

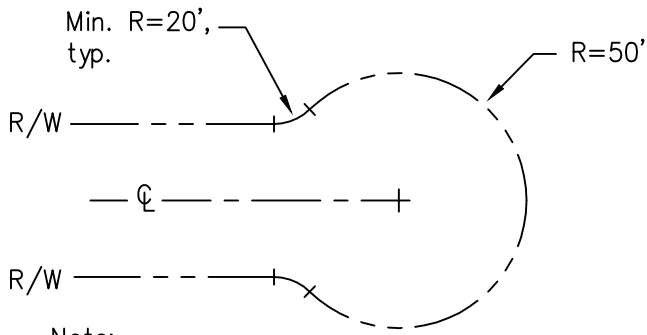
# CITY OF LIVERMORE

## STANDARD DETAILS

### TABLE OF CONTENTS

#### STREETS - ST

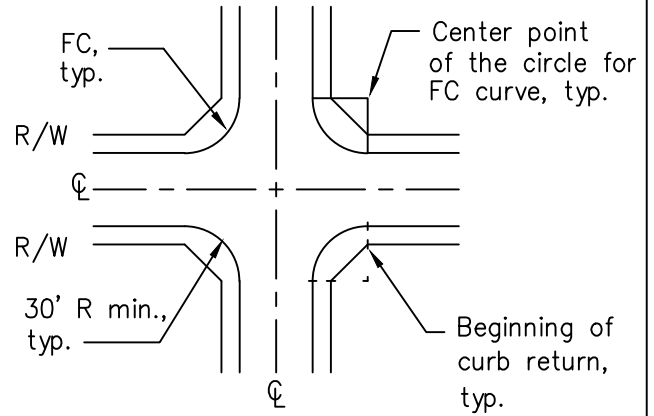
| DETAIL<br>NO. | TITLE   |
|---------------|---|
| ST-1          | CUL-DE-SAC, CURB RETURNS, AND ELBOWS;<br>HAMMERHEADS AND TEMPORARY TURNAROUND |
| ST-2          | STREET WIDTHS; PARTIAL STREET SECTION   |
| ST-3          | MONOLITHIC SIDEWALK (RESIDENTIAL/INDUSTRIAL)                                  |
| ST-4          | SEPARATED SIDEWALK AND DRIVEWAY (RESIDENTIAL)                                 |
| ST-5          | SIDEWALK (COMMERCIAL/INDUSTRIAL)  |
| ST-6          | DRIVEWAY (STREET-LEVEL)   |
| ST-7          | DRIVEWAY (RESIDENTIAL)  |
| ST-8          | DRIVEWAY (COMMERCIAL/INDUSTRIAL)  |
| ST-9          | CURB & GUTTER, MEDIAN CURB  |
| ST-10         | TEXTURED CONCRETE PAVING  |
| ST-11         | STREET SECTION  |
| ST-12         | UTILITY LOCATIONS   |
| ST-13         | MONUMENT  |
| ST-14         | STANDARD STREET LIGHT; DECORATIVE STREET LIGHT                                |
| ST-15         | BUS TURNOUT   |
| ST-16         | VALLEY GUTTER   |
| ST-17         | ROADSIDE SIGN/POST INSTALLATION   |
| ST-18         | STREET NAME SIGN AND W14-2a SPECIAL SIGN                                      |
| ST-19         | NUMBER NOT USED   |
| ST-20         | PRIVATE PROPERTY/CITY OFF-STREET SIGNS  |
| ST-21         | BARRICADES  |
| ST-22         | MEDIAN CONSTRUCTION   |
| ST-23         | REMOVABLE BOLLARD   |
| ST-24         | MAIL BOX INSTALLATION   |
| ST-25         | PAVEMENT WIDENING, CONNECTIONS; OVERLAY                                       |
| ST-26         | CROSSWALK/STOP BAR INSTALLATION   |
| ST-27         | BIKE LANES  |
| ST-28         | SIDEWALK DRAIN (RESTORATION OF EXISTING FACILITIES)                           |
| ST-29         | CHAIN LINK FENCE  |
| ST-30         | PEDESTRIAN WALKWAY  |
| ST-31         | SIDEWALK REPAIR   |
| ST-32         | SIDEWALK GRINDING REPAIR  |
| ST-33         | SIDEWALK REPAIR CRITERION   |
| ST-34         | SPEED LUMPS   |
| ST-35         | SPEED TABLE CROSSWALK   |



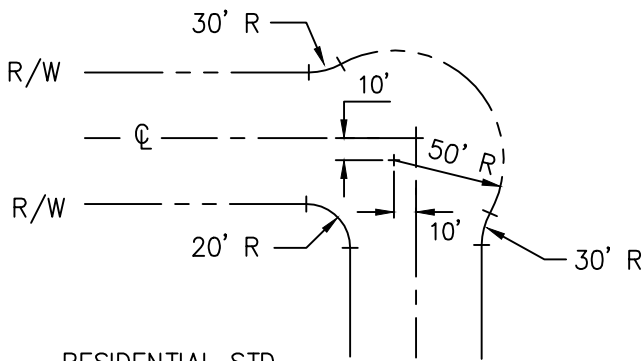
Note:

Cul-de-sac radius point may be offset from centerline.

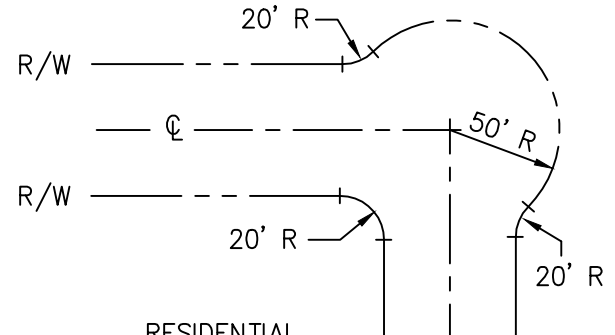
CUL-DE-SAC



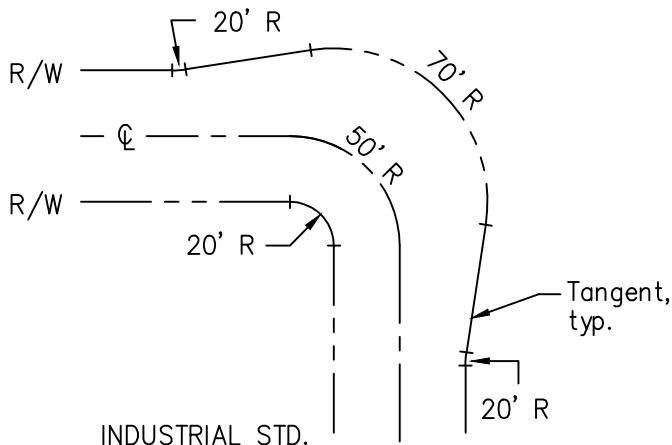
CURB RETURN



RESIDENTIAL STD.



RESIDENTIAL  
Alternate



INDUSTRIAL STD.

ELBOWS

Notes:

1. Radii shown are minimums.
2. See ST-2A thru ST-2D for standard street widths.

User note:


These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST01A.DWG

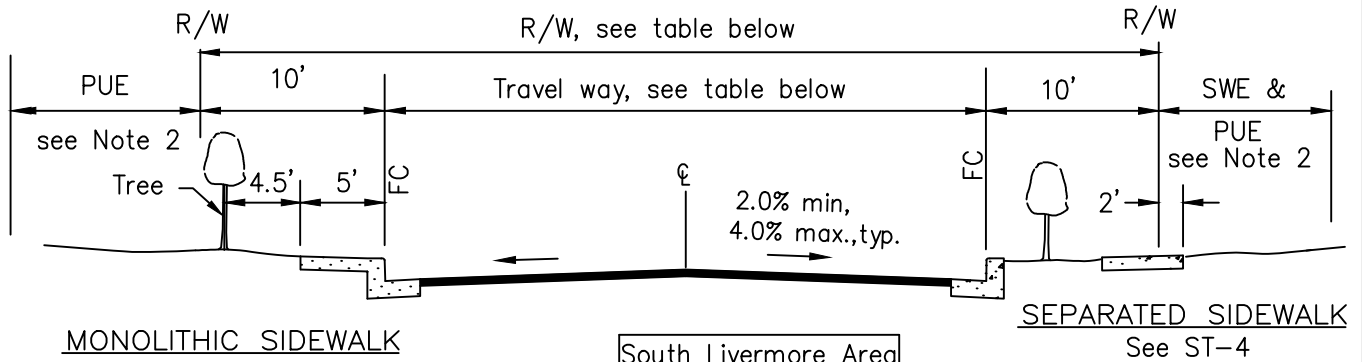
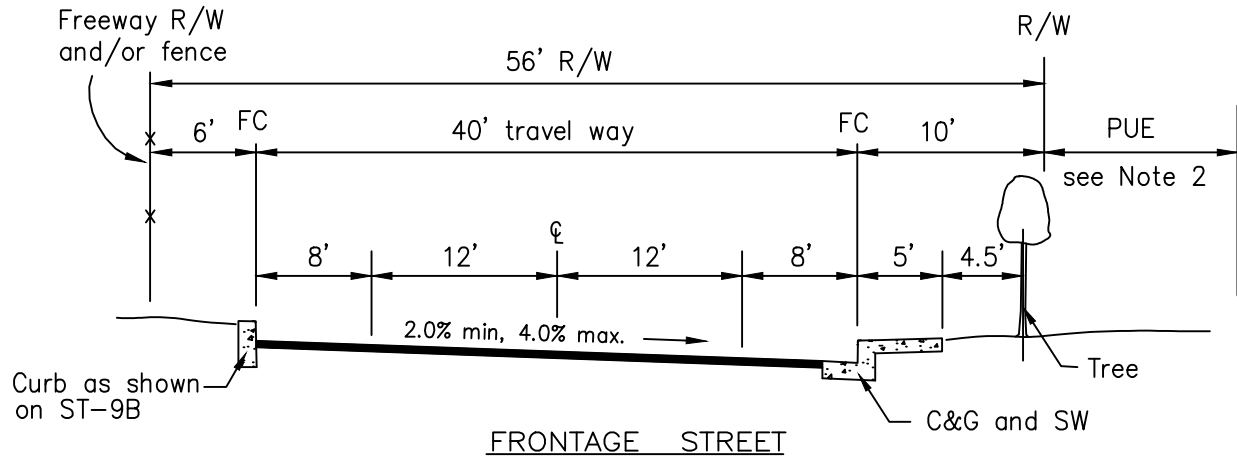
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

CUL-DE-SAC,  
CURB RETURN,  
AND ELBOWS

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY/KR   | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-1A |





South Livermore Area  
Transition Area Only

| Street type                               | *Travel way | * R/W | **Travel way | ** R/W | Guideline Criteria                                  |
|---|-------------|-------|--------------|--------|---|
| Local street                              | 40'         | 60'   | 32'          | 52'    | Planned to serve more than 50 units, each direction |
| Local street, with parking on one side    | 32'         | 52'   | 25'          | 45'    | No homes fronting on one side of the street         |
| Local street, with no parking             | 26'         | 27'   | -            | -      | Planned to serve less than 20 units ***             |
| Minor Local street, Cul-De-Sac, and Loops | 36'         | 56'   | 32'          | 52'    | Planned to serve 20 to 50 units, each direction     |
| Short Cul-De-Sac                          | 32'         | 52'   | 32'          | 52'    | Planned to serve less than 20 units                 |

\* The approved tentative map will determine actual street widths.  
This table is intended to be a guideline only.

\*\* R/W and Travel way dimensions is reduced for developments in the specific plan area.

\*\*\* Street to have monolithic sidewalk on both sides of street within 6' wide sidewalk/public utility easements adjacent to right-of-way

LOCAL STREET AND CUL-DE-SAC

See ST-2E for notes

User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

STREET WIDTHS  
(FRONTAGE, LOCAL & CUL-DE-SAC)

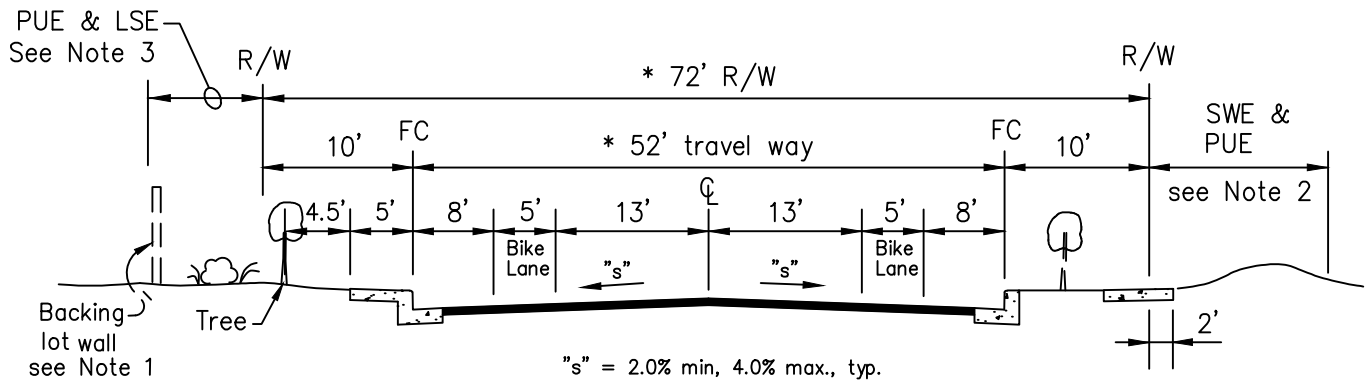
CITY OF LIVERMORE  
STANDARD DETAIL

Dwn: FY Date: May-13 NO.  
Ckd: Spec. Committee Scale: NONE  
*[Signature]*  
City Engineer

ST-2A

ST02A.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |



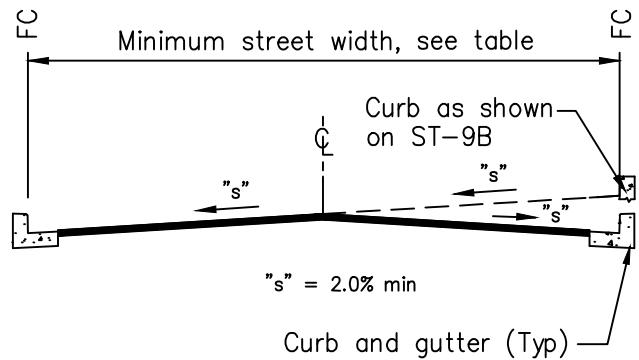
MONOLITHIC SIDEWALK  
See ST-3

COLLECTOR STREET  
(RESIDENTIAL)

SEPARATED SIDEWALK  
See ST-4

\* For collector streets with parking on one side of the street, street width may be reduce to 66' R/W and 46' travel way.

| Minimum street width                               |     |
|--|-----|
| Private street with parallel parking on both sides | 36' |
| Private street with parallel parking on one side   | 33' |
| Private street (No parking on either side)         | 24' |
| Private alley (No parking on either side)          | 20' |



PRIVATE RESIDENTIAL STREET AND  
PRIVATE RESIDENTIAL TOWNHOUSE/CONDOMINIUM STREET

See ST-2E for notes


User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST02B.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

STREET WIDTHS  
(COLLECTOR AND PRIVATE STREETS)

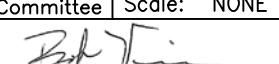
CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: FY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-2B |

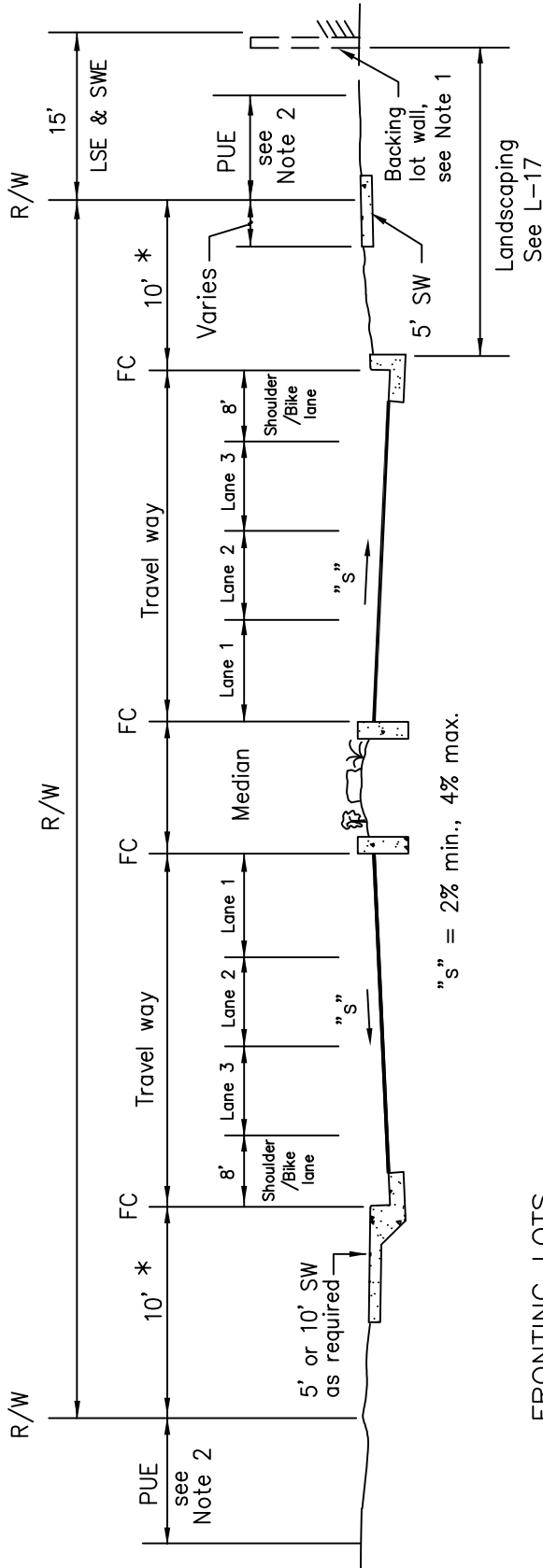
|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

# STREET WIDTHS (MAJOR STREETS)

## CITY OF LIVERMORE STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY,HI   | Date: Oct-22 | NO.   |
| Spec. Committee  | Scale: NONE  |       |
| <br>City Engineer |              | ST-2C |

User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.



FRONTING LOTS  
 MONOLITHIC SIDEWALK  
 (INDUSTRIAL OR COMMERCIAL ONLY)

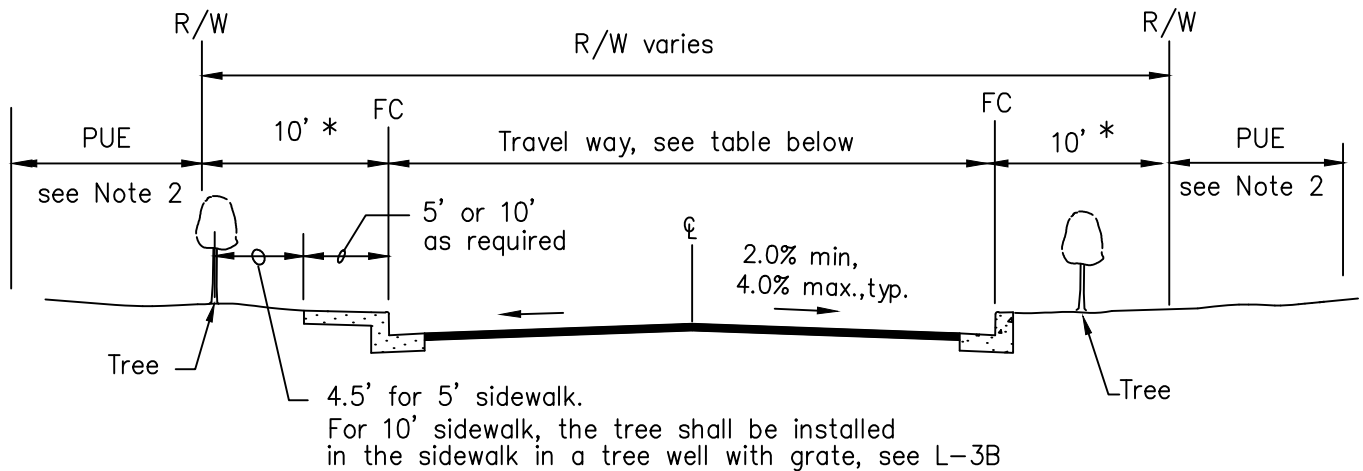
BACKING LOTS  
 SEPARATED, MONOLITHIC OR  
 MEANDERING SIDEWALK AS REQUIRED

MAJOR STREET

| Total Travel Lanes | ** R/W | Travel way               |              |              | Median       |       |                  |                |
|--------------------|--------|--------------------------|--------------|--------------|--------------|-------|------------------|----------------|
|                    |        | Shoulder/Bike Lane width | Lane 1 width | Lane 2 width | Lane 3 width | Total | Single Left Turn | Dual Left Turn |
| 4                  | 104'   | 8'-10'                   | 12'-14'      | 12'          | -            | 34'   | 16'              | -              |
| 4                  | 116'   | 8'-10'                   | 12'-14'      | 12'          | -            | 34'   | -                | 28'            |
| 6                  | 128'   | 8'-10'                   | 12'-14'      | 12'          | 12'          | 46'   | 16'              | -              |
| 6                  | 140'   | 8'-10'                   | 12'-14'      | 12'          | 12'          | 46'   | -                | 28'            |

\* Dimension is one (1) foot on Business and Commercial Park (BCP) frontages  
 \*\* Right of way (R/W) dimensions reduced in Business and Commercial Park (BCP) per Policy Proposal No. 160-98.

See ST-2E for notes.



MONOLITHIC SIDEWALK

(ONE SIDE ONLY)

See ST-3

| Street type            | Travel way | R/W      | Remarks                                     |
|------------------------|------------|----------|---|
| Industrial/ Commercial | 40' min.   | 60' min. | 1. Two lane street, with no left turn lane. |
|                        | 52' min.   | 72' min. | 1. Two lane street. with left turn lane.    |

INDUSTRIAL/COMMERCIAL STREET

\* Dimension is one (1) foot in Business and Commercial Park (BCP) per Policy Proposal No. 160-98.

User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

See ST-2E for notes

STREET WIDTHS  
(INDUSTRIAL/COMMERCIAL)

CITY OF LIVERMORE  
STANDARD DETAIL

|                      |              |     |
|----------------------|--------------|-----|
| Dwn: KY              | Date: May-13 | NO. |
| Ckd: Spec. Committee | Scale: NONE  |     |

*[Signature]*  
City Engineer

ST-2D

ST02D-R1.DWG

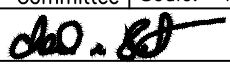
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

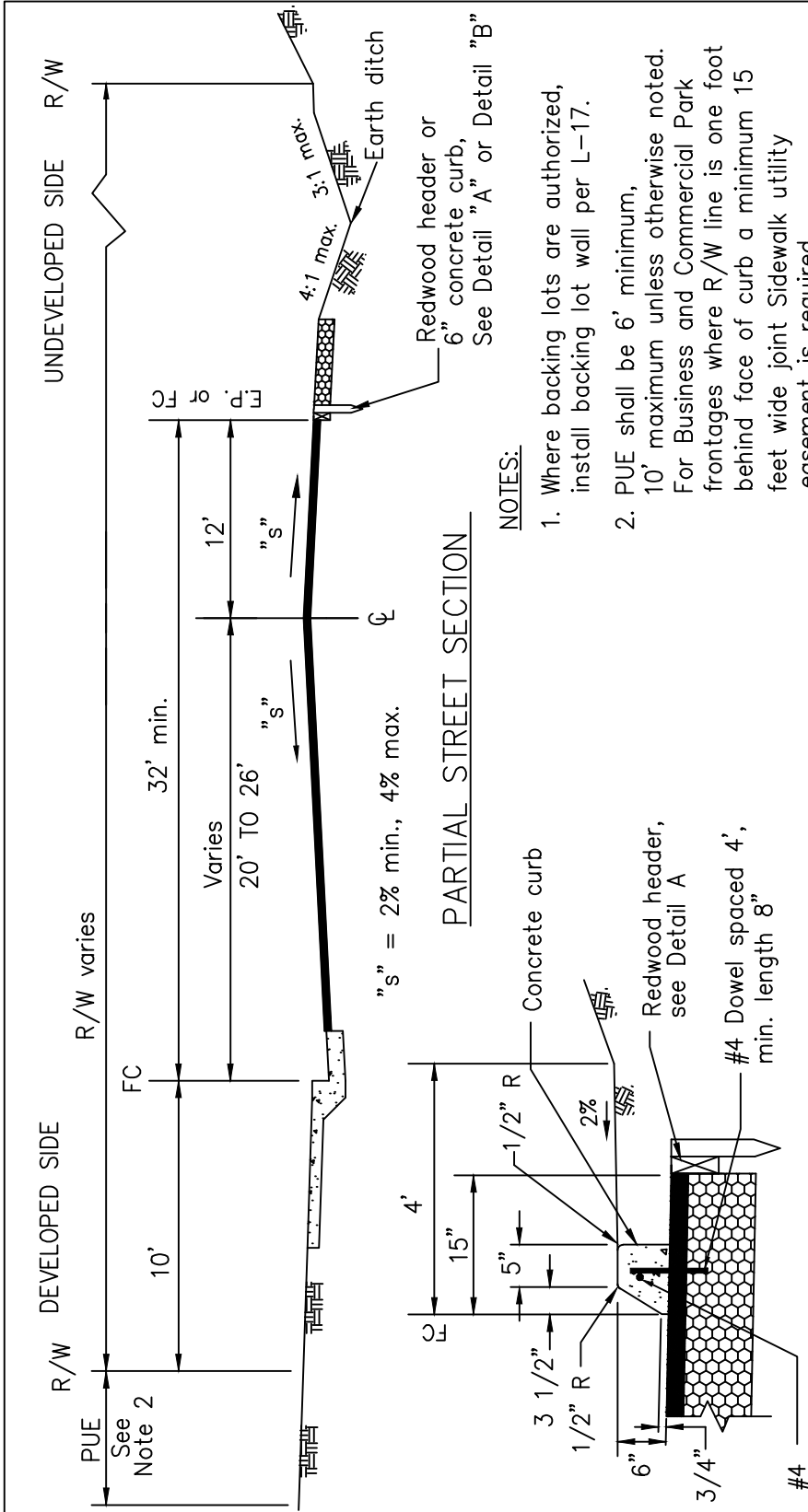
ST02E.DWG

|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

STREET WIDTH  
(PARTIAL STREET SECTION FOR TEMP  
40' TO 52' TRAVEL WAY STREETS)

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: FY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-2E |
|  |              |       |

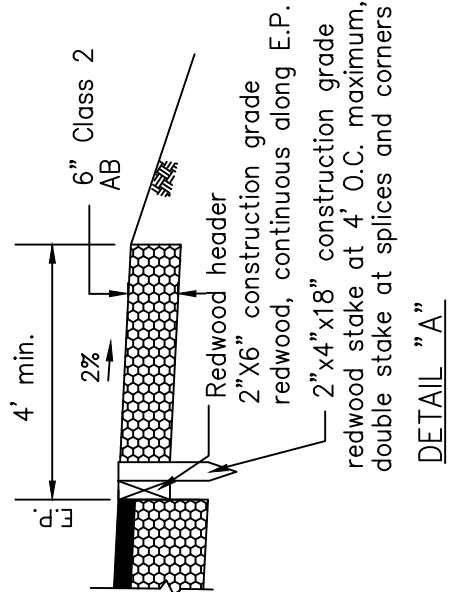
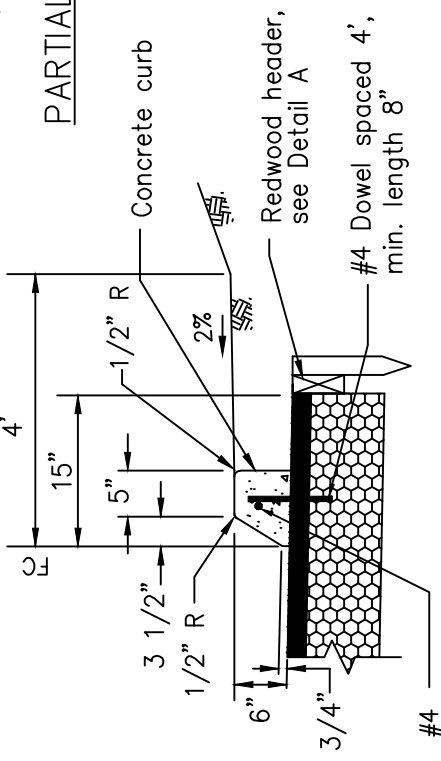


PARTIAL STREET SECTION

"s" = 2% min., 4% max.

