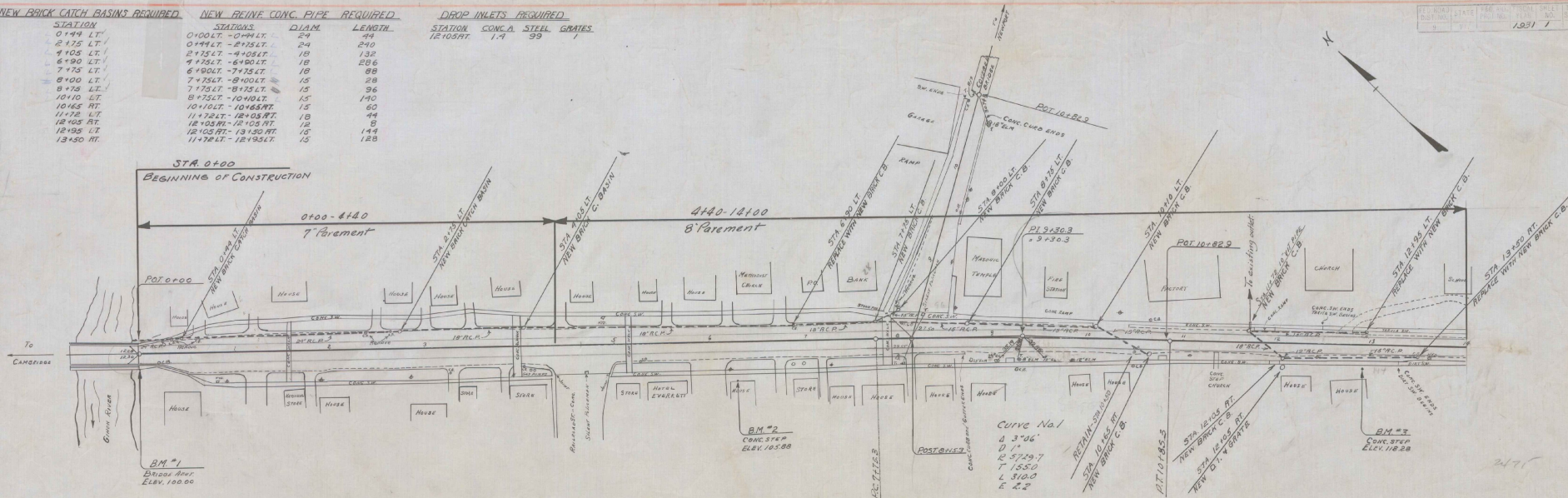


NEW BRICK CATCH BASINS REQUIRED NEW REINF. CONC. PIPE REQUIRED DROP INLETS REQUIRED

STATION	STATICS	DJAM	LENGTH
0+99 LT	0+00LT - 0+99LT	29	44
2+75 LT	0+99LT - 2+15LT	24	240
6+05 LT	2+75LT - 4+10LT	13	132
6+90 LT	4+15LT - 6+90LT	18	286
7+75 LT	6+90LT - 7+75LT	15	88
8+00 LT	7+75LT - 8+00LT	15	28
8+75 LT	7+75LT - 8+75LT	13	96
10+10 LT	8+75LT - 10+10LT	15	140
10+65 RT	10+10LT - 10+65RT	15	60
11+25 RT	10+65RT - 11+25RT	15	44
12+05 RT	11+25RT - 12+05RT	12	8
12+50 RT	12+05RT - 12+50RT	15	144
13+45 RT	12+50RT - 13+45RT	15	44

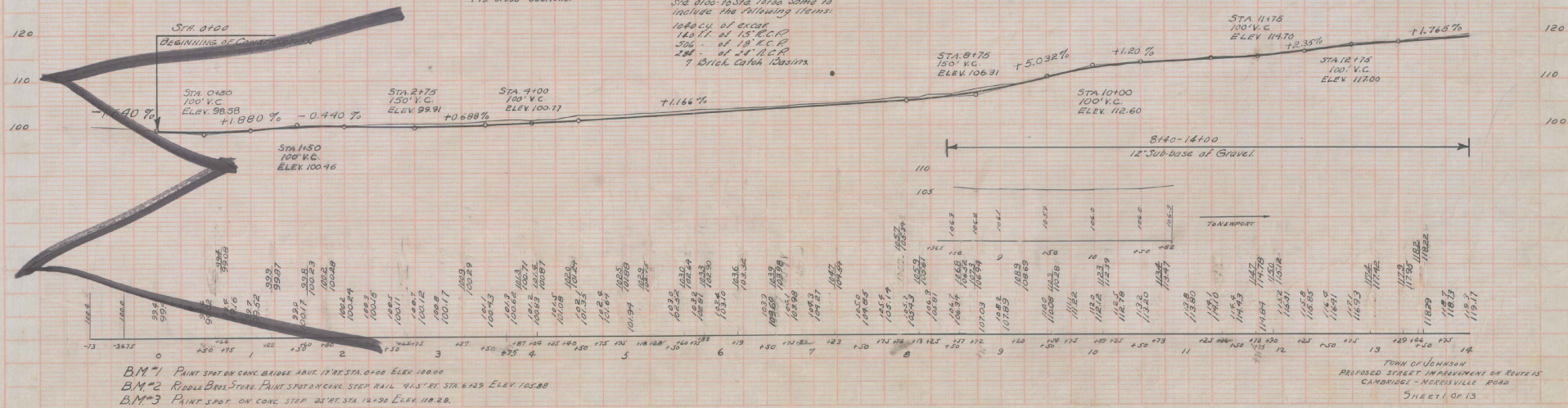
STATION	CONCA	STEEL	GRATES
12105RT	14	99	1



INDEX

SHEET No. 12.	Layouts, with Typical Section
3.	Details of Construction.
4.	Standard Structure Sheet, S. 20.
5.	" " " S. 21.
6.	" " " S. 22.
7.	Cross Sections

(NOTE:
The following items will
not be included in State
Participation:
All lateral drainage, and
the construction thereof, Sta.
Sta. 0+00 to Sta. 10+00. Some to
include the following items:
1040 cu. of excar.
180 l.f. of 15" R.C.P.
506 - of 18" R.C.P.
284 - of 24" R.C.P.
7 Brick Catch Basins.



