FIRE MARSHAL'S OFFICE
CITY OF BRYAN

Gates, Barricades, and Perimeter Fencing Submittal Requirements

Introduction

Thank you for your role in supporting safe development and reliable emergency access within the City of Bryan. Fire apparatus roads, fire lanes, gates, and barricades are critical to ensuring emergency responders have unobstructed access during fire, medical, and other emergency incidents in accordance with adopted codes.

This Fire Apparatus Roads, Gates & Barricades Submittal Guide is intended to assist design professionals, engineers, and contractors in navigating the City of Bryan's plan review and permitting process. It outlines submittal requirements, coordination expectations, operational criteria, and inspection standards necessary for compliance with the 2021 International Fire Code, City of Bryan adopted amendments, and applicable NFPA standards.

Complete and coordinated submittals help reduce review time, minimize delays, and support timely project approval. We appreciate your commitment to code-compliant design and look forward to working collaboratively to promote long-term community safety.

Sincerely,

Bryan Fire Marshal's Office

414 Lawrence St, Bryan Tx, 77801
979.209.5960 Ext. 1
Bryantx.gov/fire

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1 Code Adoption & Amendments

The 2021 edition of the International Fire Code, including appendix B, C, D, E, F, and G as published by the International Code Council, a copy of which is on file with the city secretary and the fire marshal, is adopted to the same extent as though such code were copied at length herein, subject however to the omissions, additions, supplements, and amendments contained in this article. City of Bryan Municode

NFPA ADOPTIONS

2021 IFC Chapter 80 should be consulted to find which NFPA edition is enforced in the City of Bryan.

2 Permit Fees

A construction permit is required for the installation of gates or approved barricades across fire apparatus access roads within the City of Bryan in accordance with the 2021 International Fire Code and City of Bryan adopted amendments. At this time, there is no fee associated with this specific permit.

All required submittals, plan reviews, inspections, and acceptance procedures remain applicable and must be completed in accordance with adopted codes and established Development Services processes. Applicants are encouraged to submit complete, coordinated, and accurate documentation to support an efficient review and approval process and to avoid delays in construction or Certificate of Occupancy issuance.

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The City reserves the authority to modify fee structures in the future in accordance with adopted ordinances and the adopted fee schedule.

3 Installer Qualification Requirements

Installers of automated vehicular gates located across designated fire apparatus access roads shall demonstrate competency in the installation of gate operators and assemblies in accordance with UL 325, ASTM F2200, and the 2021 International Fire Code.

Acceptable documentation demonstrating installer competency shall include one of the following:

1. **Certified Gate Automation Technician (CGAT)** credential issued by the American Fence Association; or
2. **Manufacturer certification documentation** verifying the installer has completed formal training specific to the gate operator model being installed; or
3. **Alternative documentation demonstrating installer competency**, which may include proof of formal training, documented experience with similar installations, or other evidence acceptable to the Fire Code Official.

The Fire Code Official is authorized to require submission of such documentation prior to permit approval or final acceptance inspection.

Failure to provide documentation demonstrating installer competency may result in permit hold, failed inspection, or denial of approval until compliance is verified.

4 Required Documents

- Manufacturer product data sheets for all components used in the design
    - Documentation must show compliance to:
        - UL 325
        - ASTM F2200-17

5 Drawings

The following information is required to be clearly indicated on all submitted drawings for gates or barricades installed across fire apparatus access roads. Drawings shall be complete, legible, and sufficiently detailed to demonstrate compliance with the 2021 International Fire Code, City of Bryan adopted amendments, UL 325, and ASTM F2200.Provide a dimensioned site plan showing:

Scaled Site Plan

- Location of gate(s) and/or barricades
- Fire apparatus access road width
- Driveway dimensions
- Turning radii, where applicable
- Distance to public right-of-way
- Setback from intersections
- Location of fencing and adjacent structures

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- Location of fire hydrants, FDCs, and fire lanes
- Emergency access route identification
- Location of Knox devices

Gate and Barricade Construction Details

- Gate type, swing, slide, vertical lift, pivot, or barrier arm
- Gate dimensions, width and height
- Structural support details and footing details
- Materials of construction
- Mounting and anchorage details
- Bollard or barricade specifications, if applicable

Gate Operator Documentation (Automated Gates Only)

- Manufacturer product data sheet
- Model number clearly identified
- UL 325 listing documentation
- Class of operation, Class I–IV
- Installation manual
- Power requirements
- Disconnect location

Man Gates and Egress to the Public Way

Where perimeter fencing, gates, or controlled access features prevent or restrict occupant access to the public way, the design shall include doors or man gates that comply with the egress requirements of the 2021 International Fire Code, Chapter 10, and applicable adopted building code provisions.

Vehicular gates shall not be relied upon to serve as the required means of egress unless specifically approved and demonstrated to comply with all applicable egress provisions.

6 Acceptance Testing Requirements

Fire Apparatus Roads – Gates & Barricades

Where gates or barricades are installed across required fire apparatus access roads, or where perimeter fencing or access control features affect required means of egress to the public way, acceptance testing shall be required prior to final approval.

