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Traffic Noise Readings between Chandni Chowk and Sambhaji Bridge

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Abstract: ***Pune, a city in Maharashtra, known for its IT Hub, cultural heritage, and knowledge city in the state is just 150KM from the capital city of state, Mumbai. Private vehicles are the one of the most convenient way to travel in the city from one point to another, as it has ineffective public transport system when compared to its population. Private vehicles such as Cars, Bikes and Mopeds are significant symbol of modern civilisation. But it also gives off vexatious noise in our natural environment. The study includes the noise levels in the area of heavy traffic from Chandani Chowk, the area which connects Pune to the Mumbai Highway, to Sambhaji Bridge, a populous area in Deccan area of Pune, sights heavy vehicular traffic.***
Keywords: Noise, Pune, Noise Pollution

I. INTRODUCTION

In this study, traffic noise levels are evaluated for different residential points on Paud Road. The study stretches between various points between Chandani Chowk Point to Sambhaji Bridge in Deccan area which stretches about 8.0 Kms. The readings were taken in two intervals, on the Paud Road and Karve Road, on 30th April 2019 from 5:30PM and on 31st April 2019 from 12:15 AM. The readings were taken in chronological order from Chandani Chowk to Sambhaji Bridge, Deccan.



Fig: 1: Map Showing exact points on which readings were taken (Source: Google Maps)

These are 9 points on which readings were taken on exact spot

Table 1: Spots at which readings were taken

A	Prathamesh Elite Building, Chandani Chowk.
B	Bandal Capital Complex, Paud Road
C	MNGL CNG Pump, Paud Road
D	Kinara Hotel, Paud Road
E	MIT Signal, Paud Road
F	SNDT Bridge
G	Abhinav Chowk, Nal Stop
H	Hotel Suruchi
I	Sambhaji Bridge, Deccan

Table 2: Acceptable Noise Limits

Area Code	Category of Area/ Zone	Limits in dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

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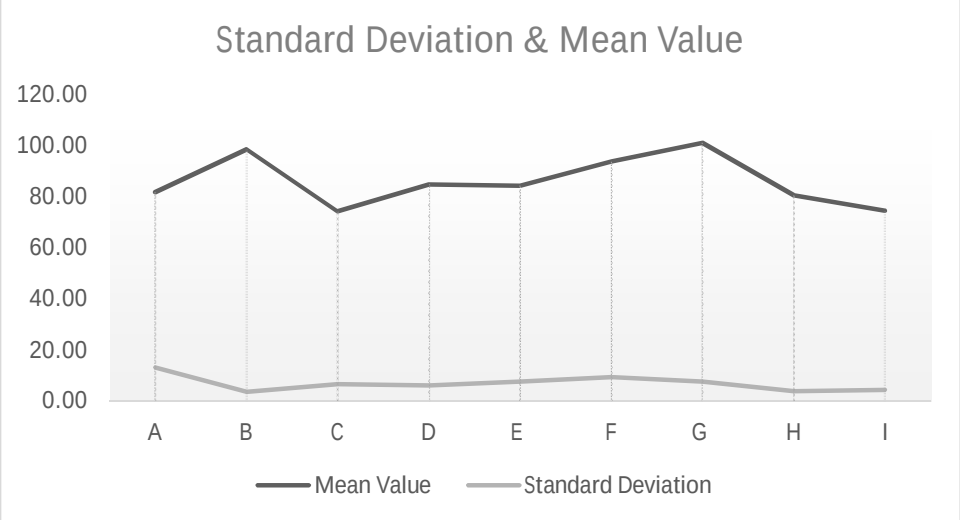
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II. RESULT