B.M.#1 PAINT SPOT ON CONC. BRIDGE ABUT. 17 RT. STA. 0+00 ELEV. 100.00
B.M.#2 RIDDLE BRGS. STORE. PAINT SPOT ON CONC. STEEL RAIL 915' RT. STA. 6+29 ELEV. 105.88
B.M.#3 PAINT SPOT ON CONC. STEP 25' RT. STA. 12+98 ELEV. 110.20.

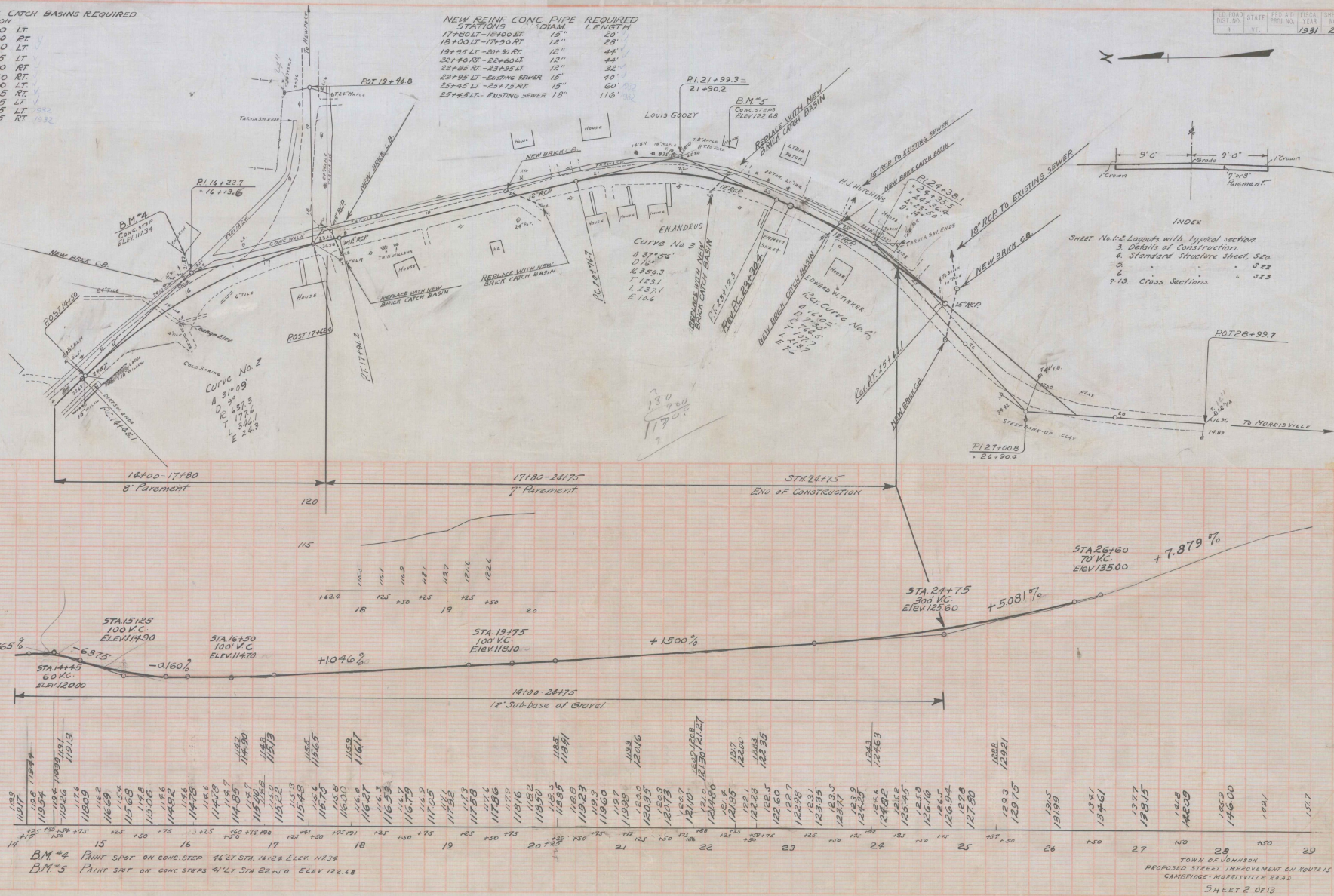
TOWN OF JOHNSON
PROPOSED STREET IMPROVEMENT ON ROUTE 15
CAMBRIDGE - MORRISVILLE ROAD
SHEET 1 OF 13

NEW BRICK CATCH BASINS REQUIRED

STATION

16+00	LT.
17+30	RT.
18+00	LT.
19+25	LT.
20+30	RT.
22+40	RT.
22+60	LT.
23+85	RT.
23+95	LT.
25+45	LT.
25+75	RT.

