MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING AND AGGREGATE BASE

LOCATED ON 65TH STREET NW BETWEEN JCT. 65TH STREET NW AND CSAH 3 AND JCT. 65TH STREET NW AND 60TH AVENUE NW (GEOGRAPHIC DESCRIPTION)

FROM 1320' W. OF 1/4 COR. 1-12 T.107N.-R.15W. TO E. SEC. COR. 1-12 T.107N.-R.15W. (LEGAL DESCRIPTION)

MINN. PROJ. NO. .....

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE MAY 2, 1994, SUPPLEMENTAL SPECIFICATION SHALL GOVERN.

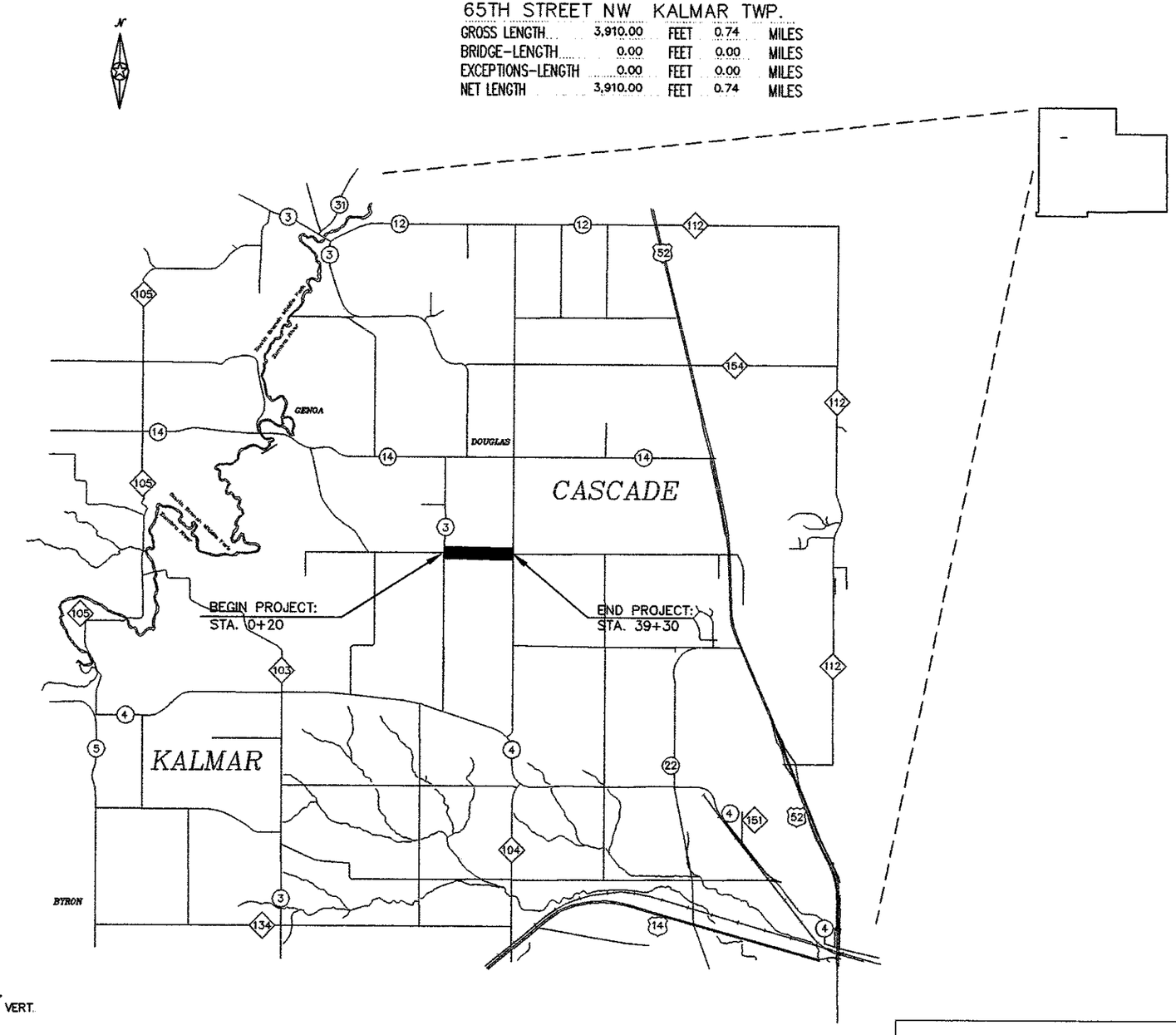
INDEX

SHEET NO. 1	TITLE SHEET
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SHEET NO. 14	TRAFFIC CONTROL SHEET
SHEET NO. 15-19	EROSION CONTROL SHEETS

THIS PLAN CONTAINS 19 SHEETS.

65TH STREET NW KALMAR TWP.

GROSS LENGTH	3,910.00	FEET	0.74	MILES
BRIDGE-LENGTH	0.00	FEET	0.00	MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.00	MILES
NET LENGTH	3,910.00	FEET	0.74	MILES



DESIGN DESIGNATION (65TH ST NW)

ADT (Current Year) =	<50 (1999)	Design Speed	55 MPH
ADT (Future Year) =	<50 (2019)	STA.	TO STA.
DHV (Design Hr. Vol.) =		Based on STOPPING Sight Distance	
D (Directional Distr.) =		Height of eye 3.5 Height of object 0.5	
T (Heavy Commercial) =		Design Speed not achieved at:	
SOIL FACTOR =	130	STA.	TO STA. MPH
TON DESIGN		STA.	TO STA. MPH
LANE WIDTH	11'		
SHOULDER WIDTH	3'		

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 ..... REG. NO. ..... ENGR. .....

COUNTY .....

Approved ..... 19 .....
OLMSTED COUNTY ENGINEER

Approved ..... 19 .....
TOWNSHIP CHAIRPERSON

PLAN 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
RIVER OR CREEK
DRY RUN
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 POLE
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 25'
PROFILE 0 25' HORIZ. 0 10' VERT.
INDEX MAP 0 5,280'

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
①	2104.501	REMOVE PIPE CULVERTS	LIN. FT.	187
②	2104.501	REMOVE FENCE	LIN. FT.	526
③	2105.515	UNCLASSIFIED EXCAVATION	CU. YDS.	(P)10352
	2105.523	COMMON BORROW (CV)	CU. YDS.	(P) 6933
④	2211.51	AGGREGATE BASE CL. 5	TON	4428
	2501.511	18" C.S. PIPE CULVERT	LIN. FT.	140
	2501.511	48" C.S. PIPE CULVERT	LIN. FT.	48
	2501.515	18" G.S. PIPE APRON	EACH	8
	2501.515	48" G.S. PIPE APRON	EACH	2
	2501.521	28" SPAN C.S. PIPE-ARCH CULVERT	LIN. FT.	40
	2501.525	28" SPAN G.S. PIPE-ARCH APRON	EACH	2
⑤	2511.501	RANDOM RIPRAP CL. III	CU. YDS.	20
⑥	2573.502	SILT FENCE, TYPE HEAVY DUTY MAINTAINED	LIN. FT.	2000
	2575.501	SEEDING	ACRE	(P) 6
	2575.502	SEED MIXTURE 500	POUND	300
	2575.502	SEED MIXTURE 1100	POUND	600
⑦	2575.505	SODDING TYPE EROSION	SQ. YD.	240
	2575.511	MULCH MATERIAL, TYPE 1	TON	12
	2575.519	DISK ANCHORING	ACRE	(P) 6
	2575.532	COMMERCIAL FERTILIZER, ANALYSIS 12-12-12	POUND	1200

QUANTITY NOTES:

① TO INCLUDE CONCRETE HEADWALL STA. 34+75 LT

② LT STA. 29+66 TO STA. 33+10 AND LT STA. 34+63 TO STA. 35+74

③ UNCLASSIFIED EXCAVATION INCLUDES SUBGRADE TREATMENT AS SHOWN IN TYPICAL SECTION AND CROSS SECTIONS. 1858 CU.YDS. OF EXCAVATION TO BE USED AS SALVAGED TOPSOIL.

④ 4,188 TONS OF AGGREGATE BASE FOR MAINLINE AND 240 TONS FOR 8 ENTRANCES

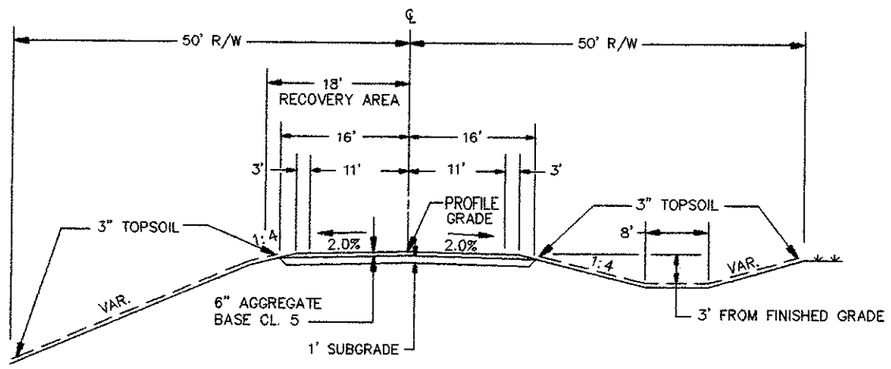
⑤ TO BE PLACED ON OUTLET C/L CULVERT STA. 32+36. SEE STANDARD PLATE 3133 C FOR DIMENSIONS. PLACE RIPRAP ON GRANULAR FILTER OR GEOTEXTILE MATERIAL WHICH SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.

⑥ LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD SPECIFICATION 1903 DOES NOT APPLY TO THIS ITEM.

⑦ LT STA. 32+30 TO STA. 34+70

TYPICAL SECTION

STA. 0+20 TO 39+30



NOTES: ALL UTILITY POLES AND UNYIELDING OBJECTS WILL BE LOCATED OUTSIDE THE 18' RECOVERY AREA BY OTHERS.

