

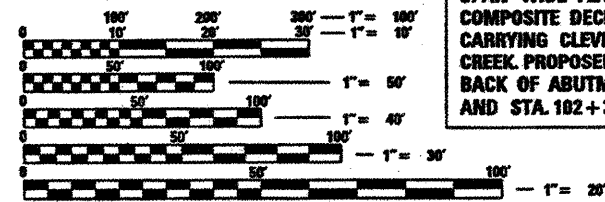
|                       |                |                             |              |           |
|-----------------------|----------------|-----------------------------|--------------|-----------|
| F.A.U. NO.            | SECTION        | COUNTY                      | TOTAL SHEETS | SHEET NO. |
| 9274                  | 04-00202-00-BR | ST. CLAIR                   | 55           | 1         |
| FED. ROAD DIST. NO. 7 |                | ILLINOIS CONTRACT NO. 97369 |              |           |
| FEDERAL AID PROJECT   |                |                             |              |           |

**INDEX OF SHEETS**

| SHEET NO. | ITEM   |
|-----------|--|
| 1         | COVER SHEET  |
| 2         | GENERAL NOTES, COMMITMENTS, AND ALIGNMENT TIE POINTS |
| 3         | SUMMARY OF QUANTITIES                                |
| 4 - 6     | TYPICAL SECTIONS                                     |
| 7         | SCHEDULES  |
| 8         | PLAN AND PROFILE SHEET                               |
| 9         | TRAFFIC CONTROL PLAN                                 |
| 10        | EROSION CONTROL PLAN                                 |
| 11        | STORM SEWER PLAN AND PROFILE SHEET                   |
| 12        | R.O.W. PLAN SHEET                                    |
| 13        | INTERSECTION DETAIL AND GRADING PLAN                 |
| 14 - 15   | SANITARY SEWER GENERAL NOTES                         |
| 16        | SANITARY SEWER PLAN AND PROFILE SHEET                |
| 17        | SANITARY SEWER DETAILS                               |
| 18 - 48   | BRIDGE PLANS   |
| 49        | CONSTRUCTION DETAILS                                 |
| 50 - 55   | CROSS SECTIONS                                       |

**STANDARDS**

|           |   |
|-----------|---|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS  |
| 001001-02 | AREAS OF REINFORCEMENT BARS   |
| 001006    | DECIMAL OF AN INCH AND OF A FOOT  |
| 280001-04 | TEMPORARY EROSION CONTROL SYSTEMS   |
| 420001-07 | PAVEMENT JOINTS   |
| 420401-07 | BRIDGE APPROACH PAVEMENT CONNECTOR  |
| 424001-05 | CURB RAMPS FOR SIDEWALKS  |
| 442201-03 | CLASS C AND D PATCHES   |
| 515001-03 | NAME PLATE FOR BRIDGES  |
| 542301-02 | PRECAST REINFORCED CONCRETE FLARED END SECTION  |
| 602306-02 | INLET - TYPE B  |
| 602401-02 | MANHOLE TYPE A  |
| 602701-02 | MANHOLE STEPS   |
| 604051-03 | FRAME AND GRATE TYPE 11   |
| 604091-02 | FRAME AND GRATE TYPE 24   |
| 606001-04 | CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER                           |
| 630001-08 | STEEL PLATE BEAM GUARDRAIL  |
| 631011-05 | TRAFFIC BARRIER TERMINAL, TYPE 2  |
| 631026-05 | TRAFFIC BARRIER TERMINAL, TYPE 5  |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT   |
| 635011-02 | REFLECTOR MARKER AND MOUNTING DETAILS   |
| 701301-03 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS   |
| 701901-01 | TRAFFIC CONTROL DEVICES   |
| BLR 10-6  | PCC PAVEMENT SPECIAL (NONREINFORCED)  |
| BLR 21-8  | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

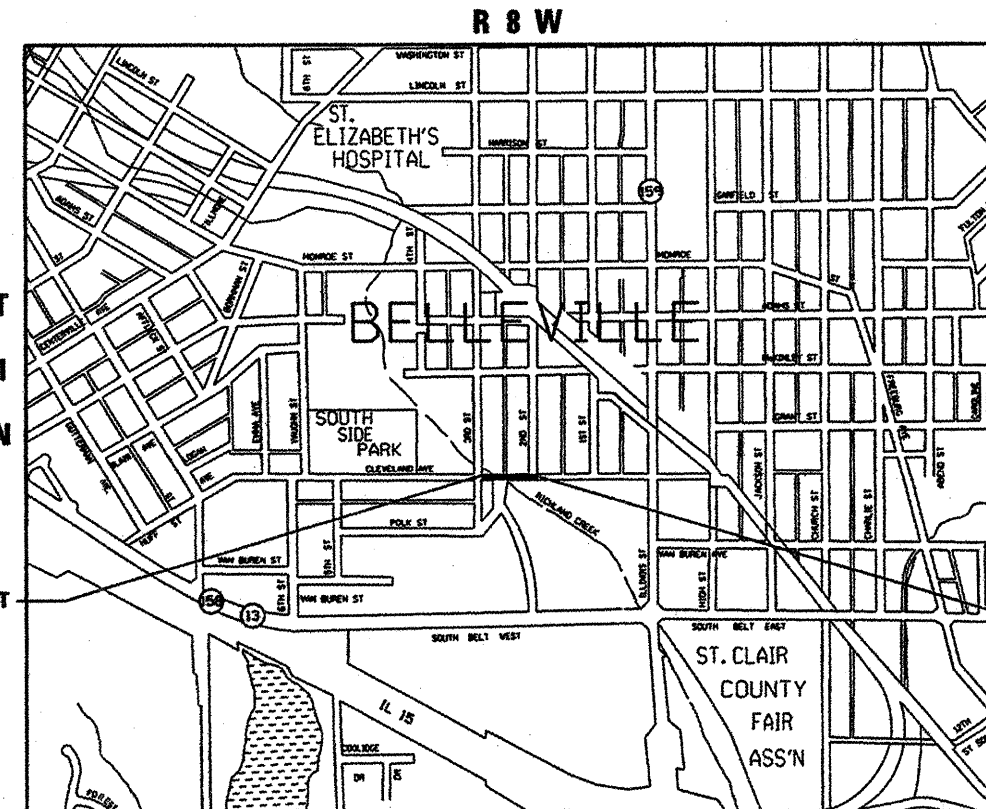
J.U.L.L.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

SECTION 04-00202-00-BR INCLUDES A SINGLE SPAN WIDE FLANGE STRUCTURE WITH A COMPOSITE DECK AND CLOSED ABUTMENTS CARRYING CLEVELAND AVENUE OVER RICHLAND CREEK. PROPOSED S. N. 082-6113 BACK OF ABUTMENT STA. 101+56.47 AND STA. 102+37.53

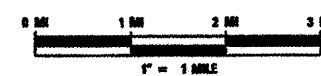
BEGIN PROJECT STA. 100+25

END PROJECT STA. 104+05

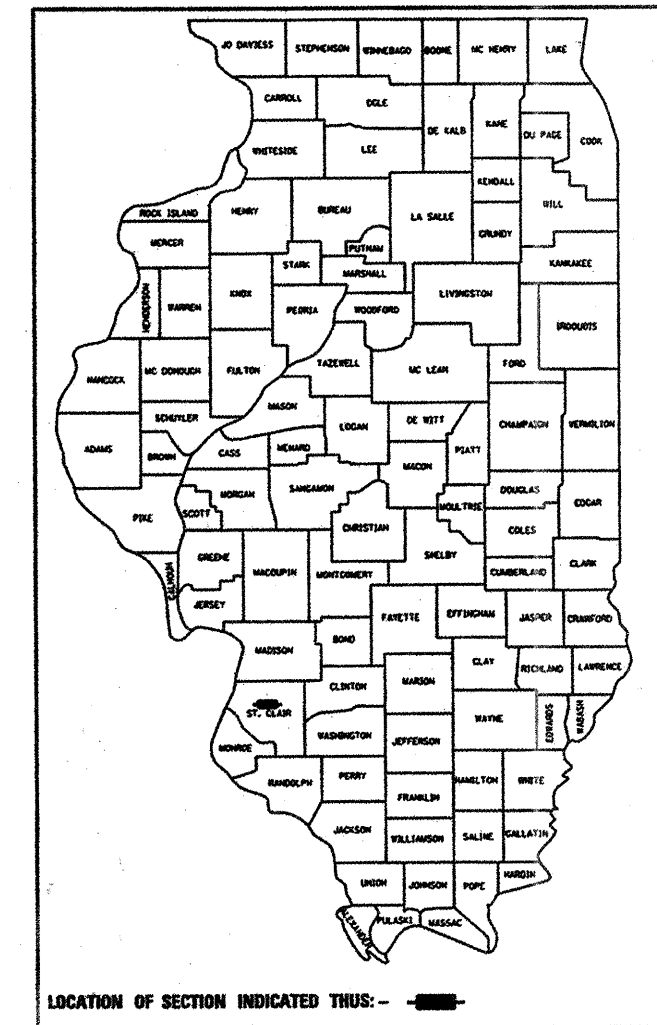
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
**PLANS FOR PROPOSED**  
FAU ROUTE 9274 (CLEVELAND AVENUE)  
SECTION 04-00202-00-BR  
PROJECT BRM-5011 (262)  
CITY OF BELLEVILLE  
BRIDGE REPLACEMENT  
ST. CLAIR COUNTY  
C-98-322-09



LOCATION MAP

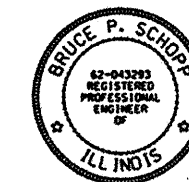


GROSS LENGTH = 380' = 0.072 MILES  
NET LENGTH = 380' = 0.072 MILES



LOCATION OF SECTION INDICATED THUS: -

|  |   |
|--|---|
| ILLINOIS DEPARTMENT OF TRANSPORTATION                      |   |
| APPROVED <u>3/16</u> 2009                                  | <i>Mark W. Eckert</i><br>MARK W. ECKERT<br>MAYOR OF BELLEVILLE            |
| PASSED <u>4/10/</u> 2009                                   | <i>Richard C. March</i><br>DISTRICT 8 ENGINEER OF LOCAL ROADS & STREETS   |
| RELEASED FOR BID BASED ON LIMITED REVIEW <u>4/10/</u> 2009 | <i>Manj C. Jamel</i><br>DEPUTY DIRECTOR OF HIGHWAYS, REGION FIVE ENGINEER |



EXPIRES 11-30-09

*Bruce P. Schopp* DATE: 3/16/09

BRUCE P. SCHOPP  
P.E. NO. 62-043293



CONTRACT NO. 97369

**DESIGN DESIGNATION**  
F.A.U. 9274 (CLEVELAND AVENUE)  
COLLECTOR  
ADT 2760 (2029)  
DESIGN SPEED = 30 MPH

**GENERAL NOTES**

- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED TO BE APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS NOT PRESENTLY KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. ILLINOIS LAW REQUIRES A MINIMUM 48-HOUR NOTICE TO ALL UTILITY COMPANIES BEFORE DIGGING. FIELD LOCATIONS OF UNDERGROUND FACILITIES MAY BE OBTAINED BY CALLING THE J.U.L.I.E. SYSTEM AT 800-892-0123 AND PROVIDING 48 HOURS ADVANCE NOTICE. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT LIMITS ARE LISTED BELOW.
- ANY FACILITIES OR APPURTENANCES WHICH ARE THE PROPERTY OF ANY PUBLIC UTILITY LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED OR ADJUSTED BY THEIR RESPECTIVE OWNERS. THE CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE OWNERS OF ANY SUCH FACILITY IN THEIR REMOVAL AND REARRANGEMENT OPERATIONS IN ORDER THAT THESE OPERATIONS AND THE CONSTRUCTION OF THIS PROJECT MAY PROGRESS IN A REASONABLE MANNER. ALL ROADSIDE OBJECTS (UTILITY POLES, FIRE HYDRANTS, SIGNS, ETC.) SHALL BE RELOCATED TO PROVIDE A MINIMUM OF 1.5 FEET CLEARANCE, MEASURED FROM THE FACE OF CURB TO THE NEAR EDGE OF THE OBJECT.
- THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION WHICH MAY REQUIRE ADJUSTMENT, RELOCATION OR REMOVAL. ALL ARE MEMBERS OF J.U.L.I.E., UNLESS NOTED OTHERWISE.

|  |   |
|--|---|
| AT&T<br>203 GOETHE<br>COLLINSVILLE, IL 62234<br>(618) 346-6400   | ILLINOIS AMERICAN WATER CO. (WATER)<br>100 NORTH WATERWORKS DRIVE<br>BELLEVILLE, IL 62223<br>(618) 277-7450 |
| CHARTER COMMUNICATIONS (CABLE TV)<br>941 CHARTER COMMONS<br>TOWN & COUNTRY, MO 63017<br>(636) 387-6633 | CITY OF BELLEVILLE (SANITARY SEWER)<br>498 ENVIRONMENTAL DRIVE<br>BELLEVILLE, IL 62220<br>(618) 233-7146    |
| AMEREN IP (GAS & ELECTRIC)<br>1050 WEST BOULEVARD<br>BELLEVILLE, IL 62221<br>(618) 234-3400            |   |

- THE ABOVE INFORMATION REPRESENTS THE BEST INFORMATION AVAILABLE TO THE LOCAL AGENCY AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR HAS TAKEN THE FOREGOING INTO CONSIDERATION IN PREPARING HIS/HER BID, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY DELAYS OR INCONVENIENCE CAUSED BY SAME.
- THE CONTRACTOR SHALL PROVIDE BLOCKOUTS IN THE PROPOSED SIDEWALK FOR PLACEMENT OF SIGN POSTS AND MAILBOX SUPPORTS, AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL STAGE ALL WORK IN SUCH A WAY AS TO MAINTAIN INGRESS AND EGRESS TO ALL ABUTTING PROPERTIES AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL FERTILIZE, SEED AND MULCH ALL EARTH SURFACES DISTURBED BY CONSTRUCTION WITHIN CONSTRUCTION LIMITS; OUTSIDE CONSTRUCTION LIMITS WILL BE PAID BY THE CONTRACTOR. SEE THE SEEDING SCHEDULE FOR ESTIMATED PLAN QUANTITIES.
- WHERE TREE REMOVAL CONFLICTS WITH EXISTING UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CUT THE TREE OFF AT THE GROUND LINE AND GRIND THE STUMP AS DIRECTED BY THE ENGINEER.
- EARTH EXCAVATION INCLUDES THE REMOVAL OF THE EXISTING BITUMINOUS (OIL & CHIP) ROADWAY SURFACE AND AGGREGATE BASE. THE CONTRACTOR MAY INCORPORATE THESE MATERIALS INTO THE PROPOSED EMBANKMENT. SURPLUS AND/OR UNSUITABLE MATERIAL SHALL BE DISPOSED OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- THE CONTRACTOR SHALL BENCH THE PROPOSED EMBANKMENT INTO THE EXISTING SLOPES TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR SHALL NOTE THE LOCATION OF ALL MANHOLE AND VALVE VAULT FRAMES AND LIDS LOCATED WITHIN THE RESURFACING LIMITS. APPROPRIATE CARE SHALL BE TAKEN TO PROTECT THESE ITEMS DURING MILLING OPERATIONS.
- ALL EXISTING ROADWAY FEATURES SUCH AS PAVEMENT, CURB, SIDEWALK, DRIVEWAY PAVEMENT, CULVERTS, HEADWALLS, RIPRAP, FENCING, RETAINING WALLS, ETC. WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR UNLESS NOTED OTHERWISE ON THE PLANS. ALL MISCELLANEOUS FEATURES WHICH ARE TO BE REMOVED AND FOR WHICH THERE IS NO SPECIFIC PAY ITEM, WILL NOT BE MEASURED SEPARATELY FOR PAYMENT. THE COST OF THIS REMOVAL WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR EARTH EXCAVATION.

**GENERAL NOTES**

- STORM SEWER INVERTS SHOWN ON THE PLANS HAVE BEEN CALCULATED TO THE CENTER OF THE STRUCTURE. THE STORM SEWER SLOPES SHOWN ON THE PLANS IS THE PERCENT GRADE FROM CENTER TO CENTER OF STRUCTURE. THE LENGTH OF STORM SEWERS SHOWN ON THE PLANS IS THE DISTANCE FROM CENTER TO CENTER OF STRUCTURE. STORM SEWER SHALL BE MEASURED AND PAID FOR AS SPECIFIED IN ARTICLE 550.09 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. FLARED END SECTIONS ARE LOCATED BY STATION, OFFSET AND FLOWLINE ELEVATION AT THE FLARED END OF THE FLARED END SECTION.
- ALL DRAINAGE STRUCTURES CONSTRUCTED, ADJUSTED OR RECONSTRUCTED UNDER THE CONTRACT, SHALL BE CLEANED OF ANY ACCUMULATION OF SILT, DEBRIS OR FOREIGN MATTER AT THE END OF EACH WORKING DAY AND AT THE TIME OF FINAL INSPECTION. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES BID FOR THE VARIOUS STRUCTURE ITEMS INCLUDED IN THE CONTRACT.
- THE FOLLOWING SYMBOLS, ABBREVIATIONS AND PATTERNS SUPPLEMENT OR SUPERCEDE HIGHWAY STANDARD 000001:

|        |   |
|--------|---|
| BO     | BY OTHERS (USED IN CONJUNCTION WITH TBA & TBR)        |
| CONSTR | CONSTRUCTION  |
| CP     | CONTROL POINT   |
| ESMT   | EASEMENT  |
| K      | LENGTH OF VERTICAL CURVE PER PERCENT GRADE DIFFERENCE |
| N/F    | NOW OR FORMERLY                                       |
| O/C    | OIL AND CHIP  |
| PERM   | PERMANENT   |
| PE     | PERMANENT EASEMENT                                    |
| PVI    | POINT OF VERTICAL INTERSECTION                        |
| PVC    | POLYVINYL CHLORIDE PIPE                               |
| TCE    | TEMPORARY CONSTRUCTION EASEMENT                       |
| TUP    | TEMPORARY USE PERMIT                                  |
| TBA    | TO BE ADJUSTED  |
| TBRL   | TO BE RELOCATED                                       |
| TYP    | TYPICAL   |
| W      | WIDTH   |

**COMMITMENTS**

- NONE

**ALIGNMENT TIE POINTS**

| DESCRIPTION:     | OFFSET: | NORTHING:    | EASTING:       |
|------------------|---------|--------------|----------------|
| P.O.T. 100+00.00 | 0       | 669,398.4519 | 2,347,636.3444 |
| P.O.T. 100+75.00 | 0       | 669,397.1940 | 2,347,711.3329 |
| P.O.T. 103+20.00 | 0       | 669,394.5668 | 2,347,956.3165 |
| P.O.T. 104+00.00 | 0       | 669,395.0039 | 2,348,036.3186 |

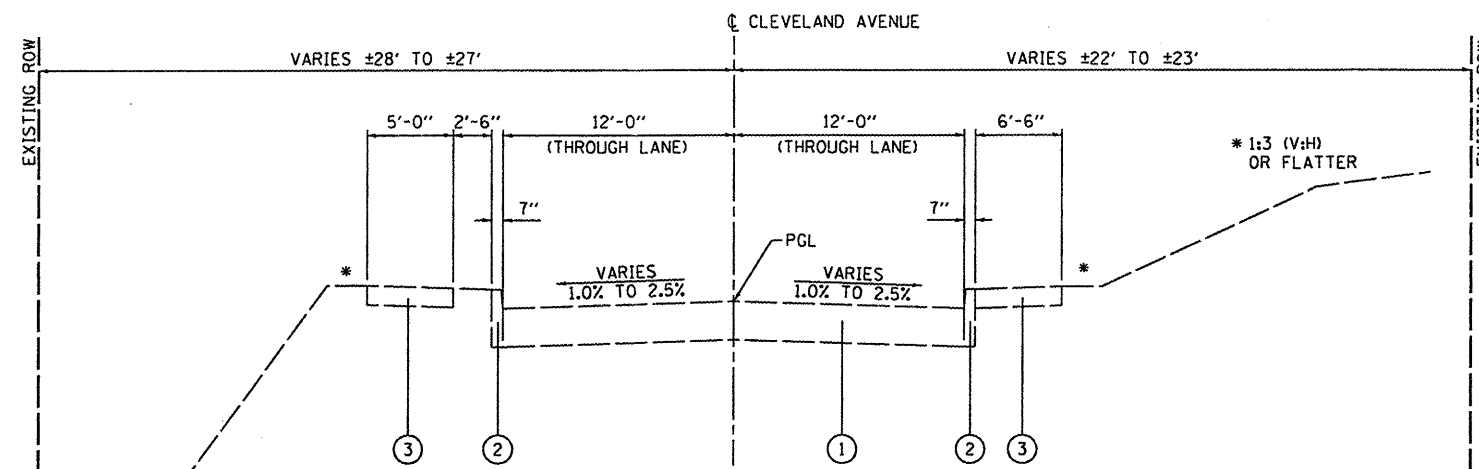
COORDINATES SHOWN ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD 83 (1997) - WEST ZONE (GPS OBSERVATIONS)

| SUMMARY OF QUANTITIES |   |        |                  |                         |       |
|-----------------------|---|--------|------------------|-------------------------|-------|
| CODE NO.              | ITEM  | UNIT   | TOTAL QUANTITIES | CONSTRUCTION TYPE CODES |       |
|                       |   |        |                  | 1000                    | X071- |
| 20100500              | TREE REMOVAL, ACRES                             | ACRE   | 0.25             | 0.25                    |       |
| 20200100              | EARTH EXCAVATION                                | CU YD  | 280              | 280                     |       |
| 20700400              | POROUS GRANULAR EMBANKMENT, SPECIAL             | CU YD  | 1,210            |                         | 1,210 |
| 20800150              | TRENCH BACKFILL                                 | CU YD  | 272              | 272                     |       |
| 25000110              | SEEDING, CLASS 1A                               | ACRE   | 0.25             | 0.25                    |       |
| 25000400              | NITROGEN FERTILIZER NUTRIENT                    | POUND  | 23               | 23                      |       |
| 25000500              | PHOSPHORUS FERTILIZER NUTRIENT                  | POUND  | 23               | 23                      |       |
| 25000600              | POTASSIUM FERTILIZER NUTRIENT                   | POUND  | 23               | 23                      |       |
| 25100115              | MULCH, METHOD 2                                 | ACRE   | 0.25             | 0.25                    |       |
| 28000250              | TEMPORARY EROSION CONTROL SEEDING               | POUND  | 75               | 75                      |       |
| 28000400              | PERIMETER EROSION BARRIER                       | FOOT   | 340              | 340                     |       |
| 28000500              | INLET AND PIPE PROTECTION                       | EACH   | 6                | 6                       |       |
| 28100105              | STONE RIPRAP, CLASS A3                          | SO YD  | 9                | 9                       |       |
| 28100107              | STONE RIPRAP, CLASS A4                          | SO YD  | 1,360            |                         | 1,360 |
| 28200200              | FILTER FABRIC                                   | SO YD  | 1,369            | 9                       | 1,360 |
| 31100300              | SUB-BASE GRANULAR MATERIAL, TYPE A 4"           | SO YD  | 475              | 475                     |       |
| 35100700              | AGGREGATE BASE COURSE, TYPE A 8"                | SO YD  | 152              | 152                     |       |
| 40300100              | BITUMINOUS MATERIALS (PRIME COAT)               | GALLON | 62               | 62                      |       |
| 40300300              | BITUMINOUS MATERIALS (COVER AND SEAL COATS)     | GALLON | 160              | 160                     |       |
| 40300500              | COVER COAT AGGREGATE                            | TON    | 3                | 3                       |       |
| 40300600              | SEAL COAT AGGREGATE                             | TON    | 2                | 2                       |       |
| 40600990              | TEMPORARY RAMP                                  | SO YD  | 36               | 36                      |       |
| 40603315              | HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70    | TON    | 45               | 45                      |       |
| 42001300              | PROTECTIVE COAT                                 | SO YD  | 338              | 338                     |       |
| 42001420              | BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)        | SO YD  | 338              | 338                     |       |
| 42400100              | PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH        | SO FT  | 2,539            | 2,539                   |       |
| 42400800              | DETECTABLE WARNINGS                             | SO FT  | 30               | 30                      |       |
| 44000100              | PAVEMENT REMOVAL                                | SO YD  | 500              | 500                     |       |
| 44000198              | HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH | SO YD  | 398              | 398                     |       |
| 44000600              | SIDEWALK REMOVAL                                | SO FT  | 2,900            | 2,900                   |       |
| 44002000              | CONCRETE CURB REMOVAL                           | FOOT   | 545              | 545                     |       |
| 44200274              | PAVEMENT PATCHING, TYPE 1                       | SO YD  | 3                | 3                       |       |
| 50100200              | REMOVAL OF EXISTING STRUCTURES                  | L SUM  | 1                |                         | 1     |
| 50105210              | REMOVE EXISTING CULVERTS                        | FOOT   | 6                | 6                       |       |
| 50200100              | STRUCTURE EXCAVATION                            | CU YD  | 1,522            |                         | 1,522 |

| SUMMARY OF QUANTITIES |   |       |                  |                         |         |
|-----------------------|---|-------|------------------|-------------------------|---------|
| CODE NO.              | ITEM  | UNIT  | TOTAL QUANTITIES | CONSTRUCTION TYPE CODES |         |
|                       |   |       |                  | 1000                    | X071-   |
| 50300225              | CONCRETE STRUCTURES                                       | CU YD | 787.4            |                         | 787.4   |
| 50300255              | CONCRETE SUPERSTRUCTURE                                   | CU YD | 310.8            |                         | 310.8   |
| 50300260              | BRIDGE DECK GROOVING                                      | SO YD | 357              |                         | 357     |
| 50300300              | PROTECTIVE COAT   | SO YD | 668              |                         | 668     |
| 50500105              | FURNISHING AND ERECTING STRUCTURAL STEEL                  | L SUM | 1                |                         | 1       |
| 50500505              | STUD SHEAR CONNECTORS                                     | EACH  | 1,278            |                         | 1,278   |
| 50800205              | REINFORCEMENT BARS, EPOXY COATED                          | POUND | 131,290          |                         | 131,290 |
| 50800515              | BAR SPLICERS  | EACH  | 80               |                         | 80      |
| 50900105              | ALUMINUM RAILING, TYPE L                                  | FOOT  | 145              |                         | 145     |
| 50900805              | PEDESTRIAN RAILING  | FOOT  | 169              |                         | 169     |
| 51201800              | FURNISHING STEEL PILES HP14X73                            | FOOT  | 1,272            |                         | 1,272   |
| 51202305              | DRIVING PILES   | FOOT  | 1,272            |                         | 1,272   |
| 51203800              | TEST PILE STEEL HP14X73                                   | EACH  | 2                |                         | 2       |
| 51204650              | PILE SHOES  | EACH  | 78               |                         | 78      |
| 51500100              | NAME PLATES   | EACH  | 1                |                         | 1       |
| 52000110              | PREFORMED JOINT STRIP SEAL                                | FOOT  | 72.5             |                         | 72.5    |
| 52100010              | ELASTOMERIC BEARING ASSEMBLY, TYPE 1                      | EACH  | 6                |                         | 6       |
| 52100520              | ANCHOR BOLTS, 1"  | EACH  | 12               |                         | 12      |
| 52100530              | ANCHOR BOLTS, 1 1/4"                                      | EACH  | 12               |                         | 12      |
| 54213657              | PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"       | EACH  | 1                | 1                       |         |
| 550A0050              | STORM SEWERS, CLASS A, TYPE 1 12"                         | FOOT  | 120              | 120                     |         |
| 58700300              | CONCRETE SEALER   | SO FT | 1,671            |                         | 1,671   |
| 59100100              | GEOCOMPOSITE WALL DRAIN                                   | SO YD | 452              |                         | 452     |
| 60228110              | MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID | EACH  | 3                | 3                       |         |
| 60240310              | INLETS, TYPE B, TYPE 11 FRAME AND GRATE                   | EACH  | 1                | 1                       |         |
| 60240328              | INLETS, TYPE B, TYPE 24 FRAME AND GRATE                   | EACH  | 4                | 4                       |         |
| 60260100              | INLETS TO BE ADJUSTED                                     | EACH  | 1                | 1                       |         |
| 60500040              | REMOVING MANHOLES   | EACH  | 1                | 1                       |         |
| 60500060              | REMOVING INLETS   | EACH  | 1                | 1                       |         |
| 60600605              | CONCRETE CURB, TYPE B                                     | FOOT  | 64.0             | 64.0                    |         |
| 60603800              | COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12         | FOOT  | 466.0            | 466.0                   |         |
| * 63000003            | STEEL PLATE BEAM GUARD RAIL, TYPE A, 9 FOOT POSTS         | FOOT  | 25.0             | 25.0                    |         |
| * 63100045            | TRAFFIC BARRIER TERMINAL, TYPE 2                          | EACH  | 1                | 1                       |         |
| * 63100070            | TRAFFIC BARRIER TERMINAL, TYPE 5                          | EACH  | 1                | 1                       |         |
| * 63100167            | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT        | EACH  | 1                | 1                       |         |

| SUMMARY OF QUANTITIES |   |        |                  |                         |       |
|-----------------------|---|--------|------------------|-------------------------|-------|
| CODE NO.              | ITEM  | UNIT   | TOTAL QUANTITIES | CONSTRUCTION TYPE CODES |       |
|                       |   |        |                  | 1000                    | X071- |
| 63200310              | GUARDRAIL REMOVAL                                       | FOOT   | 227              | 227                     |       |
| * 63300725            | STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)               | FOOT   | 25.0             | 25.0                    |       |
| 66410400              | CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED           | FOOT   | 25               | 25                      |       |
| 67000400              | ENGINEER'S FIELD OFFICE, TYPE A                         | CAL MO | 12               | 12                      |       |
| 67100100              | MOBILIZATION  | L SUM  | 1                |                         | 1     |
| 70101830              | TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21         | L SUM  | 1                |                         | 1     |
| * 78200420            | GUARDRAIL MARKERS, TYPE B                               | EACH   | 2                | 2                       |       |
| * 78201000            | TERMINAL MARKER - DIRECT APPLIED                        | EACH   | 1                | 1                       |       |
| * X0323200            | SANITARY SEWER, DUCTILE IRON, 12"                       | FOOT   | 85               | 85                      |       |
| X0321781              | MECHANICAL SPLICE                                       | EACH   | 393              |                         | 393   |
| X0323830              | DRAINAGE SCUPPERS, DS-11                                | EACH   | 4                |                         | 4     |
| X0323988              | TEMPORARY SOIL RETENTION SYSTEM                         | SO FT  | 714              |                         | 714   |
| * X0487800            | SANITARY SEWER REMOVAL 12"                              | FOOT   | 215              | 215                     |       |
| * X0840000            | SANITARY SEWER REMOVAL 8"                               | FOOT   | 57               | 57                      |       |
| X5020501              | UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1 | EACH   | 1                |                         | 1     |
| X5020502              | UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2 | EACH   | 1                |                         | 1     |
| * XX001386            | SANITARY SEWERS, PVC, 8"                                | FOOT   | 76               | 76                      |       |
| * XX001466            | SANITARY SEWER, PVC, 12"                                | FOOT   | 130              | 130                     |       |
| XX005431              | LOCATING UNDERGROUND UTILITY                            | EACH   | 2                | 2                       |       |
| * Z0057100            | SANITARY SEWER 12"                                      | FOOT   | 51               | 51                      |       |
| * Z0067700            | STEEL CASINGS 20"                                       | FOOT   | 85               | 85                      |       |
| * X0322700            | SANITARY SEWER TESTING                                  | L SUM  | 1                |                         | 1     |

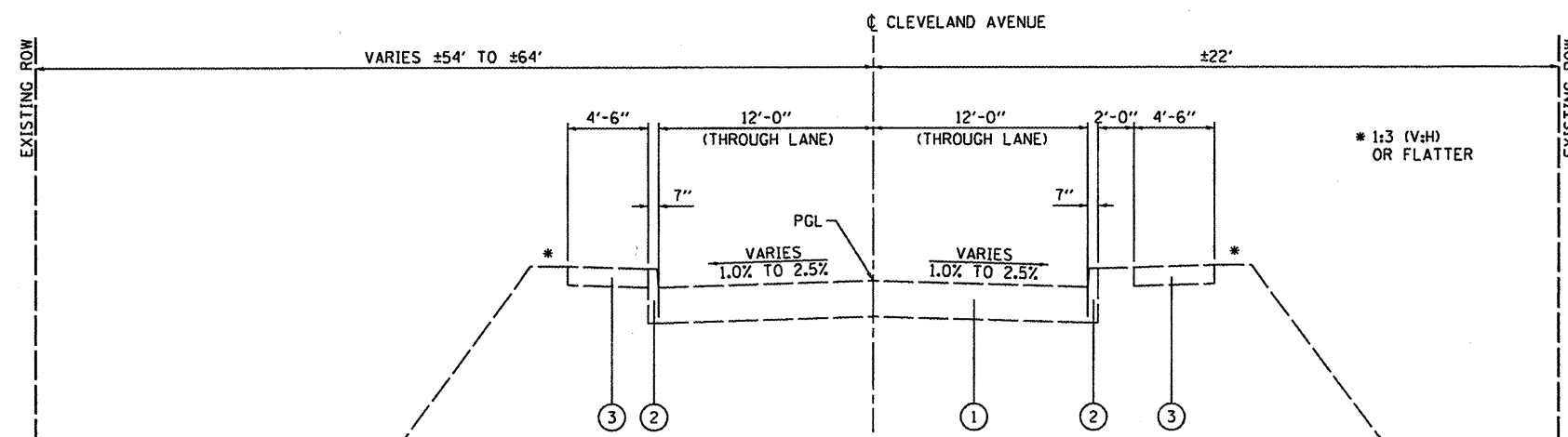
\* SPECIALTY ITEM



**EXISTING TYPICAL SECTION CLEVELAND AVENUE**

(NOT TO SCALE)  
STA. 102+33.21 TO STA. 104+05.00

- LEGEND
- ① EXISTING HMA PAVEMENT
  - ② EXISTING CONCRETE CURB, 6"
  - ③ EXISTING PCC SIDEWALK
  - ④ EXISTING AGGREGATE BASE WITH BITUMINOUS SURFACE TREATMENT
  - ⑤ PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) (8")
  - ⑥ PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE A 4"
  - ⑦ PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 WITH TIE BAR GROUTED IN PLACE (SEE HIGHWAY STANDARD 606001)
  - ⑧ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
  - ⑨ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 (2")
  - ⑩ PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH
  - ⑪ PROPOSED AGGREGATE BASE COURSE, TYPE A 8"
  - ⑫ PROPOSED BITUMINOUS SURFACE TREATMENT, A-3
  - ⑬ PROPOSED EARTH SHOULDER



**EXISTING TYPICAL SECTION CLEVELAND AVENUE**

(NOT TO SCALE)  
STA. 100+25.00 TO STA. 101+64.10  
BRIDGE OMISSION: STA. 101+64.10 TO STA. 102+33.21

|             |                      |
|-------------|----------------------|
| FILE NAME = | 27055-sh-typical.dgn |
|-------------|----------------------|

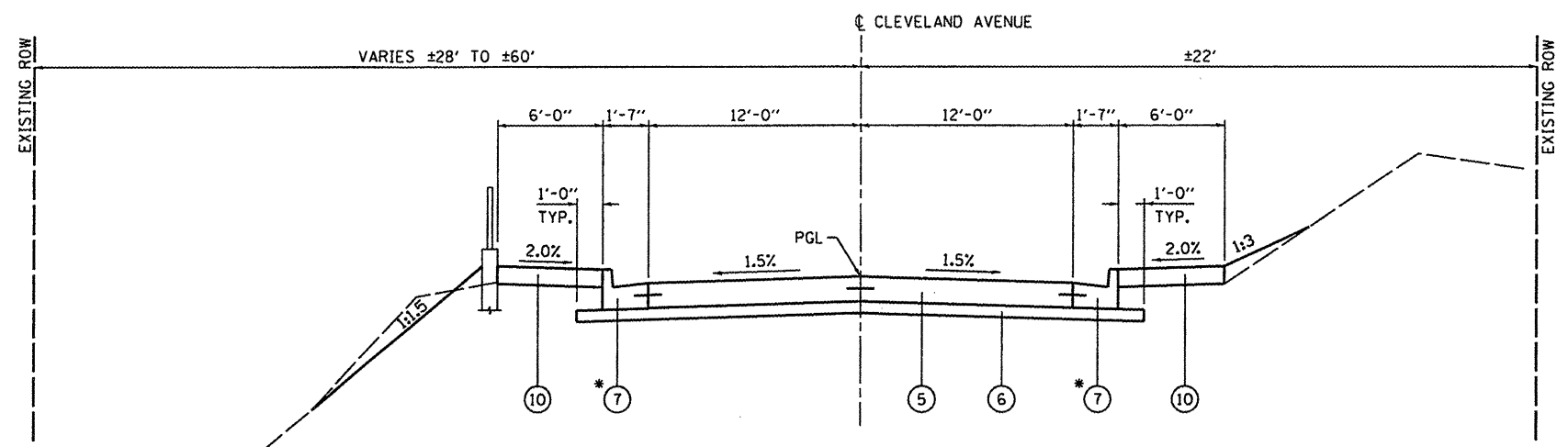
|             |             |
|-------------|-------------|
| USER NAME = | moistgraser |
| DESIGNED -  |             |
| DRAWN -     |             |
| CHECKED -   |             |
| DATE -      | 3/13/2009   |

|            |  |
|------------|--|
| DESIGNED - |  |
| REVISIED - |  |
| DRAWN -    |  |
| CHECKED -  |  |
| DATE -     |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|  |           |           |              |
|--|-----------|-----------|--------------|
| <b>TYPICAL SECTIONS - CLEVELAND AVENUE</b> |           |           |              |
| SCALE:                                     | SHEET NO. | OF SHEETS | STA. TO STA. |

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.J. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 4         |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |

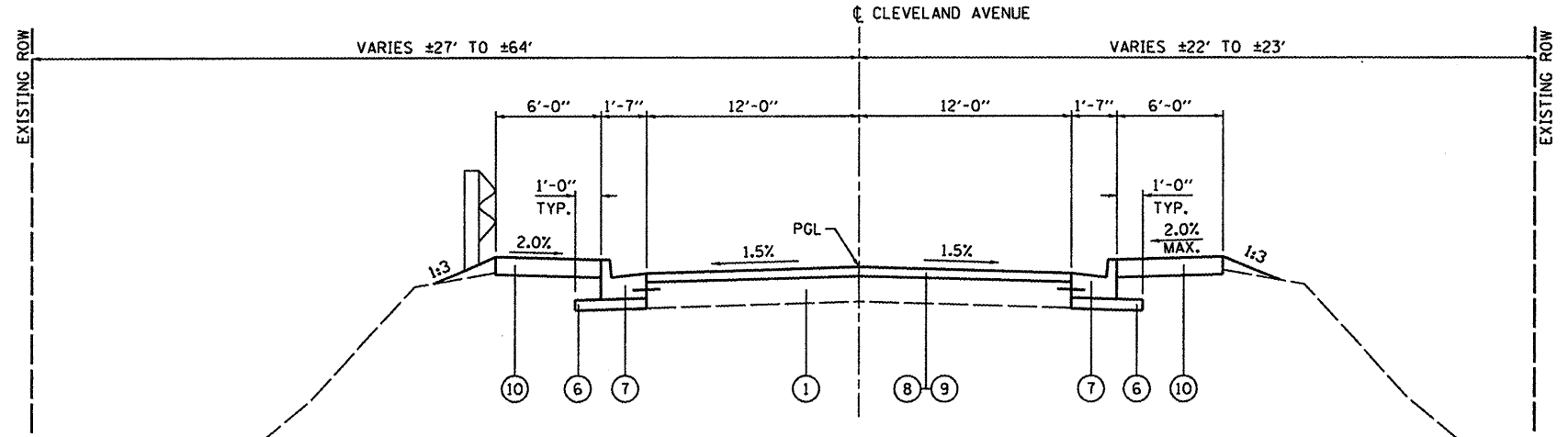


**PROPOSED TYPICAL SECTION CLEVELAND AVENUE**

(NOT TO SCALE)  
 STA. 100+75.00 TO STA. 101+30.47  
 BRIDGE APPROACH PAVEMENT: STA. 101+30.47 TO STA. 101+56.47  
 BRIDGE OMISSION: STA. 101+56.47 TO STA. 102+39.28  
 BRIDGE APPROACH PAVEMENT: STA. 102+39.28 TO STA. 102+65.28  
 STA. 102+65.28 TO STA. 103+20.00

- LEGEND**
- ① EXISTING HMA PAVEMENT
  - ② EXISTING CONCRETE CURB, 6"
  - ③ EXISTING PCC SIDEWALK
  - ④ EXISTING AGGREGATE BASE WITH BITUMINOUS SURFACE TREATMENT
  - ⑤ PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) (8")
  - ⑥ PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE A 4"
  - ⑦ PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 WITH TIE BAR GROUTED IN PLACE (SEE HIGHWAY STANDARD 606001)
  - ⑧ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
  - ⑨ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 (2")
  - ⑩ PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH
  - ⑪ PROPOSED AGGREGATE BASE COURSE, TYPE A 8"
  - ⑫ PROPOSED BITUMINOUS SURFACE TREATMENT, A-3
  - ⑬ PROPOSED EARTH SHOULDER

\* NOTE: CURB HEIGHT VARIES 6" TO 9"  
 LT. STA. 101+01.90 TO STA. 101+11.90  
 CURB HEIGHT VARIES 9" TO 6"  
 LT. STA. 102+46.71 TO STA. 102+56.71  
 RT. STA. 102+83.84 TO STA. 102+93.84



**PROPOSED TYPICAL SECTION CLEVELAND AVENUE**

(NOT TO SCALE)  
 STA. 100+25.00 TO STA. 100+75.00  
 STA. 103+20.00 TO STA. 104+05.00

**HOT MIX ASPHALT MIXTURE REQUIREMENTS**

| MIXTURE USE:                            | SURFACE        |
|---|----------------|
| AC/PG:                                  | PG 64-22       |
| RAP % (MAX):                            | 10%            |
| DESIGN AIR VOIDS:                       | 4% @ NDES = 70 |
| MIX COMPOSITION:<br>(GRADATION MIXTURE) | -              |
| FRICION AGGREGATE:                      | MIXTURE "C"    |

**CLEVELAND AVENUE**

STRUCTURAL DESIGN TRAFFIC: Year 2029

PV = 2650 SU = 83 MU = 27

ROAD/STREET CLASSIFICATION: Class II

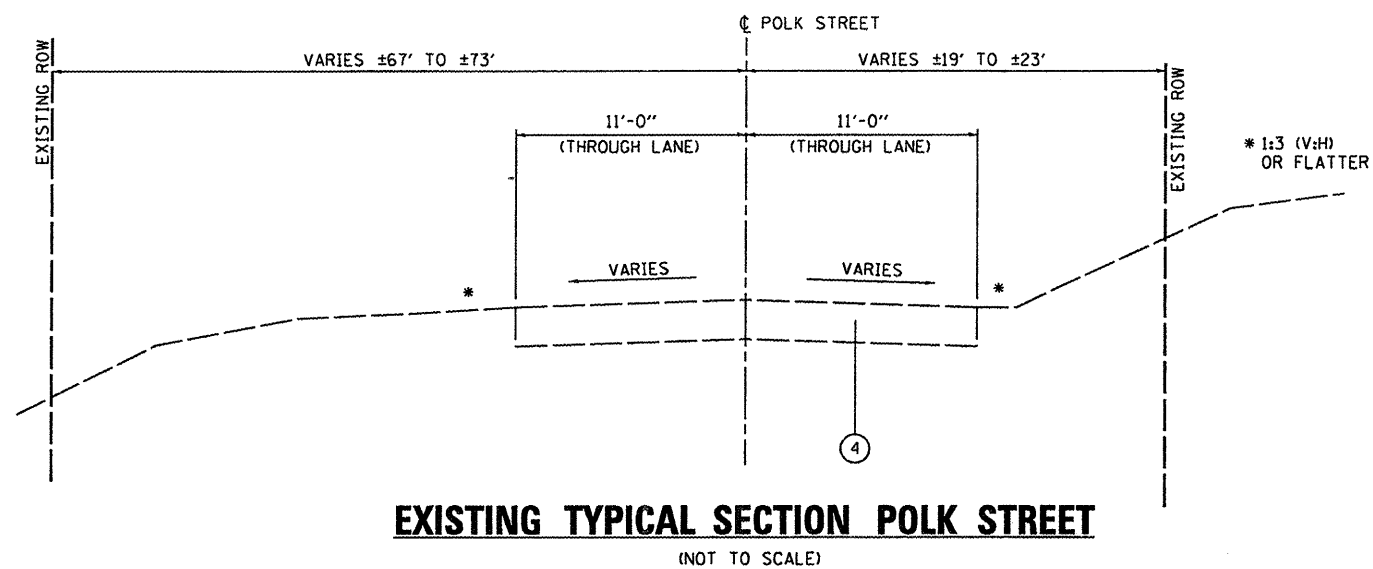
PERCENTAGE OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:

PV = 96% SU = 3% MU = 1%

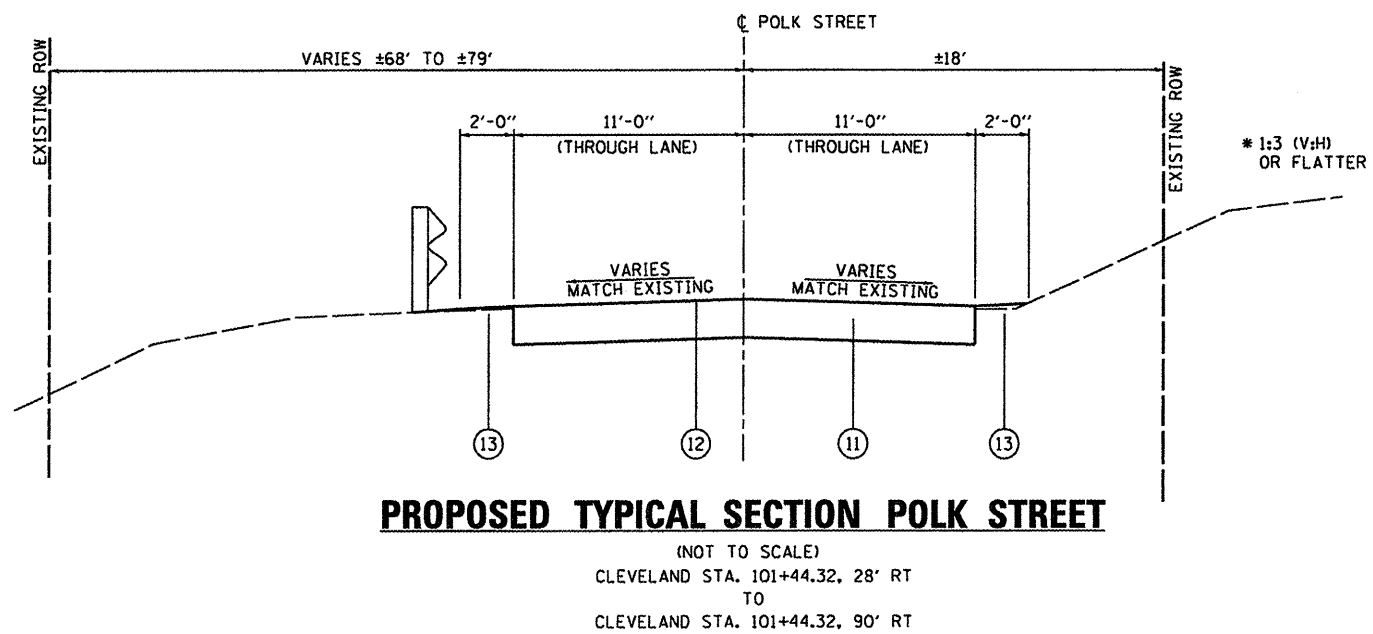
TRAFFIC FACTOR: Actual TF = 0.22

SUBGRADE SUPPORT RATING:

SSR = Poor (ASSUMED)



- LEGEND
- ① EXISTING HMA PAVEMENT
  - ② EXISTING CONCRETE CURB, 6"
  - ③ EXISTING PCC SIDEWALK
  - ④ EXISTING AGGREGATE BASE WITH BITUMINOUS SURFACE TREATMENT
  - ⑤ PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) (8")
  - ⑥ PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE A 4"
  - ⑦ PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 WITH TIE BAR GROUDED IN PLACE (SEE HIGHWAY STANDARD 606001)
  - ⑧ PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
  - ⑨ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 (2")
  - ⑩ PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH
  - ⑪ PROPOSED AGGREGATE BASE COURSE, TYPE A 8"
  - ⑫ PROPOSED BITUMINOUS SURFACE TREATMENT, A-3
  - ⑬ PROPOSED EARTH SHOULDER



|                      |                         |
|----------------------|-------------------------|
| FILE NAME =          | USER NAME = msaigrassar |
| 27855-sh-typical.dgn |                         |

|                             |         |
|-----------------------------|---------|
| DESIGNED -                  | DRAWN - |
| CHECKED -                   | DATE -  |
| PLOT SCALE = 40,0000' / IN. |         |
| PLOT DATE = 3/13/2009       |         |

|           |           |
|-----------|-----------|
| REVISED - | REVISED - |
| REVISED - | REVISED - |
| REVISED - | REVISED - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

|                                       |           |           |              |
|---------------------------------------|-----------|-----------|--------------|
| <b>TYPICAL SECTIONS - POLK STREET</b> |           |           |              |
| SCALE:                                | SHEET NO. | OF SHEETS | STA. TO STA. |

| F.A.U. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
|---|----------------|-----------|--------------|-----------|
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 6         |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |

**EARTHWORK SCHEDULE**

| STATION      | STATION   | EARTH EXCAVATION<br>(NOTE 1)<br>(CU YD) | EARTH EXCAVATION ADJUSTED FOR SHRINKAGE<br>(NOTE 2)<br>(CU YD) | EMBANKMENT<br>(NOTE 3)<br>(CU YD) | EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)<br>(NOTE 4)<br>(CU YD) |
|--------------|-----------|---|--|-----------------------------------|--|
| 100+25.00    | 101+30.47 | 66                                      | 50   | 18                                | 32   |
| 101+30.47    | 102+65.28 | 150                                     | 113  |                                   | 113  |
| 102+65.28    | 104+05.00 | 64                                      | 48   | 23                                | 25   |
| <b>TOTAL</b> |           | <b>280</b>                              | <b>211</b>   | <b>41</b>                         | <b>170</b>   |

**EARTHWORK NOTES:**

1. EARTH EXCAVATION QUANTITY INCLUDES CHANNEL CLEAN OUT AT BRIDGE.
2. ESTIMATED SHRINKAGE FACTOR = 25%.
3. APPROXIMATE EMBANKMENT QUANTITY IS SHOWN FOR INFORMATION ONLY.
4. APPROXIMATE EARTHWORK BALANCE IS SHOWN FOR INFORMATION ONLY.

