MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR AGGREGATE SHOULDER & CONCRETE OVERLAY

LOCATED ON C.S.A.H. 10 **BETWEEN** INTERSTATE 90 **AND** DOVER **(GEOGRAPHIC DESCRIPTION)**

FROM 2955.0 N. OF N.W. COR. SEC. 34 T106N R11W **TO** 246.95' N. OF S.1/4 COR. SEC. 22 T106N R11W **(LEGAL DESCRIPTION)**

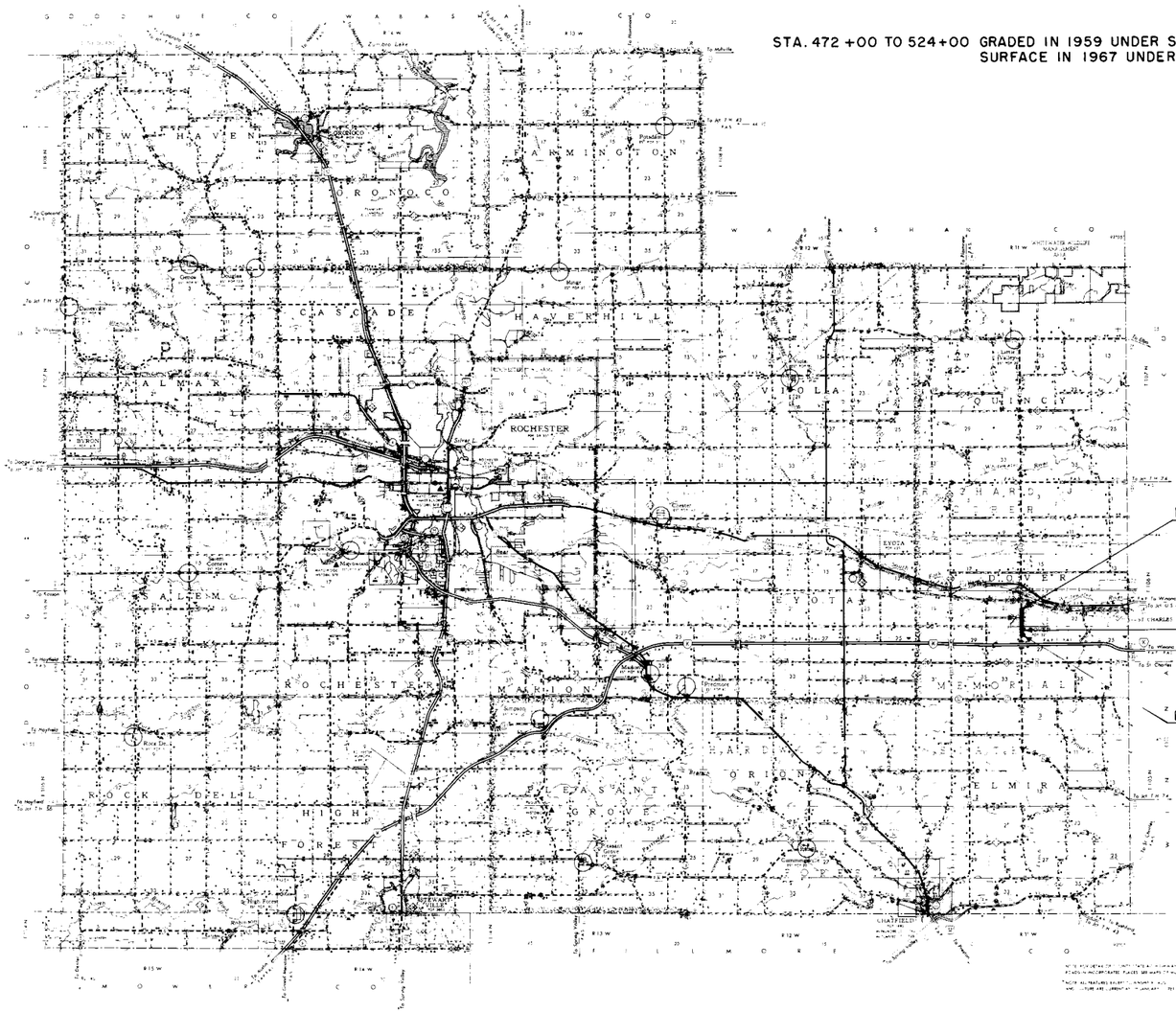
~~**STATE PROJ. NO:**~~

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

~~**STATE PROJ. NO:**~~ S.A.P. 55-610-14

GROSS LENGTH	5200	FEET	0.9848 MILES
BRIDGES-LENGTH	24	FEET	.0045 MILES
EXCEPTIONS-LENGTH	0	FEET	0 MILES
NET LENGTH	5200	FEET	0.9848 MILES

STA. 472+00 TO 524+00 GRADED IN 1959 UNDER S.A.P. 55-610-01
SURFACE IN 1967 UNDER S.A.P. 55-610-03



END: S.A.P. 55-610-14
STA. 524+00.00

BRIDGE NO. 89170

BEGIN: S.A.P. 55-610-14
STA. 472+00.00

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
DRAINAGE DITCH (S.28)
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 (C.B.)
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 S" STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
ADDEN HUB
GRAVEL PIT (G)
SAND PIT (S)
BORROW PIT (B)
ROCK QUARRY (Q)
SLOPE EASEMENT SE

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 (G)
WATER MAIN (I)
CONDUIT
TELEPHONE CABLE IN CONDUIT (T)
ELECTRIC CABLE IN CONDUIT (P)
TELEPHONE MANHOLE (T)
ELECTRIC MANHOLE (P)
BURIED TELEPHONE CABLE (T-BUR)
BURIED ELECTRIC CABLE (P-BUR)
AERIAL TELEPHONE CABLE (T-AE)
SEWER, (SANITARY OR STORM)
SEWER MANHOLE

SCALES

PLAN ——— 100 FEET
PROFILE ——— 100' HORIZ & 10' VERT
INDEX MAP ——— 10,560 FEET
GENERAL LAYOUT ———

STATE AID TITLE SHEET

MINN. PROJ. NO.

SPECIFICATIONS REFERENCE

The 1978 Edition of the Minnesota Department of Transportation "Standard Specifications For Highway Construction" Shall Govern.

INDEX

SHEET NO. 1	TITLE SHEET & LAYOUT MAP
SHEET NO. 2	ESTIMATE OF QUANTITIES & TYPICAL SECTIONS
SHEET NO. 3	PAVEMENT JOINTS
SHEET NO. 4-5	PLAN & PROFILE

DESIGN DESIGNATION

R
ADT (Current Year) = 600
ADT (Future Year) = 1200
DHV (Design Hr. Vol.) =
D (Directional Distr.) = %
T (Heavy Commercial) = %
SOIL FACTOR 130
PROJ. H.C.A.D.T. ONEWAY – 30
PROJ. TST H.C.A.D.T. ONEWAY – 20

$\Sigma N18_{(20)}$
Design Speed 45 MPH
Based on STOPPING Sight Distance
Height of eye 3.75 Height of object 0.5
Design Speed not achieved at:
STA. TO STA. MPH
STA. TO STA. MPH
STA. TO STA. MPH
9 TON DESIGN

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 3-17-83 REG. NO. 10444 ENGR. [signature]

COUNTY Olmsted

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

Recommended for Approval Delbert D. Olstad 3-23 1983
STATE AID PLANS AND SPECS ENGINEER

Approved 3/25 1983 [signature]
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. 55-610-14
~~**STATE PROJ. NO.:**~~

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	MUNICIPIAL	RURAL	TOTAL ESTIMATED QUANTITIES
2021.501	MOBILIZATION	LUMP SUM	0.56	0.44	1
2221.501	AGGREGATE SHOULDERING, CLASS 3	TON	610	460	1070
2221.501	AGGREGATE SHOULDERING, CLASS 2	TON	920	775	1695
2301.501	CONCRETE PAVEMENT (P)	SQ. YD.	6651	5616	12,267
2301.511	STRUCTURAL CONCRETE (OVERLAY)	CU. YD.	1201	1014	2,215
2331.504	BITUMINOUS MAT'L. FOR MIXTURE	TON	9	7	16
2331.516	SHOULDER MIXTURE	TON	141	117	258
2357.502	BITUMINOUS MAT'L. FOR TACK COAT	GALLON	53	27	80

(P) PLAN QUANTITY.

