CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING SIGNAGE & PAVEMENT MARKINGS GUIDELINES

Manual on Uniform Traffic Control Devices
Supplement for
The City of Colorado Springs

Revised 11/16/2009

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Signage and Pavement Marking Guidelines
City of Colorado Springs

Preface

This field guide is to supplement the Manual on Uniform Traffic Control Devices (MUTCD) and is provided as a guide for any contractor or agency installing or performing maintenance of signs and markings within the city limits of Colorado Springs. Due to the number of companies or agencies installing and/or upgrading signs and markings; the City of Colorado Springs has found it necessary to prepare this guide in order to maintain quality and uniformity. This document also provides useful information on points of contact with the numerous agencies in Colorado Springs. The goal of this supplement is to provide typical standards for signs and marking to minimize confusion and provide uniformity, and increase safety for the citizens of Colorado Springs.

Revised 11/16/2009

Signage and Pavement Marking Guidelines
City of Colorado Springs

Introduction

Drivers have come to expect a consistent level of quality on the roadways they travel. Signs and Markings have a very important function in this expectation. The signs and markings on our roadway today provide the road user with visual information pertaining to regulatory issues (speed limits, no parking, stop conditions, etc.), warnings or roadway conditions (curve ahead, approaching intersection, pedestrians, construction zones, etc.) and guides/directions (interstate identification, city limits, distance to next interchange, scenic route, etc.) For these reasons, as well as the liability the city, contractor and other agencies assume, all striping and signage shall only be used where warranted by field studies as well as federal, state, and local regulations. This supplemental manual has been created under the authority of the City of Colorado Springs Engineering Division / Traffic Engineering and is intended to be a supplement of the MUTCD. No deviation from this manual or the MUTCD shall be allowed unless under the direct approval of the City of Colorado Springs Engineering Division / Traffic Engineering.

Potential users of this handbook include a wide range of individuals and agencies with varying levels of expertise and training. The objective is to provide the users with sufficient background to assist them in the installation and maintenance of roadway signage and pavement markings. It remains the contractor and/or agencies responsibility to assure that all materials used in the installation of roadway signage and pavement markings meet or exceed the City of Colorado Springs' standards. Furthermore, no work shall be undertaken within the city's right-of-way without proper notification of the city and the issuance of appropriate permits.

Signage and Pavement Marking Guidelines
City of Colorado Springs

Objectives

Safety: signs and markings may be used to warn the motorist of condition(s) he/she may not be expecting, such as:

- Potential hazards – curves, intersections, grades, truck crossings, etc.
- Major changes in roadway character – road narrows, one-lane Bridge, pavement ends, etc.
- Obstructions – bump, dip, fixed objects, low clearances, etc.
- Locations where hazards may exist under certain circumstances – schools, rockslide areas, slippery when wet, railroad crossing, etc.
- Advise driver of appropriate action – advisory speed limit, merging traffic, etc.

Uniformity: uniformity in the use of signs and markings is becoming more important with increasing demands on existing roadways. Present day driving conditions require signs and markings that a driver can see, recognize and understand quickly. Uniformity in application promotes driver observance and avoids excessive or unwarranted use of signs and markings.

General Notes: Signage and Pavement Markings

1. Installation of all striping, signs and pavement markers shall be the responsibility of the contractor.

2. The contractor shall be responsible for all removal of existing pavement markings (scarring of pavement is not permitted). At no time will it be acceptable to paint over existing pavement markings.

3. Contractor shall be responsible for overlaying or chip sealing roadway, if scarring occurs during removal of existing or temporary pavement markings. The City Traffic Engineer will determine method of pavement repair.

4. All striping and signing shall conform to the most recent adopted edition of the following manuals and their supplemental amendments:
   - Manual on Uniform Traffic Control Devices (MUTCD)
   - City of Colorado Springs Signage and Pavement Marking Guidelines
   - City of Colorado Springs Standard Specifications
   - City of Colorado Springs Public Works Design Manual

5. All signing and striping is subject to the approval of the City Traffic Engineer prior to installation and/or removal.

6. Contractor shall remove all conflicting striping, pavement markings and legends by hydro blasting, sandblasting and/or grinding. Any debris shall be promptly removed by the contractor.

7. Sign posts shall be installed with a minimum of 1 ¾" x 1 ¾" x 10' square perforated steel square tubing with a 2"x 2"x 3' sleeve or a 2"x 2"x 10' square perforated steel square tubing per City of Colorado Springs standard. Street name signs measuring 9" or taller shall be mounted on a 2"x 2"x 10' square perforated steel tubing with sleeve per city of Colorado Springs standard.

8. All traffic signs shall have a minimum of High Intensity Grade Sheeting.

9. Any deviation from the Signage and Pavement Marking Plans shall be approved by the Engineer of Work and the City Traffic Engineer prior to any changes being made in the field.

10. All signs shown on the Signage and Pavement Marking Plans shall be new signs provided and installed by the contractor, except for existing signs specifically indicated to be reset, relocated or to remain.

11. Striped crosswalks shall have an inside dimension of 10 feet and continental crosswalks shall have a minimum length of 6 feet and maximum length of 10 feet per set requirements unless indicated otherwise.

12. All limit lines/stop lines, crosswalk lines, pavement legends, and arrows (except within bike lanes) shall be a minimum of 90mil thickness thermoplastic or preform plastic tape.

13. All longitudinal lines shall be a minimum of 15mil thickness epoxy.

14. Contractor to deliver all removed signs to the City of Colorado Springs Signs/Markings Shop at 404 Fontanero Street, (719) 385-6721.

15. Contractor shall notify City Traffic Engineer at (719) 385-5908 a minimum of five (5) working days prior to and upon completion of Signage and Pavement Markings installed.

General Notes: Contractor Responsibilities

1. Before excavating, contractor shall verify location of underground utilities.

2. Contractor shall be responsible for any monumentation and/or benchmarks which will be disturbed or destroyed by construction. Such points shall be referenced and replaced with appropriate monumentation by a registered civil engineer authorized to practice land surveying.

3. Approval of these plans by the City Engineer does not authorize any work to be performed until a permit has been issued by City Engineering Inspections.

4. The approval of these plans or issuance of a permit by the City of Colorado Springs does not authorize the sub divider and owner to violate any federal, state or city laws, ordinances, regulations, or policies.

5. The contractor shall be responsible for all new, temporary and existing traffic signs from the start of the construction project until acceptance by City Traffic Engineering.

6. All traffic signs, pavement markings, and traffic signals shall meet or exceed M.U.T.C.D. standards.

7. The contractor shall not remove any existing signs, pavement markings or traffic signals during the project without signed authorization from City Traffic Engineering Inspector assigned to the project.

8. Contractor shall prepare a detailed Traffic Control Plan, submit to City Traffic Engineering for approval, and obtain appropriate permits in accordance with the "Traffic Controls for Street Construction, Utility Work and Maintenance Operations", M.U.T.C.D. supplement for the City of Colorado Springs (most current revision).

9. The contractor shall be responsible for all work zone traffic control. Contractor shall be responsible for furnishing, installing and maintaining the temporary traffic control devices throughout the duration of the project.

10. The contractor shall be responsible for all new, temporary and existing traffic signal modifications.

Street Name Sign Format Policy

Sizes

Signalized

- All new locations with IISNS. Change outs as budget allows, 16" wide by 96" long
- Replacement of worn, lost, etc. panels – 16" blank with 9" Clearview font letters and 4" hundred block numbers with cardinal direction.

Ground Mounted

- Below 25 MPH – 6" blank with 4" letters
- 30 MPH to 40 MPH – 9" blank with 6" letters and 3" hundred block numbers
- Above 40 MPH – 12" blank with 8" letters and 4" hundred block numbers

Maximum Panel Length

Signalized – 16" blank wide by 96" long
Ground Mounted –

- Major Collectors and above – 72" maximum length blanks sandwich around 2" Telspar pole with 2 ¼ "sleeve. Mounted on opposite corners of Stop sign installation. All street name signs 24" and greater in length shall be riveted on both ends.
- Minor Collectors and Residential Streets – 72" maximum length blanks sandwich around 2" Telspar poles with 2 ¼ "sleeve. Mounted (above) on same pole as Stop sign. All street name signs 24" and greater in length shall be riveted on both ends.

Font Type

- Shall be Clearview Font, for all roadways with speed limits above 25 MPH, upper/lower case on non-residential to residential intersections.
- On all roadways with speed limits at are below 25 MPH, shall be Highway Gothic C, 4" font, all capital letters.
- Maximum reduction shall be from 100% to 90%. No greater than a 10% reduction will be allowed.

Sheeting

- Prismatic High Intensity Sheeting required on all street name signs

Advanced Arterial Signs

- Placed on minor arterials and above in advance of any signalized intersection.
- Placed on major collectors (with raised medians) and above in advance of any cross-street that changes name at the intersection.
- Distance in advance of intersections shall be a minimum of 100 feet (300 feet if posted speed limit is greater than 35 MPH), in advance of a designated left-turn taper or 250 feet from the nearest cross-street curb line, whichever is greater.

Block Numbers

- Signalized – Dual Block Numbers of travel blocks with cardinal direction.
- Ground Mounted – 30 MPH and above, single number of cross street with cardinal direction.
- Ground Mounted – 25 MPH and below, individual number of travel block with cardinal direction.
- Dual Block Numbers shall have the travel street block number on top and cross street block number on bottom.

Abbreviations

Abbreviations will be allowed as needed to meet speed limit posting and sign panel size criteria. Should a street name sign need to be abbreviated, the surname shall be abbreviated first with common words in the name being abbreviated second. For example:

- Drive – Dr
- Street – St
- Road – Rd
- Circle – Cir
- Loop – Lp

* Please see Signs Detail – 8.

Important Phone Numbers

Engineering/Traffic Engineering 30 S. Nevada Ave., Suite 401 Colorado Springs, CO 80903 Office (719) 385-5908 Fax (719) 385-5497	Questions Concerning Signage & Pavement Marking Guidelines
Traffic Engineering Signals 404 W. Fontanero St. Colorado Springs, CO 80907 Office (719) 385-6721 Fax (719) 385-6727	Questions Concerning Traffic Signals or Work at Signalized Intersections
Traffic Engineering Signs/Markings 404 W. Fontanero St. Colorado Springs, CO 80907 Office (719) 385-6720 Fax (719) 385-6727	Questions Concerning Signs and Pavement Markings on Public Streets
City Engineering Inspections 30 S. Nevada Ave., Suite 405 Colorado Springs, CO 80903 Office (719) 385-5977 Fax (719) 385-5050	Questions Concerning Excavation, Concrete and Traffic Control Permits
Colorado Springs Police Department 705 S. Nevada Ave. Colorado Springs, CO 80903 Office (719) 444-7000 Fax (719) 632-1663	Notification of Street Closures and Work on Major Arterials
Colorado Springs Fire Department 375 Printers Parkway Colorado Springs, CO 80910 Office (719) 444-7000 Fax (719) 632-1663	Notification of Street Closures and trench excavation depths 5 feet or greater in-depth

Other Agencies

Colorado Department of Transportation

Pueblo Office: P.O.Box 536 905 Erie St. Pueblo, CO 81002 Office (719) 546-5743 Fax (719) 546-5414	Questions Concerning Permits and Work on Federal and State Highways
Springs Office: 1480 Quail Lake Loop - Suite A Colorado Springs, CO 80906 Office (719) 634-2323 Fax (719) 227-3298	Questions Concerning Permits and Work on Federal and State Highways
El Paso County Dept. of Public Works 3640 Marksheffel Rd. Colorado Springs, CO 80922 Office (719) 520-6460 Fax (719) 520-6879	Questions Concerning Permits and Work on County Roadways

School District Phone Numbers

District 49	(719) 495-3601
District 20	(719) 598-2566
District 12	(719) 475-6100
District 11	(719) 520-2000
District 2	(719) 579-2000

Utility Locating

UNCC	(800) 922-1987
Traffic Signals	(719) 385-6721
Qwest	(719) 290-0901
Cablevision	(719) 633-3444

Metro Traffic

Main Number	(719) 527-9799
Fax	(719) 527-1850

Springs Transit

Main Number	(719) 385-7429 or (719) 385-7408
Fax	(719) 385-7428

Appendix "A"

Roadway Signage Details

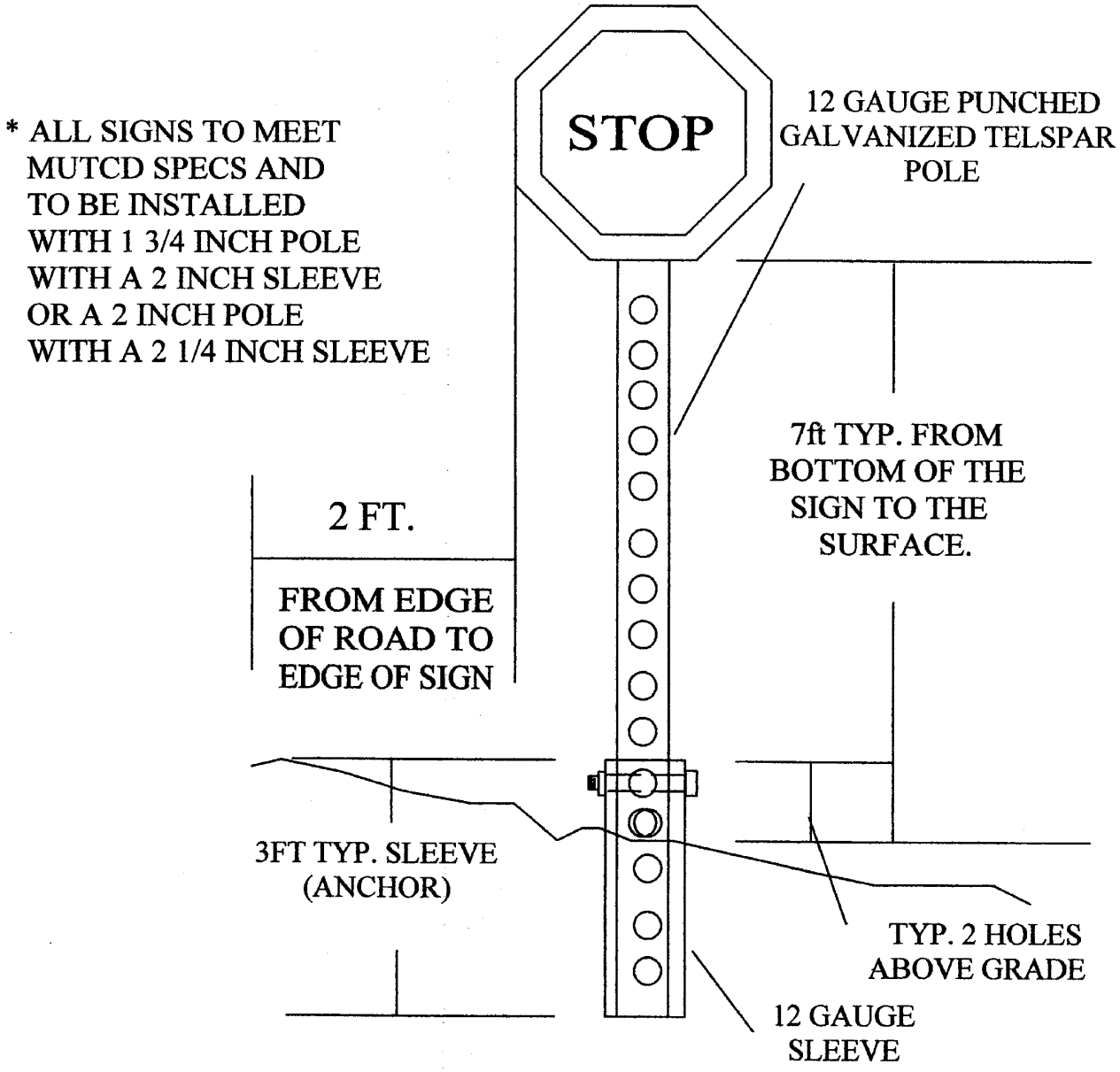
Detail Description	Detail No.
Sign Installation	Detail No. 1
Roadside Sign Installation Typical	Detail No. 2
Roadside Sign Installation Rural Application	Detail No. 3
Parking Sign Installation Typical	Detail No. 4
Placement of Stop or Keep Right Sign	Detail No. 5
Street Name Sign Installation Typical	Detail No. 6
Sign Fabrication Standards	Detail No. 7
Street Name Sign Standards	Detail No. 8
Sign Installation Hardware	Detail No. 9
Street Name Sign Hardware	Detail No. 10
Mast Arm Arterial Street Name Sign	Detail No. 11
Sky Bracket Hardware for Mast Arm	Detail No. 12
Sign Position for Overhead Signs	Detail No. 13
Span & Tether Sign Hardware	Detail No. 14
Street Name Sign Mounting on Utility Pole	Detail No. 15
Utility Pole Mounting Hardware	Detail No. 16
Standard Roundabout Signs	Detail No. 17
Sign Layout for Multilane Roundabout	Detail No. 18
Sign Layout for Single Lane Roundabout	Detail No. 19
Signing for Median Greater than 30' Wide	Detail No. 20
Signing for Median Less than 30' Wide	Detail No. 21
20 MPH School Zone Sign Layout	Detail No. 22

