

CITY OF PETALUMA

POST OFFICE BOX 61
PETALUMA, CA 94953-0061

Kevin McDonnell
Mayor

Brian Barnacle
Janice Cader-Thompson
Mike Healy
Karen Nau
Dennis Pocekay
John Shribbs
Councilmembers

ADDENDUM NO 2

Pavement Restoration & Recycled Water Extension 23/24 Maria Dr C16102248/C66501834

October 23, 2023

This Addendum No. 2 modifies the Bidding Documents for Pavement Restoration & Recycled Water Extension 23/24 Maria Dr. C16102248/C66501834. This addendum shall become part of the Contract, and all provisions of the Contract shall apply thereto. Bidders shall acknowledge all Addendums in the Bid Schedule.

BID SCHEDULE AND ENGINEER'S ESTIMATE

The revised bid schedule is attached. The quantities for Items 4 and 8, Project B were adjusted. The Engineer's Estimate is \$4.7 million for both Projects A (\$0.9 million) + B (\$3.8 million).

Public Works & Utilities

City Engineer
11 English Street
Petaluma, CA 94952
Phone (707) 778-4303

Environmental Services

Ellis Creek Water
Recycling Facility
3890 Cypress Drive
Petaluma, CA 94954
Phone (707) 776-3777
Fax (707) 656-4067

Facilities, Parks & Streets Maintenance

840 Hopper St.
Petaluma, CA 94952
Phone (707) 778-4303
Fax (707) 206-6065

Transit Division

555 N. McDowell Blvd.
Petaluma, CA 94954
Phone (707) 778-4421

Utilities & Field Operations

202 N. McDowell Blvd.
Petaluma, CA 94954
Phone (707) 778-4546
Fax (707) 206-6034

E-Mail: publicworks@cityofpetaluma.org

TECHNICAL CLARIFICATION TO CONTRACTORS – QUESTION AND RESPONSE

Question #1:

A review of the insurance requirements noted the following:

- 1) Required GL limits \$2M per occurrence/\$4M aggregate; please confirm with the Owner that the Excess policy can be used to meet these limits.
- 2) The City of Petaluma is requesting the use of their endorsements, which are not approved by the Dept of Insurance. We can fill out their forms. However, we cannot legally sign as an authorized representative since the conditions are not approved for use in CA. Please confirm that your blanket CNA Additional Insured endorsement will be acceptable.

Response #1:

- 1) Yes, the Excess policy can be used to meet these limits
- 2) Yes, the blanket CNA Additional Insured endorsement will be acceptable

Question #2:

Regarding the box culvert crossing of a 38 ft. DIP (Bid Item #18). The detail indicates there are no joints. DIP comes in 20' lengths.

Response #2:

Refer to Revision 1 on Sheet 76 CD-4, included with Bid Addenda #2. "No joints" has been removed from the detail. Note 1 indicates that all pipes and fittings shall be wrapped in polyethylene. Additional thrust blocks are provided.

1. ALL PIPE AND FITTINGS SHALL BE CEMENT LINED OR EPOXY FUSION BONDED DUCTILE IRON CLASS 53 MINIMUM AND SHALL BE WRAPPED IN POLYETHYLENE PER WATER SYSTEM DESIGN GUIDELINES.
2. ONLY RESTRAINED FITTINGS, MECHANICAL JOINT, TIE RODS, MEGALUG (OR EQUAL), FLANGED MAY BE USED. ALL BENDS MUST BE RESTRAINED.
3. PIPES SHALL BE CONTINUOUS THROUGH FITTINGS NO PIPE SEGMENTS ARE ALLOWED.
4. ALL BENDS SHALL BE 45° OR 22 1-1/2° FITTINGS. 90° BEND ARE NOT ALLOWED.

Question #3:

As written in Tech Specs Section 400, the area and scope limits for the curb ramps needs to be clarified. The specs indicate the ramps are to include “the curb and in front of the ramp on the entire curb return”, “five foot wide 6” AC or conc gutter conform,” as well as limits extending to “closest extension score marks....at grade break beyond landing”. With the various bid items for ramps listed as per EA, this leaves a significant amount of variability for each ramp. The C&G limits included in the ramps are not clear, and the total area of the ramp can vary substantially depending on score marks/grade break definition in the field.

Response #3:

Refer to the revised measurement and payment language in Tech Spec Section 400 and the Caltrans Revised Standard Plan RSP A88A markup. Temporary conforms will be included under the concrete curb, gutter, and valley gutter.

Question #3: Please confirm details 203.1, 408.1, 409.1 and 410.1.

Response #2:

See attached.

City of Petaluma,

Ken Eichstaedt

A signed copy of this Addendum and the attached acknowledgment form shall be attached to the bid proposal. Failure to do so may cause rejection of your bid as being non-responsive.

ADDENDUM NO. 2

**Pavement Restoration & Recycled Water Extension 23/24 Maria Dr
C16102248/C66501834**

October 23, 2023

ACKNOWLEDGEMENT

Receipt of Addendum No. 2 is hereby acknowledged by _____
(Contractor's Name)

on the _____ day of _____, 2023.

By: _____
Signature

Title

Company

BID SCHEDULE

RECYCLED WATER MAIN EXTENSION - PROJECT A

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Mobilization / Demobilization	1	LS		
2	Temporary Traffic Control	1	LS		
3	Storm Water Management and Erosion Control	1	LS		
4	Pothole	1	LS		
5	Trench Shoring and Bracing	1	LS		
6	Recycled Water Fire Hydrant Assembly	1	EA		
7	2" Recycled Water Service	7	EA		
8	4" Recycled Water Main	40	LF		
9	6" Recycled Water Main	45	LF		
10	8" Recycled Water Main	178	LF		
11	12" Recycled Water Main	2,255	LF		
12	4" Gate Valve	1	EA		
13	6" Gate Valve	2	EA		
14	8" Gate Valve	2	EA		
15	12" Gate Valve	7	EA		
16	6" Blowoff Assembly	1	EA		
17	Recycled Water Main Drop/Raise	4	EA		
18	Box Culver Over-Crossing	1	LS		

Total Project A \$ _____

PAVEMENT RESTORATION MARIA DRIVE - PROJECT B

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Mobilization/ Demobilization	1	LS		
2	Temporary Traffic Control	1	LS		
3	Storm Water Management and Erosion Control	1	LS		
4	Minor Concrete, Curb and Gutter	2,225	LF		
5	Minor Concrete, Driveways	735	SF		
6	Minor Concrete, Sidewalk	13,700	SF		
7	Minor Concrete, Valley Gutter	1,370	SF		
8	Minor Concrete, Vertical Curb	85	LF		
9	Minor Concrete, Bus Pad	1,765	SF		
10	Case A Curb Ramp	29	EA		
11	Modified Case A Curb Ramp	2	EA		
12	Case C Curb Ramp	11	EA		
13	Modified Case C Curb Ramp	2	EA		
14	Sidewalk Conform Grinding	1	LS		
15	Deep Lift AC	65	Ton		
16	2" AC Overlay	35	Ton		
17	4.2" AC Overlay	6,525	Ton		
18	Cold Planing	27,925	SY		
19	Full Depth Reclamation-Cement (1.17' depth)	12,050	SY		
20	Full Depth Reclamation-Cement/Lime (1.17' depth)	15,550	SY		
21	Mix Designs (FDR-C and FDR-C/L)	1	LS		
22	Cement (Full Depth Reclamation)	530	Ton		
23	Lime (Full Depth Reclamation)	250	Ton		
24	Tree and Stump Removal	1	EA		
25	Remove and Reinstall Existing Sign	2	EA		
26	Remove and Reinstall Existing Sign and Post in New Foundation	16	EA		
27	Install New Post and Foundation	32	EA		
28	Install New Sign	53	ES		
29	6" Double Yellow Stripe (Detail 22)	5,392	LF		
30	6" Double Yellow Stripe Median (Detail 29)	330	LF		
31	6" Yellow Stripe Buffer	290	LF		
32	6" White Stripe (Detail 27B, 39, 39A)	13,072	LF		
33	6" White Stripe Buffer	925	LF		
34	8" White Stripe (Painted Bulb-outs, Detail 38)	1,405	LF		
35	Pavement Markings, Thermoplastic	13,974	SF		
36	Pavement Color Treatment, Methyl Methacrylate	11,560	SF		
37	Blue Pavement Marker	8	EA		
38	Mountable Rubber Curbs	8	EA		
39	K-71 Traffic Posts	52	EA		
40	Curb Paint, Red	3,095	LF		
41	Curb Paint, White	24	LF		
42	Solar RRFB System (Single Sided: Solar Panel, Light Bar, Battery, Controller, APS, and Warning Signs)	2	EA		

