

No. RW/NH-33023/19/99-DO.III

Dated, the 31st August, 2000

To

All Chief Secretaries/Secretaries/Chief Engineers PWD/Roads of all State Governments/UTs (dealing with National Highways & Centrally Sponsored Schemes); Director General Border Roads; Chairman, National Highways Authority of India

Subject : Systems Improvement for Installation of Petrol/Diesel/Gas-Retail outlets and service-stations as well as access to private properties along National Highways

This Ministry had issued detailed instructions on licensing of National Highways land for construction of approach roads to private properties including Petrol/Diesel Retail Outlets and service stations abutting National Highways vide letter No.RW/NH-III/P/17/75 dated 30.10.1980 and RW/NH-III/P/72/76-Vol.II dated 19.2.1987. The need for system improvement for installation of Petrol/Diesel - Retail Outlets along National Highways was laid down by Ministry's circular No.RW/NH-33023/19/99-DO-III dated 27.7.1999.

2. However, it has been reported that there is still some lacunae in the present system of installation of Retail Outlets/Service Stations and private properties, leading to damage to National Highways, reducing safety and considerable time lag in the process. Therefore, it has been decided to streamline the procedure for installation of Petrol/diesel/gas Retail Outlets/ Service Stations and private properties along National Highways.

3. The general requirements governing the location and layout of petrol/diesel retail outlets and service stations have been specified in IRC:12-1983, "Recommended Practice for Location and Layout of Roadside Motor Fuel Filling and Motor-fuel Filling-cum-Service Stations". Considering the nature of changing traffic on National Highways and experience in the field, it has been decided to amend some of the requirements as applicable to National Highways. Stipulated Norms regarding location, layout and other features of petrol/diesel rates are given in Check List and *Annexure-I* enclosed with this circular. Regarding each road to private properties, provisions made in para 4 of Ministry's circular No-RW/NH-III-P/17/75 dated 30.10.1980 (Licensing of NH land for construction of approach road to private property abutting National Highways) and para 7.4 of IRC:62-1976 (Guidelines for Control of Access on Highways) have been amalgamated with slight modification and reproduced in para 13 of *Annexure-I*. Approach road to private properties may be regulated as per paras 7, 8 & 13 of *Annexure-I* and Check List enclosed with this circular. Modified procedure for installation of retail outlets/private properties, etc. are given in para 4 below.

4. **PROCEDURE FOR INSTALLATION FOR NEW RETAIL OUTLETS (PETROL/DIESEL/GAS) AND ACCESS TO PRIVATE PROPERTIES**

4.1. The present procedure was outlined in para 6 of the Ministry's circular No. No.RW/NH-33023/19-99.DO-III dated 27.7.1999. To streamline the present system, the procedure may be modified as follows.

4.2. It is the prime responsibility of the oil companies/ private parties to follow the IRC guidelines and the norms in this circular while preparing the drawing for the retail outlet/ private properties. At the time of making reference to the District Magistrate/Authorities/Licensing Authority for issue of "No Objection Certificate", the oil companies/ private parties should simultaneously make a reference to the concerned Highway Authority. The issue of "No Objection Certificate" by Licensing Authority should be made conditional to the oil company/private parties having obtained necessary approval/permission from Highway Authority and executed the License Deed before going ahead with the actual installation of the pump, and a copy should be endorsed to the Highway Authority. The Divisional/Executive Engineers (or equivalent) of Highway authority may inform the concerned Licensing Authority about this requirement. It is reiterated that any "No Objection Certificate" granted by any Licensing Authority is not binding on Highway Authority as such.

4.3. The Highway Authority at the level of Superintending Engineer in the case of State Public Works Department/Border Roads Organisation (BRO) and General Manager in the case of National Highways Authority of India (NHAI) shall examine the drawings and document to see if the location and layout of retail outlets conforms to norms given in Check List and *Annexure-I* of this circular and if so, forward the documents and

drawings as per *Annexure-II* to the Ministry through Regional Officer of Ministry for approval and signing of licence deed. Construction should be permitted only after approval and signing of licence deed in the Ministry. The Highway Authorities of the State Governments/BRO/NHAI should not give any approval to oil companies/ retail outlet owners/private parties before signing of licence deed by the concerned Chief Engineer in the Ministry.

