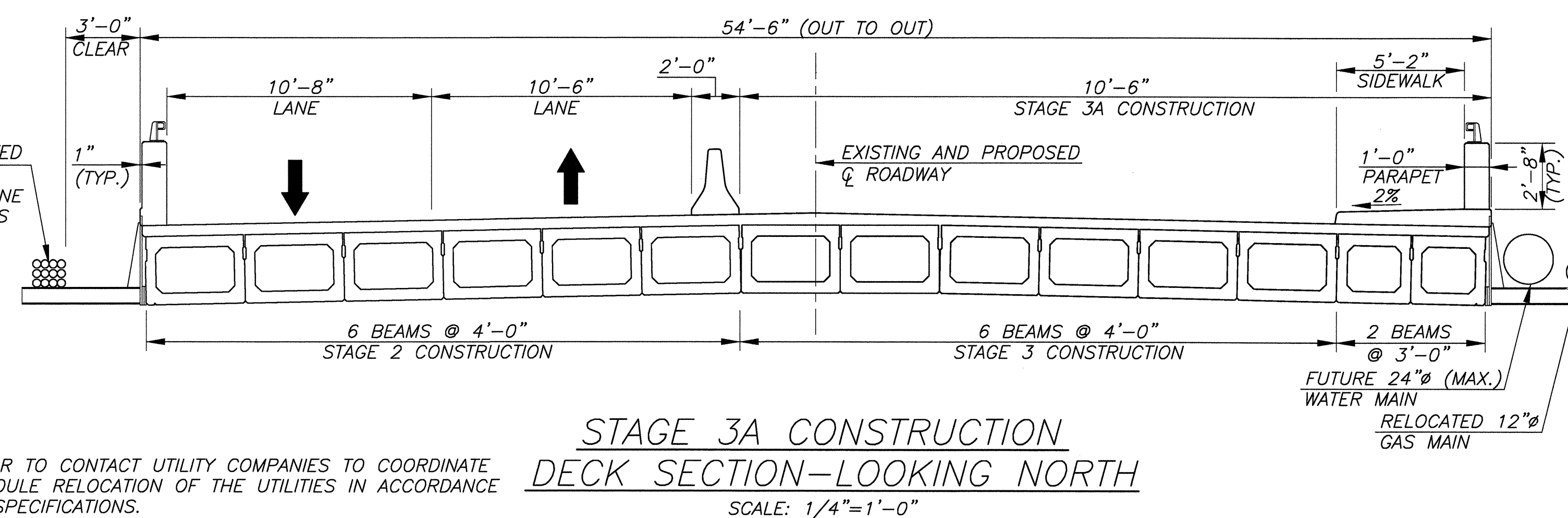
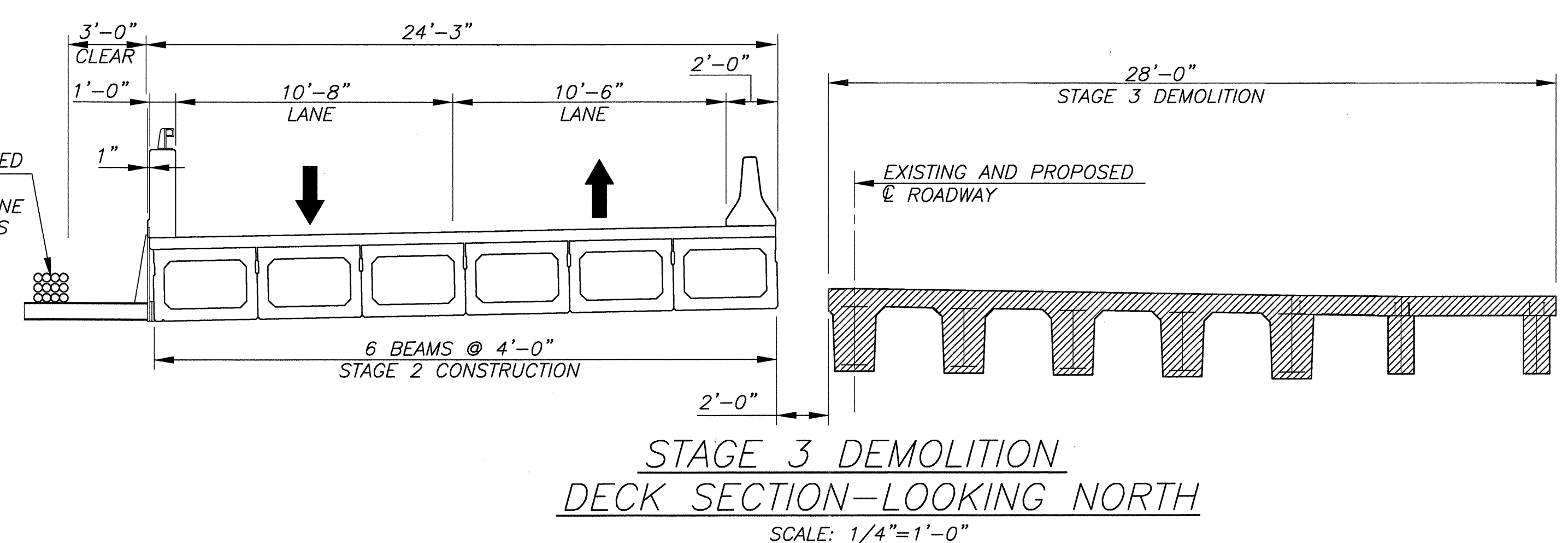
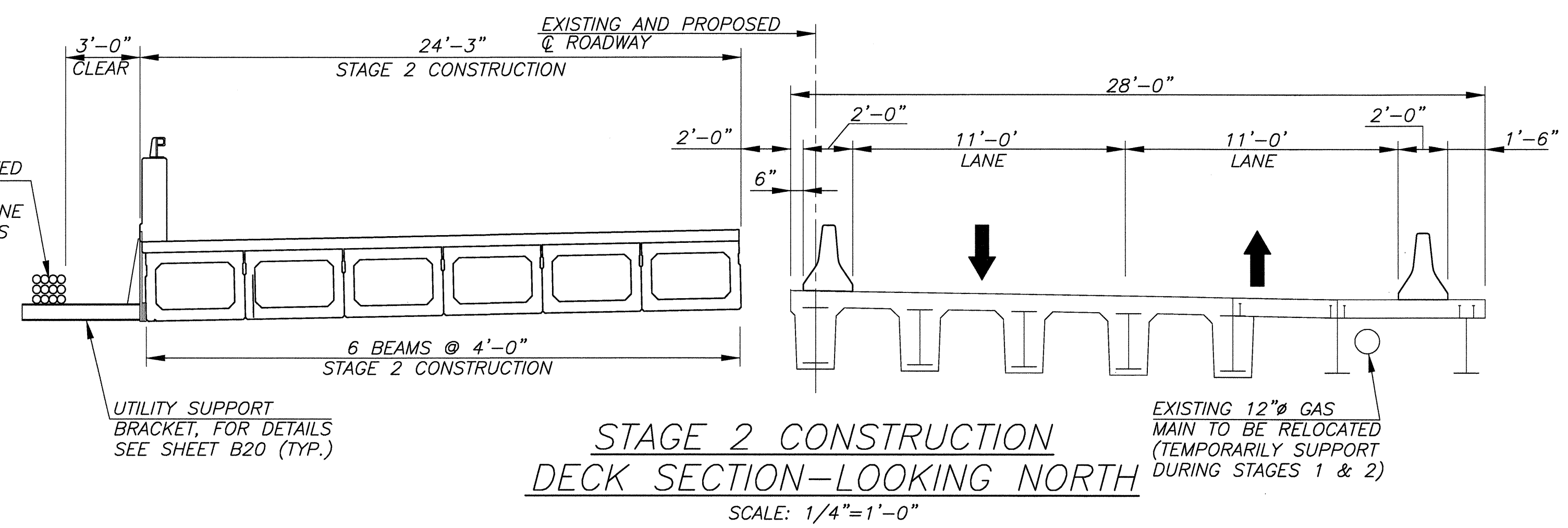
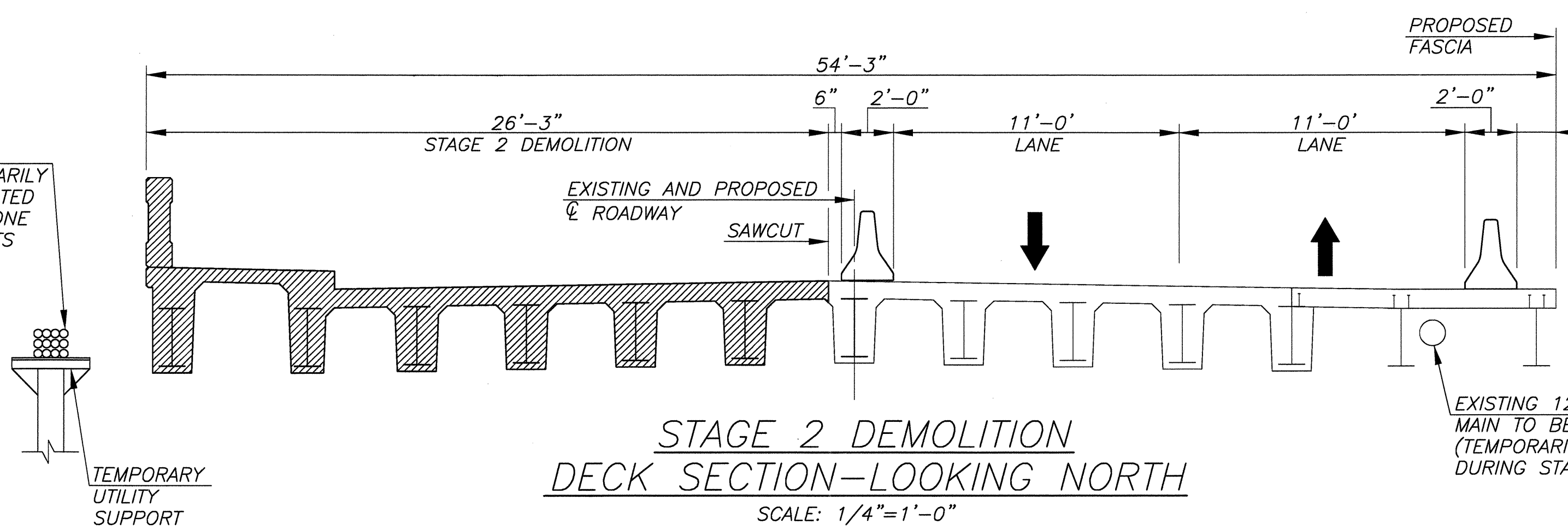
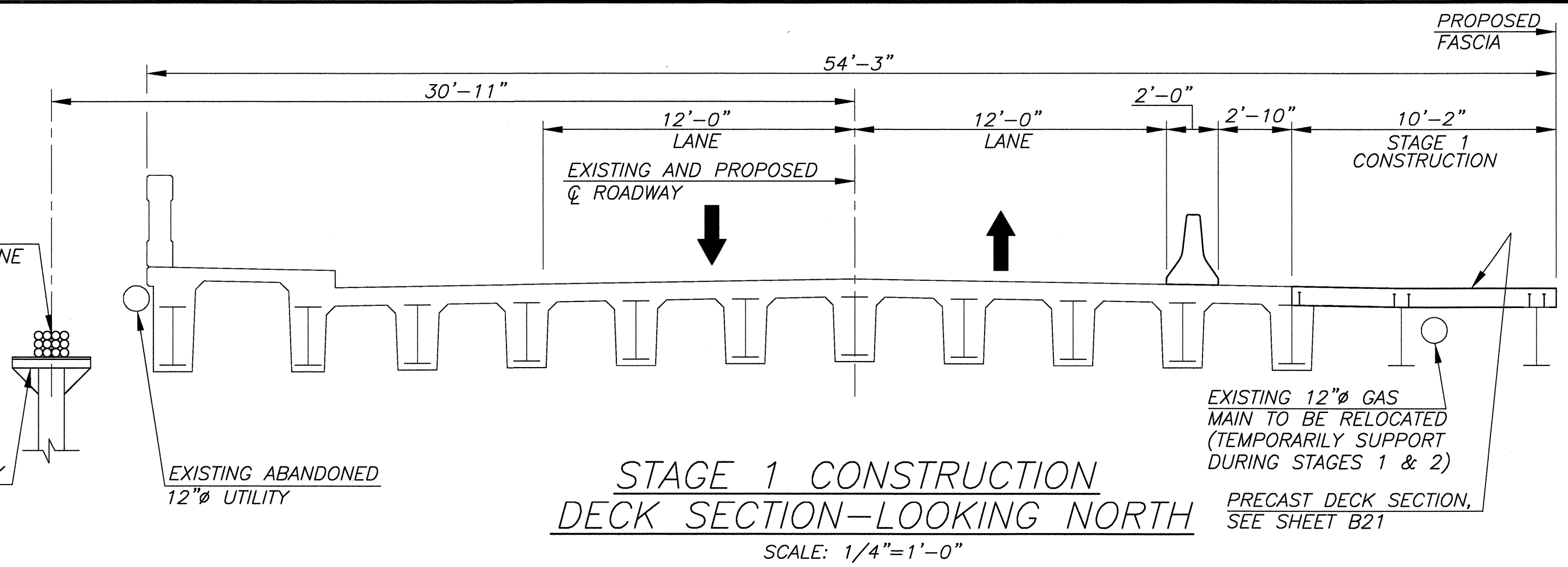
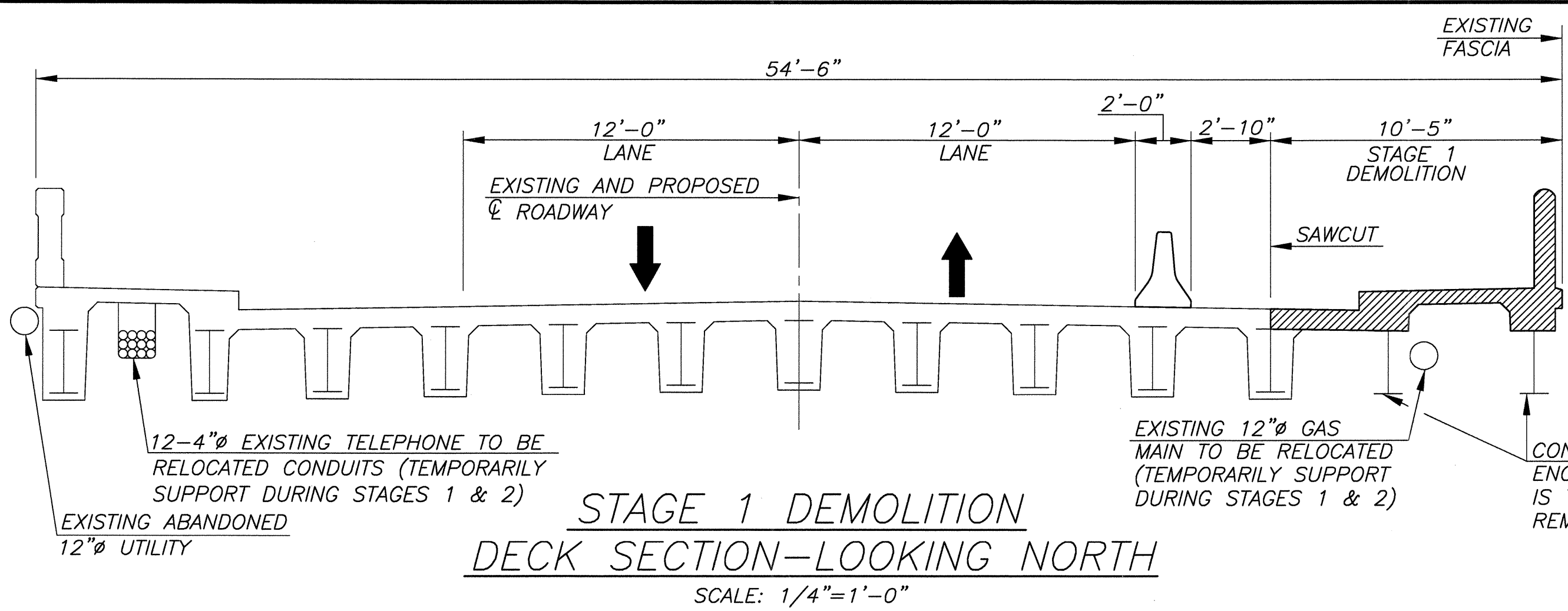
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|-----|----------|------|----|---------|
|     |          |      |    |         |

**SECTION, WORKING POINTS AND QUANTITIES**  
REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)  
BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY

*Gregory D. Bitsko*  
**GREGORY D. BITSKO**  
PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238



SCALE: NOTED DATE: 08/2011 DRAWN BY: K.W. DSGN. BY: J.M.M. CHK.'D BY: J.M.C. JOB NUMBER: NJ-C-BB-100 SHEET NO.: 19 OF 51



**NOTES:**

1. CONTRACTOR TO CONTACT UTILITY COMPANIES TO COORDINATE AND SCHEDULE RELOCATION OF THE UTILITIES IN ACCORDANCE WITH THE SPECIFICATIONS.
2. ALL COST ASSOCIATED WITH THE TEMPORARY SUPPORT OF THE TELEPHONE CONDUITS AND GAS MAIN SHALL BE INCLUDED IN THE PAY ITEM 'TEMPORARY UTILITY SUPPORT'S'.
3. ALL PRECAST CONCRETE CURB, CONSTRUCTION BARRIER, TYPE 4 SHALL BE JOINT CLASS D. REFER TO NJDOT CONSTRUCTION DETAIL CD-617-3.2 FOR FURTHER DETAILS.
4. CONTRACTION JOINT IN APPROACH SLABS SHALL BE LOCATED AT THE SAME OFFSET FROM THE CENTERLINE OF ROADWAY AS THE CONSTRUCTION JOINT IN THE BRIDGE DECK, SEE SECTIONS ABOVE AND SHEETS B4 AND B5.

**LEGEND:**

- EXISTING BRIDGE TO BE REMOVED
- DIRECTION OF TRAFFIC

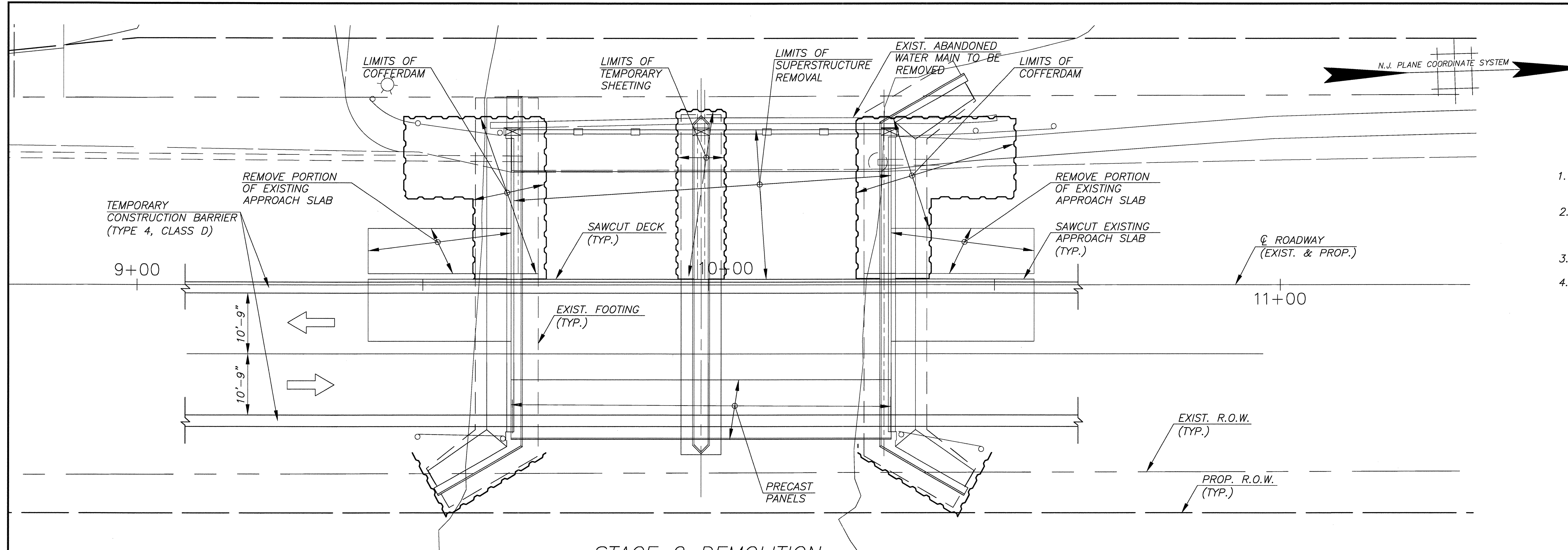
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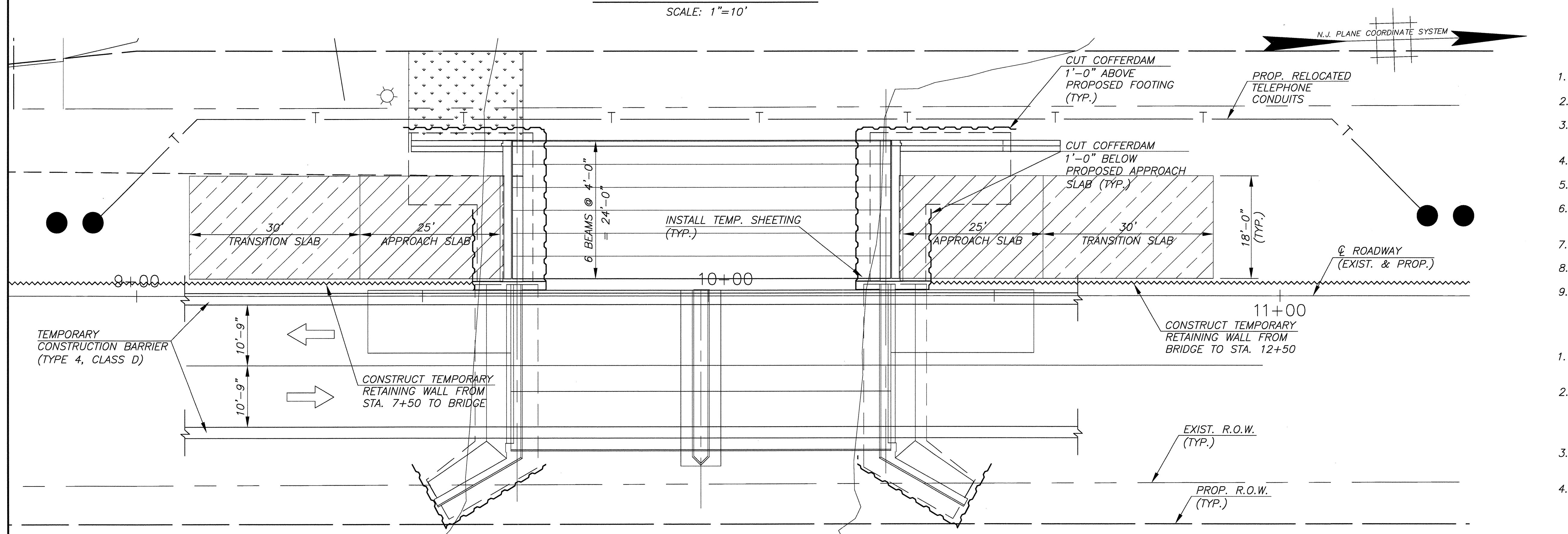
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|---|---------------|----------------|------------------|-------------------|--|
| <b>CONSTRUCTION STAGING SECTIONS</b>  |               |                |                  |                   |  |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |               |                |                  |                   |  |
| <i>Gregory D. Bitsko</i>  |               |                |                  |                   |  |
| <b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238  |               |                |                  |                   |  |
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**STAGE 2 DEMOLITION**  
SCALE: 1"=10'

**RECOMMENDED STAGE 2 DEMOLITION STAGING:**

1. DEMOLISH SUPERSTRUCTURE AND APPROACH SLABS TO LIMITS SHOWN.
2. INSTALL TEMPORARY SHEETING AND COFFERDAM TO LIMITS SHOWN. EXISTING WINGWALLS AND SUBSTRUCTURE SHALL BE DEMOLISHED AS NECESSARY TO INSTALL COFFERDAM.
3. DEMOLISH SUBSTRUCTURES.
4. REMOVE TEMPORARY SHEETING AT LOCATION OF PIER.



**STAGE 2 CONSTRUCTION**  
SCALE: 1"=10'

**RECOMMENDED STAGE 2 CONSTRUCTION STAGING:**

1. CONSTRUCT PROPOSED SUBSTRUCTURE TO LIMITS SHOWN.
2. CUT COFFERDAM 1'-0" ABOVE PROPOSED TOP OF FOOTING.
3. INSTALL TEMPORARY SHEETING AS NECESSARY TO CONSTRUCT STAGE 3 COFFERDAM.
4. CONSTRUCT TEMPORARY RETAINING WALL.
5. PLACE PRESTRESSED CONCRETE BOX BEAMS.
6. INSTALL TEMPORARY SHEETING AS NECESSARY TO CONSTRUCT STAGE 3 COFFERDAM.
7. CONSTRUCT DECK.
8. CONSTRUCT ABUTMENT BACKWALL.
9. CONSTRUCT APPROACH AND TRANSITION SLABS.

**NOTES:**

1. EXISTING PIER SHALL BE REMOVED TO 3'-0" BELOW STREAMBED.
2. UPON COMPLETION OF SUBSTRUCTURE PRIOR, TO SUPERSTRUCTURE CONSTRUCTION, COFFERDAMS SHALL BE CUT TO 1'-0" ABOVE THE TOP OF FOOTING.
3. FOR MAINTENANCE AND PROTECTION OF TRAFFIC, SEE SHEETS TC-1 THRU TC-3.
4. FOR BRIDGE CONSTRUCTION STAGING SECTIONS, SEE SHEET B3.

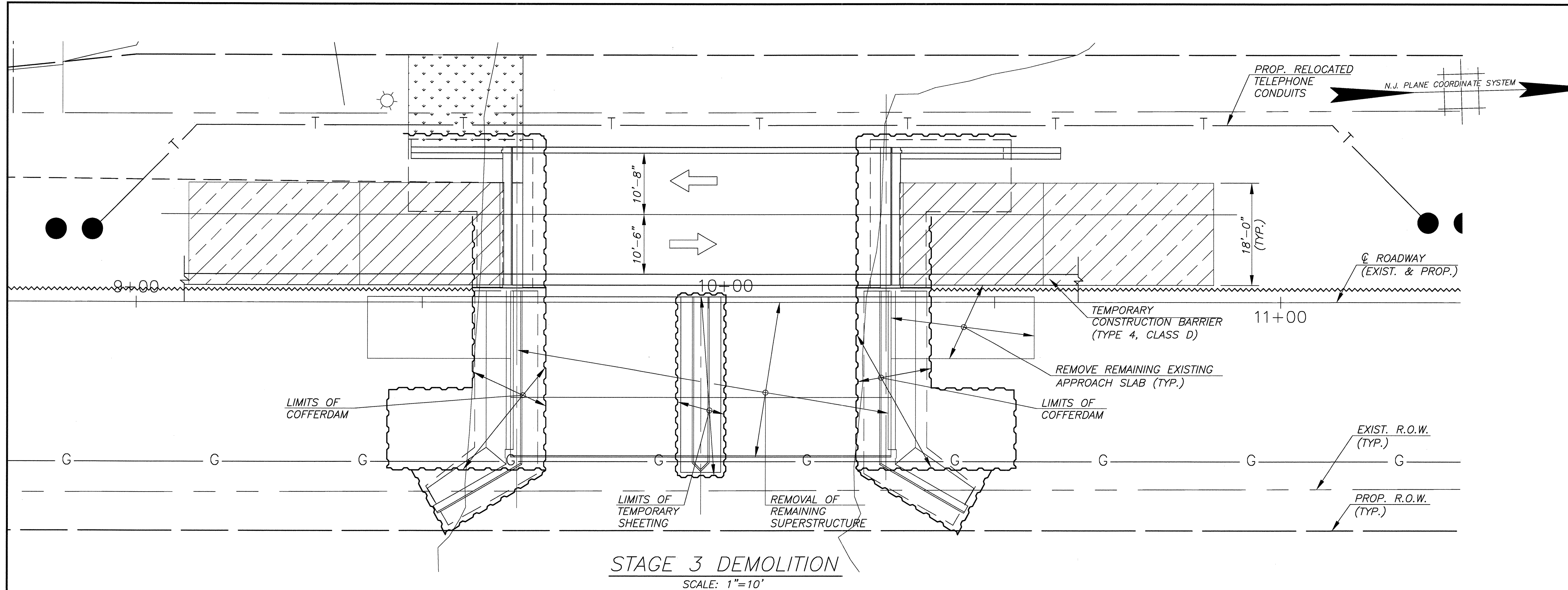
B4  
B21

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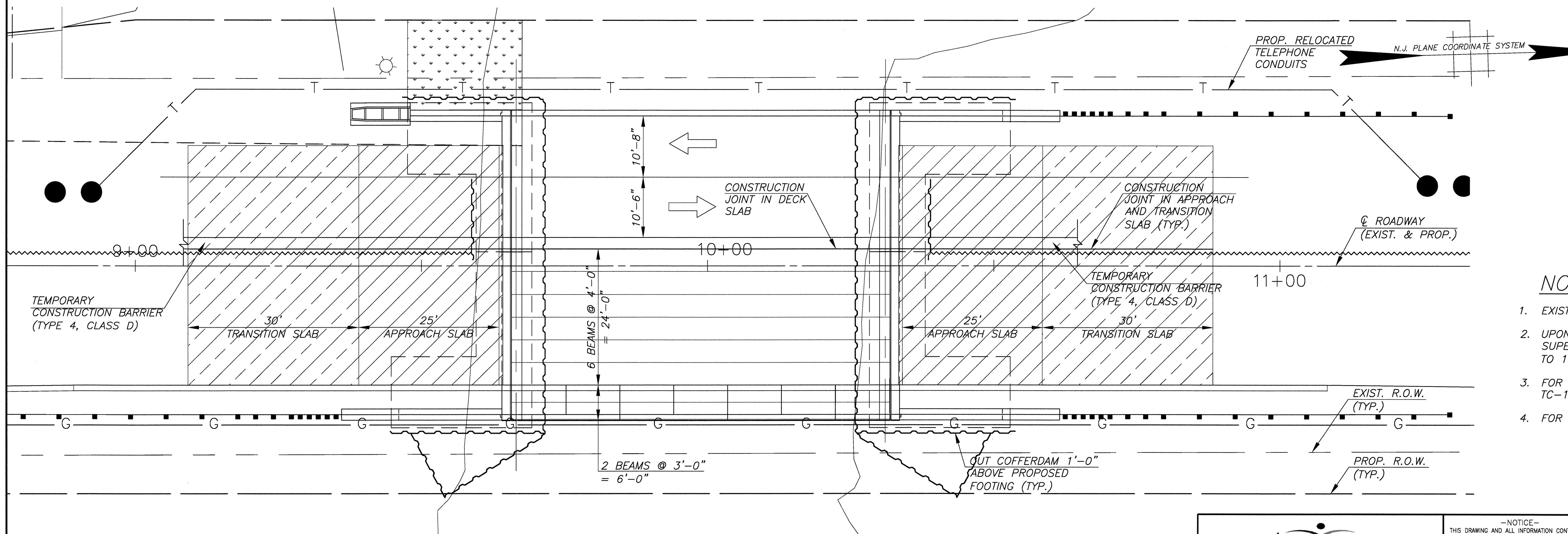
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|---|----------|-----------|-----------|------------|----------------------|
| <b>CONSTRUCTION STAGING PLAN (1 OF 2)</b>   |          |           |           |            |                      |
| REPLACEMENT OF BROOKWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |          |           |           |            |                      |
| <i>Gregory D. Bitsko</i>  |          |           |           |            |                      |
| <b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238  |          |           |           |            |                      |
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| NOTED   | 08/2011  | K.W.      | J.M.M.    | J.M.C.     | NJ-C-BB-100          |
|   |          |           |           |            | SHEET NO.<br>210F 51 |



**STAGE 3 DEMOLITION**  
SCALE: 1"=10'

**RECOMMENDED STAGE 3 DEMOLITION STAGING:**

1. DEMOLISH SUPERSTRUCTURE AND APPROACH SLABS TO LIMITS SHOWN.
2. INSTALL TEMPORARY SHEETING AND COFFERDAM TO LIMITS SHOWN. EXISTING WINGWALLS AND SUBSTRUCTURE SHALL BE DEMOLISHED AS NECESSARY TO INSTALL COFFERDAM.
3. DEMOLISH SUBSTRUCTURES.
4. REMOVE TEMPORARY SHEETING AT LOCATION OF PIER.



**STAGE 3 CONSTRUCTION**  
SCALE: 1"=10'

**RECOMMENDED STAGE 3 CONSTRUCTION STAGING:**

1. CONSTRUCT PROPOSED SUBSTRUCTURE TO LIMITS SHOWN.
2. CUT COFFERDAM 1'-0" ABOVE PROPOSED TOP OF FOOTING.
3. PLACE PRESTRESSED CONCRETE BOX BEAMS.
4. CONSTRUCT DECK.
5. CONSTRUCT ABUTMENT HEADER.
6. CONSTRUCT APPROACH AND TRANSITION SLABS.

**NOTES:**

1. EXISTING PIER SHALL BE REMOVED TO 3'-0" BELOW STREAMBED.
2. UPON COMPLETION OF SUBSTRUCTURE PRIOR TO SUPERSTRUCTURE CONSTRUCTION, COFFERDAMS SHALL BE CUT TO 1'-0" ABOVE THE TOP OF FOOTING.
3. FOR MAINTENANCE AND PROTECTION OF TRAFFIC, SEE SHEETS TC-1 THRU TC-3.
4. FOR BRIDGE CONSTRUCTION STAGING SECTIONS, SEE SHEET B3.

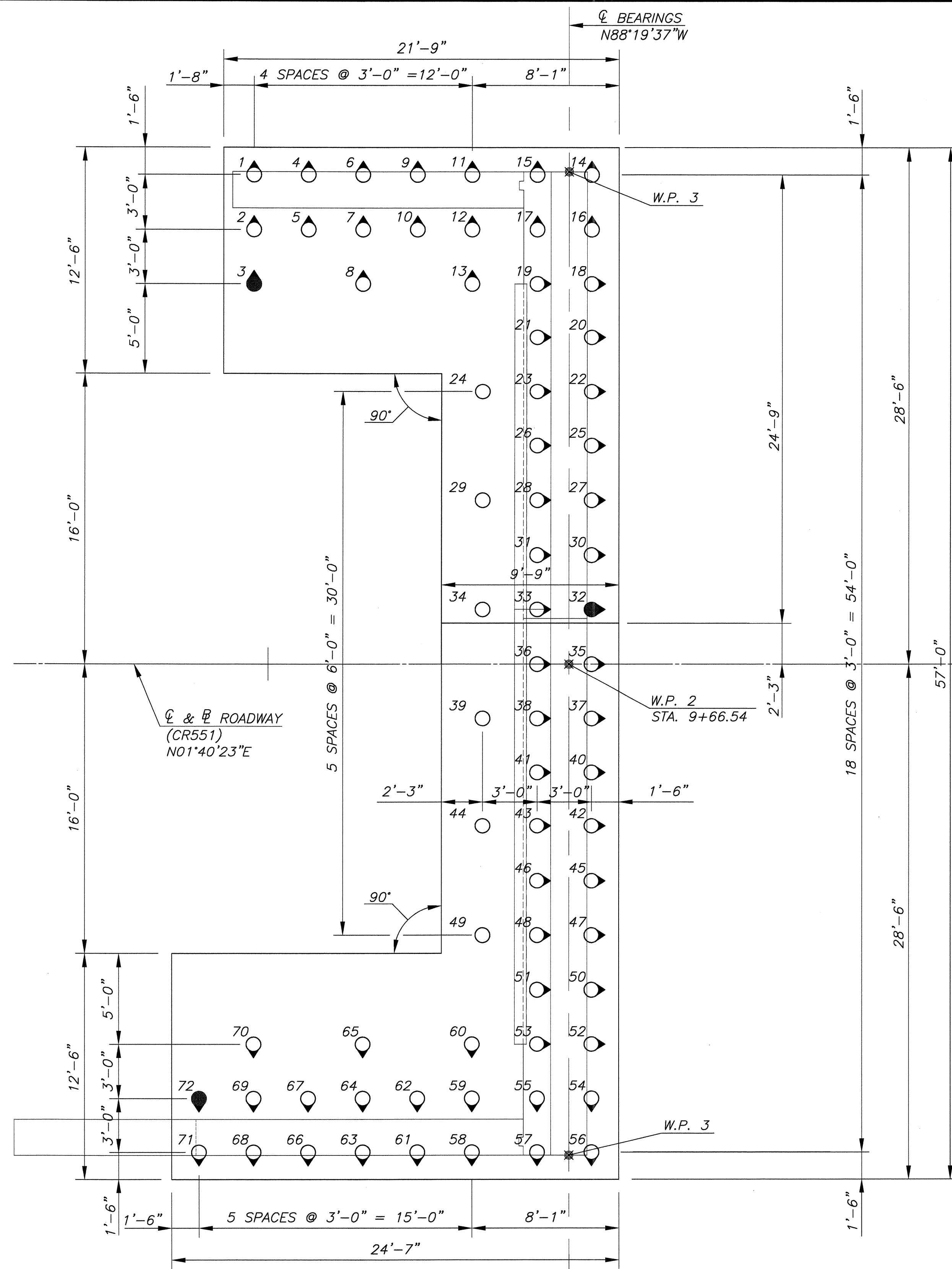
B5  
B21



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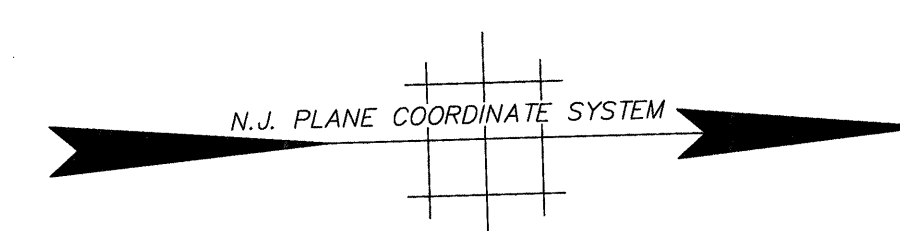
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| NO.  | REVISION         | DATE              | CHK. BY   |
|--|------------------|-------------------|---|
| <b>CONSTRUCTION STAGING PLAN (2 OF 2)</b>  |                  |                   |   |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |                  |                   |   |
| <br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238   |                  |                   |   |
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| SCALE:<br>NOTED  | DATE:<br>08/2011 | DRAWN BY:<br>K.W. | DSGN. BY:<br>J.M.M.<br>CHK'D BY:<br>J.M.C.<br>JOB NUMBER:<br>NJ-C-BB-100<br>SHEET NO.<br>22 OF 51 |



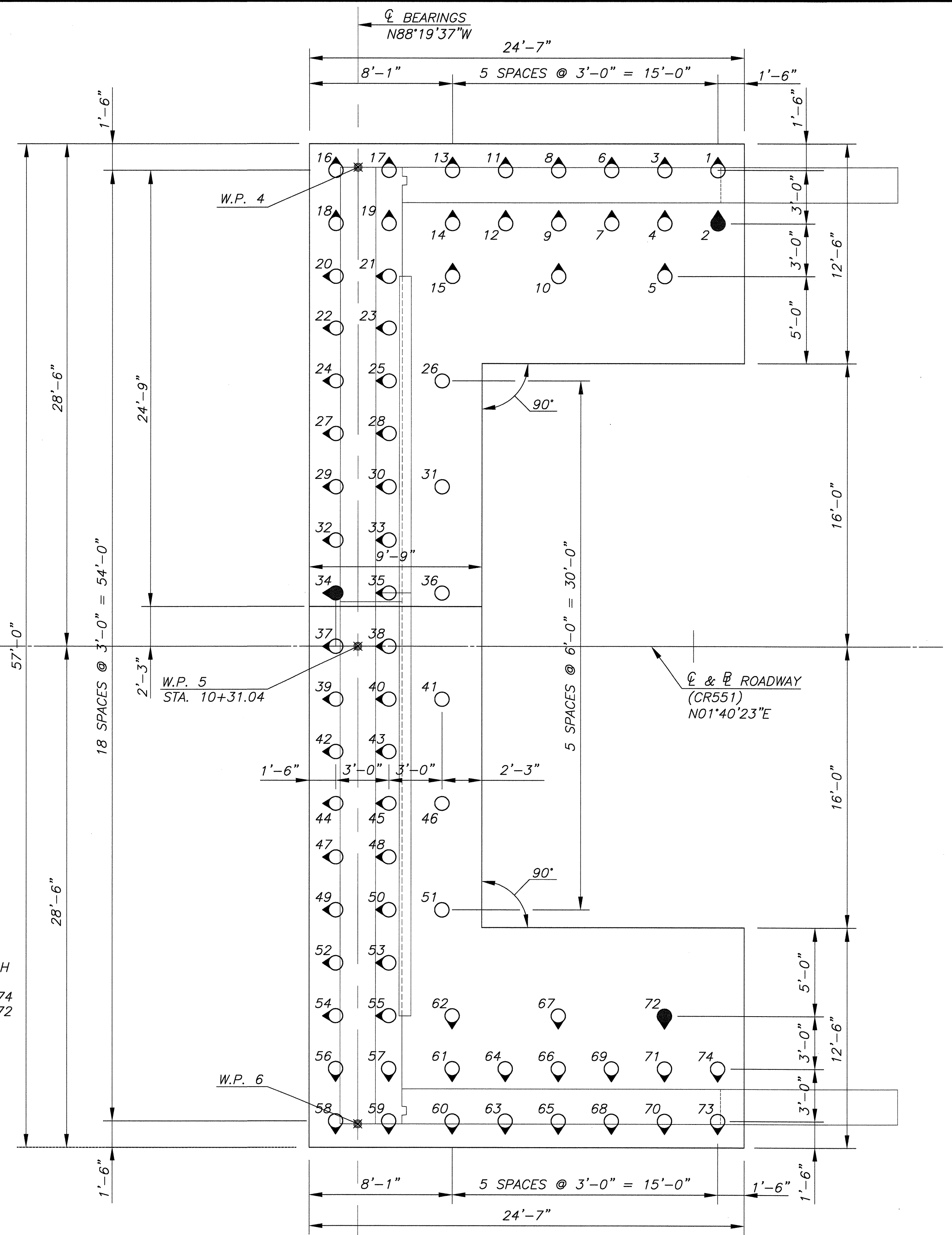
**SOUTH ABUTMENT PILE PLAN**

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



**PILE LEGEND**

- INDICATES VERTICAL PILE (PLUMB)
- ◐ INDICATES BATTERED PILE 3H:12V IN DIRECTION OF ARROW INDICATES TEST PILE
- TOTAL NUMBER OF TEST PILES = 6 NUMBER
- 20 INDICATES SEQUENTIAL NUMBER OF PILE IN EACH FOUNDATION UNIT  
TOTAL NUMBER OF NORTH ABUTMENT PILES = 74  
TOTAL NUMBER OF SOUTH ABUTMENT PILES = 72  
NUMBER OF PILES = 146



**NORTH ABUTMENT PILE PLAN**

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

**GENERAL NOTES:**

1. STEEL SHELL FOR CAST-IN-PLACE CONCRETE PILES SHALL BE 12" NOMINAL DIAMETER x 0.375" WALL THICKNESS CONFORMING TO THE REQUIREMENTS OF ASTM A252 GRADE 2.
2. CAST-IN-PLACE CONCRETE PILES SHALL BE FILLED WITH NJDOT CLASS "B" CONCRETE. COST OF CONCRETE SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS FOR "CAST-IN-PLACE CONCRETE PILES".
3. STEEL SHELL FOR CAST-IN-PLACE CONCRETE PILES SHALL BE COATED WITH COAL TAR EPOXY-POLYAMIDE PAINT. COST OF THIS PAINT SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS FOR "CAST-IN-PLACE CONCRETE PILES" AND "TEST PILES".
4. PILE ALLOWABLE CAPACITY = 45 TONS.
5. CAST-IN-PLACE CONCRETE PILES SHALL BE DRIVEN AT LEAST TO A TIP ELEVATION OF -39.86. ONCE THIS TIP ELEVATION HAS BEEN REACHED, PILE DRIVING SHALL BE STOPPED IF DRIVING EXCEEDS 20 BLOWS PER INCH USING A HAMMER RATED AT 15,000 FOOT-POUNDS ENERGY.
6. TEST PILES AT LOCATIONS SHOWN SHALL BE 60 FEET LONG AND SHALL BE USED TO ESTIMATE PRODUCTION LENGTHS PRIOR TO PRODUCTION DRIVING. THE PILE DRIVING INSPECTOR SHALL SUBMIT A COPY OF THE DRIVING RECORDS TO THE ENGINEER FOR REVIEW TO VERIFY THE ACTUAL CAPACITY OF THE PILES.
7. DIMENSIONS SHOWN ARE TO THE CENTERLINE OF PILES.

**REFERENCES:**

1. FOR PILE DETAILS, SEE SHEET B9.
2. FOR WORKING POINT DIAGRAM, SEE SHEET B2.
3. FOR FOOTING PLAN, SEE SHEET B7.
4. FOR SOUTH ABUTMENT PLAN AND ELEVATION, SEE SHEET B8.
5. FOR NORTH ABUTMENT PLAN AND ELEVATION, SEE SHEET B9.

