

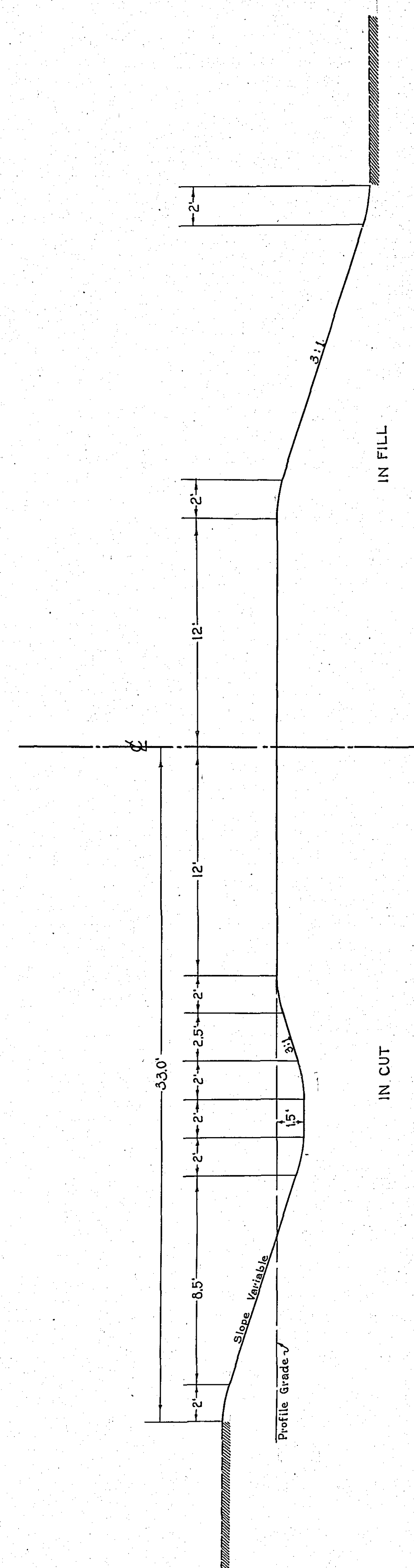
STATEMENT OF ESTIMATED QUANTITIES AND COSTS.

