



MEMORANDUM

DATE: September 9, 2014
TO: All Developers, Outside Agencies, and Public Utilities
FROM: Public Works Department, Engineering Division
SUBJECT: City of Novato Design and Construction Standards (**Interim**)

We are providing you with the City of Novato’s Interim Engineering and Construction Standards that may be useful when designing your projects in the City of Novato. A formal comprehensive City Standards package (Design Standards, Approved Material List, Standard Plans, and Standard Specifications) is currently under development. At a minimum, these Interim Standards apply to all improvements within the City right-of-way and any improvements that may become the City’s responsibility for maintenance under existing or future agreements. The City of Novato recognizes the *Uniform Construction Standards All Cities and County of Marin, May 2008* (UCS). In addition, many of our standards comply with Caltrans Standard Plans and Specifications (2006 and 2010 versions). The City has also developed specific Standard Plans for various public improvements. The following sections provide an overview of the City’s Standards.

UCS Modification – Novato

The City has made several modifications to various standard drawings and notes in the UCS. Specifically the following represents the City’s revisions to the County’s UCS:

1. **DWG. No. 100 Concrete Cub, Gutter, Sidewalk, Driveway and Other Flatwork**
 - a. Concrete shall conform to “Minor Concrete” in accordance with Section 90-1.01 of the 2010 Caltrans Standard Specifications except that it shall contain at least 540 pounds (6-sack) of Type IP (MS) “modified”; or a combination of Type II “Modified” and mineral admixture; or a Type V Portland cement and mineral admixture; with 1” maximum aggregate; and shall contain 2 pounds of lamp black (or 1 pound jet black) or approved equal per cubic yard (lamp/jet black not used for certain areas: Grant Avenue, Eucalyptus Avenue, etc.).
 - b. Install transverse expansion joints at maximum 20-foot intervals in new sidewalk. Joints shall extend through sidewalk and adjoining curb and gutter.
 - c. Sidewalks and driveway approaches shall have tooled control joints (referred to as score lines) every 4 feet on center to a depth of ½” minimum.
2. **DWG No. 105 Curb, Gutter, and Sidewalk Details:**
 - a. Type ‘A’ Sidewalk shall be placed monolithically with no expansion joint between the curb and the sidewalk.
 - b. Where new sidewalk is proposed and only concrete curb is present, placing new sidewalk next to the existing curb is acceptable. Use of #4 rebar dowels (grade 60) is required to join the old concrete with the new. Place dowels every 5 feet.
 - c. If removal and replacement of existing concrete sidewalk/curb and gutter is required, a minimum of 2 feet of existing AC pavement (3 feet for curb ramps) shall

be removed and replaced to full depth as part of the replaced concrete curb and gutter/sidewalk/curb ramps.

- d. Maximum cross slope shall be 1.5% (not 2%).
3. DWG No. 145 Sidewalk Underdrain: The City has a completely replaced this drawing with No. 145N. See below.
4. DWG No.'s 150-160, Retaining Walls: The City typically refers to Caltrans standards for concrete retaining walls. Wooden retaining walls may be used for walls less than 4 feet in height (retained height), provided that the retaining wall is not directly supporting the travelled portion of any street, inclusive of bike and parking lanes, with City approval.
5. DWG No. 200 Notes for Catch Basin, Manhole, Drop inlet, & Turning Structure:
 - a. Revise Note 1: same as 1.a. above for DWG No. 100.
 - b. **ALL** Catch Basin, Manholes and Turning Structures shall be cast-in-place, **NOT** precast units. The adjacent/adjoining portion of sidewalk shall be placed monolithically with the top portion of the catch basin, manhole or turning structure.
6. DWG No. 205 Type A Manhole:
 - a. Revise Note 1: same as 1.a. above;
 - b. Manhole frame and cover shall be 24" unless otherwise noted on plans or specifications. Manhole frame shall be adjusted after paving and the final grade of the frame must match that of the paving within 1/4".
7. DWG No. 210 Type B Manhole:
 - a. Revise Note 1: same as 1.a. above;
 - b. Manhole frame and cover shall be 24" unless otherwise noted on plans or specifications. Manhole frame shall be adjusted after paving and the final grade of the frame must match that of the paving within 1/4".
 - c. For Manhole depth: 1) less than 3' – ID of structure 2'-0" min.; 2) between 3' and 6' – ID of structure 3'-0" min.; 3) more than 6' – ID of structure 4'-0" min.
8. DWG No. 215 Step & Manhole Casting Detail: If depth is more than 3'-0" use DWG No. 230.
9. DWG No. 230, Type B Catch Basin: Minimum step width shall be 14".
10. DWG No. 235 Type C Catch Basin: If depth is more than 3'-0" use DWG No. 240.
11. DWG No.'s 235 – 250, Catch Basins: Type C, D, E, and F catch basin **MAY NOT** be used where a bike lane is present along the edge of the street where the basin is to be installed.

City Additional Standards

In addition to the revisions to the County UCS described above, the City has developed the following Standard Drawings:

1. DWG No. 140N - Maximum Driveway Grades
2. DWG No. 145N – Curb Face Drainage Outlet
3. DWG No. 195N - Bus Turnout
4. DWG No. 271N – Yard Inlet
5. DWG No. 310N - Traffic Sign Installation (required when new signs are installed in concrete flatwork)
6. DWG No.'s 330N and 335N - Trench Restoration and Street Patching*
7. DWG No. 360N - Tree Planting and Staking
8. DWG No. 370 Pollution Prevention Storm Drain Inlet Stencil

**Refer to City Resolution No. 40-13 regarding special requirements for trench restoration on streets subject to prohibition of excavation.*

The City has comprehensive Landscape and Irrigation Standards including approved products for various landscape and irrigation materials. The City also has a street tree planting and installation policy that provide guidance on species selection as well as installation techniques depending on the proximity to the public right of way, underground utilities, and other obstacles.

Adopted Caltrans Standards

The City has adopted Caltrans Standards (specifications and plans) for the following with any exceptions noted:

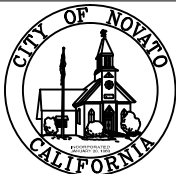
1. Pavement Markings and Striping:
 - a. Crosswalks at uncontrolled locations, at traffic signals, and at other locations as determined by the City Engineer shall be “continental” style: 24” x 10’ longitudinal lines separate by consistent gap 24” to 48” wide. Gap width to be designed to minimize wheel travel over marking, and to be verified in the field.
 - b. **ALL** markings and striping shall be thermoplastic (Section 84-2) unless approved by the City Engineer.
2. Access/Curb Ramps:
 - a. Slopes modified as follows: 1.5% maximum cross slopes; 8% maximum ramp slope; 9% maximum at wings.
 - b. Utility pull boxes, manholes, vaults, and other utility facilities within the boundaries of the curb ramp shall be relocated or adjusted to grade by the utility prior to, or in conjunction with, curb ramp construction.
3. Road Signs: materials and installation, **EXCEPT** for signs installed in concrete sidewalk (DWG No. 310N applies).
4. Storm Drain Pipe: reinforced concrete pipe (RCP) or smooth-interior HDPE conforming to Section 64 is acceptable. Minimum pipe diameter is 15 inches except that for yard drains and other minor lot drainage, smaller conduits may be permitted by the City Engineer.
5. Asphalt Concrete/Hot Mix Asphalt:
 - a. Type A ½-inch maximum, medium graded aggregate for all surface courses.
 - b. PG64-10 or PG64-16 grade asphalt shall be used.
6. Hydroseeding for final stabilization: Standard Mix Design shall meet the following:

Hydroseeding Material	Application Rate (lbs./acre)
Seed Mix, Pacific Coast Seed “Native Erosion Control Mix”, LaBallister’s “Hold Fast Native Blend” or approved equal	50
Hydraulic mulch, cellulose fiber mulch, conforming to Section 21-1.02E of the 2010 Standard Specifications	3000
Tackifier, plant-based, conforming to Section 21-1.02F of the 2010 Standard Specifications	150
Organic Fertilizer, Biosol® 7-2-1 or approved equal	500

Alternative mix designs may be used as required by other permit restrictions, etc.

