

APPENDIX B APPLICABLE STANDARD PLANS

Caltrans Standard Plans 2015:

A20A	Pavement Markers and Traffic Lines Typical Details
A20B	Pavement Markers and Traffic Lines Typical Details
A20C	Pavement Markers and Traffic Lines Typical Details
A20D	Pavement Markers and Traffic Lines Typical Details
A24A	Pavement Markings Arrows
A24D	Pavement Markings Words
A87A	Curbs and Driveways
A88A	Curb Ramp Details
ES-5A	Electrical Systems (Detectors)
ES-5D	Electrical Systems (Detectors)

Contra Costa County Standard Plans:

CA40	Street Survey Monument
CA51	Typical HMA Conform Details and Overlays
CA55	Speed Bump

Central Contra Costa Sanitary District:

DWG-8	Standard Manhole & Frame Cover
DWG-10	Rodding Inlet
DWG-11	Rodding Inlet Frame & Cover
DWG-12	Manhole Adjustment To Finish Grade

East Bay Municipal Utility District:

Fig. 3B-102	Valve Pot Installation
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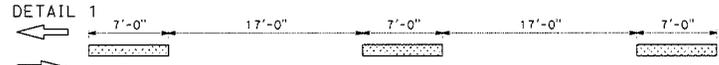
Town of Danville Standard Plans:

105	Typical Concrete Curbs
106	Typical Asphalt Dike
107	Typical Driveway
109	Sidewalk Drains
110	Sidewalk Doweling Details
112	Valley Gutter
114	Trench Backfill
117	Stop Sign Location
207	Manhole Frame and Cover Speed Lump

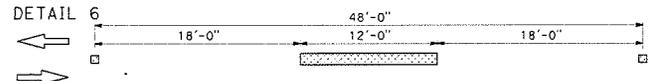
California MUTCD:

Fig 3B-102 (CA)	Reflective Blue Marker
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CENTERLINES (2 LANE HIGHWAYS)



DETAIL 3 DELETED
DETAIL 4 DELETED

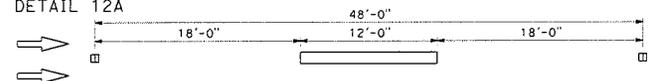
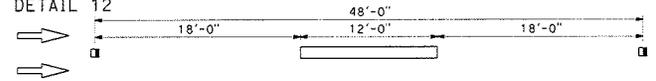


DETAIL 7 DELETED

LANE LINES (MULTILANE HIGHWAYS)

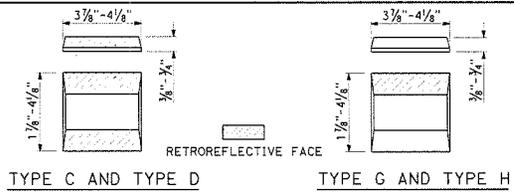


DETAIL 10 DELETED



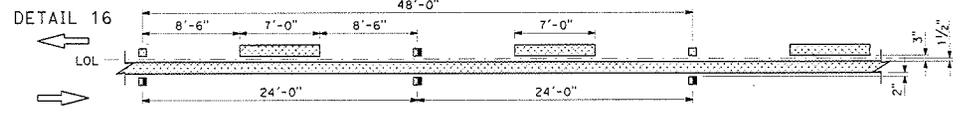
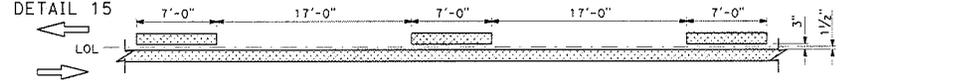
DETAIL 13 DELETED
DETAIL 14 DELETED
DETAIL 14A DELETED

- LEGEND:**
- TYPE C RED-CLEAR RETROREFLECTIVE MARKER
 - TYPE D TWO-WAY YELLOW RETROREFLECTIVE MARKER
 - TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
 - TYPE H ONE-WAY YELLOW RETROREFLECTIVE MARKER
 - 6" WHITE LINE
 - 6" YELLOW LINE

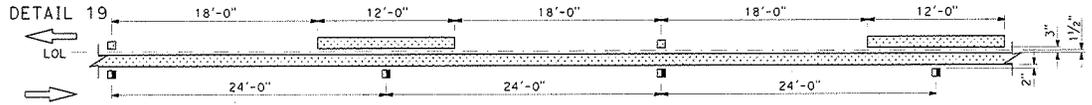
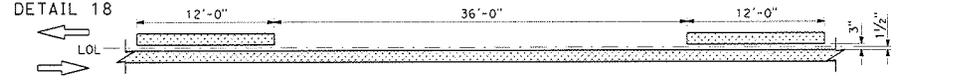


MARKER DETAILS

NO PASSING ZONES - ONE DIRECTION

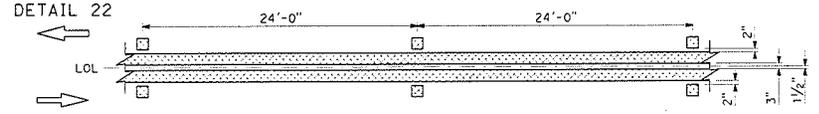
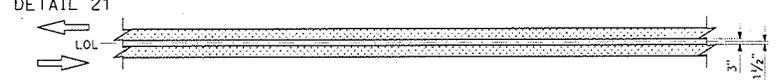


DETAIL 17 DELETED



DETAIL 20 DELETED

NO PASSING ZONES - TWO DIRECTION



DETAIL 23 DELETED

PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

NO SCALE

STATE	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

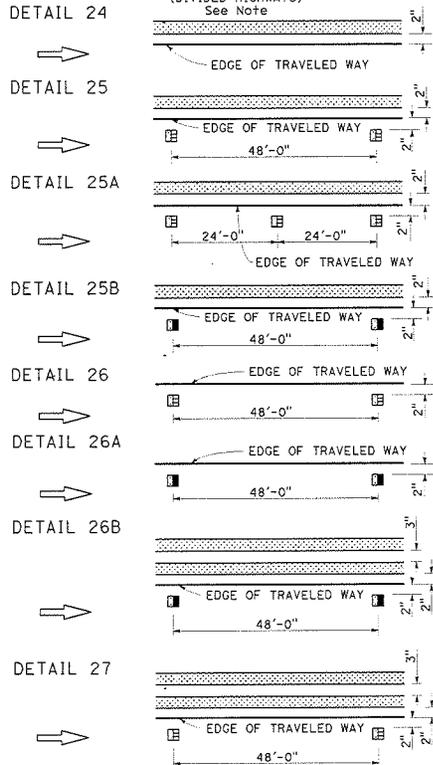
May 1, 2023

PLANS APPROVAL DATE

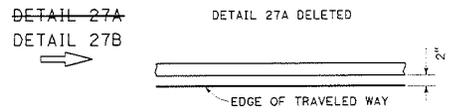
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Yue Wang
No. CB2065
Exp. 3-31-24
CIVIL

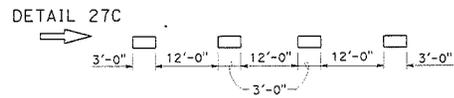
LEFT EDGE LINES



RIGHT EDGE LINES

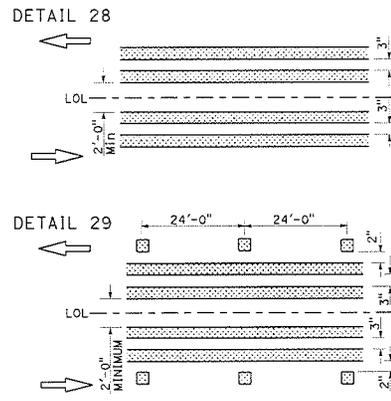


RIGHT EDGE LINE EXTENSION THROUGH INTERSECTIONS



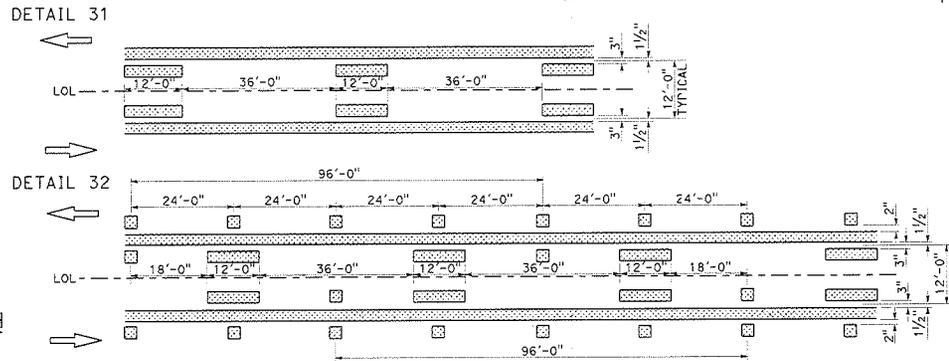
LEFT EDGE LINES NOTE:
On freeways use traffic stripe details with Type RY markers.

MEDIAN ISLANDS



DETAIL 30 DETAIL 30 DELETED

TWO-WAY LEFT TURN LANES

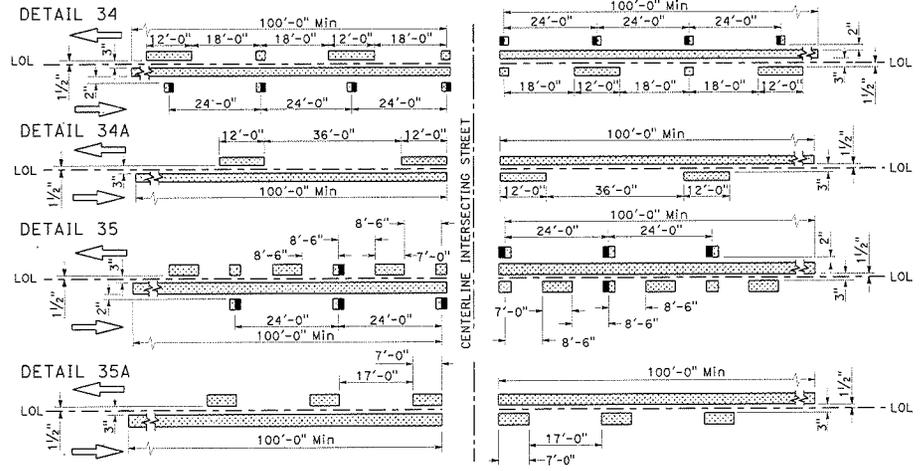


DETAIL 33 DETAIL 33 DELETED

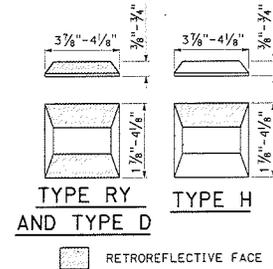
LEGEND:

- TYPE D TWO-WAY YELLOW RETROREFLECTIVE MARKER
- TYPE H ONE-WAY YELLOW RETROREFLECTIVE MARKER
- TYPE RY RED-YELLOW RETROREFLECTIVE MARKER
- 6" WHITE LINE
- 6" YELLOW LINE

INTERSECTION TREATMENTS



MARKER DETAILS



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKERS AND TRAFFIC LINES
TYPICAL DETAILS
NO SCALE

DIST.	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	TOTAL SHEETS

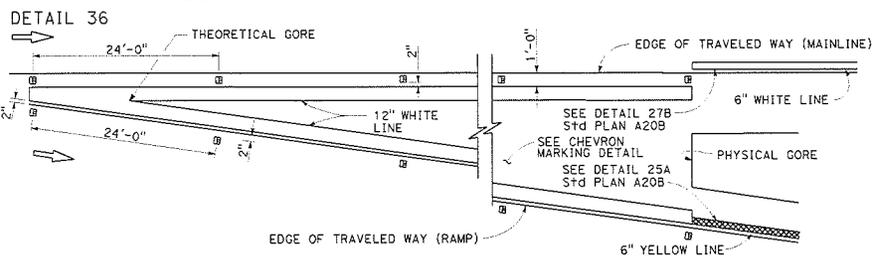
REGISTERED CIVIL ENGINEER

Yue Wang
No. C82065
Exp. 3-31-24
SINCE

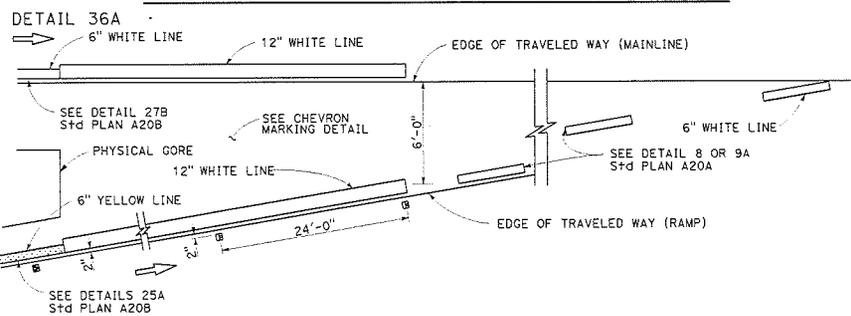
PLANS APPROVAL DATE
May 1, 2023

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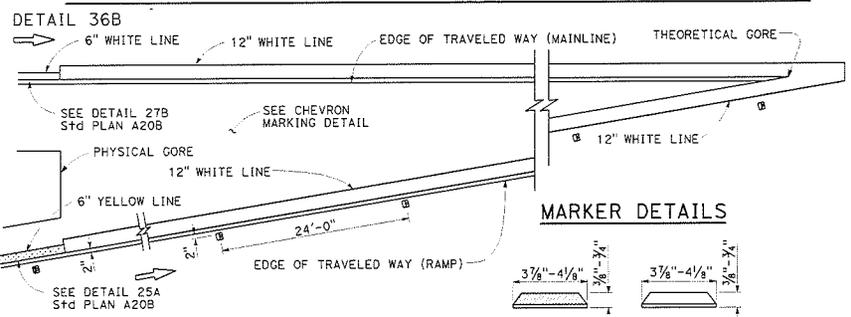
EXIT RAMP NEUTRAL AREA (GORE) TREATMENT



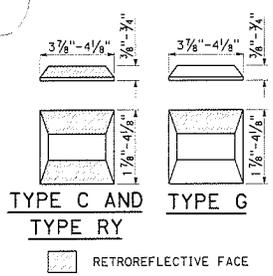
ENTRANCE RAMP NEUTRAL AREA (MERGE) TREATMENT



ENTRANCE RAMP NEUTRAL AREA (ACCELERATION LANE) TREATMENT



MARKER DETAILS



- LEGEND:**
- TYPE C RED-CLEAR RETROREFLECTIVE MARKER
 - TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
 - TYPE RY RED-YELLOW RETROREFLECTIVE MARKER

NOTES:

Install a minimum of 1 chevron in the gore area, if at least 1 chevron will not fit into the gore area, do not install chevrons.

Terminate chevron markings at physical gore.

Gore area chevron pavement markings shown. For Exit and Entrance Ramp channelizing lines details, see Details 36, 36A, and 36B.

DIST:	COUNTY:	ROUTE:	POST MILES:	SHEET:	TOTAL SHEETS:
			TOTAL PROJECT:		

REGISTERED CIVIL ENGINEER

Yue Wang

No. CR2065

Exp. 3-31-24

CIVIL

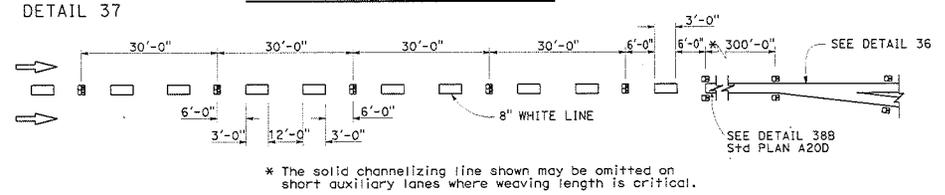
STATE OF CALIFORNIA

PLANS APPROVAL DATE

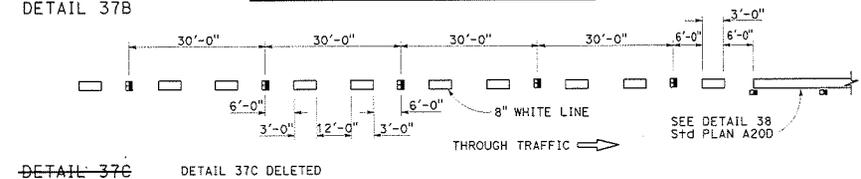
May 1, 2023

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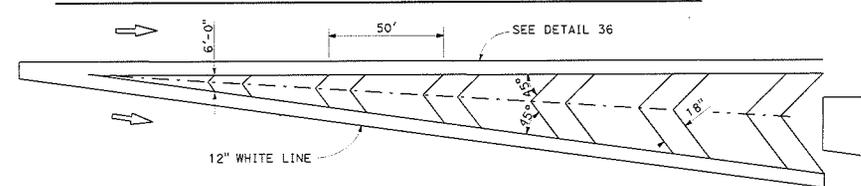
LANE DROP AT EXIT RAMP



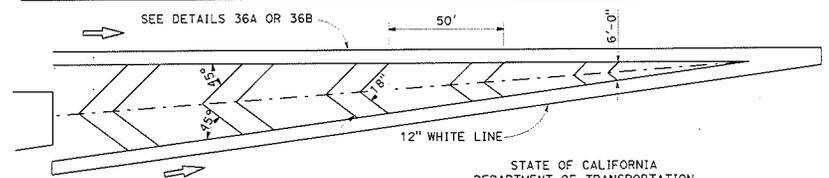
LANE DROP AT INTERSECTIONS



CHEVRON PAVEMENT MARKINGS AT EXIT RAMP GORE AREA



CHEVRON PAVEMENT MARKINGS AT ENTRANCE RAMP GORE AREA



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

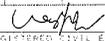
PAVEMENT MARKERS AND TRAFFIC LINES

TYPICAL DETAILS

NO SCALE

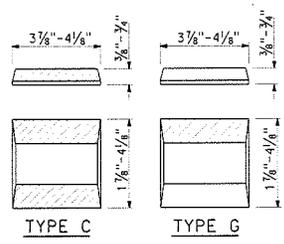
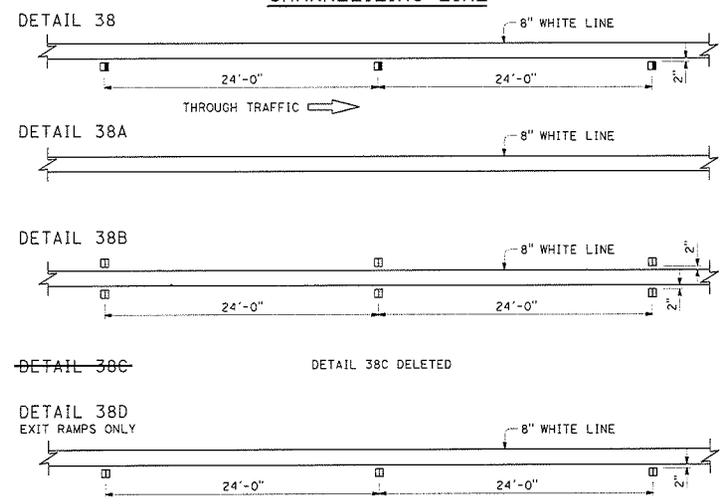
A20C