Appendix "B"

Pavement Marking Details

Detail Description	Detail No.
Pavement Marking Identifications	Detail No. 1
Pavement Marking Standards	Detail No. 2
Pavement Marking Standards	Detail No. 3
Pavement Marking Standards	Detail No. 4
Layout for Dual Left Turn Lanes	Detail No. 5
Bike Lane Layout	Detail No. 6
Multilane Layout for Roundabout	Detail No. 7
Single Lane Layout for Roundabout	Detail No.8
Yield Line Layout	Detail No. 9

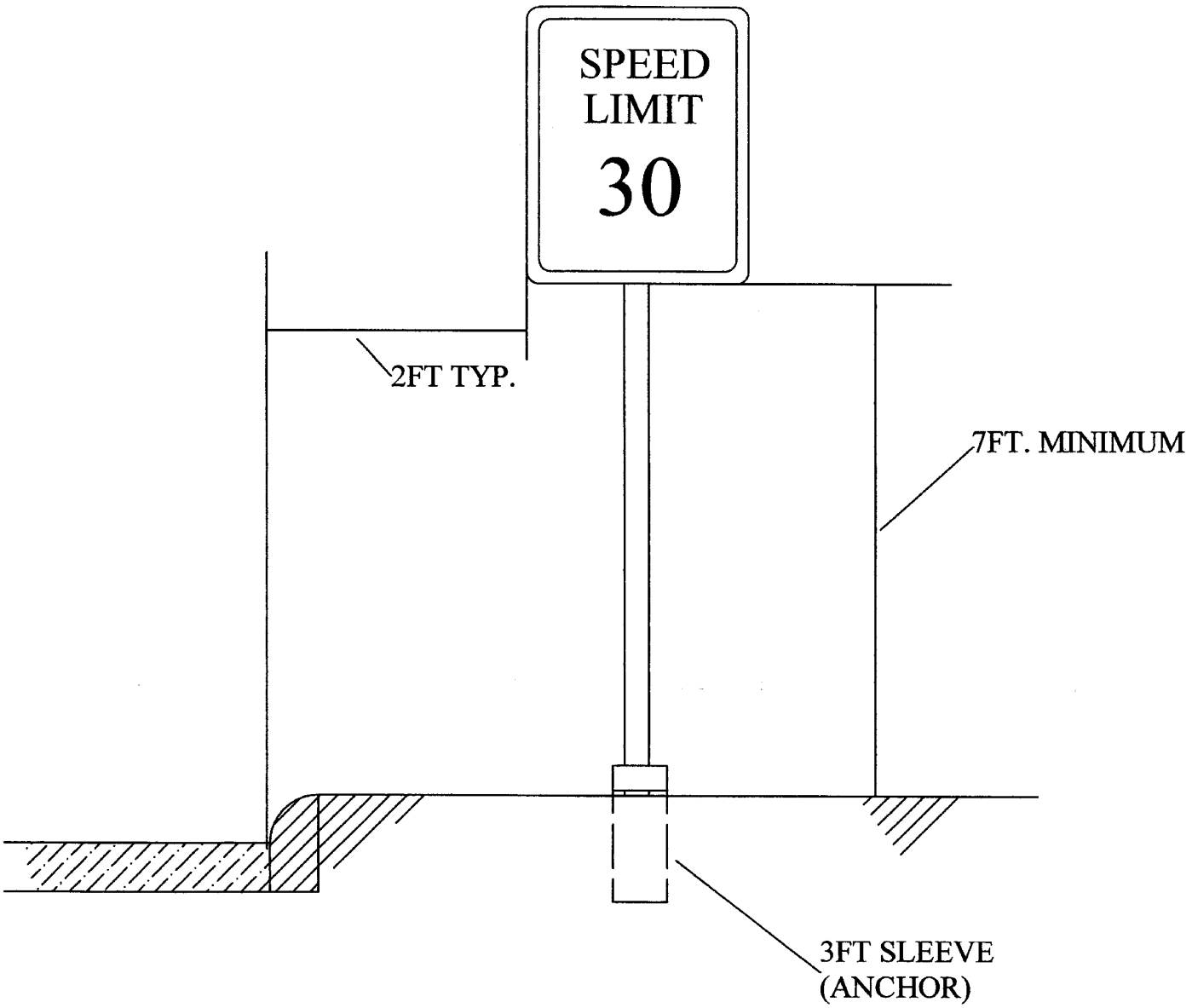
SIGN INSTALLATION



CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-1 REVISED 9/14/06

ROADSIDE SIGN

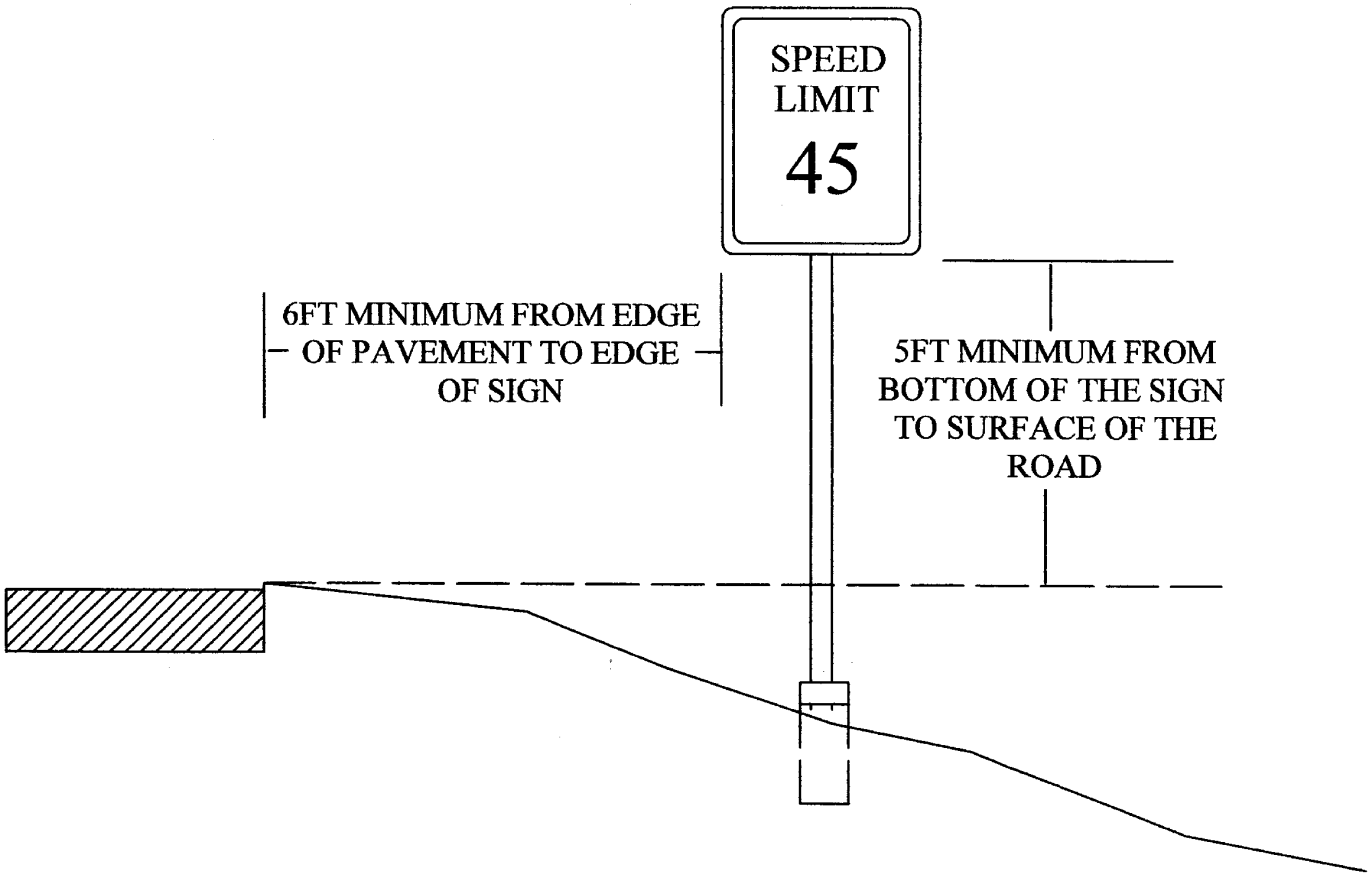
BUSINESS OR RESIDENTIAL DISTRICT



CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-2 REVISED 7/07/06

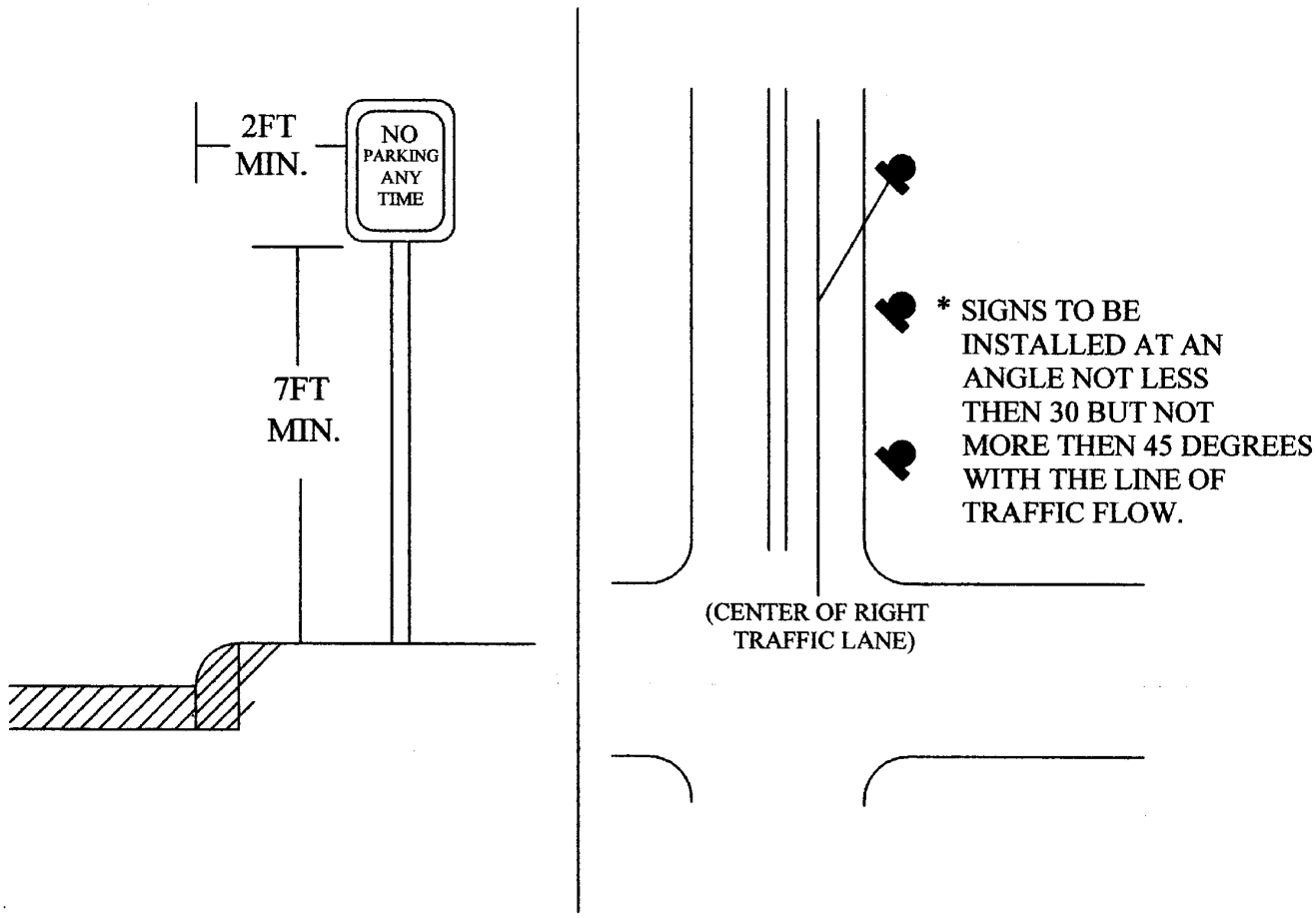
ROADSIDE SIGN

RURAL APPLICATION



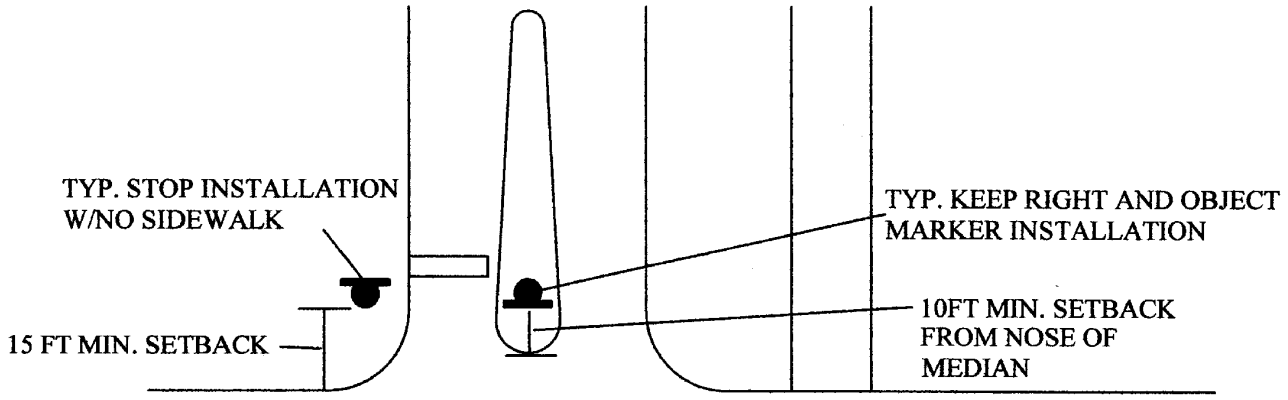
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-3 REVISED 7/07/06

