

Township of Forward  
Butler County  
207 Ash Stop Road  
Evans City, PA 16033  
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CHAPTER 21  
CODE OF ORDINANCES  
STREETS AND ACCESS MANAGEMENT  
ORDINANCE

June 20, 2006

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**ORDINANCE NO. 2006-4**

**AN ORDINANCE OF THE TOWNSHIP OF FORWARD, BUTLER COUNTY, PENNSYLVANIA, AMENDING AND SUPERSEDING CHAPTER 21 OF THE CODE OF ORDINANCES OF THE TOWNSHIP OF FORWARD RELATING TO STREETS AND ACCESS MANAGEMENT.**

**WHEREAS**, the Township of Forward is empowered by the Second Class Township Code to adopt ordinances relating to the health and safety of the Township residents; and

**WHEREAS**, the safe and efficient travel within Forward Township is a proper subject for regulations.

**NOW, THEREFORE**, be it ordained and enacted and it is hereby ordained and enacted by the Township of Forward, Butler County, Pennsylvania, as follows:

**SECTION 1:** Chapter 21 of the Code of Ordinances of the Township of Forward, Butler County, Pennsylvania, is hereby amended and superseded in its entirety, as referenced specifically in Chapter 21, Code of Ordinances, Streets and Access Management Ordinance, dated June 20, 2006:

**CHAPTER 21  
STREETS AND ACCESS MANAGEMENT  
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**SECTION 1:** Chapter 21, Part 1 of the Code of Ordinances of the Township of Forward is amended and superseded to read as follows:

**§ 101. Purpose** This section is intended to promote safe and efficient travel within Forward Township by limiting the number of conflict points, providing safe spacing standards between driveways, encouraging shared access between abutting properties, and ensuring safe access by emergency vehicles. In addition, this section is intended to define vehicular access to land development in a manner that preserves the safety and efficiency of the transportation system. Access management encompasses the careful planning of the location, design and operation of driveways, median openings, interchanges and street connections. If access systems are not properly designed, the primary transportation network, including arterials and highways, will be unable to accommodate the access needs of development and retain their primary transportation function.

**§ 102. Applicability** This section shall apply to all arterials and selected collectors within Forward Township as may be identified in functional classification table, and to all properties which abut these roadways.

**§ 103. Definitions**

**85th Percentile Speed** – The speed, in miles per hour, which is exceeded by only 15 percent of the drivers traveling on a section of highway.

**95th Percentile Queue Length** - The queue exceeded at some point during 5% of the signal cycles.

**Access** – A driveway, street or other means of passage of vehicles between the highway and abutting property, including acceleration and deceleration lanes and such drainage structures as may be necessary for proper construction and maintenance thereof. [67 PA Code Chapter 441]

**Auxiliary Lane** – The portion of the roadway adjoining the through lane that is used for speed change, turning, storage for turning, deceleration, acceleration, weaving and other purposes supplementary to through traffic movement.

**Average Daily Traffic (ADT)** – The total volume of traffic during a number of whole days (more than one day) and less than one year divided by the number of days in that period.

**Design speed** – The maximum safe speed that can be maintained over a section of roadway when conditions are so favorable that the design features of the road govern.

Driveway – Every entrance or exit used by vehicular traffic to or from properties abutting a highway. The term includes proposed streets, lanes, alleys, courts and ways. [67 PA Code Chapter 441]

Egress – The exit of vehicular traffic from abutting properties to a street.

Functional area – The area beyond the physical intersection of two controlled access facilities that comprises decision and maneuver distance, and the required vehicle storage lengths.

Functional area – The area beyond the physical intersection of two controlled access facilities that comprises decision and maneuver distance, and the required vehicle storage lengths.

High Volume Driveway – A driveway used or expected to be used by more than 1,500 vehicles per day. [67 PA Code Chapter 441]

Highways, roads or streets – any highways, roads or streets identified on the legally adopted municipal street or highway plan or the official map which carry vehicular traffic, together with all necessary appurtenances, including bridges, rights-of-way and traffic control improvements. The term shall not include the interstate highway system.

Ingress – The entrance of vehicular traffic to abutting properties from a street.

Interchange – A grade separated system of access to and from highways that includes directional ramps for access to and from the crossroads.

Internal Trips – Site generated trips which occur between two or more land uses on the subject site without exiting onto the intersecting street.

