Department of Engineering

Traffic Operation's Standards and Procedures Manual













Department of Engineering

Traffic Operations

Policy Manual

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SECTION: 1000	SUBJECT: General

I. PUPPOSE:

This Policy Manual contains the Department of Engineering's policies as related to the Traffic Operations Division. It also contains explanations of such policies with guidelines and procedures for their implementation. It is issued for the guidance of managers and supervisors.

II. POLICY:

The policies contained herein have been developed to facilitate compliance with federal and state laws, the City Charter, the City Code and administrative regulations. These requirements are subject to change at any time and every effort will be made to keep this manual current. Therefore, if there is an apparent conflict between a provision of this manual and any law or superior federal or state regulation, such conflict will be resolved in favor of such other law or regulation unless specifically identified within the this manual.

SECTION: 1100	SUBJECT: General – Flag Display Mobile Operation

I. PUPPOSE:

To establish safety guidelines for the mobile operation of displaying the American Flag.

II. POLICY:

The Operations Superintendent shall prepare and keep updated a written pre-trip checklist for this operation which is to be followed during each set up and take down. The Crew Supervisor shall establish a list of employees for the flag detail. In his absence, the Operations Superintendent will establish the list. The list will consist of two (2) primary crews, one (1) primary crew for the Jefferson Avenue route and one (1) primary crew for the Warwick Boulevard route. Each primary crew shall have a minimum of four (4) employees and two (2) trucks.

- Lead Truck: Driver, Flag Installer and Helper
- Shadow Truck with Crash Attenuator: Sr. Traffic Sign & Marking Mechanic or Crew Supervisor

In addition to the primary crews the list will consist of a one (1) secondary crew. This crew will consist of two (2) employees (Driver/helper and Flag Installer) and one (1) bucket truck.

It is imperative that all crews follow the instructions and guidance of the Sr. Traffic Sign & Marking Mechanic or Crew Supervisor who will be in charge of the flagging operation. This will ensure the safety of all personnel involved and the motoring public. Safety is of utmost importance. For the primary crews, the lead truck driver is responsible for his crew and to stay in communication with the shadow truck at all times. It is the responsibility of the shadow truck driver to protect the lead truck from traffic and/or any foreseeable incidents. It is the responsibility of all parties to be on the lookout for each other. For the secondary crew, the truck driver/helper is responsible for the safety of the truck from traffic and/or any foreseeable incidents while the Flag Installer is in the bucket. At no times shall the Flag Installer be permitted to ride in the bucket while transitioning from one intersection to the other. It is the responsibility of all parties to be on the lookout for each other.

III. SAFETY REQUIREMENTS:

In **29 CFR 1910.135**, OSHA requires the use of head protection when there is potential for injury to the head from falling objects. All employees not driving a vehicle shall properly wear head protection. All hard hats shall be equipped with chin straps. Worn out suspensions and visibly deteriorated hardhats shall be replaced.

In **29 CFR 1910.133**, OSHA requires that "each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles…" All employees not driving a vehicle shall wear proper eye protection, either goggles or safety glasses.

Fall Protection:

- Provide fall protection for employees working in the truck bed/cage. The employee in the cage shall be tied-off to the cage itself.
- Provide training for all affected employees on the fall protection system.
- Bucket Truck crew members must maintain compliance with fall protection requirements while working with the bucket truck. Fall protection must remain in place until crew members are safely lowered into the cradle.

General Safety Requirements:

- At no time should employees be allowed to stand up in the rear of the truck or in the cage while the truck is in motion.
- Bucket truck crew members must bring the bucket down each time they place or retrieve a flag, prior to traveling to the next pole.
- All Engineering vehicle operators shall be current with Defensive Driving Course requirements.
- Provide training for all affected employees on strains and sprains due to physical nature of this operation.
- Toe board(s) shall be installed and maintained around the base of the cage.
- Employees shall never use the cage rails as a step when placing flags.

SECTION: 1100	SUBJECT: General – Flag Display Mobile Operation

IV. DISPLAYING OF AMERICAN FLAGS:

Respect the Flag at all times. Load the Flags onto plastic tarpaulins to protect the flags during transition or other method as approved by the crew supervisor. At no time will the flags be allowed to touch the bed of the truck. After retrieval, if the flags are wet then they shall be hung to dry then properly stored.

Flags are to be displayed on holidays designated by City Council and ship launchings. The flags are to be displayed on the workday before the holiday. On the workday following the holiday, they are to be removed.

Flag display for ship launchings are to be displayed on Warwick Boulevard from 70th Street to Harpersville Road. Also on Jefferson Avenue at Mercury Boulevard, Jefferson Avenue at 27th Street and Jefferson Avenue at 25th Street.

The current Council approved holidays are:

- Memorial Day
- Flag Day
- Independence Day
- Veterans Day

SECTION: 2000	SUBJECT: Pavement Markings – Materials and Applications

I. PURPOSE:

The requirements contained herein have been developed to provide clear guidance on the materials and applications of permanent and temporary pavement markings within the City of Newport News either by private contractor or City personnel. The application of pavement markings shall meet the minimum requirements of the City of Newport News for pavement markings, in addition to Sections No. 246 – "Pavement Marking" and No. 704 – "Pavement Makings and Markers" of the Virginia Department of Transportation's (VDOT) *Road and Bridge Specifications* (green book) 2007 Edition or most current. All Pavement markings shall be in accordance with the Federal Highway Administration's *Manual on Traffic Control Devices* (MUTCD) and the VDOT *Supplement to the MUTCD* as to type, color and layout for the specific location the marking is applied.

II. GENERAL REQUIREMENTS:

A. Pavement Line Markings: Solid lines or skip lines for dividing lanes, marking edges, channelizing and forming islands and solid lines for crosswalks, stop bars and diagonal line markings shall be Type "A" or Type "B" - Class I, II or III (Class IV and VI may be used with prior approval from the Director of Engineering) as required in Section 704 of VDOT's *Road and Bridge Specifications* for the roadway surface (see Section III for Material Application Requirements). Solid lines and skip lines for dividing lanes, marking edges and channelizing shall be four inches (4") wide unless otherwise specified by the Engineer. Skip lines shall be ten feet (10') of painted line and a thirty foot (30') gap or skip. Mini skip or dotted lines shall be three feet (3') of painted line and a nine foot (9') gap or skip. Solid lines used to outline islands and approaches to gore areas shall be eight inch (8") wide lines and of the color it is an extension of, or as specified in the MUTCD.

Lane lines for through lanes on arterial and collector roadways shall be solid for a distance of not more than 150 feet except for lanes with offset stop bars where the line is to be extended to align with other lanes. Lane lines for through lanes on local roadways shall be solid for a distance of not more than 100 feet measured from the stop bar. Centerlines on undivided highways shall be solid double yellow lines four inches (4") wide separated by four inch (4") space for designated "NO PASSING" zones. Tracking lines shall be solid, four inch (4") wide and direct traffic to the receiving lane that provides the greatest turning radius that is practical.

On concrete or light asphalt, markings shall be bordered with two inches (2") of black.

B. Pavement Message Markings: School Zones, railroad crossings, elongated arrows and word messages shall be Type "B" - Class IV (urethane top-coat) or Class VI Preformed Marking Material. Message markings shall be white and eight feet (8') in height except for at railroad crossings.

C. Crosswalks: Crosswalk lines shall be solid white lines six inches (6") wide, marking both edges of the crosswalk area except for school crosswalks which shall be 12 inches wide. The width of a crosswalk shall be no less than ten feet (10') on center (or as specified by the Engineer) unless space does not permit, in which case, the width shall be no less than six feet (6') on center. Crosswalks should be perpendicular to the flow of traffic where practical (ADA conditions shall be taken into consideration). High visibility crosswalk lines shall be marked with white longitudinal lines, parallel to the flow of traffic, that are 12 inches wide and spaced 24 to 60 inches apart on center. The marking design should avoid the wheel paths, and the spacing should not exceed 2.5 times the line width. When on concrete or light pavement, crosswalks shall be bordered with four inches (4") of black.

D. Stop Bars: Stop bars shall be solid white line being 24 inches wide and shall completely traverse all traffic lanes on each approach at signalized intersections or approaches with "STOP" sign control at arterial and collector roadways. Stop bars on local roads shall extend from the edge of pavement to the centerline of the roadway. Stop bars are to be located at a minimum of four feet (4') in advance of a crosswalk and perpendicular to the flow of traffic. If a crosswalk is not provided, then the stop bar is to be no less than ten feet (10') and no more than 30 feet from the face of curb or edge of roadway extended. Stop bars for right turn lanes shall be offset in front of the through lane stop bars by ten feet (10') on center.

E. Yield Lines: The individual triangles comprising the yield line shall have a base of 12 inches and a height of 18 inches. The space between the triangles shall be 15 - 24 inches on center. Placement of yield lines should follow the requirements for stop lines, see Section D.

F. Arrow Markings: Lane reduction arrow markings (see Figure F) shall be used where a lane reduction transition occurs and shall be placed 40 feet apart. Turn lane-use arrow markings shall be placed as follows:

1. If full width turn lane is 50 feet or less: One (1) arrow placed 30 feet from stop bar.
2. If full width turn lane is 51 to 150 feet: One (1) arrow placed 30 feet from stop bar and a second placed where the turn lane becomes full-width.
3. If full width turn lane is 151 feet or greater: One (1) arrow placed 30 feet from stop bar, a second placed where the turn lane becomes full-width and a third placed an equal distance between the first two.

G. Parking: Parking T's and +'s shall be solid white lines, four inches (4") wide, placed eight feet (8') from curb face and 22 feet apart except for the first and last parking space which shall be 20 feet apart. Parking spaces shall be no closer than 30 feet to a crosswalk on the approach to a traffic signal and no closer than 20' after a crosswalk.

H. Railroad Crossings: All highway-rail grade crossing pavement markings shall be retroreflectorized white. Railroad crossings with no gate present shall have a stop bar located no closer than 15 feet from the nearest rail. If a gate is present, the stop bar shall be placed 10 feet in advance of the gate. The stop bar shall be perpendicular to the flow of traffic. For narrow lane railroad crossing markings refer to MUTCD guidelines.

I. Median Markings: Transverse median markings shall consist of 24 inch yellow lines spaced as required by Section J.1 at a 45 degree angle within two (2) sets of two-way barrier lines to separate traffic in opposite directions.

J. Gore Markings: Gore markings (see Figure J) shall consist of 24 inch solid white traverse lines within 8 inch barrier lines. The median and gore markings shall be spaced according to the posted speed limit as follows:

1. 45 MPH and below –16 feet on center.
2. Greater than 45 MPH –20 feet on center.

K. Pavement Markers (Retro-Reflectors): Reference should be made to the *Traffic Control Devices Handbook*, Part 3E and VDOT specifications as provided herein. Pavement markers shall be used in conjunction with pavement markings for added visibility and shall not replace the pavement markings.

1. Pavement markers used along lane lines or edge lines shall be raised snow plowable.

2. Two direction pavement markers shall be of the same color front and back to match the pavement marking line they are associated with. These are to be used on the center lines dividing two-way traffic and other lines where markers need to be visible in both directions.

3. For one-way markers, the front shall match the pavement marking line they are associated with and the back of the markers shall be red to indicate wrong way. These are to be used on white lane and edge pavement markings where the color does not need to be visible in both directions. Also, one-way markers are to be used on all lane and edge lines on divided roadways where the color does not need to be visible in both directions.

4. Markers placed along edge lines and solid lane lines shall be placed to the lane side of the pavement marking every 40 feet. Markers placed along skip lane lines shall be placed in the center of the skip portion every 80 feet.

5. Pavement markers shall be installed in accordance with the manufacturer's and VDOT specifications. For temporary pavement markers used in construction zones, the adhesive used shall allow for removing markers without damage to the pavement surface.

III. MATERIALS – PERMANENT PAVEMENT MARKINGS/PAVEMENT MARKERS:

A. Hydraulic Cement Concrete Surfaces:

1. Traffic paint (Type A Markings), shall conform Sect. 246.02(b) of VDOT's *Road and Bridge Specifications*. Traffic Zone Paint shall be selected from the Virginia Department of Transportation's approved product list.

2. Durable High Quality Pavement Markings (Type B Markings) shall conform to Sect. 246.02. Only Class II, Polyester-Resin (Sect. 246.02 (d)) and Class III, Epoxy-Resin (Sect. 246.02 (e)) may be used on Hydraulic Cement Concrete Surfaces.

3. Glass Beads shall conform to Sect. 234 of VDOT's Road and Bridge Specifications.

4. Preformed Tape, Type "B", Plastic-backed preformed tape - Class IV and Patterned preformed tape - Class VI (when permitted for use by the Director of Engineering) shall conform to Sect. 246.02(f) of VDOT's Road and Bridge Specifications. All preformed tape products shall be on the Virginia Department of Transportation's approved product list.

5. Pavement markers (Sect. 704.03(c)) shall conform to Sect. 235.02 for snow plowable raised markers.

B. Asphalt Concrete Surfaces:

1. Durable High Quality Pavement Markings (Type B Markings) shall conform to Sect. 246.02. Only Class I, Thermoplastic (Sect. 246.02 (c)) and Class III, Epoxy-Resin (Sect. 246.02 (e)) may be used on Asphalt Concrete Surfaces.

2. Pavement markers (Sect. 704.03(b)) shall conform to Sect. 235.02 for snow plowable raised markers.

3. Preformed Tape, Type "B", Plastic-backed preformed tape - Class IV and Patterned preformed tape - Class VI (when permitted for use by the Director of Engineering) shall conform to Sect. 246.02(f) of VDOT's Road and Bridge Specifications. All preformed tape products shall be on the Virginia Department of Transportation's approved product list.

IV. CONSTRUCTION PAVEMENT MARKINGS:

A. Temporary pavement markings used in construction areas for the control of traffic may be Type A Markings - Paint, Type C - Temporary Tape or Type D - Removable Tape. The color and type marking used shall be the same as required by the MUTCD for permanent pavement markings. All temporary pavement markings shall be removed immediately after they no longer apply and permanent pavement markings installed.

1. Type A or C markings shall be used in the roadway where the area of application is to be resurfaced prior to changes in the traffic pattern or where the existing pavement is to be demolished and the traffic pattern is not to be changed prior to demolition.

2. Type D markings shall be used in the roadway where the area of application is the final roadway surface or where traffic patterns are subject to change prior to the pavement being resurfaced.

B. Raised pavement markers shall be used where added visibility is required as shown on the approved plan or at the direction of the Engineer. These markers shall be spaced every 40 feet along lane lines, center lines and edge lines. Markers for double center lines may be placed between the two lines. The color and directional requirements for these markers shall be the same as the permanent pavement markers.

V. APPLICATION:

A. Surface Cleaning: Sweep surfaces with power brooms, hand brooms and/or high pressure air to remove loose materials and dirt.

B. Marking Placement Verification: Markings shall be "spotted" on the new pavement surface prior to the installation of any temporary or permanent markings for "in field verification" by the Engineer on the project. Do not begin pavement markings until approved by the Engineer.

C. Locations:

1. Permanent pavement marking placement to be remarked in accordance with the markings that existed prior to resurfacing of the pavement, or;

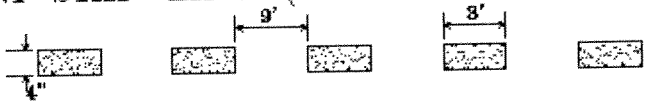
2. Permanent pavement marking placement to be in accordance with an approved "marking plan" as directed by the Engineer, and;

3. Temporary construction pavement markings shall be installed at reversible cross-overs, at locations identified in an approved traffic control plan, and at hazardous locations as directed by the Engineer.