2023 STANDARD PLAN A20C

DIST.	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS
 REGISTERED CIVIL ENGINEER No. C82065 Exp. 3-31-24 CIVIL				
May 1, 2023 PLANS APPROVAL DATE <small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENCIES SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF DIMENSIONS SHOWN ON THIS PLAN SHEET.</small>				



CHANNELIZING LINE

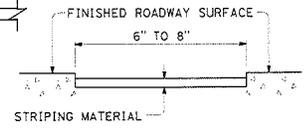
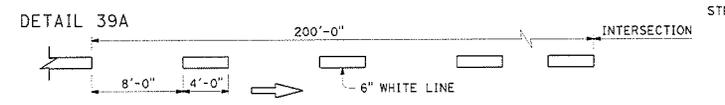


RETROREFLECTIVE FACE
MARKER DETAILS

BIKE LANE LINE

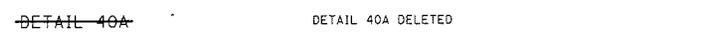


INTERSECTION LINE BIKE LANE

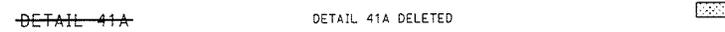


DETAIL FOR RECESSED TRAFFIC STRIPE
See Notes A and B

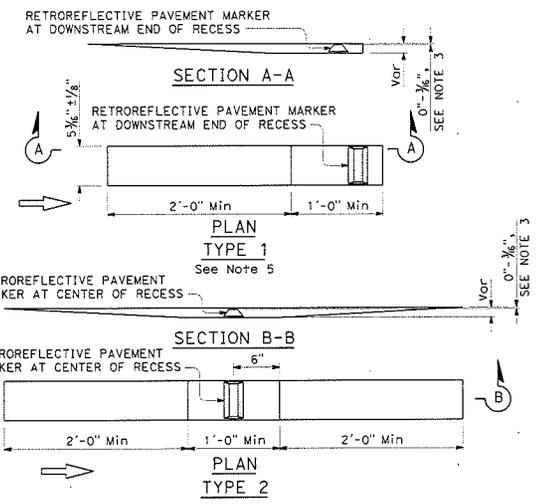
LANE LINE EXTENSIONS THROUGH INTERSECTIONS



CENTERLINE EXTENSIONS THROUGH INTERSECTIONS

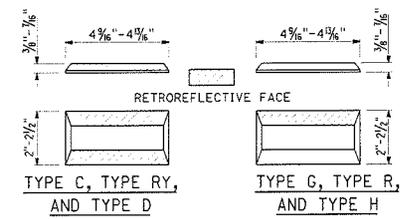


- LEGEND:**
-  TYPE C RED-CLEAR RETROREFLECTIVE MARKER
 -  TYPE G ONE-WAY CLEAR RETROREFLECTIVE MARKER
 -  6" YELLOW LINE



RECESS DETAIL FOR RETROREFLECTIVE PAVEMENT MARKER

See Note 4



- RECESSED MARKER NOTES:**
1. See typical traffic line details for marker patterns to be used with recessed pavement markers.
 2. The retroreflective pavement markers shown for recessed installations are not to be used for non-recessed installations.
 3. The top of pavement markers installed in recesses shall be 0" to 7/8" below the pavement surface.
 4. Use Type 1 recess for pavement markers with one-way retroreflective face. Use Type 2 recess for pavement markers with two-way retroreflective face.
 5. For exit ramps, use Type 1 recess for Type R markers with one-way retroreflective face. Reverse the orientation of the recess and place the marker at the upstream end of the recess.

RETROREFLECTIVE PAVEMENT MARKER FOR RECESSED INSTALLATION

See Notes 1 and 2

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION PAVEMENT MARKERS AND TRAFFIC LINES TYPICAL DETAILS

NO SCALE

A20D

2023 STANDARD PLAN A20D

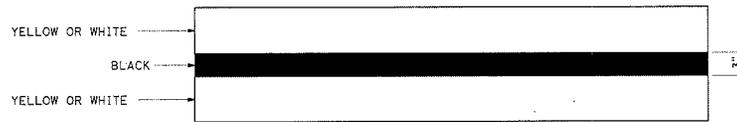
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

Yue Wang
No. CB2085
Exp. 3-31-24
(M)

May 1, 2023
PLANS APPROVAL DATE

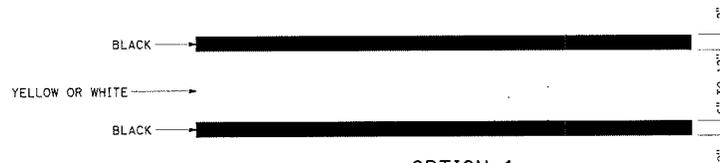
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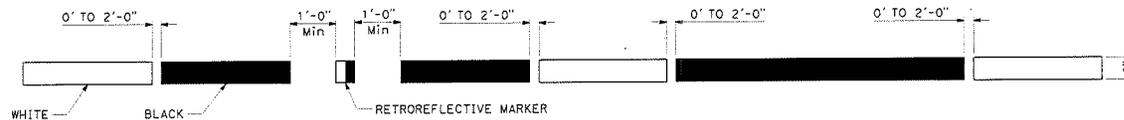
TYPICAL DOUBLE STRIPE CONTRAST DETAIL

NOTES:

1. See Standard Plans A20A, A20B, A20C, A20D and A20F for traffic lines typical details.
2. Detail 9 Traffic stripe shown. See project plans for traffic stripe details.



OPTION 1
TYPICAL LANE LINE OR RIGHT EDGE LINE CONTRAST DETAIL



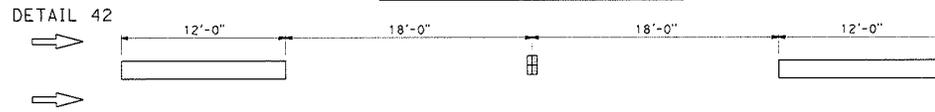
OPTION 2
TYPICAL LANE LINE CONTRAST DETAIL

See Note 2

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TRAFFIC LINES
TYPICAL DETAILS
FOR CONTRAST STRIPING**
NO SCALE

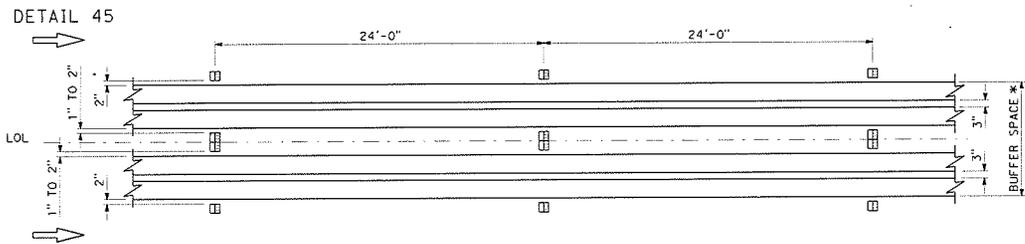
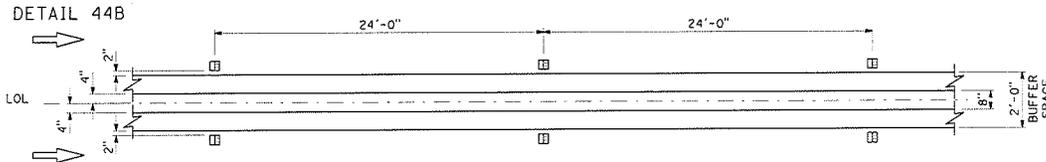
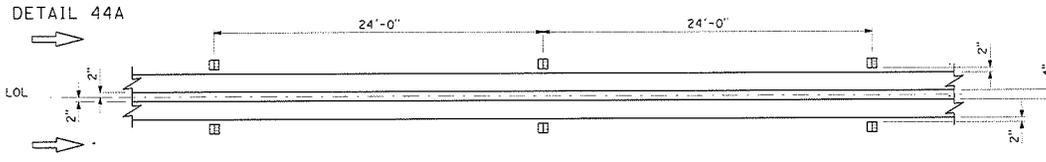
A20E

PREFERENTIAL LANE LINES



~~DETAIL 43~~ DETAIL 43 DELETED

~~DETAIL 43A~~ DETAIL 43A DELETED



* See pavement delineation plan for dimension.

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

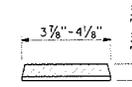
REGISTERED CIVIL ENGINEER
 May 1, 2023
 PLANS APPROVAL DATE

Yue Wang
 No. C82965
 Exp. 3-31-24
 CIVIL
 STATE OF CALIFORNIA

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LEGEND:

- TYPE C RED-CLEAR RETROREFLECTIVE MARKER
- 8" WHITE LINE



RETROREFLECTIVE FACE

**TYPE C
MARKER DETAILS**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKERS AND TRAFFIC LINES
 TYPICAL DETAILS**
 NO SCALE

A20F

2023 STANDARD PLAN A20F

17

NOTES:

1. May be a limit line or crosswalk.
2. See Standard Plans A24F and A24G for crosswalk and pavement marker details.
3. For raised markers, place Type R one-way red retroreflective markers on outermost limit line or crosswalk line with red facing the intersection. For recessed markers, place Type R one-way retroreflective markers with red facing the intersection and as shown on Standard Plan A24G.
4. The distances and marker spacings may be adjusted based on site specific conditions, exit ramp geometry, or loop detectors.
5. See Standard Plan A20D for recess details.
6. See Standard Plan A24G for Type V arrow detail with Type R one-way red retroreflective markers.
7. The Type R marker body must be white in color.

LEGEND:

MARKERS

-  TYPE C TWO-WAY RED-CLEAR RETROREFLECTIVE MARKER
-  TYPE RY TWO-WAY RED-YELLOW RETROREFLECTIVE MARKER
-  TYPE R ONE-WAY RED RETROREFLECTIVE MARKER

LINES

-  6" WHITE LINE
-  6" YELLOW LINE

DIST. COUNTY	ROUTE	POST MILES	SHEET TOTAL
		TOTAL PROJECT	NO. SHEETS

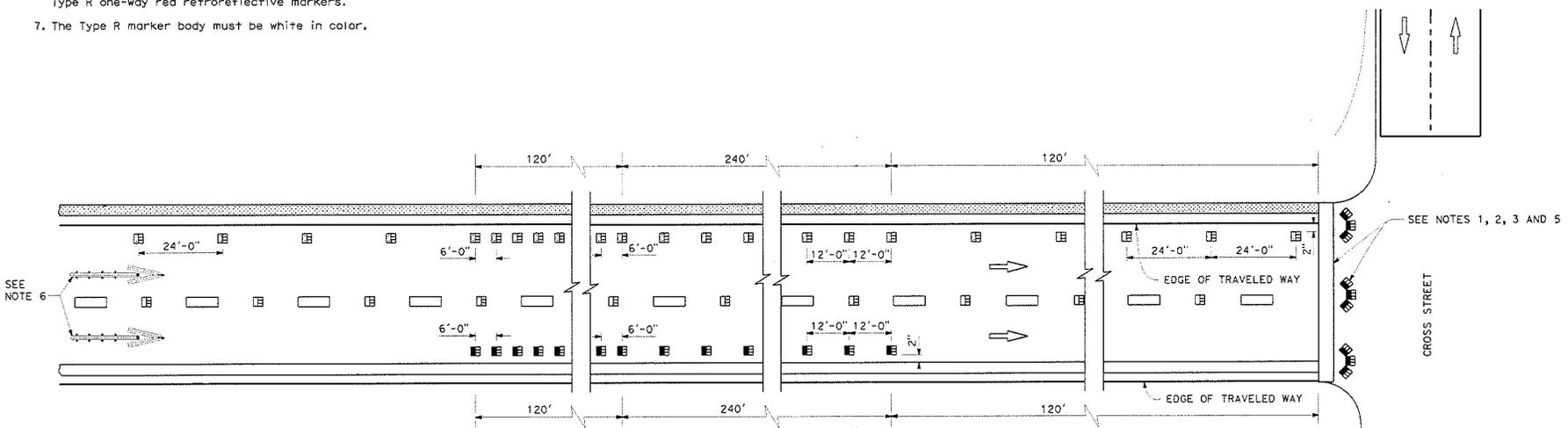
Yue Wang
REGISTERED CIVIL ENGINEER

May 1, 2023
PLANS APPROVAL DATE

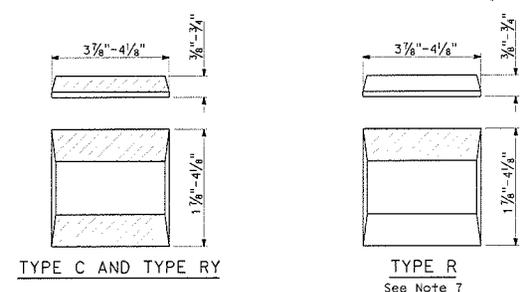
Yue Wang
No. C82065
Exp. 3-31-24
CIVIL

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2023 STANDARD PLAN A20G



SEE NOTE 6

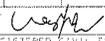


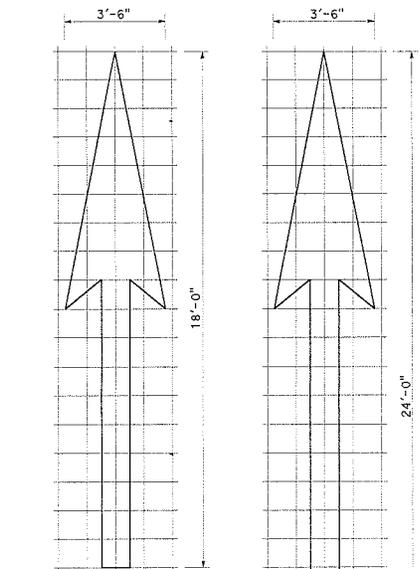
MARKER DETAILS

-  RETROREFLECTIVE FACE

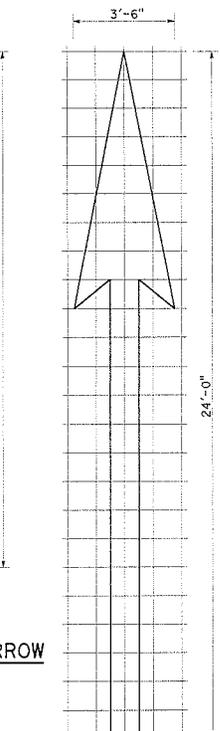
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**EXIT RAMP WITH ENHANCED PAVEMENT
MARKERS FOR WRONG WAY DETAILS**
NO SCALE

A20G

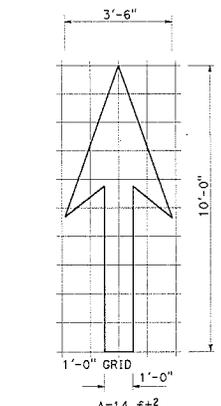
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO. TOTAL SHEETS
 REGISTERED CIVIL ENGINEER State of California License No. C82965				
May 1, 2023 PLANS APPROVAL DATE				
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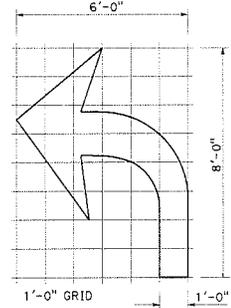
TYPE I 18'-0" ARROW
A=25 ft²



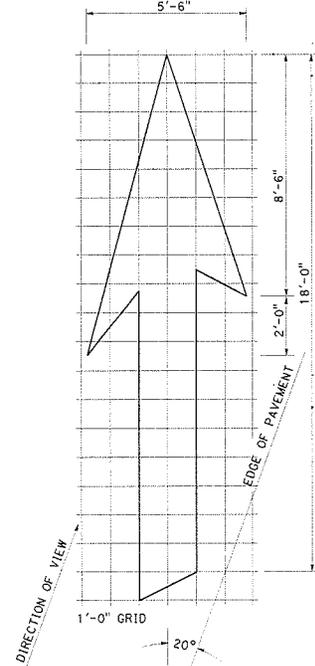
TYPE I 24'-0" ARROW
A=31 ft²



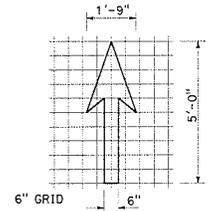
TYPE I 10'-0" ARROW
A=14 ft²



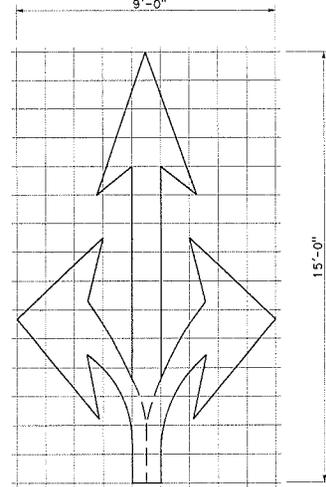
TYPE IV (L) ARROW
A=15 ft²
For Type IV (R) arrow, use mirror image.



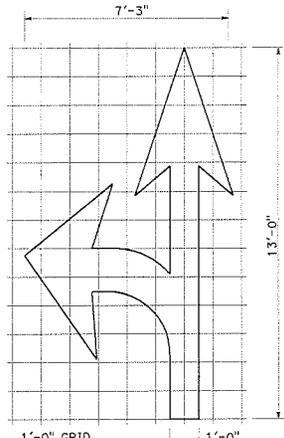
TYPE VI ARROW
A=42 ft²
Right lane drop arrow.
For left lane, use mirror image.



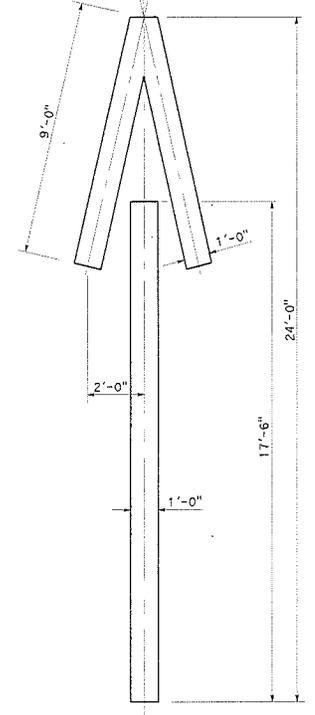
BIKE LANE ARROW
A=3.5 ft²



TYPE VIII ARROW
A=36 ft²



TYPE VII (L) ARROW
A=27 ft²
For Type VII (R) arrow, use mirror image.