Attachments:

- DWG No. 140N - Maximum Driveway Grades
- DWG No. 145N – Curb Face Drainage Outlet
- DWG No. 195N - Bus Turnout
- DWG No. 271N – Yard Inlet
- DWG No. 310N - Traffic Sign Installation
- DWG No. 330N - Trench Restoration and Street Patching
- DWG No. 335N - Trench Restoration and Street Patching
- DWG No. 360N - Tree Planting and Staking
- DWG No. 370 Pollution Prevention Storm Drain Inlet Stencil
- Approved Landscape and Irrigation Materials List
- Street Tree List

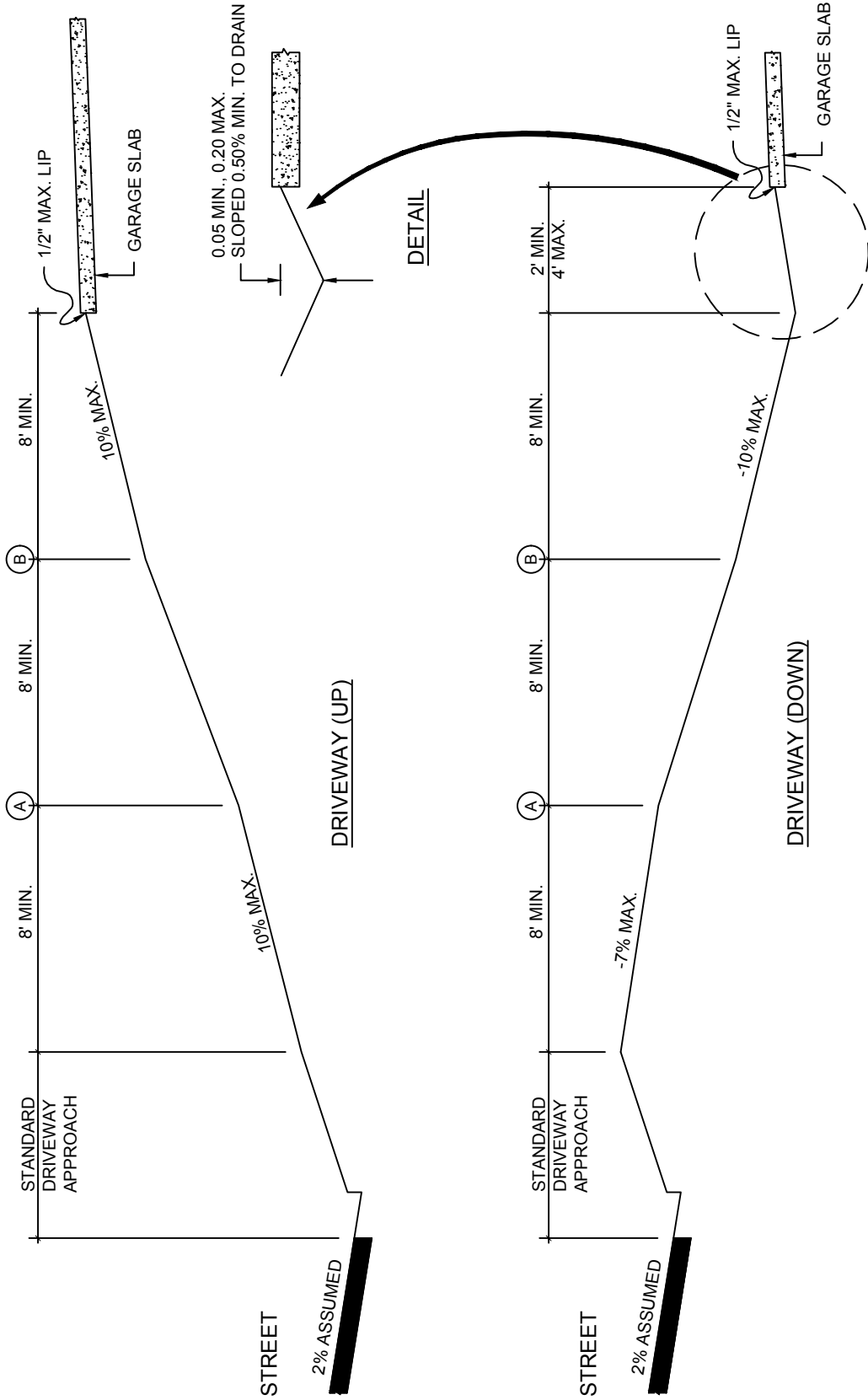


Uniform Standards
City of Novato
 Department of Public Works
 Engineering Division

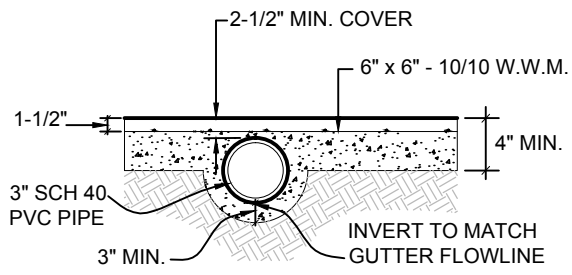
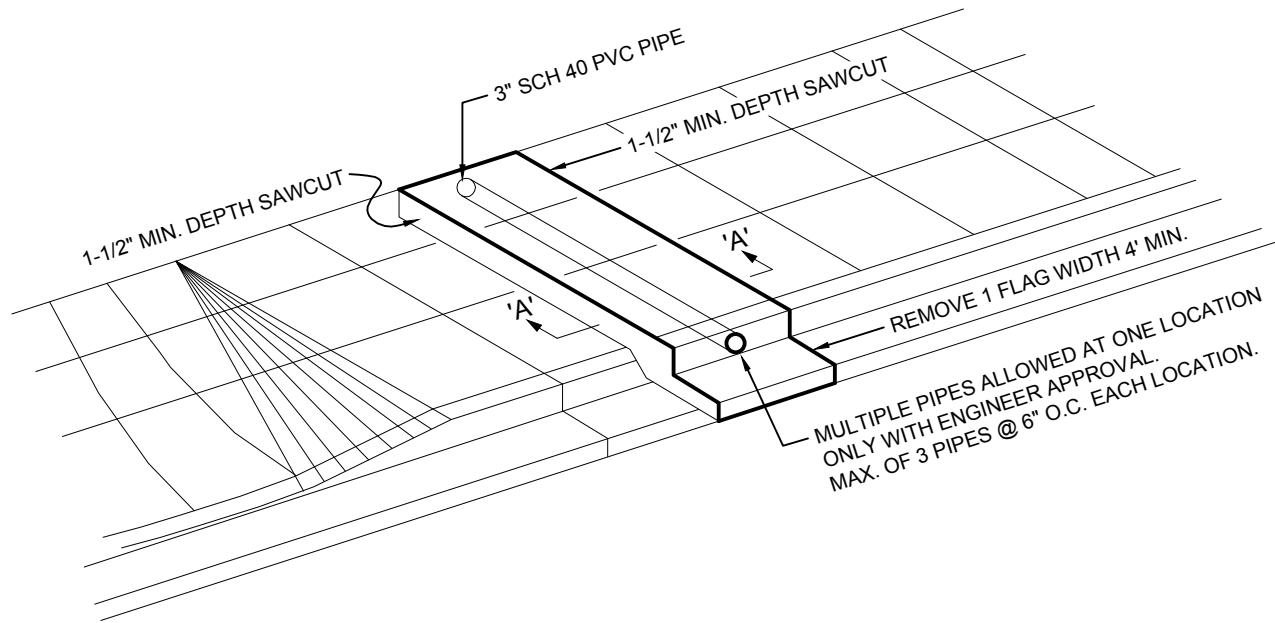
**MAXIMUM
 DRIVEWAY GRADES**

