PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY LINE
RIVER OR CREEK (NAME)
DRY RUN (SIZE)
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE

ALLEN NELSON MAPLE GROVE

MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR BRIDGE NO. L-6219 REPLACEMENT

LOCATED ON C.R. 129 **BETWEEN** C.S.A.H. 32 (APPROX. 1520' EAST OF S.E. COR.) **AND** C.S.A.H. 10 (APPROX. 1596' EAST OF S.E. COR.) **(GEOGRAPHIC DESCRIPTION)**

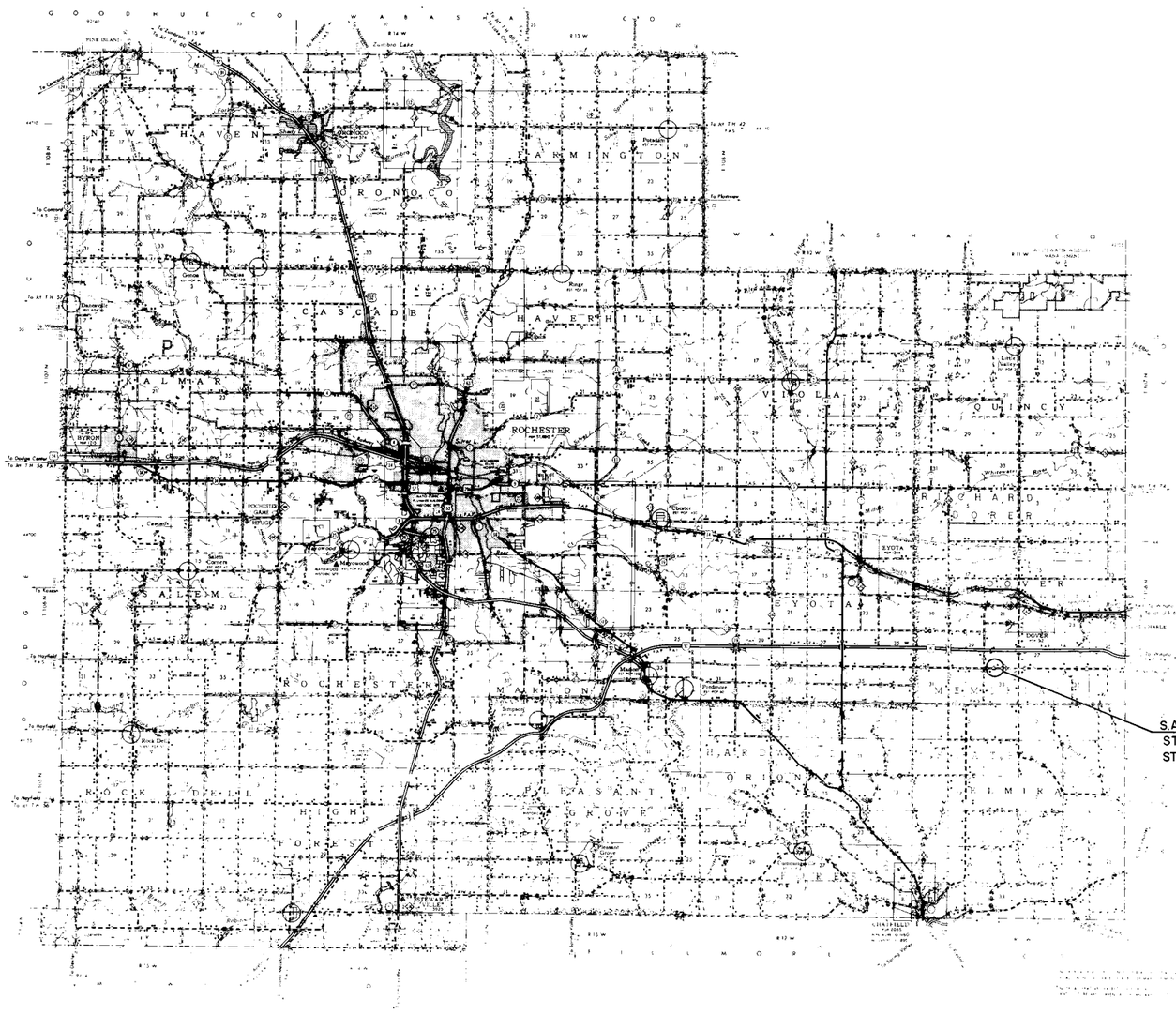
FROM SEC. 28 T106N-R11W **TO** SEC. 28 T106N-R11W **(LEGAL DESCRIPTION)**

STATE PROJ. NO. .....

GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	FEET	MILES

~~**STATE PROJ. NO.**~~ S.A.P. 55-598-33

GROSS LENGTH	76	FEET	0.014 MILES
BRIDGES-LENGTH	0	FEET	0 MILES
EXCEPTIONS-LENGTH	0	FEET	0 MILES
NET LENGTH	76	FEET	0.014 MILES



SCALES

PLAN	100 FEET
PROFILE	100' HORIZ. & 10' VERT.
INDEX MAP	10560 FEET
GENERAL LAYOUT	10 FEET

MINN. PROJ. NO. .....

THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ____ CONSTRUCTION" SHALL GOVERN

INDEX

SHEET NO. 1 TITLE SHEET
" " 2 QUANTITIES
" " 3&4 BRIDGE SURVEY SHEETS

DESIGN DESIGNATION

R .....

ADT (Current Year)	=	93
ADT (Future Year)	=	
DHV (Design Hr. Vol.)	=	
D (Directional Distr.)	=	%
T (Heavy Commercial)	=	%
SOIL FACTOR	130 %	

ΣN18 (20) .....

Design Speed 50 MPH

Based on STOPPING Sight Distance

Height of eye 3.5 Height of object 0.5'

Design Speed not achieved at:

STA.	TO STA.	MPH
STA.	TO STA.	MPH
STA.	TO STA.	MPH

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 2-13-86 REG. NO. 10219 ENGR. J.K. Dolan

COUNTY Olmsted

Recommended for Approval ..... 19 ..
DISTRICT STATE AID ENGINEER

Recommended for Approval Julie Skallman 4-21 19 86
STATE AID PLANS AND SPECS ENGINEER

Approved 6-27 19 88 for Loyd T. Swanson
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. 55-598-33
~~**STATE PROJ. NO.**~~ .....

SHEET NO. 1 **OF** 4 **SHEETS**

ESTIMATED QUANTITIES

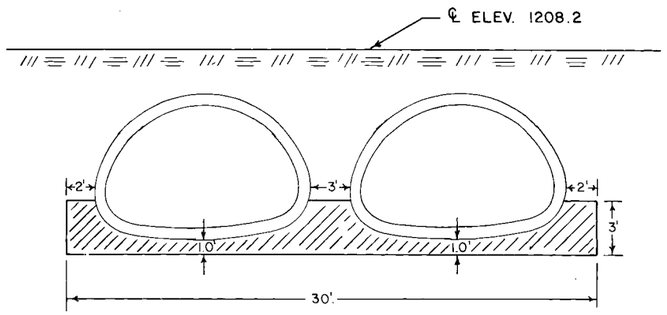
SPECIFICATION NO.	ITEM	UNIT	PARTICIPATING	NON-PARTICIPATING	TOTAL ESTIMATED QUANTITIES
2442.501	REMOVE OLD BRIDGE	LUMP SUM		1	1
2451.507	GRANULAR BEDDING (CV) (P)	CU. YD.	98		98
2501.521	122" SPAN R.C.P.-ARCH CULVERT CL. II A	LIN. FT.	80		80
2501.525	122" SPAN R.C.P.-ARCH APRONS	EACH	4		4
2511.501	RANDOM RIPRAP CL. III	CU. YD.	117		117
2511.511	GRANULAR FILTER	CU. YD.	49		49

STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

PLATE NO		DESCRIPTION
0004	A	SPECIFICATION REFERENCE TO STANDARD PLATES
3007	A	SHEAR REIFORCMENT FOR PRECAST DRAINAGE STRUCTURES
3014	J	REINFORCED CONCRETE PIPE ARCH DETAIL
3114	G	SECTIONAL CONC. APRON FOR REINFORCED CONC. PIPE ARCH
3133	B	RIPRAP AT R.C.P OUTLETS
3145	D	CONCRETE PIPE TIES
8000	H	STANDARD BARRICADES

GANULAR BEDDING DETAIL



NOTE: GRANULAR BEDDING UNDER BARREL ONLY

NOTE: BACKFILLING OF CULVERT WILL BE COMPLETED USING MATERIAL LEFT OVER FROM STRUCTURE EXCAVATION.