4.4. In cases, where the standard conditions are not satisfied, the parties concerned may be asked to modify the proposals. If in the rare case, it is not practicable to fulfill the standard conditions, the Highway Authorities at the level of Superintending Engineer in the case of State Public Works Department/BRO and General Manager in the case of NHAI may forward the proposal to the Ministry through Regional Officer of Ministry along with detailed reason for granting the relaxation and signing of licence deed by the concerned Chief Engineer in the Ministry. In the absence of a detailed explanation, the proposal would not be entertained.

5. **PROCEDURE FOR EXISTING PETROL/DIESEL/GAS PUMPS/PRIVATE PROPERTIES ON EXISTING NATIONAL HIGHWAYS**

5.1. The licence deed for use of National Highway land for approach road to the retail outlets/private properties has a validity of three years and the same is required to be renewed thereafter. While considering the case for renewal of the licence deed for existing retail outlets/private properties, any deficiencies in terms of location, layout, signage, drainage, etc. and any infringements from the stipulated norms given in Check List and *Annexure-I* of this circular should be carefully identified and got rectified by Highway authority before licence deed is sent for renewal. This should be done at least four months before the existing licence deed lapses.

5.2. The Divisional/Executive Engineer (or equivalent) of the Highway Authority will keep a register of record of Retail Outlets/private properties (which have been permitted access to the National Highway under his jurisdiction) in the format enclosed with this circular. A copy of the record should be sent to the Circle Office as well as to the Regional Officer of the Ministry. The record should be periodically checked by inspecting officials.

5.3. Four months before the lapse of the licence deed, a reminder should be sent to the owner of the retail outlet/private property asking him to submit the documents for renewal of licence deed. Failure to comply by the date of lapsing of licence deed should be treated as violation of licence conditions and the access should be disconnected.

6. **PROCEDURE FOR EXISTING RETAIL OUTLETS ON NEWLY DECLARED NATIONAL HIGHWAYS**

6.1. Existing Retail Outlets/private properties on newly declared National Highways will have to execute a licence deed when they are taken over. The Divisional/Executive Engineer (or equivalent) of the Highway Authority will take steps to complete a record as per para 5.2 and suitable reminders should be sent to each outlet owner. Necessary modifications should be got made to the retail outlet/private property to adhere to the standard norms given in Check List and *Annexure-I* of this circular within six months of taking over of the newly declared National Highways by the concerned Highway Authority. If the owner of the retail outlet/private property does not respond and get the required rectification done within the stipulated time of six months, the access should be disconnected.

6.2. When a National Highway is transferred from one organisation to another, among other records, records of retail outlets will also be transferred.

7. **PROCEDURE IN CASE OF WIDENING OF ROAD**

7.1. As per Clause 4 (4) of the licence agreement issued under Ministry's letter No NHIII/P/17/75 dated 30th Oct., 1980, the licensee has to remove the approach road within six-month of a notice given to him by the Highway Authority. This provision may be used to shift the private property/retail outlet's access roads, if required for widening.

7.2. In case service roads are constructed, the access shall be from service roads and not from main carriageway. No compensation is to be given to retail outlet/private property owner, as per Clause 4(15) of licence agreement.

8. Any retail outlet/private property owner, who violates any of the conditions of licence deed or

constructs/modifies retail outlet in violations of the stipulated norms for the retail outlets, should be given one month notice to rectify the violations. If the necessary rectifications are not done within the time given in the notice, access to the private properties/retail outlets should be disconnected.

Annexure-I

[Enclosure to Ministry's Circular No. RW/NH-33023/19/99-DOIII dated 31st Aug. 2000]

STIPULATED NORMS FOR LOCATION AND LAYOUT OF PETROL/DIESEL RETAIL OUTLET AND SERVICE STATIONS ALONG NATIONAL HIGHWAYS

1. These norms have been finalised after substantially modifying IRC:12-1983 "Recommended Practice for Location and Layout of Roadside Motor Fuel Filling and Motor Fuel Filling-cum-Service Station". These norms are applicable for National Highways.