Level of Service (LOS) – A qualitative measure describing the operational conditions within a section of roadway or at an intersection that includes factors such as speed, travel time, ability to maneuver, traffic interruptions, delay and driver comfort. Level of service is described as a letter grade system (similar to a school grading system) where delay (in seconds) is equivalent to a certain letter grade from A through F.

Local Road – Every public highway other than a State highway. The term includes existing streets, lanes, alleys, courts and ways. [67 PA Code Chapter 441]

Low Volume Driveway – A driveway used or expected to be used by more than 25 but less than 750 vehicles per day. [67 PA Code Chapter 441]

Medium Volume Driveway – A driveway used or expected to be used by more than 750 but less than 1,500 vehicles per day. [67 PA Code Chapter 441]

Minimum Use Driveway – A residential or other driveway which is used or expected to be used by not more than 25 vehicles per day. [67 PA Code Chapter 441]

Offsite Improvements – Those public capital improvements which are not onsite improvements and that serve the needs of more than one development.

Onsite Improvements – All improvements constructed on the applicant's property, or the improvements constructed on the property abutting the applicant's property necessary for ingress and egress to the applicant's property, and required to be constructed by the applicant pursuant to any municipal ordinance, including, but not limited to, the municipal code, subdivision and land development ordinance, planned residential development regulations and zoning ordinance.

Outparcel – A lot that is adjacent to the roadway that interrupts the frontage of another lot.

Pre-existing Driveway – Permitted driveways in place at the time of the adoption of this ordinance that do not conform to the standards herein.

Right-of-way – An area of land, measured from the centerline of the cartway that can be used by the public for travel and the location of utilities.

Right-of-way Preservation – The acquisition of an area of land, through dedication or easement, needed to accommodate the future widening of the roadway.

Road Improvement – The construction, enlargement, expansion or improvement of public highways, roads or streets.

Setbacks – The minimum distance from the street right-of-way line to the lot line that establishes the area within which no structure can be erected.

Signal Progression – The timing of a series of traffic signals to provide a progressive movement of traffic at a planned rate of speed through the signalized intersections without stopping.

Stopping Sight Distance – The distance required by a driver traveling at a given speed to stop the vehicle after an object on the roadway becomes visible to the driver.

Street – Includes street, avenue, boulevard, road, highway, freeway, parkway, lane, alley, viaduct, and any other ways used or intended to be used by vehicular traffic or pedestrians whether private or public.

Storage Length – Lane footage needed for a right or left turn lane to store the maximum number of vehicles likely to accumulate during a peak period of travel.

Taper – The widening of the roadway to allow the redirection or transition of vehicles into or around an auxiliary lane.

Township Road – Any road or street adopted or maintained by the Township of Forward and includes the full width of the Township's right of way, together with all ditches, water courses and facilities maintained by the Township therein.

Trip – A one directional vehicular trip to or from a site.

Trip Generation – The total number of vehicular trips going to and from a particular land use on a specific site during a specific time period.

Ultimate right-of-way – An area of land beyond the legal or dedicated right-of-way needed to accommodate future widening of the roadway, measured from the centerline.

## **§ 104. Driveways**

### 1. Number of Driveways

- a) Only one access shall be permitted for a property.
- b) An additional access or accesses shall be permitted if the applicant demonstrates that an additional access or additional accesses are necessary to accommodate traffic to and from the site and it can be achieved in a safe and efficient manner.
- c) Forward Township shall restrict access to right turn only ingress and egress or to another state maintained road or local road if safe and efficient movements cannot be accommodated.
- d) For a property that abuts two or more roadways, Forward Township may restrict access to only that roadway which can more safely and efficiently accommodate traffic.
- e) If Forward Township anticipates that a property may be subdivided and that the subdivision may result in an unacceptable number or arrangement of driveways, or both, the Forward Township shall require the property owner to enter into an access covenant to restrict future access.