| ITEM | UNIT | MILE | | | | | | | | | | | | | | | | TOTAL ESTIMATED QUANTITIES | ESTIMATED UNIT PRICES | AMOUNTS | TOTALS |
|---|--|-----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|----------------------------|-----------------------|---------|--------|
| | | ONE Sta. 0+15 to Sta. 26+85 | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | MILE Sta. to Sta. | | | | |
| 1 | Clearing | Acre | 0.51 | | | | | | | | | | | | | | | 0.51 | | | |
| 2 | Clearing | Tree | 12 | | | | | | | | | | | | | | | 12 | | | |
| 3 | Grubbing | Acre | 0.51 | | | | | | | | | | | | | | | 0.51 | | | |
| 4 | Grubbing | Tree | 6 | | | | | | | | | | | | | | | 6 | | | |
| 5 | Excavation - Earth | Cu. Yd. | 6223 | | | | | | | | | | | | | | | 6223 | | | |
| 6 | Excavation - Loose Rock | Cu. Yd. | 10 | | | | | | | | | | | | | | | 10 | | | |
| 7 | Excavation - Solid Rock | Cu. Yd. | 5 | | | | | | | | | | | | | | | 5 | | | |
| 8 | Excavation - Overhaul | Cu. Yd. | 4159 | | | | | | | | | | | | | | | 4159 | | | |
| 9 | Special Excavation | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 10 | Hand Ditching | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 11 | Tile Drain | in. Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 12 | Tile Drain | in. Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 13 | Tile Drain | in. Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 14 | Porous Back Fill Material | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 15 | Stone Rip-Rap | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 16 | Heating Rip-Rap or Stone Back Material | Cu. Yd. mile | | | | | | | | | | | | | | | | | | | |
| 17 | Install 15" C.M. | Lin. Ft. | 80 | | | | | | | | | | | | | | | 80 | | | |
| 18 | Install | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 19 | Install | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 20 | Install | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 21 | Install | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 22 | Install | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 23 | Install | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 24 | Install 18" P ₃ | Lin. Ft. | 48 | | | | | | | | | | | | | | | 48 | | | |
| 25 | Install 24" P ₃ | Lin. Ft. | 108 | | | | | | | | | | | | | | | 108 | | | |
| 26 | Install 30" P ₃ | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 27 | Install 36" P ₃ | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 28 | P ₁ Culvert Haul | Ton Mile | | | | | | | | | | | | | | | | | | | |
| 29 | P ₃ Culvert Haul | Ton Mile | 27.51 | | | | | | | | | | | | | | | 27.51 | | | |
| 30 | Remove old culverts | Lin. Ft. | 30 | | | | | | | | | | | | | | | 30 | | | |
| 31 | Replace old culverts | Lin. Ft. | 30 | | | | | | | | | | | | | | | 30 | | | |
| 32 | Finishing & Seeding | 100 Sq. Yds. | 123 | | | | | | | | | | | | | | | 123 | | | |
| TOTAL ESTIMATED COST OF GRADING | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |
| 33 | Culv. Material | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 34 | Culv. Material | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 35 | C.M. Culv. Material 15" | Lin. Ft. | 80 | | | | | | | | | | | | | | | 80 | | | |
| 36 | Culv. Material | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 37 | Culv. Material | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 38 | P ₃ Culv. Material 18" | Lin. Ft. | 48 | | | | | | | | | | | | | | | 48 | | | |
| 39 | P ₃ Culv. Material 24" | Lin. Ft. | 108 | | | | | | | | | | | | | | | 108 | | | |
| 40 | P ₃ Culv. Material 30" | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 41 | P ₃ Culv. Material 36" | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| TOTAL ESTIMATED COST OF PORTABLE CULVERT MATERIAL | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |
| 42 | Gravel Pit Stripping | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 43 | Screening | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 44 | Loading | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 45 | Hauling | Cu. Yd. Mile | | | | | | | | | | | | | | | | | | | |
| 46 | Shaping & Compacting | Man Hour | | | | | | | | | | | | | | | | | | | |
| 47 | Shaping & Compacting | Man & Team Hour | | | | | | | | | | | | | | | | | | | |
| 48 | | | | | | | | | | | | | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | | | | | |
| 51 | | | | | | | | | | | | | | | | | | | | | |
| TOTAL ESTIMATED COST OF GRAVEL HAUL | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |
| 52 | Gravel Material F. O. B. Pit | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 53 | Freight (If any) | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 54 | Unloading from Cars | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| TOTAL ESTIMATED COST OF GRAVEL MATERIAL | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |
| 55 | Fine Grading - Exo. & Emb. | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 56 | Shoulders - Earth | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 57 | | | | | | | | | | | | | | | | | | | | | |
| 58 | | | | | | | | | | | | | | | | | | | | | |
| 59 | Pavement | Sq. Yd. | | | | | | | | | | | | | | | | | | | |
| 60 | Integral Curb | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 61 | Sloping Curb | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 62 | Surface Drain | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 63 | Surface Drain Basins | Basin | | | | | | | | | | | | | | | | | | | |
| 64 | Bridge Approach Slabs (Square) | Slab | | | | | | | | | | | | | | | | | | | |
| 65 | Bridge Approach Slabs (Rect.) | Slab | | | | | | | | | | | | | | | | | | | |
| 66 | | | | | | | | | | | | | | | | | | | | | |
| 67 | | | | | | | | | | | | | | | | | | | | | |
| 68 | | | | | | | | | | | | | | | | | | | | | |
| TOTAL ESTIMATED COST OF PAVEMENT CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |
| 69 | Concrete | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 70 | Reinforcing Steel | Lb. | | | | | | | | | | | | | | | | | | | |
| 71 | Excavation - Earth | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 72 | Excavation - Loose Rock | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 73 | Excavation - Solid Rock | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 74 | Bridge | * Bridge No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | Br. No. | | |
| 75 | Station | | | | | | | | | | | | | | | | | | | | |
| 76 | Concrete | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| 77 | Reinforcing Steel | Lb. | | | | | | | | | | | | | | | | | | | |
| 78 | Structural Steel | Lb. | | | | | | | | | | | | | | | | | | | |
| 79 | Piling | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 80 | Temporary Crossing | Lump Sum | | | | | | | | | | | | | | | | | | | |
| 81 | Removing old Bridge | Lump Sum | | | | | | | | | | | | | | | | | | | |
| 82 | Bituminous Surface | Sq. Yd. | | | | | | | | | | | | | | | | | | | |
| 83 | | | | | | | | | | | | | | | | | | | | | |
| 84 | | | | | | | | | | | | | | | | | | | | | |
| TOTAL ESTIMATED COST OF STRUCTURES | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |
| 85 | Guard Rail (Cable) | Lin. Ft. | | | | | | | | | | | | | | | | | | | |
| 86 | Guard rail anchors | Each. | | | | | | | | | | | | | | | | | | | |
| 87 | Excavation for Gutter | Cu. Yd. | | | | | | | | | | | | | | | | | | | |
| TOTAL ESTIMATED COST OF MISCELLANEOUS ITEMS | | | | | | | | | | | | | | | | | | | | | |
| (IN 'TOTALS' COLUMN) | | | | | | | | | | | | | | | | | | | | | |