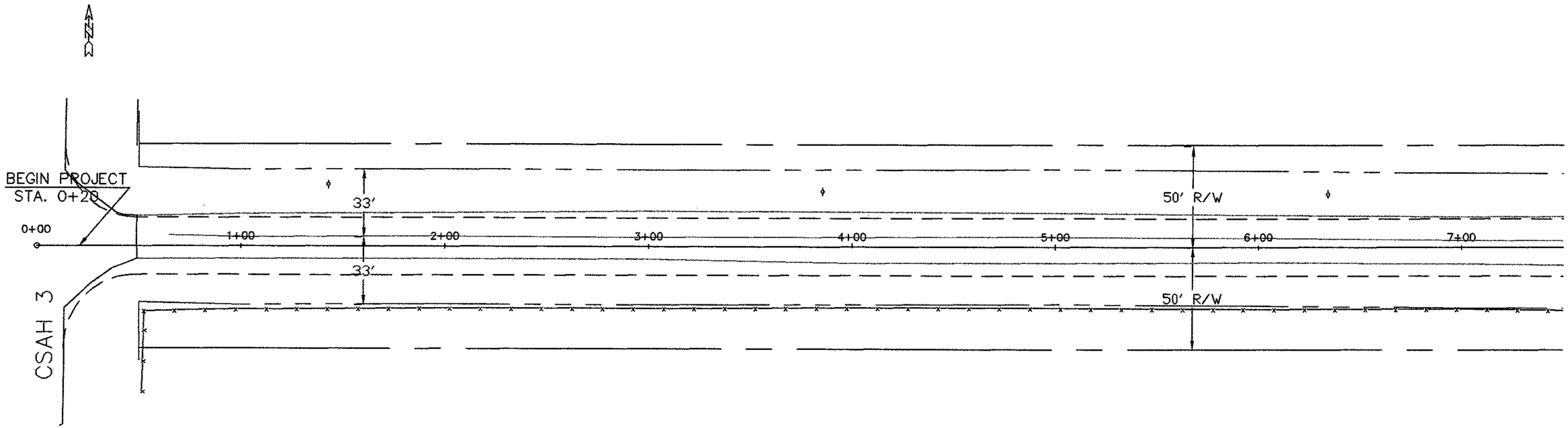
STANDARD PLATES

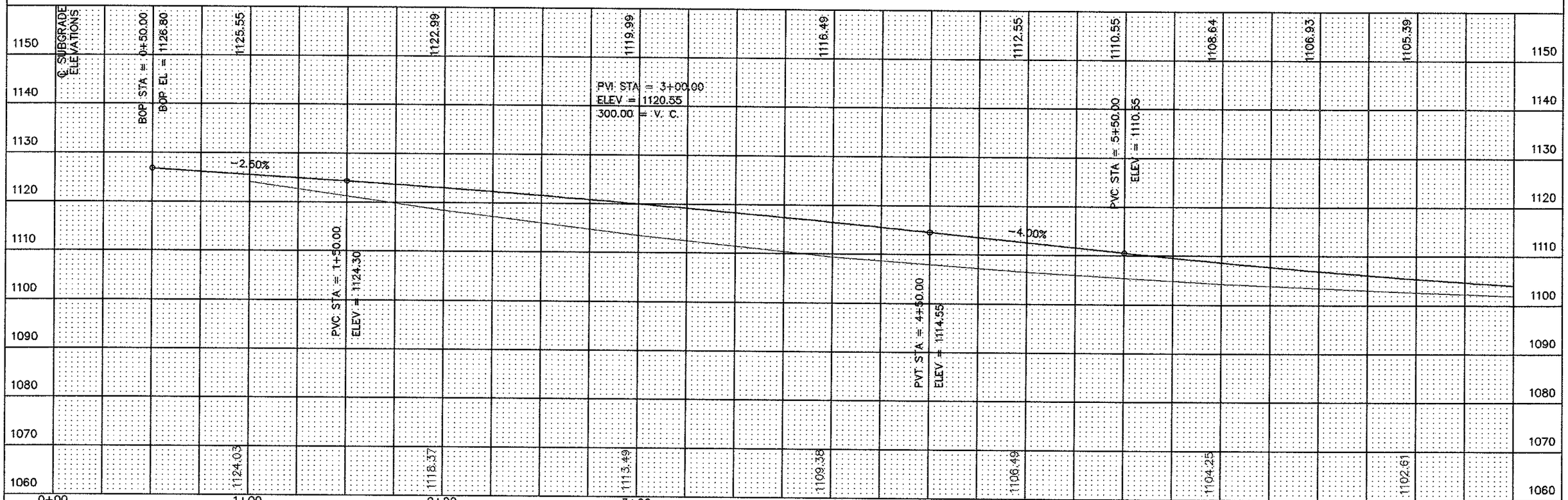
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
3007 B	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3040 F	CORRUGATED METAL PIPE CULVERT
3122 K	METAL APRON FOR C.M. PIPE-ARCH CULVERT
3123 J	METAL APRON FOR C.S. PIPE
3133 C	RIPRAP AT RCP OUTLETS
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
8000 I	STANDARD BARRICADES
9000 C	APPROACHES AND ENTRANCES

BASIS OF PLANNED QUANTITIES

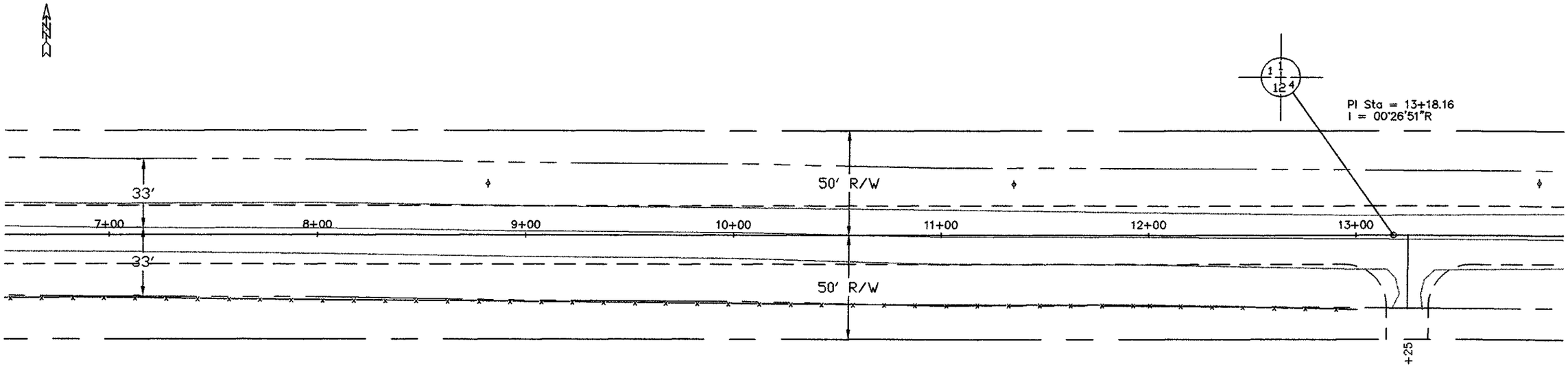
AGGREGATE BASE CL. 5 = 140 LBS./CU. FT. COMPACTED
SEED MIXTURE 500 = 50 LBS./ACRE
SEED MIXTURE 1100 = 100 LBS./ACRE
MULCH MATERIAL = 2 TONS/ACRE
DISK ANCHORING = ALL SEEDING AREA'S EXCEPT 1:2 SLOPES
COMMERCIAL FERTILIZER = 200LBS./ACRE





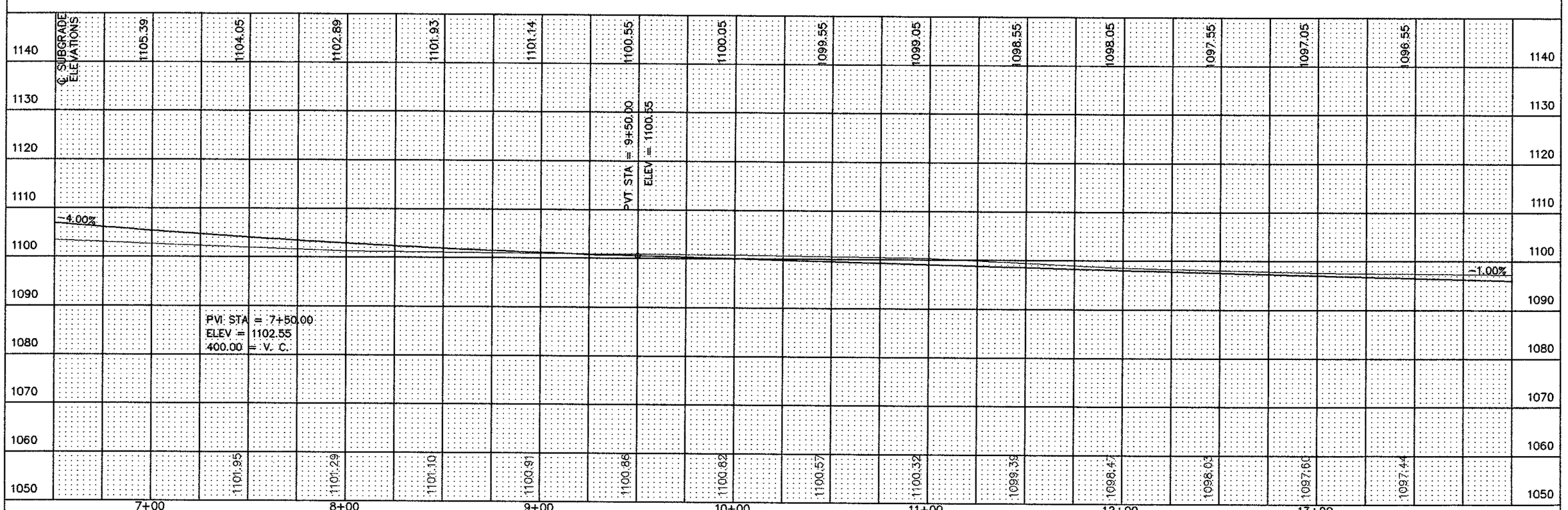
CERTIFIED BY _____ REG. NO. _____ _____19__
PROFESSIONAL ENGINEER

