

3.4 –DRIVEWAY APPLICATION ON-SITE REVIEWS

For all applications, the County Permit Supervisor or staff is required to perform an initial on-site review of the proposed work site. The reviewer's name and each on-site review date must be captured on the application.

Purpose

The purpose for this review is to verify the application package contains applicable information required under 441.3, to verify information depicted on the plans actually match field conditions, and to verify that measurements (e.g., sight distances, grades) are not in conflict with the regulations, when measured consistent with statewide policy.

Items requiring verification during the initial on-site review include the following:

1. County, Municipality, SR, Segment(s) and Offset(s) are correct.
2. The site is depicted accurately on the plan.
3. All information required by 441.3(i) is on the plan and is accurate.
4. Verify minimum **stopping** sight distances:
 - b. Use **5 miles per hour over the** posted speed limit(s); if no posted (maximum legal) speed or if operating speeds vary significantly from posted speed limit(s), measure safe-running speed or 85th percentile speed.
 - c. Independently verify and record average grade in both directions (along measured sight distance).
 - d. ~~If access is a “local road”, verify sight distances are consistent with “PennDOT Design Manual, Part 2”.~~
5. If access is a “local road”, verify design is consistent with PennDOT “Design Manual, Part 2”. See 441.7(d)).
6. Verify existing highway drainage is depicted accurately.
7. Verify existing curb is depicted accurately.
8. All highway appurtenances are shown (e.g., drainage, signage, guide rail) and whether any will require relocation or adjustment.
9. All existing and proposed utilities are shown and plans indicate if any utility facility will require relocation or adjustment to accommodate access.
10. Proposed development will meet all Americans with Disabilities Act (ADA) requirements (including RC-67M curb ramp designs), and PA Vehicle Code, Section 3354(d)(3)(iii) disability parking sign requirements.
11. Driveway is designed with required minimum distances from other driveways and intersections. See 441.8(c) & (e).
12. Driveway angle is consistent with 441.8(b) (e.g., is satisfactory justification provided if 90-degree access is not proposed at site?).
13. Driveway design is consistent with Subchapter 2.4 of this manual (e.g., is justification provided if

proposed access design is inconsistent with Subchapter 2.4).

14. A Traffic Control Plan is included (if required) and depicts actual highway conditions. See Pub. 213 “Temporary Traffic Control Guidelines”.

Driveway Sight Distance Overview

Velocity (V)

Legal Speed

The speed limit is the maximum velocity, in miles per hour, that traffic may legally travel on a section of highway as determined under 67 Pa. Code, Sections 201.6(17) and 201.31--201.35, and consistent with the Vehicle Code, 75 Pa. C.S. Sections 3361--3365. Section 3362 of the Vehicle Code (Maximum Speed Limits) reads as follows:

General rule. -- Except when a special hazard exists that requires lower speed for compliance with Section 3361 (relating to driving vehicle at safe speed), the limits specified in this section or established under this subchapter shall be maximum lawful speeds and no person shall drive a vehicle at a speed in excess of the following maximum limits:

- (1) 35 miles per hour in any urban district.
- (1.1) 65 or 70 miles per hour for all vehicles on freeways where PennDOT has posted a 65 or 70-miles-per-hour speed limit.
- (1.2) 25 miles per hour in a residence district if the highway:
 - (i) is not a numbered traffic route; and
 - (ii) is functionally classified by PennDOT as a local highway.
- (2) 55 miles per hour in other locations.
- (3) Any other maximum speed limit established under this subchapter.

Section 102 of the Vehicle Code includes the following definitions:

“Urban district.” The territory contiguous to and including any street which is built up with structures devoted to business, industry or dwelling houses situated at intervals of less than 100 feet for a distance of a quarter of a mile or more.

“Residence district.” The territory contiguous to and including a highway not comprising a business district when the property on the highway for a distance of 300 feet or more is in the main improved with residences or residences and buildings in use for business.

“Business district.” The territory contiguous to and including a highway when within any 600 feet along the highway there are buildings in use for business or industrial purposes, including but not limited to hotels, banks, or office buildings, railroad stations and public buildings which occupy at least 300 feet of frontage on one side or 300 feet collectively on both sides of the highway.

Safe-Running Speed

The safe-running speed is the maximum velocity, in miles per hour, at which drivers may safely operate their vehicles on a section of highway during favorable weather conditions and prevailing traffic conditions, as determined under 67 Pa. Code, Section 212.1.