Street Rehabilitation and Recycled Water Main Maria Drive Project
City Project No. C16102248

43	Solar RRFB System (Double Sided: Solar Panel, Light Bar, Battery, Controller, APS, and Warning Signs)	10	EA		
44	3" Diameter Post & Foundation	5	EA		
45	Solar Street Light System (Luminaire, Solar Panel, and Battery)	3	EA		
46	Type 15 Street Light Pole, Foundation, & No. 3.5 Pull Box	6	EA		
47	Connect to Existing Street Light Service	3	EA		
48	Traffic Signal System, S. McDowell Blvd & Maria Drive	1	LS		
49	Adjust Existing Utility Box to Grade	13	EA		
50	Adjust Water Valve	58	EA		
51	Adjust Manhole	19	EA		
52	Adjust Monument	14	EA		
53	12" Storm Drain Pipe	25	LF		
54	24" Storm Drain Pipe	12	LF		
55	Convert Catch Basin to SDMH	2	EA		
56	Type B Catch Basin	4	EA		
57	Fire Hydrant Relocation	2	EA		

Total Project B \$ _____

\$
Total Base Bid (Project A + Project B) _____

ADDITIVE ALTERNATIVE 1 - LANDSCAPING

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Planting Soil and Tree Planting	1	LS		

Total Alt 1 Bid \$ _____

*Note: In case of error in extension of price into the total price column, the unit price will govern.

Total Amount of Bid (written in words) is: _____ _____ Dollars and _____ Cents. In the event of discrepancy between words and figures, the words shall prevail. \$ _____ _____ Figures

Note: The award of the contract shall be awarded to the lowest price of the Total Bid of Project A +B.

Address of Bidder

Signature of Bidder

City

Name of Bidder (Print)

Telephone Number of Bidder

Fax Number of Bidder

Contractor's License Number

License's Expiration Date

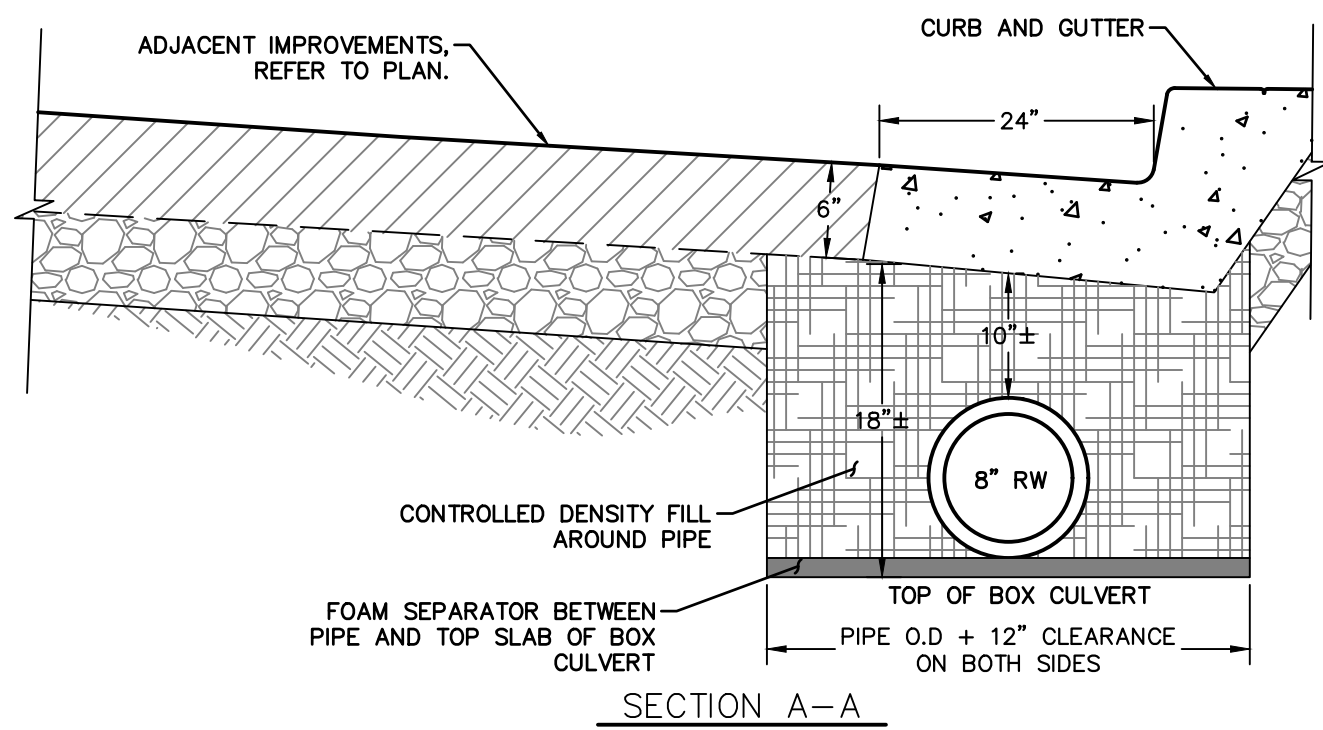
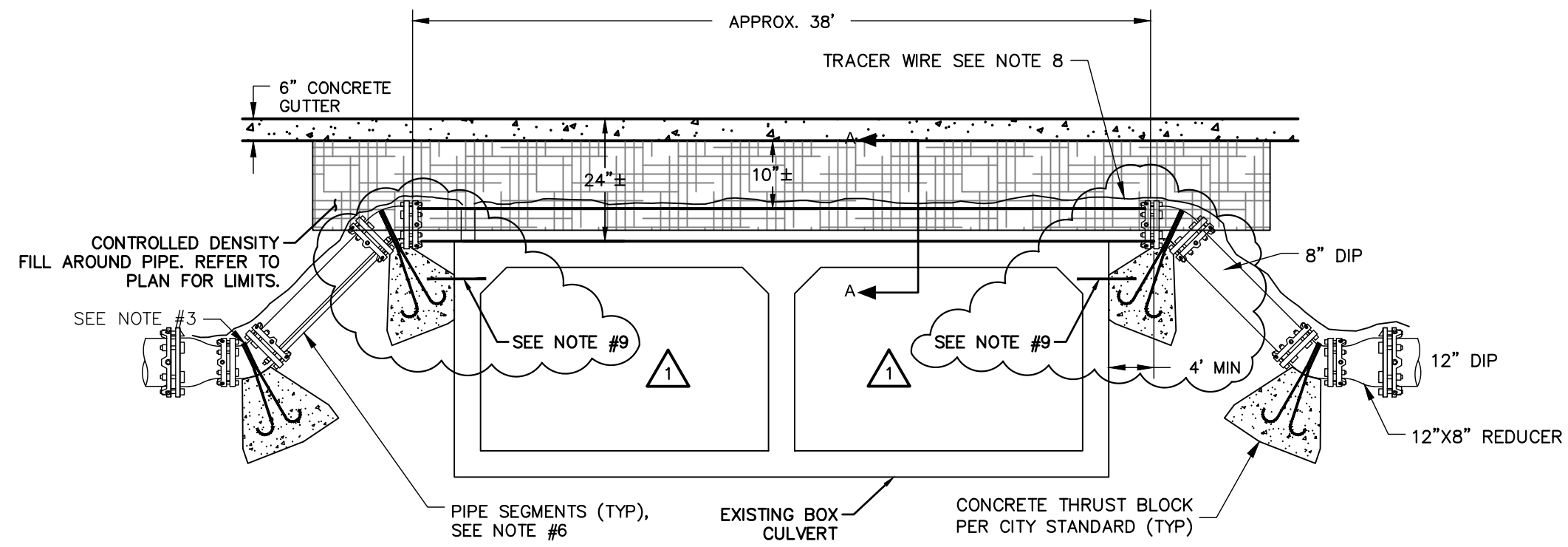
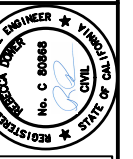
Addendum Acknowledgement

Addendum No. 1 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 2 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 3 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 3 Signature Acknowledging Receipt: _____ Date: _____