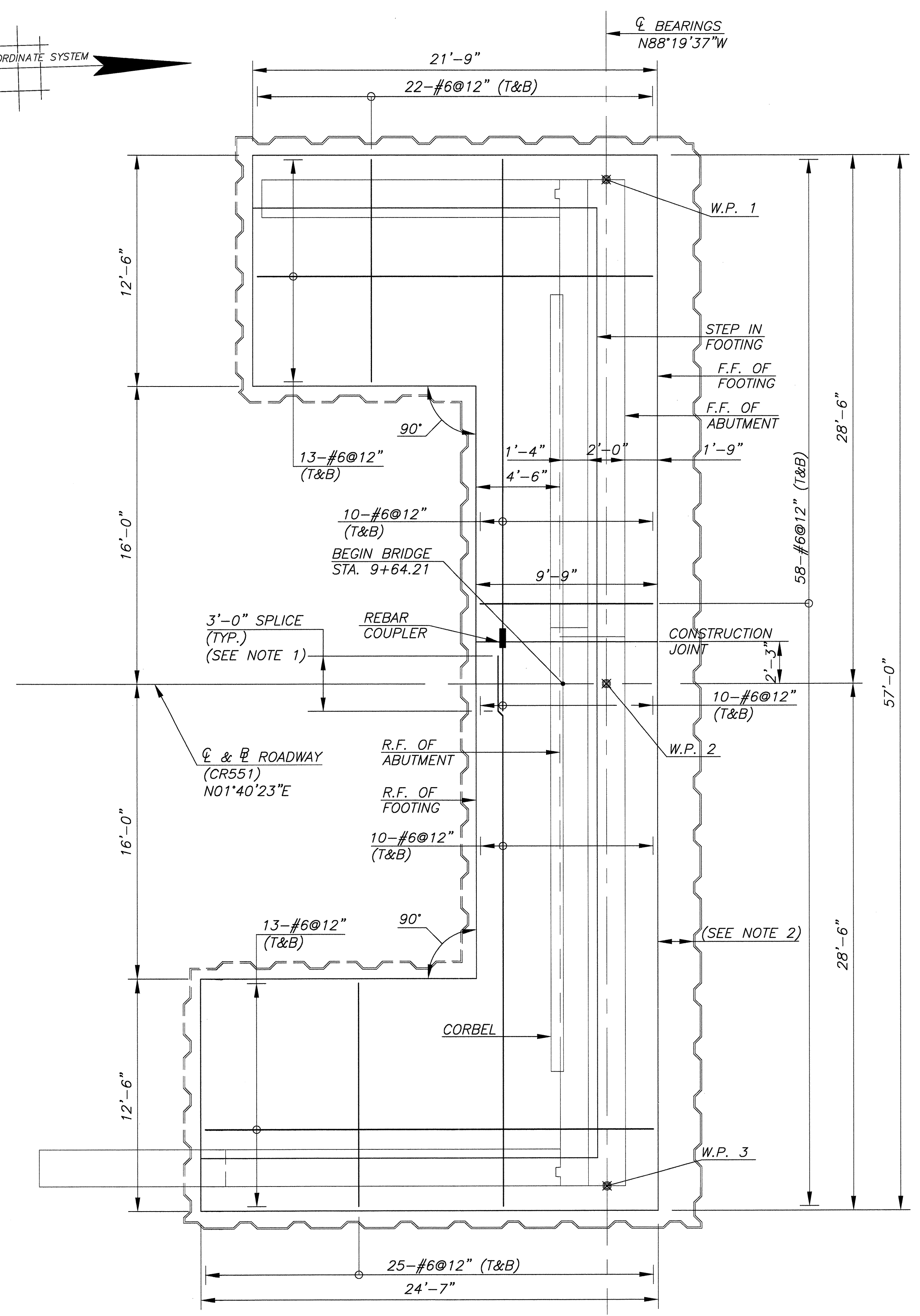
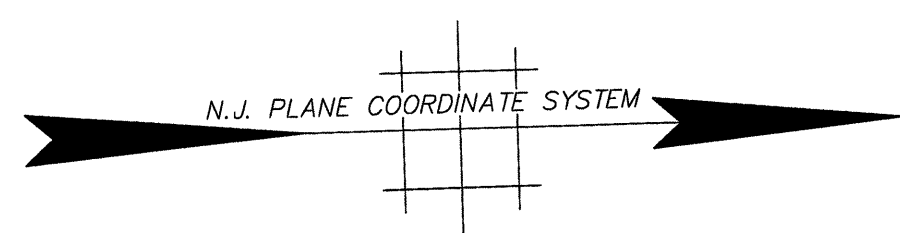
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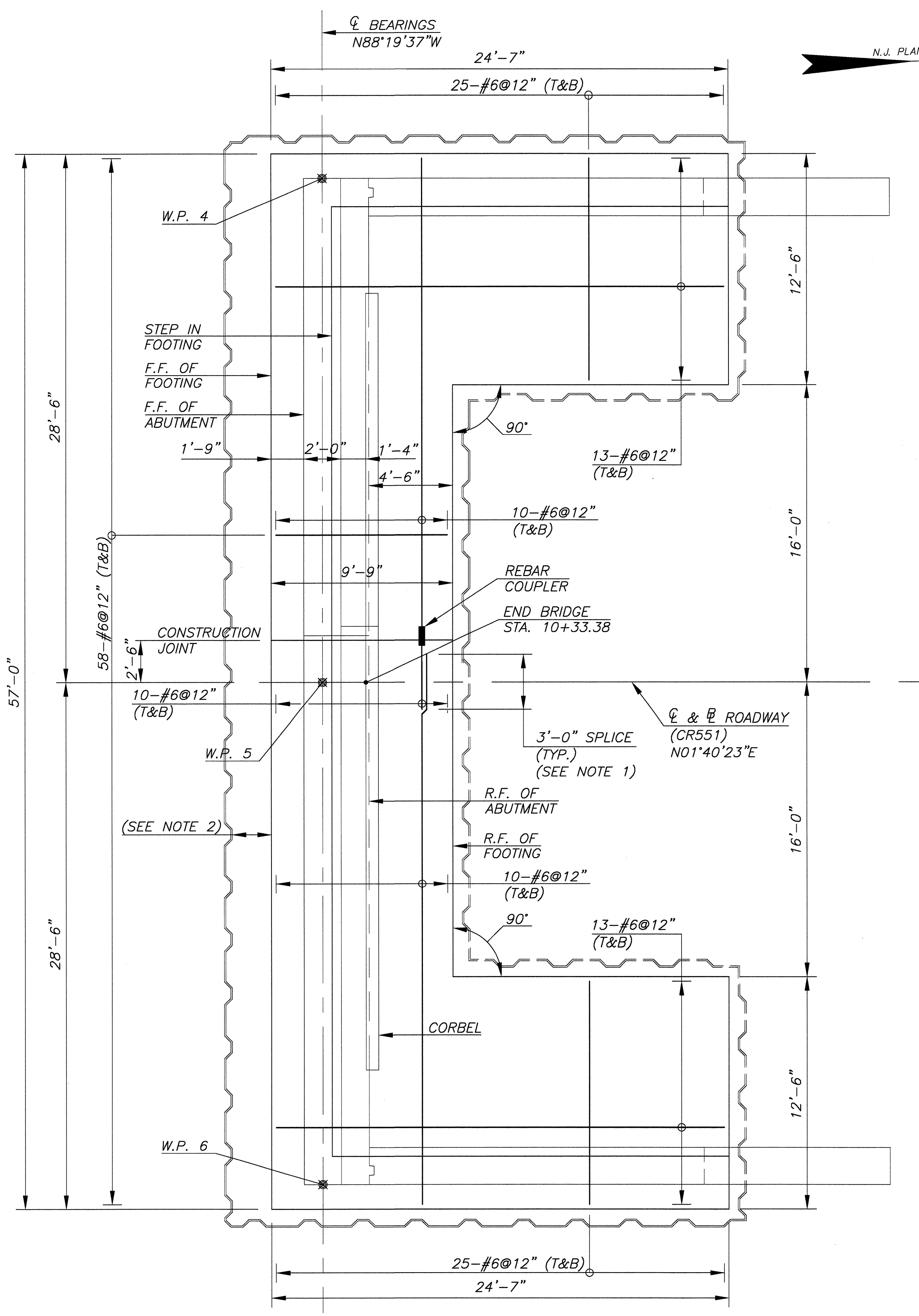
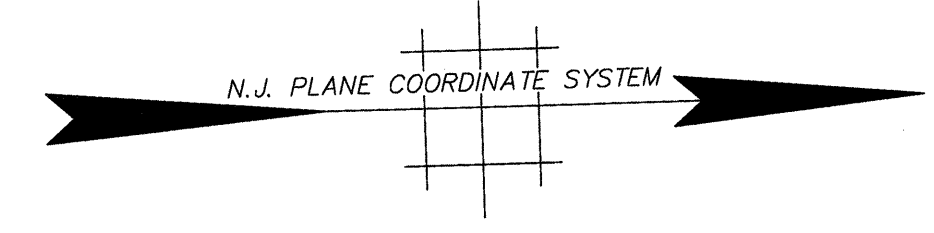
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|---|----------|-----------|-----------|------------|-------------|------------|
| NO.   | REVISION | DATE      | BY        | CHK. BY    |             |            |
| <b>PILE PLAN</b>  |          |           |           |            |             |            |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |          |           |           |            |             |            |
| <i>Gregory B. Bitsko</i><br><b>GREGORY B. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238  |          |           |           |            |             |            |
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| NOTED   | 08/2011  | K.W.      | J.M.M.    | J.M.C.     | NJ-C-BB-100 | 230F 51    |

B6  
B21



**SOUTH ABUTMENT FOOTING PLAN**  
SCALE: 1/4"=1'-0"



**NORTH ABUTMENT FOOTING PLAN**  
SCALE: 1/4"=1'-0"

--- DENOTES COFFERDAM TO BE LEFT IN PLACE  
--- DENOTES COFFERDAM TO BE REMOVED

**NOTES:**

- REBAR COUPLER SHALL BE USED TO ATTAIN NECESSARY (3'-0" MIN.) SPLICE LENGTH AT THE FOOTING CONSTRUCTION JOINT.
- COFFERDAM AT FRONT FACE OF FOOTING SHALL BE DRIVEN OUTBOARD OF THE PROPOSED FOOTING AS NECESSARY TO REMOVE THE EXISTING FOOTING AND TO AVOID CONFLICT BETWEEN PROPOSED PILES AND COFFERDAM.
- SHEETING AT REAR OF FOOTING INDICATED TO REMAIN FOLLOWING STAGE 2 CONSTRUCTION TO PROVIDE TIE IN FOR STAGE 3 COFFERDAM AND TO PREVENT DAMAGE TO TEMPORARY RETAINING WALL.

**LEGEND:**

- T - DENOTES TOP
- B - DENOTES BOTTOM
- E.F. - DENOTES EACH FACE
- F.F. - DENOTES FRONT FACE
- R.F. - DENOTES REAR FACE

**REFERENCES:**

- FOR WORKING POINT DIAGRAM, SEE SHEET B2.
- FOR STAGING PLAN, SEE SHEET B3.
- FOR PILE PLAN, SEE SHEET B6.
- FOR SOUTH ABUTMENT PLAN AND ELEVATION, SEE SHEET B8.
- FOR NORTH ABUTMENT PLAN AND ELEVATION, SEE SHEET B9.

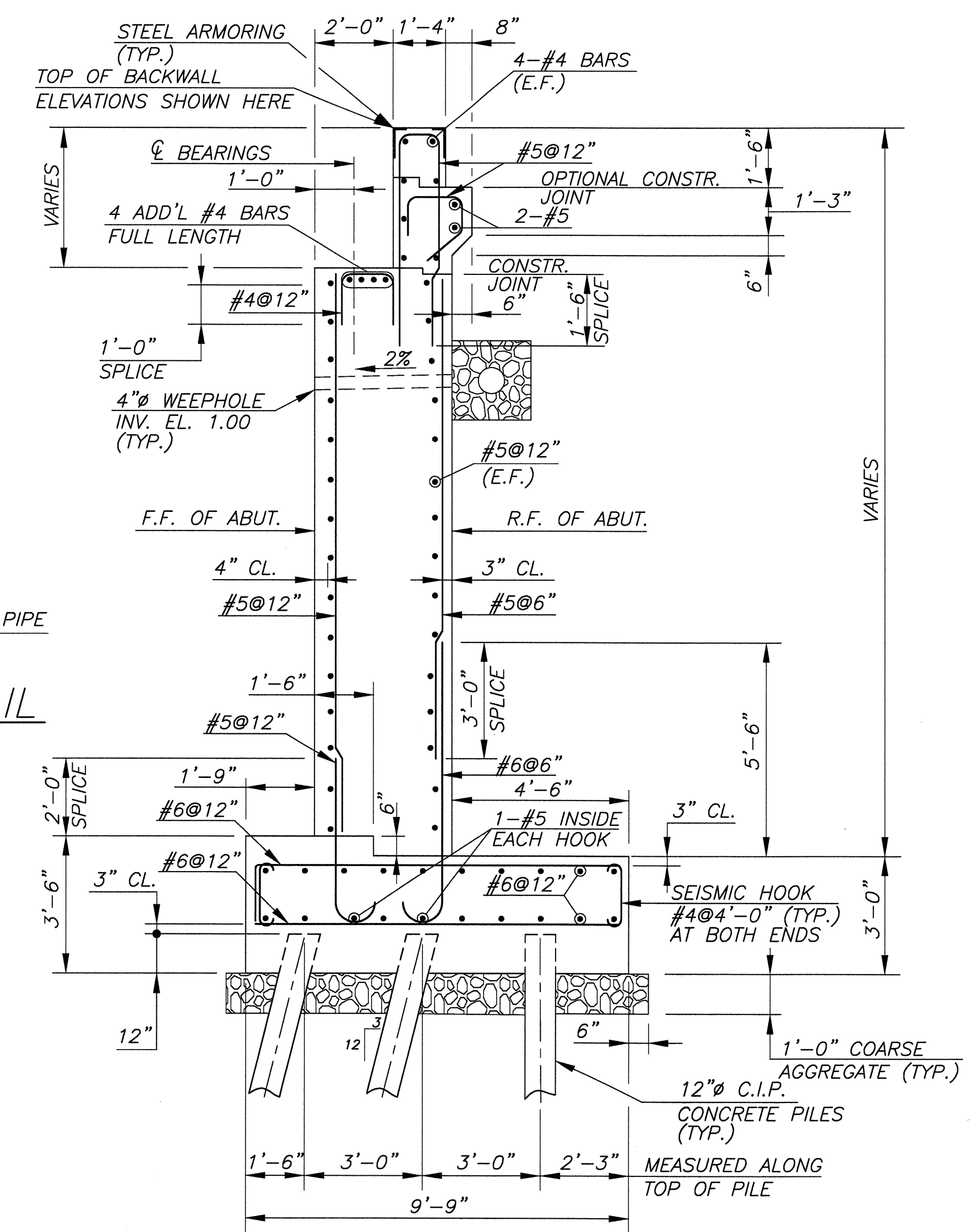
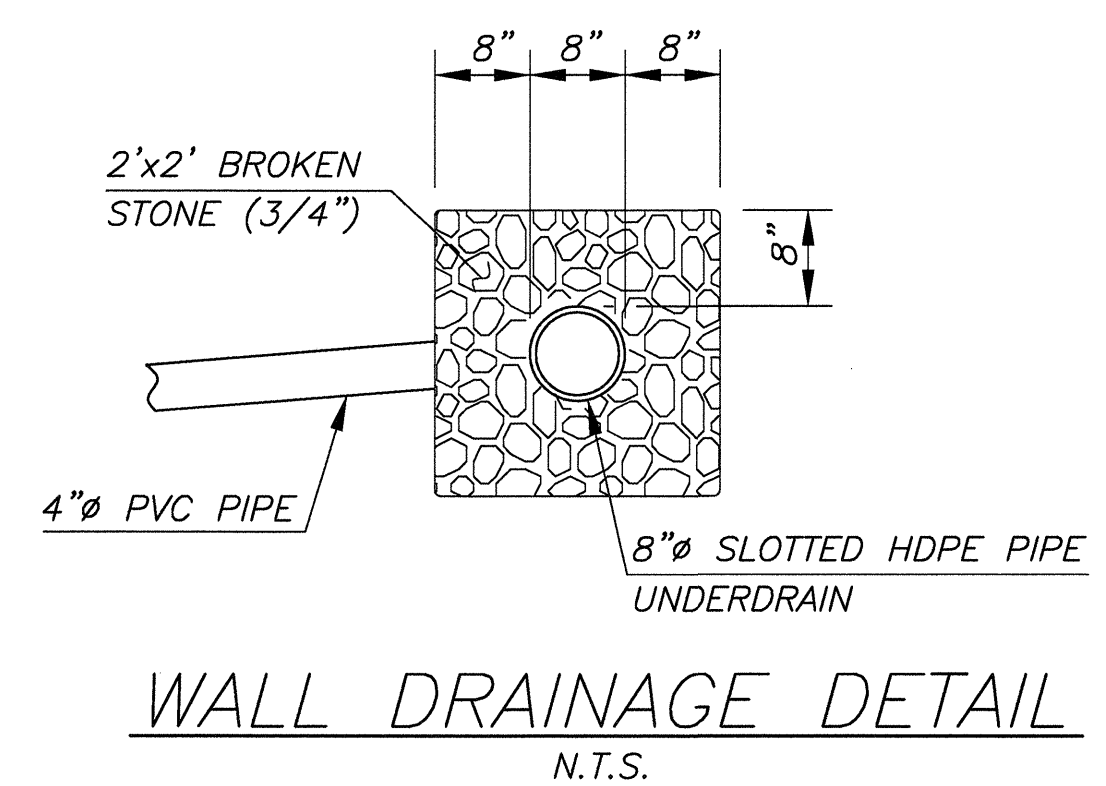
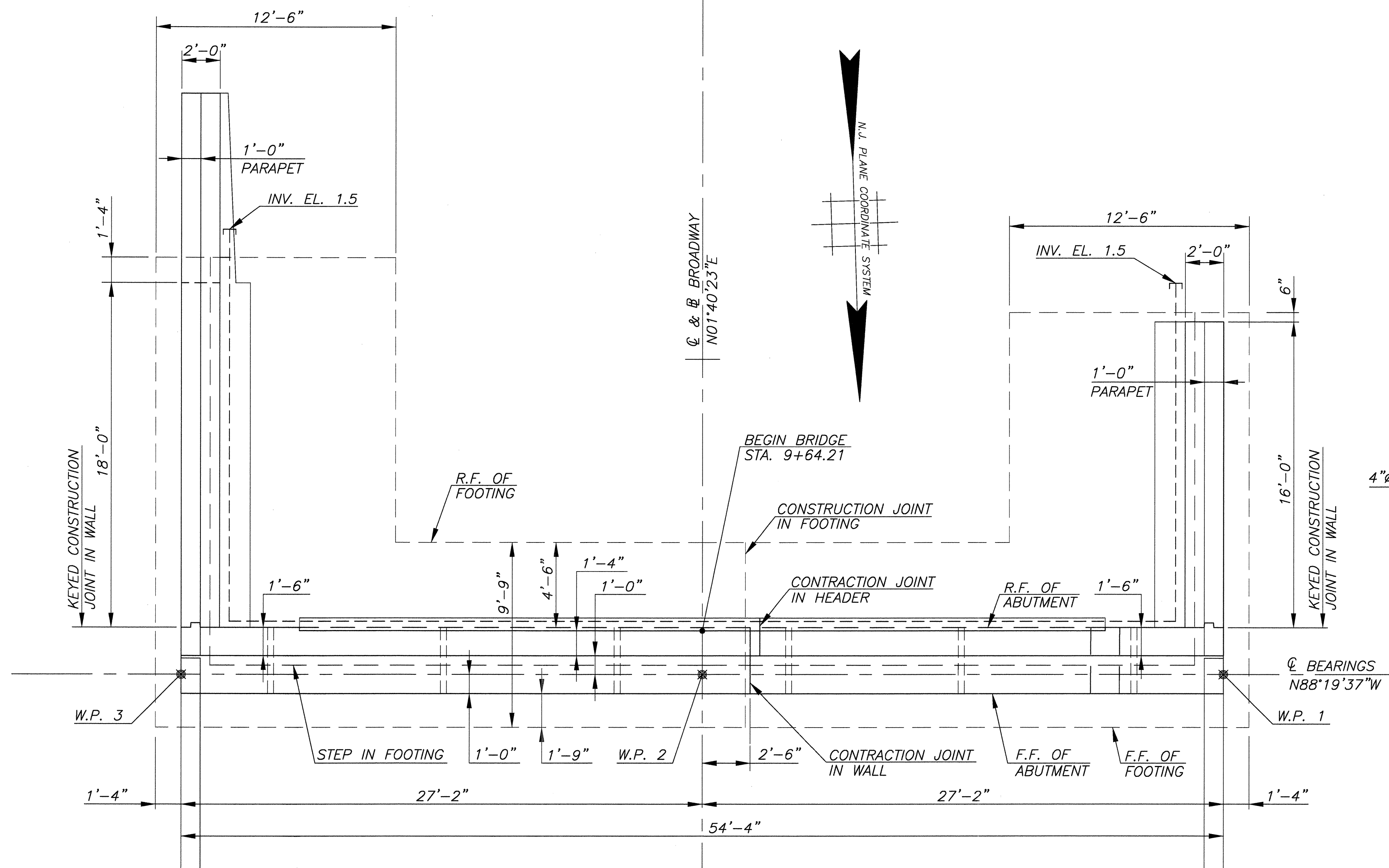
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|---|---------------|----------------|------------------|-------------------------|
| <b>FOOTING PLAN</b>   |               |                |                  |                         |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |               |                |                  |                         |
| <i>Gregory D. Bitsko</i><br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238  |               |                |                  |                         |
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|   |               |                |                  | JOB NUMBER: NJ-C-BB-100 |
|   |               |                |                  | SHEET NO: 24 OF 51      |

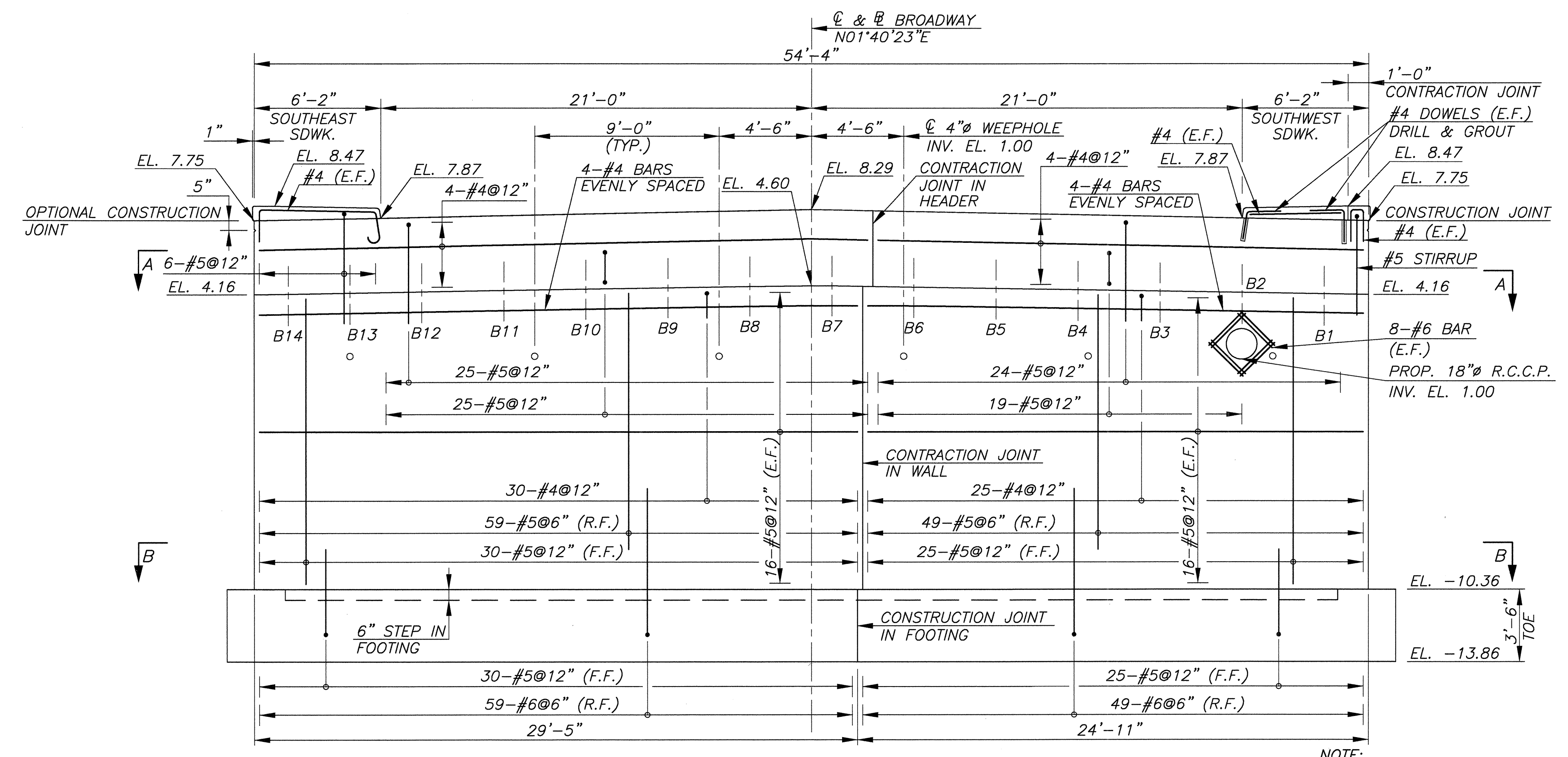
B7  
B21



**BRIDGE SEAT ELEVATIONS**

| BEAM NO. | SOUTH ABUTMENT | NORTH ABUTMENT |
|----------|----------------|----------------|
| B1       | 4.20           | 4.43           |
| B2       | 4.28           | 4.51           |
| B3       | 4.36           | 4.59           |
| B4       | 4.44           | 4.67           |
| B5       | 4.52           | 4.75           |
| B6       | 4.58           | 4.81           |
| B7       | 4.60           | 4.83           |
| B8       | 4.60           | 4.83           |
| B9       | 4.56           | 4.79           |
| B10      | 4.48           | 4.71           |
| B11      | 4.40           | 4.63           |
| B12      | 4.32           | 4.55           |
| B13      | 4.25           | 4.48           |
| B14      | 4.19           | 4.42           |

- NOTES:**
- ABUTMENT BACKWALL TO BE POURED AFTER P.C. BEAMS AND DECK ARE IN PLACE
  - ALL BRIDGE SEAT ELEVATIONS ARE GIVEN AT INTERSECTION OF  $\bar{C}$  BEARINGS AND  $\bar{C}$  BEAMS.
- REFERENCES:**
- FOR PILE PLAN, SEE SHEET B6.
  - FOR BACKWALL SECTION AT SIDEWALK, SEE SHEET B9.
  - FOR CORNER REINFORCEMENT DETAILS (SECT. A-A AND B-B), SEE SHEET B11.
  - FOR FOOTING REINFORCEMENT, SEE SHEET B7.
  - FOR SUBSTRUCTURE PAYMENT LIMITS, SEE SHEET B11.
- LEGEND:**
- F.F. - DENOTES FRONT FACE  
 R.F. - DENOTES REAR FACE  
 E.F. - DENOTES EACH FACE  
 S.W. - DENOTES SIDEWALK



NOTE: PILES NOT SHOWN FOR CLARITY.

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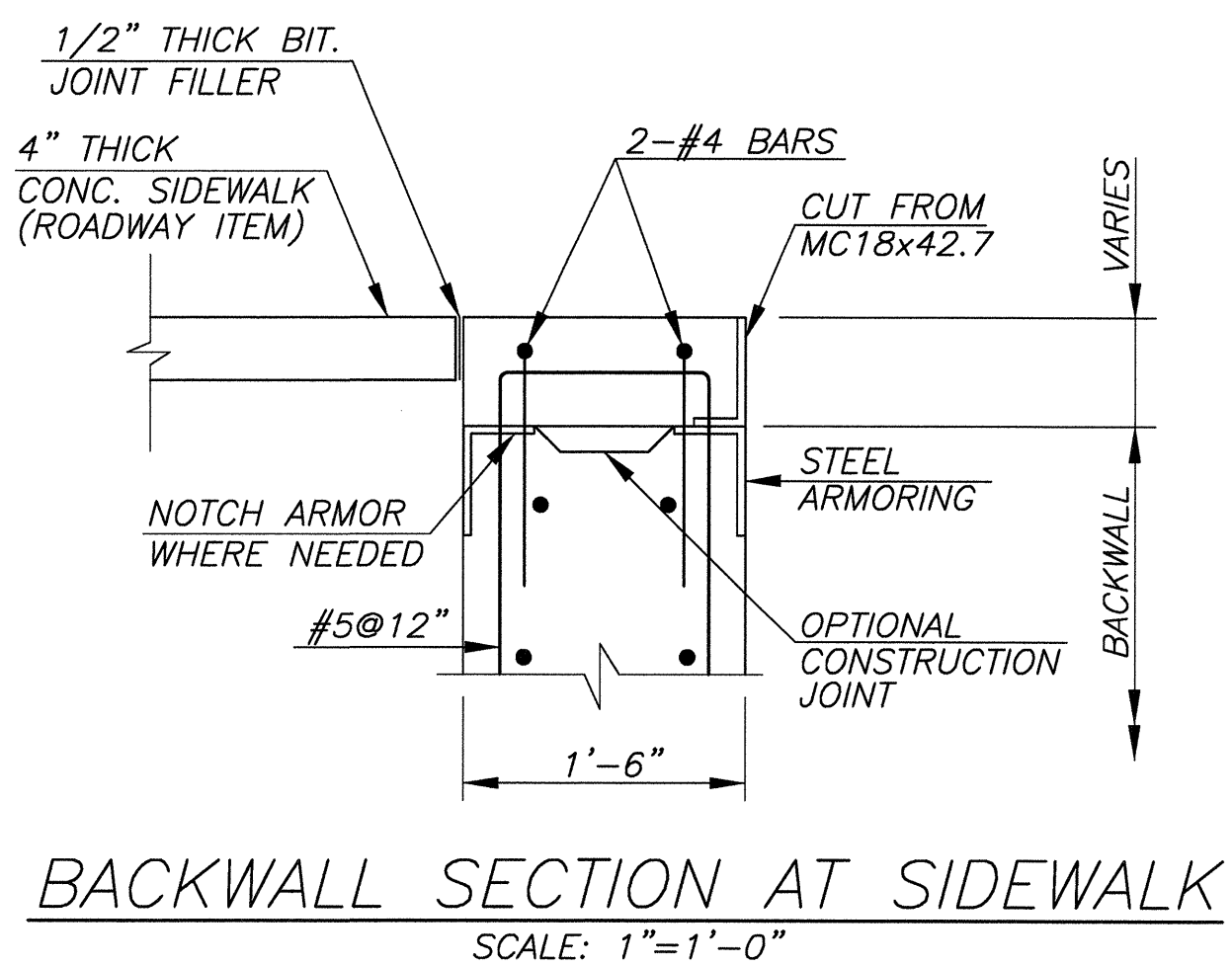
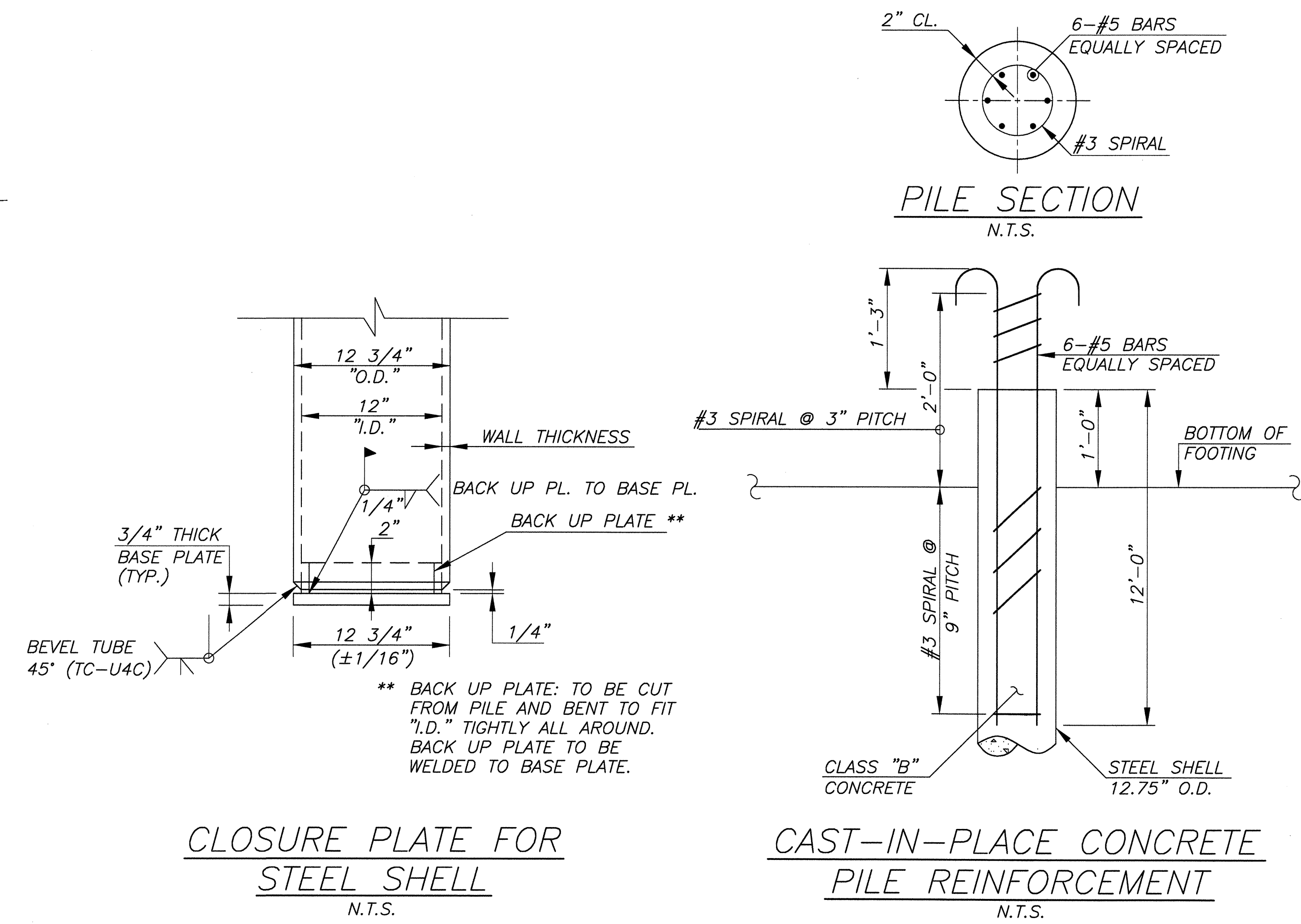
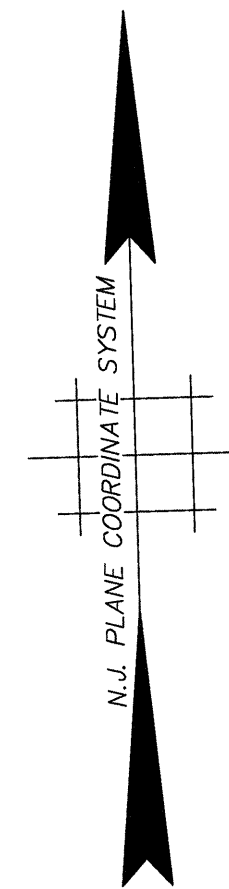
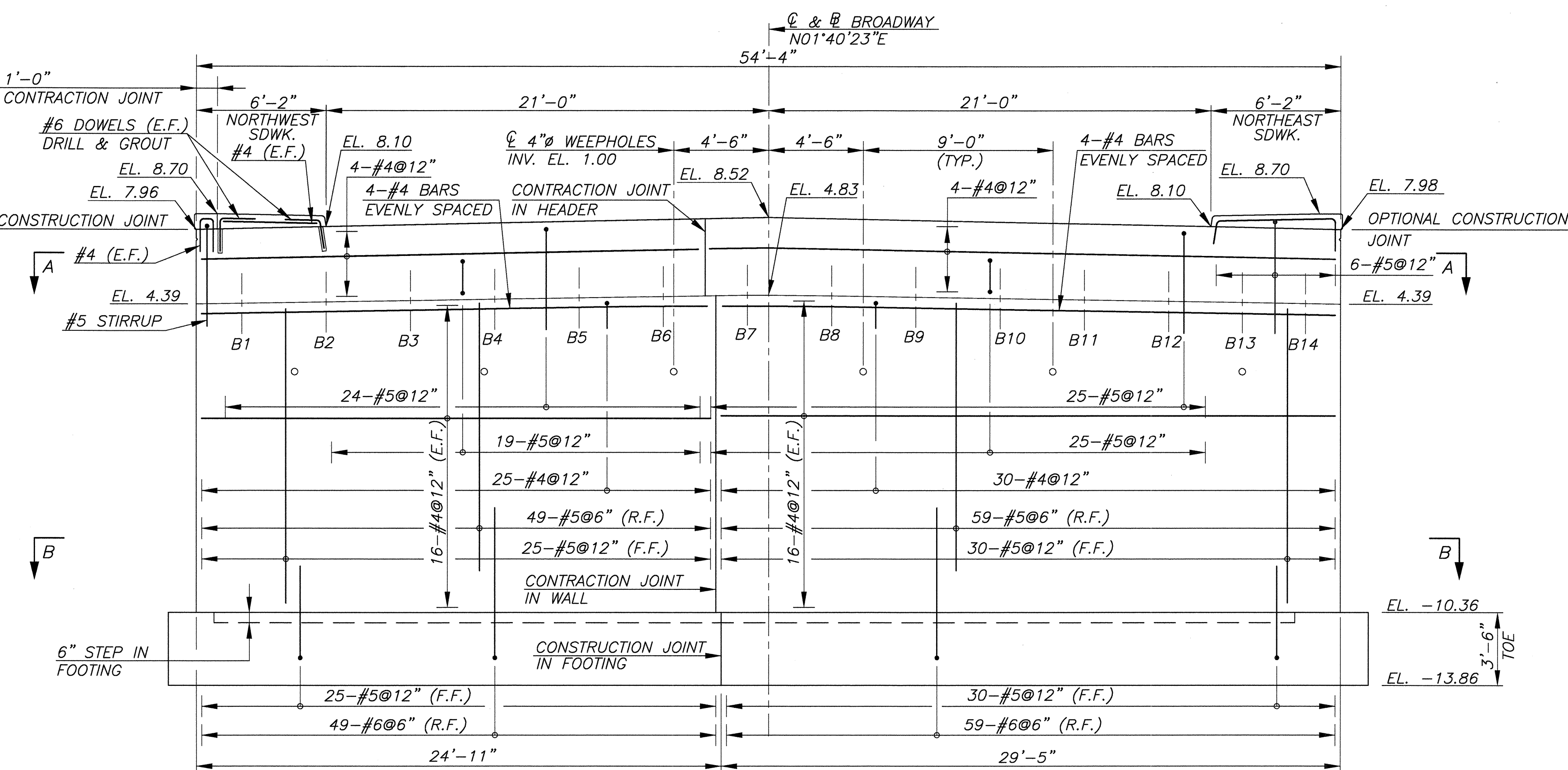
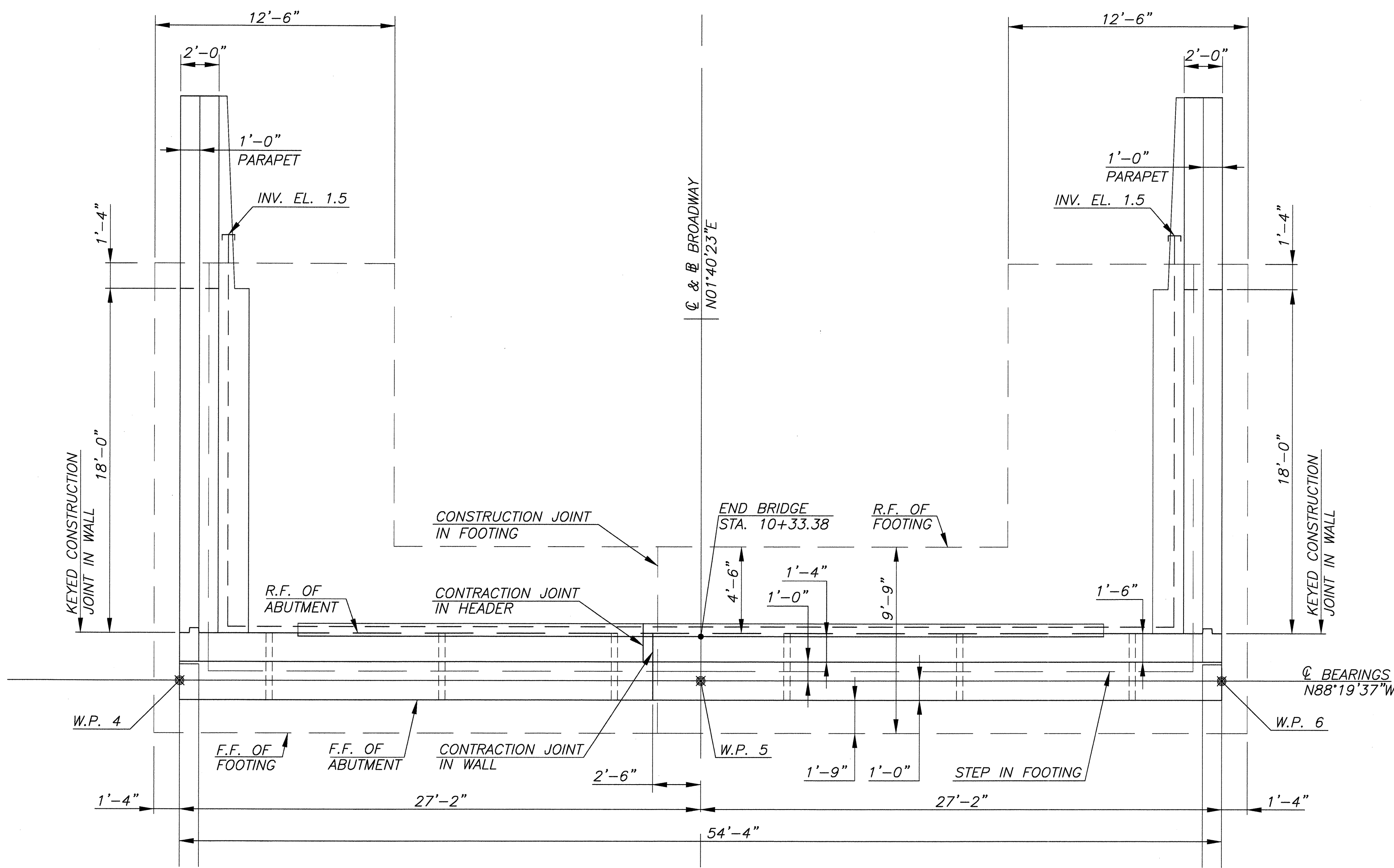
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| NO.   | REVISION      | DATE           | BY               | CHK. BY                 |
|---|---------------|----------------|------------------|-------------------------|
| <b>SOUTH ABUTMENT</b>   |               |                |                  |                         |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |               |                |                  |                         |
| <b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238  |               |                |                  |                         |
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| SCALE: NOTED  | DATE: 08/2011 | DSGN. BY: K.W. | CHK'D BY: J.M.M. | JOB NUMBER: NJ-C-BB-100 |
|   |               |                |                  | SHEET NO: 25 OF 51      |





- NOTE:**
1. ABUTMENT BACKWALL TO BE POURED AFTER P.C. BEAMS AND DECK ARE IN PLACE
  2. ALL BRIDGE SEAT ELEVATIONS ARE GIVEN AT INTERSECTION OF  $\bar{C}$  BEARINGS AND  $\bar{C}$  BEAMS.
- REFERENCES:**
1. FOR BRIDGE SEAT ELEVATIONS, SEE SHEET B8.
  2. FOR PILE PLAN, SEE SHEET B6.
  3. FOR CORNER REINFORCEMENT DETAILS (SECT. A-A AND B-B), SEE SHEET B11.
  4. FOR FOOTING REINFORCEMENT, SEE SHEET B7.
  5. FOR SUBSTRUCTURE PAYMENT LIMITS, SEE SHEET B11.
- LEGEND:**
- F.F. - DENOTES FRONT FACE
  - R.F. - DENOTES REAR FACE
  - E.F. - DENOTES EACH FACE
  - S.W. - DENOTES SIDEWALK