NEW REINF CONC PIPE STATIONS	PIPE DIAM.	REQUIRED LENGTH
17+80 LT - 18+00 LT	15"	20'
18+00 LT - 17+90 RT	12"	28'
19+95 LT - 20+30 RT	12"	44'
22+40 RT - 22+60 LT	12"	44'
23+85 RT - 23+95 LT	12"	32'
23+95 LT - EXISTING SEWER	15"	40'
25+45 LT - 25+75 RT	15"	60'
25+85 LT - EXISTING SEWER	18"	116'



BM #4 PAINT SPOT ON CONC STEP 46' HT STA 16+29 FLEV 11738

BM #5 PAINT SPOT ON CONC STEPS 4' LT. STA 22+50 ELEV. 122.68

TOWN OF JOHNSON
PROPOSED STREET IMPROVEMENT ON ROUTE 13
CAMBRIDGE-MORRISVILLE ROAD.
SHEET 2 OF 13

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON

STATE P. NO. 133-L EXTENSION

Form Eng. 3A

Summary Sheet No.

JUNE 30, 1932

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON

STATE P. NO. 133-L EXTENSION

Form Eng. 3A

Summary Sheet No.

JUNE 30, 1932

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
135	Cu. Yds.	Common Excavation	10
	Cu. Yds.	Solid Rock Excavation	10
	Cu. Yds.	Borrow	11
1120	Cu. Yds.	Common Excavation including Borrow	10-11
	Cu. Yds.	Sub-base of Field or Quarry Stone	12A
	Cu. Yds.	Sub-base of Crushed Rock or Slag	12B
100	Cu. Yds.	Sub-base of Gravel	12-B
	Cu. Yds.	Telford Base Course	12D
	Cu. Yds.	Sub-base of Sand	12E
	Cu. Yds.	Structure Excavation	15
	Cu. Yds.	Broken Stone Base Course	16
	Cu. Yds.	Gravel Surface Course	20A
	Cu. Yds.	Gravel Surface Course (Crushed)	20B
	Cu. Yds.	Gravel Shoulders	21
	Cu. Yds.	Bituminous Macadam Surface Course	22A
	Gals.	Oil Asphalt	22B
	Gals.	Refined Tar	22C
515	Cu. Yds.	One Course Cement Concrete Pavement	23
	Cu. Yds.	One Course Cement Concrete Pavement Type B	23B
	Sq. Yds.	Bituminous Concrete Surface Course	
	Sq. Yds.	Single Bituminous Surface Treatment	25
	Sq. Yds.	Double Bituminous Surface Treatment	26
	Sq. Yds.	Natural Rock Asphalt Surface	27
16.6	Cu. Yds.	Concrete Class AA (1-1-3)	34AA
	Cu. Yds.	Concrete Class A	34A
	Cu. Yds.	Concrete Class B (1-2-5)	34B
1435	lbs.	Reinforcing Steel	34
	lbs.	Structural Steel	36A
	Lump		
	Sum	Steel Superstructure	36B
	Sq. Yds.	Waterproofing Membrane	37
2.7	Cu. Yds.	Cement Rubble Masonry	43
	Cu. Yds.	Dry Rubble Masonry	44
	Sq. Yds.	Repointing Masonry	45
	Lin. Ft.	6" Vitrified Clay Pipe	50B
	Lin. Ft.	8" Vitrified Clay Pipe	50C
	Lin. Ft.	10" Vitrified Clay Pipe	50D
	Lin. Ft.	12" Vitrified Clay Pipe	50E

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
508	Lin. Ft.	12" Reinforced Concrete	49-A
	Lin. Ft.	15"	
	Lin. Ft.	16"	
40	Lin. Ft.	18"	49-C
48	Lin. Ft.	24"	49-D
	Lin. Ft.	30"	
	Lin. Ft.	36"	
	Lin. Ft.	12"	
	Lin. Ft.	15"	
	Lin. Ft.	16"	
	Lin. Ft.	18"	
	Lin. Ft.	24"	
	Lin. Ft.	30"	
	Lin. Ft.	36"	
	Lin. Ft.	Relaying Pipe Culverts	51
	Lump		
	Sum	Temporary Bridge	55
	Lin. Ft.	Timber Piling	56
	M. B. M.	Timber Grillage	57
	Cu. Yds.	Stone Fill	60
	Cu. Yds.	Plain Rip Rap	61
	Cu. Yds.	Rip Rap for Bank Protection	62
	Lin. Ft.	Tile Un'ndrain	65
	Lin. Ft.	Wood Guard Rail	66
	Lin. Ft.	Cable Guard Rail	67
	Cu. Yds.	Plain Rubble Paving	70A
	Cu. Yds.	Grouted Rubble Paving	70B
	Sq. Yds.	Plain Cement Concrete Gutter	73
	Sq. Yds.	Plain Cobble Gutter	74A
	Sq. Yds.	Grouted Cobble Gutter	74B
	Each	Leaching Basins	75
	Each	Catch Basins	76
	Each	Changing Elevations of Manholes and Catch Basins	77
	Each	Drop Inlet Grates	78

Type of Road One Course Cement Concrete Pavement

STATIONS		PAV'T WIDTHS		EQUATIONS	
FROM	TO	18 ft		+	-
0+00	13+18	1318.0			
		LENGTH OF PROJECT			
		1318.0 FT. = 0.249 MILES			

DETAILED SUMMARY OF QUANTITIES

135	SOLID ROCK EXCAVATION	16.6	CONCRETE CLASS A
135	As per sections	16.6	Drop Inlets
	Total		Total
632	COMMON EXCAVATION INCLUDING BORROW	1435	REINFORCING STEEL
	Excavation as per sections	1435	Drop Inlets
	Borrow		Total
488	Culvert Excavation		
1120	Total		
		2.7	CEMENT RUBBLE MASONRY
		2.7	Headwalls
			Total
100	SUB-BASE OF GRAVEL		
100	Sub-base		
	Total		
513	ONE COURSE CEMENT CONCRETE PAVEMENT		
2	Pavement		
515	Ramp Sta. 13+18		
	Total		

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON

F. A. P. NO. 133-L

Form Eng. 3A

Summary Sheet No.