REV.	DATE	BY

MAY
 2013
 DWG. NO.
140N



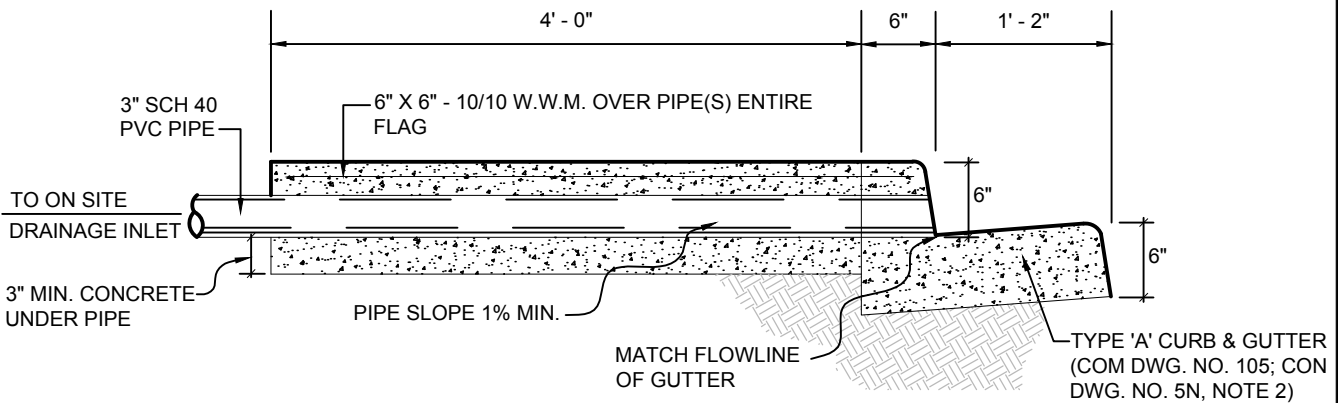
NOTE:
 BETWEEN LOCATIONS A & B, GRADE BREAKS
 IN EXCESS OF 5% REQUIRE A VERTICAL CURVE.
 REFER TO SECTION 5-17.008 OF THE CITY OF
 NOVATO MUNICIPAL CODE FOR FURTHER
 GRADE AND VERTICAL CURVE STANDARDS.



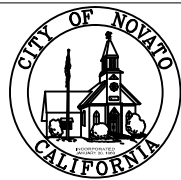
SECTION A - A

NOTES:

1. CONCRETE SHALL BE CLASS "A" (6 SACK MIX).
2. DETAIL DOES NOT SHOW ROLLED CURB (COM DWG. NO. 130).
3. NEW CONCRETE TO BE DOWELED INTO EXISTING. USE #4 REBAR CUT INTO 6" LENGTHS.
4. 2' SECTION OF CURB & GUTTER CAN BE REMOVED IF SIDEWALK IS SEPARATED BY PLANTER AREA.



ELEVATION

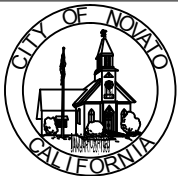


Uniform Standards
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 Department of Public Works
 Engineering Division

**CURB FACE
 DRAINAGE OUTLET**

REV.	DATE	BY

MAY
 2013
 DWG. NO.
145N

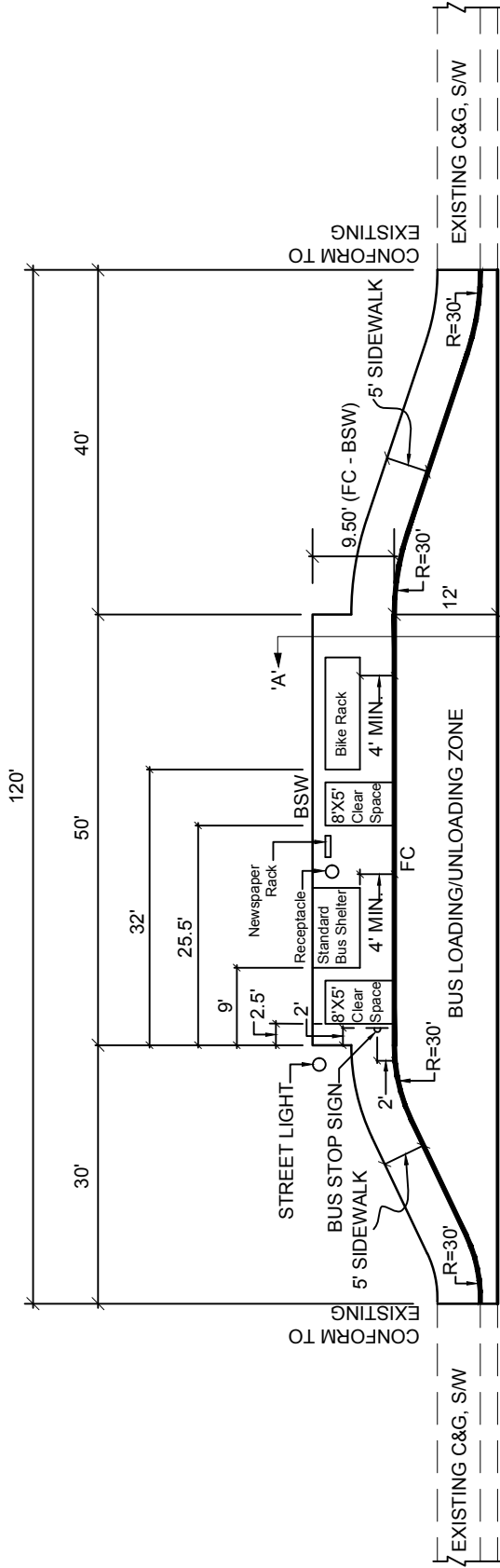


Uniform Standards
City of Novato
 Department of Public Works
 Engineering Division

