

## VISUAL CONDITIONS PREAMBLE

The main elements of vision necessary for safe driving are adequate visual acuity and peripheral vision. These two items are elaborated in the following pages as Functional Ability Profile (FAP) Tables on visual parameters. Other visual factors that may impact driving ability but which may not easily be measured are also discussed below.

Visual acuity is tested using a Snellen chart. It is tested in each eye without correction and with the correction the patient typically uses when driving. Refraction is not required for visual acuity testing. Corrective lenses, including contact lenses are permissible for testing. **Bioptic telescopic lenses (BTL's) may not be used to meet the visual acuity requirements.** A minimum of 50% of the letters on the line of the eye chart must be correctly identified to qualify as passing that level of acuity.

For screening purposes, peripheral vision should be tested using a 10 mm round white test object at a distance of 330 mm, preferably without corrective lenses, but contact lenses or corrective lenses may be worn. Alternatively, confrontation visual fields and devices such as, but not limited to, an arc perimeter, tangent screen or a Goldmann visual field using a V4e target are all acceptable forms of testing. With the subject fixating straight ahead at a fixation target in primary gaze, a continuous horizontal visual field of 110 degrees is required to meet the vision standard. **Field expansion devices**, spectacle systems incorporating pasted or mounted prisms, mirrors or a camera in or on a carrier lens or frame which are designed to shift the visual field in one or both eyes so that objects within a scotoma can be seen, **may not be used for testing.**

A binocular Esterman visual field test may be performed when it is inconclusive that the total horizontal field on the screening exam meets the 110-degree minimum. Examples of Esterman test results may be found in the appendix. Corrective lenses normally worn for driving may be worn for the Esterman, but field expansion devices may not be used for testing. The subject is to focus on the central fixation point of the perimeter and scanning eye movements are not permitted. Examples of conditions where the Esterman visual field may provide clarification include, but are not limited to hemianopsias, quadrantanopsias, retinitis pigmentosa, bilateral proliferative diabetic retinopathy following panretinal photocoagulation, and severe bilateral glaucoma. Homonymous hemianopsia is a condition where there is visual field loss to one side (either the right half or the left half) in both eyes and is most often the result of a brain injury. Most subjects with this type of vision loss will not be considered fit to drive because they will be unable to meet the minimum horizontal visual field of 110 degrees. The Esterman visual field only measures points as far peripherally as 75 degrees to the left and right of fixation. The normal peripheral visual field does extend out to 90 degrees or slightly greater, leaving a portion of the peripheral field that cannot be assessed with the Esterman test. If, on the basis of confrontational or other visual field testing it has been established that the subject can see beyond the 75° tested horizontally on the Esterman, this fact may be noted and the additional degrees counted toward the total visual field when determining whether or not the 110 degree minimum has been met. For a monocular person, the physiologic blind spot is not considered a visual field defect when scoring the test.

### Exceptional Case Criteria for Visual Field

Subjects who do not meet vision requirements due to a visual field defect may be eligible for individual consideration for licensing by meeting the following criteria:

The applicant must:

1. Contact BMV Medical Department to request an exception and provide information and documentation as requested by BMV.

BMV will:

1. Notify driver of information needed
2. Contact subject's eye care provider for information as needed
3. Review appropriate BMV records including applications, driving history (e.g., crashes, citations, driving logs), or other relevant driving information
4. Review driver status (e.g., a new applicant, suspended driver, driver seeking license renewal, etc.)
5. Forward clinical documentation, driving documentation and recommendation about driving credential to MAB

MAB will review all documentation and may approve the subject for a road test and licensure based on the following criteria:

- 1) The subject has a visual field defect caused by an isolated, non-progressive event that has been present for a minimum of 12 months, unless the patient has been evaluated by a neurologist, neuro-ophthalmologist, or an occupational therapy driving evaluator who can attest that a driver has compensated to the point of being safe to operate. Or,
- 2) The subject has a progressive visual field defect and meets all other exceptional case criteria.
- 3) The subject has no other progressive condition that is likely to cause additional visual field loss.
- 4) The visual acuity is at least 20/40 or better in the better seeing eye and is at least 20/100 or better in the fellow eye. Correction may be used to test for visual acuity.
- 5) The subject does not experience diplopia that could affect driving.
- 6) The subject's driving record must show a pattern of safe motor vehicle operation with specific consideration given to at fault crashes or law enforcement reports of adverse driving.
- 7) If the subject has a Learner's Permit, regardless of age, they must log at least 70 hours of supervised driving, according to BMV protocol for Exceptional Cases. If they wish to request a nighttime road test, they must include at least 10 hours of nighttime driving.
- 8) The Medical Advisory Board or their designated representative(s) will assess for potential approval of licensing based on a review of the preceding criteria or any other relevant factors. Further vision testing, including but not limited to an Esterman test, may be required.
- 9) If the subject meets the above criteria, they may be scheduled for a road test.
- 10) A driver may request a nighttime road test to have the daylight only driving restriction removed. Refer to criteria for removal of daylight only driving restriction.
- 11) A nighttime road test must be approved by the MAB for a person with a progressive condition.

If a driving privilege has been suspended for vision, the subject may request a temporary lifting of the suspension. If approved, they will be issued a restricted temporary credential. They may be restricted to driving only with another licensed driver holding a valid credential in good standing for at least 2 years; a driving instructor; or a Certified Occupational Therapy Driving Rehabilitation Specialist; and this person must be seated next to the subject in the vehicle while in operation.

A road test will be administered by a BMV Driver's License Examiner, to determine qualification or disqualification to hold a driving credential, with consideration for the following:

- 1) The subject must satisfactorily pass a road test. A description of the road test may be found in the appendix.
- 2) Upon passing the road test, BMV will issue an appropriate temporary driving credential subject to final review by the MAB.
- 3) A license that is approved using these criteria will be restricted to daylight only driving, based on recommendation of the MAB, per criteria listed above.

If the subject passes the road examination, BMV will forward the results and examiner notes to MAB to determine the following:

1. Whether to allow driving and if approved, the required interval for review.

2. The interval for review will not exceed 1 year for drivers with a progressive condition and will not exceed 4 years for a person with a stable, non-progressive condition.
3. The need for repeat road testing will be determined by the MAB. Repeat road testing is not expected in cases where no safety concerns are determined, and the condition is non-progressive.

When binocular diplopia creates a concern for safe operation of a motor vehicle, the clinician should recommend corrective measures. No driving restrictions are required as long as the visual acuity and peripheral visual field requirements described above are met. Fogging, patching, and temporary or permanent prisms used with lenses may all be employed. If the clinician has concern for safe operation due to diplopia that is not included in this description, they may recommend a restriction or a road test.

Based on criteria described in the FAP Tables, the following restrictions will be applied to a driver's license:

- 1) Corrective lenses are required for drivers whose uncorrected visual acuity is less than (i.e. worse than) 20/40 in both eyes.
- 2) Daylight only driving is permitted for drivers whose visual acuity is 20/50 – 20/100 in the better seeing eye. This restriction may also be imposed as per the Exceptional Case Criteria for visual field defects where less than 110 degrees of continues horizontal field is present.

The daylight only driving restriction may be removed based on:

- 1) A report from an optometrist or ophthalmologist advising that no additional eye conditions or other known relevant factors exist that may affect the ability to safely operate a motor vehicle, AND
- 2) BMV review of the subject's driving record (crashes, adverse reports of driving, etc.) shows they have the ability to operate a motor vehicle safely and in accordance with all applicable laws, rules and regulations governing the operation of motor vehicles; AND
- 3) Passing a BMV night-time driver's examination that demonstrates the ability to operate a motor vehicle safely.