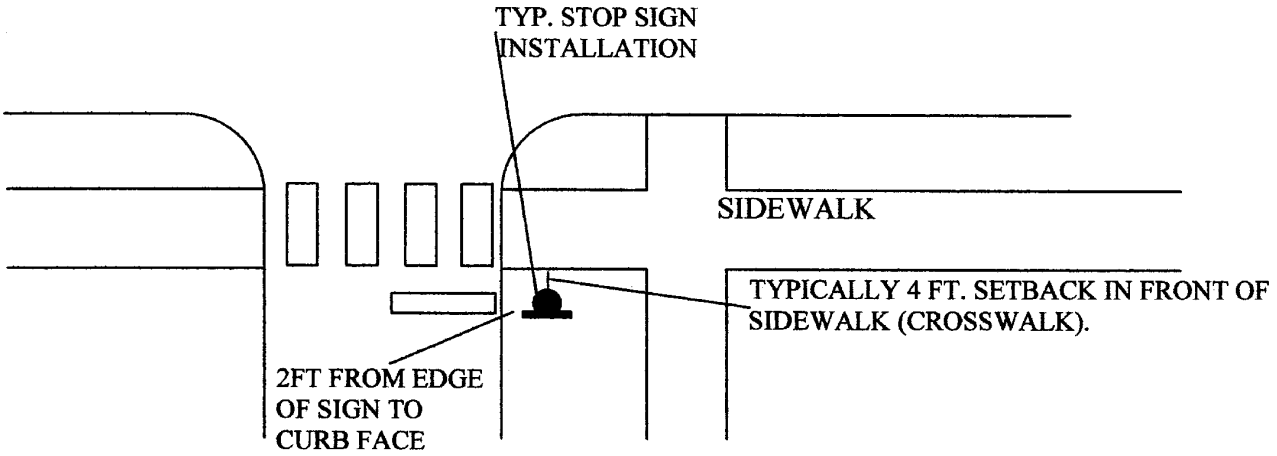
PARKING INSTALLATION



CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-4 REVISED 9/14/06

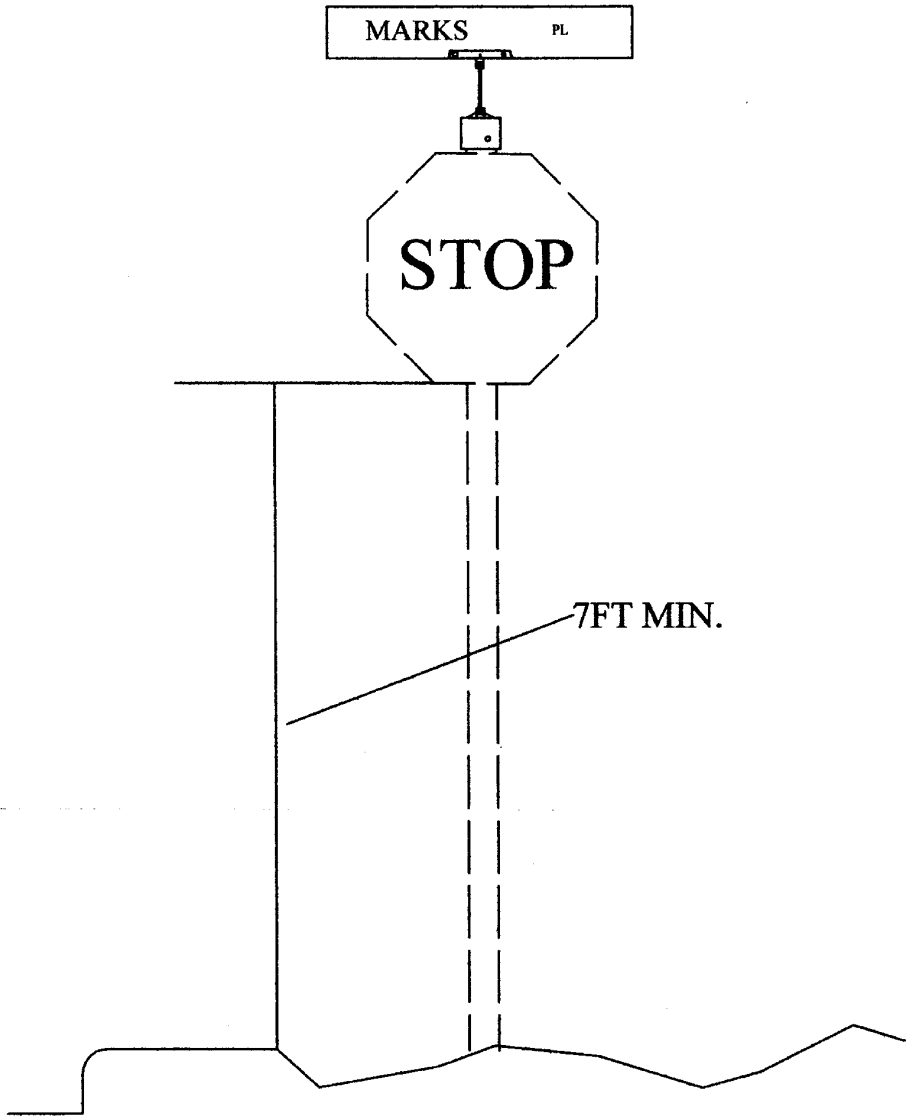
PLACEMENT OF STOP OR KEEP RIGHT





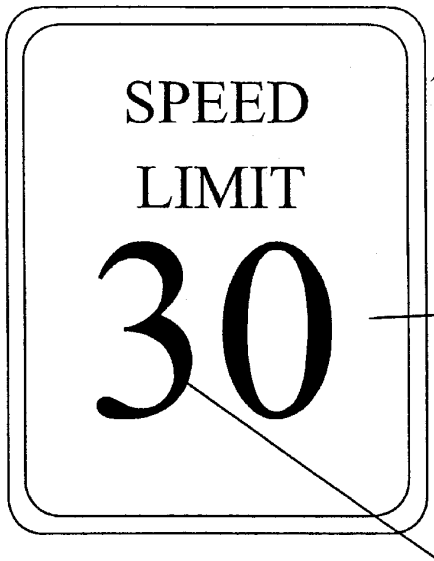
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-5 REVISED 9/14/06

STREET NAME SIGN INSTALLATION



CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-6 REVISED 9/14/06

SIGN FABRICATION STANDARDS



.080 ALUMINUM SIGN BLANK
*OR ALTERNATE MATERIAL W/APPROVAL OF CITY STAFF

REFLECTIVE SHEETING SHALL HAVE A SERVICE LIFE OF 10 YEARS TYPICAL SHEETING WOULD BE A HIGH INTENSITY GRADE

FONT STYLE IS HIGHWAY GOTHIC "C"

*ALL SIGNAGE SHALL MEET M.U.T.C.D. OR CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING SPECIFICATIONS

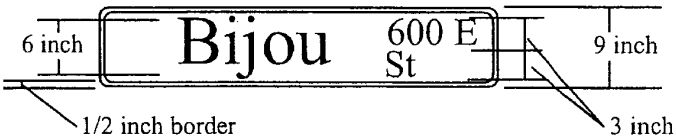
*ALL SIGNS 24" x 36" OR GREATER. REQUIRE ADDITIONAL CHANNEL SUPPORT OR DUAL POLE BASE SYSTEM

STREET NAME SIGN STANDARDS

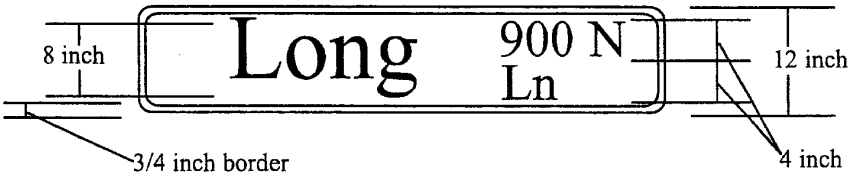
25 mph or less

*MATERIAL IS HIGH INTENSITY GRADE SHEETING, LETTER STYLE IS HIGHWAY GOTHIC "C"

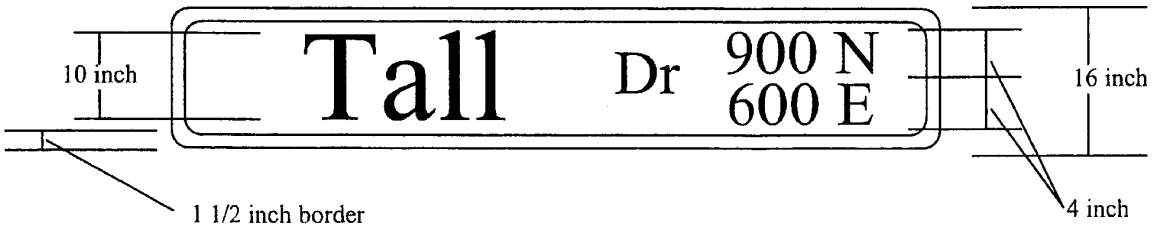
30, 35, 40 mph



45 mph or greater



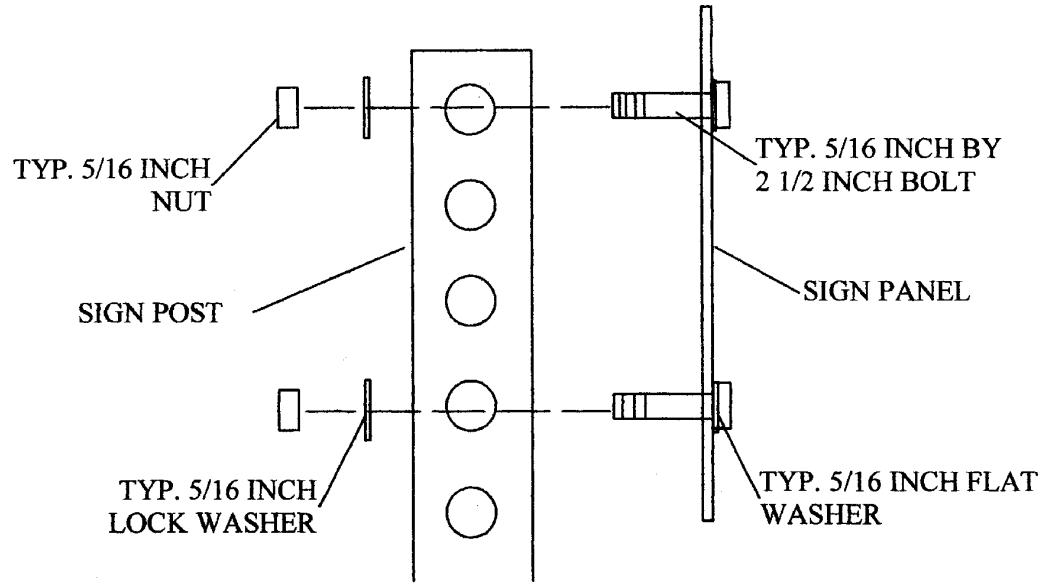
Arterial

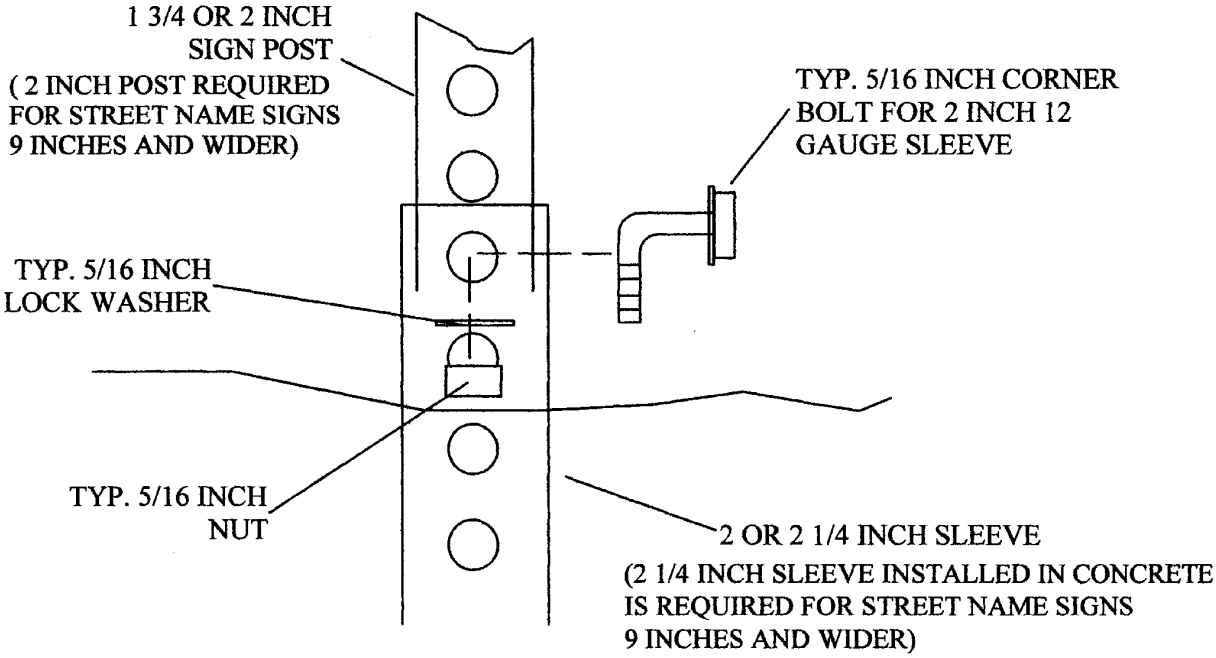


* LETTER STYLE FOR SIGNS 9 INCH AND LARGER SHALL BE CLEARVIEW (2W) HIGHWAY FONT.

* THE BLOCK NUMBERS ON THE ARTERIAL SIGNS WILL HAVE THE NAMED STREET ON TOP AND THE INTERSECTING STREET ON THE BOTTOM.