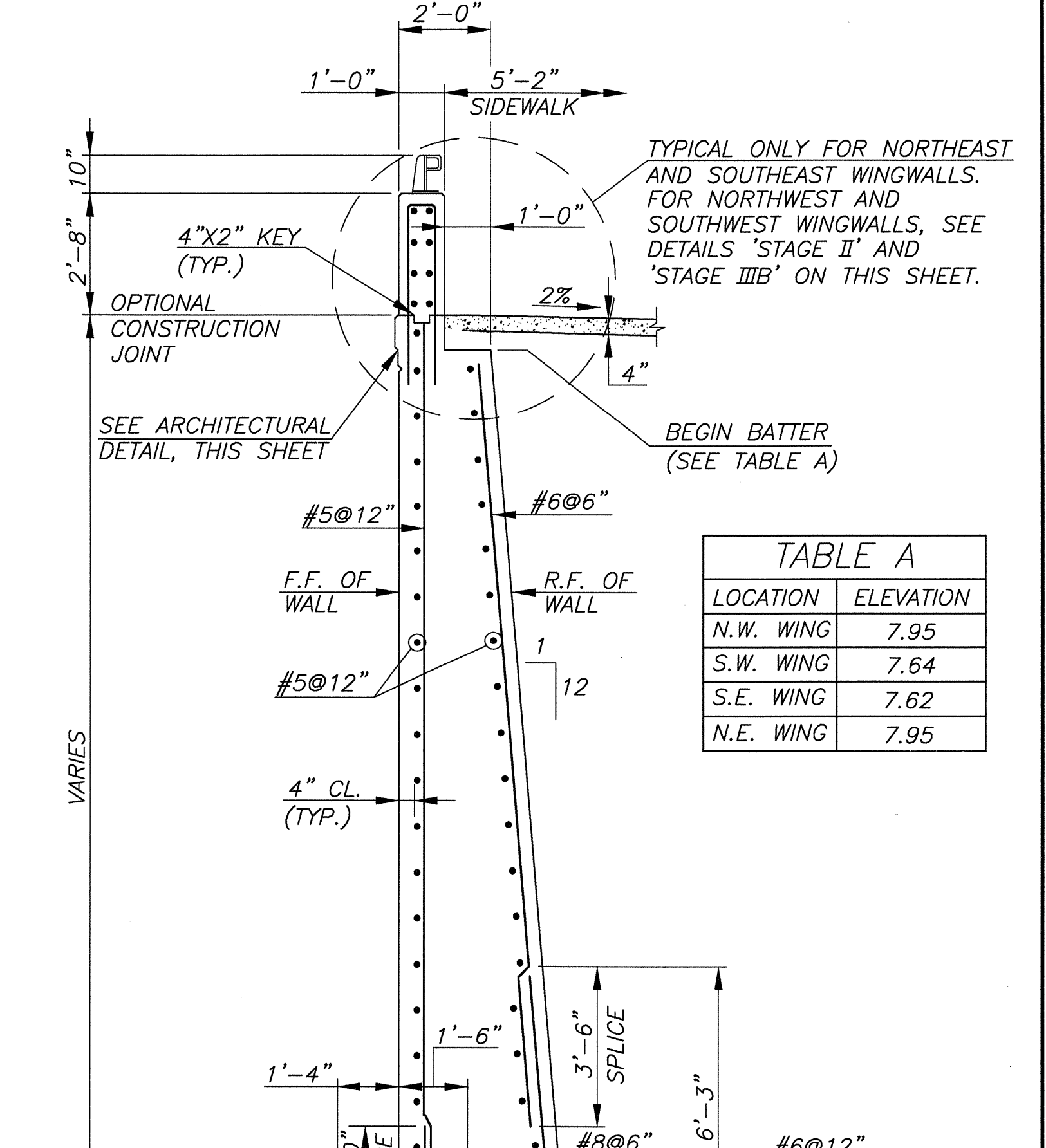
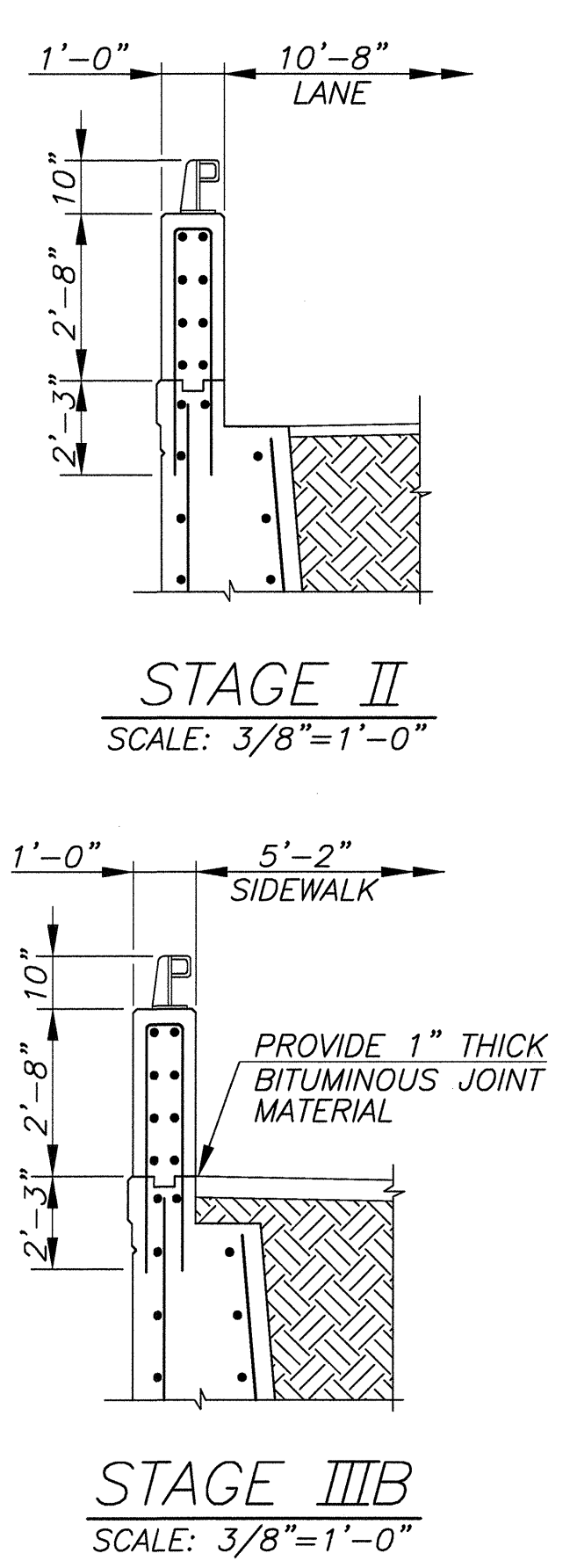
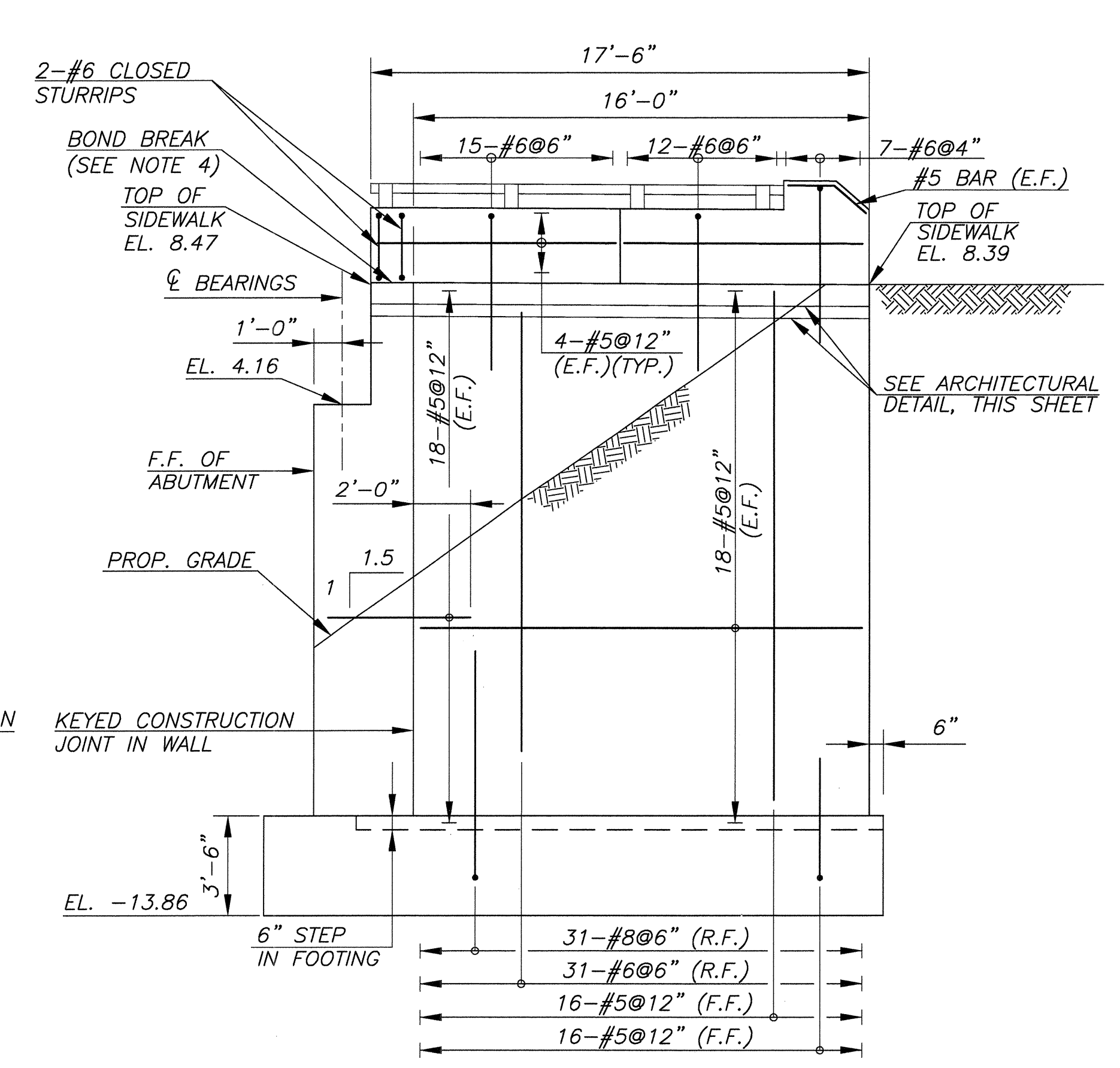
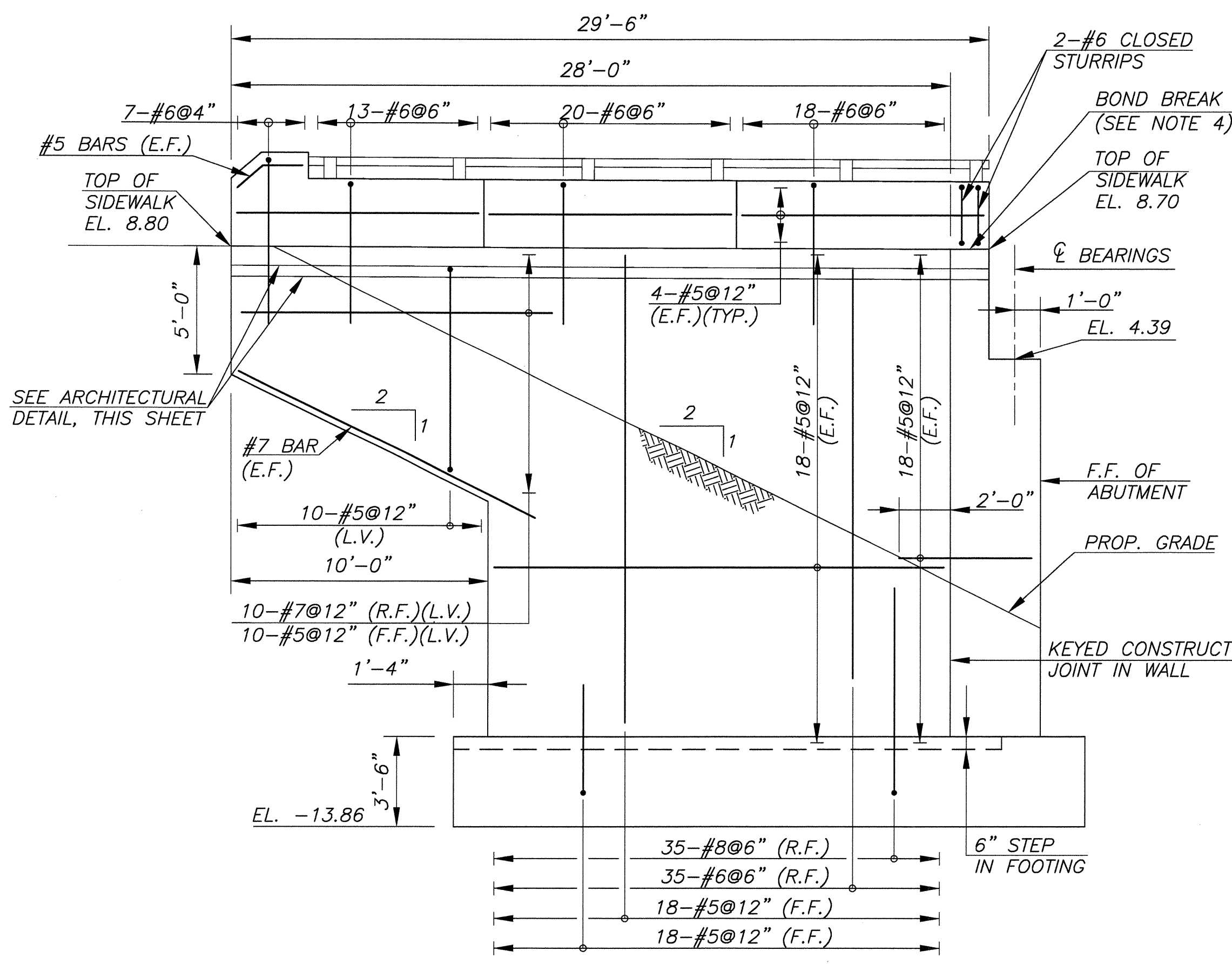
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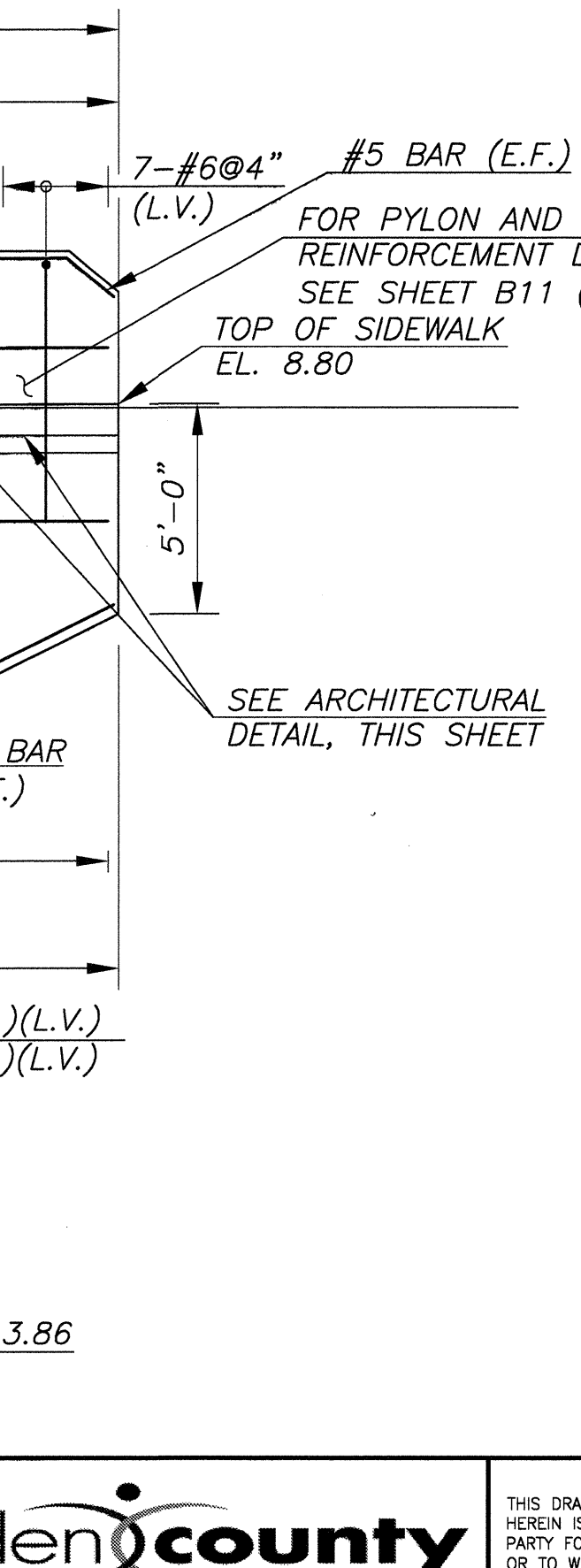
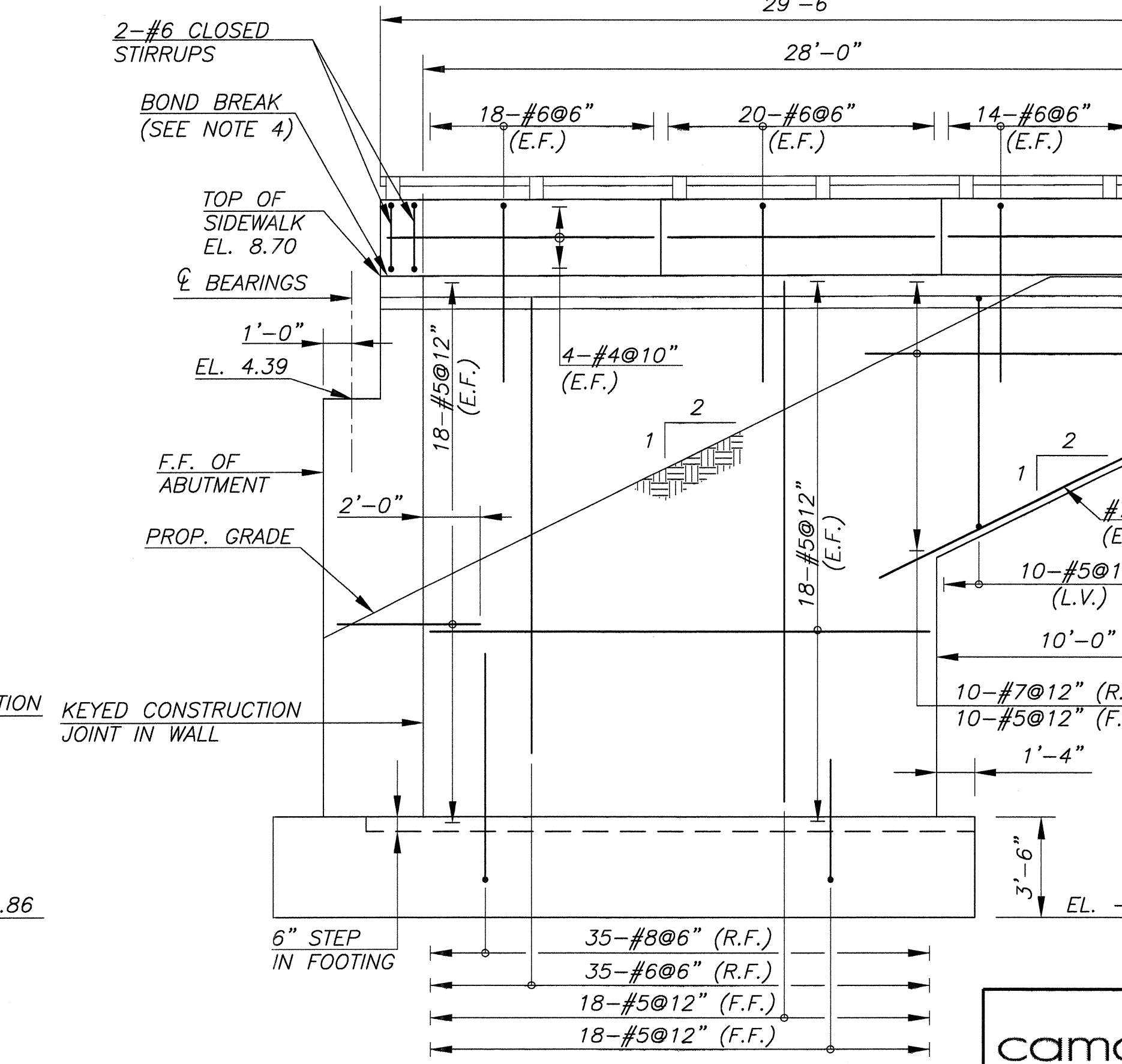
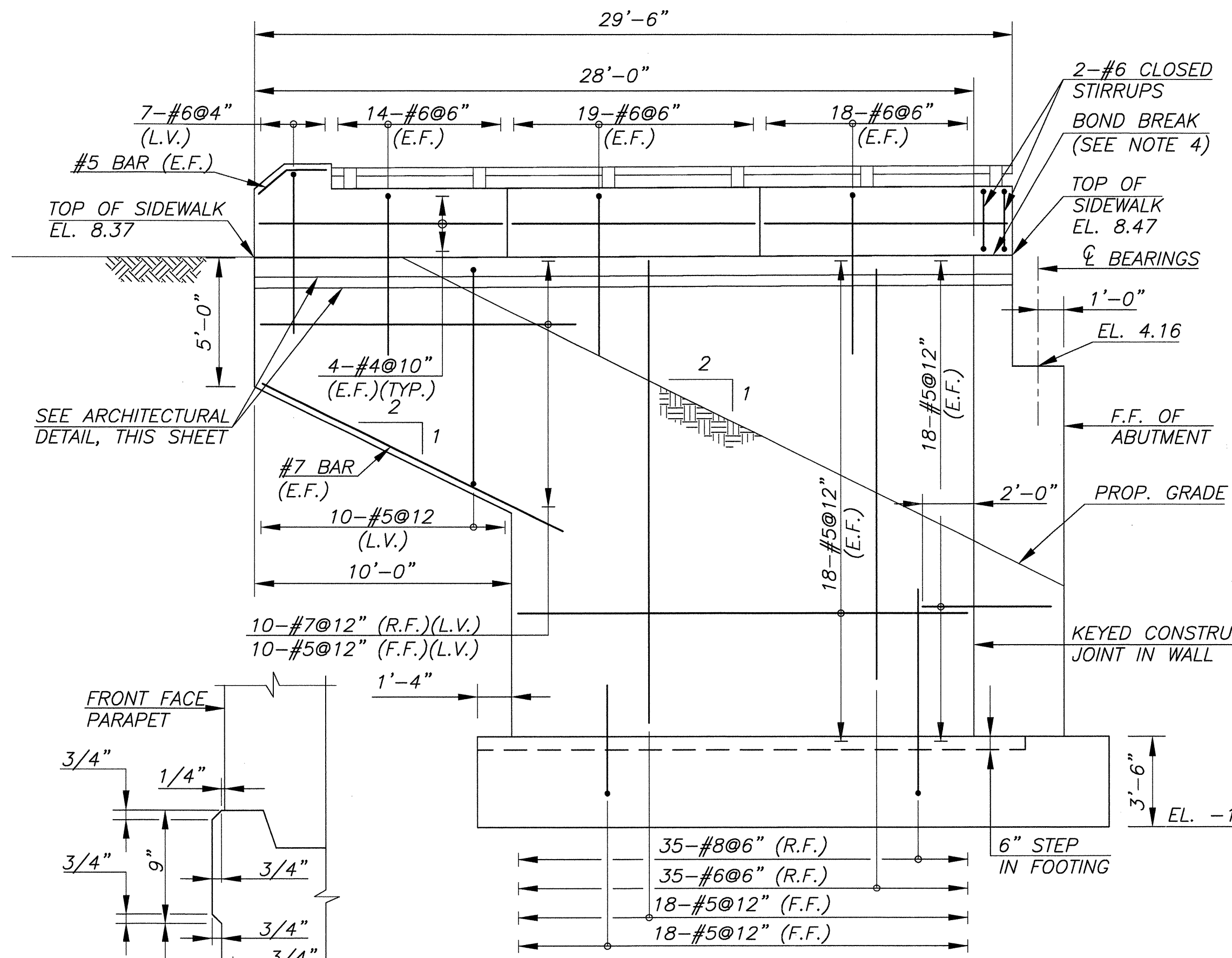
| NO.  | REVISION      | DATE                    | BY               | CHK. BY            |
|--|---------------|-------------------------|------------------|--------------------|
| <b>NORTH ABUTMENT</b>  |               |                         |                  |                    |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |               |                         |                  |                    |
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|  |               | JOB NUMBER: NJ-C-BB-100 |                  | SHEET NO: 26 OF 51 |



**TABLE A**

| LOCATION  | ELEVATION |
|-----------|-----------|
| N.W. WING | 7.95      |
| S.W. WING | 7.64      |
| S.E. WING | 7.62      |
| N.E. WING | 7.95      |

**NOTE:**  
PILES NOT SHOWN FOR CLARITY.



**NOTE:**  
PILES NOT SHOWN FOR CLARITY.

**REFERENCES:**

- FOR PILE PLAN, SEE SHEET B6.
- FOR FOOTING REINFORCEMENT, SEE SHEET B7.
- FOR CORNER REINFORCEMENT DETAILS, SEE SHEET B11.

**LEGEND:**

- F.F. - DENOTES FRONT FACE
- R.F. - DENOTES REAR FACE
- E.F. - DENOTES EACH FACE
- L.V. - DENOTES LENGTH VARIES

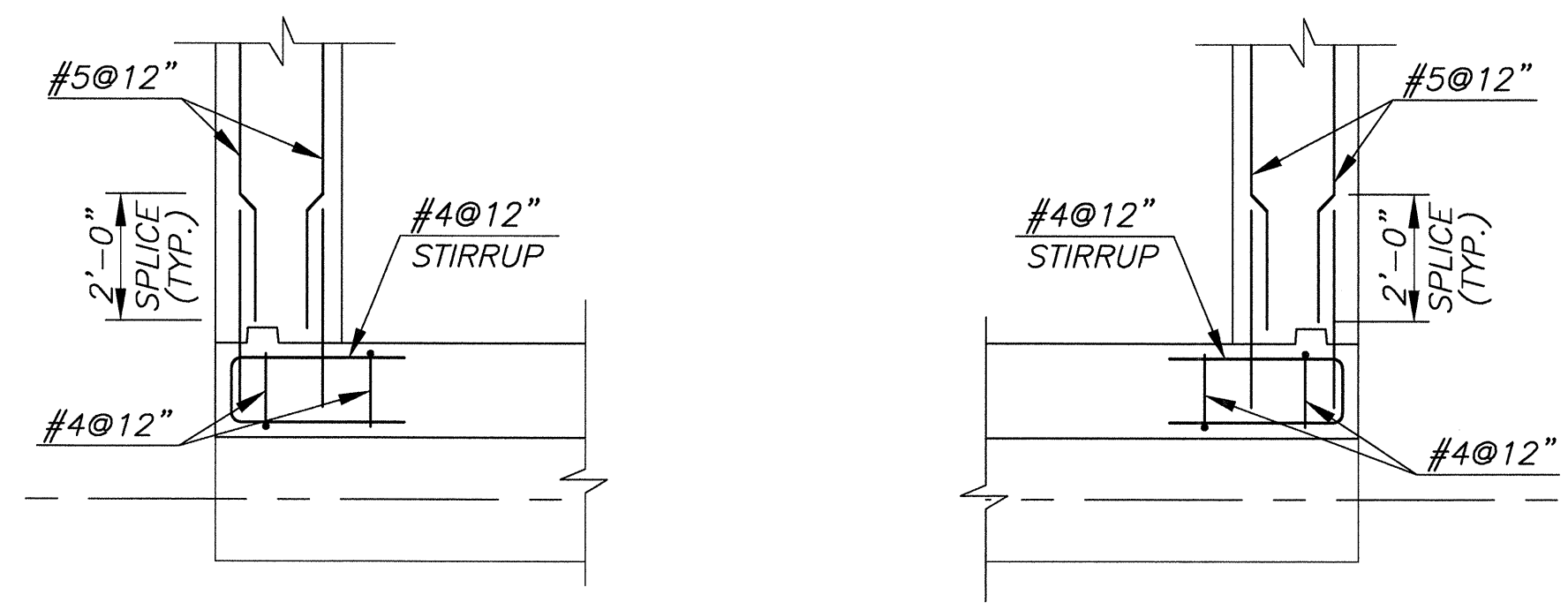
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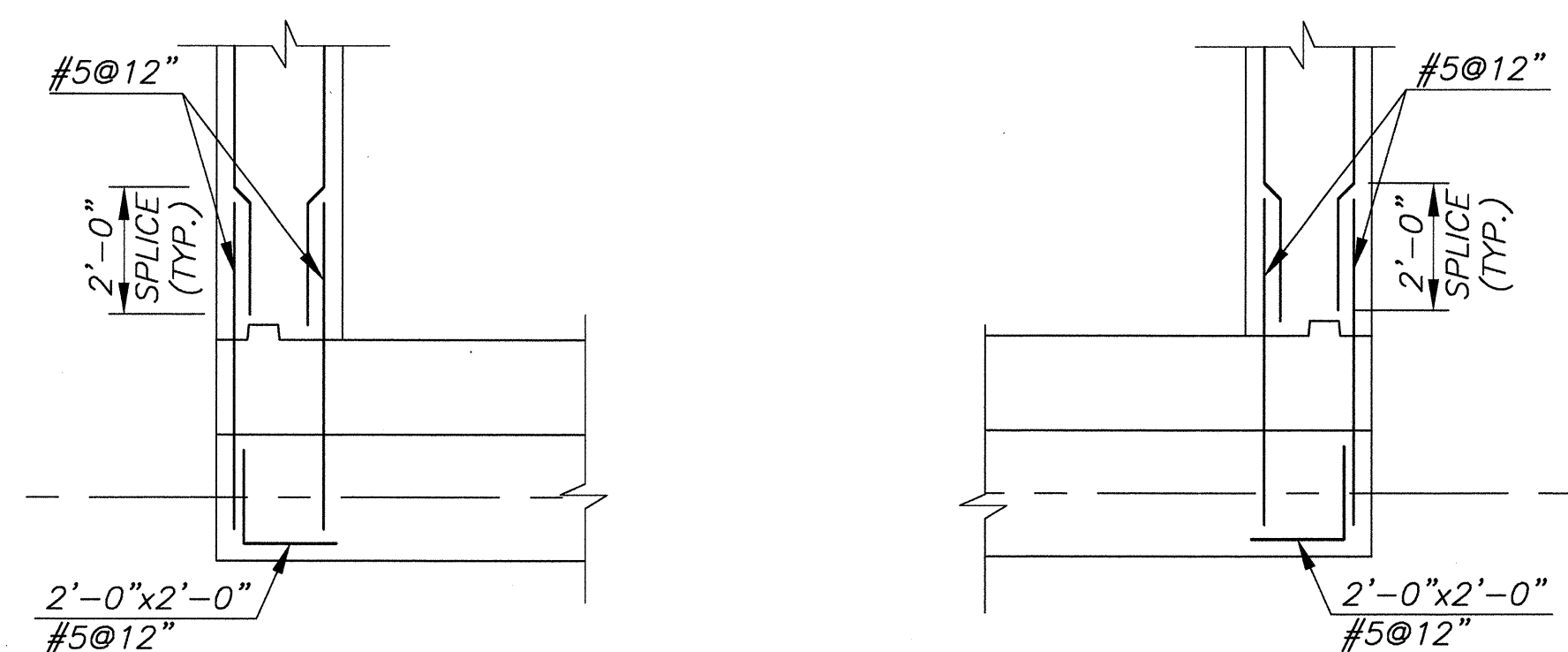
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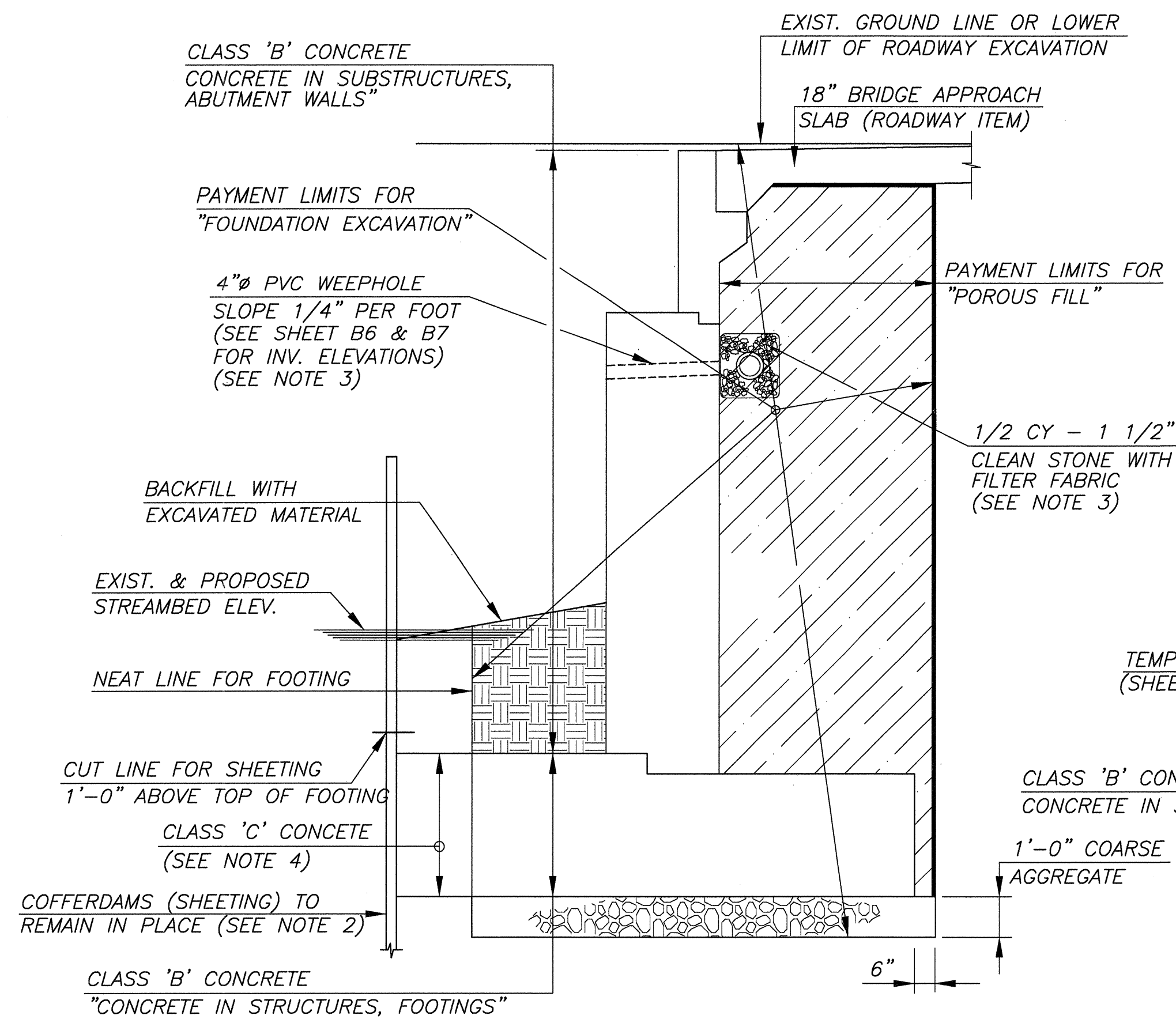
| NO.   | REVISION      | DATE           | BY               | CHK. BY                 |
|---|---------------|----------------|------------------|-------------------------|
| <b>WINGWALLS</b>  |               |                |                  |                         |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |               |                |                  |                         |
| <i>Gregory D. Bitsko</i>  |               |                |                  |                         |
| GREGORY D. BITSKO<br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238   |               |                |                  |                         |
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|   |               |                |                  | JOB NUMBER: NJ-C-BB-100 |
|   |               |                |                  | SHEET NO: 27 OF 51      |



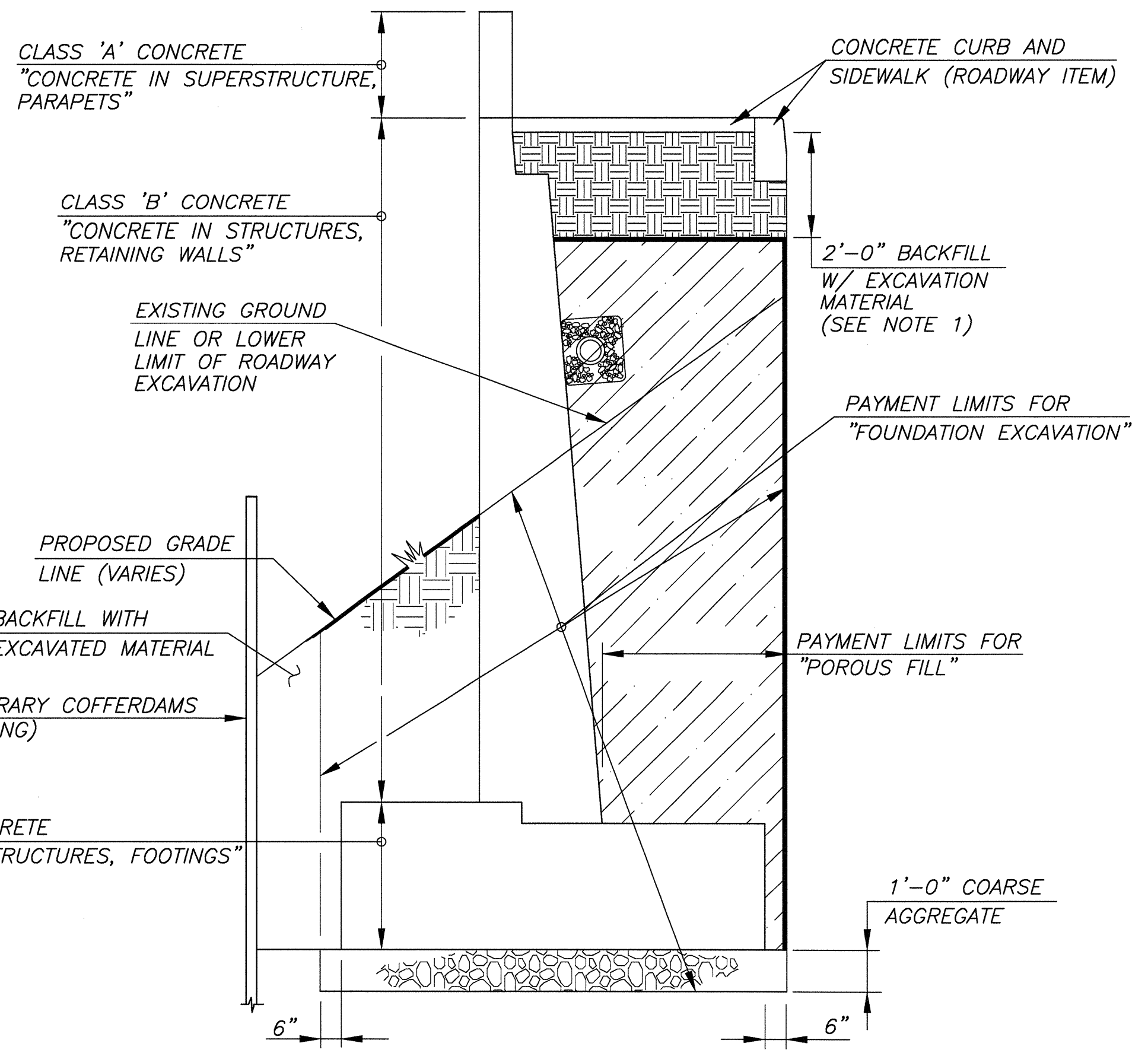
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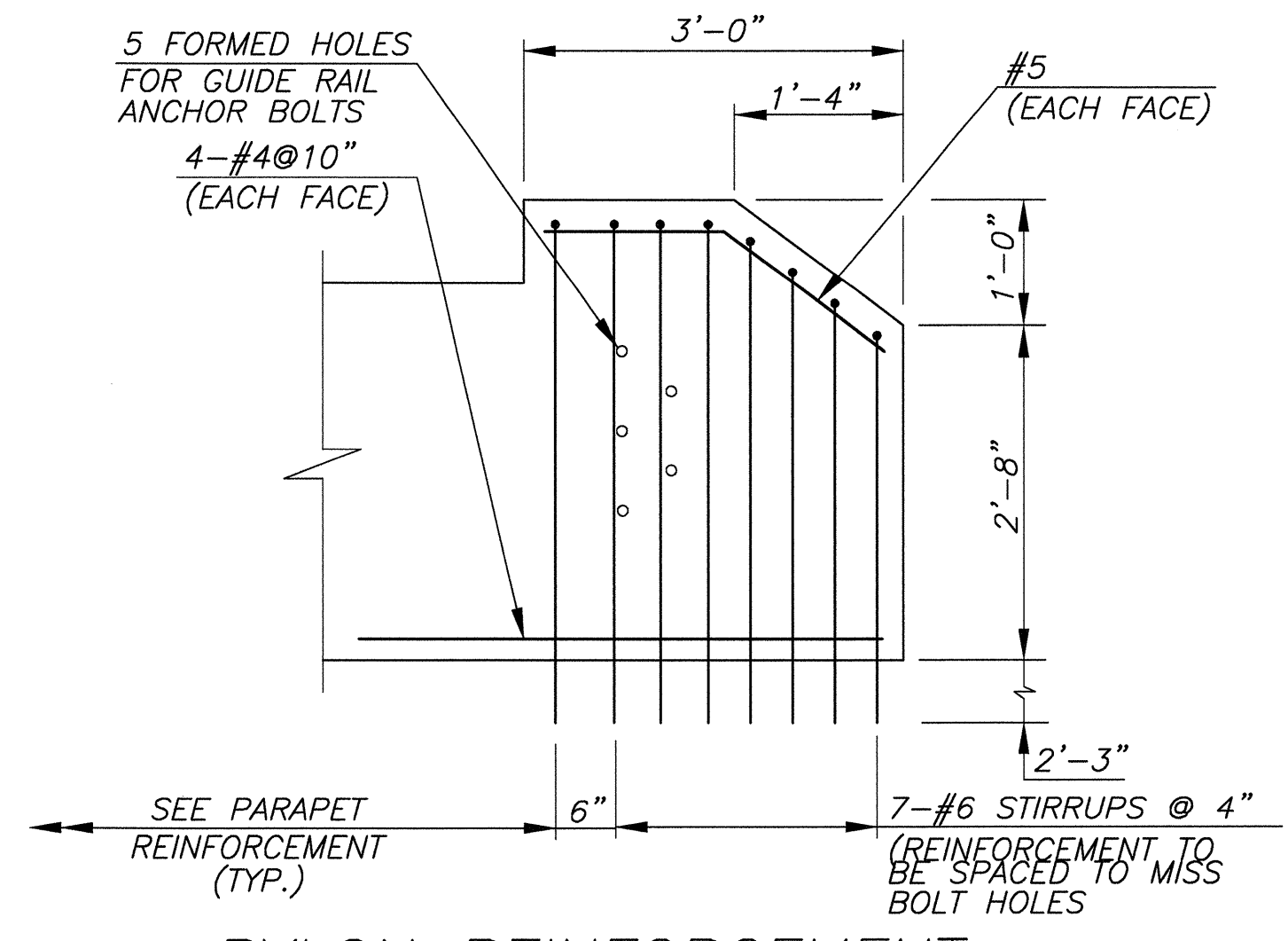
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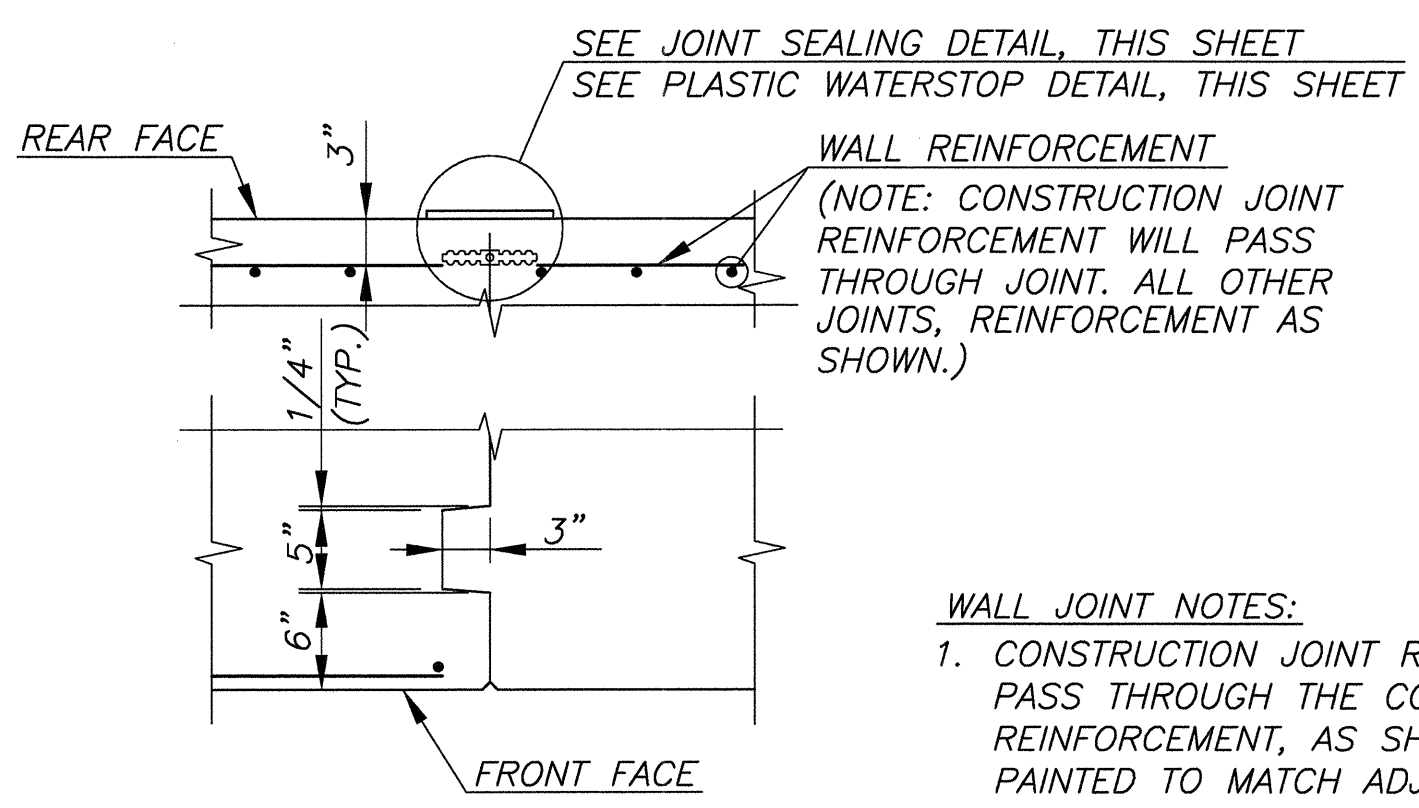
**ABUTMENT PAYMENT LIMITS**  
N.T.S.



**WINGWALL PAYMENT LIMITS**  
N.T.S.



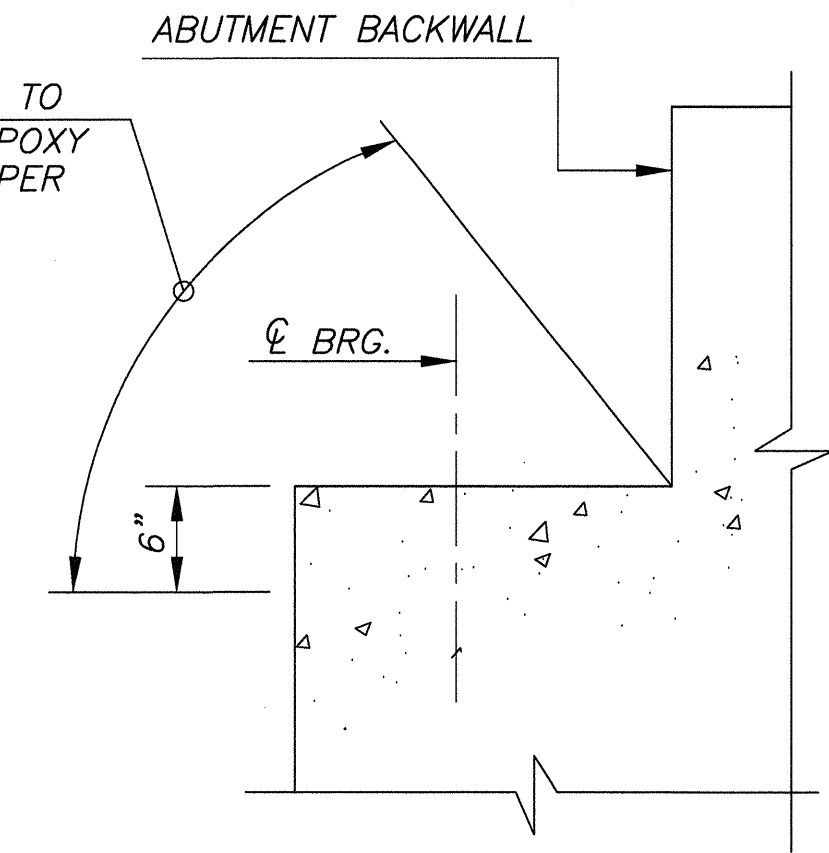
**PYLON REINFORCEMENT**  
N.T.S.



**TYPICAL WINGWALL JOINT**  
N.T.S.

- WALL JOINT NOTES:**
- CONSTRUCTION JOINT REINFORCEMENT SHALL PASS THROUGH THE COLD JOINT. ALL OTHER REINFORCEMENT, AS SHOWN. CORK TO BE PAINTED TO MATCH ADJACENT CONCRETE.
  - EXPANSION JOINT—CORK JOINT MATERIAL CONFORMING TO AASHTO SPECIFICATIONS, DESIGNATION M153, TYPE 2.
  - CONSTRUCTION OR CONTRACTION JOINT—JOINT SHALL BE TIGHT (0") AND CONTRACTION JOINT SHALL BE PARAFFIN COATED.

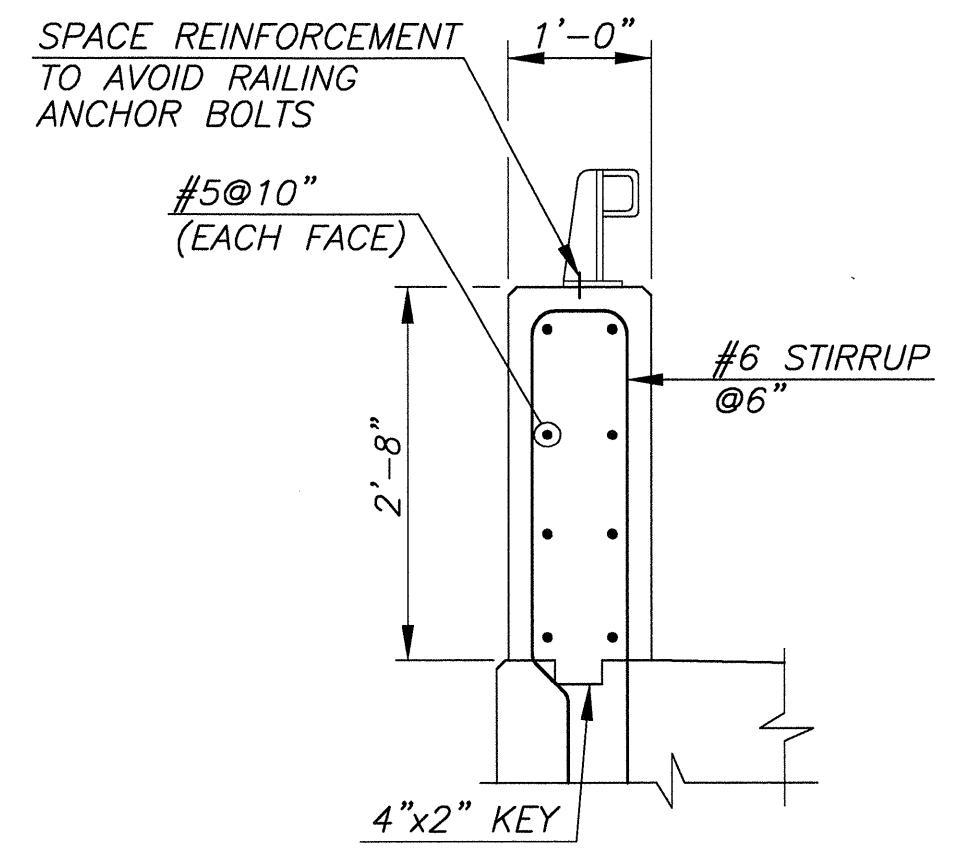
LIMITS OF SURFACES TO BE COVERED WITH EPOXY WATERPROOFING AS PER SPECIFICATIONS



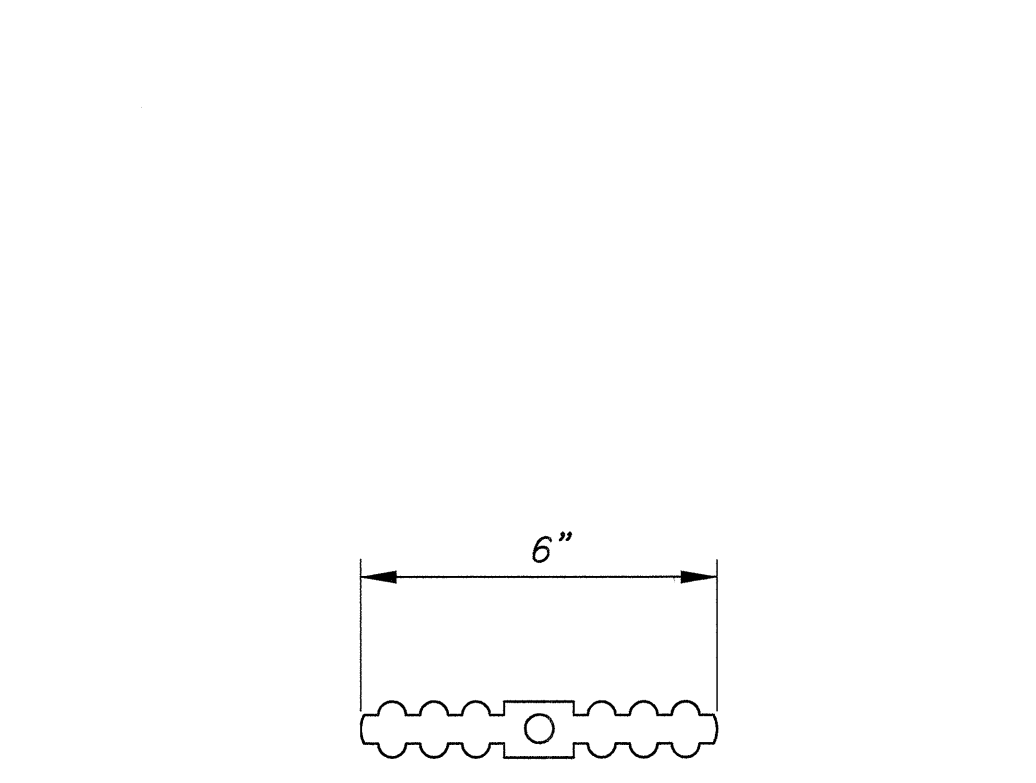
**LIMITS OF EPOXY WATERPROOFING SEAL COAT ON ABUTMENTS**  
N.T.S.

**NOTES:**

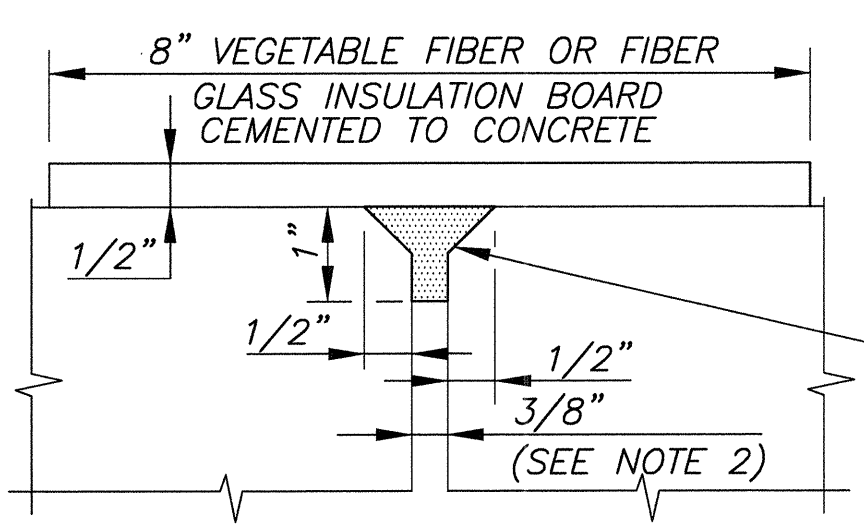
- COST OF BACKFILLING TO BE INCLUDED IN THE PAY ITEM "FOUNDATION EXCAVATION".
- COFFERDAMS (SHEETING) SHALL BE LEFT IN PLACE ALONG THE LIMITS SHOWN OF THE PROPOSED FOOTING (SEE SHEET B7). THE INSTALLATION OF THE COFFERDAMS SHALL AVOID INTERFERING WITH BATTERED PILES. REFER TO SPECIFICATIONS, SECTION 206.08.
- NO SEPARATE PAYMENT WILL BE MADE FOR THE 4" PVC WEEPHOLE PIPE, FILTER FABRIC, 8" SLOTTED HDPE PIPE UNDERDRAIN, AND THE CLEAN STONE. ALL COSTS THEREOF TO BE INCLUDED IN THE PAY ITEM "CONCRETE IN SUBSTRUCTURES, ABUTMENT WALLS".
- CLASS 'C' CONCRETE WILL BE USED TO SEAL THE GAP BETWEEN THE FRONT FACE OF FOOTING AND THE COFFERDAM. NO SEPARATE PAYMENT WILL BE MADE FOR CLASS 'C' CONCRETE THE COST SHALL BE INCLUDED IN THE COST FOR PAY ITEM "CONCRETE IN STRUCTURES, FOOTINGS".