Individuals undergoing BMV vision review with potentially progressive pathology affecting either visual acuity or peripheral visual field are required to have their eyes examined at specified intervals. A clinician may request a shorter interval based on the likelihood of more rapid deterioration.

Sometimes an ocular defect or disease does not cause the applicant to fail the eye examination but the examining clinician suspects that the condition may affect driving ability. It is reasonable to ask that a road test be given by a BMV Driver's License Examiner to look at specific aspects of driving. For example, a patient with retinitis pigmentosa who wants to drive at night may pass the eye exam but the effect of the disease on the patient's night driving ability remains uncertain. The clinician might recommend a nighttime road test. Alternatively, a patient who has suffered a stroke or a patient with bilateral severe glaucoma may meet the visual field-testing criteria, but the ability to detect obstacles and remain in the driving lane may be questioned. A road test may be requested by the clinician. A road test cannot be requested in order to obtain a license for an individual who has failed to meet the vision standards, unless they have already met the "exceptional case" criteria. A description of the road test may be found in the appendix.

When there is a history of traumatic brain injury or stroke that has resulted in either decreased vision and/or peripheral field loss, an Eye Examination Form (MVE-103) must be completed using the Visual Conditions FAP; and a Driver Medical Evaluation (CR-24) form must be completed using the Cerebrovascular Accident (CVA/Stroke) or Traumatic Brain Injury (TBI) FAP. Each form should be completed by the appropriate health care provider and the condition with the more restrictive rules will determine driving privileges.

Contrast sensitivity, glare recovery and night vision may be impaired in the presence of various pathologies such as corneal scars, cataracts, and retinal disease. Evidence is inconclusive that standard office testing of these parameters of visual function can determine which drivers can safely operate a motor vehicle. Defects in color vision, which may impair the ability to distinguish traffic signals, are not sufficient reason in the absence of any other visual loss to deny or restrict driving.

**FUNCTIONAL ABILITY PROFILE**  
**Visual Conditions<sup>1</sup>: Visual Acuity**

<b>Profile Levels</b>	<b>Degree of Impairment/ Potential for At Risk Driving</b>	<b>Condition Definition / Example</b>	<b>Interval for Review and Other Actions</b>
1.	No diagnosed condition	Visual acuity is equal to or better than 20/40 in the better seeing eye without correction and with no progressive disease. <sup>2</sup>	N/A
2.	Condition fully recovered	Visual acuity equal to or better than 20/40 in the better seeing eye with correction and the condition is stable. <sup>2</sup>	Restrict to corrective lenses
3.	Active impairment  (Profile levels are intended to describe potential for at risk driving; they are NOT consistent with clinical definitions for mild, moderate or severe.)	Presence of progressive disease or of another serious visual deficit (glaucoma, diabetic retinopathy, macular degeneration, cataract and others).  <b>Bioptic telescopic lenses are not permitted for vision testing.<sup>2</sup></b>	Those needing corrective lenses to meet visual acuity requirements will be restricted to wearing them while driving for all profile levels described below.
	a. Mild risk	Visual acuity equal to or better than 20/40 in the better seeing eye but could deteriorate due to progressive disease. <sup>2</sup>	4 years or earlier if recommended by vision examiner
	b. Moderate risk	Visual acuity 20/50 - 20/100 in the better seeing eye. <sup>2</sup>	2 years or earlier if recommended by vision examiner  Restrict to daylight driving only <sup>3</sup>
	c. Severe risk	Visual acuity less (worse) than 20/100 in the better seeing eye. <sup>2</sup>	No driving

<sup>1</sup> For further discussion regarding VISUAL CONDITIONS, please refer to PREAMBLE at the beginning of this section.

<sup>2</sup> **Bioptic telescopic lenses (BTL's) may not be used** for the 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.

