

| STATE | FEDERAL PROJECT NO. | SHEET | TOTAL SHEETS |
|-------|---------------------|-------|--------------|
| N.J. | | | |

STRUCTURE NO.:
 STRUCTURE NAME:

GENERAL NOTES:

- DESIGN SPECIFICATIONS**
 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, 2007, AS MODIFIED BY SECTION 3 OF THE NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES.
- CONSTRUCTION SPECIFICATIONS**
 THE 2007 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS MODIFIED BY THE SPECIAL PROVISIONS.
- LIVE LOAD**
 AASHTO LRFD HL-93 VEHICULAR LIVE LOADING OR NJDOT PERMIT VEHICLE, WHICHEVER GOVERNS.
- CONCRETE COMPRESSIVE STRESSES**
 (a) DESIGN COMPRESSIVE STRENGTH - f'_c
 CLASS A 28 MPa
 CLASS B 21 MPa
 (b) CLASS MIX DESIGN STRENGTHS
 (IN ACCORDANCE WITH TABLE 903.03.06-3 OF THE NJDOT STANDARD SPECIFICATIONS)
 CLASS A 32 MPa
 CLASS B 26 MPa
- REINFORCEMENT STEEL**
 ASTM A615M GRADE 420
- SUPERSTRUCTURE**
 (a) DEAD LOAD INCLUDES 12 kPa PROVISION FOR A FUTURE 50 MM THICK CONCRETE OVERLAY PROTECTIVE SYSTEM ON THE BRIDGE DECK.
 (b) SINGLE SPAN, WELDED STEEL PLATE GIRDERS WITH COMPOSITE ONE COURSE CONSTRUCTION REINFORCED HIGH PERFORMANCE CONCRETE DECK SLAB.
 (c) STRUCTURAL STEEL: AASHTO M 270/M 270, GRADE 345W (ASTM A 709/A 709M, GRADE 345W) WITH SUPPLEMENTARY REQUIREMENTS FOR NOTCH TOUGHNESS FOR ALL MEMBER COMPONENTS MARKED (T).
 (d) SEE STRUCTURAL STEEL PLANS FOR CLEANING AND PAINTING SYSTEMS, AND FINISH COAT COLOR.
- SEISMIC DESIGN NOTES**
 SEISMIC PERFORMANCE ZONE 2
 ACCELERATION COEFFICIENT 'A' = 0.18
 SOIL PROFILE TYPE I
- BORINGS:**
 (a) ⊗ INDICATES LOCATION OF SOIL BORINGS
 LOG NO.
 (b) * INDICATES LOCATION OF OBSERVATION WELLS
- FOUNDATION DESIGN CRITERIA**
 ABUTMENTS TO BE FOUNDED ON ROCK:
 NOMINAL BEARING RESISTANCE 1,140 kPa
 FACTORED BEARING RESISTANCE 833 kPa
- DETAILS AND DIMENSIONS AS SHOWN ON THE PLANS GOVERN OVER THE STANDARD BRIDGE CONSTRUCTION DETAILS AND SPECIFICATIONS.**

REFERENCES

- FOR INDEX OF DRAWINGS, SUMMARY OF QUANTITIES AND WORKING POINT LAYOUT, SEE SHEET NO. B-17
- FOR BRIDGE TYPICAL SECTION AND APPROACH ROADWAY SECTIONS, SEE SHEET NO. B-18
- FOR PROFILES, SEE SHEET NO. B-19
- FOR DETAILS OF CONCRETE SLOPE PROTECTION, SEE STANDARD BRIDGE CONSTRUCTION DETAIL BCD-504-3.1.

