NEW YORK STATE
DEPARTMENT OF TRANSPORTATION

RESIDENTIAL DRIVEWAY STANDARDS
(Based on: Policy and Standards for the Design of Entrances to State Highways)

November 24, 2003
5A.1 INTRODUCTION

Section 52 of the New York State Highway Law and Section 1220-a of the New York State Vehicle and Traffic Law prohibits entrance on and work being performed on any State highway except pursuant to the authority of a permit and under rules and regulations prescribed by the Commissioner of Transportation.

In accordance with the exercise of these duties, the Department of Transportation has standards and procedures governing such work within the highway right of way including the construction of entrances to State highways so as to regulate traffic entering or leaving abutting properties. These policies, standards, and procedures protect the public through orderly control of traffic movements onto and from the highway, preserve the public’s investment in highway capacity, and assure uniform design and construction of entrances and exits statewide.

The Highway Work Permitting process, which governs access from individual properties to State highways, begins when an application for a highway work permit is filed.

For the complete Driveway Policy and Standards for all driveway types and to obtain sight distance charts, you may contact the NYSDOT Regional Permit Engineer by calling 1-888-783-1685, or go to the following URL: http://www.dot.state.ny.us/traffic/oper/tehspermit.html and click on "Driveway Policy and Standards".
5A.3 CONDITIONS AND LIMITATIONS OF HIGHWAY WORK PERMITS

Highway work permits for entrances to State Highways are subject to the following conditions and limitations.

5A.3.1 General Conditions

- Work should start within the time period specified in the permit. The permittee shall notify the Resident Engineer before work is started and when it is completed, on or before the estimated completion date. The Department may grant an extension of time if valid reasons exist for the delay.
- All work completed and materials used within the right of way shall meet the Department’s current *Standard Specifications for Construction and Materials* and is subject to Department approval on a case-by-case basis.
- All work completed and materials used within the right of way shall meet the terms and stipulations of the permit. The Department will make every reasonable effort to include all required stipulations and conditions of work in the permit before the work begins. If additions or alterations to either the work or the conditions of the permit are required after work commences, written Department approval shall be secured before such additions or alterations are undertaken by the permittee.
- The entire cost of the work specified shall be borne by the permittee, his grantees, successors, and assignees.
- The permittee shall have a copy of the permit available at the site at all times during construction.
- Piped or channelized natural drainage shall not be permitted to flow onto a highway right of way unless special provisions are approved by the Department.
- The permittee shall remove all surplus materials to an area outside the right of way unless the permit provides for disposal at locations within the right of way. Excavated material from within the right of way shall be disposed of as directed by the Department.
- Mitigation work shall be completed to the Department’s satisfaction before opening of any access to the State highway.

5A.3.2 Insurance

A permittee shall not hold the Department liable for any claim for damages arising from his/her negligence, or his/her contractor’s negligence in operations covered by the permit. Protective liability insurance to cover the Department during the period of work within the right of way is mandatory and, with the exception of permits for major commercial driveways and subdivision streets, may be obtained from the Department at a nominal cost.
5A.3.3 **Inspection**

The Department reserves the right of inspection by its authorized representatives of construction or reconstruction of any driveway, walkway or stairway within the highway right of way. As a condition of issuance of the highway work permit, the permittee shall reimburse the Department for the cost of on-the-job inspection in excess of one person-hour, sometimes required for major and minor commercial developments.

5A.3.4 **Performance Bonds and Deposits**

A performance bond and/or a deposit (certified check) and/or a letter of credit naming the permittee as principal is required for a permit issued for various work stipulated in the permit in order to protect the Department against the cost of completing construction or correcting deficiencies. The deposit will be returned when the work is completed to the satisfaction of the Department and all conditions of the Highway Work Permit have been met. The performance guarantee and amount will be prescribed by the Department, consistent with the scope and magnitude of the work involved.

