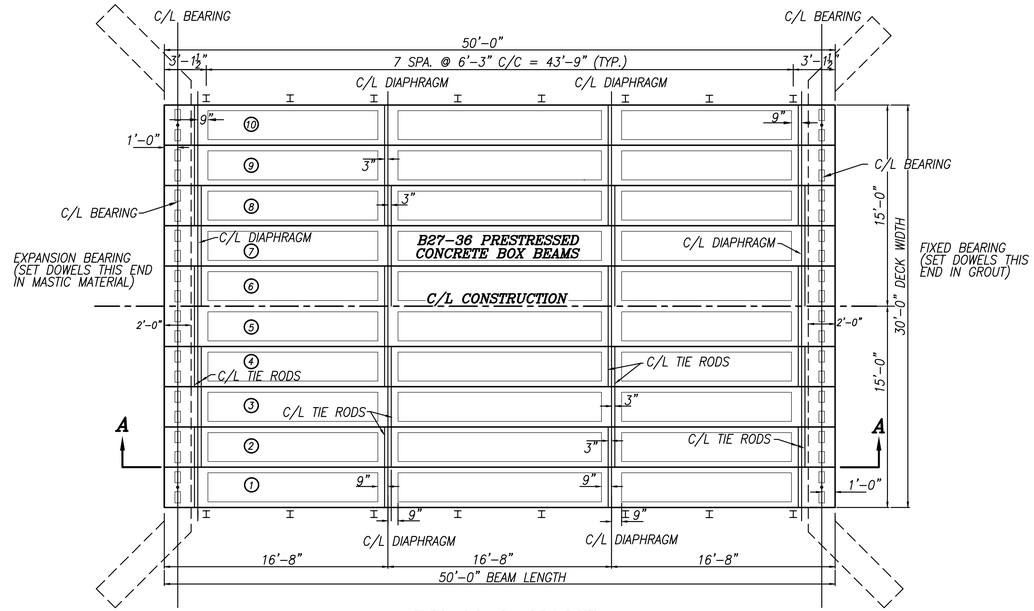
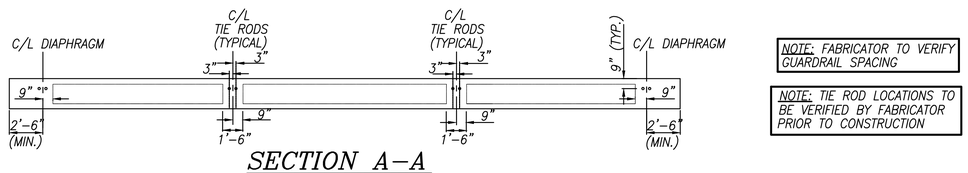


BEAM LAYOUT

SCALE: 3/16"=1'-0"

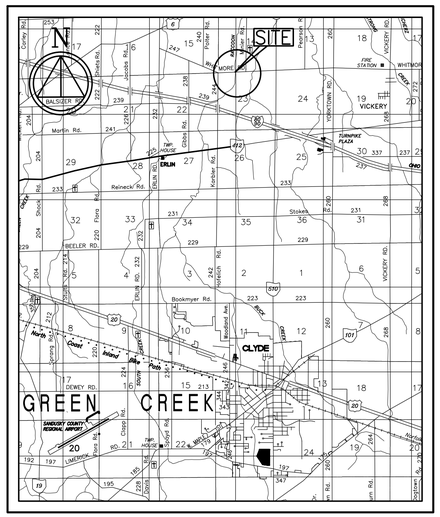


SECTION A–A

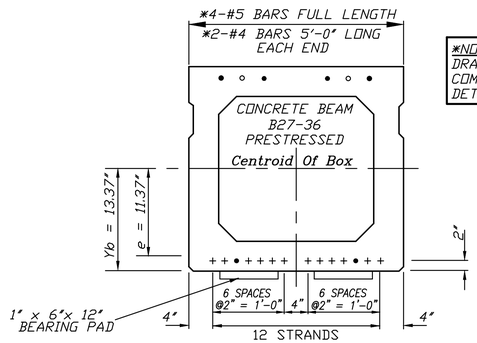
SCALE: 3/16"=1'-0"

NOTE: FABRICATOR TO VERIFY GUARDRAIL SPACING

NOTE: TIE ROD LOCATIONS TO BE VERIFIED BY FABRICATOR PRIOR TO CONSTRUCTION



LOCATION MAP



*NOTE-FABRICATORS SHOP DRAWINGS SHALL SHOW COMPLETE REINFORCING DETAILS.