SIGN INSTALLATION HARDWARE (DETAIL)

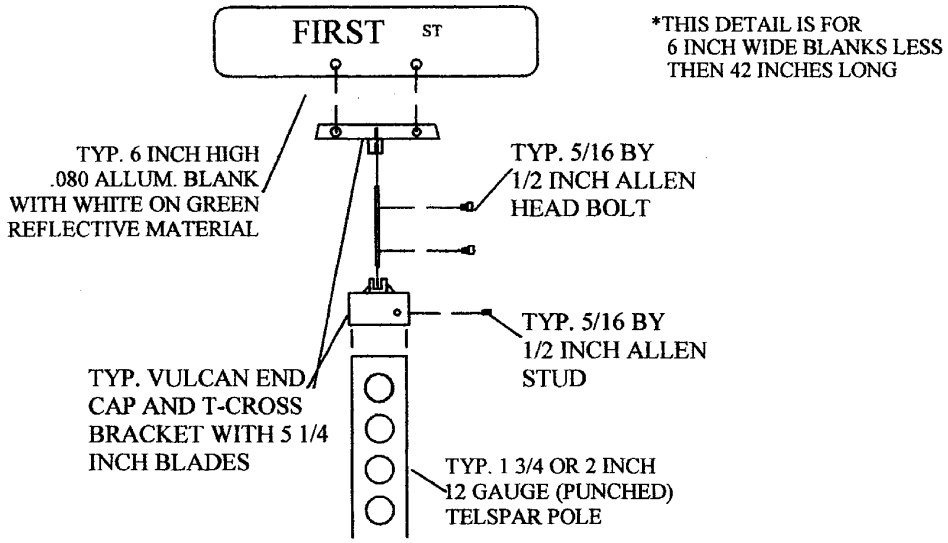




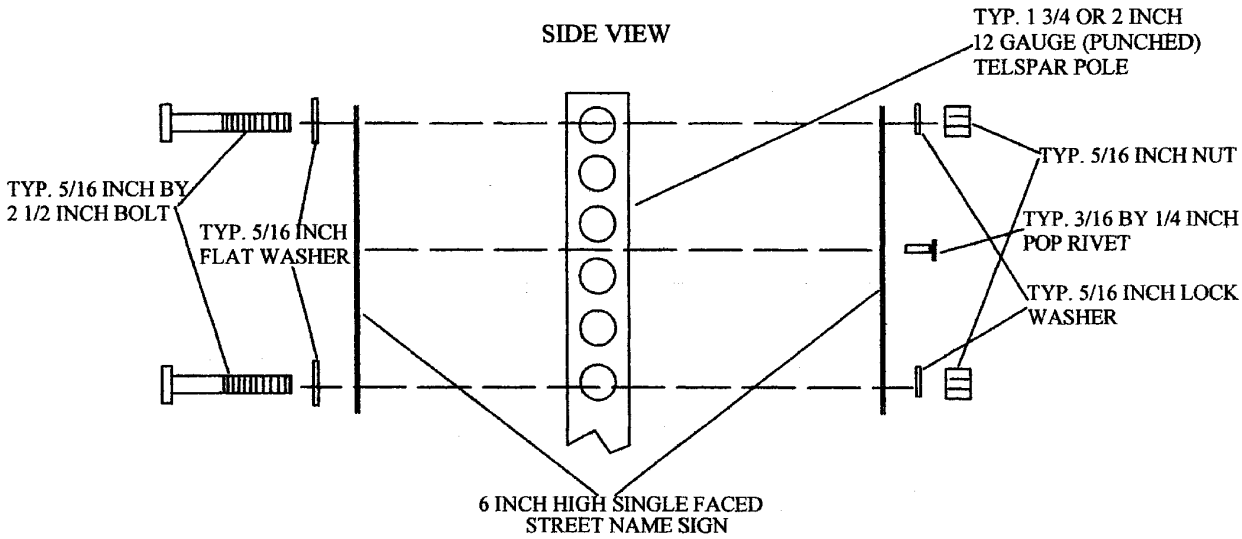
SIDE VIEW

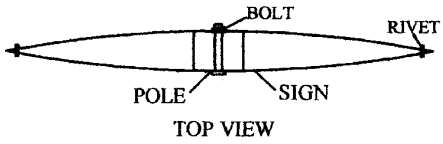
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-9 REVISED 9/21/06

STREET NAME SIGN HARDWARE (DETAIL)



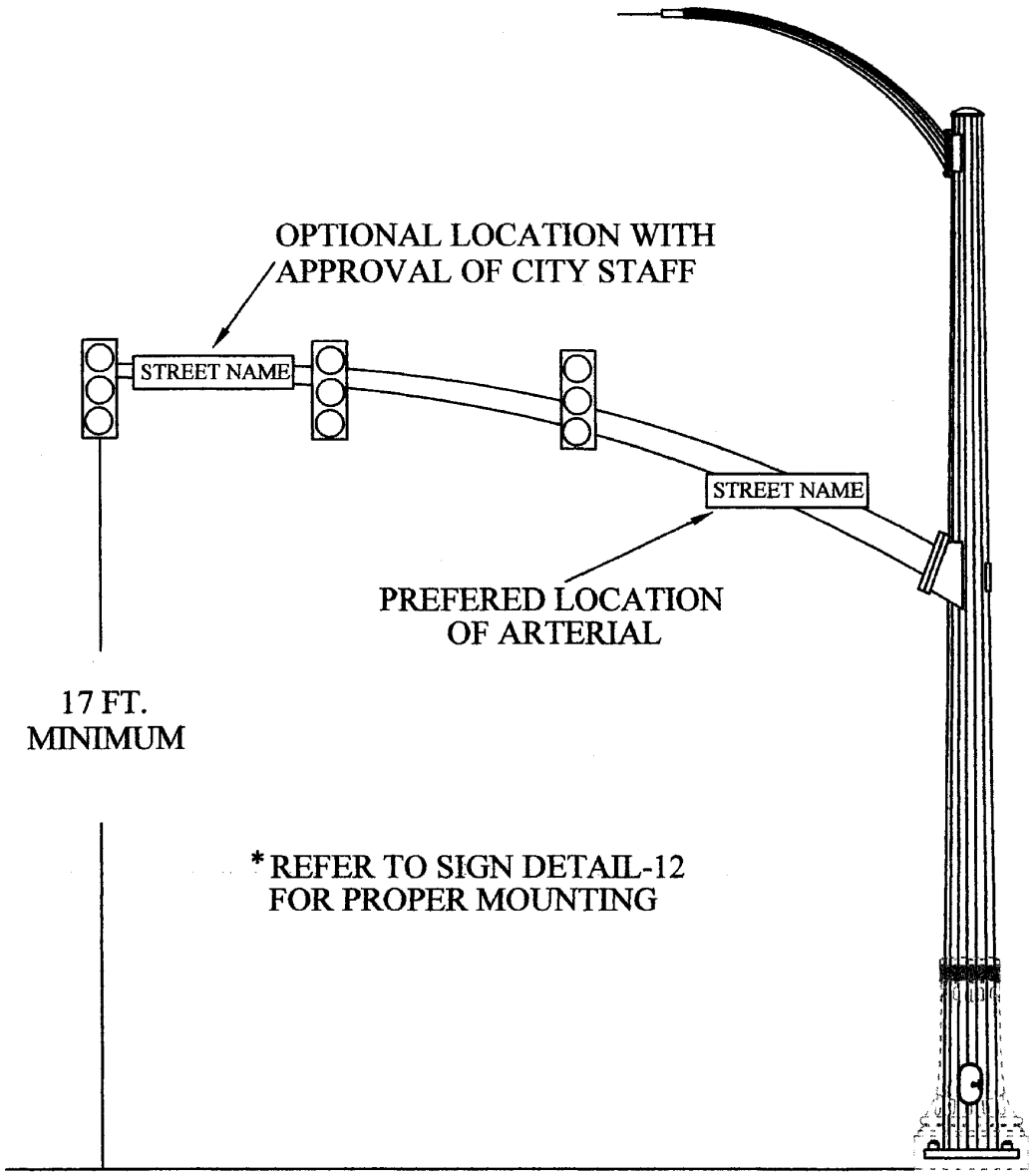
MOUNTING DETAIL FOR STREET NAME SIGNS 42 INCHES AND LARGER (OR 9 INCHES AND WIDER)





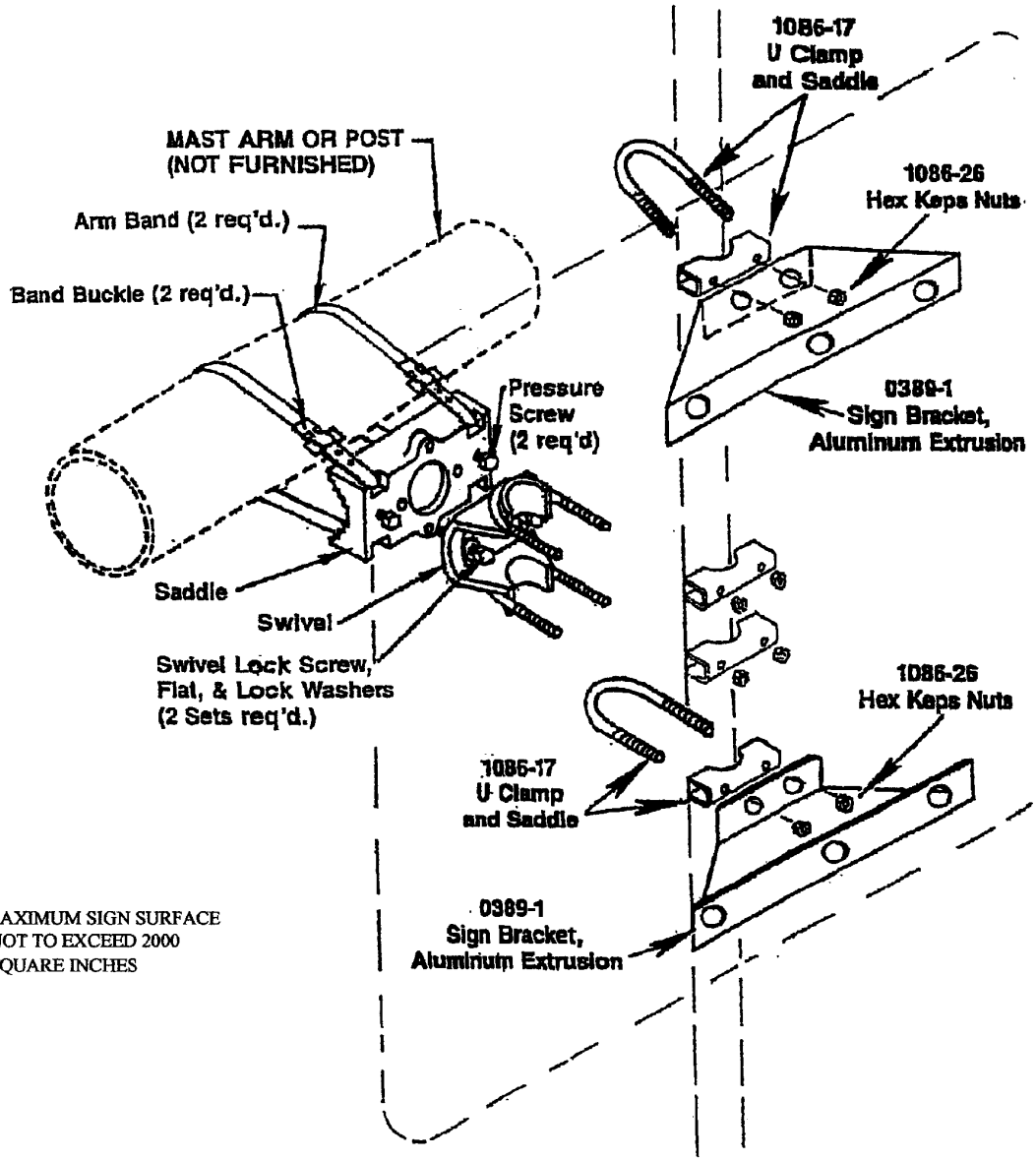
*STREET NAME SIGNS 9 INCH AND WIDER REQUIRE A 2 INCH 12 GAUGE POLE

