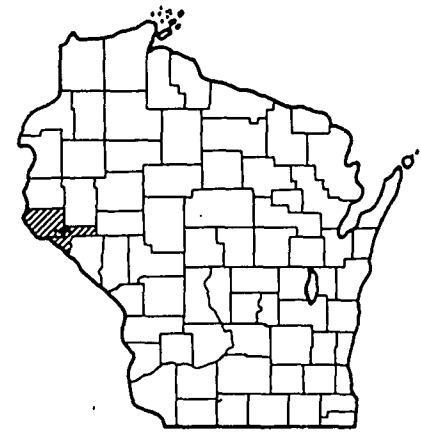


Index of Sheets

|           |        |                          |
|-----------|--------|--------------------------|
| Sheet No. | 1      | Title                    |
| Sheet No. | 2-2.2  | Typical Cross Sections   |
| Sheet No. | 3      | Estimate of Quantities   |
| Sheet No. | 3      | Miscellaneous Quantities |
| Sheet No. | -      | Right of Way Plat        |
| Sheet No. | 5-5.11 | Plan and Profile         |
| Sheet No. | 6-6.3  | Standard Details         |
| Sheet No. | -      | Structure Plans          |
| Sheet No. | -      | Computer Earthwork Data  |
| Sheet No. | -      | Cross Sections           |

TOTAL SHEETS = 21



Design Designation

|        |      |   |           |
|--------|------|---|-----------|
| A.D.T. | 1973 | = | 1190      |
| A.D.T. | 1995 | = | 1600      |
| D.H.V. |      | = | 195       |
| D.     |      | = | 50-50     |
| T.     |      | = | 17.1%     |
| V.     |      | = | 60 M.P.H. |

Conventional Signs

|                                                          |       |                               |       |
|----------------------------------------------------------|-------|-------------------------------|-------|
| County Line                                              | ----- | Culverts in Place             | ----- |
| Township or Range Line                                   | ----- | Culverts Required             | ----- |
| Section Line                                             | ----- | Drop Inlet                    | ----- |
| New Right of Way Line                                    | ----- | Power Pole                    | ----- |
| Present Right of Way Line                                | ----- | Telephone or Telegraph Pole   | ----- |
| Wire Fence                                               | ----- | Right of Way Markers          | ----- |
| Corporate or City Limits                                 | ----- | Reference Stake for Hubs Only | ----- |
| Property Line                                            | ----- | Marsh                         | ----- |
| Traveled Way or P.E.                                     | ----- | Hedge                         | ----- |
| Railroads                                                | ----- | Trees                         | ----- |
| Base or Survey Line                                      | ----- | Ground Elevation              | ----- |
| Caution Symbol<br>(combustible fluids<br>under pressure) | ----- | Grade Elevation               | ----- |

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED  
ELLSWORTH - DURAND ROAD

RUSH RIVER-EAST COUNTY LINE

WEST COUNTY LINE - C.T.H. 'G'

U.S.H. 10

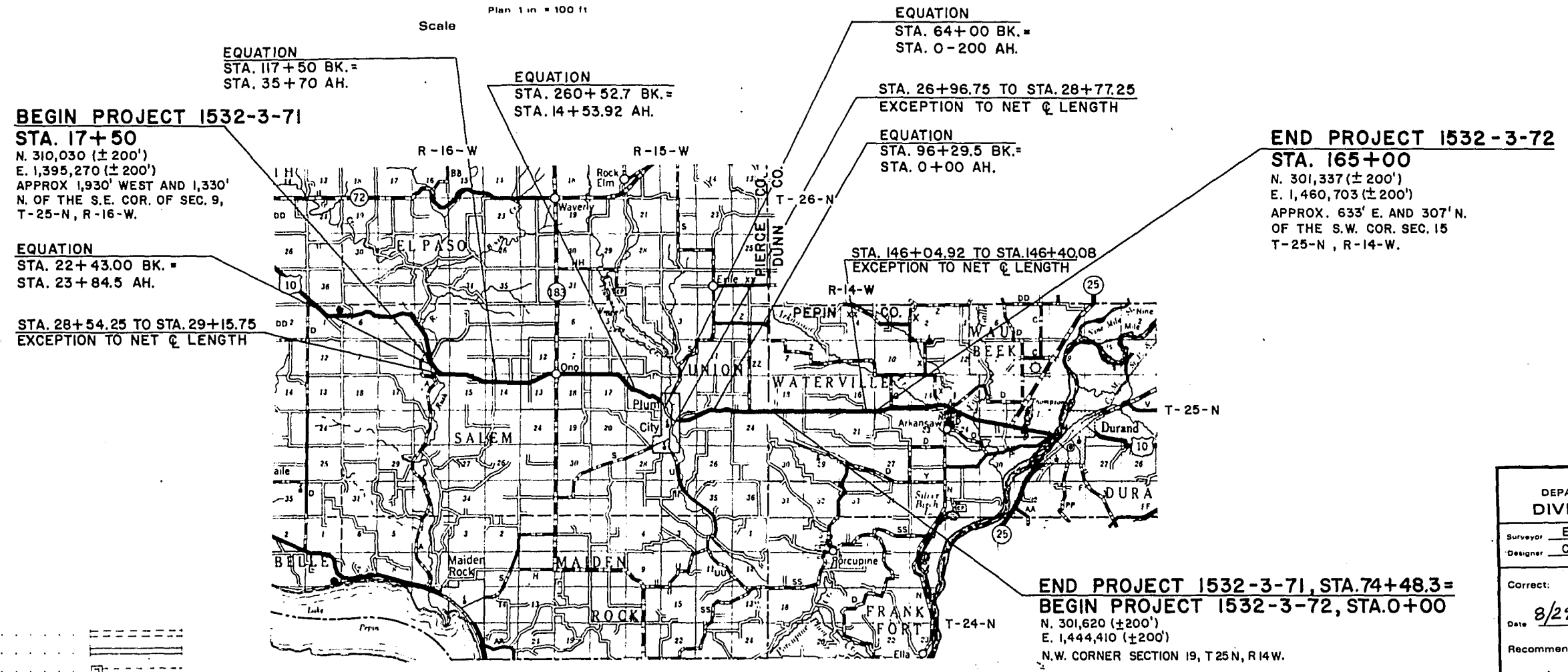
PIERCE COUNTY

PEPIN COUNTY

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 1532-03-71           |

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 1532-03-72           |

*AS BUILT*



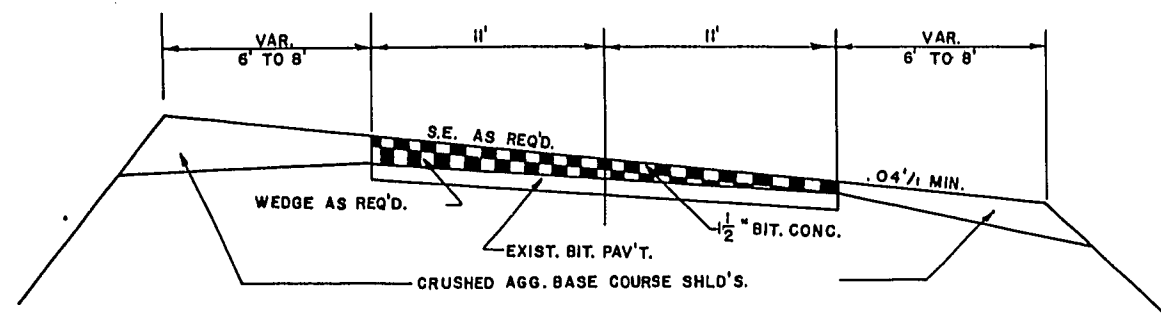
|                                             |                   |
|---------------------------------------------|-------------------|
| Layout                                      |                   |
| Scale                                       | 0 1 2 3 4 5 MILES |
| 1532-03-71                                  | = 10.284 MI.      |
| 1532-03-72                                  | = 3.118 MI.       |
| Total Net Length of Centerline = 13.402 MI. |                   |

ALL CO-ORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN CO-ORDINATES SYSTEM, CENTRAL ZONE AND ARE SCALED FROM U.S.G.S. TOPOGRAPHIC MAPS, MAIDEN ROCK AND ARKANSAW, WISCONSIN QUADRANGLE FOR IDENTIFICATION ONLY.

| STATE PROJECT | FEDERAL PROJECT |          |
|---------------|-----------------|----------|
|               | PROJECT         | CONTRACT |
| 1532-03-71    |                 |          |
| 1532-03-72    |                 |          |
|               |                 |          |
|               |                 |          |

|                                                                                                                     |                                  |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION<br>DIVISION OF HIGHWAYS                                          |                                  |
| Surveyor <u>E. J. E.</u>                                                                                            | District Checker <u>C. W. W.</u> |
| Designer <u>C. W. W.</u>                                                                                            | C.O. Checker <u>R. A. H.</u>     |
| Correct: <u>8/29/75</u> <u>M. J. Schaeffer</u><br>Date <u>8/29/75</u> District Engineer                             |                                  |
| Recommended for Approval: <u>9/15/75</u> <u>J. P. Hennel</u><br>Date <u>9/15/75</u> Chief of Facilities Development |                                  |
| Approved: <u>9-17-75</u> <u>H. J. Jiedler</u><br>Date <u>9-17-75</u> State Highway Engineer                         |                                  |
| U.S. DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION<br>REGION 5 WISCONSIN DIVISION                  |                                  |
| Approved: _____<br>Date _____ Division Engineer                                                                     |                                  |

## TYPICAL CROSS SECTIONS

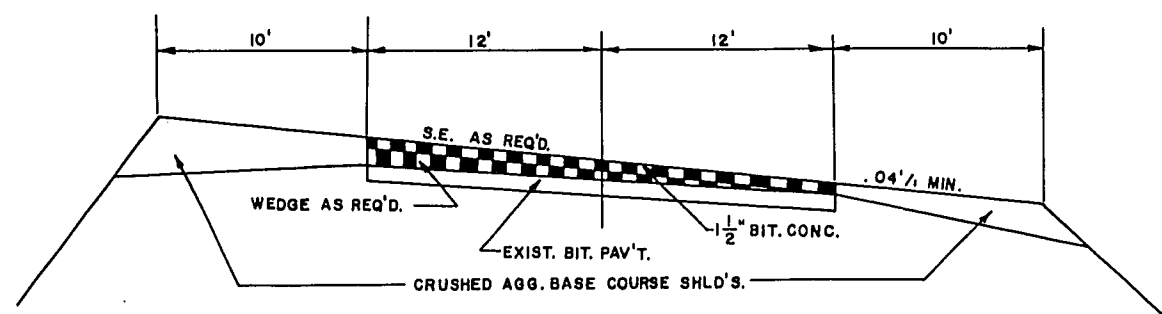


TYPICAL SUPER ELEVATED SECTION

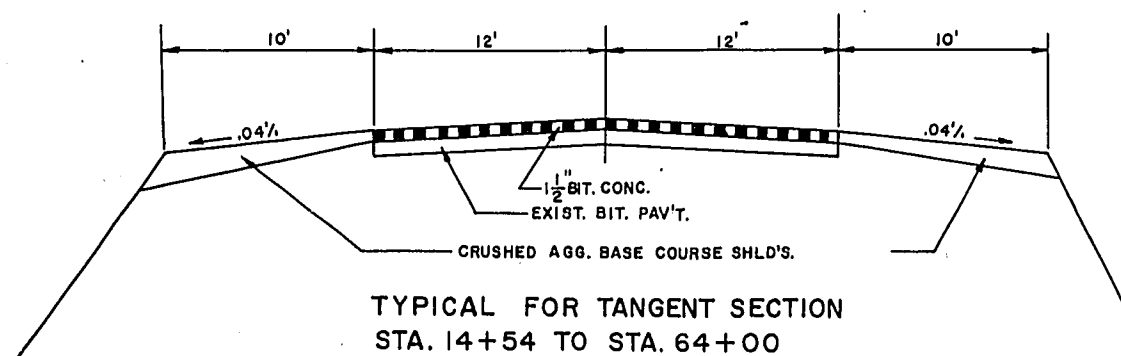
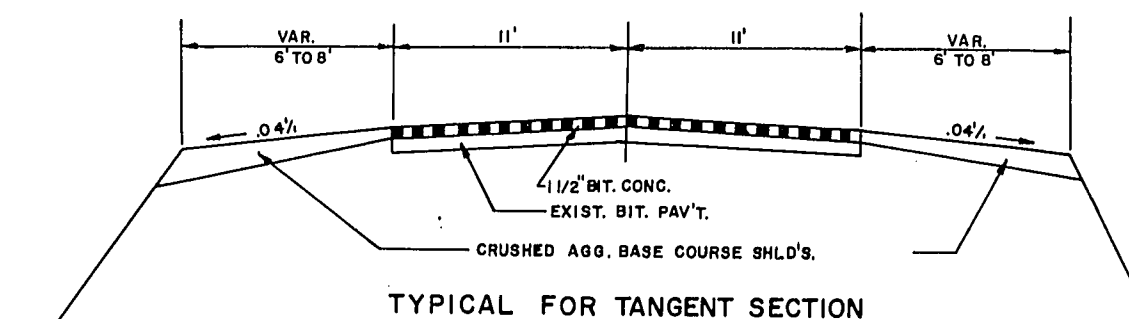
| STATION TO STATION | DEG.     | S.E.  | SHO.             |
|--------------------|----------|-------|------------------|
| 80+50.4            | 90+08.8  | 3°00' | .065 1/1, EXIST. |
| 110+30             | 117+99   | 3°30' | .065 1/1, EXIST. |
| 211+55.3           | 223+61.8 | 4°00' | .08 1/1, EXIST.  |
| 242+11.2           | 252+78   | 4°00' | .08 1/1, EXIST.  |
| 0+76               | 5+39     | 3°00' | .05 1/1,         |
| 7+76               | 34+57    | 3°30' | .06 1/1,         |
| 60+37.4            | 65+70.7  | 0°30' | R.C. EXIST.      |
| 82+31.9            | 88+3     | 3°00' | .07 1/1, EXIST.  |
| 90+23              | 94+80    | 3°00' | .07 1/1, EXIST.  |
| 0+43.3             | 4+05.8   | 2°00' | .044 1/1,        |
| 8+89.2             | 12+50.3  | 3°00' | .05 1/1,         |
| 12+50.3            | 20+08.6  | 2°00' | .044 1/1,        |
| 23+04.1            | 33+44.1  | 2°00' | .044 1/1,        |
| 38+28.7            | 45+52    | 0°30' | R.C. EXIST.      |

## PEPIN COUNTY

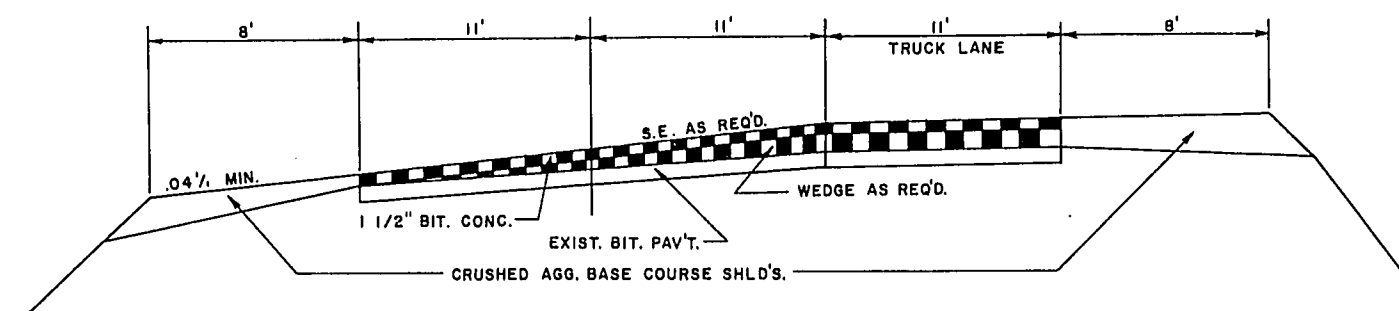
| STATION TO STATION | DEG.     | S.E.  | SHO.            |
|--------------------|----------|-------|-----------------|
| 49+27.7            | 57+87.7  | 2°00' | .06 1/1, EXIST. |
| 59+46.3            | 68+40.6  | 3°30' | .08 1/1, EXIST. |
| 69+03.6            | 75+06.4  | 3°30' | .08 1/1, EXIST. |
| 81+12.8            | 87+47    | 2°00' | .06 1/1,        |
| 97+12.4            | 108+85.5 | 0°30' | R.C. EXIST.     |
| 138+52             | 146+92   | 1°00' | .03 1/1, EXIST. |

TYPICAL SUPER ELEVATED SECTION  
STA. 14+54 TO STA. 64+00

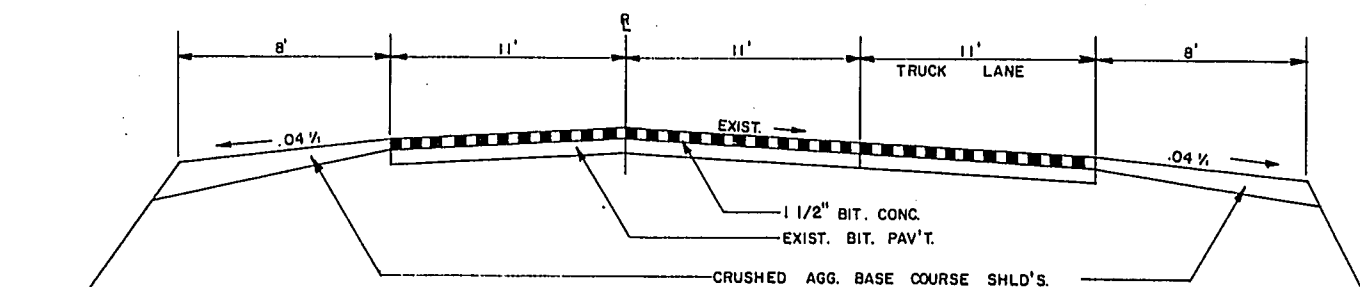
| STATION TO STATION | DEG.    | S.E.  | SHO.             |
|--------------------|---------|-------|------------------|
| 15+19.7            | 22+36.2 | 3°30' | .073 1/1, EXIST. |
| 24+42.9            | 32+78   | 5°00' | .08 1/1, EXIST.  |
| 37+19              | 55+53.7 | 5°00' | .08 1/1, EXIST.  |