BUS TURNOUT

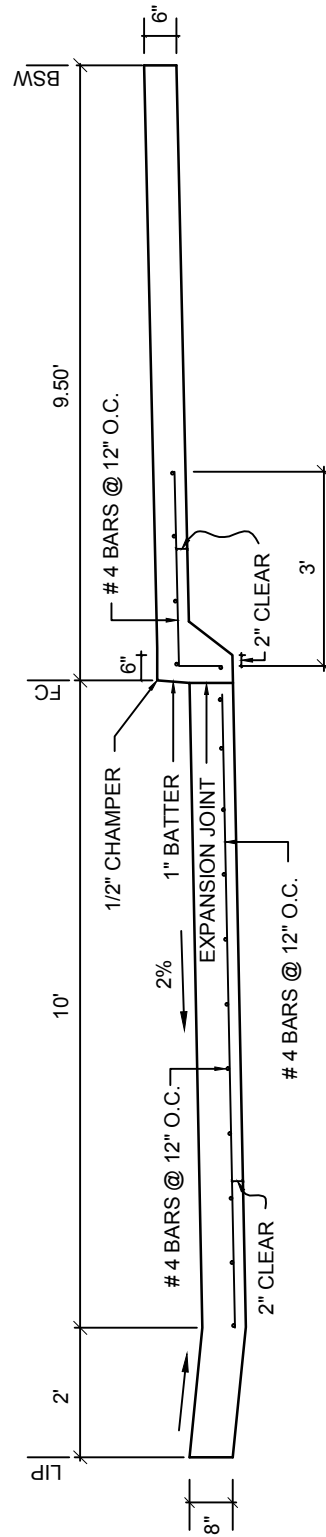
REV.	DATE	BY

MAY 2013
 DWG. NO.
195N



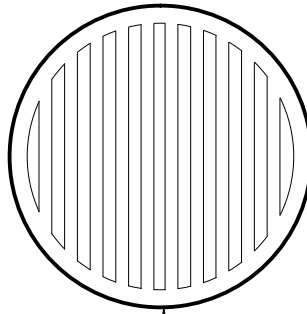
BUS TURNOUT PLAN

SCALE: 1" = 20'

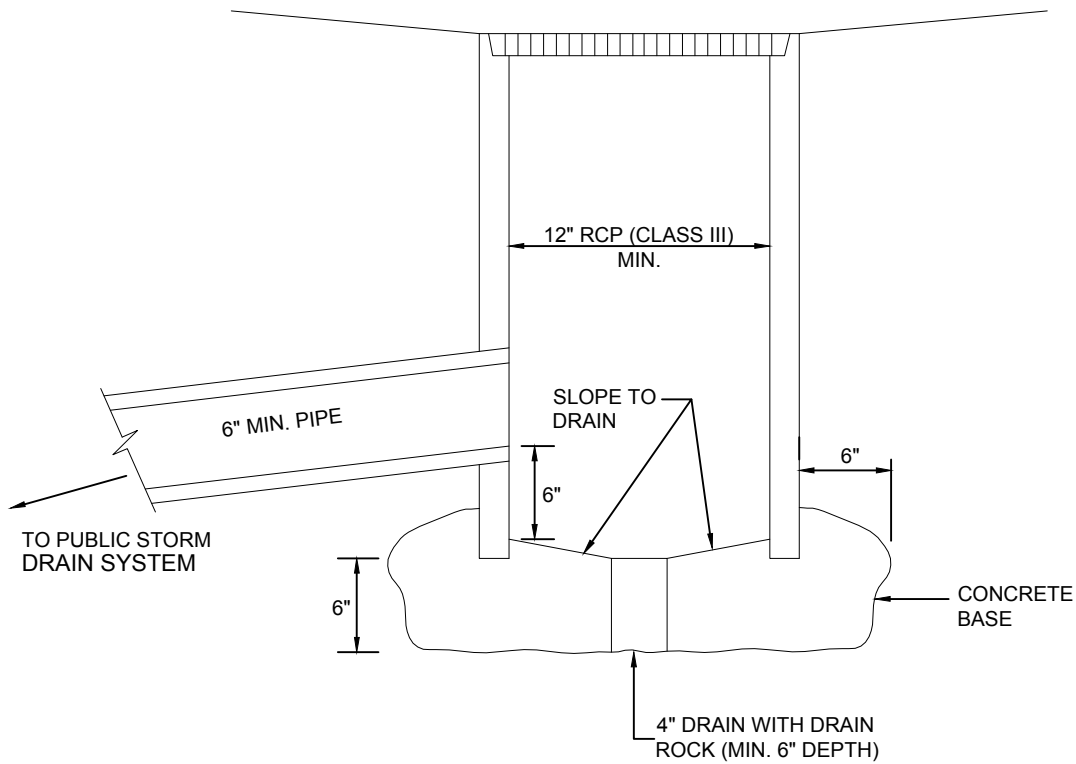


SECTION A-A

SCALE: NTS

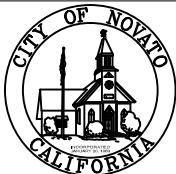


NEENAH DRAINAGE GRATE
 R-4380 OR R-4385, D&L
 C-1012, OR APPROVED
 EQUIVALENT



NOTES:

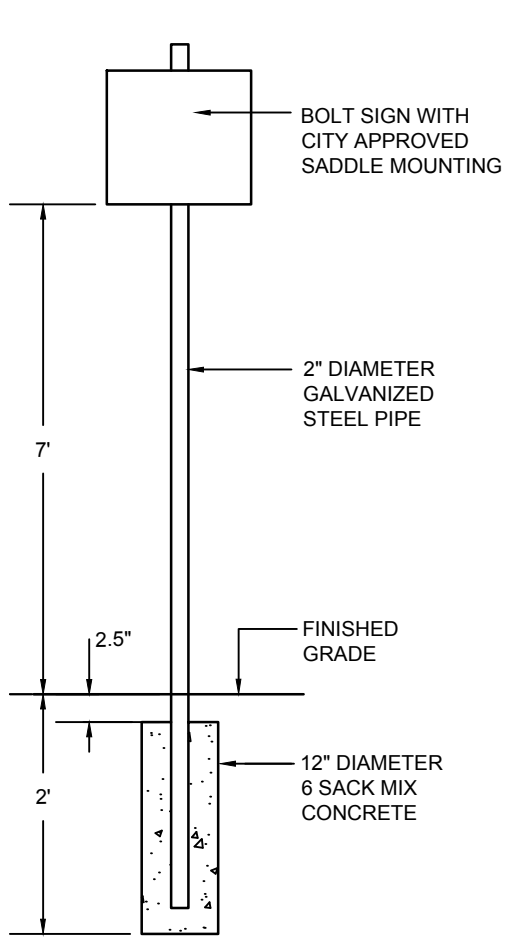
1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTIC: 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH SLUMP AT 1 TO 4 INCHES.
2. TO BE OWNED AND MAINTAINED BY PRIVATE DEVELOPMENTS ONLY. NOT TO BE USED IN DRIVEWAYS OR WHERE DRAINAGE ORIGINATES FROM AREAS USED FOR VEHICULAR TRAFFIC.