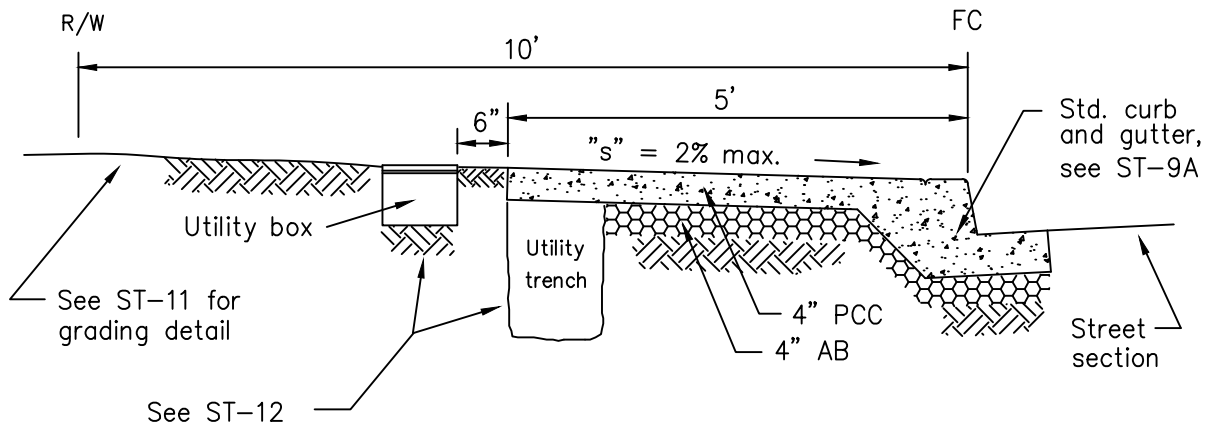
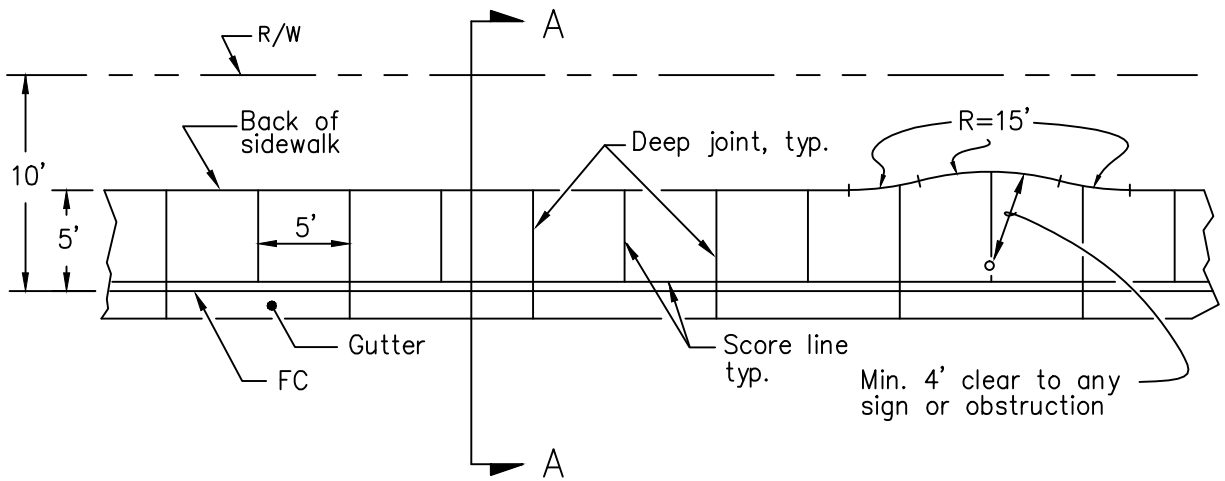
NOTES:

1. Where backing lots are authorized, install backing lot wall per L-17.
2. PUE shall be 6' minimum, 10' maximum unless otherwise noted. For Business and Commercial Park frontages where R/W line is one foot behind face of curb a minimum 15 feet wide joint Sidewalk utility easement is required.
3. For backing lot treatment, landscape easement and PUE shall be 3'. For no backing lot treatment, PUE shall be 6'.
4. See ST-3, 4 & 5 for sidewalks.
5. See ST-9A for curb and gutter.
6. See ST-4, 6, 7, & 8 for driveways.
7. See ST-12 for utility locations.
8. See ST-11 for traffic index, and street section requirements.
9. Redwood Header for temporary application, concrete flush curb required for permanent application.



User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.





SECTION A-A

User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST03.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

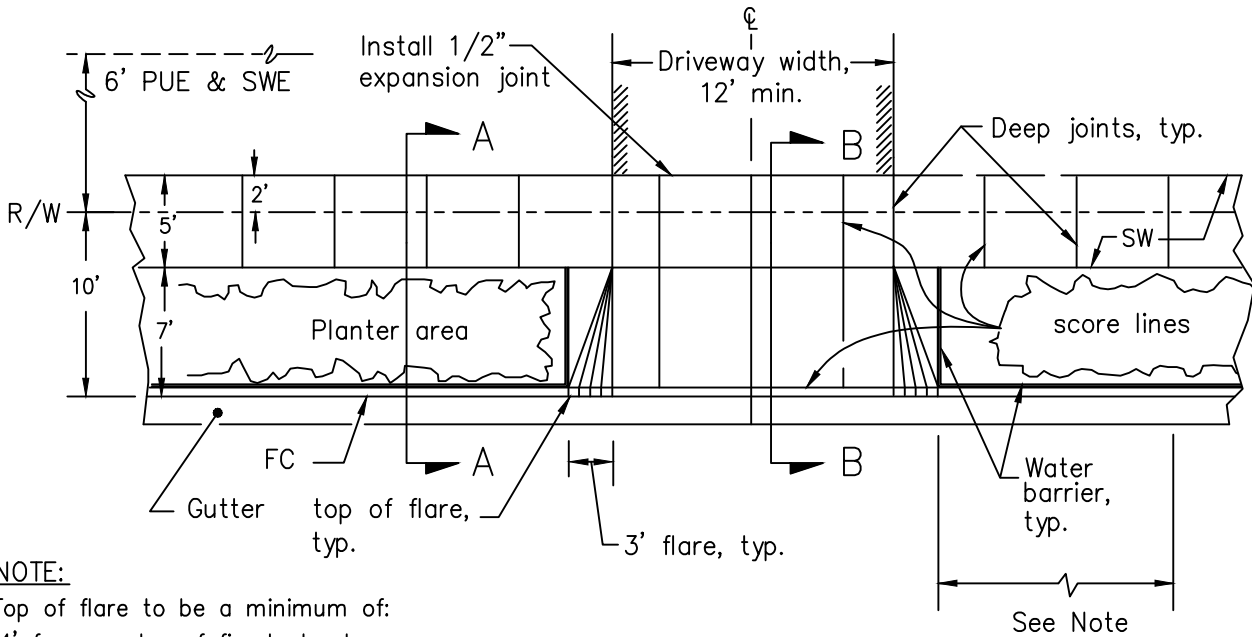
MONOLITHIC SIDEWALK  
 (RESIDENTIAL/INDUSTRIAL)

CITY OF LIVERMORE  
 STANDARD DETAIL

|                      |              |
|----------------------|--------------|
| Dwn: KY/KR           | Date: May-13 |
| Ckd: Spec. Committee | Scale: NONE  |

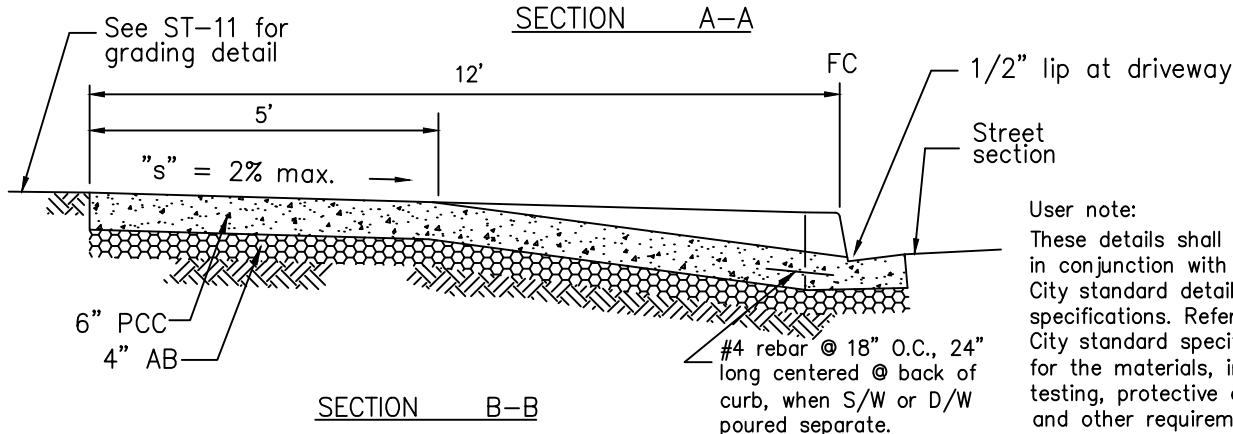
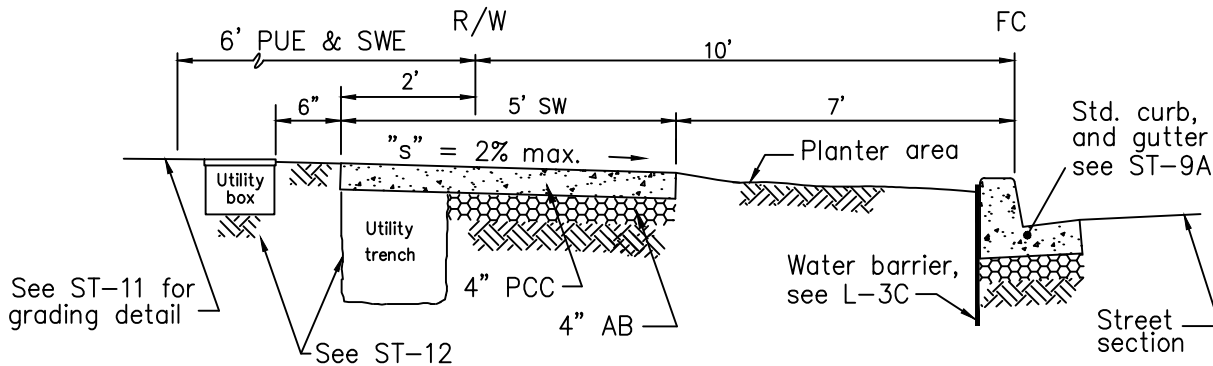
*[Signature]*  
 City Engineer

NO.  
 ST-3



**NOTE:**

- Top of flare to be a minimum of:
- 4' from center of fire hydrant
- 4' from center of street light
- 4' from property line
- 10' from beginning of curb return
- 8' from center of street tree
- 4' from top of flare of other driveway




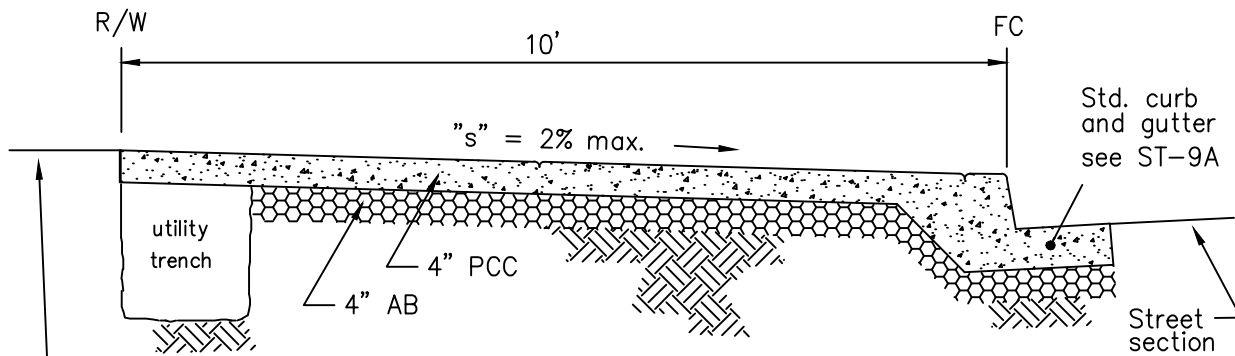
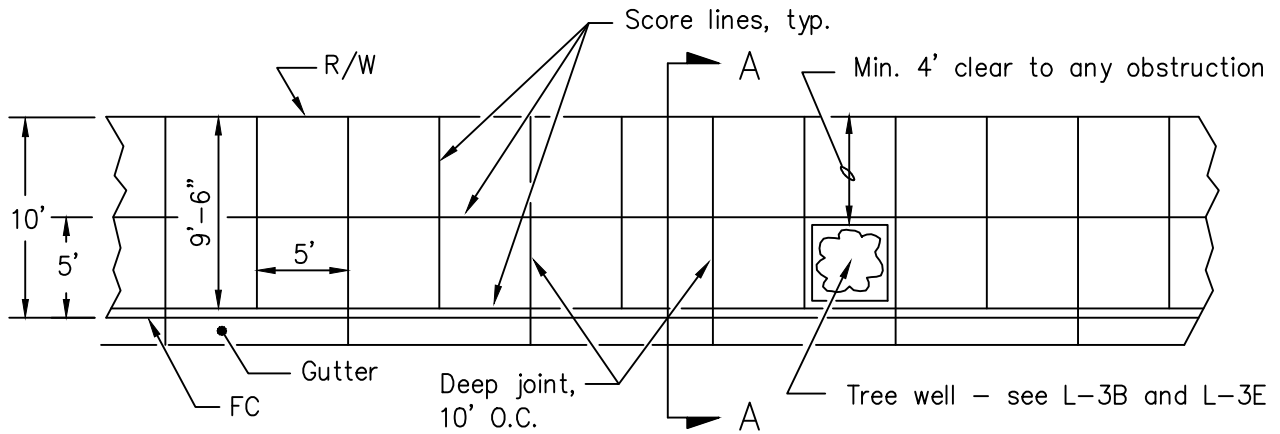
**User note:**  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

|          |    |      |  |
|----------|----|------|--|
| ST04.DWG |    |      |  |
| Date     | By | Rev. |  |

# SEPARATED SIDEWALK AND DRIVEWAY (RESIDENTIAL)

## CITY OF LIVERMORE STANDARD DETAIL

|  |              |      |
|--|--------------|------|
| Dwn: FY  | Date: May-13 | NO.  |
| Ckd: Spec. Committee   | Scale: NONE  |      |
| <br>City Engineer |              | ST-4 |



Utility boxes to be placed in PUE behind sidewalk where applicable, see ST-12 for placement of utility trench and boxes.

SECTION A-A

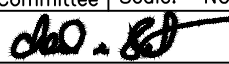
User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST05.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

SIDEWALK  
 (COMMERCIAL/INDUSTRIAL)

CITY OF LIVERMORE  
 STANDARD DETAIL


|  |              |      |
|--|--------------|------|
| Dwn: KR/KY   | Date: May-13 | NO.  |
| Ckd: Spec. Committee   | Scale: NONE  |      |
| <br>City Engineer |              | ST-5 |

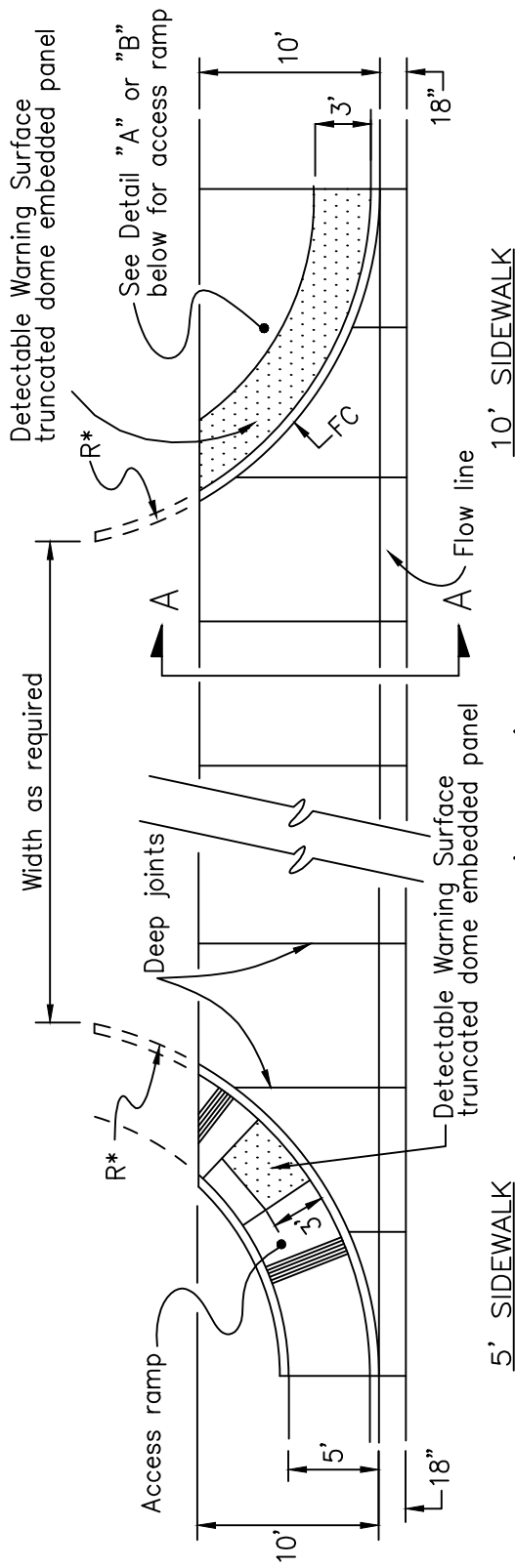
ST06.DWG

|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

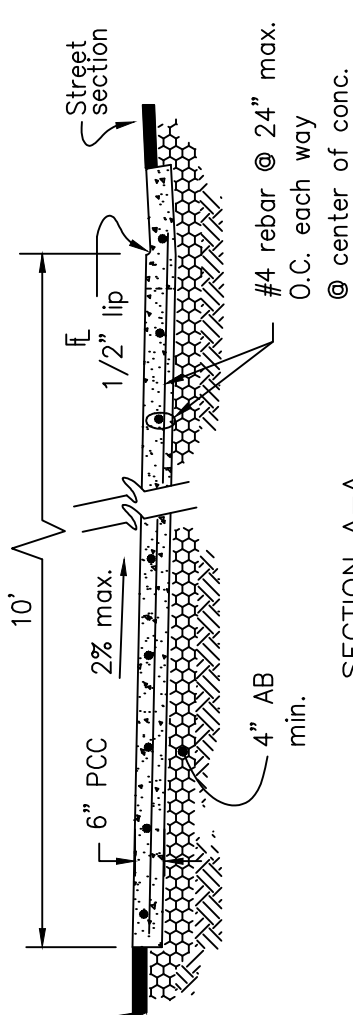
DRIVEWAY  
(STREET-LEVEL)  
(INDUSTRIAL/COMMERCIAL)

CITY OF LIVERMORE  
STANDARD DETAIL

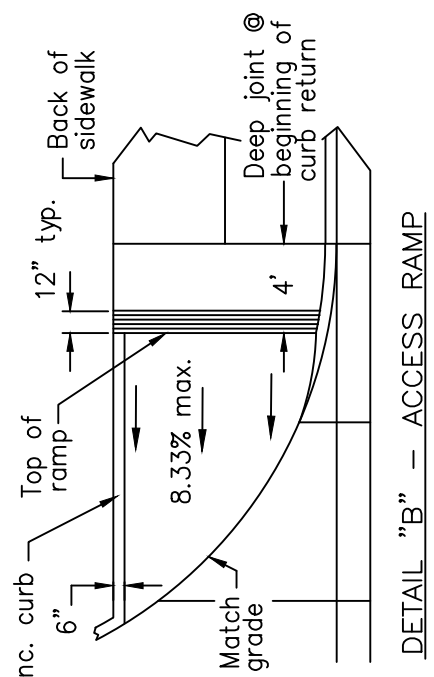
|  |              |      |
|--|--------------|------|
| Dwn: FY  | Date: May-13 | NO.  |
| Ckd: Spec. Committee   | Scale: NONE  |      |
| <br>City Engineer |              | ST-6 |



\* R=20' min., 30' max.



SECTION A-A

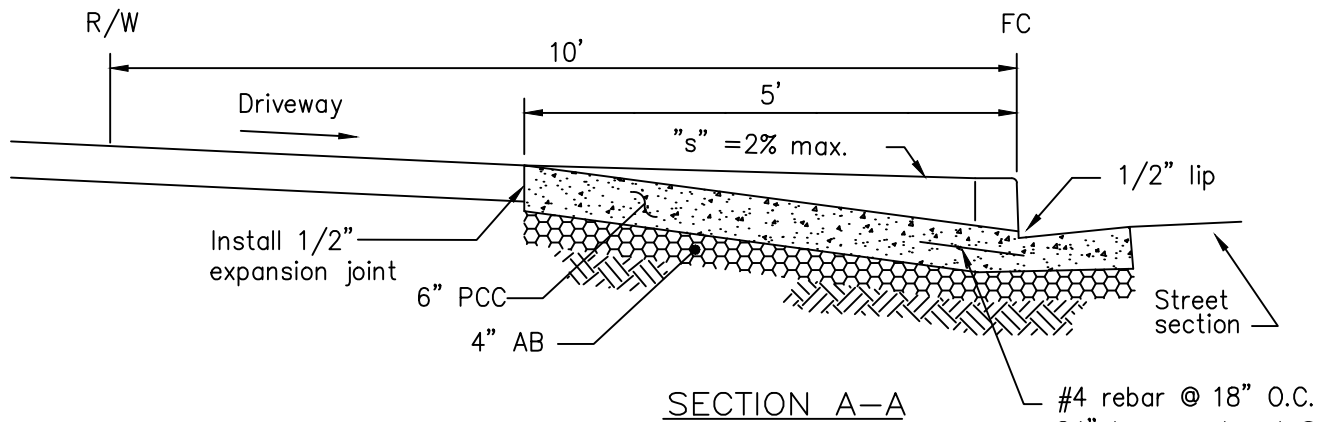
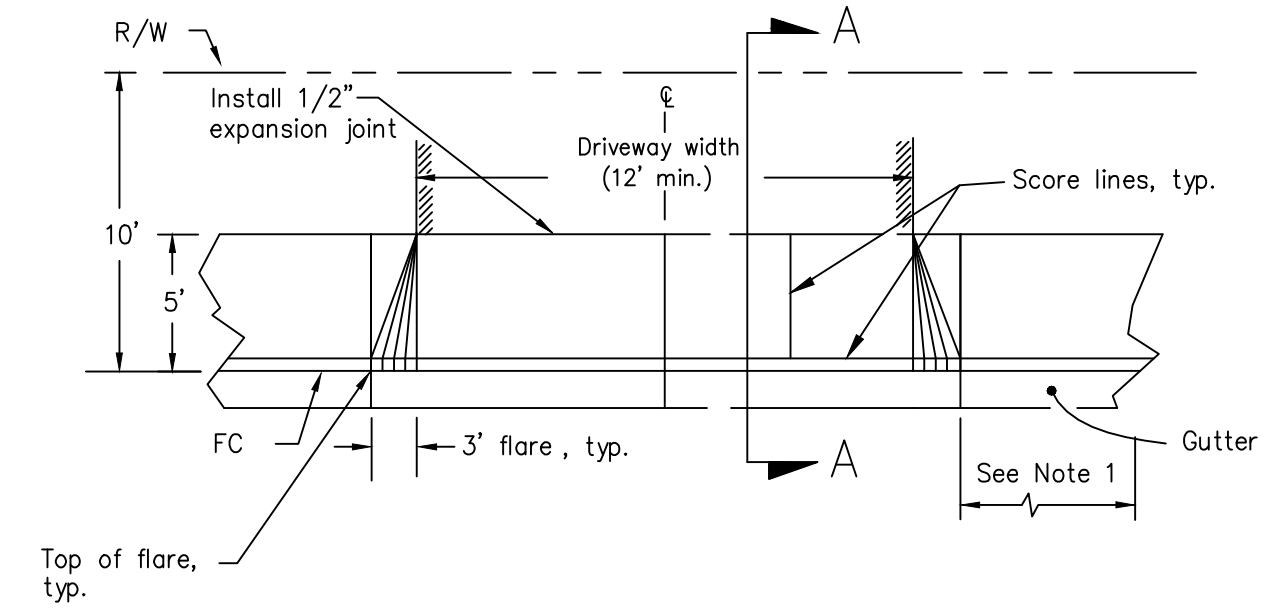


User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

- Notes:
1. See ST-3, ST-5 for sidewalk details
  2. See Caltrans Curb Ramp Detail A88A for additional details and requirements.

DETAIL "A" - ACCESS RAMP

DETAIL "B" - ACCESS RAMP



**NOTES:**

1. Top of flare to be a minimum of:
  - 4' from center of fire hydrant
  - 4' from center of street light
  - 4' from property line
  - 10' from beginning of curb return
  - 8' from center of street tree
  - 4' from top of flare of other driveway
2. See ST-3 for sidewalk.
3. The driveway shall be symmetric about the centerline.

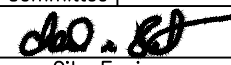
User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

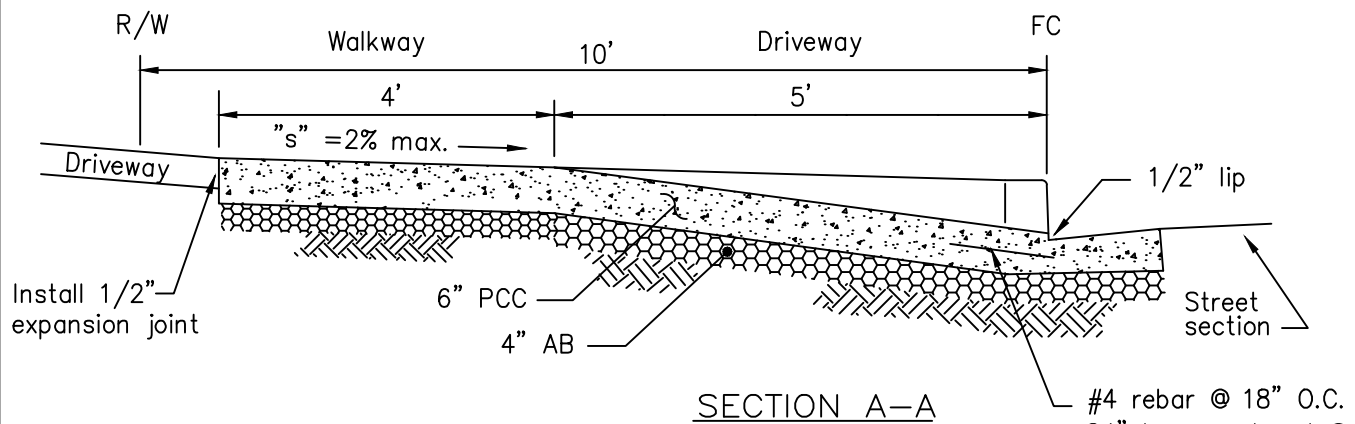
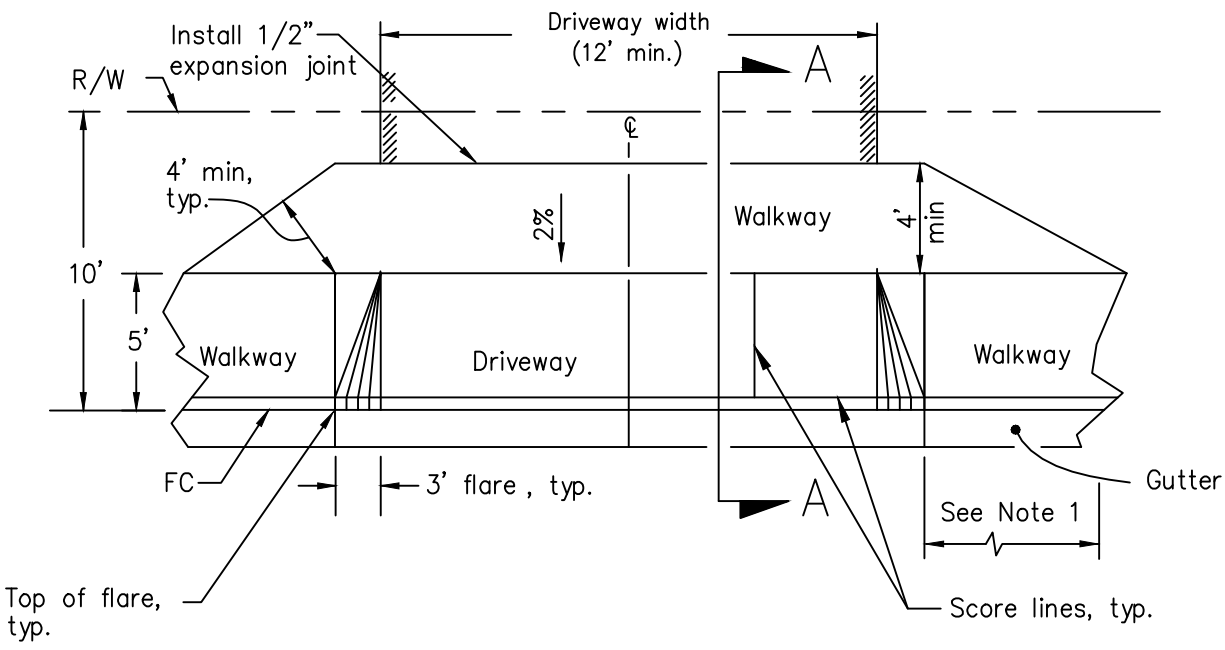
ST07A.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

DRIVEWAY  
 EXISTING DEVELOPMENT  
 (RESIDENTIAL)

CITY OF LIVERMORE  
 STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: FY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-7A |



**NOTES:**

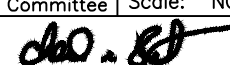
1. Top of flare to be a minimum of:
  - 4' from center of fire hydrant
  - 4' from center of street light
  - 4' from property line
  - 10' from beginning of curb return
  - 8' from center of street tree
  - 4' from top of flare of other driveway
2. See ST-3 for sidewalk.
3. The driveway shall be symmetric about the centerline.