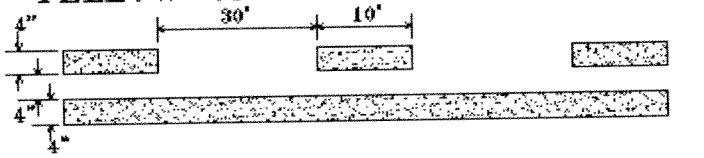
VI. GENERAL PLACEMENT AND DETAILS:

A. Line Marking Details

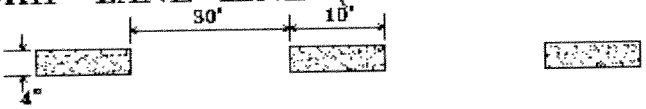
MINI SKIP LINE (WHITE or YELLOW)



YELLOW ONE WAY BARRIER LINE



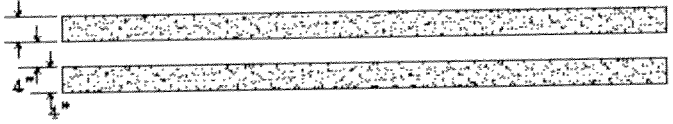
SKIP LANE LINE (YELLOW or WHITE)



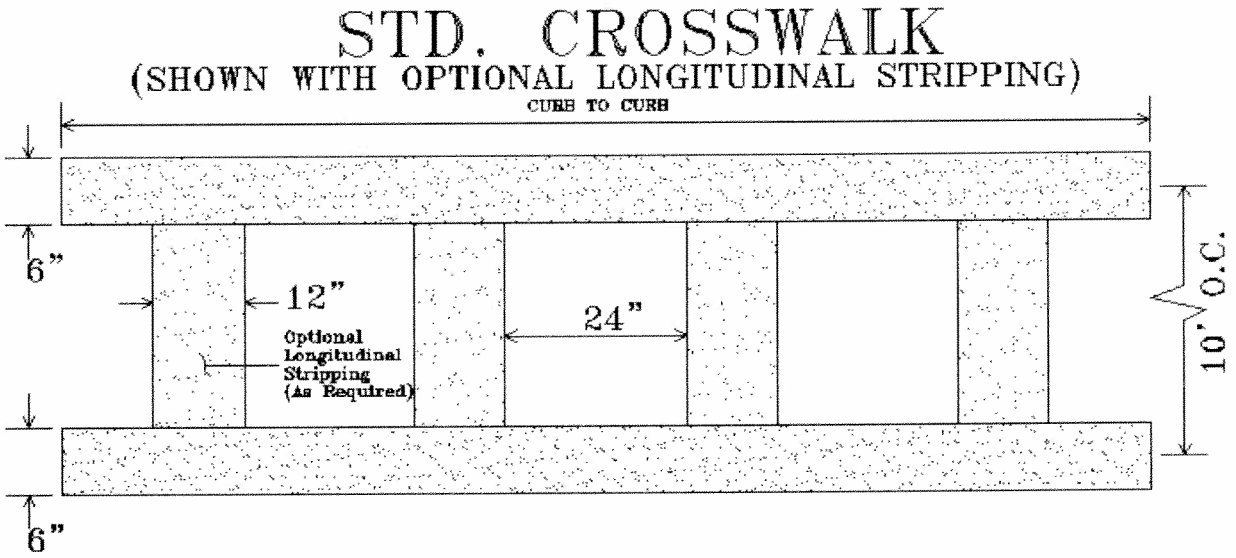
LANE OR EDGE LINE (YELLOW or WHITE)



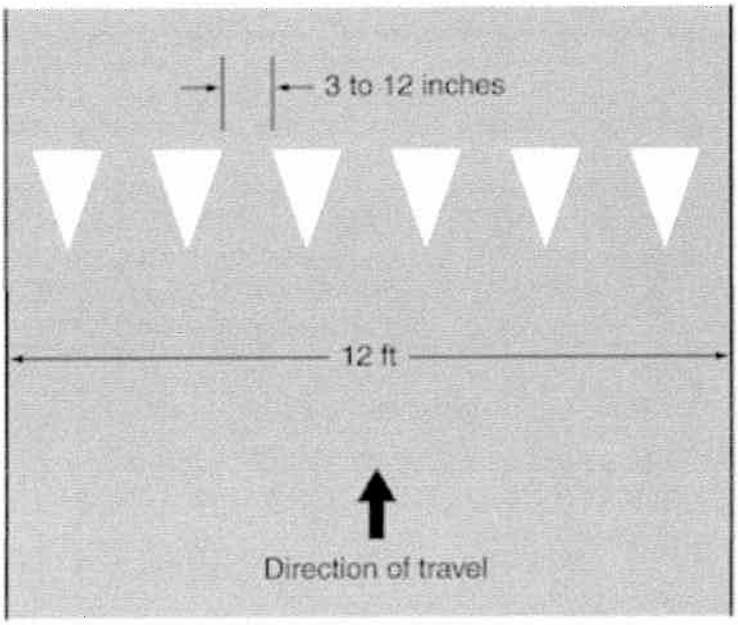
4" DOUBLE YELLOW LANE LINE

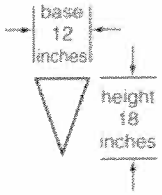


B. Crosswalk Details



C. Yield Line Details



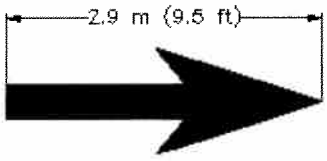


Notes:
Triangle height is equal to 1.5 times the base dimension.

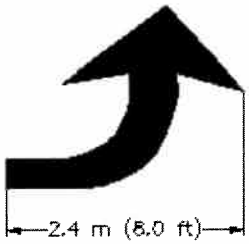
Yield lines may be smaller than suggested when installed on much narrower, slow-speed facilities such as shared-use paths.

D. Arrow Marking Details

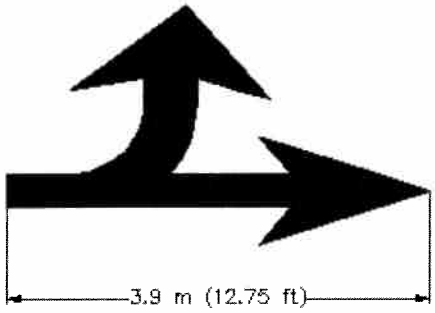
a – Through Lane–Use Arrow



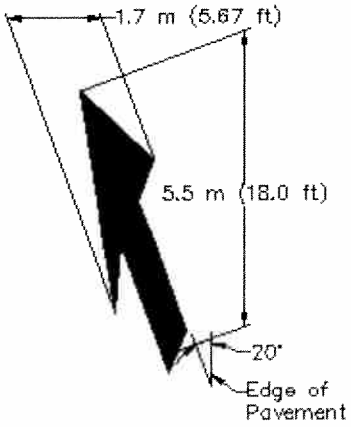
b – Turn Lane–Use Arrow



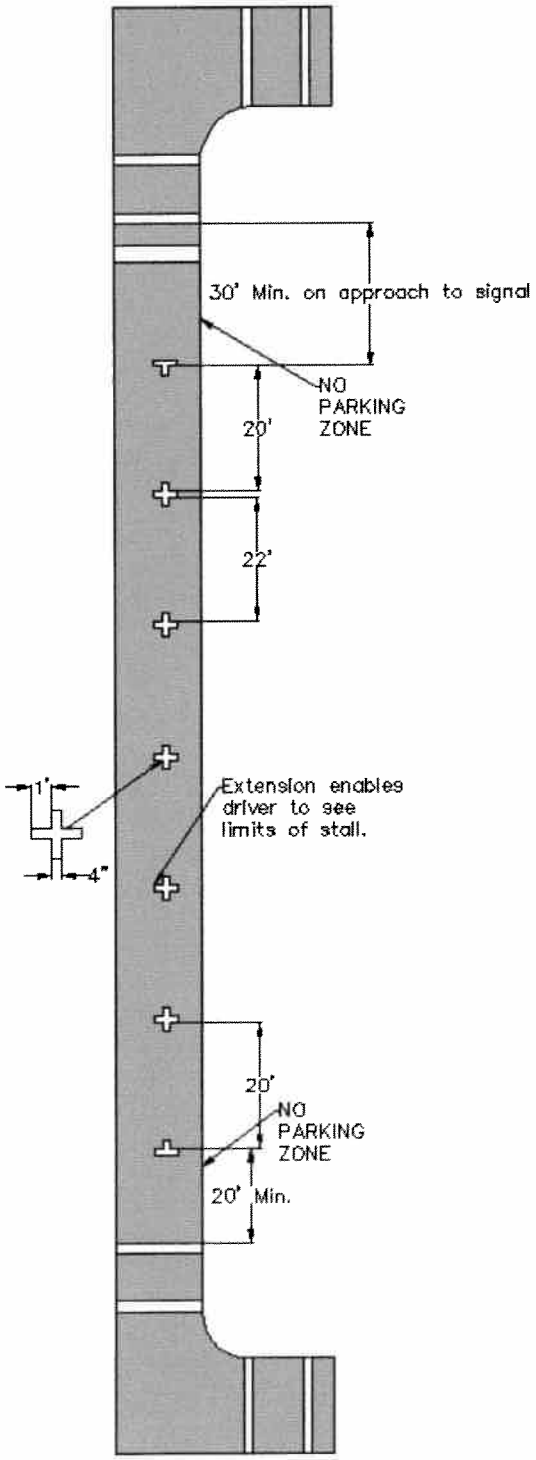
c – Turn and Through Lane–Use Arrow



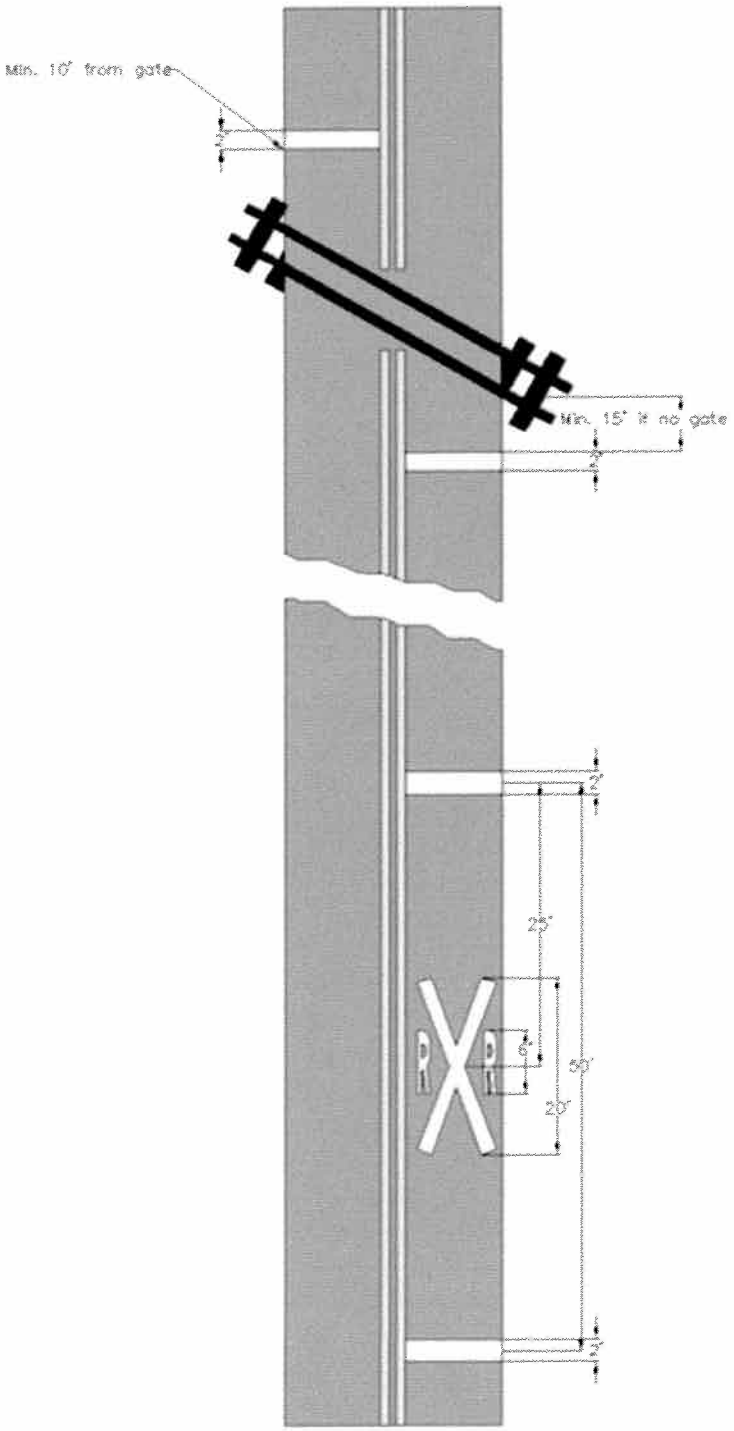
d – Lane–Reduction Arrow



E. On Street Parking Detail



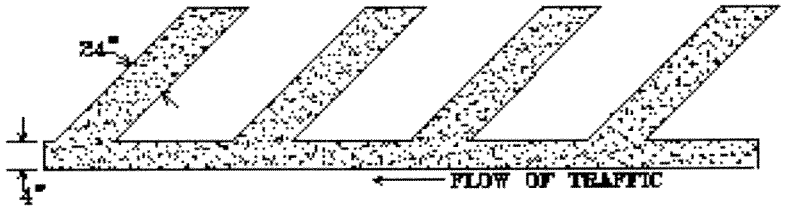
F. Railroad Marking Detail



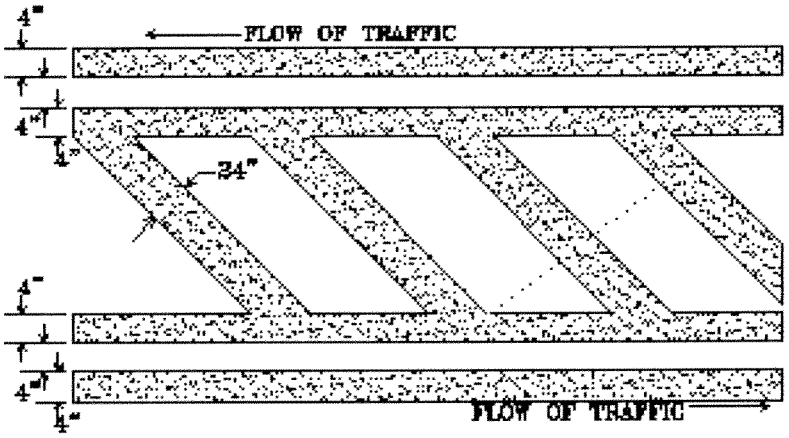
G.