1. ALL PIPE AND FITTINGS SHALL BE CEMENT LINED OR EPOXY FUSION BONDED DUCTILE IRON CLASS 53 MINIMUM AND SHALL BE WRAPPED IN POLYETHYLENE PER WATER SYSTEM DESIGN GUIDELINES.
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3. PIPES SHALL BE CONTINUOUS THROUGH FITTINGS NO PIPE SEGMENTS ARE ALLOWED.
4. ALL BENDS SHALL BE 45° OR 22 1-1/2° FITTINGS. 90° BEND ARE NOT ALLOWED.
5. REDUCED CLEARANCE MAY BE APPROVED BY THE PUBLIC WORKS & UTILITIES DEPARTMENT.
6. DUCTILE IRON TRANSITION COUPLINGS MAY BE ALLOWED WHEN THE NOMINAL PIPE SIZE IS THE SAME AND THE O.D. IS DIFFERENT.
7. ALL JOINTS WITHIN 50 FEET OF REDUCER SHALL BE RESTRAINED.
8. ALL HARDWARE IS TO BE TYPE 316 STAINLESS STEEL.
9. DOWEL AND EPOXY #4 REBAR INTO EXISTING BOX CULVERT A MINIMUM OF 3-INCHES.

9 BOX CULVERT OVER-CROSSING
 NO SCALE



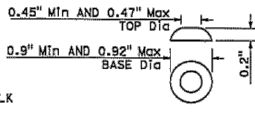
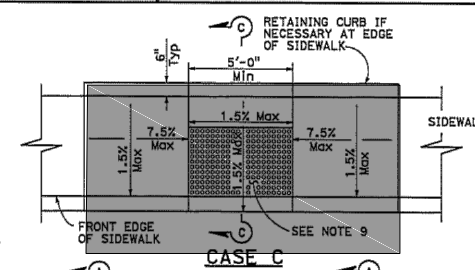
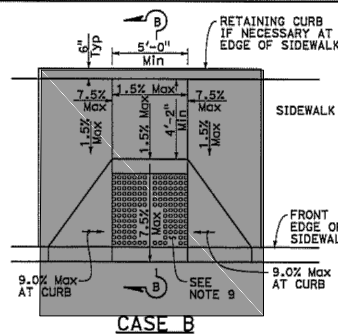
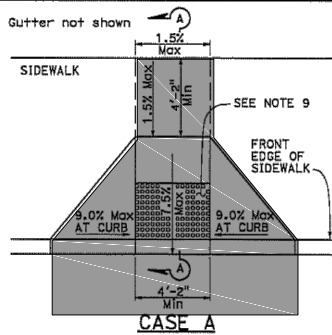
PAY LIMITS – APPLIES TO ALL CURB RAMPS INCLUDING MODIFIED CASE RAMPS

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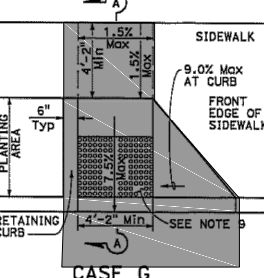
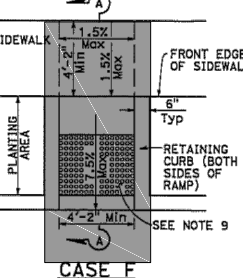
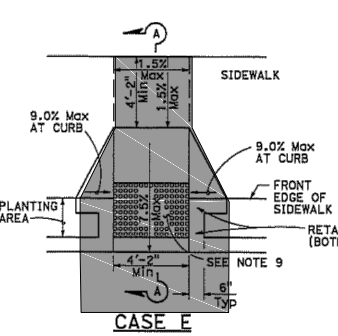
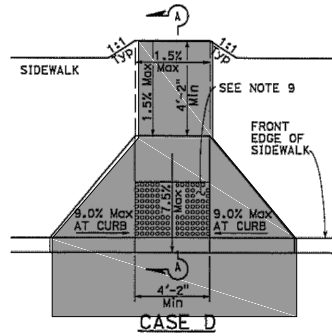
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

H. David Collier
 REGISTERED CIVIL ENGINEER
 July 15, 2016
 PLANS APPROVAL DATE
 THE STATE OF CALIFORNIA ON ITS OFFICERS
 OR AGENTS SHALL NOT BE RESPONSIBLE FOR
 THE ACCURACY OR COMPLETENESS OF SCANNED
 COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 HECTOR ZAVILA CARDONA
 C41957
 CIVIL
 STATE OF CALIFORNIA

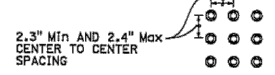
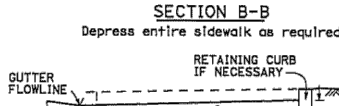
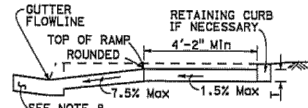
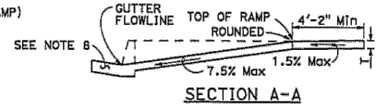


RAISED TRUNCATED DOME

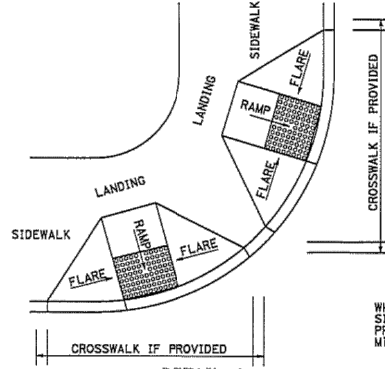


NOTES:

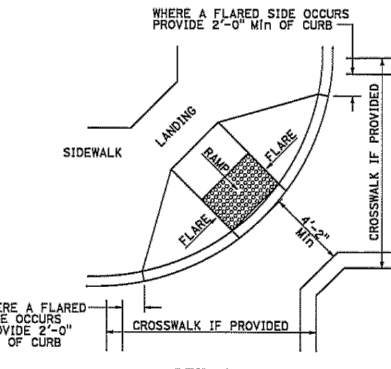
- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
- If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-2" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
- When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
- As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
- If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-2".
- Side slope of ramp flares vary uniformly from a maximum of 9.0% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
- The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level.
- Counter slopes of adjoining gutters and road surfaces immediately adjacent to and within 24 inches of the curb ramp shall not be steeper than 1:20 (5.0%). Gutter pan slope shall not exceed 1" of depth for each 2'-0" of width.
- Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. A 4'-0" wide detectable warning surface may be used on a 4'-2" wide curb ramp. Detectable Warning Surfaces shall conform to the requirements in the Standard Specifications.
- Slidewalk and ramp thickness, "T", shall be 3/4" minimum.
- Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
- Detectable warning surface may have to be cut to allow removal of utility covers while maintaining full detectable warning width and depth.



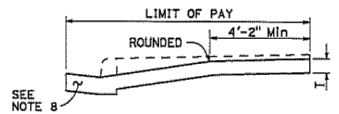
**RAISED TRUNCATED DOME PATTERN (IN-LINE)
DETECTABLE WARNING SURFACE**
See Note 9



**DETAIL A
TYPICAL TWO-RAMP
CORNER INSTALLATION**
See Note 1



**DETAIL B
TYPICAL ONE-RAMP
CORNER INSTALLATION**
See Notes 1 and 3



RETROFIT PAY LIMITS
Existing curb and sidewalk

REVISED STANDARD PLAN RSP A88A

2010 REVISED STANDARD PLAN RSP A88A

SECTION 400 MINOR CONCRETE

400A. GENERAL

New Portland cement concrete facilities including curbs, curbs and gutters, valley gutters, sidewalks, ADA curb ramps, and roadways, pads, and shallow utility backfill shall be constructed per the plans, Construction Standard 200 Series, and these specifications at the locations indicated on the plans or as directed by the Engineer.

The CONTRACTOR shall furnish all materials for concrete and grout work in accordance with the provisions of this Section and shall form, mix, place, cure, repair, finish, and do all other work as required to produce finished concrete and grout in accordance with the requirements of the Contract Documents.

400B. SUBMITTALS

Submittals shall be provided to confirm that material to be used comply with information specified herein. The CONTRACTOR shall furnish a concrete mix design to the Engineer at least ten working days prior to the start of the work.