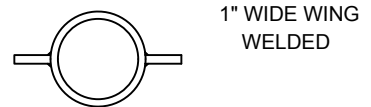
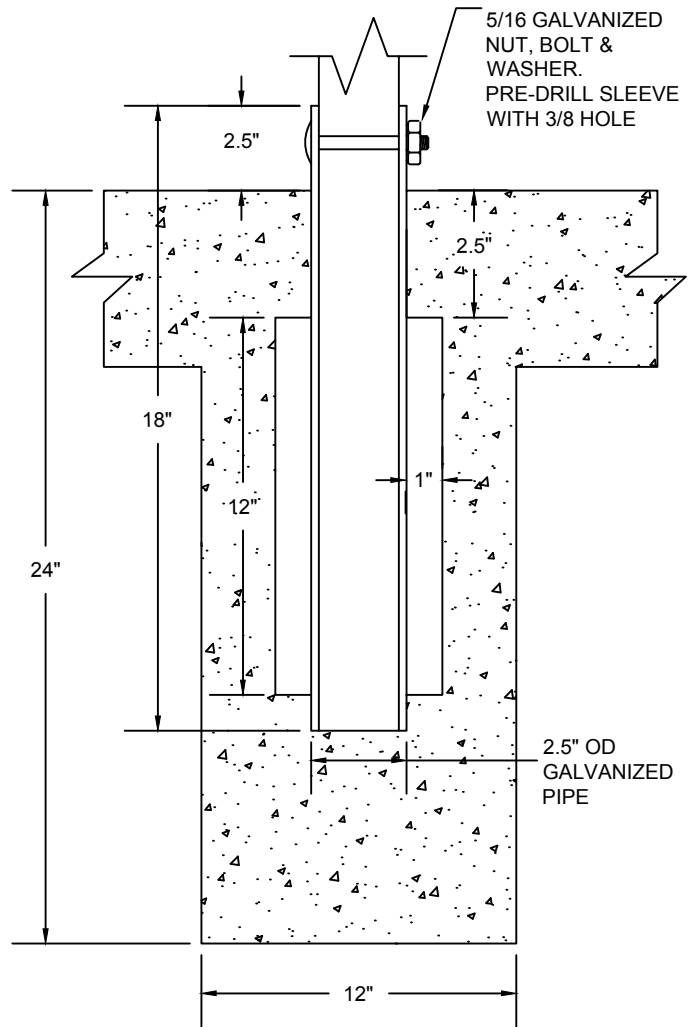
Uniform Standards
City of Novato
 Department of Public Works
 Engineering Division

YARD DRAIN

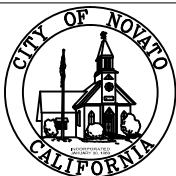
			MAY 2013
			DWG. NO.
			271N
REV.	DATE	BY	



TRAFFIC SIGN
INSTALLATION



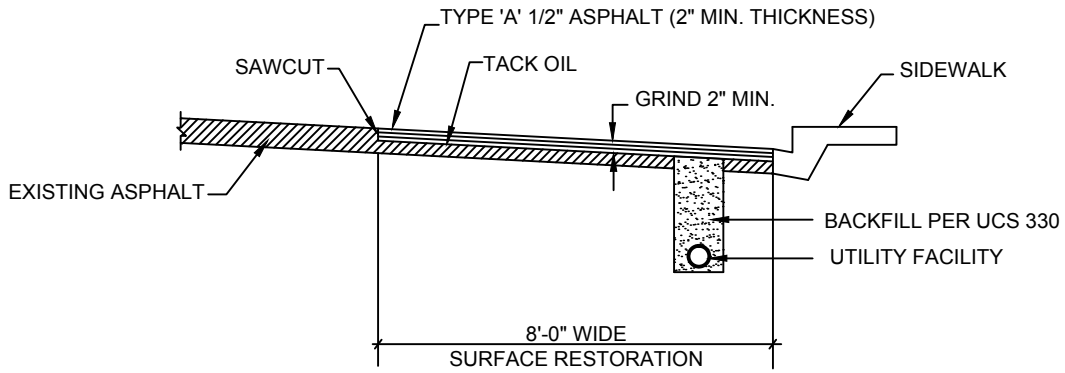
SLEEVE POST DETAIL
FOR TRAFFIC SIGN INSTALLATION
IN CONCRETE SIDEWALK



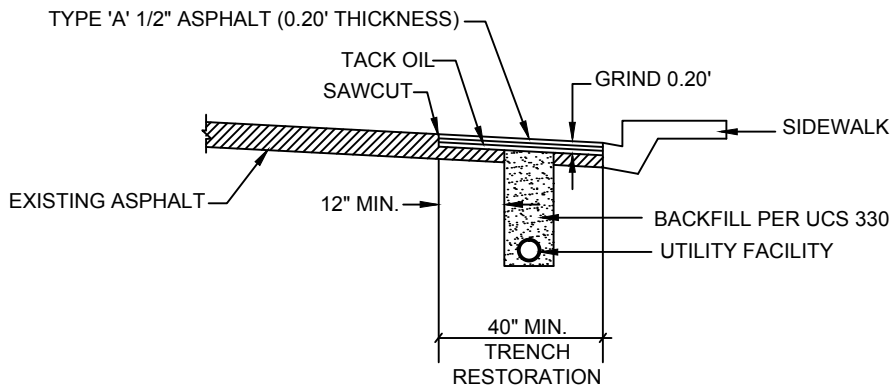
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City of Novato
 Department of Public Works
 Engineering Division

**TRAFFIC SIGN
 INSTALLATION**

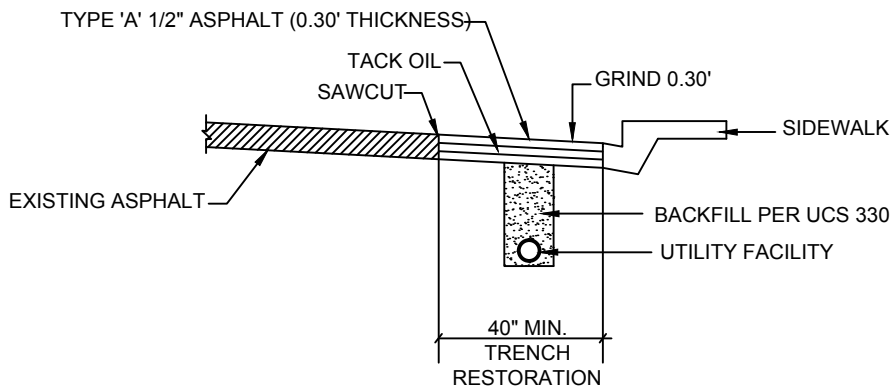
			MAY 2013
			DWG. NO.
			310N
REV.	DATE	BY	



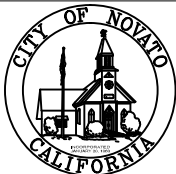
STANDARD TRENCH RESTORATION DETAIL
(NON MORITORIUM STREET PCI > 50)



DETERIORATED ASPHALT STREET (PCI < 50)
(APPLIES WHERE EXISTING AC THICKNESS EXCEEDS GRIND DEPTH)



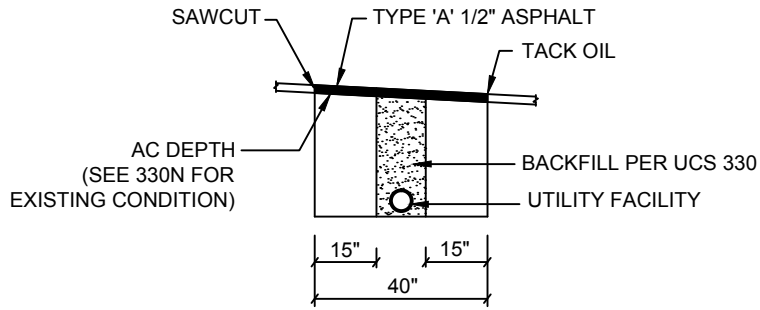
CLASS II UNDER ASPHALT DETERIORATED ASPHALT STREET (PCI < 50)
(APPLIES WHERE EXISTING AC THICKNESS IS LESS THAN 0.30')