SEED MAT'L TO BE FURNISHED BY RAMSEY COUNTY

TYPICAL CROSS SECTIONS AND DETAILS

| | | | | | | |
|---------------------|-------|--------------------|------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | SEC. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| 4 | MINN. | | | | | |



NOTE: All details to conform to 86 C.R.W.

CONVENTIONAL SIGNS & ABBREVIATIONS

| | | | | |
|-----------------------------|-------|----------------------------|-------|--------|
| STATE LINE | ----- | EXCAVATION | | F |
| COUNTY LINE | ----- | EMBANKMENT | ----- | F |
| TOWNSHIP LINE | ----- | OVERHAUL | ----- | H |
| SECTION LINE | ----- | SURFACING | ----- | S |
| CITY, VILLAGE, OR BOROUGH | ----- | GUARD RAIL | ----- | GR |
| FENCE LINE | ----- | INTERSECTION ANGLE | ----- | A |
| RIGHT-OF-WAY LINE | ----- | RADIUS | ----- | R |
| TRAVELLED WAY | ----- | ELEVATION | ----- | EL |
| RAILROADS | ----- | VERTICAL CURVE | ----- | V.C. |
| RETAINING WALL | ----- | BEKCH MARK | ----- | B.M. |
| BASE OR SURVEY LINE | ----- | SECTIONAL CONCRETE CULVERT | ----- | P.C. |
| LEVEE | ----- | CORRUGATED METAL CULVERT | ----- | C.M. |
| GRAVEL PIT | ----- | CULVERT HAUL | ----- | P.H. |
| SAND PIT | ----- | TON MILES | ----- | T.M. |
| CLAY PIT | ----- | PLACE | ----- | P |
| ROCK QUARRY | ----- | IN PLACE | ----- | INP |
| CULVERTS | ----- | REPLACE | ----- | REP |
| PLAIN | ----- | RIGHT | ----- | R |
| WITH FACE WALLS | ----- | LEFT | ----- | L |
| WITH WING WALLS | ----- | HAND DITCHING | ----- | H.D. |
| DROP INLET | ----- | POINT OF CURVE | ----- | P.C. |
| POWER POLE LINE | ----- | POINT OF TANGENT | ----- | P.T. |
| TELEPHONE OR TELEGRAPH LINE | ----- | POINT OF INTERSECTION | ----- | P.I. |
| MARSH | ----- | SPECIAL EXCAVATION | ----- | S.E. |
| HERD, BRUSH, OR THICKER | ----- | SPECIAL FLOWING | ----- | S.P. |
| GROUND ELEVATION | ----- | TELEPHONE POLE | ----- | TEL.P. |
| GRADE ELEVATION | ----- | | | |