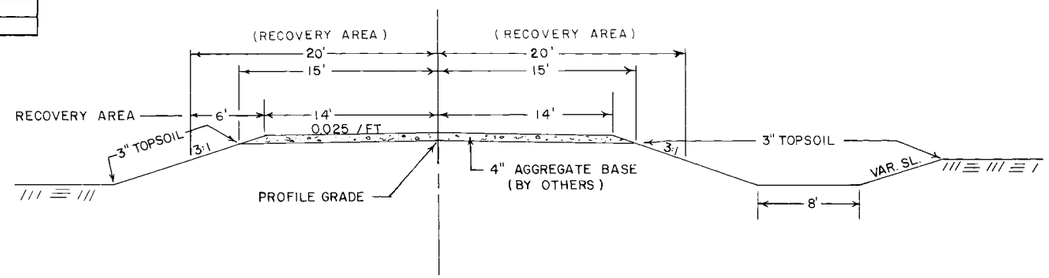
NOTE: ALL DIMENSIONS AND SLOPES SHOWN ON TYPICAL SECTION ARE APPROXIMATE.

NOTE: EXCAVATION FOR R.C.P.-ARCH CULV. WILL BE INCIDENTAL AND INCLUED FOR PAYMENT UNDER UNIT PRICE FOR R.C.P. – ARCH CULVERT.

NOTE: REMOVAL OF RETAINING WALL WILL BE INCIDENTAL AND INCLUDED FOR PAYMENT UNDER UNIT PRICE FOR REMOVAL OF OLD BRIDGE.

NOTE: EXCESS MATERIAL FROM STRUCTURAL EXCAVATION AND RIPRAP PLACEMENT IS TO BE USED IN THE ROADWAY EMBANKMENT.

