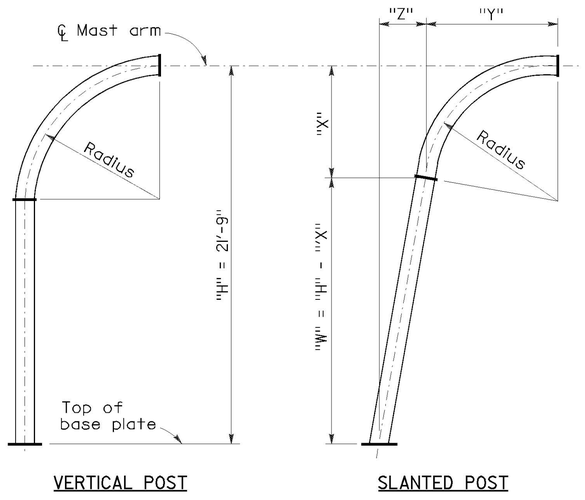
SLANTED POST OFFSET	
DIMENSION \ RADIUS	3.66
"X"	3.02
"Y"	3.60
"Z" = "W" × .17632698	



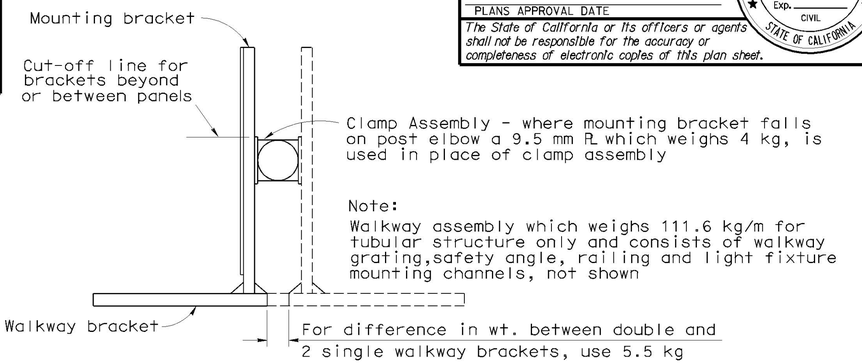
VERTICAL POST SLANTED POST

MAST ARM QUANTITIES

POST #	PIPE SPEC (NPS)	SPLICE PLATE (kg) 2 EA SPLICE	BOLT & NUTS SET (kg)	6.4 mm END PLATE FOR CANTILEVER (kg)	19 mm square bar on mast arm (kg/m)	Kg/m
I	Pipe 20x9.5 tk	153	17	20	2.842 kg/m	117.0
II	Pipe 24x9.5 tk	362	36	20		140.8
III	Pipe 24x9.5 tk	362	36	27		140.8
IV	Pipe 30x9.5 tk	606	52	39		176.7
V	Pipe 30x9.5 tk	606	52	39		176.7
VI	Pipe 30x9.5 tk	606	52	39		176.7

MOUNTING BRACKET ASSEMBLY QUANTITIES (kgs)

POST #	PIPE SPEC (NPS)	CLAMP ASSEMBLY (BEHIND THE PANELS) INCLUDE WT102x29.7 kg/m, RODS, 6.4 mm TRIANGULAR PLATE	MOUNTING BRACKET (INCLUDE VERTICAL CHANNEL C130x10 kg/m, HORIZONTAL W130x24 kg/m, BOLTS & NUTS) DEPTH OF SIGN PANEL, mm						GUSSET SUPPORT AT ELBOW
			1778	2032	2286	2540	2794	3048	
I	Pipe 20x12.7 tk	33	45	47	50	53	55	58	4
II	Pipe 24x12.7 tk	35	45	47	50	53	55	58	4
III	Pipe 24x15.9 tk	35	45	47	50	53	55	58	4
IV	Pipe 30x12.7 tk	39	45	47	50	53	55	58	4
V	Pipe 30x15.9 tk	39	45	47	50	53	55	58	4
VI	Pipe 30x19.05 tk	39	45	47	50	53	55	58	4



*** Mounting bracket assembly includes mounting bracket, walkway bracket and connection hardware. Structures which are painted have walkway brackets, and walkway assembly which are galvanized.

SLANTED POST QUANTITIES (kg)

POST #	PIPE SPEC (NPS)	RADIUS (m)	kg/m	HEIGHT (m) FROM BASE PLATE TO CENTER OF MAST ARM 6.40	7.01	7.62	8.23	8.84
I	Pipe 20x12.7 tk	3.66	154.9	1325	1421	1518	1614	1710
II	Pipe 24x12.7 tk	3.66	186.7	1597	1714	1830	1945	2061
III	Pipe 24x15.9 tk	3.66	232.1	1985	2130	2274	2418	2562
IV	Pipe 30x12.7 tk	3.66	234.5	2006	2152	2298	2443	2588
V	Pipe 30x15.9 tk	3.66	291.6	2495	2676	2857	3038	3219
VI	Pipe 30x19.05 tk	3.66	348.1	2978	3195	3411	3627	3843

VERTICAL POST QUANTITIES (kg)