1931-2

192

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON

F. A. P. NO.

133-L

Form Eng. 3A

Summary Sheet No.

1931-2

192

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
Cu. Yds.	Common Excavation		10
Cu. Yds.	Solid Rock Excavation		10
Cu. Yds.	Borrow		11
Cu. Yds.	Common Excavation including Borrow		10-11
Cu. Yds.	Sub-base of Field or Quarry Stone		12A
Cu. Yds.	Sub-base of Crushed Rock or Slag		12B
Cu. Yds.	Sub-base of Gravel		12C
Cu. Yds.	Telford Base Course		12D
Cu. Yds.	Sub-base of Sand		12E
Cu. Yds.	Structure Excavation		15
Cu. Yds.	Broken Stone Base Course		16
Cu. Yds.	Gravel Surface Course		20A
Cu. Yds.	Gravel Surface Course (Crushed)		20B
Cu. Yds.	Gravel Shoulders		21
Cu. Yds.	Bituminous Macadam Surface Course		22A
Gals.	Oil Asphalt		22B
Gals.	Refined Tar		22C
Cu. Yds.	One Course Cement Concrete Pavement Type A		23 A
Cu. Yds.	One Course Cement Concrete Pavement Type B		23B
Sq. Yds.	Bituminous Concrete Surface Course		
Sq. Yds.	Single Bituminous Surface Treatment		25
Sq. Yds.	Double Bituminous Surface Treatment		26
Sq. Yds.	Natural Rock Asphalt Surface		27
Cu. Yds.	Concrete Class AA (1-1-3)		34AA
Cu. Yds.	Concrete Class A (1-2-4)		34A
Cu. Yds.	Concrete Class B (1-2-5)		34B
lbs.	Reinforcing Steel		35
lbs.	Structural Steel		36A
Lump	Sum		
Sum	Steel Superstructure		36B
Sq. Yds.	Waterproofing Membrane		37
Cu. Yds.	Cement Rubble Masonry		43
Cu. Yds.	Dry Rubble Masonry		44
Sq. Yds.	Repointing Masonry		45
Lin. Ft.	6" Vitrified Clay Pipe		50B
Lin. Ft.	8" Vitrified Clay Pipe		50C
Lin. Ft.	10" Vitrified Clay Pipe		50D
Lin. Ft.	12" Vitrified Clay Pipe		50E

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
Lin. Ft.	12"	Pipe	
Lin. Ft.	15"	Pipe	
Lin. Ft.	18"	Pipe	
Lin. Ft.	24"	Pipe	
Lin. Ft.	30"	Pipe	
Lin. Ft.	36"	Pipe	
Lin. Ft.	12"	Pipe	
Lin. Ft.	15"	Pipe	
Lin. Ft.	16"	Pipe	
Lin. Ft.	18"	Pipe	
Lin. Ft.	24"	Pipe	
Lin. Ft.	30"	Pipe	
Lin. Ft.	36"	Pipe	
Lin. Ft.	Relaying Pipe Culverts		
Lump	Sum	Temporary Bridge	
Lin. Ft.	Timber Piling		
M. B. M.	Timber Grillage		
Cu. Yds.	Stone Fill		
Cu. Yds.	Plain Rip Rap		
Cu. Yds.	Rip Rap for Bank Protection		
Lin. Ft.	Tile Un'erdrain		
Lin. Ft.	Wood Guard Rail		
Lin. Ft.	Cable Guard Rail		
Cu. Yds.	Plain Rubble Paving		
Cu. Yds.	Grouted Rubble Paving		
Sq. Yds.	Plain Cement Concrete Gutter		
Sq. Yds.	Plain Cobble Gutter		
Sq. Yds.	Grouted Cobble Gutter		
Each	Leaching Basins		
Each	Catch Basins		
Each	Changing Elevations of Manholes and Catch Basins		
Each	Drop Inlet Grates		

DETAILED SUMMARY OF QUANTITIES

Type of Road ONE COURSE CEMENT CONCRETE PAVEMENT

STATIONS		EQUATIONS			
FROM	TO	7"	8"	+	-
0+00	4+40	440			
4+40	8+40		400		
8+40	17+80		940		
17+80	24+75	695			
		1135	1380		
					2475 ft
					1931.2
ITEM		PANT	LATERAL SYSTEM	GRAVEL	PANT
		0+00-8+40	8+40-24+75	8+40-24+75	8+40-24+75
SOLID ROCK EXCAVATION		40	—	60	—
COMMON EXCAVATION		—	—	—	—
As per Sections		612	—	672	—
Culverts		300	1040	1060	—
Overrun		288	—	1028	—
Removal of Surface Course		—	—	—	273
TOTAL		1200	1040	2760	273
SUB-BASE OF GRAVEL		—	—	1090	—
		—	—	—	1090 cu
PAVEMENT		7"	171	—	270
		8"	178	—	418
TOTAL		349	—	—	688
CONC. CLASS A		—	—	5	—
		—	—	—	5 cu
BEING STEEL		—	—	300	—
		—	—	—	300 #
12" R.C. PIPE		—	—	156	—
15" " "		—	140	576	—
18" " "		—	506	160	—
24" " "		—	254	—	—
		—	—	—	284 lf
RELAYING PIPE CULVERTS		—	—	100	—
		—	—	—	100 lf
CATCH BASINS		—	7	17	—
		—	—	—	24 each
CHANGING ELEV. OF C.B.		—	—	1	—
		—	—	—	1 "
DROP INLET GRATES		—	—	1	—
		—	—	—	1 "
GRAVEL SURFACE COURSE		—	—	—	273
		—	—	—	273 cu