CONSTRUCTION NOTES

GRADES:

THE CENTERLINE GRADE FOR PAVING WILL BE ESTABLISHED BY THE OLMSTED COUNTY HIGHWAY DEPT.

JOINTS:

ALL CONTRACTION JOINTS, ALL LONGITUDINAL JOINTS AND HEADER JOINTS WILL BE INCIDENTAL TO ITEM NO. 2301.501 CONCRETE PAVEMENT AND NO DIRECT COMPENSATION WILL BE MADE THERE FOR.

REINFORCED PANEL OVER CULVERTS:

REINFORCED CONCRETE PANELS OF THE LENGTH INDICATED AT LOCATIONS LISTED BELOW SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD DETAIL PLATE NOTED IN THE PLANS, MODIFIED TO THE EXTENT THAT A DOWELED TRANSVERSE JOINT WILL NOT BE REQUIRED. REINFORCED PANELS WILL BE INCIDENTAL TO ITEM NO. 2301.501 CONCRETE PAVEMENT AND NO DIRECT COMPENSATION WILL BE MADE THERE FOR.

STA. 484+17 — 14', 17', 14' PANEL
507+96 — 18' PANEL

CONCRETE PAVEMENTS NON-REINFORCED:

- CONCRETE PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD DETAIL PLATE NOTED IN THE PLANS, MODIFIED TO THE EXTENT THAT DOWELS WILL NOT BE REQUIRED IN THE LAST TEN CONTRACTION JOINTS AT END OF PROJECT.

AGGREGATE SHOULDERING, CLASS 2:

ITEM NO. 2221.501 AGGREGATE SHOULDERING CLASS 2 INCLUDES 270 TONS FOR 11 ENTRANCES AND APPROACHES AND 1355 TONS FOR SHOULDERING.

SHOULDER MIXTURE:

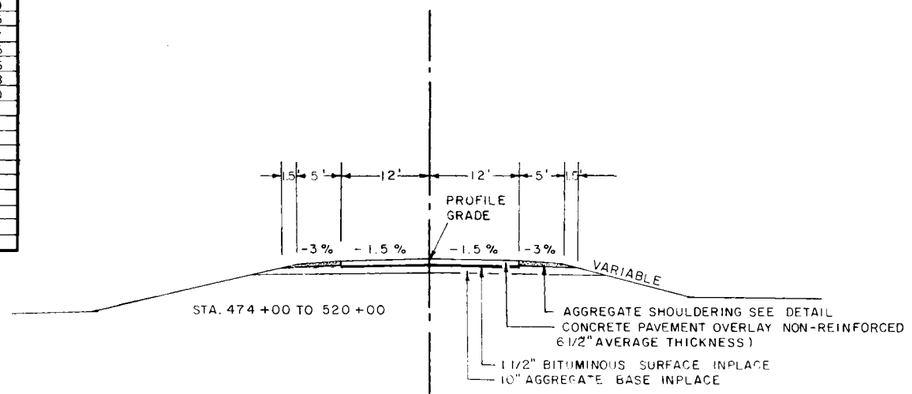
ITEM NO. 2331.516 SHOULDER MIXTURE INCLUDES 90 TONS FOR 4 ENTRANCES AND APPROACHES, AND 167 TONS FOR BITUMINOUS OVERLAY FROM STA. 472+00 TO STA. 474+00 AND FROM STA. 520+00 TO STA. 524+00.

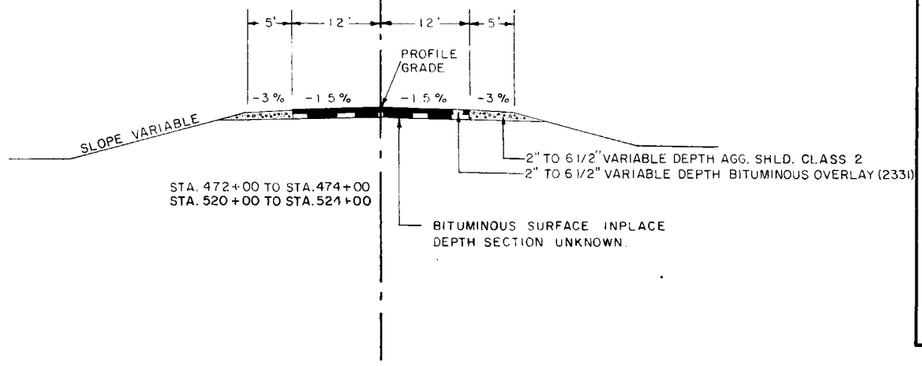
STANDARD PLATES

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

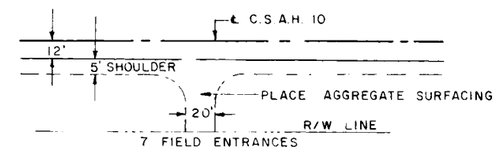
PLATE NO.		DESCRIPTION
0003	A	SPECIFICATION REFERENCE TO STANDARD PLATES.
1016	G	CONCRETE PAVEMENTS NON-REINFORCED.
1070	I	REINFORCED PANEL OVER CULVERTS.
1120	R	CONTRACTION JOINTS
1140	R	LONGITUDINAL JOINTS
1141	B	PAVEMENT KEYWAY FOR KEYED JOINT CONSTRUCTION
1150	N	CONSTRUCTION OF HEADER JOINTS
8000	H	STANDARD BARRICADES

TYPICAL SECTION

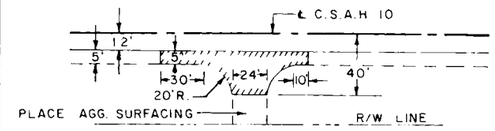




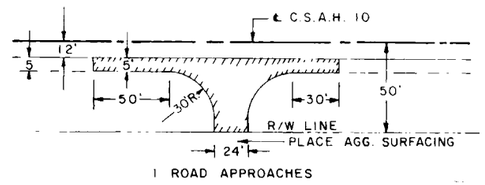
APPROACHES AND ENTRANCES



7 FIELD ENTRANCES



3 FARM AND RES. ENTRANCES

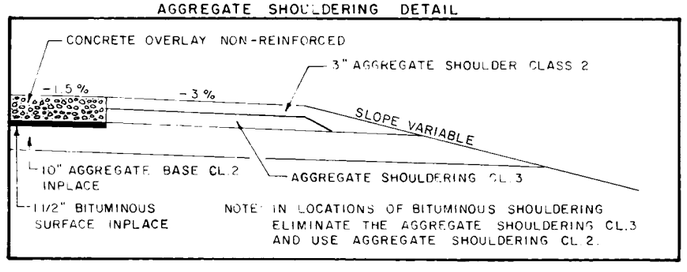


1 ROAD APPROACHES

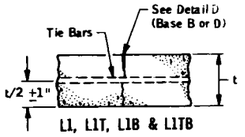
▨ DESIGNATES BITUMINOUS SURFACING

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

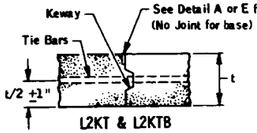
AGGREGATE SHOULDERING DETAIL



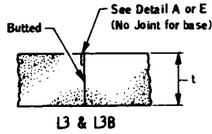
Fed. Proj. No.