Table 3: Readings taken at 5:30 PM							
Points on Map	Readings (in db)					Mean Value	Standard Deviation
	1	2	3	4	5		
A	105.3	64.3	79.2	80.5	79.8	81.82	13.19809
B	101.2	98.6	103.4	92.5	97.3	98.6	3.706751
C	72.3	71.2	87.4	68.3	72.6	74.36	6.694655
D	82.3	90.2	91.3	74.4	86.2	84.88	6.127773
E	81.6	92.3	91.4	71.4	85.5	84.44	7.608574
F	103.4	78.4	88.3	101.3	98.6	94	9.366536
G	106.2	111.7	98.4	88.9	101.3	101.3	7.672548
H	88.3	79.2	76.8	80	79.3	80.72	3.941269
I	74.3	76.7	71.2	69.4	81.8	74.68	4.356788

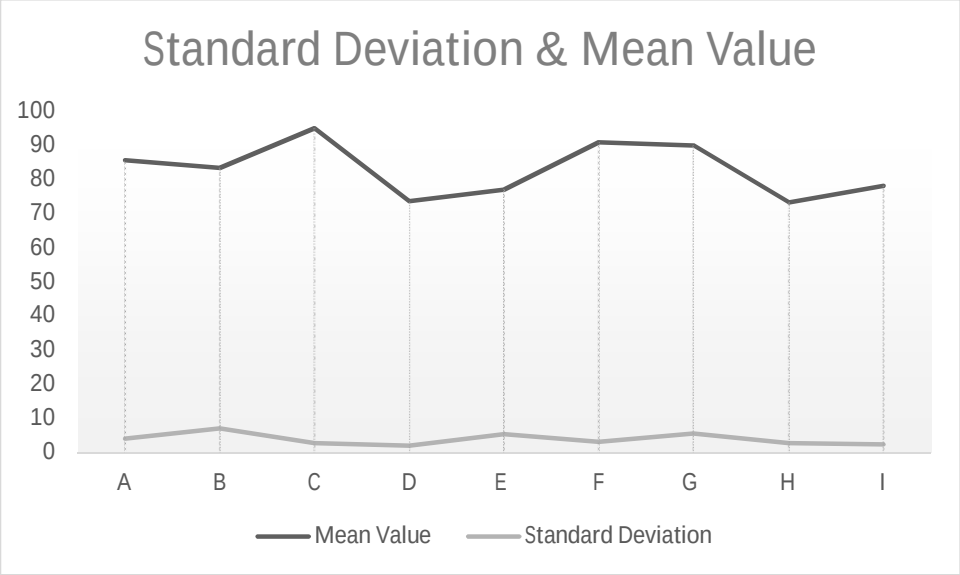
Table 4: Readings taken at 12:15 AM							
Points on Map	Readings (in db)					Mean Value	Standard Deviation
	1	2	3	4	5		
A	81.3	83.1	87.4	92.6	83.9	85.66	3.996298
B	74.7	76.7	92	82.6	90.9	83.38	7.091234
C	93.3	95.7	98.6	90.6	96.4	94.92	2.743283
D	75.1	73.2	74.9	69.9	75.3	73.68	2.032142
E	72.7	69.8	77.5	85.2	79.4	76.92	5.358134
F	86.6	88	91.4	95.3	93	90.86	3.190987
G	87.9	94.1	97.1	81	89.4	89.9	5.530642
H	70.3	71.4	72.2	74.9	77.9	73.34	2.739781
I	75.3	77.9	76.7	78.8	82.1	78.16	2.293992

Chart A: Standard Deviation and Mean Values for readings taken at 5:30 PM



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Chart B: Standard Deviation and Mean Values for readings taken at 12:15 AM



III. CONCLUSION

A. The Noise is above acceptable limits
B. The Mean Value follows same trend in both the time intervals.
C. The Readings at 12:15 AM are mainly hampered by Construction activities of Pune Metro
D. The CNG Pump witness more noise at 12:15 AM due to Construction activities of Pune Metro.
E. Spot A, B, F and G witness more noise due to heavy traffic at the spots.