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON VILLAGE

F. A. P. NO. 133-L

Form Eng. 3A

Summary Sheet No. 1

MAY 10 1932

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON VILLAGE

F. A. P. NO. 133-L

Form Eng. 3A

Summary Sheet No. 1

MAY 10 1932

APPROXIMATE SUMMARY OF QUANTITIES				APPROXIMATE SUMMARY OF QUANTITIES				Type of Road ONE COURSE CEMENT CONCRETE PAVEMENT					
QUANTITIES	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS	ITEM NUMBER	STATIONS		EQUATIONS			
								FROM	TO			+	-
	Cu. Yds.	Common Excavation	10		Lin. Ft.	12" REINFORCED CONCRETE	Pipe			18'			
	Cu. Yds.	Solid Rock Excavation	10	72	Lin. Ft.	15"	Pipe	438					
	Cu. Yds.	Borrow	11		Lin. Ft.	16"	Pipe						
800	Cu. Yds.	Common Excavation including Borrow	10-11		Lin. Ft.	18"	Pipe		0+00	24+75	2475.0		
	Cu. Yds.	Sub-base of Field or Quarry Stone	12A		Lin. Ft.	24"	Pipe						
	Cu. Yds.	Sub-base of Crushed Rock or Slag	12B		Lin. Ft.	30"	Pipe						
					Lin. Ft.	36"	Pipe						
850	Cu. Yds.	Sub-base of Gravel	12C										
	Cu. Yds.	Telford Base Course	12D		Lin. Ft.	12"	Pipe						
	Cu. Yds.	Sub-base of Sand	12E		Lin. Ft.	15"	Pipe						
					Lin. Ft.	16"	Pipe						
	Cu. Yds.	Structure Excavation	15		Lin. Ft.	18"	Pipe						
	Cu. Yds.	Broken Stone Base Course	16		Lin. Ft.	24"	Pipe						
					Lin. Ft.	30"	Pipe						
					Lin. Ft.	36"	Pipe						
	Cu. Yds.	Gravel Surface Course	20A										
	Cu. Yds.	Gravel Surface Course (Crushed)	20B										
	Cu. Yds.	Gravel Shoulders	21		Lin. Ft.	Relaying Pipe Culverts		51					
	Cu. Yds.	Bituminous Macadam Surface Course	22A										
	Gals.	Oil Asphalt	22B		Lump								
	Gals.	Refined Tar	22C		Sum	Temporary Bridge		55					
1020	Cu. Yds.	One Course Cement Concrete Pavement	23		Lin. Ft.	Timber Piling		56					
	Cu. Yds.	One Course Cement Concrete Pavement Type B	23B		M. B. M.	Timber Grillage		57					
	Sq. Yds.	Bituminous Concrete Surface Course											
	Sq. Yds.	Single Bituminous Surface Treatment	25		Cu. Yds.	Stone Fill		60					
	Sq. Yds.	Double Bituminous Surface Treatment	26		Cu. Yds.	Plain Rip Rap		61					
	Sq. Yds.	Natural Rock Asphalt Surface	27		Cu. Yds.	Rip Rap for Bank Protection		62					
	Cu. Yds.	Concrete Class AA	34AA		Lin. Ft.	Tile Un'edrain		65					
6	Cu. Yds.	Concrete Class A	34A		Lin. Ft.	Wood Guard Rail		66					
	Cu. Yds.	Concrete Class B	34B		Lin. Ft.	Cable Guard Rail		67					
500	lbs.	Reinforcing Steel	34										
	lbs.	Structural Steel	36A		Cu. Yds.	Plain Rubble Paving		70A					
	Lump				Cu. Yds.	Grouted Rubble Paving		70B					
	Sum	Steel Superstructure	36B										
	Sq. Yds.	Waterproofing Membrane	37		Sq. Yds.	Plain Cement Concrete Gutter		73					
					Sq. Yds.	Plain Cobble Gutter		74A					
	Cu. Yds.	Cement Rubble Masonry	43		Sq. Yds.	Grouted Cobble Gutter		74B					
	Cu. Yds.	Dry Rubble Masonry	44		Each	Leaching Basins		75					
	Sq. Yds.	Repointing Masonry	45		Each	Catch Basins		76					
				17	Each	Changing Elevations of Manholes and Catch Basins		77					
	Lin. Ft.	6" Vitrified Clay Pipe	50B	2	Each	Drop Inlet Grates		78					
	Lin. Ft.	8" Vitrified Clay Pipe	50C										
	Lin. Ft.	10" Vitrified Clay Pipe	50D										
	Lin. Ft.	12" Vitrified Clay Pipe	50E										
DETAILED SUMMARY OF QUANTITIES													
COMMON EXCAVATION/INCL. BORROW				ONE COURSE CEMENT CONCRETE PAVEMENT									
623	Cu. Yds.	AS PER CROSS SECTIONS		962.8	C.Y.	PAVEMENT							
84	"	PIPE CULV. & CATCH BASINS		39.6	"	INTERSECTION TO RAILROAD ST.							
93	"	OVERRUN		16.2	"	RAMP AT 8+20							
800	Cu. Yds.	TOTAL		1.7	"	RAMP AT 24+75							
				1020.0	C.Y.	TOTAL							
SUBBASE OF GRAVEL													
701	Cu. Yds.	AS PER CROSS SECTIONS											
149		OVERRUN											
850		TOTAL											