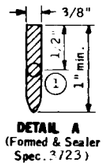
L1, L1T, L1B & L1TB



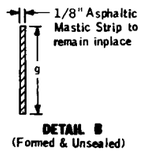
L2KT & L2KTB



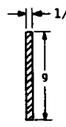
L3 & L3B



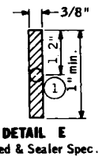
DETAIL A
(Formed & Sealer Spec. 3723)



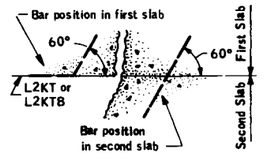
DETAIL B
(Formed & Unsealed)



DETAIL D
(Sawed & Sealer Spec. 3723)
(Base joints unsealed)



DETAIL E
(Sawed & Sealer Spec. 3723)



TIE BAR BENDING DETAIL

TYPE L1 JOINT DEPTHS

Pav't. Thickness	Non-Reinf. Pav't.	Reinforced Pav't.	Concrete Base
t	g	g	g
6"	2"		2"
6-1/2"	2"		2"
7"	2-1/4"		2-1/4"
7-1/2"	2-1/4"		2-1/4"
8"	2-1/2"	2-1/2"	2-1/2"
8-1/2"	2-1/2"	2-1/2"	2-1/2"
9"	2-3/4"	2-3/4"	2-3/4"
10"	3"	3"	3"

LONGITUDINAL JOINTS

CLASS DESIGNATION				JOINT DETAIL	JOINT SEALER SPEC.
Without Tie Bars	With Tie Bars	With Keyway & Tie Bars	Butted		
L1 L1B	L1T L1TB	L2KT L2KTB	L3 L3B	D B or D A or E None	3723 Unsealed 3723 Unsealed

LEGEND

L = Longitudinal Joint
No. = Joint Reference
T = Tie Bars
K = Keyway
B = Concrete Base

EXAMPLE

L2KT
- Tie Bars
- Keyway
- Joint Reference
- Longitudinal Joint

LONGITUDINAL JOINT NOTES

Tie bars for L1TB joints shall be the same size and spacing as shown on standard plan sheet 5-297.217.

Except when noted otherwise in the plans the tie bar spacing for all L2KT and L2KTB joints shall be 2' 6" c. to c. and bent 60° as shown.

Tie bars in the L2KT and L2KTB Joints shall be the same size and length as used for the L1T or L1TB Joints when tying pav't. to pav't. or base to base. Tie bars in the L2KT or L2KTB joints shall be No. 4 x 2' 6" when tying curb and gutter to pav't. or base.

All tie bars shall meet the requirements of Grade 60 for AASHO M-31 or M-53.

Normally, tied pavement widths shall not exceed 30 feet except bridge approach panels and pavement tapers.

Joint width tolerance, +1/16", -1/32".

Spec. 3723 Sealer - Top of sealer flush to -3/16" below top of pavement surface.

(1) Just prior to sealing joint (Detail A&E) a paper rope with a 1/8" larger diameter than the joint opening may be placed 1/2" below the top of the pavement.

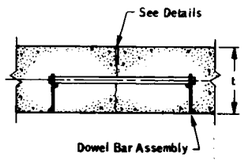
GENERAL NOTES:

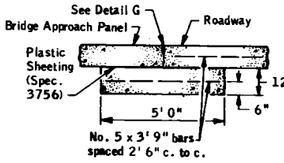
See the following standard plates and standard plan sheet for additional details: Dowel Bar Assembly 1103; Pav't. Keyway 1141; and Concrete Pavement with Skewed Joints 5-297.217.

See paving layouts in the plans for joint class designations to be used and special reinforcement required.

APPROVED June 8, 1981
R. O. Kipp
Director
OFFICE OF ENGINEERING STANDARDS

LONGITUDINAL JOINTS
DESIGN L





CONCRETE SILL
(Included as part of C3S joint)

LEGEND

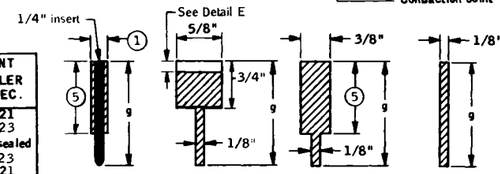
C = Contraction Joint
No. = Joint Reference
-1 = Hot Poured Seal 3723
D = Dowel Bars
S = Concrete Sill
B = Concrete Base

EXAMPLE

C1DB
- Concrete Base
- Dowel Bars
- Joint Reference
- Contraction Joint

CONTRACTION JOINTS

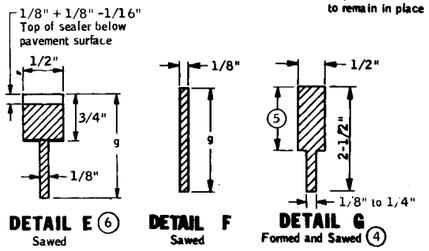
CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITHOUT DOWELS	WITH DOWELS		
C1	C1D	A or C	3721
C1-1	C1D-1	A or B	3723
C1B	C1DB	D or F	Unsealed
C2-1	C2D-1	B	3723
C3S		G	3721
C4	C4D	C	3721
C5-1	C5D-1	E	3723



DETAIL A Formed (Insert to be removed) **DETAIL B** (2) Sawed or Formed (3) **DETAIL C** Sawed **DETAIL D** Formed Asphaltic mastic strip to remain in place

MIN. CONTRACTION JOINT DEPTHS

Pav't. Thickness	Non-Reinf. Pav't.	Reinforced Pav't.	Concrete Base
t	g	g	g
6"	1-5/8"		1-1/4"
6-1/2"	1-5/8"		1-1/4"
7"	1-5/8"		1-1/2"
7-1/2"	1-5/8"		1-1/2"
8"	1-5/8"	2"	1-1/2"
8-1/2"	1-5/8"	2"	1-1/2"
9"	1-5/8"	2"	1-1/2"
10"	2"	2-1/2"	2"



DETAIL E (6) Sawed **DETAIL F** Sawed **DETAIL G** Formed and Sawed (4)

(1) Design C1 or C1D: Prior to installing preformed joint sealer in the formed joint, (Detail A) the joint shall be widened to a nominal width of 3/8" by sawing along the full length of the formed joint.

Design C1-1 or C1D-1: Prior to sealing formed joint (Detail A) with hot poured joint sealer, the joint shall be widened to a nominal width of 5/8" for a depth of 3/4", +1/8", -1/16", by sawing along the full length of the formed joint. Prior to sealing joint (Detail B) with hot poured joint sealer a strip of paper 5/8" wide shall be placed on the bottom of the 5/8" wide joint.

(2) Design C1-1 or C1D-1, C2-1 or C2D-1: Prior to sealing joint (Detail B) with hot poured joint sealer a strip of paper 5/8" wide shall be placed on the bottom of the 5/8" wide joint.

(3) Design C2-1 or C2D-1: Use insert for forming joint (no sawing permitted).

(4) Use 5/16" x 2" insert for forming joint. Final dimensions shall be obtained by sawing.

(5) Depth shall be 1/4" greater than preformed joint sealer when compressed to fit joint design width.

(6) Design C5-1 or C5D-1: Prior to sealing joint (Detail E) with hot poured joint sealer a strip of paper 1/2" wide shall be placed on the bottom of the 1/2" wide joint.