Median & Gore Markings Detail

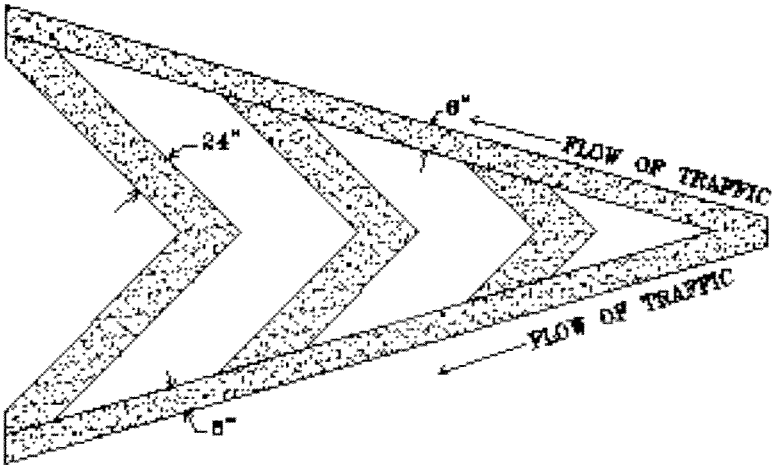
WHITE ONE WAY BARRIER GORE MARKING



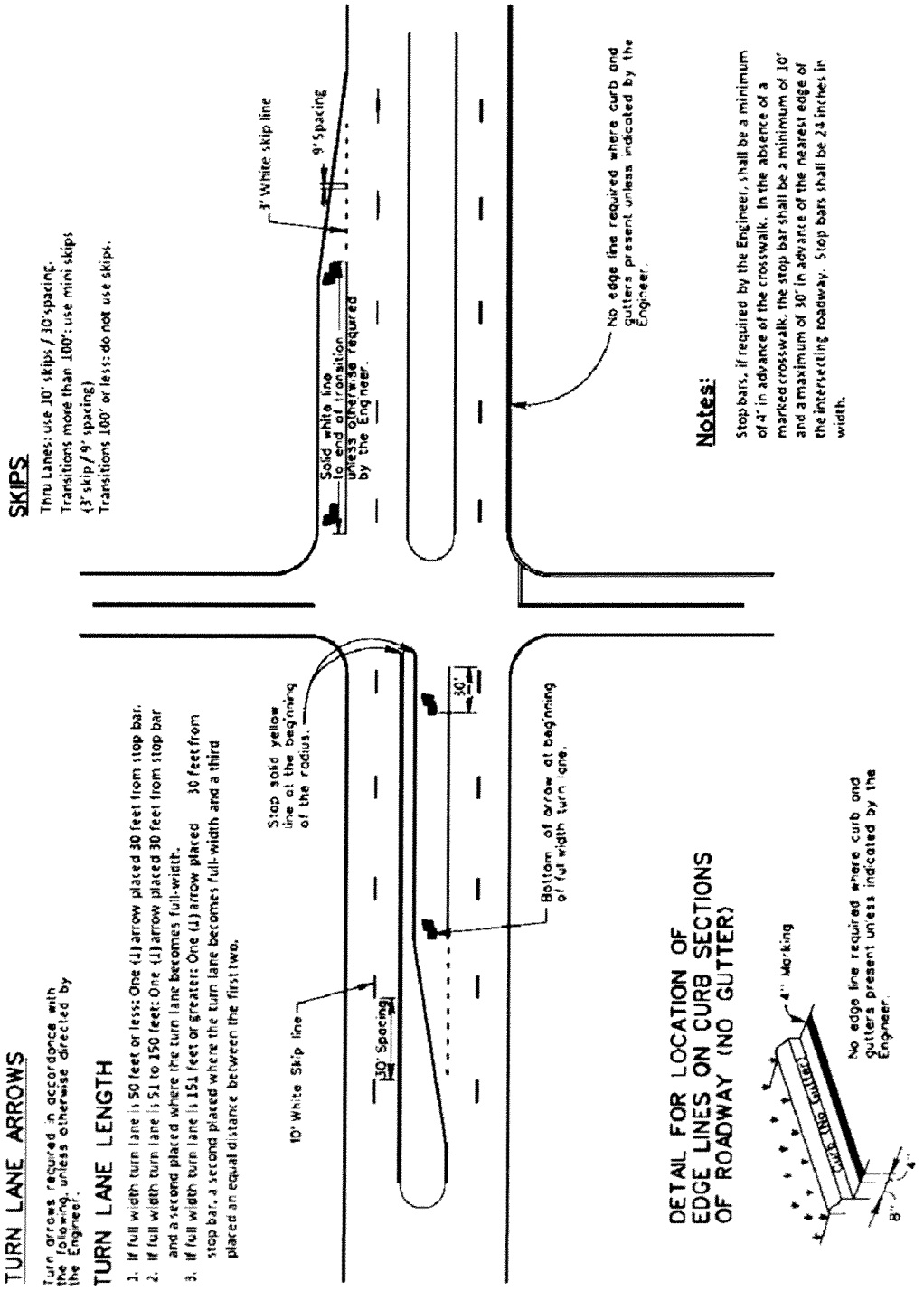
YELLOW TRANSVERSE MEDIAN MARKING



WHITE CHEVRON GORE MARKING

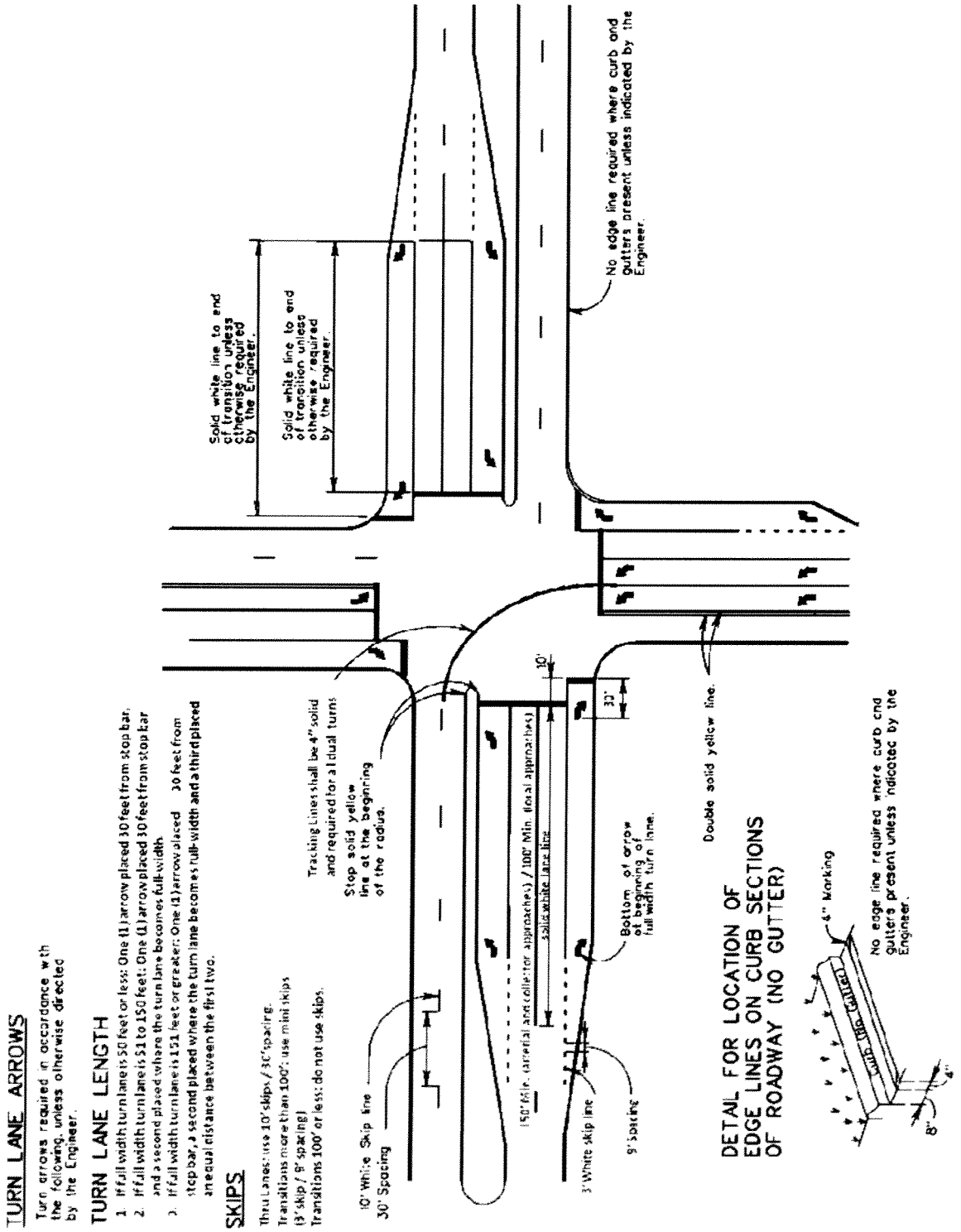


H. Typical Pavement Marking for Un-signalized Intersections



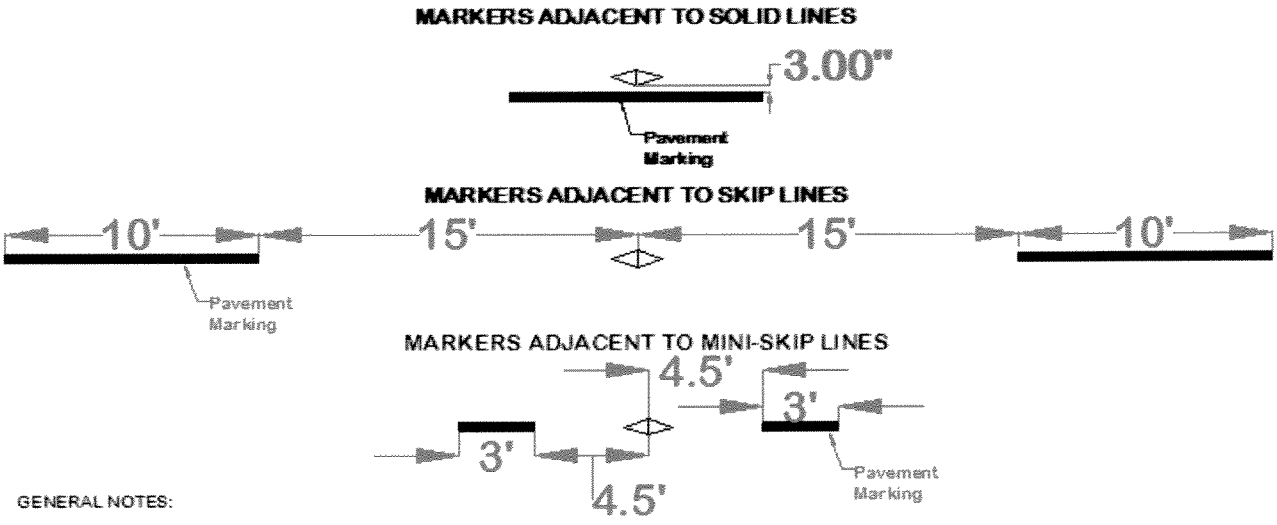
SECTION: 2000	SUBJECT: Pavement Markings – Materials and Applications

I. Typical Pavement Marking for Signalized Intersections



MENDS/SUPERSEDES: Policy dated Nov. 1, 2009	REFERENCES:	APPROVAL:

J. Retro-Reflector Placement Details



NOTES:

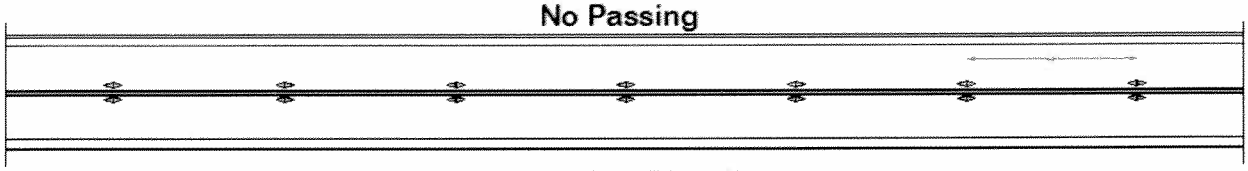
1. Exact locations of the markers shall be approved by the Engineer prior to installation.

2. "Typical" Spacing Requirements:
   - 40' Center to Center when used adjacent to a solid line.
   - 80' Center to Center when used adjacent to a skip line except that on horizontal curves of 4' or more, the spacing along skip lines and channelizing lines adjacent to turn lanes can be reduced by ½.
   - 36' Center to Center when used adjacent mini-skip line.

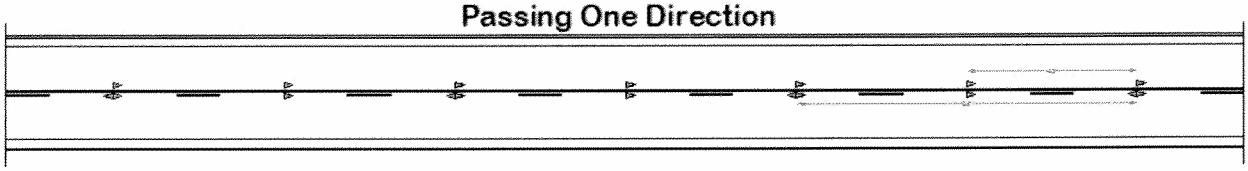
SECTION: 2000	SUBJECT: Pavement Markings – Materials and Applications

TWO LANE ROADS - With Curb/Gutter

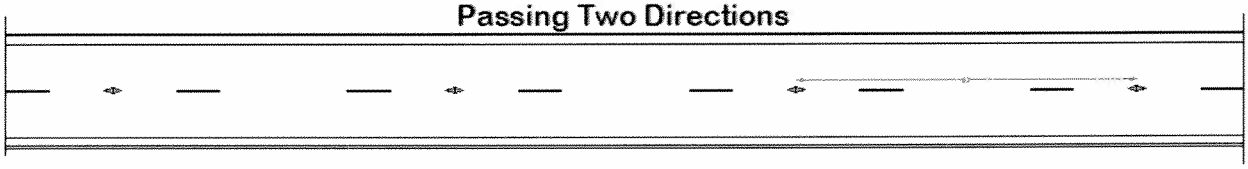
No Passing



Passing One Direction

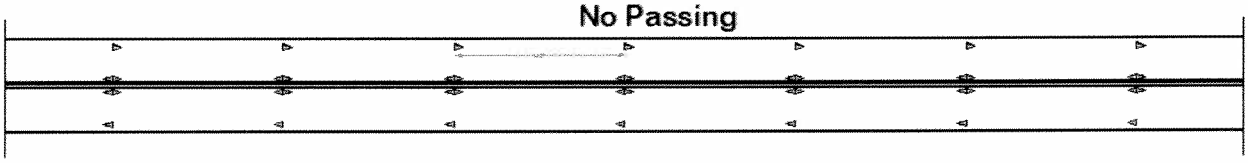


Passing Two Directions

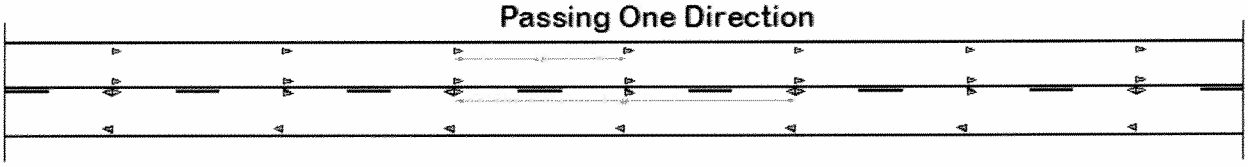


TWO LANE ROADS - Without Curb/Gutter

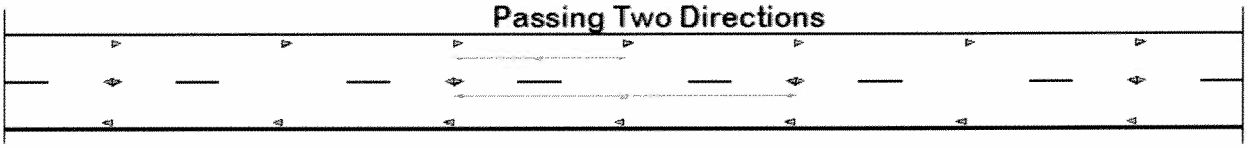
No Passing



Passing One Direction



Passing Two Directions



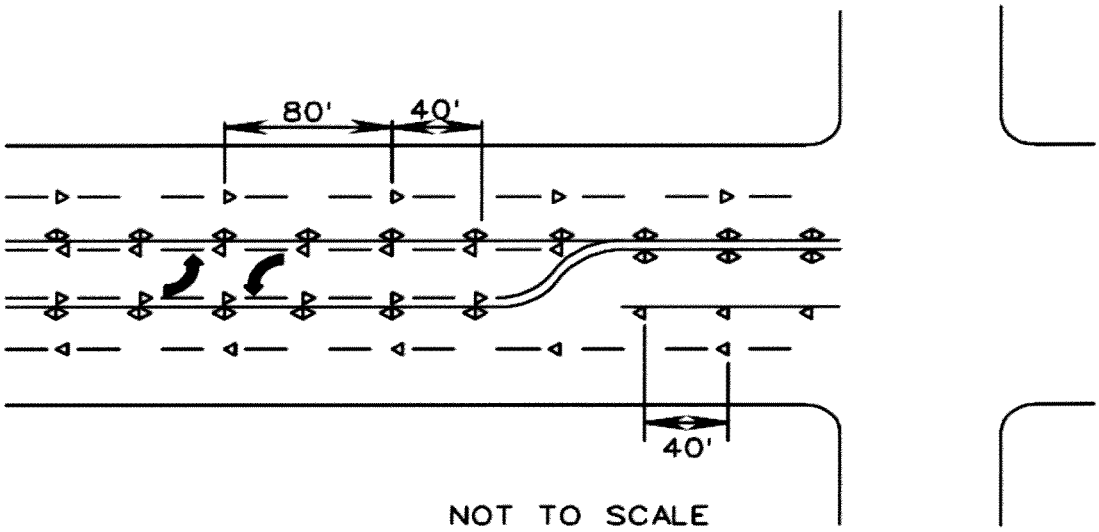
NOTES:

1. Exact locations of the markers shall be approved by the Engineer prior to installation.

2. The following criteria shall be applied for placement reflectors on streets with substandard widths.
   a. If the roadway is less than 21' from edge line to edge line, then no reflectors will be installed.
   b. If the roadway is between 21' and 22' from edge line to edge line, then white reflectors will be installed adjacent to the edge lines only, leaving 9 ½ feet minimum travel lane width.
   c. If the roadway is more than 22' from edge line to edge line, then both white edge line and yellow center line reflectors are to be used, leaving 9 ½ feet minimum travel lane width.

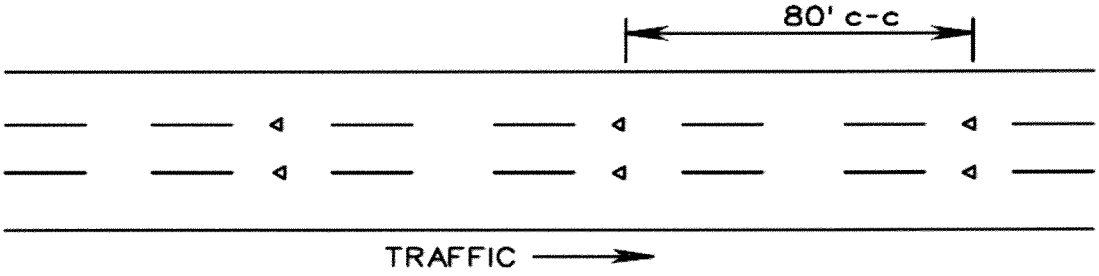
SECTION: 2000	SUBJECT: Pavement Markings – Materials and Applications

FIVE LANE - CENTER LANE LEFT TURN ONLY



NOT TO SCALE

DIVIDED ROADWAYS



SECTION: 2100	SUBJECT: Pavement Markings – Painting of Center and Edge Lines

I. PURPOSE:

The requirements contained herein have been developed to provide clear guidance on the painting of center line and edge line markings on streets within the City of Newport News. It does not preclude the use of engineering judgment based on the *Manual of Uniform Traffic Control Devices* (MUTCD) and the Virginia supplement to that manual when making decisions concerning placement and replacement of pavement markings.

II. CENTERLINE MARKINGS:

All center line markings shall be applied under the following criteria:

A. All primary highways.

B. All secondary roads shall have a center line applied if **ALL** of the following criteria are met:
   1. The pavement surface width is a minimum of 18 feet.
   2. A traffic count reflects a minimum of 1500 vehicles per day.
   3. Sections to be center-lined are continuous between major points.
   4. All locations where engineering studies indicate a need for them.

C. Discontinuing (breaking) Double Yellow Centerline
   1. **Do not** discontinue (break) a Double Yellow Centerline for a private driveway.
   2. Discontinue (break) a Double Yellow Centerline for a public street with an exiting volume of 750 vehicles per day or greater.

III. EDGE MARKINGS:

Edge markings shall be applied under the following criteria:

A. Non-Curb and Gutter Roadways
   1. All primary routes, expressways and limited access areas that do not have curb and gutter.
   2. All secondary routes not having curb and gutter, but having a minimum pavement width of 20 feet, which also satisfies the center line criteria.
   3. All structural crossings (fixed object ends) or pavement width reductions involving tapered pavement approaches.
   4. All locations where an engineering study indicates a need for them.

B. Curb and Gutter Roadways
   1. All expressways and limited access areas.
   2. All structural crossings (fixed object ends) or pavement width reductions involving tapered pavement approaches.
   3. All locations where an engineering study indicates a need for them.

IV. REPLACEMENT MARKINGS:

Where a roadway has been resurfaced and it is necessary to replace pavement markings, the new markings shall be placed according to the following criteria:

A. When a traffic volume exceeds 10,000 vehicles per day, new pavement markings shall be placed within 24 hours after resurfacing is complete.

B. When a roadway carries a traffic volume between 3000 and 10,000 vehicles per day, new pavement markings shall be placed within 48 hours after resurfacing is complete.

C. On roads carrying less than 3000 vehicles per day, new pavement markings shall be placed within 72 hours after resurfacing is complete.

V. REVIEW:

This policy will be reviewed annually during the anniversary month of publication by the Director of Engineering or his designee.

SECTION: 2200	SUBJECT: Pavement Markings – Long Line Restriping

I. PURPOSE:

The requirements contained herein have been developed to provide clear guidance for the Traffic Operations Division of Engineering regarding the remarking of Centerlines, Edge Lines and Lane Lines (typically called "Long Line"). In an effort to maintain pavement markings to a level of safety as required by City, State and Federal guidelines, it was determined that a re-marking schedule for "long lines" is to be establish for all arterial and collector roadways within the City of Newport News.

II. AREA DESIGNATIONS:

The City is currently divided into 23 Neighborhood Statistical Areas (NSA), however, the 23rd NSA covers Fort Eustis Military Reservation and is not included in this schedule. The remaining 22 NSA's are to be grouped into five (5) marking areas and defined as follows for this policy:

A. **Area 1**: NSA's 1 - 7

B. **Area 2**: NSA's 8, 9 and 14

C. **Area 3**: NSA's 10, 11, 15, 16, 17 and 18

D. **Area 4**: NSA's 12, 13, 19 and 20

E. **Area 5**: NSA's 21 and 22

III. POLICY:

It shall be the policy for the Department of Engineering that all "Long Lines" on the City's Arterial and Collector roadways be restriped no less than every 12 months. Typically the restriping season shall run from April through October of each calendar year. As the arterials are most critical segment in our infrastructure network, they are to be striped first and then followed with the collator roadways.