ALL DIMENSIONS SHOWN ON THIS SHEET ARE IN METRIC UNITS

BRIDGE NO. 8

NEW JERSEY DEPARTMENT OF TRANSPORTATION
 BUREAU OF STRUCTURAL ENGINEERING

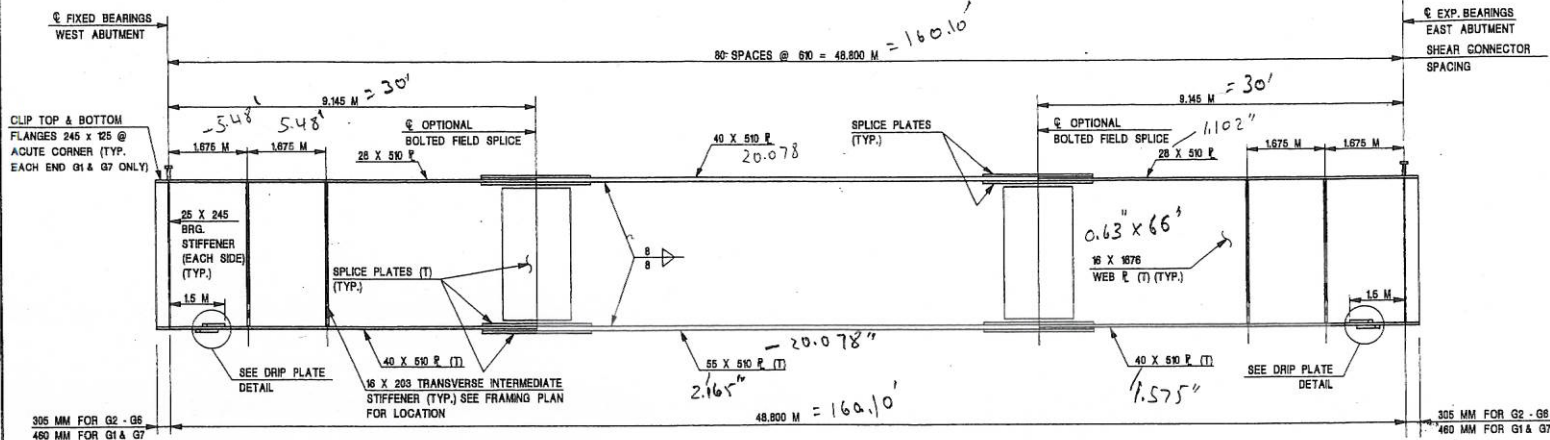
GENERAL PLAN AND ELEVATION

SAMPLE

NOTES:
 HORIZONTAL DIMENSIONS ARE MEASURED RADIAL TO ROUTE U.S. 208 BYPASS, EXCEPT FOR SPAN LENGTH.

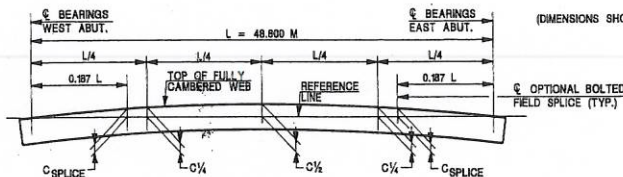
DEWEY-HY-0000000, INC.
 CERTIFICATE OF AUTHORIZATION NO. 2401A20047000

491



GIRDER ELEVATION

NOT TO SCALE
(DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE)



