

VISUAL DISORDERS

The main elements of vision necessary for safe driving are visual acuity, peripheral vision and freedom from double vision (diplopia). These three items are elaborated in the following pages as Functional Ability Profile charts on visual parameters. Other, not so easily measured visual factors are discussed below:

Defects in color vision, important in distinguishing traffic signals, are usually compensated for by learning traffic light positions and are not in themselves reasons to deny driving and are usually tested adequately by the road evaluation.

Night vision, contrast sensitivity, and glare recovery may be impaired in the presence of corneal scars, cataracts, and retinal aging or disease. Evidence is inconclusive that testing these parameters of visual function can determine which drivers are safe.

Sometimes an ocular defect or disease does not cause the applicant to fail the eye examination. If the examining clinician suspects that the condition may affect driving, it is reasonable to ask that a road test be given by a BMV driver examiner to look at specific aspects of driving. For example, a patient with retinitis pigmentosa who wants to drive at night may pass all the office eye exams but the disease's effect on the patient's night driving remains uncertain. The clinician might recommend a night road test evaluation.

Drivers with hemianopsia must meet standard vision requirements described in this Functional Ability Profile. They must also pass the Esterman field test as described in the Peripheral Vision Profile Table. Individuals with a history of traumatic brain injury or stroke should be evaluated using both the Visual Disorders and the Cerebrovascular Accident (CVA/Stroke) or Traumatic Brain Injury(TBI) FAP's.

Individuals with deficits in useful field of view and visual processing speed, as well as other visuo-spatial deficits, should be assessed for other cognitive impairments using the Dementia FAP.

FOR REFERENCES, SEE BIBLIOGRAPHY AT END OF DOCUMENT.

FUNCTIONAL ABILITY PROFILE
Visual Disorders¹: Visual Acuity

Profile Levels	Degree of Impairment²/ Potential for At Risk Driving	Condition Definition / Example	Interval for Review and Other Actions
1.	No diagnosed condition	Sees 20/40 or better in best eye without correction.	N/A
2.	Condition fully recovered	Visual acuity correctable to 20/40 or better in best eye. Restrict to corrective lenses.	N/A
3.	Active impairment	Those needing corrective lenses to meet visual acuity requirements will be restricted to wearing them when they drive. See note ³ below re: telescopic or bioptic lenses.	
	a. Mild	Vision correctable to 20/40 in best eye but could deteriorate due to glaucoma, diabetic retinopathy, macular degeneration, or other potentially progressive diseases.	2 years or interval recommended by vision examiner
	b. Moderate	Vision correctable to at least 20/100 in best eye; restrict to daytime driving (See note ⁴ below).	1 year or interval recommended by vision examiner
	c. Severe	Best corrected vision currently less than 20/100 in each eye.	No driving

¹ For further discussion regarding VISUAL DISORDERS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, refer to SECTION 3.

³ Telescopic or bioptic lenses (BTL's) may not be used for purposes of meeting any of the visual acuity requirements. Drivers who meet the Visual Acuity requirements without BTL's may use them for taking the road test and for driving.

⁴The daytime only restriction may be changed based on:

- A recommendation from an optometrist or ophthalmologist advising that the individual's vision is adequate to permit the safe operation of a motor vehicle; and
- A BMV night time driver's examination that demonstrates the driver's ability to operate a motor vehicle safely; and
- A review of the individual's driving record shows the ability to operate a motor vehicle safely and in accordance with all applicable laws, rules, and regulations governing the operation of motor vehicles.

FUNCTIONAL ABILITY PROFILE
Visual Disorders¹: Peripheral Vision

Profile Levels	Degree of Impairment²/ Potential for At Risk Driving	Condition Definition / Example	Interval for Review and Other Actions
1.	No diagnosed condition	Binocular total visual field of at least 120° & a minimum of 50° to left and 50° to right of fixation.	N/A
2.	Condition fully recovered	Past history of visual field defect but current total is 120° or more with at least 50° to left and 50° to right of fixation.	N/A
3.	Active impairment	See notes ^{3 4 5 & 6} re: testing. For hemianopsia, see note ⁶ below.	
	a. Mild	Binocular or monocular visual field total 120° or better with minimum of 50° to left and 50° to right of fixation, with potential for deterioration.	4 years
	b. Moderate	i. Binocular or monocular visual field total less than 120° but at least 110° and at least 50° to left and 50° to right of fixation. Must pass Esterman. See note ⁵ .	1 year or as recommended by vision examiner. Road Test depends on Esterman.
		ii. Binocular or monocular visual field total at least 110°, but less than 50° to left or 50° right of fixation. Must pass Esterman ⁵ , and road test required.	1 year or as recommended by vision examiner. ROAD TEST.
	c. Severe	Binocular or monocular visual field total less than 110°.	No driving

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² For further explanation of degree of impairment, please refer to SECTION 3.

³ Testing of peripheral vision must be done without the use of Fresnel paste on prism lenses. Prisms incorporated into correction are allowed.

⁴ Peripheral vision should be measured with a 10 mm white test object at 330 mm, preferably without corrective lenses, in the horizontal meridian. Contacts or permanent prism lenses may be used. Confrontational visual fields or alternate field tests other than the 10 mm white at 330 mm are acceptable. The minimum peripheral visual field must be 120°, with at least 50° to left and 50° to right of fixation. For exception, see note⁵ below.

⁵ The binocular Esterman test may be used for drivers with at least 110° but less than 120°. If test passed without missing any points, no road test will be required. Missing one to three points on the Esterman test requires passing a road test. Missing four points on the Esterman test will disqualify for driving.

⁶ If hemianopsia is present driver will also need evaluation using the TBI/Stroke profile and must pass the Esterman field test as stated above.

FUNCTIONAL ABILITY PROFILE
Visual Disorders¹: Double Vision

Profile Levels	Degree of Impairment²/ Potential for At Risk Driving	Condition Definition / Example	Interval for Review and Other Actions
1.	No diagnosed condition	Never sees double.	N/A
2.	Condition fully recovered	History of diplopia that has recovered or eyes crossed but no diplopia without patch.	N/A
3.	Active impairment	If diplopia is due to a head injury or stroke, also require an evaluation using that profile.	
	a. Mild	Intermittent diplopia or constant double vision correctable by patching one eye.	4 years
	b. Moderate	Monocular diplopia in the <u>only eye</u> meeting visual acuity requirements, with potential for correction.	No driving
	c. Severe	Monocular diplopia in the only eye meeting visual acuity requirements, without potential for correction.	No driving

¹ For further discussion regarding VISUAL DISORDERS, please refer to NARRATIVE found at beginning of this section.

² For further explanation of degree of impairment, please refer to SECTION 3.