MENDS/SUPERSEDES:	REFERENCES:	APPROVAL:

IV. RESTRIPING SCHEDULE:

The following schedule shall be followed annually for the restriping of long lines on the arterial roadways or as adjusted by the Superintendent of Traffic Operations:

North/South Routes	*East/West Routes*
AREA 1 (NSA: 1-7)	
1st Week April	**2nd & 3rd Week June**
AREA 2 (NSA's 8, 9 and 14)	
2nd & 3rd Week April	**4th Week June & 1st Week July**
AREA 3 (NSA's 10, 11, 15, 16, 17 and 18)	
4th Week April & 1st Week May	**2nd & 3rd Week July**
AREA 4 (NSA's 12, 13, 19 and 20)	
2nd & 3rd Week May	**4th Week July & 1st Week August**
AREA 5 (NSA's 21 and 22)	
4th Week May & 1st Week June	**2nd Week of August**

The following schedule shall be followed annually for the restriping of long lines on the collector roadways or as adjusted by the Superintendent of Traffic Operations:

All Routes
AREA 1 (NSA: 1-7)
3rd & 4th Week August
AREA 2 (NSA's 8, 9 and 14)
1st & 2nd Week September
AREA 3 (NSA's 10, 11, 15, 16, 17 and 18)
3rd & 4th Week September and 1st Week October
AREA 4 (NSA's 12, 13, 19 and 20)
2nd & 3rd Week October
AREA 5 (NSA's 21 and 22)
4th Week October

SECTION: 3000	SUBJECT: Signage – Annual Sign Replacement Program

I. PURPOSE:

The requirements contained herein have been developed to provide clear guidance for the Traffic Operations Division of Engineering regarding the annual replacement of signs within the City of Newport News. In an effort to maintain signage to a level of safety as required by City, State and Federal guidelines as well as maintain the current compliance with the same, it was determined that an annual sign replacement program shall be developed and maintained for the City of Newport News.

II. AREA DESIGNATIONS:

The City is currently divided into 23 Neighborhood Statistical Areas (NSA), however, the 23rd NSA covers Fort Eustis Military Reservation and is not included in this schedule. Due to the number of signage in certain areas, the Superintendent of Traffic Operations may divide areas in to subcomponents as identified on the schedule.

III. POLICY:

It shall be the policy for the Department of Engineering that all signage fabricated, erected and/or maintained by the City of Newport News shall be replaced every fifteen (15) calendar years regardless of condition. This policy shall not preclude the repairs or reinstallation of signage that may become damaged or otherwise in need of replacement prior to the twelve year cycle. Once signs are removed they are to be evaluated for wear and reflectivity. Signs that still have a potential for additional service life shall be warehoused and used as replacements in NSA's that are scheduled for replacement within the determined remaining service life of the removed sign. As an example, if a Stop sign is replaced and determined that it has two (2) years of additional service life, it may be reinstalled in an area that is scheduled for annual replacement in the next two years but may not be installed in areas that are not due for replacement for three (3) or more years.

IV. SIGNAGE REPLACEMENT SCHEDULE:

The following fifteen (15) year schedule shall be followed for the annual replacement of signage. A historical listing of sign replacements shall be maintained by the Superintendent of Traffic Operations:

SECTION: 3000	SUBJECT: Signage – Annual Sign Replacement Program

Schedule			NSA Area
2009	2024	2039	1 West
2010	2025	2040	1 East
2011	2026	2041	7
2012	2027	2042	8
2013	2028	2043	9
2013	2028	2043	14
2014	2029	2044	15
2014	2029	2044	16
2014	2029	2044	17
2015	2030	2045	10A
2016	2031	2046	10B
2017	2032	2047	11
2017	2032	2047	13
2018	2033	2048	12
2018	2033	2048	22
2019	2034	2049	20
2019	2034	2049	21
2020	2035	2050	18
2020	2035	2050	19
2021	2036	2051	2
2021	2036	2051	4
2022	2037	2052	3
2023	2038	2053	5
2023	2038	2053	6

By Year

NSA Area	Schedule		
1 West	2009	2024	2039
1 East	2010	2025	2040
2	2021	2036	2051
3	2022	2037	2052
4	2021	2036	2051
5	2023	2038	2053
6	2023	2038	2053
7	2011	2026	2041
8	2012	2027	2042
9	2013	2028	2043
10A	2015	2030	2045
10B	2016	2031	2046
11	2017	2032	2047
12	2018	2033	2048
13	2017	2032	2047
14	2013	2028	2043
15	2014	2029	2044
16	2014	2029	2044
17	2014	2029	2044
18	2020	2035	2050
19	2020	2035	2050
20	2019	2034	2049
21	2019	2034	2049
22	2018	2033	2048

By Location (NSA's)

MENDS/SUPERSEDES:	REFERENCES:	APPROVAL:

NSA Area	Replacement History	
1 East	1996	N/A
1 West	1993	N/A
2	2005	1992
3	2006	1995
4	2005	1995
5	2008	1994
6	2008	1994
7	1997	1984
8	1998	1986
9	1999	1987
10A	2000	1988
10B	2001	1988
11	2002	1989
12	2003	1990
13	2002	1989
14	1999	1987
15	1999	1987
16	1999	1987
17	1999	1987
18	2004	1991
19	2004	1991
20	2004	1991
21	2004	1991
22	2003	1990

Replacement History by Location (NSA's)

SECTION: 3100	SUBJECT: Signage – Roadside Memorial Signs

I. PURPOSE:

This program has been developed as a means to provide a memorial for victims of traffic accidents as well as enhance awareness of the need to drive safe and sober. The requirements contained herein have been developed to provide clear guidance for the Traffic Operations Division of Engineering regarding the fabrication and installation procedures for "Roadside Memorial" signs within the City of Newport News. Self/privately erected memorials will no longer be permissible and shall be removed from City right-of-way.

II. POLICY:

The Department of Engineering will fabricate and install a roadside memorial sign along a city-maintained highway, normally for a period of two years. The entire cost of fabricating, installing and final removal of such a sign must be paid by the applicant requesting said sign. There may be no deviation from the standard roadside memorial sign specifications (see section IV).

III. PROCEDURE:

A. A written application shall be forwarded to the Director of Engineering. Within the request shall indicate the victim of the traffic accident, the location of the crash and the date of the crash. If possible a copy of the Police Crash Report (FR300) should be sent along with the memorial sign request.

B. The Director of Engineering or his designee will meet with the requester to review and approve the proposed location of the sign. The sign cannot be installed within a "clear zone".

C. Memorial Signs will not be installed or maintained in work zone areas for highway construction.

D. The applicant will bear the entire cost of the sign. A onetime fee for the fabrication, installation and ultimate removal of the sign (per the sign specification) shall be paid to the City of Newport News prior to issuance of a work order.

E. When the sign has been fabricated, the Traffic Operations Division will install the sign at the agreed upon location for a period of two years.

F. The sign *will not* remain on site more than two years. After this period, the Traffic Operations Division will remove the sign and retain it at the operations center for 30 days.

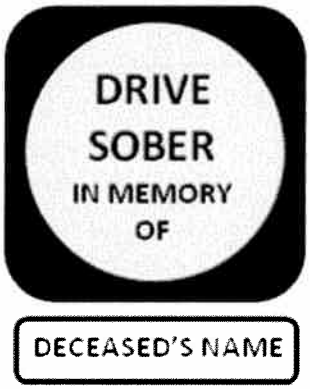
G. For a roadside memorial sign to remain longer than the two-year period, the applicant *must write* the Supervisor of Traffic Operations requesting a one-year extension. This extension can be repeated in following years for a total installation period not to exceed 5 years.

H. All memorials shall be erected on the right side of the highway.

IV. SIGN SPECIFICATIONS:



Option 1



Option 2

SECTION: 3100	SUBJECT: Signage – Roadside Memorial Signs

Design Standards			
Shape	Top Panel:		Square
	Bottom Panel:		Horizontal Rectangle
Color	Message & Border:		Black Non-reflectorized
	Field:		Gray Non-reflectorized
Size		**Top Panel**	**Bottom Panel**
	Horizontal:	24"	30" (max)
	Vertical:	24"	6" (9" max)
	Circle Diameter:	22"	
Message		**Top Panel**	**Bottom Panel**
	Line 1 Capitals:	3" D	2" C
	Line 2 Capitals:	3" D	See notes
	Line 3 Capitals:	2" D	
	Line 4 Capitals:	2" D	
Border Width	Top Panel:		1"
	Bottom Panel:		3/8"
Corner Radius	Top Panel:		1 ½"
	Bottom Panel:		1 ½"

Notes:

Top Panel – Vertical spacing between the top of the panel and Line 1 is 4⅛". Vertical spacing between Lines 1 and 2 is 2.25". Vertical spacing between Lines 2 and 3 is 2". Vertical spacing between Lines 3 and 4 is 1½".

Bottom Panel – Vertical spacing between the top of the panel and Line 1 is 2". The use of initials and/or avoidance of hyphenated names may be needed for the deceased's name to fit the bottom panel. If necessary, the bottom panel may be increased to 9" in height and a second line used to accommodate those names that will not fit onto one line. When a 9" panel is used, vertical spacing between the top of the panel and Line 1 is 2" and vertical spacing between Lines 1 and 2 is 1". When the applicant requests that the deceased's name not be indicated, the message "A LOVED ONE" should be used on the bottom panel.

ROAD SIDE MEMORIAL SIGN POLICY/APPLICATION

Department of Engineering – City of Newport News

DRIVE SAFELY IN MEMORY OF

Mail the application to: Director of Engineering, 2400 Washington Avenue, Newport News, Virginia 23607

The following policy concerns the installation of Road Side Memorial signs within the public Right-of-way:

1. The applicant must make a written request, on this form, to the Department of Engineering that includes:

   a. Name of the victim involved in a motor vehicle crash: and
   b. Date of the motor vehicle crash and
   c. Location of the motor vehicle crash and (if possible)
   d. Copy of the Police Crash Report (FR300)

2. The sign will not remain on site more than two years. After this period, the Traffic Operations Division will remove the sign and retain it at the operations center for 30 days.

3. For a roadside memorial sign to remain longer than the two-year period, the applicant must write the Supervisor of Traffic Operations requesting a one-year extension. This extension can be repeated in following years for a total installation period not to exceed 5 years.

4. All memorials shall be erected on the right side of the highway.

If the request is approved, the Department of Engineering will so notify the applicant in writing.

THIS SECTION MUST BE COMPLETED BY THE APPLICANT

Applicant Name: _____ Phone Number: _____
Last, First Middle

Address: _____
Street, Ciy/State Zip

Name of Deceased: _____
Last, First Middle

Date of Crash: _____ Location of Crash: _____

I certify that the information I have furnished is correct:

_____
(Signature of Applicant) (Date)

Check One

I am requesting the:

☐ Drive Safely Sign

☐ Drive Sober Sign

Check One

☐ Place the name of the deceased, as shown, on the sign.

☐ Do not use the name of the deceased, use, "A LOVED ONE".

OFFICE USE ONLY – APPLICANT MUST NOT WRITE IN THIS SECTION

Date completed application received: _____

Application reviewed by: _____

Application approved (circle one) YES NO by: _____ on: _____

If not approved, give reason: _____

If approved: Work Order #: _____ Date: _____

Response to applicant by (Name): _____ Date: _____

ROAD SIDE MEMORIAL SIGN POLICY/APPLICATION

Department of Engineering – City of Newport News

Mail the application to: Director of Engineering, 2400 Washington Avenue, Newport News, Virginia 23607

The following policy concerns the installation of Road Side Memorial signs within the public Right-of-way:

1. The applicant must make a written request, on this form, to the Department of Engineering that includes:
   a. Name of the victim involved in a motor vehicle crash: and
   b. Date of the motor vehicle crash and
   c. Location of the motor vehicle crash and (if possible)
   d. Copy of the Police Crash Report (FR300)
2. The sign will not remain on site more than two years. After this period, the Traffic Operations Division will remove the sign and retain it at the operations center for 30 days.
3. For a roadside memorial sign to remain longer than the two-year period, the applicant must write the Supervisor of Traffic Operations requesting a one-year extension. This extension can be repeated in following years for a total installation period not to exceed 5 years.
4. All memorials shall be erected on the right side of the highway.

If the request is approved, the Department of Engineering will so notify the applicant in writing.

THIS SECTION MUST BE COMPLETED BY THE APPLICANT

Applicant Name: _____ Phone Number: _____
Last, First Middle

Address: _____
Street, Ciy/State Zip

Name of Deceased: _____
Last, First Middle

Date of Crash: _____ Location of Crash: _____

I certify that the information I have furnished is correct:

_____
(Signature of Applicant) (Date)

Check One

I am requesting the:

☐ Drive Safely Sign

☐ Drive Sober Sign

Check One

☐ Place the name of the deceased, as shown, on the sign.

☐ Do not use the name of the deceased, use, "A LOVED ONE".

OFFICE USE ONLY – APPLICANT MUST NOT WRITE IN THIS SECTION

Date completed application received: _____

Application reviewed by: _____

Application approved (circle one) YES NO by: _____ on: _____

If not approved, give reason: _____

If approved: Work Order #: _____ Date: _____

Response to applicant by (Name): _____ Date: _____

SECTION: 3200	SUBJECT: Signage – Handicap Parking Signs

I. PURPOSE:

This program has been developed as a means to provide residential on street parking that is restricted for handicap use only. Although the restricted parking spaces cannot be assigned to an individual property or individual user(s), this policy will allow for the creation of reserved handicap parking spaces located as near as possible to residential properties that meet the criteria established in the application.

II. POLICY:

This hereby establishes policy and procedure, within the limited circumstances described, for the installation of handicapped parking signs on the public street. It applies primarily to Transportation Division employees; however employees in other divisions within the department must be knowledgeable of its contents so that proper referral of queries is accomplished.

III. PROCEDURE:

A. There must be a written application (Form DE 50, attached) to the Director of Engineering that includes:

1) Documentation of a DMV Handicapped license plate or certificate.

2) Doctor's certifications:

- that the applicant's handicap affects his or her ability to walk or walk any significant distance, and
- the expected length of handicap, if not permanent.

B. In order to be eligible for handicapped parking signs, the applicant must not have a driveway to his or her property.

C. The applicant must make a written renewal application to the Department of Engineering annually in the month of December for the handicapped parking signs to remain.

MENDS/SUPERSEDES: Policy Dated 9/23/1994	REFERENCES:	APPROVAL:

D. Location of the handicapped parking signs shall normally be directly in front of the residence of the applicant. The Department of Engineering may consider other factors in determining placement of the signs if such space is not available.

E. Each space shall be identified with at least one handicapped parking sign, as well as a painted handicapped symbol (in blue paint) on the pavement.

IV. IMPLEMENTATION:

If the above conditions are approved, the Department of Engineering will install the handicapped parking signs and will so notify the applicant in writing. Furthermore, the Department of Engineering will notify the Police Department for enforcement of the new parking regulation.

V. REVIEW:

This policy will be reviewed annually during the anniversary month of publication by the Director of Engineering or their designee.

RESIDENTIAL HANDICAPPED PARKING SIGN POLICY/APPLICATION

Department of Engineering – City of Newport News

Mail the application to: Traffic Operations Superintendent, 513 Oyster Point Road, Newport News, Virginia 23602

The following policy concerns the installation of handicapped parking signs on the public street:

1. The applicant must make a written request, on this form, to the Department of Engineering that includes:
   a. Documentation of a DMV handicapped license plate or a certificate: and
   b. A doctor's statement (use space provided below) that handicap affects the applicant's ability to walk or walk any significant distance, along with an indication as to the expected length of the handicap or that the handicap is permanent.
2. To be eligible, the applicant must not have a driveway to his or her property.
3. For the parking signs to remain, the applicant must make a written renewal request to the Department of Engineering, annually, during December. The applicant or a relative must notify the department when the signs are no longer needed.
4. The handicapped parking signs will normally be located directly in front of the applicant's residence. If such space is not available, the Department of Engineering may consider other factors in determining where the signs will be located.

If the request is approved, the Department of Engineering will so notify the applicant in writing. A copy of the letter will be forwarded to the Police Department for enforcement.

THIS SECTION MUST BE COMPLETED BY THE APPLICANT

Name: _____ Phone Number: _____

Last, First Middle

Address: _____

Street, Ciy/State Zip

Is there a driveway? Circle one: YES NO Type of application? Circle one: NEW RENEWAL

☐ Check this block if a copy of handicapped license plate receipt or a DMV certificate is attached. (Not required for renewals if handicap is permanent.)

AND

☐ Check this block and ask your doctor to complete the following (circle number and fill in blanks, if any);

1. Handicap affects applicant's ability to walk or walk any significant distance.
2. Applicant's handicap is expected to last ____ years.
3. Applicant's handicap deemed to be permanent.

I certify that the information I have furnished is correct:

_____

(Signature of Applicant) (Date)

Doctor's Stamp and signature (not required for renewals)

OFFICE USE ONLY – APPLICANT MUST NOT WRITE IN THIS SECTION

Date completed application received: _____

Application reviewed by: _____

Application approved (circle one) YES NO by: _____ on: _____

If not approved, give reason: _____

If approved: Work Order #: _____ Date: _____

Response to applicant by (Name): _____ Date: _____

Date of notification to the Police Department: _____

RESIDENTIAL HANDICAPPED PARKING SIGN POLICY/APPLICATION

Department of Engineering – City of Newport News

Mail the application to: Traffic Operations Superintendent, 513 Oyster Point Road, Newport News, Virginia 23602

The following policy concerns the installation of handicapped parking signs on the public street:

1. The applicant must make a written request, on this form, to the Department of Engineering that includes:
   a. Documentation of a DMV handicapped license plate or a certificate: and
   b. A doctor's statement (use space provided below) that handicap affects the applicant's ability to walk or walk any significant distance, along with an indication as to the expected length of the handicap or that the handicap is permanent.
2. To be eligible, the applicant must not have a driveway to his or her property.
3. For the parking signs to remain, the applicant must make a written renewal request to the Department of Engineering, annually, during December. The applicant or a relative must notify the department when the signs are no longer needed.
4. The handicapped parking signs will normally be located directly in front of the applicant's residence. If such space is not available, the Department of Engineering may consider other factors in determining where the signs will be located.

If the request is approved, the Department of Engineering will so notify the applicant in writing. A copy of the letter will be forwarded to the Police Department for enforcement.

THIS SECTION MUST BE COMPLETED BY THE APPLICANT

Name: _____ Phone Number: _____
Last, First Middle

Address: _____
Street, Ciy/State Zip

Is there a driveway? Circle one: YES NO Type of application? Circle one: NEW RENEWAL

☐ Check this block if a copy of handicapped license plate receipt or a DMV certificate is attached. (Not required for renewals if handicap is permanent.)