65TH STREET NW



FIELD ENT. RT. STA. 13+25
NO CULV. INPLACE

CONST. F. E. RT. STA. 13+25
NO CULVERT REQUIRED

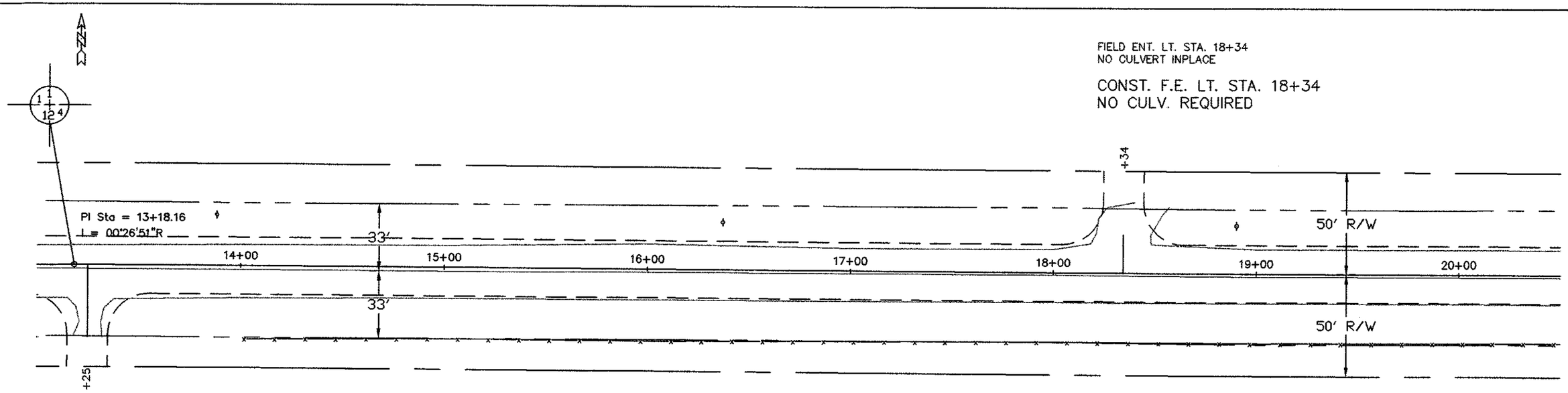


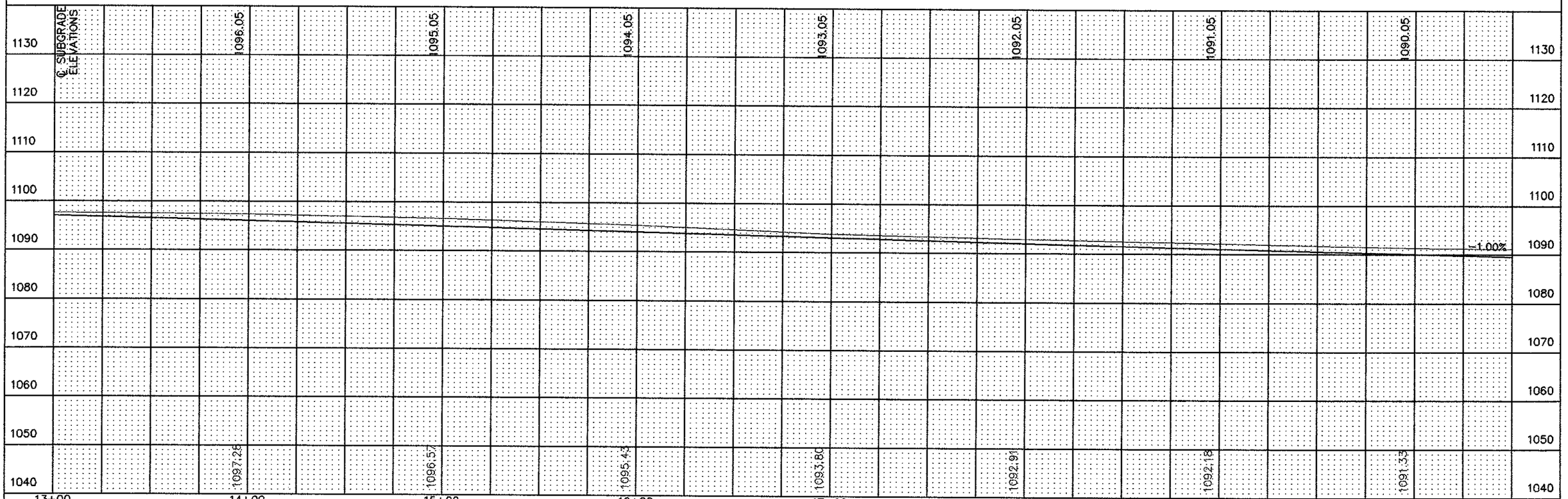
CERTIFIED BY _____ REG. NO. _____ 19__
PROFESSIONAL ENGINEER

65TH STREET NW

FIELD ENT. LT. STA. 18+34
NO CULVERT INPLACE

CONST. F.E. LT. STA. 18+34
NO CULV. REQUIRED

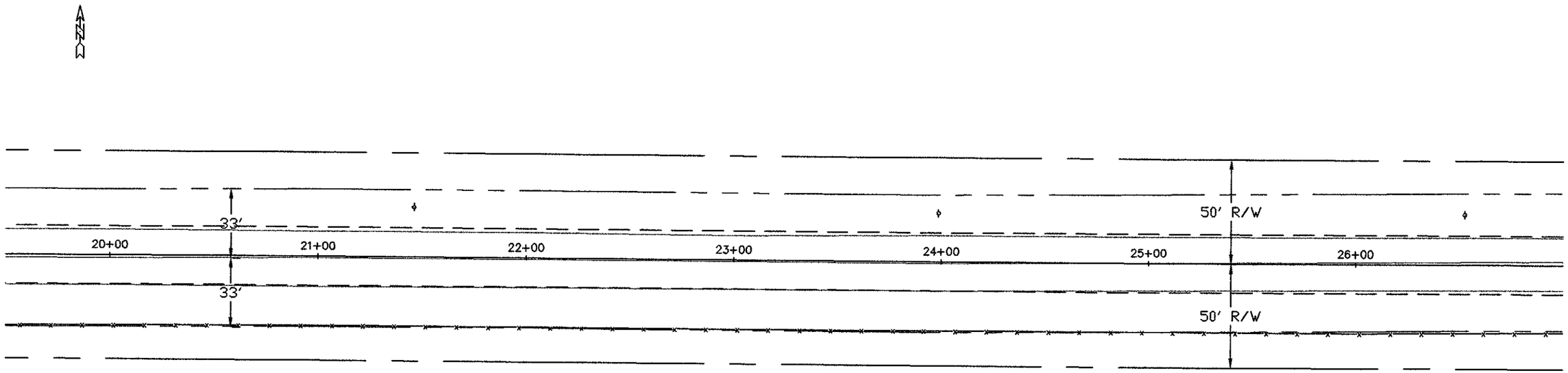


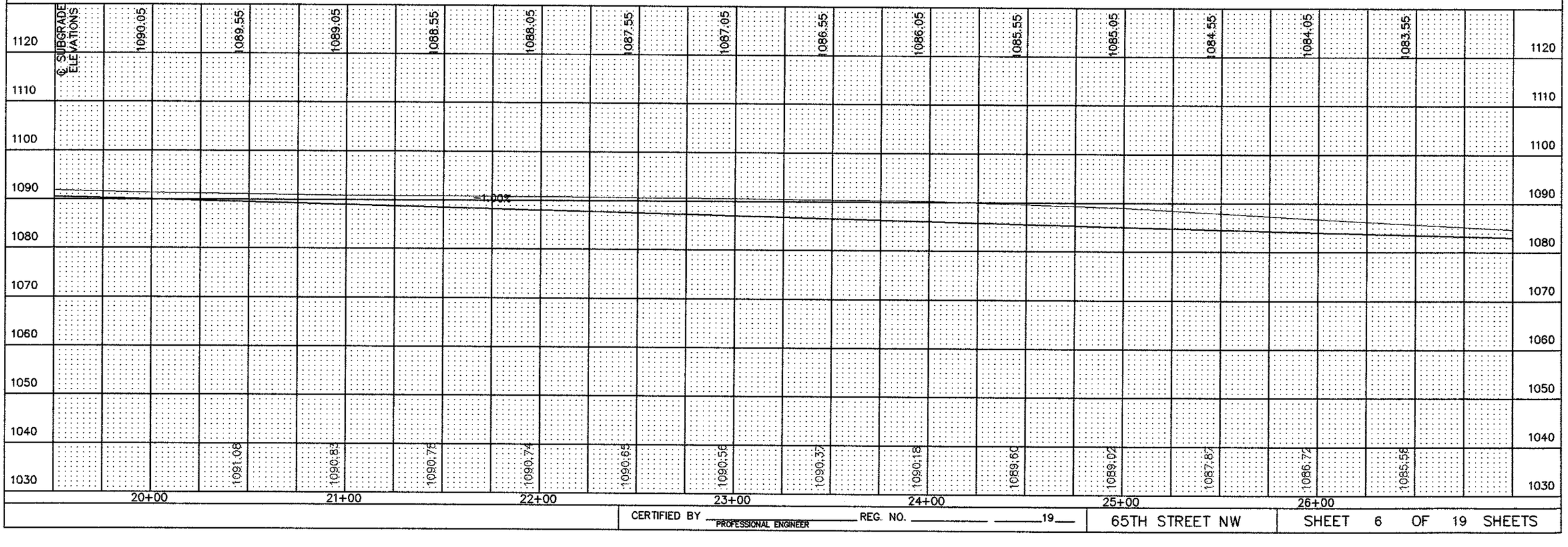


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PROFESSIONAL ENGINEER

65TH STREET NW

SHEET 5 OF 19 SHEETS





CERTIFIED BY _____ REG. NO. _____ 19__
PROFESSIONAL ENGINEER

65TH STREET NW

SHEET 6 OF 19 SHEETS

FIELD ENT. LT. STA. 27+78
15" x 22' CMP NO APRONS
REMOVE 22 LIN. FT. PIPE CULV.

CONST. F.E. LT. STA. 27+60
18" x 28' C.S. PIPE CULV.
2- 18" G.S. PIPE APRONS

HORSE & SNOWMOBILE TRAIL

FIELD ENT. LT. STA. 30+05
NO CULVERT INPLACE

CONST. F.E. LT. STA. 30+05
18" x 32' C.S. PIPE CULV.
2- 18" G.S. PIPE APRONS

FIELD ENT. LT. STA. 30+35
NO CULVERT INPLACE

REMOVE FIELD ENT.

℄ CULV. STA. 32+36
30" x 44' CMP W/APRONS
REMOVE 53 LIN. FT. PIPE CULV.