**TYPICAL PARAPET REINFORCEMENT**  
N.T.S.



**PLASTIC WATERSTOP DETAIL**  
N.T.S.



**JOINT SEALING DETAIL**  
N.T.S.

TWO COMPONENT, RUBBER TYPE, COLD-APPLIED JOINT SEALING COMPOUND OR AN APPROVED EQUAL, AS PER SPECIFICATIONS

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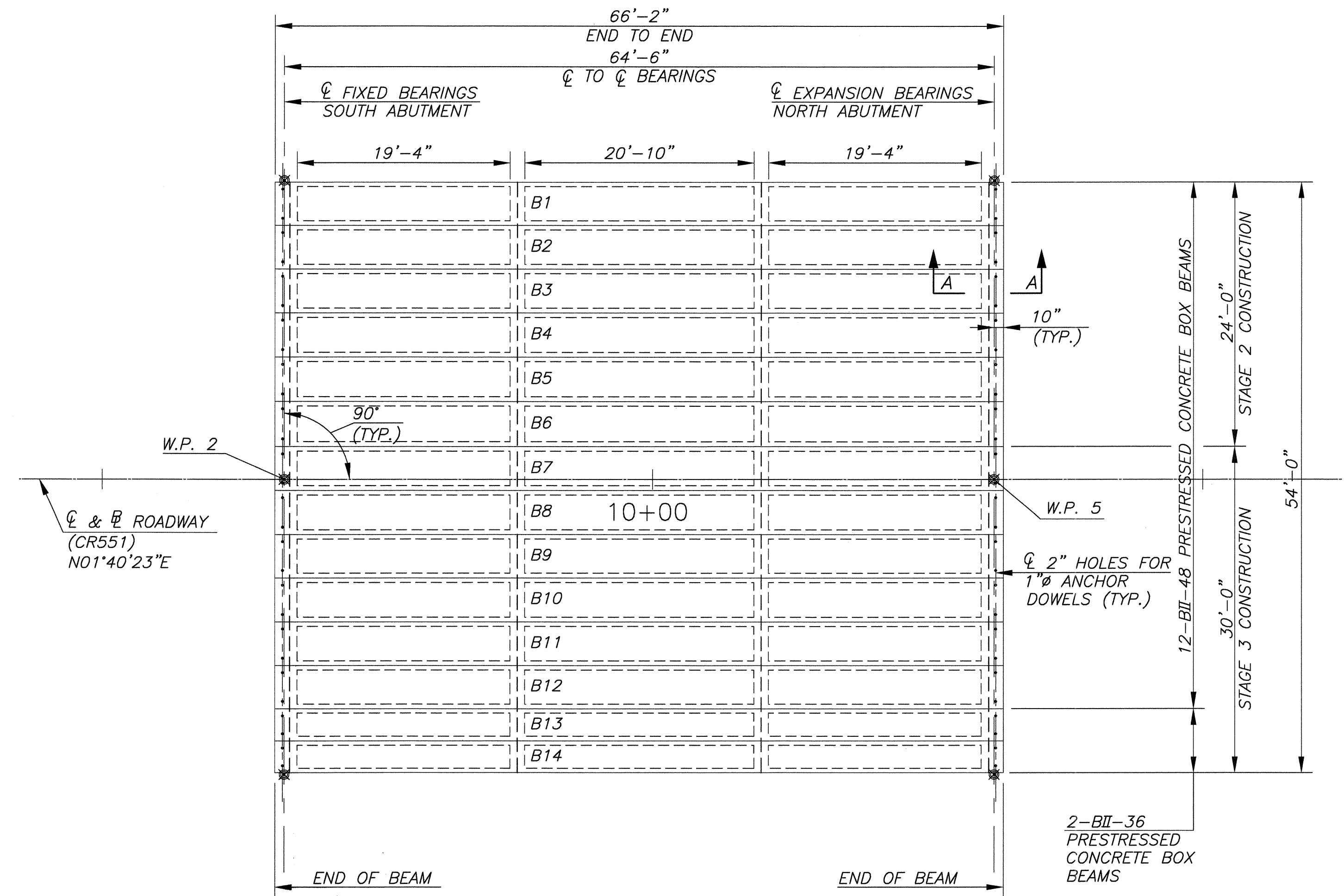
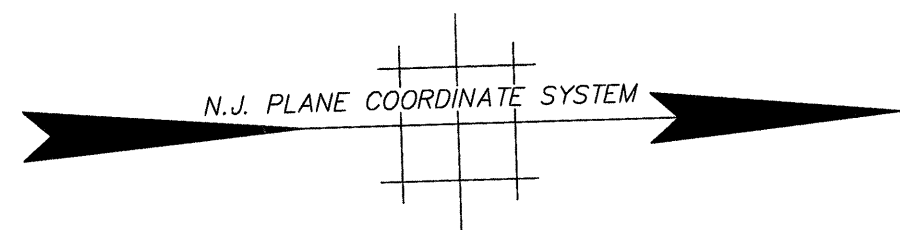
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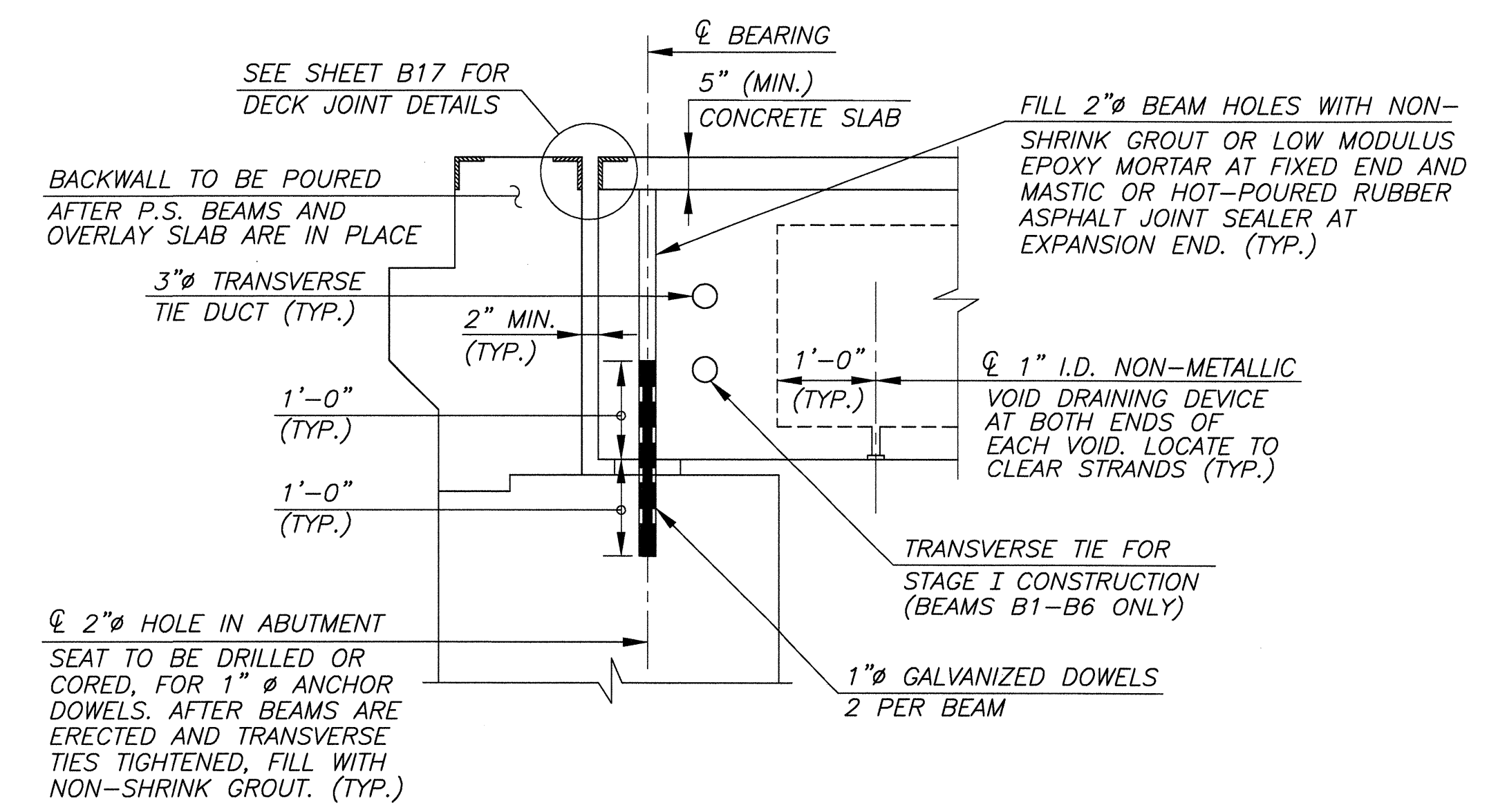
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|  |                  |                            |                     |                        |
|--|------------------|----------------------------|---------------------|------------------------|
| NO.  | REVISION         | DATE                       | BY                  | CHK. BY                |
| <b>SUBSTRUCTURE DETAILS</b>  |                  |                            |                     |                        |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |                  |                            |                     |                        |
| <i>Gregory D. Bitsko</i><br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238   |                  |                            |                     |                        |
| <b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>20 GIBSON PLACE, SUITE 100<br>FREDERICK, N.J. 07728<br>PHONE: (732) 303-8100 FAX: (732) 303-8100 |                  |                            |                     |                        |
| SCALE:<br>NOTED  | DATE:<br>08/2011 | DRAWN BY:<br>K.W.          | DSGN. BY:<br>J.M.M. | CHK.'D BY:<br>J.M.C.   |
|  |                  | JOB NUMBER:<br>NJ-C-BB-100 |                     | SHEET NO.:<br>28 OF 51 |

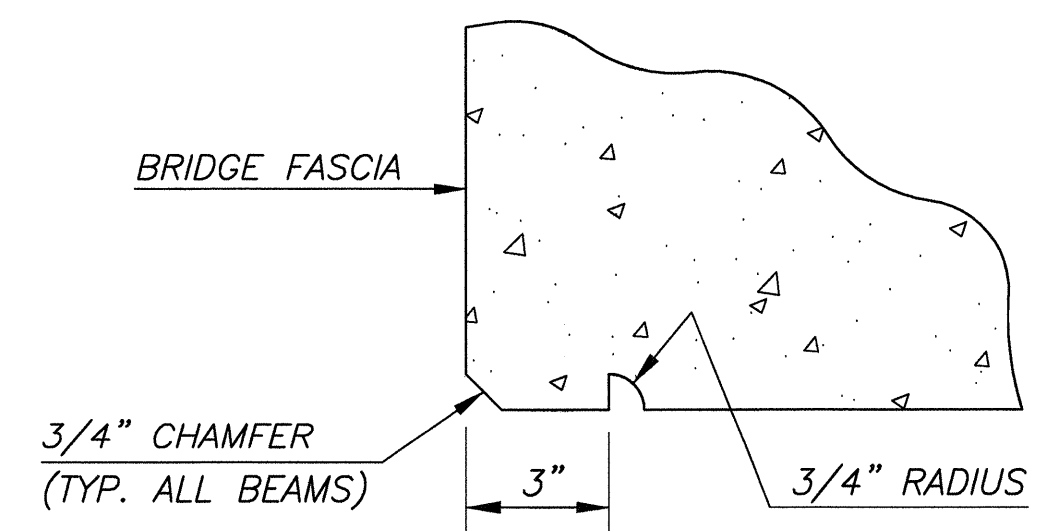
B11  
B21



**FRAMING PLAN**  
SCALE: 1/8"=1'-0"

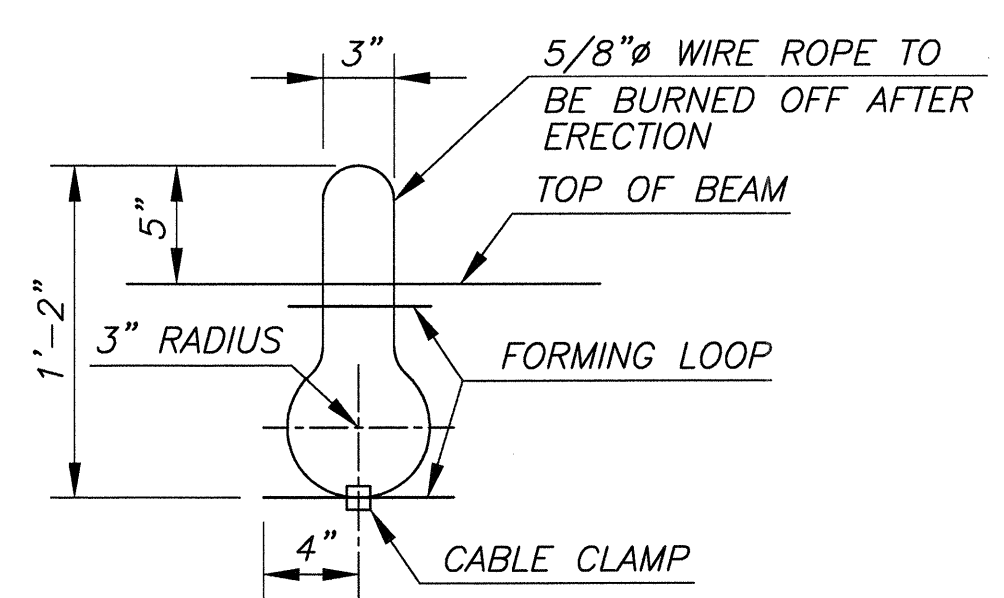


**SECTION A-A**  
SCALE: 3/4"=1'-0"



NOTE:  
OMIT SHEAR KEY ON FASCIA SIDE OF FASCIA BEAMS.

**DRIP NOTCH DETAIL FOR FASCIA BEAMS**  
N.T.S.



**LIFTING LOOP CLAMP**  
N.T.S.

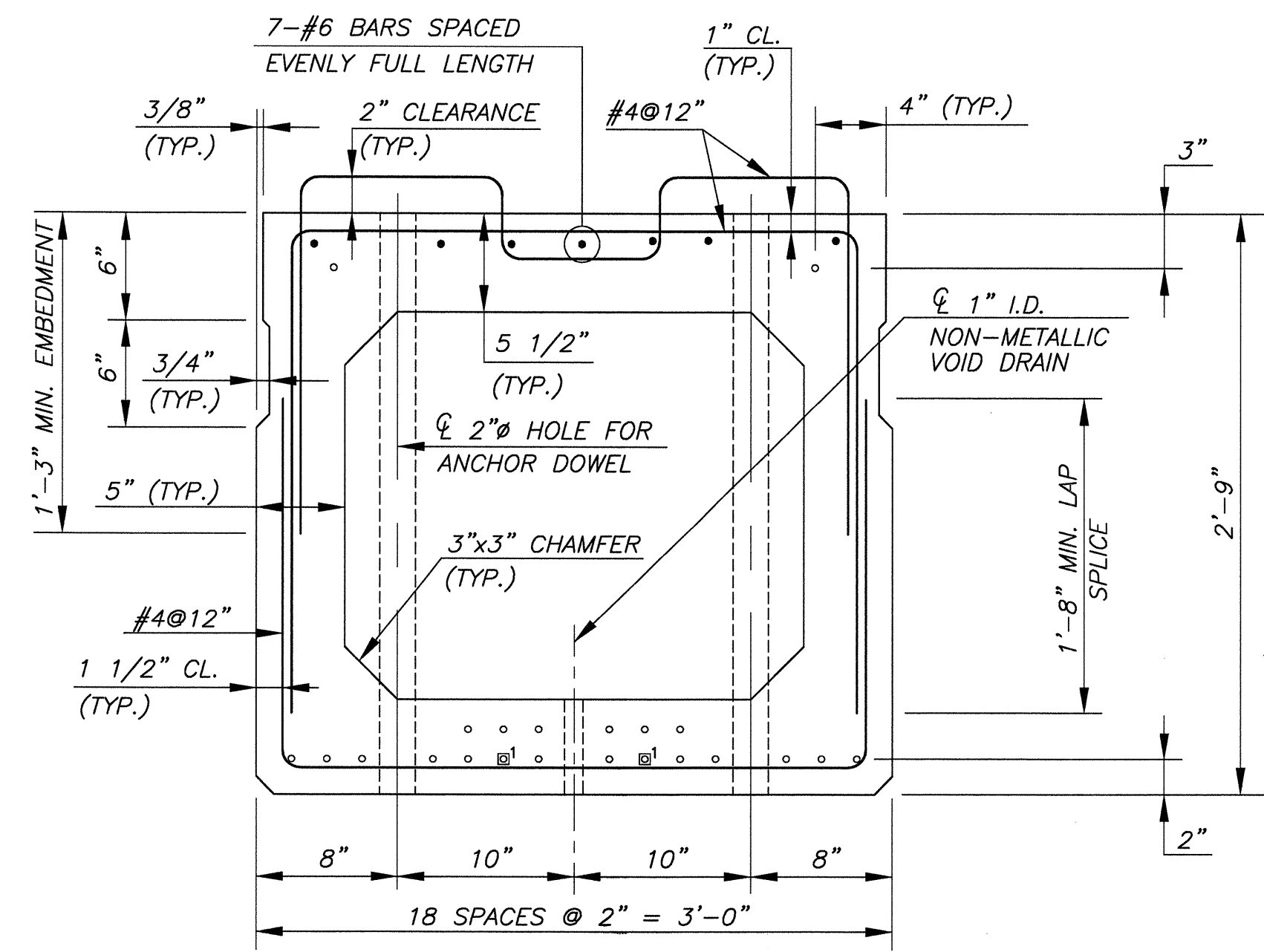
B12  
B21

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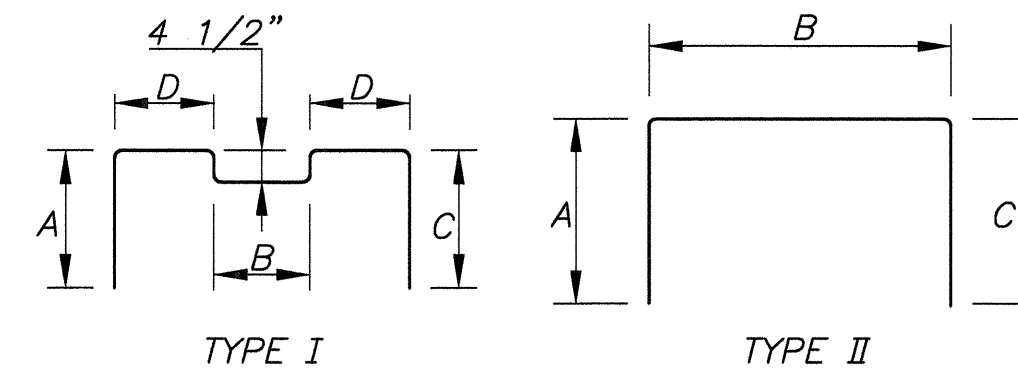
| NO.   | REVISION         | DATE              | BY                  | CHK.                | BY                        |
|---|------------------|-------------------|---------------------|---------------------|---------------------------|
| <b>FRAMING PLAN</b>   |                  |                   |                     |                     |                           |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |                  |                   |                     |                     |                           |
| <i>Gregory D. Bitsko</i><br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238  |                  |                   |                     |                     |                           |
| <b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>200 GREEN PLAZA, SUITE 100<br>FREDERICK, N.J. 07728<br>PHONE: (732) 303-8100      FAX: (732) 303-8110 |                  |                   |                     |                     |                           |
| SCALE:<br>NOTED   | DATE:<br>08/2011 | DRAWN BY:<br>K.W. | DSGN. BY:<br>J.M.M. | CHK'D BY:<br>J.M.C. | JOB NUMBER<br>NJ-C-BB-100 |
|   |                  |                   |                     |                     | SHEET NO.<br>29 OF 51     |



TOTAL NUMBER OF STRANDS - 22

| REINFORCEMENT BAR SCHEDULE * |      |          |        |      |            |       |        |       |         |
|------------------------------|------|----------|--------|------|------------|-------|--------|-------|---------|
| MARK                         | SIZE | TYPE     | LENGTH | QTY. | DIMENSIONS |       |        |       | REMARKS |
|                              |      |          |        |      | A          | B     | C      | D     |         |
| PB1                          | #4   | I        | 6'-6"  | 66   | 1'-8"      | 0'-9" | 1'-8"  | 1'-0" |         |
| PB2                          | #4   | II       | 6'-4"  | 66   | 1'-10"     | 2'-8" | 1'-10" |       |         |
| PB3                          | #4   | II       | 5'-2"  | 66   | 1'-2"      | 2'-9" | 1'-2"  |       |         |
| PB4                          | #4   | II       | 12'-3" | 14   | 5'-0"      | 2'-3" | 5'-0"  |       |         |
| PB5                          | #4   | II       | 12'-6" | 12   | 5'-0"      | 2'-6" | 5'-0"  |       |         |
| PB6                          | #4   | II       | 10'-0" | 16   | 4'-0"      | 2'-3" | 4'-0"  |       |         |
| PB7                          | #4   | II       | 10'-3" | 12   | 4'-0"      | 2'-6" | 4'-0"  |       |         |
| PB8                          | #6   | STRAIGHT | 35'-0" | 7    |            |       |        |       |         |
| PB9                          | #6   | STRAIGHT | 33'-8" | 7    |            |       |        |       |         |

\* REINFORCEMENT SHOWN FOR ONE (1) BEAM ONLY

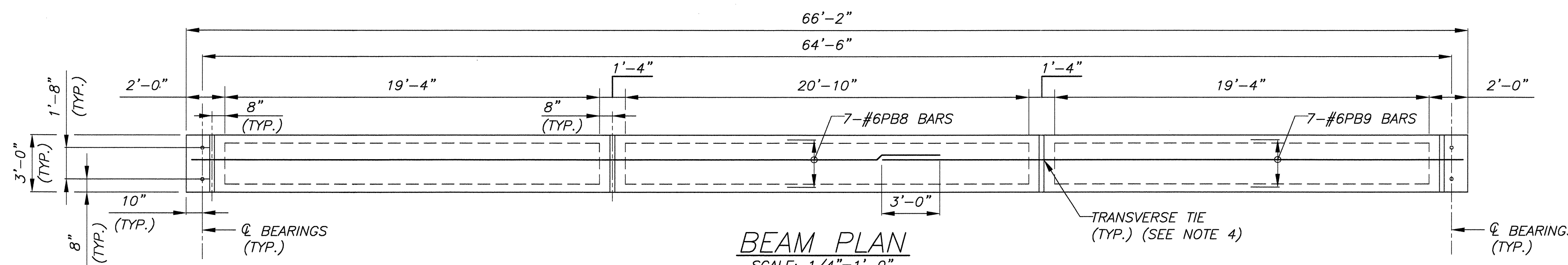


CONCRETE BOX BEAM BII-36 (33"x36")-2 REQUIRED

SCALE: 1 1/2"=1'-0"

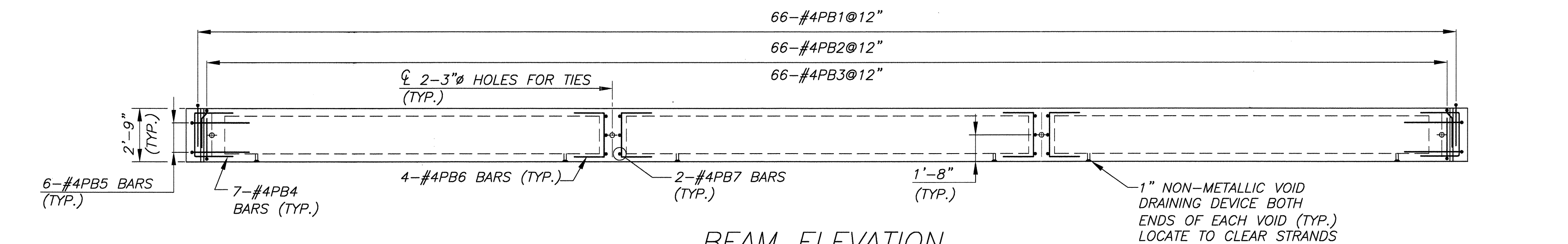
LEGEND:

- PRESTRESSING STRAND
- ▣ DEBONDED PRESTRESSING STRAND FOR SHIELD LENGTH-1
- MILD STEEL REINFORCING



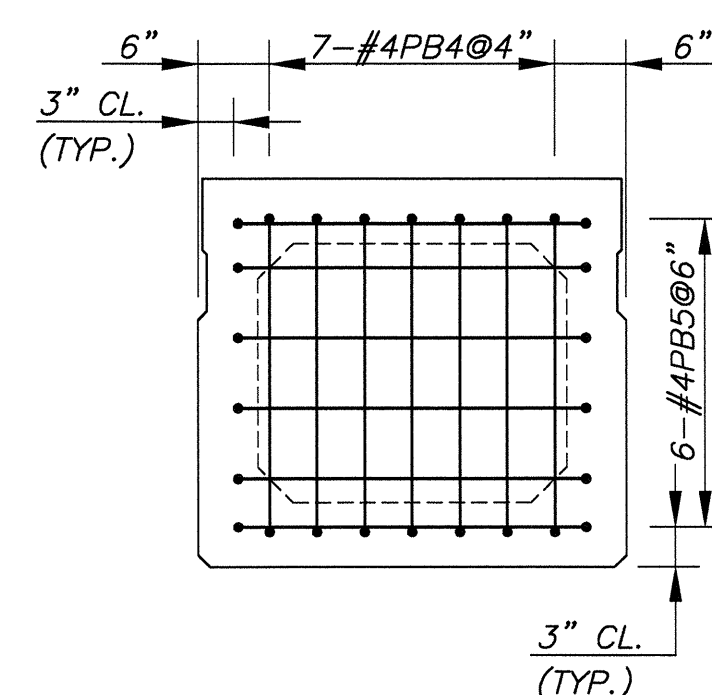
BEAM PLAN

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



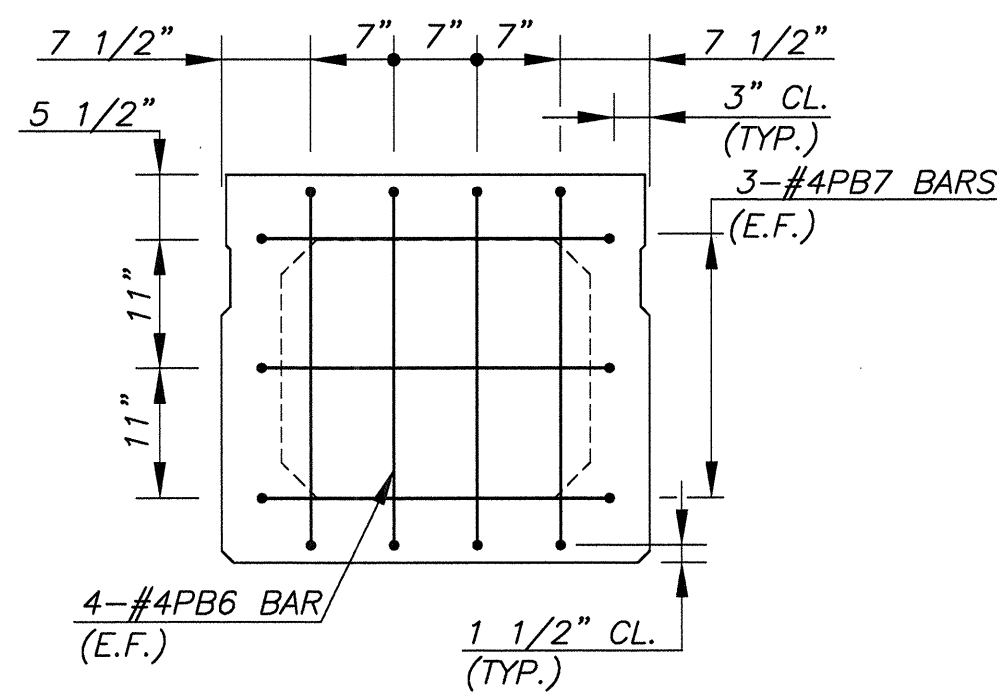
BEAM ELEVATION

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



END BLOCK REINFORCEMENT

SCALE: 3/4"=1'-0"



DIAPHRAGM DETAIL

SCALE: 3/4"=1'-0"

NOTES:

- SEE SHEET B15 FOR EPOXY WATERPROOFING SEAL COAT LIMITS FOR PRESTRESSED CONCRETE BEAMS.
- FOR DEBONDED STRAND DETAILS, SEE SHEET B14.

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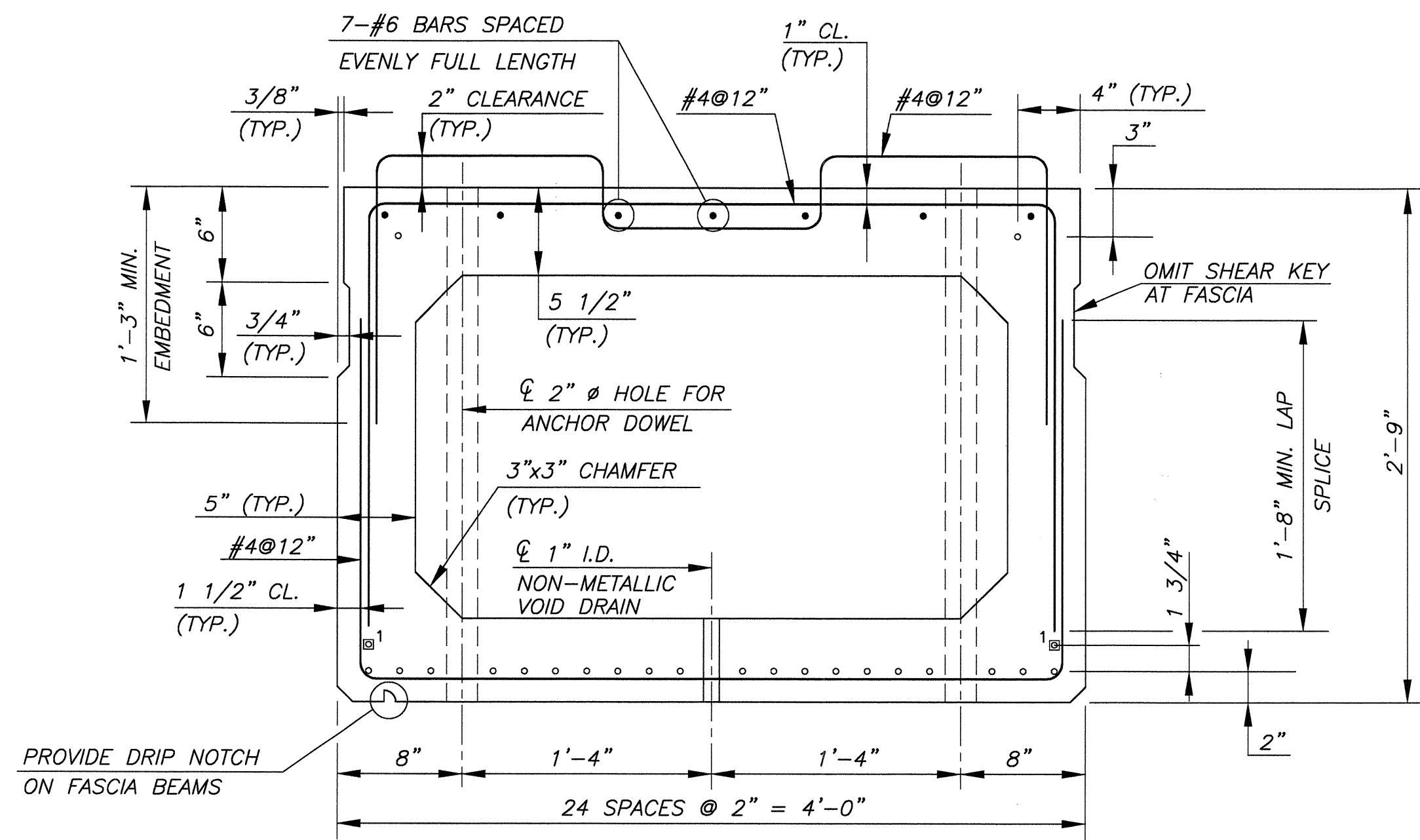
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PRECAST BOX BEAM NOTES:

- CONCRETE: SPECIFIED DESIGN COMPRESSIVE STRENGTH ( $f'_c$ ) (IN ACCORDANCE WITH THE RETEST LIMIT FOR PAY ADJUSTMENT ITEMS AS SPECIFIED IN TABLE 914.4 OF THE NJDOT STANDARD SPECIFICATIONS AND AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS)  
  
@28 DAYS: 5000 PSI (CLASS P)  
@TRANSFER: 4000 PSI (CLASS P)  
CLASS DESIGN STRENGTH (28 DAYS): 5500 PSI (CLASS P)
- STEEL: A. 7 WIRE 1/2"Ø LOW RELAXATION STRANDS, A=0.153 IN<sup>2</sup>, ULTIMATE STRENGTH = 41,300 LBS (GRADE 270).  
B. FORCE @ PRETENSIONING = 29.0 KIPS PER STRAND.  
C. REINFORCEMENT DOWELS AND MILD STEEL REINFORCEMENT IN P.C. BEAMS TO BE INCLUDED IN ITEM: PRESTRESSED CONCRETE BOX BEAMS.  
D. ALL MILD REINFORCING STEEL SHALL BE GRADE 60, UNCOATED. EXPOSED PORTIONS OF STIRRUPS FOR COMPOSITE ACTION SHALL BE CLEANED AND GIVEN TWO (2) COATS OF ZINC RICH PAINT.
- BEAMS TO BE ERECTED BY MEANS OF LIFTING DEVICES LOCATED AT ENDS OF BEAMS.
- TRANSVERSE TIES SHALL BE 7-WIRE, 1/2" DIA., 270 KSI POLYSTRAND CP (OR APPROVED EQUAL) WITH FORCE AT TENSION = 4.3 KIPS. USE 3 STRANDS PER DUCT. PRECAUTION SHALL BE TAKEN TO PREVENT DAMAGE TO CONCRETE UNDER BEARING PLATES.
- PAYMENT FOR THE FOLLOWING SHALL BE INCLUDED IN THE ITEM: PRESTRESSED CONCRETE BOX BEAMS (TYPE BII-36), 33" X 36" OR OR (TYPE BII-48), 33" X 48" ITEM: ELASTOMERIC BEARING PADS, NONSHRINK GROUT, THREADED INSERTS, TRANSVERSE TIES, SHOP COAT EPOXY WATERPROOFING SEAL COAT, ALL REINFORCING STEEL IN BOX BEAMS ANCHOR DOWELS INCLUDING DRILLING AND PLATE WITH STUDS FOR ARMORED JOINT.
- SHEAR KEYS TO BE SAND BLASTED PRIOR TO PLACING GROUT. TRANSVERSE TIES SHALL BE INSTALLED THROUGH PREFORMED HOLES AND TENSIONED BEFORE THE LONGITUDINAL KEYWAY BETWEEN ADJACENT PRESTRESSED BOX BEAMS ARE GROUTED.
- SUBSEQUENT TO PLACING P.C. BEAMS, THE CONTRACTOR SHALL TAKE ELEVATIONS ALONG THE TOP OF THE BEAMS AT THE 1/4 POINTS TO FINALIZE THE DECK PROFILE. THE CONTRACTOR SHALL NOT POUR THE DECK UNTIL GIVEN AUTHORIZATION BY THE ENGINEER.
- TOP OF BEAMS TO RECEIVE A "ROUGHENED SURFACE".
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 1", UNLESS OTHERWISE NOTED.

| NO.    | REVISION  | DATE      | BY        | CHK.      | BY                 |
|--------|---|-----------|-----------|-----------|--------------------|
|        | BII-36 BEAM DETAILS   |           |           |           |                    |
|        | REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY |           |           |           |                    |
|        | <i>Dym Bit</i>  |           |           |           |                    |
|        | GREGORY D. BITSKO   |           |           |           |                    |
|        | PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238  |           |           |           |                    |
|        | CHERRY, WEBER & ASSOCIATES  |           |           |           |                    |
|        | CONSULTING ENGINEERS - PLANNERS   |           |           |           |                    |
|        | 200 GREEN PLAZA, SUITE 100 FREDERICK, N.J. 07728  |           |           |           |                    |
| SCALE: | DATE:   | DRAWN BY: | DSGN. BY: | CHK'D BY: | JOB NUMBER:        |
| NOTED  | 08/2011   | K.W.      | J.M.M.    | J.M.C.    | NJ-C-BB-100        |
|        |   |           |           |           | SHEET NO. 30 OF 51 |



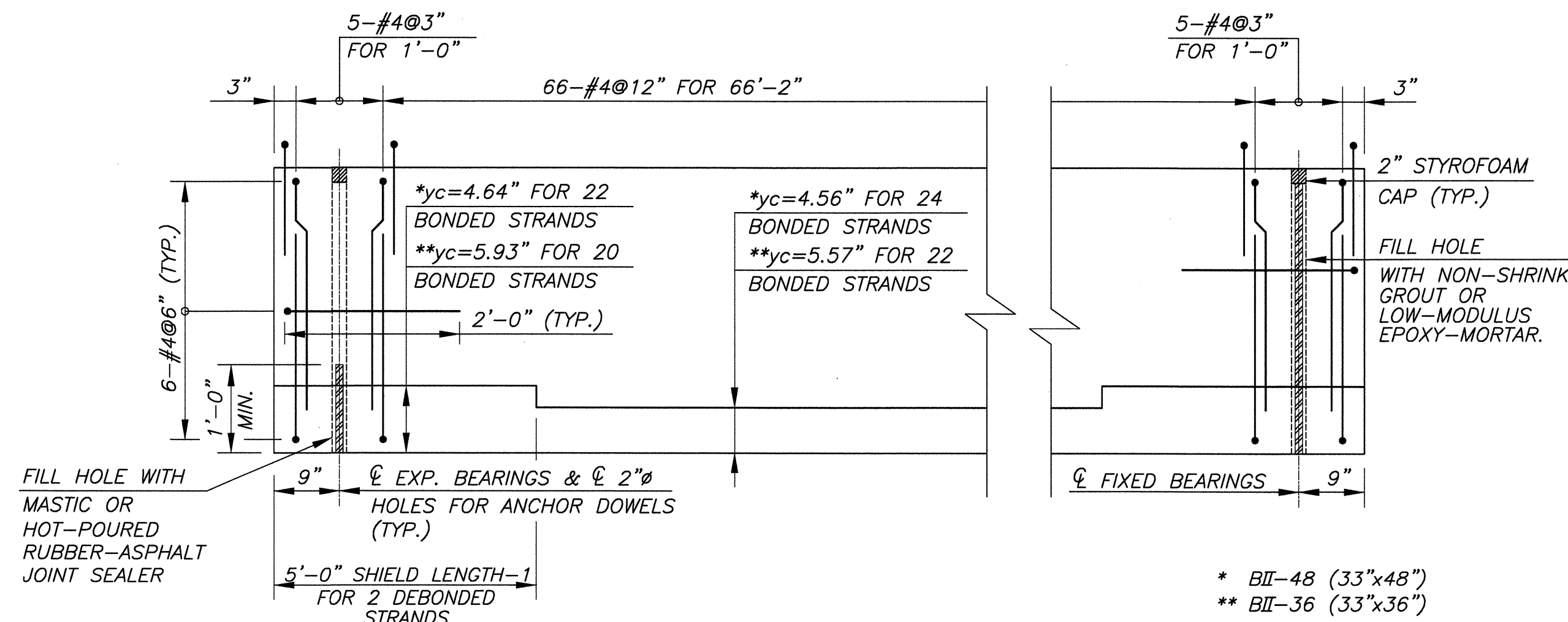
TOTAL NUMBER OF STRANDS - 24

CONCRETE BOX BEAM BII-48 (33"x48")-12 REQUIRED

SCALE: 1 1/2"=1'-0"

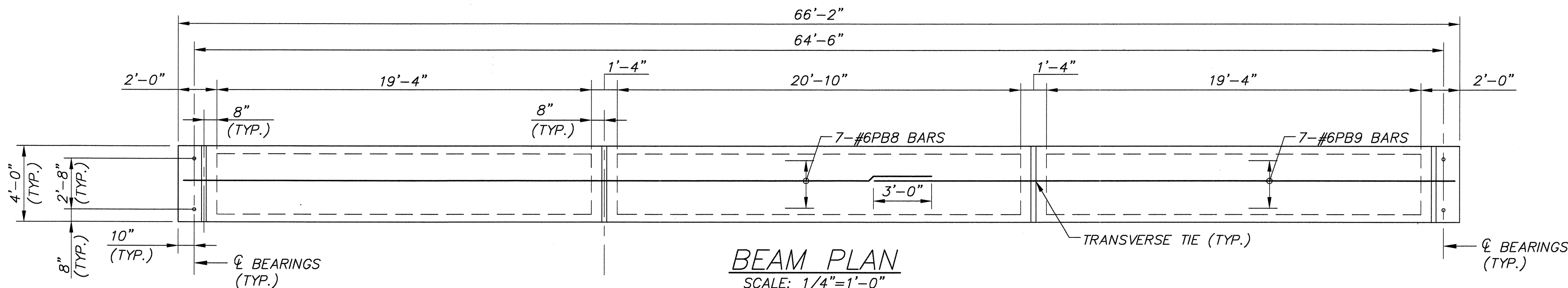
LEGEND:

- PRESTRESSING STRAND
- ⊠ DEBONDED PRESTRESSING STRAND FOR SHIELD LENGTH - 1
- MILD STEEL REINFORCING



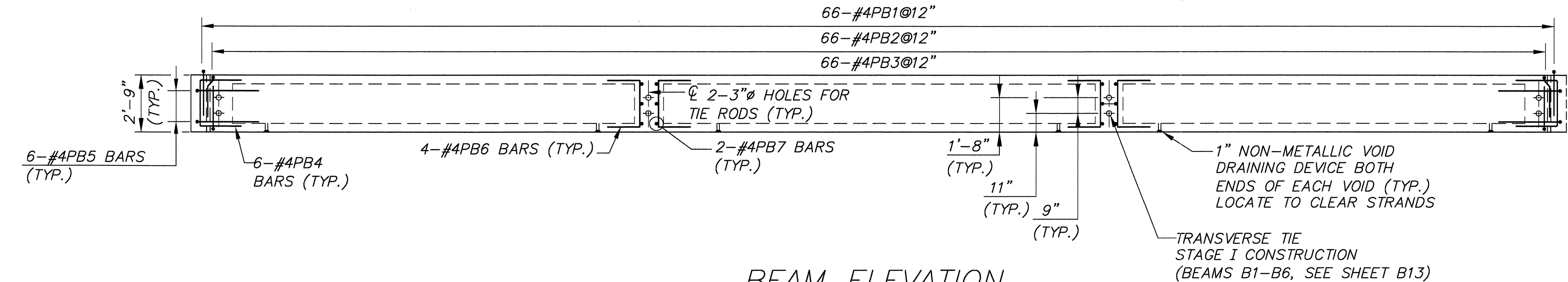
DEBONDED STRAND DETAILS  
N.T.S.

\* BII-48 (33"x48")  
\*\* BII-36 (33"x36")



BEAM PLAN

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

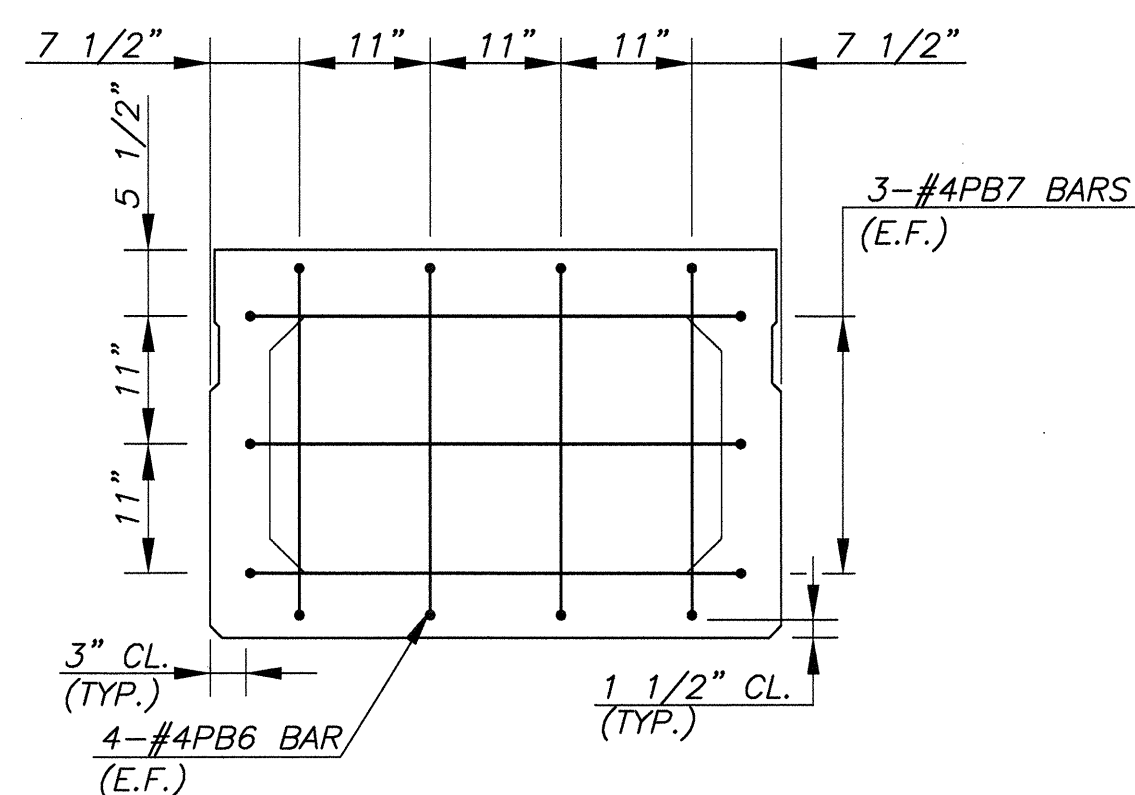
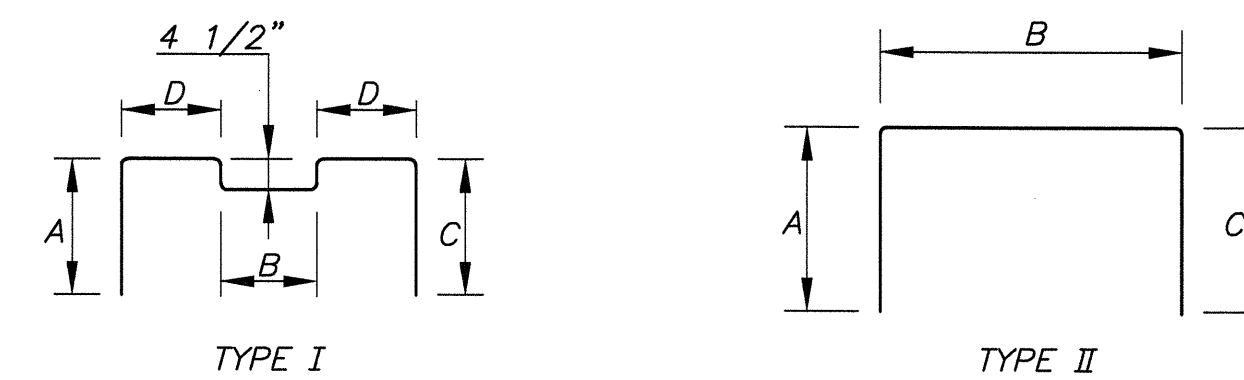


BEAM ELEVATION

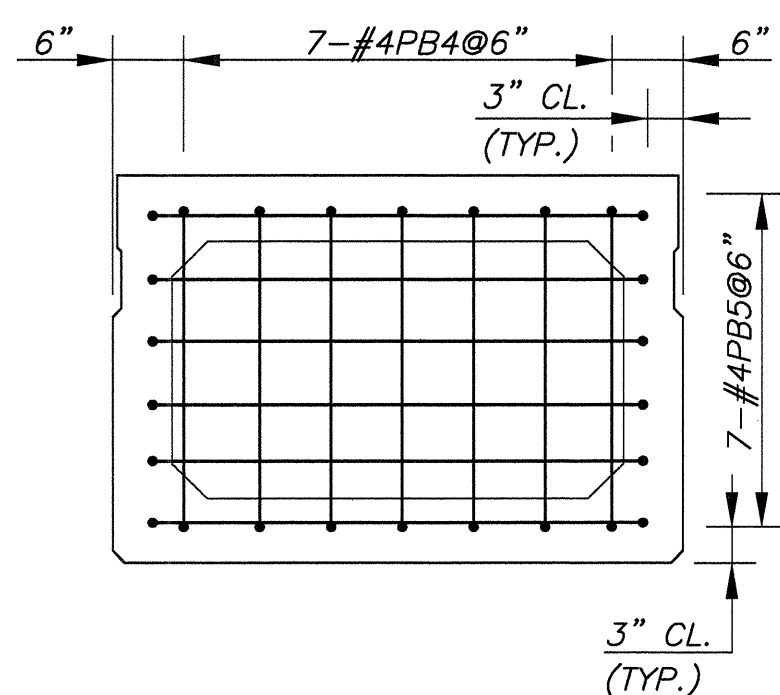
SCALE: 1/4"=1'-0"

| REINFORCEMENT BAR SCHEDULE * |      |          |        |      |            |       |        |           |         |
|------------------------------|------|----------|--------|------|------------|-------|--------|-----------|---------|
| MARK                         | SIZE | TYPE     | LENGTH | QTY. | DIMENSIONS |       |        |           | REMARKS |
|                              |      |          |        |      | A          | B     | C      | D         |         |
| PB1                          | #4   | I        | 7'-8"  | 66   | 1'-8"      | 0'-9" | 1'-8"  | 1'-2 1/2" |         |
| PB2                          | #4   | II       | 8'-2"  | 66   | 1'-10"     | 2'-8" | 1'-10" |           |         |
| PB3                          | #4   | II       | 7'-10" | 66   | 1'-2"      | 2'-9" | 1'-2"  |           |         |
| PB4                          | #4   | II       | 12'-3" | 14   | 5'-0"      | 2'-3" | 5'-0"  |           |         |
| PB5                          | #4   | II       | 13'-6" | 12   | 5'-0"      | 3'-6" | 5'-0"  |           |         |
| PB6                          | #4   | II       | 10'-3" | 16   | 4'-0"      | 2'-3" | 4'-0"  |           |         |
| PB7                          | #4   | II       | 11'-6" | 12   | 4'-0"      | 3'-6" | 4'-0"  |           |         |
| PB8                          | #6   | STRAIGHT | 35'-0" | 7    |            |       |        |           |         |
| PB9                          | #6   | STRAIGHT | 33'-8" | 7    |            |       |        |           |         |

\* REINFORCEMENT SHOWN FOR ONE (1) BEAM ONLY



DIAPHRAGM DETAIL  
N.T.S.



END BLOCK REINFORCEMENT  
N.T.S.

NOTES:

1. SEE SHEET B15 FOR EPOXY WATERPROOFING SEAL COAT LIMITS FOR PRESTRESSED CONCRETE BEAMS.
2. FOR POST TENSIONING POCKET, DRIP NOTCH AND LIFTING LOOP CLAMP DETAILS, SEE SHEET B12.



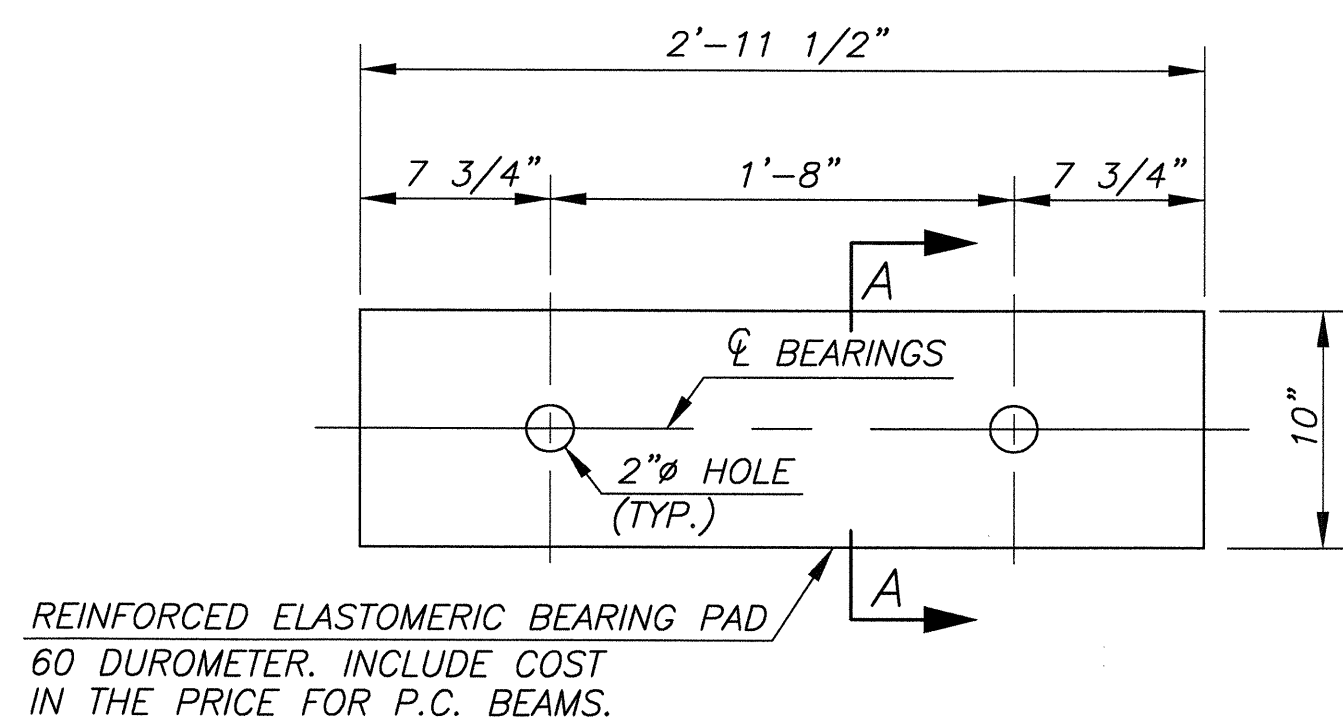
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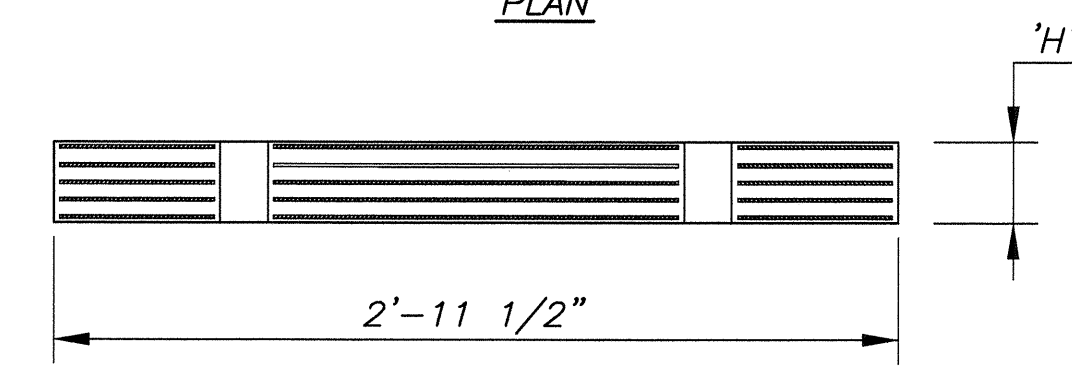
| NO.   | REVISION            | DATE           | BY               | CHK. BY                 |
|---|---------------------|----------------|------------------|-------------------------|
|   | BII-48 BEAM DETAILS |                |                  |                         |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |                     |                |                  |                         |
| <br>GREGORY D. BISKO<br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238  |                     |                |                  |                         |
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| SCALE: NOTED  | DATE: 08/2011       | DRAWN BY: K.W. | DSGN. BY: J.M.M. | CHK.'D BY: J.M.C.       |
|   |                     |                |                  | JOB NUMBER: NJ-C-BB-100 |
|   |                     |                |                  | SHEET NO. 31 OF 51      |

B14  
B21



REINFORCED ELASTOMERIC BEARING PAD  
60 DUROMETER. INCLUDE COST  
IN THE PRICE FOR P.C. BEAMS.

