

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

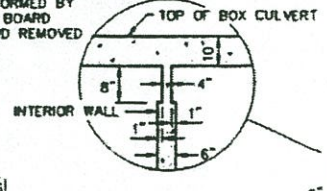
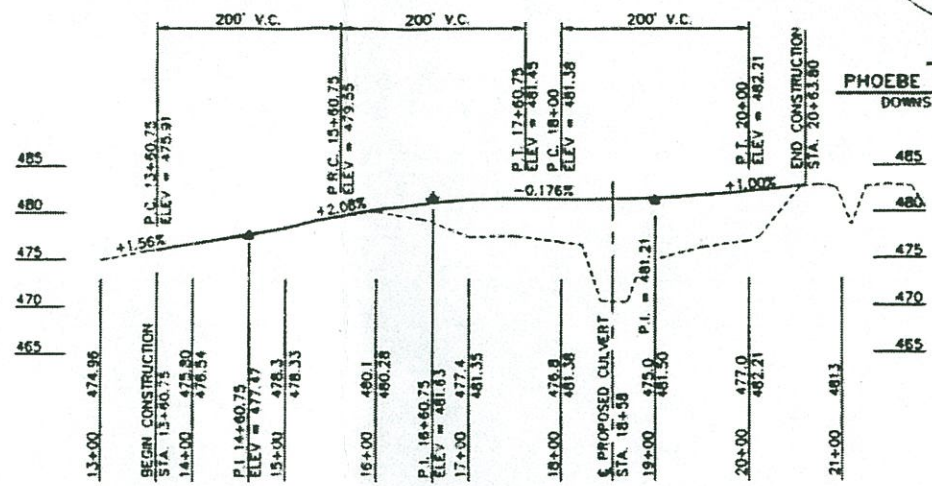
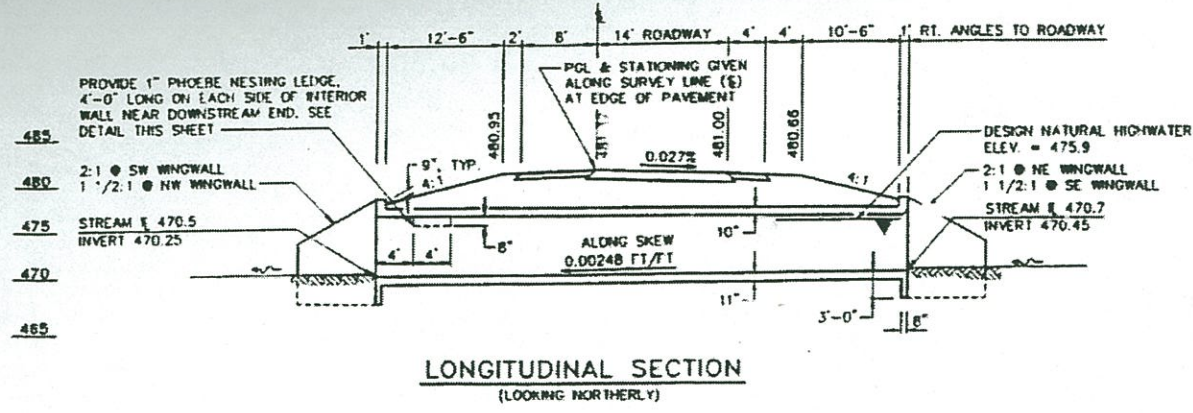
NESTING LEDGE FORMED BY
ROUGH-FINISHED BOARD
ATTACHED TO AND REMOVED
WITH FORMWORK.

| ROUTE NO. | SECTION | QUANTITY | TOTAL SHEETS | SHEET |
|-------------------------------------------------|-----------|----------|--------------|-------|
| F.A.P. 673 | (102-1)BR | TAZEWELL | 19 | 7 |
| FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT | | | | |

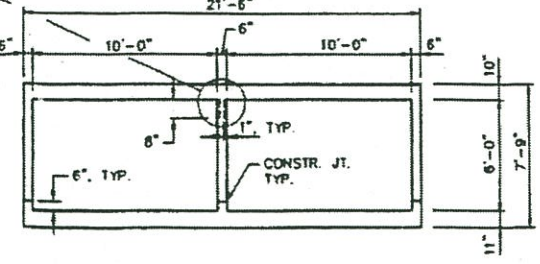
SHEET NO. 1
SHEETS 3

ANCHOR MARK: CHISELED "T" TOP OF SE. CORNER CONCRETE HEADWALL. SEE SW. RAMP I.L. RTE. 116, S.N. 090-2007, STA. 18+19, ELEV. 476.66

EXISTING STRUCTURE: No. 090-2007, CAST-IN-PLACE, DOUBLE BOX CULVERT WITH 10'-6" CELLS TO BE REMOVED FOLLOWING DIVERSION
TRAFFIC TO RELOCATED RAMP. NO SALVAGE.



PHOEBE NESTING LEDGE
DOWNSTREAM END ONLY

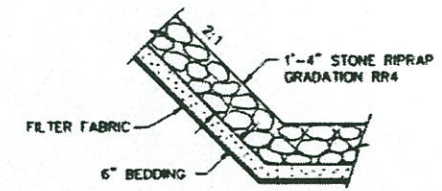


TOTAL BILL OF MATERIALS - CULVERT

| ITEM | UNIT | QUANTITY |
|-----------------------------------|----------|----------|
| REMOVAL OF EXISTING STRUCTURE | EACH | 1 |
| CLASS X CONCRETE BOX CULVERTS | CU. YDS. | 157.4 |
| REINFORCEMENT BARS | LBS. | 23,753 |
| NAME PLATES | EACH | 1 |
| PERMANENT SURVEY MARKERS, TYPE 1 | EACH | 1 |
| STONE RIPRAP, CLASS A4 | SQ. YD. | 110 |
| FILTER FABRIC FOR USE WITH RIPRAP | SQ. YD. | 110 |

STATION 18+58
BUILT 199 BY
STATE OF ILLINOIS
F.A. RT. 673 SEC (102-1)BR
LOADING HS20
STR. NO. 090-2013

NAME PLATE
(SEE STD 211.3)