MAST ARM ARTERIAL



CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-11 REVISED 9/22/06

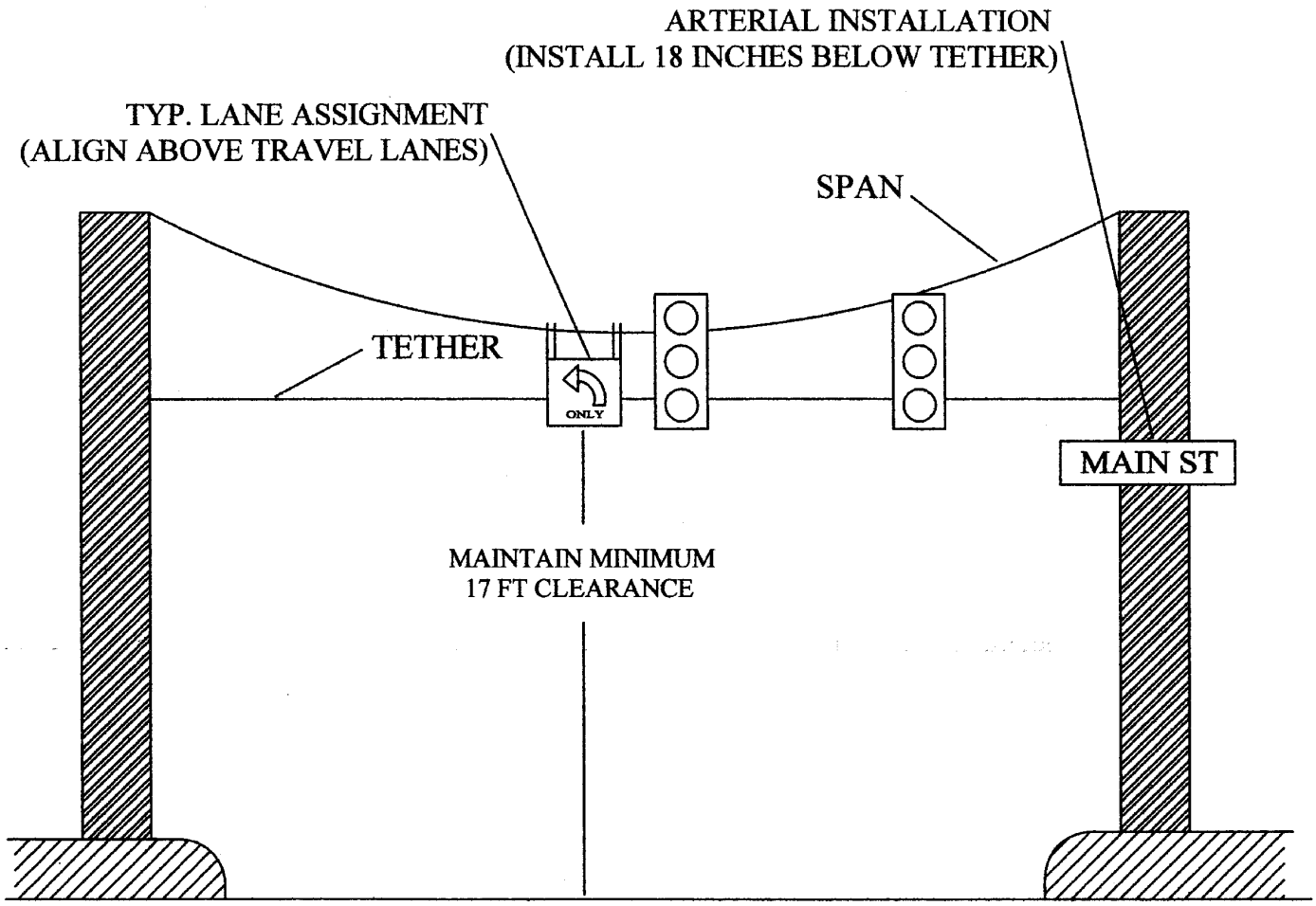
SKY BRACKET



*MAXIMUM SIGN SURFACE
NOT TO EXCEED 2000
SQUARE INCHES

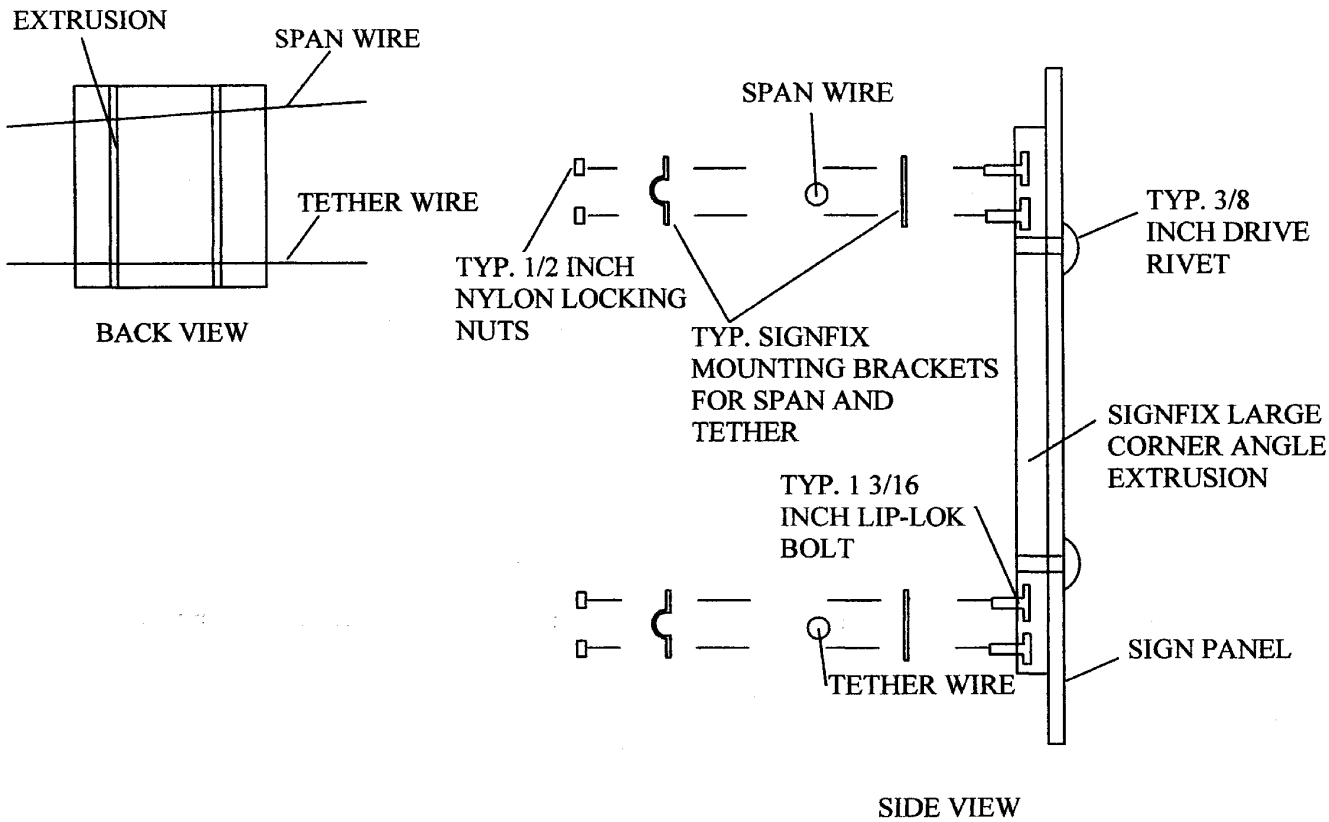
SIGN POSITION

FOR LANE ASSIGNMENT AND
ARTERIAL STREET NAME
SIGNS



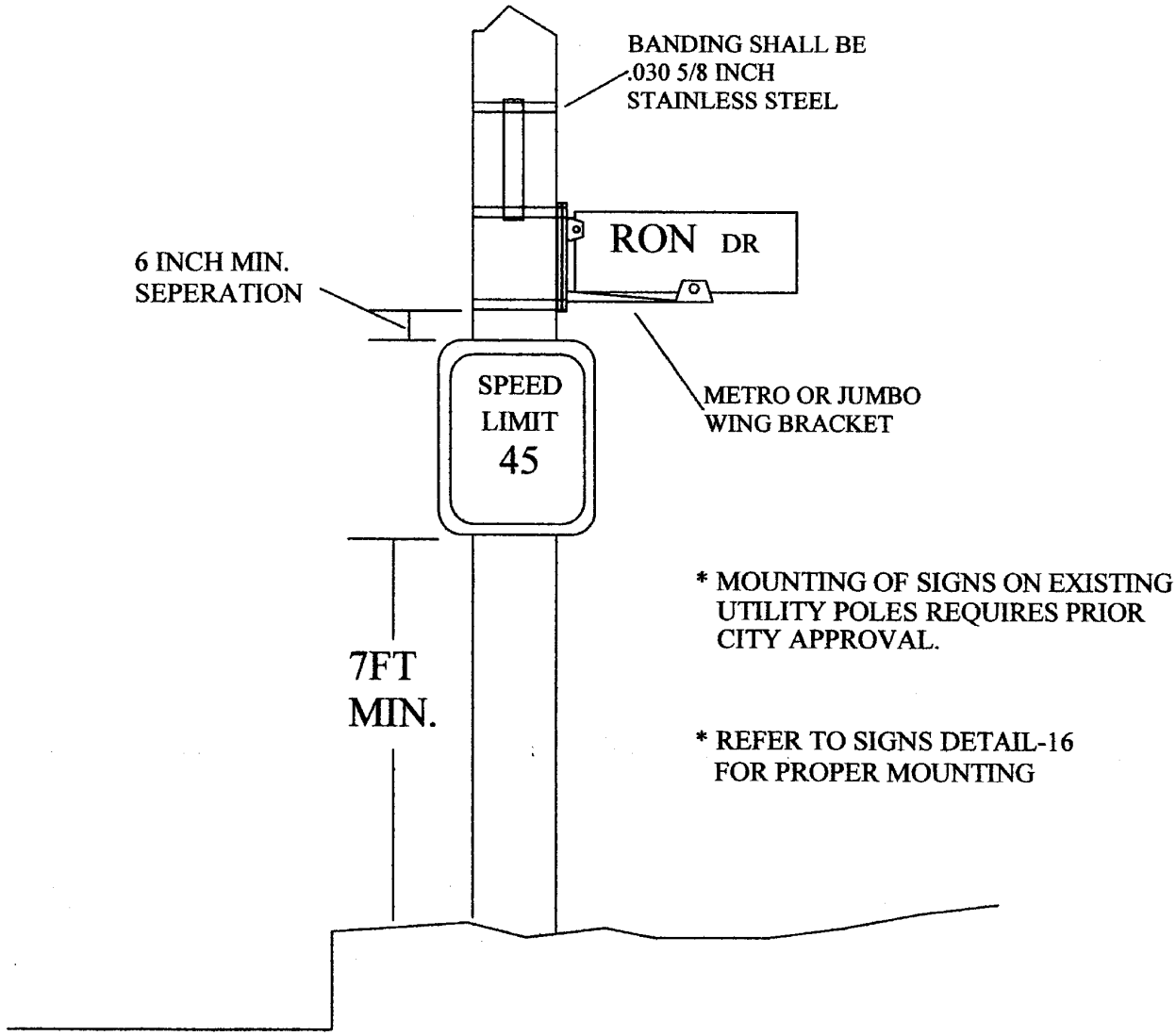
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-13 REVISED 9/21/06

SPAN AND TETHER MOUNTING OF LANE ASSIGNMENT SIGN (DETAIL)



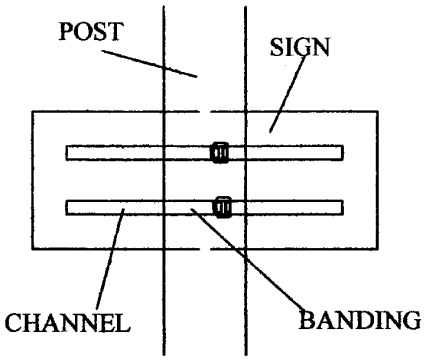
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL14 REVISED 7/07/06

STREET NAME SIGN
AND SPEED LIMIT
MOUNTED ON UTILITY POLE
(STREET LIGHTS, POWER POLES, ETC.)

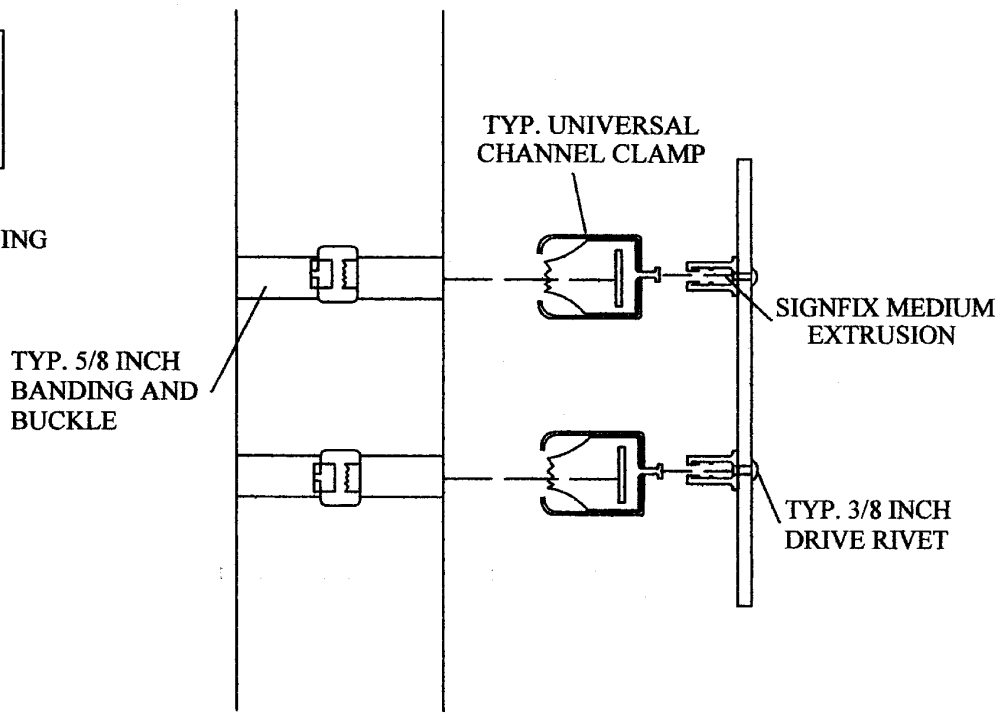


CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-15 REVISED 9/22/06

UTILITY POLE MOUNTING
(DETAIL)



BACK VIEW

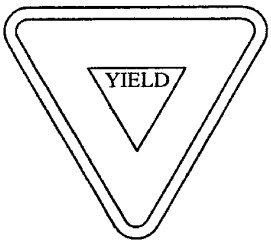


SIDE VIEW

*FOR ARTERIAL STREET NAME
SIGN MOUNTING REFER TO
SIGNS DETAIL 12(SKY BRACKET)

CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-16 REVISED 9/22/06

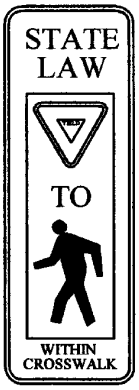
STANDARD ROUNDABOUT SIGNS



R1-2

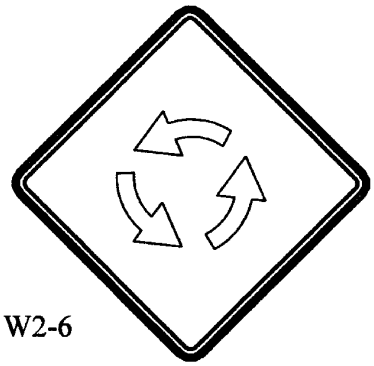
R6-1 (R)

D3-1

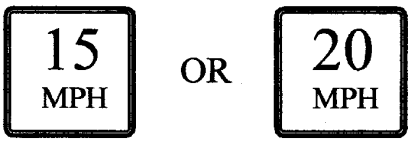


R1-6

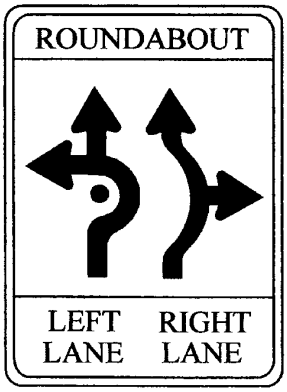
W11-2



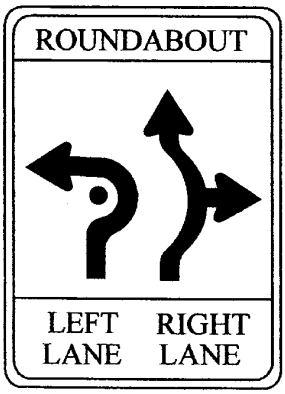
W2-6



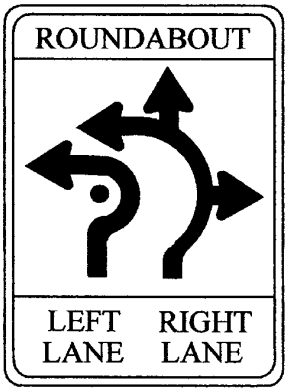
W13-1



R3-8c (r1)

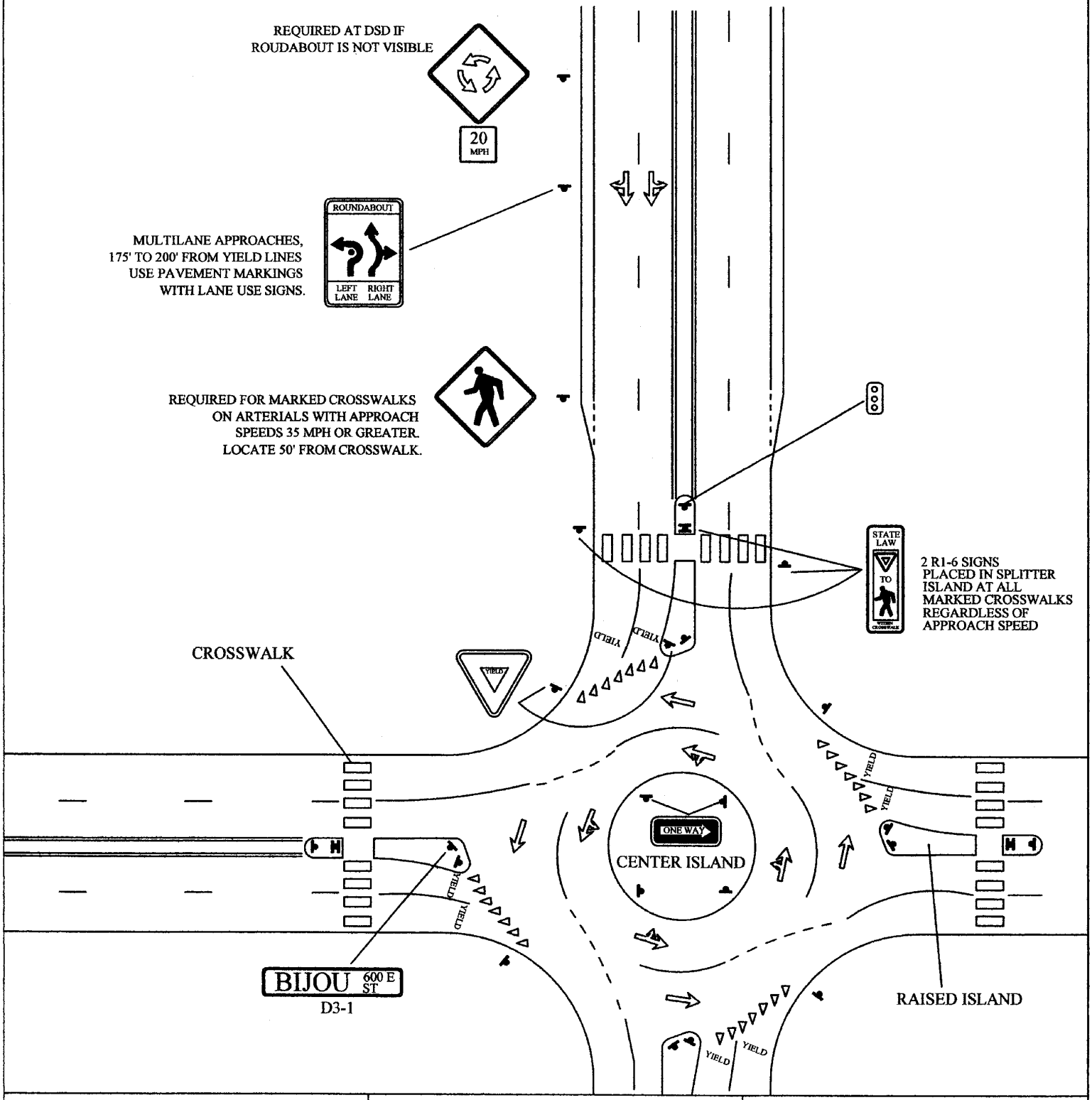


R3-8c (r2)