2. Petrol/Diesel Retail outlets and service station etc. are hereinafter referred to as "Retail Outlets".

3. GENERAL CONDITIONS OF SITING

3.1. As a general rule, the clear distance between two adjacent Retail outlet should not be less than 300 m.

3.2. Clustering of Retail Outlets along highway should be avoided and successive Retail Outlets should be located sufficiently apart, as indicated in paragraph 3.1. If for some reason two or more fuel filling stations are sited in close proximity these should be grouped together and a parallel service road provided by way of common access. The service road should be of adequate width and at least two-lane wide (7.0 m).

3.3. Retail Outlets should be well distributed on both sides of the road, so that vehicles do not have to cut across the traffic to reach the Retail Outlet. The fuel filling station on opposite sides shall be staggered.

3.4. A Retail Outlet should be at least 1 km away from the check barrier.

3.5. It is desirable that Retail Outlets should be made a part of a rest area complex offering various amenities. For new roads or upgraded roads, this point may be incorporated in the plans.

3.6. It should be ensured that location of Retail Outlet does not interfere with future improvements to the road and nearby junctions.

3.7. The distance between the tangent points of the curves of the side road and that of Retail Outlet measured in a direction parallel to the centre line of the National Highway should not be less than 300 m and the Retail Outlet should be located only in the out bound direction as shown in Fig. 1.

3.8. As far as possible in plain and rolling terrain, the Retail Outlet should be located where the highway is practically level. However, in hilly terrain the Retail Outlet should be sited only along such highway sections which are having gradient not steeper than 5 per cent.

In all these cases, it should be ensured that retail outlet premises/ service area has a minimum slope 2 per cent for adequate drainage towards the drain where the surface runoff is designed to be taken out.

4. FRONTAGE

For easy flow of vehicles into and out of the fuel filling stations, the site should permit construction of sufficiently wide entrance and exit with easy curves. Therefore, the minimum frontage should be 30 m.

5. BUFFER STRIP

5.1. A buffer strip of at least 12 m long and 3 m wide should be provided.

5.2. No structure or hoarding, except approved standard identification sign on poles providing a clearance of at least 3 m above ground level, should be erected on the buffer strip.

5.3. Kerbs of at least 225 mm high should be constructed on the periphery of the buffer strip to prevent vehicles from crossing it.

5.4. The outer edge of buffer strip should be along the outer edge of the road land boundary for National Highways. Due space, for provision of roadside drain should be made. The future widening of the road should be kept in mind, so that there is no obstruction to the improvement to the road. In all such cases, the distance from the outer edge of the buffer strip to the centre line of the carriageway should not be less than 7 m. In case of National Highways, where cycle tracks or service road are required now or in the near future, this distance should not be less than 12 m. In case of divided carriageway, the distance shall be measured from the centreline of the nearest half of the carriageway.

5.5. The space between the outer edge of the buffer strip and the roadway edge shall not be paved (but turfed and raised from the approach road level with the provision of 225 mm high kerbs in order to prevent the space being used for parking purposes) except for entrance and exit, as shown in Fig. 1.

6. VISIBILITY

6.1. Vehicles entering or leaving the fuel filling station should be fully visible to the traffic using the main road. This is best done by selecting a site where there are no obstructions to the view between the fuel pump and the road.

6.2. No hedges or plants more than 600 mm high should be grown on or around the buffer Strip.

7. LAYOUT OF ENTRANCE AND EXIT

7.1. The entrance and exit should be at least 9 m wide. To prevent vehicles from entering or exiting too fast and preventing the approach road being used for parking purposes, the width of entrance or exit should not be more than 12 m.

7.2. The ruling radius of the turning curve should be 30 m and absolute, minimum should be 13 m. The radius of the non-turning curves should be from 1.5 to 3 m. This is illustrated in Fig. 1.