<sup>3</sup> The daylight only driving restriction may be removed based on:

- A report from an optometrist or ophthalmologist advising that no additional eye conditions or other known relevant factors exist that may affect the ability to safely operate a motor vehicle, AND
- BMV review of the person's driving record (crashes, citations, etc.) shows they have the ability to operate a motor vehicle safely and in accordance with all applicable laws, rules and regulations governing the operation of motor vehicles; AND
- Passing a BMV night-time driver's examination that demonstrates the ability to operate a motor vehicle safely.

**FUNCTIONAL ABILITY PROFILE**  
**Visual Conditions<sup>1</sup>: Peripheral Vision**

<b>Profile Levels</b>	<b>Degree of Impairment/ Potential for At Risk Driving</b>	<b>Condition Definition / Example</b>	<b>Interval for Review and Other Actions</b>
1.	No diagnosed condition	Total continuous horizontal visual field <sup>2,3</sup> of at least 110°; no progressive disease and no visual field deficits.	N/A
2.	Condition fully recovered	Past history of visual field <sup>2,3</sup> defect but current continuous horizontal total is 110° or more and condition is recovered.	N/A
3.	Active impairment  (Profile levels are intended to describe potential for at risk driving; they are NOT consistent with clinical definitions for mild, moderate or severe)	Presence of progressive conditions, visual field loss following CVA/TBI, and/or other serious visual diseases or deficits (E.g., hemianopsia, quadrantanopsia, retinitis pigmentosa, bilateral severe glaucoma). <sup>4</sup>  <b>For instructions on measuring peripheral vision, see preamble and footnotes.<sup>2,3</sup></b>	
	a. Mild risk	Total continuous horizontal visual field <sup>2,3</sup> of 110° OR more with a visual field deficit <sup>4,5</sup> but without expectation of deterioration.	4 years or earlier if recommended by vision examiner.  Esterman test may be performed. <sup>5</sup>  Road test may be required if recommended by vision examiner or MAB.
	b. Moderate risk	i. Total continuous horizontal visual field <sup>2,3</sup> at least 110° with potential for deterioration. <sup>4,5</sup>	1 year or earlier if recommended by vision examiner.

			<p>Esterman test may be performed.<sup>5</sup></p> <p>Road test may be required if recommended by vision examiner or MAB.</p>
		<p>ii. Total continuous horizontal visual field<sup>2,3</sup> less than 110° and subject has been approved by MAB for Exceptional Case consideration.<sup>4,5,6</sup></p>	<p>Initial road test required.</p> <p>Need for repeat road test will be determined by MAB.</p> <p>Interval for review to be determined by MAB.</p>
	c. Severe risk	<p>Total continuous horizontal visual field<sup>2,3</sup> less than 110°.<sup>4,5,6</sup></p>	<p>No driving</p> <p>See criteria for exceptional cases<sup>6</sup></p>

<sup>1</sup> For further discussion regarding VISUAL CONDITIONS, please refer to PREAMBLE at the beginning of this section.

<sup>2</sup> For screening purposes, peripheral vision should be tested using a 10 mm round white test object at a distance of 330 mm, preferably without corrective lenses, but contact lenses or corrective lenses may be worn. Alternatively, confrontation visual fields and devices such as, but not limited to, an arc perimeter, tangent screen or a Goldmann visual field using a V4e target are all acceptable forms of testing. The subject must be fixating straight ahead at a fixation target in primary gaze.

<sup>3</sup> **Field expansion devices**, spectacle systems incorporating pasted or mounted prisms, mirrors or a camera in or on a carrier lens or frame which are designed to shift the visual field in one or both eyes so that objects within a scotoma can be seen, **may not be used for testing visual field**.

<sup>4</sup> If hemianopsia or quadrantanopsia is present, driver will also need to be evaluated using the Brain Injury/Stroke profile guidelines.

<sup>5</sup> A binocular Esterman visual field test may be performed when it is uncertain that the total horizontal field on the screening exam meets the 110-degree minimum. Refer to preamble.

<sup>6</sup> See the Visual Conditions Preamble for exceptional case consideration criteria.