5A.3.5 **Traffic Control and Work Site Safety**

The permittee and/or contractor shall take all necessary precautions and employ appropriate methods to preserve traffic flow, prevent injury to persons, or damage to property from operations covered by the permit and shall use guide, warning and regulatory signs and safety devices in accordance with the *Title 17, Volume B of the NYCRR* (a.k.a. New York State Manual of Uniform Traffic Control Devices (NYS MUTCD)), the current NYSDOT *Standard Specifications for Construction and Materials* and other Department guidance. The Department may require the permittee to submit plans showing such precautions, methods, and traffic control devices. The Department may, as a condition of the work permit, impose work restrictions as necessary to minimize disruption to traffic flow during peak travel periods. In all cases, the Department will be the final authority in matters related to maintaining and protecting traffic.
5A.3.6 **Maintenance Responsibility**

Property owners having access to a State highway shall be fully responsible for maintenance of their driveway and channelization including the portion from the highway right of way line to the outside edge of the highway shoulder or curb. This maintenance responsibility includes removal of snow and ice and keeping the portion within the highway right of way in a safe condition for the general public.

The property owner shall be responsible for the maintenance of ditches, pipes, catch basins, grates, detention ponds, and other drainage structures constructed in connection with providing access to his property, unless other legally binding arrangements, acceptable to the Department, are made. The property owner shall also trim brush and maintain his/her property in such a manner as to maintain optimal sight distance. A maintenance agreement requiring the owner and his/her successors to maintain the above features specified should be filed as appropriate with the deed in the County Clerk’s office.

5A.4 **GENERAL DESIGN REQUIREMENTS, AND GUIDELINES**

The following general design requirements apply to all types of entrances. The design requirements set forth in this section are intended to maintain traffic service and safety on the roadway and convenience for the traveling public and the permittee and are based on the premise that the rights of highway users and abutting property owners can be mutually satisfied. The Department reserves the right to impose any additional requirements it deems necessary for public safety.

A driveway or a driveway system shall be so located as to provide:

- The most favorable vision (sight distance), and horizontal and vertical alignment conditions for users of the proposed driveway and the highway.
- No undue interference with nearby driveways, intersections, interchanges, and turning or acceleration and deceleration lanes.
- Maximum safety and convenience for vehicles, cyclists, pedestrians, and other users of highway right of way.
- Consistency with driveway spacing standards presented in this section.
- Consistency with any local adopted driveway spacing standards or arterial corridor management plan.

In the interest of public safety and traffic flow and convenience, the Department may restrict the placement of a driveway to a particular location along the owner's frontage, restrict the type of access, or require shifting of an existing driveway. When a property fronting on a State highway also fronts on and has access to any other public street, road, or highway that intersects the State highway, the Department may restrict access to the State highway if it determines that such access would be detrimental to the safety and/or operation of the State highway.
5A.4.1 **Spacing**

The following instructions are provided to help locate new or reconstructed driveways for a particular site. More detailed requirements and guidance go to the following URL: [http://www.dot.state.ny.us/traffic/oper/tehspermit.html](http://www.dot.state.ny.us/traffic/oper/tehspermit.html) and click on "Driveway Policy and Standards", and see Figure 5A-1. The Department may modify this distance if an engineering determination indicates another dimension is more suitable for a particular site. The Department may restrict or prohibit specific movements if it determines that such movement(s) will interfere with safe and efficient traffic flow within or near an intersection.

5A.4.1.2 **Location Within Frontage**

A driveway should be located entirely within the applicant's frontage, with spacing as per Figure 5A-1 to intersections and driveways serving adjacent properties. If the driveway extends onto adjoining property or is to be shared with other property owners, the permittee may be required to provide written agreement with the adjoining property owner(s).

5A.4.1.3 **Number of Driveways**

Normally only one driveway shall be permitted for each residential property. An additional driveway may be permitted by the Department if both sufficient frontage exists and extenuating circumstances justify a second driveway.

5A.4.2 **Sight Distance**

Inadequate sight distance or other safety or operational deficiencies may require that one-way or turn restrictions (e.g., no left turns) be imposed at the driveway.