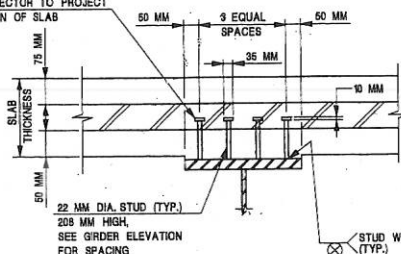
CAMBER DIAGRAM
NOT TO SCALE

| CAMBER TABLE (MM) | | | | | | |
|-------------------|---------------------|-------------------|-----|-----|---------|-------------------|
| GIRDER | CAMBER | BEARINGS W. ABUT. | C/4 | C/2 | C/SPICE | BEARINGS E. ABUT. |
| G1 | STRUCT. STEEL | 0 | 44 | 61 | 35 | 0 |
| | CONC. SLAB | 0 | 100 | 139 | 79 | 0 |
| | S.I.P. & ADD. CONC. | 0 | 9 | 13 | 7 | 0 |
| | S.D.L. & F.W.S. | 0 | 31 | 43 | 25 | 0 |
| | V.C. CAMBER | 0 | 71 | 95 | 59 | 0 |
| | ARCH. CAMBER | 0 | 0 | 0 | 0 | 0 |
| G2 - G4 | TOTAL | 0 | 255 | 350 | 204 | 0 |
| | STRUCT. STEEL | 0 | 44 | 61 | 35 | 0 |
| | CONC. SLAB | 0 | 109 | 151 | 86 | 0 |
| | S.I.P. & ADD. CONC. | 0 | 18 | 25 | 15 | 0 |
| | S.D.L. & F.W.S. | 0 | 26 | 41 | 23 | 0 |
| | V.C. CAMBER | 0 | 75 | 100 | 61 | 0 |
| G5 & G6 | ARCH. CAMBER | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 0 | 275 | 378 | 220 | 0 |
| | STRUCT. STEEL | 0 | 44 | 61 | 35 | 0 |
| | CONC. SLAB | 0 | 109 | 151 | 86 | 0 |
| | S.I.P. & ADD. CONC. | 0 | 18 | 25 | 15 | 0 |
| | S.D.L. & F.W.S. | 0 | 29 | 41 | 23 | 0 |
| G7 | V.C. CAMBER | 0 | 79 | 105 | 64 | 0 |
| | ARCH. CAMBER | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 0 | 279 | 383 | 223 | 0 |
| | STRUCT. STEEL | 0 | 44 | 61 | 35 | 0 |
| | CONC. SLAB | 0 | 109 | 151 | 86 | 0 |
| | S.I.P. & ADD. CONC. | 0 | 9 | 13 | 7 | 0 |
| G7 | S.D.L. & F.W.S. | 0 | 31 | 43 | 25 | 0 |
| | V.C. CAMBER | 0 | 79 | 105 | 64 | 0 |
| | ARCH. CAMBER | 0 | 0 | 0 | 0 | 0 |
| | TOTAL | 0 | 283 | 380 | 220 | 0 |

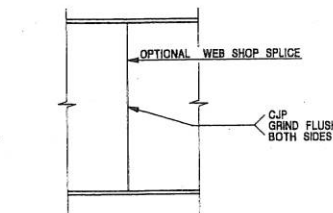
CAMBER TABLE NOTES:

1. THE TOTAL CAMBER, AS TABULATED, IS ASSUMED TO BE MEASURED VERTICALLY TO THE TOP OF THE FULLY CAMBERED WEB FROM A STRAIGHT LINE DRAWN FROM THE INTERSECTION OF TOP OF WEB AND CENTERLINE OF BEARING AT ONE END OF THE GIRDER TO THE INTERSECTION OF TOP OF WEB AND CENTERLINE OF BEARING AT THE OTHER END OF THE GIRDER.
2. THE CAMBER LABELED 'STRUCT. STEEL' IN THE TABLE IS THE CAMBER REQUIRED IN THE GIRDER TO OFFSET THE DEFLECTION DUE TO THE DEAD LOAD WEIGHT OF THE STEEL IN THE GIRDER, DIAPHRAGMS AND STIFFENERS.
3. THE CAMBER LABELED 'CONC. SLAB' IN THE TABLE IS THE CAMBER REQUIRED IN THE GIRDER TO OFFSET THE DEFLECTION DUE TO THE DEAD LOAD WEIGHT OF THE CONCRETE DECK AND THE HAUNCHES.
4. THE CAMBER LABELED 'S.I.P. & ADD. CONC.' IN THE TABLE IS THE CAMBER REQUIRED IN THE GIRDER TO OFFSET THE DEFLECTION DUE TO THE DEAD LOAD WEIGHT OF THE STAY-IN-PLACE DECK FORMS AND DUE TO THE WEIGHT OF ADDED CONCRETE THAT IS NEEDED TO MEET DECK GRADES AND BOTTOM MAT REINFORCEMENT CLEARANCES.
5. THE CAMBER LABELED 'S.D.L. & F.W.S.' IN THE TABLE IS THE CAMBER REQUIRED IN THE GIRDER TO OFFSET THE DEFLECTION DUE TO THE SUPERIMPOSED DEAD LOAD WEIGHT OF THE PARAPETS, SIDEWALK, FENCE AND THE FUTURE WEARING SURFACE.
6. THE CAMBER LABELED 'V.C. CAMBER' IN THE TABLE IS THE CAMBER REQUIRED IN THE GIRDER TO FOLLOW THE VERTICAL CURVE.
7. VERTICAL CURVE CAMBER VALUES EXCEED THE MINIMUM ARCHITECTURAL APPEARANCE REQUIREMENTS. THEREFORE, ARCHITECTURAL CAMBER VALUES IN THE TABLE ARE SHOWN AS ZERO.
8. POSITIVE CAMBER VALUES DENOTE UPWARD CAMBER. NEGATIVE CAMBER VALUES DENOTE DOWNWARD CAMBER.
9. THE CAMBERS TABULATED ARE IN MILLIMETERS.