7 Definition Reference ASTM F2200 AND UL 325

GENERAL TERMS

ACCESS CONTROL DEVICE: A keypad, card reader, radio receiver, telephone-entry system, KNOX key switch or similar device that sends an operating command to the gate operator. An access-control device is not itself the gate operator or an entrapment-protection device unless specifically listed for that function.

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ACTIVATION DEVICE: A device used to initiate gate opening, closing or stopping. Examples include key switches, push buttons, vehicle detectors, card readers and remote controls.

AUTOMATED VEHICULAR GATE: A gate intended to control vehicular access and moved by a powered gate operator. An automated vehicular gate is not intended to serve as a pedestrian-access opening.

GATE: The moving portion of a barrier that controls access through an opening in a fence, wall or other perimeter.

GATE ID: A unique plan identifier assigned to each vehicular or pedestrian gate so that its location, classification, type, operator, safety devices and details can be consistently referenced throughout the submittal.

GATE OPERATOR: The powered equipment that controls and moves a gate. The operator generally includes the motor, drive mechanism, controls and associated safety functions. The operator is separate from the physical gate and from access-control devices such as keypads and card readers.

GATE SYSTEM: The complete installation, including the gate, gate operator, controls, access-control devices, entrapment-protection devices, posts, guides, hardware and adjacent construction affecting safe operation.

GATE TYPE: The physical movement or construction configuration of the gate, such as horizontal slide, horizontal swing, vertical lift, vertical pivot, overhead pivot, horizontal bifold or barrier arm.

OPERATOR CATEGORY: The type of gate movement for which the operator is listed, such as slide, swing, vertical lift, pivot, bifold or barrier. The listed operator category must be compatible with the physical gate type.

USE CLASSIFICATION: The UL 325 classification—Class I, II, III or IV—established by the intended occupancy, users and degree of public access. Use classification is not the same as gate type.

LISTED: Equipment included in a list published by an approved testing organization and evaluated for use under specified conditions. The listing label and installation instructions identify the permitted gate type, use classification and safety-device configuration.

NRTL: A Nationally Recognized Testing Laboratory authorized to test and certify equipment to applicable product-safety standards. Examples may include UL, ETL or another approved laboratory.

MANUAL RELEASE OR MECHANICAL DISCONNECT: A mechanism that disengages or releases the powered drive system so the gate can be moved manually. The release must be installed and operated in accordance with the operator's listing and manufacturer instructions.

EMERGENCY ACCESS DEVICE: A switch, lock, receiver, relay or similar approved device provided to permit emergency responders to activate or obtain access through a gate. A KNOX key switch is an example but does not replace a required mechanical manual release.

UL 325 USE CLASSIFICATIONS

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CLASS I—RESIDENTIAL VEHICULAR GATE OPERATOR: An operator intended for a vehicular gate serving a home of one to four single-family dwelling units or an associated garage or parking area.

CLASS II—COMMERCIAL/GENERAL-ACCESS VEHICULAR GATE OPERATOR: An operator intended for a commercial location or residential development serving five or more dwelling units where access by the general public is expected. Examples include multifamily developments, hotels, parking garages and retail properties.

CLASS III—INDUSTRIAL/LIMITED-ACCESS VEHICULAR GATE OPERATOR: An operator intended for an industrial location or other area not intended to serve the general public, such as a factory, loading area or secured employee entrance.

CLASS IV—RESTRICTED-ACCESS VEHICULAR GATE OPERATOR: An operator intended for a guarded or highly restricted location where unauthorized access is prevented through security supervision or institutional controls, such as certain airport, correctional or critical-infrastructure facilities.

GATE-CONSTRUCTION AND MOVEMENT TYPES

HORIZONTAL SLIDE GATE: A gate that moves horizontally across an opening. Examples include rolling, cantilever and track-supported slide gates.

HORIZONTAL SWING GATE: A gate that rotates in a horizontal arc about a vertical hinge or pivot.

VERTICAL LIFT GATE: A gate that moves vertically to open and close the access opening.

VERTICAL PIVOT GATE: A gate that rotates in a vertical plane about a horizontal pivot, typically raising the gate panel toward an upright position.

OVERHEAD PIVOT GATE: A rigid gate panel that pivots upward and overhead, sometimes with portions of the gate guided by a track or support system.

HORIZONTAL BIFOLD GATE: A gate made of connected panels that fold together while moving horizontally. For projects reviewed under ASTM F2200-17, apply the general and other applicable gate-construction provisions because horizontal bifold gates were not separately addressed as a named gate type in that edition.

BARRIER ARM: A pivoting arm used primarily to control vehicular traffic. A barrier-arm operator must be listed for that use. Where the barrier restricts a required fire apparatus access road, the applicable IFC and City emergency-access requirements also apply.

PEDESTRIAN GATE: A gate specifically designed and located for pedestrian passage. A required pedestrian gate must be separate from an automated vehicular gate and must comply with applicable egress, accessibility and door-hardware requirements.