CONST. 48" x 48' C.S. PIPE CULV. SKEWED 14°
2- 48" G.S. PIPE APRONS
PLACE 20 CU.YDS. CL.III RIPRAP AT OUTLET

14°

+60 +78 +05 +80 +82 +00

33' 33'

50' R/W 50' R/W

27+00 28+00 29+00 30+00 31+00 32+00 33+00

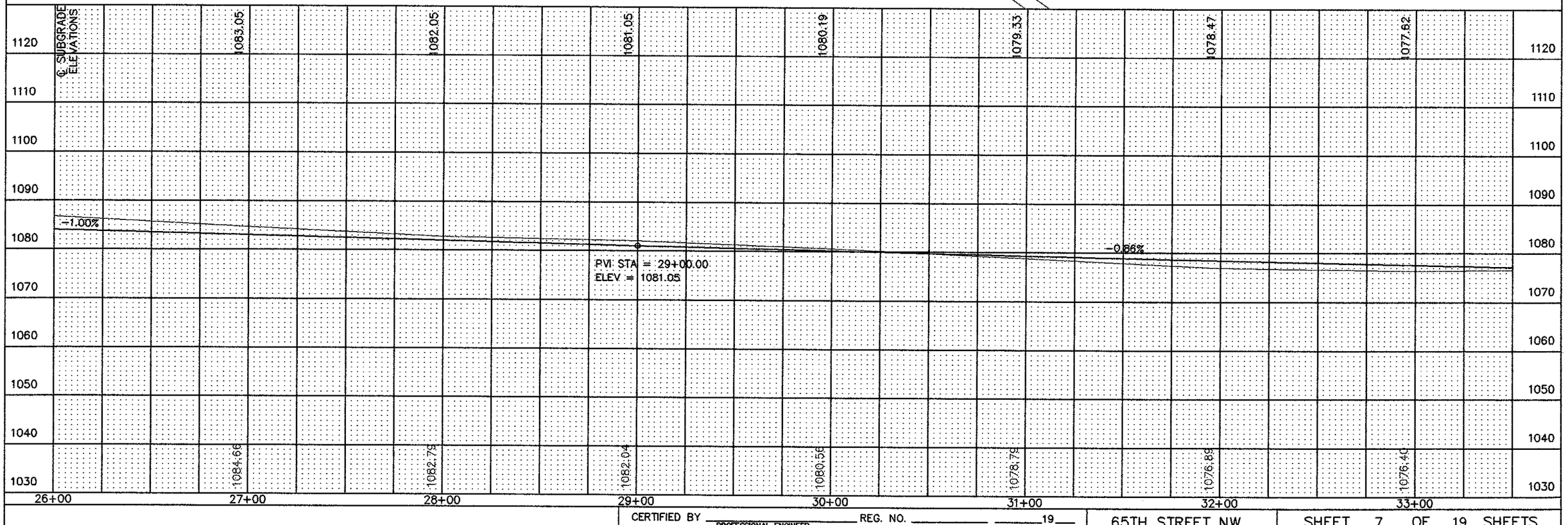
FIELD ENT. RT. STA. 28+80
NO CULVERT INPLACE

CONST. F.E. RT. STA. 28+80
NO CULV. REQUIRED

DOUGLAS BIKE TRAIL

FIELD ENT. RT. STA. 30+82
15" x 28' CMP NO APRONS
REMOVE 28 LIN. FT. PIPE CULV.

CONST. F.E. RT. STA. 31+00
18" x 30' C.S. PIPE CULV.
2- 18" G.S. PIPE APRONS



CERTIFIED BY _____ REG. NO. _____ _____19___
PROFESSIONAL ENGINEER

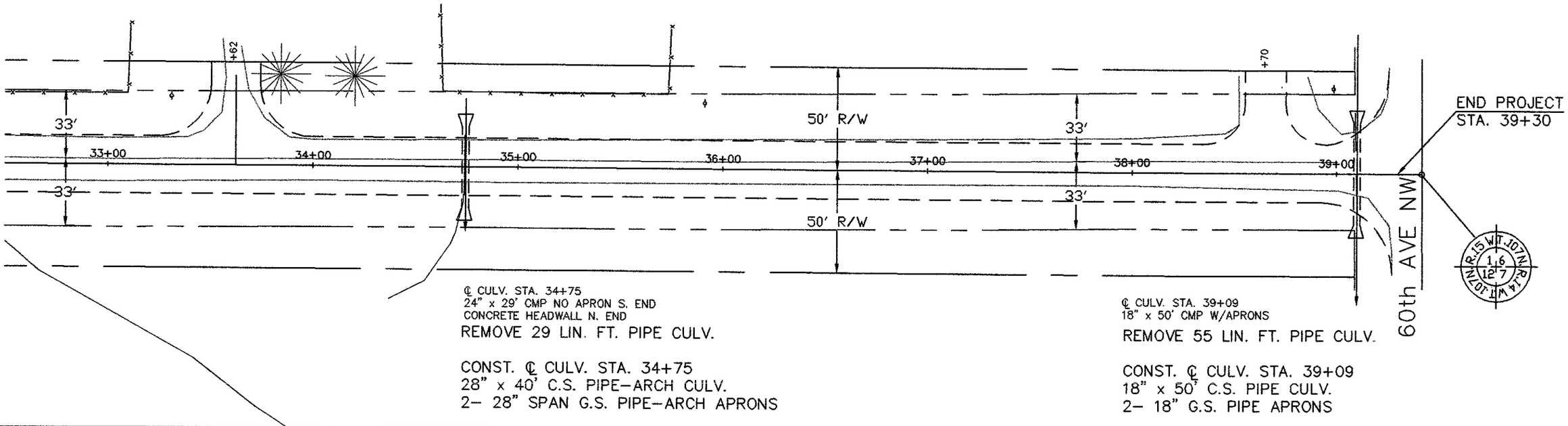
65TH STREET NW

RES. ENT. LT. STA. 33+62
NO CULVERT INPLACE

CONST. RES. DRIVE STA. 33+62
NO CULV. REQUIRED

FIELD ENT. LT. STA. 38+70
NO CULVERT INPLACE

CONST. F.E. LT. STA. 38+65
NO CULV. REQUIRED

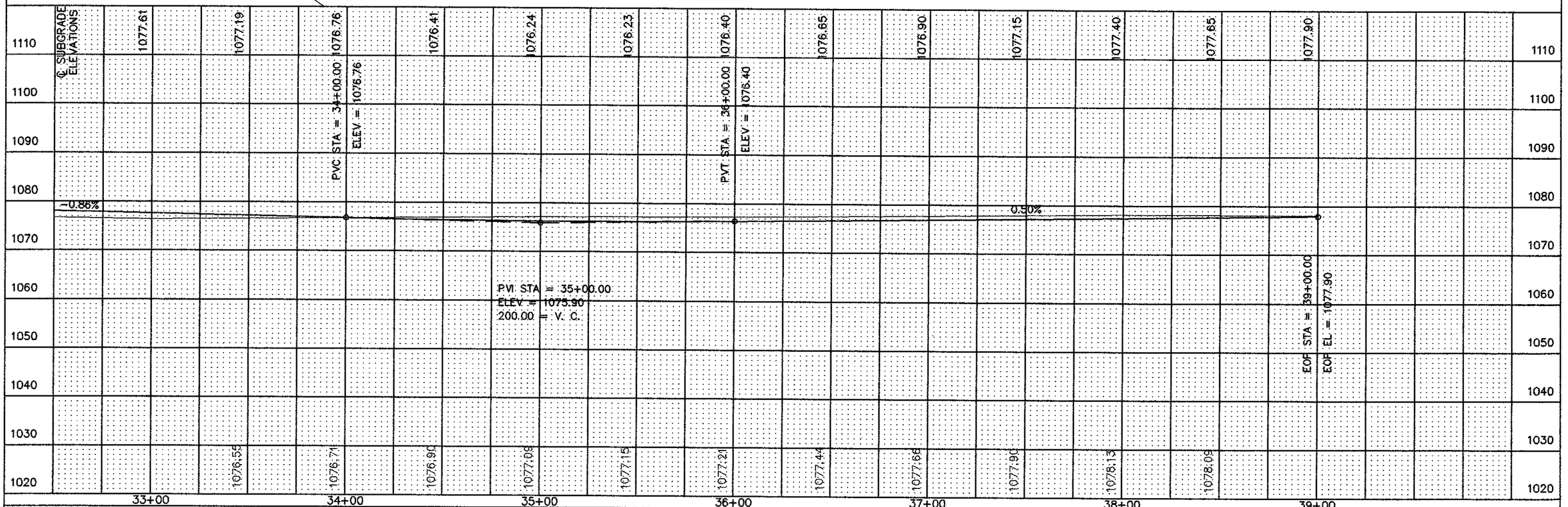


℄ CULV. STA. 34+75
24" x 29' CMP NO APRON S. END
CONCRETE HEADWALL N. END
REMOVE 29 LIN. FT. PIPE CULV.