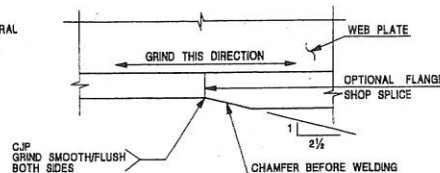
HEAD OF SHEAR CONNECTOR TO PROJECT INTO HATCHED PORTION OF SLAB



SHEAR CONNECTOR DETAIL
NOT TO SCALE



OPTIONAL WEB SHOP SPICE DETAIL
NOT TO SCALE



OPTIONAL FLANGE SHOP SPICE DETAIL
NOT TO SCALE

STRUCTURAL STEEL NOTES:

1. WELDING SHALL CONFORM TO THE CURRENT AASHTO/AWS D1.5M BRIDGE WELDING CODE WITH NADOT AMENDMENTS. WELDING AND NONDESTRUCTIVE TESTING SYMBOLS SHALL CONFORM TO SYMBOLS FOR WELDING, BRAZING AND NONDESTRUCTIVE EXAMINATION AWS A2.4. ALL GIRDERS AND GIRDER COMPONENTS INCLUDING STIFFENERS, SPICE PLATES, DIAPHRAGM CONNECTION PLATES AND DRIP PLATES ARE CONSIDERED MAIN MEMBERS.
2. JOINT WELDING PROCEDURES, OVERALL FABRICATION METHODS AND QUALITY CONTROL INSPECTION PROCEDURE SHALL BE INCLUDED AS WRITTEN PROCEDURE SPECIFICATIONS WITH THE SHOP DRAWING SUBMISSION.
3. LOCATION OF OPTIONAL FLANGE AND WEB SHOP SPICES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. LENGTHS OF PLATES SHALL BE CONSISTENT WITH LENGTHS OF PLATES AVAILABLE FROM THE MILL. LOCATION SHALL BE AT POINTS OF REDUCED TENSILE STRESS. WEB SPICES SHALL BE AT LEAST 300 MM FROM FLANGE SPICES AND/OR TRANSVERSE INTERMEDIATE STIFFENER AND/OR CONNECTION PLATES FOR DIAPHRAGMS.
4. WHEN FLANGES OR WEBS ARE DETAILED ON THE CONTRACT PLANS AS A SERIES OF VARYING THICKNESS PLATES, THE CONTRACTOR MAY, FOR THE PURPOSE OF ELIMINATING BUTT WELDS, EXTEND THE LENGTH OF THE THICKER PLATE TO THE END OF THE NEXT THINNER PLATE OR TO THE END OF THE MEMBER, PROVIDED THE MAXIMUM PLATE THICKNESS DOES NOT EXCEED 15 TIMES THE THICKNESS OF THE THINNER PLATE PLUS 9.5 MILLIMETERS. SUBJECT TO APPROVAL BY THE ENGINEER, IF THE CONTRACTOR INCREASES THE THICKNESS OF THE BOTTOM FLANGE PLATE AT A BEARING LOCATION, HE SHALL MAINTAIN THE ORIGINAL GIRDER ELEVATION BY MAKING SUITABLE CHANGES IN THE ELEVATION OF THE CONCRETE MASONRY.
5. ALLOWANCES SHALL BE MADE IN THE SHOP FOR SHRINKAGE DUE TO WELDING AND BURNING. IF UNEVEN SHRINKAGE IS ANTICIPATED, CAMBER ORDINATES SHALL BE ADJUSTED ACCORDINGLY.
6. FLANGE AND WEB SHOP SPICES ARE TO BE COMPLETED AND WELDMENTS INSPECTED BEFORE FITTING AND WELDING FLANGES TO WEBS. FABRICATION METHODS WHICH MAY BE REQUIRED FOR SPECIAL CONDITIONS, SHALL BE INCLUDED IN THE WRITTEN WELDING AND PROCEDURE SPECIFICATIONS OF THE SHOP DRAWINGS.
7. ALL TRANSVERSE INTERMEDIATE STIFFENERS, INTERMEDIATE AND END DIAPHRAGM CONNECTION PLATES ARE TO BE NORMAL TO THE WEB.
8. ALL BEARING STIFFENERS, END DIAPHRAGMS AND ENDS OF GIRDERS SHALL BE PLUMB UNDER FULL DEAD LOAD. ALL BEARING STIFFENERS ARE TO BE NORMAL TO THE WEB.
9. DETAIL AND FABRICATE GIRDERS AND DIAPHRAGMS SO THAT THE GIRDER WEBS ARE PLUMB UNDER FULL DEAD LOAD.
10. ALL FIELD CONNECTIONS SHALL BE MADE WITH SIZE M22, A 325M, TYPE 3 HIGH STRENGTH BOLTS IN 24 MM DIAMETER OPEN HOLES UNLESS NOTED OTHERWISE. ALL CONNECTING PARTS SHALL HAVE CLASS B CONTACT SURFACES.
11. NO FIELD WELDING TO GIRDERS SHALL BE PERMITTED FOR MEMBER COMPONENTS MARKED (T) UNLESS NOTED OTHERWISE.
12. FILL PLATES IN BOLTED FIELD SPICE MAY BE FABRICATED WITH 2 PLATE THICKNESSES.