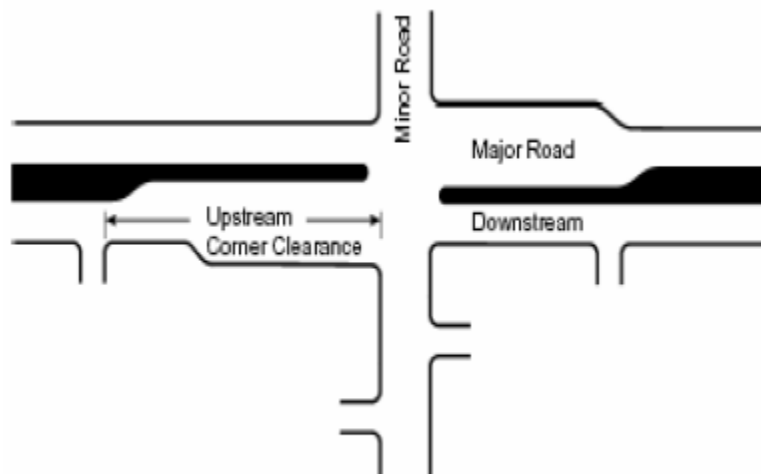
### 2. Corner Clearance

- a) Corner clearance shall meet the following driveway spacing standards that are desirable for arterial and major collector roads:
  - i) Principal arterial: 600 feet
  - ii) Minor arterial: 400 feet
  - iii) Major Collector: 200 feet
- b) Access shall be provided to the roadway where corner clearance requirements can be achieved.
- c) If the minimum driveway spacing standards cannot be achieved due to constraints, the following shall apply in all cases:

- i) There shall be a minimum ten foot tangent distance between the end of the intersecting roadway radius and the beginning radius of a permitted driveway.
- ii) The distance from the nearest edge of cartway of an intersecting roadway to the beginning radius of a permitted driveway shall be a minimum of 30 feet.

d) If no other reasonable access to the property is available, and no reasonable alternative is identified, the driveway shall be located the farthest possible distance from the intersecting roadway. In such cases, directional connections (i.e., right in/right out only, right in only or right out only) may be required.

e) Forward Township shall require restrictions at the driveway if the Township Engineer determines that the location of the driveway and particular ingress or egress movements will create safety or operational problems.



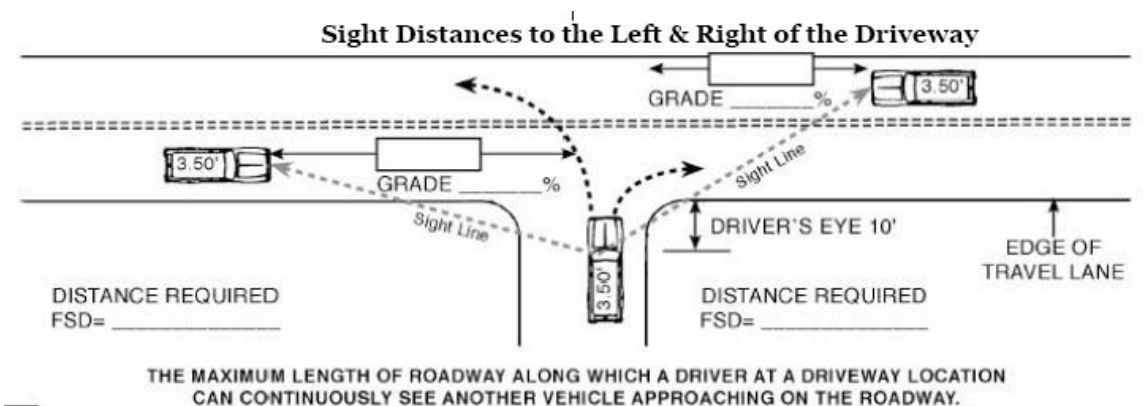
**Upstream Corner Clearance**

### 3. Safe Sight Distance

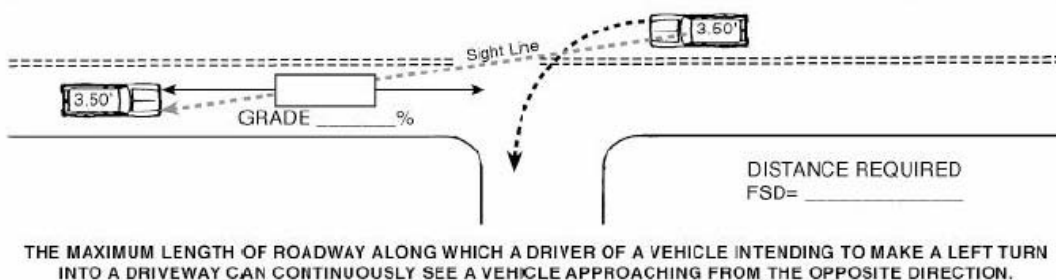
a) Safe sight distance shall be available for all permitted turning movements at all driveway intersections.

b) PennDOT's Pub. 441 and Pub. 282 for driveways or Pub. 70 for local roads shall be referenced to determine minimum driveway and roadway intersection safe sight distance requirements.

