

SUTTER COUNTY STANDARD DRAWINGS

2025



Adopted by Sutter County Board of Supervisors February 25, 2025

Table of Contents

ACCESSIBLE RAMPS

AR-1	Curb Ramp Elements Definitions and Standards
AR-2	Curb Ramp General Details
AR-3	Detectable Warning Specifications
AR-4	Detectable Warning Standard Layout
AR-5	Dual Pan Curb Ramps
AR-6	Single Parallel Curb Ramp for Uncontrolled T-Intersections
AR-7	Dual Flare Curb Ramps
AR-8	Single Combination Curb Ramp
AR-9	Dual Flared Perpendicular Curb Ramps
AR-10	Planter Strip Curb Ramps
AR-11	Sidewalk Driveway Detail
AR-12	Planter Strip Driveway Detail

DRAFTING

D-1	Approval Blocks
D-2	Drafting Standards
D-3	Standard Map Associated with Legal Description for 8-1/2 " x 11" Sheet

GRADING

G-1	Grading Exterior Property Line
G-2	Grading for Interior Property Lines And Perimeter Property Lines In Cut Areas
G-3	Wood Retaining Wall Details for Interior Property Lines
G-4	Masonry/Concrete Retaining Wall Detail for Fill Areas at Boundary and Project Phase Lines

LANDSCAPING

L-1	Tree Planting
L-2	Shrub Planting
L-3	Remote Control Valve
L-4	Drip Irrigation Valve Assembly
L-5	Quick Coupling Valve
L-6	Master Valve Flow Sensor
L-7	Flush Valve
L-8	Air Relief Valve
L-9	Pop-Up Rotor Sprinkler
L-10	Pop-Up Spray Sprinkler
L-11	Bubbler Sprinkler Head
L-12	Drip Irrigation Multi Outlet Emitter
L-13	Subsurface In-Line Drip Irrigation Center-Feed Supply Manifold
L-14	Subsurface In-Line Drip Irrigation End-Feed Supply Manifold
L-15	Deep Watering Pipe for Trees
L-16	Irrigation Controller Enclosure
L-17	Irrigation System Trenching
L-18	Drinking Fountain

L-19	Post and Cable Fencing
L-20	Knock-Down Bollard and Stationary Bollard
L-21	Removable Bollard
L-22	Concrete Walk (In Park Areas, Not Frontage Areas)
L-23	Concrete Mow Strip
L-24	Bike Trail Paving Section
L-25	Roadway Median Section
L-26	Redwood Headerboard
L-27	Double Pipe Gate
L-28	Single Pipe Gate

SEWER

S-1	Sewer Cleanout
S-2	8" Flushing Branch
S-3	Frame and Cover
S-4	Sewer Service Connection
S-5	Standard Sewer Manhole
S-6	Special Sewer Manhole
S-7	Sewer Cleanout
S-8	Average Sewer Flows
S-9	Sewer Peaking Factors
S-10	Sewer Pipe Bedding & Initial Backfill
S-11	Sewer Drop Connection

STORM DRAINAGE

SD-1	10-Year Peak Flow Sacramento Method Rainfall Zone 2, <80 Acres
SD-2	10-Year Peak Flow Sacramento Method Rainfall Zone 2, 80-640 Acres
SD-3	100-Year Peak Flow Sacramento Method Rainfall Zone 2, <80 Acres
SD-4	100-Year Peak Flow Sacramento Method Rainfall Zone 2, 80-640 Acres
SD-5	Loss In Junction Due To Change In Direction Of Flow In Lateral
SD-6	Storm Drain Trench Detail
SD-7	Storm Drain Reinforced Concrete Pipe Bedding and Initial Backfill
SD-8	Storm Drain Plastic Pipe Bedding and Initial Backfill
SD-9	Cutoff Collar
SD-10	Standard Precast Concrete Drainage Manhole
SD-11	Type A Saddle Manhole
SD-12	Type B Saddle Manhole
SD-13	Grey Cast Iron Standard 24" Manhole Frame & Cover
SD-14	Grey Cast Iron Standard 36" Manhole Frame & Cover
SD-15	Grate Type Manhole Cover
SD-16	Drop Inlet Type B
SD-17	Drop Inlet Type B at Detached Sidewalk
SD-18	Drop Inlet Type C
SD-19	Welded Steel Grate Frame
SD-20	Welded Steel Grate
SD-21	Center Support Assembly for Multiple Grates
SD-22	Catch Basin Face Plate Assembly and Protection Bar
SD-23	Drop Inlet Type F

SD-24.1	Drop Inlet Type G Type 2 C&G Only (Pg 1 Of 2)
SD-24.2	Drop Inlet Type G Type 2 C&G Only (Pg 2 Of 2)
SD-25	Modified Type J Inlet
SD-26	Drainage Inlet Type H
SD-27.1	Temporary Corrugated Metal Pipe Drainage Inlet Type I (Pg 1 Of 2)
SD-27.2	Temporary Corrugated Metal Pipe Drainage Inlet Type I (Pg 2 Of 2)
SD-28	Corrugated Pipe Fittings
SD-29	Pipe Connections
SD-30	Flexible Pipe to Manhole Connection
SD-31	Typical Ramp and Transition Detail
SD-32	Outlet Pipe Headwall and Apron
SD-33	Ditch Discharge Control and Apron
SD-34.1	Trash Rack 24"-36" Pipe (Sheet 1 of 4)
SD-34.2	Trash Rack 42" Pipe and Larger (Sheet 2 of 4)
SD-34.3	Trash Rack 42" Pipe and Larger (Sheet 3 of 4)
SD-34.4	Trash Rack Details (Sheet 4 of 4)
SD-35.1	Inlet Pipe Headwall Wingwall Structure (Sheet 1 Of 2)
SD-35.2	Inlet Pipe Headwall Wingwall Structure (Sheet 2 Of 2)
SD-36.1	Lined Channel Section (Sheet 1 Of 2)
SD-36.2	Lined Channel Section (Sheet 2 Of 2)
SD-37	Utility Stream Crossing

STREET LIGHTING

SL-1	Street Lighting Poles and Symbols
SL-2	Street Light Illumination Criteria
SL-3	Street Light Foundations
SL-4	Standard Pull Box
SL-5	Traffic-Rated Pull Box
SL-6	Base Location for Street Light
SL-7	Underground Service Installation
SL-8	Metered Service Pedestal (Can) (120/208v, 120/240v)
SL-9	Metered Service Pedestal (Can) With Step-Down Transformer (277/480v to 120/240v)
SL-10	In-Line Fuse Requirements
SL-11	2 - Wire Street Light System Wire Size and Voltage Drop Calculation
SL-12	3 - Wire Street Light System Wire Size and Voltage Drop Calculation
SL-13	Conduit, Service Wire and Breaker Sizing
SL-14	Common Type Electrolier
SL-15	Common Type Street Light Pole Spacing Guide
SL-16	Common Type Typical Locations Arterial Streets
SL-17	Common Type Typical Locations Collector and Residential Streets
SL-18	Street Light, Park and Path Light Luminaires

STORMWATER QUALITY

SQ-1	Stabilized Construction Site Access
SQ-2	Sediment Trap Stabilized Outlet
SQ-3	Fiber Rolls
SQ-4	Silt Fence
SQ-5	Concrete Washout
SQ-6	Inlet Sediment Control

SQ-7	Storm Drain Inlet Filter Bag
SQ-8	Erosion Control Blankets / Mats Channel Installation
SQ-9	Erosion Control Blankets / Mats Slope Installation
SQ-10.1	Drop Inlet Concrete Stamp (Sheet 1 of 2)
SQ-10.2	Drop Inlet Concrete Stamp (Sheet 2 of 2)

STREET

ST-1	Trench Backfilling and Resurfacing
ST-2	Trench Resurfacing When Fabric is Required
ST-3	Utility Pothole Repair
ST-4	General Notes
ST-5	Manhole Backfill Detail
ST-6	Typical Trench Compaction Detail
ST-7	Temporary Trench Resurfacing
ST-8	Trench Sections in Improved Areas Horticulture, Lawn, Or Cultivated Areas
ST-9	Widening Details for Thoroughfares at Various Street Intersections
ST-10	Widening Details for Arterials at Major Street Intersections
ST-11	Widening Details for Arterials at Collector Street Intersections
ST-12	Typical Striping for Collector Streets with Bicycle Lanes at Intersections with Arterial Streets
ST-13	Typical Striping for Arterial Intersections with Thoroughfares or Arterials
ST-14	Typical Striping for Arterial Intersections with Collectors
ST-15	Typical Striping for Thoroughfare Intersections with Thoroughfares or Arterials
ST-16	Typical Striping for Thoroughfare Intersections with Collectors
ST-17	Typical Raised Island Designs for Limiting Access
ST-18	Typical Sections Interim Improvements for Special Thoroughfare and Thoroughfare Streets with Rolled-In Rumble Strips
ST-19	Typical Sections Street Classes "A" & "C"
ST-20	Driveway Connection
ST-21	Private Road Connection
ST-22	Typical Street Sections at Residential Driveways
ST-23	Commercial Driveways Types A-6, A-7 & A-8
ST-24	Sidewalk Ramp for A-7 Driveways Without Additional R/W (Not for New Construction)
ST-25	Driveway Location Standards
ST-26	Cul-De-Sac
ST-27	Bulb-Out Detail
ST-28	90 Degree Intersection Elbow
ST-29	Minimum Sight Distance at Intersections and Non-Residential Driveways
ST-30	Visibility Requirements
ST-31	Bus Turnouts
ST-32	Bus Stop Details
ST-33	A.C. Conforms to New Sidewalk Ramp Re-Construction
ST-34	Typical Curb & Gutter Sections
ST-35	Cross Gutter
ST-36	Barrier Curb Detail
ST-37	Under Sidewalk Drain
ST-38	Separated (or Detached) Sidewalk Transition
ST-39	AC Sidewalk Conform
ST-40	Residential Corner Lot Driveway Location Residential or Collector Streets
ST-41	Pavement Widening Detail
ST-42	Standard Concrete Joint Details

ST-43	Street Survey Monument Well
ST-44.1	Street Closure Timber Barricade
ST-44.2	Street Closure Timber Barricade
ST-45	Signs and Barricades at Abrupt Change of Pavement Width
ST-46	Sidewalk Barricade
ST-47	Multi-Use Trail Connections at Driveways and Intersections
ST-48	Multi-Use Trail Connection at Mid-Block Crosswalk
ST-49	Micro-Trenching
ST-50.1	Residential and Rural Mini-Roundabout
ST-50.2	Rural Mini-Roundabout Island Striping Detail

TRAFFIC

T-1	Stop Sign and Stop Legend Location
T-2	Bollard Detail
T-3	Omitted
T-4	Omitted
T-5	Omitted
T-6	Omitted
T-7	Street Name Sign
T-8	Private Street Name Sign
T-9	Street Name Sign on Street Light Pole Placement Detail
T-10	Street Name Sign on Electroliers
T-11	Street Name Sign General Location
T-12	Street Sign Location
T-13	Sign Back Bracing
T-14	Bike Loop and Bike Legend Installation Detail
T-15	Mid-Block Crosswalk at Uncontrolled Locations
T-16	Typical Street Cross Sections 26', 38', and 48'
T-17	Typical Street Cross Sections 68' and 78'
T-18	Typical Street Cross Sections Frontage Road
T-19	20-Foot Street (Private Alley)
T-20	Class C Street Cross Section 40' Rural Local
T-21	Class C Street Cross Section 50 Rural Collector
T-22	Class C Street Cross Section 60' Rural Arterial
T-23	Pedestrian Lane with Bike Barrier
T-24	Concrete Foundation for Type P Controller Cabinet and Type III Service Cabinet
T-25	(Edge-Lit LED) Internally Illuminated Street Name Sign
T-26	IISNS Support Arm Typical Clamp Detail
T-27	Conduit, Service Wire and Breaker Sizing
T-28	Typical Detector Loop Layouts
T-29	Type "B" Detector Handhole Detail
T-30	Interconnect Terminal Cabinet and Pedestrian Signal Controller Cabinet Details
T-31	Accessible Pedestrian Signal System
T-32	CCTV IP Dome Camera (Signal Pole Mounted)
T-33.1	Traffic Signal Mast Arm Sign Assembly (1 of 2)
T-33.2	Traffic Signal Mast Arm Sign Assembly (2 of 2)
T-34	Stop Bar Location

WATER

W-1	Fire Hydrant
W-2	Special Fire Hydrant
W-3	Thrust Block
W-4	Water Valve Box
W-5	Locating Wire for Water Mains & Services
W-6	1in Water Service Main Connection
W-7	1.5in & 2in Water Service Main Connection
W-8	Dead-End Water Main
W-9	Blowoff Hydrant
W-10	Reduced Pressure Backflow Preventer for 1-2in Water Services
W-11	Backflow Preventer
W-12	Testing Block & Bypass
W-13	Thrust Block for Flange Cross
W-14	Double Combination Air Valve to be Used on Pipes 14 in. and Greater
W-15	Single Combination Air Valve to be Used on Pipes 12 in. and Smaller
W-16	Below Ground Installation Combination Air Valve
W-17	Fire Service Connection
W-17.1	Special Fire Service Connection
W-18	Side Mounted Resilient Wedge Gate Valve
W-19	Backflow Preventer Schematic
W-20	1in Dual Water Service

1) SIDEWALK TRANSITIONS

- a. LOCATED ADJACENT TO THE TOP OF RAMP AS NEEDED
- b. 48" MINIMUM WIDTH
- c. 1.5% (1:66) MAXIMUM CROSS SLOPE
- d. 4.5% (1:22) MAXIMUM PARALLEL SLOPE

2) LANDINGS

- a. LOCATED ABOVE OR BELOW RAMP (AS SHOWN IN DETAILS)
- b. 48" MINIMUM CLEAR SPACE IN ALL DIRECTIONS
- c. 1.5% (1:66) MAXIMUM PARALLEL AND CROSS SLOPE

3) RAMPS

- a. LOCATED ABOVE PAN OR BELOW LANDING
- b. 48" MINIMUM WIDTH
- c. 1.5% (1:66) MAXIMUM CROSS SLOPE
- d. 7.5% (1:13) MAXIMUM SLOPE
- e. ALL RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE (TRUNCATED DOMES) AND SHALL BE PLACED ON THE RAMP UNLESS THE RAMP IS CONNECTED TO A PAN.
- f. TRANSITION TO GUTTER SHALL BE FLUSH AND FREE OF ABRUPT CHANGES
- g. GRADE BREAKS SHALL BE PERPENDICULAR TO DIRECTION OF RAMP RUN

4) PANS

- a. LOCATED BELOW RAMP (AS SHOWN IN DETAILS)
- b. 60" MINIMUM AT BACK OF PAN
- c. 54" MINIMUM FROM BACK OF PAN TO FLOW LINE
- d. 1.5% (1:66) MAXIMUM CROSS SLOPE
- e. ON CORNERS, PAN BOUNDARIES ARE TO BE RADIAL
- f. TRANSITIONS TO GUTTER SHALL BE FLUSH AND FREE OF ABRUPT CHARGES.
- g. ALL PANS SHALL HAVE A DETECTABLE WARNING SURFACE (TRUNCATED DOMES).

5) FLARES

- a. LOCATED ADJACENT TO RAMP (AS SHOWN IN DETAILS)
- b. REQUIRED BETWEEN RAMPS WHERE THERE IS NO PLANTER AREA
- c. REQUIRED ON THE EXTERIOR OF RAMPS WHERE THERE IS AN ADJACENT CONCRETE SIDEWALK, REGARDLESS OF OBSTACLES
- d. SHALL ALSO HAVE AT LEAST 24" LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN MARKED CROSSINGS.
- e. GENERALLY TRIANGULAR IN NATURE
- f. 9% (1:11) MAXIMUM SLOPE WHEN NOT IN THE PATH OF TRAVEL
- g. 7.5% (1:13) MAXIMUM SLOPE WHEN FLARE IS IN THE PATH OF TRAVEL

6) GUTTERS

- a: ADJACENT TO RAMP OR PAN
- b: 4.5% (1:22) MAXIMUM SLOPE FOR 4' OUT FROM FLOW LINE
- c: TRANSITION TO RAMP OR PAN SHALL BE FLUSH AND FREE OF ABRUPT CHANGES

7) RETAINING CURBS

- a: REQUIRED ADJACENT TO SIDEWALK TRANSITIONS, LANDINGS, RAMPS AND PANS WHERE THE EXISTING LANDSCAPE (PLANTER AREA) IS 1" OR HIGHER AT ANY POINT ABOVE THE NEWLY CONSTRUCTED CURB RAMP ELEMENT
- b: REQUIRED FOR EXISTING PLANTER AREAS BETWEEN RAMPS
- c: RETAINING CURBS ARE TO HAVE A 6" WIDTH AND A VERTICAL FACE
- d: RETAINING CURB FOUNDATIONS ARE TO EXTEND 8" BELOW THE ADJACENT RAMP ELEMENT SURFACE
- e: OUTSIDE CORNERS OF RETAINING CURBS MUST HAVE A 6" RADIUS

8) DETECTABLE WARNINGS

- a: PLACEMENT OF DETECTABLE WARNINGS SHALL BE PER DRAWINGS AR-4
- b: 6"-8" FROM THE FLOW LINE
- c: 3' DEPTH X FULL WIDTH
- d: DETECTABLE WARNING REQUIREMENTS, SEE AR-3

GENERAL NOTES:

1. DIRECTIONAL CURB RAMPS ARE REQUIRED UNLESS OTHERWISE APPROVED BY THE DIRECTOR.
2. ALL ELEMENTS, EXCEPT GUTTERS AND RETAINING CURBS, MUST BE CONSTRUCTED PLANAR IN NATURE WITH WEAKENED PLANE JOINTS SCORED BETWEEN EACH ELEMENT.
3. OPPOSING CURB RAMPS SHALL ALIGN UNLESS OTHERWISE APPROVED BY THE DIRECTOR.
4. THESE ELEMENTS, DEFINITIONS AND STANDARDS, GENERAL DETAILS, AND STANDARD DRAWINGS SHALL APPLY TO ALL CURB AND GUTTER TYPES.
5. THERE ARE VARIATIONS AND ADJUSTMENTS THAT MAY BE REQUIRED UPON THE APPROVAL OF THE DIRECTOR.
6. REFERENCES TO MAXIMUM CROSS SLOPE OF 1.5% ARE INTENDED TO ALLOW FOR NORMAL CONSTRUCTION TOLERANCES IN AN EFFORT TO KEEP THE ACTUAL CONSTRUCTED CROSS SLOPE TO LESS THAN THE REQUIRED ADA STANDARD OF 2.0% MAXIMUM CROSS SLOPE. ANY INSTALLATIONS OF CROSS SLOPES GREATER THAN 2.0% WILL BE UNACCEPTABLE.

COUNTY OF SUTTER - ENGINEERING

**CURB RAMP ELEMENTS
DEFINITIONS AND STANDARDS**

APPROVED BY:



DEVELOPMENT SERVICES DIRECTOR

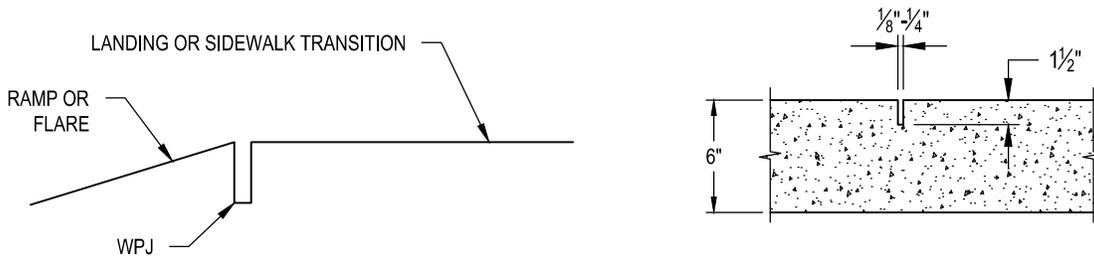
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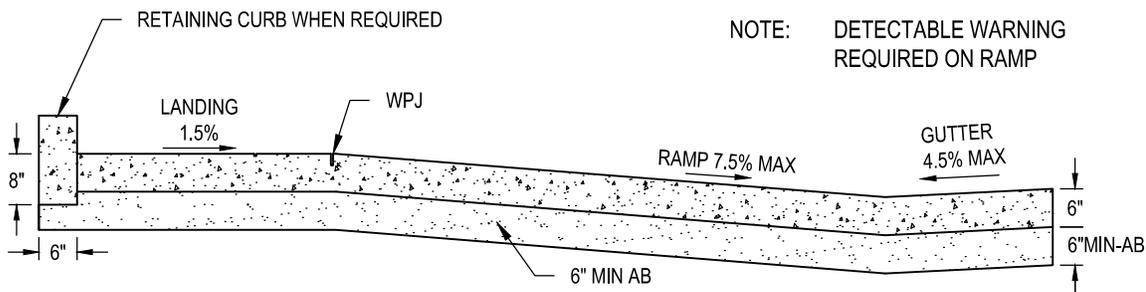


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AR-1

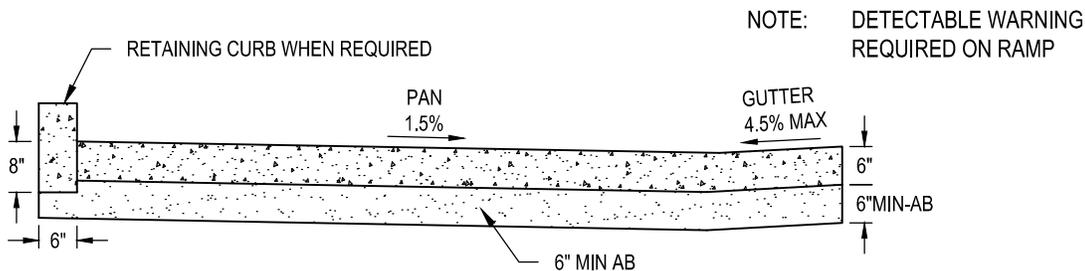


WEAKENED PLANE JOINT (WPJ)



NOTE: DETECTABLE WARNING REQUIRED ON RAMP

TYPICAL CROSS SECTION FOR CENTER LINE OF FLARE, COMBO OR PLANTER STRIP CURB RAMP



NOTE: DETECTABLE WARNING REQUIRED ON RAMP

TYPICAL CROSS SECTION FOR CENTER LINE OF PAN CURB RAMP

NOTES:

1. SURFACE OF RAMPS AND PANS SHALL HAVE A TRANSVERSE BROOM SURFACE TEXTURE ROUGHER THAN ADJACENT SIDEWALK.
2. COLORING SHALL BE ADDED TO NEW CONCRETE AS NECESSARY TO MATCH EXISTING COLOR

COUNTY OF SUTTER - ENGINEERING

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ULPJ

DEVELOPMENT SERVICES DIRECTOR

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CURB RAMP GENERAL DETAILS

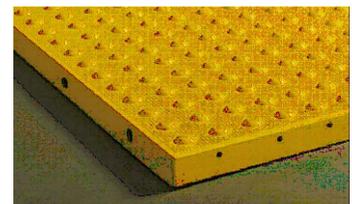


DRAWING NUMBER

AR-2

APPROVED CBC DETECTABLE WARNINGS MUST MEET THE FOLLOWING CRITERIA:

1. A WRITTEN 5 YEAR PRODUCT WARRANTY FOR SHAPE, COLOR FASTNESS, SOUND-ON-CANE ACOUSTIC QUALITY, RESILIENCE, AND ATTACHMENT:
 - A. SHAPE: MUST BE ABLE TO RETAIN ITS ORIGINAL SHAPE WHEN SUBJECTED TO VARYING DEGREES OF TEMPERATURE, MOISTURE, PRESSURE, OR OTHER STRESS.
 - B. COLOR FASTNESS: THE ABILITY OF THE MATERIAL OR COATING TO RETAIN ITS ORIGINAL HUE WITHOUT FADING OR CHANGING WHEN EXPOSED TO ENVIRONMENTAL CONDITIONS.
 - C. SOUND-ON-CANE ACOUSTIC QUALITY: THE ABILITY OF A MATERIAL TO RETAIN ITS ORIGINAL SOUND CHARACTERISTICS WHEN IMPACTED BY AN OBJECT.
 - D. RESILIENCE: THE ABILITY OF THE MATERIAL TO ABSORB ENERGY WHEN DEFORMED ELASTICALLY WITHOUT CREATING A PERMANENT DEFORMATION.
 - E. ATTACHMENT: ATTACHMENT WILL NOT DEGRADE SIGNIFICANTLY FOR AT LEAST FIVE (5) YEARS AFTER INITIAL INSTALLATION - MEANING THE PRODUCT MAINTAINS AT LEAST 90% OF ORIGINAL PRODUCT AND BOND. BOLT DOWN PRODUCTS SHALL NOT BE USED.
2. CONFIRMATION - A WRITTEN DIMENSIONAL SPECIFICATIONS OF THE TRUNCATED DOMES AND RAISED BARS AS SPECIFIED IN THE CODES - SEE BELOW DIMENSIONS.
 - A. BASE DIAMETER: 0.9" TO 0.92"
 - B. TOP DIAMETER: 0.45" TO 0.47"
 - C. CENTER-TO-CENTER SPACING: 2.3" TO 2.4"
 - D. HEIGHT: 0.18" TO 0.22"
3. LIGHT ON DARK OR DARK ON LIGHT: 70% CONTRAST WITH ADJOINING SURFACES - CONTRAST = $[(B1-B2)/B1] \times 100$ PERCENT WHERE B1=LIGHT REFLECTANCE VALUE (LRV) OF THE LIGHTER AREA, B2=LIGHT REFLECTANCE VALUE (LRV) OF THE DARKER AREA.
4. METHODS OF INSTALLATIONS: CAST-IN-PLACE (REQUIRED FOR ALL NEW CONSTRUCTION) OR SURFACE MOUNT (RETROFIT ONLY).
5. SIZE: 3-FOOT DEPTH BY FULL WIDTH
6. COLOR: COLOR SHALL BE YELLOW COLOR NO. 33538 OF FED-STD-595 UNLESS SPECIFIED OTHERWISE.
7. APPROVAL: ARMOR-TILE OR EQUAL AS APPROVED BY DIRECTOR.



COUNTY OF SUTTER - ENGINEERING

**DETECTABLE WARNING
SPECIFICATIONS**

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DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

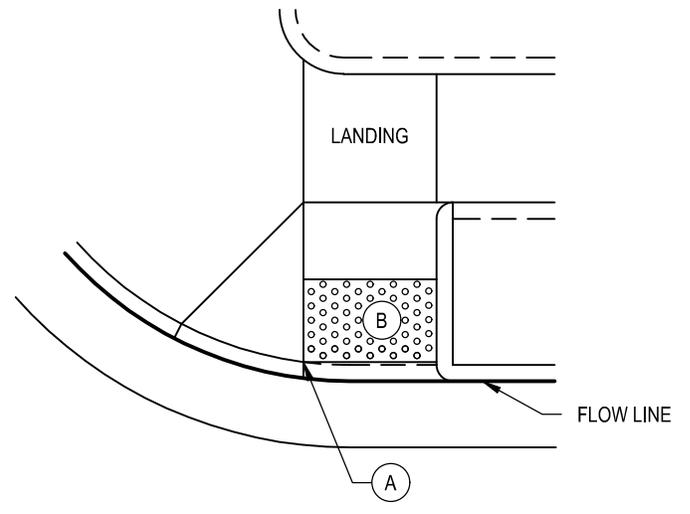
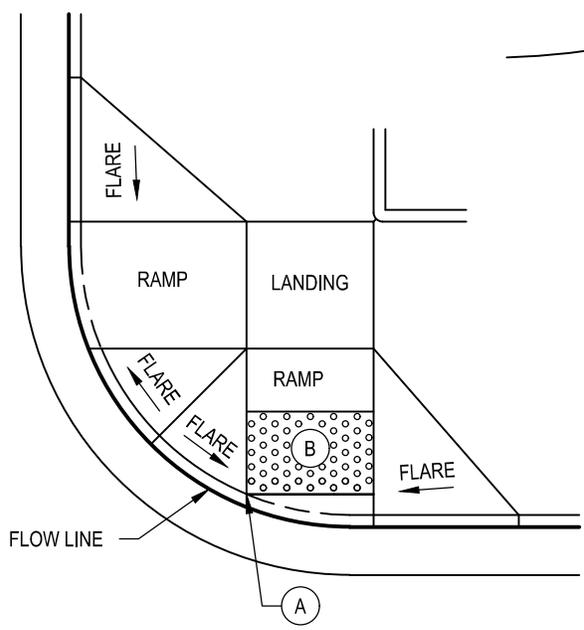
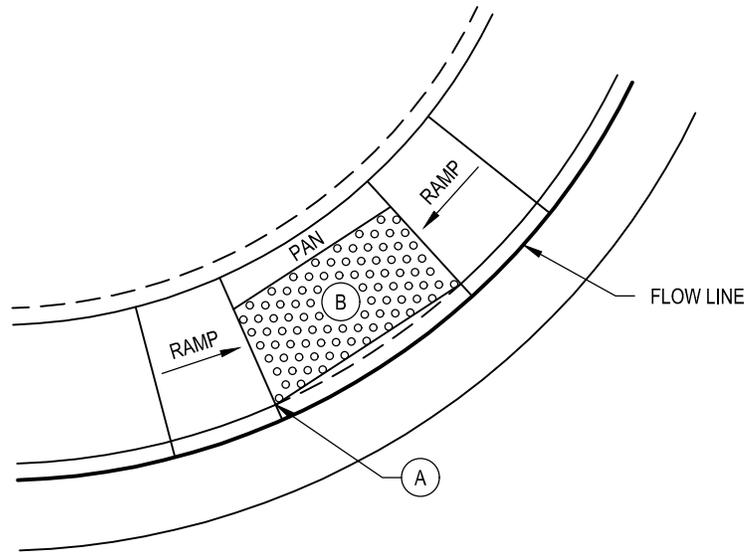
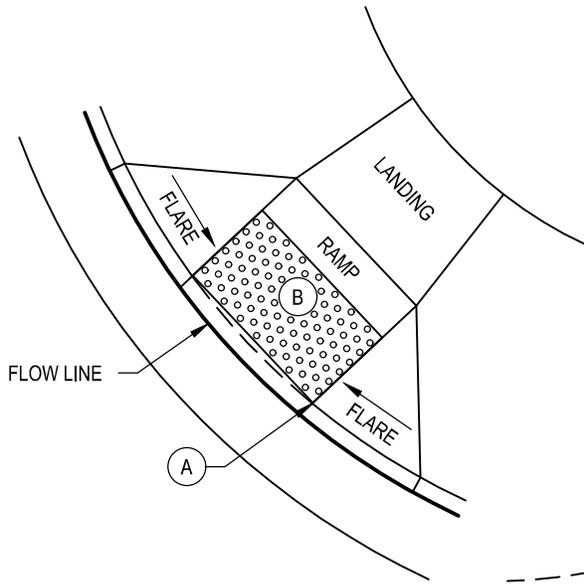


DRAWING NUMBER

AR-3

CONSTRUCTION KEYNOTES

- A CLOSEST CORNER OF DETECTABLE WARNING TO STREET TO BE SET 6" FROM FLOW LINE.
- B 3' DEPTH X WIDTH DETECTABLE WARNING TO BE CENTERED AND SQUARED ON RAMP



COUNTY OF SUTTER - ENGINEERING

DETECTABLE WARNING STANDARD LAYOUT

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DEVELOPMENT SERVICES DIRECTOR

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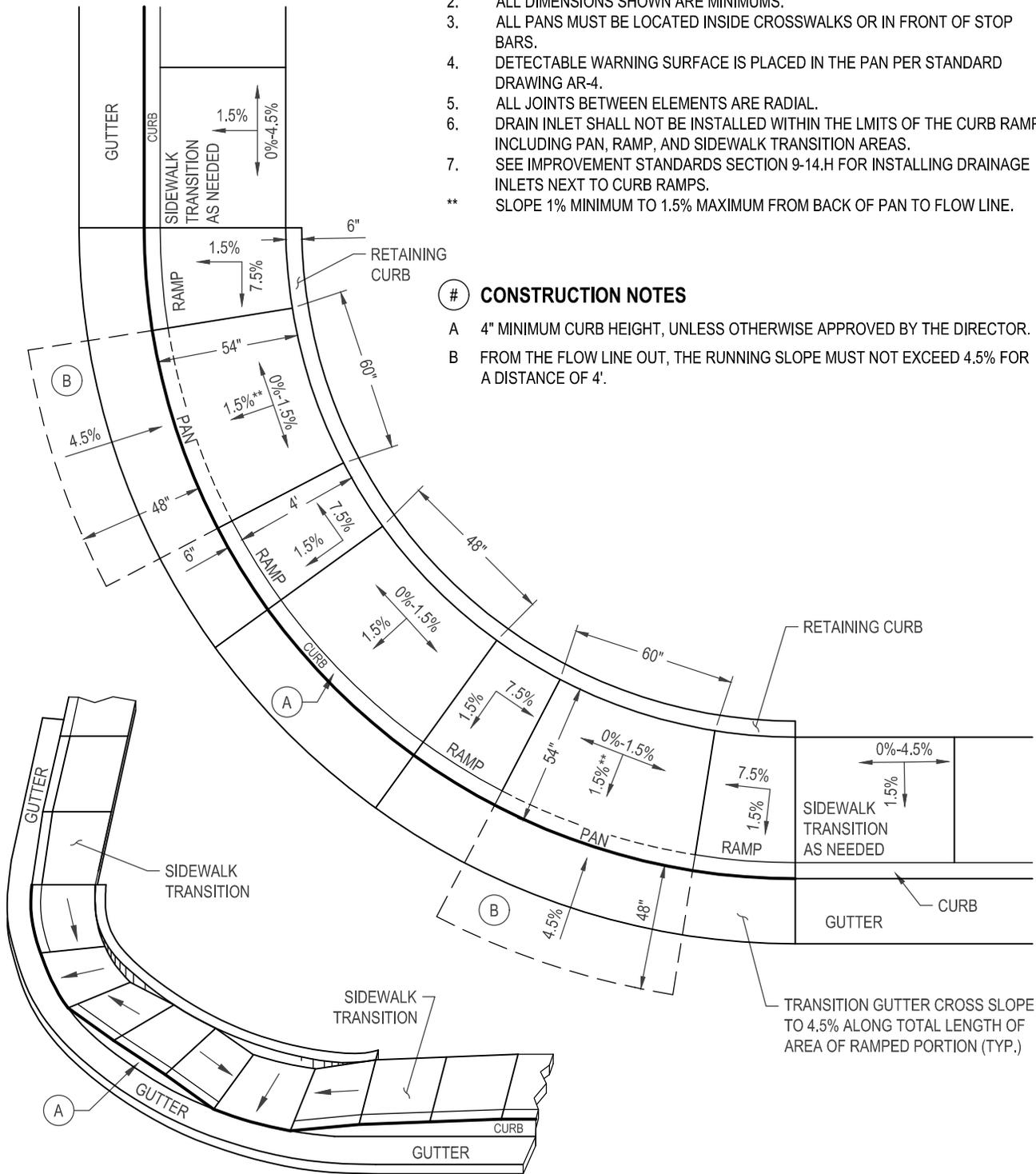
AR-4

NOTES:

1. ALL SLOPES SHOWN ARE MAXIMUMS.
2. ALL DIMENSIONS SHOWN ARE MINIMUMS.
3. ALL PANS MUST BE LOCATED INSIDE CROSSWALKS OR IN FRONT OF STOP BARS.
4. DETECTABLE WARNING SURFACE IS PLACED IN THE PAN PER STANDARD DRAWING AR-4.
5. ALL JOINTS BETWEEN ELEMENTS ARE RADIAL.
6. DRAIN INLET SHALL NOT BE INSTALLED WITHIN THE LIMITS OF THE CURB RAMP INCLUDING PAN, RAMP, AND SIDEWALK TRANSITION AREAS.
7. SEE IMPROVEMENT STANDARDS SECTION 9-14.H FOR INSTALLING DRAINAGE INLETS NEXT TO CURB RAMPS.
- ** SLOPE 1% MINIMUM TO 1.5% MAXIMUM FROM BACK OF PAN TO FLOW LINE.

CONSTRUCTION NOTES

- A 4" MINIMUM CURB HEIGHT, UNLESS OTHERWISE APPROVED BY THE DIRECTOR.
- B FROM THE FLOW LINE OUT, THE RUNNING SLOPE MUST NOT EXCEED 4.5% FOR A DISTANCE OF 4'.



TRANSITION GUTTER CROSS SLOPE TO 4.5% ALONG TOTAL LENGTH OF AREA OF RAMPED PORTION (TYP.)

COUNTY OF SUTTER - ENGINEERING

DUAL PAN CURB RAMPS

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

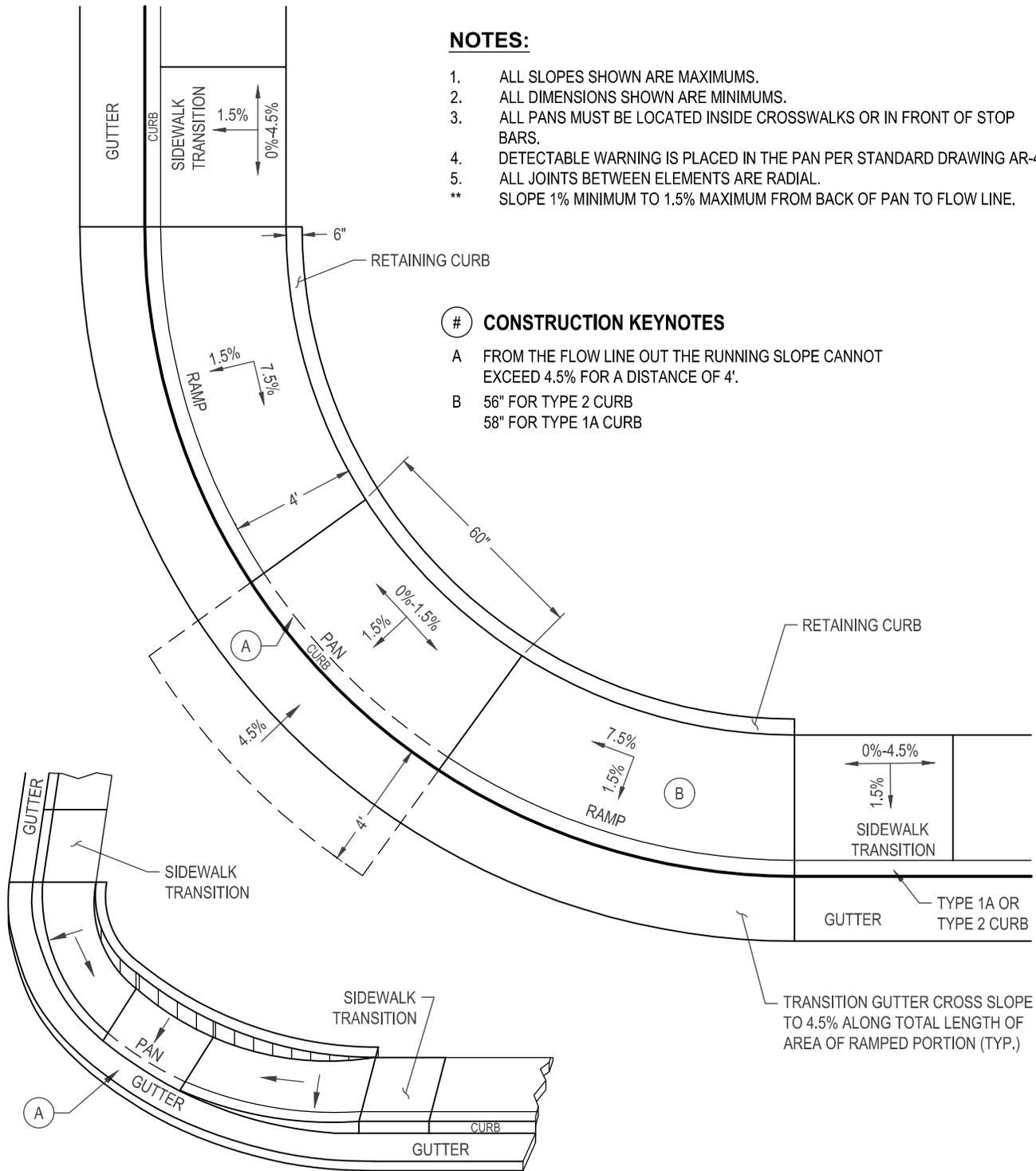
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DRAWING NUMBER

AR-5



NOTES:

1. ALL SLOPES SHOWN ARE MAXIMUMS.
2. ALL DIMENSIONS SHOWN ARE MINIMUMS.
3. ALL PANS MUST BE LOCATED INSIDE CROSSWALKS OR IN FRONT OF STOP BARS.
4. DETECTABLE WARNING IS PLACED IN THE PAN PER STANDARD DRAWING AR-4.
5. ALL JOINTS BETWEEN ELEMENTS ARE RADIAL.
- ** SLOPE 1% MINIMUM TO 1.5% MAXIMUM FROM BACK OF PAN TO FLOW LINE.

CONSTRUCTION KEYNOTES

- A FROM THE FLOW LINE OUT THE RUNNING SLOPE CANNOT EXCEED 4.5% FOR A DISTANCE OF 4'.
- B 56" FOR TYPE 2 CURB
58" FOR TYPE 1A CURB

TRANSITION GUTTER CROSS SLOPE TO 4.5% ALONG TOTAL LENGTH OF AREA OF RAMPED PORTION (TYP.)

COUNTY OF SUTTER - ENGINEERING

**SINGLE PARALLEL CURB RAMP
FOR UNCONTROLLED
T-INTERSECTIONS**

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DATE



DRAWING NUMBER

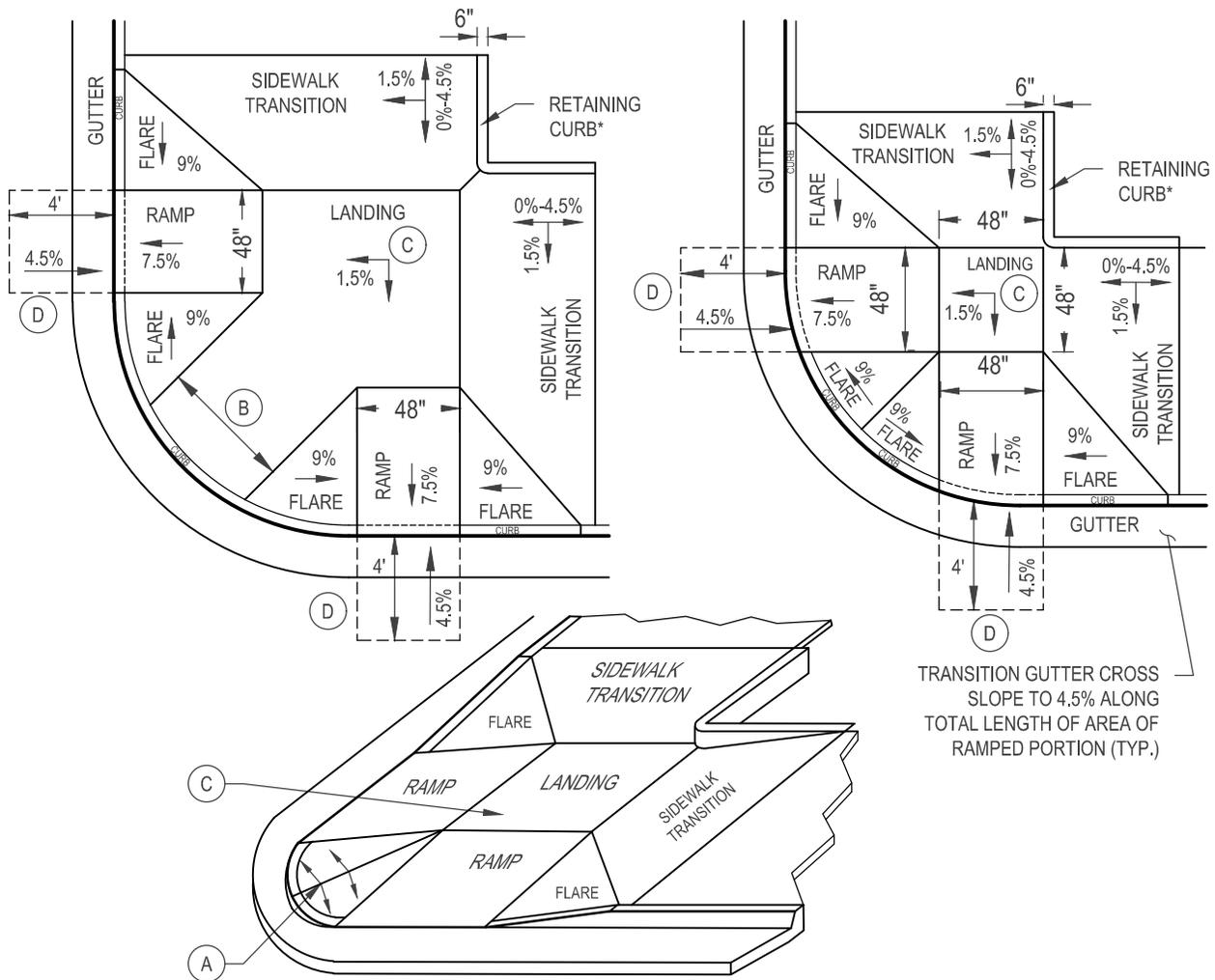
AR-6

NOTES:

1. ALL SLOPES SHOWN ARE MAXIMUMS.
2. ALL DIMENSIONS SHOWN ARE MINIMUMS.
3. THE RAMP MUST BE LOCATED INSIDE CROSSWALKS OR PRIOR TO STOP BARS.
4. DETECTABLE WARNING SURFACE IS PLACED IN THE RAMP PER STANDARD DRAWING AR-4.
5. IF THE FLARE IS IN THE PATH OF TRAVEL THEN THE SLOPE SHALL NOT EXCEED 7.5%.

CONSTRUCTION NOTES

- A 4" MINIMUM CURB HEIGHT DESIRABLE - 9% MAX SLOPE CONTROLS CURB HEIGHT, UNLESS OTHERWISE APPROVED BY THE DIRECTOR.
- B NO MINIMUM DIMENSION. FLARES MAY INTERSECT.
- C ALL RAMPS WILL HAVE A MINIMUM OF 48" X 48" LANDING. TWO RAMPS CAN SHARE ONE LANDING.
- D FROM THE FLOW LINE OUT THE RUNNING SLOPE CANNOT EXCEED 4.5% FOR A DISTANCE OF 4'.



COUNTY OF SUTTER - ENGINEERING

DUAL FLARE CURB RAMPS

APPROVED BY:

ULP
DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

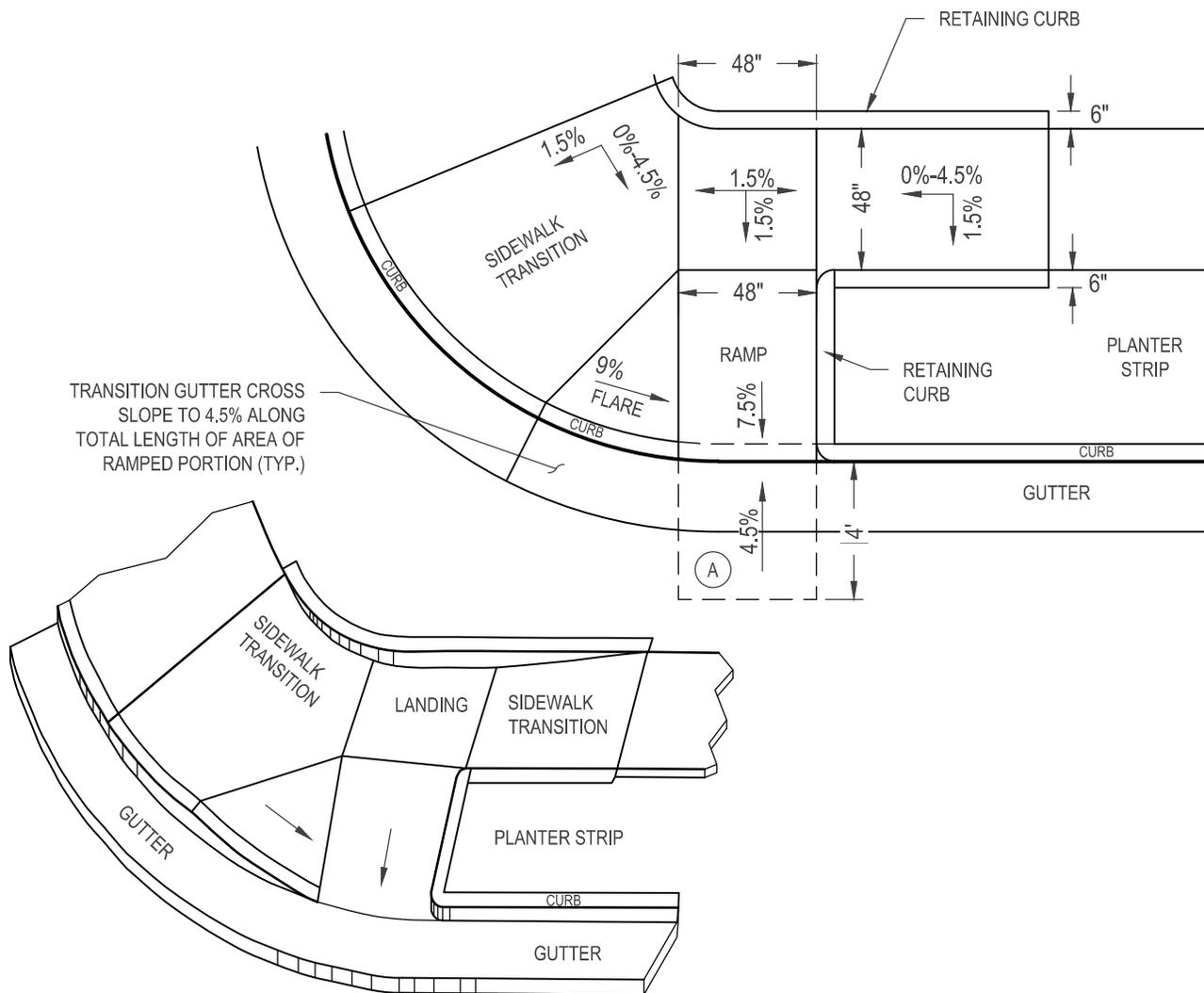
AR-7

NOTES:

1. ALL SLOPES SHOWN ARE MAXIMUMS.
2. ALL DIMENSIONS SHOWN ARE MINIMUMS.
3. RAMP MUST BE LOCATED INSIDE CROSSWALKS OR IN FRONT OF STOP BARS.
4. DETECTABLE WARNING SURFACE IS PLACED IN THE RAMP PER STANDARD DRAWING AR-4.
5. IF THE FLARE IS IN THE PATH OF TRAVEL THEN THE SLOPE SHALL NOT EXCEED 7.5%.
6. ALL JOINTS BETWEEN ELEMENTS, EXCEPT BETWEEN RAMP AND FLARE ARE RADIAL. RAMP WIDTH REMAINS CONSTANT.
7. SINGLE RAMPS SHALL BE CONSTRUCTED PARALLEL TO CROSSING DIRECTION.

CONSTRUCTION KEYNOTES

- A FROM THE FLOWLINE OUT THE RUNNING SLOPE CANNOT EXCEED 4.5% FOR A DISTANCE OF 4'.



COUNTY OF SUTTER - ENGINEERING

SINGLE COMBINATION CURB RAMP

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

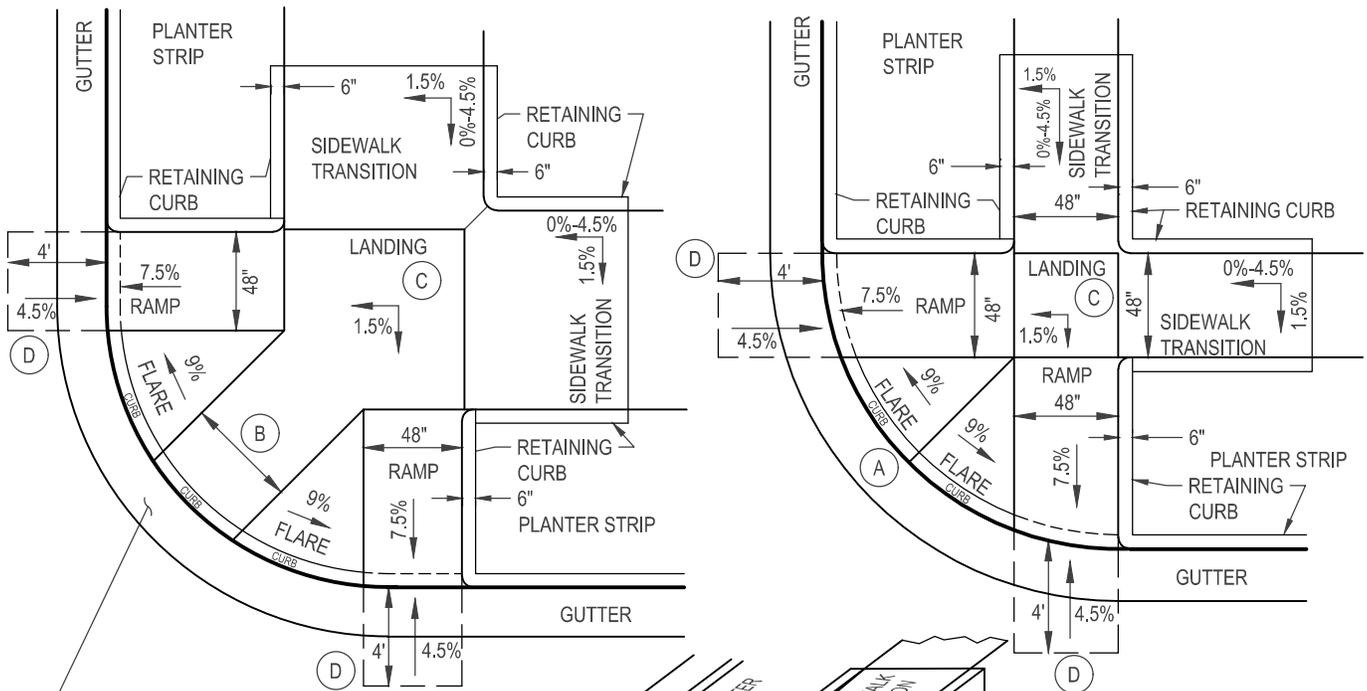
4/3/2025

DATE

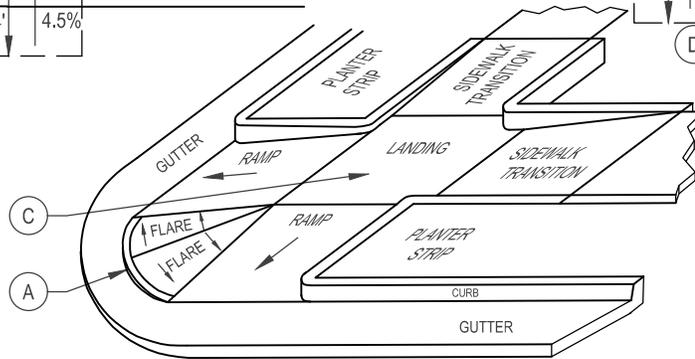


DRAWING NUMBER

AR-8



TRANSITION GUTTER CROSS SLOPE TO 4.5% ALONG TOTAL LENGTH OF AREA OF RAMPED PORTION (TYP.)



NOTES:

1. ALL SLOPES SHOWN ARE MAXIMUMS.
2. ALL DIMENSIONS SHOWN ARE MINIMUMS.
3. THE RAMP MUST BE LOCATED INSIDE CROSSWALKS OR IN FRONT OF STOP BARS.
4. DETECTABLE WARNING IS PLACED IN THE RAMP PER STANDARD DRAWING AR-4.
5. IF THE FLARE IS IN THE PATH OF TRAVEL THEN THE SLOPE SHALL NOT EXCEED 7.5%.

CONSTRUCTION NOTES

- A 4" MINIMUM CURB HEIGHT DESIRABLE 9% MAX SLOPE CONTROLS CURB HEIGHT, UNLESS OTHERWISE APPROVED BY THE DIRECTOR.
- B NO MINIMUM DIMENSION. FLARES MAY INTERSECT.
- C ALL RAMPS WILL HAVE A MINIMUM OF 48" X 48" LANDING. TWO RAMPS CAN SHARE ONE LANDING.
- D FROM THE FLOWLINE OUT THE RUNNING SLOPE CANNOT EXCEED 4.5% FOR A DISTANCE OF 4'.

COUNTY OF SUTTER - ENGINEERING

DUAL FLARED PERPENDICULAR CURB RAMPS

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

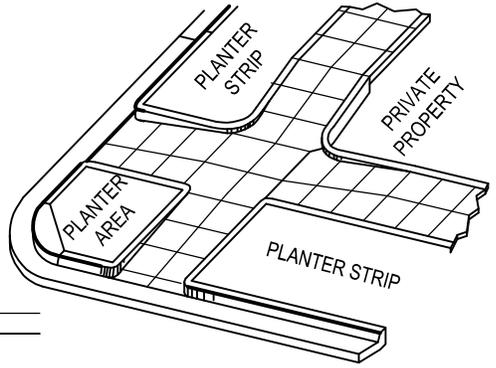
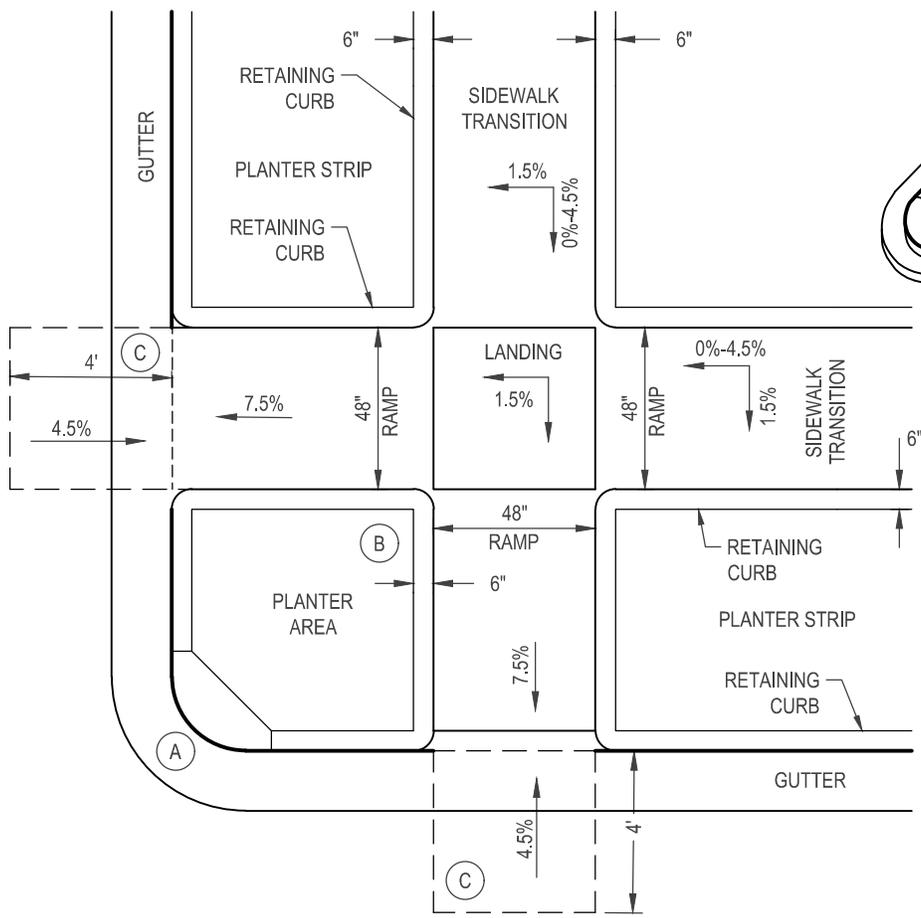
4/3/2025

DATE



DRAWING NUMBER

AR-9



NOTES:

1. ALL SLOPES SHOWN ARE MAXIMUMS.
2. ALL DIMENSIONS SHOWN ARE MINIMUMS.
3. ALL RAMPS MUST BE LOCATED INSIDE CROSSWALKS OR IN FRONT OF STOP BARS.
4. DETECTABLE WARNING IS PLACED IN THE RAMP PER STANDARD DRAWING AR-4.
5. ADD LAMP BLACK TO NEW CONCRETE AS DIRECTED BY DIRECTOR. MATCH EXISTING COLOR.

CONSTRUCTION NOTES

- A STANDARD CURB HEIGHT TO MATCH EXISTING.
- B TOP OF RETAINING CURB TO MATCH ADJACENT RETAINING CURB. ELEVATIONS CAN BE FLUSH WITH LANDING.
- C FROM THE FLOW LINE OUT THE RUNNING SLOPE CANNOT EXCEED 4.5% FOR A DISTANCE OF 4'.

COUNTY OF SUTTER - ENGINEERING

PLANTER STRIP CURB RAMPS

APPROVED BY:

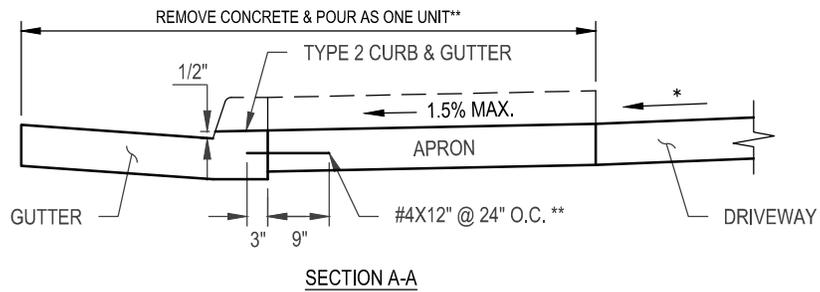
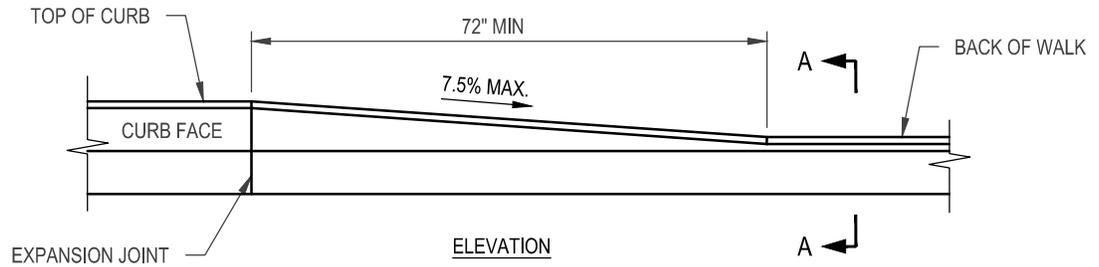
 DEVELOPMENT SERVICES DIRECTOR

4/3/2025
 DATE



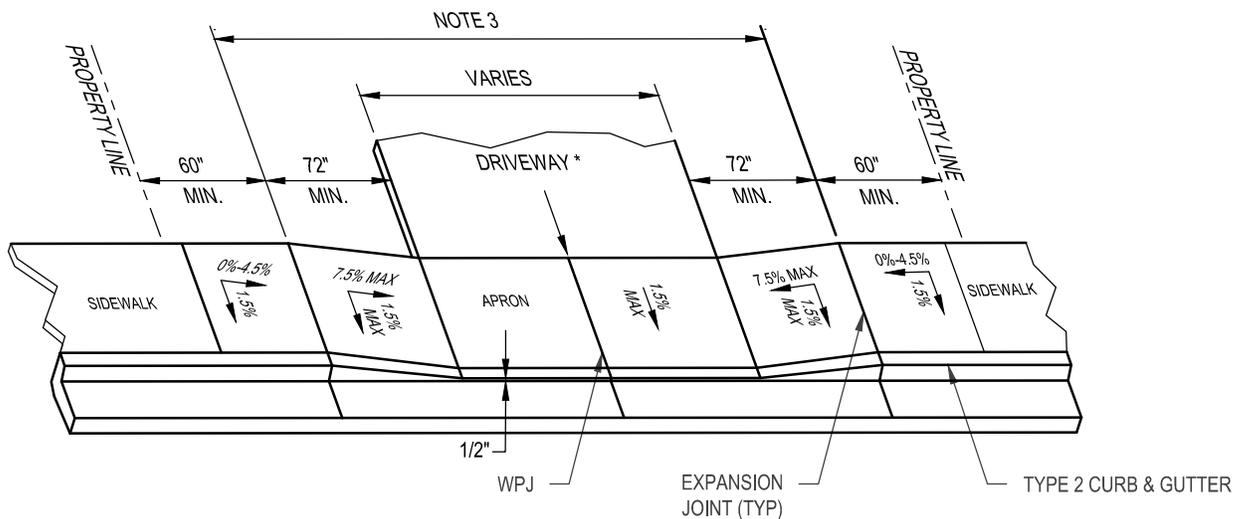
DRAWING NUMBER

AR-10



NOTES:

1. DRIVEWAY WIDTH AS PER COUNTY CODE.
 2. WEAKENED PLANE JOINTS (WPJ) REQUIRED ON CENTERLINE FOR DRIVEWAYS 10' TO 20' WIDE. DRIVEWAYS 22' TO 35' WIDE SHALL HAVE TWO WPJ EVENLY SPACED AT 1/3 AND 2/3 POINTS.
 3. THICKNESS OF APRONS SHALL BE 6" ON BOTH RESIDENTIAL & COMMERCIAL DRIVEWAYS.
 4. APRON WILL BE DEPRESSED ON CURB AND GUTTER WHEN RECONSTRUCTING EXISTING COMMERCIAL DRIVEWAYS.
- * SEE SECTION 4-7(G) OF IMPROVEMENT STANDARDS
 ** IF CURB & GUTTER ARE POURED SEPARATE OF APRON THEN DOWELS ARE REQUIRED AT BACK OF CURB.



COUNTY OF SUTTER - ENGINEERING

SIDEWALK DRIVEWAY DETAIL

APPROVED BY:

ULPJ
 DEVELOPMENT SERVICES DIRECTOR

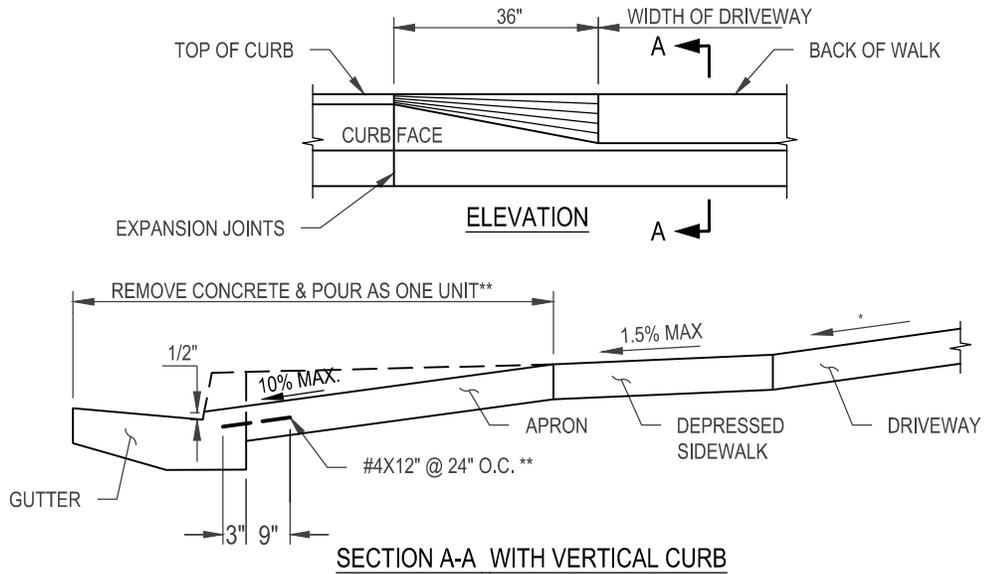
4/3/2025

DATE



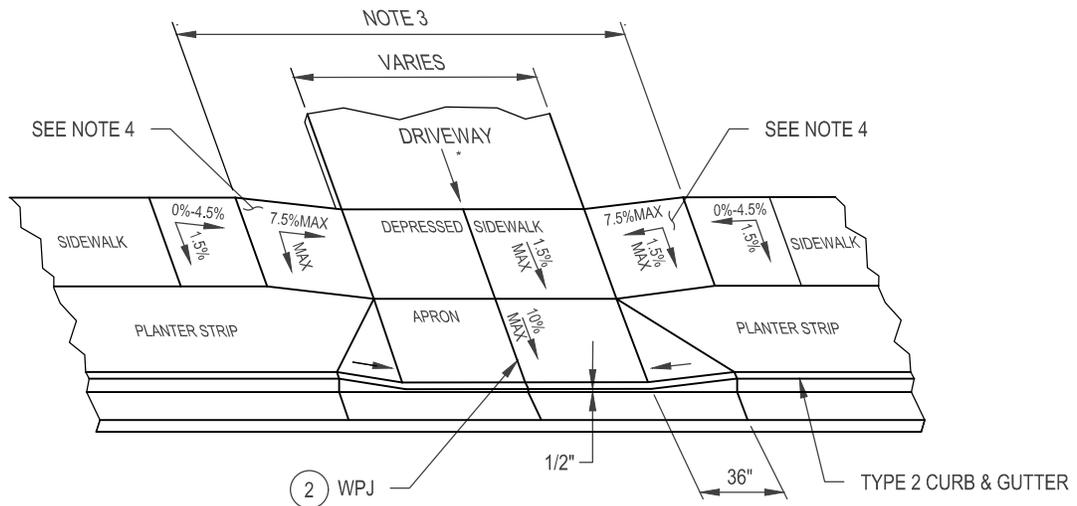
DRAWING NUMBER

AR-11



NOTES:

1. DRIVEWAY WIDTH AS PER COUNTY CODE..
 2. WEAKENED PLANE JOINTS (WPJ) REQUIRED ON CENTERLINE FOR DRIVEWAYS 10' TO 20' WIDE. DRIVEWAYS 22' TO 35' WIDE SHALL HAVE TWO WPJ EVENLY SPACED AT 1/3 AND 2/3 POINTS.
 3. THICKNESS OF APRONS SHALL BE 6".
 4. ELIMINATE IN COMMERCIAL DRIVEWAY. PROVIDE 4.5% MAX SLOPE BETWEEN SIDEWALK AND DEPRESSED SIDEWALK.
- * SEE SECTION 4-7(G) OF IMPROVEMENT STANDARDS
 ** IF CURB & GUTTER ARE POURED SEPARATE OF APRON THEN DOWELS ARE REQUIRED AT BACK OF CURB.



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

DATE

PLANTER STRIP DRIVEWAY DETAIL



DRAWING NUMBER

AR-12

SUTTER COUNTY PLAN APPROVAL BLOCK

SUTTER COUNTY DEVELOPMENT SERVICES DEPARTMENT
(PUT PROJECT NAME HERE)
WDID No.:
SUTTER COUNTY PLANNING PROJECT NO.:
APPROVED FOR CONSTRUCTION BY:
_____ NEAL HAY, DIRECTOR OF DEVELOPMENT SERVICES - SUTTER COUNTY DATE

1. PROJECT NAME SHALL BE IN 10 POINT ARIAL FONT.
2. APPROVAL BLOCK SHALL BE LOCATED AT THE LOWER RIGHT CORNER OF TITLE SHEET, WITHIN BOTTOM 6 INCHES AND RIGHT 8 INCHES OF PAGE.

PLAN REVISION BLOCK

REV. NO.	DESCRIPTION	ENGR INIT.	COUNTY APPROVAL	
			BY	DATE



1. PUT REVISION BLOCK ON ALL SHEETS.

OTHER AGENCY APPROVAL BLOCKS

INCLUDE ON PLANS AS NECESSARY

APPROVED BY:

SUTTER COUNTY FIRE CHIEF DATE

APPROVED BY:

SUTTER COUNTY WATER AGENCY DATE

APPROVED BY:

GOLDEN STATE WATER COMPANY DATE

APPROVED BY:

GILSIZER DRAINAGE DISTRICT DATE

APPROVED BY:

SACRAMENTO AREA SEWER DISTRICT DATE

APPROVED BY:

RECLAMATION DISTRICT 1000 DATE

APPROVED BY:

SUTTER COMMUNITY SERVICE DISTRICT DATE

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:
DEVELOPMENT SERVICES DIRECTOR DATE

APPROVAL BLOCKS

DRAWING NUMBER **D-1**

DRAFTING STANDARDS

ALL SUBDIVISION PLANS, CONSTRUCTION DRAWINGS, & PROPERTY PLATS SUBMITTED TO THE CITY ENGINEER FOR CONSIDERATION SHALL CONFORM TO AND BE PREPARED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

1. **ALL LETTERING**, OTHER THAN THAT HEREIN SPECIFIED OR SHOWN BELOW, SHALL BE A MINIMUM OF 0.100 INCH IN HEIGHT AND USING 0.01" LINE WIDTH, OR EQUAL.

2. **SUBDIVISION PLANS**

		<u>LINE WIDTH</u>
STREET CENTER LINES (CENTER)	— — — — —	0.25mm (.010") WIDTH
RADIAL BEARING LINES	—————	0.15mm (.006") WIDTH
EASEMENT LINES (DASHED)	- - - - -	0.25mm (.010") WIDTH
LOT LINES	—————	0.25mm (.010") WIDTH
RIGHT-OF-WAY LINES (PHANTOM)	- - - - -	0.40mm (.016") WIDTH
BLOCK OUTLINE	—————	0.40mm (.016") WIDTH
SUBDIVISION OUTLINE	—————	0.50mm (.020") WIDTH
CALCULATED POINT, NOTHING SET	○	
MONUMENTS SET (DESCRIBE)	⊗	
MONUMENTS SET IN MONUMENT WELL	⊙	
MONUMENTS FOUND AS NOTED	✱	
MONUMENTS FOUND IN MONUMENT WELL	●	
BENCH MARK ELEVATION	⊕	
STREET NAMES	NAME	LETTERS 0.180" HIGH AND 0.04" LINE WIDTH
LOT NUMBERS	36	LETTERS 0.120" HIGH AND 0.02" LINE WIDTH
BEARINGS, DISTANCES, CURVE DATA, COORDINATES,...		LETTERS 0.100" HIGH AND 0.01" LINE WIDTH
ADJACENT SUBDIVISIONS		LETTERS 0.180" HIGH, SHADOW LETTERING & 0.01" LINE WIDTH
ADJACENT LOT NUMBERS		LETTERS 0.180" HIGH, DOTTED LETTERING & 0.01" LINE WIDTH

TITLE BLOCK AND OTHER RELATED LETTERING SHALL BE IN ACCORDANCE WITH STANDARD ACCEPTED ENGINEERING PRACTICE, BUT IN NO CASE SHALL THE LETTERING BE LESS THAN 0.100 INCH IN HEIGHT AND USING LINE WIDTH OF 0.01".

3. **IMPROVEMENT PLANS**

<u>DESCRIPTION</u>	<u>PROPOSED</u>	<u>EXISTING</u>
SANITARY SEWER	——— 6" SS ———	----- (6" SS) -----
STORM SEWER (AKA STORM DRAIN)	——— 18" SD ———	----- (18" SD) -----
GAS LINE	——— 4" G ———	----- (4" G) -----
WATER LINE	——— 8" W ———	----- (8" W) -----
TELEPHONE	——— T ———	----- T -----
CABLE TELEVISION	——— TV ———	----- TV -----
GAS VALVE	——— G —⊗——	----- G —⊗——
WATER VALVE	——— W —⊗——	----- W —⊗——
ELECTRICAL CONDUIT	——— E ———	----- E -----
MATCH LINE [DASHED, 1.20mm (.047") WIDTH]	— — — — —	— — — — —

SEE SHEET ##

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

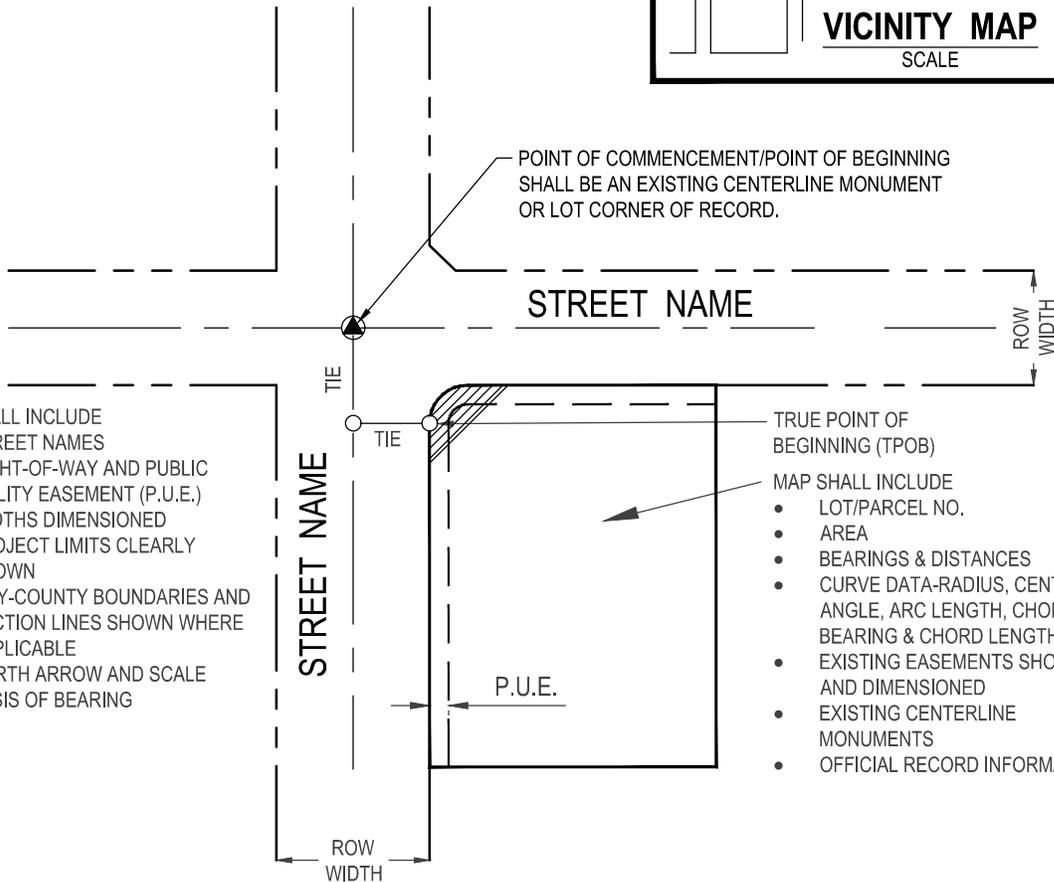
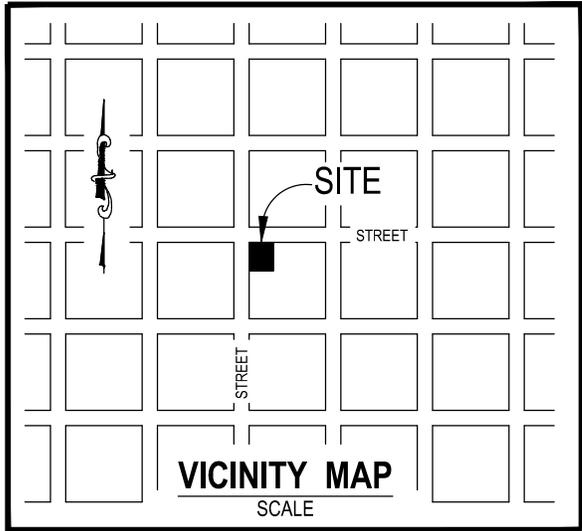
DATE

DRAFTING STANDARDS



DRAWING NUMBER

D-2



POINT OF COMMENCEMENT/POINT OF BEGINNING SHALL BE AN EXISTING CENTERLINE MONUMENT OR LOT CORNER OF RECORD.

- MAP SHALL INCLUDE
- STREET NAMES
 - RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENT (P.U.E.) WIDTHS DIMENSIONED
 - PROJECT LIMITS CLEARLY SHOWN
 - CITY-COUNTY BOUNDARIES AND SECTION LINES SHOWN WHERE APPLICABLE
 - NORTH ARROW AND SCALE BASIS OF BEARING

- MAP SHALL INCLUDE
- LOT/PARCEL NO.
 - AREA
 - BEARINGS & DISTANCES
 - CURVE DATA-RADIUS, CENTRAL ANGLE, ARC LENGTH, CHORD BEARING & CHORD LENGTH
 - EXISTING EASEMENTS SHOWN AND DIMENSIONED
 - EXISTING CENTERLINE MONUMENTS
 - OFFICIAL RECORD INFORMATION

NOTES:

1. DRAFTING STANDARDS AND SYMBOLS SHALL CONFORM TO SUTTER COUNTY STANDARDS.
2. CLOSURE CALCULATIONS, INCLUDING AREA AND PRECISION, SHALL BE SUBMITTED SEPARATELY.
3. LEGAL DESCRIPTIONS SUBMITTED WITH THE MAP SHALL BE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR.

PREPARED BY:

 (ENGINEERING FIRM)

COUNTY OF SUTTER - ENGINEERING

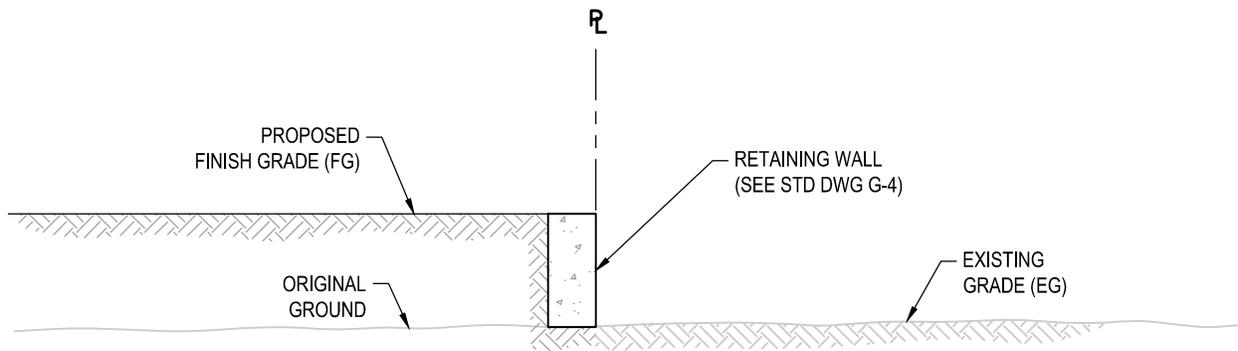
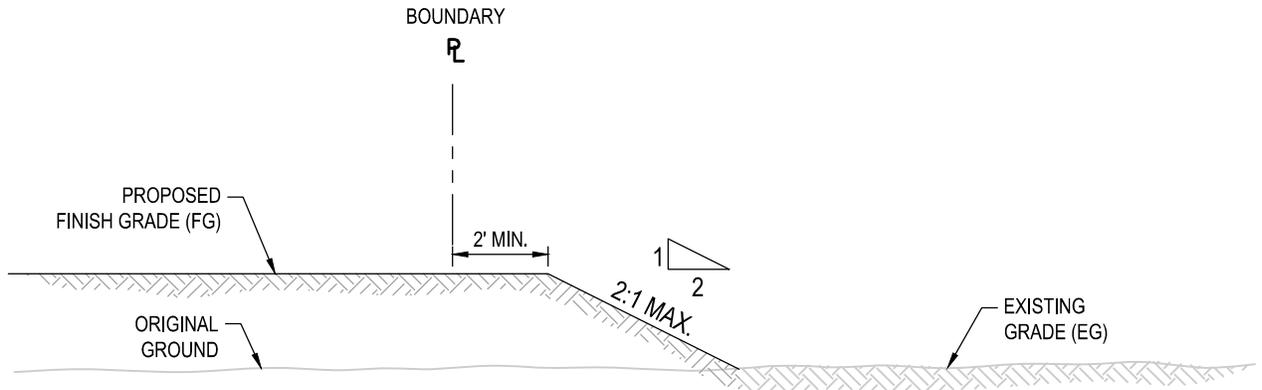
APPROVED BY:

 DEVELOPMENT SERVICES DIRECTOR
 DATE 4/3/2025

**STANDARD MAP ASSOCIATED
 WITH LEGAL DESCRIPTION FOR 8-1/2 " x 11" SHEET**

DRAWING NUMBER

D-3



COUNTY OF SUTTER - ENGINEERING

GRADING EXTERIOR PROPERTY LINE

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

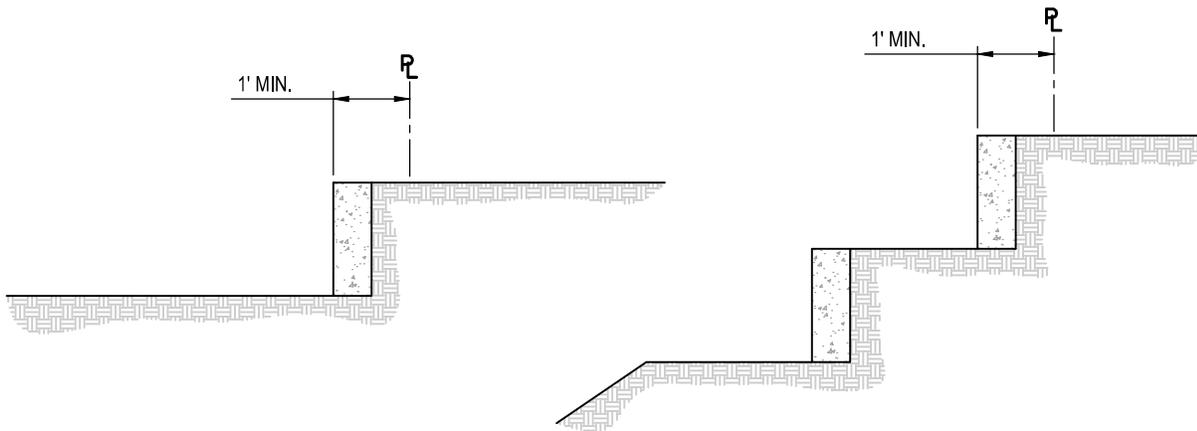
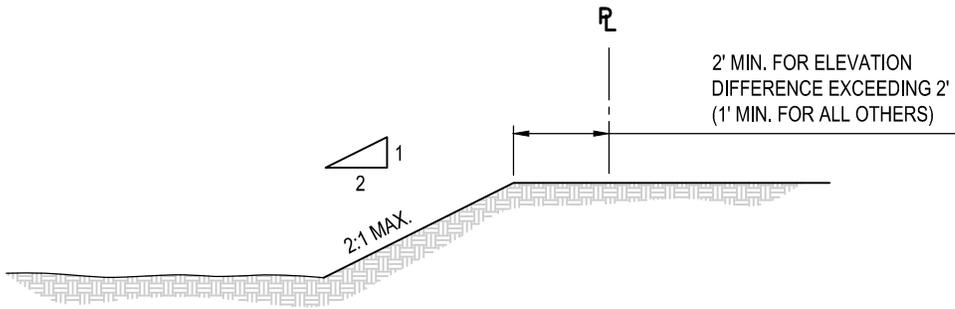
4/3/2025

DATE



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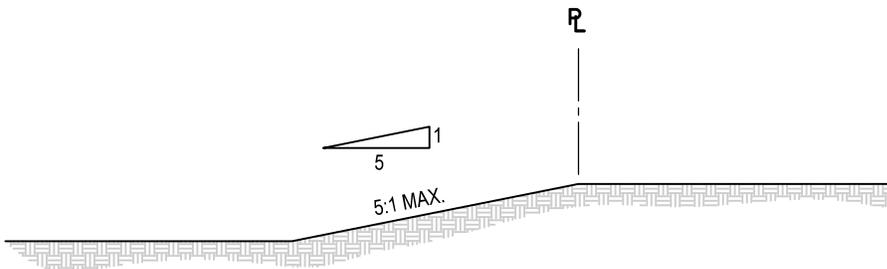
G-1



RETAINING WALL

(SEE STD DWG G-3 AND G-4)

NOTE: NO DOUBLE RETAINING WALLS SHALL BE CONSTRUCTED ON SIDE YARD



COUNTY OF SUTTER - ENGINEERING

**GRADING FOR INTERIOR PROPERTY
LINES AND PERIMETER PROPERTY
LINES IN CUT AREAS**

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

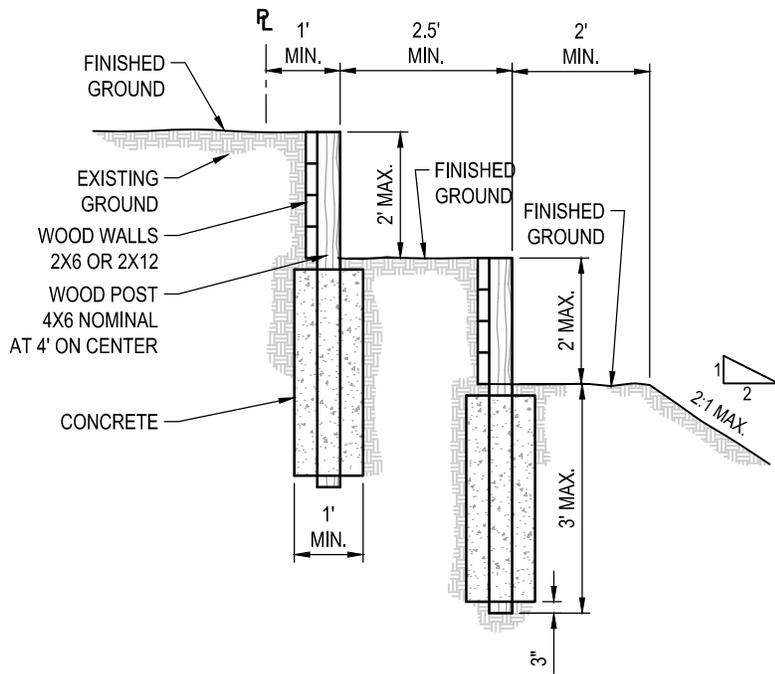
4/3/2025

DATE

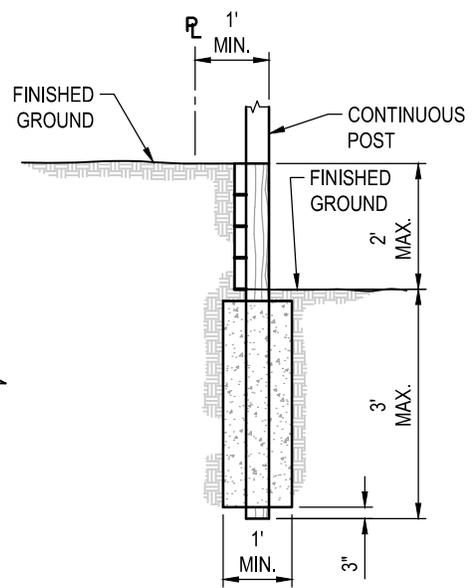


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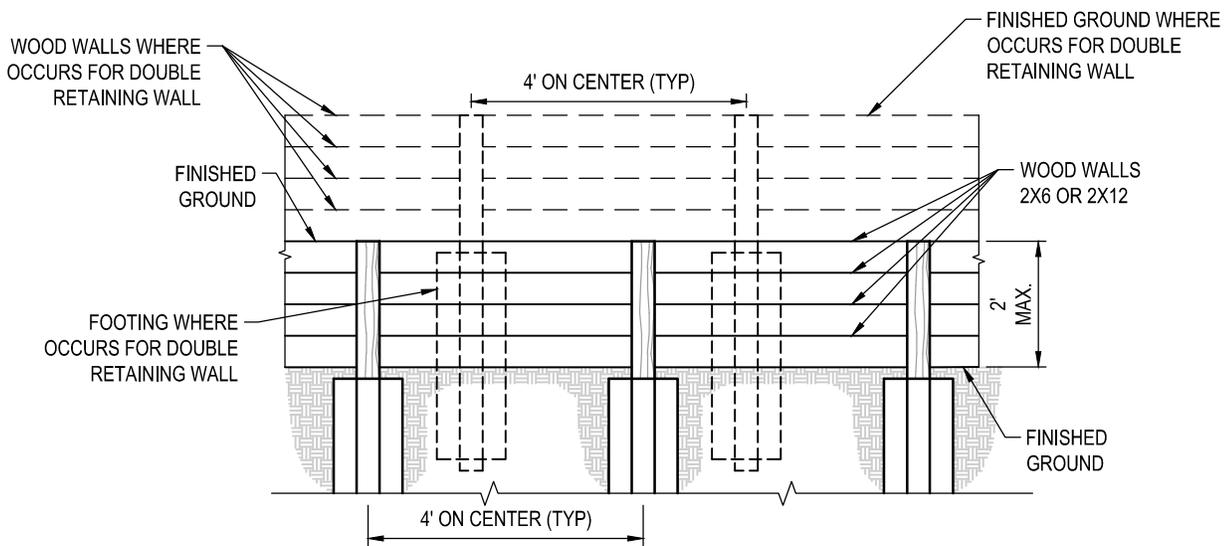
G-2



DOUBLE RETAINING WALL



SINGLE RETAINING WALL



ELEVATION

NOTES:

1. MATERIAL FOR WALLS SHALL BE GRADE NO. 2 OR BETTER REDWOOD WITH NO OPEN GRAIN MATERIAL.
2. WOOD WALLS SHALL NOT BE USED ADJACENT TO THE PUBLIC RIGHT OF WAY.
3. ALL WALLS WITHIN 8-FT OF A BOUNDARY OR PROJECT PHASE LINE SHALL BE CONSTRUCTED WITH MASONRY OR CONCRETE.
4. 4X6 NOMINAL WOOD POSTS AT 4-FT ON CENTER SHALL BE USED AS FENCE POSTS WHEN FENCES ARE ATTACHED TO RETAINING WALLS.
5. NO DOUBLE RETAINING WALLS SHALL BE CONSTRUCTED ON SIDE YARDS.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

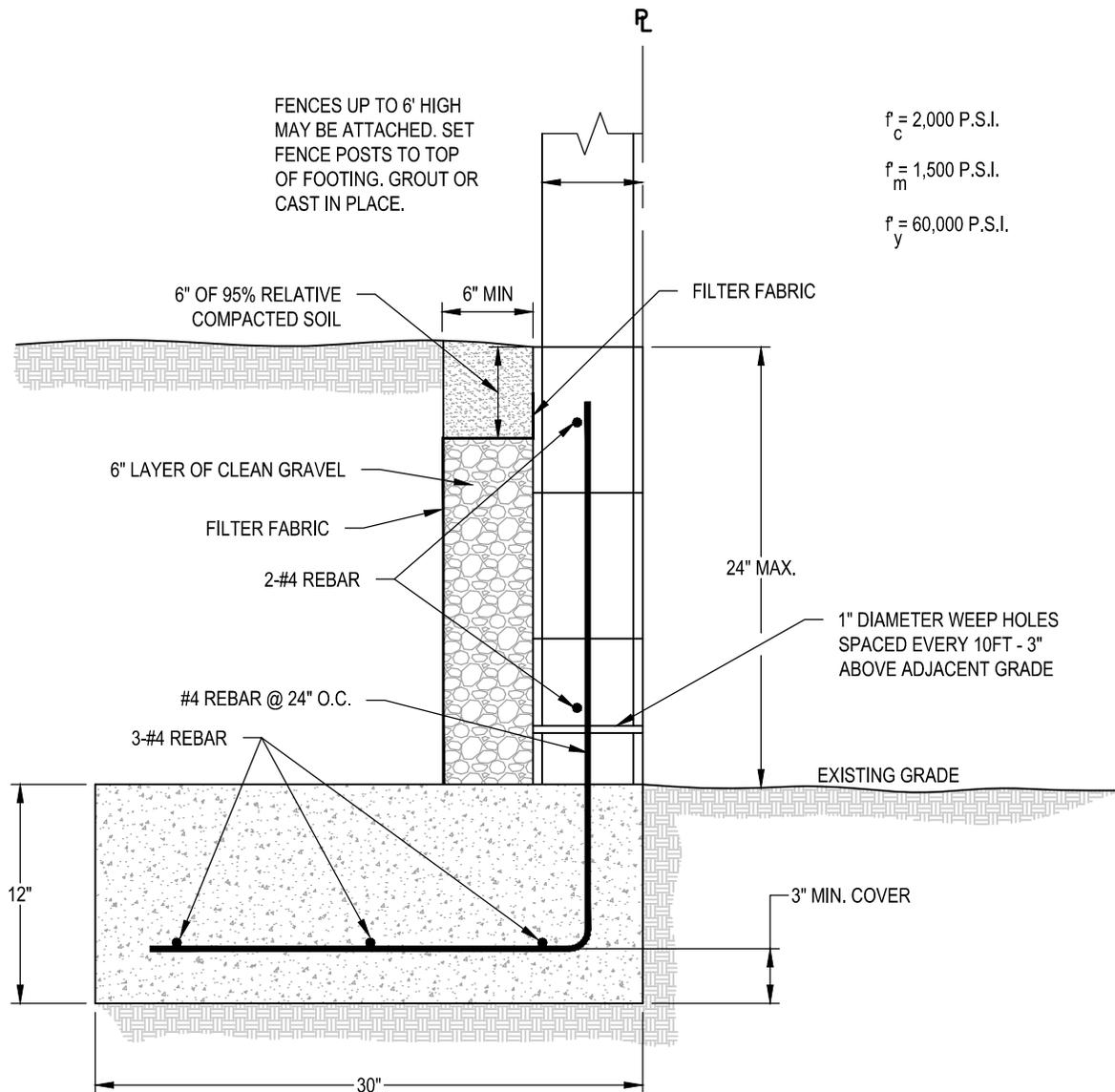
DATE

**WOOD RETAINING WALL DETAILS
FOR INTERIOR PROPERTY LINES**



DRAWING NUMBER

G-3



NOTES:

1. 8-INCH NORMAL WEIGHT BLOCK WITH FULL GROUTING REQUIRED.
2. A 6-INCH WIDE CAST-IN-PLACE CONCRETE STEM WALL MAY BE USED INSTEAD OF MASONRY.
3. SPECIAL INSPECTION IS NOT REQUIRED.
4. A BUILDING PERMIT IS REQUIRED FOR WALLS EXCEEDING 24" IN HEIGHT WHEN CONSTRUCTION DETAILS ARE NOT SHOWN ON APPROVED IMPROVEMENT PLANS.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP
 DEVELOPMENT SERVICES DIRECTOR

4/3/2025

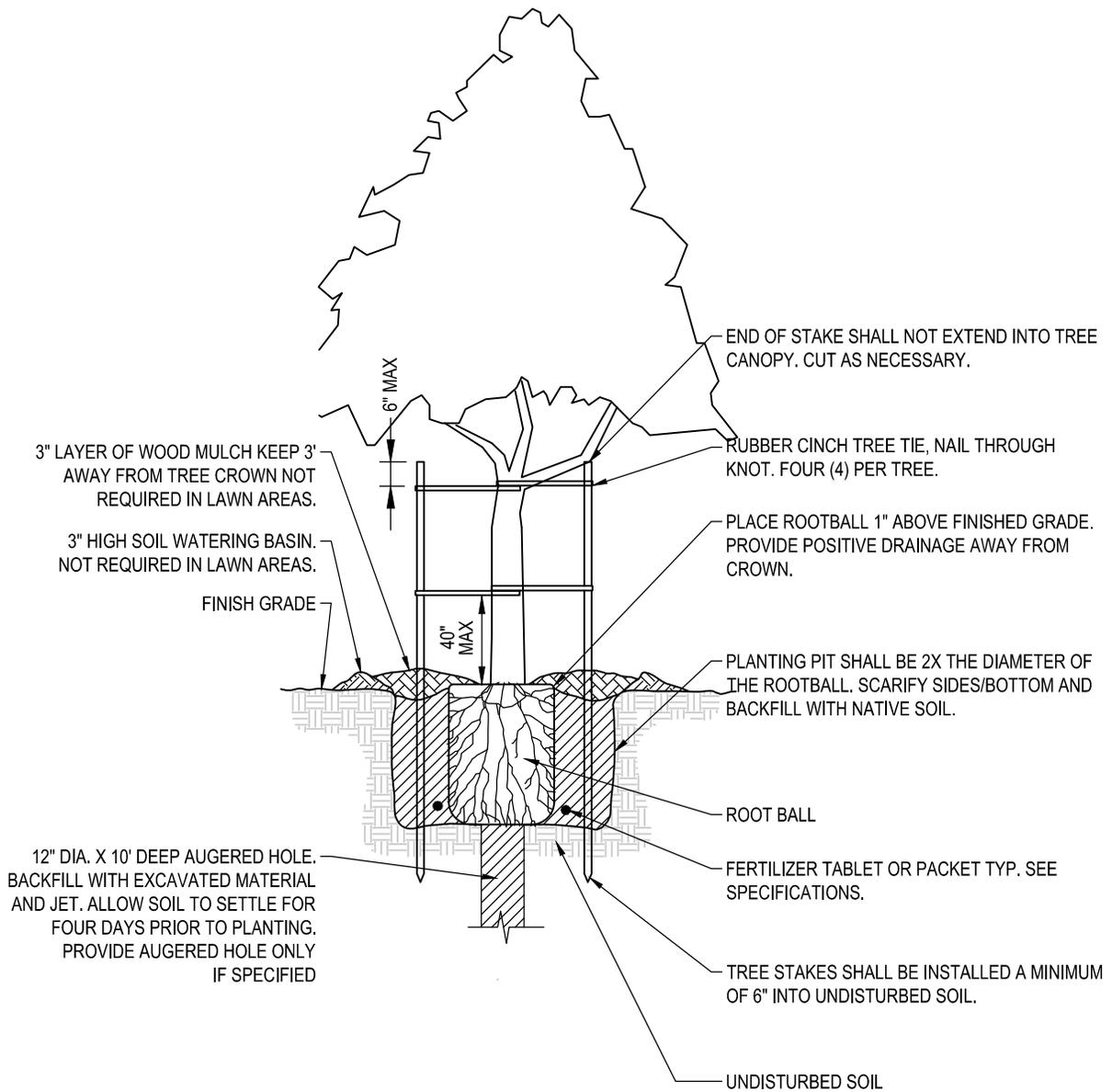
DATE

**MASONRY/CONCRETE RETAINING WALL DETAIL FOR FILL
 AREAS AT BOUNDARY AND PROJECT PHASE LINES**



DRAWING NUMBER

G-4



NOTE:
 FOR 36" BOX TREES. STAKE WITH TWO 2" X 12' LONG SCHEDULE 40 GALVANIZED STEEL PIPES. PAINTED WITH TWO COATS OF DARK GREEN PAINT. TIE TREE WITH A METAL TWIST BRACE BOLTED TO THE STAKES OR OTHER APPROVED TREE TIE AS SPECIFIED.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

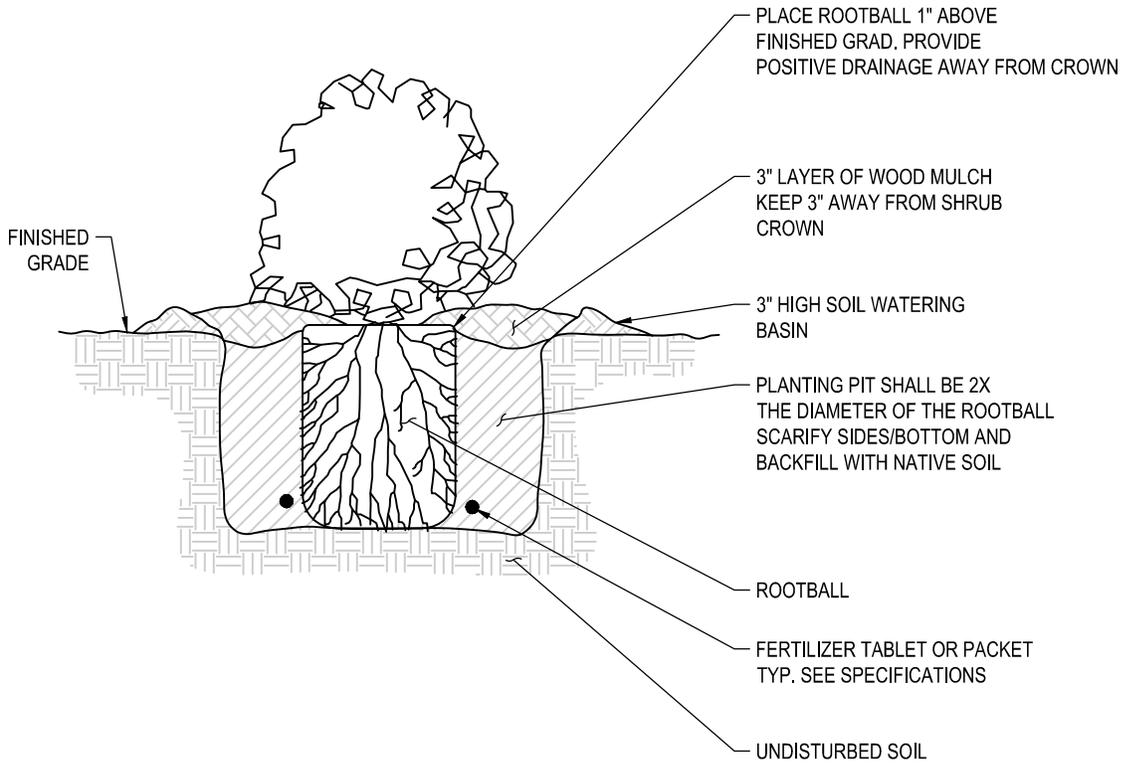
DATE

TREE PLANTING



DRAWING NUMBER

L-1



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULPJ

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

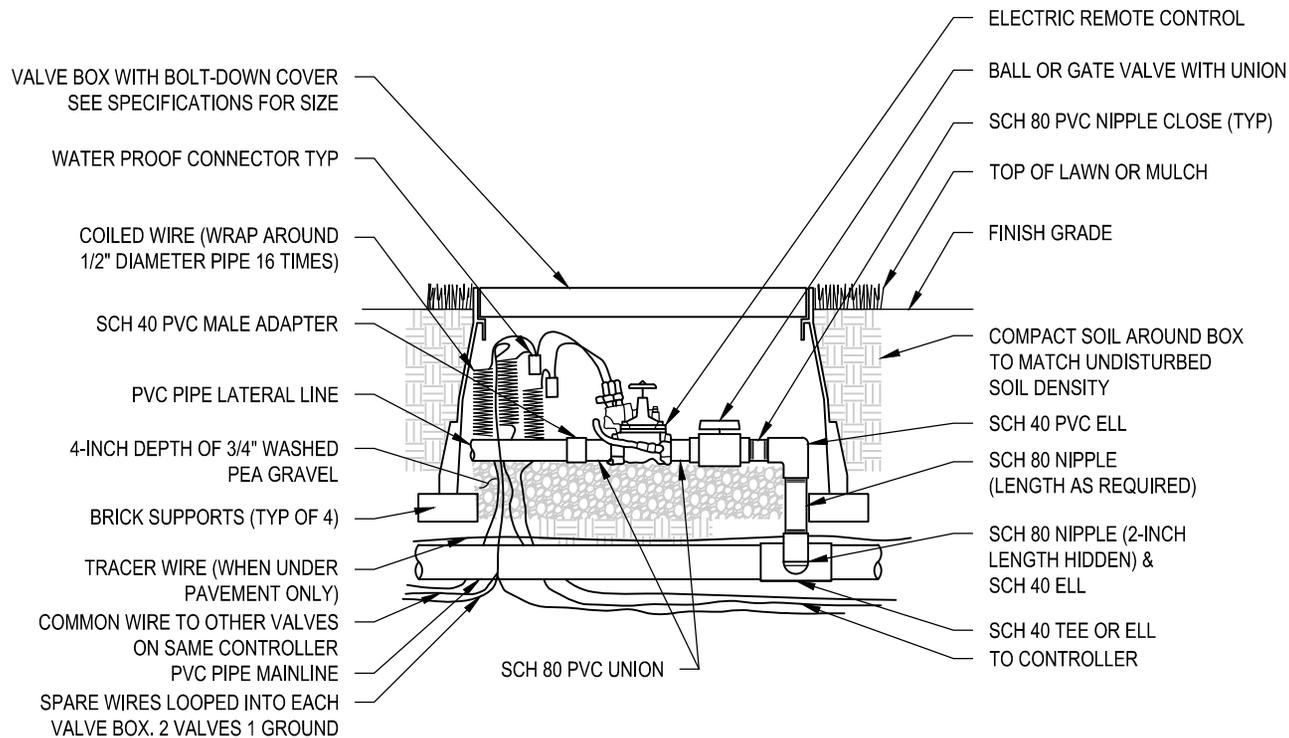
DATE

SHRUB PLANTING



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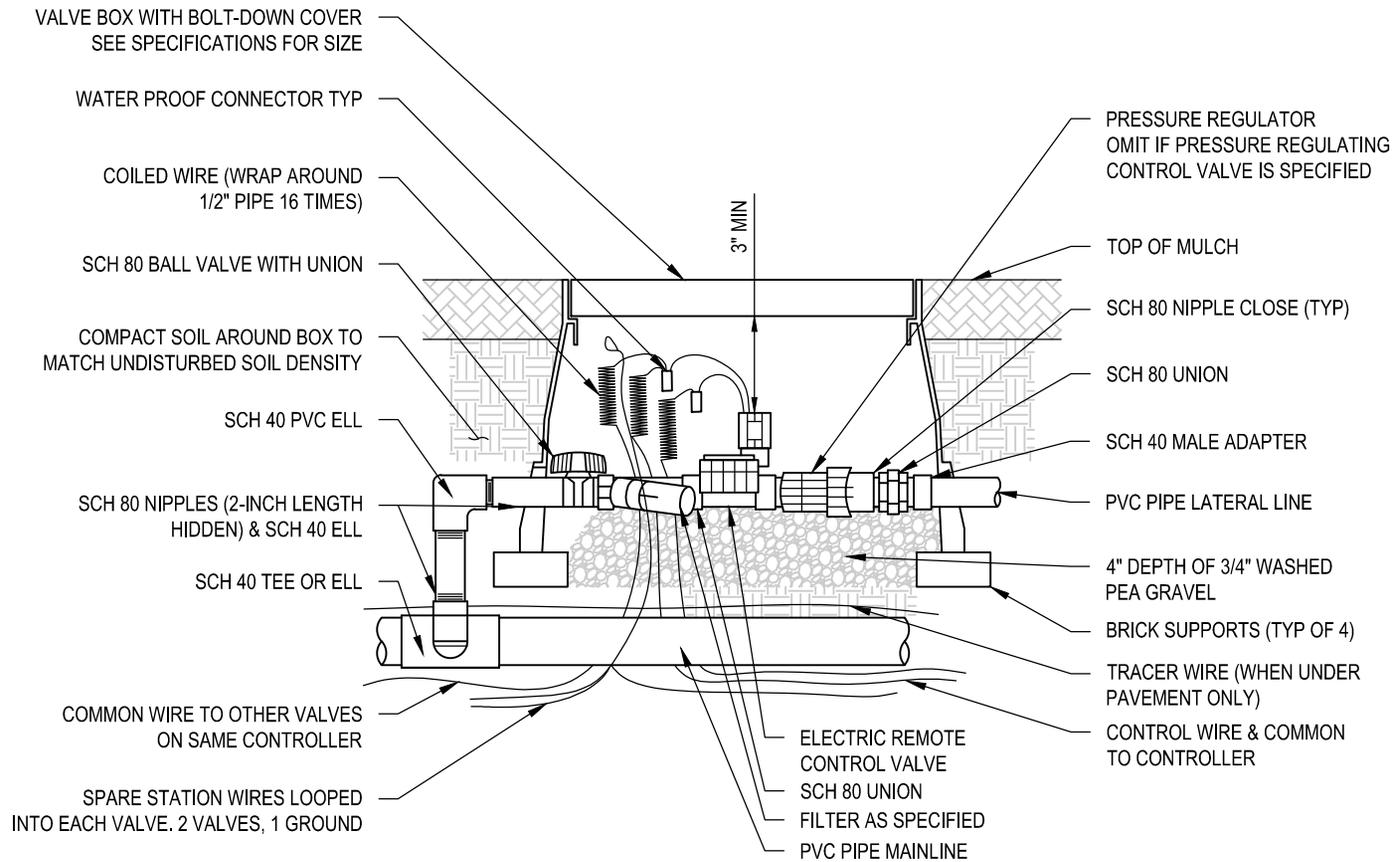
L-2



NOTES:

1. ALL WIRE SHALL BE TAPED AND BUNDLED EVERY TEN FEET AND SHALL BE INSTALLED AS PER LOCAL CODE.
2. SHUT-OFF VALVES 3" AND SMALLER SHALL BE SCH 80 BALL VALVES. VALVES LARGER THAN 3" SHALL BE BRASS GATE VALVES.
3. ALL VALVE BOXES AND LIDS WITHIN THE SIDEWALK SHALL BE OF TRAFFIC RATED QUALITY

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>REMOTE CONTROL VALVE</p>	<p>DRAWING NUMBER  L-3</p>



NOTES:

1. ALL WIRE SHALL BE TAPED AND BUNDLED EVERY TEN FEET AND SHALL BE INSTALLED AS PER LOCAL CODE.
2. ALL VALVE BOXES AND LIDS WITHIN THE SIDEWALK SHALL BE OF TRAFFIC RATED QUALITY

COUNTY OF SUTTER - ENGINEERING

**DRIP IRRIGATION
VALVE ASSEMBLY**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

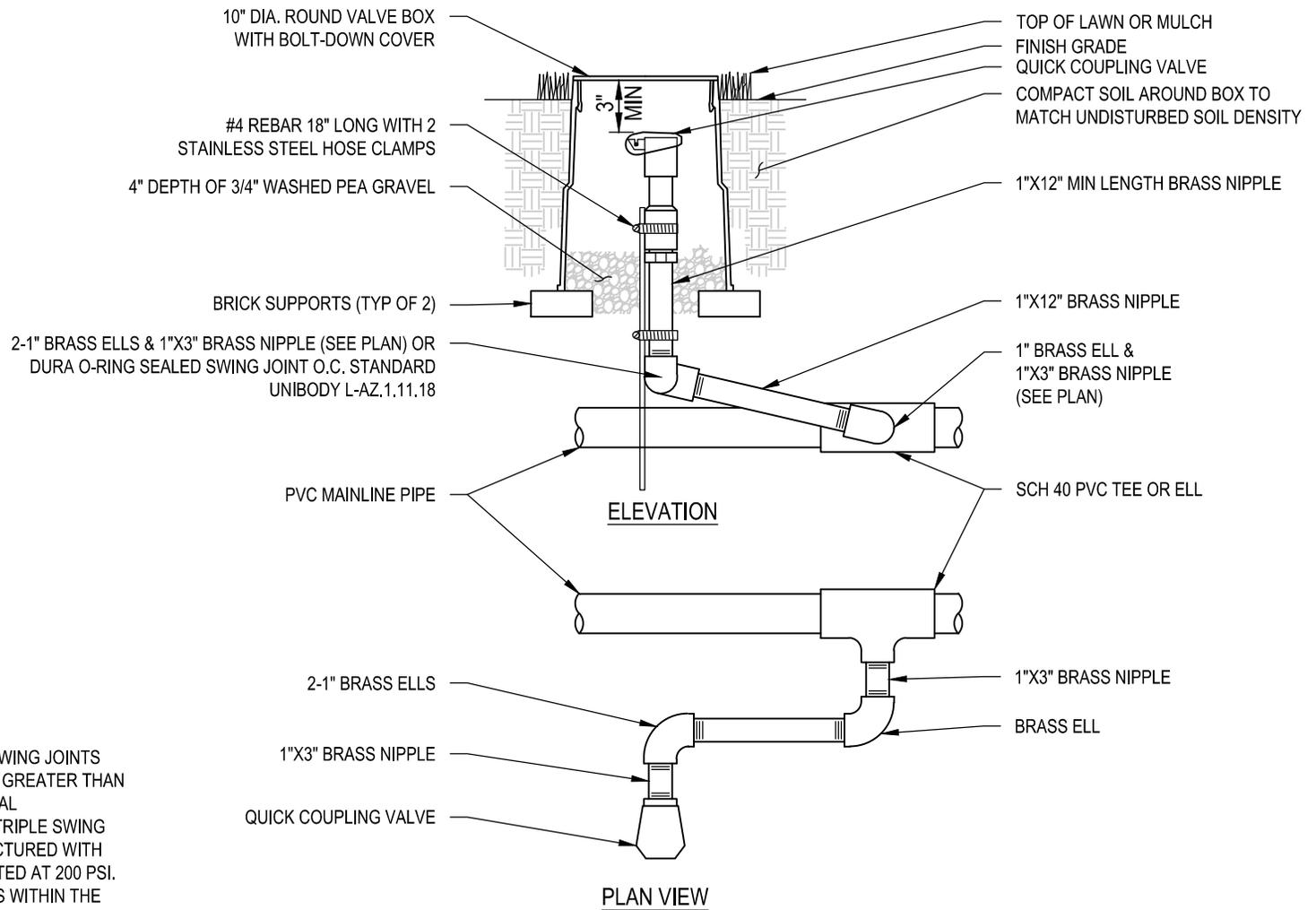
4/3/2025

DATE



DRAWING NUMBER

L-4



NOTES:

1. INSTALLATION OF TRIPLE SWING JOINTS SHALL BE AT AN ANGLE NO GREATER THAN 45 DEGREES TO HORIZONTAL
2. ALL PRE-MANUFACTURED TRIPLE SWING JOINTS SHALL BE MANUFACTURED WITH D-RINGS AND SHALL BE RATED AT 200 PSI.
3. ALL VALVE BOXES AND LIDS WITHIN THE SIDEWALK SHALL BE OF TRAFFIC RATED QUALITY

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>QUICK COUPLING VALVE</p>	<p>DRAWING NUMBER</p> <p>L-5</p> 

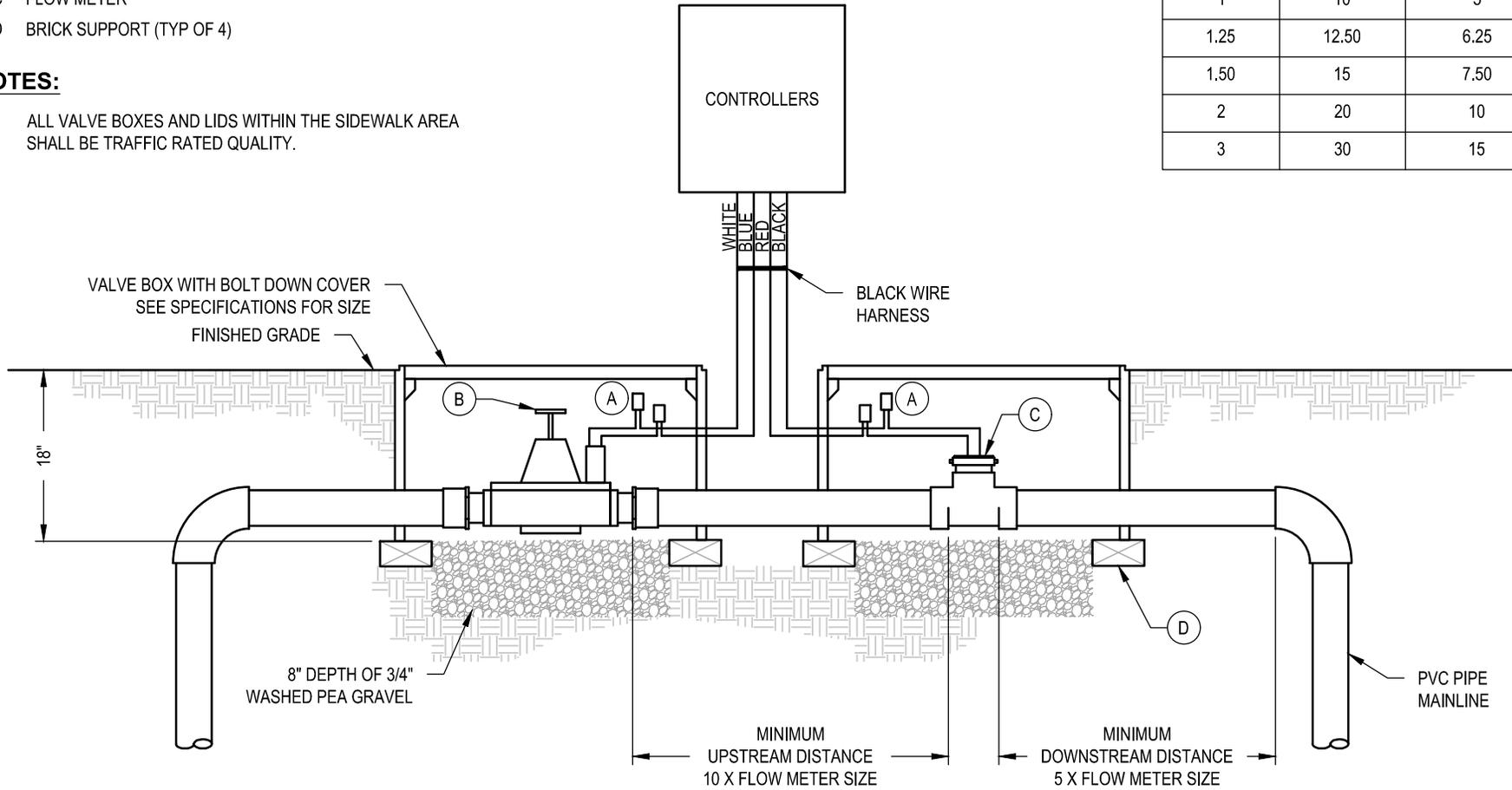
CONSTRUCTION KEYNOTES

- A WATERPROOF ELECTRICAL 3M CONNECTORS (DO NOT USE PRE-FILLED TYPE CONNECTORS)
- B MASTER VALVE
- C FLOW METER
- D BRICK SUPPORT (TYP OF 4)

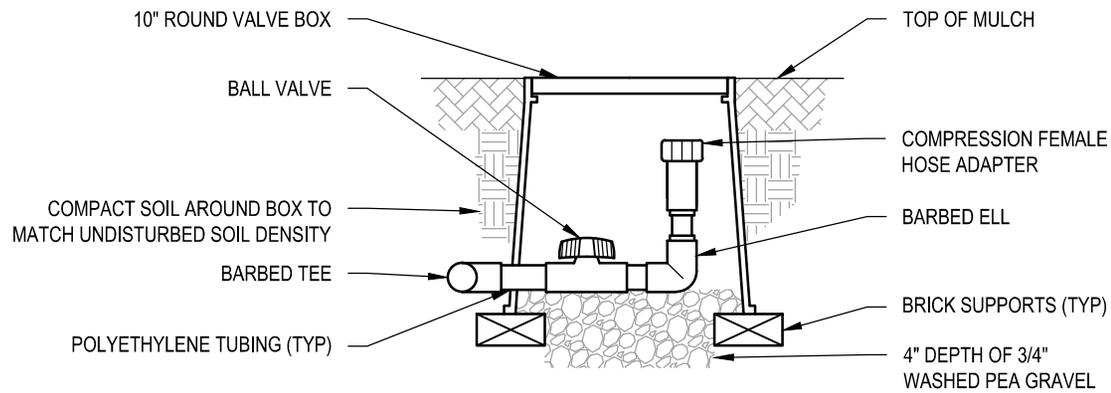
NOTES:

1. ALL VALVE BOXES AND LIDS WITHIN THE SIDEWALK AREA SHALL BE TRAFFIC RATED QUALITY.

PIPE SIZING CHART		
FLOW METER SIZE (INCH)	UPSTREAM LENGTH (INCH)	DOWNSTREAM LENGTH (INCH)
1	10	5
1.25	12.50	6.25
1.50	15	7.50
2	20	10
3	30	15



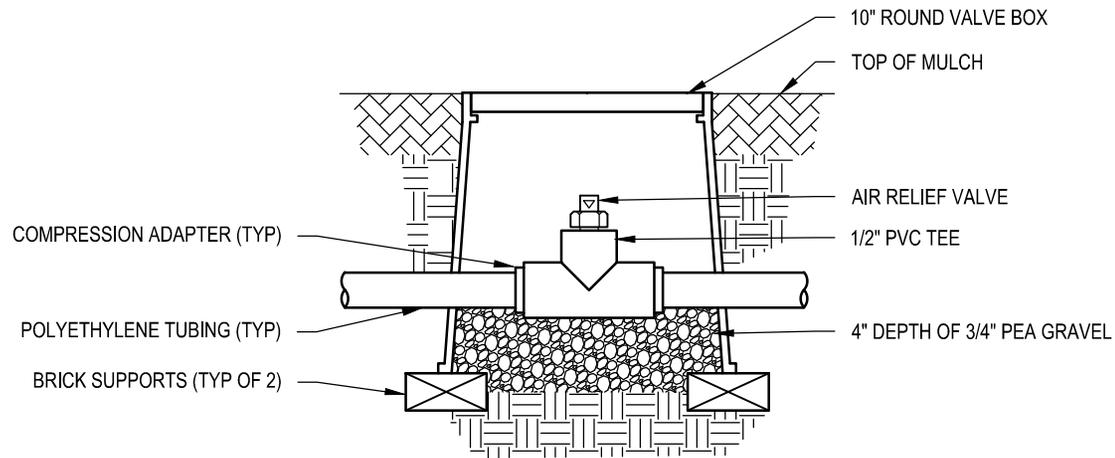
COUNTY OF SUTTER - ENGINEERING	APPROVED BY: DEVELOPMENT SERVICES DIRECTOR
MASTER VALVE FLOW SENSOR	4/3/2025 DATE SUTTER COUNTY DRAWING NUMBER L-6



NOTES:

1. ALL VALVE BOXES AND LIDS WITHIN THE SIDEWALK AREA SHALL BE OF TRAFFIC RATED QUALITY.

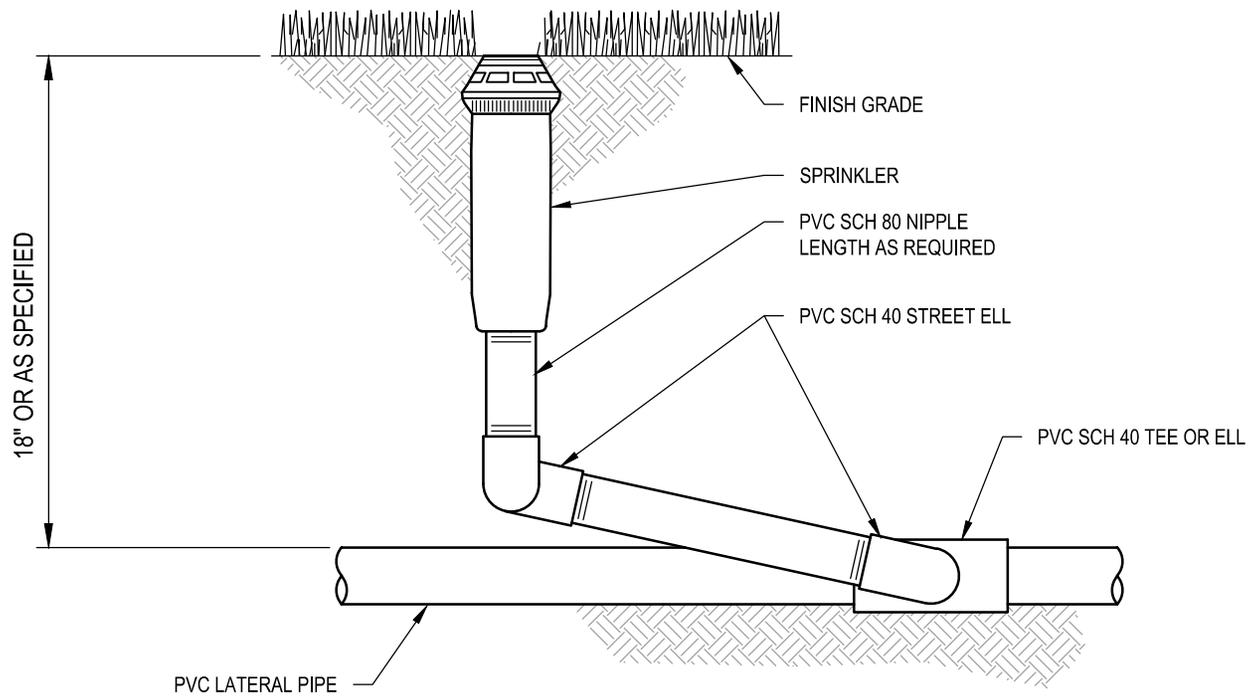
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p><i>ULP</i></p> <p>4/3/2025</p>
<p>FLUSH VALVE</p>	<p>DEVELOPMENT SERVICES DIRECTOR</p> <p>DATE</p> <p>DRAWING NUMBER</p> <p>SUTTER COUNTY</p> <p>L-7</p>



NOTES:

1. ALL VALVE BOXES AND LIDS WITHIN THE SIDEWALK AREA SHALL BE OF TRAFFIC RATED QUALITY.
2. AIR RELIEF VALVE SHALL BE INSTALLED AT THE HIGHEST POINT OF THE SYSTEM ABOVE ALL DRIPLINE LATERALS.