**SEEDING SCHEDULE**

| STATION      | STATION      | SEEDING CL IA<br>(ACRE) | NITROGEN FERT NUTR<br>(POUND) | PHOSPHORUS FERT NUTR<br>(POUND) | POTASSIUM FERT NUTR<br>(POUND) | MULCH METHOD 2<br>(TON) | TEMP EROS CONTR SEED<br>(POUND) |
|--------------|--------------|-------------------------|-------------------------------|---------------------------------|--------------------------------|-------------------------|---------------------------------|
| LT 100+25.00 | LT 101+56.47 | 0.04                    | 4                             | 4                               | 4                              | 0.04                    | 12                              |
| RT 100+25.00 | RT 101+56.47 | 0.16                    | 14                            | 14                              | 14                             | 0.16                    | 48                              |
| LT 102+37.53 | LT 104+05.00 | 0.03                    | 3                             | 3                               | 3                              | 0.03                    | 9                               |
| RT 102+37.53 | RT 104+05.00 | 0.02                    | 2                             | 2                               | 2                              | 0.02                    | 6                               |
| <b>TOTAL</b> |              | <b>0.25</b>             | <b>23</b>                     | <b>23</b>                       | <b>23</b>                      | <b>0.25</b>             | <b>75</b>                       |

**CURB & GUTTER SCHEDULE**

| STATION      | STATION | OFFSET | CONC CURB REM<br>(FOOT) | CONC CURB TB<br>(FOOT) | COMB CC&G TB6.12<br>(FOOT) |
|--------------|---------|--------|-------------------------|------------------------|----------------------------|
| 100+08       | 101+32  | RT     | 130                     | 10.0                   | 136.5                      |
| 100+26       | 101+12  | LT     | 120                     | 12.0                   | 88.5                       |
| 101+20       | 101+30  | RT     |                         | 9.5                    |                            |
| 101+55       | 101+70  | RT     |                         | 22.0                   |                            |
| 101+70       | 101+84  | RT     | 13                      |                        |                            |
| 102+47       | 103+64  | LT     | 152                     | 10.5                   | 119.5                      |
| 102+83       | 104+05  | RT     | 130                     |                        | 121.5                      |
| <b>TOTAL</b> |         |        | <b>545</b>              | <b>64.0</b>            | <b>466.0</b>               |

**GUARDRAIL SCHEDULE**

| STATION      | STATION      | SPBGR TY A 9-FT POSTS<br>(FOOT) | TRAF BAR TERM T2<br>(EACH) | TRAF BAR TERM T5<br>(EACH) | TRAF BAR TRM T1 SPL TAN<br>(EACH) | GUARDRAIL REMOV<br>(FOOT) | SPBGR (SHORT RADIUS)<br>(FOOT) | GUARDRAIL MKR TYPE B<br>(EACH) | TERMINAL MARKER - DA<br>(EACH) |
|--------------|--------------|---------------------------------|----------------------------|----------------------------|-----------------------------------|---------------------------|--------------------------------|--------------------------------|--------------------------------|
| LT 100+43.98 | LT 100+54.92 | 25.0                            |                            |                            |                                   |                           |                                | 1                              |                                |
| LT 101+44    | LT 101+36    |                                 |                            |                            |                                   | 94                        |                                |                                |                                |
| LT 100+54.92 | LT 100+67.38 |                                 | 1                          |                            |                                   |                           |                                |                                |                                |
| RT 101+60.32 | RT 101+59.32 |                                 |                            |                            | 1                                 |                           |                                | 1                              | 1                              |
| RT 101+59.32 | RT 101+69.78 |                                 |                            |                            |                                   |                           | 25.0                           |                                |                                |
| RT 101+69.78 | RT 101+84.44 |                                 |                            | 1                          |                                   |                           |                                |                                |                                |
| RT 101+65    | RT 101+92    |                                 |                            |                            |                                   | 28                        |                                |                                |                                |
| LT 102+08    | LT 102+48    |                                 |                            |                            |                                   | 40                        |                                |                                |                                |
| RT 102+62    | RT 103+27    |                                 |                            |                            |                                   | 65                        |                                |                                |                                |
| <b>TOTAL</b> |              | <b>25.0</b>                     | <b>1</b>                   | <b>1</b>                   | <b>1</b>                          | <b>227</b>                | <b>25.0</b>                    | <b>2</b>                       | <b>1</b>                       |

**PAVEMENT SCHEDULE**

| STATION      | STATION   | SUB GRAN MAT A 4<br>(SQ YD) | AGG BASE CSE A 8<br>(SQ YD) | BIT MATLS PR CT<br>(GALLON) | BIT MATLS C&S CT<br>(GALLON) | COVER COAT AGG<br>(TON) | SEAL COAT AGG<br>(TON) | HMA SC "C" N70<br>(TON) | PROTECTIVE COAT<br>(SQ YD) | BR APPR PVT CON (PCC)<br>(SQ YD) | PAVEMENT REMOVAL<br>(SQ YD) | HMA SURF REM VAR DP<br>(SQ YD) |
|--------------|-----------|-----------------------------|-----------------------------|-----------------------------|------------------------------|-------------------------|------------------------|-------------------------|----------------------------|----------------------------------|-----------------------------|--------------------------------|
| 100+25.00    | 100+75.00 | 35                          |                             |                             |                              |                         |                        | 16                      |                            | 192                              | 268                         | 139                            |
| 100+75.00    | 101+30.47 | 226                         |                             |                             |                              |                         |                        |                         | 192                        | 192                              | 232                         |                                |
| 102+65.28    | 103+20.00 | 177                         |                             |                             |                              |                         |                        |                         | 146                        | 146                              |                             |                                |
| 103+20.00    | 104+05.00 | 37                          |                             |                             |                              |                         |                        | 29                      |                            |                                  |                             | 259                            |
| POLK STREET  |           |                             | 152                         | 62                          | 160                          | 3                       | 2                      |                         |                            |                                  |                             |                                |
| <b>TOTAL</b> |           | <b>475</b>                  | <b>152</b>                  | <b>62</b>                   | <b>160</b>                   | <b>3</b>                | <b>2</b>               | <b>45</b>               | <b>338</b>                 | <b>338</b>                       | <b>500</b>                  | <b>398</b>                     |

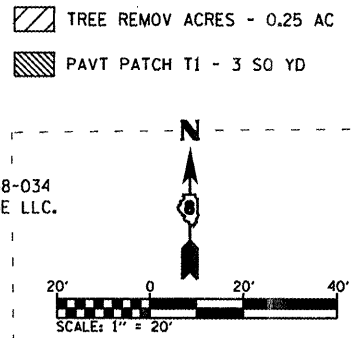
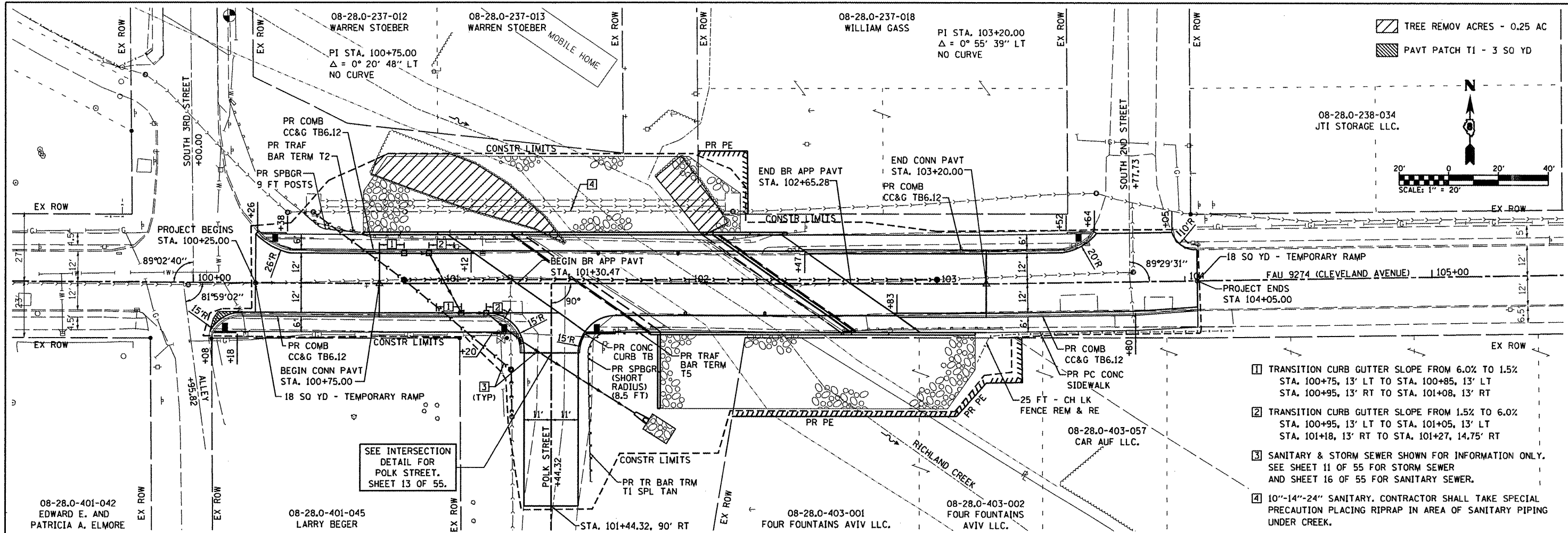
**SIDEWALK SCHEDULE**

| STATION      | STATION | OFFSET | PC CONC SIDEWALK 4<br>(NOTE 1)<br>(SQ FT) | DETECTABLE WARNINGS<br>(SQ FT) | SIDEWALK REM<br>(SQ FT) |
|--------------|---------|--------|---|--------------------------------|-------------------------|
| 100+08       | 101+30  | RT     | 686                                       | 12                             | 590                     |
| 101+62       | 101+85  | RT     |   | 6                              | 90                      |
| 100+27       | 101+11  | LT     | 450                                       | 6                              | 495                     |
| 102+85       | 104+05  | RT     | 702                                       |                                | 975                     |
| 102+46       | 103+63  | LT     | 701                                       | 6                              | 750                     |
| <b>TOTAL</b> |         |        | <b>2,539</b>                              | <b>30</b>                      | <b>2,900</b>            |

**SIDEWALK NOTES:**

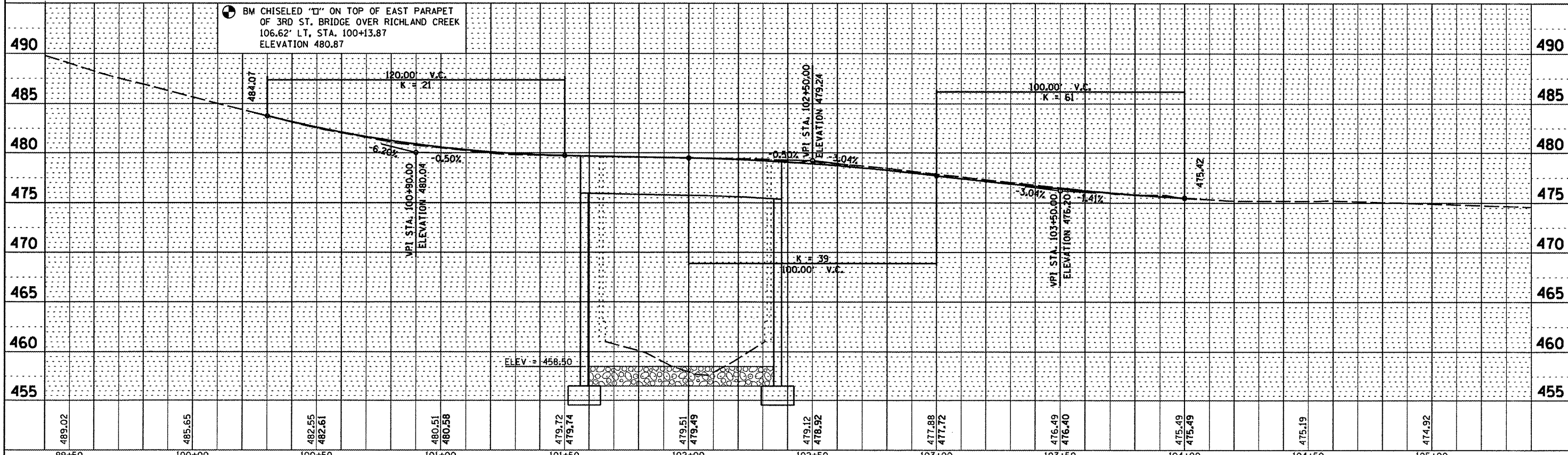
1. SIDEWALK RAMPS ACCESSIBLE TO THE DISABLED ARE REQUIRED. SEE PLAN SHEETS FOR LOCATIONS AND TYPES. SEE HIGHWAY STANDARD 424001 FOR SIDEWALK RAMP DETAILS.

|           |      |
|-----------|------|
| PLAN      | DATE |
| BY        |      |
| REVISED   |      |
| NOTED     |      |
| FILE NAME |      |



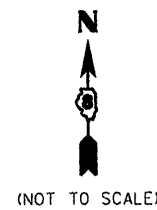
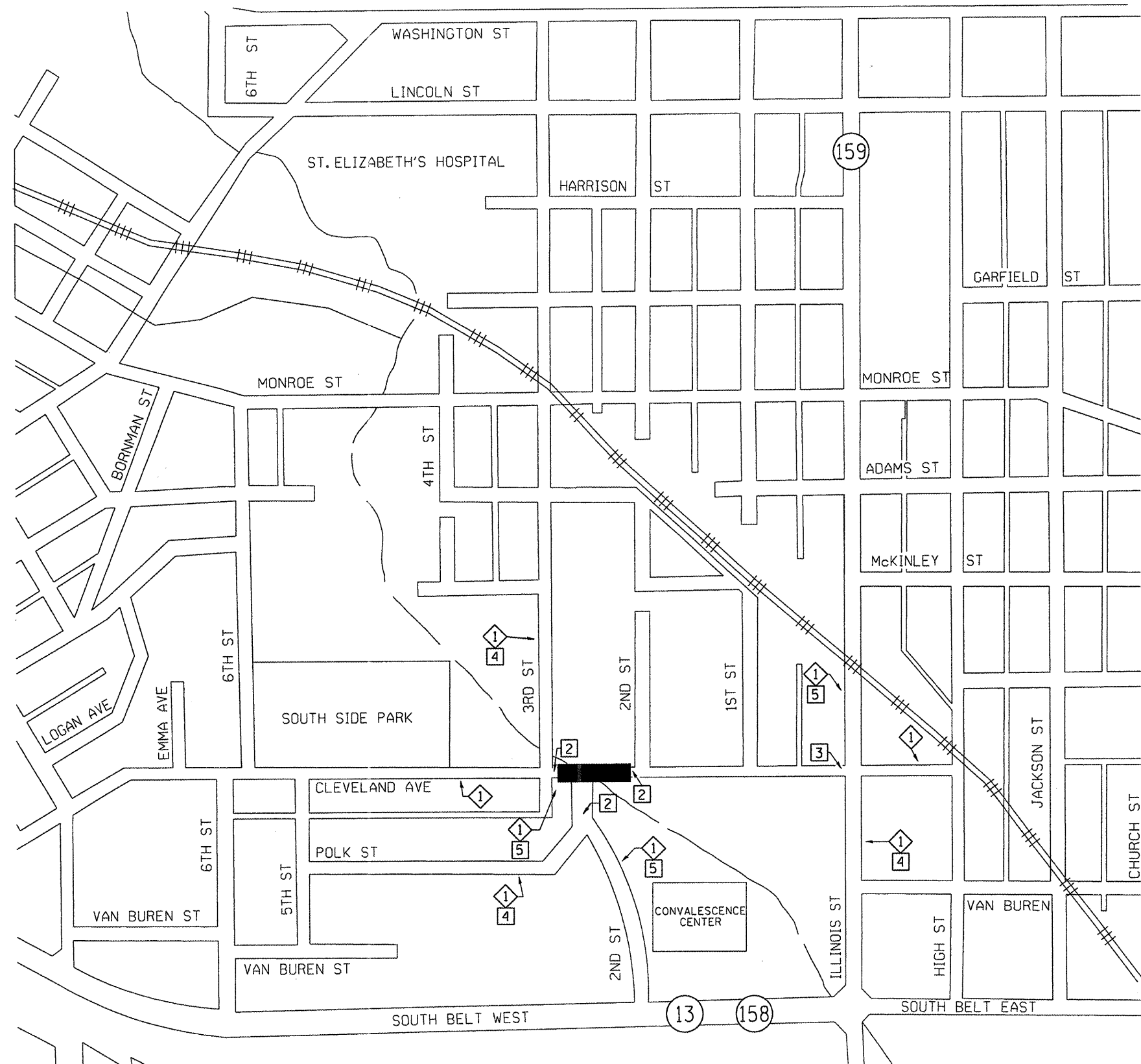
- 1 TRANSITION CURB GUTTER SLOPE FROM 6.0% TO 1.5% STA. 100+75, 13' LT TO STA. 100+85, 13' LT STA. 100+95, 13' RT TO STA. 101+08, 13' RT
- 2 TRANSITION CURB GUTTER SLOPE FROM 1.5% TO 6.0% STA. 100+95, 13' LT TO STA. 101+05, 13' LT STA. 101+18, 13' RT TO STA. 101+27, 14.75' RT
- 3 SANITARY & STORM SEWER SHOWN FOR INFORMATION ONLY. SEE SHEET 11 OF 55 FOR STORM SEWER AND SHEET 16 OF 55 FOR SANITARY SEWER.
- 4 10"-14"-24" SANITARY. CONTRACTOR SHALL TAKE SPECIAL PRECAUTION PLACING RIPRAP IN AREA OF SANITARY PIPING UNDER CREEK.

|           |      |
|-----------|------|
| PROFILE   | DATE |
| BY        |      |
| REVISED   |      |
| NOTED     |      |
| FILE NAME |      |



|                                 |                        |             |               |   |                               |                     |                                  |   |                 |                    |  |
|---------------------------------|------------------------|-------------|---------------|---|-------------------------------|---------------------|----------------------------------|---|-----------------|--------------------|--|
| FILE NAME: 27855-sh1-plnprf.dgn | USER NAME: msaigrasser | DESIGNED: - | REVISED: -    | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>PLAN AND PROFILE SHEET</b> | F.A.J.I. RTE. 9274  | SECTION 04-00202-00-BR           | COUNTY ST. CLAIR                                | TOTAL SHEETS 55 | SHEET NO. 8        |  |
| PLOT SCALE: 40,000' / IN.       | CHECKED: -             | REVISED: -  | SCALE: 1"=20' |   |                               | SHEET NO. OF SHEETS | STA. 100+25.00 TO STA. 104+05.00 | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                 | CONTRACT NO. 97369 |  |
| PLOT DATE: 5/8/2009             | DATE: -                | REVISED: -  |               |   |                               |                     |                                  |   |                 |                    |  |
|                                 |                        |             |               |   |                               |                     |                                  |   |                 |                    |  |





**NOTES**

1. TYPE III BARRICADES AND ROAD CLOSURE SIGNS SHALL BE POSITIONED AS SHOWN, IN ACCORDANCE WITH HIGHWAY STANDARD 701901 AND AS DIRECTED BY THE ENGINEER.
2. TYPE A LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE USED ON EACH SIGN IN ADVANCE OF THE WORK DURING HOURS OF DARKNESS.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ENTRANCES AT ALL TIMES.
4. LONGITUDINAL DISTANCES MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
5. ALL TYPE III BARRICADES UTILIZED FOR ROAD CLOSURES SHALL HAVE A LOW INTENSITY FLASHING LIGHT MOUNTED ON TOP OF EACH BARRICADE.
6. EXACT LOCATION OF ALL WARNING SIGNS AND BARRICADES SHALL BE STAKED IN THE FIELD FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
7. ALL RESIDENTS FRONTING THE PROJECT SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ROAD CLOSURES AFFECTING THEIR ACCESS.

**LEGEND**

- ◇ W20-310)-48 (ROAD CLOSED AHEAD)
- 2 TYPE III BARRICADES W/ R-11-2-4830 (ROAD CLOSED) SIGN AND TYPE A LOW INTENSITY FLASHING LIGHTS
- 3 TYPE III BARRICADES W/ R-11-4-6030 (ROAD CLOSED TO THRU TRAFFIC) SIGN
- 4 W16-6pL(O)-2418
- 5 W16-6pR(O)-2418
- WORK ZONE

FILE NAME = 27855-sht-staging.dgn

USER NAME = msaigraser  
 PLOT SCALE = 40.0000' / IN.  
 PLOT DATE = 3/13/2009

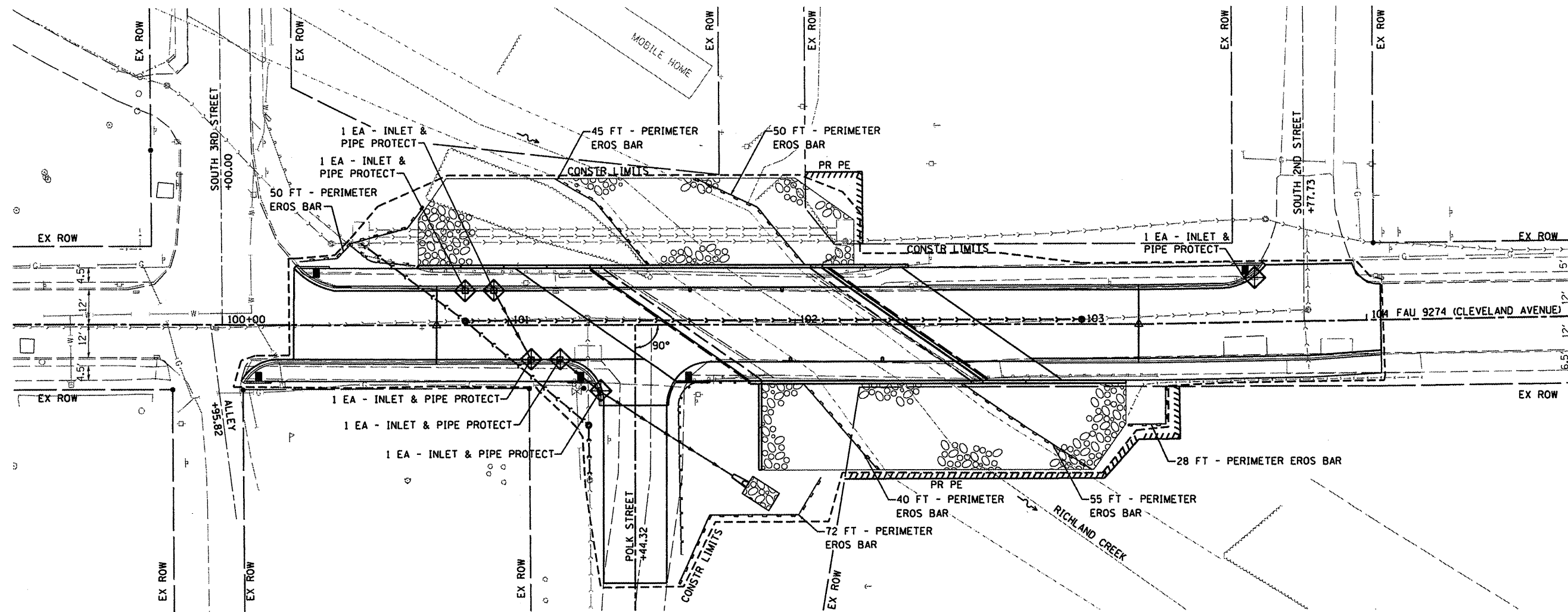
|            |           |
|------------|-----------|
| DESIGNED - | REVISED - |
| DRAWN -    | REVISED - |
| CHECKED -  | REVISED - |
| DATE -     | REVISED - |



**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

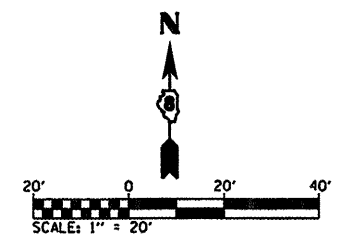
**TRAFFIC CONTROL PLAN**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 9         |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |



-  PERIMETER EROSION BARRIER
-  INLET AND PIPE PROTECTION



|                                   |                                |                       |                        |
|-----------------------------------|--------------------------------|-----------------------|------------------------|
| FILE NAME =<br>27855-shr-eros.dgn | USER NAME =<br>maisiagraser    | DESIGNED -<br>DRAWN - | REVISED -<br>REVISED - |
|                                   | PLOT SCALE =<br>48.0000' / IN. | CHECKED -<br>DATE -   | REVISED -<br>REVISED - |
|                                   | PLOT DATE =<br>3/13/2009       |                       |                        |

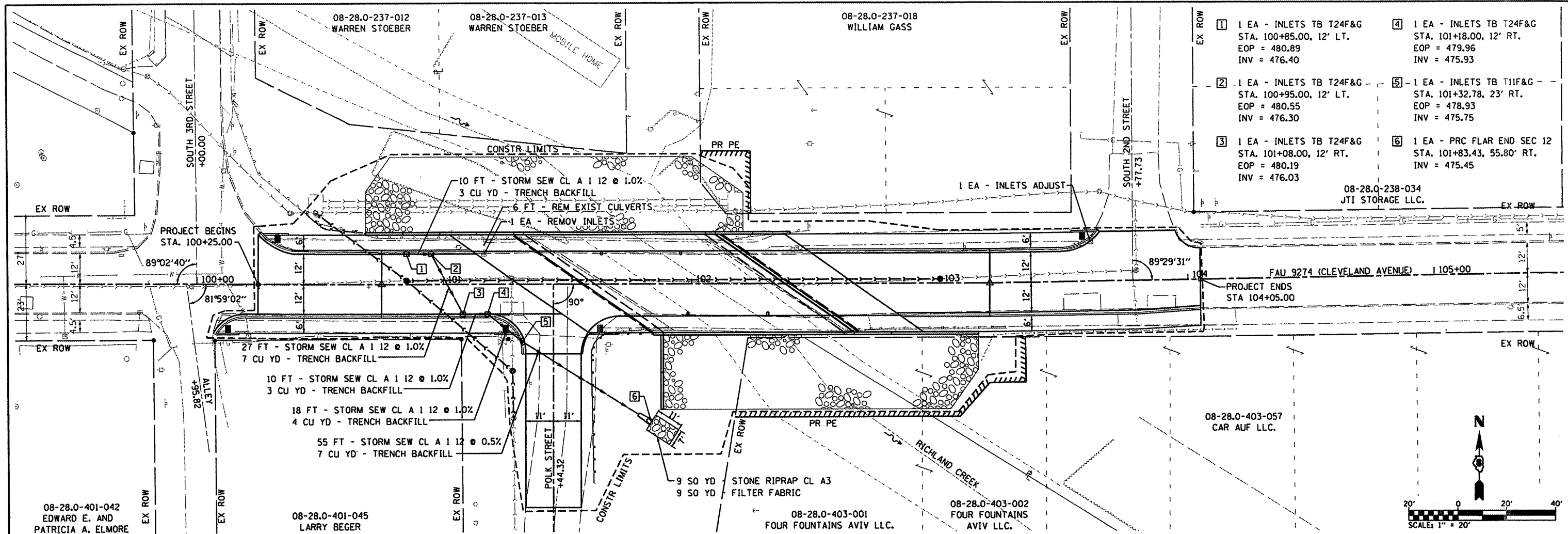
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|                             |           |    |                                  |
|-----------------------------|-----------|----|----------------------------------|
| <b>EROSION CONTROL PLAN</b> |           |    |                                  |
| SCALE:                      | SHEET NO. | OF | SHEETS                           |
|                             |           |    | STA. 100+25.00 TO STA. 104+05.00 |

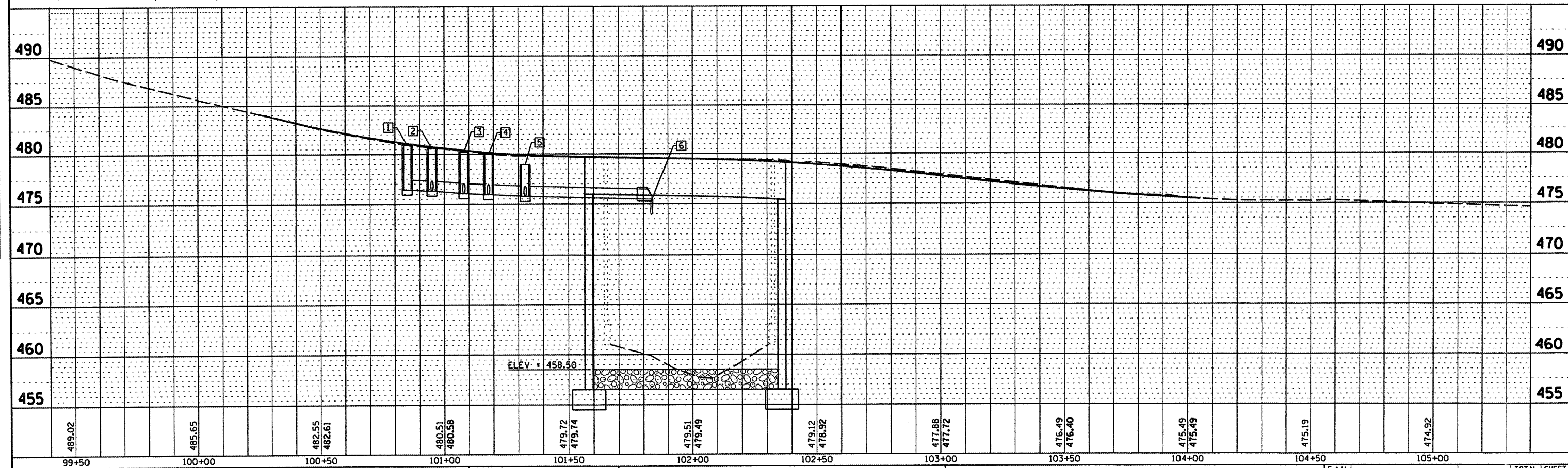
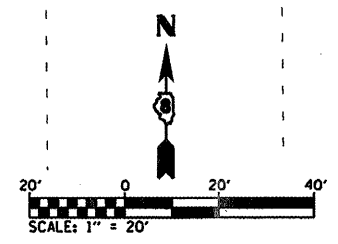
|   |                |           |                 |              |
|---|----------------|-----------|-----------------|--------------|
| F.A.I.<br>RTE.                                  | SECTION        | COUNTY    | TOTAL<br>SHEETS | SHEET<br>NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55              | 10           |
| CONTRACT NO. 97369                              |                |           |                 |              |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |                 |              |

|               |  |
|---------------|--|
| DATE          |  |
| BY            |  |
| SURVEYED      |  |
| ALIGNED       |  |
| CHECKED       |  |
| NO. OF PAGES  |  |
| NO. OF SHEETS |  |
| NO.           |  |

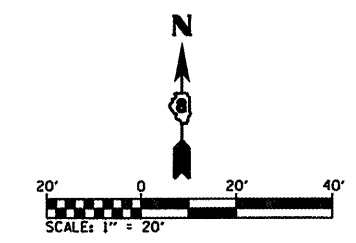
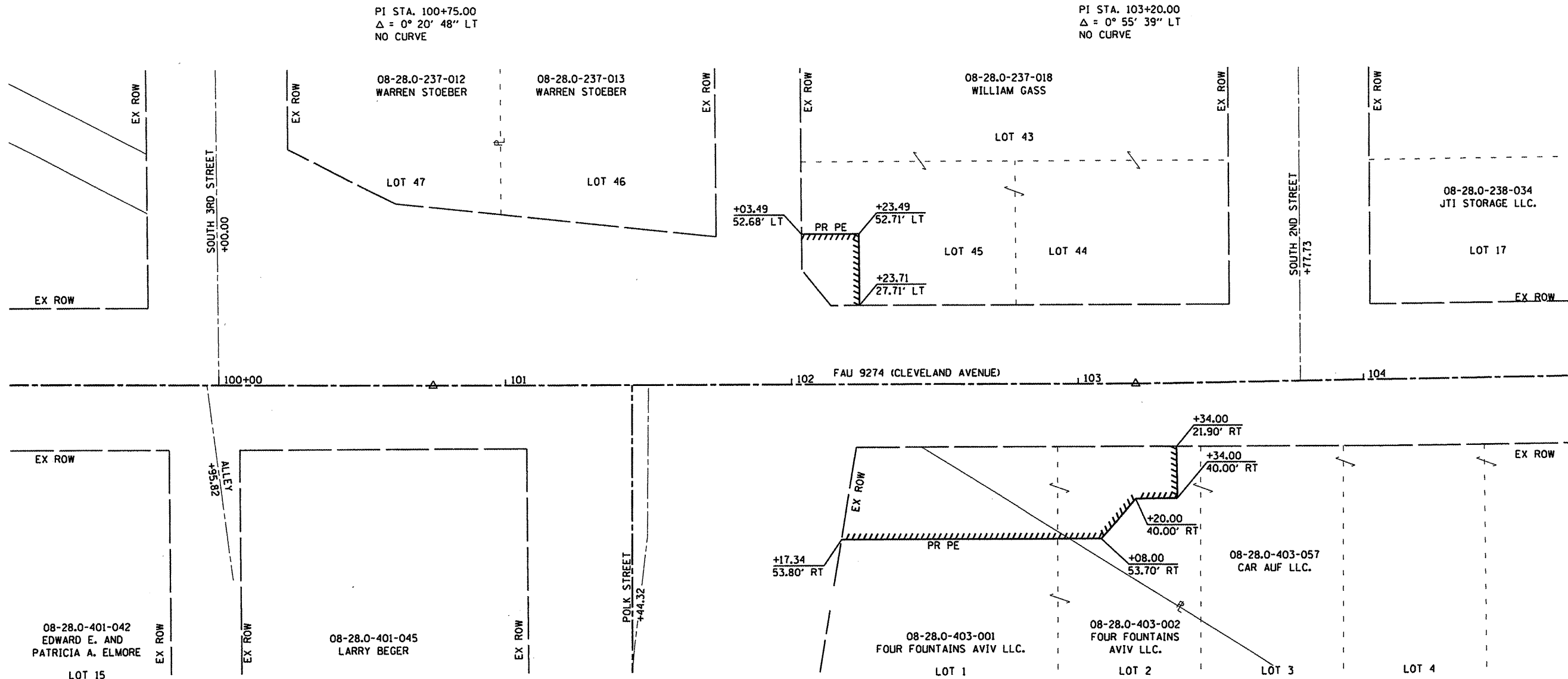
|               |  |
|---------------|--|
| DATE          |  |
| BY            |  |
| SURVEYED      |  |
| PLOTTED       |  |
| CHECKED       |  |
| NO. OF PAGES  |  |
| NO. OF SHEETS |  |
| NO.           |  |



- 1 1 EA - INLETS TB T24F&G  
STA. 100+85.00, 12' LT.  
EOP = 480.89  
INV = 476.40
- 2 1 EA - INLETS TB T24F&G  
STA. 100+95.00, 12' LT.  
EOP = 480.55  
INV = 476.30
- 3 1 EA - INLETS TB T24F&G  
STA. 101+08.00, 12' RT.  
EOP = 480.19  
INV = 476.03
- 4 1 EA - INLETS TB T24F&G  
STA. 101+18.00, 12' RT.  
EOP = 479.96  
INV = 475.93
- 5 1 EA - INLETS TB T11F&G  
STA. 101+32.78, 23' RT.  
EOP = 478.93  
INV = 475.75
- 6 1 EA - PRC FLAR END SEC 12  
STA. 101+83.43, 55.80' RT.  
INV = 475.45



|                                      |                             |            |           |   |   |                     |                                  |                    |                        |                  |                 |              |
|--------------------------------------|-----------------------------|------------|-----------|---|---|---------------------|----------------------------------|--------------------|------------------------|------------------|-----------------|--------------|
| FILE NAME = 27855-sh-t-55p1npr.f.dgn | USER NAME = moisigresor     | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>STORM SEWER<br/>PLAN AND PROFILE SHEET</b>   |                     |                                  | F.A.U. RTE. 9274   | SECTION 04-00202-00-BR | COUNTY ST. CLAIR | TOTAL SHEETS 55 | SHEET NO. 11 |
|                                      | PLOT SCALE = 48.0000' / IN. | CHECKED -  | REVISED - |   | SCALE: 1"=20'                                   | SHEET NO. OF SHEETS | STA. 100+25.00 TO STA. 104+05.00 | CONTRACT NO. 97369 |                        |                  |                 |              |
|                                      | PLOT DATE = 3/13/2009       | DATE -     | REVISED - |   | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                     |                                  |                    |                        |                  |                 |              |
|                                      |                             |            |           |   |   |                     |                                  |                    |                        |                  |                 |              |



|                                      |                                |                       |                        |
|--------------------------------------|--------------------------------|-----------------------|------------------------|
| FILE NAME =<br>27855-sht-rowplan.dgn | USER NAME =<br>maisiegrosser   | DESIGNED -<br>DRAWN - | REVISED -<br>REVISED - |
|                                      | PLOT SCALE =<br>40.0000' / IN. | CHECKED -             | REVISED -              |
|                                      | PLOT DATE =<br>3/13/2009       | DATE -                | REVISED -              |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

| R.O.W. PLAN SHEET |           |           |              |
|-------------------|-----------|-----------|--------------|
| SCALE:            | SHEET NO. | OF SHEETS | STA. TO STA. |

| F.A.U. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
|---|----------------|-----------|--------------|-----------|
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 12        |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |



# SANITARY SEWER GENERAL NOTES

## A. GENERAL REQUIREMENTS

1. SEWER LINE INSTALLATION SHALL NOT COMMENCE UNTIL A COMPLETE SET OF PLANS HAVE BEEN APPROVED BY THE CITY OF BELLEVILLE AND ARE ON FILE IN THE OFFICE OF THE WASTEWATER SUPERINTENDENT. PRIOR TO COMMENCEMENT OF ANY WORK, THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE PLANS WITH THE ACTUAL DIMENSIONS AND CONDITIONS OF THE SITE. THE GENERAL CONTRACTOR MUST VERIFY THE ENGINEER'S LINES AND GRADES. IF A DISCREPANCY OCCURS FROM WHAT IS SHOWN ON THE PLANS, STANDARD SPECIFICATIONS, AND/OR DETAILS, THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE AFFECTED WORK. FAILING TO DO SO WILL BE CONSIDERED AS THE GENERAL CONTRACTOR HAVING PROCEEDED AT HIS OWN RISK AND EXPENSE.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEER AND THE WASTEWATER DIVISION AT LEAST 48 HOURS PRIOR TO INSTALLING SANITARY SEWERS, AND BEFORE PERFORMING ANY SANITARY SEWER TESTING. ALL TESTS SHALL BE WITNESSED BY THE ENGINEER.
3. THE CONTRACTOR WILL BE REQUIRED TO JET AND CLEAN ALL STORM AND SANITARY SEWERS THAT COLLECT MUD, DEBRIS, CONCRETE, BUILDING SUPPLIES, ETC. WHILE THE WORK IS UNDER THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL CAPPED SERVICE LATERALS THROUGHOUT CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL MANHOLE ELEVATIONS THROUGHOUT CONSTRUCTION. NO MANHOLE COVERS CAN BE COVERED. SANITARY SEWER MANHOLE RIM ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE. FINAL RIM ELEVATIONS SHALL BE SET TO MATCH THE SURROUNDING FINISH GRADES. ALL COSTS ASSOCIATED WITH THE FINAL RIM ADJUSTMENTS SHALL BE INCIDENTAL TO THE COST OF THE AFFECTED MANHOLE. THE OFFSETS TO ALL MANHOLES ARE GIVEN TO THE CENTER OF THE OPENING AT THE BASE OF THE FRAME AND GRATE OR LID. CONCENTRIC STRUCTURES WERE ASSUMED WHEN CALCULATING THESE DIMENSIONS. LOCATION SIGNS FOR MANHOLES TO BE PROVIDED BY CONTRACTOR.
6. ALL MATERIALS, INSTALLATION, AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, FIFTH EDITION, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH, THE ILLINOIS PLUMBING CODE, AND THE CITY OF BELLEVILLE MUNICIPAL CODE. THE CITY OF BELLEVILLE ACCEPTS NO RESPONSIBILITY FOR THE PROJECT DESIGN AND/OR CONSTRUCTION OF THIS PROJECT NOR ANY OTHER DESIGN CONSIDERATION OR STANDARD UTILIZED IN THIS PROJECT. THE PERMITTEE AND THE DESIGN ENGINEER ARE RESPONSIBLE FOR MEETING OR EXCEEDING ALL PERTINENT FEDERAL, STATE OR LOCAL CODES OR STANDARDS BOTH ON AND OFF THE SITE.
7. ALL TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE CITY OF BELLEVILLE ACCEPTS THE PROJECT IMPROVEMENTS. ALL WARNING SIGNS, TRAFFIC CONTROL SIGNS, AND REGULATORY SIGNS SHALL CONFORM TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
8. CONTRACTOR TO LEAVE SITE IN A CONDITION EQUAL TO PRE-CONSTRUCTION CONDITIONS. THE CONTRACTOR SHALL NOT DISTURB PROPERTY OUTSIDE OF THIS AREA.
9. ALL WORK AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE RIGHT-OF-WAY AND EASEMENT, IF APPLICABLE. THE CONTRACTOR SHALL NOT DISTURB PROPERTY OUTSIDE OF THIS AREA. SHOULD PROPERTY OUTSIDE THE RIGHT-OF-WAY BE DISTURBED OR DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER, WITH NO ADDITIONAL COMPENSATION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL UNDERGROUND FACILITIES, UTILITIES AND DRAIN TILE DAMAGED DURING CONSTRUCTION.
11. CONTRACTOR SHALL SUPPLY SUBMITTALS FOR THE ENGINEER'S AND CITY'S APPROVAL, THREE COPIES WILL BE RETAINED BY THE ENGINEER.
12. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS WHICH SHALL BE SUBMITTED TO THE CITY ENGINEER'S OFFICE AND WASTEWATER DIVISION DEPARTMENT. SEWER CONNECTIONS SHALL BE RECORDED BY MEASURING THE NUMBER OF FEET FROM THE DOWNSTREAM MANHOLE, AND SHALL INDICATE THE LENGTH OF OFFSET FROM THE SANITARY SEWER MAIN AND DEPTH OF LATERAL AT ITS TERMINUS POINT. ALL LATERALS SHALL BE FURNISHED WITH AN AIR TIGHT CAP TO FACILITATE AIR TESTING. THE PVC LATERAL SHALL BE EXTENDED FOUR (4) FEET ABOVE THE FINISHED GRADE GROUND SURFACE TO ALLOW RELOCATION OF THE LATERAL IN THE FUTURE. ALL STRUCTURES SHALL HAVE RECORD ELEVATIONS.
13. SANITARY SEWER INVERTS SHOWN ON THE PLANS HAVE BEEN CALCULATED TO THE CENTER OF THE STRUCTURE. THE SANITARY SEWER SLOPES SHOWN ON THE PLANS IS THE PERCENT GRADE FROM CENTER TO CENTER OF STRUCTURE. THE LENGTH OF SANITARY SEWERS SHOWN ON THE PLANS IS THE DISTANCE FROM CENTER TO CENTER OF STRUCTURE.
14. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.

## B. SPECIFICATIONS

1. ALL SANITARY SEWERS SHALL BE OF THE MATERIAL SPECIFIED ON THE PLANS. ALL PVC SANITARY SEWER PIPES SHALL BE PVC SDR-26 MEETING THE REQUIREMENTS OF ASTM D3034 WITH ELASTOMERIC JOINTS MEETING THE REQUIREMENTS OF ASTM D3212 AND F477. ALL DUCTILE IRON SANITARY SEWER PIPES SHALL BE DUCTILE IRON MEETING THE REQUIREMENTS OF AWWA C600-93 WITH MECHANICAL JOINTS MEETING THE REQUIREMENTS OF AWWA C111 AND C600. LUBRICANT SHALL BE SUITABLE FOR LUBRICATING THE JOINT COMPONENTS. IT SHALL HAVE NO DETERIORATING EFFECT ON THE GASKET OR PIPE MATERIAL AND NO DETRIMENTAL EFFECT ON THE QUALITY OF WASTEWATER TO BE CARRIED BY THE PIPE.
2. BEDDING OF THE PIPE AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH ASTM D2321-89 CLASS IA (FOR FLEXIBLE PIPE) OR ASTM C12 CLASS B (FOR RIGID PIPE), THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS AND AS SHOWN IN THE PLANS. GRANULAR TRENCH BACKFILL SHALL BE USED AS INDICATED ON THE PLANS AND WHEN THE EDGE OF ANY TRENCH IS WITHIN 2 FT. OF ANY PAVEMENT, CURB, SIDEWALK, OR OTHER STRUCTURE. TRENCH BACKFILL SHALL BE COMPACTED WITH A ROLLER, VIBRATORY PLATE, OR OTHER COMPACTING DEVICE IN 12-INCH LIFTS.
3. ALL SANITARY SEWER MANHOLES SHALL BE PRECAST CONCRETE TYPE A, MINIMUM 48-INCH IN DIAMETER WITH GASKETED INVERTS, ECCENTRIC CONES, AND STEPS IN ACCORDANCE WITH STANDARD DRAWING NO. 3 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS. CONSTRUCTED OF PRECAST CONCRETE AND CONFORM TO ASTM CASTINGS ASTM A48-83 CLASS 35B, OR ASTM A536-80 GRADE 65-45-12 FOR DUCTILE-IRON. CONES AND SECTIONS SHALL BE SUBSTANTIALLY FREE FROM FRACTURES, LARGE OR DEEP CRACKS AND SURFACE ROUGHNESS. JOINTS SHALL BE SEALED WITH A PRE-MOLDED JOINT SEALER AND WRAPPED ON THE OUTSIDE WITH A 9" CONCRETE JOINT WRAP. SANITARY SEWER MANHOLE LIDS SHALL HAVE THE WORD "SANITARY" CAST IN THE FACE AND BE FURNISHED WITH A CONCEALED "PICK HOLE." SANITARY SEWER MANHOLE FRAME AND GRATES SHALL BE NEENAH R-1772.
4. MANHOLES SHALL BE CONSTRUCTED WITH A SILICAFUME ADMIXTURE SPECIFICALLY TO PREVENT HYDROGEN SULFIDE CORROSION OF THE PRE-CAST CONCRETE. SUBMITTALS DETAILING THE TYPE OF SILICAFUME ADMIXTURE AND ITS SUITABILITY FOR THIS APPLICATION SHALL BE SUBMITTED TO THE ENGINEER AND WASTEWATER SUPERINTENDENT FOR APPROVAL.
5. SEWER PIPE CONNECTIONS SHALL BE FLEXIBLE WATER TIGHT CONNECTIONS CONFORMING WITH ASTM C-923 STANDARD SPECIFICATIONS FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE MANHOLE STRUCTURES AND PIPE. THE PRE-CAST BASE SECTION SHALL BE MONOLITHICALLY CONSTRUCTED WITH A PRE-CAST INVERT TO ALIGN ALL SEWER PIPES TO THE ELEVATIONS AS SHOWN ON THE PLANS.
6. IF A GASKETED CONNECTION DOES NOT EXIST, ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY MEANS OF A MECHANICAL CUTTING DEVICE. THE DEVICE SHALL LEAVE A ROUND SMOOTH HOLE, NO LARGER THAN 1/2" GREATER THAN THE OUTSIDE DIAMETER OF THE SANITARY SEWER PIPE TO BE INSERTED. THE CUTTING DEVICE SHALL ALSO BE CAPABLE OF FORMING/CUTTING THE NECESSARY CHANNEL WITHIN THE INTERIOR OF THE MANHOLE. NO PNEUMATIC JACK HAMMERS, HAND HELD SAWS, OR SLEDGE HAMMERS SHALL BE ALLOWED. THE OPENING SHALL BE SEALED WITH A LINK SEAL OR OTHER APPROVED MECHANICAL DEVICE.
7. WHEN CONNECTIONS ARE TO BE MADE TO EXISTING STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATIONS OF THE STRUCTURE PRIOR TO MAKING THE CONNECTION. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IF THE EXISTING STRUCTURES ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE DRAWINGS. ALL CONNECTIONS TO EXISTING STRUCTURES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR SANITARY SEWER TYPE AND SIZE SPECIFIED.
8. PROTECTION OF THE WATER MAIN FROM SANITARY SEWER MAINS IS REQUIRED AND SHALL BE MADE IN ACCORDANCE WITH LATEST EDITION OF TITLE 25: ENVIRONMENTAL PROTECTION, SUBTITLE F: PUBLIC WATER SUPPLIES, CHAPTER 11: ENVIRONMENTAL PROTECTION AGENCY, SECTION 653.119: PROTECTION OF WATER MAIN AND WATER SERVICE LINES. THE WATER AND SEWER MAIN AS DELINEATED ON THE DRAWINGS SHALL BE CONSTRUCTED WITH A MINIMUM OF 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION IN ACCORDANCE WITH ARTICLE 41-2.01B AND 41-2.01C OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.
9. NO WATER PIPE SHALL PASS THROUGH OR INTO CONTACT WITH ANY PART OF A SEWER MANHOLE.
10. PVC PIPE SHALL BE STORED UNDER COVER TO PROTECT FROM ULTRAVIOLET LIGHT.
11. CASING SPACERS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), NON-METALLIC AND MOLDED IN SEGMENTS FOR FIELD ASSEMBLY. THE CASING SPACER SHALL HAVE INTEGRALLY MOLDED RUNNERS EXTENDING BEYOND THE BELL, MECHANICAL JOINT, OR RESTRAINER OF THE CARRIER PIPE. INDIVIDUAL SEGMENTS SHALL HAVE A SOLID CORE AND EACH RUNNER SHALL BE WITHIN 1.5" OF THE CASING PIPE TO CENTER THE CARRIER PIPE WITHIN THE CASING. CASING SPACERS SHALL BE SPACED WITHIN TWO FEET OF BOTH ENDS OF EACH INDIVIDUAL CASING PIPE SECTION WITH ALL REMAINING SPACERS ASSEMBLED ALONG THE LENGTH OF THE PIPE SECTION AT AN EQUAL DISTANCE APART NOT EXCEEDING EIGHT FEET IN LENGTH. ALL SPACERS SHALL BE SUPPLIED WITH A MOLDED THERMOPLASTIC RUBBER NON-SLIP BUTTON COMPRISED OF PLIABLE MATERIAL HAVING A HIGH COEFFICIENT OF FRICTION THAT IS DESIGNED TO GRIP ALL TYPES OF PIPE.
12. CASING SPACER END SEALS SHALL BE A PULL-OVER TYPE AND MADE FROM NEOPRENE WITH T-304 STAINLESS STEEL BANDS FOR SECURING THE ENDS OF THE END SEAL TO THE CASING PIPE AND CARRIER PIPE.

FILE NAME =  
27855-shr-SANgennote.dgn

|                             |            |           |
|-----------------------------|------------|-----------|
| USER NAME = maisigroser     | DESIGNED - | REVISED - |
| PLOT SCALE = 48.0000' / IN. | DRAWN -    | REVISED - |
| PLOT DATE = 3/13/2009       | CHECKED -  | REVISED - |
|                             | DATE -     | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|                                     |           |    |        |              |
|-------------------------------------|-----------|----|--------|--------------|
| <b>SANITARY SEWER GENERAL NOTES</b> |           |    |        |              |
| SCALE:                              | SHEET NO. | OF | SHEETS | STA. TO STA. |

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.J. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 14        |
| <b>CONTRACT NO. 97369</b>                       |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |

**SANITARY SEWER GENERAL NOTES (CONTINUED)**

**C. TESTING**

1. A VISUAL INSPECTION, INCLUDING LAMPING, SHALL BE MADE OF ALL GRAVITY FLOW LINES; AND ALL OBSTRUCTIONS SHALL BE REMOVED. ANY SEWER SHOWING LESS THAN ONE-HALF THE CROSS SECTIONAL AREA OF THE PIPE BETWEEN ADJACENT MANHOLES OR OTHER UNDUE DEVIATION FROM LINE AND GRADE SHALL BE CONSIDERED AS UNSATISFACTORY AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
2. TESTING OF SANITARY SEWERS FOR ACCEPTABILITY SHALL BE CONDUCTED BY THE EXFILTRATION BY AIR TESTING TECHNIQUE. THE CONTRACTOR SHALL BE REQUIRED TO TEST ALL GRAVITY SEWER MAINS. ALL TESTING SHALL BE IN CONFORMANCE WITH ARTICLE 31-1.11 METHOD A, EXFILTRATION OF AIR UNDER PRESSURE, OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS. THE CITY REQUIRES THAT PRESSURE "HOLD" IN THE PIPE FOR DOUBLE THE TIME LIMIT LISTED IN THE STANDARD SPECIFICATIONS.
3. THE GRAVITY SEWER LINES (EXCLUDING SERVICE LATERALS) SHALL BE TESTED FOR EXCESS DEFLECTION BY PULLING A MANDREL THROUGH THE PIPE FROM MANHOLE TO MANHOLE. TEST SHALL BE IN ACCORDANCE WITH ARTICLE 31-1.11 METHOD D, DEFLECTION FOR FLEXIBLE THERMOPLASTIC PIPE, OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.
4. THE OUTSIDE DIAMETER OF THE TEST MANDREL SHALL BE EQUAL TO NINETY-FIVE PERCENT (95%) OF THE ORIGINAL INSIDE DIAMETER OF THE PIPE BEING USED. THE INDIVIDUAL LINES TO BE TESTED SHALL BE SO TESTED NO SOONER THAN 30 DAYS AFTER THEY HAVE BEEN INSTALLED. WHEREVER POSSIBLE AND PRACTICAL THE TESTING SHALL INITIATE AT THE DOWNSTREAM LINES AND PROCEED TOWARDS THE UPSTREAM LINES.
5. WHERE DEFLECTION IS FOUND TO BE IN EXCESS OF 5% OF THE ORIGINAL PIPE DIAMETER, THE CONTRACTOR SHALL EXCAVATE TO THE POINT OF EXCESS DEFLECTION AND CAREFULLY COMPACT AROUND THE POINT WHERE EXCESS DEFLECTION WAS FOUND. THE LINE SHALL BE RETESTED FOR DEFLECTION. HOWEVER, SHOULD THE DEFLECTED PIPE FAIL TO RETURN TO THE ORIGINAL SIZE (INSIDE DIAMETER) AFTER THE CORRECTIVE MEASURES, THE LINE SHALL BE REPLACED. THE ENTIRE SYSTEM SHALL BE TESTED. DEFLECTION TESTING AND POSSIBLE REPAIR AND REPLACEMENT, AS STATED ABOVE, SHALL BE INCIDENTAL TO THE CONSTRUCTION OF SEWER PIPE; AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED. ANY REPAIRED SECTIONS WILL BE REQUIRED TO BE VIDEO INSPECTED AT CONTRACTORS COST.
6. LEAK TESTING FOR MANHOLES SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH ASTM C1244-93 "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE PRESSURE (VACUUM) TEST". CONTRACTOR SHALL REPAIR OR REPLACE ANY LINE OR STRUCTURE WHICH FAILS ANY OF THE REQUIRED TESTS, AND RETEST. ALL TESTS SHALL BE WITNESSED BY THE ENGINEER. CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF ANY TESTING TO BE PERFORMED. ALL SANITARY SEWER MANHOLES SHALL BE VACUUM TESTED.

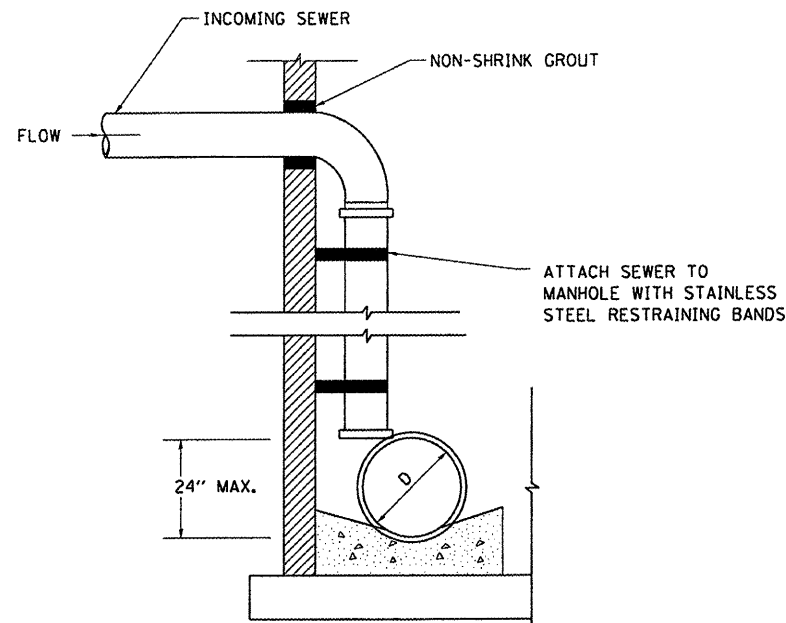
**D. CONSTRUCTION**

1. CONTRACTOR SHALL NOTIFY THE CITY OF BELLEVILLE OF THE DATE AND SCHEDULE OF CONSTRUCTION.
  2. PROPER DEWATERING OF THE SEWER TRENCH IS THE RESPONSIBILITY OF THE CONTRACTOR. DEWATERING INTO THE CITY'S SEWER SYSTEM IS STRICTLY FORBIDDEN.
  3. THE CITY OF BELLEVILLE REQUIRES THAT THE PERMITTEE RETAIN A QUALIFIED LICENSED PROFESSIONAL ENGINEER TO OBSERVE THE SEWER CONSTRUCTION PERIODICALLY, TO DETERMINE CONFORMANCE WITH PLANS AND SPECIFICATIONS.
  4. WHENEVER PIPE LAYING IS NOT ACTIVELY IN PROGRESS, OPEN ENDS OF ALL INSTALLED PIPE AND FITTINGS SHALL BE FITTED WITH A WATERTIGHT PLUG.
- E. ACCEPTANCE**
- PRIOR TO ACCEPTING THE SANITARY SEWERS, THE FOLLOWING ITEMS SHALL BE COMPLETED/SUBMITTED:
1. JET CLEAN, AIR, MANDREL, AND MANHOLE TESTS COMPLETED AND RESULTS SUBMITTED. THESE MUST BE SEALED BY A PROFESSIONAL ENGINEER.
  2. A NOTARIZED CERTIFICATION, TO BE DELIVERED TO THE OFFICE OF THE WASTEWATER SUPERINTENDENT, BY THE INSTALLING CONTRACTOR THAT HE/SHE HAS INSTALLED ALL THE SEWERS AND TREATMENT FACILITIES IN ACCORDANCE WITH THE PERMITS AND PLANS.
  3. SUBMISSION OF TWO (2) 25" X 36" AND THREE (3) 11" X 17" RECORD DRAWINGS (AS-BUILTS) SHOWING CONSTRUCTED MANHOLE INVERT ELEVATIONS, MANHOLE LOCATIONS, SERVICE LATERALS, TEE/WYE LOCATIONS REFERENCED TO DOWNSTREAM MANHOLE. SIZE AND TYPE OF PIPE SHALL ALSO BE ON THE DRAWINGS. ELECTRONIC FILE, CONTAINING AS-BUILT DRAWINGS ON STATE PLANE COORDINATES FOLLOWING AUTO CAD 2000 FORMAT WILL ALSO BE PROVIDED.
  4. UPON COMPLETION OF THE PROJECT AFTER ALL REQUIRED TESTING HAS BEEN DONE, A FINAL INSPECTION WILL BE MADE BY CITY PERSONNEL. THE FINAL INSPECTION WILL NOT BE CONDUCTED UNTIL "RECORD" PLANS ARE SUBMITTED. FINAL INSPECTION WILL BE MADE AT THE REQUESTS OF THE OWNER. DEFECTS NOTED MUST BE CORRECTED AND A REINSPECTION MADE BEFORE ACCEPTANCE. IMPROVEMENTS FOUND NOT AS DEPICTED ON THE SUBMITTED "RECORD" PLANS SHALL BE REJECTED.
  5. AFTER ALL DEFECTS, IF ANY WERE NOTED DURING FINAL INSPECTION, HAVE BEEN CORRECTED AND PRIOR TO ANY SEWER PERMITS BEING ISSUED, A MAINTENANCE BOND IN AN AMOUNT EQUAL TO FIFTY PERCENT (50%) OF THE CONSTRUCTION COST SHALL BE FILED WITH THE CITY CLERK. THE BOND SHALL BE FOR A PERIOD OF TWO (2) YEARS, COMMENCING ON THE DATE OF FINAL INSPECTION OR REINSPECTION IF NECESSARY, AND SHALL COVER ALL DEFECTS IN MATERIALS AND WORKMANSHIP. THE BOND SHALL BE BINDING ON THE DEVELOPER OR THE CONTRACTOR.
  6. ALL EASEMENTS GATHERED BY THE PERMITTEE(S), ACROSS PRIVATE PROPERTY THAT IS NOT CONTAINED WITHIN THEIR DEVELOPMENT, SHALL BE ASSIGNED/CONVEYED TO THE CITY OF BELLEVILLE BY THE PERMITTEE(S) FREE AND CLEAR OF ANY AND ALL LIENS AND ENCUMBRANCES WITHOUT COST TO THE CITY.
  7. AT THE TIME OF ACCEPTANCE OF THE SEWER EXTENSION, TITLE TO IT SHALL BE TRANSFERRED AND CONVEYED TO THE CITY OF BELLEVILLE, BY THE PERMITTEE(S) FREE AND CLEAR OF ANY AND ALL LIENS AND ENCUMBRANCES, WITHOUT COST THE CITY, AND UPON EXPIRATION OF THE PERMITTEE'S MAINTENANCE BOND (TWO (2) YEARS AFTER ACCEPTANCE OF THE SEWERS), THE CITY SHALL ASSUME ALL COSTS OF MAINTENANCE AND REPAIR OF SUCH EXTENSION.

|  |                             |            |   |   |                                     |                |           |                    |             |         |        |              |           |
|--|-----------------------------|------------|---|---|-------------------------------------|----------------|-----------|--------------------|-------------|---------|--------|--------------|-----------|
| FILE NAME =<br>27855-sht-SANgenote.dgn | USER NAME = maisiegraser    | DESIGNED - | REVISED -                                       | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>SANITARY SEWER GENERAL NOTES</b> |                |           |                    | F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|  | PLOT SCALE = 40.0000' / IN. | DRAWN -    | REVISED -                                       |   | 9274                                | 04-00202-00-BR | ST. CLAIR | 55                 | 15          |         |        |              |           |
| PLOT DATE = 3/13/2009                  | CHECKED -                   | REVISED -  | SCALE: SHEET NO. OF SHEETS STA. TO STA.         |   |                                     |                |           | CONTRACT NO. 97369 |             |         |        |              |           |
|  | DATE -                      | REVISED -  | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |   |                                     |                |           |                    |             |         |        |              |           |



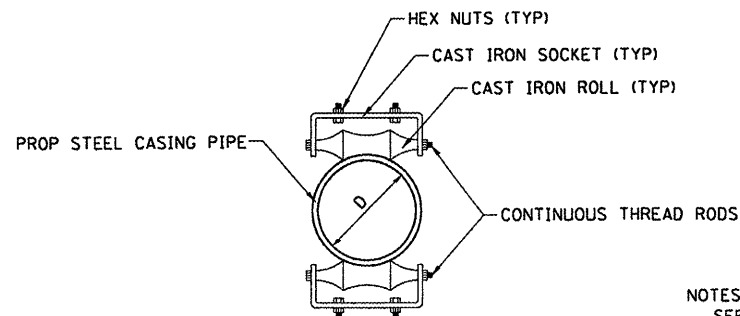




NOTE: PAYMENT FOR DROP MANHOLE CONNECTION TO BE MADE AT CONTRACT UNIT PRICE PER FOOT "SANITARY SEWER 12".