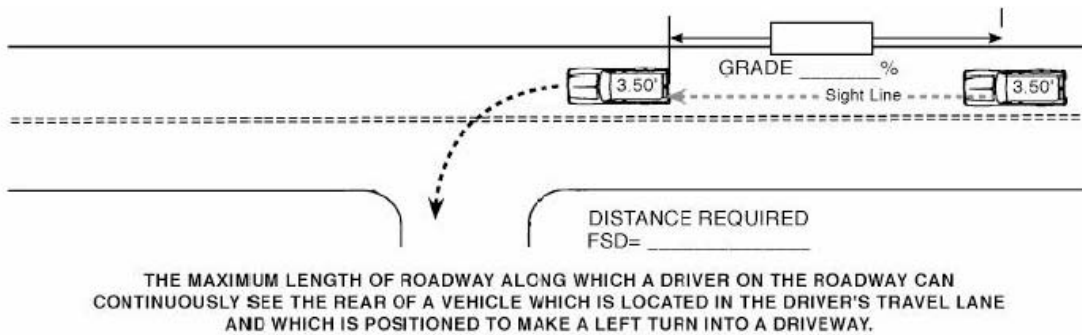
c) All driveways and intersecting roadways shall be designed and located so that the sight distance is optimized to the degree possible without jeopardizing other requirements such as intersection spacing and at least minimum sight distance requirements are met.



**Sight Distance to an Approaching Vehicle From a Vehicle Turning Left into the Driveway**



**Sight Distance Approaching the Rear of a Left Turning Vehicle**



4. Driveway Channelization

a) For high and medium volume driveways, channelization islands and medians shall be used to separate conflicting traffic movements into specified lanes to facilitate orderly movements for vehicles and pedestrians.

b) Where it is found to be necessary to restrict particular turning movements at a driveway, due to the potential disruption to the orderly flow of traffic or a result of sight distance constraints, Forward Township may require a raised channelization island.

c) Raised channelization islands shall be designed with criteria consistent with the latest AASHTO publication entitled A Policy on Geometric Design of Highways and Streets.

5. Joint and Cross Access

a) The Township may require a joint driveway in order to achieve the following driveway spacing standards that are desirable for arterial and major collector roads:

i) Principal arterial: 600 feet

ii) Minor arterial: 400 feet

iii) Major Collector: 200 feet

b) Adjacent non residential properties shall provide a joint or cross access driveway to allow circulation between sites wherever feasible along roadways classified as major collectors or arterials in accord with the functional classification contained in the municipal comprehensive plan. The following shall apply to joint and cross access driveways:

i) The driveway shall have a design speed of 10 mph and have sufficient width to accommodate two-way traffic including the largest vehicle expected to frequently access the properties.

ii) A circulation plan that may include coordinated or shared parking shall be required.

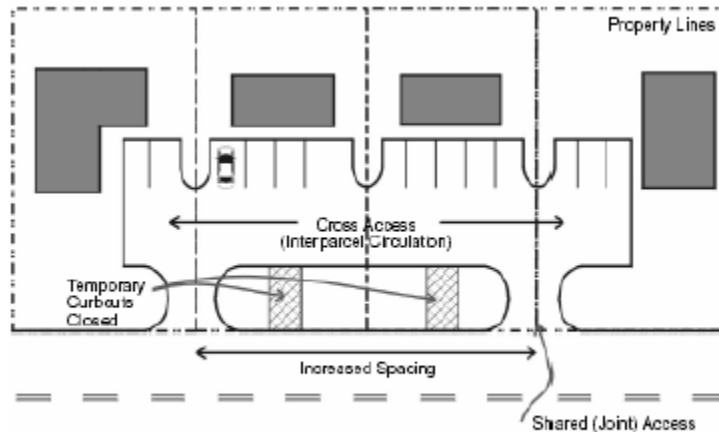
iii) Features shall be included in the design to make it visually obvious that abutting properties shall be tied in to provide cross access.

c) The property owners along a joint or cross access driveway shall:

i) Record an easement with the deed allowing cross access to and from other properties served by the driveway.

ii) Record an agreement with Forward Township so that future access rights along the driveway shall be granted at the discretion of the Township and the design shall be approved by the municipal engineer.

iii) Record a joint agreement with the deed defining the maintenance responsibilities of each of the property owners located along the driveway.