8. DRAINAGE

8.1. There should be adequate drainage arrangement in the fuel filling station/private property so that neither the surface water flows over the highway nor there is water logging on the National Highway. For this a downward minimum slope of 2 per cent towards the retail outlet private property should be given to the access roads so that the elevation of roadway at the edge of buffer strip is at least 15 cm below the edge of the road and is in no place above any part of the carriageway. Surface water from the filling station/private property/access road should be collected in suitable drains and led away to natural course through the culvert to be provided at the edge of road land boundary as illustrated in Fig. 2. Preferably, slab type culvert with iron gratings of adequate strength as slab may be constructed in the approaches so that the surface water is drained through the holes in the grating. If pipe culvert is used, then it should be ensured that the inner diameter of the pipe is not less than 1 m for proper cleaning and necessary shallow drains are constructed along the access road and at the edge of the private premises/retail outlet so that the surface water is led to the open drain in front the buffer strip. If the open drain in front of the buffer strip is to be covered for aesthetic reason, it should be covered with iron gratings pipes so that the surface water is led to the culvert through the holes in iron gratings. In brief it is to emphasise that there should be adequate drainage arrangement either by the method mentioned above or otherwise as per the satisfaction of the Highway Authorities/Ministry.

8.2. Adequate slope to the paved surface in the service area should be provided to ensure proper drainage of water.

8.3. The culvert and road side drain should be designed to carry discharge calculated according to any method described in IRC:SP-13 "Guidelines for the Design of Small Bridges and Culverts."

9. KIOSK, LUBRITORIUM AND OTHER BUILDINGS

The Kiosk, lubritorium and other appurtenances thereto comprising a small office, store and compressor room should be located not less than 4 metres away from the fuel pump kerbing.

10. DISTANCE OF THE FUEL PUMP FROM THE CARRIAGEWAY

The fuel pump shall be outside the road land, subject to the provision that the distance from the inner edge of the buffer strip to the edge of the strip having the fuel pump should not be less than 4 metres.

11. SPACE INSIDE THE FUEL PUMP

There should be sufficient standing space and sufficient number of fuel pumps to cater to vehicles requiring fueling, so that they do not spill over to the National Highway. It is desirable to have oil, air, etc installed at some distance from the fuel filling pump so that vehicles which have been refuelled can immediately be driven away from the fuel pump.

12. SIGN BOARDS

Suitable entry and exit retro-reflective sign boards, as per-section 801 of Ministry of Surface Transport Specification for Road and Bridge Works as updated from time-to-time, shall be installed for guidance for motorist. They may be lit up, if necessary, in such a manner so that it does not distract the attention of drivers.

13. INSTRUCTIONS REGARDING REGULATION OF ACCESS POINTS/APPROACH ROAD TO PRIVATE PROPERTY

13.1. In urban areas, the spacing of access to National Highways should wherever possible be restricted to 500 m interval. If the National Highway is likely to be developed as Expressway/Motorway, the spacing should be 1000 m.

13.2. In rural areas, the spacings of connections from parallel service roads and of intersections should not be closer than 750 m. Individual driveways to private properties should not be spaced closer than 300 m from each other or from an intersection. On highways with dual carriageway (4 lane with median), median openings should generally be limited to intersection with public roads and should not be permitted for individual business needs. Where intersections are far apart, median openings may be provided at intervals of 2 km for permitting U-turn and diversion of traffic to one of the carriageways at times of emergency or major repairs. As far as possible, a number of property owners along the highway should be grouped together and parallel service roads (i.e. frontage roads) constructed to give access at selected points. The geometrics of the driveways should conform to requisite standards conducive to smooth traffic flow as given in paras 7 & 8 above.

Annexure-II

[Enclosure to Ministry's Circular No. RW/NH-33023/19/99-DOIII dated 31st August, 2000]

List of documents to be submitted for renewal of licence deed for allowing approach road to retail outlets/private property etc. along National Highways.