**EXISTING SANITARY STRUCTURE 3  
TEMPORARY INSIDE DROP CONNECTION**

(NOT TO SCALE)



**ROLLER SUPPORTS**

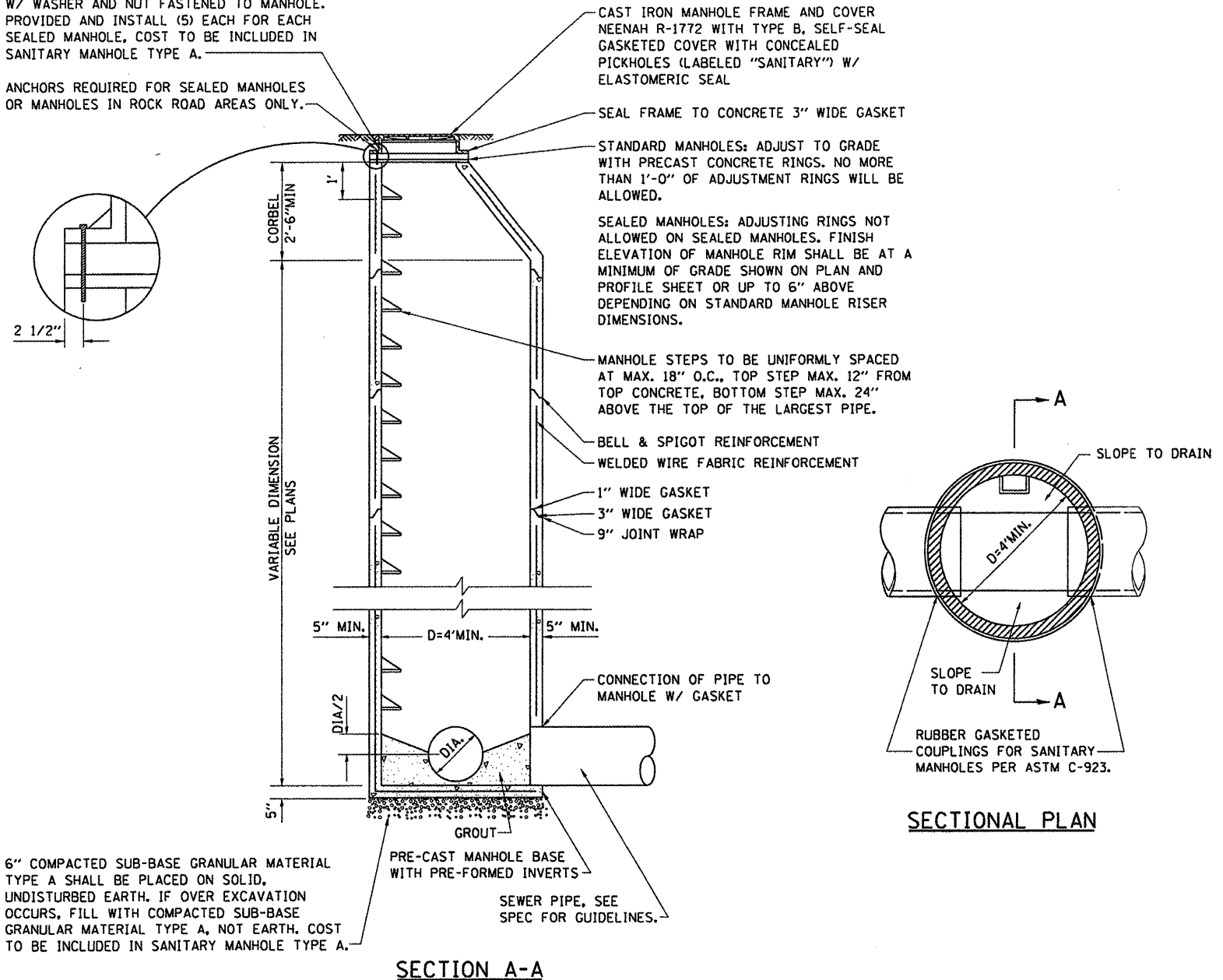
(NOT TO SCALE)

NOTES:  
SEE BRIDGE PLANS FOR HANGER DETAILS.  
SHOP DRAWINGS TO BE SUBMITTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

SEALED MANHOLES WILL BE REQUIRED IN AREAS LIKELY TO BE INUNDATED, NEAR WATERWAYS, AND WITHIN 100 YEAR AND 500 YEAR FLOOD ZONES, INCLUDING AREAS OF UNDETERMINED FLOODING.

ANCHOR BOLTS TO BE 1" DIA. THREADED ROD W/ WASHER AND NUT FASTENED TO MANHOLE. PROVIDED AND INSTALL (5) EACH FOR EACH SEALED MANHOLE, COST TO BE INCLUDED IN SANITARY MANHOLE TYPE A.

ANCHORS REQUIRED FOR SEALED MANHOLES OR MANHOLES IN ROCK ROAD AREAS ONLY.



6" COMPACTED SUB-BASE GRANULAR MATERIAL TYPE A SHALL BE PLACED ON SOLID, UNDISTURBED EARTH. IF OVER EXCAVATION OCCURS, FILL WITH COMPACTED SUB-BASE GRANULAR MATERIAL TYPE A, NOT EARTH, COST TO BE INCLUDED IN SANITARY MANHOLE TYPE A.

**SECTION A-A**

NOTES:  
STEPS REQUIRED, UNLESS DELETED BY SPECIAL PROVISIONS.

SEPARATE SANITARY SEWER MANHOLES SUBJECT TO SATURATED SOIL CONDITIONS OR SURFACE SUBMERGENCE SHALL BE EQUIPPED WITH CHIMNEY SEALS AND WATER TIGHT MANHOLE COVERS.

MANHOLE SHALL CONFORM TO THE ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION (LATEST EDITION).

**TYPICAL SANITARY MANHOLE TYPE A**

(NOT TO SCALE)

|                                     |                          |            |           |
|-------------------------------------|--------------------------|------------|-----------|
| FILE NAME = 27055-shr-SANdetail.dgn | USER NAME = moisiogrosar | DESIGNED - | REVISED - |
|                                     |                          | DRAWN -    | REVISED - |
|                                     |                          | CHECKED -  | REVISED - |
|                                     |                          | DATE -     | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|                               |           |           |              |
|-------------------------------|-----------|-----------|--------------|
| <b>SANITARY SEWER DETAILS</b> |           |           |              |
| SCALE:                        | SHEET NO. | OF SHEETS | STA. TO STA. |

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.I. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 17        |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |

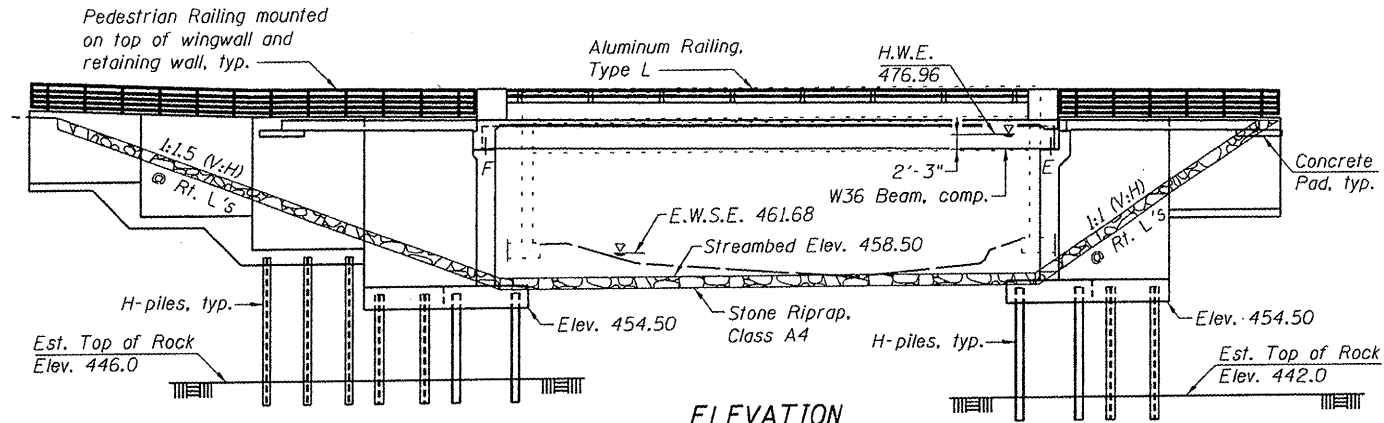
Bench Mark: Chiseled square on top of east parapet of S.N. 082-6108 (3rd Street over Richland Creek).  
Sta. 100+13.87, 106.62' L1. Elev. 480.87

Existing Structure: S.N. 082-6109 built in 1914 and repaired in 1989 as M.F.T. Section 89-00136-00-BR.  
Structure consists of a single span concrete tee beam superstructure supported on closed abutments and retaining walls supporting roadway approaches. ±72' Bk. to Bk. abutments with a 57° skew. 36'-0" out-to-out deck. Structure to be removed and replaced.

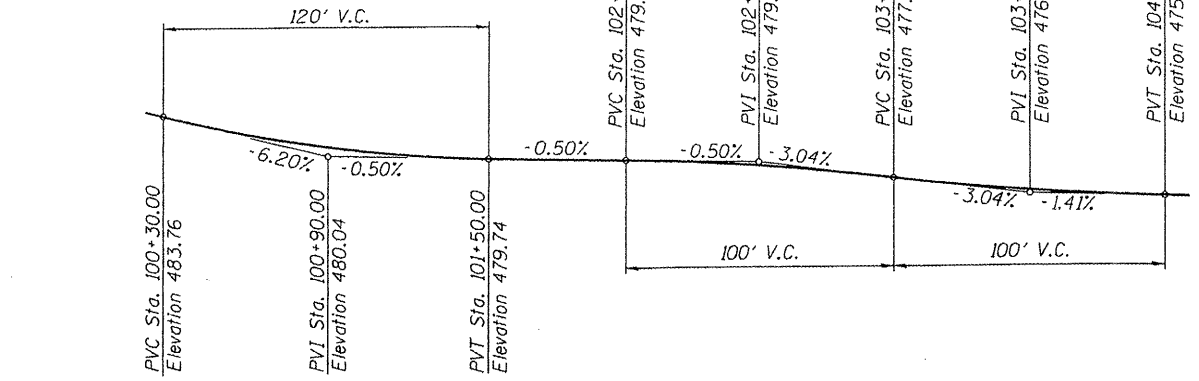
Traffic Control: Bridge will be closed during construction. Traffic will be detoured.

Salvage: Existing name plate to be removed without damage and returned to the city. Cost included with Removal of Existing Structures

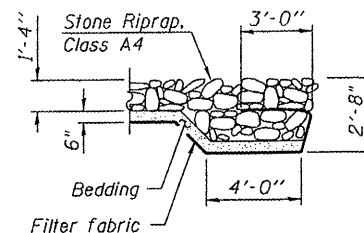
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**ELEVATION**  
(North face shown looking North)



**PROFILE GRADE - CLEVELAND AVE.**  
(Along E Roadway)



**SECTION A-A**

STATION 101+97.00  
BUILT 20\_\_ BY  
CITY OF BELLEVILLE  
LOADING HS20-44  
STRUCTURE NO. 082-6113

**NAME PLATE**  
See Std. 515001

**LOADING HS20-44**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**  
2002 AASHTO

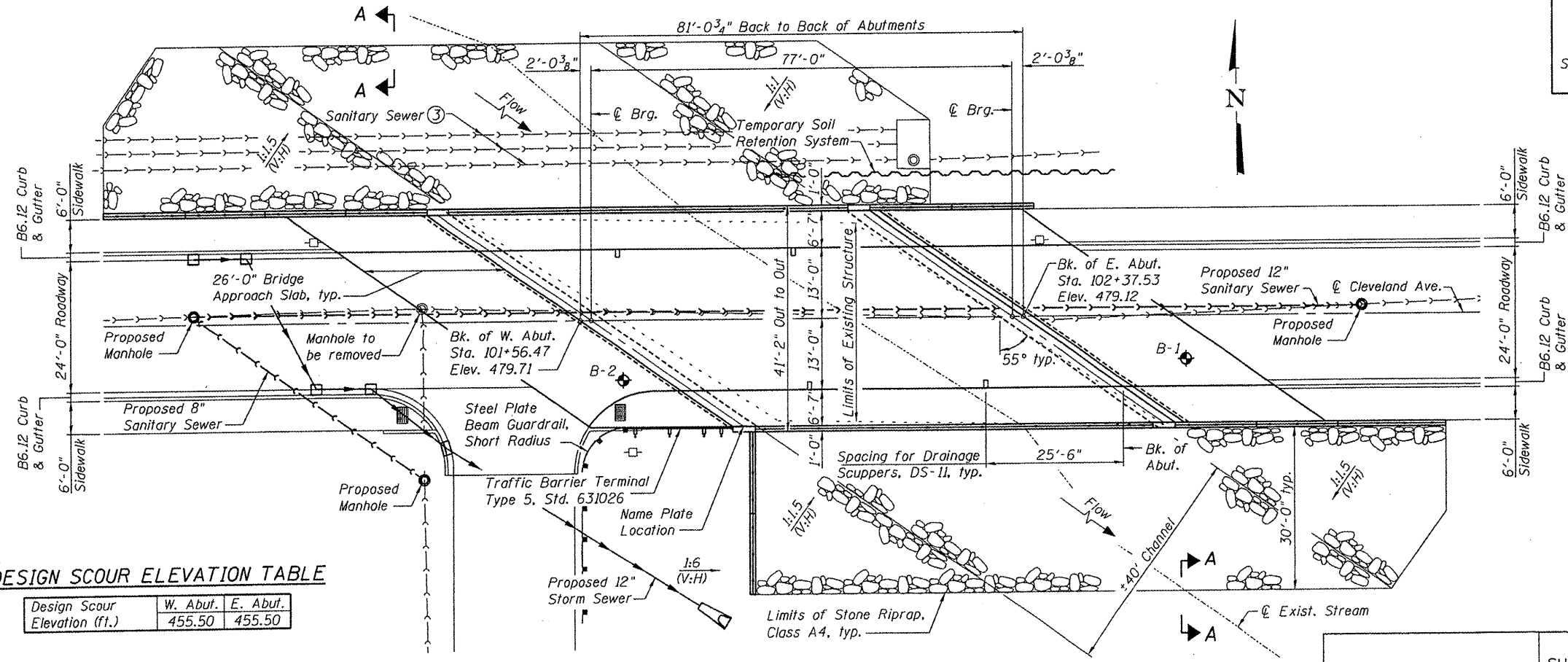
**DESIGN STRESSES**  
**FIELD UNITS**

f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 36,000 psi (AASHTO M 270 Grade 36)  
fy = 50,000 psi (AASHTO M 270 Grade 50)

**SEISMIC DATA**

Seismic Performance Category (SPC) = B  
Bedrock Acceleration Coefficient (A) = 0.12g  
Site Coefficient (S) = 1.0

- Notes:
- ① Three existing power poles shown to be relocated by others.
  - ② See sheet 2 of 31 for Index of Sheets.
  - ③ 10"-14"-24" diameter sanitary sewer pipes. Contractor shall take special precaution placing riprap in area of sanitary piping under creek.



**PLAN**

**DESIGN SCOUR ELEVATION TABLE**

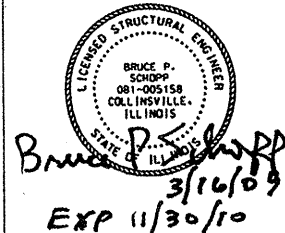
| Design Scour Elevation (ft.) | W. Abut. | E. Abut. |
|------------------------------|----------|----------|
|                              | 455.50   | 455.50   |

**WATERWAY INFORMATION**

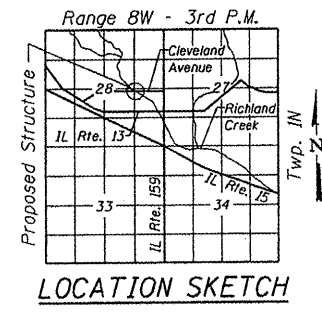
Drainage Area = 19.81 sq. mi. Low Grade Elev. 474.0 @ Sta. 106+00

| Flood      | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. |       | Head - Ft.    |       | Headwater El. |        |        |
|------------|-----------|----------|-----------------|-------|---------------|-------|---------------|--------|--------|
|            |           |          | Exist.          | Prop. | H.W.E. Exist. | Prop. | Exist.        | Prop.  |        |
| Design     | 10        | 5,219    | 537             | 646   | 475.09        | 0.86  | 0.39          | 475.95 | 475.48 |
| Base       | 30        | 6,950    | 537             | 646   | 476.96        | 0.40  | 0.19          | 477.36 | 477.15 |
| Max. Calc. | 100       | 8,585    | 537             | 646   | 477.86        | 0.16  | 0.02          | 478.02 | 477.88 |
|            | 500       | 11,601   | 537             | 646   | 479.05        | 0.06  | 0.02          | 479.11 | 479.07 |

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."



|   |                                |                           |   |                    |                 |
|---|--------------------------------|---------------------------|---|--------------------|-----------------|
| SHEET NO. 1<br>31 SHEETS  | F.A.U. RTE.<br>9274            | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR                                     | TOTAL SHEETS<br>55 | SHEET NO.<br>18 |
|   | FED. ROAD DIST. NO. 7 ILLINOIS |                           |   | FED. AID PROJECT   |                 |
| Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                                |                           | DESIGNED DGL<br>CHECKED NEL<br>DRAWN DGL<br>CHECKED NEL |                    |                 |



**GENERAL PLAN**  
**CLEVELAND AVENUE OVER**  
**RICHLAND CREEK**  
**FAU ROUTE 9274**  
**SECTION 04-00202-00-BR**  
**ST. CLAIR COUNTY**  
**STATION 101+97.00**  
**STRUCTURE NO. 082-6113**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

Fasteners shall be AASHTO M 164 Type 1, mechanically galvanized bolts.  
Bolts 3/4 in.  $\phi$ , holes 13/16 in.  $\phi$ , unless otherwise noted.

Calculated weight of Structural Steel: AASHTO M 270 Grade 36 = 14,660 pounds  
AASHTO M 270 Grade 50 = 85,230 pounds

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.

Bearing seat surfaces shall be constructed or adjusted to their designated  
elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made  
either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the East Abutment.

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 Reddish Brown, Munsell No. 2.5YR 3/4.  
See Special Provision for "Cleaning and Painting New Metal Structures".

Layout of slope protection system may be varied in the field to suit ground  
conditions as directed by the Engineer.

The Contractor shall drive test piles in production locations at substructures  
specified or approved by the Engineer before ordering the remainder of piles.  
The piles shall be driven to 110% of the nominal required bearing specified or  
3 feet into shale, whichever depth is greater.

The steel H-piles shall be according to AASHTO M270 Grade 50.

The concrete for bridge decks finished according to Article 503.16(a) of the  
Standard Specifications shall be placed and compacted parallel to the skew in  
uniform increments along centerline of bridge. The machine used for finishing  
shall be set parallel to the skew for striking off and screeding the concrete.

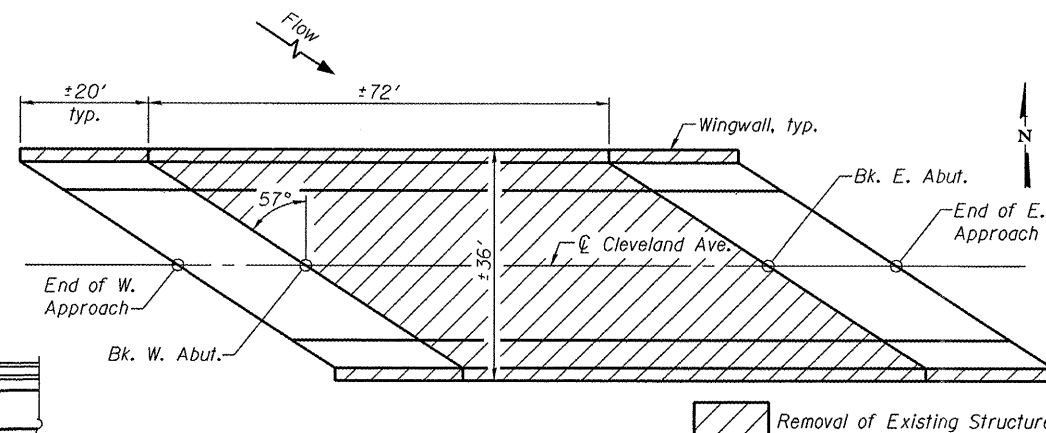
A cantilevered sheet piling design does not appear feasible and additional  
members or other retention systems may be necessary. The Contractor shall  
submit a temporary soil retention system design including plan details and  
calculations for review and acceptance by the Engineer.

**TOTAL BILL OF MATERIAL**

| ITEM   | UNIT    | SUPER  | SUB    | TOTAL   |
|--|---------|--------|--------|---------|
| Porous Granular Embankment, Special                      | Cu. Yd. | -      | 1,210  | 1,210   |
| Stone Riprap, Class A4                                   | Sq. Yd. | -      | 1,360  | 1,360   |
| Filter Fabric  | Sq. Yd. | -      | 1,360  | 1,360   |
| Removal of Existing Structures                           | L. Sum  | -      | -      | 1       |
| Structure Excavation                                     | Cu. Yd. | -      | 1,522  | 1,522   |
| Concrete Structures                                      | Cu. Yd. | -      | 787.4  | 787.4   |
| Concrete Superstructure                                  | Cu. Yd. | 310.8  | -      | 310.8   |
| Bridge Deck Grooving                                     | Sq. Yd. | 357    | -      | 357     |
| Protective Coat  | Sq. Yd. | 668    | -      | 668     |
| Furnishing and Erecting Structural Steel                 | L. Sum  | 1      | -      | 1       |
| Stud Shear Connectors                                    | Each    | 1,278  | -      | 1,278   |
| Reinforcement Bars, Epoxy Coated                         | Pound   | 59,640 | 71,650 | 131,290 |
| Bar Splicers   | Each    | 80     | -      | 80      |
| Aluminum Railing, Type L                                 | Foot    | 145    | -      | 145     |
| Pedestrian Railing                                       | Foot    | 169    | -      | 169     |
| Furnishing Steel Piles HP14X73                           | Foot    | -      | 1,272  | 1,272   |
| Driving Piles  | Foot    | -      | 1,272  | 1,272   |
| Test Pile Steel HP14X73                                  | Each    | -      | 2      | 2       |
| Pile Shoes   | Each    | -      | 78     | 78      |
| Name Plates  | Each    | 1      | -      | 1       |
| Preformed Joint Strip Seal                               | Foot    | 72.5   | -      | 72.5    |
| Elastomeric Bearing Assembly, Type I                     | Each    | 6      | -      | 6       |
| Anchor Bolts, 1"   | Each    | 12     | -      | 12      |
| Anchor Bolts, 1 1/4"                                     | Each    | 12     | -      | 12      |
| Concrete Sealer  | Sq. Ft. | -      | 1,671  | 1,671   |
| Geocomposite Wall Drain                                  | Sq. Yd. | -      | 452    | 452     |
| Mechanical Splice  | Each    | -      | 393    | 393     |
| Drainage Scuppers, DS-11                                 | Each    | 4      | -      | 4       |
| Temporary Soil Retention System                          | Sq. Ft. | -      | 714    | 714     |
| Underwater Structure Excavation<br>Protection-Location 1 | Each    | -      | 1      | 1       |
| Underwater Structure Excavation<br>Protection-Location 2 | Each    | -      | 1      | 1       |

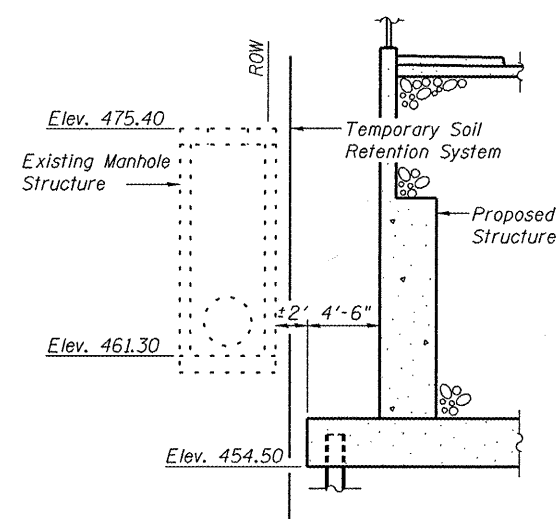
**INDEX OF SHEETS**

| Sheet No. | Description                          |
|-----------|--------------------------------------|
| 1         | General Plan                         |
| 2         | General Data                         |
| 3-4       | Top of Slab Elevations               |
| 5         | Top of West Approach Slab Elevations |
| 6         | Top of East Approach Slab Elevations |
| 7         | Superstructure                       |
| 8-9       | Superstructure Details               |
| 10        | Diaphragm Details                    |
| 11-12     | Bridge Approach Slab Details         |
| 13        | Aluminum Railing, Type L             |
| 14        | Preformed Joint Strip Seal           |
| 15        | Drainage Scuppers, DS-11             |
| 16        | Framing Plan                         |
| 17        | Beam & Framing Details               |
| 18        | Bearing Details                      |
| 19-20     | West Abutment                        |
| 21-22     | East Abutment                        |
| 23        | Abutment Details                     |
| 24        | West Retaining Walls                 |
| 25        | East Retaining Walls                 |
| 26        | Retaining Wall Details               |
| 27        | HP Pile Details                      |
| 28        | Pedestrian Railing                   |
| 29        | Bar Splicer Assembly Details         |
| 30-31     | Boring Logs                          |

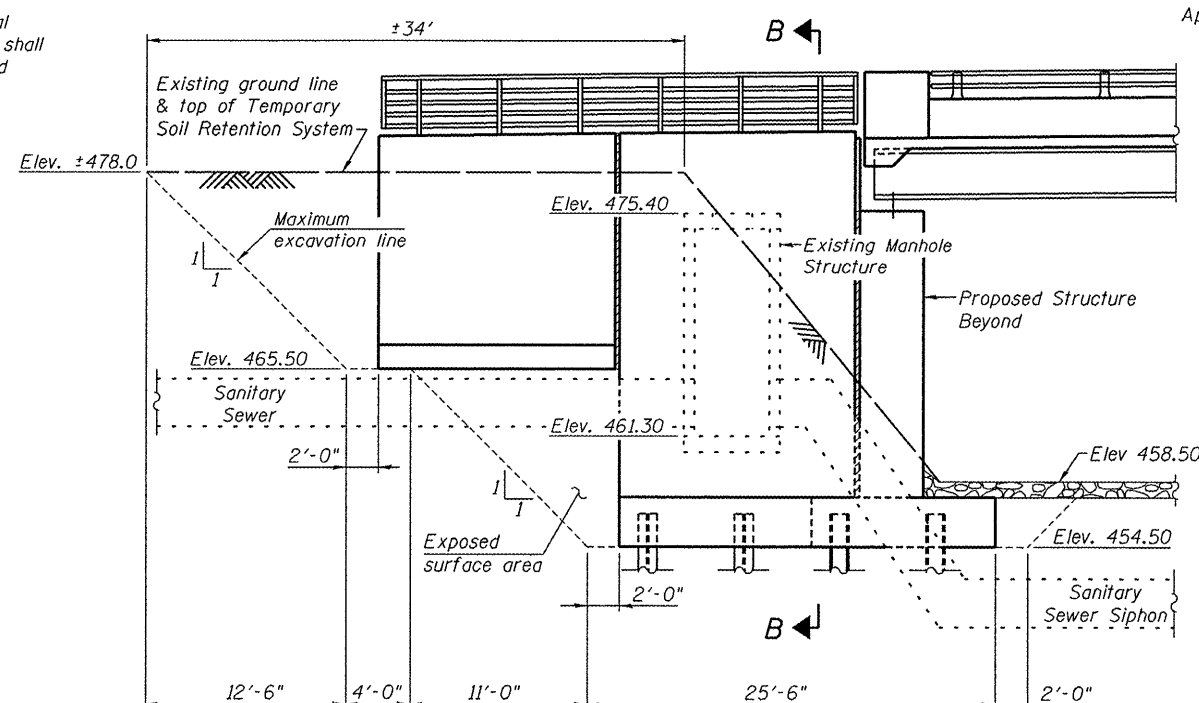


**REMOVAL PLAN**

Removal includes retaining walls and bridge. See Special Provisions.



**SECTION B-B**



**ELEVATION**

NE corner of structure looking south

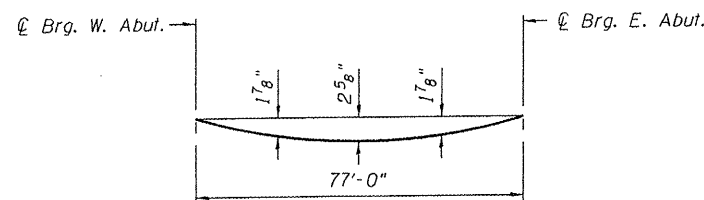
**TEMPORARY SOIL RETENTION SYSTEM**

Elevations and piping shown are approximated. System to be used during  
Removal of Existing Structure as required. Contractor shall field verify  
actual conditions prior to determination of Temporary Soil Retention System.  
Cost included with Temporary Soil Retention System.

**GENERAL DATA  
STRUCTURE NO. 082-6113**

|  |             |                |                  |              |           |
|--|-------------|----------------|------------------|--------------|-----------|
| SHEET NO. 2<br>31 SHEETS   | F.A.U. RTE. | SECTION        | COUNTY           | TOTAL SHEETS | SHEET NO. |
|  | 9274        | 04-00202-00-BR | ST. CLAIR        | 55           | 19        |
| FED. ROAD DIST. NO. 7 ILLINOIS   |             |                | FED. AID PROJECT |              |           |
| CONTRACT NO. 97369   |             |                | DESIGNED DGL     |              |           |
| EASTPORT BUSINESS CENTER 1<br>100 LANER COURT, SUITE 1<br>COLLINSVILLE, ILLINOIS 62234<br>618-345-2200 |             |                | CHECKED JAD      |              |           |
| OATES ASSOCIATES<br>Consulting Engineers<br>Design Firm License No. 184.001115                         |             |                | DRAWN JAD        |              |           |
|  |             |                | CHECKED DGL      |              |           |

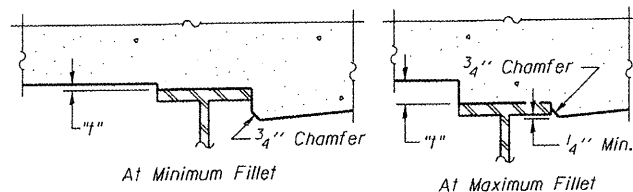
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**DEAD LOAD DEFLECTION DIAGRAM**

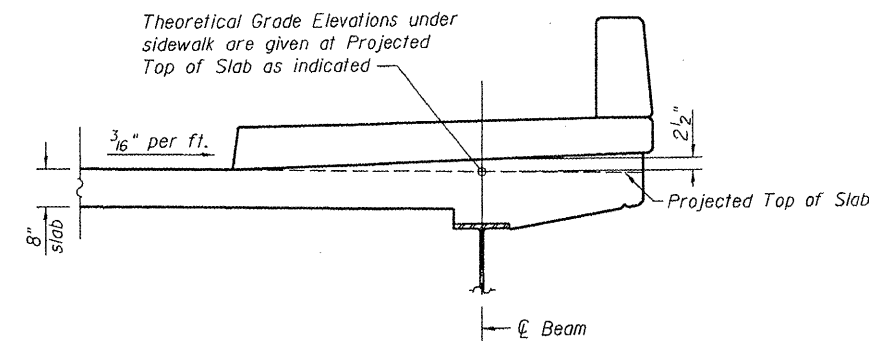
(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" as shown on sheet 4 of 31.

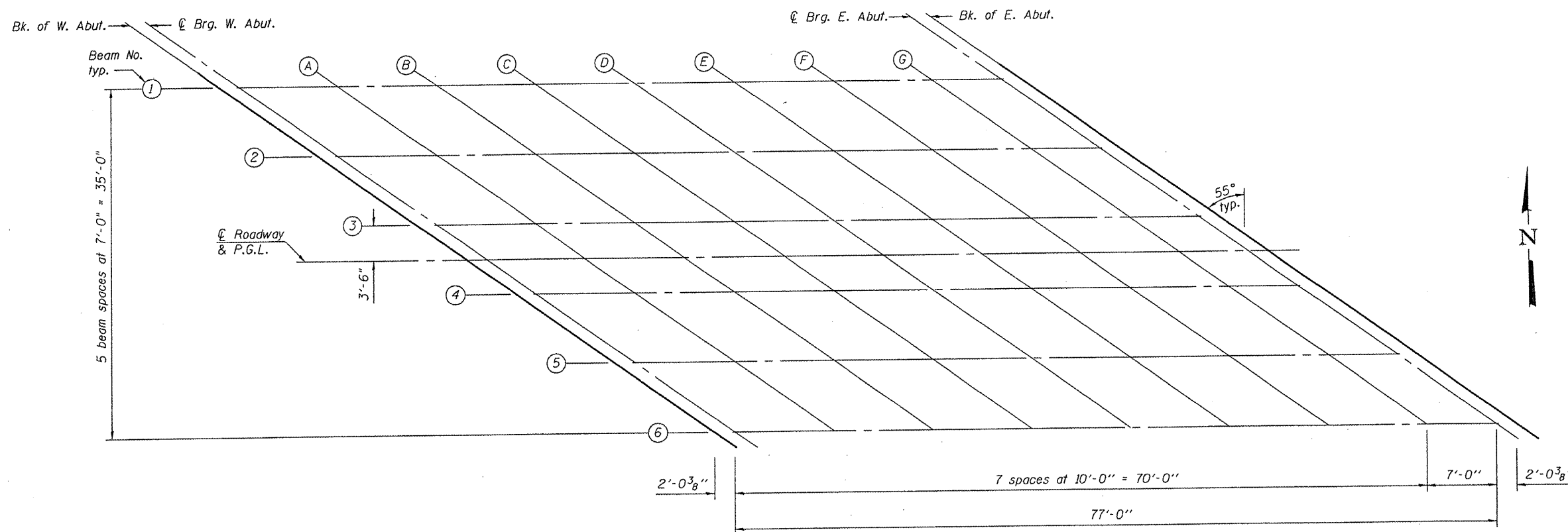


To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 4 of 31, minus slab thickness, equals the fillet heights "f" above top flange of beams.

**FILLET HEIGHTS**




**TOP OF SLAB ELEVATIONS  
UNDER SIDEWALK**



**PLAN**

**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 082-6113**

|  |   |                |           |   |           |
|--|---|----------------|-----------|---|-----------|
| SHEET NO. 3<br>31 SHEETS   | F.A.U. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS  | SHEET NO. |
|  | 9274  | 04-00202-00-BR | ST. CLAIR | 55  | 20        |
| CONTRACT NO. 97369   |   |                |           |   |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT  |   |                |           |   |           |
| <br><b>OATES ASSOCIATES</b><br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                |           | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEAM 1

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+31.47 | -17.50 | 479.64                       | 479.64   |
| ☉ Brg. W. Abut. | 101+33.51 | -17.50 | 479.61                       | 479.61   |
| A               | 101+43.51 | -17.50 | 479.51                       | 479.60   |
| B               | 101+53.51 | -17.50 | 479.45                       | 479.61   |
| C               | 101+63.51 | -17.50 | 479.40                       | 479.60   |
| D               | 101+73.51 | -17.50 | 479.35                       | 479.56   |
| E               | 101+83.51 | -17.50 | 479.30                       | 479.49   |
| F               | 101+93.51 | -17.50 | 479.25                       | 479.39   |
| G               | 102+03.51 | -17.50 | 479.20                       | 479.26   |
| ☉ Brg. E. Abut. | 102+10.51 | -17.50 | 479.15                       | 479.15   |
| Bk. E. Abut.    | 102+12.54 | -17.50 | 479.13                       | 479.13   |

BEAM 2

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+41.47 | -10.50 | 479.64                       | 479.64   |
| ☉ Brg. W. Abut. | 101+43.50 | -10.50 | 479.62                       | 479.62   |
| A               | 101+53.50 | -10.50 | 479.56                       | 479.65   |
| B               | 101+63.50 | -10.50 | 479.51                       | 479.67   |
| C               | 101+73.50 | -10.50 | 479.46                       | 479.66   |
| D               | 101+83.50 | -10.50 | 479.41                       | 479.62   |
| E               | 101+93.50 | -10.50 | 479.36                       | 479.55   |
| F               | 102+03.50 | -10.50 | 479.31                       | 479.45   |
| G               | 102+13.50 | -10.50 | 479.24                       | 479.30   |
| ☉ Brg. E. Abut. | 102+20.50 | -10.50 | 479.17                       | 479.17   |
| Bk. E. Abut.    | 102+22.54 | -10.50 | 479.15                       | 479.15   |

BEAM 3

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+51.47 | -3.50  | 479.68                       | 479.68   |
| ☉ Brg. W. Abut. | 101+53.50 | -3.50  | 479.67                       | 479.67   |
| A               | 101+63.50 | -3.50  | 479.62                       | 479.70   |
| B               | 101+73.50 | -3.50  | 479.57                       | 479.73   |
| C               | 101+83.50 | -3.50  | 479.52                       | 479.72   |
| D               | 101+93.50 | -3.50  | 479.47                       | 479.68   |
| E               | 102+03.50 | -3.50  | 479.42                       | 479.61   |
| F               | 102+13.50 | -3.50  | 479.34                       | 479.48   |
| G               | 102+23.50 | -3.50  | 479.25                       | 479.31   |
| ☉ Brg. E. Abut. | 102+30.50 | -3.50  | 479.16                       | 479.16   |
| Bk. E. Abut.    | 102+32.54 | -3.50  | 479.14                       | 479.14   |

☉ ROADWAY & P.G.L.

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+56.47 | 0.00   | 479.71                       | 479.71   |
| ☉ Brg. W. Abut. | 101+58.50 | 0.00   | 479.70                       | 479.70   |
| A               | 101+68.50 | 0.00   | 479.65                       | 479.73   |
| B               | 101+78.50 | 0.00   | 479.60                       | 479.76   |
| C               | 101+88.50 | 0.00   | 479.55                       | 479.75   |
| D               | 101+98.50 | 0.00   | 479.50                       | 479.71   |
| E               | 102+08.50 | 0.00   | 479.44                       | 479.63   |
| F               | 102+18.50 | 0.00   | 479.35                       | 479.49   |
| G               | 102+28.50 | 0.00   | 479.24                       | 479.31   |
| ☉ Brg. E. Abut. | 102+35.50 | 0.00   | 479.15                       | 479.15   |
| Bk. E. Abut.    | 102+37.53 | 0.00   | 479.12                       | 479.12   |

BEAM 4

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+61.46 | 3.50   | 479.63                       | 479.63   |
| ☉ Brg. W. Abut. | 101+63.50 | 3.50   | 479.62                       | 479.62   |
| A               | 101+73.50 | 3.50   | 479.57                       | 479.65   |
| B               | 101+83.50 | 3.50   | 479.52                       | 479.68   |
| C               | 101+93.50 | 3.50   | 479.47                       | 479.67   |
| D               | 102+03.50 | 3.50   | 479.42                       | 479.63   |
| E               | 102+13.50 | 3.50   | 479.34                       | 479.54   |
| F               | 102+23.50 | 3.50   | 479.25                       | 479.39   |
| G               | 102+33.50 | 3.50   | 479.13                       | 479.19   |
| ☉ Brg. E. Abut. | 102+40.50 | 3.50   | 479.02                       | 479.02   |
| Bk. E. Abut.    | 102+42.53 | 3.50   | 478.99                       | 478.99   |


BEAM 5

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+71.46 | 10.50  | 479.47                       | 479.47   |
| ☉ Brg. W. Abut. | 101+73.50 | 10.50  | 479.46                       | 479.46   |
| A               | 101+83.50 | 10.50  | 479.41                       | 479.50   |
| B               | 101+93.50 | 10.50  | 479.36                       | 479.52   |
| C               | 102+03.50 | 10.50  | 479.31                       | 479.51   |
| D               | 102+13.50 | 10.50  | 479.24                       | 479.45   |
| E               | 102+23.50 | 10.50  | 479.14                       | 479.33   |
| F               | 102+33.50 | 10.50  | 479.02                       | 479.15   |
| G               | 102+43.50 | 10.50  | 478.87                       | 478.93   |
| ☉ Brg. E. Abut. | 102+50.50 | 10.50  | 478.75                       | 478.75   |
| Bk. E. Abut.    | 102+52.53 | 10.50  | 478.71                       | 478.71   |

BEAM 6

| Location        | Station   | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|-----------|--------|------------------------------|--|
| Bk. W. Abut.    | 101+81.46 | 17.50  | 479.31                       | 479.31   |
| ☉ Brg. W. Abut. | 101+83.49 | 17.50  | 479.30                       | 479.30   |
| A               | 101+93.49 | 17.50  | 479.25                       | 479.34   |
| B               | 102+03.49 | 17.50  | 479.20                       | 479.36   |
| C               | 102+13.49 | 17.50  | 479.13                       | 479.33   |
| D               | 102+23.49 | 17.50  | 479.03                       | 479.24   |
| E               | 102+33.49 | 17.50  | 478.91                       | 479.10   |
| F               | 102+43.49 | 17.50  | 478.76                       | 478.90   |
| G               | 102+53.49 | 17.50  | 478.59                       | 478.65   |
| ☉ Brg. E. Abut. | 102+60.49 | 17.50  | 478.45                       | 478.45   |
| Bk. E. Abut.    | 102+62.53 | 17.50  | 478.41                       | 478.41   |

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 082-6113

|   |   |                |                    |   |           |
|---|---|----------------|--------------------|---|-----------|
| SHEET NO. 4<br>31 SHEETS  | F.A.U. RTE.   | SECTION        | COUNTY             | TOTAL SHEETS  | SHEET NO. |
|   | 9274  | 04-00202-00-BR | ST. CLAIR          | 55  | 21        |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT   |   |                | CONTRACT NO. 97369 |   |           |
| <br>QATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                |                    | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH FACE OF NORTH RETAINING WALL

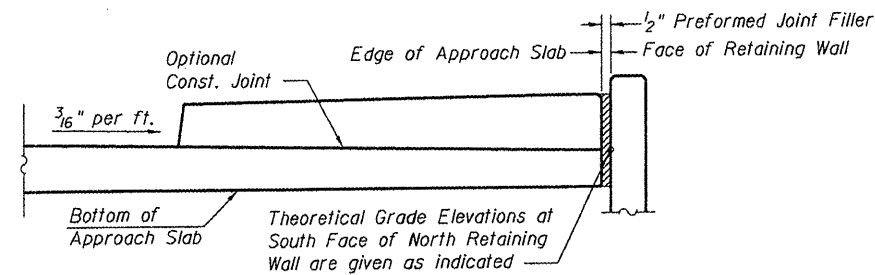
| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End West Appr. Slab | 101+02.50 | -19.58 | 480.21                       |
| A1                     | 101+08.50 | -19.58 | 480.05                       |
| A2                     | 101+18.50 | -19.58 | 479.83                       |
| E. End West Appr. Slab | 101+28.50 | -19.58 | 479.65                       |

NORTH EDGE OF PAVEMENT

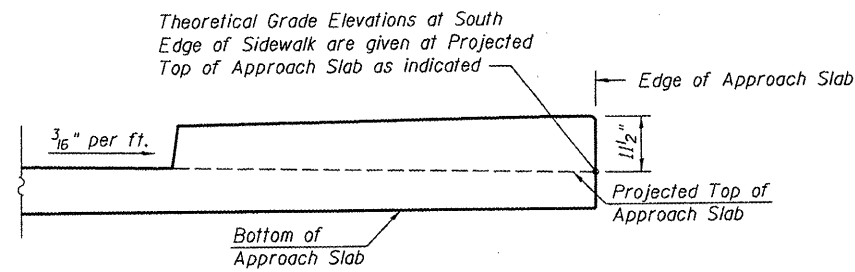
| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End West Appr. Slab | 101+11.90 | -13.00 | 480.07                       |
| A1                     | 101+17.90 | -13.00 | 479.94                       |
| A2                     | 101+27.90 | -13.00 | 479.76                       |
| E. End West Appr. Slab | 101+37.90 | -13.00 | 479.63                       |

☐ ROADWAY & P.G.L.

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End West Appr. Slab | 101+30.47 | 0.00   | 479.93                       |
| A1                     | 101+36.47 | 0.00   | 479.85                       |
| A2                     | 101+46.47 | 0.00   | 479.76                       |
| E. End West Appr. Slab | 101+56.47 | 0.00   | 479.71                       |



TOP OF APPROACH SLAB ELEVATIONS  
UNDER SIDEWALK - NORTH END



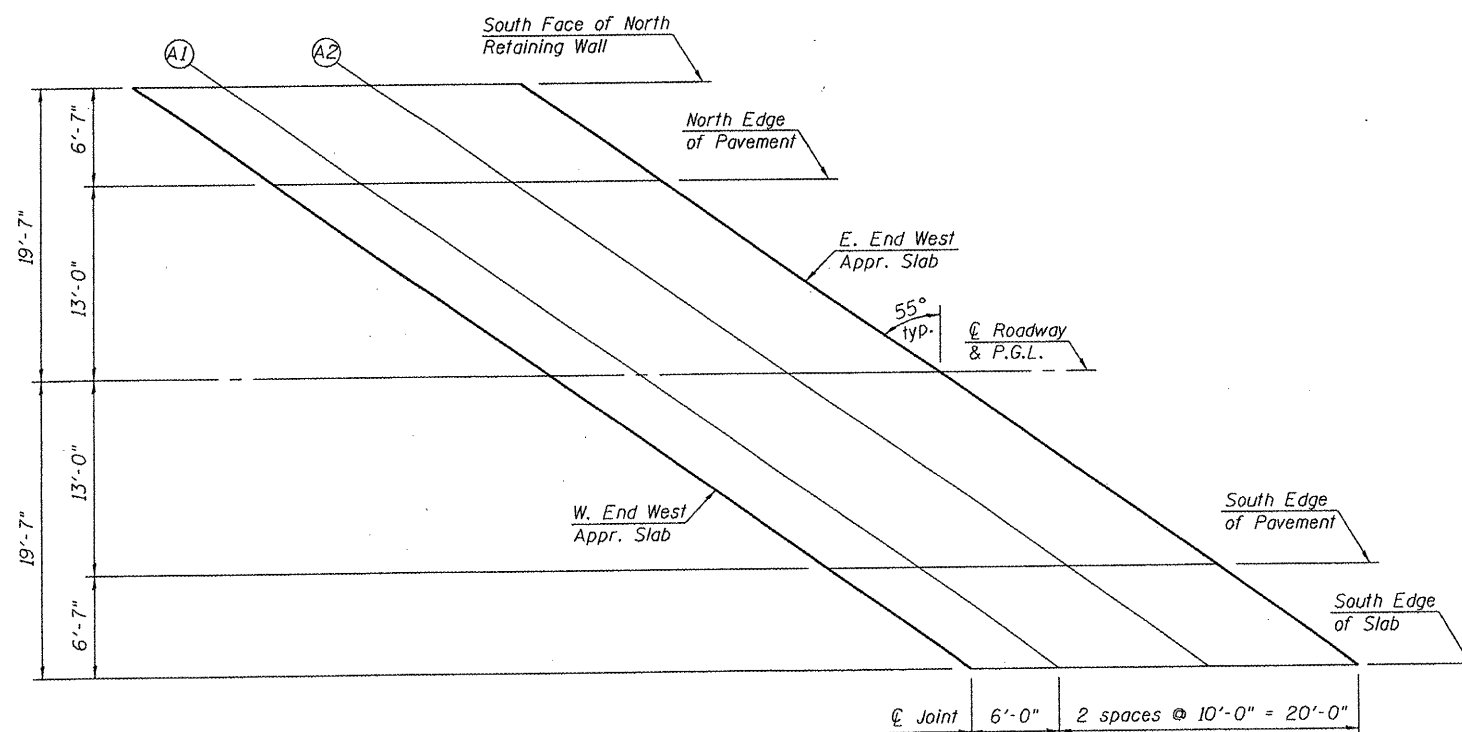
TOP OF APPROACH SLAB ELEVATIONS  
UNDER SIDEWALK - SOUTH END

SOUTH EDGE OF PAVEMENT

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End West Appr. Slab | 101+49.03 | 13.00  | 479.54                       |
| A1                     | 101+55.03 | 13.00  | 479.51                       |
| A2                     | 101+65.03 | 13.00  | 479.46                       |
| E. End West Appr. Slab | 101+75.03 | 13.00  | 479.41                       |


SOUTH EDGE OF SLAB

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End West Appr. Slab | 101+58.43 | 19.58  | 479.39                       |
| A1                     | 101+64.43 | 19.58  | 479.36                       |
| A2                     | 101+74.43 | 19.58  | 479.31                       |
| E. End West Appr. Slab | 101+84.43 | 19.58  | 479.26                       |



PLAN  
West Approach

TOP OF WEST APPROACH  
SLAB ELEVATIONS  
STRUCTURE NO. 082-6113

|   |             |                |   |              |           |
|---|-------------|----------------|---|--------------|-----------|
| SHEET NO. 5<br>31 SHEETS  | F.A.U. RTE. | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO. |
|   | 9274        | 04-00202-00-BR | ST. CLAIR   | 55           | 22        |
| FED. ROAD DIST. NO. 7 ILLINOIS  |             |                | FED. AID PROJECT  |              |           |
|  Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |             |                | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |              |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH FACE OF NORTH RETAINING WALL

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End East Appr. Slab | 102+11.31 | -19.58 | 479.11                       |
| A3                     | 102+21.31 | -19.58 | 479.02                       |
| A4                     | 102+31.31 | -19.58 | 478.90                       |
| E. End East Appr. Slab | 102+37.31 | -19.58 | 478.82                       |

NORTH EDGE OF PAVEMENT

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End East Appr. Slab | 102+20.71 | -13.00 | 479.13                       |
| A3                     | 102+30.71 | -13.00 | 479.01                       |
| A4                     | 102+40.71 | -13.00 | 478.87                       |
| E. End East Appr. Slab | 102+46.71 | -13.00 | 478.78                       |

☐ ROADWAY & P.G.L.