CONTRACTION JOINT NOTES

In concrete base construction the contraction joints shall be spaced at 30 foot intervals and at right angles to the longitudinal joints except as noted below. Where concrete base is constructed adjacent to existing pavement or base, the contraction joints in the new base shall match those in the existing pavement or base except that the spacing shall not be less than 15 feet nor more than 30 feet.

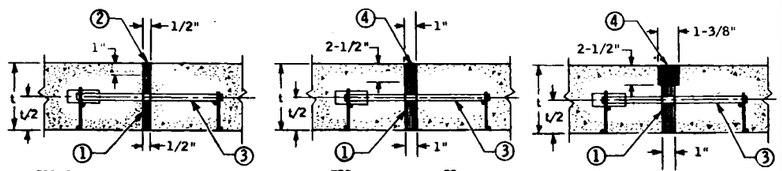
Joint width tolerances: +1/16", -1/32"

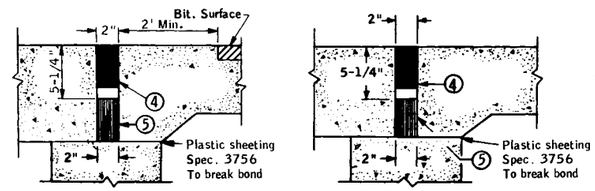
GENERAL NOTES:

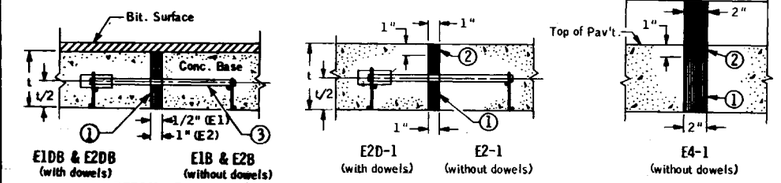
See the following standard plates and standard plan sheet for additional details: Dowel Bar Assembly 1103; Construction of Header Joints 1150, and Concrete Pavement with Skewed Joints 5-297.217.

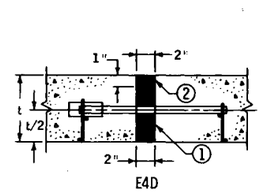
See paving layouts in the plans for joint class designation to be used and special reinforcement required.

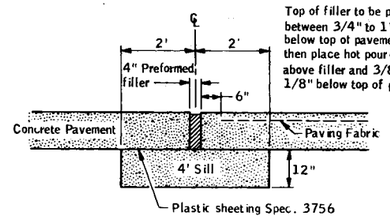
CONTRACTION JOINTS
DESIGN C











Top of filler to be placed between 3/4" to 1". below top of pavement, then place hot pour (2) above filler and 3/8" ± 1/8" below top of pav't.

DETAIL E&S JOINT

(1) Preformed Joint Filler Material - Spec. 3702

(2) Joint Sealer as specified. Top of sealer, flush to 1/8" below top of pavement surface. Top of sealer for curb section E joints flush with surface (0") ± 1/8".

(3) Dowel Bar Assembly See Std. Pl. 1103

(4) Joint Sealer - Spec. 3721 Refer to plans for details of sealer

(5) Preformed Joint Filler Material - Spec. 3702 or an approved sheet polystyrene.

LEGEND

E = Expansion Joint
No. = Joint Reference
-1 = Hot Poured Seal (2)
D = Dowel Bars
B = Concrete Base

EXAMPLE

E1D-1
- Hot Poured Seal (2)
- Dowel Bars
- Joint Reference
- Expansion Joint

EXPANSION JOINTS

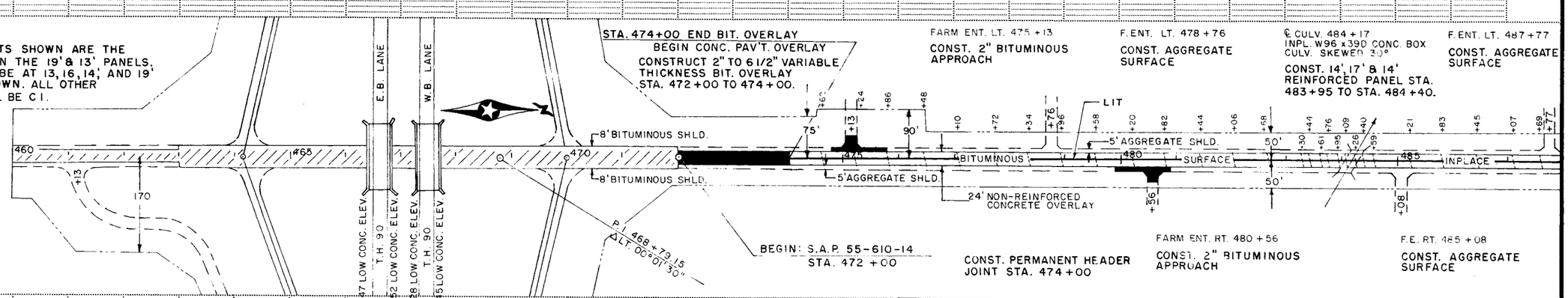
CLASS DESIGNATION		JOINT DETAIL	JOINT SEALER SPEC.
WITH DOWELS	WITHOUT DOWELS		
E1D-1	E1-1	A	(2)
E1DB	E1B	F	Unsealed
E2D	E2	B	3721
E2D-1	E2-1	G	(2)
E2DB	E2B	F	Unsealed
E3D	E3	C	3721
	E4	E	3721
	E4B	D	3721
	E4-1	H	(2)
E4D		I	(2)

EXPANSION JOINTS
DESIGN E

PAVEMENT JOINTS

Fed. Proj. No.

NOTE: C5-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19'& 13' PANELS. ROTATION OF JOINTS TO BE AT 13,16,14, AND 19' UNLESS OTHERWISE SHOWN. ALL OTHER CONTRACTION JOINTS SHALL BE C1.



STA. 474+00 END BIT. OVERLAY
BEGIN CONC. PAV'T. OVERLAY
CONSTRUCT 2" TO 6 1/2" VARIABLE THICKNESS BIT. OVERLAY STA. 472+00 TO 474+00.

CONST. PERMANENT HEADER JOINT STA. 474+00

FARM ENT. LT. 475+13
CONST. 2" BITUMINOUS APPROACH

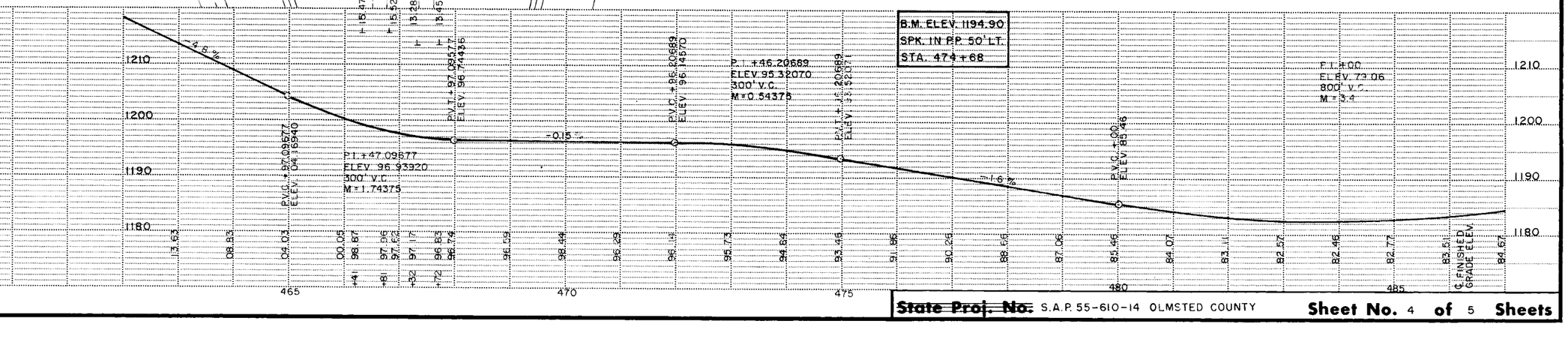
FARM ENT. RT. 480+56
CONST. 2" BITUMINOUS APPROACH

F.ENT. LT. 478+76
CONST. AGGREGATE SURFACE

F.E. RT. 485+08
CONST. AGGREGATE SURFACE

℄ CULV. 484+17
INPL. W96 x 39D CONC. BOX CULV. SKEWED 30°
CONST. 14', 17' & 14' REINFORCED PANEL STA. 483+95 TO STA. 484+40.

