

| NO.      | ITEM  | UNIT  | TOTAL QUANTITY | 80% FEDERAL<br>20% STATE<br>ACRS L25 |                    |                    | NON-PART<br>80% STATE<br>20% VILLAGE | 80% FED.<br>20% VILLAGE<br>ACTE L22 | NON-PART<br>100% VILLAGE |
|----------|---|-------|----------------|--------------------------------------|--------------------|--------------------|--------------------------------------|-------------------------------------|--------------------------|
|          |   |       |                | 0001<br>ROADWAY                      | 0008<br>SN050-0250 | 0008<br>SN050-7201 | 0021<br>SIDEWALK                     | 0031<br>ITEP                        | 0043<br>WATER MAIN       |
| 70300280 | TEMPORARY PAVEMENT MARKING - LINE 24"   | FOOT  | 311            | 311                                  | --                 | --                 | --                                   | --                                  | --                       |
| 70301000 | WORK ZONE PAVEMENT MARKING REMOVAL  | SQ FT | 5643           | 5643                                 | --                 | --                 | --                                   | --                                  | --                       |
| 72000100 | SIGN PANEL - TYPE 1   | SQ FT | 245.0          | 245.0                                | --                 | --                 | --                                   | --                                  | --                       |
| 72800100 | TELESCOPING STEEL SIGN SUPPORT  | FOOT  | 595            | 595                                  | --                 | --                 | --                                   | --                                  | --                       |
| 73000100 | WOOD SIGN SUPPORT   | FOOT  | 16             | 16                                   | --                 | --                 | --                                   | --                                  | --                       |
| 78004200 | PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - LETTERS AND SYMBOLS             | SQ FT | 298            | 298                                  | --                 | --                 | --                                   | --                                  | --                       |
| 78004280 | PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - LINE 24"                        | FOOT  | 447            | 447                                  | --                 | --                 | --                                   | --                                  | --                       |
| 78100100 | RAISED REFLECTIVE PAVEMENT MARKER   | EACH  | 89             | 89                                   | --                 | --                 | --                                   | --                                  | --                       |
| 78200300 | PRISMATIC CURB REFLECTOR  | EACH  | 28             | 28                                   | --                 | --                 | --                                   | --                                  | --                       |
| 81000400 | CONDUIT IN TRENCH, 1 1/4" DIA., GALVANIZED STEEL                                      | FOOT  | 22             | 22                                   | --                 | --                 | --                                   | --                                  | --                       |
| 81000700 | CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL                                      | FOOT  | 390            | --                                   | --                 | --                 | 390                                  | --                                  | --                       |
| 81001000 | CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL  | FOOT  | 56             | --                                   | --                 | --                 | 56                                   | --                                  | --                       |
| 81012400 | CONDUIT IN TRENCH, 1 1/4" DIA., PVC   | FOOT  | 422            | 410                                  | --                 | --                 | 12                                   | --                                  | --                       |
| 81200120 | CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., GALVANIZED STEEL                              | FOOT  | 210            | --                                   | --                 | --                 | 210                                  | --                                  | --                       |
| 81200215 | CONDUIT EMBEDDED IN STRUCTURE, 1 1/4" DIA., PVC                                       | FOOT  | 238            | 119                                  | --                 | --                 | 119                                  | --                                  | --                       |
| 81400730 | HANDHOLE, COMPOSITE CONCRETE  | EACH  | 23             | --                                   | --                 | --                 | 23                                   | --                                  | --                       |
| 81603000 | UNIT DUCT, 600V, 2-1C NO. 8, 1/C NO. 8 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE | FOOT  | 800            | --                                   | --                 | --                 | 800                                  | --                                  | --                       |
| 81702120 | ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 8                              | FOOT  | 1560           | --                                   | --                 | --                 | 1560                                 | --                                  | --                       |