OFFICE OF COUNTY SURVEYOR

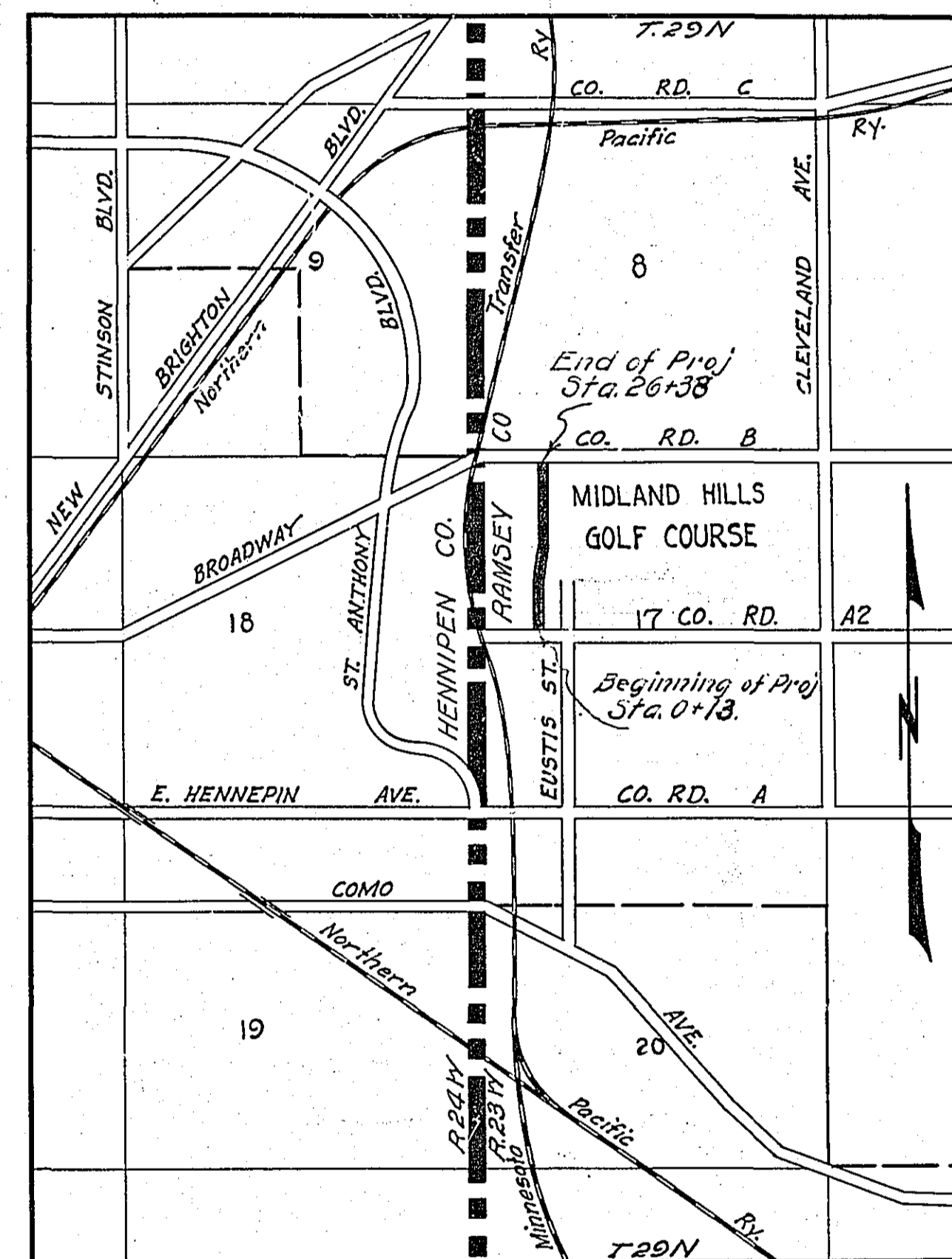
RAMSEY COUNTY

Plan and Profile of County Project No. 32-67

From a point 662' E. and 13' N. of W. 1/4 Cor. of Sec. 17-29-23 To a point 792' E. and 15' S. of N-W. Cor. of Sec. 17-29-23

GROSS LENGTH- 2625.00 FEET 0.50 MILES
 LENGTH OF EXCEPTIONS- 0.00 FEET 0.00 MILES
 NET LENGTH- 2625.00 FEET 0.50 MILES
 PLAN, 1 Inch = 100 Feet
 PROFILE, Horz. 1 Inch = 100 Feet. Vert. 1 Inch = 10 Feet
 WORKING PLANS (Horz. 1 Inch = 100 Feet
 Vert. 1 Inch = 10 Feet
 Cross-Sections, 1 Inch = 5 Feet

LAYOUT
 SCALE, 1 Inch = 2640 Feet



INDEX OF SHEETS

Sheet No. 1. Title Sheet and Layout Map
 " No. 2. Typical Cross-Sections and Statement
 " No. 3. Plan and Profile, Sta. 0+13 to Sta. 26+38
 " No. 4. to 8 Inc. Cross Sections

Regraded -
 now T.H. 280

Date of Resolution for Preparation of Plans Sept 14, 1931
 Planned by W. W. Gabel ASSISTANT ENGINEER
 Recommended for Approval [Signature] ASSISTANT ENGINEER
 Plans Approved and Recommended for Consideration [Signature] COUNTY SURVEYOR
 Approved by County Board 3/17 1933 [Signature] CHAIRMAN OF COUNTY BOARD