AND

☐ Check this block and ask your doctor to complete the following (circle number and fill in blanks, if any);
1. Handicap affects applicant's ability to walk or walk any significant distance.
2. Applicant's handicap is expected to last ____ years.
3. Applicant's handicap deemed to be permanent.

I certify that the information I have furnished is correct:

_____
(Signature of Applicant) (Date)

Doctor's Stamp and signature (not required for renewals)

OFFICE USE ONLY – APPLICANT MUST NOT WRITE IN THIS SECTION

Date completed application received: _____

Application reviewed by: _____

Application approved (circle one) YES NO by: _____ on: _____

If not approved, give reason: _____

If approved: Work Order #: _____ Date: _____

Response to applicant by (Name): _____ Date: _____

Date of notification to the Police Department: _____

SECTION: 3300	SUBJECT: Signage – School Zones

I. PURPOSE:

The requirements contained herein have been developed to provide clear guidance on the typical signage and marking requirements to adequately identify school zones for the safety of the pedestrians crossing the roadway in the area of our local (K-12) schools in accordance with federal standards and section 46.2-873 of the state driving code. Regardless of the school location, the best way to achieve effective traffic control is through the uniform application of realistic policies, practices, and standards developed through engineering judgment or studies.

Pedestrian safety depends upon public understanding of accepted methods for efficient traffic control. This principle is especially important in the control of pedestrians, bicycles, and other vehicles in the vicinity of schools. Neither pedestrians on their way to or from school nor other road users can be expected to move safely in school areas unless they understand both the need for traffic controls and how these controls function for their benefit. Procedures and devices that are not uniform might cause confusion among pedestrians and other road users, prompt wrong decisions, and contribute to crashes. To achieve uniformity of traffic control in school areas, comparable traffic situations need to be treated in a consistent manner.

A uniform approach to school area traffic controls assures the use of similar controls for similar situations, which promotes appropriate and uniform behavior on the part of motorists, pedestrians, and bicyclists. However, engineering measures alone do not always result in the intended change in student and road user behavior.

II. DEFINITIONS

School: A public or private educational institution recognized by the state education authority for one or more grades K through 12.

School Zone: A designated roadway segment approaching, adjacent to, and beyond school buildings or grounds, or along which school related activities occur.

III. GENERAL:

A. All signage and pavement markings used in a school zone shall meet the current Manual on Uniform Traffic Control Devices (MUTCD). This is to include size, color, reflectorization, height, lettering and placement.

B. Markings have definite and important functions in a proper scheme of school area traffic control. In some cases, they are used to supplement the regulations or warnings provided by other devices, such as traffic signs or signals. In other instances, they are used alone and produce results that cannot be obtained by the use of any other device. In such cases they serve as an effective means of conveying certain regulations, guidance, and warnings that could not otherwise be made clearly understandable.

C. Crosswalks should be marked at all intersections on established routes to a school where there is substantial conflict between motorists, bicyclists, and student movements; where students are encouraged to cross between intersections; where students would not otherwise recognize the proper place to cross; or where motorists or bicyclists might not expect students to cross.

D. Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign.

E. Because non-intersection school crossings are generally unexpected by the road user, warning signs should be installed for all marked school crosswalks at non-intersection locations. Adequate visibility of students by approaching motorists and of approaching motorists by students should be provided by parking prohibitions or other appropriate measures.

F. Based upon a request from the school administrator or the school board and with an engineering study, a reduced School Zone Speed Limit with flashers may be installed in advance to a school zone.

G. The establishment of the speed limit to be used for a reduced speed limit school zone shall be established through an engineering study, but shall not exceed 25 miles per hour.

H. The maximum speed limit in school zones in residential areas may be decreased to 15 miles per hour provided the normal operating speed is posted for 25 miles per hour and there is an engineering study to justify this reduction.

I. A School Speed Limit sign with or without flasher may not be installed if the posted speed is the same as the normal operating speed limit. This sign assembly is not to be used to reinforce the existing posted speed limit.

J. Based on an engineering study, additional School Speed Limit and Flashers may be installed at appropriate locations to identify to side streets that enter into a school zone what the appropriate speed limit is and when it is in effect.

K. When right of way is limited or as determined by an engineering study the school speed limit sign and flashers may be mounted over the roadway in lieu of ground mounting. When mounted over the roadway, MUTCD requirements for clearance of traffic signals shall be observed.

L. The minimum height, measured vertically from the bottom of the sign assembly (to include flashers on a S5-1 sign) to the top of the curb, or in the absence of curb, measured vertically from the bottom of the assembly to the elevation of the near edge of the traveled way, of signs installed at the side of the road, shall be 7 feet. If the assembly overhangs a sidewalk that is at a different elevation as the top of curb (or traveled way) a minimum clearance of 7' shall be maintain between the assembly and the sidewalk.

M. The Maximum height, measured vertically from the top of the sign assembly (to include flashers on a S5-1 sign) to the top of the curb, or in the absence of curb, measured vertically from the top of the assembly to the elevation of the near edge of the traveled way, of signs installed at the side of the road, shall be 15 feet.

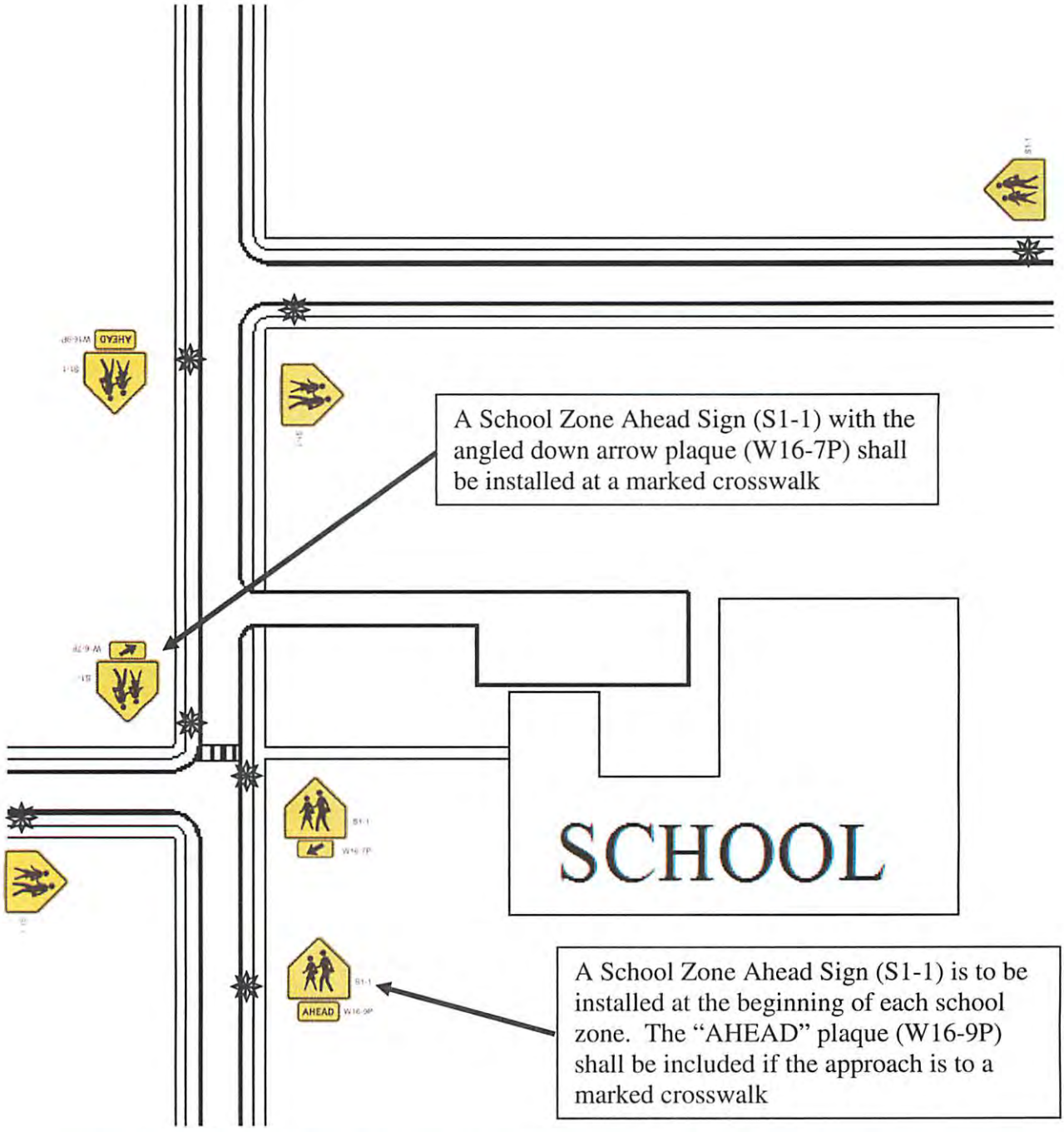
N. A confirmation light or device to indicate that the S5-1 sign flashers are in operation should be considered, to aid in enforcement, for inclusion on the back of the S5-1 School Speed Limit sign assembly.

O. The signal indications for the S5-1 School Speed Limit sign shall have a nominal diameter of not less than 8 inches or as indicated in the current MUTCD.

P. Given the age of pedestrians crossing at marked school crosswalks, school crosswalks shall be a high visibility design consisting of the standard 6" wide crosswalk marking with the supplemental longitudinal lines. Longitudinal lines shall be 12 to 24 inches wide and separated by gaps of 12 to 60 inches. The design of the lines and gaps should avoid the wheel paths if possible, and the gap between the lines should not exceed 2.5 times the width of the longitudinal lines.

IV. TYPICAL SCHOOL ZONE – WITHOUT REDUCED SPEED ZONE:

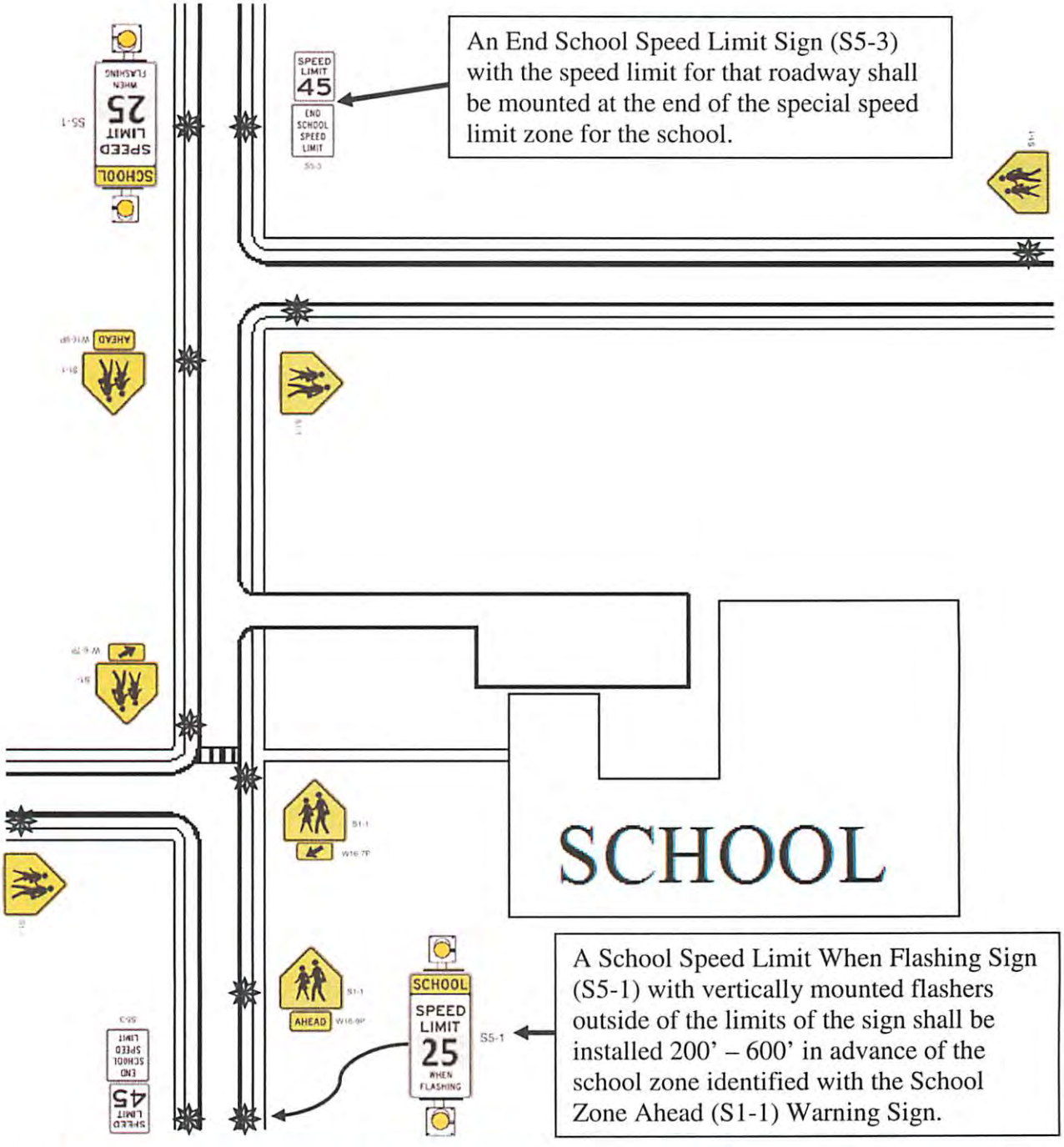
Use the detail below to determine the typical SCHOOL ZONE TRAFFIC CONTROL PLAN.



SECTION: 3300	SUBJECT: Signage – School Zones

TYPICAL SCHOOL ZONE – WITH REDUCED SPEED ZONE:

Use the detail below to determine the typical SCHOOL ZONE TRAFFIC CONTROL PLAN.



MENDS/SUPERSEDES:	REFERENCES:	APPROVAL:

SECTION: 3400 A	SUBJECT: Signage – Street Name APPENDIX A

APPENDIX A:

A. Sec. 38-215. Street names required; displayed.

All streets within the city, both public and private, shall be designated by street names, and said street names shall be prominently displayed on easily readable signs located at all street intersections.

(Ord. No. 4107-90, <sec> 1)

B. Sec. 38-216. Naming of streets; approval.

Except as otherwise provided, it shall be the responsibility of the owner(s) of private streets to choose names therefor; and in the absence of such a request, a name shall be chosen by the city manager or his designee. Public streets shall hereafter be named by ordinance passed by city council, or by designation upon subdivision plats which have been approved and recorded in accordance with the City Code.

All street names within the city, both public and private, shall first be requested from and approved by the city manager or his designee. The criteria for approval or disapproval of a requested name shall be that such names shall not sound like, be spelled like or be easily confused with existing street names and that such names shall not contain more than ten (10) letters exclusive of such symbols as St., Ave., or other abbreviations. This section shall not apply to street names existing on the date of the adoption of the ordinance first setting forth this section for which signs had been previously erected displaying such names.

(Ord. No. 4107-90, <sec> 1)

C. Sec. 38-217. Street identification signs; maintenance of street name signs.

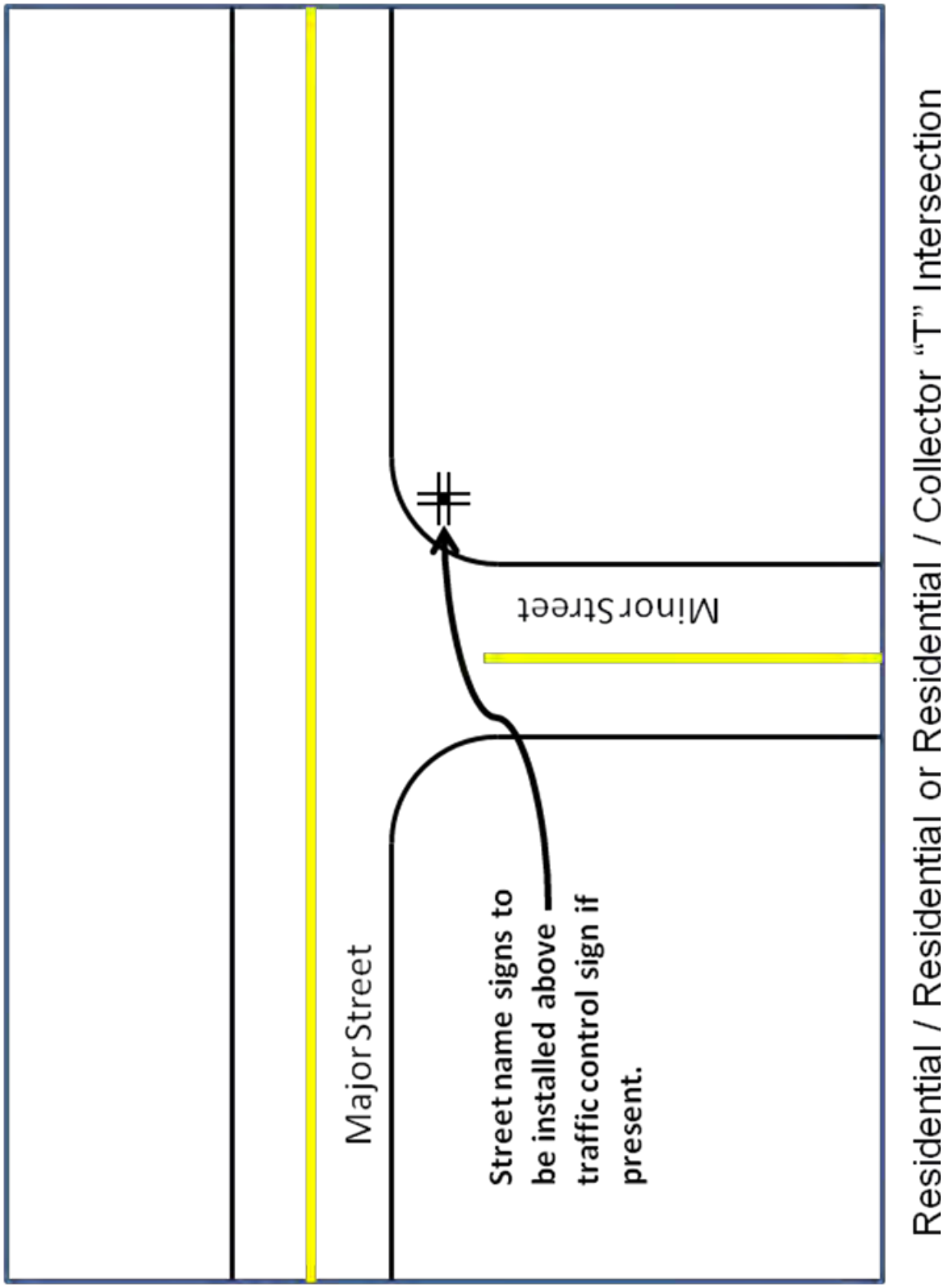
Street identification signs shall be installed at each public or private street intersection at the expense of the owner. Such signs shall be provided by the city and the owner shall be charged the city's cost for producing the signs.