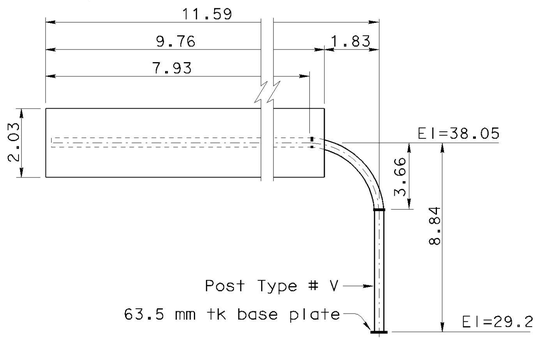
POST #	PIPE SPEC (NPS)	RADIUS (m)	kg/m	HEIGHT (m) FROM BASE PLATE TO CENTER OF MAST ARM 6.40	7.01	7.62	8.23	8.84
I	Pipe 20x12.7 tk	3.66	154.9	1318	1412	1507	1602	1696
II	Pipe 24x12.7 tk	3.66	186.7	1589	1703	1817	1931	2045
III	Pipe 24x15.9 tk	3.66	232.1	1975	2117	2258	2400	2542
IV	Pipe 30x12.7 tk	3.66	234.5	1995	2138	2282	2425	2568
V	Pipe 30x15.9 tk	3.66	291.6	2481	2659	2838	3016	3194
VI	Pipe 30x19.05 tk	3.66	348.1	2962	3175	3388	3600	3813

BASE PLATE	
POST #	WT (kg)
I	327
II	404
III	404
IV	534
V	534
VI	641

GUSSETS AT BASE	
POST #	WT (kg)
I	68
II	68
III	68
IV	82
V	82
VI	82

WT OF ANCHOR BOLTS W/NUT A307	
POST #	kg @ EA POST TOTAL WT BOLTS & NUTS
I	354
II	452
III	452
IV	517
V	517
VI	517

Example 1:



Anchor bolts A307, bolts & nuts = 517 kg

Base plate = 534 kg

Gussets at post & base plate = 82 kg

Post: Use table "STRAIGHT POST QUANTITIES", post V data
Right side: post V = 3194 - (pipe length for 63.5 mm tk base plate)
= 3194 - (63.5/1000) x 292 = 3176 kg

Mast arm:
Length of mast arm = 7.93 m
Weight = 7.93 m x 176.7 kg/m = 1401 kg
Splice plate 2 each = 606 kg
Bolts & nuts = 52 kg
End plate for cantilever = 39 kg
19 mm square bar on mast arm
= 7.93 m x 2.842 kg/m = 23 kg

Mounting bracket assemblies:
No. of bracket
= (11.59-1.83)/1.67 = 6 + 1 = 7 brackets
Clamp assembly = 234 kg
Mounting brackets = 329 kg
Gusset support at elbow = 4 kg

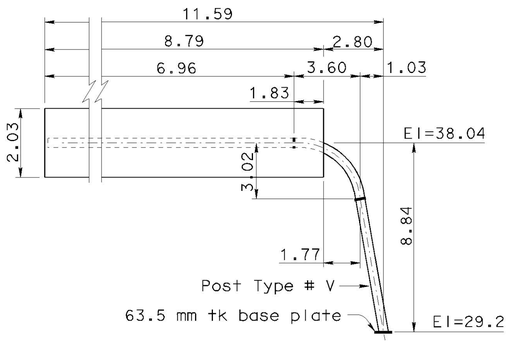
Walkway assembly:
Total weight (9.76 m x 111.6 kg/m) = 1089 kg

Subtotal: = 8086 kg

Galvanized structure + 3.5% = 283 kg

Total weight: = 8369 kg

Example 2:



Anchor bolts A307, bolts & nuts = 517 kg

Base plate = 534 kg

Gussets at post & base plate = 82 kg

Post: Use table "SLANTED POST QUANTITIES", post V data
Right side: post V = 3219 - (pipe length for 63.5 mm tk base plate)
= 3219 - (63.5/1000) x 292 = 3201 kg

Mast arm:
Length of mast arm = 6.96 m
Weight = 6.96 m x 176.7 kg/m = 1230 kg
Splice plate 2 each = 606 kg
Bolts & nuts = 52 kg
End plate for cantilever = 39 kg
19 mm square bar on mast arm
= 6.96 m x 2.842 kg/m = 20 kg

Mounting bracket assemblies:
No. of bracket
= (11.59-2.80)/1.67 = 6 + 1 = 7 brackets
Clamp assembly = 234 kg
Mounting brackets = 329 kg
Gusset support at elbow = 4 kg

Walkway assembly:
Total weight (8.79 m x 111.6 kg/m) = 981 kg

Subtotal: = 7829 kg

Galvanized structure + 3.5% = 274 kg

Total weight: = 8103 kg

DIST.	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED ENGINEER - CIVIL

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE SHOWN

THIS SHEET NOT A PART OF CONTRACT PLANS

OVERHEAD SIGNS - TUBULAR SINGLE POST TYPE

QUANTITIES | **16**