LEGEND:

- (T) - MAIN LOAD CARRYING MEMBER SUBJECT TO NOTCH TOUGHNESS REQUIREMENTS.

C.J.P. - COMPLETE JOINT PENETRATION

PAINTING NOTES:

1. CLEANING AND PAINTING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION REQUIREMENTS FOR WEATHERING STEEL. COATING SYSTEM: IEU FINISH COAT COLOR: BROWN
2. CONTACT SURFACES FOR BOLTED CONNECTIONS SHALL BE CLASS B.

REFERENCES:

1. FOR BOLTED FIELD SPICE, BEARING STIFFENER, TRANSVERSE INTERMEDIATE STIFFENER, DIAPHRAGM CONNECTION PLATE, DRIP PLATE AND FILLET WELD TERMINATION DETAILS, SEE SHEET NO. B-135.
2. FOR DIAPHRAGM DETAILS, SEE SHEET NO. B-138.
3. FOR BEARING DETAILS, SEE SHEET NO. B-137.

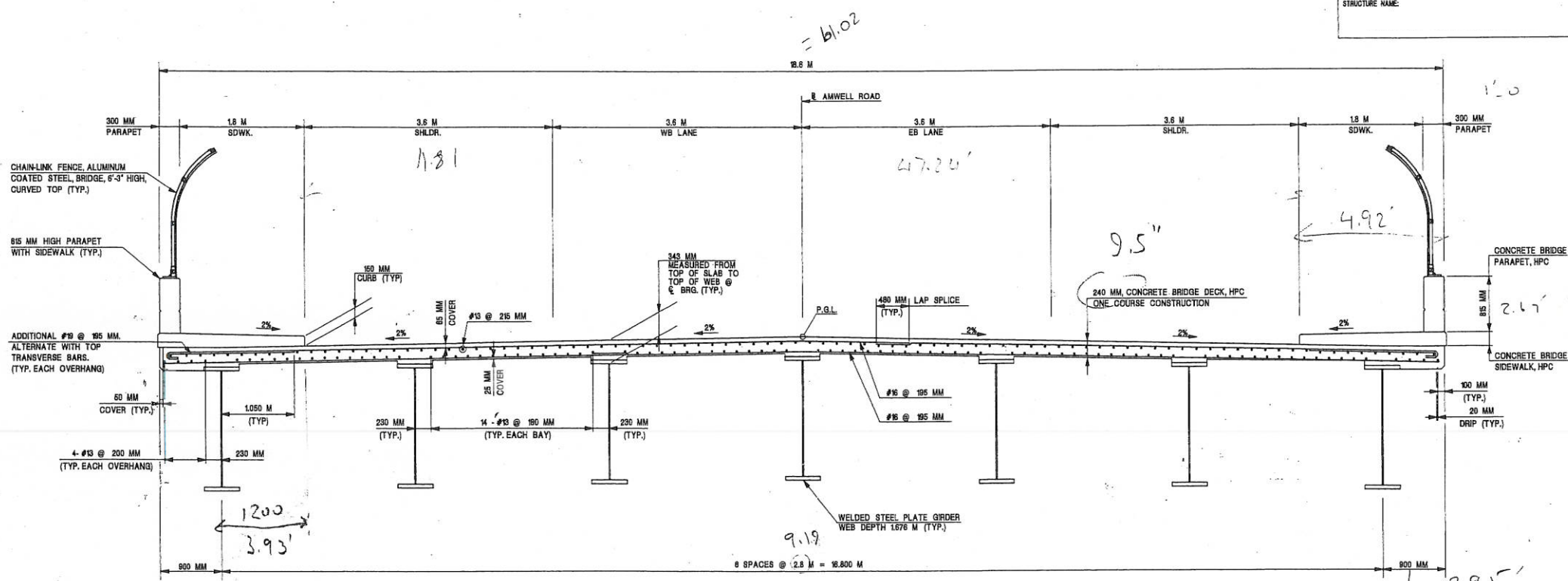
ALL DIMENSIONS SHOWN ON THIS SHEET ARE IN METRIC UNITS