TYPE V ARROW
A=33 ft²

NOTE:
Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
ARROWS**
NO SCALE

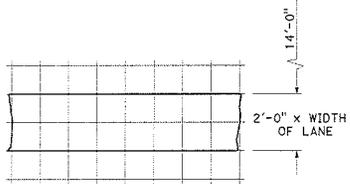
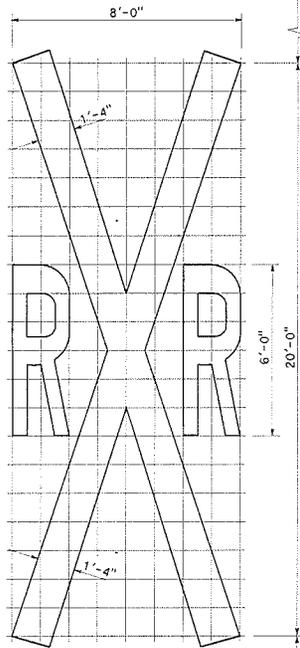
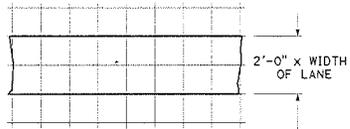
A24A

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS

REGISTERED CIVIL ENGINEER
Yue Wang
 May 1, 2023
 PLANS APPROVAL DATE

RECEIVED PROFESSIONAL ENGINEER
 Yue Wang
 No. C82065
 Exp. 3-31-24
 (151)
 STATE OF CALIFORNIA

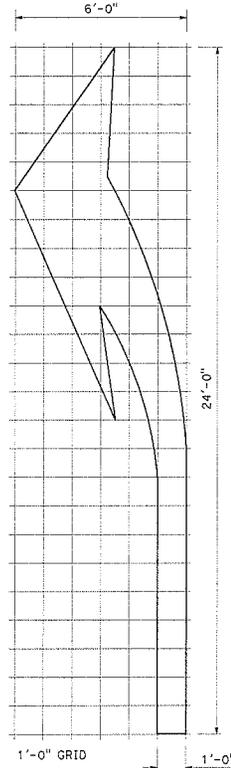
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF DIMENSIONS SHOWN ON THIS PLAN SHEET.



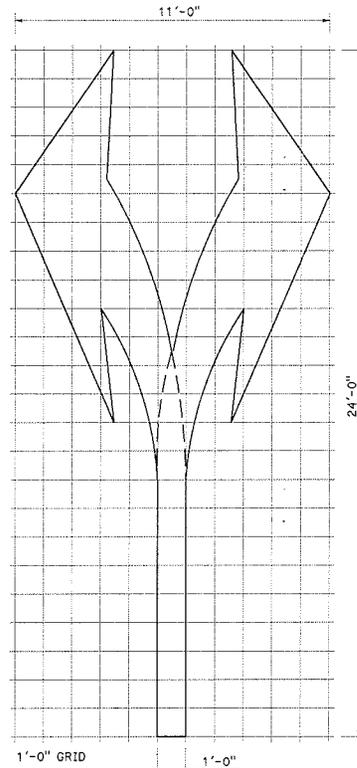
1'-0" GRID
 A=70 ft² *

RAILROAD CROSSING SYMBOL

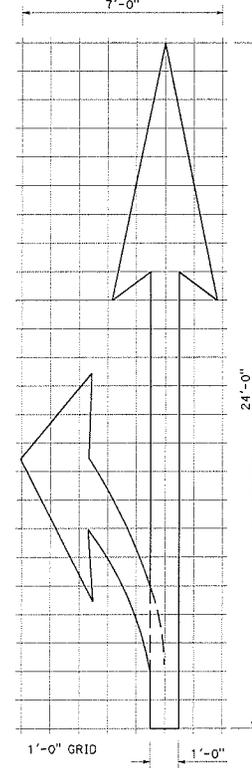
* 70 ft² does not include the 2'-0" x variable width transverse lines.



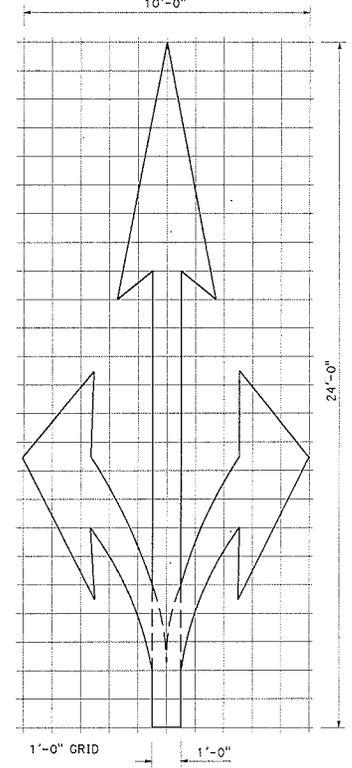
A=42 ft²
TYPE III (L) ARROW
 For Type III (R) use mirror image.



A=73 ft²
TYPE III (B) ARROW



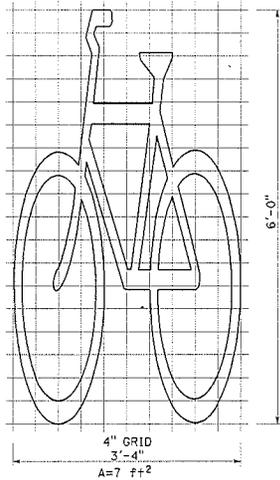
A=45 ft²
TYPE II (L) ARROW
 For Type II (R) use mirror image.



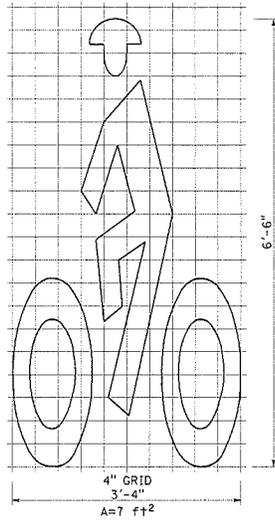
A=59 ft²
TYPE II (B) ARROW

NOTE:
 Minor variations in dimensions may be accepted by the Engineer.

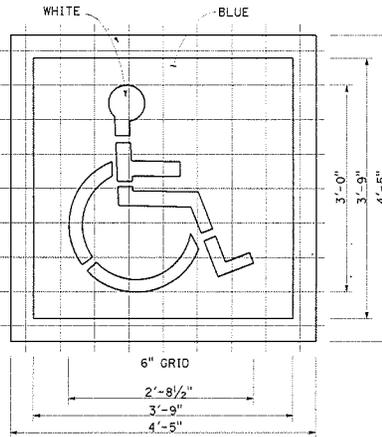
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
 ARROWS AND SYMBOLS**
 NO SCALE



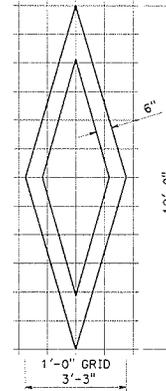
**BIKE LANE SYMBOL
WITHOUT PERSON**



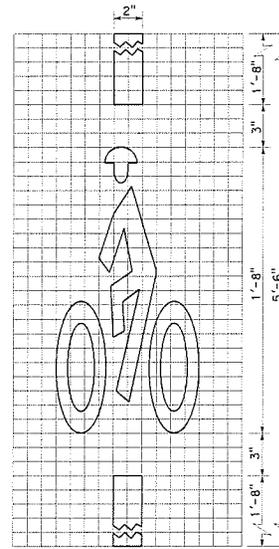
**BIKE LANE SYMBOL
WITH PERSON**



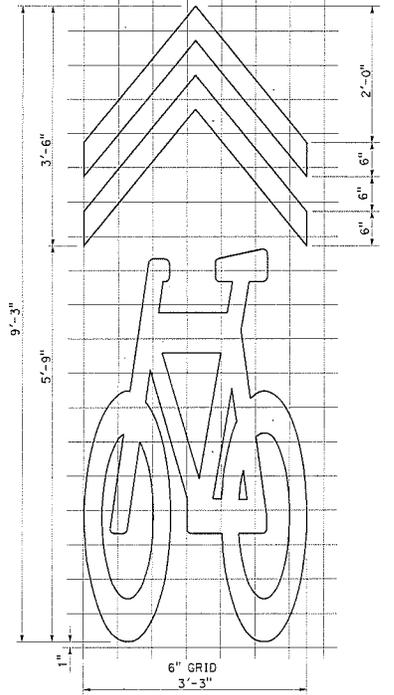
**INTERNATIONAL SYMBOL OF
ACCESSIBILITY (ISA) MARKING**



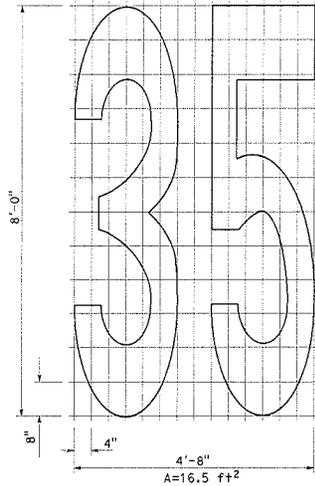
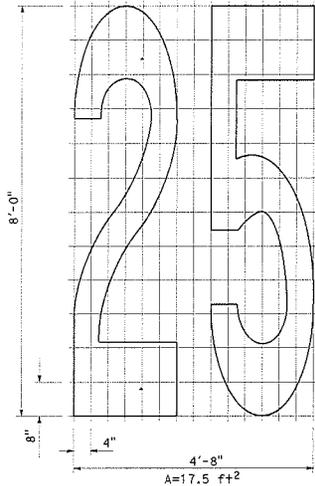
DIAMOND SYMBOL



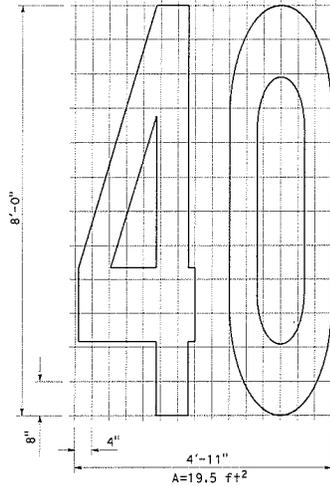
**BIKE LOOP
DETECTOR SYMBOL**



SHARED ROADWAY BICYCLE MARKING



NUMERALS

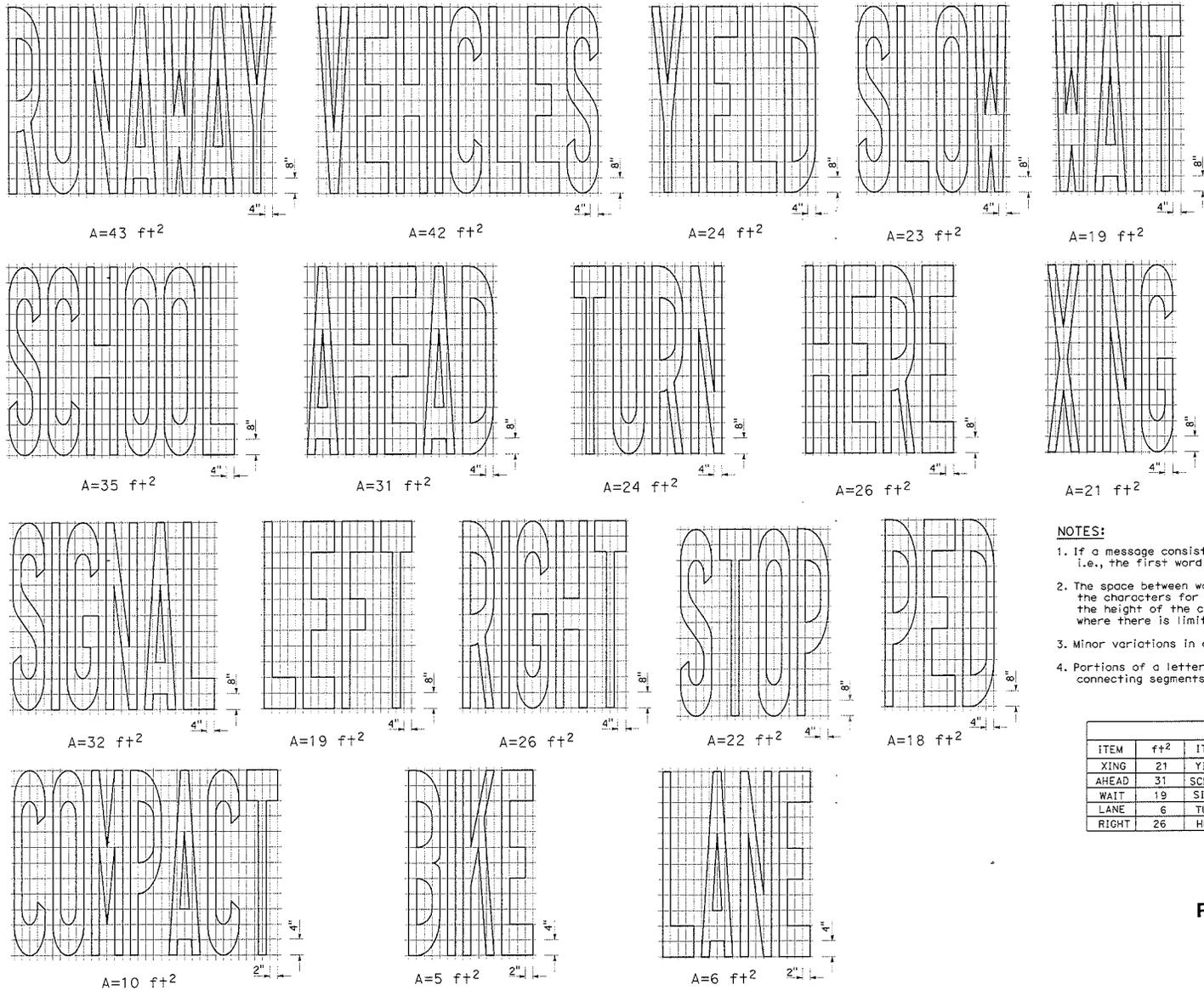


Dist:	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
			TOTAL PROJECT	NO.	SHEETS
<i>Wesley</i>					
REGISTERED CIVIL ENGINEER					
May 1, 2023					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA ON ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
		Yue Wang No. CB2065 (Exp. 3-31-24) (111)			

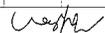
NOTE:
Minor variations in dimensions may be accepted by the Engineer.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
SYMBOLS AND NUMERALS**
NO SCALE

A24C



DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS


 REGISTERED CIVIL ENGINEER
 No. C82965
 Exp. 3-31-24
 CIVIL
 STATE OF CALIFORNIA

May 1, 2023
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF DIMENSIONS SHOWN ON THIS PLAN SHEET.

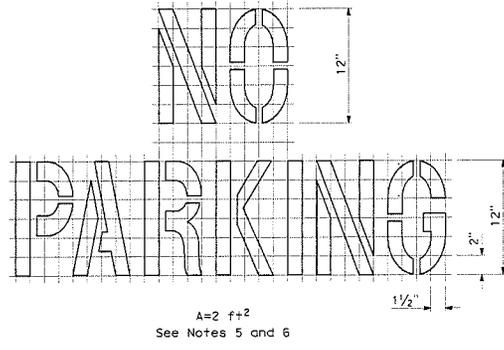
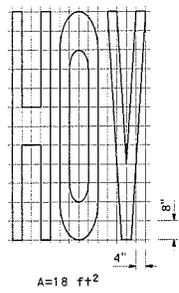
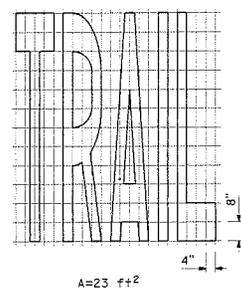
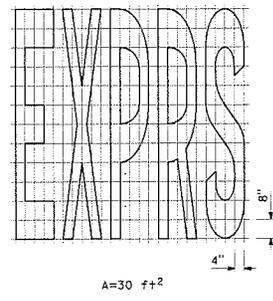
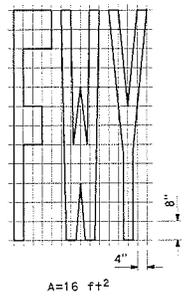
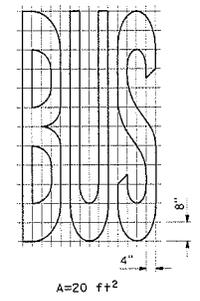
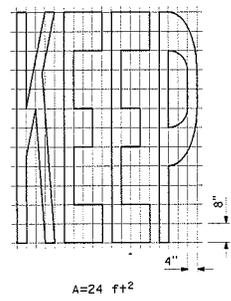
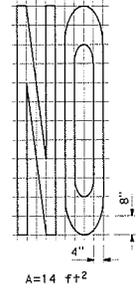
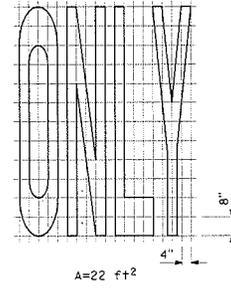
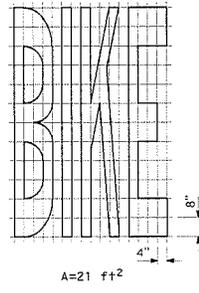
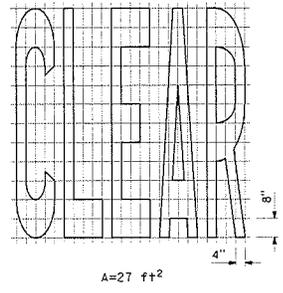
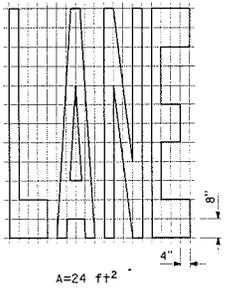
NOTES:

1. If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
2. The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number or symbol may be separated by connecting segments not to exceed 2" in width.

WORD MARKINGS					
ITEM	f+2	ITEM	f+2	ITEM	f+2
XING	21	YIELD	24	BIKE	5
AHEAD	31	SCHOOL	35	SLOW	23
WAIT	19	SIGNAL	32	STOP	22
LANE	6	TURN	24	LEFT	19
RIGHT	26	HERE	26	VEHICLES	42

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS
WORDS
 NO SCALE

A24D



DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

Yun Wang
No. CB2065
Exp. 3-31-24
STATE OF CALIFORNIA

PLANS APPROVAL DATE
May 1, 2023

THE ENGINEER OR ARCHITECT, IN HIS OR HER OWN NAME, SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF UNLAWFUL WORKS OF THIS PLAN SHEET.