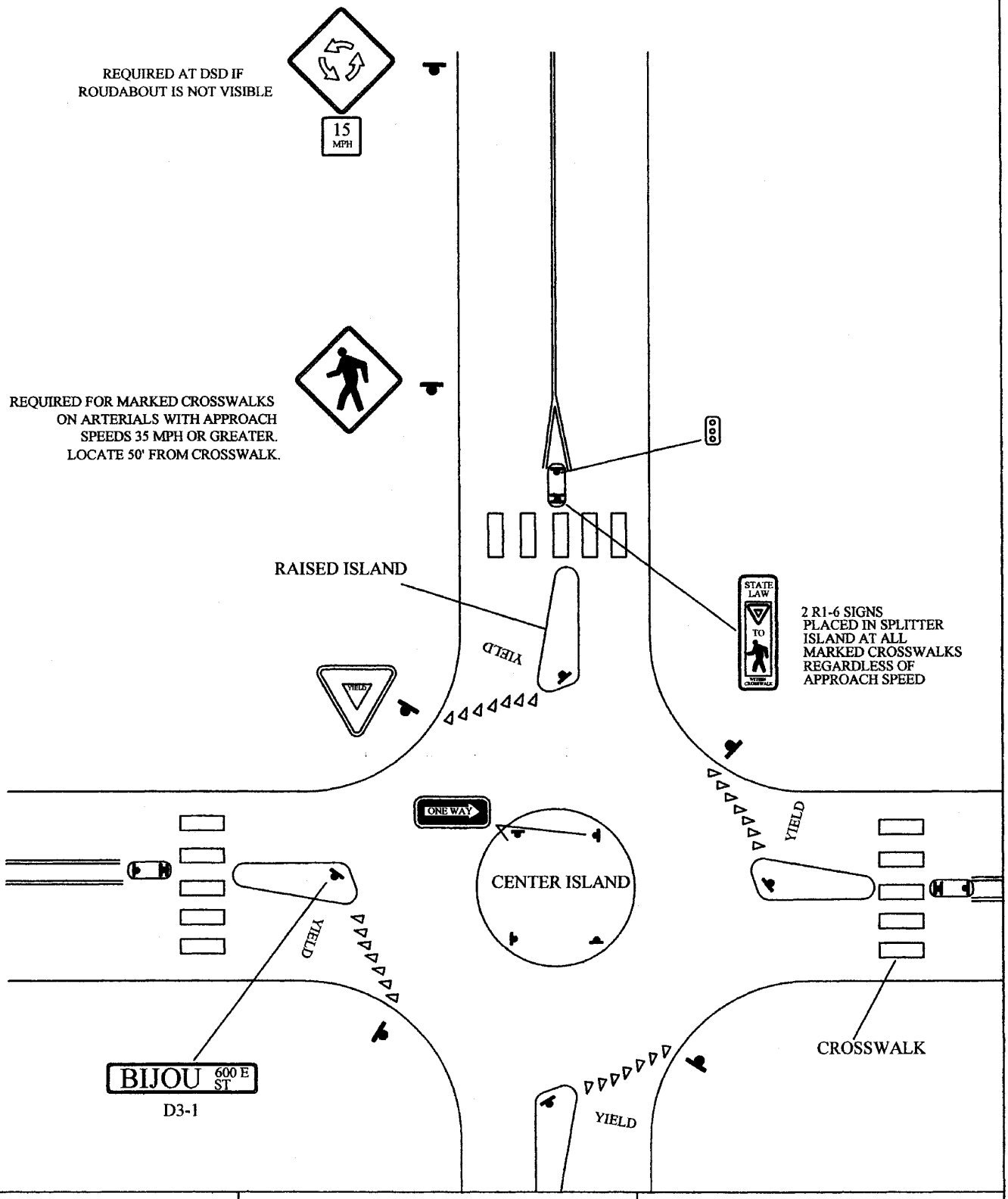
R3-8c (r3)

SIGN LAYOUT FOR MULTILANE ROUNDABOUTS



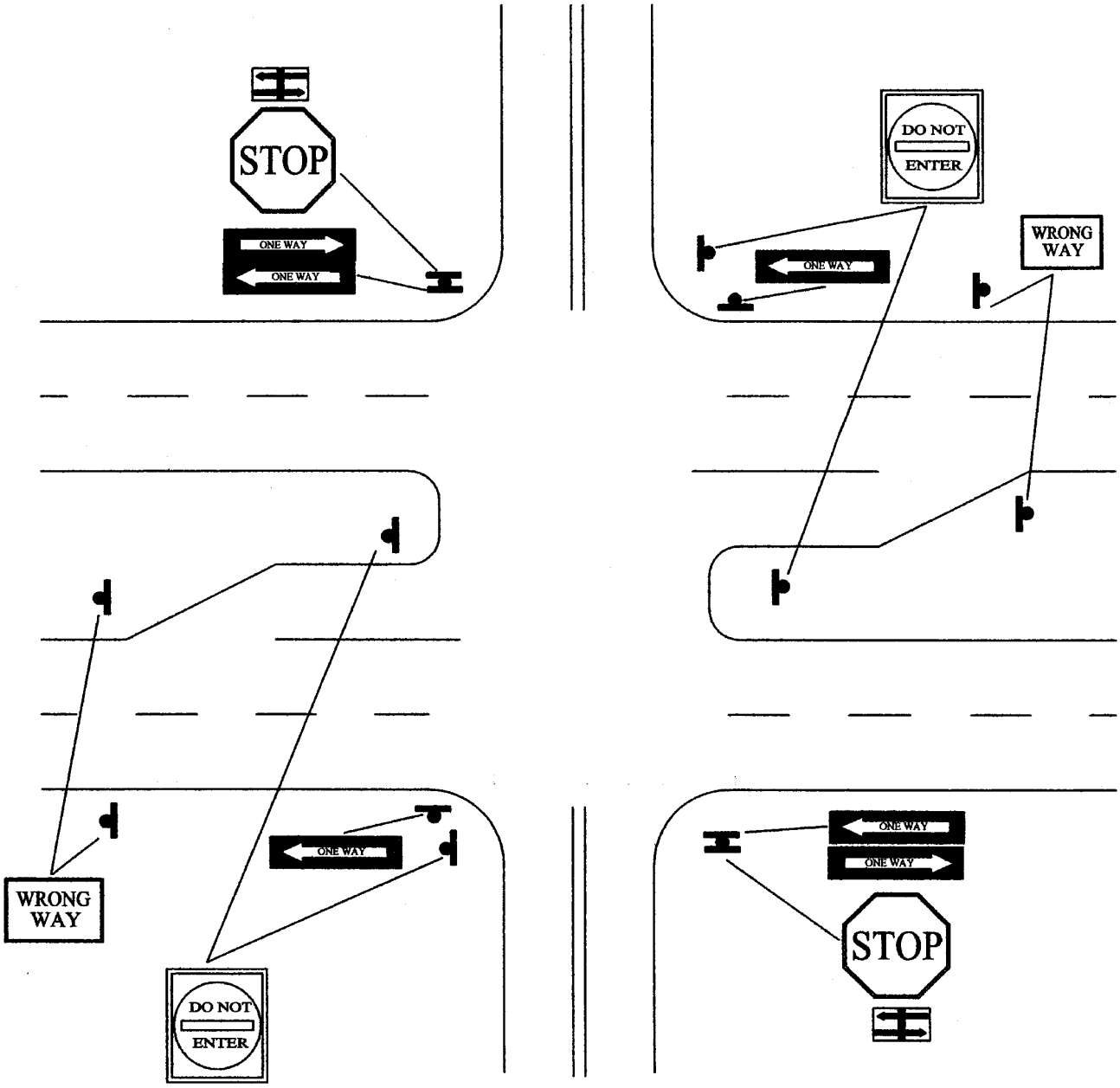
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL- 18 REVISED 9/22/06

SIGN LAYOUT FOR
SINGLE LANE ROUNDABOUT



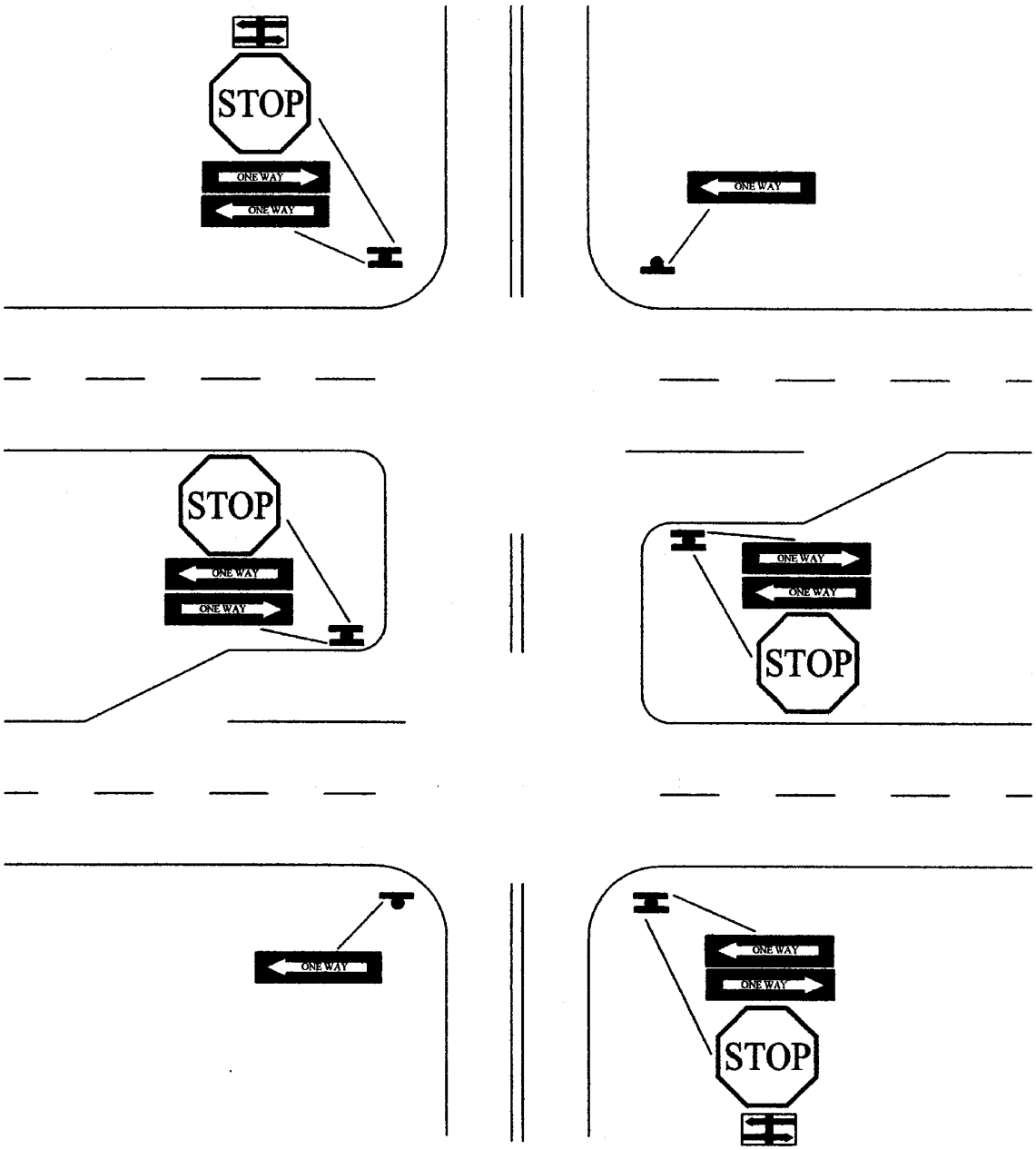
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL- 19 REVISED 9/26/06

ONE WAY SIGNING FOR DIVIDED HIGHWAYS WITH MEDIANS GREATER THAN 30 FT.



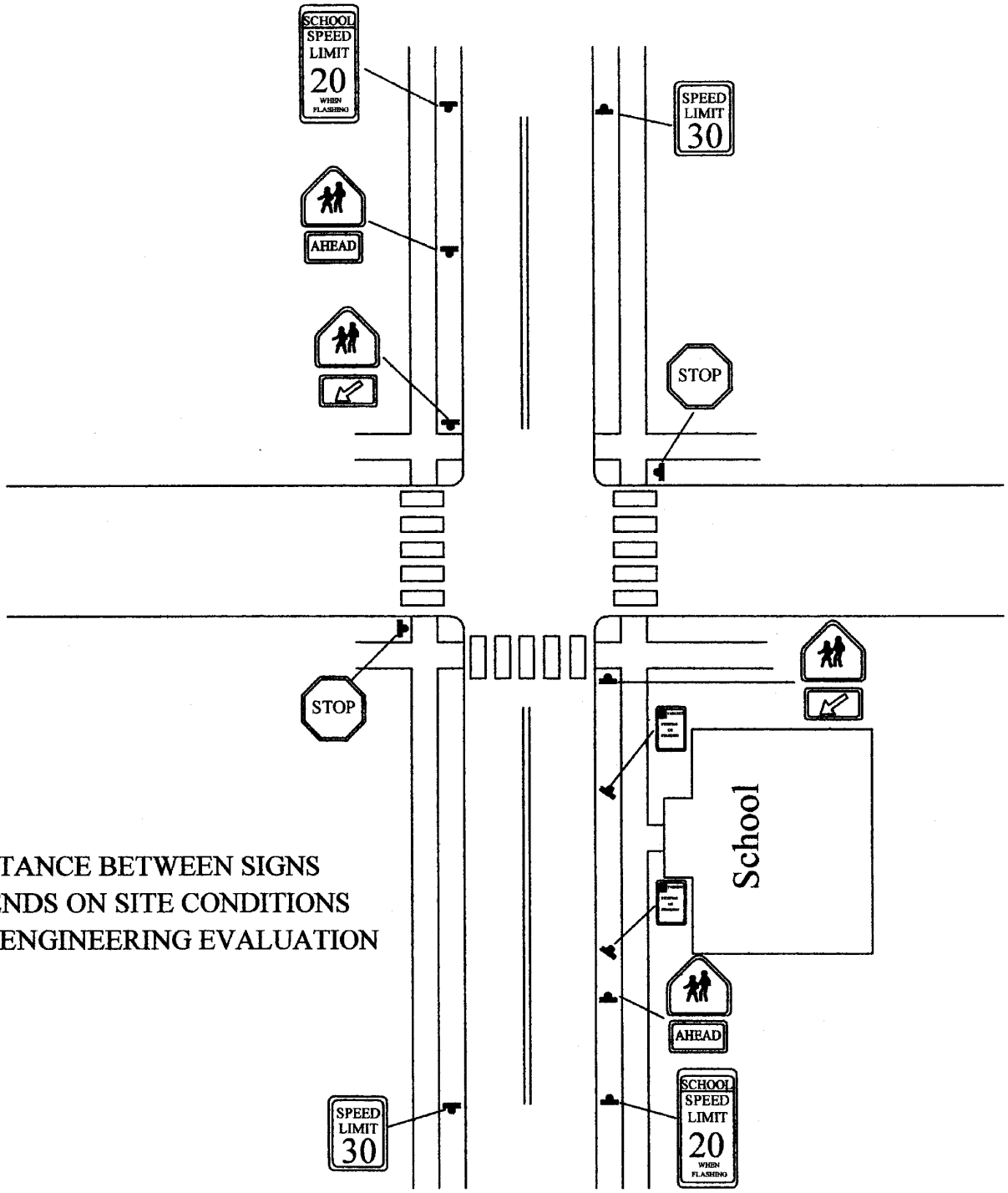
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-20 REVISED 9/26/06

ONE WAY SIGNING FOR DIVIDED HIGHWAYS WITH MEDIANS LESS THAN 30 FT.



CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-21 REVISED 9/26/06

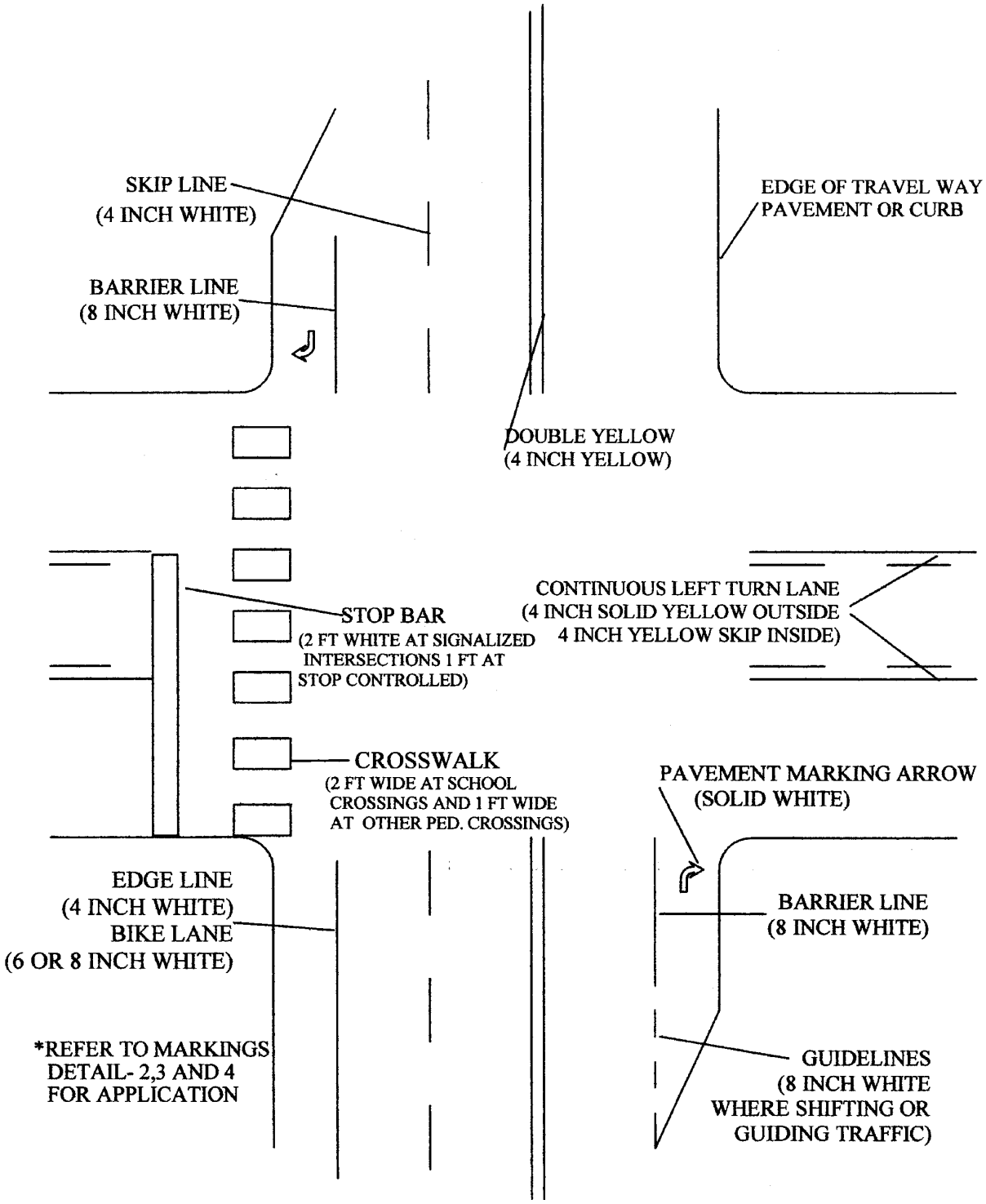
SCHOOL ZONES



* DISTANCE BETWEEN SIGNS DEPENDS ON SITE CONDITIONS AND ENGINEERING EVALUATION

CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	SIGNS DETAIL-22 REVISED 9/26/06

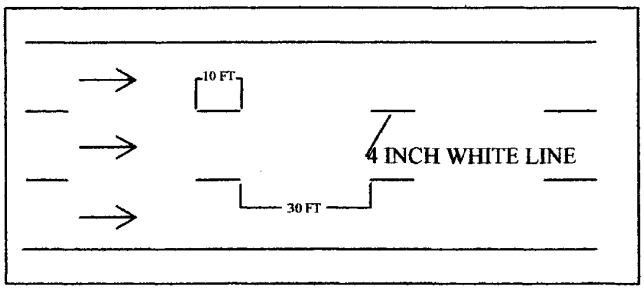
MARKINGS IDENTIFICATION



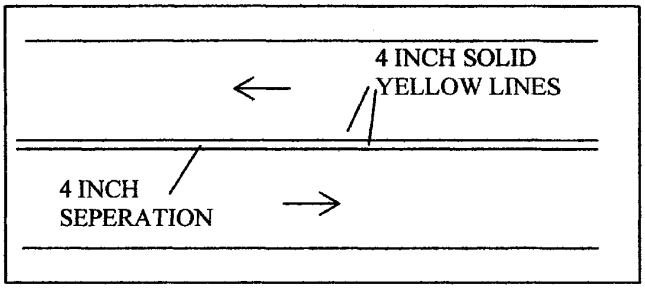
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	MARKINGS DETAIL- 1 REVISED 9/27/06

MARKINGS STANDARDS

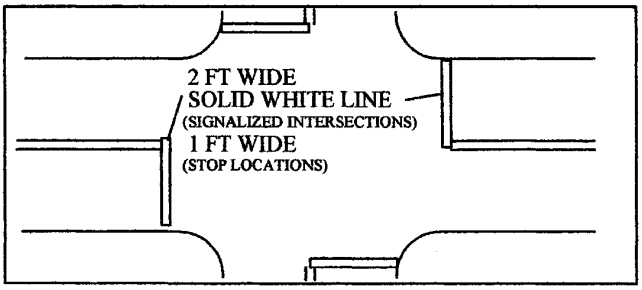
1. SKIP LINE



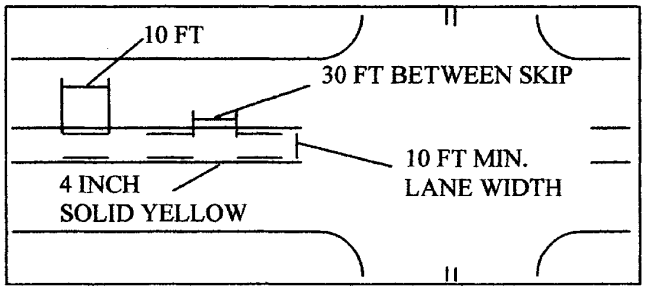
2. DOUBLE YELLOW



3. STOP BAR

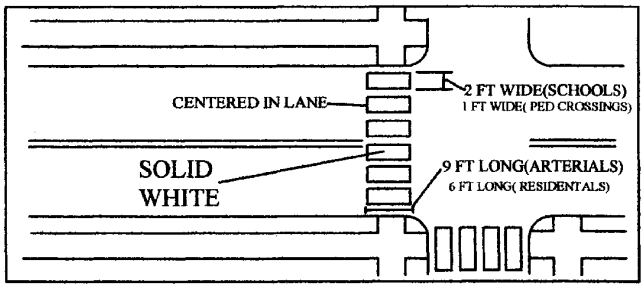


4. CONTINUOUS LEFT TURN LANE

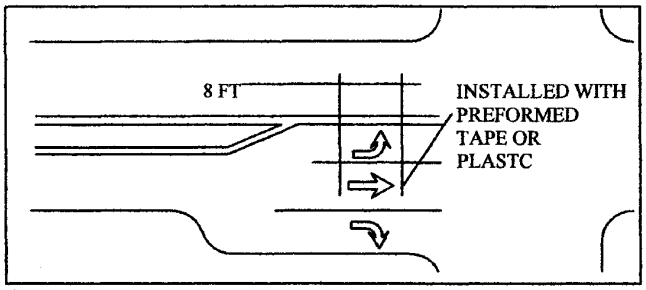


CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	MARKINGS DETAIL-2 REVISED 9/28/06

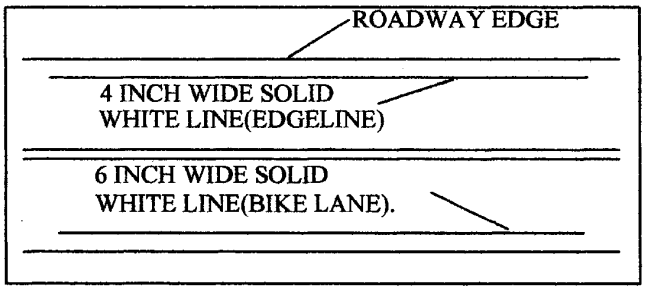
5. CROSSWALK



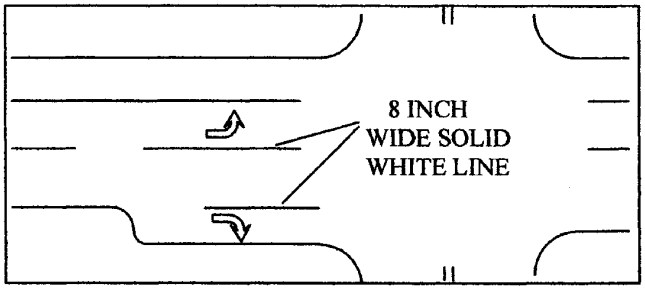
6. PAVEMENT MARKING ARROW



7. EDGE LINE- BIKE LANE



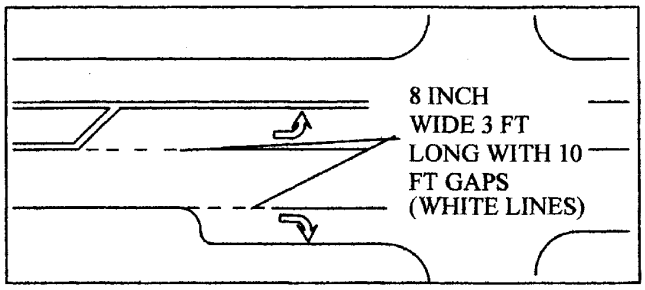
8. BARRIER LINE



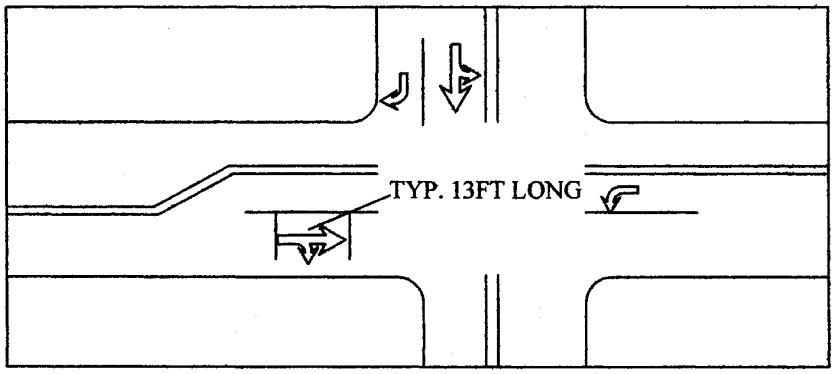
REVISED 11/28/01

9. GUIDELINE MARKINGS

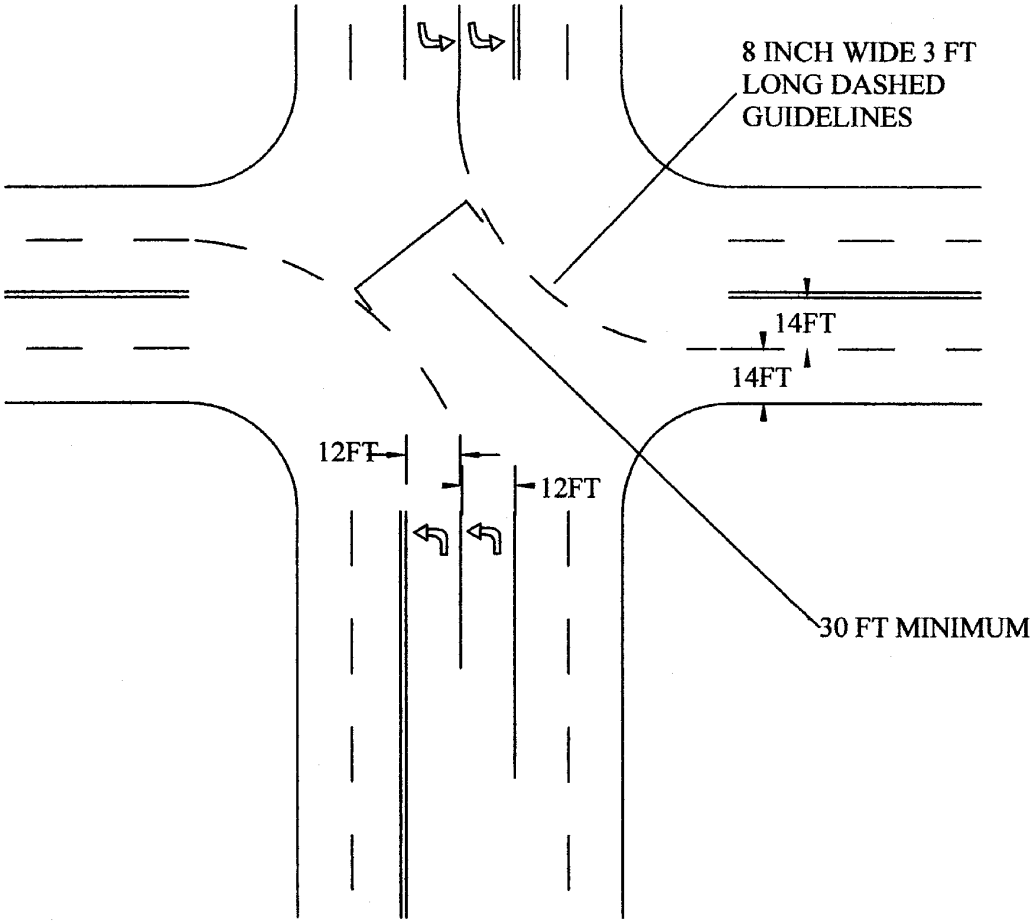
*ONLY USED WHEN SHIFTING OR GUIDING TRAFFIC