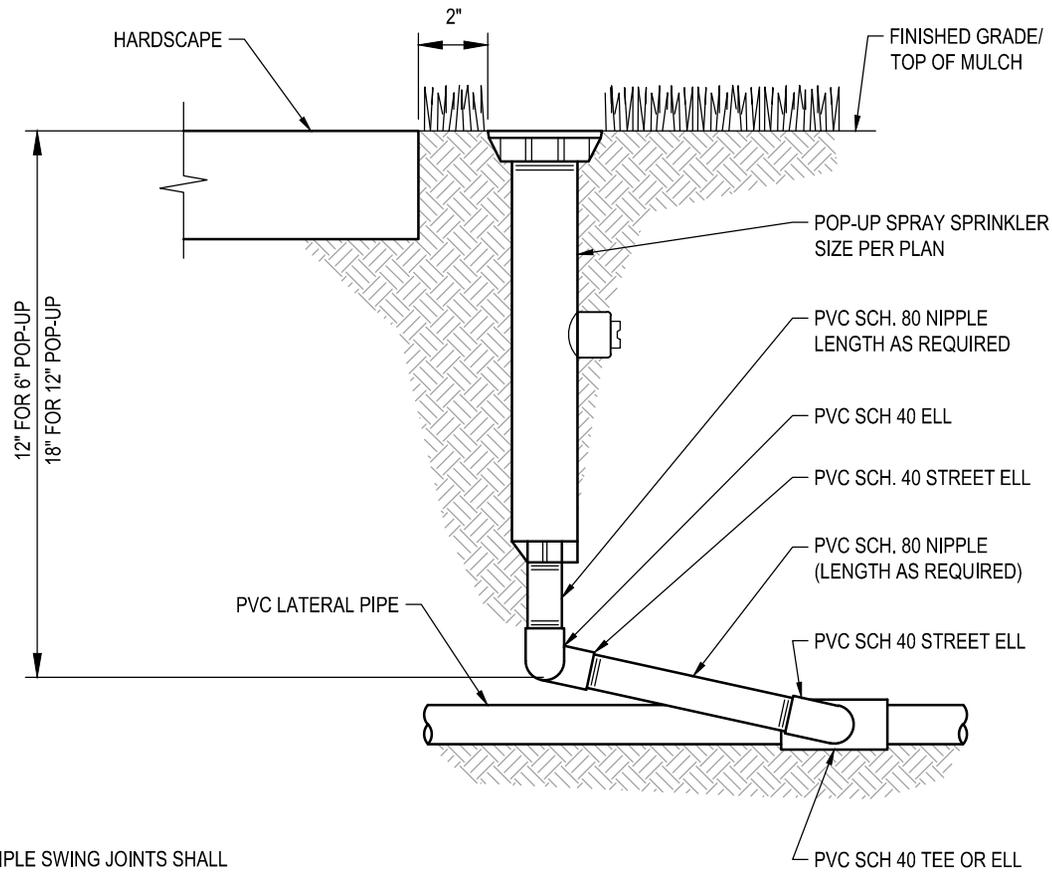
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>AIR RELIEF VALVE</p>	<p>SUTTER COUNTY</p>  <p>DRAWING NUMBER</p> <p>L-8</p>



NOTES:

1. INSTALLATION OF TRIPLE SWING JOINTS SHALL BE AT AN ANGLE NO GREATER THAN 45 DEGREES TO HORIZONTAL.
2. ALL PRE-MANUFACTURED TRIPLE SWING JOINTS SHALL BE MANUFACTURED WITH D-RINGS AND SHALL BE RATED AT 200 PSI.

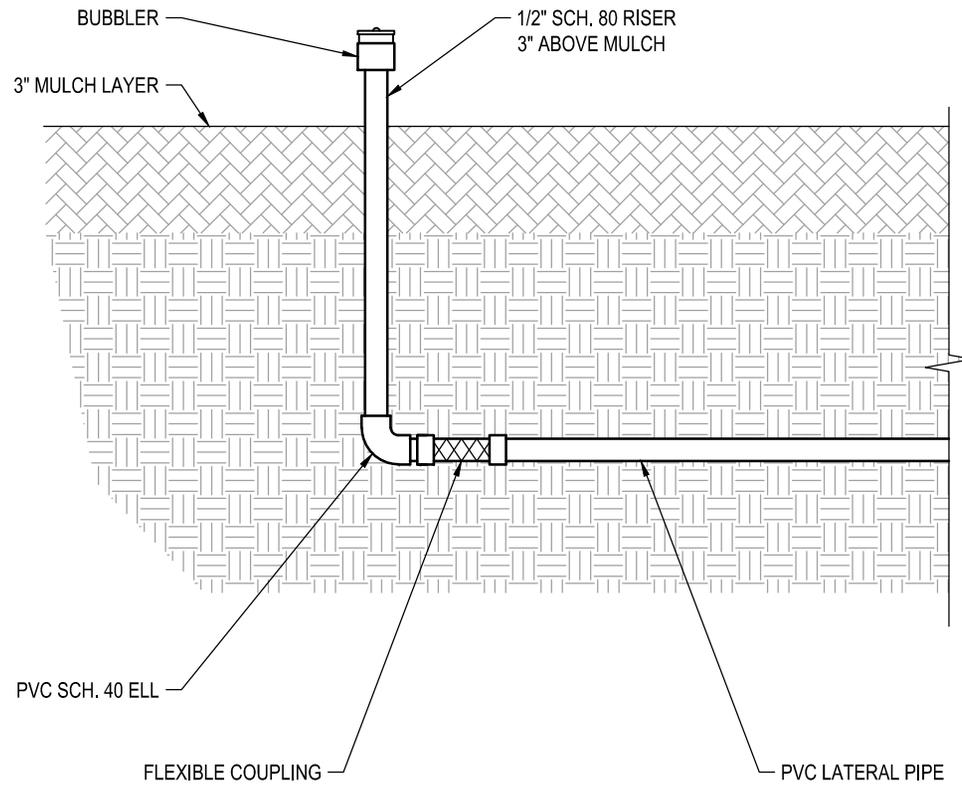
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>POP-UP ROTOR SPRINKLER</p>	<p>DRAWING NUMBER  L-9</p>



NOTE:

1. INSTALLATION OF TRIPLE SWING JOINTS SHALL BE AT AN ANGLE NO GREATER THAN 45 DEGREES TO HORIZONTAL
2. ALL PRE-MANUFACTURED TRIPLE SWING JOINTS SHALL BE MANUFACTURED WITH D-RINGS AND SHALL BE RATED AT 200 PSI.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>POP-UP SPRAY SPRINKLER</p>	<p>DRAWING NUMBER  L-10</p>



COUNTY OF SUTTER - ENGINEERING

BUBBLER SPRINKLER HEAD

APPROVED BY:

ULPJ

4/3/2025

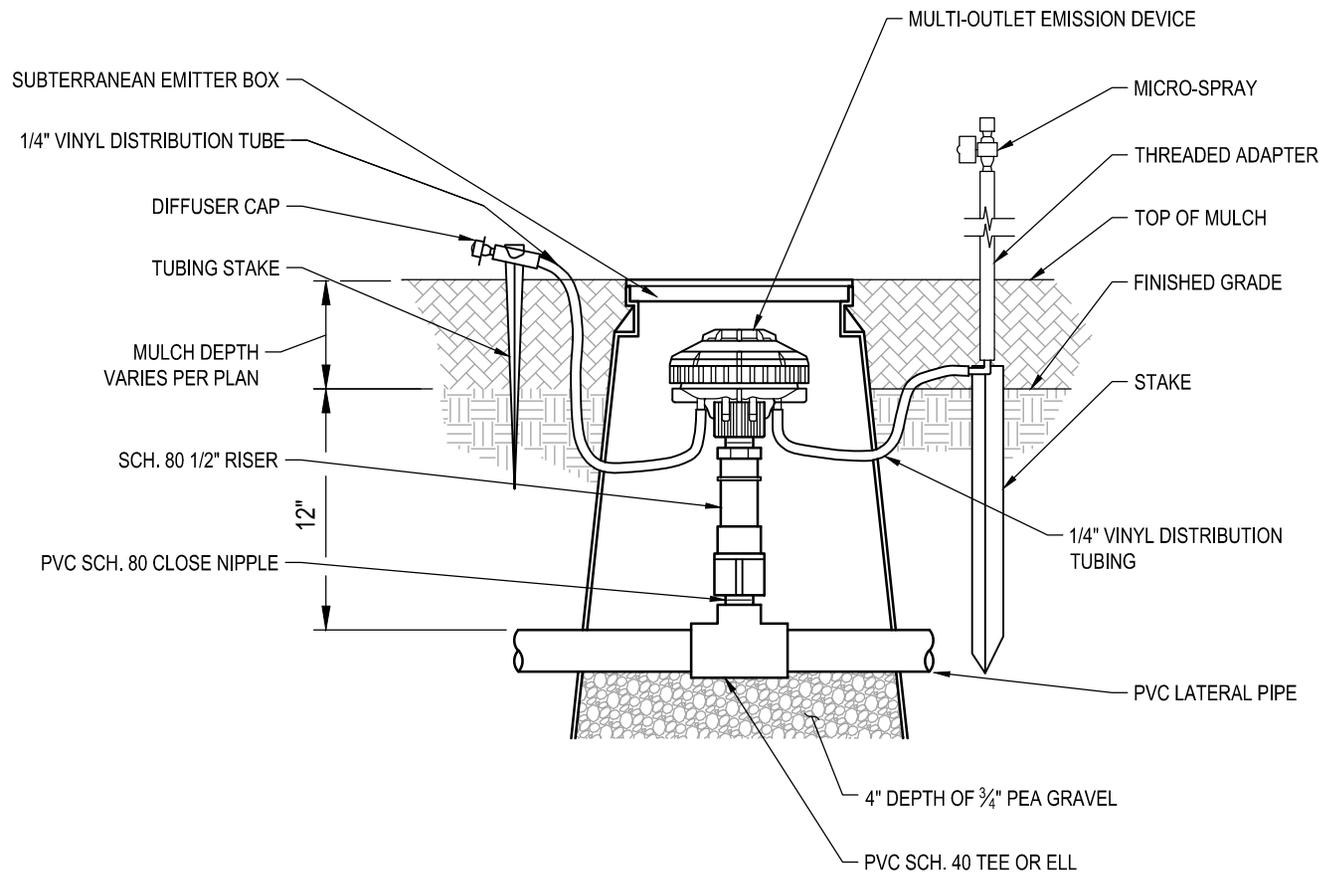
DEVELOPMENT SERVICES DIRECTOR

DATE



DRAWING NUMBER

L-11



COUNTY OF SUTTER - ENGINEERING

**DRIP IRRIGATION
MULTI-OUTLET EMITTER**

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

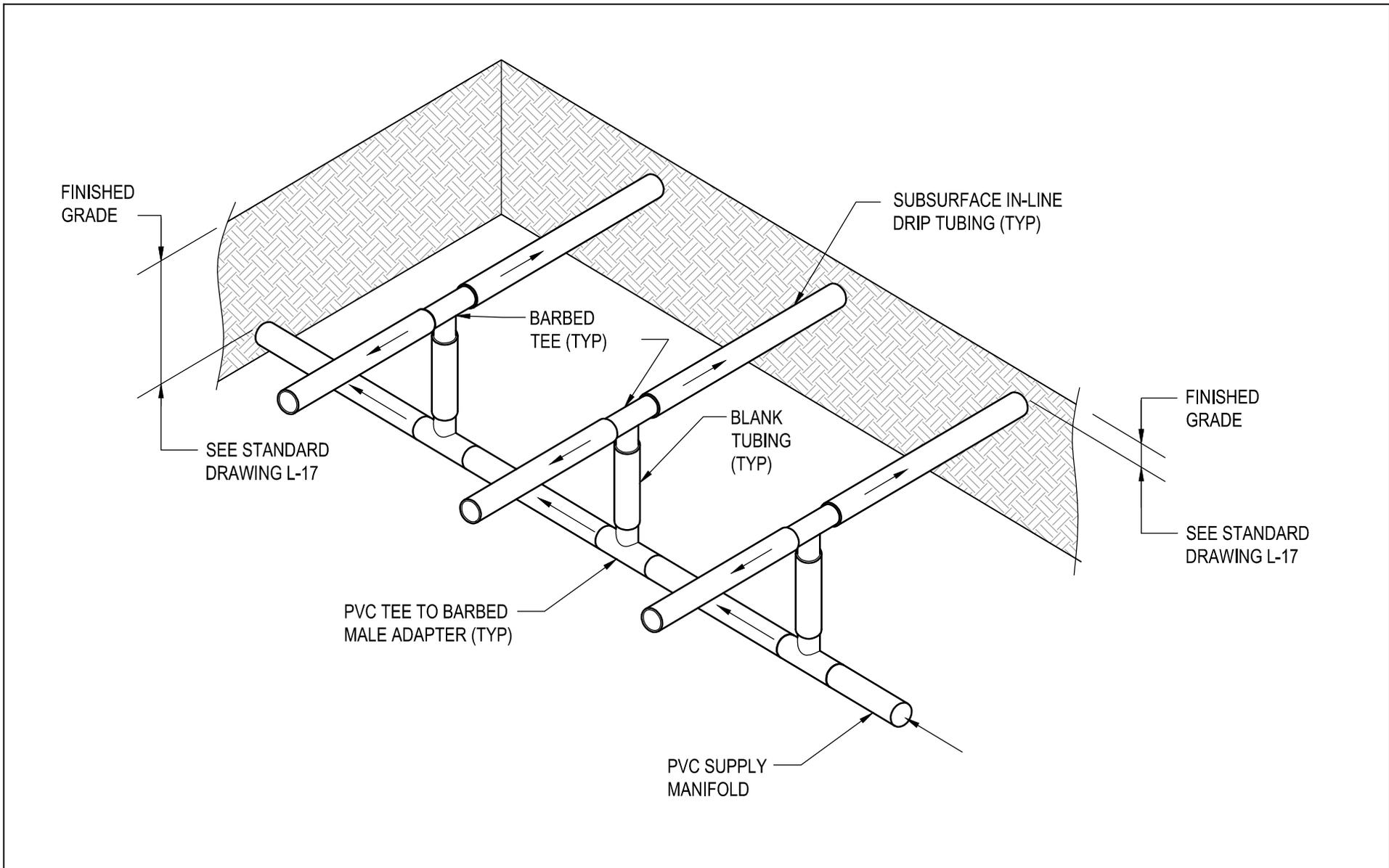
4/3/2025

DATE

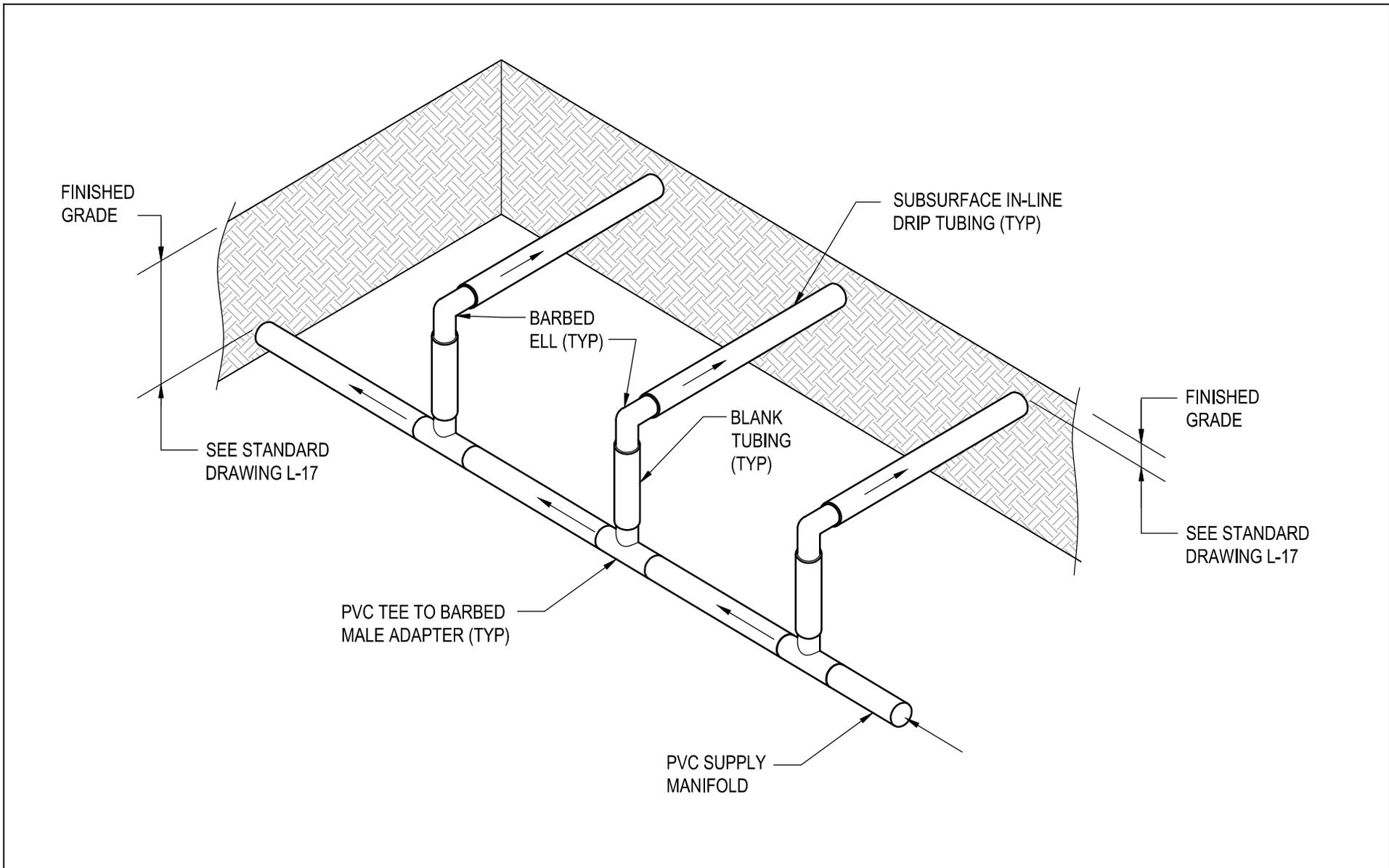


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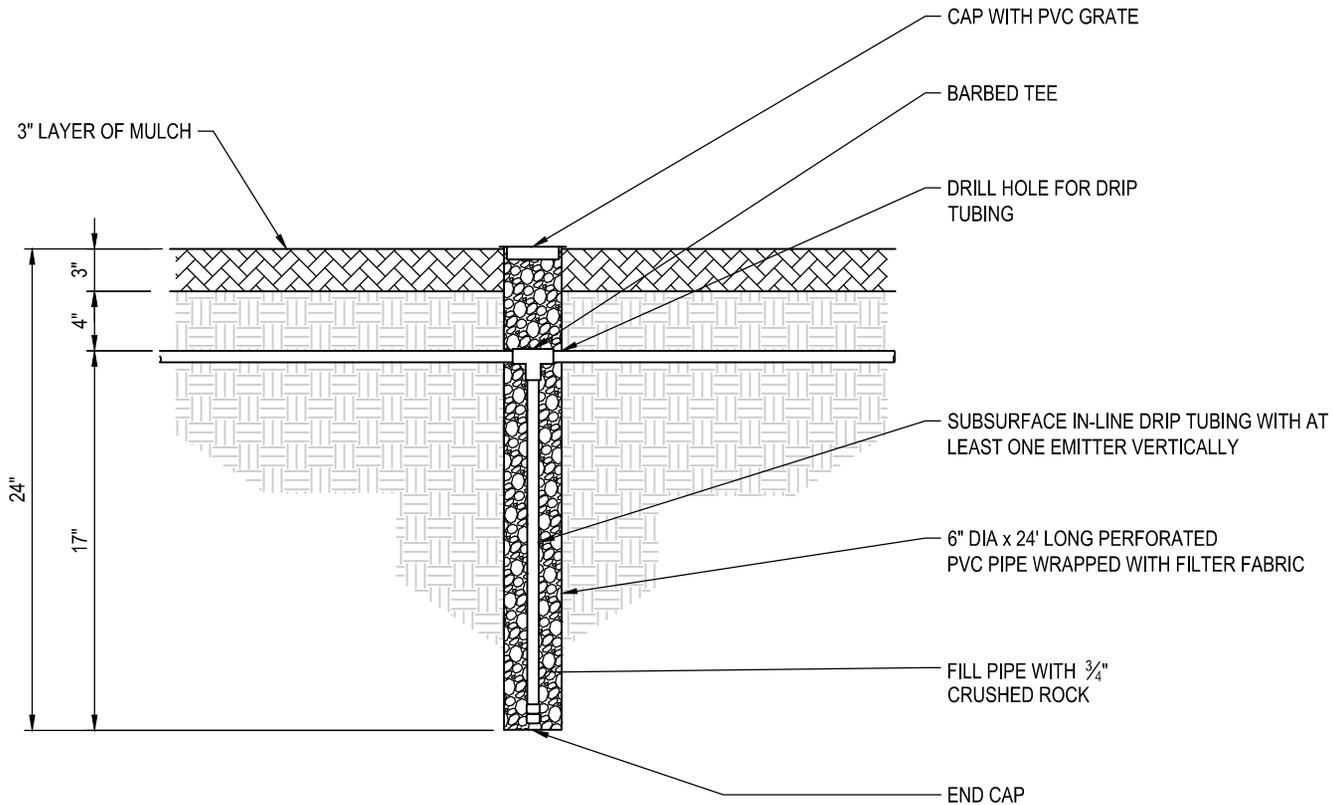
L-12



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>SUBSURFACE IN-LINE DRIP IRRIGATION CENTER-FEED SUPPLY MANIFOLD</p>	<p>DRAWING NUMBER  L-13</p>



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>SUBSURFACE IN-LINE DRIP IRRIGATION END-FEED SUPPLY MANIFOLD</p>	<p>DRAWING NUMBER  L-14</p>



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

NLPJ

4/3/2025

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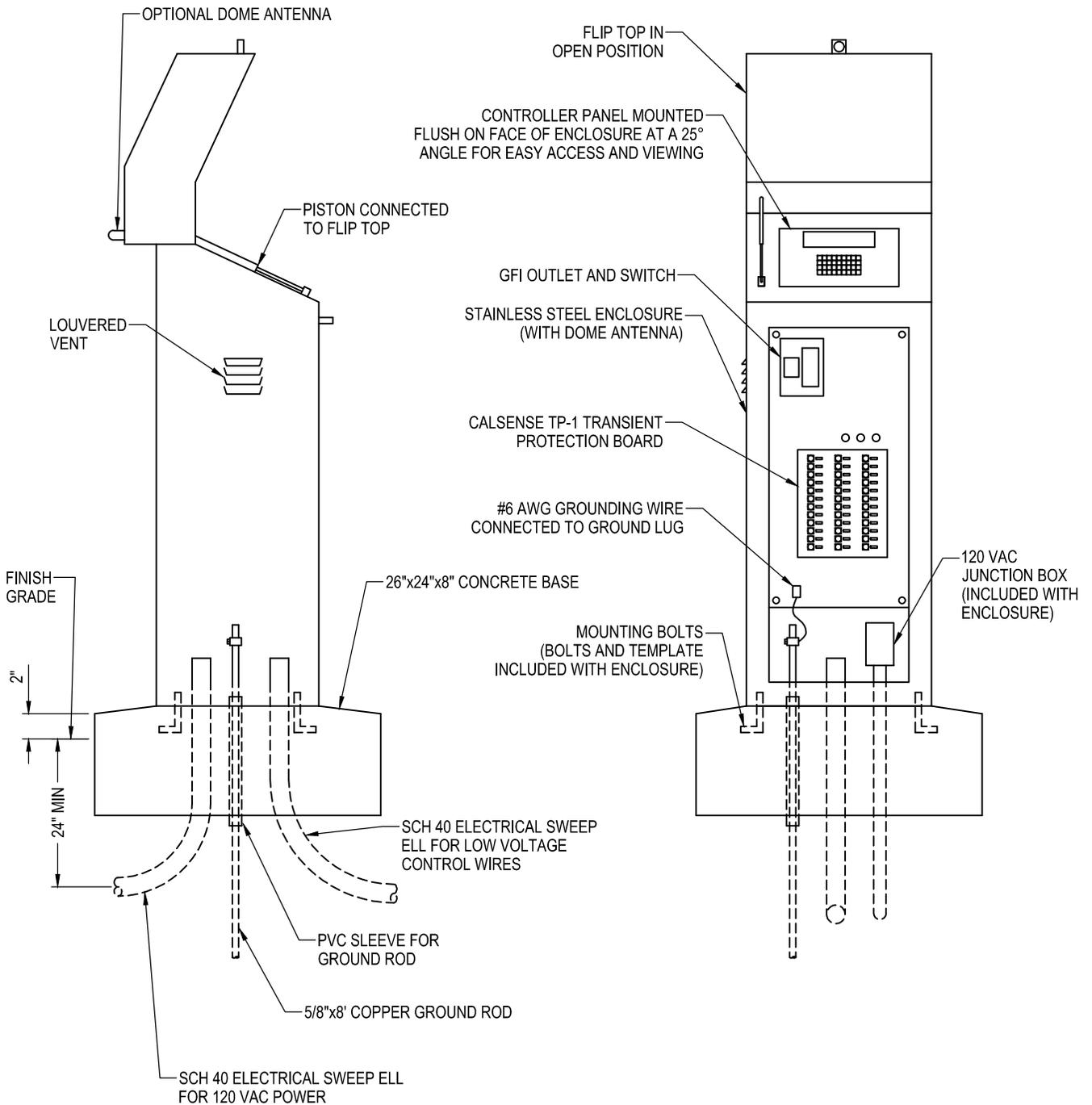
DATE

DEEP WATERING PIPE FOR TREES



DRAWING NUMBER

L-15



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

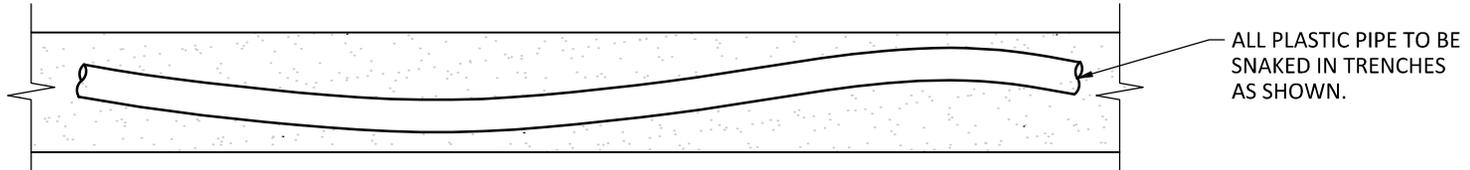
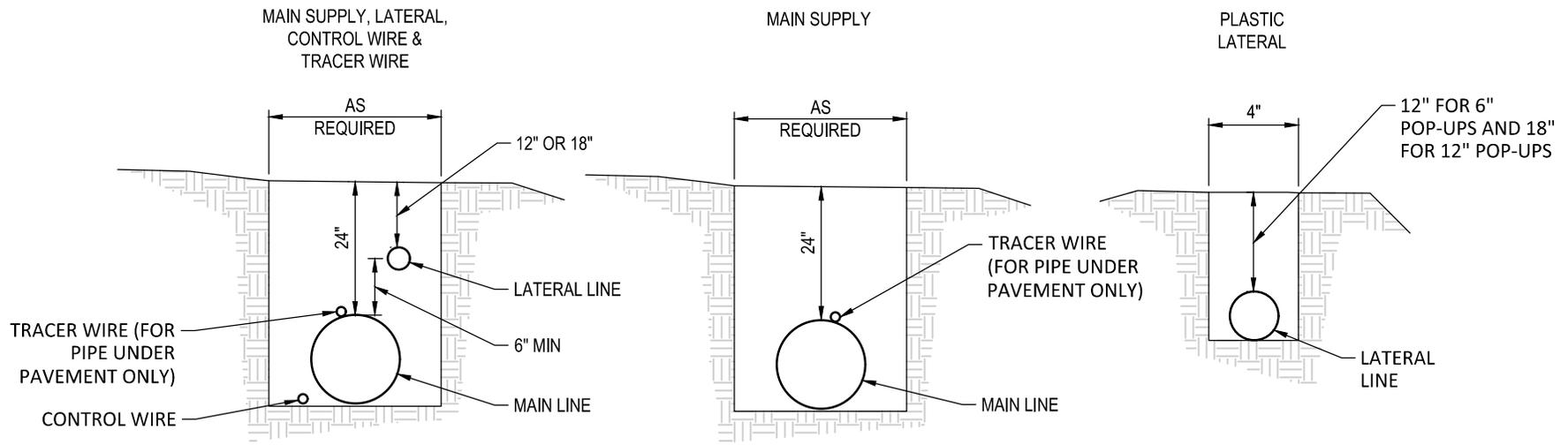
DATE

**IRRIGATION CONTROLLER
ENCLOSURE**



DRAWING NUMBER

L-16



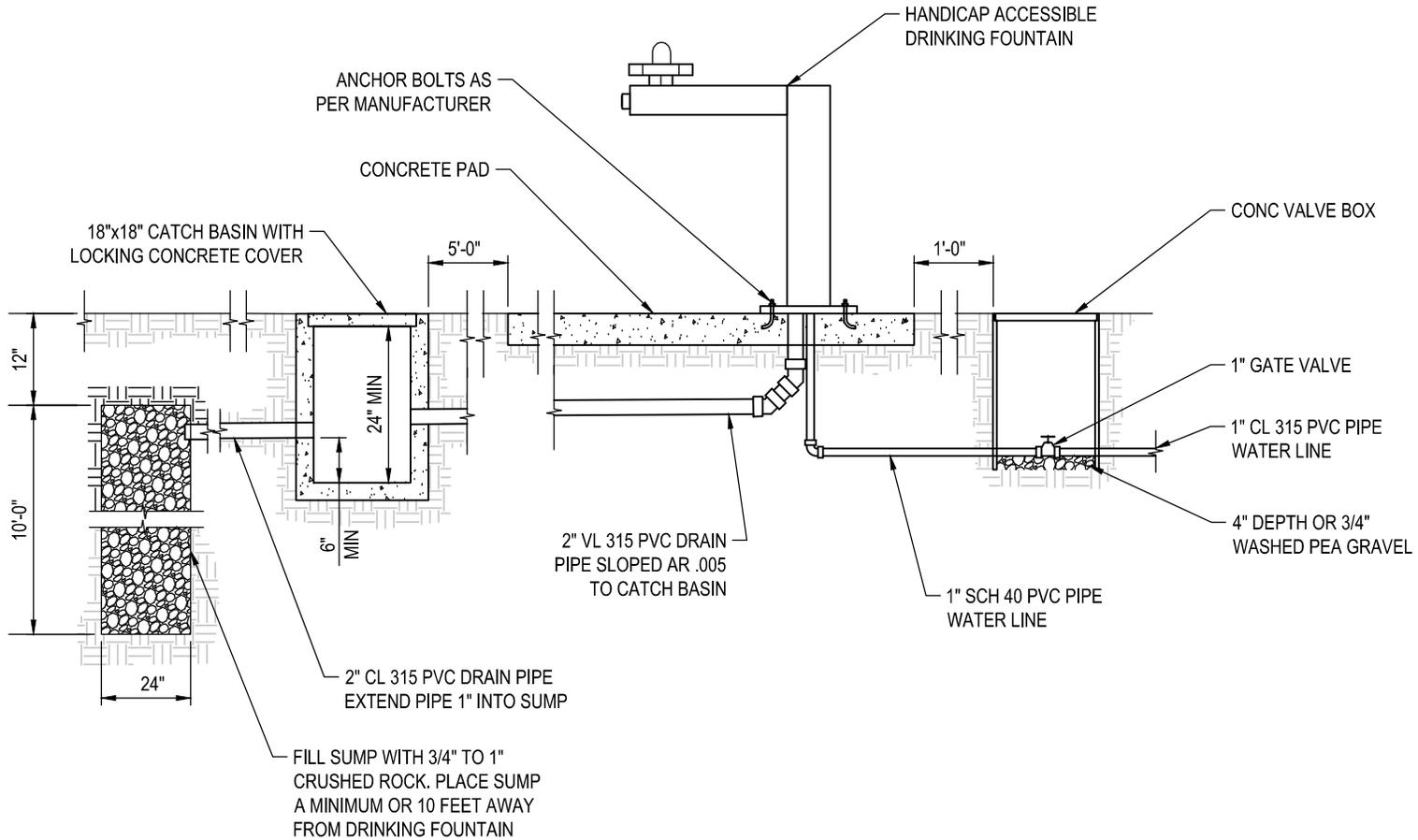
PLAN

NOTES:

1. ALL TRENCH DEPTHS ARE MEASURED FROM TOP OF FINISH GRADE.
2. TRACER WIRE SHALL BE REQUIRED ONLY WHEN PIPES ARE INSTALLED UNDER PAVEMENT.
3. ALL PIPE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION SPECIFICATIONS.
4. IF SPRINKLER HEAD AND NIPPLE HEIGHT EXCEED 11" LATERAL LINE DEPTH SHALL BE 18".
5. INSTALL PIPE BEDDING UNDER PIPING, WHEN SPECIFIED.
6. INSTALL SLEEVING UNDER PAVING PER PLANS.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY: <small>DEVELOPMENT SERVICES DIRECTOR</small></p>
<p>IRRIGATION SYSTEM TRENCHING</p>	<p style="text-align: right;"><small>4/3/2025</small> DATE</p> <p style="text-align: right;"><small>DRAWING NUMBER</small> L-17</p>





COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

NLP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

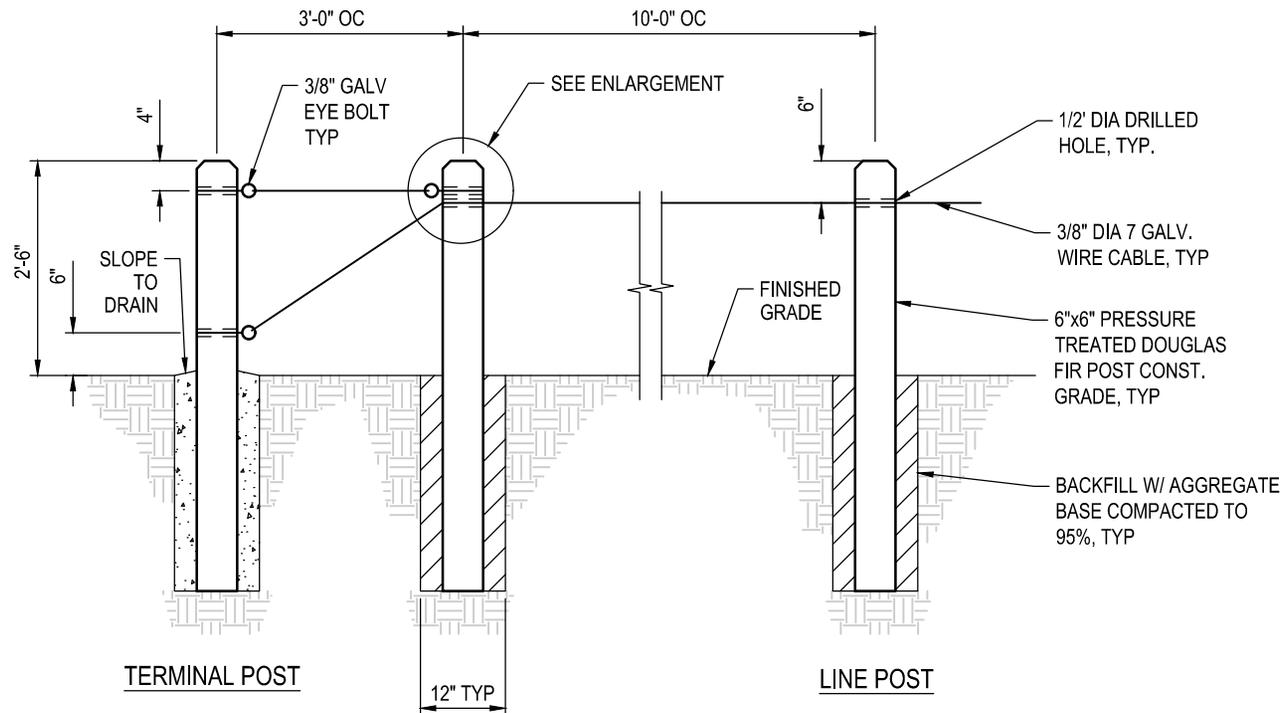
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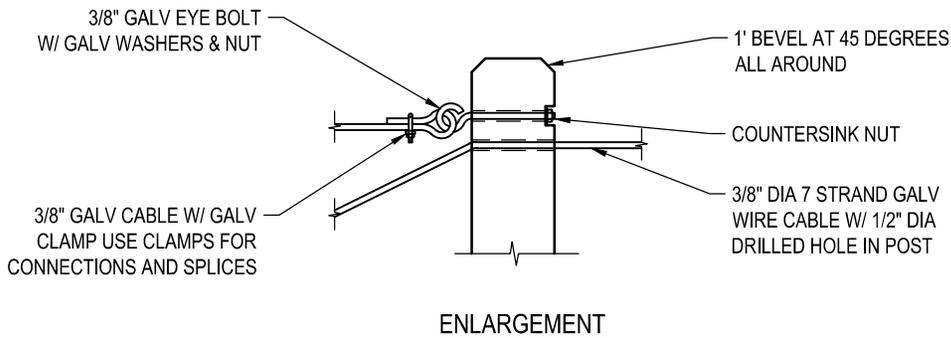
L-18

DRINKING FOUNTAIN



TERMINAL POST

LINE POST



ENLARGEMENT

NOTE: CONCRETE FOOTING SHALL BE INSTALLED AT ALL TERMINAL POSTS AND AT ALL BENDS

COUNTY OF SUTTER - ENGINEERING		APPROVED BY: 	4/3/2025
POST AND CABLE FENCING		DEVELOPMENT SERVICES DIRECTOR	DATE
		 SUTTER COUNTY	DRAWING NUMBER L-19

$\frac{3}{16}$ " STEEL PLATE WELDED TO TUBE AND GROUND SMOOTH
5'-0" CLEARANCE MAX.
OR AS SPECIFIED ON PLAN

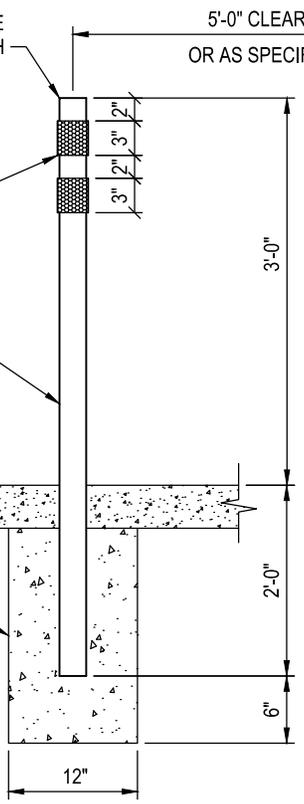
3" YELLOW HIGH INTENSITY RETRO-REFLECTIVE TAPE (TYP)

2 1/2" X 2 1/2" STEEL TUBE 3/16" THICK. PAINTED WITH 2 COATS OF PRIMER AND INSIGNIA YELLOW.

FINISH SURFACE

CONCRETE FOOTING

STATIONARY BOLLARD



2 1/4" RUBBER HIGH PRESSURE HOSE SECURED TO STEEL TUBE WITH A 1/4" HEX BOLT, WASHER AND NUT.

2 1/2" X 2 1/2" STEEL TUBE, 3/16" THICK. PAINT WITH 2 COATS OF PRIMER YELLOW PAINT.

SEE DETAIL A

DRILL 5/8" DIA. HOLE WITH 1/2" DIA. HEX HEAD BOLT FOR SWIVEL. TACK WELD BOTH SIDES OF BOLT.

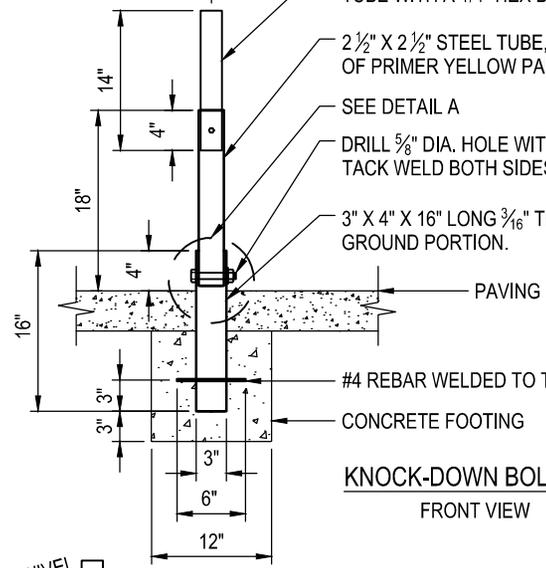
3" X 4" X 16" LONG 3/16" THICK STEEL TUBING. PAINT ABOVE GROUND PORTION.

PAVING

#4 REBAR WELDED TO TUBING, BOTH SIDES

CONCRETE FOOTING

KNOCK-DOWN BOLLARD
FRONT VIEW

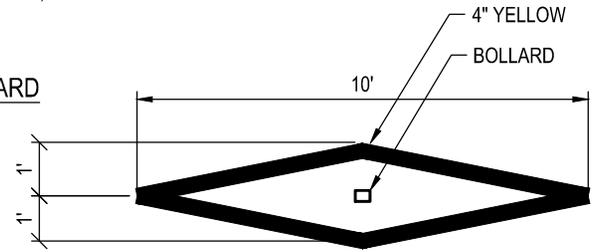
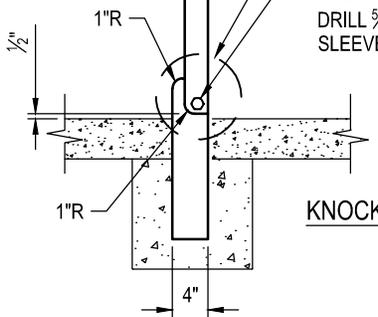


SWIVEL

SEE DETAIL B

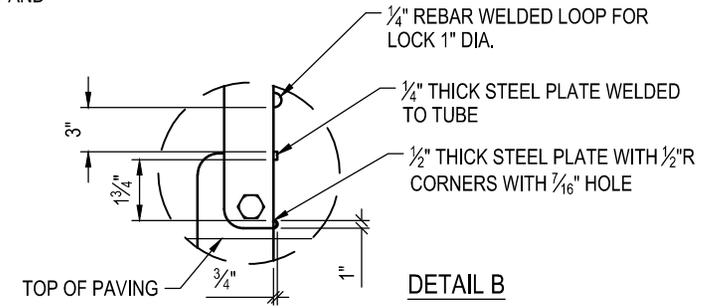
1/2" HEX BOLT, WASHER AND NUT. TACK WELD BOTH SIDES OF BOLT. DRILL 5/8" DIA. HOLE THRU POST AND SLEEVE.

KNOCK-DOWN BOLLARD
SIDE VIEW

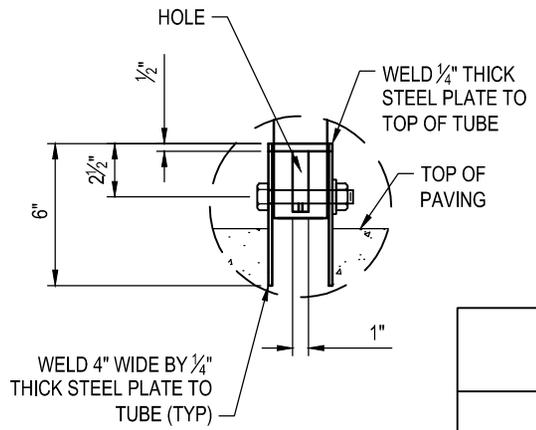


STREET SIDE

BOLLARD STRIPING
IF REQUIRED



DETAIL B



DETAIL A

COUNTY OF SUTTER - ENGINEERING

**KNOCK-DOWN BOLLARD
AND STATIONARY BOLLARD**

APPROVED BY:

ULP

4/3/2025

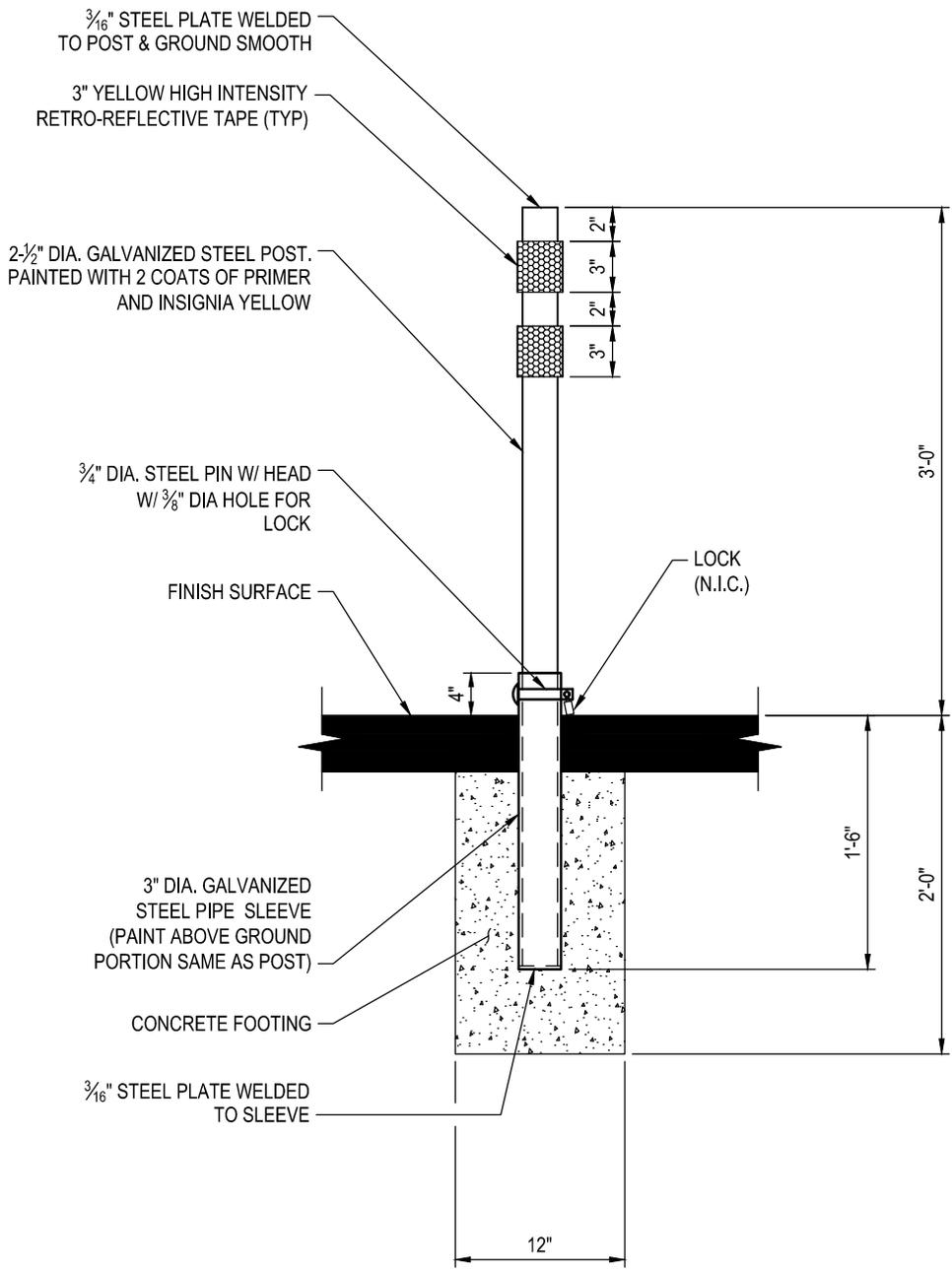
DEVELOPMENT SERVICES DIRECTOR

DATE



DRAWING NUMBER

L-20



NOTE:
 DRILL A 1 3/16" DIA HOLE THRU BOTH THE POST
 AND SLEEVE FOR PIN PLACEMENT

COUNTY OF SUTTER - ENGINEERING

REMOVABLE BOLLARD

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

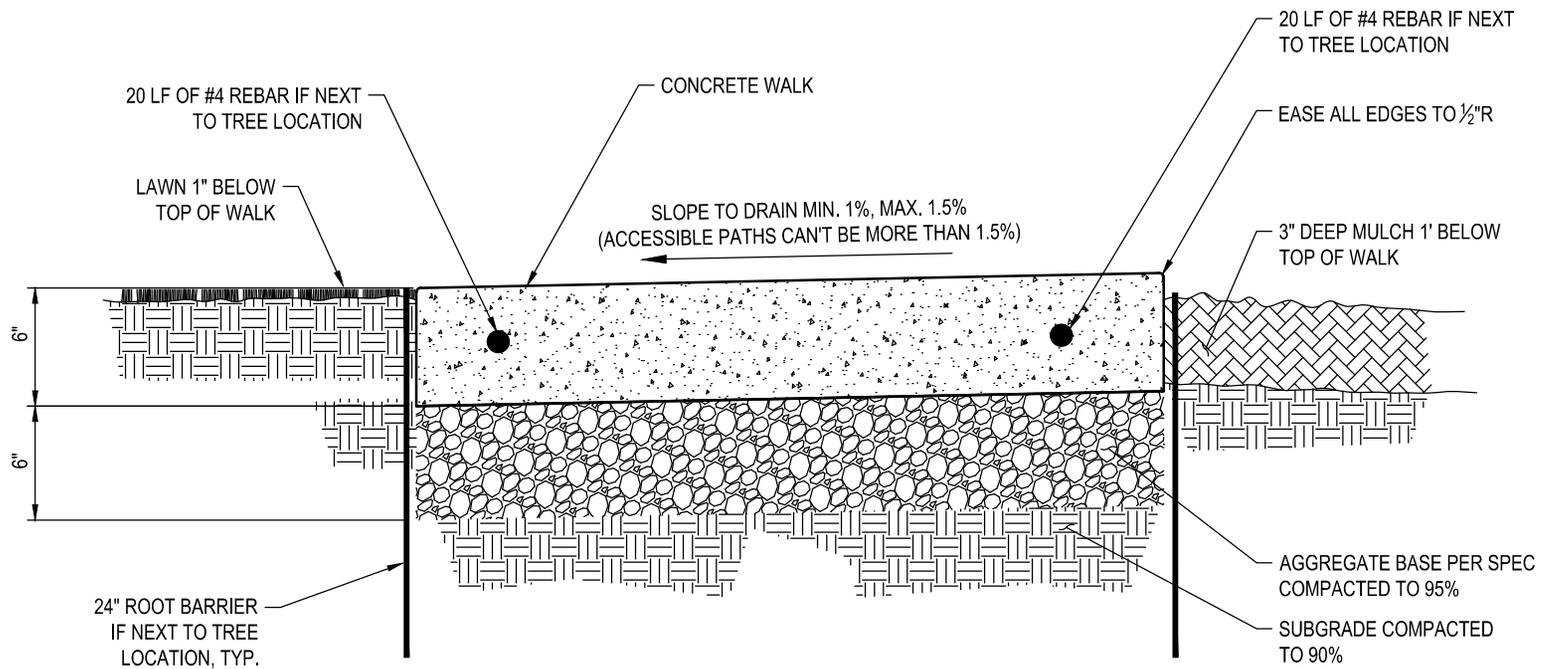
4/3/2025

DATE



DRAWING NUMBER

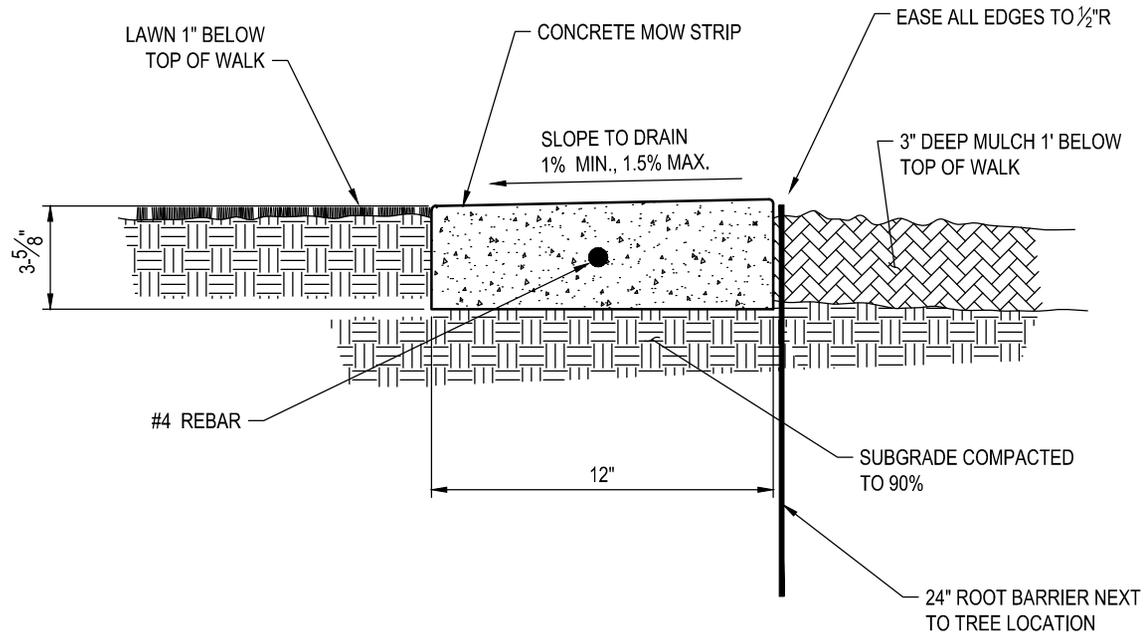
L-21



NOTES:

1. PROVIDE 25% OF THICKNESS OR 1.5" DEEP SCORE JOINTS AT 10'-0" ON CENTER.
2. PROVIDE EXPANSION JOINTS AT 20'-0" INTERVALS.
3. CLASS "B" CONCRETE.
4. MEDIUM BROOM FINISH PERPENDICULAR TO WALK EDGE UNLESS OTHERWISE SPECIFIED.
5. PROVIDE FULL DEPTH FELT EXPANSION JOINTS WHEN ABUTTING WALKS, WALLS AND BUILDINGS.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>CONCRETE WALK (IN PARK AREAS, NOT FRONTAGE AREAS)</p>	<p>SUTTER COUNTY</p>  <p>DRAWING NUMBER</p> <p>L-22</p>



NOTES:

1. PROVIDE 1" DEEP SCORE JOINTS AT 10'-0" ON CENTER.
2. PROVIDE EXPANSION JOINTS AT 20'-0" INTERVALS.
3. CLASS "B" CONCRETE.
4. MEDIUM BROOM FINISH UNLESS OTHERWISE SPECIFIED.
5. PROVIDE FULL DEPTH FELT EXPANSION JOINTS WHEN ABUTTING WALKS, WALLS AND BUILDINGS.

COUNTY OF SUTTER - ENGINEERING

CONCRETE MOW STRIP

APPROVED BY:

ULP

4/3/2025

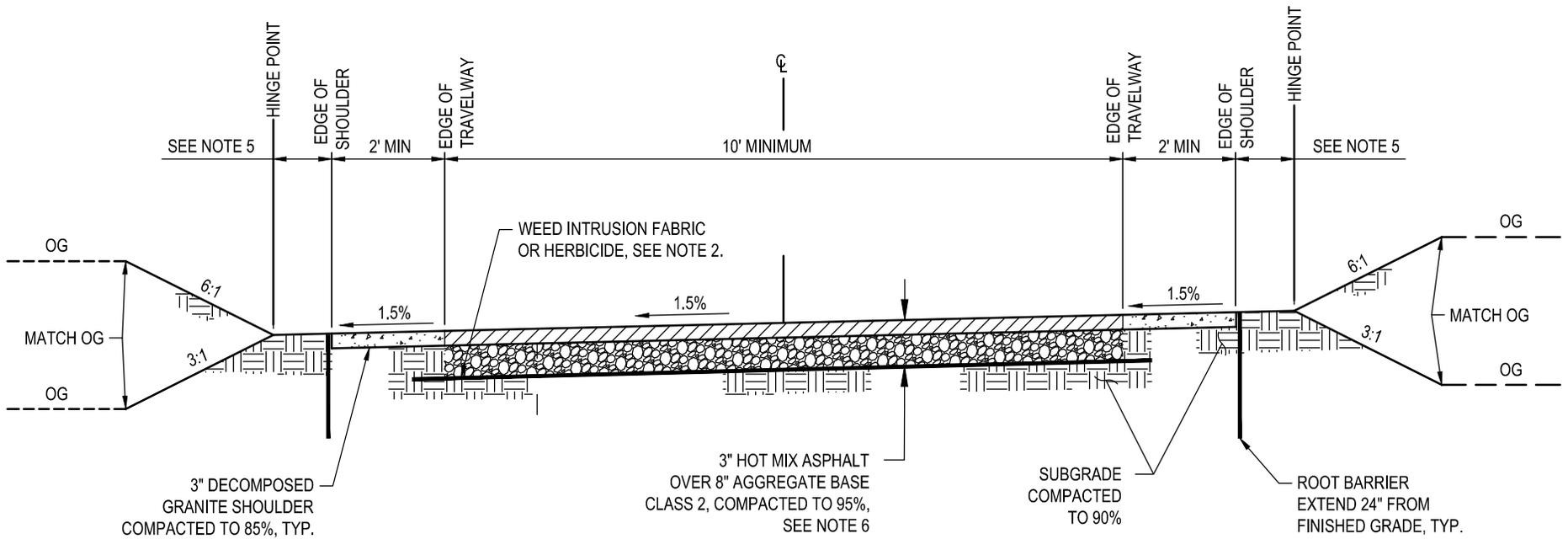
DEVELOPMENT SERVICES DIRECTOR

DATE



DRAWING NUMBER

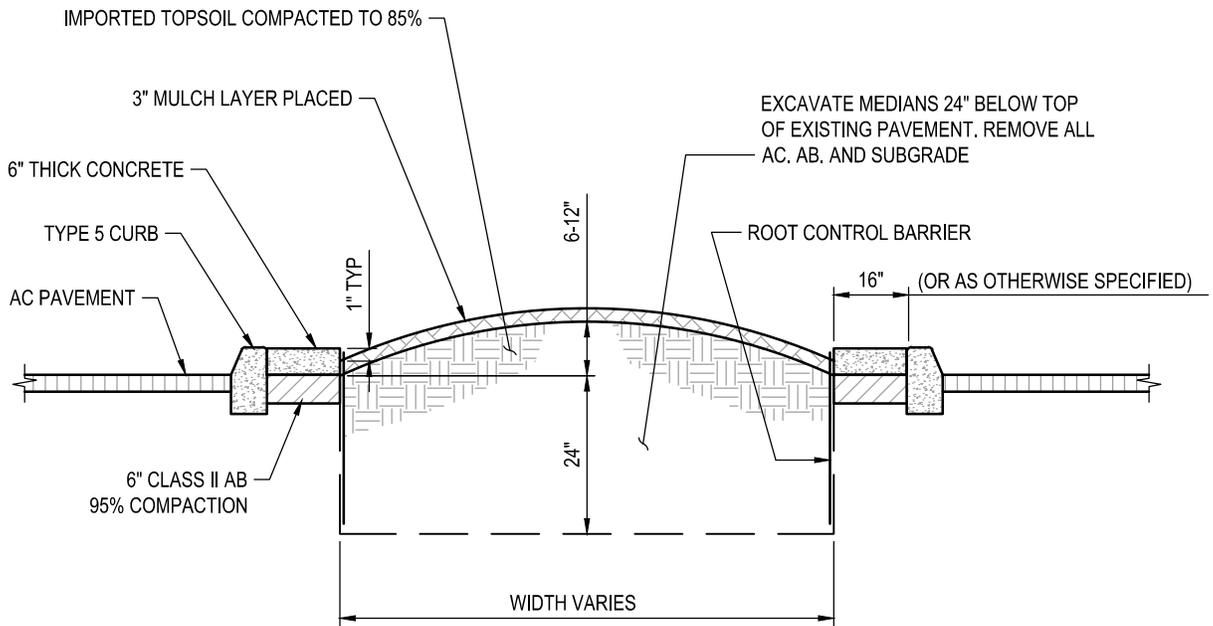
L-23



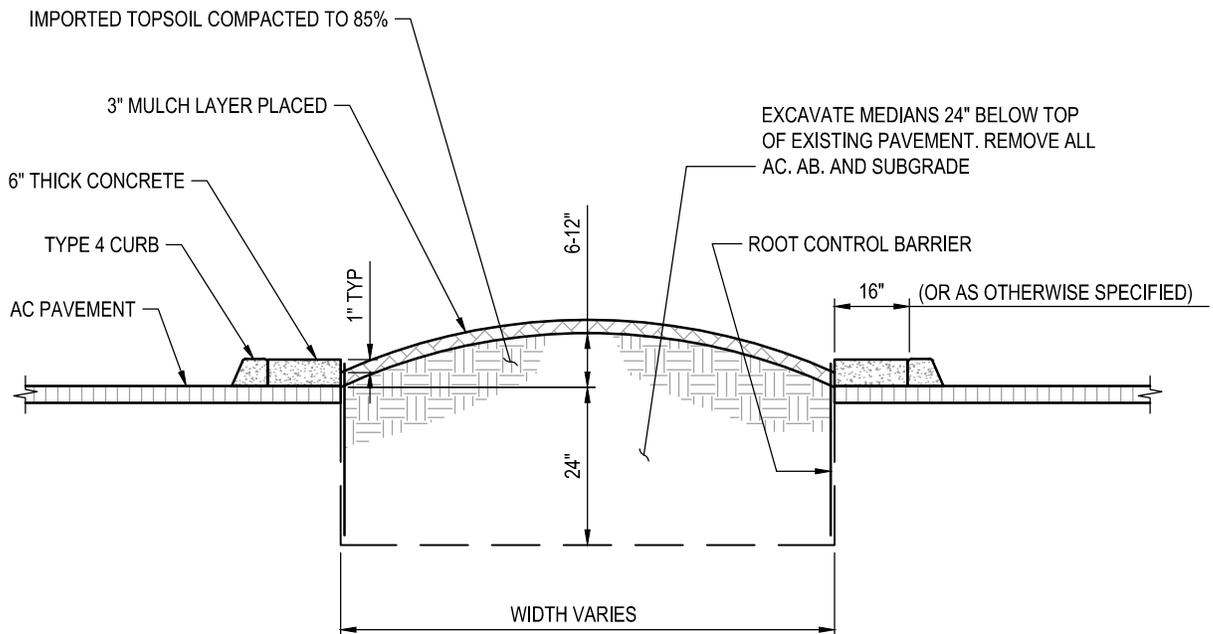
NOTE:

1. APPLY PRE-EMERGENT HERBICIDE UNDER DECOMPOSED GRANITE PRIOR TO INSTALLING IT.
2. APPLY PRE-EMERGENT HERBICIDE OR WEED INTRUSION FABRIC TO AGGREGATE BASE PRIOR TO PAVING ASPHALT CONCRETE.
3. APPLY A 4" WIDE SOLID THERMOPLASTIC YELLOW CENTERLINE STRIPE CONTINUOUSLY DOWN THE CENTER OF THE BIKE TRAIL.
4. A MINIMUM 3-FOOT HORIZONTAL CLEARANCE FROM THE PAVED EDGE OF A BIKE PATH TO OBSTRUCTIONS SHALL BE PROVIDED.
5. FOR TRAILS PARALLEL AND ADJACENT TO STREET, THE TRAIL EDGE OF TRAVELED WAY SHALL BE 5' MINIMUM FROM THE ROADWAY EDGE OF SHOULDER OR 5' MINIMUM FROM THE ROADWAY TOP FACE OF CURB WHICHEVER IS GREATER.
6. A GEOTECHNICAL RECOMMENDATION IS REQUIRED FOR AN R-VALUE OF LESS THAN 50 TO PROVIDE A DESIGN LIFE OF 20 YEARS AND A TI OF 5.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p>4/3/2025 DATE</p>
<p>BIKE TRAIL PAVING SECTION</p>	<p>DEVELOPMENT SERVICES DIRECTOR</p> <p>SUTTER COUNTY DRAWING NUMBER L-24</p>



TYPE 5 CURB



TYPE 4 CURB

NOTE:
 CONTOUR OF MEDIAN WILL VARY DEPENDING UPON MEDIAN WIDTH. DO NOT EXCEED BID
 QUANTITY OF IMPORTED TOPSOIL TO ACHIEVE 12" HEIGHT.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULPJ

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

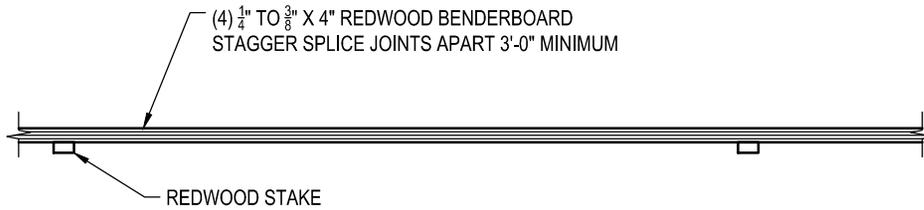
DATE

**ROADWAY MEDIAN
 SECTION**

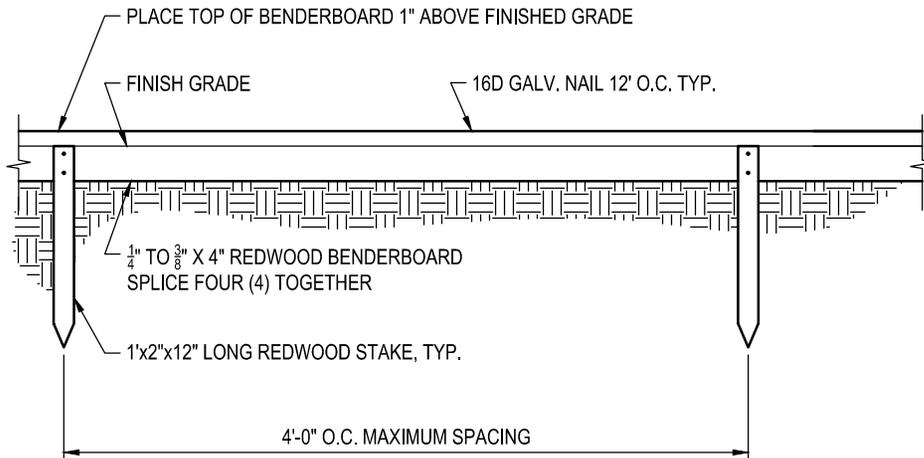


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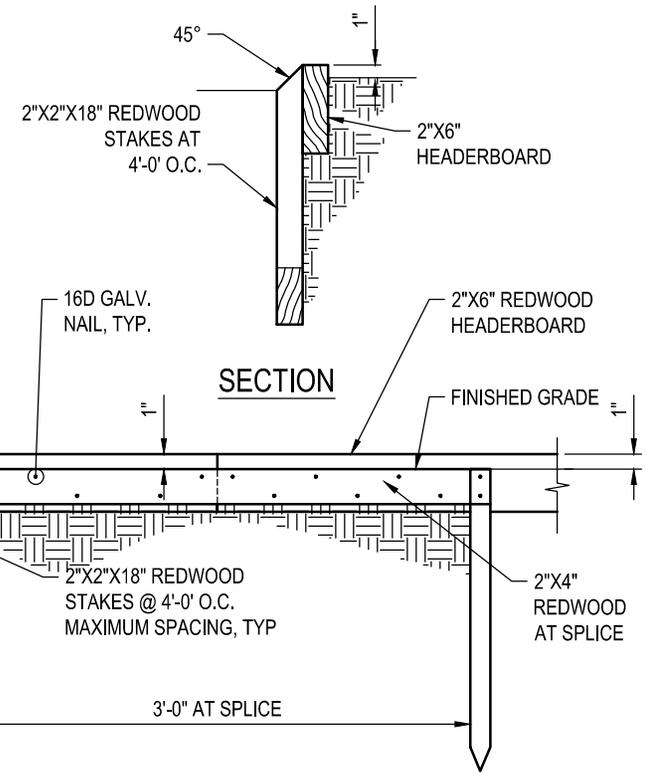
L-25



BENDERBOARD PLAN VIEW



ELEVATION VIEW
1/4" TO 3/8" X 4" BENDERBOARD

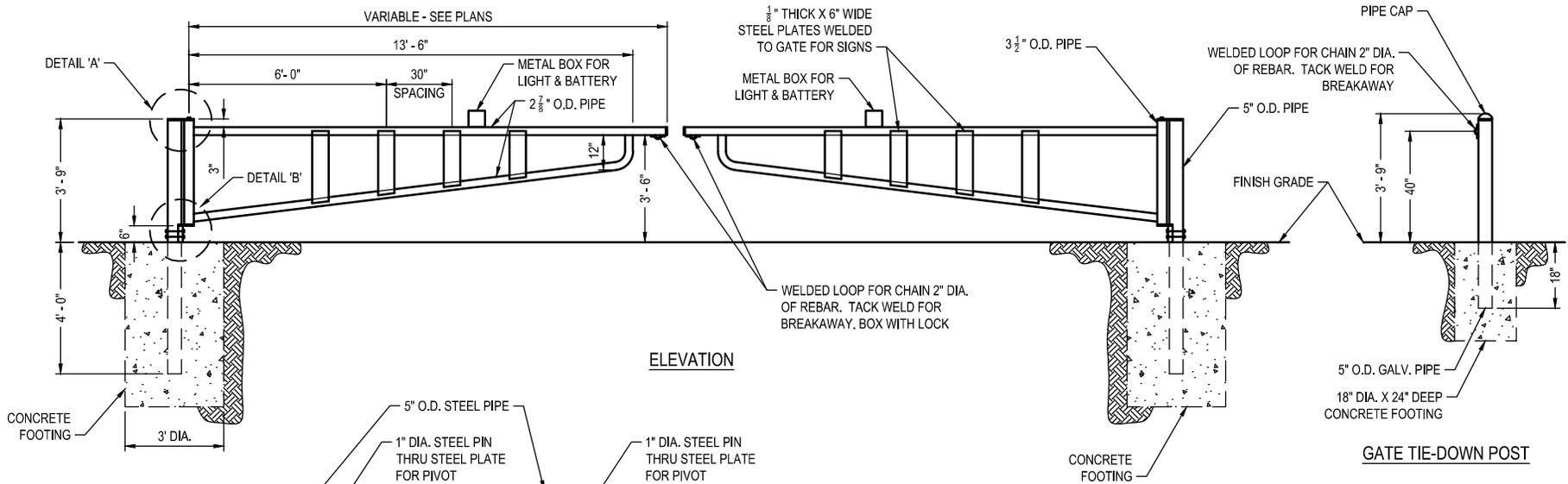


SPLICE DETAIL
2" X 6" HEADERBOARD

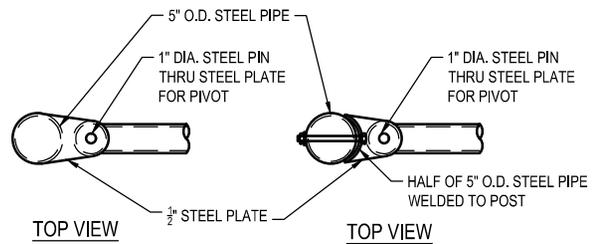
NOTES:

1. INSTALL ALL STAKES AND SPLICES ON PLANTING SIDE OF HEADERBOARD.
2. ALL NAILS SHALL BE GALVANIZED.
3. ALL REDWOOD SHALL BE ROUGH CONSTRUCTION COMMON GRADE IN ACCORDANCE TO CALIFORNIA REDWOOD ASSOCIATION GRADING RULES. DRIVE STAKES TO RESISTANCE AND CUT TOP AT 45 DEGREE ANGLE.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>REDWOOD HEADERBOARD</p>	<p>SUTTER COUNTY</p>  <p>DRAWING NUMBER</p> <p>L-26</p>

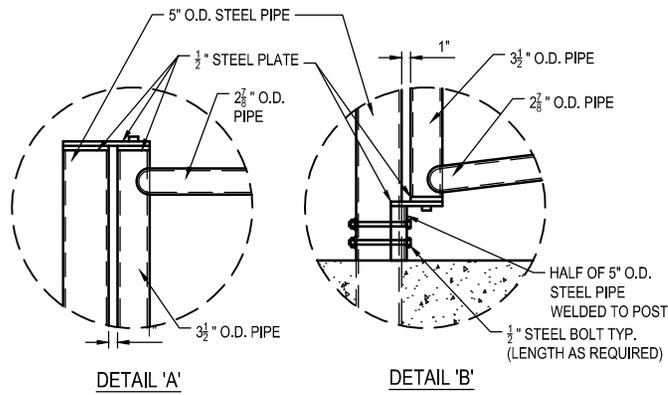


ELEVATION



TOP VIEW

TOP VIEW



DETAIL 'A'

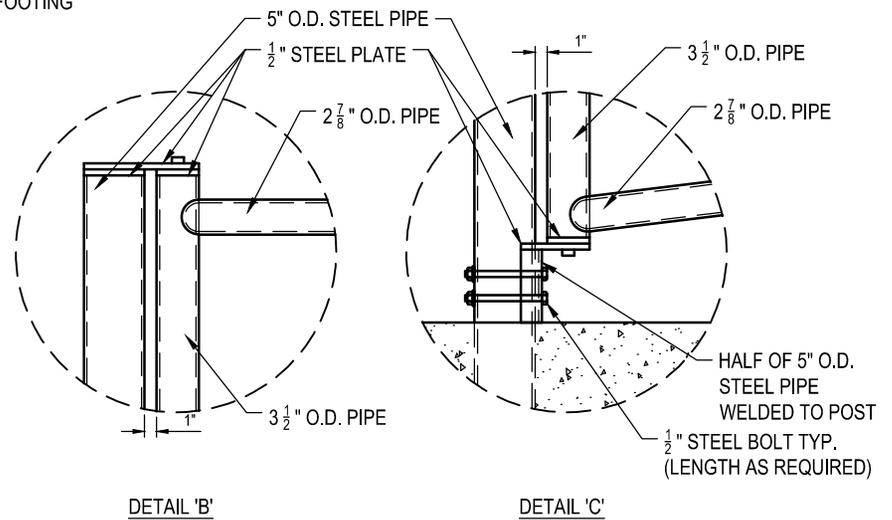
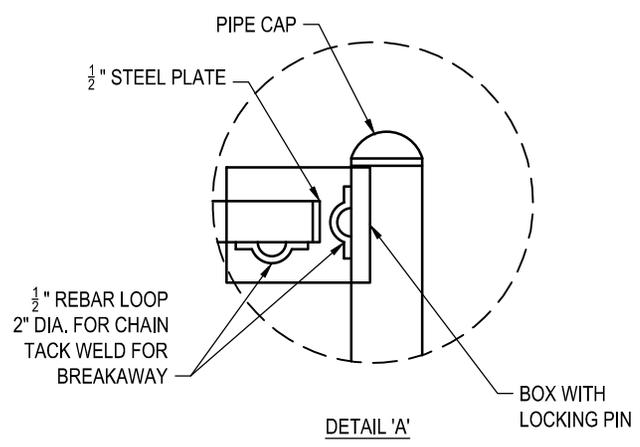
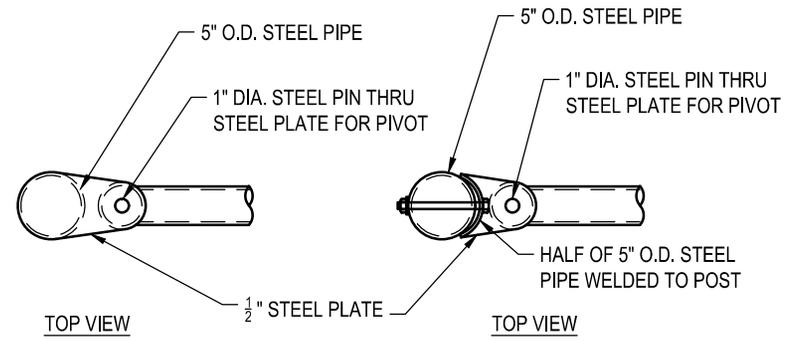
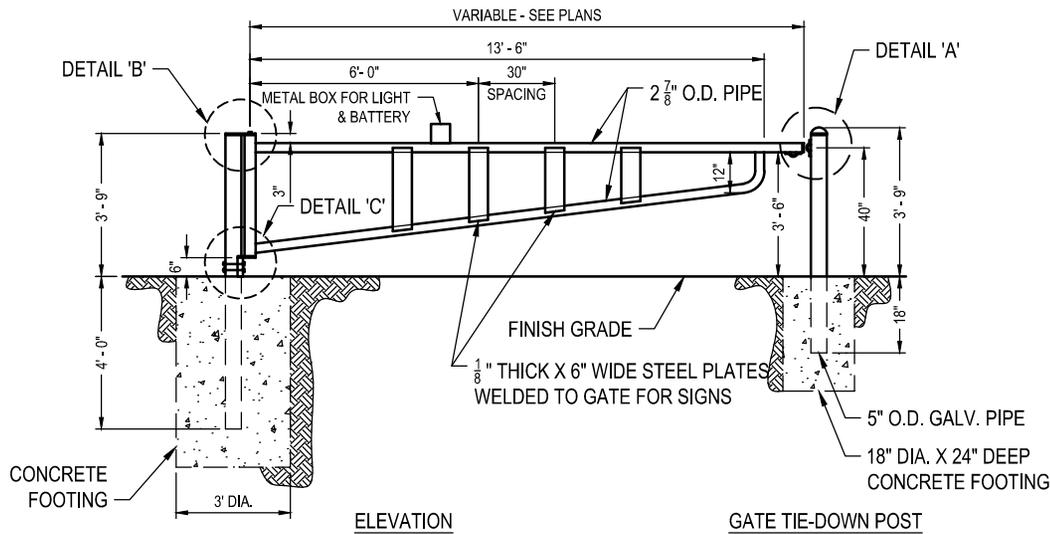
DETAIL 'B'

NOTES:

1. DOUBLE PIPE GATES SHALL BE USED FOR ROADWAYS OR DRIVEWAYS OVER 24' WIDE OPENING.
2. ALL PIPES SHALL BE BLACK STEEL PIPES, OUTSIDE DIAMETER (O.D.) AND WELDED.
3. ALL STEEL TO BE PAINTED WITH 2 COATS OF PRIMER AND INSIGNIA YELLOW.
4. PROVIDE TWO (2) 5" O.D. PIPES AND INSTALL WITH CONCRETE FOOTING (18" X 24" D) FOR TIE-DOWN WHEN GATE IS OPENED AND CLOSED.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p>DEVELOPMENT SERVICES DIRECTOR</p>
<p>DOUBLE PIPE GATE</p>	<p>4/3/2025 DATE</p> <p>DRAWING NUMBER L-27</p>



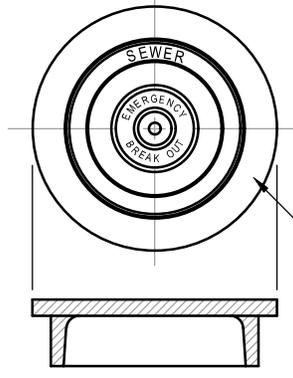


NOTES:

1. SINGLE PIPE GATE SHALL BE USED FOR ROADWAYS OR DRIVEWAYS UP TO 24' WIDE MAXIMUM OPENING.
2. ALL PIPES SHALL BE BLACK STEEL PIPES. OUTSIDE DIAETER (O.D.) AND WELDED.
3. ALL STEEL TO BE PAINTED WITH 2 COATS OF PRIMER AND INSIGNIA YELLOW.
4. PROVIDE TWO (2) 5" O.D. PIPES AND INSTALL WITH CONCRETE FOOTING (18" X 24" D) FOR TIE-DOWN WHEN GATE IS OPENED AND CLOSED.

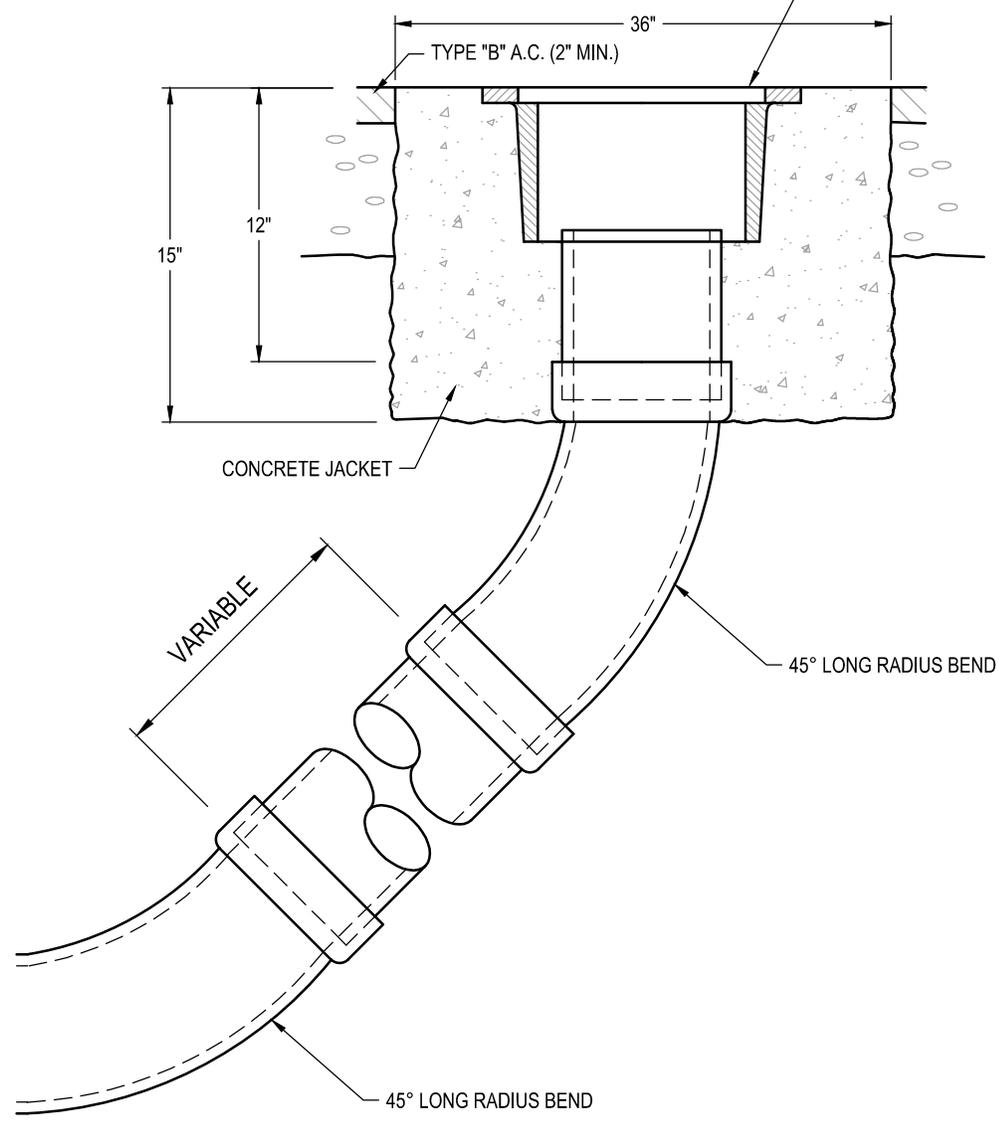
COUNTY OF SUTTER - ENGINEERING	APPROVED BY: DEVELOPMENT SERVICES DIRECTOR
SINGLE PIPE GATE	DATE: 4/3/2025 DRAWING NUMBER: L-28

SUTTER COUNTY



COVER DETAIL

1. FOR 6" SEWER MAIN USE D & L SUPPLY 9 1/2" TRAFFIC VALVE BOX TYPE H8030 OR APPROVED EQUAL MARKED "SEWER".
2. FOR 8" 10" AND 12" SEWER MAINS USE D & L CLEAN-OUT ASSEMBLY H-8026 OR EQUAL MARKED "SEWER".



COUNTY OF SUTTER - ENGINEERING

SEWER CLEANOUT

APPROVED BY:

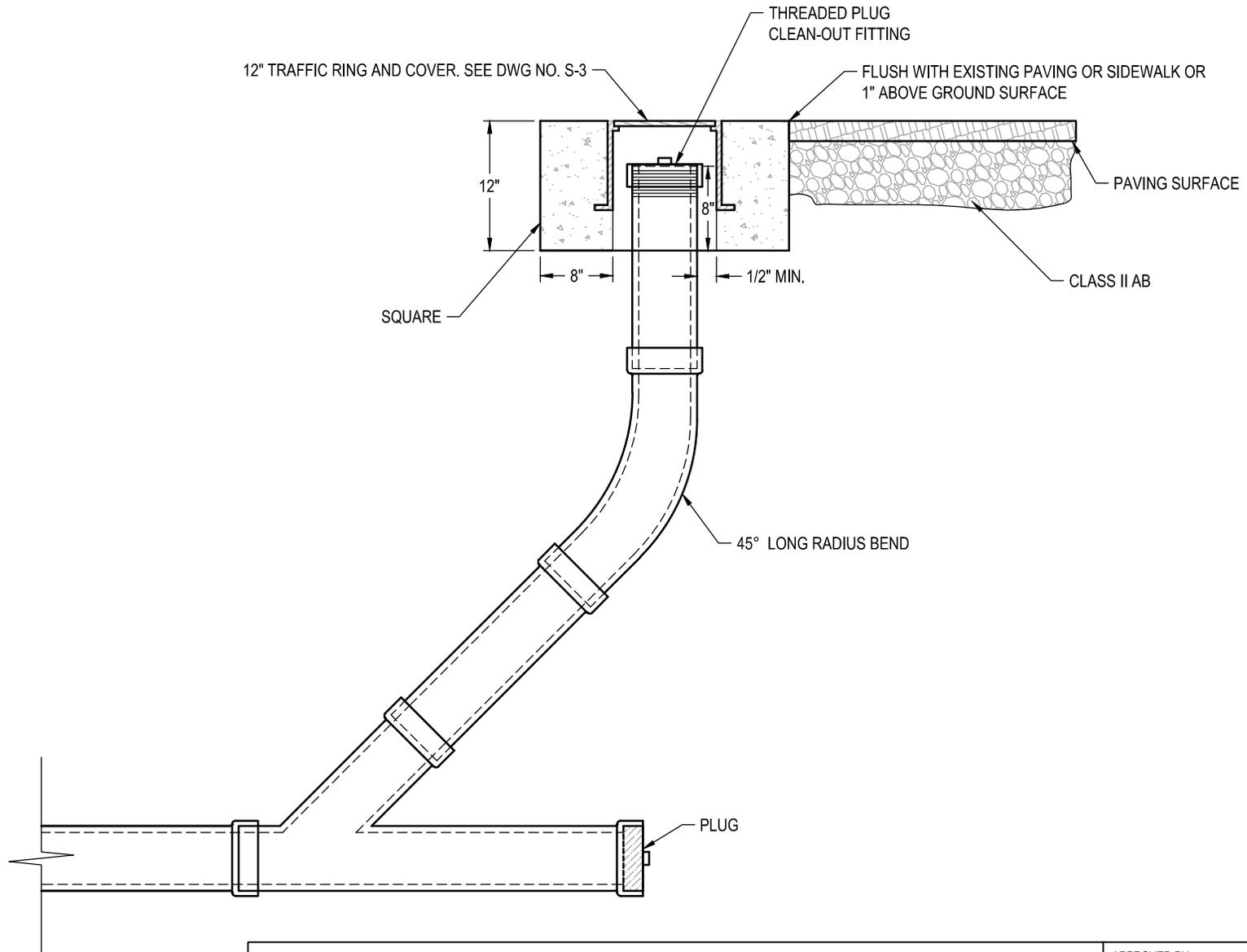
 DEVELOPMENT SERVICES DIRECTOR

4/3/2025
 DATE



DRAWING NUMBER

S-1



COUNTY OF SUTTER - ENGINEERING

8" FLUSHING BRANCH

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

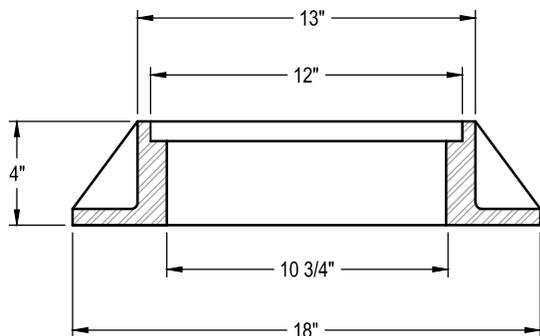
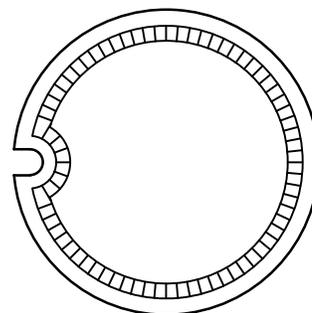
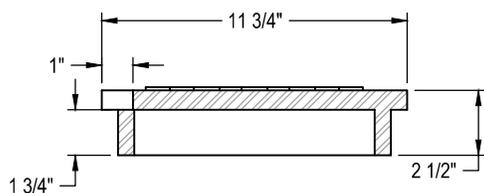
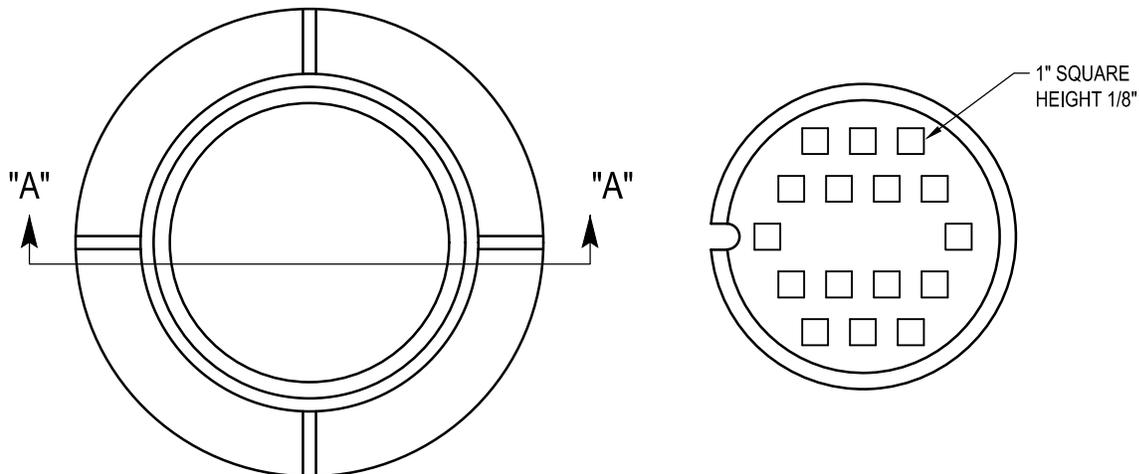
DATE



DRAWING NUMBER

S-2

PLAN



SECTION A-A

NOTES:

1. USE D&L SUPPLY H-8024 OR APPROVED EQUAL. MARKED "FLUSHING".
2. ALL MATERIALS USED IN MANUFACTURING SHALL CONFORM TO ASTM 48, CLASS 35B.
3. CASTING SHALL BE DIPPED IN BLACK, BITUMINOUS PAINT.
4. FRAME AND COVER MEETS H-20 WHEEL LOADING.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULPJ
DEVELOPMENT SERVICES DIRECTOR

4/3/2025

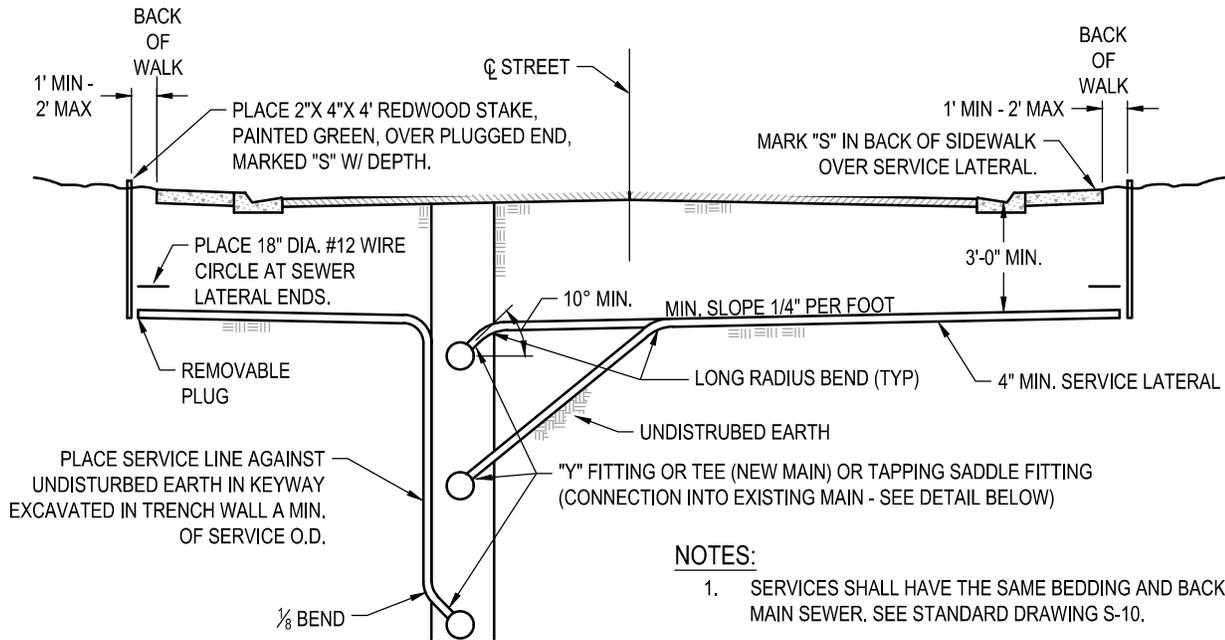
DATE

FRAME AND COVER



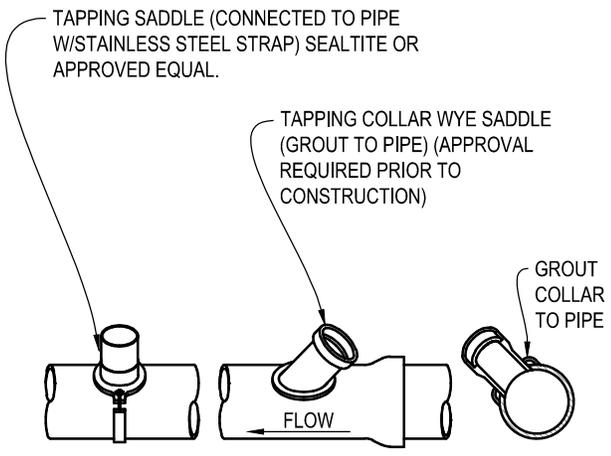
DRAWING NUMBER

S-3



NOTES:

1. SERVICES SHALL HAVE THE SAME BEDDING AND BACKFILL AS MAIN SEWER. SEE STANDARD DRAWING S-10.
2. PLACE TRACER (LOCATOR) WIRE ALONG LATERAL AND MAIN.
3. ANY REPAIRS TO SERVICES AND MAINS SHALL HAVE COMPRESSION COUPLINGS WITH STAINLESS STEEL SHEAR RINGS.
4. COLLAR WYE SADDLE OR CUT IN WYE SHALL BE USED FOR 4-INCH AND 6-INCH LATERAL. 8-INCH LATERALS OR LARGER REQUIRE A STANDARD MANHOLE.
5. "HAMMER TAP" CONNECTIONS ARE NOT ACCEPTABLE. THE HOLE FOR THE COLLAR OR WYE FITTING FOR A SEWER SADDLE SHALL BE MADE WITH AT TAPPING MACHINE. THE HOLE SHALL BE CLEANLY MACHINED AND IF NECESSARY WORKED BY HAND WITH A RASP OR SANDED TO ACCOMPLISH A TRUE AND NEAT OPENING FOR THE COLLAR WYE.
6. TAP TO BE MADE AT APPROXIMATELY CENTER OF JOINT.
7. THE SADDLE CONNECTION SHALL BE ENCASED TO THE LIMITS SHOWN WITH CONTROLLED LOW STRENGTH CONCRETE (100 PSI, MAX) AFTER THE CONNECTION IS APPROVED BY THE INSPECTOR. THE BELL IN THE LATERAL SHALL NOT BE ENCASED.
8. ALL CHIPS, DIRT, MORTAR, AND CONCRETE SHALL BE KEPT OUT OF THE SADDLE. CLEANING AND BALLING OF THE SADDLED REACH SHALL BE PERFORMED IF DIRECTED BY THE INSPECTOR.
9. ANY DAMAGED PIPE SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE INSPECTOR.
10. MAIN LINE SHALL CUT FOR SADDLE ONLY IN THE PRESENCE OF THE INSPECTOR.



COUNTY OF SUTTER - ENGINEERING

SEWER SERVICE CONNECTION

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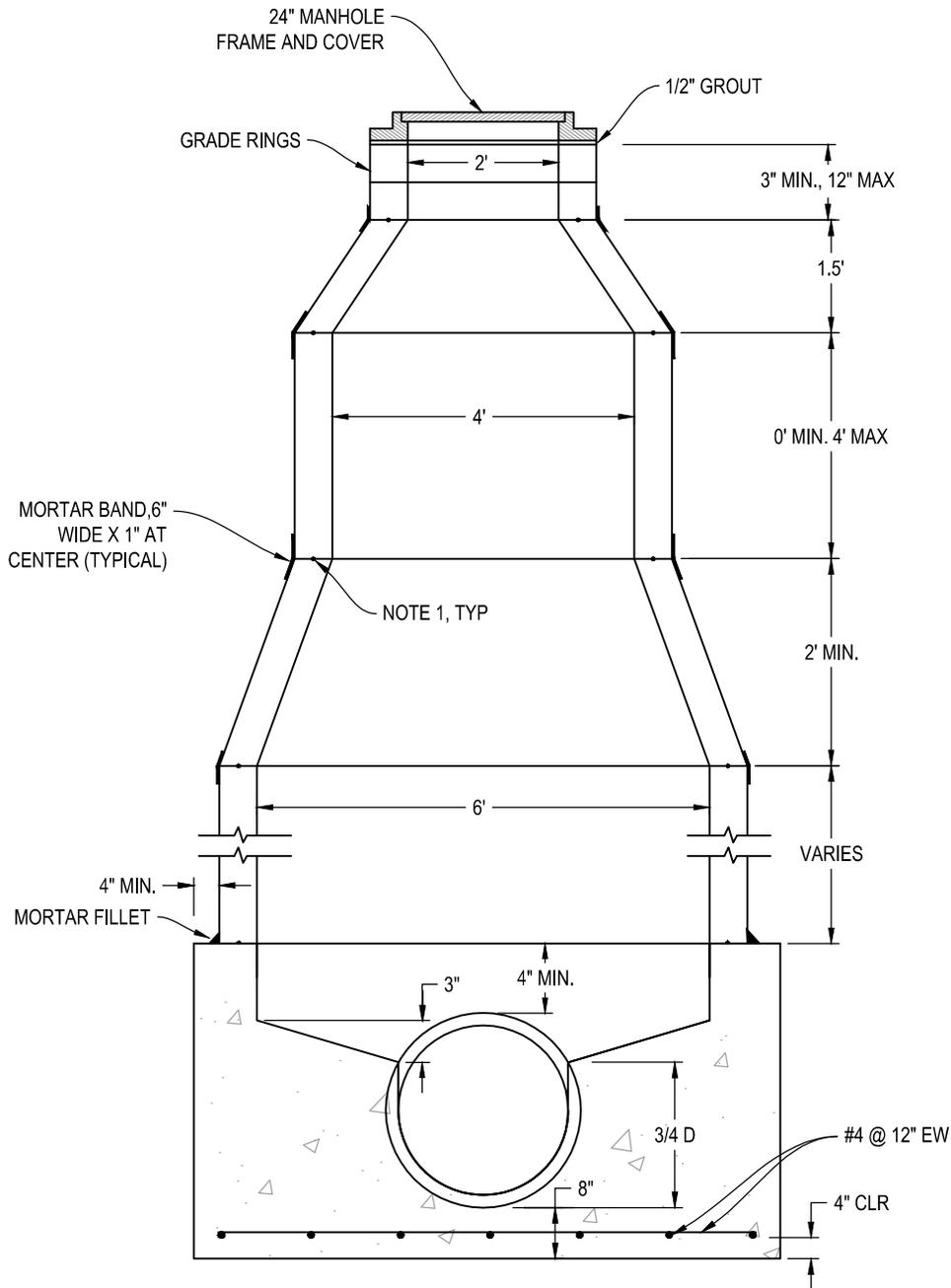
4/3/2025

DATE



DRAWING NUMBER

S-4



SANITARY SEWER SPECIAL MANHOLE

NOTES:

1. SEAL ALL JOINTS WITH RAM-NEK. GROUT JOINTS INSIDE AND OUTSIDE, TYP.
2. REMOVE TOP OF PIPE INSIDE MANHOLE.

COUNTY OF SUTTER - ENGINEERING

SPECIAL SEWER MANHOLE

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

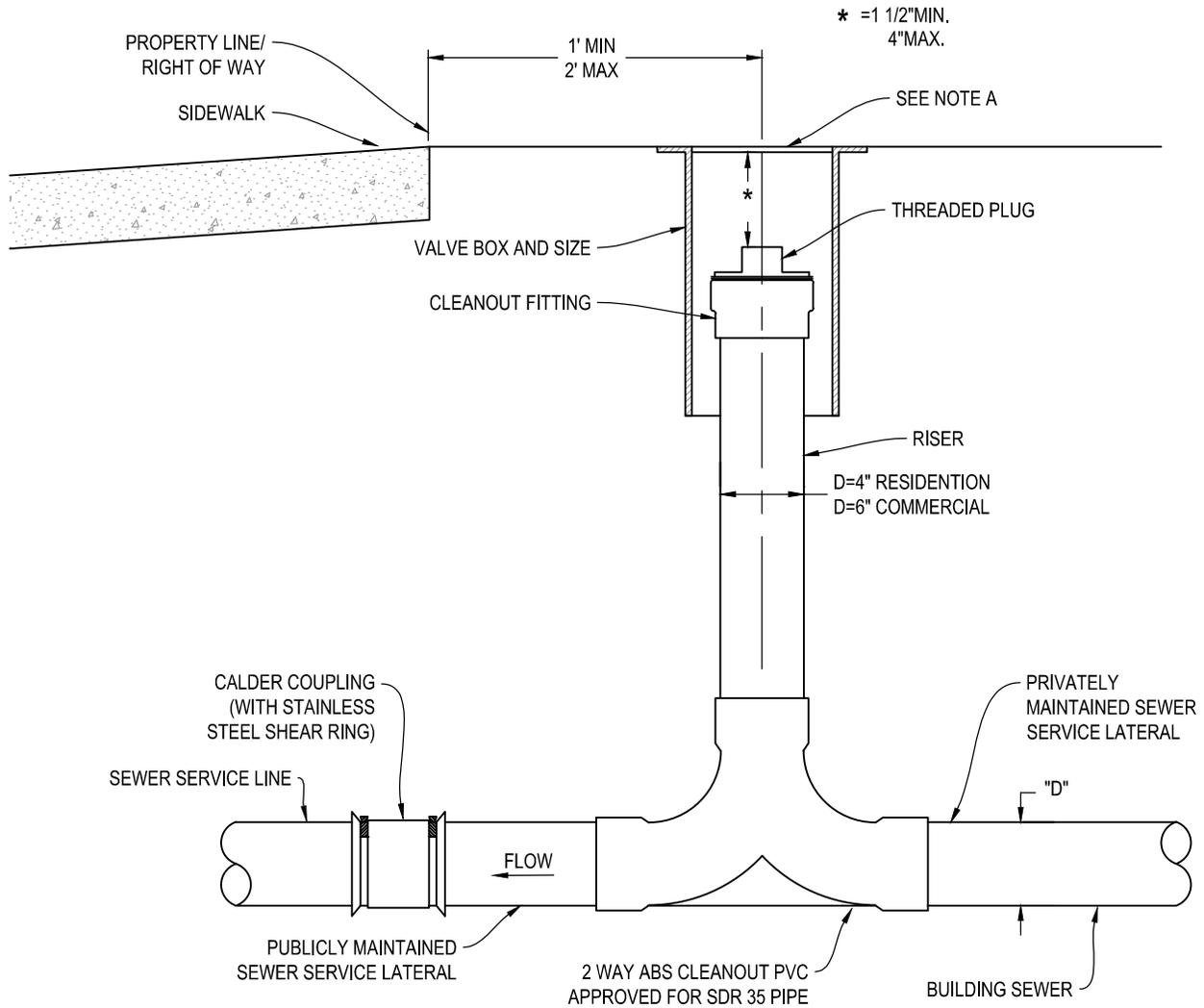
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DATE



DRAWING NUMBER

S-6



NOTE A:
 WHEN INSTALLED IN DRIVEWAY USE TRAFFIC RATED VALVE BOX, MARKED "SEWER"- WHEN INSTALLED IN LAWN OR PLANTER USE NON TRAFFIC RATED VALVE BOX MARKED "SEWER".

SANITARY SEWER ACCESS CONTROL

COUNTY OF SUTTER - ENGINEERING

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4/3/2025

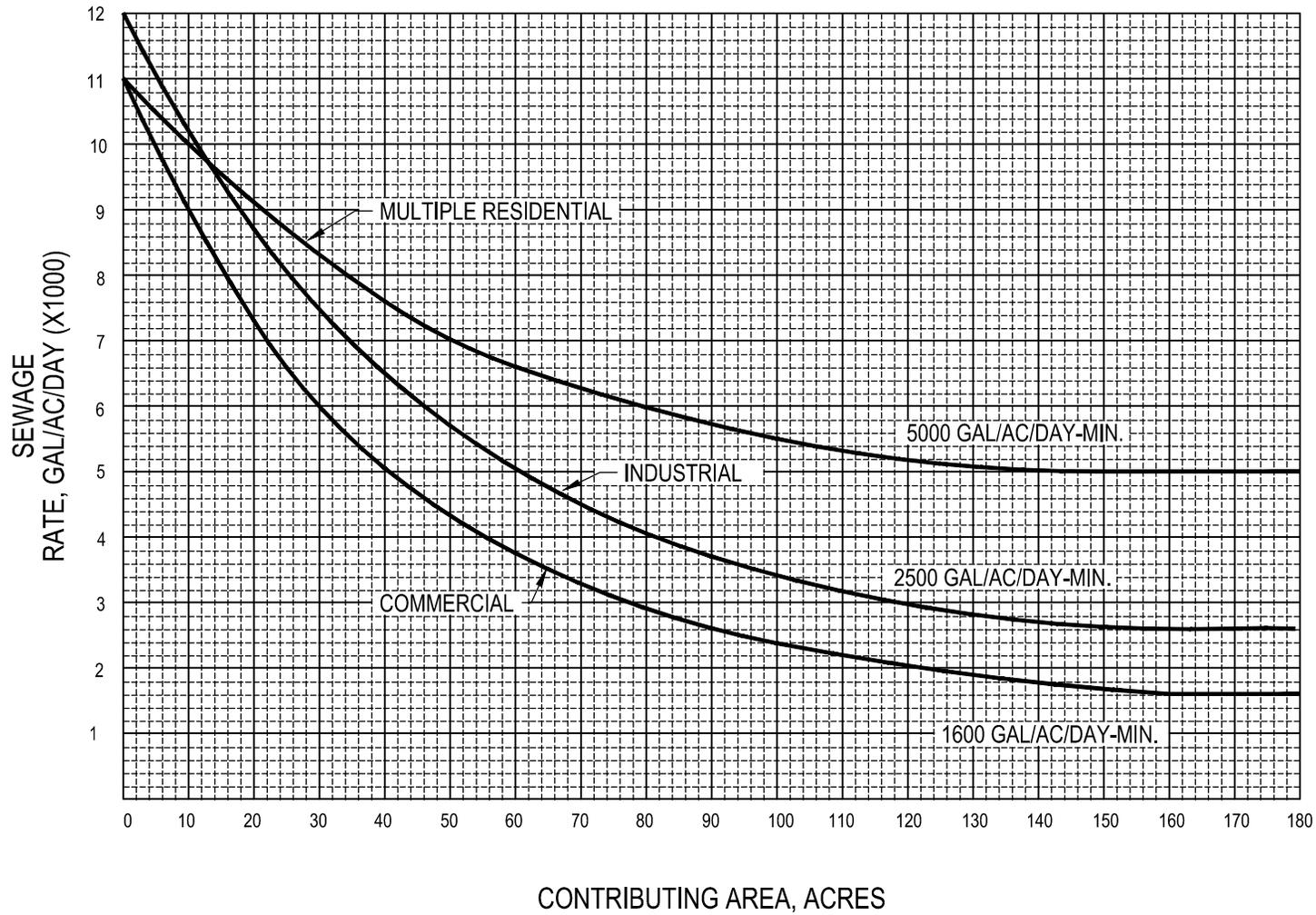
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SEWER CLEANOUT



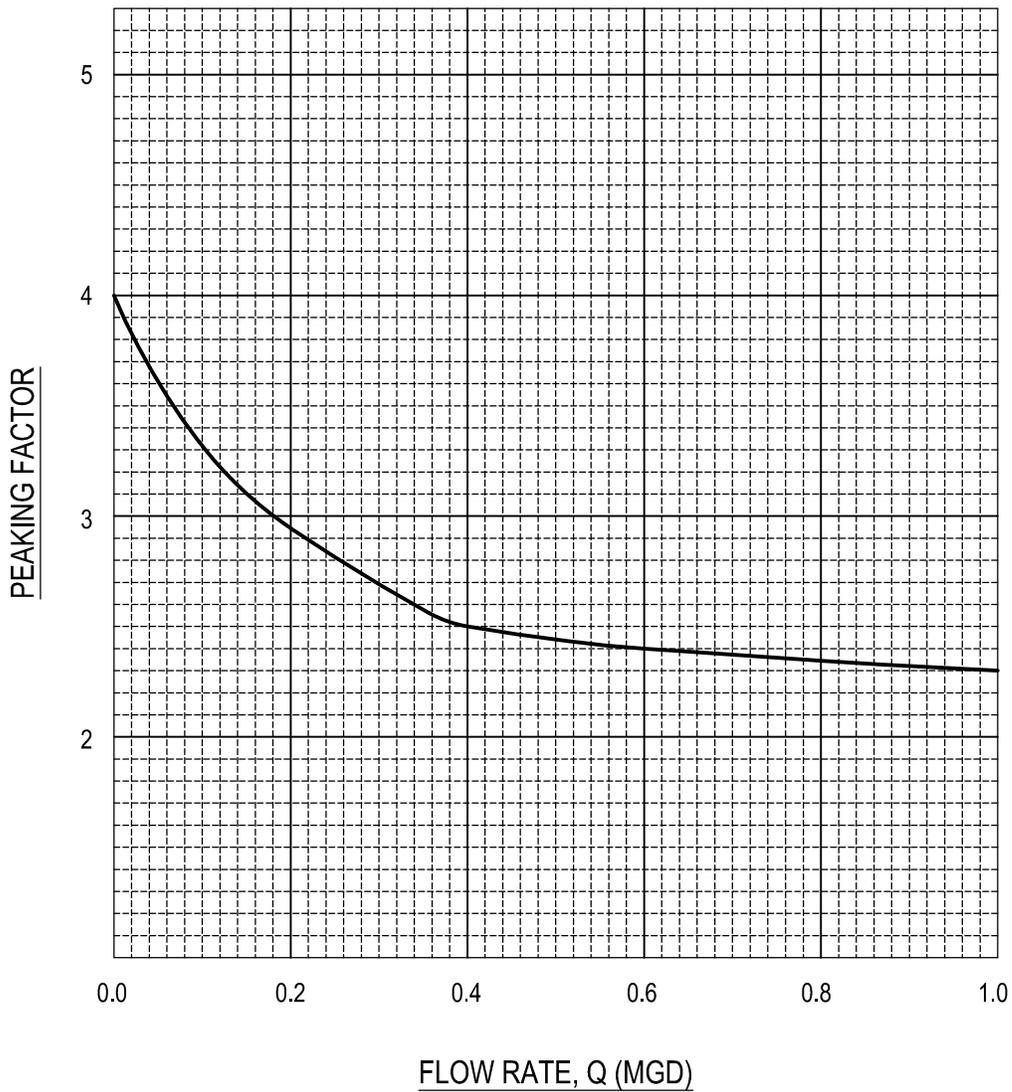
DRAWING NUMBER

S-7



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p style="text-align: right; font-size: small;">4/3/2025</p> <p style="text-align: right; font-size: x-small;">DATE</p>
<p>AVERAGE SEWER FLOWS</p>	<p style="text-align: right; font-size: x-small;">DRAWING NUMBER</p> <p style="text-align: right; font-size: large; font-weight: bold;">S-8</p>





COUNTY OF SUTTER - ENGINEERING

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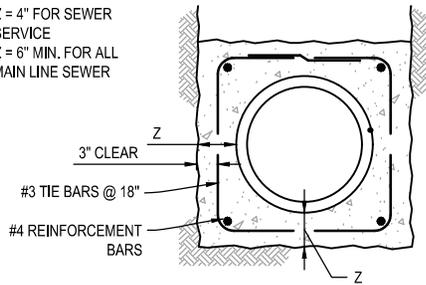
SEWER PEAKING FACTORS



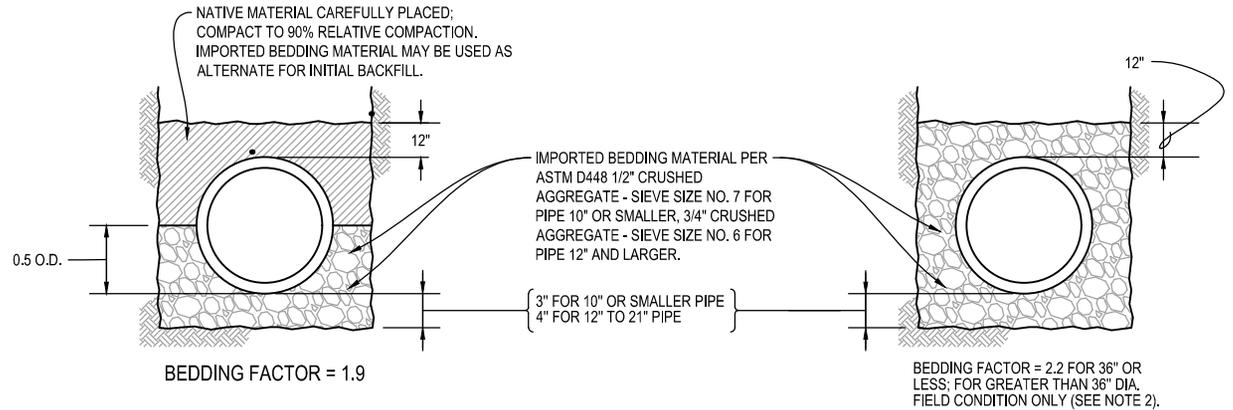
DRAWING NUMBER

S-9

Z = 4" FOR SEWER SERVICE
 Z = 6" MIN. FOR ALL MAIN LINE SEWER



CONCRETE ENCASEMENT

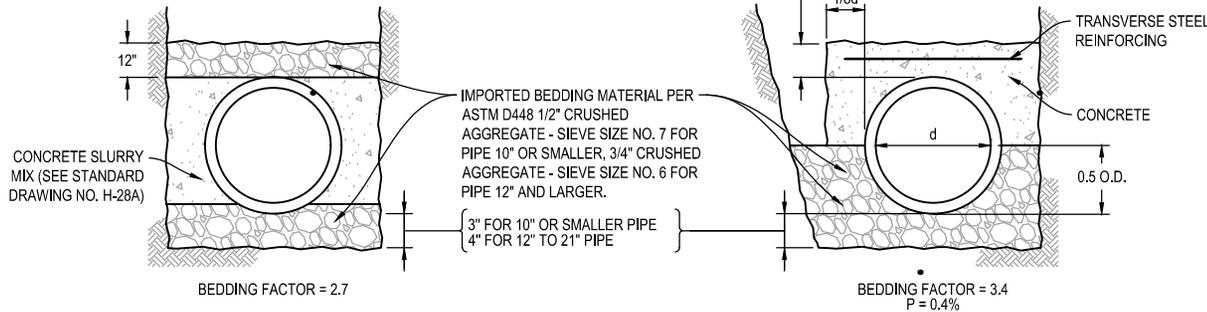


TYPE II
 (SEE NOTE 5)

TYPE II ALTERNATE

GENERAL NOTES:

1. MINIMUM DEPTH OF BEDDING AND MATERIAL UNDER PIPE BELLS SHALL BE 3 INCHES.
2. FOR PIPE GREATER THAN 36" IN DIAMETER TYPE II ALTERNATE SHALL BE ALLOWED ONLY WHEN FIELD ENCOUNTERED CONSTRUCTION CONDITIONS HAVE RESULTED IN THE ALLOWABLE TRENCH WIDTH FOR TYPE II BEING EXCEEDED AND CALCULATIONS MUST BE SUBMITTED FOR THE DIRECTOR'S APPROVAL TO DETERMINE THE APPROPRIATE BEDDING FACTOR FOR THE SITUATION. DESIGN METHOD NO. 38 AS PUBLISHED BY THE AMERICAN CONCRETE PIPE ASSOCIATION SHALL BE THE BASIS FOR THE CALCULATIONS. MAXIMUM ALLOWABLE BEDDING FACTOR IS 2.2.
3. TYPE III AND IV MAY BE USED ONLY WHEN CONSTRUCTION CONDITIONS ENCOUNTERED IN THE FIELD HAVE RESULTED IN THE ALLOWABLE TRENCH WIDTH FOR TYPE II AND TYPE II ALTERNATE BEING EXCEEDED. WRITTEN APPROVAL OF THE DIRECTOR IS NECESSARY.
4. FOR REINFORCED CONCRETE, P IS THE PERCENTAGE OF THE AREA OF TRANSVERSE STEEL TO THE AREA OF CONCRETE ABOVE THE TOP OF THE PIPE BARREL. USE WIRE MESH OR UNIFORMLY DISTRIBUTED SMALL DIAMETER REBAR.
5. FOR ALL FLEXIBLE (NON-RIGID) PIPE, IMPORTED MATERIAL MUST BE USED FOR BEDDING AND INITIAL BACKFILL TO 12 INCHES OVER PIPE BELL.



