

DIVISION NINE

STANDARDS FOR TRAFFIC ENGINEERING

CHAPTER I. INTRODUCTION

Sec. 901-1 Purpose and Scope

This division establishes the minimum acceptable standards for the application of traffic engineering and traffic planning principals in the design of the transportation system to promote the safe, efficient and orderly movement of goods and people.

CHAPTER II. TRAFFIC STUDIES

Sec. 902-1 Responsibility for Traffic Studies

Traffic studies may be required by the County in order to adequately assess the impacts of a development proposal on the existing and/or planned major street system. These impacts would typically be addressed in the "Traffic Circulation" section of an Environmental Impact Report (EIR). If a full EIR is not required, a Negative Declaration, or an expanded initial study addressing traffic impacts, may be required. The primary responsibility for assessing the traffic impacts associated with a proposed development shall be the developer's, with the County serving in a review capacity.

The following development proposals will require regional traffic studies prepared, in a format acceptable to the Kern County Public Works Department, unless the study is waived.

- 902-1.01** Any Project proposed within the Kern County General Plan, where a Transportation Impact Fee Program has not been implemented and the increase in project trip generation during any peak hour is expected to exceed 50 vehicles.
- 902-1.02** Any Project proposed within the Rosamond-Willow Springs Specific Plan where the increase in project trip generation during any peak hour is expected to exceed 50 vehicles.
- 902-1.03** Any General/Specific Plan Amendment application, which is expected to intensify land use over that previously allowed in the General/Specific Plan whereby the increase in trip generation during any peak hour is expected to exceed 50 vehicles.

Where proposed projects, as noted above, are not expected to result in an increase in trip generation, it is exempt from a regional traffic impact study. To be eligible, a traffic analysis shall be submitted and approved which computes

trip generation with proposed land uses. Said analysis shall show that increase in peak hour trip generation does not exceed 50 trips.

- 902-1.04** Special traffic studies may be required where special circumstances dictate the need for a traffic study (such as issues of safe access concerns, significant public opposition, request for deviation from standards, large commercial/ industrial centers, etc.).
- 902-1.05** Where access points are not defined at the time the traffic study is prepared, additional traffic work may be required when the access points are determined.
- 902-1.06** Transportation consultants are required to discuss projects with the Development Review Division prior to starting the study.
- 902-1.07** The traffic study shall be prepared, stamped and signed by a licensed Traffic Engineer or Civil Engineer experienced in preparing traffic studies.

Sec. 902-2 Traffic Study Format

In order to provide consistency and to facilitate staff review of traffic studies, the Caltrans "Guide for The Preparation of Traffic Impact Studies" shall be followed in the preparation of traffic studies.

(<http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>) VERIFY REFERENCE AND THE METRIC TO BE USED

Facilities to be studied shall be any City, State or County facility (mainline, interchange, structure, intersection or any project on the Transportation Impact Fee (TIF) list) when the peak hour trip generation onto said facility exceeds 50 trips. For those facilities currently experiencing level-of-service (LOS) "C" or less, the following "sliding scale" of "added peak project trips" shall be applied as the procedure to determine whether the facility should be included:

<u>EXISTING LOS</u>	<u>ADDED PEAK PROJECT TRIPS</u>
"C"	50
"D"	40
"E"	20
"F"	10

- 902-2.01** Project Trip Generation and Design Hour Volumes must be calculated using the data contained within the Institute of Transportation Engineer's (ITE) Trip Generation Manual, latest edition, or more appropriate local data as approved by the Traffic Engineer. (Formula Averaging is NOT acceptable for the

calculation of Peak Hour trip generation rates as published in the ITE Trip Generation Manual, latest edition.)

902-2.02 Capacity Analysis must be determined by the methods contained within the Highway Capacity Manual (HCM), latest edition.

902-2.03 Traffic Signal requirements will be determined by the warrants contained in the California Manual on Uniform Traffic Control Devices (California MUTCD), latest edition.

902-2.04 Proportionate Shares along State highways and County Roads shall be calculated using the Caltrans formula.

CHAPTER III. TENTATIVE SUBDIVISION REVIEW

Sec. 903-1 Introduction

This chapter is intended as a standard for design and review of the traffic aspects of tentative subdivision maps.

Sec. 903-2 Street Name Signs

Street name signs shall be paid for and installed by the developer and placed in accordance with the requirements of County Standards Plate Nos. T-1 and T-2. These shall also be placed at the corner of knuckled streets.

Sec. 903-3 Regulatory/Warning Signs

Developer will be required to pay for and install regulatory and warning signs in accordance with these standards. Traffic signs shall be installed in conformance with the standards in the latest California MUTCD. In the event of a conflict between these standards and the California MUTCD, the California MUTCD shall take precedence.

CHAPTER IV. TRAFFIC SIGNAL IMPROVEMENTS

Sec. 904-1 Introduction

This chapter is intended as a standard for design and installation of traffic signal improvements.

Sec. 904-2 Traffic Signal & Lighting System Design

Traffic signals and lighting systems shall be designed to meet all County and State standards. These standards are defined in detail by the Kern County Public Works Department, Traffic Engineering Division.

Sec. 904-3 Traffic Signal Interconnect

Traffic signal interconnect conduit shall be installed along all collector and arterial streets or as directed by the Traffic Engineer as part of the standard street improvements. Placement of conduit shall be on the side of the street first developed unless otherwise directed due to prior development or conduit placement.

Interconnect conduit shall accommodate future Fiber-Optic Cable Systems, and be two (2) inches minimum with pull rope or pull wire and shall conform to CalTrans Standard Specifications, latest edition. Interconnect conductor shall be installed where a complete segment of conduit is being placed between signalized or future signalized intersections. The standard location for conduit shall be under sidewalk and shall be constructed with No. 5 pull boxes per Plate No. T-16 spaced at a maximum of 200 feet. Alternate design locations may be allowed as approved by the Traffic Engineer.

Sec. 904-4 Future Signal Conduit

Future signal conduit shall be installed at all major intersections or intersections planned for future signals per Plate No. T-15. Additional right of way shall be provided for location of controller as shown in the detail.

CHAPTER V. LINE OF SIGHT REVIEW

Sec. 905-1 Introduction

This chapter is intended as a standard for the construction and restriction of improvements in the line of sight for vehicles entering and exiting county roads as required.

Sec. 905-2 Uncontrolled Intersections

At all corners located on uncontrolled intersections no obstruction to the driver's view in excess of three (3) feet above the adjacent gutter flowline shall be placed in a triangular area formed by the intersecting street curblines and a line connecting them at points 60 feet from the intersection point per Plate No. T-7.

Sec. 905-3 Alleys and Minor Driveways

No obstruction to sight view will be allowed within a triangular area formed by the alley or driveway edge and the interior sidewalk edge (the street right-of-way line if no sidewalk exists) and a line connecting them at points 10 feet from the intersection point.

Sec. 905-4 Controlled Intersections

905-4.01 Sight distance at controlled intersections shall be based upon a sight distance equal to design speed (S) in miles per hour multiplied by a factor of 10 (See Plate No. T-7). Design speeds for various street classifications are as follows:

Classification	Speed (S)
Local Street	25 MPH
Collector	65 MPH
Arterial	65 MPH

905-4.02 Corner sight distance is measured from a point on the minor road fifteen feet from the curb line of the major road, and three feet right of the left edge of the viewing lane under consideration. Said point is viewed from a height of three and one-half (3.5) feet on the minor road to an oncoming vehicle height of four and one-quarter (4.25) feet on the major road.

905-4.03 When viewing left, the location of the oncoming vehicle is considered to be twelve feet from the nearest curb line of the major street (six (6) feet with parking prohibited). Parking is assumed to be prohibited on arterial and collector streets.

905-4.04 When viewing right, the location of the oncoming vehicle is considered to be three (3) feet right of the left edge of the left most lane for the oncoming vehicle on the major street.

Sec. 905-5 T-Intersections

At uncontrolled T-intersections, the requirements of both Sections 905-2 and 905-4 shall be met.

Sec. 905-6 Landscaping

905-6.01 Landscaping over thirty (30) inches in height above top of curb shall not be placed within the lines of sight defined in the preceding sections. All landscaping must be maintained at a height of thirty (30) inches or less with the exception of trees as provided for in Section 905-6.02 (See Plate No. T-8)

905-6.02 Trees are permitted in the line of sight for controlled intersections provided that the skirt height (bottom of foliage) is maintained seven (7) feet above the adjacent top of curb height. In the event more than one (1) tree is placed in the sight line area they must be placed on a radial from the viewpoint. (See Plate No. T-8)

CHAPTER VI. SIGNING, STRIPING AND MARKING

Sec. 906-1 Introduction

The County shall provide all new and revised signing, striping, marking and other channelization necessary except as noted in Chapter III of this Division. However, design of all new and revised signing, striping, marking and other channelization shall be provided by the project's Engineer and comply with the standards established in the State of California and detailed in the California MUTCD.

These requirements are intended to supplement and clarify the requirements contained in the California MUTCD and the CalTrans Standard Plans and Specifications, latest edition.