### **Joint Driveways and Cross Access**

#### 6. Access to Outparcels

a) For commercial and office developments under the same ownership and consolidated for the purposes of development or phased developments comprised of more than one building site, Forward Township shall require that the development be served by an internal road that is separated from the main roadway.

b) All access to outparcels shall be internalized using the internal roadway.

c) The driveways for outparcels shall be designed to allow safe and efficient ingress and egress movements from the internal road.

d) The internal circulation roads shall be designed to avoid excessive queuing across parking aisles.

e) The design of the internal road shall be in accordance with all other sections of this ordinance.

f) All necessary easements and agreements required under Section A.6.c shall be met.

g) Forward Township may require an access covenant to restrict an outparcel to internal access only.

### **§ 105. Driveway Design Elements**

#### 1. Driveway Throat Length

a) For minimum use driveways, the throat length shall be a minimum of 25 feet.

b) For low volume driveways, the throat length shall be a minimum of 50 feet or as determined by queuing analysis.

c) For medium volume driveways, the throat length shall be a minimum of 120 feet or as determined by a queuing analysis.

d) For high volume driveways, the throat length shall be a minimum of 150 feet or as determined by a queuing analysis.

## 2. Driveway Throat Width

a) For driveways without curb:

i) A minimum use driveway shall have a minimum width of 10 feet.

ii) Low and medium volume driveways shall have a minimum width of ten feet for one-way operation and a minimum width of 20 feet for two-way operation.

iii) The design of high volume driveways shall be based on analyses to determine the number of required lanes.

b) For driveways with curb, two feet should be added to the widths contained in Section a.i and a.ii.

c) The municipality may require additional driveway width to provide turning lanes for adequate traffic flow and safety.

d) The municipality may require that the driveway design include a median to control turning movements. Where medians are required or permitted, the minimum width of the median shall be four feet to provide adequate clearance for signs.

## 3. Driveway Radius

a) The following criteria shall apply to driveway radii:

i) For minimum use driveways, the radii shall be a minimum of 15 feet.

ii) For low volume driveways, the radii shall be a minimum of 15 feet uncurbed and 25 feet curbed.

iii) For medium volume driveways, the radii shall be a minimum of 15 feet uncurbed and 25 feet curbed.

iv) For high volume driveways, the design should be reviewed by the municipal engineer on municipal roadways and PennDOT on state maintained roadways.

b) For all driveways, the radii shall be designed to accommodate the largest vehicle expected to frequently use the driveway.

c) Except for joint driveways, no portion of a driveway radius may be located on or along the frontage an adjacent property.

#### 4. Driveway Profile

a) Driveway grade requirements where curb is not present on the intersecting street:

i) Shoulder slopes vary from four percent to six percent. When shoulders are present, the existing shoulder slope shall be maintained across the full shoulder width.

ii) The change in grade between the crossslope of the connecting roadway or shoulder and the driveway shall not exceed eight percent.

iii) The driveway grade shall not exceed eight percent within ten feet of the edge of travel lane for minimum use driveways and within 40 feet for low, medium and high volume driveways.

iv) A 40-foot minimum vertical curve should be used for a high volume driveway.

b) Driveway grade requirements where curbs and sidewalks are present:

i) The difference between the cross slope of the roadway and the grade of the driveway apron may not exceed eight percent.

ii) The driveway grade shall not exceed eight percent within ten feet of the edge of travel lane for minimum use driveways and within 40 feet for low, medium and high volume driveways.

iii) If a planted area exists between the sidewalk and curb, the following shall apply:

(1) The grade of the planted area shall not exceed eight percent.

(2) If the driveway grade would exceed eight percent in the area between the curb and the sidewalk, the outer edge (street side) of the sidewalk may be depressed to enable the driveway grade to stay within eight percent. A maximum sidewalk cross slope of eight percent must be maintained.