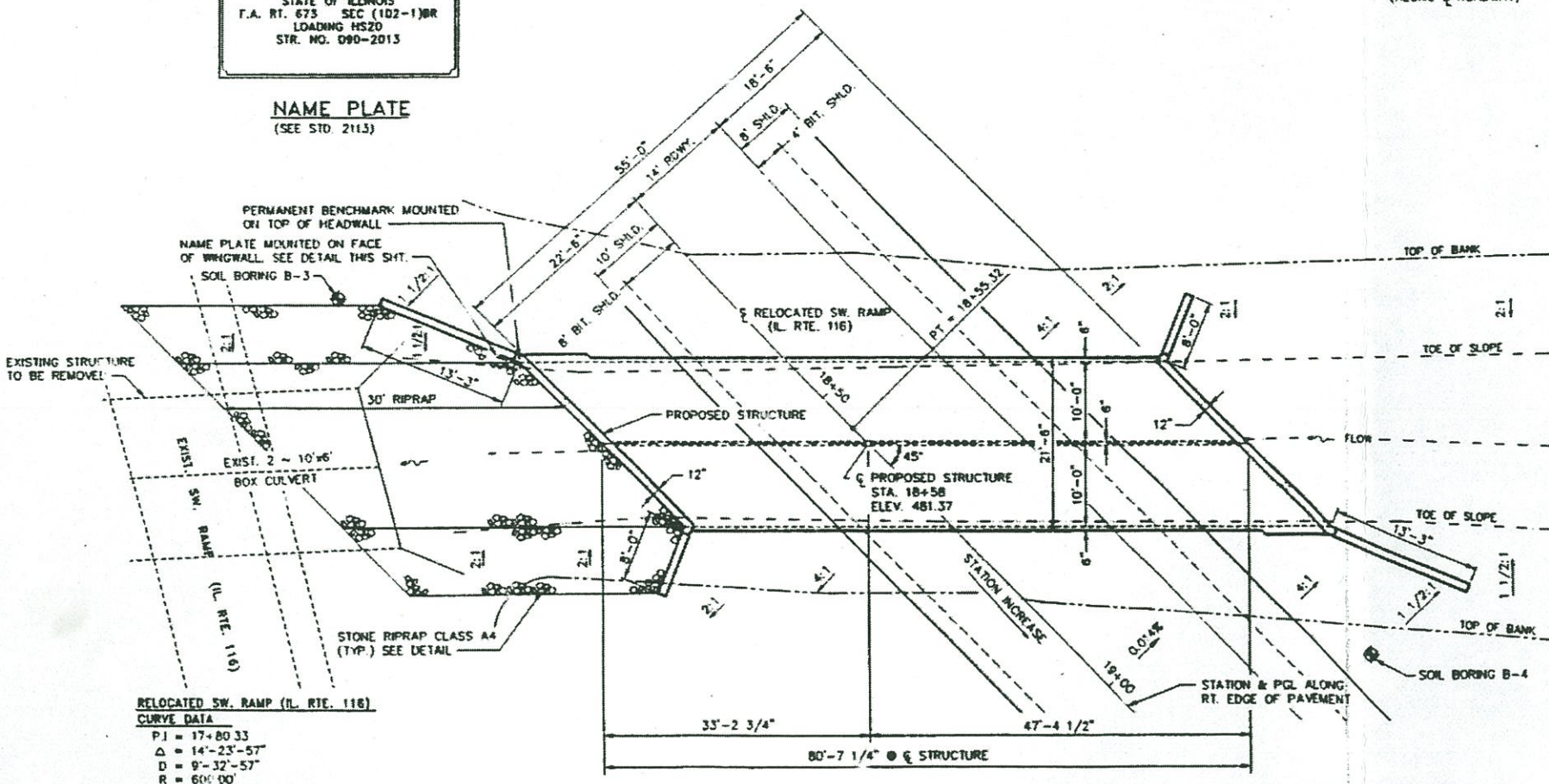


GENERAL NOTES

- CLASS X CONCRETE SHALL BE USED THROUGHOUT.
- AT LEAST 6'-9" OF BARREL SHALL BE Poured MONOLITHICALLY WITH WINGWALLS.
- EXPOSED EDGES SHALL HAVE STANDARD 3/4" CHAMFERS.
- FOR BACKFILLING AND EMBANKMENT, SEE STANDARD SPECIFICATIONS.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DIVERT THE STREAM FLOW DURING CONSTRUCTION IN ORDER TO KEEP CONSTRUCTION AREAS FREE OF WATER. THE METHOD OF WATER DIVERSION SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND COST SHALL BE INCIDENTAL TO "CLASS X CONCRETE BOX CULVERTS"
- PRECAST CONCRETE OPTION SHALL NOT BE PERMITTED.

DESIGN SPECIFICATIONS
1989 AASHTO W/ 1990 & 1991 INTERIM SPECIFICATIONS

DESIGN STRESSES
f_c = 3,500 psi (FIELD CAST CONC.)
f_y = 60,000 psi (REINF.)



RELOCATED SW. RAMP (I.L. RTE. 116)
CURVE DATA

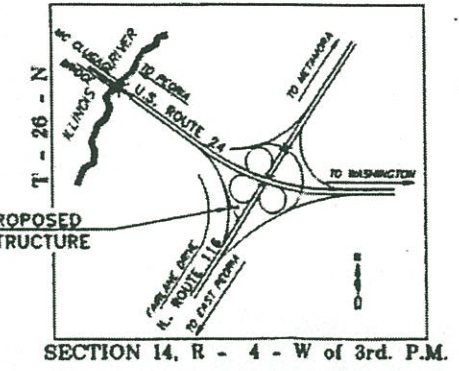
| | |
|------|----------------------|
| P.I. | 17+80.33 |
| Δ | 14'-23'-57" |
| D | 9'-32'-57" |
| R | 600.00' |
| T | 75.79' |
| L | 150.79' |
| E | 4.77' |
| S.E. | 0.05'/FT. |
| S.A. | 15+63.75 TO 17+73.75 |
| S.R. | 17+85.32 TO 19+95.32 |
| P.C. | 17+04.54 |
| P.T. | 18+55.32 |