| 81702420 | ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/2 NO. 8                            | FOOT  | 925            | 781                                  | --                 | --                 | 144                                  | --                                  | --                       |
| 81900200 | TRENCH AND BACKFILL FOR ELECTRICAL WORK   | FOOT  | 3480           | 419                                  | --                 | --                 | 3061                                 | --                                  | --                       |
| 82500410 | LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 200AMP (DUAL)                             | EACH  | 1              | --                                   | --                 | --                 | 1                                    | --                                  | --                       |
| 83600120 | LIGHT POLE FOUNDATION (SPECIAL)   | FOOT  | 136            | --                                   | --                 | --                 | 136                                  | --                                  | --                       |
| 83600200 | LIGHT POLE FOUNDATION, 24" DIAMETER   | FOOT  | 12.5           | 12.5                                 | --                 | --                 | --                                   | --                                  | --                       |
| 84200500 | REMOVAL OF LIGHTING UNIT, SALVAGE   | EACH  | 1              | 1                                    | --                 | --                 | --                                   | --                                  | --                       |
| 84200804 | REMOVAL OF POLE FOUNDATION  | EACH  | 4              | 4                                    | --                 | --                 | --                                   | --                                  | --                       |
| 84400105 | RELOCATE EXISTING LIGHTING UNIT   | EACH  | 3              | 3                                    | --                 | --                 | --                                   | --                                  | --                       |
| X0301852 | DEWATERING STRUCTURE NO. 1  | EACH  | 1              | --                                   | --                 | --                 | --                                   | --                                  | --                       |
| Z0056650 | STORM SEWERS, WATER MAIN QUALITY PIPE TYPE 1, 15"                                     | FOOT  | 15             | 15                                   | --                 | --                 | --                                   | --                                  | --                       |
| X0325607 | GROUND STABILIZATION GEOSYNTHETIC   | SQ YD | 16119          | 16119                                | --                 | --                 | --                                   | --                                  | --                       |
| X0325670 | CONCRETE BRIDGE RAILING, SIDEWALK MOUNTED   | FOOT  | 190            | --                                   | 190                | --                 | --                                   | --                                  | --                       |
| X0326498 | GFCI 20 AMP DUPLEX RECEPTACLE   | EACH  | 16             | --                                   | --                 | --                 | 16                                   | --                                  | --                       |
| X0326654 | ORNAMENTAL LIGHT UNIT, COMPLETE   | EACH  | 27             | --                                   | --                 | --                 | 27                                   | --                                  | --                       |
| X2070304 | POROUS GRANULAR EMBANKMENT, SPECIAL   | CU YD | 268            | --                                   | 183                | 85                 | --                                   | --                                  | --                       |
| X4240440 | PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH, SPECIAL                                     | SQ FT | 233            | 233                                  | --                 | --                 | --                                   | --                                  | --                       |
| X5020501 | UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1                               | EACH  | 1              | --                                   | --                 | 1                  | --                                   | --                                  | --                       |
| X6063600 | COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.24                                     | FOOT  | 150            | 150                                  | --                 | --                 | --                                   | --                                  | --                       |
| X7800610 | URETHANE PAVEMENT MARKING - LINE 4"   | FOOT  | 7779           | 7779                                 | --                 | --                 | --                                   | --                                  | --                       |
| X7800630 | URETHANE PAVEMENT MARKING - LINE 6"   | FOOT  | 1872           | 1872                                 | --                 | --                 | --                                   | --                                  | --                       |
| X7800640 | URETHANE PAVEMENT MARKING - LINE 8"   | FOOT  | 416            | 416                                  | --                 | --                 | --                                   | --                                  | --                       |