STRANDS SHALL BE PLACED AS SHOWN AND SHALL BE DISTRIBUTED SYMMETRICALLY OVER THE BEAM WIDTH. STRAND PATTERN AND THE DEBONDED LENGTHS SHALL BE SYMMETRICAL ABOUT VERTICAL C/L OF BEAM. DEBONDED STRANDS SHALL BE IN THE BOTTOM LAYER. EXTERIOR STRANDS SHALL BE FULLY BONDED. LENGTH OF STRANDS TO BE DEBONDED IS MEASURED FROM ENDS OF BEAM. TWO BOTTOM REINFORCING BARS (#5, FULL LENGTH OF BEAM) SHALL BE LOCATED AS SHOWN. A LAP OF 3'-3" FOR BOTTOM BARS SHOULD BE PROVIDED WITHIN THE OUTER QUARTER OF THE SPAN, IF NEEDED. FOUR TOP REINFORCING BARS (#5, FULL LENGTH OF BEAM) SHALL BE LOCATED AT THE STIRRUP CORNERS AS SHOWN. A LAP OF 3'-8" FOR TOP BARS SHOULD BE PROVIDED WITHIN THE MIDDLE HALF OF THE SPAN, IF NEEDED. ADDITIONAL TOP REINFORCING BARS AT ENDS OF BEAM, WHERE REQUIRED, SHALL BE PLACED SYMMETRICALLY OVER THE BEAM WIDTH AND SHALL BE PLACED MIDWAY BETWEEN FULL LENGTH BARS.

TYPICAL B 27–36 PRESTRESSED CONCRETE BEAM SECTION

SCALE: 1"= 1'-0"

STRUCTURE RY 247 –1.38
SUPERSTRUCTURE DETAIL

Sections 14, 23 T5N–R16E
Riley Township
Sandusky County, Ohio
2013

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 2010 SHALL GOVERN THE MAKING OF THIS IMPROVEMENT.

ITEM 515, B27–36 PRESTRESSED CONCRETE BOX BEAM SUPERSTRUCTURE, AS PER PLAN

THE BRIDGE SUPERSTRUCTURE SHALL CONSIST OF CONSTRUCTING AND ERECTING TEN (10) B27–36 PRESTRESSED CONCRETE BOX BEAMS IN ACCORDANCE WITH ITEM 515 OF THE STATE OF OHIO, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE UNIT PRICE BID FOR "ITEM 515, PRESTRESSED CONCRETE BOX BEAM SUPERSTRUCTURE, AS PER PLAN", SHALL INCLUDE ALL LABOR AND MATERIAL NECESSARY TO CONSTRUCT, STORE, TRANSPORT AND ERECT THE BEAMS, INCLUDING 1" BEARING PADS, SHIMS, GUARDRAIL POSTS (TYPE 1), GUARDRAIL ANCHOR ASSEMBLIES WITH STUDS, NUTS AND WASHERS AND TRANSVERSE TIE RODS. IN ADDITION, THE DOWEL RODS, JUTE PACKING, AND NON–SHRINKING ADDITIVE SHALL ALSO BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

GENERAL DESIGN NOTES

DESIGN LOADING – HL–93

CONCRETE – MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS f'c = 7000 P.S.I.
– MINIMUM COMPRESSIVE STRENGTH AT TIME OF INITIAL PRESTRESS f'ci = 5000 P.S.I.

REINFORCING STEEL – GRADE 60
MIN. YIELD STRENGTH 60,000 P.S.I.

PRESTRESSING STEEL – A.S.T.M. A416, GRADE 270, LOW RELAXATION, UNCOATED, SEVEN WIRE STRAND
1/2" DIAMETER
Aps = 0.167 SQ. IN. PER STRAND
fpu = 270 K.S.I.
Ep = 28,500 K.S.I.
INITIAL STRESS 0.75 fpu = 202.5 K.S.I.
INITIAL TENSION LOAD = 33.82 KIPS/STRAND

ALL APPLICABLE NOTES AND DETAILS FROM THE STATE OF OHIO, STANDARD DRAWINGS PSBD–2–07, PAGES 1 THROUGH 4 SHALL APPLY TO THIS PROJECT.

PLANS PREPARED BY:

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