- (1) Signed copy of licence deed as per Annexure-2 of Ministry's circular No.NH-III/P/17/75 dated 30.10.1980
- (2) Inspection report of Divisional/Executive Engineer (or equivalent) or his representative.
- (3) Certificate that no modifications have been made in the retail outlet/private property from original proposal for which licence deed had been signed.
- (4) Certified copy of drawings showing any modifications (if done) with approval letter from competent authority.
- (5) Sectional view/drainage plan of retail outlet area/private property and culverts in approaches.
- (6) Undertaking from the private party oil company that the private party/oil company would pay necessary rent for the use of the National Highway land whenever the rents are asked by the highway authorities in future.

Annexure-II

[Enclosure to Ministry's Circular No RW/NH-33023/19/99-DOIII dated 31st Aug. 2000]

List of documents to be submitted for getting approval for installation of new Retail Outlets/Private property along National Highways

- (1) Signed copy of licence deed (*Annexure-I* of Ministry's Circular No.NHIII/P/17/75 dated 30.10.1980).
- (2) Certified copy of location plan of the retail outlet/private property along the National Highway showing details of right of way of National Highway, access roads to private properties, existing public roads and other developments falling within a radius of 1.5 km in each side of the retail outlet.
- (3) Certified copy of plan of the proposed retail outlet/private property showing details of Access road, buffer strip, fuel pump, kiosk, lubritorium, air and water supply, drainage details etc.
- (4) Certified copy of sectional view showing elevation of retail outlet/private property with respect to National Highway and slopes to be provided for adequate drainage and preventing water logging on National Highway.
- (5) Drainage plan of the retail outlet/private property area.
- (6) Details of material to be provided for paving the retail outlet/private property.
- (7) Inspection report of the officer inspecting the site of proposed retail outlet/ private property.
- (8) Certificate that all standard conditions have been-specified.
- (9) Detailed explanation for reasons for granting of exemption from guidelines/stipulated norms (If required).
- (10) Undertaking from the private party/ oil company that the private party/oil company would pay necessary rent for the use of the National Highway land whenever the rents are asked by the highway authorities in future.

[Enclosure to Ministry's Circular No. RW/NH-33023/11/99-DO III dated 31st Aug. 2000]

Check list for getting approval for installation of new Retail Outlets/renewal of licence deed for existing Retail Outlets/access to private property along National Highways

1. GENERAL INFORMATION

- | | | | |
|--------|--|---|-------|
| 1.1. | National Highway Number | : | _____ |
| 1.2. | State | : | _____ |
| 1.3. | Location | : | _____ |
| 1.3.1. | (Chainage in km) | : | _____ |
| 1.3.2. | [Side of NH (Left or right side of NH towards increasing chainage/km direction)] | : | _____ |
| 1.4. | Name of Highway Authority (NHAI/PWD/BRO) | : | _____ |
| 1.5. | Executive Engineer (or Equivalent) address | : | _____ |

1.6. Name of Oil Company : _____
(as applicable)

1.7. Name and address of Owner of Retail Outlet/
Private Property : _____

2. STIPULATED NORMS FOR RETAIL OUTLETS

Sl. No.	Item	Measure- ment at site	Para No.*	MOST Norms ^f Norms	Whether complying with MOST Norms*
(1)	(2)	(3)	(4)	(5)	(6)
1.	Distance from nearest retail Outlet		3.1	Minimum 300 m	Yes/No
2.	Provision of 7.0 m wide service road		3.2	Necessary where clustering of Retail outlets is present	Yes/No
3.	Distance from check barrier		3.4	Minimum 1 km	Yes/No
4.	Is it a part of rest area complex?		3.5		Yes/No
5.	Distance from tangent point of curve from side roads and that of retail outlet		3.7	Minimum 300 m	Yes/No
6.	Gradient of highway section (in hilly terrain)		3.8	Maximum 5 per cent	Yes/No
7.	Slope of retail outlet premises/ service area for drainage purpose		3.8	Minimum 2 per cent	Yes/No
8.	Width of frontage		4	Minimum 30 m	Yes/No
9.	Length of buffer strip		5.1	Minimum 12m	Yes/No
10.	Width of buffer strip		5.1	Minimum 3 m	Yes/No
11.	Is the only one structure of approved standard identification sign on pole with 3 m clearance from ground existing on buffer strip?		5.2	No structure or hoarding except approved standard identification sign on pole is allowed on buffer strip.	Yes/No
12.	Height of kerb on periphery of buffer strip		5.3	Minimum 225 mm	Yes/No
13.	Distance of outer edge of buffer strip from centerline of carriage way		5.4	Minimum 7 m Minimum 12 m (divided carriage way)	Yes/No
14.	Is the space from outer edge of buffer strip to the edge of road turfed and raised with provision of 225mm kerbs, with no other structure?		5.5	No structure or hoarding or parking space is allowed in the space in front of buffer strip	Yes/No