\* SPECIALTY ITEM

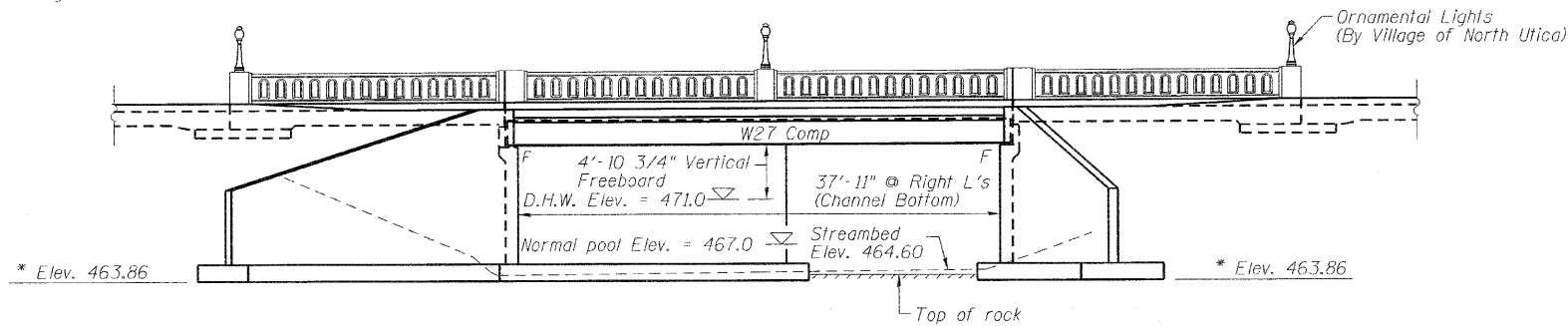
△ REVISED 10-20-10

|   |                 |                |               |   |                              |                          |   |                        |                 |                   |                        |                   |
|---|-----------------|----------------|---------------|---|------------------------------|--------------------------|---|------------------------|-----------------|-------------------|------------------------|-------------------|
| FILE NAME =<br>D366547-SHT-SUM-QUANTS.DGN | USER NAME = --- | DESIGNED - JKC | REVISED - --- | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>SUMMARY OF QUANTITIES</b> |                          |   | F.A.S.<br>RTE.<br>1279 | SECTION<br>6R,B | COUNTY<br>LASALLE | TOTAL<br>SHEETS<br>190 | SHEET<br>NO.<br>7 |
| PLOT SCALE = 1"=18'                       | CHECKED - JKC   | REVISED - ---  | SCALE: NONE   |   | SHEET NO. ___ OF ___ SHEETS  | STA. _____ TO STA. _____ | FED. ROAD DIST. NO. _ [ILLINOIS] FED. AID PROJECT |                        |                 |                   |                        |                   |
| PLOT DATE = 08/10                         | DATE - 08/10    | REVISED - ---  |               |   |                              |                          |   |                        |                 |                   |                        |                   |
| CONTRACT NO. 66547                        |                 |                |               |   |                              |                          |   |                        |                 |                   |                        |                   |

Bench Mark:  
Chiseled "X" on west bolt of fire hydrant at west side of IL Route 178, south side of Canal Bridge Elev. 480.15

