



LOADING CONFIGURATION
FRONT VIEW

LOADING CONFIGURATION
SIDE VIEW

TRAFFIC SIGNAL LIGHT DUTY STRAIGHT SHAFT DESIGN CRITERIA.

DESIGN AS PER THE 2001 4th EDITION OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. THE TRAFFIC SIGNAL LIGHT DUTY STRAIGHT SHAFT IS DESIGNED TO SUPPORT LOADS AS SHOWN ON THIS DRAWING AND DESCRIBED IN THE TECHNICAL SPECIFICATION FOR AASHTO GROUP LOAD COMBINATION I, II, AND III. FATIGUE STRESS RANGE FOR NATURAL WIND GUSTS AT CRITICAL FATIGUE LOCATIONS WERE CALCULATED FOR TRAFFIC SIGNAL FATIGUE CATEGORY III AS PER AASHTO TABLE 11-1. ALL RESULTS ARE LISTED IN DESIGN RESULT REPORT. THE DESIGN WIND PRESSURE $P_z = 0.00256K_zGV^2I_rC_d$ psf WHERE $(0.00256GV^2) = 25.6$ psf, K_z AS PER AASHTO TABLE 3-5 EXCEPT NOT LESS THAN 1.0, $I_r = 1.0$ FOR 50 YEAR DESIGN LIFE AND C_d AS PER AASHTO TABLE 3-6.

PROPERTIES OF SIGNALS AND SIGN

FACE AREAS LISTED BELOW DO NOT INCLUDE DRAG COEFFICIENT

- A 5 SECTION 12" SIGNAL HEAD SIDE MOUNT
FACE AREA 6.8 sq. ft. (14" x 70")
END AREA 1.34 sq. ft.
WEIGHT 80 lb.
- B TWO PEDESTRIAN HEADS AT 90°
TOTAL EFFECTIVE PROJECTED AREA 3.3 sq. ft. (EACH 13½" W x 13½" H)
TOTAL WEIGHT 50 lb.
- C TRAFFIC SIGN
FACE AREA 4.0 sq. ft. (24" W x 24" H)
WEIGHT 14 lb.



2	MAY 26, 2004	REDRAWN, ADDED SHEET 2	
REV. No.	DATE	REVISIONS	APPROVED
		THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT TRANSPORTATION DIVISION	
GES ENGINEERING INC. CALGARY, AB. PHONE (403) 240-2921 FAX (403) 240-3713			
TRAFFIC SIGNAL LIGHT DUTY STRAIGHT SHAFT POLE OF 18 FEET IN HEIGHT			
DESIGNED AND APPROVED	DRAWN	DWG No.	
DATE	DATE	ST-166	
<i>D. Selme</i> GES Engineering Inc. Aug 17, 2004	G.G.	SCALE	SHEET
	MAY 12, 2004	NTS	2 OF 2
			REV. No.
			2