The associated details, special provisions and these requirements are to be used as a general standard for developing signing & striping plans. Specific situations may require special consideration.

Sec. 906-2 Design Requirements

- 906-2.01** Signing & striping plans shall show the proposed signing, striping and markings within the limits of the project. It shall also show existing signing and striping in and beyond the project limits as needed to determine proper transition.
- 909-2.02** Depending upon the location involved, various methods for dividing traffic may be available or appropriate. These include: a yellow skip stripe, double yellow stripe, double-double yellow stripe (painted median), two-way turn lane stripe and where there is a minimum specified ADT, reflective raised pavement markers will be required. The Traffic Engineer shall have final determination as to which method is used.
- 909-2.03** Paint shall conform to Section 84 of the Caltrans Standard Specifications, unless another treatment is allowed.
- 906-2.04** Existing stripes shall be removed, where necessary. Removal shall be in accordance to Section 15 of the Caltrans Standard Specifications.
- 906-2.05** Provisions shall be included to have the Inspector review the "Rabbit Tracked" layout in the field prior to final striping. Field adjustments may be needed.

- 906-2.06** It is the responsibility of the project's Engineer to review the road work to be done with relationship to maintaining existing traffic. If the project's Engineer determines a detour is needed, then a detour plan shall also be included. If no detour plan is provided but the Inspector finds that one is necessary during construction, then the project's Engineer shall provide such a plan at that time and no work shall progress until such plan is approved.
- 906-2.07** Plate Nos. T-12 and T-13 detail typical striping plans, which cover most of the common striping situations encountered. Striping plans shall be designed to provide the total number of lanes for ultimate full width improvements whenever possible. Specific projects may require special treatment to match existing conditions. (e.g. - dropping a lane or forcing the outside lane to turn at an intersection, providing only 2-lanes each way on a 6-lane arterial, moving lanes over due to 1/2 width improvements, etc.)

CHAPTER VII. STREET SIGN SPECIFICATIONS

907-1 Design

Street signs shall consist of two (2) double faced signs, mounted at right angles. (or 45 degree if angle of intersection warrants)

907-2 Bracket Assembly

Post cap shall fit a two (2) inch I.D. Round Pipe or two (2) inch Square Tubing, complete with minimum of three (3) Allenhead setscrews to secure to pipe. Crosspiece shall secure the name plates at 90-degree (or 45-degree) with a minimum of two (2) five-sixteenths (5/16) inch Allen head setscrews in each plate (setscrews shall be electro-plated zinc-coated.0003-.0005"). Casting shall be die-cast aluminum. Standard weight.

907-3 Plate Size

Length shall be either 30" or 36". Width shall be nine (9) inches. Radius of corners shall be one-half (1/2) inch. Plates shall be 0.125" ga. aluminum, 6061T6 Alloy with Alodine 1200 surface treatment.

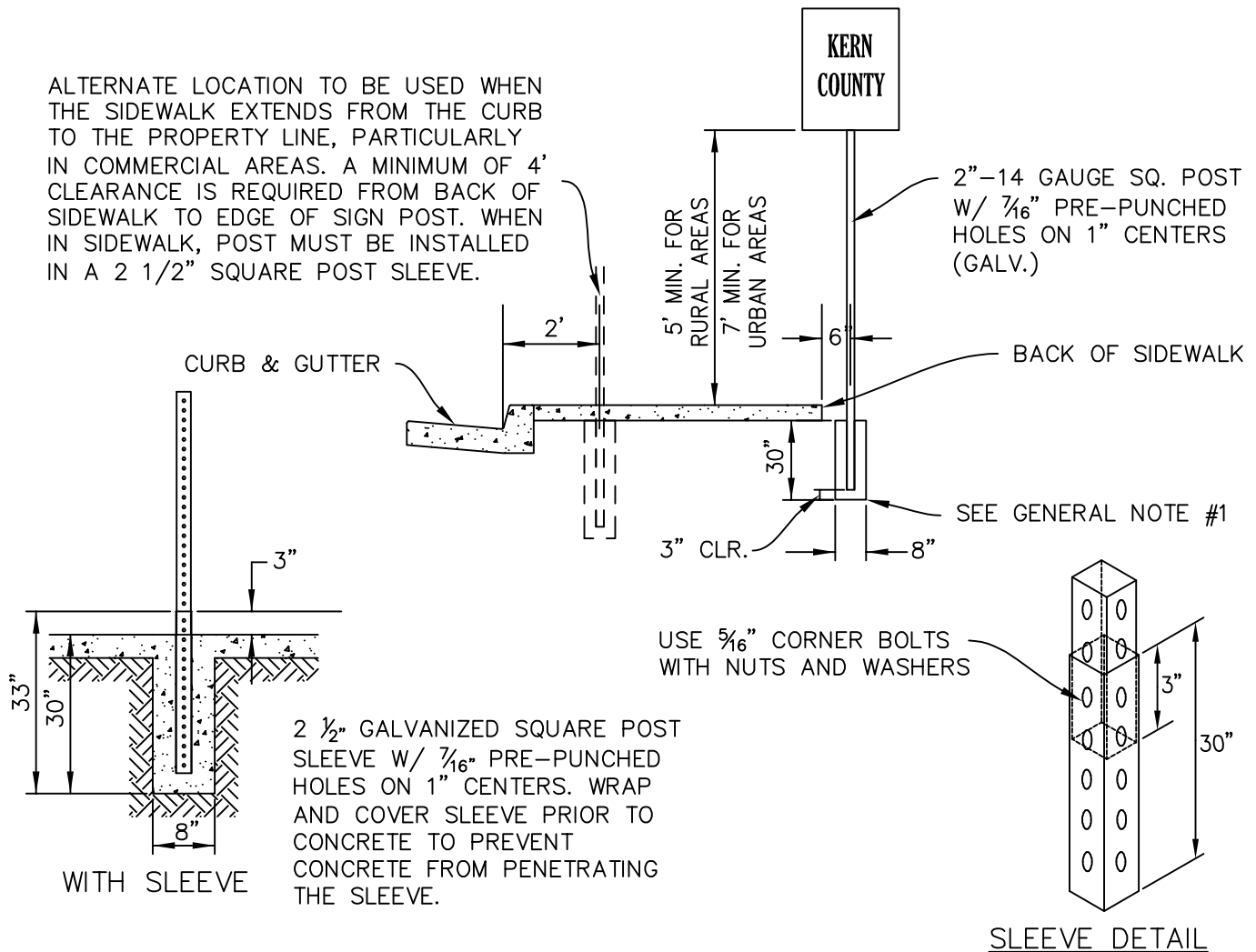
907-4 Finish

Signs shall be baked enamel finished in accordance with the current State of California Specifications of Interstate Green.

907-5 Lettering

The letters shall be the rounded type style conforming to the standard alphabet for highway signs designed by the "Standard Highway Signs and Markings" of the Federal Highways Administration (FHWA). Street names shall be Series B, C, D, or E, six (6) inch high. Abbreviations (St., Dr., Ln., Ave., Ct., Way, etc.) shall be series C, two (2) inch high. Street names and abbreviations shall be White Reflective Sheeting Material, as manufactured by the 3M Company, or equal. Each name shall be individually laid out and spaced to fit either the 30" or 36" plates. Application of Reflective sheeting shall be applied in accordance with the manufacturer's specifications.

ALTERNATE LOCATION TO BE USED WHEN THE SIDEWALK EXTENDS FROM THE CURB TO THE PROPERTY LINE, PARTICULARLY IN COMMERCIAL AREAS. A MINIMUM OF 4' CLEARANCE IS REQUIRED FROM BACK OF SIDEWALK TO EDGE OF SIGN POST. WHEN IN SIDEWALK, POST MUST BE INSTALLED IN A 2 1/2" SQUARE POST SLEEVE.



GENERAL NOTE:

1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR MINOR CONCRETE (MIN. CEMENT CONTENT 505 LB/CU.YD.). CONCRETE SHALL CONTAIN NO ADDITIVES UNLESS PRIOR APPROVAL IS OBTAINED FROM THE COUNTY ENGINEER.