WATERWAY INFORMATION

| FLOOD | FREQ. YR. | Q C.F.S. | OPENING SQ. FT. | | NAT. H.W.E. | | HEAD - FT. | | HEADWATER EL. | |
|-------------|-----------|----------|-----------------|-------|-------------|-------|------------|-------|---------------|--------|
| | | | EXIST. | PROP. | EXIST. | PROP. | EXIST. | PROP. | EXIST. | PROP. |
| DESIGN | 50 | 1139 | 104 | 104 | 475.9 | 475.9 | 2.6 | 2.6 | 478.50 | 478.50 |
| BASE | 100 | 1354 | 110 | 110 | 476.2 | 476.2 | 3.5 | 3.5 | 479.70 | 479.70 |
| OVERTOPPING | 140 | 1420 | 112 | 112 | 476.3 | 476.3 | 3.8 | 3.8 | 480.10 | 480.10 |
| MAX. CALC. | | | | | | | | | | |

LOADING HS 20-44
ALLOW 25#/SQ. FT. FOR FUTURE WEARING SURFACE.

MAXIMUM SOIL BEARING PRESSURE
840 psf UNDER CULVERT BARREL



PHILIP J. LANE
ILLINOIS REGISTERED
STRUCTURAL ENGINEER
NO. 4084
(EXPIRATION DATE 11/30/94)



1/22/95
DATE

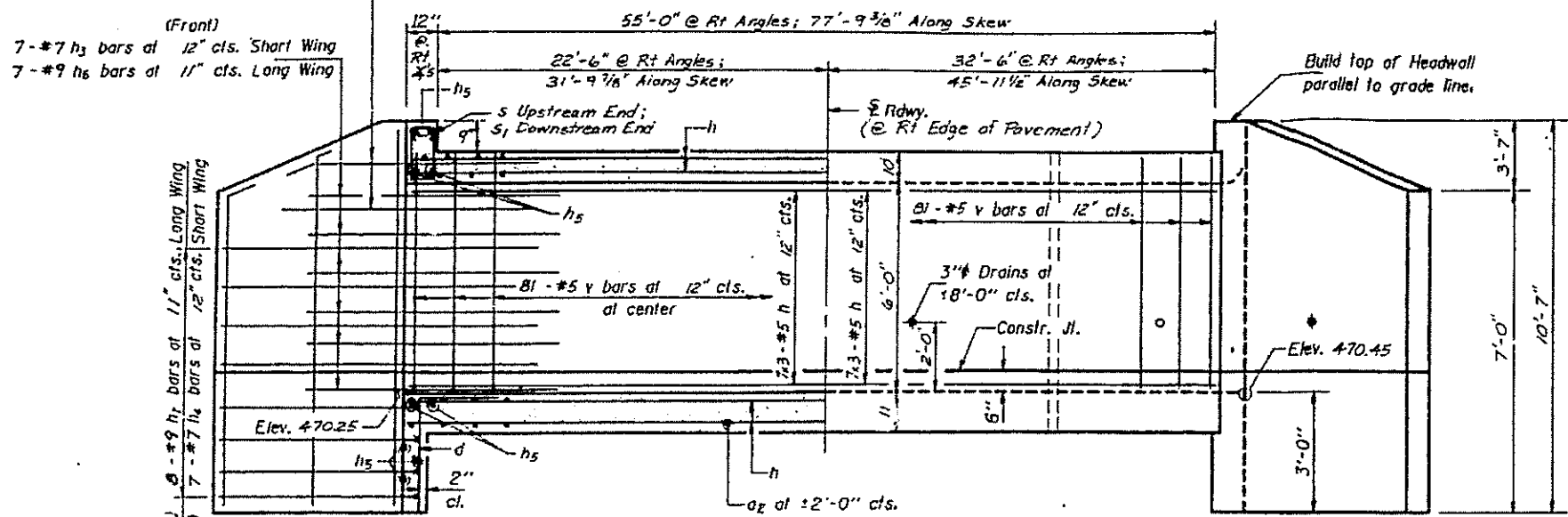
| | | |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------|
| SW. RAMP U.S. 24 EAST BOUND TO I.L. RTE. 116 SOUTH BOUND F.A. RTE. 673 SECTION (102-1)BR STATION 18+58 TAZEWELL COUNTY | GENERAL PLAN & ELEVATION STRUCTURE NUMBER 090-2013 | SHEET 7 OF 19 |
| CLARK ENGINEERS MW, INC. 3425 N. DRIS LANE PEORIA, ILLINOIS 61604 | DESIGN P.J.L. CHECKED DEH | DATE 1-22-93 REVISIONS |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | | |
|----------------|------------|----------|------|------|-------------|
| PROJECT NO. | DATE | BY | CHKD | DATE | SHEET NO. 2 |
| T.A.P. 678 | (102-1) BR | TAZEWELL | 19 | 8 | SHEETS 3 |
| TOTAL SHEETS 1 | CLASS | PROJECT | | | |