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Existing Structure: None

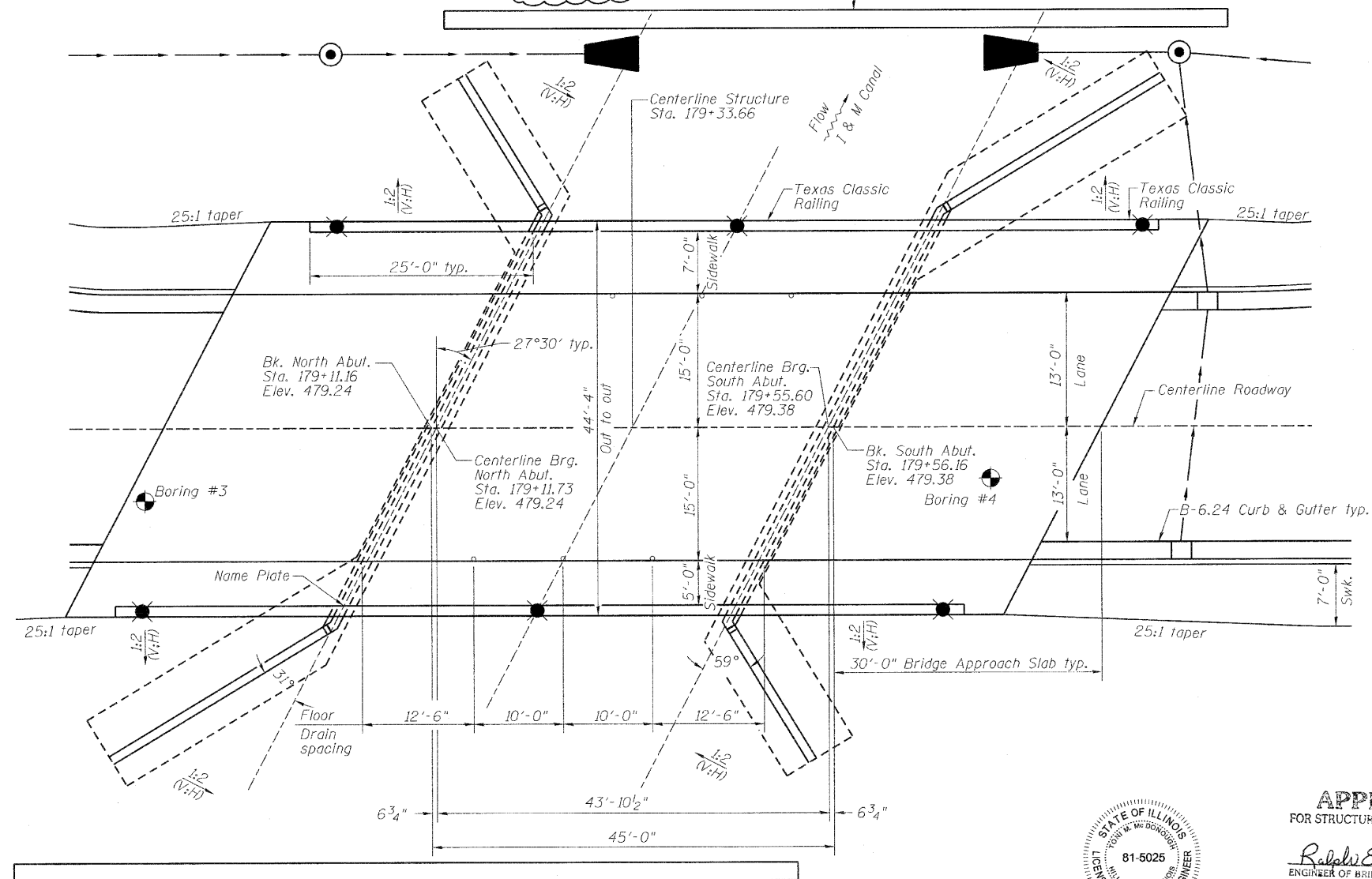


\* Elev. 463.86

\* Footing to be placed at the elevation shown or 6" into rock, whichever is deeper.

ELEVATION

LIMITS OF Dewatering Structure typ.



PLAN



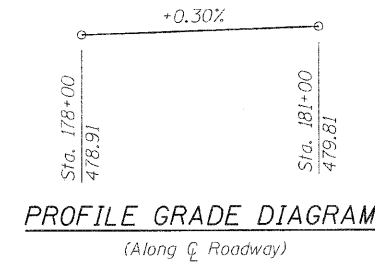
|          |     |
|----------|-----|
| DESIGNED | CMF |
| CHECKED  | TMM |
| DRAWN    | RNH |
| CHECKED  | TMM |

*Toni M. McDonough* 8-5-2010 Date  
Toni M. McDonough  
Licensed Structural Engineer  
State of Illinois No. 81-5025  
License Expires 11/30/10



APPROVED  
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson (TD)*  
ENGINEER OF BRIDGES AND STRUCTURES



INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 General Notes & Bill of Material
- 3-4 Top of Slab Elevations
- 5 Top of North Approach Slab Elevations
- 6 Top of South Approach Slab Elevations
- 7 Superstructure
- 8-9 Concrete Bridge Railing, Sidewalk Mounted
- 10-11 Bridge Approach Slab Details
- 12 Framing Plan
- 13 Beam Details
- 14 North Abutment
- 15 South Abutment
- 16 Abutment Details
- 17 Cantilever Forming Brackets for Superstructures With W27 Beams and Smaller Bar Splicer Assembly Details
- 18 Boring Logs
- 20 Rock Core Logs

| WATERWAY INFORMATION  |        |                          |        |            |                     |
|---|--------|--------------------------|--------|------------|---------------------|
| DRAINAGE AREA= 34.7 mi. <sup>2</sup> LOW GRADE ELEV.= 478.9 @ STA. 178+00 |        |                          |        |            |                     |
| FLOOD   | 0      | OPENING ft. <sup>2</sup> | NAT.   | HEAD - ft. | HEADWATER EL. - ft. |
|   | C.F.S. | PROP.                    | H.W.E. | PROP.      | PROP.*              |
| DESIGN  | **     | 242                      | 471.0  | 0.0        | 471.0               |