TOTAL LENGTH OF PROJECT 2475.0 LIN. FT.
0.468 MILES

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

JOHNSON VILLAGE F. A. P. NO. _____
Form Eng. 3A Summary Sheet No. _____

1931

STATE OF VERMONT

DEPARTMENT OF HIGHWAYS

F. A. P. NO. _____
Form Eng. 3A Summary Sheet No. 192

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
100	Cu. Yds.	Common Excavation	10
	Cu. Yds.	Solid Rock Excavation (est.)	10
	Cu. Yds.	Borrow	11
5000	Cu. Yds.	Common Excavation including Borrow	10-11
	Cu. Yds.	Sub-base of Field or Quarry Stone	12A
	Cu. Yds.	Sub-base of Crushed Rock or Slag	12B
600	Cu. Yds.	Sub-base of Gravel	12B
	Cu. Yds.	Telford Base Course	12D
	Cu. Yds.	Sub-base of Sand	12E
	Cu. Yds.	Structure Excavation	15
	Cu. Yds.	Broken Stone Base Course	16
	Cu. Yds.	Gravel Surface Course	20A
	Cu. Yds.	Gravel Surface Course (Crushed)	20B
	Cu. Yds.	Gravel Shoulders	21
	Cu. Yds.	Bituminous Macadam Surface Course	22A
	Gals.	Oil Asphalt	22B
	Gals.	Refined Tar	22C
1039 441	Cu. Yds.	One Course Cement Concrete Pavement Type A	23 A
108 596	Cu. Yds.	One Course Cement Concrete Pavement Type B	23 B
	Sq. Yds.	Bituminous Concrete Surface Course	
	Sq. Yds.	Single Bituminous Surface Treatment	25
	Sq. Yds.	Double Bituminous Surface Treatment	26
	Sq. Yds.	Natural Rock Asphalt Surface	27
5	Cu. Yds.	Concrete Class AA (1-1-3)	34AA
	Cu. Yds.	Concrete Class A	33A
	Cu. Yds.	Concrete Class B (1-2-5)	34B
300	lbs.	Reinforcing Steel	34
	lbs.	Structural Steel	36A
	Lump	Steel Superstructure	36B
	Sq. Yds.	Waterproofing Membrane	37
	Cu. Yds.	Cement Rubble Masonry	43
	Cu. Yds.	Dry Rubble Masonry	44
	Sq. Yds.	Repointing Masonry	45
	Lin. Ft.	6" Vitrified Clay Pipe	50B
	Lin. Ft.	8" Vitrified Clay Pipe	50C
	Lin. Ft.	10" Vitrified Clay Pipe	50D
	Lin. Ft.	12" Vitrified Clay Pipe	50E

APPROXIMATE SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS	ITEM NUMBER
156	Lin. Ft.	12" Rel. Cnc.	49-A
716	Lin. Ft.	15"	49-B
	Lin. Ft.	16"	
666	Lin. Ft.	18"	49-C
284	Lin. Ft.	24"	49-D
	Lin. Ft.	30"	
	Lin. Ft.	36"	
	Lin. Ft.	12"	
	Lin. Ft.	15"	
	Lin. Ft.	16"	
	Lin. Ft.	18"	
	Lin. Ft.	24"	
	Lin. Ft.	30"	
	Lin. Ft.	36"	
100	Lin. Ft.	Relaying Pipe Culverts (est.)	51
	Lump	Temporary Bridge	55
	Lin. Ft.	Timber Piling	56
	M. B. M.	Timber Grillage	57
	Cu. Yds.	Stone Fill	60
	Cu. Yds.	Plain Rip Rap	61
	Cu. Yds.	Rip Rap for Bank Protection	62
	Lin. Ft.	Tile Un'erdmain	65
	Lin. Ft.	Wood Guard Rail	66
	Lin. Ft.	Cable Guard Rail	67
	Cu. Yds.	Plain Rubble Paving	70A
	Cu. Yds.	Grouted Rubble Paving	70B
	Sq. Yds.	Plain Cement Concrete Gutter	73
	Sq. Yds.	Plain Cobble Gutter	74A
	Sq. Yds.	Grouted Cobble Gutter	74B
	Each	Leaching Basins	75
20	Each	Catch Basins (Brick)	76
1	Each	Changing Elevations of Manholes and Catch Basins	77
1	Each	Drop Inlet Grates	78

Type of Road One Course Cement Concrete Pavement

STATIONS		EQUATIONS	
FROM	TO	7'	8'
0+00.0	4+400	660.0	
4+400	17+80.0	1380.0	
17+80.0	24+75.0	695.0	
		1135.0	1380.0
Total length of Construction = 24750 ft. = 0.469 Miles.			

DETAILED SUMMARY OF QUANTITIES

1282	cu.	COMMON EXCAVATION INCLUDING BORROW
2400	"	Earth Exca. as per sections
1316	"	Culverts x 1.5 (1600)
5000	"	OVERRUN
	"	Total
489	cu.	SUB-BASE OF GRAVEL
111	"	Plans
600	"	OVERRUN
	"	Total
14	cu.	CONCRETE CLASS A
3.6	"	Culverts
5.0	"	OVERRUN
	"	Total
99	lbs.	REINFORCING STEEL
201	"	Culverts
300	"	OVERRUN
	"	Total

Note:

The following items will not be included in State Participation:

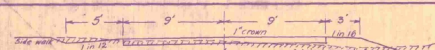
All lateral drainage, and the construction thereof, from Sta. 0+00 to Sta. 10+00. Same to include the following items.

100 cu. of exca. @
140 l.f. of 15" H.C.P.
506 l.f. of 18" H.C.P.
284 l.f. of 24" H.C.P.
7 Brick Catch Basins.