MOUNTING REQUIREMENTS:

- SIGN PANELS SHALL BE MOUNTED WITH HAWKINS M2G SERIES BOLT AND VANDAL PROOF NUT ASSEMBLY OR APPROVED EQUAL. SIGNS MOUNTED ON SIGNAL OR OTHER POLES SHALL BE ATTACHED WITH STAINLESS STEEL STRAPS AND HAWKINS M2G SERIES BOLT AND VANDAL PROOF NUT ASSEMBLY OR APPROVED EQUAL. TOP OF POST IS TO BE BELOW THE TOP OF SIGN PANEL BY NO MORE THAN 1.5".
- SIZE OF SIGN PANELS SHALL BE ASSUMED AS STANDARD DENOTED IN THE CALIFORNIA MUTCD, UNLESS OTHER SIZE IS SPECIFIED ELSEWHERE.
- SIGN PANEL SHALL BE MOUNTED WITH 3/8" ALL ALUMINUM DRIVE RIVET WITH WASHERS. SIGNS MOUNTED ON SIGNAL OR OTHER POLES SHALL BE ATTACHED WITH STAINLESS STEEL STRAPS WITH 5/16" THREADED STAINLESS STEEL STRAPPING FLARED LEG BRACKETS. DRILLED HOLES SHALL NOT EXCEED DIAMETER OF BOLT MORE THAN 1/16". TOP OF POST IS TO BE BELOW THE TOP OF THE SIGN PANEL BY NO MORE THAN 1.5"



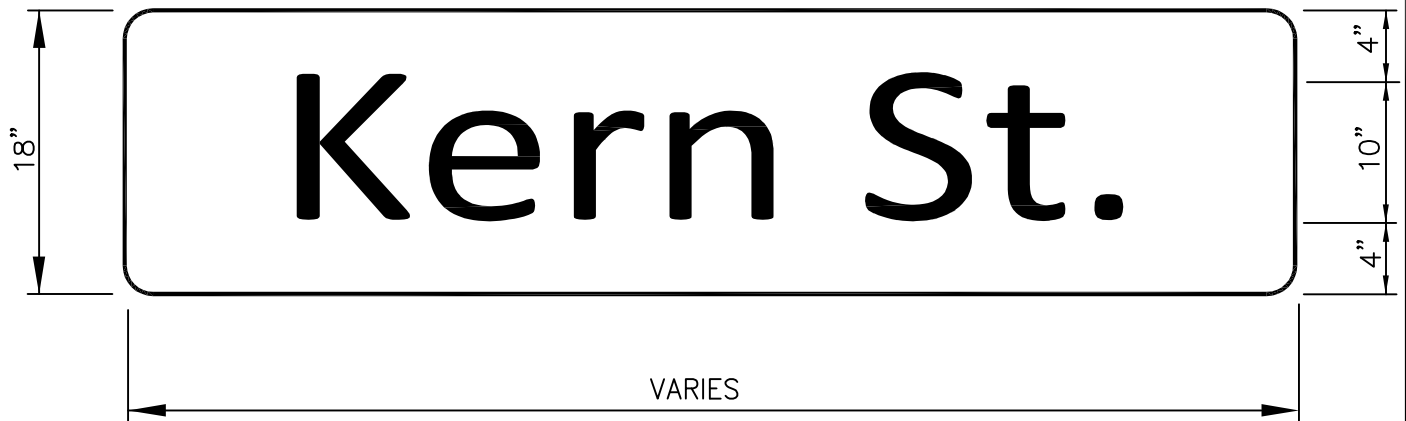
STANDARD MISCELLANEOUS SIGN DETAILS

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

REVISIONS	DATE	DESC
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DESIGNED BY:	J.R.C.
DATE DRAFTED:	09/30/23
APPROVED BY:	J.R.C.

PLATE NO.
T-2



SPECIFICATIONS:

THE SIGN PLATE SHALL BE ALUMINUM, 0.125" THICK.

THE BACKGROUND SHALL BE REFLECTIVE SHEETING, HIGH INTENSITY GRADE, GREEN.

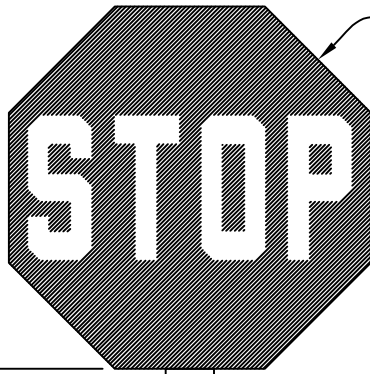
THE STREET NAME LETTERING SHALL BE 10 INCH REFLECTIVE SHEETING, DIAMOND GRADE, WHITE.

BACKGROUND AND LETTERING SHALL BE INSTALLED ON BOTH SIDES.

INSTALL USING MAST-ARM HANGER METHODS SUCH AS HAWKINS M10J SERIES SWINGING SIGN BRACKET, WITH RETURN SPRING REMOVED, OR APPROVED EQUAL.

OTHER DETAILS SHALL BE PER THE CURRENT STANDARD SPECIFICATIONS, STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, SECTION 56, "SIGNS".

	STANDARD SIGN PLATE MAST ARM MOUNT	REVISIONS	DRAFTED BY: R.R.P.	PLATE NO. T-3
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	-	-	DESIGNED BY: J.R.C.	
	-	-		
	-	-	DATE DRAFTED: 09/30/23	
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	COUNTY OF KERN STATE OF CALIFORNIA DEVELOPMENT STANDARD	-	-	APPROVED BY: J.R.C.
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STANDARD R1-1, SIZE 30"x 30"
OR AS DIRECTED BY THE
TRAFFIC ENGINEER

LOCATIONS

CURB & GUTTER

URBAN

12" MIN.
24" MAX.

E.P.

RURAL

6'

5'-0" MIN.-RURAL, 6'-8" MIN. CLEARANCE IF IN SIDEWALK
7'-0" MIN.-URBAN

GROUND OR
SIDEWALK GRADE

2"-14 GAUGE SQUARE POST
WITH 7/16" PRE-PUNCHED
HOLES ON 1" CENTER (GALV.)

SEE PLATE T-2 FOR IN
SIDEWALK INSTALLATION
WITH SLEEVE

NOTES:

1. SIGNS SHALL BE REFLECTORIZED IN ACCORDANCE WITH CA MUTCD (CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) SPECIFICATIONS.
2. IF A CONFLICT EXISTS WITH THE LOCATION OF THE STOP SIGN AND A FIRE HYDRANT, THE STOP SIGN MAY BE MOVED 24" ALONG THE TANGENT AWAY FROM THE END OF THE RETURN.

SEE PLATE T-2, NOTE 1

NOT TO SCALE



STANDARD STOP SIGN

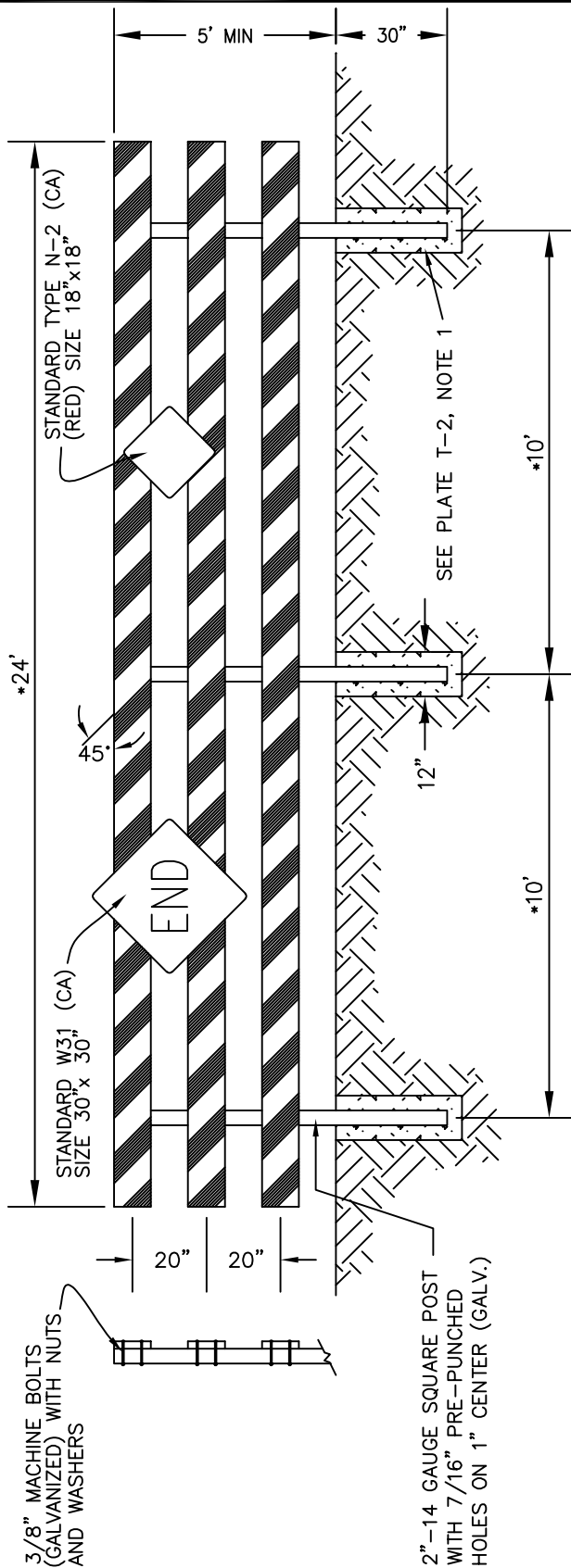
COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

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PLATE NO.