(Back)
3 - #7 h₃ bars at 12" cts. Short Wing
3 - #9 h₆ bars at 11" cts. Long Wing

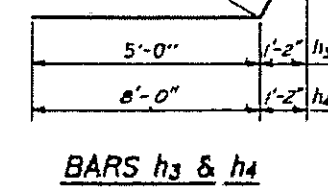
(Front)
7 - #7 h₃ bars at 12" cts. Short Wing
7 - #9 h₆ bars at 11" cts. Long Wing



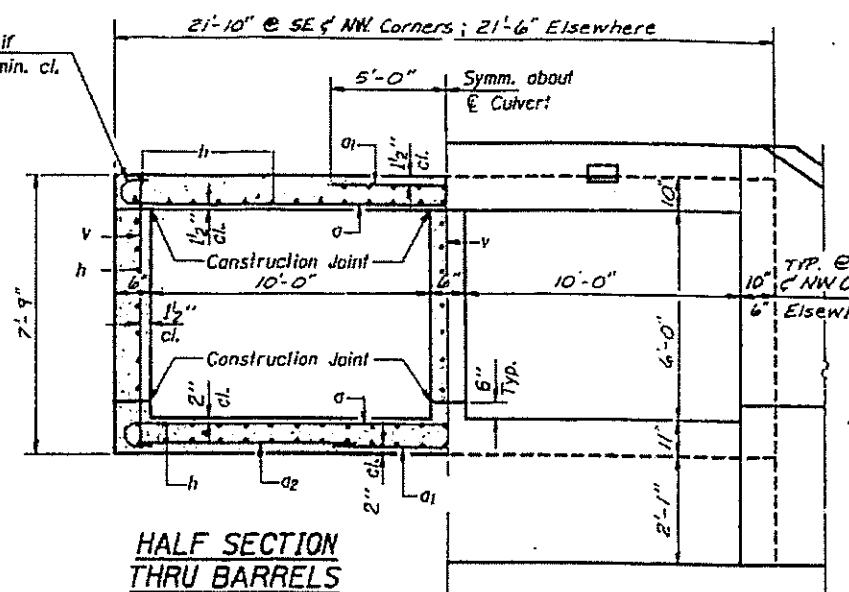
HALF LONG SECTION
Showing bars in Center Wall

HALF ELEVATION
Showing bars in Outside Wall

Till hook of a bars if necessary for 1/2" min. cl.