TYPE III
 (SEE NOTE 3)

(CONCRETE MUST EXTEND FROM PIPE TO THE TRENCH WALLS. TYPE III NOT ALLOWED WHERE SOILS ARE EXPANSIVE)

TYPE IV
 (SEE NOTES 3 & 4)

COUNTY OF SUTTER - ENGINEERING

SEWER PIPE BEDDING & INITIAL BACKFILL

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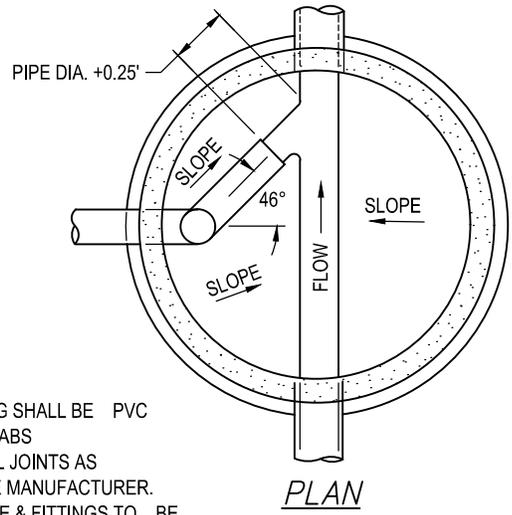
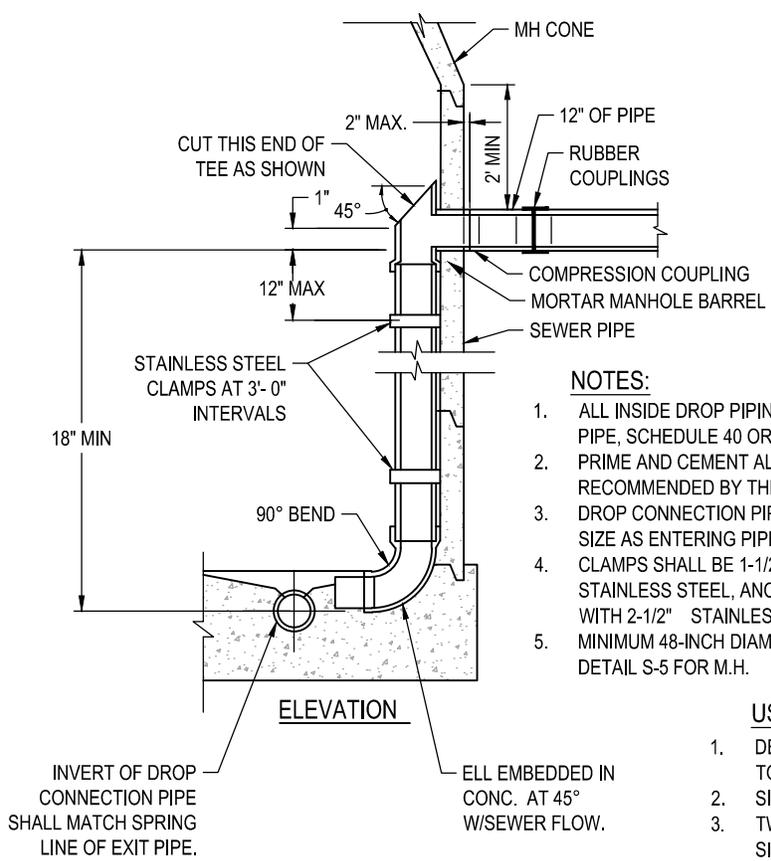
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DRAWING NUMBER

S-10



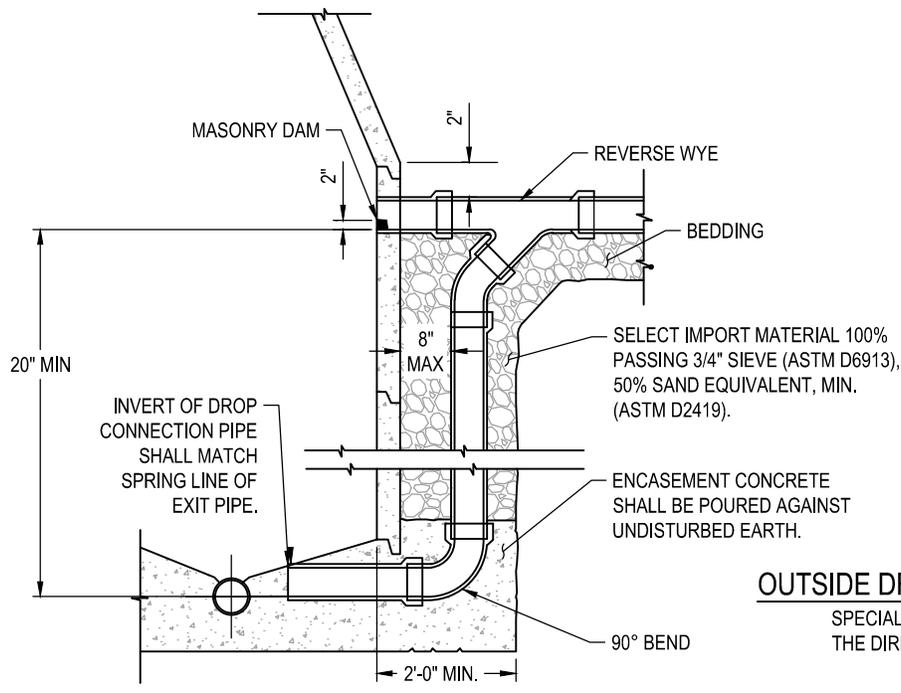
NOTES:

1. ALL INSIDE DROP PIPING SHALL BE PVC PIPE, SCHEDULE 40 OR ABS
2. PRIME AND CEMENT ALL JOINTS AS RECOMMENDED BY THE MANUFACTURER.
3. DROP CONNECTION PIPE & FITTINGS TO BE SIZE AS ENTERING PIPE.
4. CLAMPS SHALL BE 1-1/2" X 12 GAGE STAINLESS STEEL, ANCHORED TO M.H. WALL WITH 2-1/2" STAINLESS STEEL BOLTS.
5. MINIMUM 48-INCH DIAMETER MANHOLE. SEE DETAIL S-5 FOR M.H.

USE 60" MANHOLE IF:

1. DEPTH EXCEEDS 12' (MEASURED FROM RIM ELEVATION TO DEEPEST INVERT ELEVATION), OR
2. SIZE OF INSIDE DROP IS 10" OR GREATER, OR
3. TWO (2) OR MORE INSIDE DROP CONNECTIONS OF ANY SIZE ARE PLACED WITHIN MANHOLE.

INSIDE DROP CONNECTION UP TO 8" IN SIZE



NOTE:

DROP CONNECTION PIPE AND FITTINGS TO BE SAME SIZE & MATERIAL AS LATERAL.

OUTSIDE DROP CONNECTION OVER 8" IN SIZE

SPECIAL CASE (USE ONLY AS DIRECTED BY THE DIRECTOR)

COUNTY OF SUTTER - ENGINEERING

SEWER DROP CONNECTION

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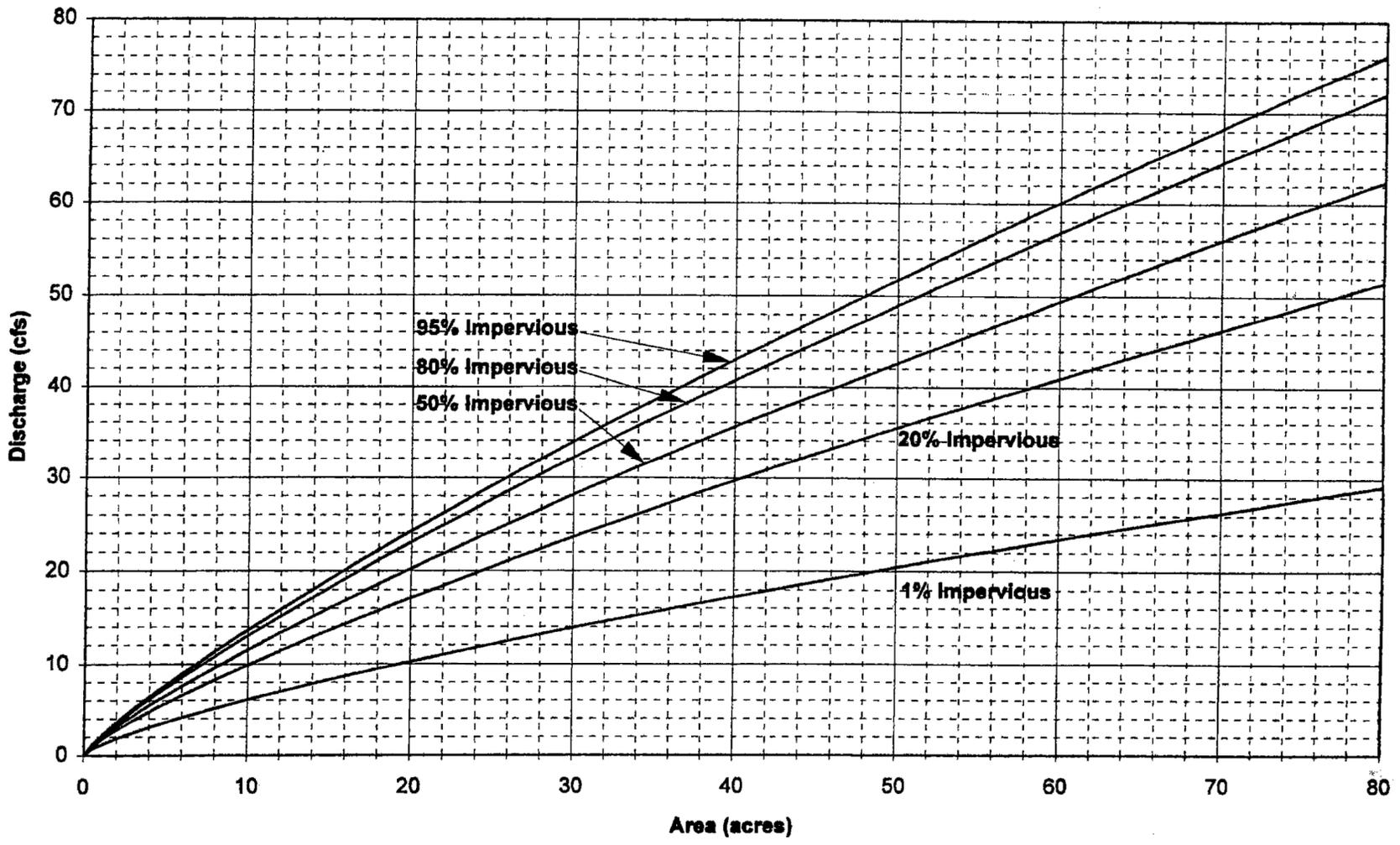
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S-11

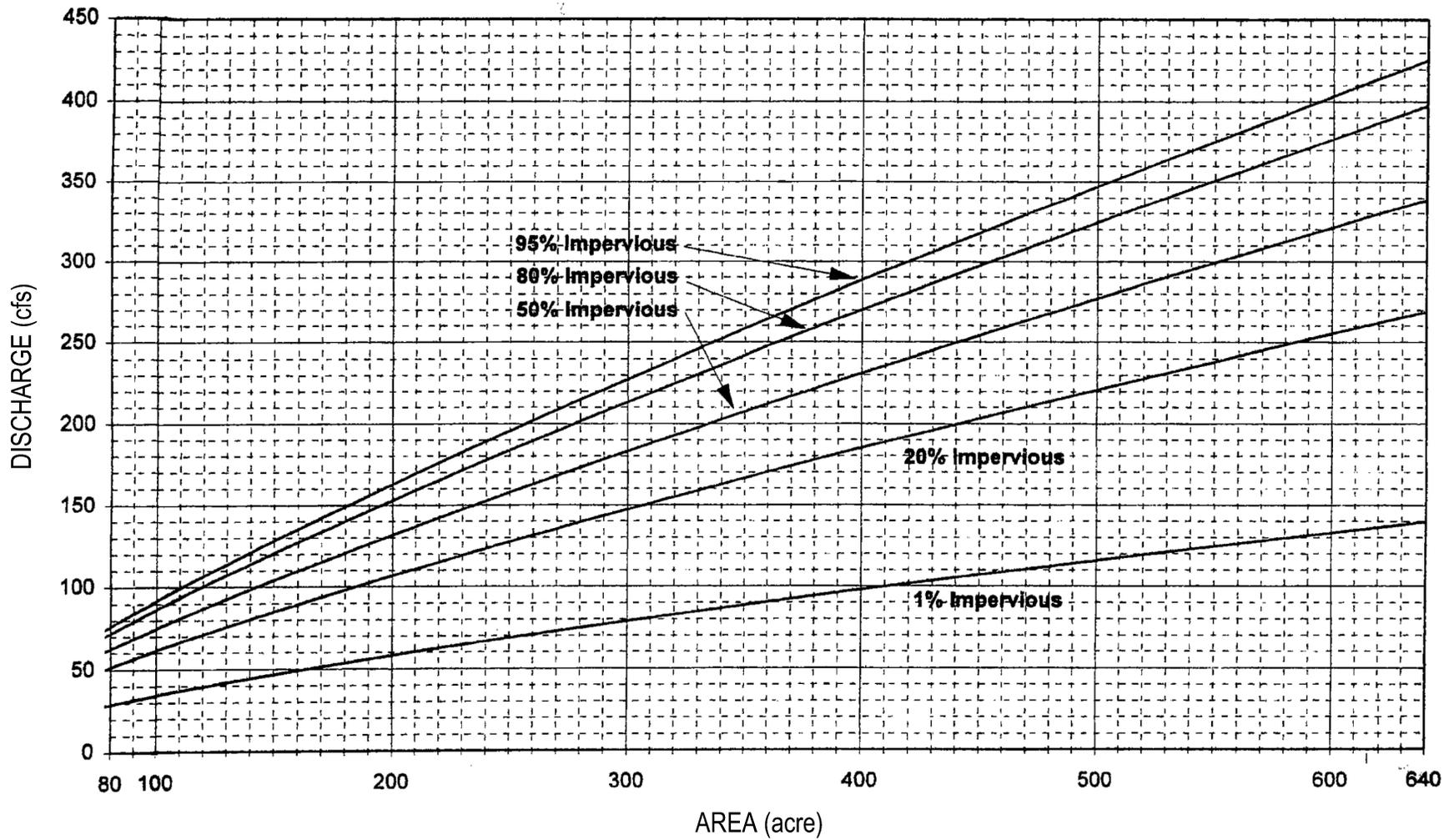


NOTE:

REFER TO VOLUME 2 HYDROLOGY STANDARDS OF THE SACRAMENTO CITY/COUNTY DRAINAGE MANUAL FOR ASSUMPTIONS MADE IN DERIVING THIS FIGURE.

COUNTY OF SUTTER - ENGINEERING	
10-YEAR PEAK FLOW SACRAMENTO METHOD RAINFALL ZONE 2, <80 ACRES	

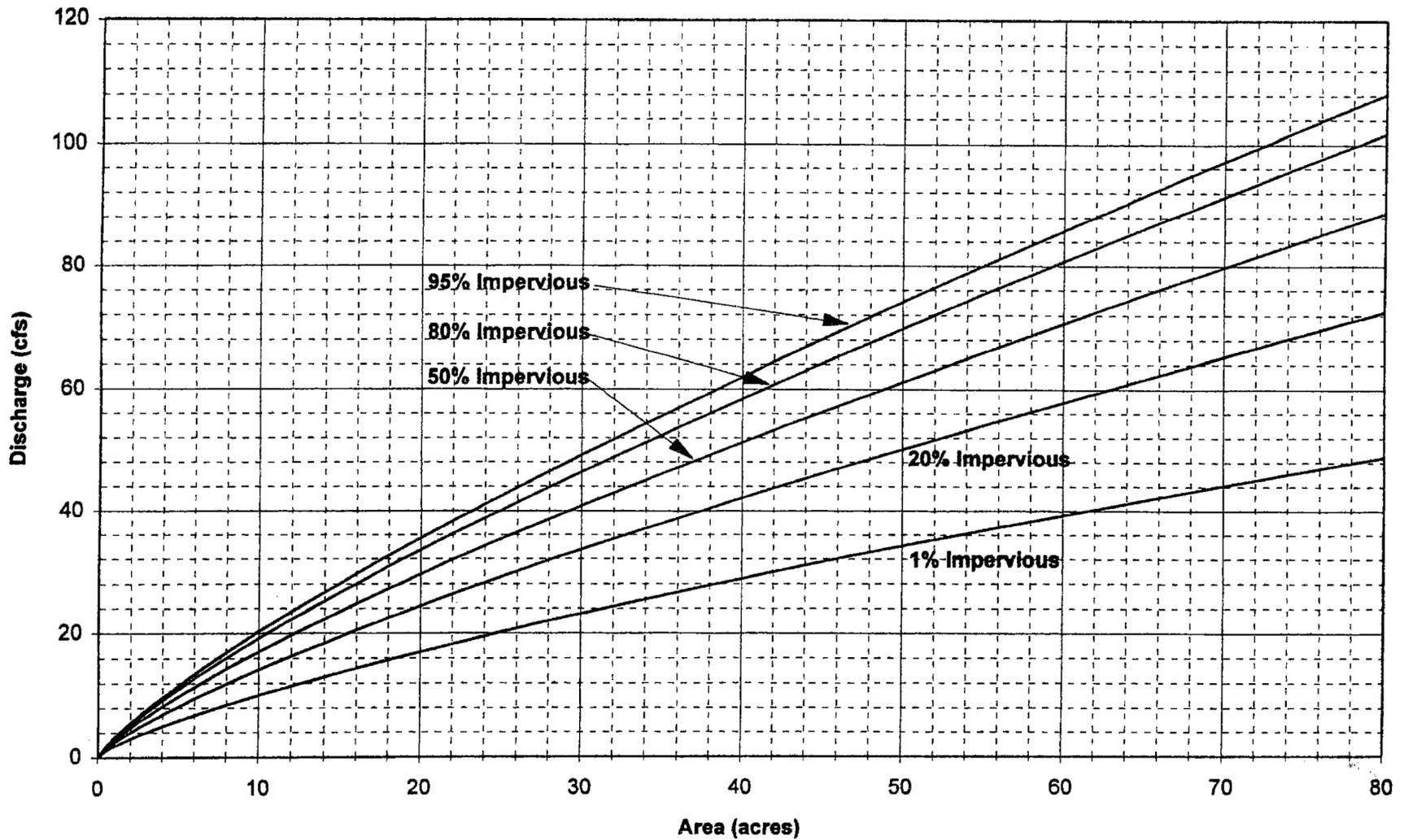
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DEVELOPMENT SERVICES DIRECTOR	DATE
	DRAWING NUMBER
	SD-1



NOTE:

REFER TO VOLUME 2 HYDROLOGY STANDARDS OF THE SACRAMENTO CITY/COUNTY DRAINAGE MANUAL FOR ASSUMPTIONS MADE IN DERIVING THIS FIGURE.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE: 4/3/2025</p>
<p>10-YEAR PEAK FLOW SACRAMENTO METHOD RAINFALL ZONE 2, 80-640 ACRES</p>	<p>DRAWING NUMBER  SD-2</p>



NOTE:

REFER TO VOLUME 2 HYDROLOGY STANDARDS OF THE SACRAMENTO CITY/COUNTY DRAINAGE MANUAL FOR ASSUMPTIONS MADE IN DERIVING THIS FIGURE.

COUNTY OF SUTTER - ENGINEERING

**100-YEAR PEAK FLOW
SACRAMENTO METHOD
RAINFALL ZONE 2, <80 ACRES**

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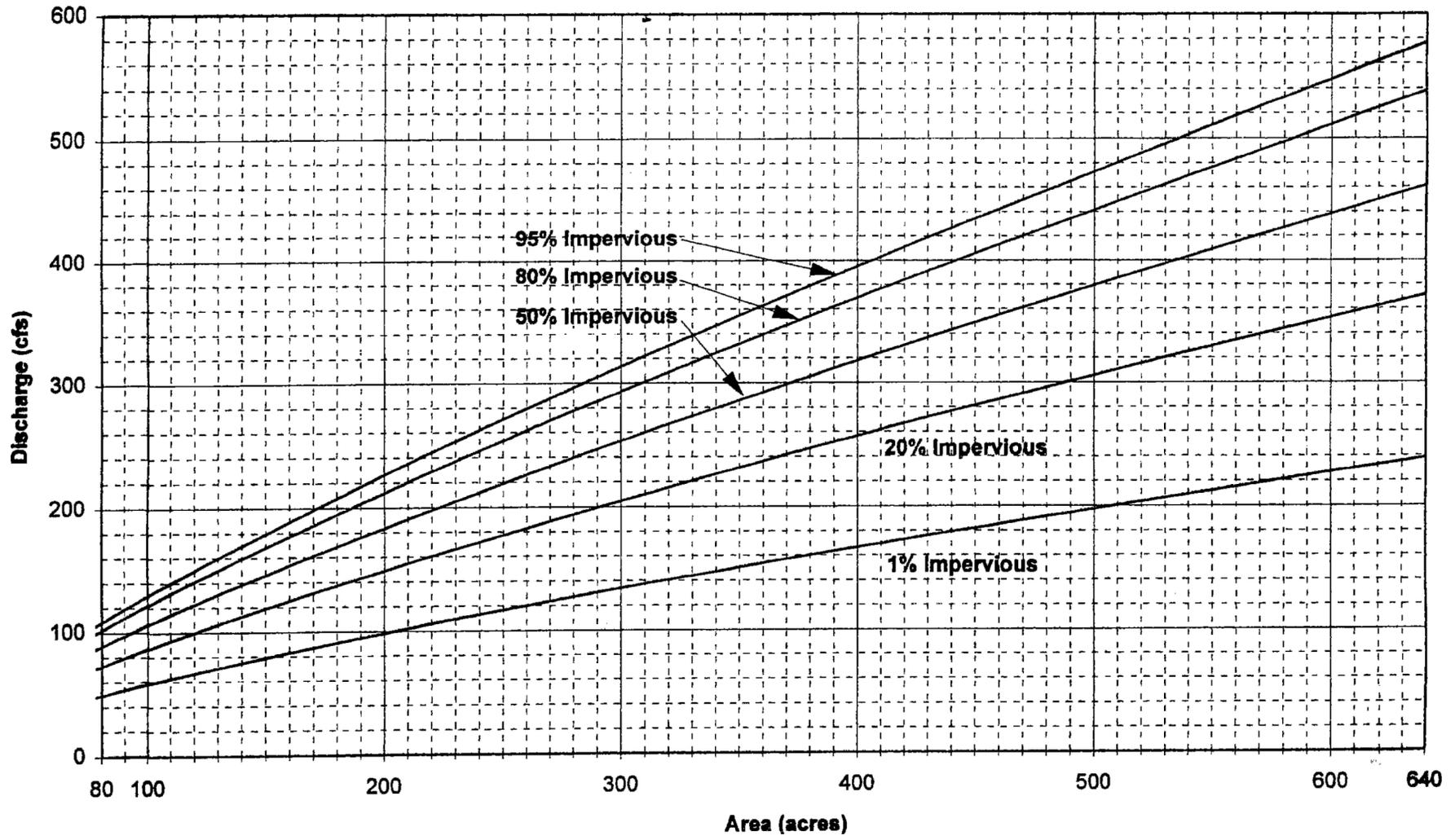
4/3/2025

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DRAWING NUMBER

SD-3



NOTE:

REFER TO VOLUME 2 HYDROLOGY STANDARDS OF THE SACRAMENTO CITY/COUNTY DRAINAGE MANUAL FOR ASSUMPTIONS MADE IN DERIVING THIS FIGURE.

COUNTY OF SUTTER - ENGINEERING

**100-YEAR PEAK FLOW
SACRAMENTO METHOD
RAINFALL ZONE 2, 80-640 ACRES**

APPROVED BY:

ULP

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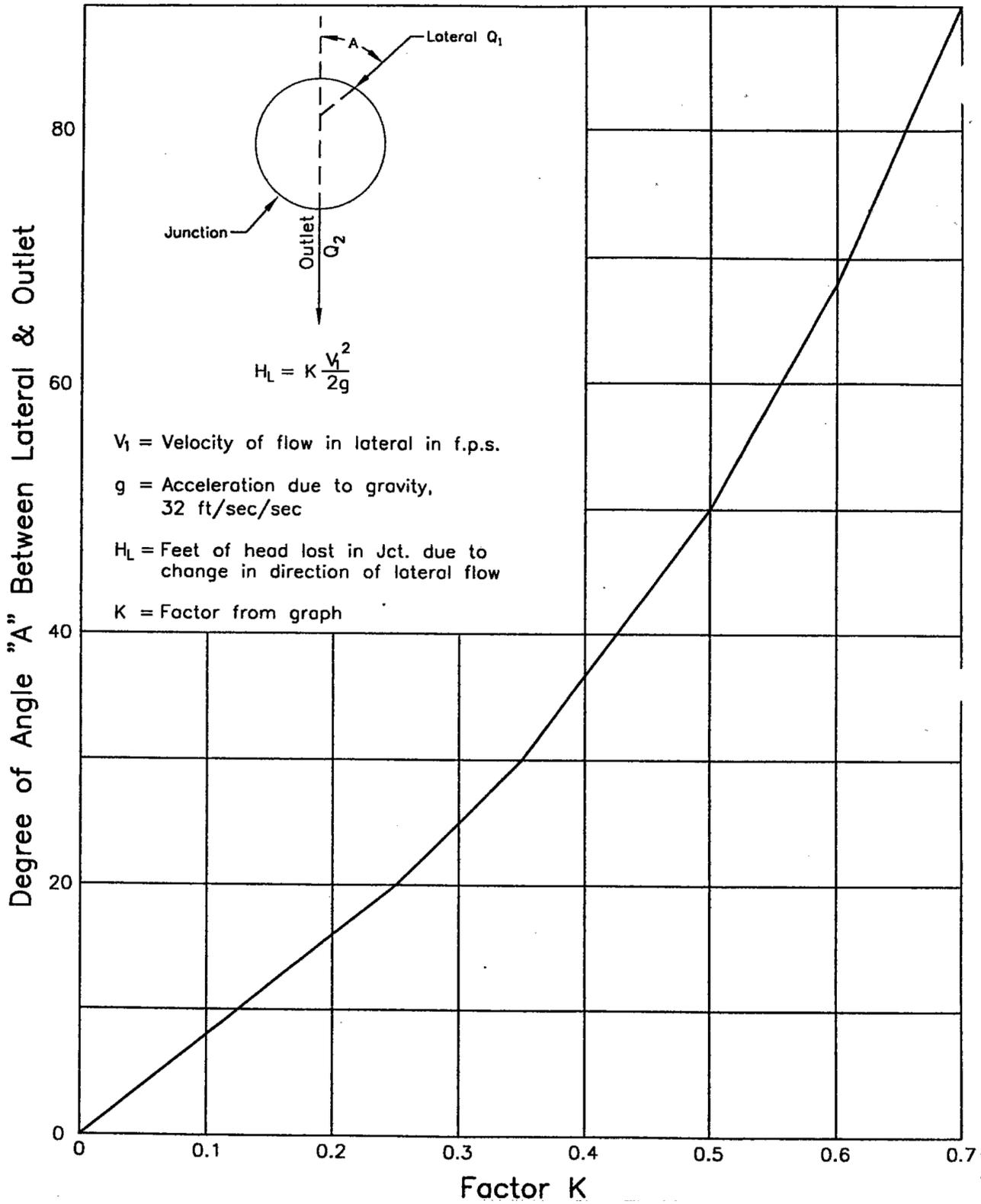
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DRAWING NUMBER

SD-4



COUNTY OF SUTTER - ENGINEERING

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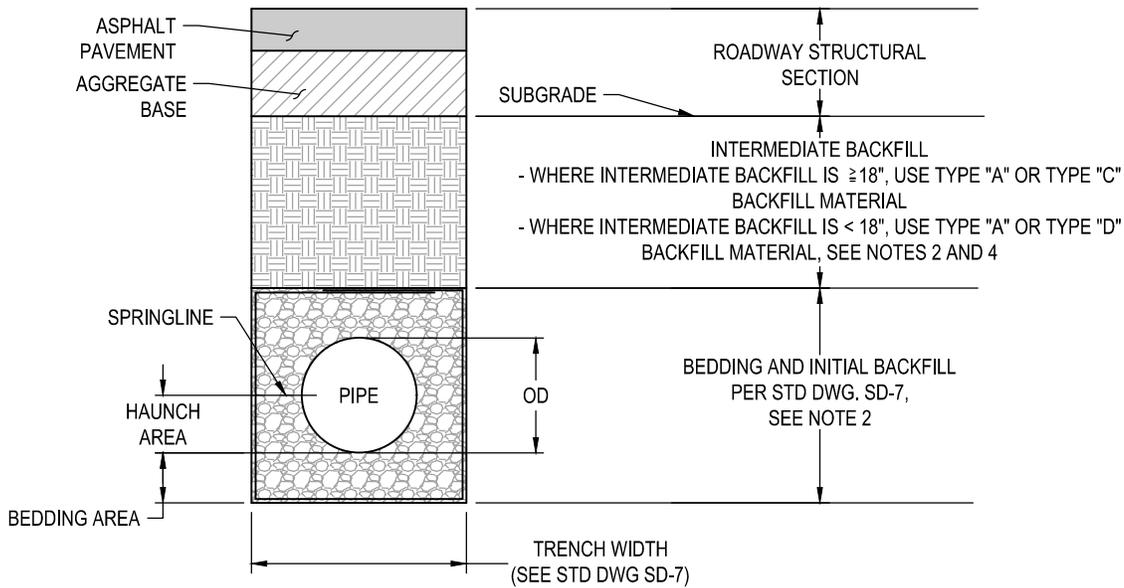
**LOSS IN JUNCTION DUE TO CHANGE
 IN DIRECTION OF FLOW IN LATERAL**



DRAWING NUMBER

SD-5

**STORM DRAIN
TRENCH DETAIL**



BACKFILL MATERIALS

TYPE "A" BACKFILL MATERIAL: 3/4" CLASS II AB AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS SECTION 26-1.02B.

TYPE "B" BACKFILL MATERIAL: 3/4" CLEAN CRUSHED AGGREGATE SIEVE SIZE NO. 6.

TYPE "C" BACKFILL MATERIAL: JOB EXCAVATED NATIVE MATERIAL FREE OF ORGANIC OR UNSUITABLE MATERIALS THAT CAN CAUSE VOIDS OR DEPRESSIONS TO DEVELOP DURING OR AFTER PLACEMENT OF THE BACKFILL. ROCKS, STONES, AND SOLID EARTH CHUNKS EXCEEDING 3-INCHES IN GREATEST DIMENSION ARE NOT ALLOWED.

TYPE "D" BACKFILL MATERIAL: CONTROLLED LOW-STRENGTH MATERIAL AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS SECTION 19-3.02G OR 19-3.03F SLURRY CEMENT BACKFILL.

TYPE "E" BACKFILL MATERIAL: CLASS "C" CONCRETE AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS.

NOTES

1. GEOTEXTILE SHALL BE INSTALLED AS PER STD DWG SD-7, SD-8 AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS.
2. INTERMEDIATE BACKFILL TO BE PLACED IN 8" TO 10" MAXIMUM LOOSE LIFTS AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS.
3. CUTOFF COLLARS TO BE INSTALLED EVERY MANHOLE RUN AS PER STD DWG SD-9.
4. IF ROADWAY SUBGRADE IS WITHIN 24" OF TOP OF PIPE, RCP PIPE REQUIRED & BEDDING AND INITIAL BACKFILL SHALL CONFORM TO SHALLOW PIPE DETAILS AS PER STD DWG SD-7.

COUNTY OF SUTTER - ENGINEERING

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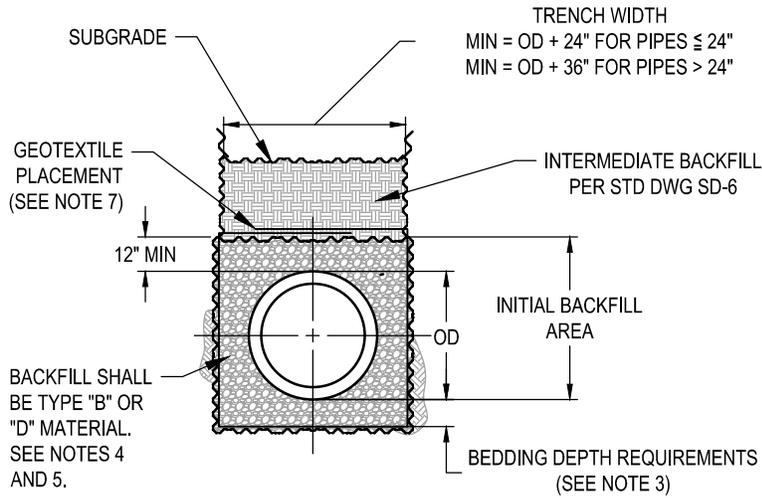
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STORM DRAIN TRENCH DETAIL

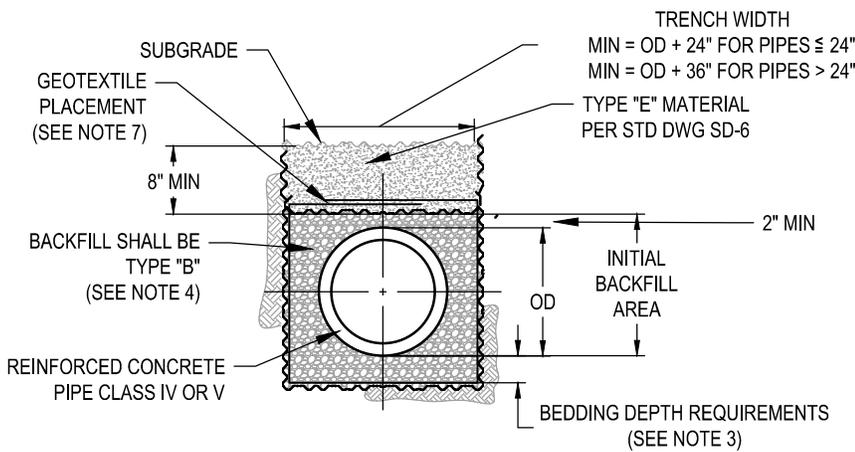


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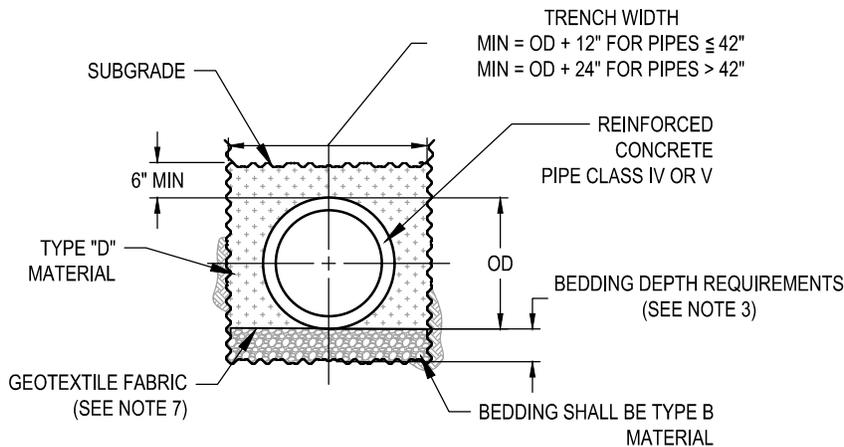
SD-6



BACKFILL REQUIREMENTS



**BACKFILL REQUIREMENTS FOR SHALLOW PIPE -
OPTION 1**



**BACKFILL REQUIREMENTS FOR SHALLOW PIPE -
OPTION 2**

NOTES:

1. INITIAL BACKFILL MATERIAL SHALL BE THOROUGHLY COMPACTED AROUND PIPE AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS.
2. "TRENCH EXCAVATION, BEDDING AND BACKFILL" AS PER CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS.
3. MINIMUM DEPTH OF BEDDING SHALL BE THE GREATER OF:
4" MIN FOR PIPES WITH ID ≤ 48"
6" MIN FOR PIPES WITH ID > 48"
OR
THE DIFFERENCE BETWEEN THE OD OF THE PIPE BARREL AND THE BELL PLUS 1.5".
4. IF MINIMUM TRENCH WIDTH CANNOT BE ACHIEVED, TYPE "D" MATERIAL SHALL BE USED IN LIEU OF TYPE "B" MATERIAL AT NO EXTRA COST.
5. IF BOTTOM OF ROADWAY STRUCTURAL SECTION (SUBGRADE) IS WITHIN 12" OF TOP OF PIPE, BEDDING AND INITIAL BACKFILL SHALL BE PER ONE OF THE TWO SHALLOW PIPE DETAILS ON THIS SHEET.
6. SEE STD DWG S-6 AND CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS FOR BACKFILL MATERIAL DEFINITIONS AND ADDITIONAL REQUIREMENTS.
7. GEOTEXTILE FABRIC (TYPE B PER CALTRANS 96-1.02B) SHALL BE INSTALLED AS FOLLOWS FOR RCP & PLASTIC PIPE:
 - FOR DRY TRENCH CONDITIONS - PLACE ON TOP OF INITIAL BACKFILL MATERIAL OR BETWEEN THE BEDDING AND THE TYPE D MATERIAL. EXTENDING A 2" EDGE FACING UP ON THE TRENCH SIDES.
 - FOR SATURATED TRENCH CONDITIONS - WRAP TYPE B MATERIALS WITH GEOTEXTILE FABRIC. OVERLAP THE FABRIC EDGES AT LEAST TWO FEET (2') ON TOP OF INITIAL BACKFILL MATERIAL OR BEDDING MATERIAL OR THE WIDTH OF THE TRENCH, WHICHEVER IS SMALLER..

COUNTY OF SUTTER - ENGINEERING

**STORM DRAIN REINFORCED
CONCRETE PIPE BEDDING AND
INITIAL BACKFILL**

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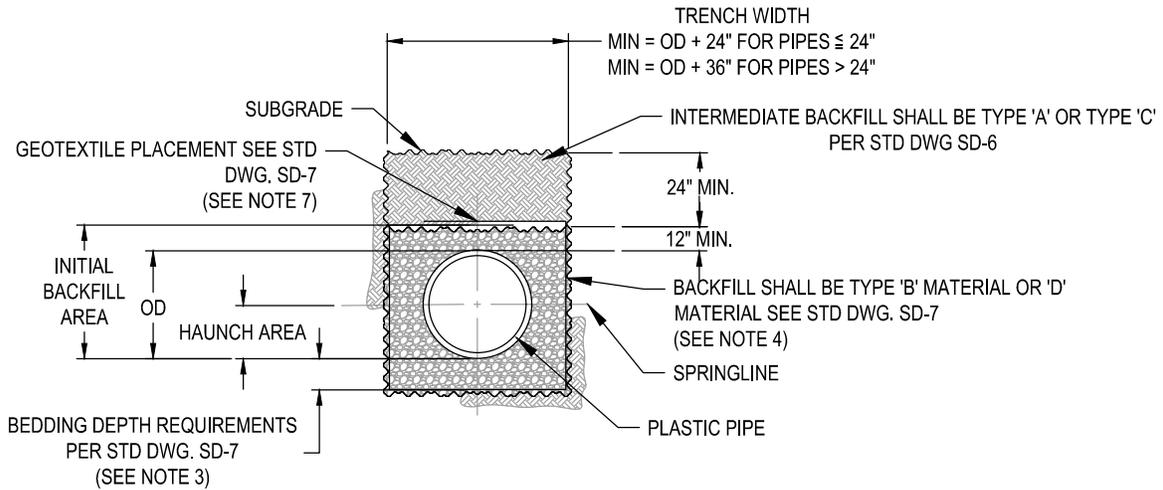
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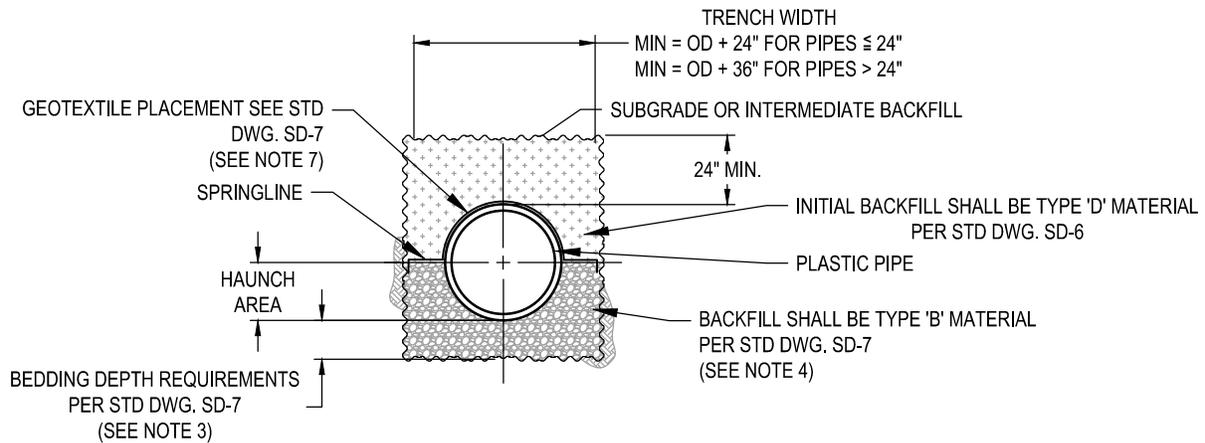


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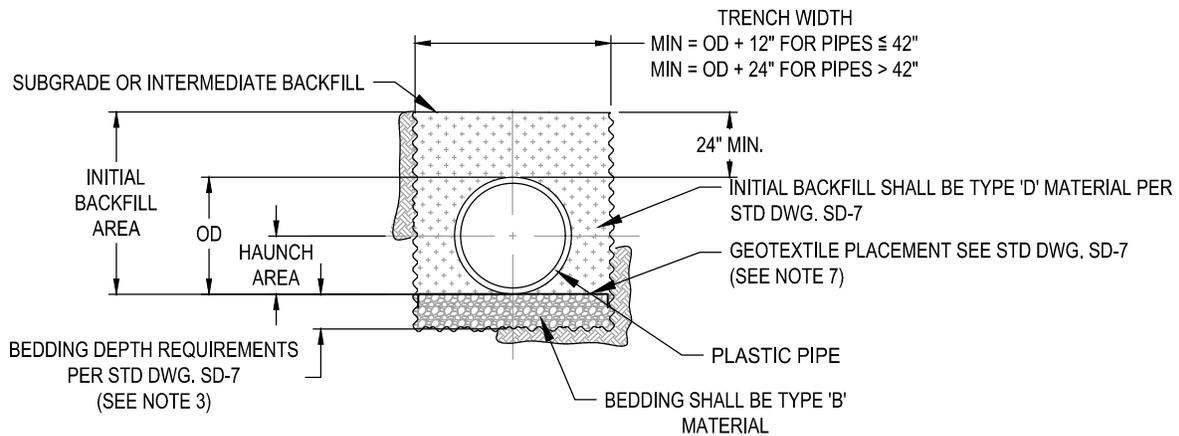
SD-7



BACKFILL REQUIREMENTS FOR PLASTIC PIPE 12" TO 42" DIAMETER ONLY



INITIAL BACKFILL REQUIREMENTS FOR PLASTIC PIPE (12" TO 60" DIAMETER) - OPTION 1



INITIAL BACKFILL REQUIREMENTS FOR PLASTIC PIPE (12" TO 60" DIAMETER) - OPTION 2

COUNTY OF SUTTER - ENGINEERING

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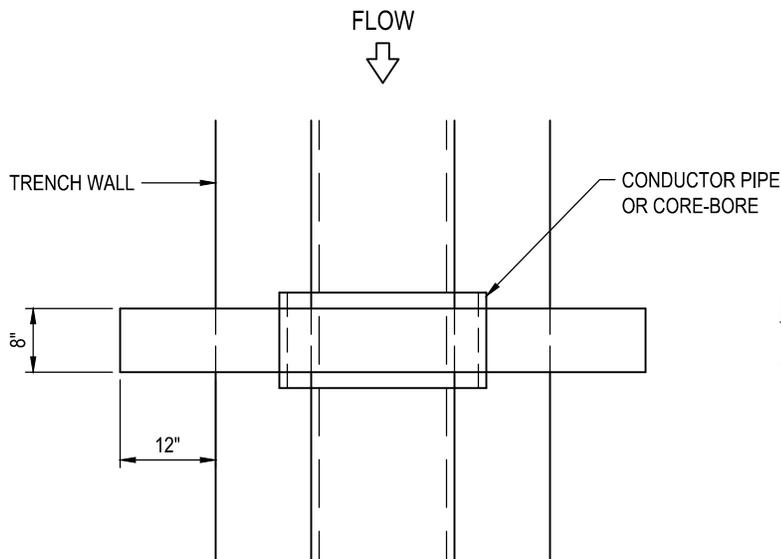
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**STORM DRAIN PLASTIC PIPE
BEDDING AND INITIAL BACKFILL**



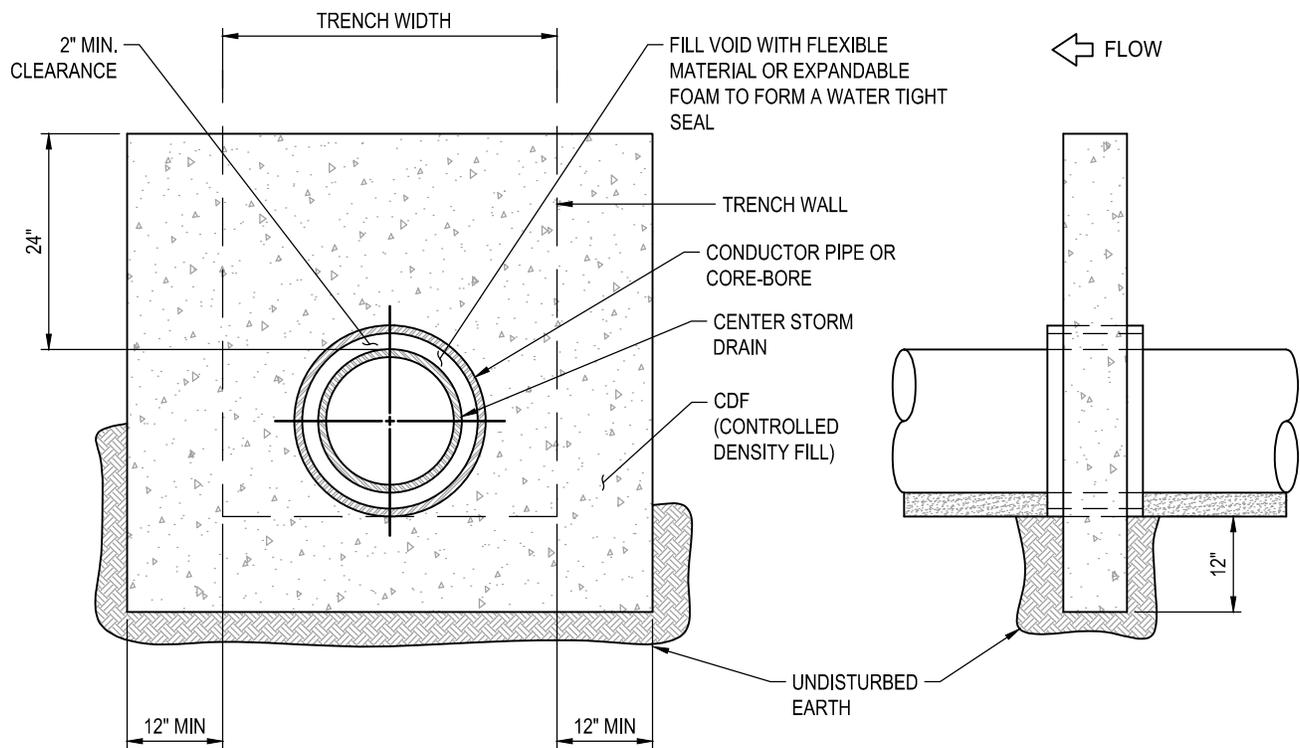
DRAWING NUMBER

SD-8



NOTES:

1. TOP OF COLLAR TO EXTEND INTO INTERMEDIATE BACKFILL 12" MINIMUM OR TOP OF GROUND WATER HGL.



COUNTY OF SUTTER - ENGINEERING

CUTOFF COLLAR

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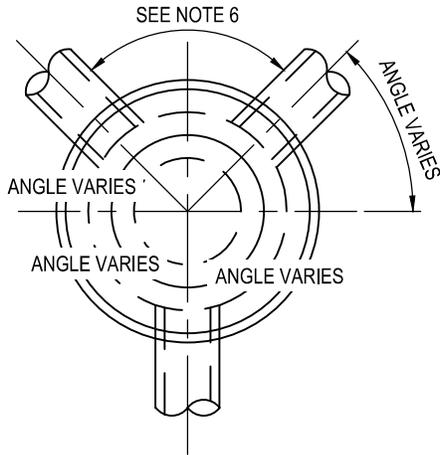
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SD-9

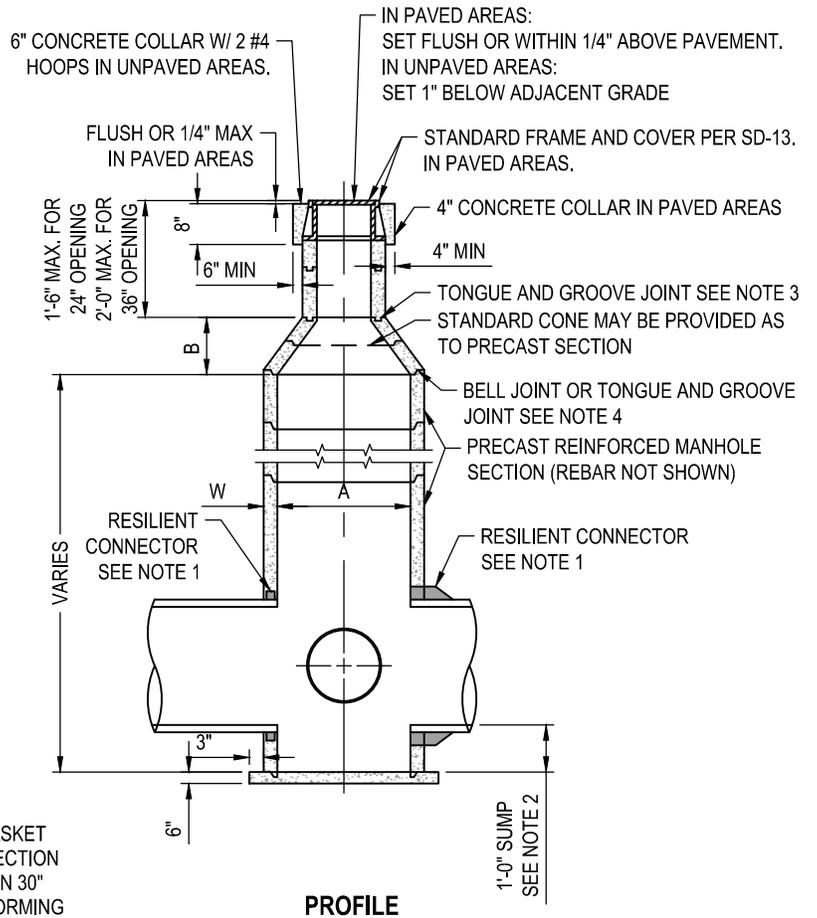


PLAN

TABLE OF MINIMUM DIMENSIONS				
MH	A	B	T*	W
48"	48"	18"	8"	4'
60"	60"	28"	9"	6'
72"	72"	SEE NOTE 7	10"	7'

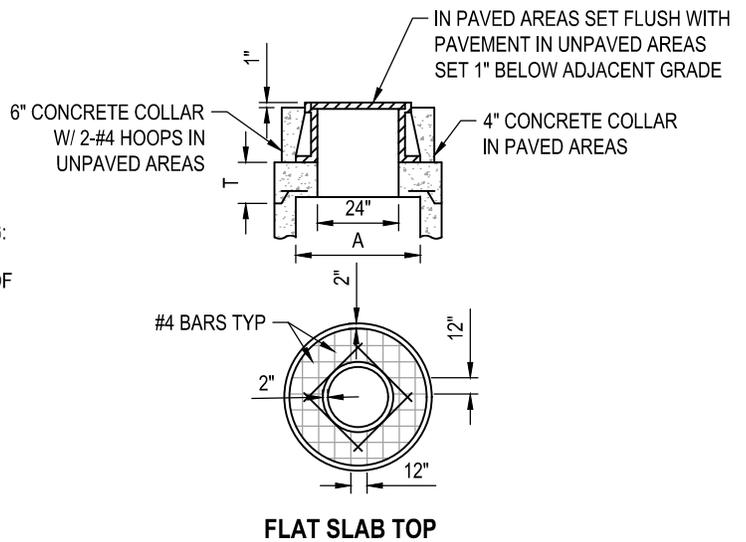
NOTES:

- ON ALL PIPES UP TO 30" I.D. USE FLEXIBLE COMPRESSION GASKET OR BOOT CONNECTOR CONFORMING TO ASTM C-923. CONNECTION SHALL BE WATER AND SOIL TIGHT. FOR PIPES GREATER THAN 30" I.D., BASE MAY BE CAST-IN-PLACE AND A WATER STOP CONFORMING TO ASTM C-923 SHALL BE USED.
- SUMP SHALL BE 1'-0" DEEP, MEASURED FROM INVERT OF OUTFALL PIPE. SUMP NOT REQUIRED IF OUTFALL PIPE IS 24" I.D. OR LARGER.
- RISER SECTIONS, CONES, AND ADJUSTING RINGS SHALL CONFORM TO ASTM C-478.
- ALL JOINTS SHALL BE MADE WITH PREFORMED PLASTIC JOINT SEALING COMPOUND. FOLLOWING INSTALLATION GROUT ALL INTERIOR AND EXTERIOR JOINTS.
- CONCENTRIC COMPONENTS SHALL BE USED UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- PRECAST MANHOLES SHALL BE SIZED TO PROVIDE THE FOLLOWING: THE ANNULAR SPACE ON THE INSIDE OF THE MANHOLE BARREL BETWEEN CORED PIPE CONNECTION HOLES SHALL BE A MINIMUM OF 10 INCHES, IF THE CONNECTION HOLE IS CAST MONOLITHICALLY WITH THE MANHOLE BARREL THE MEASUREMENT SHALL BE TAKEN FROM THE FINISHED CONCRETE CONNECTION.
- CONE FOR MANHOLES GREATER THAN 60" DIAMETER SHALL BE INDIVIDUALLY DESIGNED.



PROFILE

FLAT SLAB SHALL BE USED WHEN DEPTH DOES NOT PERMIT USE OF TAPER UNIT



COUNTY OF SUTTER - ENGINEERING

**STANDARD PRECAST CONCRETE
DRAINAGE MANHOLE**

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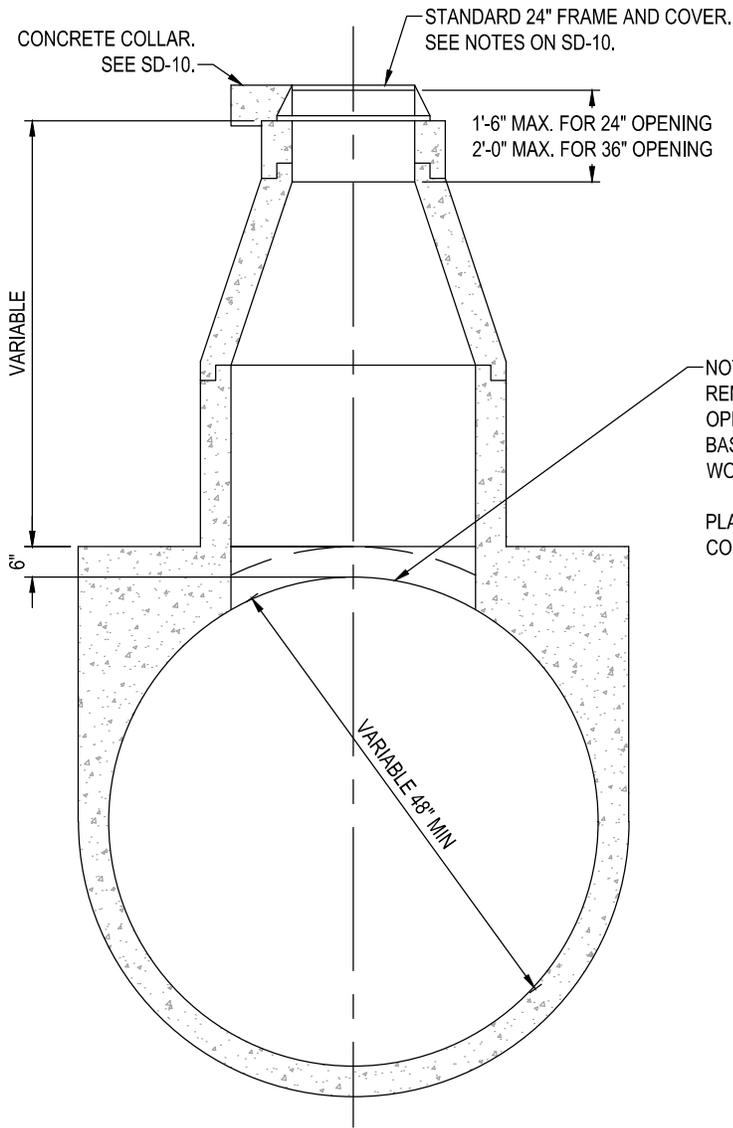
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DATE



DRAWING NUMBER

SD-10



NOTE
 REMOVE CONCRETE IN MANHOLE
 OPENING AND CONSTRUCT RISER
 BASE WHILE CONCRETE IS STILL
 WORKABLE.
 PLACE RISER SECTION AFTER
 CONCRETE HAS SET.

TYPE A
CAST-IN-PLACE PIPE ONLY

COUNTY OF SUTTER - ENGINEERING

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TYPE A
SADDLE MANHOLE

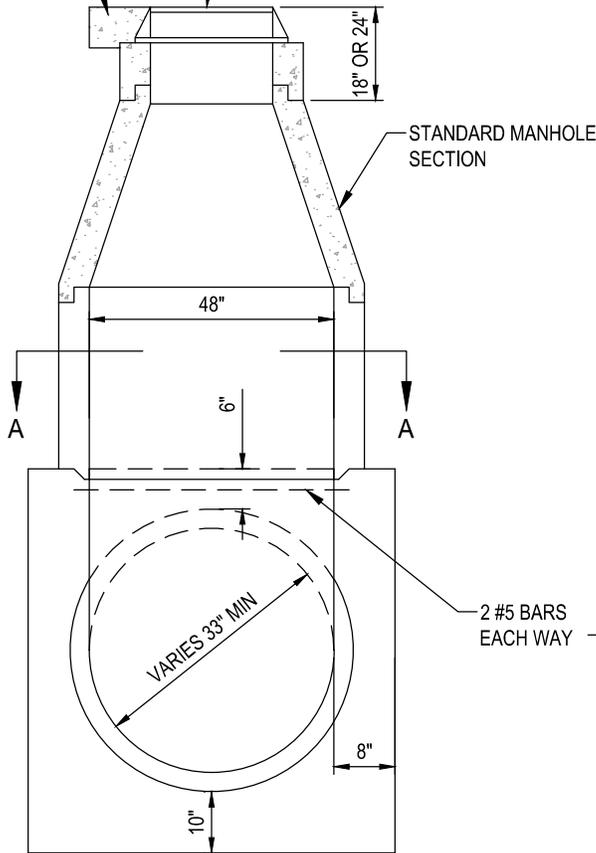


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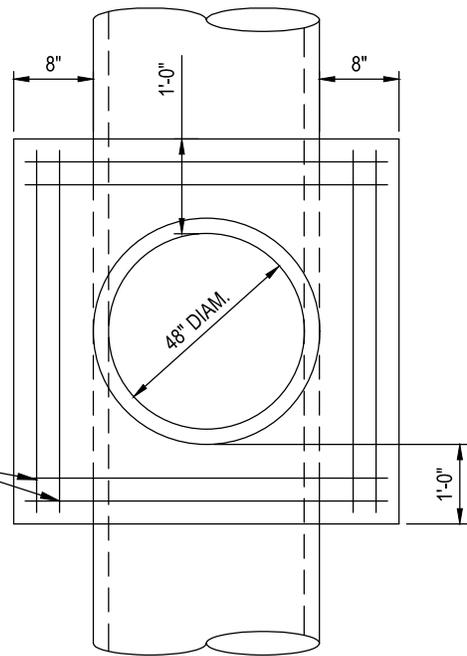
SD-11

CONCRETE COLLAR
(SEE STD DWG SD-10)

STANDARD 24" FRAME AND COVER
SEE NOTES ON STD DWG SD-10



TYPE B



SECTION A-A

COUNTY OF SUTTER - ENGINEERING

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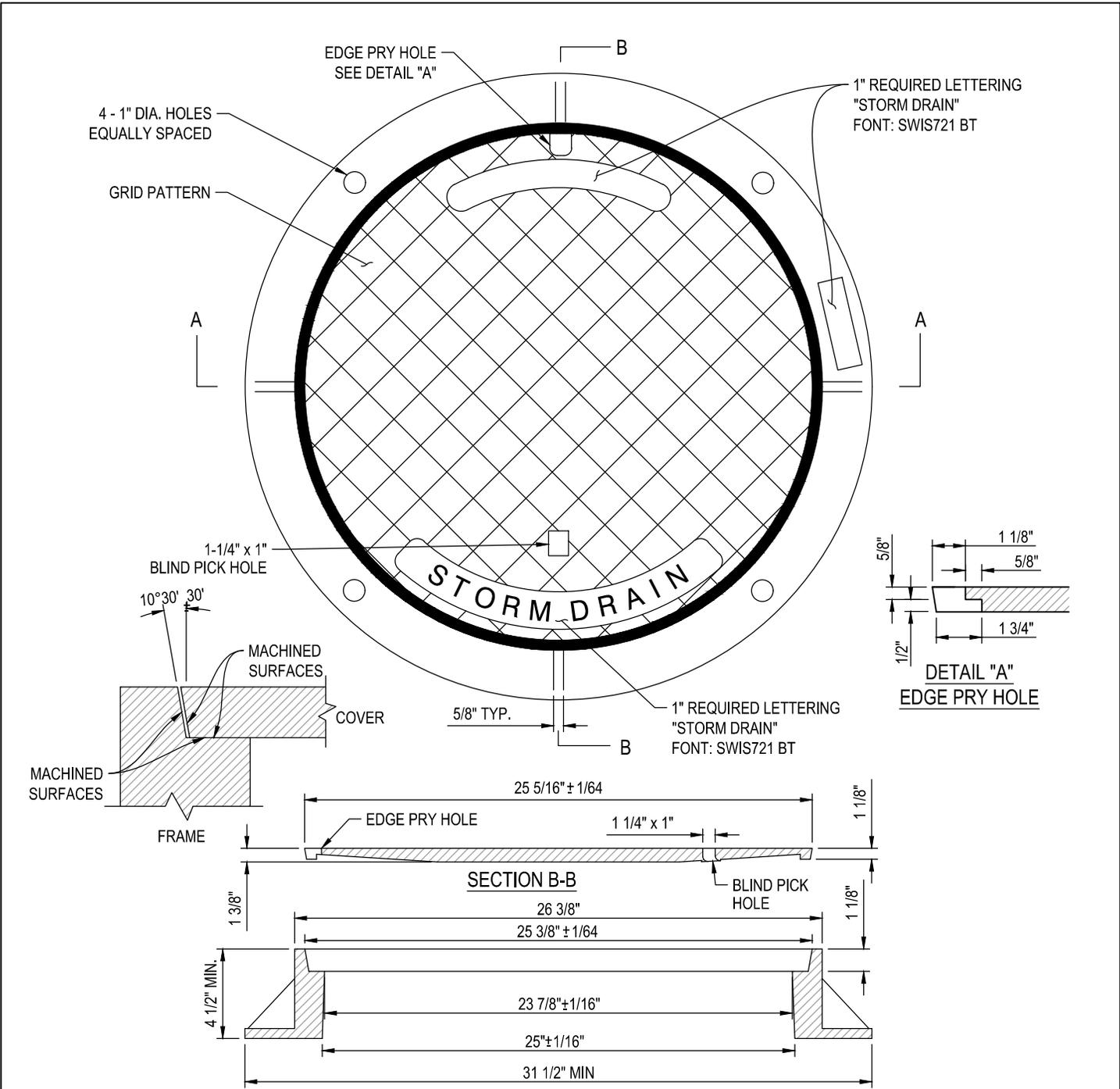
DATE

**TYPE B
SADDLE MANHOLE**



DRAWING NUMBER

SD-12



NOTES:

1. ALL CASTINGS TO CONFORM TO ASTM A48, CLASS 35B.
2. FRAME AND COVER TO MEET AASHTO M-306-10 LOAD SPECIFICATIONS & MANUFACTURER'S PERFORMANCE REQUIREMENTS FOR POSITION & FIT.
3. FRAME AND COVER SHALL HAVE A COATING OF BLACK BITUMINOUS MATERIAL.
4. A TAMPER RESISTANT BOLTED TYPE FRAME & COVER SHALL BE USED IN EASEMENT AREAS UNLESS OTHERWISE APPROVED.

APPROX. SET WEIGHT	
FRAME	163 LBS
COVER	135 LBS
TOTAL	298 LBS

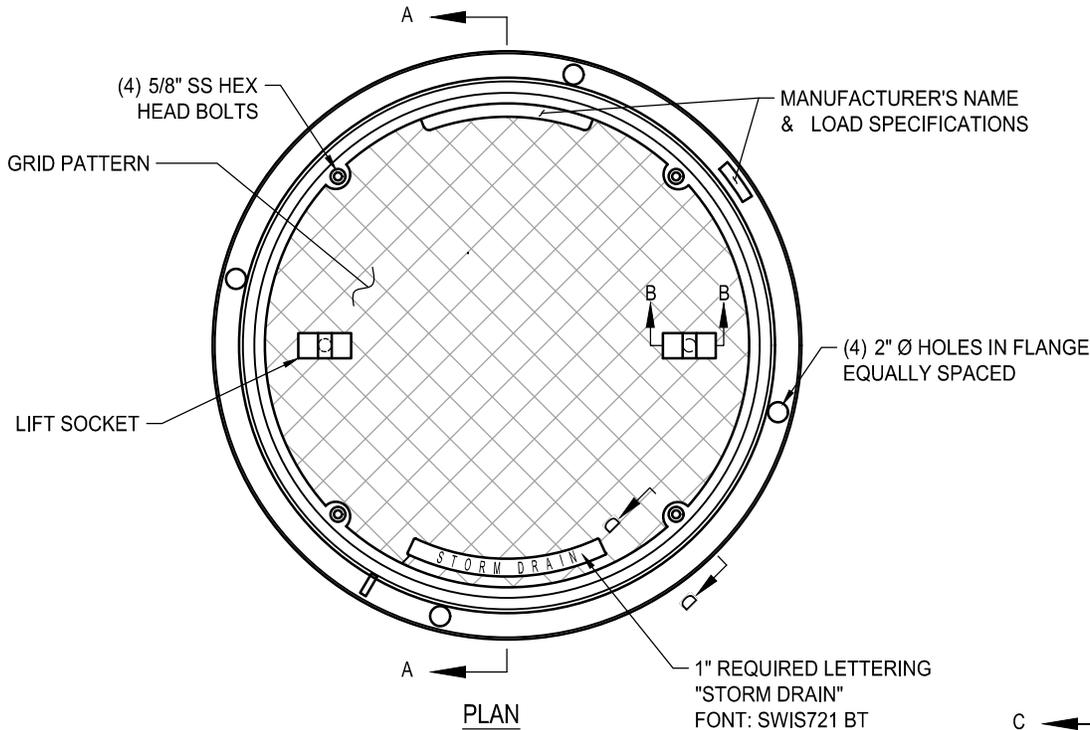
COUNTY OF SUTTER - ENGINEERING

APPROVED BY: *[Signature]* 4/3/2025
 DEVELOPMENT SERVICES DIRECTOR DATE

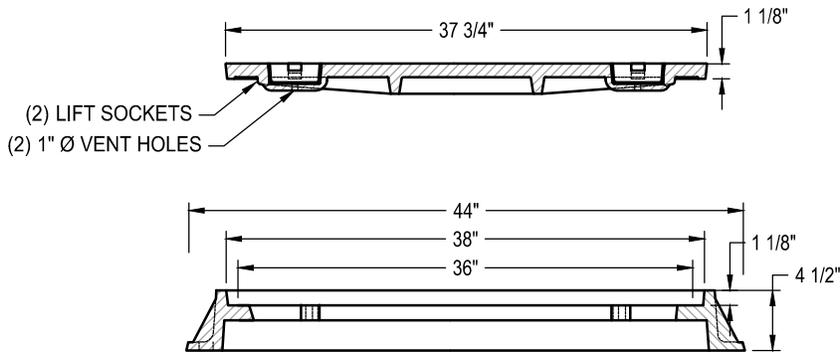
**GREY CAST IRON
 STANDARD 24" MANHOLE
 FRAME & COVER**

DRAWING NUMBER
SD-13

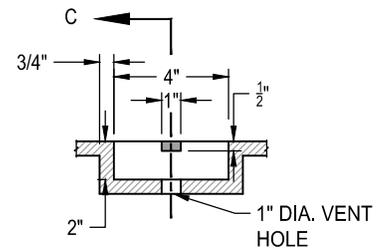




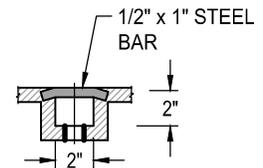
SET WEIGHT	
FRAME	334 LBS
COVER	197 LBS
TOTAL	531 LBS



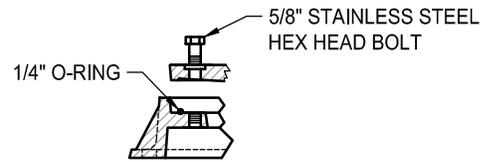
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. ALL CASTINGS TO CONFORM TO ASTM A48, CLASS 35B.
2. FRAME AND COVER TO MEET H-20 LOAD SPECIFICATIONS.
3. MACHINED HORIZONTAL AND VERTICAL BEARING SURFACES NOT TO EXCEED 1/64" TOLERANCE.
4. FRAME AND COVER SHALL HAVE A COATING OF BLACK BITUMINOUS PAINT.
5. LOCKING COVER TYPE FRAME AND COVERS SHALL BE USED WHEN SPECIFIED IN CONTRACT DOCUMENTS.
6. H20 RATED SLOTTED GRATE OR GRATE TYPE MANHOLE COVER MAY BE SUBSTITUTE FOR COVER WHEN SPECIFIED IN CONTRACT DOCUMENTS OR UPON APPROVAL OF DIRECTOR.
7. COVER SHALL BE "STORM DRAIN" STAMPED.

COUNTY OF SUTTER - ENGINEERING

**GREY CAST IRON
STANDARD 36" MANHOLE
FRAME & COVER**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

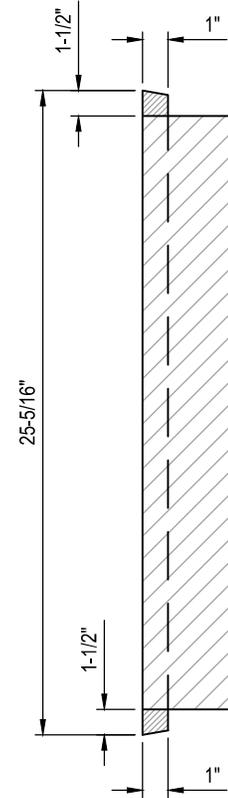
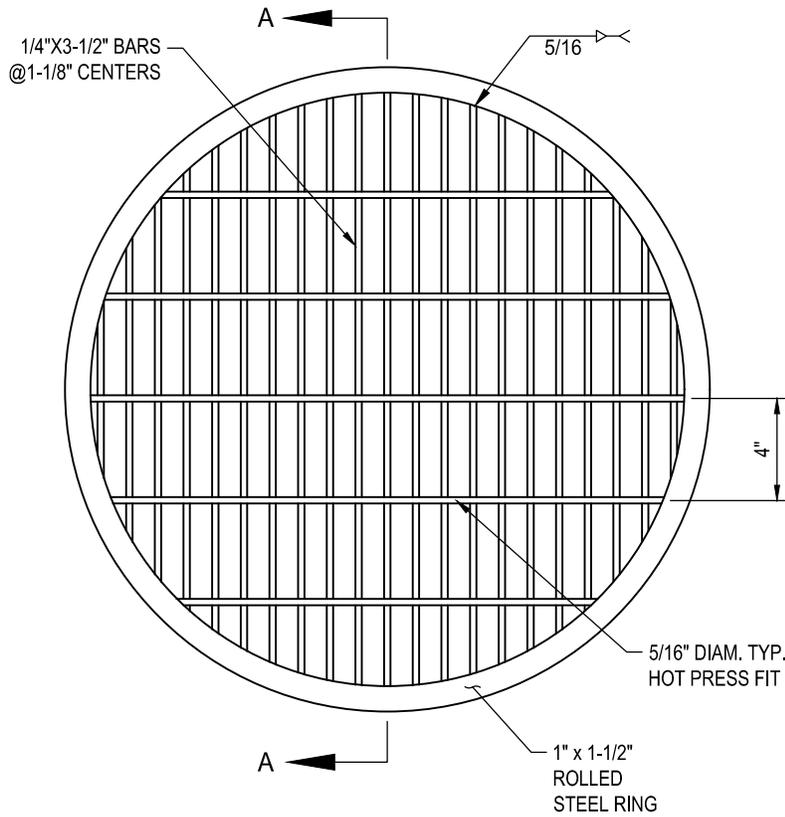
4/3/2025

DATE



DRAWING NUMBER

SD-14



SECTION A-A

NOTES:

1. MANHOLE COVER SHALL FIT FRAME SHOWN ON STANDARD DRAWING SD-13.
2. SEATING SURFACES SHALL BE MACHINED AS SHOWN IN DETAIL ON STANDARD DRAWING SD-13.
3. THIS COVER MAY BE USED ONLY WITH APPROVAL OF THE DIRECTOR.
4. GALVANIZE AFTER FABRICATION.

COUNTY OF SUTTER - ENGINEERING

GRATE TYPE MANHOLE COVER

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

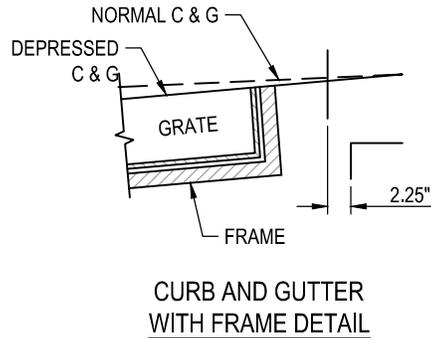
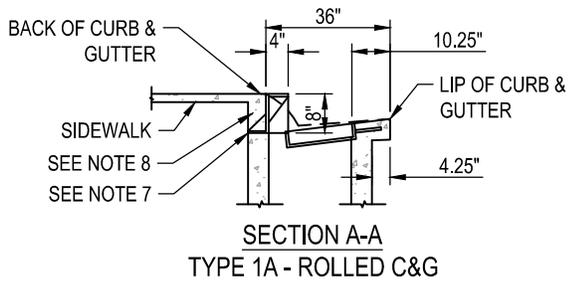
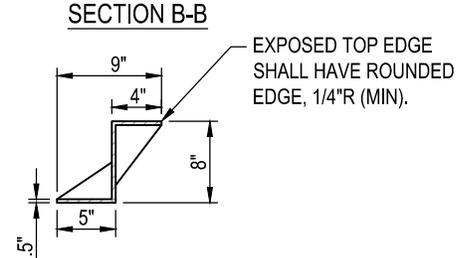
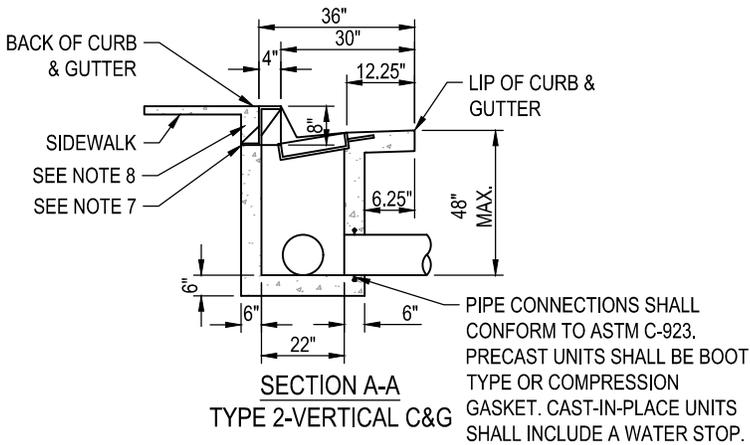
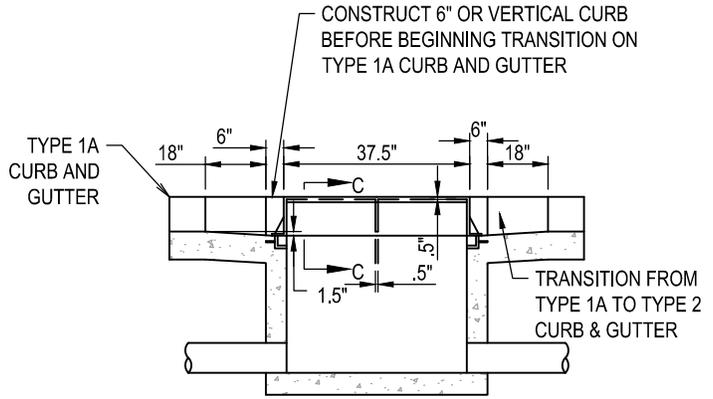
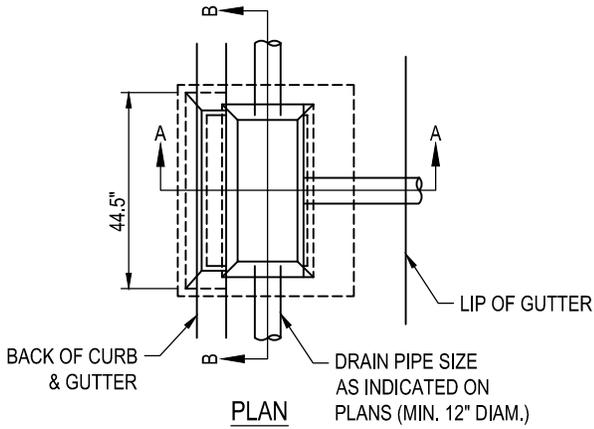
4/3/2025

DATE



DRAWING NUMBER

SD-15



NOTES

1. STANDARD DEPRESSION FOR INLET IS 1-1/2" AND LIP OF GUTTER MUST BE SET BACK 3" FROM GUTTER FLOW LINE.
2. FRAME AND GRATE SHALL CONFORM TO STANDARD DRAWINGS SD-19 AND SD-20.
3. OPEN-BACK HOOD SHALL BE H-20 RATED.
4. EXPOSED EDGES SHALL HAVE A 1/8" R (MINIMUM).
5. AN EDGING TOOL SHALL BE USED ON ALL EDGES WHERE THE CONCRETE SIDEWALK AND CURB MEET THE TOP OF THE HOOD.
6. ALL EXPOSED PARTS TO BE HOT DIP GALVANIZED PER ASTM A123, AFTER FABRICATION.
7. SEE STANDARD DRAWING SD-17 FOR INSTALLATION OF INLETS AT DETACHED SIDEWALKS.
8. INCREASE SIDEWALK THICKNESS TO 8" IN ORDER TO ANCHOR CAST IRON HOOD AND INLET WALL. WIDTH TO BE 6" MINIMUM.
9. WHEN MORE THAN ONE GRATE IS PROPOSED, STD DWG SD-21 FOR SUPPORT ASSEMBLY.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP
DEVELOPMENT SERVICES DIRECTOR

4/3/2025

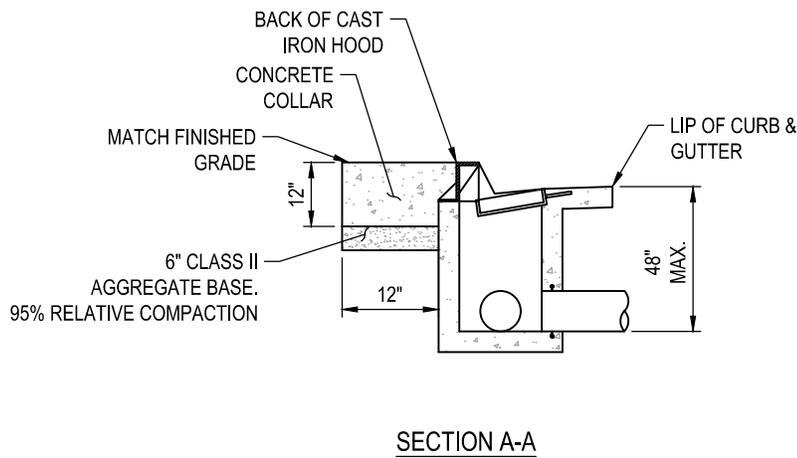
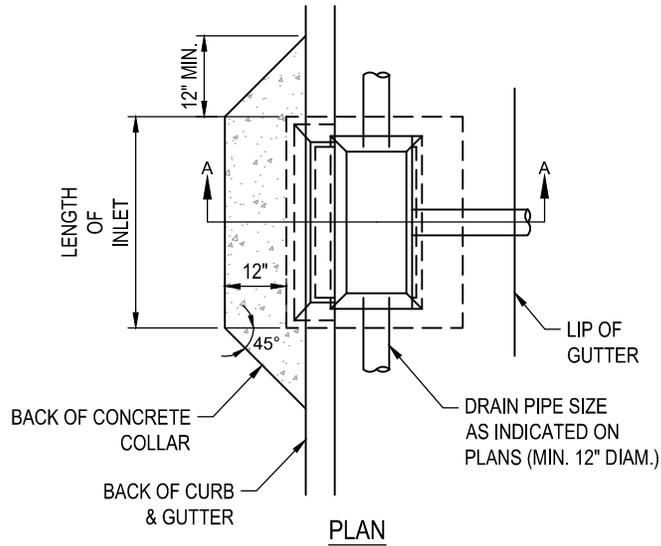
DATE

**DROP INLET
TYPE B**



DRAWING NUMBER

SD-16



NOTES

1. TO BE USED ON TYPE 1A AND TYPE 2 CURB AND GUTTER (SEE STANDARD DRAWING ST-34) WHERE INLETS ARE AT DETACHED SIDEWALKS.

COUNTY OF SUTTER - ENGINEERING

**DROP INLET
TYPE B
AT DETACHED SIDEWALK**

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

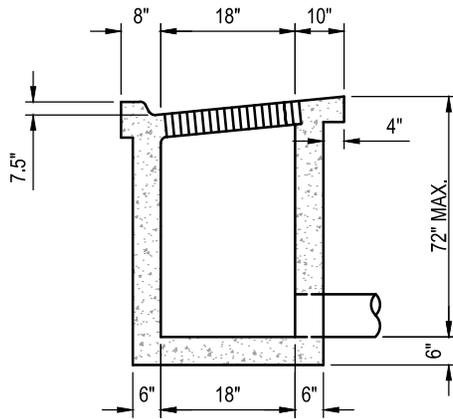
4/3/2025

DATE

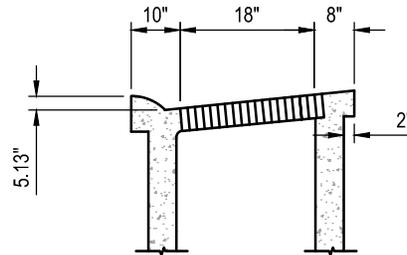


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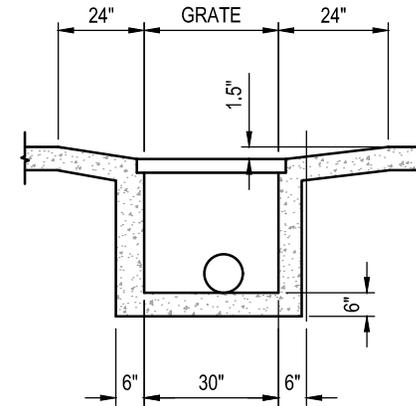
SD-17



TYPE 2 CURB

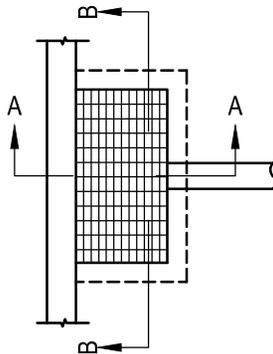


TYPE 1A CURB



SECTION B-B

SECTION A-A



NOTES

1. STANDARD DEPRESSION FOR INLET IS 1-1/2".
2. FRAME AND GRATE SHALL CONFORM TO STANDARD DRAWINGS SD-19 AND SD-20.
3. OPEN-BACK HOOD SHALL BE H-20 RATED.
4. ALL EXPOSED EDGES SHALL HAVE A 1/8" R (MINIMUM).
5. AN EDGING TOOL SHALL BE USED ON ALL EDGES WHERE THE CONCRETE SIDEWALK AND CURB MEET THE TOP OF THE HOOD.
6. ALL EXPOSED PARTS TO BE HOT DIP GALVANIZED PER ASTM A123, AFTER FABRICATION.

COUNTY OF SUTTER - ENGINEERING

**DROP INLET
TYPE C**

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

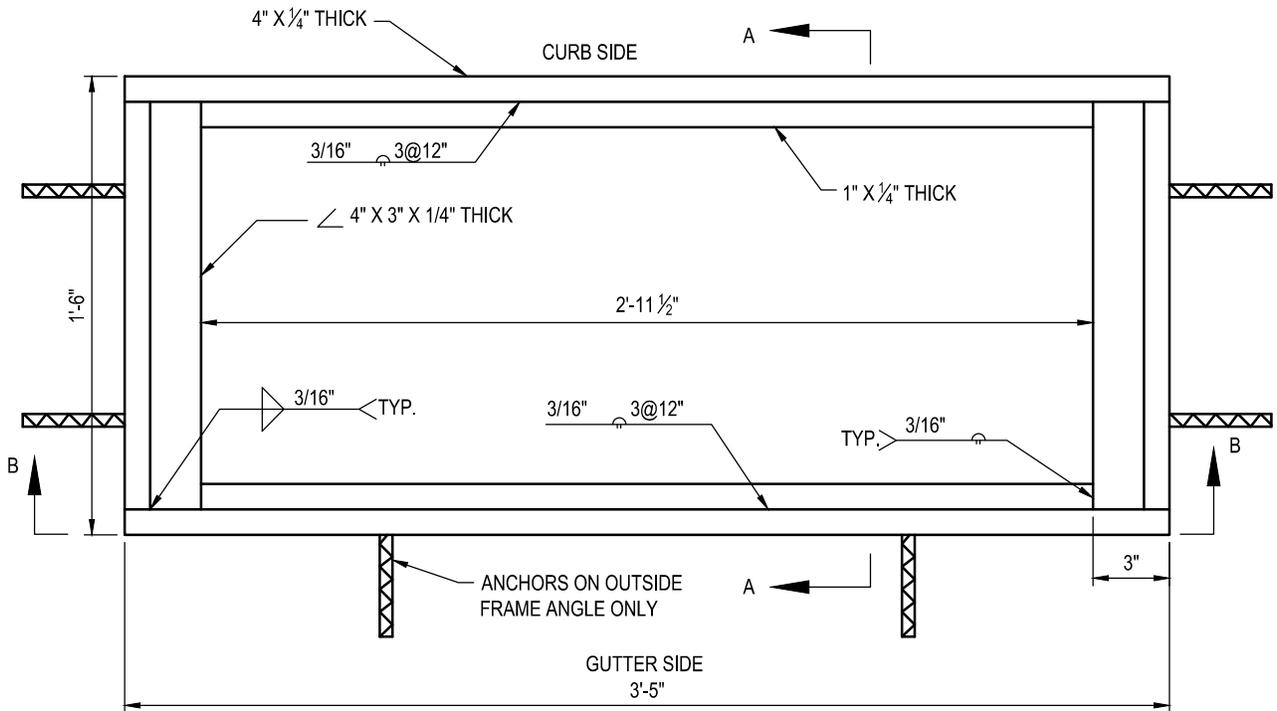
4/3/2025

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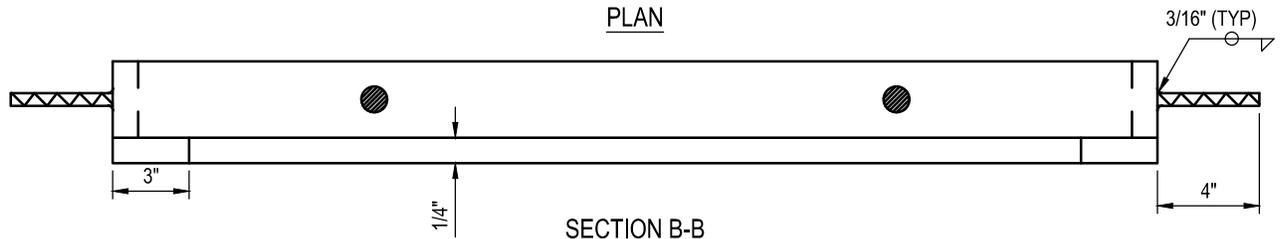


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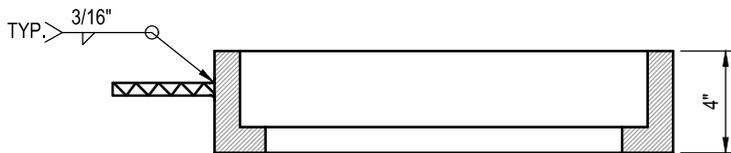
SD-18



PLAN



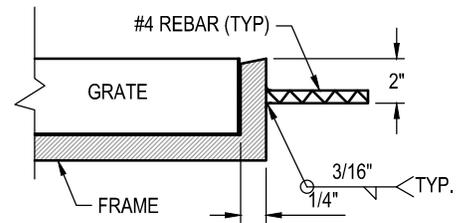
SECTION B-B



SECTION A-A

NOTES:

1. OMIT 1/2" FRAME ANCHORS OVER CENTER SUPPORT ASSEMBLY WHEN MULTIPLE FRAMES ARE USED.
2. MATERIAL: ASTM A36 MILD STEEL
3. ALL EXPOSED PARTS TO BE HOT DIP GALVANIZED PER ASTM A123, AFTER FABRICATION.



FRAME ANCHOR DETAIL

COUNTY OF SUTTER - ENGINEERING

WELDED STEEL GRATE FRAME

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

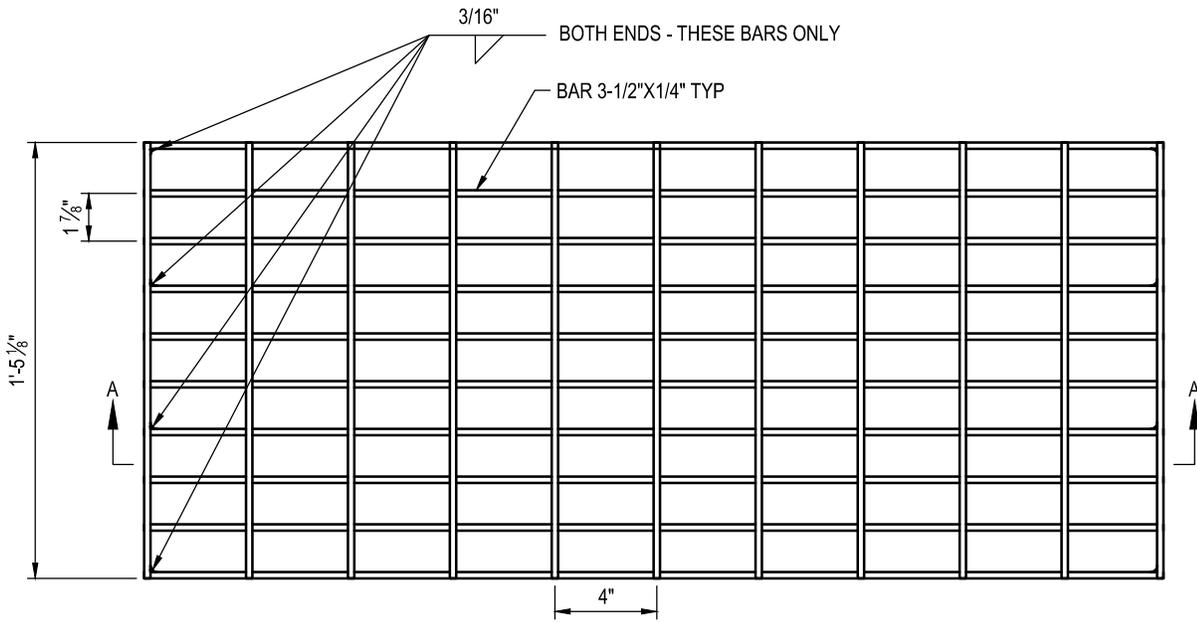
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SUTTER COUNTY

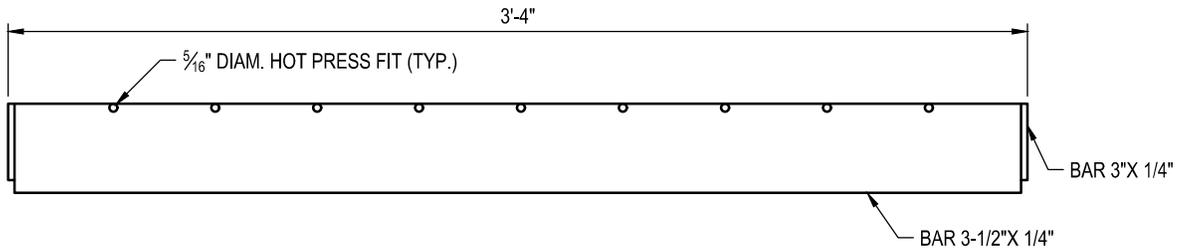


DRAWING NUMBER

SD-19



PLAN



SECTION A-A

NOTES:

1. DIMENSIONS TO CENTERLINE OF BARS UNLESS OTHERWISE NOTED.
2. ALL EXPOSED PARTS TO BE HOT DIP GALVANIZED PER ASTM A123, AFTER FABRICATION.

COUNTY OF SUTTER - ENGINEERING

WELDED STEEL GRATE

APPROVED BY:

NLP
DEVELOPMENT SERVICES DIRECTOR

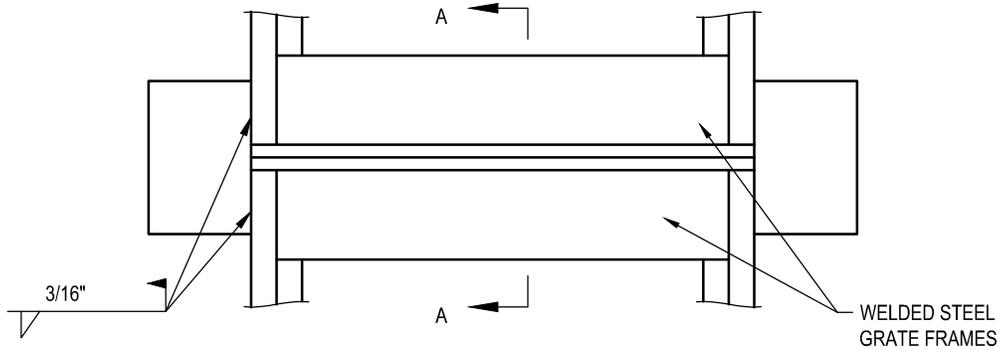
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DATE



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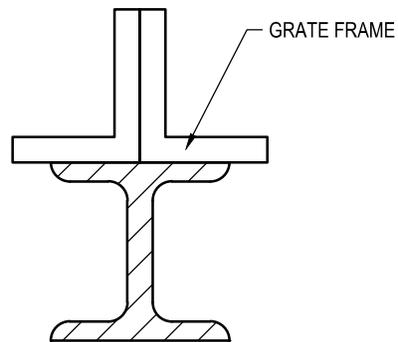
SD-20



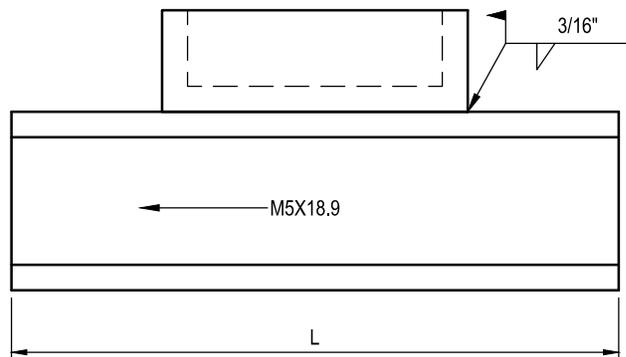
PLAN

NOTES:

1. OMIT 1/2" FRAME ANCHORS OVER CENTER SUPPORT.
2. L=57 INCHES FOR CURB OPENING CATCH BASIN WITH GRATING(S) AND DEBRIS SKIMMER (APWA GREENBOOK STANDARD PLAN 301).
3. ALL EXPOSED PARTS TO BE HOT DIP GALVANIZED PER ASTM A123, AFTER FABRICATION.



SECTION A-A



ELEVATION

COUNTY OF SUTTER - ENGINEERING

**CENTER SUPPORT ASSEMBLY
FOR MULTIPLE GRATES**

APPROVED BY:

ULPJ
DEVELOPMENT SERVICES DIRECTOR

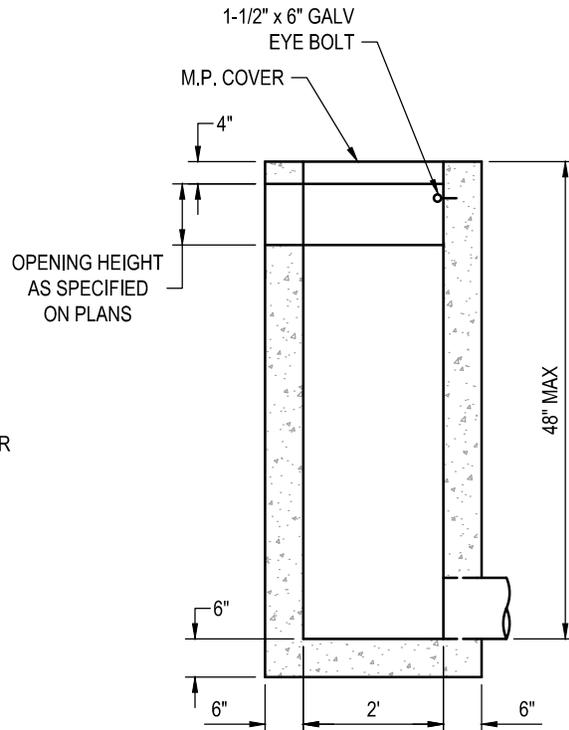
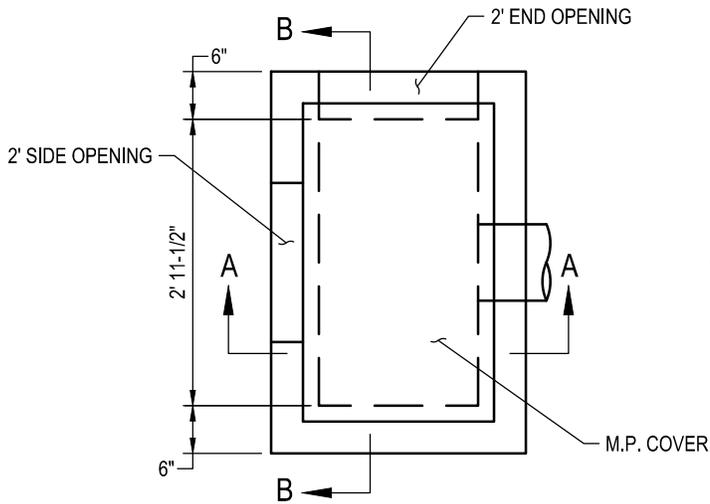
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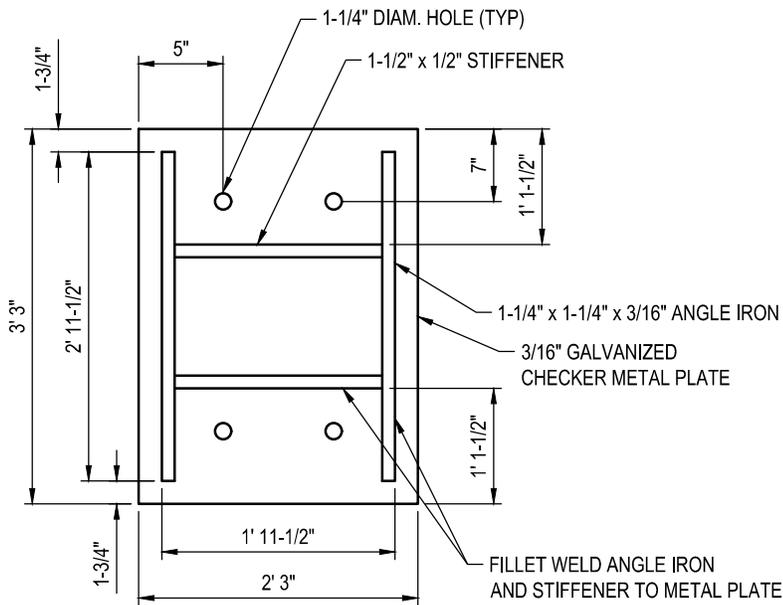


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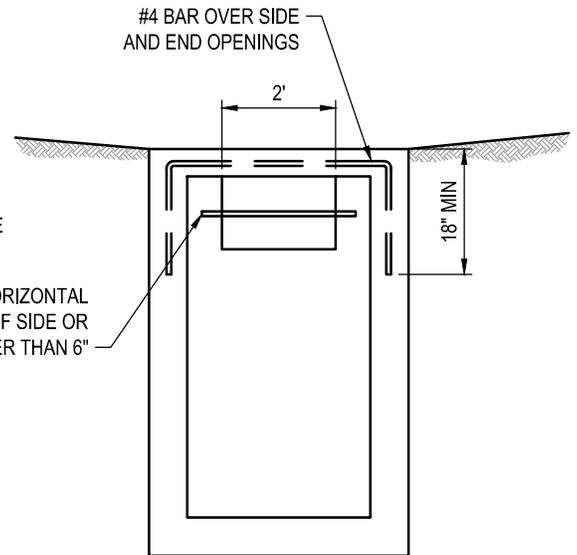
SD-21



SECTION A-A



METAL COVER (UNDERSIDE)



SECTION B-B

PLACE 1/2" DIAM. HORIZONTAL BAR IN CENTER OF SIDE OR END OPENING GREATER THAN 6"

NOTES:

1. PROVIDE 1/4" x 18" GALVANIZED CHAIN WELD TO COVER AND EYE BOLT.
2. PROVIDE END OR SIDE OPENINGS AS SHOWN ON PLANS OR CROSS SECTION.
3. TOP OF WALLS TO BE FINISHED TO A FLAT PLANE TO PROVIDE EVEN BEARING FOR PLATE COVER.
4. ALL METALS SHALL BE HOT DIP GALVANIZED PER ASTM A123.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

**DROP INLET
TYPE F**



DRAWING NUMBER

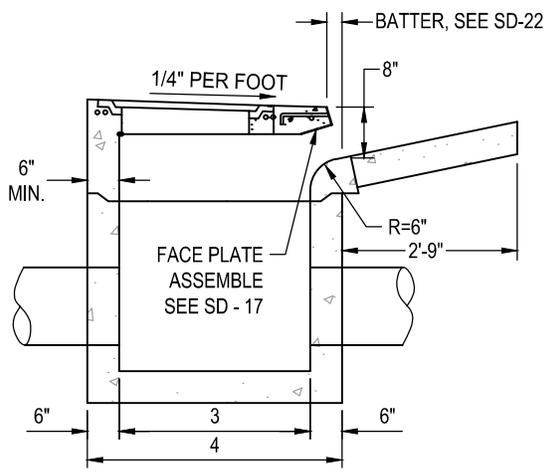
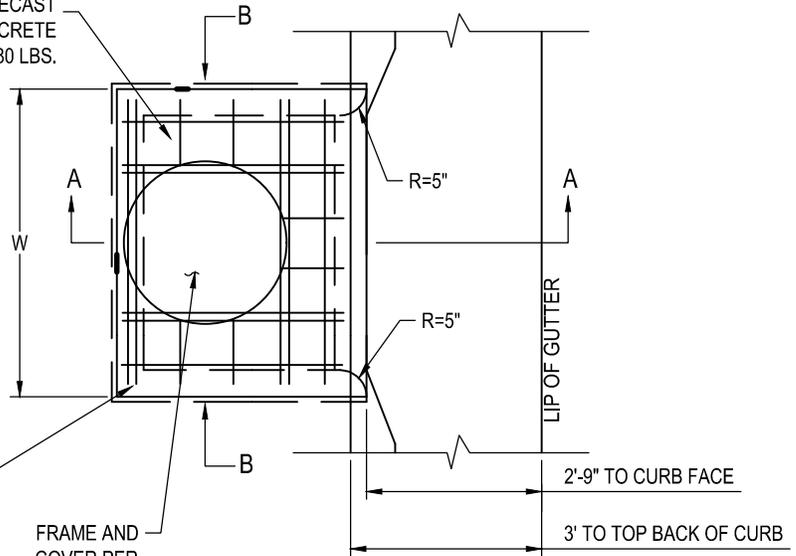
SD-23

MIN. WEIGHT OF PRECAST REINFORCED CONCRETE COVER IS 80 LBS.

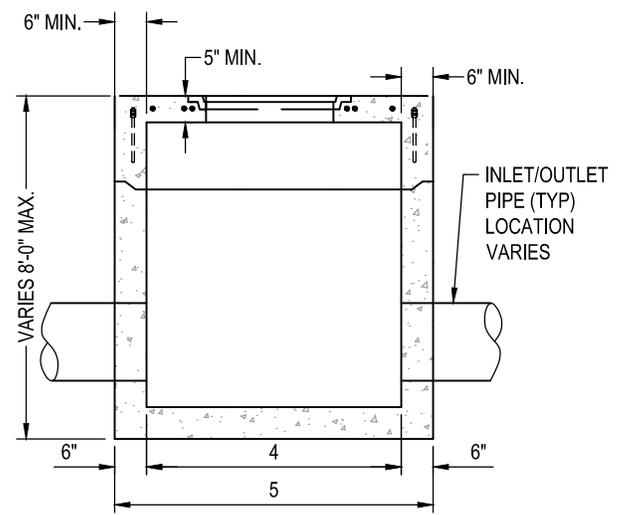
#4 REBAR @ 12" O.C. E.W., ADD 2 #4 ON 4 SIDES OF MANHOLE FRAME. MINIMUM 1" CLEAR COVER ALL DIRECTIONS

FRAME AND COVER PER STD. DWG. SD-13

PLAN



SECTION A-A



SECTION B-B

NOTES:

1. CURB INLET ASSEMBLY MAY BE PRECAST CONCRETE OR FORMED AND CAST-IN-PLACE P.C.C.
2. ALL METAL SHALL BE HOT DIP GALVANIZED PER ASTM A123.
3. SEE STANDARD DRAWING SD-22 FOR FACE PLATE ASSEMBLY.

COUNTY OF SUTTER - ENGINEERING

**DROP INLET TYPE G
TYPE 2 C&G ONLY
(PG 1 OF 2)**

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

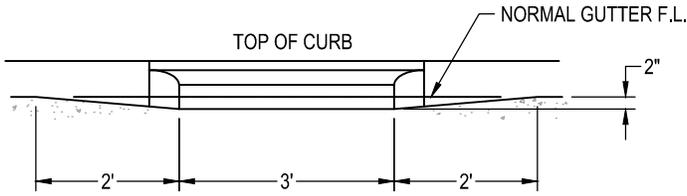
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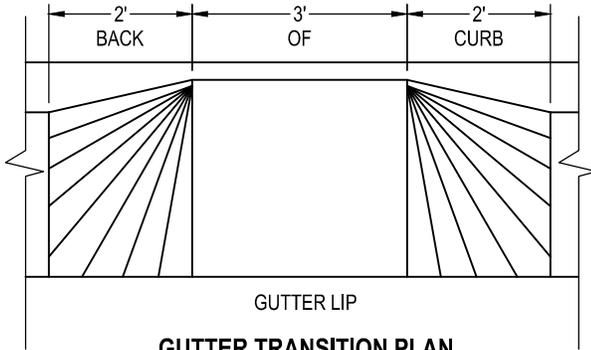
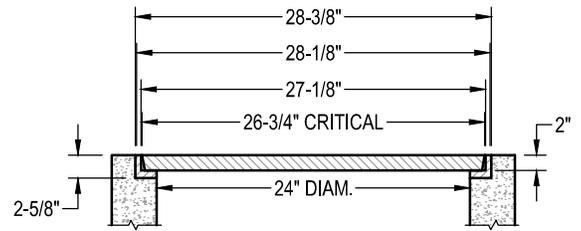


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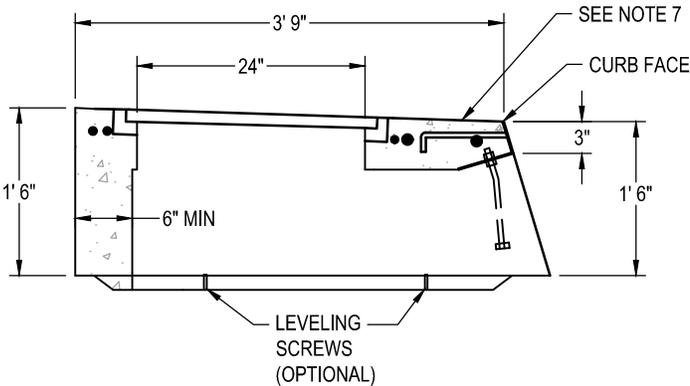
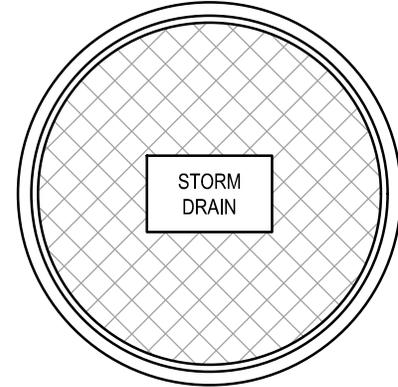
SD-24.1



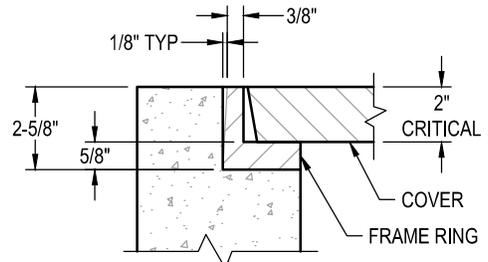
GUTTER TRANSITION ELEVATION



GUTTER TRANSITION PLAN



CURB INLET DETAIL



FRAME AND LID DETAIL

WEIGHT	
CAST IRON COVER	91 LBS
CAST IRON FRAME RING	52 LBS

NOTES:

1. CURB INLET ASSEMBLY MAY BE PRECAST CONCRETE, OR FORMED AND CAST-IN-PLACE P.C.C.
2. ALL METAL SHALL BE HOT DIPPED GALVANIZED ASTM A123.
3. ALL CASTINGS TO CONFORM TO ASTM A4B, CLASS 35B
4. FRAME AND COVER TO MEET H-20 LOAD SPECIFICATIONS.
5. BEARING SURFACES ARE MACHINE BEVELED TO ASSURE A CLOSE, NON ROCKING SURFACE.
6. FRAME AND COVER SHALL HAVE A COATING OF BLACK BITUMINOUS MATERIAL CONFORMING TO ASTM 48-30.
7. INSTALL "NO DUMPING, DRAINS TO RIVER" PLACARD ON TOP OF CURB.

COUNTY OF SUTTER - ENGINEERING

**DROP INLET TYPE G
TYPE 2 C&G ONLY
(PG 2 OF 2)**

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

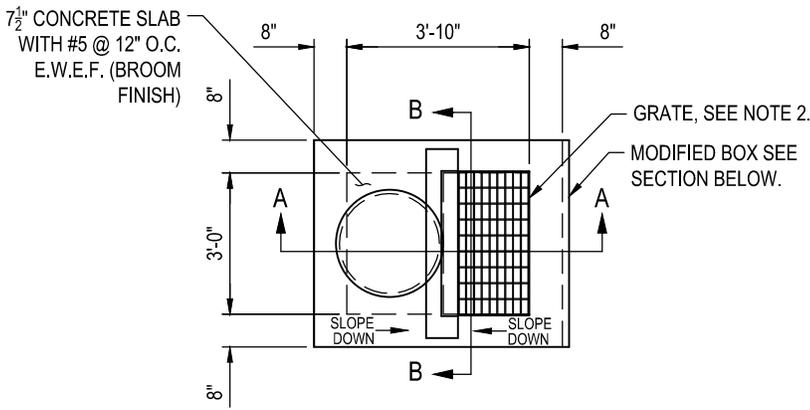
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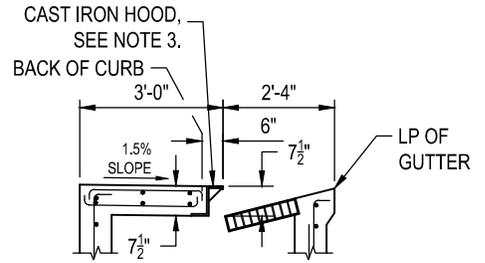


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SD-24.2



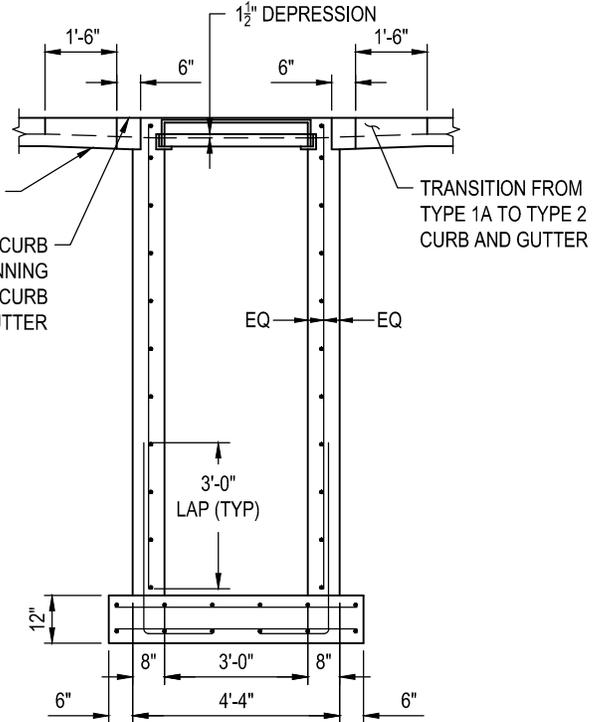
PLAN VIEW



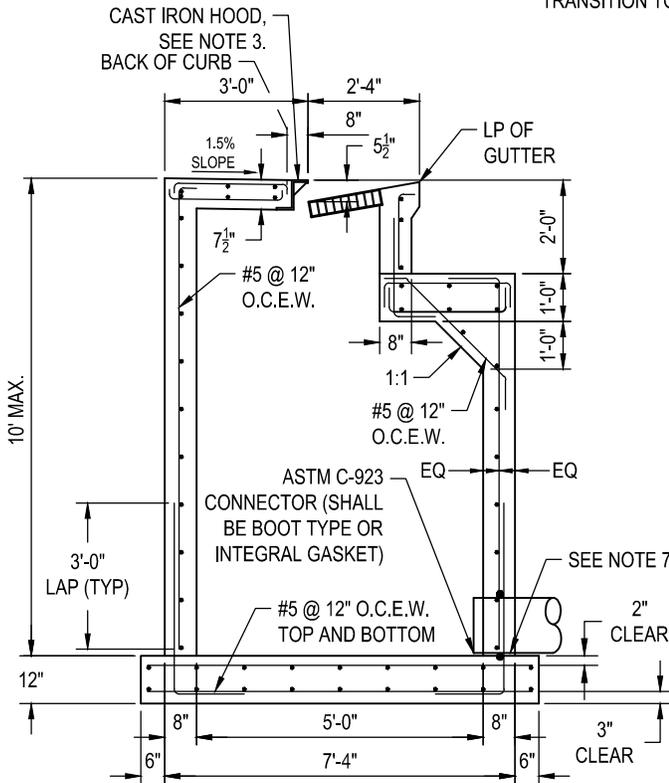
SECTION A-A

TYPE 2 CURB AND GUTTER

(FOR INFORMATION NOT SHOWN OR NOTED REFER TO SECTION A-A TYPE 1A CURB AND GUTTER)



SECTION B-B



SECTION A-A
TYPE 1A CURB AND GUTTER

NOTES:

1. STANDARD DEPRESSION FOR INLET IS 1 1/2".
2. FRAME AND GRATE SHALL CONFORM TO STANDARD DRAWINGS SD-19 AND SD-20.
3. OPEN BACK CAST IRON HOOD SHALL BE H-20 RATED, 3/4" THICK AND CONFORM TO STANDARD DRAWING SD-16.
4. ALL EXPOSED EDGES SHALL HAVE A 1/8" RADIUS (MINIMUM).
5. AN EDGING TOOL SHALL BE USED ON ALL EDGES WHERE THE CONCRETE SIDEWALK AND CURB MEET THE TOP OF THE HOOD.
6. EXPOSED SURFACES OF THE GRATES, FRAMES, AND HOODS WITH THE PARTS ASSEMBLED DISASSEMBLED SHALL BE PAINTED WITH COMMERCIAL QUALITY ASPHALTUM PAINT AFTER TESTING AND ASSEMBLY.
7. THE MINIMUM PIPE SIZE IS 12" IF THE INLET DEPTH IS GREATER THAN 4', THE MINIMUM PIPE SIZE SHALL BE 15".
8. THE MANHOLE FRAME AND COVER SHALL BE PER STANDARD DRAWING SD-13.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

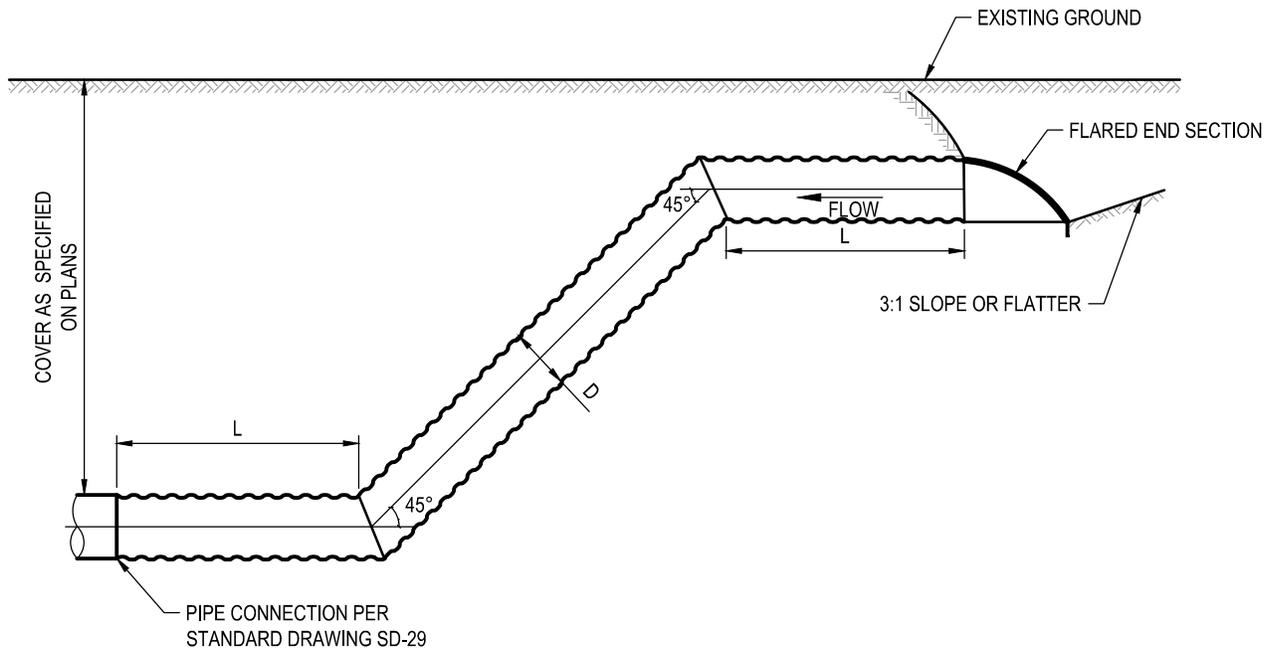
DATE

MODIFIED TYPE J INLET



DRAWING NUMBER

SD-25



RISER DIAMETER, D	LENGTH OF HORIZONTAL PIPE, L
15"	1'-0"
18"	1'-6"
21"	1'-6"
24"	1'-6"
30"	2'-0"
36"	3'-0"
42"	4'-0"
48"	4'-0"

NOTES

1. USE 2-PIECE ELBOW AT BOTH ENDS OF RISER. ELBOWS SHALL CONFORM TO STANDARD DRAWING SD-28.
2. TO BE USED ONLY WITH THE SPECIFIC APPROVAL OF THE DIRECTOR.
3. PIPE MATERIAL TO BE CMP.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

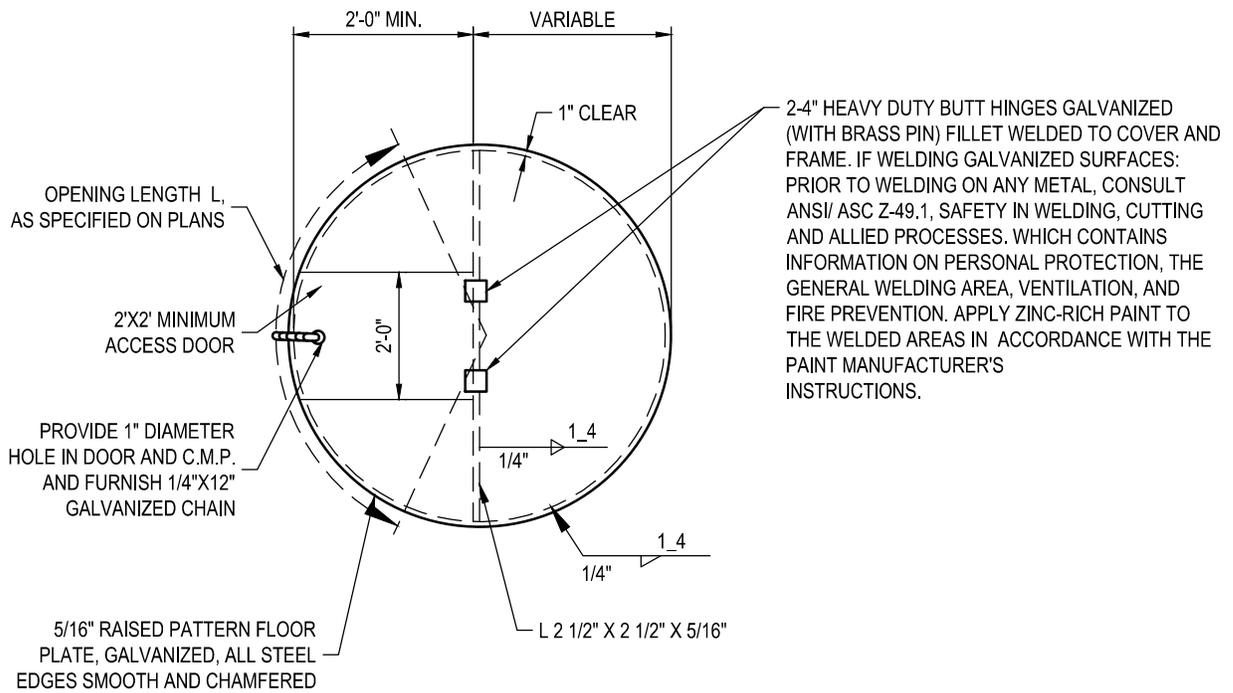
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**DRAINAGE INLET
TYPE H**

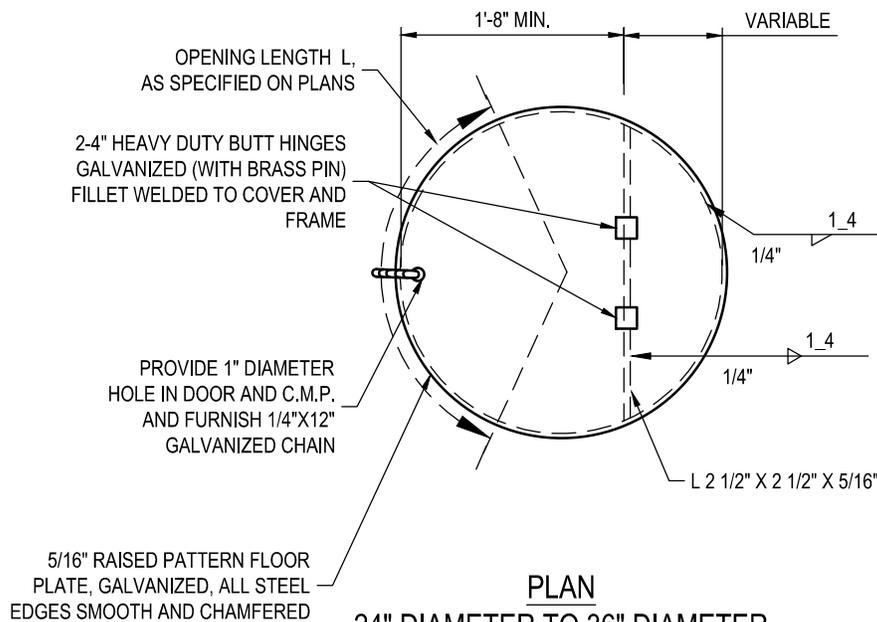


DRAWING NUMBER

SD-26



PLAN
42" DIAMETER TO 72" DIAMETER
C.M.P. INLET



PLAN
24" DIAMETER TO 36" DIAMETER
CORRUGATED METAL PIPE (CMP) INLET

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

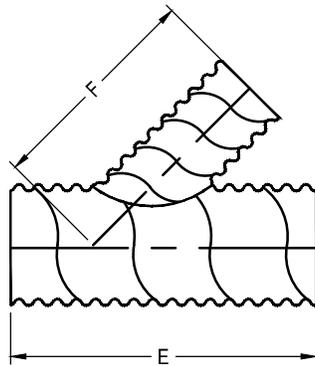
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TEMPORARY CORRUGATED METAL PIPE
DRAINAGE INLET
TYPE I (PG 1 OF 2)

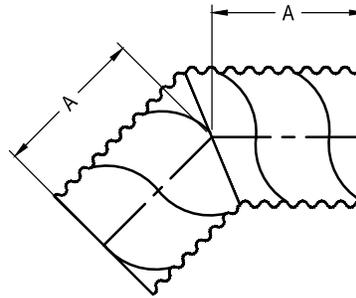


DRAWING NUMBER

SD-27.1



WYE LATERAL



ELBOW
0° to 45°

FITTING SIZES

DIAM (IN)	A (FT)	E (FT)	F (FT)
12	1	4	4
15	1	4	4
18	1	4	4
21	2	6	4
24	2	6	4
30	2	6	4
36	2	8	6
42	2	8	6
48	2	10	8
54	3	10	8
60	3	12	10
66	3	12	10
72	3	14	10
78	3	14	10
84	3	16	12
90	3	16	12
96	3	16	12

NOTES

1. TO USE TABLE, REFER TO DIAGRAM AND SELECT LETTER REPRESENTING DESIRED DIMENSION, THEN ENTER TABLE AT CORRECT PIPE DIMENSION AND READ DIMENSION IN COLUMN UNDER APPROPRIATE LETTER HEADING.
2. DIMENSIONS ON TABLE ALLOW FOR USE OF STANDARD 12 INCH WIDE BAND COUPLER ON SIZES 15 INCH THROUGH 54 INCH AND 24 INCH WIDE BAND ON 60 INCH AND LARGER SIZES.
3. FOR PIPE-ARCH FITTINGS, CHOOSE PIPE DIAMETER EQUAL TO OR GREATER THAN ARCH SPAN. (EXAMPLE: 35 INCH X 24 INCH PIPE-ARCH; USE DIMENSIONS FOR 36 INCH PIPE).
4. STRUCTURAL REINFORCEMENT MAY BE REQUIRED ON SOME LARGER SIZES.