CONST. ℄ CULV. STA. 34+75
28" x 40' C.S. PIPE-ARCH CULV.
2- 28" SPAN G.S. PIPE-ARCH APRONS

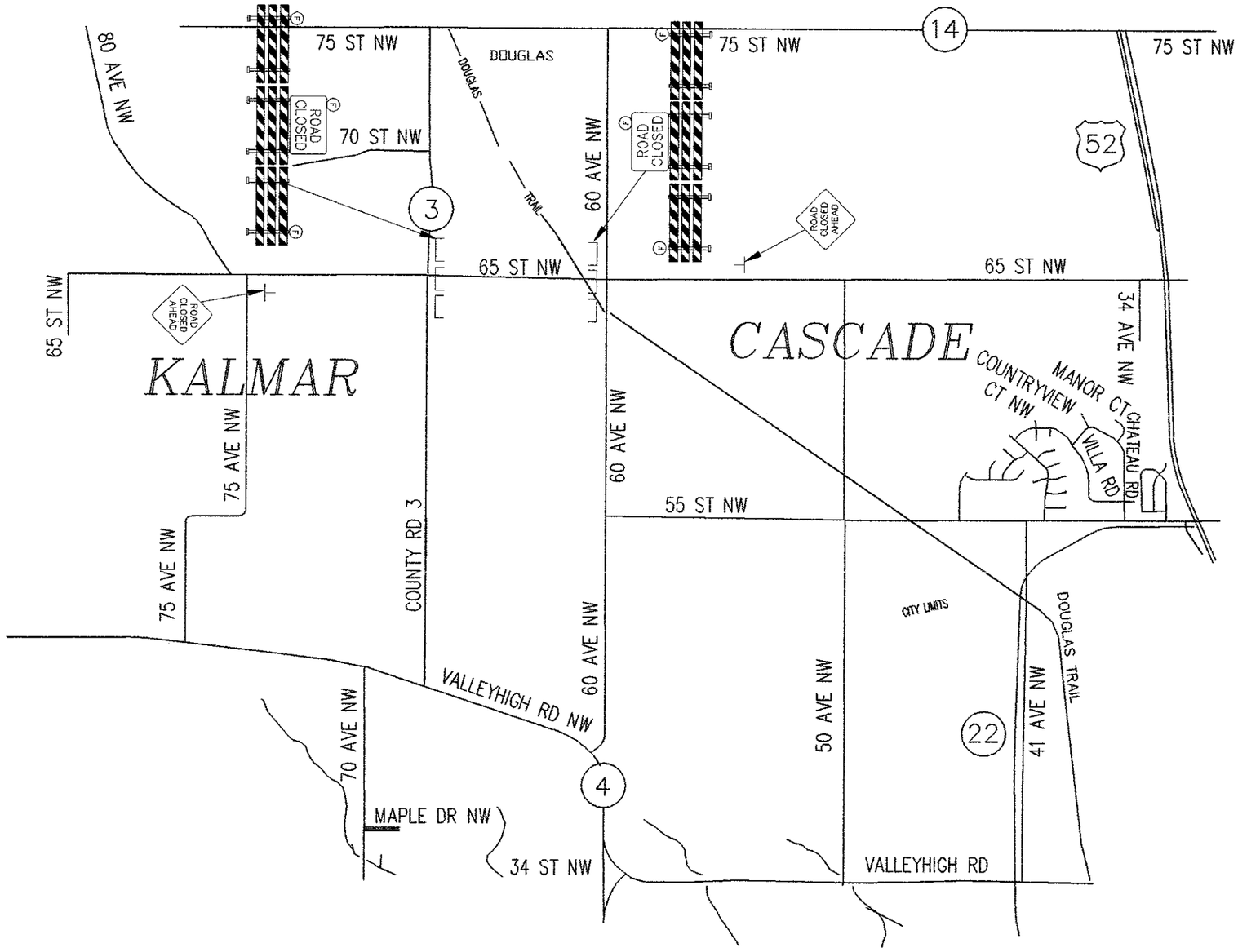
℄ CULV. STA. 39+09
18" x 50' CMP W/APRONS
REMOVE 55 LIN. FT. PIPE CULV.

CONST. ℄ CULV. STA. 39+09
18" x 50' C.S. PIPE CULV.
2- 18" G.S. PIPE APRONS



CERTIFIED BY _____ REG. NO. _____ _____ 19__
PROFESSIONAL ENGINEER

65TH STREET NW



ESTIMATE OF TRAFFIC CONTROL DEVICES									
DEVICE	NUMBER	SIZE	COLOR	QUANTITY	DEVICE	NUMBER	SIZE	COLOR	QUANTITY
ROAD CLOSED	R11-2	48 x 30	BLK/WH	2		TYPE III	MIN 6'	OR & WHT	6
ROAD CLOSED AHEAD	W20-3	48 x 48	BLK/OR	2	(F)	TYPE A	FLASHING LAMP	AMBER	6

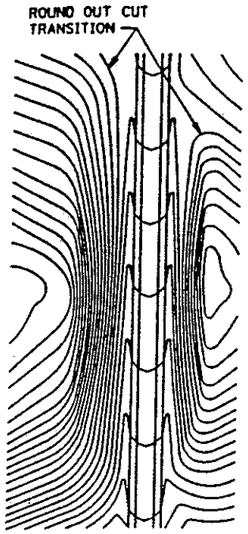
N

TRAFFIC CONTROL LEGEND

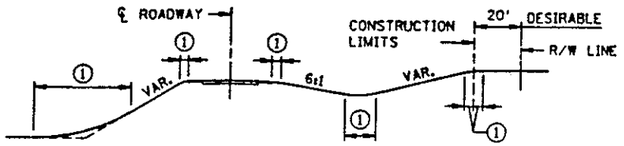
- ⊥ POST OR STAND MOUNTED SIGN
- ⌊⌋ TYPE III BARRICADE
- (F) TYPE "A" AMBER FLASHING LAMP

TRAFFIC CONTROL NOTES

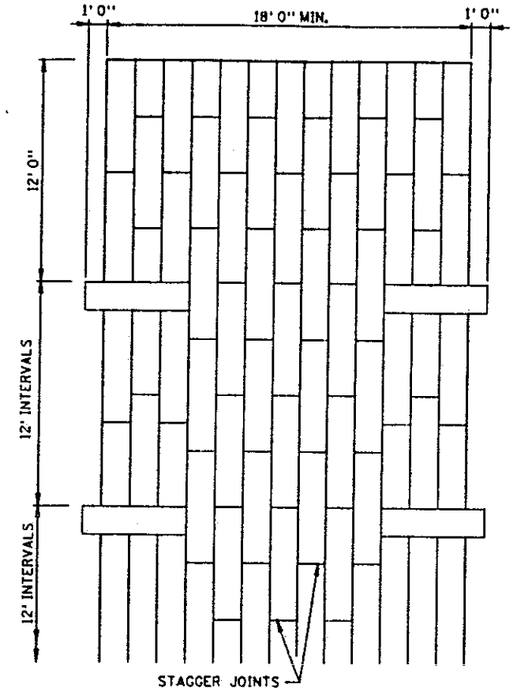
1. THE LOCATION OF SIGNS AND DEVICES WILL BE STAKED BY THE ENGINEER IN THE FIELD.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL ON THIS PROJECT.
3. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL DATED JANUARY 1998.
4. CONSTRUCTION ZONE SIGNING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL INCLUDE, BUT NOT BE LIMITED TO SIGNS FOR LANE CLOSURE, MACHINERY AHEAD, BUMP, DIP, LOOSE GRAVEL, ETC.. THE NUMBER AND LOCATION WILL BE DETERMINED BY THE CONTRACTORS OPERATION
5. ALL BARRICADES ON THIS PROJECT SHALL BE REFLECTORIZED ON BOTH SIDES.



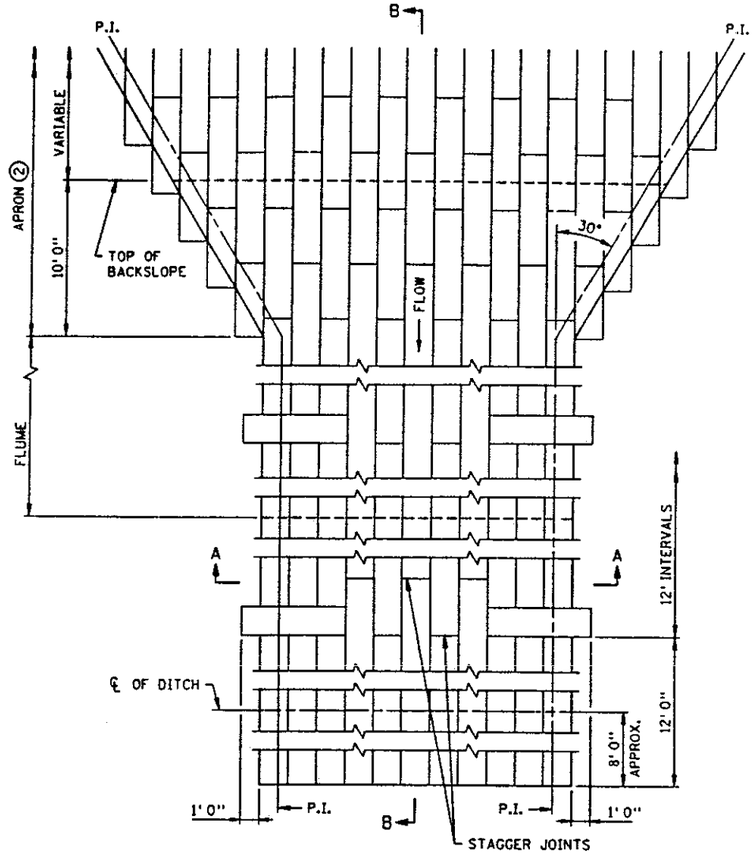
CONTOURING ROAD CUTS



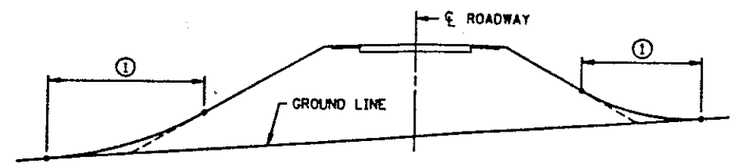
ROUNDING SHOULDERS AND BACKSLOPES



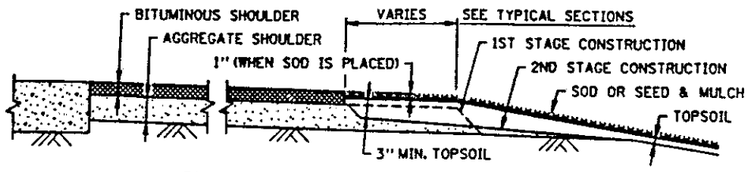
PLAN VIEW



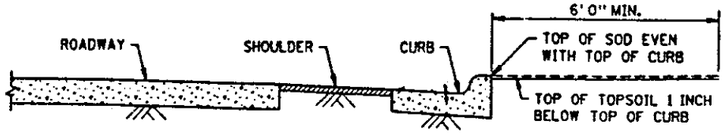
PLAN VIEW



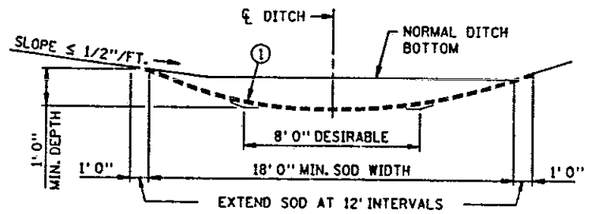
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



SHAPING AND TOPSOILING INSLOPES

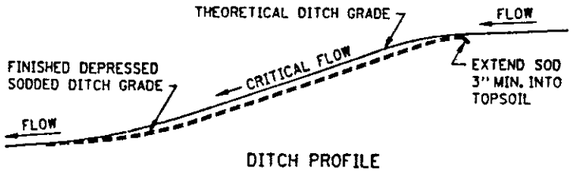


SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



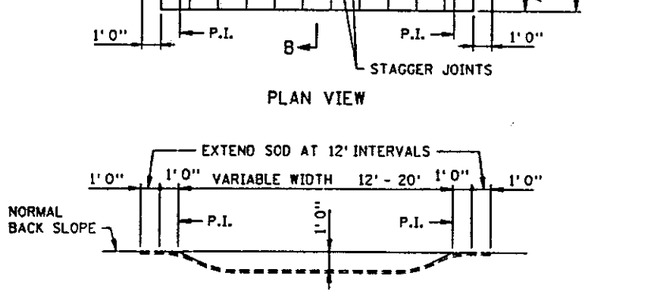
SODDED DITCH CROSS SECTION

WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.), FIRST NOTCH DITCH AND THAN PROVIDE ROUNDING.