District permit staff may determine the ~~Formula Stopping~~ Sight Distance (SFSD) ~~consistent with Regulation 441.8(h)~~ by using the safe-running speed in the "formula" for "V", where V = Speed of vehicle (miles per hour).

The safe-running speed method, as outlined on Form M-950 SRS, may be used where the maximum legal highway speed approaching a driveway is not posted. The recorded speeds and computations will be documented on Form M-950 SRS and filed with the driveway application package.

85th Percentile Speed

The 85th percentile speed is the velocity, in miles per hour, which is exceeded by only 15% of the drivers traveling on a section of highway, consistent with the "Manual of Transportation Engineering Studies," Institute of Transportation Engineers, current edition, and 67 Pa. Code, Section 212.1.

District Traffic staff may determine the ~~Formula Stopping~~ Sight Distance (~~FSD SSD~~) ~~consistent with Regulation 441.8(h)~~ by using the 85th percentile speed in the ~~stopping sight distance equation "formula"~~ for "V", where ~~V = Speed of vehicle~~ V = design speed (miles per hour).

District Traffic staff may require sight distances greater than minimum values derived from the ~~Formula Stopping~~ Sight Distance (SFSD):

1. If trucks, longer combination vehicles, buses, special mobile equipment or similar specialized vehicles will frequently use the driveway, considering number of lanes, medians and roadway geometry, consistent with Chapter 9 of the AASHTO publication entitled "A Policy on Geometric Design of Highways and Streets," and Design Manual, Part 2.
2. If staff determines another location along the property frontage of the owner will better accommodate the amount and type of traffic that is expected to frequently use the driveway and considering the type, character and 85th percentile speed of the highway which is being accessed.

~~3. If a local road, consistent with PennDOT "Design Manual, Part 2" sight distance criteria.~~

Measuring Sight Distances

The measurement of available sight distances for a proposed access is a critical component of the access location decision. An applicant's sight distance measurements need to be verified by PennDOT. ~~Applicants should achieve Intersection Sight Distance (ISD) unless determined to be infeasible or impractical. If ISD cannot be met, Stopping Sight Distance (SSD) may be used to determine the minimum acceptable sight distance values for a driveway.~~ The County Permit Supervisor or staff verifies driveway sight distances and documents these measurements consistent with Form M-950S. County staff ~~sends attaches~~ the completed copy ~~with to~~ the driveway application ~~in EPS to the for~~ District Permit Office ~~for~~ review.

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Applicants should use ISD values and equation consistent with PennDOT “Design Manual, Part 2” and AASHTO Green Book based on conditions. Adjustments to the ISD values should be made per the following situations identified in the AASHTO Green Book:

- (A) Minor-road approach grade is an upgrade that exceeds 3 percent.
- (B) Left turns onto multilane roadways or where a median is present. Medians should be converted into an equivalent number of lanes.
- (C) Single-unit or combination truck design vehicles.
- (D) Where two roadways intersect at an angle less than 75 degrees or greater than 105 degrees.

Where both left and right turns are permitted, time gaps found in AASHTO Green Book Table 9-6 (*Time Gap for Case B1, Left Turn from Stop*) should be used for the sight distance looking to both the left and right. If only right turns are permitted, time gaps in Table 9-8 (*Time Gap for Case B2, Right Turn from Stop*) should be used.

If Intersection Sight Distance (ISD) is determined to be infeasible or impractical as defined in Chapter 441 along any other part of the property frontage, PennDOT may consider accepting sight distances less than ISD values if they are at least equal to the appropriate Stopping Sight Distance (SSD) based on below criteria.

PennDOT has provided applicants with a sight distance tool for determining ISD and SSD which can be found on the HOP website and EPS homepage. **(LINK SPREADSHEET HERE)**

~~For the purpose of measuring driveway sight distances, the drivers' eye heights shall be measured at 3.50 feet above the proposed driveway surface and highway pavement surface. For intersection sight distance, the driver's eye height and the height of the approaching vehicle shall be measured at 3.50 feet above the proposed driveway surface and highway pavement surface. For stopping sight distance, the driver's eye height shall be measured at 3.50 feet and the object height shall be measured at 2.0 feet above the proposed driveway surface and highway pavement surface. - respectfully. The vehicle heights shall be measured at 3.50 feet above the proposed driveway surface and highway pavement surface.~~ The placement of vehicles measured at the driveway and on the roadway, shall be consistent with the operation of the driveway and roadway, as illustrated on Form M-950S.