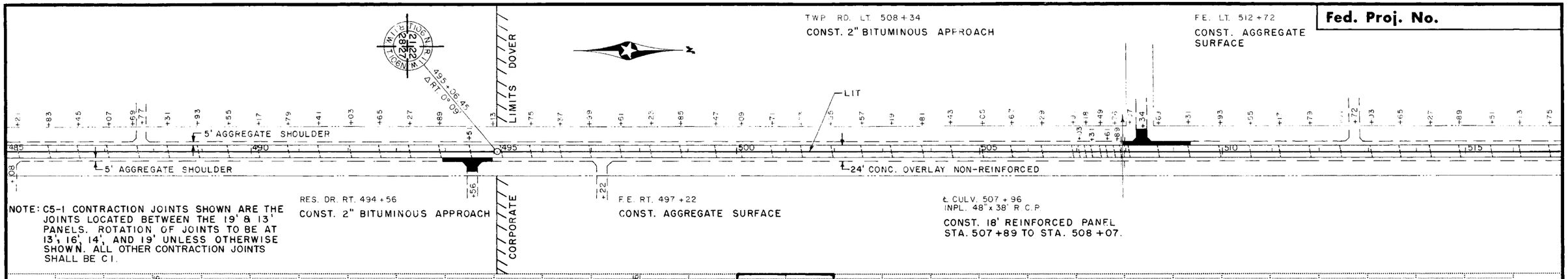
F.ENT. LT. 487+77
CONST. AGGREGATE SURFACE

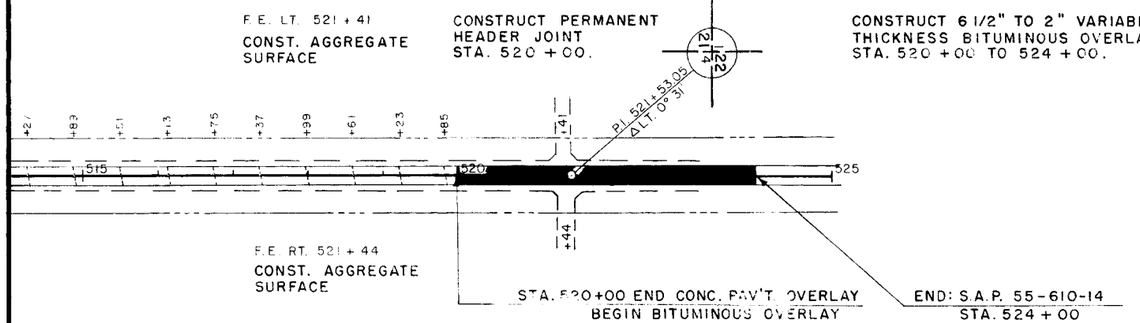


State Proj. No. S.A.P. 55-610-14 OLMSTED COUNTY

Sheet No. 4 of 5 Sheets

Fed. Proj. No.


TWP. RD. LT. 508+34
CONST. 2" BITUMINOUS APPROACH
F.E. LT. 512+72
CONST. AGGREGATE SURFACE
LIMITS DOVER
CORPORATE
LIT
5' AGGREGATE SHOULDER
5' AGGREGATE SHOULDER
24' CONC. OVERLAY NON-REINFORCED
RES. DR. RT. 494+56
CONST. 2" BITUMINOUS APPROACH
F.E. RT. 497+22
CONST. AGGREGATE SURFACE
℄ CULV. 507+96
INPL. 48" x 38" R.C.P.
CONST. 18' REINFORCED PANEL
STA. 507+89 TO STA. 508+07.
NOTE: C5-1 CONTRACTION JOINTS SHOWN ARE THE JOINTS LOCATED BETWEEN THE 19' & 13' PANELS. ROTATION OF JOINTS TO BE AT 13', 16', 14', AND 19' UNLESS OTHERWISE SHOWN. ALL OTHER CONTRACTION JOINTS SHALL BE C1.
B.M. ELEV. 1176.27
SPK IN PP 50' RT.
STA. 508+30
P.I. +00
ELEV. 97.06
600' V.C.
M = 4.4
P.I. +00
ELEV. 78.86
600' V.C.
M = 3.6
P.I. +00
ELEV. 77.45
600' V.C.
M = 0.765
+1.8%
-6%
-0.2%
+0.82%
1190
1180
1170
490
495
500
505
510
515


F.E. LT. 521+41
CONST. AGGREGATE SURFACE
CONSTRUCT PERMANENT HEADER JOINT
STA. 520+00.
CONSTRUCT 6 1/2" TO 2" VARIABLE THICKNESS BITUMINOUS OVERLAY
STA. 520+00 TO 524+00.
P.I. 521+53.05
ΔLT 0°31'
F.E. RT. 521+44
CONST. AGGREGATE SURFACE
STA. 520+00 END CONC. PAV'T. OVERLAY
BEGIN BITUMINOUS OVERLAY
END: S.A.P. 55-610-14
STA. 524+00
B.M. ELEV. 1159.99
TOP FIRE HYD. 28' LT. STA. 528+30
P.I. +83.625
ELEV. 83.8857
800' V.C.
M = 3.42
P.I. +00
ELEV. 65.26
600' V.C.
K = 0.37.8
-4.3%
1180
1170
1160
1150
515
520
525
530

MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR BRIDGE NO. 3746 REPLACEMENT, GRADING AND SURFACING

LOCATED ON C.S.A.H. 10 **BETWEEN** R.R. TRACKS IN DOVER **AND** T. H. 14 **(GEOGRAPHIC DESCRIPTION)**

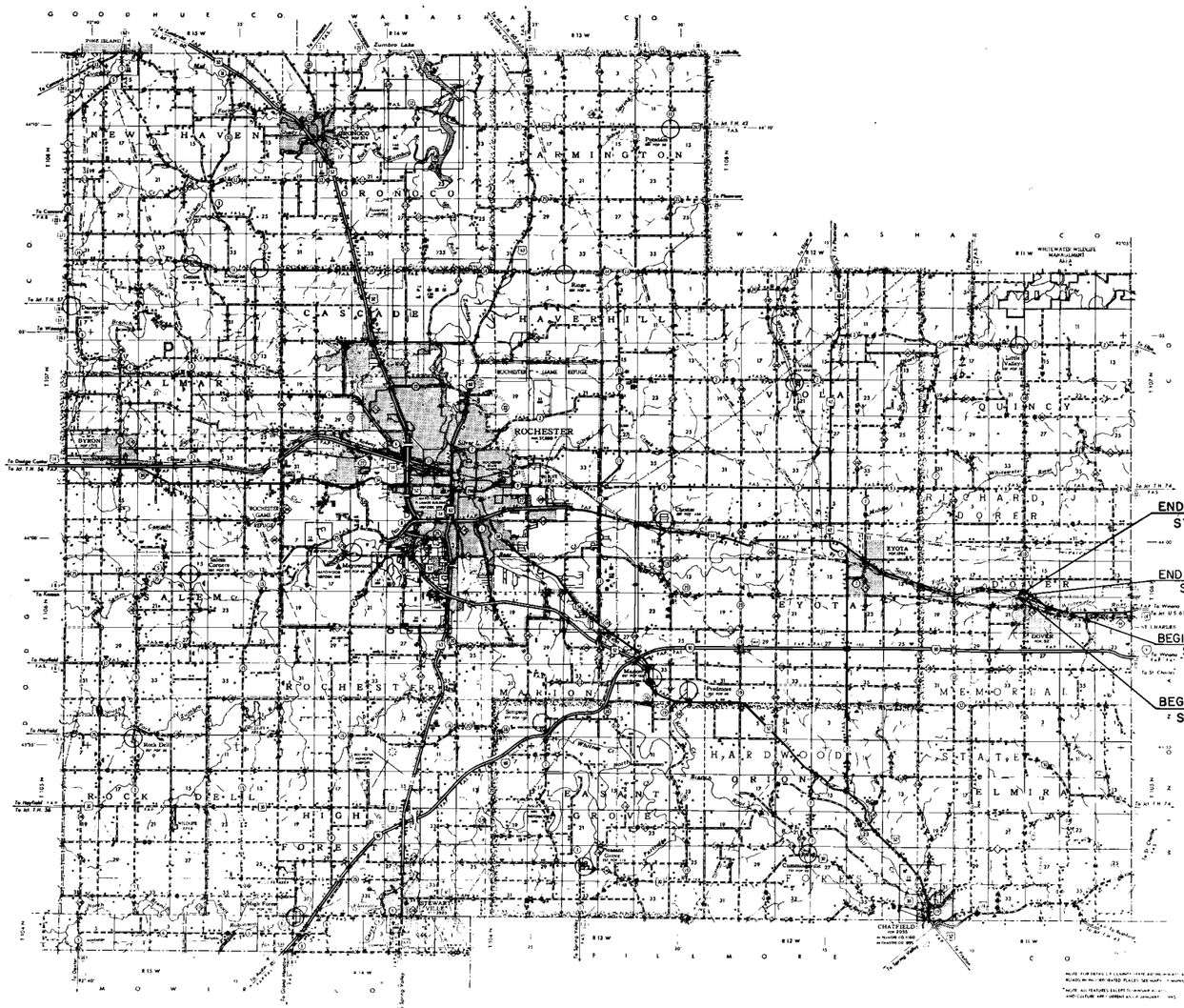
FROM 354.5' SOUTH S.E. COR. SEC. 16 T106N-R11W **TO** 680.52' NORTH S.E. COR. SEC. 16 T106N-R11W **(LEGAL DESCRIPTION)**

STATE PROJ. NO. 55-610-09

GROSS LENGTH	94.60	FEET	0.018 MILES
BRIDGES-LENGTH	94.60	FEET	0.018 MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.000 MILES
NET LENGTH	94.60	FEET	0.018 MILES

STATE PROJ. NO. 55-610-11

GROSS LENGTH	1035.08	FEET	0.196 MILES
BRIDGES-LENGTH	94.60	FEET	0.018 MILES
EXCEPTIONS-LENGTH	94.60	FEET	0.018 MILES
NET LENGTH	940.48	FEET	0.178 MILES



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 (P.C., P.T., P.O.T., P.O.T.)
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY LINE
RIVER OR CREEK (NAME)
DRY RUN
DRAINAGE DITCH (SIZE)
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE (W, C-L)
CHAIN LINK FENCE (C-L)
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
(TIMBER)
CATCH BASIN (C.B.)
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame) (I.S.P. 75')
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 (G)
SAND PIT (S)
BORROW PIT (B)
ROCK QUARRY (Q)
SLOPE EASEMENT (SE)

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 (G)
WATER MAIN (I)
CONDUIT
TELEPHONE CABLE IN CONDUIT (T)
ELECTRIC CABLE IN CONDUIT (P)
TELEPHONE MANHOLE (T)
ELECTRIC MANHOLE (P)
BURIED TELEPHONE CABLE (T-BUR)
BURIED ELECTRIC CABLE (P-BUR)
AERIAL TELEPHONE CABLE (T-AE)
SEWER, (SANITARY OR STORM)
SEWER MANHOLE

ALBINSON MPLS 55405

SCALES

PLAN	100'
PROFILE	100' HORI. & 10' VERT.
INDEX MAP	10,560'
GENERAL LAYOUT	10'

MINN. PROJ. NO. BRRS 6238 (7)
RS 6238 (15)

GOVERNING SPECIFICATIONS

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

INDEX

SHEET NO. 1		TITLE SHEET & LAYOUT MAP
" " 2		ESTIMATE OF QUANTITIES & TYPICAL SECTIONS
" " 3		PLAN & PROFILE
" " 4&5		CROSS SECTION SHEETS
" " 6		COMMON CHANNEL EXCAVATION
" " 1		ESTIMATE OF QUANTITIES & GENERAL PLAN AND ELEV. FOR BRIDGE NO. 95764
" " 2-10		DETAIL DRAWINGS FOR BRIDGE NO. 95764

DESIGN DESIGNATION

R ____
ADT (Current Year) 1228 (1986)
ADT (Future Year) 2210 (2006)
DHV (Design Hr. Vol.) = ____
D (Directional Distr.) = ____ %
T (Heavy Commercial) = 10 %
SOIL FACTOR 130 %
9 TON DESIGN

ΣN18(20) ____
Design Speed 55 MPH
Based on STOPPING Sight Distance
Height of eye 3.50 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 2-5-86 REG. NO. 10219 ENGR. [signature]

COUNTY Olmsted

Approved [signature] 19 ____
MAYOR OF DOVER

Recommended for Approval [signature] 2-13 19 86
DISTRICT STATE AID ENGINEER

Recommended for Approval [signature] 5-1 19 86
STATE AID PLANS AND SPECS ENGINEER

Approved 5/2 19 86 [signature]
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR ____ DATE

STATE ~~##~~ PROJ. NO. C.A.S.H. 10 OLMSTED COUNTY
STATE PROJ. NO. BRIDGE 55-610-09 & GRADING 55-610-11 **SHEET NO.** 1 **OF** 6 **SHEETS**