COUNTY OF SUTTER - ENGINEERING

CORRUGATED PIPE FITTINGS

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

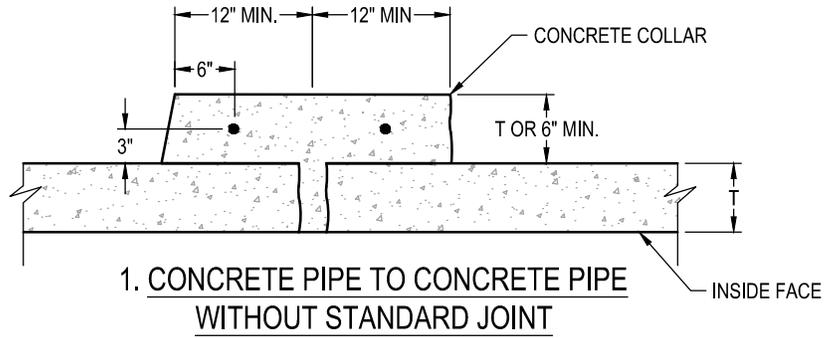
4/3/2025

DATE

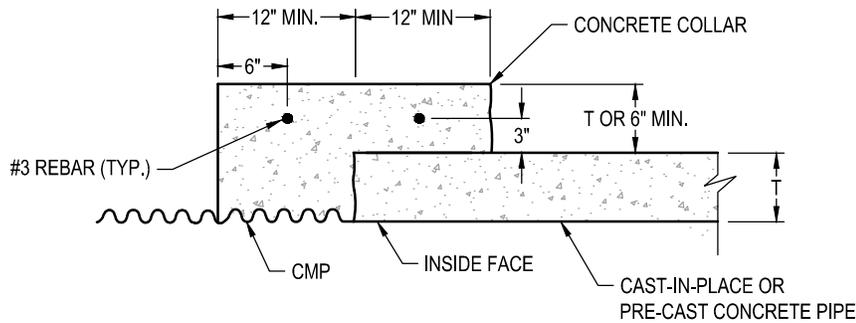


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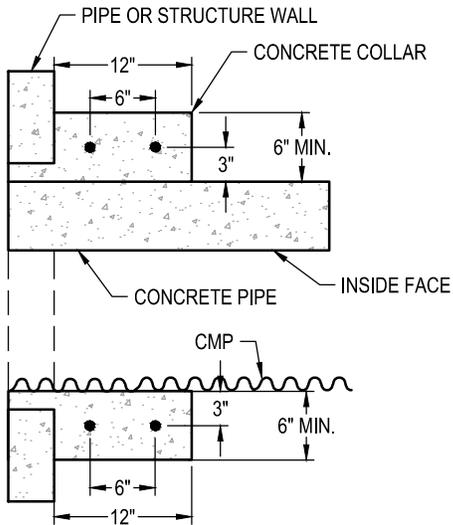
SD-28



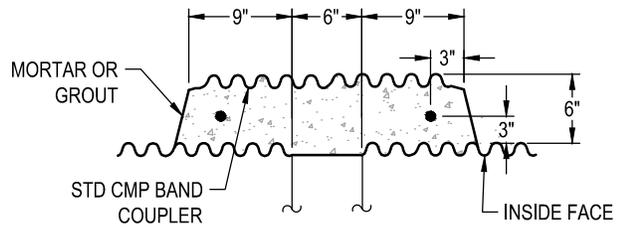
**1. CONCRETE PIPE TO CONCRETE PIPE
WITHOUT STANDARD JOINT**



**2. CAST-IN-PLACE OR PRE-CAST
CONCRETE PIPE TO CORRUGATED METAL PIPE (CMP)**



**3. CONCRETE PIPE,
CMP INTO EXISTING
PIPE OR STRUCTURE**



**4. PIPES OF
DISSIMILAR METALS**

COUNTY OF SUTTER - ENGINEERING

PIPE CONNECTIONS

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

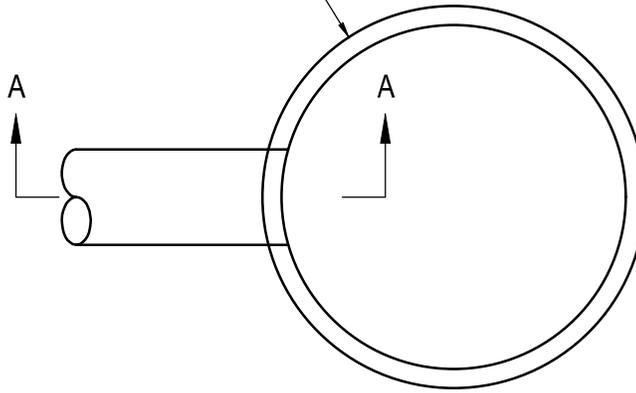
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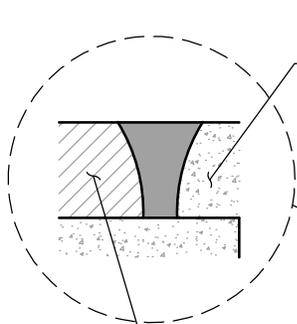
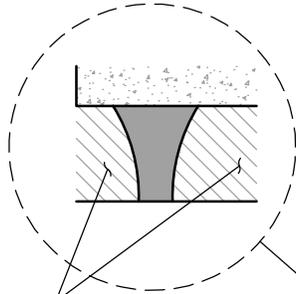
SD-29

MANHOLE BASE AND BARREL SECTION. MANHOLE CONE, FRAME, AND COVER OMITTED FOR CLARITY.



PLAN

DO NOT MORTAR THESE AREAS



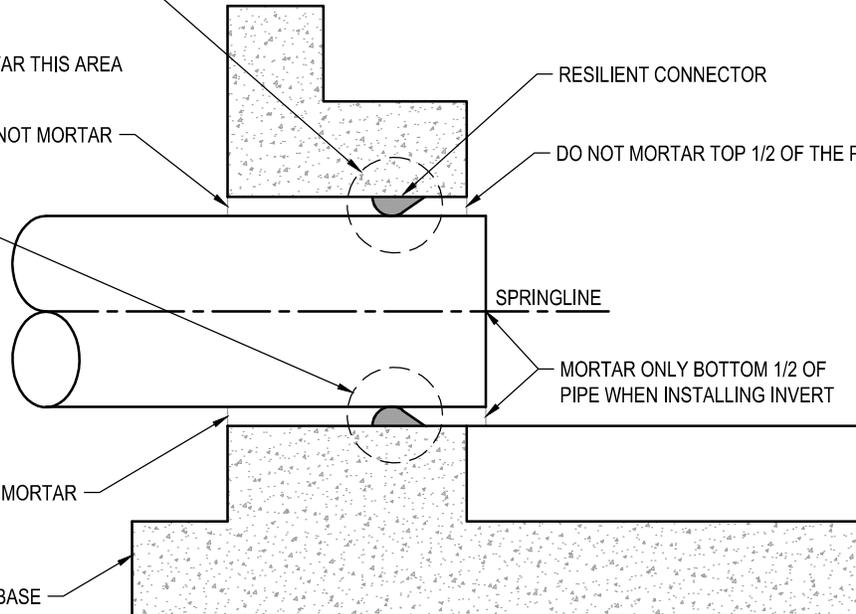
DO NOT MORTAR THIS AREA

MORTAR THIS AREA

DO NOT MORTAR

DO NOT MORTAR

MANHOLE BASE



RESILIENT CONNECTOR

DO NOT MORTAR TOP 1/2 OF THE PIPE

SPRINGLINE

MORTAR ONLY BOTTOM 1/2 OF PIPE WHEN INSTALLING INVERT

SECTION A-A

NOTES:

1. TO HELP CREATE A FLEXIBLE, WATERTIGHT JOINT, DO NOT PLACE MORTAR AROUND THE CONNECTOR ON THE OUTSIDE OF THE STRUCTURE OR AROUND THE TOP HALF OF THE CONNECTOR ON THE INSIDE WHEN COMPLETING THE INVERT WORK.
2. RESILIENT CONNECTORS SHALL BE A FLEXIBLE COMPRESSION GASKET OR BOOT CONNECTOR.
3. ALL CONNECTORS SHALL MEET OR EXCEED THE REQUIREMENTS OF A.S.T.M. C-923.

COUNTY OF SUTTER - ENGINEERING

FLEXIBLE PIPE TO MANHOLE CONNECTION

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

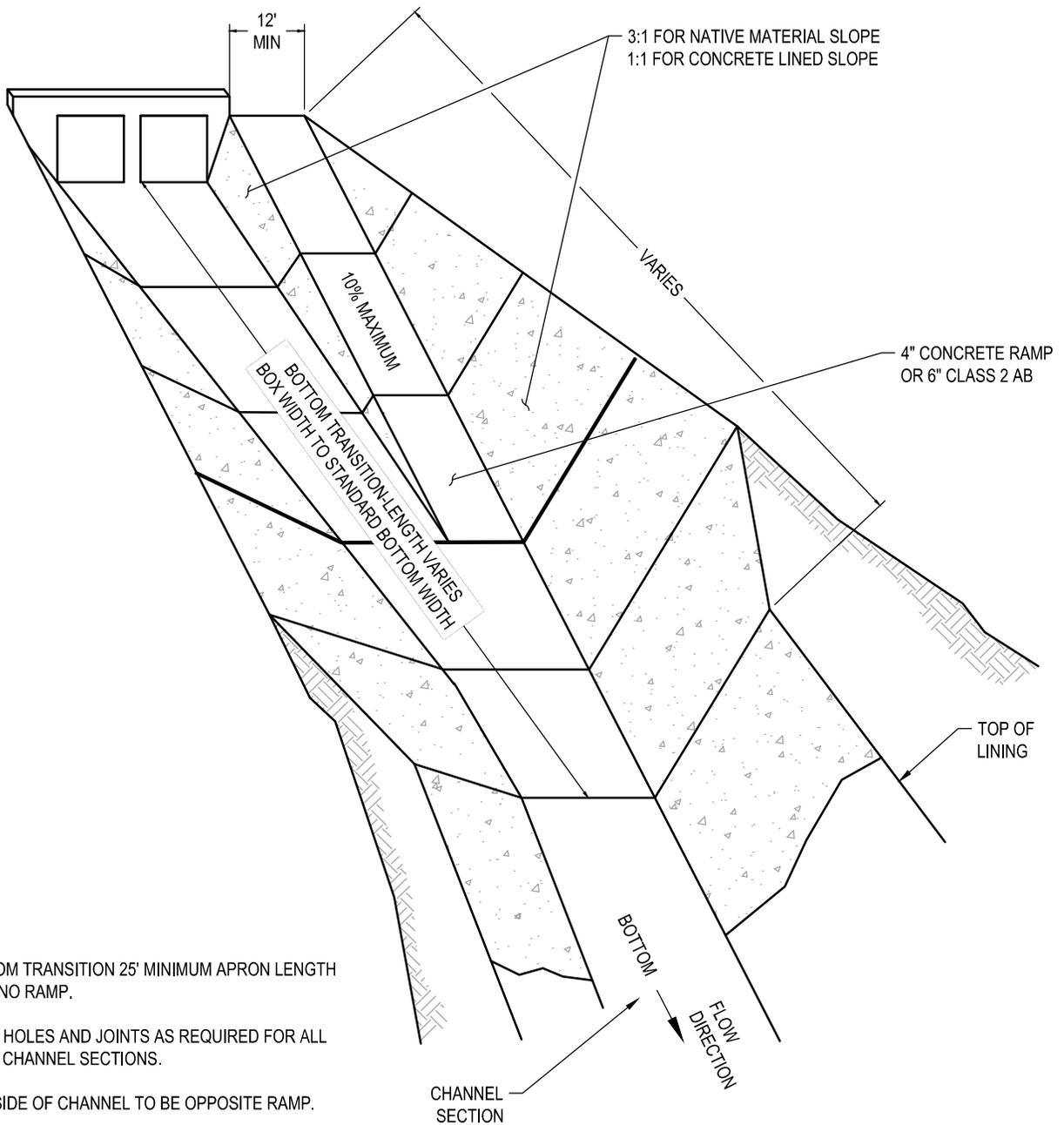
4/3/2025

DATE



DRAWING NUMBER

SD-30



NOTES:

1. BOTTOM TRANSITION 25' MINIMUM APRON LENGTH WITH NO RAMP.
2. WEEP HOLES AND JOINTS AS REQUIRED FOR ALL LINED CHANNEL SECTIONS.
3. LOW SIDE OF CHANNEL TO BE OPPOSITE RAMP.
4. SIDE SLOPE LINING MAY BE USED AT RAMP LOCATIONS TO INCREASE SLOPE TO MAXIMUM 1:1. TOP OF SLOPE GREATER THAN 3:1 MUST BE FENCED.

COUNTY OF SUTTER - ENGINEERING

**TYPICAL RAMP AND TRANSITION
DETAIL**

APPROVED BY:

NLP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

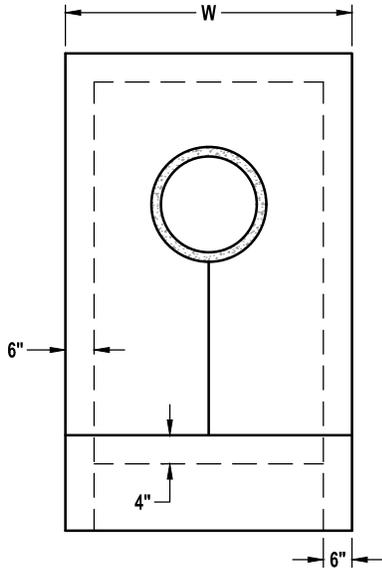
DATE



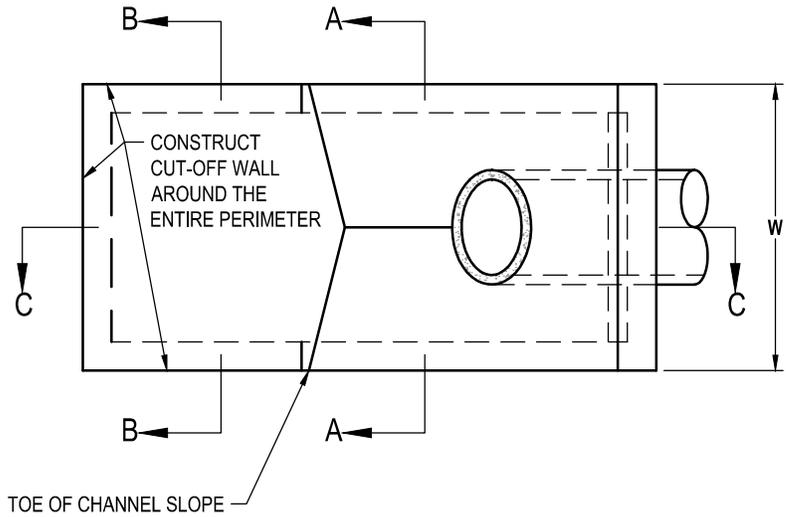
DRAWING NUMBER

SD-31

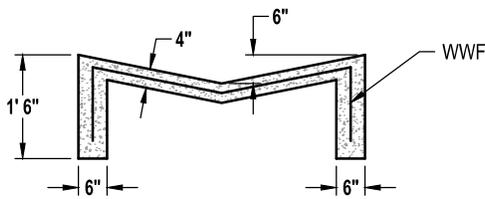
W = 6' 0" MINIMUM
W = 2 x PIPE DIAM. (3'+)
WWF = WELDED WIRE FABRIC



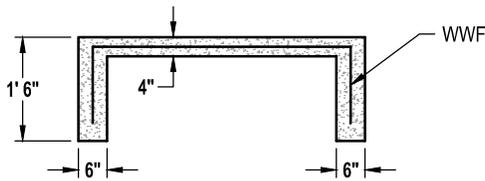
FRONT VIEW



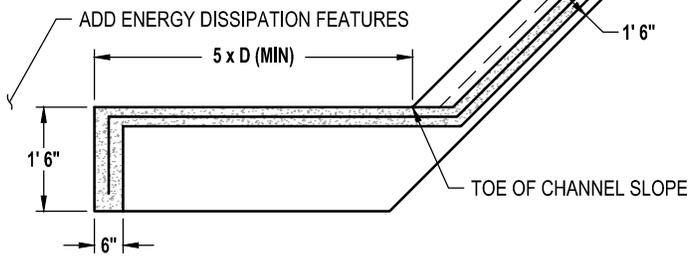
TOP VIEW



SECTION A-A

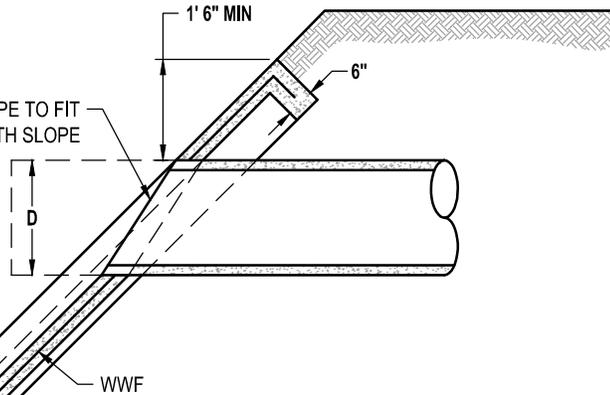


SECTION B-B



SECTION C-C

MITER CUT PIPE TO FIT
FLUSH WITH SLOPE



NOTES:

1. USE CLASS "B" CONCRETE.
2. 6" x 6" - W6 x W6 WWF THROUGHOUT CONCRETE.
3. ADD ENERGY DISSIPATION FEATURES SUCH AS COBBLES, RIP-RAPS, OR MOLDED CONCRETE AT END OF APRON.

COUNTY OF SUTTER - ENGINEERING

**OUTLET PIPE HEADWALL AND
APRON**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

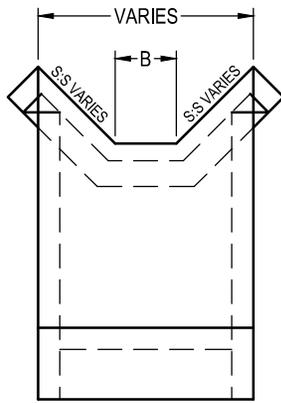
4/3/2025

DATE

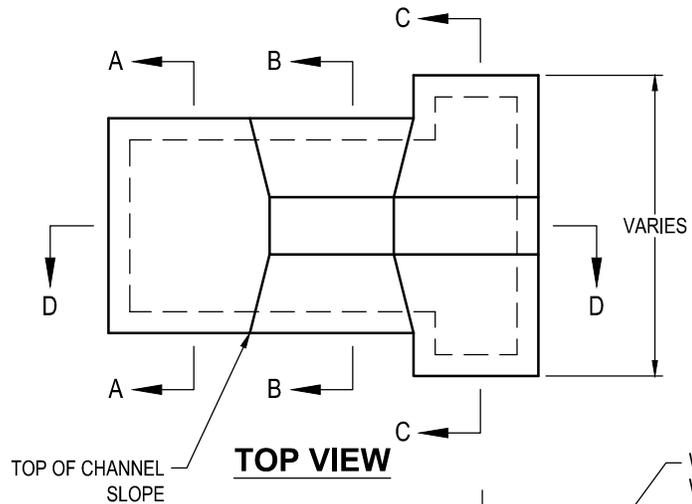


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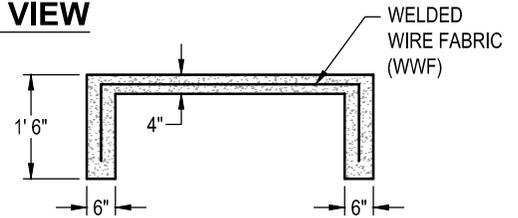
SD-32



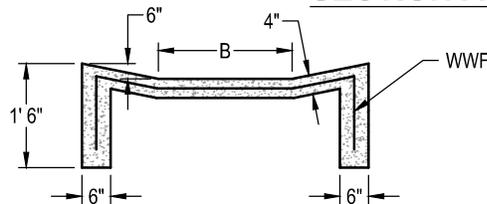
FRONT VIEW



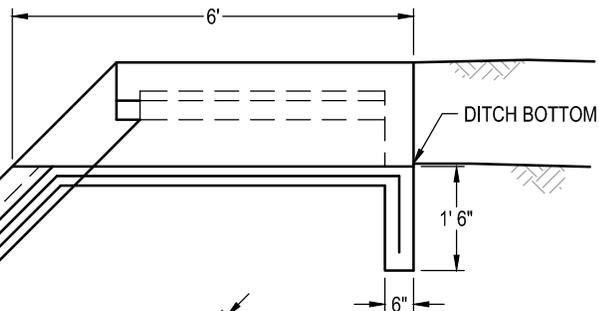
TOP VIEW



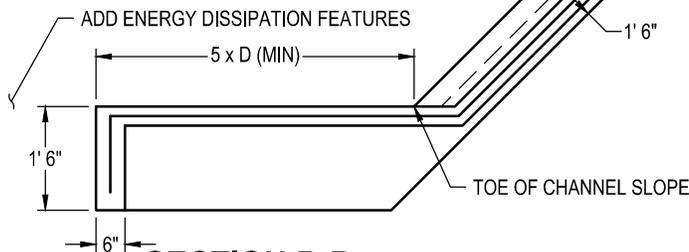
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. USE CLASS "B" CONCRETE OR GROUTED COBBLES AS SPECIFIED.
2. 6" x 6" -W6 x W6 WWF THROUGHOUT CONCRETE.
3. ON LINED CHANNELS APRON SHALL CONNECT TO SIDE LINING.
4. B = DITCH BOTTOM WIDTH OR AS SHOWN ON PLANS.
5. D = DITCH WATER DEPTH PLUS ONE FOOT OF FREEBOARD.
6. ADD ENERGY DISSIPATION FEATURES SUCH AS COBBLES, RIP-RAP, OR MOLDED CONCRETE AT END OF APRON.

COUNTY OF SUTTER - ENGINEERING

DITCH DISCHARGE CONTROL AND APRON

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

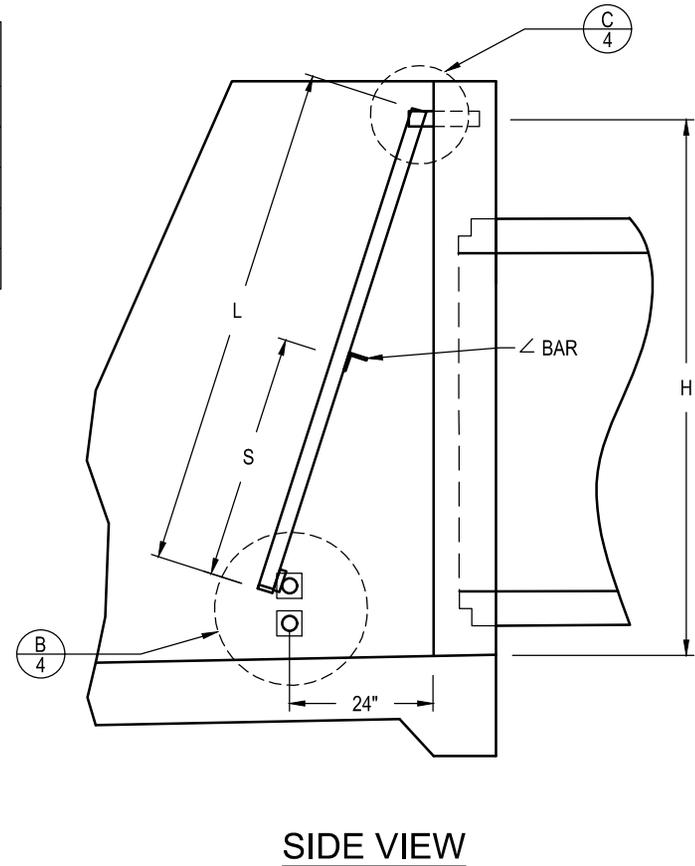
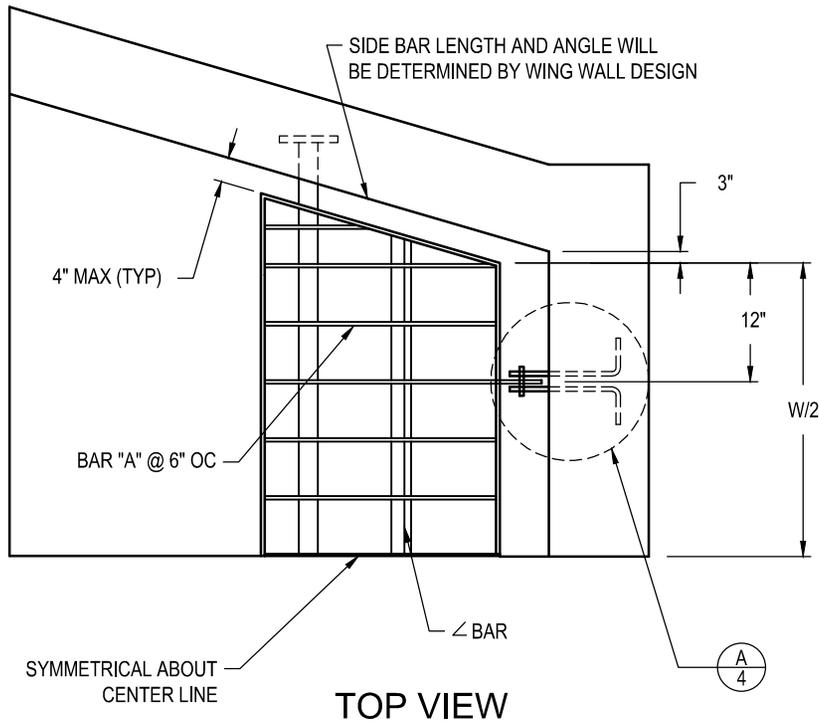


DRAWING NUMBER

SD-33

PIPE DIA. (IN)	PIPE OD (IN)	QUANTITY* BAR "A"	BAR "A" SIZE (IN)	H (IN)	W (IN)	L (IN)	S (IN)
24	30	11	3/8x2 1/2	46	48	40	18
27	33.5	11	3/8x2 1/2	50	48	42	19
30	37	11	3/8x2 1/2	53	48	46	21
33	40.5	11	3/8x2 1/2	57	48	52	24
36	44	13	3/8x2 1/2	60	60	52	24

*INCLUDES OUTSIDE FRAME



COUNTY OF SUTTER - ENGINEERING

TRASH RACK
24"-36" PIPE
(SHEET 1 OF 4)

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

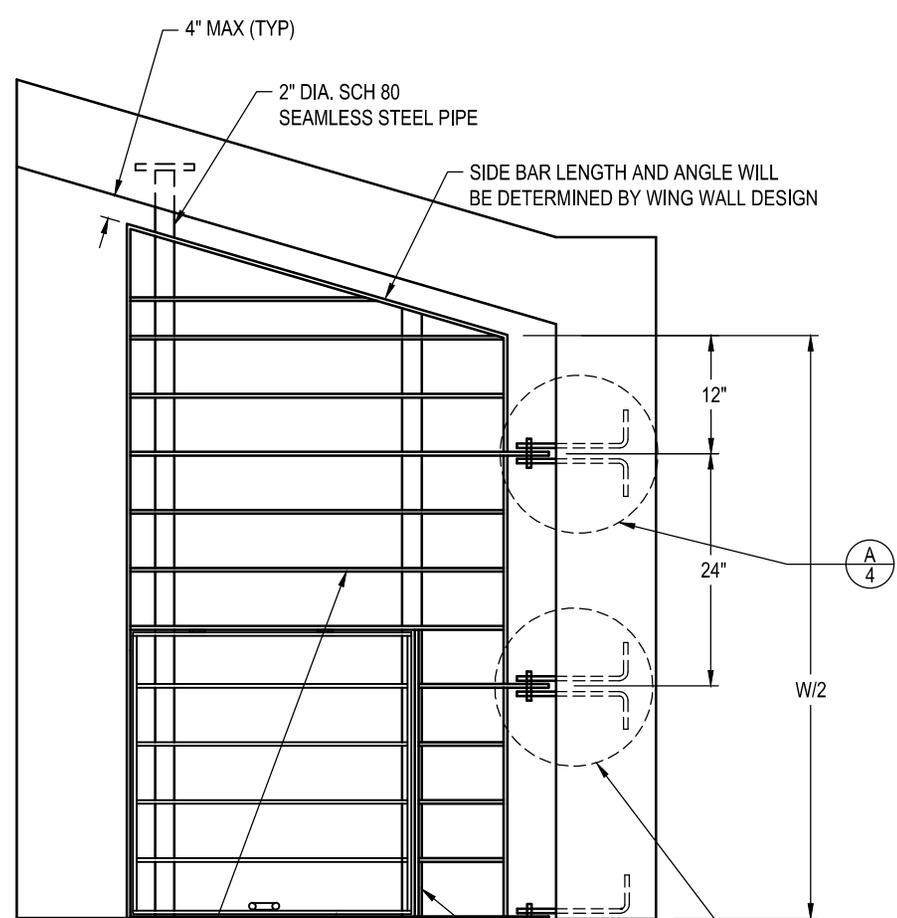
4/3/2025

DATE

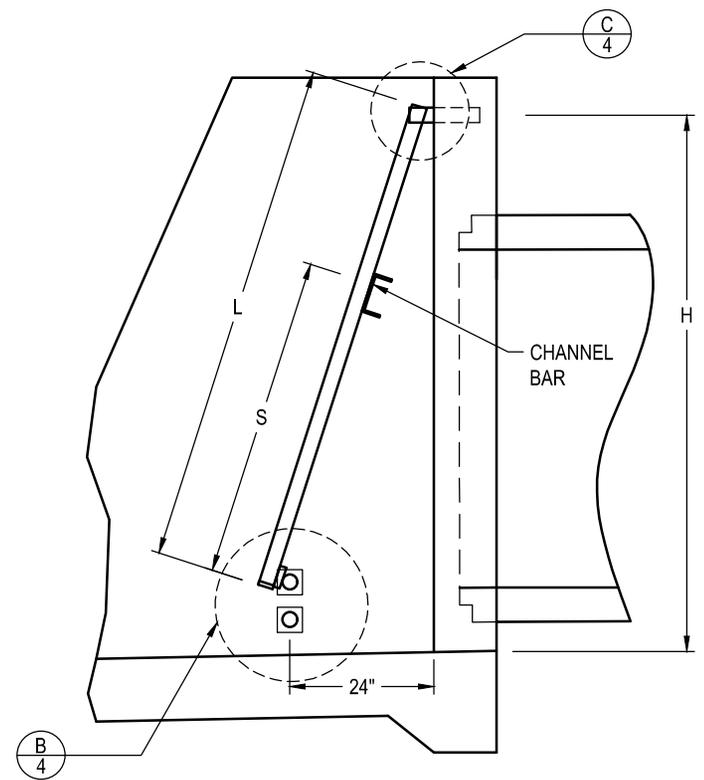


DRAWING NUMBER

SD-34.1



4" MAX (TYP)
 2" DIA. SCH 80 SEAMLESS STEEL PIPE
 SIDE BAR LENGTH AND ANGLE WILL BE DETERMINED BY WING WALL DESIGN
 12"
 24"
 W/2
 BAR "A" @ 6" OC
 SYMMETRICAL ABOUT CENTER LINE
 ACCESS GATE SEE STANDARD DWG SD-34.3
TOP VIEW



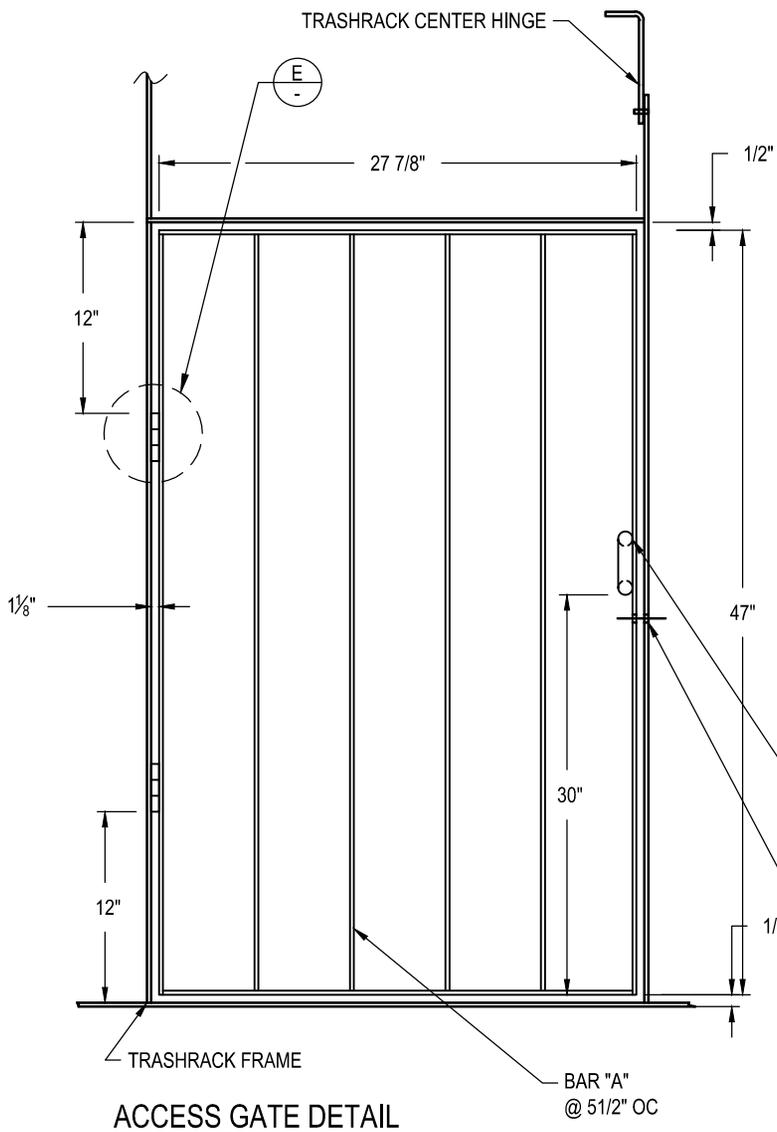
SIDE VIEW

ADDITIONAL HINGE REQUIRED ON TRASH RACK FOR 60" AND 72" PIPE
 3"x1½"x¼" C10 CHANNEL BAR

NOTE:
 SEE SECTION 9-17 FOR DESIGN REQUIREMENTS

<p>COUNTY OF SUTTER - ENGINEERING</p>
<p>TRASH RACK 42" PIPE AND LARGER (SHEET 2 OF 4)</p>

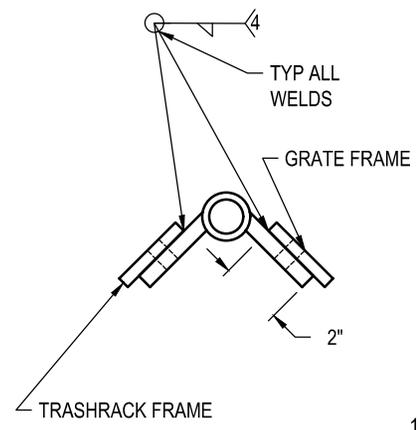
APPROVED BY: 	4/3/2025 DATE
DEVELOPMENT SERVICES DIRECTOR	DRAWING NUMBER
	SD-34.2



ACCESS GATE DETAIL

PIPE DIAM (IN)	PIPE OD (IN)	QUANTITY* BAR "A"	BAR "A" SIZE (IN)	H (IN)	W (IN)	L (IN)	S (IN)
42	51	15	3/8x2 1/2	67	72	60	47-3/4
48	58	17	3/8x2 1/2	74	84	70	47-3/4
54	65	21	3/8x2 1/2	81	108	72	47-3/4
60	72	23	3/8x2 1/2	88	120	80	47-3/4
72	86	27	3/8x2 1/2	102	144	96	47-3/4

*INCLUDES OUTSIDE FRAME



DETAIL E

NOTES

1. SEE STANDARD DRAWINGS SD-35.1 AND SD-35.2 FOR PIPE HEADWALL DETAILS.
2. MATERIAL TO CONFORM TO ASTM DESIGNATION A-36. GALVANIZE ALL EXPOSED FERROUS PARTS AFTER FABRICATION.
3. ALL FILLET WELDS TO BE 3/16".
4. ALL STEEL SHALL CONFORM TO ASTM A36, A575 AND A576.
5. GATE HINGES TO BE COATED TO RESIST CORROSION.

COUNTY OF SUTTER - ENGINEERING

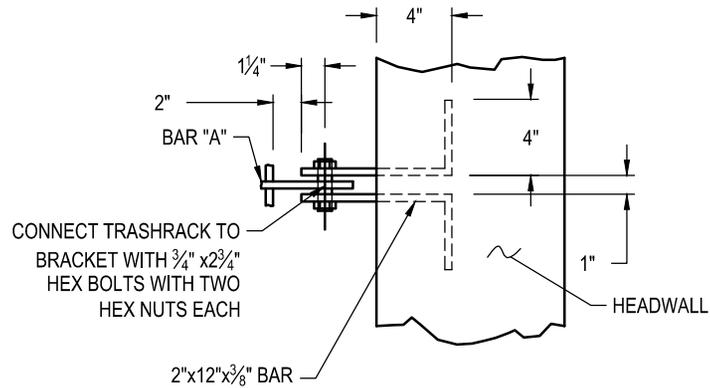
**TRASH RACK
42" PIPE AND LARGER
(SHEET 3 OF 4)**

APPROVED BY: *ULP* 4/3/2025

DEVELOPMENT SERVICES DIRECTOR DATE

SUTTER COUNTY DRAWING NUMBER

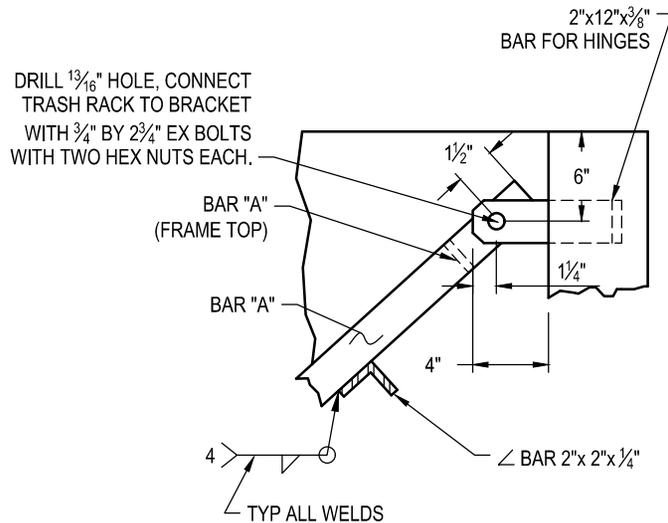
SD-34.3



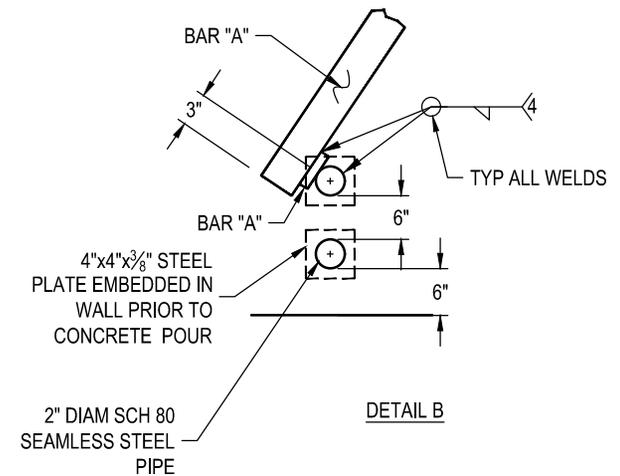
DETAIL A

NOTES

1. SEE STANDARD DRAWINGS SD-35.1 AND SD-35.2 FOR PIPE HEADWALL DETAILS.
2. MATERIAL TO CONFORM TO ASTM DESIGNATION A-36. GALVANIZE ALL EXPOSED FERROUS PARTS AFTER FABRICATION.
3. ALL FILLET WELDS TO BE $\frac{3}{16}$ ".
4. ALL STEEL SHALL CONFORM TO ASTM A36, A575 AND A576.



DETAIL C



DETAIL B

COUNTY OF SUTTER - ENGINEERING

TRASH RACK
DETAILS
(SHEET 4 OF 4)

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

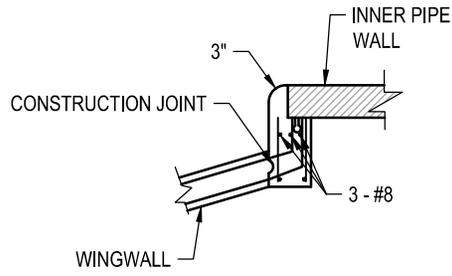
4/3/2025

DATE



DRAWING NUMBER

SD-34.4

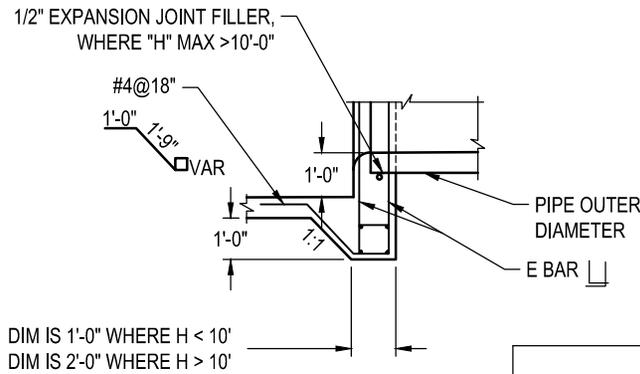


DETAIL A

- # **CONSTRUCTION NOTES**
- 1 PLACE #5 REBAR ON DIAGONALS @ 4" FROM PIPE OD.
 - 2 PIPE CONNECTIONS SHALL CONFORM TO ASTM C-923. UNITS SHALL INCLUDE A WATER STOP.
 - 3 CHAMFER ALL EXPOSED EDGES $\frac{3}{4}$ ".
 - 4 ALL STEEL MINIMUM 2" FROM CONCRETE EDGES.
 - 5 ALL LAP SPLICES MINIMUM 12".

HEADWALL DIMENSIONS

PIPE DIA	PIPE OD	W	H _{min}	T	L _{min}
24"	3"	4'-6"	4'-8"	8"	2'-9"
27"	33.5"	4'-6"	4'-10"	8"	3'-0"
30"	37"	4'-6"	5'-3"	8"	3'-3"
33"	40.5"	5'-6"	5'-9"	8"	3'-6"
36"	44"	5'-6"	5'-9"	8"	3'-9"
42"	51"	6'-6"	6'-6"	8"	4'-3"
48"	58"	7'-6"	7'-5"	10"	5'-3"
54"	65"	9'-6"	7'-7"	10"	5'-9"
60"	72"	10'-6"	8'-3"	10"	6'-0"
72"	86"	12'-6"	9'-8"	10"	7'-3"

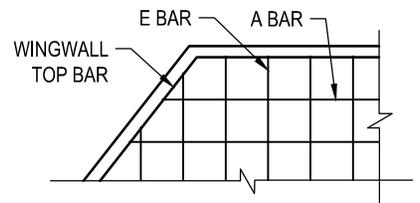


DETAIL B

REINFORCING STEEL DIMENSIONS AND DATA

	A BAR	B BAR	C BAR	D BAR	E BAR	WINGWALL TOP BAR
H ≤ 7'	#4@12"OC	#4@12"OC	#4@12"OC	#4@12"OC	#4@12"OC	#4
7' < H ≤ 8'	#4@12"OC EF	#4				
8' < H ≤ 10'	#5@12"OC EF	#5@6"OC EF	#5@12"OC EF	#5@12"OC EF	#5@12"OC EF	#5

EF = EACH FACE

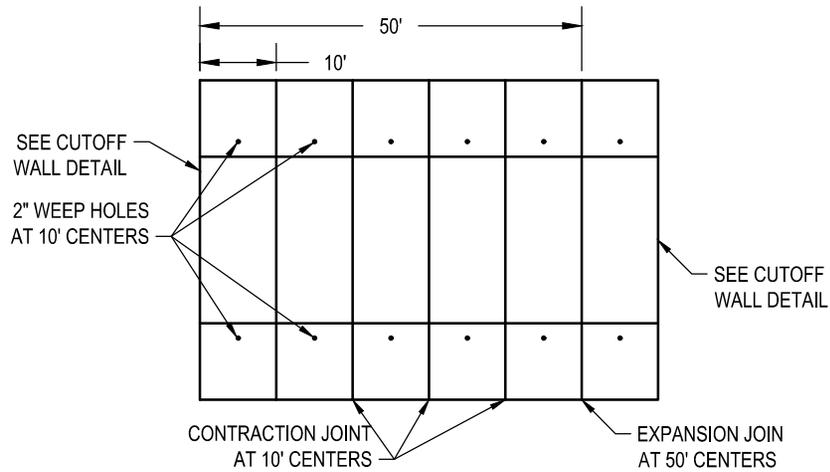


DETAIL C

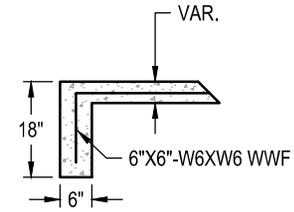
COUNTY OF SUTTER - ENGINEERING

**INLET PIPE HEADWALL
WINGWALL STRUCTURE
(SHEET 2 OF 2)**

APPROVED BY:  4/3/2025
 DEVELOPMENT SERVICES DIRECTOR DATE
 DRAWING NUMBER
SD-35.2

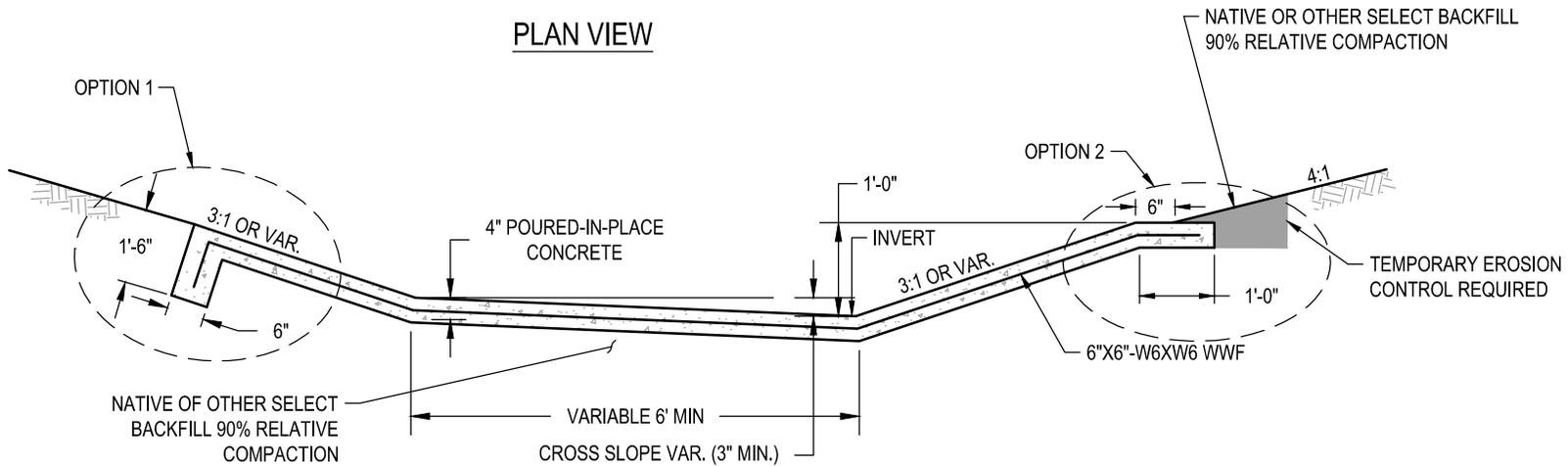


PLAN VIEW



CUTOFF WALL DETAIL

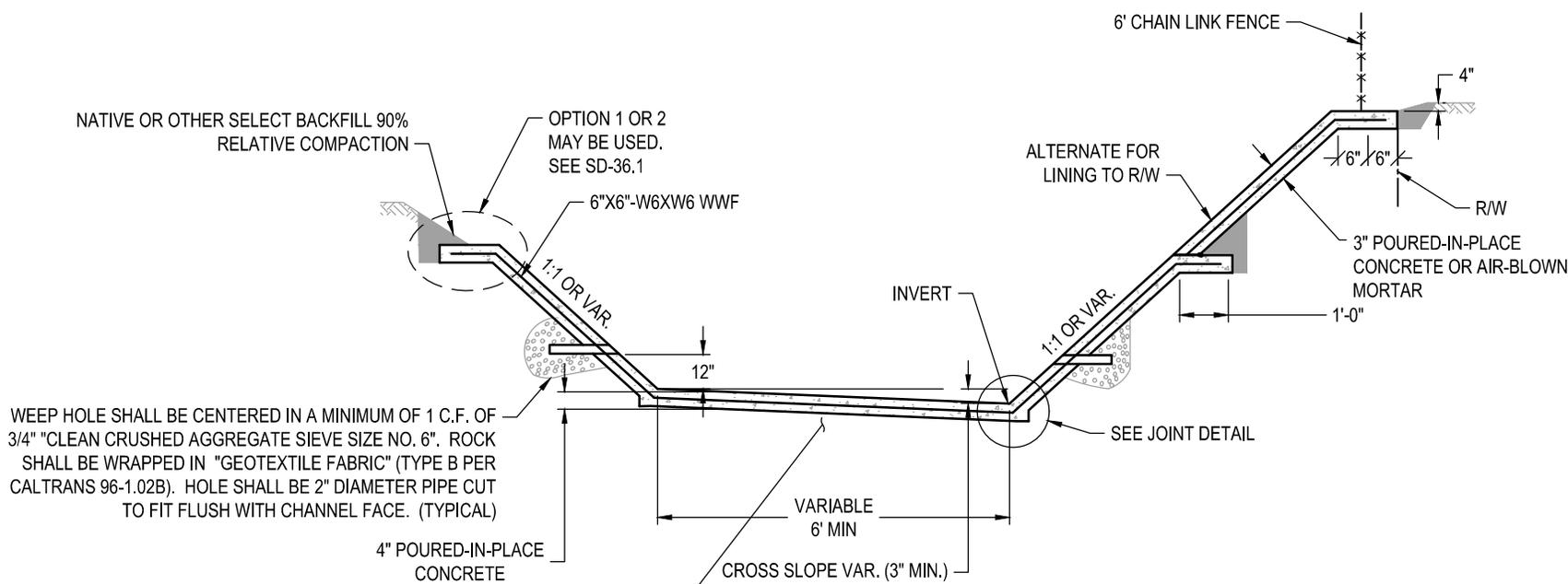
TO BE PLACED ALONG ENTIRE END OF LINED SECTION AT BEGINNING AND AT END OF LINING



TYPICAL BOTTOM LINING

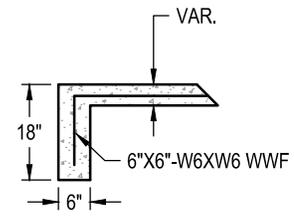
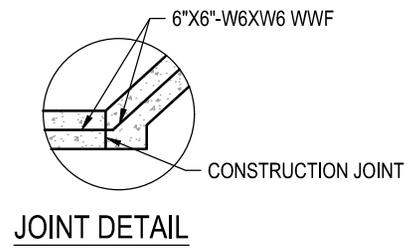
WWF = WELDED WIRE FABRIC

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>LINED CHANNEL SECTION (SHEET 1 OF 2)</p>	<p>DRAWING NUMBER  SD-36.1</p>



WEEP HOLE SHALL BE CENTERED IN A MINIMUM OF 1 C.F. OF 3/4" "CLEAN CRUSHED AGGREGATE SIEVE SIZE NO. 6". ROCK SHALL BE WRAPPED IN "GEOTEXTILE FABRIC" (TYPE B PER CALTRANS 96-1.02B). HOLE SHALL BE 2" DIAMETER PIPE CUT TO FIT FLUSH WITH CHANNEL FACE. (TYPICAL)

TYPICAL FULL LINING

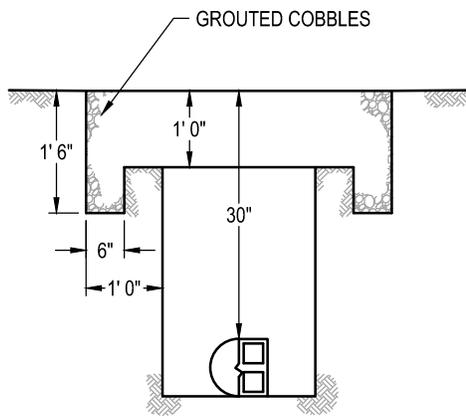
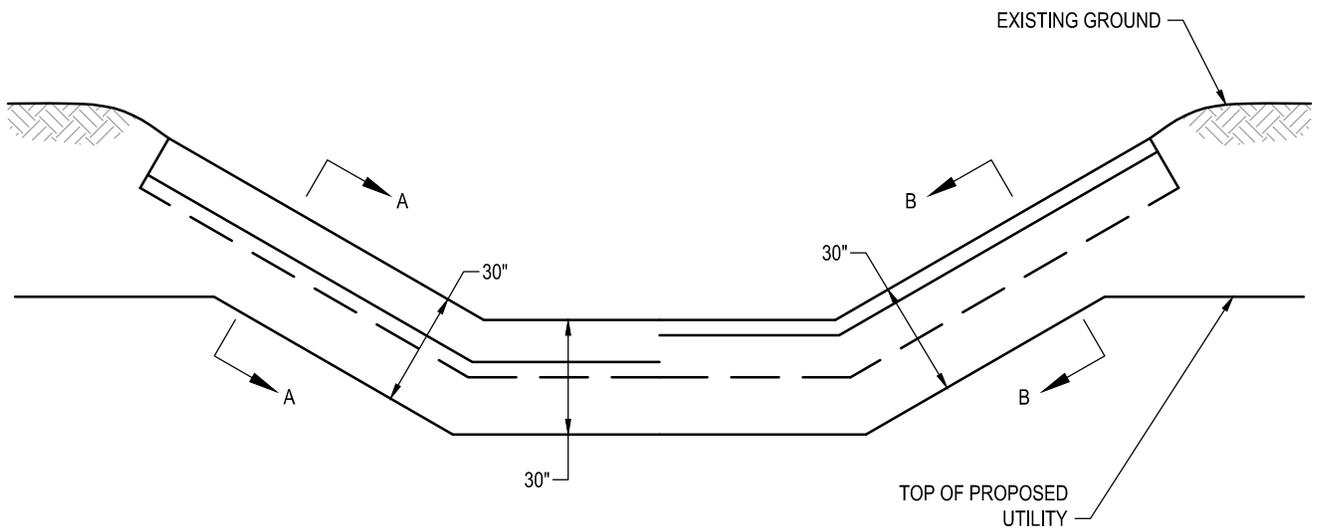


CUTOFF WALL DETAIL

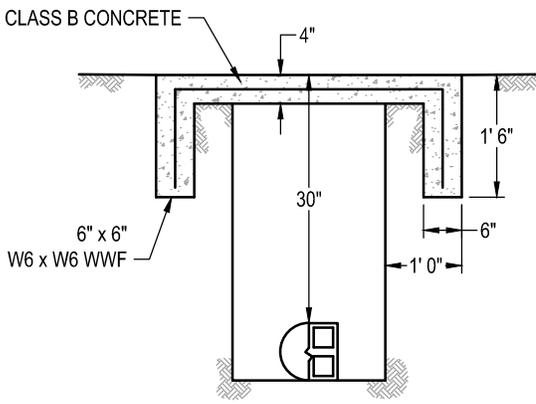
TO BE PLACED ALONG ENTIRE END OF LINED SECTION AT BEGINNING AND AT END OF LINING SEE DRAWING SD-36.1

WWF = WELDED WIRE FABRIC

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>LINED CHANNEL SECTION (SHEET 2 OF 2)</p>	<p>DRAWING NUMBER  SD-36.2</p>



SECTION A-A



SECTION B-B

WWF = WELDED WIRE FABRIC

NOTES:

1. ALL UTILITY CROSSINGS OF EXISTING STREAMS SHALL BE AT LEAST 30" BELOW EXISTING CHANNEL SIDES AND BOTTOMS. DEEPER PLACEMENT MAY BE REQUIRED IF FUTURE CHANNEL IMPROVEMENTS ARE ANTICIPATED.
2. THE CUT SHALL BE SEALED AS SHOWN WITH GROUTED COBBLES OR CLASS B CONCRETE TO A WIDTH OF 1 FOOT EACH SIDE OF THE UTILITY TRENCH. ALL NATURAL STREAMS, AS SHOWN ON THE NATURAL STREAMS PLAN, SHALL UTILIZED GROUTED COBBLES.
3. CONSTRUCTION IS TO CONFORM TO CALTRANS STANDARD CONSTRUCTION SPECIFICATIONS WITH CUT OFF WALLS CONFORMING TO STANDARD DRAWING SD-36.1.

COUNTY OF SUTTER - ENGINEERING

UTILITY STREAM CROSSING

APPROVED BY:

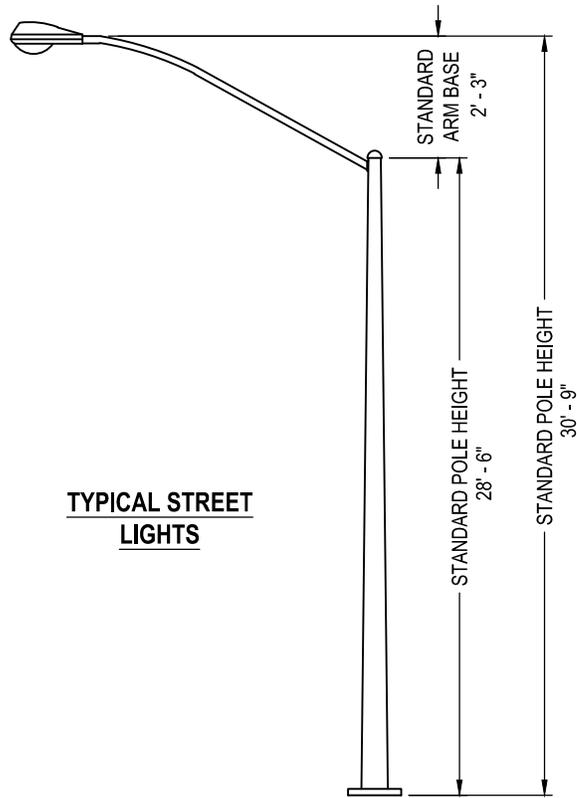
 DEVELOPMENT SERVICES DIRECTOR

4/3/2025
 DATE



DRAWING NUMBER

SD-37



TYPICAL STREET LIGHTS

SYMBOLS

<u>PROPOSED</u>	<u>EXISTING</u>	
	STREET LIGHT
	PULL BOX
	SERVICE POINT PULL BOX
	CONDUIT
	SERVICE ENCLOSURE
	U.G. UTILITY SERVICE
	TRANSFORMER
	WOOD POLE

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

NLPJ

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

**STREET LIGHTING
POLES AND SYMBOLS**



DRAWING NUMBER

SL-1

STREET CLASSIFICATION	RIGHT-OF-WAY WIDTH	STANDARD MOUNTING TYPE	AVERAGE MAINTAINED FOOTCANDLE	MAINTENANCE FACTOR
THOROUGHFARE	78'	30'-9"	0.56	0.65
ARTERIAL	68'	30'-9"	0.36	0.65
COLLECTOR	48'	30'-9"	0.26	0.65
RESIDENTIAL	<40'	25'-0"	0.13	0.70

NOTE:

LUMENS USED TO CALCULATE THE AVERAGE MAINTAINED FOOTCANDLE SHALL BE 80% OF INITIAL LUMEN VALUE RATED BY THE LAMP MANUFACTURER.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  <small>4/3/2025</small> DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>STREET LIGHTING ILLUMINATION CRITERIA</p>	<p> DRAWING NUMBER SL-2</p>

MINIMUM FOUNDATION DIMENSIONS *						
STREET LIGHT AREAS	STREET LIGHT SUB-TYPE (SERIES)	SQUARE			ROUND	
		L	W	D	R	D
CT	SERIES 'A'	30"	30"	5'	15"	6'-6"

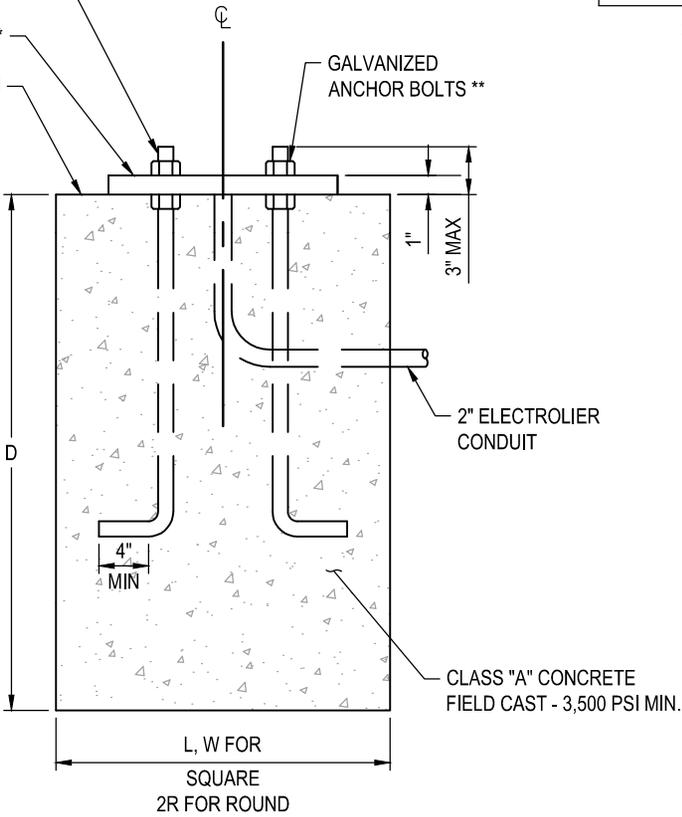
CT - COMMON TYPE

ELECTROLIER MUST BE GROUNDED BACK TO THE SERVICE POINT

BASE PLATE **

SIDEWALK FINISH (IF APPLICABLE)

GALVANIZED ANCHOR BOLTS **



ELEVATION

* STABLE SOILS ONLY. UNSTABLE SOIL MAY REQUIRE A DEEPER FOUNDATION AS DETERMINED BY THE DESIGN ENGINEER.

* IN LIEU OF USING THE STANDARD MINIMUM DIMENSIONS, A LICENSED PROFESSIONAL ENGINEER MAY SUBMIT A SITE-SPECIFIC (BY STREET LIGHT TYPE/LOCATION) FOUNDATION DESIGN FOR APPROVAL. FOUNDATION DESIGN MUST CONFORM TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."

** ANCHOR BOLT SIZES AND BASE PLATE SHALL BE PURSUANT TO THE POLE MANUFACTURER'S DESIGN REQUIREMENTS, WHICH SHALL BE IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

DATE

STREET LIGHT FOUNDATIONS



DRAWING NUMBER

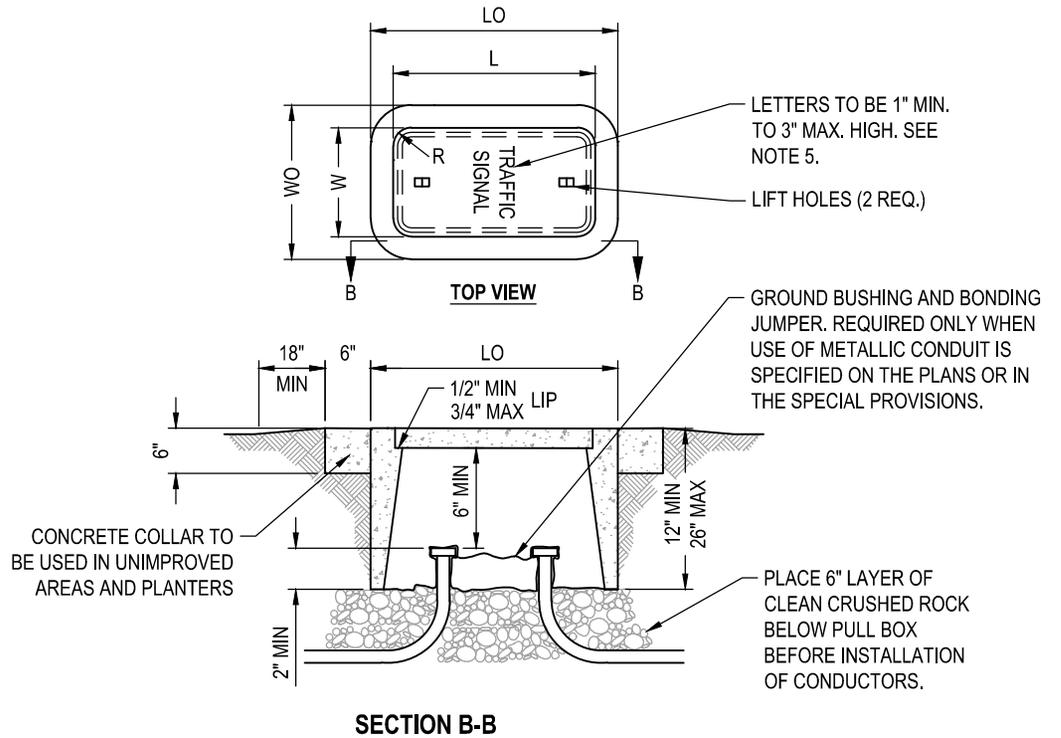
SL-3

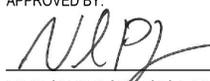
PULL BOX No.	REINFORCED CONCRETE BOX				COMPOSITE BOX		REINFORCED CONC. OR COMPOSITE COVER				
	MIN.** THICKNESS	MIN DEPTH BOX AND EXTENSION	LO	WO	MIN.** THICKNESS	MIN DEPTH BOX AND EXTENSION	L***	W***	R	EDGE THICKNESS	EDGE TAPER
3-1/2	1"	NO EXTENSION	20"	14"	5/16"	NO EXTENSION	15-3/8"	10-1/8"	1-1/8"	1-3/4"	1/8"
5	1"	22"	28"	18"	5/16"	20"	23-1/4"	13-3/4"	1-1/4"	2"	1/8"
5A	1"	22"	25-1/4"	15-3/4"	5/16"	20"	20-5/8"	10-1/2"	1-1/4"	2"	1/8"
6	1-1/2"	24"	36"	23"	3/8"	20"	30-5/8"	17-5/8"	1-1/4"	2"	1/8"

** EXCLUDING CONDUIT WEB *** TOP DIMENSION

NOTES:

- IN UNIMPROVED AREAS, THE TOP OF PULL BOXES SHALL BE PLACED 0.10 FOOT ABOVE THE SURROUNDING GRADE OR, WHEN ADJACENT TO A CURB, FLUSH WITH THE TOP OF THE CURB. THE SURROUNDING GRADE SHALL BE RAMPED UP TO MATCH THE TOP OF THE CONCRETE COLLAR. UNLESS OTHERWISE NOTED, PULL BOXES SHOWN IN THE VICINITY OF SIDEWALK SHALL BE PLACED ADJACENT TO THE BACK OF SIDEWALK, AND PULL BOXES SHOWN ADJACENT TO POLES SHALL BE PLACED ON THE SIDE OF THE FOUNDATION FACING AWAY FROM TRAFFIC.
- PLACEMENT OF PULL BOXES IN AREAS SUBJECT TO VEHICULAR TRAFFIC LOADS (INCLUDES TRAFFIC LANES, BIKE LANES, SHOULDERS, AND DRIVEWAYS) SHALL BE AVOIDED WHENEVER POSSIBLE. IF UNAVOIDABLE, THEN A TRAFFIC RATED PULL BOX WITH STEEL TRAFFIC COVER SHALL BE USED. SEE STANDARD DRAWING SL-5.
- PULL BOXES SHALL NOT BE PLACED WITHIN THE BOUNDARIES OF SIDEWALKS AND SIDEWALK RAMPS.
- PULL BOXES SHOULD NOT BE PLACED WITHIN PLANTER AREAS WHENEVER POSSIBLE.
- PULL BOX COVERS SHALL BE MARKED AS FOLLOWS:
 - "TRAFFIC SIGNAL" TRAFFIC SIGNAL CIRCUITS WITH OR WITHOUT STREET LIGHTING CIRCUITS.
 - "STREET LIGHTING" STREET LIGHTING CIRCUITS WHERE NO VOLTAGE IS ABOVE 600V.
 - "STREET LIGHTING-HIGH VOLTAGE" STREET LIGHTING CIRCUITS WHERE VOLTAGE IS ABOVE 600V.
 - "SERVICE" SERVICE CIRCUITS BETWEEN SERVICE POINT AND SERVICE DISCONNECT.
 - "SPRINKLER CONTROL" SPRINKLER CONTROL CIRCUITS, 50 VOLTS OR LESS.
 - "IRRIGATION" CIRCUIT FOR IRRIGATION CONTROLLER, 120 VOLTS OR MORE.
 - "RAMP METER" RAMP METER CIRCUITS.
 - "COUNT STATION" COUNT AND/OR SPEED MONITOR CIRCUITS.
 - "TELEPHONE" TELEPHONE SERVICE.
 - "TOS COMMUNICATIONS" TOS COMMUNICATIONS TRUNK LINE.
 - "TOS POWER" TOS POWER.
 - "TDC POWER" TELEPHONE DEMARCATION CABINET POWER.
 - "SIGNAL INTERCONNECT" TRAFFIC SIGNAL INTERCONNECT CIRCUIT.
- COVERS SHALL FIT FLUSH WITH THE TOP OF PULL BOXES. THERE SHALL BE 1/8" MAXIMUM CLEARANCE ALL AROUND BETWEEN COVERS AND PULL BOX OPENINGS.
- ALL COVERS AND BOXES SHALL BE INTERCHANGEABLE WITH CALIFORNIA STANDARD MALE AND FEMALE GAUGES. WHEN INTERCHANGED WITH STANDARD MALE OR FEMALE GAUGE, THE TOP SURFACES SHALL BE FLUSH WITHIN 1/8 INCH.
- THE TOP EDGES OF ALL CONCRETE COVER AND PULL BOXES SHALL HAVE A 1/4" MINIMUM RADIUS.
- STACKING OF PULL BOXES IS PERMITTED (TWO PULL BOXES MINIMUM).
- STEEL REINFORCING SHALL BE A REGULARLY USED IN THE STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025 DATE</p> <p>DEVELOPMENT SERVICES DIRECTOR</p>
<p>STANDARD PULL BOX</p>	<p>DRAWING NUMBER</p> <p>SL-4</p> 

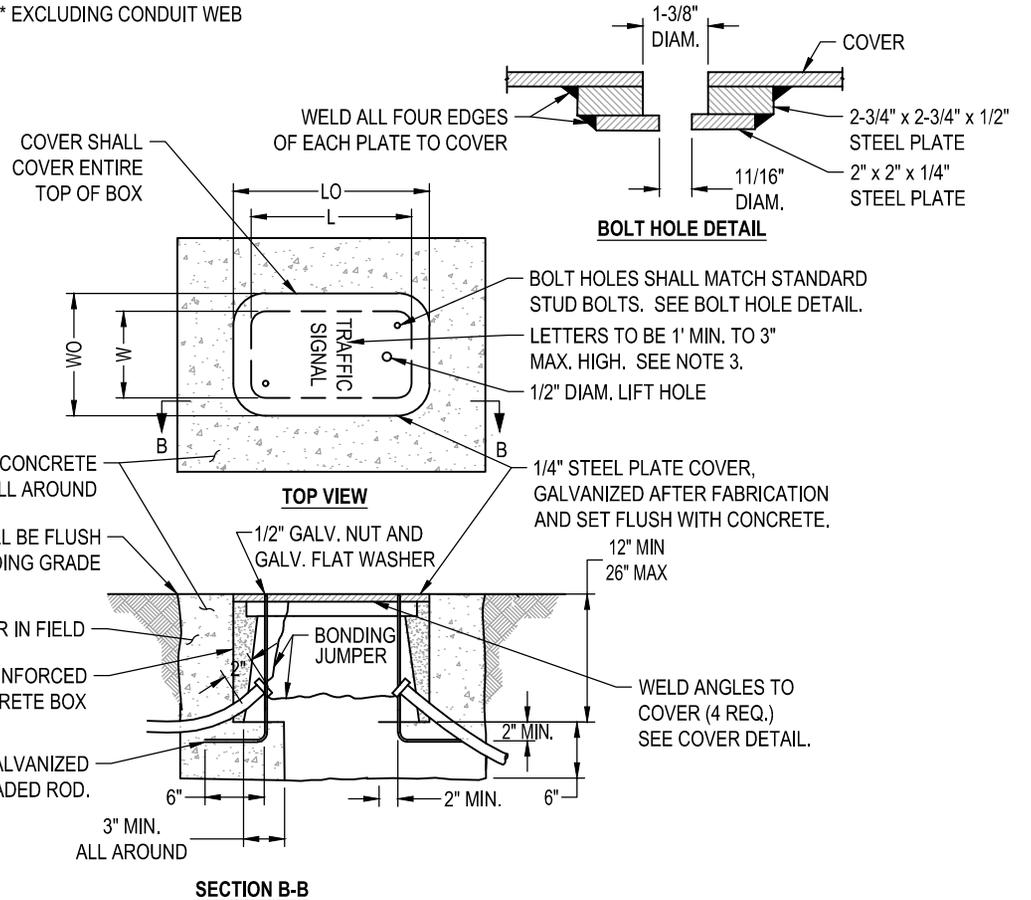
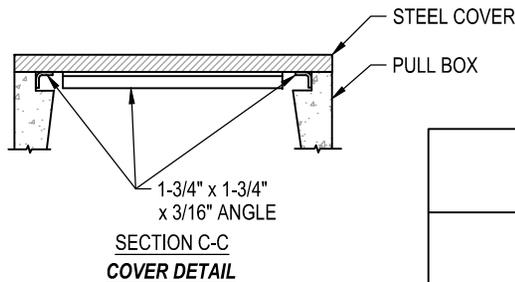
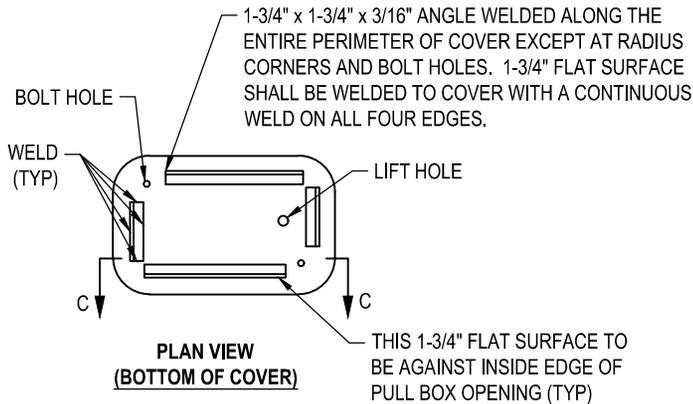
PULL BOXES SHALL BE PLACED BEHIND THE SIDEWALK OR IN THE PLANTER AREA WHENEVER POSSIBLE. TRAFFIC RATED BOXES AND COVERS SHALL BE USED IF A PULL BOX MUST BE INSTALLED IN THE SIDEWALK OR DRIVEWAY.

NOTES:

1. STEEL COVER SHALL HAVE EMBOSSED NON-SKID PATTERN.
2. STEEL REINFORCING SHALL BE AS REGULARLY USED IN THE STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
3. PULL BOX COVERS SHALL BE MARKED AS DESCRIBED IN NOTE 5 ON STANDARD DRAWING SL-4. MARKING SHALL BE APPLIED TO EACH COVER PRIOR TO GALVANIZING BY BEAD WELDING THE LETTERS ON THE COVERS. THE LETTERS SHALL BE RAISED AT LEAST 3/32 INCH.
4. BONDING JUMPER FOR COVER SHALL BE A MIN. OF 36" LONG. WHEN NON-METALLIC CONDUIT IS USED, THE BONDING JUMPER FOR THE COVER SHALL BE SPLICED TO THE BOND WIRE IN THE CONDUITS. WHEN THE USE OF METALLIC CONDUIT IS SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS, THE BONDING JUMPER FOR THE COVER SHALL BE CONNECTED TO THE CONDUIT GROUND BUSHING, AND THE CONDUITS SHALL BE BONDED TOGETHER WITH GROUND BUSHINGS AND A BONDING JUMPER.
5. CONDUITS SHALL ENTER AT BOTTOM OF PULL BOX AS SHOWN IN THE DRAWING.

PULL BOX No.	REINFORCED CONCRETE BOX					
	MIN.** THICKNESS	MIN. DEPTH BOX AND EXTENSION	LO	WO	L	W
3-1/2	1"	NO EXTENSION	20"	14"	15-1/2"±	10"±
5	1"	22"	28"	18"	23"±	13-1/2"±
5A	1"	22"	25-1/4"	15-3/4"	21"±	10-1/2"±

** EXCLUDING CONDUIT WEB



COUNTY OF SUTTER - ENGINEERING

TRAFFIC-RATED PULL BOX

APPROVED BY:

ULP

4/3/2025

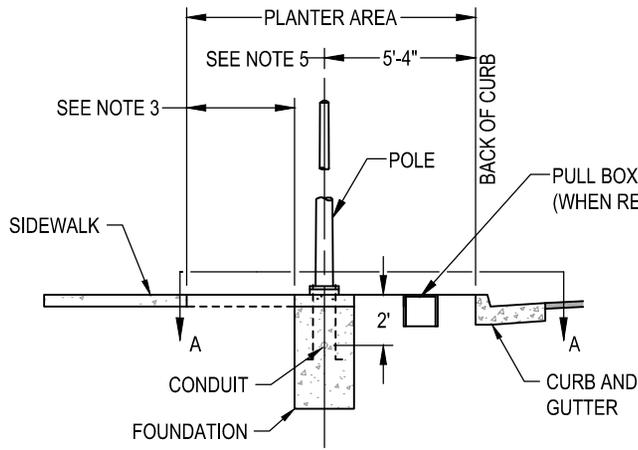
DEVELOPMENT SERVICES DIRECTOR

DATE

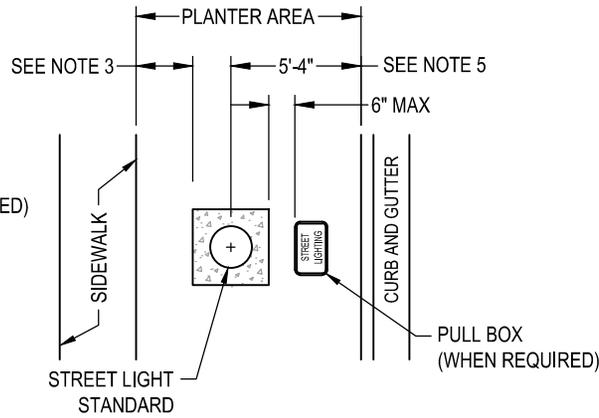


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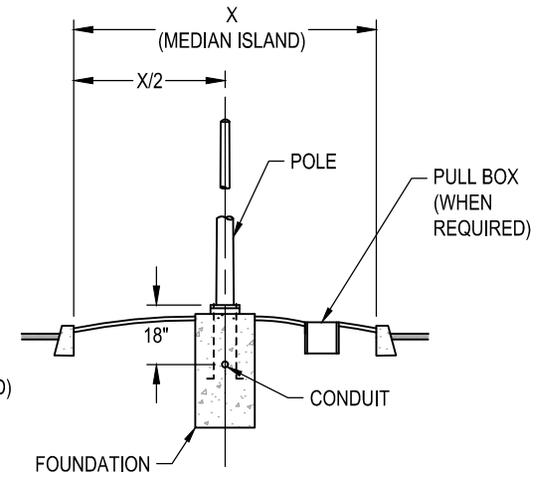
SL-5



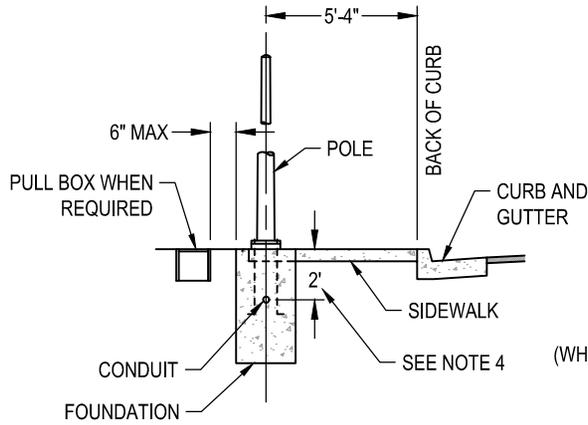
SIDEWALK WITH PLANTER AREA



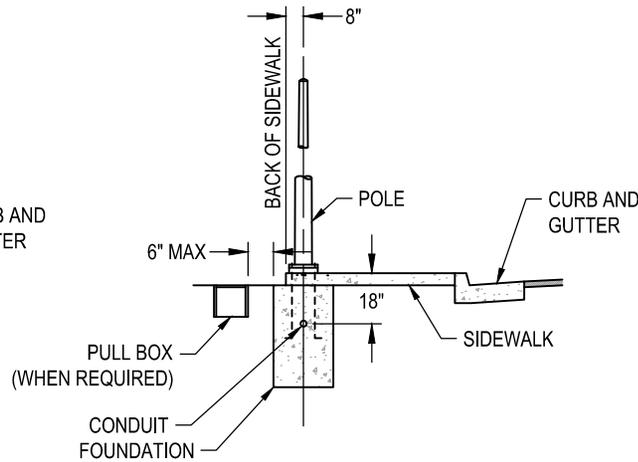
SECTION A-A



MEDIAN



5' TO 6' SIDEWALK



OVER 6' SIDEWALK

NOTES

1. BACKFILL FOR CONDUIT TRENCH LOCATED UNDER CURB, GUTTER & SIDEWALK AND IN UNIMPROVED AREAS SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. BACKFILL FOR CONDUIT TRENCH LOCATED IN PAVEMENT SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. LANDSCAPING IN THE AREA OF THE STREET LIGHT STANDARD TO MATCH BASE ELEVATION AND HAVE A MINIMUM OF 12" OF CLEARANCE FROM THE BASE.
3. IF THIS LENGTH IS 12" OR LESS, PLACE 3-1/2" THICK CONCRETE FROM STREET LIGHT BASE TO EDGE OF SIDEWALK. WIDTH TO MATCH CONCRETE AROUND STREET LIGHT FOUNDATION.
4. IF CONDUIT IS LOCATED BENEATH THE SIDEWALK, IT MAY BE PLACED AT 18" DEPTH INSTEAD OF 2".
5. IF THE PLANTER AREA IS LESS THAN 6' WIDE, THEN PLACE STREET LIGHT SO THAT THE BASE PLATE ALIGNS WITH THE EDGE OF SIDEWALK. TOP OF FOUNDATION TO MATCH SIDEWALK GRADE.
6. PULL BOXES SHALL NOT BE PLACED IN SIDEWALK. THEY SHALL BE PLACED IN PUE OR PLANTER AREA.

COUNTY OF SUTTER - ENGINEERING

BASE LOCATION FOR STREET LIGHT

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

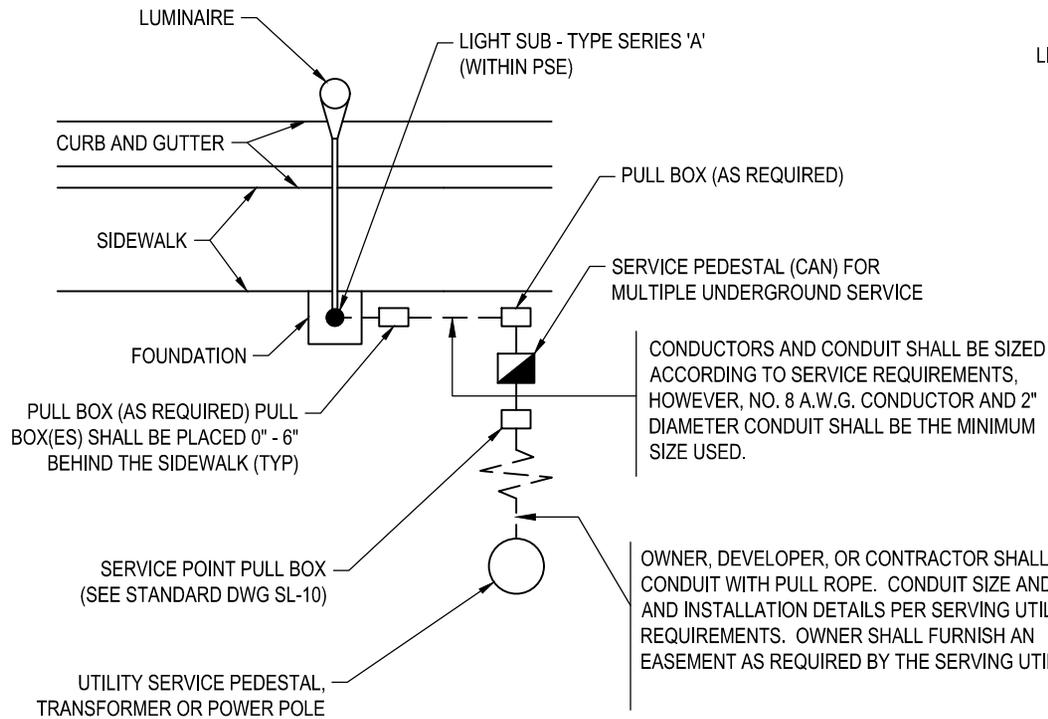
4/3/2025

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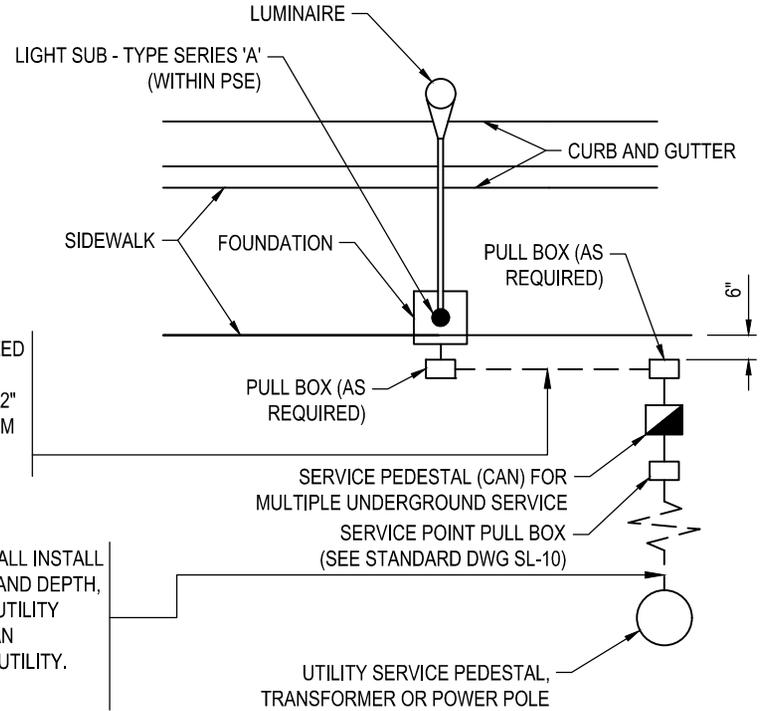


DRAWING NUMBER

SL-6



5 TO 6 FOOT SIDEWALK

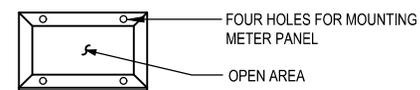
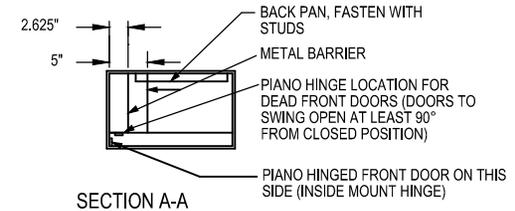
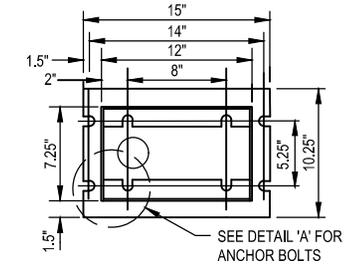
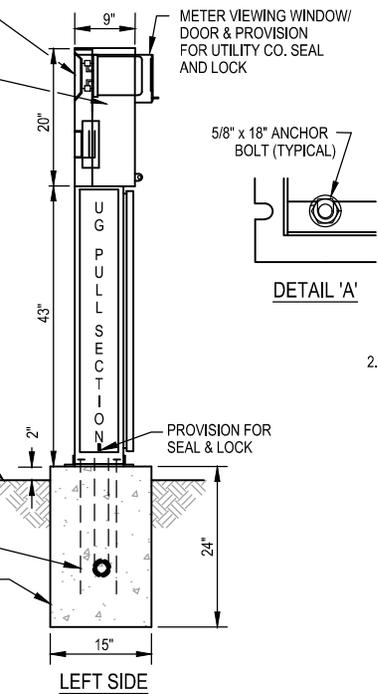
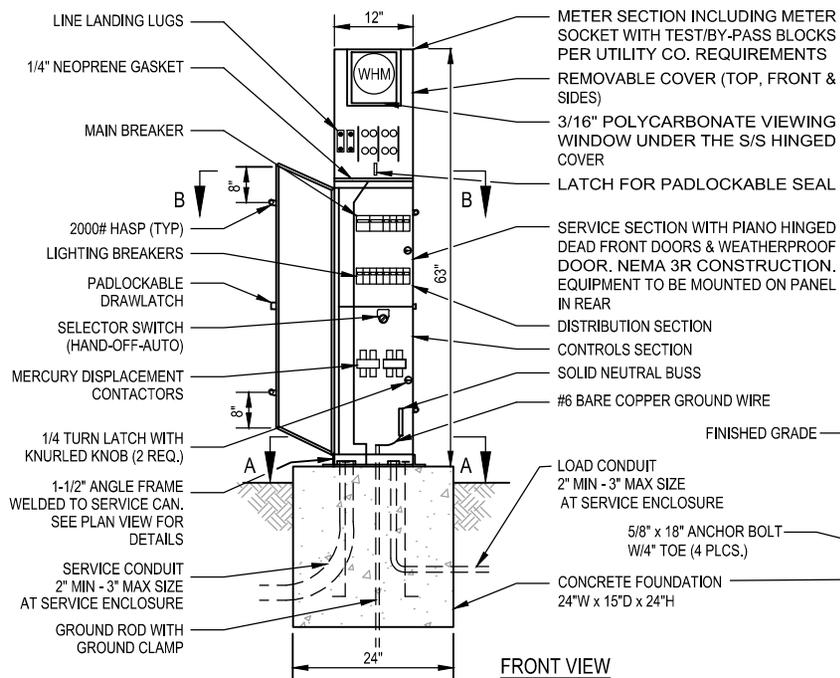


6 FOOT OR WIDER SIDEWALK

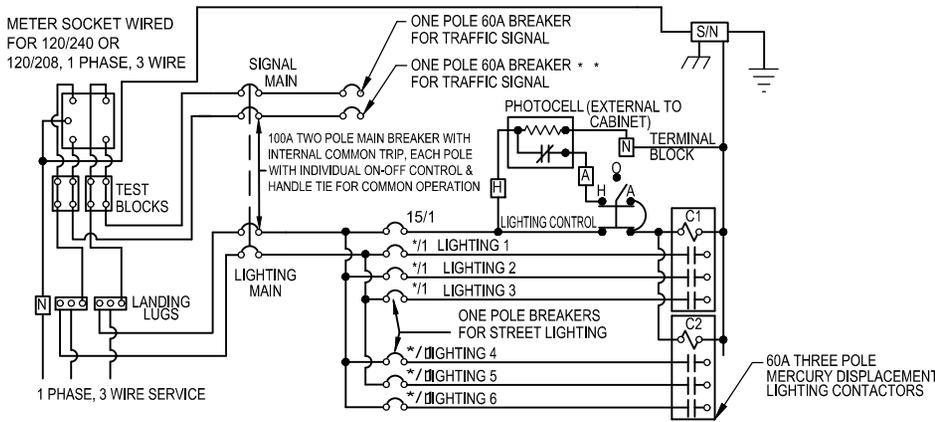
NOTES:

1. ALL FACILITIES SHALL BE WITHIN PUBLIC SERVICE EASEMENT (PSE).
2. SEE STANDARD DRAWING SL-10 FOR SERVICE POINT PULL BOX DETAILS AND WIRING DIAGRAM.
3. SEE STANDARD DRAWING SL-4 FOR PULL BOX DETAILS.
4. PHOTOCELLS SHALL BE INSTALLED ON THE TOP OF THE LUMINAIRE NEAREST THE SERVICE PEDESTAL OR SERVICE POINT.
5. THE SERVING UTILITY WILL INSTALL AND MAINTAIN CONDUCTORS FROM THEIR TRANSFORMER, OR POWER POLE TO THE SERVICE POINT PULL BOX.
6. STREET LIGHT CIRCUITS SHALL HAVE A DEDICATED SERVICE METER AND SHALL NOT BE WIRED TO BYPASS THE METER.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>UNDERGROUND SERVICE INSTALLATION</p>	<p>DRAWING NUMBER</p> <p>SL-7</p> 



- NOTES:**
- EXTERIOR SHALL BE 14 GAUGE #304D STAINLESS STEEL, INTERIOR DEAD FRONT PANEL AND BACK PAN SHALL BE 14 GAUGE STEEL, PAINTED WHITE. ENCLOSURE SHALL BE ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
 - CONSTRUCTION SHALL BE NEMA 3R AND 12, RAIN TIGHT AND DUST TIGHT.
 - ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
 - NUTS, BOLTS, AND SCREWS SHALL NOT BE USED ON THE OUTSIDE OF THE SERVICE ENCLOSURE. PHENOLIC NAMEPLATES SHALL BE USED TO IDENTIFY ALL OPERATOR CONTROLS.
 - CONTROL WIRING SHALL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
 - A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
 - SERVICE ENCLOSURE SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
 - SERVICE ENCLOSURE SHALL BE U.L. LISTED AS INDUSTRIAL CONTROL PANELS U.L. 508 FILE NO. E62062.
 - WIRING BETWEEN CIRCUIT BREAKER AND CONTACTOR SHALL BE #6 THWN OR THHN MINIMUM.
 - SERVICE ENCLOSURE SHALL BE OF TWO-PIECE CONSTRUCTION.
 - THE WIRING SCHEMATIC DIAGRAM AS SHOWN IS FOR A 2-WIRE STREET LIGHTING SYSTEM. IF THE SERVICE ENCLOSURE WILL BE USED FOR A 3-WIRE STREET LIGHTING SYSTEM, THEN THE LIGHTING BREAKERS SHALL CONSIST OF 2-POLE BREAKERS WITH INTERNAL COMMON TRIP, EACH POLE WITH INDIVIDUAL ON-OFF CONTROL AND HANDLE TIE FOR COMMON OPERATION. FOR EACH 2-POLE BREAKER, THE CIRCUIT LOAD SHALL BE EQUALLY DIVIDED ACROSS THE LIGHTING MAIN.
 - SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
 - DUAL METERS SHALL BE PROVIDED AND SHALL CONFORM TO CALTRANS STANDARD DRAWING ES-2F.
 - STREET LIGHT CIRCUITS SHALL HAVE A DEDICATED SERVICE METER AND SHALL NOT BE WIRED TO BYPASS THE METER.



METERED SERVICE WIRING SCHEMATIC DIAGRAM

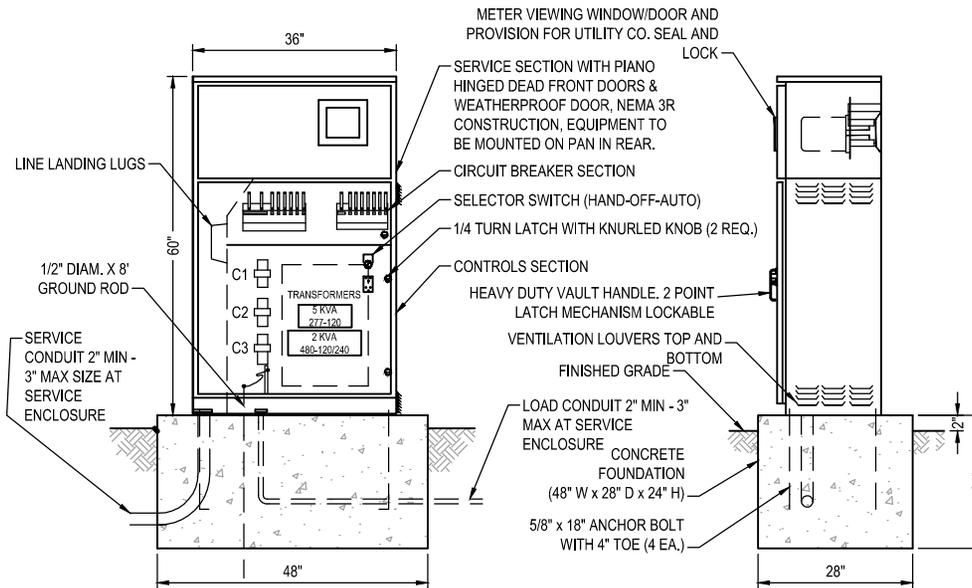
* * MODIFY TRAFFIC SIGNAL BREAKER TO PROVIDE A 15 AMP, 120V, 1P CIRCUIT BREAKER FOR IISNS. MODIFY WIRINGS TO USE 60 AMP, LIGHTING CONTACTOR FOR IISNS.

COUNTY OF SUTTER - ENGINEERING

METERED SERVICE PEDESTAL (Can) (120/208V, 120/240V)

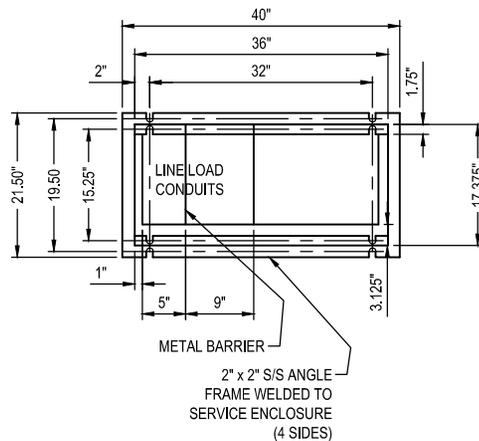
APPROVED BY: *ULP* 4/3/2025
DEVELOPMENT SERVICES DIRECTOR DATE

SUTTER COUNTY DRAWING NUMBER
SL-8

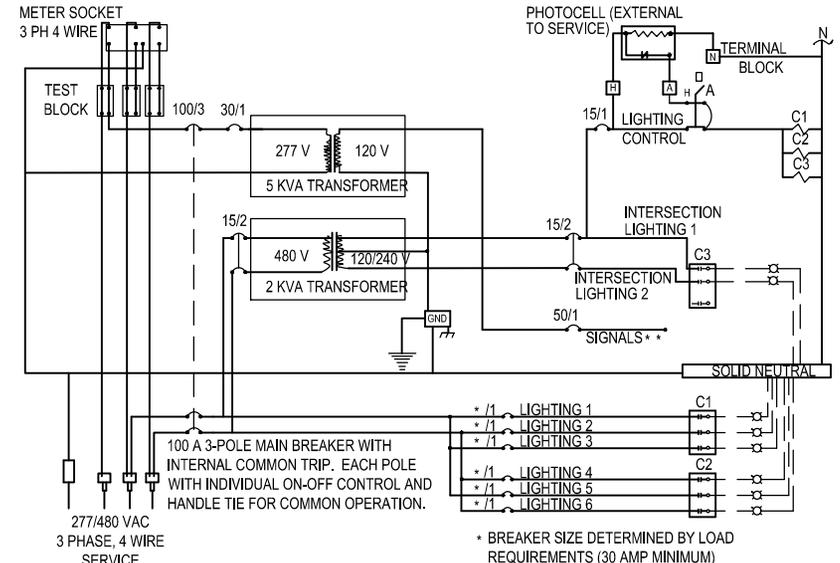


FRONT VIEW

RIGHT SIDE



BASE PLATE DETAIL



METERED SERVICE WIRING SCHEMATIC DIAGRAM

* BREAKER SIZE DETERMINED BY LOAD REQUIREMENTS (30 AMP MINIMUM)

** PROVIDE A 15 AMP, 120V, 1P CIRCUIT BREAKER FOR IISNS. MODIFY WIRINGS TO USE LIGHTING CONTACTOR FOR IISNS.

NOTES:

- EXTERIOR SHALL BE 14 GAUGE #304D STAINLESS STEEL. INTERIOR SHALL BE 14 GAUGE STEEL, PAINTED WHITE. ENCLOSURE SHALL BE ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
- CONSTRUCTION SHALL BE NEMA 3R AND 12, RAIN-TIGHT AND DUST-TIGHT.
- ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL.
- NUTS, BOLTS, AND SCREWS SHALL NOT BE USED ON THE OUTSIDE OF THE SERVICE ENCLOSURE.
- PHENOLIC NAMEPLATES SHALL BE USED TO IDENTIFY ALL OPERATION CONTROLS.
- CONTROL WIRING SHALL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
- A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
- SERVICE ENCLOSURE SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
- SERVICE ENCLOSURE SHALL BE U.L. LISTED AS INDUSTRIAL CONTROL PANELS U.L. 508 FILE NO. E62062.
- WIRING BETWEEN CIRCUIT BREAKER AND CONTACTOR SHALL BE #6 THWN OR THHN MINIMUM.
- SIZE OF TRANSFORMER FOR SIGNALS SHALL BE 5 KVA. SIZE OF TRANSFORMER FOR 120 V INTERSECTION SHALL BE 2 KVA.
- WHEN CHANGING VOLTAGE ON A RETROFIT PROJECT WHERE A NEW SERVICE ENCLOSURE WITH A STEP-DOWN TRANSFORMER IS REQUIRED, THE NEW SERVICE ENCLOSURE THE NEW SERVICE ENCLOSURE SHALL BE PLACED BETWEEN THE SERVICE POINT AND THE OLD SERVICE ENCLOSURE LOCATION WITHIN THE COUNTY R/W OR PUBLIC SERVICE EASMENT. VOLTAGE OUTPUT FROM THE NEW SERVICE ENCLOSURE MAY BE CONNECTED INTO THE EXISTING CONDUIT SYSTEM.
- THE WIRING SCHEMATIC DIAGRAM AS SHOWN IS FOR A 2-WIRE STREET LIGHTING SYSTEM. IF THE SERVICE ENCLOSURE WILL BE USED FOR A 3-WIRE STREET LIGHTING SYSTEM, THEN THE LIGHTING BREAKERS SHALL CONSIST OF 2-POLE BREAKERS WITH INTERNAL COMMON TRIP. EACH POLE WITH INDIVIDUAL ON-OFF CONTROL AND HANDLE TIE FOR COMMON OPERATION. FOR EACH 2-POLE BREAKER, THE CIRCUIT LOAD SHALL BE EQUALLY DIVIDED ACROSS THE LIGHTING MAIN.
- SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
- DUAL METERS SHALL BE PROVIDED AND SHALL CONFORM TO CALTRANS STANDARD DRAWING ES-2F.
- STREET LIGHT CIRCUITS SHALL HAVE A DEDICATED SERVICE METER AND SHALL NOT BE WIRED TO BYPASS THE METER.

COUNTY OF SUTTER - ENGINEERING

METERED SERVICE PEDESTAL (Can)
WITH STEP-DOWN TRANSFORMER
(277/480V TO 120/240V)

APPROVED BY:

ULP
DEVELOPMENT SERVICES DIRECTOR

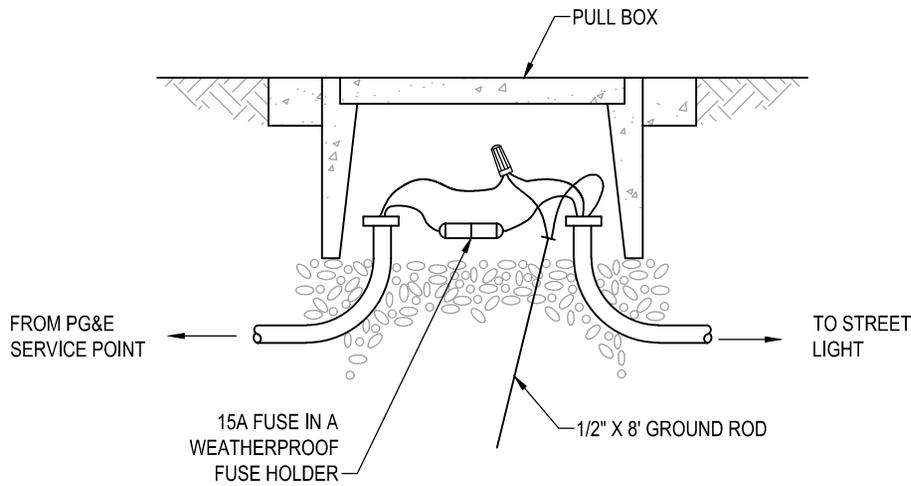
4/3/2025

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SL-9

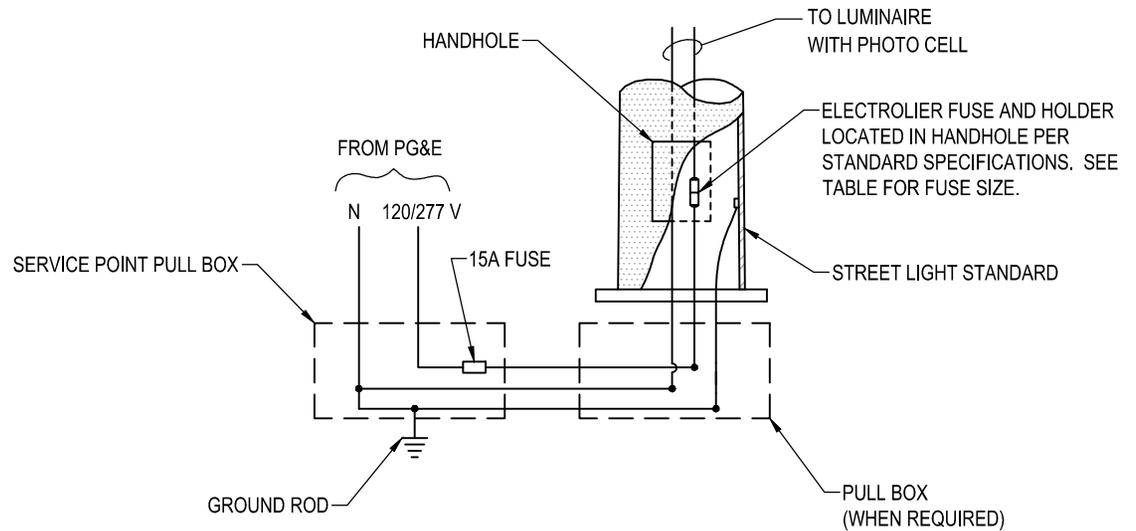


SERVICE POINT PULL BOX DETAILS

LAMP WATTAGE	ELECTROLIER FUSE SIZE
200 WATT OR LESS	6 AMP
250 WATT-400 WATT	10 AMP

NOTES:

1. FUSE SHALL BE A MIDGET FERRULE TYPE, RATED AT 600 VOLTS.
2. ATTACH GROUND CONDUCTOR TO THE ELECTROLIER.
3. ALL PULL BOXES SHALL HAVE PROVISIONS FOR LOCKING.



WIRING DIAGRAM

COUNTY OF SUTTER - ENGINEERING

IN-LINE FUSE REQUIREMENTS

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

SL-10

TYPICAL VOLTAGE DROP CALCULATION FOR 2 - WIRE SYSTEM

$$\text{VOLTAGE DROP (COPPER CONDUCTOR)} = \frac{D \times A \times N \times 22}{\text{CIRCULAR MILS}}$$

D = Length of section, in feet.

A = Line operating amperes drawn by one light.

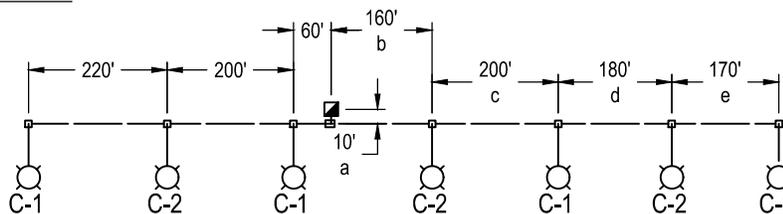
N = Number of lights in the circuit beyond the section.

WIRE SIZE (AWG)	AREA (CIRCULAR MILS)
14	4,110
12	6,530
10	10,380
8	16,510
6	26,250
4	41,740

Driver Maximum Input Amps for Light Emitting Diode (LED) Luminaries (At 115 Volts)

All Fixtures 1.25 Amps

TYPICAL MULTIPLE STREET LIGHTING SYSTEM



EXAMPLE CALCULATION:

FIND TOTAL VOLTAGE DROP IN CIRCUIT #1:
(115 volt system)

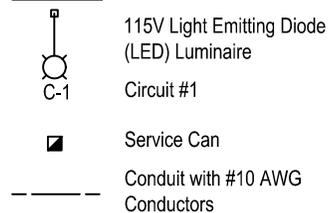
NOTE:

Dimension "a" is the distance between the service can and the adjacent load pull box. Use "a"=10' for standard installations where the load pull box is immediately adjacent to the service can.

Voltage drop calculations

$$\begin{aligned} \text{Section a} &= \frac{10 (1.25 \times 4) (22)}{10,380} = 0.11 \\ \text{Section b + c} &= \frac{360 (1.25 \times 2) (22)}{10,380} = 1.91 \\ \text{Section d + e} &= \frac{350 (1.25 \times 1) (22)}{10,380} = 0.93 \\ \text{TOTAL VOLTAGE DROP} &= 2.95 \end{aligned}$$

LEGEND



NOTES:

- Design must be based on a two (2) wire system, even though three (3) wires (with a single common wire) are actually used.
- Maximum voltage drop allowed in 115 volt system = 8.05 volts.

COUNTY OF SUTTER - ENGINEERING

**2 - WIRE STREET LIGHT SYSTEM
WIRE SIZE AND VOLTAGE DROP
CALCULATION**

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

SL-11

TYPICAL VOLTAGE DROP CALCULATION FOR 3 - WIRE SYSTEM

$$\text{VOLTAGE DROP (COPPER CONDUCTOR)} = \frac{D \times A \times N \times 11}{\text{CIRCULAR MILS}}$$

D = Length of section, in feet.

A = Line operating amperes drawn by one light.

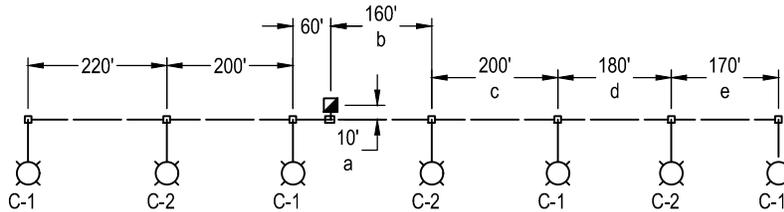
N = Number of lights in the circuit beyond the section.

WIRE SIZE (AWG)	AREA (Circular Mils)
14	4,110
12	6,530
10	10,380
8	16,510
6	26,250
4	41,740

Driver Maximum Input Amps for Light Emitting Diode (LED) Luminaires (At 115 Volts)

All Fixtures 1.25 Amps

TYPICAL MULTIPLE STREET LIGHTING SYSTEM



EXAMPLE CALCULATION:

FIND TOTAL VOLTAGE DROP IN CIRCUIT #1:
(115 volt system)

NOTE:

Dimension "a" is the distance between the service can and the adjacent load pull box. Use "a"=10' for standard installations where the load pull box is immediately adjacent to the service can.

Voltage drop calculations

$$\begin{aligned} \text{Section a} &= \frac{10 (1.25 \times 4) (11)}{6,530} = 0.08 \\ \text{Section b + c} &= \frac{360 (1.25 \times 2) (11)}{6,530} = 1.52 \\ \text{Section d + e} &= \frac{350 (1.25 \times 1) (11)}{6,530} = 0.74 \\ \hline \text{TOTAL VOLTAGE DROP} &= 2.34 \end{aligned}$$

LEGEND

-  115V Light Emitting Diode (LED) Luminaire
-  Circuit #1
-  Service Can
-  Conduit with #12 AWG Conductors

NOTE:

Maximum voltage drop allowed in 115 volt system = 6.90 volts.

COUNTY OF SUTTER - ENGINEERING

**3 - WIRE STREET LIGHT SYSTEM
WIRE SIZE AND VOLTAGE DROP
CALCULATION**

APPROVED BY:



DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

SL-12

CONDUIT SIZING

CONDUCTOR	EQUIVALENT NUMBER OF #14 AWG CONDUCTORS FOR USE IN CONDUIT SIZING
#12 CONDUCTOR	1.2
#10 CONDUCTOR	1.5
#8 CONDUCTOR	2.3
#6 CONDUCTOR	3
#4 CONDUCTOR	4
#2 CONDUCTOR	5.3
#0 CONDUCTOR	11.5
INTERCONNECT CABLE	18
DETECTOR LEAD-IN CABLE	2.5
EMERGENCY VEHICLE DETECTOR CABLE	2

CONDUIT SIZE	2"	2.5"	3"	3.5"	4"
MAXIMUM NUMBER OF #14 AWG CONDUCTORS	31	44	69	91	113

NOTE: MINIMUM SIZE FOR NEW CONDUITS IS 2.0".

CIRCUIT BREAKER SIZING

CONDUCTOR SIZE (AWG)	MAXIMUM CIRCUIT BREAKER AMPERAGE
#2	100
#4	80
#6	50
#8	40
#10	30

SERVICE WIRE MAXIMUM LENGTHS FOR TRAFFIC SIGNALS

WIRE SIZE	LENGTH
#0	567'
#2	360'
#4	224'

NOTE:

THE BREAKER SIZE SHALL BE DETERMINED BY THE LOAD REQUIREMENTS. MINIMUM BREAKER SIZE IS 30 AMPS.

COUNTY OF SUTTER - ENGINEERING

CONDUIT, SERVICE WIRE AND BREAKER SIZING

APPROVED BY:



DEVELOPMENT SERVICES DIRECTOR

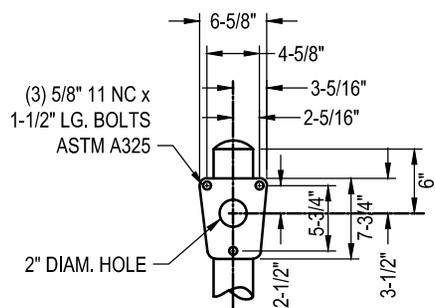
4/3/2025

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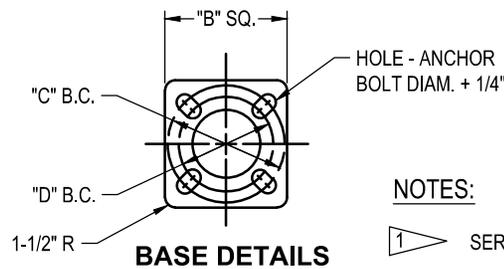
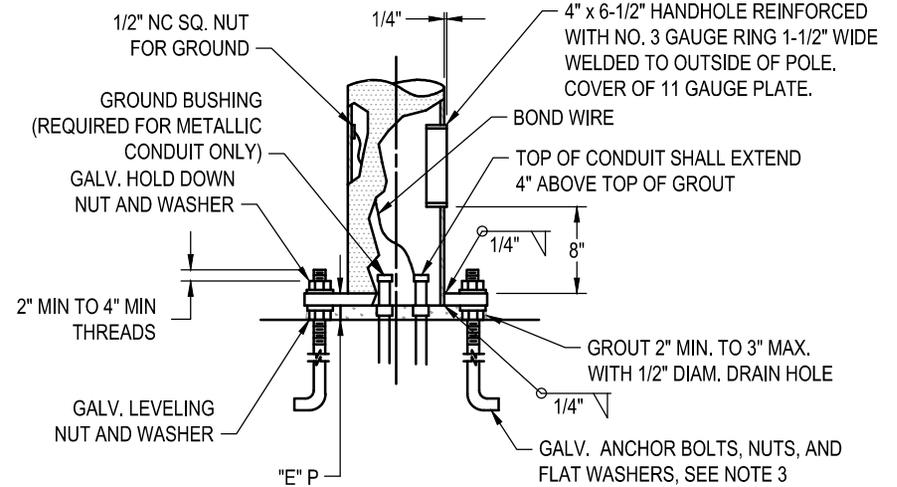
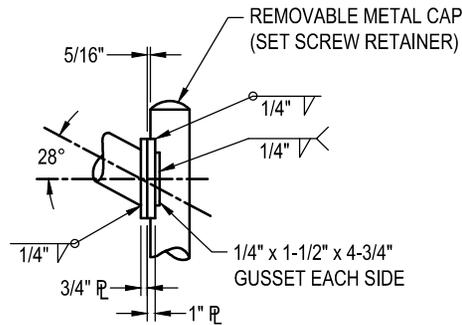


DRAWING NUMBER

SL-13



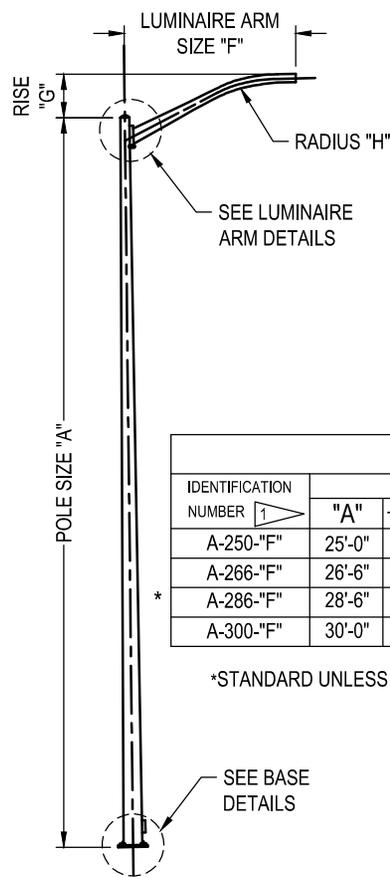
LUMINAIRE ARM DETAILS



BASE DETAILS

NOTES:

- SERIES 'A' NUMBERING PROCEDURE
 POLE SIZE 'A' → A-286-8 → LUMINAIRE ARM SIZE 'F'
 (STANDARD UNLESS OTHERWISE SPECIFIED)
- STANDARD SHALL BE INSTALLED SO HANDHOLE FACES THE STREET.
- ANCHOR BOLT SIZES SHALL BE PURSUANT TO THE POLE MANUFACTURER'S DESIGN REQUIREMENTS, WHICH SHALL BE IN ACCORDANCE WITH AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."