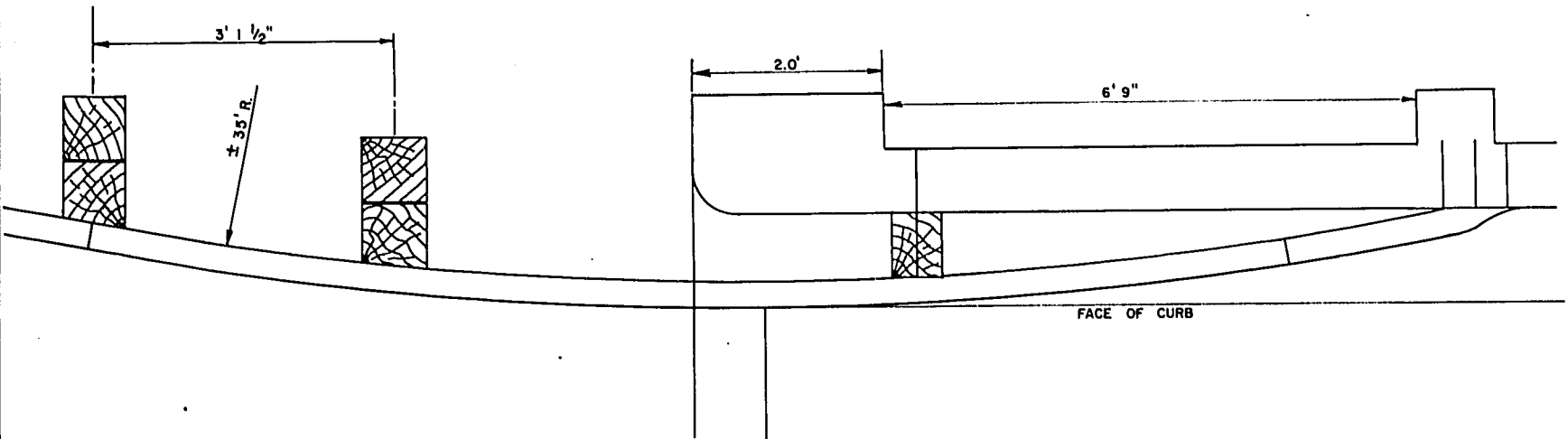
TYPICAL FOR TANGENT SECTION  
STA. 14+54 TO STA. 64+00

TYPICAL FOR TANGENT SECTION

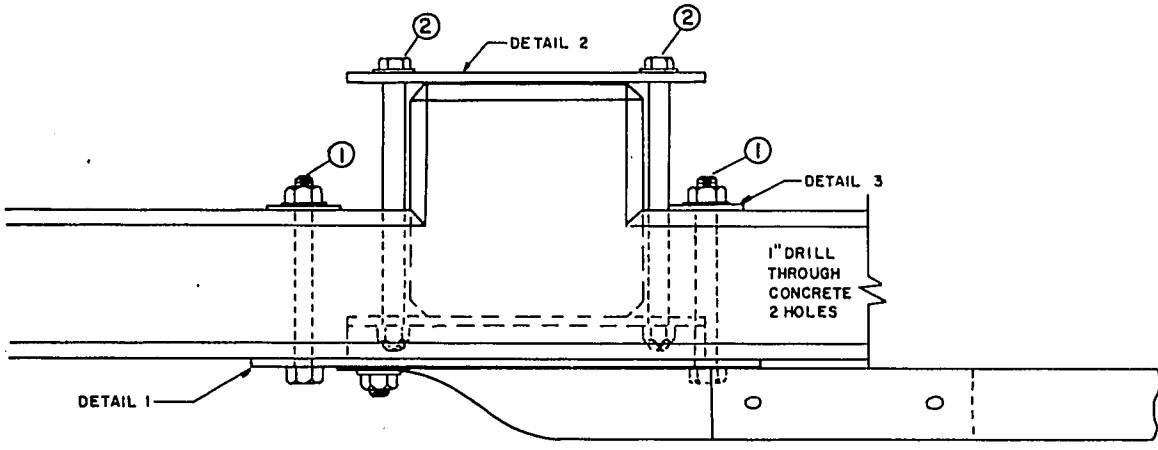
TYPICAL SUPER ELEVATED SECTION  
STA. 33+50 TO STA. 117+50

| STATION TO STATION | DEG.    | S.E.  | TRUCK LANE | SHO. |
|--------------------|---------|-------|------------|------|
| 23+84.5            | 41+22   | 3°00' | .04 1/1,   | 8'   |
| 43+76.3            | 51+73   | 0°45' | .021 1/1,  | 8'   |
| 55+45.1            | 60+56.8 | 0°30' | .02 1/1,   | 8'   |
| 62+99.7            | 73+36.3 | 2°00' | .044 1/1,  | 8'   |
| 73+71.6            | 83+03.3 | 1°00' | .01 1/1,   | 8'   |
| 94+98              | 100+73  | 3°00' | .03 1/1,   | 8'   |

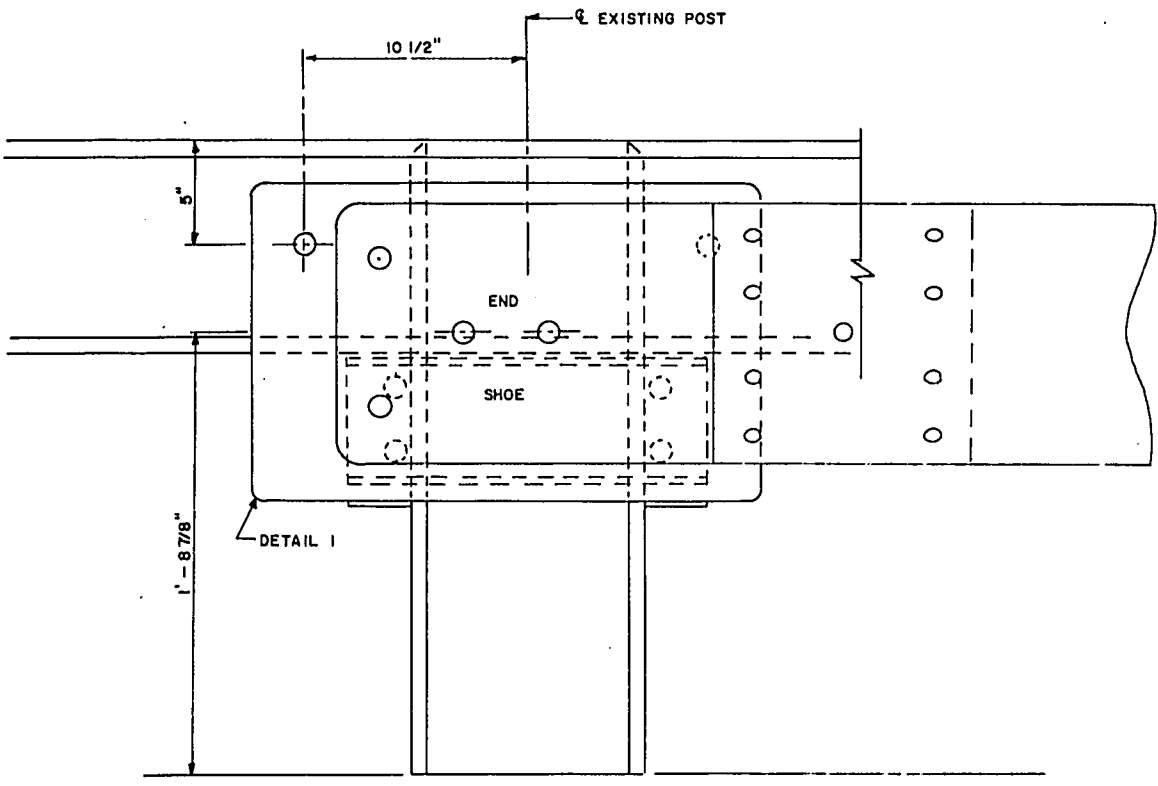
TYPICAL TANGENT SECTION  
STA. 33+50 TO STA. 117+50



STEEL PLATE BEAM GUARD ATTACHMENT LAYOUT B-47-10



PLAN VIEW



FRONT VIEW

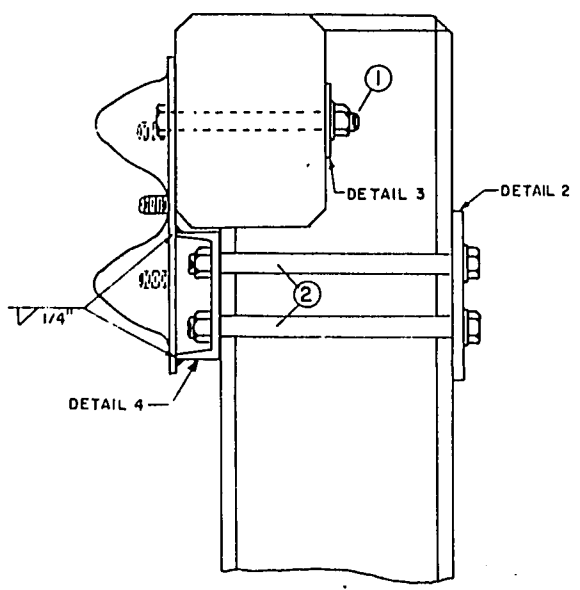
| PARTS REQUIRED PER CONNECTION<br>(FOUR CONNECTIONS) |        |                    |                 |
|-----------------------------------------------------|--------|--------------------|-----------------|
| NO.                                                 | REQ'D. | PART               | SIZE            |
| 1                                                   | 2      | HIGH STRENGTH BOLT | 7/8" DIA. X 9"  |
|                                                     | 2      | WASHER             |                 |
|                                                     | 2      | NUTS               |                 |
| 2                                                   | 4      | HIGH STRENGTH BOLT | 7/8" DIA. X 13" |
|                                                     | 4      | WASHER             |                 |
|                                                     | 4      | NUT                |                 |

GENERAL NOTES

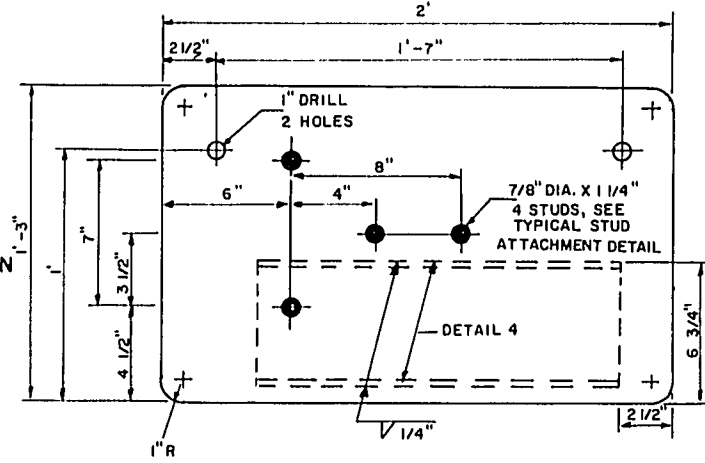
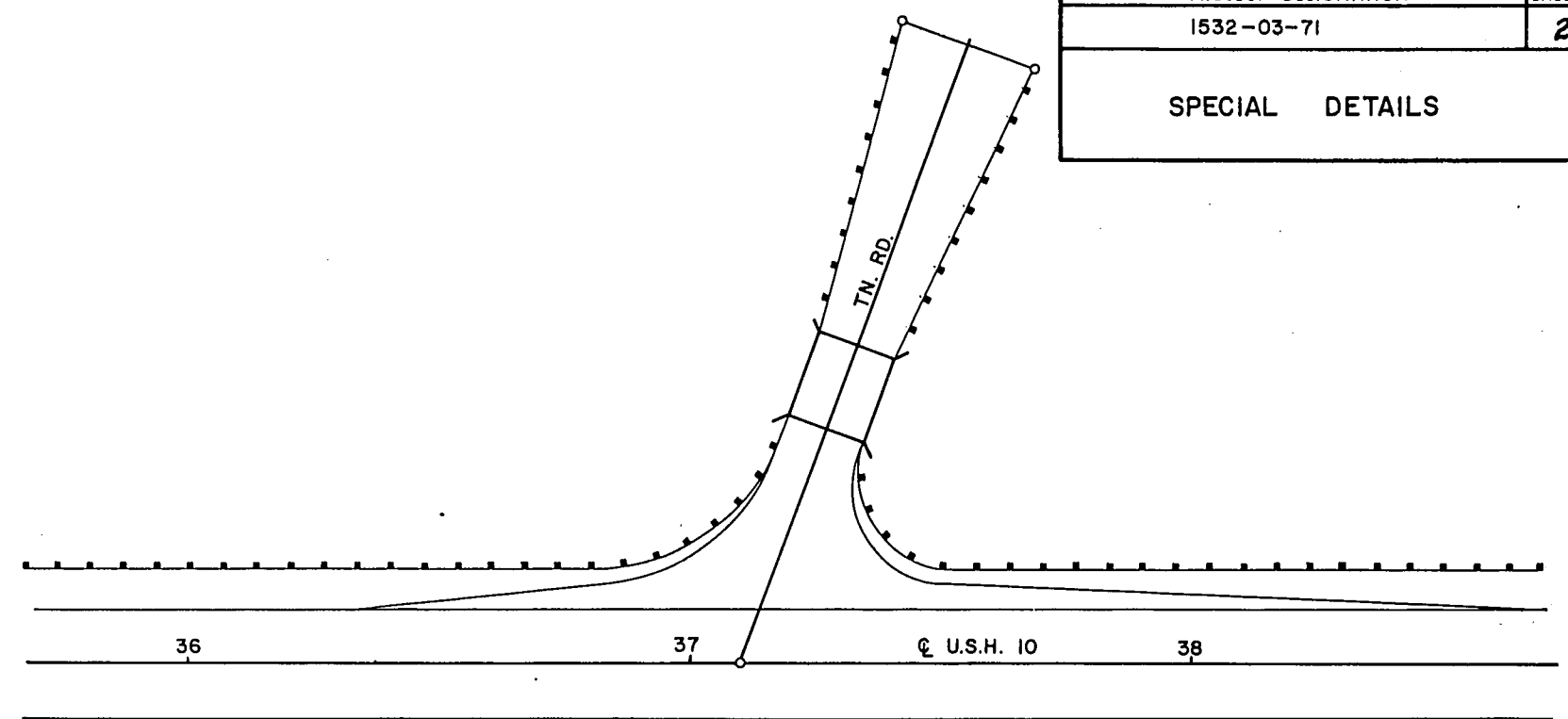
ALL STEEL HARDWARE, NUTS BOLTS & HARDWARE TO BE GALVANIZED.

ALIGN AND ADJUST STRUCTURE MOUNTING CONNECTION BEFORE MARKING AND DRILLING HOLES IN EXISTING CONCRETE RAIL.

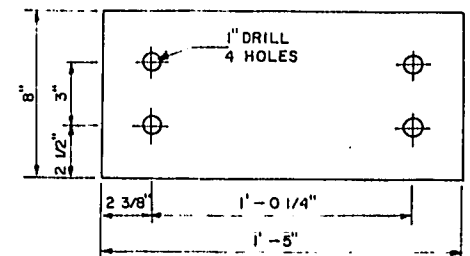
GRIND DOWN ANY HIGH AREAS ON THE CONCRETE UNDER THE STEEL CONNECTION.



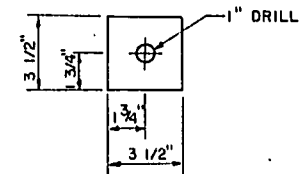
SIDE VIEW



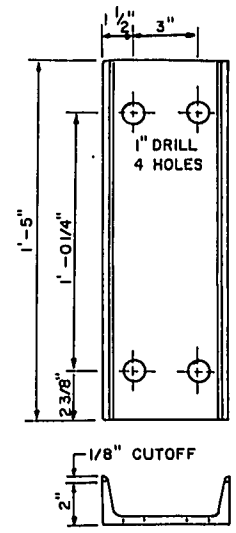
DETAIL 1  
3/8" STEEL PLATE



DETAIL 2  
1/2" STEEL PLATE



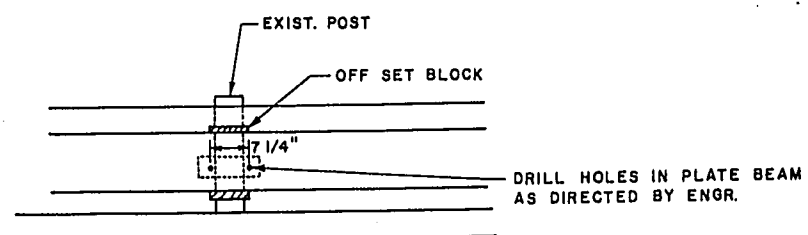
DETAIL 3  
1/4" STEEL PLATE  
(2 REQUIRED)



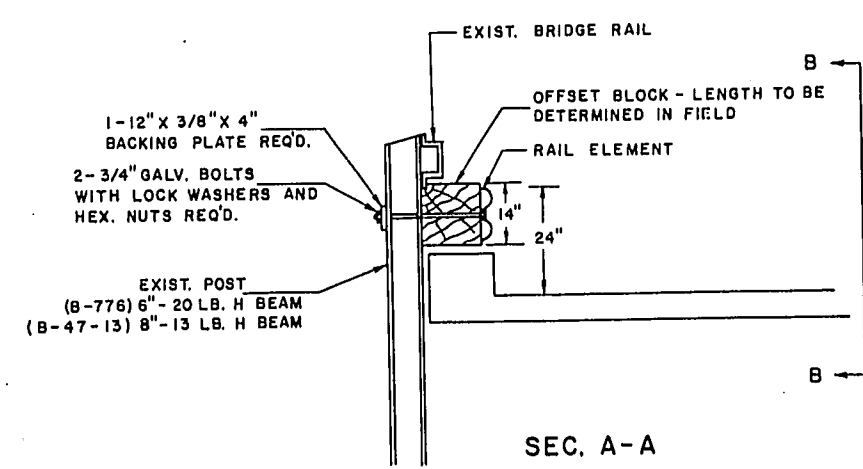
DETAIL 4  
C6 X 13 CHANNEL

NOTE: MODIFIED BEAM GUARD CONNECTIONS IN FIELD TO MEET EXISTING CONDITIONS.