Street name signs shall be maintained to ensure that they are easily readable. Unless otherwise provided, maintenance of signs designating private street names shall be the responsibility of the owner(s) of the private street. Public street name signs and private street name signs at intersections with public streets will be maintained by the city.

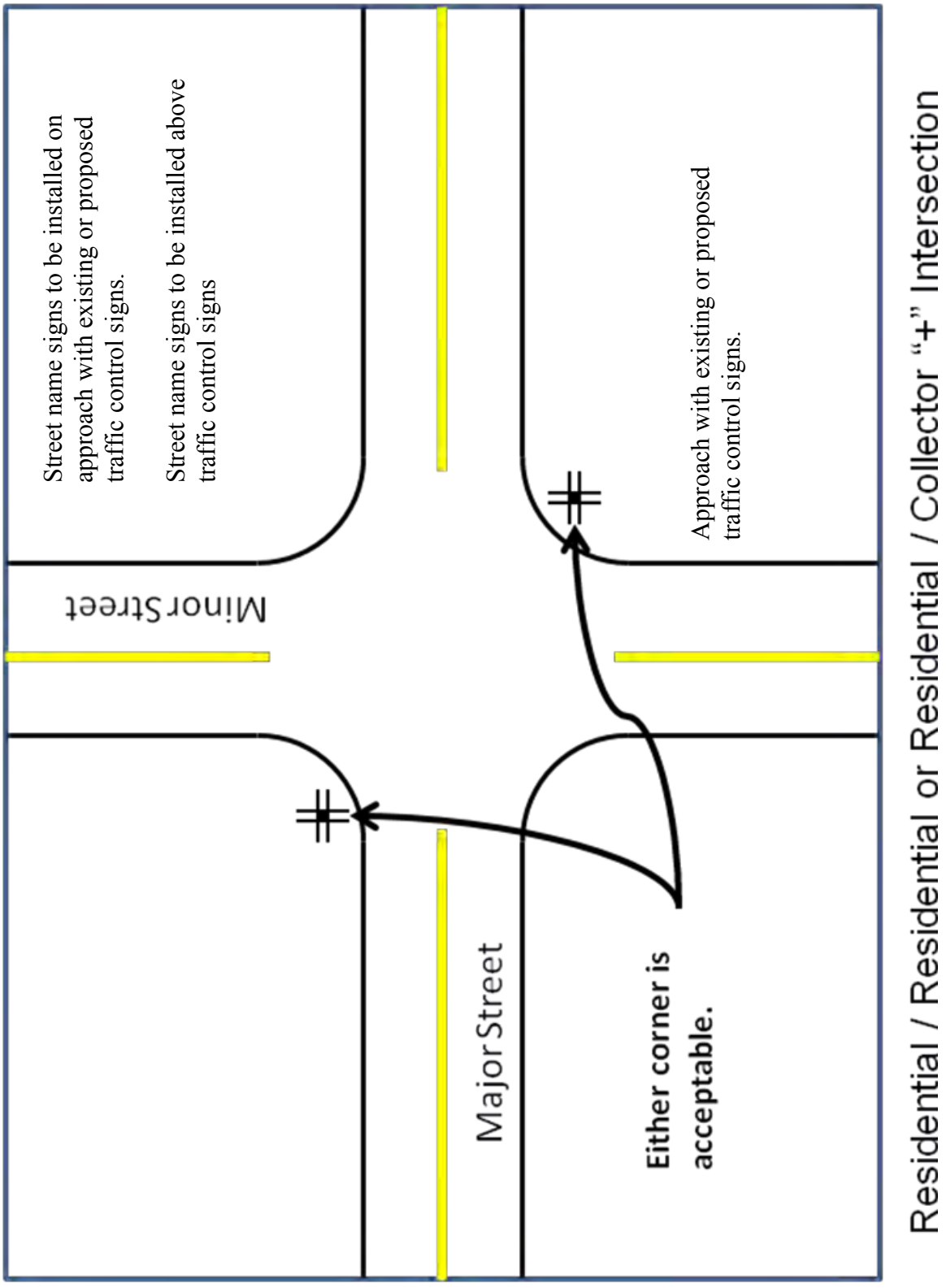
(Ord. No. 4107-90, <sec> 1)

SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B

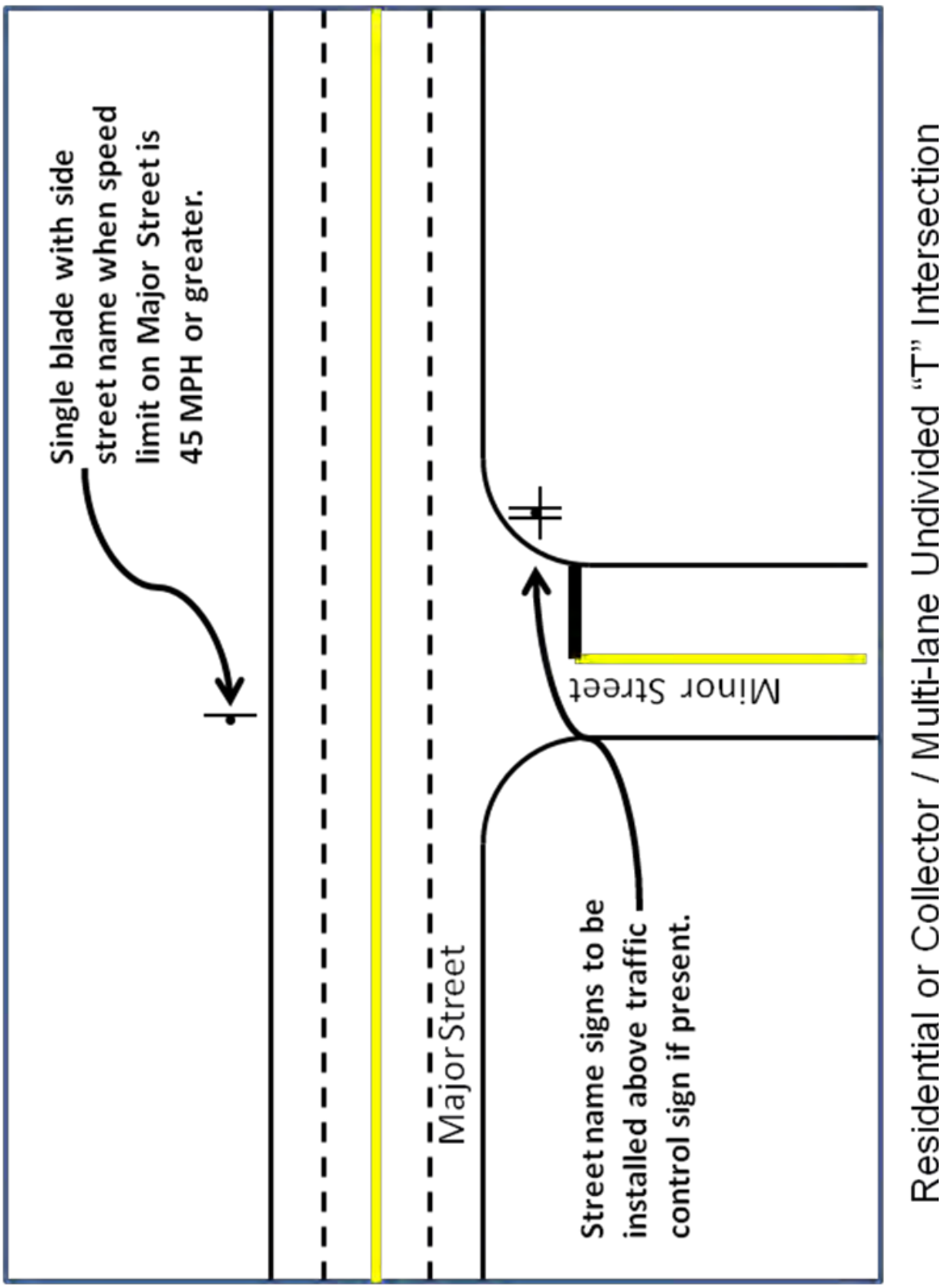
APPENDIX B:



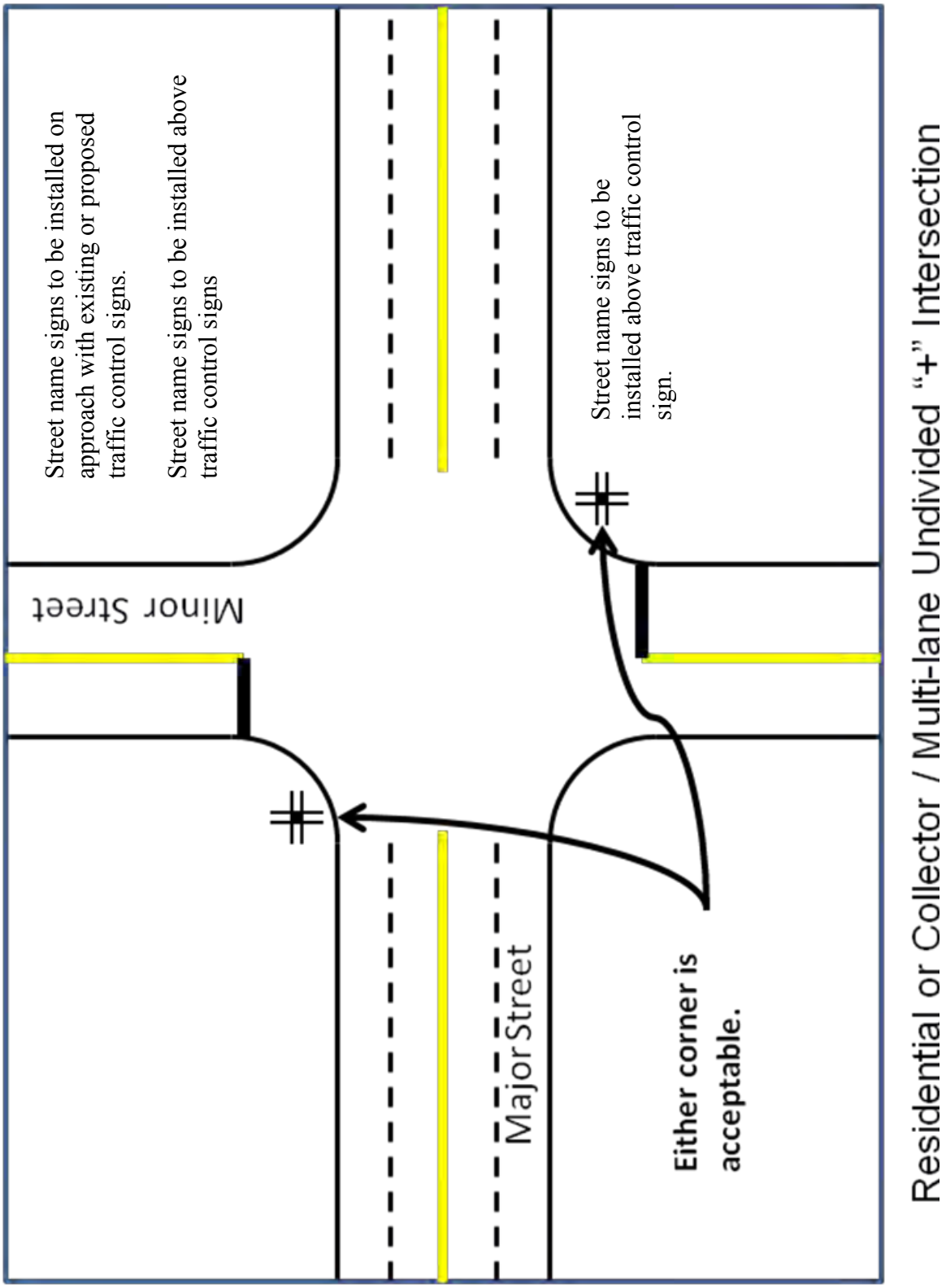
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



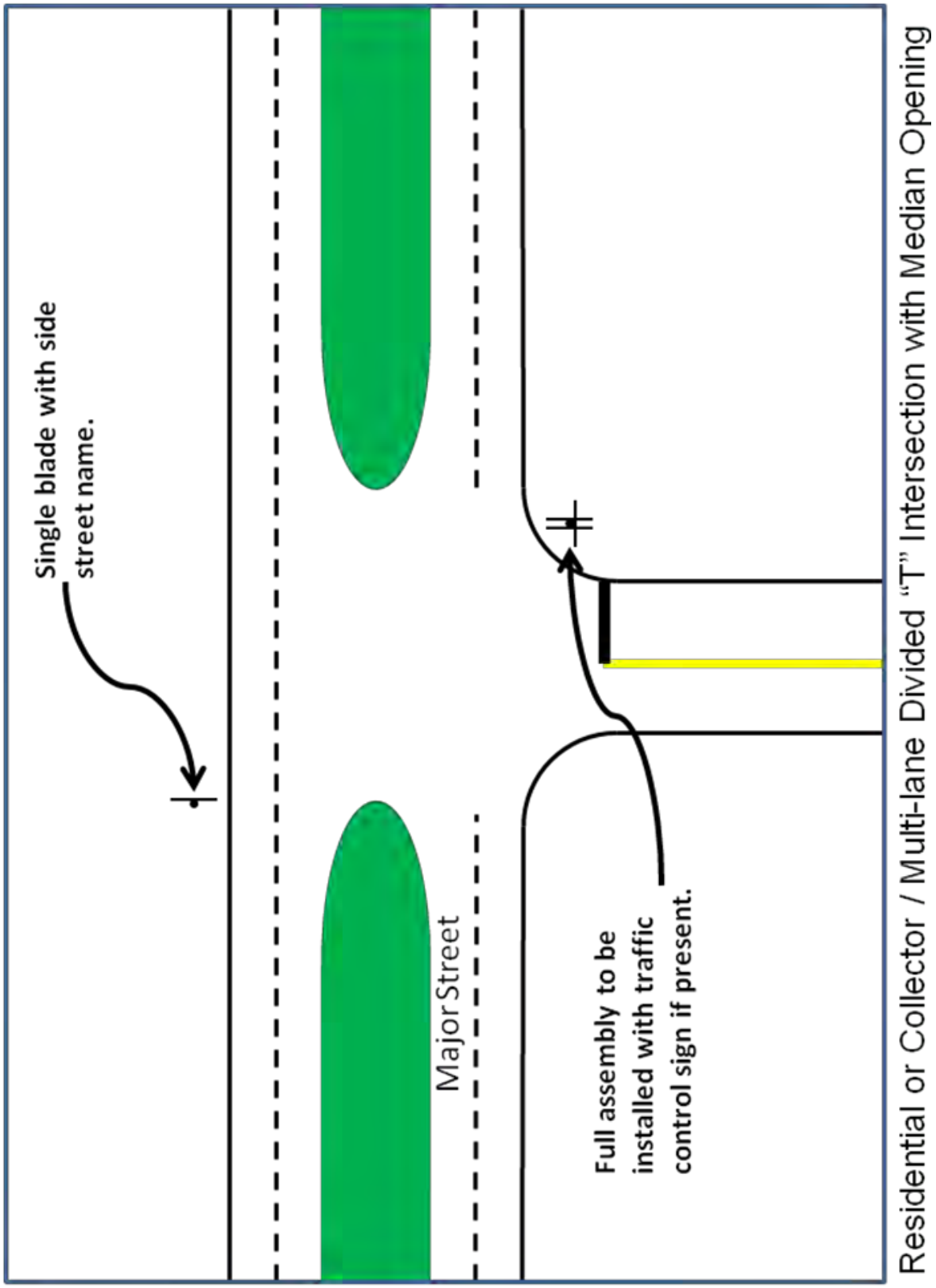
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



