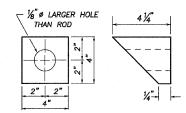


ROD DETAILS

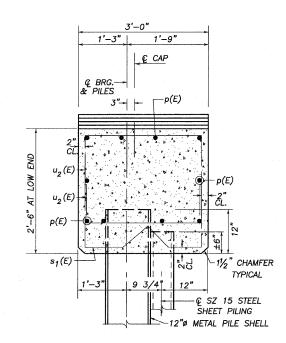
ROD DETAILS & DIMENSIONS

| | RODS | SIZE | NO. | L. | T | TURN- BUCKLE | EACH ROD | | |
|--|----------------|----------|-----|--------|-----|-----------------|-----------------|-----|-----|
| | | | | | | | BEVELED WASHERS | | NUT |
| | | | | | | | SIZE | NO. | NUT |
| | R ₁ | 1 1/4" ø | 2 | 38'-6" | 12" | 11/4"ø | 4"x4"x * | 2 | 2 |
| | R ₂ | 11/40 | 2 | 48'-6" | 12" | 11/4"0 | 4"x4"x * | 2 | 2 |
| | | | - | | | | | | |

*SEE DETAIL THIS SHEET



BEVELED WASHER DETAIL
(8 REQUIRED)

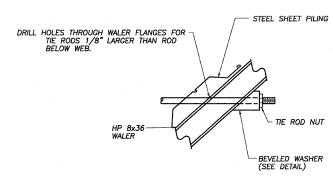


SEC. THRU ABUT.

BILL OF HARDWARE

| ITEM | NO. | SIZE |
|--------------------|-----|----------------------------|
| ROD R ₁ | 2 | 1½"× 38'-6" |
| ROD R ₂ | 2 | 1¼"× 38'-6" 1¼"× 48'-6" |
| | | |
| | | |
| | | |
| BEVELED WASHERS | 8 | 4"x4"x * |
| | | |
| NUTS FOR RODS | 8 | 11/4" |
| TURNBUCKLES | 4 | 11/4" |
| | | |
| | | |
| | | |
| | | |
| | | |

*SEE DETAIL THIS SHEET



<u>TYPICAL TIE ROD</u> CONNECTION DETAIL

SUBSTRUCTURE NOTES

AFTER THE ABUTMENT PILES ARE IN PLACE, THE CONTRACTOR SHALL START STEEL SHEET PILE DRIVING OPERATIONS WITH A BENT CORNER SHEET AT THE LOCATION SHOWN, OR BY MAKING AN ACCURATE LAYOUT OF THE WALL BEFORE STARTING, SO THAT ALL SHEETS, WALERS AND RODS WILL FIT AS PLANNED.

AFTER THE DECK HAS BEEN POURED, THE CONTRACTOR SHALL WELD A PIECE OF STEEL SHEETING TO THE CORNER SHEET, ABOVE THE ABUTMENT, TO PROVIDE A SOIL STOP BETWEEN THE CORNER SHEET AND THE EDGE OF THE OUTSIDE DECK. COST SHALL BE INCIDENTAL TO STEEL SHEET PILING.

HARDWARE ITEMS SHALL BE HOT-DIPPED GALVANIZED AND ARE INCLUDED FOR PAYMENT PER POUND OF HARDWARE. ALL OTHER MATERIAL AND LABOR REQUIRED FOR THE INSTALLATION OF HARDWARE SHALL BE INCIDENTAL TO THE CONTRACT.

AFTER THE WING SHEET PILING IS IN PLACE, HOLES SHALL BE DRILLED (NOT BURNT) IN THE WING SHEETING AND WALERS FOR PASSAGE OF TIERODS.

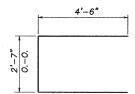
WALERS & CHANNEL SECTIONS ARE ALL INCLUDED FOR PAYMENT PER POUND OF FURNISHING AND ERECTING STRUCTURAL STEEL. WALERS SHALL HAVE 3/8 INCH DRAINAGE HOLES AT 24 INCH CTS. ALONG CENTERLINE OF WEB.

ALL RODS, NUTS, WASHERS, AND WALERS SHALL BE IN PLACE AND PROPERLY SECURED BEFORE BACKFILLING SHALL BEGIN.

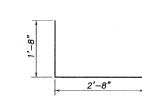
BACKFILL SHALL BE PLACED BEHIND THE ABUTMENT AFTER THE SUPERSTRUCTURE HAS BEEN POURED AND THE FALSEWORK REMOVED. SEE ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.

ALL EXPOSED WALERS AND CHANNELS SHALL BE PRIMED IN THE SHOP WITH AN INORGANIC ZINC RICH PRIMER PER AASHTO M300, TYPE 1. NO FIELD PAINTING SHALL BE RQUIRED.

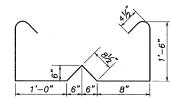
STEEL SHEET PILING SHALL BE NEW SZ 15 OR APPROVED EQUAL PILING WITH AN EFFECTIVE SECTION MODULUS EQUAL TO OR GREATER THAN 10.9 IN.³/FT. SEE SPECIAL PROVISION FOR "PERMANENT STEEL SHEET PILING."



BAR u1(E)



BAR u2(E)



BAR $s_1(E)$

ABUTMENT DETAILS
SECTION 01-09114-00-BR
NORTH GROVE ROAD
DEKALB COUNTY
S.N. 019-4409