T-4



NOT TO SCALE

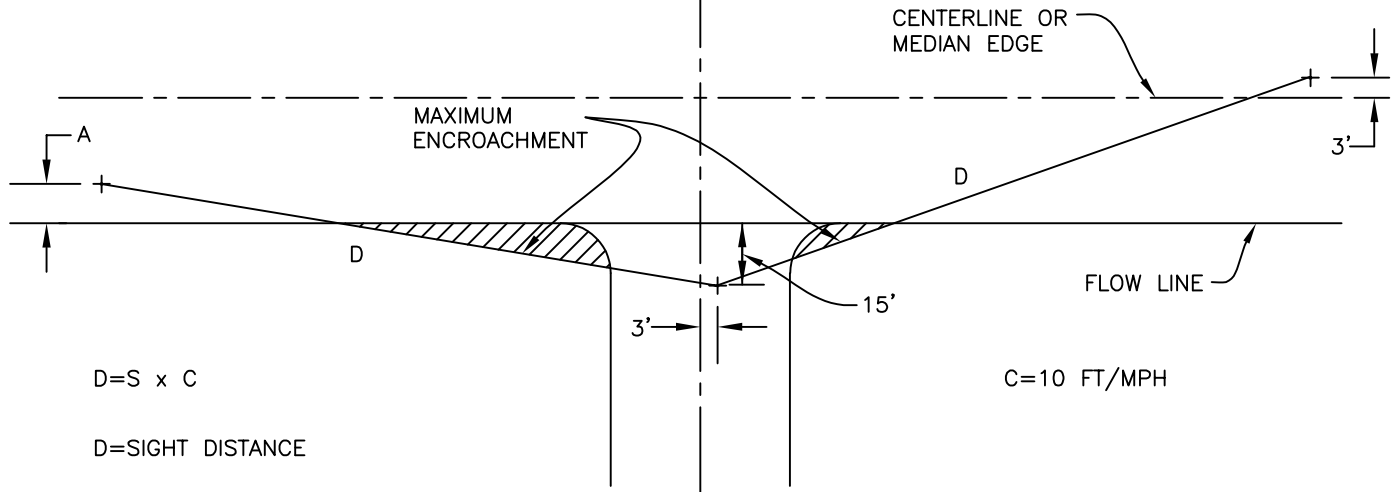
NOTES:

1. MARKINGS FOR BARRICADE RAILS SHALL BE ORANGE AND WHITE STRIPES (SLOPING AT AN ANGLE OF 45 DEGREES)
2. THE ENTIRE AREA OF THE ORANGE AND WHITE RAIL SHALL BE REFLECTORIZED AND SHALL MEET THE FOLLOWING MINIMUM DRY REFLECTIVE VALUES AT 0.2 AND 0.5 DEGREE DIVERGENCE, EXPRESSED IN UNITS OF CANDLEPOWER PER FOOT CANDLE PER SQUARE FOOT, AS MEASURED AT A DISTANCE OF 50 FEET FROM THE LIGHT SOURCE. THE WET REFLECTIVE VALUES SHALL BE A MINIMUM OF 90 PERCENT OF THE DRY VALUES. THE PREDOMINATE COLOR FOR OTHER BARRICADE COMPONENTS SHALL BE WHITE.

INCLUDED ANGLE	WHITE	ORANGE
0.2	0.5	0.2
0.5	45.0	13.0
20.0	20.0	6.5
11.0	6.5	2.9
3. SECTION 57, "TIMBER STRUCTURES" OF THE STANDARD SPECIFICATIONS, CURRENT EDITION, SHALL APPLY. ALL TIMBER TO BE DOUGLAS FIR CONSTRUCTION GRADE S4S.
4. RAILS SHALL BE NOMINAL 2" x 8" OF 2" x 10"
- *5. WIDTHS OF BARRICADE AND PLACEMENT OF TRAFFIC STANDARD SIGNS SHALL BE DETERMINED/APPROVED BY THE DIRECTOR

A=6' WITHOUT PARKING
(ALWAYS USED ON ARTERIALS
AND COLLECTORS)
A=12' WITH PARKING

DESIGN SPEEDS	
60' R/W	25 MPH
76' R/W	55 MPH
90' R/W	65 MPH
110' R/W	65 MPH



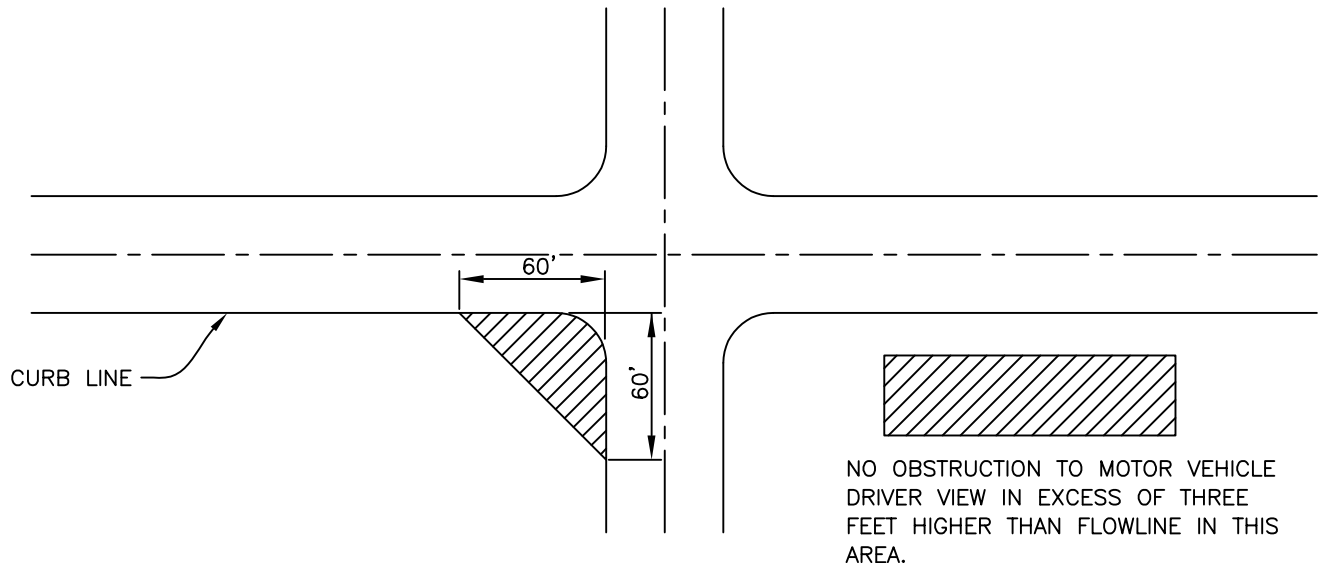
$$D = S \times C$$

D=SIGHT DISTANCE

S=CRITICAL SPEED (85th PERCENTILE) OR,
IF NOT KNOWN, DESIGN SPEED ON THRU STREET.

(SIGHT LINE ASSUMES AN EYE AT 3.5' HEIGHT
LOOKING AT AN OBJECT AT 4.25' HEIGHT)

CONTROLLED INTERSECTION NOT TO SCALE



UNCONTROLLED INTERSECTION NOT TO SCALE



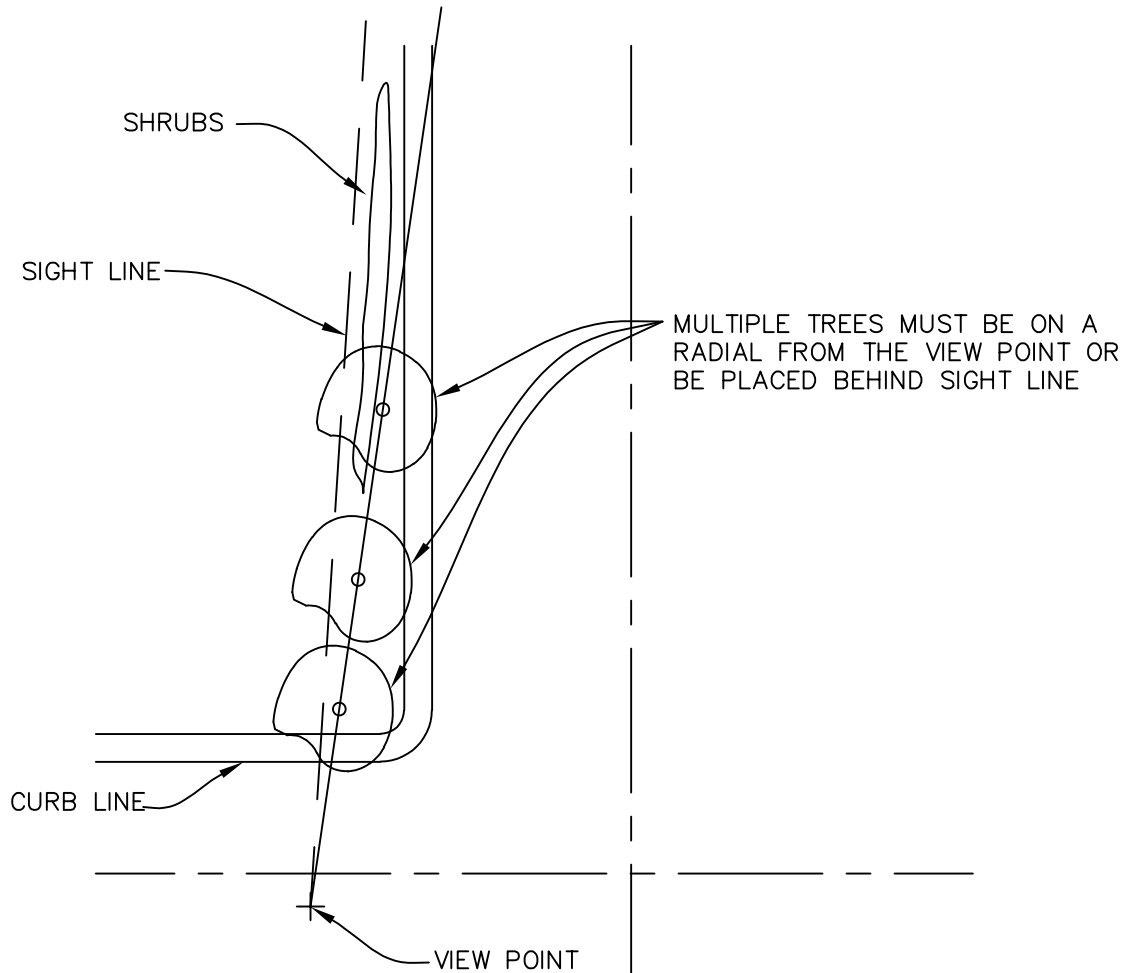
STANDARD SIGHT DISTANCE REQUIREMENTS FOR INTERSECTIONS