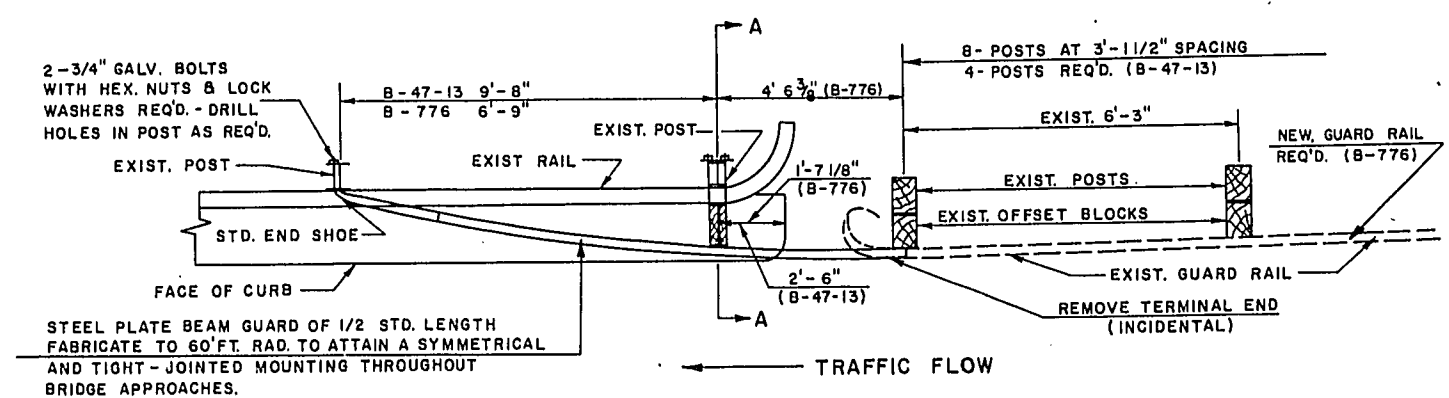
J. PALZKILL



SEC. B - B



SEC. A - A



DETAIL FOR ATTACHING BEAM GUARD  
TO STRUCTURES FROM EXIST. BEAM GUARD (B-47-13)  
AND NEW BEAM GUARD (B-776)

ESTIMATE OF QUANTITIES

CONTRACT NO. 1

BITUMINOUS CONCRETE  
PAVEMENT.

PROJECT DESIGNATION

1532 - 03 - 71,72

SHEET NO

3

| SEC. NO. | STATION TO STATION       | NET LENGTH OF CENTER LINE | REMOVING BITUMINOUS SURFACE | REMOVING GUARDRAIL | CRUSHED AGGREGATE BASE COURSE | BITUMINOUS CONCRETE PAVEMENT | BITUMINOUS MATERIAL FOR SURFACE COURSE | ANCHORAGES FOR STEEL PLATE BEAM GUARD | STEEL PLATE BEAM GUARD, CLASS "A" | MAINTENANCE AND REPAIR OF HAUL ROADS 1532-03-71 | FIELD OFFICE, TYPE "B" | FIELD LABORATORY | MOBILIZATION 1532-03-71 | MOBILIZATION 1532-03-72 | MAINTENANCE AND REPAIR OF HAUL ROADS 1532-03-72 |
|----------|--------------------------|---------------------------|-----------------------------|--------------------|-------------------------------|------------------------------|----------------------------------------|---------------------------------------|-----------------------------------|-------------------------------------------------|------------------------|------------------|-------------------------|-------------------------|-------------------------------------------------|
|          | ITEM NO                  |                           | 20402                       | 20411              | 30404                         | 40701                        | 40702                                  | 61406                                 | 61408                             | 61802                                           | 64202                  | 64210            | 61911                   | 61912                   | 61803                                           |
|          | UNIT                     | LIN. FT.                  | SQ. YD.                     | LIN. FT.           | TON                           | TON                          | TON                                    | EACH                                  | LIN. FT.                          | LUMP SUM                                        | LUMP SUM               | LUMP SUM         | LUMP SUM                | LUMP SUM                | LUMP SUM                                        |
| 1        | 17+50 TO 74+48.3         | 54,297.51                 | 500                         | 14,735             | 24,100                        | 17,550                       | 1140                                   | 41                                    | 17,300                            | 1                                               | 1                      | 1                | 1                       | 1                       | 1                                               |
|          | PIERCE COUNTY 1532-03-71 |                           |                             |                    |                               |                              |                                        |                                       |                                   |                                                 |                        |                  |                         |                         |                                                 |
| 2        | 0+00 TO 165+00           | 16,465.11                 | 250                         | —                  | 8,900                         | 4,550                        | 295                                    | 2                                     | 258                               |                                                 |                        |                  |                         |                         |                                                 |
|          | PEPIN COUNTY 1532-03-72  |                           |                             |                    |                               |                              |                                        |                                       |                                   |                                                 |                        |                  |                         |                         |                                                 |
|          | TOTALS                   | 70,762.62                 | 750                         | 14,735             | 33,000                        | 22,100                       | 1435                                   | 43                                    | 17,558                            | 1                                               | 1                      | 1                | 1                       | 1                       | 1                                               |

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

LIST OF STANDARD ABBREVIATIONS

|             |                            |         |                              |
|-------------|----------------------------|---------|------------------------------|
| AGGR.       | Aggregate                  | N.      | Northing                     |
| AH.         | Ahead                      | N.E.    | Northeast                    |
| ADT         | Average Daily Traffic      | NO.     | Number                       |
| BK.         | Back                       | NOR.    | Normal                       |
| BEG.        | Begin                      | PAV'T.  | Pavement                     |
| B.M.        | Bench Mark                 | P.C.    | Point of Curvature           |
| BIT.        | Bituminous                 | P.I.    | Point of Intersection        |
| C.          | Center Line                | P.T.    | Point of Tangency            |
| C.C.        | Center to Center           | P.O.C.  | Point on Curve               |
| Δ           | Central Angle or Delta     | P.O.T.  | Point on Tangent             |
| COMM.       | Commercial                 | P.L.    | Property Line                |
| C.O.        | Central Office             | PROJ.   | Project                      |
| CONC.       | Concrete                   | P.E.    | Private Entrance             |
| CONST.      | Construction               | R.      | Radius                       |
| CMPA        | Corrugated Metal Pipe Arch |         |                              |
| CO.         | County                     | REINF.  | Reinforcing or Reinforcement |
| CTH         | County Trunk Highway       | REL.    | Relocated                    |
| CULV. or C. | Culvert                    | REQ'D.  | Required                     |
| C.P.        | Culvert Pipe               | RT.     | Right                        |
| C.Y.        | Cubic Yard                 | R.H.F.  | Right Hand Forward           |
| D.          | Distribution               | R/W     | Right of Way                 |
| D           | Degree of Curve            | S.E.    | Super Elevated               |
| DHV         | Design Hour Volume         | SEC.    | Section                      |
| DIS.        | Discharge                  | SHR.    | Shrinkage                    |
| E.          | Easting                    | S.W.    | Southwest                    |
| ELEV.       | Elevation                  | SQ.     | Square                       |
| EX.         | Existing                   | STA.    | Station                      |
| FT.         | Foot (Feet)                | S.S.D.  | Stopping Sight Distance      |
| H.          | House                      | T.      | Tangent Length of Curve      |
| H.T.        | House Trailer              | TN. RD. | Town Road                    |
| IN.         | Inches                     | T.      | Trucks                       |
| I.P.        | Iron Pin or Pipe           | UNCL.   | Unclassified                 |
| LT.         | Left                       | V.      | Velocity                     |
| L.H.F.      | Left Hand Forward          | V.C.    | Vertical Curve               |
| L           | Length of Curve            | W.      | White                        |
| L.H.E.      | Limited Highway Easement   | YD.     | Yard                         |
| LIN. FT.    | Linear Feet                |         |                              |
| MAX.        | Maximum                    |         |                              |
| MI.         | Mile                       |         |                              |
| MIN.        | Minimum                    |         |                              |

| CRUSHED AGGREGATE BASE COURSE               |                    |               |         |  |
|---------------------------------------------|--------------------|---------------|---------|--|
| SEC.                                        | STATION TO STATION | SHO. WIDTH    | TONS    |  |
| 1                                           | 17+50 117+50       | 8'            | 5200    |  |
|                                             | 117+50 260+53      | 6'            | 9100    |  |
|                                             | 14+54 64+00        | 10'           | 2750    |  |
|                                             | 0-200 74+48        | 6' TO 8'      | 7050    |  |
| 2                                           | 0+00 165+00        | 8'            | 8900    |  |
| <del>DELETED - (PAVED THRU) STRUCTURE</del> |                    |               |         |  |
| REMOVING BITUMINOUS SURFACING WITH 1" COVER |                    |               |         |  |
| SEC.                                        | STATION TO STATION | LOC.          | SQ. YD. |  |
| 1                                           | 28+04 28+54        | B-47-13       | 125     |  |
|                                             | 29+16 29+66        | B-47-13       | 125     |  |
|                                             | 26+47 26+97        | B-47-10       | 125     |  |
|                                             | 28+77 29+27        | B-47-10       | 125     |  |
| 2                                           | 145+55 146+05      | B-776         | 125     |  |
|                                             | 146+40 146+90      | B-776         | 125     |  |
| BITUMINOUS CONCRETE PAVEMENT                |                    |               |         |  |
| SEC.                                        | STATION TO STATION | LOCATION      | TONS    |  |
| 1                                           | 17+50 117+50       | MAINLINE      | 2233    |  |
|                                             | 33+50 117+50       | TRUCK LANE    | 888     |  |
|                                             | 17+50 117+50       | CURVE CORR.   | 1480    |  |
|                                             | 17+50 117+50       | INTERSECTIONS | 200     |  |
|                                             | 35+70 260+53       | MAINLINE      | 5295    |  |
|                                             | 35+70 260+53       | CURVE CORR.   | 315     |  |
|                                             | 35+70 260+53       | INTERSECTIONS | 620     |  |
|                                             | 14+54 64+00        | MAINLINE      | 1216    |  |
|                                             | 0-200 74+48        | MAINLINE      | 3893    |  |
|                                             | 0-200 74+48        | CURVE CORR.   | 920     |  |
|                                             | 0-200 74+48        | INTERSECTIONS | 490     |  |
| 2                                           | 0+00 165+00        | MAINLINE      | 3750    |  |
|                                             | 0+00 165+00        | CURVE CORR.   | 500     |  |
|                                             | 0+00 165+00        | INTERSECTIONS | 300     |  |

REMOVING GUARDRAIL

| SEC. | STATION TO STATION  | LOC. | L.F. |
|------|---------------------|------|------|
| 1    | 97+50 101+70        | LT.  | 420  |
|      | 97+50 101+70        | RT.  | 420  |
|      | 200+48 205+04       | RT.  | 456  |
|      | 200+48 1+77 TN. RD. | LT.  | 540  |
|      | 42+00 42+37         | LT.  | 37   |
|      | 9+00 15+00          | LT.  | 600  |
|      | 28+90 36+02         | LT.  | 712  |
|      | 28+90 32+66         | RT.  | 376  |
|      | 32+66 2+06 TN. RD.  | RT.  | 200  |
|      | 37+20 47+20         | LT.  | 1000 |
|      | 48+00 58+08         | RT.  | 1008 |
|      | 48+00 63+00         | LT.  | 1500 |
|      | 64+00 81+40         | LT.  | 1740 |
|      | 70+00 71+25         | RT.  | 125  |
|      | 81+80 9+03          | LT.  | 2353 |
|      | 12+00 14+48         | LT.  | 248  |
|      | 15+78 0+80 TN. RD.  | LT.  | 1140 |
|      | 1+00 TN. RD. 28+45  | RT.  | 516  |
|      | 0+80 TN. RD. 28+50  | LT.  | 156  |
|      | 47+45 2+00 "ZZ"     | LT.  | 228  |
|      | 2+00 "ZZ" 52+50     | LT.  | 576  |
|      | 47+63 51+47         | RT.  | 384  |

STEEL PLATE BEAM GUARD

| SEC. | STATION TO STATION   | LOC. | L.F. | ANCHORS |
|------|----------------------|------|------|---------|
| 1    | B-47-13              |      | 60   |         |
|      | 97+60 101+40         | LT.  | 379  | 2       |
|      | 97+60 101+40         | RT.  | 379  | 2       |
|      | 199+35 205+64        | RT.  | 629  | 2       |
|      | 199+96 1+22 TN. RD.  | LT.  | 541  | 2       |
|      | 41+73 42+37          | LT.  | 64   | 1       |
|      | 46+00 46+64          | RT.  | 64   | 1       |
|      | 63+93 64+57          | LT.  | 64   | 1       |
|      | 8+35 15+39           | LT.  | 704  | 2       |
|      | 25+77 B-47-10        | LT.  | 129  | 1       |
|      | 25+77 B-47-10        | RT.  | 129  | 1       |
|      | B-47-10 1+32 TN. RD. | LT.  | 942  | 1       |
|      | B-47-10 1+96 TN. RD. | RT.  | 542  | 1       |
|      | 1+32 TN.RD. 47+29    | LT.  | 1104 | 2       |
|      | 47+85 63+15          | LT.  | 1530 | 2       |
|      | 46+86 59+65          | RT.  | 1279 | 2       |
|      | 63+85 81+40          | LT.  | 1755 | 2       |
|      | 65+86 71+15          | RT.  | 529  | 2       |
|      | 81+85 9+59           | LT.  | 2404 | 2       |
|      | 11+36 1+55 TN. RD.   | LT.  | 1634 | 2       |
|      | 1+54 TN. RD. 28+66   | LT.  | 266  | 2       |
|      | 0+16 TN. RD. 28+64   | RT.  | 591  | 2       |
|      | 45+25 1+25 TN. RD.   | LT.  | 366  | 2       |
|      | 1+35 TN. RD. 52+64   | LT.  | 517  | 2       |
|      | 45+26 52+14          | RT.  | 679  | 2       |
| 2    | 144+70 B-776         | RT.  | 129  | 1       |
|      | B-776 147+75         | LT.  | 129  | 1       |

93± 105  
60± 85±

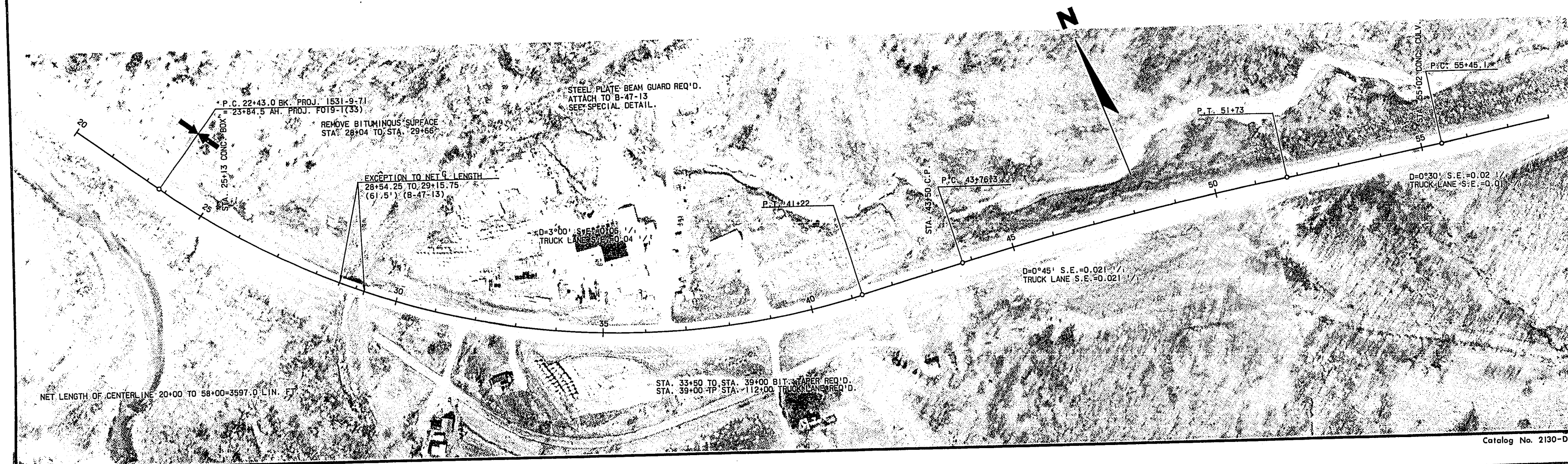
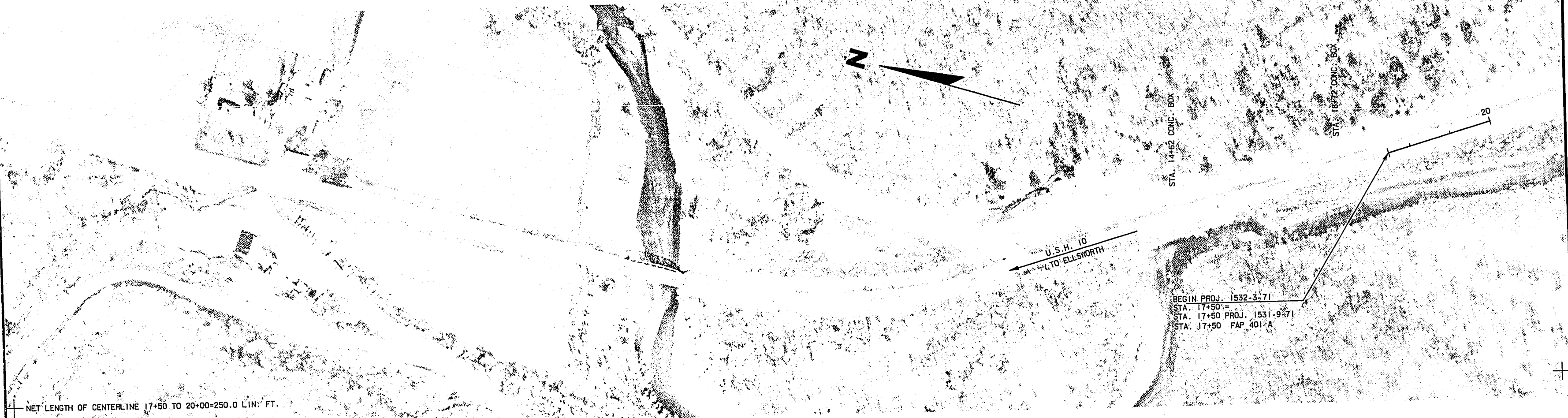
RT 1300± 1 } ADDED TO  
LT 300± 4 } CONTRACT

STANDARD DETAIL DRAWINGS

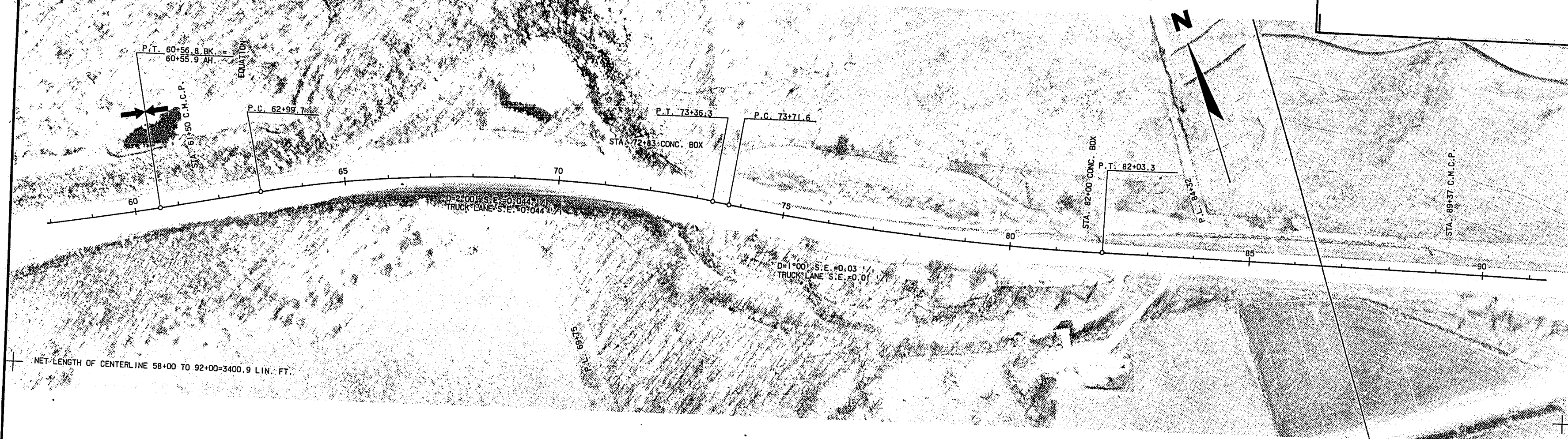
- 9A1-2 Design and Layout Details for Side Road At-Grade Intersections  
14B2-3a & b Class "A" Steel Plate Beam Guard & Steel Plate Beam Median Guard (2 sheets)  
15C1-4 Construction Barricade & Standard Signs.