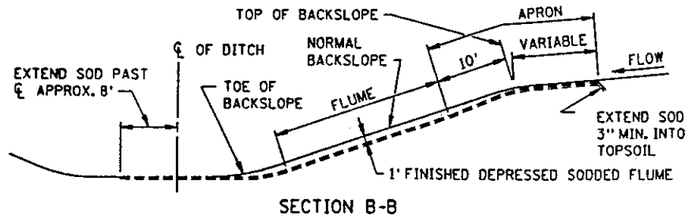


DITCH PROFILE

SODDED DITCH DETAILS



SECTION A-A



SECTION B-B

SODDED FLUME DETAILS

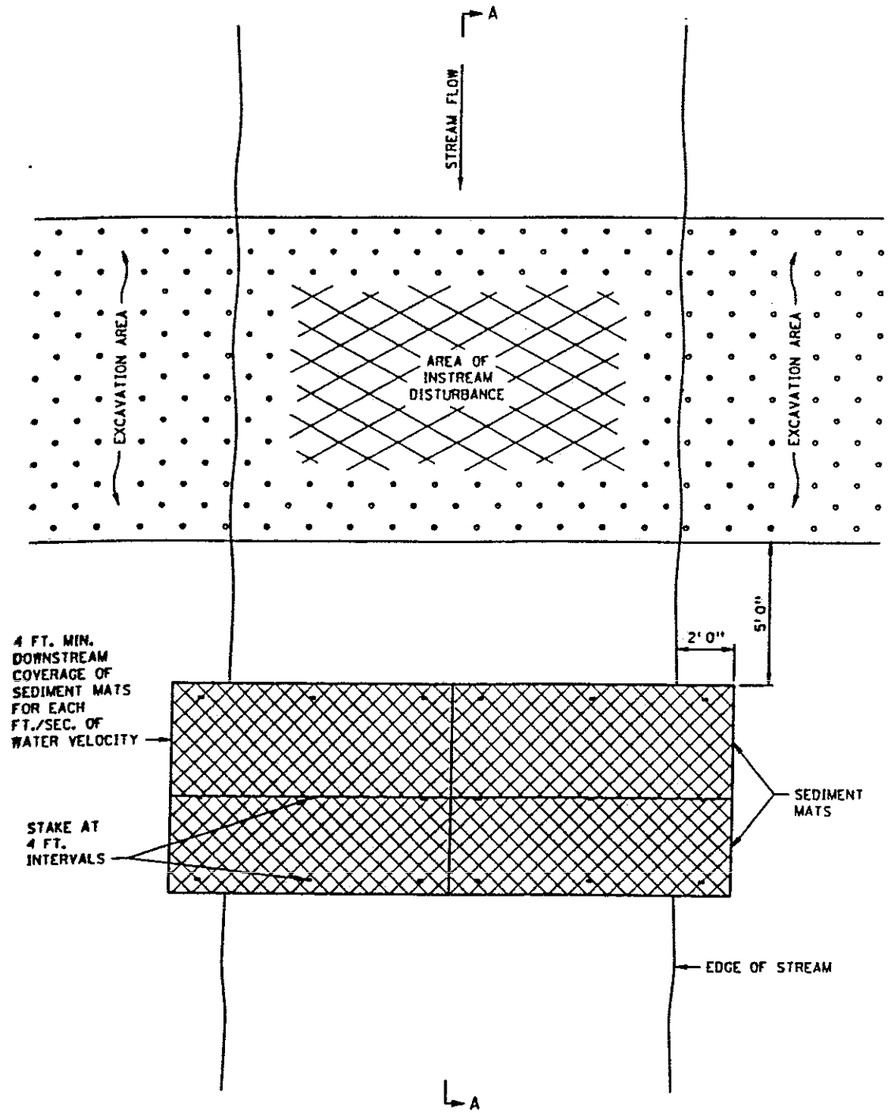
NOTES:

SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.

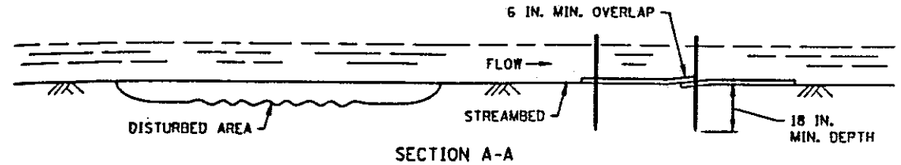
① FOR ROUNDING, SEE ROAD DESIGN MANUAL.

② CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD APPROVED: DECEMBER 19, 1990	
65TH STREET NW KALMAR TWP.	SHEET 15 OF 19 SHEETS



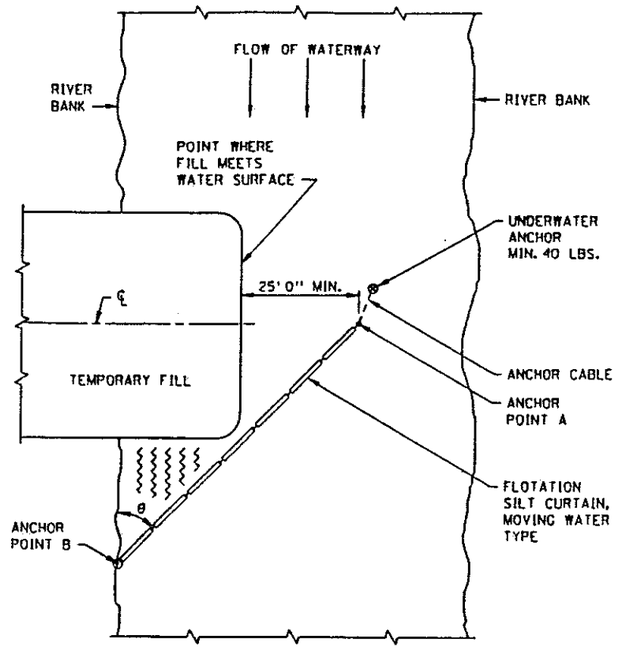
PLAN VIEW



SECTION A-A

SEDIMENT MAT
TYPICAL STREAMBED INSTALLATION

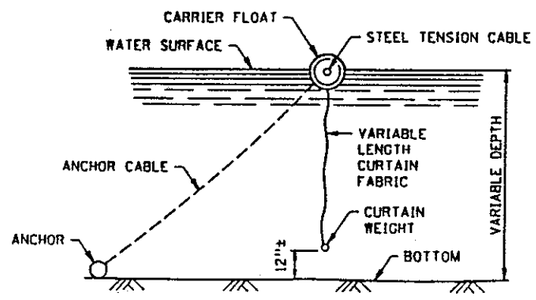
DESIGN CRITERIA:
MAXIMUM FLOW VELOCITY: 5 FT./SEC.
MAXIMUM FLOW DEPTH: 2 FT.



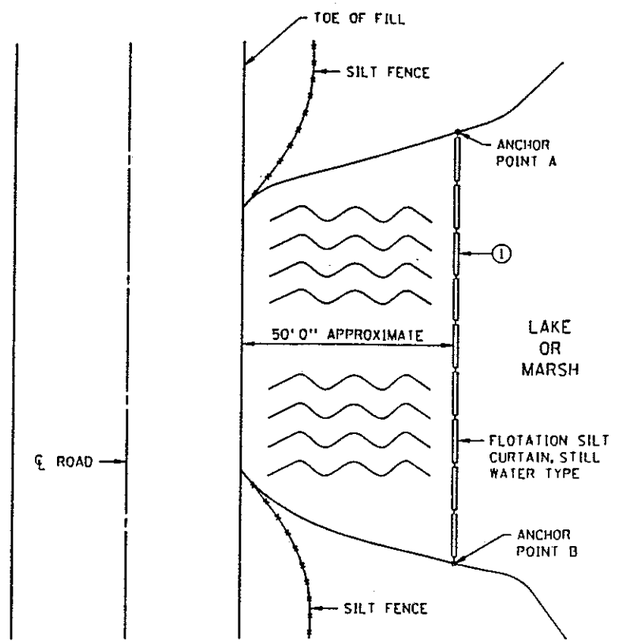
∠ θ	RIVER VELOCITY
45°	SLOW, LESS THAN 5 FT./SEC.
35°	MODERATE, 5 - 7 FT./SEC.

PLAN VIEW OF SILT CURTAIN - MOVING WATER

DESIGN CRITERIA:
MAXIMUM WATER DEPTH: 12 FT.
MAXIMUM WATER VELOCITY: 7 FT./SEC.

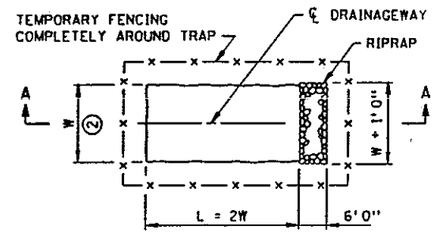


FLOTATION SILT CURTAIN DETAIL
(SEE SPEC. 3887)

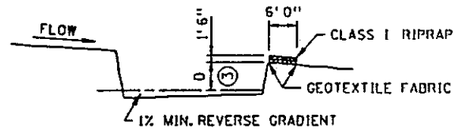


PLAN VIEW OF SILT CURTAIN - STILL WATER

DESIGN CRITERIA:
MAXIMUM WATER DEPTH: 12 FT.



PLAN



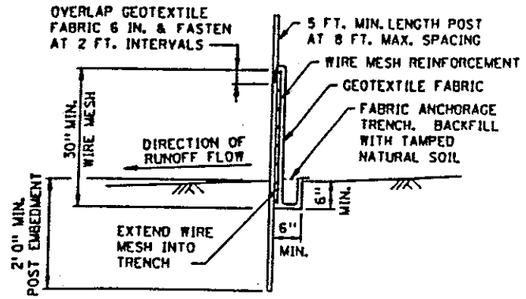
SECTION A-A

TEMPORARY SEDIMENT TRAP DETAIL

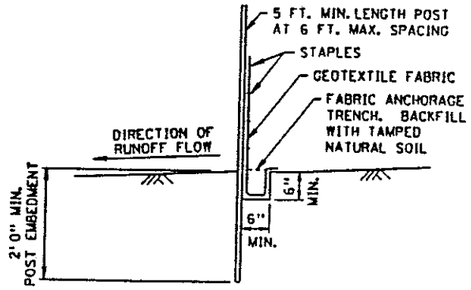
NOTES:
1. CURTAIN 1 FT. FROM BOTTOM
2. W = 10 FT. MIN., 20 FT. MAX.
3. D = 3 FT. MIN., 6 FT. MAX.