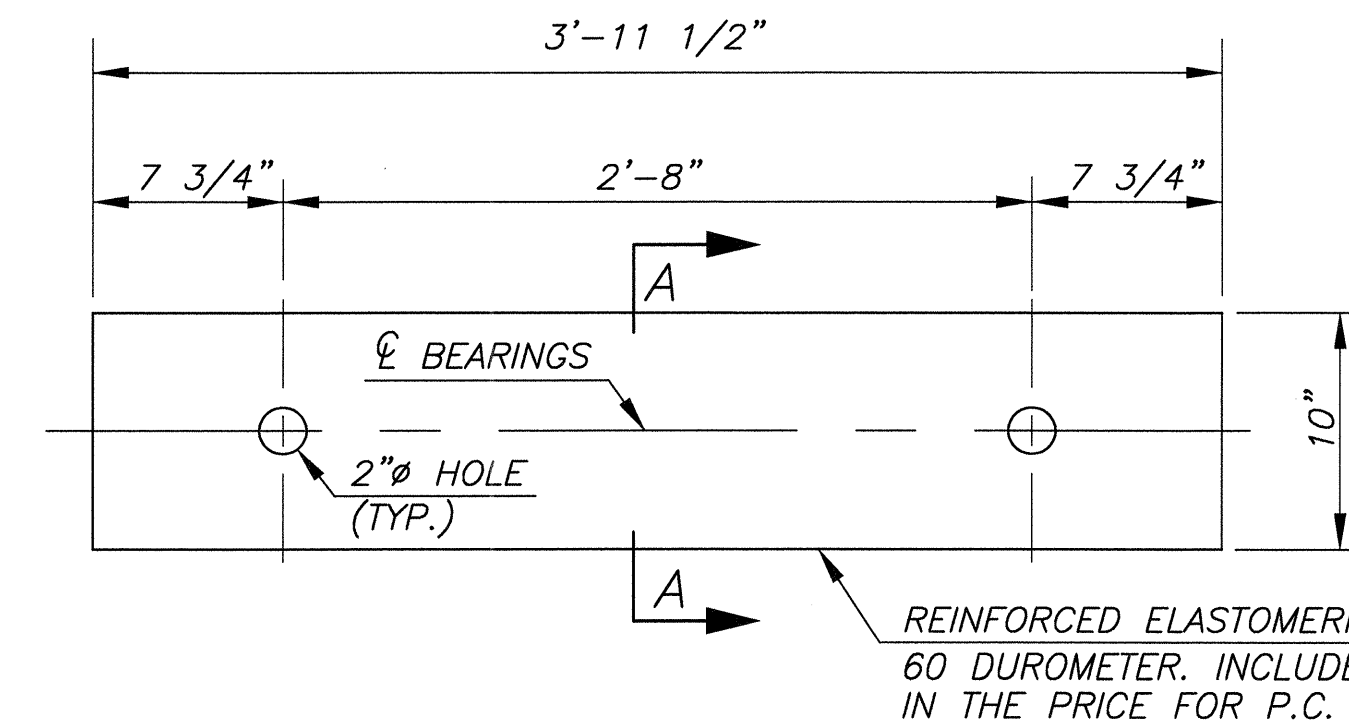
PLAN



ELEVATION

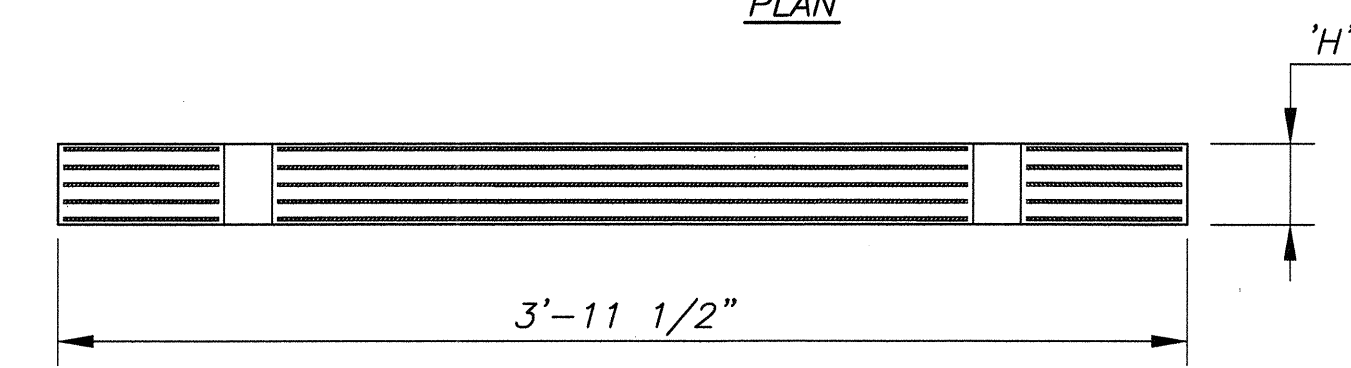
**ELASTOMERIC BEARING PAD DETAIL**  
**BII-36 (33"x36") BOX BEAM**

SCALE: 1 1/2"=1'-0"



REINFORCED ELASTOMERIC BEARING PAD  
60 DUROMETER. INCLUDE COST  
IN THE PRICE FOR P.C. BEAMS.

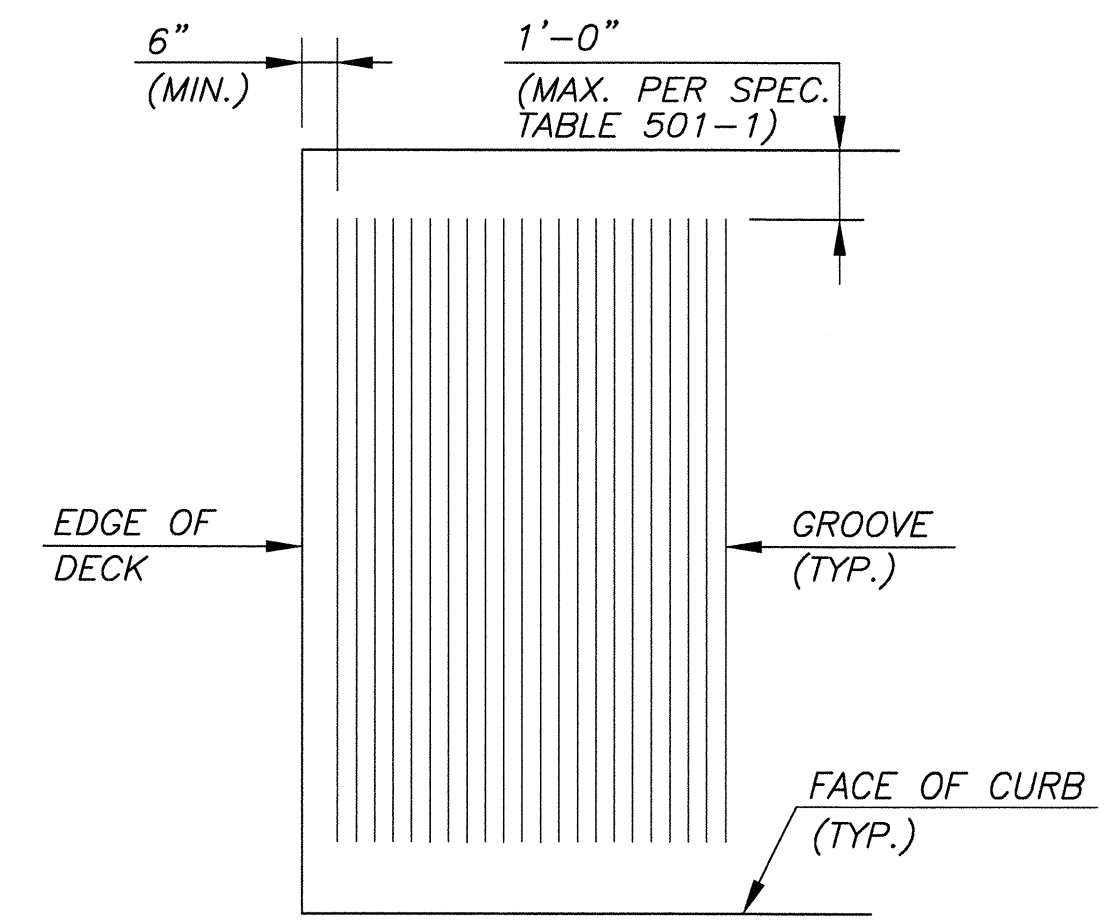
PLAN



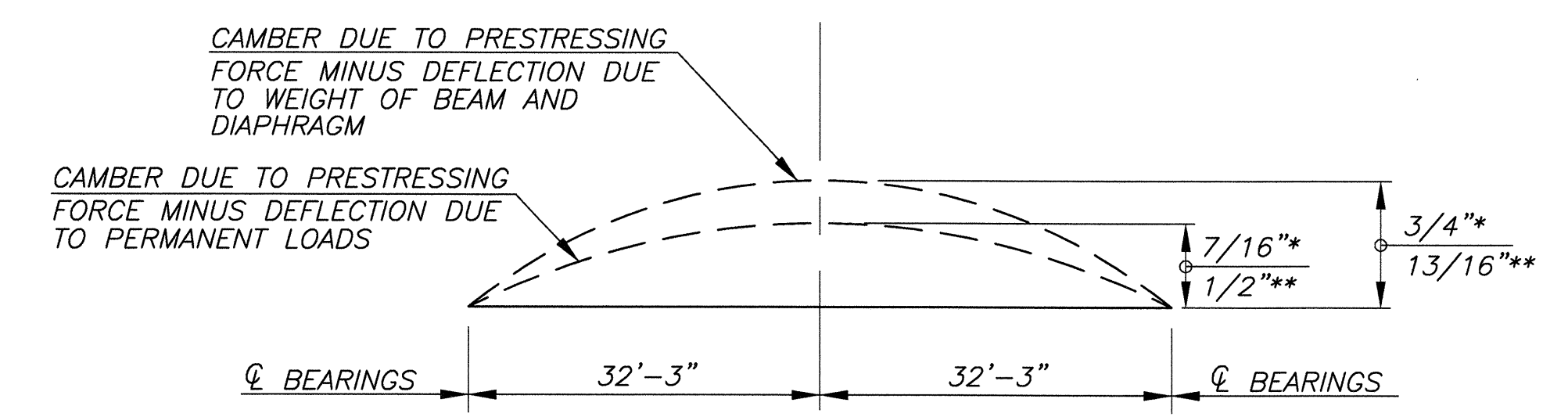
ELEVATION

**ELASTOMERIC BEARING PAD DETAIL**  
**BII-48 (33"x48") BOX BEAM**

SCALE: 1 1/2"=1'-0"

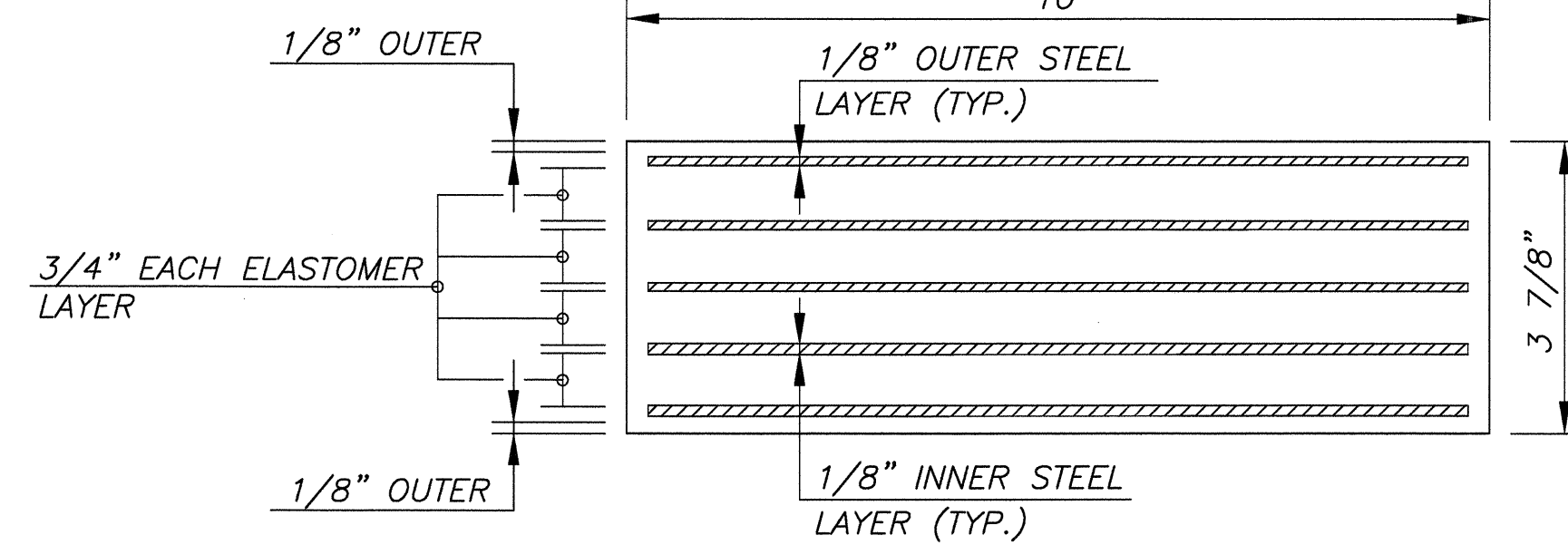


**SAWCUT GROOVE DETAIL**  
N.T.S.

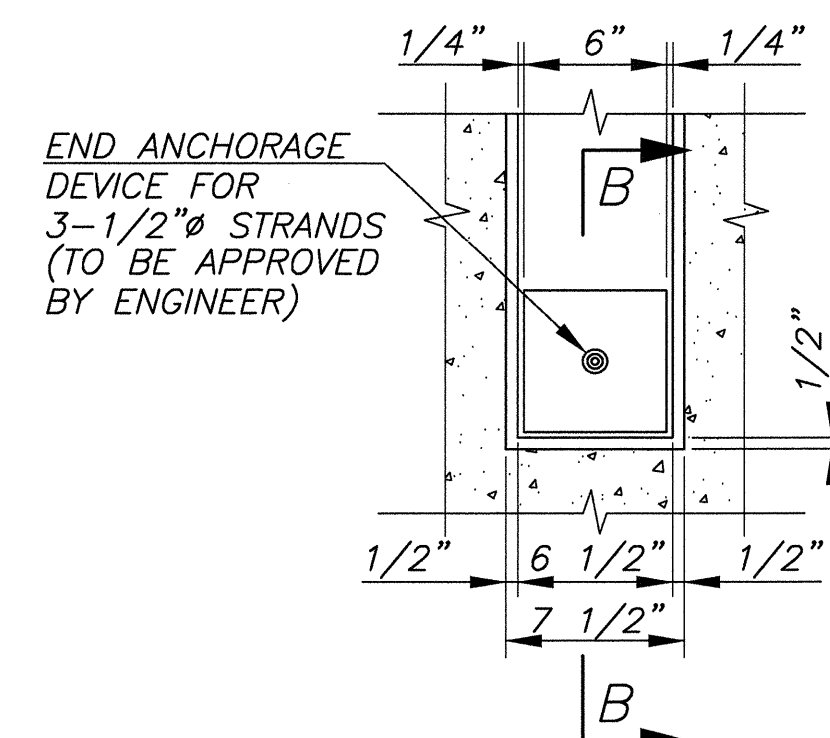


**ESTIMATED BEAM DEFLECTION DIAGRAM**  
**FOR BOX BEAMS**  
N.T.S.

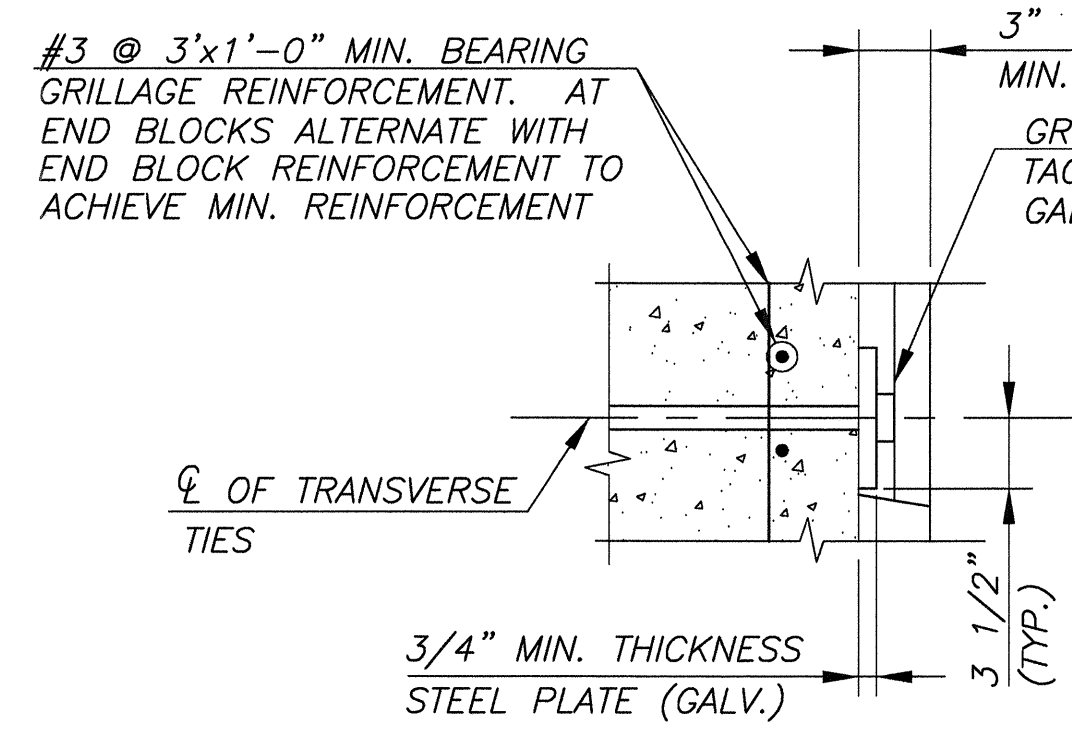
\* BII-48 (33"x48")  
\*\* BII-36 (33"x36")



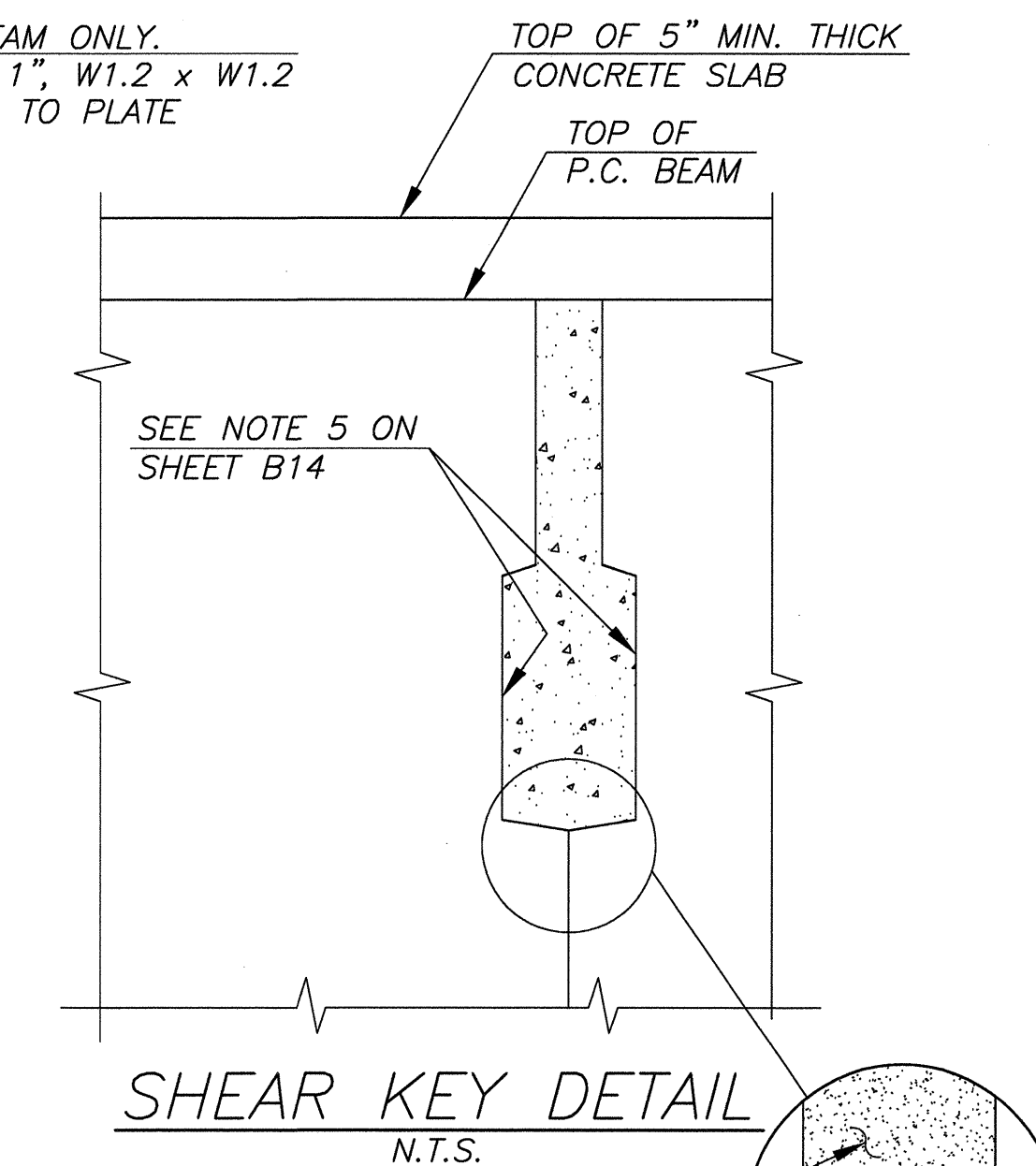
**SECTION A-A**  
SCALE: 6"=1'-0"



**FASCIA ELEVATION (B6 & B14)**  
N.T.S.  
(NORMAL TO THE TIE)



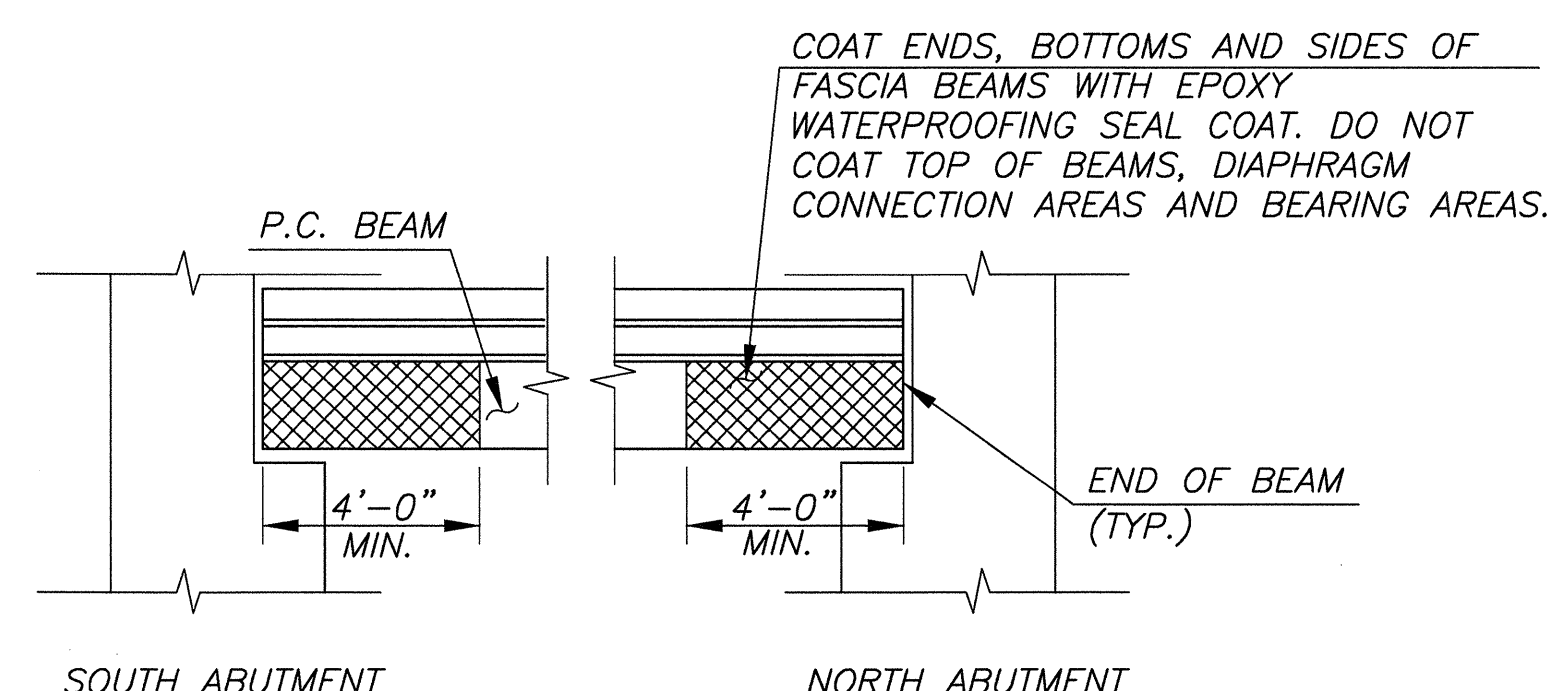
**SECTION B-B**  
N.T.S.  
(THRU  $\bar{C}$  TIE)



**SHEAR KEY DETAIL**  
N.T.S.  
FILL KEYWAYS WITH  
NONMETALLIC, NON-SHRINK GROUT  
SEAL WITH CLOSED CELL  
FOAM BACKER ROD BEFORE  
PLACING GROUT

**NOTES:**

- IF TRANSVERSE TIE RODS ARE USED, P.C. FABRICATOR IS TO PROVIDE COUPLERS & HAND HOLES IN INTERIOR P.C. BEAMS AS NECESSARY.
- STEEL PLATE AND RECESS SIZE MAY VARY FROM THE DIMENSIONS SHOWN DEPENDING UPON THE END ANCHORAGE DEVICE SELECTED.
- HEIGHT UNDER DEAD LOAD WAS USED TO FIND THE BRIDGE SEAT ELEVATIONS. THE PUBLISHED SEAT ELEVATIONS MUST BE ADJUSTED IF THE ELASTOMERIC BEARINGS SUPPLIED HAVE A DIFFERENT LOADED HEIGHT THAN THAT SHOWN.
- DURING STAGE I CONSTRUCTION THE BOTTOM TRANSVERSE TIE HOLE WILL BE USED FOR BEAMS B1-B6. AFTER CONSTRUCTION OF STAGE 2 IS COMPLETE, THE TOP TRANSVERSE TIE HOLE ON BEAMS B1-B6 SHALL BE USED TO CONNECT ALL THE BEAMS. AFTER THE TOP TRANSVERSE TIE IS IN PLACE, THE BOTTOM TIE SHALL BE REMOVED.

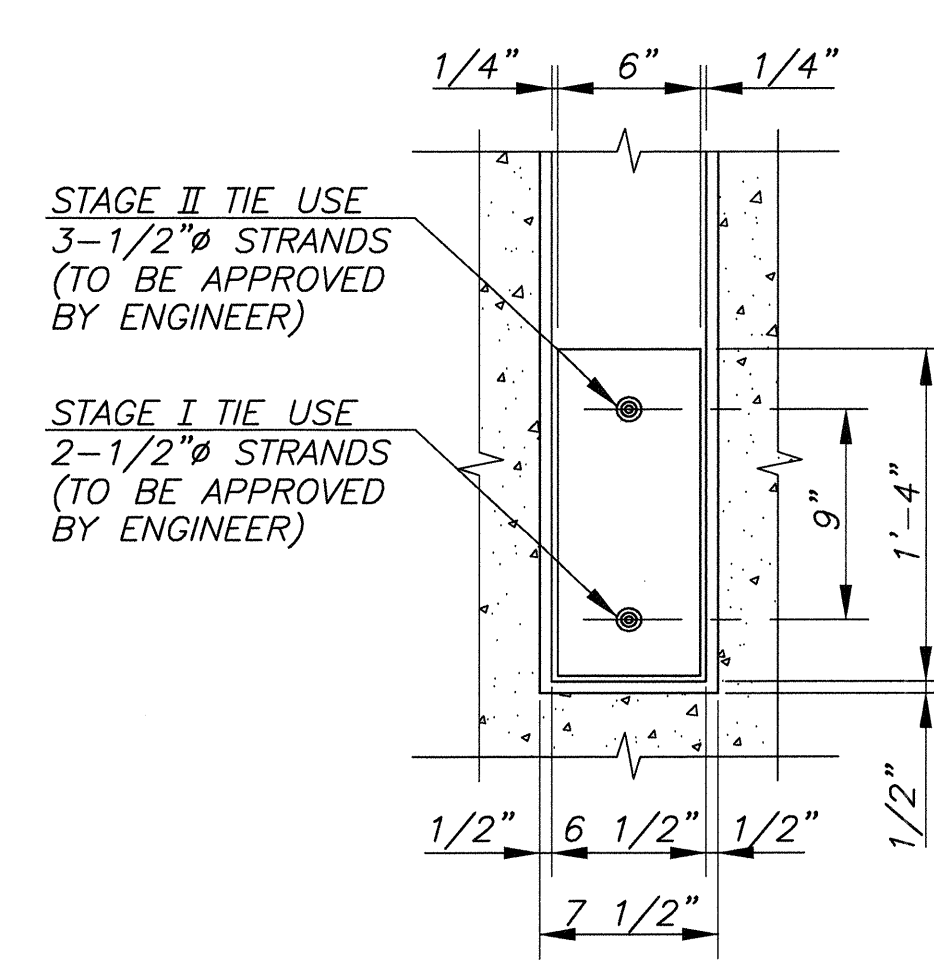


COAT ENDS, BOTTOMS AND SIDES OF FASCIA BEAMS WITH EPOXY WATERPROOFING SEAL COAT. DO NOT COAT TOP OF BEAMS, DIAPHRAGM CONNECTION AREAS AND BEARING AREAS.

**NOTES:**

- INDICATES LIMITS OF EPOXY WATERPROOFING SEAL COAT TO BE APPLIED IN THE SHOP. COLOR TO BE GRAY TO MATCH CONCRETE. INCLUDE COST IN THE PRICE FOR P.C. BEAMS.

**LIMITS FOR EPOXY WATERPROOFING SEAL COAT**  
N.T.S.



**FASCIA ELEVATION (B1)**  
N.T.S.  
(NORMAL TO THE TIE)

| BEARING DESIGN DATA<br>BII-36 BEAM |                       |                    |                   |
|------------------------------------|-----------------------|--------------------|-------------------|
| DEAD LOAD                          | LIVE WITH IMPACT LOAD | INITIAL HEIGHT 'H' | HEIGHT UNDER DEAD |
| 32.6 KIPS                          | 41.2 KIPS             | 3 7/8"             | 3 27/32"          |

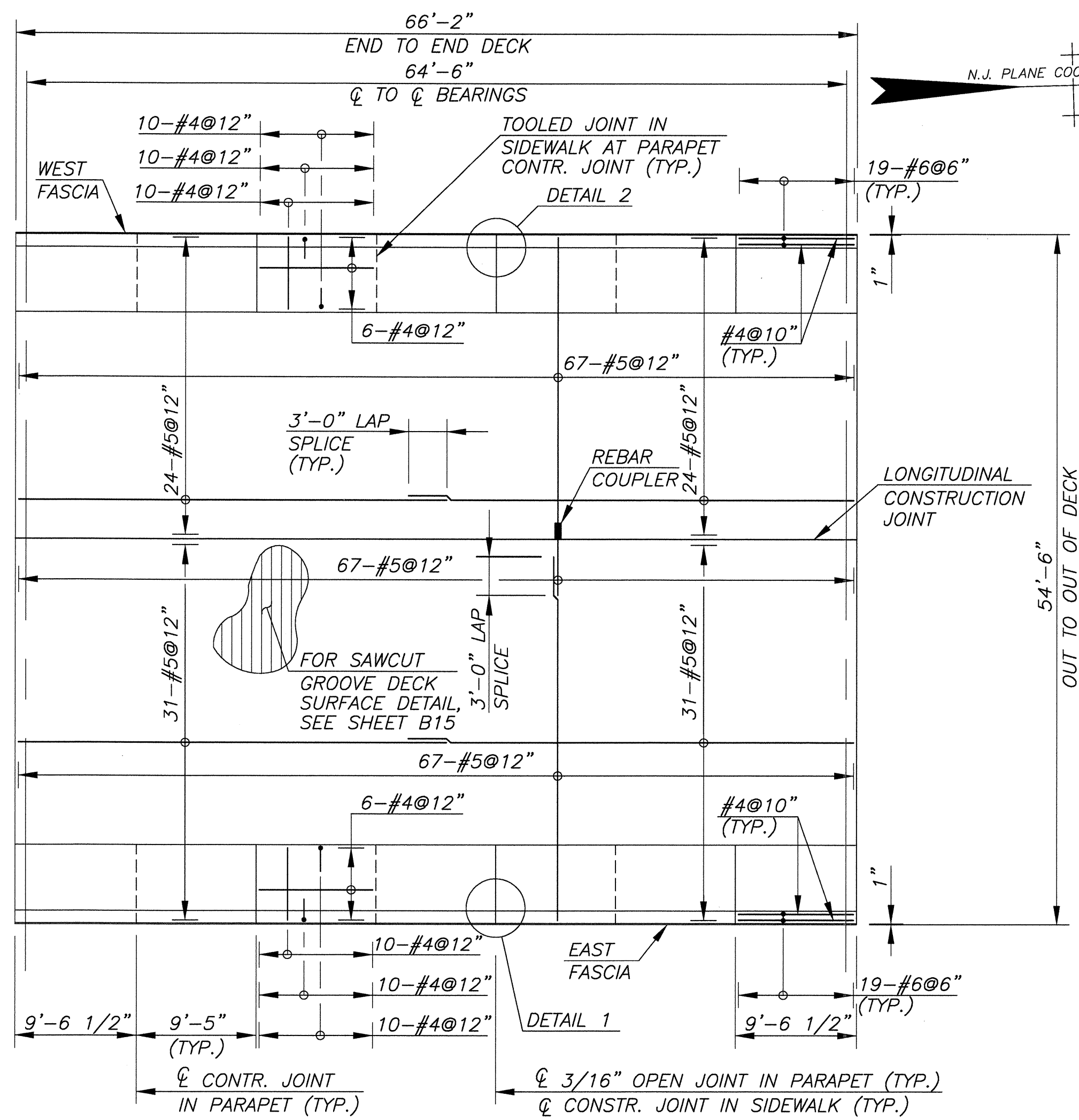
| BEARING DESIGN DATA<br>BII-48 BEAM |                       |                    |                   |
|------------------------------------|-----------------------|--------------------|-------------------|
| DEAD LOAD                          | LIVE WITH IMPACT LOAD | INITIAL HEIGHT 'H' | HEIGHT UNDER DEAD |
| 38.9 KIPS                          | 43.6 KIPS             | 3 7/8"             | 3 27/32"          |

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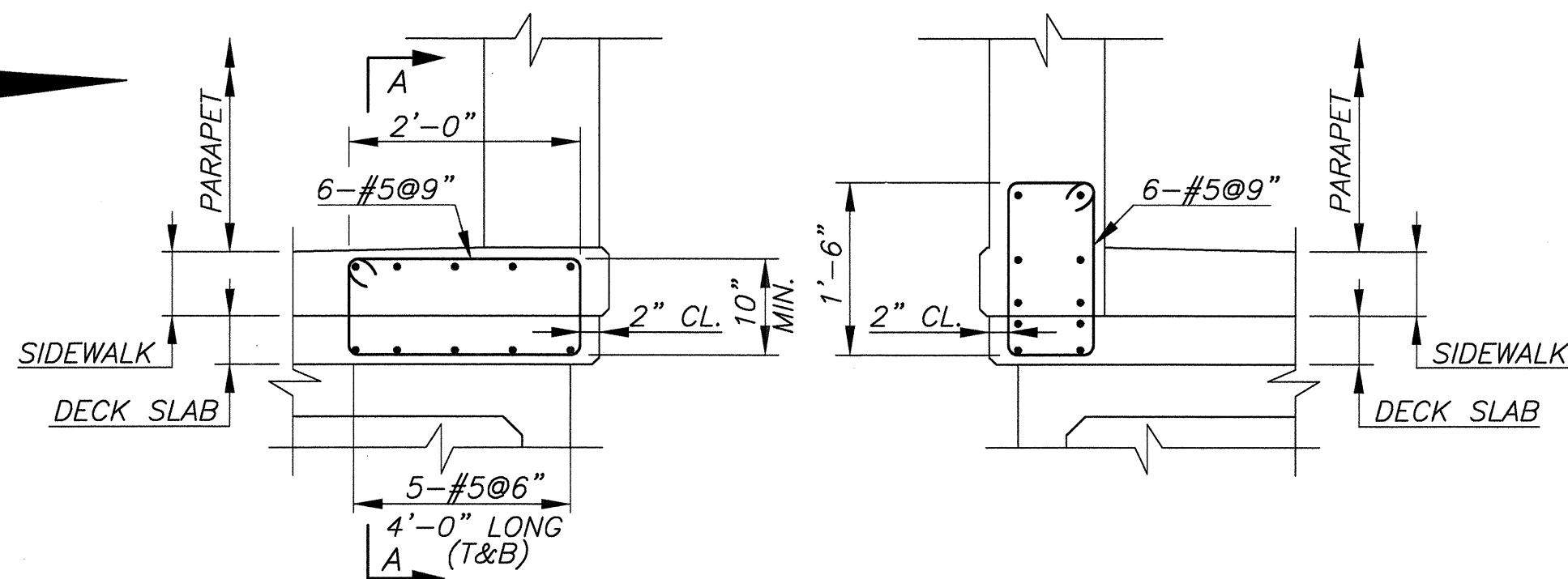
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| NO.   | REVISION         | DATE              | BY                  | CHK. BY                    |
|---|------------------|-------------------|---------------------|----------------------------|
| <b>SUPERSTRUCTURE DETAILS</b>   |                  |                   |                     |                            |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |                  |                   |                     |                            |
| <br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238  |                  |                   |                     |                            |
| <br><b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>20 BIRCH PLACE, SUITE 100<br>FREDRICKS, N.J. 07728<br>PHONE: (732) 353-8100 FAX: (732) 353-8100 |                  |                   |                     |                            |
| SCALE:<br>NOTED   | DATE:<br>08/2011 | DRAWN BY:<br>K.W. | DSGN. BY:<br>J.M.M. | CHK'D BY:<br>J.M.C.        |
|   |                  |                   |                     | JOB NUMBER:<br>NJ-C-BB-100 |
|   |                  |                   |                     | SHEET NO.<br>32 OF 51      |

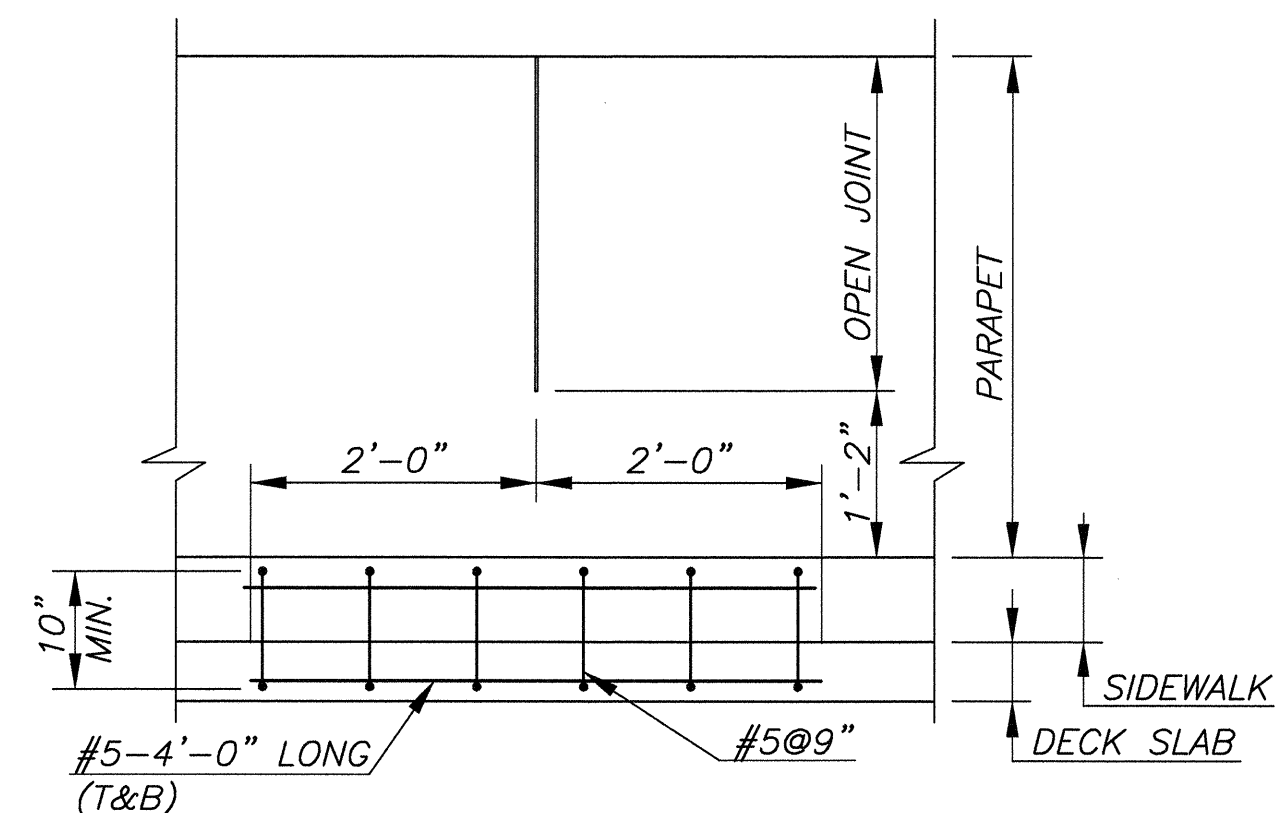


**DECK PLAN**  
SCALE: 1/8"=1'-0"

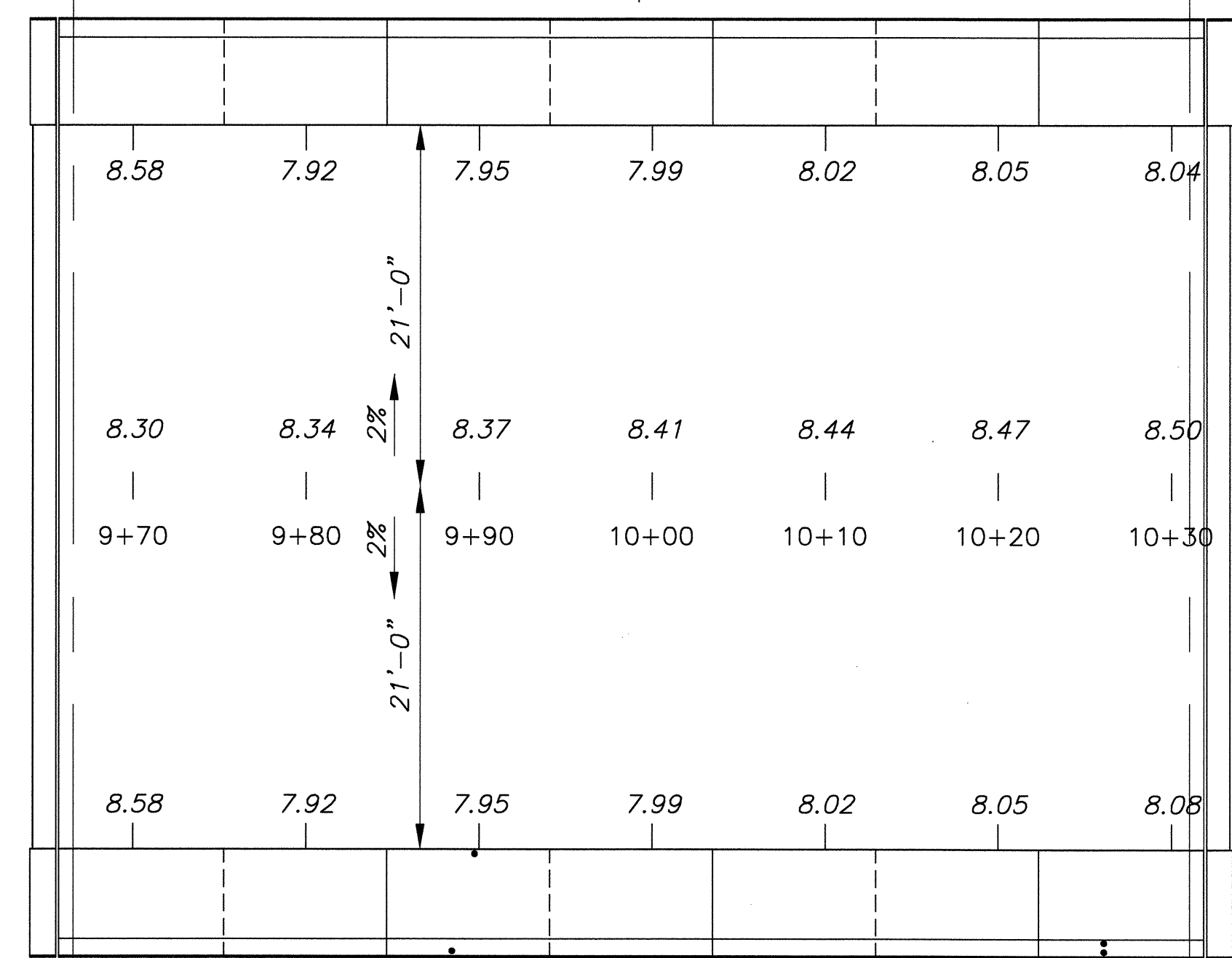


**DETAIL 1**  
(DECK REINFORCEMENT AT PARAPET JOINT)

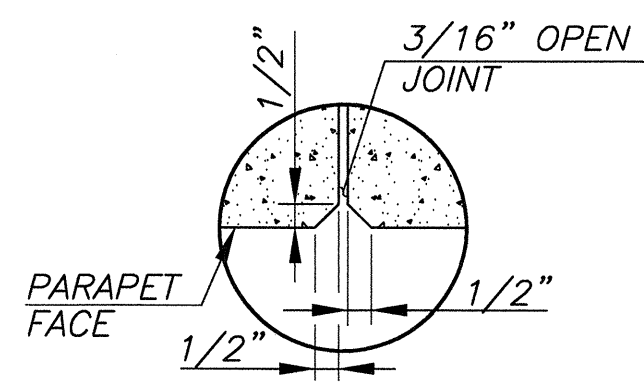
**DETAIL 2**  
(DECK REINFORCEMENT AT PARAPET JOINT)



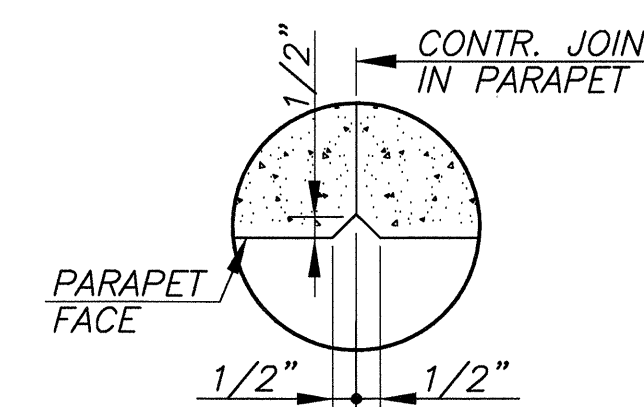
**SECTION A-A**  
**DECK REINFORCEMENT AT OPEN JOINT IN PARAPET**  
N.T.S.