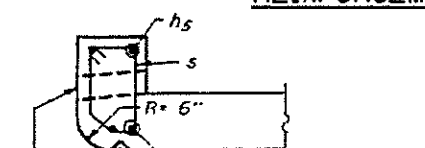
BARS h₃ & h₄



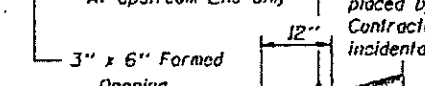
HALF SECTION THRU BARRELS

HALF END ELEVATION

REINFORCEMENT



3" x 6" Formed Opening



3" x 6" Formed Opening



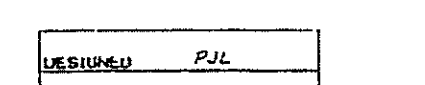
3" x 6" Formed Opening



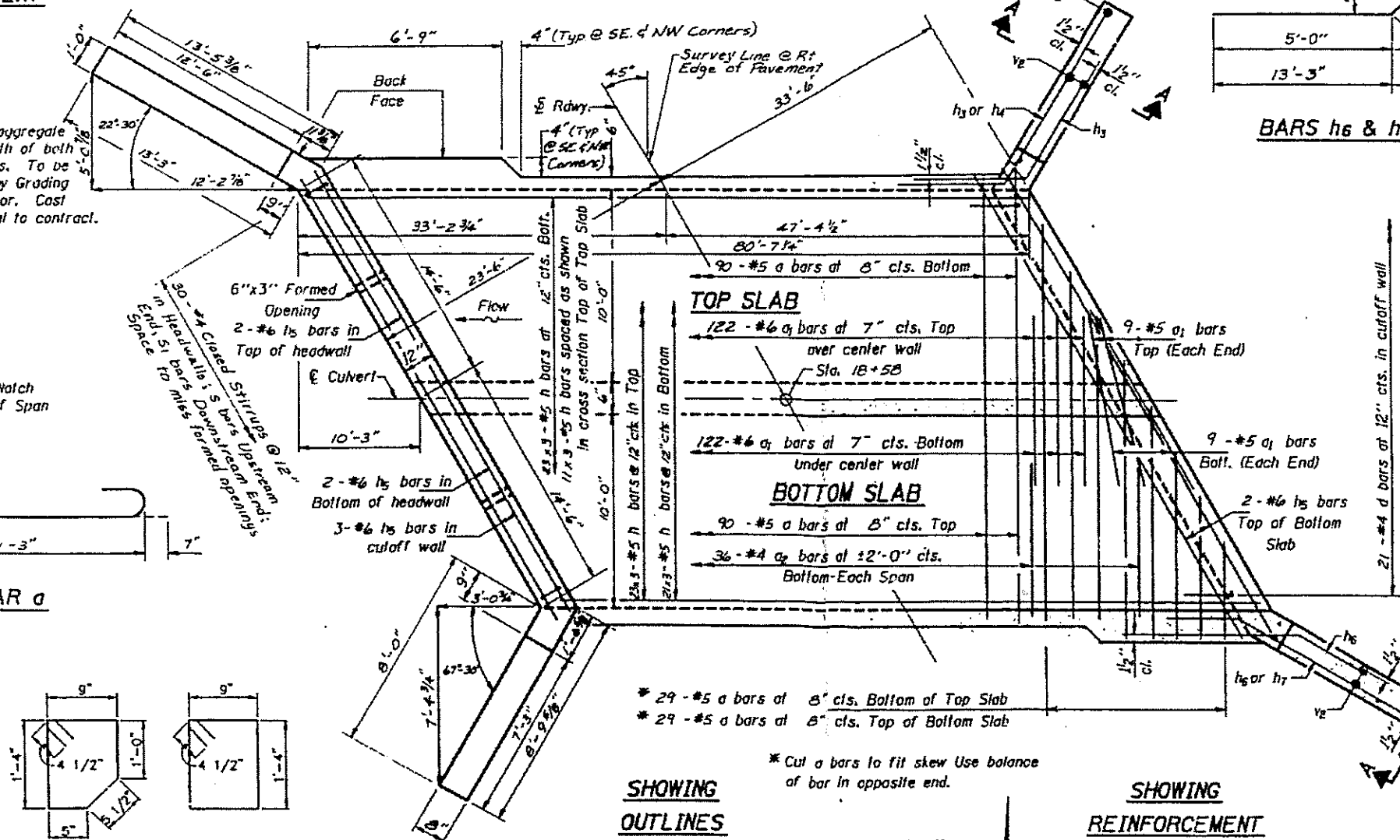
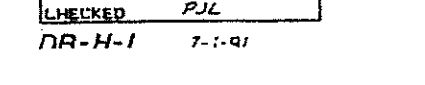
3" x 6" Formed Opening