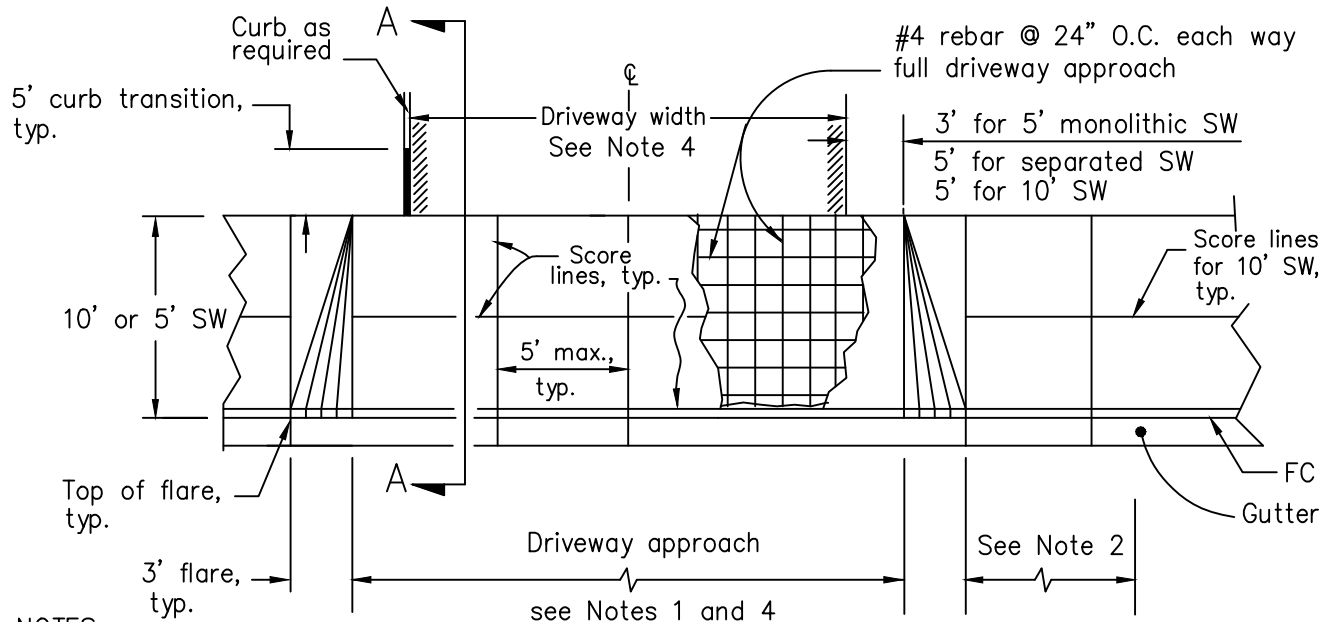
User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST07B.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

DRIVEWAY - NEW DEVELOPMENT  
 (RESIDENTIAL)

|  |              |       |
|--|--------------|-------|
| CITY OF LIVERMORE<br>STANDARD DETAIL   |              |       |
| Dwn: FY  | Date: May-13 | NO.   |
| Kcd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-7B |

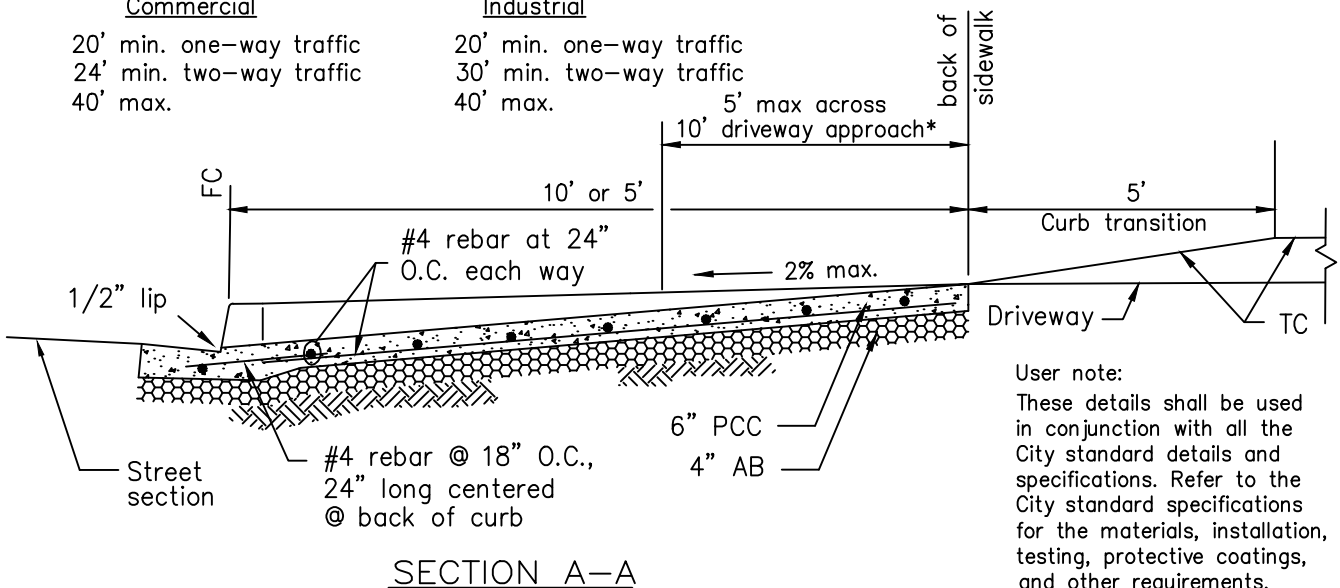


**NOTES:**

1. Driveway approach to be 10' min. wider than the driveway width for 10' monolithic SW or 5' separated SW and 6' min. wider than the driveway width for 5' SW.
2. Top of flare to be a minimum of:
  - 10' from center of fire hydrant
  - 4' from center of street light
  - 4' from property line
  - 10' from beginning of curb return
  - 8' from center of street tree
  - 4' from top of flare of other driveway
3. See ST-3 & ST-5 for sidewalk.
4. Driveway width:
 

|                          |                          |
|--------------------------|--------------------------|
| <u>Commercial</u>        | <u>Industrial</u>        |
| 20' min. one-way traffic | 20' min. one-way traffic |
| 24' min. two-way traffic | 30' min. two-way traffic |
| 40' max.                 | 40' max.                 |

\*For 10' driveways provide a 5' max walkway at 2% slope across back of driveway approach. For 5' driveways, see detail ST-7B for walkway behind driveway approach.



User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

**SECTION A-A**

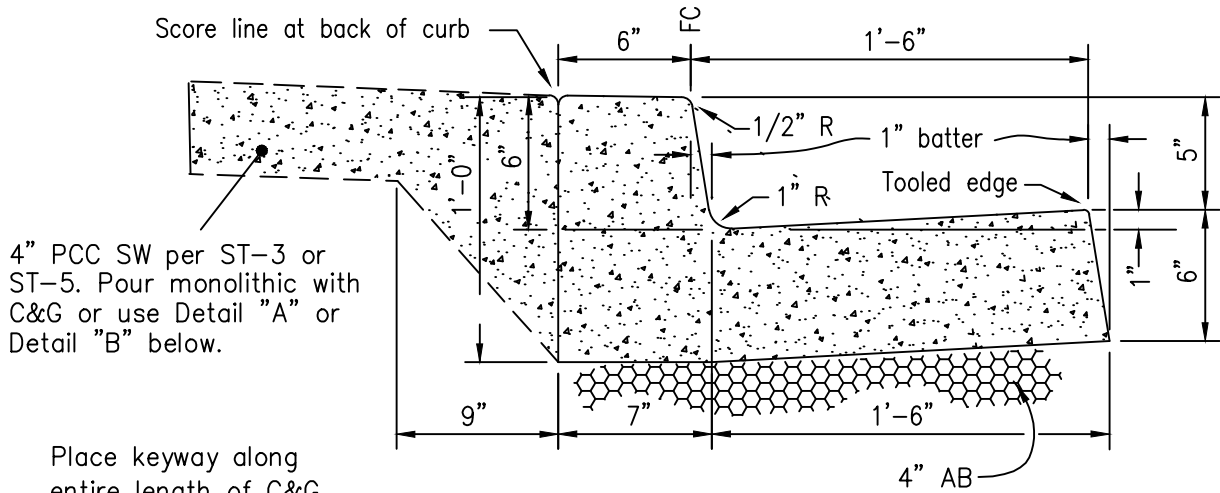
**DRIVEWAY**  
 (COMMERCIAL/INDUSTRIAL)

**CITY OF LIVERMORE**  
 STANDARD DETAIL

|                      |              |      |
|----------------------|--------------|------|
| Dwn: FY              | Date: May-13 | NO.  |
| Kcd: Spec. Committee | Scale: NONE  | ST-8 |
| City Engineer        |              |      |

ST08.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

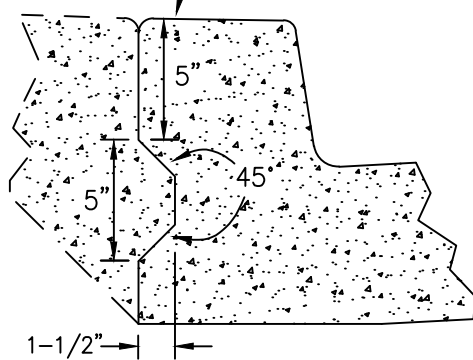


4" PCC SW per ST-3 or ST-5. Pour monolithic with C&G or use Detail "A" or Detail "B" below.

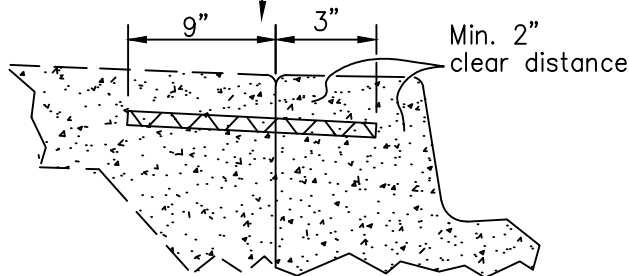
Place keyway along entire length of C&G as shown.

CURB & GUTTER

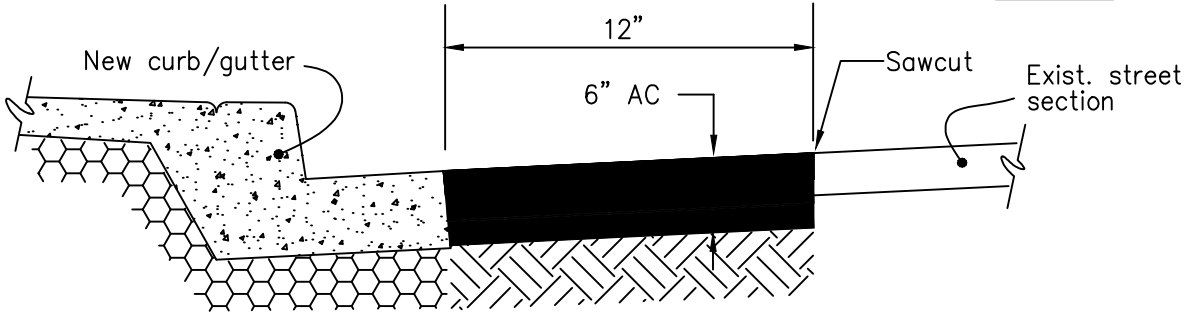
#4 rebar, 12" long. Install rebar into 3" deep hole drilled into existing curb at 3' O.C. for entire length as shown.



DETAIL "A"  
KEYWAY



DETAIL "B"  
DOWELS



NEW OR REPLACEMENT CURB & GUTTER  
AT EXISTING STREET

User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

NOTE:


Curb, gutter, and sidewalk to be placed monolithically where possible. Where non-monolithic, place dowels and/or keyway as shown above.

ST09A.DWG

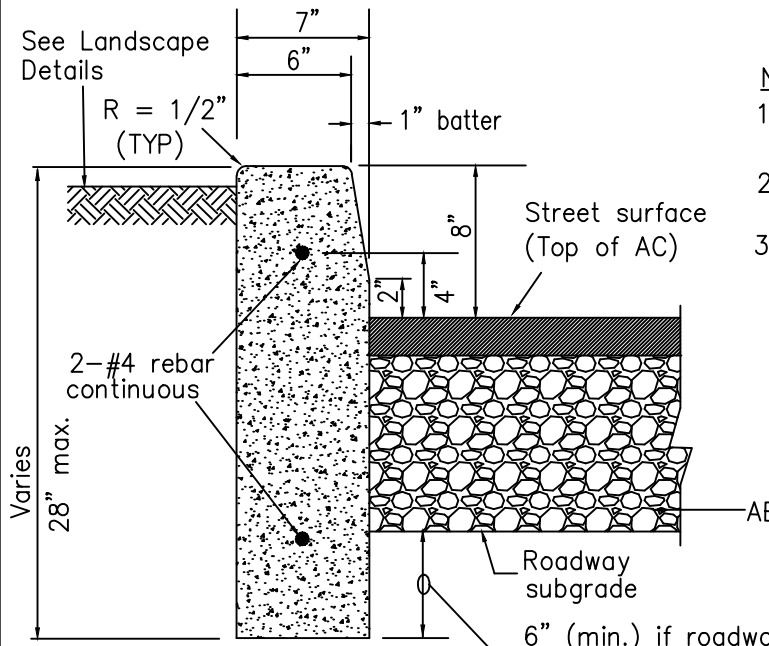
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

CURB & GUTTER

CITY OF LIVERMORE  
STANDARD DETAIL

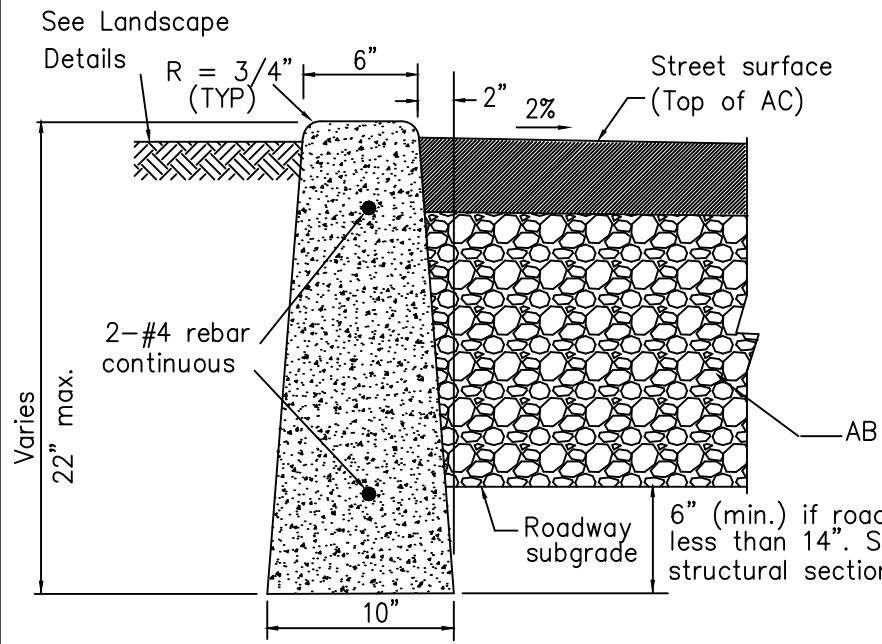
|  |              |       |
|--|--------------|-------|
| Dwn: KY/KR   | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-9A |





- NOTES:**
1. Place deep joints at 10' spacing along median curb.
  2. See L-2B and L-2C for water barrier installation.
  3. If roadway structural section is greater than 14", install water barrier extending from top of curb to 6" below roadway subgrade. See L-2B and L-2C.

**MEDIAN CURB**



**FLUSH CURB**

6" (min.) if roadway structural section is less than 14". See Note 3 for roadway structural sections greater than 14".

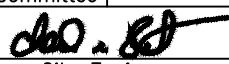
**User note:**  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

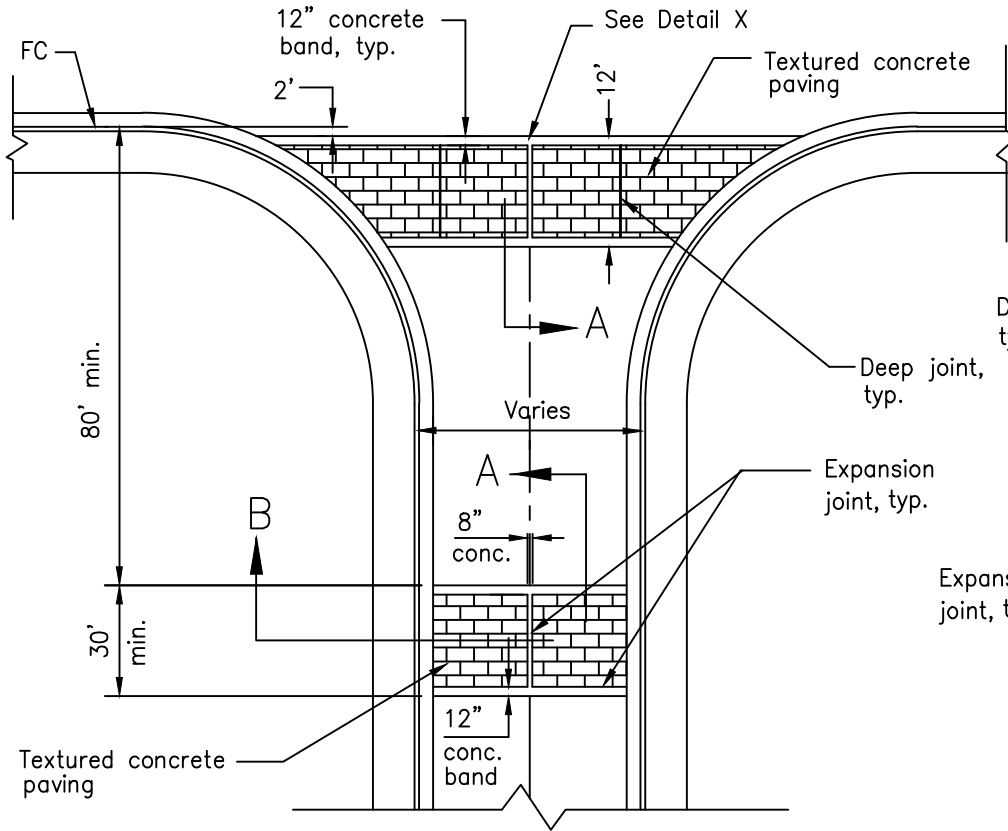
ST09B.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

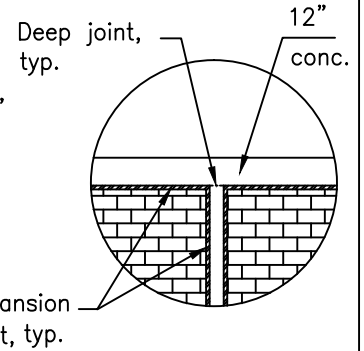
**MEDIAN CURB/FLUSH CURB  
 (DEEP CURB)**

**CITY OF LIVERMORE  
 STANDARD DETAIL**

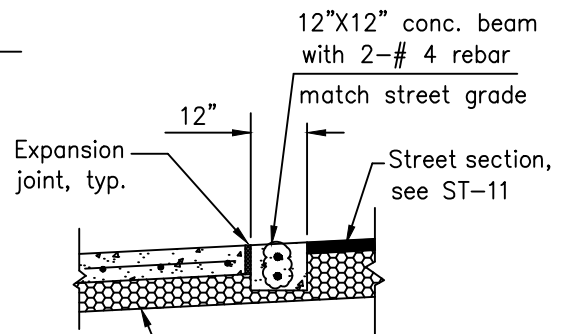
|  |              |       |
|--|--------------|-------|
| Dwn: KY/KR   | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-9B |



PLAN



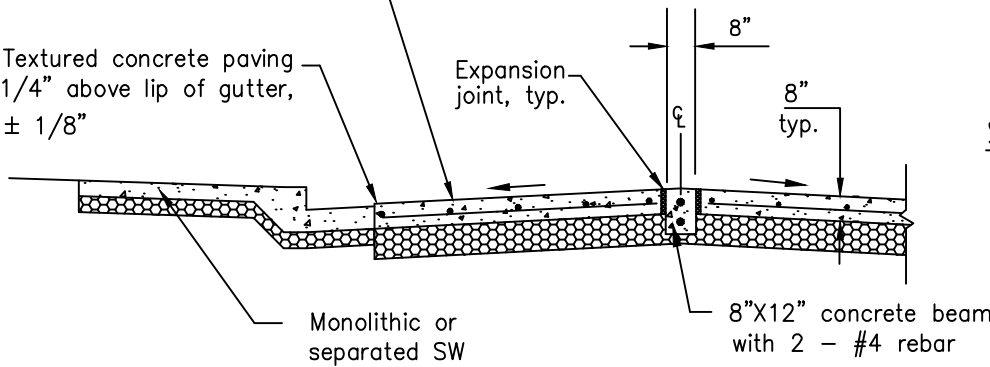
DETAIL X



SECTION "A"

Textured concrete paving  
W/ #3 rebar @ 18" O.C.  
each way, 3" clearance  
from top of concrete,  
see drawing for texture  
and color

Textured concrete paving  
1/4" above lip of gutter,  
± 1/8"



SECTION "B"

User note:  
These details shall be used  
in conjunction with all the  
City standard details and  
specifications. Refer to the  
City standard specifications  
for the materials, installation,  
testing, protective coatings,  
and other requirements.

# TEXTURED CONCRETE PAVING

## CITY OF LIVERMORE STANDARD DETAIL

|                      |              |     |
|----------------------|--------------|-----|
| Dwn: FY              | Date: May-13 | NO. |
| Ckd: Spec. Committee | Scale: NONE  |     |

*[Signature]*  
City Engineer

ST-10

ST10.DWG

|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

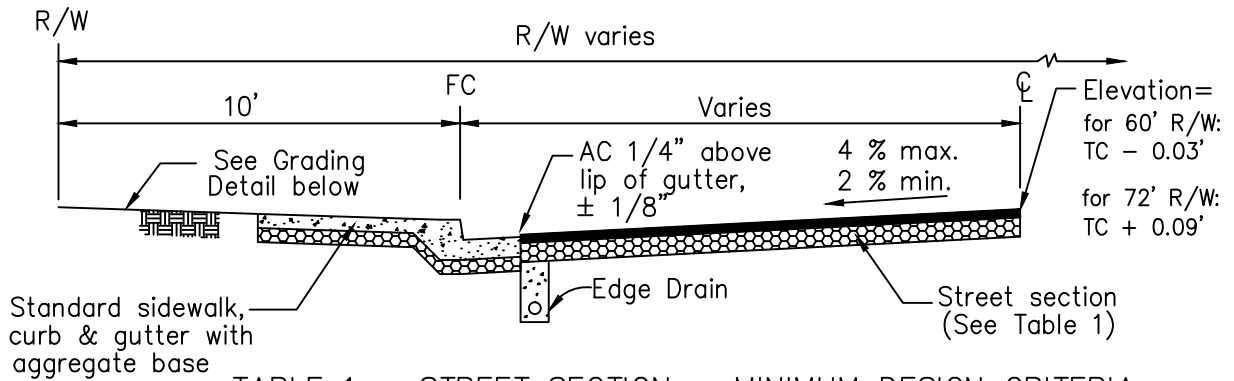


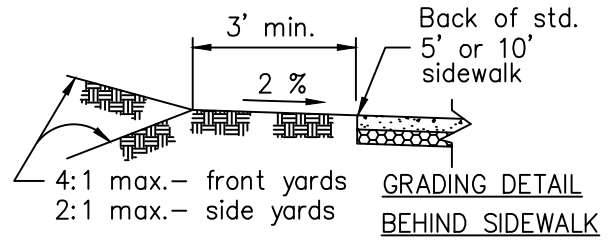
TABLE 1 - STREET SECTION - MINIMUM DESIGN CRITERIA

| STREET TYPE                     | MIN. TRAFFIC INDEX                | AC & BASE                                    |             |
|---------------------------------|-----------------------------------|--|-------------|
|                                 |                                   | MIN. AC                                      | MIN. BASE   |
| Private/townhouse/condo         | NA                                | 4.0"   | 6.0"-8.0" * |
| Cul-de-sac                      | NA                                | 4.0"   | 6.0"-8.0" * |
| Local                           | NA                                | 4.0"   | 6.0"-8.0" * |
| Collector (Residential) **      | 7.0                               | 4.0"   | 8.0"        |
| Major (Residential) **          | 9.0                               | 5.5"   | 7.0"        |
| Major (Industrial/Commercial)** | 10.0                              | 6.5"   | 7.0"        |
| Frontage**                      | 9.0                               | 5.5"   | 7.0"        |
| Industrial/Commercial**         | 9.0                               | 5.5"   | 7.0"        |
| Bus stops                       | in street area<br>in turnout area | 12" full depth AC<br>12" concrete. See ST-15 |             |

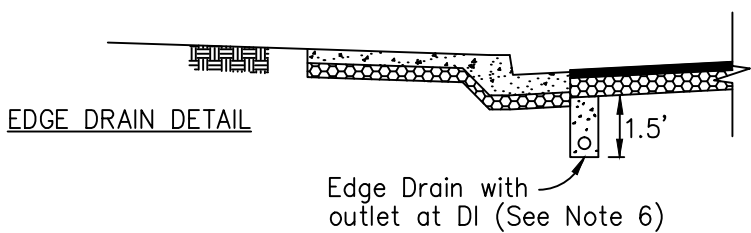
\* See Table 2 - Base Thickness Requirement  
 \*\* Street section design to be based on Caltrans flexible pavement design method  
 Submit supporting data for traffic index calculation for City Engineer's approval

NOTES:

1. See ST-3, 4 & 5 for sidewalks.
2. See ST-9A for curb and gutter.
3. See ST-4, 6, 7, & 8 for driveways.
4. See ST-12 for utility locations.
5. See ST-2 for travel way and R/W widths.
6. Edge drain required at all park frontage, and at toe of slope or as required by the City Engineer.  
 (Construct per Caltrans Standard Plan D102, Perforated Pipe Dia.=4")



Note: No retaining walls allowed within 3' of back of sidewalk.