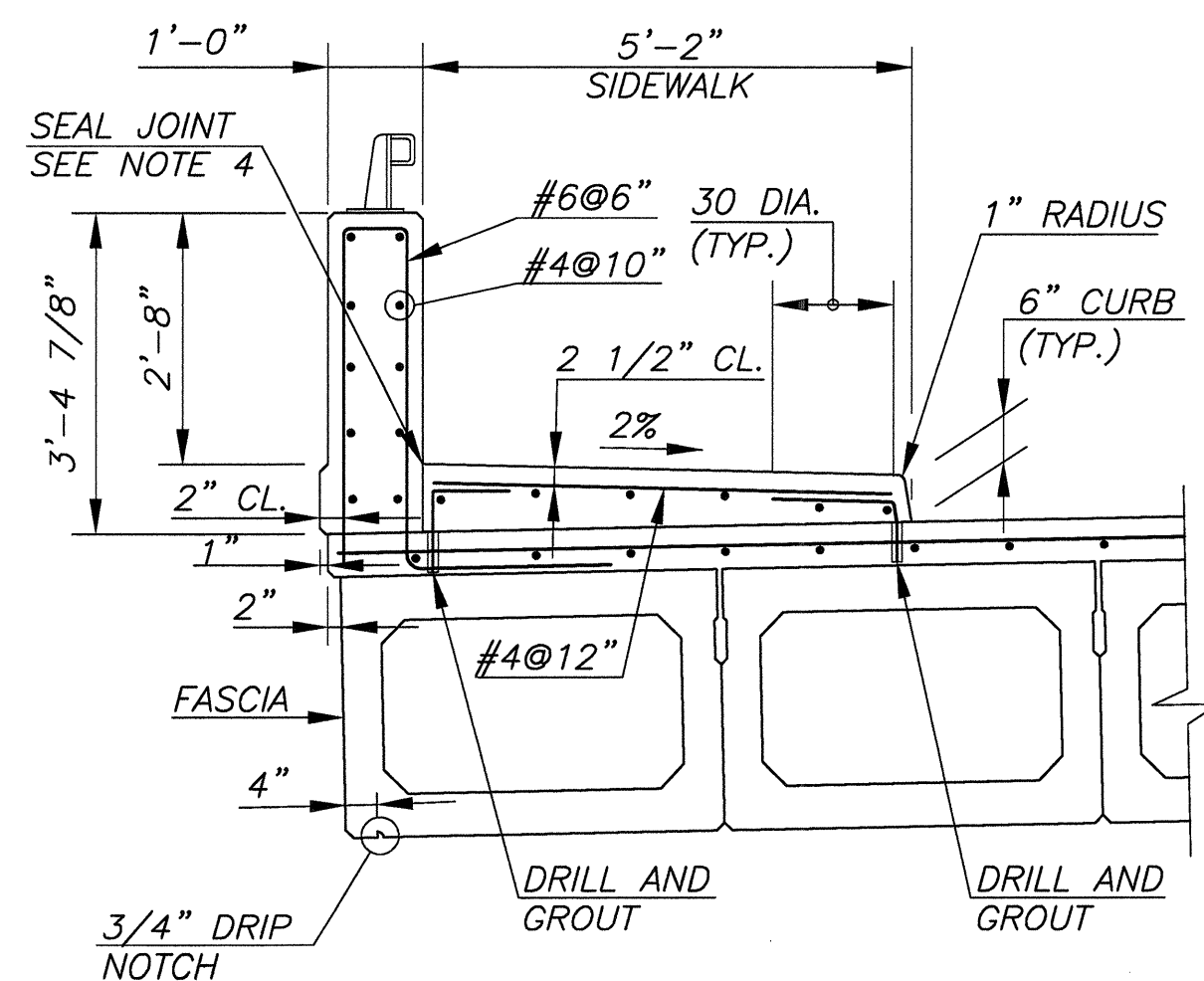
**DECK ELEVATION PLAN**  
SCALE: 1/8"=1'-0"



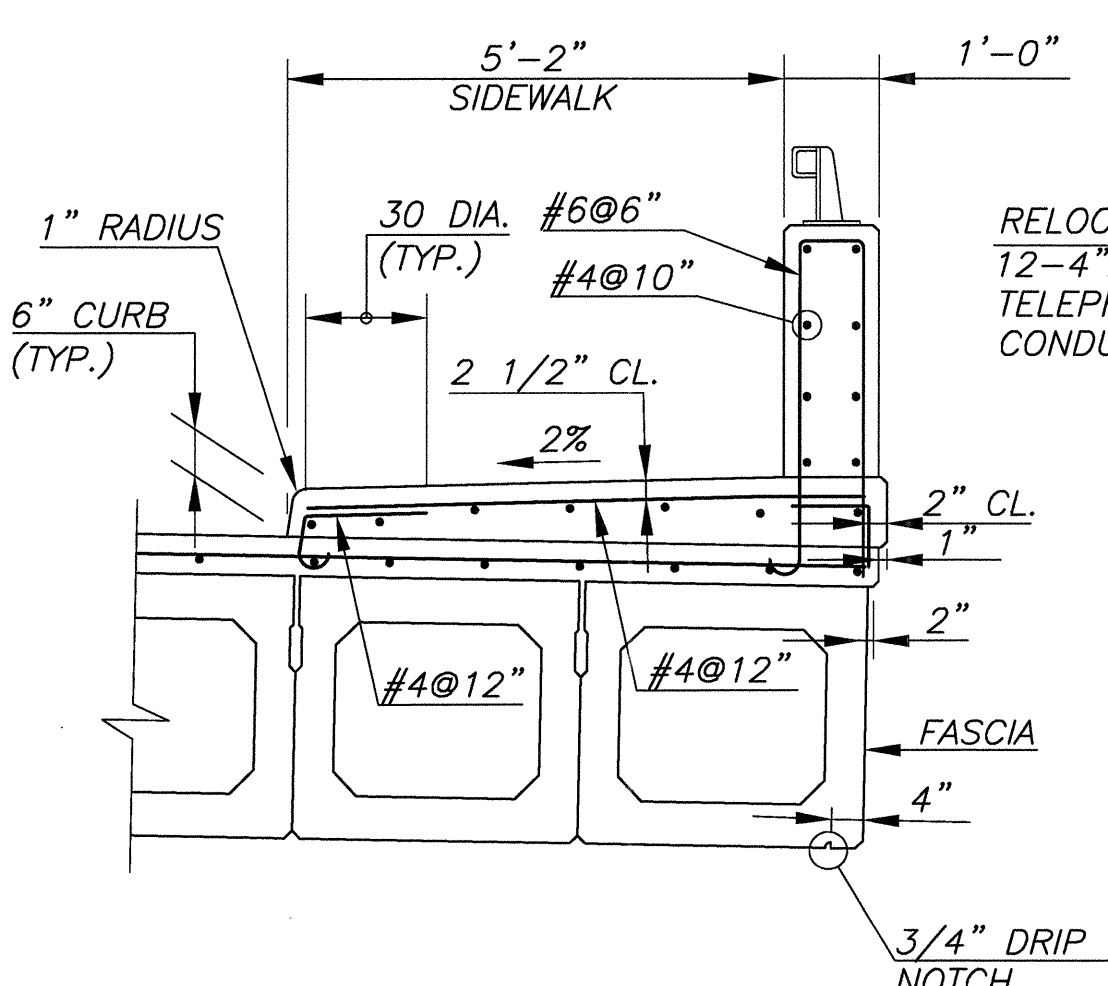
**OPEN JOINT**  
N.T.S.



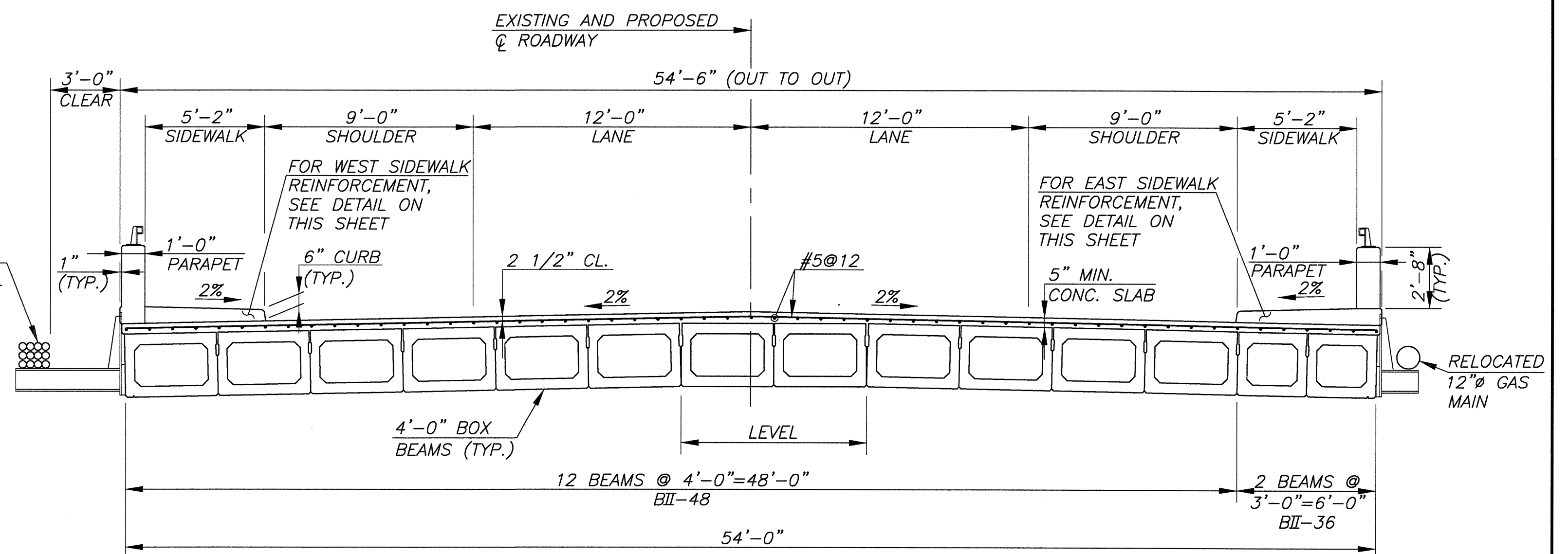
**CONTRACTION JOINT**  
N.T.S.



**WEST SIDEWALK REINFORCEMENT**  
SCALE: 1/2"=1'-0"



**EAST SIDEWALK REINFORCEMENT**  
SCALE: 1/2"=1'-0"



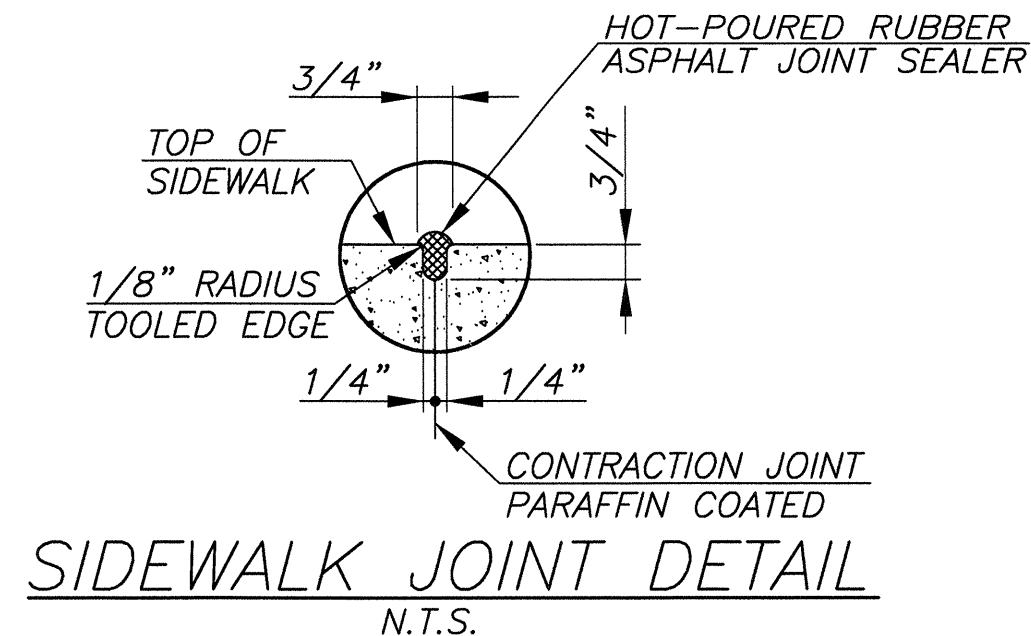
**TYPICAL SECTION**  
SCALE: 1/4"=1'-0"

**NOTES:**

1. CONCRETE IN DECK SLAB SHALL BE CLASS 'A' CONCRETE.
2. ALL REINFORCEMENT BARS IN DECK SLAB, PARAPET AND SIDEWALK SHALL BE HOT-DIP GALVANIZED.
3. AS AN OPTION, THE CONTRACTOR MAY ELIMINATE SPLICES AT EACH END OF THE TOP TRANSVERSE REINFORCEMENT IN THE SIDEWALKS BY PROVIDING A SINGLE BAR OF THE SAME CONFIGURATION WITH HOOKS AT EACH END, EMBEDDED IN THE DECK SLAB.
4. VERTICAL JOINT SHALL BE SEALED USING SIKAFLEX-1A, OR APPROVED EQUAL.

**LEGEND:**

- E.F. - DENOTES EACH FACE  
T - DENOTES TOP  
B - DENOTES BOTTOM



**SIDEWALK JOINT DETAIL**  
N.T.S.

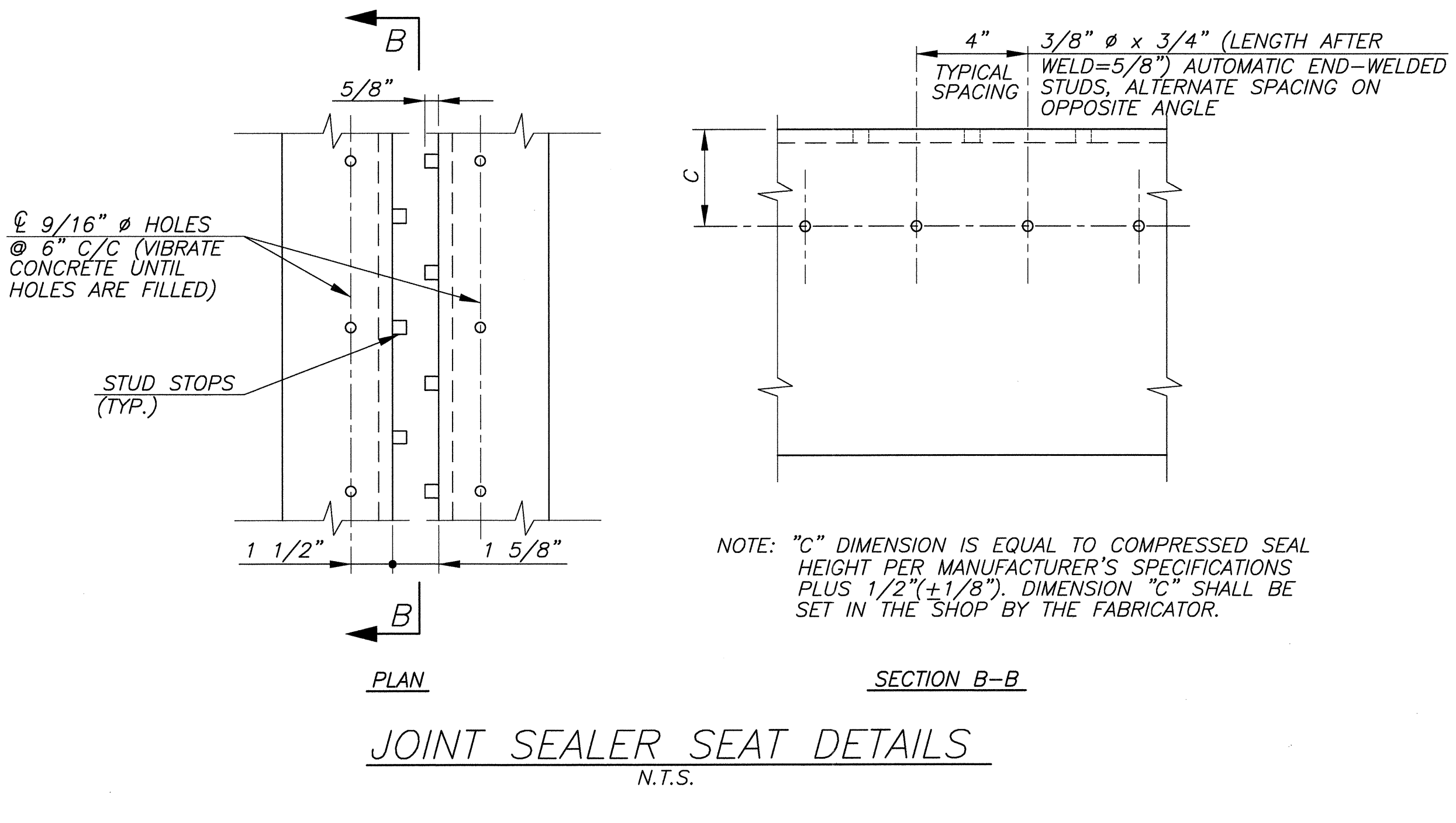
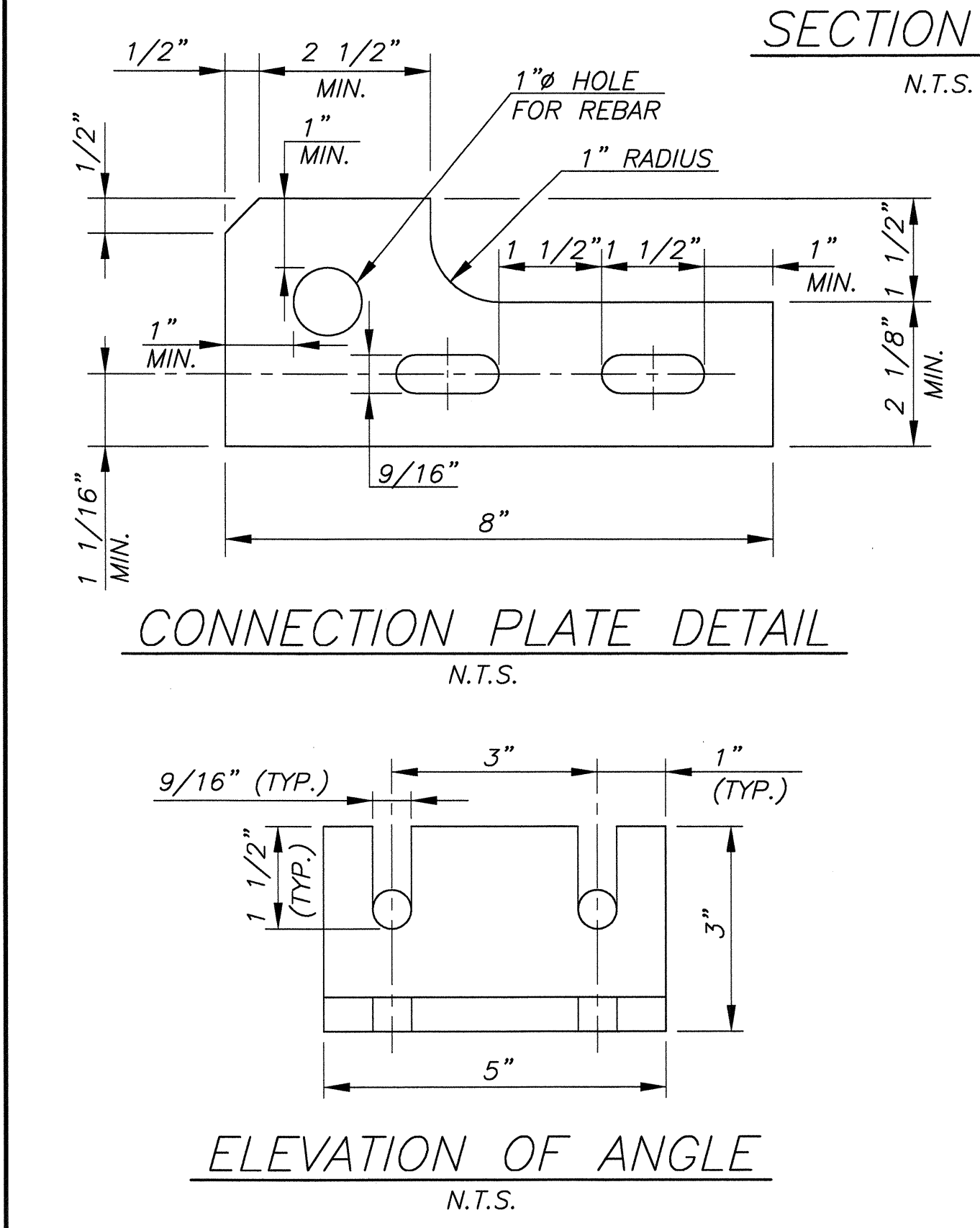
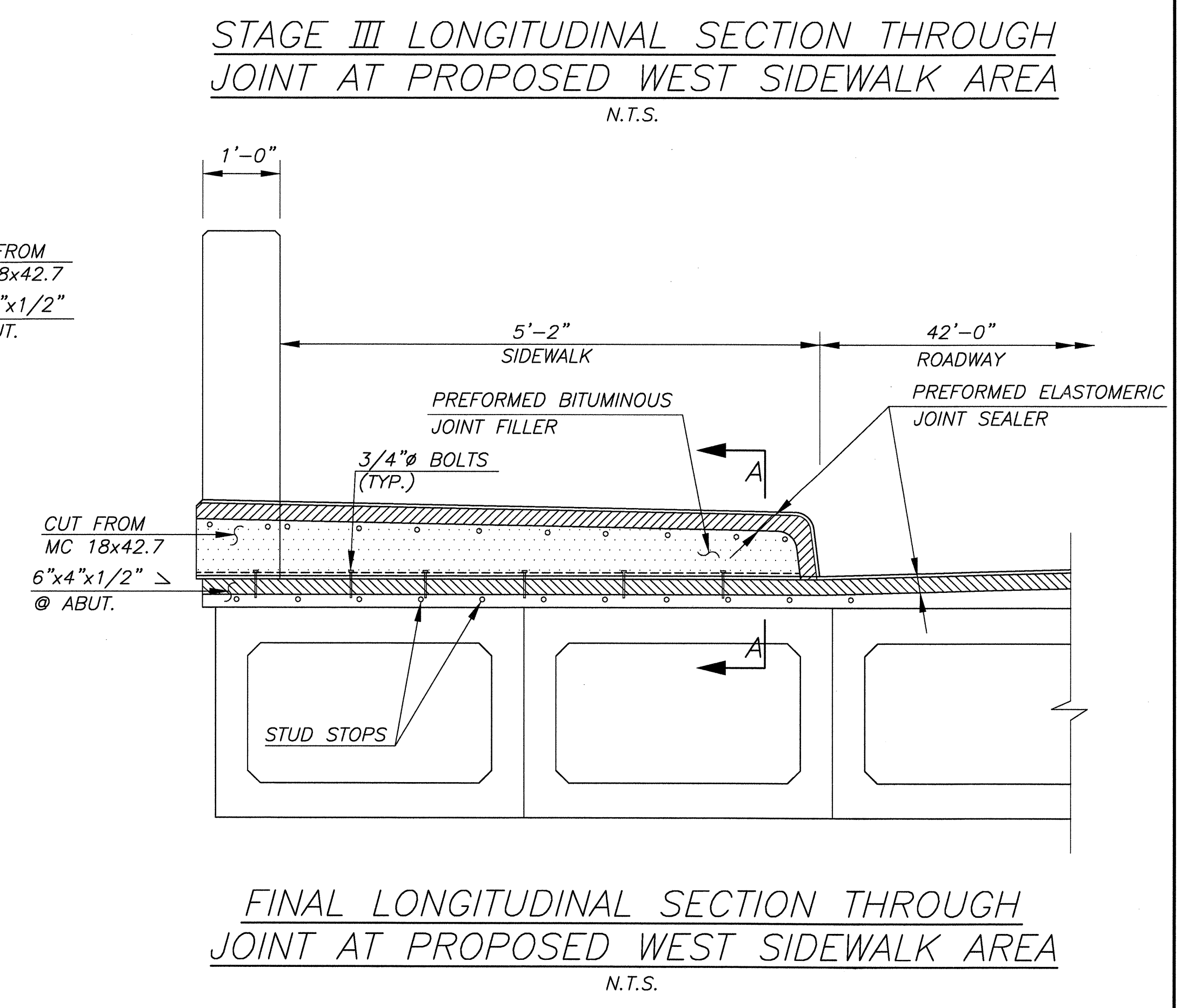
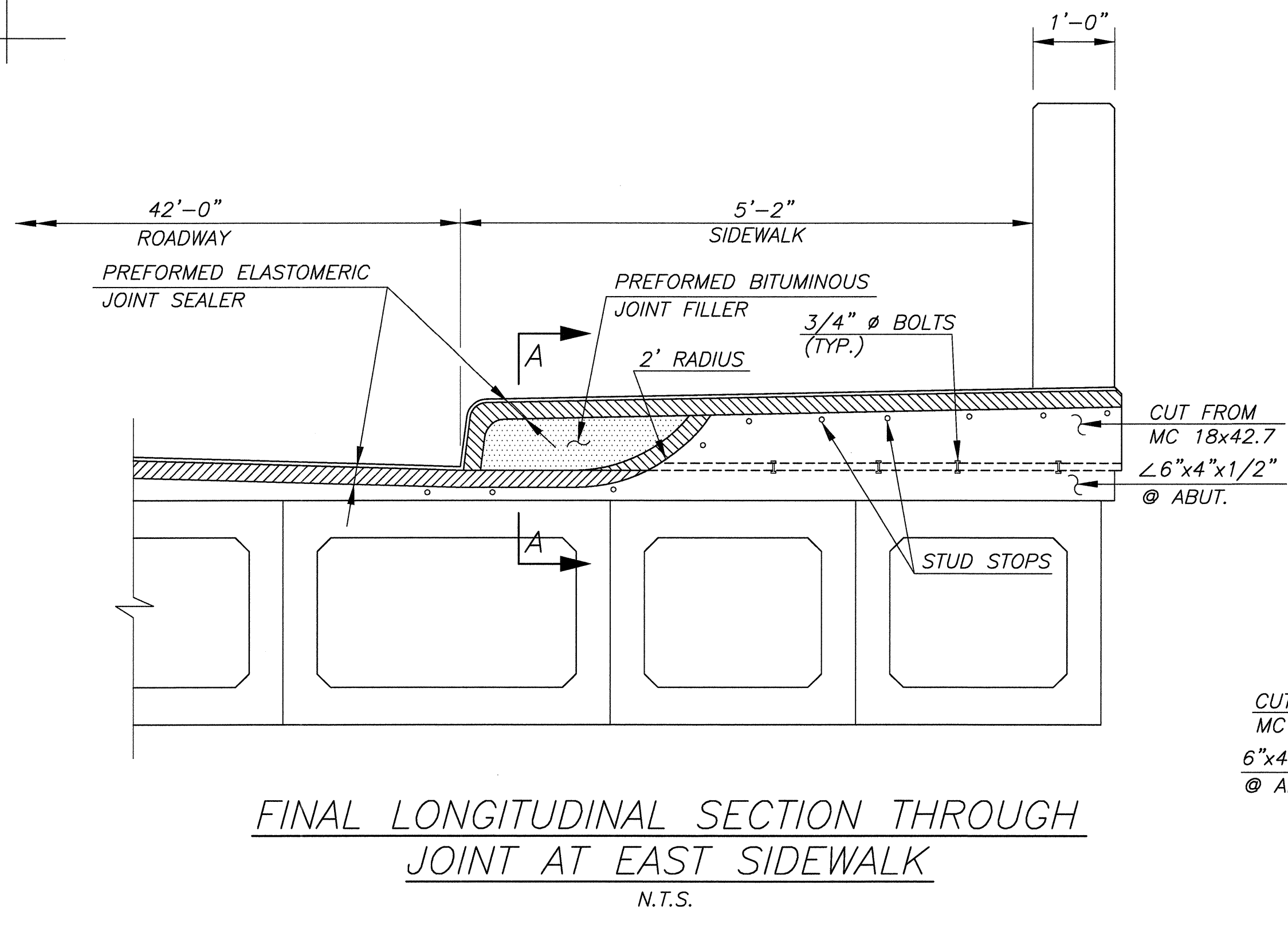
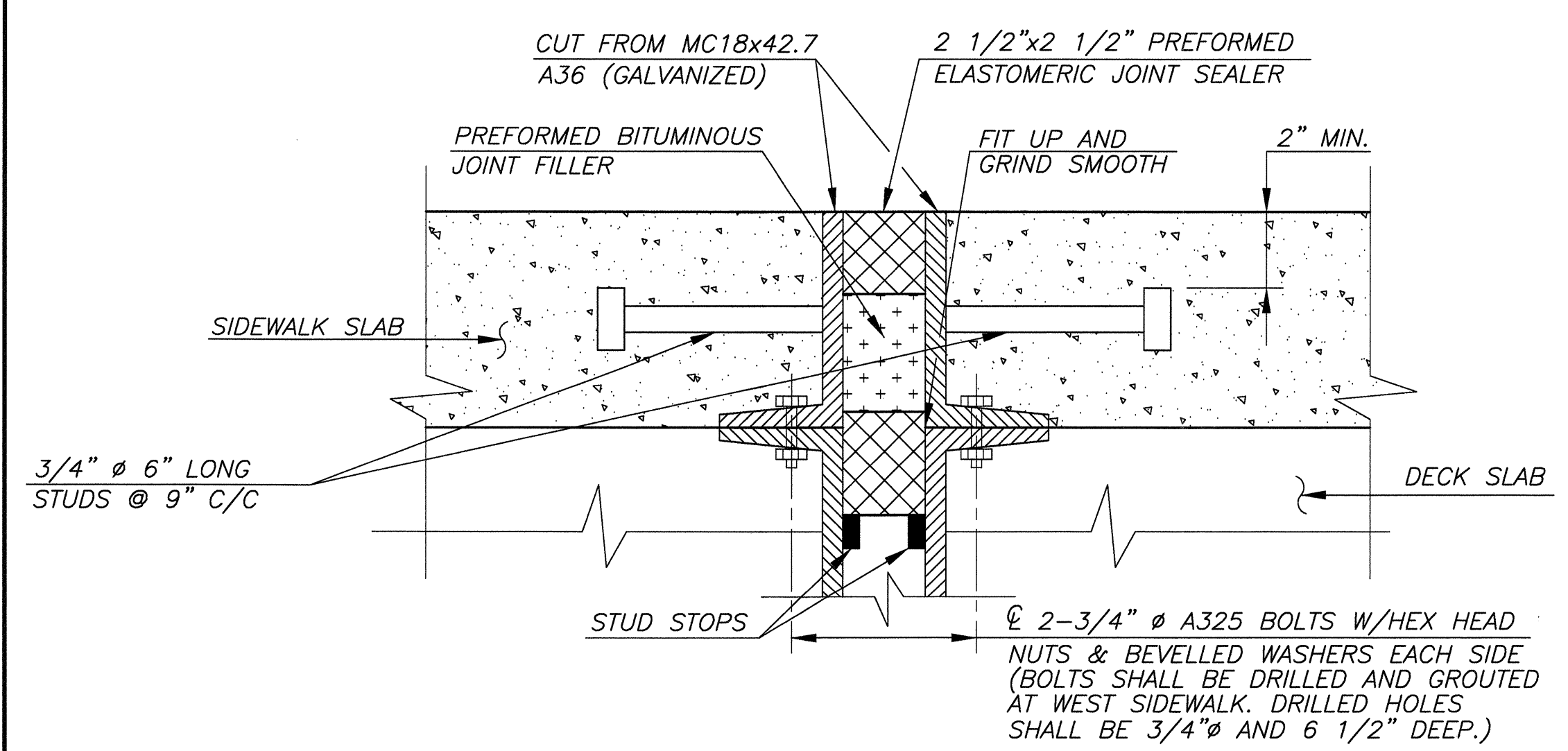
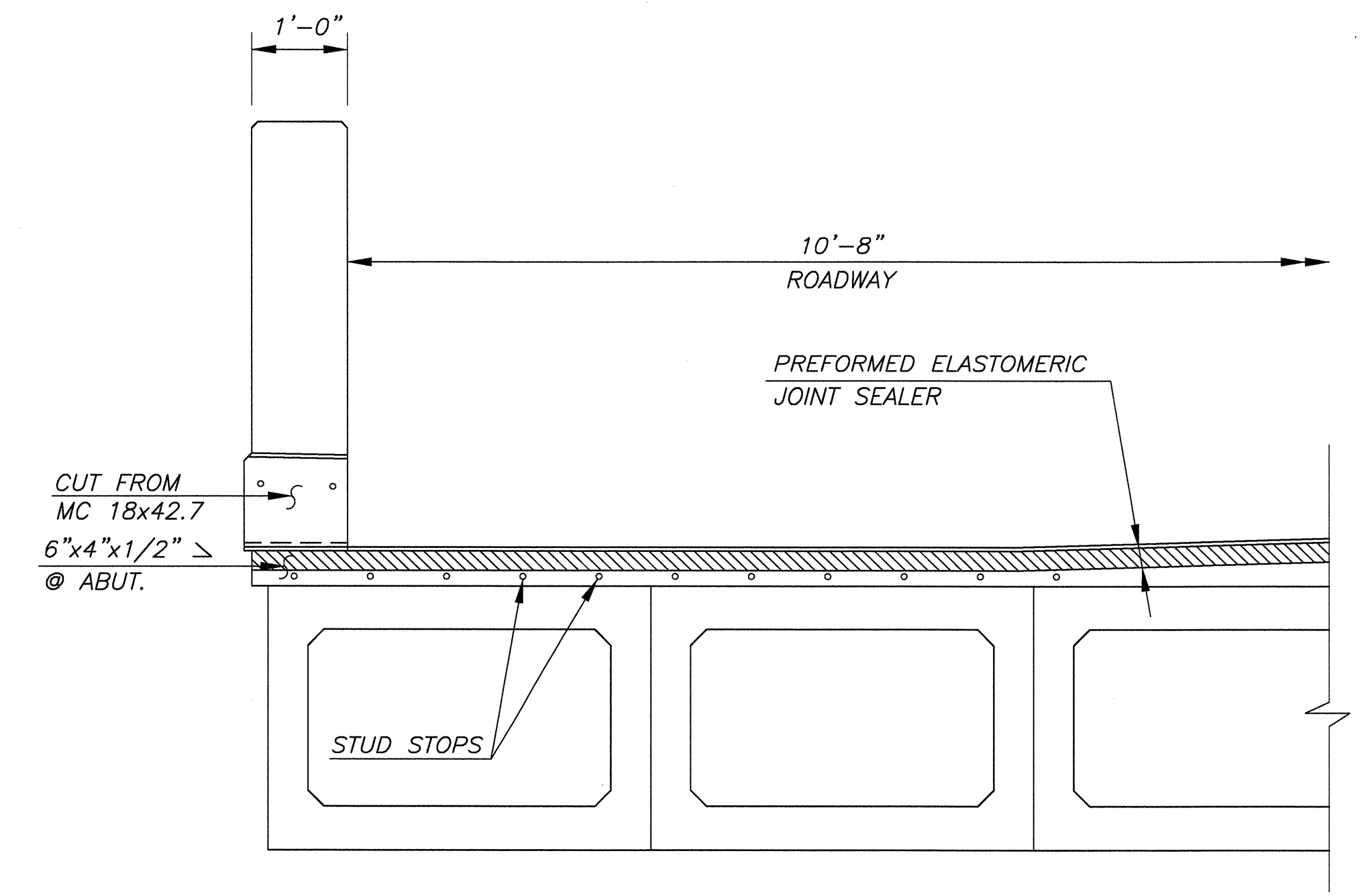
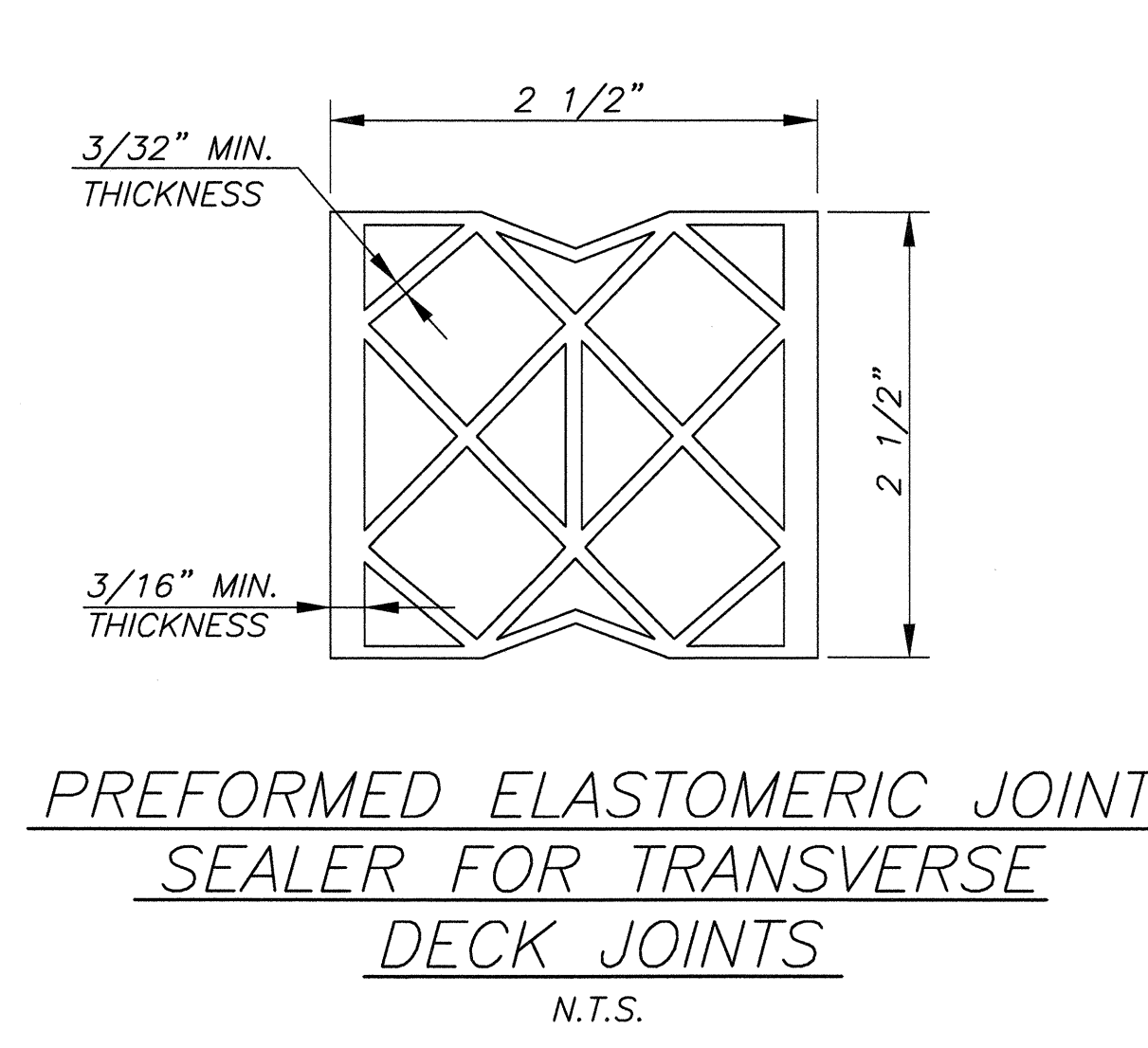
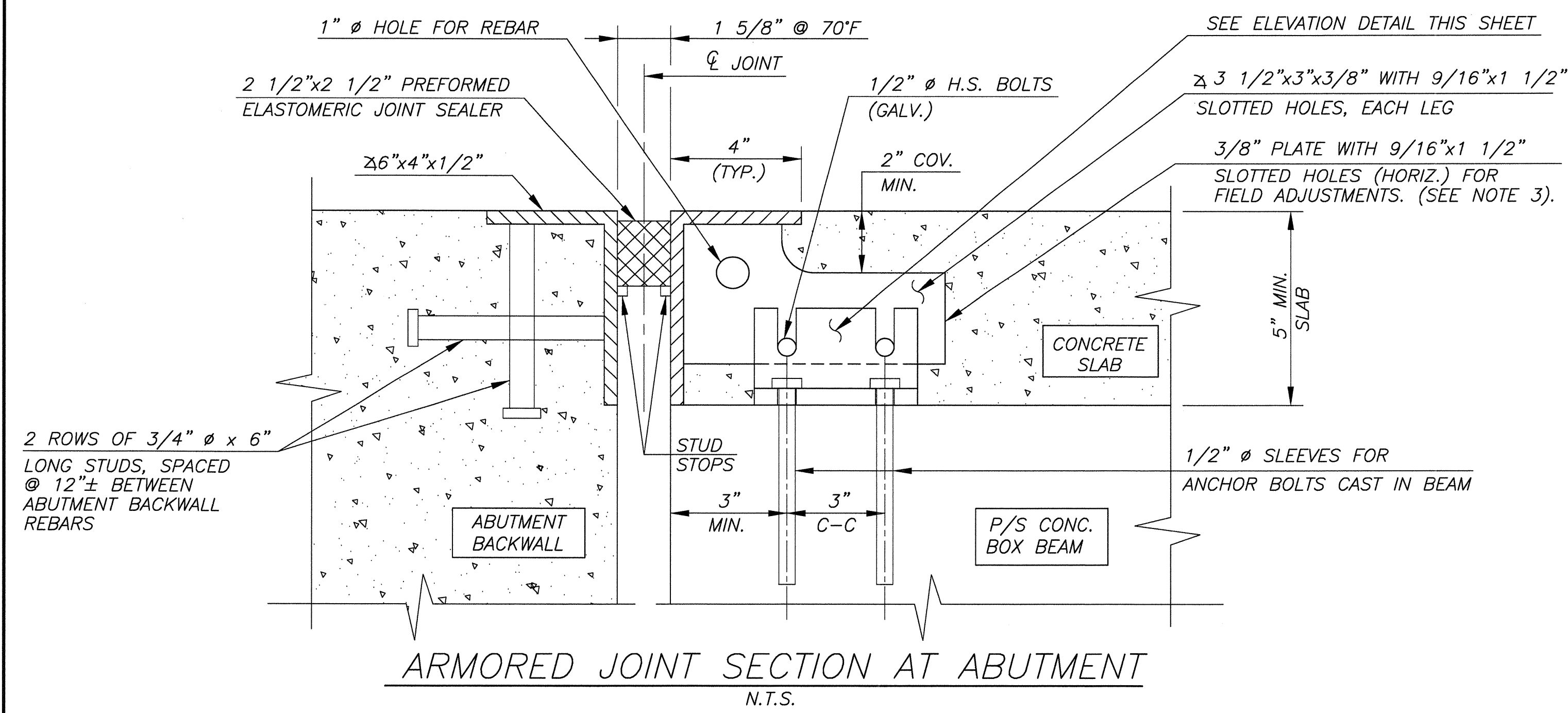


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| NO.  | REVISION         | DATE                       | BY                  | CHK. BY               |
|--|------------------|----------------------------|---------------------|-----------------------|
| <b>DECK PLAN AND SECTION</b>   |                  |                            |                     |                       |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |                  |                            |                     |                       |
| <br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238   |                  |                            |                     |                       |
| <br><b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>20 GREEN PLAZE, SUITE 100<br>FRENCHTOWN, N.J. 07728<br>PHONE: (732) 303-8100 FAX: (732) 303-8100 |                  |                            |                     |                       |
| SCALE:<br>NOTED  | DATE:<br>08/2011 | DRAWN BY:<br>K.W.          | DSGN. BY:<br>J.M.M. | CHK'D BY:<br>J.M.C.   |
|  |                  | JOB NUMBER:<br>NJ-C-BB-10Q |                     | SHEET NO.<br>33 OF 51 |





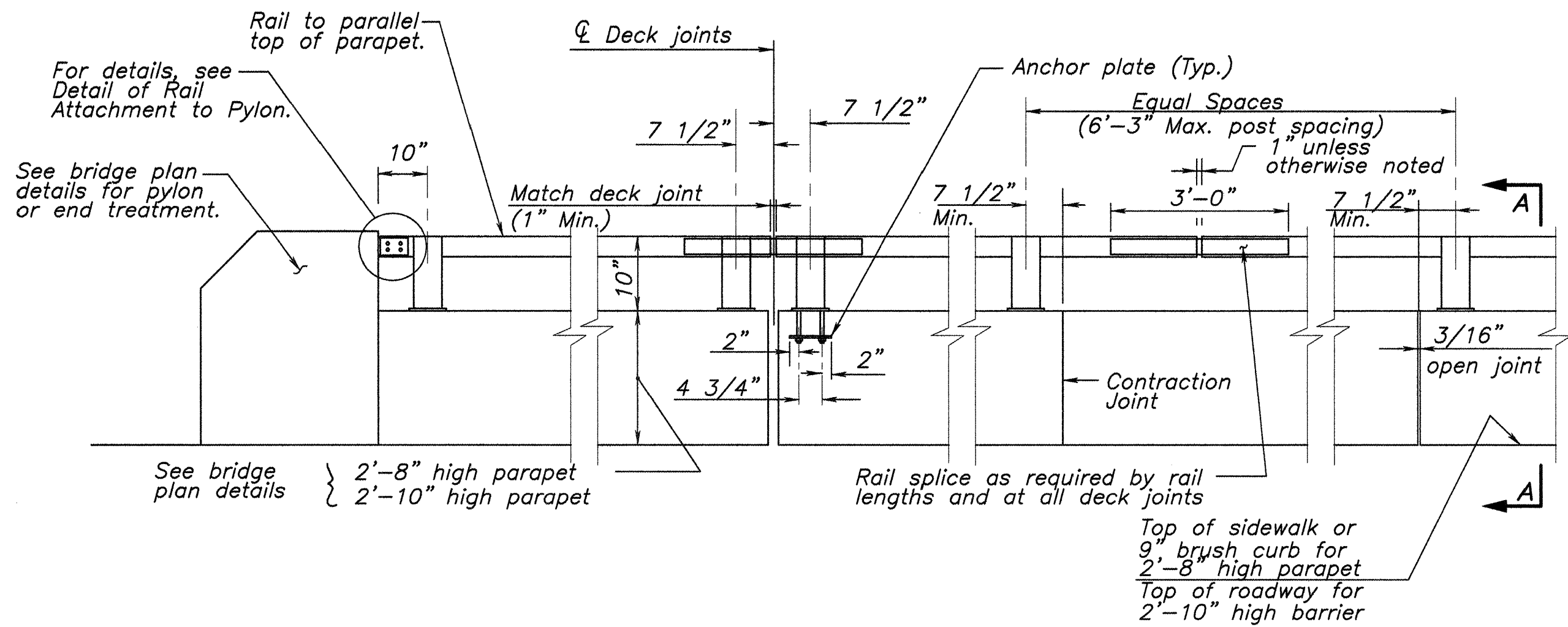
- NOTES:**
1. PLATES, ANGLES AND STUDS SHALL BE ASTM A36 AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
  2. DAMAGED GALVANIZATION SHALL BE REPAIRED ACCORDING TO SPECIFICATION SUBSECTION 503.14.
  3. MAXIMUM CONNECTION PLATE ASSEMBLY SPACING SHALL BE FOUR FEET.