3" x 6" Formed Opening



3" x 6" Formed Opening

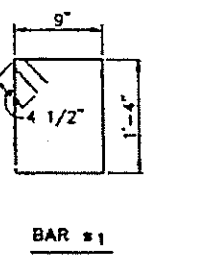
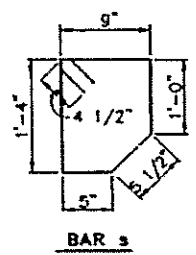


TOP SLAB

BOTTOM SLAB

BAR d

| | |
|----------|--------|
| DESIGNED | PJL |
| CHECKED | MGO |
| DRAWN | DEH |
| CHECKED | PJL |
| DR-H-1 | 7-1-91 |



SHOWING OUTLINES

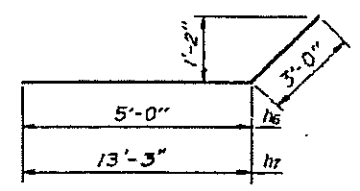
PLAN

SHOWING REINFORCEMENT

* 29 - #5 a bars at 8" cts. Bottom of Top Slab
* 29 - #5 a bars at 8" cts. Top of Bottom Slab

* Cut a bars to fit skew Use balance of bar in opposite end.

BARS h₆ & h₇

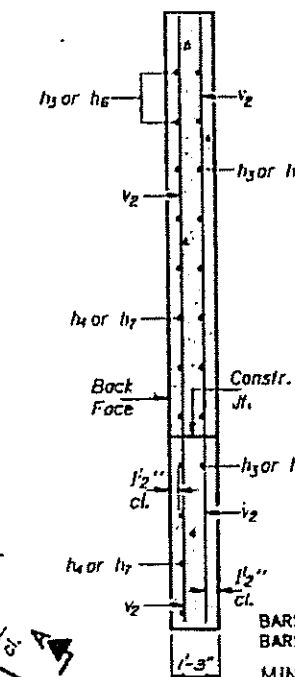


BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|--------------------|-----|------|----------|--------|
| a | 238 | #5 | 22'-5" | U |
| a ₁ | 280 | #6 | 10'-0" | — |
| a ₂ | 72 | #4 | 7'-0" | — |
| d | 42 | #4 | 4'-6" | — |
| h | 297 | #5 | 28'-3" | — |
| h ₃ | 20 | #7 | 8'-0" | — |
| h ₄ | 14 | #7 | 11'-0" | — |
| h ₅ | 18 | #6 | 31'-9" | — |
| h ₆ | 20 | #9 | 8'-0" | — |
| h ₇ | 16 | #9 | 16'-3" | — |
| s | 30 | #4 | 4'-9" | □ |
| s ₁ | 30 | #4 | 4'-11" | □ |
| v | 243 | #5 | 7'-5" | — |
| v ₂ | 16 | #4 | 10'-3" | — |
| Class X Concrete | | | Cu. Yds. | 151.7 |
| Box Culverts | | | | |
| Reinforcement Bars | | | Lbs. | 24,040 |

BARS INDICATED THUS 12 x 4 - #5 ETC. INDICATES 12 LINES OF BARS WITH 4 LENGTHS PER LINE.
MINIMUM #5 BAR LAPS = 2'-2"

SECTION A-A



BOX CULVERT DETAILS

SW. RAMP U.S. 24 EAST BOUND
TO IL. RTE. 116 SOUTH BOUND
F.A. RTE. 673 SECTION (102-1) BR
TAZEWELL COUNTY
STATION 18+58
STRUCTURE NUMBER 080-2013