STANDARD SHEET NO.	TITLE:
5-297.405 (1 OF 3)	TEMPORARY EROSION CONTROL
STANDARD APPROVED: MAY 1, 1995	

65TH STREET NW KALMAR TWP. SHEET 16 OF 19 SHEETS



HEAVY DUTY

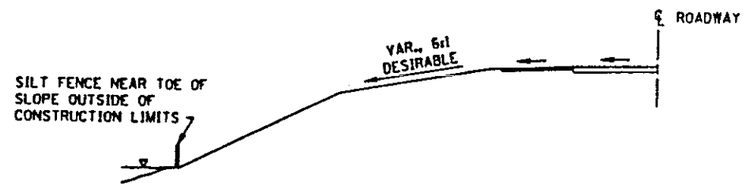


SELF SUPPORTING

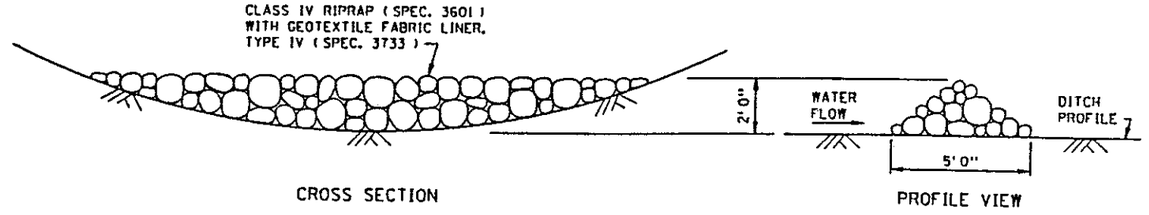
SILT FENCE DETAILS

TO PROTECT AREAS FROM SHEET FLOW
(SEE SPEC. 3886)

DESIGN CRITERIA:
MAXIMUM CONTRIBUTING AREA: 3 ACRES



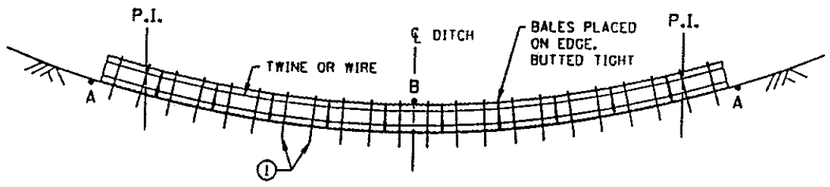
ROADWAY EMBANKMENT



CROSS SECTION

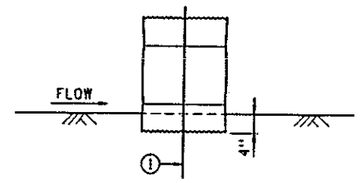
PROFILE VIEW

ROCK DITCH CHECK

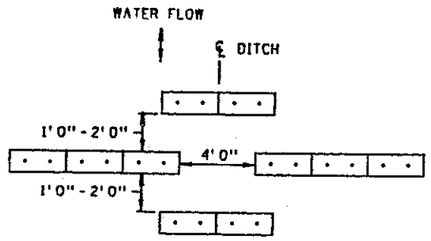


NOTE:
POINT A MUST BE HIGHER THAN POINT B

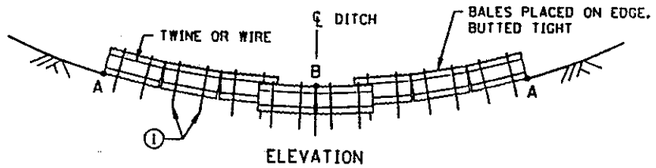
BALE DITCH SEDIMENT CHECK



BALE CHECK DETAIL



PLAN VIEW



ELEVATION

NOTE:
POINT A MUST BE HIGHER THAN POINT B

BALE DITCH VELOCITY CHECKS
(WILL REQUIRE A MINIMUM OF 10 BALES PER SITE)

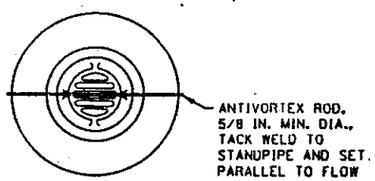
RECOMMENDED SPACING BETWEEN DITCH CHECKS	
DITCH GRADE (%)	SPACING (FT.)
2	100
4	75
6	50
8	40
10	25

DESIGN CRITERIA:

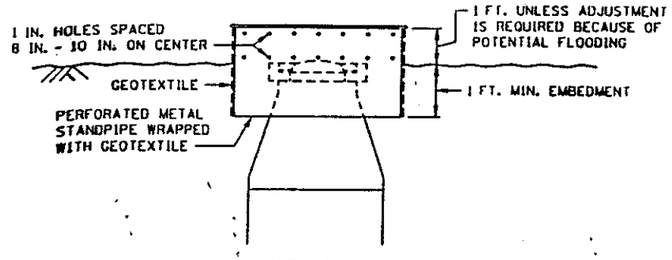
	BALE	ROCK
STORM FREQUENCY:	2 YR. - 24 HR.	10 YR. - 24 HR.
MAX. FLOW VELOCITY:	5 FT./SEC.	12 FT./SEC.
MAX. DITCH GRADE:	5%	—
MAX. DRAINAGE AREA:	2 ACRES	5 ACRES

NOTE:
① TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10 IN. MINIMUM.

STANDARD SHEET NO.	TITLE:
5-297.405 (2 OF 3)	TEMPORARY EROSION CONTROL
STANDARD APPROVED: MAY 1, 1995	
65TH STREET NW KALMAR TWP.	SHEET 17 OF 19 SHEETS



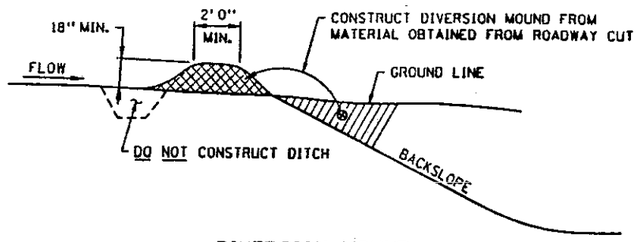
PLAN VIEW



ELEVATION

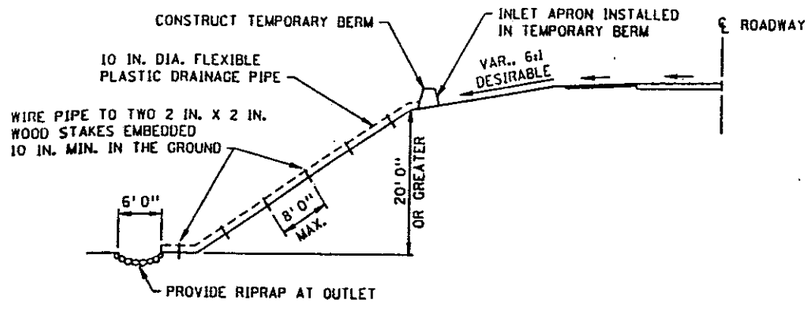
TEMPORARY STANDPIPE
TO PROTECT DROP INLET

DESIGN CRITERIA:
STORM FREQUENCY: 10 YEAR. - 24 HOUR.



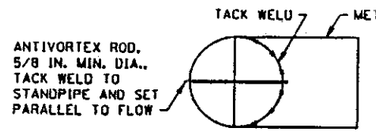
DIVERSION MOUND

DESIGN CRITERIA:
STORM FREQUENCY: 10 YEAR - 24 HOUR
MAXIMUM DRAINAGE AREA: 5 ACRES
MAXIMUM DIVERSION: GRADE 5%

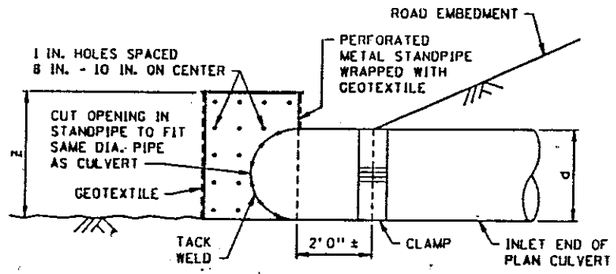


TEMPORARY DRAIN ON FILL SLOPE

DESIGN CRITERIA:
STORM FREQUENCY: 2 YEAR - 24 HOUR
MAXIMUM DRAINAGE AREA: 3 ACRES



PLAN VIEW

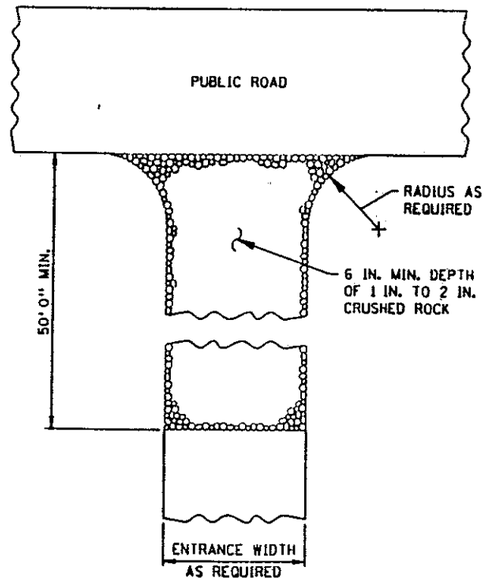


ELEVATION

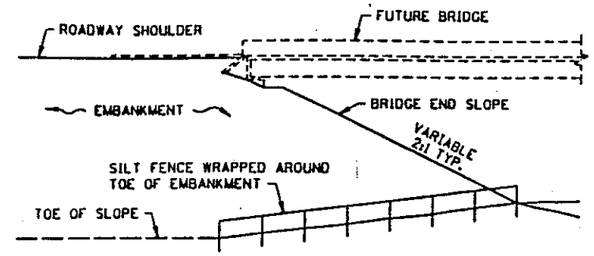
TEMPORARY STANDPIPE
FOR SEDIMENT CONTROL ON CULVERT INLET

d = DIA. OF STANDPIPE EQUAL TO DIA. OF PLAN CULVERT
Z = LENGTH OF PERFORATED STANDPIPE (d + 1 FT.)