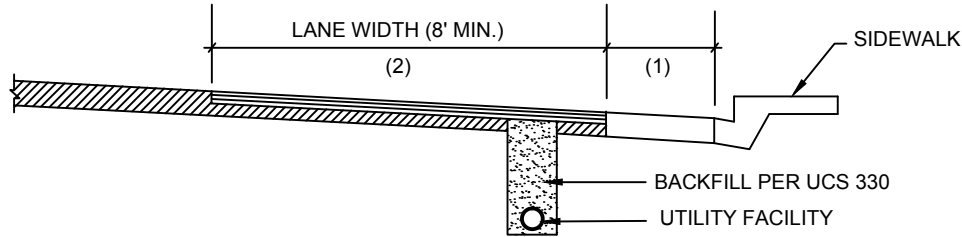
Uniform Standards
City of Novato
Department of Public Works
Engineering Division

TRENCH RESTORATION
AND STREET PATCHING

			MAY 2013
			DWG. NO.
			330N
REV.	DATE	BY	

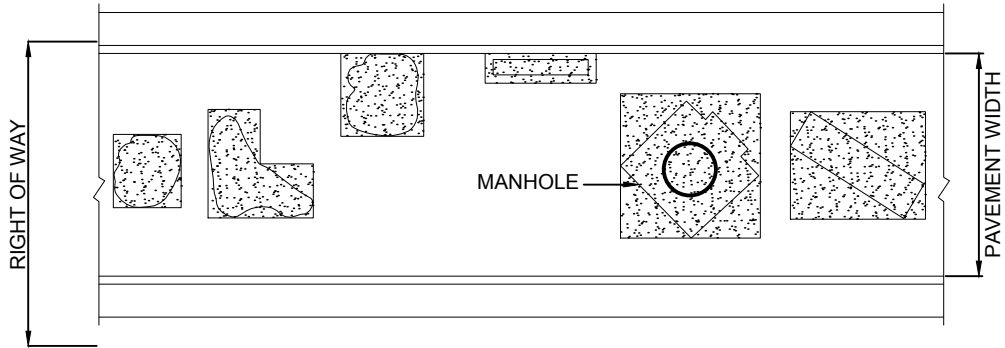


DETAIL WHERE NO ADJACENT CURB & GUTTER EXIST



MORATORIUM STREET DETAIL FOR WIDTH OF RESTORATION

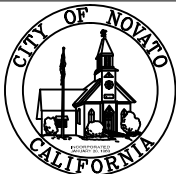
- (1) IF LESS THAN 4', AREA SHALL BE MILLED OUT AND PAVED.
- (2) HALF WIDTH RESURFACING (CROWN POINT TO LIP OF GUTTER) MAY BE REQUIRED BY PUBLIC WORKS DIRECTOR/CITY ENGINEER.



STREET PATCHING

GENERAL NOTES:

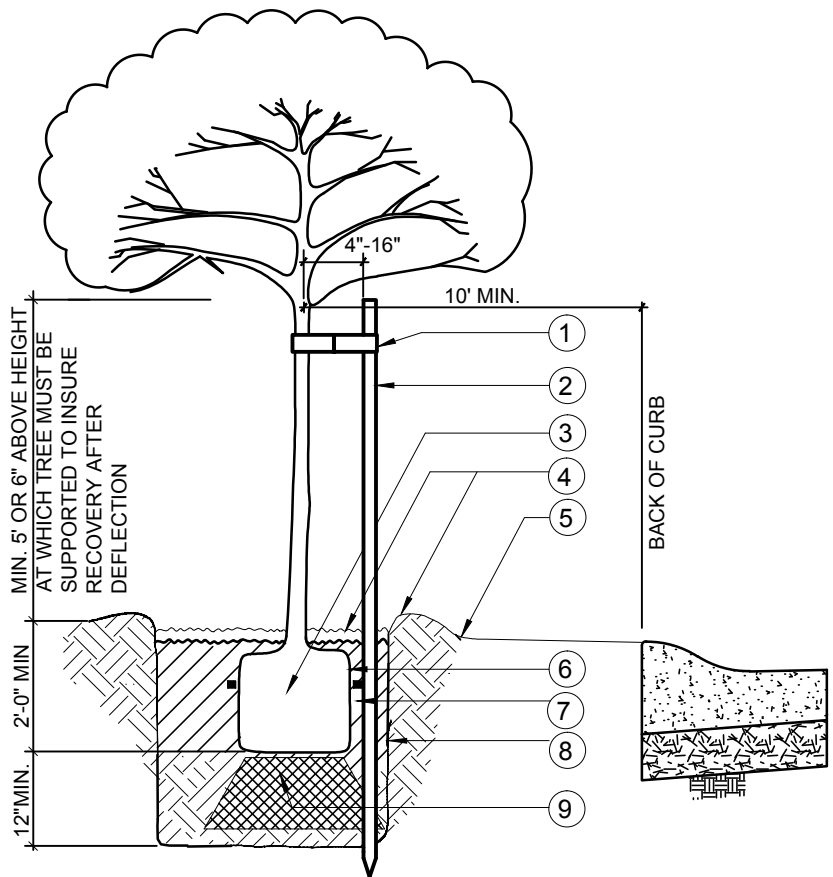
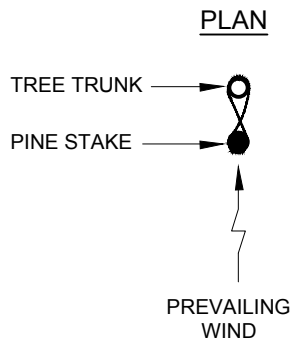
1. ALL WORK AND MATERIALS SHALL CONFORM TO APPLICABLE SECTIONS OF PROJECT SPECIFICATIONS AND/OR CALTRANS AND CITY OF NOVATO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS. SEE UCS 330 FOR TYPICAL TRENCH EXCAVATION AND BACKFILL REQUIREMENT.
2. PATCH EDGES SHALL BE PARALLEL AND/OR PERPENDICULAR TO PAVEMENT EDGE (CURB LINE). PATCHES WITHIN 18" OF PAVEMENT EDGE SHALL BE EXTENDED TO THE PAVEMENT EDGE.
3. TRENCHES SHALL BE BACKFILLED AND PAVED (PERMANENT OR TEMPORARY) OR COVERED WITH STEEL PLATES AT THE END OF EACH DAY. TEMPORARY PAVING SHALL BE REPLACED WITH PERMANENT PAVING WITHIN 72 HOURS.
4. NO RESIDENT OR COMMERCIAL DRIVEWAYS SHALL BE ADVANCE NOTICE TO THE OWNER. DRIVEWAYS MAY BE BLOCKED ONLY DURING ACTUAL CONSTRUCTION. TRENCH SHALL BE BACKFILLED OR BRIDGED TO ALLOW ACCESS TO DRIVEWAY.
5. CONTRACTOR SHALL CONTACT CITY INSPECTOR FOR INSPECTION ON BACKFILLING, SURFACING AND ALL OTHER PHASES OF WORK GIVING 48 HOURS ADVANCE NOTICE PRIOR TO COMMENCEMENT OF ANY WORK OR PHASE OF WORK.
6. BETWEEN OCTOBER 15TH AND APRIL 15TH ONLY HOT MIX ASPHALT CONCRETE SHALL BE USED. NO CUTBACK!!!