User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

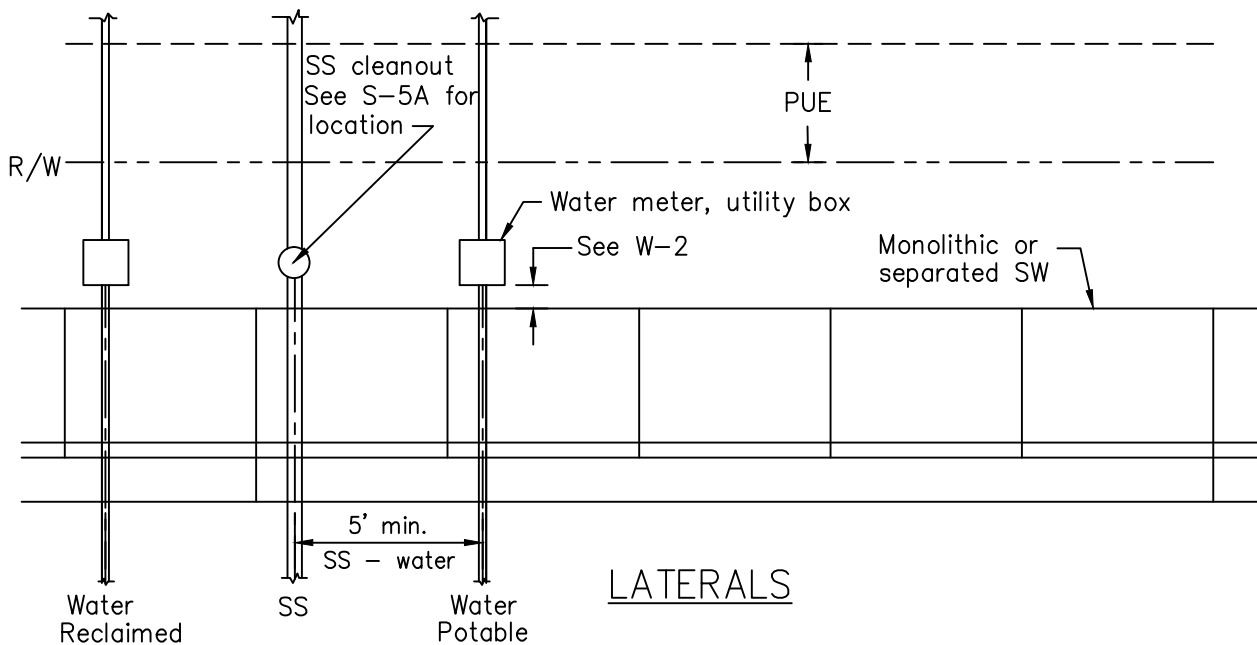
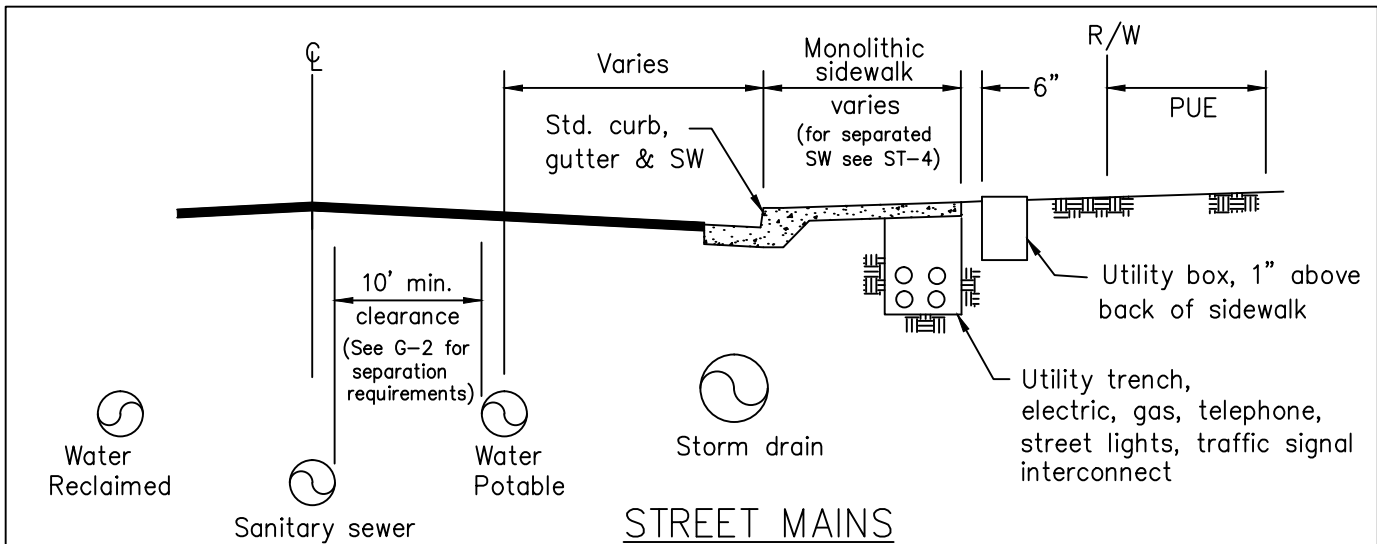
ST011.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

STREET SECTION

CITY OF LIVERMORE  
 STANDARD DETAIL

|  |              |                  |
|--|--------------|------------------|
| Dwn: FY  | Date: May-13 | NO.<br><br>ST-11 |
| Ckd: Spec. Committee   | Scale: NONE  |                  |
| <br>City Engineer |              |                  |



**NOTES:**

1. Water lines to be placed on the north or west side of the centerline.
2. See ST-3, 4, & 5 for sidewalks.
3. See ST-4, 6, 7, & 8 for driveways.
4. See ST-9A for curb and gutter.
5. Utility services shall be located a minimum of 2' away from any driveway. No utility services shall be placed beneath a driveway unless otherwise approved by the Engineer.
6. Utility boxes in driveway areas to have traffic lids.
7. A 10' distance must be maintained between reclaimed and portable water

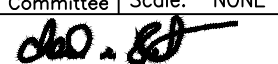
User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

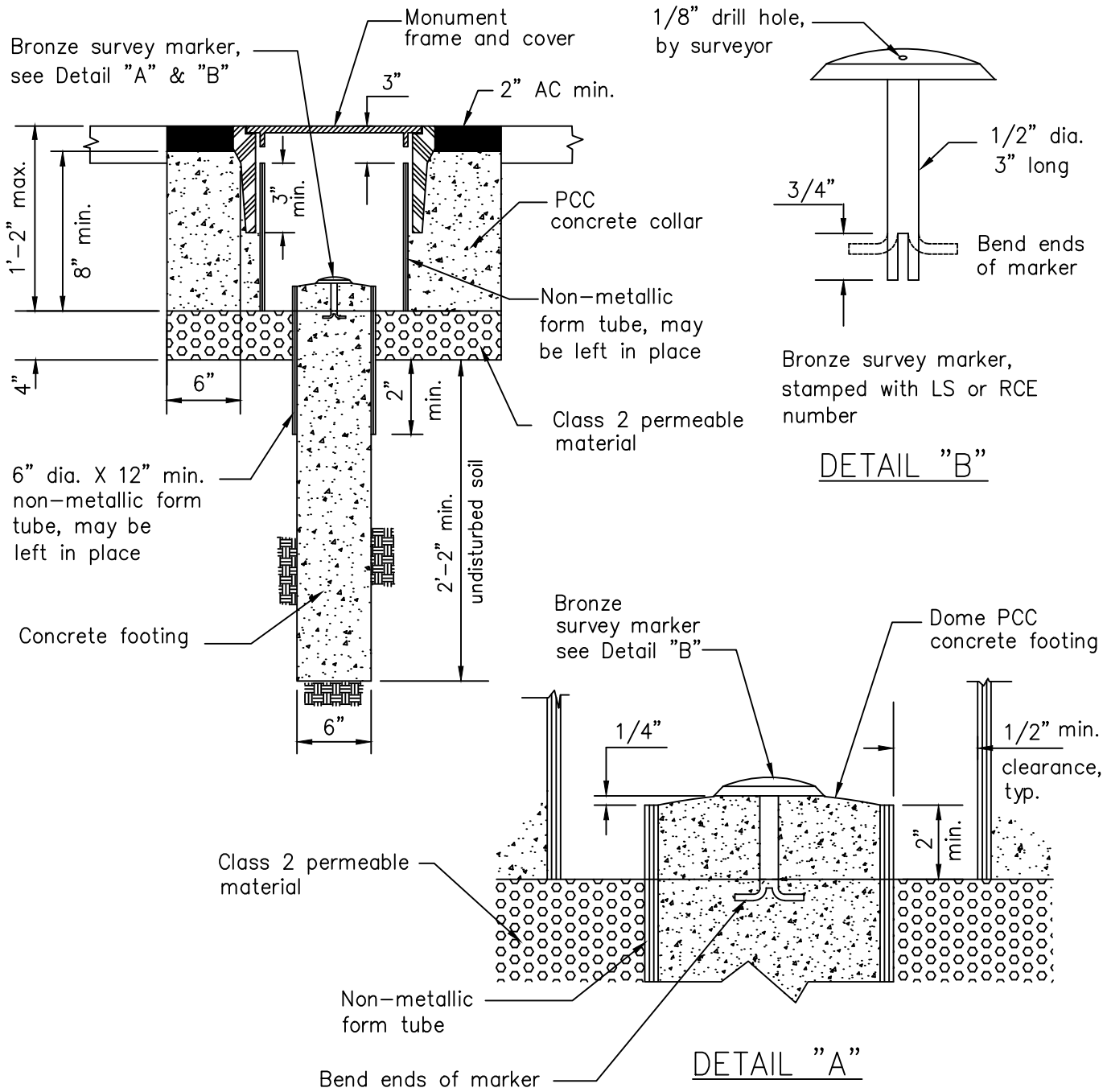
ST12.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

UTILITY LOCATIONS

CITY OF LIVERMORE  
 STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: FY  | Date: May-13 | NO.   |
| Kcd: Spec. Committee   | Scale: NONE  | ST-12 |
| <br>City Engineer |              |       |




User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

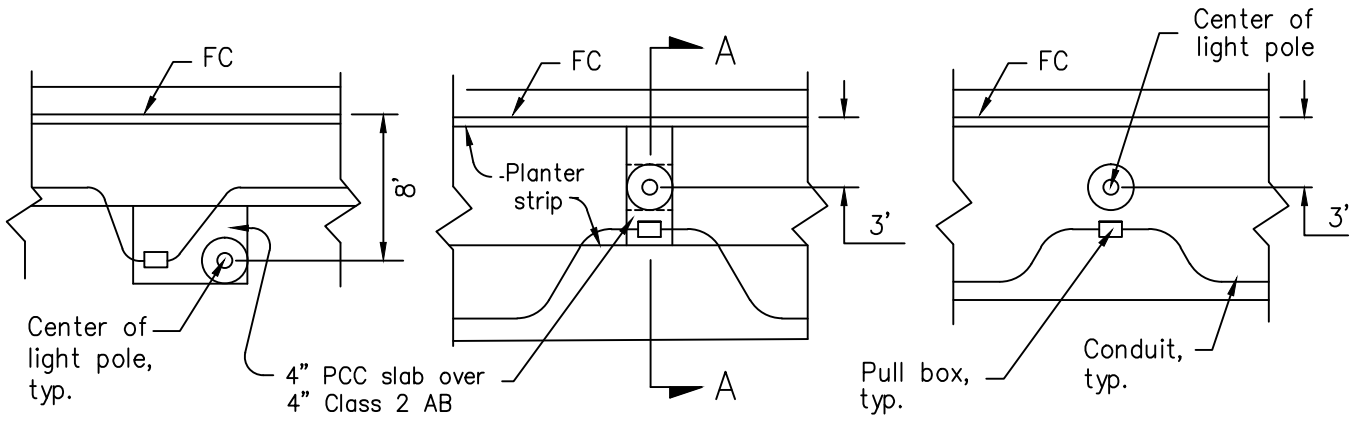
ST13.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

MONUMENT

CITY OF LIVERMORE  
 STANDARD DETAIL

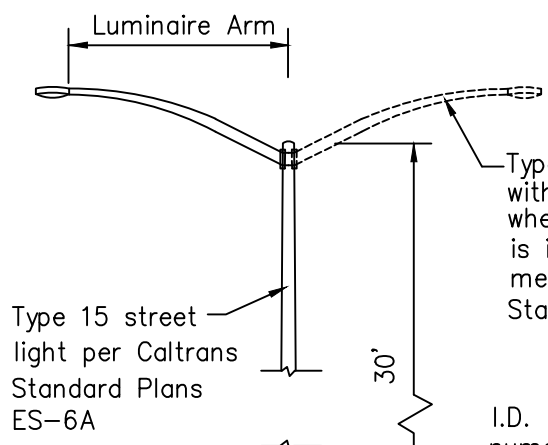
|  |              |       |
|--|--------------|-------|
| Dwn: KY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  | ST-13 |
| <br>City Engineer |              |       |



5' SIDEWALK  
Luminaire Arm = 12'

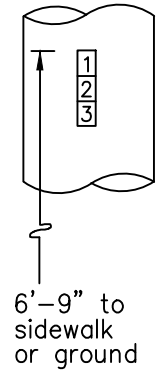
SEPARATED SIDEWALK  
Luminaire Arm = 6'

10' SIDEWALK  
Luminaire Arm = 6'

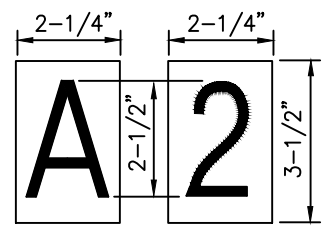


Type 15 street light per Caltrans Standard Plans ES-6A

Type 15D Pole with double arm when street light is installed in median per Caltrans Standard Plan ES-6D



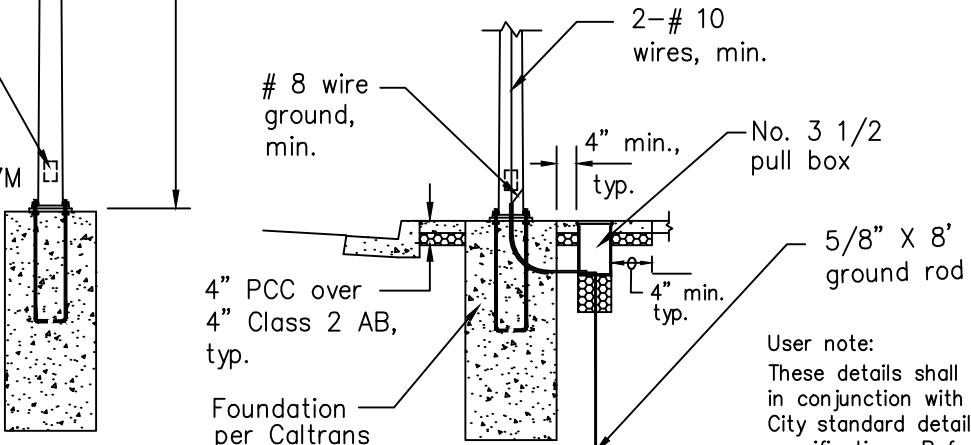
6'-9" to sidewalk or ground



I.D. NUMERALS  
TYPICAL DIMENSIONS

Fuse holder with 5' conductor coiled inside handhole on opposite side of approaching traffic per Caltrans Standard Plan ES-7M See ST-14D

I.D. numerals place facing approaching traffic



4" PCC over 4" Class 2 AB, typ.

Foundation per Caltrans Standard Plans ES-7N

User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

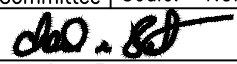
SECTION A-A

ST14A.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

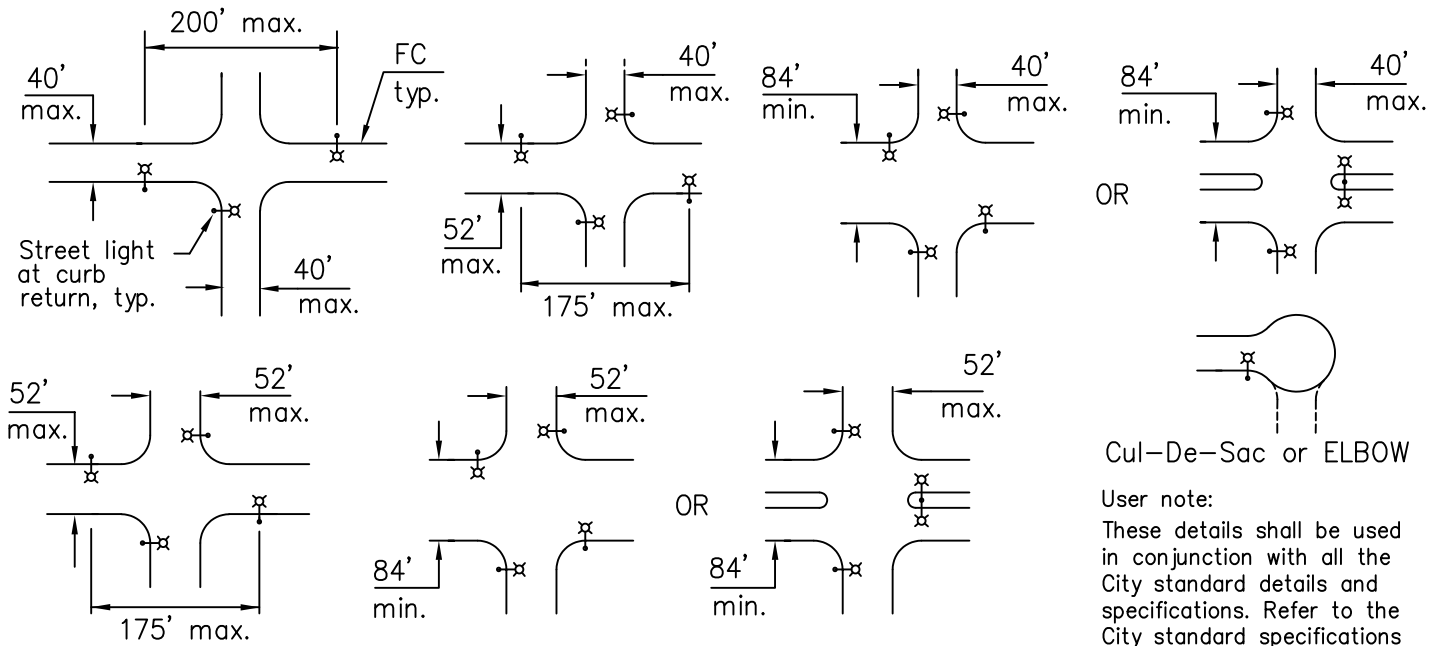
STANDARD STREET LIGHT

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |        |
|--|--------------|--------|
| Dwn: FY  | Date: May-13 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE  | ST-14A |
| <br>City Engineer |              |        |

| MAXIMUM STREET WIDTH (FC TO FC) | MEDIAN WIDTH | STREET LIGHT |                   |                 |  |
|---------------------------------|--------------|--------------|-------------------|-----------------|--|
|                                 |              | LOCATION     | PATTERN           | MAXIMUM SPACING | LED LUMINAIRE  |
| 40'                             | 0            | roadside     | staggered         | * 200'          | LEOTEK Green Cobra<br>GCJ1-30J-MV-40K-2R-045<br>With house side shield or approved<br>or approved equal(Max Wattage-25W<br>Min Delivered Lumens-3900 Lm) |
| 52'                             | 0            | roadside     | staggered         | * 175'          |  |
| 84'                             | 16'          | roadside     | staggered         | 160' each side  | LEOTEK Green Cobra<br>GCJ1-30J-MV-40K-2R-055<br>approved equal(Max Wattage-34W<br>Min Delivered Lumens-5400 Lm)  |
|                                 |              | median       | dual arm centered | 200'            |  |
| 96'                             | 28'          | roadside     | staggered         | 160' each side  |  |
|                                 |              | median       | dual arm centered | 180'            |  |
| 108'                            | 16'          | roadside     | staggered         | 200' each side  | LEOTEK Green Cobra<br>GCJ3-30J-MV-40K-2R-095<br>approved equal(Max Wattage-67W<br>Min Delivered Lumens-9300 Lm)  |
|                                 |              | median       | dual arm centered | 200'            |  |
| 120'                            | 28'          | roadside     | staggered         | 200' each side  |  |
|                                 |              | median       | dual arm centered | 200'            |  |

\* NOTE: The maximum street light spacing may be increased by 40% on industrial streets up to 52' wide.



MINIMUM INTERSECTION AND CUL-DE-SAC LIGHTING REQUIREMENTS


Cul-De-Sac or ELBOW  
User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

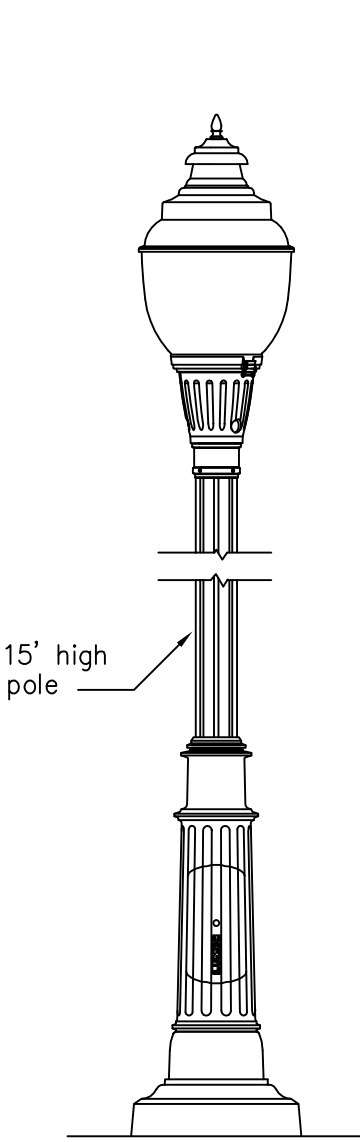
ST14B.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

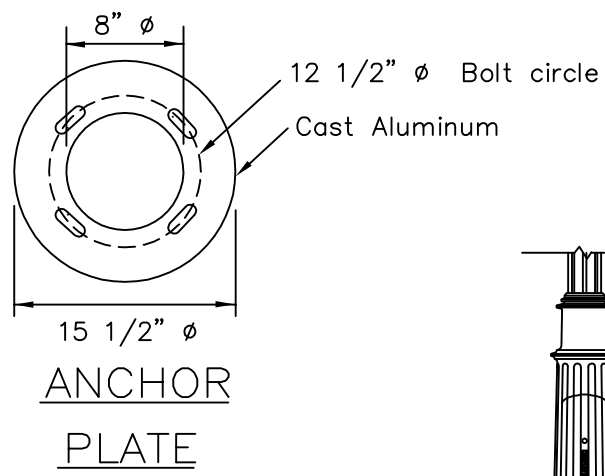
## STANDARD STREET LIGHT LAYOUT

### CITY OF LIVERMORE STANDARD DETAIL

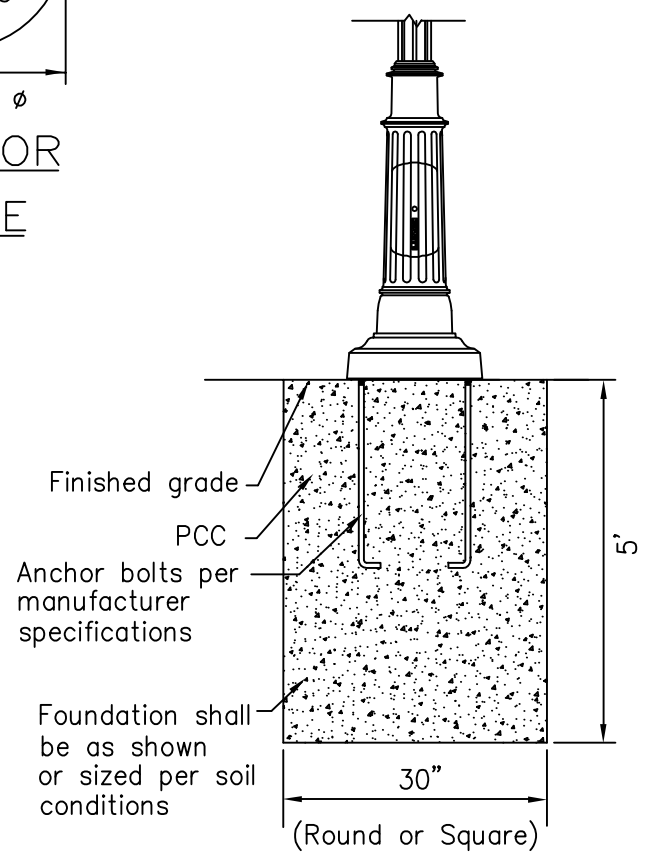
|  |               |        |
|--|---------------|--------|
| Dwn: KY/HI   | Date: Sept-22 | NO.    |
| Ckd: <sup>Spec.</sup> Committee  | Scale: NONE   |        |
| <br>City Engineer |               | ST-14B |



LUMEC LUMINAIRE  
AND POLE



ANCHOR  
PLATE



TYPICAL FOUNDATION

NOTE:

1. PULL BOX LOCATION PER ST-14A
2. THIS STREET LIGHT TO BE INSTALLED IN ALL AREAS OF THE CITY EXCEPT WHERE THE DOWNTOWN AND FIRST STREET LIGHT LOCATIONS ARE SPECIFIED ON DETAIL ST-14E

DECORATIVE STREET LIGHT LAYOUT

| MAXIMUM STREET WIDTH<br>FC TO FC | STREET LIGHT |           | LED LUMINAIRE |                 |
|----------------------------------|--------------|-----------|---------------|-----------------|
|                                  | LOCATION     | PATTERN   | SIZE WATT     | MAXIMUM SPACING |
| 40'                              | roadside     | staggered | 65            | 160'            |

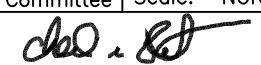
User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST14C.DWG

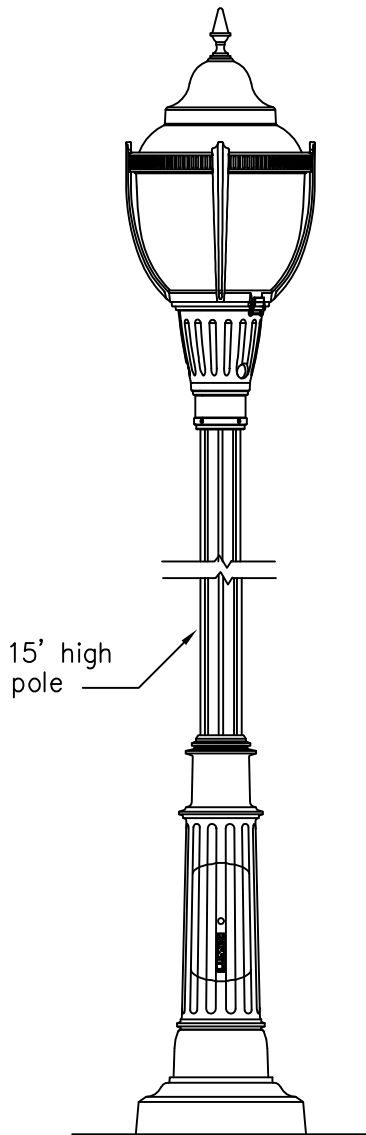
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

DECORATIVE  
STREET LIGHT

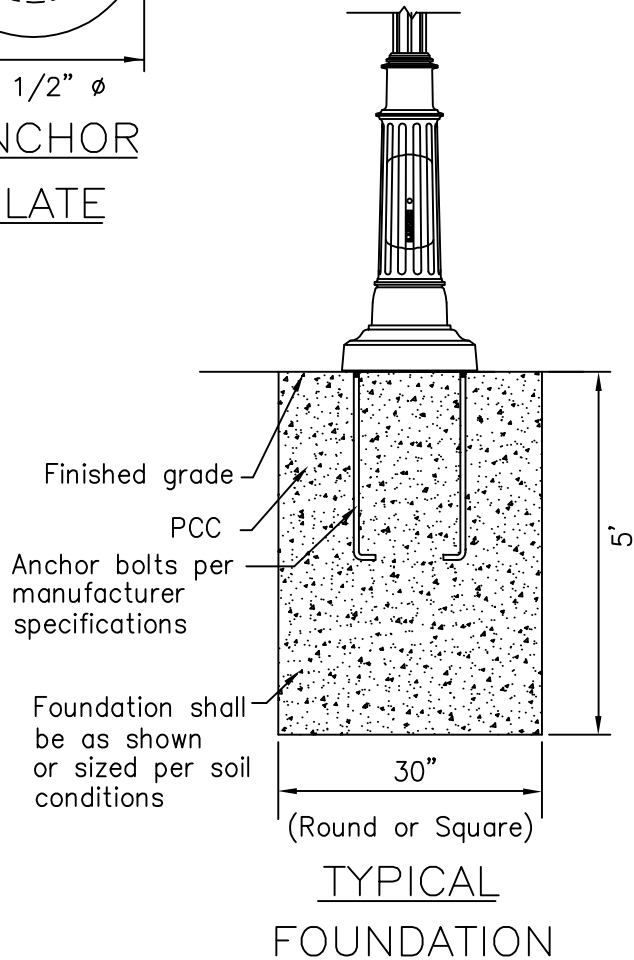
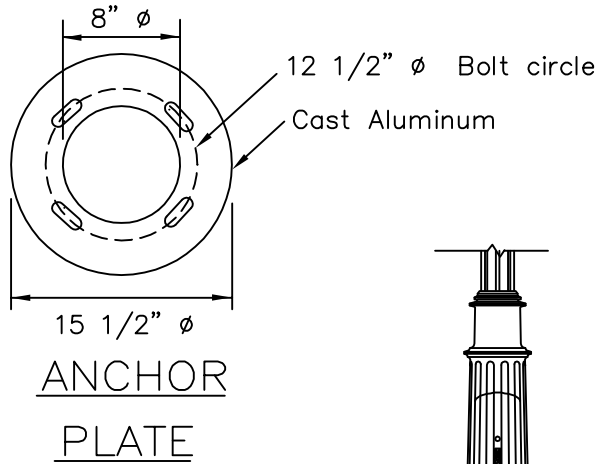
CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |        |
|--|--------------|--------|
| Dwn: FY  | Date: May-13 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE  | ST-14C |
| <br>City Engineer |              |        |