DESIGN CRITERIA:
CULVERT SIZE: 12 - 36 IN.
STORM FREQUENCY: 10 YR. - 24 HR.

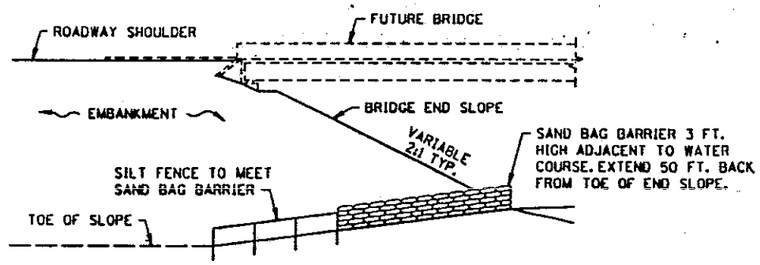


ROCK CONSTRUCTION ENTRANCE



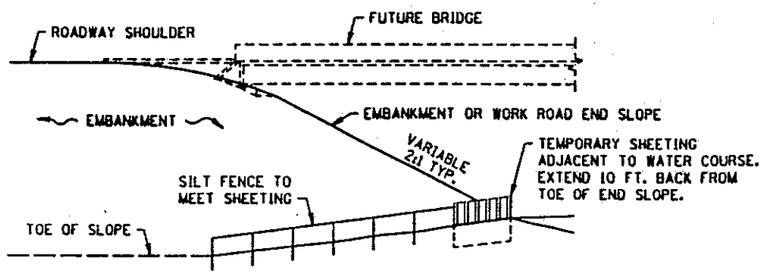
BRIDGE FILL

DESIGN CRITERIA:
WATER COURSE FLOW VELOCITY: STAGNANT
CONTRIBUTING SLOPE AREA: 1/2 ACRE



BRIDGE FILL

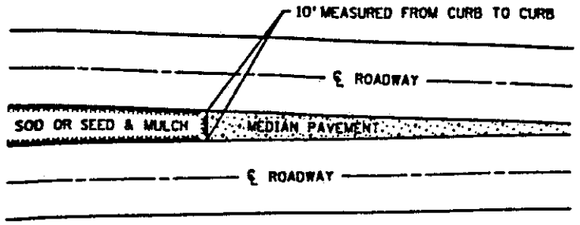
DESIGN CRITERIA:
MAX. WATER COURSE FLOW VELOCITY: 7 FT./SEC.
CONTRIBUTING SLOPE AREA: 1 ACRE



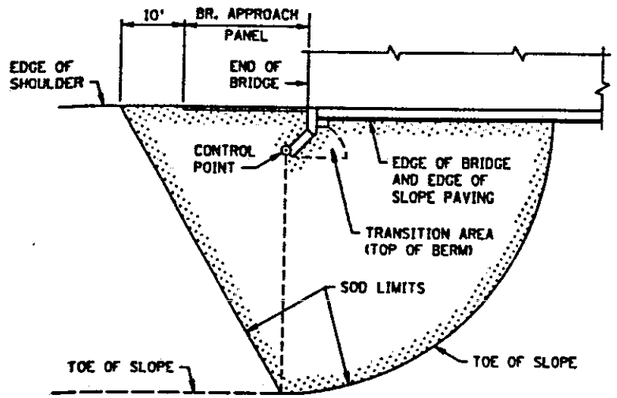
EMBANKMENT OR WORK ROAD FILL

DESIGN CRITERIA:
MAX. WATER COURSE FLOW VELOCITY: 15 FT./SEC.
CONTRIBUTING SLOPE AREA: 3 ACRES

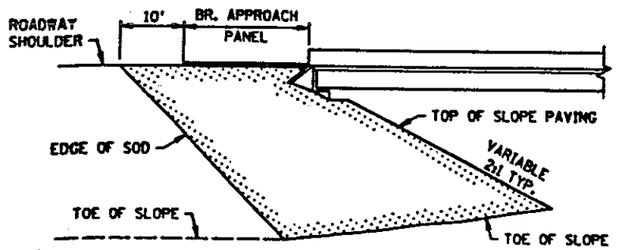
STANDARD SHEET NO.	TITLE:
5-297.405 (3 OF 3)	TEMPORARY EROSION CONTROL
STANDARD APPROVED: MAY 1, 1995	
65TH STREET NW KALMAR TWP.	SHEET 18 OF 19 SHEETS



SODDING LIMITS AT GORE AREA

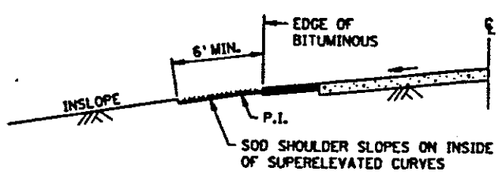


PLAN

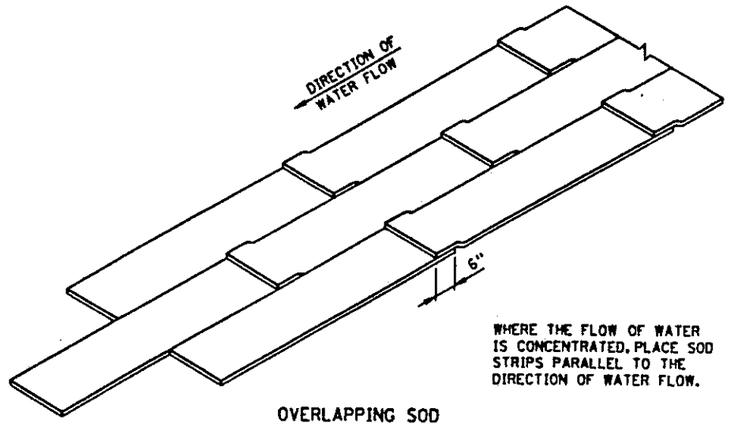


ELEVATION

SODDING LIMITS AT BRIDGE APPROACH FILLS

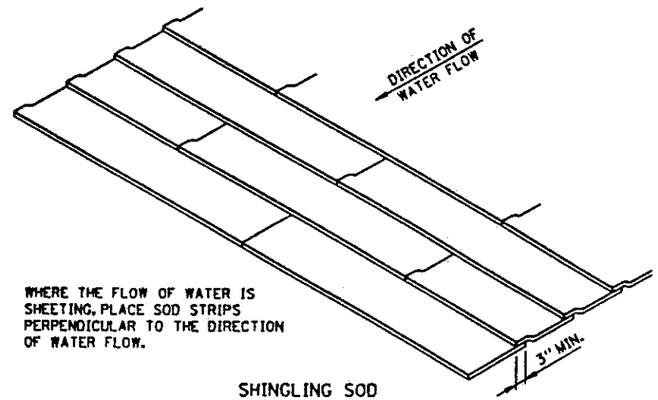


SODDING INSLOPES OF SUPERELEVATED CURVES



OVERLAPPING SOD

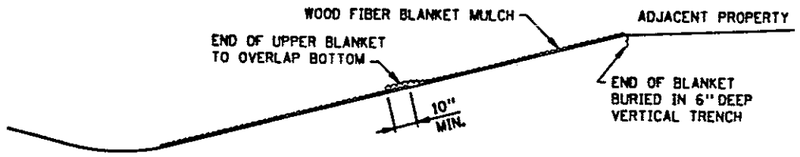
WHERE THE FLOW OF WATER IS CONCENTRATED, PLACE SOD STRIPS PARALLEL TO THE DIRECTION OF WATER FLOW.



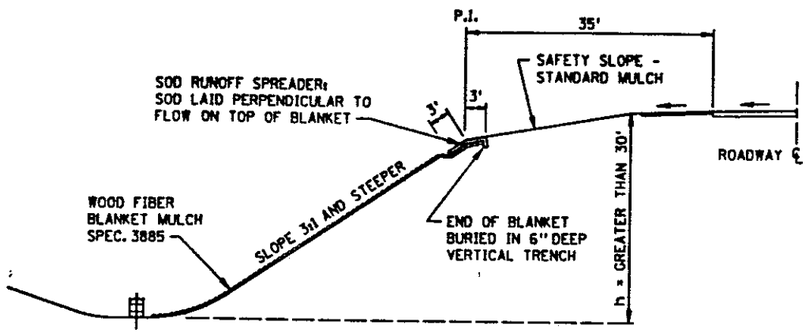
SHINGLING SOD

WHERE THE FLOW OF WATER IS SHEETING, PLACE SOD STRIPS PERPENDICULAR TO THE DIRECTION OF WATER FLOW.

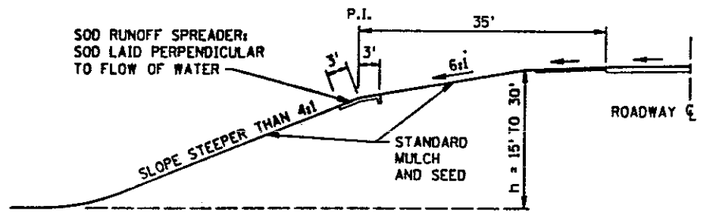
SPECIAL SOD PLACEMENT TECHNIQUES



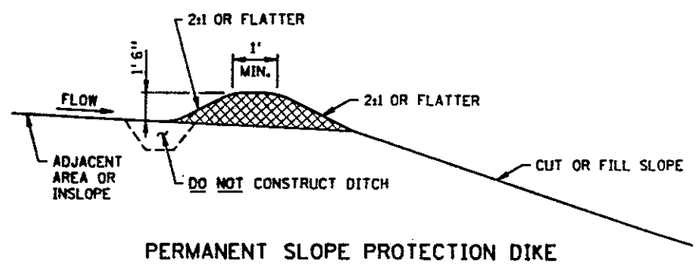
WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE



WOOD FIBER BLANKET INSTALLATION ON AN INSLOPE
(WHEN REQUIRED)



BROKEN-BACK SAFETY FILL SLOPE



PERMANENT SLOPE PROTECTION DIKE

STANDARD SHEET NO. 5-297.406	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS AND AT GORE AREAS & BRIDGE APPROACH FILLS
STANDARD APPROVED: JANUARY 31, 1985	
65TH STREET NW KALMAR TWP.	SHEET 19 OF 19 SHEETS