Mix Designs: Prior to beginning the Work, the CONTRACTOR shall submit to the ENGINEER, for review, preliminary concrete mix designs which shall show the proportions and graduations of all materials proposed for each class and type of concrete specified. The mix designs shall be designed by an independent testing laboratory acceptable to the ENGINEER. All costs related to such mix design shall be borne by the CONTRACTOR. This Specification sets the minimum requirements for mix design that meets all requirements specified herein.

If deviations from the specifications are indicated, and therefore requested by the CONTRACTOR, each deviation shall be underlined and denoted by a number in the margin to the right of the identified paragraph. The remaining portions of the paragraph not underlined will signify compliance on the part of the CONTRACTOR with the specifications. The submittal shall be accompanied by a detailed, written justification for each deviation. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration.

400C. MATERIALS

400C.1 GENERAL

Concrete shall conform to the provisions of Section 90 of the Standard Specifications and these special provisions.

Where new concrete is placed adjoining existing concrete, steel dowels (No. 4 x 20 inch) shall be installed at 24 inches o.c. into existing concrete with six-inch embedment. The dowels shall be epoxy grouted.

Concrete shall contain one (1) pound of lampblack per cubic yard of concrete to match existing concrete

General Concrete Facilities including curbs, gutters, and sidewalk and ADA curb ramps shall meet the following requirements:

- Compressive Strength: 3,000 psi @ 28 days
Polypropylene Fiber
Reinforcement: 1.5 lbs/cy (0.01% by volume), ¾ inch or 1-1/2 inch length
- Maximum Slump: 4 inches
- Steel Reinforcement: 60 ksi

Heavy Vehicular Facilities including valley gutters, driveways, and alley entrances and shallow utility backfill shall meet the following requirements:

- Compressive Strength: 2000 psi @ 3 days,
4000 psi @ 28 days
Polypropylene Fiber
Reinforcement: 3.0 lbs/cy (0.02% by volume), 1-1/2 inch minimum length
- Maximum Slump: 4 inches
- Steel Reinforcement: 60 ksi

Lean concrete shall have a minimum 28-day compressive strength of 2,000 psi, a maximum aggregate of 3/4 inches, a minimum of 4 sacks of cement per cubic yard, and a maximum water to cement ratio of 0.60 by weight.

400C.2 FORMS

Concrete forms shall be metal, wood, plywood, or other approved material that will not adversely affect the concrete and will facilitate placement of concrete to the shape, form, line, and grade indicated. Metal forms shall be an approved type that will accomplish such results.

Plywood for concrete formwork shall be new, waterproof, synthetic resin bonded, exterior type Douglas Fir or Southern Pine plywood manufactured especially for concrete formwork.

Lumber shall be Douglas Fir or Southern Pine, construction grade or better.

400C.3 REINFORCEMENT STEEL

Reinforcement steel shall be deformed bars conforming to ASTM A615 Grade 60 or ASTM A706.

400C.4 CONCRETE

Cement: Portland Cement Type II conforming to ASTM C150.

Water: Clean and free from oil, acid, alkali, organic matter, or other deleterious substances and shall contain not more than 50 ppm chlorides as Cl no more than 50 ppm sulfates as SO_4^{-2} .

Aggregates:

Natural aggregates shall be free from deleterious coatings, conforming to ASTM C33, together with all referenced ASTM Standard Specifications, except as modified herein. Aggregates shall not be potentially reactive as defined in Appendix XI of ASTM C33. Aggregates shall be thoroughly and uniformly washed before use.

Fine aggregates shall conform to ASTM C33. Materials finer than the 200 sieve shall not exceed 4 percent. Use only clean, sharp, natural sand.

Coarse aggregate shall be: 1) natural gravels, 2) a combination of gravels and crushed gravels, 3) crushed stone, or 4) a combination of these materials containing no more than 15 percent flat or elongated particles (long dimension more than five times the short dimension). Materials finer than the 200 sieve shall not exceed 0.5 percent.

Ready-Mixed Concrete: Ready-mixed concrete shall conform to the requirements of ASTM C94.

400C.5 CURING COMPOUND

Liquid membrane-forming curing compound shall be clear or translucent, suitable for spray application and shall conform to ASTM C309, Type 1.

400C.6 EXPANSION JOINT FILLER

Expansion joint filler shall be ½-inch thick, preferred asphalt-impregnated, expansion joint material, conforming to ASTM D994.

400C.7 GROUTS

Epoxy Grout. Epoxy grout for bonding reinforcing bars to existing concrete structures shall be manufactured by, or approved equal:

- A. Adhesive Engineering, Concrete No. 1001
- B. Sika Chemical Corp., Sikastix 350, 370, or 390, as applicable

Ordinary Type Grout (Dry Pack). One part portland cement to 2 parts fine sand. Add sufficient water to form a damp formable consistency.

Non-Shrink Grout. Non-shrink grout shall be nonmetallic, nongas-liberating type, as manufactured by, or approved equal:

- A. Master Builders, Master Flow 713
- B. UPCO Company, UPCON, High Flow

Cement Grout. Cement grout shall be composed of one part cement, two parts sand, and the minimum amount of water necessary to obtain the desired consistency. Where needed to match the color of adjacent concrete, white portland cement shall be blended with regular cement as needed. The minimum compressive strength at 28 days shall be 4000 psi.

400C.8 BONDING AGENT

Bonding agent shall be manufactured by, or approved equal:

- A. W. R. Grace and Company, Cambridge, MA
- B. Sika Chemical Corp., Lyndhurst, NJ
- C. Adhesive Engineering Company, San Carlos, CA

Product shall be recommended by manufacturer as suitable to meet job requirements with regard to surface, pot life, set time, vertical or horizontal application, forming restrictions, etc. Furnish manufacturer's specific instructions for this job application, and obtain ENGINEER's approval prior to application.

400C.8 TRUNCATED DOMES

Prefabricated truncated dome panels shall be used. The panels shall be **"FEDERAL YELLOW"** (unless specified otherwise on the plans) and shall be cast-in-place ("wet set") style at all locations. The CONTRACTOR shall submit for review the manufacturer's information at least 14 days prior to placement of the panels for approval by the City.

400D. CONSTRUCTION

400D.1 EARTHWORK

Excavation, backfill and compaction shall be in accordance with Section 80, Earthwork.

400D.2 EXISTING CURB & GUTTER, SIDEWALK, AND ASPHALT REMOVAL

The CONTRACTOR shall only be permitted to remove concrete and/or asphalt on one side of the street at a time. The other side of the street may be removed only after the concrete and asphalt have been installed and opened to the public.

All concrete which is to be removed from curb and gutter areas shall be removed to the nearest construction joint or as directed by the Engineer.

All concrete which is to be removed from sidewalk areas shall be removed to the nearest transverse score mark across the full width of sidewalk or construction joint as directed by the Engineer.

Burying of broken concrete within the limits of the project will not be allowed.

Reinforcing steel may be encountered in portions of the concrete to be removed and no additional allowance will be made for the removal of such steel.

400D.3 SUBGRADE

After the subgrade is prepared, moisture conditioned, and compacted to 90% relative compaction at zero to three percent over optimum, the CONTRACTOR shall continuously maintain the subgrade in a uniform condition at the moisture content obtained during subgrade compaction until the concrete is placed.

400D.4 FORMING

Construct all form work in accordance with ACI 347. Before placing the concrete, the contact surfaces of forms shall be coated with a suitable non-staining form coating compound or shall be given two coats of nitrocellulose lacquer. All excess coating shall be removed by wiping with cloths.

400D.5 TOLERANCES

The maximum variation from design elevation shall not exceed +/- 0.02 feet. In some instances, particularly in critical drainage areas, tolerances may be reduced to zero. Concrete facilities shall be installed to maintain or provide positive drainage. Questions regarding applicable tolerances shall be directed to the Engineer forty-eight hours in advance of the work.

When shown on the drawings, the concrete shall be set at the design elevations. When existing facilities are to be removed and replaced, they shall conform to the existing elevations and grades. Generally, this will be at a straight line between the start and end points of the removal, unless otherwise noted on the plans.

400D.6 REINFORCEMENT

All reinforcement shall be provided as indicated together with all necessary ties, spacers, supports, and other devices necessary to install and secure the reinforcement properly. All reinforcement, when placed, shall be free from loose rust, scale, oil, grease, and other coatings and foreign substances that would reduce or destroy the bond. Use of wire mesh is prohibited.