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End East Appr. Slab | 102+39.28 | 0.00   | 479.10                       |
| A3                     | 102+49.28 | 0.00   | 478.93                       |
| A4                     | 102+59.28 | 0.00   | 478.75                       |
| E. End East Appr. Slab | 102+65.28 | 0.00   | 478.62                       |

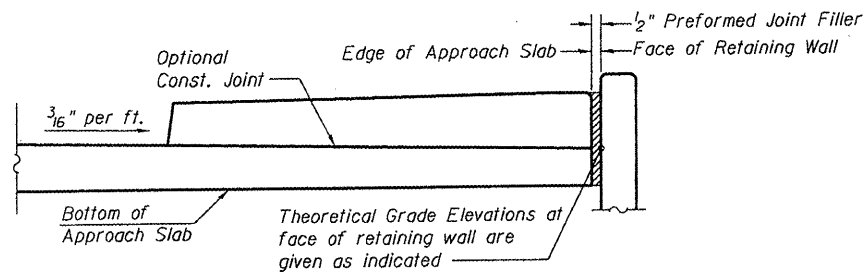
SOUTH EDGE OF PAVEMENT

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End East Appr. Slab | 102+57.84 | 13.00  | 478.57                       |
| A3                     | 102+67.84 | 13.00  | 478.36                       |
| A4                     | 102+77.84 | 13.00  | 478.13                       |
| E. End East Appr. Slab | 102+83.84 | 13.00  | 477.97                       |

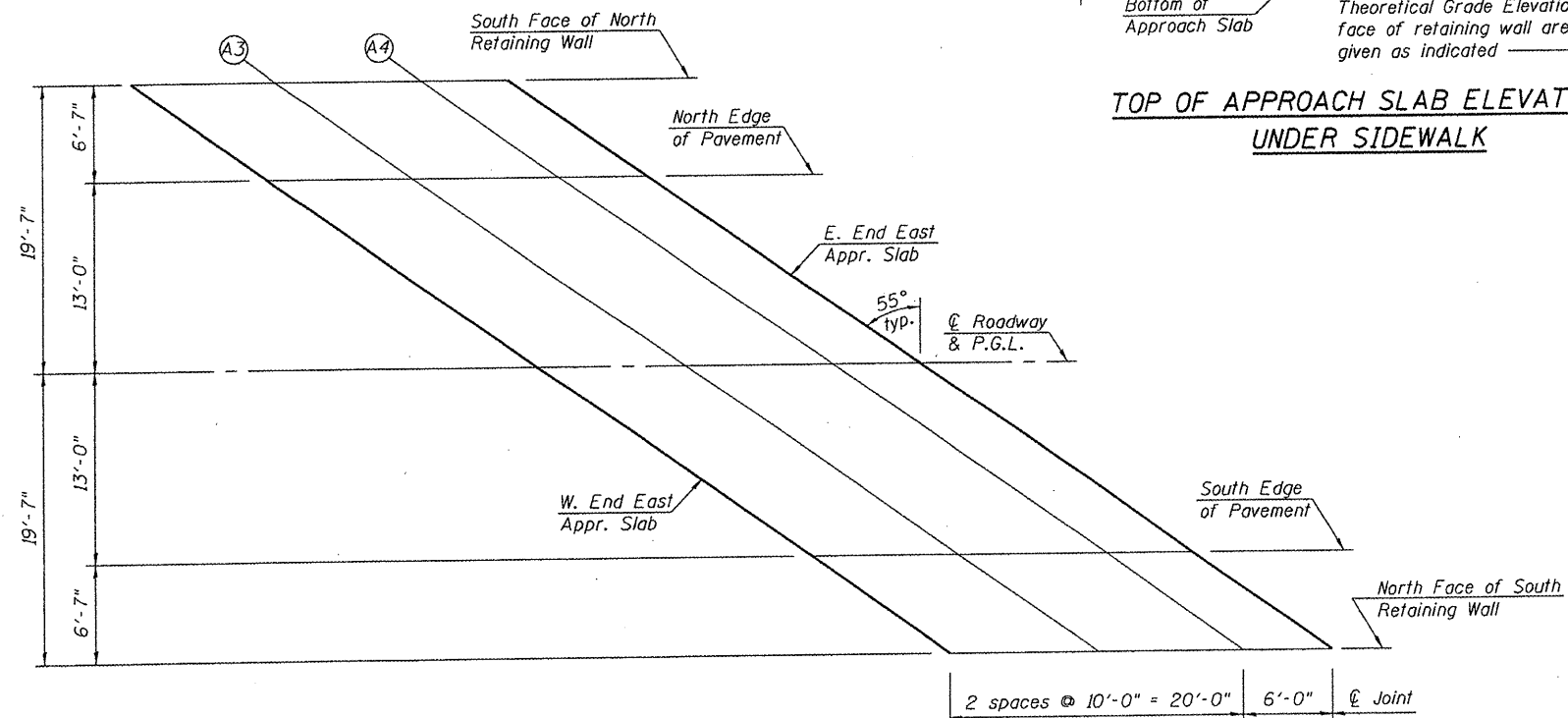
NORTH FACE OF SOUTH RETAINING WALL

| Location               | Station   | Offset | Theoretical Grade Elevations |
|------------------------|-----------|--------|------------------------------|
| W. End East Appr. Slab | 102+67.25 | 19.58  | 478.27                       |
| A3                     | 102+77.25 | 19.58  | 478.04                       |
| A4                     | 102+87.25 | 19.58  | 477.78                       |
| E. End East Appr. Slab | 102+93.25 | 19.58  | 477.61                       |


TOP OF EAST APPROACH  
SLAB ELEVATIONS  
STRUCTURE NO. 082-6113



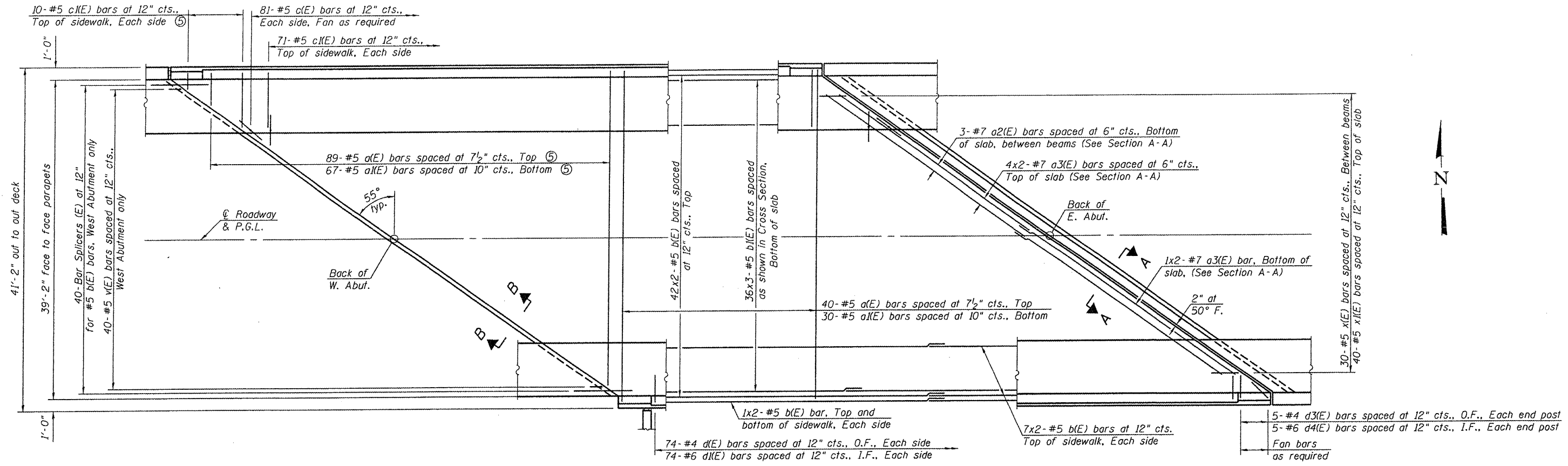
TOP OF APPROACH SLAB ELEVATIONS  
UNDER SIDEWALK



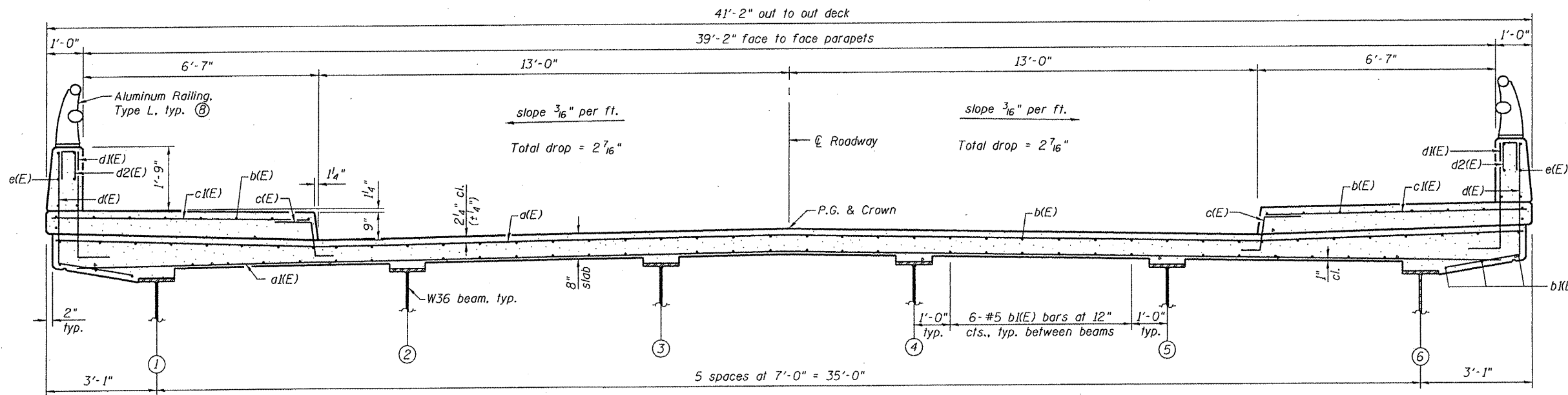
PLAN  
East Approach

| SHEET NO.  | F.A.U. RTE. | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO.   |
|--|-------------|----------------|---|--------------|---|
| 6  | 9274        | 04-00202-00-BR | ST. CLAIR   | 55           | 23  |
| 31 SHEETS  |             |                |   |              |   |
| CONTRACT NO. 97369   |             |                |   |              |   |
| FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT  |             |                |   |              |   |
|  OATES ASSOCIATES<br>Consulting Engineers |             |                | Eastport Business Center I<br>100 Lanter Court, Suite I<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |              | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION




PLAN



CROSS SECTION  
Looking East

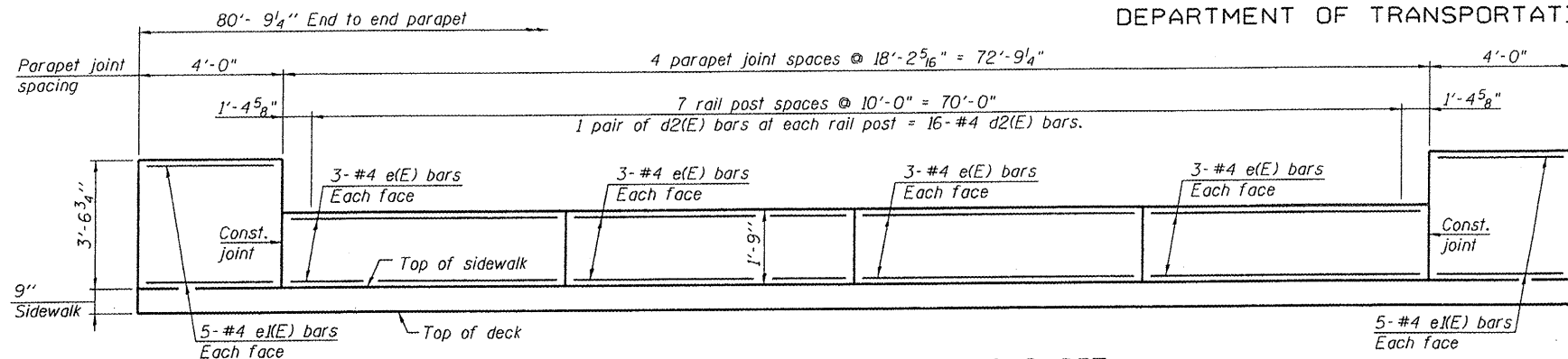
- Notes:
- ① For superstructure details, Bill of Material, Bar List, Bar details, and Section A-A, see sheet 9 of 31.
  - ② Bars indicated thus 7 x 2-#5 etc. indicates 7 lines of bars with 2 lengths per line.
  - ③ For parapet reinforcement, see sheet 8 of 31.
  - ④ For Section B-B, see sheet 10 of 31.
  - ⑤ Order a(E), a1(E), and c1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
  - ⑥ Minimum bar lap: #5 bars = 1'-8"
  - ⑦ For bar splicer assembly details, see sheet 29 of 31.
  - ⑧ For Aluminum Railing, Type L details, see sheet 13 of 31.

SUPERSTRUCTURE  
STRUCTURE NO. 082-6113

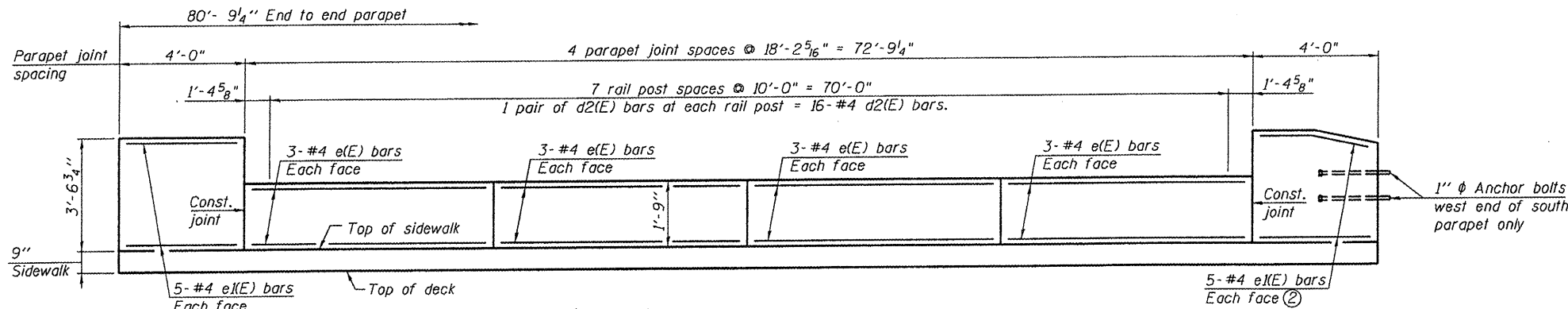
|   |                |                |   |                 |              |
|---|----------------|----------------|---|-----------------|--------------|
| SHEET NO. 7<br>31 SHEETS  | F.A.U.<br>RTE. | SECTION        | COUNTY  | TOTAL<br>SHEETS | SHEET<br>NO. |
|   | 9274           | 04-00202-00-BR | ST. CLAIR   | 55              | 24           |
| FED. ROAD DIST. NO. 7 ILLINOIS  |                |                | FED. AID PROJECT  |                 |              |
| <br>OATES ASSOCIATES<br>Consulting Engineers |                |                | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                 |              |
| DESIGNED NEL  |                |                | CHECKED JAD   |                 |              |
| DRAWN NEL   |                |                | CHECKED JAD   |                 |              |



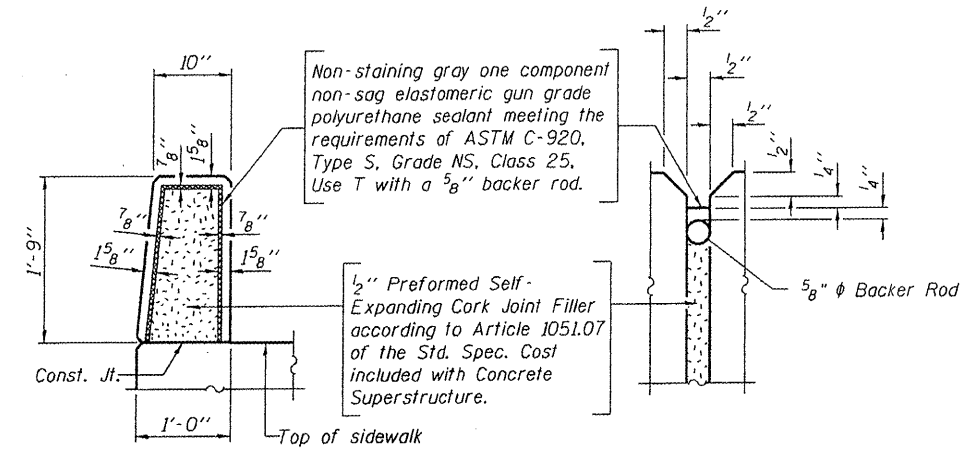
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



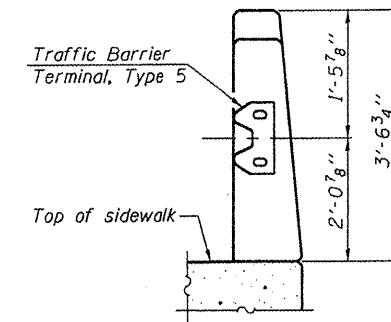
**INSIDE ELEVATION OF NORTH PARAPET**  
Looking North



**INSIDE ELEVATION OF SOUTH PARAPET**  
Looking South



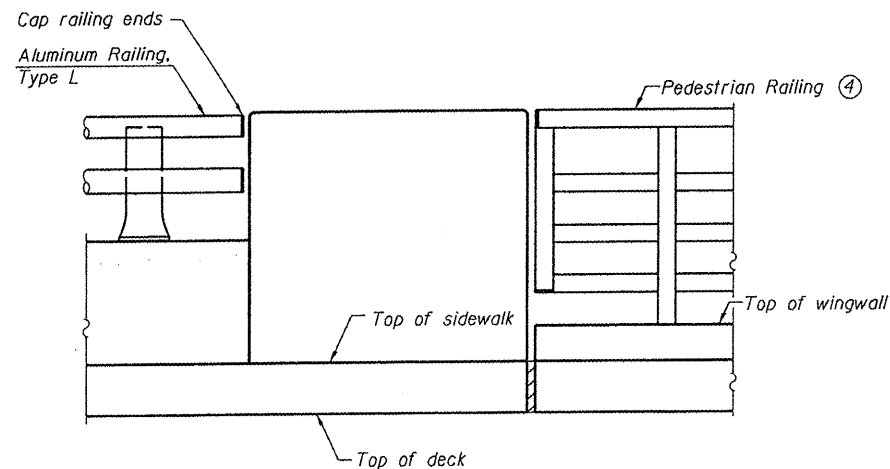
**PARAPET JOINT DETAILS**



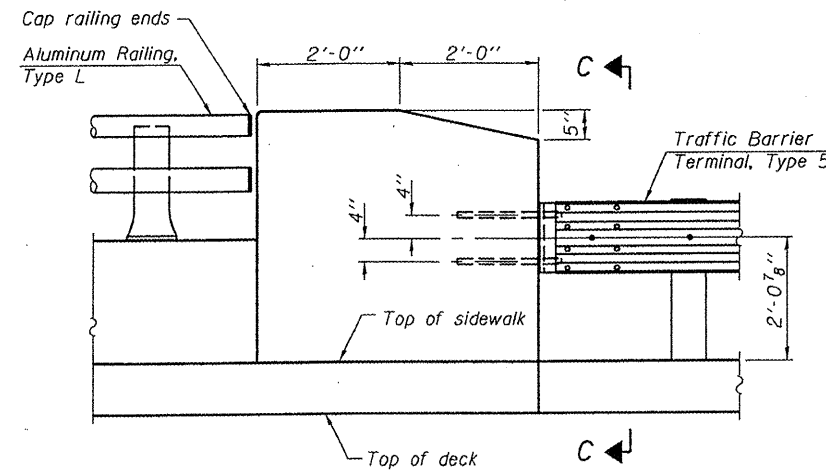
**SECTION C-C**

- Notes:
- ① All edges of parapets and end posts shall have standard  $\frac{3}{4}$ " chamfer.
  - ② Bend in field as required.
  - ③ For bar detail, Bill of Material, Bar List, Section Thru Sidewalk & Parapet, and Section Thru Sidewalk & End Post, see sheet 9 of 31.
  - ④ For Pedestrian Railing details, see sheet 28 of 31.


**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 082-6113**



**PARAPET END ELEVATION**  
North Parapet and East end of South Parapet



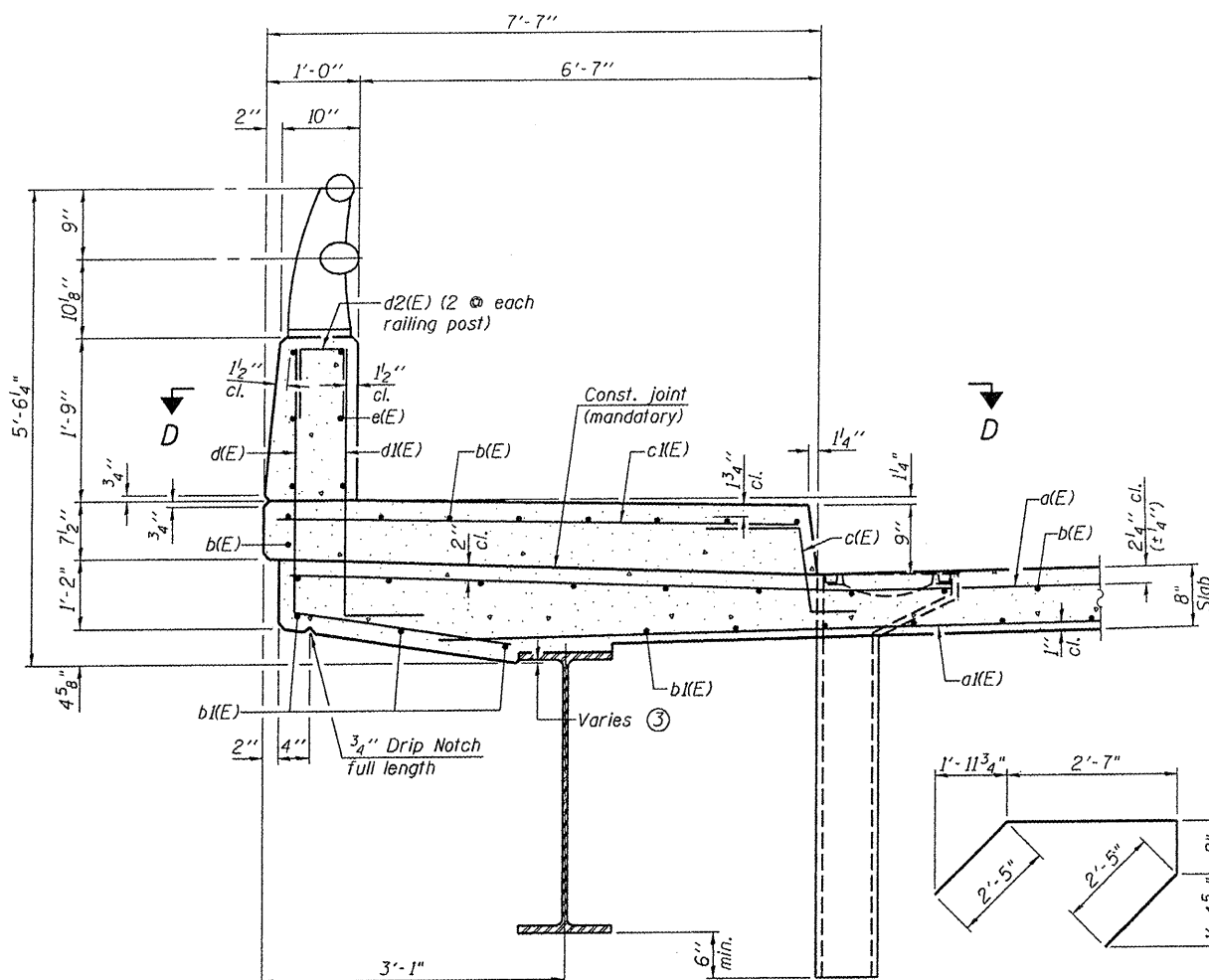
**PARAPET END ELEVATION**  
West end of South Parapet

|  |   |                           |                     |   |                 |
|--|---|---------------------------|---------------------|---|-----------------|
| SHEET NO. 8<br>31 SHEETS   | F.A.U. RTE.<br>9274   | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55                                      | SHEET NO.<br>25 |
|  | CONTRACT NO. 97369  |                           |                     |   |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT  |   |                           |                     |   |                 |
| <br><b>DATES ASSOCIATES</b><br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |                 |

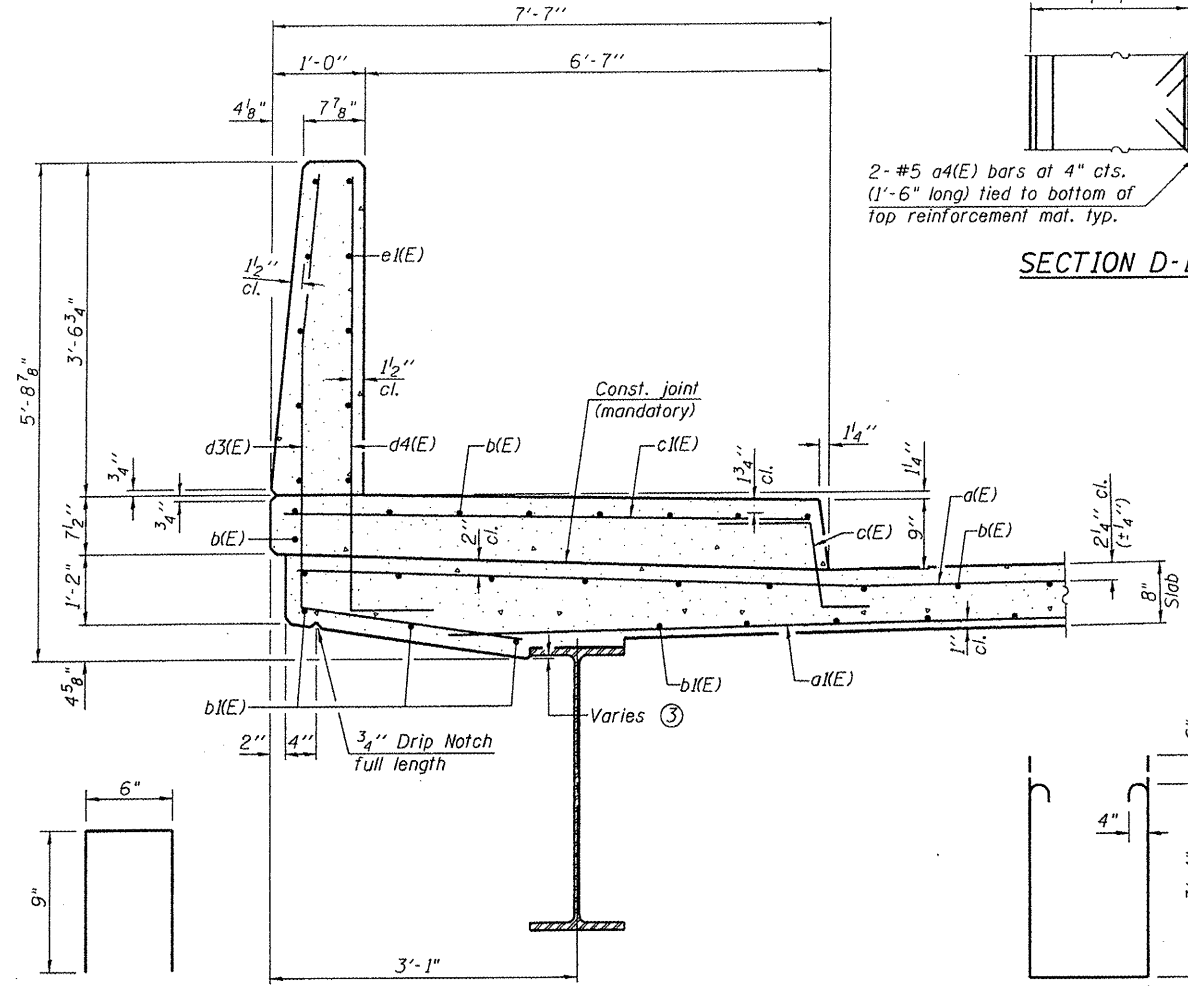
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE  
BILL OF MATERIAL**

| Bar No.                          | Size | Length   | Shape   |
|----------------------------------|------|----------|---------|
| a(E)                             | 129  | #5       | 40'-6"  |
| a1(E)                            | 97   | #5       | 38'-10" |
| a2(E)                            | 15   | #7       | 13'-7"  |
| a3(E)                            | 10   | #7       | 31'-11" |
| a4(E)                            | 32   | #5       | 1'-6"   |
| b(E)                             | 120  | #5       | 41'-0"  |
| b1(E)                            | 108  | #5       | 27'-11" |
| c(E)                             | 162  | #5       | 2'-5"   |
| c1(E)                            | 162  | #5       | 7'-1"   |
| d(E)                             | 148  | #4       | 5'-3"   |
| d1(E)                            | 148  | #6       | 4'-1"   |
| d2(E)                            | 32   | #4       | 2'-0"   |
| d3(E)                            | 20   | #4       | 7'-0"   |
| d4(E)                            | 20   | #6       | 5'-10"  |
| e(E)                             | 48   | #4       | 17'-10" |
| e1(E)                            | 40   | #4       | 3'-8"   |
| m(E)                             | 6    | #6       | 35'-3"  |
| m1(E)                            | 12   | #6       | 15'-0"  |
| m2(E)                            | 5    | #6       | 11'-7"  |
| m3(E)                            | 2    | #6       | 3'-0"   |
| m4(E)                            | 6    | #6       | 35'-3"  |
| s(E)                             | 39   | #4       | 11'-5"  |
| u(E)                             | 4    | #5       | 10'-6"  |
| u2(E)                            | 4    | #5       | 8'-1"   |
| v(E)                             | 40   | #5       | 3'-4"   |
| x(E)                             | 30   | #5       | 6'-11"  |
| x1(E)                            | 40   | #5       | 4'-7"   |
| Reinforcement Bars, Epoxy Coated |      | Pound    | 24,710  |
| Concrete Superstructure          |      | Cu. Yds. | 173.5   |



SECTION THRU SIDEWALK & PARAPET



SECTION THRU SIDEWALK & END POST

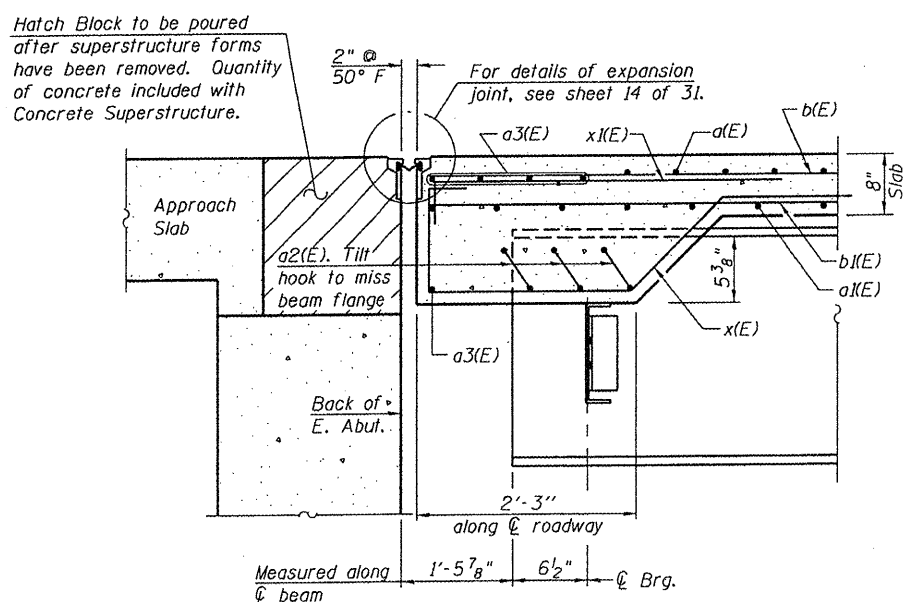
SECTION D-D ①

2-#5 a4(E) bars at 4" cts. (1'-6" long) tied to bottom of top reinforcement mat. typ.

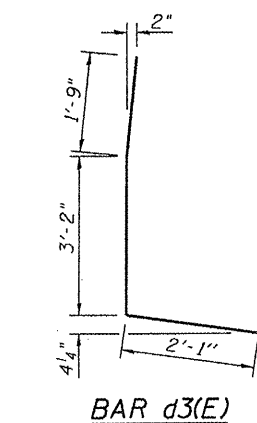
BAR u2(E)

BAR d2(E)

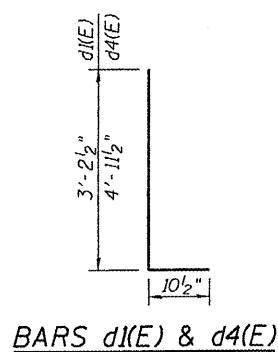
BAR s(E)



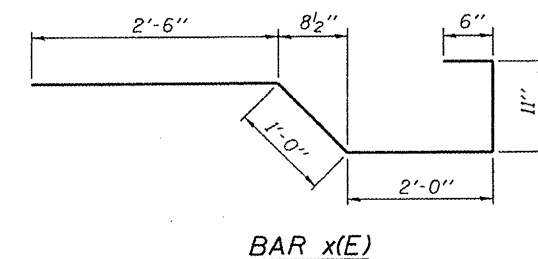
SECTION A-A



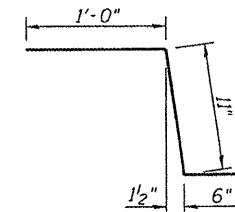
BAR d3(E)



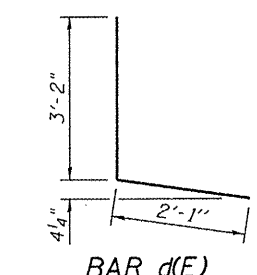
BARS d1(E) & d4(E)



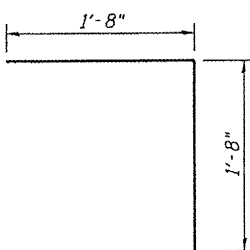
BAR x(E)



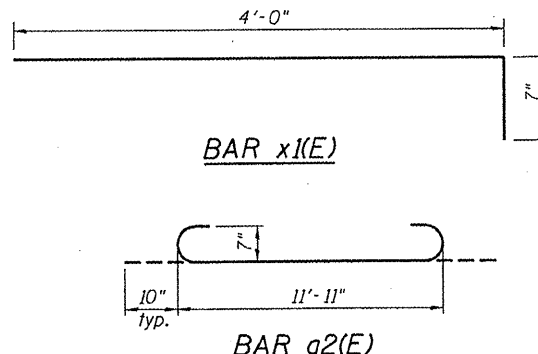
BAR c(E)



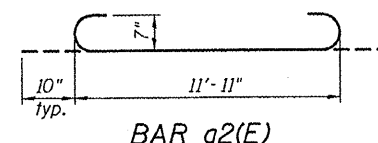
BAR d(E)



BAR v(E)




BAR x1(E)



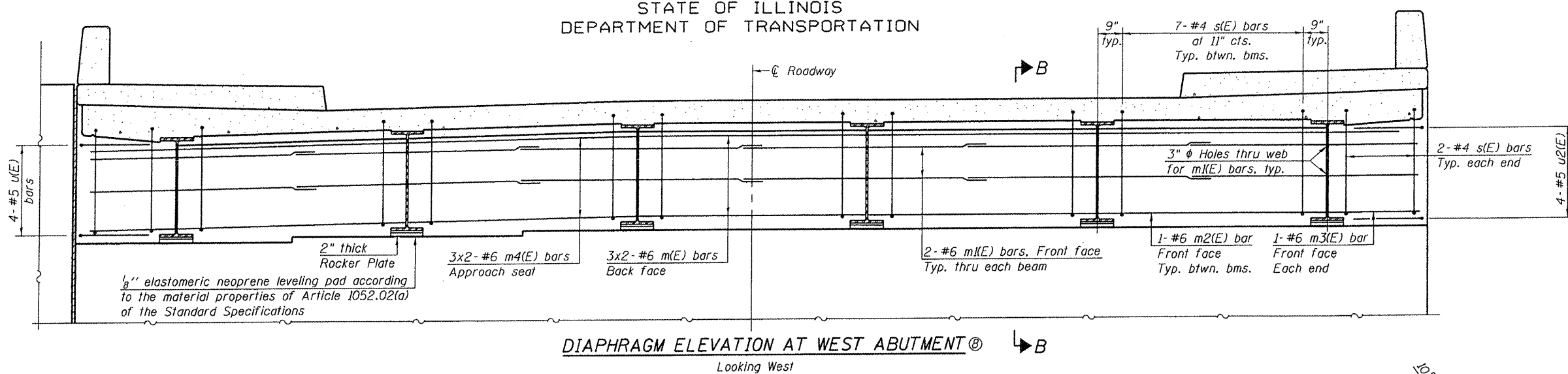
BAR a2(E)

- Notes:
- ① Cut longitudinal reinforcement to clear drainage scuppers.
  - ② For Inside Elevation of Parapets and Parapet Joint Details, see sheet 8 of 31.
  - ③ Dimension varies throughout the length of the structure from 4" minimum at the maximum fascia beam fillet height.
  - ④ For bar u(E) details see sheet 23 of 31.

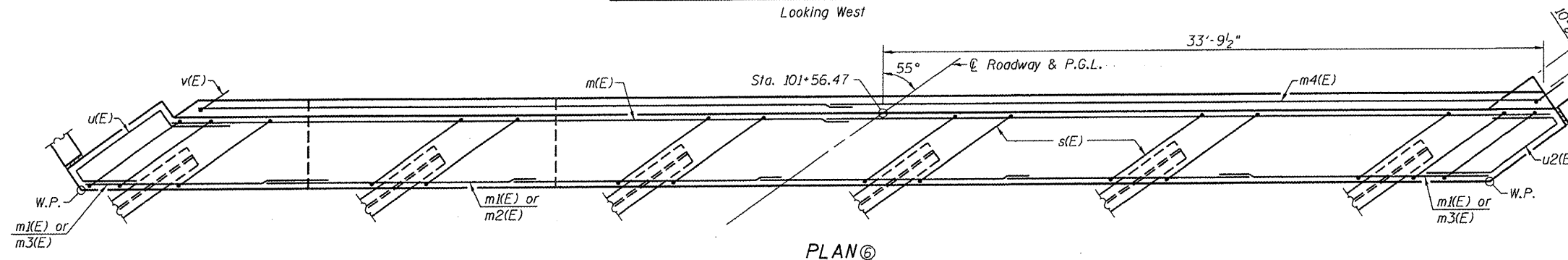
**SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 082-6113**

|   |                    |                |   |   |           |
|---|--------------------|----------------|---|---|-----------|
| SHEET NO. 9   | F.A.U. RTE.        | SECTION        | COUNTY  | TOTAL SHEETS                                    | SHEET NO. |
|   | 9274               | 04-00202-00-BR | ST. CLAIR   | 55  | 26        |
| 31 SHEETS   | CONTRACT NO. 97369 |                |   | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |           |
|  OATES ASSOCIATES<br>Consulting Engineers<br>Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                    |                | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |   |           |

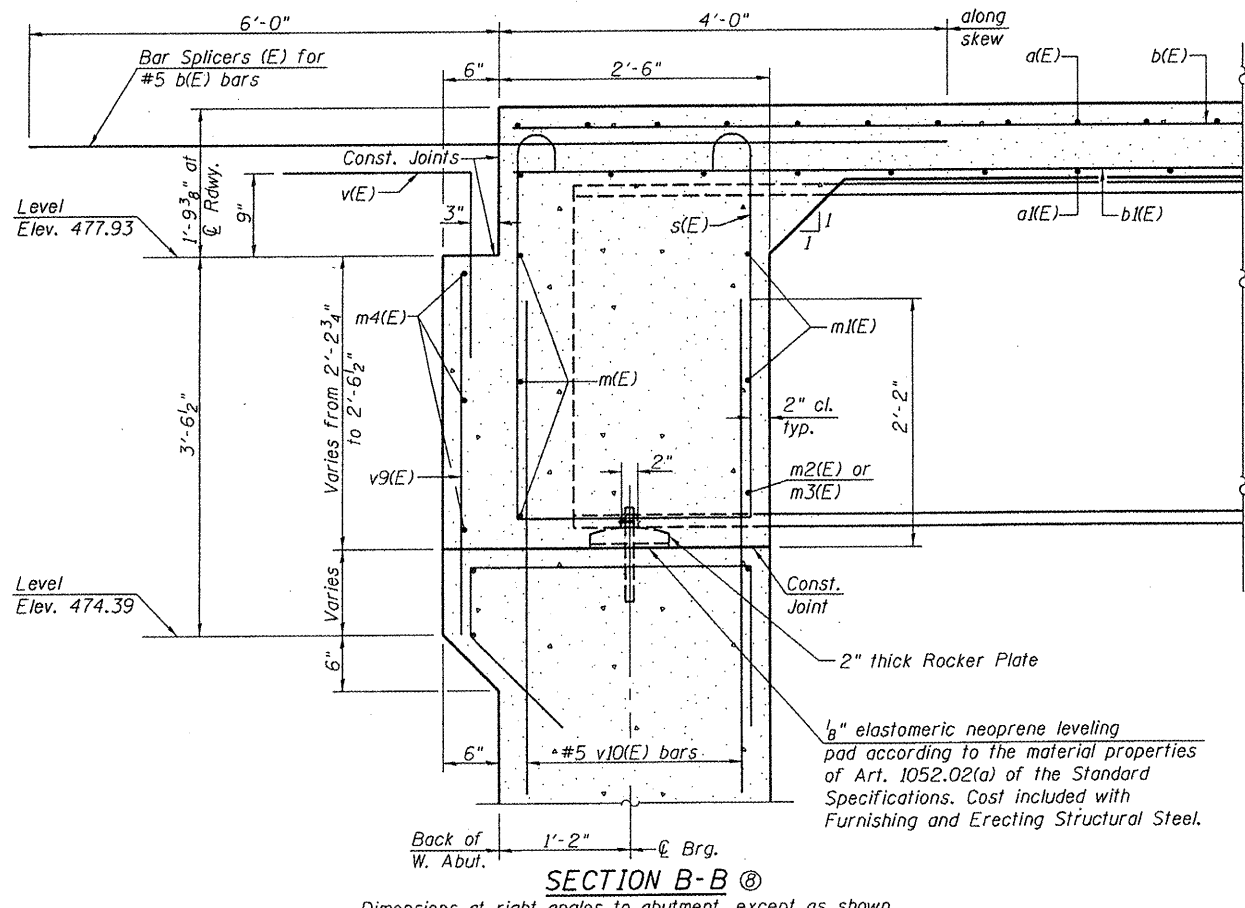
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



DIAPHRAGM ELEVATION AT WEST ABUTMENT ©  
Looking West



PLAN ©




SECTION B-B ©  
Dimensions at right angles to abutment, except as shown.

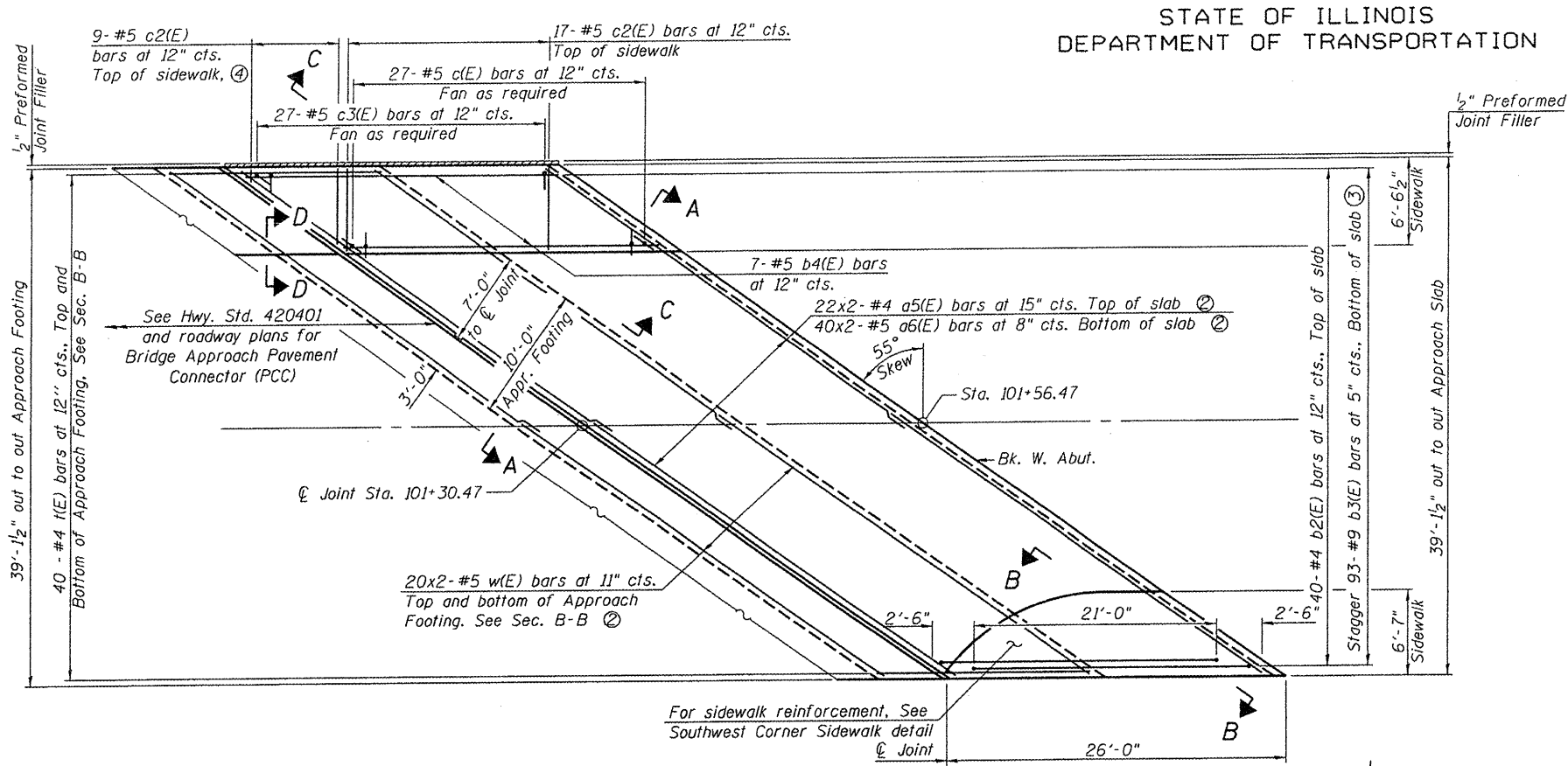
**MIN. BAR LAP**  
#6 bar = 2'-9"

- Notes:
- ① Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 31.
  - ② Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 31.
  - ③ For details of bars s(E) & v(E), see sheet 9 of 31.
  - ④ For bar v(E) callouts, see sheet 7 of 31.
  - ⑤ The s(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
  - ⑥ For dimensions not shown see Seat Plan on sheet 19 of 31.
  - ⑦ Bars indicated thus 3 x 2 - #6 etc. indicates 3 lines of bars with 2 lengths per line.
  - ⑧ Steel End Diaphragm D1 not shown. See sheet 16 of 31 for additional details.

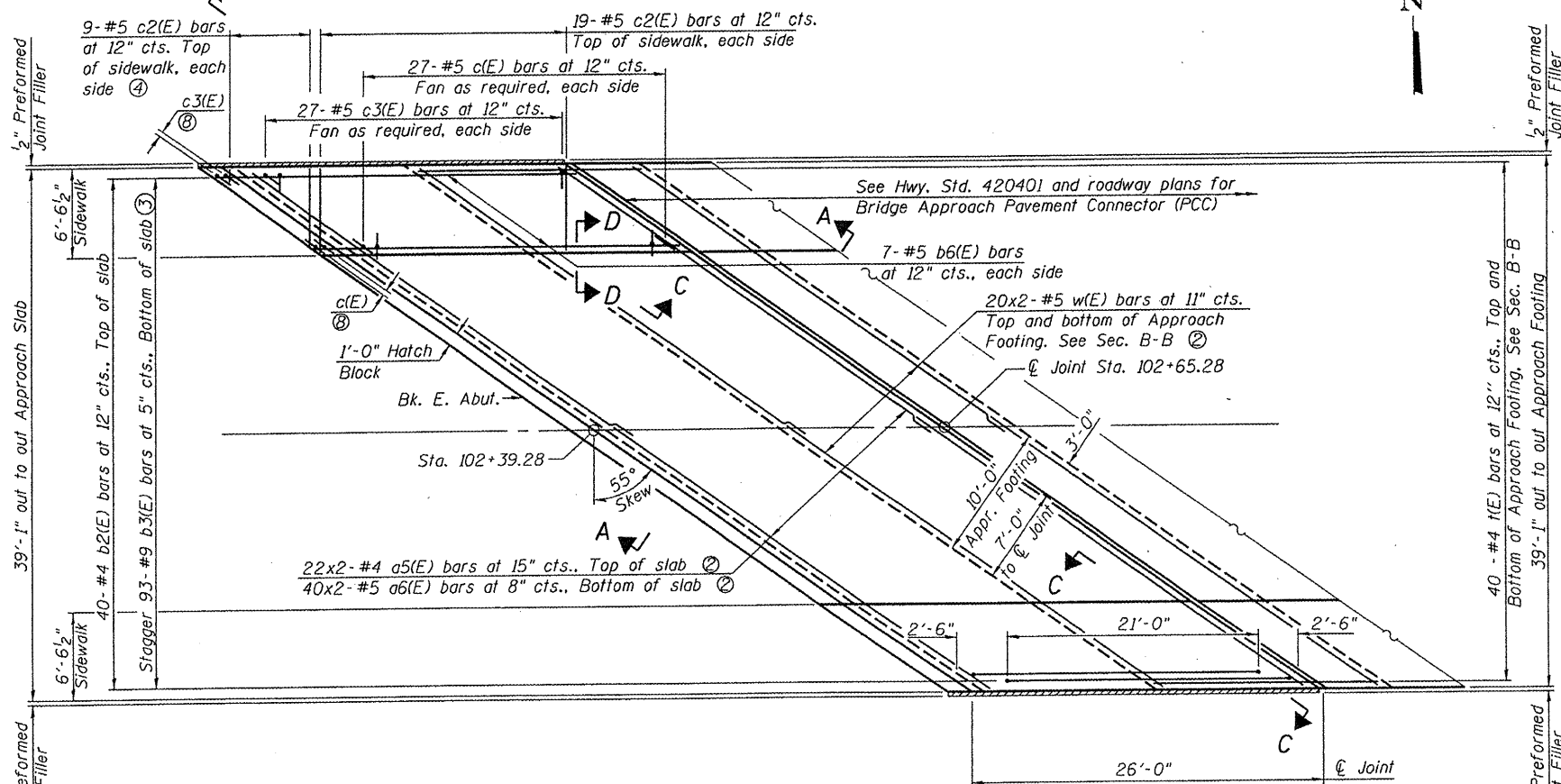
**DIAPHRAGM DETAILS**  
**STRUCTURE NO. 082-6113**

|  |   |                    |           |   |           |
|--|---|--------------------|-----------|---|-----------|
| SHEET NO. 10   | F.A.U. RTE.   | SECTION            | COUNTY    | TOTAL SHEETS  | SHEET NO. |
|  | 9274  | 04-00202-00-BR     | ST. CLAIR | 55  | 27        |
| 31 SHEETS  |   | CONTRACT NO. 97369 |           |   |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT  |   |                    |           |   |           |
| <br><b>OATES ASSOCIATES</b><br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                    |           | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |           |

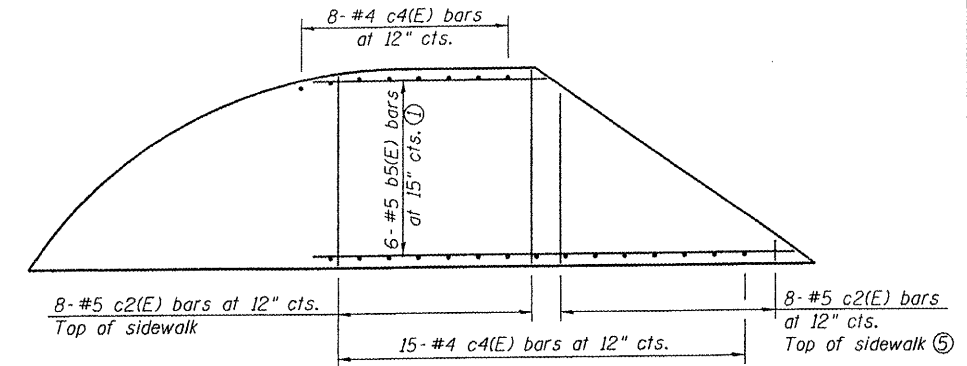
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



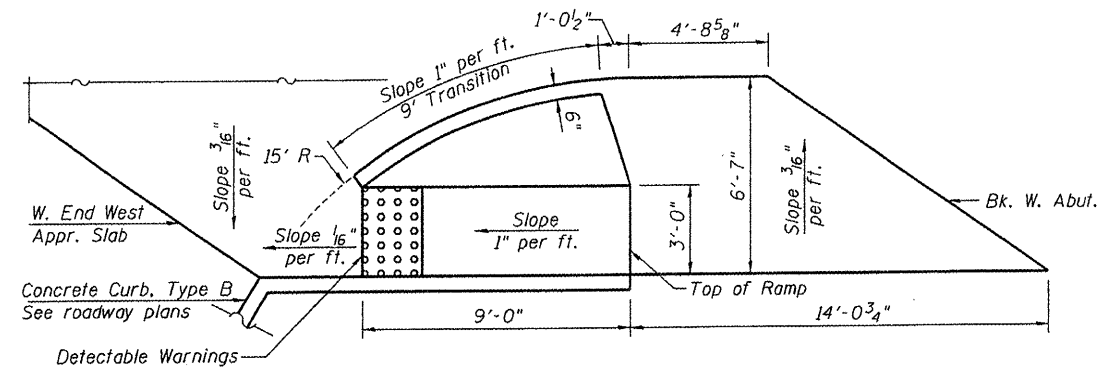
WEST APPROACH PLAN



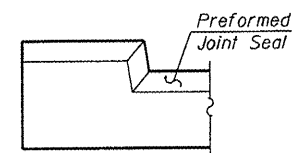
EAST APPROACH PLAN



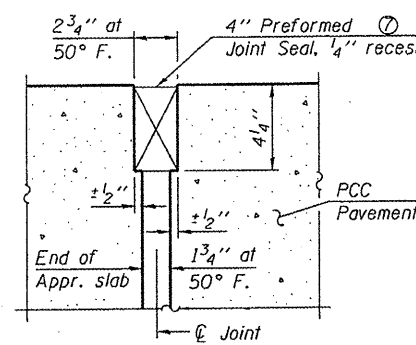
SOUTHWEST CORNER SIDEWALK  
Showing Reinforcement



SOUTHWEST CORNER SIDEWALK  
Showing Dimensions

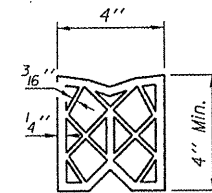


VIEW D-D



DETAIL A


Dimensions at right angles to  $\perp$  Joint



PREFORMED  
JOINT SEAL

- Notes:
- For Field Cutting Diagram, Bill of Material, Bar List, Bar Details, Sections A-A, B-B, and C-C, see sheet 12 of 31.
  - a5(E), a6(E), and w(E) bar spacings measured perpendicular to  $\perp$  Rdwy.
  - Tilt #9 b3(E) bars as required to maintain clearance.
  - Order c2(E) bars full length. Cut to fit skew and use remainder of bars in opposite end of sidewalk.
  - Order c2(E) bars full length. Cut to fit skew and use remainder of bars in top of ramp maintaining 1 3/4" clearance.
  - Bars indicated thus 20 x 2 - #5 etc. indicates 20 lines of bars with 2 lengths.
  - Cost included with Concrete Superstructure.
  - For c(e) and c3(E) bars cast in Hatch Block, see sheet 21 of 31. Typical each end of east approach.