NOTES:

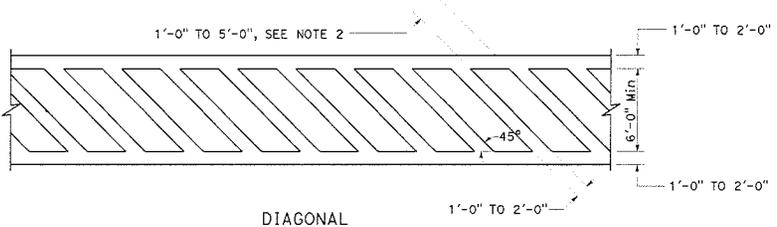
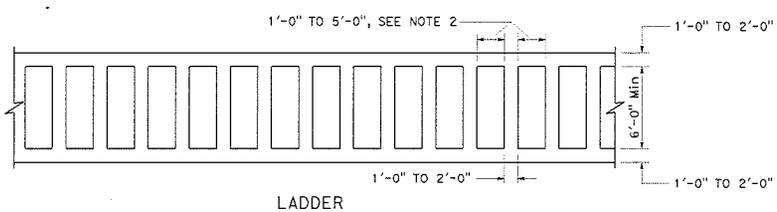
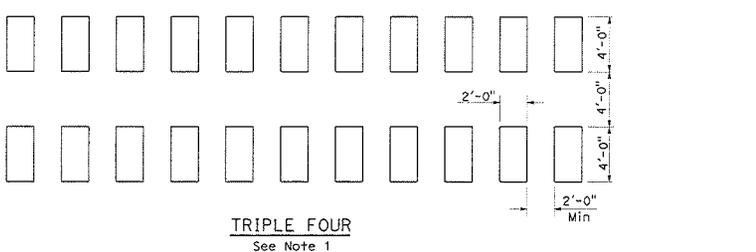
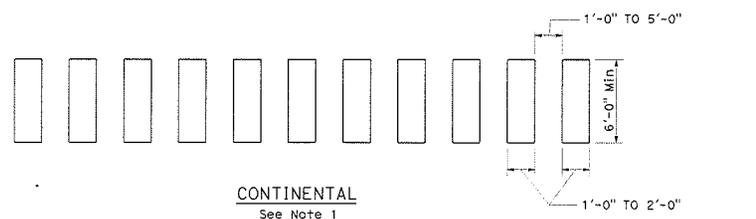
1. If a message consists of more than one word, it must read "UP", i.e., the first word must be nearest the driver.
2. The space between words must be at least four times the height of the characters for low speed roads, but not more than ten times the height of the characters. The space may be reduced appropriately where there is limited space because of local conditions.
3. Minor variations in dimensions may be accepted by the Engineer.
4. Portions of a letter, number, or symbol may be separated by connecting segments not to exceed 2" in width.
5. The words "NO PARKING" pavement marking is to be used for parking facilities. For typical locations of markings, see Standard Plans A90A and A90B.
6. The words "NO PARKING", shall be painted in white letters no less than 1'-0" high on a contrasting background and located so that it is visible to traffic enforcement officials.

WORD MARKINGS			
ITEM	SOFT	ITEM	SOFT
LANE	24	NO	14
CLEAR	27	BIKE	21
KEEP	24	BUS	20
HOV	18	ONLY	22
TRAIL	23	FWY	16
EXPRS	30		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
WORDS**
NO SCALE

A24E

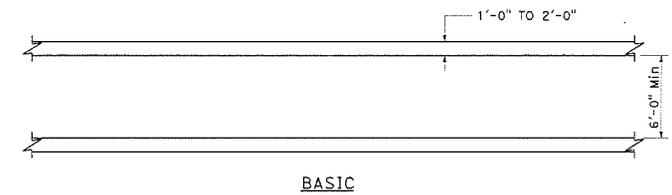
DT-OF	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
			TOTAL PROJECT	NO.	SHEETS
REGISTERED CIVIL ENGINEER			Yue Wang		
PLANS APPROVAL DATE			May 1, 2023		
			No. 082065		
			Exp. 3-31-24		
			STATE OF CALIFORNIA		
			THE STATE OF CALIFORNIA ON ITS OFFICERS AND AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF DRAWINGS EXCEPT OF THIS PLAN SHEET.		



HIGHER VISIBILITY CROSSWALKS

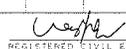
NOTES:

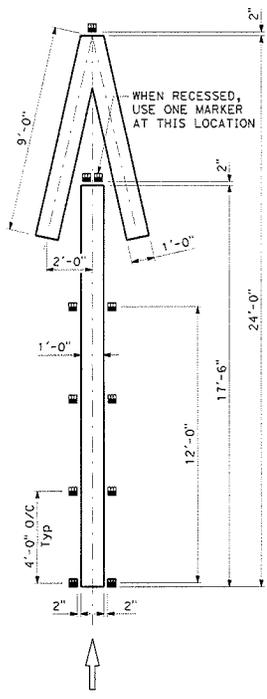
1. Spaces between markings must be placed in wheel tracks of each lane.
2. Spacings not to exceed 2.5 x width of longitudinal line.
3. All crosswalk markings must be white except those near schools must be yellow.



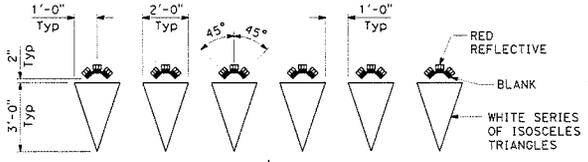
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**PAVEMENT MARKINGS
CROSSWALKS**
NO SCALE

A24F

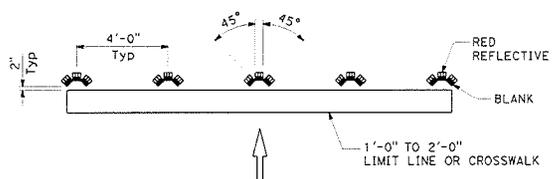
DIST.	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
			TOTAL PROJECT	NO.	SHEETS
 REGISTERED CIVIL ENGINEER					
May 1, 2023 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF DRAWINGS OR ANY PART THEREOF OR THE CONSEQUENCES OF THEIR USE UNLESS OTHERWISE NOTED ON THESE PLANS.</small>					



TYPE V ARROW AT EXIT RAMP

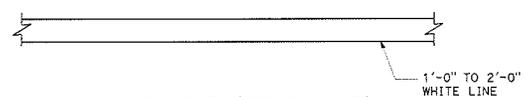


YIELD LINE AT EXIT RAMP
(Markers are not recessed)

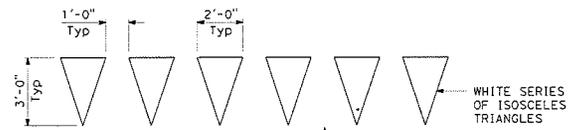


LIMIT LINE (STOP LINE) AT EXIT RAMP
(Markers are not recessed)

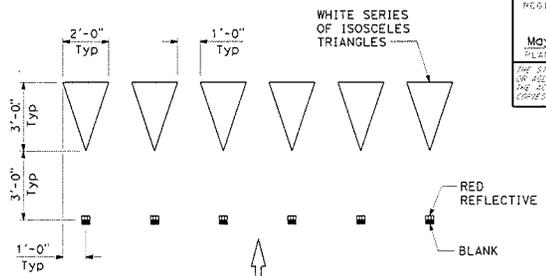
NOTE:
 1. If there is crosswalk at the end of the exit ramp, place Type R markers in front of the first line for wrong way vehicle that travels up the ramp with the red reflective side facing the intersection.



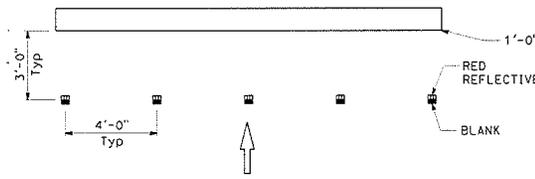
LIMIT LINE (STOP LINE)



YIELD LINE

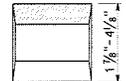
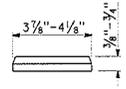


YIELD LINE AT EXIT RAMP
(Markers are recessed)



LIMIT LINE (STOP LINE) AT EXIT RAMP
(Markers are recessed)

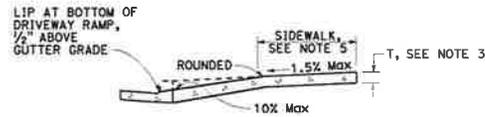
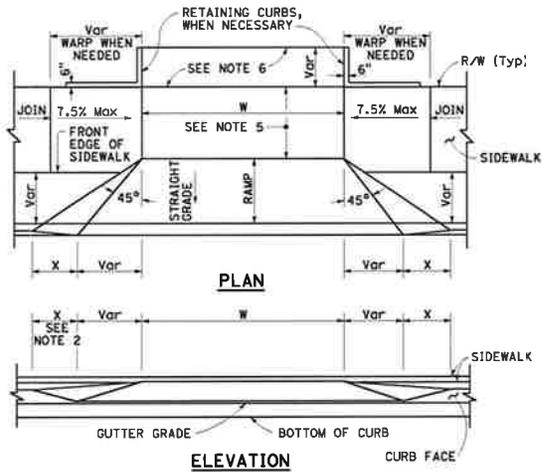
LEGEND:
 TYPE R ONE-WAY RED RETROREFLECTIVE MARKER



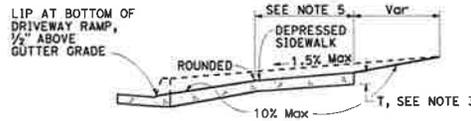
TYPE R MARKER DETAILS

 RETROREFLECTIVE FACE ON BACKSIDE

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKINGS
YIELD LINES, LIMIT LINES
AND WRONG WAY DETAILS
 NO SCALE



CASE A
Typical driveway, sidewalk not depressed



CASE B
Driveway with depressed sidewalk

SECTIONS

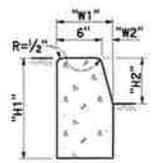
TABLE A

CURB TYPE	DIMENSIONS			
	"H1"	"H2"	"W1"	"W2"
A1-6	1'-2"	6"	7 1/2"	1 1/2"
A1-8	1'-4"	8"	8"	2"
A2-6	1'-0"	6"	2'-7 1/2"	1 1/2"
A2-8	1'-2"	8"	2'-8"	2"
A3-6	6"	5"	7 1/4"	1 1/4"
A3-8	8"	7"	7 3/4"	1 3/4"
B1-4	1'-0"	4"	7 1/2"	2 1/2"
B1-6	1'-2"	6"	9"	4"
B2-4	10"	4"	2'-7 1/2"	2 1/2"
B2-6	1'-0"	6"	2'-9"	4"
B3-4	4"	3"	7"	2"
B3-6	6"	5"	8 1/2"	3 1/2"
D-4	10"	4"	1'-6"	1'-1"
D-6	1'-0"	6"	2'-2"	1'-9"

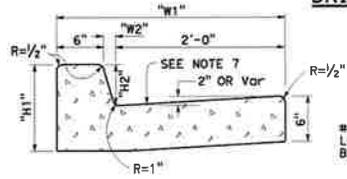
CURB QUANTITIES

TYPE	CUBIC YARDS PER LINEAR FOOT
A1-6	0.02585
A1-8	0.03084
A2-6	0.05903
A2-8	0.06379
A3-6	0.01036
A3-8	0.01435
B1-4	0.02185
B1-6	0.02930
B2-4	0.05515
B2-6	0.06171
B3-4	0.00641
B3-6	0.01074
B4	0.05709
D-4	0.04083
D-6	0.06804
E	0.06661

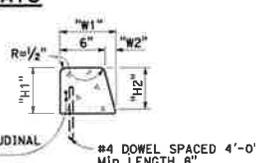
DRIVEWAYS



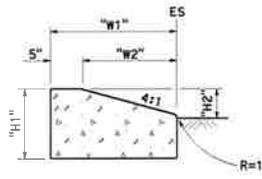
TYPE A1 CURBS
See Table A



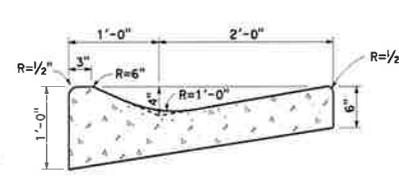
TYPE A2 CURBS
See Table A



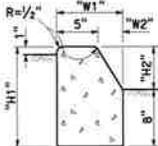
TYPE A3 CURBS
Superimposed on existing pavement
See Table A



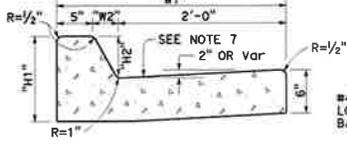
TYPE D CURBS
See Table A



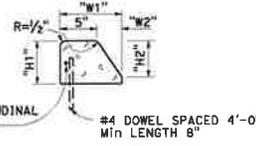
TYPE E CURB



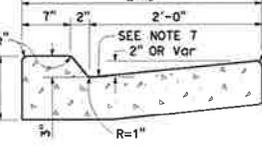
TYPE B1 CURBS
See Table A



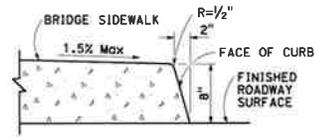
TYPE B2 CURBS
See Table A



TYPE B3 CURBS
Superimposed on existing pavement
See Table A



TYPE B4 CURBS



TYPE H CURB
On Bridges

CURBS

NOTES:

- Case A driveway section typically applies.
- X=3'-0" except for curb heights over 10" where 4:1 slopes shall be used on curb slope.
- Sidewalk and ramp thickness "t" at driveway shall be 4" for residential and 6" for commercial.
- Difference in slope of the driveway ramp and the slope of a line between the gutter and a point on the roadway 5'-0" from gutter line shall not exceed 15%. Reduce driveway ramp slope, not gutter slope, where required.
- Minimum width of clear passageway for sidewalk shall be 4'-2".
- Retaining curbs and acquisition of construction easement may be necessary for narrow sidewalks or curb heights in excess of 6".
- Across the pedestrian route at curb ramp locations, the gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.

STATE	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

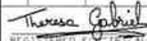
Hick
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

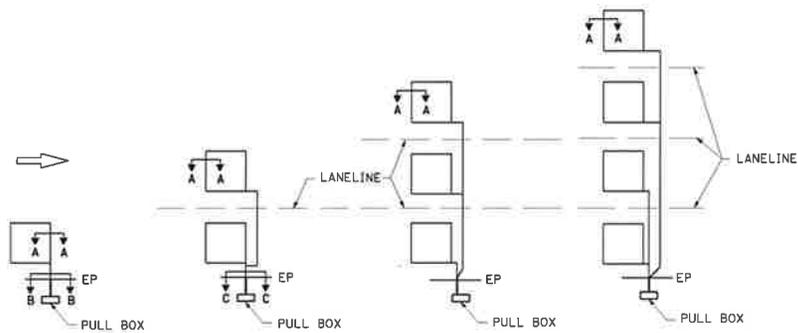
STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
44788
3-31-16
CIVIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
CURBS AND DRIVEWAYS
NO SCALE

A87A

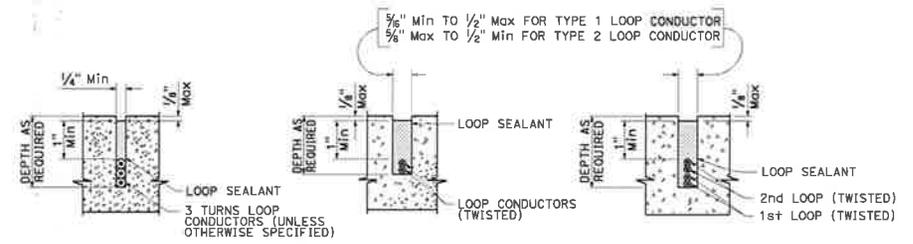
PLAN	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL No. SHEETS
 REGISTERED ELECTRICAL ENGINEER Theresa Gabriel E15129 Exp. 6-30-16 STATE OF CALIFORNIA				
April 15, 2016 PLANS APPROVAL DATE				
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>				

TO ACCOMPANY PLANS DATED _____



SAW CUT DETAILS

Type A loop detector configurations illustrated

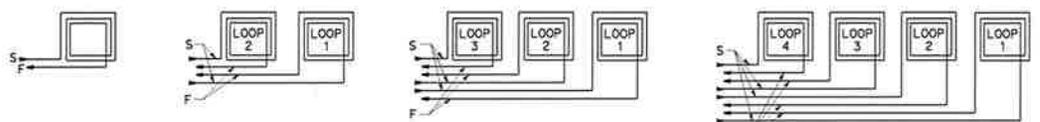


SECTION A-A

SECTION B-B

SECTION C-C

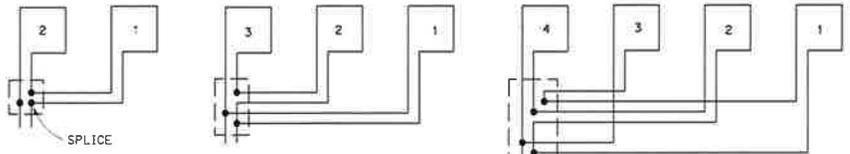
SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



WINDING DETAILS

ABBREVIATIONS:

- S - START
- F - FINISH



TYPICAL LOOP CONNECTIONS

Dashed lines represent the pull box

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LOOP DETECTORS)**

NO SCALE

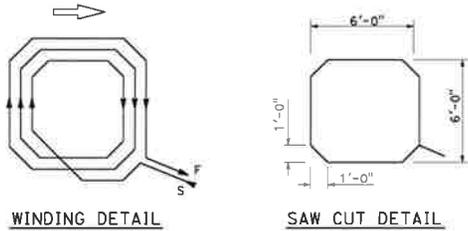
RSP ES-5A DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-5A DATED OCTOBER 30, 2015 - PAGE 445 OF THE STANDARD PLANS BOOK DATED 2015.

REVISED STANDARD PLAN RSP ES-5A

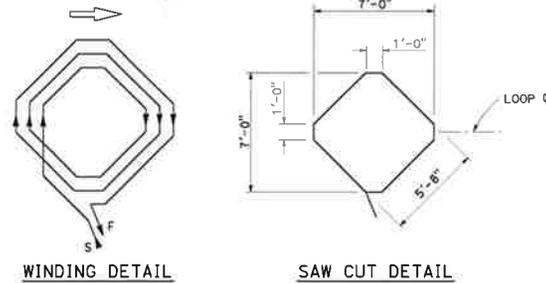
2015 REVISED STANDARD PLAN RSP ES-5A

PLAN	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS
Theresa Gabriel REGISTERED ELECTRICAL ENGINEER No. E15189 License No. 6-30-16 MECHANICAL, ELECTRICAL, AND PLUMBING				
April 15, 2016 PLANS APPROVAL DATE				
THE STATE OF CALIFORNIA AND ITS OFFICERS AND AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNER COPIES OF THIS PLAN SHEET.				