GENERAL NOTES

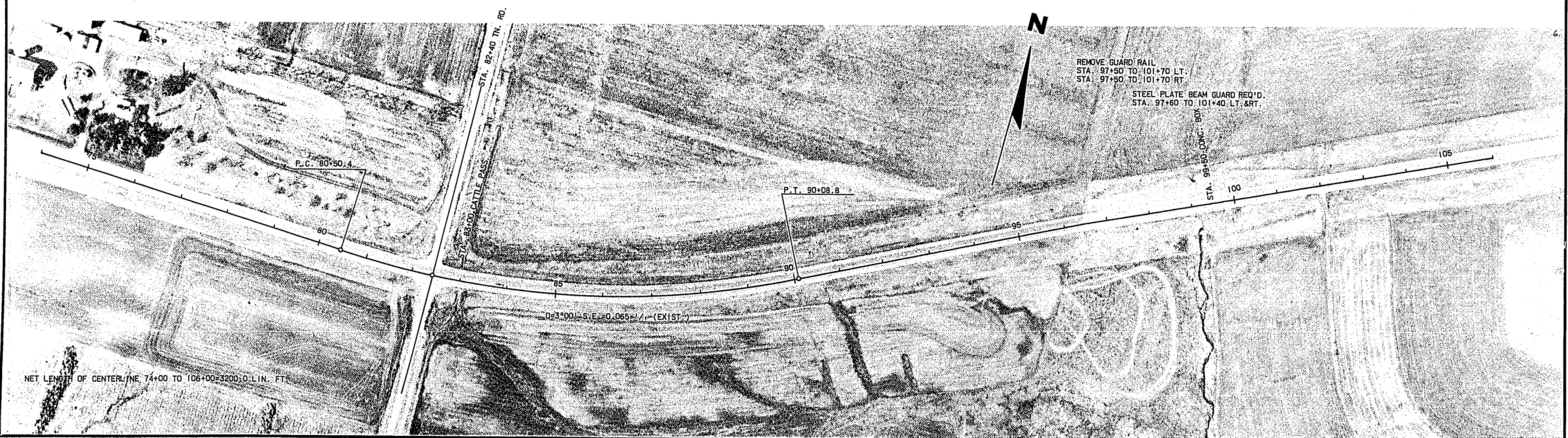
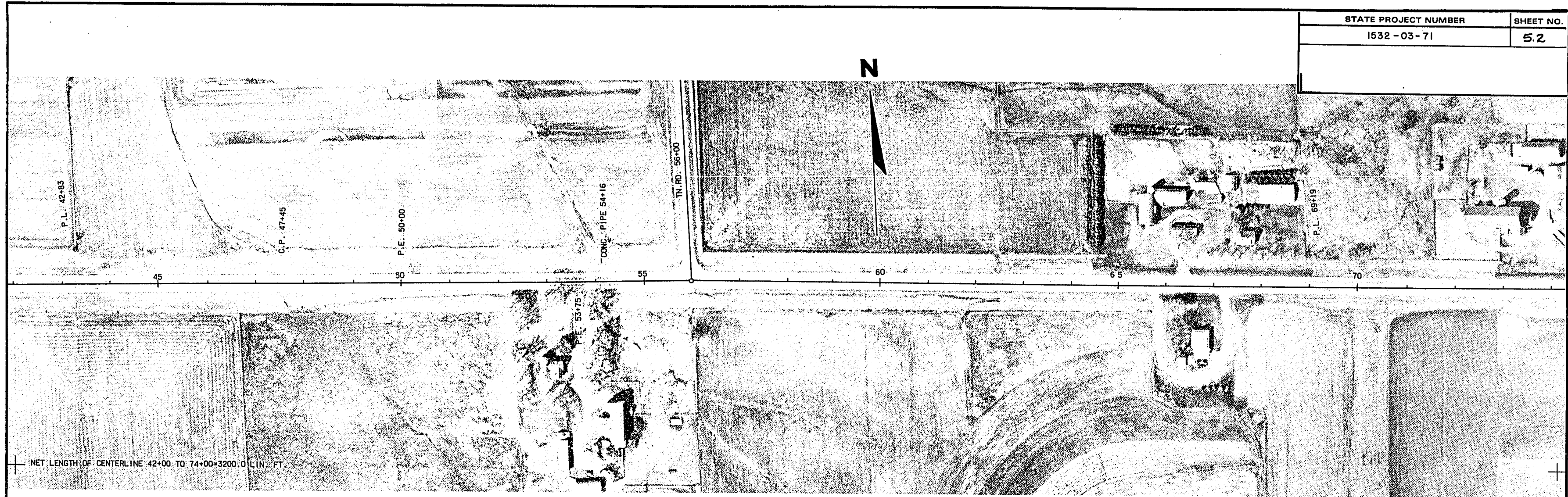
Unless otherwise shown on the plans all intersections shall be type "C" as shown on the standard detail drawing.  
When the quantity of the items of Base or Surface Course is measured for payment by the ton or cubic yard, the depth or thickness of the course shown on the plans is approximate and the actual thickness will depend on the distribution of the material directed by the engineer.



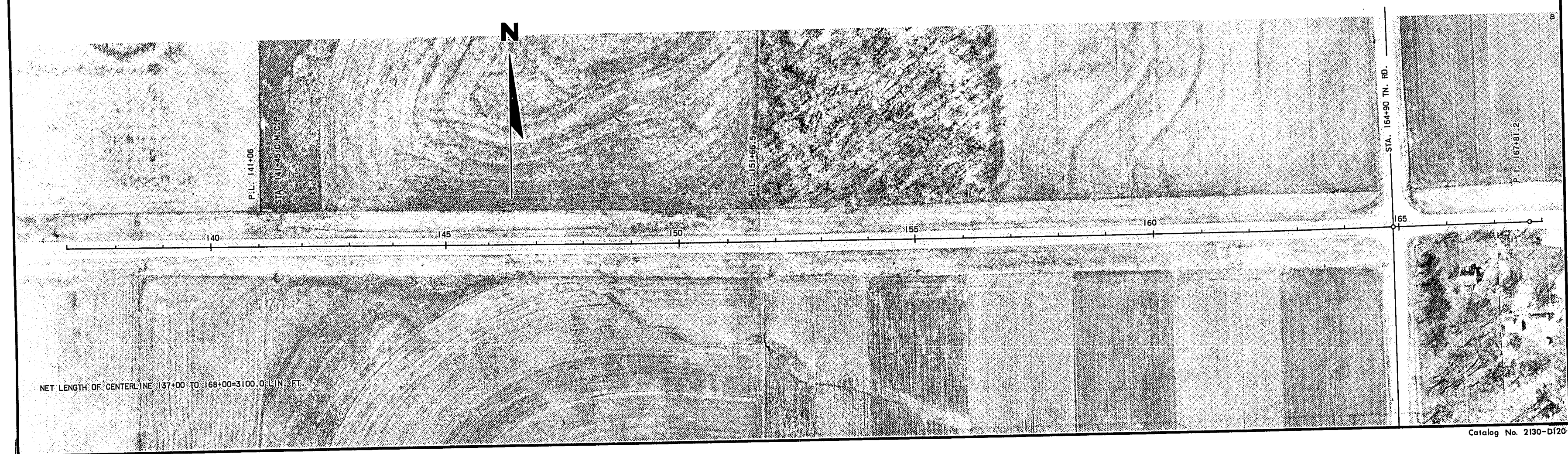
| STATE PROJECT NUMBER | SHEET NO. |
|----------------------|-----------|
| 1532-03-71           | 5.1       |



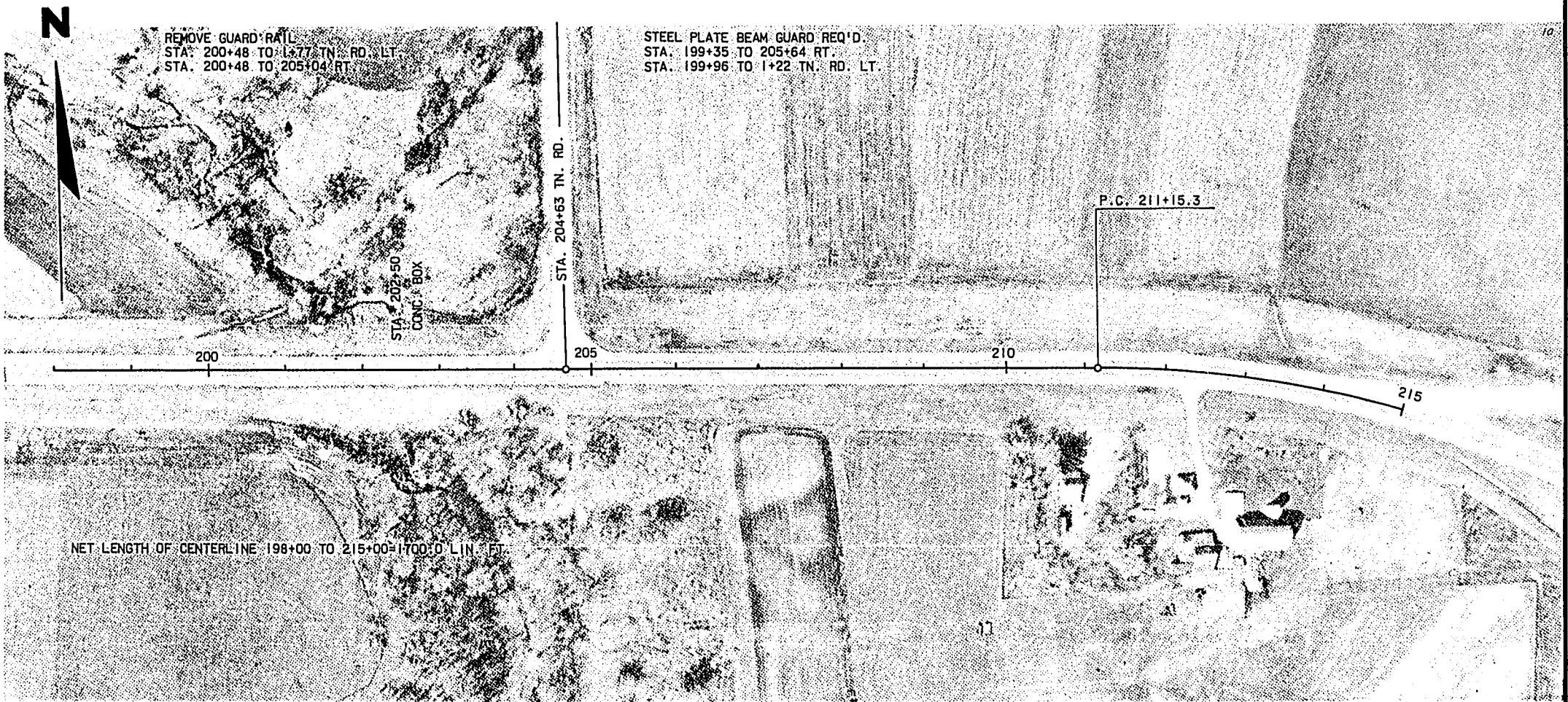
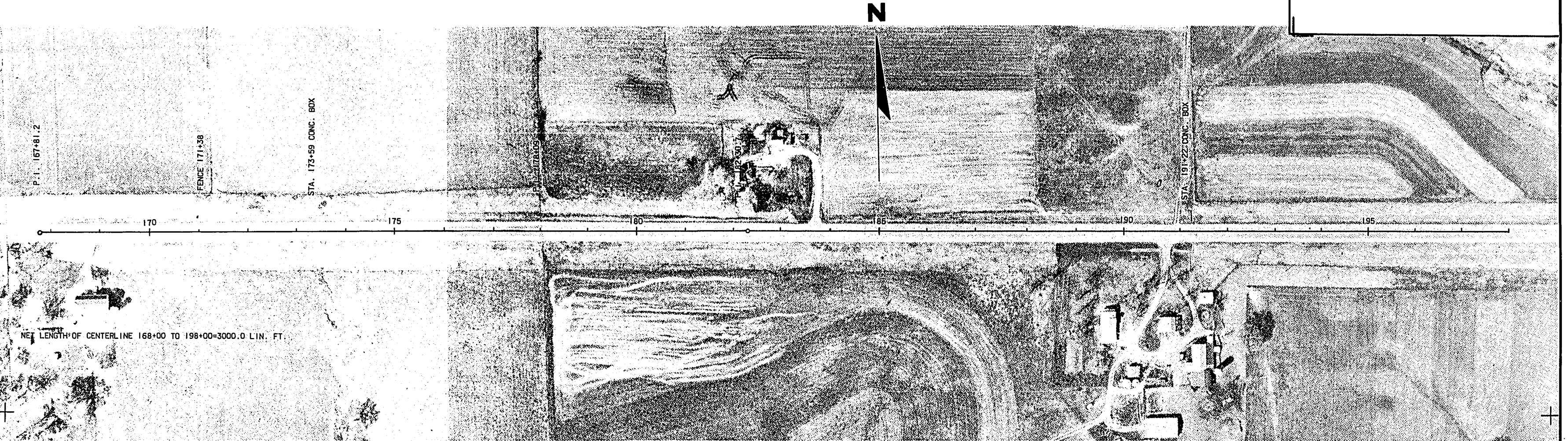
| STATE PROJECT NUMBER | SHEET NO. |
|----------------------|-----------|
| 1532 - 03 - 71       | 5.2       |
|                      |           |



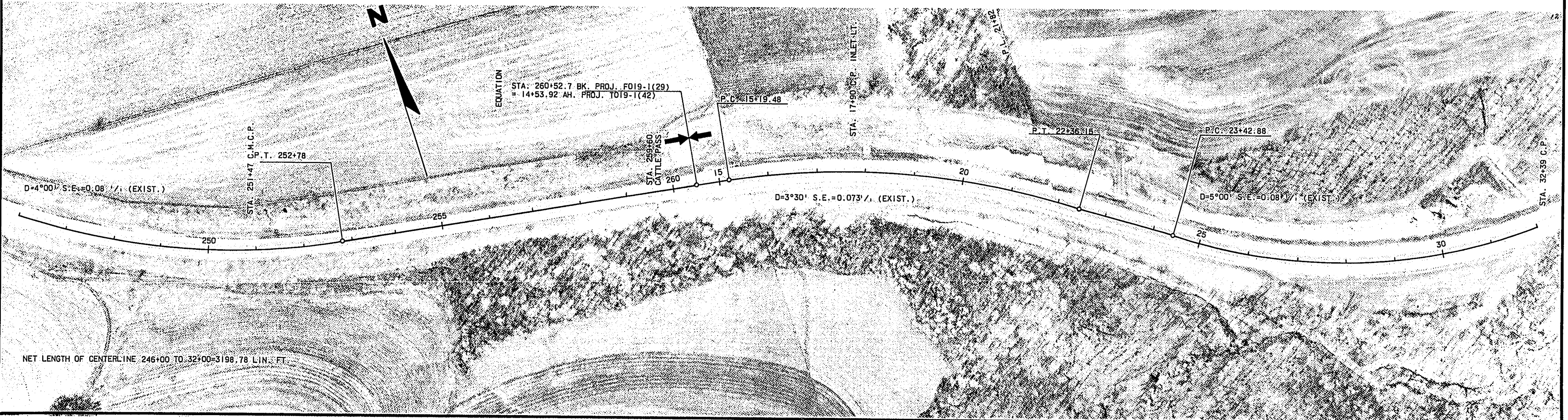
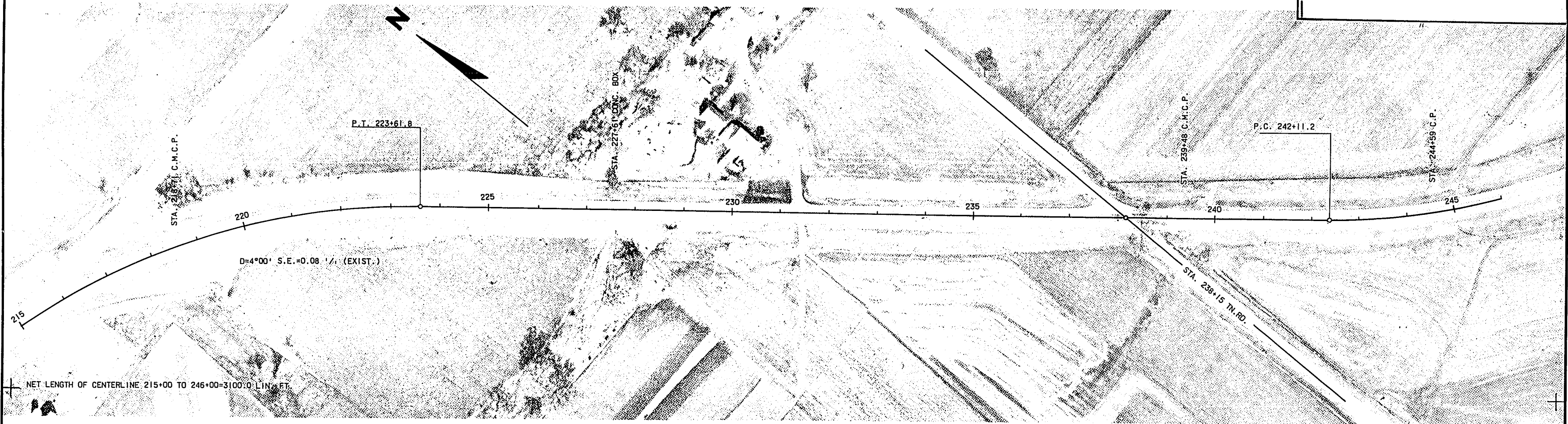
| STATE PROJECT NUMBER | SHEET NO. |
|----------------------|-----------|
| 1532-03-71           | 5.3       |