TYPICAL SECTION



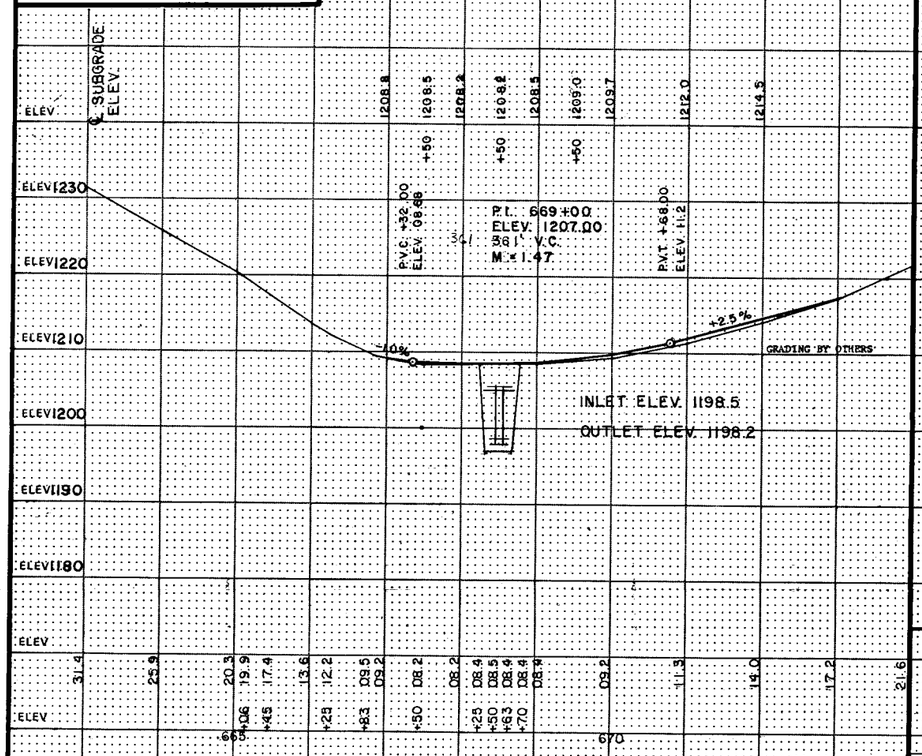
S. A. P. 55-598-33

~~State Proj. No.~~

ALBINSON, INC. MINNEAPOLIS 55401

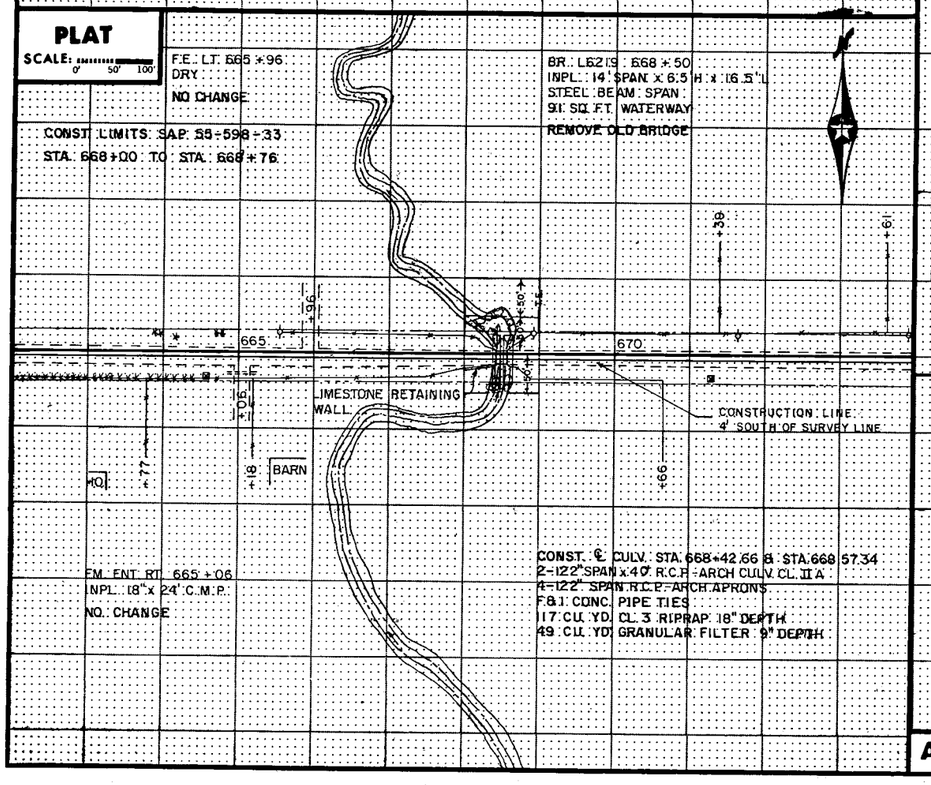
CONTRACTED PROFILE

SCALE: HOR. 0' 50' 100' VER. 0' 5' 10'



PLAT

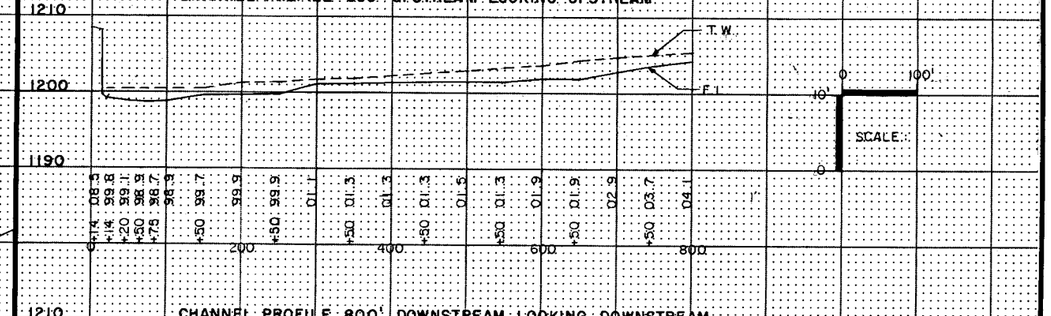
SCALE: 0' 50' 100'