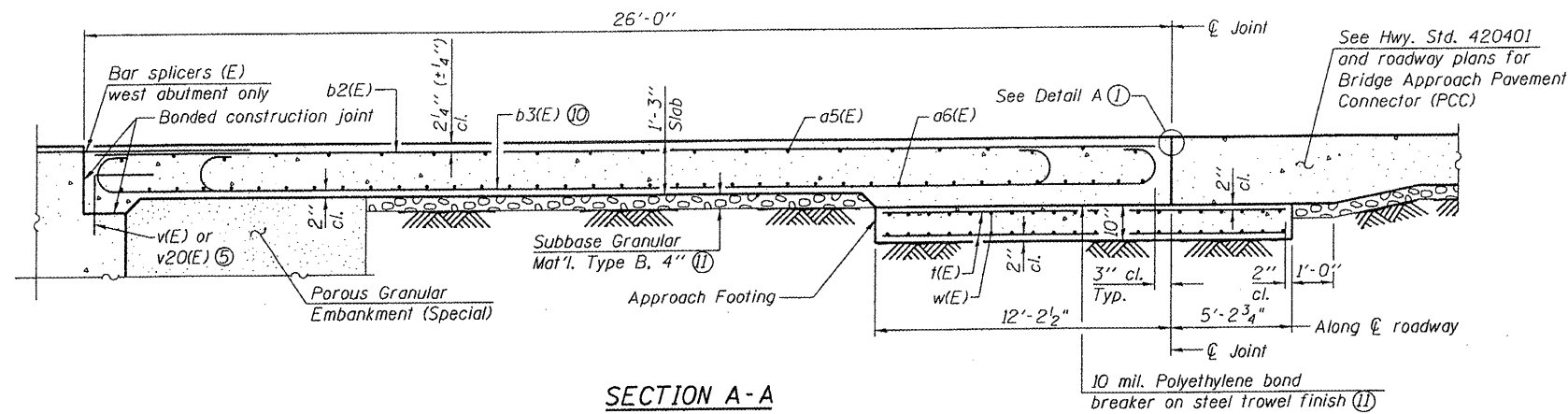
BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 082-6113

|  |                    |                |   |   |   |
|--|--------------------|----------------|---|---|---|
| SHEET NO. 11   | F.A.U. RTE.        | SECTION        | COUNTY  | TOTAL SHEETS                                    | SHEET NO.   |
|  | 9274               | 04-00202-00-BR | ST. CLAIR   | 55  | 28  |
| 31 SHEETS  | CONTRACT NO. 97369 |                |   | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |   |
|  GATES ASSOCIATES<br>Consulting Engineers |                    |                | Eastport Business Center 1<br>100 Laner Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.00115 |   | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |

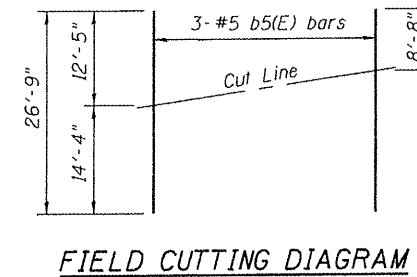
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TWO APPROACHES  
BILL OF MATERIAL

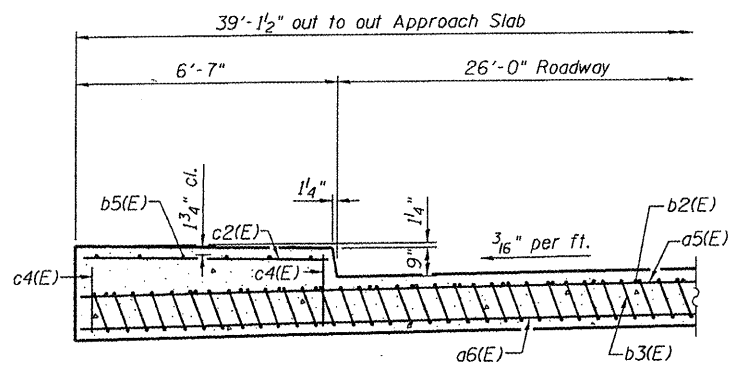
| Bar                              | No. | Size | Length  | Shape  |
|----------------------------------|-----|------|---------|--------|
| a5(E)                            | 88  | #4   | 34'-8"  | —      |
| a6(E)                            | 160 | #5   | 34'-11" | —      |
| b2(E)                            | 80  | #4   | 25'-6"  | —      |
| b3(E)                            | 186 | #9   | 25'-9"  | —      |
| b4(E)                            | 7   | #5   | 25'-6"  | —      |
| b5(E)                            | 3   | #5   | 26'-9"  | —      |
| b6(E)                            | 14  | #5   | 27'-2"  | —      |
| c(E)                             | 85  | #5   | 2'-5"   | L      |
| c2(E)                            | 98  | #5   | 6'-1"   | —      |
| c3(E)                            | 85  | #5   | 3'-0"   | —      |
| c4(E)                            | 23  | #4   | 1'-4"   | —      |
| 1(E)                             | 160 | #4   | 16'-10" | —      |
| w(E)                             | 160 | #5   | 34'-11" | —      |
| Concrete Structures              |     |      | Cu. Yd. | 42.2   |
| Concrete Superstructure          |     |      | Cu. Yd. | 137.3  |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 34,930 |



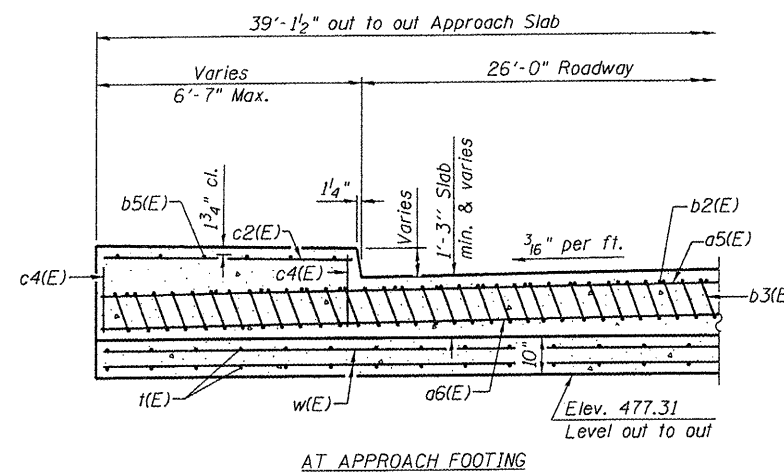
SECTION A-A



FIELD CUTTING DIAGRAM (12)

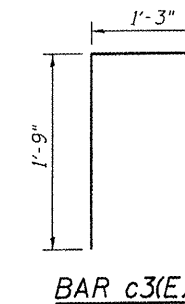


NEAR ABUTMENT

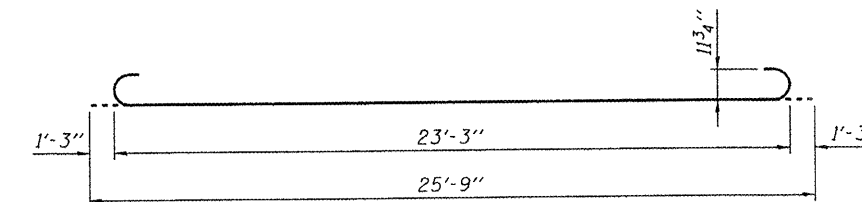


AT APPROACH FOOTING

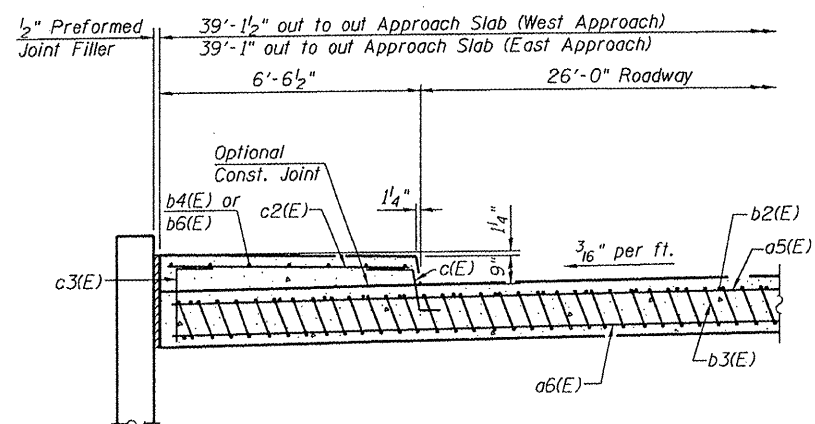
SECTION B-B



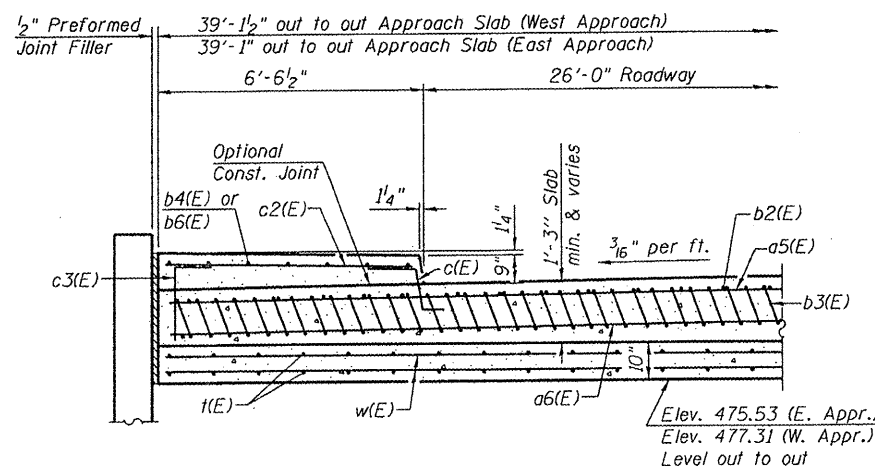
BAR c3(E)



BAR b3(E)



NEAR ABUTMENT




AT APPROACH FOOTING

SECTION C-C

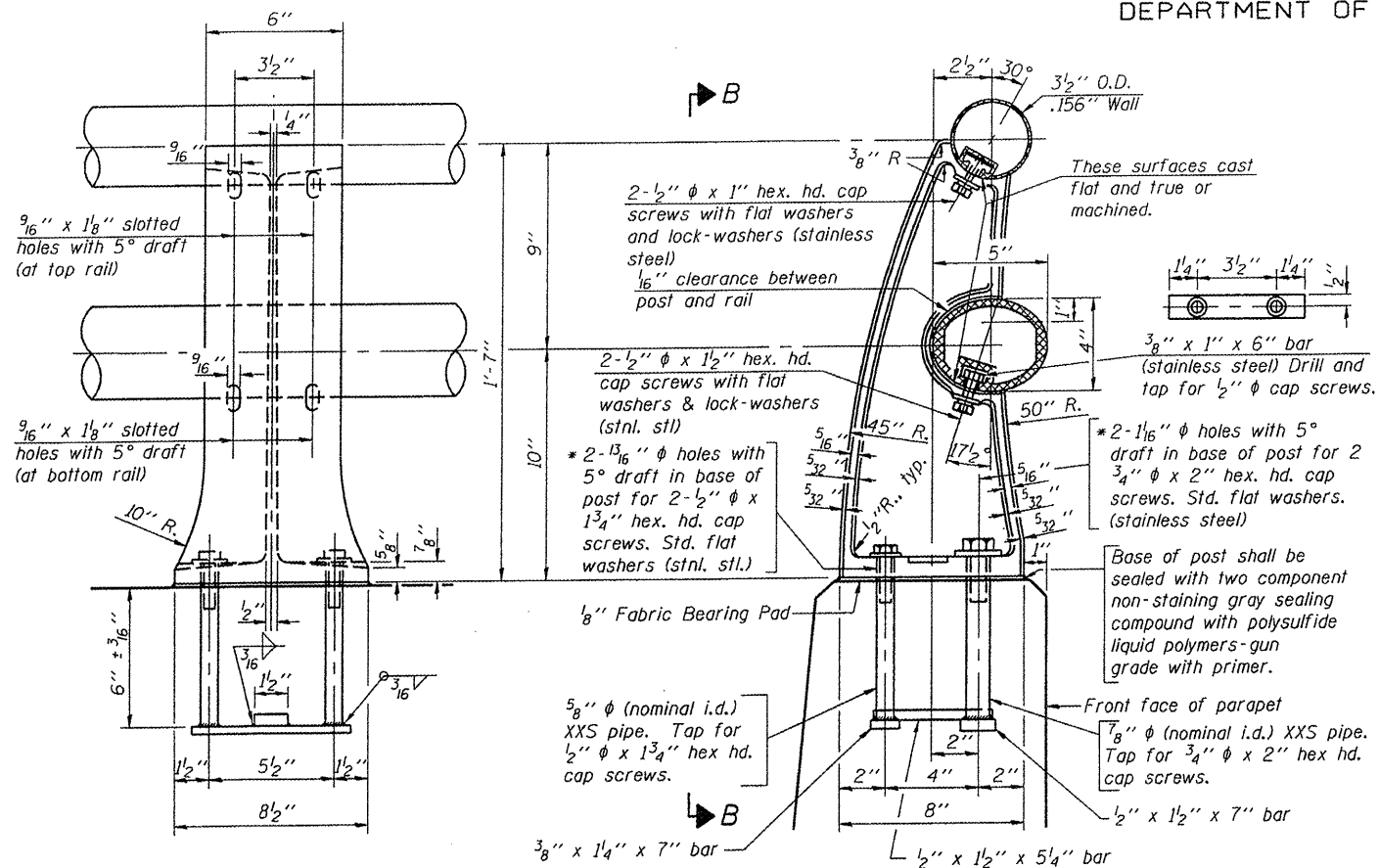
- Notes:
- For Detail A, see sheet 11 of 31.
  - Approach slab and sidewalk concrete shall be paid for as Concrete Superstructure.
  - Approach footing concrete shall be paid for as Concrete Structures.
  - Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
  - For bar v(E) and c(E) details, see sheet 9 of 31. For bar v20(E) details, see sheet 21 of 31.
  - The approach footing maximum applied service bearing pressure (Omax) = 2.0 ksf.
  - For bar splicer details, see sheet 29 of 31.
  - Cost of excavation for approach footing included with Concrete Structures.
  - For Porous Granular Embankment (Special) and drainage treatment details, see sheets 19 of 31 and 21 of 31.
  - Tilt #9 b3(E) bars as required to maintain clearance.
  - Cost included with Concrete Superstructure.
  - Order b5(E) full length. Cut as shown and use remainder of bars in opposite side of sidewalk.

BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 082-6113

|   |   |                |           |   |           |
|---|---|----------------|-----------|---|-----------|
| SHEET NO. 12  | F.A.U. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS  | SHEET NO. |
|   | 9274  | 04-00202-00-BR | ST. CLAIR | 55  | 29        |
| 31 SHEETS   | CONTRACT NO. 97369  |                |           | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT         |           |
| <br>QATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                |           | DESIGNED NEL<br>CHECKED JAD<br>DRAWN NEL<br>CHECKED JAD |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

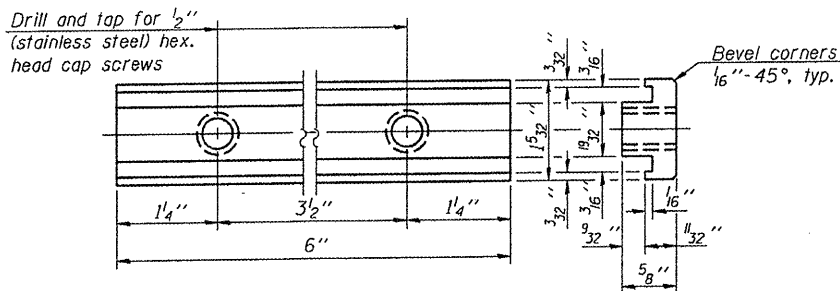
\* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



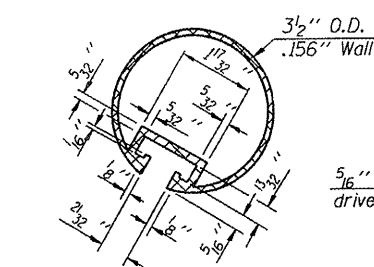
VIEW B-B

RAIL POST DETAILS

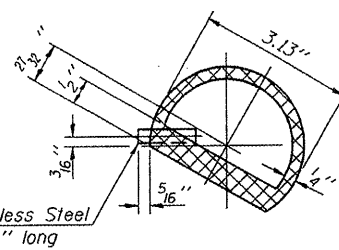
SECTION A-A



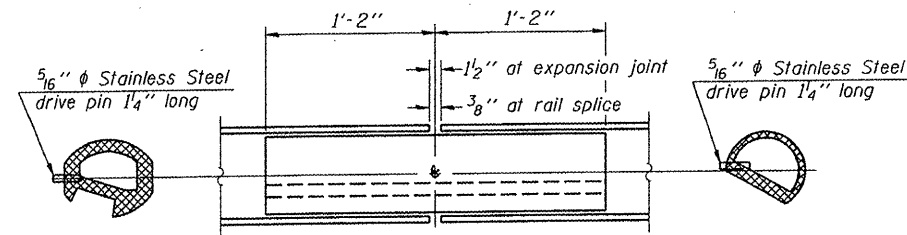
RAIL POST CLAMP BAR  
For Top Rail



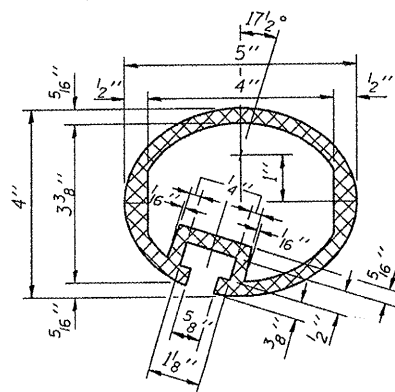
SECTION THRU TOP RAIL



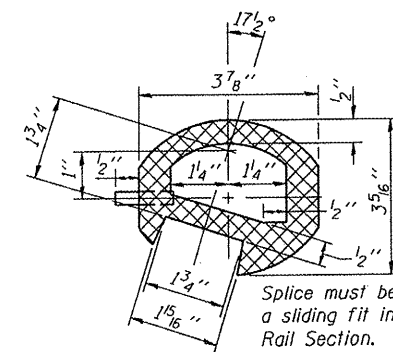
SECTION THRU SPLICE  
For Top Rail



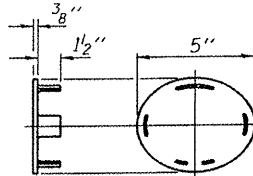
RAIL SPLICE



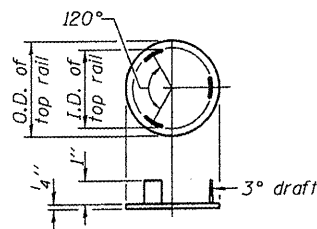
SEC. THRU ELLIPTICAL  
RAIL SECTION



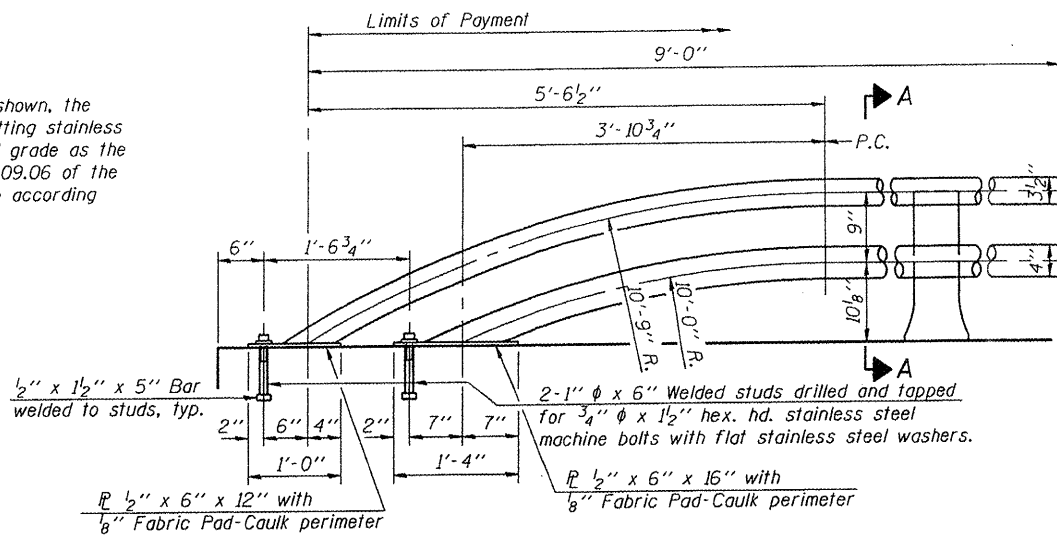
SEC. THRU SPLICE



CAST END CAP  
For bottom rail  
DRIVE FIT TYPE



CAST END CAP  
For top rail



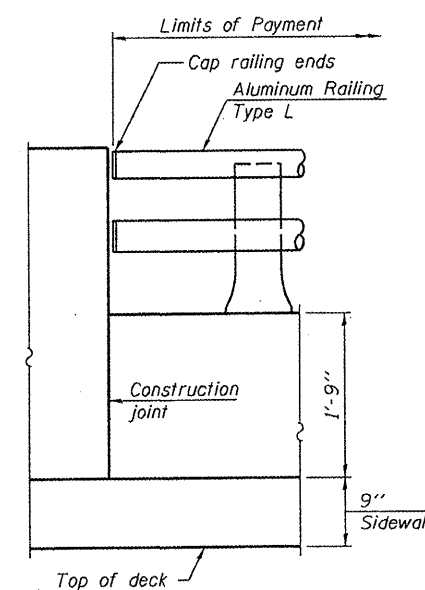
RAIL TERMINAL SECTION

Note:  
The end rail post shall be set back as required for the terminal rail section.

BILL OF MATERIAL

| Item                     | Unit | Quantity |
|--------------------------|------|----------|
| Aluminum Railing, Type L | Foot | 145      |

Notes:  
All Posts shall be normal to parapet.  
All joints in rail shall be spliced per detail.  
All exposed rail ends shall be capped per detail.  
Provide 1-1/8" and 2-1/16" Aluminum Shim for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.  
See sheet 8 of 31 for rail post spacing.



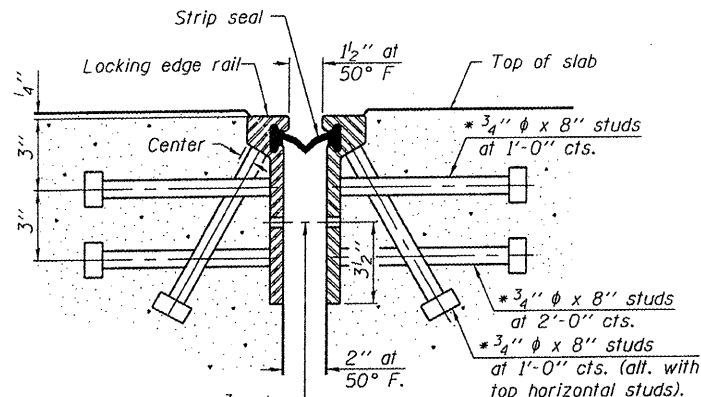
RAIL END TREATMENT FOR  
TYPE 5 AND 6 TERMINAL

ALUMINUM RAILING, TYPE L  
STRUCTURE NO. 082-6113

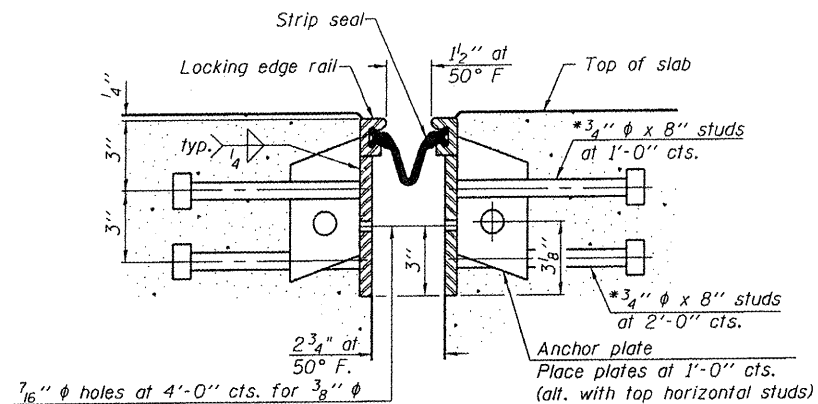
|   |   |                    |           |              |           |
|---|---|--------------------|-----------|--------------|-----------|
| SHEET NO. 13                                    | F.A.U. RTE.   | SECTION            | COUNTY    | TOTAL SHEETS | SHEET NO. |
|   | 9274  | 04-00202-00-BR     | ST. CLAIR | 55           | 30        |
| 31 SHEETS                                       |   | CONTRACT NO. 97369 |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |   |                    |           |              |           |
| <br>QATES ASSOCIATES<br>Consulting Engineers    | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                    |           | DESIGNED -   |           |
|   |   |                    |           | CHECKED -    |           |
|   |   |                    |           | DRAWN -      |           |
|   |   |                    |           | CHECKED -    |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



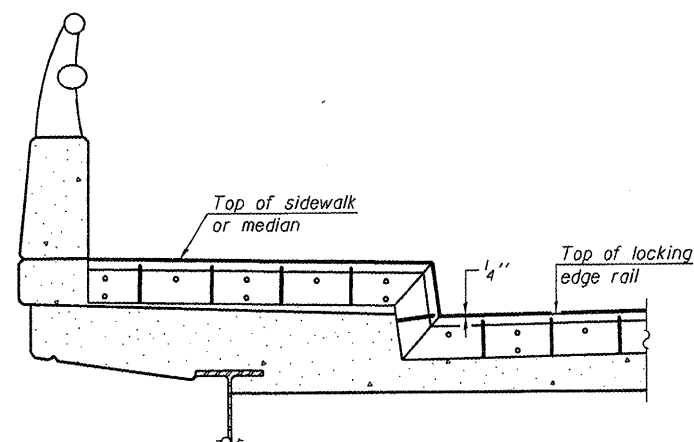
SECTION THRU  
ROLLED RAIL JOINT



SECTION THRU  
WELDED RAIL JOINT

7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

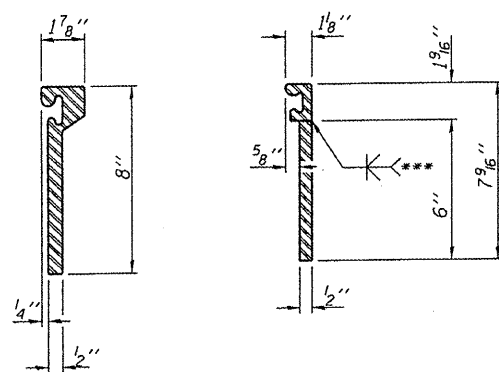
7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



AT SIDEWALK OR MEDIAN

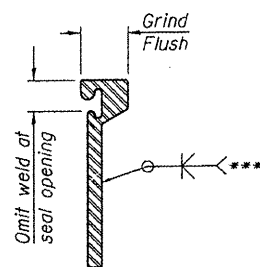
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENT



ROLLED  
EXTRUDED RAIL

WELDED RAIL

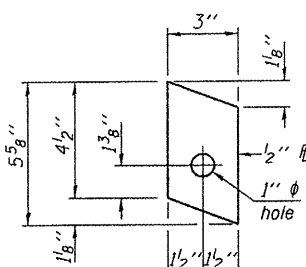


\*\*\*Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE  
RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS



ANCHOR PLATE  
(for welded rail)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.


The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

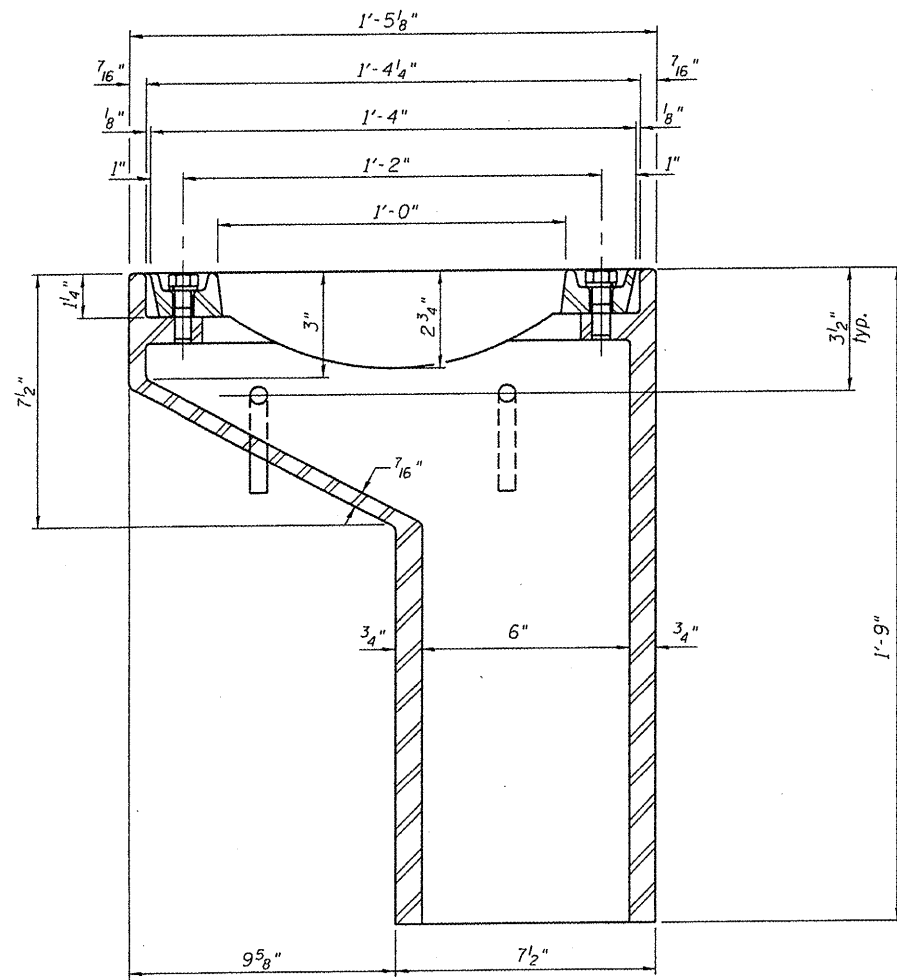
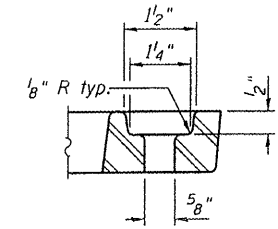
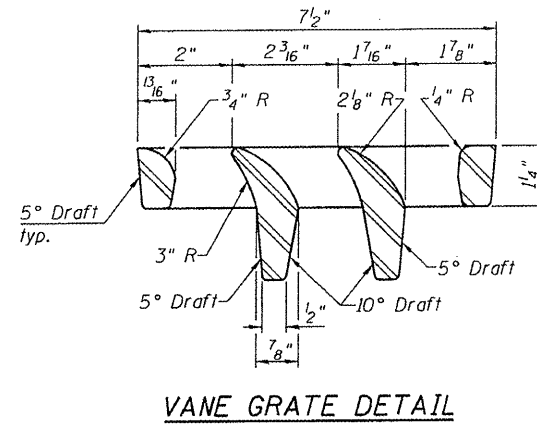
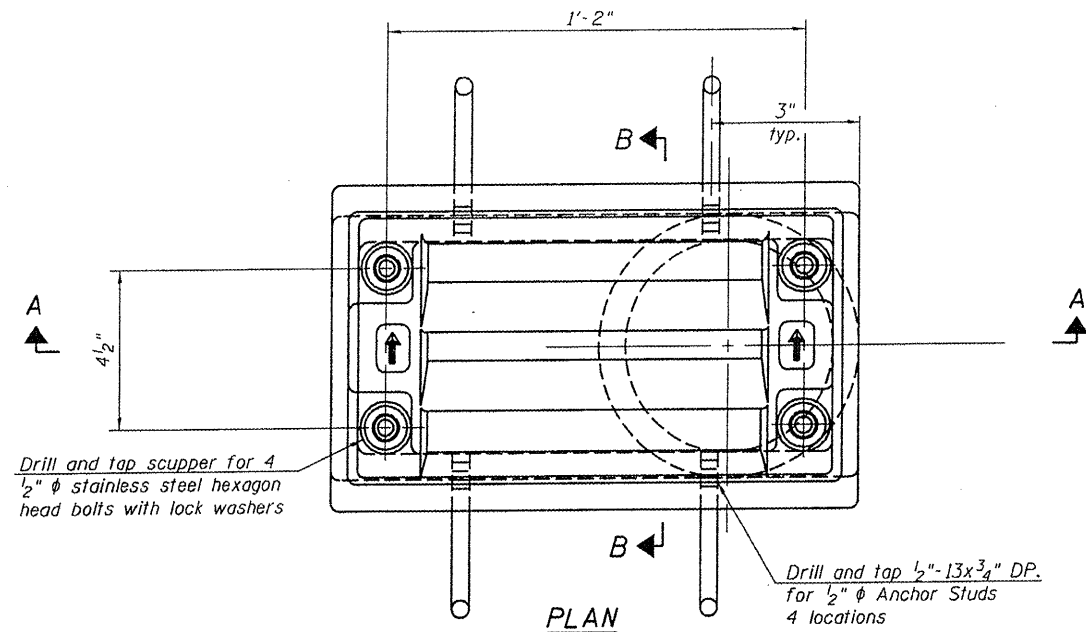
BILL OF MATERIAL

| Item                      | Unit | Total |
|---------------------------|------|-------|
| Prefomed Joint Strip Seal | Foot | 72.5  |

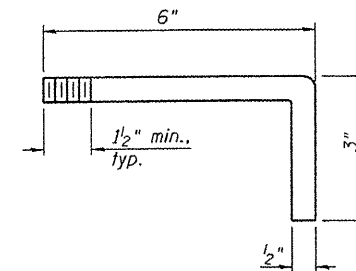
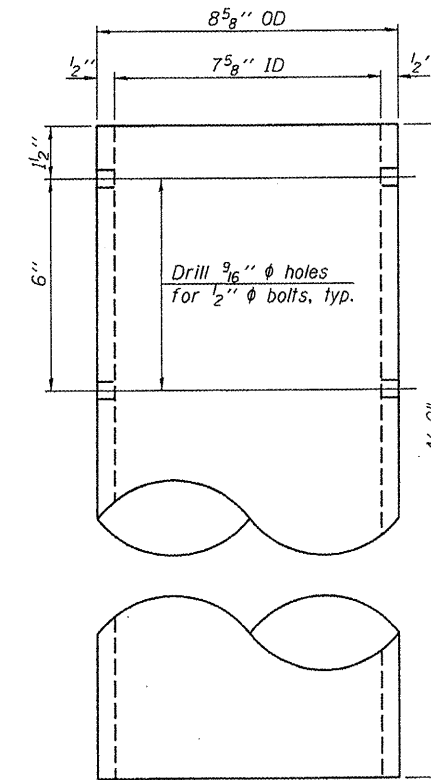
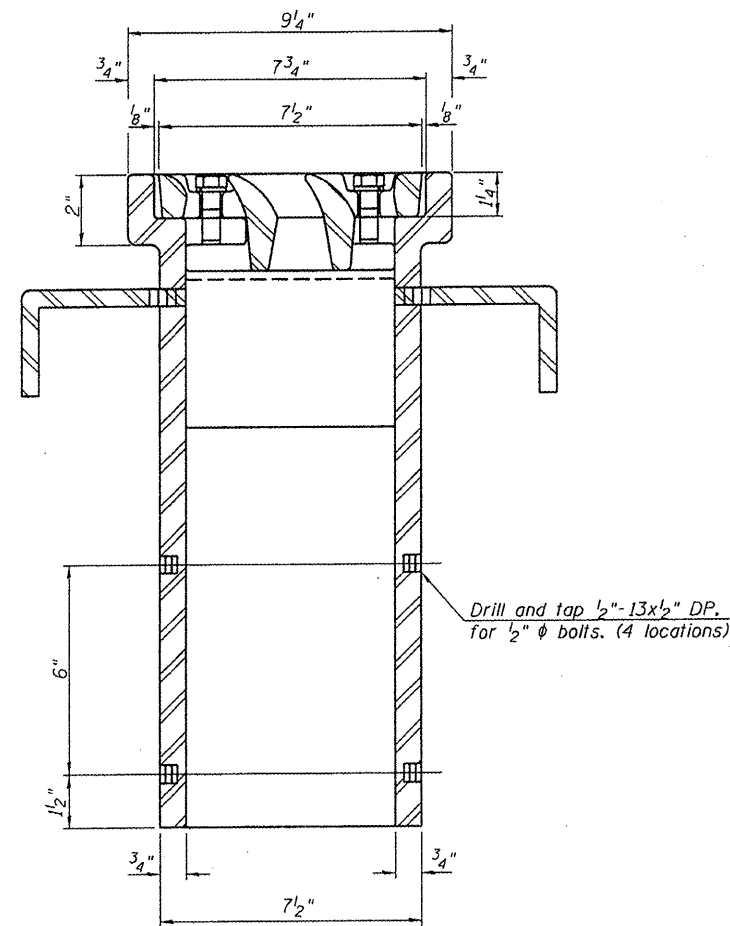
PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 082-6113

|   |   |                |                    |   |           |
|---|---|----------------|--------------------|---|-----------|
| SHEET NO. 14<br>31 SHEETS   | F.A.U. RTE.   | SECTION        | COUNTY             | TOTAL SHEETS  | SHEET NO. |
|   | 9274  | 04-00202-00-BR | ST. CLAIR          | 55  | 31        |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT   |   |                | CONTRACT NO. 97369 |   |           |
| <br>QATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                |                    | DESIGNED JAD<br>CHECKED NEL<br>DRAWN JAD<br>CHECKED NEL |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION A-A  
See sheet 9 of 31 for scupper location relative to parapet and sidewalk.



ANCHOR STUD DETAIL

BILL OF MATERIAL

| Item                     | Unit | Quantity |
|--------------------------|------|----------|
| Drainage Scuppers, DS-II | Each | 4        |

DRAINAGE SCUPPERS, DS-II  
STRUCTURE NO. 082-6113

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, DS-II.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

| SHEET NO.                                       | F.A.U. RTE. | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
|---|-------------|----------------|--------------------|--------------|-----------|
| 15  | 9274        | 04-00202-00-BR | ST. CLAIR          | 55           | 32        |
| 31 SHEETS                                       |             |                | CONTRACT NO. 97369 |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |             |                |                    |              |           |

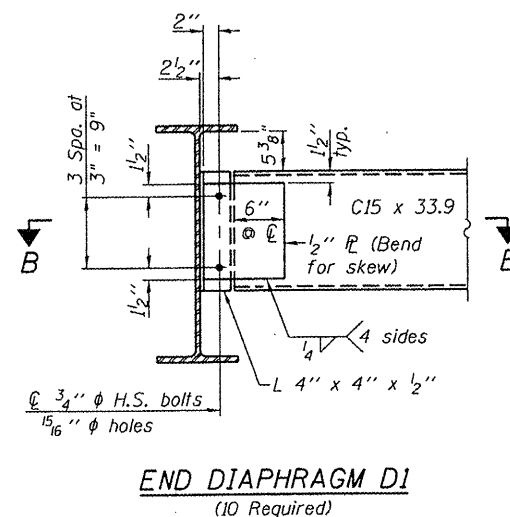
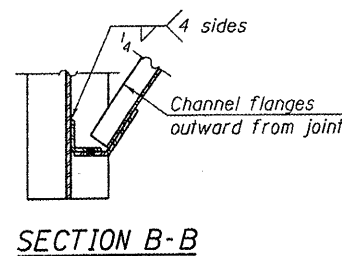
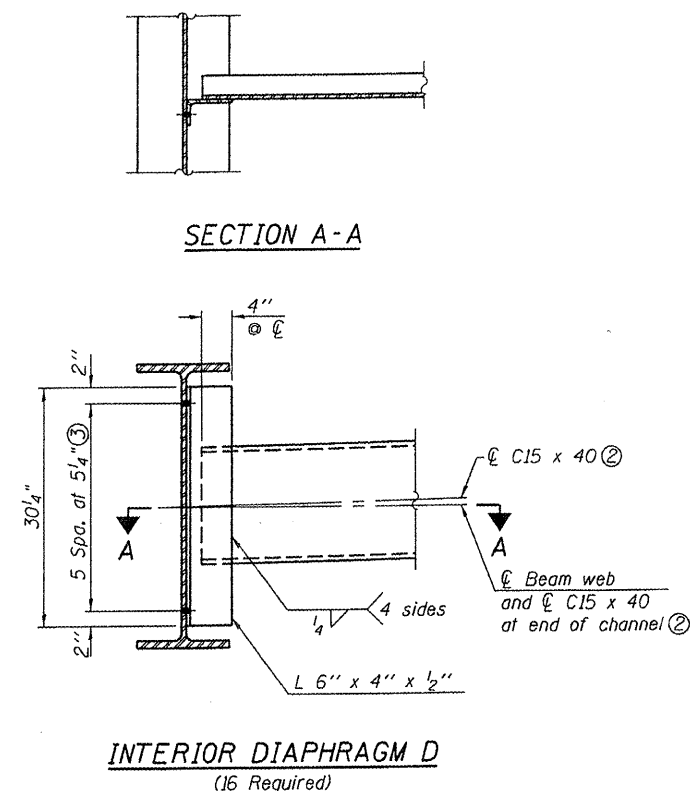
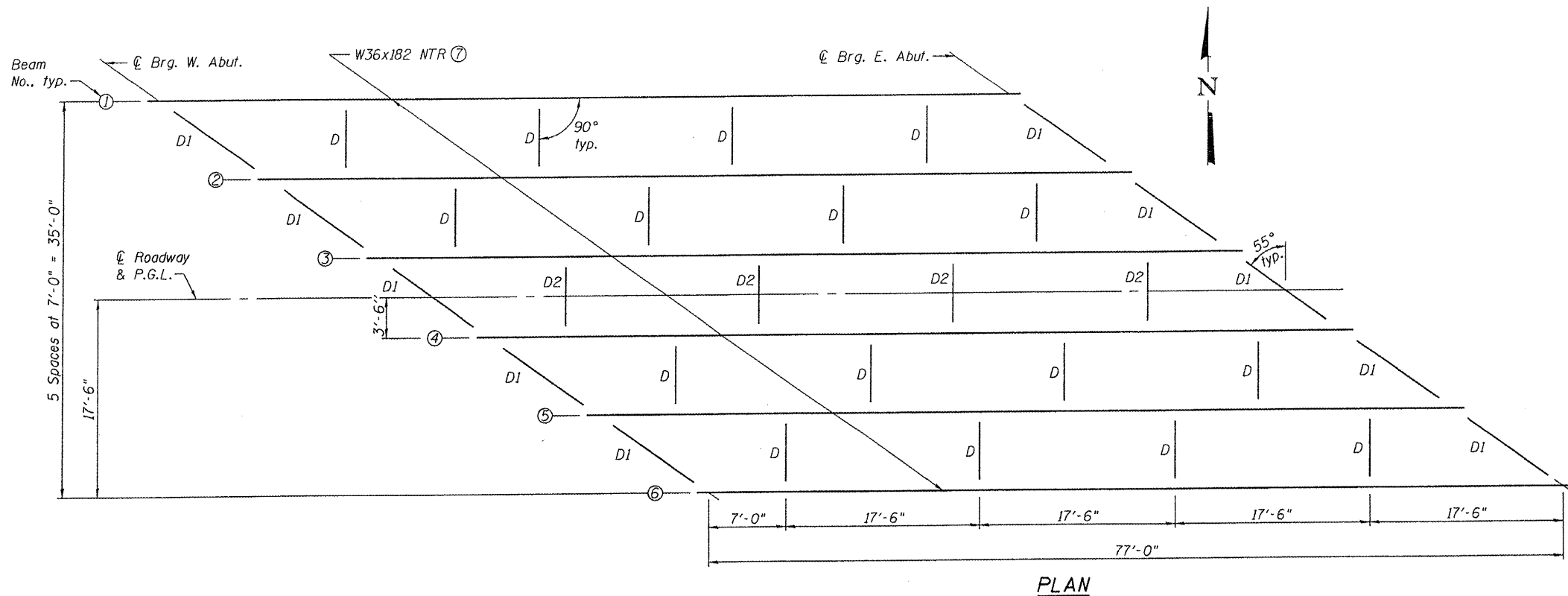


Eastport Business Center 1  
100 Lanter Court, Suite 1  
Collinsville, Illinois 62234  
618-345-2200  
Design Firm License No. 184.001115

|            |
|------------|
| DESIGNED - |
| CHECKED -  |
| DRAWN -    |
| CHECKED -  |



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Notes:

- ① Two hardened washers required for each set of oversized holes.
- ② Alternate C15 x 50 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
- ③ 3/4"  $\phi$  HS bolts, 1 5/16"  $\phi$  holes
- ④ All diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- ⑤ Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- ⑥ For beam elevation, beam details, and Diaphragm D2, see sheet 17 of 31.
- ⑦ AASHTO M 270 Grade 50 Steel.

FRAMING PLAN  
STRUCTURE NO. 082-6113

| INTERIOR BEAM MOMENT TABLE |                    | 0.5 Span |
|----------------------------|--------------------|----------|
| $I_s$                      | (in <sup>4</sup> ) | 11300    |
| $I_c(n)$                   | (in <sup>4</sup> ) | 27006    |
| $I_c(3n)$                  | (in <sup>4</sup> ) | 19772    |
| $S_s$                      | (in <sup>3</sup> ) | 623      |
| $S_c(n)$                   | (in <sup>3</sup> ) | 870      |
| $S_c(3n)$                  | (in <sup>3</sup> ) | 786      |
| $Z$                        | (in <sup>3</sup> ) | —        |
| $\rho$                     | (k/')              | 1.071    |
| $M \rho$                   | (k)                | 793.7    |
| $s \rho$                   | (k/')              | 0.575    |
| $M_s \rho$                 | (k)                | 426.1    |
| $M_L$                      | (k)                | 704.5    |
| $M_{1M}$                   | (k)                | 174.7    |
| $S_3 [M_L + M_1]$          | (k)                | 1465.3   |
| $M_o$                      | (k)                | 3490.9   |
| $M_u$                      | (k)                | 4246.6   |
| $f_s \rho$ non-comp        | (ksi)              | 15.29    |
| $f_s \rho$ (comp)          | (ksi)              | 6.51     |
| $f_s S_3 [M_L + M_1]$      | (ksi)              | 20.21    |
| $f_s$ (Overload)           | (ksi)              | 42.01    |
| $f_s$ (Total)              | (ksi)              | —        |
| VR                         | (k)                | 56.2     |

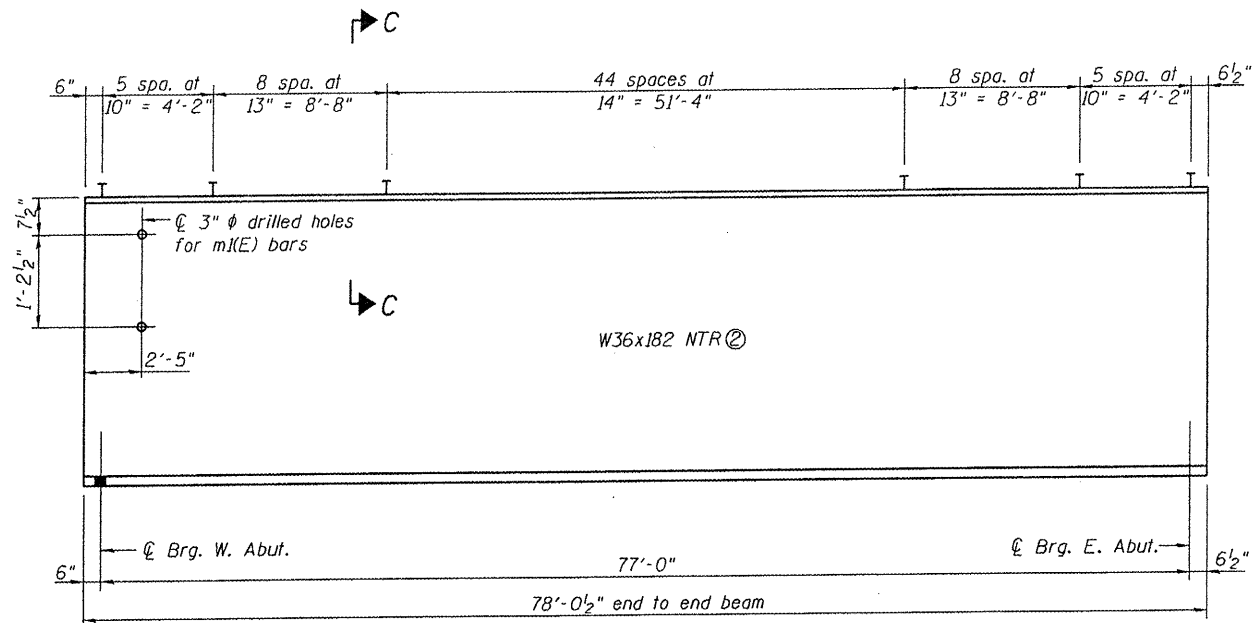
- $I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $Z$ : Plastic Section Modulus of the steel section in non-composite areas (in<sup>3</sup>).
- $\rho$ : Un-factored non-composite dead load (kips/ft.).
- $M \rho$ : Un-factored moment due to non-composite dead load (kip-ft.).
- $s \rho$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).
- $M_s \rho$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- $M_L$ : Un-factored live load moment (kip-ft.).
- $M_1$ : Un-factored moment due to impact (kip-ft.).
- $M_o$ : Factored design moment (kip-ft.).
- $M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- $f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).
- $f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
- VR: Maximum  $\pm$  impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

| INTERIOR BEAM REACTION TABLE |     | E. & W. Abut. |
|------------------------------|-----|---------------|
| $R \rho$                     | (k) | 63.4          |
| $R_L$                        | (k) | 45.1          |
| $R_I$                        | (k) | 11.2          |
| $R_{Total}$                  | (k) | 119.7         |

- \* Compact section  
\*\* Braced non-compact and partially braced section

|   |                    |                |   |              |   |
|---|--------------------|----------------|---|--------------|---|
| SHEET NO. 16  | F.A.U. RTE.        | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO.   |
|   | 9274               | 04-00202-00-BR | ST. CLAIR   | 55           | 33  |
| 31 SHEETS   | CONTRACT NO. 97369 |                |   |              |   |
| FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT |                    |                |   |              |   |
|   |                    |                | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |              | DESIGNED JAD<br>CHECKED NEL<br>DRAWN JAD<br>CHECKED NEL |

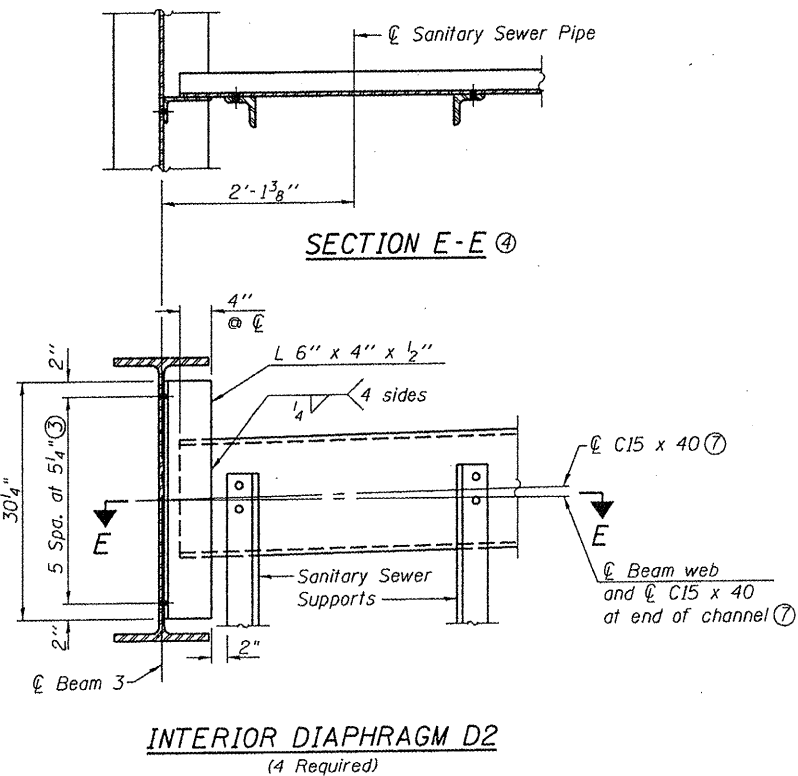
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



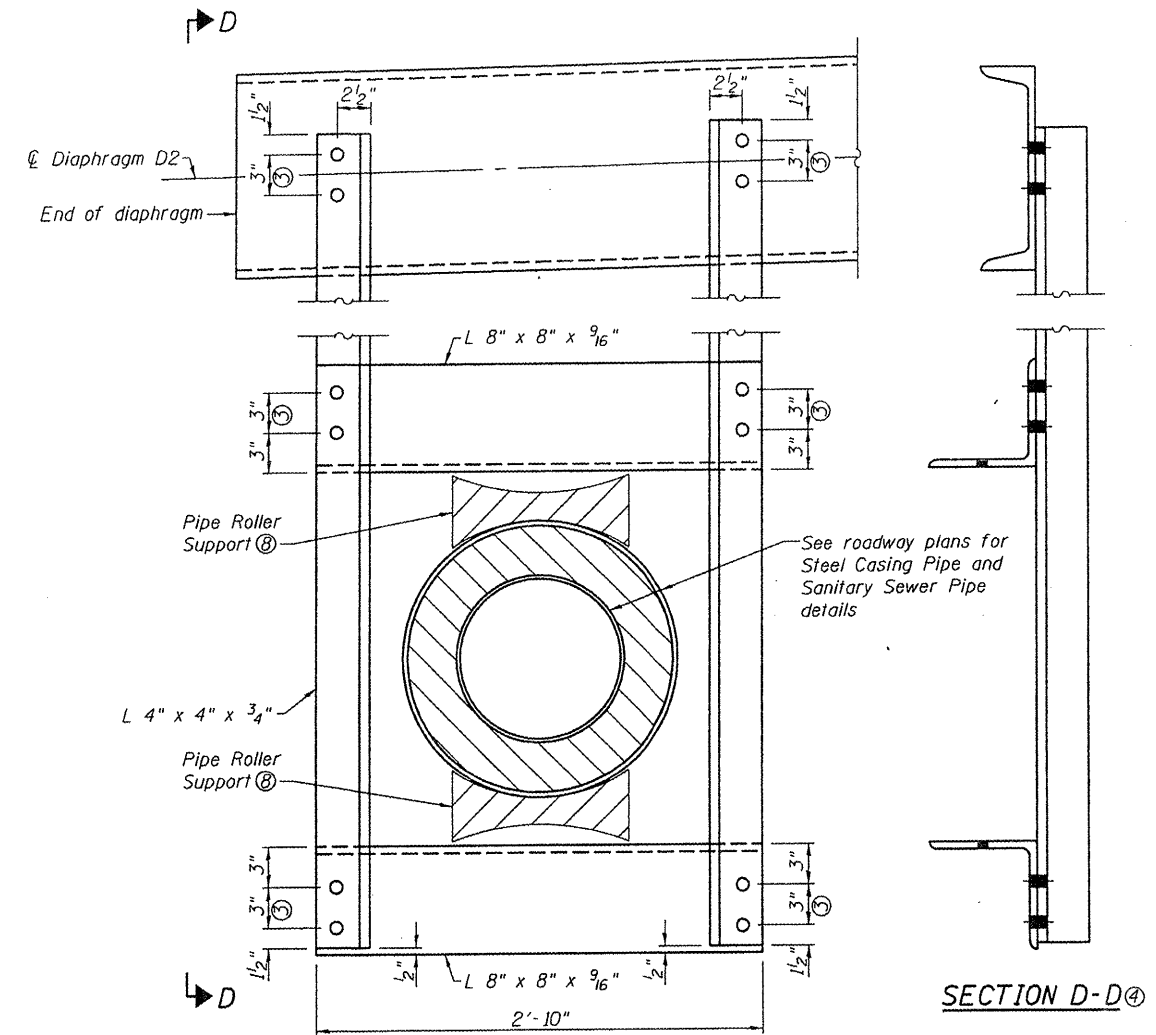
**BEAM ELEVATION**  
(6 Required)

| TOP OF BEAM ELEVATIONS* |         |         |         |         |         |         |
|-------------------------|---------|---------|---------|---------|---------|---------|
|                         | Beam #1 | Beam #2 | Beam #3 | Beam #4 | Beam #5 | Beam #6 |
| ℄ Brg. W. Abut.         | 478.91  | 478.91  | 478.96  | 478.91  | 478.75  | 478.59  |
| ℄ Brg. E. Abut.         | 478.44  | 478.46  | 478.46  | 478.32  | 478.04  | 477.74  |

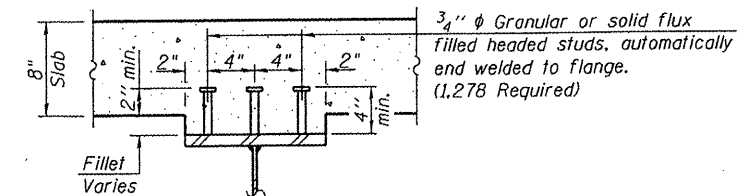
\*For fabrication only.



**INTERIOR DIAPHRAGM D2**  
(4 Required)




**SANITARY SEWER SUPPORT ELEVATION**  
AT DIAPHRAGM D2 (2 Required)



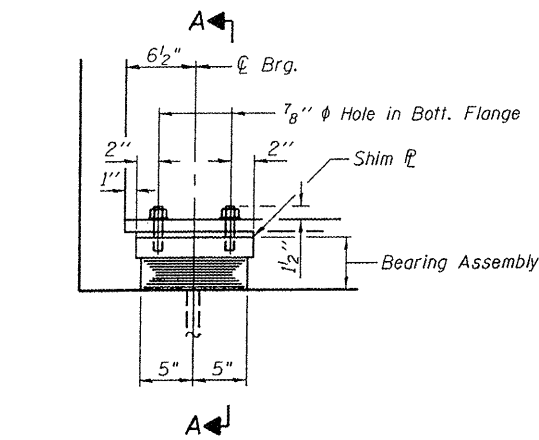
**SECTION C-C**

**BEAM & FRAMING DETAILS**  
STRUCTURE NO. 082-6113

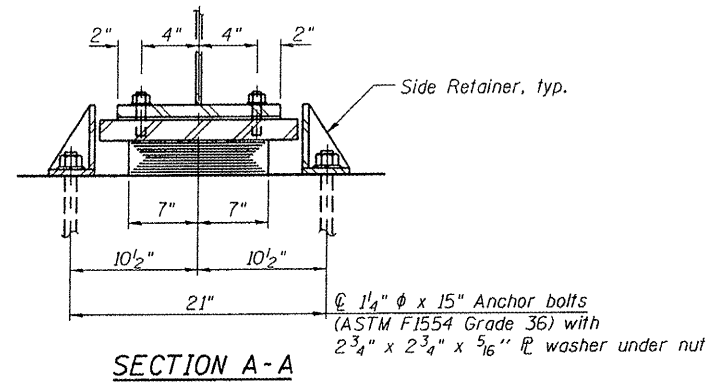
- Notes:
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
  - AASHTO M270 Grade 50 Steel.
  - 3/4" φ HS bolts, 1 5/16" φ holes
  - Pipe and Pipe Roller Supports not shown for clarity.
  - All diaphragms shall be installed as steel is erected and secured with erection pins. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
  - Two hardened washers required for each set of oversized holes.
  - Alternate C15 x 50 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
  - For detailed requirements for Pipe Roller Supports, see roadway plans and Special Provisions.
  - Sewer support system shall be detailed to maintain a constant flowline grade from back to back of abutment. Contractor to coordinate all details and include with shop drawings for approval by the Engineer.

|  |  |                           |                     |   |                 |
|--|--|---------------------------|---------------------|---|-----------------|
| SHEET NO. 17<br>31 SHEETS  | F.A.U. RTE.<br>9274  | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55                                      | SHEET NO.<br>34 |
|  | CONTRACT NO. 97369   |                           |                     |   |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT  |  |                           |                     |   |                 |
| <br><b>GATES ASSOCIATES</b><br>Consulting Engineers | Eastport Business Center 1<br>100 Laner Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     | DESIGNED JAD<br>CHECKED NEL<br>DRAWN JAD<br>CHECKED NEL |                 |

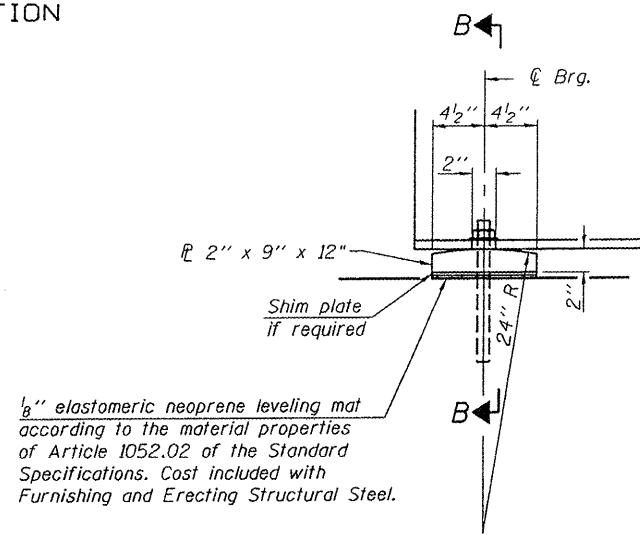
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



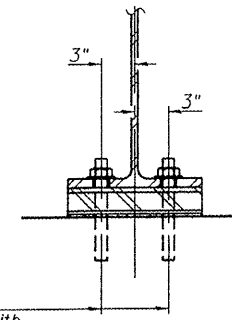
ELEVATION AT ABUTMENT



SECTION A-A

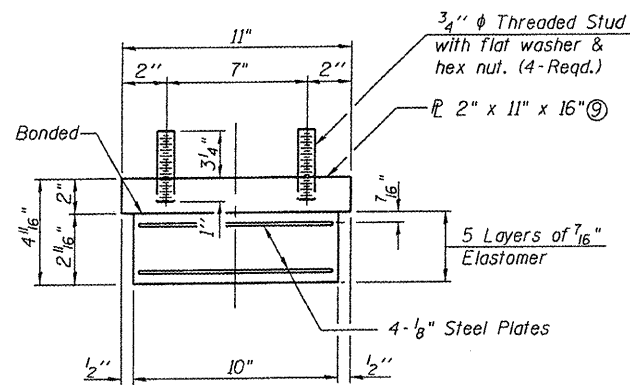


ELEVATION AT ABUTMENT



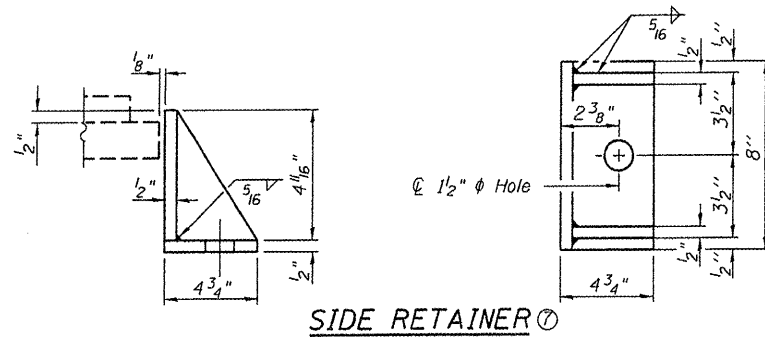
SECTION B-B

FIXED BEARING  
(West Abutment)



BEARING ASSEMBLY ⑥

TYPE I ELASTOMERIC EXP. BRG.  
(East Abutment)



SIDE RETAINER ⑦

BILL OF MATERIAL

| Item                                 | Unit | Total |
|--------------------------------------|------|-------|
| Elastomeric Bearing Assembly, Type I | Each | 6     |
| Anchor Bolts, 1"                     | Each | 12    |
| Anchor Bolts, 1 1/4"                 | Each | 12    |


SHIM TABLE ⑤

|          | Beam 1 | Beam 2 | Beam 3 | Beam 4 | Beam 5 | Beam 6 |
|----------|--------|--------|--------|--------|--------|--------|
| W. Abut. | —      | —      | 3/4"   | —      | —      | —      |
| E. Abut. | —      | 1/4"   | 1/4"   | —      | —      | —      |

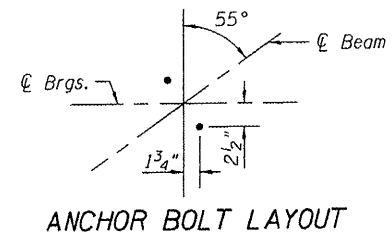
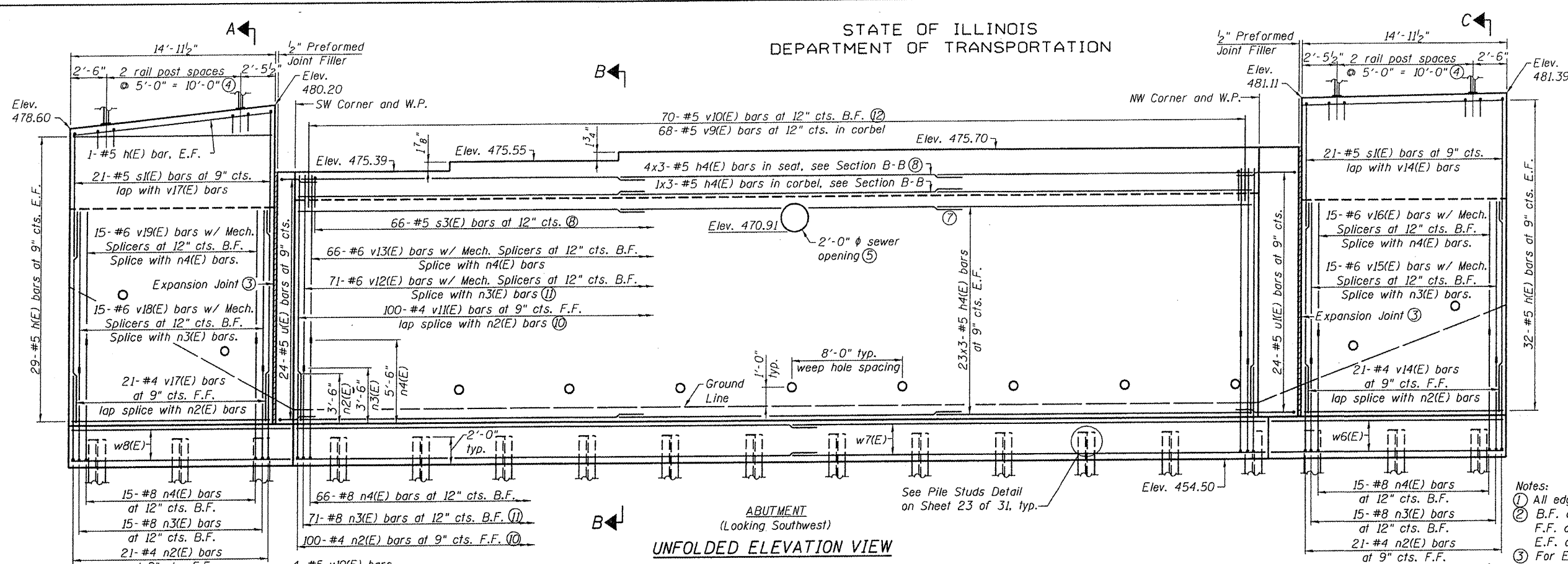
Notes:

- Anchor bolts shall be ASTM F1554 all-thread or an Engineer-approved alternate material of the grades and diameters specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
- Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
- Shim plates shall not be placed under Bearing Assembly.
- Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- AASHTO M270 Grade 50 Steel.