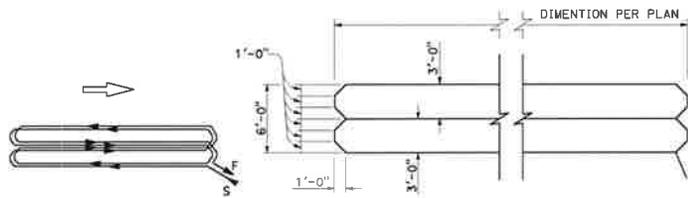
TO ACCOMPANY PLANS DATED _____



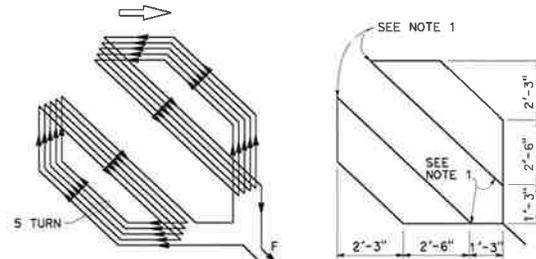
WINDING DETAIL SAW CUT DETAIL
TYPE A LOOP DETECTOR CONFIGURATION



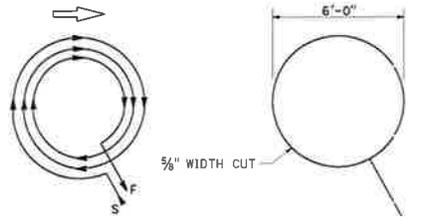
WINDING DETAIL SAW CUT DETAIL
TYPE B LOOP DETECTOR CONFIGURATION



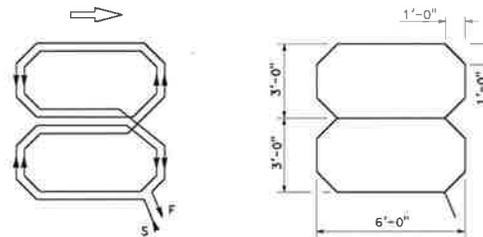
WINDING DETAIL SAW CUT DETAIL
TYPE C LOOP DETECTOR CONFIGURATION



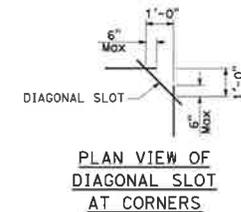
WINDING DETAIL SAW CUT DETAIL
TYPE D LOOP DETECTOR CONFIGURATION



WINDING DETAIL SAW CUT DETAIL
TYPE E LOOP DETECTOR CONFIGURATION



WINDING DETAIL SAW CUT DETAIL
TYPE Q LOOP DETECTOR CONFIGURATION



PLAN VIEW OF
DIAGONAL SLOT
AT CORNERS

NOTES:

1. Round corners of acute angle saw cuts to prevent damage to conductors.
2. Typical distance separating loops from edge to edge is 10' for Type A, B, D and E installation in single lane.
3. Use Type D loops for limit line detection and bicycle lanes.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(DETECTORS)**

NO SCALE

RSP ES-58 DATED APRIL 15, 2016 SUPERSEDES STANDARD PLAN ES-58
DATED OCTOBER 30, 2015 - PAGE 446 OF THE STANDARD PLANS BOOK DATED 2015.

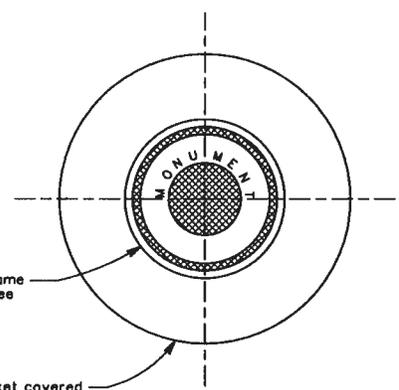
REVISED STANDARD PLAN RSP ES-58

2015 REVISED STANDARD PLAN RSP ES-58

Julia R. Bueren
 PUBLIC WORKS DIRECTOR
March 11, 2014
 PLANS APPROVAL DATE

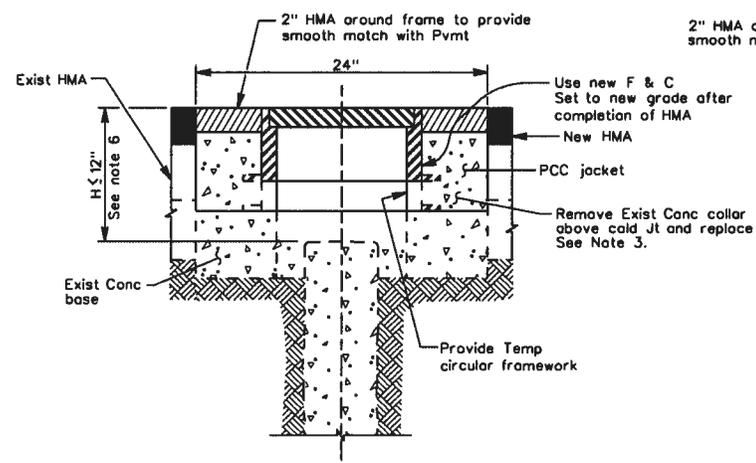
REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

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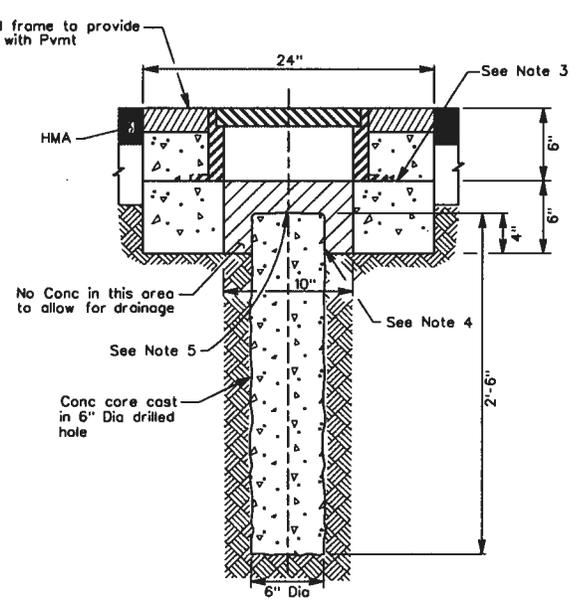


Metal cover and frame (Schematic only)-See Note 2.

24" Dia PCC jacket covered with 2" of HMA-See Note 1



FRAME ADJUSTMENT DETAIL



NEW INSTALLATION DETAIL

NOTES:

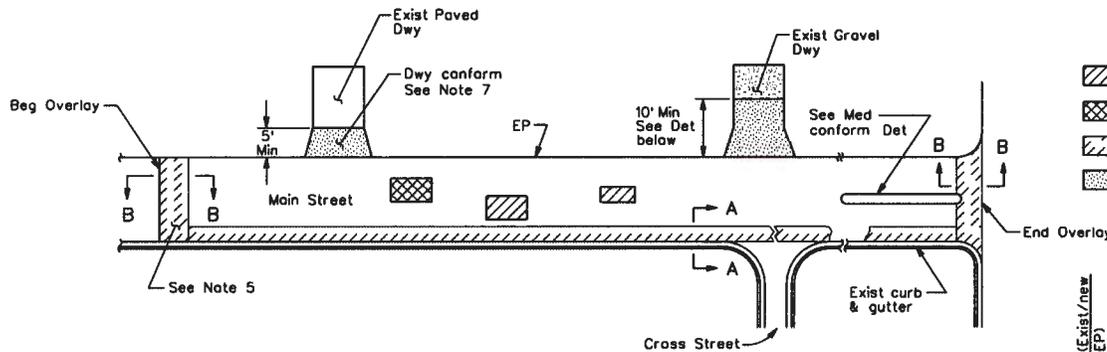
- Concrete for jacket and core shall contain not less than 590 lbs of cementitious material per cubic yard, 1/2" maximum aggregate grading, in conformance with Section 90, "Concrete", of the California Department of Transportation's Standard specifications.
- Approved covers and frames are those manufactured by Chris Co. Casting, Part No. 9277M or 9279 or approved equivalent. Covers shall be marked "Monument" shall be non-rocking and designed for a 15000 lb. wheel load.
- 30* felt or 1/4" layer of sand to create a "cold joint".
- 6" diameter collar formed with 30* felt or non-metallic form tube (may be left in place).
- Solid brass marker (2" to 2 1/2" diameter top and 2" minimum shank) with distinctive punch and R.E. or L.S. number.
- When "H" exceeds 12", a complete reconstruction of monument is required.

COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

STREET SURVEY MONUMENT

NO.	DATE	REVISION DESCRIPTION	BY	SCALE: NO SCALE	DATE: 3/14
				DRAWN BY: L. COSTA	PLAN NO. CA40
				CHECKED BY: R. Zwemmer	

STD. PLAN CA40



LEGEND

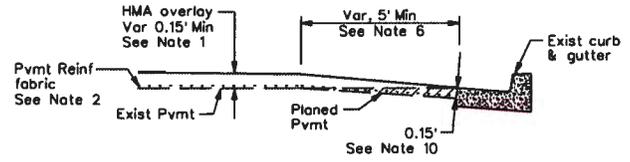
- Pvmt Failure Repair
- Base Failure Repair
- Tapered Conform-Cold Planed
- Tapered HMA

Julio R Bueren
PUBLIC WORKS DIRECTOR
 March 11, 2014
PLANS APPROVAL DATE

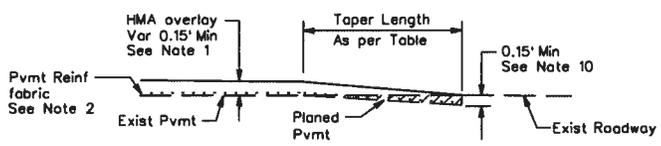
REGISTERED PROFESSIONAL ENGINEER
 JULIA R BUEREN
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

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PLANED ASPHALT CONFORM DETAILS

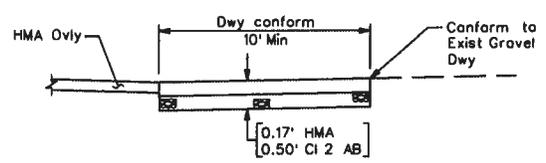


SECTION A-A TAPERED KEYCUT CONFORM DETAIL with Curb

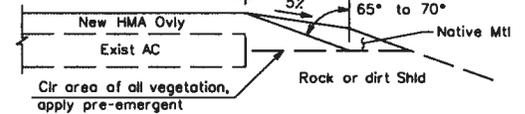


SECTION B-B LENGTH OF TAPER DETAIL

LENGTH OF TAPER BY DESIGN SPEED		
Overlay Thickness (feet)	Taper Length speed ≤ 45mph (feet)	Taper Length speed > 45mph (feet)
0.10	10	20
0.12	12	24
0.15	15	30
0.20	20	40
0.25	25	50
0.30	30	60
0.35	35	70
0.40	40	80

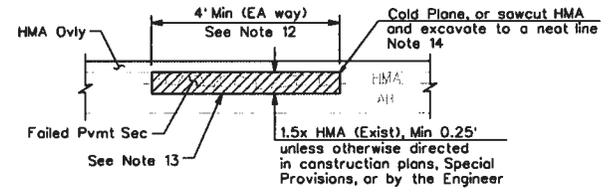


EXISTING GRAVEL DRIVEWAY CONFORM DETAIL

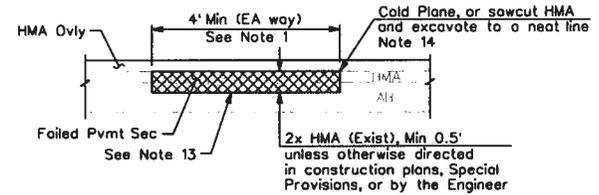


- NOTES:**
- 1) Safety edges shall be used on all roads posted 35 mph or higher with paved shoulders 4' or less.
 - 2) Construct safety edge in conformance with project special provisions or Public Works Department Standard Provisions for Public Works Construction.

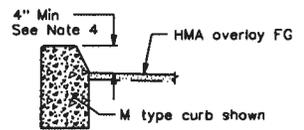
SAFETY EDGE



PAVEMENT FAILURE REPAIR DETAIL



BASE FAILURE REPAIR DETAIL



MEDIAN CONFORM DETAIL

NOTES:

1. Hot mix asphalt (HMA) overlay thickness shall be as specified by the Public Works Department.
2. Pavement reinforcing fabric shall be as required by the Public Works Department.
3. Paving at the gutter lip shall be placed per Standard Plan CA70 Detail A when conforming to S1-6, S1-8 curb, or PCC valley gutters.
4. When conforming to median curb, extend overlay to face of median curb regardless of curb type. If minimum remaining height of curb is less than 4", "Modified M3-8 Curb" per County Standard Plan CA71 shall be constructed.
5. For design speeds of 45 mph or less maximum grade break of taper shall not exceed 1%. For design speeds greater than 45 mph grade of taper shall not exceed 0.5%. Use "Length of Taper by Design Speed" table.
6. Planed width shall be such that the resultant slope of shoulder after overlay does not exceed 5%. The width of planing shall be approved by the Public Works Department.
7. HMA driveway conforms shall be tapered and no planing is required, unless otherwise specified by the Public Works Department.
8. Depth and dimensions of pavement failure repair shall be as specified by the Public Works Department.
9. Removal of failed pavement by cold planing the required depth and dimensions, or by sawcutting around failure to a neat line and removing failed pavement.
10. Conform thickness shall be 0.15' unless otherwise specified by the Public Works Department.
11. Place and compact native material per Public Works Department Standard Provisions or project special provisions to conform to new EP unless shown on project plans.
12. Limits of pavement failure repairs and base failure repairs shall be as marked in the field by the Engineer/Inspector.
13. For pavement failure repairs and base failure repairs recompact the existing road base or subgrade to 95% relative density prior to placing HMA in accordance with Section 19 of California Department of Transportation's Standard Specifications.
14. Place point binder on all vertical cut faces prior to placing HMA.

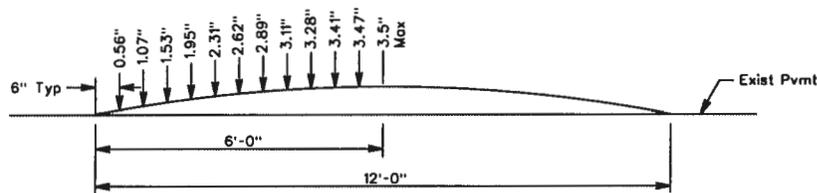
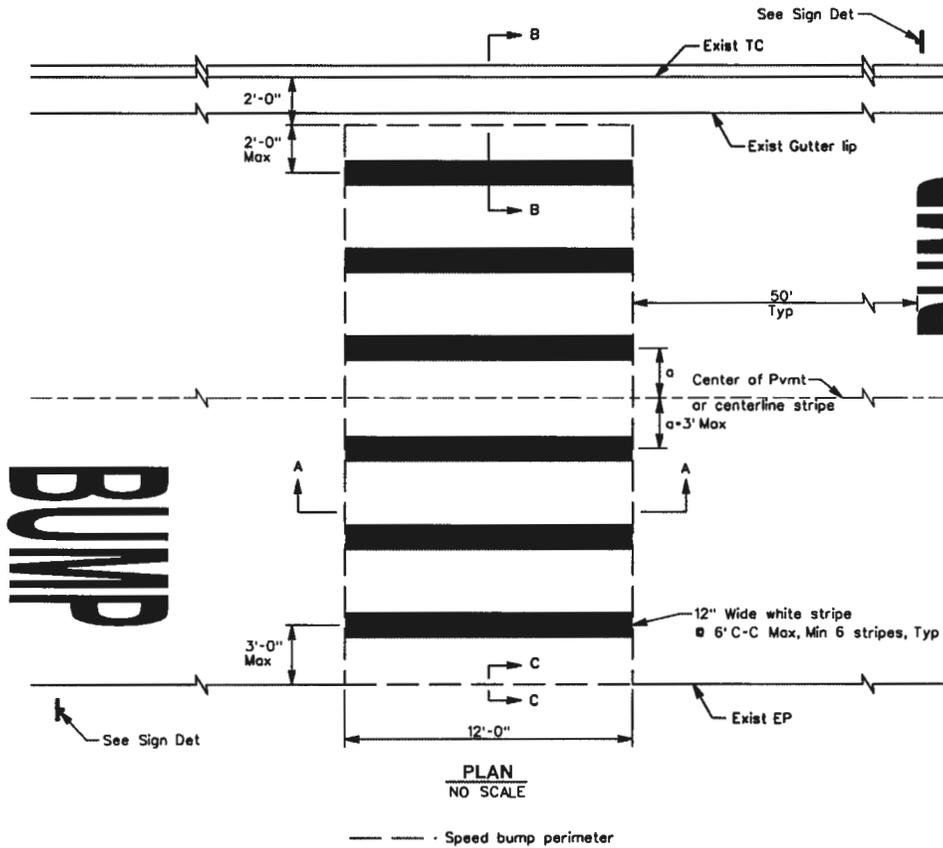
COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

TYPICAL HMA CONFORM DETAILS for OVERLAYS

SCALE: NO SCALE	DATE: 3/14
DRAWN BY: H. HUSSEY/L. COSTA	PLAN NO. CA51
CHECKED BY: M. HOLLINGSWORTH	

NO.	DATE	REVISION DESCRIPTION	BY

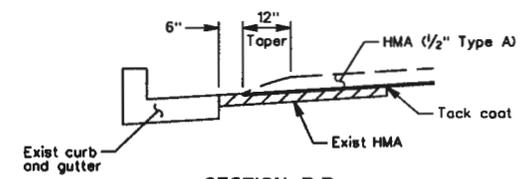
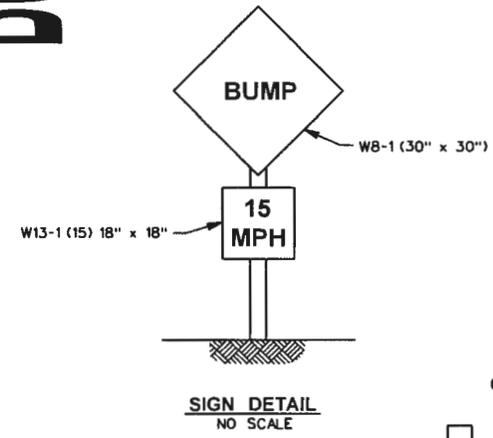
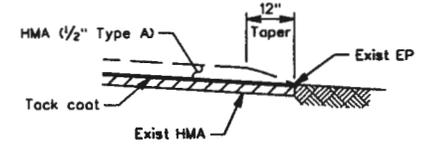
STD. PLAN CA51



Julia R. Bueren
 PUBLIC WORKS DIRECTOR
 March 11, 2014
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 JULIA R. BUEREN
 No. 37937
 CIVIL
 STATE OF CALIFORNIA

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NOTES:

1. A template shall be used to construct bump to section dimensions shown.
2. Signs shall be in place prior to installation of HMA bump.
3. Type 1 barricades with flashers shall be placed immediately on each side of bump and maintained until pavement markings and stripes are installed.
4. Signs shall conform to California MUTCD and installed per County Standard Plan *CRS1.