— INDEX OF SHEETS —
 Sheet 1 Layout & Typical Section
 2 Old Street Sheet 3-20
 3-6 Cross Sections

STATION TO STATION	L & E	R.C.P.	LENGTH	JOINT POSITION	CONC.	STEEL	GUTTER	HEADWALL
3+15	E	18"	40'	3+75	LT	1.8	152	1
6+25	7+74	RT	12"	6+75	RT	2.1	189	1
7+30	7+74	LT	12"	6+25	RT	1.7	146	1
7+74	8+00	RT	12"	7+74	RT	2.6	189	1
8+00	8+00	LT	12"	7+30	LT	1.7	146	1
8+00	10+60	RT	12"	8+00	RT	1.8	152	1
10+60	10+60	LT	12"	8+00	LT	1.7	146	1
10+60	10+60	RT	24"	10+60	RT	2.1	189	1
								27

DRAINAGE SYSTEM



Note: All Drop Inlets are to be constructed with 12" Jumps.

TYPICAL SECTION
 One Course Cement Concrete Pavement

STA 13+10
 END OF PROJECT

Construct ramp at end of project

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

Do not bank or widen

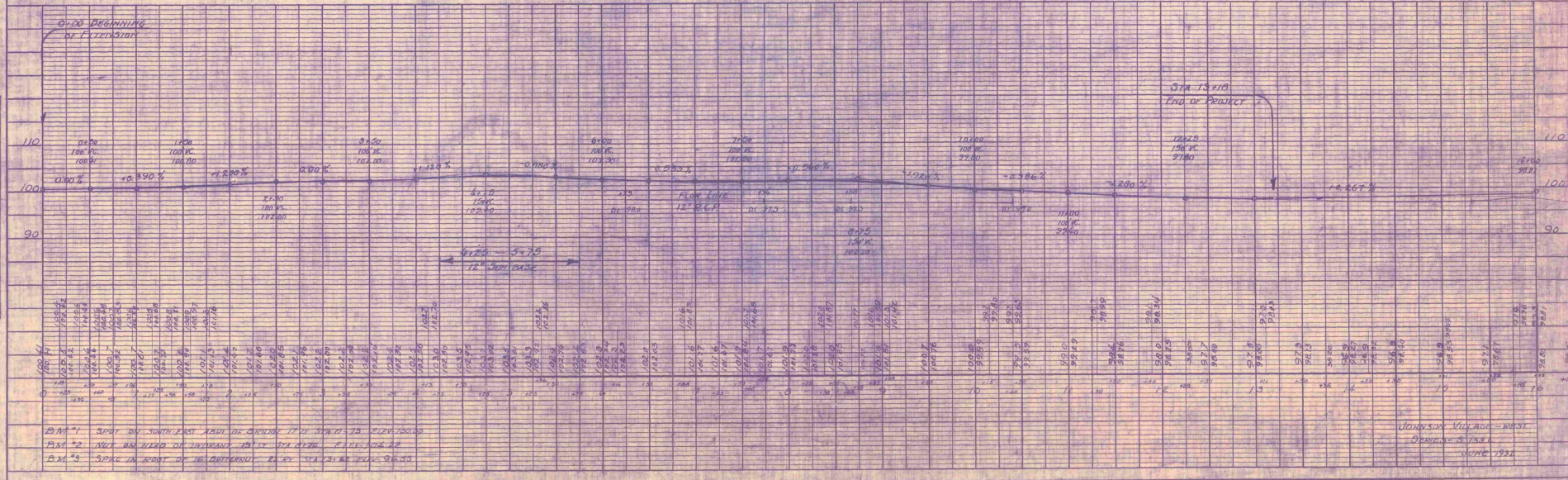
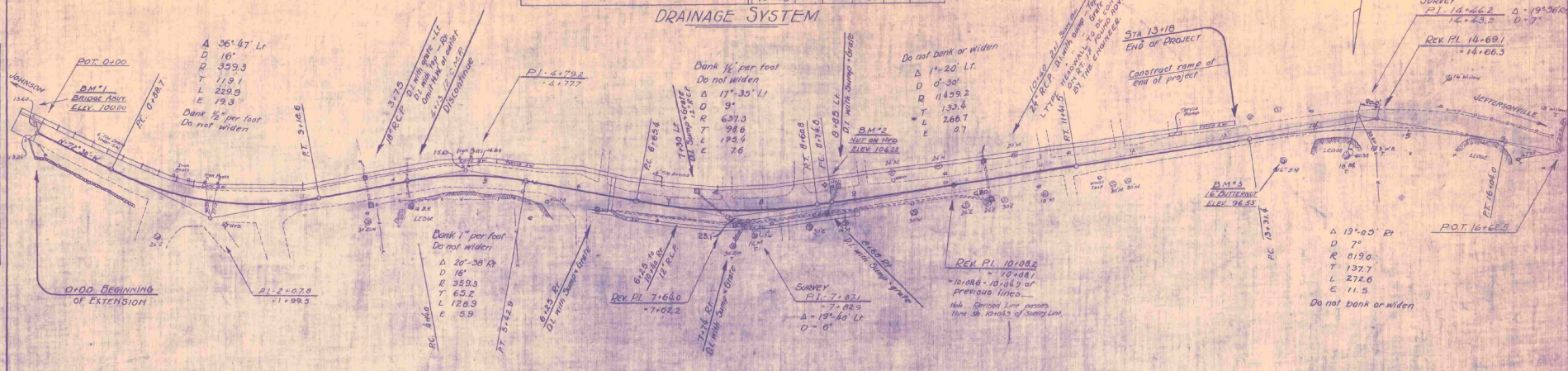
Do not bank or widen

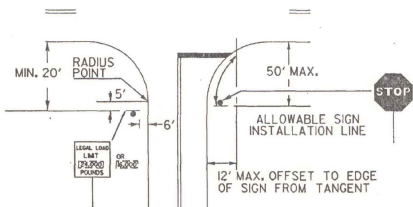
Do not bank or widen

Do not bank or widen

Do not bank or widen

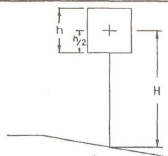
Do not bank or widen





STOP SIGN SHALL BE PLACED ON DRIVERS RIGHT, MAINTAINING MAXIMUM VISIBILITY. CLEARANCE SHALL BE A MINIMUM OF 6' AND A MAXIMUM OF 50' FROM SHOULDER POINT OF INTERSECTING ROADWAY AND DOES NOT HAVE TO BE ADJACENT TO THE STOP BAR.