Curb and Gutter / Vertical Curb: Reinforcement shall be #4 bar 24" on-center per our City Standards

Sidewalk: Reinforcement shall be #3 bar 24" on-center each way per our City Standards.

Curb Ramp: Reinforcement shall be #3 bar 24" on-center each way per our City Standards.

Driveway / Valley Gutter: Reinforcement shall be #3 bar 24" on-center each way per our City Standards.

400D.7 MIXING

Concrete mixing shall conform to ACI 304, current edition, and to the other requirements specified herein.

Concrete shall be discharged at the job within 1-1 /2 hours after the water has been added to the cement and aggregates mixture. Concrete may be machine mixed at the job site or ready mixed at the CONTRACTOR's option, and shall conform to the following requirements:

1. Site Mixing: Concrete produced at the site shall be mixed in a batch mixer with a capacity of not less than 1 /2 cy. The minimum mixing time for each batch (from the time when all solid materials and water are in the drum) shall be 1-1 /2 minutes for mixers of 1 cy capacity or less; for mixers of larger capacity, the mixing time shall be increased 30 seconds for each additional 1 /2 cy or fraction thereof. The mixer shall revolve at a uniform peripheral speed of about 200 rpm. The entire batch shall be discharged before the mixer is recharged.

2. Ready Mixed Concrete: All concrete constituents for ready mixed concrete shall be batched at the central plant. All central plant and rolling stock equipment and methods shall conform to the requirements of ASTM C94, as applicable.

400D.8 SCHEDULING

The CONTRACTOR shall schedule the work so that the replacement of sidewalks and curbs and gutters at driveways shall be completed within three (3) days of demolition operation start. The CONTRACTOR may use seven (7) sack mixes (Class D) with no more than one (1) percent calcium chloride to speed up the concrete set.

The CONTRACTOR shall notify the affected business owners or residents in writing at least forty-eight (48) hours prior to starting the work. All local business and residents shall be provided access at all times.

The CONTRACTOR shall schedule his operation so that all other concrete shall be poured within five (5) days after excavation or by the weekend, whichever is earlier. Failure to do so will result in a liquidated damage of \$500 per location per occurrence.

400D.9 PLACING

No concrete shall be placed after there is evidence of initial set. Concrete placement will not be permitted when weather conditions prevent proper placement and consolidation. Consolidation of concrete shall be with internal concrete vibrators supplemented by handspading, rodding, and tamping. Vibrating equipment shall be adequate to thoroughly compact the concrete. Concrete shall be compacted, screeded to grade, and prepared for the specified finish.

In general, adding water to the surface of the concrete to assist in finishing operations shall not be permitted.

Before final finishing is completed and before the concrete has taken its initial set, the edges shall be carefully finished with the radius shown on the plans or a radius to match the existing construction.

Concrete shall be thoroughly consolidated against and along the faces of all forms and adjacent concrete. After the forms are removed, excess concrete below the form surface shall be removed to be flush with the form face.

400D.10 CURING

Curing shall begin as soon as free water has disappeared from concrete surfaces after placing and finishing. Curing materials shall be applied and maintained so as to protect the concrete from moisture loss. Water used in curing shall be potable. Curing shall be accomplished by moist curing method. Unformed surfaces shall be covered with absorptive materials wetted before placing. Absorptive materials or forms used in curing shall be kept continually wet.

400D.11 CLEANUP AND BACKFILL

After the concrete is placed, cured, and the forms have been removed, the CONTRACTOR shall clean the site of all concrete and forming debris.

After curing has been completed and the forms have been removed from the driveway, sidewalk, or ADA curb ramp, the void between the new concrete and the existing parkway shall be filled with clean native material and the entire parkway left in a clean and orderly condition.

For concrete removed but not replaced, the resulting void after excavation shall be backfilled with clean native material or topsoil.

400E. QUALITY CONTROL

Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the requirements of the Building Code and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of this Section; provided, that for Building Codes, the latest edition of the code, as adopted as of the date of award by the agency having jurisdiction, shall apply to the Work.

ACI 304R Guide for Measuring, Mixing, Transporting and Placing Concrete

ACI 347R Guide to Formwork for Concrete

ASTM A615 Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

ASTM C33 Concrete Aggregates

400E.1 FIELD SAMPLING AND TESTS

The CONTRACTOR shall be responsible for the quality of the materials and workmanship of the placement of the concrete. Sampling, preparation of test specimens, and testing will be the ENGINEER's responsibility.

400E.2 SLUMP

Concrete consistency shall be determined by slump tests in accordance with ASTM C143. At least one test shall be made at the commencement of the concrete placement and at the time standard test cylinders are molded.

Tests will be performed by the ENGINEER

400F. MEASUREMENT AND PAYMENT

Minor Concrete, Curb and Gutter shall be paid for at the contract unit price **per linear foot (LF)** of actual concrete installed, which shall be full compensation for mobilization, site preparation and site clean-up, installation of concrete curb and gutter, removal and disposal of existing curb and gutter, temporary conforms, staking/ layout, site grubbing, excavation and grading, including roadway excavation to reduce curb radii, root pruning, backfilling, 6" class II aggregate base, compaction, dowelling, reinforcing bar addition of lamp black paint, pedestrian and traffic control, and restoration of any damages including furnishing all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof and as directed by the Engineer, complete, in place, and accepted, and no additional compensation will be allowed therefor.

Minor Concrete - Vertical Curb shall be paid for at the contract unit price **per linear foot (LF)** of actual concrete installed, which shall be full compensation for mobilization, site preparation and site clean-up, installation of concrete curb and gutter, removal and disposal of existing curb and gutter, staking/ layout, site grubbing, excavation and grading, including roadway excavation to reduce curb radii, root pruning, backfilling, 6" class II aggregate base, compaction, dowelling, reinforcing bar addition of lamp black paint, ~~two (2) foot asphalt concrete conform,~~ pedestrian and traffic control, and restoration of any damages including furnishing all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof and as directed by the Engineer, complete, in place, and accepted, and no additional compensation will be allowed therefor.

Minor Concrete –Driveways shall be paid for at the contract unit price **per square foot (SF)** of actual concrete installed, which shall include full compensation for removing and placing PCC sidewalk complete, in place, and shall include, but not limited to, demolition, saw cutting, excavation for placement of aggregate base, subgrade preparation; furnish and place 4" thick aggregate base; dowels to existing concrete: reinforcing bars; furnish and place concrete; weakened plane, construction joints and scoring, protection from vandalism, removal and disposal of existing sidewalks, and all other work required to complete work in place.

Minor Concrete – Sidewalks shall be paid for at the contract unit price **per square foot (SF)** of actual concrete installed, which shall include full compensation for removing and placing PCC sidewalk complete, in place, and shall include, but not limited to, demolition, saw cutting, excavation for placement of aggregate base, subgrade preparation; furnish and place 4" thick aggregate base; dowels to existing concrete: reinforcing bars and wire mesh where required; furnish and place concrete; weakened plane, construction joints and scoring, protection from vandalism, removal and disposal of existing sidewalks, and all other work required to complete work in place.