FOUNDATION DIMENSIONS		
	SQUARE	ROUND
SERIES 'A'	2'6" x 2'6" x 5'	2'6" x 6'6"

LUMINAIRE ARM DATA						
"F"	END OD	BASE OD	GA	"G"	"H"	
6'-0"	2-3/8"	3-3/8"	10	1'-6"	7'-5"	
8'-0"	2-3/8"	3-11/16"	10	2'-3"	7'-5"	
10'-0"	2-3/8"	3-7/8"	10	2'-6"	13'-3"	
12'-0"	2-3/8"	4-5/16"	10	3'-9"	13'-3"	
15'-0"	2-3/8"	4-3/4"	10	4'-3"	13'-3"	
18'-0"	2-3/8"	4-3/4"	10	5'-3"	13'-3"	

'A' SERIES									
IDENTIFICATION NUMBER	POLE DATA				BASE PLATE DATA				ANCHOR BOLTS
	"A"	TOP OD	BASE OD	GA	"B"	"C"	"D"	"E"	
A-250-"F"	25'-0"	3-7/8"	7-5/16"	11	12"	11-1/2"	11"	1"	SEE NOTE 3
A-266-"F"	26'-6"	3-7/8"	7-1/2"	11	12"	11-1/2"	11"	1"	
A-286-"F"	28'-6"	3-7/8"	7-3/4"	11	12"	11-1/2"	11"	1"	
A-300-"F"	30'-0"	3-7/8"	8"	11	12"	11-1/2"	11"	1"	

*STANDARD UNLESS OTHERWISE SPECIFIED

COUNTY OF SUTTER - ENGINEERING

COMMON TYPE ELECTROLIER

APPROVED BY:

ULP
DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

SL-14

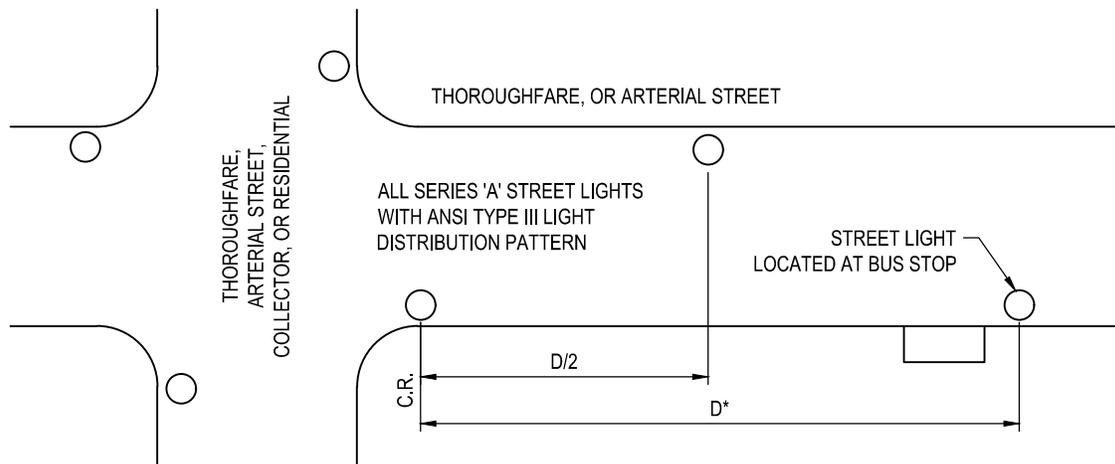
STREET CLASSIFICATION	RIGHT - OF - WAY WIDTH	STANDARD MOUNTING HEIGHT	MAXIMUM SPACING* (ONE SIDE ONLY)
THOROUGHFARE	78'	30'-9"	220'
ARTERIAL	68'	30'-9"	220'
			MAXIMUM SPACING* (TWO-SIDES)
COLLECTOR	48'	30'-9"	220'
RESIDENTIAL	<40'	27'-3"	220'

NOTES:

1. WATTAGE AND MODEL NUMBER FOR LIGHT EMITTING DIODE (LED) LAMP SHALL BE SPECIFIED ON THE PLANS. EQUIPMENT SHALL CONFORM TO SUTTER COUNTY APPROVED EQUIPMENT LIST.
2. ILLUMINATION SHALL CONFORM TO STANDARD DRAWING SL-2.
3. SEE SECTION 5-8D, "SPACING," FOR DEFINITIONS OF ONE-SIDE AND TWO-SIDE SPACING.
- * 4. MAXIMUM SPACING MAY BE ADJUSTED AS LONG AS ILLUMINATION CRITERIA ARE MET WITH APPROVAL OF THE DIRECTOR.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p>
<p>COMMON TYPE STREET LIGHT POLE SPACING GUIDE</p>	<p>DEVELOPMENT SERVICES DIRECTOR DATE</p> <p> DRAWING NUMBER</p> <p>SL-15</p>

STREET LIGHT PLACEMENT
ON THOROUGHFARE, AND ARTERIAL STREETS
(78' AND 68' STREETS)



*SEE STANDARD DRAWING SL-15
D = 220"

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

NLP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

DATE

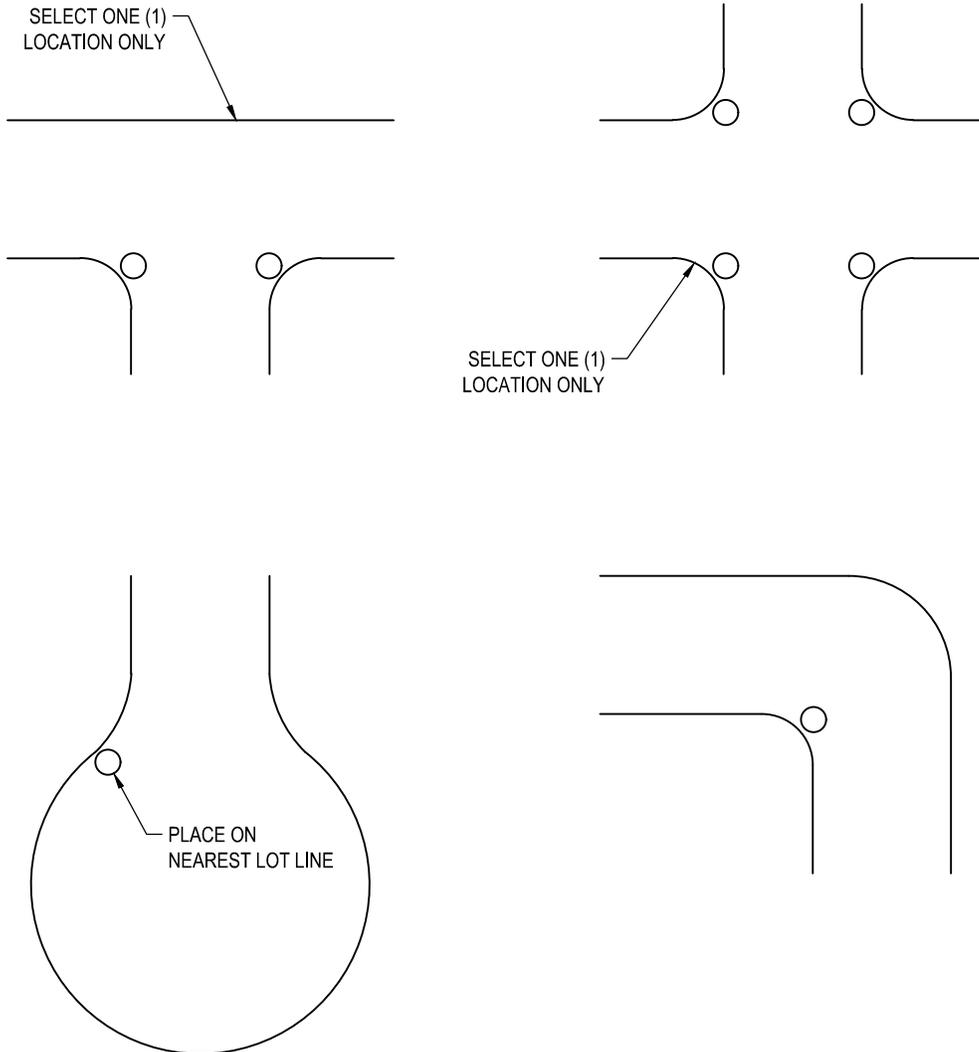
**COMMON TYPE TYPICAL LOCATIONS
ARTERIAL STREETS**



DRAWING NUMBER

SL-16

STREET LIGHT PLACEMENT ON COLLECTOR, AND RESIDENTIAL STREETS



NOTE:

IN ACCORDANCE WITH STREET CLASSIFICATIONS, ALL ARE STREET LIGHTS WITH ANSI TYPE III LIGHT DISTRIBUTIONS PATTERN. SEE STANDARD DRAWINGS SL-2 AND SL-15

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

NLP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

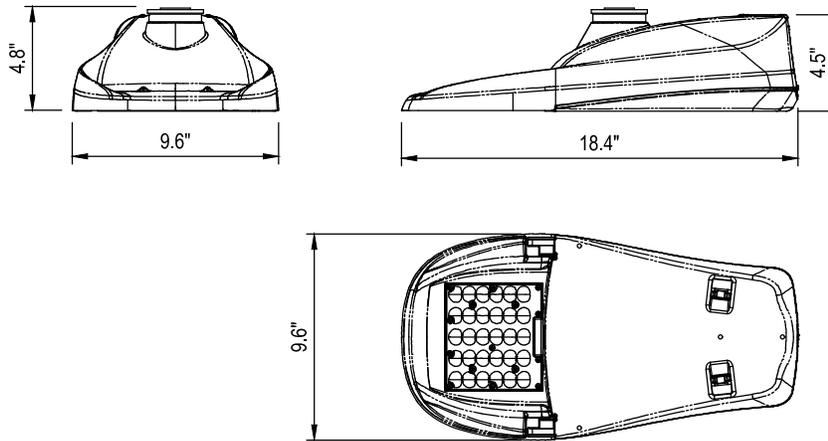
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**COMMON TYPE TYPICAL LOCATIONS
COLLECTOR AND RESIDENTIAL STREETS**



DRAWING NUMBER

SL-17



COBRA HEAD LUMINAIRES

LUMINAIRE DATA					
NO. OF LEDs	VOLTS	SYSTEM WATTAGE	DRIVE CURRENT (mA)	NOMINAL COLOR TEMPERATURE	ACCEPTABLE PRODUCTS
30	120-277	17	270	2,700 K	LEOTEK GreenCobra Jr. (GRAY) #GCJ1-30J-MV-27-2R-GY-025-FOC-PCR7-WL-RWG (RESIDENTIAL AREAS ONLY)
					LEOTEK GreenCobra Jr. (GRAY) #GCJ1-30J-MV-27-2R-GY-025-FOC-PCR7-MSL3-CODPATH-RWG (PARK/PATHWAY LIGHTS)
30	120-277	37, 49, 64	590, 780, 900	4,000 K	LEOTEK GreenCobra Jr. (GRAY) #GCJ2-30J-MV-40K-2R-GY-060-FOC-WL-PCR7-RWG (37 WATTS. DELIVERS 5883 LUMENS) (ARTERIALS)
					LEOTEK GreenCobra Jr. (GRAY) #GCJ3-30J-MV-40K-2R-GY-075-FOC-WL-PCR7-RWG (49 WATTS, 7256 LUMENS) (THOROUGHFARES)
					LEOTEK GreenCobra Jr. (GRAY) #GCJ3-30J-MV-40K-2R-GY-090-FOC-WL-PCR7-RWG (64 WATTS, 9216 LUMENS) (CROSSWALK AREAS ONLY)

NOTES:

1. FIXTURES MUST OPERATE AT THE MA RATING SHOWN IN THE TABLE ABOVE AND HAVE A MINIMUM 7 PIN CONFIGURATION.
2. PARK & PATH LIGHTS SHALL HAVE MOTION SENSOR AND PROGRAMMABLE ADAPTIVE LIGHTING CONTROLS.
3. PARK & PATH LIGHTS SHALL HAVE LOW SETTING MUST BE LESS THAN 1 W AND HIGH OF 2 W.
4. HOUSE SIDE SHIELDS ARE REQUIRED.
5. CUL-DE-SAC SIDE SHIELDS REQUIRED IN CUL-DE-SACS.

COUNTY OF SUTTER - ENGINEERING

**STREET LIGHT, PARK & PATH LIGHT
LUMINAIRES**

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

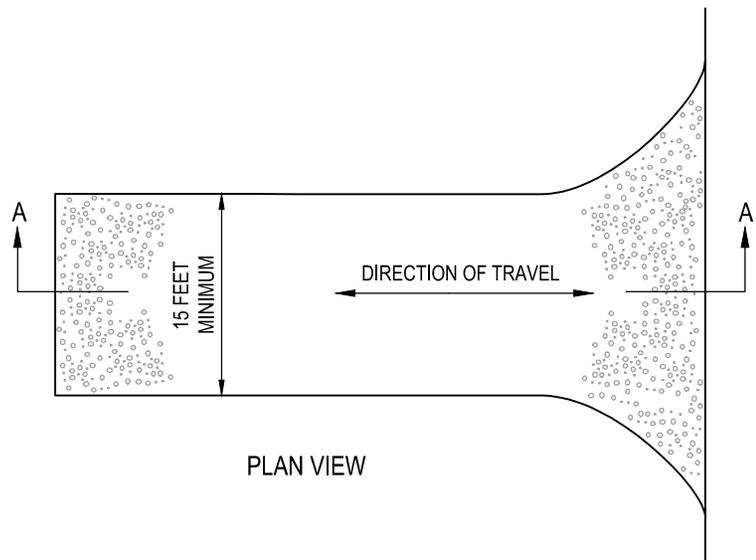
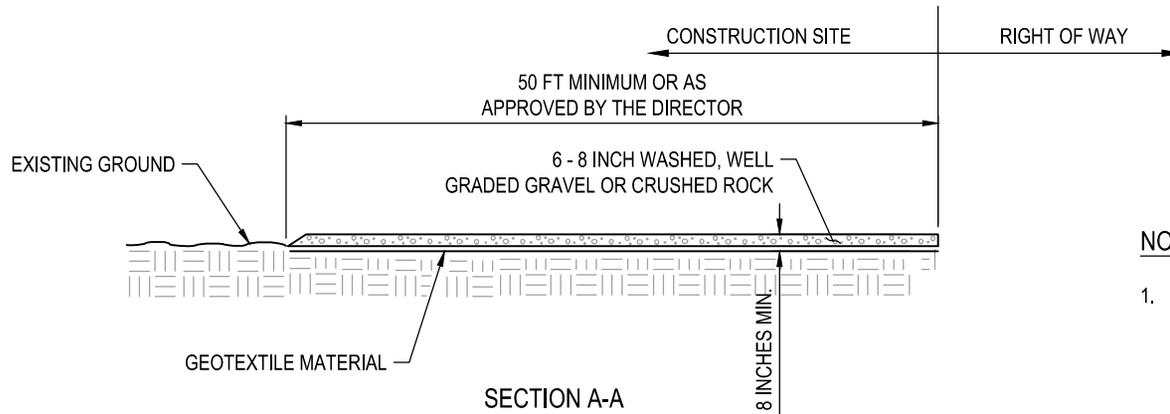
4/3/2025

DATE



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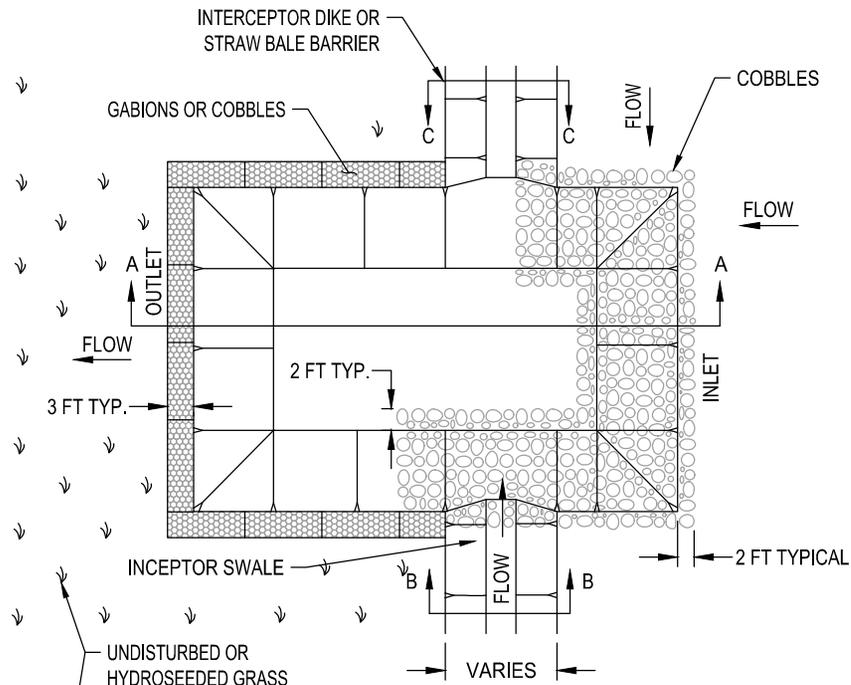
SL-18



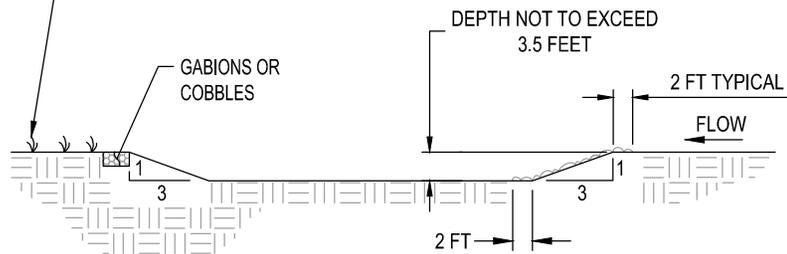
NOTES

1. STABILIZED CONSTRUCTION SITE ACCESS SHALL BE CONSTRUCTED OF 6 - 8 INCH WASHED, WELL GRADED GRAVEL OR CRUSHED ROCK. MATERIAL SHALL BE PLACED TO A MINIMUM THICKNESS OF 8 INCHES. ROUND ROCK (RIVER ROCK) NOT ALLOWED.
2. LENGTH OF ENTRANCE SHALL BE A MINIMUM OF 50 FEET. WIDTH SHALL BE A MINIMUM OF 15 FEET OR GREATER IF NECESSARY TO COVER ALL VEHICULAR INGRESS AND EGRESS. PROVIDE AMPLE TURNING RADII.
3. THE ENTRANCE SHALL BE KEPT IN GOOD CONDITION BY OCCASIONAL TOP DRESSING WITH MATERIAL AS SPECIFIED IN NOTE 1.
4. ACCESS SHALL BE INSPECTED WEEKLY DURING PERIODS OF HEAVY USAGE, MONTHLY DURING NORMAL USAGE, AND AFTER EACH RAINFALL, WITH MAINTENANCE PROVIDED AS NECESSARY. PERIODIC TOP DRESSING SHALL BE DONE AS NEEDED.

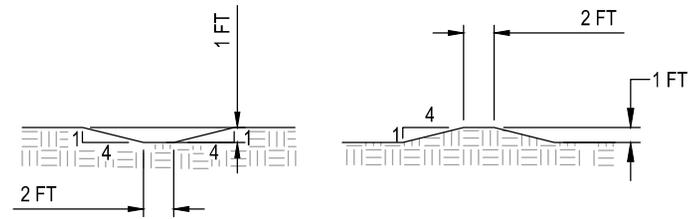
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p>4/3/2025 DATE</p>
<p>STABILIZED CONSTRUCTION SITE ACCESS</p>	<p>DEVELOPMENT SERVICES DIRECTOR</p> <p>SUTTER COUNTY DRAWING NUMBER SQ-1</p>



PLAN VIEW



SECTION A-A



SECTION B-B

SECTION C-C

NOTES:

1. DIMENSIONS OF SEDIMENT TRAPS, DIKES, AND SWALES SHALL BE APPROVED BY THE DIRECTOR.
2. INTERCEPTION DIKES AND SWALES SHALL BE CONSTRUCTED TO DRAIN SURFACE RUNOFF INTO SEDIMENT TRAPS.
3. TRAPS SHALL BE EXCAVATED WITH APPROPRIATE EQUIPMENT, TAKING CARE NOT TO DISTURB VEGETATION OR SOIL AT OUTLET CREST. SIDE SLOPES SHALL BE 1V:3H OR FLATTER. MAXIMUM TRAP DEPTH SHALL BE 3.5 FEET.
4. COBBLES CONFORMING TO SUTTER COUNTY SPECIFICATIONS SHALL BE PLACED ON THE TOPS, SLOPES, AND BOTTOMS OF THE INLET SIDES. COBBLES SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE TOP AND TOE OF SLOPES.
5. PERIMETER OF SEDIMENT TRAPS SHALL BE STABILIZED WITH GABIONS OR COBBLES AND HYDROSEEDED 10 FEET BEYOND EDGE OF EXCAVATION IF EXISTING VEGETATION IS THIN, DISTURBED OR NONEXISTENT.
6. THE CONTRACTOR SHALL INSPECT SEDIMENT TRAPS WEEKLY AND AFTER EACH RAINFALL AND CLEAN AND REPAIR AS NECESSARY. SEDIMENT SHALL BE REMOVED FROM THE BOTTOM OF THE TRAP WHEN 1 FOOT DEEP OR LESS.

COUNTY OF SUTTER - ENGINEERING

**SEDIMENT TRAP
STABILIZED OUTLET**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

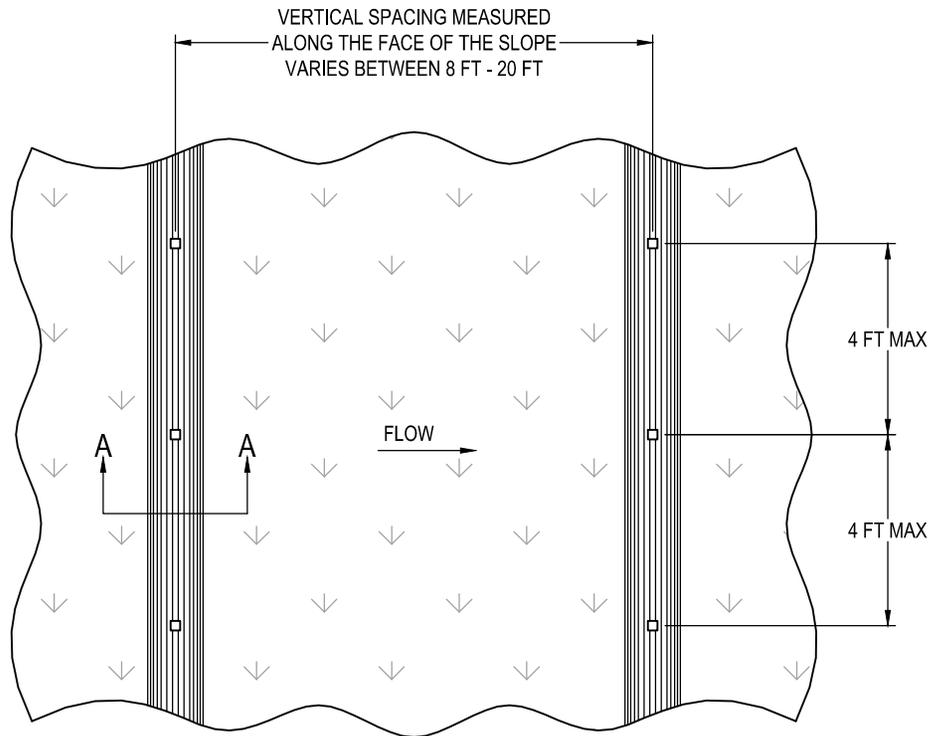
4/3/2025

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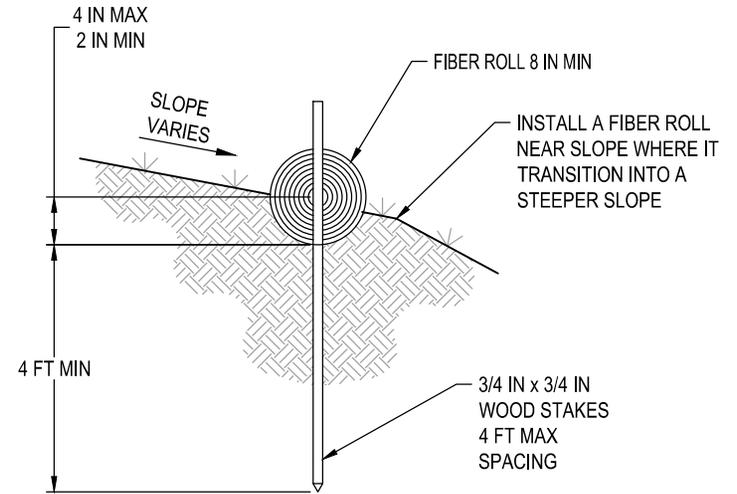


DRAWING NUMBER

SQ-2



TYPICAL FIBER ROLL INSTALLATION

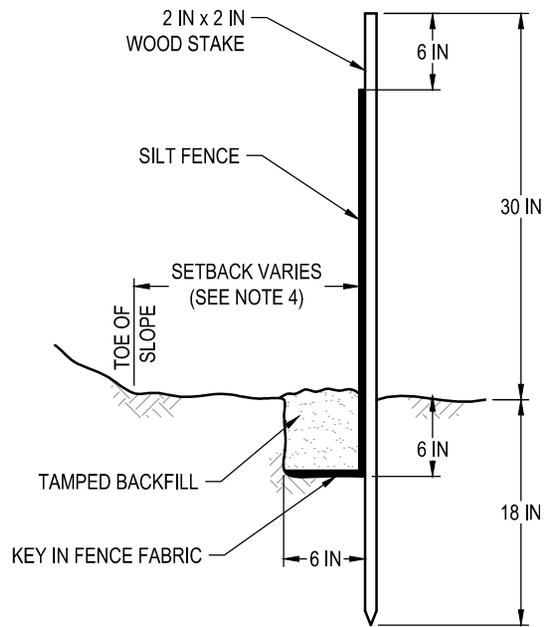


SECTION A-A

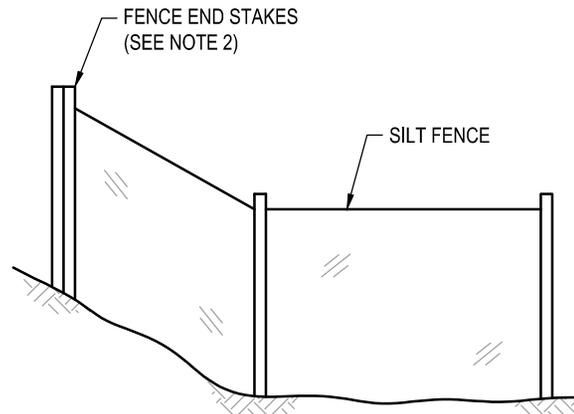
NOTES:

1. INSTALL FIBER ROLL IN A ROW ALONG A LEVEL CONTOUR.
2. AT ENDS OF A ROW TURN THE LAST TWO FEET UP SLOPE SLIGHTLY.
3. FIBER ROLLS SHALL BE BUTTED TIGHTLY AT THE JOINTS.
4. DO NOT OVERLAP JOINTS.

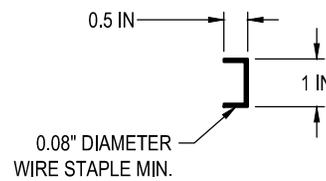
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>FIBER ROLLS</p>	<p>DRAWING NUMBER SQ-3</p> 



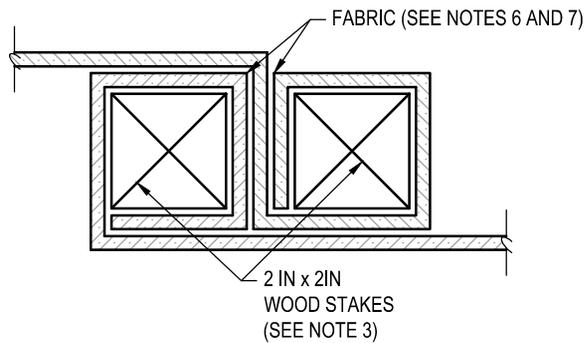
FENCE SECTION DETAIL



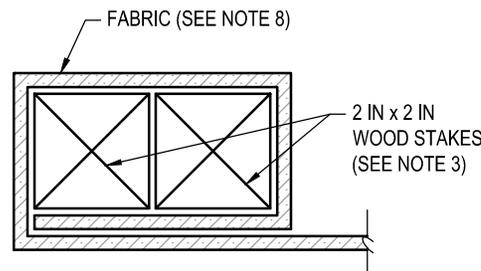
FENCE END DETAIL



STAPLE DETAIL



JOINT DETAIL



END STAKE DETAIL

NOTES:

1. CONSTRUCT THE LENGTH OF EACH REACH SO THAT THE CHANGE IN BASE ELEVATION ALONG THE REACH DOES NOT EXCEED 1/3 THE HEIGHT OF THE LINEAR BARRIER. IN NO CASE SHALL THE REACH LENGTH EXCEED 6 IN
2. THE LAST 8 FT OF FENCE SHALL BE TURNED UP SLOPE.
3. STAKE DIMENSIONS ARE NOMINAL.
4. DIMENSIONS MAY VARY TO FIT FIELD CONDITION.
5. STAKES SHALL BE SPACED AT 8 FT MAXIMUM AND SHALL BE POSITIONED ON THE DOWNSTREAM SIDE OF THE FENCE.
6. OVERLAP STAKES, AND FOLD FENCE FABRIC TO ROUND EACH STAKE ONE FULL TURN.
7. STAKES SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW THROUGH OF SEDIMENT AT THE JOINT.
8. FOR END STAKE CONDITION FOLD FENCE FABRIC AROUND (2) STAKES (1) FULL TURN AND SECURE WITH (4) STAPLES.
9. MINIMUM (4) STAPLES PER STAKE.
10. CROSS BARRIERS SHALL BE MINIMUM OF 1/3 AND MAXIMUM OF 1/2 THE HEIGHT OF THE LINEAR BARRIER.

COUNTY OF SUTTER - ENGINEERING

SILT FENCE

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

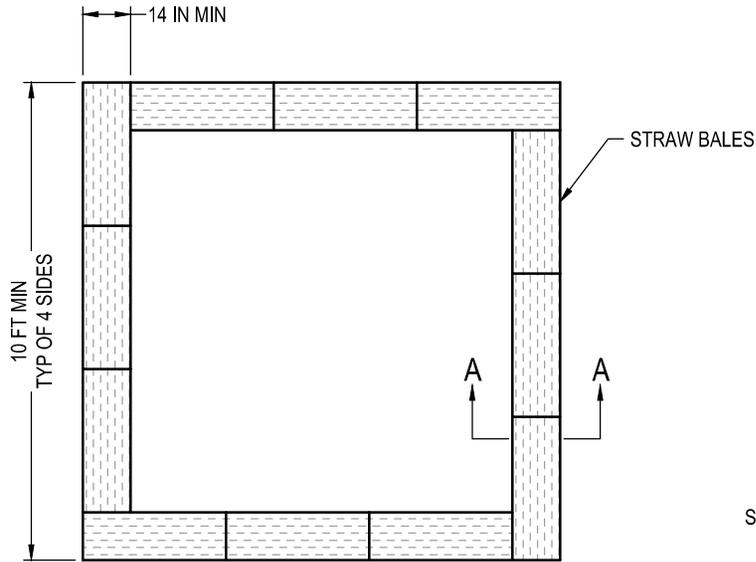
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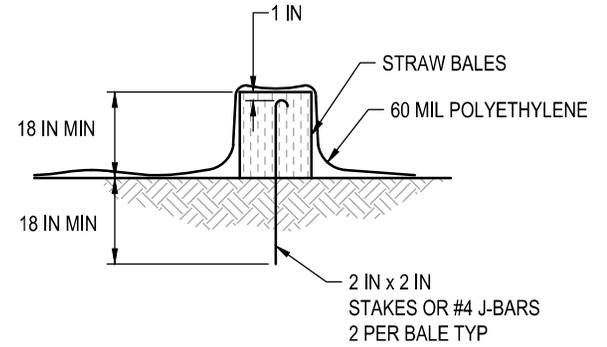
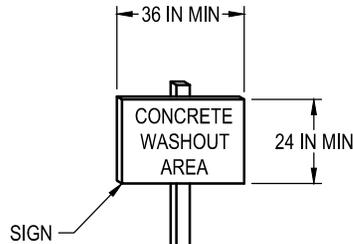


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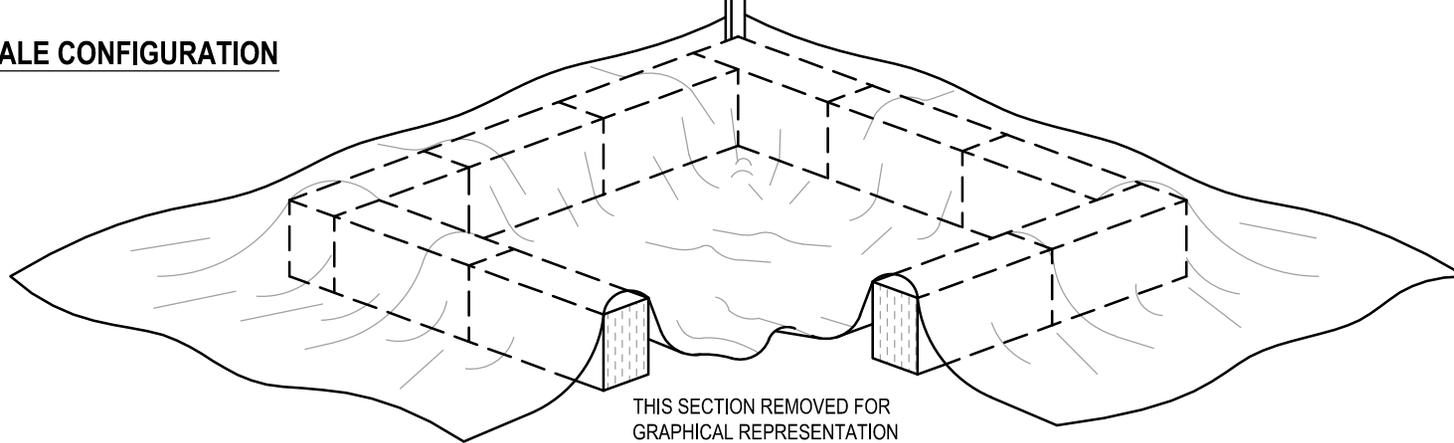
SQ-4



BALE CONFIGURATION



SECTION A-A



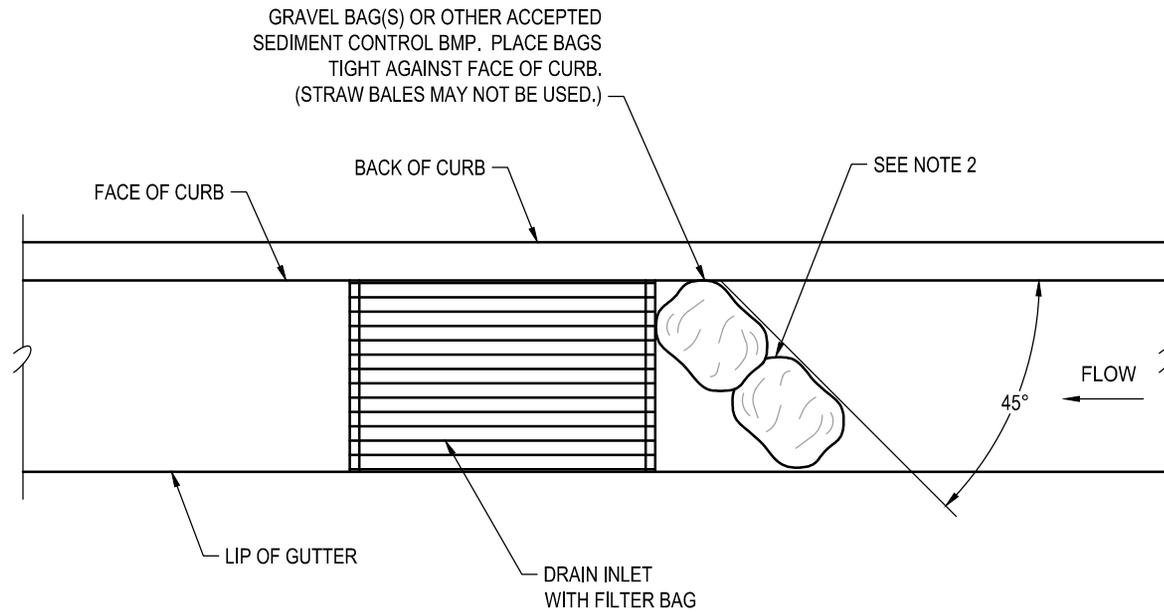
THIS SECTION REMOVED FOR GRAPHICAL REPRESENTATION ONLY. STRAW BALE PERIMETER SHALL BE CONTINUOUS.

NOTES:

1. FACE SIGN TOWARD NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY: <i>ULP</i> DEVELOPMENT SERVICES DIRECTOR</p>
<p>CONCRETE WASHOUT</p>	<p>4/3/2025 DATE</p> <p>DRAWING NUMBER SQ-5</p>



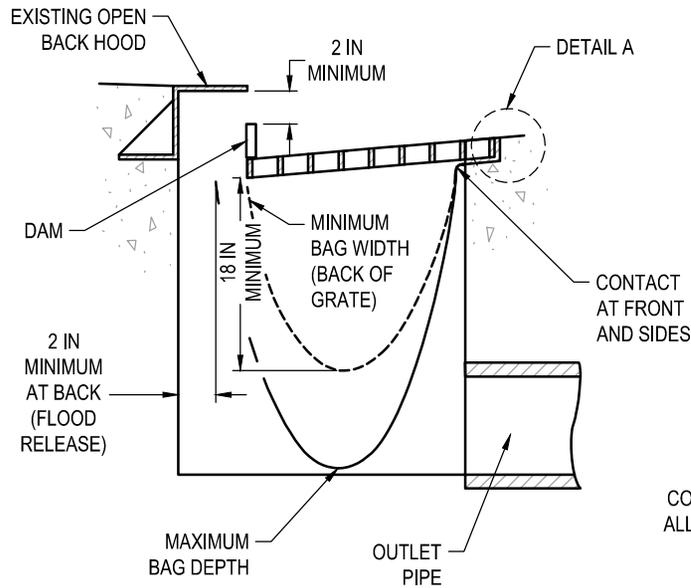


NOTES:

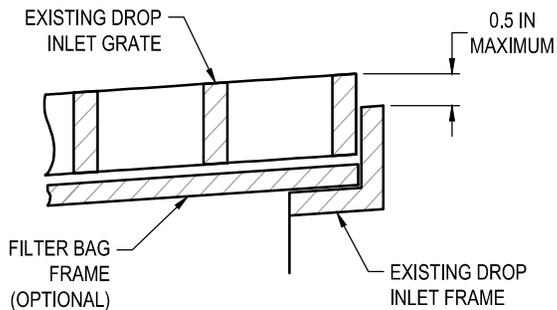
1. SEDIMENT TRAP UPSTREAM OF SEDIMENT CONTROL BMP SHALL BE CLEANED WEEKLY AND PRIOR TO A RAINFALL EVENT.
2. PLACE BAGS TIGHTLY TOGETHER AT JOINTS TO PREVENT OR MINIMIZE SEEPAGE AT JOINTS.

PLAN VIEW

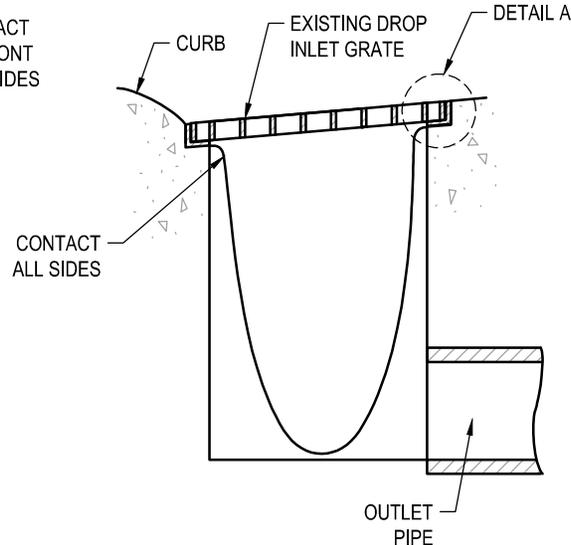
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>INLET SEDIMENT CONTROL</p>	<p>DRAWING NUMBER  SQ-6</p>



PLACEMENT AT TYPE B AND E DROP INLETS



DETAIL A



PLACEMENT AT TYPE A, C, D, & F DROP INLETS AND PARKING LOTS

NOTES:

1. THE MAXIMUM DRAINAGE AREA PER FILTER SHALL BE NO MORE THAN 2 ACRES.
2. THE FILTER BAG SHALL BE MANUFACTURED FROM UV RESISTANT POLYPROPYLENE, NYLON, POLYESTER, OR ETHYLENE FABRIC WITH A MINIMUM TENSILE STRENGTH OF 50 LBS PER LINEAL FOOT, AN EQUIVALENT OPENING SIZE NOT GREATER THAN 20 SIEVE AND WITH GALLONS/MINUTE/SQ FT.
3. THE FILTER BAG MAY BE SUSPENDED FROM OR HELD IN PLACE ON EXISTING INLET GRATE (OR OTHER APPROVED METHOD), PROVIDING NO MODIFICATION OR DAMAGE SHALL BE DONE TO THE INLET GRATE OR FRAME. THE INLET GRATE SHALL NOT BE CAUSED TO REST MORE THAN 0.5 IN ABOVE THE INLET FRAME (SEE DETAIL A).
4. THE FILTER BAG MAY EXTEND TO THE BOTTOM OF THE INLET BOX PROVIDED THE OUTLET PIPE IS UNOBSTRUCTED.
5. FLOWS SHALL NOT BE ALLOWED TO BYPASS THE BAG. THE BAG OR ITS FRAME SHALL CATCH FLOWS AT ALL SIDES OF THE INLET, EXCEPT AS SHOWN FOR FLOOD RELEASE.
6. INLET FILTER BAGS SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL DURING THE WET SEASON AND MONTHLY DURING THE DRY SEASON. SEDIMENT AND DEBRIS SHALL BE REMOVED BEFORE ACCUMULATIONS HAVE REACHED ONE THIRD THE DEPTH OF THE BAG. BAGS SHALL BE REPAIRED OR REPLACED AS SOON AS DAMAGE OCCURS.

COUNTY OF SUTTER - ENGINEERING

STORM DRAIN INLET FILTER BAG

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

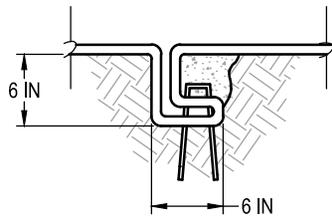
4/3/2025

DATE

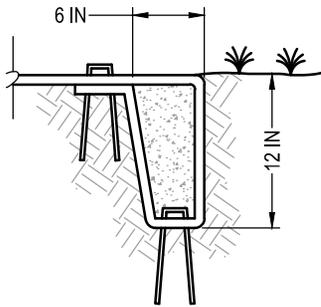


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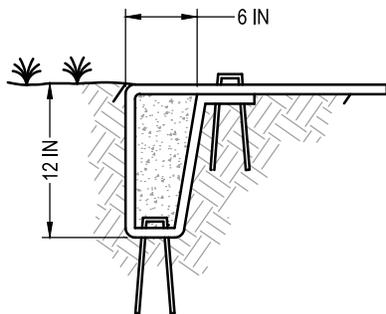
SQ-7



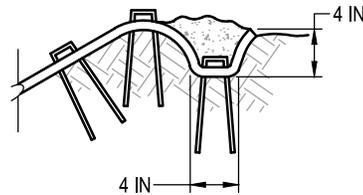
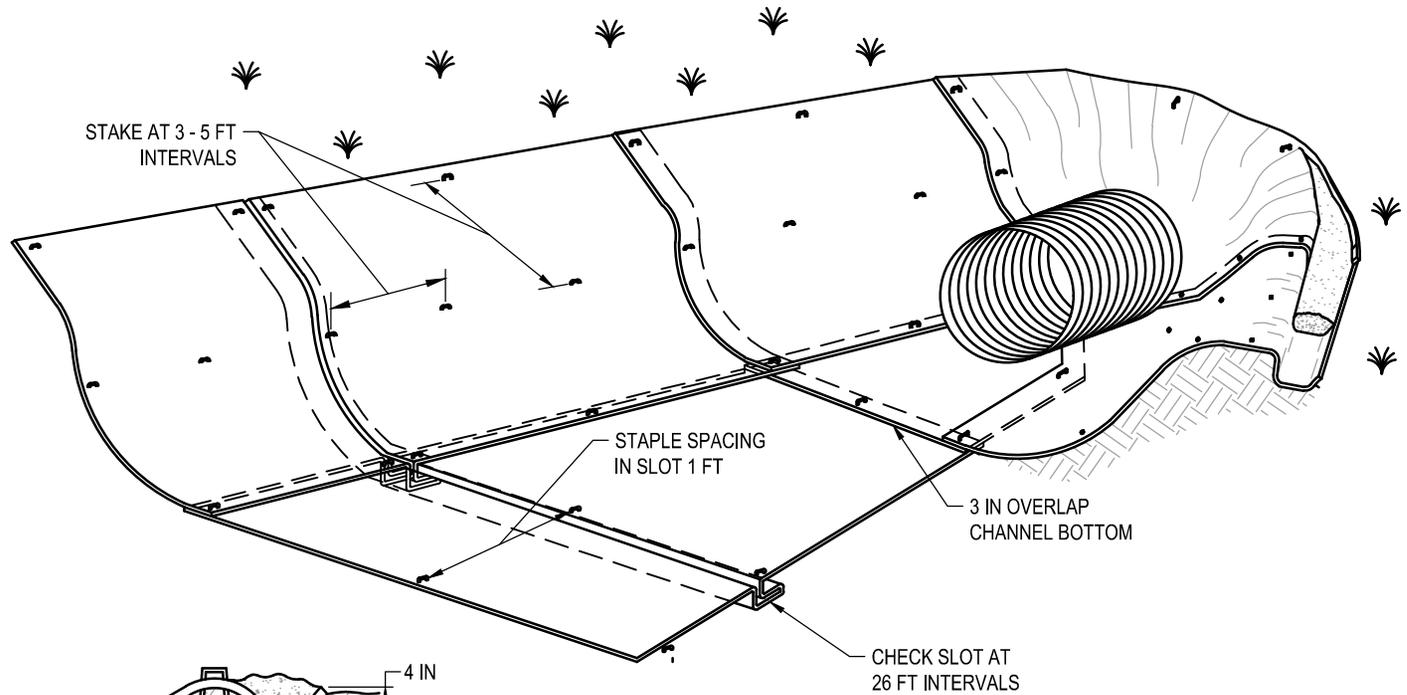
CHECK SLOT



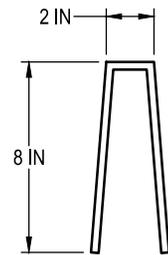
INITIAL CHANNEL ANCHOR TRENCH



TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH



LONGITUDINAL ANCHOR TRENCH



WIRE STAPLES

TYPICAL CHANNEL SOIL STABILIZATION

NOTE:

1. CONSTRUCTION OF CHECK SLOTS, STAKING, STAPLING LAYOUT, AND MAT INSTALLATION ALL TO BE DONE PER MANUFACTURER'S SPECIFICATIONS.

COUNTY OF SUTTER - ENGINEERING

EROSION CONTROL BLANKETS / MATS CHANNEL INSTALLATION

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

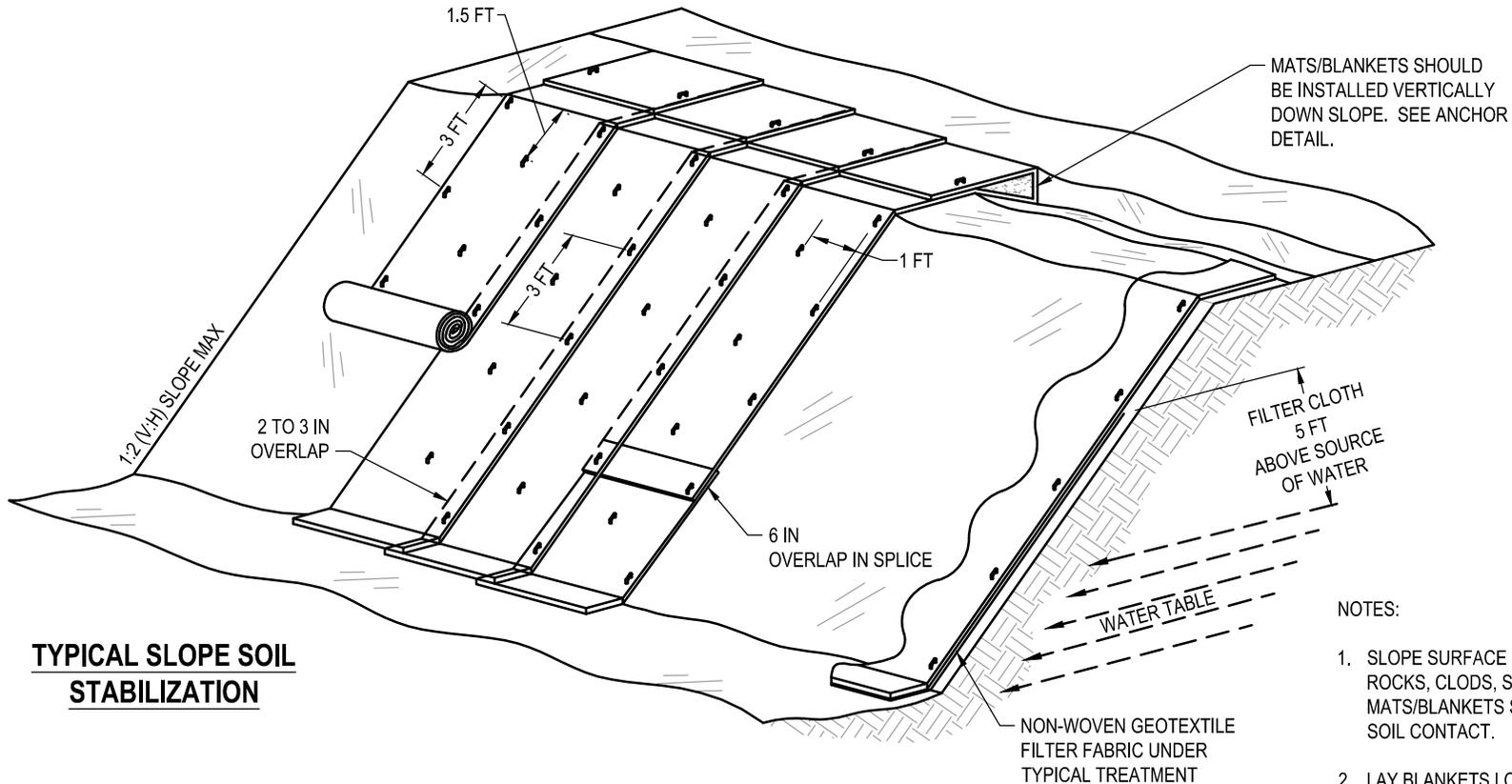
4/3/2025

DATE

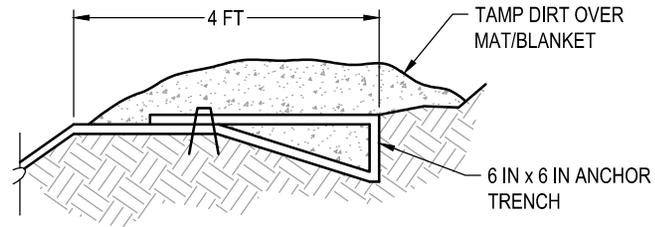


DRAWING NUMBER

SQ-8



TYPICAL SLOPE SOIL STABILIZATION



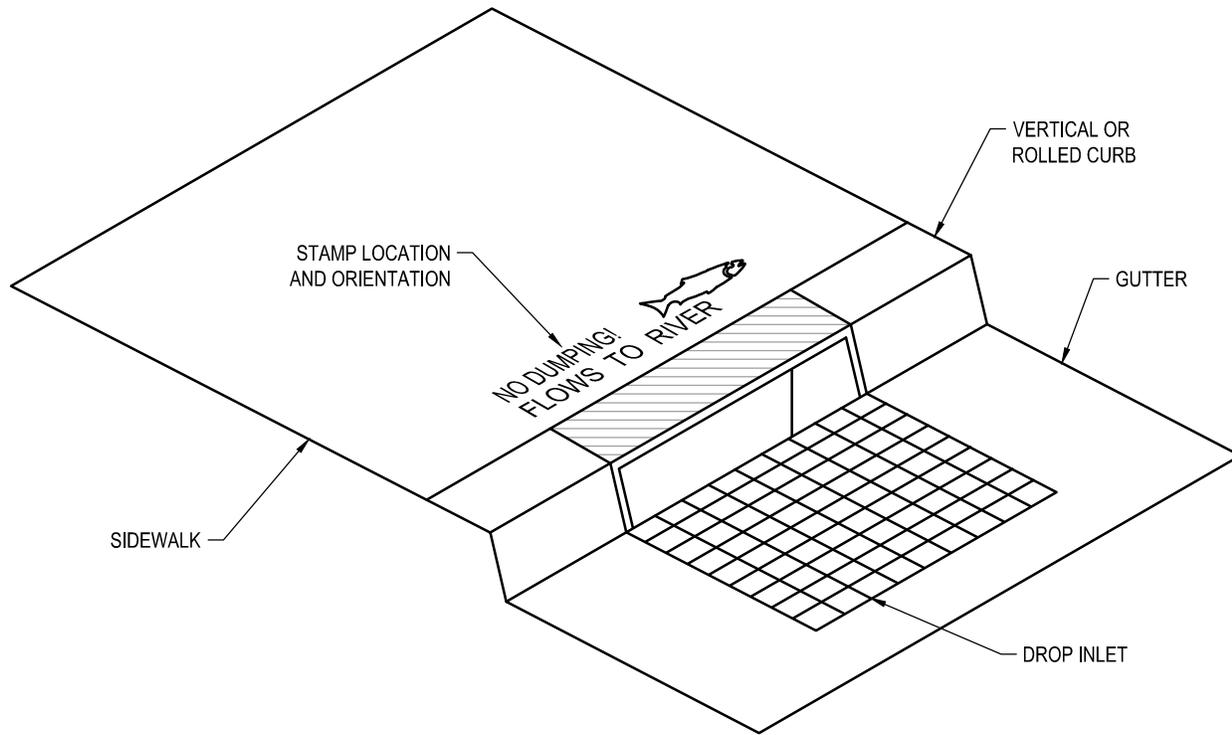
ANCHOR DETAIL

WET SLOPE LINING

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p>
<p>EROSION CONTROL BLANKETS/MATS SLOPE INSTALLATION</p>	<p>DEVELOPMENT SERVICES DIRECTOR DATE</p> <p>SUTTER COUNTY DRAWING NUMBER</p> <p> SQ-9</p>



NOTES:

1. MESSAGE AND SYMBOL SHALL BE AS SHOWN ON SQ-10.2 OR AS APPROVED BY THE DIRECTOR.
2. LETTERS SHALL BE 1.5 INCHES IN HEIGHT. THE MESSAGE SHALL BE CENTERED ON THE BACK OF THE INLET.
3. CONCRETE SHALL BE STAMPED IN SUCH A WAY AS TO PROVIDE FOR A CLEAR AND LEGIBLE IMAGE. (APPROXIMATE DEPTH OF 0.25 INCH).

COUNTY OF SUTTER - ENGINEERING

**DROP INLET CONCRETE STAMP
(SHEET 1 OF 2)**

APPROVED BY:

NLP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

SQ-10.1

STAMP MESSAGES AND SYMBOLS

DIMENSIONS MAY VARY AMONG THE STAMP DESIGNS SHOWN BELOW, BUT SHALL NOT EXCEED THE MAXIMUM DIMENSIONS.



COUNTY OF SUTTER - ENGINEERING

**DROP INLET CONCRETE STAMP
(SHEET 2 OF 2)**

APPROVED BY:


DEVELOPMENT SERVICES DIRECTOR

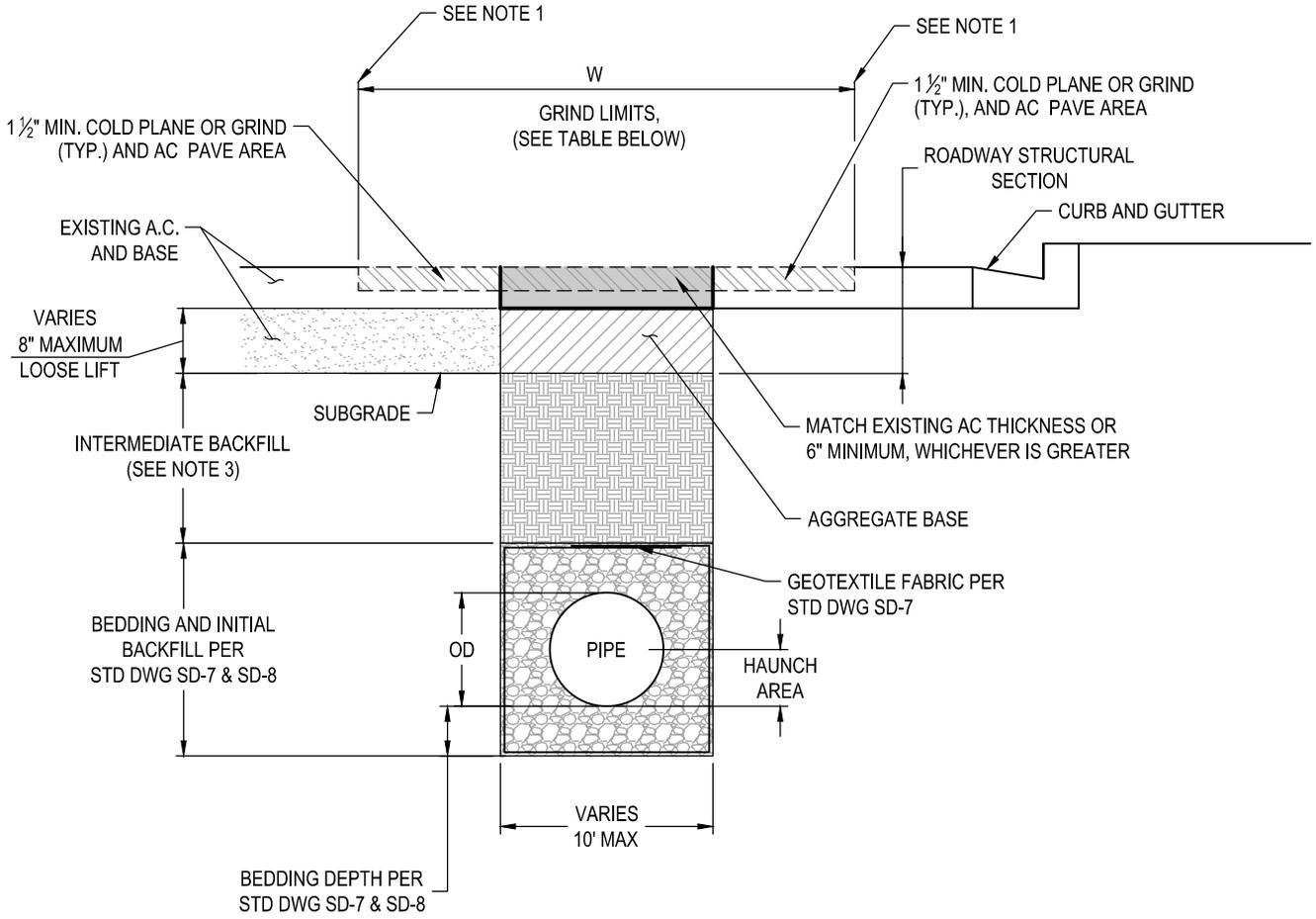
4/3/2025

DATE



DRAWING NUMBER

SQ-10.2



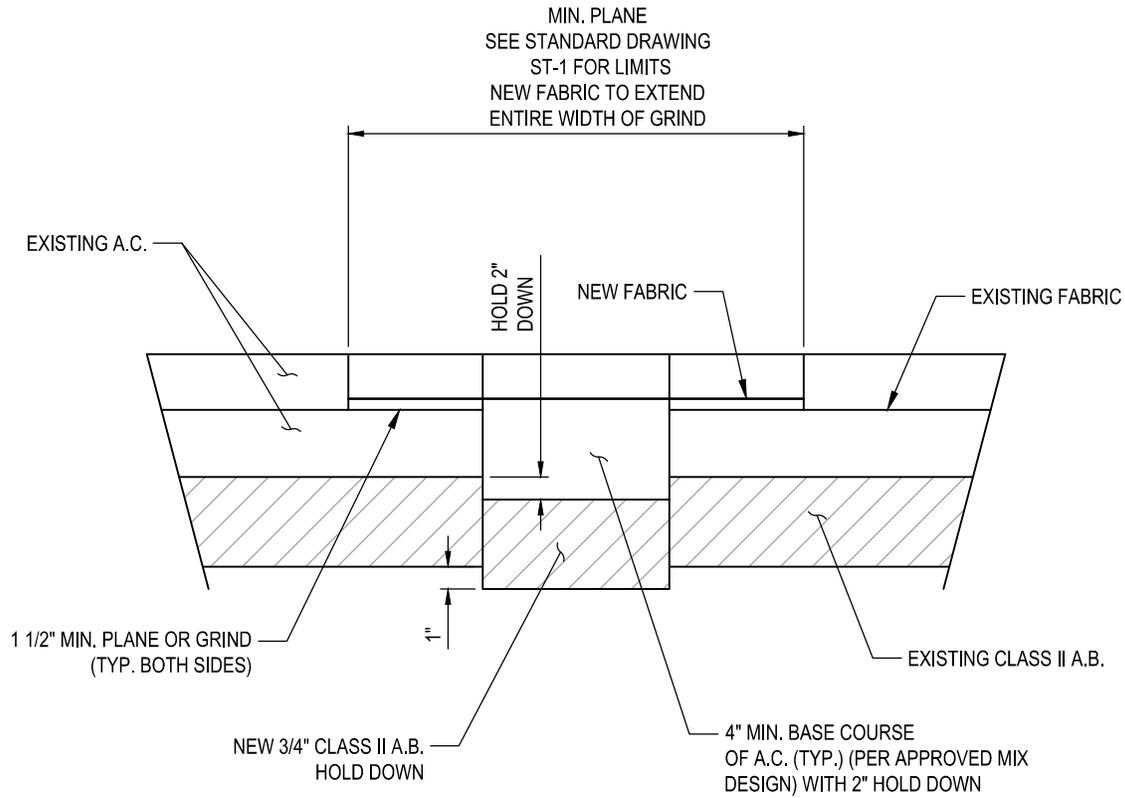
GRIND LIMITS DETAILS		
PAVEMENT CONDITION PCI	W	
	ACROSS TRAFFIC (PERPENDICULAR)	ALONG TRAFFIC (LONGITUDINAL)
85-100	TRENCH + 2' EACH SIDE (10' MIN)	TRENCH + 2' EACH SIDE
70<85	TRENCH + 2' EACH SIDE (5' MIN)	TRENCH + 2' EACH SIDE (8' MIN)
50<70	TRENCH + 2' EACH SIDE (5' MIN)	TRENCH + 2' EACH SIDE (5' MIN)
0<50	TRENCH + 1' EACH SIDE (5' MIN)	TRENCH + 1' EACH SIDE (4' MIN)

- NOTES:**
1. GRINDING/PAVEMENT JOINT SHALL BE LOCATED ALONG GUTTER LINES, LANE LINES, OR CENTER OF LANES AND SHALL NOT BE PLACED IN WHEEL LINES.
 2. ENTIRE BIKE LANE SHALL BE REPAVED WHEN TRENCHING OCCURS IN BIKE LANE AREA.
 3. INTERMEDIATE BACKFILL MATERIALS SHALL BE PER STD DWG SD-6.

COUNTY OF SUTTER - ENGINEERING

TRENCH BACKFILLING AND RESURFACING

APPROVED BY:  4/3/2025
 DEVELOPMENT SERVICES DIRECTOR DATE
 DRAWING NUMBER
ST-1



NOTES:

1. NO NATIVE MATERIAL WITHIN 24" OF AC COURSE. USE 3/4" CLASS II A.B. WHERE PIPE ZONE IS WITHIN 48" OF AC COURSE, 3/4" CLASS II A.B. OR CDF BACKFILL (PER CDF MIX STANDARDS) MAY BE USED.
2. ADDITIONAL GRINDING AND PAVING MAY BE REQUIRED IF WITHIN TWO (2) FEET OF A SURFACE CRACK OR A LOCATION UNSUITABLE TO PAVE AGAINST AT THE INSPECTORS DISCRETION. AT THE CONTRACTORS EXPENSE.

COUNTY OF SUTTER - ENGINEERING

**TRENCH RESURFACING WHEN
FABRIC IS REQUIRED**

APPROVED BY:

ULPJ
DEVELOPMENT SERVICES DIRECTOR

4/3/2025

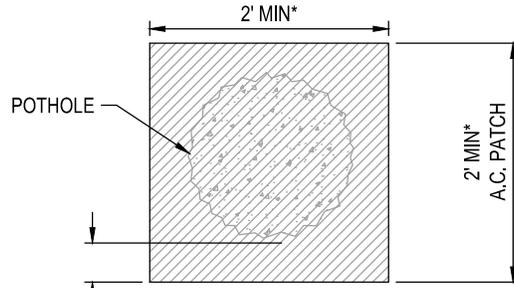
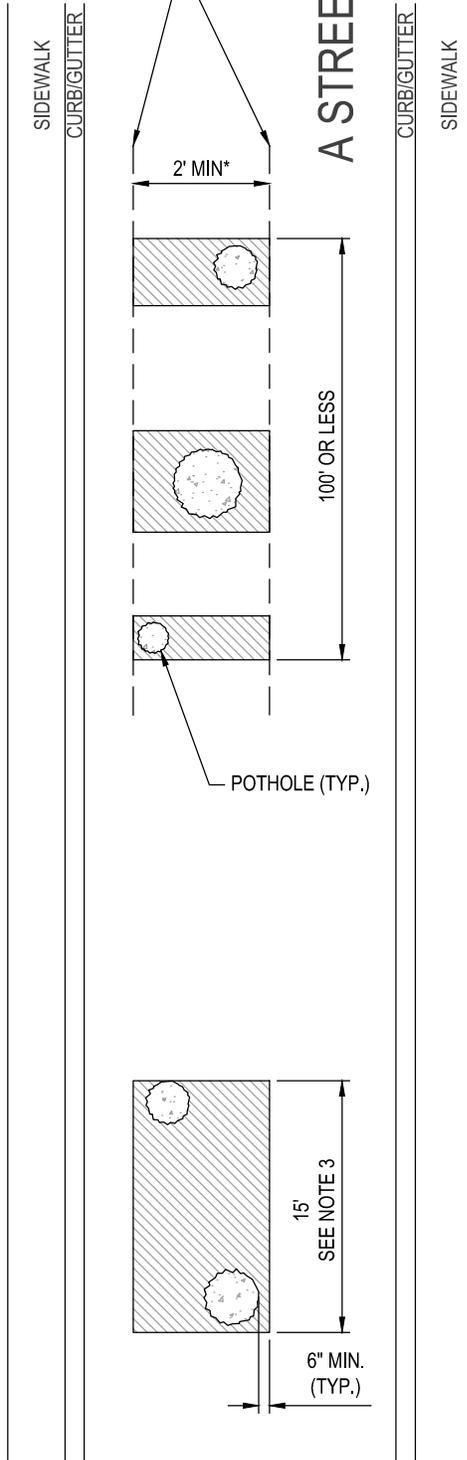
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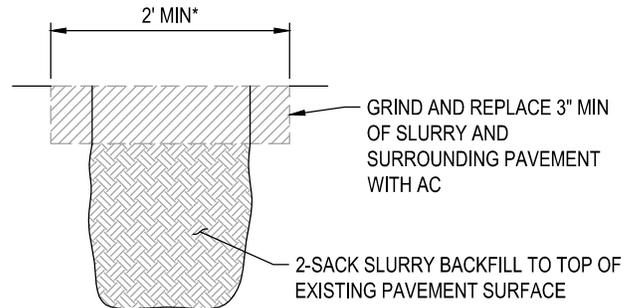
DRAWING NUMBER

ST-2

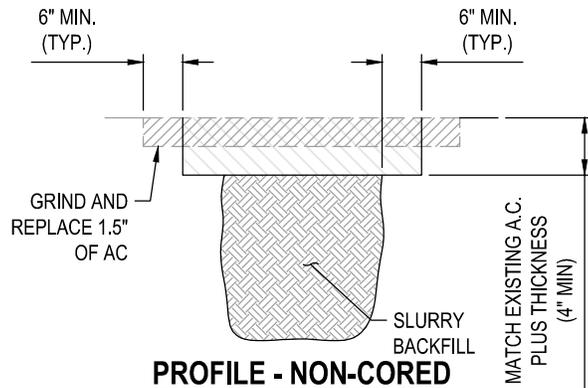
SEE NOTE 1 & 2



PLAN



**PROFILE - CORED
HOLE REPAIR**



**PROFILE - NON-CORED
HOLE REPAIR**

NOTES:

1. EDGES OF POTHOLE REPAIRS SHALL BE ALIGNED WHEN DISTANCE BETWEEN 3 CONSECUTIVE POTHOLE IS 100-FT OR LESS.
 2. EDGES OF POTHOLE REPAIRS SHALL BE PLACED ALONG PAVEMENT STRIPES, GUTTER LINES, OR MID-LANE, AND SHALL NOT BE PLACED IN WHEEL PATH.
 3. POTHOLE REPAIRS SHALL BE JOINED IF SPACING BETWEEN HOLES IS 15-FT OR LESS, UNLESS APPROVED BY THE COUNTY.
 4. REPAIR OF CORED POTHOLE SHALL INCLUDE A FULL DEPTH BASE SLURRY BACKFILL. AFTER MINIMUM OF 48 HOURS OF CURE, THE SLURRY BACKFILL AND SURROUNDING PAVEMENT SHALL BE GROUND TO A MINIMUM OF 3-INCH DEPTH. OR LARGER AS NEEDED TO KEEP ALL PATCHES ALIGNED.
- * OR LARGER AS NEEDED TO KEEP ALL PATCHES ALIGNED.

REFERENCE STANDARD DETAILS: ST-1, ST-4, ST-7

COUNTY OF SUTTER - ENGINEERING

UTILITY POTHOLE REPAIR

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

SUTTER COUNTY



DRAWING NUMBER

ST-3

GENERAL NOTES

- 1. PLANE EXISTING ASPHALT TO A 1 1/2" MIN. DEPTH.
- 2. A TACK COAT SHALL BE APPLIED TO THE AREA PRIOR TO PLACING NEW ASPHALT CONCRETE.
- 3. ASPHALT CONCRETE MIX SHALL BE APPROVED BY THE COUNTY PRIOR TO PLACEMENT.
- 4. ASPHALT CONCRETE SHALL BE SAND SEALED WITHIN 24 HOURS OF TRENCH RESURFACING.
- 5. TRAFFIC CONTROL PLAN SHALL BE REQUIRED. ALL TRENCH WORK IN RIGHT-OF-WAY WILL REQUIRE TRAFFIC CONTROL PLAN.
- 6. VIBRATORY ROLLERS SHALL BE USED ON ALL TRENCH REPAIRS IF CLASS II AGGREGATE BASE IS USED. VIBRATORY PLATES MAY ONLY BE USED WHERE APPROVED IN ADVANCE BY THE DIRECTOR.

GENERAL NOTES (FOR FABRIC)

- 1. AN APPROVED TACK COAT IS REQUIRED PRIOR TO PLACING NEW FABRIC.
- 2. NEW FABRIC IS TO OVERLAP EXISTING FABRIC A MINIMUM OF 3' ON EACH SIDE OF THE TRENCH.

GENERAL NOTES (FOR NARROW TRENCH / CDF BACKFILL)

- 1. CDF BACKFILL SHALL HAVE A MINIMUM 8" SLUMP
- 2. CDF BACKFILL SHALL BE THOROUGHLY CONSOLIDATED TO ENCASE CONDUITS. CONCRETE VIBRATORS SHALL BE USED DURING PLACEMENT OF SAND CEMENT.
- 3. CDF SHALL BE SCREENED OFF TO MATCH PLANED PAVEMENT GRADE.
- 4. ALLOW CDF BACKFILL 48 HOURS MINIMUM CURE AND DRY TIME BEFORE APPLYING ASPHALT CONCRETE.
- 5. IN SECONDARY, MAJOR OR PRIME ARTERIAL STREETS, TO ACCELERATE CURING TIMES PER NOTE 4, AN APPROVED SET ACCELERATING ADMIXTURE MAY BE USED WITH THE DIRECTOR'S APPROVAL.
- 6. TYPE "F" CDF BACKFILL IS NOT ALLOWED OVER CSD-1 OR SCWA PIPES. USE TYPE "C".

COUNTY OF SUTTER - ENGINEERING

GENERAL NOTES

APPROVED BY:



DEVELOPMENT SERVICES DIRECTOR

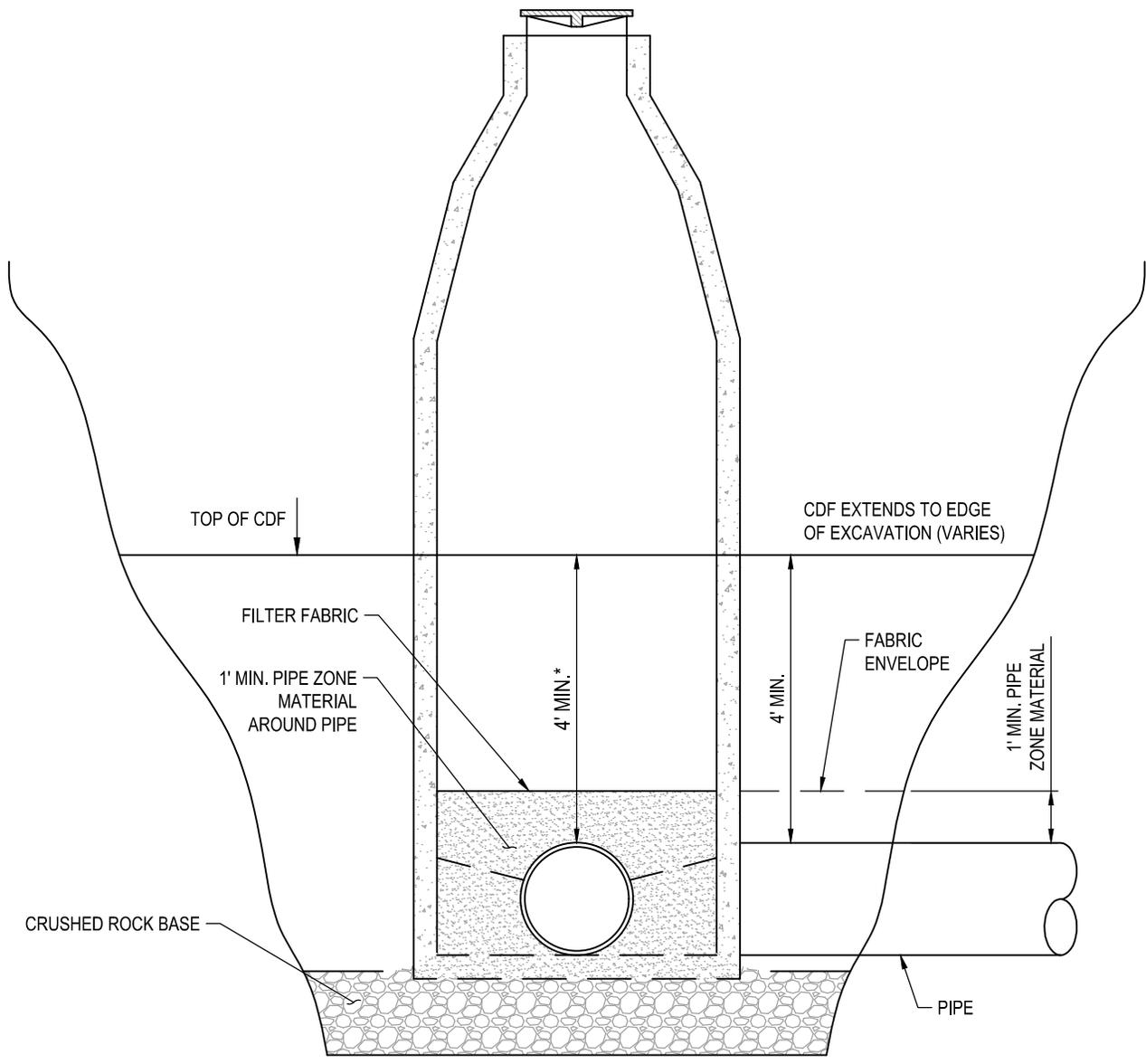
4/3/2025

DATE



DRAWING NUMBER

ST-4



*OR THE BASE OF CONE, WHICHEVER IS LESS. FLATTOP MANHOLES, CDF TO BE PLACED NO HIGHER THAN SUBGRADE.

NOTE:
 SEE MATERIAL SPECIFICATION SECTION 50-15 FOR
 CONTROLLED DENSITY FILL (CDF) OR FLOWABLE FILL
 CONCRETE

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:
ULP
 DEVELOPMENT SERVICES DIRECTOR

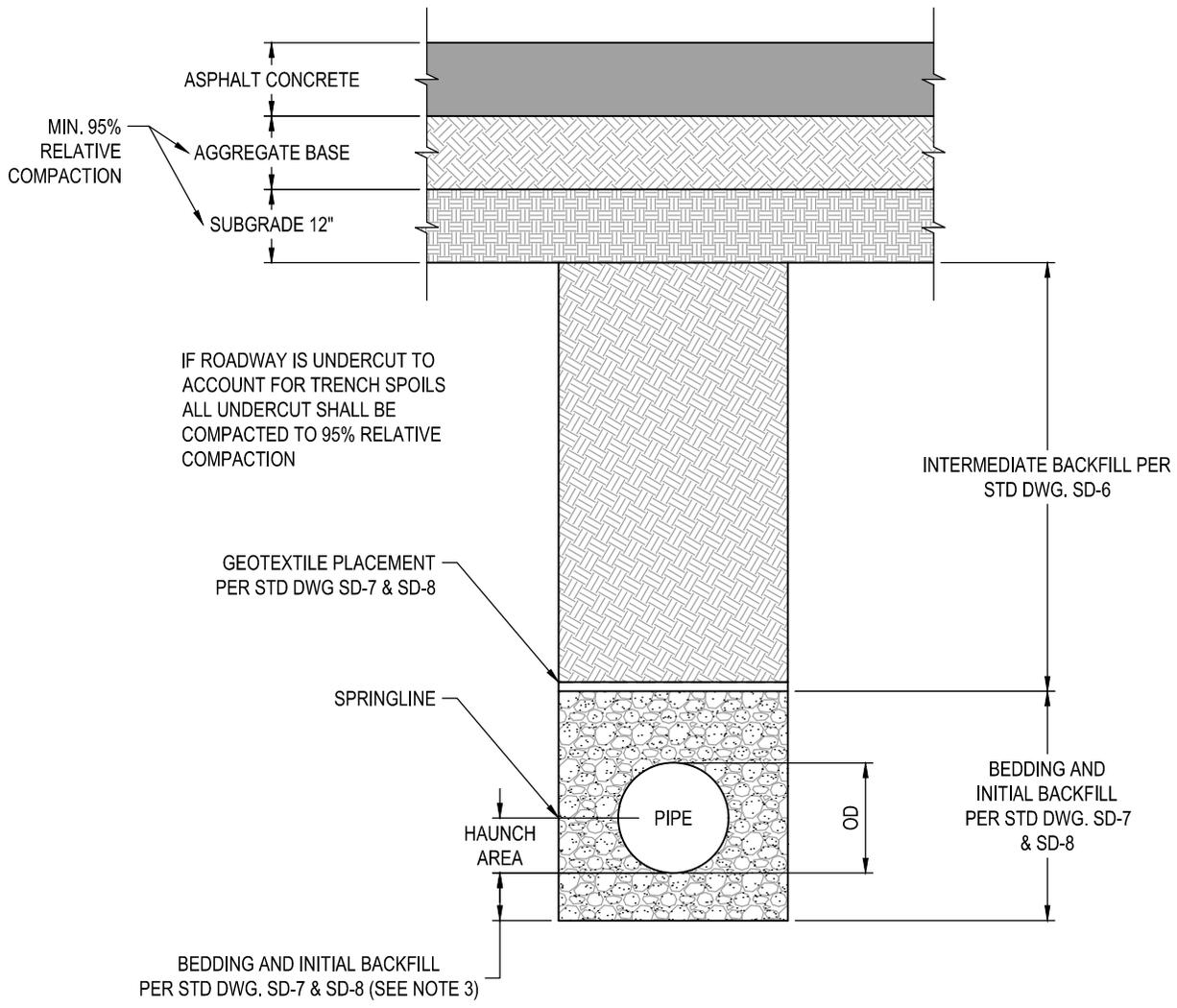
4/3/2025
 DATE

MANHOLE BACKFILL DETAIL



DRAWING NUMBER

ST-5



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

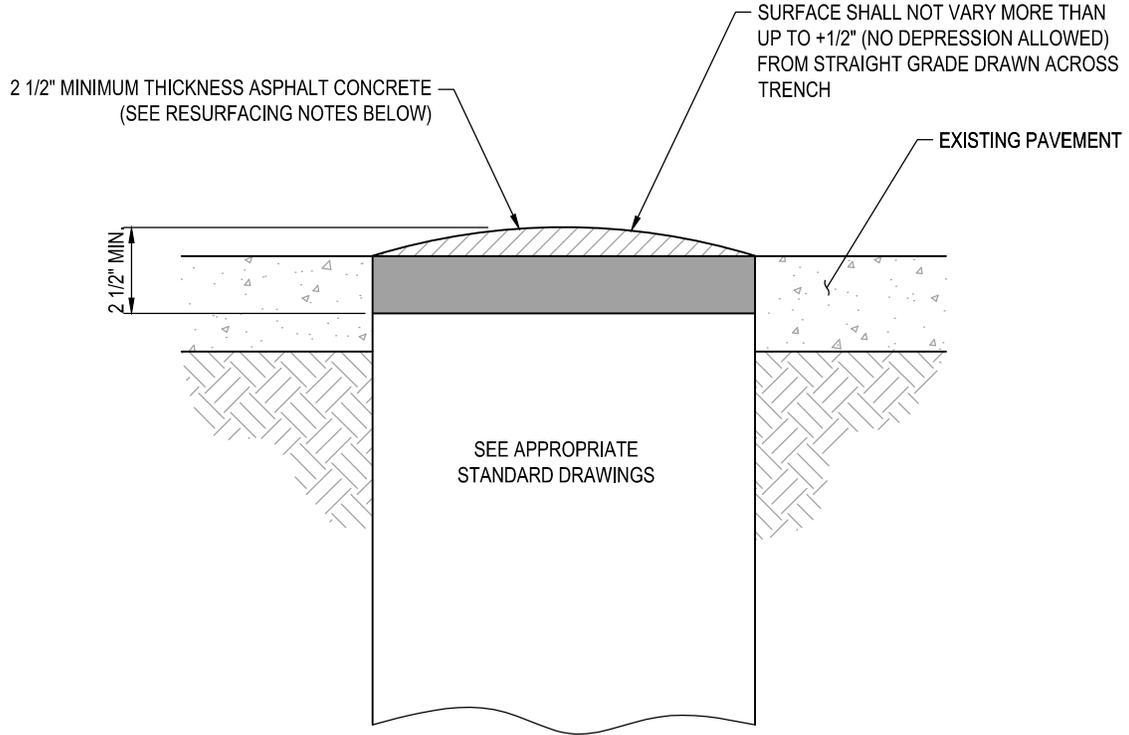
**TYPICAL TRENCH COMPACTION
DETAIL**



DRAWING NUMBER

ST-6

TEMPORARY



TEMPORARY RESURFACING

- A. 30 DAYS MAXIMUM ON NON-OCCUPIED RESIDENTIAL STREETS.
- B. 72 HOURS MAXIMUM ON OCCUPIED RESIDENTIAL STREETS.
- C. 48 HOURS MAXIMUM ON LOCAL COLLECTORS, MAJOR ROADS, AND PRIME ARTERIALS (HOT MIX ONLY 3/4" PG 64-16.)
- D. TRAFFIC CONTROL PLAN REQUIRED.

GENERAL NOTES

- 1. "COLD MIX" WILL BE ALLOWED TO REMAIN AS SURFACING FOR A MAXIMUM OF 24 HOURS. EARLIER REPLACEMENT WILL BE REQUIRED IF MAINTENANCE OF THE SURFACE IS UNSATISFACTORY, SOLELY AT THE DISCRETION OF THE DIRECTOR OR HIS DESIGNATED REPRESENTATIVE.

COUNTY OF SUTTER - ENGINEERING

TEMPORARY TRENCH RESURFACING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

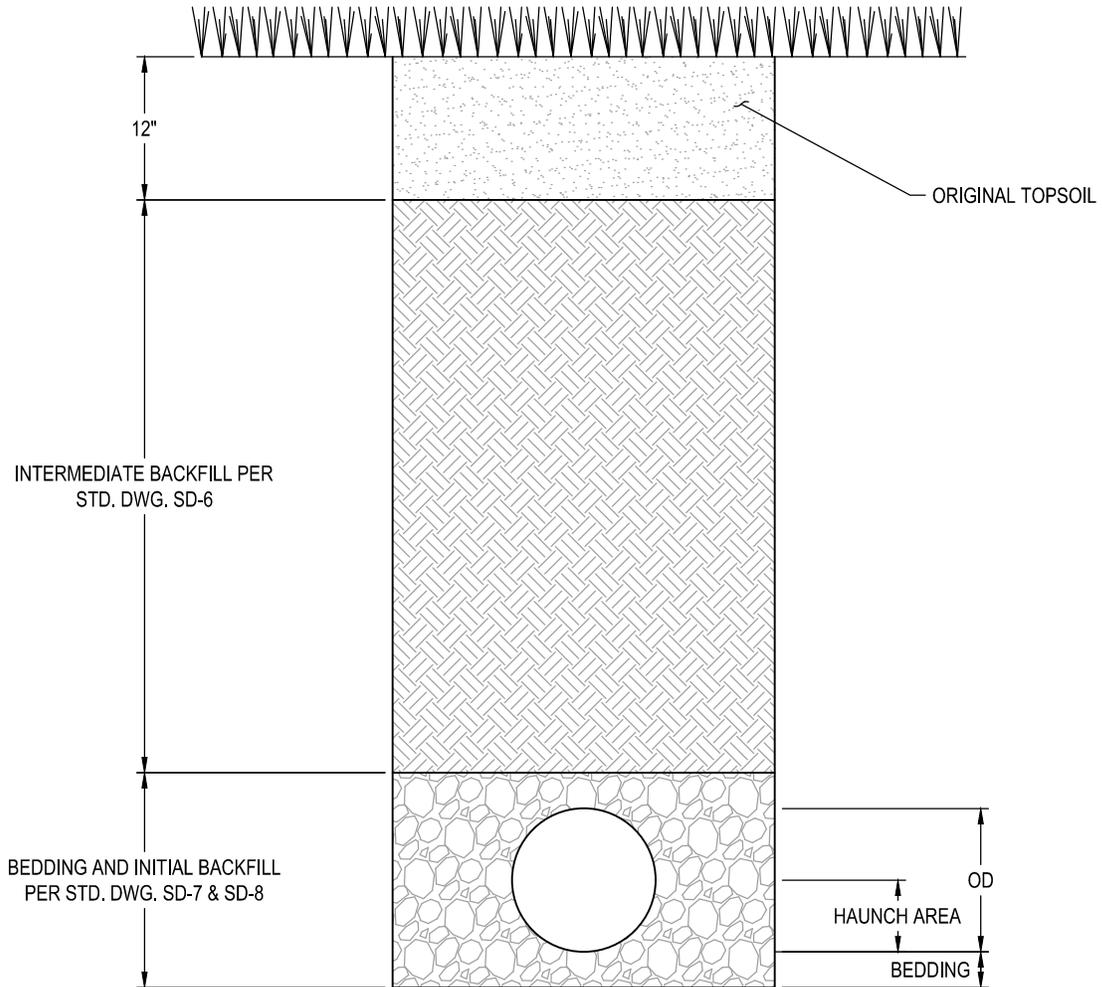


DRAWING NUMBER

ST-7

NOTES:

1. SEE STANDARD DRAWING SD-7 AND SD-8 FOR GEOTEXTILE REQUIREMENTS.



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

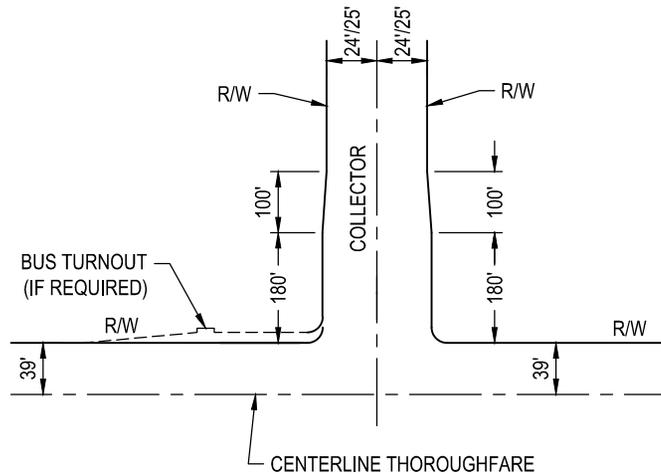
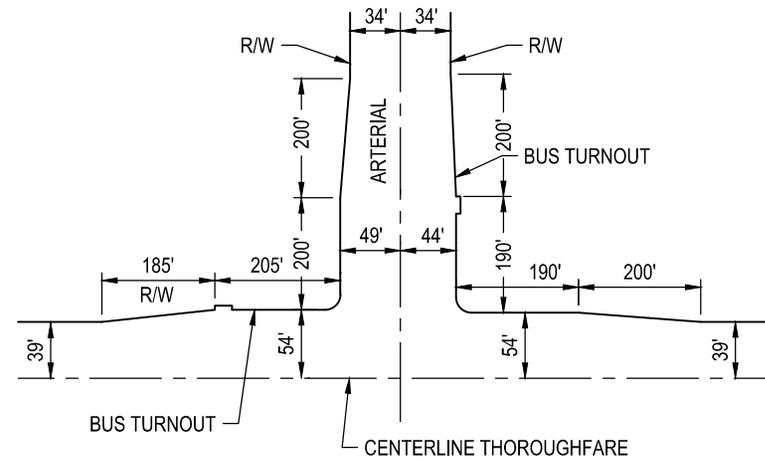
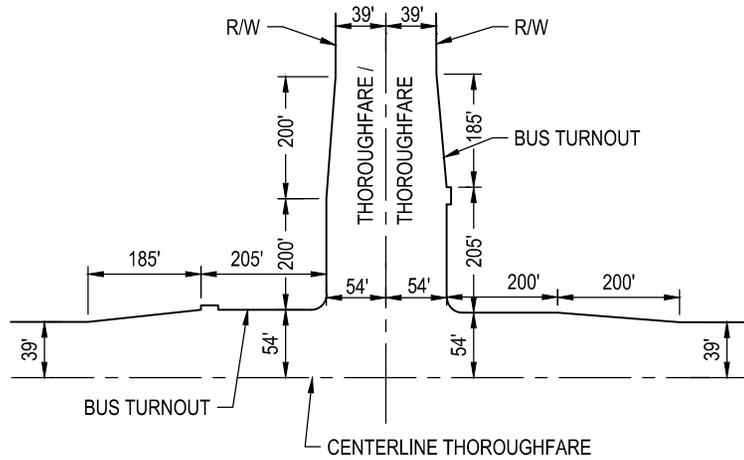
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**TRENCH SECTIONS IN IMPROVED AREAS
HORTICULTURE, LAWN, OR CULTIVATED AREAS**



DRAWING NUMBER

ST-8



NOTES:

1. RADIUS AT CORNERS IS 25'.
2. FOR BUS TURNOUT DIMENSIONS, SEE STANDARD DRAWING ST-31.
3. PEDESTRIAN EASEMENTS PER STANDARD DRAWINGS ST-31 AND ST-32 ARE REQUIRED.
4. TYPE 2 CURB AND GUTTER SHALL BE REQUIRED WITHIN ALL CURB RETURNS, AND AT ALL BUS TURNOUTS AS SHOWN ON STANDARD DRAWINGS ST-31 AND ST-32.

COUNTY OF SUTTER - ENGINEERING

**WIDENING DETAILS FOR
THOROUGHFARES AT VARIOUS
STREET INTERSECTIONS**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

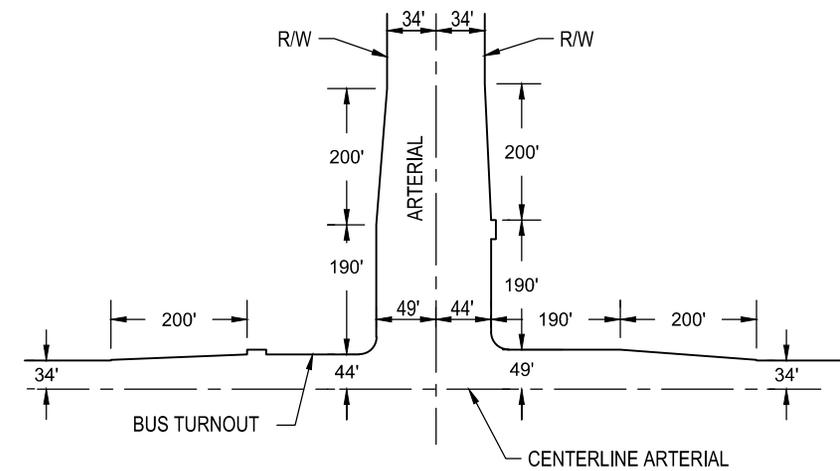
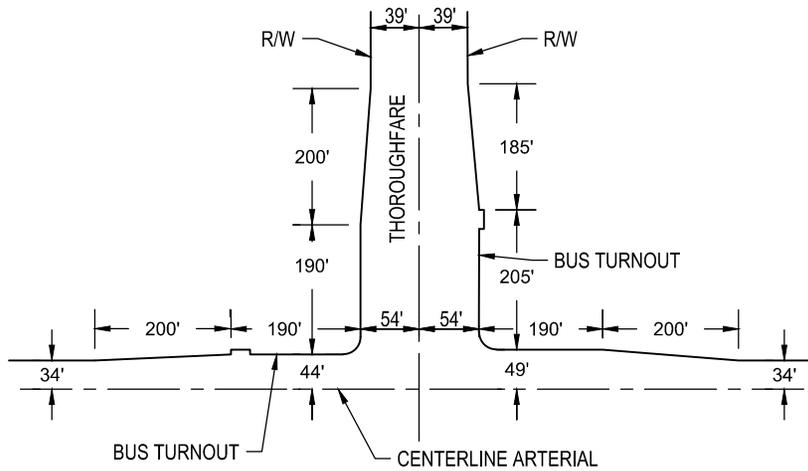
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DRAWING NUMBER

ST-9



NOTES:

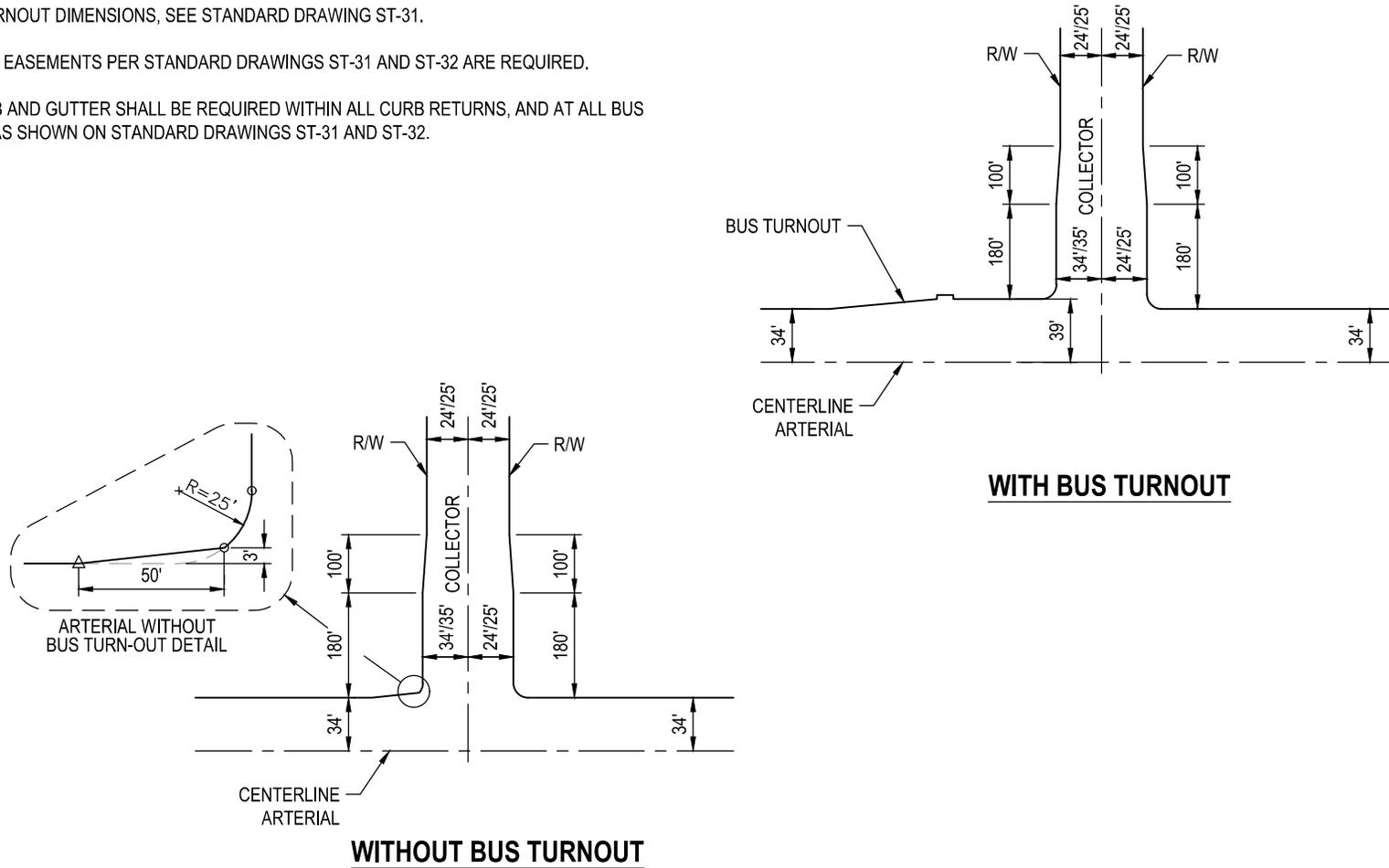
1. RADIUS AT CORNERS IS 25'.
2. FOR BUS TURNOUT DIMENSIONS, SEE STANDARD DRAWING ST-31.
3. PEDESTRIAN EASEMENTS PER STANDARD DRAWINGS ST-31 AND ST-32 ARE REQUIRED.
4. TYPE 2 CURB AND GUTTER SHALL BE REQUIRED WITHIN ALL CURB RETURNS, AND AT ALL BUS TURNOUTS AS SHOWN ON STANDARD DRAWINGS ST-31 AND ST-32.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p style="text-align: center;"><i>ULP</i></p> <p>DEVELOPMENT SERVICES DIRECTOR</p> <p style="text-align: right;">4/3/2025</p> <p style="text-align: right;">DATE</p>
<p>WIDENING DETAILS FOR ARTERIALS AT MAJOR STREET INTERSECTIONS</p>	<p style="text-align: right;">DRAWING NUMBER</p> <p style="text-align: right; font-size: 24pt;">ST-10</p>

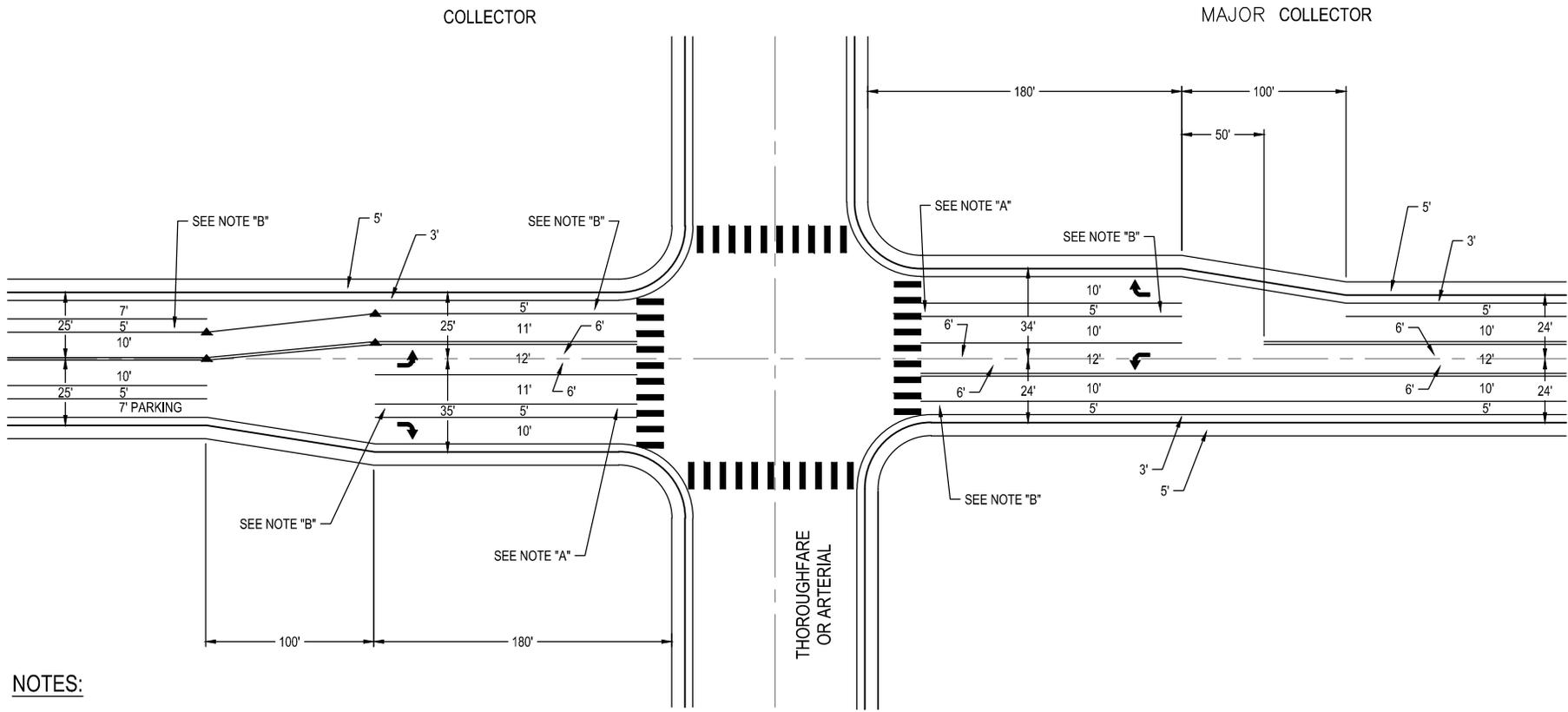


NOTES:

1. RADIUS AT CORNERS IS 25'.
2. FOR BUS TURNOUT DIMENSIONS, SEE STANDARD DRAWING ST-31.
3. PEDESTRIAN EASEMENTS PER STANDARD DRAWINGS ST-31 AND ST-32 ARE REQUIRED.
4. TYPE 2 CURB AND GUTTER SHALL BE REQUIRED WITHIN ALL CURB RETURNS, AND AT ALL BUS TURNOUTS AS SHOWN ON STANDARD DRAWINGS ST-31 AND ST-32.



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE: 4/3/2025</p>
<p>WIDENING DETAILS FOR ARTERIALS AT COLLECTOR STREET INTERSECTIONS</p>	<p>DRAWING NUMBER  ST-11</p>



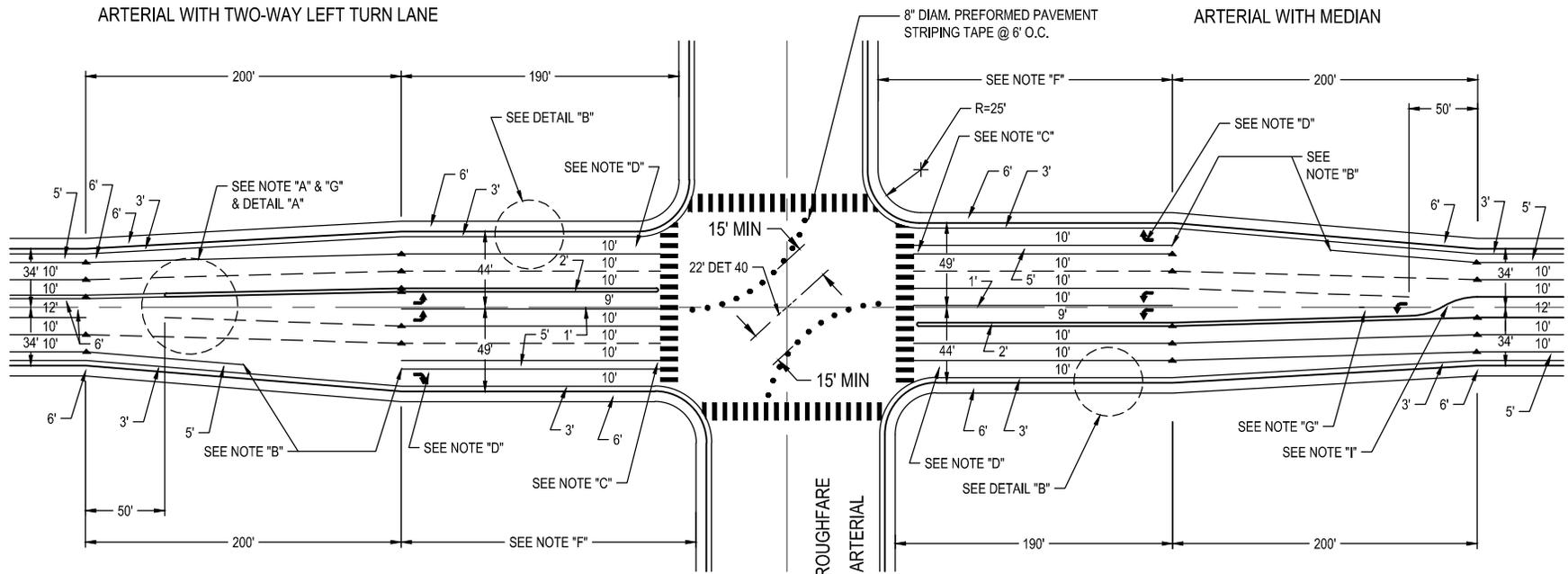
NOTES:

- A. INSTALL BICYCLE SYMBOL OVER DETECTOR LOCATIONS.
- B. INSTALL "BIKE", "LANE" AND " " PAVEMENT LEGENDS AT THE FOLLOWING LOCATIONS:
 - APPROXIMATELY 10' PAST CROSSWALKS.
 - AT THE BEGINNING OF BICYCLE LANE ADJOINING RIGHT-TURN LANES.
- C. DIMENSIONS ARE TO CENTERLINE OF STRIPES.
- D. BIKE LANE MARKINGS SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE CALIFORNIA MUTCD.

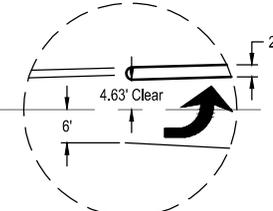
COUNTY OF SUTTER - ENGINEERING
**TYPICAL STRIPING FOR COLLECTOR STREETS
 WITH BICYCLE LANES AT INTERSECTIONS
 WITH ARTERIAL STREETS**

APPROVED BY:

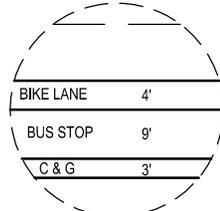
 DEVELOPMENT SERVICES DIRECTOR
 DATE: 4/3/2025
 DRAWING NUMBER: ST-12

THOROUGHFARE
OR ARTERIAL



Detail "A"



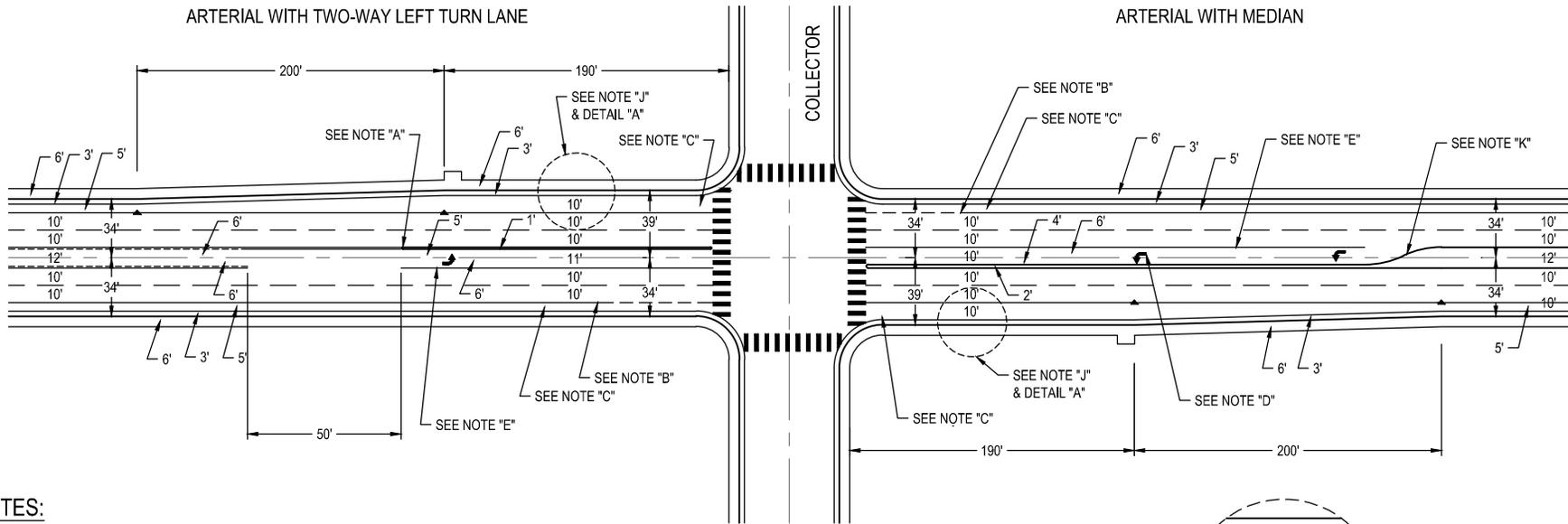
Detail "B"

NOTES:

- A. END OF RAISED MEDIAN MAY BE MOVED AS NECESSARY FOR DRIVEWAY LOCATIONS. SEE IMPROVEMENT STANDARD SECTION 4-7 (G)
- B. BIKE LANE STRIPE TO BE DISCONTINUED APPROX. 100' FROM START OF RIGHT-TURN LANE AND RESUMED AT BEGINNING OF RIGHT-TURN-ONLY LANE.
- C. INSTALL BICYCLE SYMBOL OVER DETECTOR LOCATIONS.
- D. INSTALL "BIKE", "LANE" AND " " PAVEMENT LEGENDS AS PER THE CURRENT VERSION OF THE CALIFORNIA MUTCD AT THE FOLLOWING LOCATIONS:
- APPROXIMATELY 10' PAST CROSSWALKS;
- AT BEGINNING OF BICYCLE LANE ADJOINING RIGHT-TURN LANES.
- E. DIMENSIONS ARE TO CENTERLINE OF STRIPES.
- F. LENGTH OF APPROACH ADJACENT TO RIGHT TURN LANE SHALL BE: 200' APPROACHING A THOROUGHFARE 190' APPROACHING AN ARTERIAL.
- G. DIRECTIONAL ARROWS ARE PROVIDED AT THE BEGINNING OF ALL TURN POCKETS. INSTALL ADDITIONAL ARROWS IF LENGTH OF TURN POCKET EXCEEDS 250 FT.
- H. ALL PAVEMENT MARKINGS AND STRIPING AS PER THE CURRENT VERSION OF THE CALIFORNIA MUTCD.
- I. 90° BAY TAPER AS PER THE CURRENT CALTRANS HDM.
- J. IF THE DRIVEWAY, APPROVED BY DEVELOPMENT SERVICES IS WITHIN THE EXPANDED INTERSECTION, ADDITIONAL 3 FEET RIGHT-OF-WAY WILL BE REQUIRED. SEE DETAIL "B".
- K. BIKE LANE MARKINGS SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE CALIFORNIA MUTCD.

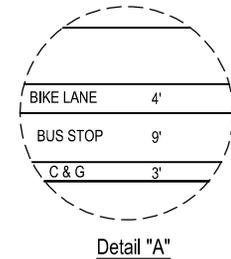
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY: DEVELOPMENT SERVICES DIRECTOR</p> <p style="text-align: right;">4/3/2025 DATE</p>
<p>TYPICAL STRIPING FOR ARTERIAL INTERSECTIONS WITH THOROUGHFARES OR ARTERIALS</p>	<p style="text-align: right;">DRAWING NUMBER</p> <p style="font-size: 2em; font-weight: bold;">ST-13</p>



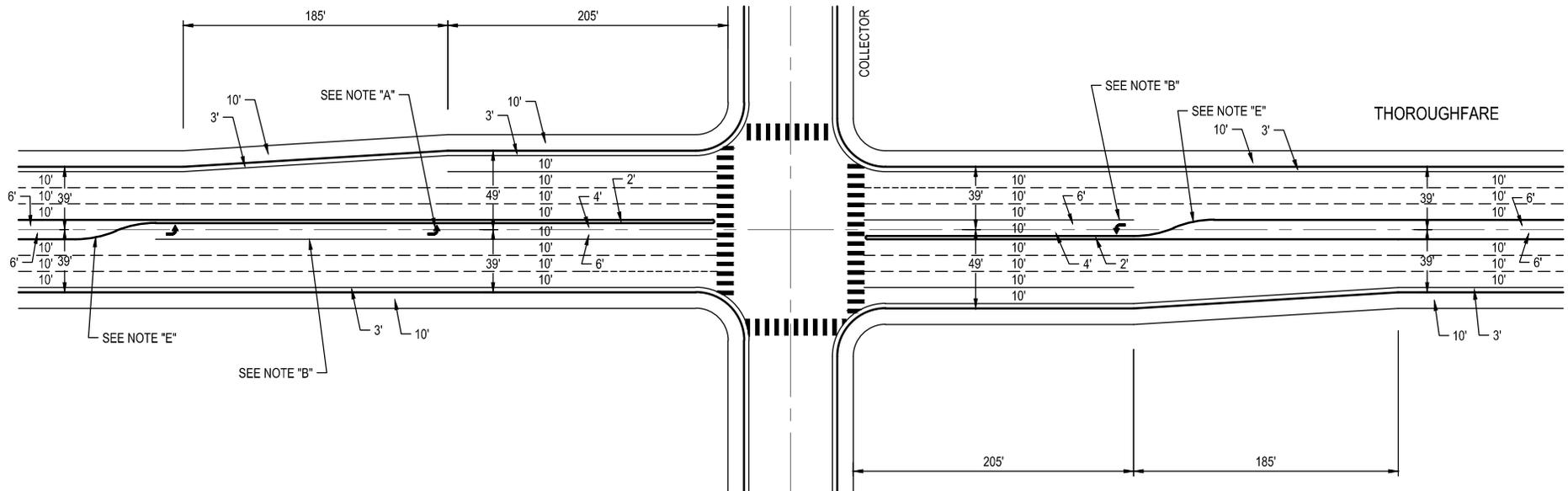


NOTES:

- A. END OF RAISED MEDIAN MAY BE MOVED AS NECESSARY FOR DRIVEWAY LOCATIONS. SEE IMPROVEMENT STANDARD SECTION 4-7 (G)
- B. BIKE LANE STRIPING TO BE DASHED BEGINNING 120' FROM INTERSECTION.
- C. INSTALL "BIKE", "LANE", AND " → " PAVEMENT LEGENDS AS PER THE CURRENT VERSION OF THE CALIFORNIA MUTCD, AT THE FOLLOWING LOCATIONS:
 - APPROXIMATELY 10' PAST CROSSWALKS;
 - BEFORE START OF DASHED BICYCLE LANE STRIPING.
- D. DIRECTIONAL ARROWS ARE PROVIDED AT THE BEGINNING OF ALL TURN POCKETS. INSTALL ADDITIONAL LEFT-TURN ARROW MIDWAY IN THE LENGTH OF THE TURN LANE IF IT EXCEEDS 250'.
- E. CONSULT WITH DEVELOPMENT SERVICES TO DETERMINE POCKET LENGTH.
- F. DIMENSIONS ARE TO CENTERLINE OF STRIPES.
- G. SHOULD DESIGN OF ROADWAY NOT INCLUDE BUS TURNOUTS, DESIGN OF INTERSECTIONS OF ARTERIAL & COLLECTOR STREETS SHALL CONFORM TO THE DETAIL ON DRAWING ST-11.
- H. ALL PAVEMENT MARKINGS AND STRIPING AS PER THE CURRENT VERSION OF THE CALIFORNIA MUTCD.
- I. SIDEWALK SHALL BE INCLUDED AS PART OF THE RIGHT-OF-WAY WHEN ADJACENT TO THE BACK OF CURB SUCH AS AT INTERSECTIONS AND DRIVEWAYS.
- J. IF THE DRIVEWAY, APPROVED BY DEVELOPMENT SERVICES, IS WITHIN THE EXPANDED INTERSECTION, ADDITIONAL 3 FEET RIGHT OF WAY WILL BE REQUIRED. SEE DETAIL "A".
- K. 90° BAY TAPER AS PER THE CURRENT CALTRANS HDM.
- L. BIKE LANE MARKINGS SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE CALIFORNIA MUTCD.



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY: DEVELOPMENT SERVICES DIRECTOR</p> <p style="text-align: right;">4/3/2025 DATE</p>
<p>TYPICAL STRIPING FOR ARTERIAL INTERSECTIONS WITH COLLECTORS</p>	<p style="text-align: right;">DRAWING NUMBER ST-14</p>



NOTES:

- A. INSTALL ADDITIONAL LEFT TURN ARROW MIDWAY IN THE LENGTH OF THE TURN LANE IF IT EXCEEDS 250'.
- B. LENGTH OF TURN POCKET IS TO BE SIZED ACCORDING TO TRAFFIC NEEDS, 180' MIN. ARROWS ARE PROVIDED AT THE BEGINNING OF ALL TURN POCKETS.
- C. DIMENSIONS ARE TO CENTERLINE OF STRIPES.
- D. ALL PAVEMENT MARKINGS AND STRIPING AS PER THE CURRENT VERSION OF THE CALIFORNIA MUTCD.
- E. 90' BAY TAPER AS PER THE CURRENT CALTRANS HDM.