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

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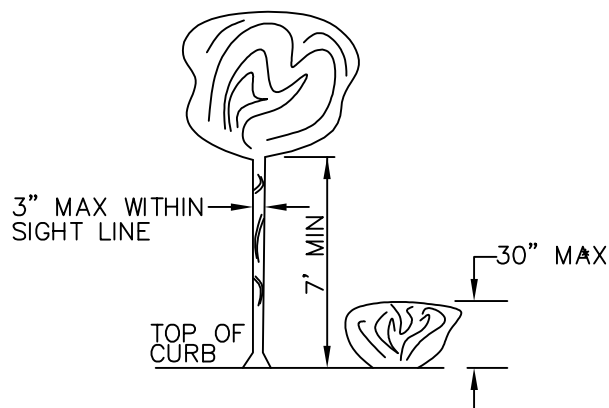
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PLATE NO.
T-7



TREES IN MEDIANS WITHIN SIGHT LINE VIEWING AREA SHALL BE SPACED AT OR GREATER THAN 50'. OTHER PLANT MATERIALS SHALL BE RESTRICTED TO LOW GROWTH SHRUBS, GROUND COVER OR TURF.

NOT TO SCALE



TREES AND SHRUBS WITHIN SIGHT LINE AND TREES OVER SIDEWALKS SHALL CONFORM TO THE DETAIL BELOW.

TREES AND SHRUBS WITHIN SIGHT LINE AND TREES OVER SIDEWALKS SHALL CONFORM TO THE DETAIL BELOW.

* MEASURE FROM TOP OF CURB FOR SOLID OBJECTS, I.E. FENCES, WALLS, ETC.



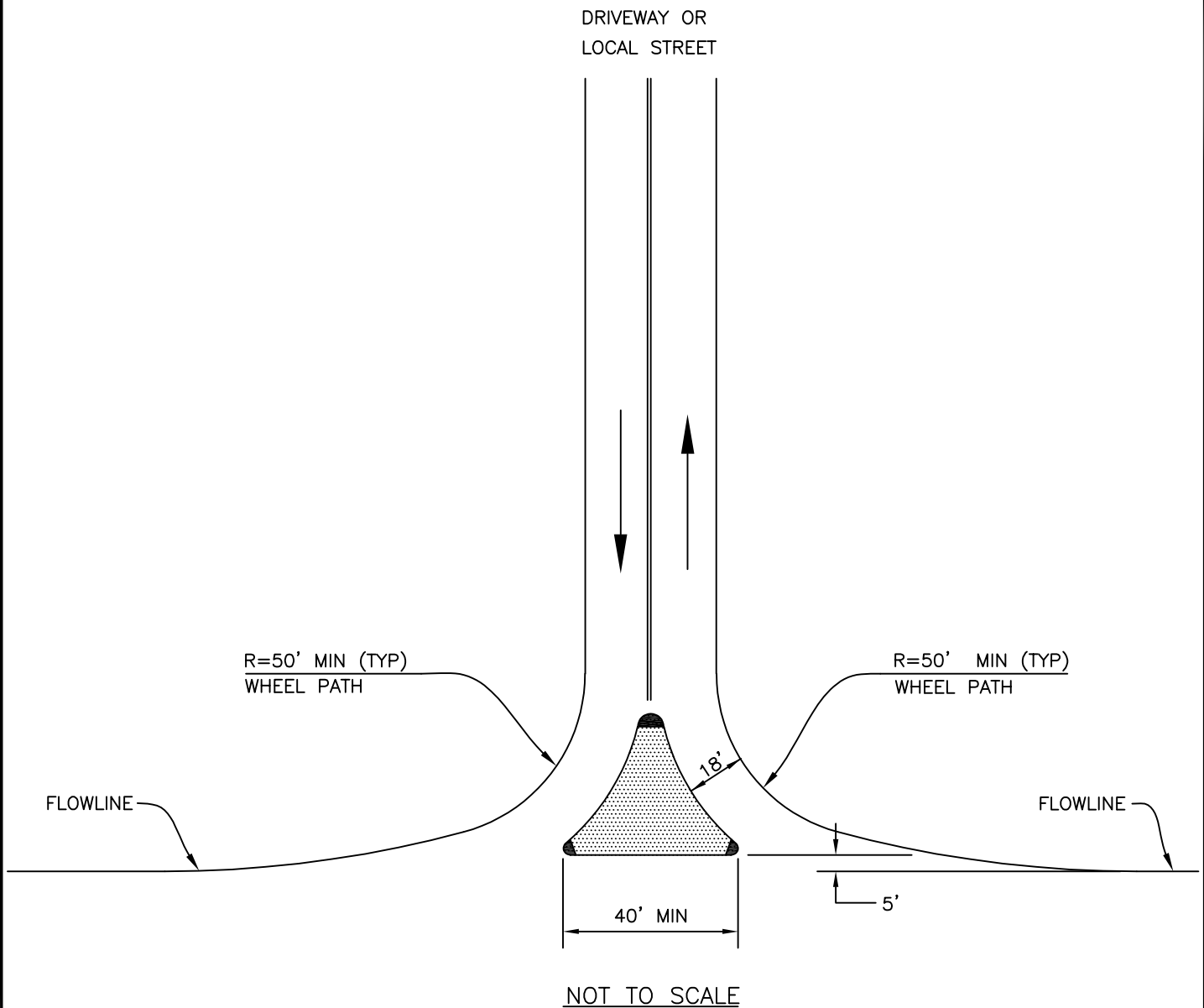
STANDARD TYPICAL SIGHT LINE REQUIREMENTS FOR LANDSCAPING

COUNTY OF KERN
STATE OF CALIFORNIA
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DATE DRAFTED: 09/30/23
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PLATE NO.
T-8



NOTES:

1. ALL CONCRETE MEDIAN NOSES SHALL BE PAINTED YELLOW AND HAVE TYPE "G" RAISED PAVEMENT MARKERS.
2. TO BE USED WHERE RESTRICTED TURNING MOVEMENTS ARE REQUIRED AND MEDIAN NOT BEING CONSTRUCTED ON MAIN STREET AT TIME OF DRIVEWAY OR LOCAL STREET CONSTRUCTION.
3. ALTERNATIVE DESIGN DIMENSIONS MAY BE ACCEPTED, PROVIDING MOVEMENTS ARE SATISFACTORILY RESTRICTED, PEDESTRIAN AND DISABLED ACCESS IS PROVIDED FOR, AND DESIGN TURNING RADIUS IS ACCOMMODATED.

"THIS PLAN IS CONCEPTUAL ONLY AND IS NOT TO BE CONSIDERED A CONSTRUCTION DRAWING."