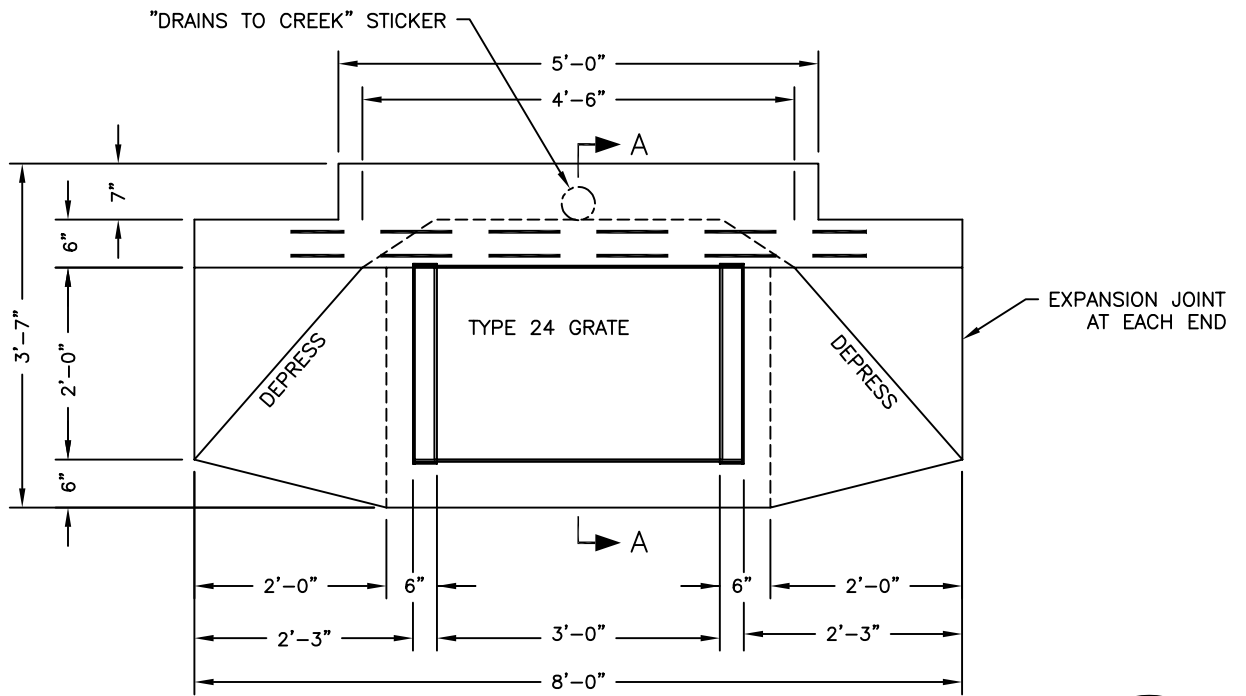
Minor Concrete – Valley Gutter shall be paid for at the contract unit price **per square foot (SF)** of actual concrete installed, which shall include full compensation for removing and replacing concrete valley gutter or asphalt complete, in place, and shall include, but not limited to, demolition, saw cutting, excavation for placement of aggregate base, subgrade preparation, temporary conforms; furnish and place 8" thick aggregate base; dowels to existing concrete: reinforcing bars; furnish and place concrete; weakened plane,

construction joints and scoring, protection from vandalism, removal and disposal of existing valley gutters, and all other work required to complete work in place.

Minor Concrete – Bus Pad shall be paid for at the contract unit price **per square foot (SF)** of actual concrete installed, which shall include full compensation for removing asphalt and placing 8” PCC bus pad, in place, and shall include, but not limited to, demolition, saw cutting, excavation for placement of aggregate base, subgrade preparation; furnish and place 8” thick aggregate base; dowels to existing concrete: reinforcing bars and wire mesh where required; furnish and place concrete pad and curb; weakened plane, construction joints and scoring, protection from vandalism, removal and disposal of existing sidewalks, capping encountered irrigation lines at work limit, and all other work required to complete work in place.

Case A Curb Ramp, Modified Case A Curb Ramp, Case C Curb Ramp, Modified Case C Curb Ramp shall be paid for at the contract unit **price each (EA)**, which shall include full compensation for mobilization, site preparation and site clean-up, installation of temporary AC to provide a safe path of travel at all times, installation of a concrete curb ramp, removal and disposal of existing concrete within the ramp location ~~and entire curb return~~ including roadway excavation to reduce curb radii, ramp lay out, staking, necessary grade adjustments to conform to existing conditions and ADA requirements, excavation for placement of aggregate base, subgrade preparation, furnish and place 4” thick aggregate base, reinforcing steel, furnish and place concrete, furnish and place truncated domes, weakened plane, placing landscape soils, relocation and adjustment of utility boxes, deepened curbs, removal, construction joints and scoring, protection from vandalism and all other work required to complete the work in place. Modified Case A shall include an six (6) foot wide truncated domes in lieu of a five (5) foot wide truncated domes which shall include full compensation for removal and disposal of fence posts, and shall include all work necessary to furnish and install the limit of work as shown on attached mark up of Caltrans Standard Plan RSP A88A Section VII and shall extend to the back of sidewalk regardless of the width of the existing sidewalk and shall ~~include~~ include the curb and gutter in front of the ramp, the curb and gutter in front of the ramp on the entire curb return, five (5) foot wide 6” thick asphalt concrete or concrete gutter conform (match existing) as shown on the plan, the integral/retaining curb at ramps (where needed), ramp wings, the landing behind the ramp to the back of sidewalk (to the grade break), backfill of landscape planting mix, retaining curbs on the back of ramp and sidewalk, and all of the concrete to be replaced that is damaged or removed during the curb ramp installation. ~~In addition, curb ramp limits shall also extend to the closest extension score marks or expansion joints at the grade break beyond the landing.~~

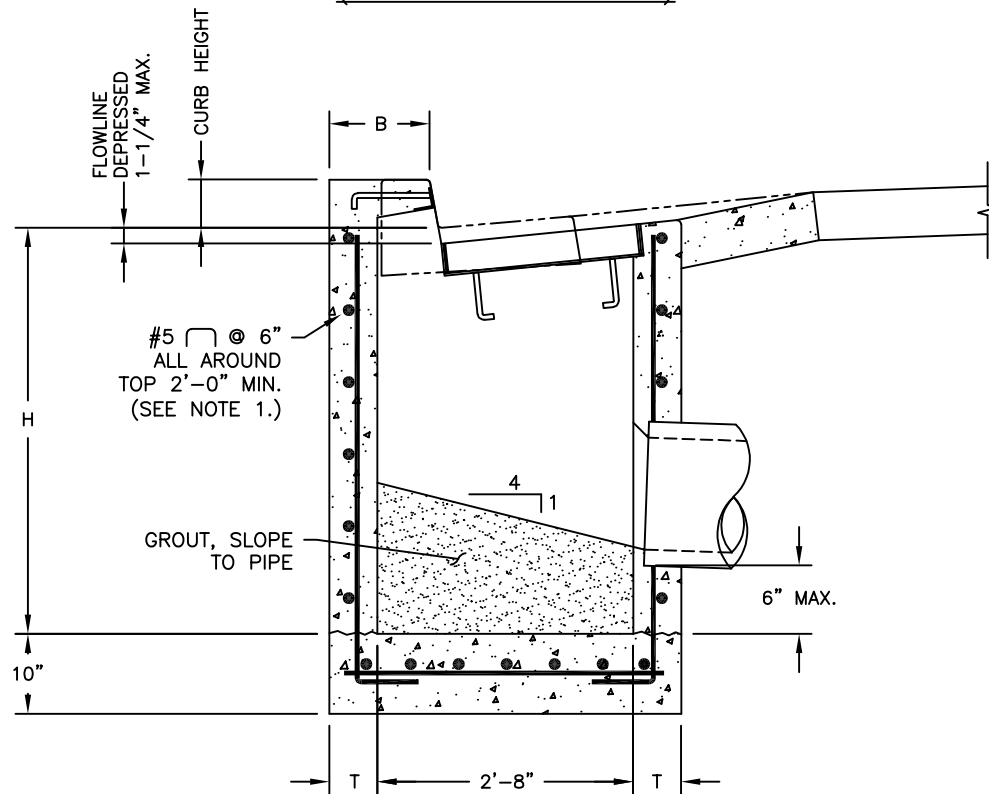
END OF SECTION



TYPE "B" INLET PLAN VIEW
(REF. CALTRANS D78A)



STICKER



A-A TYPE "B" CURB INLET
(REF. CALTRANS D72E)

NOTES:

1. SEE STANDARD 410.1 FOR TABLE OF VARIABLES "B", "H" AND "T", AND FOR SIZES AND SPACING OF REBARS.
2. FOR CIP DETAILS REFER TO CALTRANS STANDARD PLANS 2018, SHEET D72E TYPE GO,
3. FOR PRECAST DETAILS REFER TO CALTRANS STANDARD PLANS 2018, SHEET D73E TYPE GO.