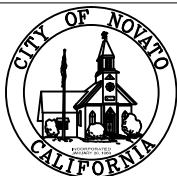
Uniform Standards
City of Novato
 Department of Public Works
 Engineering Division

**TRENCH RESTORATION
 AND STREET PATCHING**

			MAY 2013
			DWG. NO.
			335N
REV.	DATE	BY	



1. 24" CORDED RUBBER TIE ATTACHED TO STAKE WITH 2 ROOFING NAILS OR NO. 9 GAUGE GALVANIZED WIRE TOE WITH REINFORCED RUBBER HOSE GUARD.
2. 2" DIAMETER X 10' LONG LODGE POLE PINE STAKE PLACE OUTSIDE OF ROOTBALL PERPENDICULAR TO THE PREVAILING WIND. STAKE MUST BE PLUMB. STAKE TO BE NO CLOSER THAN 4" NOR FARTHER THAN 16" FROM THE TREE TRUNK.
3. ROOT BALL: TREES SHALL NOT BE ROOTBOUND. SCARIFY ROOTBALL BEFORE PLANTING. PLANT TREE WITH CROWN 1" ABOVE EXISTING GRADE TO ALLOW FOR SETTLEMENT.
4. PROVIDE 4" BERM AROUND TREE FOR WATER BASIN. BERM TO BE REMOVED IN LAWN AREA AFTER INITIAL WATERING. MULCH TREETWELL WITH 2" LAYER OF 1" BARK. KEEP MULCH AWAY FROM TREE TRUNK.
5. FINISH GRADE
6. AGRIFORM SLOW RELEASE PLANT TABLETS: 20-10-5 COMPOSITION. PLACE NEAR ROOTBALL: 5 FOR 15 GALLON TREES - 1 BELOW AND 4 ON SIDES OF ROOTBALL
7. BACKFILL MATERIAL: MIX 2 PARTS OF EXISTING SOIL WITH 1 PART NITRIFIED REDWOOD SOIL CONDITIONER.
8. HOLE SIZE: SHALL BE 18" WIDER AND 12" DEEPER THAN ROOTBALL OR 2 TIMES WIDTH AND DEPTH OF ROOTBALL, WHICHEVER IS GREATER. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE.
9. TAMPED SOIL: CULTIVATE NATIVE SOIL TO 12" DEPTH DIRECTLY BELOW ROOTBALL. WATER SETTLE.
10. USE BARRIER IF TREE IS WITHIN 6 FEET OF ANY CONCRETE.



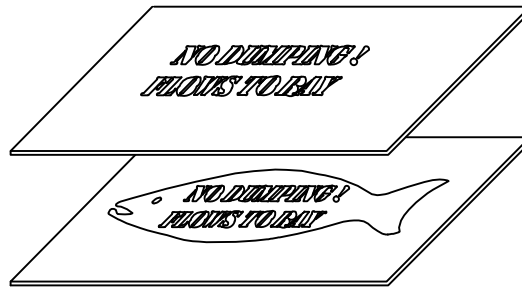
Uniform Standards
City of Novato
 Department of Public Works
 Engineering Division

TREE PLANTING AND STAKING

				MAY 2013
				DWG. NO.
				360N
REV.	DATE	BY		

Part "B" - Lettering Stencil

Part "A" - Fish Stencil



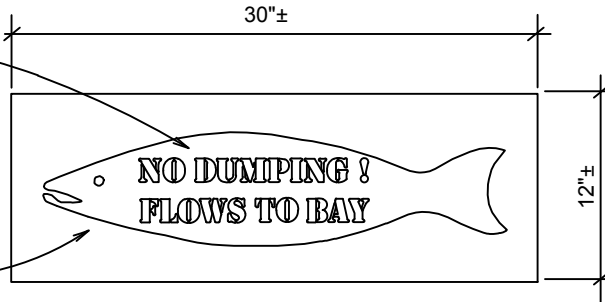
Two-Part Stencil



Marker

Lettering
AERVOE* Striping Paint
710 White

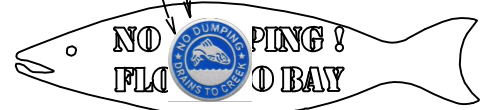
Fish Symbol
AERVOE* Striping Paint
750 Blue



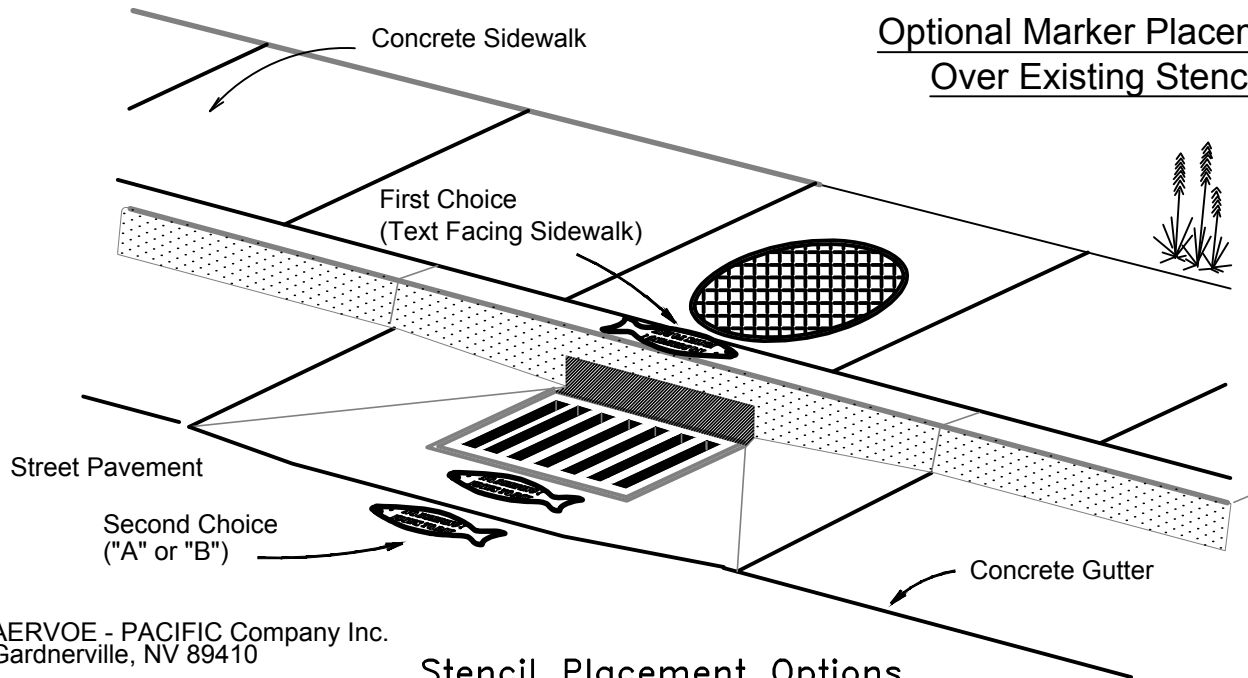
Stencil Detail

Attach with Sikaflex 11FC
Construction Adhesive
Color: White

ALMETEK** Stainless
Storm Drain Marker
Color: Natural and Blue



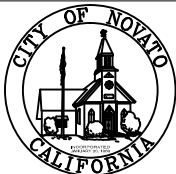
Optional Marker Placement
Over Existing Stencil