LEGAL LOAD LIMIT AND STOP SIGNS AT INTERSECTIONS



$$\text{SIGN AREA (FT}^2\text{)} \times \text{H (FT)} \leq \text{SV (SELECTION VALUE)}$$

POST SELECTION CHART

POST REFERENCE: PROPER MOUNTING OF SIGNS ON APPROPRIATE SIZE POSTS IS COVERED IN DETAIL ON STANDARD E-180 FOR FLANGED CHANNEL POSTS AND STANDARD E-182 FOR TUBULAR ALUMINUM POSTS. FOR CONVENIENCE POST SELECTION TABLES ARE ALSO SHOWN AT LEFT.

WHEN SV VALUES EXCEED THOSE SHOWN ON THE TABLES THE TOTAL SV MAY BE DIVIDED BY TWO AND THAT VALUE USED TO SELECT AN APPROPRIATE SIZE AND MATERIAL FOR A TWO POST INSTALLATION. HOWEVER, TWO POST ASSEMBLIES WHICH REQUIRE UNUSUALLY LONG POSTS EITHER BECAUSE OF STEEP SLOPES OR TOTAL HEIGHT OF THE SIGN OR SIGNS DISPLAYED, SHOULD ALWAYS BE MOUNTED ON ALUMINUM TUBES TO TAKE ADVANTAGE OF THE GREATER EMBEDMENT DEPTH.

POST SIZE	SV
2 LB./FT. (ONE POST INSTALLATION)	32
2 LB./FT. (TWO POST INSTALLATION)	62
2.5 LB./FT.	77
3 LB./FT.	107

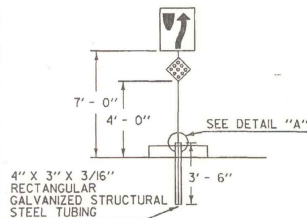
POST SIZE	SV (FT.)
3" DIA.	257
3" SQUARE TUBE *	350
4" DIA.	477

SINGLE 2 LB. AND 2.5 LB. PER FOOT POSTS SHALL ONLY BE USED IN URBAN AREAS.

* USE ON SINGLE POST INSTALLATIONS ONLY

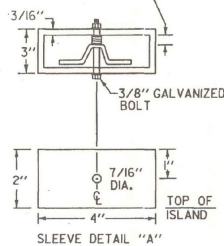
FLANGED CHANNEL STEEL SIGN POSTS

TUBULAR ALUMINUM SIGN POSTS

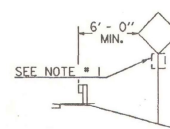
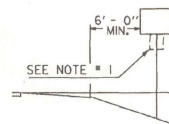
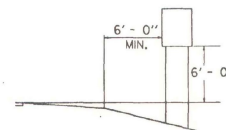


WARNING SIGNS ON ISLAND IN THE LINE OF TRAFFIC

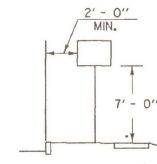
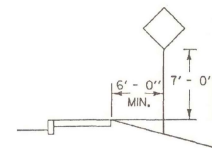
TO INSURE A TIGHT CONNECTION 1/4" GALVANIZED WASHERS SHALL BE USED AS SPACERS.



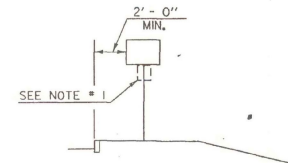
INCREASE VERTICAL CLEARANCE TO 7' IN AREAS OF FREQUENT ROADSIDE PARKING OR PEDESTRIAN ACTIVITY



RURAL



IF SUFFICIENT CLEARANCE IS NOT AVAILABLE BETWEEN CURB AND SIDEWALK MOUNT SIGN BEHIND SIDEWALK AS SHOWN AT TOP. CHECK FOR ADEQUATE R.O.W..



URBAN

NOTES:

1. IN BOTH RURAL AND URBAN LOCATIONS, IF A SECONDARY SIGN IS MOUNTED BELOW ANOTHER SIGN, THE MINIMUM CLEARANCE MAY BE REDUCED BY ONE FOOT.
2. IN RURAL AREAS WITH NO OR MINIMAL SHOULDER, THE LATERAL CLEARANCE TO THE EDGE OF A SIGN SHOULD BE A MINIMUM OF 12' FROM THE EDGE OF THE TRAVELED WAY.
3. ALSO SEE OTHER STANDARD SHEETS FOR MOUNTING CLEARANCE AND SPACING OF DESTINATION AND ROUTE MARKER ASSEMBLIES AND TOWN LINE SIGNS.

REVISIONS AND CORRECTIONS

APPROVED

JAN. 23, 1989
DATE

David R. Kelley
CHIEF ENGINEER
Richard J. Smith
DIRECTOR OF PLANNING
AND PRE-CONSTRUCTION
Stephen B. MacArthur
TRAFFIC AND SAFETY ENGINEER

APPROVED FOR THIS PROJECT
AND/OR DESIGN IMPLEMENTATION.
FINAL FINAL APPROVAL PENDING.

STANDARD SIGN PLACEMENT CONVENTIONAL ROAD



STANDARD
E-121

1932

Johnson
133-L

1932