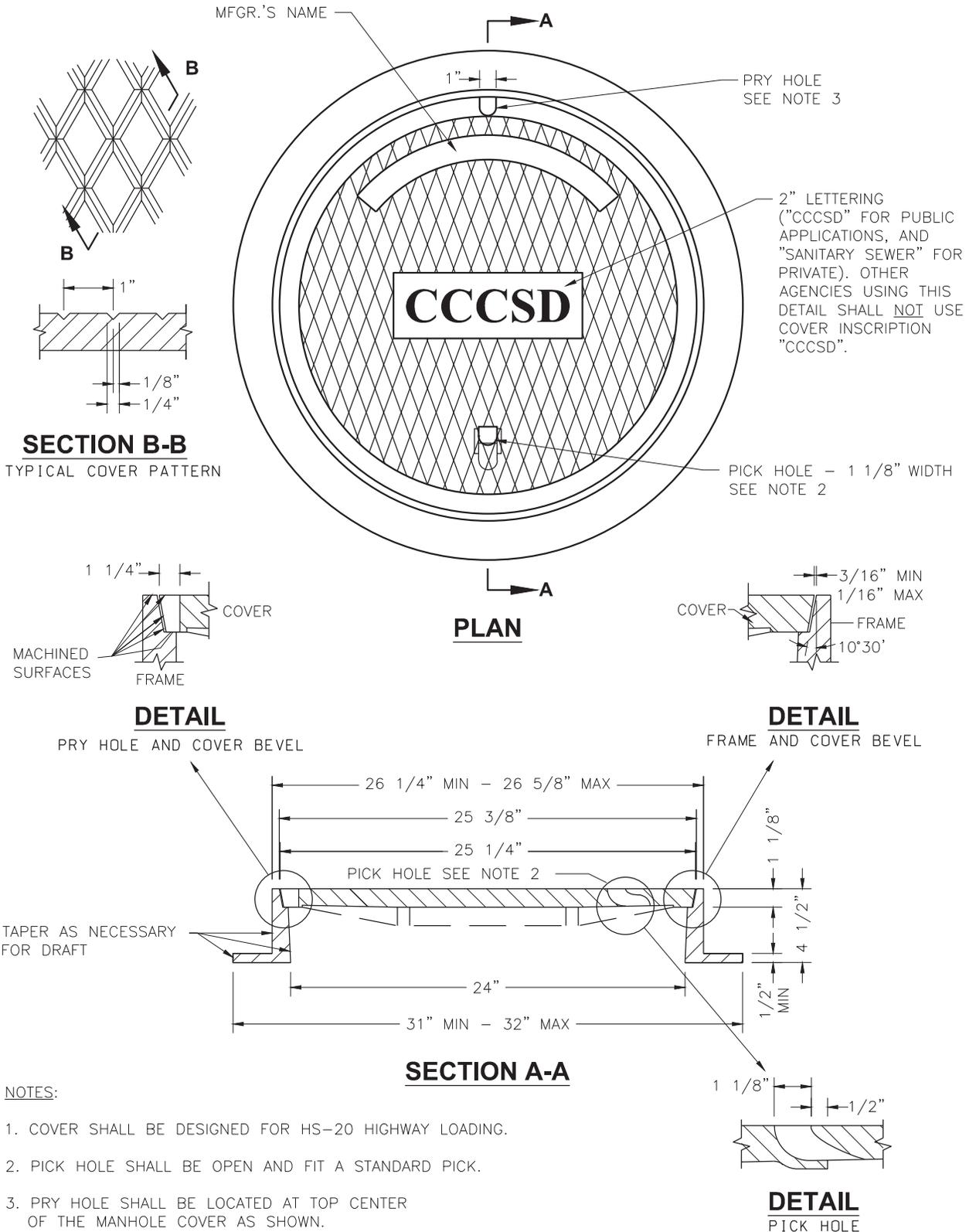
COUNTY OF CONTRA COSTA
 PUBLIC WORKS DEPARTMENT
 MARTINEZ, CALIFORNIA
 STANDARD PLAN

SPEED BUMP

NO.	DATE	REVISION DESCRIPTION	BY	SCALE: NO SCALE	DATE: 3/14
				DRAWN BY: L. COSTA	PLAN NO. CA55
				CHECKED BY: M. HOLLINGSWORTH	

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

STANDARD MANHOLE FRAME & COVER



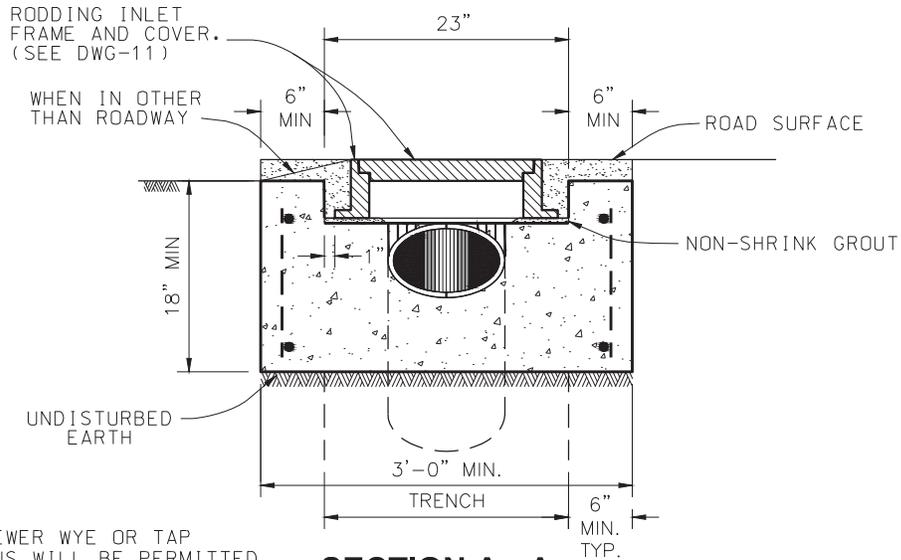
NOTES:

1. COVER SHALL BE DESIGNED FOR HS-20 HIGHWAY LOADING.
2. PICK HOLE SHALL BE OPEN AND FIT A STANDARD PICK.
3. PRY HOLE SHALL BE LOCATED AT TOP CENTER OF THE MANHOLE COVER AS SHOWN.

08-Jul-2014 K:\Projects_standardSpecs\colsys\08_StandardManholeFrameCover.dwg

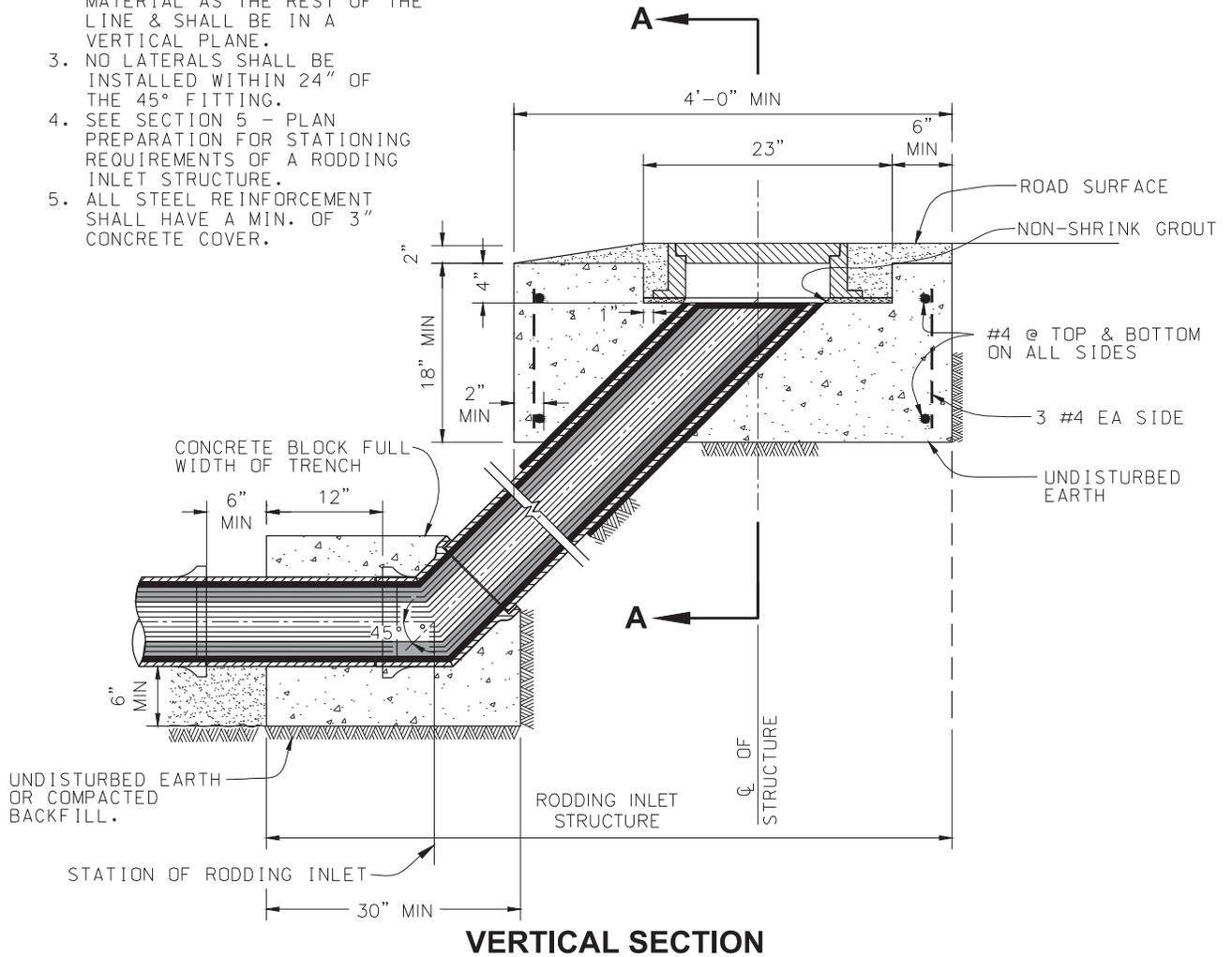
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

RODDING INLET



NOTES:

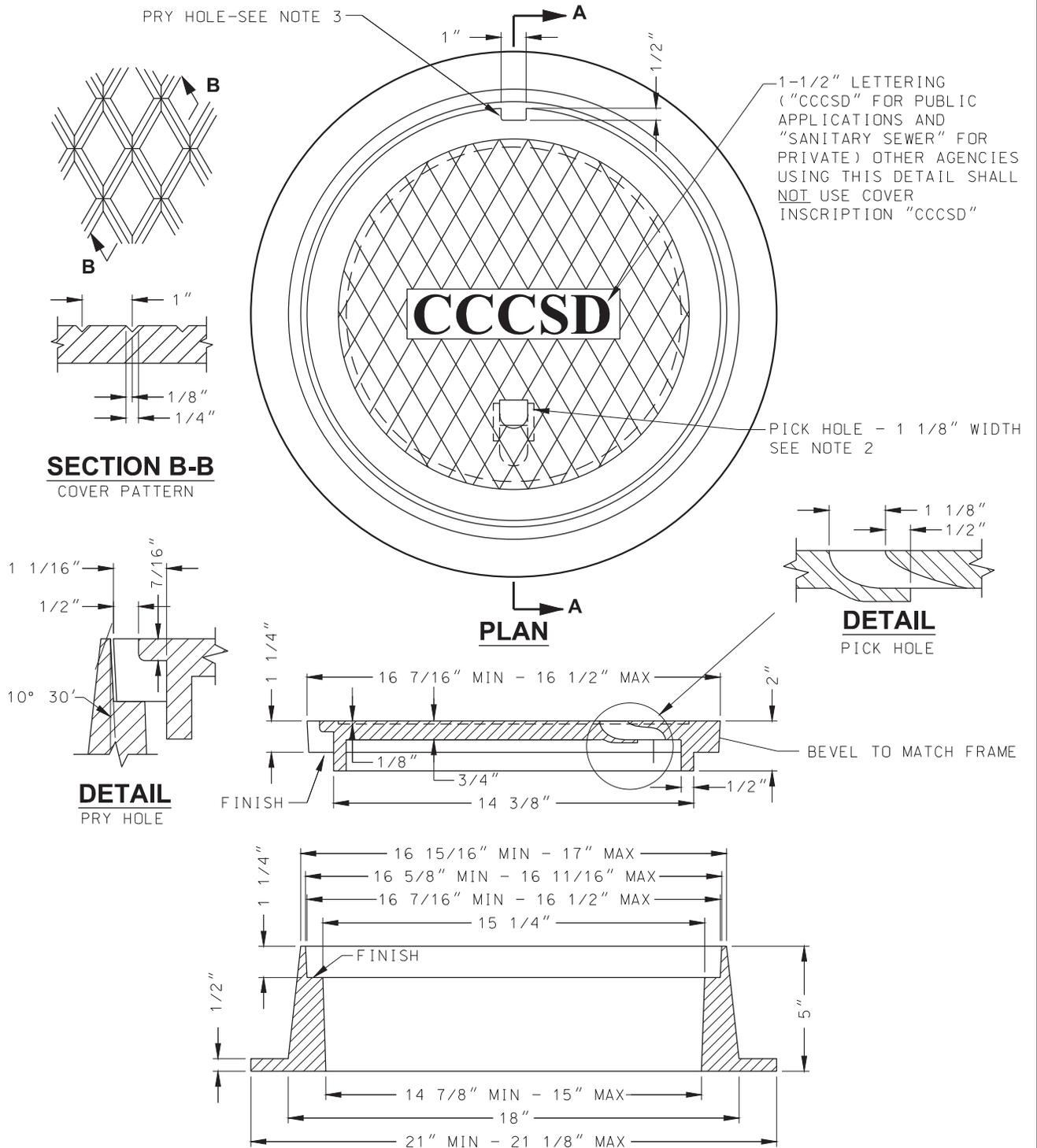
1. NO SIDE SEWER WYE OR TAP CONNECTIONS WILL BE PERMITTED IN RISER PIPE.
2. RISER PIPE SHALL BE THE SAME MATERIAL AS THE REST OF THE LINE & SHALL BE IN A VERTICAL PLANE.
3. NO LATERALS SHALL BE INSTALLED WITHIN 24" OF THE 45° FITTING.
4. SEE SECTION 5 - PLAN PREPARATION FOR STATIONING REQUIREMENTS OF A RODDING INLET STRUCTURE.
5. ALL STEEL REINFORCEMENT SHALL HAVE A MIN. OF 3" CONCRETE COVER.



08-Jul-2014 K:\Projects_standardSpecs\colsys10_RoddingInlet.dwg

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

RODDING INLET FRAME & COVER

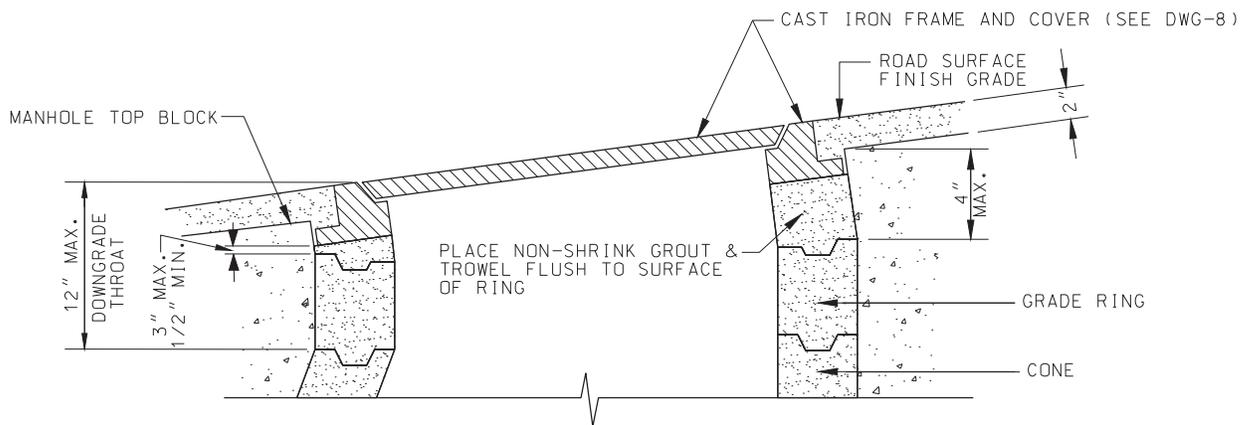
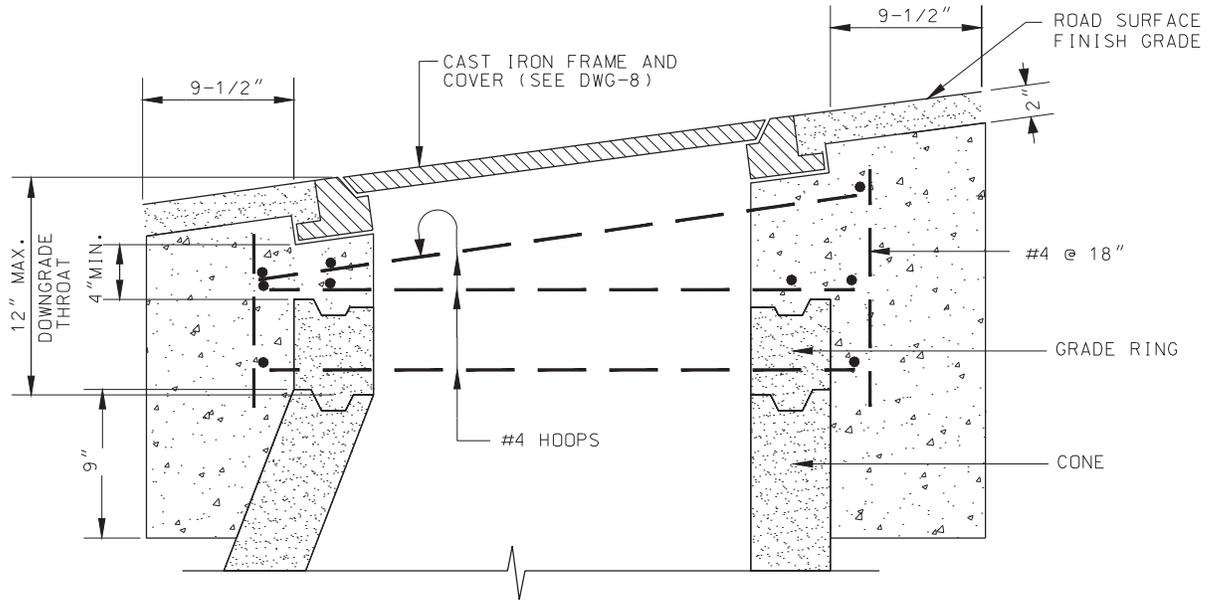


NOTES:

1. COVER SHALL BE DESIGNED FOR HS-20 HIGHWAY LOADING.
2. PICK HOLE SHALL BE OPEN AND FIT A STANDARD PICK.
3. PRY HOLE SHALL BE LOCATED AT TOP CENTER OF THE RODDING INLET COVER AS SHOWN.