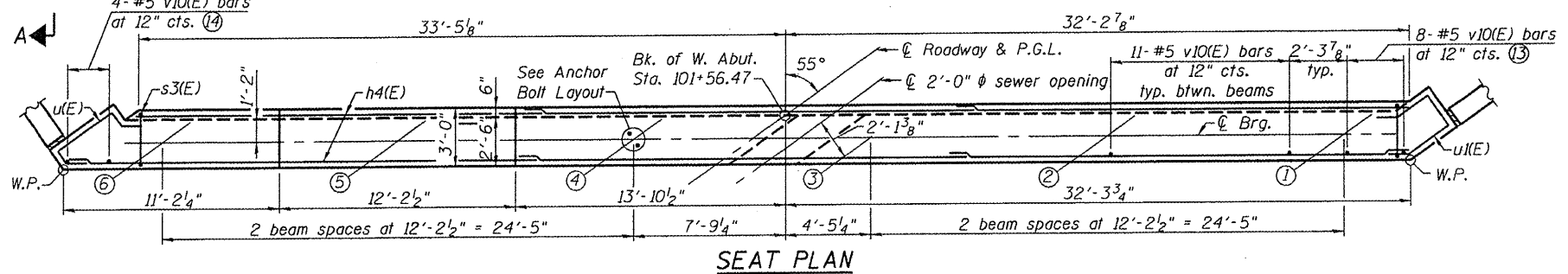
BEARING DETAILS  
STRUCTURE NO. 082-6113

|   |   |                           |                     |   |                 |
|---|---|---------------------------|---------------------|---|-----------------|
| SHEET NO. 18<br>31 SHEETS   | F.A.U. RTE.<br>9274   | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55                                      | SHEET NO.<br>35 |
|   | CONTRACT NO. 97369  |                           |                     |   |                 |
| FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT   |   |                           |                     |   |                 |
| <br>QATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     | DESIGNED JAD<br>CHECKED NEL<br>DRAWN JAD<br>CHECKED NEL |                 |

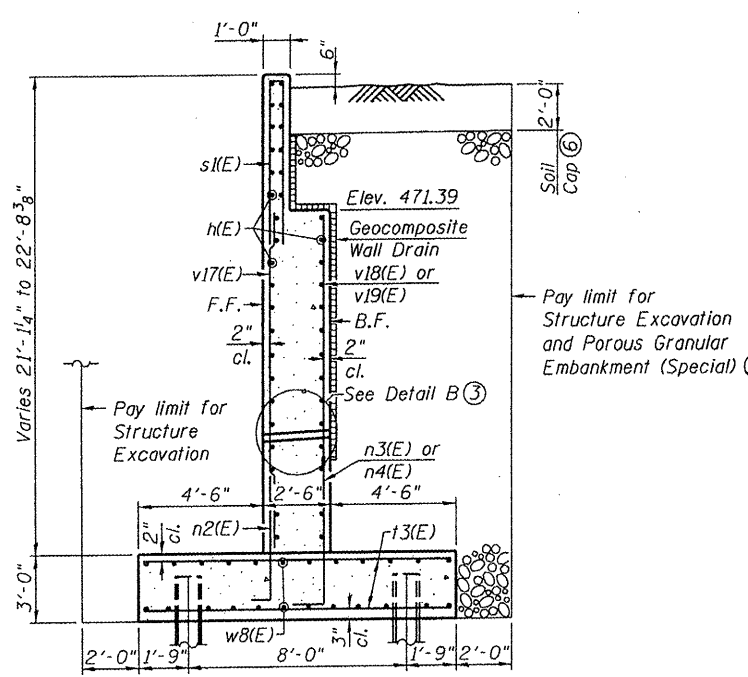
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



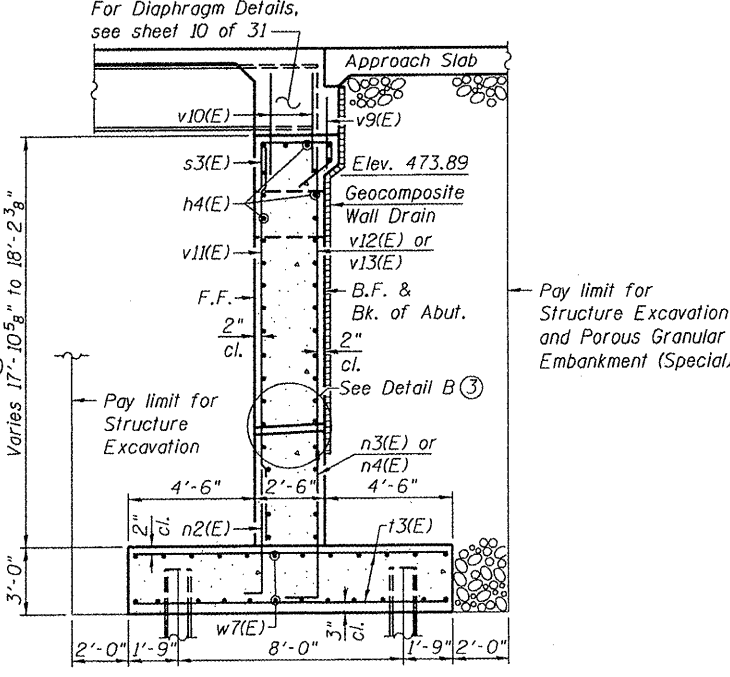
UNFOLDED ELEVATION VIEW



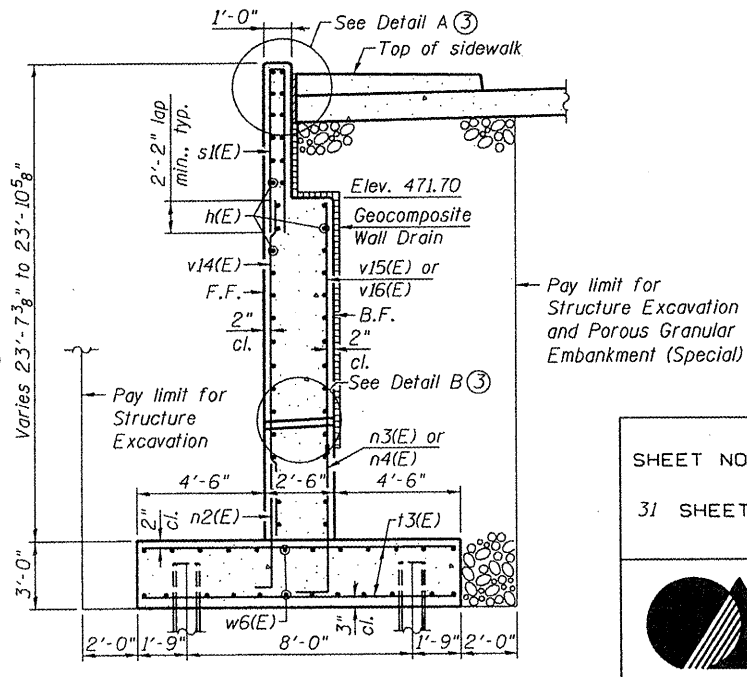
SEAT PLAN



SECTION A-A



SECTION B-B



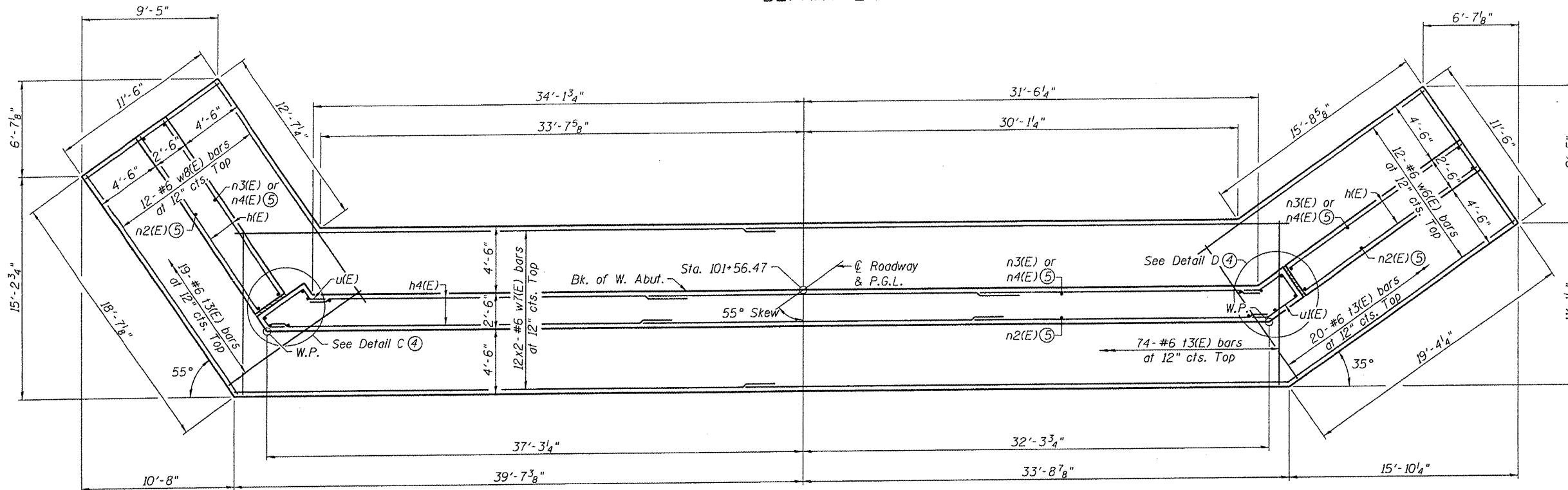
SECTION C-C

- Notes:
- ① All edges shall have 3/4" chamfer unless noted otherwise.
  - ② B.F. denotes back face.  
F.F. denotes front face.  
E.F. denotes each face.
  - ③ For Expansion Joint detail, Bar List, Bill of Materials, Detail A, Detail B, and reinforcement details, see sheet 23 of 31.
  - ④ 1 pair of s2(E) bars at each rail post = 6-#4 s2(E) bars
  - ⑤ For horizontal location of sewer opening, see Seat Plan. For sewer opening details, see sheet 23 of 31.
  - ⑥ Cast of soil cap included in Structure Excavation.
  - ⑦ Minimum bar lap: #5 bars = 2'-5"
  - ⑧ Space reinforcement in seat to miss anchor bolts.
  - ⑨ Bars indicated thus 23x3-#5 etc. indicates 23 lines of bars with 3 lengths.
  - ⑩ Total includes two bar F.F. of SW Corner and four bars F.F. of NW Corner.
  - ⑪ Total includes one bar B.F. of SW Corner and four bars B.F. of NW Corner.
  - ⑫ Total includes one bar B.F. of SW Corner and three bars B.F. of NW corner.
  - ⑬ Total includes three bars F.F. of NW corner.
  - ⑭ Total includes one bar F.F. of SW corner.
  - ⑮ Over excavation beyond the limits of Structure Excavation shall not be measured for payment. Over excavation beneath roadway, sidewalk, 2 feet beyond outside edge of sidewalk, and under proposed footings shall be backfilled according to Section 205 of the Standard Specification or according to the specifications of Porous Granular Embankment (Special). Backfill shall not be measured for payment and shall be incidental to Structure Excavation.

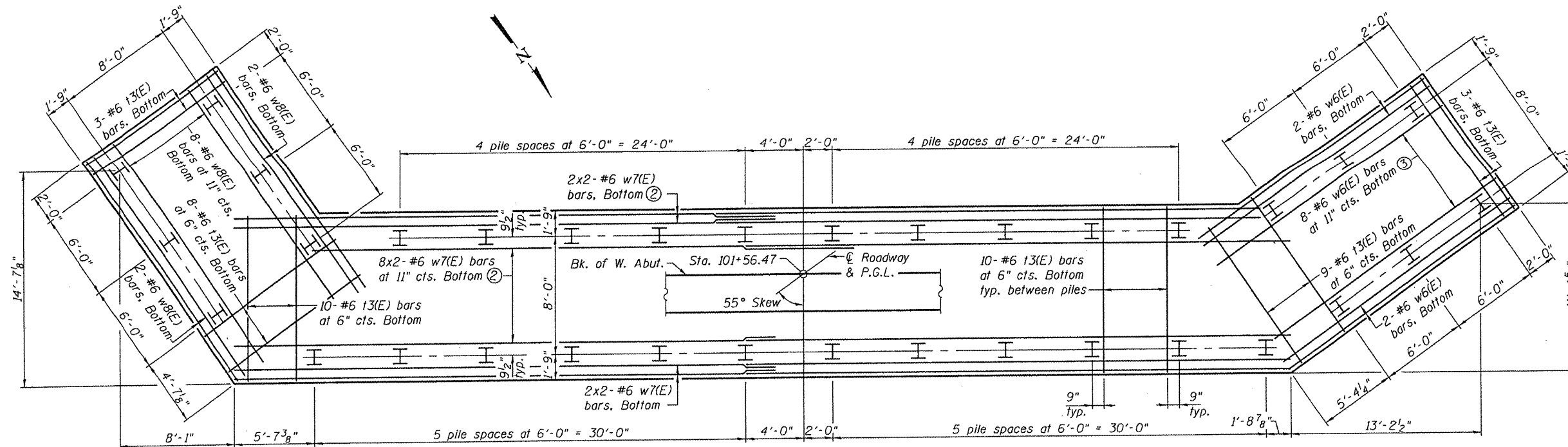
WEST ABUTMENT  
STRUCTURE NO. 082-6113

|   |                    |                |   |              |           |
|---|--------------------|----------------|---|--------------|-----------|
| SHEET NO. 19                                    | F.A.U. RTE.        | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO. |
|   | 9274               | 04-00202-00-BR | ST. CLAIR   | 55           | 36        |
| 31 SHEETS                                       | CONTRACT NO. 97369 |                |   |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                    |                |   |              |           |
| <br>OATES ASSOCIATES<br>Consulting Engineers    |                    |                | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |              |           |
|   |                    |                | DESIGNED DGL  |              |           |
|   |                    |                | CHECKED JAD   |              |           |
|   |                    |                | DRAWN JAD   |              |           |
|   |                    |                | CHECKED DGL   |              |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**FOOTING PLAN**  
(Piles not shown for clarity)




**PILE LAYOUT**  
(Walls not shown for clarity)

**PILE DATA**

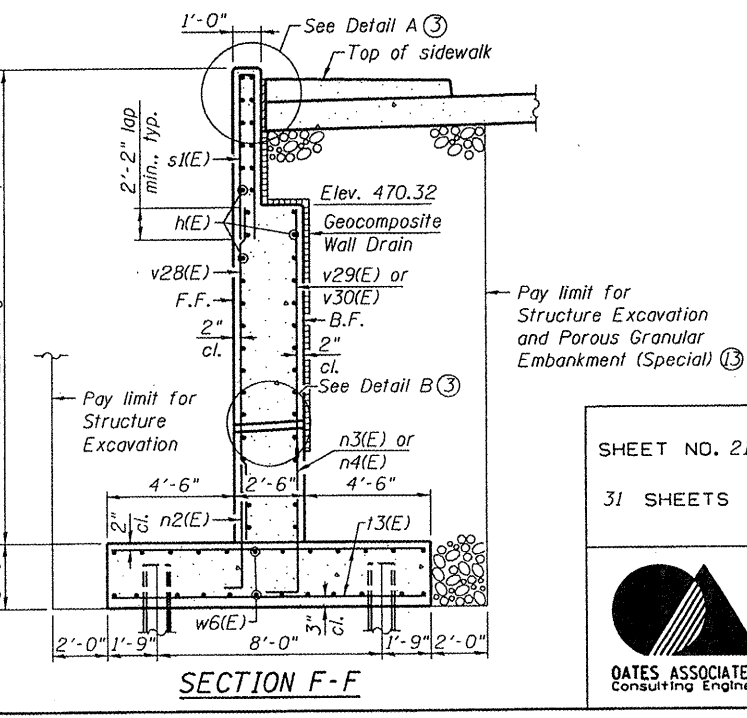
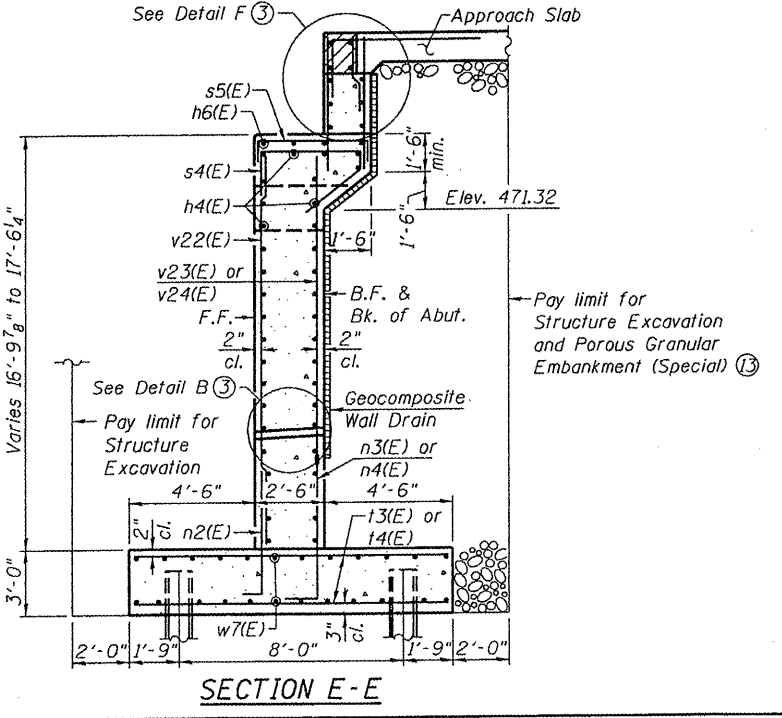
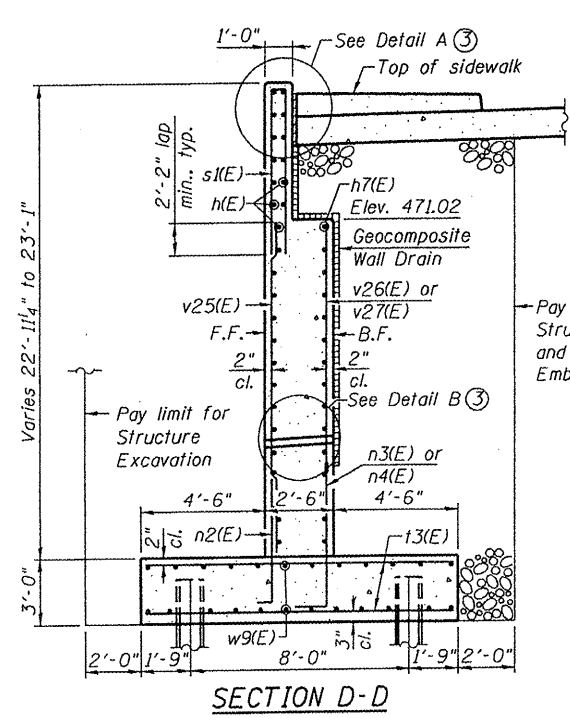
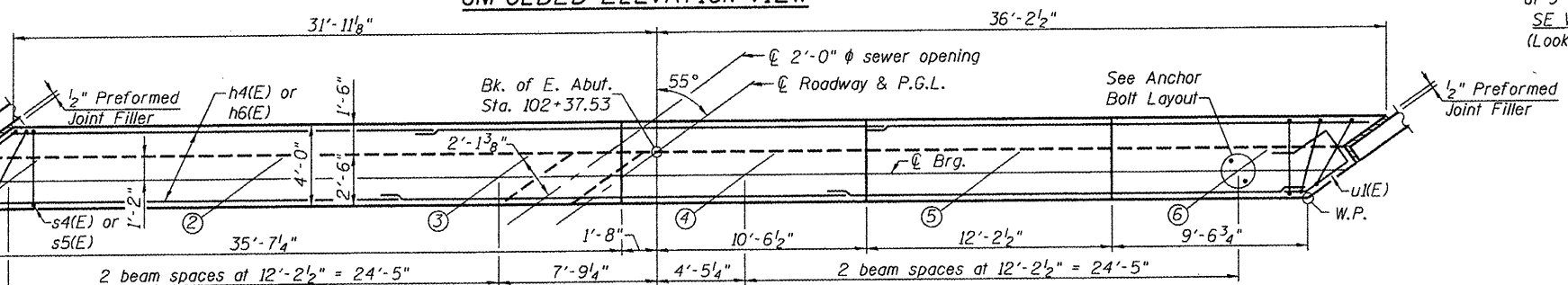
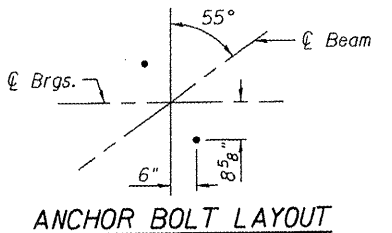
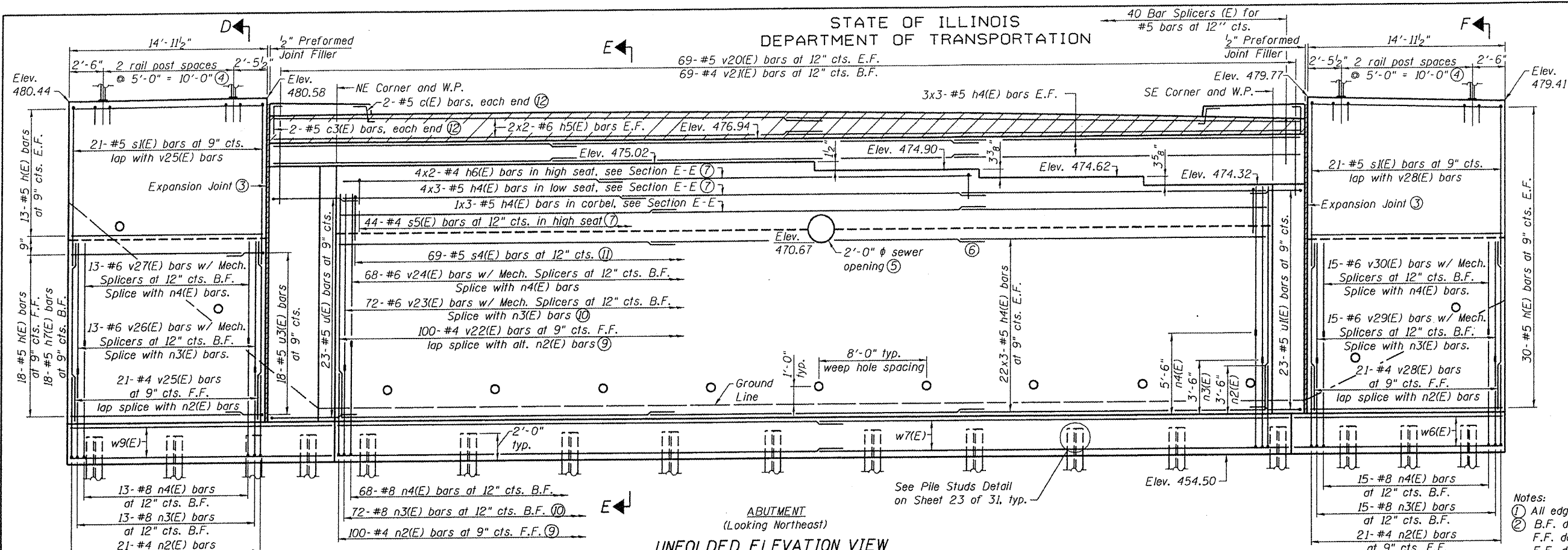
Type: HP14x73 with Pile Shoes  
 Nominal Required Bearing: 578 Kip  
 Allowable Resistance Available: 192 Kip  
 Est. Length: 14' (Embed 3 feet into shale  
 as directed by the Engineer)  
 No. Test Piles: 1  
 No. Production Piles: 33

- Notes:
- ① Minimum bar lap: #6 bars = 2'-10"
  - ② Vary bar lap where required to avoid conflict with piles.
  - ③ Cut bars where required to avoid conflict with piles.
  - ④ For Bar List, Bill of Materials, Detail C, Detail D, pile details, and reinforcement details, see sheet 23 of 31.
  - ⑤ Bars n2(E), n3(E), and n4(E) shall be cast with footing. Bars billed in Unfolded Elevation View of abutment for clarity.
  - ⑥ Bars indicated thus 12x2-#6 etc. indicates 12 lines of bars with 2 lengths.

**WEST ABUTMENT**  
**STRUCTURE NO. 082-6113**


|  |                    |                |              |              |           |
|--|--------------------|----------------|--------------|--------------|-----------|
| SHEET NO. 20   | F.A.U. RTE.        | SECTION        | COUNTY       | TOTAL SHEETS | SHEET NO. |
|  | 9274               | 04-00202-00-BR | ST. CLAIR    | 55           | 37        |
| 31 SHEETS  | CONTRACT NO. 97369 |                |              |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT  |                    |                |              |              |           |
| <br>GATES ASSOCIATES<br>Consulting Engineers<br>Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                    |                | DESIGNED DGL |              |           |
|  |                    |                | CHECKED JAD  |              |           |
|  |                    |                | DRAWN JAD    |              |           |
|  |                    |                | CHECKED DGL  |              |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

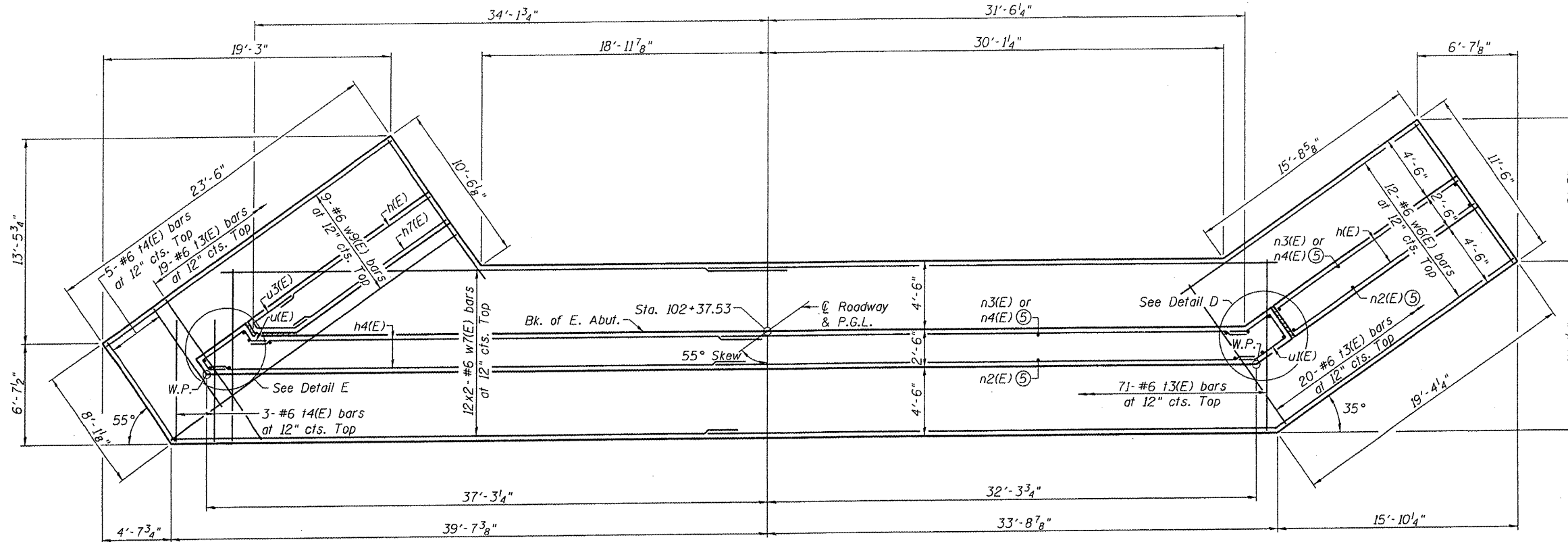


- Notes:
- All edges shall have  $\frac{3}{4}$ " chamfer unless noted otherwise.
  - B.F. denotes back face.  
F.F. denotes front face.  
E.F. denotes each face.
  - For Expansion Joint detail, Bar List, Bill of Materials, Detail A, Detail B, Detail F, and reinforcement details, see sheet 23 of 31.
  - 1 pair of s2(E) bars at each rail post = 6-#4 s2(E) bars.
  - For horizontal location of sewer opening, see Seat Plan. For sewer opening details, see sheet 23 of 31.
  - Minimum bar lap: #5 bars = 2'-5"
  - Space reinforcement in seat to miss anchor bolts.
  - Bars indicated thus 22x3-#5 etc. indicates 22 lines of bars with 3 lengths.
  - Total includes two bar F.F. of NE Corner and four bars F.F. of SE corner.
  - Total includes two bars B.F. of NE Corner and one bar B.F. of SE Corner.
  - Total includes two bars each end. Fan bars as required, see Seat Plan.
  - c(E) and c3(E) bars to be cast with Hatch Block.
  - Over excavation beyond the limits of Structure Excavation shall not be measured for payment. Over excavation beneath roadway, sidewalk, 2 feet beyond outside edge of sidewalk, and under proposed footings shall be backfilled according to Section 205 of the Standard Specification or according to the specifications of Porous Granular Embankment (Special). Backfill shall not be measured for payment and shall be incidental to Structure Excavation.
  - The East Abutment shall have all exposed surfaces of the backwall, bridge seat, and front face of stem treated with Concrete Sealer.

**EAST ABUTMENT  
STRUCTURE NO. 082-6113**

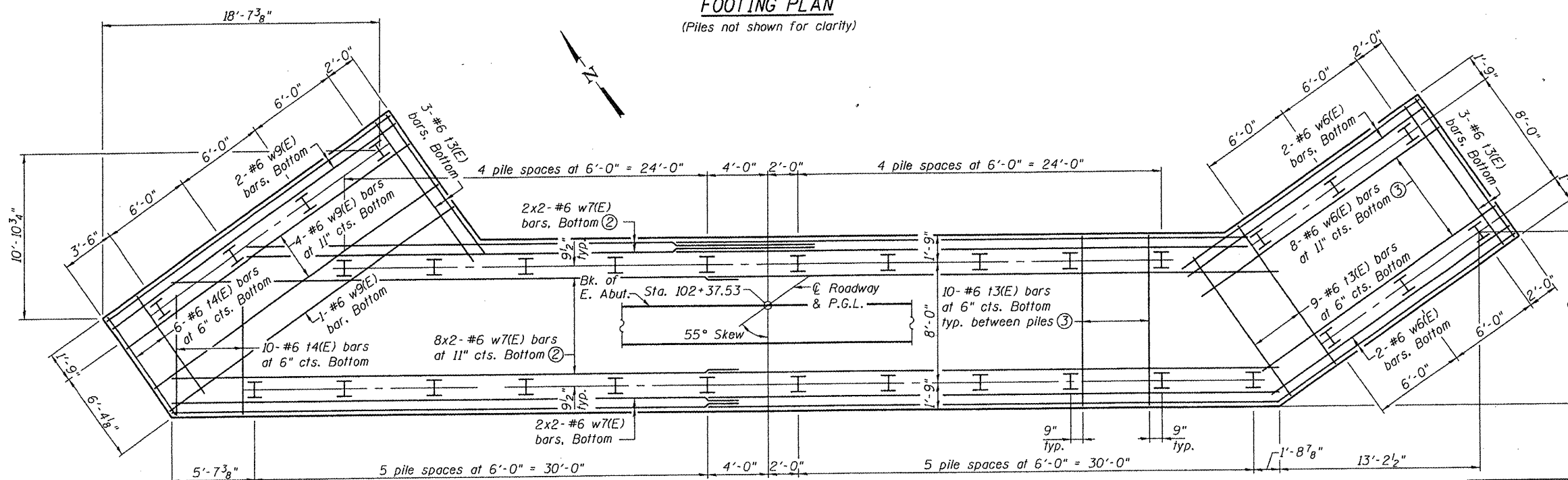
|   |   |                           |                     |   |                 |
|---|---|---------------------------|---------------------|---|-----------------|
| SHEET NO. 21<br>31 SHEETS   | F.A.U. RTE.<br>9274   | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55                                      | SHEET NO.<br>38 |
|   | CONTRACT NO. 97369  |                           |                     |   |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT   |   |                           |                     |   |                 |
| <br>OATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     | DESIGNED DGL<br>CHECKED JAD<br>DRAWN JAD<br>CHECKED DGL |                 |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**FOOTING PLAN**

(Piles not shown for clarity)



**PILE LAYOUT**

(Walls not shown for clarity)

**PILE DATA**

Type: HP14x73 with Pile Shoes  
Nominal Required Bearing: 578 Kip  
Allowable Resistance Available: 192 Kip  
Est. Length: 18' (Embed 3 feet into shale as directed by the Engineer)  
No. Test Piles: 1  
No. Production Piles: 31

**Notes:**

- ① Minimum bar lap: #6 bars = 2'-10"
- ② Vary bar lap where required to avoid conflict with piles.
- ③ Cut bars where required to avoid conflict with piles.
- ④ For Bar List, Bill of Materials, Detail D, Detail E, pile details, and reinforcement details, see sheet 23 of 31.
- ⑤ Bars n2(E), n3(E), and n4(E) shall be cast with footing. Bars billed in Unfolded Elevation View of abutment for clarity.
- ⑥ Bars indicated thus 12x2-#6 etc. indicates 12 lines of bars with 2 lengths.

**EAST ABUTMENT  
STRUCTURE NO. 082-6113**

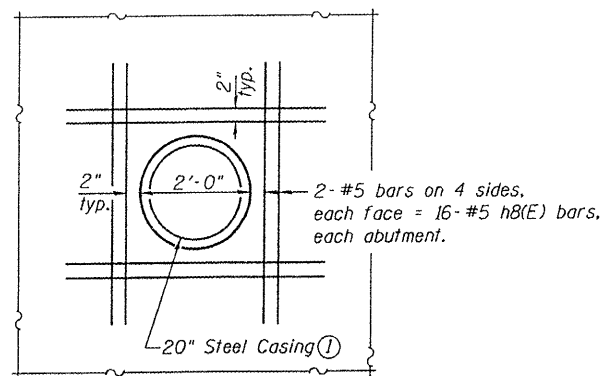
|   |                     |                           |                     |                    |                 |
|---|---------------------|---------------------------|---------------------|--------------------|-----------------|
| SHEET NO. 22<br><br>31 SHEETS                   | F.A.U. RTE.<br>9274 | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55 | SHEET NO.<br>39 |
|   | CONTRACT NO. 97369  |                           |                     |                    |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                     |                           |                     |                    |                 |



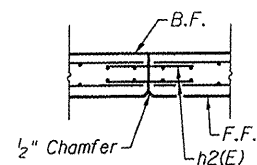
Eastport Business Center I  
100 Lanier Court, Suite 1  
Collinsville, Illinois 62234  
618-345-2200  
Design Firm License No. 184.001115

DESIGNED DGL  
CHECKED JAD  
DRAWN JAD  
CHECKED DGL

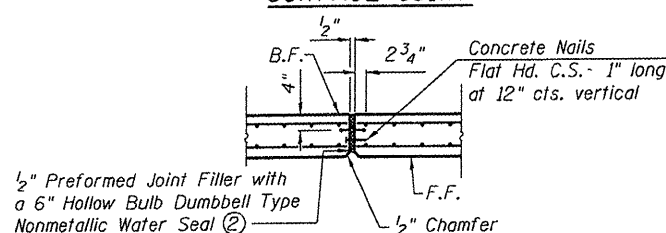
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



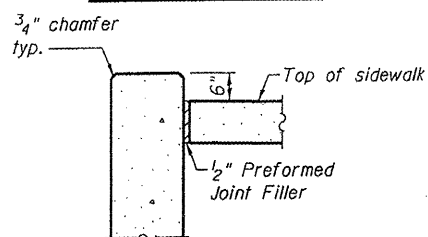
SEWER OPENING



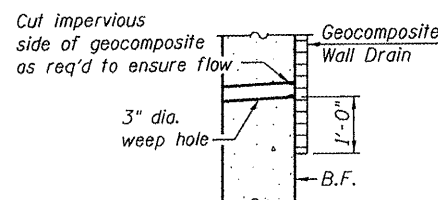
CONTROL JOINT



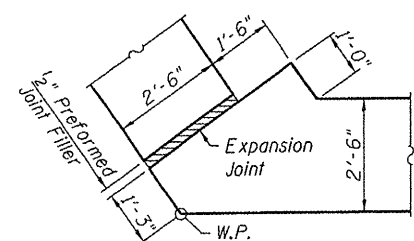
EXPANSION JOINT



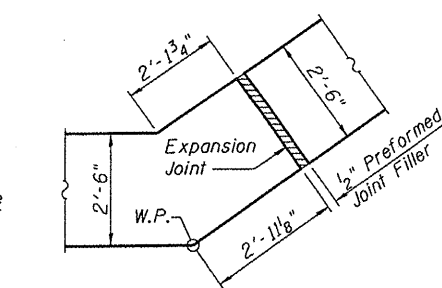
DETAIL A



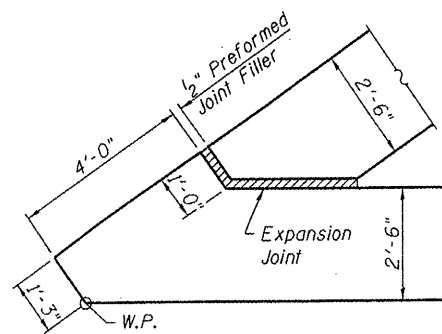
DETAIL B



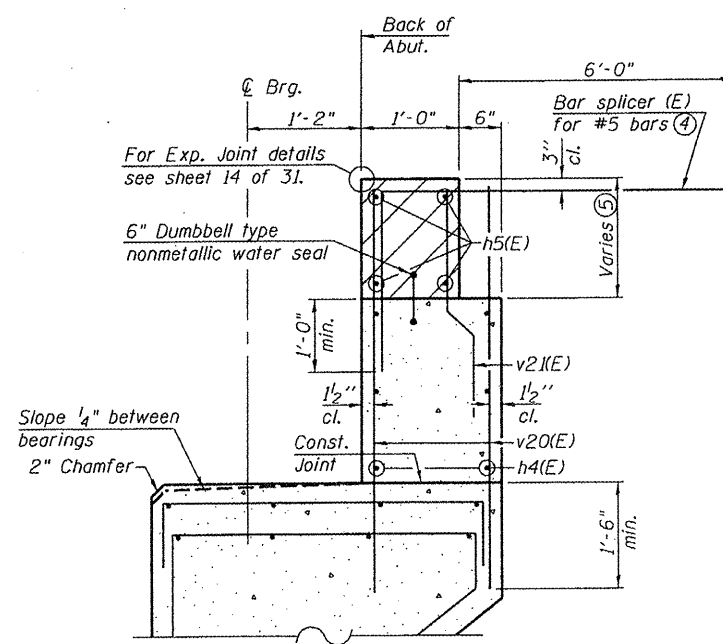
DETAIL C



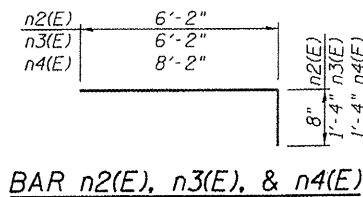
DETAIL D



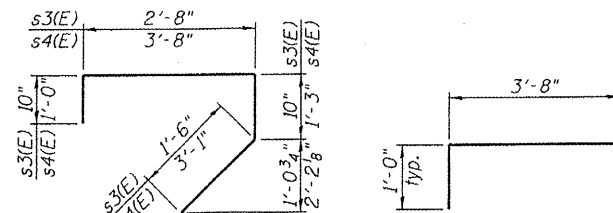
DETAIL E



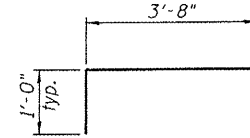
DETAIL F



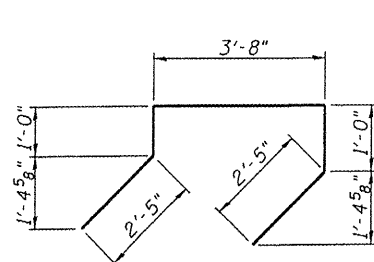
BAR n2(E), n3(E), & n4(E)



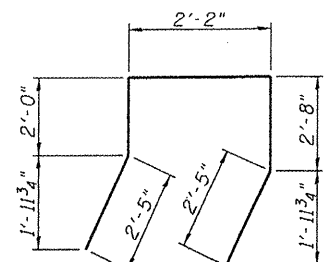
BAR s3(E) & s4(E)



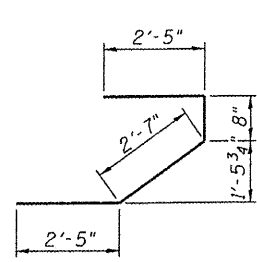
BAR s5(E)



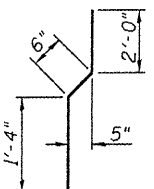
BAR u(E)



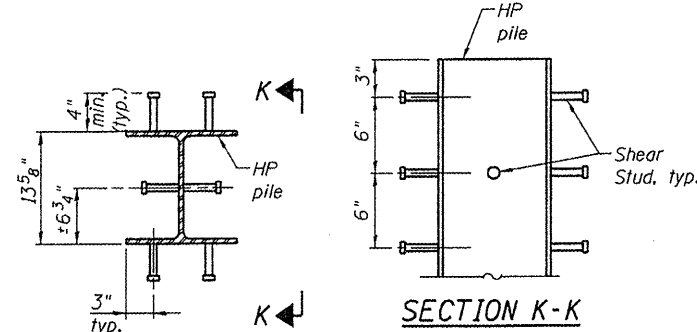
BAR u1(E)



BAR u3(E)



BAR v2(E)



PILE STUDS DETAIL

Provide 14 - 3/4 inch diameter granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications automatically end welded to piling, each pile, each abutment. Cost included with Furnishing Steel Piles HP14x73.

WEST ABUTMENT  
BILL OF MATERIAL

| Bar   | No. | Size    | Length  | Shape |
|---|-----|---------|---------|-------|
| n2(E)   | 142 | #4      | 6'-10"  | ┌     |
| n3(E)   | 101 | #8      | 7'-6"   | ┌     |
| n4(E)   | 96  | #8      | 9'-6"   | ┌     |
| s1(E)   | 42  | #5      | 24'-8"  | ≡     |
| s2(E)   | 12  | #4      | 2'-2"   | └     |
| s3(E)   | 66  | #5      | 5'-10"  | ┌     |
| t3(E)   | 296 | #6      | 11'-2"  | ≡     |
| u(E)  | 24  | #5      | 10'-6"  | ┌     |
| u1(E)   | 24  | #5      | 11'-8"  | ┌     |
| v9(E)   | 68  | #5      | 3'-4"   | ≡     |
| v10(E)  | 137 | #5      | 4'-4"   | ≡     |
| v11(E)  | 100 | #4      | 16'-5"  | ≡     |
| v12(E)  | 71  | #6      | 14'-3"  | ≡     |
| v13(E)  | 66  | #6      | 12'-3"  | ≡     |
| v14(E)  | 21  | #4      | 12'-9"  | ≡     |
| v15(E)  | 15  | #6      | 10'-6"  | ≡     |
| v16(E)  | 15  | #6      | 8'-6"   | ≡     |
| v17(E)  | 21  | #4      | 11'-5"  | ≡     |
| v18(E)  | 15  | #6      | 10'-3"  | ≡     |
| v19(E)  | 15  | #6      | 8'-3"   | ≡     |
| w6(E)   | 24  | #6      | 19'-0"  | ≡     |
| w7(E)   | 48  | #6      | 37'-11" | ≡     |
| w8(E)   | 24  | #6      | 18'-3"  | ≡     |
| Structure Excavation                                  |     | Cu. Yd. | 415     |       |
| Concrete Structures                                   |     | Cu. Yd. | 301.2   |       |
| Reinforcement Bars, Epoxy Coated                      |     | Pound   | 27,990  |       |
| Furnishing Steel Piles HP14x73                        |     | Foot    | 462     |       |
| Driving Piles   |     | Foot    | 462     |       |
| Test Pile Steel HP14x73                               |     | Each    | 1       |       |
| Pile Shoes  |     | Each    | 34      |       |
| Underwater Structure Excavation Protection-Location 1 |     | Each    | 1       |       |

EAST ABUTMENT  
BILL OF MATERIAL

| Bar   | No. | Size    | Length  | Shape |
|---|-----|---------|---------|-------|
| c(E)  | 4   | #5      | 2'-5"   | ┌     |
| c3(E)   | 4   | #5      | 3'-0"   | ┌     |
| n(E)  | 104 | #5      | 14'-8"  | ≡     |
| n4(E)   | 165 | #5      | 24'-9"  | ≡     |
| n5(E)   | 8   | #6      | 35'-3"  | ≡     |
| n6(E)   | 8   | #4      | 24'-0"  | ≡     |
| n7(E)   | 18  | #5      | 12'-6"  | ≡     |
| n8(E)   | 16  | #5      | 4'-6"   | ≡     |
| n2(E)   | 142 | #4      | 6'-10"  | ┌     |
| n3(E)   | 100 | #8      | 7'-6"   | ┌     |
| n4(E)   | 96  | #8      | 9'-6"   | ┌     |
| s1(E)   | 42  | #5      | 24'-8"  | ≡     |
| s2(E)   | 12  | #4      | 2'-2"   | └     |
| s4(E)   | 69  | #5      | 9'-0"   | ┌     |
| s5(E)   | 44  | #4      | 5'-8"   | ┌     |
| t3(E)   | 285 | #6      | 11'-2"  | ≡     |
| t4(E)   | 24  | #6      | 7'-9"   | ≡     |
| u(E)  | 23  | #5      | 10'-6"  | ┌     |
| u1(E)   | 23  | #5      | 11'-8"  | ┌     |
| u3(E)   | 18  | #5      | 8'-1"   | ┌     |
| v20(E)  | 138 | #5      | 5'-4"   | ≡     |
| v21(E)  | 69  | #4      | 3'-10"  | ≡     |
| v22(E)  | 100 | #4      | 15'-4"  | ≡     |
| v23(E)  | 72  | #6      | 13'-2"  | ≡     |
| v24(E)  | 68  | #6      | 11'-2"  | ≡     |
| v25(E)  | 21  | #4      | 11'-9"  | ≡     |
| v26(E)  | 13  | #6      | 9'-10"  | ≡     |
| v27(E)  | 13  | #6      | 7'-10"  | ≡     |
| v28(E)  | 21  | #4      | 11'-0"  | ≡     |
| v29(E)  | 15  | #6      | 9'-2"   | ≡     |
| v30(E)  | 15  | #6      | 7'-2"   | ≡     |
| w6(E)   | 24  | #6      | 19'-0"  | ≡     |
| w7(E)   | 48  | #6      | 37'-11" | ≡     |
| w9(E)   | 16  | #6      | 23'-2"  | ≡     |
| Structure Excavation                                  |     | Cu. Yd. | 284     |       |
| Concrete Structures                                   |     | Cu. Yd. | 296.3   |       |
| Reinforcement Bars, Epoxy Coated                      |     | Pound   | 29,020  |       |
| Furnishing Steel Piles HP14x73                        |     | Foot    | 558     |       |
| Driving Piles   |     | Foot    | 558     |       |
| Test Pile Steel HP14x73                               |     | Each    | 1       |       |
| Pile Shoes  |     | Each    | 32      |       |
| Concrete Sealer                                       |     | Sq. Ft. | 1,671   |       |
| Underwater Structure Excavation Protection-Location 2 |     | Each    | 1       |       |

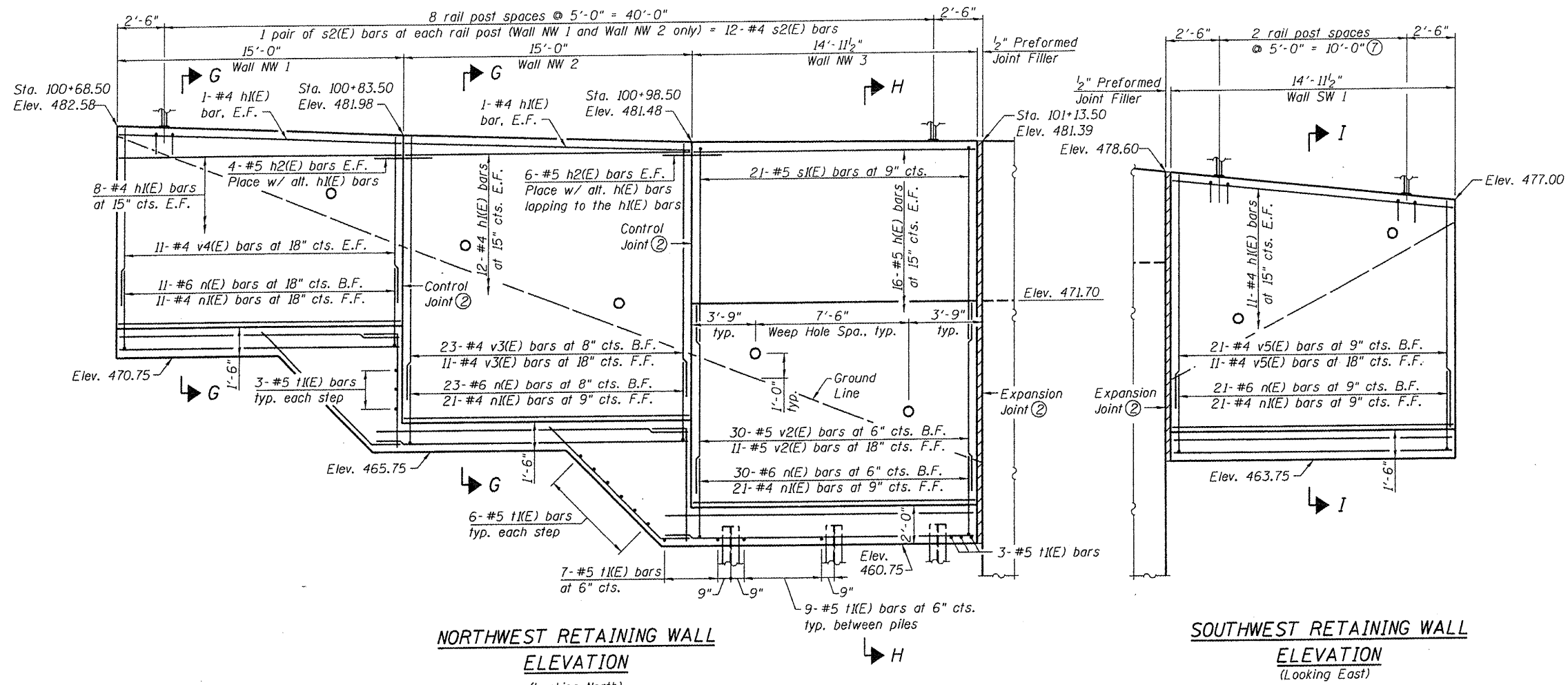
ABUTMENT DETAILS  
STRUCTURE NO. 082-6113

- Notes:
- For details of 20" Steel Casing and 12" Ductile Iron Sanitary Sewer Pipe, see roadway plans. The gap between the Steel Casing and the Sewer Opening in the abutment stem shall be grouted with nonshrink grout for the entire length of the opening before backfilling proceeds above the bottom of the opening. The nonshrink grout shall conform to the IDOT Standard Specification Section 1024. Cost of grout included in Concrete Structures.
  - Preformed Joint Filler and Nonmetallic Water Seal shall extend from 6" below the top of the wall to the bottom of the footing. Cost included in Concrete Structures.
  - For bar c(E) details, see sheet 9 of 31. For bar c3(E) details, see sheet 12 of 31. For bar s1(E) and s2(E) details, see sheet 26 of 31.
  - Bar Splicer (E) for #5 bars shall be placed parallel to the approach pavement reinforcement.
  - Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
  - Pour steps monolithically with abutment stem. Typical East and West Abutments.

|   |                                |                  |   |              |           |
|---|--------------------------------|------------------|---|--------------|-----------|
| SHEET NO. 23  | F.A.U. RTE.                    | SECTION          | COUNTY  | TOTAL SHEETS | SHEET NO. |
|   | 9274                           | 04-00202-00-BR   | ST. CLAIR   | 55           | 40        |
| 31 SHEETS   | FED. ROAD DIST. NO. 7 ILLINOIS |                  | CONTRACT NO. 97369                                      |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS  |                                | FED. AID PROJECT |   |              |           |
| GATES ASSOCIATES<br>Consulting Engineers<br>Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                                |                  | DESIGNED DGL<br>CHECKED JAD<br>DRAWN JAD<br>CHECKED DGL |              |           |