**STANDARD RESTRICTED ACCESS
STANDARD RIGHT-IN, RIGHT-OUT ONLY**

COUNTY OF KERN
STATE OF CALIFORNIA
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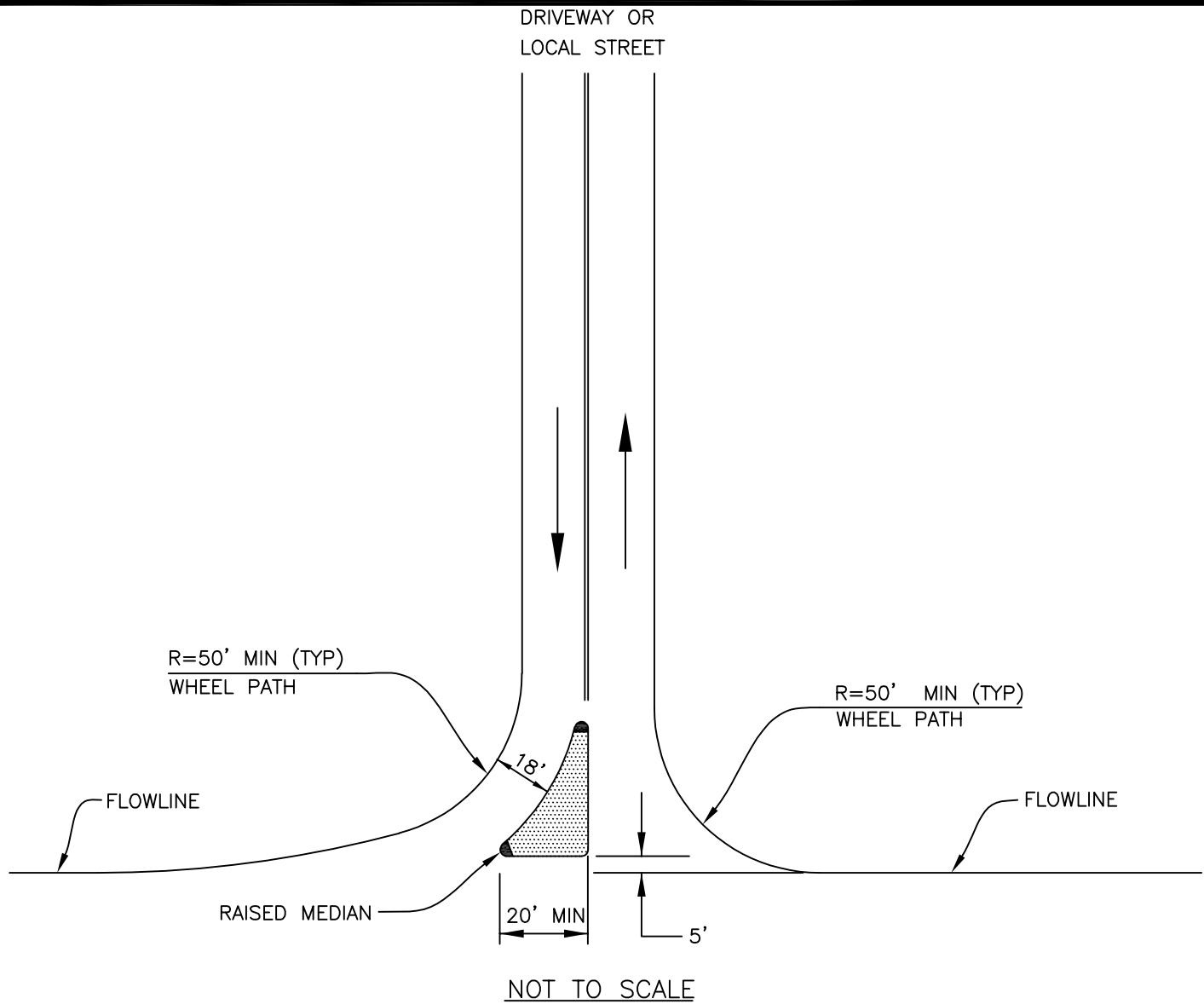
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DATE DRAFTED: 09/30/23

APPROVED BY: J.R.C.

PLATE NO.

T-9



NOTES:

1. ALL CONCRETE MEDIAN NOSES SHALL BE PAINTED YELLOW AND HAVE TYPE "G" RAISED PAVEMENT MARKERS.
2. TO BE USED WHERE RESTRICTED TURNING MOVEMENTS ARE REQUIRED AND MEDIAN NOT BEING CONSTRUCTED ON MAIN STREET AT TIME OF DRIVEWAY OR LOCAL STREET CONSTRUCTION.

"THIS PLAN IS CONCEPTUAL ONLY AND IS NOT TO BE CONSIDERED A CONSTRUCTION DRAWING."



STANDARD RESTRICTED ACCESS RIGHT-IN, RIGHT-OUT, LEFT-IN ONLY

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

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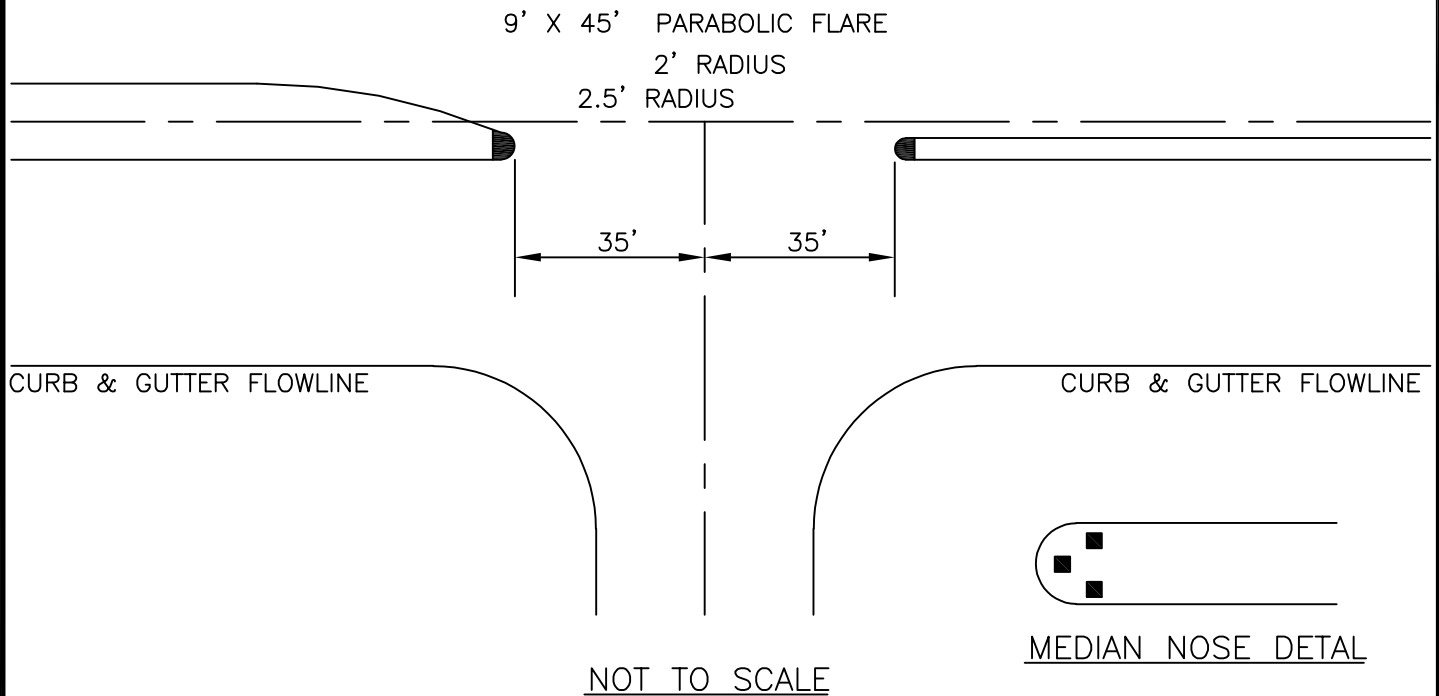
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PLATE NO.

T-10

CURB & GUTTER FLOWLINE



TYPICAL MEDIAN END DETAIL FOR
T – INTERSECTION OF LOCAL STREET WITH ARTERIAL STREET
HAVING FULL ACCESS IN ALL DIRECTIONS

NOTES:

1. ALL CONCRETE MEDIAN NOSES SHALL BE PAINTED YELLOW AND HAVE TYPE "G" RAISED PAVEMENT MARKERS.

"THIS PLAN IS CONCEPTUAL ONLY AND IS NOT TO BE CONSIDERED A CONSTRUCTION DRAWING."



STANDARD TYPICAL MEDIAN END DETAILS AT INTERSECTIONS WITH T-LOCAL STREETS

COUNTY OF KERN
STATE OF CALIFORNIA
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PLATE NO.