10. SHARED LANE ARROWS

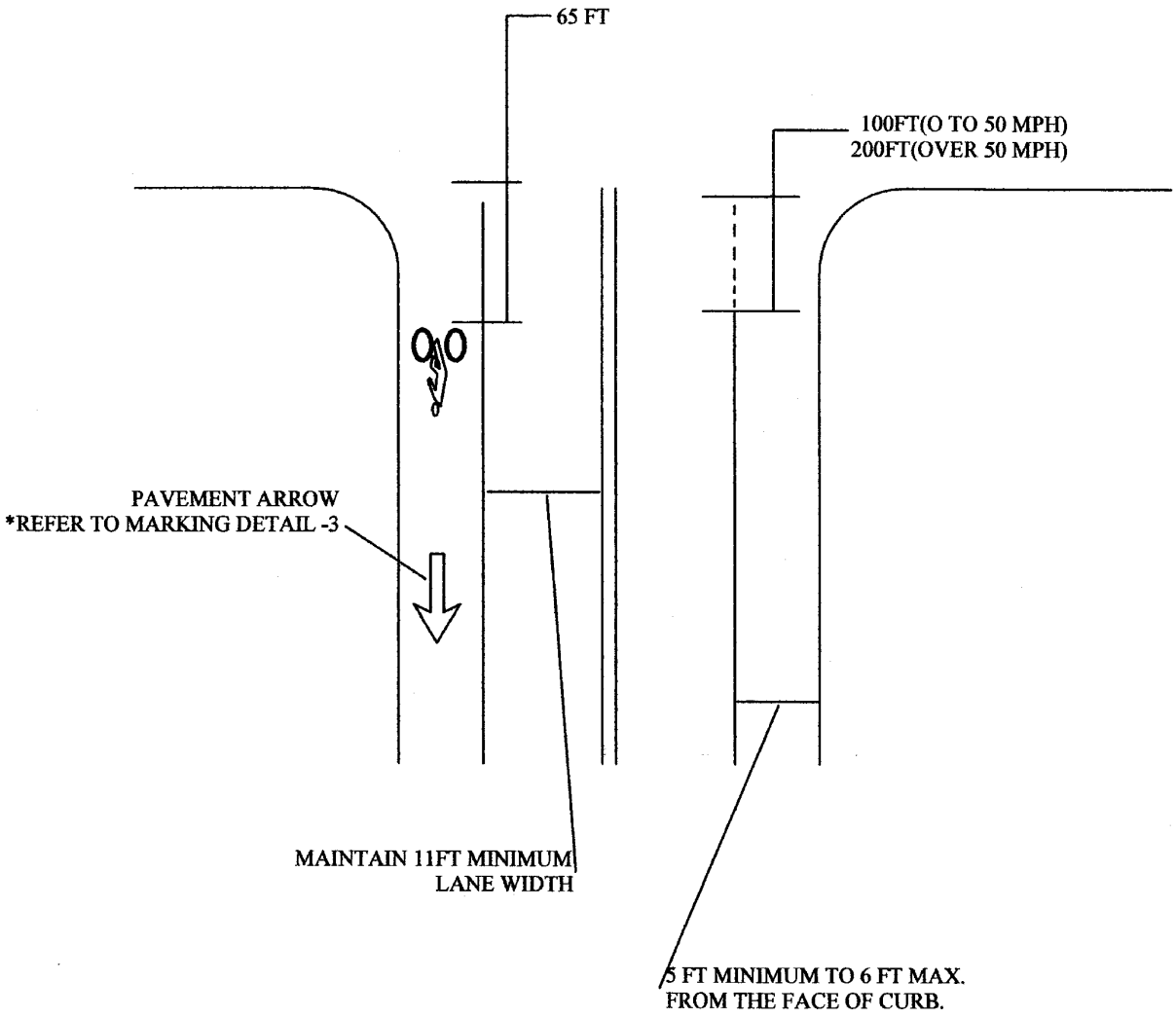


LAYOUT FOR DUAL LEFT TURNS



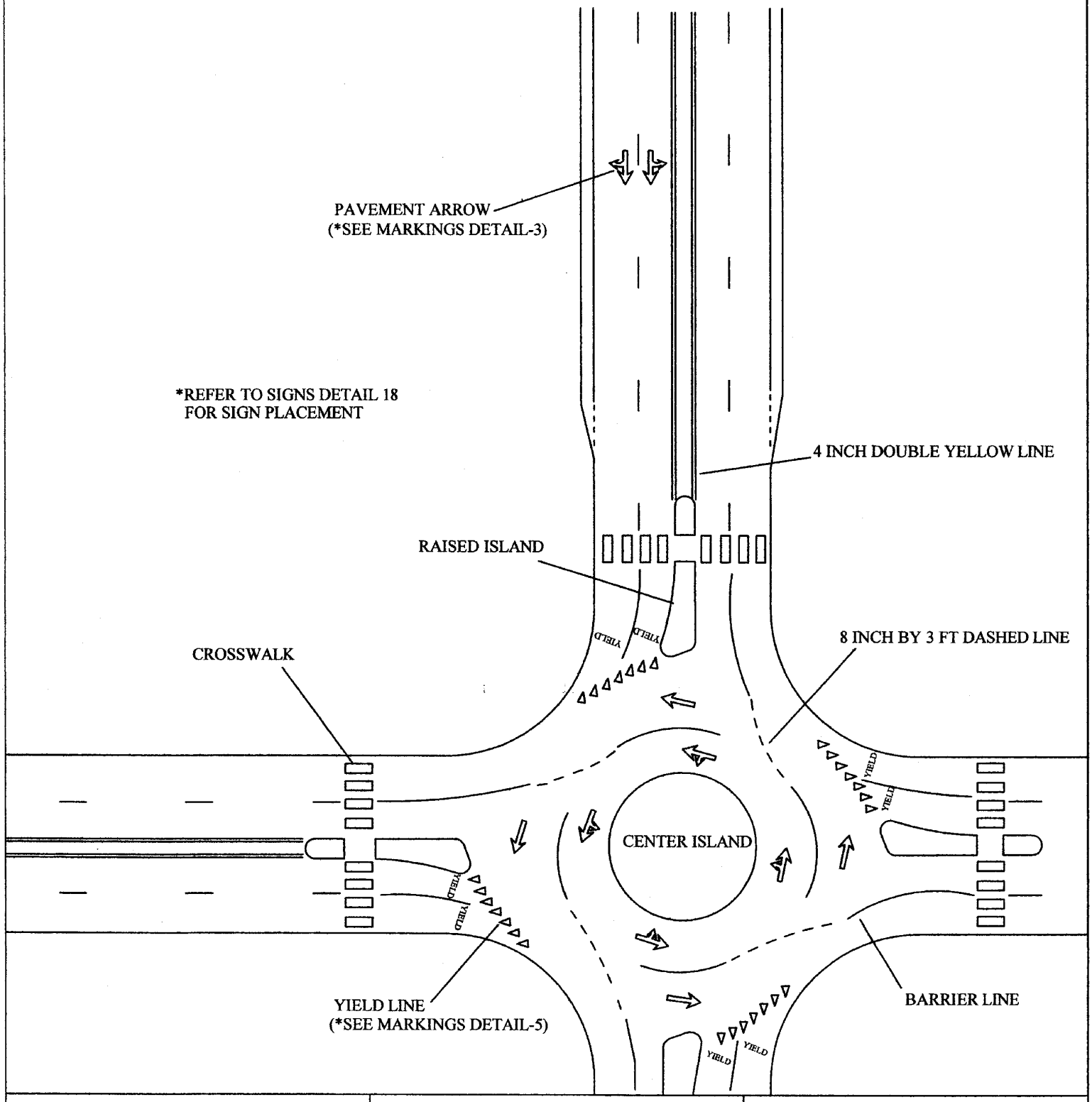
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	MARKINGS DETAIL- 5 REVISED 9/28/06

BIKE LANE LAYOUT



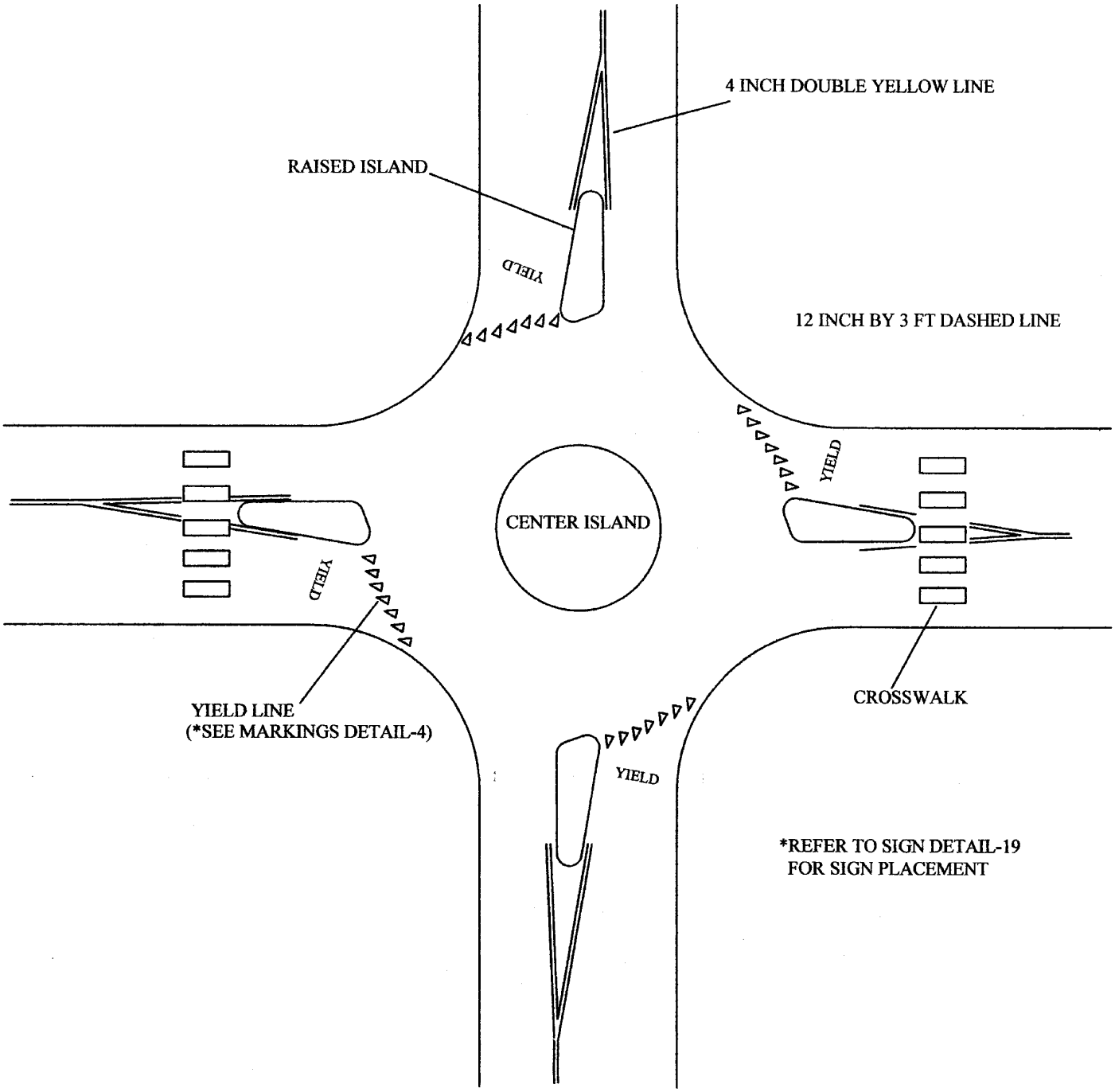
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	MARKINGS DETAIL-6 REVISED 9/28/06

STRIPING LAYOUT FOR MULTILANE ROUNDABOUTS



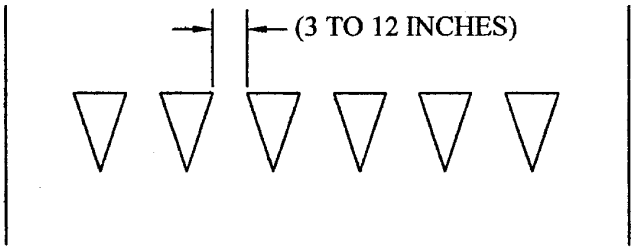
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	MARKINGS DETAIL-7 REVISED 9/28/06

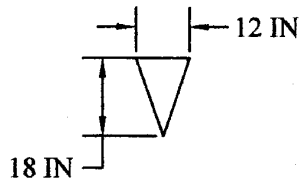
STRIPING LAYOUT FOR SINGLE LANE ROUNDABOUT



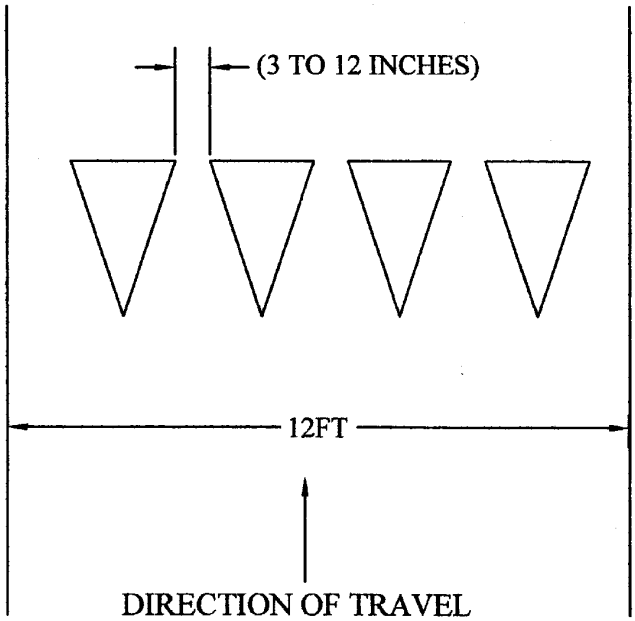
CITY OF COLORADO SPRINGS TRAFFIC ENGINEERING	SIGNS AND MARKINGS GUIDELINES	MARKINGS DETAIL-8 REVISED 9/28/06

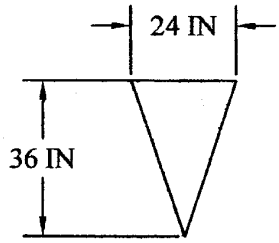
YIELD LINE LAYOUT





*MINIMUM DIMENSIONS





*MAXIMUM DIMENSIONS

*TRIANGLE LENGTH IS EQUAL TO 1.5 TIMES THE BASE DIMENSION