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES
	2104 . 501	REMOVE PIPE CULVERTS	LIN. FT.	20	56	76
	2105 . 501	COMMON EXCAVATION	CU. YD.	(P) 1219	(P) 2304	(P) 3523
	2105 . 507	SUBGRADE EXCAVATION	CU. YD.	(P) 547	(P) 1126	(P) 1673
	2105 . 511	COMMON CHANNEL EXCAVATION	CU. YD.		(P) 2024	(P) 2024
	2105 . 535	SALVAGED TOPSOIL (EV)	CU. YD.	(P) 100	(P) 250	(P) 350
②	2211 . 501	AGGREGATE BASE, CLASS 2	TON	1012	3059	4071
	2221 . 501	AGGREGATE SHOULDERING, CLASS 2	TON	167	430	597
	2331 . 504	BITUMINOUS MATERIAL FOR MIXTURE	TON	20	39	59
①	2331 . 508	WEARING COURSE MIXTURE	TON	136	264	400
	2331 . 510	BINDER COURSE MIXTURE	TON	120	250	370
	2331 . 514	BASE COURSE MIXTURE	TON	120	220	340
	2357 . 502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	100	200	300
	2442 . 501	REMOVE OLD BRIDGE	LUMP SUM		1	1
	2501 . 511	18" C.S. PIPE CULVERT	LIN. FT.		56	56
	2501 . 515	18" G.S. PIPE APRONS	EACH		4	4
	2531 . 501	CONCRETE CURB AND GUTTER DESIGN B624	LIN. FT.	176		176
	2575 . 501	ROADSIDE SEEDING	ACRE	(P) 0.3	(P) 0.7	(P) 1
	2575 . 502	SEED, MIXTURE CLASS 5	POUND	15	35	50
③	2575 . 505	SODDING	SQ. YD.	200		200
	2575 . 511	MULCH MATERIAL TYPE 1	TON	0.6	1.4	2
	2575 . 519	DISC ANCHORING	ACRE	(P) 0.3	(P) 0.7	(P) 1
	2101 . 502	CLEARING	TREE	1	0	1
	2101 . 507	GRUBBING	TREE	1	0	1
	0575 . 607	COMMERCIAL FERT. ANALYSIS 12-12-12	POUND	60	140	200
	2442. 501	REMOVE OLD BRIDGE	LUMP SUM		1	1
	0105. 601	ONE-LANE BY-PASS (12' LANE)	LUMP SUM		1	1
	2021. 501	MOBILIZATION	LUMP SUM			1

① INCLUDES 20 TONS FOR 2 DRIVEWAYS

② INCLUDES 150 TONS FOR 5 APPROACHES, 100 TONS FOR RADIUS AT T.H. 14 AND 3821 TONS FOR MAINLINE

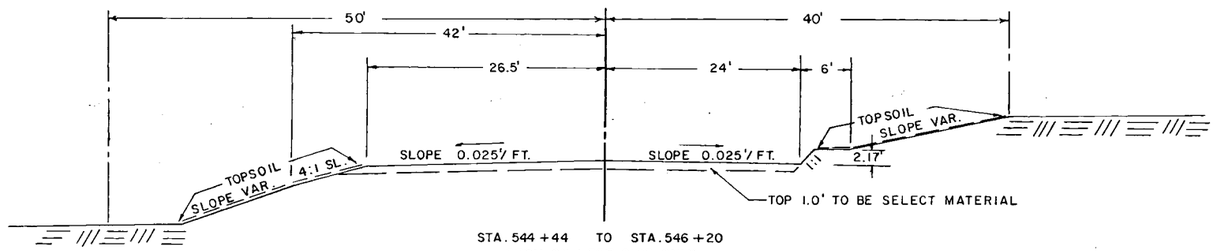
③ SODDING TO BE PLACED FROM BACK CURB TO 33' LEFT FROM STA. 544+44 TO STA. 546+20.

STANDARD PLATES

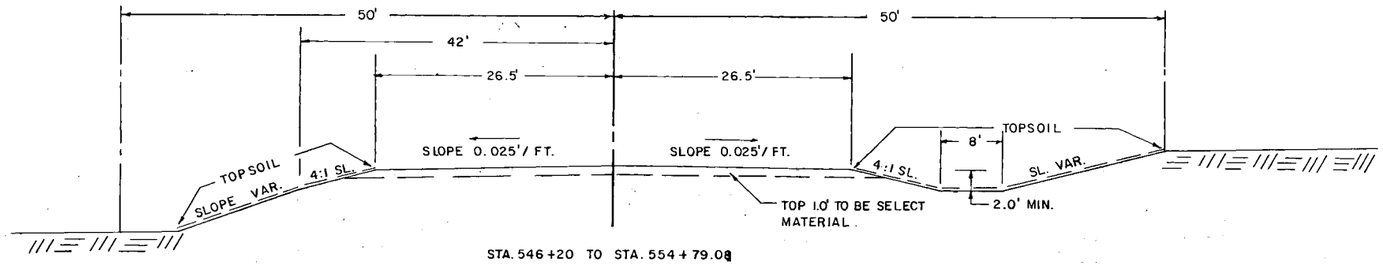
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

PLATE NO		DESCRIPTION
0004	A	SPECIFICATION REFERENCE TO STANDARD PLATES
3040	F	CORRUGATED METAL PIPE CULVERT
3123	I	METAL APRON FOR C.S. PIPE
3124	B	METAL APRON CONNECTION
3221	C	CORRUGATED STEEL PIPE COUPLING BAND
7100	F	CONCRETE CURB & GUTTERS
8000	I	STANDARD BARRICADE
9000	B	APPROACHES AND ENTERANCES
8003	B	BREAKAWAY SIGN SUPPORT (PLASTIC)
8307	M	STRUCTURAL PLATE BEAM GUARDRAIL
8316	C	POST SEAT FOR ANCHORAGE ON FOOTINGS OR BOX CULVERTS

TYPICAL GRADING SECTIONS

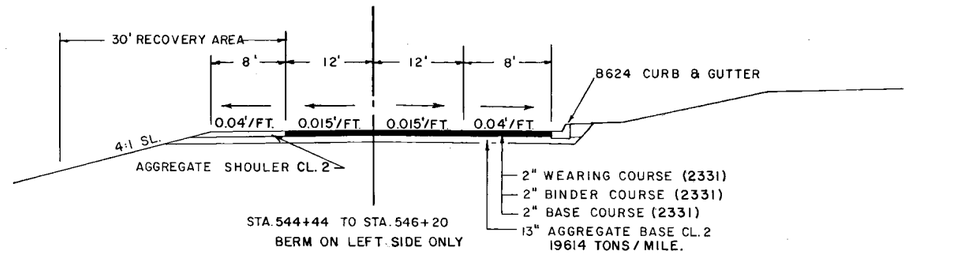


STA. 544+44 TO STA. 546+20
BERM ON LEFT SIDE ONLY

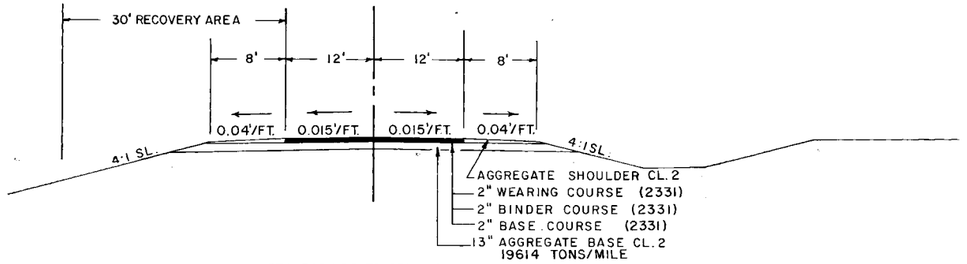


STA. 546+20 TO STA. 554+79.08

TYPICAL BASE & SURFACE SECTIONS



STA. 544+44 TO STA. 546+20
BERM ON LEFT SIDE ONLY



STA. 546+20 TO STA. 554+79.08

S.P. BRIDGE GRADING 55-610-09 & 55-610-11

OLMSTED COUNTY C.S.A.H. 10 **Sheet No. 2 of 6 Sheets**

ARMSTRONG, INC. MINNEAPOLIS 55455

545+50 LEFT
CLEAR 1 TREE
GRUB 1 TREE

F.E. LT. 546+10
INPL. 16"x 20' S.C.P.
REMOVE
NO CULV. REQ'D.