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

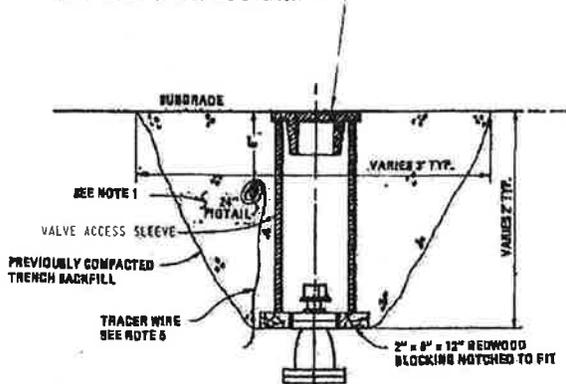
MANHOLE ADJUSTMENT TO FINISH GRADE PAVED AREAS



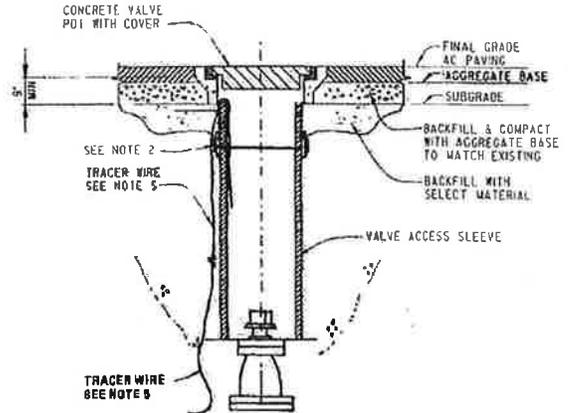
NOTE:

1. SEE DWG-1 FOR TOP BLOCK DETAILS

CONCRETE VALVE POT WITH COVER AS SHOWN IN THE FINAL INSTALLATION DETAIL OR USE EBMUD CAST IRON COVER (UNTIL EXISTING SUPPLIES ARE EXPENDED)

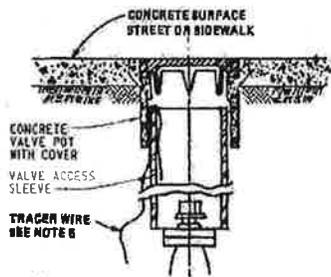


PRELIMINARY INSTALLATION PRIOR TO PLACING PAVING BASE

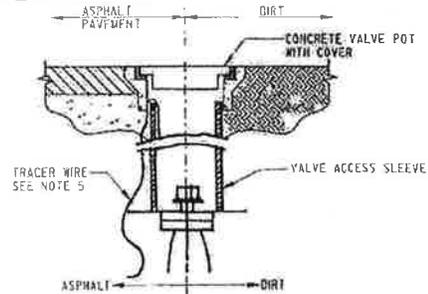


FINAL INSTALLATION AFTER PAVING IS COMPLETED

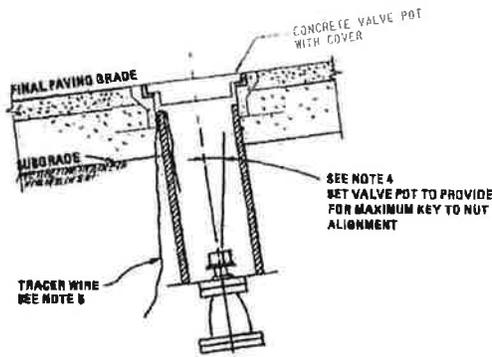
IN NEW A.C. STREET CONSTRUCTION



IN EXISTING CONCRETE PAVEMENT



IN EXISTING ASPHALT PAVEMENT OR DIRT



IN SLOPING GRADES

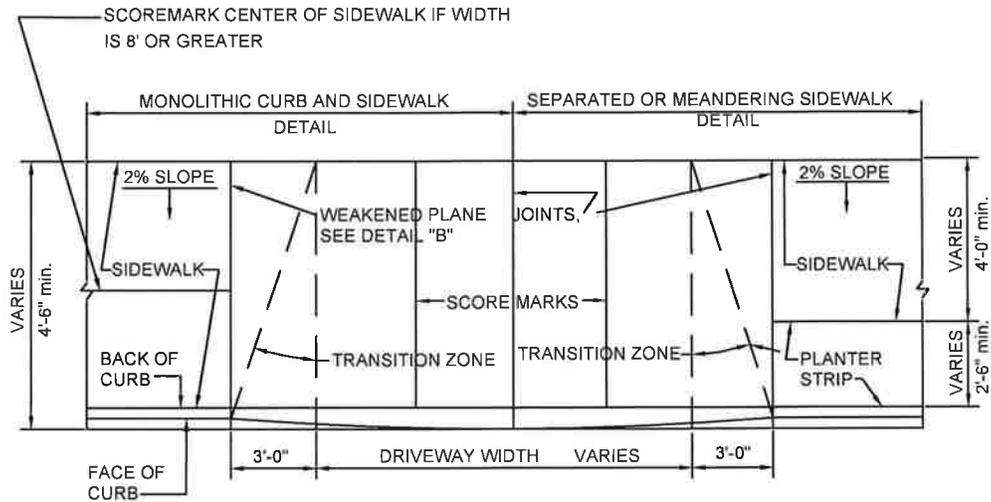
- NOTE:**
1. AGGREGATE BASE OR OTHER SUITABLE MATERIAL, FOR COMPACTION SEE SPECIFICATIONS.
 2. USE REPAIR CLAMP, OR 3 WRAPS OF 2" WIDE MPH TAPE, OR EQUIVALENT, TO HOLD JOINT IN ALIGNMENT WHILE PLACING CONCRETE.
 3. VALVE ACCESS SLEEVE IS 8.625" O.D. STEEL PIPE, MIN. WALL 10 GA., MAX. SCHEDULE 40 OR SCHEDULE 40 PVC PIPE.
 4. TOP OF VALVE COVER TO FIT FLUSH WITH FINISHED GRADE OF THE STREET OR RIGHT OF WAY.
 5. NON-METALLIC MAINS REQUIRE TRACER WIRE TO BE EXTENDED INTO THE TOP OF THE VALVE POT, IN ACCORDANCE WITH E.B.M.U.D. SPECIFICATIONS.
 6. ON STREET RESURFACING PROJECTS, INSTALL RISER RINGS, AS REQUIRED TO ALLOW GATE POT COVER TO CONFORM WITH ADJACENT SURFACES.

USE: 1. 1987 EDITION
 EBMUD DATE: 06/07/1997 141441
 FILE: 00000001/012-0000/321-000-000

REVISED 31 OCT 97		APPROVED: <i>[Signature]</i> ASST. GEN. MGR. & CHIEF ENGINEER, R.P.E. NO. C-1624	
DESIGNER BY: EBMUD	EAST BAY MUNICIPAL UTILITY DISTRICT OAKLAND, CALIFORNIA		
SECTION CHECKED BY: <i>[Signature]</i>	STANDARD DRAWING		
DRAWN BY: R.O.B.	VALVE POT INSTALLATION		
MECH: ELECT STRUCT	NO SCALE		
PIPELINE: CORR. NEW. FIRM.	DATE: 30 JAN 79		
EBMUD PIPELINE DIVISION R.P.E. NO. C-1624	DIRECTOR OF ENGRG R.P.E. NO. C-1624		321-EA
DISTRIBUTION SYSTEM MAP NO.			

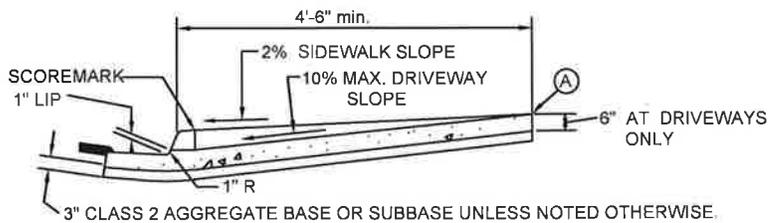
DANVILLE

STANDARD PLAN



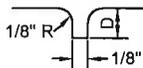
TYPICAL DRIVEWAY

(GUTTER NOT SHOWN)



POINT (A) TO BE ON A 2% SLOPE FROM TOP OF CURB UNLESS OTHERWISE APPROVED

SECTION



D=1" FOR WEAKENED PLANE JOINTS
D=1/4" FOR SCORE MARKS
JOINTS SHALL BE FORMED BY USE OF PLASTIC INSERTS

SCORE MARKS AND
WEAKENED PLANE JOINTS
DETAIL "B"

NOTE

1. ALL CONCRETE TO BE CLASS B.

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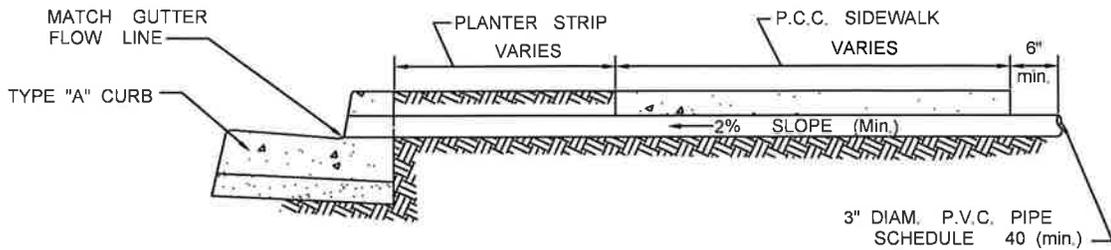
TYPICAL DRIVEWAY

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CITY ENGINEER RCE 31870 DATE _____

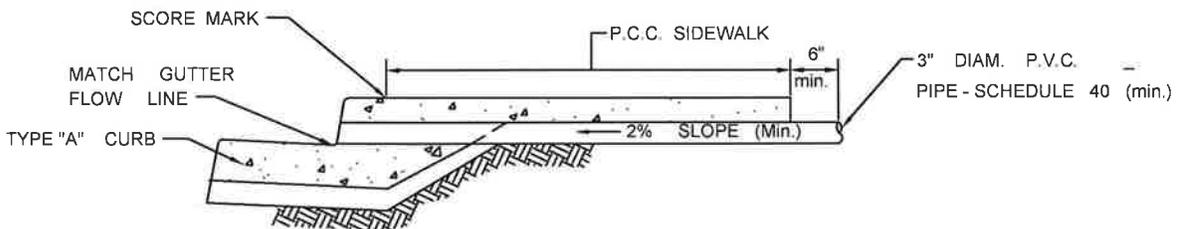
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DANVILLE

STANDARD PLAN



SIDEWALK DRAIN FOR SEPARATED SIDEWALK



SIDEWALK DRAIN FOR
MONOLITHIC CURB AND SIDEWALK

NOTES

1. SIDEWALK DRAIN SHALL BE INSTALLED AT WEAKENED PLANE JOINTS.
2. SIDEWALK DRAIN SHALL BE INSTALLED ON THE LOW SIDE OF THE DRIVEWAY OR LOT WHERE APPLICABLE.

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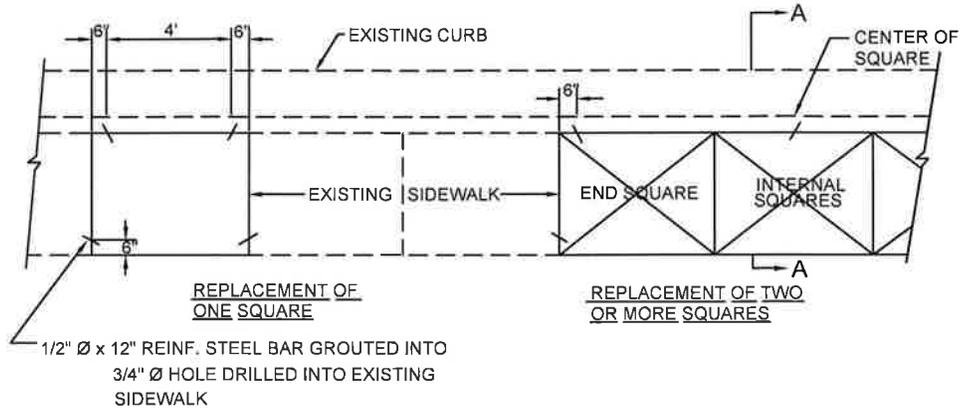
SIDEWALK DRAINS

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CITY ENGINEER RCE 31870 DATE _____

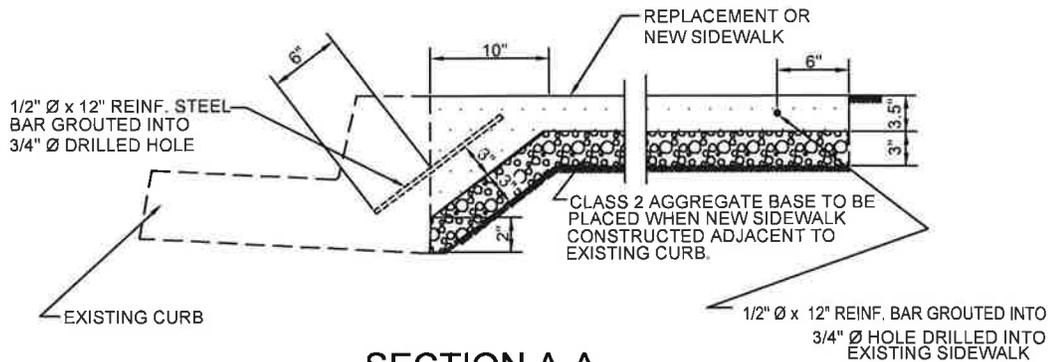
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STANDARD PLAN



TYPICAL DOWEL INSTALLATION



NOTE:

1. DOWELS TO BE PLACED AT A 30° ANGLE TO THE PERPENDICULAR.

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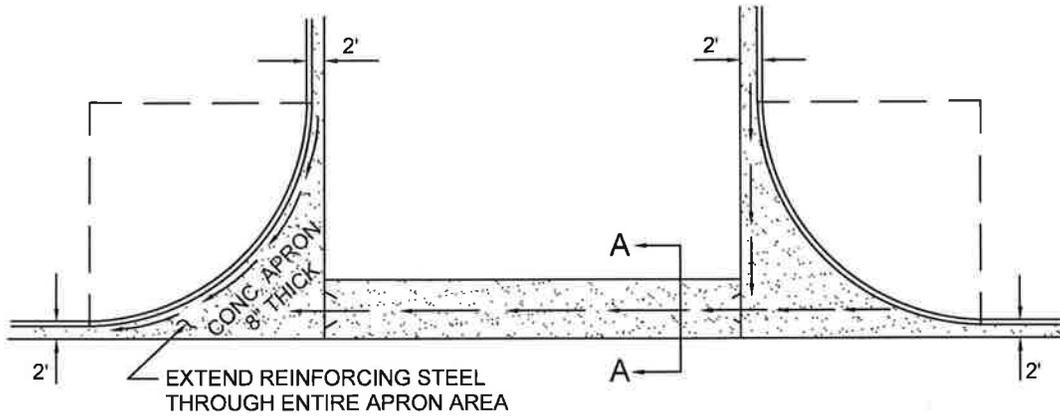
**SIDEWALK DOWELING
DETAILS**

Approved By _____
CITY ENGINEER RCE 31870 DATE _____

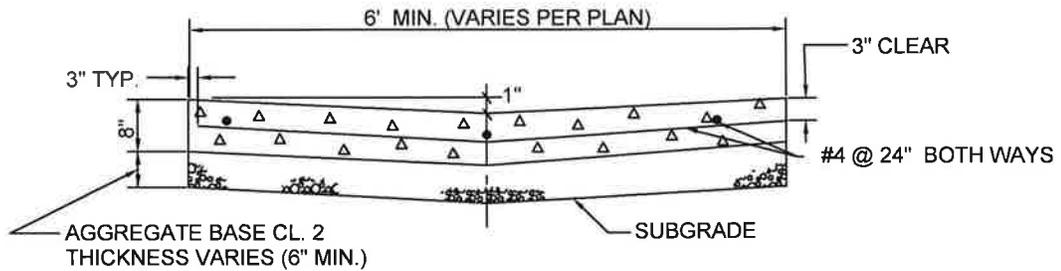
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DANVILLE

STANDARD PLAN



PLAN



SECTION A - A

NOTE

1. VALLEY GUTTERS TO BE USED ONLY WHERE SPECIFICALLY APPROVED.

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VALLEY GUTTER

Approved By _____

CITY ENGINEER RCE 31870 DATE _____

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DANVILLE

STANDARD PLAN

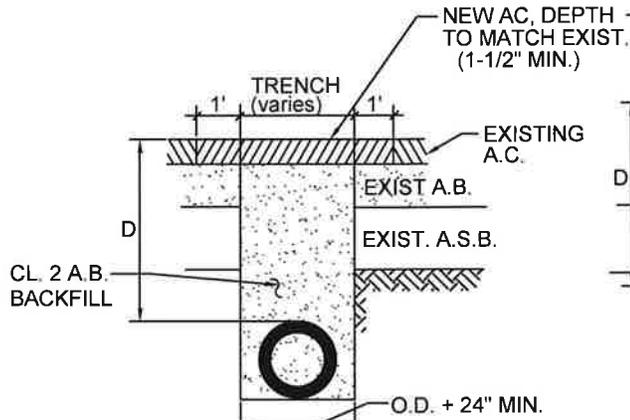


FIGURE 1

D= 18" or GREATER

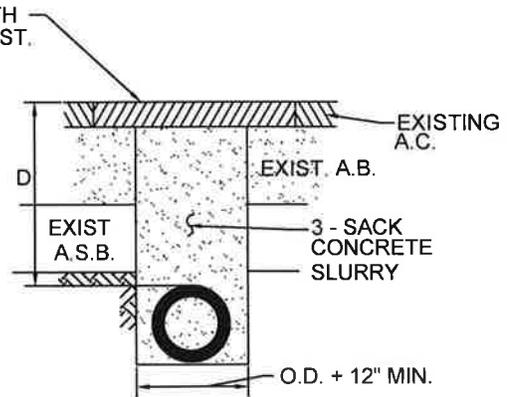


FIGURE 2

D=LESS THAN 18"

NOTES

1. ASPHALT OR CONCRETE STREETS SHALL BE OVERCUT ONE FOOT GREATER ON EACH SIDE THAN THE TRENCH WIDTH. (FIGURE1)
2. REMOVE TO PROPER DEPTH, INSTALL UTILITY AND BACKFILL.
3. CONTRACTOR MAY BE REQUIRED TO PLACE SAND BEDDING MATERIAL ON THE TRENCH FLOOR DEPENDING ON SOIL CONDITION AND TYPE OF PIPE USED.
4. COMPACTION-THE RELATIVE COMPACTION OF ALL TRENCH BACKFILL AS FOLLOWS:
AB/ASB = 95% NATIVE = 90%.
5. NO JETTING IS ALLOWED UNDER ANY PAVED ROADWAY OR WITHIN A DISTANCE OF FOUR FEET FROM THE EDGE OF EXISTING PAVEMENT. BACKFILL SHALL BE COMPACTED BY IMPACT, VIBRATION OR ANY COMBINATION OF THESE. JETTING WILL BE ALLOWED ONLY WHEN MORE THAN FOUR FEET FROM THE PAVEMENT AND WHEN THE BACKFILL AND TRENCH ARE SUITABLE FOR JETTING AND SHALL BE SUPPLEMENTED WITH MECHANICAL COMPACTION IN FOUR FEET MAXIMUM LAYERS.

