

1 Proceedings

2 Okay. My observations are over  
3 the past 25 years having commuted  
4 across the Tappan Zee and I feel that  
5 the most important item are the  
6 approaches to the bridge in the Nyack,  
7 Nanuet Area. Before any money is  
8 spent on bridge improvements or  
9 traffic improvements at the bridge  
10 level, I really believe a heavy focus  
11 should be placed on improving access  
12 to the Thruway and egress from the  
13 Thruway. Friday night, in particular,  
14 the traffic jams in the Nyack cut,  
15 generally, start and continue where  
16 the exits are not adequate.

17 That's it.

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TZB-041T 18 MR. IRVINE: My name is Gerald  
19 Irvine, P.O. Box 246, Suffern, New  
20 York 10901. Phone Number is 357-6156.

21 The purpose of my being here is  
22 to comment on the proposals for the  
23 Tappan Zee Bridge.

24 The Number 1 Proposal is to  
25 include single-seat passenger rail

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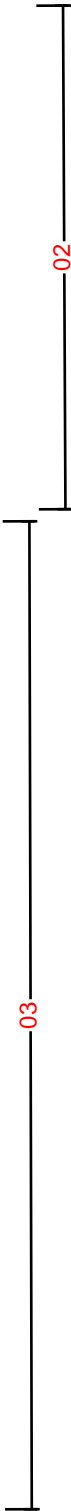
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transport across the bridge to Stewart  
Airport from Manhattan. Stewart  
Airport is going to be a premiere  
international airport for the area  
with increased passenger capacity and  
it deserves efficient, nonstop and  
single-seat rail passenger service  
from Manhattan to the airport.

Second proposal: The present  
design of the toll plaza needs to be  
revised to include the recommendations  
and the U.S. Federal Highway  
Administration Report issued 2006  
entitled "State of the Practices and  
Traffic Control Strategies at Toll  
Plaza, Best Practices."

Accordingly, in line with the  
report, the toll plaza needs to  
include areas and spaces for security  
personnel to conduct truck and vehicle  
inspections.

Secondly, regarding the toll  
plaza, it needs to include weigh-in  
motion lanes to monitor truck vehicle



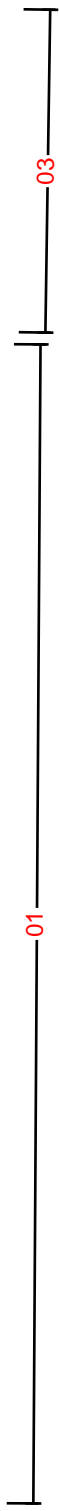
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weights to ensure that only traffic of the allowable weights drives on the bridge. This will reduce the deterioration of the bridge due to overweight truck traffic.

Next proposal: The lighting of the bridge needs to be improved to a lighting level of two candelas per square meter, as this type of bridge structure merits special consideration due to the absence of breakdown lanes, the absence of a sidewalk and the absence of any other emergency lanes. The lighting can be achieved with high-pressure sodium luminators using electronic ballast for a low-energy consumption and supplied by solar-energy panels installed on the south of the bridge facing the sun.

Also, in regard to the lighting, the luminaires need to be of the type recommended by the New York State Department of Transportation that are rated for bridge vibration levels,



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also, rated for the luminary protection from ingress of dirt and moisture. This will enable the lighting design to, economically, fulfill the two candela per square meter recommendation.

Also, in regard to lighting, the luminaires should meet the recommendations of dark sky, that is, with full cutoff to eliminate glare and light trespass.

The next proposal, in regard to the electrical distribution, the design should conform to New York State Department of Transportation recommendation to use previously-coated galvanized rigid steel conduits for protection from the deicing salts and the salt atmosphere of this area. This will enable the distribution system to have a long life without the corrosion, presently, observed on the bridge.

To recapture the recommendation





**TZB-124E**

Dear Sir:

This is to provide comments on the proposed Tappan Zee bridge:

**TRAIN SERVICE**

[1] The bridge needs to provide a heavy rail line on the south side suitable for connection to the MetroNorth Hudson Division so that a continuous one-seat link is provided from Manhattan to Stewart Airport.

[2] The south side of the bridge allows for stepped pylons to support a gradual transition for the rail line from the existing tracks along the river to the bridge elevation.

[3] At the bridge elevation a rail switch can allow other trains to continue onto the MetroNorth Harlem Division and thence onto Manhattan.

[4] The new rail line can extend into Rockland County and connect to the Port Jervis Line of MetroNorth at Suffern.

New rail line can be extended a short way from the Port Jervis Line's Campbell Hall Station into Stewart Airport.

Station stops in Rockland County should include Nyack, Spring Valley, and Suffern.

There are tracks existing between Spring Valley and Suffern.

New tracks would be required from Spring Valley eastward and may be placed within the Thruway right-of-way.