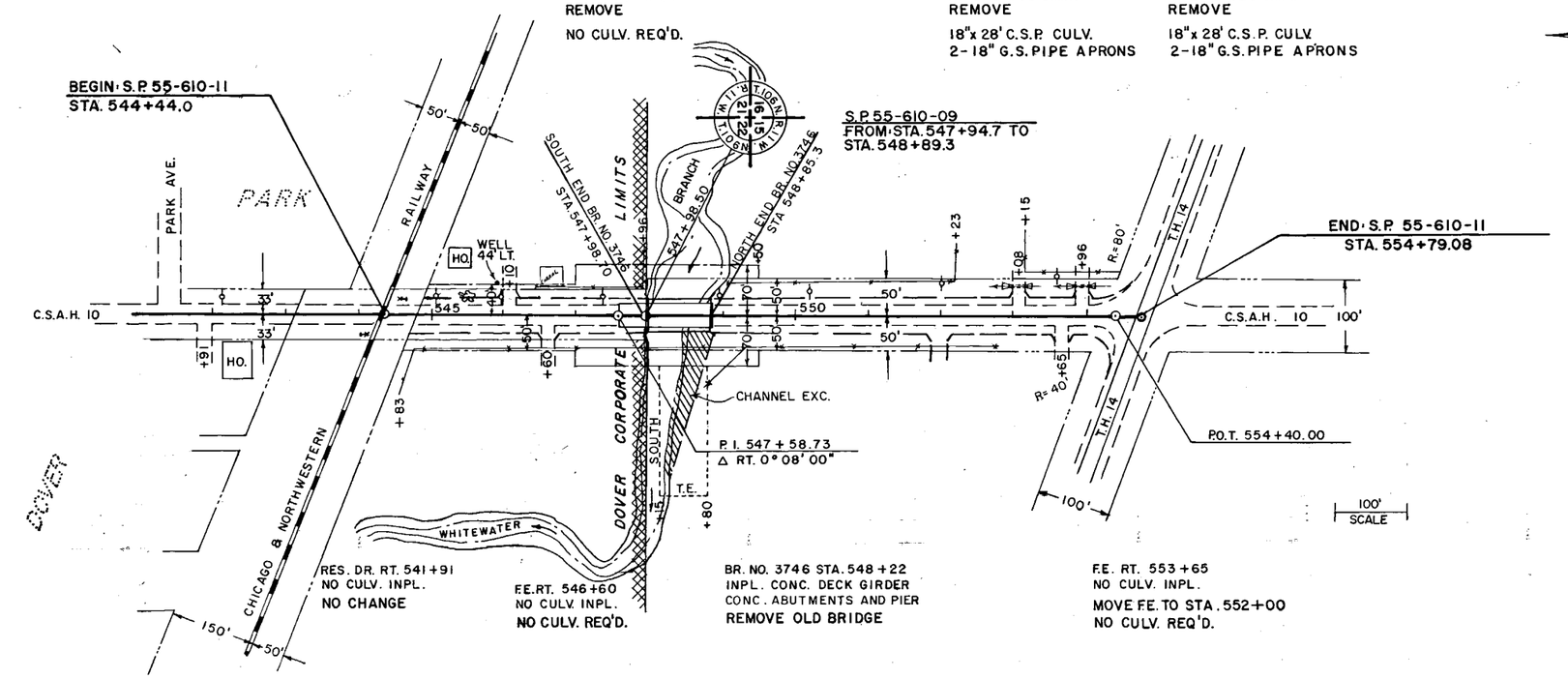
F.E. LT. 553+08
INPL. 18"x 30' C.M.P.
REMOVE
18"x 28' C.S.P. CULV.
2-18" G.S. PIPE APRONS

F.E. LT. 553+96
INPL. 18"x 26' C.M.P.
REMOVE
18"x 28' C.S.P. CULV.
2-18" G.S. PIPE APRONS

BEGIN S.P. 55-610-11
STA. 544+44.0

S.P. 55-610-09
FROM STA. 547+94.7 TO
STA. 548+89.3

END S.P. 55-610-11
STA. 554+79.08



RES. DR. RT. 541+91
NO CULV. INPL.
NO CHANGE

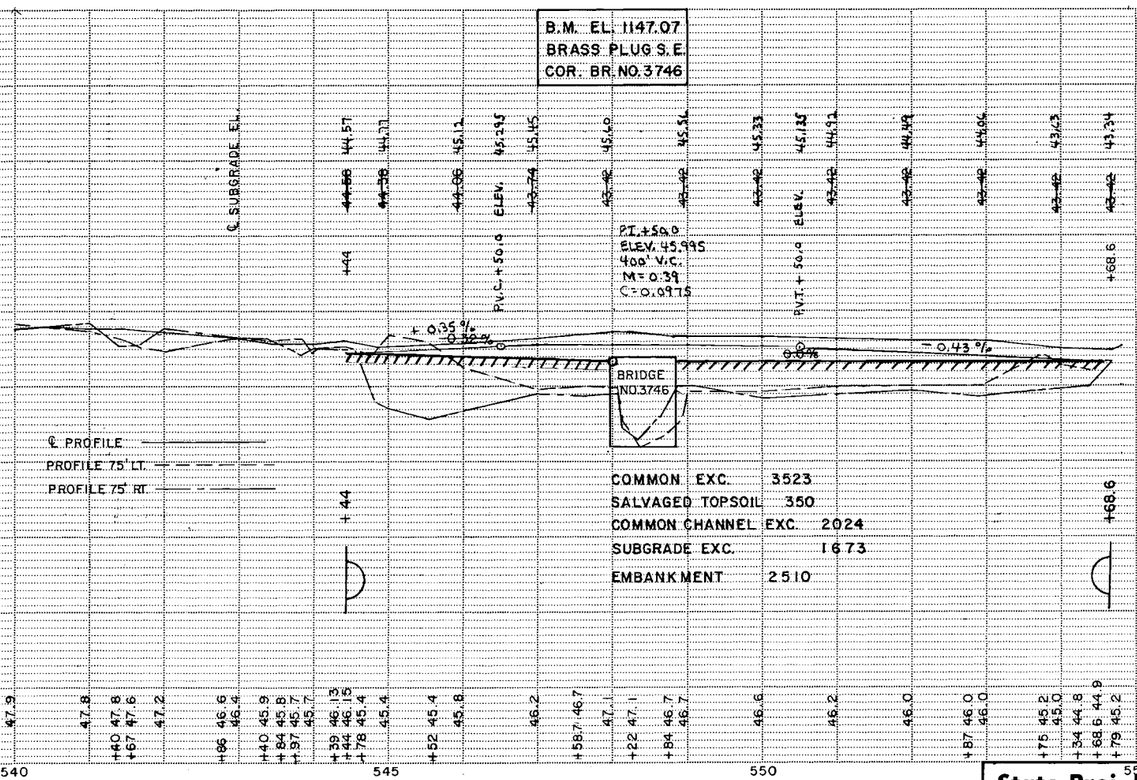
F.E. RT. 546+60
NO CULV. INPL.
NO CULV. REQ'D.

BR. NO. 3746 STA. 548+22
INPL. CONC. DECK GIRDER
CONC. ABUTMENTS AND PIER
REMOVE OLD BRIDGE

F.E. RT. 553+65
NO CULV. INPL.
MOVE F.E. TO STA. 552+00
NO CULV. REQ'D.

B.M. EL. 1147.07
BRASS PLUG S.E.
COR. BR. NO. 3746

B.M. EL. 1144.15
SPK. IN B. POLE
31' LT. 554+15



℄ PROFILE
PROFILE 75' LT.
PROFILE 75' RT.

COMMON EXC.	3523
SALVAGED TOPSOIL	350
COMMON CHANNEL EXC.	2024
SUBGRADE EXC.	1673
EMBANKMENT	2510

C.S.A.H. 10 OLMSTED COUNTY

State Proj. No. 55-610-09 & 55-610-11 **Sheet No.** 3 **of** 6 **Sheets**