COUNTY OF SUTTER - ENGINEERING

**TYPICAL STRIPING FOR THOROUGHFARE
INTERSECTIONS WITH COLLECTORS**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

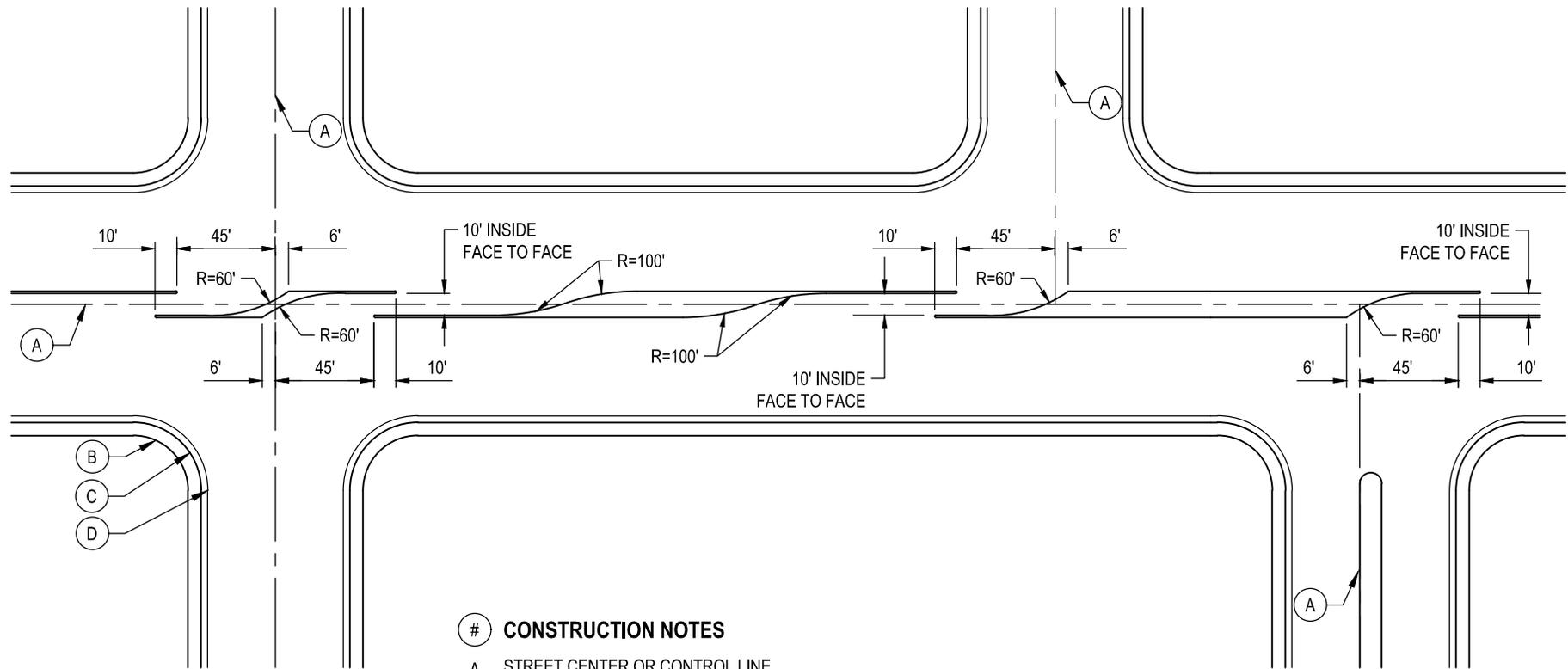
4/3/2025

DATE



DRAWING NUMBER

ST-16



CONSTRUCTION NOTES

- A STREET CENTER OR CONTROL LINE
- B BACK OF SIDEWALK OR RIGHT OF WAY/PROPERTY LINE
- C BACK OF CURB/TOP OF CURB
- D EDGE OF PAVEMENT OR LIP OF GUTTER

COUNTY OF SUTTER - ENGINEERING

**TYPICAL RAISED ISLAND DESIGNS
FOR LIMITING ACCESS**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

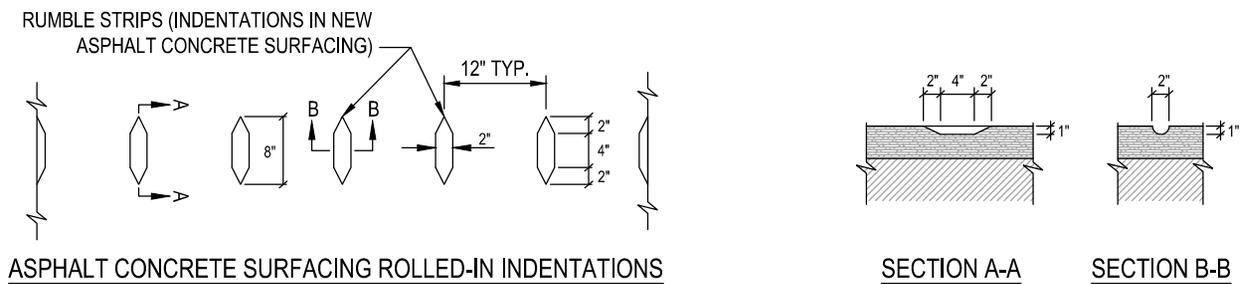
4/3/2025

DATE



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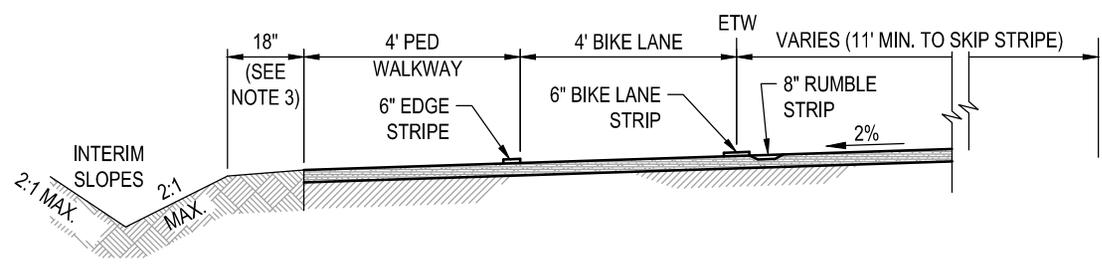
ST-17



ASPHALT CONCRETE SURFACING ROLLED-IN INDENTATIONS

SECTION A-A

SECTION B-B

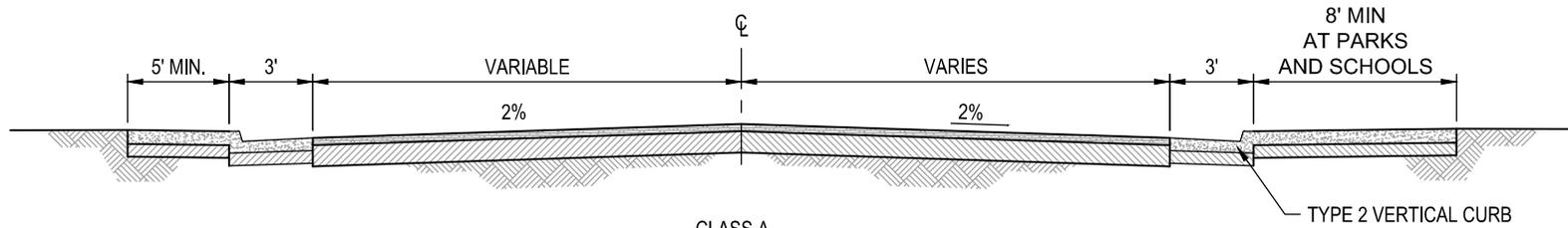


ROLLED-IN RUMBLE STRIP SHOULDER PLACEMENT DETAIL

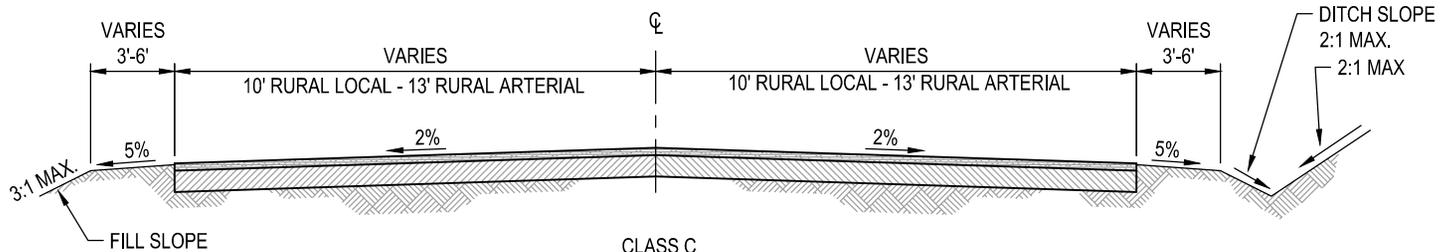
NOTES:

1. RUMBLE STRIP SHALL STOP 120' FROM THE C.R. ON THE MAJOR ROAD APPROACHING ENTERING SIDE STREETS, AND BEGIN AT C.R. ON THE MAJOR ROAD DEPARTING ENTERING SIDE STREETS.
2. POSITION BIKE LANE LEGENDS BETWEEN RUMBLE STRIP AND EDGE LINE STRIPE.
3. EARTHEN SHOULDER MAY BE ELIMINATED IF SHOULDER CONFLICTS WITH TREES OR RIGHT-OF-WAY LIMITS AND FULL DEPTH ASPHALT SECTION IS USED.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>TYPICAL SECTIONS INTERIM IMPROVEMENTS FOR SPECIAL THOROUGHFARE AND THOROUGHFARE STREETS WITH ROLLED-IN RUMBLE STRIPS</p>	<p>DRAWING NUMBER  ST-18</p>



CLASS A
 CLASS B (SAME AS CLASS A EXCEPT SIDEWALKS MAY BE OMITTED)



CLASS C
 SEE STANDARD DRAWING T-20, T-21, AND T-22 FOR
 CLASS A, B, AND C SPECIFIC RURAL STREET SECTIONS

COUNTY OF SUTTER - ENGINEERING

TYPICAL SECTIONS
 STREET CLASSES
 "A" & "C"

APPROVED BY:

ULP

4/3/2025

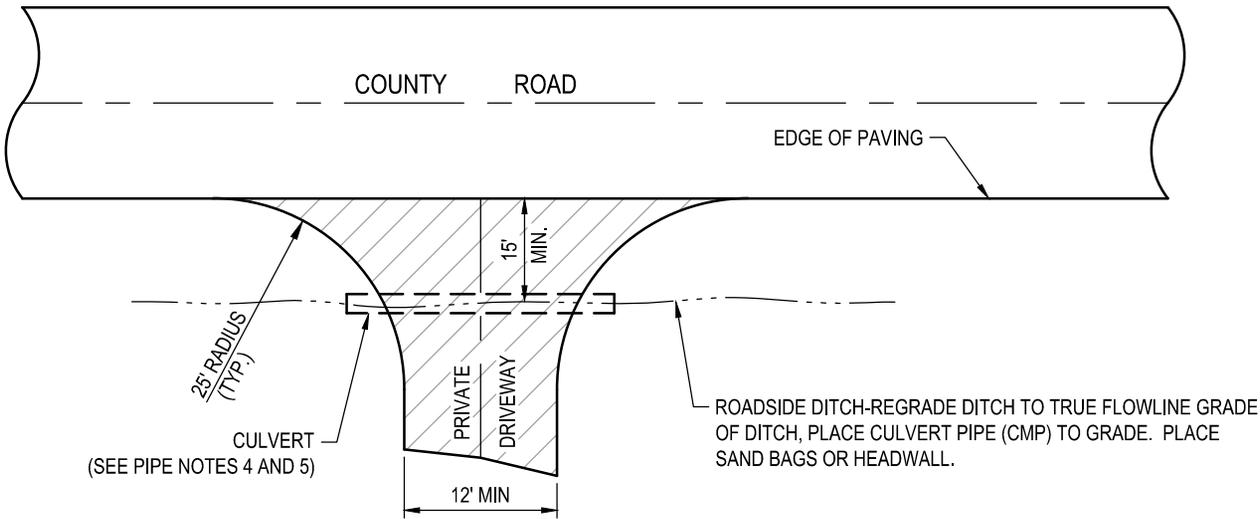
DEVELOPMENT SERVICES DIRECTOR

DATE



DRAWING NUMBER

ST-19

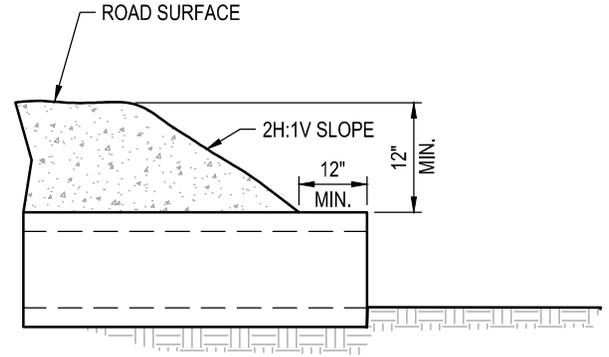


NOTE:

1. PIPE SHALL BE PLACED SLIGHTLY BELOW EXISTING GRADE OR AT A GRADE SPECIFIED BY THE COUNTY DEVELOPMENT SERVICES DEPARTMENT.
2. PIPE SECTIONS SHALL BE JOINED TOGETHER SECURELY TO PREVENT INFILTRATION.
3. USED PIPE IS UNACCEPTABLE.
4. PIPE DIAMETER SHALL BE 12" MINIMUM.
5. PIPE PLACEMENT SHALL BE 100' MAXIMUM IN LENGTH. ANY PIPE PLACEMENT MORE THAN 100' IN LENGTH SHALL INSTALL A DRAINAGE INLET OR LEAVE 5' GAP BETWEEN.

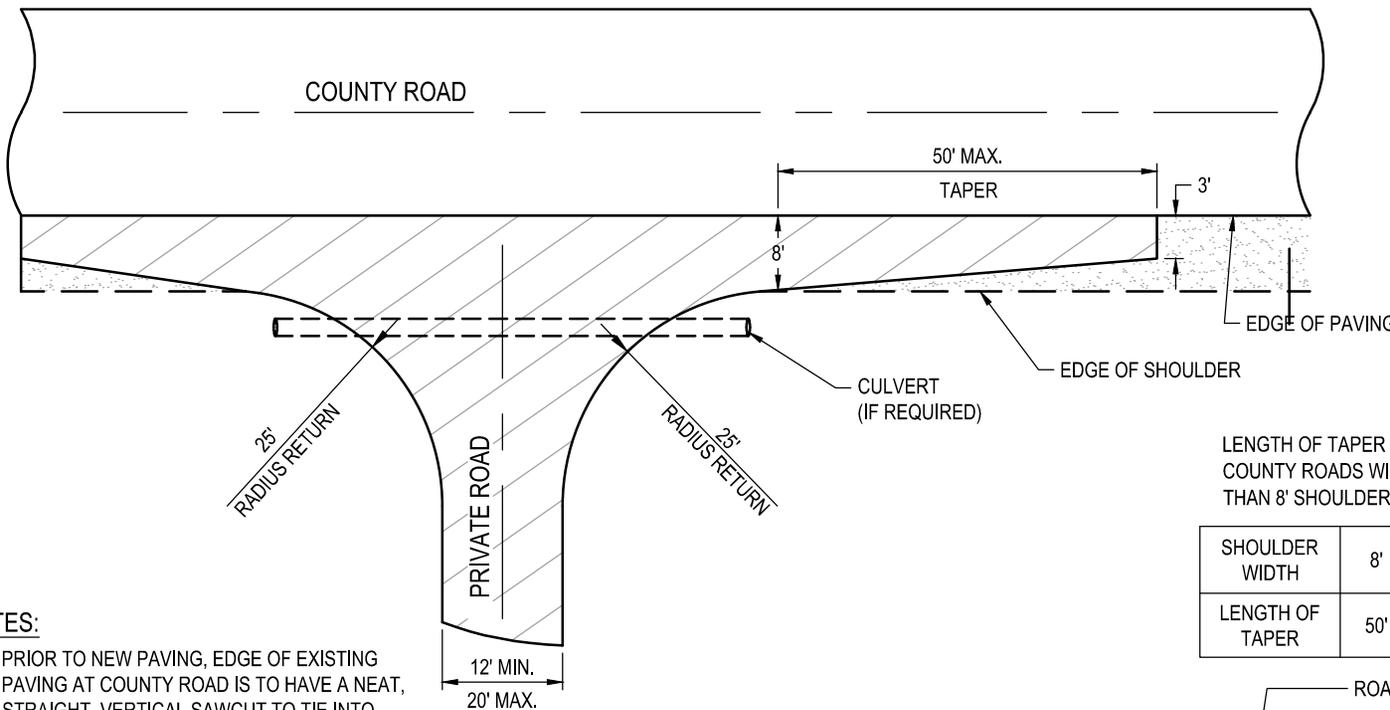
NOTES:

1. PRIOR TO NEW PAVING, EDGE OF EXISTING PAVING AT COUNTY ROAD IS TO HAVE A NEAT, STRAIGHT, VERTICAL SAWCUT TO TIE INTO.
2. PRIOR TO PLACING ASPHALT CONCRETE THE SAWCUT EDGE IS TO HAVE A SS-1 TACK COAT APPLIED.
3. THE DRIVEWAY APPROACH SECTION SHALL BE A MINIMUM OF 2 1/2" ASPHALT CONCRETE ON 4" CLASS II AGGREGATE BASE ROCK FOR RESIDENTIAL APPROACHES AND 4" ASPHALT CONCRETE ON 6" CLASS II AGGREGATE BASE ROCK FOR COMMERCIAL DRIVE APPROACHES. ASPHALT CONCRETE SHALL CONSIST OF AR4000, 1/2" MAXIMUM AGGREGATE ASPHALT CONCRETE. BASE ROCK SHALL BE COMPACTED TO 95%.
4. ASPHALT CONCRETE PLACEMENT AT COUNTY ROAD IS TO BE A FLUSH BUTT JOINT, PLACED TO SAWCUT EDGE OF ROAD AND SLOPED AWAY FROM ROAD.
5. FINISH GRADE IS TO SLOPE AWAY FROM COUNTY ROAD AT A MINIMUM 2% FALL, 5% MAXIMUM FALL.
6. PAVING SURFACE AT BUTT JOINTS SHALL BE SEALED WITH SS-1 EMULSION 4" EACH SIDE OF JOINT AFTER FINAL COMPACTION OF ASPHALT CONCRETE. SEALANT SHALL BE SANDED AS NECESSARY TO PREVENT TRAFFIC PICK UP.
7. ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, CURRENT EDITION.
8. DEVELOPMENT SERVICES SHALL BE NOTIFIED 24 HOURS AFTER PERMIT ISSUE AND PRIOR TO ANY WORK PERFORMED. PHONE NUMBER 822-7400
9. NO ADDITIONAL DRAINAGE WATER DIRECT TO COUNTY RIGHT OF WAY.
10. APPROPRIATE AGENCIES SHALL BE CONTRACTED/NOTIFIED OF WORK PRIOR TO ANY WORK START FOR NECESSARY UTILITY PERMITS AND USA NOTIFICATION (1-800-227-2600) AND MARKINGS BY PERMITTEE/OWNER.



CULVERT DETAIL

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p style="text-align: right;">4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>DRIVEWAY CONNECTION</p>	<p style="text-align: right;">DRAWING NUMBER</p> <p style="text-align: right; font-size: 24pt;">ST-20</p>



NOTE:

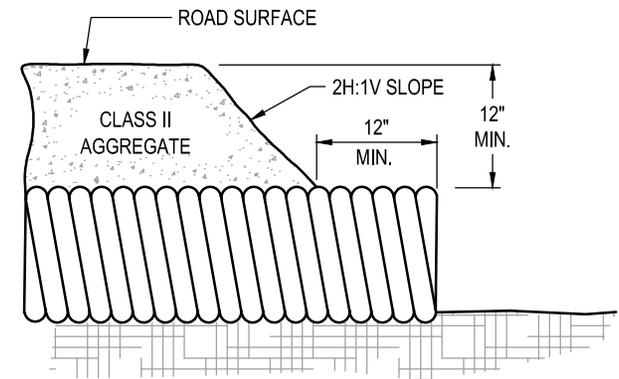
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2. PIPE SECTIONS SHALL BE JOINED TOGETHER SECURELY TO PREVENT INFILTRATION.
3. USED PIPE IS UNACCEPTABLE.
4. PIPE DIAMETER SHALL BE 12" MINIMUM.
5. PIPE PLACEMENT SHALL BE 100' MAXIMUM IN LENGTH. ANY PIPE PLACEMENT MORE THAN 100' IN LENGTH SHALL INSTALL A DRAINAGE INLET OR LEAVE 5' GAP BETWEEN.

LENGTH OF TAPER FOR COUNTY ROADS WITH LESS THAN 8' SHOULDERS

SHOULDER WIDTH	8'	6'	4'	2'	0'
LENGTH OF TAPER	50'	38'	25'	13'	0'

NOTES:

1. PRIOR TO NEW PAVING, EDGE OF EXISTING PAVING AT COUNTY ROAD IS TO HAVE A NEAT, STRAIGHT, VERTICAL SAWCUT TO TIE INTO.
2. PRIOR TO PLACING ASPHALT CONCRETE THE SAWCUT EDGE IS TO HAVE A SS-1 TACK COAT APPLIED.
3. THE DRIVEWAY APPROACH SECTION SHALL BE A MINIMUM OF 2 1/2" ASPHALT CONCRETE ON 4" CLASS II AGGREGATE BASE ROCK FOR RESIDENTIAL APPROACHES AND 4" ASPHALT CONCRETE ON 6" CLASS II AGGREGATE BASE ROCK FOR COMMERCIAL DRIVE APPROACHES. ASPHALT CONCRETE SHALL CONSIST OF AR4000, 1/2" MAXIMUM AGGREGATE ASPHALT CONCRETE. BASE ROCK SHALL BE COMPACTED TO 95%.
4. ASPHALT CONCRETE PLACEMENT AT COUNTY ROAD IS TO BE A FLUSH BUTT JOINT. PLACED TO SAWCUT EDGE OF ROAD AND SLOPED AWAY FROM ROAD.
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8. DEVELOPMENT SERVICES SHALL BE NOTIFIED 24 HOURS AFTER PERMIT ISSUE AND PRIOR TO ANY WORK PERFORMED. PHONE NUMBER 822-7400
9. NO ADDITIONAL DRAINAGE WATER DIRECT TO COUNTY RIGHT OF WAY.
10. APPROPRIATE AGENCIES SHALL BE CONTRACTED/NOTIFIED OF WORK PRIOR TO ANY WORK START FOR NECESSARY UTILITY PERMITS AND USA NOTIFICATION (1-800-227-2600) AND MARKINGS BY PERMITTEE/OWNER.



CULVERT DETAIL

COUNTY OF SUTTER - ENGINEERING

PRIVATE ROAD CONNECTION

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

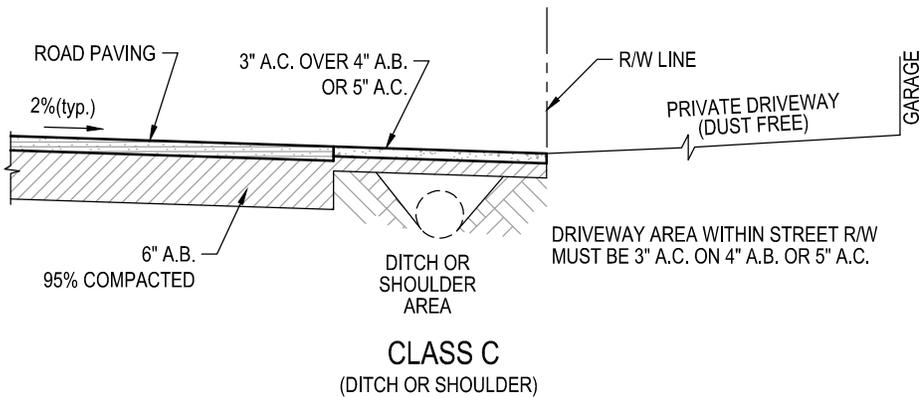
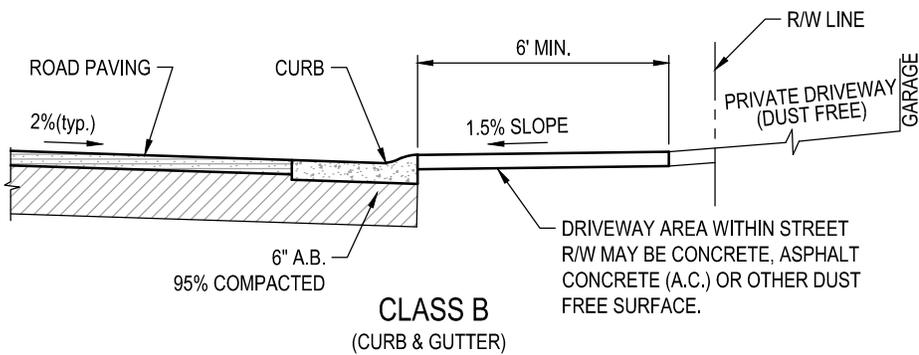
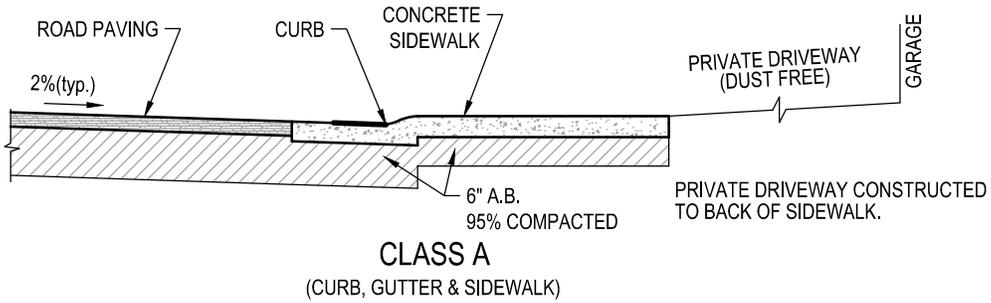
4/3/2025

DATE



DRAWING NUMBER

ST-21



NOTE: SEE SUTTER COUNTY IMPROVEMENT STANDARDS SECTION 4-10 FOR DRIVEWAY REQUIREMENTS.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

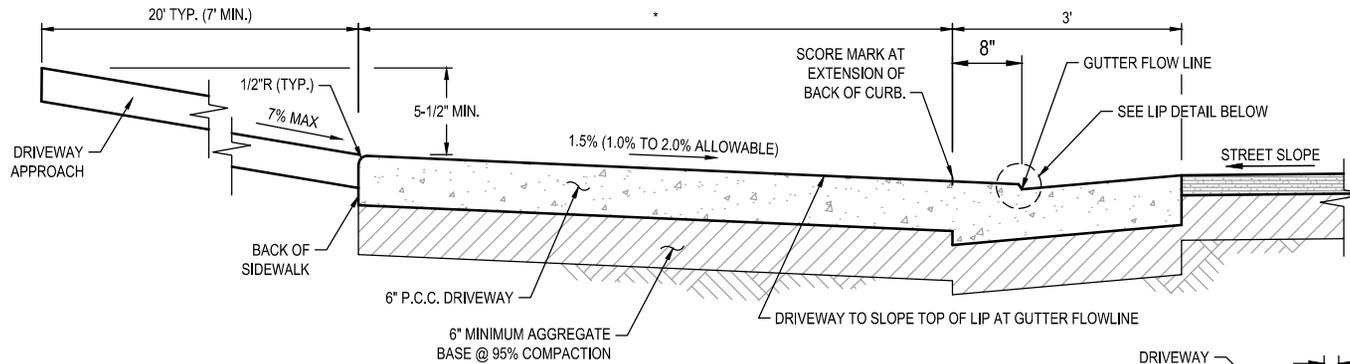
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**TYPICAL STREET SECTIONS
AT RESIDENTIAL DRIVEWAYS**

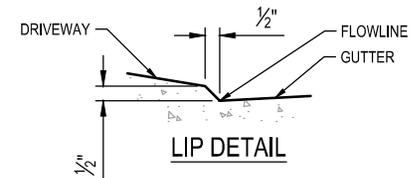


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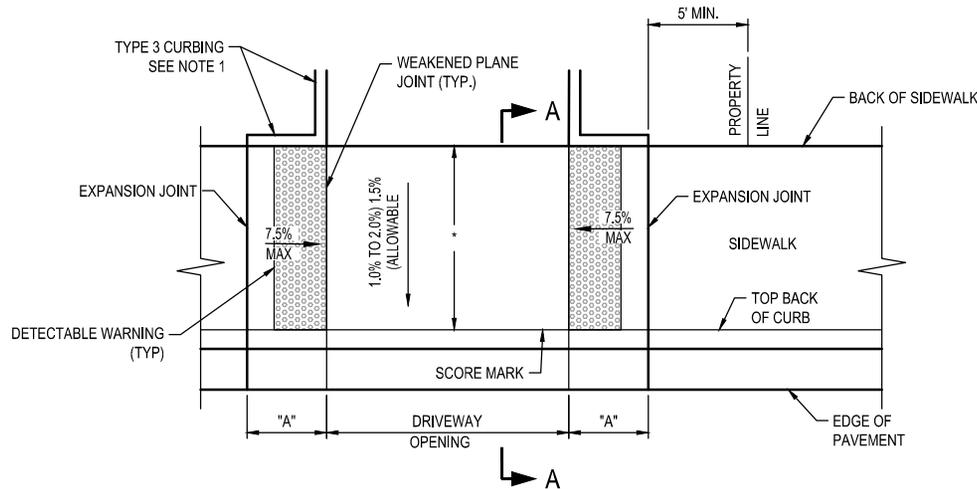
ST-22



TYPICAL DRIVEWAY SECTION A-A



SLOPE OF GUTTER	"A" (APPROX. LENGTH)
0.25% TO 0.65%	6'-0"
> 0.65% TO 1.75%	7'-0"
> 1.75% TO 2.55%	8'-0"



NOTES:

1. TYPE 3 CURBING ON SITE SHALL EXTEND TO WHERE THE DRIVEWAY APPROACH IS A MINIMUM OF FOUR INCHES ABOVE THE BACK OF SIDEWALK ELEVATION AT THE DRIVEWAY.
 2. A 1/2-INCH CONCRETE BATTER SHALL BE PLACED ON ALL CURB LIPS.
 3. SEE STD. DWG. AR-11 FOR ELEMENTS NOT SHOWN HEREON.
- * DRIVEWAY APRON MATCHES SIDEWALK WIDTH

COUNTY OF SUTTER - ENGINEERING

COMMERCIAL DRIVEWAYS
TYPES A-6, A-7 & A-8

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

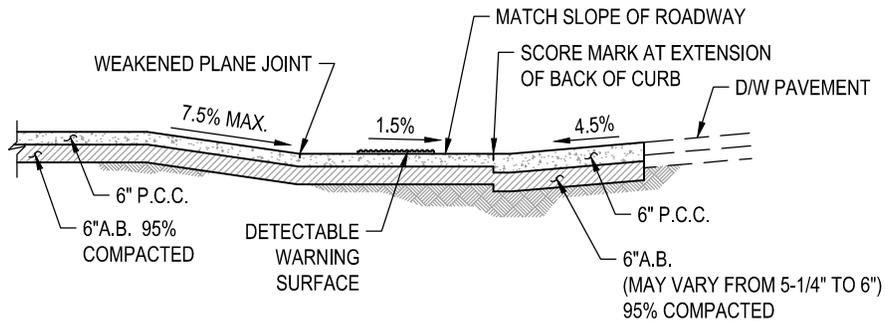
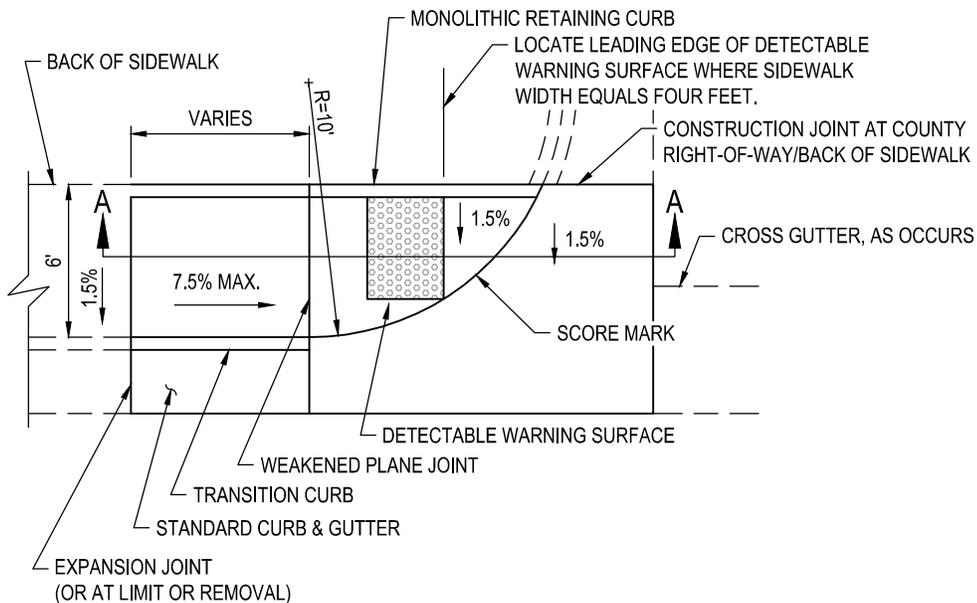
4/3/2025

DATE



DRAWING NUMBER

ST-23



SECTION A-A
N.T.S.

NOTES:

1. NO PULL BOX, UTILITY VAULT, UTILITY POLE, MANHOLE OR SIMILAR APPURTENANCE SHALL BE LOCATED WITHIN SIDEWALK RAMP AREA.
2. IT IS DESIRABLE TO LOCATE ALL DRAIN INLETS OUT OF SIDEWALK RAMP AREA. USE OF DRAIN INLET WITHIN RAMP AREA REQUIRES SPECIAL DESIGN OF INLETS.

COUNTY OF SUTTER - ENGINEERING

**SIDEWALK RAMP FOR A-7 DRIVEWAYS
WITHOUT ADDITIONAL R/W
(NOT FOR NEW CONSTRUCTION)**

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

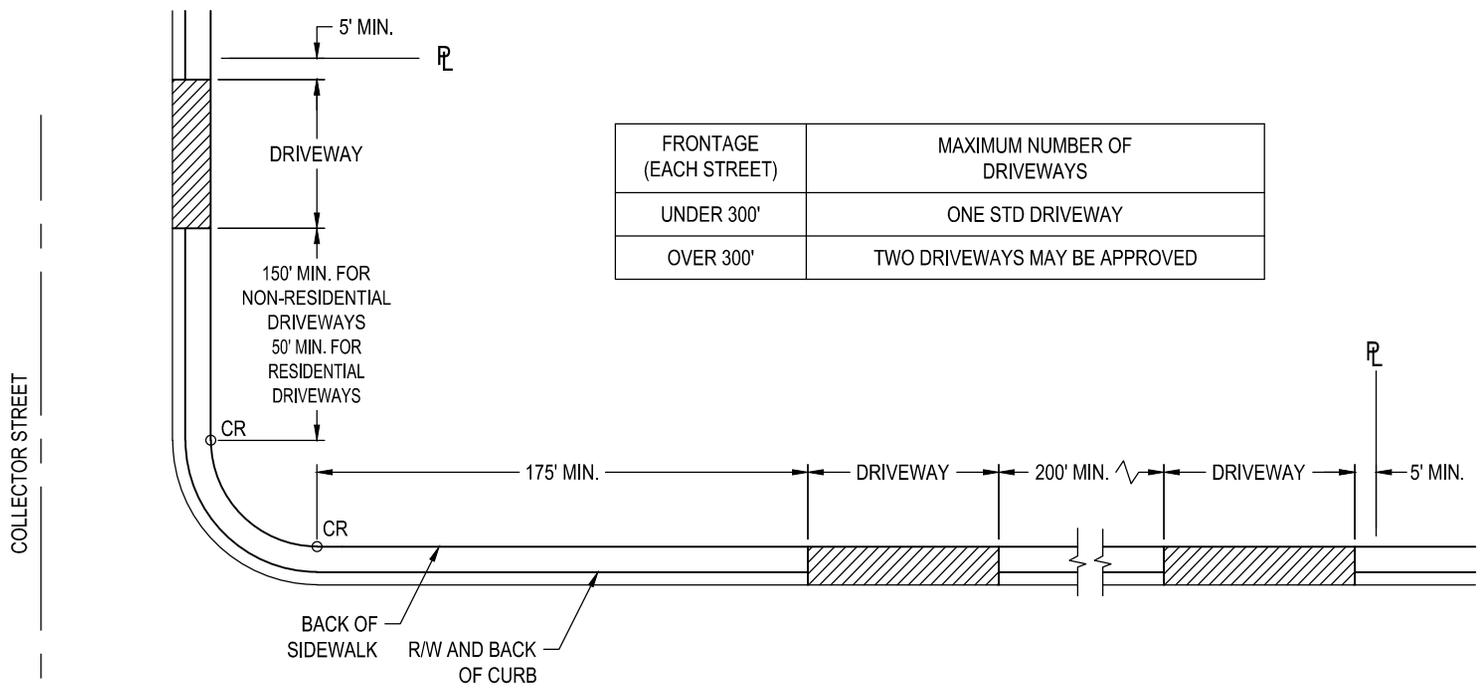
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DATE



DRAWING NUMBER

ST-24

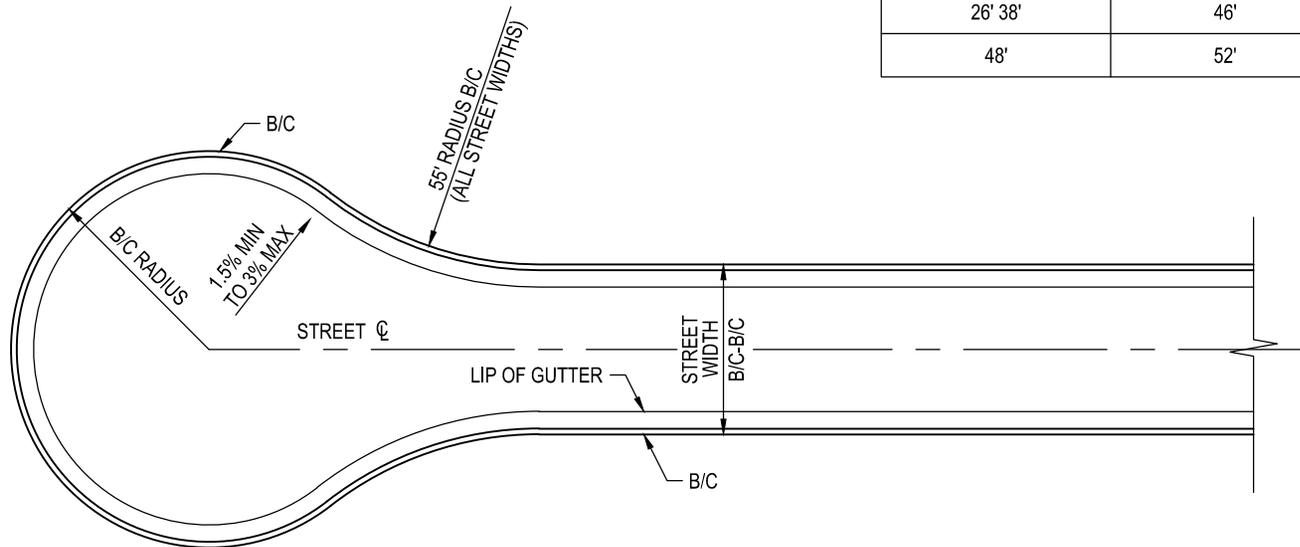


FRONTAGE (EACH STREET)	MAXIMUM NUMBER OF DRIVEWAYS
UNDER 300'	ONE STD DRIVEWAY
OVER 300'	TWO DRIVEWAYS MAY BE APPROVED

- NOTES:
- DRIVEWAYS ON ARTERIAL AND THOROUGHFARE STREETS SHALL HAVE A MINIMUM CLEAR SPACING OF 200' BETWEEN DRIVEWAYS. LESSER SPACING MAY BE APPROVED BY THE DIRECTOR FOR SMALL LOTS WHERE A MINIMUM OF ONE DRIVEWAY PER STREET FRONTAGE WILL BE APPROVED.
 - FOR ADDITIONAL DRIVEWAY REQUIREMENTS SEE SECTION 4-7 OF THE COUNTY IMPROVEMENT STANDARDS.

<p>COUNTY OF SUTTER - ENGINEERING</p> <p>DRIVEWAY LOCATION STANDARDS</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p> <p>DEVELOPMENT SERVICES DIRECTOR DATE</p>
	<p style="text-align: right;">DRAWING NUMBER</p> <p>ST-25</p> 

BULB RADIUS REQUIREMENTS	
STREET R/W WIDTH	B/C RADIUS @ BULB
26' 38'	46'
48'	52'

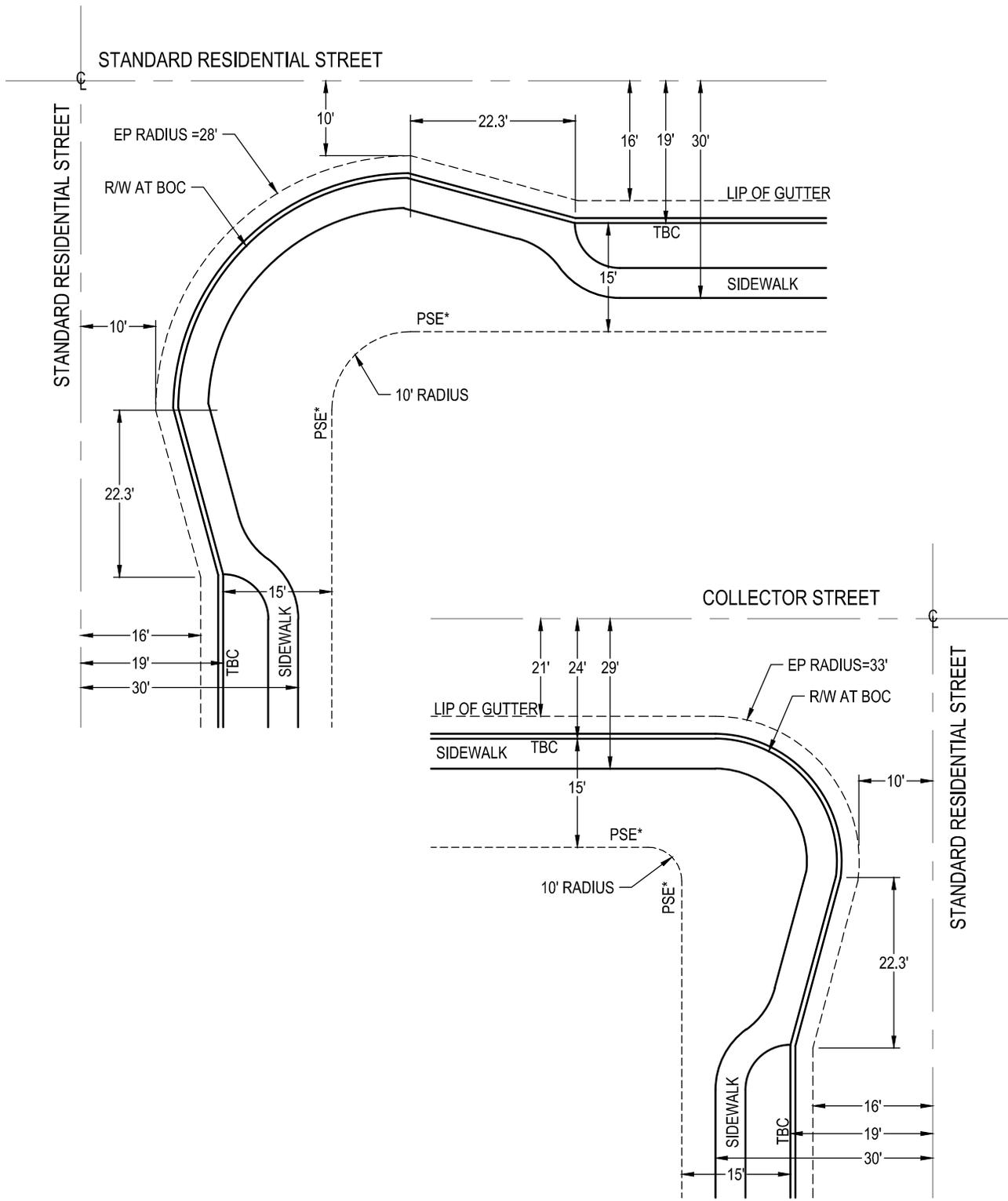


NOTES:

1. A STANDARD W14-1 ("DEAD END") SIGN MAY BE REQUIRED AT THE ENTRANCE TO THE CUL-DE-SAC (SEE SECTION 4-27).
2. NO CUL-DE-SAC SHALL EXCEED 600 FEET IN LENGTH, MEASURED AS THE DISTANCE FROM THE CENTERLINE OF THE INTERSECTING STREET TO THE CENTER OF THE CUL-DE-SAC BULB.

<p>COUNTY OF SUTTER - ENGINEERING</p> <p>CUL-DE-SAC</p>	<p>APPROVED BY:</p> 	<p>4/3/2025</p>
	<p>DEVELOPMENT SERVICES DIRECTOR</p>	<p>DATE</p>
		<p>DRAWING NUMBER</p> <p>ST-26</p>





*PUBLIC SERVICE EASEMENT

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:


4/3/2025

DEVELOPMENT SERVICES DIRECTOR

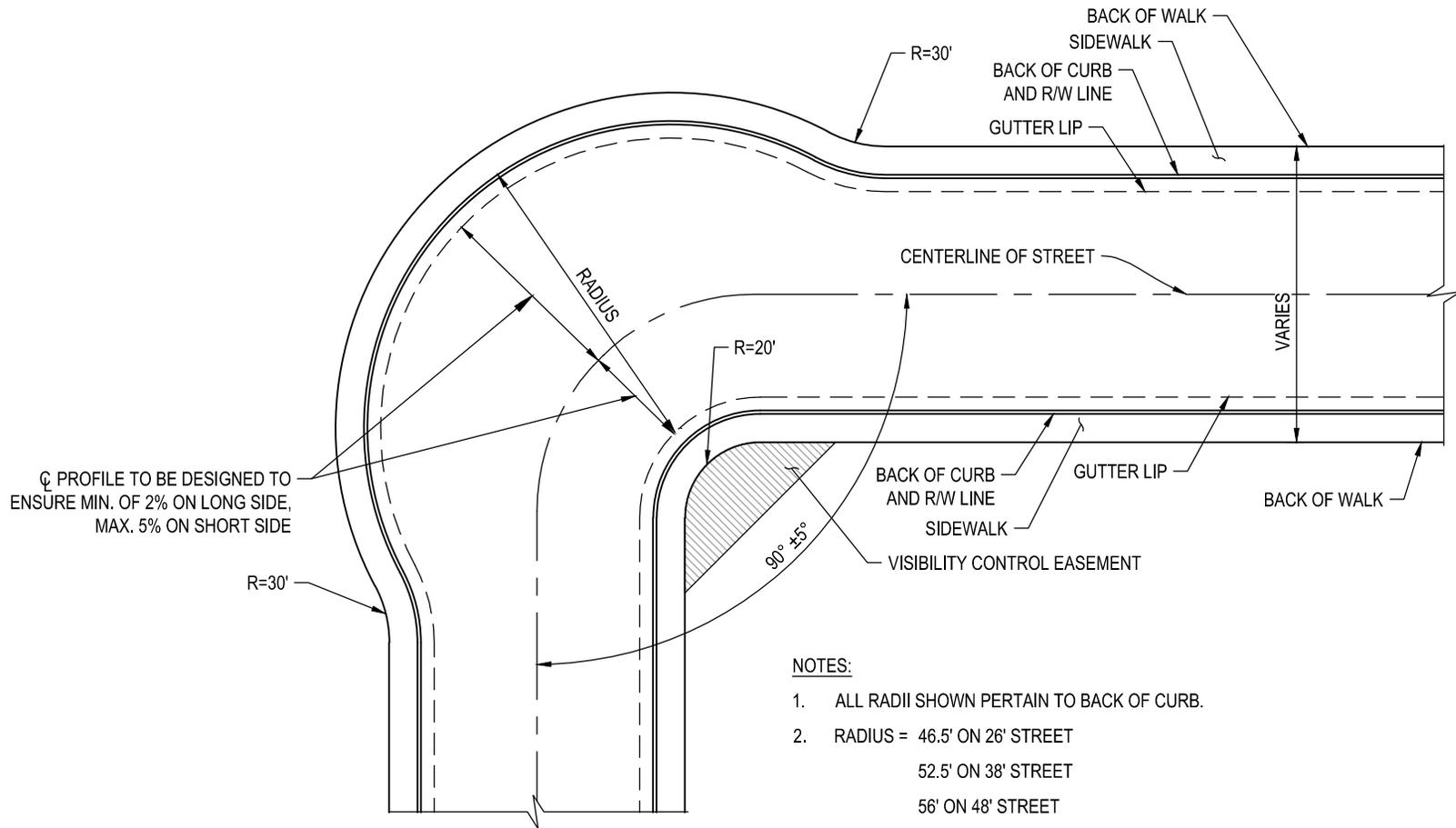
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BULB-OUT DETAIL



DRAWING NUMBER

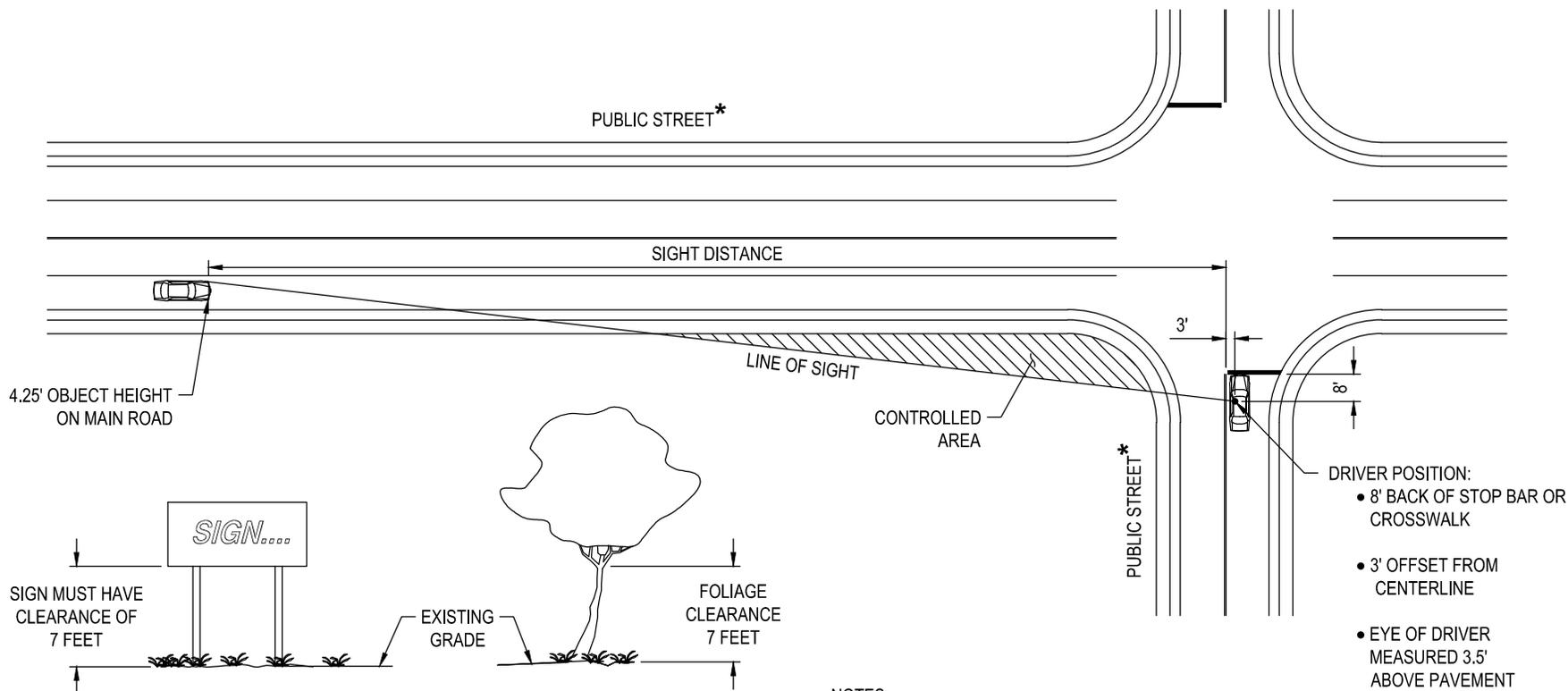
ST-27



NOTES:

1. ALL RADII SHOWN PERTAIN TO BACK OF CURB.
2. RADIUS = 46.5' ON 26' STREET
52.5' ON 38' STREET
56' ON 48' STREET
3. INTERSECTION ANGLE SHALL BE $90^\circ \pm 5^\circ$.
4. SHADED AREA SHALL HAVE VISIBILITY CONTROL EASEMENT IN ACCORDANCE WITH SECTION 4-8 OF THE COUNTY IMPROVEMENT STANDARDS AND STANDARD DRAWING ST-29 AND ST-30 (PERMANENT BUILDINGS EXCEPTED WITHIN SETBACK LINE).

COUNTY OF SUTTER - ENGINEERING	APPROVED BY: DEVELOPMENT SERVICES DIRECTOR
90 DEGREE INTERSECTION ELBOW	<div style="display: flex; justify-content: space-between;"> 4/3/2025 DATE </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: right;"> DRAWING NUMBER ST-28 </div> </div>



NOTES:

1. SHOW LINE OF SIGHT AND SIGHT DISTANCE FOR ALL APPROACHES OF EACH INTERSECTION.
2. SIGHT DISTANCE SHALL COMPLY WITH SUTTER COUNTY IMPROVEMENT STANDARDS SECTION 4-8.

* FOR STREETS 48 FEET OR WIDER MEASURED FROM BACK OF CURB TO BACK OF CURB, OR AS REQUIRED BY THE DIRECTOR.

COUNTY OF SUTTER - ENGINEERING

MINIMUM SIGHT DISTANCE AT INTERSECTIONS AND NON-RESIDENTIAL DRIVEWAYS

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

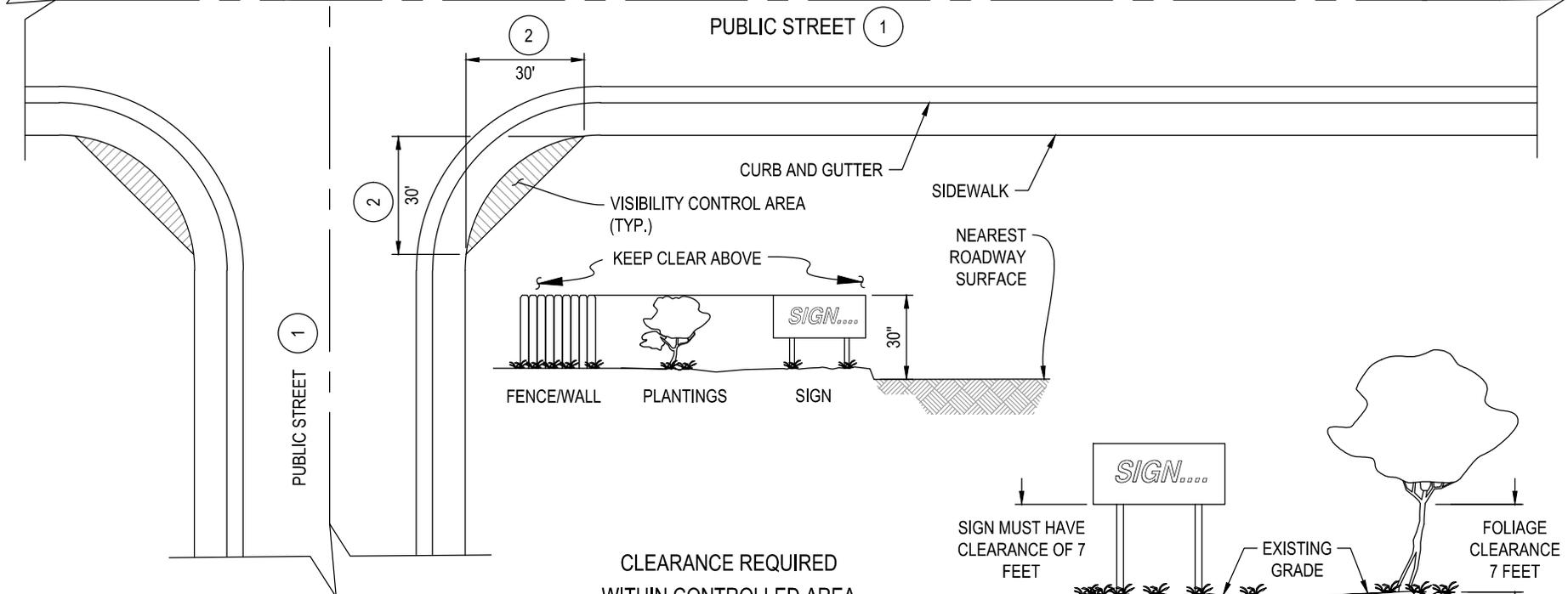
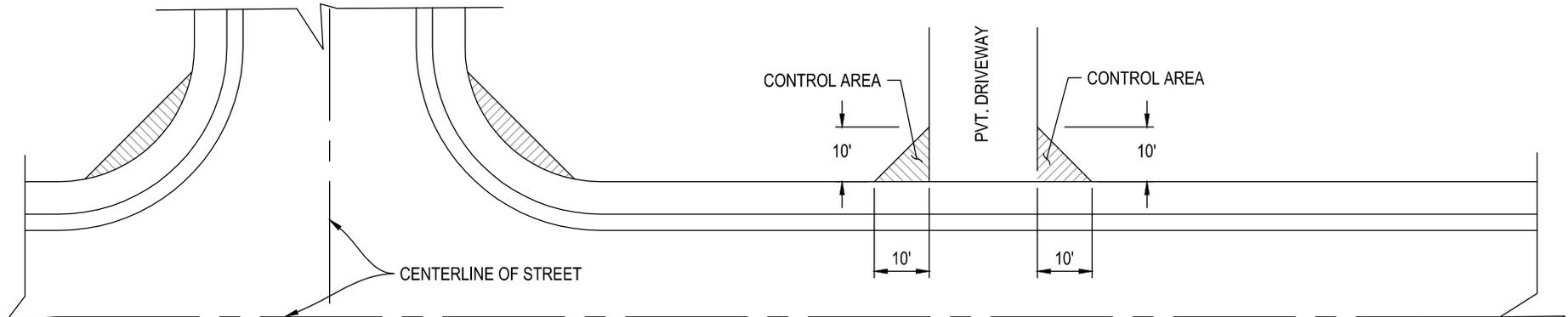
4/3/2025

DATE



DRAWING NUMBER

ST-29



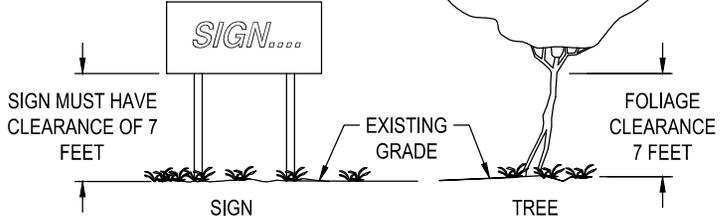
- # CONSTRUCTION NOTES**
- 1 FOR STREETS LESS THAN 48 FEET MEASURED FROM BACK OF CURB TO BACK OF CURB.
 - 2 VISIBILITY CONTROL AREAS MAY BE REDUCED TO A 20' X 20' TRIANGLE AT STOP OR SIGNAL CONTROLLED INTERSECTIONS.

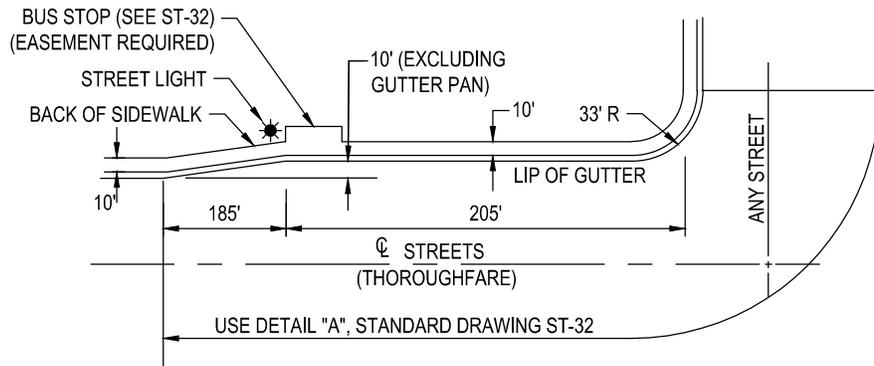
COUNTY OF SUTTER - ENGINEERING

VISIBILITY REQUIREMENTS

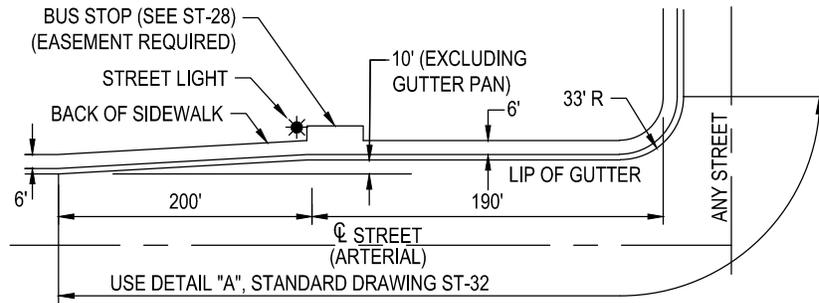
APPROVED BY: *ULP* 4/3/2025
 DEVELOPMENT SERVICES DIRECTOR DATE
 SUTTER COUNTY DRAWING NUMBER
ST-30

CLEARANCE REQUIRED WITHIN CONTROLLED AREA

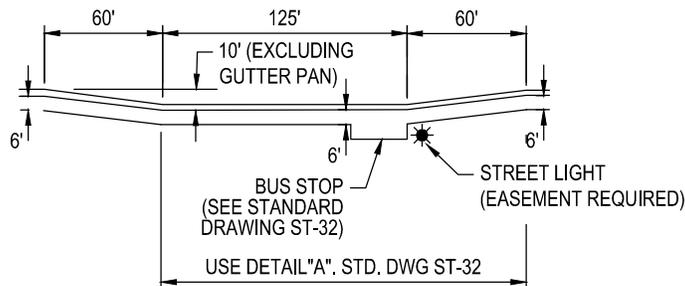




BUS TURNOUT ON THOROUGHFARE STREETS



BUS TURNOUT ON ARTERIAL STREETS



TYPICAL MID-BLOCK BUS TURNOUT

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

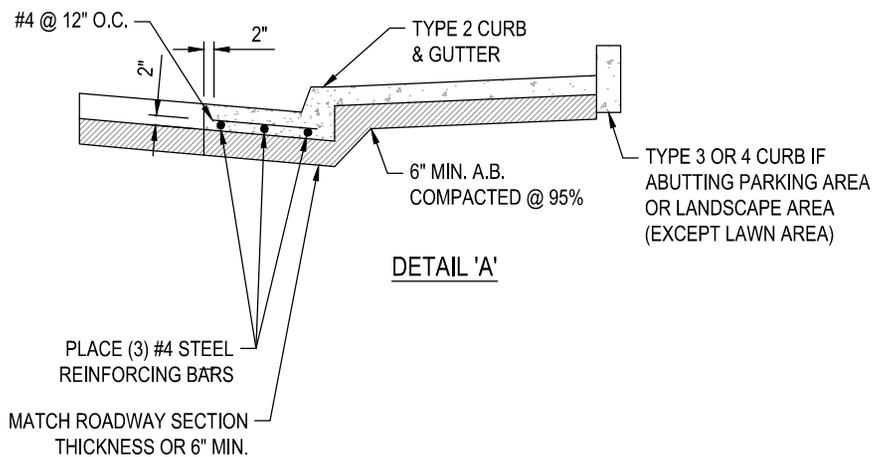
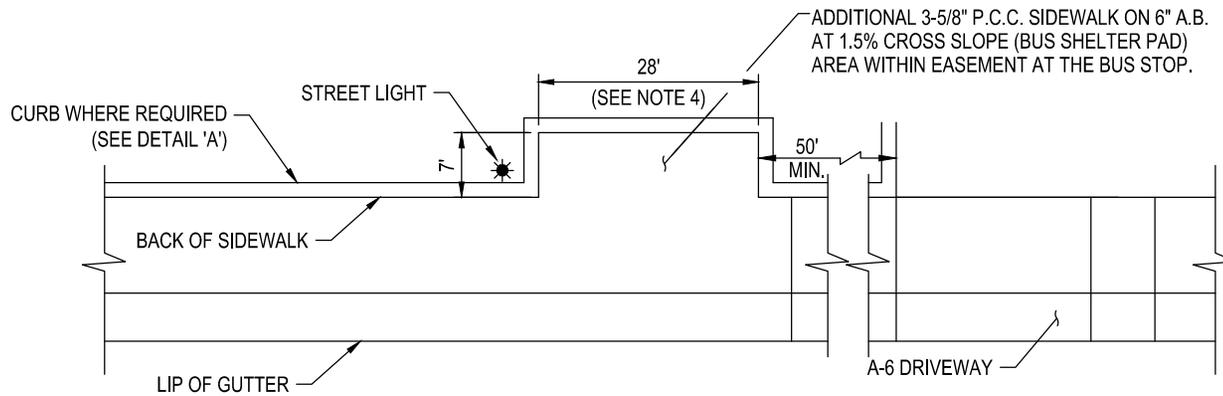
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BUS TURNOUTS



DRAWING NUMBER

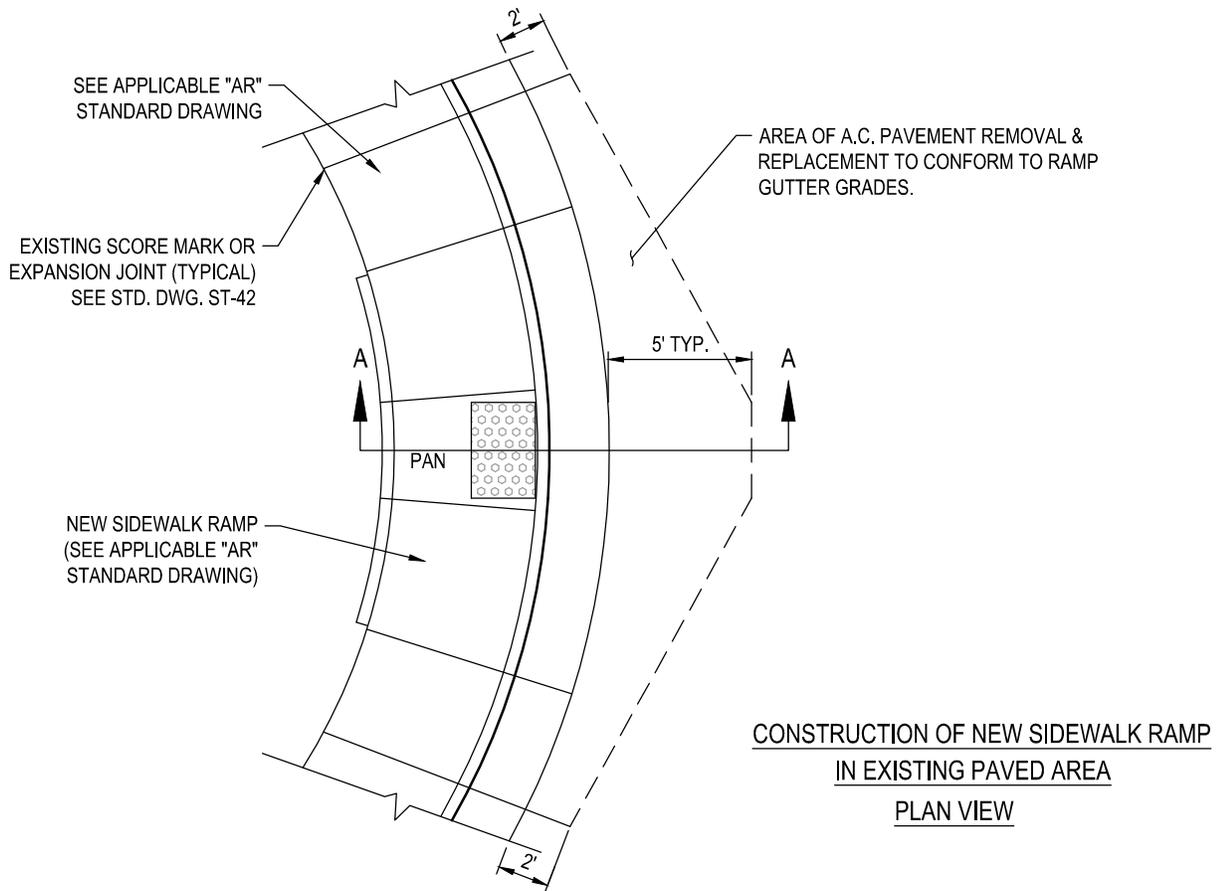
ST-31



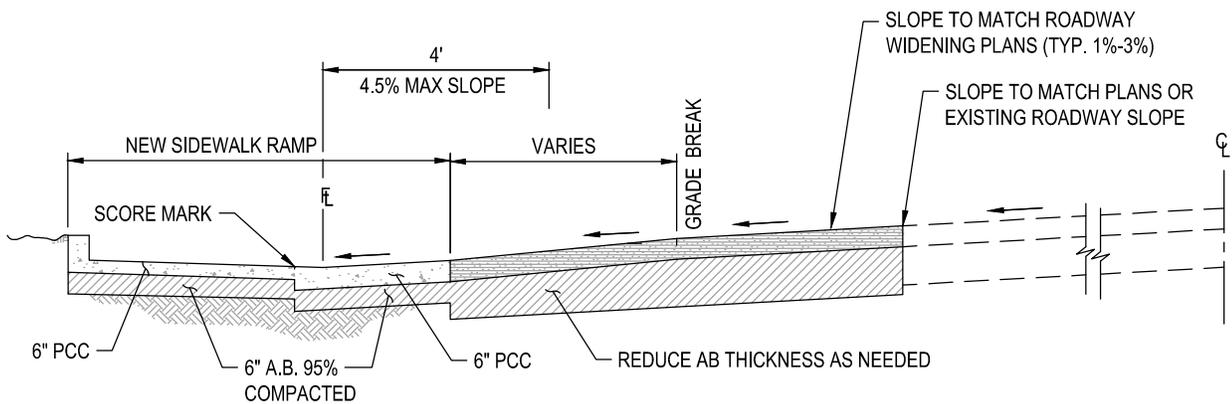
NOTES:

1. DETAIL 'A' SECTION SHALL BE USED FOR 100 FEET EACH SIDE OF BUS STOPS WITHOUT TURNOUTS. THE REINFORCING STEEL SHALL BE CONTINUED ACROSS ANY DRIVEWAYS WITHIN THE 100 FOOT DISTANCE FROM THE BUS STOP.
2. SEE STANDARD DRAWING ST-31 FOR APPLICATIONS OF DETAIL 'A' AT BUS STOP TURNOUTS.
3. TRANSITION FROM REINFORCED TYPE 2 CURB TO ABUTTING CURB AND GUTTER SECTION IN 5' BEYOND LIMITS OF BUS STOP AREA AS SHOWN ON DWG. ST-31.
4. PAD LENGTH MAY BE 14' AT MINOR STREET INTERSECTIONS & MID. BLOCK LOCATIONS.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE: 4/3/2025</p>
<p>BUS STOP DETAILS</p>	<p>DRAWING NUMBER  ST-32</p>



**CONSTRUCTION OF NEW SIDEWALK RAMP
IN EXISTING PAVED AREA
PLAN VIEW**



**CONSTRUCTION OF NEW SIDEWALK RAMP
WITH PAVEMENT WIDENING
SECTION A - A**

COUNTY OF SUTTER - ENGINEERING

**A.C. CONFORMS TO NEW SIDEWALK
RAMP RE-CONSTRUCTION**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

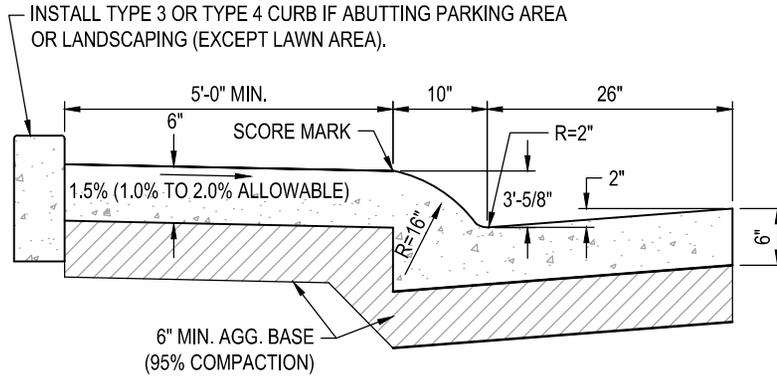
4/3/2025

DATE

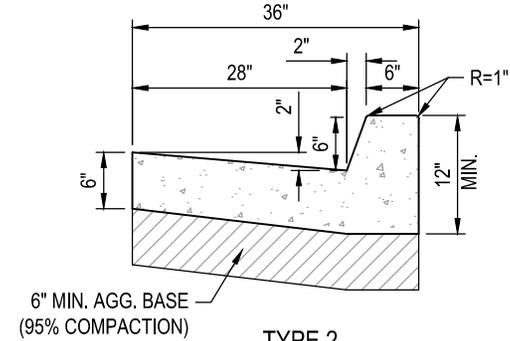


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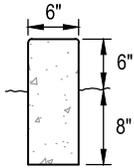
ST-33



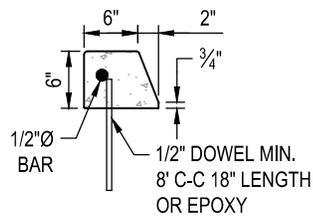
TYPE 1A & TYPICAL SIDEWALK



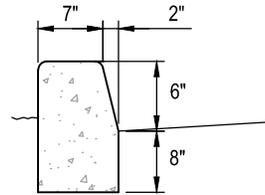
TYPE 2



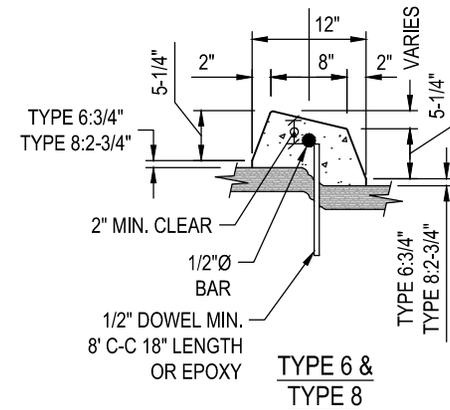
TYPE 3



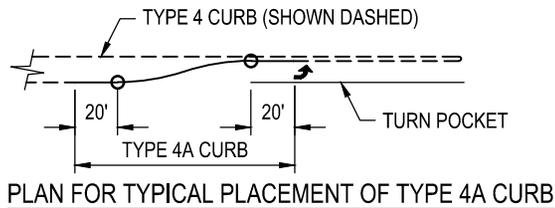
TYPE 4 & 4A
(4A REQUIRES BOTH DOWELS AND EPOXY)



TYPE 5



TYPE 6 & TYPE 8



PLAN FOR TYPICAL PLACEMENT OF TYPE 4A CURB

NOTES:
SEE CALTRANS STANDARD SPECIFICATIONS FOR REQUIREMENT FOR EXPANSION JOINTS, WEAKENED PLANE JOINTS AND SCORE MARKS.

1/2" RADIUS ON EXPOSED EDGES UNLESS NOTED OTHERWISE.

SEE ST-32 FOR BUS STOP DETAIL

COUNTY OF SUTTER - ENGINEERING

TYPICAL CURB & GUTTER SECTIONS

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

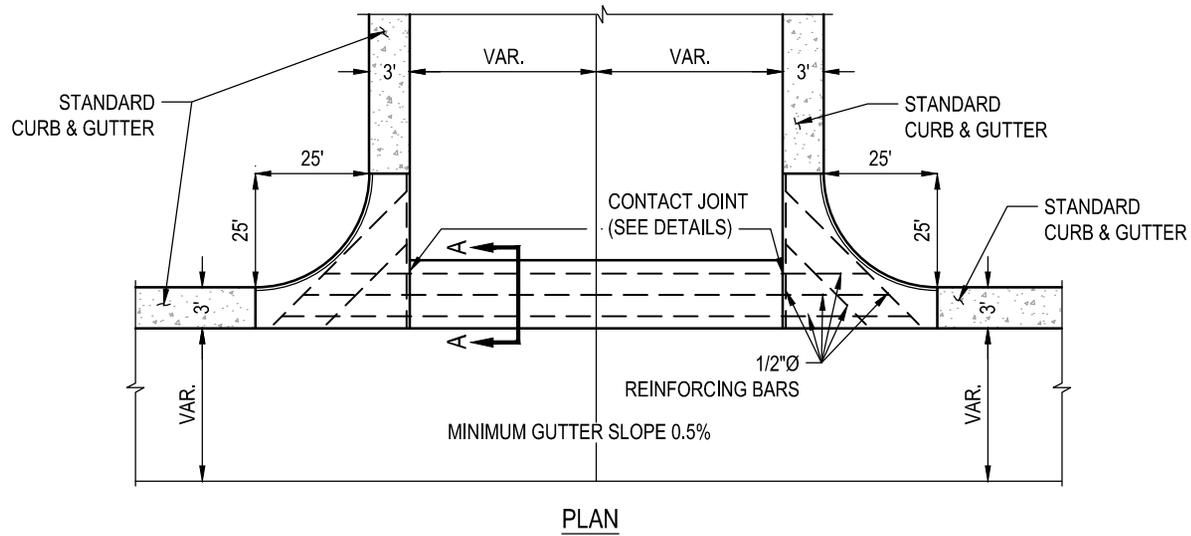
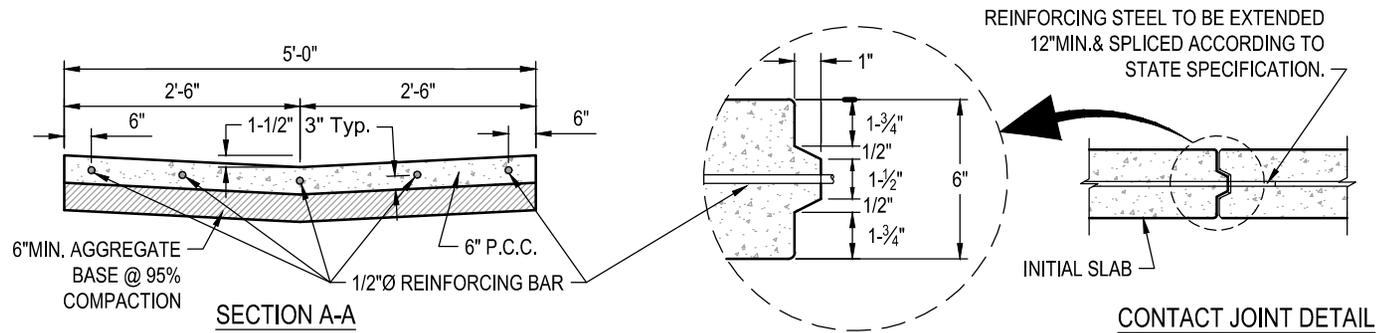
4/3/2025

DATE



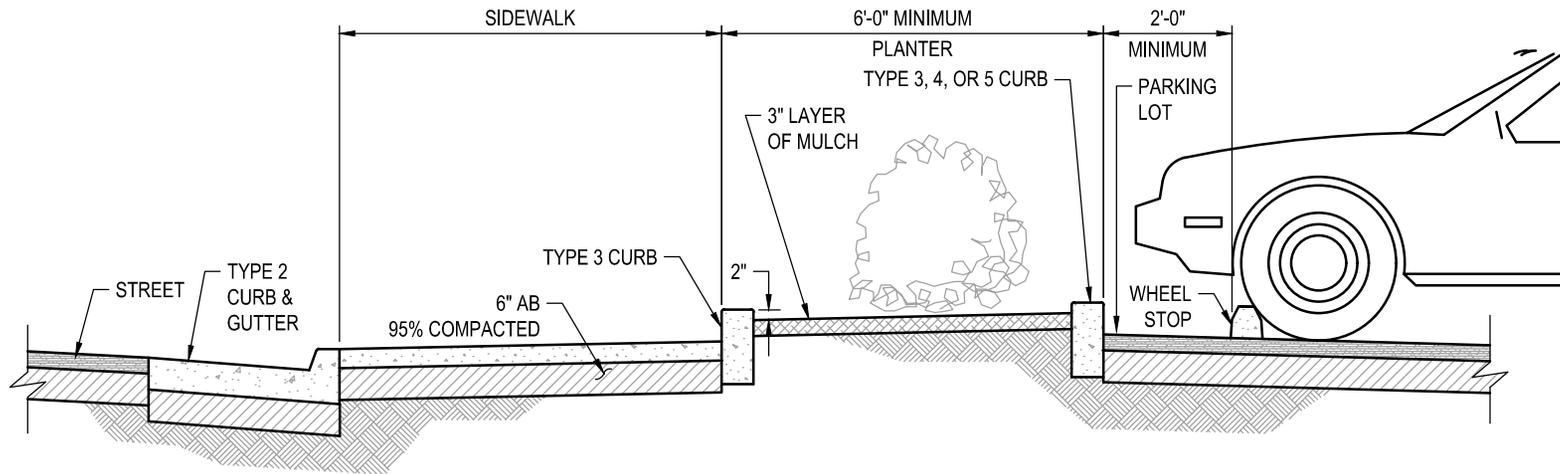
DRAWING NUMBER

ST-34



NOTE:
 6" MIN AGGREGATE BASE (95% RELATIVE COMPACTION)
 TO BE PLACED WITHIN LIMITS OF CROSS GUTTER.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>CROSS GUTTER</p>	<p>DRAWING NUMBER  ST-35</p>

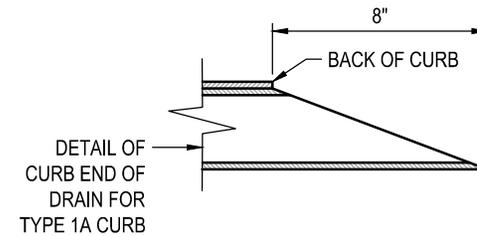
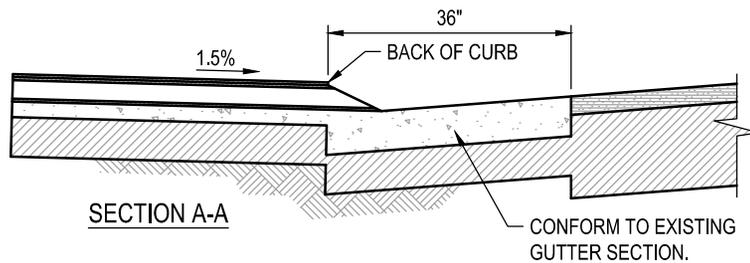
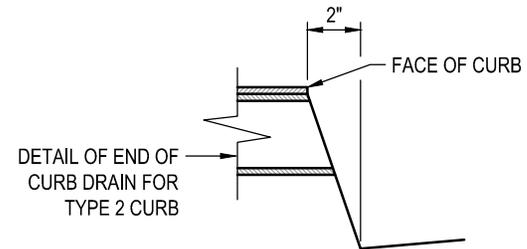
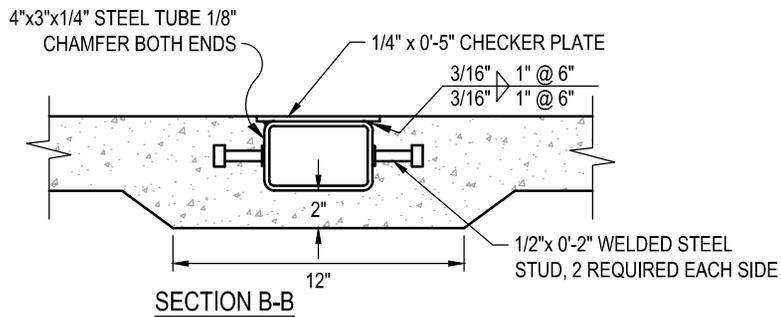


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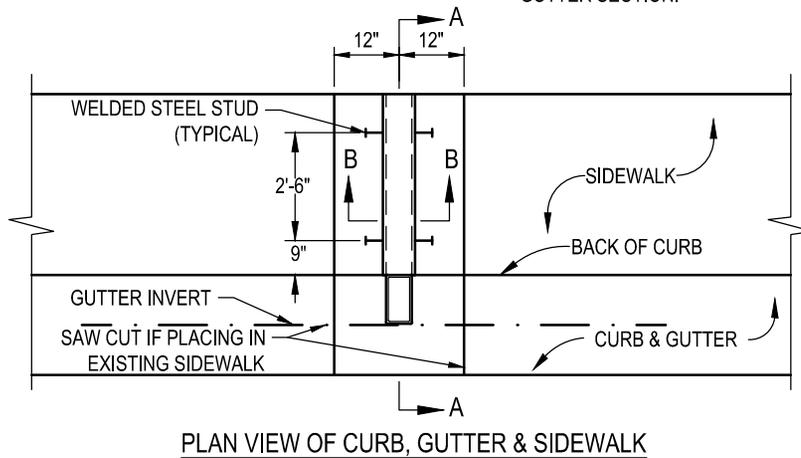
1. FOR 68' AND 78' STREET WIDTHS AND COMMERCIAL DEVELOPMENT.
2. SEE SECTION 4-16 FOR REQUIREMENTS.
3. TYPE 3 CURB AT THE BACK OF SIDEWALK MAY BE OMITTED IF LAWN IS PLANTED TO THE BACK OF SIDEWALK.
4. SIDEWALKS SHALL BE SEPARATED ON ALL 68' AND 78' STREETS

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p style="text-align: center;"><i>NLPJ</i></p> <p>DEVELOPMENT SERVICES DIRECTOR</p> <p style="text-align: right;">4/3/2025</p>
<p>BARRIER CURB DETAIL</p>	<p style="text-align: right;">DATE</p> <p style="text-align: right;">DRAWING NUMBER</p> <p style="text-align: right;">ST-36</p>





NOTE:
GALVANIZE AFTER FABRICATION



COUNTY OF SUTTER - ENGINEERING

**UNDER
SIDEWALK DRAIN**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

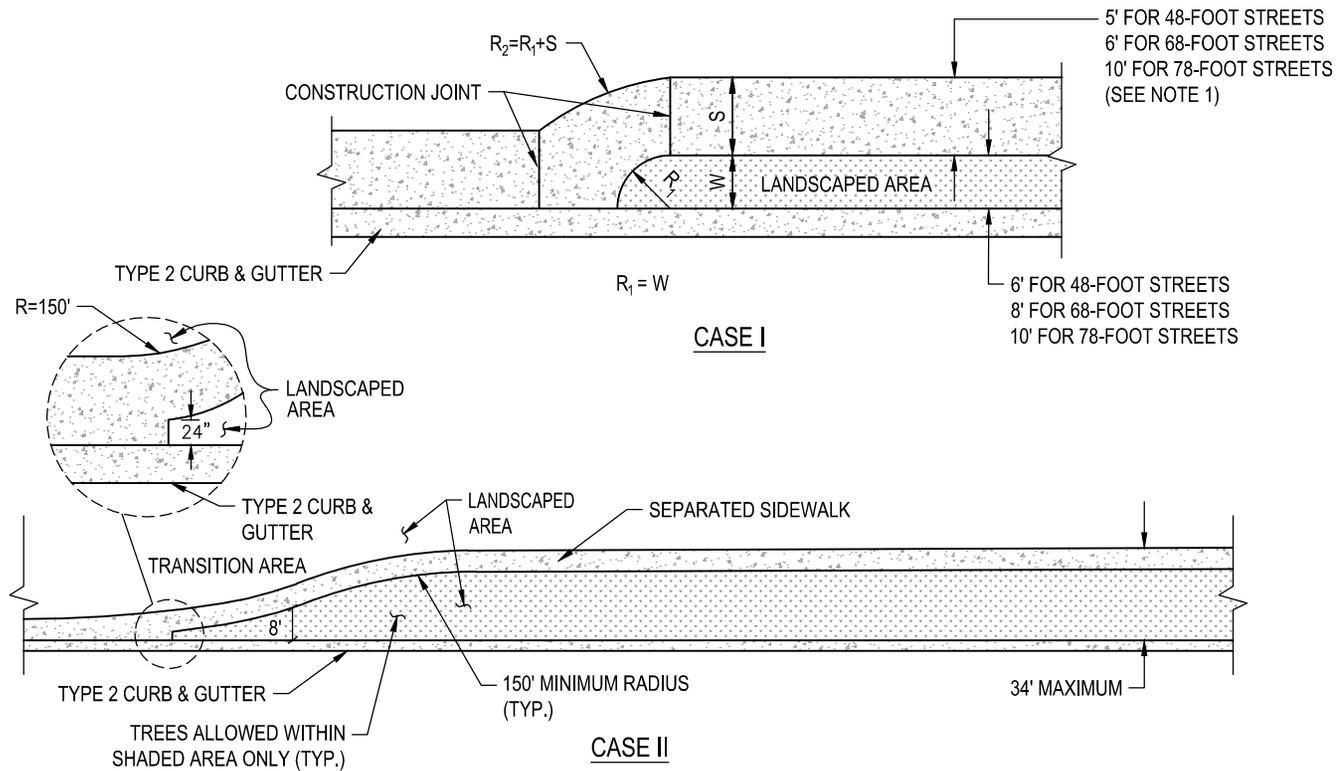
4/3/2025

DATE



DRAWING NUMBER

ST-37



NOTE:

1. ON THOROUGHFARES, ARTERIALS, AND WHERE 6 FOOT SIDEWALKS ARE REQUIRED BY THE IMPROVEMENT STANDARDS. 5 FOOT MINIMUM ALL OTHER LOCATIONS.
2. CROSS SLOPE OF SEPARATED SIDEWALK TO BE 1.5% (1.0% TO 2.0% ALLOWABLE). LONGITUDINAL GRADE NOT TO EXCEED 5%.
3. USE OF SEPARATED SIDEWALKS WILL REQUIRE STREET LIGHTING REVIEW IN RELATION TO LANDSCAPE PLAN, AND MAY REQUIRE ADDITIONAL SIDEWALK LIGHTING.
4. COMPACTION UNDER SEPARATED SIDEWALK AREA AT 90%, UNDER ATTACHED AREA AT 95%.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULPJ

4/3/2025

DEVELOPMENT SERVICES DIRECTOR

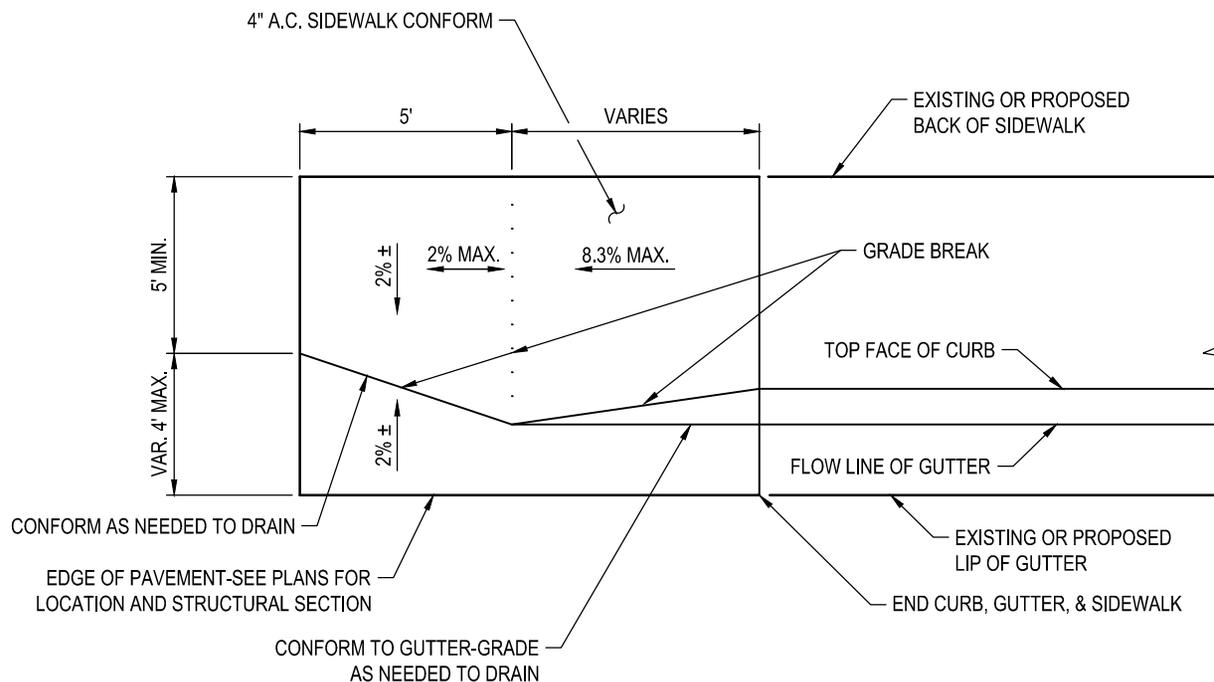
DATE

**SEPARATED (OR DETACHED)
SIDEWALK TRANSITION**



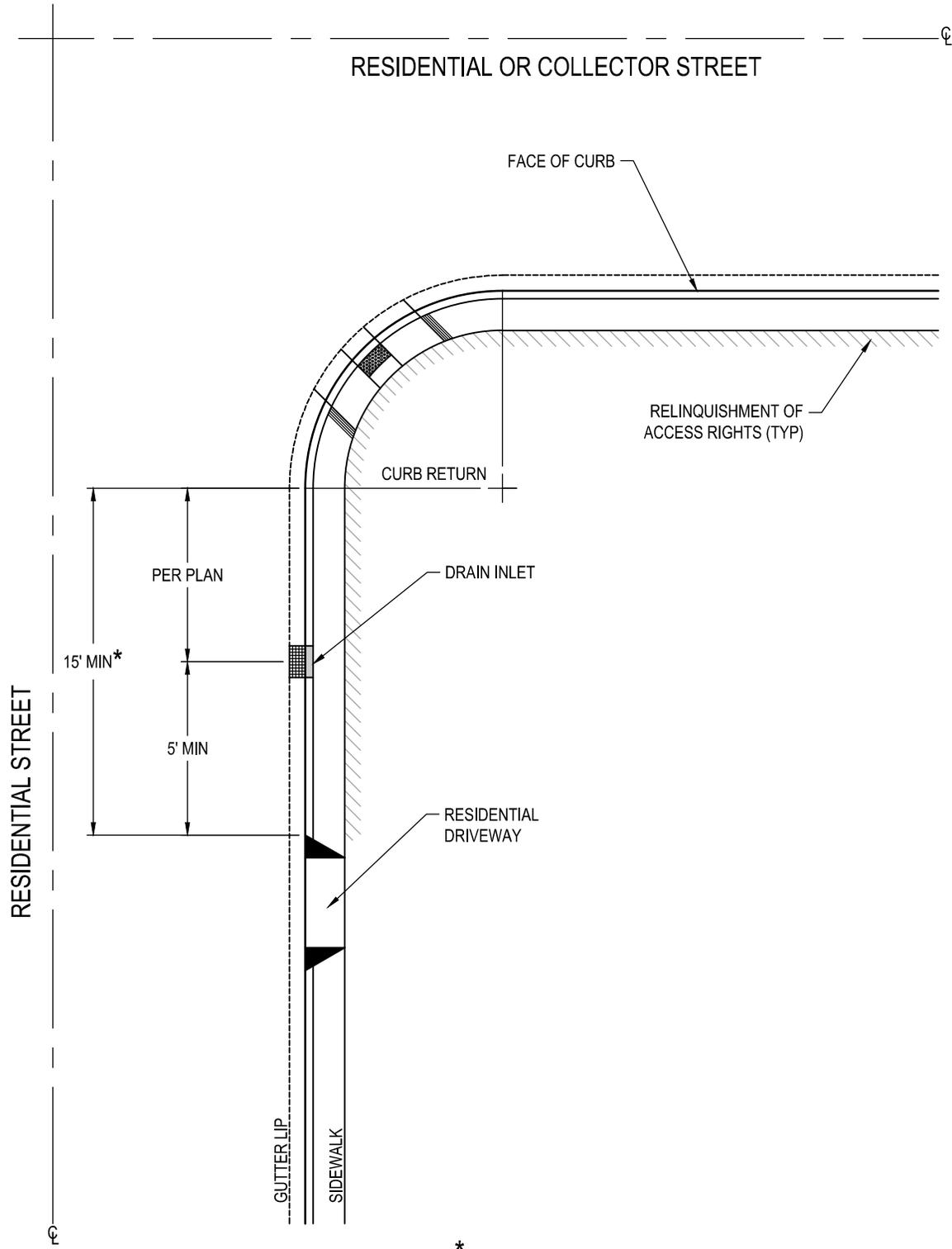
DRAWING NUMBER

ST-38



NOTE:
 A SIDEWALK BARRICADE SHALL BE REQUIRED IF THE END OF THE A.C. SIDEWALK CONFORM ABUTS A DRAINAGE DITCH OR ANY OTHER SURFACE THAT WOULD POSE A HAZARD TO PEDESTRIANS.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  <small>4/3/2025</small></p>
<p>A.C. SIDEWALK CONFORM</p>	<p>DEVELOPMENT SERVICES DIRECTOR DATE</p> <p> DRAWING NUMBER</p> <p>ST-39</p>



* THE 15' DIMENSION MAY BE REDUCED AS DETERMINED BY THE DIRECTOR WHERE LOTS ARE LESS THAN 56' WIDE.

COUNTY OF SUTTER - ENGINEERING

**RESIDENTIAL CORNER LOT DRIVEWAY
LOCATION
RESIDENTIAL OR COLLECTOR STREETS**

APPROVED BY:
ULP
DEVELOPMENT SERVICES DIRECTOR

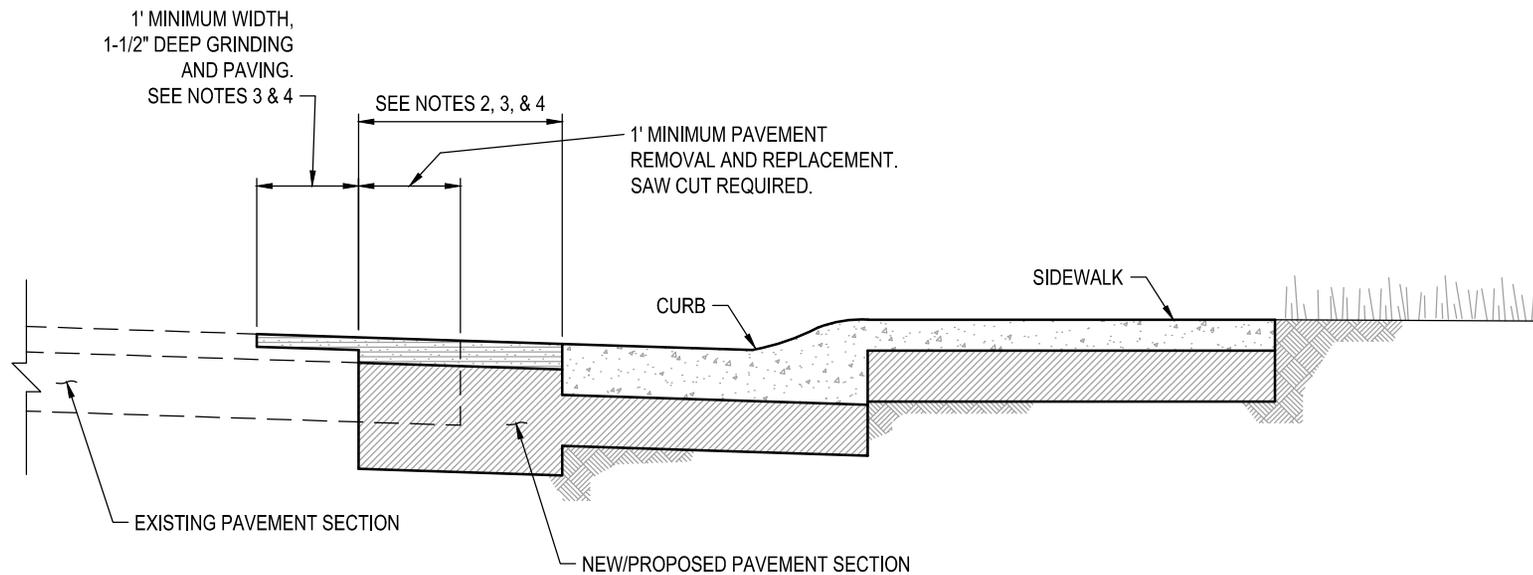
4/3/2025

DATE



DRAWING NUMBER

ST-40

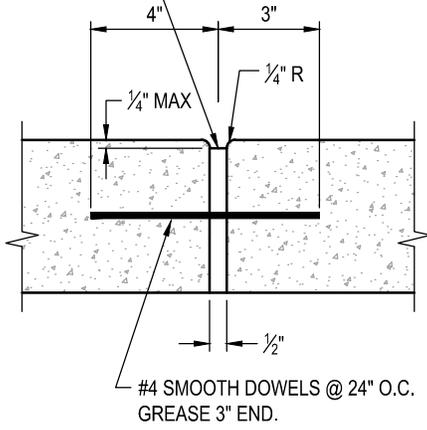


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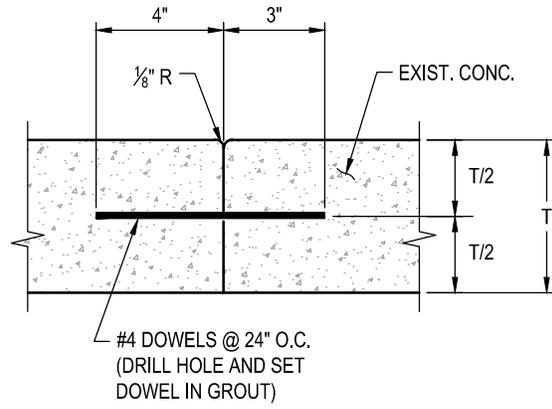
1. THIS DETAIL IS APPLICABLE TO PAVEMENT WIDENING PROJECTS AND TO PAVEMENT EXTENSION PROJECTS (WHERE NEW ROAD CONNECTS TO EXISTING PAVEMENT).
2. 2' MINIMUM DISTANCE EXCEPT WHEN INSIDE A BIKE LANE. DISTANCE SHALL BE FROM LIP OF CURB TO FULL EXTENT OF THE BIKE LANE.
3. GRINDING AND PAVING JOINT SHALL BE LOCATED ALONG GUTTER PATH, LANE PATH, OR CENTER OF LANES SHALL NOT BE PLACED IN WHEEL PATH
4. ADDITIONAL GRINDING AND PAVING MAY BE REQUIRED IF WITHIN TWO (2) FEET OF A SURFACE CRACK OR A LOCATION UNSUITABLE TO PAVE AGAINST AT THE INSPECTOR'S DISCRETION, AT THE CONTRACTOR'S EXPENSE.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>PAVEMENT WIDENING DETAIL</p>	<p>DRAWING NUMBER  ST-41</p>

EXPANSION JOINT FILLER MATERIAL (MATCH FULL CONCRETE SECTION)

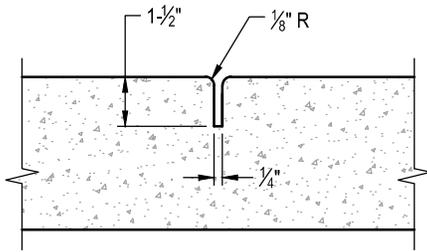


EXPANSION JOINT

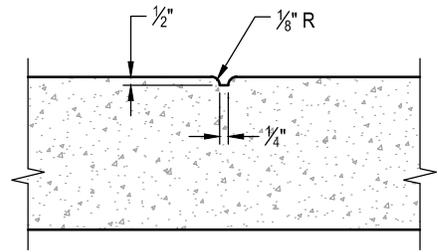


SIDEWALK CONTACT JOINT

(USE WHERE NEW CONSTRUCTION OF S/W AND OR CURB & GUTTER ABUTS EXISTING IMPROVEMENTS.)



WEAKENED PLANE JOINT



SCORE MARK

NOTE:
JOINT SPACING PER CALTRANS STANDARD SPECIFICATIONS.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:
ULPJ
DEVELOPMENT SERVICES DIRECTOR

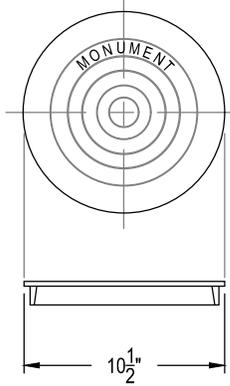
4/3/2025
DATE

**STANDARD CONCRETE
JOINT DETAILS**



DRAWING NUMBER

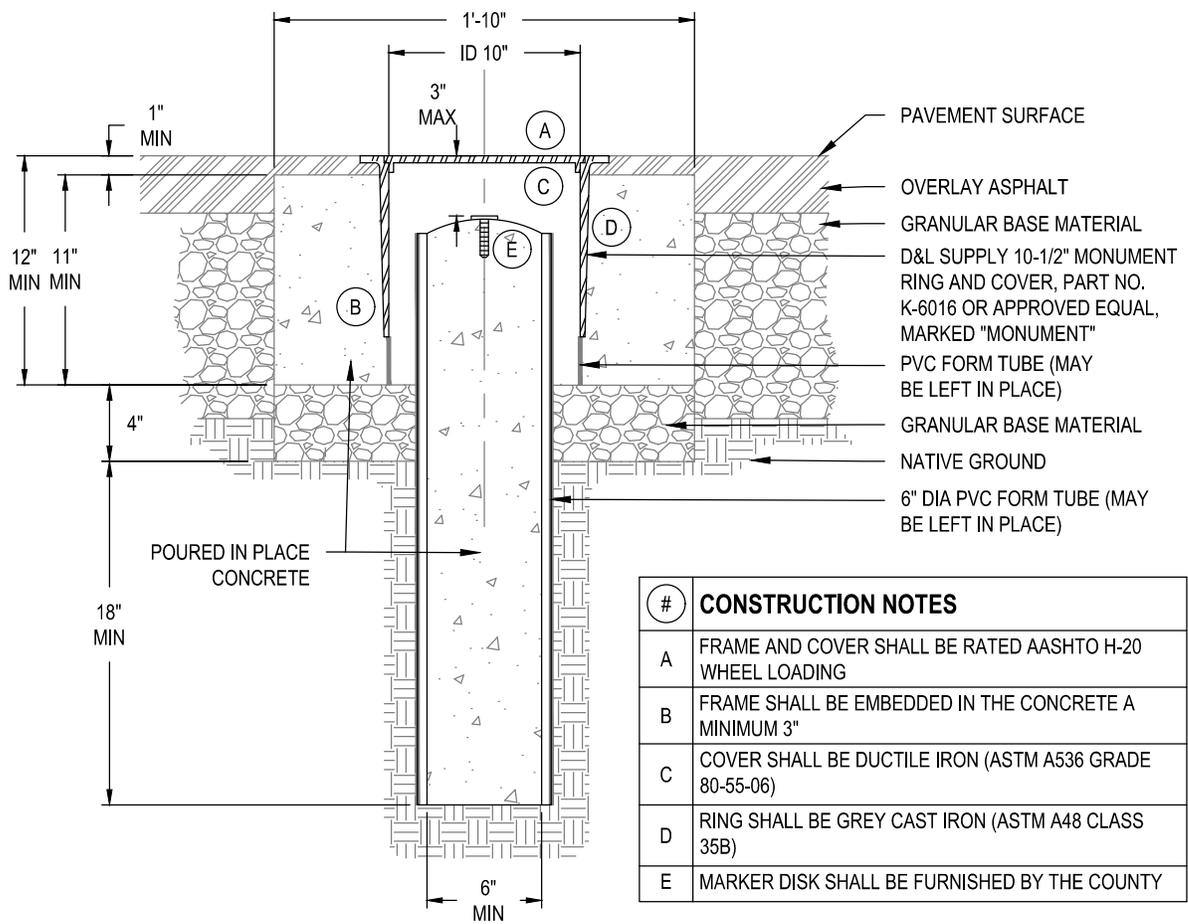
ST-42



PLAN - COVER DETAIL

NOTES:

1. SURVEY MONUMENT MARKER: 3" DIA. DOME BRASS W/ CAST CORRUGATED STEM.
2. COUNTY TO STAMP MONUMENT PRIOR TO INSTALLATION
3. TO BE SET IN WET CONCRETE



#	CONSTRUCTION NOTES
A	FRAME AND COVER SHALL BE RATED AASHTO H-20 WHEEL LOADING
B	FRAME SHALL BE EMBEDDED IN THE CONCRETE A MINIMUM 3"
C	COVER SHALL BE DUCTILE IRON (ASTM A536 GRADE 80-55-06)
D	RING SHALL BE GREY CAST IRON (ASTM A48 CLASS 35B)
E	MARKER DISK SHALL BE FURNISHED BY THE COUNTY

SECTION

COUNTY OF SUTTER - ENGINEERING

STREET SURVEY MONUMENT WELL

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

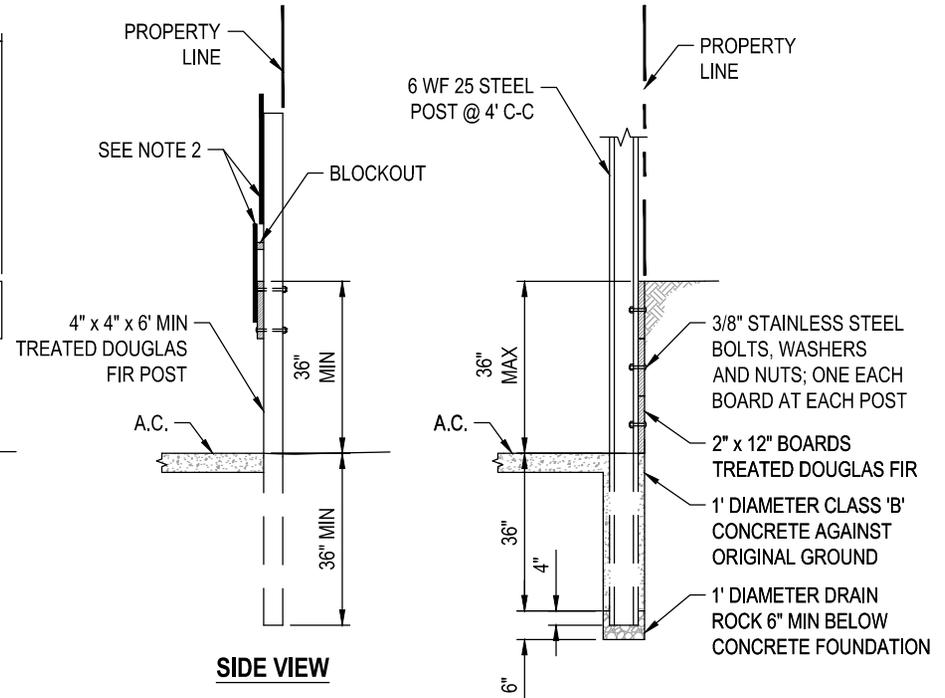
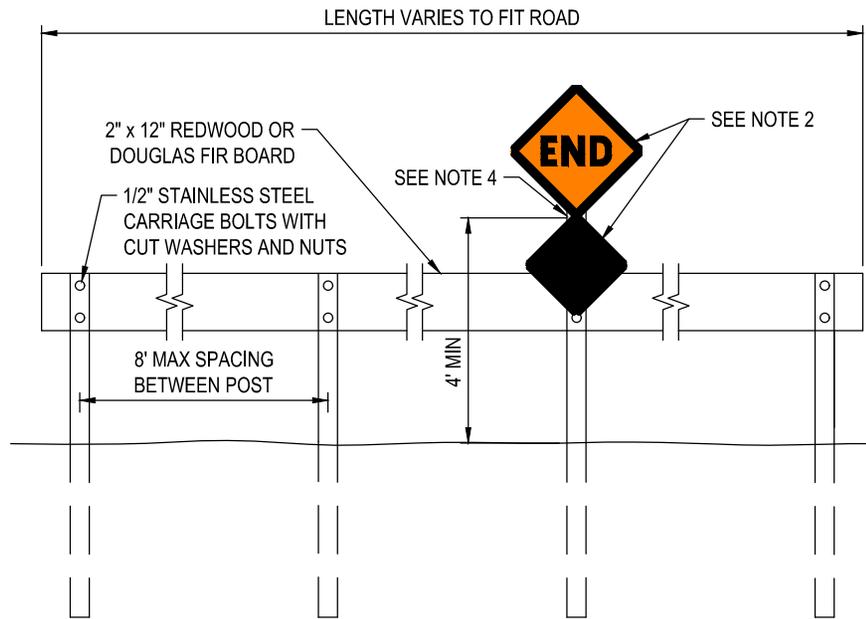
4/3/2025

DATE



DRAWING NUMBER

ST-43



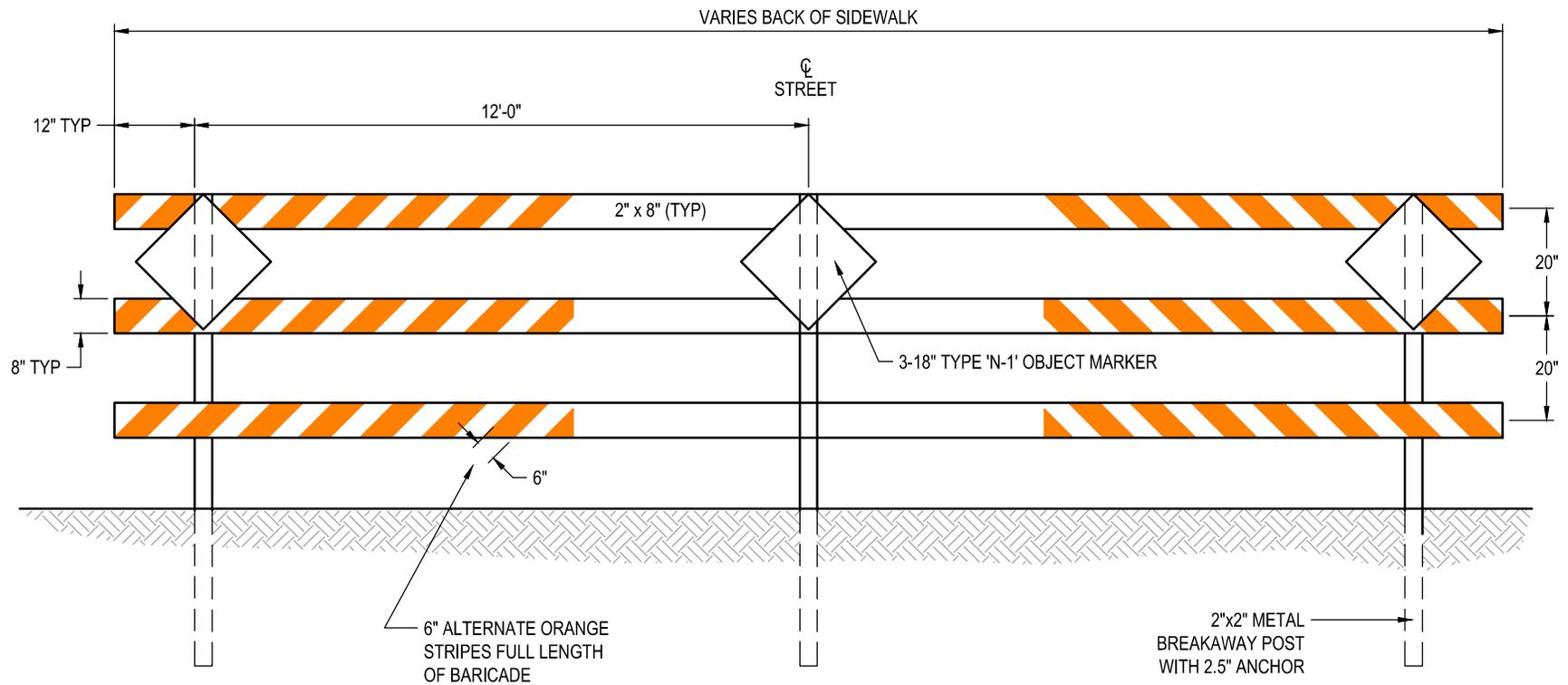
NOTES:

1. WHERE PERMISSION HAS BEEN GRANTED TO CLOSE AN EXISTING PUBLIC STREET, A R11-2 "ROAD CLOSED" SIGN WILL BE REQUIRED ON THE CENTERLINE OF THE ROAD IN ADDITION TO THE W31(CA) "END" SIGN.
2. 24" x 24" W31(CA) SIGN AND 18" x 18" OM4-3 MARKER. BLOCK OUT AS NECESSARY FOR OM4-3 MARKER TOP MOUNTING BOLT (BOTTOM MOUNTING BOLT NORMALLY THROUGH BARRIER RAIL). OM4-3 MARKER TO HAVE SOLID RED REFLECTIVE BACKGROUND WITHOUT ADDED REFLECTORS.
3. ALL EXPOSED SURFACES OF BARRICADE SHALL BE PAINTED WITH TWO (2) COATS OF WHITE PAINT CONFORMING TO STATE OF CALIFORNIA STANDARD SPECIFICATIONS SECTION 91-3.
4. POST AT CENTER OR NEAREST TO CENTER ON RIGHT HAND SIDE TO BE EXTENDED TO PROVIDE MOUNTING FOR SIGNS.
5. POST SHALL BE PRESSURE TREATED PER STATE OF CALIFORNIA STANDARD SPECIFICATIONS SECTION 57-2.01B(3).

STREET ENDING IN CUT WHERE SLOPE IS NOT OBTAINABLE

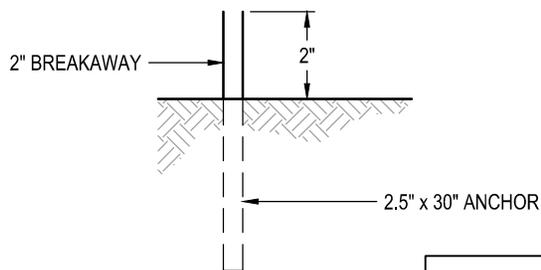
RIGHT OF WAY WIDTH	W31(CA)		O4-3		R11-2	
	SIZE	NO.	SIZE	NO.	SIZE	NO.
<60'	24"	1	18"	1	36" x 24"	1
60' TO 72'	24"	2	18"	2	48" x 30"	1
>72'	24"	3	18"	3	48" x 30"	1

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:</p> <p style="text-align: right; font-size: small;">4/3/2025</p> <p style="text-align: center; font-size: x-small;">DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>STREET CLOSURE TIMBER BARRICADE</p>	<p style="text-align: right; font-size: x-small;">DRAWING NUMBER</p> <p style="font-size: 2em; font-weight: bold; text-align: right;">ST-44.1</p>



FRONT

NOTE:
 ALL EXPOSED SURFACES TO BE PAINTED WITH 2 COATS OF WHITE AND ONE COAT OF ORANGE FOR STRIPES. BOTH PAINTS TO CONFORM TO SECT. 91-3.02 OF THE CA. DIV. OF HIGHWAYS STANDARD SPECS. 2"x8" CROSS MEMBERS SHALL BE CONSTRUCTION GRADE DOUGLAS FIR. BARRICADE(S) SHALL EXTEND TO BACK OF WALK.



COUNTY OF SUTTER - ENGINEERING

STREET CLOSURE TIMBER BARRICADE

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

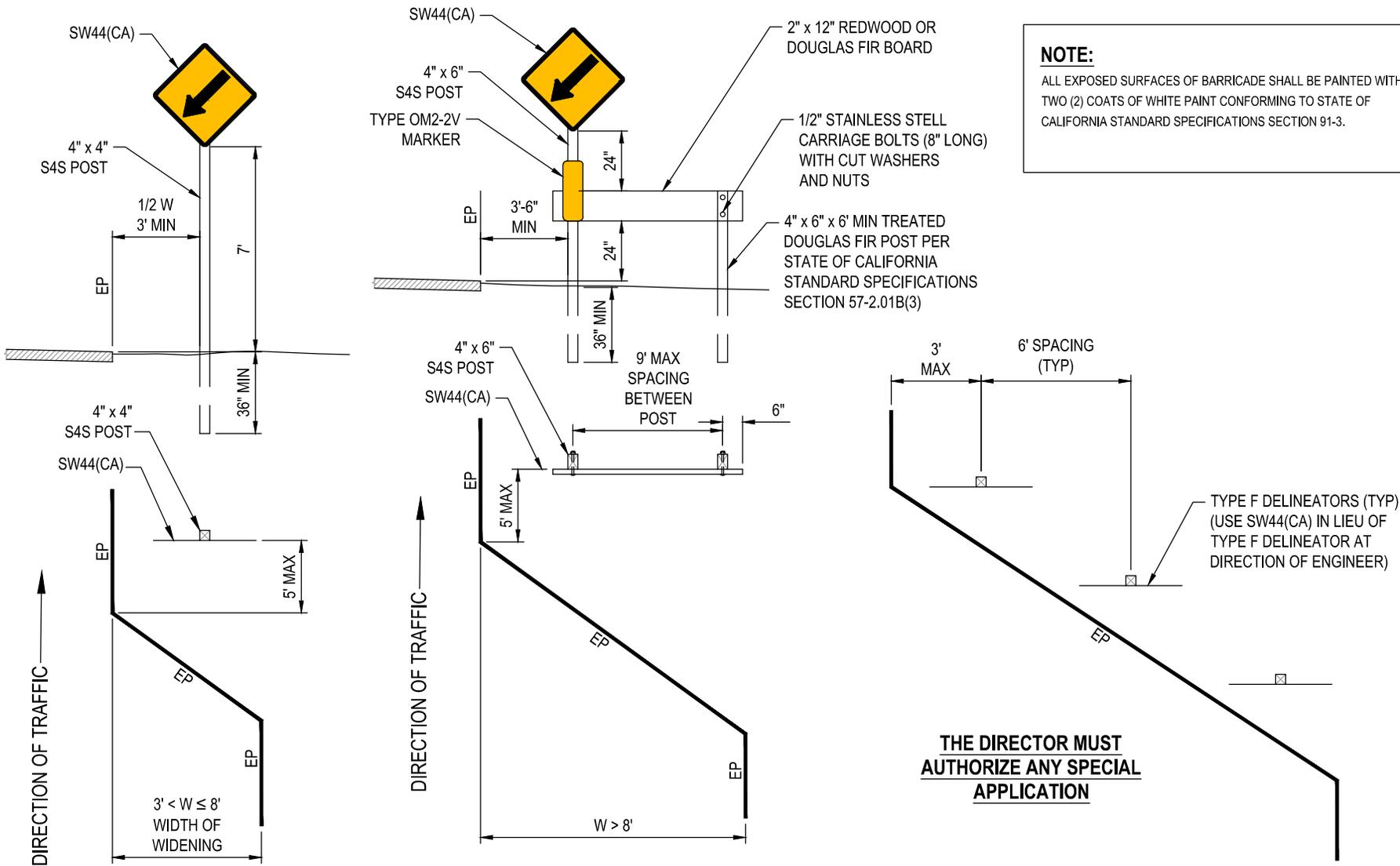
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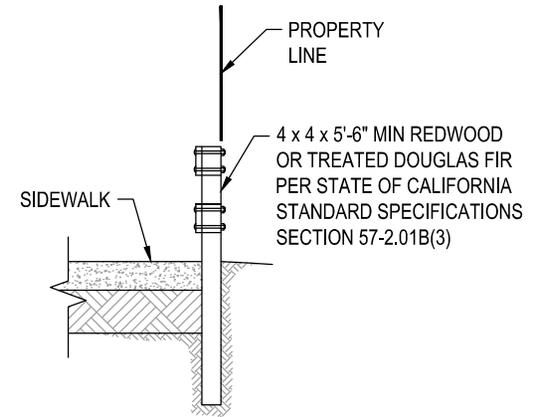
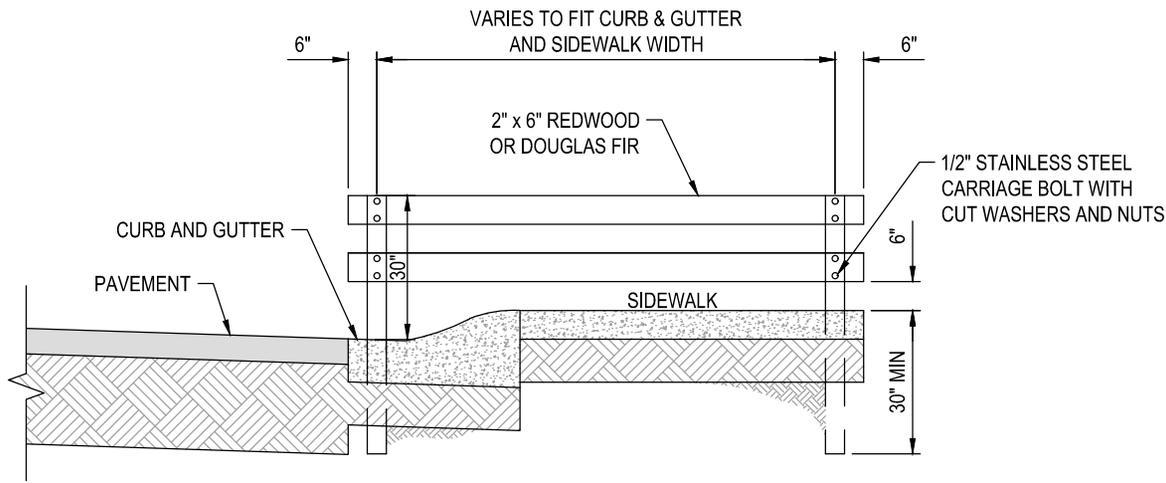
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ST-44.2

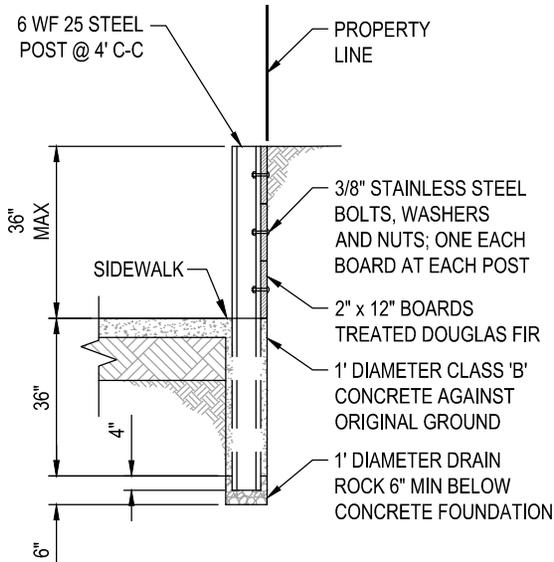
NOTE:
 ALL EXPOSED SURFACES OF BARRICADE SHALL BE PAINTED WITH TWO (2) COATS OF WHITE PAINT CONFORMING TO STATE OF CALIFORNIA STANDARD SPECIFICATIONS SECTION 91-3.



<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR</p> <p>4/3/2025 DATE</p>
<p>SIGNS AND BARRICADES AT ABRUPT CHANGE OF PAVEMENT WIDTH</p>	<p>SUTTER COUNTY  DRAWING NUMBER ST-45</p>



SIDE VIEW



**DETAIL FOR SIDEWALK BARRICADE WITH
RETAINING WALL**

NOTES:

1. SIDEWALK BARRICADES TO BE ERCTED AT EACH LOCATION WHERE SATISFACTORY PROVISION CAN NOT BE MADE FOR PEDESTRIAN TO CONTINUE BEYOND THE TERMINUS OF A SIDEWALK AND A HAZARD IS PRESENT.
2. ALL EXPOSED SURFACES OF BARRICADES SHALL BE PAINTED WITH TWO (2) COATS OF WHITE PAINT CONFORMING TO STATE OF CALIFORNIA STANDARD SPECIFICATIONS SECTION 91-3.