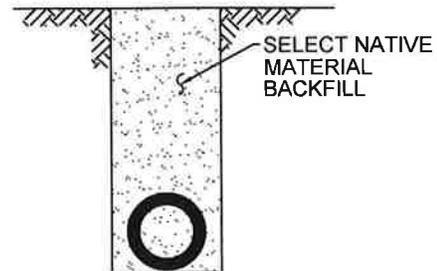


FIGURE 3

NON PAVEMENT AREAS

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TRENCH BACKFILL

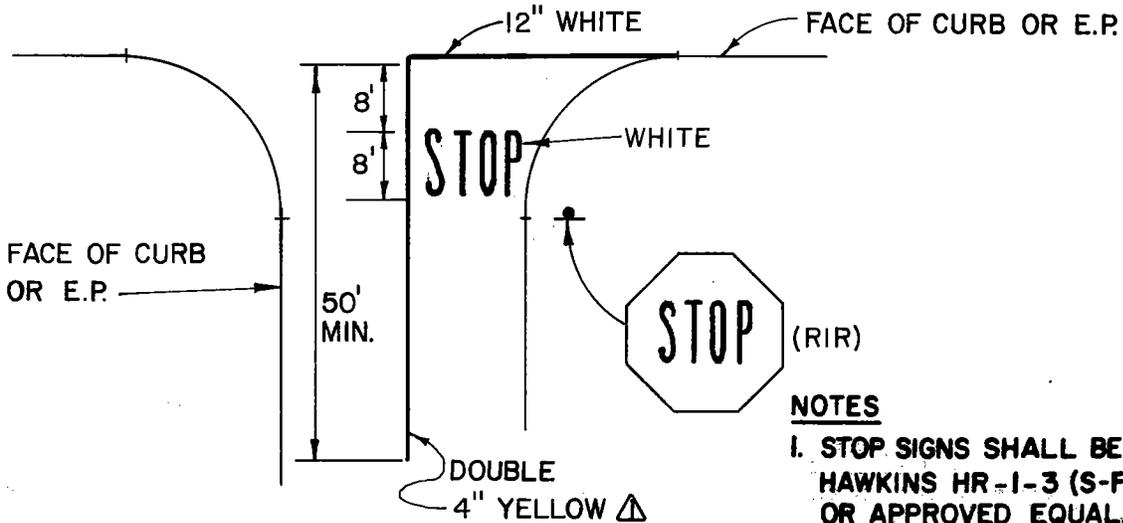
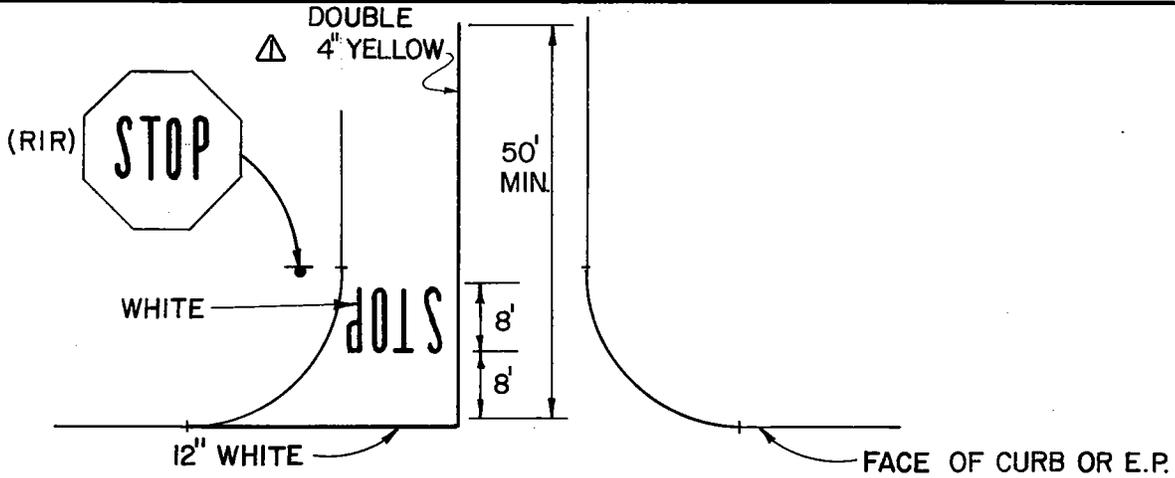
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DANVILLE

STANDARD PLAN



NOTES

1. STOP SIGNS SHALL BE HAWKINS & HAWKINS HR-1-3 (S-F) 30" x 30" OR APPROVED EQUAL.
2. STREET-SIDE EDGE OF SIGN SHALL BE NOT LESS THAN 24" FROM FACE OF CURB.
3. ALL PAVEMENT MARKINGS TO BE REFLECTIVE PAINT OR THERMO-PLASTIC AS SPECIFIED.
4. FOR POLE TYPE & INSTALLATION DETAIL, SEE CC 305I.

No.	Rev.	By
1	1-90	KMD

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Drawn By B.C. Checked By MZ

STOP SIGN LOCATION

Approved By

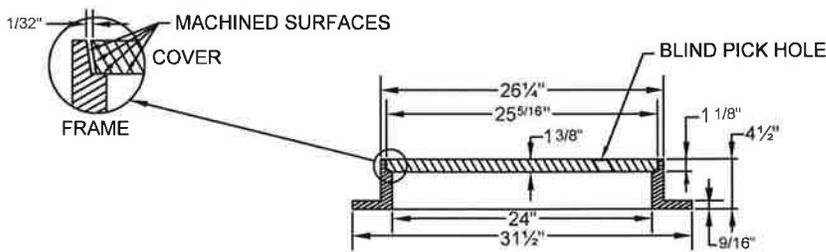
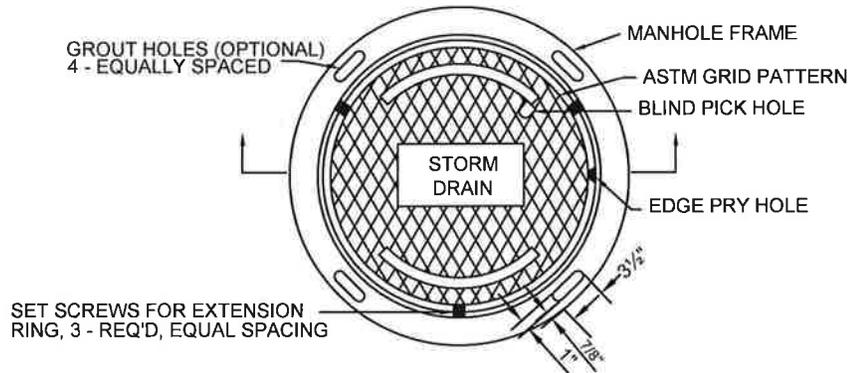
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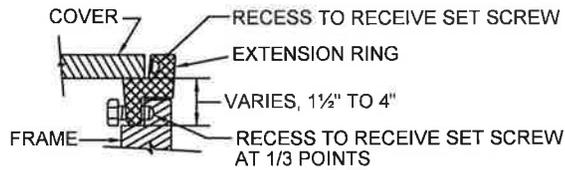
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DANVILLE

STANDARD PLAN



TYPICAL FRAME AND COVER DETAIL



TYPICAL CAST IRON EXTENSION RING

NOTES

1. MANHOLE FRAME AND COVER SHALL BE PHOENIX IRON WORKS (OAKLAND) MODEL P-1090 OR PINKERTON FOUNDRY (LODI) MODEL A-640 OR AN APPROVED EQUAL.

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**MANHOLE FRAME
AND COVER**

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SPEED LUMP DETAIL 1

STANDARDS FOR SPEED LUMPS IN TOWN OF DANVILLE

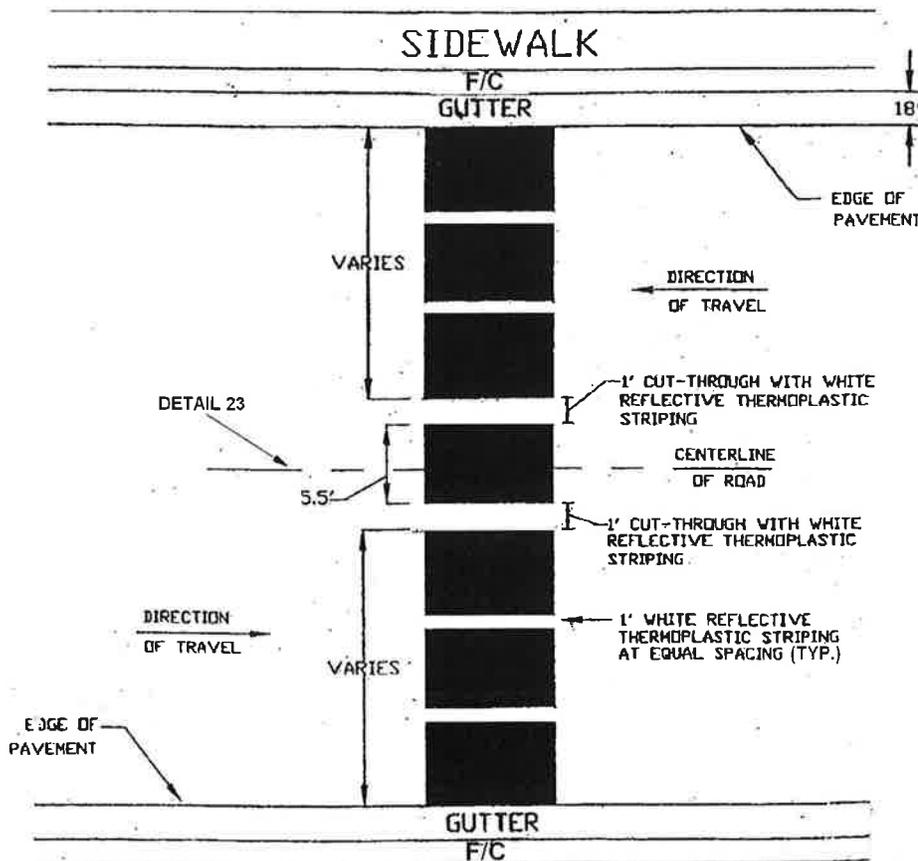
GENERAL NOTES:

The overall dimensions for a speed "lump" in the Town of Danville is 12 feet long by 3.5 inches high (maximum) by a variable width to accommodate the pavement width of the two-lane street. ~~The 3.5 inch high lumps are the most drastic, and lesser heights may be employed dependent upon the physical characteristics of the street in question, and the desired speed reduction.~~

Speed "lumps" are similar to speed "humps" except they are divided into three lumps with one foot of space between each lump. The space between the lumps is specifically designed to accommodate the axle width of emergency response vehicles. All lumps, regardless of street width, shall have a center lump with a width of 5.5 feet. The two outside lump widths shall be dependent on the width of the street.

As with speed humps, the speed lump must be distinguished from the more common "bump" often seen on private roads, parking lots, and driveways.

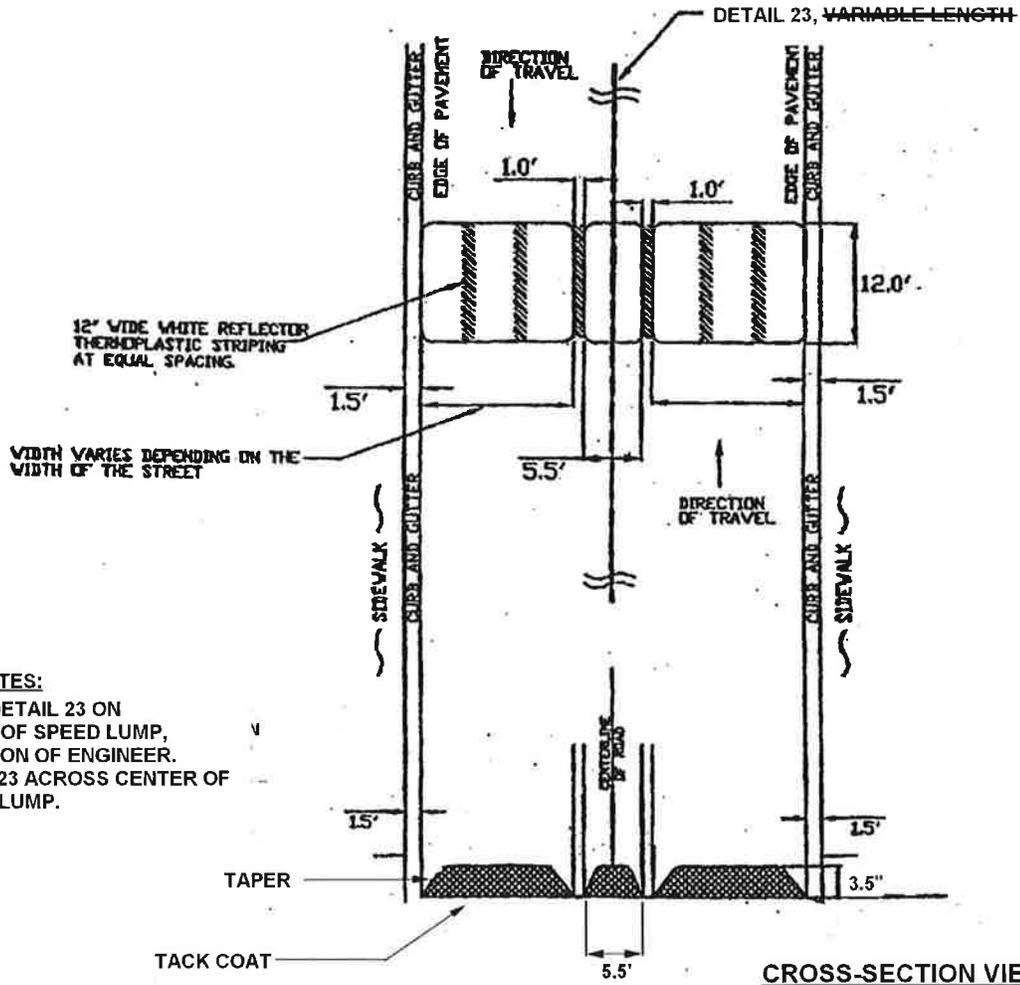
PLAN VIEW 1



SPEED LUMP DETAIL 2

SPEED LUMP DIAGRAM

PLAN VIEW 2



STRIPING NOTES:

1. 25' ~~OR 50'~~ DETAIL 23 ON EACH SIDE OF SPEED LUMP, AT DIRECTION OF ENGINEER.
2. 12' DETAIL 23 ACROSS CENTER OF SPEED LUMP.

PROFILE - TYPICAL CONSTRUCTION DETAIL

1. SPEED HUMP SHALL BE CONSTRUCTED USING TWO LIFTS OF AC, 3/8" MIX.
2. A TEMPLATE SHALL BE USED TO MAINTAIN A SMOOTH, CONSISTENT PROFILE.
3. A DEPTH GAUGE SHALL BE USED TO MEASURE THE REQUIRED INCREMENTAL AC DEPTHS, AS SHOWN.

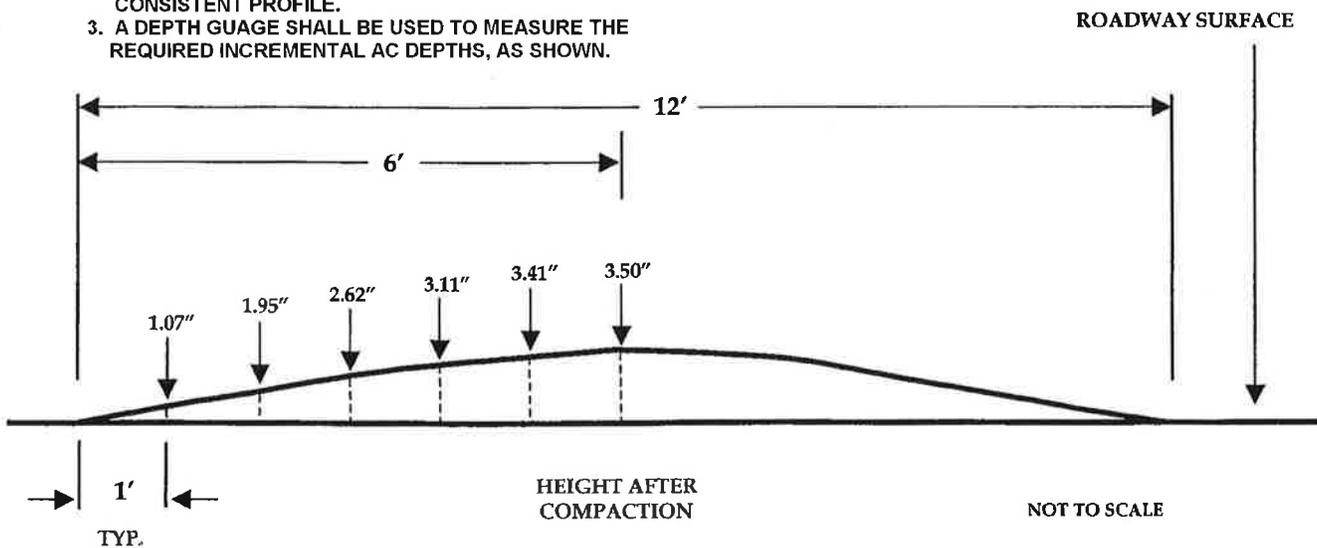


Figure 3B-102 (CA). Examples of Fire Hydrant Location Pavement Markers