(1)	(2)	(3)	(4)	(5)	(6)
15.	Is there no hedges or plants 600 mm high on or around buffer strip?		6.2	—	Yes/No
16.	Width of entrance/exit		7.1	Minimum 9 m Maximum 12 m	Yes/No
17.	Radius of turning curve		7.2	Minimum 13 m Ruling 30 m	Yes/No
18.	Radius of non-turning curve		7.2	Minimum 1.5 m Maximum 3 m	Yes/No
19.	Minimum downward slope of access roads towards the retail outlet		8.1	Minimum 2 per cent	Yes/No
20.	Difference in elevation from edge of road and edge of buffer strip		8.1	Minimum 15 cm	Yes/No
21.	Provision of culvert, designed for drainage according to IRC:SP-13		8.1/8.3	Minimum 1m dia (pipe culvert) Minimum 1m span (slab culvert)	Yes/No
22.	Distance of kiosks, etc. from the Fuel Pump		9.0	Minimum 4 m	Yes/No
23.	Provision of proper drainage arrangement for retail outlet premises		8	Drawing showing drainage arrangement as per satisfaction of highway authorities to be submitted.	Yes/No
24.	Provision of suitable retroreflective signboards		12	—	Yes/No

Check list for getting approval for installation of new Retail Outlets/renewal of licence deed for existing Retail Outlets/access to private property along National Highways

[Enclosure to Ministry's Circular No RW/NH-33023/19/99-DOIII dated 31st Aug., 2000]

Existing Retail Outlets/access to private property along National Highways

3. STIPULATED NORMS FOR ACCESS TO PRIVATE PROPERTY

Sl. No.	Item	Value	MOST Norms		Whether complying with MOST Norms**
			Para No.*	Norms	
1.	Distance from nearest access/intersection		13.1/ 13.2	URBAN: Minimum 500 m (NH) Minimum 1000 m (for NH likely to be made Expressway) RURAL: Minimum 750 m (for service roads) Minimum 300 m (individual property)	Yes/No
2.	Provision of 7.0 m wide service road		13.2	Necessary where clustering of properties is present	Yes/No
3.	Width of entrance/exit		7.1	Minimum 9 m Maximum 12 m	Yes/No
4.	Radius of turning curve		7.2	Minimum 13 m Ruling 30 m	Yes/No
5.	Radius of non-turning curve		7.2	Minimum 1.5 m Maximum 3 m	Yes/No
6.	Minimum downward slope of access roads		8.1	Minimum 2 per cent	Yes/No
7.	Difference in elevation from edge of road and edge of property		8.1	Minimum 15 cm	Yes/No
8.	Provision of proper drainage arrangement for runoff from private premises		8	Drawing showing drainage arrangement as per satisfaction of highway authorities to be submitted.	Yes/No
9.	Provision of culvert designed for drainage in accordance with IRC SP-13		8.1/8.3	Minimum 1m dia (pipe culvert) Minimum 1m span (slab culvert)	Yes/No

* Annexure I to MOST Circular No. RW/NH-33023/19/99-DO. III dated 31st Aug. 2000

** If Norms are not satisfied, detailed explanation needs to be given, otherwise the application will not be considered. In all cases supporting documents as per Annexure II have to be submitted, otherwise, the case will be summarily rejected.