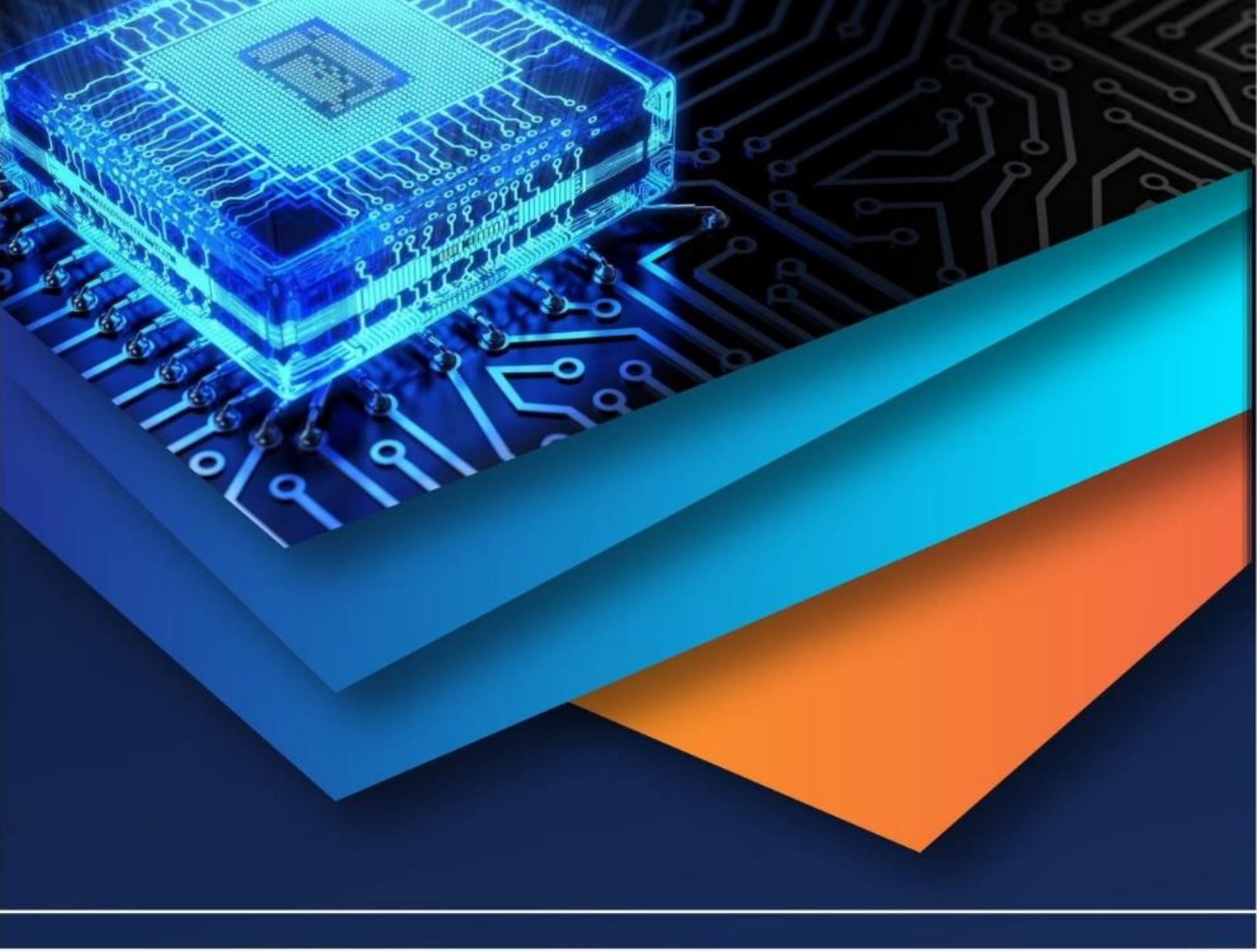
IV. ACKNOWLEDGEMENT

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[1] Google Maps
[2] cpcbenvis.nic.in (Table 2)
[3] Google Search Engine

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