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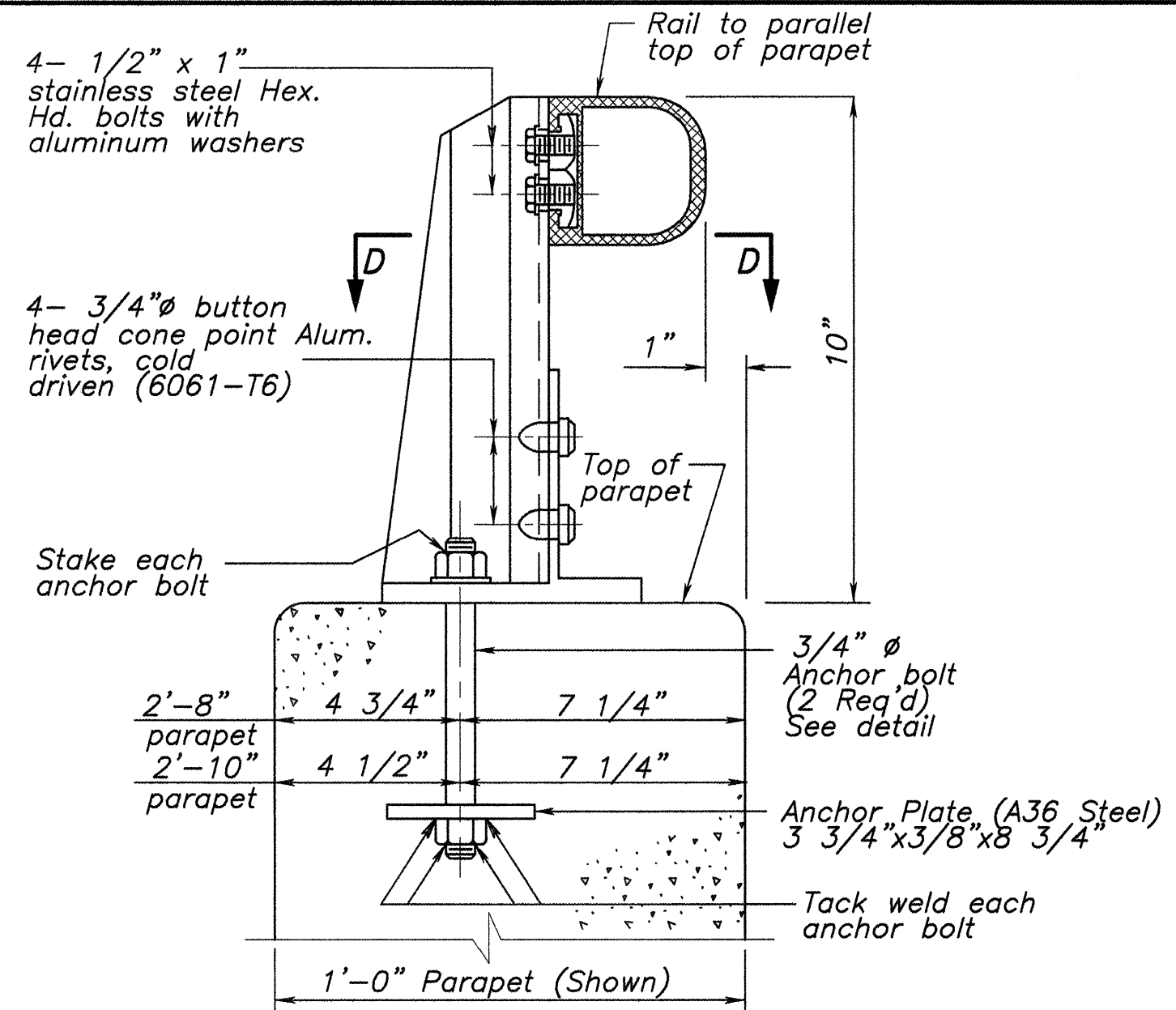
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| NO.   | REVISION | DATE      | BY        | CHK. BY   |             |            |
|---|----------|-----------|-----------|-----------|-------------|------------|
| <b>DECK JOINT DETAILS</b>   |          |           |           |           |             |            |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY   |          |           |           |           |             |            |
| <i>Greg Bitsko</i>  |          |           |           |           |             |            |
| GREGORY O. BITSKO<br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238   |          |           |           |           |             |            |
| <b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>25 GREEN PLAZE, SUITE 100<br>FREDERICK, N.J. 07728<br>PHONE: (732) 353-8700 FAX: (732) 353-8700 |          |           |           |           |             |            |
| SCALE:  | DATE:    | DRAWN BY: | DSGN. BY: | CHK'D BY: | JOB NUMBER: | SHEET NO.: |
| NOTED   | 08/2011  | K.W.      | J.M.M.    | J.M.C.    | NJ-C-BB-100 | 34 OF 51   |

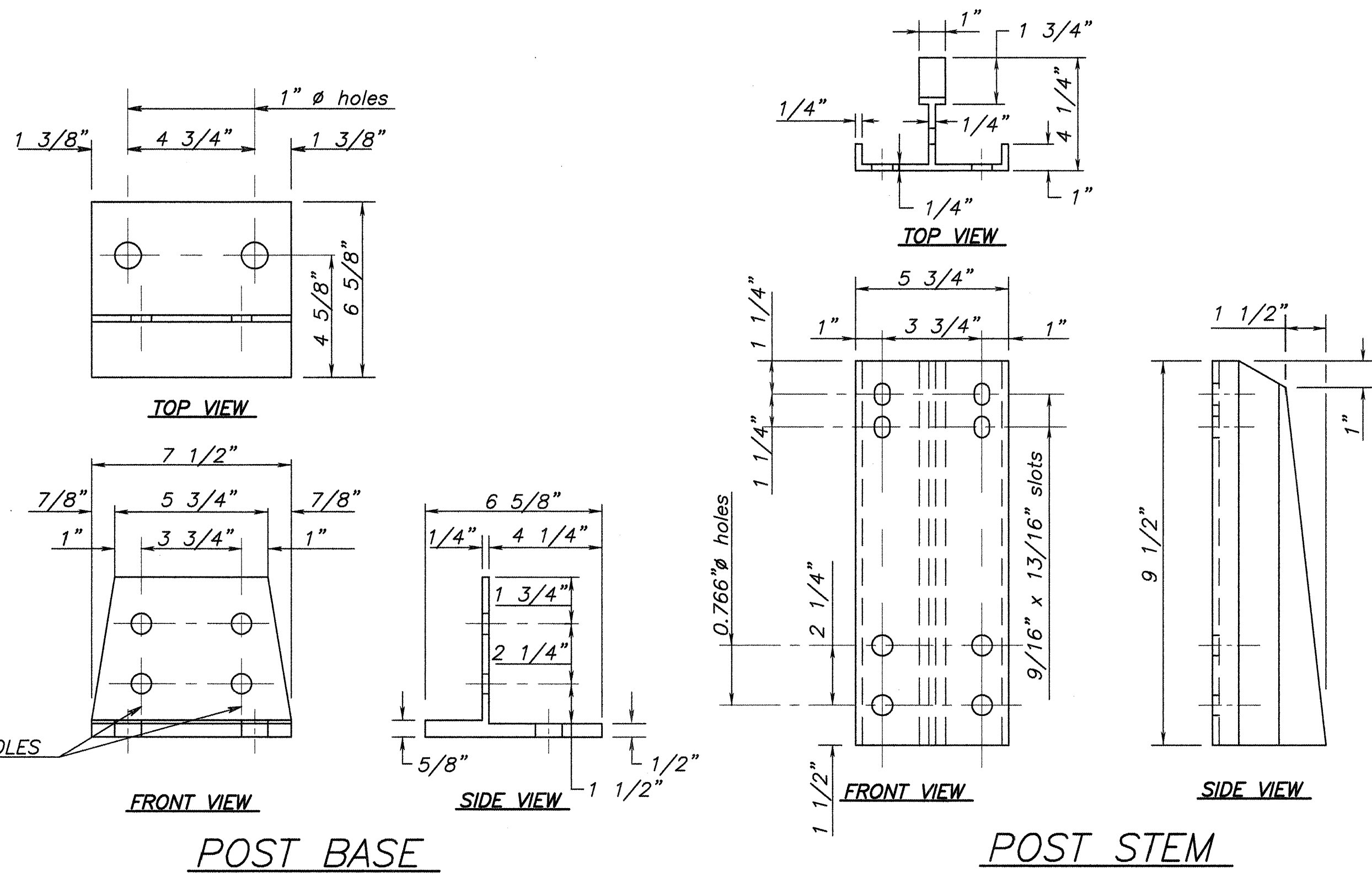


TYPICAL EXTERIOR ELEVATION OF CONTINUOUS RAILING SYSTEM  
(METAL RAIL, 1-RAIL ALUMINUM)



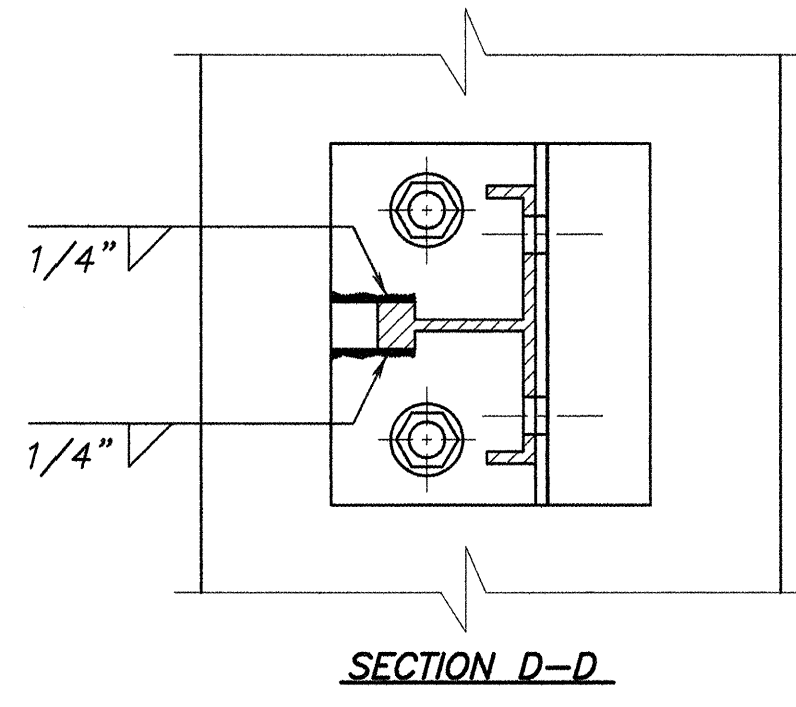
SECTION A-A

- GENERAL NOTES:**
- MATERIAL FOR POSTS, BASES, RAILS, AND RAIL CLAMPS SHALL BE ASTM B 221-73. ALUMINUM ALLOY 6061-T6.
  - WASHERS SHALL BE ASTM B 209-73 ALCLAD 2024-T3 AND NUTS SHALL BE ASTM B 211-74, ALUMINUM ALLOY 6061-T6.
  - DAM PLATES SHALL BE USED TO CLOSE ALL OPEN RAILING ENDS. MATERIAL SHALL BE ASTM B 209-73 ALUMINUM ALLOY 6061-T6.
  - WHERE NECESSARY FOR POST ALIGNMENT, ALUMINUM ALLOY SHIM MATERIAL SHALL BE USED WHERE REQUIRED BY THE ENGINEER. SHIM MATERIAL SHALL BE ASTM B 209, ALLOY 1100-0.
  - PAINT UNDERSIDE OF BASE WITH A HEAVY COAT OF ALUMINUM PIGMENTED ALKALINE RESISTANT BITUMINOUS PAINT EQUAL TO FEDERAL SPECIFICATIONS TT-C-001079B.
  - ALL ANCHOR BOLT HOLES AND SPACES BETWEEN BASE PLATES AND CONCRETE SHALL BE THOROUGHLY CAULKED WITH AN ALUMINUM IMPREGNATED CAULKING COMPOUND CONFORMING TO FEDERAL SPECIFICATIONS TT-C-598, CONSISTENCY GRADE 1.

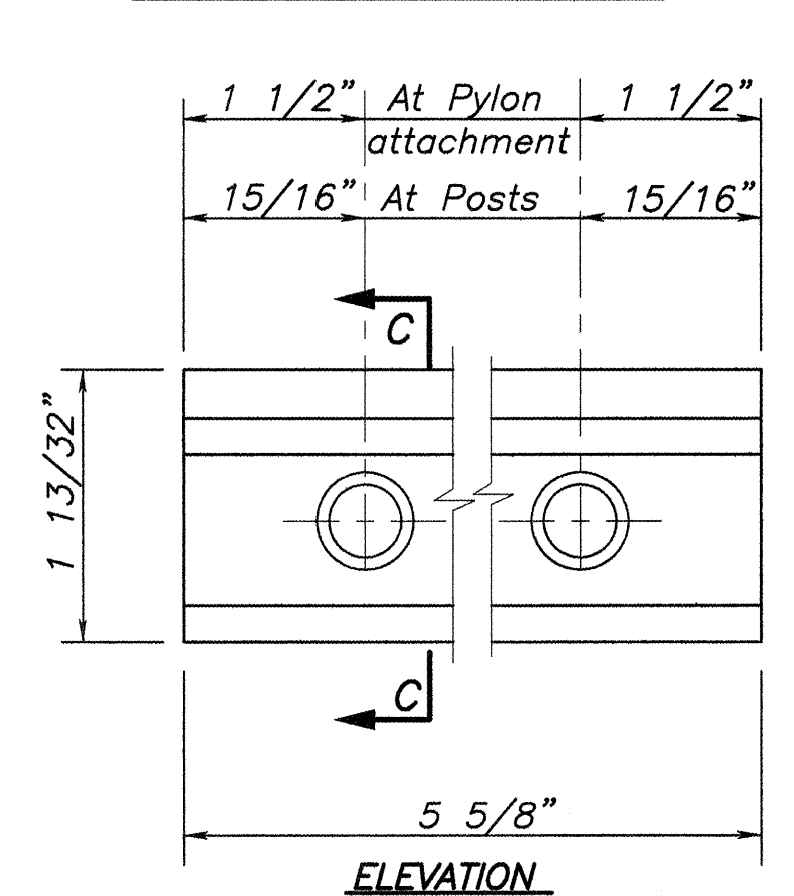


POST BASE

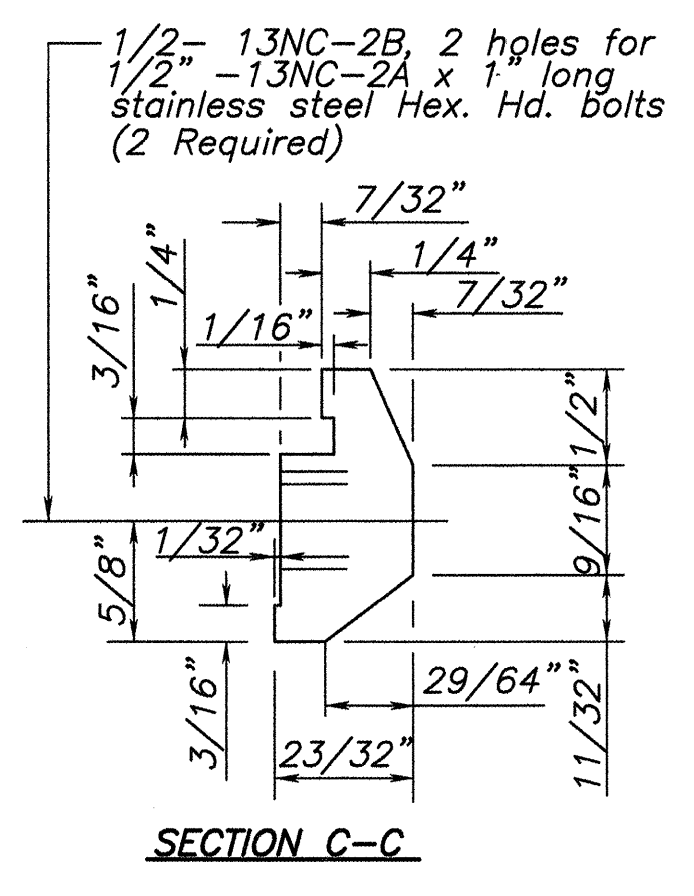
POST STEM



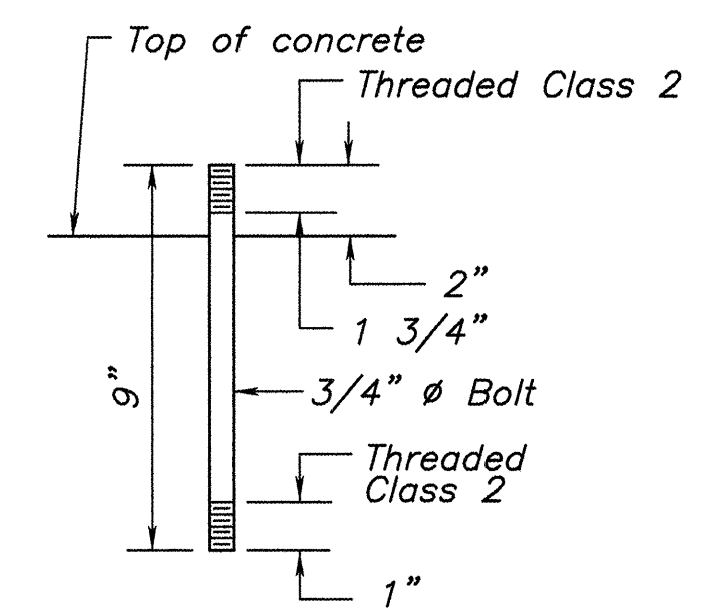
SECTION D-D



DETAILS OF RAIL CLAMP

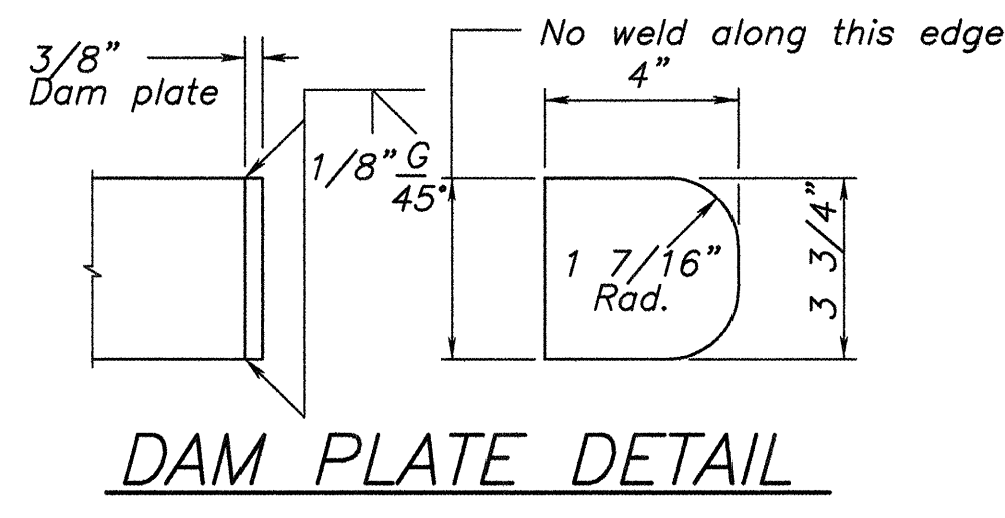


SECTION C-C

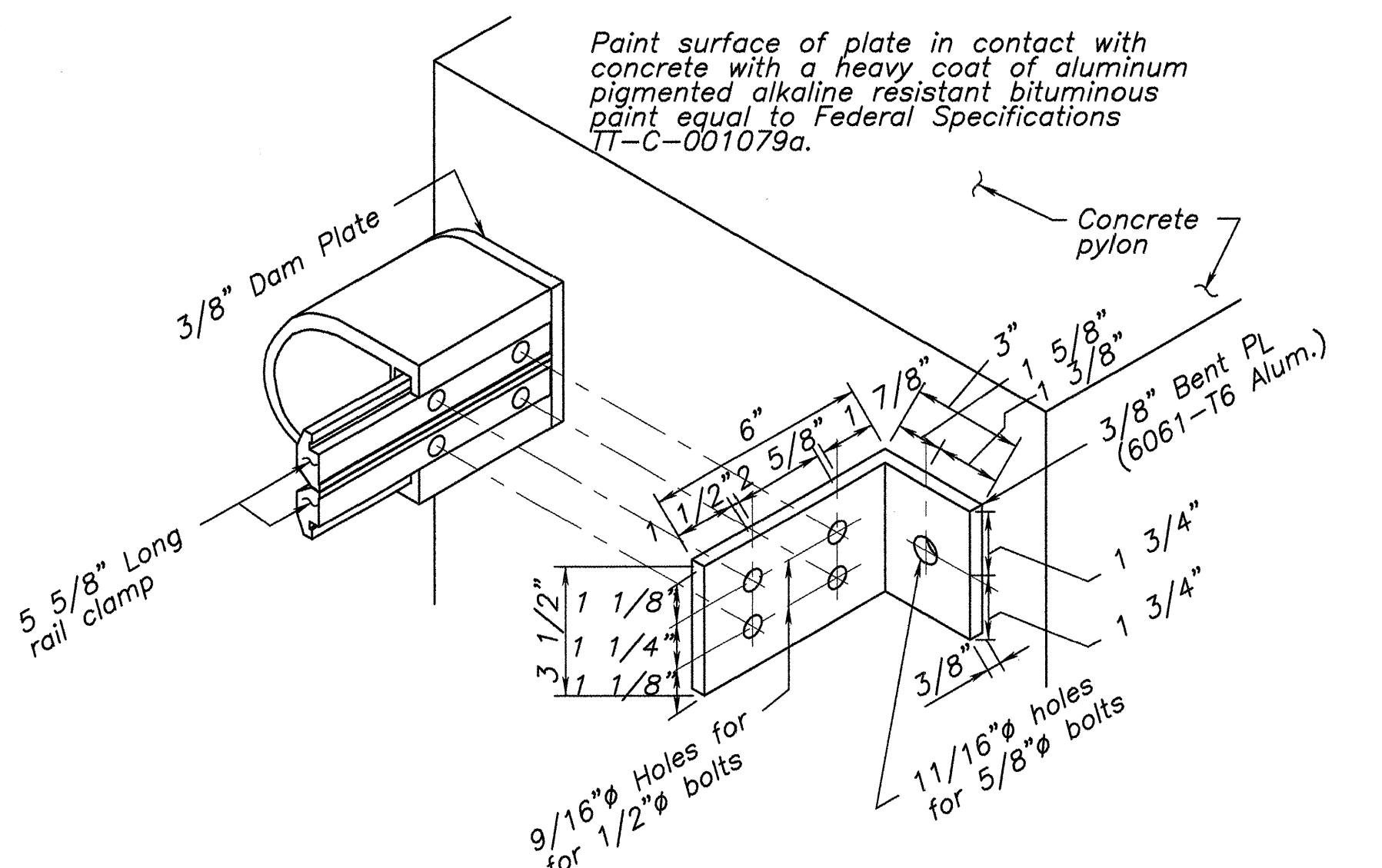


ANCHOR BOLT DETAIL

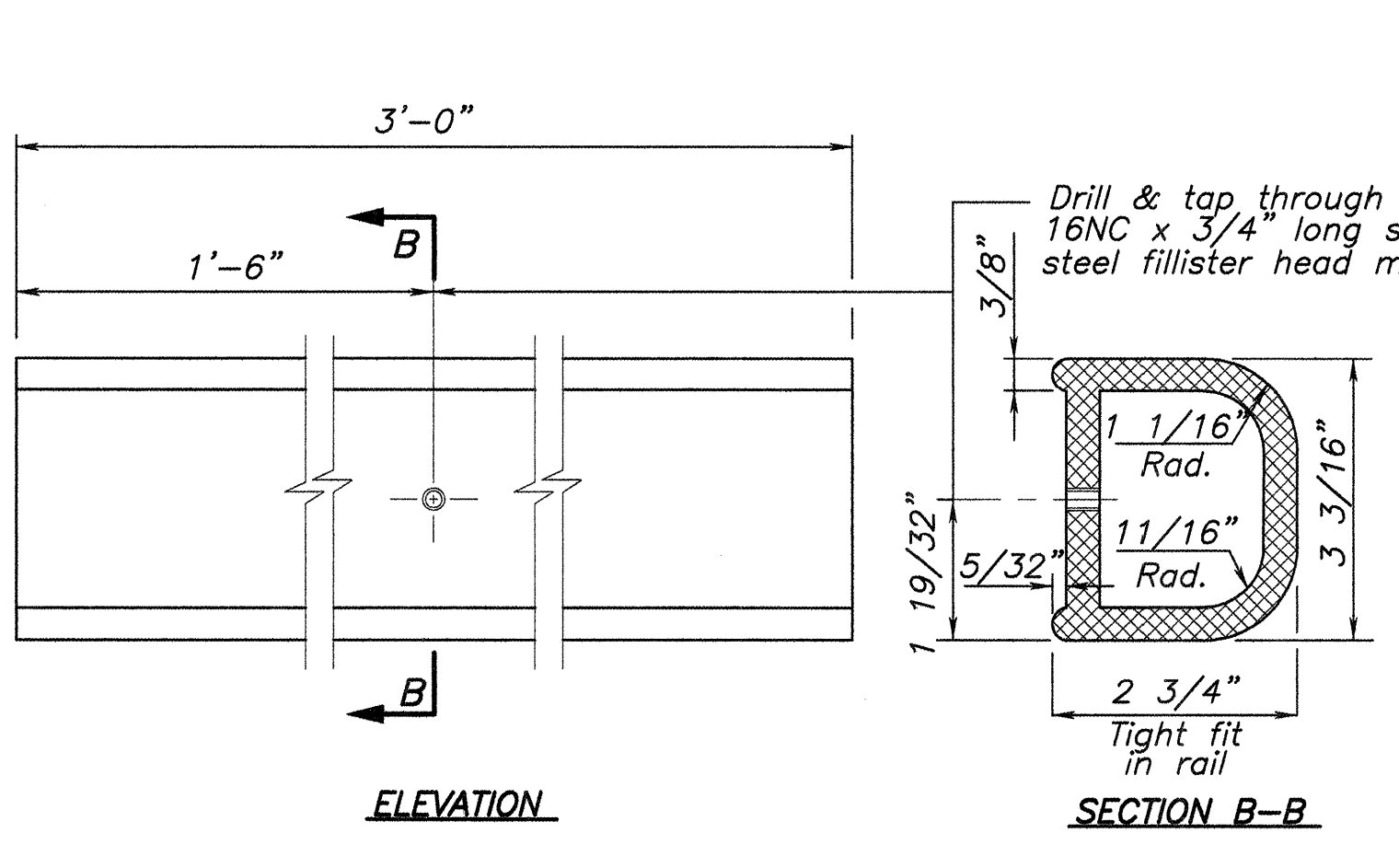
Material for anchor bolts shall be A.S.T.M. A276 stainless steel, Type 302, Type 430 or as an alternate, A36 steel may be used for embedded portion. Top nuts shall be Aluminum thick nuts A.S.T.M. B211-74 Alloy 6061-T6 Class 2 thread. Bottom nuts shall be A.S.T.M. A325.



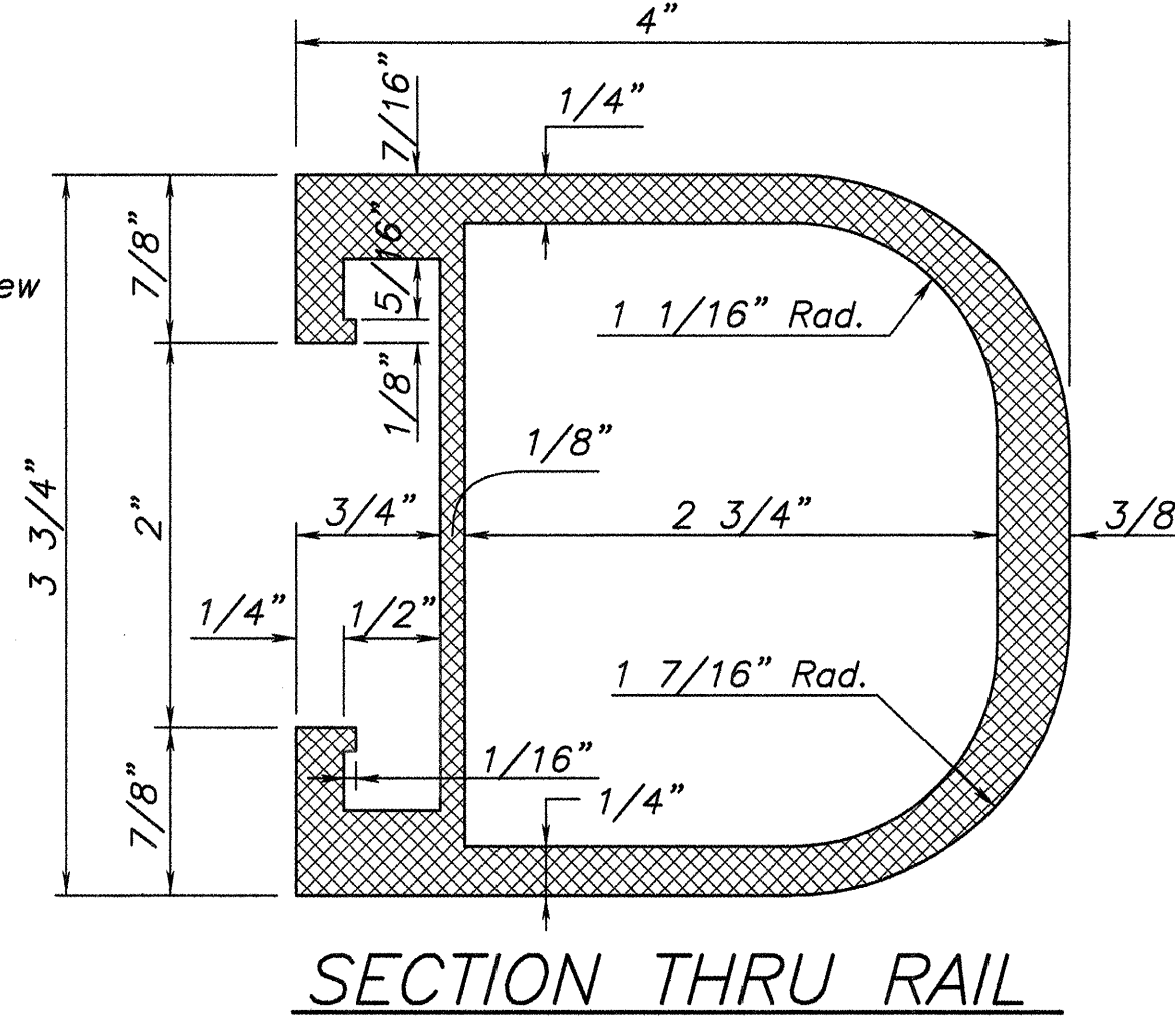
DAM PLATE DETAIL



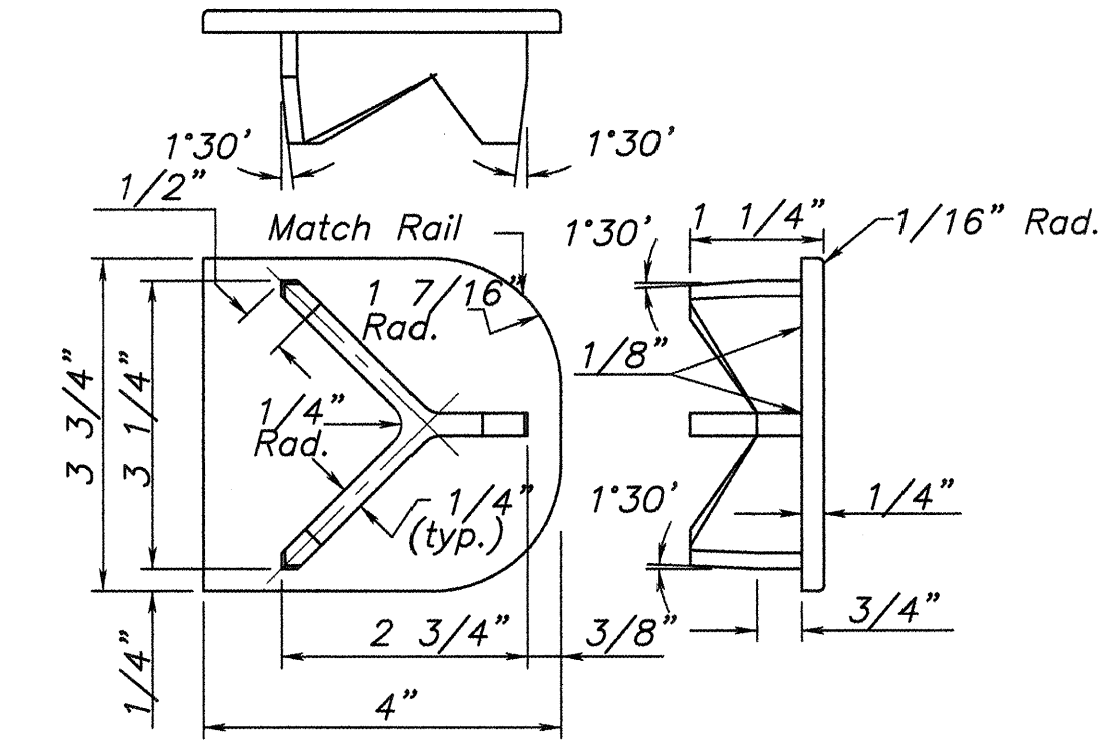
DETAIL OF RAIL ATTACHMENT TO PYLON



DETAIL OF RAIL SPLICE



SECTION THRU RAIL



ALTERNATE DETAIL END CAP

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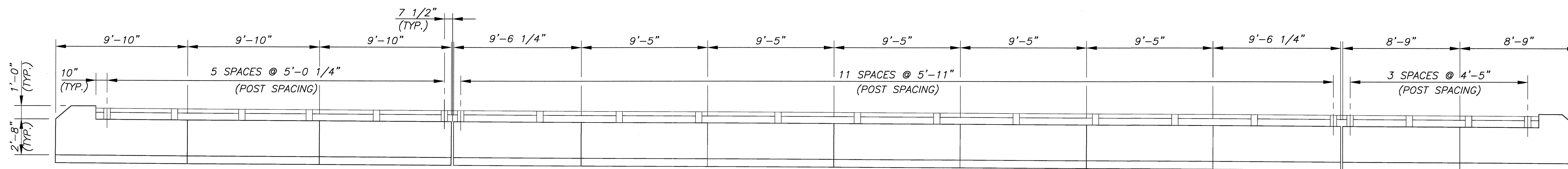
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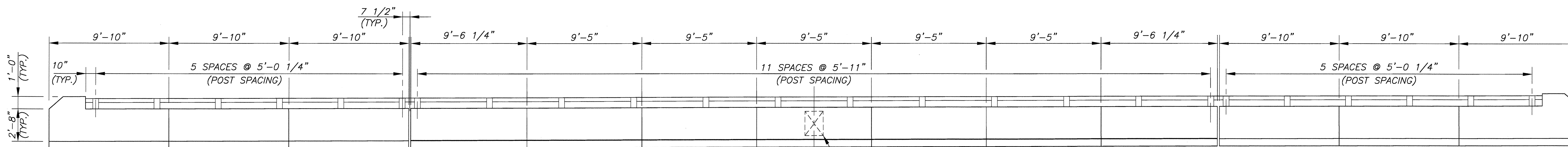
| NO.  | REVISION | DATE      | BY        | CHK.      | BY                 |
|--|----------|-----------|-----------|-----------|--------------------|
| <b>RAILING DETAILS</b>   |          |           |           |           |                    |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |          |           |           |           |                    |
| <i>Sym Btd</i>   |          |           |           |           |                    |
| GREGORY D. BITSKO<br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238  |          |           |           |           |                    |
| <b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>20 SIBBON PLACE, SUITE 100<br>FREDERICK, N.J. 07728<br>PHONE: (732) 303-8700 FAX: (732) 303-8710 |          |           |           |           |                    |
| SCALE:   | DATE:    | DRAWN BY: | DSGN. BY: | CHK'D BY: | JOB NUMBER:        |
| NOTED  | 08/2011  | K.W.      | J.M.M.    | J.M.C.    | NJ-C-BB-100        |
|  |          |           |           |           | SHEET NO. 35 OF 51 |

B18  
B21



**WEST PARAPET ELEVATION**

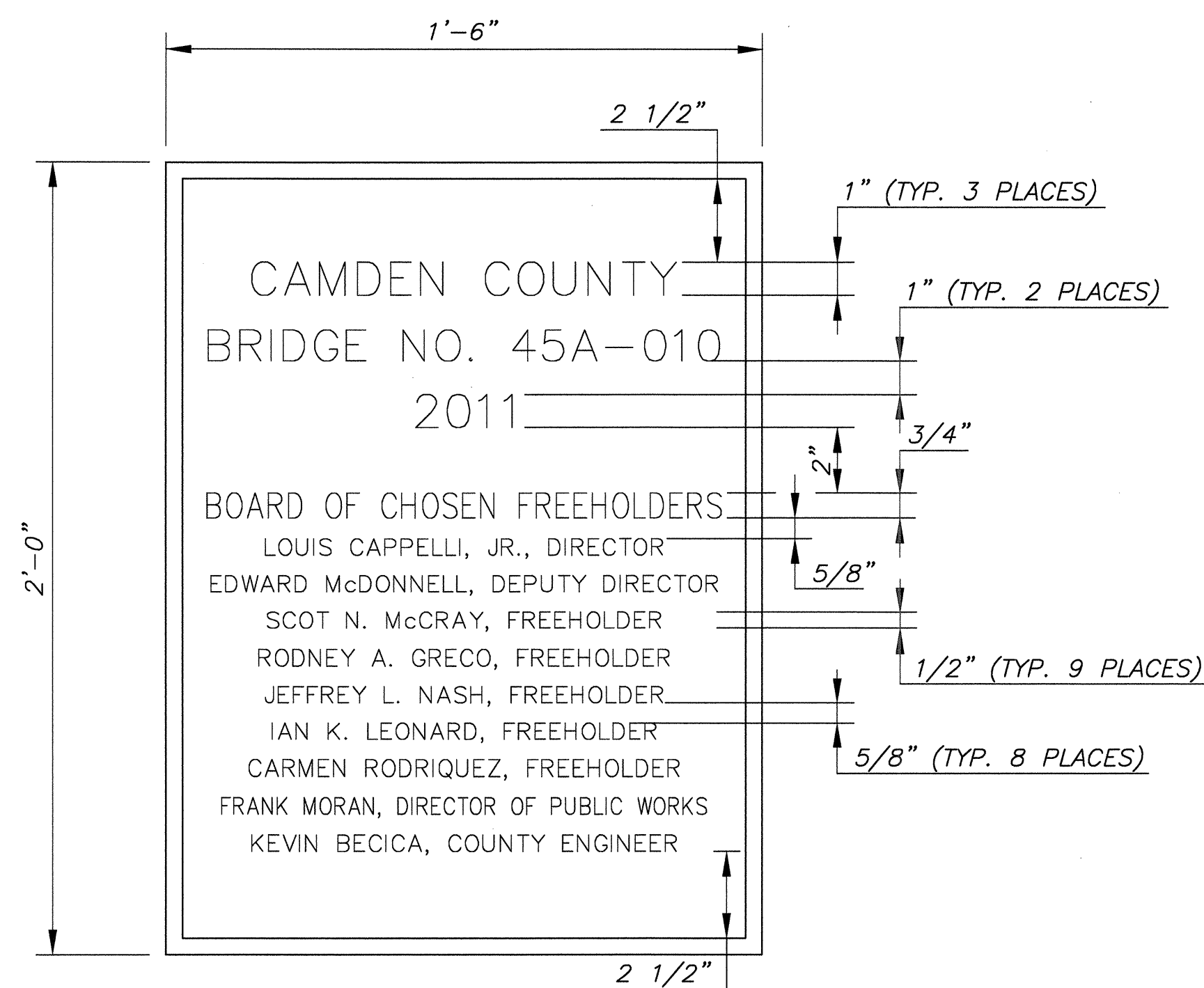
(LOOKING EAST)  
SCALE: 1/4"=1'-0"



**EAST PARAPET ELEVATION**

(LOOKING WEST)  
SCALE: 1/4"=1'-0"

PROPOSED NAME  
PLAQUE LOCATION AT  
INSIDE FACE OF  
PARAPET

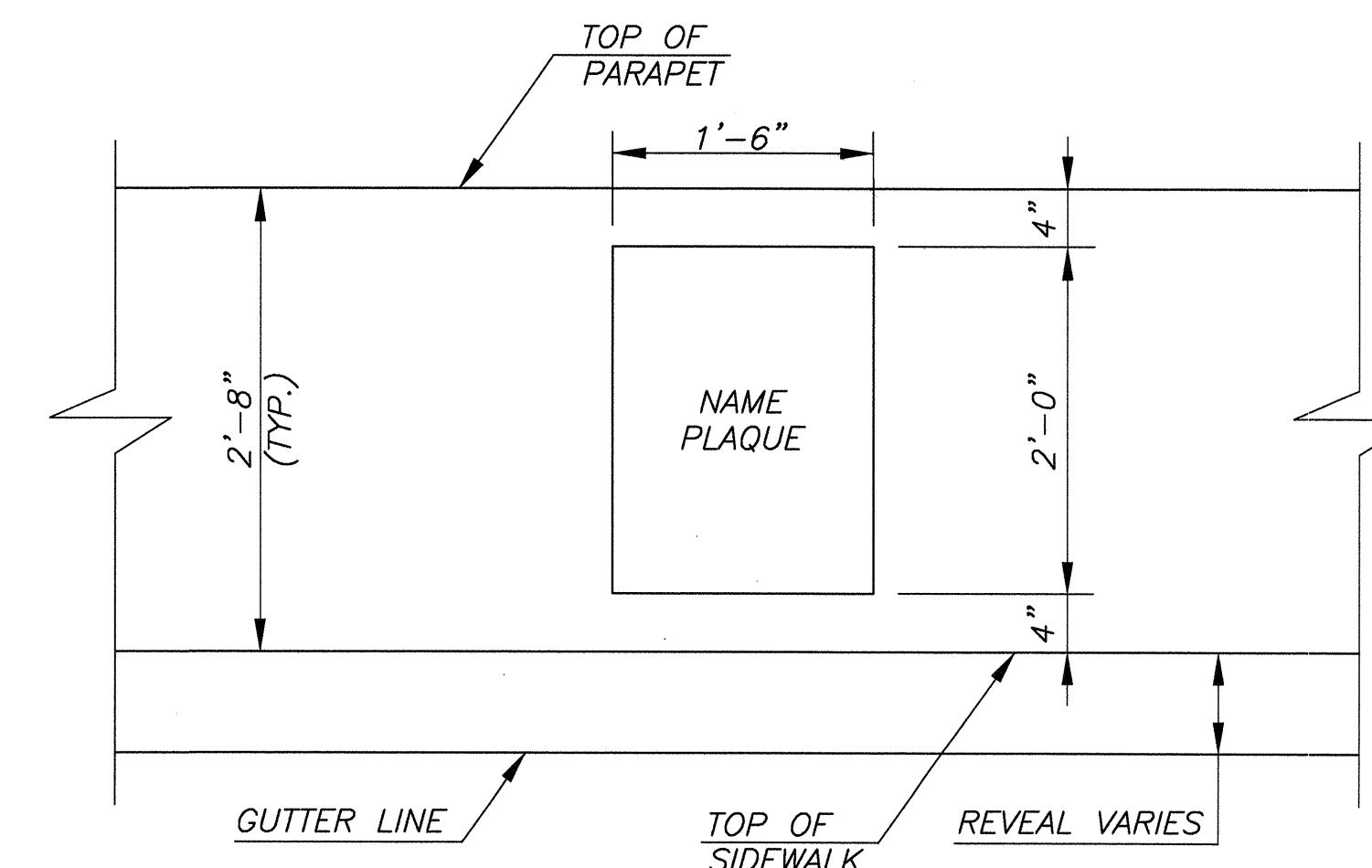


**NAME PLAQUE DETAIL**

N.T.S.

**PARAPET/PLAQUE NOTES:**

1. PLAQUE SHALL BE POLISHED BLACK GRANITE OF 1"± THICKNESS.
2. PLAQUE SHALL BE RECESSED IN PARAPET TO PROVIDE FOR A FLUSH FRONT SURFACE.
3. ATTACHMENT STUDS FOR PLAQUE AS SUPPLIED BY PLAQUE FABRICATION SHALL BE POSITIONED TO CLEAR PARAPET REINFORCEMENT STEEL. EPOXY TYPE MATERIAL BE USED TO ATTACH PLAQUE.
4. PROVIDE RUBBINGS PRIOR TO MANUFACTURING OF PLAQUE.
5. COST OF PLAQUE AND INSTALLATION SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE PROPOSAL.
6. BRIDGE PLAQUE TO BE MOUNTED AS SHOWN, OR AS DIRECTED BY THE ENGINEER.
7. GUIDE RAIL ATTACHMENTS AND ALUMINUM BRIDGE RAILING NOT SHOWN FOR CLARITY.
8. THE ENGRAVING ON THE PLAQUE SHALL BE APPROVED BY THE COUNTY ENGINEER PRIOR TO MANUFACTURING.



**PARTIAL ELEVATION OF INSIDE FACE OF EAST PARAPET**

N.T.S.

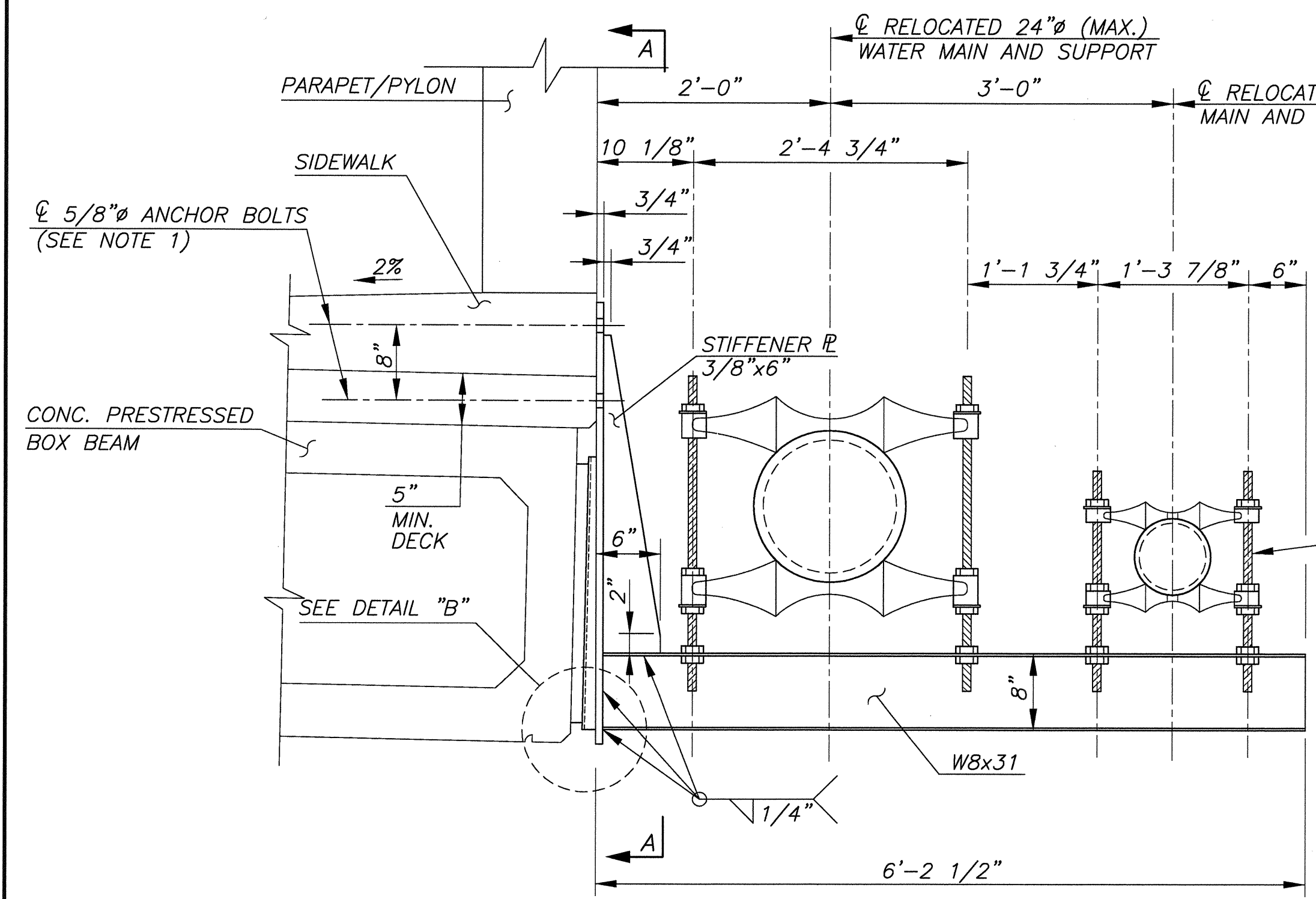
B19  
B21

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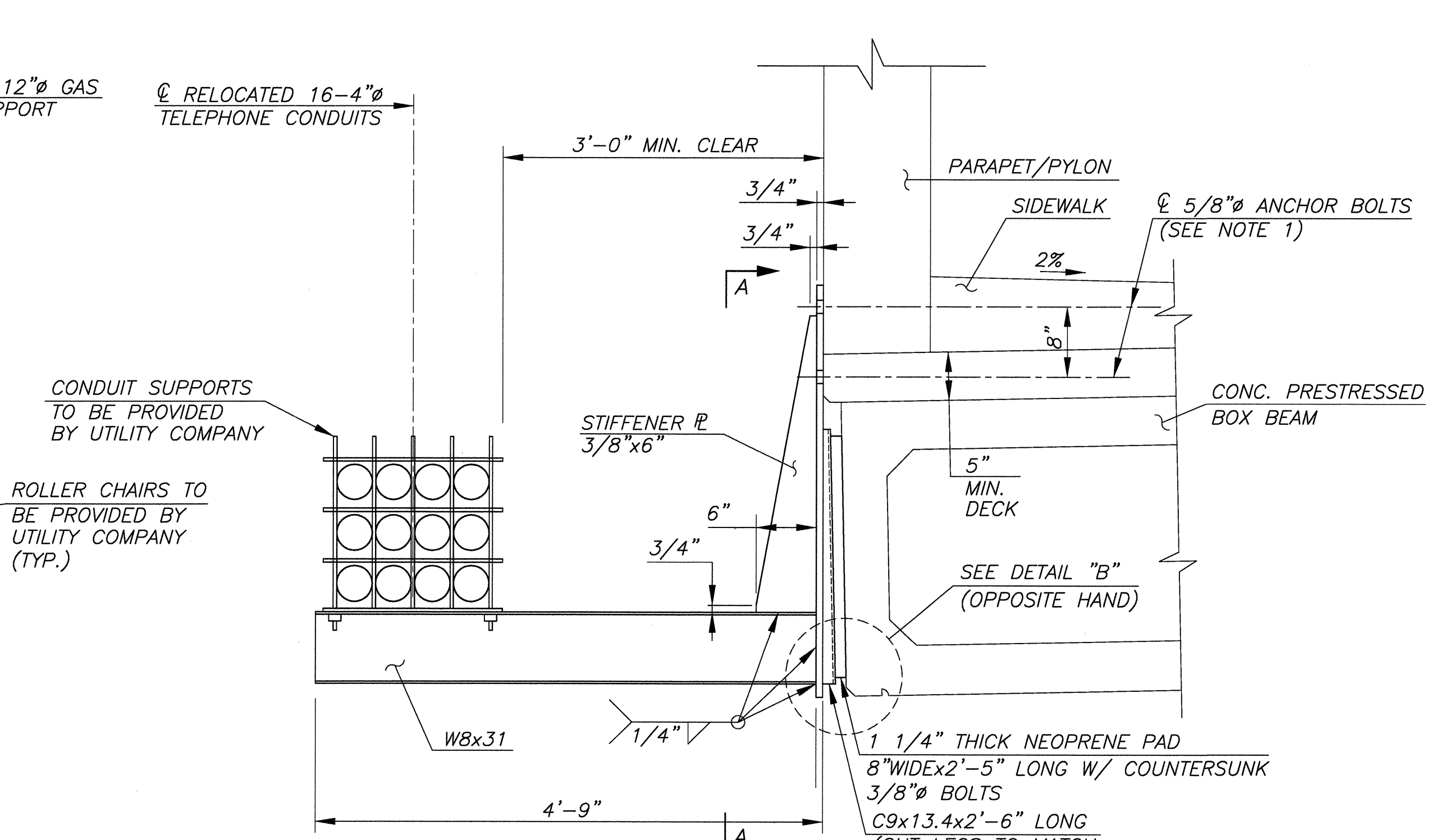
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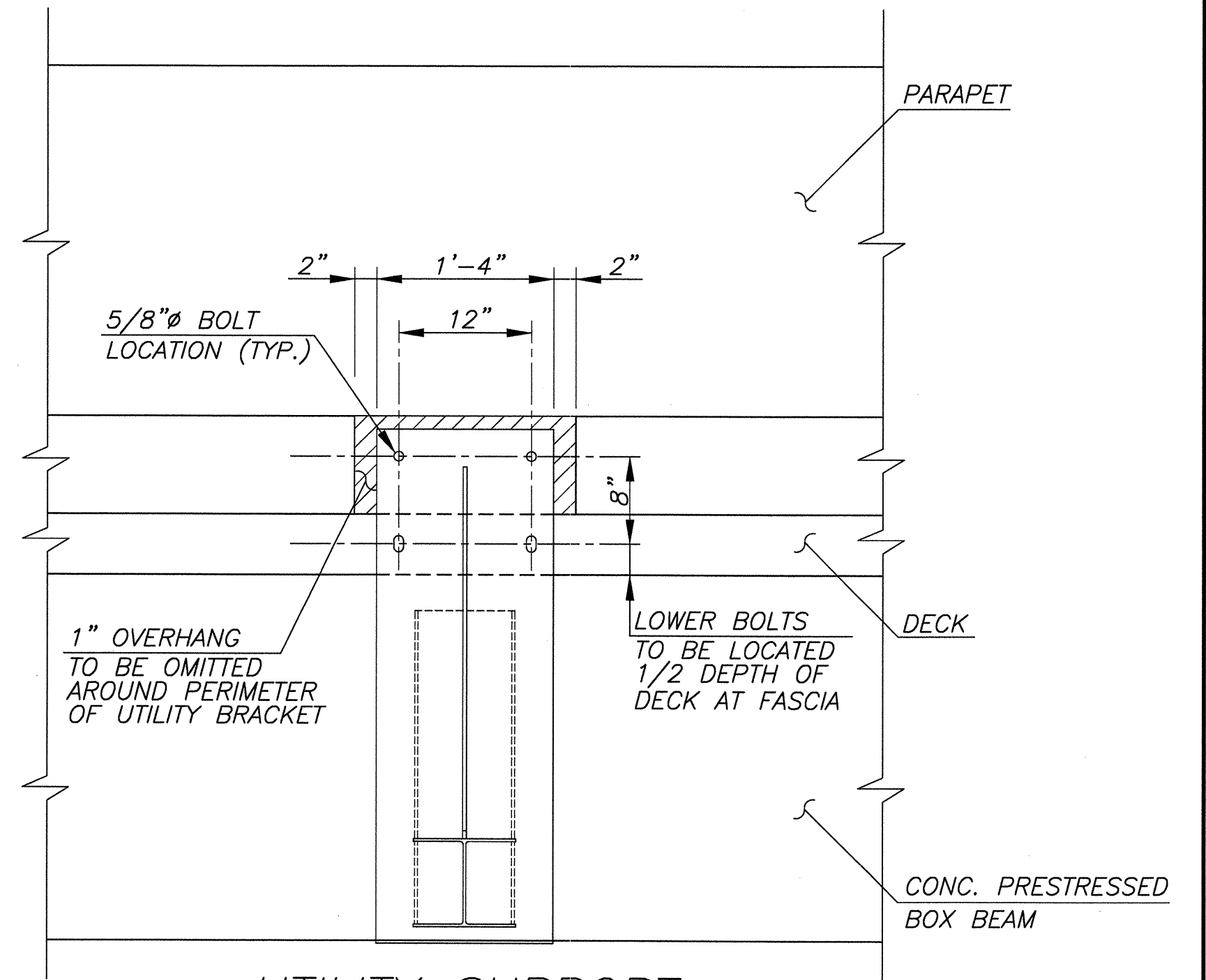
| NO.  | REVISION      | DATE                    | BY                 | CHK. BY          |
|--|---------------|-------------------------|--------------------|------------------|
| <b>PARAPET AND MISCELLANEOUS DETAILS</b>   |               |                         |                    |                  |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER LITTLE TIMBER CREEK (STRUCTURE NO. 45A010) BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |               |                         |                    |                  |
| <br><b>GREGORY D. BLISKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. No. GE 035238   |               |                         |                    |                  |
| <br><b>CHERRY, WEBER &amp; ASSOCIATES</b><br>A Professional Corporation<br>CONSULTING ENGINEERS - PLANNERS<br>29 GREEN PLAZE, SUITE 100<br>FREEHOLD, N.J. 07728<br>PHONE: (732) 303-8700 FAX: (732) 303-8710 |               |                         |                    |                  |
| SCALE: NOTED   | DATE: 08/2011 | DRAWN BY: K.W.          | DSGN. BY: J.M.M.   | CHK'D BY: J.M.C. |
|  |               | JOB NUMBER: NJ-C-BB-100 | SHEET NO. 36 OF 51 |                  |