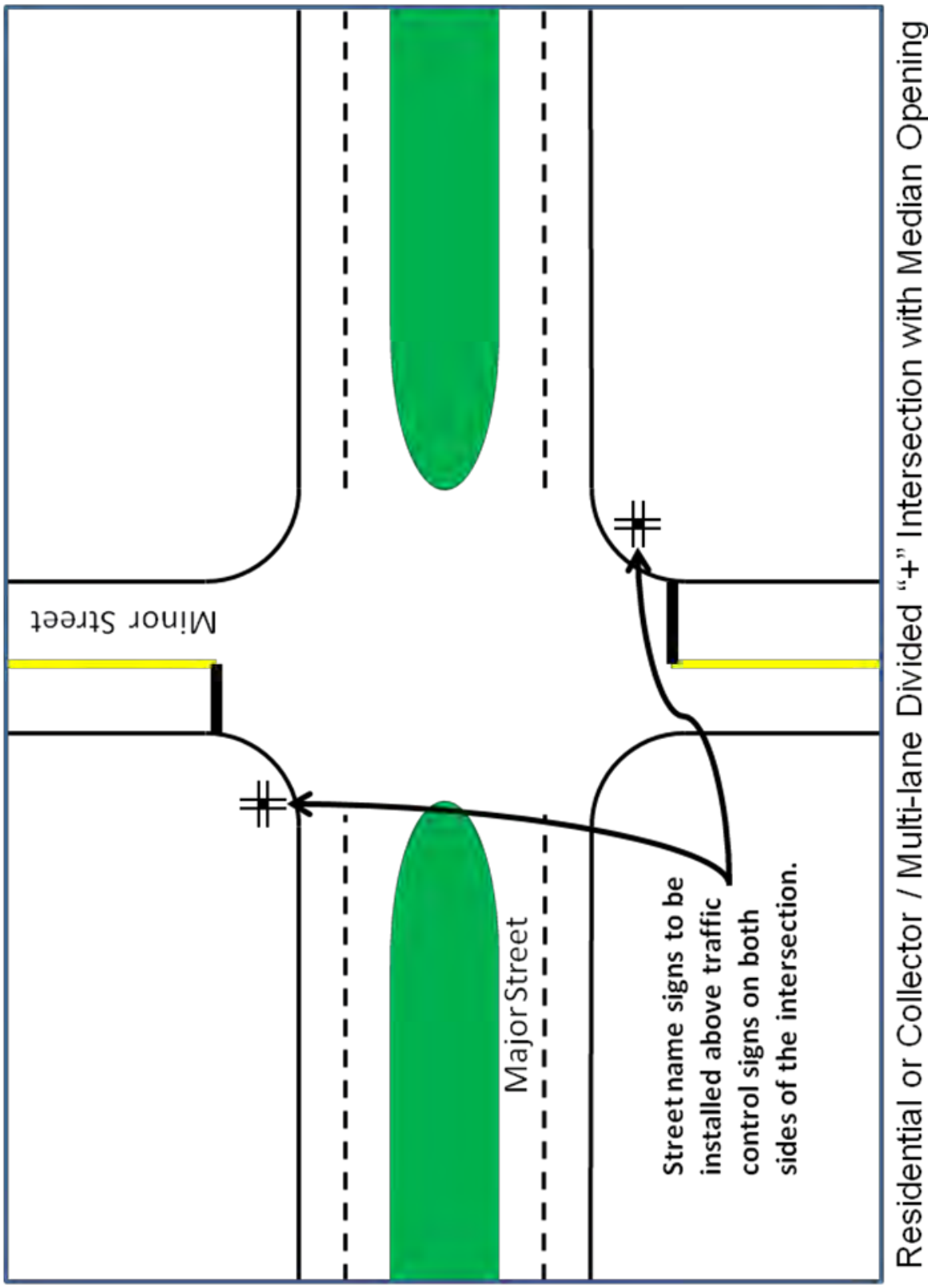
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



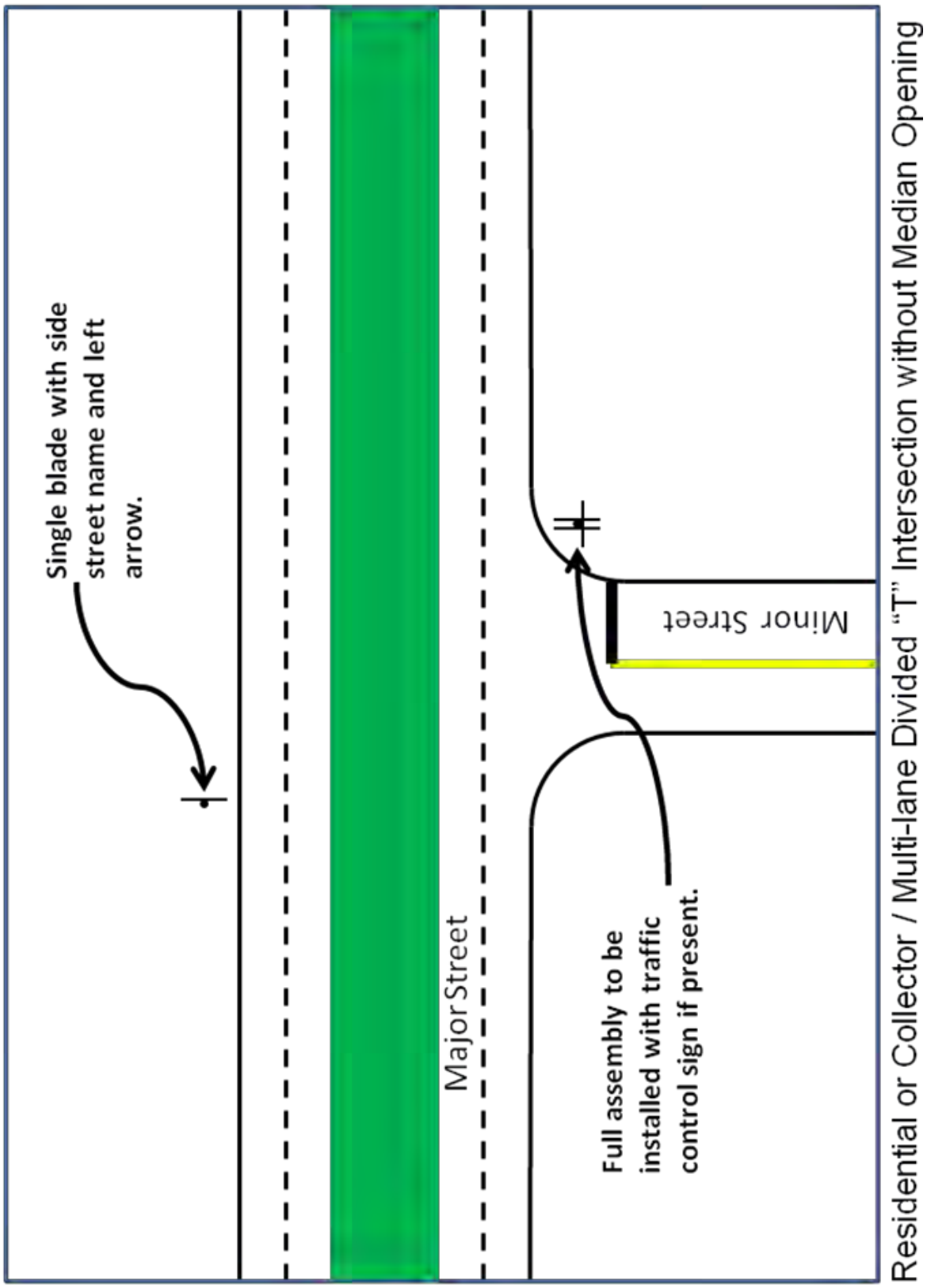
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



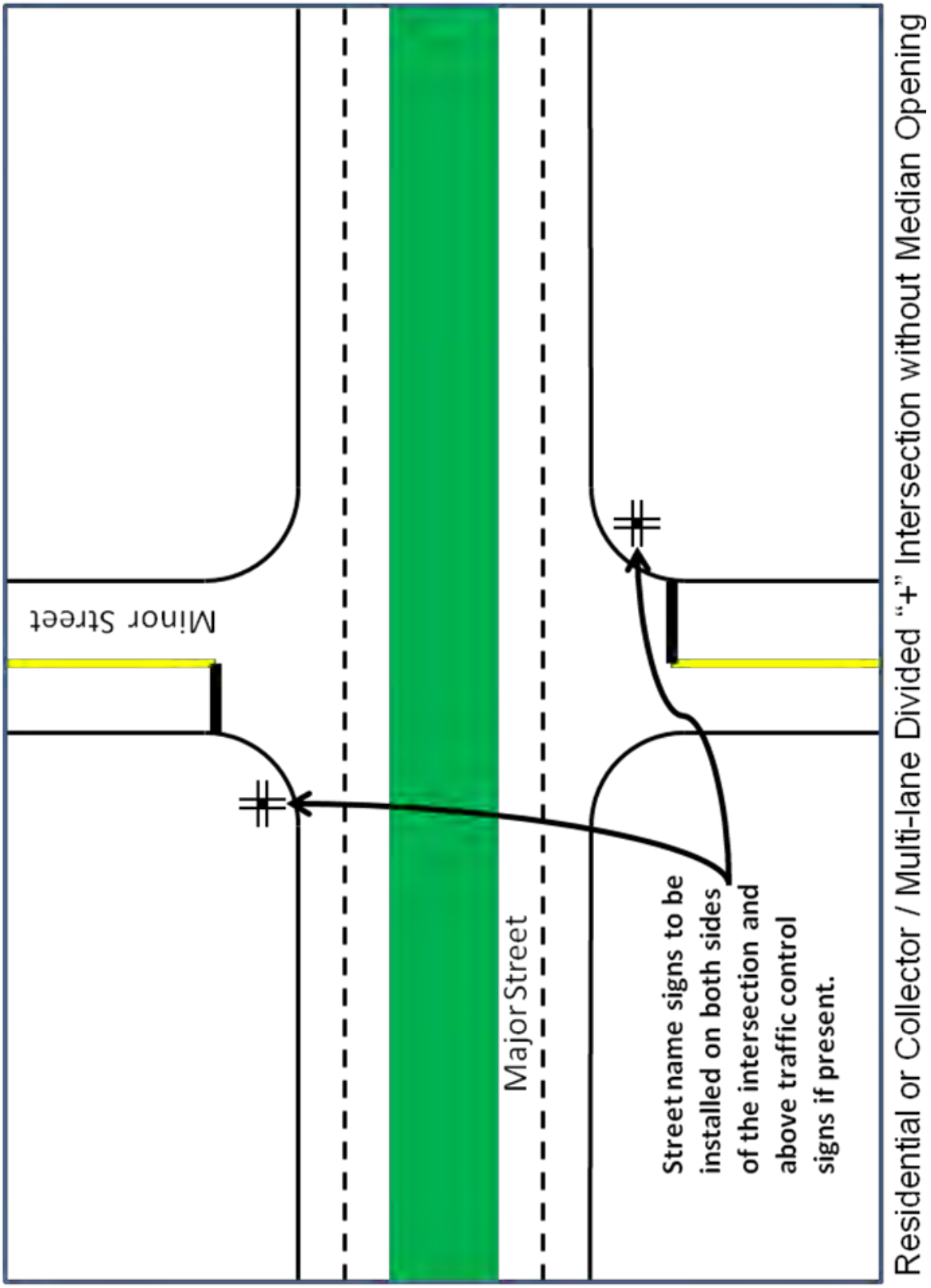
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



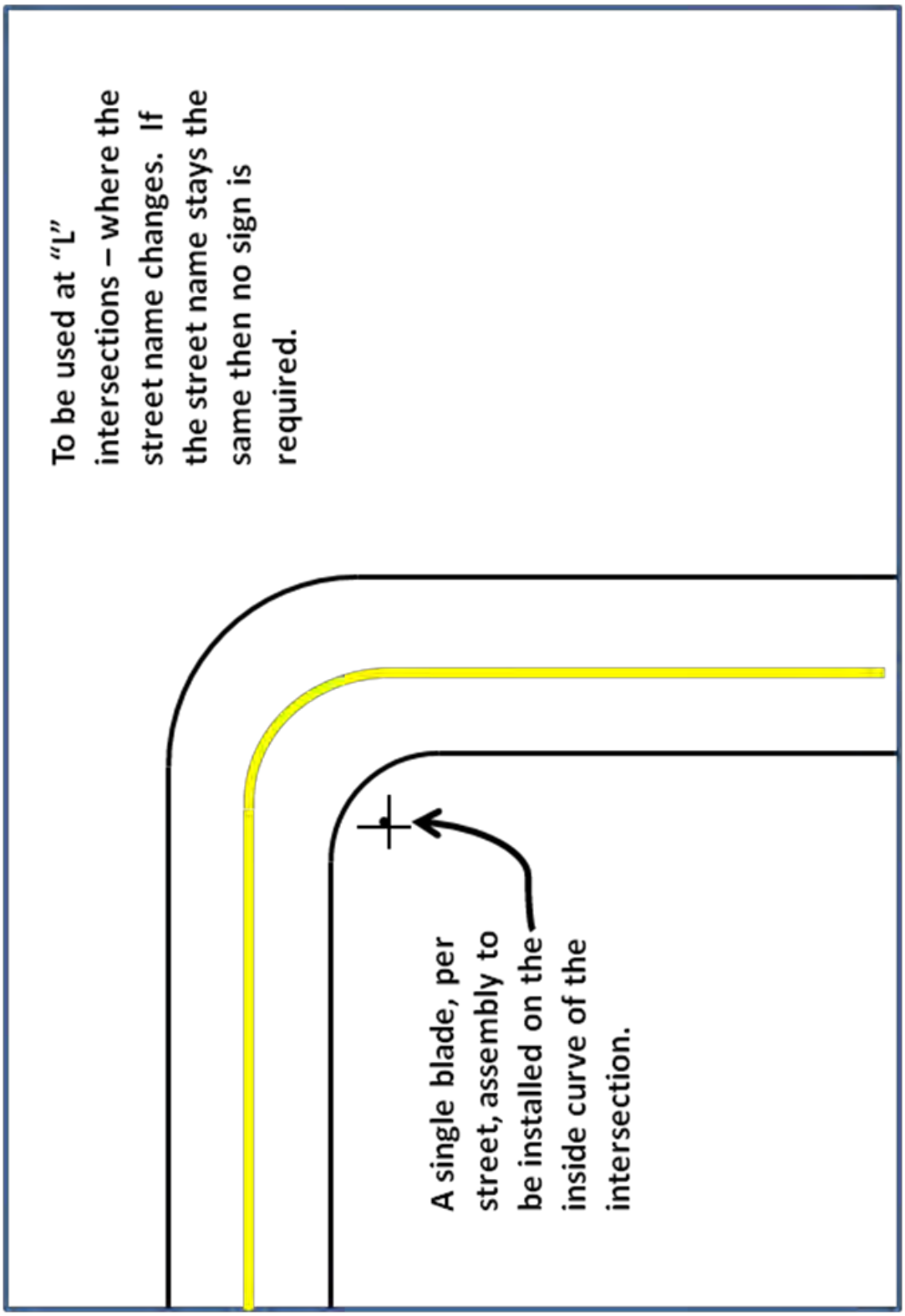
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B