T-11



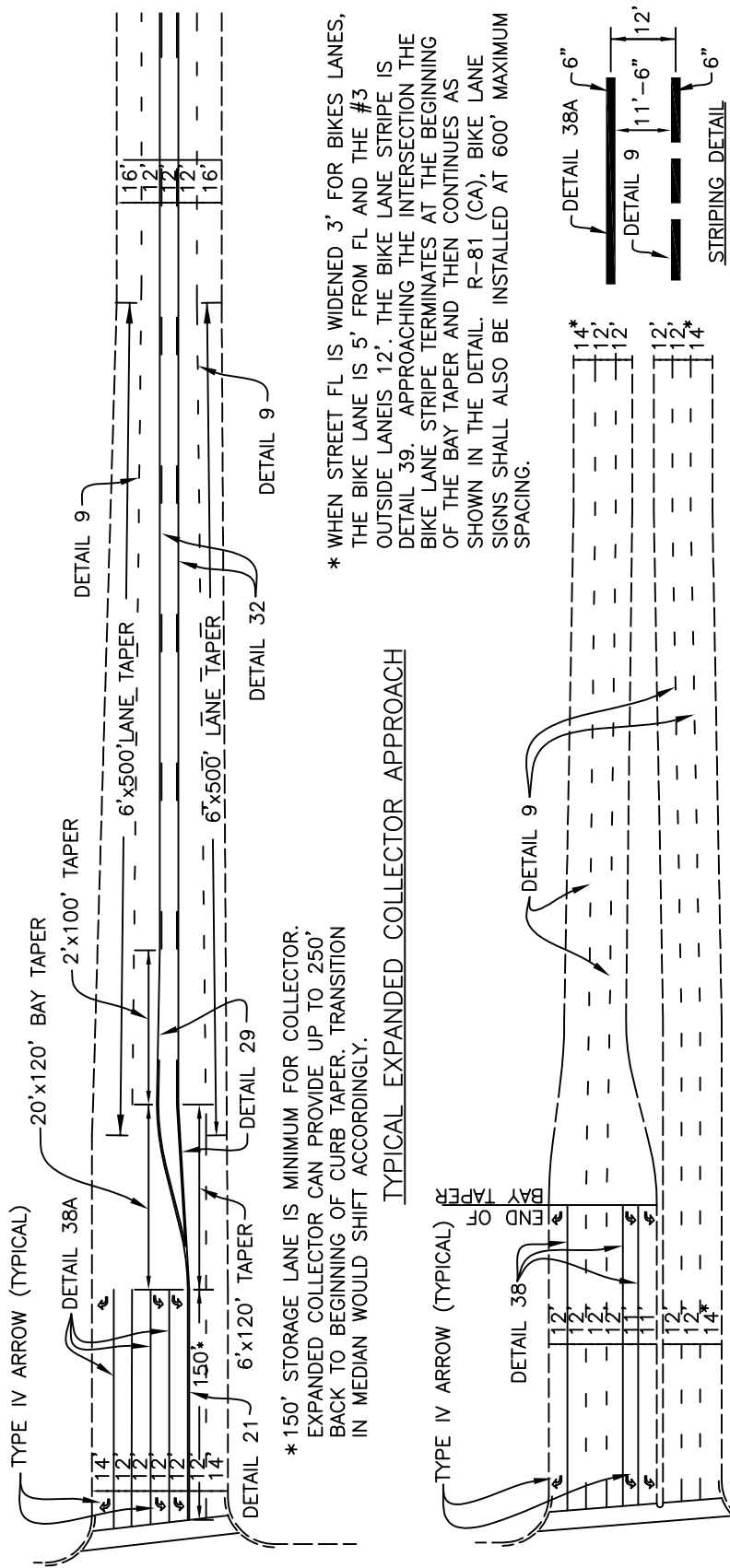
STANDARD TYPICAL STRIPING PLAN FOR
ARTERIAL AND COLLECTOR APPROACHES

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

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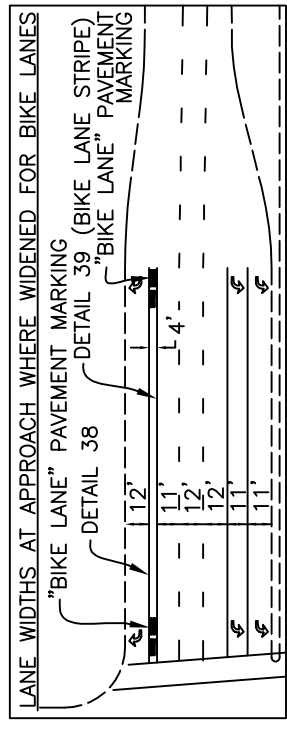
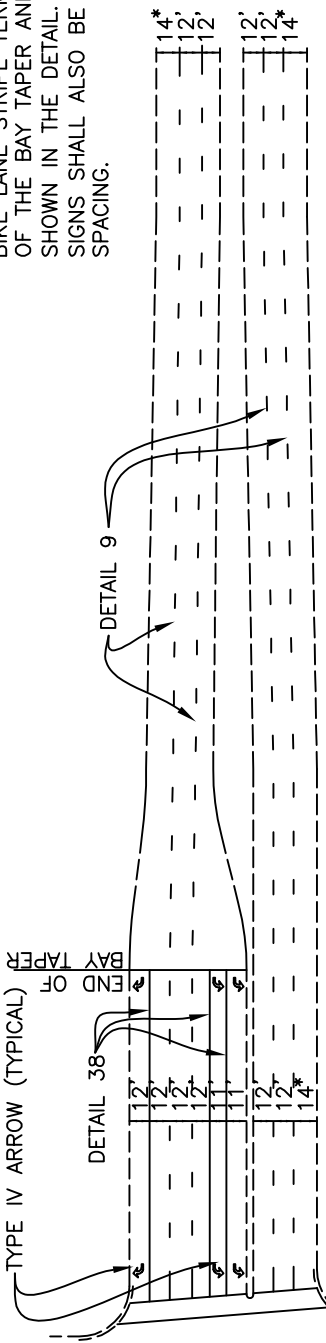
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DESIGNED BY:	J.R.C.
DATE DRAFTED:	09/30/23
APPROVED BY:	J.R.C.

PLATE NO.
T-13



* WHEN STREET FL IS WIDENED 3' FOR BIKES LANES, THE BIKE LANE IS 5' FROM FL AND THE #3 OUTSIDE LANES 12'. THE BIKE LANE STRIPE IS DETAIL 39. APPROACHING THE INTERSECTION THE BIKE LANE STRIPE TERMINATES AT THE BEGINNING OF THE BAY TAPER AND THEN CONTINUES AS SHOWN IN THE DETAIL. R-81 (CA), BIKE LANE SIGNS SHALL ALSO BE INSTALLED AT 600' MAXIMUM SPACING.

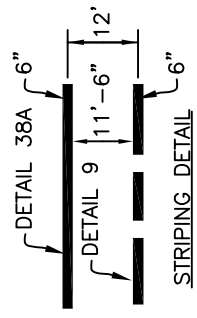
TYPICAL EXPANDED COLLECTOR APPROACH

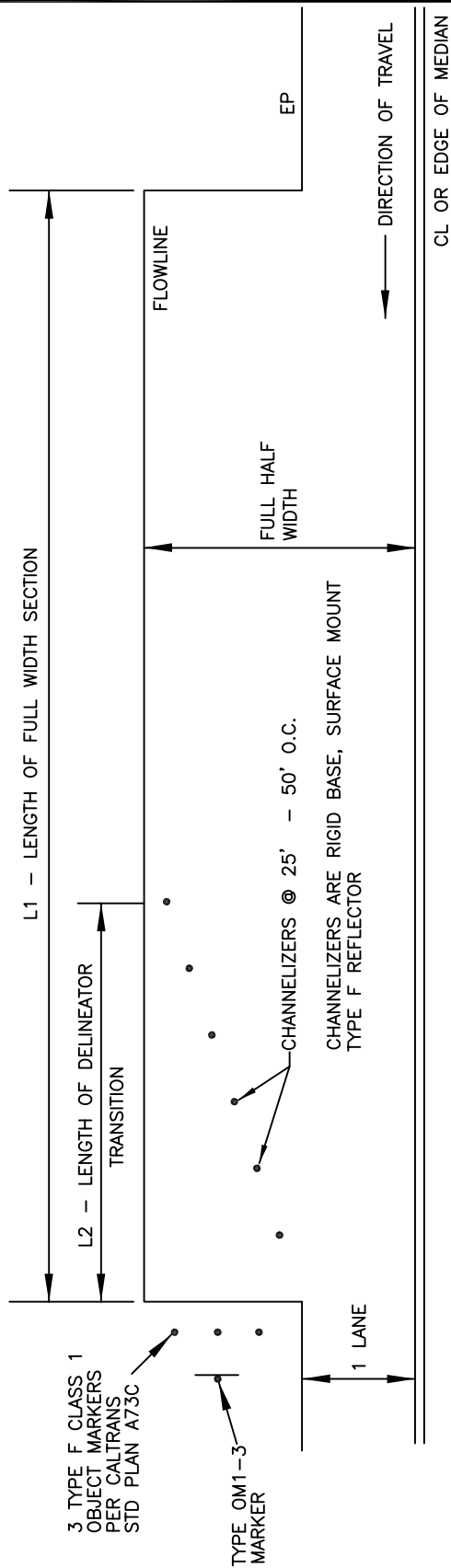


TYPICAL EXPANDED ARTERIAL APPROACH

GENERAL NOTES:

- FIGURES 6-13 THROUGH 6-55 OF THE CALTRANS TRAFFIC MANUAL SHALL BE USED AS A DESIGN GUIDE FOR STRIPING, SIGNING, & MARKING PLANS.
- STRIPING DETAILS AND PAVEMENT MARKINGS SHALL CONFORM TO CURRENT CALTRANS STANDARD PLANS A20A THROUGH A24C.
- STORAGE LENGTH FOR LEFT AND RIGHT TURN LANES VARY, BASED ON NEED DUE TO DECELERATION AND ANTICIPATED VOLUMES. THE LENGTH SHALL MATCH LENGTH TO BEGINNING OF TURN BAY TAPERS WHERE EXISTING IN MEDIAN OR IN CURB AND GUTTER.
- SIGNS SHALL BE PLACED IN ACCORDANCE WITH PLATE T-1 & T-2.
- PLACEMENT OF WARNING SIGNS SHALL BE BASED ON SEC. 2C.05 OF THE CA MUTCD (CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES).
- TRANSITION TAPERS SHALL BE ADJUSTED IN THE FIELD TO PROVIDE SMOOTH TRANSITION OF TRAFFIC.