COUNTY OF SUTTER - ENGINEERING

SIDEWALK BARRICADE

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

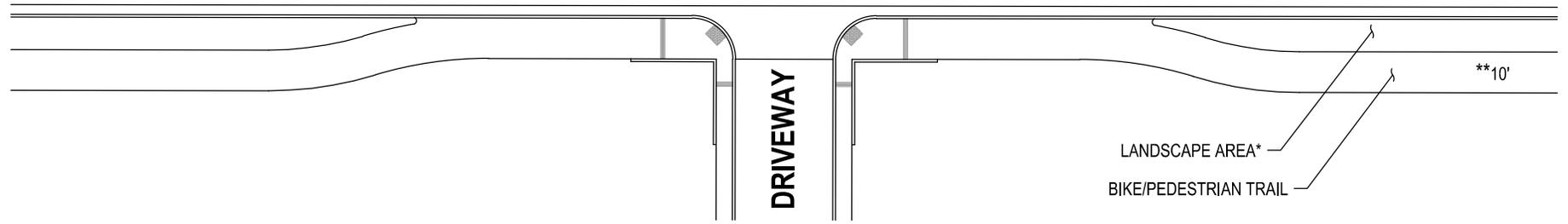
4/3/2025

DATE

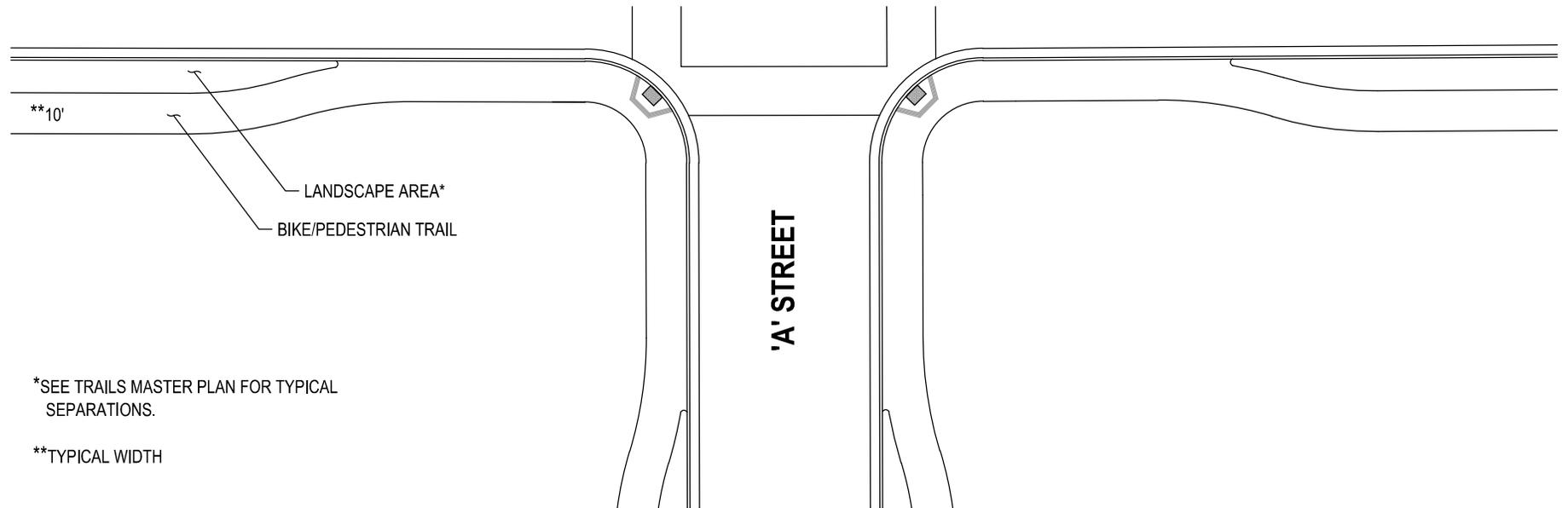


DRAWING NUMBER

ST-46



MULTI-USE TRAIL AT DRIVEWAY

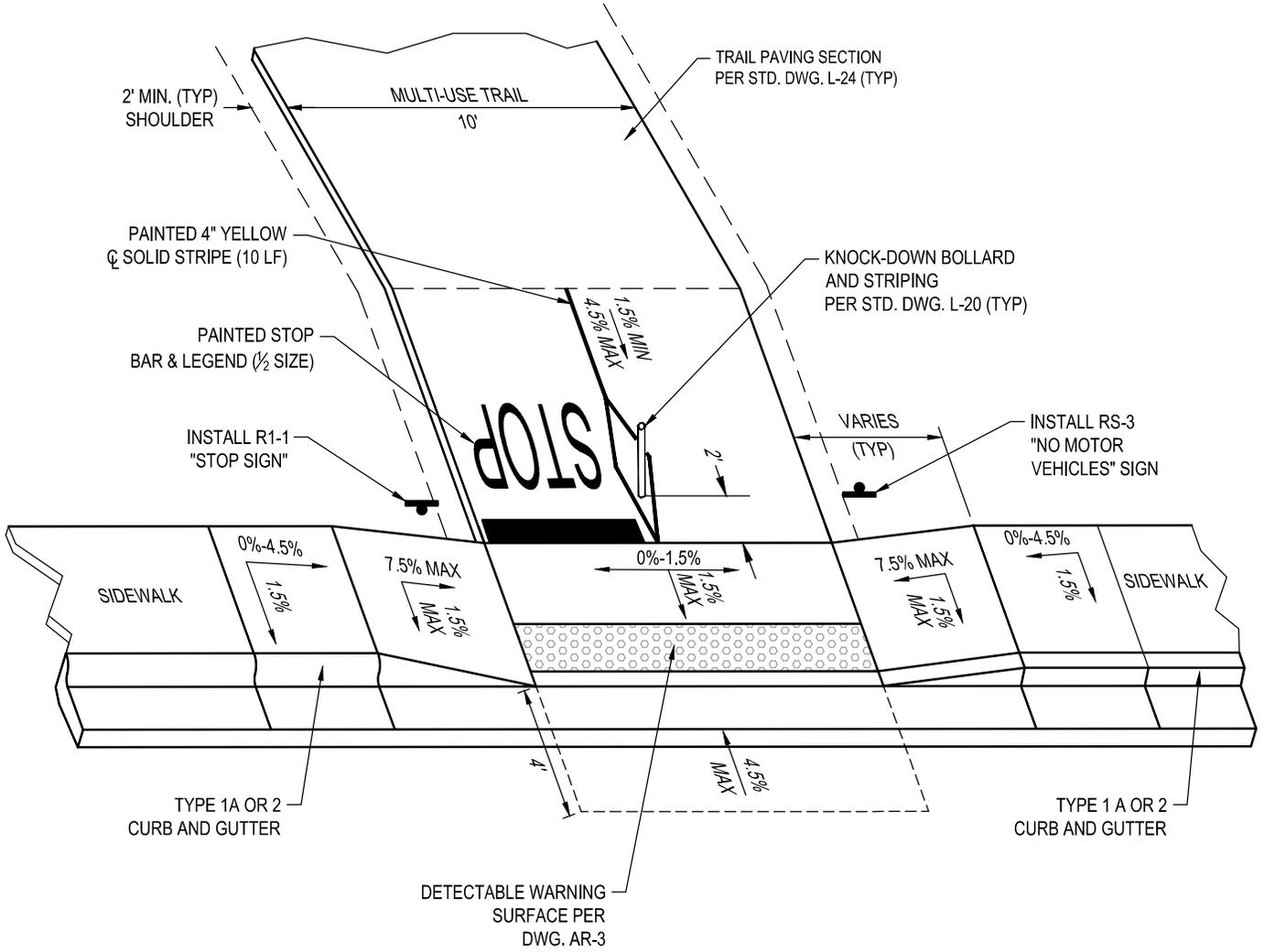


MULTI-USE TRAIL AT INTERSECTION

*SEE TRAILS MASTER PLAN FOR TYPICAL SEPARATIONS.

**TYPICAL WIDTH

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  4/3/2025 DEVELOPMENT SERVICES DIRECTOR DATE</p>
<p>MULTI-USE TRAIL CONNECTIONS AT DRIVEWAYS AND INTERSECTIONS</p>	<p>DRAWING NUMBER  ST-47</p>



NOTES:

1. TRAIL CONNECTION MUST BE AT A CROSSWALK.
2. MID-BLOCK CROSSWALK SIGNAGE, STRIPING AND/OR SIGNAL TO BE INSTALLED AS DETERMINED BY THE COUNTY.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:


4/3/2025

DEVELOPMENT SERVICES DIRECTOR

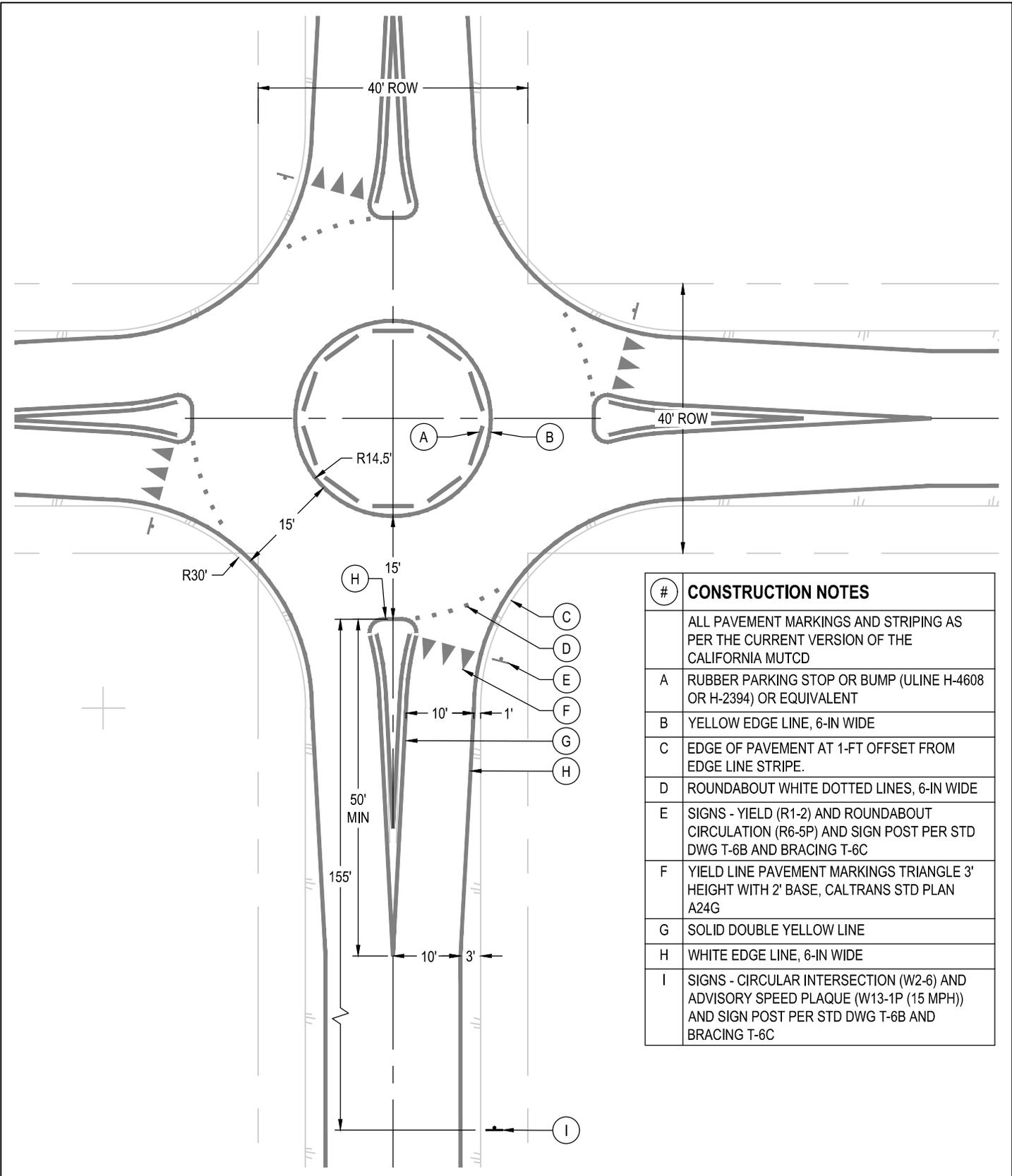
DATE

**MULTI-USE TRAIL CONNECTION
 AT MID-BLOCK CROSSWALK**



DRAWING NUMBER

ST-48



#	CONSTRUCTION NOTES
	ALL PAVEMENT MARKINGS AND STRIPING AS PER THE CURRENT VERSION OF THE CALIFORNIA MUTCD
A	RUBBER PARKING STOP OR BUMP (ULINE H-4608 OR H-2394) OR EQUIVALENT
B	YELLOW EDGE LINE, 6-IN WIDE
C	EDGE OF PAVEMENT AT 1-FT OFFSET FROM EDGE LINE STRIPE.
D	ROUNDAOBOUT WHITE DOTTED LINES, 6-IN WIDE
E	SIGNS - YIELD (R1-2) AND ROUNDAOBOUT CIRCULATION (R6-5P) AND SIGN POST PER STD DWG T-6B AND BRACING T-6C
F	YIELD LINE PAVEMENT MARKINGS TRIANGLE 3' HEIGHT WITH 2' BASE, CALTRANS STD PLAN A24G
G	SOLID DOUBLE YELLOW LINE
H	WHITE EDGE LINE, 6-IN WIDE
I	SIGNS - CIRCULAR INTERSECTION (W2-6) AND ADVISORY SPEED PLAQUE (W13-1P (15 MPH)) AND SIGN POST PER STD DWG T-6B AND BRACING T-6C

COUNTY OF SUTTER - ENGINEERING

RESIDENTIAL AND RURAL MINI-ROUNDAOBOUT

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

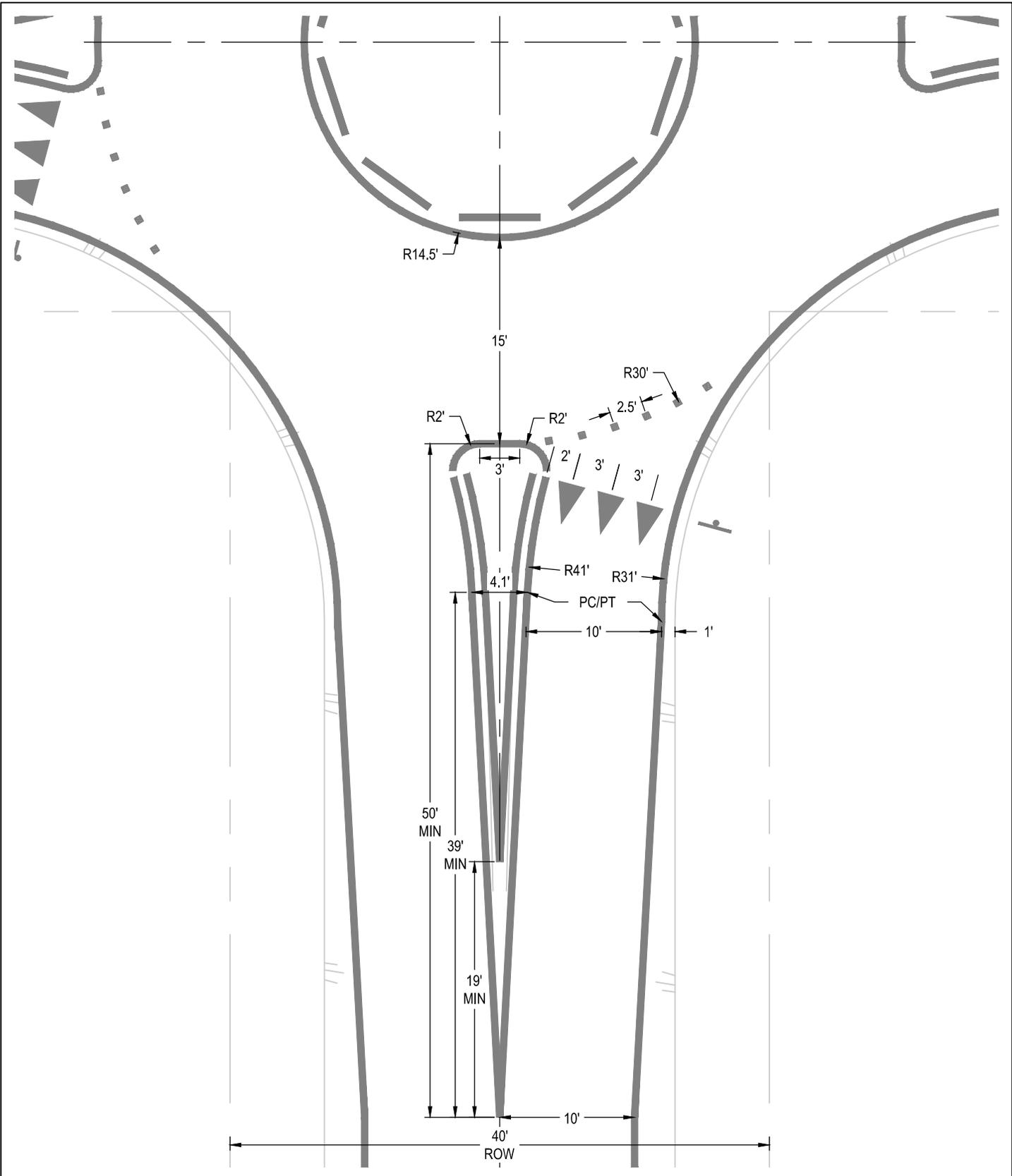
4/3/2025

DATE



DRAWING NUMBER

ST-50.1



COUNTY OF SUTTER - ENGINEERING

**RURAL MINI-ROUNDABOUT
ISLAND STRIPING DETAIL**

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

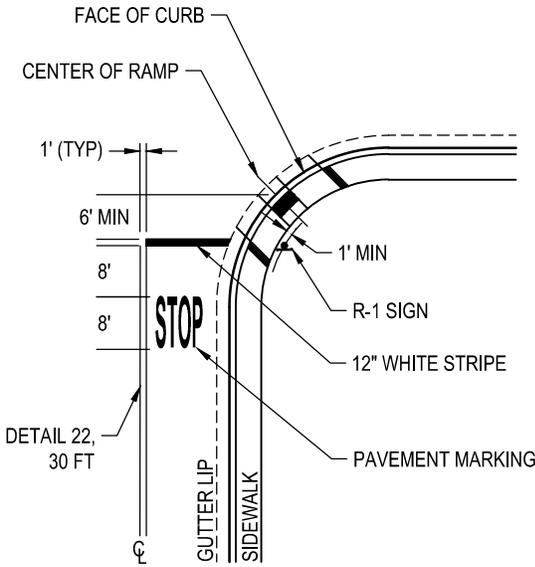
4/3/2025

DATE

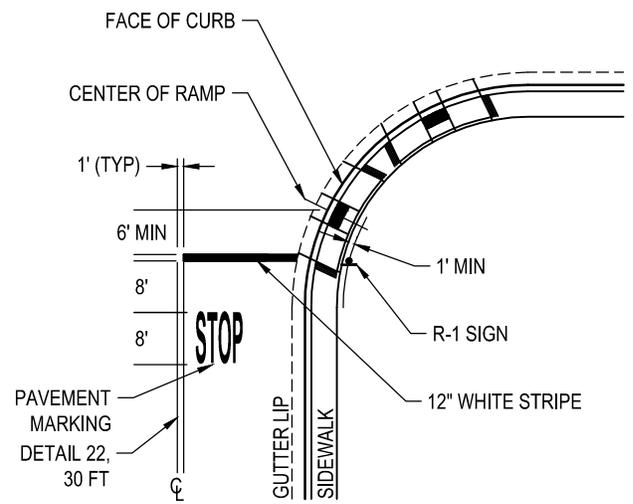


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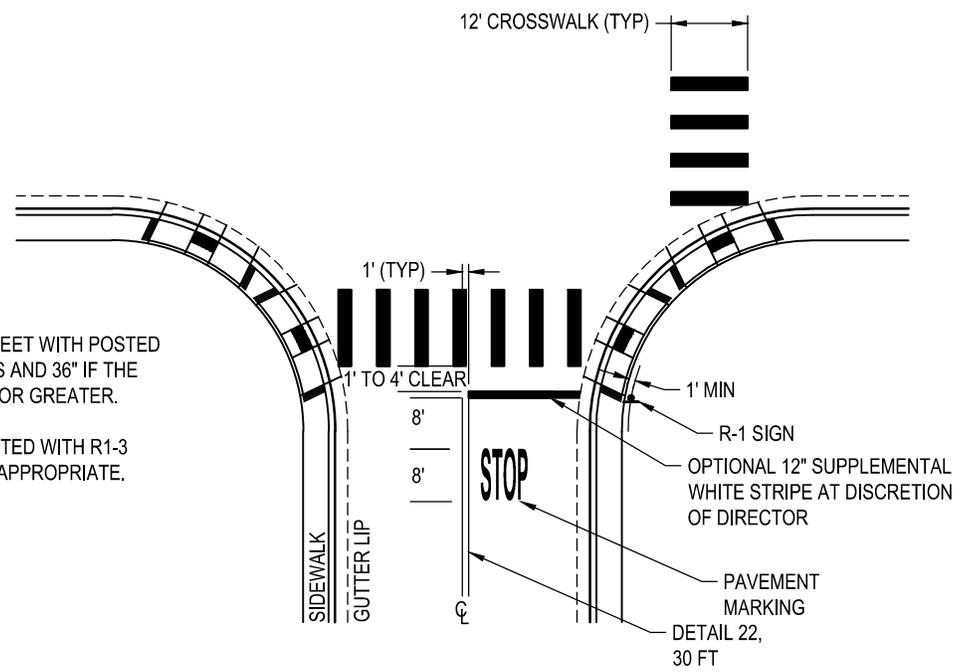
ST-50.2



**SINGLE SIDEWALK RAMP
WITHOUT CROSSWALK**



**DUAL SIDEWALK RAMP
WITHOUT CROSSWALK**



**TYPICAL SIDEWALK RAMP
WITH CROSSWALK**

NOTES:

1. STOP SIGN SHALL BE 30" FOR STREET WITH POSTED SPEED LIMIT OF 35 M.P.H. OR LESS AND 36" IF THE POSTED SPEED LIMIT IS 40 M.P.H. OR GREATER.
2. STOP SIGN SHALL BE SUPPLEMENTED WITH R1-3 (3-WAY OR 4-WAY) SIGNS WHERE APPROPRIATE.

COUNTY OF SUTTER - ENGINEERING

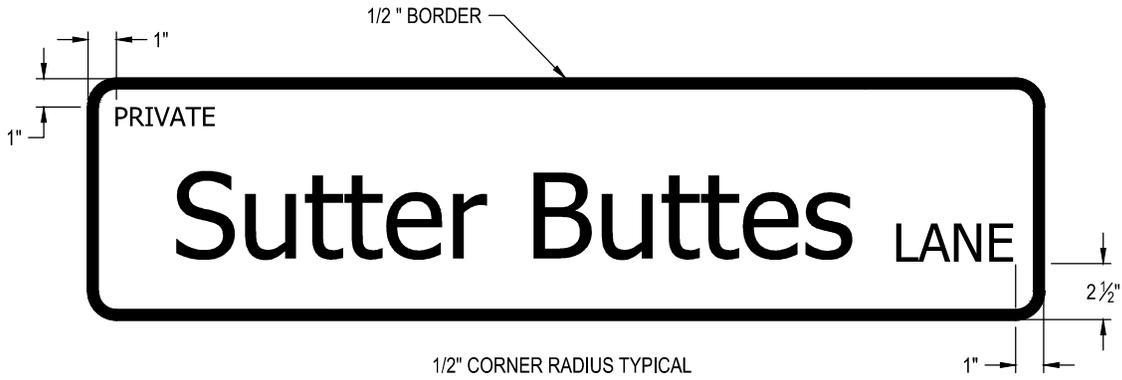
**STOP SIGN AND STOP LEGEND
LOCATION**

APPROVED BY:
ULP
DEVELOPMENT SERVICES DIRECTOR



4/3/2025
DATE
DRAWING NUMBER

T-1



SIGN BLANKS: ALL STREET NAME SIGNS SHALL BE 9 INCHES IN HEIGHT, A MINIMUM OF 24 INCHES IN LENGTH AND A MAXIMUM OF 48 INCHES IN LENGTH. SIGN SHALL BE 0.125 INCH THICK, ASTM ALLOY 6061-T6, FLAT ALUMINUM FOR CENTER MOUNTED SIGNS.

SHEETING: REFLECTIVE SHEETING SHALL BE 3M DIAMOND GRADE OR EQUIVALENT (WHITE), OVERLAYED WITH ELECTROCUT (EC) TRANSPARENT OVERLAY FILM (GREEN).

STREET NAMES: STREET NAMES SHALL BE NO LONGER THAN 14 LETTERS LONG UNLESS APPROVED BY DIRECTOR, INCLUDING SPACES AND SHALL BE USED TO DETERMINE SIGN LENGTH AS SPECIFIED ABOVE.

FONTS: ALL LETTERS AND NUMBERS SHALL BE HIGHWAY GOTHIC FONT "D". MINIMUM LETTER DIMENSIONS AS LISTED BELOW ARE TO BE USED WITH LONG STREET NAMES IN ORDER TO FIT NAMES ON SIGN BLANKS.

UPPER CASE LETTERS FOR STREET NAMES:	4.5 INCHES
LOWER CASE LETTERS FOR STREET NAMES:	3 INCHES
UPPER CASE LETTERS FOR STREET TYPES (I.E. BLVD, WAY, RD, ST)	2.5 INCHES

COLORS: STREET NAME SIGN COLORS SHALL BE AS FOLLOWS:
 BACKGROUND: GREEN
 TEXT: WHITE
 BORDER: WHITE

MOUNTING: STREET NAME SIGNS SHALL BE CAP MOUNTED WITH A MINIMUM BRACKET WIDTH OF 12".

LAYOUT: SIGNS SHALL BE DOUBLE FACED (FRONT AND REAR) . LAYOUT SHALL BE AS SHOWN ABOVE.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

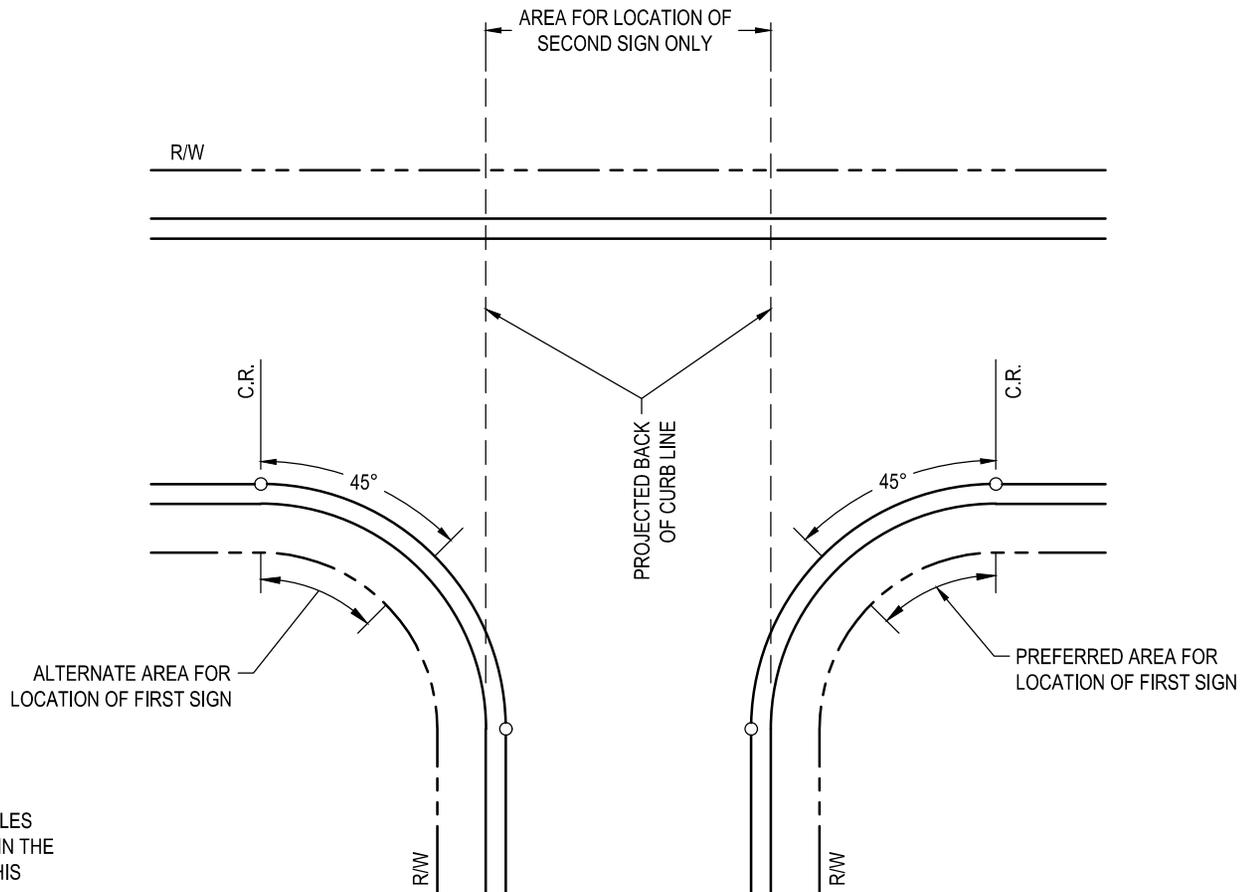
DATE

PRIVATE STREET NAME SIGN



DRAWING NUMBER

T-8

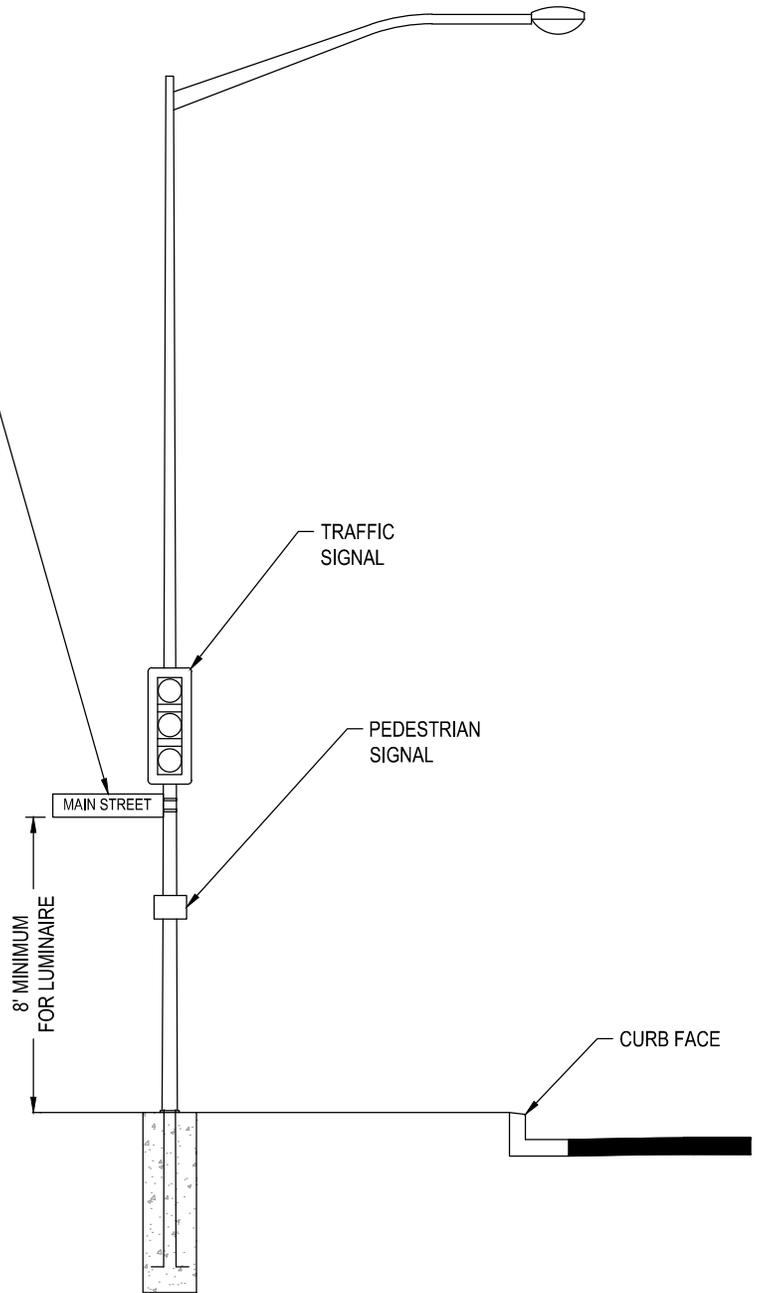


NOTES:

1. STREET NAME SIGNS SHALL BE INSTALLED ON STREET LIGHT POLES WHEN THEY ARE LOCATED WITHIN THE LOCATION LIMITS DEFINED ON THIS DETAIL.
2. THE LOCATION FOR SECOND SIGN SHALL BE USED ONLY WHEN 2 (TWO) SETS OF STREET NAME SIGNS ARE REQUIRED AS SHOWN IN STANDARD DRAWING NUMBER T-11.
3. ALL OTHER STREET NAME SIGN REQUIREMENTS IN SECTIONS 4-22 AND 4-23 AND IN STANDARD DRAWINGS T-7, T-8, T-10, T-11 AND T-12 SHALL APPLY.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>STREET NAME SIGN ON STREET LIGHT POLE PLACEMENT DETAIL</p>	<p>DRAWING NUMBER  T-9</p>

CANTILEVER SIGNS SHALL BE MOUNTED ON SIGNAL POLES AND LUMINAIRE POLES AWAY FROM THE CROSS STREET WITH 30-INCH BRACKETS, TOP AND BOTTOM, (SEE NOTE). BRACKETS SHALL BE FASTENED TO POLES WITH TWO (2) 0.750 INCH WIDE BY 0.30 INCH THICK TYPE 201 STAINLESS STEEL BANDS WITH HEAVY DUTY BUCKLE AND A MINIMUM OF TWO (2) VANDAL PROOF SCREWS SHALL AFFIX THE STREET SIGN TO THE BRACKET. THE SCREWS SHALL PASS THROUGH THE BRACKET AND SIGN. AT LOCATIONS WITH TWO (2) SIGNS, THE SIGNS SHALL EACH HAVE TWO (2) BANDS AFFIXING THE BRACKET TO THE POLE.



NOTE:

BRACKETS SHALL BE 30-INCH IN LENGTH, TOP AND BOTTOM OF SIGN, AND SHALL BE ASSEMBLED BY ATTACHING AN EXTRUDED ALUMINUM "T" CHANNEL. THE BRACKET SHALL BE MADE FROM 6082-T6 ALUMINUM WITH "T" SECTION SHALL BE MADE FROM 6062-T6 ALUMINUM. THESE CANTILEVER ASSEMBLIES SHALL ACCOMMODATE UP TO 3/4" INCH STAINLESS STEEL BANDING THAT CAN BE DOUBLE WRAPPED FOR MOUNTING. THE CANTILEVER ARM SYSTEM SHALL ACCEPT SIGNS UP TO 0.125-INCH THICK. CANTILEVER ARMS SHALL BE ATTACHED TO BOTH THE TOP AND BOTTOM OF SIGN. CANTILEVER ARMS SHALL BE DESIGNED TO SUPPORT UP TO A SIGN AREA OF 6-SQ. FT. COLOR OF CANTILEVER ASSEMBLY AND BANDS SHALL MATCH POLE COLOR.

COUNTY OF SUTTER - ENGINEERING

**STREET NAME SIGN ON
ELECTROLIERS**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

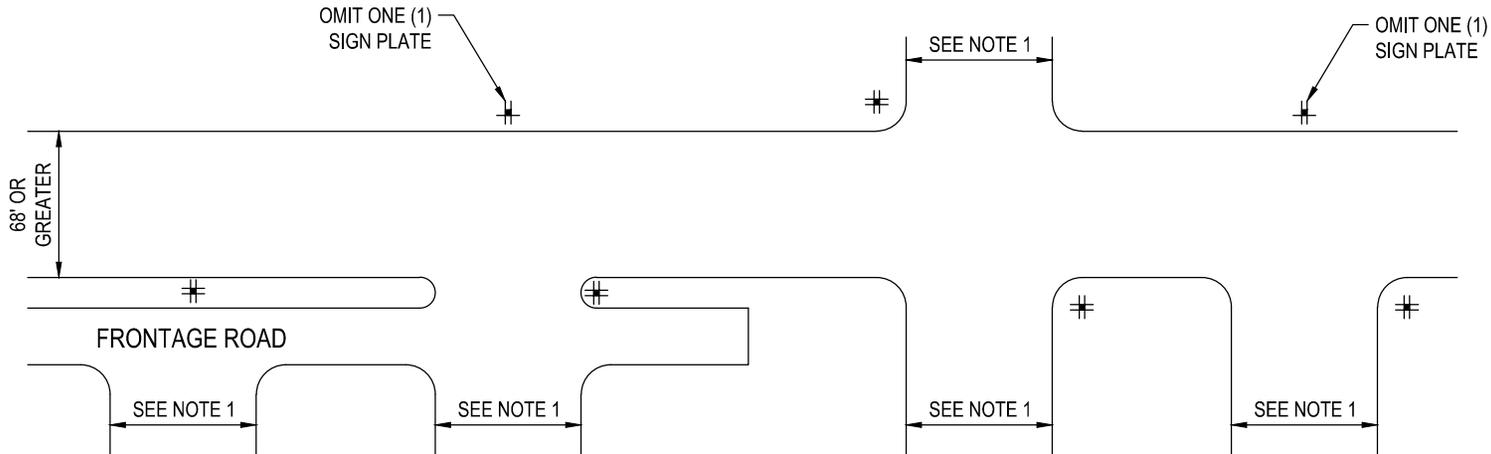
4/3/2025

DATE

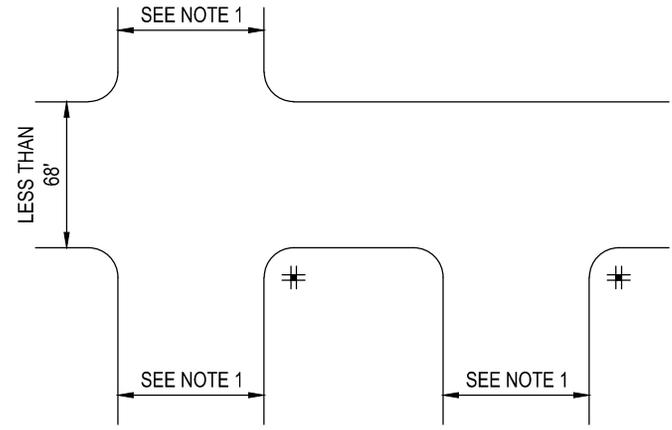


DRAWING NUMBER

T-10



STREETS HAVING 68' OR GREATER R/W WIDTH



STREETS HAVING LESS THAN 68' R/W WIDTH

NOTE:

1. SIDE STREETS INDICATED ARE STREETS WITH R/W WIDTHS EQUAL TO OR LESS THAN R/W WIDTH FOR THROUGH STREET
2. STREET SIGNS ARE TO BE LOCATED AT MID-RETURN APPROXIMATELY 30 INCHES BEHIND THE FACE OF CURB OR 6" BEHIND ATTACHED SIDEWALKS. SEE STANDARD DRAWING T-1 WHEN COMBINED WITH A STOP SIGN.
3. SIGNS SHALL BE INSTALLED ON NORTHEAST AND SOUTHWEST CORNERS OF INTERSECTIONS. SIGNS SHALL BE INSTALLED ON STREET LIGHTING STANDARD WHEN APPROPRIATE AND AS APPROVED BY COUNTY.
4. COUNTY TO REVIEW AND APPROVE SIGN LOCATIONS PRIOR TO INSTALLATION.
5. SEE STANDARD DRAWINGS T-1, T-7, T-8, T-9, T-10, AND T-12.

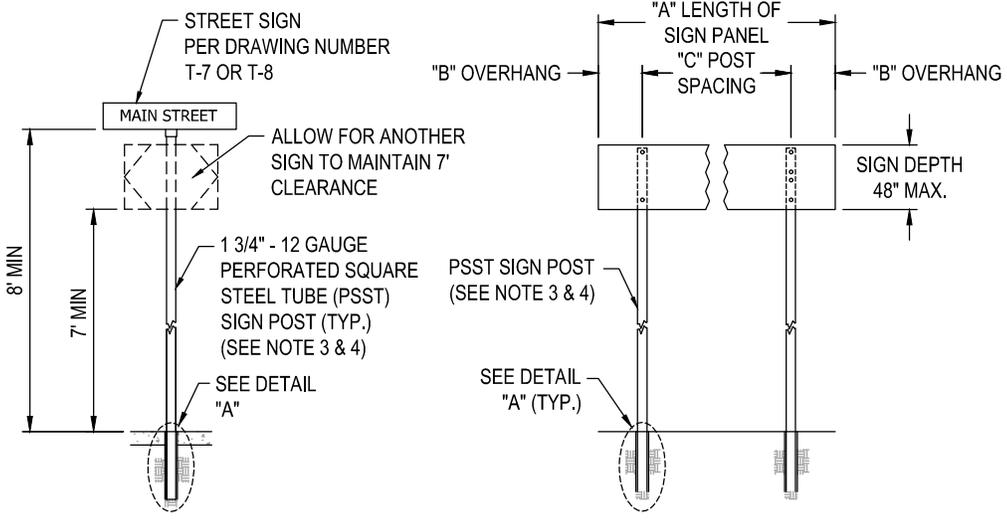
LEGEND:

⊕ STANDARD STREET NAME SIGN INSTALLATION. FOUR (4) SIGN PLATES ON POST OR ON STREET LIGHT POLE.

⊙ THREE (3) SIGN PLATES ON POST OR ON STREET LIGHT POLE.

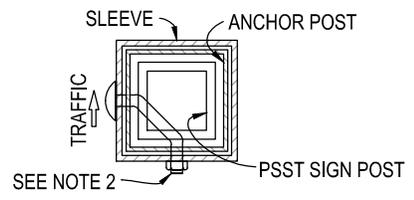
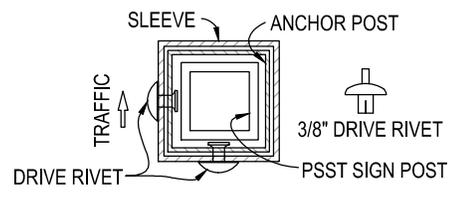
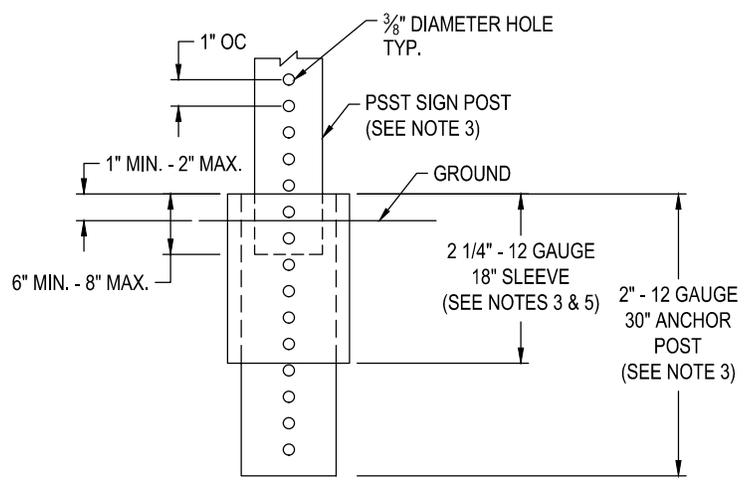
<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY: </p> <p style="text-align: right; font-size: small;">4/3/2025</p>
<p>STREET NAME SIGN GENERAL LOCATION</p>	<p style="text-align: right; font-size: small;">DATE</p> <p style="text-align: right; font-size: small;">DRAWING NUMBER</p> <p style="text-align: right; font-size: large; font-weight: bold;">T-11</p>





Post Spacing Table Maximum Sign Height of 48"

Sign Panel Length	Sign Panel Overhang	Post Spacing
"A"	"B"	"C"
3' - 6"	6"	2' - 6"
4' - 0"	6"	3' - 0"
4' - 6"	6"	3' - 6"
4' - 8"	7"	3' - 6"
5' - 6"	1' - 0"	3' - 6"
6' - 0"	1' - 0"	4' - 0"



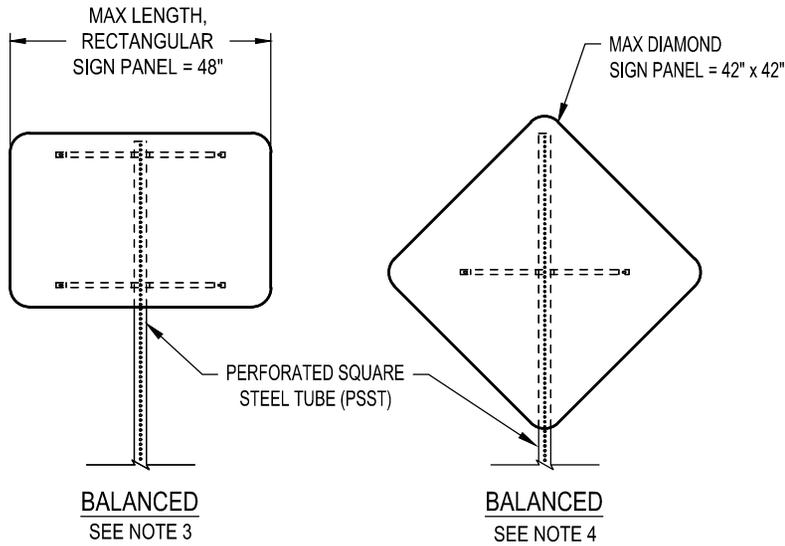
NOTES:

1. BOTTOM OF LOWEST STREET SIGN TO BE MOUNTED EIGHT (8) FEET ABOVE THE GROUND OR SIDEWALK PER DETAIL "A" SHOWN ON THIS SHEET EXCEPT, WHEN STOP SIGN IS MOUNTED ON SAME POST AS A STREET SIGN, BOTTOM OF STOP SIGN SHALL BE MOUNTED SEVEN (7) FEET ABOVE THE GROUND OR SIDEWALK AND STREET NAME SIGN TO BE MOUNTED DIRECTLY ABOVE THE STOP SIGN. IN NO CASE SHALL THE BOTTOM OF THE LOWEST SIGN BE LESS THAN SEVEN (7) FEET ABOVE THE GROUND OR SIDEWALK LEVEL.
2. USE TWO DRIVE RIVETS TO FASTEN ASSEMBLED SIGN AND SIGN POST INTO ANCHOR SLEEVE. INSTALL DRIVE RIVETS OR FASTNER ALTERNATIVE INTO THE SIDES FACING TRAFFIC.
3. PSST SIGN POST, ANCHOR POST, AND SLEEVE SHALL BE GALVANIZED AND OF THE SAME GAUGE.
4. PSST SIGN POST PER STANDARD SPECIFICATIONS.
5. SLEEVE PLACE IN CONCRETE SHALL BE SOLID WITH ONLY ONE HOLE AT THE TOP FOR DRIVE RIVET OR FASTENER.

COUNTY OF SUTTER - ENGINEERING

STREET SIGN LOCATION

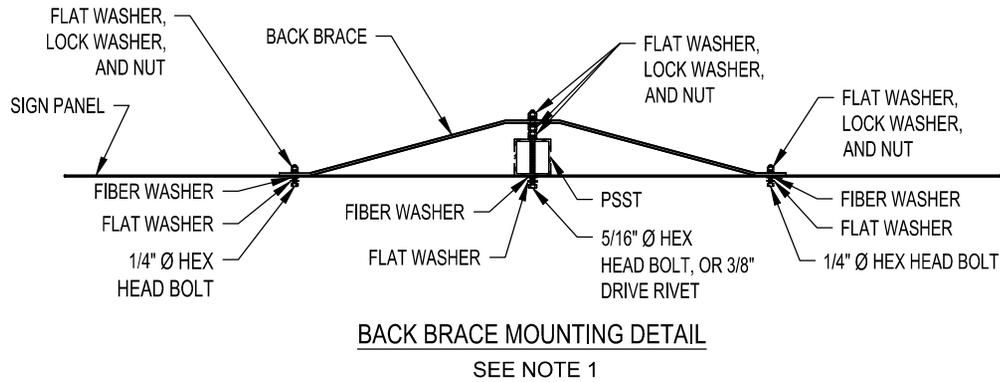
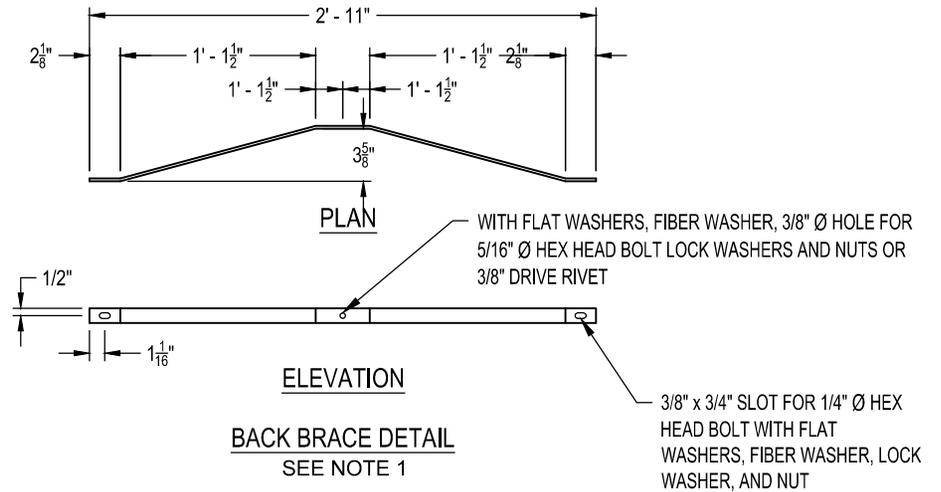
APPROVED BY:  4/3/2025
 DEVELOPMENT SERVICES DIRECTOR DATE
 DRAWING NUMBER
T-12



SINGLE POST INSTALLATION

NOTE:

1. BALANCED PSST POST INSTALLATIONS OF SIGN PANEL REQUIRE BACK BRACES WHEN 3' - 0" OR MORE IN LENGTH.
2. WOOD BLOCK SPACERS ARE NOT REQUIRED FOR SIGNS MOUNTED ON PSST POST.
3. ATTACH RECTANGULAR SIGN PANEL TO PSST POST AT THE TOP, BOTTOM, AND CENTER.
4. ATTACH DIAMOND SIGN PANEL TO PSST POST AT TOP, BOTTOM, AND CENTER.



COUNTY OF SUTTER - ENGINEERING

SIGN BACK BRACING

APPROVED BY:

ULPJ

4/3/2025

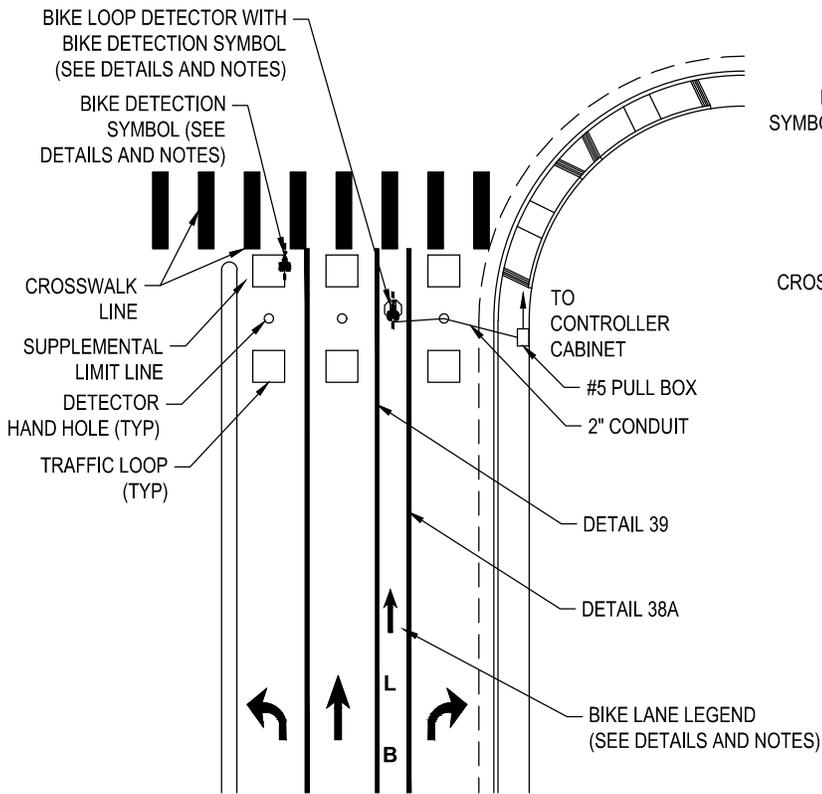
DEVELOPMENT SERVICES DIRECTOR

DATE

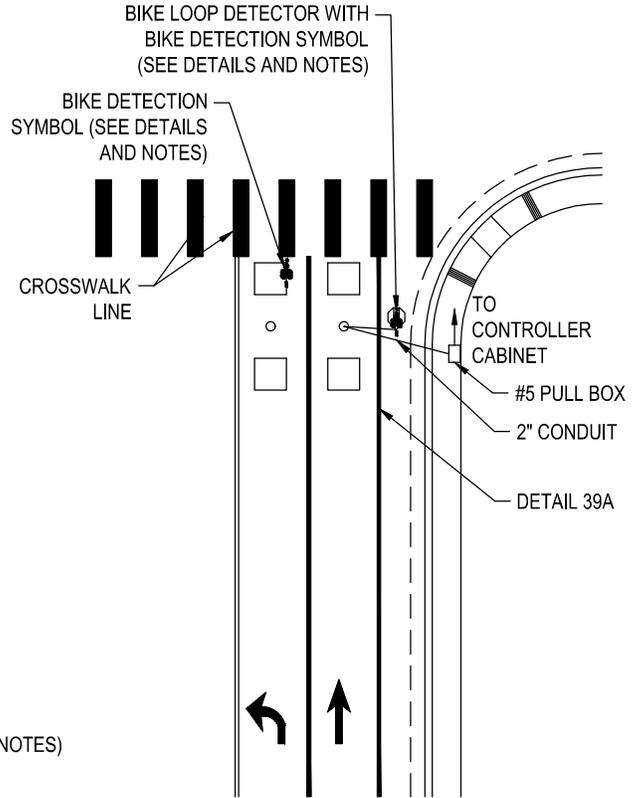


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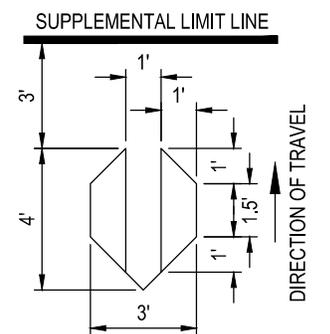
T-13



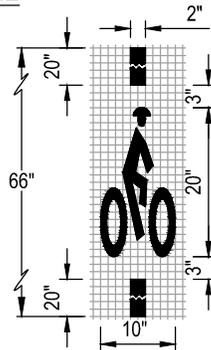
BIKE LOOP INSTALLATION AT MAJOR INTERSECTION WITH RIGHT TURN LANE



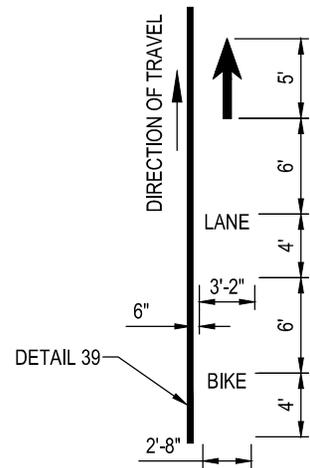
BIKE LOOP INSTALLATION ADJACENT TO CURB AND GUTTER



BIKE LOOP DETECTOR DETAIL
NOT TO SCALE



BIKE DETECTION SYMBOL DETAIL
NOT TO SCALE



BIKE LANE LEGEND DETAIL
NOT TO SCALE

NOTES:

1. BIKE LOOP SHALL BE INSTALLED WITH CONDUIT, DETECTOR HANDHOLE (DH) AND DETECTOR LEAD IN CABLE (DLC) AND CONNECTED IN CONTROLLER WITH SEPARATE CHANNEL FOR OPERATION, UNLESS OTHERWISE NOTED ON THE PLANS.
2. FOR BIKE LANE WITH LESS THAN 3 FEET IN WIDTH, MEASURING FROM BIKE LANE STRIPE AND LIP OF GUTTER, USE 3/4 SIZE OF BIKE LANE LEGEND.
3. BIKE LANE LEGENDS, ARROWS AND BIKE DETECTION SYMBOLS SHALL BE 2 COATS WATER BASED WHITE PAINT PER SECTION 84-3.02 OF THE STATE STANDARD SPECIFICATIONS.
4. BIKE DETECTION SYMBOL SHALL BE INSTALLED ON LOOP DETECTOR FOR LEFT TURN LANE, BIKE LANE AND OUTSIDE THROUGH LANE WHERE NO BIKE LANE IS PROPOSED. FOR DUAL LEFT TURN LANES, ONLY THE OUTSIDE LEFT TURN LANE SHALL BE INSTALLED WITH BIKE DETECTION SYMBOL. COORDINATE WITH SIGNAL CONTRACTOR AND COUNTY INSPECTOR FOR EXACT LOCATION OF DETECTION.

COUNTY OF SUTTER - ENGINEERING

**BIKE LOOP AND BIKE LEGEND
INSTALLATION DETAIL**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

T-14

36" W11-2 OR S1-1
AND 24"X12" W16-9P
SIGNS

"PED XING AHEAD"
PAVEMENT LEGEND (TYP)

PER PLAN

RRFB

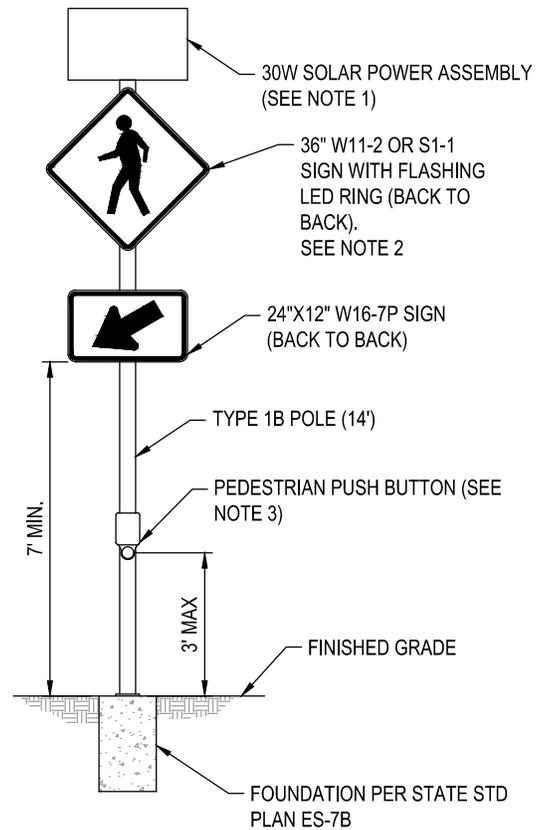
FLASHING SIGN SYSTEM

24" WHITE STRIPE (TYP)

24" CLEARANCE (TYP)

RRFB (SEE NOTE 4)

36" W11-2 OR S1-1
AND 24"X12" W16-9P
SIGNS



FLASHING SIGN SYSTEM DETAIL

NOTES:

1. 30W SELF CONTAINED SOLAR ENGINE THAT HOUSES THE ENERGY MANAGEMENT SYSTEM, ON-BOARD USER INTERFACE, WIRELESS COMMUNICATIONS BETWEEN UNITS, BATTERIES AND SOLAR PANEL. EACH SYSTEM WILL HAVE A MAXIMUM OF ONE CONTROLLER (TRAFFICALM M75-SA300-CTL3). ADDITIONAL POLES IN THE SYSTEM ARE TO BE RUN BY COLLABORATORS (TRAFFICALM M75-SA300-CLB3).
2. ALL LED UNITS (TRAFFICALM M75-R3636-BA47 OR M75-R3636-BA45) OF THE FLASHING LED SYSTEM SHALL FLASH SIMULTANEOUSLY AT A RATE OF MORE THAN 50 AND LESS THAN 60 TIMES PER MINUTE.
3. THE PEDESTRIAN PUSH BUTTON (PPB) SHALL BE TYPE B LARGE A.D.A. TYPE WITH TWO-INCH DIAMETER BUTTON (POLARA BDL3-Y). PPB HOUSING SHALL BE CAST ALUMMINUM (POLARA PBF2C-9X12-Y). PEDESTRIAN SIGN SHALL CONFORM TO STANDARD SIGN R10-25 OF THE CALIFORNIA MUTCD.
4. INSTALL FLASHING SIGN SYSTEM IN THE MEDIAN ISLAND WHEN APPLICABLE.
5. USE OF MID-BLOCK CROSSWALK REQUIRES BOARD OF SUPERVISOR APPROVAL.

COUNTY OF SUTTER - ENGINEERING

**MID-BLOCK CROSSWALK
AT UNCONTROLLED LOCATIONS**

APPROVED BY:

ULP
DEVELOPMENT SERVICES DIRECTOR

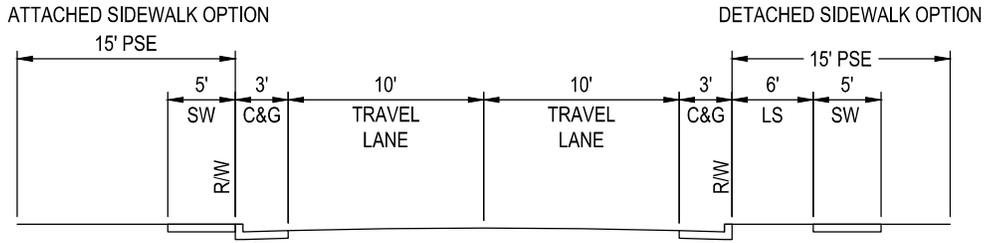
4/3/2025

DATE

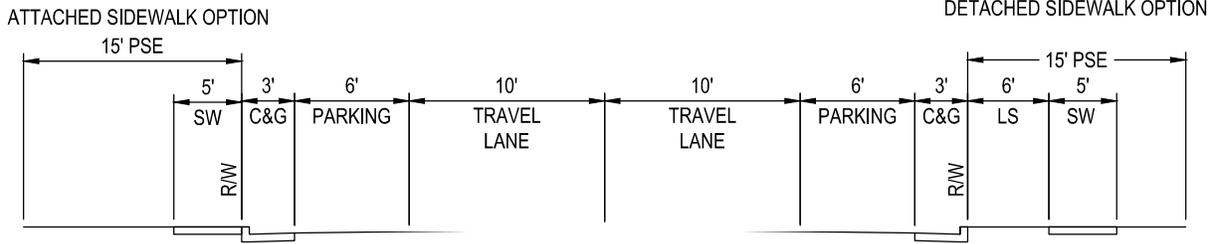


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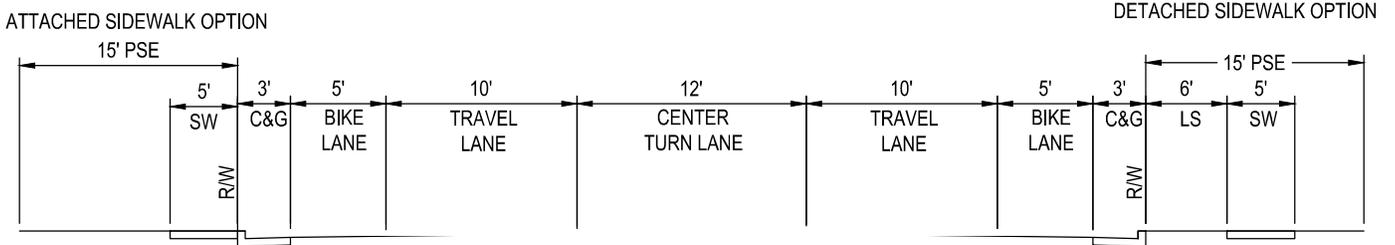
T-15



26' MINOR RESIDENTIAL STREET



38' STANDARD RESIDENTIAL STREET



48' COLLECTOR STREET

AT THE DISCRETION OF DEVELOPMENT SERVICES

1. ADJACENT TO SCHOOLS OR PARKS WIDEN THE SIDEWALK TO 8' AND THE PSE TO 18'.
2. PUBLIC SERVICE EASEMENT (PSE) SHALL BE DEDICATED BY GRANT DEED OR BY OWNER'S STATEMENT ON A SUBDIVISION MAP.

MINOR DEVIATION MAY BE APPROVED BY THE DIRECTOR.

COUNTY OF SUTTER - ENGINEERING

TYPICAL STREET CROSS SECTIONS
26', 38', AND 48'

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

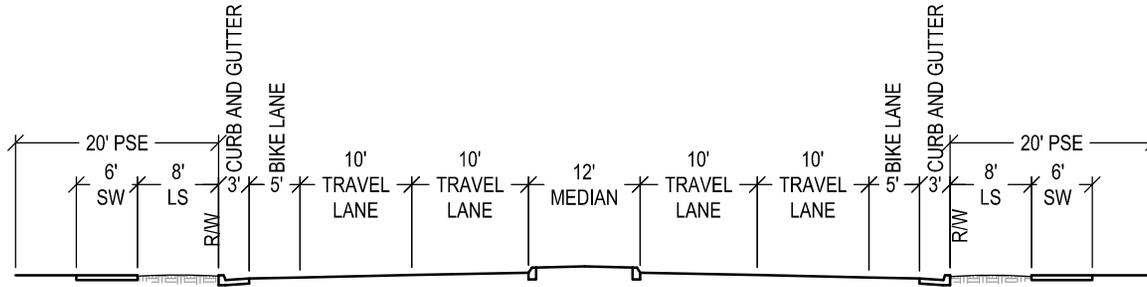
4/3/2025

DATE

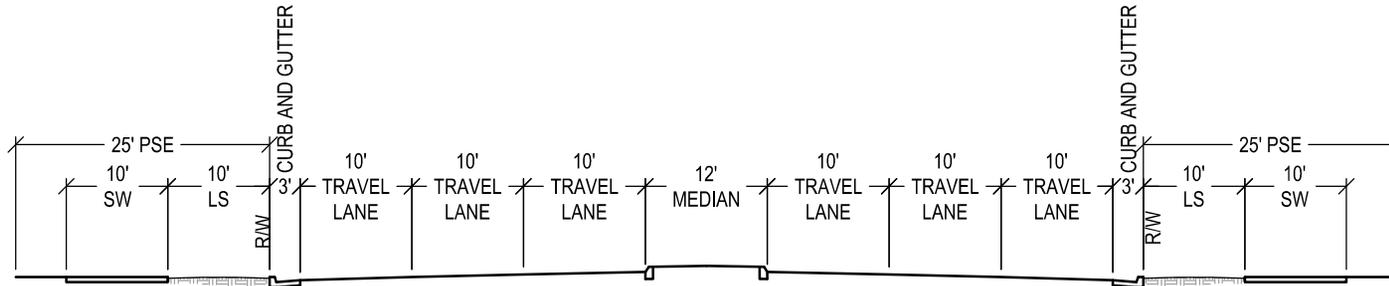


DRAWING NUMBER

T-16



68' ARTERIAL STREET



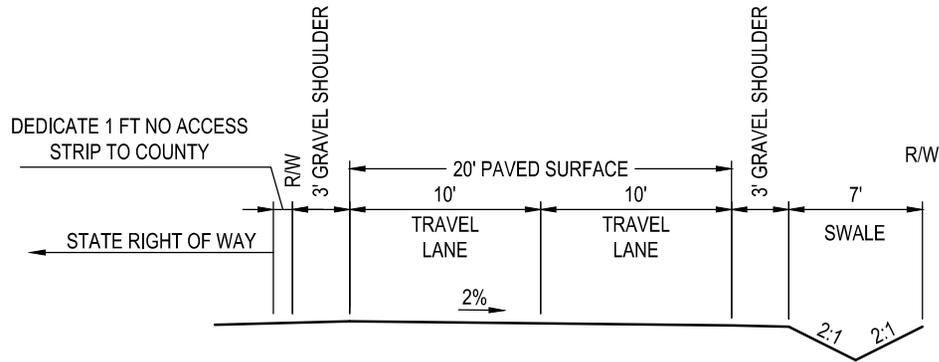
78' THOROUGHFARE STREET

AT THE DISCRETION OF DEVELOPMENT SERVICES

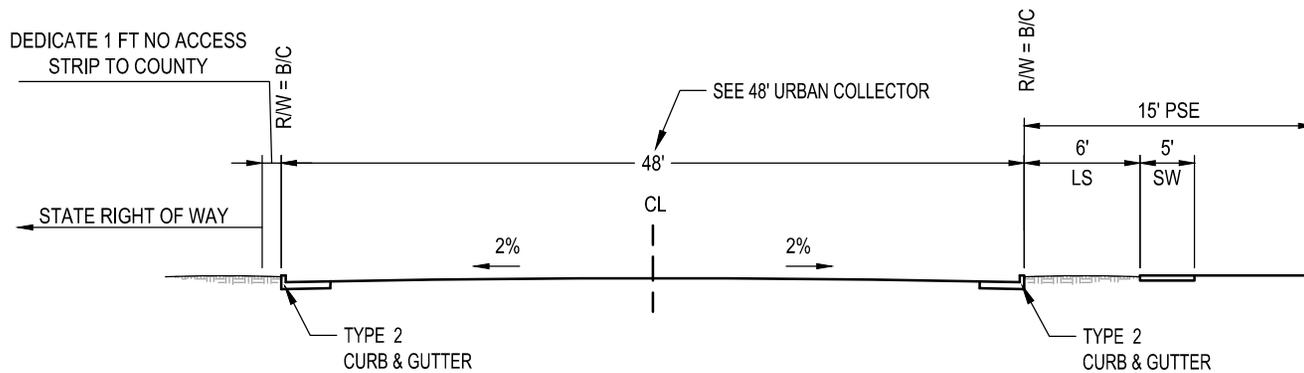
1. ADJACENT TO SCHOOLS OR PARKS WIDEN THE SIDEWALK TO 8' AND THE PSE TO 18'.
2. PUBLIC SERVICE EASEMENT (PSE) SHALL BE DEDICATED BY GRANT DEED OR BY OWNER'S STATEMENT ON A SUBDIVISION MAP.

MINOR DEVIATION MAY BE APPROVED BY THE DIRECTOR.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>TYPICAL STREET CROSS SECTIONS 68' AND 78'</p>	<p>DRAWING NUMBER  T-17</p>



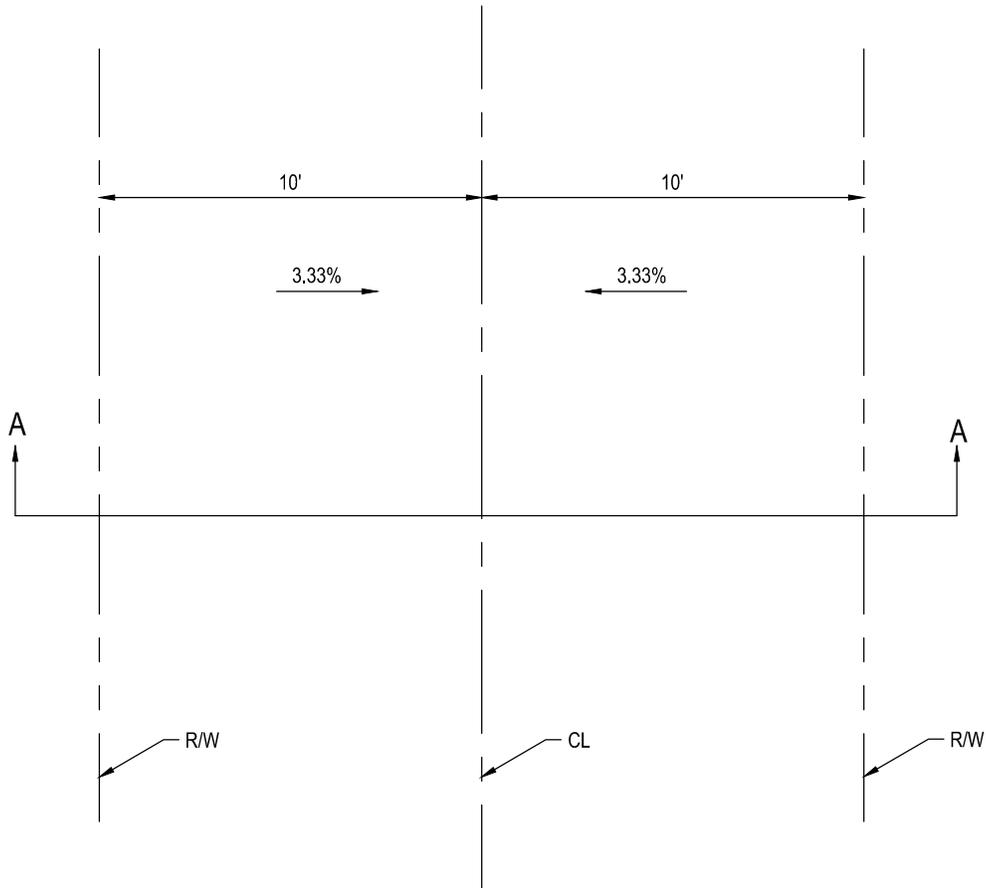
**33' RURAL FRONTAGE ROAD
ADJACENT TO STATE FREEWAY**



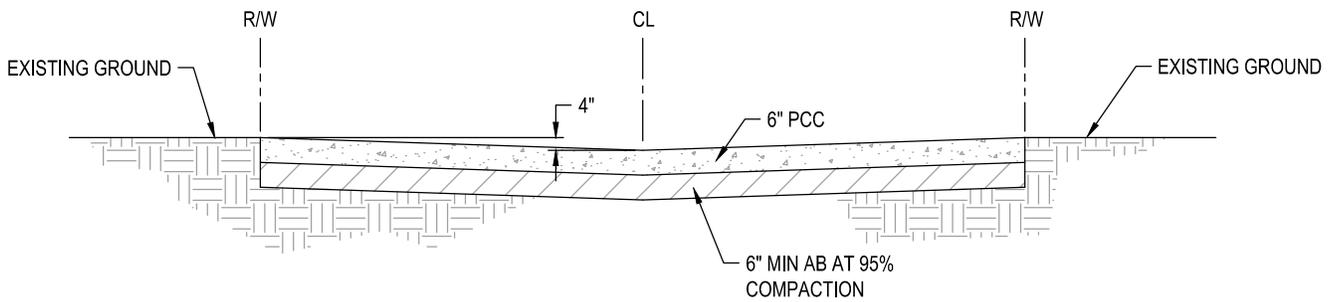
**48' URBAN FRONTAGE ROAD
ADJACENT TO STATE FREEWAY**

NOTE:
PUBLIC SERVICE EASEMENT (PSE) SHALL BE DEDICATED BY GRANT
DEED OR BY OWNER'S STATEMENT ON A SUBDIVISION MAP.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY: <i>ULPJ</i> DEVELOPMENT SERVICES DIRECTOR DATE: 4/3/2025</p>
<p>TYPICAL STREET CROSS SECTIONS FRONTAGE ROAD</p>	<p>DRAWING NUMBER T-18</p> 



PLAN



SECTION A-A

NOTES:

1. OTHER STRUCTURAL SECTIONS MAY BE USED WITH SPECIFIC APPROVAL OF THE DIRECTOR (SEE SECTION 4-6A)

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

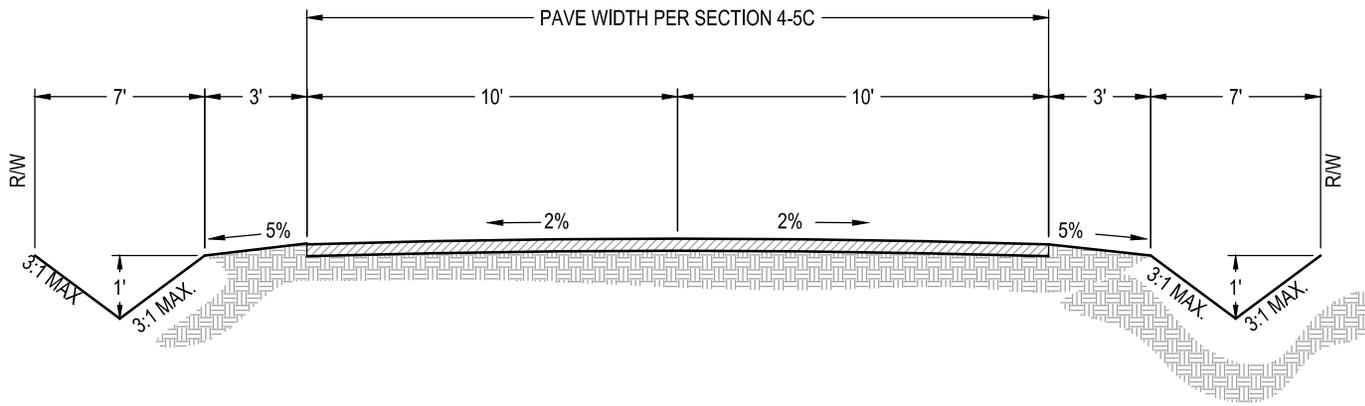
DATE

**20-FOOT STREET
(PRIVATE ALLEY)**



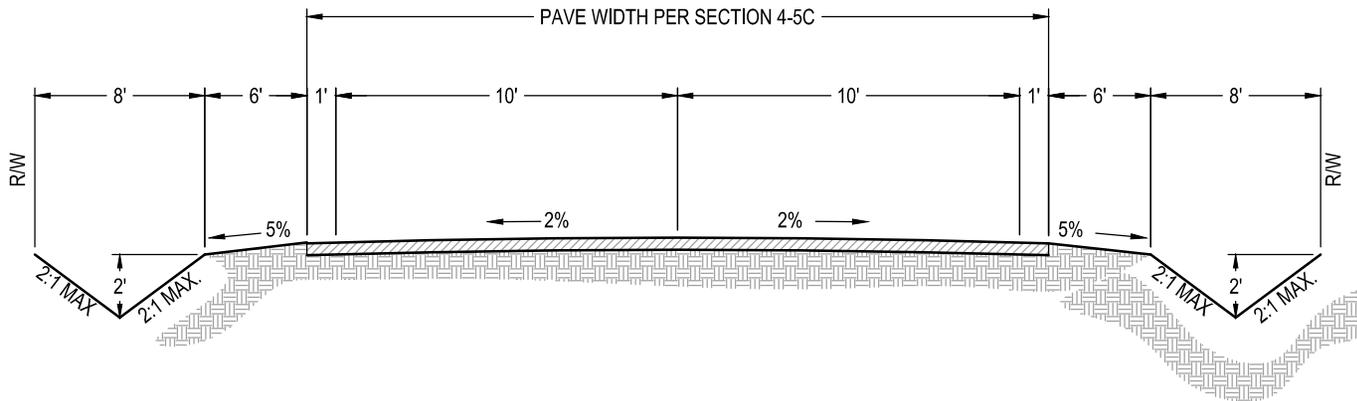
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T-19



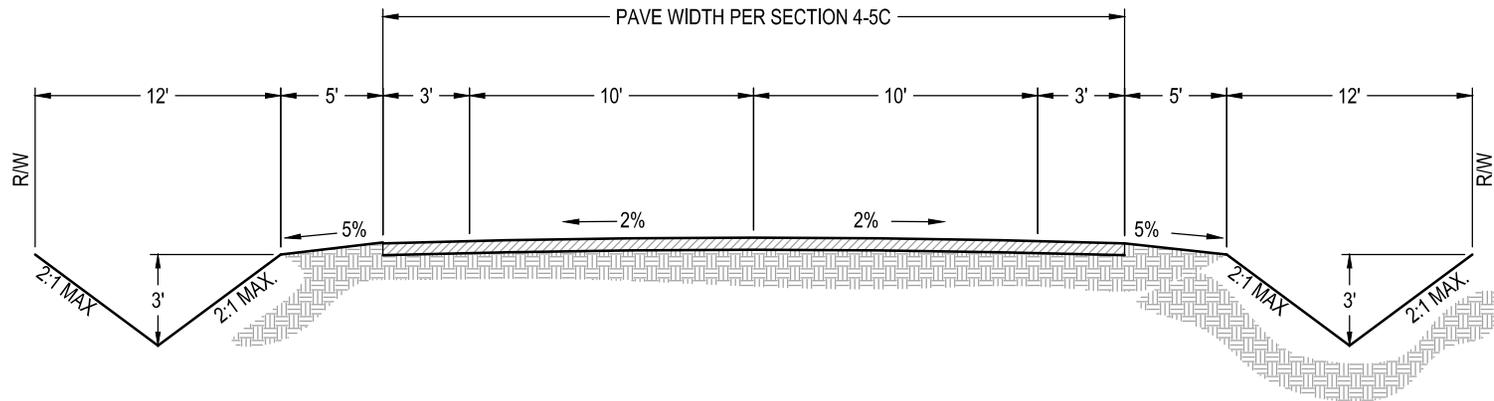
40' RURAL LOCAL

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR</p> <p>4/3/2025 DATE</p>
<p>CLASS C STREET CROSS SECTION</p>	<p>SUTTER COUNTY </p> <p>DRAWING NUMBER T-20</p>



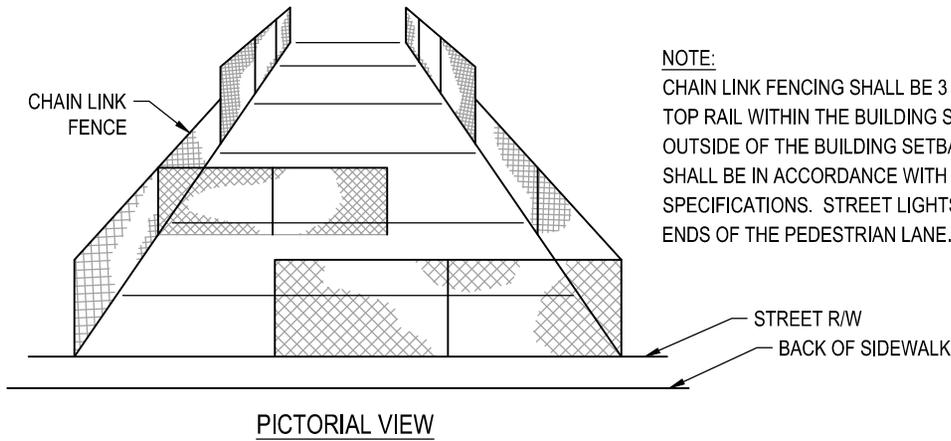
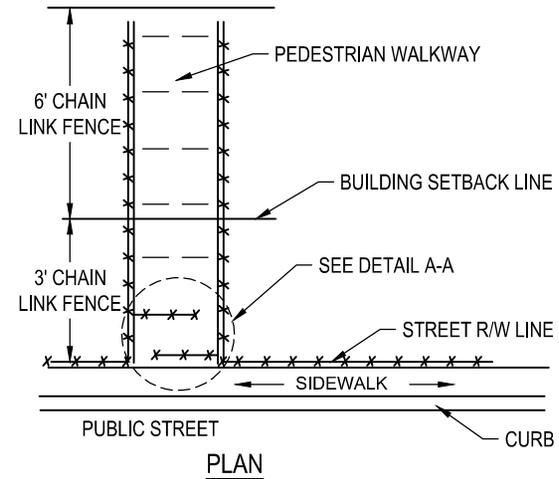
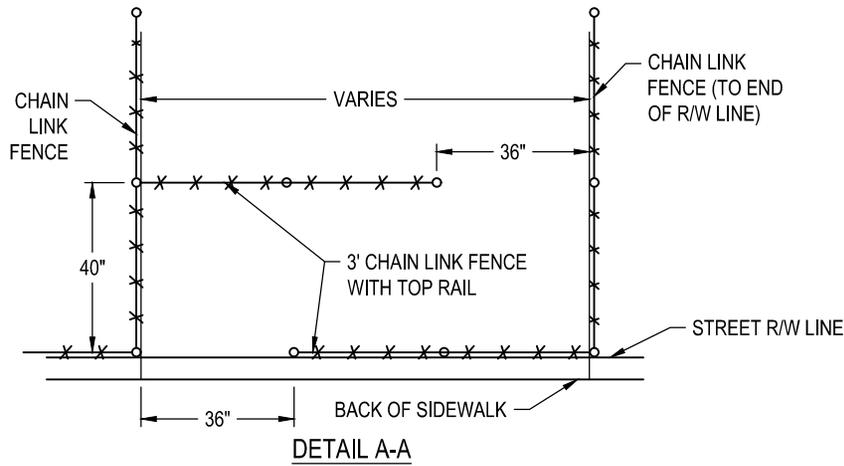
50' RURAL COLLECTOR

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>CLASS C STREET CROSS SECTION</p>	<p>DRAWING NUMBER  T-21</p>



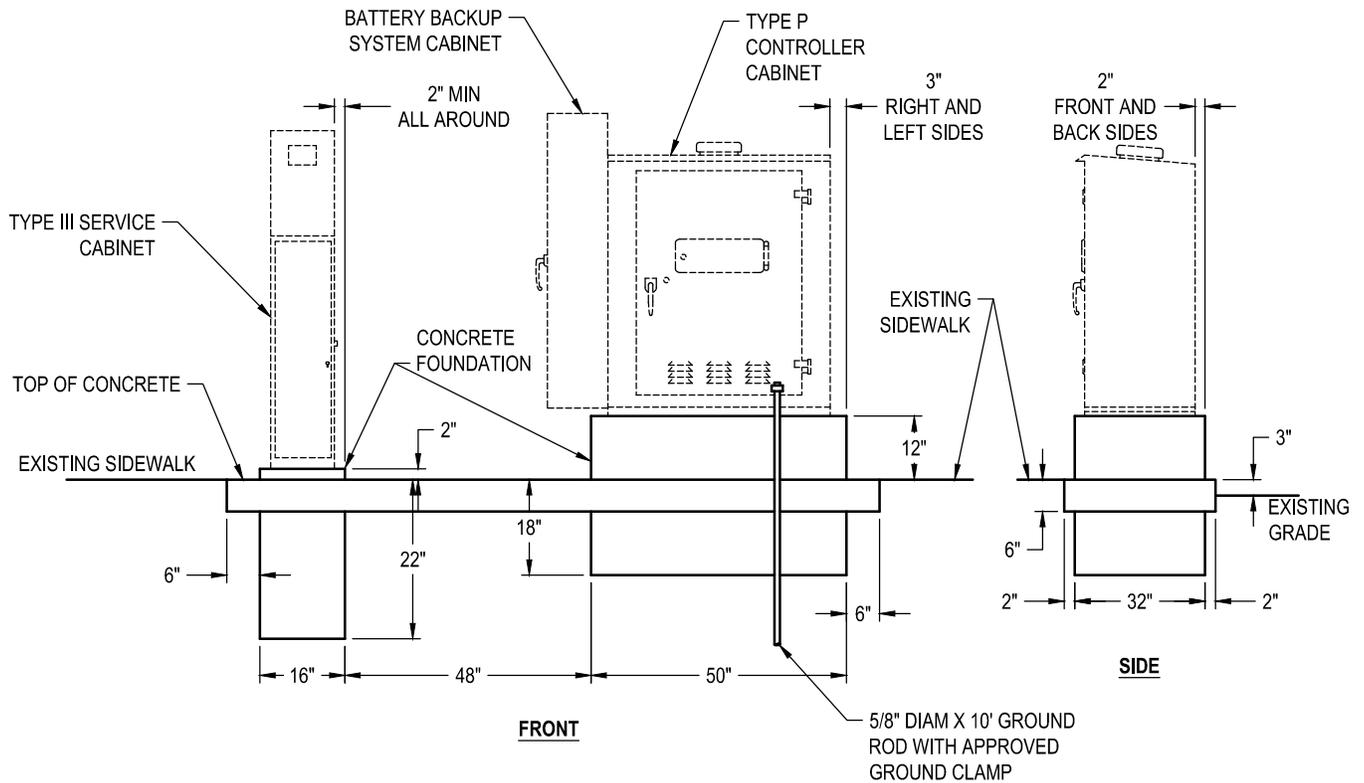
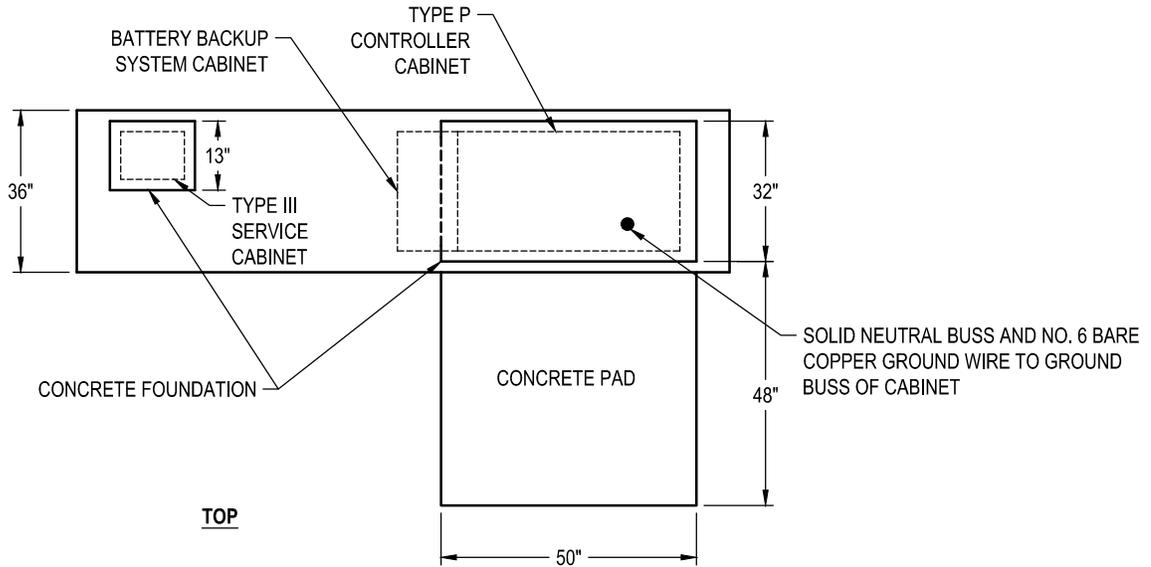
60' RURAL ARTERIAL

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>CLASS C STREET CROSS SECTION</p>	<p>DRAWING NUMBER  T-22</p>



NOTE:
 CHAIN LINK FENCING SHALL BE 3 FT. HIGH WITH A 1-1/4" DIAMETER TOP RAIL WITHIN THE BUILDING SETBACK LINE AND 6 FT. HIGH OUTSIDE OF THE BUILDING SETBACK LINE. CHAIN LINK FENCING SHALL BE IN ACCORDANCE WITH SECTION 45 OF THE STANDARD SPECIFICATIONS. STREET LIGHTS SHALL BE PLACED AT BOTH ENDS OF THE PEDESTRIAN LANE.

<p>COUNTY OF SUTTER - ENGINEERING</p>	<p>APPROVED BY:  DEVELOPMENT SERVICES DIRECTOR DATE 4/3/2025</p>
<p>PEDESTRIAN LANE WITH BIKE BARRIER</p>	<p>DRAWING NUMBER  T-23</p>



NOTES:

1. SEE STATE STANDARD PLAN ES-2D AND ES-3C FOR STANDARD ANCHOR BOLT PATTERNS AND SIZES.
2. IN UNPAVED AREAS, A RAISED PORTLAND CEMENT PAD SHALL BE CONSTRUCTED IN FRONT OF THE FRONT DOOR OF THE CONTROLLER CABINET (50" W X 48" D X 4" THICK).
3. FRONT DOOR OF THE CONTROLLER CABINET SHALL FACE NORTH OR EAST, WHENEVER FEASIBLE. THE FINAL LOCATION OF THE CONTROLLER CABINET AND SERVICE CABINET SHALL BE APPROVED BY THE DIRECTOR.

COUNTY OF SUTTER - ENGINEERING

**CONCRETE FOUNDATION FOR
TYPE P CONTROLLER CABINET
AND TYPE III SERVICE CABINET**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

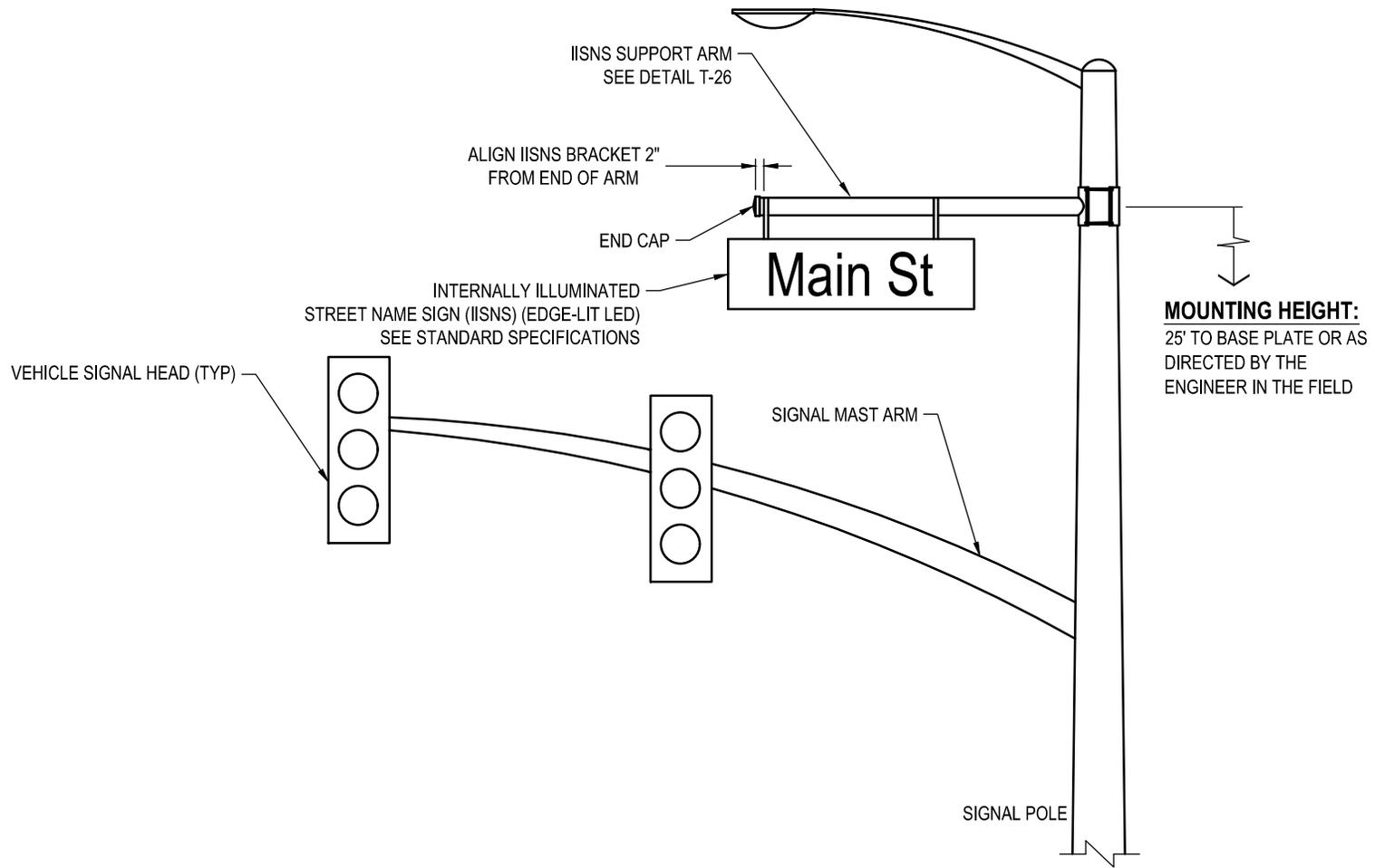
4/3/2025

DATE



DRAWING NUMBER

T-24



MOUNTING HEIGHT:
 25' TO BASE PLATE OR AS
 DIRECTED BY THE
 ENGINEER IN THE FIELD

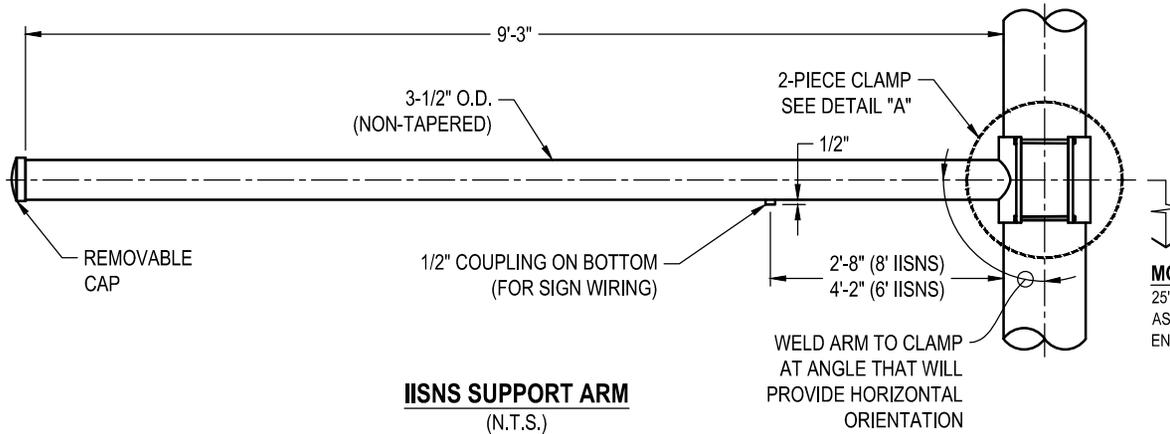
COUNTY OF SUTTER - ENGINEERING

APPROVED BY:
ULP
 DEVELOPMENT SERVICES DIRECTOR
 DATE 4/3/2025

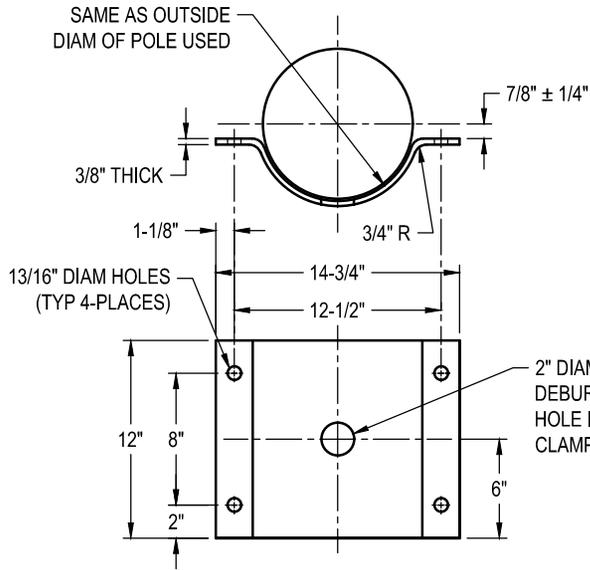
**(EDGE-LIT LED) INTERNALLY
 ILLUMINATED STREET NAME SIGN**

SUTTER COUNTY

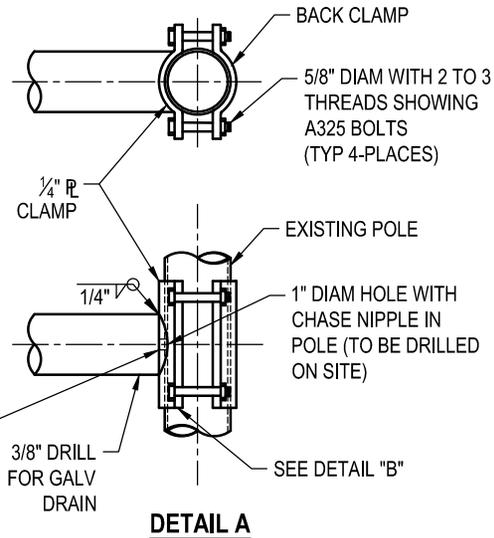
 DRAWING NUMBER
T-25



IISNS SUPPORT ARM
(N.T.S.)



DETAIL B



DETAIL A

CLAMP DETAILS
(N.T.S.)

GENERAL NOTES	
MATERIAL SPECIFICATIONS	
SHAFT	STEEL OF 48,000 PSI MINIMUM YIELD AFTER FABRICATION
CLAMP PLATE	ASTM A-572 GR. 50 STEEL
MANUFACTURING PROCESS	
LONGITUDINAL WELDS	ALL WELDS SHALL CONFORM TO AWS D1.1 WELD SPECIFICATION
FINISH COATING	
STRUCTURE	HOT DIP GALVANIZED PER ASTM A-123
HARDWARE	HOT DIP GALVANIZED PER ASTM A-153

IISNS = INTERNALLY ILLUMINATED STREET NAME SIGN

<p>COUNTY OF SUTTER - ENGINEERING</p> <p>IISNS SUPPORT ARM TYPICAL CLAMP DETAIL</p>	<p>APPROVED BY:</p>  <p>4/3/2025</p>
	<p>DEVELOPMENT SERVICES DIRECTOR DATE</p> <p>SUTTER COUNTY DRAWING NUMBER</p>  <p>T-26</p>

CONDUIT SIZING

CONDUCTOR	H, MAX, feet
#12 CONDUCTOR	1.2
#10 CONDUCTOR	1.5
#8 CONDUCTOR	2.3
#6 CONDUCTOR	3
#4 CONDUCTOR	4
#2 CONDUCTOR	5.3
#0 CONDUCTOR	11.5
INTERCONNECT CABLE	18
DETECTOR LEAD-IN CABLE	2.5
EMERGENCY VEHICLE DETECTOR CABLE	2

CONDUIT SIZE	1"	1.5"	2"	2.5"	3"	3.5"	4"
MAXIMUM NUMBER OF #14 A.W.G CONDUCTORS	8	19	31	44	69	91	113

NOTE: MINIMUM SIZE FOR NEW CONDUITS IS 1.5".

SERVICE WIRE MAXIMUM LENGTHS
FOR TRAFFIC SIGNALS

WIRE SIZE	LENGTH
#0	576'
#2	360'
#4	224'

CIRCUIT BREAKER SIZING

CONDUCTOR SIZE A.W.G.	MAXIMUM CIRCUIT BREAKER AMPERAGE
#2	100
#4	80
#6	50
#8	40
#10	30

NOTE:
THE BREAKER SIZE SHALL BE DETERMINED BY THE LOAD REQUIREMENTS. MINIMUM BREAKER SIZE IS 30 AMPS.

COUNTY OF SUTTER - ENGINEERING

**CONDUIT, SERVICE WIRE
AND BREAKER SIZING**

APPROVED BY:



DEVELOPMENT SERVICES DIRECTOR

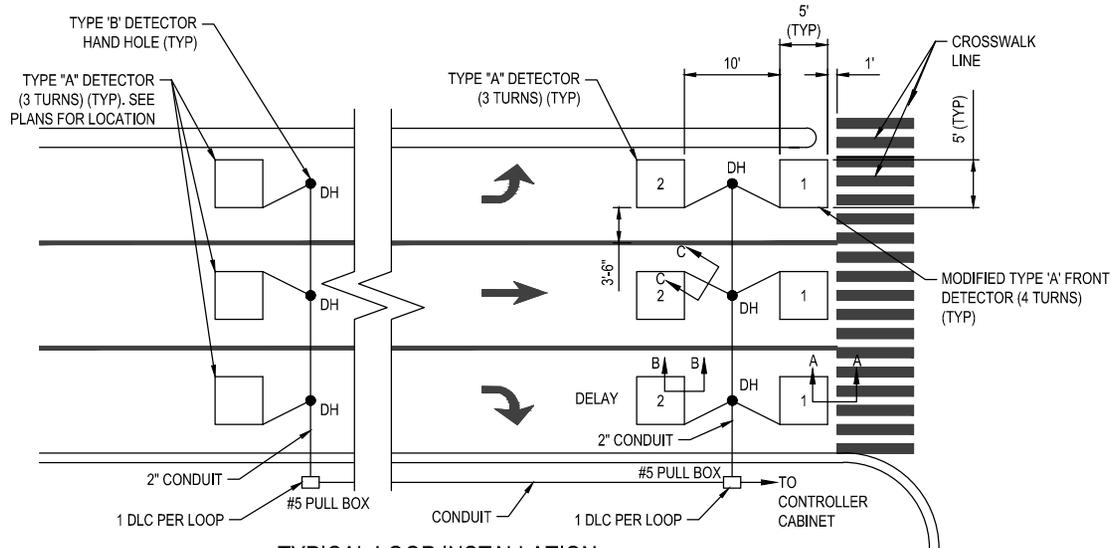
4/3/2025

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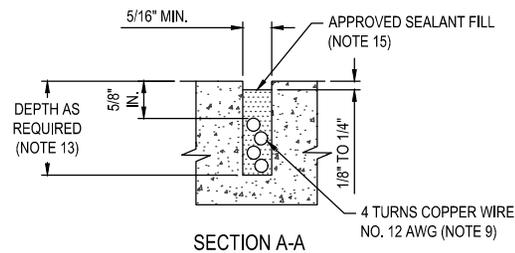


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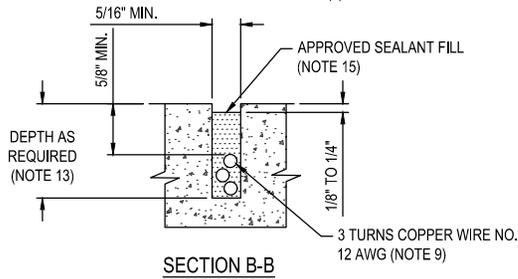
T-27



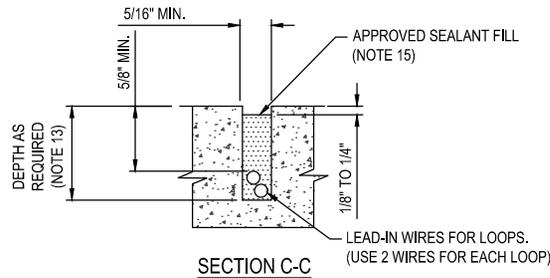
TYPICAL LOOP INSTALLATION



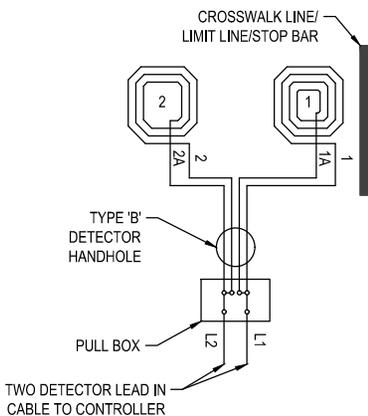
SECTION A-A



SECTION B-B



SECTION C-C



LOOP WINDING AND CONNECTION PATTERNS

LOOP INSTALLATION PROCEDURE

1. ALL LOOP WORK SHALL CONFORM TO THE LATEST VERSION OF THE CALTRANS STANDARD SPECIFICATIONS.
2. SEE CURRENT STATE STANDARD PLANS ES-5 SERIES FOR ADDITIONAL DETAILS.
3. THE PLACEMENT OF LOOPS SHALL BE CENTERED IN EACH LANE, WITH THE EXCEPTION OF: LEFT TURN LANE, THE SEPARATION DISTANCE BETWEEN THE RIGHT EDGE OF EACH LOOP AND THE LANE ON THE RIGHT (THRU LANE) SHOULD BE 3'-6".
4. NEW OR REPLACEMENT LOOP SHALL BE MARKED ON PAVEMENT AND THEIR LOCATION APPROVED BY THE DIRECTOR, PRIOR TO PAVEMENT CUTTING.
5. LOOP INSTALLATION SHALL INCLUDE NEW CONDUIT, DETECTOR HANDHOLE (DH) AND DETECTOR LEAD IN CABLE (DLC), UNLESS OTHERWISE NOTED ON THE PLANS.
6. EACH DETECTOR LOOP IN EACH TRAVEL LANE SHALL BE INSTALLED WITH ITS OWN DETECTOR LEAD IN CABLE AND CONNECTED IN CONTROLLER WITH SEPARATE DETECTOR CHANNEL FOR OPERATION, UNLESS OTHERWISE NOTED ON THE PLANS.
7. DETECTOR LEAD IN CABLES SHALL BE CONTINUOUS WITHOUT SPLICES BETWEEN LOOP TERMINATION PULL BOX AND CONTROLLER.
8. LOOP INSTALLATION 250' OR MORE FROM STOP BAR SHALL HAVE 4 TURNS.
9. DETECTOR LOOP CONDUCTOR SHALL BE TYPE RHW-USE NEOPRENE-JACKETED OR TYPE USE CROSSLINKED POLYPROPYLENE INSULATED NO. 12 STRANDED COPPER WIRE. CONDUCTOR INSULATION THICKNESS SHALL BE FORTY (40) MILS MINIMUM.
10. DISTANCE BETWEEN SIDE OF LOOP AND LEAD-IN SAW CUT SHALL BE 1'-0" MINIMUM.
11. LOOPS AND LEAD-IN CUTS SHALL BE LOCATED A MINIMUM OF 2 FEET FROM THE NEAREST EDGE OF MANHOLE COVER OR VALVE BOX.
12. WIDTH OF SAW CUTS SHALL BE 1/4" WIDER THAN THICKNESS OF THE CONDUCTOR.
13. DEPTH OF SAW CUTS SHALL BE SUCH THAT THE MINIMUM SEALANT COVER SHALL BE 1/2" WITH AN ADDITIONAL 1/8" TO 1/4" GAP BETWEEN TOP OF SEALANT AND SURFACE OF PAVEMENT.
14. TEST EACH LOOP CIRCUIT AT CONTROLLER CABINET (OR, IF THESE ARE NOT INSTALLED, TEST AT TERMINATION PULL BOX) BEFORE FILLING SLOTS. PERFORM A RESISTANCE TEST BETWEEN EACH CIRCUIT AND GROUND. INSULATION RESISTANCE SHALL NOT BE LESS THAN 100 MEGA OHMS. TEST EACH LOOP CIRCUIT FOR CONTINUITY. LOOP CIRCUIT RESISTANCE SHALL NOT EXCEED 0.5 OHMS PLUS 0.35 OHMS PER 100 FEET OF LEAD-IN CABLE.
15. SEALANT FOR LOOP DETECTORS SHALL BE 3M 5000 OR APPROVED EQUAL ELASTOMERIC SEALANT.
16. CONDUIT BETWEEN DETECTOR HANDHOLE AND PULL BOX SHALL BE INSTALLED 30" MINIMUM BELOW ROADSIDE DITCH OR SWALE.
17. DETECTOR HANDHOLE (DH) SHALL BE TYPE B (SEE STD DWG T-29).
18. ANY DAMAGE TO EXISTING LOOPS, DETECTOR HANDHOLE, CONDUIT AND DETECTOR LEAD IN CABLE SHALL BE REPLACED PER THE REQUIREMENTS SET FORTH IN THIS DETAIL.

COUNTY OF SUTTER - ENGINEERING

TYPICAL DETECTOR LOOP LAYOUTS

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

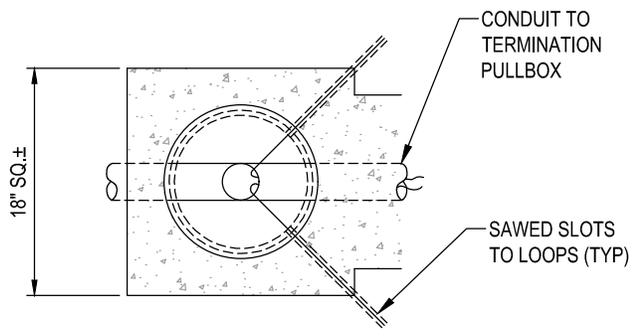
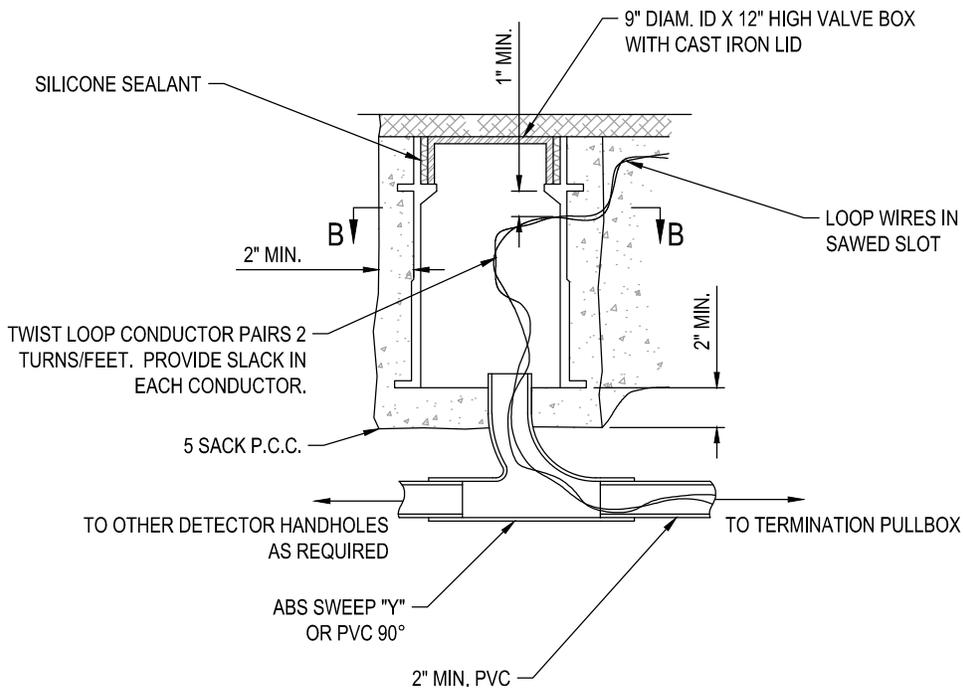
4/3/2025

DATE



DRAWING NUMBER

T-28



SECTION B-B

INSTALLATION REQUIREMENTS:

1. 18" SQ.± P.C.C. ENCASUREMENT OUTLINE SHALL BE SAW CUT TO A MINIMUM DEPTH OF 3", EXCEPT WHERE AC OVERLAY IS TO BE PLACED.
2. THE PRECAST VALVE BOX WITH CAST IRON LID SHALL BE FABRICATED OF CALCIUM CARBONATE AND POLYESTER RESINS WITH FIBERGLASS REINFORCING AND DESIGNED FOR HEAVY TRAFFIC LOADS.
3. CAST IRON LID SHALL BE MARKED "DETECTOR" AND SHALL BE SECURED IN PLACE BY APPLYING SILICONE SEALANT. VALVE BOX LOCATION SHALL BE AS SHOWN ON THE PLANS.
4. THE EXCAVATION AROUND THE HANDHOLE SHALL BE BACKFILLED WITH 5 SACK P.C.C.
5. THE HANDHOLE SHALL BE PROTECTED WITH COLD PATCH OR OTHER SUITABLE PROTECTION UNTIL PERMANENT A.C. BACKFILL IS PLACED.
6. THE CEMENT USED TO JOIN THE ABS SWEEP "Y" TO THE PVC CONDUIT SHALL BE CAPABLE OF PROVIDING SOLVENT TYPE WELD BETWEEN THE TWO MATERIALS.

COUNTY OF SUTTER - ENGINEERING

TYPE "B" DETECTOR HANDHOLE DETAIL

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DEVELOPMENT SERVICES DIRECTOR

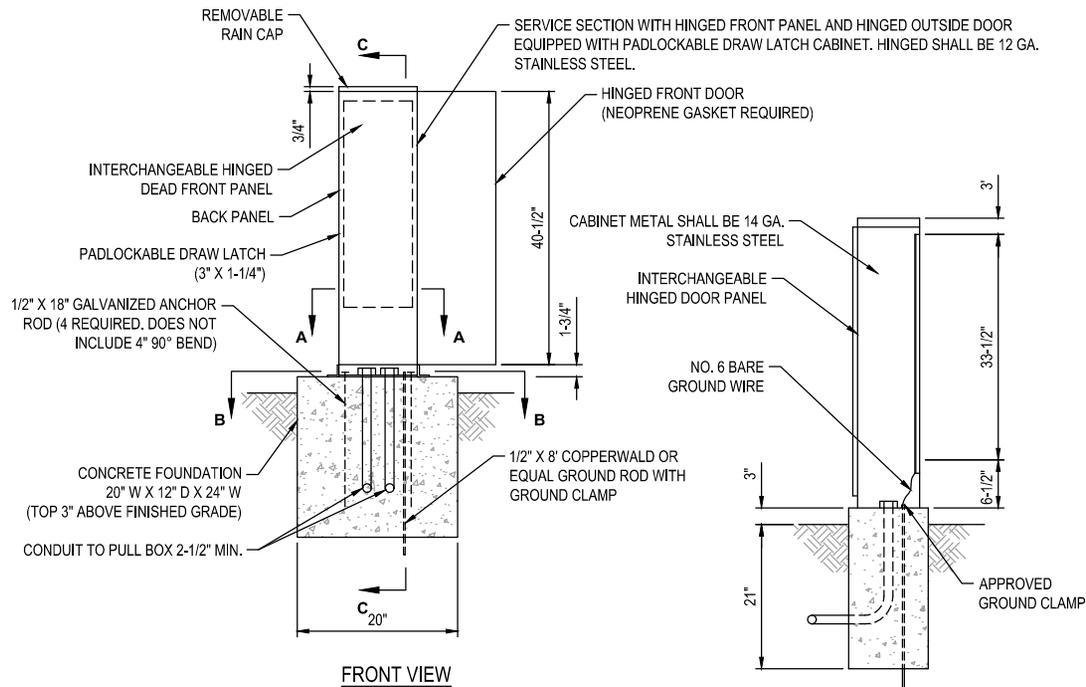
4/3/2025

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T-29



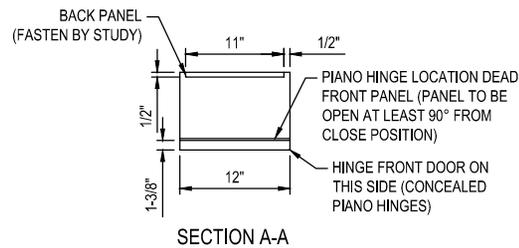
FRONT VIEW

SECTION C-C

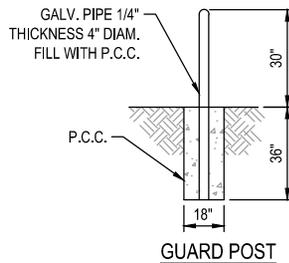
GENERAL INSTALLATION NOTES - ALL CABINETS

1. ALL CABINET DIMENSIONS ARE NOMINAL
2. FOUNDATION SHALL BE LOCATED AS SHOWN ON PLANS. WHERE INSTALLED IN SIDEWALK PLACE AT BACK OF WALK AND PROVIDE 48" MINIMUM CLEARANCE BETWEEN FACE OF CURB AND FRONT OF CABINET.
3. ONE ANCHOR BOLT SHALL BE BONDED TO CONDUIT OR GROUND WIRE.
4. SERVICE CAN, CONTROLLER CABINET, AND TERMINAL CABINET (IF NECESSARY) SHALL BE ON A COMMON FOUNDATION WITH 6" SPACING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE SERVICE CAN SHALL BE TO THE LEFT OF THE CONTROLLER CABINET SO AS TO NOT BE BLOCKED BY CONTROLLER CABINET DOOR WHEN FULLY OPEN.
5. APPROVED WATERPROOF SEAL TO BE APPLIED TO BASE OF CABINETS AND CONCRETE FOUNDATION.
6. IN UNIMPROVED AREAS A RAISED P.C.C. PAD OF 36" X 30" X 4" SHALL BE PLACED IN FRONT OF EACH CABINET.
7. IN ALL UNPAVED AREAS TOP OF FOUNDATION FOR CABINETS SHALL BE 6" ABOVE SURROUNDING GRADE. IN PAVED AREAS TOP OF FOUNDATION SHALL BE 3" ABOVE PAVED AREA.
8. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.
9. ALL CONDUITS SHALL BE BONDED TOGETHER IN THE CABINET.
10. LOCATIONS SHOWN FOR EQUIPMENT ARE TYPICAL ONLY.
11. A 1/2" DIAMETER DRAIN HOLE SHALL BE FORMED IN THE CABINET BASE. ALL CABINETS SHALL BE LEVELED SO THAT THE CABINET DOOR WILL OPEN AND CLOSE EASILY.

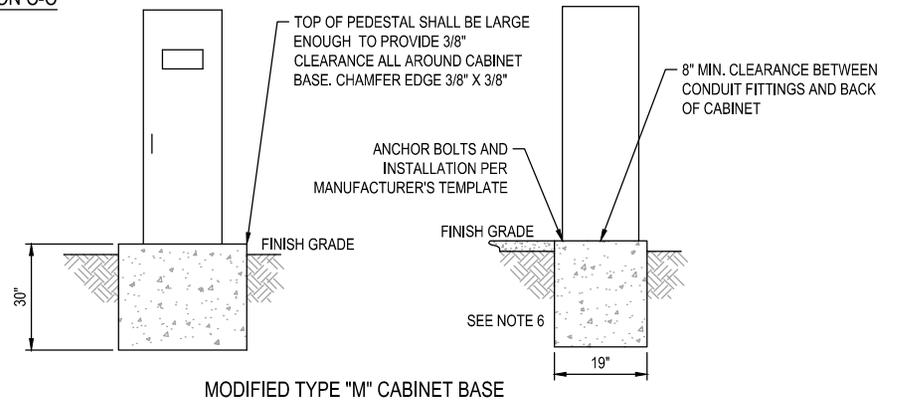
TRAFFIC SIGNAL INTERCONNECT TERMINAL CABINET OR PEDESTRIAN SIGNAL CONTROLLER CABINET



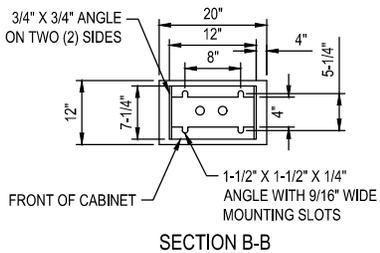
SECTION A-A



GUARD POST



MODIFIED TYPE "M" CABINET BASE



SECTION B-B

COUNTY OF SUTTER - ENGINEERING

**INTERCONNECT TERMINAL CABINET
AND PEDESTRIAN SIGNAL
CONTROLLER CABINET DETAILS**

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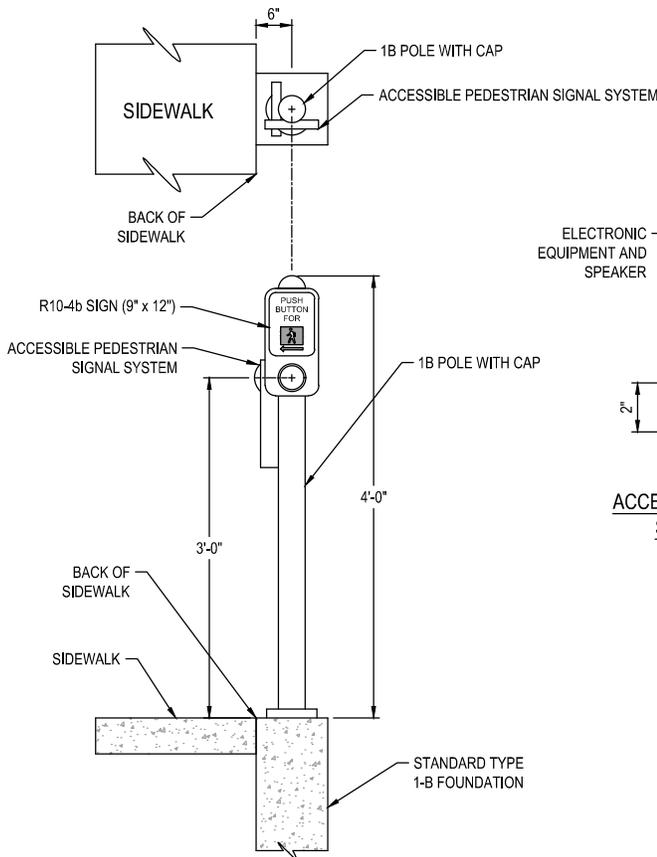
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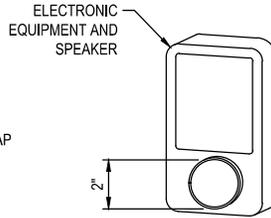


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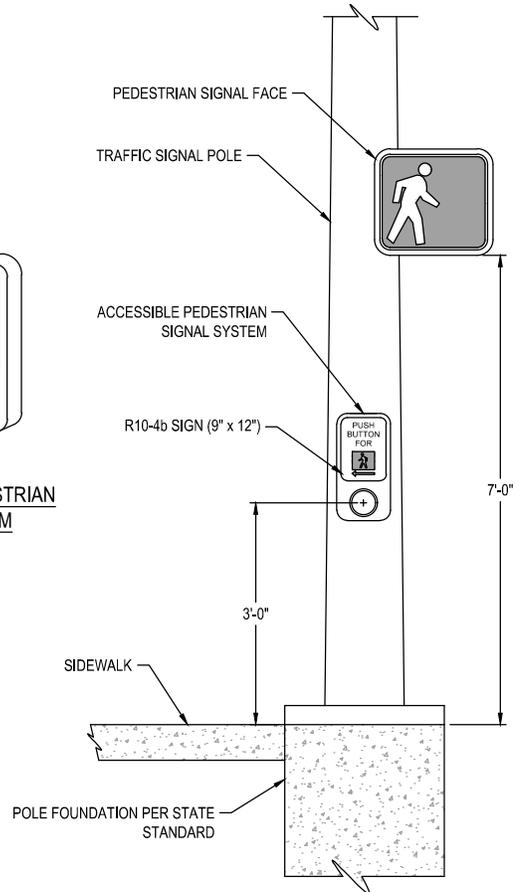
T-30



ACCESSIBLE PEDESTRIAN SIGNAL POLE
NOT TO SCALE



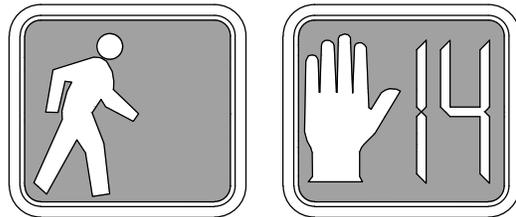
ACCESSIBLE PEDESTRIAN SIGNAL SYSTEM
NOT TO SCALE



COMBINED TRAFFIC SIGNAL AND ACCESSIBLE PEDESTRIAN SIGNAL POLE
NOT TO SCALE

NOTES:

1. ACCESSIBLE PEDESTRIAN SIGNAL SYSTEM SHALL BE POLARA'S NAVIGATOR 2-WIRE SYSTEM OR APPROVED EQUIVALENT.
2. PEDESTRIAN SIGNS SHALL BE METAL AND SHALL CONFORM TO STANDARD SIGN NO. R10-4b (9" x 12") OF THE CALIFORNIA MUTCD.
3. PEDESTRIAN PUSH BUTTON HOUSING SHALL BE EITHER DIE-CAST OR PERMANENT MOLD CAST ALUMINUM.
4. ALL PEDESTRIAN SIGNAL HEADS SHALL BE THE "COUNTDOWN" VARIETY.
5. PEDESTRIAN HEADS SIGNAL DISPLAY SHALL BE ONE OF THE FOLLOWING:
 - DIALIGHT 430-6479-001XC
 - GE PS7-CFF1-VLA OR PS7-CFF1-27A
 - LEOTEK TSL-PED-16-CIL-P1
 THE DISPLAY SHALL INCLUDE SOLID (FILLED IN) "WALKING PERSON" AND "RAISED HAND" SYMBOLS.