5A.4.2.1 **Intersection Sight Distance**

Intersection sight distances should meet or exceed the values in Chapter 9 of AASHTO’s latest *A Policy on Geometric Design of Highways and Streets*. Intersection sight distance at a driveway allows the drivers of approaching vehicles a sufficient view of the highway to decide when to enter the intersection to avoid collisions. Lower sight distance values may be used if the Regional Traffic Engineer determines that they will not significantly degrade traffic safety and operations and there is no reasonable alternative.
5A.4.2.2 Stopping Sight Distance

Driveways should be located where the stopping sight distance meets or exceeds the values in AASHTO’s latest *A Policy on Geometric Design of Highways and Streets*. Where the stopping sight distance is nonstandard, consider turn restrictions and/or speed change lanes (i.e., acceleration and deceleration lanes) as mitigation, and, if practical, locate the driveway for optimal sight distance.

5A.4.4 Driveway Profile

5A.4.4.1 Profile Within Highway Edge of Pavement

All driveways shall be constructed to slope away from the edge of the travel lane at the same slope as the highway shoulder which normally varies in slope from 2% to 6% (0.25 in/ft to 0.75 in/ft).

5A.4.4.2 Profile Beyond Highway Edge of Pavement

The profile beyond the highway edge of pavement is controlled by the:

- Drainage needs, discussed in Section 5A.4.5.
- Maximum grades are provided at the following URL: [http://www.dot.state.ny.us/traffic/oper/tehspermit.html](http://www.dot.state.ny.us/traffic/oper/tehspermit.html) and click on "Driveway Policy and Standards", and see Figure 5A-2. Where special circumstances require steeper driveway grades, contact the NYSDOT Traffic Engineer for assistance in establishing a safe profile design.
- Minimum vertical curve to accommodate the design vehicle. Whenever the driveway grade changes, the profile should be rounded by connecting the two different grades with a smooth vertical curve. Abrupt changes in driveway grade near the highway may cause operational and safety problems. Driveway profiles should prevent vehicle undercarriage damage and facilitate entering and exiting maneuvers. Refer to NYSDOT *Highway Design Manual* Chapter 3 for a graphical method of checking the driveway profile for compatibility with passenger vehicles.
- Sidewalk requirements, if applicable.

5A.4.5 Drainage

A driveway shall not adversely affect the highway drainage or drainage of adjacent properties. Drainage and the stability of the highway subgrade shall not be impaired by driveway construction or roadside development. The drainage design of a construction project shall not be compromised by field adjustments to compensate for altered driveway location. In no case
shall the construction of a driveway cause water to flow across the highway pavement, pond on the shoulders, or pond in the ditch.

5A.4.5.1 Highway Drainage Ditches and Driveway Culverts

Where construction of a driveway necessitates crossing a highway ditch, a culvert pipe of adequate capacity shall be installed in the ditch. The low point of the driveway profile shall be at or close to the centerline of the pipe to direct runoff (flowing from the highway and adjacent property) into the ditch.

Driveway side slopes within the highway clear zone defined by the Department should be as flat as practical. Side slopes within the highway clear zone shall be:

- No steeper than 1 vertical on 6 horizontal for driveways on highways with operating speeds or design speeds of 80 km/h (50 mph) or greater.
- No steeper than 1 vertical on 3 horizontal for driveways on highways with operating speeds or design speeds of less than 80 km/h (50 mph).

Where there is a drainage ditch along the frontage, delineation (e.g., pavement markings, delineators, signs, curbing) should be provided to guide motorists to the driveway and away from the ditch.

Culvert pipe shall:

- Be adequate to carry the anticipated flow in the ditch per NYSDOT *Highway Design Manual* Chapter 8.
- Not be smaller than 375 mm (15 in) inside diameter, except in extreme conditions where the Department may approve a pipe with a 300 mm (12 in) inside diameter.
- Have structural material and gauge adequate to withstand the load from anticipated vehicular traffic across the driveway.
- Have tapered or flared pipe end sections, instead of head walls, within the highway clear zone defined by the Department. Pipe end sections shall meet current Department design policy in NYSDOT Engineering Instructions, Engineering Bulletins, and *Highway Design Manual* Chapter 10.
- Have a length determined as the sum of the width of the driveway and any driveway median measured along the ditch center line and the length needed to accommodate the side slope from the driveway surface to the top of the pipe.
5A.4.5.2 Curbing