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURAL ENGINEERING

GIRDER ELEVATION,

SAMPLE

| | | | |
|-----------------|---------------------|-------|--------------|
| STATE | FEDERAL PROJECT NO. | SHEET | TOTAL SHEETS |
| N.J. | | | |
| STRUCTURE NO.: | | | |
| STRUCTURE NAME: | | | |



TYPICAL SECTION
SCALE: 1:50

- NOTES:
- ALL REINFORCEMENT STEEL IN DECK SLAB, PARAPETS AND SIDEWALKS SHALL BE EPOXY COATED.
 - THE SPLICES IN BOTTOM TRANSVERSE BARS SHALL BE ALTERNATED OVER ADJACENT BEAMS AT THE CENTER PORTION OF THE ROADWAY. THE SPLICES IN TOP TRANSVERSE BARS SHALL ALTERNATE OVER THE CENTERS BETWEEN ADJACENT BEAMS AT THE CENTER PORTION OF THE ROADWAY.

- REFERENCES
- FOR SIDEWALK AND PARAPET DETAILS AND FOR DETAILS OF CONCRETE REINFORCEMENT AT PARAPET OPEN JOINTS, SEE BCD-607-2.
 - FOR CHAIN LINK FENCE DETAILS, SEE BCD-608-1.

ALL DIMENSIONS SHOWN ON THIS SHEET ARE IN METRIC UNITS

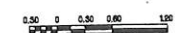
NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURAL ENGINEERING