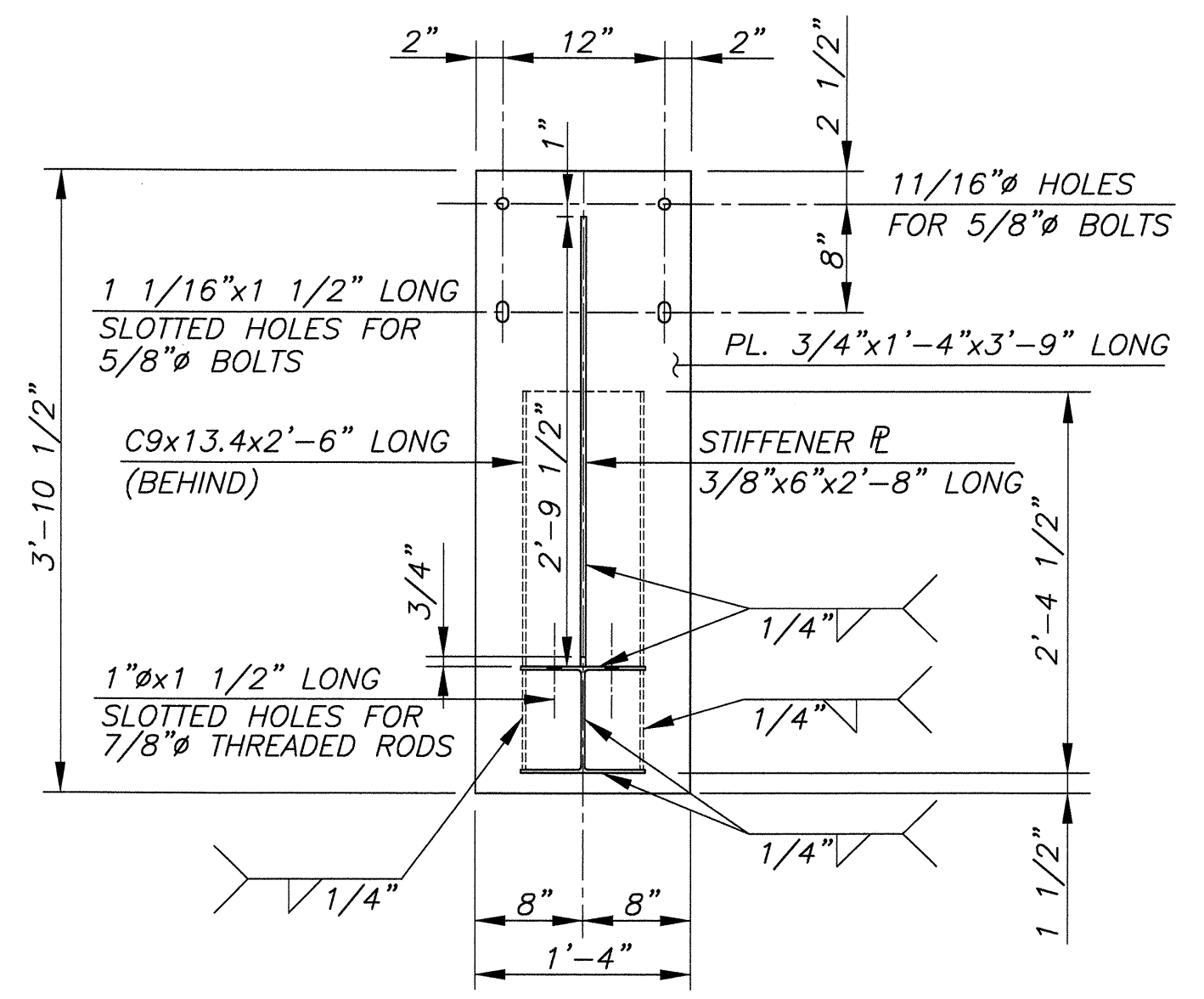
**ELEVATION**  
**GAS - UTILITY SUPPORT BRACKET DETAIL**  
 SCALE: 1"=1'-0"



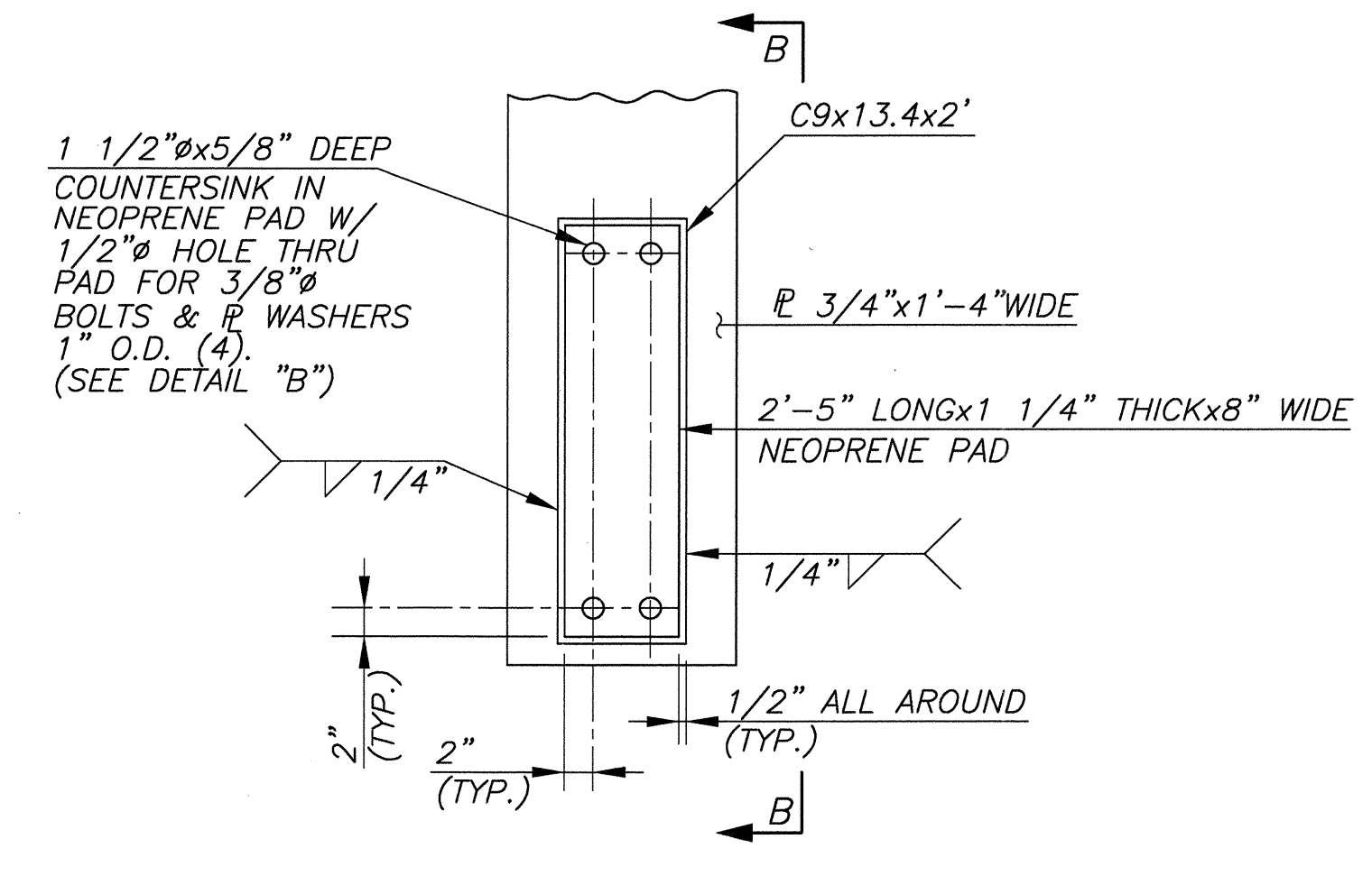
**ELEVATION**  
**TELEPHONE - UTILITY SUPPORT BRACKET**  
 SCALE: 1"=1'-0"



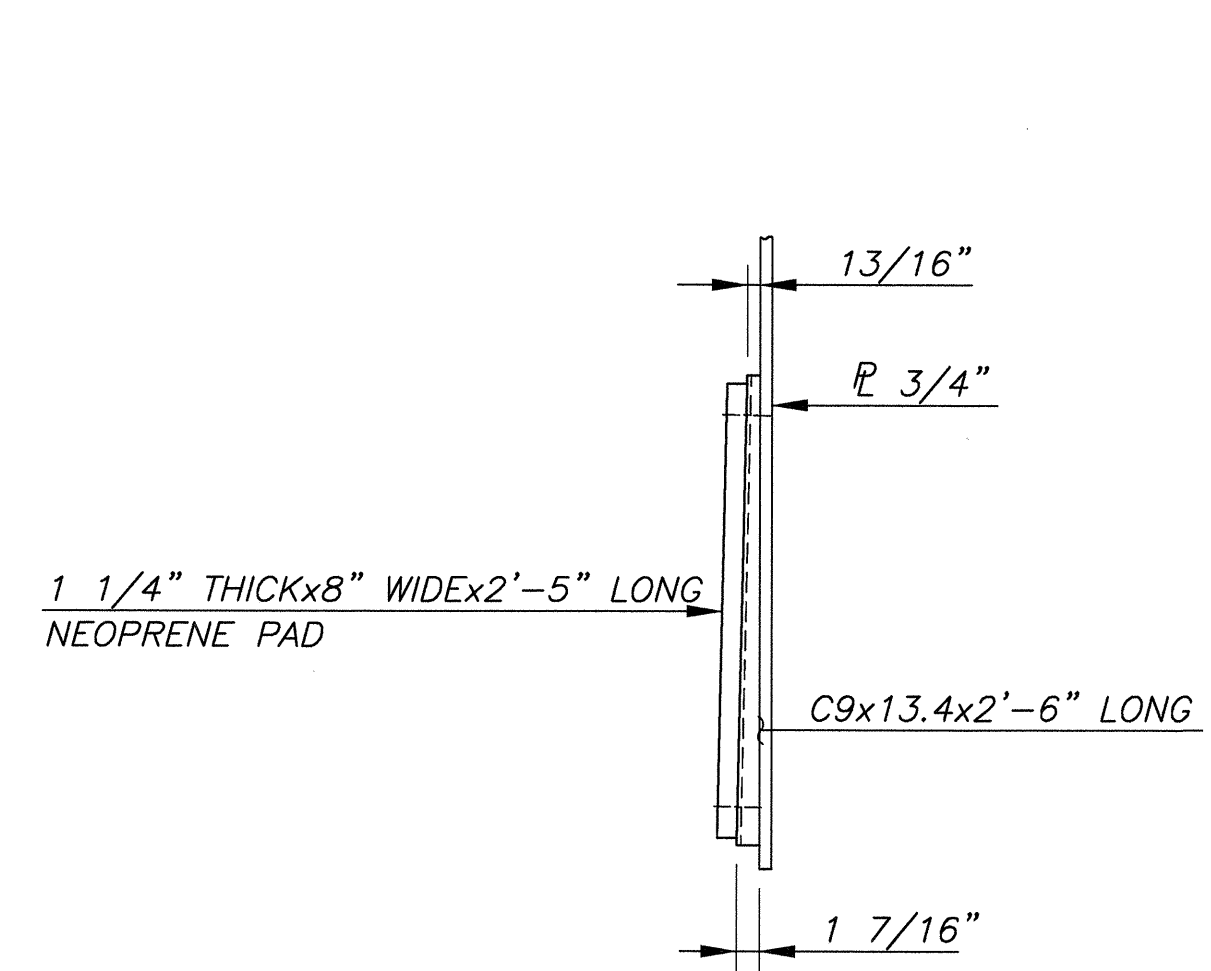
**UTILITY SUPPORT CONNECTION SURFACE**  
 SCALE: 1"=1'-0"



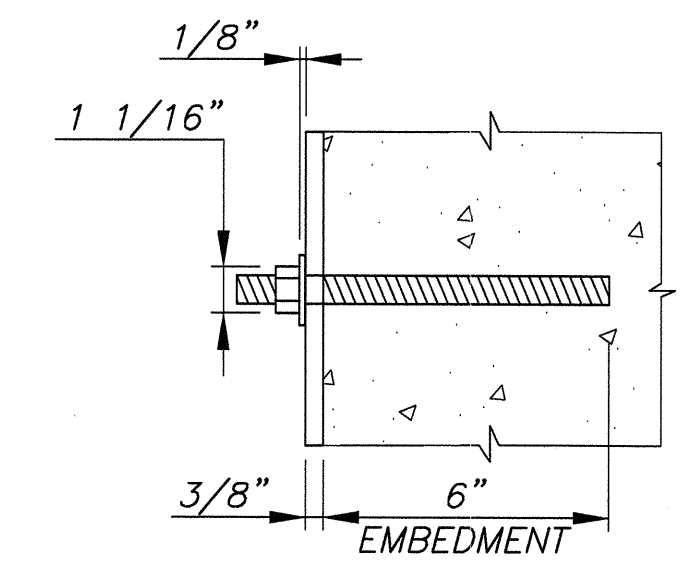
**SECTION A-A**  
 SCALE: 1"=1'-0"



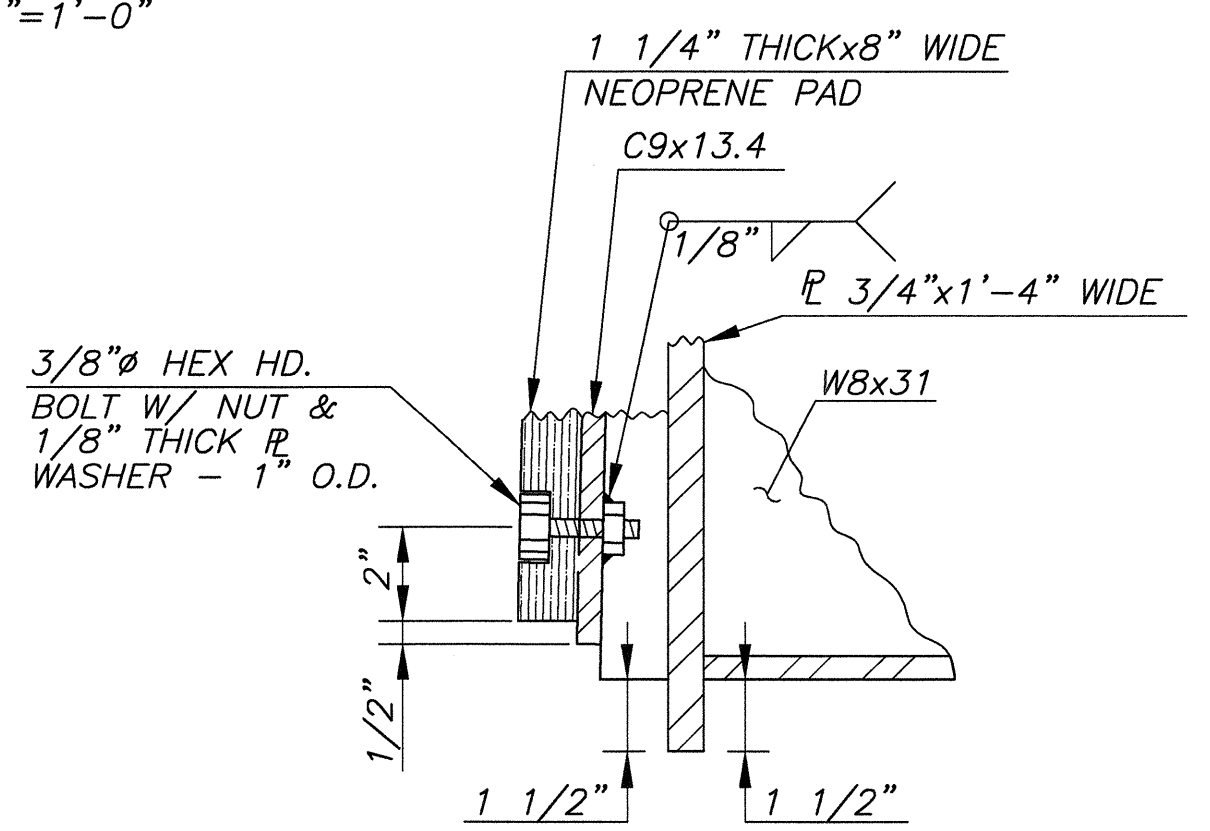
**ELEVATION**  
**CHANNEL PAD DETAIL**  
 SCALE: 1"=1'-0"



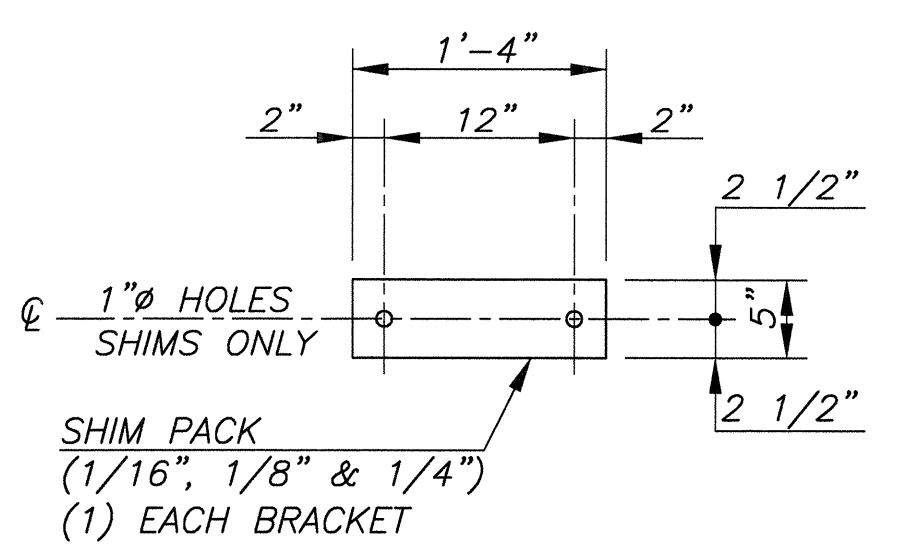
**SECTION B-B**  
 SCALE: 1"=1'-0"



**TYPICAL EMBEDMENT DETAIL**  
 SCALE: 3"=1'-0"



**DETAIL "B"**  
 SCALE: 3"=1'-0"



**SHIM PACK DETAIL**  
 SCALE: 1"=1'-0"

**NOTES:**

1. CONTRACTOR SHALL DRILL 3/4" HOLES FOR 5/8" BOLTS AS SHOWN. BOLTS SHALL HAVE 6" MIN. EMBEDMENT. BOLTS SHALL BE KELKEN GOLD "LEFTY" ANCHORS COATED WITH KELISLIP AND ANCHORED IN PLACE WITH KELIGROUT. CONTRACTOR MAY SUBMIT ALTERNATE ANCHORING SYSTEM TO ENGINEER FOR APPROVAL.
2. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
3. ROLLER CHAIR SUPPORT SHALL BE HOT-DIP GALVANIZED.
4. UTILITY SUPPORT BRACKETS AND SHIMS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
5. ONE (1) 12" GAS SUPPORT REQUIRED. TWELVE (12) 4" TELEPHONE SUPPORTS REQUIRED. ONE (1) FUTURE WATER MAIN UTILITY SUPPORT REQUIRED.
6. CONTRACTOR SHALL VERIFY ELEVATION OF UTILITIES AT SUPPORTS PRIOR TO SETTING SLEEVES IN HEADERS.

B20  
 B21

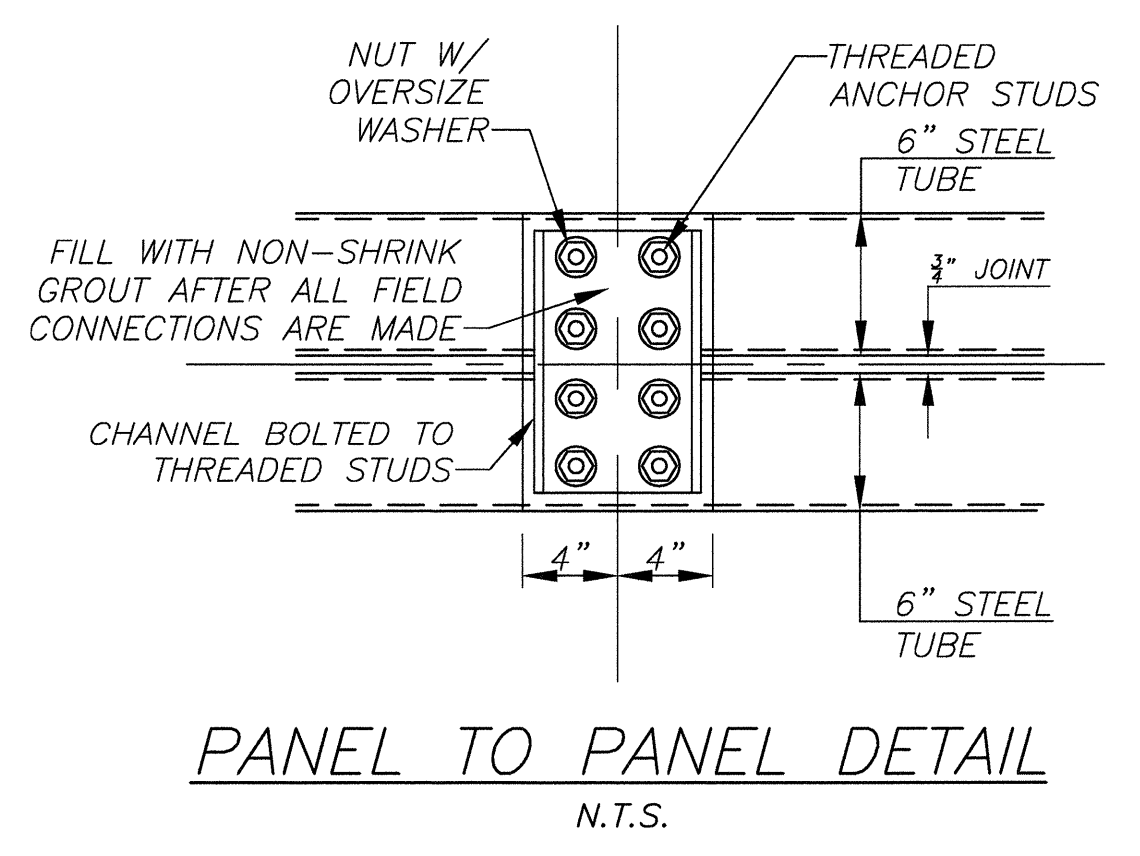
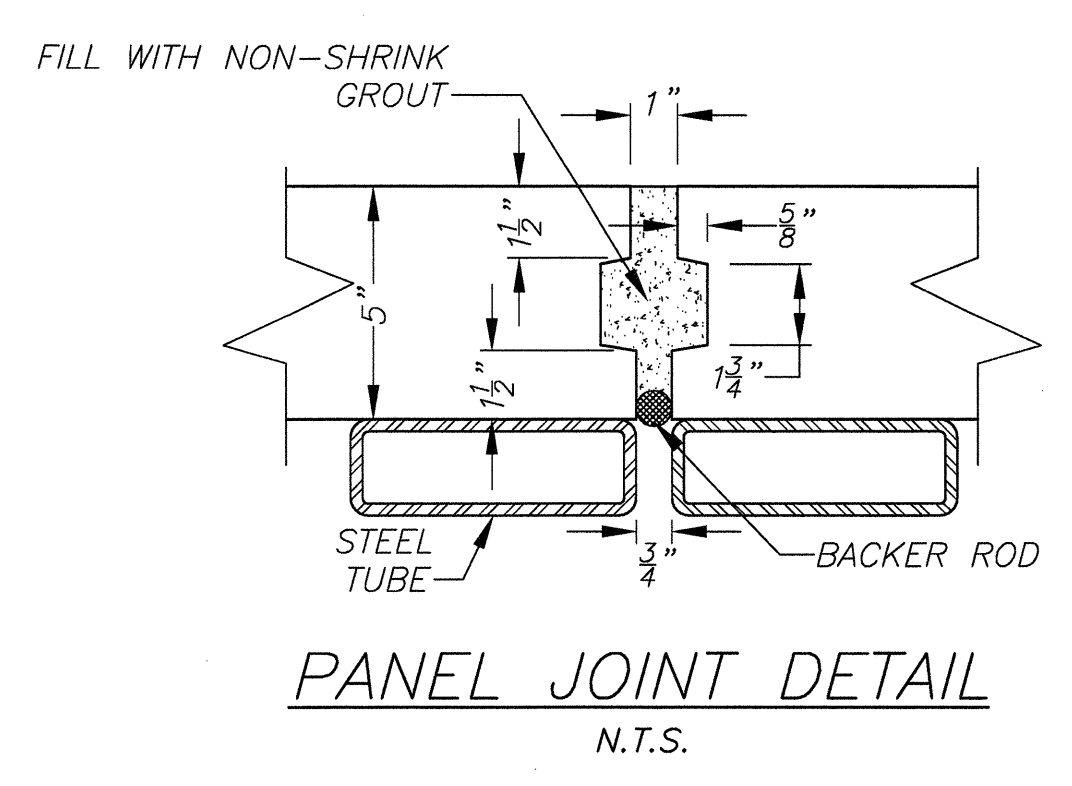
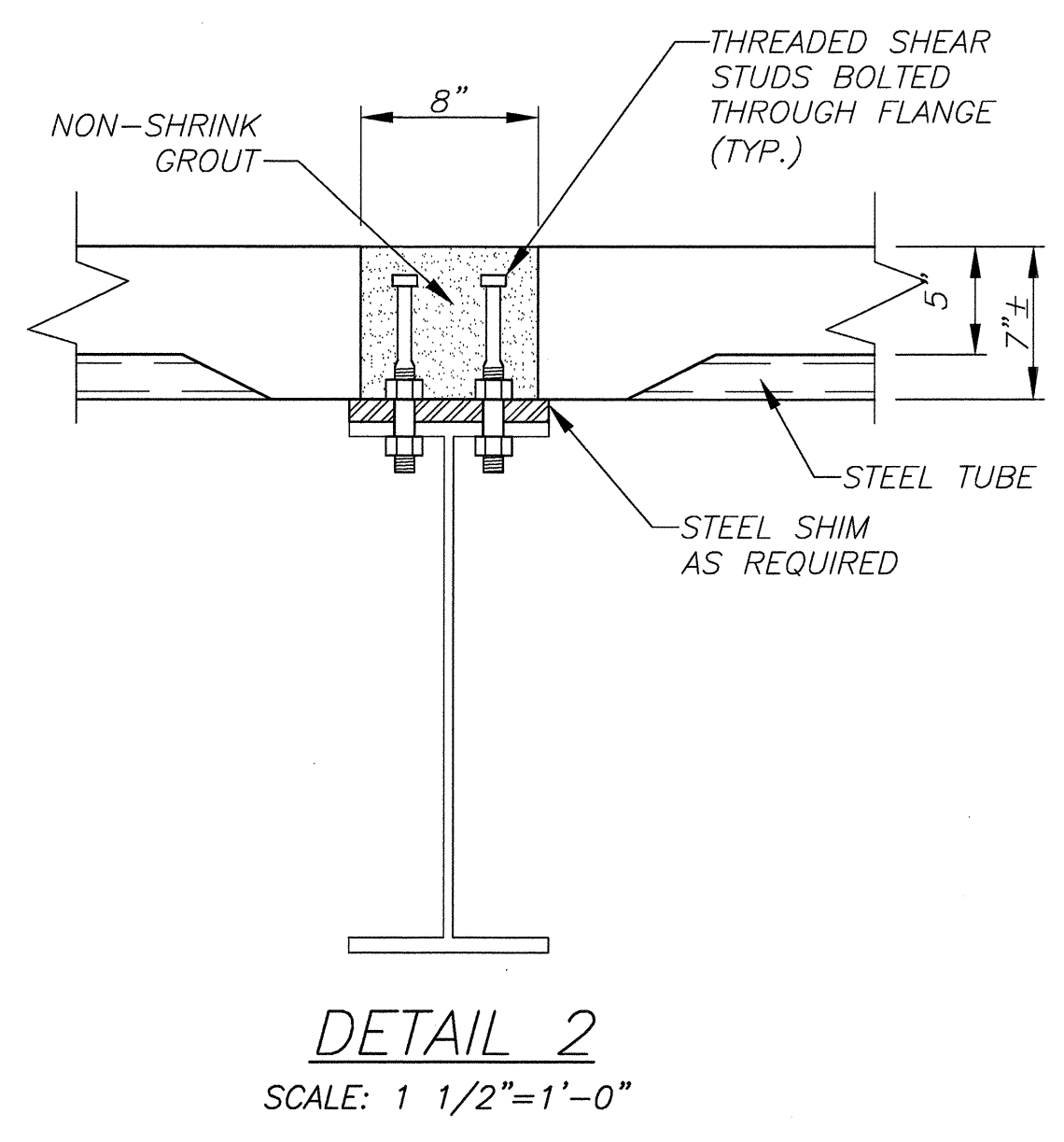
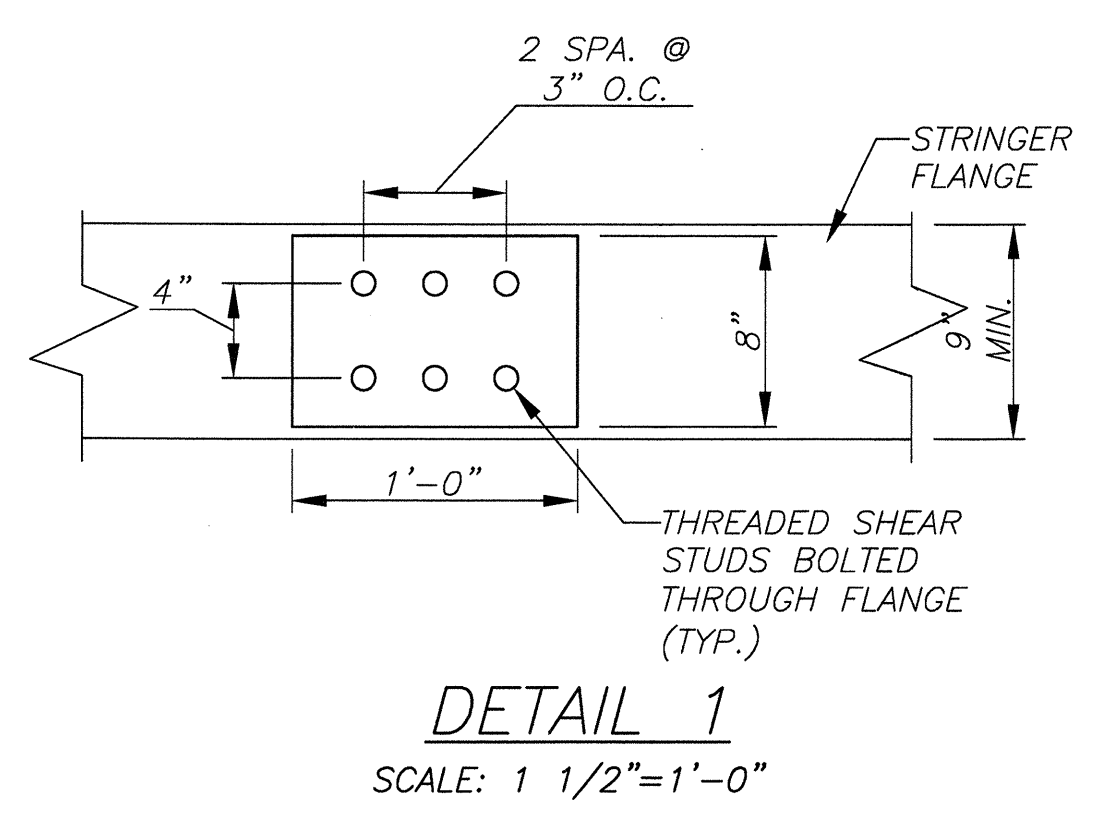
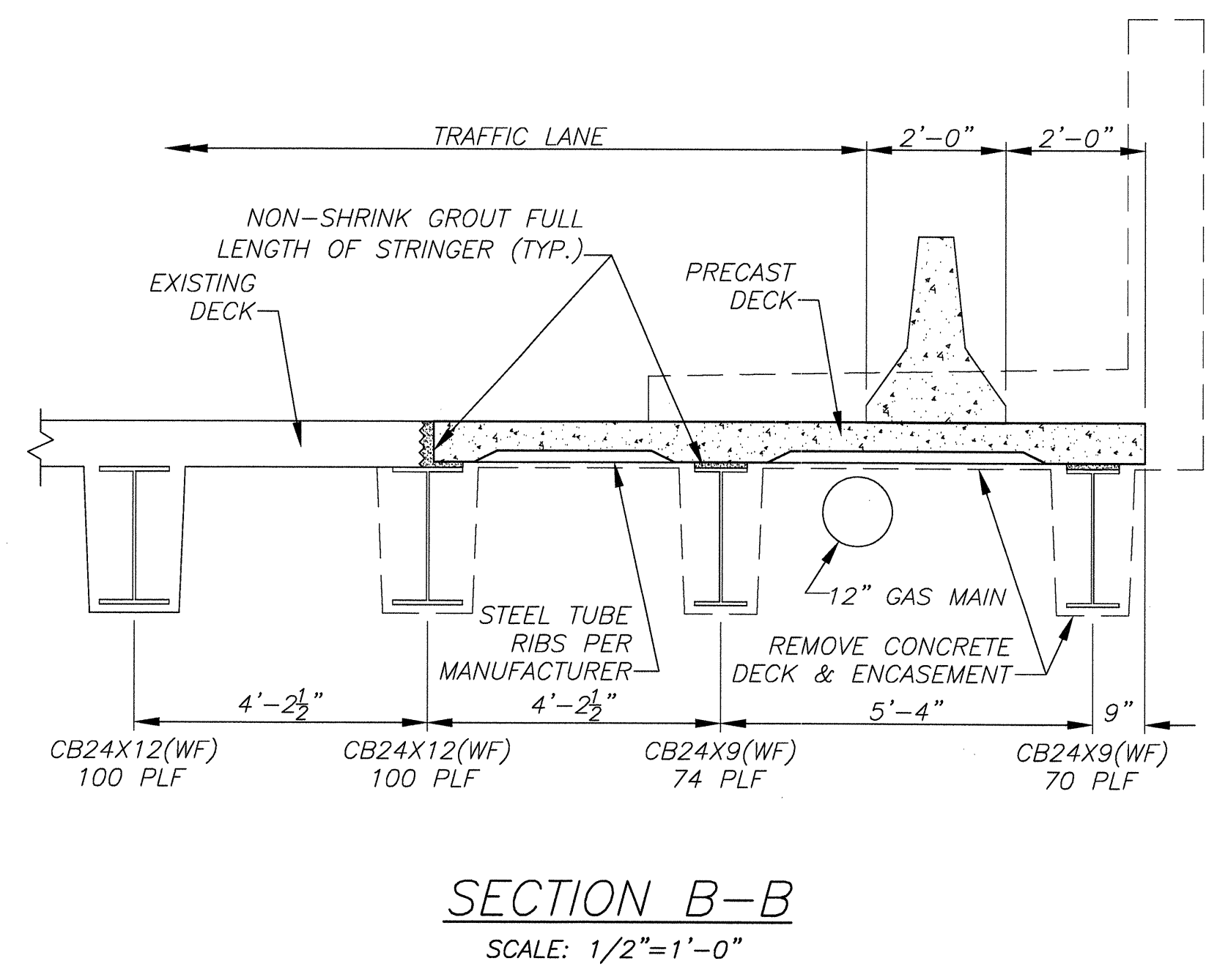
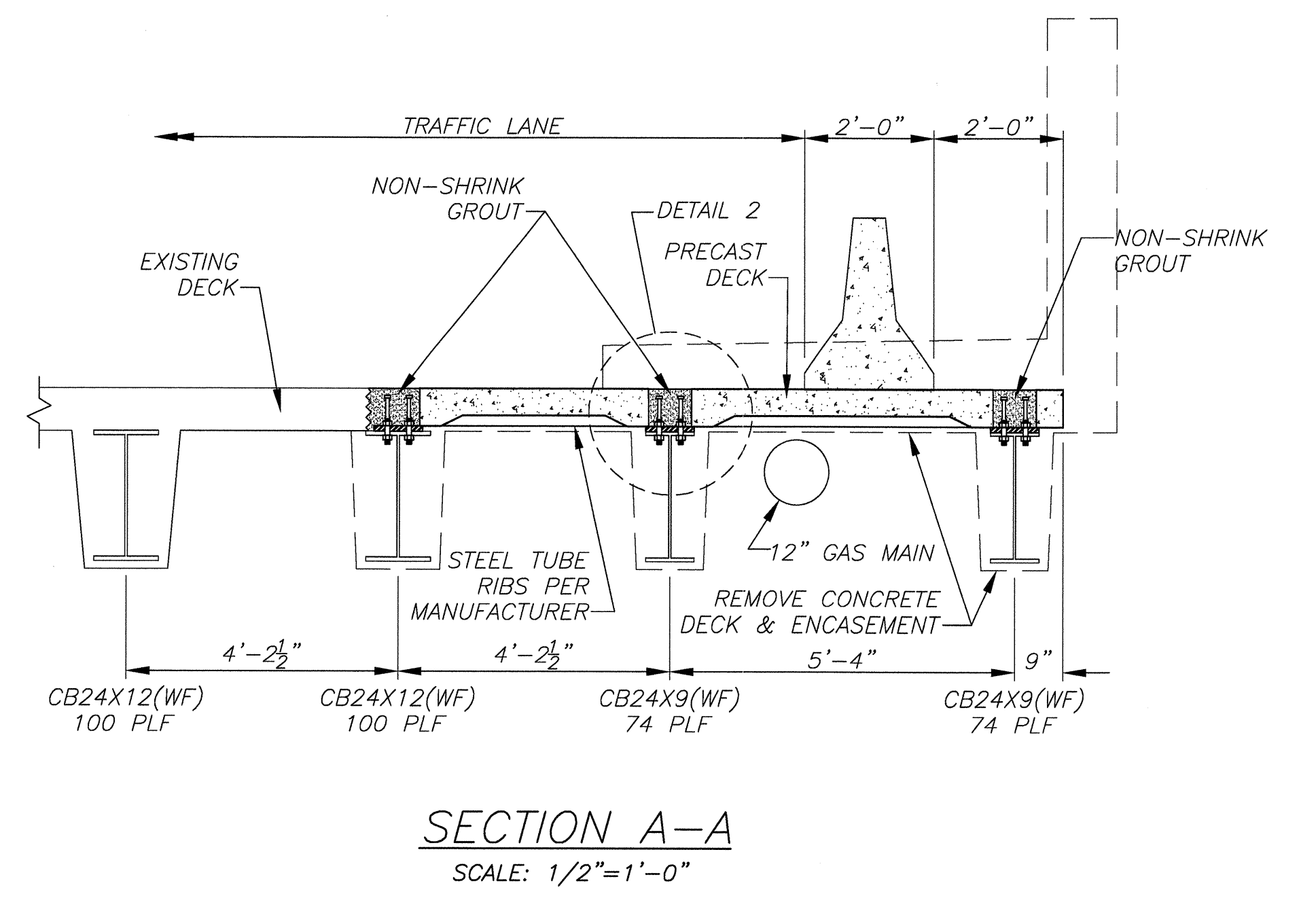
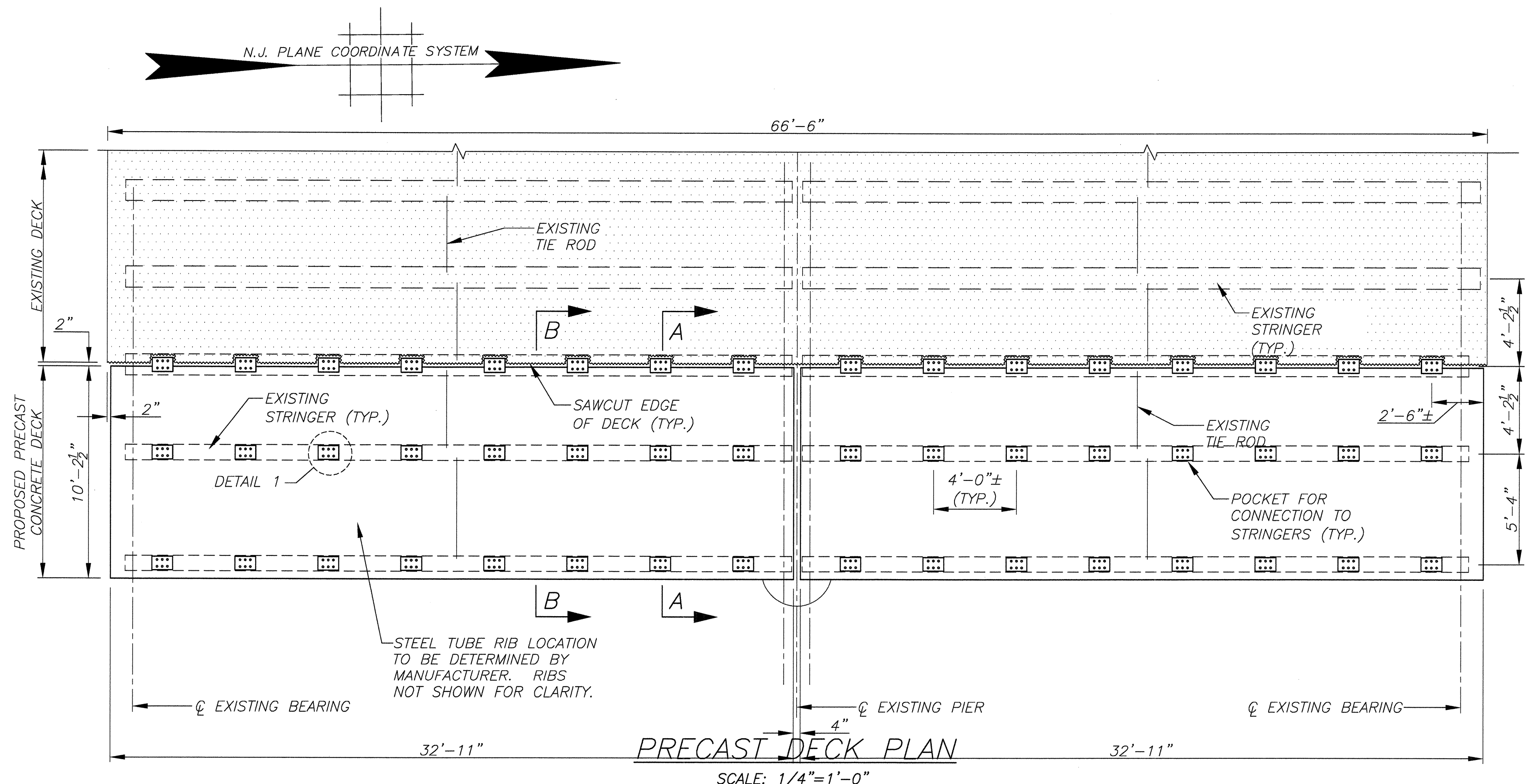
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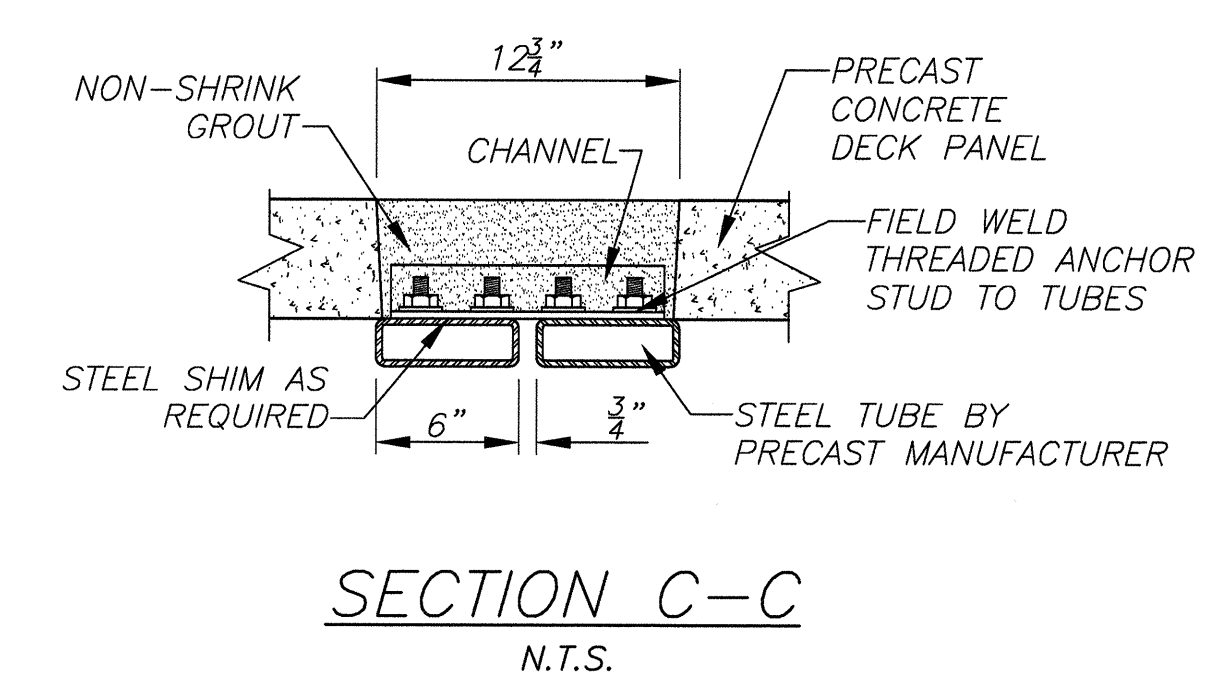
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| NO.  | REVISION         | DATE              | BY                  | CHK.                | BY                        |
|--|------------------|-------------------|---------------------|---------------------|---------------------------|
| <b>UTILITY SUPPORT BRACKET DETAILS</b>   |                  |                   |                     |                     |                           |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |                  |                   |                     |                     |                           |
| <i>Gregory D. Bitsko</i><br><b>GREGORY D. BITSKO</b><br>PROFESSIONAL ENGINEER, N.J. LIC. NO. GE 035238   |                  |                   |                     |                     |                           |
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|  |                  |                   |                     |                     | SHEET NO.<br>37 OF 51     |



- NOTES:**
1. PRECAST CONCRETE PANEL SHALL BE INSTALLED FOLLOWING STAGE I DEMOLITION. THE PRECAST PANEL SHALL BE REMOVED DURING STAGE III DEMOLITION.
  2. CONSTRUCT SUPERPAVE HOT MIX ASPHALT 12.5H64 SURFACE COURSE AS DIRECTED TO MATCH EXISTING DECK ELEVATIONS. COST TO BE INCLUDED IN THE COSTS FOR PAY ITEM 'PRECAST PANELS'.



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|--|----------|-----------|-----------|-----------|-----------------------|
| <b>PRECAST DECK PLAN &amp; DETAILS</b>   |          |           |           |           |                       |
| REPLACEMENT OF BROADWAY (CR 551) BRIDGE OVER<br>LITTLE TIMBER CREEK (STRUCTURE NO. 45A010)<br>BOROUGH OF BROOKLAWN, CAMDEN COUNTY, NEW JERSEY  |          |           |           |           |                       |
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| NOTED  | 08/2011  | K.W.      |           |           | NJ-C-BB-100           |
|  |          |           |           |           | SHEET NO.<br>38 OF 51 |