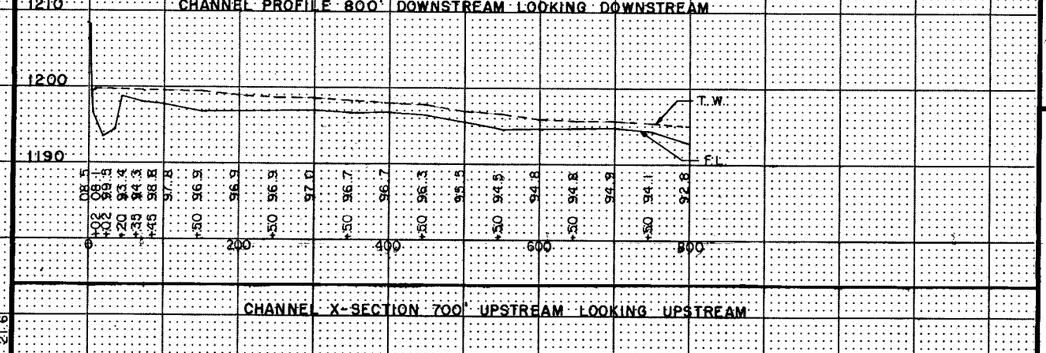
TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN

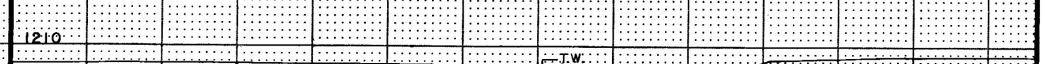
CHANNEL PROFILE 800' UPSTREAM LOOKING UPSTREAM



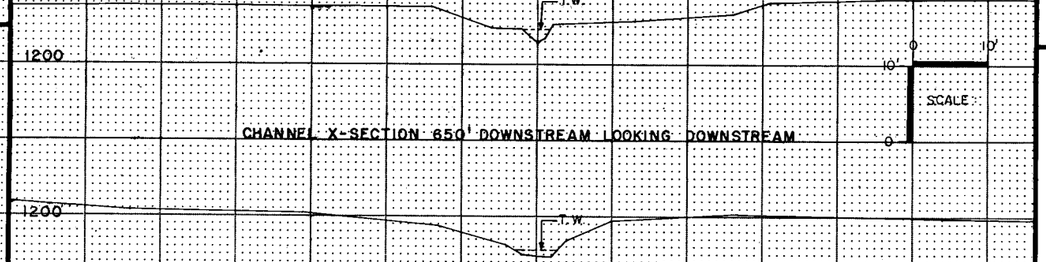
CHANNEL PROFILE 800' DOWNSTREAM LOOKING DOWNSTREAM

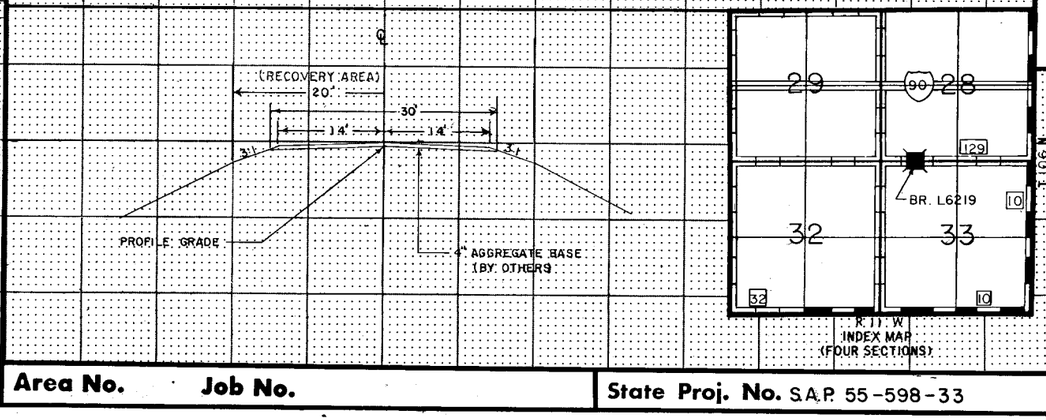


CHANNEL X-SECTION 700' UPSTREAM LOOKING UPSTREAM



CHANNEL X-SECTION 650' DOWNSTREAM LOOKING DOWNSTREAM





Fed. Proj. No.