- \* Headwater Elev. = water surface Elev. @ upstream face of proposed structure.
- \*\* Regular waterway analysis does not apply in this case.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD  
Bridge Design Specifications  
With 2008 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface

DESIGN STRESSES

Field Units

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)  
 $f_y = 50,000$  psi (Struct. Steel) (M270 Grade 50)  
 $f_y = 36,000$  psi (Struct. Steel) (M270 Grade 36)

Allowable Bearing Pressure = 6000 psf

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec.  $S_{d1} = 0.04g$   
Design Spectral Acceleration at 0.2 sec.  $S_{d0.2} = 0.11g$   
Soil Site Class = B

DESIGN SCOUR ELEVATION TABLE

| DESIGN SCOUR ELEVATION (ft) | N. ABUTMENT | S. ABUTMENT |
|-----------------------------|-------------|-------------|
|                             | 464.40      | 464.40      |

DESIGN SPECIFICATIONS

2007 AASHTO LRFD  
Bridge Design Specifications  
With 2008 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface

DESIGN STRESSES

Field Units

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)  
 $f_y = 50,000$  psi (Struct. Steel) (M270 Grade 50)  
 $f_y = 36,000$  psi (Struct. Steel) (M270 Grade 36)

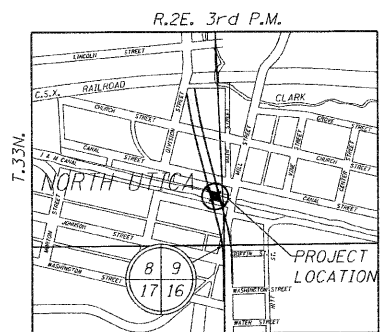
Allowable Bearing Pressure = 6000 psf

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec.  $S_{d1} = 0.04g$   
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Soil Site Class = B

DESIGN SCOUR ELEVATION TABLE

| DESIGN SCOUR ELEVATION (ft) | N. ABUTMENT | S. ABUTMENT |
|-----------------------------|-------------|-------------|
|                             | 464.40      | 464.40      |



LOCATION SKETCH

GENERAL PLAN & ELEVATION  
IL ROUTE 178 RELOCATED OVER I & M CANAL  
PUBLIC WATER

F.A.S. ROUTE 1279 SECTION 6R, B  
LASALLE COUNTY  
STATION 179+33.66  
STRUCTURE NO. 050-0250

McDonough-Whitlow, P.C.  
Consulting Engineers & Land Surveyors  
138 East Wood Street  
Hillsboro, IL 62049  
Phone: 217.532.9233  
Fax: 217.532.6300  
PROFESSIONAL DESIGN NO. 184-02754

SHEET NO. 1  
20 SHEETS

| F.A.S. RTE.                                     | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---|---------|---------|--------------|-----------|
| 1279  | 6R, B   | LASALLE | 190          | 103       |
| CONTRACT NO.                                    |         |         |              | 66547     |
| FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT |         |         |              |           |