Format for Maintaining Records of Retail Outlet/Access to Private Property

(to be maintained separately for every NH and State, every PWD Division or equivalent)

1. Name of State : _____
2. Name of Agency (PWD/BRO/NHAI) : _____
3. Name of PWD Division or Equivalent : _____
4. NH No. : _____

Sl. No.	Location (chainage in km)	Left or right side of NH (towards increasing chainage/km direction)	Retail Outlet/ Access to Private Property	Name of Owner and address	Name of Oil Company and contact address (if applicable)	Date of signing of licence deed	Date of validity of licence deed	Date of sending reminder to the owner of retail outlet/private property (4 month before the date of lapse of licence deed)	Date of last inspection of site	Any deviation from MOST standard norms	Remarks

(Enclosure to Ministry's Circular No. RWNH-33023/19/99-D.O.III dated 31/08/2000 [142.21])

LOCATION AND LAYOUT OF MOTOR-FUEL FILLING AND MOTOR-FUEL FILLING- CUM-SERVICE STATIONS ALONG NATIONAL HIGHWAYS

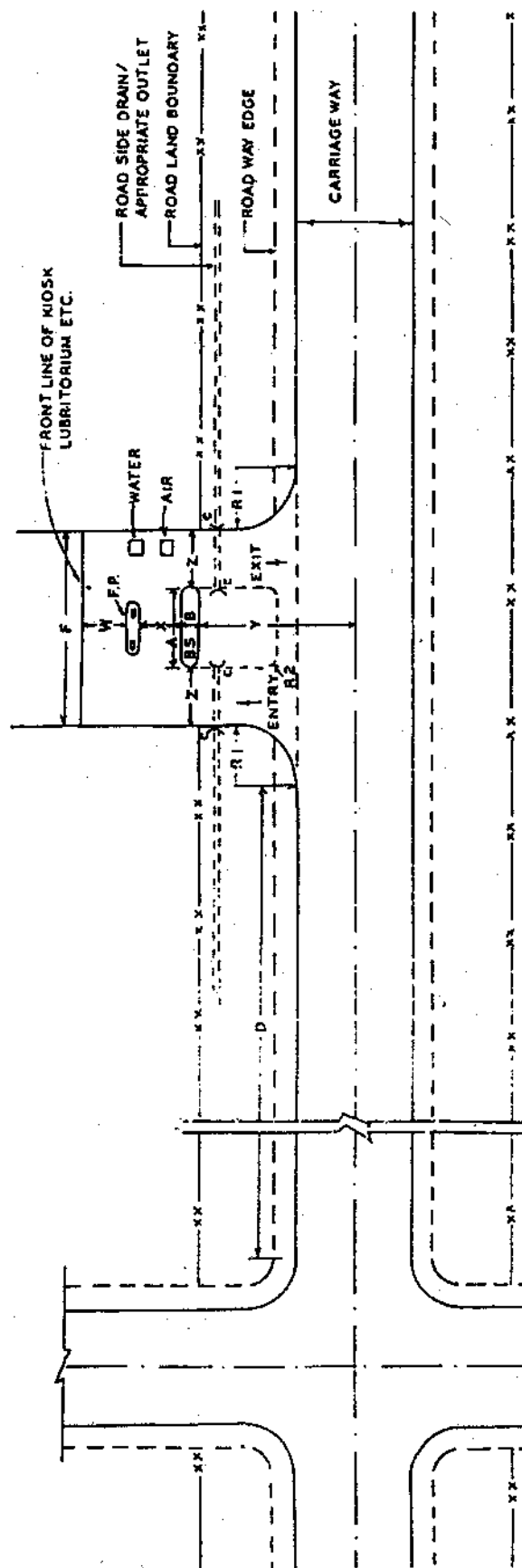


FIG. 1

BS - Buffer strip

A - Minimum 12 m (See Para 5.1)

B - Minimum 3 m (See Para 5.1)

F - Minimum 30 m (See Para 4)

Z - Minimum 9 m, Maximum 12 m (See Para 7.1)

X - Minimum 4 m (See Para 10)

W - Minimum 4 m (See Para 9)

Y - Half the width of road subject to provision that it is not less than 7 m, where no cycle tracks are required now or in future, and not less than 12 m where cycle tracks/service road exist or may be required in future. In the case of dual/divided carriageway, these distances should be measured from the centreline of the nearest two-lanes of the carriageway, (See Para 5.4)