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

1. Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.

2. Other bridges or culverts over the same stream (particularly structures which carry high water without overflow of roadway) :Given location, type, length, height above high water, cross-sectional area etc.

3. Apparent highwater elevation..... Obtained from.....

4. Other data: Approx. velocity of water at time of survey.....

HYDRAULIC ENGINEERS RECOMMENDATION

DATE .....

Stream or ditch designation ....UNNAMED....

Drainage area ....1.4 SQ. MILES....

Max. flood on record. .....Design flood (...50...yr. freq.) .614... C.F.S.

Max. observed highwater elevation .UNKNOWN.Design highwater elevation.1205.9...

Design mean velocity through structure ....6.1....F.P.S.0.9 STAGE INCREASE

Low superstructure at or above elevation .....

Flowline elevation ....1198.5.....Skew angle...0...

Waterway area req'd. below elevation ..... = ...Sq. Ft. at Rt. angles to channel

In the interest of flood plain zoning the regional flood (100 yr. freq.) is....770 C.F.S. at stage 1206.8 and mean velocity of....7.5.....F.P.S. with....1.4.....Ft. swellhead. The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

FOUNDATION ENGINEERS RECOMMENDATION

DATE .....

Bridge survey sheets made from: SURVEY CONDUCTED BY OLMSTED COUNTY

Bench mark elevation. 1207.16 (M.S.L. 1929 Adj.)
Location: PAINT MARK TOP W. END RETAINING WALL S.W. COR. BR. L6219

MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT 12.07 ON C.R. 129 (T.H., C.S.A.H., C.R. etc.)

PROPOSED BRIDGE LOCATED 0.7 MILES W OF JCT. C.S.A.H. 10

SEC. 33 TWP 106 R 11W

TOWNSHIP DOVER COUNTY OLMSTED

BRIDGE NO. L6219

Area No. Job No.

State Proj. No. S.A.P. 55-598-33

Sheet No. 3 of 4 Sheets

Fed. Proj. No.

50' TEMPORARY EASEMENT

50' TEMPORARY EASEMENT

RANDOM RIPRAP CL. 3
18" DEPTH

GRANULAR FILTER
9" DEPTH

SCALE: 0 10' 20'

40'

50'

33'

667 + 00

668 + 00

669 + 00

670 + 00

+42.66

+50

+57.34

4'

BEGIN S.A.P. 55-598-33
STA. 668+00

CONSTRUCTION LINE

END S.A.P. 55-598-33
STA. 668+76

RANDOM RIPRAP CL. 3
24" DEPTH

GRANULAR FILTER
9" DEPTH

5'

PLAN

℄ SUBGRADE ELEVATIONS

BEGIN S.A.P. 55-598-33 STA. 668+00

END S.A.P. 55-598-33 STA. 668+76

1:1 SL.

INLET EL. 1198.5

OUTLET EL. 1198.2

GRANULAR BEDDING

℄ PROFILE
PROFILE 20' LT.
PROFILE 20' RT.

1220
1210
1200
1190
1180

09.2 08.2 08.2 08.2 08.4 08.4 08.5 08.4 08.4 08.5

667 668 669 670

+50 +25 +35 +50 +63 +70

0 10' 20'

SCALE: 20' 10' 0

ELEVATION

BORINGS SHOWN [ ] TAKEN WITH
STD 140 LB HAMMER
30 INCH DROP
2 INCH O.D. SAMPLER

BRIDGE SURVEY PLAN AND PROFILE

DES: DR: APPROVED:
CHK: CHK:

S.A.P. 55-598-33

Sheet No. 4 of 4 Sheets

Bridge No.
L 6219