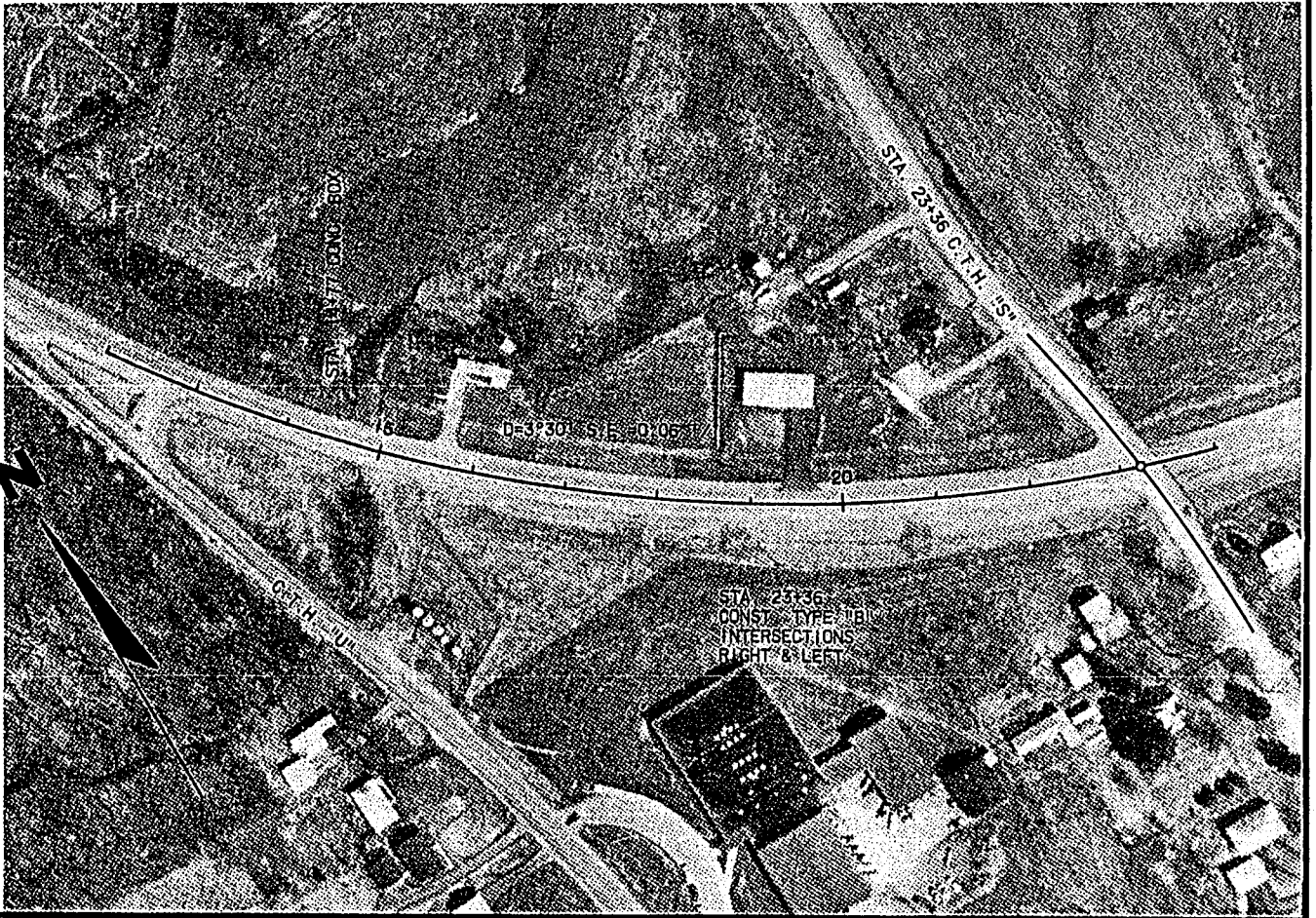
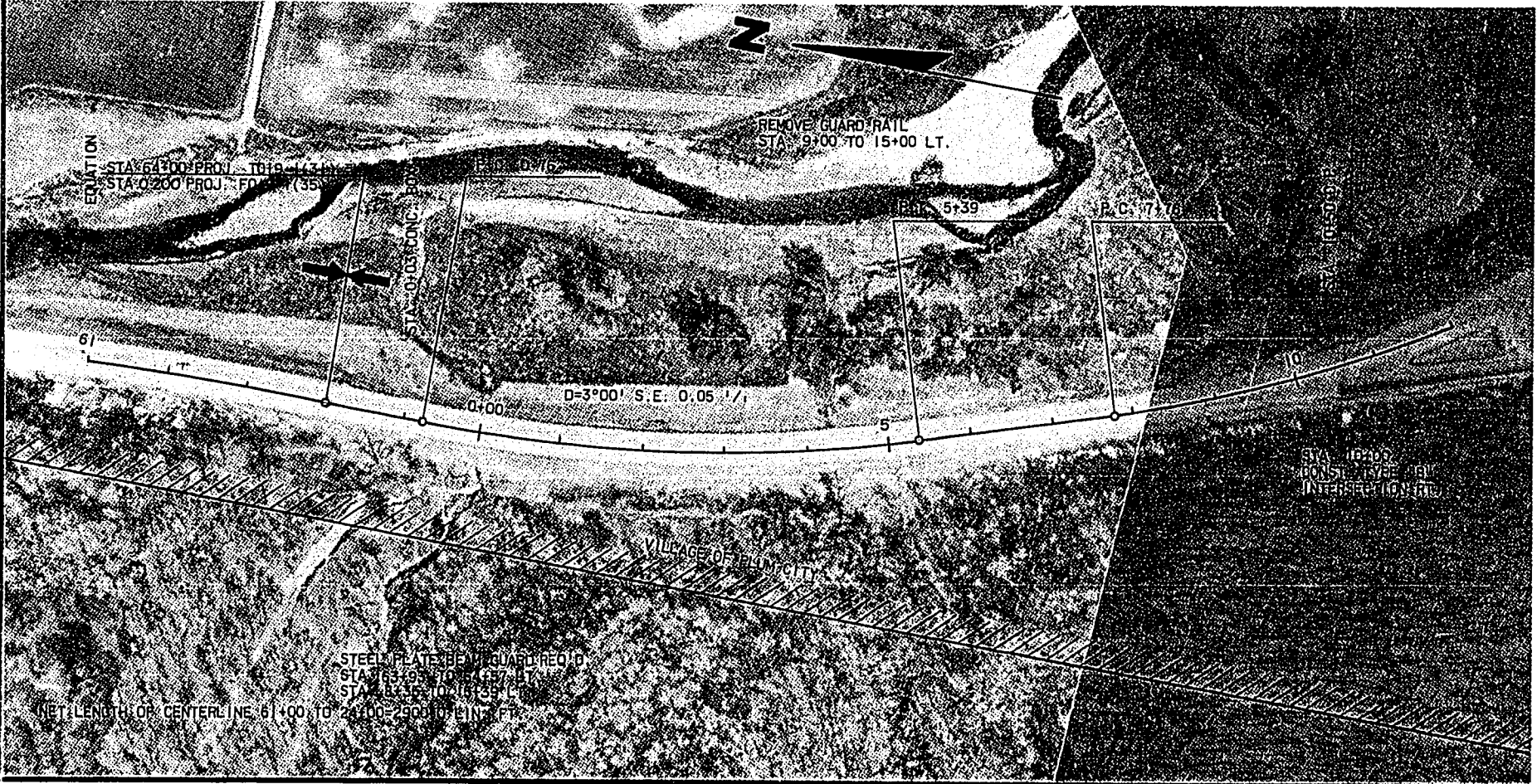
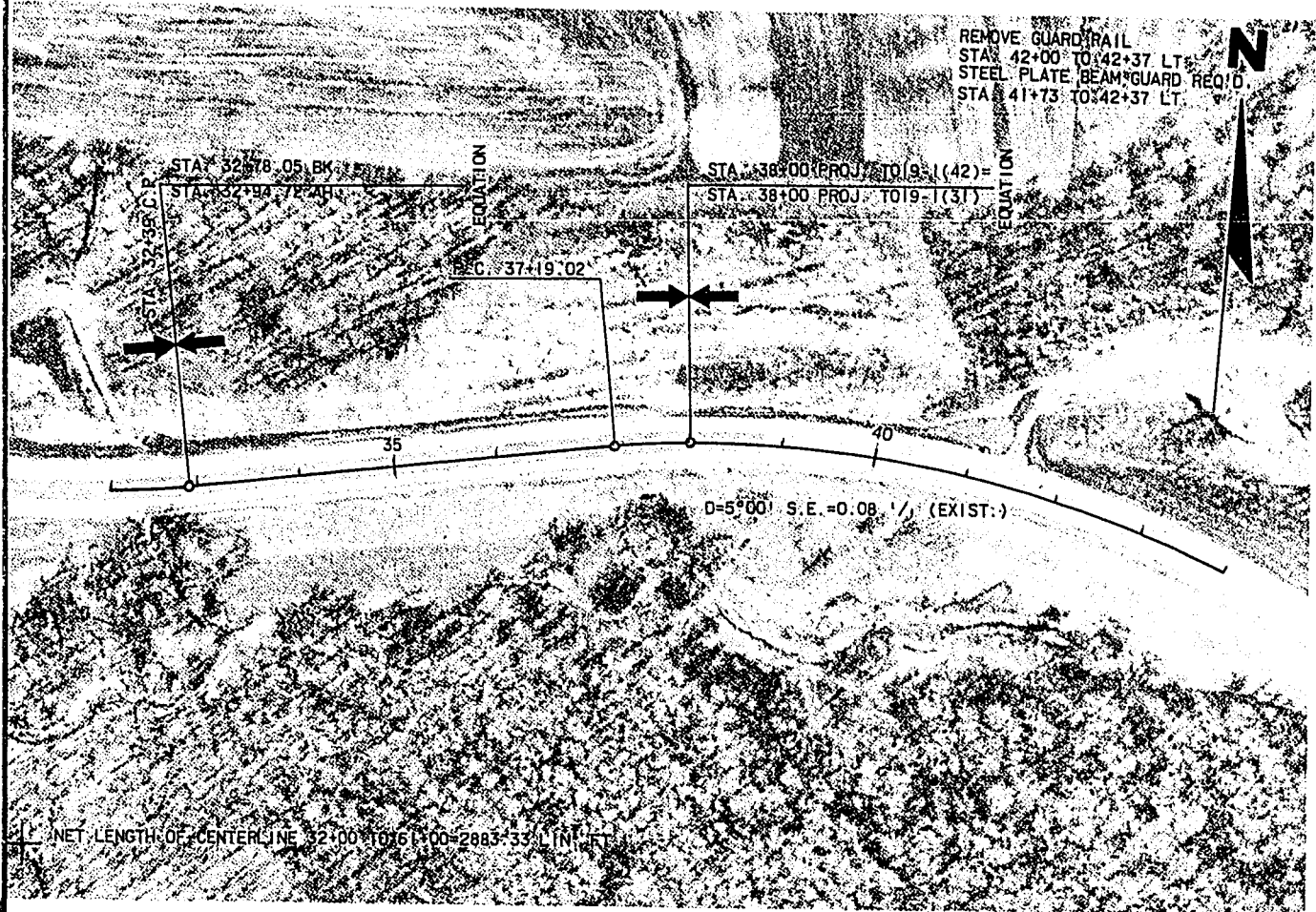


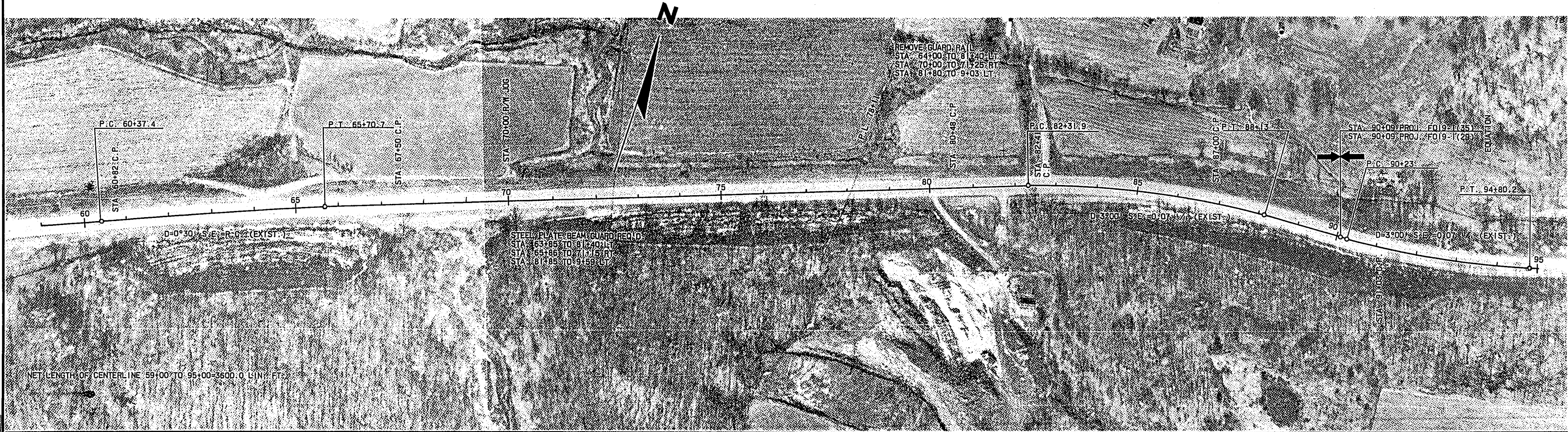
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|----------------------|-----------|
| 1532 - 03 - 71       | 5.4       |
|                      |           |

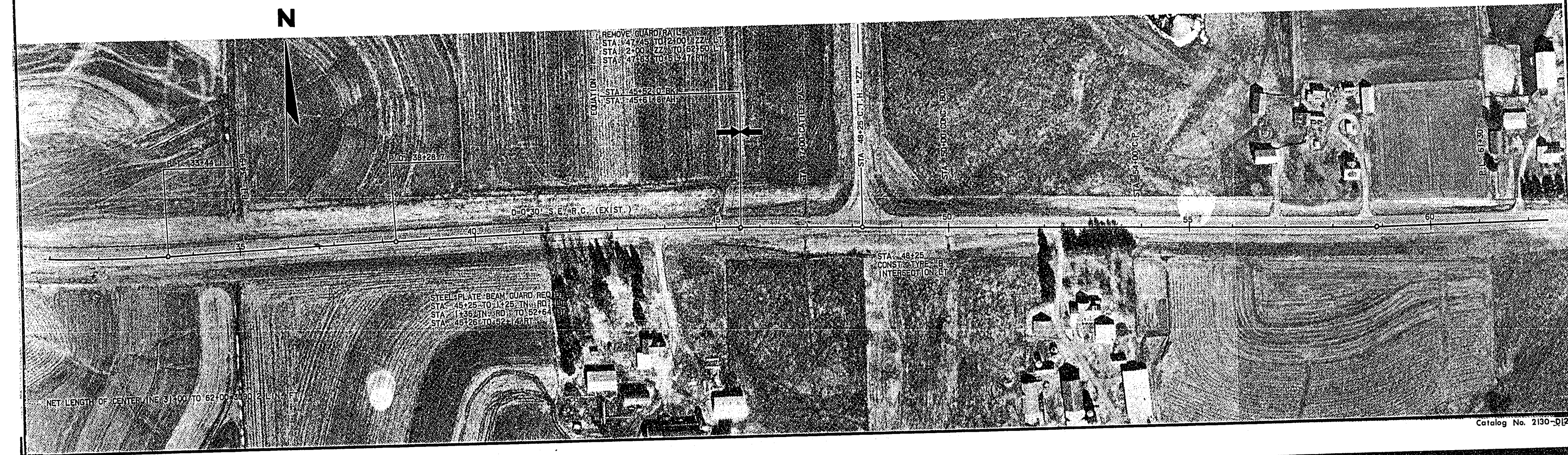


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| 1532-03-71           | 5.5       |
|                      |           |

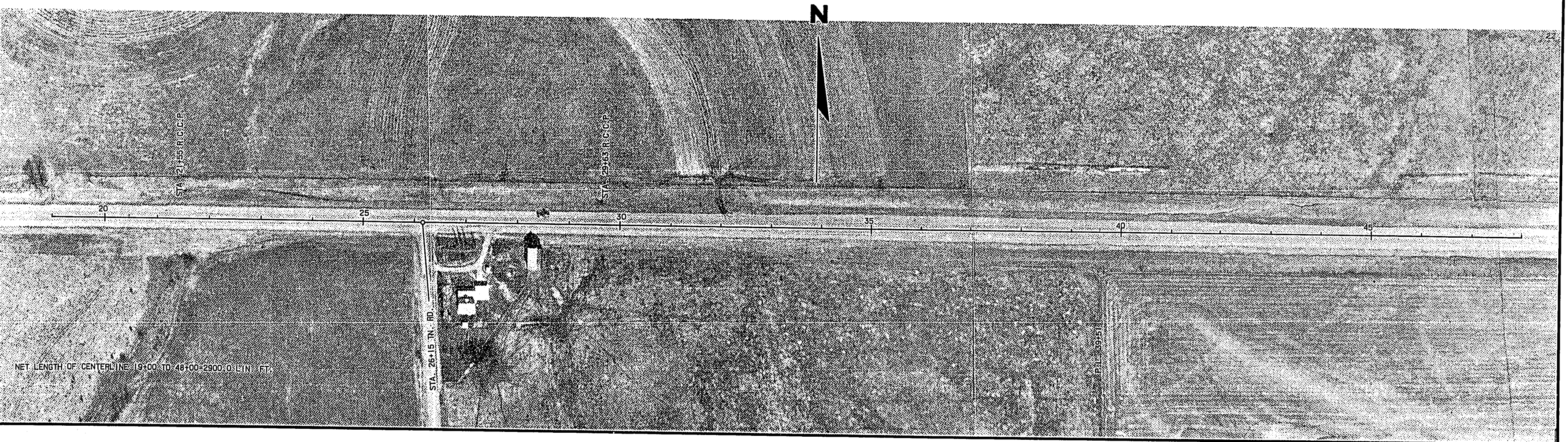
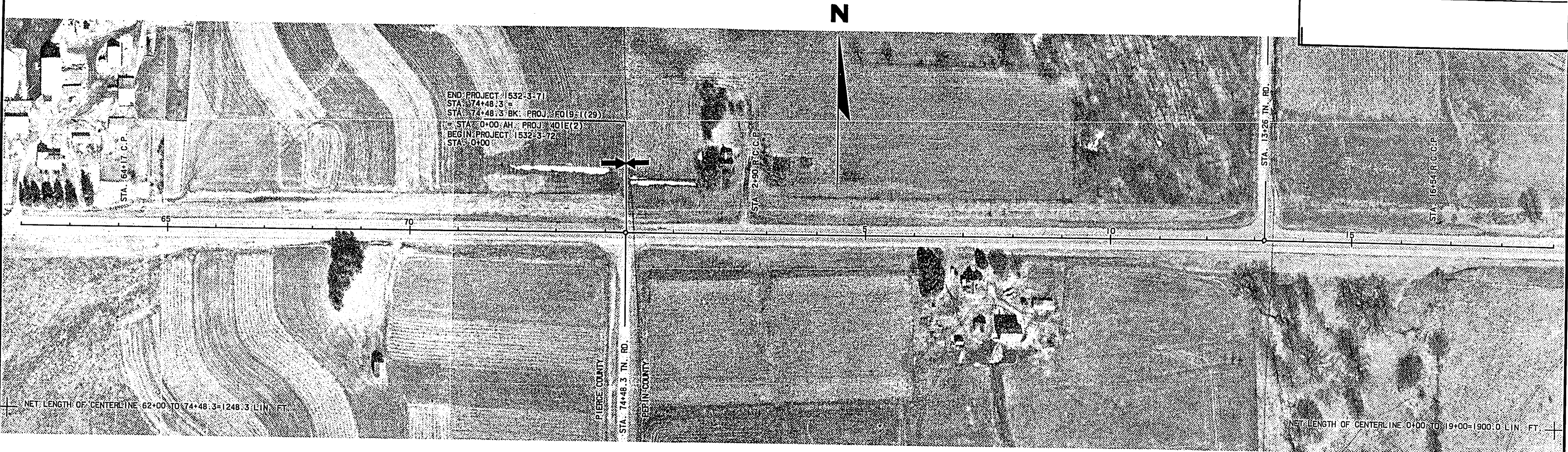