ENTRAPMENT AND SAFETY TERMS

ENTRAPMENT: A condition in which a person becomes caught, held, pinned or confined by a moving gate or between the gate and another surface, creating a risk of injury or death.

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ENTRAPMENT ZONE: A location where movement of the gate or operator can trap a person between the moving equipment and a counter-opposing edge, surface or object. Entrapment zones depend on the gate type, direction of travel, clearances and adjacent construction.

COUNTER-OPPOSING EDGE OR SURFACE: A fixed object, edge or surface against which a moving gate could trap or compress a person. Examples include posts, columns, walls, fences, curbs and operator housings.

LEADING EDGE: The forward edge of a gate as it moves in a particular direction. A gate may have different leading edges during opening and closing.

GATE TRAVEL OR TRAVERSAL: The complete path or operating distance through which the gate moves between its fully closed and fully open positions.

ENTRAPMENT-PROTECTION DEVICE: A device or operator-integrated system intended to detect, prevent or respond to a person becoming trapped by a moving gate.

INHERENT ENTRAPMENT-PROTECTION SYSTEM—TYPE A: A protection system built into the listed gate operator that detects an obstruction through monitored motor force, current, speed or similar operating characteristics and causes the gate to stop, reverse or otherwise respond as required by its listing.

NONCONTACT SENSOR—TYPE B1: A device that detects an obstruction without physical contact, typically a photoelectric sensor. The detection area must protect the specific entrapment zone and remain unobstructed throughout gate operation.

CONTACT SENSOR—TYPE B2: A sensing edge or similar device that responds when physical contact occurs. It must be located and installed to protect the applicable gate edge or entrapment zone.

TYPE C ENTRAPMENT PROTECTION: An inherent force-limiting system, such as an adjustable clutch or hydraulic pressure-relief device, where permitted by the operator's listing and applicable UL 325 requirements.

CONSTANT-PRESSURE CONTROL—TYPE D: A control that requires continuous pressure to move the gate. Releasing the control causes gate movement to stop. The control location and line of sight must comply with the operator's listing and installation instructions.

EXTERNAL ENTRAPMENT-PROTECTION DEVICE: A photoelectric sensor, sensing edge or other protective device that is connected to, but is not a permanent internal component of, the gate operator.

MONITORED DEVICE: An external entrapment-protection device whose presence, connection and proper operation are checked by the gate operator. A fault or loss of the device must cause the operator to respond as required by its listing.

MONITORING: The operator's process of verifying that a required entrapment-protection device is connected and functioning. Monitoring normally checks for conditions such as a disconnected device, open circuit, short circuit or device fault.

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INDEPENDENT ENTRAPMENT PROTECTION: Separate means of protection provided for each identified entrapment zone as required by the operator's listing. A single sensor must not be assumed to protect multiple zones unless the listing and installation instructions specifically permit that arrangement.

DETECTION ZONE: The area monitored by a noncontact sensor, vehicle detector or other sensing device. The drawings should show the location and coverage of each safety-related detection zone.

VEHICLE-DETECTION LOOP: A sensor installed in or near the roadway to detect a vehicle and initiate or influence gate operation. A vehicle loop is not considered protection for a person in an entrapment zone unless specifically evaluated and listed for that purpose.

LINE OF SIGHT: A condition in which the person operating a control can continuously see the gate and its entire path of travel while the gate is moving.

CONSTRUCTION-SAFETY TERMS

POSITIVE STOP: A physical device that limits gate travel at the fully open or fully closed position without relying solely on the gate operator's internal limits.

RECEIVER GUIDE: A device attached to a fixed post or support that provides lateral stability to a closed gate.

RECEIVER POST: The fixed post supporting a receiver guide or other hardware that receives and stabilizes the closed gate.

WEIGHT-BEARING EXPOSED ROLLER: An accessible roller that supports the weight of a moving gate. Exposed weight-bearing rollers can create hazardous pinch points and must be guarded or otherwise addressed as required by ASTM F2200.

PROTRUSION: A component or object extending beyond the face of a gate that could create a snagging, shearing, impact or entrapment hazard during gate movement.

PINCH POINT: A location where moving gate components, rollers, hinges, arms, chains or adjacent surfaces can catch or compress a person or body part.

SCREENING OR GUARDING: Material or construction used to prevent a person from reaching through, around or into hazardous moving components or entrapment areas. Openings and the extent of screening must comply with the requirements applicable to the gate type.

FAIL-SAFE OPERATION: A failure response that places priority on allowing access or egress, typically by releasing or opening the gate when power or a controlling system fails.

FAIL-SECURE OPERATION: A failure response that places priority on maintaining security, typically by keeping the gate secured when power or a controlling system fails. Fail-secure operation must not conflict with required egress or approved emergency access.

CYCLE: One complete sequence in which the gate moves from the fully closed position to the fully open position and returns to the fully closed position.

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ACCEPTANCE TEST: A field verification performed after installation to confirm that the gate, operator, access controls, emergency-access features, manual release and each entrapment-protection device operate as shown on the approved plans and in accordance with the operator's listing and manufacturer instructions.

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