Existing curbing may be saw cut to provide a driveway opening conforming to Figures 5A-2 through 5A-5. (Figures available at the following URL: http://www.dot.state.ny.us/traffic/oper/tehspermit.html and click on "Driveway Policy and Standards"). Where drainage is carried along the curb, the driveway profile should be constructed with a short upgrade beyond the highway edge of pavement to prevent highway runoff from spilling onto private property. Where a short upgrade is not practical for residential and minor commercial driveways, a dropped curb, as shown on Figure 5A-3 (Figures available at the following URL: http://www.dot.state.ny.us/traffic/oper/tehspermit.html and click on "Driveway Policy and Standards"), should be considered to divert a portion of the runoff being carried along the curb. Grate inlets and slotted inlets (pipe interceptor drains) to a stormwater system may also be considered.

Where an existing curb opening is no longer needed for access, new curbing, matching the adjacent curbing, should be installed.

5A.4.5.3 Drainage for Driveways With Nonconforming Profiles

Driveways with a continuous down grade from the highway may channel stormwater runoff from the highway onto private lands. Where profile adjustments are not practical, consideration should be given to providing gutter sections with grate inlets or slotted inlets (pipe interceptor drains) to a stormwater system.

Driveways with a continuous down grade to the highway may channel stormwater runoff from the private lands onto the highway. Where profile adjustments are not practical, consideration should be given to grate inlets or slotted inlets (pipe interceptor drains) to a stormwater system. A pipe with a top opening is impractical in dirt or gravel driveways or where debris may clog the opening or the pipe.

5A.4.5.4 Highway Work Permits

Highway work permits for entrances to State Highways are subject to the following conditions and limitations.

Ditches, gutters, and/or pipes on private property shall not drain into the highway drainage system unless expressly approved by the Department. Under no circumstances shall existing highway ditches or gutters be filled by the permittee without adequate provision for alternate drainage.
5A.4.6 Sidewalks, Walkways and Stairways

All sidewalks, walkways, and stairways shall be constructed consistent with NYSDOT Highway Design Manual Chapter 18. Whenever a sidewalk or other pedestrian facility that intended to be used by the public is constructed, altered, added to, or restored, access for persons with disabilities shall be provided in accordance with the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.

Sidewalk Requirements:

- Sidewalk cross slope shall not exceed 2% (0.25 in/ft).
- Sidewalk grade shall not exceed the grade of the adjacent parallel highway.
- Ramped sidewalk sections across the driveway opening shall not be steeper than 8.3% (1 in/ft), unless it is technically infeasible due to terrain or other site constraints.
- Where sidewalks are provided to serve the public, curb ramps with detectable warnings shall be provided where pedestrian access routes cross curbs. Refer to the NYSDOT Standard Sheets for sidewalk curb ramp and detectable warning details.

Sidewalk Guidelines:

- Where a sidewalk is located close to the curbline and the driveway opening is a taper-type (see Figure 5A-3. Figures available at the following URL: http://www.dot.state.ny.us/traffic/oper/tehspermit.html and click on "Driveway Policy and Standards") or the curb drops at the sidewalk, the sidewalk should be warped to conform to the driveway profile provided the sidewalk will meet the above requirements. This may depress one or both edges of the sidewalk across the driveway.
- It may be necessary to discontinue the sidewalk across the driveway and construct a curb with curb ramps along each driveway edge or to provide convenient alternative access for persons with disabilities.
- In urban areas, it is aesthetically desirable for the sidewalk to have a profile that is as consistent as practicable.
5A.5 RESIDENTIAL DRIVEWAYS AND FIELD ENTRANCES

For highway work permits, complete the PERM 33 and the Residential Driveway Form included at the end of this policy.
State of New York
Department of Transportation

(Revised 11/03)

Residential Driveway Form
**INSTRUCTIONS** - This form is for residential driveway applicants only. This form is to be submitted with the PERM 33 *Highway Work Permit Application*. Refer to the New York State *Policy and Standards for the Design of Entrances to State Highways* (i.e., The Driveway Design Policy) for copies of the PERM 33 and for additional guidance and requirements. Complete the white sections of this form.