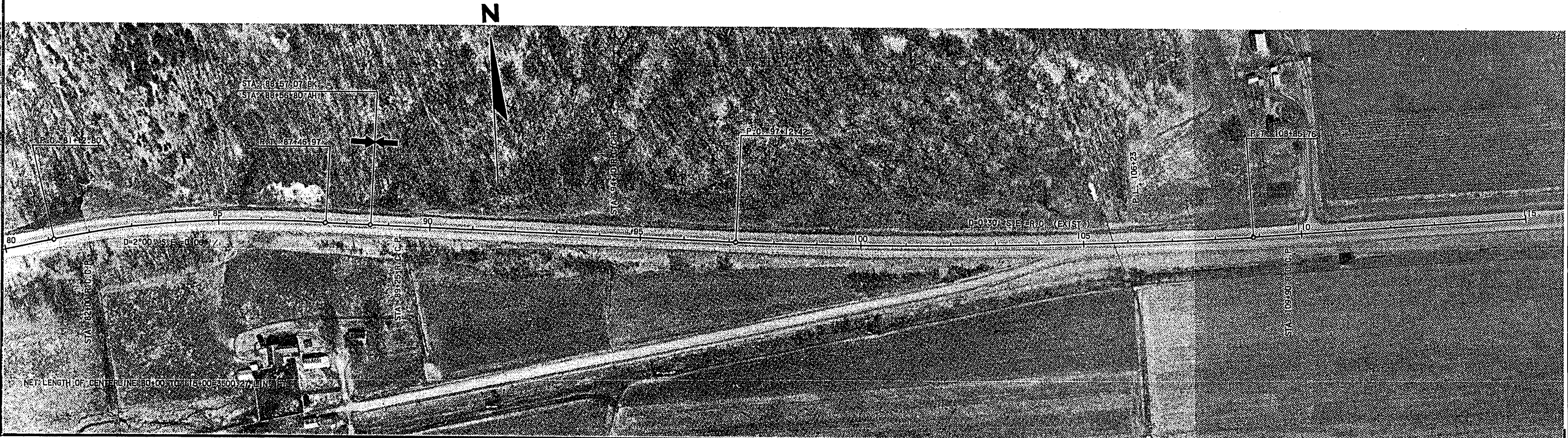
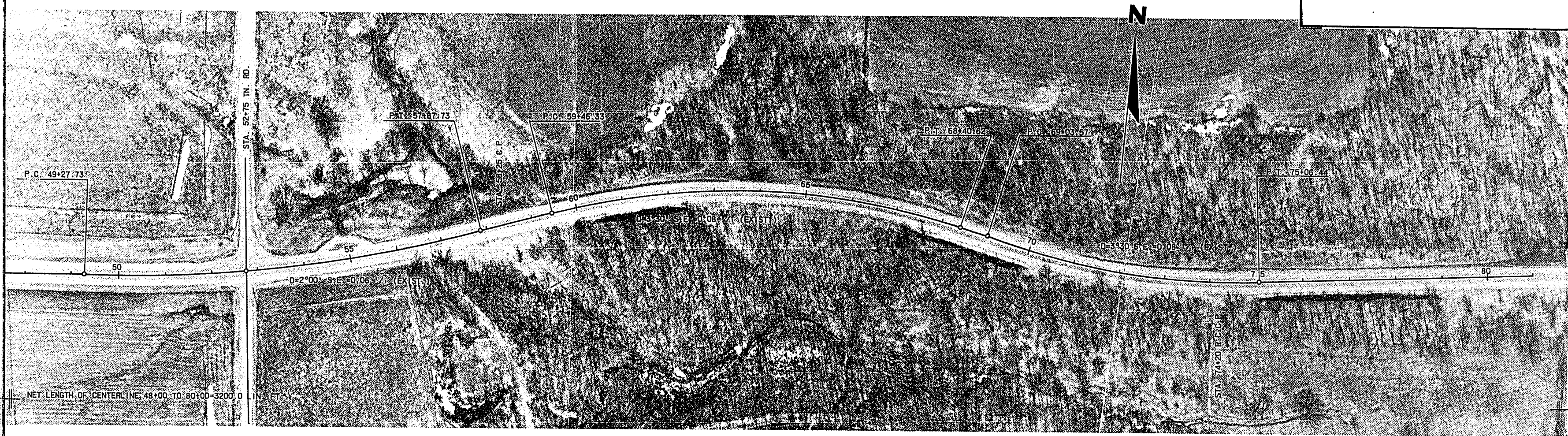




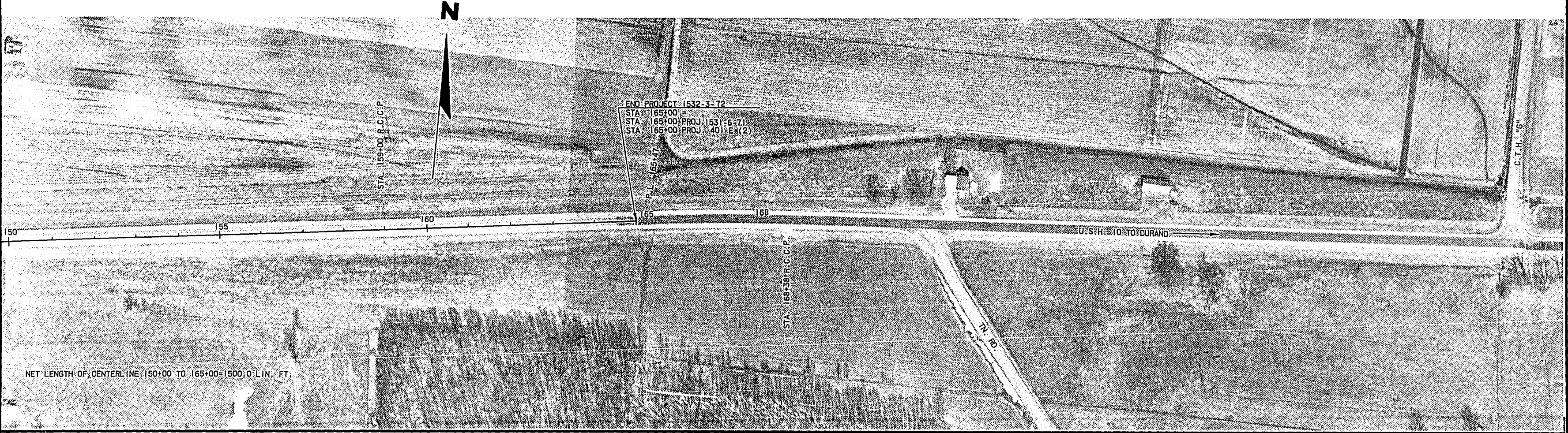
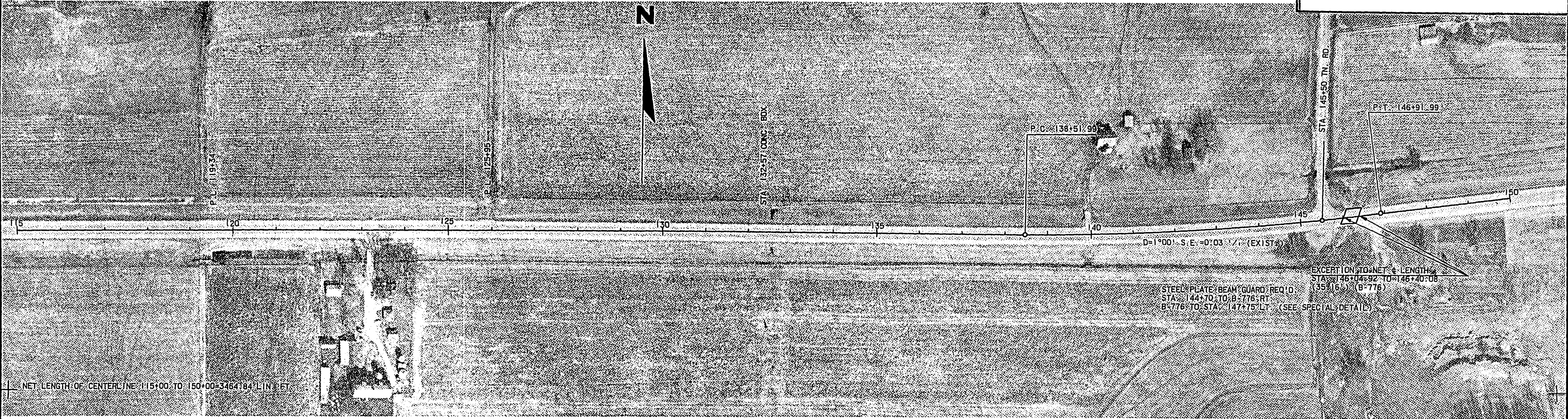


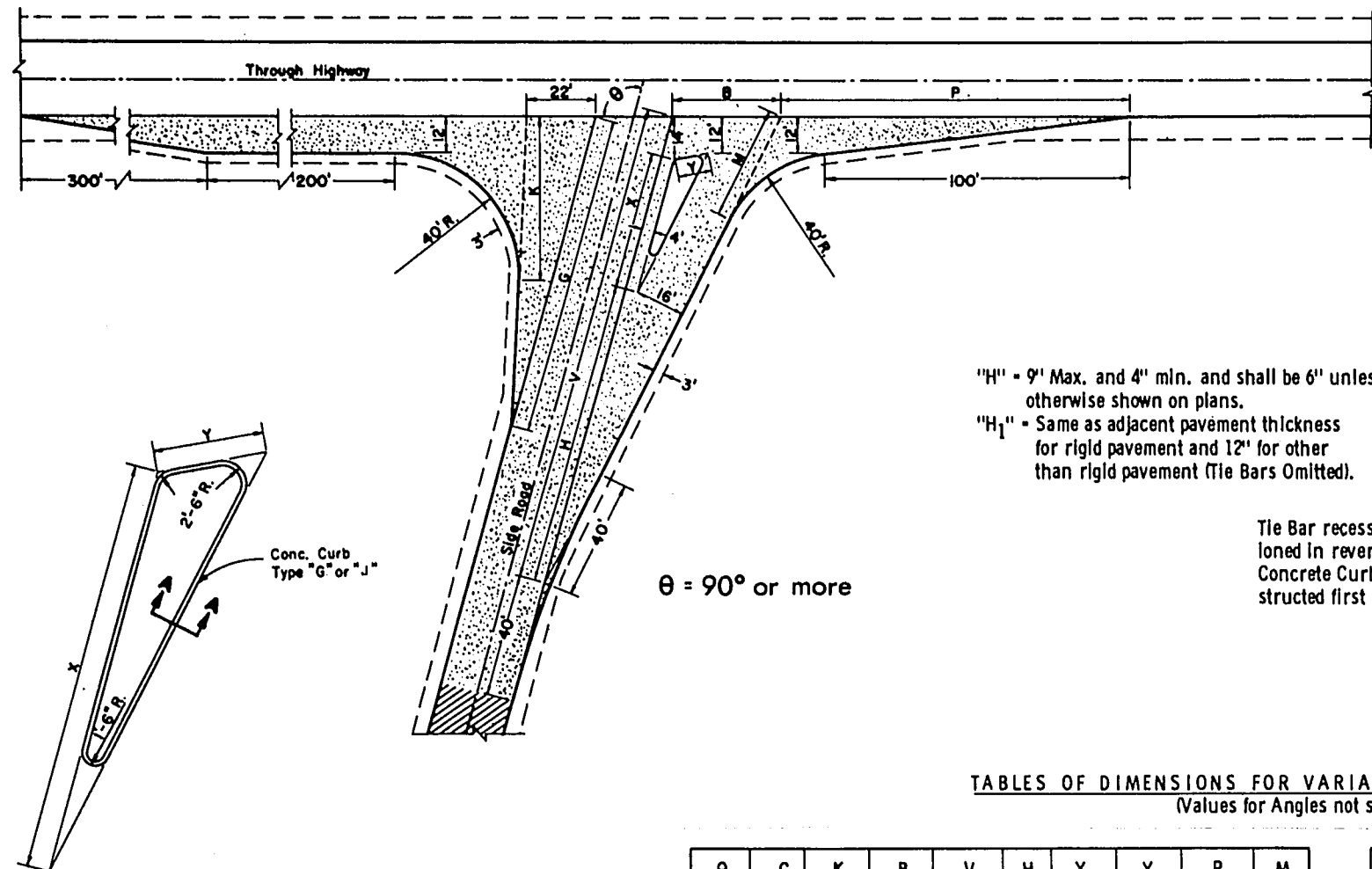
| STATE PROJECT NUMBER | SHEET NO. |
|----------------------|-----------|
| 1532-03-71, 72       | 5.9       |





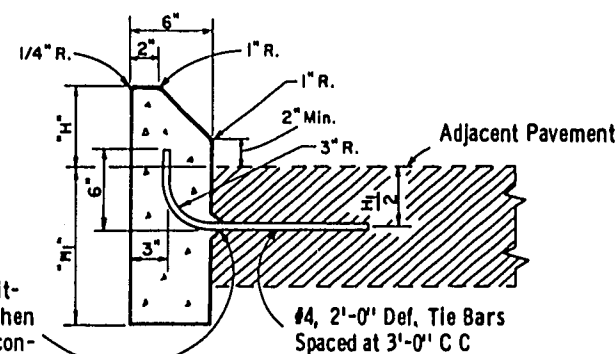
| STATE PROJECT NUMBER | SHEET NO. |
|----------------------|-----------|
| 1532-03-71, 72       | 5.11      |
|                      |           |





"H" = 9' Max. and 4' min. and shall be 6' unless otherwise shown on plans.  
 "H<sub>1</sub>" = Same as adjacent pavement thickness for rigid pavement and 12" for other than rigid pavement (Tie Bars Omitted).

Tie Bar recess positioned in reverse when Concrete Curb is constructed first



### SECTION A - A

Note: To be measured and paid for as Type "G" (Including Tie Bars) or Type "J" (Excluding Tie Bars) Concrete Curbs.