SUPERSTRUCTURE CROSS SECTION

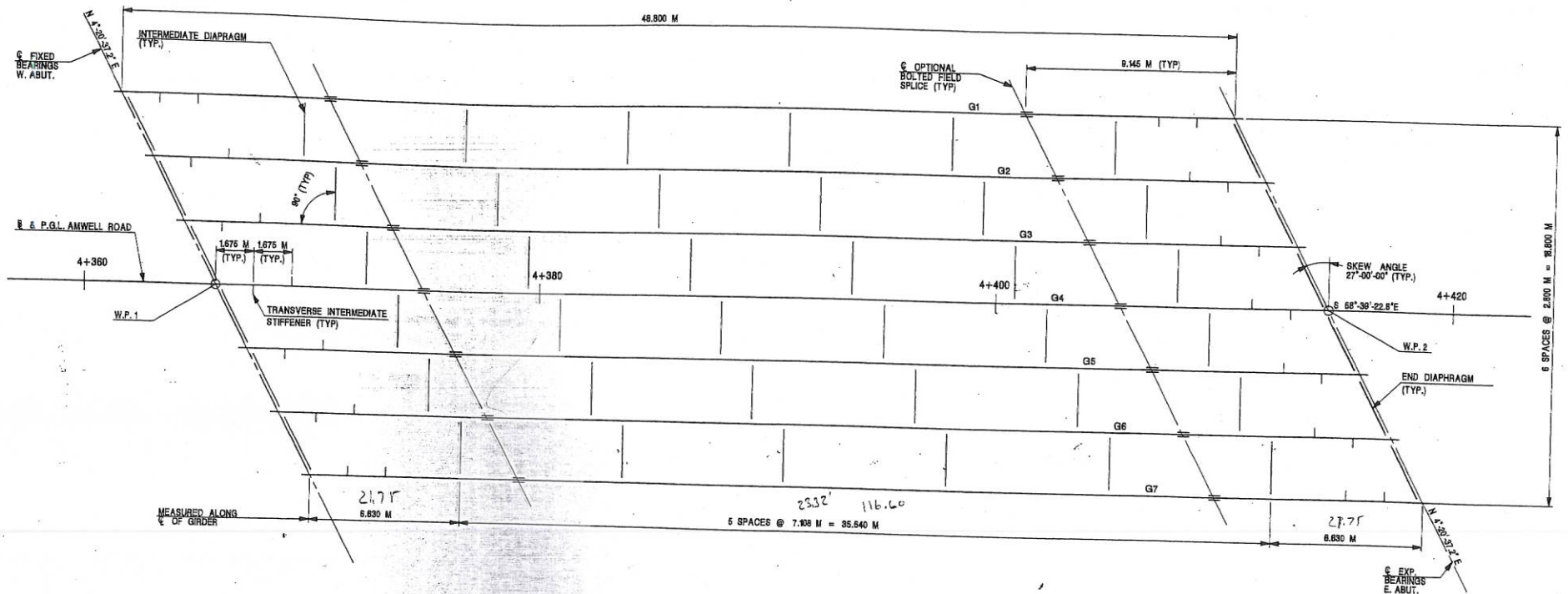
SAMPLE

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURAL ENGINEERING
CERTIFICATE OF AUTHORIZATION NO. 240A38047800

| | |
|---------|---------------|
| CONTROL | JOB NO. |
| DESIGN | BY T. STRAD |
| CHECK | BY S. ENOS |
| APPROVE | BY A. BERHADI |



STRUCTURE NAME:



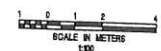
FRAMING PLAN
SCALE: 1:100

| QUANTITIES | | | |
|-----------------------|---|------|--------------------|
| ITEM NO. (ENGLISH) | DESCRIPTION (ENGLISH) | UNIT | METRIC QUANTITY |
| 606003P | STRUCTURAL STEEL (APPROX. 815,705 LB) | L.S. | LUMP SUM |
| 606006P | REINFORCED ELASTOMERIC BEARING ASSEMBLY | UNIT | 14 |
| 606012P | SHEAR CONNECTOR | UNIT | 2,286 |

| TOP OF STEEL ELEVATIONS (AT C BEARINGS) | | |
|--|------------------|------------------|
| GIRDER | WEST ABUTMENT | EAST ABUTMENT |
| G1 | 31.848 | 32.276 |
| G2 | 32.019 | 32.226 |
| G3 | 32.090 | 32.276 |
| G4 | 32.101 | 32.325 |
| G5 | 32.120 | 32.281 |
| G6 | 32.079 | 32.196 |
| G7 | 32.038 | 32.131 |

- REFERENCES:
1. FOR WORKING POINT LAYOUT, SEE SHEET NO. B-107.
 2. FOR GIRDER ELEVATION, CAMBER TABLE AND STRUCTURAL STEEL NOTES, SEE SHEET NO. B-134.
 3. FOR BOLTED FIELD SPLICE AND GIRDER DETAILS, SEE SHEET NO. B-135.
 4. FOR DIAPHRAGM DETAILS, SEE SHEET NO. B-136.

ALL DIMENSIONS SHOWN ON THIS
SHEET ARE IN METRIC UNITS



NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF STRUCTURAL ENGINEERING

FRAMING PLAN

SAMPLE

DEWBERRY-GOODWIN, INC.
CERTIFICATE OF AUTHORIZATION NO. 240A38047000

DATE: 11/8/09

BRIDGE SHEET NO. B-133 OF B-157

508
532

CONTROL SECTION: JOB NO.

DES. BY: T. STRIMAD: CHK. BY: A. SERNADW

DWN. BY: S. ERDAS: BY:

IN CHARGE OF: S. JAEKOT