**HELP** - Contact the NYSDOT Resident Engineer listed on the Department’s Internet home page [http://www.dot.state.ny.us/reg/regmenu.html](http://www.dot.state.ny.us/reg/regmenu.html). The address and phone number are also listed in the Government Listings (blue pages) of your local phone book (typically under State Offices, Transportation Department of, Transportation Maintenance).

**COPIES** - The Driveway Design Policy is available from the New York State Department of Transportation online at [http://www.dot.state.ny.us/](http://www.dot.state.ny.us/) or from the Plans Sales Office at (518) 457-2124.
<table>
<thead>
<tr>
<th>#</th>
<th>Requirements and Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Sketch of Driveway Site</strong> - A sketch with the following items should be completed on a copy of a tax map or site map and stapled to this form. If a tax map or site map is not available, place a sketch showing the items below on the following page. Please clearly label the items on the sketch and use a ruler or straight edge (The sketch must be clearly legible).</td>
</tr>
<tr>
<td></td>
<td>• North directional arrow.</td>
</tr>
</tbody>
</table>
|   | • Existing location and dimensions of the following items **along the frontage of the applicant's property**:
|   |   ▶ Width of the outside highway travel lane. |
|   |   ▶ Width of the highway shoulder. |
|   |   ▶ If the applicant’s property is a corner lot, include the distance from the edge of proposed driveway to the edge of pavement of the intersecting roadway. |
|   |   ▶ Curbs. |
|   |   ▶ Highway drainage (culverts, inlets, and ditches). |
|   |   ▶ Guide rail. |
|   |   ▶ Sidewalk. |
|   |   ▶ Utility poles and boxes. |
|   |   ▶ Traffic signs. |
|   |   ▶ Traffic signals. |
|   |   ▶ Property lines. |
|   | • Existing and proposed buildings on the applicant's property. |
|   | • Direction of surface water flow on applicant's property (i.e., direction that the rain water flows across the property). |
|   | • Centerline of the proposed driveway(s). Refer to Figure 5A-1 of the Driveway Design Policy for restrictions on driveway locations. |

The Department may require additional information as site-specific conditions warrant.

The sketch need not be to scale if dimensions are provided. The dimensions should be as follows:

- Dimensions less than 30 m (100 ft) should be to the nearest 0.3 m (1 ft).
- Dimensions of 30 m (100 ft) to 100 m (300 ft) should be to the nearest 3 m (10 ft).
- Distances greater than 100 m (300 ft) need not be measured and can be noted as “>100 m (300 ft)” on the sketch.
- U.S. customary (inches and feet) or metric units may be used.
Sketch of Driveway Site
<table>
<thead>
<tr>
<th>#</th>
<th>Requirements and Questions</th>
<th>✓ or reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td><strong>Location</strong> - Street address and the distance and direction from nearest cross street or State Highway Reference Marker (include number). Examples: 409 NY Route 7, Princetown, NY, 300 feet west of Kelly Station Road. 512 NY Route 20, Duanesburg, NY, 1000 feet east of Reference Marker 20 1619 1064.</td>
<td></td>
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<tr>
<td>3.</td>
<td><strong>Underground Utilities</strong> - Have the location flagged for underground utilities before construction. Up-State NY, call 1 (800) 962-7962. NYC and Long Island, call 1 (800) 272-4480. Date flagged (month/day/year) = <em><strong>/</strong></em>/___</td>
<td></td>
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<tr>
<td>4.</td>
<td><strong>Select Driveway Width</strong> - Select a preferred driveway width ranging from 9 ft to 24 ft for driveways 50 ft or less in length and 9 ft to 12 ft for driveways longer than 50 ft. ______ ft.</td>
<td></td>
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<tr>
<td>5.</td>
<td><strong>Maximum Grade</strong> - In urban areas, the maximum grade is 8% (1 inch per foot). In rural areas, the maximum grade is 12% (1.5 inches per foot). Maximum grade ________</td>
<td></td>
</tr>
</tbody>
</table>
| 6. | **Driveway Materials** -  
• Existing driveway material =  
• Proposed driveway material within 10 ft of traveled-way (Asphalt or Concrete) = | |
| 7. | **Drainage** - If the driveway will cross a ditch, a culvert with a tapered/flared end section is needed. (Culvert head walls may be permitted only if there is a run of existing guide rail along the highway that would prevent an errant vehicle from being abruptly stopped by the head wall.)  
• Inside diameter (15 in minimum) =  
• Material = | |
| 8. | **Curb** - Answer “No” if the highway is not curbed. Dropped curb is a 1 inch high curb running across the driveway opening. This helps keep storm water from flowing from the highway to a driveway with a downhill slope away from the highway. Will dropped curb be used? (Yes or No) | |
| 9. | **Corner Angle** - Angle measured from the highway turning into the driveway. 90° is preferred. Angle must be between 60° and 120°. | |
| 10. | **Layout Method** - Select the layout method using the table below. Attached are the layout instructions. Entrance Type (Radius or Taper) = | |