PEDESTRIAN SIGNAL FACE
SYMBOL TYPE
NOT TO SCALE

COUNTY OF SUTTER - ENGINEERING

ACCESSIBLE PEDESTRIAN SIGNAL SYSTEM

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4/3/2025

DATE

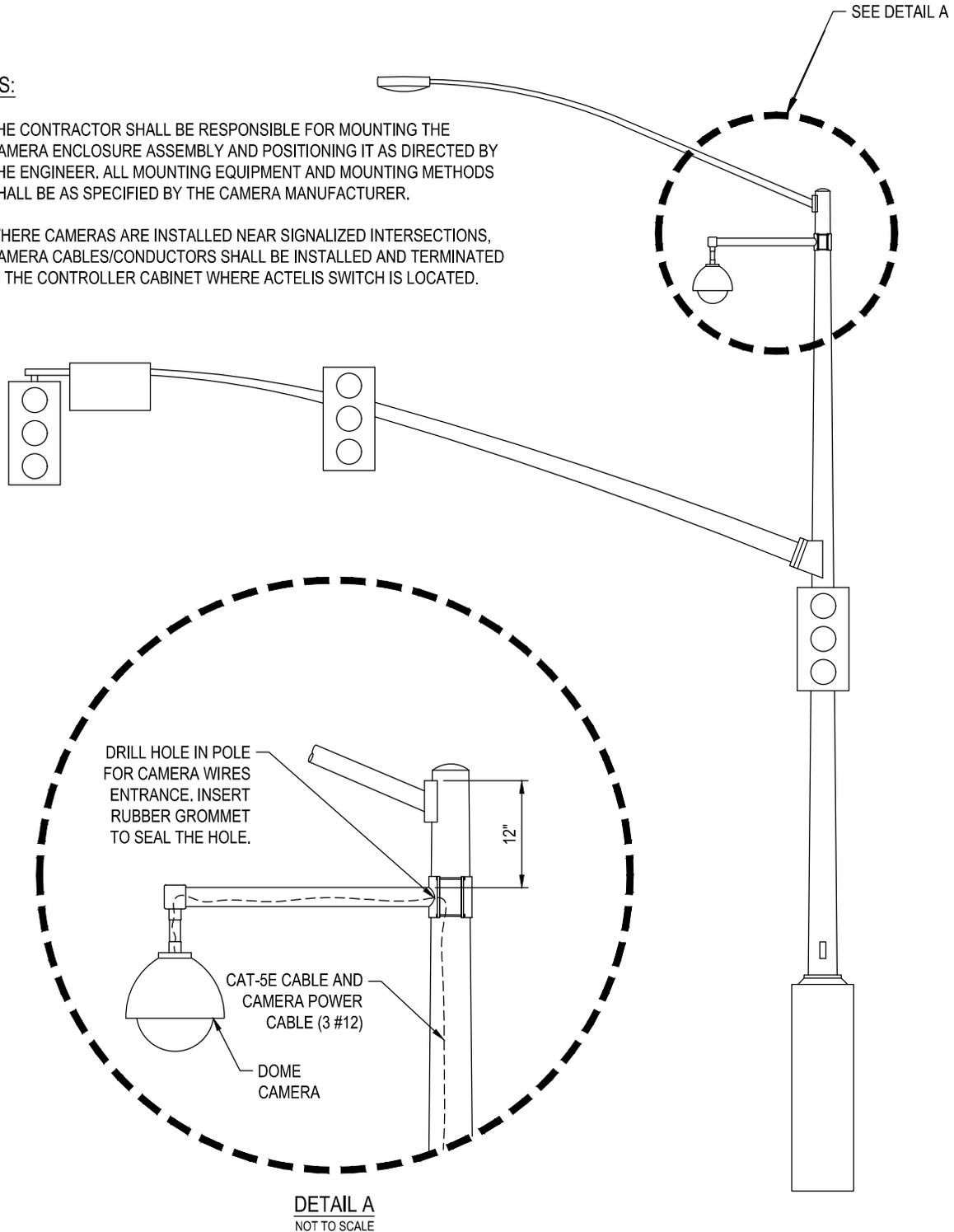


DRAWING NUMBER

T-31

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOUNTING THE CAMERA ENCLOSURE ASSEMBLY AND POSITIONING IT AS DIRECTED BY THE ENGINEER. ALL MOUNTING EQUIPMENT AND MOUNTING METHODS SHALL BE AS SPECIFIED BY THE CAMERA MANUFACTURER.
2. WHERE CAMERAS ARE INSTALLED NEAR SIGNALIZED INTERSECTIONS, CAMERA CABLES/CONDUCTORS SHALL BE INSTALLED AND TERMINATED IN THE CONTROLLER CABINET WHERE ACTELIS SWITCH IS LOCATED.



COUNTY OF SUTTER - ENGINEERING

**CCTV IP DOME CAMERA
(SIGNAL POLE MOUNTED)**

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ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

T-32

NOTES FOR TRAFFIC-SIGNAL-ARM SIGN MOUNTING:

1. ALL MATERIAL FURNISHED SHALL BE RUST RESISTANT. ALL SIGN HARDWARE SHALL BE ALUMINUM AND ANY MOVING PARTS MUST BE MADE OF STAINLESS STEEL TO PREVENT RUSTING.
2. SINGLE STREET NAME SIGN SHALL HAVE NAME AND SUFFIX CENTERED IN SIGN. SIGNS SHALL BE SINGLE FACE AND FABRICATED ON ALUMINUM BLANKS 0.063-INCH THICKNESS. BLANK SHALL BE 18-INCHES IN WIDTH AND VARY IN LENGTH DEPENDING ON THE NUMBER OF LETTERS OF THE STREET (MIN. OF 6-FEET IN LENGTH). SIGN BLANK SHALL HAVE GREEN ELECTRO CUT FILM (EC) OVER 3M DIAMOND GRADE, REFLECTIVE VINYL SHEETING. UPPER CASE LETTERS SHALL BE 10-INCHES AND LOWER CASE LETTERS SHALL BE 7.5-INCHES. ALL LETTERS SHALL BE HIGHWAY FRONT "D". SIGN SHALL HAVE 1-INCH WHITE BORDER COVERING THE ENTIRE EDGE OF SIGN BLANK. CORNERS SHALL BE NEATLY ROUNDED TO A 3-INCH RADIUS. THERE SHALL BE 10-INCHES SPACING BETWEEN BOARDER AND SIDES OF STREET NAME. LETTERS SHALL BE SPACED A MIN. OF 1.5 INCHES.
3. VARIOUS STREETS IN THE COUNTY CHANGE NAMES AT MAJOR INTERSECTIONS. SIGNS THAT DESIGNATE DIFFERENT NAMES SHALL BE MADE AS PER STANDARD DRAWING T-33.1.
4. ALL SIGNS SHALL BE APPROVED FOR CONFORMANCE BY THE COUNTY OPERATION AND MAINTENANCE STAFF PRIOR TO INSTALLATION. TO SCHEDULE AN INSPECTION PLEASE CALL (530) 822-7400.

COUNTY OF SUTTER - ENGINEERING

**TRAFFIC SIGNAL MAST ARM
SIGN ASSEMBLY (2 OF 2)**

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DEVELOPMENT SERVICES DIRECTOR

4/3/2025

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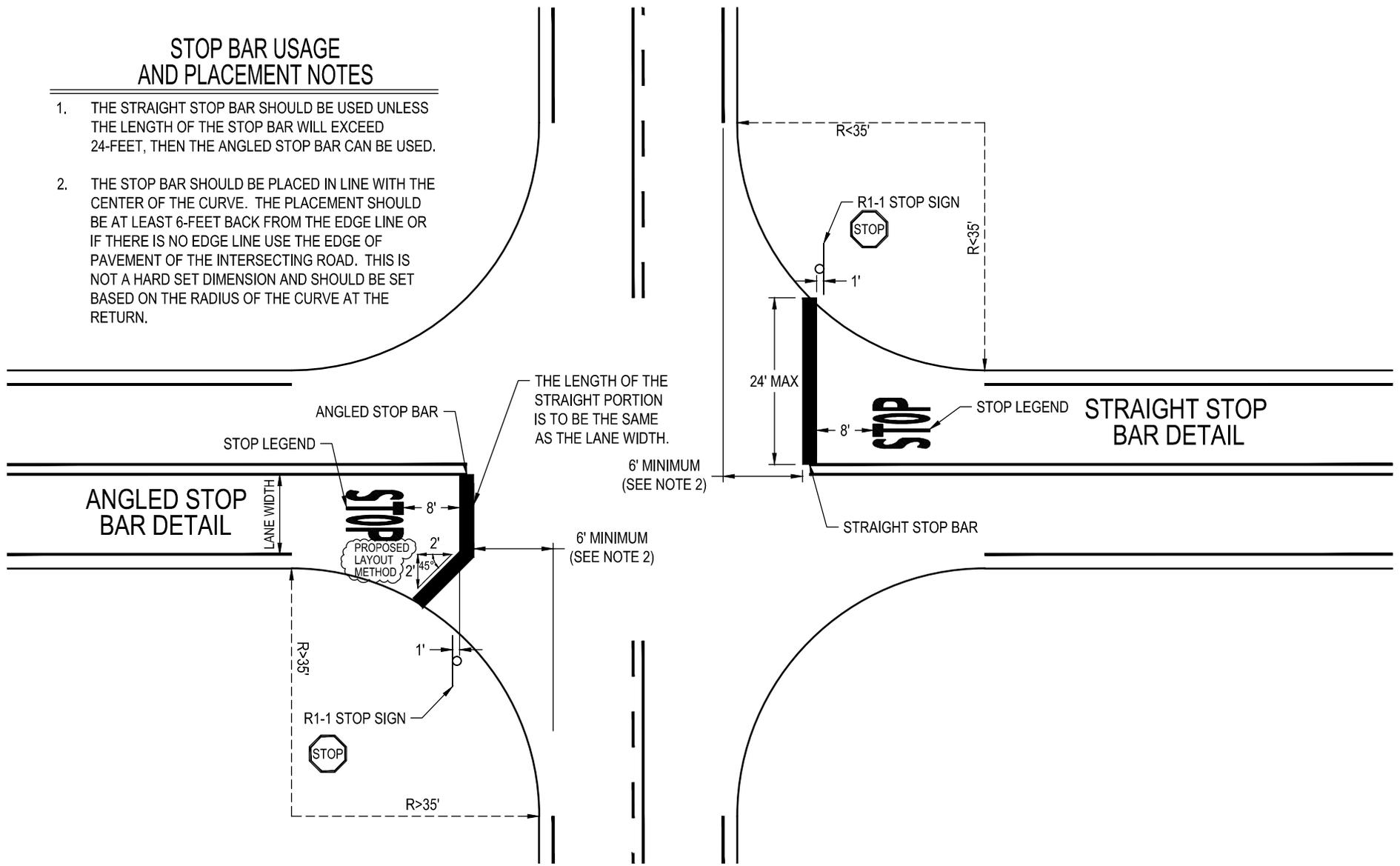


DRAWING NUMBER

T-33.2

STOP BAR USAGE AND PLACEMENT NOTES

1. THE STRAIGHT STOP BAR SHOULD BE USED UNLESS THE LENGTH OF THE STOP BAR WILL EXCEED 24-FEET, THEN THE ANGLED STOP BAR CAN BE USED.
2. THE STOP BAR SHOULD BE PLACED IN LINE WITH THE CENTER OF THE CURVE. THE PLACEMENT SHOULD BE AT LEAST 6-FEET BACK FROM THE EDGE LINE OR IF THERE IS NO EDGE LINE USE THE EDGE OF PAVEMENT OF THE INTERSECTING ROAD. THIS IS NOT A HARD SET DIMENSION AND SHOULD BE SET BASED ON THE RADIUS OF THE CURVE AT THE RETURN.



COUNTY OF SUTTER - ENGINEERING

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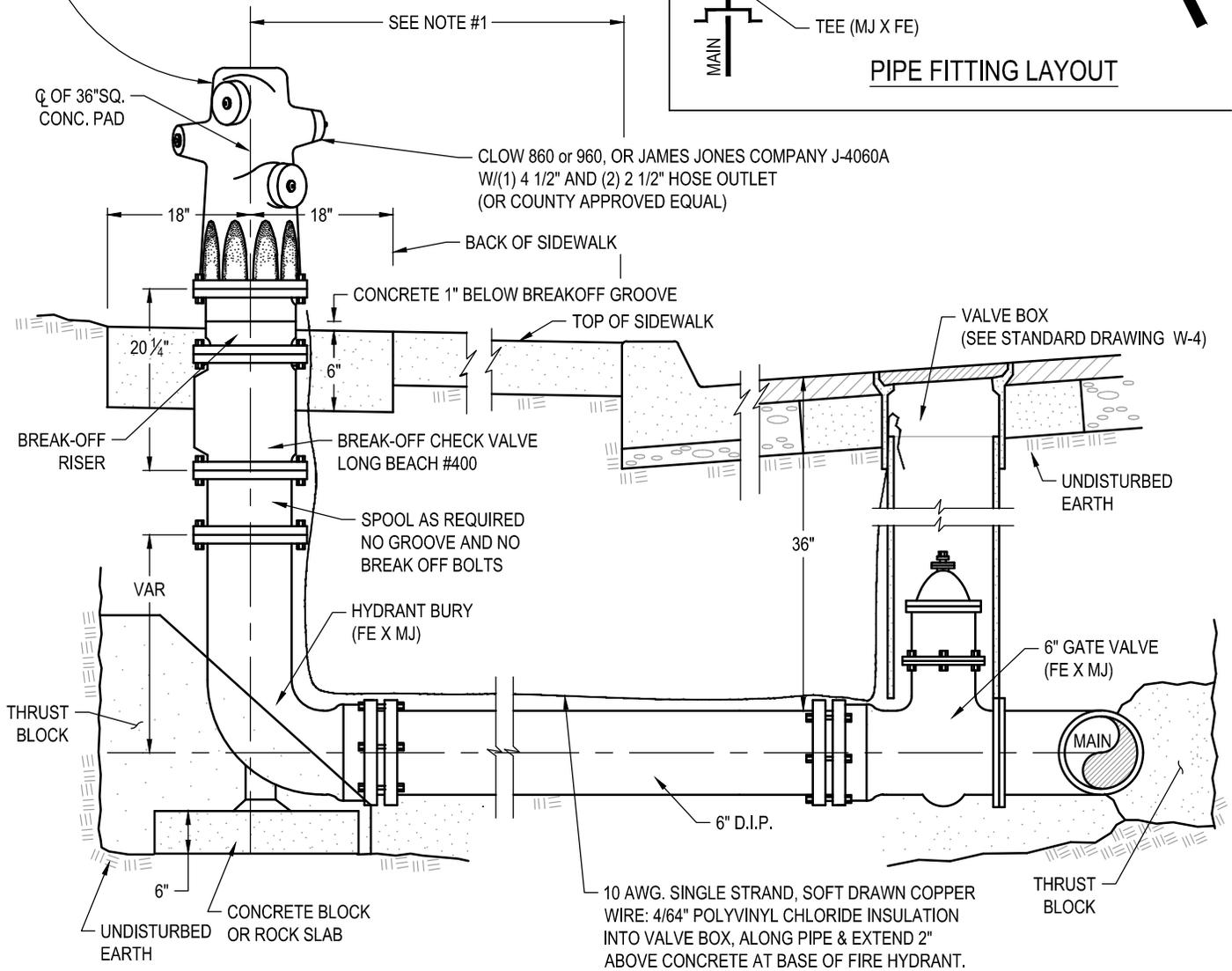
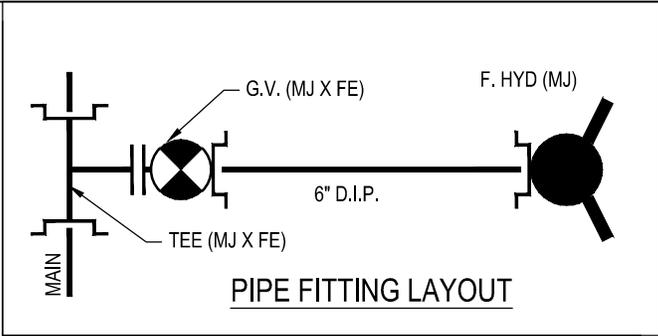
STOP BAR LOCATION



DRAWING NUMBER

T-34

PAINT - 1 COAT PRIMER OVER SOUND METAL & 2 COATS 1145 SAFETY YELLOW PAINT (OR COUNTY APPROVED EQUAL)



NOTES

- HYDRANT SHALL BE PLACED 24" BEHIND TOP BACK OF CURB WHEN PLACED WITHIN PLANTER STRIP. CONC. PAD SHALL EXTEND FROM TOP BACK OF CURB TO 18" BEYOND CENTERLINE OF HYDRANT
- BLUE REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED 6" FROM CENTERLINE ON SIDE NEAREST THE HYDRANT ON TWO OR MULTI-LANE STREETS. TWO MARKERS ARE REQUIRED AT INTERSECTIONS HAVING A HYDRANT. THE MARKER SHALL BE PLACED 6" FROM THE EDGE OF THE CONTINUOUS LEFT TURN LANE LINE ON SIDE NEAREST THE HYDRANT. FOUR LANE STREETS WITH TURN LANE AT INTERSECTION, THE MARKER SHALL BE PLACED 6" FROM NEAREST WHITE LINE ON THE SIDE NEAREST THE HYDRANT.

COUNTY OF SUTTER - ENGINEERING

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4/3/2025

DEVELOPMENT SERVICES DIRECTOR

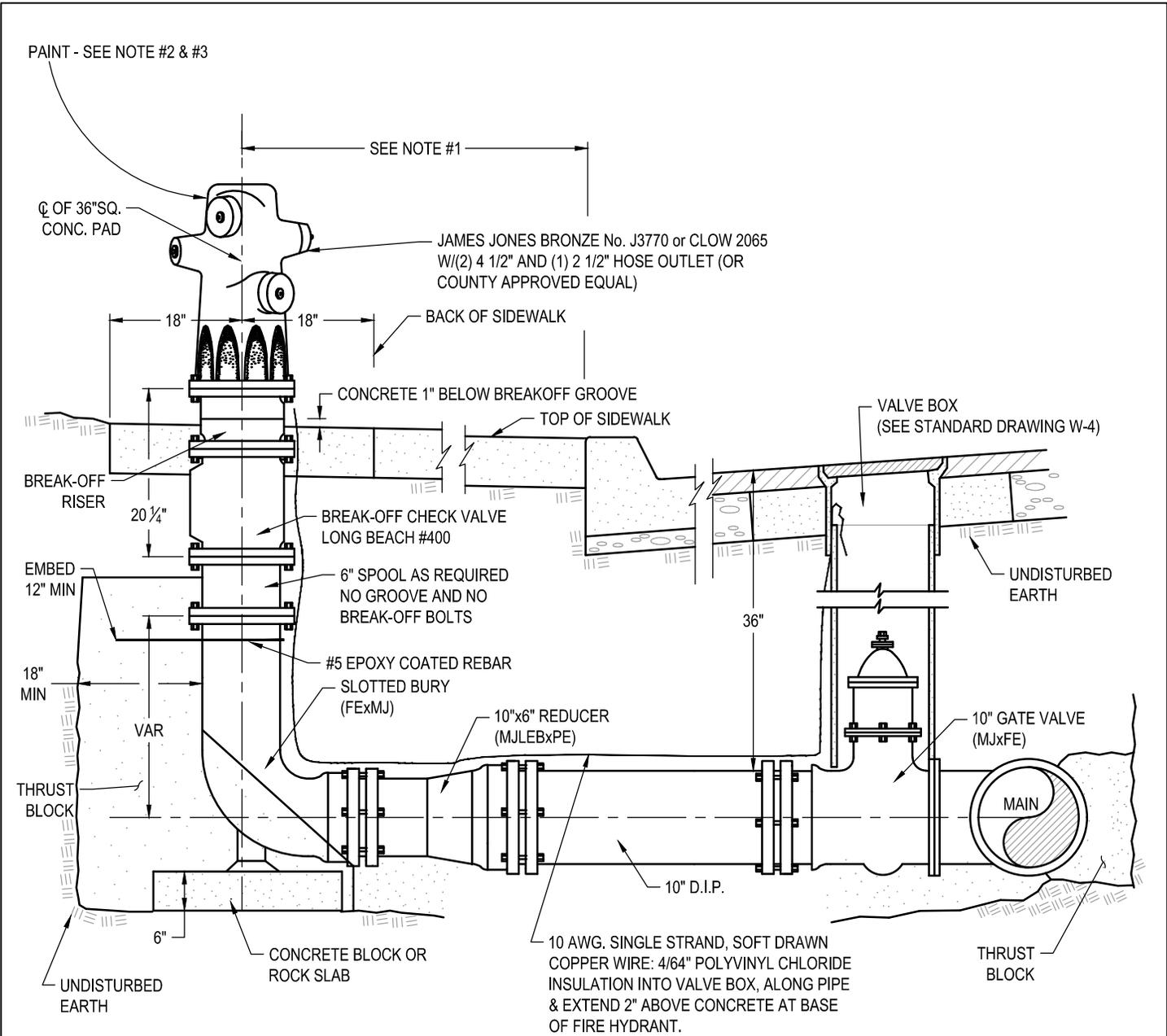
DATE

FIRE HYDRANT



DRAWING NUMBER

W-1



NOTES:

1. HYDRANT SHALL BE PLACED 24" BEHIND TOP BACK OF CURB WHEN PLACED WITHIN PLANTER STRIP. CONC. PAD SHALL EXTEND FROM TOP BACK OF CURB TO 18" BEYOND CENTERLINE OF HYDRANT.
2. THE HYDRANT SHALL HAVE 1 COAT PRIMER OVER SOUND METAL AND TWO COATS 1145 SAFETY YELLOW PAINT (or County approved equal).
3. BLUE REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED 6" FROM CENTERLINE ON SIDE NEAREST THE HYDRANT ON TWO OR MULTI-LANE STREETS. FOUR MARKERS ARE REQUIRED AT INTERSECTIONS HAVING A HYDRANT. TWO MARKERS SHALL BE PLACED 6" FROM THE EDGE OF THE CONTINUOUS LEFT TURN LANE LINE ON SIDE NEAREST THE HYDRANT. FOUR LANE STREETS WITH TURN LANE AT INTERSECTION, THE MARKERS SHALL BE PLACED 6" FROM NEAREST WHITE LINE ON THE SIDE NEAREST THE HYDRANT.

COUNTY OF SUTTER - ENGINEERING

SPECIAL FIRE HYDRANT

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

4/3/2025

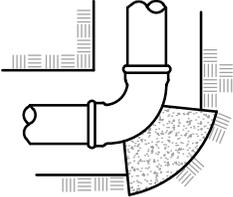
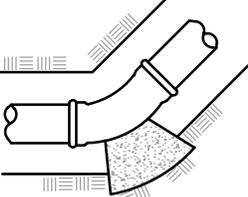
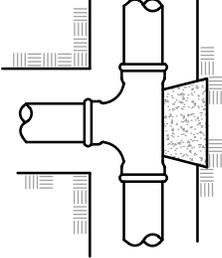
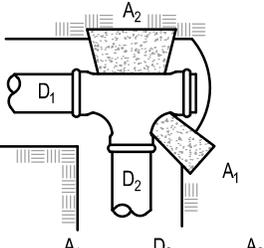
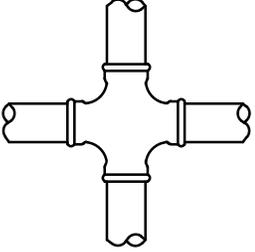
DATE



DRAWING NUMBER

W-2

REQUIRED BEARING ~ TOTAL SQUARE FEET

TYPE OF FITTING		90° BEND	45° BEND	11 1/2° OR 22 1/2° BEND			
TYPICAL INSTALLATION							
SIZE OF PIPE	4"	2	1	1			
	6"	4	2	1			
	8"	7	4	2			
	10"	12	6	3			
	12"	16	10	5			
	24"	60	30	16			
	30"	90	45	25			
TYPE OF FITTING		TEE OR DEAD END	TEE WITH PLUG		CROSS		
TYPICAL INSTALLATION							
SIZE OF PIPE	4"	2	4"	2	4"	2	SEE STANDARD DRAWING W-13
	6"	3	6"	4	6"	3	
	8"	5	8"	6	8"	5	
	10"	8	10"	10	10"	8	
	12"	12	12"	14	12"	12	
	24"	40	24"	55	24"	40	
	30"	60	30"	80	30"	60	

NOTES:

1. THRUST BLOCKS TO BE CONSTRUCTED OF MINOR CONCRETE.
2. AREAS GIVEN ARE FOR CLASS 150 PIPE AT TEST PRESSURE OF 150 P.S.I. IN SOIL WITH 2,500 P.S.F. BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND/OR SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL BY THE DIRECTOR.
3. THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL FOR THE FULL DEPTH OF PIPE.
4. JOINTS TO BE KEPT CLEAR OF CONCRETE.
5. THRUST BLOCKS TO BE IN PLACE 7 (SEVEN) DAYS BEFORE TESTING.
6. ALL PLUGS SHALL BE SECURED WITH THRUST BLOCKS.
7. THRUST BLOCKS CAN BE ELIMINATED BASED ON THE FLANGE OR MECH CONNECTIONS AVAILABLE.

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:


DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

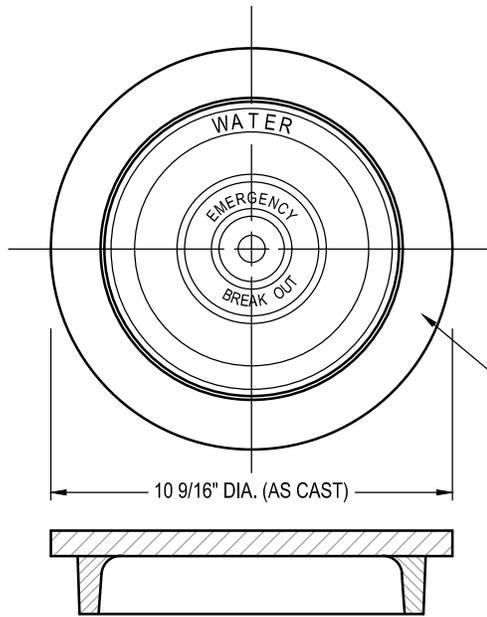
THRUST BLOCK



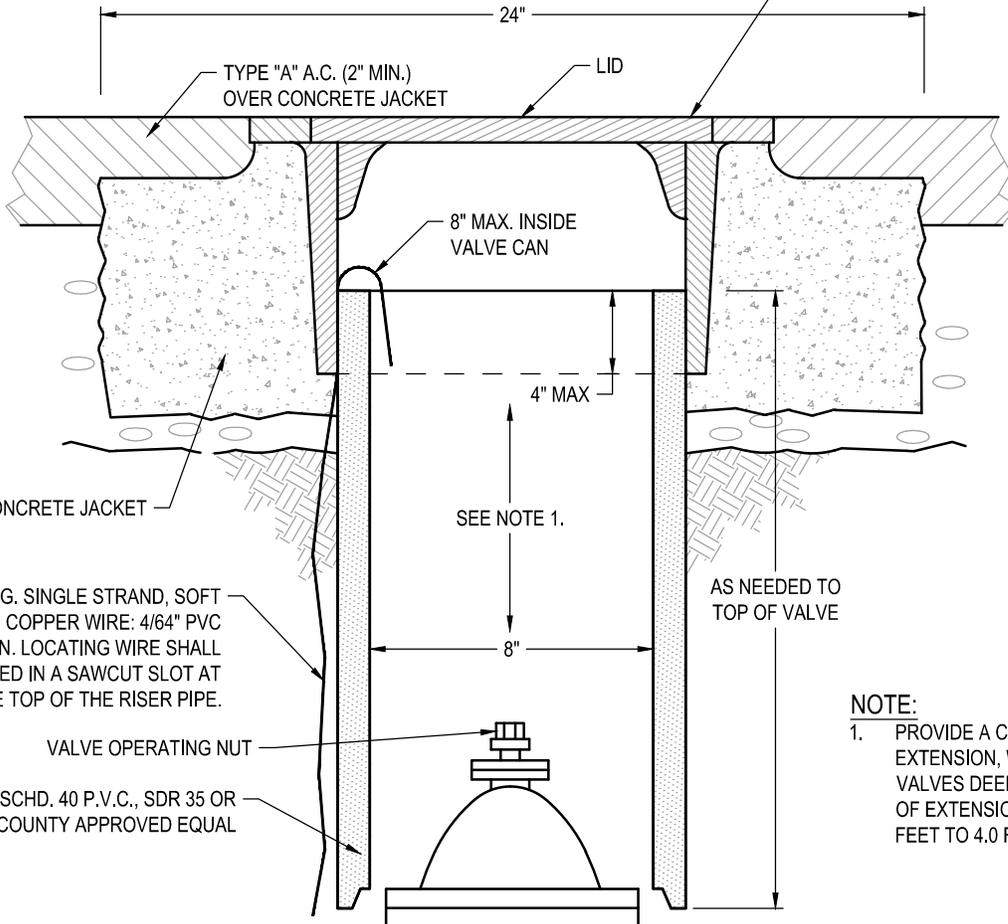
DRAWING NUMBER

W-3

COVER DETAIL



D AND L SUPPLY K-6016 TRAFFIC RATED MONUMENT RING AND COVER OR APPROVED EQUAL MARKED "WATER"



10 AWG. SINGLE STRAND, SOFT DRAWN COPPER WIRE: 4/64" PVC INSULATION. LOCATING WIRE SHALL BE PLACED IN A SAWCUT SLOT AT THE TOP OF THE RISER PIPE.

VALVE OPERATING NUT

SCHD. 40 P.V.C., SDR 35 OR COUNTY APPROVED EQUAL

SEE NOTE 1.

AS NEEDED TO TOP OF VALVE

NOTE:

1. PROVIDE A COUNTY APPROVED VALVE EXTENSION, WITH A RISER CAN, FOR VALVES DEEPER THAN 6.0 FEET. HEIGHT OF EXTENSION SHALL TERMINATE AT 1.5 FEET TO 4.0 FEET BELOW GRADE.

COUNTY OF SUTTER - ENGINEERING

WATER VALVE BOX

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

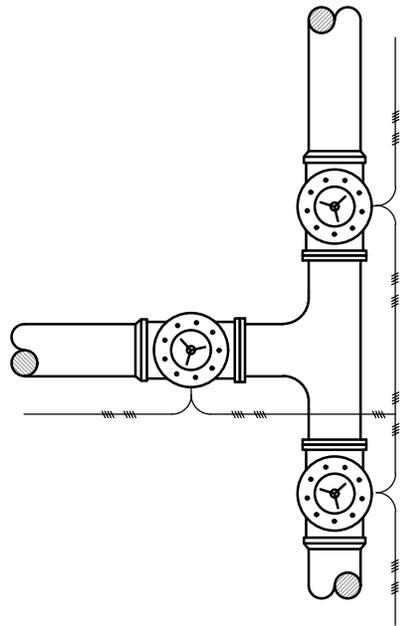
4/3/2025

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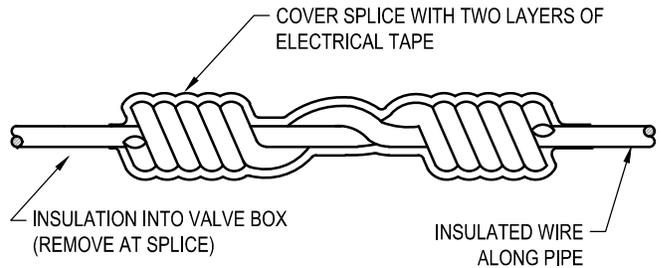
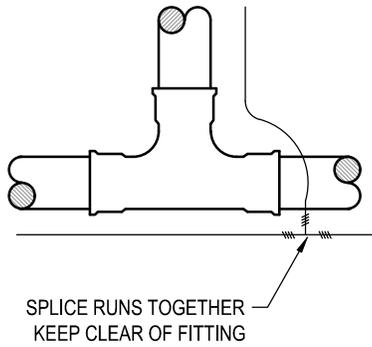


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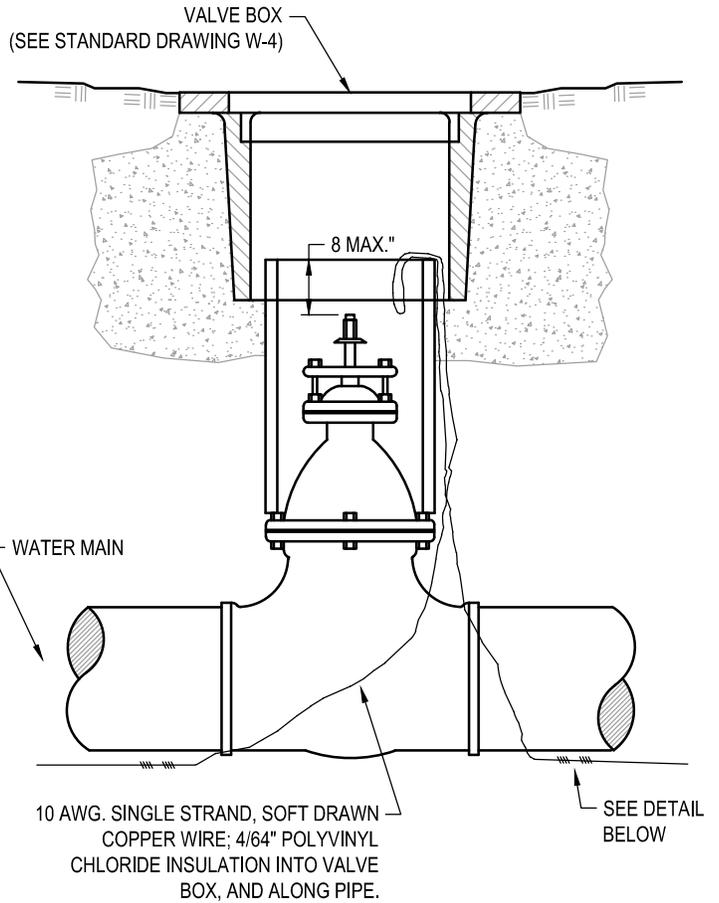
W-4



TYPICAL LAYOUT



SPLICE DETAIL



NOTES:

1. WIRE TO BE CONTINUOUS BETWEEN VALVE BOXES.
2. LOCATING WIRE TO BE LAID AT BOTTOM OF TRENCH, NEXT TO PIPE.
3. LOCATING WIRE SHALL BE TESTED AND IN WORKING ORDER AFTER ALL UNDERGROUND WORK IS DONE, AND PRIOR TO STREET PAVING.

COUNTY OF SUTTER - ENGINEERING

**LOCATING WIRE FOR WATER MAINS
AND SERVICES**

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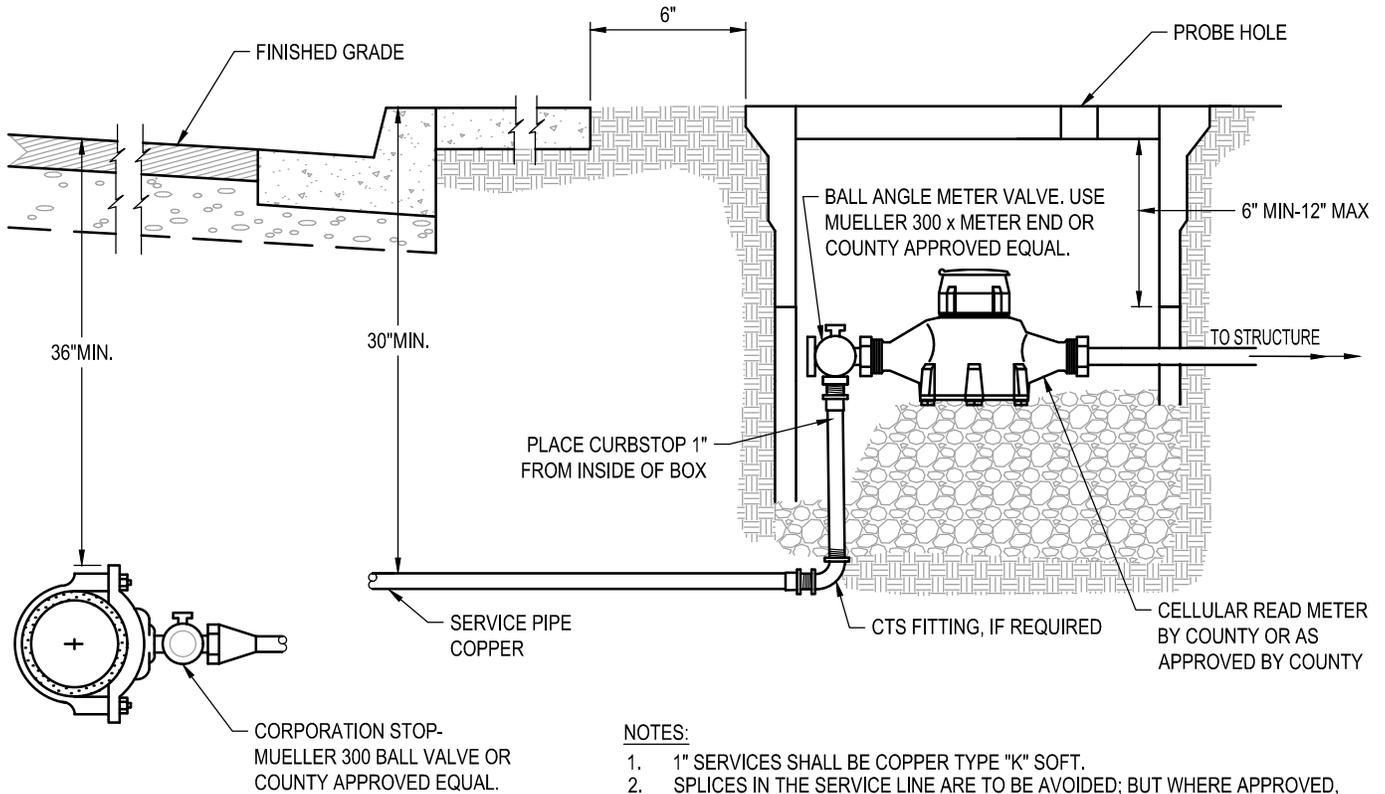
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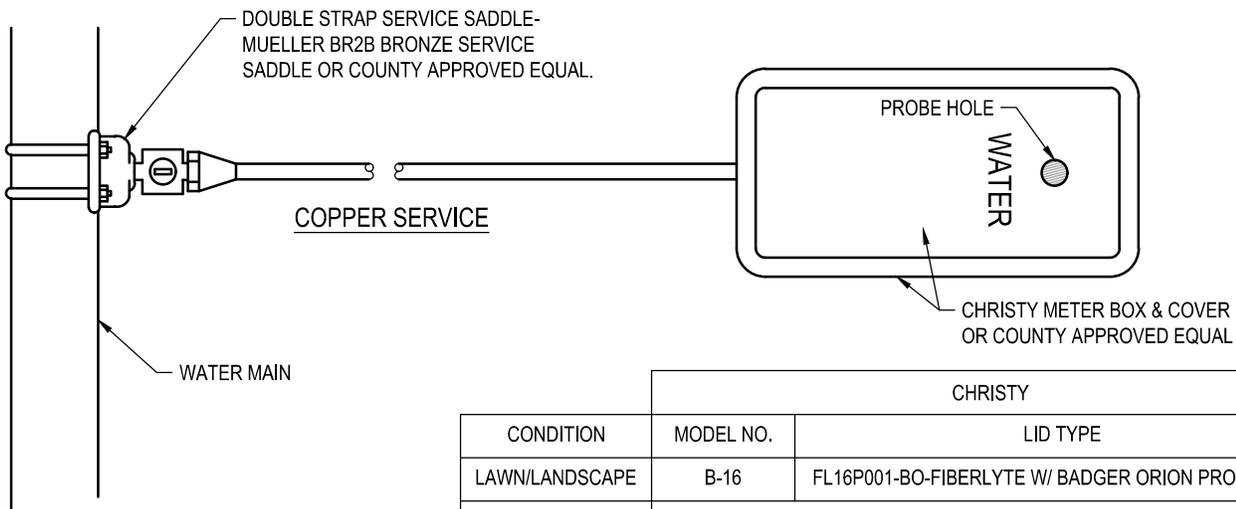
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W-5



NOTES:

1. 1" SERVICES SHALL BE COPPER TYPE "K" SOFT.
2. SPLICES IN THE SERVICE LINE ARE TO BE AVOIDED; BUT WHERE APPROVED, THEY SHALL BE MADE USING CTS GRIP-TYPE COMPRESSION COUPLINGS.
3. ALL FITTINGS ARE COPPER OR BRASS AND SHALL BE MUELLER 110 (CONDUCTIVE TYPE) COMPRESSION CONNECTIONS OR COUNTY APPROVED EQUAL.
4. WHEN BACKFLOW PREVENTER IS REQUIRED, SEE STANDARD DRAWING W-10.
5. ROCK BOTTOM OF BOX WITH 3" MIN. OF 3/4" MINUS CRUSHED ROCK.
6. PACK JOINT FITTINGS ARE NOT ACCEPTABLE.
7. ALL MATERIALS SHALL COMPLY WITH ASSEMBLY BILL 1953 (LEAD FREE LAW).
8. NO ABOVE GROUND STRUCTURES SHALL BE PLACED WITHIN 3 FEET OF THE WATER METER.



CHRISTY		
CONDITION	MODEL NO.	LID TYPE
LAWN/LANDSCAPE	B-16	FL16P001-BO-FIBERLYTE W/ BADGER ORION PROBE HOLE
CONCRETE		APPROVED ON A CASE-BY CASE BASIS

COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

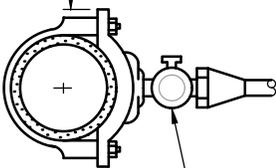
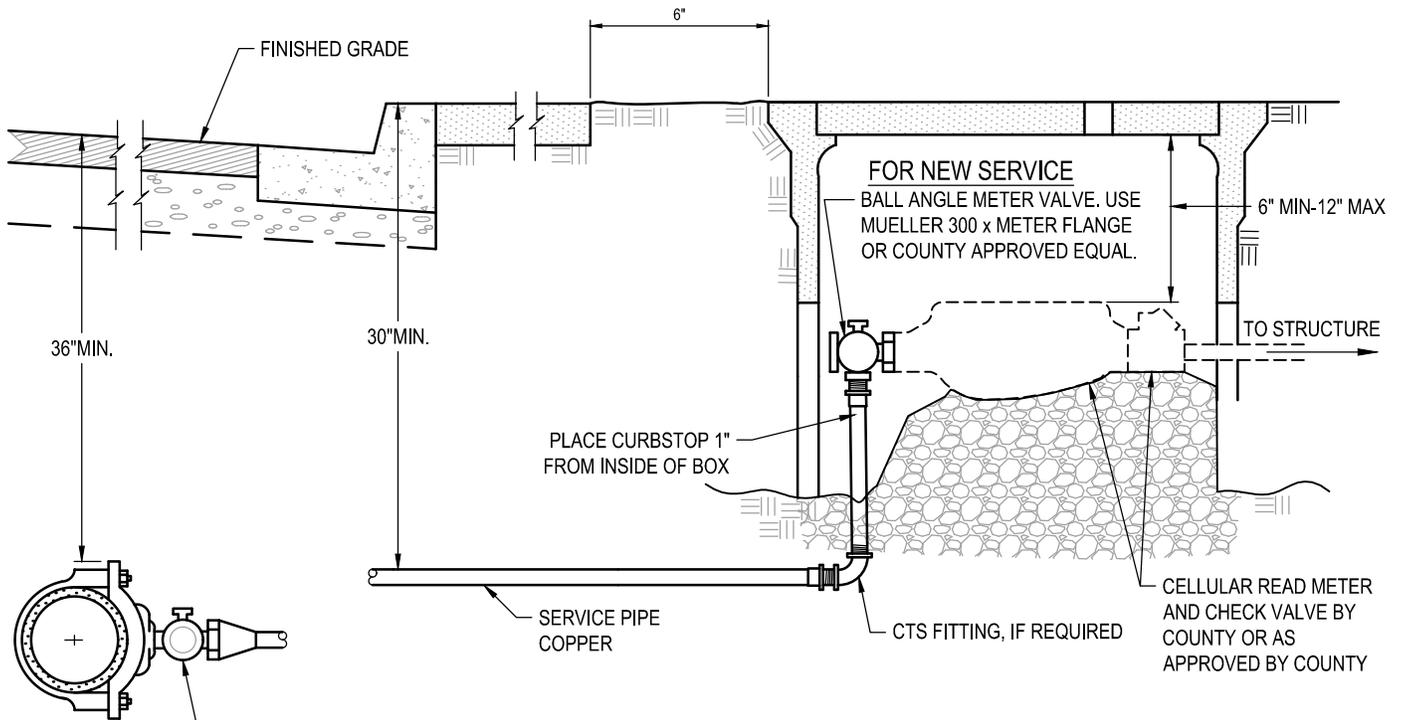
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**1" WATER SERVICE
MAIN CONNECTION**



DRAWING NUMBER

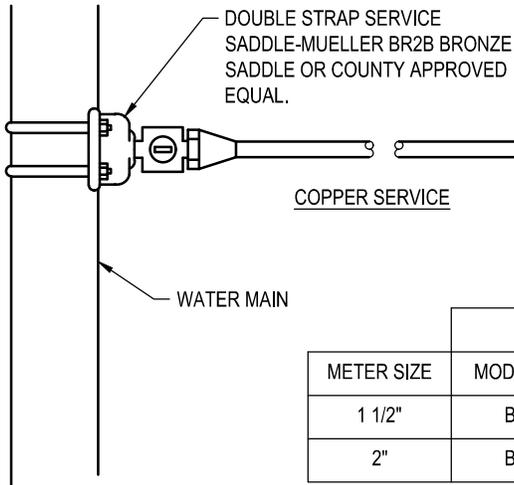
W-6



CORPORATION STOP-MUELLER 300 BALL VALVE OR COUNTY APPROVED EQUAL.

NOTES:

1. 1 1/2" & 2" SERVICES SHALL BE COPPER TYPE "K" HARD UNLESS OTHERWISE NOTED.
2. ALL FITTINGS ARE COPPER OR BRASS AND SHALL BE MUELLER 110 (CONDUCTIVE TYPE) COMPRESSION CONNECTIONS OR COUNTY APPROVED EQUAL
3. INSTALLATION SHOWN IS FOR USE WITH A NON-TURBO TYPE METER. FOR TURBO TYPE METER, SEE STANDARD DRAWING W-10.
4. WHEN BACKFLOW PREVENTER IS REQUIRED, SEE STANDARD DRAWING W-10.
5. ROCK BOTTOM OF BOX WITH 3" MIN. OF 3/4" MINUS CRUSHED ROCK.
6. PACK JOINT FITTINGS ARE NOT ACCEPTABLE.
7. ALL MATERIALS SHALL COMPLY WITH ASSEMBLY BILL 1953 (LEAD FREE LAW).
8. NO ABOVE GROUND STRUCTURES SHALL BE PLACED WITHIN 3 FEET OF THE WATER METER.



CHRISTY		
METER SIZE	MODEL NO.	LID TYPE
1 1/2"	B-36	FIBERLITE-36 w/PROBE HOLE
2"	B-36	FIBERLITE-36 w/PROBE HOLE

COUNTY OF SUTTER - ENGINEERING

**1 1/2" & 2" WATER SERVICE
MAIN CONNECTION**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

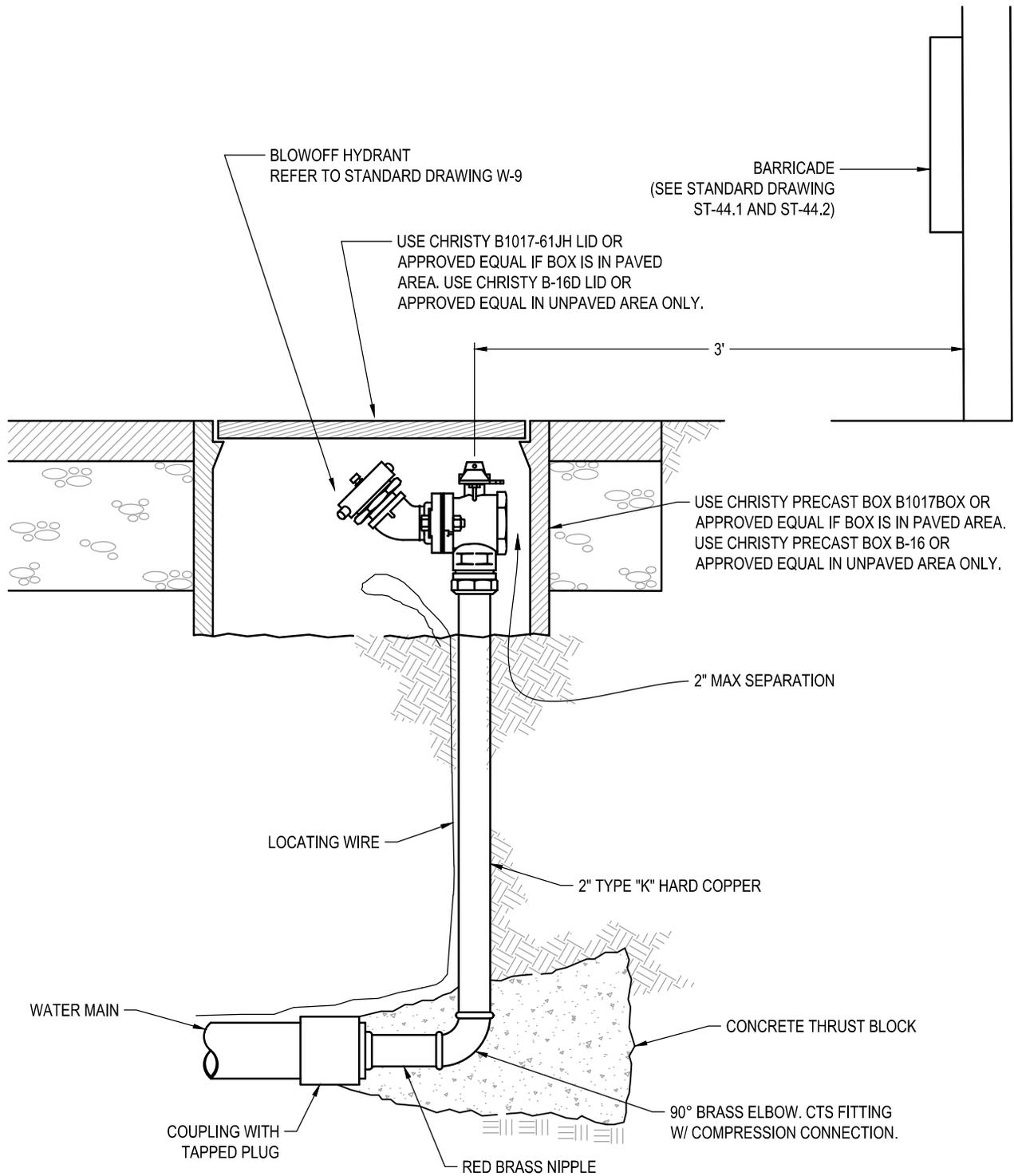
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DRAWING NUMBER

W-7



NOTE:
1. PACK JOINT FITTINGS ARE NOT ACCEPTABLE.

COUNTY OF SUTTER - ENGINEERING

DEAD-END WATER MAIN

APPROVED BY:

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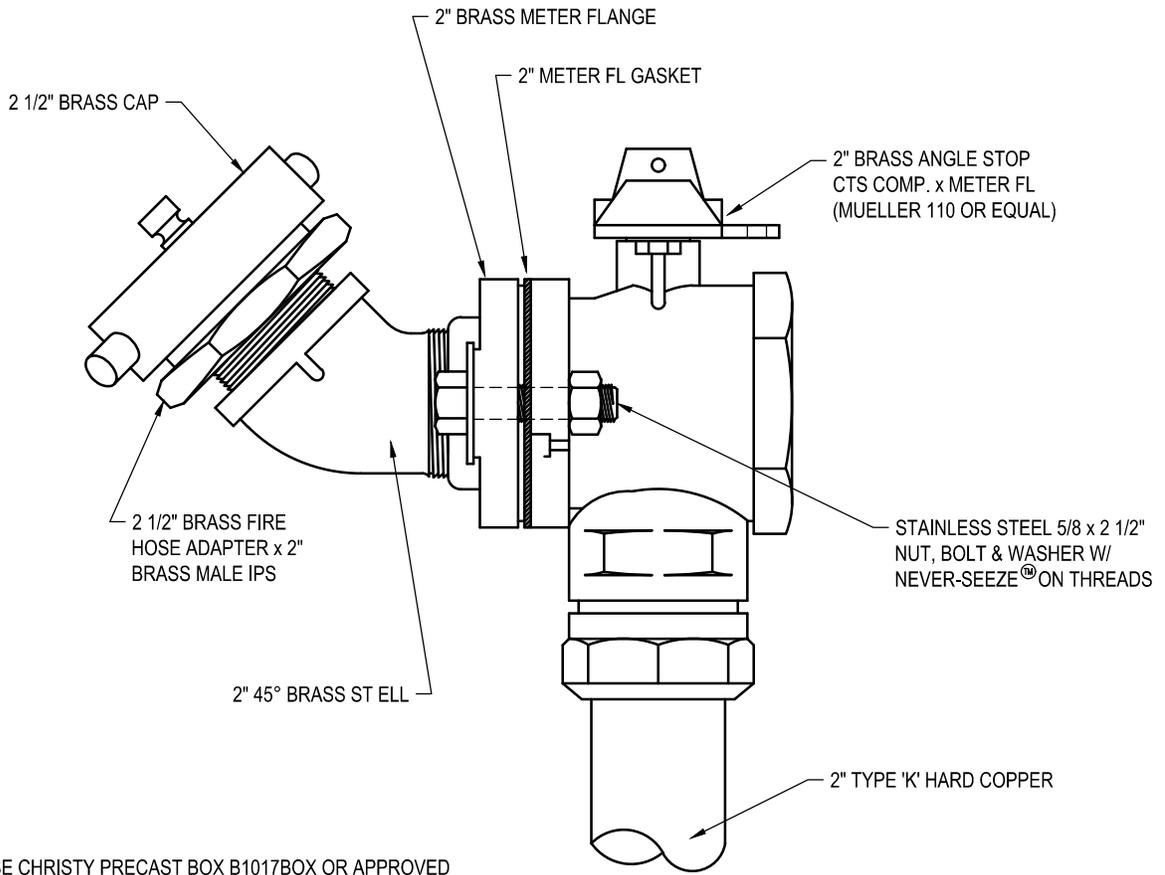
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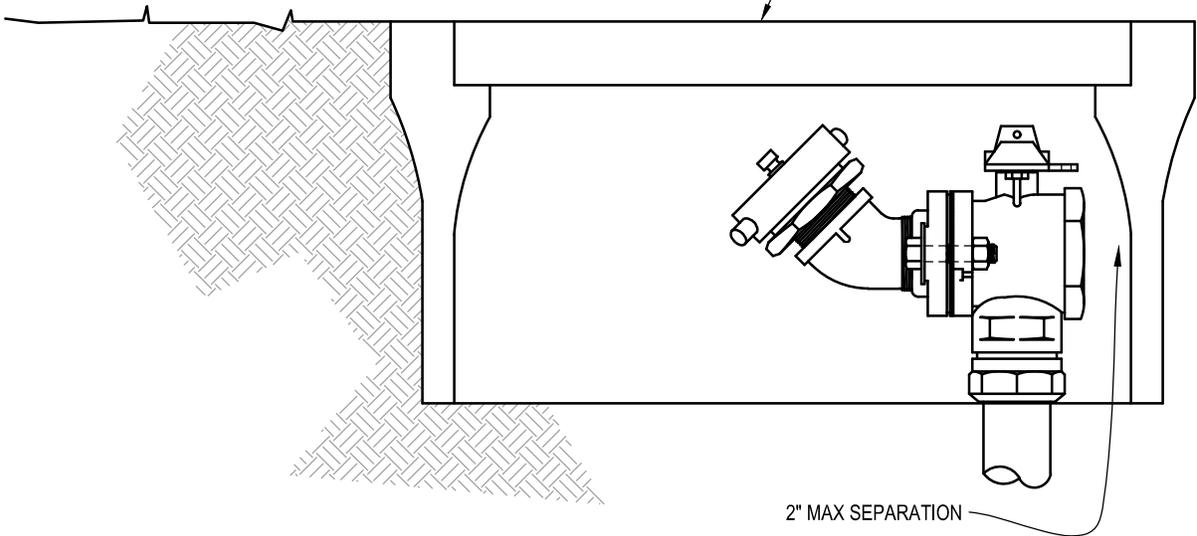
W-8



NOTES:

1. USE CHRISTY PRECAST BOX B1017BOX OR APPROVED EQUAL IF BOX IS IN PAVED AREA. USE CHRISTY PRECAST BOX B-16 OR APPROVED EQUAL IN UNPAVED AREA ONLY.
2. REFER TO STANDARD DRAWING W-8

USE CHRISTY B1017-61JH LID OR APPROVED EQUAL IF BOX IS IN PAVED AREA. USE CHRISTY B-16D LID OR APPROVED EQUAL IN UNPAVED AREA ONLY.



COUNTY OF SUTTER - ENGINEERING

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE

BLOWOFF HYDRANT

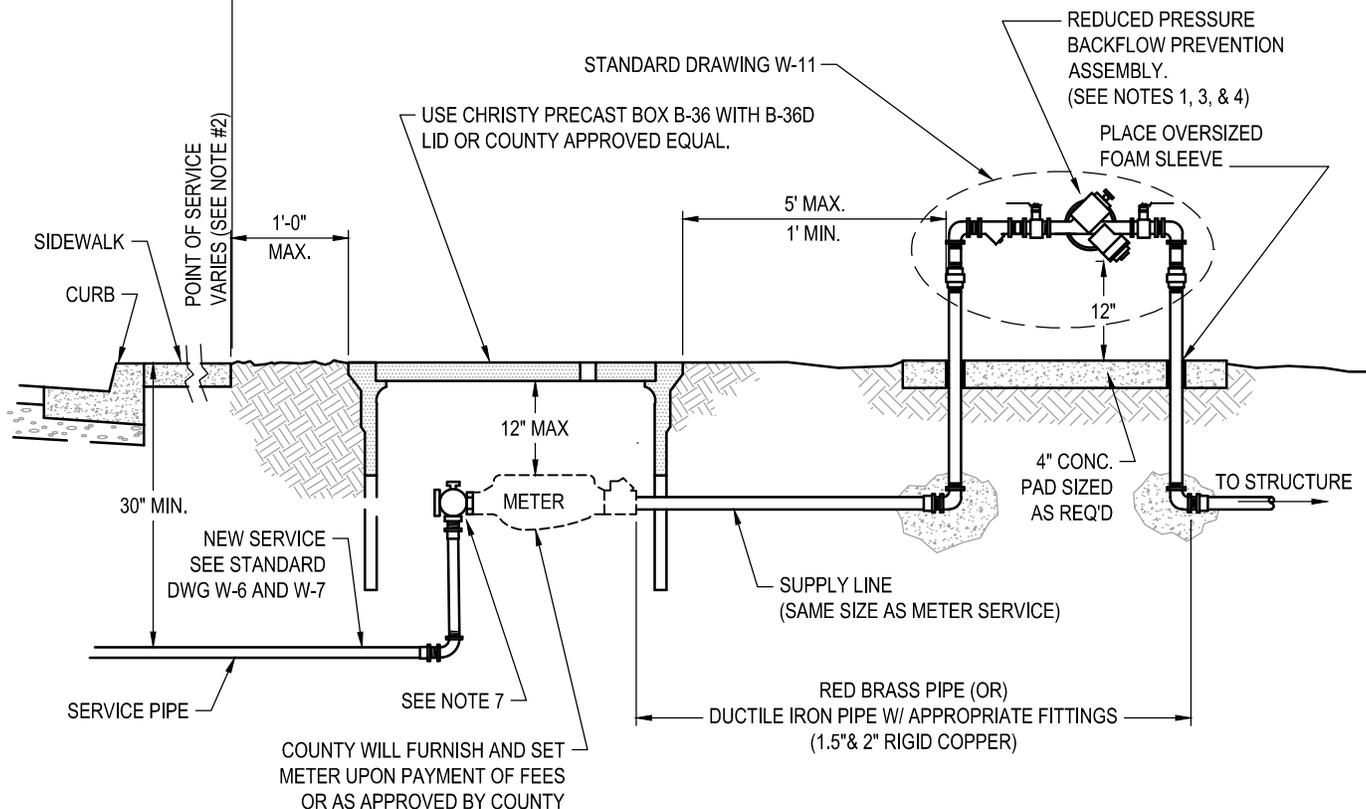


DRAWING NUMBER

W-9

NOTES:

- A. SEE STANDARD DRAWINGS W-6 AND W-7 FOR SERVICE CONNECTION AND METER BOX SIZES
- B. SEE STANDARD DRAWING W-11 FOR FITTINGS REQUIRED AT BACKFLOW PREVENTER



COUNTY WILL FURNISH AND SET METER UPON PAYMENT OF FEES OR AS APPROVED BY COUNTY

NOTES:

1. REDUCED PRESSURE BACK FLOW PREVENTION ASSEMBLY SHALL BE CONNECTED TO THE COUNTY WATER, TESTED BY CERTIFIED TESTER WITH AN AWWA CERTIFICATION, AND TEST REPORT PROVIDED TO THE PUBLIC WORKS DEPARTMENT PRIOR TO BEING PLACED INTO SERVICE.
2. POINT OF SERVICE:
 - A. POINT OF SERVICE IS THE BACK OF SIDEWALK FOR STREETS WITH SIDEWALK CONTIGUOUS WITH CONTIGUOUS WITH CURB & GUTTER or DETACHED SIDEWALK IN PARKWAY STRIPS.
 - B. POINT OF SERVICE IS THE RIGHT OF WAY LINE ON ALL ALLEYS & UNIMPROVED STREETS.
 - C. WHERE THE POINT OF SERVICE IS UNCLEAR THE LOCATION SHALL BE DETERMINED BY THE CROSS CONNECTION CONTROL SPECIALIST OR HIS DESIGNEE.
3. LISTS OF APPROVED BACK FLOW PREVENTION ASSEMBLIES: FEBCO, WATTS, OR COUNTY APPROVED EQUAL.
4. THE SIZE OF THE BACKFLOW PREVENTION ASSEMBLY SHALL BE THE SAME SIZE AS THE SUPPLY LINE AND METER.
5. THE BACK FLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED ABOVE GROUND, IN A HORIZONTAL & LEVEL POSITION. THE ASSEMBLY SHALL BE LOCATED ON THE CUSTOMER'S SIDE & NO FURTHER THAN FIVE (5) FEET FROM THE POINT OF SERVICE TO THE WATER METER. PROVIDE A LOCKABLE, EXPANDED METAL & INSULATED PROTECTIVE ENCLOSURE. USE PLACER WATER WORKS MODEL #PW/E1AW OR COUNTY APPROVED EQUAL.
6. NO OUTLET, TAP, TEE, OR CONNECTION BETWEEN THE WATER MAIN AND THE BACKFLOW PREVENTER IS ALLOWED.
7. THERE SHALL BE A SEPARATION BETWEEN THE BALL ANGLE METER AND THE METER OF 5 TIMES THE DIA OF THE SERVICE FOR TURBO METERS ONLY.

COUNTY OF SUTTER - ENGINEERING

**REDUCED PRESSURE BACKFLOW
PREVENTER FOR
1" - 2" WATER SERVICES**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

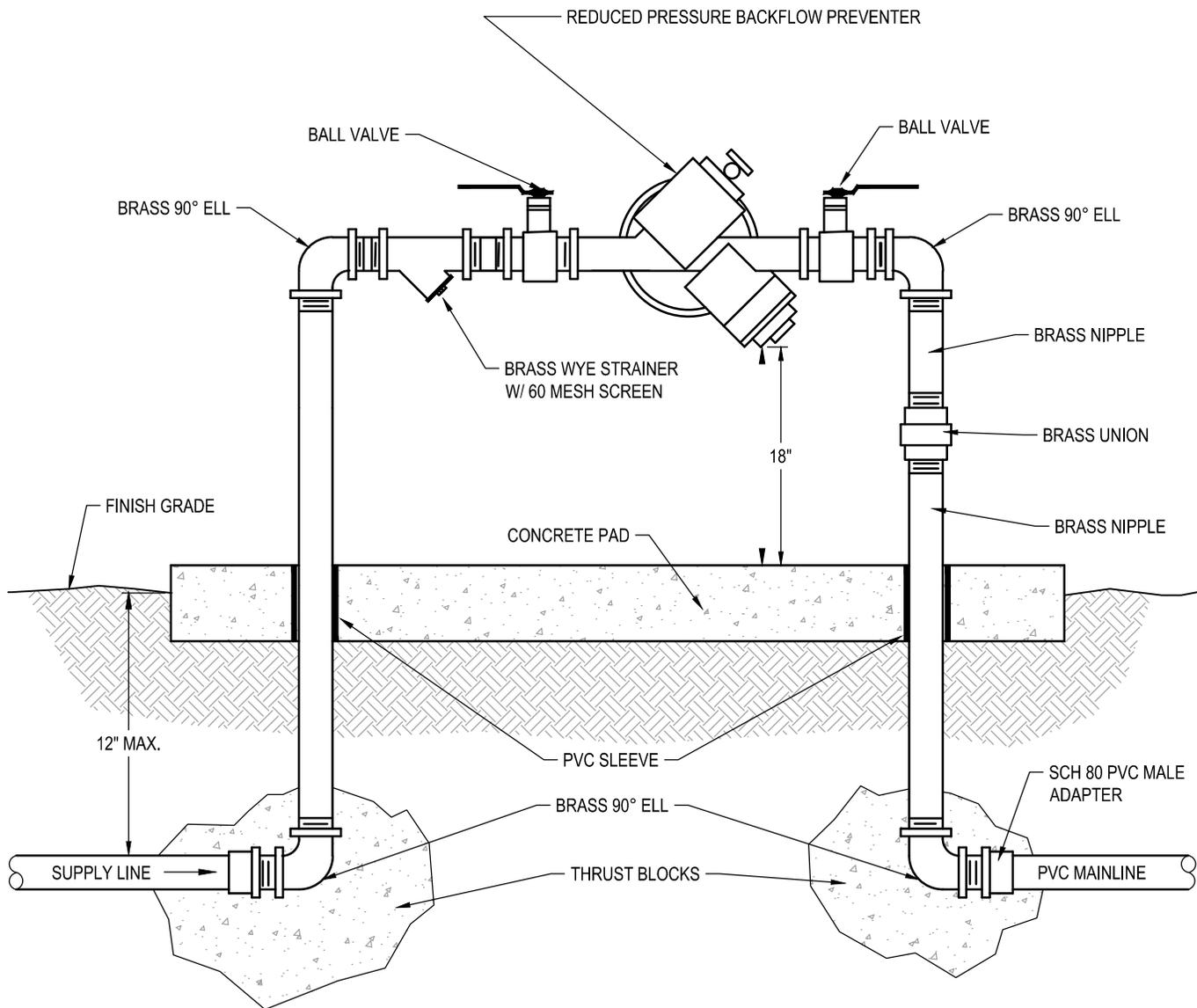
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DRAWING NUMBER

W-10



NOTES:

1. EQUIPMENT TO BE INSTALLED A MIN. OF 24" FROM ANY STRUCTURE OR HARDSCAPING.
2. WHEN UNIT IS NEAR A STRUCTURE: MOUNT TEST COCK ON OPEN OR NON-OBSTRUCTED SIDE.
3. REFER TO SPECIFICATIONS & PLAN SHEET FOR MORE INFORMATION.
4. PROVIDE A LOCKABLE, EXPANDED METAL & INSULATED PROTECTIVE ENCLOSURE. USE PLACER WATER WORKS MODEL #PW/E1AW OR COUNTY APPROVED EQUAL.
5. FOR ADDITIONAL INFORMATION SEE STANDARD DRAWING W-10.
6. ALL MATERIALS SHALL COMPLY WITH ASSEMBLY BILL 1953 (LEAD FREE LAW)

COUNTY OF SUTTER - ENGINEERING

BACKFLOW PREVENTER

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

DATE



DRAWING NUMBER

W-11

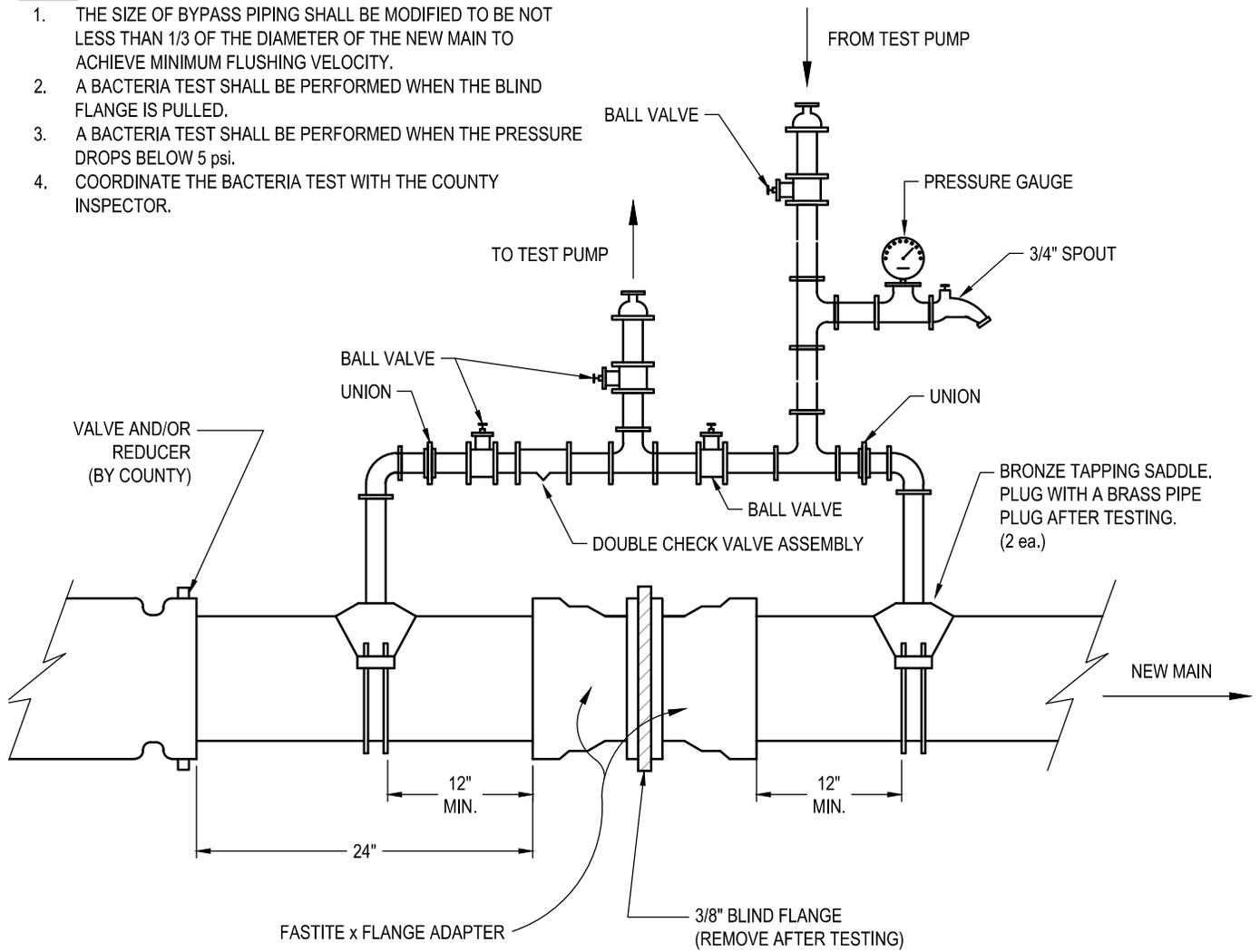
FLOW AND OUTLET OPENINGS TO FLUSH PIPE

PIPE DIAMETER IN.	FLOW REQUIRED TO PRODUCE 2.5 FT/S (APPROX) VELOCITY IN MAIN GPM	SIZE OF TAP, IN.			NUMBER OF 2 1/2 IN. HYDRANT OUTLETS
		1"	1 1/2"	1"	
4	100	1	-	-	1
6	200	-	1	-	1
8	400	-	2	1	1
10	600	-	3	2	1
12	900	-	-	2	2
GREATER THAN 12"		SPECIAL DESIGN			

(PER AWWA C651-92)

NOTES:

1. THE SIZE OF BYPASS PIPING SHALL BE MODIFIED TO BE NOT LESS THAN 1/3 OF THE DIAMETER OF THE NEW MAIN TO ACHIEVE MINIMUM FLUSHING VELOCITY.
2. A BACTERIA TEST SHALL BE PERFORMED WHEN THE BLIND FLANGE IS PULLED.
3. A BACTERIA TEST SHALL BE PERFORMED WHEN THE PRESSURE DROPS BELOW 5 psi.
4. COORDINATE THE BACTERIA TEST WITH THE COUNTY INSPECTOR.



FOR NEW WATER MAIN CONSTRUCTION

COUNTY OF SUTTER - ENGINEERING

TESTING BLOCK AND BYPASS

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

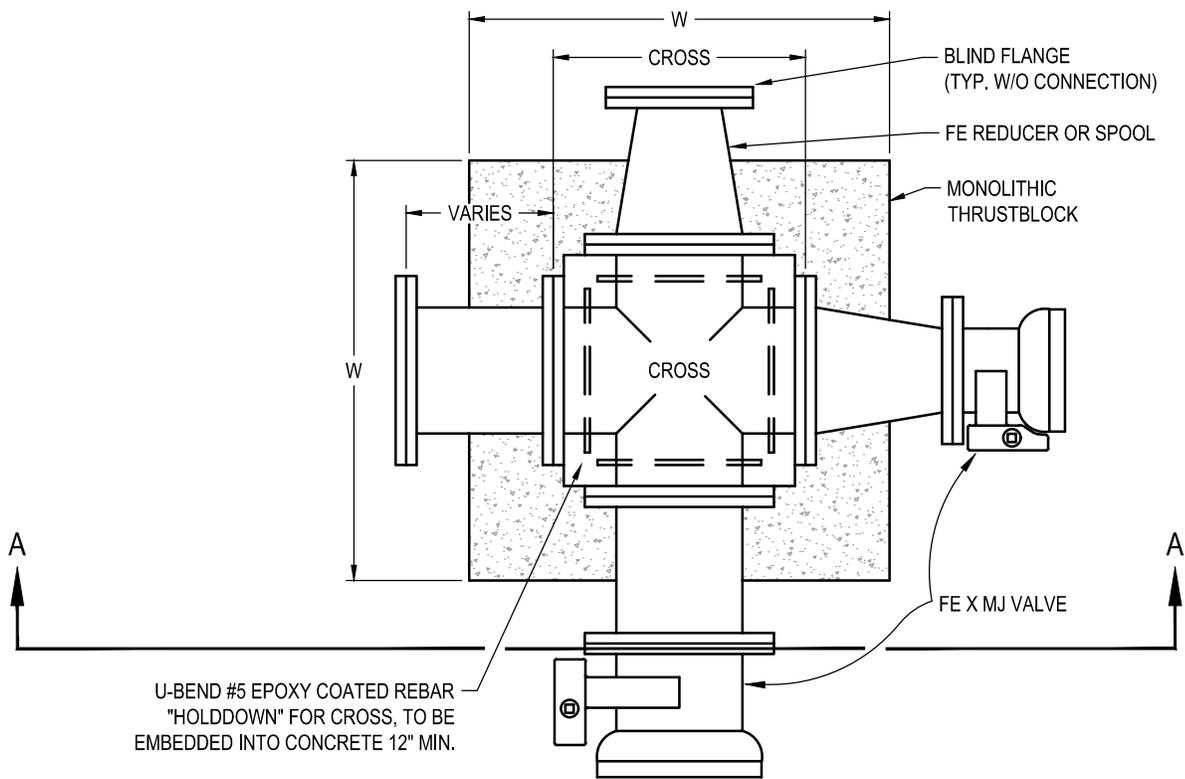
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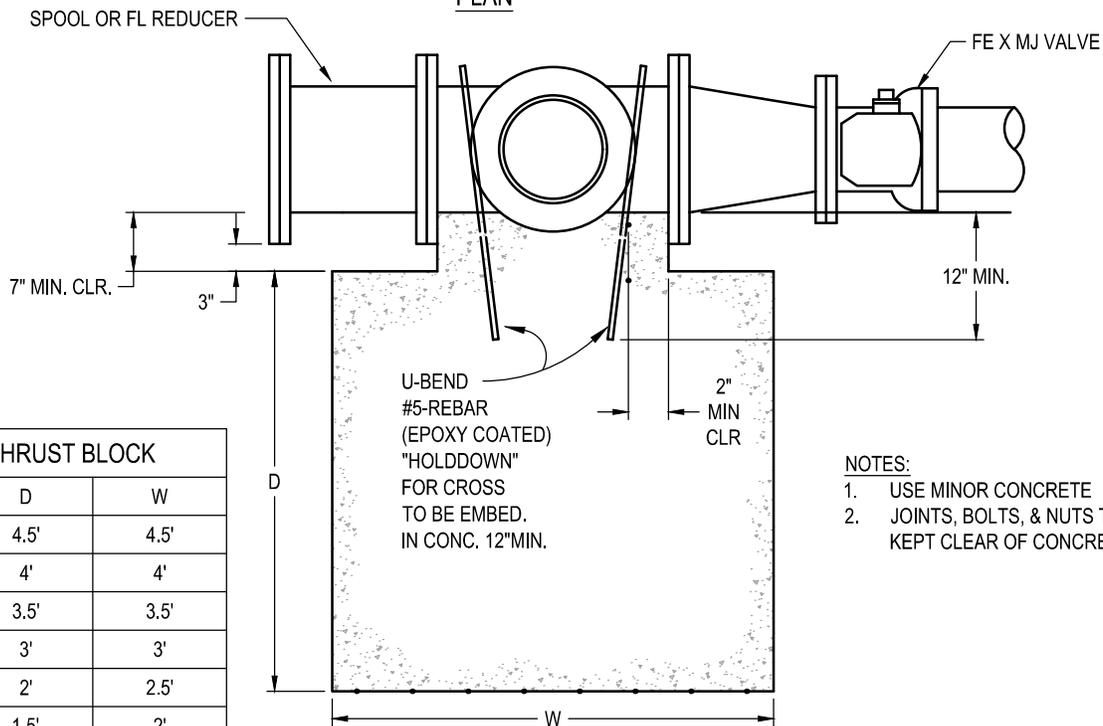


DRAWING NUMBER

W-12



PLAN



SECTION A-A

SIZE OF THRUST BLOCK		
SIZE OF CROSS	D	W
16"	4.5'	4.5'
14"	4'	4'
12"	3.5'	3.5'
10"	3'	3'
8"	2'	2.5'
6"	1.5'	2'

NOTES:

1. USE MINOR CONCRETE
2. JOINTS, BOLTS, & NUTS TO BE KEPT CLEAR OF CONCRETE.

COUNTY OF SUTTER - ENGINEERING

THRUST BLOCK FOR FLANGE CROSS

APPROVED BY:

ULP

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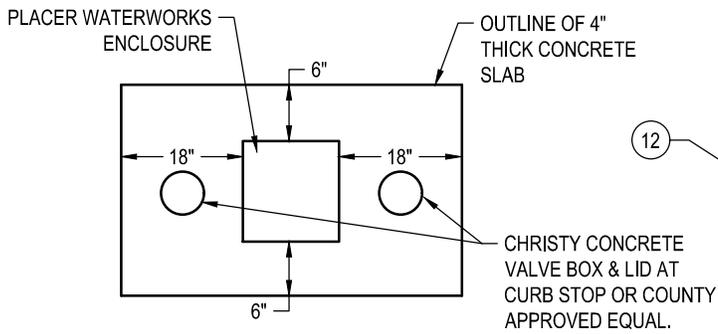
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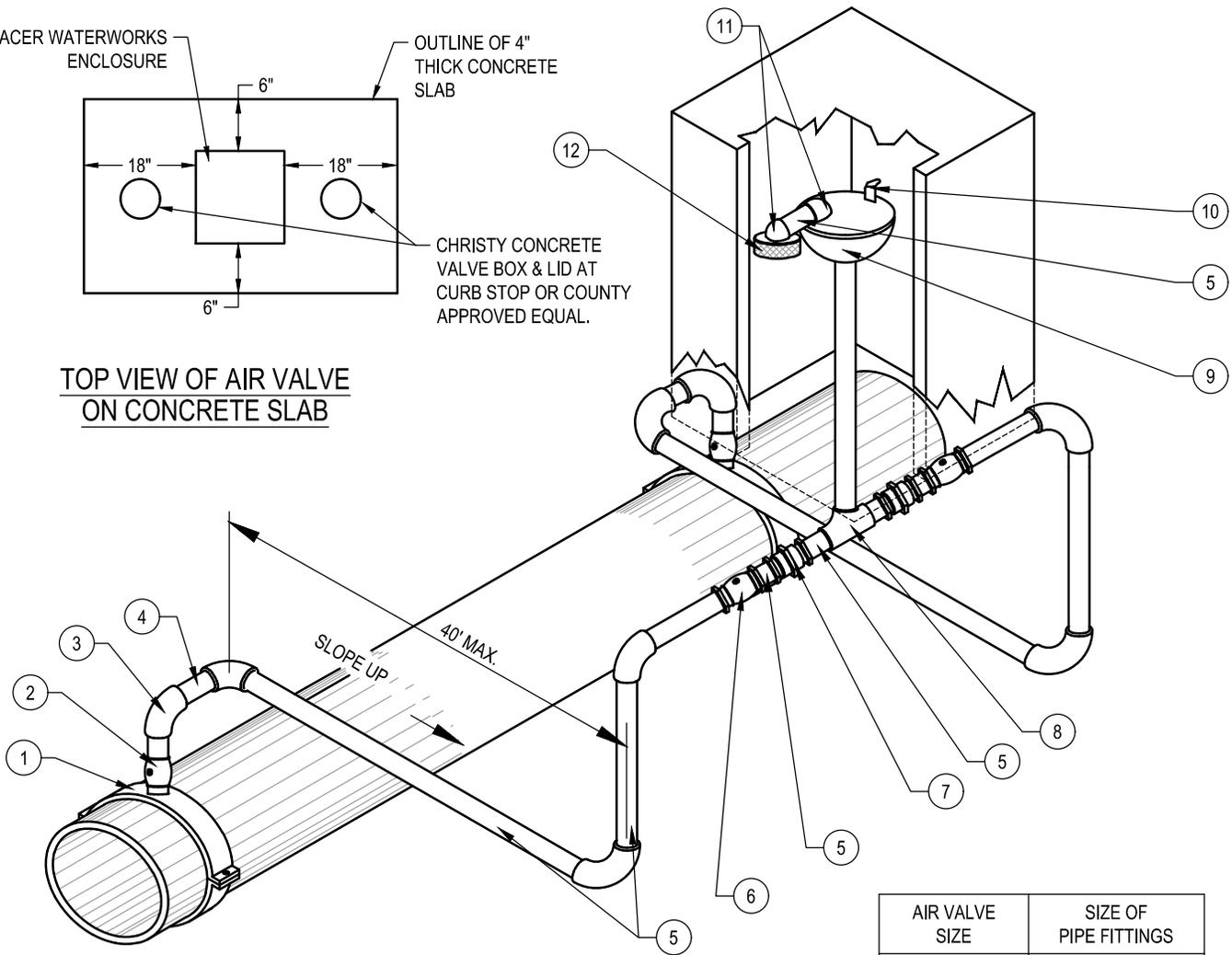


DRAWING NUMBER

W-13



**TOP VIEW OF AIR VALVE
ON CONCRETE SLAB**



AIR VALVE SIZE	SIZE OF PIPE FITTINGS
1"	1"
2"	2"

NOTES:

1. SERVICE SADDLE: MUELLER BR2B BRONZE SERVICE SADDLE OR COUNTY APPROVED EQUAL
2. CORPORATION STOP: MUELLER 300 BALL VALVE
3. 90° BRASS ELL
4. BRASS NIPPLE
5. TYPE K HARD COPPER PIPE
6. TEFLON BALL: MUELLER OR COUNTY APPROVED EQUAL
7. BRASS UNION
8. BRASS TEE
9. AIR-VACUUM & AIR RELEASE VALVE: APCO SERIES 140C; G.A. INDUSTRIES FIG. 945; OR COUNTY APPROVED EQUAL
10. BIBB W/TEE HANDLE
11. 90° BRASS ST. ELL
12. STAINLESS STEEL SCREEN (McMASTER-CARR NO. 9877K) - FACE DOWNWARD
13. PROVIDE A LOCKABLE, EXPANDED METAL & INSULATED PROTECTIVE ENCLOSURE FOR AIR VALVE. USE PLACER WATERWORKS PW/SJARV-3 ENCLOSURE OR COUNTY APPROVED EQUAL.
14. PROVIDE 4" THICK CONCRETE SLAB BASE FOR THE ENCLOSURE. THE CONCRETE SHALL BE WIDER THAN THE ENCLOSURE ON ALL SIDES AS SHOWN ABOVE.
15. PROVIDE LOCATING WIRE FROM SERVICE SADDLE AT MAIN, ALONG THE PIPING TO THE AIR VALVE. SEE STANDARD DRAWING W-5 FOR LOCATING WIRE INSTALLATION.

COUNTY OF SUTTER - ENGINEERING

**DOUBLE COMBINATION AIR VALVE
TO BE USED ON PIPES
14" AND GREATER**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

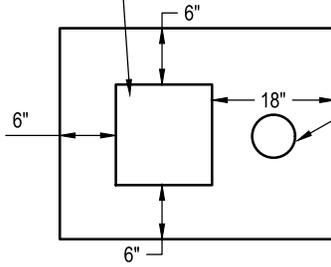
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W-14

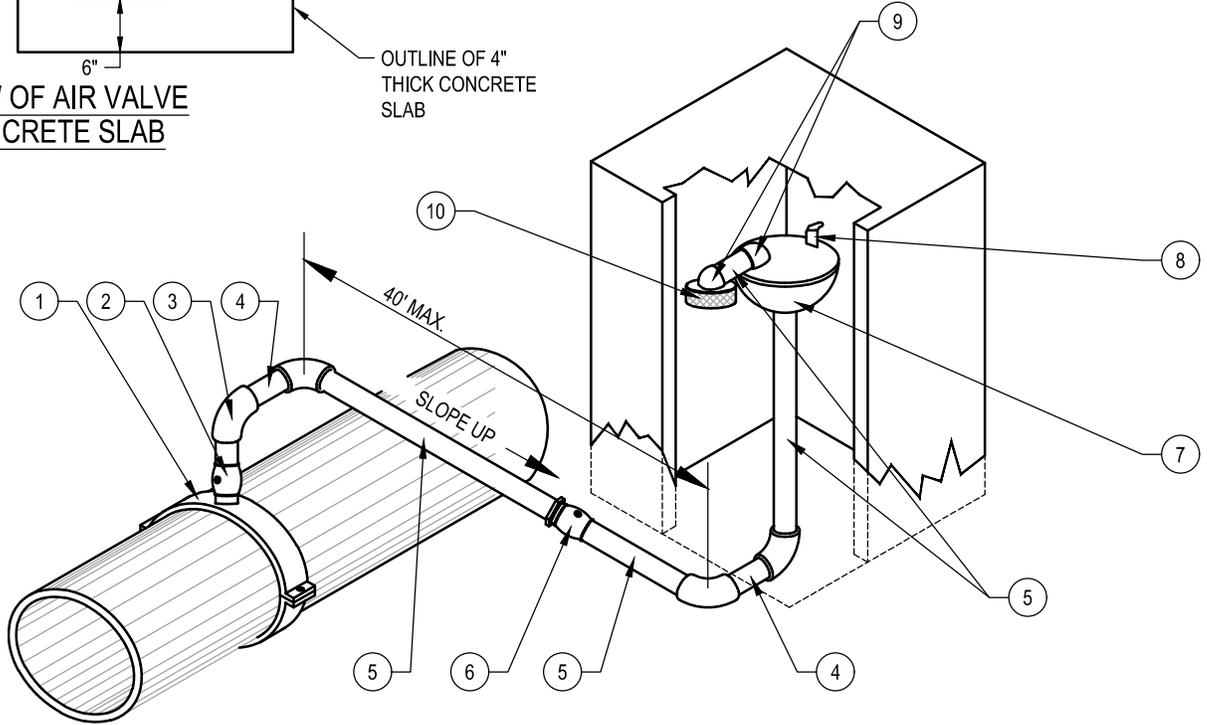
PLACER WATERWORKS ENCLOSURE



TOP VIEW OF AIR VALVE ON CONCRETE SLAB

CHRISTY CONCRETE VALVE BOX & LID AT CURB STOP OR COUNTY APPROVED EQUAL.

OUTLINE OF 4" THICK CONCRETE SLAB



NOTES:

1. SERVICE SADDLE: MUELLER BR2B BRONZE SERVICE SADDLE OR COUNTY APPROVED EQUAL
2. CORPORATION STOP: MUELLER 300 BALL VALVE
3. 90° BRASS ELL
4. BRASS NIPPLE
5. TYPE K HARD COPPER PIPE
6. TEFLON BALL: MUELLER OR COUNTY APPROVED EQUAL
7. AIR-VACUUM & AIR RELEASE VALVE: APCO SERIES 140C; G.A. INDUSTRIES FIG. 945; OR COUNTY APPROVED EQUAL
8. BIBB W/TEE HANDLE
9. 90° BRASS ST. ELL
10. STAINLESS STEEL SCREEN (McMASTER-CARR NO. 9877K) - FACE DOWNWARD
11. PROVIDE A LOCKABLE, EXPANDED METAL & INSULATED PROTECTIVE ENCLOSURE FOR AIR VALVE. USE PLACER WATERWORKS PW/SJARV-2 OR PW/SJARV-3 ENCLOSURE OR COUNTY APPROVED EQUAL.
12. PROVIDE 4" THICK CONCRETE SLAB BASE FOR THE ENCLOSURE. THE CONCRETE SHALL BE WIDER THAN THE ENCLOSURE ON ALL SIDES AS SHOWN ABOVE.
13. PROVIDE LOCATING WIRE FROM SERVICE SADDLE AT MAIN, ALONG THE PIPING TO THE AIR VALVE. SEE STANDARD DRAWING W-5 FOR LOCATING WIRE INSTALLATION.

AIR VALVE SIZE	SIZE OF PIPE FITTINGS
1"	1"
2"	2"

COUNTY OF SUTTER - ENGINEERING

**SINGLE COMBINATION AIR VALVE
TO BE USED ON PIPES
12" AND SMALLER**

APPROVED BY:

DEVELOPMENT SERVICES DIRECTOR

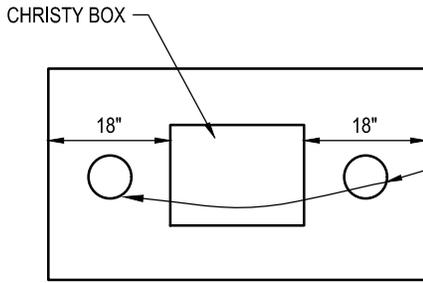
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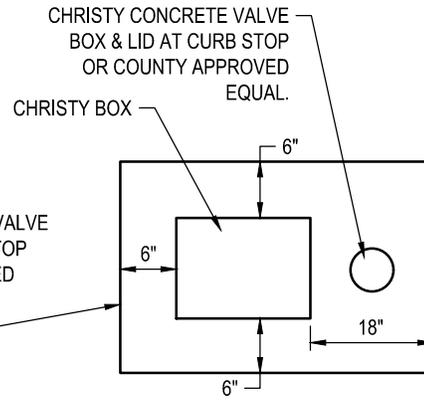


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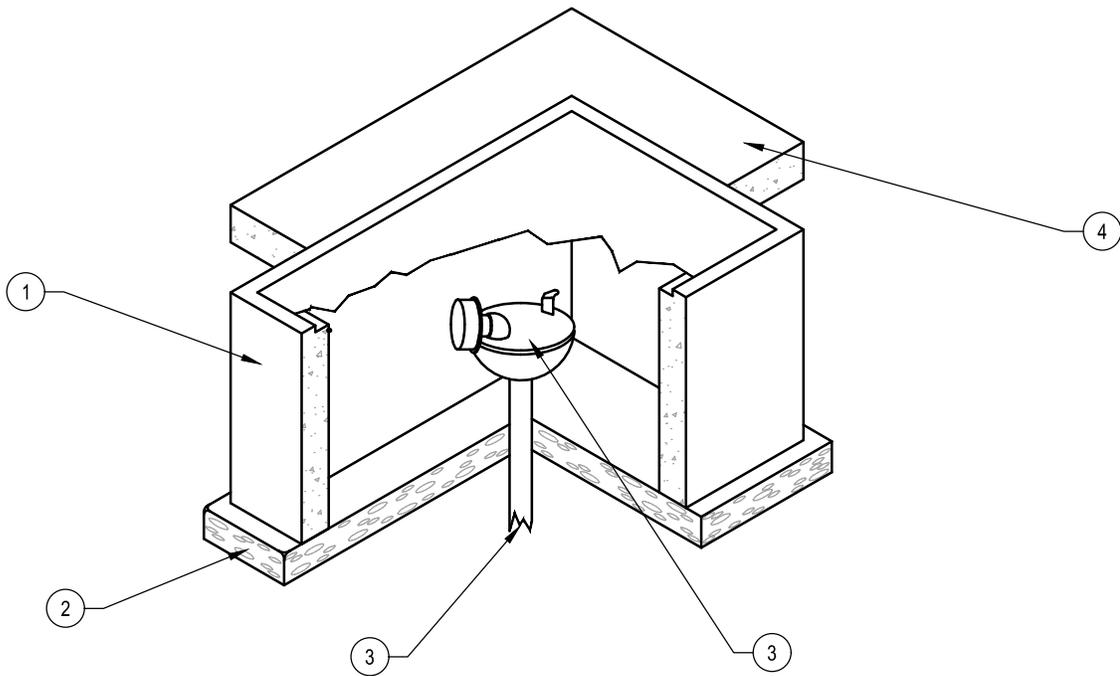
W-15



**TOP VIEW OF AIR VALVE
WITH CONCRETE SLAB**
DOUBLE COMBINATION AIR VALVE APPLICATION



**TOP VIEW OF AIR VALVE
WITH CONCRETE SLAB**
SINGLE COMBINATION AIR VALVE APPLICATION



NOTES:

1. CHRISTY BOX B-36 WITH LID B-36D OR COUNTY APPROVED EQUAL. THE TOP OF THE LID SHALL BE FLUSH WITH THE TOP OF THE CONCRETE SLAB.
2. DRAIN ROCK. PROVIDE 5 CUBIC FEET PER VAULT BOX.
3. SEE STANDARD DRAWINGS W-14 AND W-15 FOR ADDITIONAL INFORMATION.
4. 4" THICK CONCRETE SLAB ON GRADE. THE CONCRETE SHALL BE WIDER THAN THE BOX ON ALL SIDES AS SHOWN ABOVE.

COUNTY OF SUTTER - ENGINEERING

**BELOW GROUND INSTALLATION
COMBINATION AIR VALVE**

APPROVED BY:

ULP
DEVELOPMENT SERVICES DIRECTOR

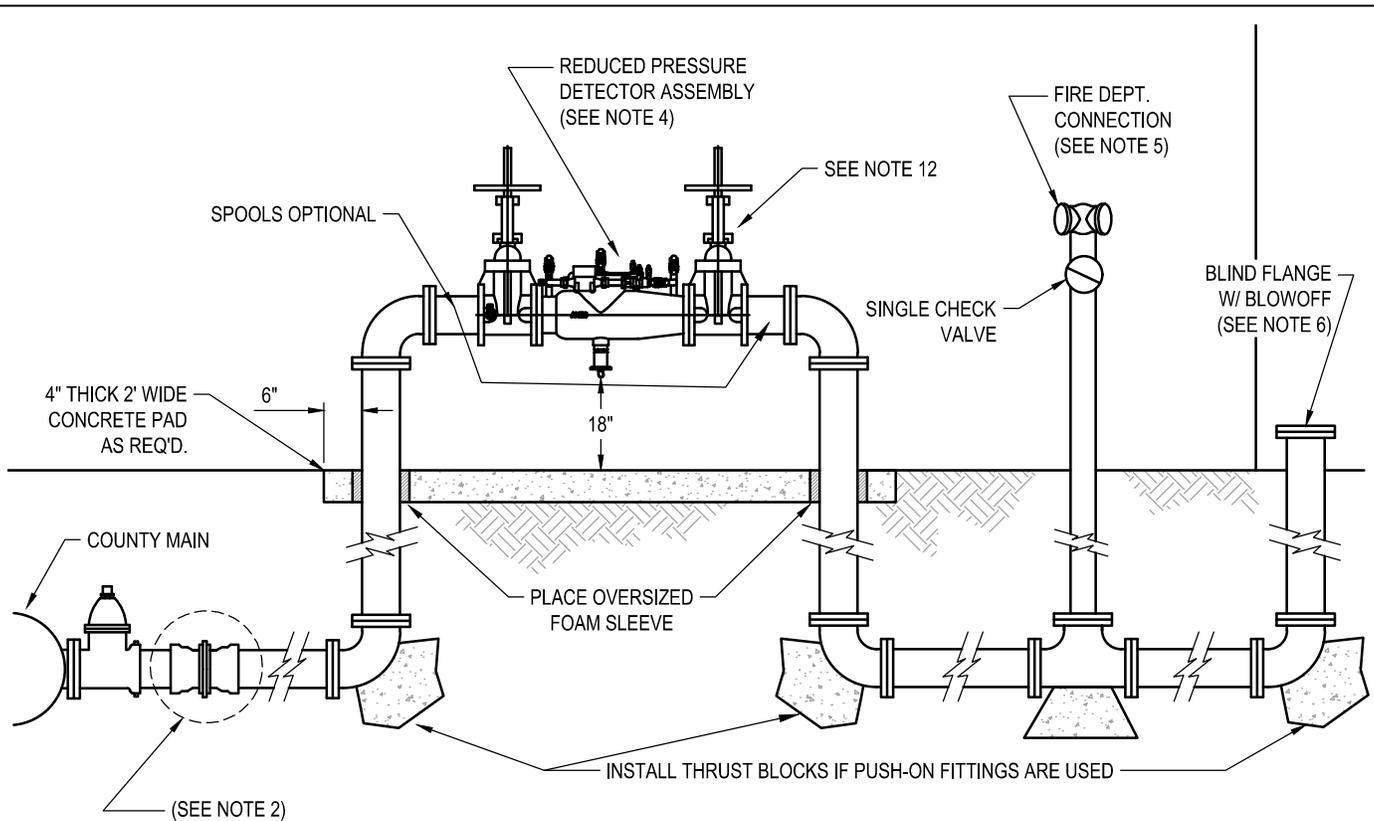
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DRAWING NUMBER

W-16



NOTES:

1. INSTALLATION OF THE FIRE SERVICE SHALL BE IN ACCORDANCE WITH AWWA C600.
2. INSTALL TEST PLATE AND JUMPER ASSEMBLY IN ACCORDANCE WITH STANDARD DRAWING W-12
3. PIPES AND FITTINGS SHALL BE DUCTILE IRON CL250 MINIMUM FROM THE MAIN TO THE BURIED ELBOW DOWNSTREAM OF THE BACKFLOW PREVENTER
4. PLACE DETECTOR ASSEMBLY WITHIN 8' BEHIND BACK OF S/W. APPROVED DETECTOR ASSEMBLIES: AMES, FEBCO or COUNTY APPROVED EQUAL. CERTIFICATION BY AN AWWA LICENSED TESTER SHALL BE DELIVERED TO THE PUBLIC WORKS MAINTENANCE DIVISION. FOR FIRE LINES TWO (2") INCHES AND LARGER, USED EXCLUSIVELY FOR UNMETERED PRIVATE FIRE SERVICES, A DETECTOR CHECK VALVE OF A TYPE APPROVED BY THE NATIONAL BOARD OF FIRE UNDERWRITERS AND EQUIPPED WITH A BYPASS METER SHALL BE INSTALLED. SUCH INSTALLATIONS SHALL BE LOCATED WITHIN PUBLIC STREETS, ALLEYS, RIGHTS-OF-WAY, OR EASEMENTS.
5. FIRE SERVICE CONNECTION SHALL BE INSTALLED 18" FROM BACK OF S/W, 30' MIN./50' MAX. FROM A FIRE HYDRANT, AND PER THE FIRE DEPARTMENT'S REQUIREMENTS.
6. PROVIDE TEMPORARY BLIND FLANGE W/ BLOWOFF AT BUILDING. AFTER TESTING THE FIRE SERVICE FROM THE MAIN TO THE BUILDING, REMOVE FLANGE AND MAKE CONNECTION.
7. DISINFECTION OF THE FIRE SERVICE SHALL BE IN ACCORDANCE WITH AWWA C651.
8. TESTING THE FIRE SERVICE FROM THE WATER MAIN TO THE REDUCED PRESSURE DETECTOR ASSEMBLY SHALL BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT. IT SHALL CONSIST OF A 2 HOUR PRESSURE TEST AT 200 PSI AND A BACTERIA TEST AFTER THE FIRE SERVICE HAS BEEN SUFFICIENTLY FLUSHED.
9. TESTING FROM THE REDUCED PRESSURE DETECTOR ASSEMBLY TO AND WITHIN THE BUILDING SHALL BE COORDINATED WITH THE FIRE DEPARTMENT.
10. IF THE FIRE SERVICE CONNECTION SERVES MORE THAN ONE BUILDING, A POST INDICATOR VALVE IS REQUIRED FOR EACH BUILDING.
11. NO OTHER CONNECTIONS WILL BE ALLOWED ON A FIRE SERVICE.
12. ALL FIRE BACKFLOW PREVENTERS SHALL HAVE OUTSIDE STEM & YOKE VALVES, OR GROOVED BUTTERFLY VALVES (THAT ARE MONITORED BY A FIRE ALARM SYSTEM) WITH TAMPER SWITCH. VALVE TYPE IS TO BE APPROVED BY THE SUTTER COUNTY FIRE DEPARTMENT.

**REDUCED PRESSURE DEVICE
OUTSIDE INSTALLATION**

COUNTY OF SUTTER - ENGINEERING

FIRE SERVICE CONNECTION

APPROVED BY:

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DEVELOPMENT SERVICES DIRECTOR

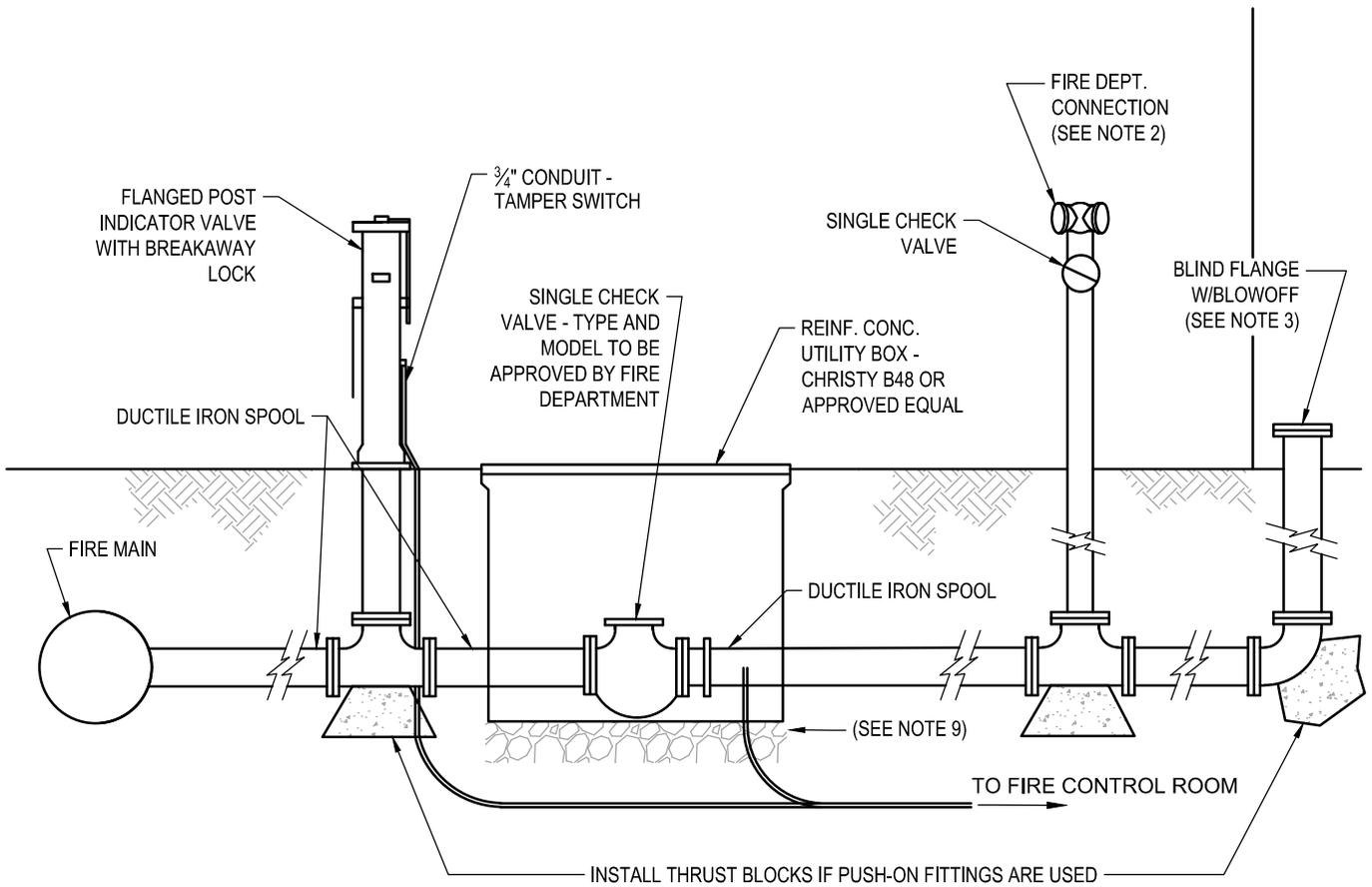
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DRAWING NUMBER

W-17



NOTES:

1. INSTALLATION OF THE FIRE SERVICE SHALL BE IN ACCORDANCE WITH AWWA C600.
2. FIRE SERVICE CONNECTION SHALL BE INSTALLED 18" FROM BACK OF S/W, 30" MIN./50" MAX. FROM A FIRE HYDRANT, AND PER THE FIRE DEPARTMENT'S REQUIREMENTS.
3. PROVIDE TEMPORARY BLIND FLANGE W/ BLOWOFF AT BUILDING. AFTER TESTING THE FIRE SERVICE FROM THE MAIN TO THE BUILDING, REMOVE FLANGE AND MAKE CONNECTION.
4. DISINFECTION OF THE FIRE SERVICE SHALL BE IN ACCORDANCE WITH AWWA C651.
5. TESTING THE FIRE SERVICE FROM THE WATER MAIN TO THE BUILDING SHALL BE COORDINATED WITH PUBLIC WORKS. IT SHALL CONSIST OF A 2 HOUR PRESSURE TEST AT 200 PSI AND BACTERIA TEST AFTER THE FIRE SERVICE HAS BEEN SUFFICIENTLY FLUSHED.
6. TESTING IN THE BUILDING SHALL BE COORDINATED WITH THE FIRE DEPARTMENT.
7. NO OTHER CONNECTIONS WILL BE ALLOWED ON A FIRE SERVICE.
8. CHECK VALVE AND PIPE SHALL BE U.L.-F.M. APPROVED.
9. 3/4" CRUSHED ROCK AND 12" DEEP, COMPACTED TO 90%.

**REDUCED PRESSURE DEVICE
OUTSIDE INSTALLATION**

COUNTY OF SUTTER - ENGINEERING

SPECIAL FIRE SERVICE CONNECTION

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

4/3/2025

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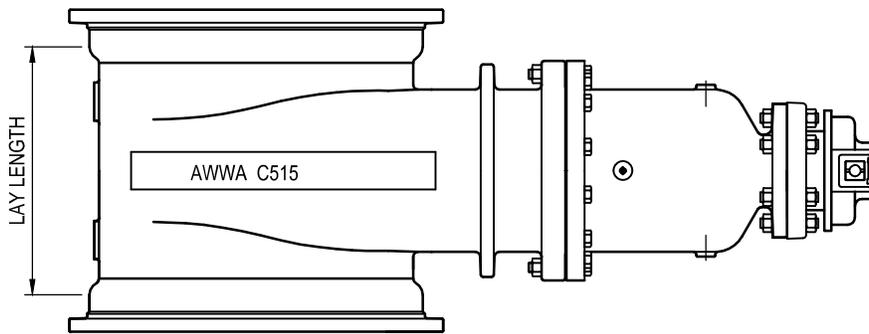
DRAWING NUMBER

W-17.1

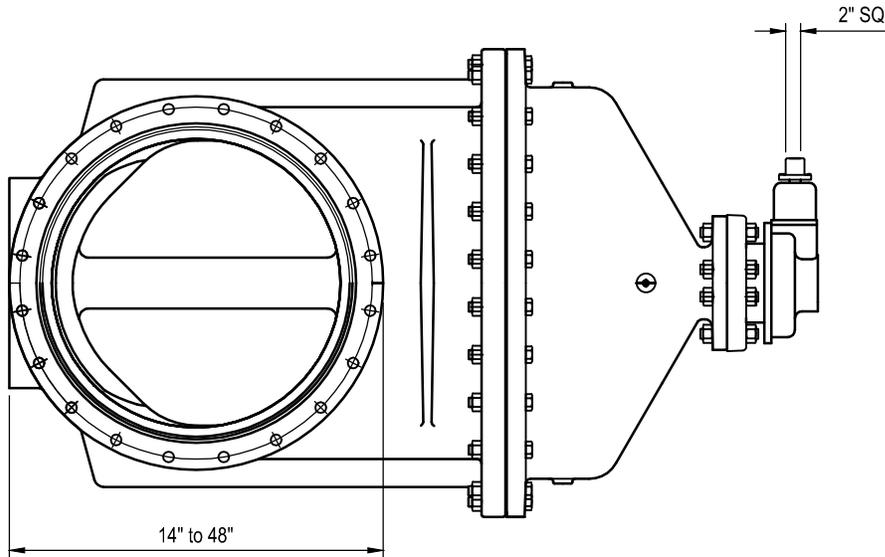
NOTES:

1. VALVES SHALL BE AMERICAN FLOW CONTROL'S SERIES 2500 DUCTILE IRON RESILIENT WEDGE GATE VALVE or COUNTY APPROVED EQUAL.
2. ALL SURFACES OF THE VALVE BODY AND BONNET SHALL HAVE A FUSION-BONDED EPOXY COATING APPLIED PRIOR TO ASSEMBLY.
3. DIRECT BURY SIDE MOUNTED VALVES SHALL BE BEVEL GEARED AND ON PIPES GREATER THAN 12"Ø.
4. VALVES INSTALLED ON MAINS IN THE NORTH-SOUTH DIRECTION SHALL HAVE THE OPERATING NUT ON THE EAST SIDE.
5. VALVES INSTALLED ON MAINS IN THE EAST-WEST DIRECTION SHALL HAVE THE OPERATING NUT ON THE NORTH SIDE.
6. WHEN VALVES ARE CONNECTED TO A FLxFL TEE, 6" SPOOLS SHALL BE INSTALLED BETWEEN THE TEE AND VALVE.
7. PROVIDE A COUNTY APPROVED VALVE EXTENSION, WITH A RISER CAN, FOR VALVES DEEPER THAN 6.0 FEET. HEIGHT OF EXTENSION SHALL TERMINATE AT 1.5 FEET TO 4.0 FEET BELOW GRADE.
8. A 10 AWG SINGLE STRAND, SOFT DRAWN COPPER WIRE SHALL BE INSTALLED AS SHOWN IN STANDARD DRAWING W-4.

TOP VIEW



SIDE VIEW



MECHANICAL JOINT ENDS AND BEVEL GEAR

COUNTY OF SUTTER - ENGINEERING

**SIDE MOUNTED
RESILIENT WEDGE
GATE VALVE**

APPROVED BY:

ULP

DEVELOPMENT SERVICES DIRECTOR

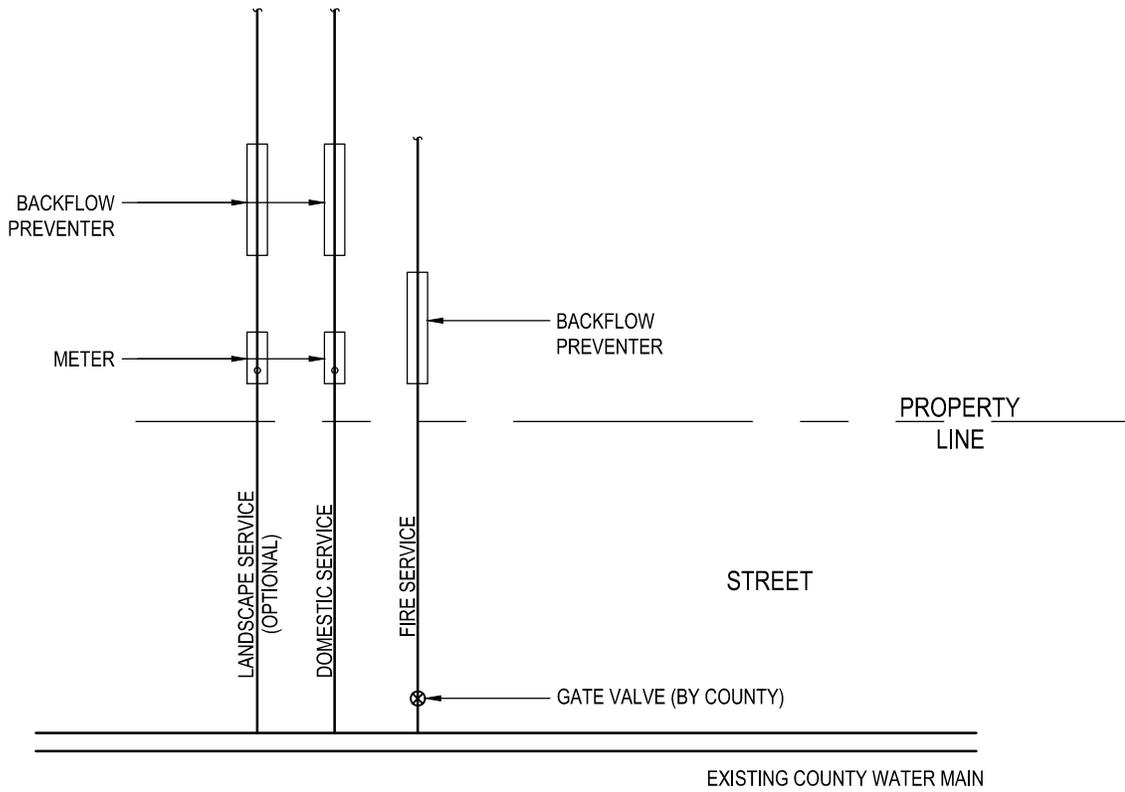
4/3/2025

DATE



DRAWING NUMBER

W-18



NOTES:

1. THE COUNTY WILL INSTALL THE DOMESTIC/LANDSCAPE WATER SERVICE FROM THE WATER MAIN TO THE METER.
2. THE COUNTY WILL DO THE HOT TAP AND SET A GATE VALVE FOR THE FIRE SERVICE. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE FIRE SERVICE FROM THE GATE VALVE TO THE BUILDING.
3. ALL DOMESTIC, LANDSCAPE, AND FIRE SERVICES SHALL HAVE REDUCED PRESSURE BACKFLOW PREVENTERS (THIS EXCLUDES SINGLE FAMILY DWELLINGS AND DUPLEXES).
4. SEE STANDARD DRAWINGS W-10 AND W-17 FOR ADDITIONAL BACKFLOW PREVENTER INFORMATION.

COUNTY OF SUTTER - ENGINEERING

BACKFLOW PREVENTER SCHEMATIC

APPROVED BY:

ULPJ

DEVELOPMENT SERVICES DIRECTOR

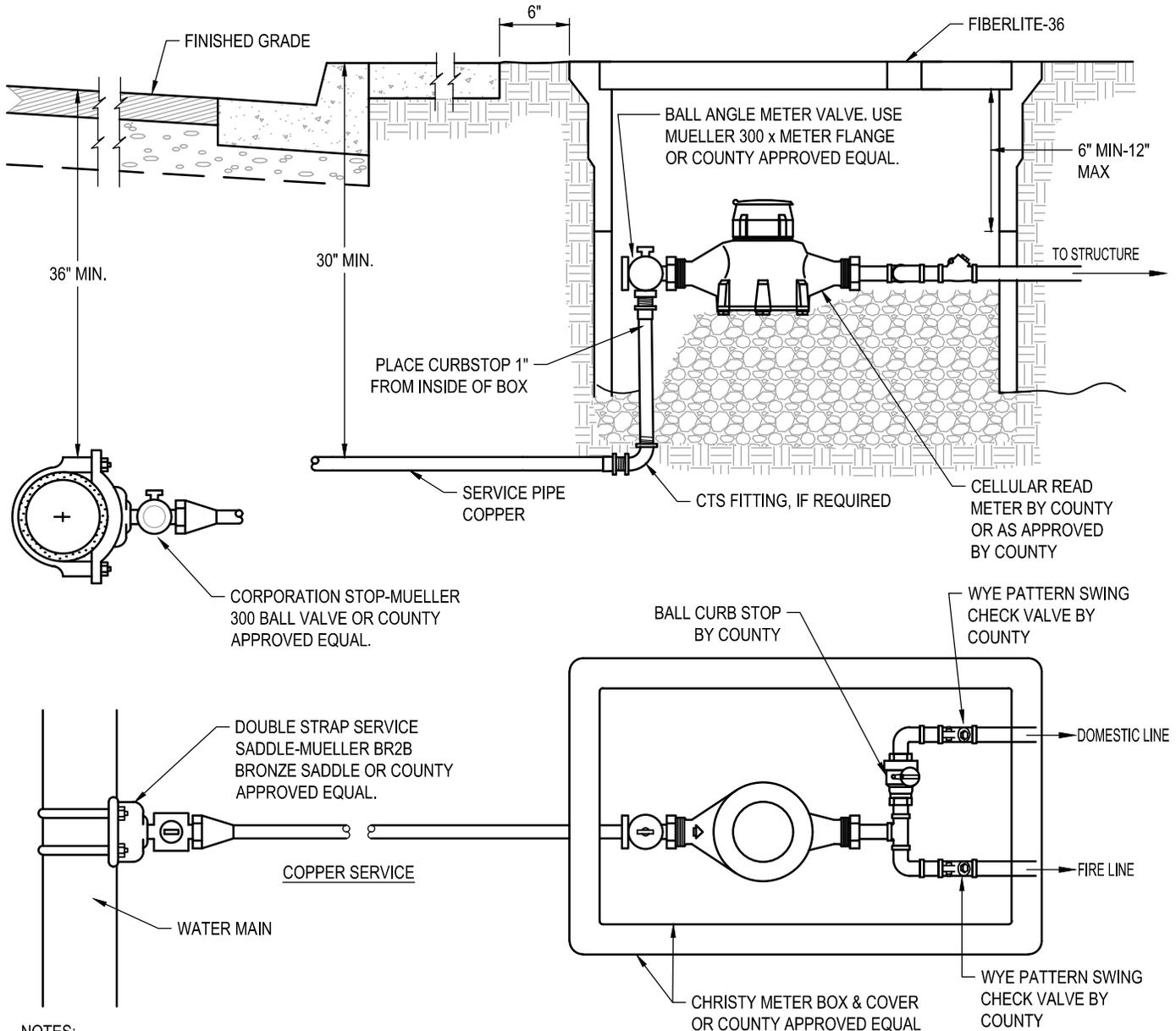
4/3/2025

DATE



DRAWING NUMBER

W-19



- NOTES:**
- 1" SERVICES SHALL BE COPPER TYPE "K" SOFT.
 - SPLICES IN THE SERVICE LINE ARE TO BE AVOIDED; BUT WHERE APPROVED, THEY SHALL BE MADE USING CTS GRIP-TYPE COMPRESSION COUPLINGS.
 - ALL FITTINGS ARE COPPER OR BRASS AND SHALL BE MUELLER 110 (CONDUCTIVE TYPE) COMPRESSION CONNECTIONS OR COUNTY APPROVED EQUAL.
 - WHEN BACKFLOW PREVENTER IS REQUIRED, SEE STANDARD DRAWING W-10.
 - ROCK BOTTOM OF BOX WITH 3" MIN. OF 3/4" MINUS CRUSHED ROCK.
 - PACK JOINT FITTINGS ARE NOT ACCEPTABLE.
 - ALL MATERIALS SHALL COMPLY WITH ASSEMBLY BILL 1953 (LEAD FREE LAW)
 - NO ABOVE GROUND STRUCTURE SHALL BE PLACED WITH IN 3 FEET OF THE WATER METER

CHRISTY		
CONDITION	MODEL NO.	LID TYPE
LAWN/LANDSCAPE	B-36	FIBERLITE-36
CONCRETE	APPROVED ON A CASE-BY-CASE BASIS	

COUNTY OF SUTTER - ENGINEERING

1" DUAL WATER SERVICE

APPROVED BY: *ULP* 4/3/2025
 DEVELOPMENT SERVICES DIRECTOR DATE
 SUTTER COUNTY DRAWING NUMBER
W-20