[5] Alternatively the Tappan Zee rail line may connect to the CSX Line in the vicinity of the Palisades Mall, West Nyack

(The CSX rail line extends to Albany).

In the vicinity of Newburgh a short spur to Stewart Airport may be constructed.

Station stops in Rockland County and Orange County should include West Nyack, Haverstraw or West Haverstraw, Highland Falls, and Stewart Airport.

**BRIDGE LIGHTING**

**ROADWAY LIGHTING**

[1] Bridge illumination has particular significance in contributing to smooth traffic flow. The bridge has no breakdown lanes and no shoulder lanes and no pedestrian lanes and is of narrower construction than the approaches.

The proximity of railings to the traffic lanes have a psychological effect on the motorist, creating a tendency for traffic to slow down.

There are also motorists with gephyrophobia that will also tend to slow down.

In addition the bridge has continuous construction and maintenance activity, emergency vehicle traffic, snow and ice clearing, pothole filling,

movable barrier machines movement, occasional suicide attempts, and other activity all leading to the conclusion that the bridge requires Special Consideration in regard to selecting the lighting levels.

It is recommended therefore that an illumination level of two candelas per square meters be selected (This is consistent with the International Commission on Illumination, CIE,

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standards).

[2] The illumination may be provided efficiently with high pressure sodium lamps (non-cycling lamps) on poles of appropriate height and spacing.

[3] The luminaires selected are recommended to comply with "Dark Sky" recommendations and CIE recommendations for minimizing glare affecting the motorists.

[4] The luminaires are recommended to include photocontrol receptacles.

The photocontrol receptacles may include a photocontrol and a telemetering device for transmitting the lamp and ballast status to a central monitoring station so as to improve maintenance. Properly specified photocontrols are more efficient than using time clocks for lighting circuit control.

The photocontrol receptacle may also provide an outlet for power for other devices installed on the pole.

[5] The luminaires are recommended to comply with recommendations for vibration, that is to be capable of meeting 3G vibration standards.

[6] Consideration should be given to using solid-state ballasts for powering the high pressure sodium lamps so as to reduce the overall luminaire power.

[7] Consideration should be given to using a solar energy system that stores energy from solar panels during the daytime and then powers the luminaires from the stored energy during nighttime hours.

#### BRIDGE LIGHTING

##### DECORATIVE LIGHTING

[1] Consideration should be given to minimizing the decorative lighting, for example the Golden Gate Bridge has only a few luminaires on the suspension cables, not the multitude of luminaires on the Tappan Zee bridge.

[2] No floodlighting should be installed as it is an unnecessary cost and adds to energy usage.

#### BRIDGE LIGHTING

##### OBSTRUCTION LIGHTING

[1] FAA required obstruction lighting is recommended to be of the light emitting diode type and strictly controlled by FAA required independent circuits, not wired or controlled by circuits controlling the roadway lighting, and independent photocontrols providing the illumination only during the FAA specified times that the illumination is at certain levels. The FAA obstruction beacons need feedback circuits to the central monitoring station for indication when out-of-service.

#### BRIDGE LIGHTING

##### NAVIGATION LIGHTING

[1] USCG required navigation lighting is recommended to be of the light emitting diode type and strictly controlled by USCG required independent circuits, not wired or controlled by circuits controlling the roadway lighting, and independent photocontrols providing the illumination only during the USCG specified times. The USCG navigation beacons need feedback circuits to the central monitoring station for indication when out-of-service.

## BRIDGE ELECTRICAL DISTRIBUTION

- [1] Conduits exposed on the bridge are recommended to be PVC coated galvanized rigid steel for corrosion resistance and long trouble-free life.
- [2] Conductors for the low-voltage wiring are recommended to be EPR Type RHW-2 for long trouble-free life in the wet conditions.
- [3] Enclosures are recommended to be stainless steel or suitable grade aluminum or equivalent for corrosion resistance.
- [4] Switching devices are recommended to be fusible devices, except for low current branch circuits, for improved protection and selective coordination.

## TOLL PLAZA DESIGN

- [1] The toll plaza design is recommended to comply with the 2006 Federal Highway Administration Report "State of the Practice and Recommendations on Traffic Control Strategies at Toll Plazas"
- [2] The toll plaza design is recommended to comply with the National Transportation Safety Board letter of May 8, 2006 on toll plaza design.
- [3] The toll plaza design is recommended to comply with the report "Toll Plaza Concepts" presented at the 2004 ASCE Conference.
- [4] The toll plaza is recommended to include Weigh-in-Motion lanes for truck traffic.
- [5] The toll plaza is recommended to include designated areas for:
  - (1) Vehicle security searches
  - (2) Vehicle with mechanical problems.
  - (3) Lost motorists

Sincerely,  
Gerald Irvine  
R.GERALD IRVINE [irvine@prodigy.net]