### Driveway Entrance Type Selection

<table>
<thead>
<tr>
<th>Entrance Type</th>
<th>Conditions for Use</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Corner Angle*</td>
<td>Travel Lane and Paved Shoulder Width</td>
</tr>
<tr>
<td>Radius Type</td>
<td>60 - 120</td>
<td>Any</td>
</tr>
<tr>
<td>Taper Type</td>
<td>80 - 100</td>
<td>16 ft or greater</td>
</tr>
</tbody>
</table>

* The corner angle is the angle between the driveway centerline and the highway centerline.  
** Unless otherwise directed by the Department.

**CONSTRUCTION PLANS & PROFILES** - The following pages are layout instructions for you or your driveway contractor.
NOTES:
1. IF SIDEWALK IS PRESENT, PAVE DRIVE A MINIMUM OF 2' BEYOND SIDEWALK. SIDEWALKS SHALL HAVE A 6" MINIMUM THICKNESS OF PORTLAND CEMENT CONCRETE.
2. SIDEWALK RAMPS MUST HAVE A MAXIMUM SLOPE OF 1 IN/FT EXCEPT WHERE THE HIGHWAY GRADE MAKES THIS IMPractical. IN SUCH CASES, USE A 15' RAMP LENGTH.
3. PLACE FABRIC REINFORCEMENT 3" BELOW TOP SURFACE OF PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS.
4. NEW CURB SHALL NOT BE CONSTRUCTED. DETAIL SHOWS HOW TO CONSTRUCT A DRIVEWAY OPENING WHERE CURB IS PRESENT. IF CURB IS NOT PRESENT, OMIT THE CURB TRANSITION.
5. PAVED SHOULDER WIDTH MAY BE DESIGNATED AS A PARKING LANE, BIKE LANE, OR CURB OFFSET.
6. ROUND SHARP CHANGES IN GRADE TO PREVENT VEHICLES FROM BOTTOMING OUT.

METHOD OF LAYOUT

STEP 1. LOCATE AN OFFSET LINE 11' FROM THE INSIDE EDGE OF THE OUTERMOST TRAVEL LANE.

STEP 2. Scribe a line parallel to the offset line, offset a distance "R" equal to 16' for driveways 13' or less in width or 13' (OR driveways 14' or wider).

STEP 3. Scribe a line parallel to the edge of driveway (near side), offset "R" FEET.


STEP 5. FROM THE CENTER POINT, Scribe an arc with radius "R", which is tangent to both the offset line and the edge of driveway.

STEP 6. FIND THE DRIVEWAY OPENING LIMIT POINT WHERE THE ARC INTERSECTS THE HIGHWAY EDGE OF PAVEMENT.

STEP 7. REPEAT STEPS 1 - 6 FOR THE OTHER SIDE OF THE DRIVEWAY OPENING.
NOTES:

1. IF SIDEWALK IS PRESENT, PAVE DRIVE A MINIMUM OF 2' BEYOND SIDEWALK. SIDEWALKS SHALL HAVE A 6" MINIMUM THICKNESS OF PORTLAND CEMENT CONCRETE.