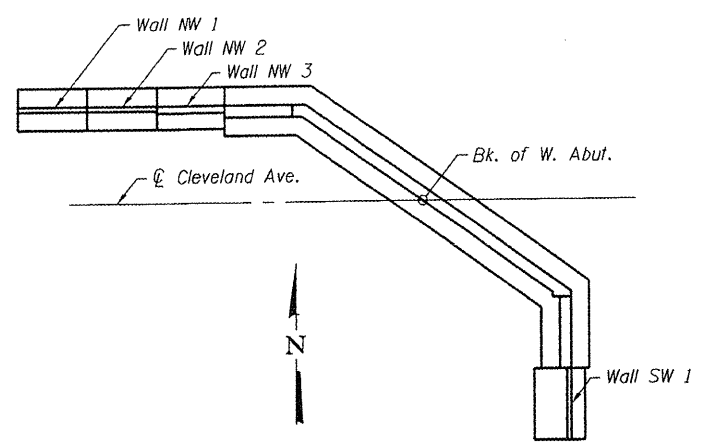


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NORTHWEST RETAINING WALL  
ELEVATION**  
(Looking North)

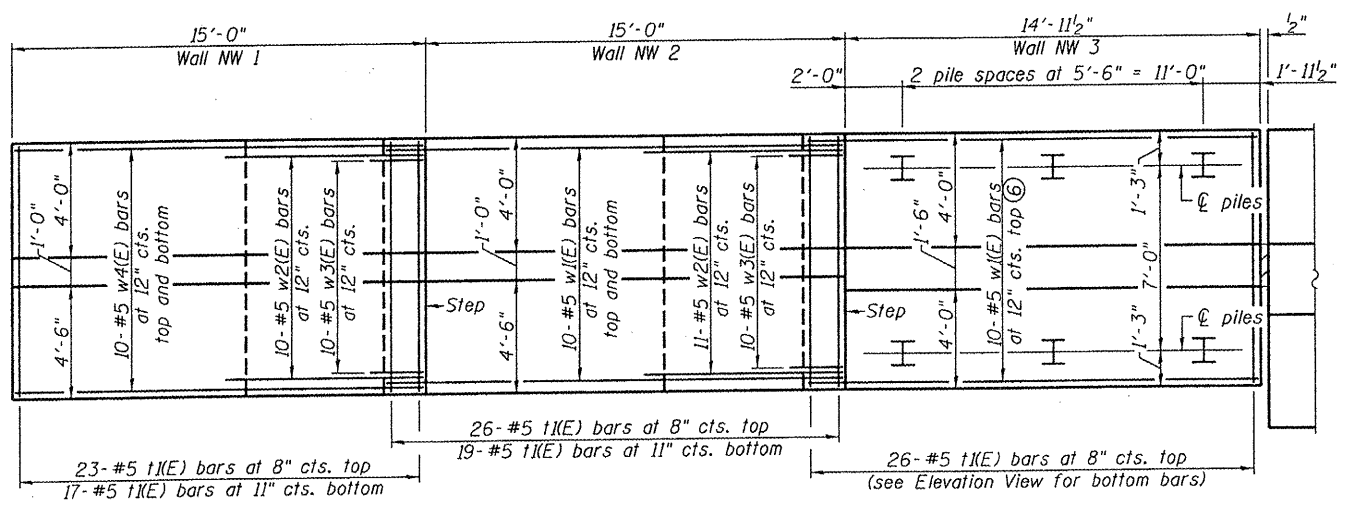
**SOUTHWEST RETAINING WALL  
ELEVATION**  
(Looking East)



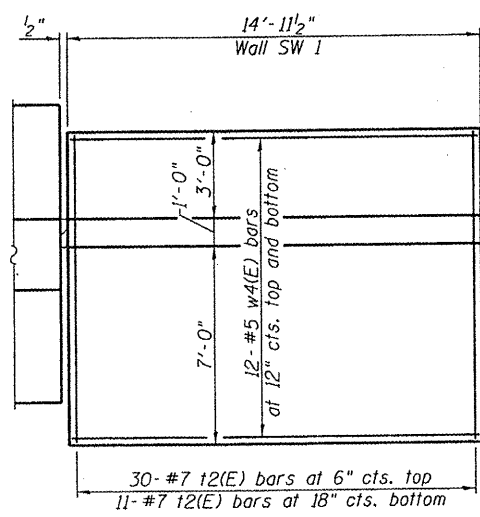
**WEST ABUTMENT REFERENCE DIAGRAM**

**PILE DATA**  
Type: HP14x73 with Pile Shoes  
Nominal Required Bearing: 578 Kip  
Allowable Resistance Available: 192 Kip  
Est. Length: 19' (Embed 3 feet into shale as directed by the Engineer)  
No. Production Piles: 6

- Notes:
- For Bar List, Bill of Materials, Stepped Footing, Section G-G, Section H-H, Section I-I, and reinforcement details, see sheet 26 of 31.
  - For Expansion Joint and Control Joint, see sheet 23 of 31.
  - All edges shall have 3/4" chamfer unless noted otherwise.
  - B.F. denotes back face.  
F.F. denotes front face.  
E.F. denotes each face.
  - The retaining walls bearing on soil shall have a Maximum Applied Bearing Pressure = 1.5 ksf.
  - For w1(E) bars in bottom of NW 3 wall footing, see Section H-H.
  - 1 pair of s2(E) bars at each rail post = 6-#4 s2(E) bars



**NORTHWEST RETAINING WALL  
FOOTING PLAN**

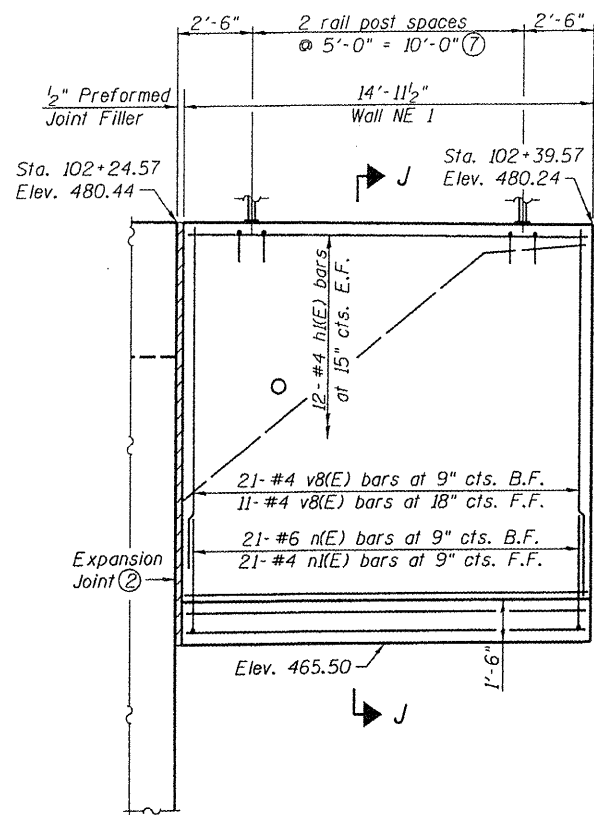


**SOUTHWEST RETAINING WALL  
FOOTING PLAN**

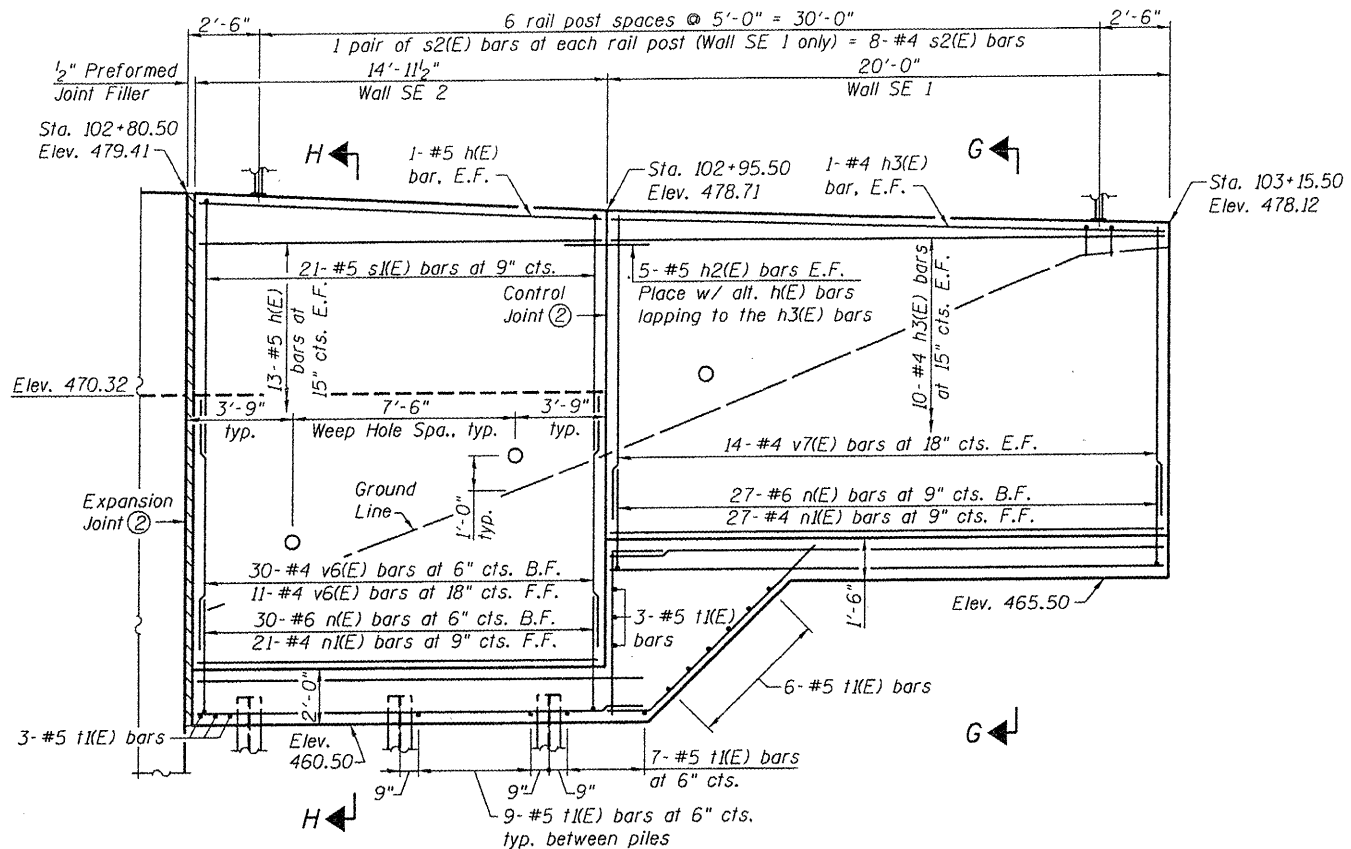
**WEST RETAINING WALLS  
STRUCTURE NO. 082-6113**

|   |                    |                |   |              |           |
|---|--------------------|----------------|---|--------------|-----------|
| SHEET NO. 24                                    | F.A.U. RTE.        | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO. |
|   | 9274               | 04-00202-00-BR | ST. CLAIR   | 55           | 41        |
| 31 SHEETS                                       | CONTRACT NO. 97369 |                |   |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                    |                |   |              |           |
| GATES ASSOCIATES<br>Consulting Engineers        |                    |                | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |              |           |
|   |                    |                | DESIGNED DGL  |              |           |
|   |                    |                | CHECKED JAD   |              |           |
|   |                    |                | DRAWN JAD   |              |           |
|   |                    |                | CHECKED DGL   |              |           |

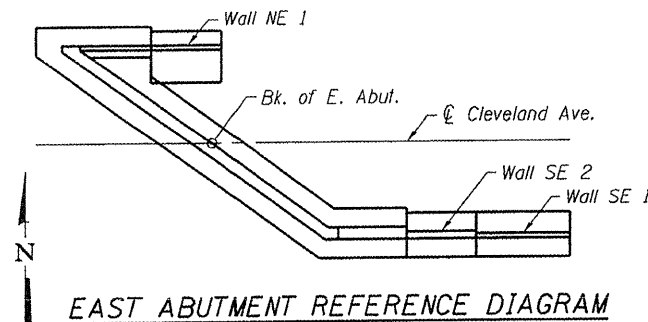
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NORTHEAST RETAINING WALL  
ELEVATION**  
(Looking North)



**SOUTHEAST RETAINING WALL  
ELEVATION**  
(Looking North)

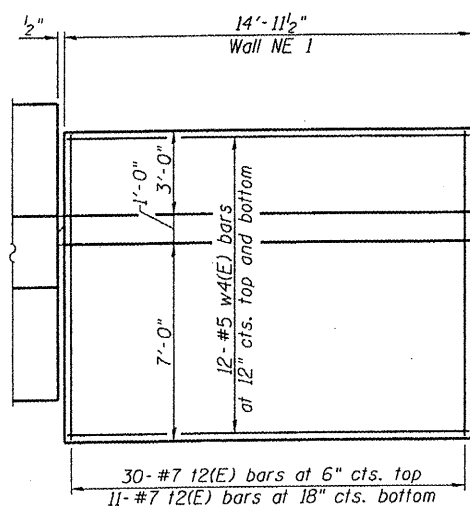


**PILE DATA**

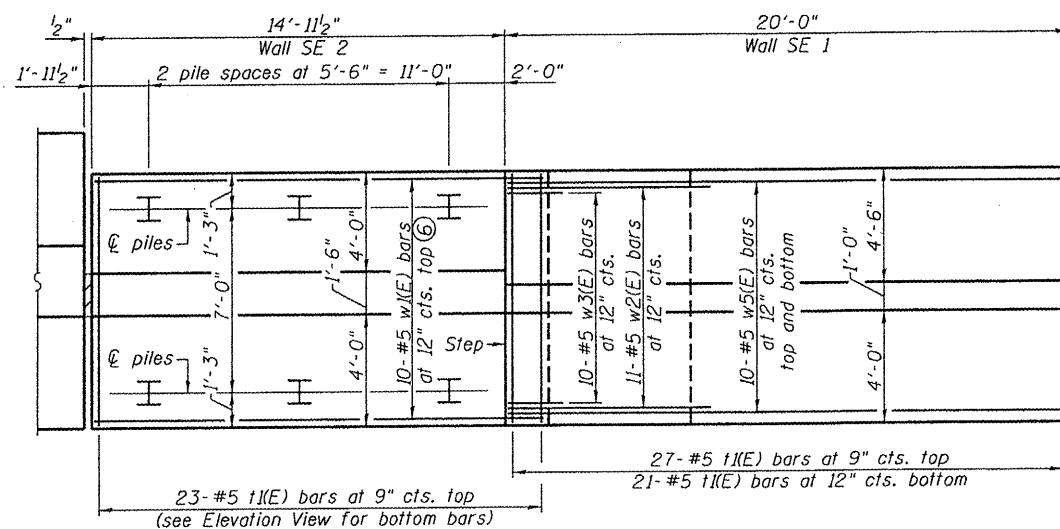
Type: HP14x73 with Pile Shoes  
Nominal Required Bearing: 578 Kip  
Allowable Resistance Available: 192 Kip  
Est. Length: 23' (Embed 3 feet into shale  
as directed by the Engineer)  
No. Production Piles: 6

**Notes:**

- ① For Bar List, Bill of Materials, Stepped Footing, Section G-G, Section H-H, Section J-J, and reinforcement details, see sheet 26 of 31.
- ② For Expansion Joint and Control Joint, see sheet 23 of 31.
- ③ All edges shall have 3/4\"/>
- ④ B.F. denotes back face.  
F.F. denotes front face.  
E.F. denotes each face.
- ⑤ The retaining walls bearing on soil shall have a Maximum Applied Bearing Pressure = 1.5 ksf.
- ⑥ For w(E) bars in bottom of SE 2 wall footing, see Section H-H.
- ⑦ 1 pair of s2(E) bars at each rail post = 6-#4 s2(E) bars




**NORTHEAST RETAINING WALL  
FOOTING PLAN**

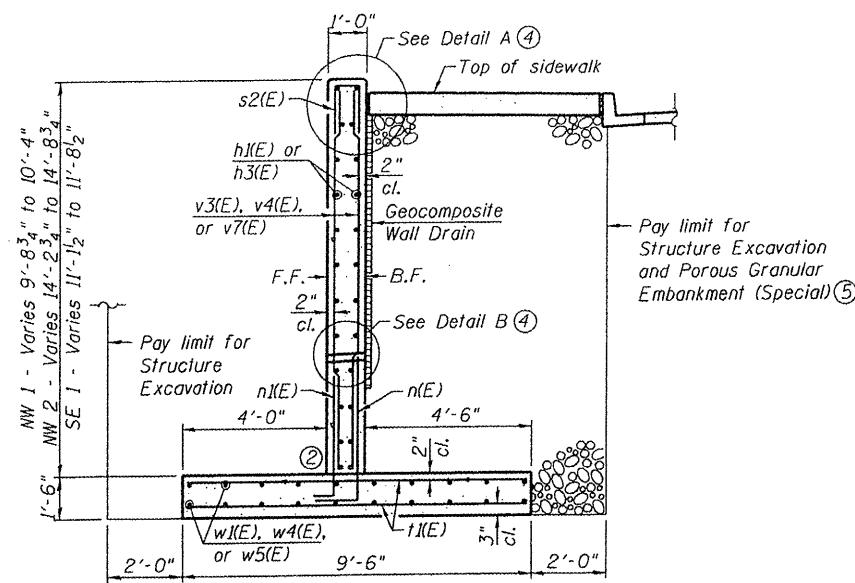


**SOUTHEAST RETAINING WALL  
FOOTING PLAN**

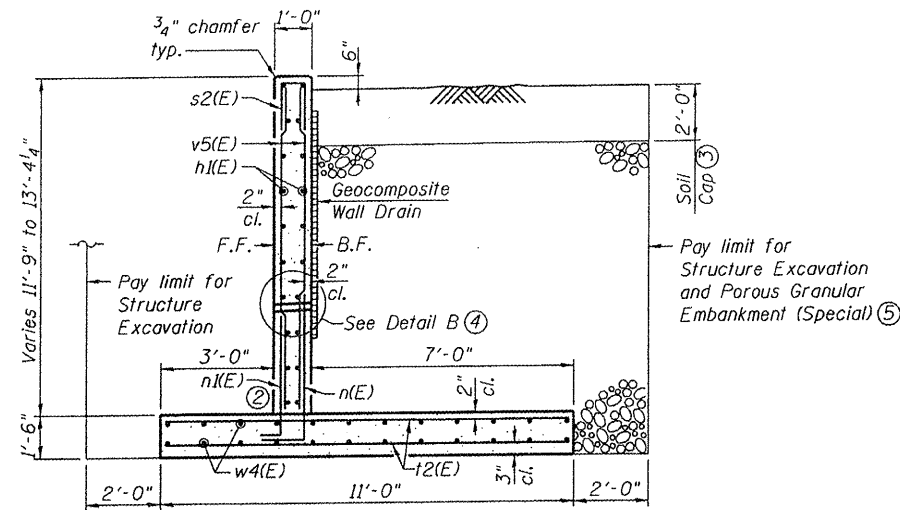
**EAST RETAINING WALLS  
STRUCTURE NO. 082-6113**

|  |                     |                           |   |                    |                 |
|--|---------------------|---------------------------|---|--------------------|-----------------|
| SHEET NO. 25<br><br>31 SHEETS  | F.A.U. RTE.<br>9274 | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR                                     | TOTAL SHEETS<br>55 | SHEET NO.<br>42 |
|  | CONTRACT NO. 97369  |                           |   |                    |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT  |                     |                           |   |                    |                 |
| <br>Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                     |                           | DESIGNED DGL<br>CHECKED JAD<br>DRAWN JAD<br>CHECKED DGL |                    |                 |

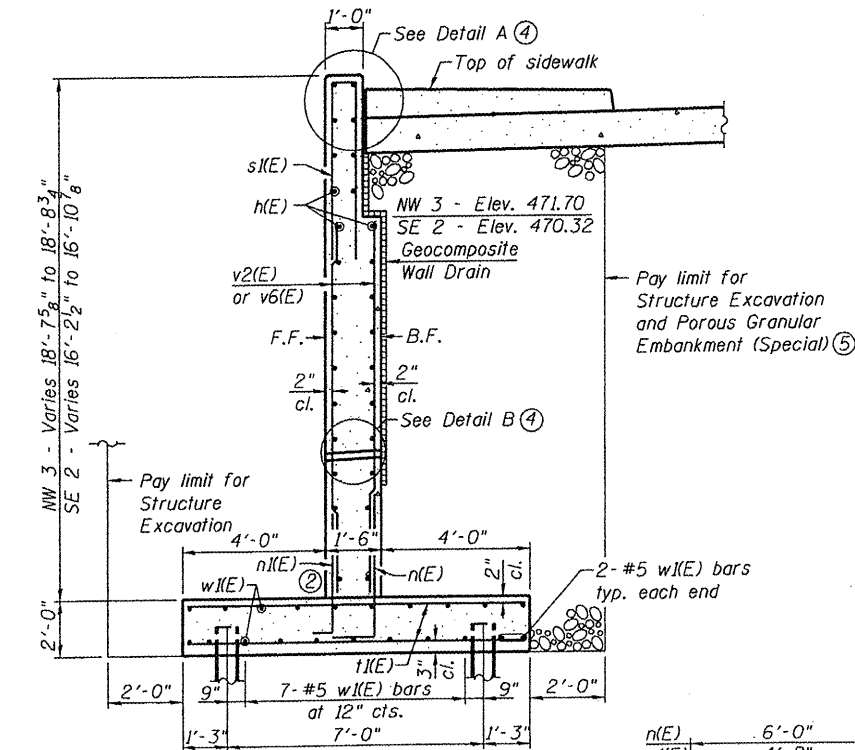
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



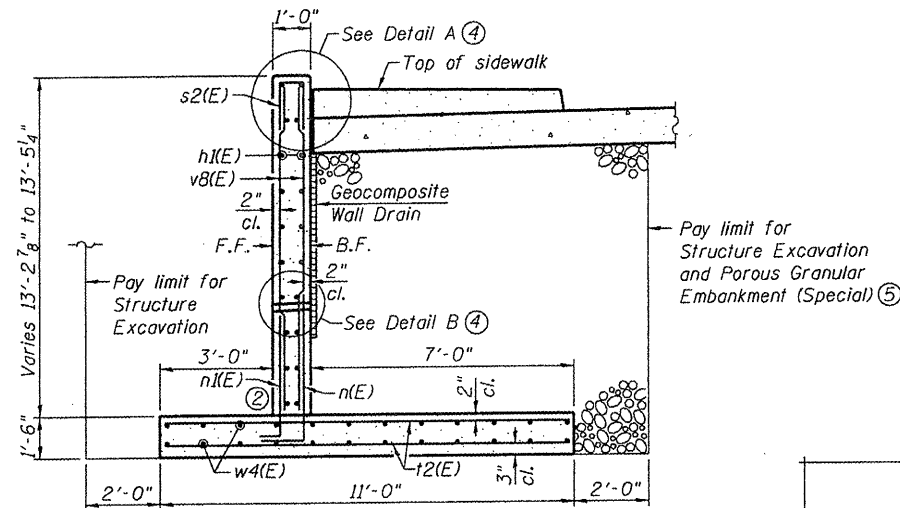
**SECTION G-G**  
(Walls NW 1, NW 2, & SE 1)



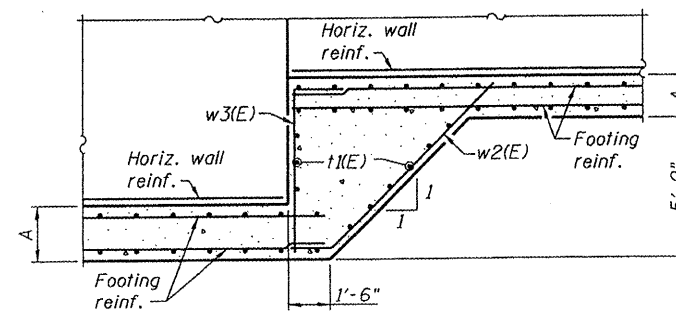
**SECTION I-I**  
(Wall SW 1)



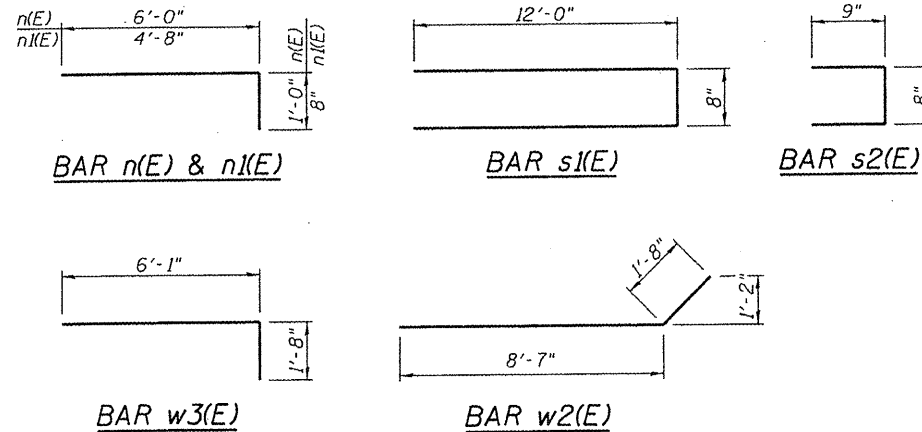
**SECTION H-H**  
(Walls NW 3 or SE 2)



**SECTION J-J**  
(Wall NE 1)



**STEPPED FOOTING**



**WEST RETAINING WALLS**  
**BILL OF MATERIAL**

| Bar                              | No. | Size | Length | Shape        |
|----------------------------------|-----|------|--------|--------------|
| h(E)                             | 32  | #5   | 14'-8" | —            |
| h1(E)                            | 66  | #4   | 14'-8" | —            |
| h2(E)                            | 20  | #5   | 5'-2"  | —            |
| n(E)                             | 85  | #6   | 7'-0"  | ┌            |
| n1(E)                            | 74  | #4   | 5'-4"  | ┌            |
| s1(E)                            | 21  | #5   | 24'-8" | ▭            |
| s2(E)                            | 18  | #4   | 2'-2"  | ▭            |
| i1(E)                            | 157 | #5   | 9'-2"  | —            |
| i2(E)                            | 41  | #7   | 10'-8" | —            |
| v2(E)                            | 41  | #5   | 7'-10" | —            |
| v3(E)                            | 34  | #4   | 13'-1" | —            |
| v4(E)                            | 22  | #4   | 8'-8"  | —            |
| v5(E)                            | 32  | #4   | 11'-5" | —            |
| w1(E)                            | 41  | #5   | 16'-4" | —            |
| w2(E)                            | 21  | #5   | 10'-3" | —            |
| w3(E)                            | 20  | #5   | 7'-9"  | —            |
| w4(E)                            | 44  | #5   | 14'-8" | —            |
| Structure Excavation             |     |      |        | Cu. Yd. 467  |
| Concrete Structures              |     |      |        | Cu. Yd. 83.1 |
| Reinforcement Bars, Epoxy Coated |     |      |        | Pound 8,120  |
| Furnishing Steel Piles HP14x73   |     |      |        | Foot 114     |
| Driving Piles                    |     |      |        | Foot 114     |
| Pile Shoes                       |     |      |        | Each 6       |

**EAST RETAINING WALLS**  
**BILL OF MATERIAL**

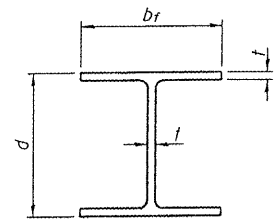
| Bar                              | No. | Size | Length  | Shape        |
|----------------------------------|-----|------|---------|--------------|
| h(E)                             | 28  | #5   | 14'-8"  | —            |
| h1(E)                            | 24  | #4   | 14'-8"  | —            |
| h2(E)                            | 10  | #5   | 5'-2"   | —            |
| h3(E)                            | 22  | #4   | 19'-8"  | —            |
| n(E)                             | 78  | #6   | 7'-0"   | ┌            |
| n1(E)                            | 69  | #4   | 5'-4"   | ┌            |
| s1(E)                            | 21  | #5   | 24'-8"  | ▭            |
| s2(E)                            | 14  | #4   | 2'-2"   | ▭            |
| i1(E)                            | 108 | #5   | 9'-2"   | —            |
| i2(E)                            | 41  | #7   | 10'-8"  | —            |
| v6(E)                            | 41  | #4   | 6'-8"   | —            |
| v7(E)                            | 28  | #4   | 10'-1"  | —            |
| v8(E)                            | 32  | #4   | 11'-10" | —            |
| w1(E)                            | 21  | #5   | 16'-4"  | —            |
| w2(E)                            | 11  | #5   | 10'-3"  | —            |
| w3(E)                            | 10  | #5   | 7'-9"   | —            |
| w4(E)                            | 24  | #5   | 14'-8"  | —            |
| w5(E)                            | 20  | #5   | 19'-8"  | —            |
| Structure Excavation             |     |      |         | Cu. Yd. 356  |
| Concrete Structures              |     |      |         | Cu. Yd. 64.6 |
| Reinforcement Bars, Epoxy Coated |     |      |         | Pound 6,520  |
| Furnishing Steel Piles HP14x73   |     |      |         | Foot 138     |
| Driving Piles                    |     |      |         | Foot 138     |
| Pile Shoes                       |     |      |         | Each 6       |

- Notes:
- B.F. denotes back face  
F.F. denotes front face
  - v(E) thru v8(E) bars shall maintain a 2" clearance to the top of retaining wall by varying the lap with n(E) thru n1(E) bars. A 2'-0" minimum lap shall be maintained between v(E) thru v8(E) and n(E) thru n1(E) bars in front face and back face.
  - Cost of soil cap included in Structure Excavation.
  - For Detail A and Detail B, see sheet 23 of 31.
  - Over excavation beyond the limits of Structure Excavation shall not be measured for payment. Over excavation beneath roadway, sidewalk, 2 feet beyond outside edge of sidewalk, and under proposed footings shall be backfilled according to Section 205 of the Standard Specification or according to the specifications of Porous Granular Embankment (Special). Backfill shall not be measured for payment and shall be incidental to Structure Excavation.

**RETAINING WALL DETAILS**  
**STRUCTURE NO. 082-6113**

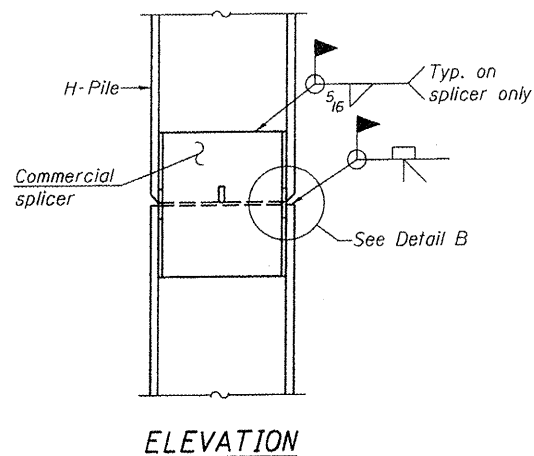
|   |   |                           |                     |   |                 |
|---|---|---------------------------|---------------------|---|-----------------|
| SHEET NO. 26<br>31 SHEETS                       | F.A.U. RTE.<br>9274   | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55                                      | SHEET NO.<br>43 |
|   | CONTRACT NO. 97369  |                           |                     |   |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |   |                           |                     |   |                 |
| <br>OATES ASSOCIATES<br>Consulting Engineers    | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     | DESIGNED DGL<br>CHECKED JAD<br>DRAWN JAD<br>CHECKED DGL |                 |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

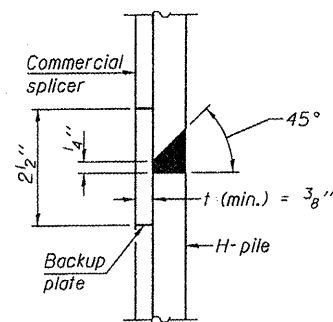


STEEL PILE TABLE

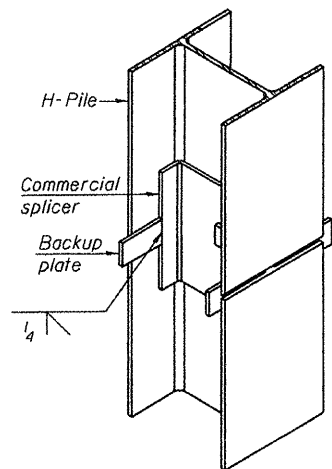
| Designation | Depth<br><i>d</i> | Flange<br>width<br><i>b<sub>f</sub></i> | Web and<br>Flange<br>thickness<br><i>t</i> | Encasement<br>diameter<br><i>A</i> |
|-------------|-------------------|---|--|------------------------------------|
| HP 14x117   | 14 1/4"           | 14 7/8"                                 | 13/16"                                     | 30"                                |
| x102        | 14"               | 14 3/4"                                 | 1/16"                                      | 30"                                |
| x89         | 13 7/8"           | 14 3/4"                                 | 5/8"                                       | 30"                                |
| x73         | 13 5/8"           | 14 5/8"                                 | 1/2"                                       | 30"                                |
| HP 12x84    | 12 1/4"           | 12 1/4"                                 | 1/16"                                      | 24"                                |
| x74         | 12 1/8"           | 12 1/4"                                 | 5/8"                                       | 24"                                |
| x63         | 12"               | 12 1/8"                                 | 1/2"                                       | 24"                                |
| x53         | 11 3/4"           | 12"                                     | 7/16"                                      | 24"                                |
| HP 10x57    | 10"               | 10 1/4"                                 | 9/16"                                      | 24"                                |
| x42         | 9 3/4"            | 10 1/8"                                 | 7/16"                                      | 24"                                |
| HP 8x36     | 8"                | 8 1/8"                                  | 7/16"                                      | 18"                                |



ELEVATION

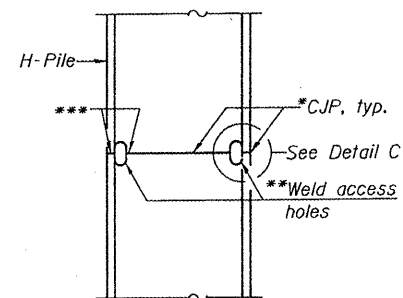


DETAIL "B"

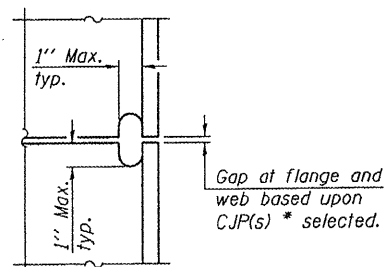


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



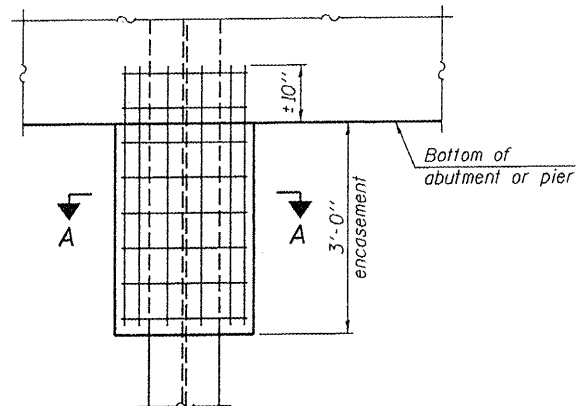
ELEVATION



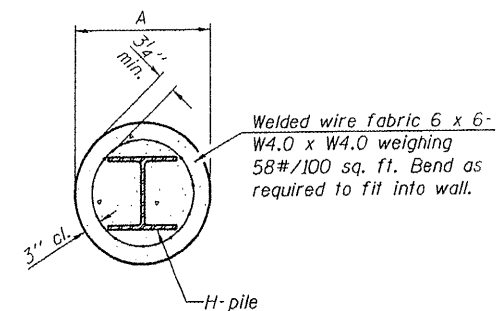
DETAIL C

COMPLETE PENETRATION WELD SPLICE

- \* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- \*\* Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- \*\*\* Interrupt welds 1/4" from end of each pile.



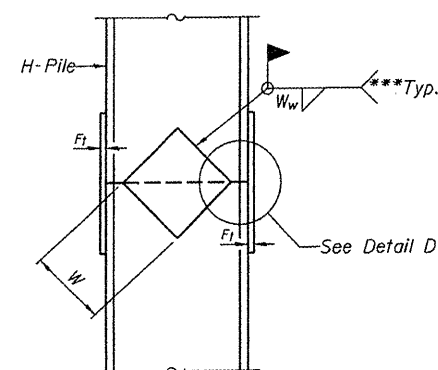
ELEVATION



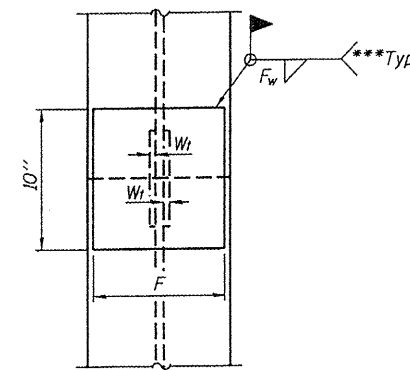
SECTION A-A

Note:  
Forms for encasement may be omitted  
when soil conditions permit.

PILE ENCASEMENT

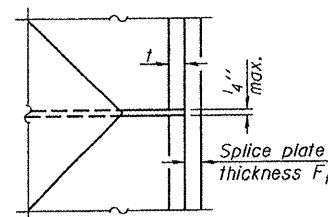


ELEVATION



END VIEW

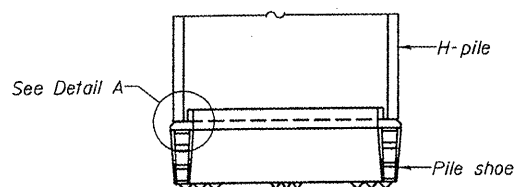
| Designation | <i>F</i> | <i>F<sub>1</sub></i> | <i>F<sub>w</sub></i> | <i>W</i> | <i>W<sub>1</sub></i> | <i>W<sub>w</sub></i> |
|-------------|----------|----------------------|----------------------|----------|----------------------|----------------------|
| HP 14x117   | 12 1/2"  | 1"                   | 7/8"                 | 7 3/4"   | 5/8"                 | 1/2"                 |
| x102        | 12 1/2"  | 7/8"                 | 3/4"                 | 7 3/4"   | 5/8"                 | 1/2"                 |
| x89         | 12 1/2"  | 3/4"                 | 1/16"                | 7 3/4"   | 5/8"                 | 1/2"                 |
| x73         | 12 1/2"  | 5/8"                 | 9/16"                | 7 3/4"   | 5/8"                 | 1/2"                 |
| HP 12x84    | 10"      | 7/8"                 | 1/16"                | 6 1/2"   | 5/8"                 | 1/2"                 |
| x74         | 10"      | 7/8"                 | 1/16"                | 6 1/2"   | 5/8"                 | 1/2"                 |
| x63         | 10"      | 5/8"                 | 1/2"                 | 6 1/2"   | 1/2"                 | 3/8"                 |
| x53         | 10"      | 5/8"                 | 1/2"                 | 6 1/2"   | 1/2"                 | 3/8"                 |
| HP 10x57    | 8"       | 3/4"                 | 9/16"                | 5 1/4"   | 1/2"                 | 3/8"                 |
| x42         | 8"       | 5/8"                 | 9/16"                | 5 1/4"   | 1/2"                 | 3/8"                 |
| HP 8x36     | 7"       | 5/8"                 | 7/16"                | 4 1/4"   | 1/2"                 | 3/8"                 |



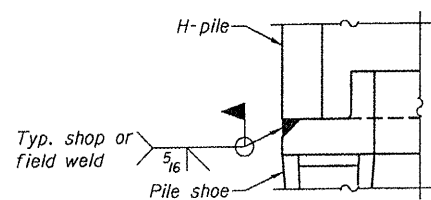
DETAIL D

WELDED PLATE FIELD SPLICE

HP PILE DETAILS  
STRUCTURE NO. 082-6113



ELEVATION



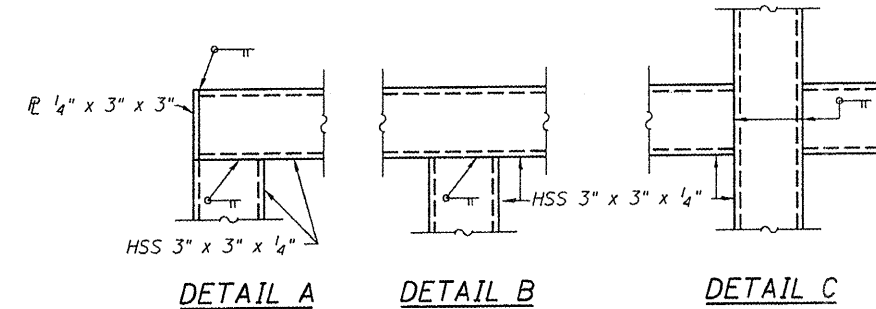
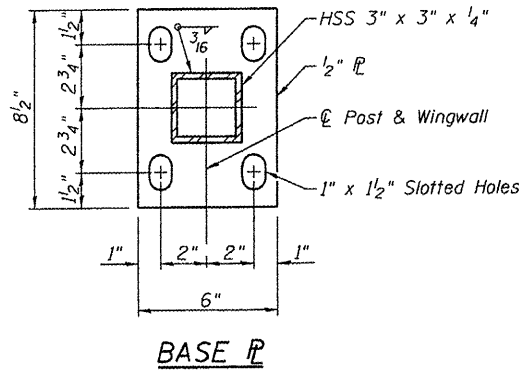
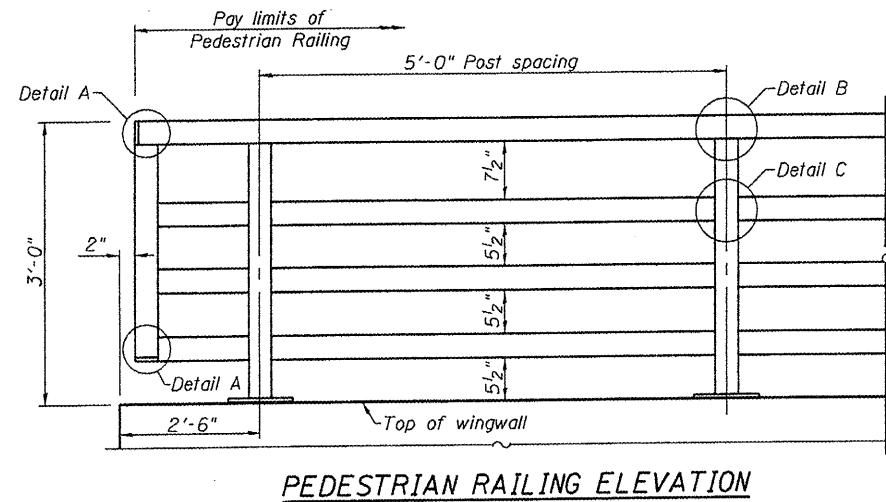
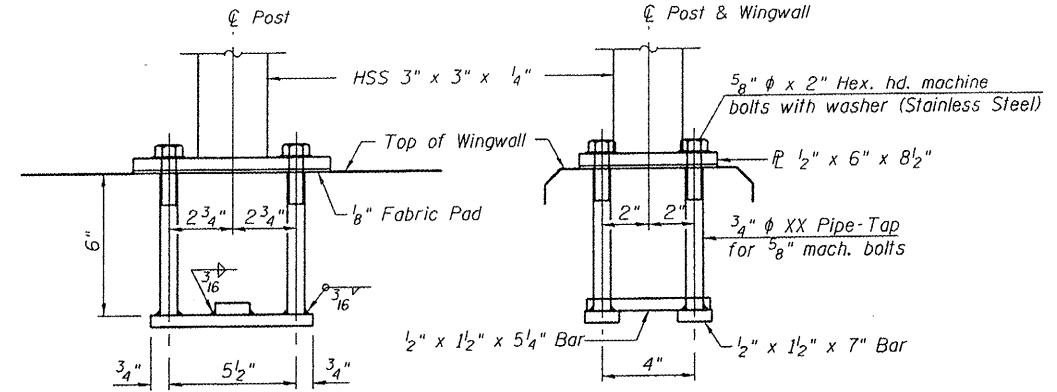
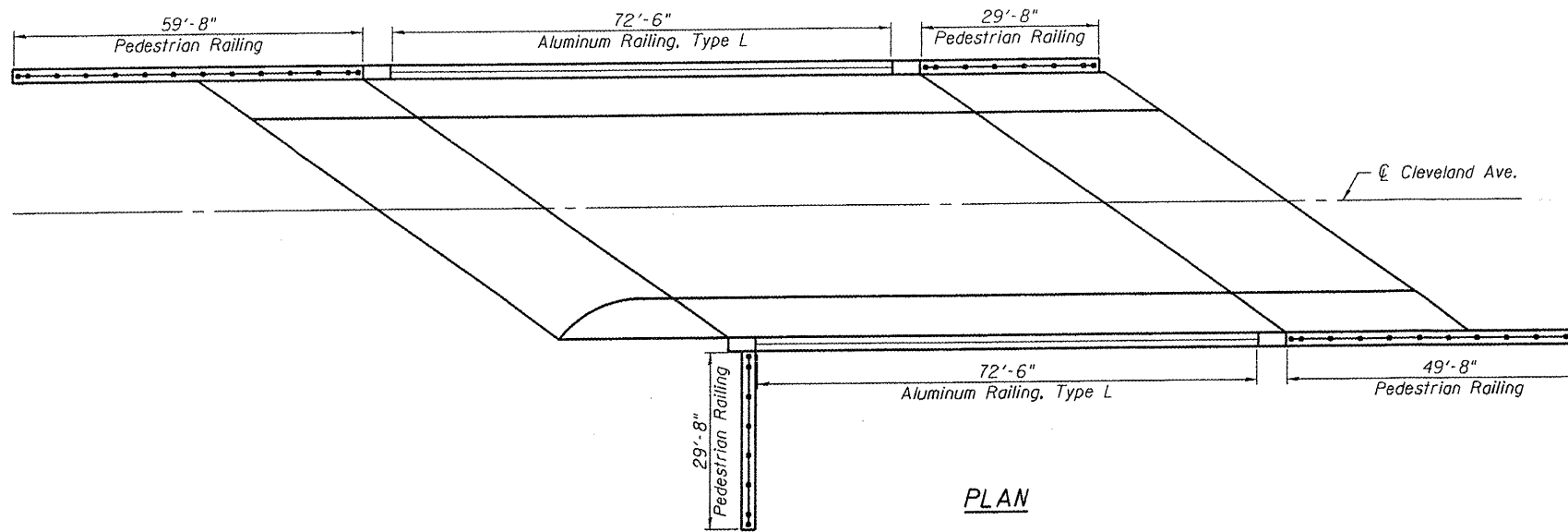
DETAIL A

H-PILE SHOE ATTACHMENT

|   |             |                |   |              |           |
|---|-------------|----------------|---|--------------|-----------|
| SHEET NO. 27                                    | F.A.U. RTE. | SECTION        | COUNTY  | TOTAL SHEETS | SHEET NO. |
|   | 9274        | 04-00202-00-BR | ST. CLAIR   | 55           | 44        |
| 31 SHEETS                                       |             |                | CONTRACT NO. 97369  |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |             |                |   |              |           |
|   |             |                | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |              |           |
|   |             |                | DESIGNED -  |              |           |
|   |             |                | CHECKED -   |              |           |
|   |             |                | DRAWN -   |              |           |
|   |             |                | CHECKED -   |              |           |

Note:  
The steel H-piles shall be according to  
AASHTO M270 Grade 50.

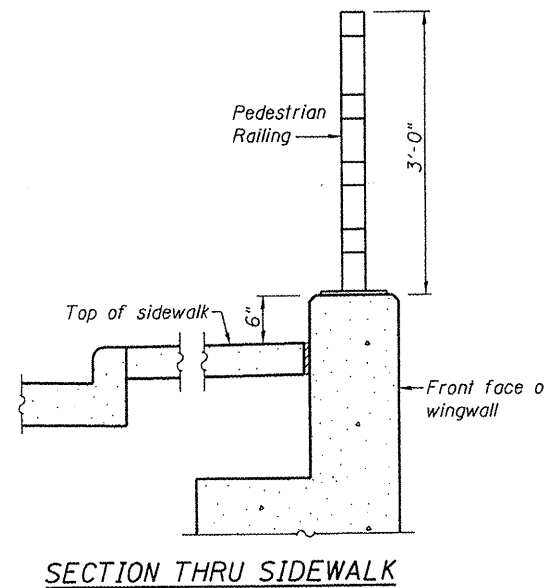
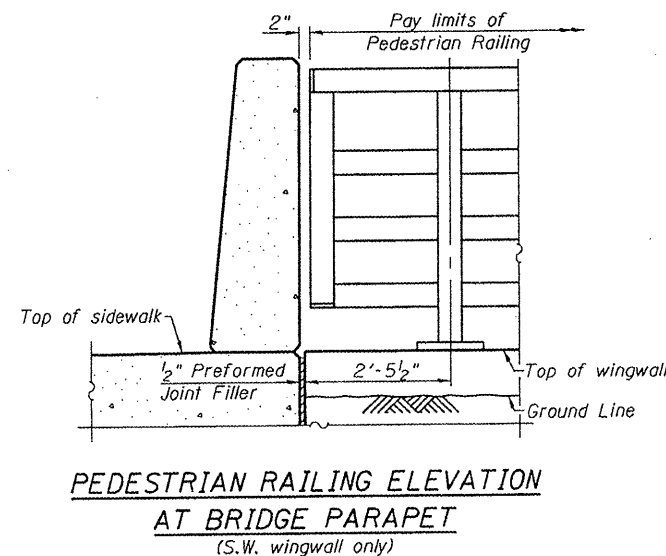
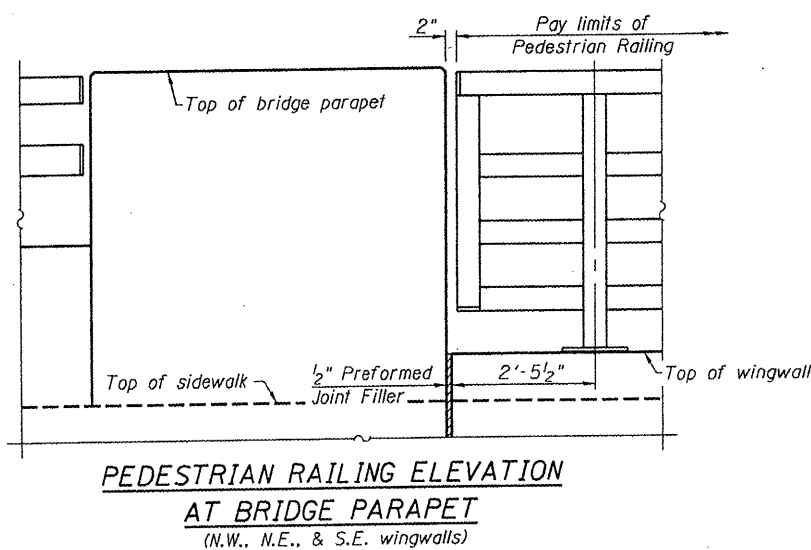
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION




BILL OF MATERIAL

| Item               | Unit | Total |
|--------------------|------|-------|
| Pedestrian Railing | Foot | 169   |

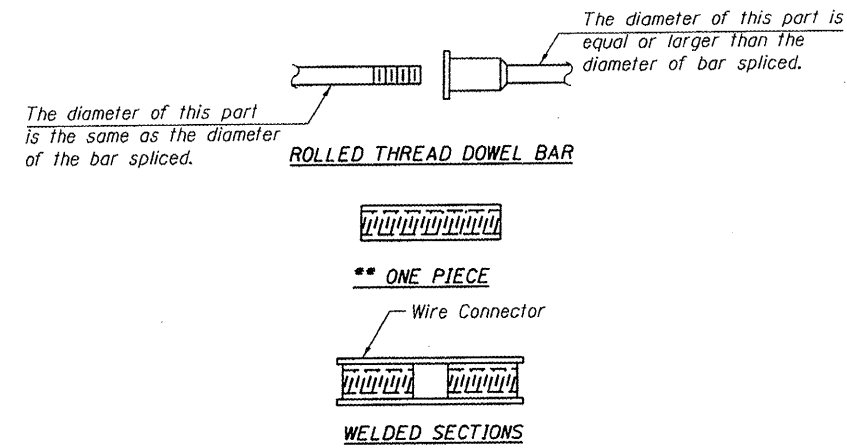
- Notes:
- Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Pedestrian Railing.
  - Hollow structural steel tubing shall conform to the requirements of ASTM designation A500, Grade B, Structural Steel Tubing.
  - All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.
  - In lieu of the cast in place anchor device shown, the contractor has the option of drilling and epoxy grouting 5/8"  $\phi$  anchor rods. Embedment shall be according to the manufacturer's specifications.
  - If the option of drilling and epoxy grouting the anchor rods is chosen, the contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given prior approval by the Illinois Department of Transportation. The contractor shall install these anchor rods in pre-drilled holes according to the recommendations and procedures of the epoxy manufacturer. The adhesive cartridge shall be sealed with premeasured amounts of the adhesive chemical.
  - All posts, railings, anchor devices, and plates shall be galvanized after shop fabrication according to AASHTO M111 and ASTM A 385. All bolts, nuts, and washers shall be galvanized according to AASHTO M232.



PEDESTRIAN RAILING  
STRUCTURE NO. 082-6113

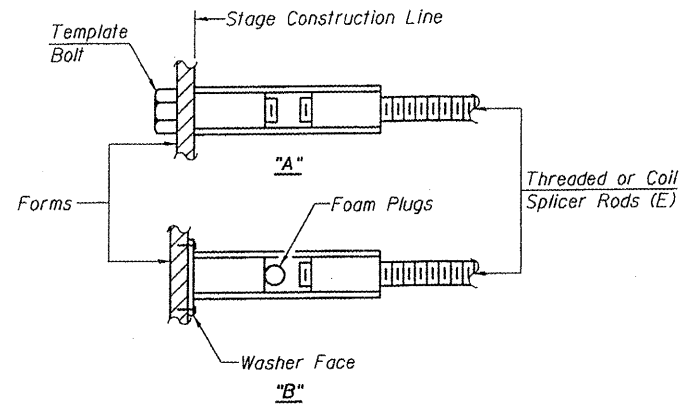
|   |  |                           |                     |   |                 |
|---|--|---------------------------|---------------------|---|-----------------|
| SHEET NO. 28<br>31 SHEETS   | F.A.U. RTE.<br>9274  | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL SHEETS<br>55                                      | SHEET NO.<br>45 |
|   | CONTRACT NO. 97369   |                           |                     |   |                 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT   |  |                           |                     |   |                 |
| <br>GATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center I<br>100 Laner Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     | DESIGNED DGL<br>CHECKED JAD<br>DRAWN JAD<br>CHECKED DGL |                 |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



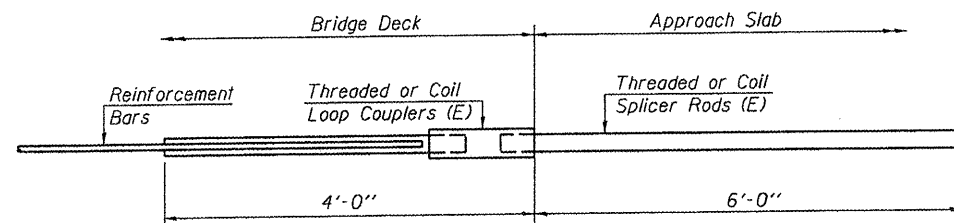
**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\*Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



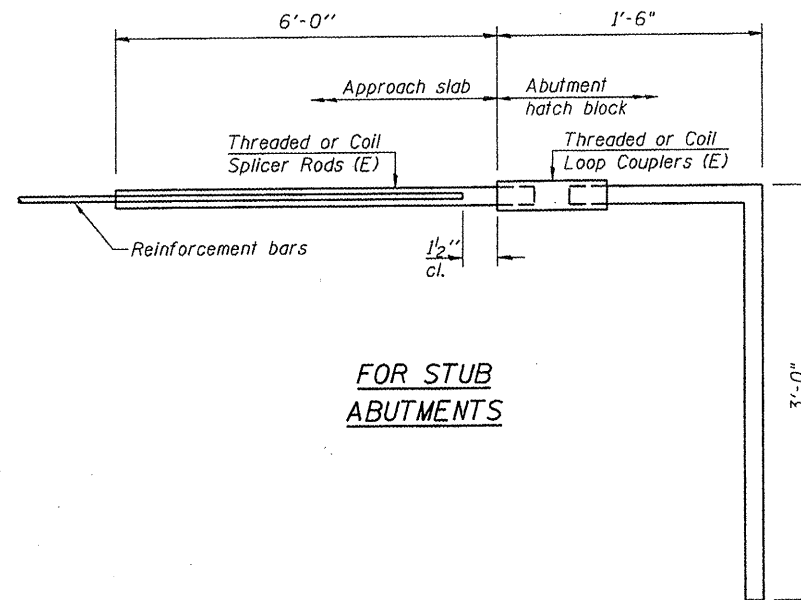
**INSTALLATION AND SETTING METHODS**

"A": Set bar splicer assembly by means of a template bolt.  
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E): Indicates epoxy coating.