D - Minimum 300 m (See Para 3.1, 3.2, 3.4, 3.7)

R1 - Minimum 13 m ruling 30 m (See Para 7.2)

R2 - Minimum 1.5 m - 3 m (See Para 7.2)

CC - Culvert - Culverts to be provided both at entry & exit

(Enclosure to Ministry's Circular No. RW/NH-33023/19/99-D.O.III dated 31/08/2000)

TYPICAL X-SECTIONAL ELEVATION OF A RETAIL OUTLET

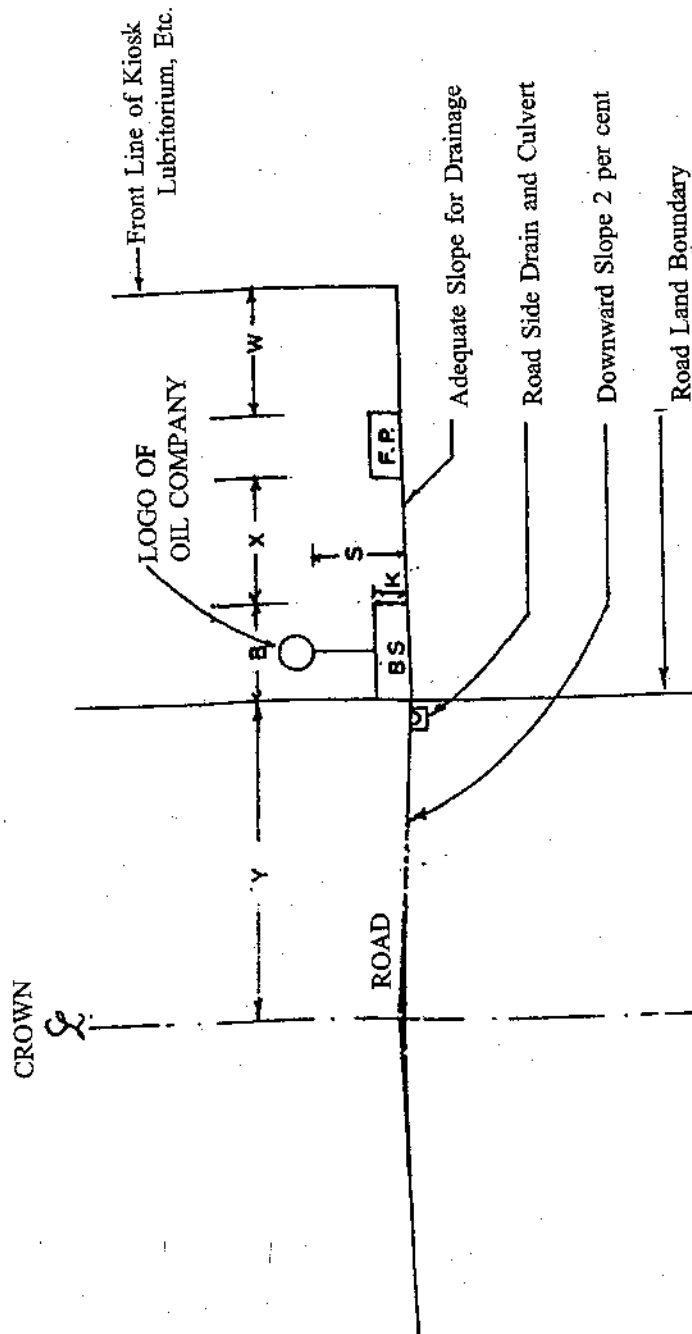


FIG.2

- H - Minimum 150 mm (See Para 8.1)
- K - Minimum 150 mm (See Para 5.2)
- S - Minimum Clearance 3 m (See Para 3.2)
- Y - Minimum 7 m with cycle track or service road minimum 12 m for divided carriageway the distance shall be measured from centreline of nearest carriageway (See Para 8.1)
- B - Minimum 3 m (See Para 5.1)
- BS - Buffer Strip
- FP - Fuel Pump
- X - Minimum 4 m (See Para 10)
- W - Minimum 4 m (See Para 9)