2. SIDEWALK RAMPS MUST HAVE A MAXIMUM SLOPE OF 1 1/2 ft/ft EXCEPT WHERE THE HIGHWAY GRADE MAKES THIS IMPRACTICAL. IN SUCH CASES, USE A 15' RAMP LENGTH.

3. PLACE WIRE FABRIC REINFORCEMENT 3" BELOW TOP SURFACE OF PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS.

4. NEW CURB SHALL NOT BE CONSTRUCTED. DETAIL SHOWS HOW TO CONSTRUCT A DRIVEWAY OPENING WHERE CURB IS PRESENT. IF CURB IS NOT PRESENT, OMIT THE CURB TRANSITION.

5. PAVED SHOULD WIDTH MAY BE DESIGNATED AS A PARKING LANE, BIKE LANE, OR CURB OFFSET.

6. ROUND SHARP CHANGES IN GRADE TO PREVENT VEHICLES FROM BOTTOMING OUT.
NOTES:

1. PAVE DRIVE A MINIMUM OF 2' BEYOND SIDEWALK. SIDEWALKS SHALL HAVE A 6" MINIMUM THICKNESS IF PORTLAND CEMENT CONCRETE.

2. SIDEWALK RAMPS MUST HAVE A MAXIMUM SLOPE OF 1 in/ft EXCEPT WHERE THE HIGHWAY GRADE MAKES THIS IMPractical. IN SUCH CASES, USE A 15' RAMp LENGTH.

3. PLACE WIRE FABRIC REINFORCEMENT 3" BELOW THE TOP SURFACE OF PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS.

4. NEW CURB SHALL NOT BE CONSTRUCTED. DETAIL SHOWS HOW TO CONSTRUCT A DRIVEWAY OPENING WHERE CURB IS PRESENT. IF CURB IS NOT PRESENT, OMIT THE TIP-UP SECTION AND CURB TRANSITION.

5. PAVED SHOULDER WIDTH MAY BE DESIGNATED AS A PARKING LANE, BIKE LANE, OR CURB OFFSET

6. ROUND SHARP CHANGES IN GRADE TO PREVENT VEHICLES FROM BOTTOMING OUT.
NOTES:
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TAPER LAYOUT
NO SCALE

TAPER METHOD OF LAYOUT
TAPERS ARE NOT RECOMMENDED FOR DRIVEWAYS WITH CORNER ANGLES LESS THAN 80 DEGREES OR GREATER THAN 100 DEGREES. TAPERS ARE NOT RECOMMENDED FOR DRIVEWAYS WITH AN OUTER TRAVEL LANE + PAVED SHOULDER WIDTH OF LESS THAN 16'. REGARDLESS OF THE CORNER ANGLE OR COMBINED LANE AND PAVED SHOULDER WIDTH, TAPERS CAN BE USED IF THE DRIVEWAY ENTRANCE WIDTH WILL ACCOMMODATE THE TURNING MOVEMENTS OF A FULL-SIZED PICKUP TRUCK OR SUV WITHOUT ENCROACHING INTO OTHER TRAVEL LANES OR TRAVELING OFF THE EDGE OF PAVEMENT.

STEP 1. SCRIBE A LINE (LAYOUT LINE) OFFSET THE 28' 'LAYOUT DISTANCE' FROM THE INSIDE EDGE OF THE OUTERMOST TRAVEL LANE.
STEP 2. LOCATE THE TAPER LAYOUT POINT, WHICH IS AT THE INTERSECTION OF THE EDGE OF DRIVEWAY AND THE LAYOUT LINE.
STEP 3. SCRIBE A 1/2 TAPER FROM THE LAYOUT POINT TO THE EDGE OF PAVEMENT.
STEP 4. FIND THE DRIVEWAY OPENING LIMIT POINT WHICH IS WHERE THE TAPER INTERSECTS THE EDGE OF PAVEMENT.
STEP 5. REPEAT STEPS 1 - 4 FOR THE OTHER SIDE OF THE DRIVEWAY OPENING.