LUMEC LUMINAIRE  
AND POLE



NOTE:

1. PULL BOX LOCATION PER ST-14A

DECORATIVE STREET LIGHT LAYOUT

| STREET LIGHT |           | LED LUMINAIRE |                 |
|--------------|-----------|---------------|-----------------|
| LOCATION     | PATTERN   | SIZE WATT     | MAXIMUM SPACING |
| roadside     | staggered | 90            | 100'            |

User note:

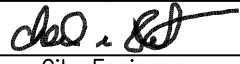
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

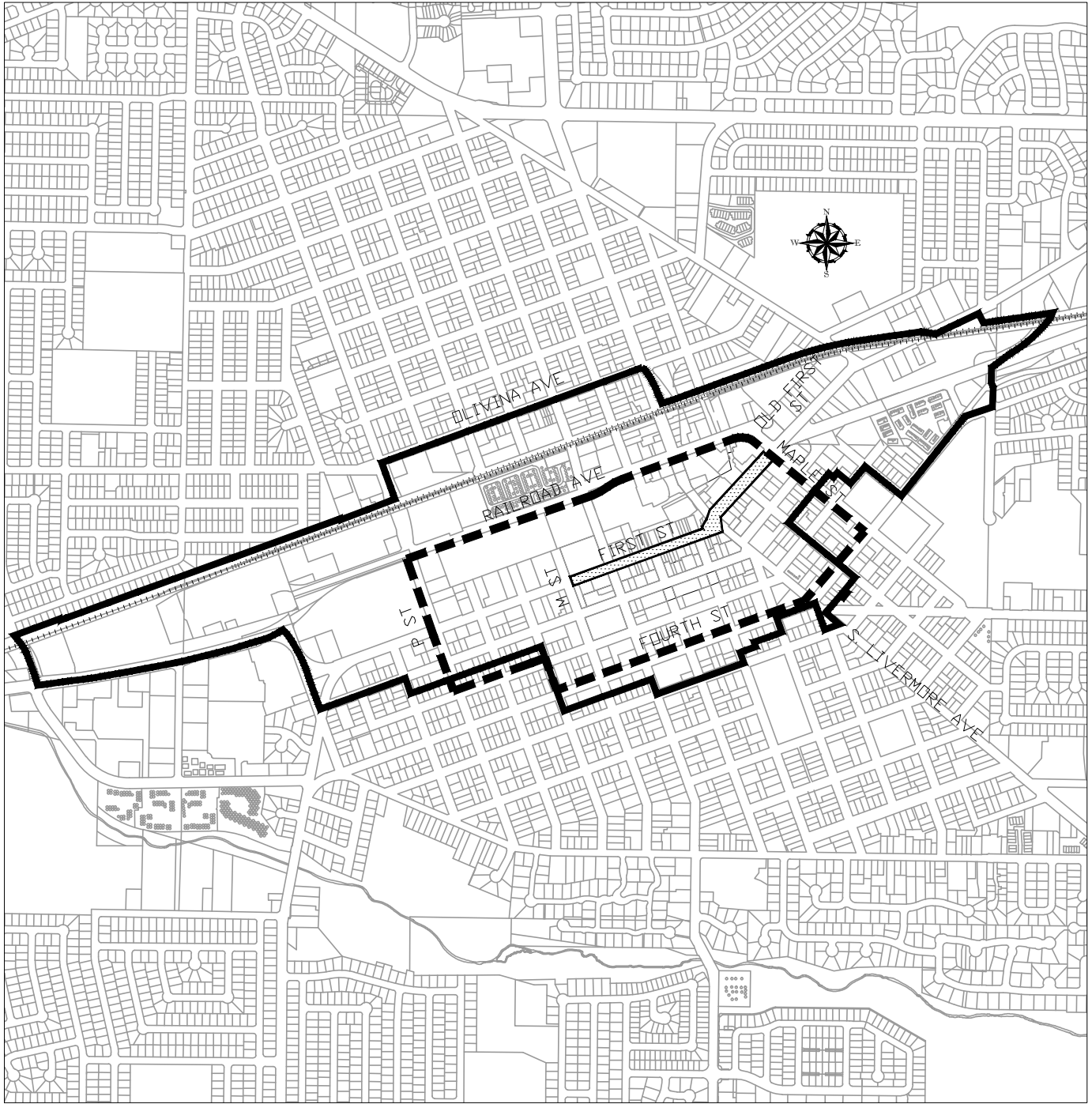
ST14C.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |




DOWNTOWN DECORATIVE  
STREET LIGHT

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |        |
|--|--------------|--------|
| Dwn: FY  | Date: May-13 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE  |        |
| <br>City Engineer |              | ST-14D |



STREET LIGHT BOUNDARY


-  First Street Decorative Street Light to be installed on First Street in the Downtown Core Area between Old First Street and M Street only. (See detail ST-14F)
-  Downtown Decorative Street Light to be installed within this boundary except for the Downtown Core Area of First Street as indicated above. (See detail ST-14D)
-  Downtown Specific Plan Area Boundary.

User note:

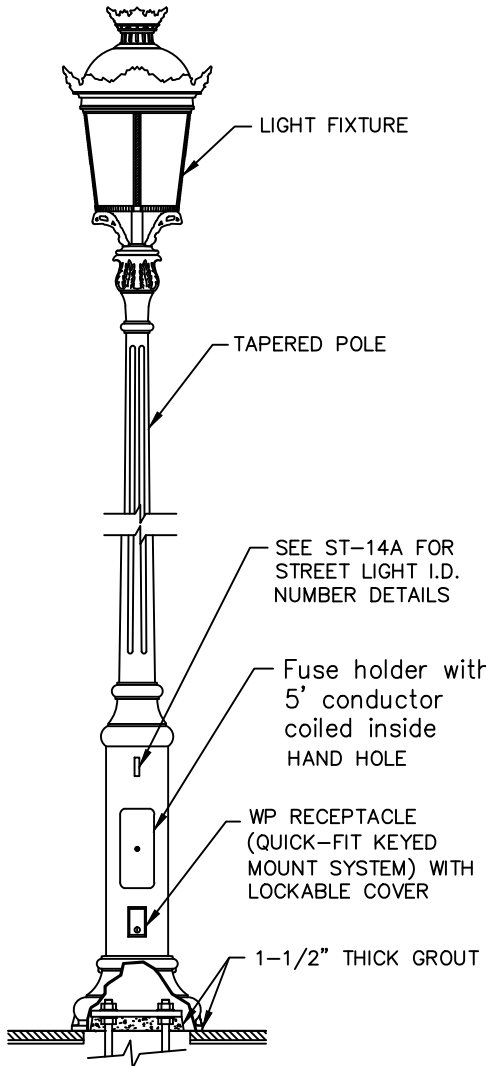
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

DOWNTOWN DECORATIVE  
STREET LIGHT

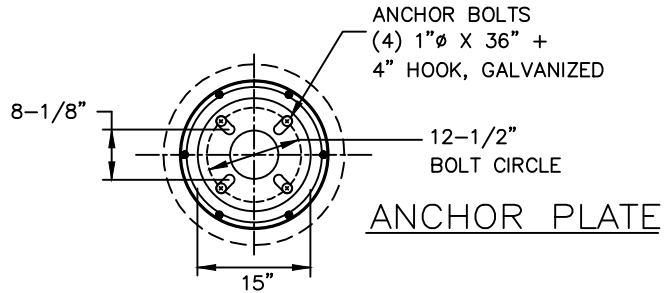
CITY OF LIVERMORE  
STANDARD DETAIL

|   |              |        |
|---|--------------|--------|
| Dwn: FY   | Date: May-13 | NO.    |
| Spec. Committee   | Scale: NONE  |        |
|  |              |        |
| City Engineer   |              | ST-14E |

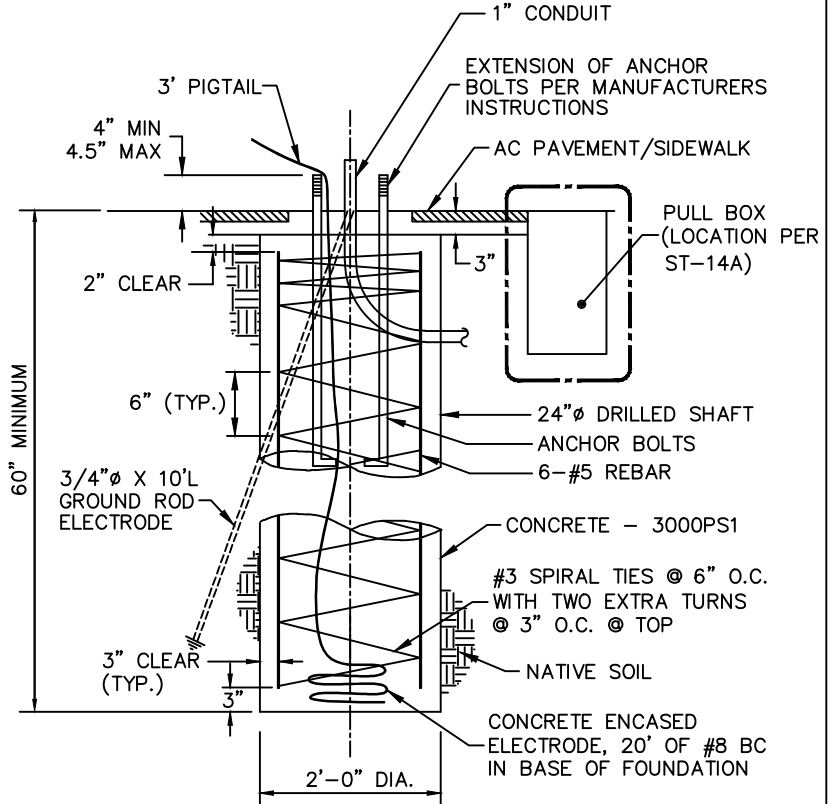
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |



LUMEC LUMINAIRE AND POLE



ANCHOR PLATE



TYPICAL FOUNDATION

DECORATIVE STREET LIGHT LAYOUT

|   | LUMINAIRE TYPE    | POLE HEIGHT | POLE SPACING |
|---|-------------------|-------------|--------------|
| MAIN CORE   | 100w METAL HALIDE | 9'          | 50'          |
| THIS LIGHT TO BE USED ON FIRST STREET BETWEEN OLD FIRST ST. AND M STREET ONLY |                   |             |              |
| SEE ST-14E FOR STREET LIGHT USE BOUNDARIES                                    |                   |             |              |

User note:


These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST14D.DWG

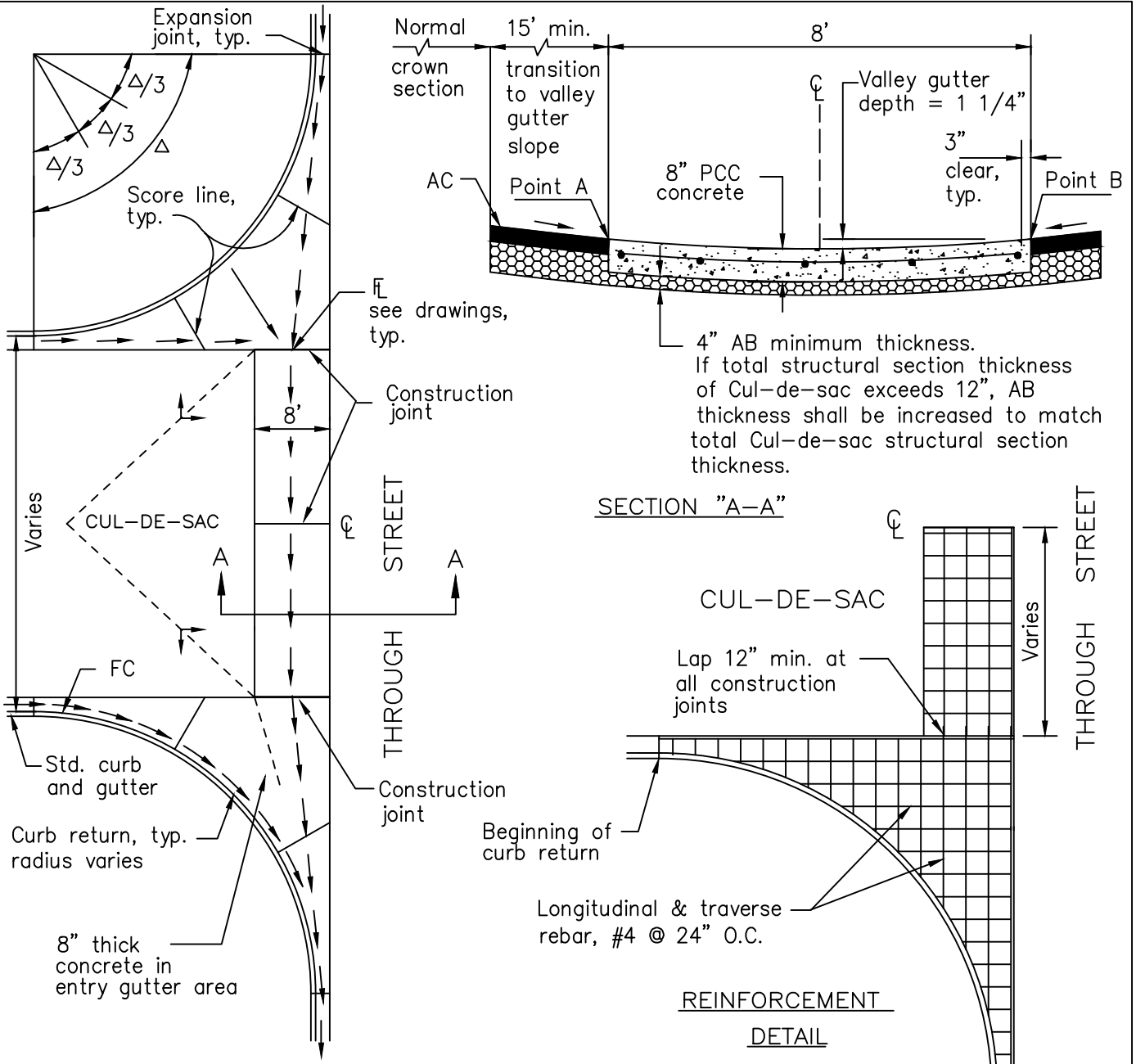
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

FIRST STREET DECORATIVE STREET LIGHT

CITY OF LIVERMORE STANDARD DETAIL

|  |              |        |
|--|--------------|--------|
| Dwn: FY  | Date: May-13 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE  |        |
| <br>City Engineer |              | ST-14F |





**NOTES:**


1. See ST-9A for curb and gutter.
2. Points A & B shall be at the same elevation.
3. Pavement replacement for existing street shall be approved on a case by case basis by the Engineer.

User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

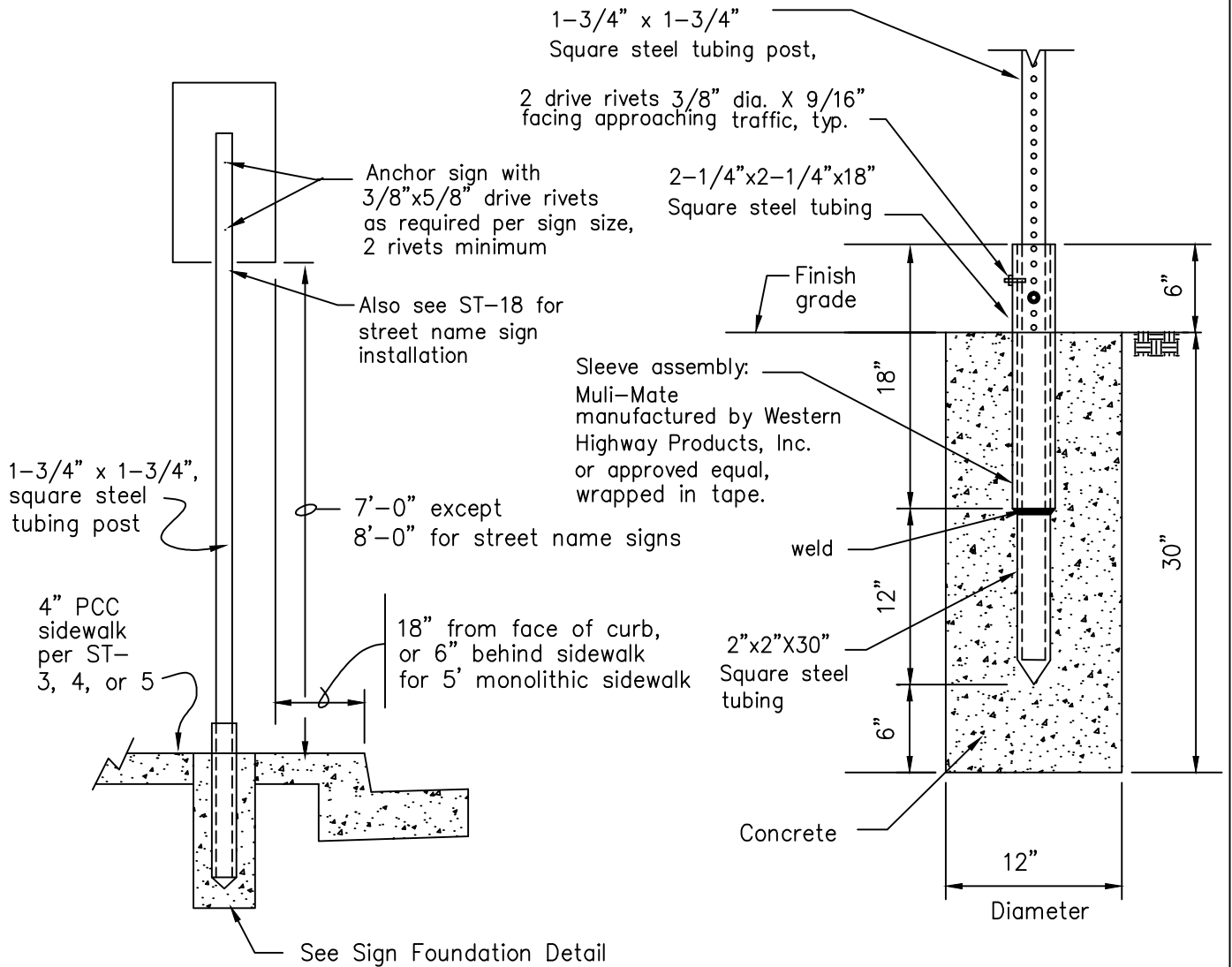
|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

VALLEY GUTTER

CITY OF LIVERMORE  
 STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-16 |

ST16.DWG



STEEL POST

SIGN FOUNDATION DETAIL

NOTES:

1. See ST-18 for street name sign requirements.
2. See ST-22 for median island sign requirements.

User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST17.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

ROADSIDE SIGN/POST  
INSTALLATION

CITY OF LIVERMORE  
STANDARD DETAIL

|                      |              |     |
|----------------------|--------------|-----|
| Dwn: KY/KR           | Date: May-13 | NO. |
| Ckd: Spec. Committee | Scale: NONE  |     |

*do. [Signature]*  
City Engineer

ST-17

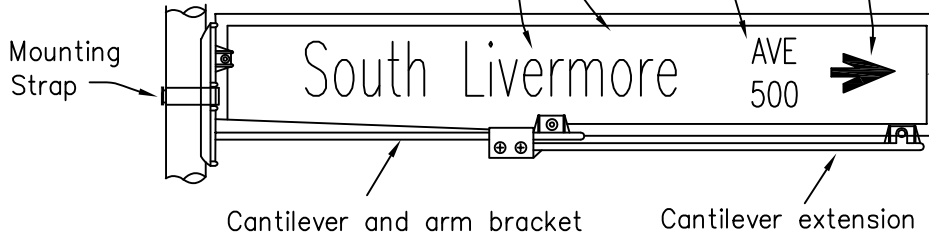
.080 aluminum blank no holes  
with 1/2" corner radius, see Note 7

6" upper case (Legacy Sans Bold)  
6" lower case (Highway Gothic Series C)

Block number  
1-3/4" prefix and address number  
(Highway gothic series C), see Note 5

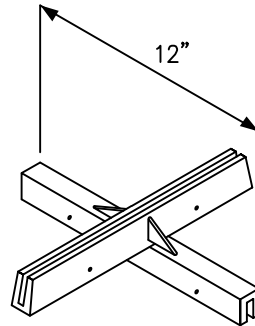
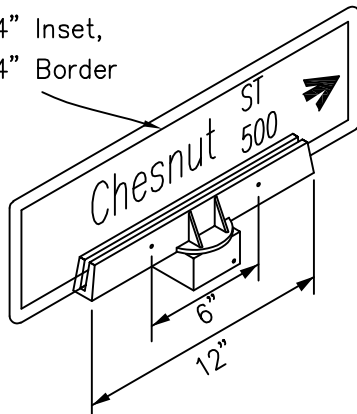
2-1/4" high x 3" long, see Note 6

1/4" Inset,  
1/4" Border



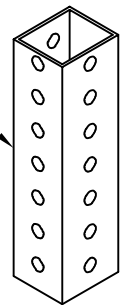
STREET NAME SIGN INSTALLATION ON A STREET LIGHT

1/4" Inset,  
1/4" Border



90 DEGREE CROSSPIECE 12"

1-3/4" x 1-3/4" post  
perforated tubing powder  
green, see ST-17



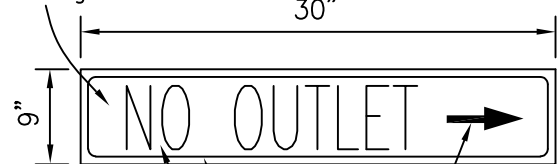
POST

NOTES:

1. Reflective sheeting material 3M DG3 4090 white.  
Electro cut film 3M 1177c green reserve weed.
2. See ST-17 for pole installation.
3. Bottom of lowest sign on post to be 8'-0" min. above finish grade, and bottom of lowest sign on street light to be 10'-0" above finished grade.
4. Signs shall be installed 18" behind face of curb or 6" behind 5' monolithic sidewalk.
5. Block number to denote highest address number adjacent to intersection by hundreds (or by tens if applicable).
6. Arrow to point in direction of increase in address. Omit arrow if the street does not continue in the direction of increase.
7. The size of the street name sign blank depends on how many letters are in the name:

|           |              |
|-----------|--------------|
| 24" x 9 " | 1-5 letters  |
| 30" x 9 " | 6-8 letters  |
| 36" x 9 " | 9-12 letters |
| 42" x 9 " | 13+ letters  |

Yellow reflective  
background



5" arrow, see Note 6  
1/4" border, 1/4" inset  
black 4" (series "c") letters

W14-2a SPECIAL  
W14-2a (Rt) SPECIAL SHOWN

User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

STREET NAME SIGN  
AND  
W14-2a SPECIAL SIGN

CITY OF LIVERMORE  
STANDARD DETAIL

Dwn: KY/KR/HI Date: Apr-23 NO.

Ckd: Spec. Committee Scale: NONE

*B. J. [Signature]*  
City Engineer

ST-18A

ST18.DWG

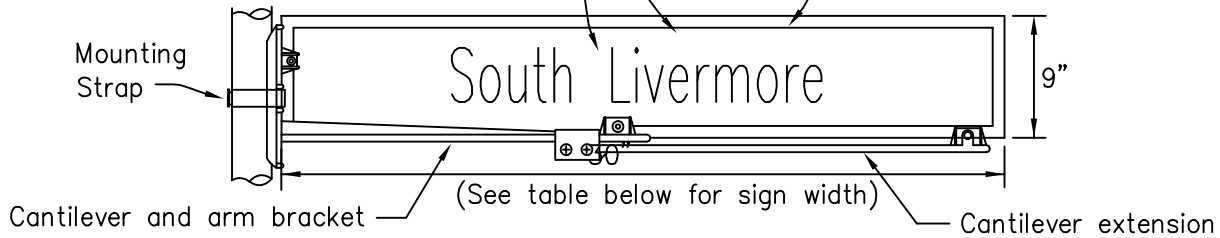
|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

.080 aluminum blank no holes  
with 1/2" corner radius, see Note 7

6" upper case (Legacy Sans Bold)  
6" lower case (Highway Gothic Series C)

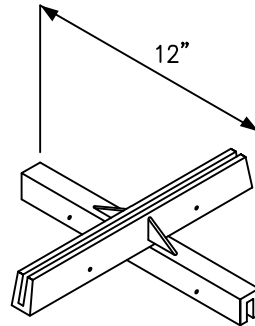
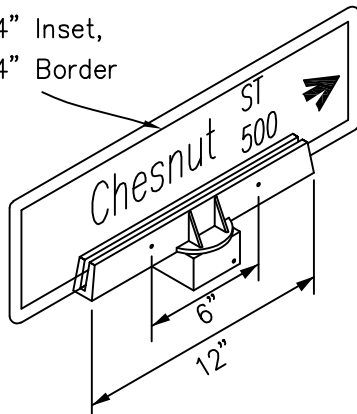
1/4" Inset,  
1/4" Border  
White Border

Border - White  
Background - Green  
Letters - White



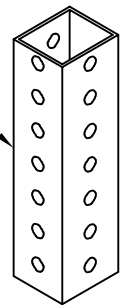
STREET NAME SIGN INSTALLATION ON A STREET LIGHT

1/4" Inset,  
1/4" Border



90 DEGREE CROSSPIECE 12"  
(Use this mount)

1-3/4" x 1-3/4" post  
perforated tubing powder  
green, see ST-17



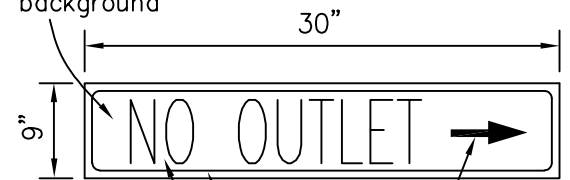
POST

NOTES:

1. Reflective sheeting material 3M DG3 4090 white.  
Electro cut film 3M 1177c green reserve weed.
2. See ST-17 for pole installation.
3. Bottom of lowest sign on post to be 8'-0" min. above finish grade, and bottom of lowest sign on street light to be 10'-0" above finished grade.
4. Signs shall be installed 18" behind face of curb or 6" behind 5' monolithic sidewalk.
5. Block number to denote highest address number adjacent to intersection by hundreds (or by tens if applicable).
6. Arrow to point in direction of increase in address. Omit arrow if the street does not continue in the direction of increase.
7. The size of the street name sign blank depends on how many letters are in the name:

|           |              |
|-----------|--------------|
| 24" x 9 " | 1-5 letters  |
| 30" x 9 " | 6-8 letters  |
| 36" x 9 " | 9-12 letters |
| 42" x 9 " | 13+ letters  |

Yellow reflective  
background



5" arrow, see Note 6  
1/4" border, 1/4" inset  
black 4" (series "c") letters

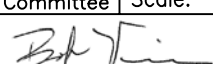
W14-2a SPECIAL  
W14-2a (Rt) SPECIAL SHOWN

User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST18.DWG

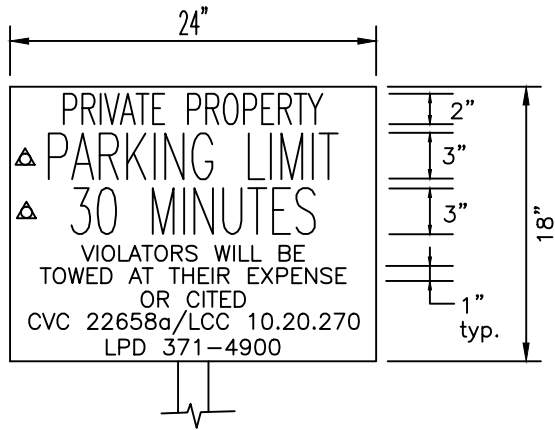
STREET NAME SIGN  
(DOWNTOWN CORE) AND  
W14-2a SPECIAL SIGN

CITY OF LIVERMORE  
STANDARD DETAIL

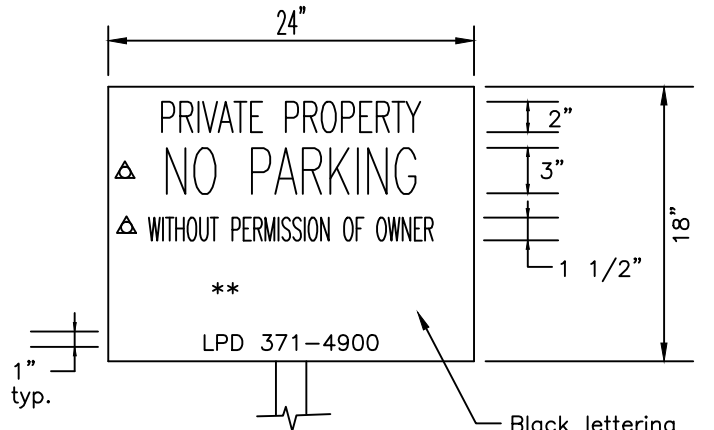
|  |              |        |
|--|--------------|--------|
| Dwn: KY/KR/HI  | Date: Apr-23 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE  |        |
| <br>City Engineer |              | ST-18B |

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |





SIGN A

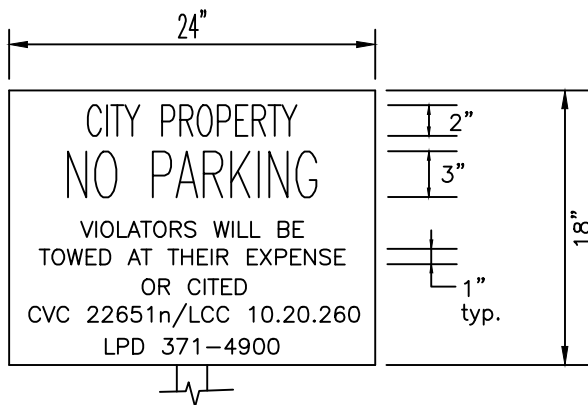


SIGN B

\*\* Both codes may be used together (see above example) or individually:  
 " VIOLATORS WILL BE TOWED AT THEIR EXPENSE CVC 22658a "  
 " VIOLATORS WILL BE CITED LCC 10.20.270 "

Additional signs may be installed within the parking area with approval of the Planning Department.