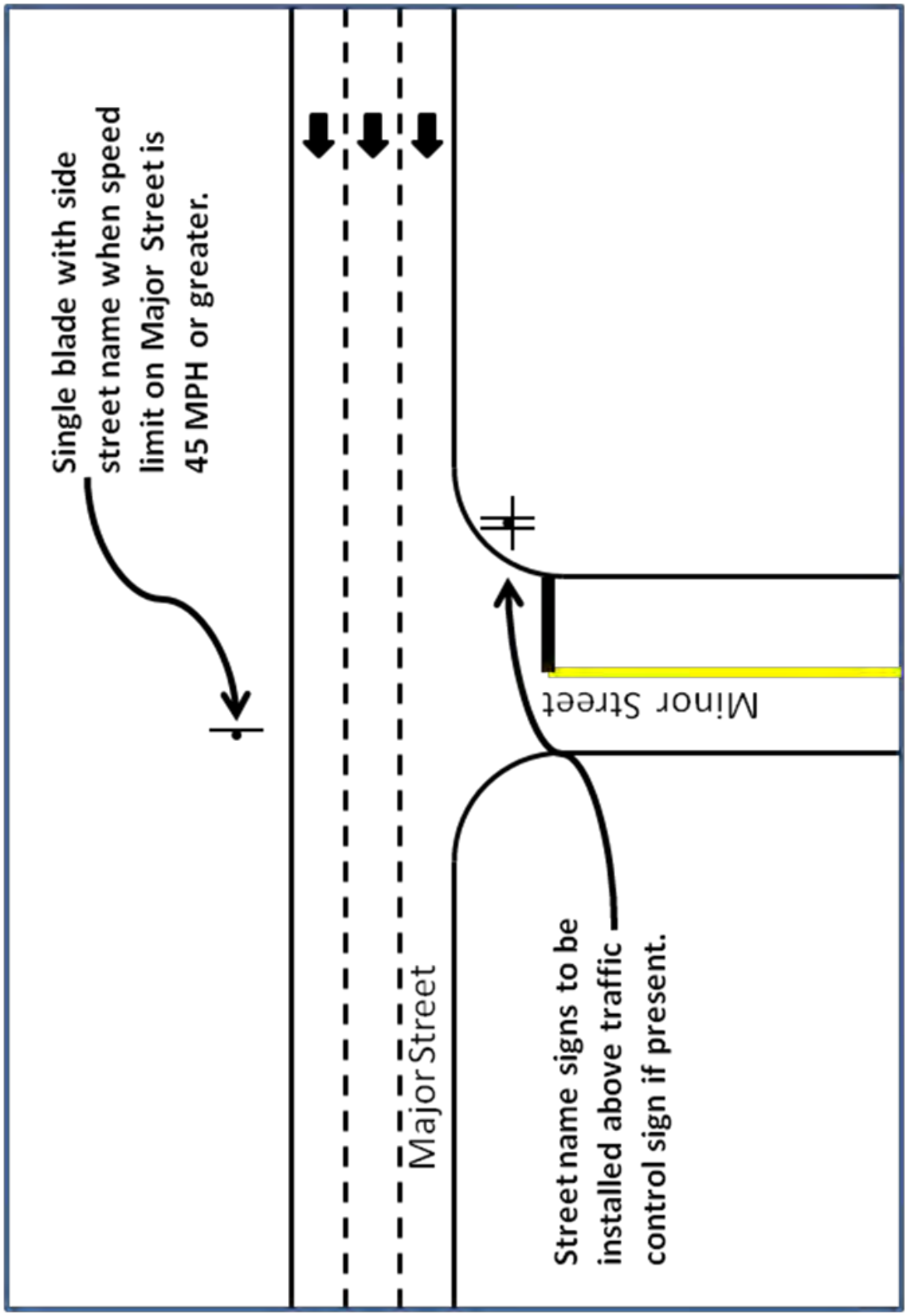


SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B

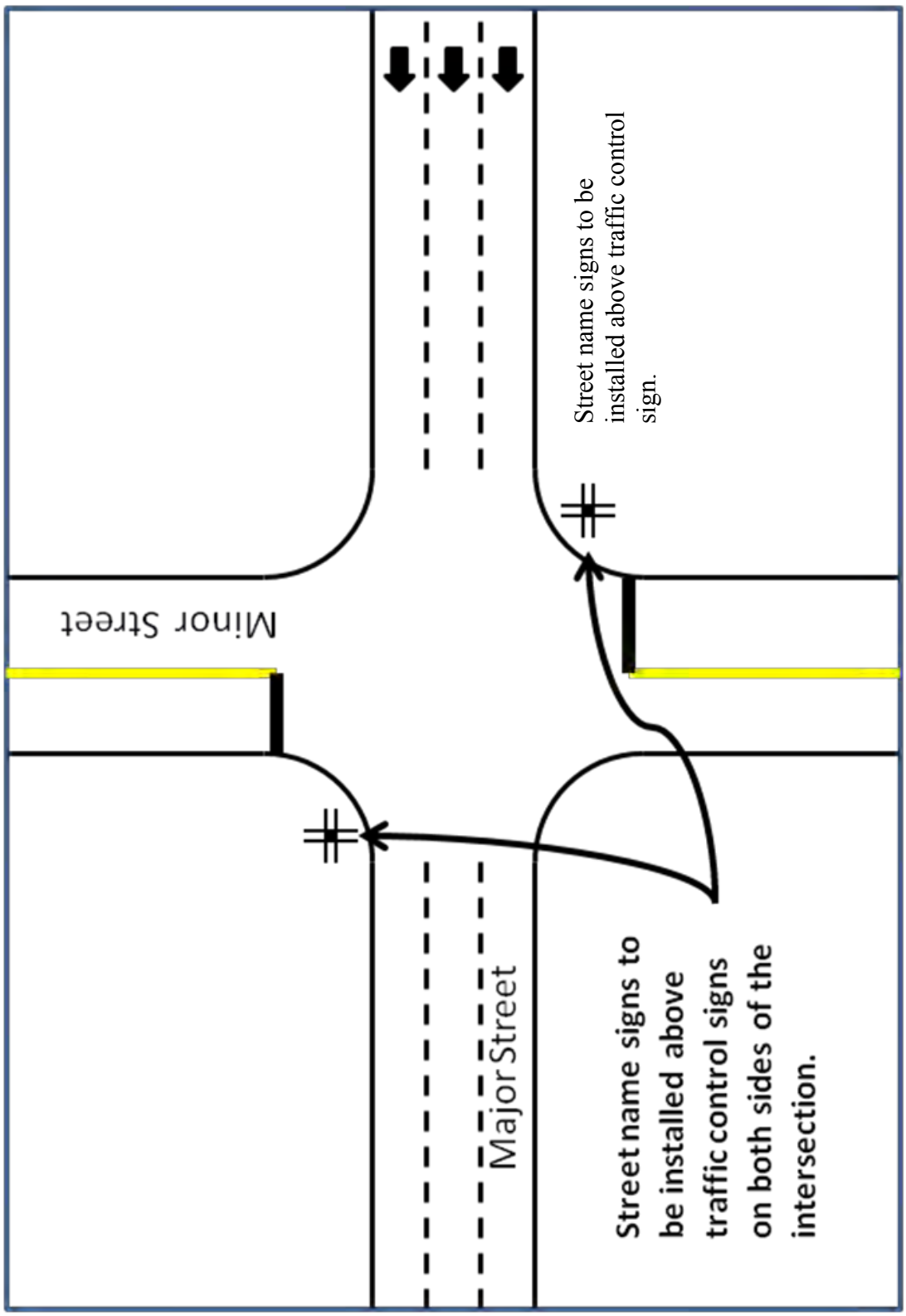


"L" Intersection

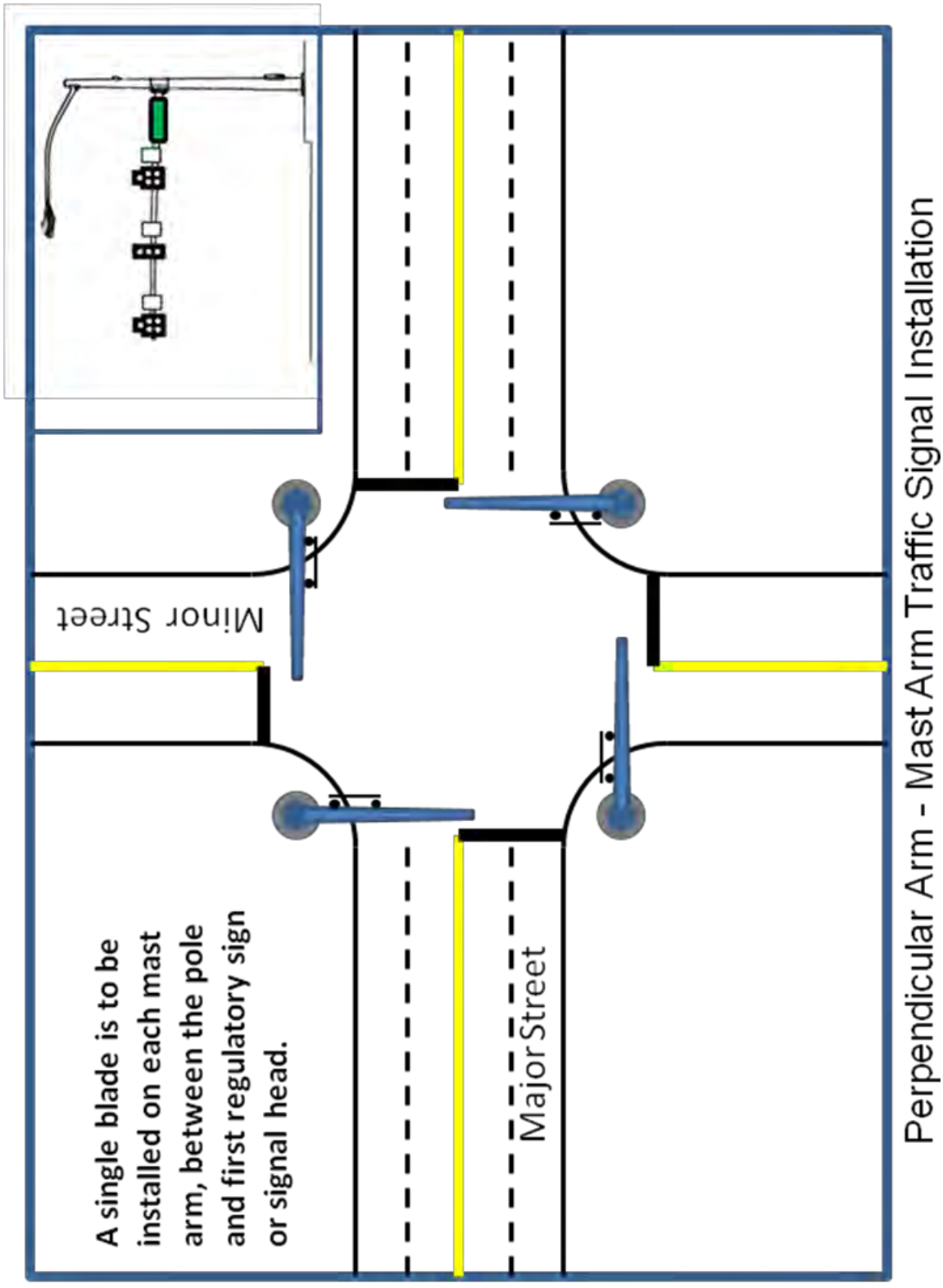
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



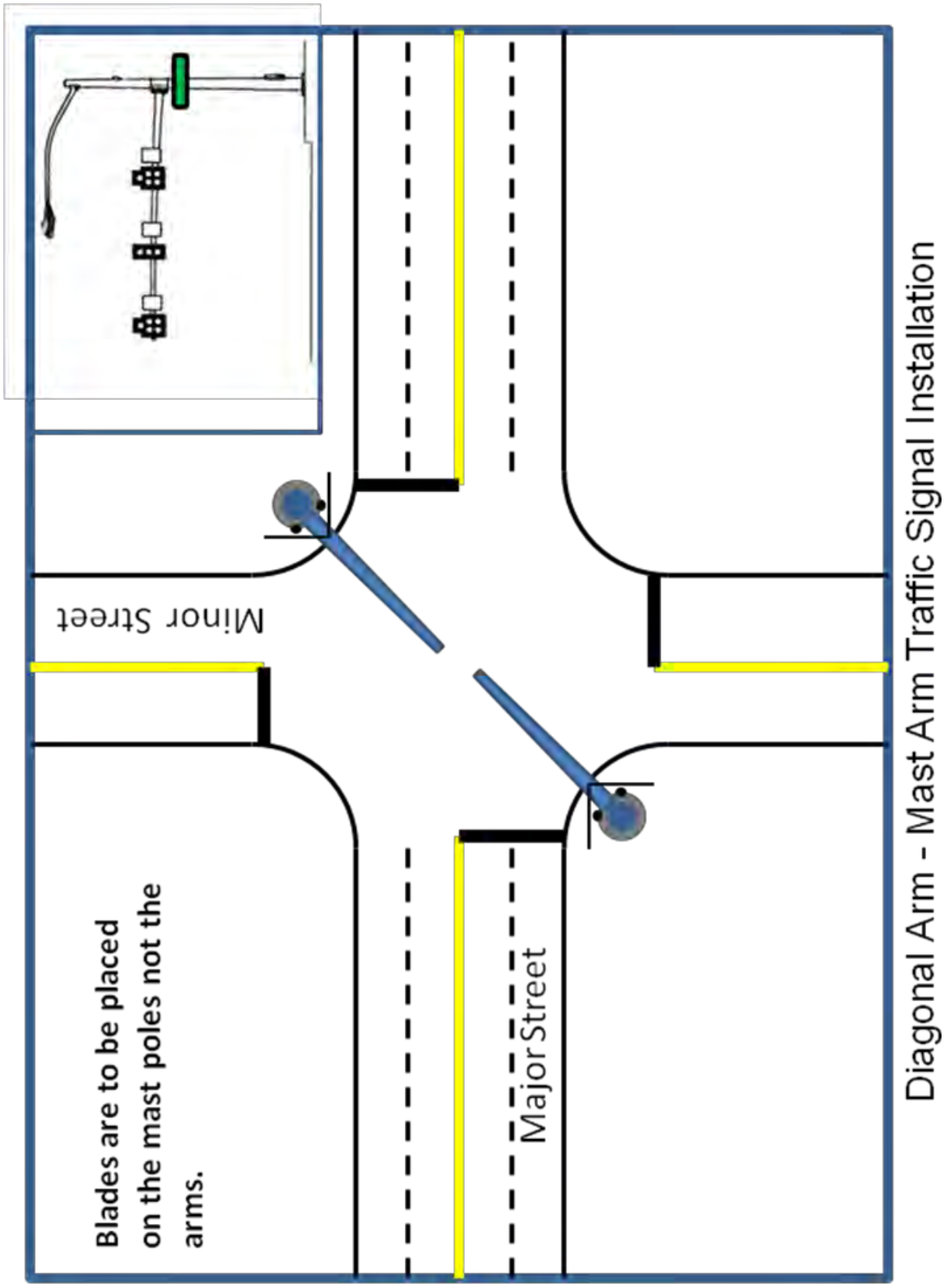
SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



SECTION: 3400 B	SUBJECT: Signage – Street Name APPENDIX B



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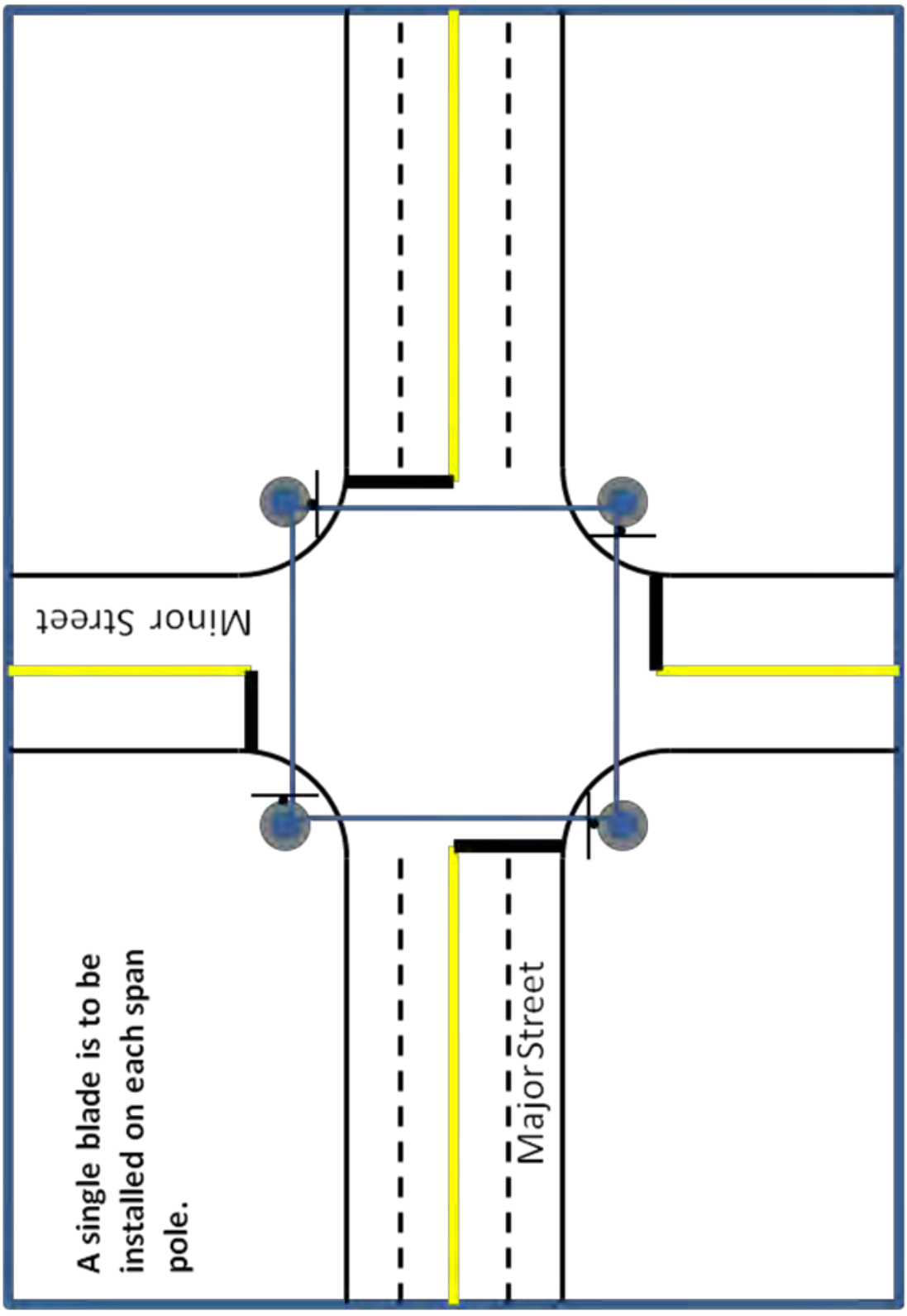

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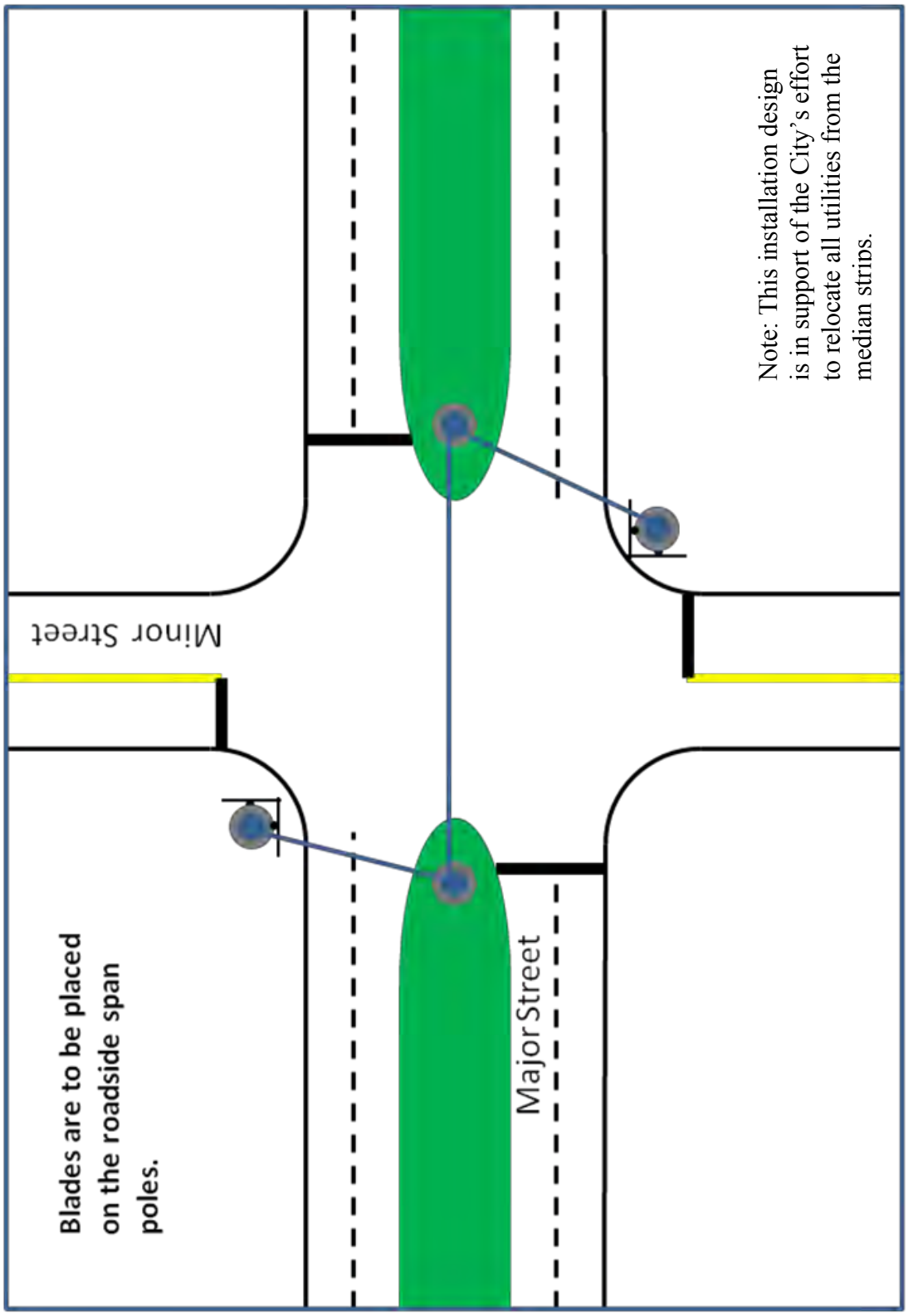

"Z" Design Span Wire Traffic Signal Installation