TABLES OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES  
 (Values for Angles not shown shall be interpolated)

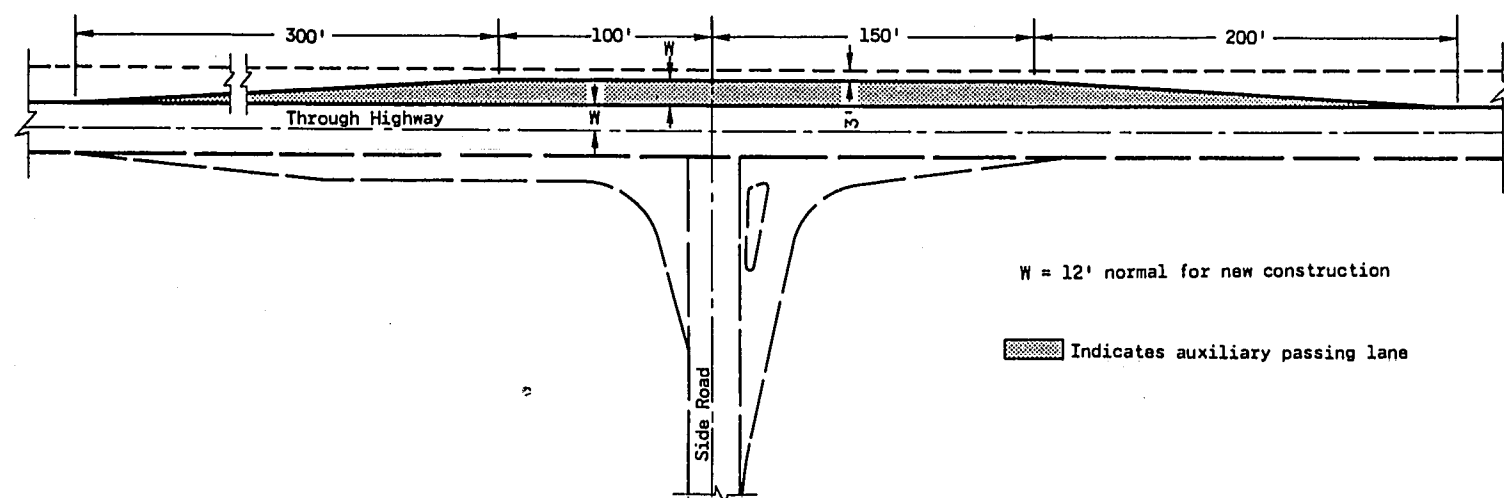
| θ    | G   | K    | B    | V     | H   | X    | Y    | P     | M    |
|------|-----|------|------|-------|-----|------|------|-------|------|
| 90   | 90  | 43.8 | 33.9 | 156.0 | 94  | 48.0 | 11.0 | 125.0 | 44.2 |
| 95   | 94  | 46.7 | 34.0 | 156.7 | 96  | 47.0 | 11.0 | 121.3 | 41.9 |
| 100  | 98  | 50.0 | 34.4 | 157.4 | 98  | 45.9 | 11.0 | 117.7 | 39.7 |
| 105  | 102 | 53.8 | 35.2 | 158.3 | 100 | 44.9 | 11.2 | 114.2 | 37.8 |
| 110  | 106 | 58.2 | 36.4 | 159.2 | 102 | 43.7 | 11.4 | 110.6 | 36.2 |
| 115  | 110 | 63.4 | 38.4 | 161.8 | 104 | 42.6 | 11.7 | 107.1 | 34.8 |
| *120 | 114 | 69.4 | 40.1 | 161.2 | 106 | 41.4 | 12.2 | 103.4 | 33.7 |

\*Maximum angle of intersection

| θ   | C    | G    | K    | B    | V     | X    | Y    | H  | P     | M    | T    |
|-----|------|------|------|------|-------|------|------|----|-------|------|------|
| *60 | 19.7 | 76.3 | 38.6 | 41.5 | 169.9 | 67.4 | 29.3 | 84 | 144.5 | 58.8 | 21.6 |
| 65  | 17.8 | 82.6 | 40.6 | 39.4 | 166.9 | 63.6 | 25.0 | 86 | 141.2 | 54.9 | 20.7 |
| 70  | 15.8 | 87.2 | 43.1 | 37.4 | 164.1 | 59.7 | 21.9 | 88 | 136.8 | 51.4 | 19.2 |
| 75  | 15.7 | 90.9 | 45.6 | 35.7 | 161.4 | 55.9 | 19.3 | 90 | 132.7 | 48.2 | 17.4 |
| 80  | 15.9 | 94.9 | 48.3 | 34.4 | 158.9 | 51.9 | 17.0 | 92 | 128.8 | 45.3 | 14.9 |
| 85  | 16.2 | 99.3 | 51.4 | 33.4 | 156.4 | 48.0 | 15.0 | 94 | 125.2 | 42.7 | 10.4 |

\*Desirable Minimum angle of intersection

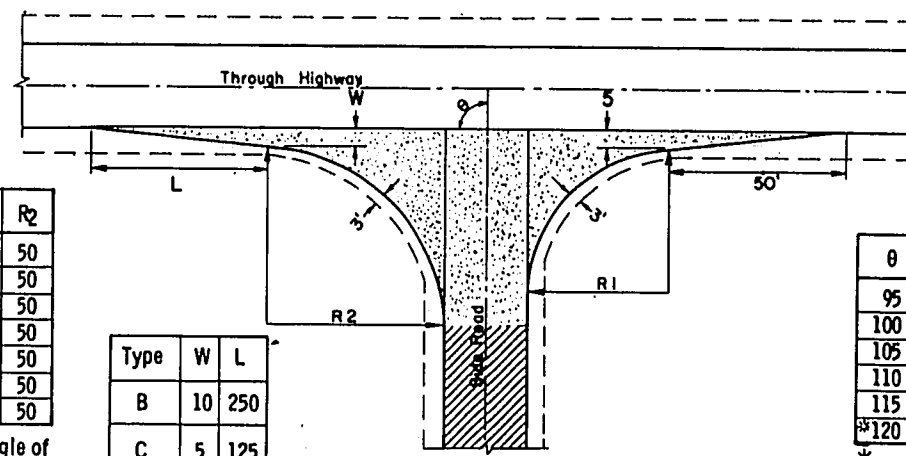
### TYPE "A" SIDE ROAD INTERSECTION DETAILS



W = 12' normal for new construction

Indicates auxiliary passing lane

### PASSING LANE DETAIL



| θ   | R <sub>1</sub> | R <sub>2</sub> |
|-----|----------------|----------------|
| *60 | 40             | 50             |
| 65  | 40             | 50             |
| 70  | 40             | 50             |
| 75  | 40             | 50             |
| 80  | 40             | 50             |
| 85  | 40             | 50             |
| 90  | 40             | 50             |

\*Min. Angle of Intersection

| Type | W  | L   |
|------|----|-----|
| B    | 10 | 250 |
| C    | 5  | 125 |

### TYPE "B" & "C" SIDE ROAD INTERSECTION DETAILS

| θ    | R <sub>1</sub> | R <sub>2</sub> |
|------|----------------|----------------|
| 95   | 45             | 49             |
| 100  | 50             | 48             |
| 105  | 55             | 47             |
| 110  | 60             | 46             |
| 115  | 65             | 45             |
| *120 | 70             | 44             |

\*Max. Angle of Intersection

### GENERAL NOTES

Designs may be used interchangeably in combination or separately for any one complete intersection depending upon intersection angle and surfacing of each approach roadway.

Details on this drawing are for minimum design only, and not applicable to special conditions, as shown elsewhere on the plans.

### SIDE ROAD SURFACING NOTE

If the side road is not presently paved, pavement shall be placed to the limits shown. In the case where the construction limits are beyond the paving limits, gravel or crushed stone surfacing shall be placed between the paving limits and construction limits.

If the side road is presently paved, new pavement shall be placed to the limits of design as shown and beyond, if necessary, to meet existing pavement.

If side road is the construction project, the intersection surfacing shall be the same as for the project.

New Pavement  
 Existing Surface

### LAYOUT DETAILS FOR AT-GRADE SIDE ROAD INTERSECTIONS

State of Wisconsin  
 Department of Transportation  
 Division of Highways

RECOMMENDED FOR APPROVAL:

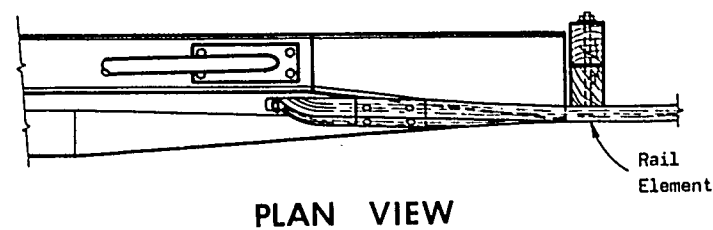
4-11-73  
 DATE

*L. O. Hermal*  
 CHIEF OF FACILITIES DEVELOPMENT

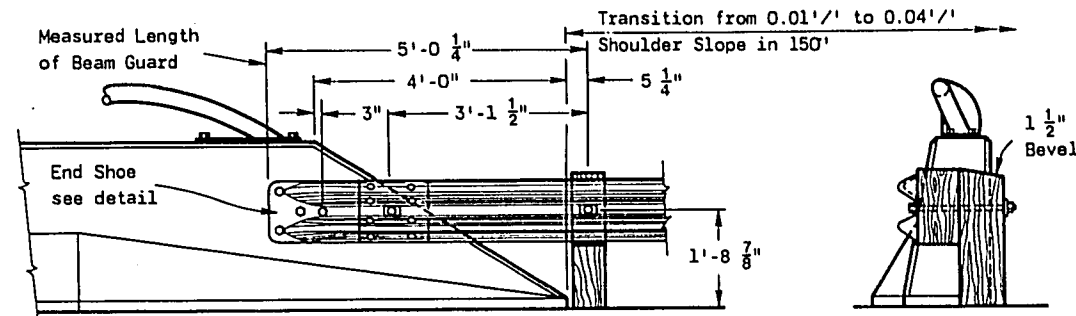
APPROVED

4-17-73  
 DATE

*W. J. Siedler*  
 STATE HIGHWAY ENGINEER



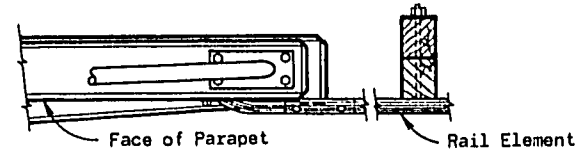
PLAN VIEW



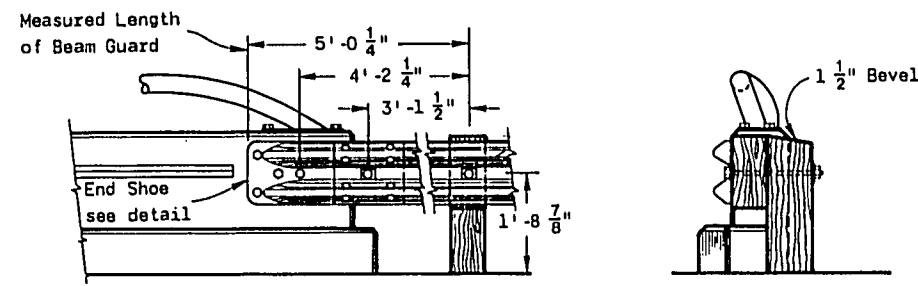
FRONT ELEVATION

END ELEVATION

STRUCTURE MOUNTING DETAIL  
SLOPING TYPE PARAPET WALL



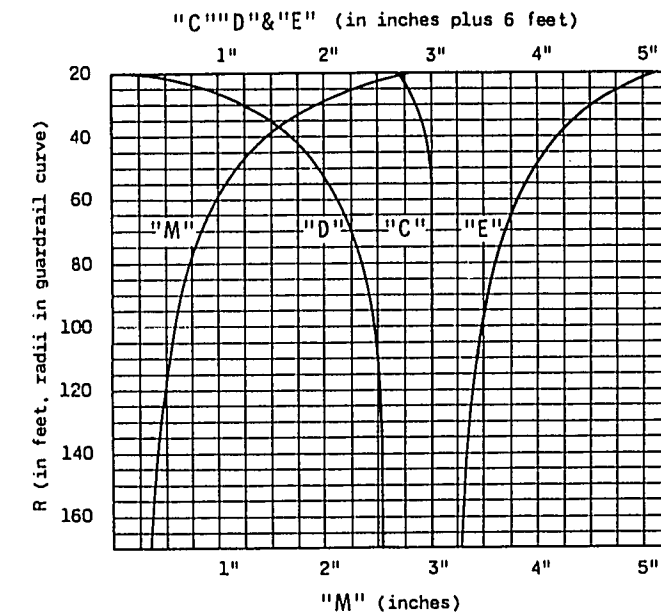
PLAN VIEW



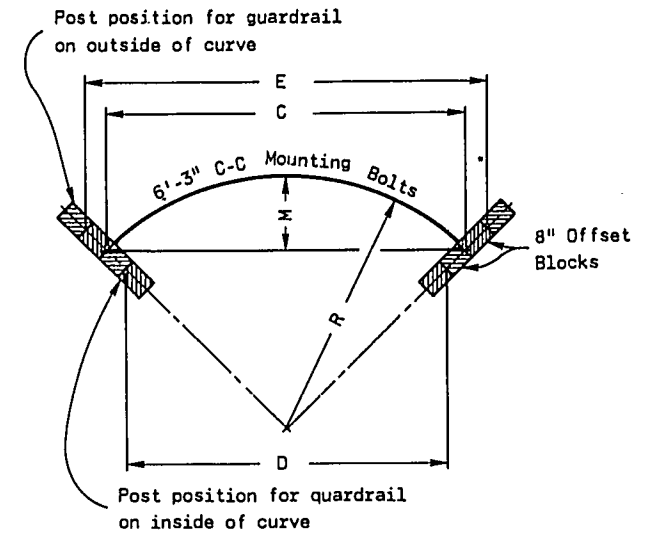
FRONT ELEVATION

END ELEVATION

STRUCTURE MOUNTING DETAIL  
VERTICAL TYPE PARAPET WALL



CURVE DATA FOR POST SPACING AND BEAM CURVING



CHORD LENGTHS FOR POST SPACING AND  
MIDDLE ORDINATES FOR BEAM CURVING

### GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

The exact location of the beginning and end of each Guardrail installation shall be as shown on the plans or as directed by the Engineer.

Square anchor alternates will be permitted. Square anchors shall be a minimum of 24 inches x 24 inches.

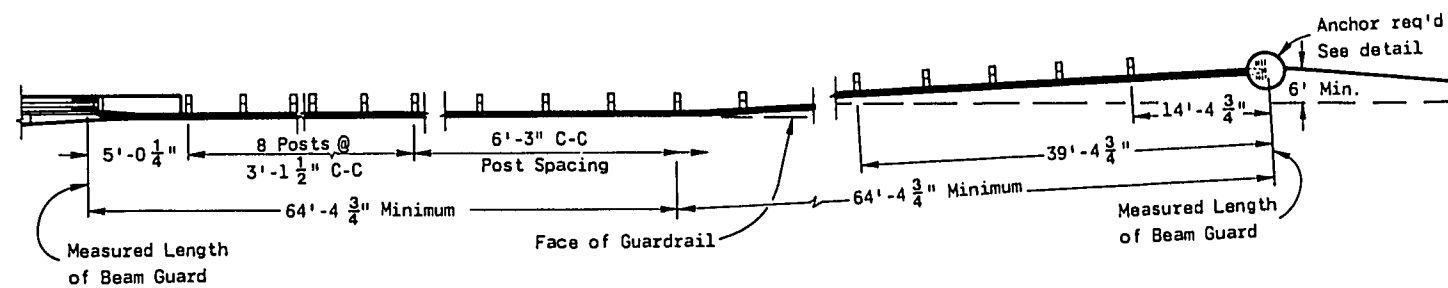
The shoulder widening to accommodate the anchored end of the guardrail shall be accomplished at the rate of widening not to exceed 15 to 1.

Upon approval of the Engineer, the 6 foot anchor offset may be reduced to nothing for replacement installations where existing conditions will not permit the desirable offset. However, when no offset greater than or equal to 3 feet can be provided, the minimum length of guardrail in advance of an obstacle (obstacle to anchor) shall be 150 feet.

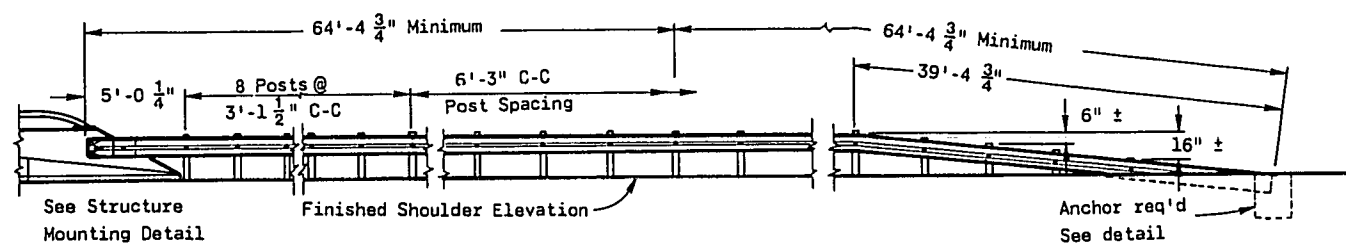
The minimum clearance from the front face of guardrail to obstacle shall be 3 feet unless otherwise shown on contract plans. When clearance is less than 3 feet post spacing shall be reduced to 3 feet - 1 1/2 inches C.C.

The "Post Footing Details At Piers" shall be used when guardrail posts are over structure footings and less than 3 feet - 6 inches of earth is provided over the top of the footing.

NOTE:  
THIS STANDARD DETAIL DRAWING CONSISTS OF  
TWO PLATES, AND BOTH PLATES ARE REQUIRED  
WHEN THIS STANDARD IS CALLED FOR IN THE  
PLANS.