△ Message may vary (TIME LIMIT, CUSTOMERS ONLY, etc.) with approval of the Police Department.



SIGN C

NOTES:

1. For enforcement of public traffic regulations and control see ST-20B.
2. Private Property signs to be purchased, installed and maintained at no cost to the City.
3. Private Property signs to be installed at each entrance to the subject private property outside of the public right-of-way.
4. City off-street signs on City property shall use square steel tubing poles per ST-17.
5. Optional wording : " VIOLATORS WILL BE CITED/TOWED AT THEIR EXPENSE "

User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

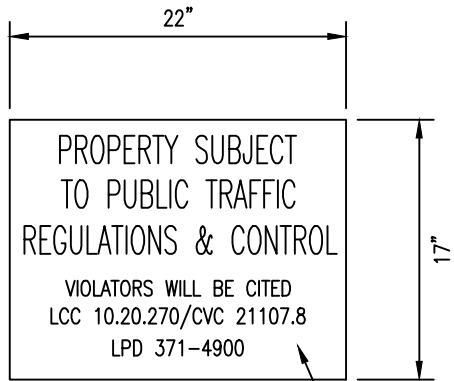
PRIVATE PROPERTY/  
CITY OFF-STREET  
SIGNS

CITY OF LIVERMORE  
STANDARD DETAIL

|                      |              |     |
|----------------------|--------------|-----|
| Dwn: KY              | Date: May-13 | NO. |
| Kkd: Spec. Committee | Scale: NONE  |     |

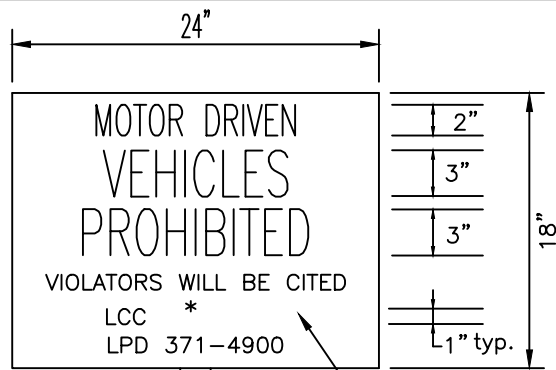
*do. [Signature]*  
City Engineer

ST-20A



SIGN D

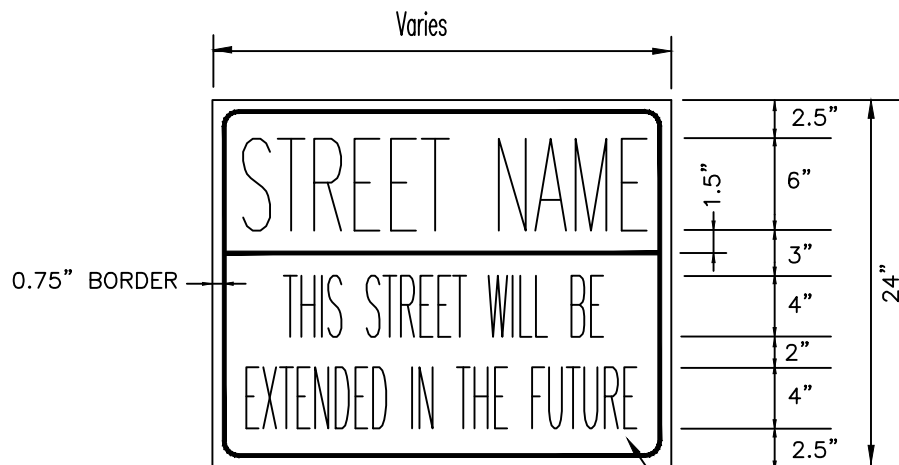
Black lettering on white background, also see Note 1



SIGN E

\* 10.20.270 for private property  
10.28.070 for public property

Black lettering on white background



SIGN F

\* See Note 4

Black lettering on white background

NOTES:

1. The following apply to Sign D :
  - a. These signs must be posted for enforcement of public traffic regulations and control.
  - b. Signs may be posted alone or with Parking Limit signs, see ST-20A
2. Minimum letter size 1" .
3. See ST-20A for additional notes.
4. Sign F to be installed at end of stubbed streets which are to be extended in the future.

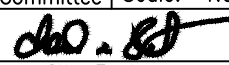
User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

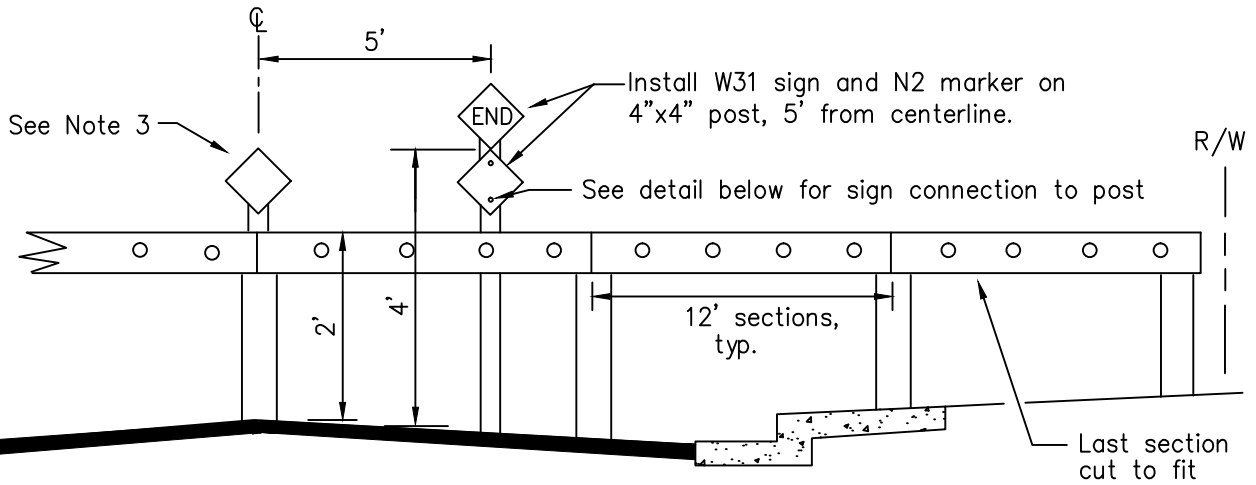
ST20B.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

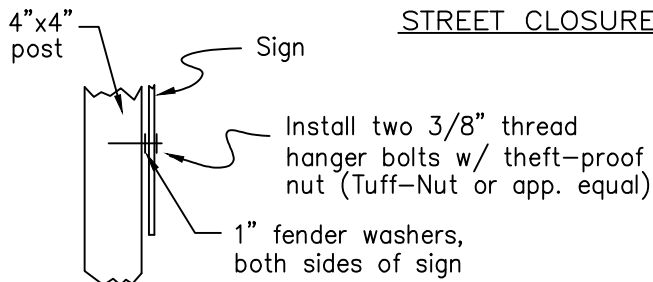
PRIVATE PROPERTY/  
CITY OFF-STREET  
SIGNS

CITY OF LIVERMORE  
STANDARD DETAIL

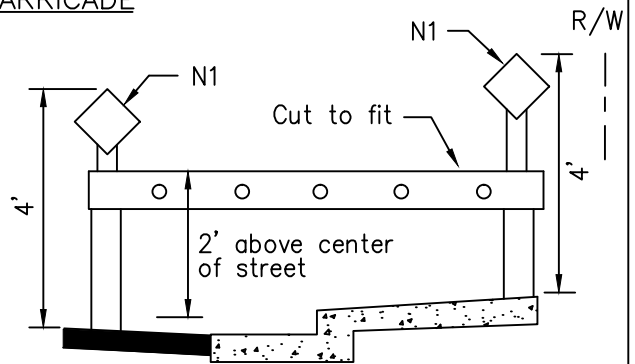
|  |              |        |
|--|--------------|--------|
| Dwn: KY  | Date: May-13 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE  |        |
| <br>City Engineer |              | ST-20B |



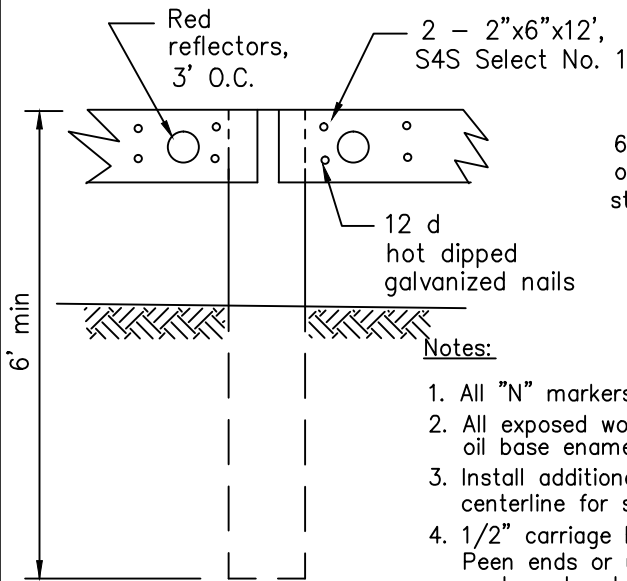
STREET CLOSURE BARRICADE



SIGN CONNECTION TO POST



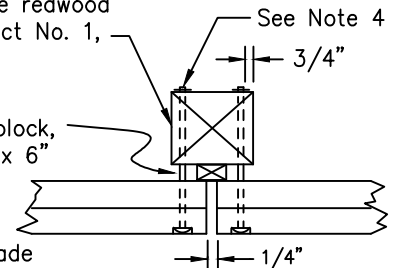
STREET SHOULDER BARRICADE



ELEVATION

6"x6" S4S construction grade redwood or pressure-treated DF, Select No. 1, stamped "ground contact"

Separate post from boards w/ spacer block, 1-5/8" x 2'-1/8" x 6"



PLAN

Notes:

1. All "N" markers shall be high-intensity grade
2. All exposed wood to have 2 coats of gloss oil base enamel exterior white paint.
3. Install additional N2 markers in line with centerline for streets more than 40' wide.
4. 1/2" carriage bolts, countersunk full depth; Peen ends or use theft-proof nuts; 1/4" washer at nut end.
5. Use Sign F per ST-20B for end of stubbed streets to be extended in the future.

User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

|          |    |      |  |
|----------|----|------|--|
| ST21.DWG |    |      |  |
| Date     | By | Rev. |  |

BARRICADES

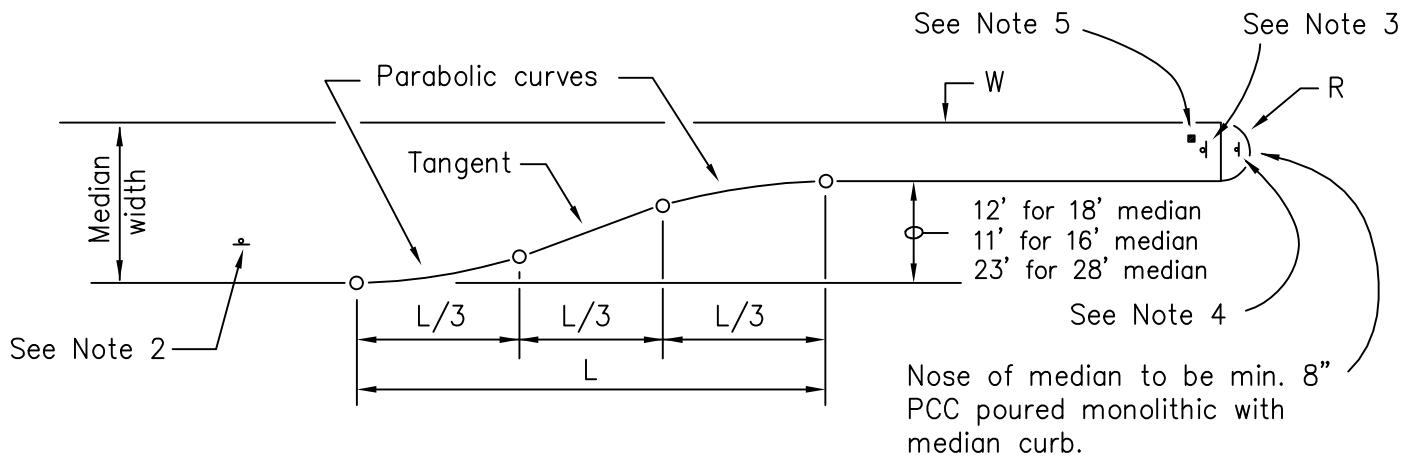
CITY OF LIVERMORE  
STANDARD DETAIL

Dwn: KY/KR Date: May-13 NO.

Ckd: Spec. Committee Scale: NONE

*dao*  
City Engineer

ST-21



| L=length of taper        |      |      | Offset distance for lane width of... |       |       |
|--------------------------|------|------|--------------------------------------|-------|-------|
| 60'                      | 90'  | 120' | 10'                                  | 11'   | 12'   |
| dist. from beg. of taper |      |      | 10'                                  | 11'   | 12'   |
| 5                        | 7.5  | 10   | .16                                  | .17   | .19   |
| 10                       | 15.0 | 20   | .62                                  | .69   | .75   |
| 15                       | 22.5 | 30   | 1.41                                 | 1.55  | 1.69  |
| 20                       | 30.0 | 40   | 2.50                                 | 2.75  | 3.00  |
| 30                       | 45.0 | 60   | 5.00                                 | 5.50  | 6.00  |
| 40                       | 60.0 | 80   | 7.50                                 | 8.25  | 9.00  |
| 45                       | 67.5 | 90   | 8.59                                 | 9.45  | 10.31 |
| 50                       | 75.0 | 100  | 9.38                                 | 10.31 | 11.25 |
| 55                       | 82.5 | 110  | 9.84                                 | 10.83 | 11.81 |
| 60                       | 90.0 | 120  | 10.00                                | 11.00 | 12.00 |

| median width | W  | R    |
|--------------|----|------|
| 16'          | 5' | 2.5' |
| 18'          | 6' | 3'   |
| 28'          | 5' | 2.5' |

See above detail for nose signing & marking

| MEDIAN WIDTH | CURVE # ① DATA |              |       | CURVE # ② DATA |             |        |
|--------------|----------------|--------------|-------|----------------|-------------|--------|
|              | R              | DELTA        | L     | R              | DELTA       | L      |
| 16'          | 2'             | 138° 35' 25" | 4.84' | 50'            | 41° 24' 35" | 36.14' |
| 18'          | 2'             | 139° 43' 28" | 4.87' | 60'            | 40° 34' 02" | 42.48' |
| 28'          | 4'             | 134° 11' 04" | 9.38' | 70'            | 45° 48' 56" | 55.79' |

Notes

- See Notes 3, 4, and 5
- R= Radius; Delta= internal angle; L= Length of curve
- In the presence of roadway features, such as curves, which would affect the layout of the median, see the drawing for layout data.

MEDIAN NOSE OPPOSITE A  
LEFT TURN LANE

**NOTES:**

- See ST-2A thru ST-2C for street widths, ST-9B for median curb, and ST-17 for roadside sign/pole installation.
- Install R6-1 (rt) opposite driveways as directed by the Engineer.
- Install R4-7 ; bottom of sign 5' above median surface, 4' from nose of median, as directed by the Engineer.
- Install Type K reflector, with 8" anchor, 18" from nose of median. Paint nose w/ reflective yellow paint, as directed by the Engineer.
- All boxes installed in nose of median to be 5' from end of PCC concrete nose.

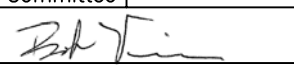
User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

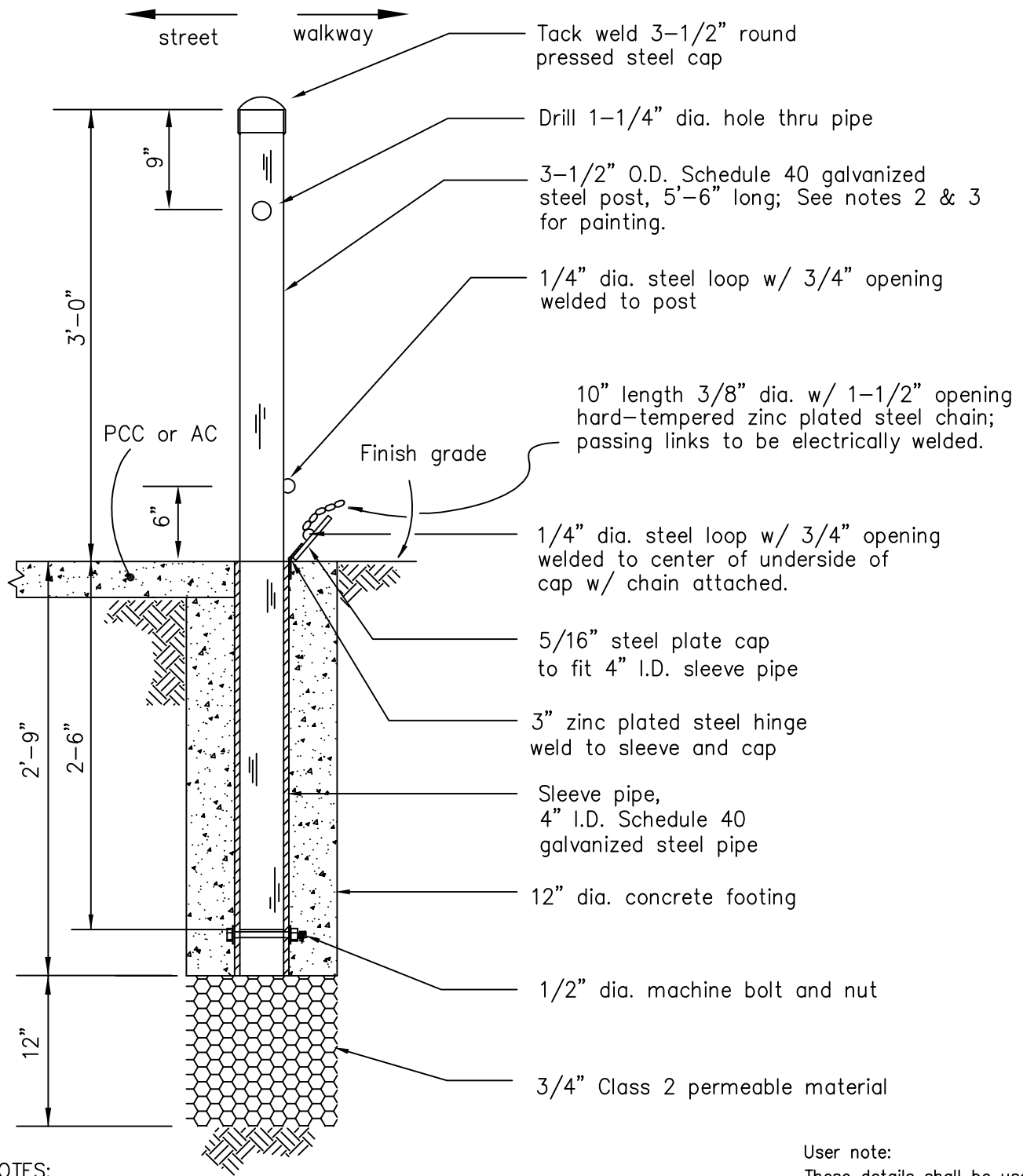
ST22.DWG

| Date | By | Rev. |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

MEDIAN  
CONSTRUCTION

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY/KR/HI  | Date: Apr-23 | NO.   |
| Spec. Committee  | Scale: NONE  | ST-22 |
| <br>City Engineer |              |       |



**NOTES:**

1. Locate all underground utilities prior to excavating post footing.
2. Prime all metal with one coat of galvanize-compatible primer and two coats of white industrial enamel.
3. Apply two 3" wide strips of reflectorized yellow tape. Provide a 3" gap between each strip.

**User note:**

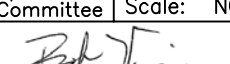
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

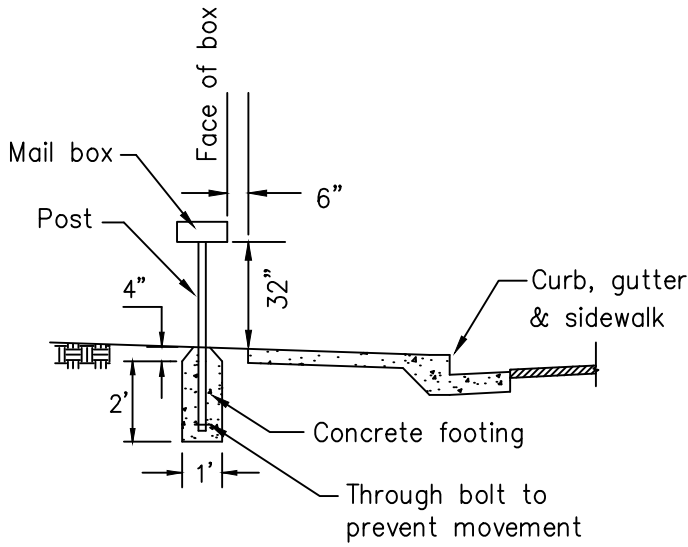
ST23.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

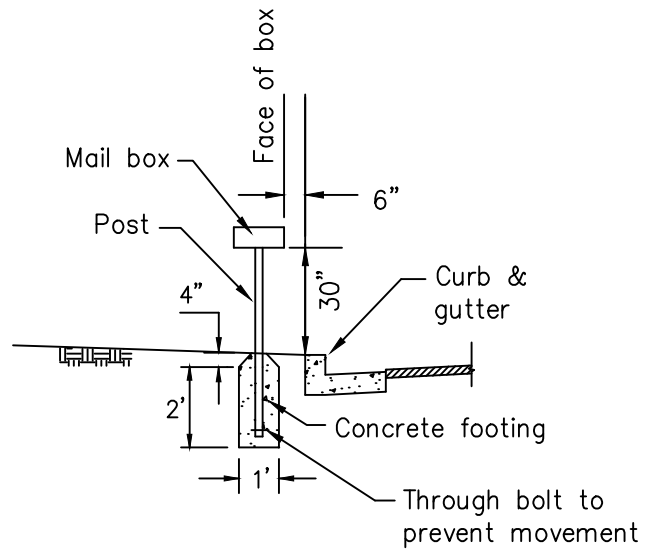
# REMOVABLE BOLLARD

## CITY OF LIVERMORE STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY/KR/HL  | Date: Apr-23 | NO.   |
| Spec. Committee  | Scale: NONE  |       |
| <br>City Engineer |              | ST-23 |



WITH MONOLITHIC SIDEWALK



ALL OTHER CASES

NOTES:

1. Residential boxes may be installed on 4"x4" construction Heart S4S Grade wood post set in concrete footing.
2. Residential installation shall be dual or cluster installation. Single box installation allowed only upon approval of Postmaster.
3. Install industrial boxes on 2" diameter steel pipe.
4. Industrial boxes to be installed on side of street without sidewalk, and may be single box installation.
5. Edge of box to be a minimum of :
  - 5' from poles
  - 3' from driveways
  - 10' from curb returns
  - 5' from fire hydrants in 5' SW
  - 10' from fire hydrants in 10' SW
6. Location of all boxes subject to approval of Postmaster.