REVISED 10/2010

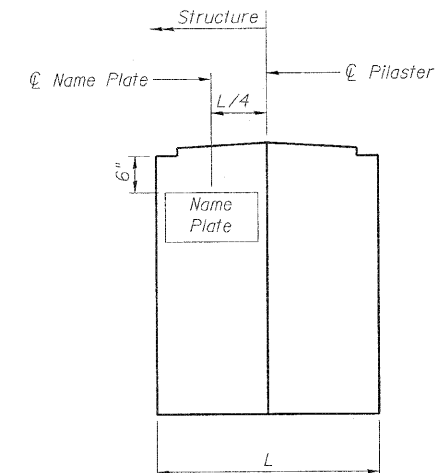
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas. Bolts  $\frac{3}{4}$  in.  $\phi$ , holes  $\frac{15}{16}$  in.  $\phi$ , unless otherwise noted.
- Calculated weight of Structural Steel = 22,500 lb. 50 ksi  
1,680 lb. 36 ksi
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- The Inorganic Zinc Rich Primer/ Acrylic/ Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".
- The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number as shown in the contract plans.
- Quantities have been included in the Summary of Quantities for contaminated soil disposal and removal of underground storage tanks that may exist between station 176+70 and station 179+00.

TOTAL BILL OF MATERIAL

| Item   | Unit    | Super  | Sub.   | Total  |
|--|---------|--------|--------|--------|
| Porous Granular Embankment, Special                      | Cu. Yd. | --     | 183    | 183    |
| Structure Excavation                                     | Cu. Yd. | --     | 141    | 141    |
| Rock Excavation for Structures                           | Cu. Yd. | --     | 122    | 122    |
| Floor Drains   | Each    | 6      | --     | 6      |
| Concrete Structures                                      | Cu. Yd. | --     | 189.5  | 189.5  |
| Concrete Superstructure                                  | Cu. Yd. | 236.9  | --     | 236.9  |
| Bridge Deck Grooving                                     | Sq. Yd. | 140    | --     | 140    |
| Protective Coat  | Sq. Yd. | 647    | --     | 647    |
| Furnishing and Erecting Structural Steel                 | L. Sum  | 1      | --     | 1      |
| Stud Shear Connectors                                    | Each    | 1116   | --     | 1116   |
| Reinforcement Bars, Epoxy Coated                         | Pound   | 54,520 | 13,880 | 68,400 |
| Bar Splicers   | Each    | 90     | --     | 90     |
| Name Plates  | Each    | 1      | --     | 1      |
| Anchor Bolts, 1"   | Each    | --     | 24     | 24     |
| Geocomposite Wall Drain                                  | Sq. Yd. | --     | 235    | 235    |
| Conduit Embedded in Structure, 2" Dia., Galvanized Steel | Foot    | 210    | --     | 210    |
| Conduit Embedded in Structure, 1 1/4" Dia., PVC          | Foot    | 238    | --     | 238    |
| Dewatering Structure No. 1                               | Each    | --     | --     | 1      |
| Concrete Bridge Rail, Sidewalk Mounted                   | Foot    | 190    | --     | 190    |
| Anchor Bolts, 1/2"                                       | Each    | 18     | --     | 18     |



NAME PLATE LOCATION

STATION 179+33.66  
BUILT 20 BY  
STATE OF ILLINOIS  
F.A.S. 1279 SECTION 6R, B  
LOADING HL-93  
STR. NO. 050-0250

NAME PLATE

Locate Name Plate at Northwest Corner  
of Bridge in Rail Abutment Pilaster  
(See Std. 515001)

GENERAL NOTES & BILL OF MATERIAL  
STRUCTURE NO. 050-0250

|          |     |
|----------|-----|
| DESIGNED | CMF |
| CHECKED  | TMM |
| DRAWN    | RNH |
| CHECKED  | TMM |

REVISED 10/20/10

|   |                              |             |         |         |                    |           |
|---|------------------------------|-------------|---------|---------|--------------------|-----------|
| McDonough-Whitlow, P.C.<br>Consulting Engineers & Land Surveyors<br>138 East Wood Street<br>Hillsboro, IL 62049<br>Phone: 217.532.9233<br>Fax: 217.532.6300<br>PROFESSIONAL DESIGN NO. 184-002754 | SHEET NO. 2<br><br>20 SHEETS | F.A.S. RTE. | SECTION | COUNTY  | TOTAL SHEETS       | SHEET NO. |
|   |                              | 1279        | 6R, B   | LASALLE | 190                | 104       |
| FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT   |                              |             |         |         | CONTRACT NO. 66547 |           |