(3) If the sidewalk cross slope exceeds two percent, the entire sidewalk may be depressed. The longitudinal grade of the sidewalk may not exceed six percent.

c) Although site conditions may not allow strict adherence to these guidelines in this ordinance, every effort should be made to design and construct the safest and most efficient access onto the municipal or state roadway.

#### **§ 106. Prohibitions Relative to Drainage**

1. No person shall design, construct or maintain any driveway or artificial drainage facility which shall permit water or other liquid to be deposited upon or discharged over a township road.
2. No person shall design, construct or maintain any driveway in any manner which will block, impede or restrict the flow of culverts, ditches or other drainage facilities relating to a township road.

#### **§ 107. Permits**

1. No person shall construct a new driveway or install or replace a culvert pipe under an existing driveway until they have received a permit from the township.
2. Application for the permit must be made in writing on the forms provided by the township.
3. The application shall describe the intended construction in accordance with the standards set forth in this Part relating to depth, slope, size and location of any culvert pipe.
4. The Board of Supervisors or its duly appointed agent may inspect the site of the driveway before issuing the permit.
5. Upon completion of the work authorized by the permit, the applicant shall give written notice thereof to the Township.
6. A permit shall be valid for a period of three months.

#### **§ 108. Permit Standards for Drainage Facilities**

1. Where it is necessary to install or replace a culvert under a driveway to keep the drainage channel open, it shall be the responsibility of the permit holder to do so in

accordance with these standards. The culvert shall be at least 12 inches in diameter and shall be large enough to carry the normal flow of the drainage channel. The culvert shall have a minimum length of 20 feet.

2. The culvert shall be of sufficient strength to bear the weight of the heaviest vehicle normally using the driveway and shall be A.S.T.M. (American Society for Testing Material) standard drainage pipe or its equivalent. Equivalency of substitutes is to be approved in writing by the Supervisors or their duly appointed agent prior to installation.
3. A minimum fall of  $\frac{3}{4}$  inch per foot shall be maintained from the edge of the pavement or cartway of the township road to the top of the culvert cover.

**§ 109. Permit Fees** Access to and occupancy of highways by driveways and local roads requires a permit. No driveway, local road or drainage facility or structure shall be constructed or altered within Township road right-of-way and no drainage facility of the Township may be altered or connected onto without first obtaining a permit from the Township. There is hereby imposed a fee for the issuance of the permits required in this Part, which shall be fixed from time to time by resolution of the Board of Supervisors and paid upon the application for permit. Said fee shall be retained by the Township for its general use.

**§ 110. Enforcement and Penalties**

1. Any person required by this part to apply for and obtain a permit who fails to do so shall be given seven (7) days written notice to do so by posting a notice at the site of violation and by mailing a copy to the registered landowner for real estate tax purposes by certified mail, return receipt requested, allowing an additional seven (7) days to obtain said permit. If at the expiration of seven (7) days such permit is not obtained, upon conviction thereof before a District Justice, the landowner or contractor or both shall be sentenced to pay a fine of not more than \$300.00, and in default of the payment of fine or costs, to be imprisoned in the Butler County correctional facility for a period of not more than thirty (30) days.
2. In addition to the fine prescribed in this Section, if the condition which required the application for and receipt of the permit required under this part is not corrected within thirty (30) days of the notice to the landowner as hereinbefore provided, then the township supervisors or their dully authorized agents may remove the offending condition and repair, maintain or reconstruct the drainage facilities or driveway in accordance with this Part and charge the cost of restoring the same to the landowner.

**§ 111. PennDOT Standards Adopted** Title 67, Chapter 441 of the Pennsylvania Code, as amended, is hereby incorporated herein by reference, except where the context thereof would be

reasonably substitute the Township for the Pennsylvania Department of Transportation; and procedure for appeals from determinations of the Township which shall be governed by applicable law.

**SECTION 2:** This Ordinance is intended to supplement and be a continuation of prior regulations not as a repeal thereof.

**SECTION 3:** This Ordinance shall be effective in five (5) days.

Ordained and enacted this 20<sup>th</sup> day of June, 2006.

TOWNSHIP OF FORWARD

By: Duan N. Jankovic  
Chairman

ATTEST;

Mary L. McElhinny  
Secretary