User note:


These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

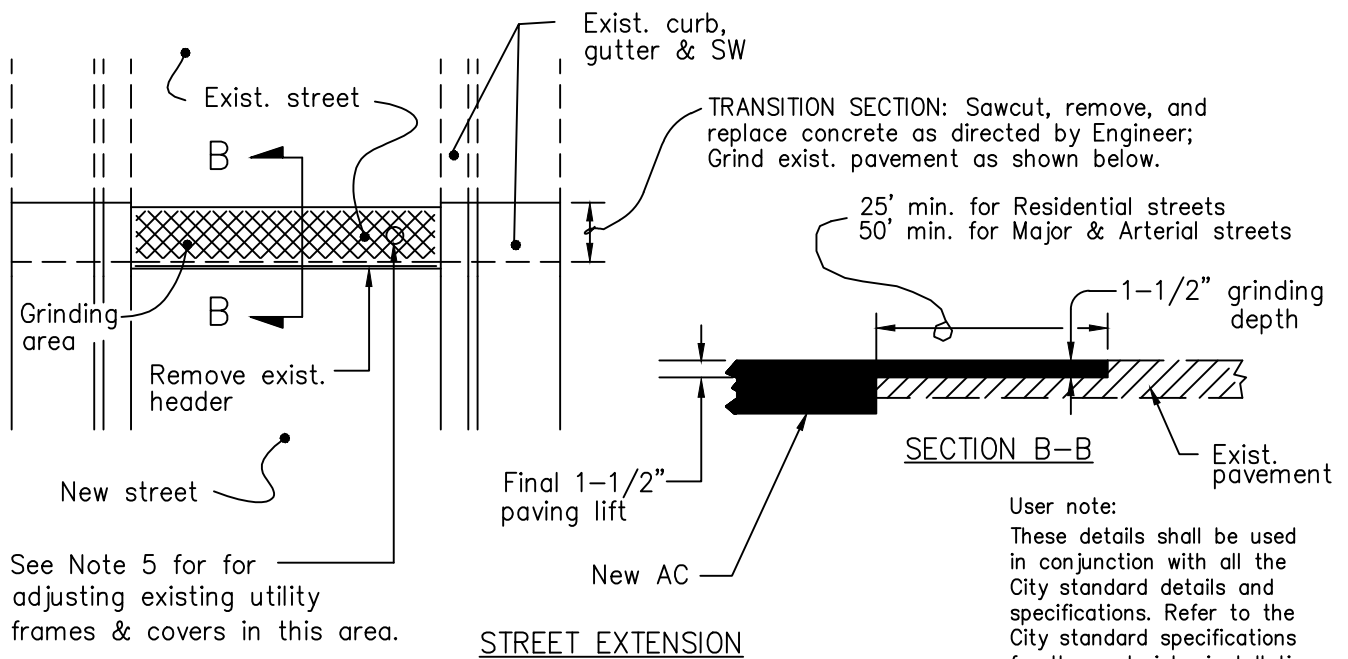
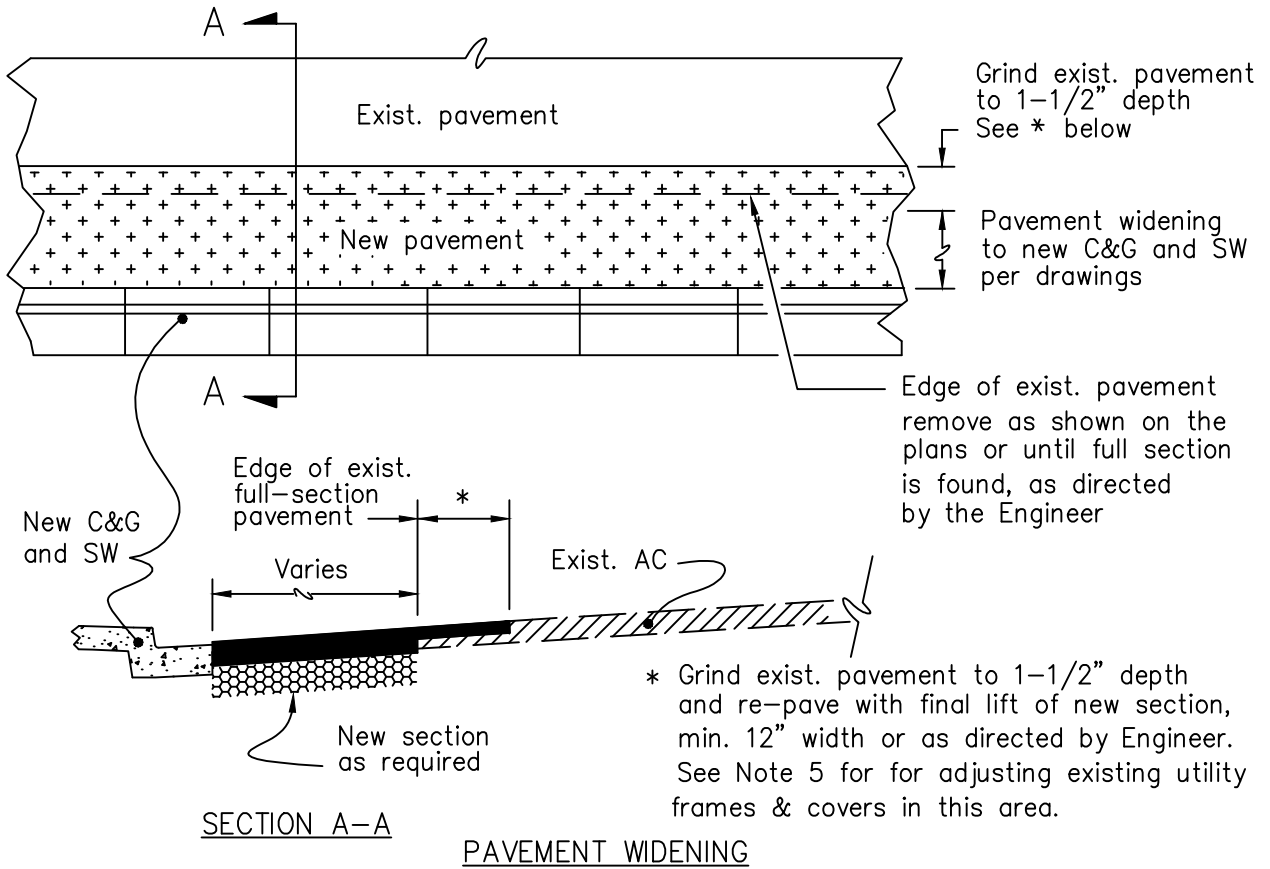
ST24.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

MAIL BOX INSTALLATION

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-24 |



PAVEMENT WIDENING,  
CONNECTIONS

CITY OF LIVERMORE  
STANDARD DETAIL

|                      |              |     |
|----------------------|--------------|-----|
| Dwn: KY/KR           | Date: May-13 | NO. |
| Ckd: Spec. Committee | Scale: NONE  |     |

*[Signature]*  
City Engineer

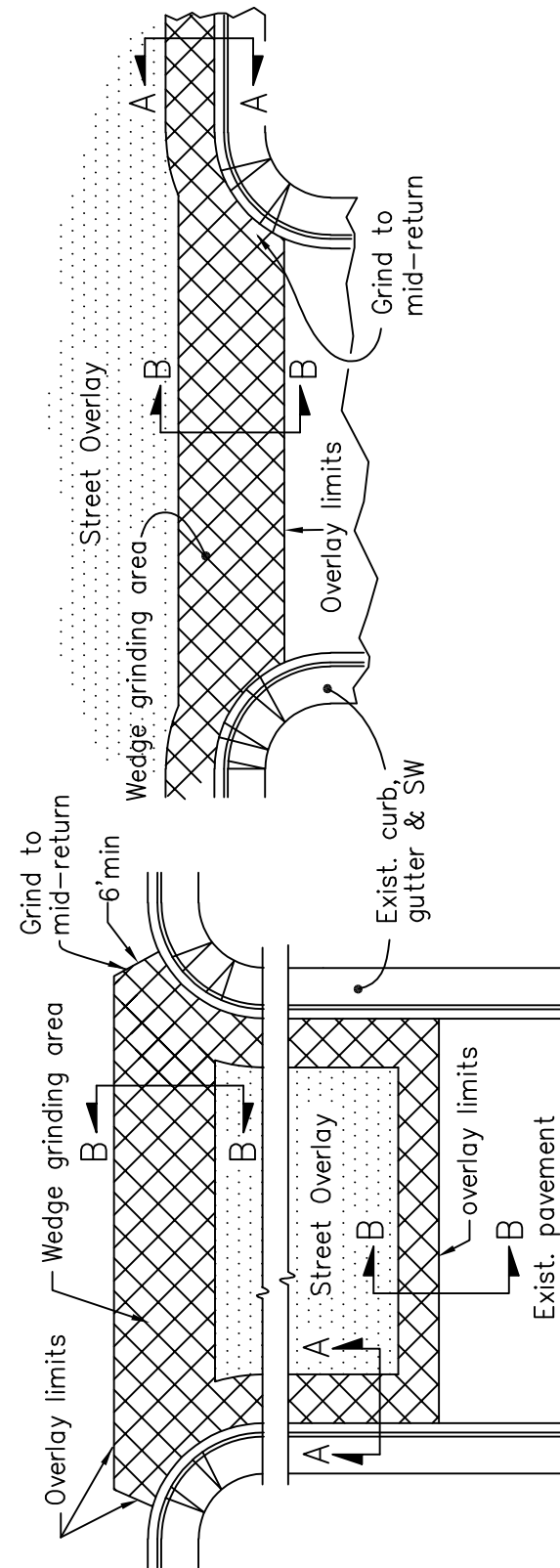
ST-25A

ST25A.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |

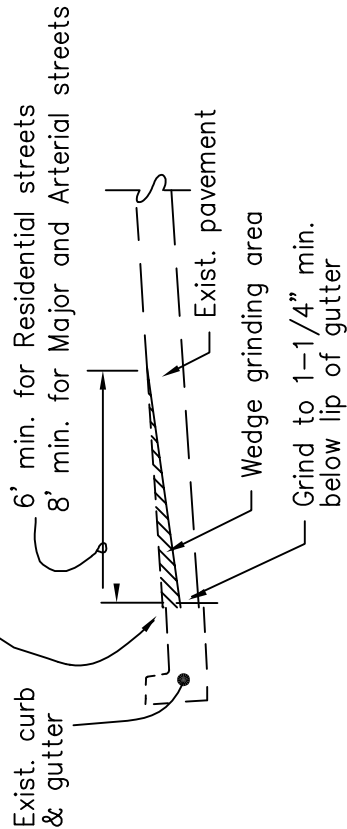
# PAVEMENT OVERLAY



Grind to lip of valley gutter where applicable

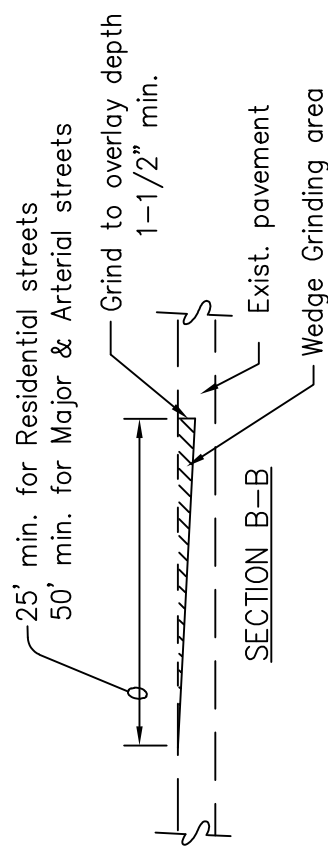
## Grinding Detail at Intersections

AC lip, See Note 2



## SECTION A-A

User note:  
These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

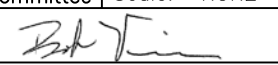


## SECTION B-B

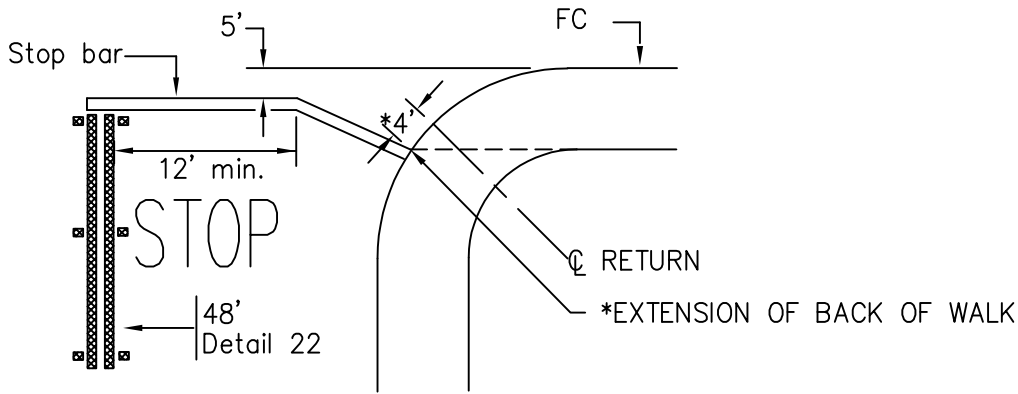
### Notes:

1. Wedge grinding shall taper from depth specified to 0".
2. Place AC at gutter to 1/4" above lip.
3. At curb with no gutter, grind to 2" depth at face of curb and pave to grades specified by Engineer in field.
4. Break overlay at grinding so that min. 1-1/4" thickness is achieved.
5. In conform and grinding areas, existing utility and monument frames and covers shall be lowered first before grinding and then raised to finished grade after paving.
6. Wedge grinding shall be extended in front of new curb ramp and curb & gutter reconstruction.

## CITY OF LIVERMORE STANDARD DETAIL

|  |               |        |
|--|---------------|--------|
| Dwn: KY/KR/HI  | Date: Sept-22 | NO.    |
| Ckd: Spec. Committee   | Scale: NONE   | ST-25B |
| <br>City Engineer |               |        |

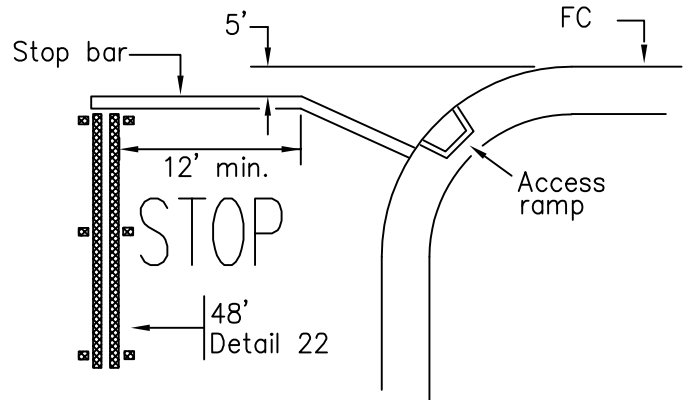




STOP BAR AT INTERSECTION

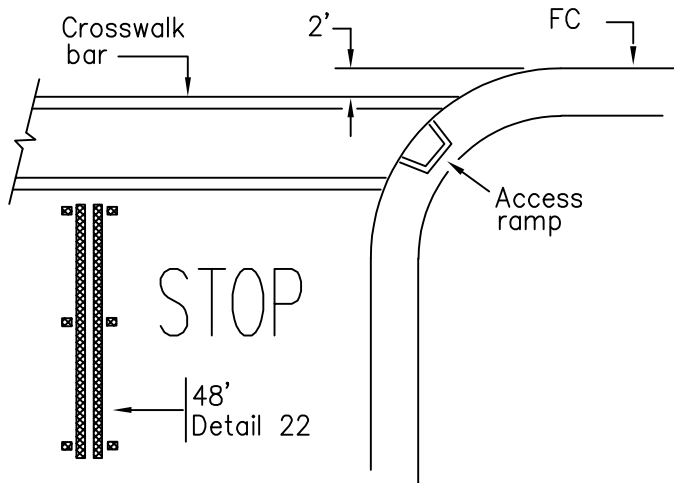
NO ACCESS RAMP

\* STOP BAR SHALL ANGLE TO GUTTER EITHER AT 4' FROM  $\phi$  OF RETURN OR AT EXTENSION OF BACK OF WALK, WHICHEVER IS GREATER.



STOP BAR AT INTERSECTION

W/ ACCESS RAMP



CROSSWALK


User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

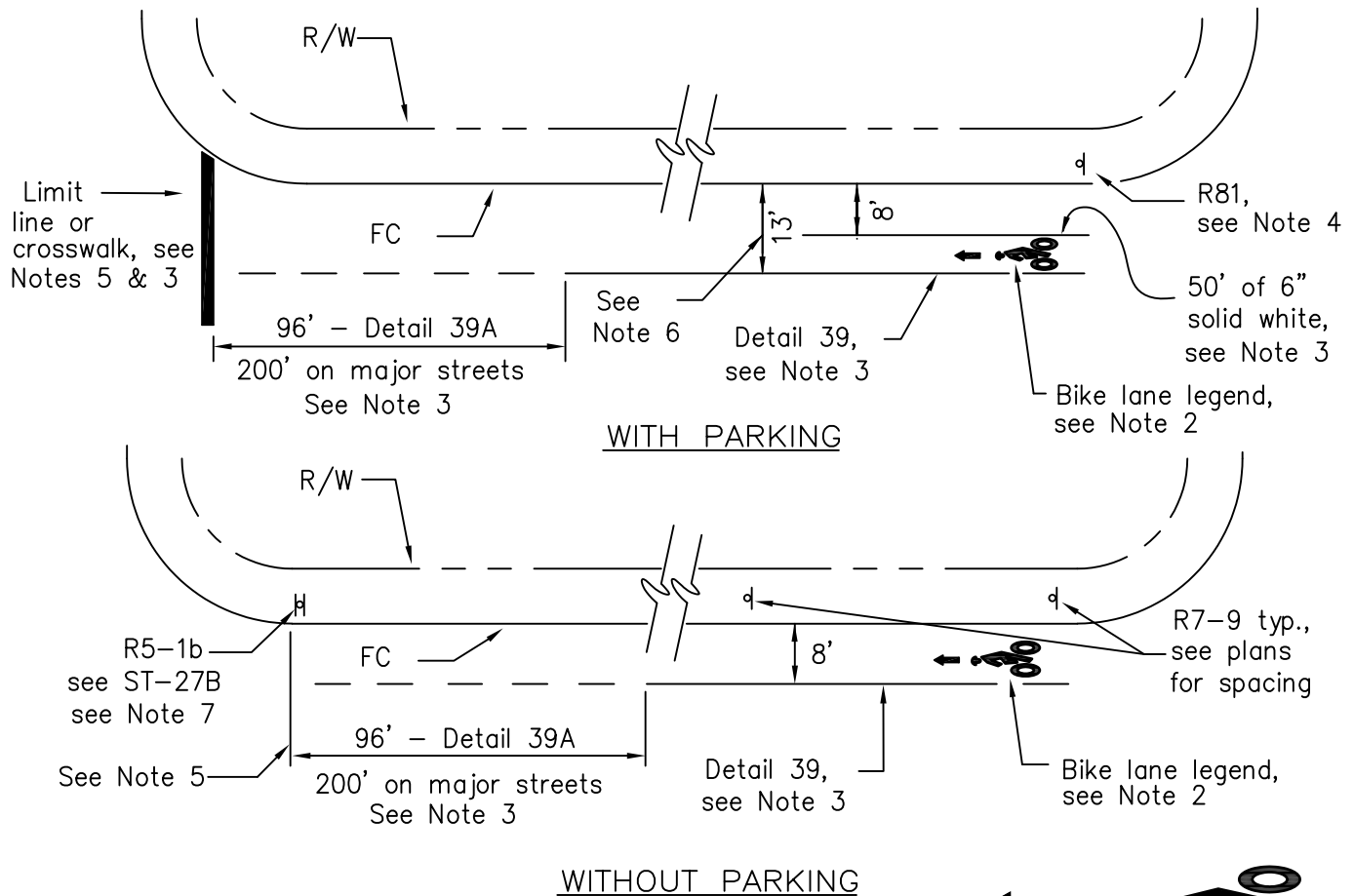
ST26.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

CROSSWALK/STOP BAR  
 INSTALLATION

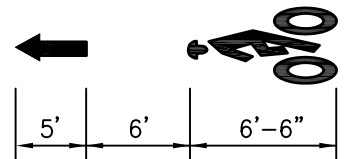
CITY OF LIVERMORE  
 STANDARD DETAIL

|  |               |       |
|--|---------------|-------|
| Dwn: KY/KR/HI  | Date: Sept-22 | NO.   |
| Clkd: Spec. Committee  | Scale: NONE   | ST-26 |
| <br>City Engineer |               |       |



**NOTES:**

1. See Detail ST-17 for sign pole installation.
2. Bike Lane legend shall be per Caltrans Standard Plans A24A "Bike Lane Arrow", and A24C "Bike Lane Symbol with Person". Bike lane legends shall be installed using a specialized crushed glass thermoplastic composition per the specifications.
3. All striping to be white thermoplastic.
4. Install 12"x8" R81 signs at the beginning of bike lane at all major street intersections and at 1/2 mile maximum spacing. Install legends at the beginning of the bike lane at all intersections and 1/2 mile maximum spacing.
5. At crosswalk or limit line, extend Detail 39A to line; otherwise terminate at curb return.
6. Parking plus Bike Lane width may be reduced to 12' in special cases, if approved by the Engineer.
7. On major streets, install R5-1b back to back with the last R7-9 on each block.



**BIKE LEGEND DETAIL**

| Legend type   | Legend area  |
|---------------|--------------|
|               | 7 SF         |
|               | 7 SF         |
| <b>total:</b> | <b>14 SF</b> |

**User note:**  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

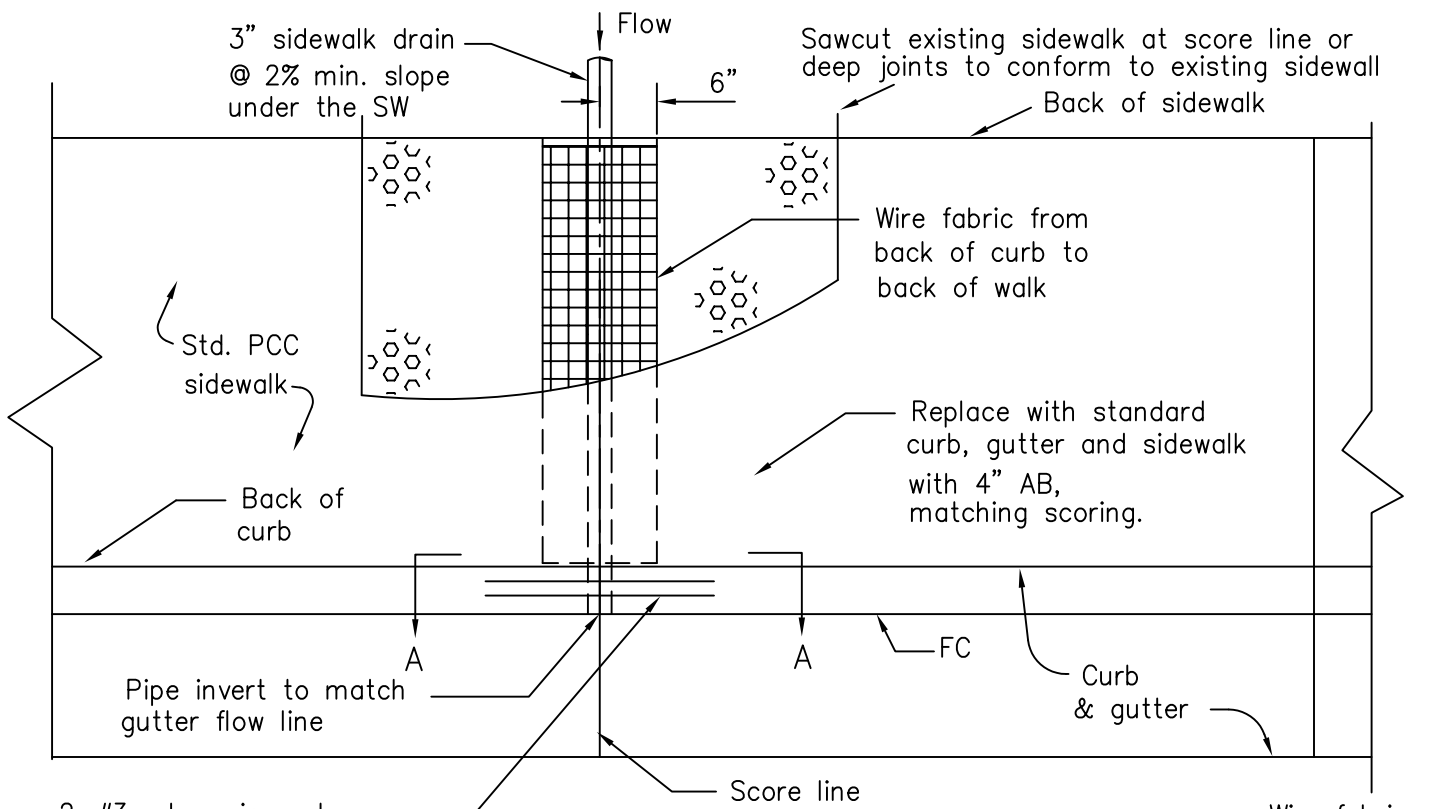
ST27.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

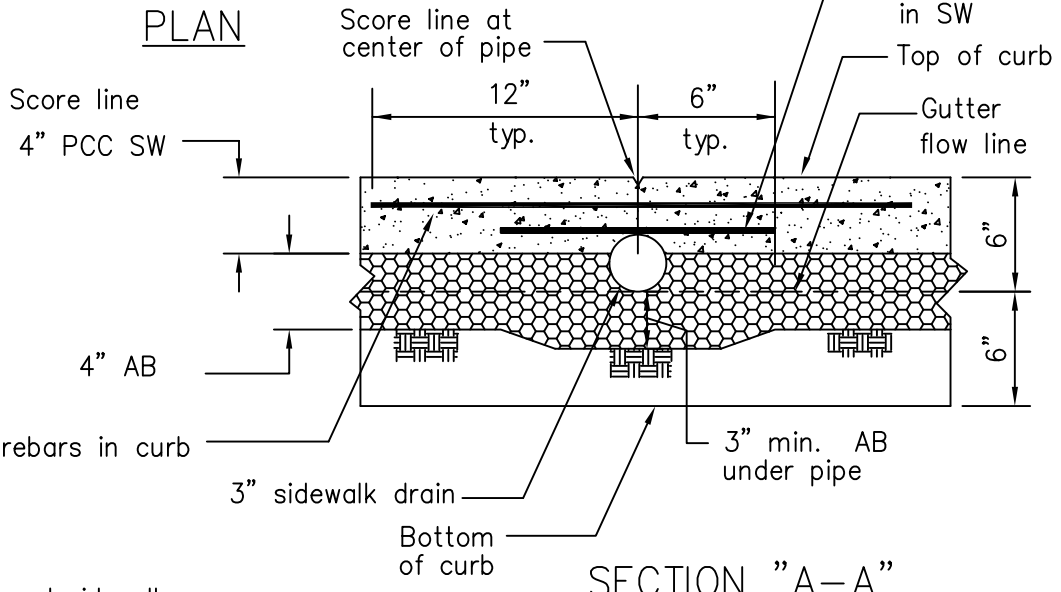
**BIKE LANES**

**CITY OF LIVERMORE  
 STANDARD DETAIL**

|                      |               |                         |
|----------------------|---------------|-------------------------|
| Dwn: KY/KR/JV/HI     | Date: Sept-22 | NO.<br><br><b>ST-27</b> |
| Spec. Ckd: Committee | Scale: NONE   |                         |
| <br>City Engineer    |               |                         |



PLAN



SECTION "A-A"

NOTES:

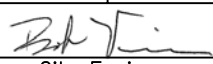
1. Standard curb, gutter and sidewalk:
  - a. See ST-3, 4, & 5 for sidewalks.
  - b. See ST-9A for curb and gutter.
2. Minimum 4" between pipes in multiple installations.
3. Sidewalk drain may not be installed within driveway approach (top of flare) .
4. Sidewalk drain to be perpendicular to face of curb.

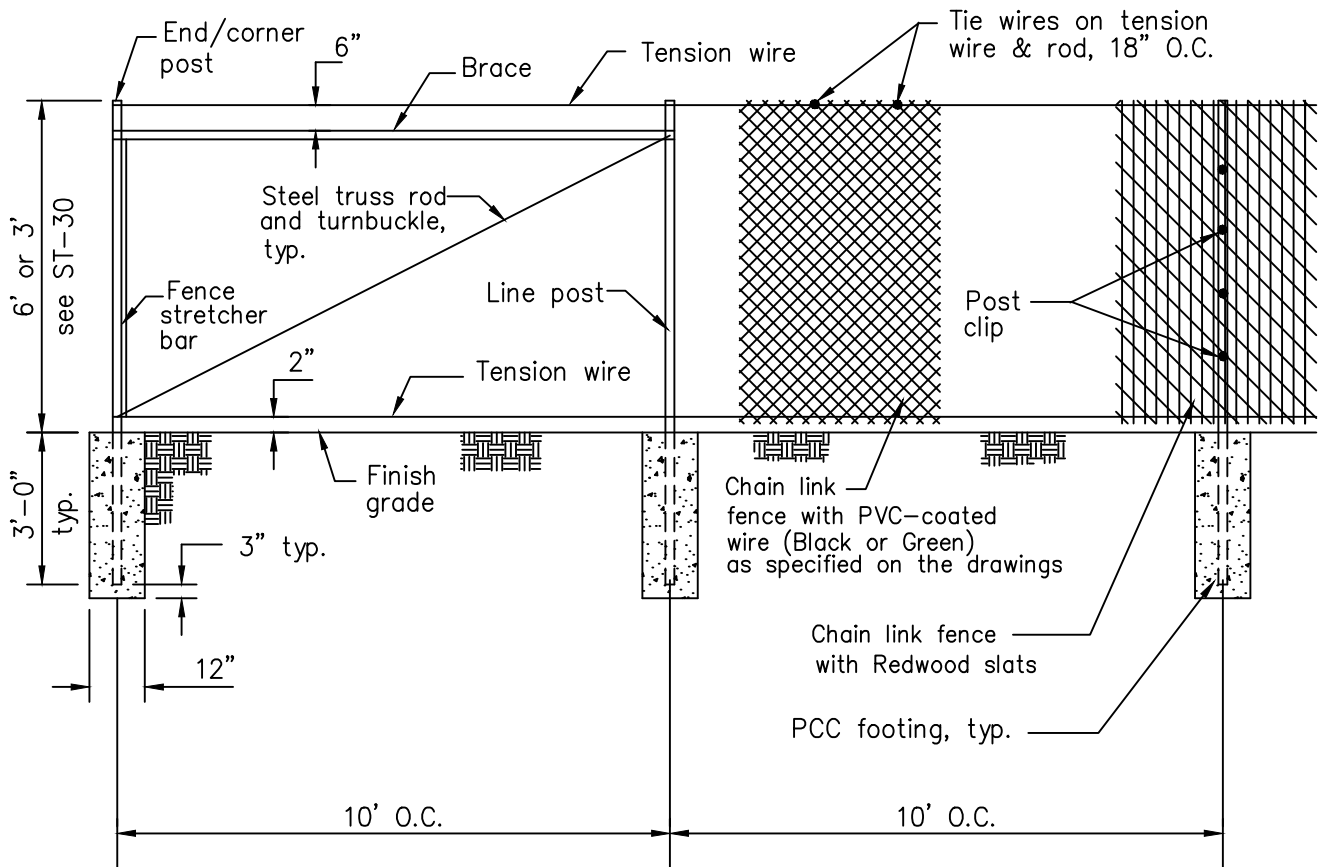
User note:  
 These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST28.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

**SIDEWALK DRAIN**  
 (FOR RESTORATION OF EXISTING FACILITIES)

|  |              |              |
|--|--------------|--------------|
| <b>CITY OF LIVERMORE</b><br>STANDARD DETAIL  |              |              |
| Dwn: KY/HI   | Date: Dec-23 | NO.          |
| Kcd: Spec. Committee   | Scale: NONE  |              |
| <br>City Engineer |              | <b>ST-28</b> |



**NOTE:**

See ST-30 for Pedestrian Walkway fence height and setback requirements.