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UTILITIES DIVISION

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STANDARD TYPE "B"
CIP DRAINAGE INLET
STORM DRAIN

DATE: JANUARY 2023

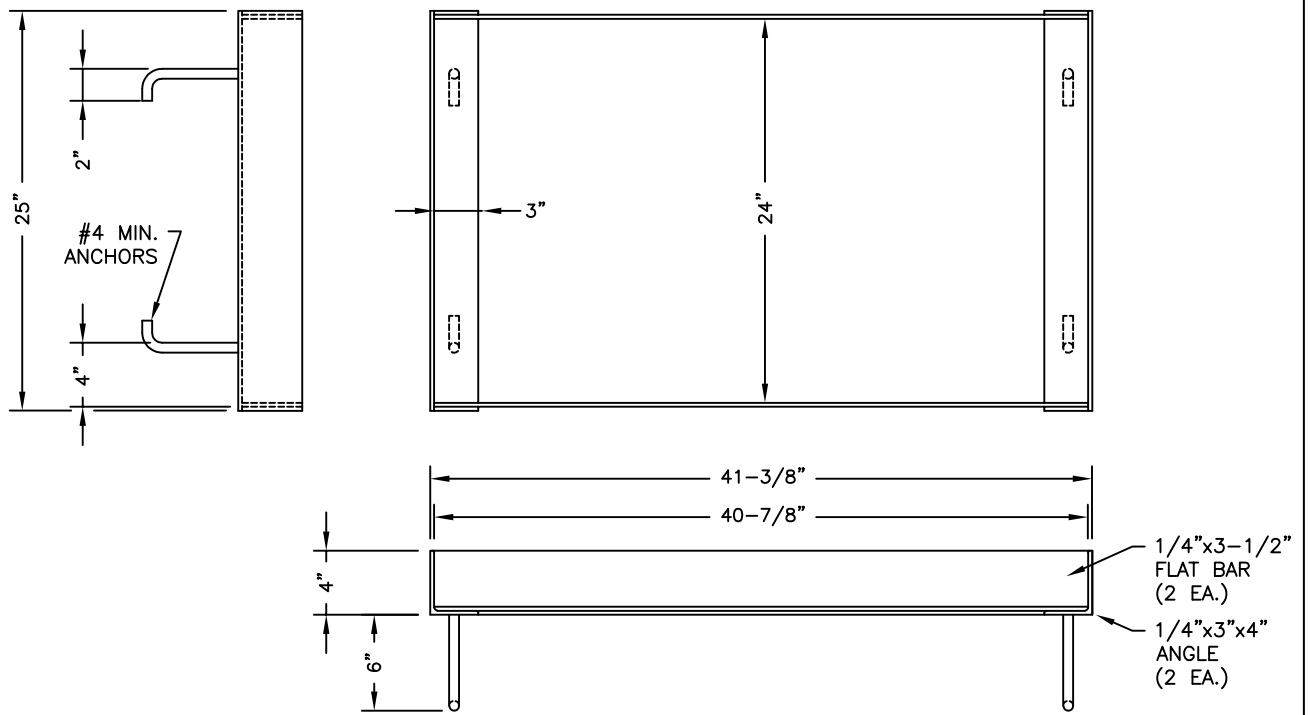
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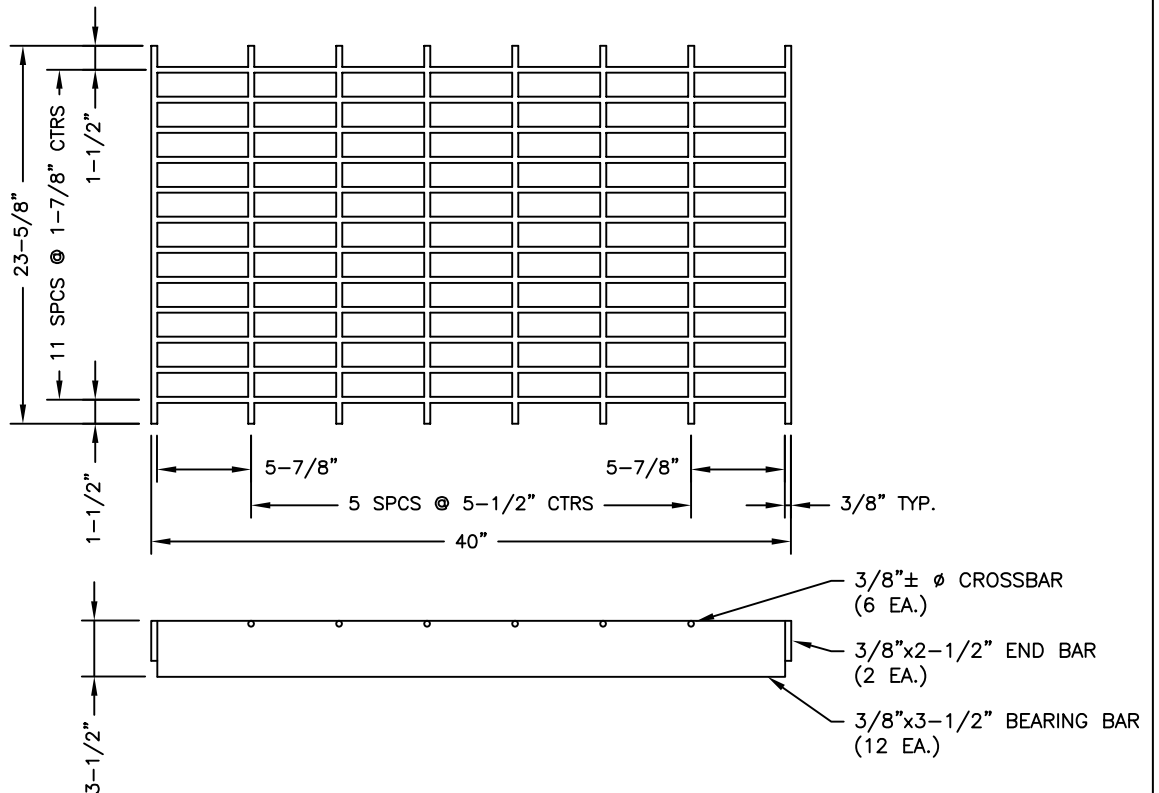
Jeffrey A. Stutsman, P.E. City Engineer C79843

REV'D BY: ETL

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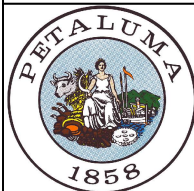


TYPE "24" GRATE FRAME
(REF. CALTRANS D77A)



NOTE:
THIS GRATE IS NOT APPROVED FOR BICYCLE TRAFFIC. THE GRATE TYPES SHOWN ON CALTRANS STANDARD PLAN D77B MUST BE USED IF BICYCLE TRAFFIC CAN BE EXPECTED.

TYPE "24-12" WELDED STEEL GRATE
(REF. CALTRANS D77A)



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STANDARD TYPE "24"
DRAINAGE INLET
GRATE DETAIL

DATE: JANUARY 2023

SCALE: N.T.S.

APPROVED BY:

Jeffrey A. Stutsman, P.E. City Engineer C79843

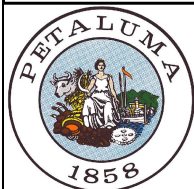
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NO. 409.1

DRAINAGE INLET NOTES

1. ALL CONCRETE SHALL BE CLASS "A" (6-SACK MIX) UNLESS OTHERWISE NOTED.
2. BASE SHALL BE POURED IN PLACE AGAINST UNDISTURBED EARTH. SIDES MAY BE FORMED OR POURED IN PLACE AGAINST UNDISTURBED EARTH.
3. WHERE CONDUITS ARE ENCOUNTERED LARGER IN DIAMETER THAN THE WALL THICKNESS THROUGH WHICH THEY PASS, THE THICKNESS OF THE WALLS ABUTTING THE PIPE SHALL BE INCREASED TO EQUAL THE OUTSIDE DIAMETER OF THE PIPE.
4. EXPANSION JOINTS SHALL BE PLACED THROUGH CURB AND SIDEWALK AT BOTH SIDES OF DRAINAGE INLETS AND SHALL BE LIMIT OF PAYMENT FOR CURB AND GUTTER. UNIT PRICES FOR DRAINAGE STRUCTURES SHALL INCLUDE CURB, GUTTER AND SIDEWALK POURED WITH DRAINAGE STRUCTURE.
5. NO CONCRETE SHALL BE PLACED PRIOR TO FORM AND STEEL APPROVAL BY THE CITY ENGINEER.
6. SEE STANDARD DRAWING FOR TYPE 24 DRAINAGE INLET GRATE FRAME DETAIL 403.1 (REF. CALTRANS D77A).
7. WALL THICKNESS AND REINFORCING SHALL BE DETERMINED FROM THE TABLE BELOW.
8. PLACE 3/4" WEEP HOLES AS REQUIRED BY THE CITY ENGINEER.
9. EQUIVALENT PRECAST STRUCTURES MAY BE SUBSTITUTED AS APPROVED BY THE CITY ENGINEER.