**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

|  |
|--|
| Bar Splicer for #5 bar                       |
| Min. Capacity = 23.0 kips - tension          |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = 40 at W. Abut.                |



**FOR STUB ABUTMENTS**

|  |
|--|
| Bar Splicer for #5 bar                       |
| Min. Capacity = 23.0 kips - tension          |
| Min. Pull-out Strength = 12.3 kips - tension |
| No. Required = 40 at E. Abut.                |

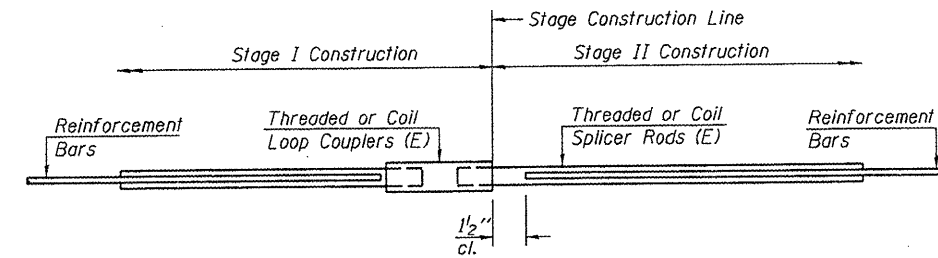
**NOTES**

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity =  $1.25 \times f_y \times A_1$   
(Tension in kips)
- ② Minimum \*Pull-out Strength =  $0.66 \times f_y \times A_1$   
(Tension in kips)

Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_1$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete


| Bar Size to be Spliced | Splicer Rod or Dowel Bar Length | Strength Requirements        |                                       |
|------------------------|---------------------------------|------------------------------|---------------------------------------|
|                        |                                 | Min. Capacity kips - tension | Min. Pull-Out Strength kips - tension |
| #4                     | 1'-8"                           | 14.7                         | 7.9                                   |
| #5                     | 2'-2"                           | 23.0                         | 12.3                                  |
| #6                     | 2'-7"                           | 33.1                         | 17.4                                  |
| #7                     | 3'-5"                           | 45.1                         | 23.8                                  |
| #8                     | 4'-6"                           | 58.9                         | 31.3                                  |
| #9                     | 5'-9"                           | 75.0                         | 39.6                                  |
| #10                    | 7'-3"                           | 95.0                         | 50.3                                  |
| #11                    | 9'-0"                           | 117.4                        | 61.8                                  |



**STANDARD**

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|----------|
|          |                         |          |
|          |                         |          |
|          |                         |          |
|          |                         |          |

**BAR SPLICER ASSEMBLY DETAILS  
STRUCTURE NO. 082-6113**

|   |   |                |           |   |           |
|---|---|----------------|-----------|---|-----------|
| SHEET NO. 29  | F.A.U. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS  | SHEET NO. |
|   | 9274  | 04-00202-00-BR | ST. CLAIR | 55  | 46        |
| 31 SHEETS   | CONTRACT NO. 97369  |                |           | FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT |           |
| <br>OATES ASSOCIATES<br>Consulting Engineers | Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                |           | DESIGNED -  |           |
|   |   |                |           | CHECKED -   |           |
|   |   |                |           | DRAWN -   |           |
|   |   |                |           | CHECKED -   |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Illinois Department  
of Transportation  
Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Page 1 of 2

Date 01/14/08

ROUTE FAU 9274 DESCRIPTION Cleveland Avenue Bridge over Richland Creek LOGGED BY SCI  
SECTION 04-00202-00-BR LOCATION Belleville, SEC. 28, TWP. 1N, RNG. 8W  
COUNTY St. Clair DRILLING METHOD CME 75 w/CFA HAMMER TYPE Automatic

| STRUCT. NO. 082-6109 Existing<br>Station                        | D<br>E<br>P<br>T<br>H<br>ft | B<br>L<br>O<br>W<br>S | U<br>C<br>S<br>Qu<br>T | M<br>O<br>I<br>S<br>T<br>% | Surface Water Elev. 459.8 ft<br>Stream Bed Elev. _____ ft | D<br>E<br>P<br>T<br>H<br>ft | B<br>L<br>O<br>W<br>S | U<br>C<br>S<br>Qu<br>T | M<br>O<br>I<br>S<br>T<br>% | Groundwater Elev.:<br>First Encounter 460.8 ft<br>Upon Completion _____ ft<br>After _____ Hrs. _____ ft |
|---|-----------------------------|-----------------------|------------------------|----------------------------|---|-----------------------------|-----------------------|------------------------|----------------------------|---|
|   |                             |                       |                        |                            |   |                             |                       |                        |                            |   |
| ASPHALT - 3 inches  | 476.6                       |                       |                        |                            |   |                             |                       |                        |                            | CLAYEY SILT: Gray, low plastic (A-4) (continued)  |
| CONCRETE - 10 inches  | 477.8                       |                       |                        |                            |   |                             |                       |                        |                            |   |
| CRUSHED ROCK mixed with brown, low plastic clayey silt          | 478.8                       | 6                     | 4.5                    | 14                         |   | 1                           | 2                     | 1.1                    | 29                         | SILTY CLAY: Gray, low plastic (A-6)   |
|   |                             | 4                     | P                      |                            |   | 3                           | B                     |                        |                            |   |
| FILL: Slag, cinders, organics, and dark brown, low plastic silt | 479.8                       | 7                     |                        |                            |   | 1                           | 2                     | 0.2                    | 28                         |   |
|   |                             | 4                     |                        | 15                         |   | 2                           | 1                     | B                      |                            |   |
|   |                             | 2                     |                        |                            |   | 1                           | 2                     | 0.3                    | 33                         | CLAYEY SILT: Gray, low plastic, some sand (A-4)   |
| FILL: Brown, low plastic clayey silt (A-6)                      | 479.3                       | 2                     | 0.9                    | 26                         |   | 2                           | 2                     | 0.3                    | 33                         |   |
|   |                             | 1                     |                        |                            |   | 3                           | 3                     | P                      |                            |   |
|   |                             | 3                     | S15                    |                            |   |                             |                       |                        |                            |   |
| Becomes brown and gray  | 480.8                       | 3                     |                        |                            |   | 3                           | 2                     | 0.3                    | 33                         | CLAYEY SILT: Gray, low plastic (A-4) and SANDY CLAY: Gray, low plastic (A-6)                            |
|   |                             | 2                     | 0.6                    | 26                         |   | 2                           | 3                     | P                      |                            |   |
|   |                             | 3                     | S15                    |                            |   |                             |                       |                        |                            |   |
| Becomes gray  | 481.8                       | 3                     | 1.5                    | 23                         |   |                             |                       |                        |                            |   |
|   |                             | 2                     |                        |                            |   |                             |                       |                        |                            |   |
|   |                             | 3                     | S10                    |                            |   |                             |                       |                        |                            |   |
| FILL: Gray, low plastic silty clay, some sand (A-6)             | 485.8                       | 1                     | 0.4                    | 36                         |   | 4                           | 7                     | 2.2                    | 33                         | SHALEY CLAY: Gray and brown, high plastic, trace black, organic deposit (A-7)                           |
|   |                             | 2                     |                        |                            |   | 3                           | 9                     | B                      |                            |   |
|   |                             | 3                     | S10                    |                            |   |                             |                       |                        |                            |   |
| FILL: Gray, low plastic clayey silt, trace cinders (A-4)        | 483.3                       | 2                     |                        |                            |   |                             |                       |                        |                            |   |
|   |                             | 2                     | 0.5                    | 37                         |   |                             |                       |                        |                            |   |
| FILL: Gray, low plastic silty clay (A-6)                        | 482.3                       | 2                     |                        |                            |   |                             |                       |                        |                            | CLAYEY SHALE: Gray  |
|   |                             | 2                     | P                      |                            |   |                             |                       |                        |                            |   |
|   |                             | 2                     |                        |                            |   |                             |                       |                        |                            |   |
|   |                             | 2                     | 0.9                    | 33                         |   | 48                          | 50/2"                 | 3.2                    | 18                         |   |
|   |                             | 3                     | B                      |                            |   | 48                          | S15                   |                        |                            |   |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department  
of Transportation  
Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Page 2 of 2

Date 01/14/08

ROUTE FAU 9274 DESCRIPTION Cleveland Avenue Bridge over Richland Creek LOGGED BY SCI  
SECTION 04-00202-00-BR LOCATION Belleville, SEC. 28, TWP. 1N, RNG. 8W  
COUNTY St. Clair DRILLING METHOD CME 75 w/CFA HAMMER TYPE Automatic

| STRUCT. NO. 082-6109 Existing<br>Station | D<br>E<br>P<br>T<br>H<br>ft | B<br>L<br>O<br>W<br>S | U<br>C<br>S<br>Qu<br>T | M<br>O<br>I<br>S<br>T<br>% | Surface Water Elev. 459.8 ft<br>Stream Bed Elev. _____ ft | D<br>E<br>P<br>T<br>H<br>ft | B<br>L<br>O<br>W<br>S | U<br>C<br>S<br>Qu<br>T | M<br>O<br>I<br>S<br>T<br>% | Groundwater Elev.:<br>First Encounter 460.8 ft<br>Upon Completion _____ ft<br>After _____ Hrs. _____ ft |
|--|-----------------------------|-----------------------|------------------------|----------------------------|---|-----------------------------|-----------------------|------------------------|----------------------------|---|
|  |                             |                       |                        |                            |   |                             |                       |                        |                            |   |
| CLAYEY SHALE: Gray (continued)           |                             |                       |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | 50/5"                 | 4.5                    | 14                         |   |                             |                       |                        |                            |   |
|  |                             | P                     |                        |                            |   |                             |                       |                        |                            |   |
| SHALE: Gray                              | 435.8                       |                       |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | 50/4"                 | 4.5                    | 10                         |   |                             |                       |                        |                            |   |
|  |                             | P                     |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | 45                    |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | 50/3"                 | 4.5                    | 10                         |   |                             |                       |                        |                            |   |
| Boring terminated at 46 feet.            | 432.5                       |                       |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | P                     |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | 45                    |                        |                            |   |                             |                       |                        |                            |   |
|  |                             | 50                    |                        |                            |   |                             |                       |                        |                            |   |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

BORING LOGS  
STRUCTURE NO. 082-6113

|   |             |                |           |   |           |
|---|-------------|----------------|-----------|---|-----------|
| SHEET NO. 30  | F.A.U. RTE. | SECTION        | COUNTY    | TOTAL SHEETS                                    | SHEET NO. |
|   | 9274        | 04-00202-00-BR | ST. CLAIR | 55  | 47        |
| 31 SHEETS   |             |                |           |   |           |
| CONTRACT NO. 97369  |             |                |           |   |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT   |             |                |           |   |           |
| Eastport Business Center 1<br>100 Lanter Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |             |                |           | DESIGNED -<br>CHECKED -<br>DRAWN -<br>CHECKED - |           |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SOIL BORING LOG

Page 1 of 2

ROUTE FAU 9274 DESCRIPTION Cleveland Avenue Bridge over Richland Creek LOGGED BY SCI  
SECTION 04-00202-00-BR LOCATION Belleville, SEC. 28, TWP. 1N, RNG. 8W  
COUNTY St. Clair DRILLING METHOD CME 75 w/CFA HAMMER TYPE Automatic

| STRUCT. NO.<br>Station   | D<br>E<br>P<br>T<br>H<br>ft                        | B<br>L<br>O<br>W<br>S<br>H | U<br>C<br>S<br>Qu | M<br>O<br>I<br>S<br>T<br>% | Surface Water Elev. _____ ft   |       |       |     | D<br>E<br>P<br>T<br>H<br>ft | B<br>L<br>O<br>W<br>S<br>H | U<br>C<br>S<br>Qu | M<br>O<br>I<br>S<br>T<br>% |
|--|--|----------------------------|-------------------|----------------------------|--|-------|-------|-----|-----------------------------|----------------------------|-------------------|----------------------------|
|  |  |                            |                   |                            | (ft)   | (/ft) | (tsf) | (%) |                             |                            |                   |                            |
| BORING NO. <u>B-2</u><br>Station <u>101+84</u><br>Offset <u>11 R.Rt.</u><br>Ground Surface Elev. <u>478.1</u> ft |  |                            |                   |                            | Groundwater Elev.:<br>First Encounter _____ ft<br>Upon Completion _____ ft<br>After _____ Hrs. |       |       |     |                             |                            |                   |                            |
| ASPHALT - 1 inch<br>CONCRETE - 8 inches<br>CRUSHED ROCK mixed with<br>brown, low plastic silty clay              | 478.0<br>478.4<br>478.4<br>478.4<br>478.4<br>478.4 |                            |                   |                            | SILTY CLAY: Brown, low plastic,<br>trace sand (A-6)  |       |       |     | 1<br>2<br>2                 | 0.9<br>2                   | 28                |                            |
| FILL: Brown and gray, low plastic<br>silty clay (A-6)  | 473.8<br>473.8<br>473.8<br>473.8<br>473.8          |                            |                   |                            | SANDY CLAY: Brown, low plastic<br>(A-6) and SILTY CLAY: Brown,<br>low plastic (A-6)            |       |       |     | 2<br>2<br>3                 |                            | 21                |                            |
| Becomes gray and trace sleg  | 473.8<br>473.8<br>473.8<br>473.8<br>473.8          |                            |                   |                            | COAL   |       |       |     | 11<br>34<br>50              |                            | 27                |                            |
| Becomes brown and gray   | 469.8<br>469.8<br>469.8<br>469.8<br>469.8          |                            |                   |                            | CLAYEY SHALE Gray  |       |       |     | 26<br>50/5"                 |                            | 43                |                            |
| FILL: Gray and brown, low plastic<br>silt (A-4)  | 463.8<br>463.8<br>463.8<br>463.8<br>463.8          |                            |                   |                            | ROCK and ROCK FRAGMENTS<br>SHALE Gray  |       |       |     | 35<br>50/5"                 | 4.5<br>S                   | 13                |                            |
| FILL: Gray and brown, low plastic<br>silty clay (A-6)  | 461.1<br>461.1<br>461.1<br>461.1<br>461.1          |                            |                   |                            | CLAYEY SHALE Gray  |       |       |     | 29<br>50/5"                 | 4.5<br>P                   | 18                |                            |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, Form 137 (Rev. 8-99)



SOIL BORING LOG

Page 2 of 2

ROUTE FAU 9274 DESCRIPTION Cleveland Avenue Bridge over Richland Creek LOGGED BY SCI  
SECTION 04-00202-00-BR LOCATION Belleville, SEC. 28, TWP. 1N, RNG. 8W  
COUNTY St. Clair DRILLING METHOD CME 75 w/CFA HAMMER TYPE Automatic

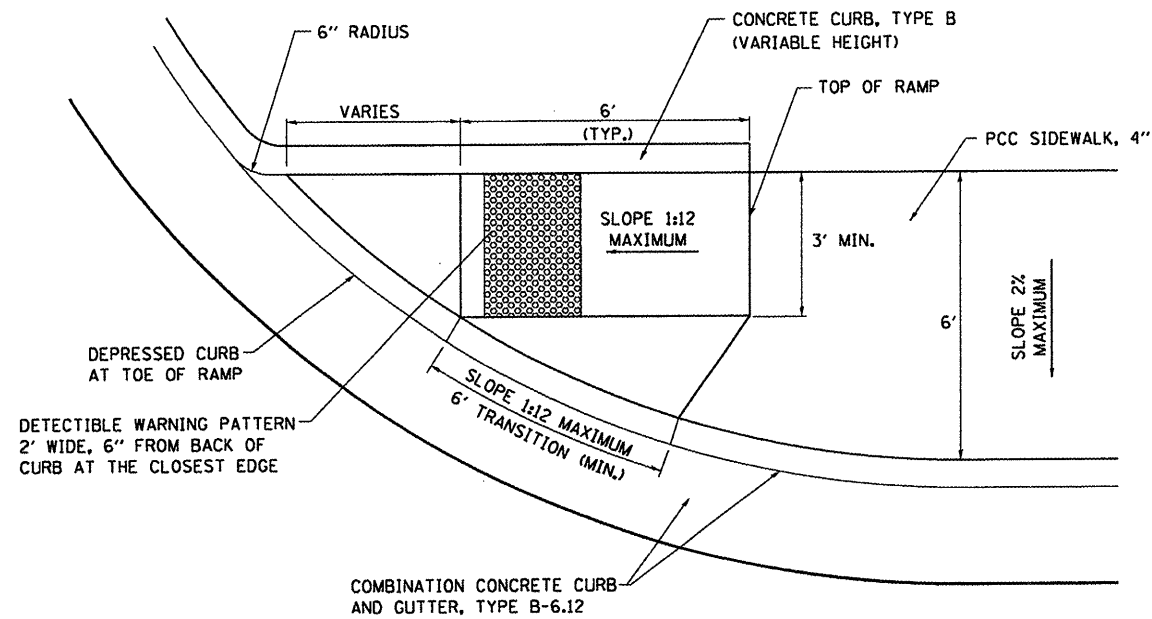
| STRUCT. NO.<br>Station   | D<br>E<br>P<br>T<br>H<br>ft               | B<br>L<br>O<br>W<br>S<br>H | U<br>C<br>S<br>Qu | M<br>O<br>I<br>S<br>T<br>% | Surface Water Elev. _____ ft   |       |       |     | D<br>E<br>P<br>T<br>H<br>ft | B<br>L<br>O<br>W<br>S<br>H | U<br>C<br>S<br>Qu | M<br>O<br>I<br>S<br>T<br>% |
|--|---|----------------------------|-------------------|----------------------------|--|-------|-------|-----|-----------------------------|----------------------------|-------------------|----------------------------|
|  |   |                            |                   |                            | (ft)   | (/ft) | (tsf) | (%) |                             |                            |                   |                            |
| BORING NO. <u>B-2</u><br>Station <u>101+84</u><br>Offset <u>11 R.Rt.</u><br>Ground Surface Elev. <u>479.1</u> ft |   |                            |                   |                            | Groundwater Elev.:<br>First Encounter _____ ft<br>Upon Completion _____ ft<br>After _____ Hrs. |       |       |     |                             |                            |                   |                            |
| CLAYEY SHALE Gray<br>(continued)   | 437.8<br>437.8<br>437.8<br>437.8<br>437.8 |                            |                   |                            | Boring terminated at 41 feet.  |       |       |     | 50/4"                       | 4.5<br>P                   | 14                |                            |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, Form 137 (Rev. 8-99)

BORING LOGS  
STRUCTURE NO. 082-6113

|   |   |                           |                     |                       |                    |
|---|---|---------------------------|---------------------|-----------------------|--------------------|
| SHEET NO. 31  | F.A.U.<br>RTE.<br>9274  | SECTION<br>04-00202-00-BR | COUNTY<br>ST. CLAIR | TOTAL<br>SHEETS<br>55 | SHEET<br>NO.<br>48 |
|   | 31 SHEETS   |                           |                     |                       |                    |
| CONTRACT NO. 97369                                  |   |                           |                     |                       |                    |
| FED. ROAD DIST. NO. 7   ILLINOIS   FED. AID PROJECT |   |                           |                     |                       |                    |
| <br>DATES ASSOCIATES<br>Consulting Engineers        | Eastport Business Center 1<br>100 Lanier Court, Suite 1<br>Collinsville, Illinois 62234<br>618-345-2200<br>Design Firm License No. 184.001115 |                           |                     |                       | DESIGNED -         |
|   |   |                           |                     |                       | CHECKED -          |
|   |   |                           |                     |                       | DRAWN -            |
|   |   |                           |                     |                       | CHECKED -          |

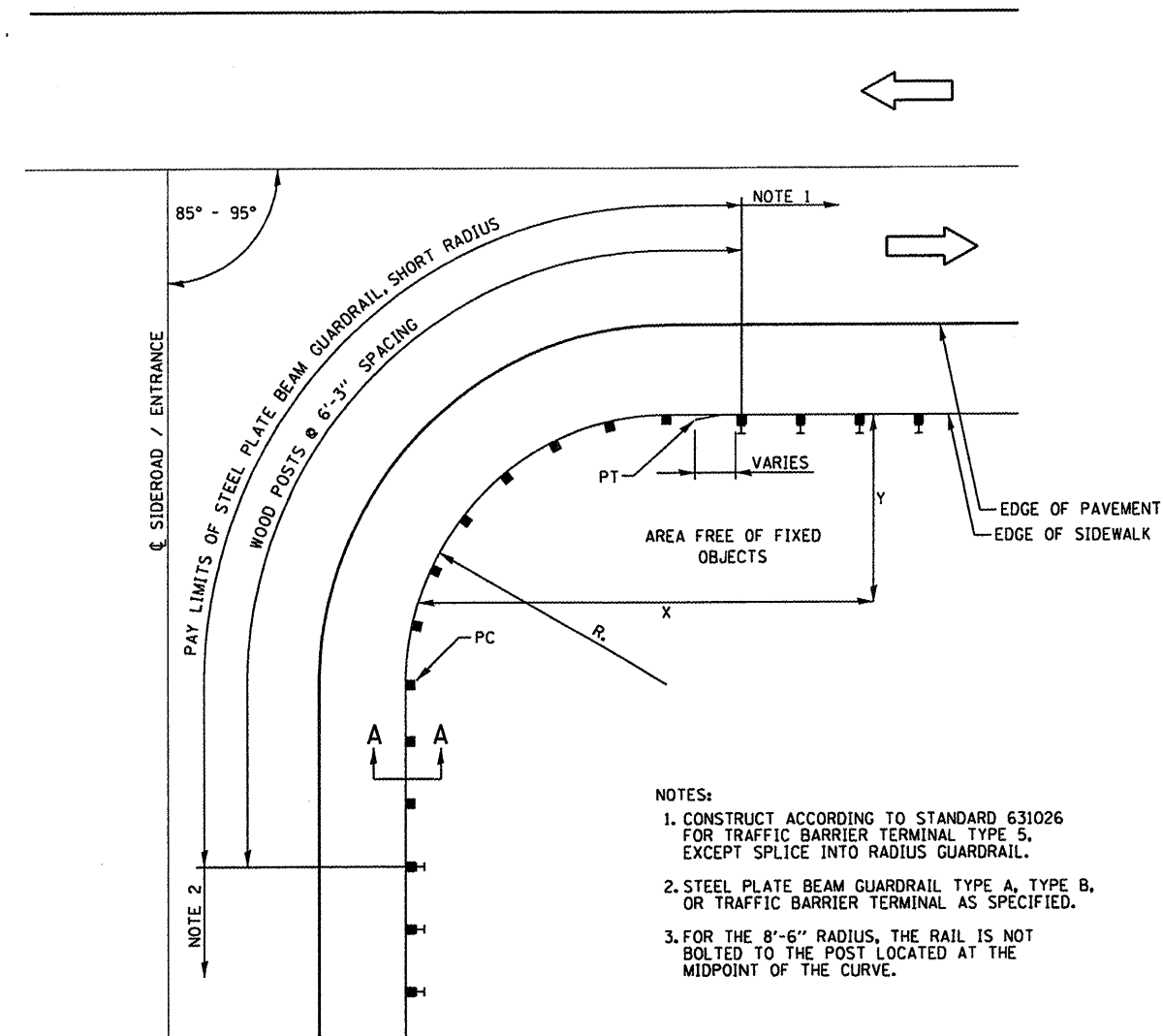




**SIDEWALK RAMPS**

(NOT TO SCALE)

NOTE:  
SEE PLANS FOR LOCATIONS.  
FOR SIDEWALK RAMP AT STA. 101+62 RT ON BRIDGE  
APPROACH PAVEMENT, REFER TO BRIDGE PLANS  
SHEET 28 OF 55 FOR CONSTRUCTION DETAILS.

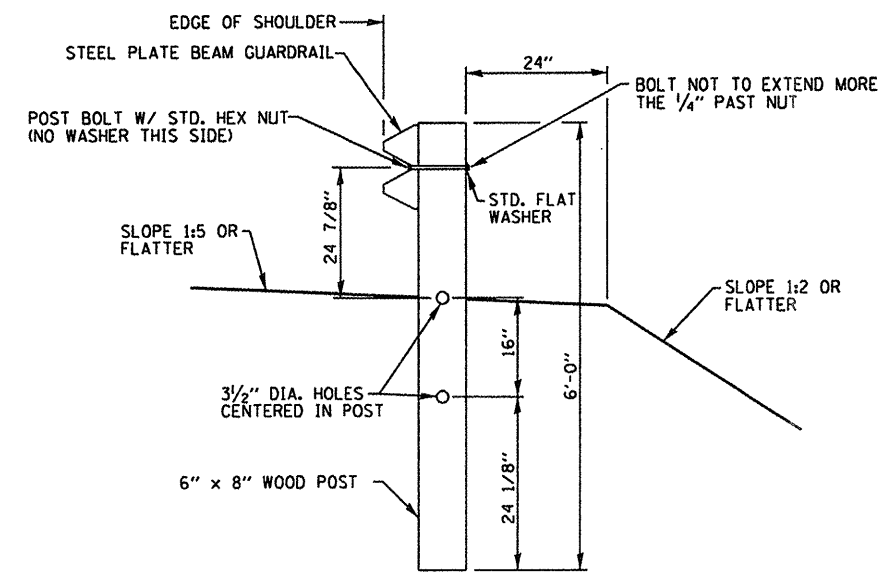


**PLAN VIEW SHORT RADIUS GUARDRAIL DETAIL**

(NOT TO SCALE)

- NOTES:
1. CONSTRUCT ACCORDING TO STANDARD 631026 FOR TRAFFIC BARRIER TERMINAL TYPE 5, EXCEPT SPLICE INTO RADIUS GUARDRAIL.
  2. STEEL PLATE BEAM GUARDRAIL TYPE A, TYPE B, OR TRAFFIC BARRIER TERMINAL AS SPECIFIED.
  3. FOR THE 8'-6" RADIUS, THE RAIL IS NOT BOLTED TO THE POST LOCATED AT THE MIDPOINT OF THE CURVE.

| INSTALLATION CHARACTERISTICS PER DESIGN RADIUS |                   |     |     |
|--|-------------------|-----|-----|
| R  | NO. OF WOOD POSTS | X   | Y   |
| 8'-6"  | 5<br>(NOTE 3)     | 25' | 15' |
| 17'-0"   | 6                 | 30' | 15' |
| 25'-6"   | 8                 | 40' | 20' |
| 35'-0"   | 11                | 50' | 20' |



**SECTION A-A**

(NOT TO SCALE)

|                                      |                           |            |           |
|--------------------------------------|---------------------------|------------|-----------|
| FILE NAME =<br>27055-shr-details.dgn | USER NAME =<br>moisiegros | DESIGNED - | REVISED - |
|                                      |                           | DRAWN -    | REVISED - |
|                                      |                           | CHECKED -  | REVISED - |
|                                      |                           | DATE -     | REVISED - |

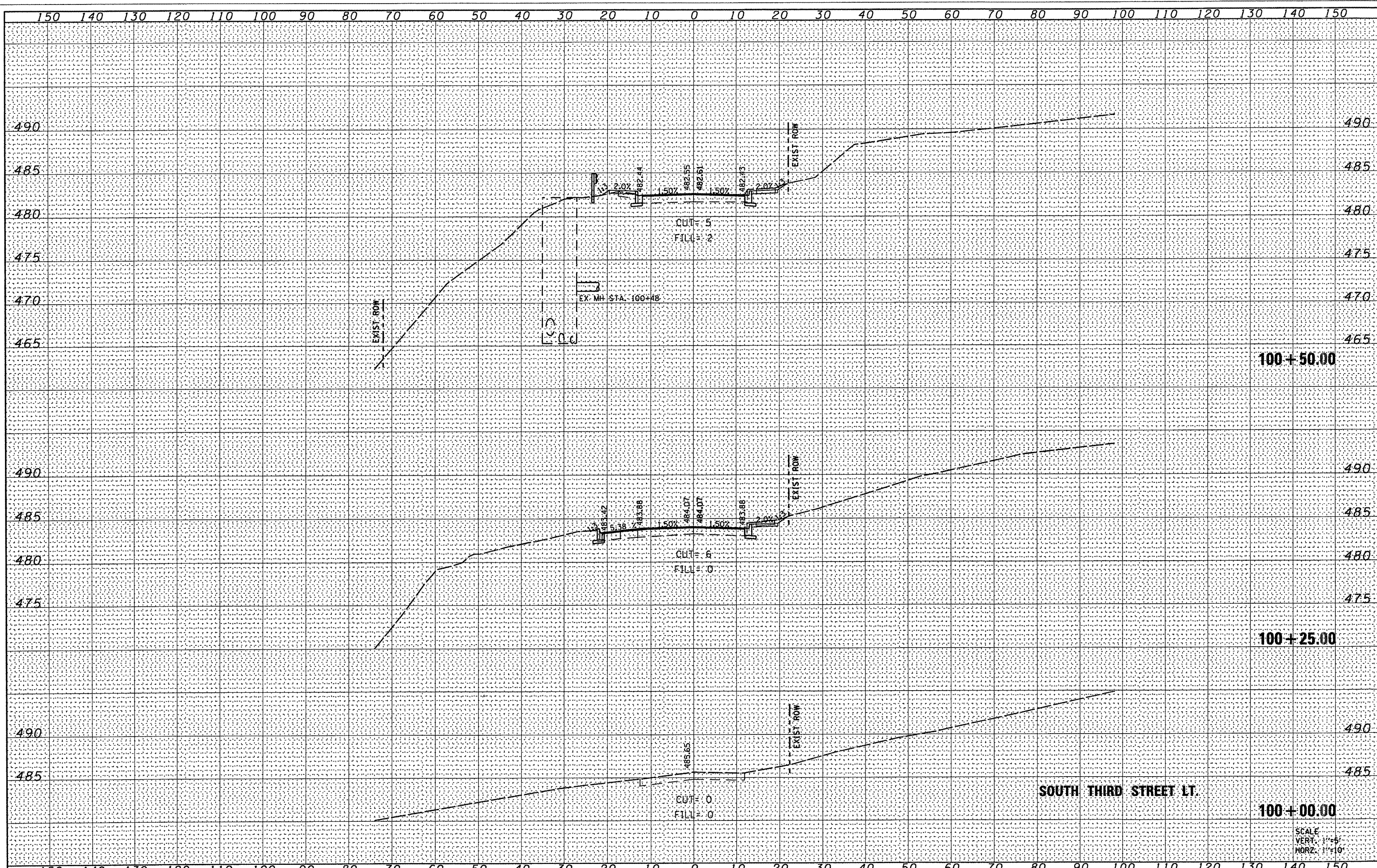
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|                             |           |           |              |
|-----------------------------|-----------|-----------|--------------|
| <b>CONSTRUCTION DETAILS</b> |           |           |              |
| SCALE:                      | SHEET NO. | OF SHEETS | STA. TO STA. |

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.U. RTE.                                       | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 49        |
| CONTRACT NO. 97369                                |                |           |              |           |
| FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT |                |           |              |           |

SURVEYED  
 SURVEY  
 NOTE BOOK  
 NO.

SURVEYED  
 SURVEY  
 NOTE BOOK  
 NO.



FILE NAME =  
 H:\P\27055\MicroStation\8\CADD Sheets\27055-

|                             |            |           |
|-----------------------------|------------|-----------|
| USER NAME = maisegraser     | DESIGNED - | REVISED - |
| t-xsc.dgn                   | DRAWN -    | REVISED - |
| PLOT SCALE = 20.0000' / IN. | CHECKED -  | REVISED - |
| PLOT DATE = 3/13/2009       | DATE -     | REVISED - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS**

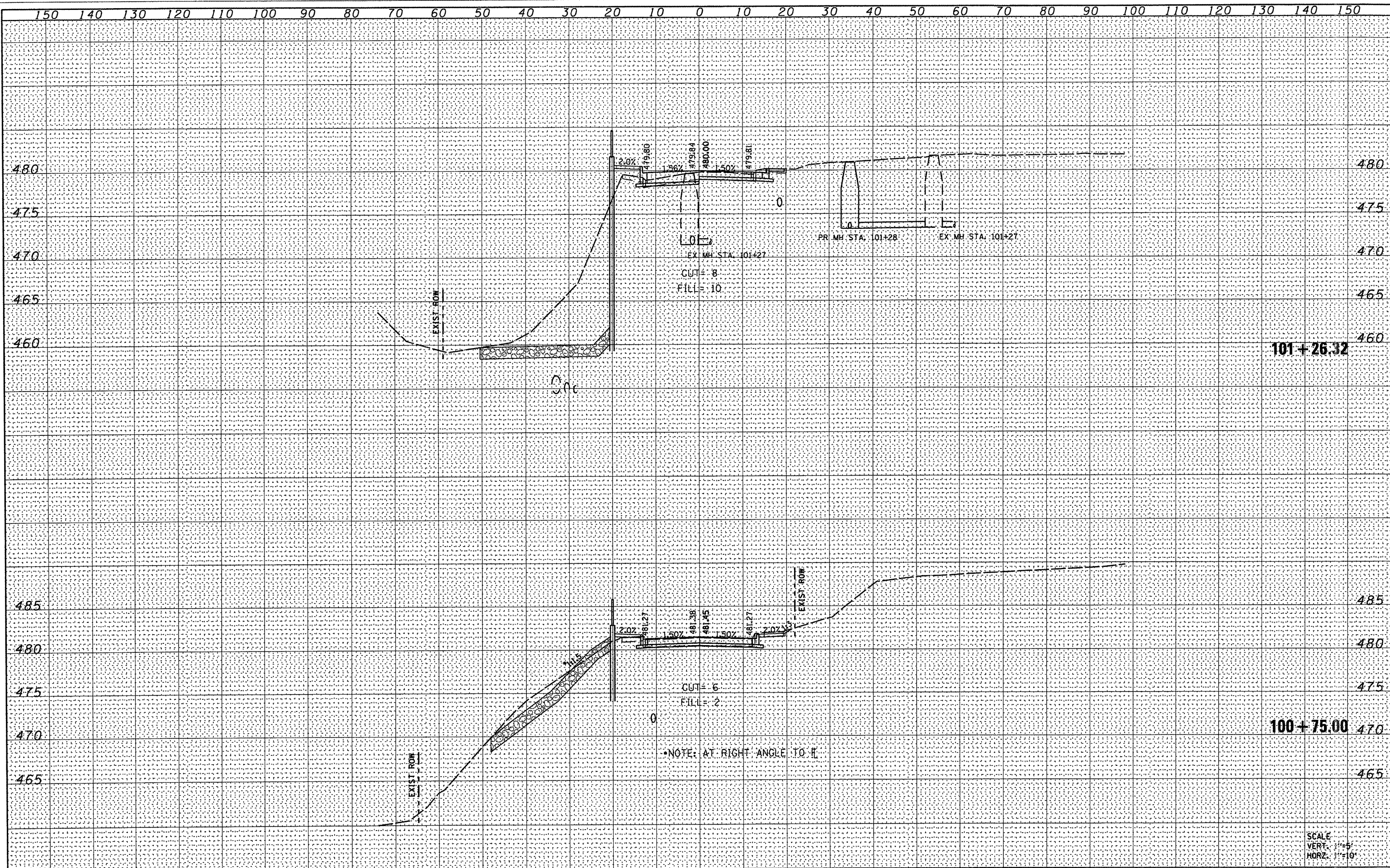
|        |           |    |        |                |                   |
|--------|-----------|----|--------|----------------|-------------------|
| SCALE: | SHEET NO. | OF | SHEETS | STA. 100+00.00 | TO STA. 100+50.00 |
|--------|-----------|----|--------|----------------|-------------------|

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.U. RTE.                                       | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 50        |
| CONTRACT NO. 97369                                |                |           |              |           |
| FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT |                |           |              |           |

SCALE  
 VERT. 1"=5'  
 HORZ. 1"=10'

SURVEYED \_\_\_\_\_  
 SURVEY PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_

SURVEYED \_\_\_\_\_  
 SURVEY PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
 AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_



FILE NAME =  
 H:\P\27855\MicroStation\8\CADD Sheets\27855-  
 t-xsc.dgn  
 PLOT SCALE = 20.0000 "/ IN.  
 PLOT DATE = 3/13/2009

|                        |            |           |
|------------------------|------------|-----------|
| USER NAME = moisgrisor | DESIGNED - | REVISED - |
|                        | DRAWN -    | REVISED - |
|                        | CHECKED -  | REVISED - |
|                        | DATE -     | REVISED - |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

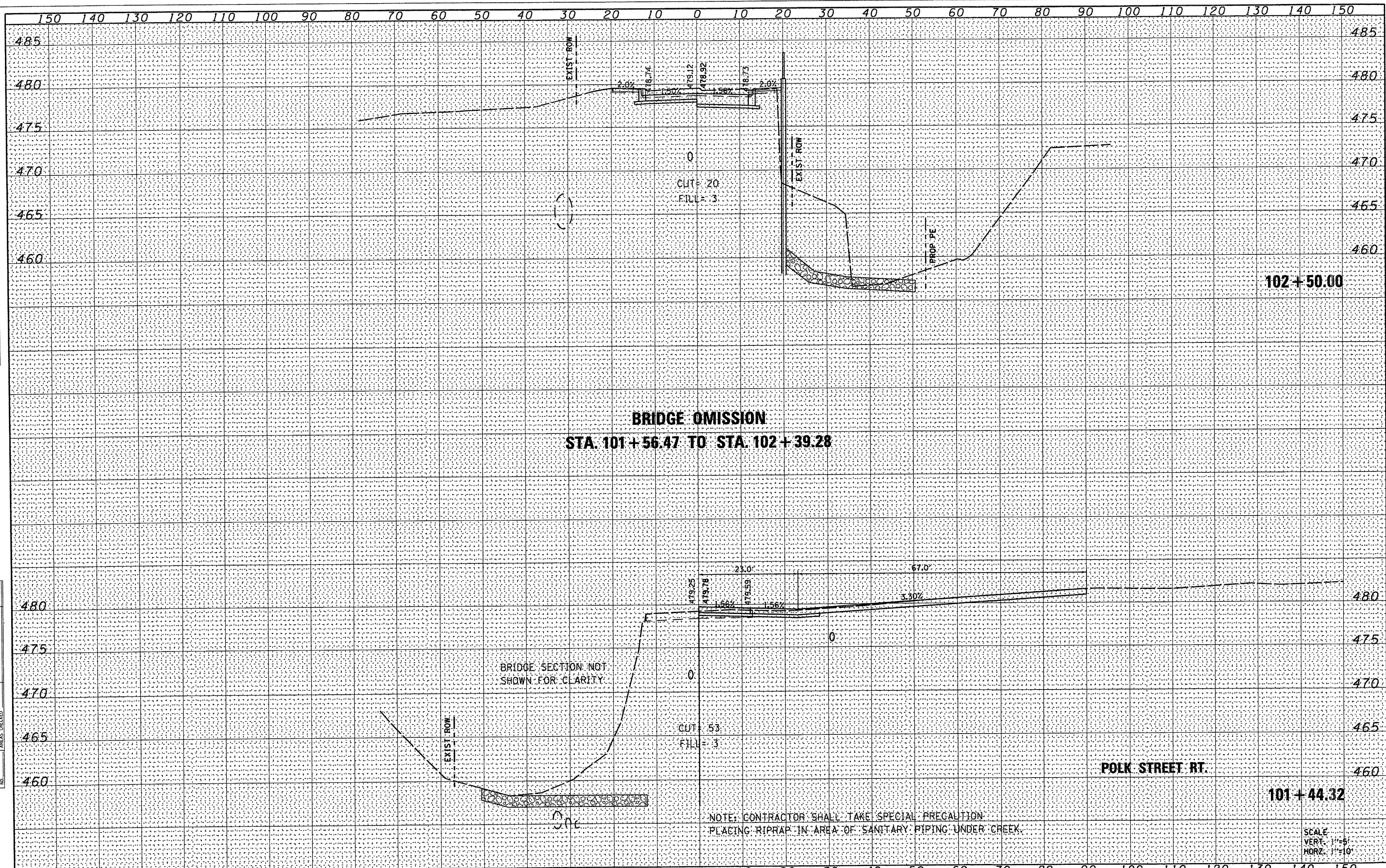
**CROSS SECTIONS**  
 SCALE: SHEET NO. OF SHEETS STA. 100+75.00 TO STA. 101+26.32

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 51        |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |

SCALE  
 VERT. 1"=5'  
 HORZ. 1"=10'

SURVEYED  
 PLOTTED  
 NOTE BOOK  
 AREAS CHECKED

SURVEYED  
 PLOTTED  
 NOTE BOOK  
 AREAS CHECKED



**BRIDGE OMISSION**  
**STA. 101+56.47 TO STA. 102+39.28**

BRIDGE SECTION NOT SHOWN FOR CLARITY

NOTE: CONTRACTOR SHALL TAKE SPECIAL PRECAUTION  
 PLACING RIPRAP IN AREA OF SANITARY PIPING UNDER CREEK.

SCALE  
 VERT. 1"=5'  
 HORZ. 1"=10'

|  |                          |            |           |
|--|--------------------------|------------|-----------|
| FILE NAME                                      | USER NAME = maisiegraser | DESIGNED - | REVISED - |
| H:\P\27855\MacroStation\8\CADD Sheets\27855-91 | *asc.dgn                 | DRAWN -    | REVISED - |
| PLOT SCALE = 28.0000' / IN.                    |                          | CHECKED -  | REVISED - |
| PLOT DATE = 3/13/2009                          |                          | DATE -     | REVISED - |

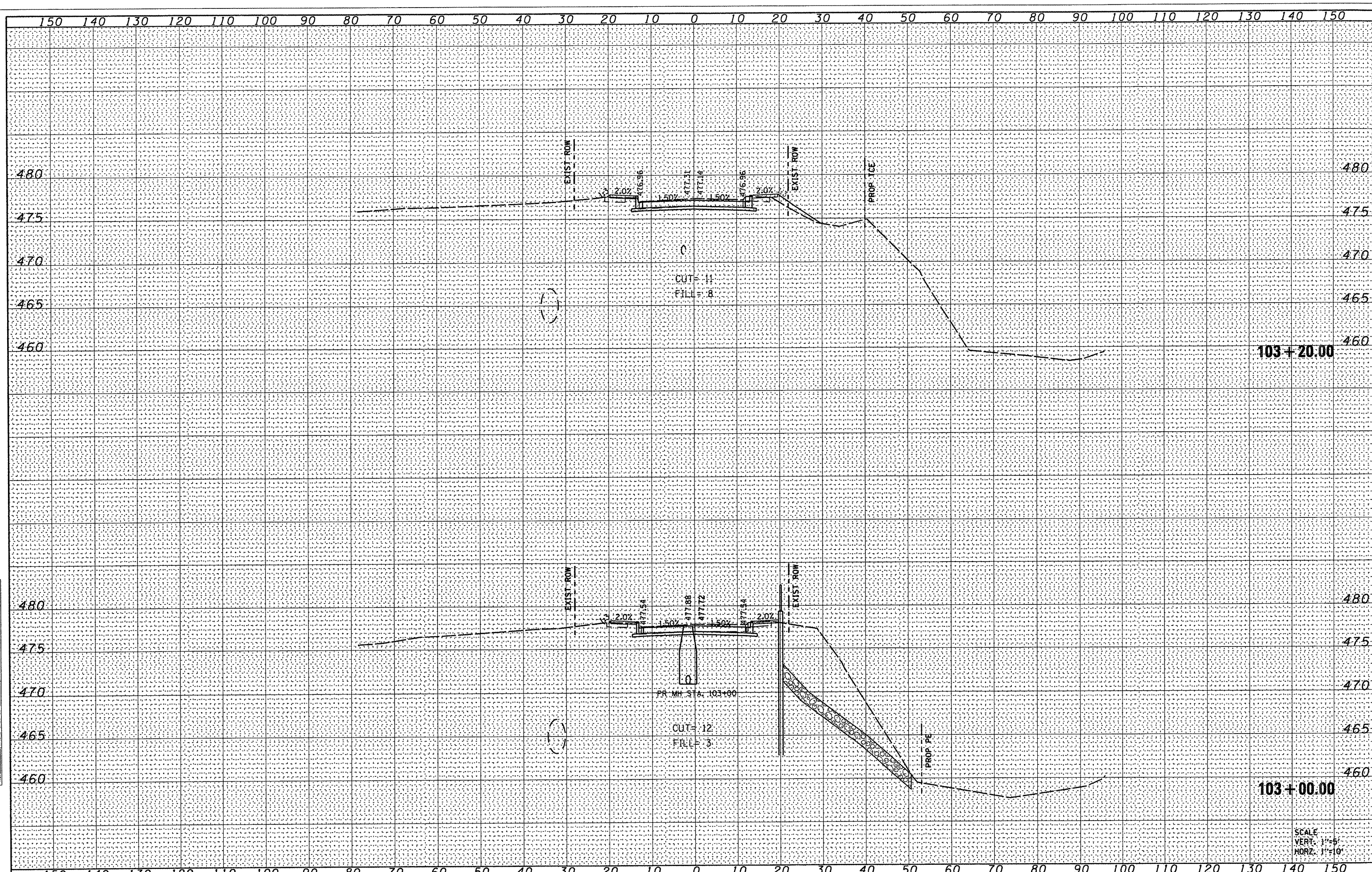
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

|                       |           |           |                                  |
|-----------------------|-----------|-----------|----------------------------------|
| <b>CROSS SECTIONS</b> |           |           |                                  |
| SCALE:                | SHEET NO. | OF SHEETS | STA. 101+44.32 TO STA. 102+50.00 |

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.U. RTE.                                       | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 52        |
| CONTRACT NO. 97369                                |                |           |              |           |
| FED. ROAD DIST. NO. 7   ILLINOIS FED. AID PROJECT |                |           |              |           |

|               |  |
|---------------|--|
| DATE          |  |
| FINAL SURVEY  |  |
| SURVEYED      |  |
| PLOTTED       |  |
| NOTE BOOK     |  |
| AREAS CHECKED |  |
| NO.           |  |

|                 |  |
|-----------------|--|
| DATE            |  |
| ORIGINAL SURVEY |  |
| SURVEYED        |  |
| PLOTTED         |  |
| NOTE BOOK       |  |
| AREAS CHECKED   |  |
| NO.             |  |



103+20.00

103+00.00

SCALE  
VERT. 1"=5'  
HORZ. 1"=10'

|  |                          |
|--|--------------------------|
| FILE NAME =                                    | USER NAME = moisiegraser |
| H:\P\27855\MicroStation\B\CADD Sheets\27855-11 | xsc.dgn                  |
| PLOT SCALE = 28.0000 1/ IN.                    | CHECKED -                |
| PLOT DATE = 3/13/2009                          | DATE -                   |

|            |           |
|------------|-----------|
| DESIGNED - | REVISED - |
| DRAWN -    | REVISED - |
| CHECKED -  | REVISED - |
| DATE -     | REVISED - |

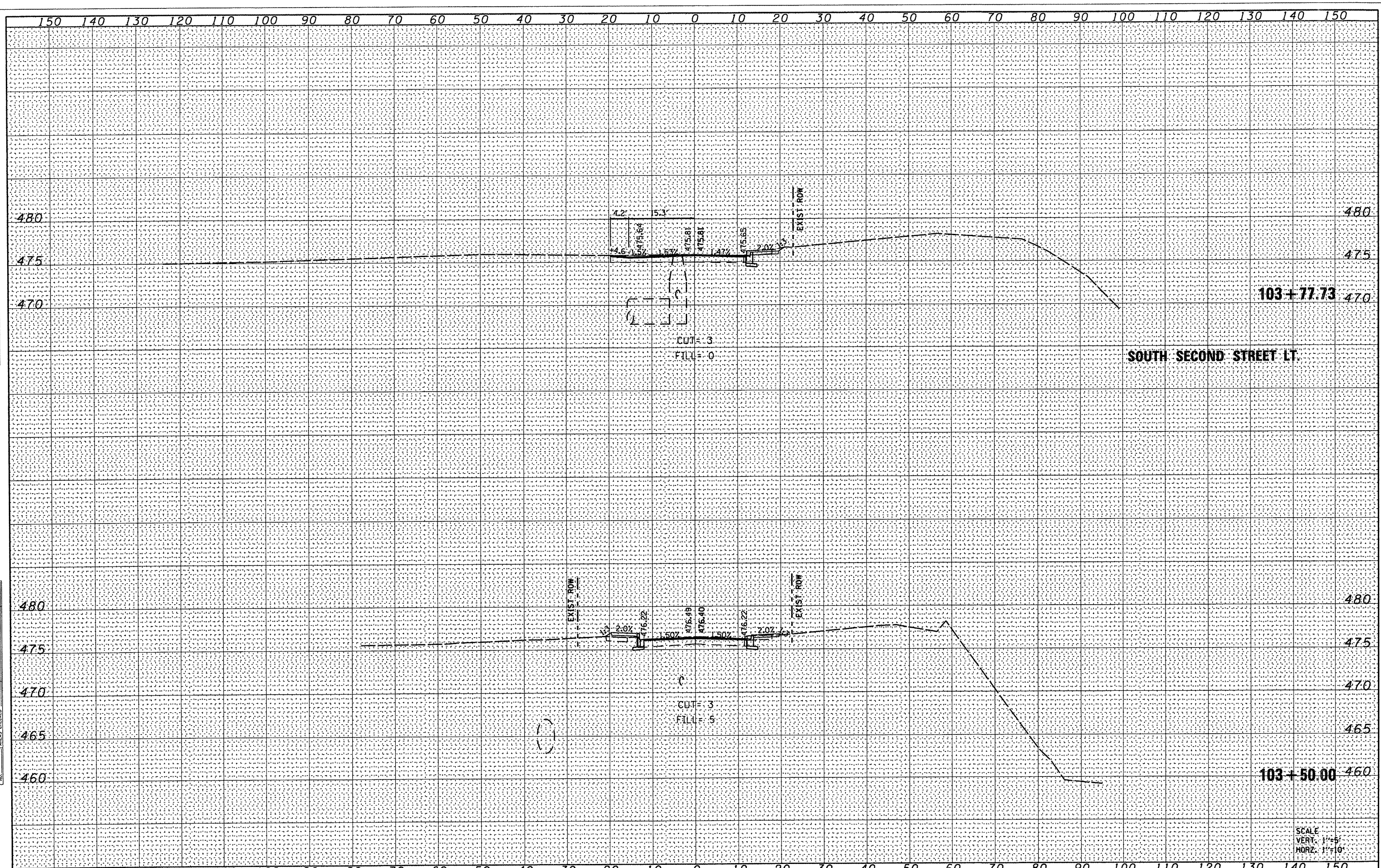
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|                |           |           |                                  |
|----------------|-----------|-----------|----------------------------------|
| CROSS SECTIONS |           |           |                                  |
| SCALE:         | SHEET NO. | OF SHEETS | STA. 103+00.00 TO STA. 103+20.00 |

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.U. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 53        |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |

|               |  |
|---------------|--|
| DATE          |  |
| BT            |  |
| FINAL SURVEY  |  |
| PLOTTED       |  |
| NOTE BOOK     |  |
| AREAS CHECKED |  |
| NO.           |  |

|                 |  |
|-----------------|--|
| DATE            |  |
| BT              |  |
| ORIGINAL SURVEY |  |
| PLOTTED         |  |
| NOTE BOOK       |  |
| AREAS CHECKED   |  |
| NO.             |  |



**SOUTH SECOND STREET LT.**

**103+77.73**

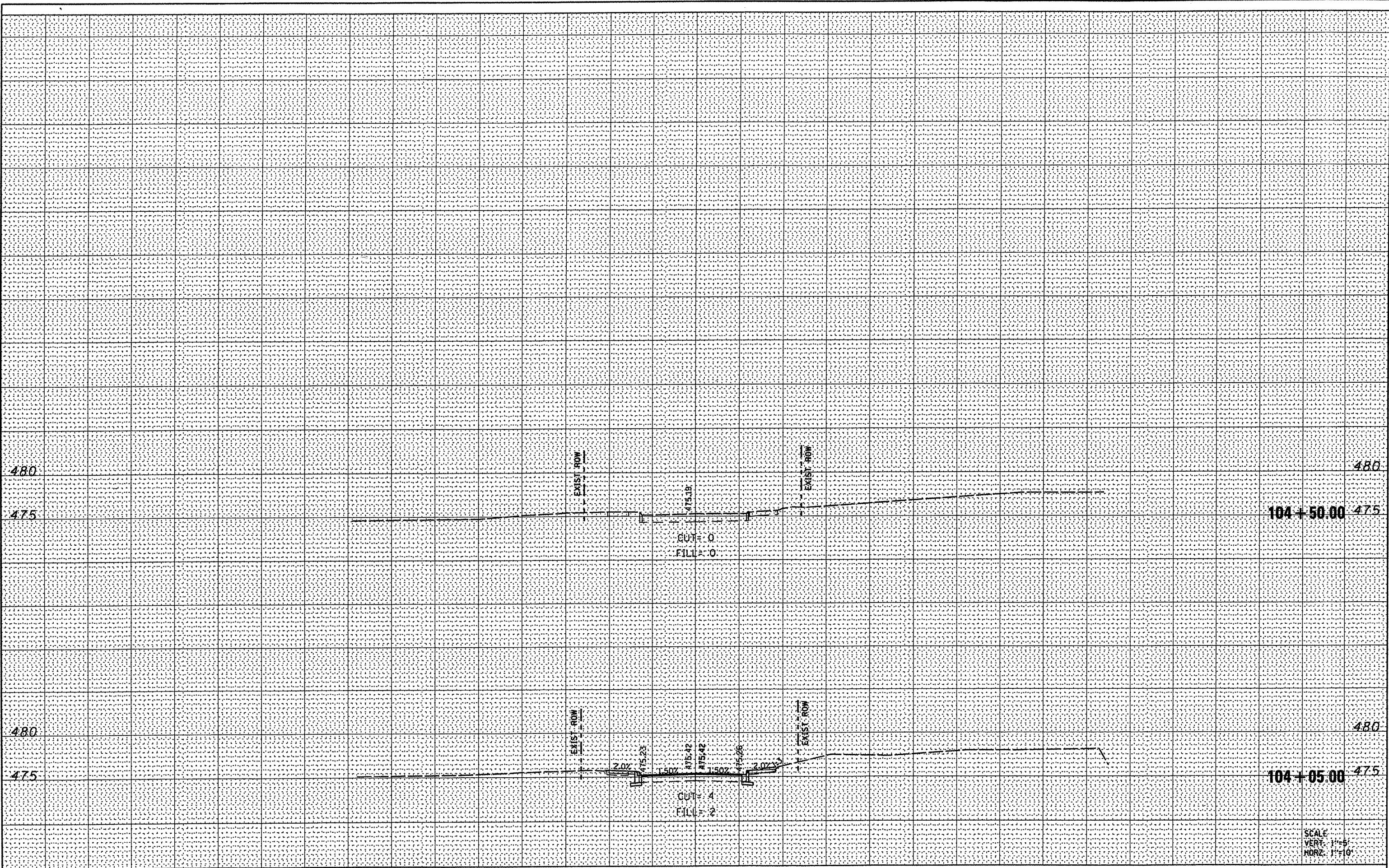
**103+50.00**

SCALE  
VERT. 1"=5'  
HORIZ. 1"=10'

|  |                          |            |           |   |                       |           |    |             |                                  |        |                |                    |    |   |  |
|--|--------------------------|------------|-----------|---|-----------------------|-----------|----|-------------|----------------------------------|--------|----------------|--------------------|----|---|--|
| FILE NAME =  | USER NAME = moisingraser | DESIGNED - | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>CROSS SECTIONS</b> |           |    | F.A.U. RTE. | SECTION                          | COUNTY | TOTAL SHEETS   | SHEET NO.          |    |   |  |
| H:\VP\27055\MicroStation\8\CADD Sheets\27055-sh1-xsc.dgn |                          | DRAWN -    | REVISED - |   | SCALE:                | SHEET NO. | OF | SHEETS      | STA. 103+50.00 TO STA. 103+77.73 | 9274   | 04-00202-00-BR | ST. CLAIR          | 55 | 54  |  |
| PLOT SCALE = 20.0000' / IN.                              |                          | CHECKED -  | REVISED - |   |                       |           |    |             |                                  |        |                |                    |    |   |  |
| PLOT DATE = 3/13/2009                                    |                          | DATE -     | REVISED - |   |                       |           |    |             |                                  |        |                |                    |    |   |  |
|  |                          |            |           |   |                       |           |    |             |                                  |        |                | CONTRACT NO. 97369 |    | FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |  |

FINAL SURVEY SURVEYED PLOTTED DATE AREAS CHECKED

ORIGINAL SURVEY SURVEYED PLOTTED DATE AREAS CHECKED



SCALE  
VERT. 1"=5'  
HORZ. 1"=10'

FILE NAME = H:\P\27055\MicroStationV8\CADD Sheets\27055-sh

USER NAME = moisieg-aser  
DRAWN -  
CHECKED -  
DATE -  
PLOT SCALE = 20.0000 "/>

DESIGNED -  
REVISOR -  
REVISOR -  
REVISOR -  
REVISOR -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 104+05.00 TO STA. 104+50.00

|   |                |           |              |           |
|---|----------------|-----------|--------------|-----------|
| F.A.J. RTE.                                     | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
| 9274  | 04-00202-00-BR | ST. CLAIR | 55           | 55        |
| CONTRACT NO. 97369                              |                |           |              |           |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT |                |           |              |           |