**User note:**

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

CHAIN LINK FENCE

CITY OF LIVERMORE  
STANDARD DETAIL

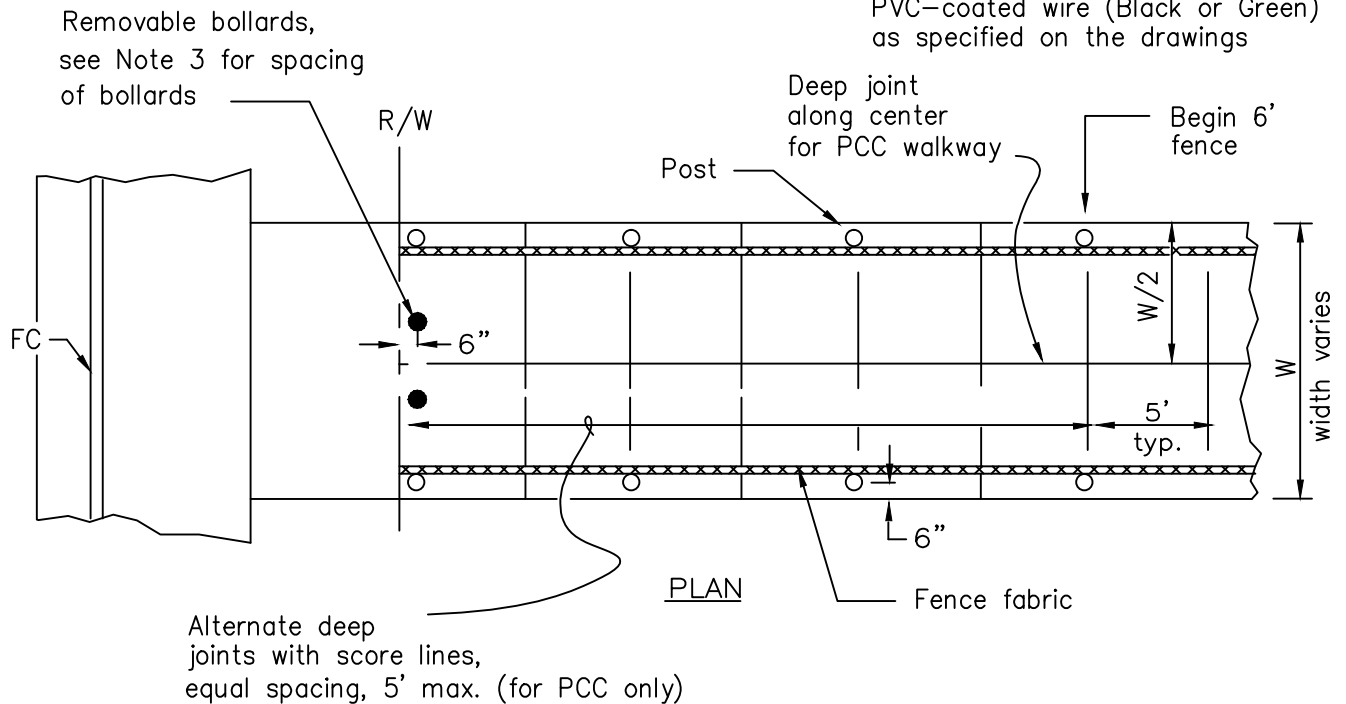
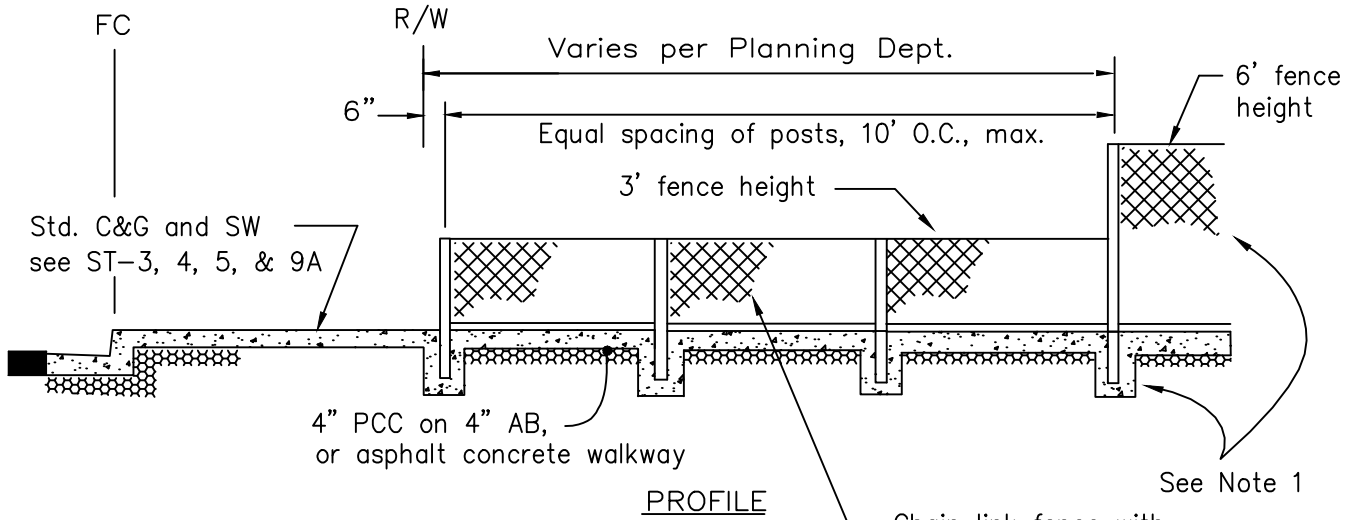
|                      |              |     |
|----------------------|--------------|-----|
| Dwn: KY              | Date: May-13 | NO. |
| Ckd: Spec. Committee | Scale: NONE  |     |

*dbw - [Signature]*  
City Engineer

ST-29

ST29.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |



**NOTES:**

1. See ST-29 for chain link fence and concrete footing details.
2. See ST-23 for removable bollard details.
3. For walkways 10 feet or narrower, install one bollard at 5 feet from one edge of travel path. For walkways wider than 10 feet, install bollards (2 min.) with a 5 feet wide gap at the center of walkway.

**User note:**


These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

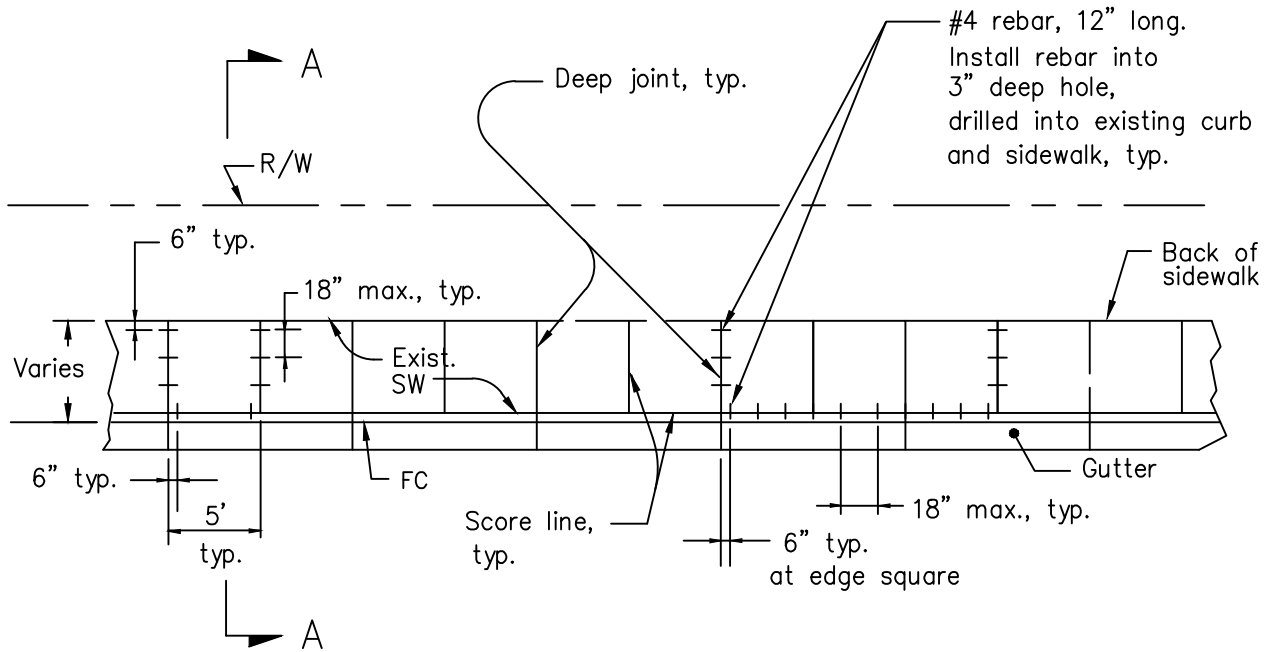
ST30.DWG

|      |    |      |
|------|----|------|
| Date | By | Rev. |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |

PEDESTRIAN  
WALKWAY

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY/KR   | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-30 |

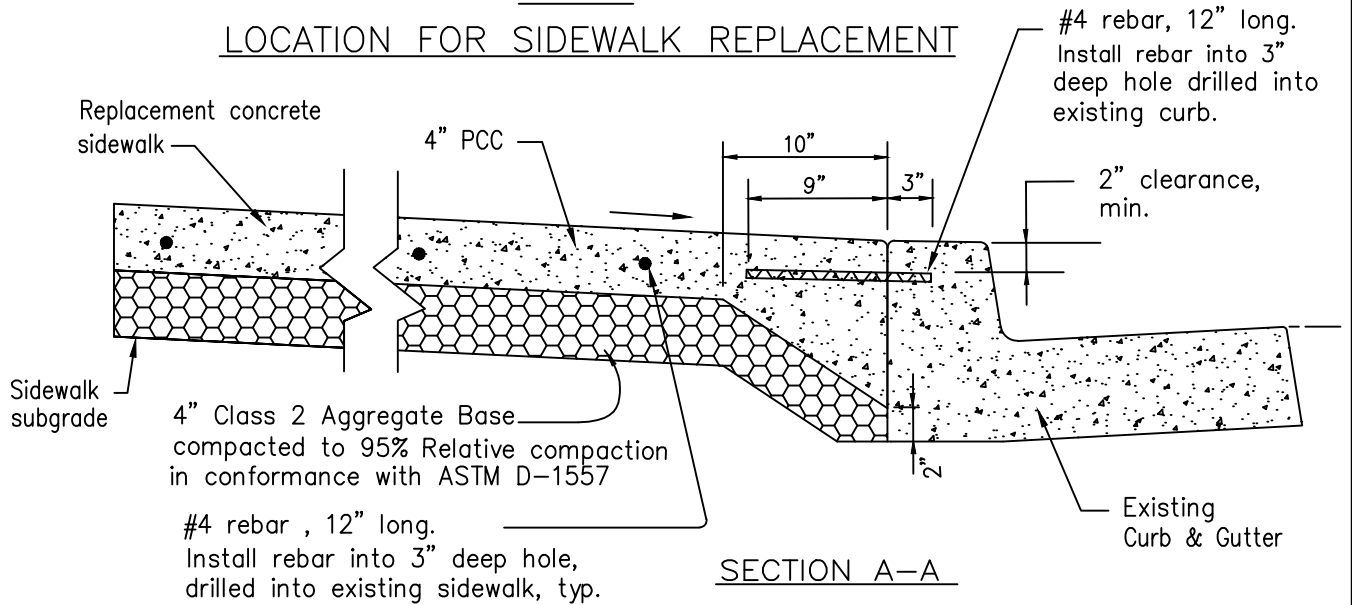


REPLACEMENT OF ONE SQUARE

REPLACEMENT OF TWO OR MORE SQUARES

PLAN

LOCATION FOR SIDEWALK REPLACEMENT



SECTION A-A

NOTES:

1. Match width and scoring pattern with adjacent existing sidewalk.
2. Moist undisturbed native subgrade may not need to be compacted as approved by the City.
3. All exposed corners shall have 1/2" radius.
4. Sawcut existing sidewalk at score line or deep joints to conform to existing sidewalk.
5. The concrete shall have a minimum 28 day compressive strength of 3000 psi. Lampblack shall be added at a rate of 3/4 pound/pint per cubic yard of concrete.

User note:


These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

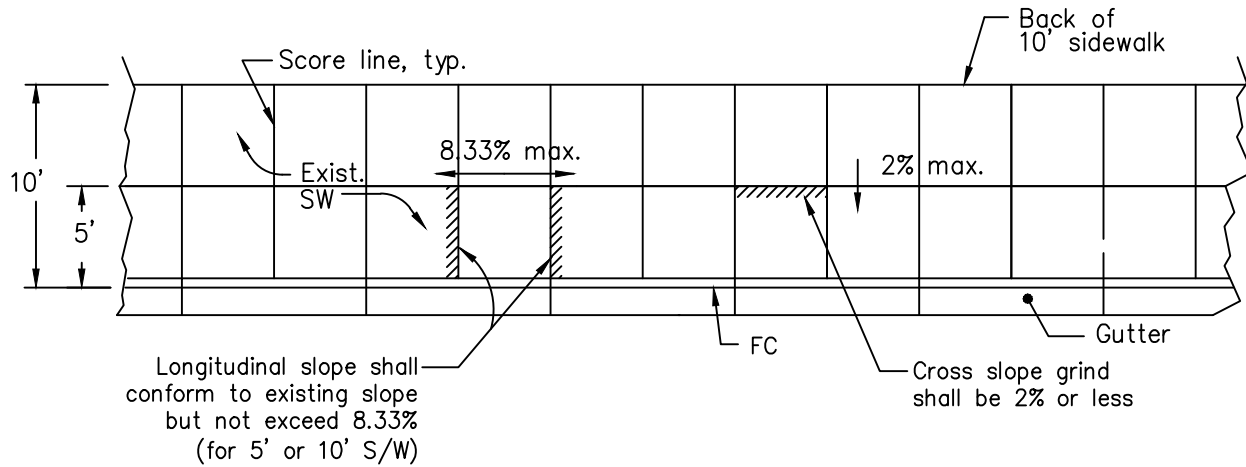
ST31.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

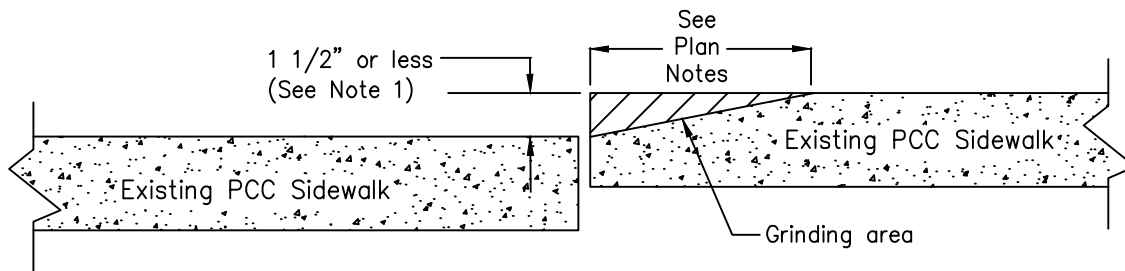
SIDEWALK REPAIR

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: KY  | Date: May-13 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-31 |



PLAN



TYPICAL SECTION

NOTE:

1. If separation is greater than 1 1/2" then sidewalk is to be removed and replaced per City Standard Detail ST-31.

User note:


These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

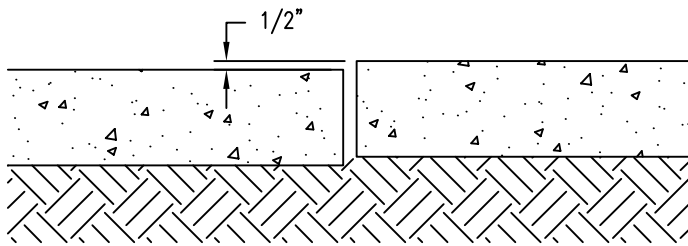
ST31.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

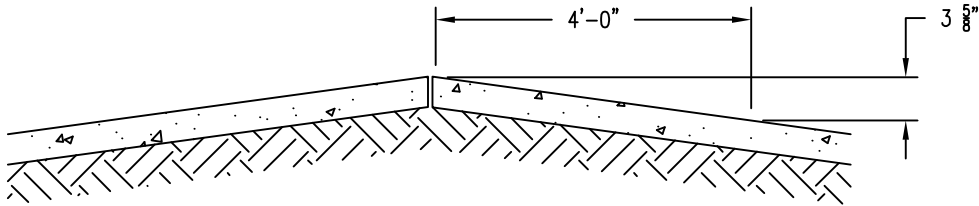
SIDEWALK  
GRINDING  
REPAIR

CITY OF LIVERMORE  
STANDARD DETAIL

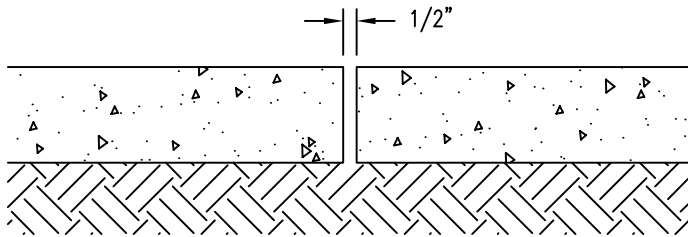
|  |              |                  |
|--|--------------|------------------|
| Dwn: MJT   | Date: May-13 | NO.<br><br>ST-32 |
| Ckd: Spec. Committee   | Scale: NONE  |                  |
| <br>City Engineer |              |                  |



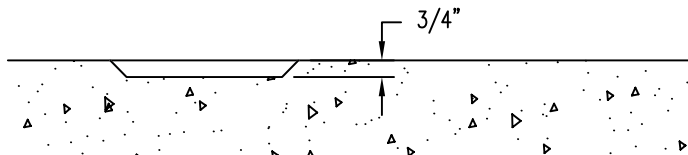
**STEP SEPARATIONS** A sidewalk panel has been lifted or subsided by  $1/2''$  or more than the adjacent panel.



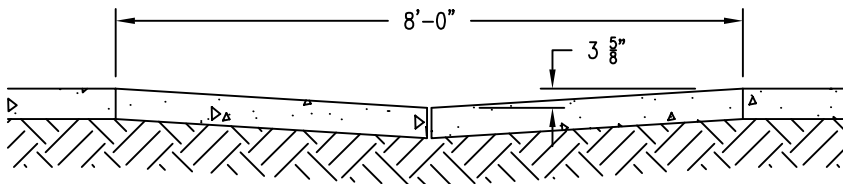
**TRANSVERSE GRADE CHANGE** Two sidewalk panels have been lifted to a peak, where the peak is  $3 \frac{5}{8}''$  (7.5%) or higher than the normal grade of the sidewalk 4' away in each direction.



**OPENING IN SIDEWALK** There is an opening in the sidewalk measuring  $1/2''$  or greater.



**SPALLING OF SURFACE** A portion of the sidewalk has been removed, and the result is a hole of  $3/4''$  or deeper.



**SUNKEN SIDEWALK** The sidewalk has subsided within a stretch of 8 feet of sidewalk while there is a portion that is greater than or equal to  $3 \frac{5}{8}''$  (7.5%) lower than the rest of the sidewalk.

**NOTE:** CROSS SLOPE REQUIREMENT=2%

ST33.DWG


|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

## SIDEWALK REPAIR CRITERION

CITY OF LIVERMORE  
STANDARD DETAIL

Dwn: BC      Date: Oct-18      NO.

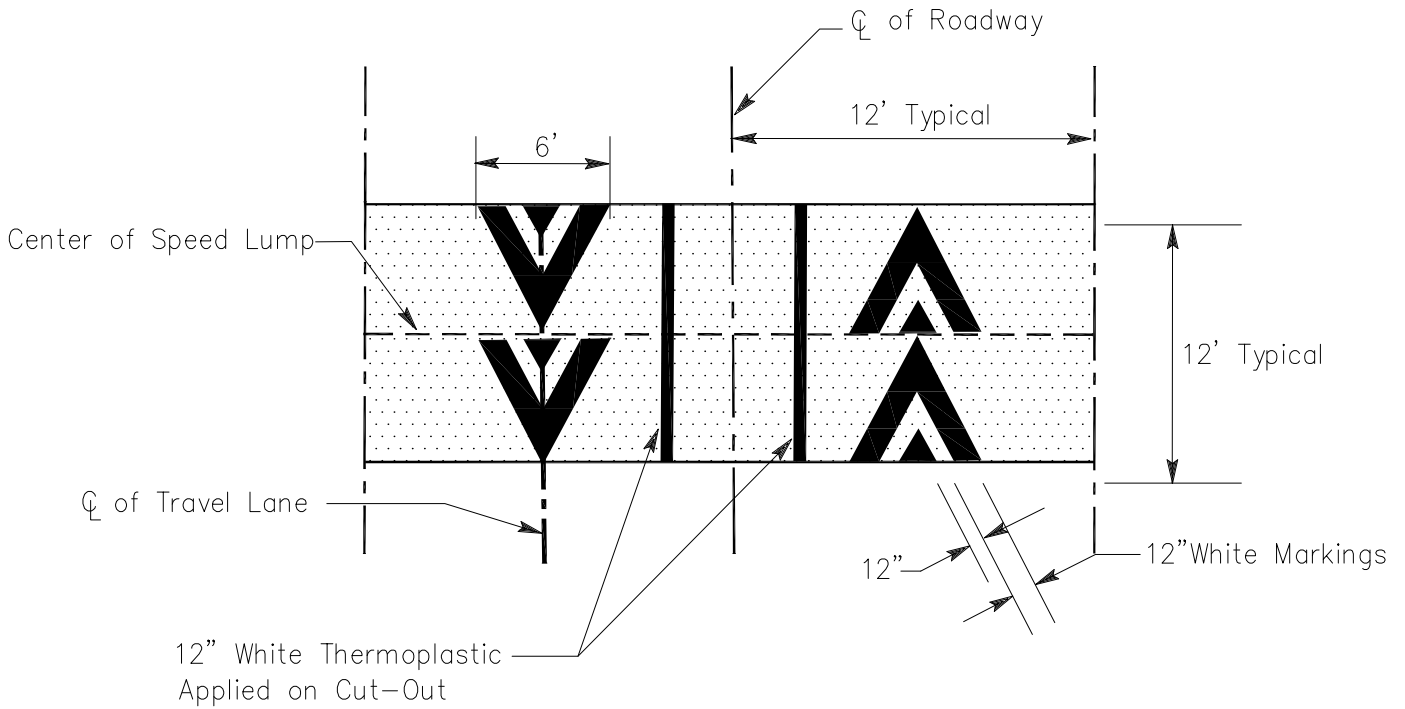
Ckd: <sup>Spec.</sup>Committee      Scale: NONE

  
City Engineer

ST-33



PAVEMENT MARKINGS FOR SPEED LUMPS DETAIL:



User note:

These details shall be used in conjunction with all the City standard details and specifications. Refer to the City standard specifications for the materials, installation, testing, protective coatings, and other requirements.

ST-34.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

SPEED LUMPS

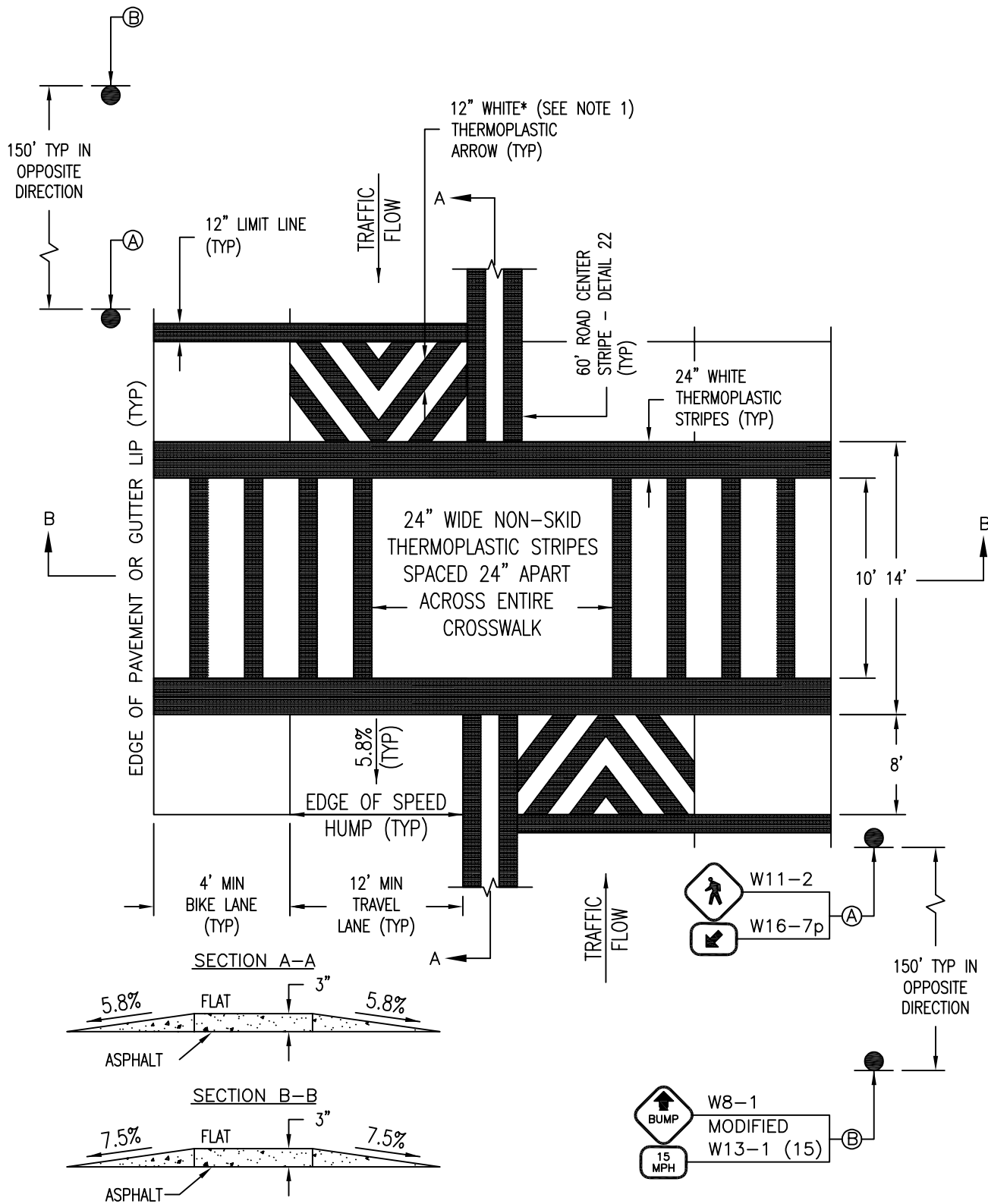
CITY OF LIVERMORE  
STANDARD DETAIL

Dwn: KY/KR/JV/HI Date: Sept-22

Spec. Committee Ckd: Scale: NONE

*Bob Tim*  
City Engineer

NO.  
ST-34



**NOTES:**

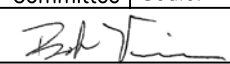
1. \*-IN THE SCHOOL VICINITY, CONSULT THE CITY TRAFFIC ENGINEER

ST-35.DWG

|      |    |      |
|------|----|------|
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
|      |    |      |
| Date | By | Rev. |

SPEED TABLE  
CROSSWALK

CITY OF LIVERMORE  
STANDARD DETAIL

|  |              |       |
|--|--------------|-------|
| Dwn: BC  | Date: Feb-18 | NO.   |
| Ckd: Spec. Committee   | Scale: NONE  |       |
| <br>City Engineer |              | ST-35 |