CIP DRAINAGE INLET VARIABLES (REF. D72E, TABLE A & D72G, TABLE C)		
	SHALLOW OPTION ↓	DEEP OPTION ↓
"H" (HEIGHT OF INLET BODY)	$H \leq 8 \text{ FT}$	$8 \text{ FT} < H \leq 20 \text{ FT}$
"T" (WALL THICKNESS)	6"	11"
"B" (T+ 6-1/2")	12-1/2"	17-1/2"
WALL REBAR (HORIZONTAL)	#4 @ 9"	#4 @ 6"
WALL REBAR (VERTICAL)	#4 @ 6"	#6 @ 4-1/2"
BASE REBAR (EACH WAY)	#6 @ 4"	#6 @ 4"



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**STANDARD
 CIP CONCRETE
 DRAINAGE INLET NOTES
 STORM DRAIN**

DATE: JANUARY 2023 SCALE: N.T.S.

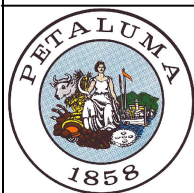
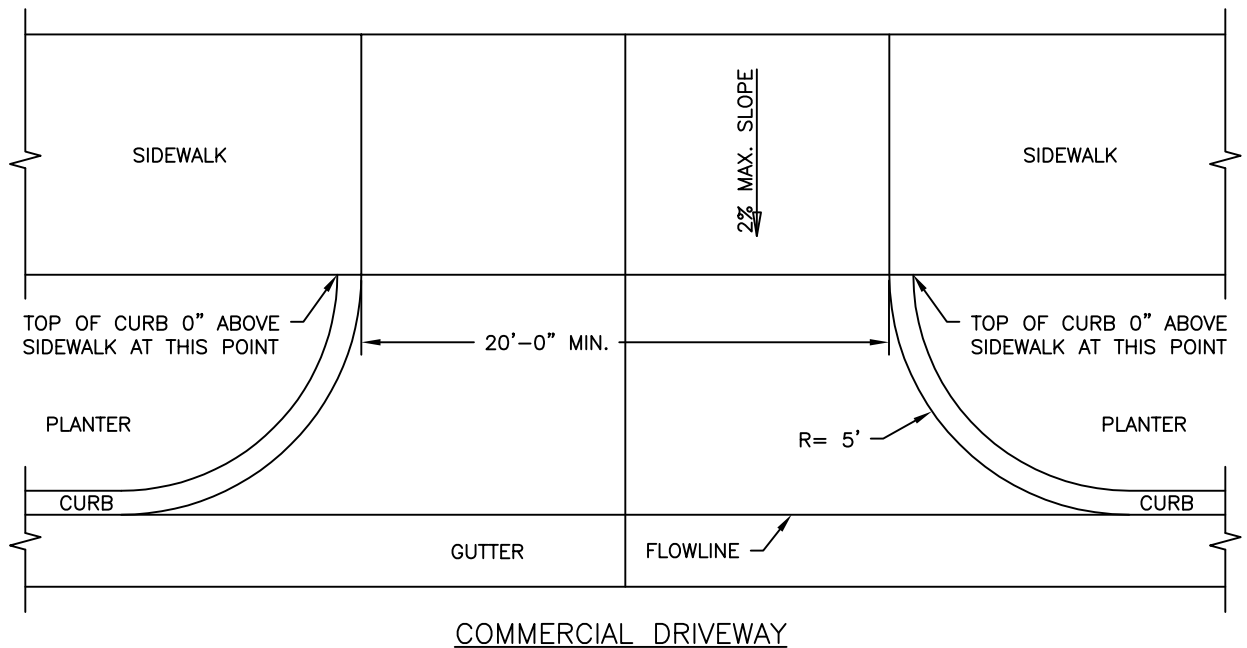
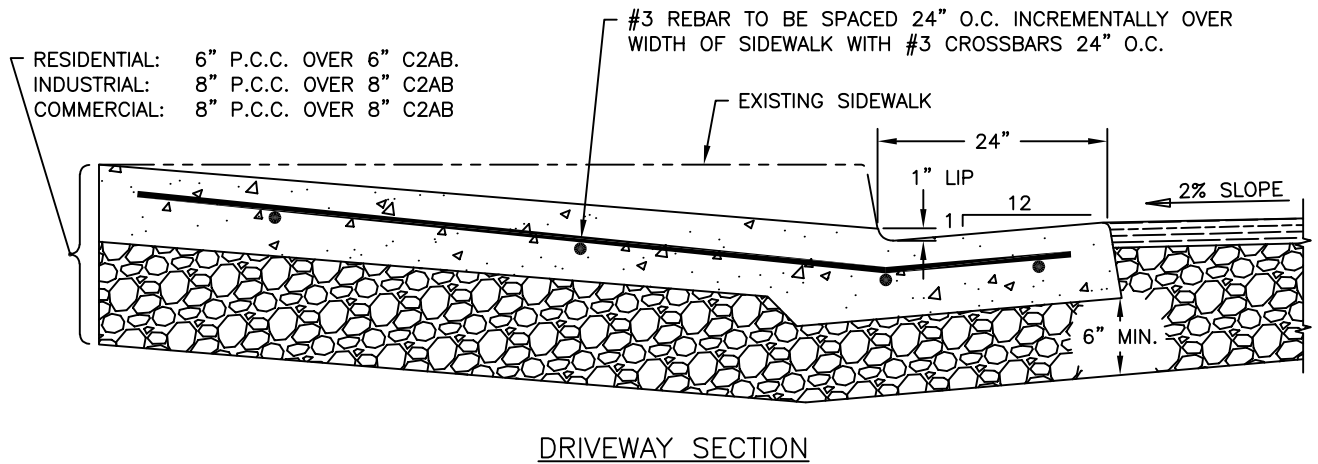
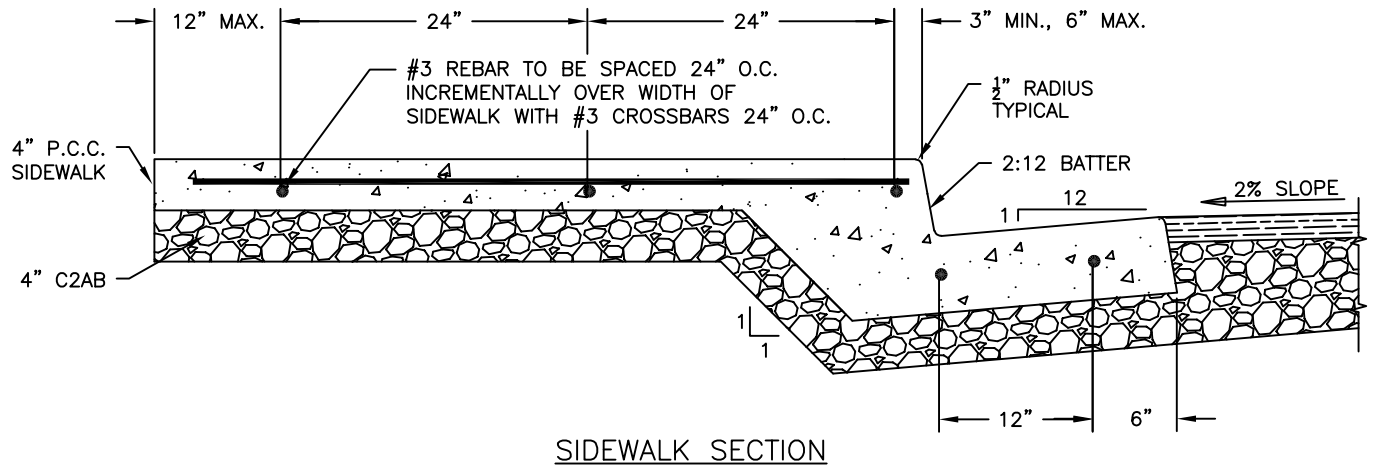
APPROVED BY:

 Jeffrey A. Stutsman, P.E. City Engineer C79843

DRAWN BY: ETL

NO 410.1

C2AB = CLASS 2 AGGREGATE BASE. REFER TO CITY STANDARD 202, GENERAL NOTE 8.



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STANDARD DETAILS
CURB, GUTTER
SIDEWALK, DRIVEWAY

DATE: OCT. 2021

SCALE: N.T.S.

APPROVED BY:

Jeffrey A. Stutsman, P.E. City Engineer C79843

DRAWN BY: ETL

NO 203.1