Applicants should provide a clear sight triangle for a P vehicle (passenger car) at all intersections. In addition, provide a clear sight triangle for the SU-30 vehicle for rural highway conditions. If there is significant combination truck traffic, use the WB-67 rather than the SU-30 design vehicle, and evaluate the possible impact of elevated visual obstructions (e.g., tree branches, overhead structures, etc.). In areas where SU-30 or WB vehicles are minimal and right-of-way restrictions limit sight triangle clearing, only the P vehicle sight distance needs to be provided. Sight triangles should be provided for the type of sight distance applicable to the intersection or driveway.

Also consider impacts of legally parked vehicles and foliage which may not be present when the sight distance measurements are made. For each direction along the highway, the following lengths shall be the measured sight distances for that direction, as illustrated on Form M-950 S:

- (A) The maximum length of roadway along which a driver at a driveway location can continuously see another vehicle approaching on the roadway. Consistent with driver responsibilities contained in Sections 3112, 3114, 3323, 3344 and 3361 of the Vehicle Code (75 Pa. C.S.), the

driver's eyes ~~shall~~ **should** be measured **14.50 feet but no less than** ten feet back from the traveled portion of the roadway.

- (B) The maximum length of roadway along which a driver on the roadway can continuously see the rear of a vehicle which is located in the driver's travel lane and which is positioned to make a left turn into a driveway.
- (C) The maximum length of roadway along which a driver of a vehicle intending to make a left turn into a driveway can continuously see a vehicle approaching from the opposite direction. This sight distance length is measured from the location of the approaching vehicle to a point on the roadway where the left-turning vehicle crosses the path of the approaching vehicle.

For intersection sight distance, grade should be measured for the minor-road approach only. If the approach grade is an upgrade that exceeds 3 percent, add 0.2 s for each percent grade by which the approach grade exceeds zero percent.

For stopping sight distance, grades should be measured for each major-road approach along the centerline of the roadway.

For grade measurements, the average grade should be calculated using no fewer than two measurement points and be determined using a SmartLevel or equivalent device.

Staff should not re-measure any sight distance unless highway features or proposed access location have changed (e.g., vegetation or embankment removed). Sight distance measurements need to be carefully taken initially, using accurate measuring devices.

Design Speed should be used for all sight distance measurements:

- (A) The posted speed plus 5 mph should be used to determine sight distance.
- (B) If observed operating speeds are greater than 5 mph higher or lower than posted, an 85th Percentile speed study may be performed to determine the appropriate design speed. The speed study should be performed by the applicant's engineer or the Traffic Unit.
- (C) If not posted, staff should obtain the operating speed by conducting the safe-running speed method (Form M-950SRS).
- (D) Staff should record the Posted Speed, Design Speed (Posted Speed plus 5 mph), and if a study was conducted, the Operating Speed on the form.

Insufficient Sight Distance

If any measured sight distance for a proposed driveway does not exceed the minimum Stopping Sight Distance, based on the operating speeds or, if not determined, the Design Speed, the application will be denied using the ~~forward the~~ sight distance denial response letter in EPS ~~to the applicant. See "Form Letters" Folder (posted in PennDOT permits shared folder). The denial letter should reference failing Design Speed rather than Posted Speed.~~ An exception to the denial may be made if the available sight distance falls between the sight distance required for posted and the posted plus 5 mph design speed. If this is the case, staff should refer the application to the Traffic Unit or have the applicant's engineer perform a speed study to confirm operating speeds prior to making a decision on the application.

Vegetation on Adjacent Property

PennDOT generally has broad authority to control use of highway right-of-way for all transportation purposes.

36 P.S. Section 670-420, 71 P.S. Section 512. PennDOT "...shall have the absolute right to trim, cut and remove any...shrubs growing within the legal right-of-way of any State highway...insofar as they overhang or encroach upon the legal right-of-way of any State highway." 36 P.S. Section 670-410. Accordingly, PennDOT may require removal of any shrub or encroachment – within the right-of- way – affecting sight distance as a condition of a Highway Occupancy Permit.

In addition, Section 6112 of the Vehicle Code reads:

6112. Removal of traffic hazards by property owner.

(a) General rule – It is the duty of the owner of real property to remove from the property any tree, plant, shrub or other similar obstruction, or part thereof, which by obstructing the view of