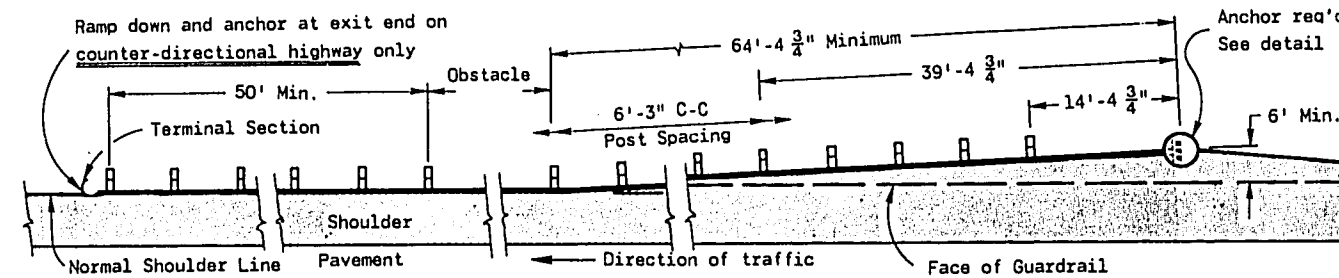


PLAN VIEW



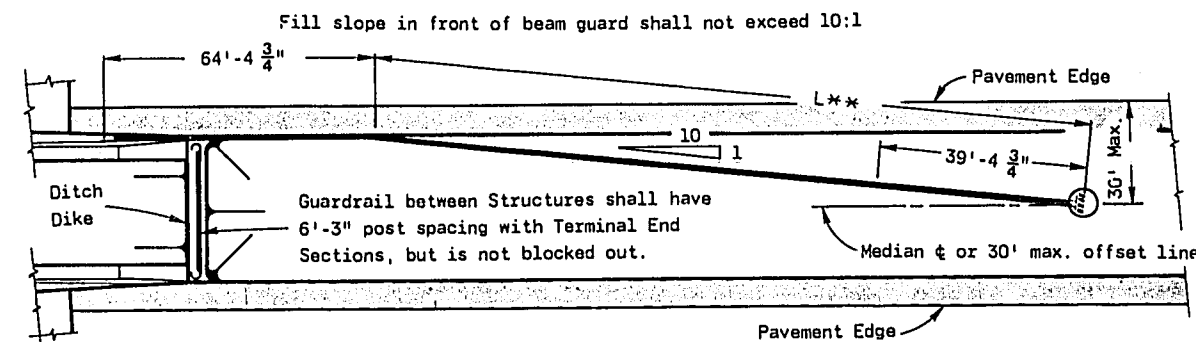
FRONT ELEVATION

TYPICAL INSTALLATION AT STRUCTURES



PLAN VIEW

TYPICAL INSTALLATION AT  
LOCATIONS OTHER THAN STRUCTURES



PLAN VIEW

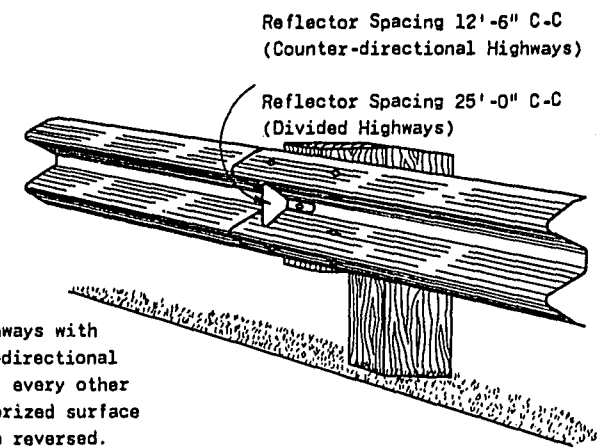
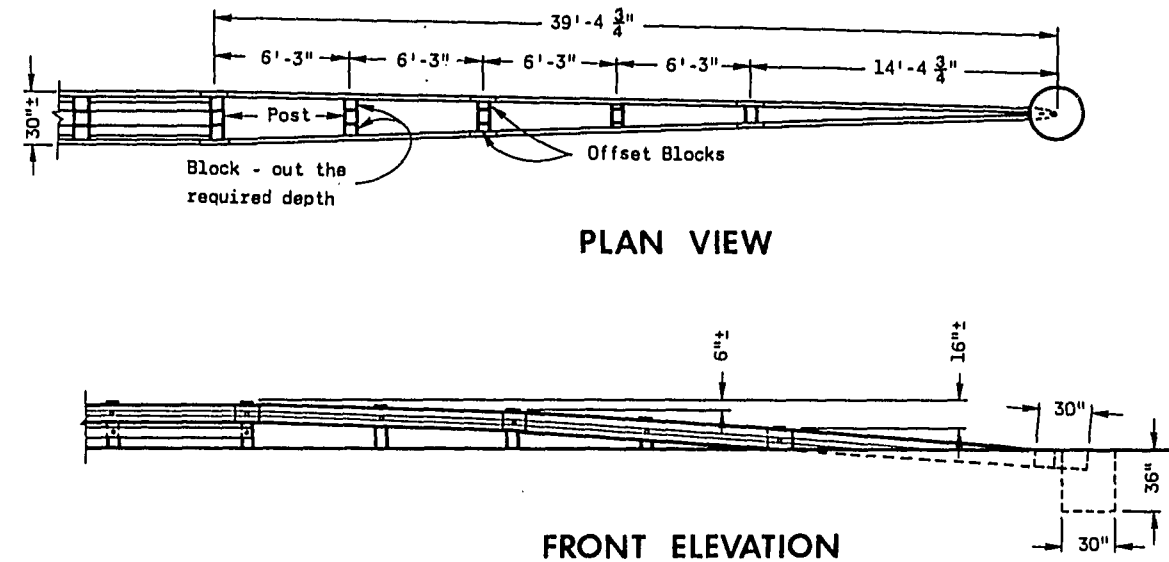
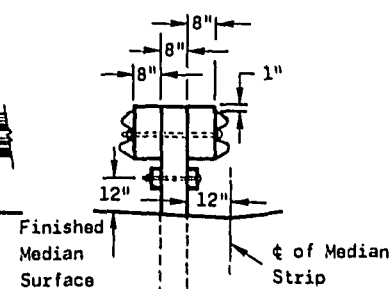
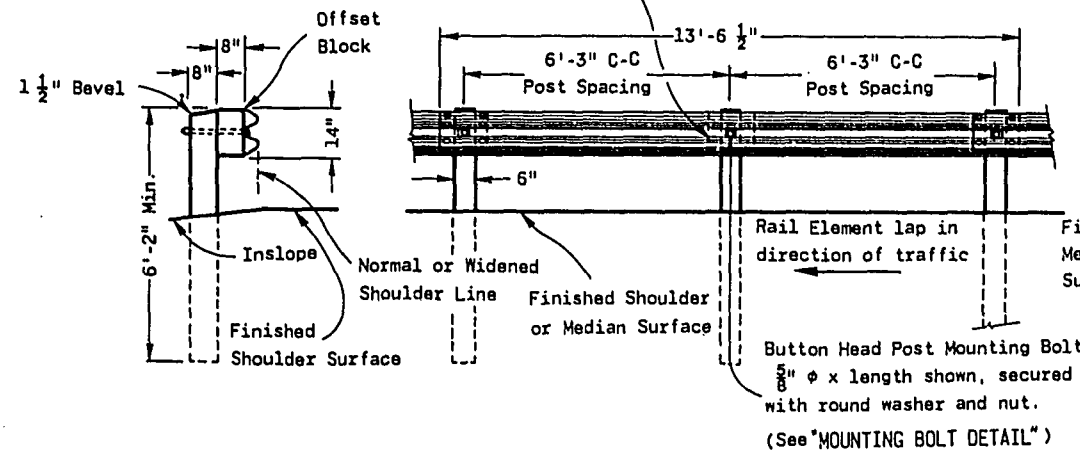
MEDIAN PROTECTION

CLASS "A"  
STEEL PLATE BEAM GUARD &  
STEEL PLATE BEAM MEDIAN GUARD

State of Wisconsin  
Department of Transportation  
Division of Highways

S.D.D. 14 B 2-3a

Sawed and treated timber posts and offset blocks shall be furnished and placed in accordance with Standard Specifications. Posts shall be 6" x 8" x 6'-6" and have 6" x 8" x 14" offset blocks.

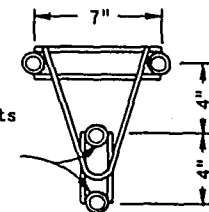
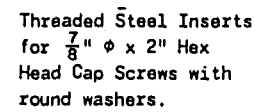
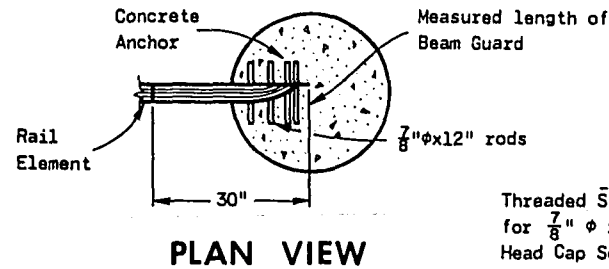


**NOTE:**  
For highways with counter-directional traffic, every other reflectorized surface shall be reversed.

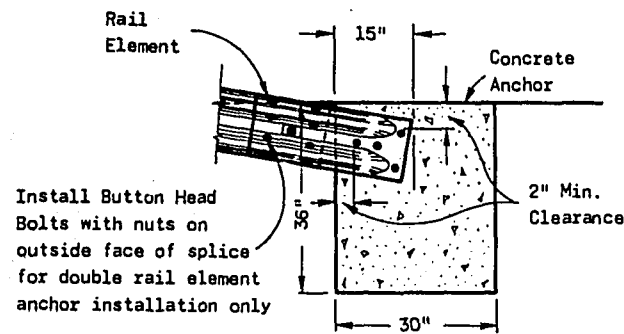
## TYPICAL INSTALLATION



## STEEL PLATE BEAM MEDIAN GUARD BEAM MEDIAN GUARD



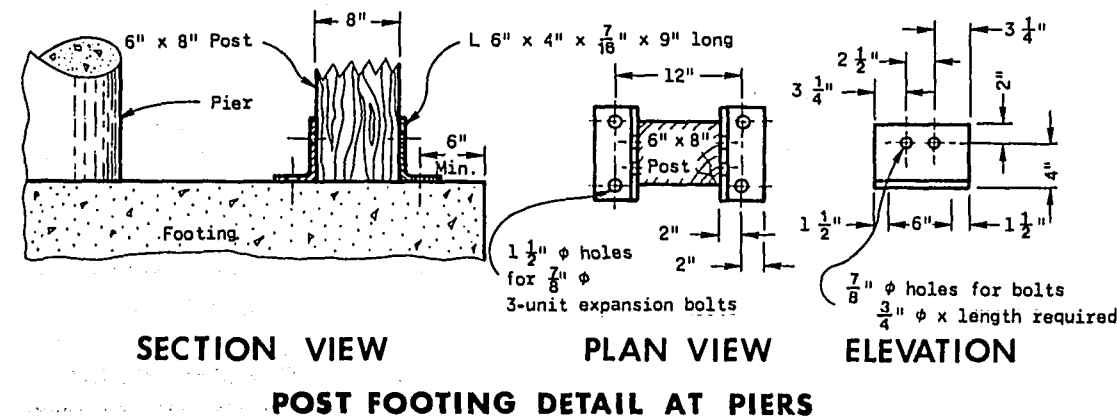
### PLAN VIEW



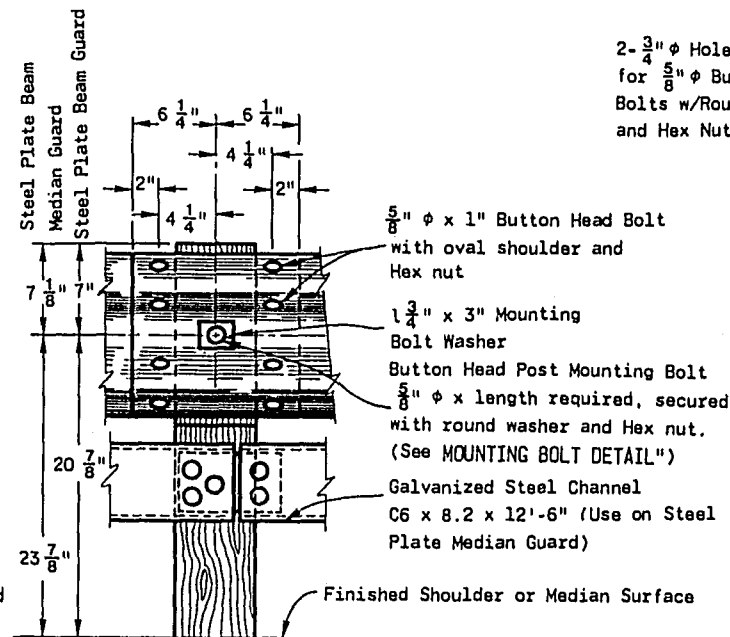
### SECTION VIEW ANCHOR DETAIL SINGLE RAIL ELEMENT INSTALLATION



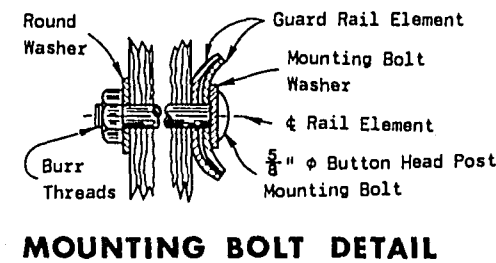
NOTE: Installation of 4 Bolt  
Insert Assembly (with Cap  
Screws inserted) to be part  
of Bridge Contract.



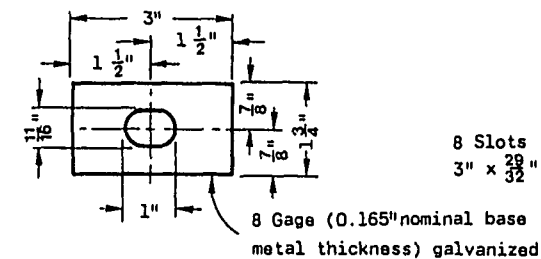
### SECTION THRU RAIL ELEMENT



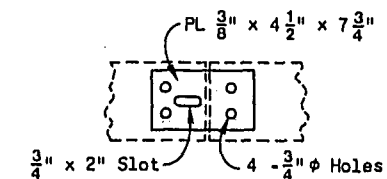
## RAIL ELEMENT SPLICING AND POST MOUNTING DETAIL



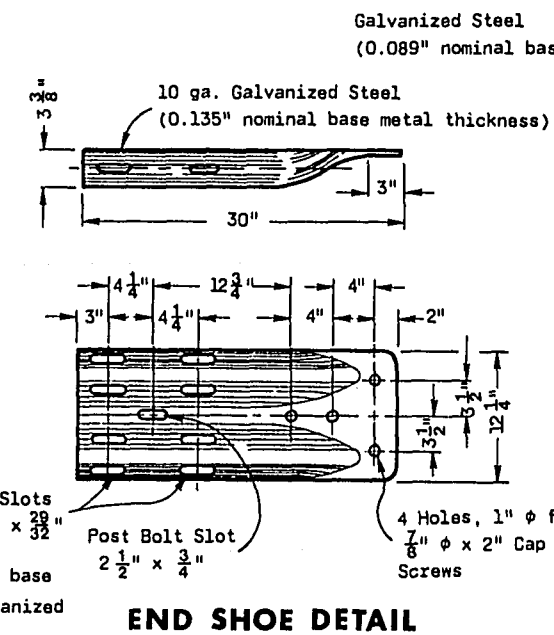
### MOUNTING BOLT WASHER



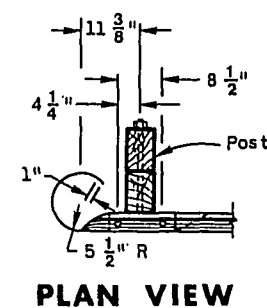
### RUB RAIL SPLICE DETAIL



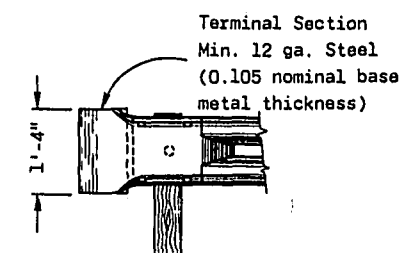
## SPLICE PLATE



## END SHOE DETAIL



### PLAN VIEW



**FRONT ELEVATION**  
**TERMINAL SECTION DETAILS**

### TYPICAL TERMINAL END ELEVATION

NOTE:  
THIS STANDARD DETAIL DRAWING CONSISTS  
OF TWO PLATES, AND BOTH PLATES ARE  
REQUIRED WHEN THIS STANDARD IS CALLED  
FOR IN THE PLANS.

**CLASS "A"**  
**STEEL PLATE BEAM GUARD &**  
**STEEL PLATE BEAM MEDIAN GUARD**

State of Wisconsin  
Department of Transportation  
Division of Highways

RECOMMENDED FOR APPROVAL:

10-29-73

APPROVED  
10-20-72

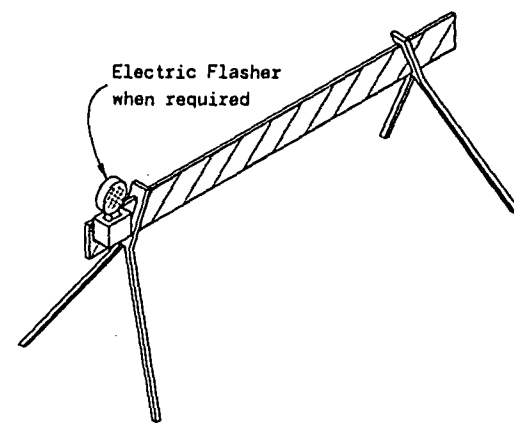
AL: J. C. Hermal  
CHIEF OF FACILITIES DEVELOPMENT

H. Siedler  
STATE HIGHWAY ENGINEER

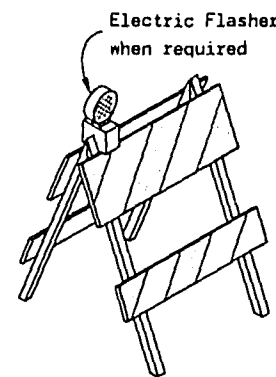
TABLE OF BARRICADE CHARACTERISTICS

| BARRICADE TYPE  | I                                     | II | III               |
|-----------------|---------------------------------------|----|-------------------|
| Height          | 3'(91.4 cm) Min.                      |    | 5'(152.4 cm) Min. |
| * Rail Width    | 8"(20.3 cm) Min. to 12"(30.5 cm) Max. |    |                   |
| Rail Length     | 2'(61.0 cm) Min. to Variable Maximum  |    |                   |
| ** Stripe Width | 6" (15.2 cm) at 45° Angle             |    |                   |
| Stripe Colors   | Reflectorized Orange & White          |    |                   |

\* Nominal dimensions when barricade is constructed of lumber.  
 \*\* May be 4"(10.2 cm) for rail lengths less than 3'(91.4 cm).



TYPICAL TYPE I BARRICADE



TYPICAL TYPE II BARRICADE

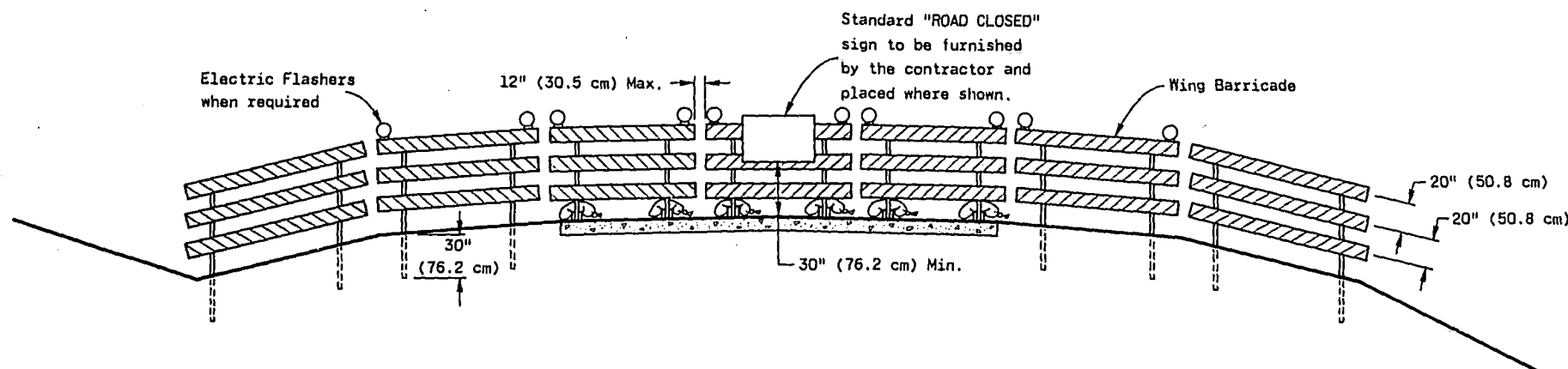


W20-3  
 48"(121.9 cm) x 48"(121.9 cm)  
 Black Lettering on Reflective  
 Orange Background  
 Letter Series "D"  
 Letter height 7" (17.8 cm)



R11-2  
 48"(121.9 cm) x 30"(76.2 cm)  
 Black Lettering on Reflective  
 White Background  
 Letter Series "D"  
 Letter height 8" (20.3 cm)

STANDARD SIGNS-TYPE II



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES

## GENERAL NOTES

The contractor shall furnish, erect and maintain Barricades and Signs. Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of Barricades and Signs shall conform to this drawing, the Wisconsin Manual on Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the construction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

## CONSTRUCTION BARRICADES & STANDARD SIGNS

State of Wisconsin  
 Department of Transportation  
 Division of Highways

RECOMMENDED FOR APPROVAL  
 DATE 6-6-75  
 APPROVED  
 DATE 6-6-75  
 CHIEF OF FACILITIES DEVELOPMENT  
 STATE HIGHWAY ENGINEER