L1		L2	
<	$\frac{1}{4}$ MILE	NO TRANSITION NECESSARY TYPE F CLASS 1 OBJECT MARKERS ONLY WITH OM1-3 MARKER	
	$\frac{1}{4}$ MILE		200'
	TO $\frac{1}{2}$ MILE		
OVER	$\frac{1}{2}$ MILE	500' MIN OR MORE. FOR ACTUAL MOVE OVER USE DESIGN SPEED	

REFERENCE: 1. SEC. 6-06 OF THE CALTRANS TRAFFIC MANUAL FOR USE OF CHANNELIZERS
2. CALTRANS STD PLAN A73C FOR DETAILS



STANDARD TRANSITIONS AT ROAD NARROWINGS

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

REVISIONS	
DATE	DESC
-	-
-	-
-	-
-	-
-	-
-	-

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PLATE NO.
T-14

R/W REQUIRED AT ALL CORNERS TO PROVIDE FOR CONTROLLER

R/W BACK OF SIDEWALK

3' MIN

PULL BOX AT BACK OF CURB

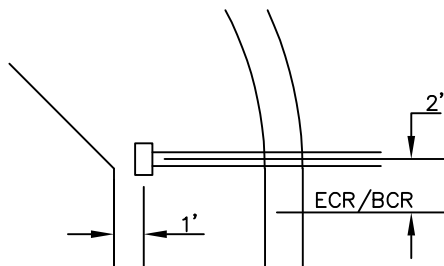
TYPICAL INTERCONNECT CONDUIT AND PULL BOXES WHEN REQUIRED PER PLATE T-16

BACK OF SIDEWALK R/W

NO. 5 PULL BOX PER CALTRANS STANDARD PLAN ES-8, CURRENT EDITION, WITH LID MARKED "TRAFFIC SIGNAL" (SEE DIMENSIONS BELOW)

4" SCHEDULE 40 CONDUITS INSTALLED IN CONFORMANCE TO SEC. 86-2.05 OF THE CALTRANS STANDARD SPECIFICATIONS, CURRENT EDITION.

PULL BOXES ARE REQUIRED AT BOTH ENDS OF CONDUIT. WHERE PAVING IS EXISTING, CONDUIT SHALL EXTEND ACROSS ENTIRE PAVED WIDTH AND SHALL BE INSTALLED BY BORING EXISTING PAVEMENT, UNLESS OTHER METHOD IS ALLOWED.



THIS STANDARD APPLIES AT ALL INTERSECTIONS OF 2 MAJOR STREETS OR ANY INTERSECTION DESIGNATED FOR FUTURE SIGNAL INSTALLATION

SEPARATE CONDUIT AND PULL BOXES MAY BE REQUIRED ON CERTAIN CROSSINGS WHERE INTERCONNECT IS REQUIRED ALONG SAID STREET. (SEE PLATE T-16)



STANDARD CONDUIT & R/W REQUIREMENTS FOR FUTURE SIGNAL LOCATIONS

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

REVISIONS	DATE	DESC
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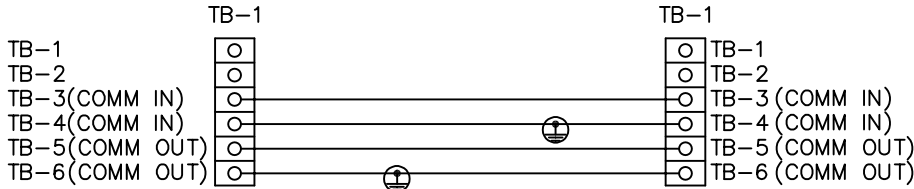
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PLATE NO.
T-15

C2P MODEM INTERCONNECT/TERMINAL BLOCK TB-1

INPUT PANEL #4
WIRE COLOR ASSIGNMENTS

PIN	FUNCTION	WIRE COLOR MODEM HARNESS	TB-1	WIRE COLOR INTERCONNECT CABLE
A	AUDIO IN	WHITE	TB1-3	WHITE
B	AUDIO IN	BLACK	TB1-4	BLACK
C	AUDIO OUT	RED	TB1-5	BLACK
E	AUDIO OUT	GREEN	TB1-6	GREEN



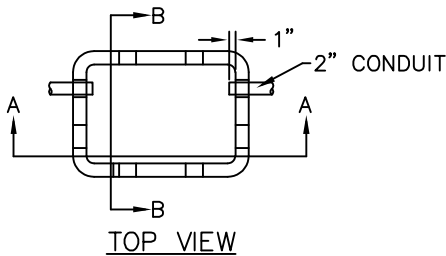
INTERSECTION
LOCATION A

INTERSECTION
LOCATION B

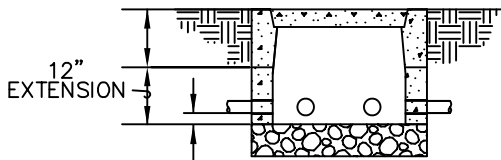
INTERCONNECT DETAIL
NTS

NOTE:

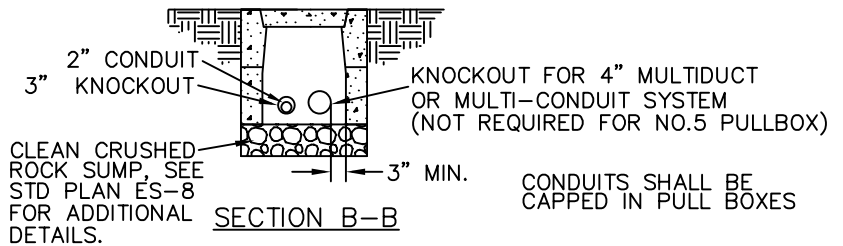
COPPER WIRE NO LONGER USED.
REPLACE CABLE WITH A PULL ROPE
FOR FUTURE USE WITH FIBER.



TOP VIEW



SECTION A-A



SECTION B-B

CONDUITS SHALL BE
CAPPED IN PULL BOXES

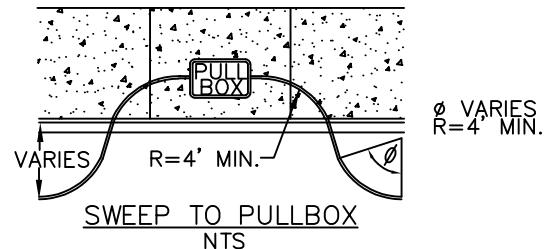
NO.5 PULLBOX WITH EXTENSION
(NO.6 PULLBOX WITH EXTENSION SIMILAR)
NTS

MULTI-DUCT:

TRAFFIC SIGNAL INTERCONNECT SHALL BE INSTALLED
ALONG ALL ARTERIAL AND COLLECTOR STREETS OR AS DIRECTED AS
PART OF THE STANDARD STREET IMPROVEMENT. OMISSION OF
INTERCONNECT CONDUIT ALONG ARTERIAL OR COLLECTOR STREETS
MAY BE ALLOWED WHERE ACCEPTABLE ALTERNATE MEANS OF
COMMUNICATION IS APPROVED BY THE COUNTY
TRAFFIC ENGINEER.

ALL OTHER ROUTES:

INSTALL 2" SCHEDULE 40 CONDUIT UNDER SIDEWALK WITH
PULL BOXES AT 200' (60m) MAXIMUM INTERVAL. PULL BOXES
SHALL BE NO. 5 WITH EXTENSIONS AND KNOCKOUTS. CONDUIT
SHALL BE BROUGHT INTO PULL BOXES PARALLEL TO THE
EXISTING SURFACE (HORIZONTAL). THE TOTAL ANGULAR BEND
OF CONDUIT BETWEEN PULL BOXES SHALL NOT EXCEED 180
DEGREES. A PULL ROPE CONFORMING TO SECTION
86-2.05C "INSTALLATION" OF THE STANDARD SPECIFICATION
SHALL BE INCLUDED IN ALL INTERCONNECT CONDUIT
FOR INSTALLATION OF FUTURE CONDUCTORS.



NOTE:

TO BE USED ONLY WHEN
CONDUIT IS ALLOWED TO BE PLACED
AT GUTTER LIP LINE. IN ALL OTHER
CASES, CONDUIT IS TO BE LOCATED
UNDER SIDEWALK AREA.

LIDS SHALL READ "TRAFFIC SIGNAL"



STANDARD TRAFFIC SIGNAL INTERCONNECT-WIRING AND PULL BOXES

COUNTY OF KERN
STATE OF CALIFORNIA
DEVELOPMENT STANDARD

REVISIONS DATE	DESC
-	-
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DESIGNED BY: J.R.C.

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APPROVED BY: J.R.C.

PLATE NO.

T-16