Stencil Placement Options

* AERVOE - PACIFIC Company Inc.
Gardnerville, NV 89410

** ALMETEK INDUSTRIES Inc.
2 JOY Drive
Hackettstown, NJ 07840



Uniform Standards
City of Novato
Department of Public Works
Engineering Division

POLLUTION PREVENTION
STORM DRAIN INLET
STENCIL

	5/21/13	P.S	MAY 2013
			DWG. NO.
			370N
REV.	DATE	BY	

Approved Irrigation
Materials

IRRIGATION SPECS

Controller	Irritrol MC-Plus series with remote pigtail
Controller	ETwater
Enclosure	Strong box/ SB 18 cold rolled or Equal
Valves	Brass, Griswold DWS Series
Backflow	Febco, 825-RP
Backflow cage	Guard Shack or Equal, Color to be Green
Heads	Turf Spray, Rainbird 1800 Series Turf Rotor, Hunter I-40, 25, 20, PGP's, ALL on swing joints
Drip	Netafim Techline or Equal
Pipe	Mail Line Schedule 40 Lateral Line Schedule 40
Fittings	Schedule 40
Valve Boxes	Rectangular, green or purple with bolt down locking lids VB2 Applied engineering/ 1419 Carson Brooks
Quick coupler	1" with locking cap/swing assembly / Rain Bird 44 RC
Quick coupler Boxes	Round boxes, green or purple with Bolt down locking lids VB 1 Applied engineering/ 910 Carson Brooks
Wire	Direct burial Irrigation type 14 gauge, red, white, black extra
Pump	One that will run on Single or three-phase power and give adequate pressure to operate the system as designed
Irrigation Remote unit	Eicon # TRX-5V, MRX-RR, for the Irritrol controller, TRC commander for the ET Water Controller
Trenches	Main 24" Lateral 18"

APPROVED STREET TREE LIST

WHEN REQUIRED

A permit is required from the Department of Community Development prior to planting any street trees or shrubs. A street tree or shrub is defined as those trees or shrubs to be planted on or adjacent to property owned by the City, including streets or sidewalks.

APPLICATION

Street tree plantings shall conform to the Novato Streetscape Master Plan where applicable. All street tree and shrub planting shall be in accordance with the applicable City of Novato Standard Drawings and Standard specifications. Trees placed within 10 feet of utility lines shall be limited to those that are 20-25 feet in height at maturity. Trees shall not be planted within 20 feet of a streetlight or within 30 feet of the property line of any intersecting street. All street trees planted closer than 5 feet to street improvements shall be planted with root boxes as detailed in applicable City of Novato Standard Drawings and Standard Specifications.

GROUP I Ground Covers - Only plants growing to maximum heights of 18 inches and not objectionable to or interfering with pedestrian health and safety are permitted to be grown in planting strips which measure less than two feet between the curb and sidewalk. Acceptable ground covers are listed in the Novato Streetscape Master Plan.

GROUP II Street trees listed below may be grown in planting strips which measure between one and one-half (1.5) feet up to four (4) feet between the curb and sidewalk. Trees shall generally be spaced 20 feet to 30 feet apart. Conifers are not allowed. In commercial areas where there is no planting area in back of the sidewalk, street trees listed below may be planted in tree wells as per the Novato Standard "Street Tree Detail for Grant Avenue Reichert to 7th Street" of January 17, 1989, provided that the sidewalk is 8 feet or more in width, and provided an encroachment permit is approved by the City Engineer. Drip irrigation will generally be installed by the permittee.

<u>Botanical Name</u>	<u>Common Name</u>
Cornus florida	Flowering Dogwood
Cornus nuttali	Pacific Dogwood
Arbutus "Marina"	Strawberry Tree
Cercis canadensis	Eastern Redbud
Ilex wilsoni	Wilson Holly (standard)
Lagerstroemia indica faurei	Crape Myrtle (Indian varieties)
Laurus nobilis	Grecian Laurel (standard)
Magnolia stellata	Star Magnolia
Magnolia soulingiana	Saucer Magnolia

<u>Botanical Name</u>	<u>Common Name</u>
Malus	Crabapple
Prunus blireiana	Pink Flowering Plum (double blossom)
Prunus cerasifera krauter vesuvisus	Pale Pink Flowering Plum (single flower)
Pyrus calleryana	Aristocrat, Bradford, Capitol, Chanticleer, or Red Spire Pear

GROUP III Street trees listed below or in Group II above may be grown in planting strips which measure between four (4) feet to six (6) feet or greater between the curb and sidewalk. Trees shall generally be spaced 30 feet to 40 feet apart. Where trees are planted that may overhang the public right-of-way, the trees listed below may be planted no closer than six feet (6') from the sidewalk, or 10 feet from back of curb or edge of pavement where no sidewalk exists.

<u>Botanical Name</u>	<u>Common Name</u>
Acer platanoides “Schwedleri”	Schwedler Maple
Acer platanoides “Crimson King”	Crimson Maple
Carpinus betulus	European Hornbeam
Cinnamon camphor	Camphor Tree
Ficus Microcarpa	Indian Laurel Fig
Fraxinus excelsior “Kimberly”	Kimberly Ash
Geijera parviflora	Australian Willow
Ginko biloba (male only)	Maidenhair Tree (variety) “Autumn Gold”
Magnolia grandiflora (varieties)	Southern Magnolia
Maytenus boaria	Mayten Tree (standard)
Metrosideros tomentosa	New Zealand Christmas Tree
Olea europala	Olive (Swan Hill variety)
Pistacia chinensis	Chinese Pictache
Tilia cordata	Little Leaf Linden
Zelkova serrata	Sawleaf Zelkova

GROUP IV Street trees listed below or in Group II or III above may be grown in planting strips which measure six (6) feet or greater between the curb and sidewalk. Trees listed below are appropriate for the interface with adjacent oak woodlands. Where trees may overhang the public right-of-way, the street trees listed below may be planted no closer than six feet (6') from the sidewalk, or 10 feet from back of curb or edge of pavement where no sidewalk exists. Trees shall generally be spaced 30 feet to 40 feet apart. Multi-trunk trees are encouraged when planted at least six feet from the back of sidewalk or curb/edge of pavement where no sidewalk exists.

Botanical Name	Common Name
Plantanus acerifolia (“Yarwood”)	Sycamore
Quercus agrifolia	California Live Oak
Quercus coccinea	Scarlet Oak
Quercus douglasii	Blue Oak
Quercus kelloggii	Black Oak
Quercus ilex	Holly Oak
Quercus lobata	Valley Oak
Quercus ruba	Red Oak
Quercus suber	Cork Oak
Robinia idahosensis	Idaho Loquast
Sequoia sempervirens	Coast Redwood (*) “Soquel,” “Aptos blue”
Sophora japonica	Japanese pagodata tree

* Redwoods may be planted only where the planting area exceeds 15 feet in width.

GROUP V Street trees and shrubs listed below may be planted adjacent to creeks in informal masses and clusters to break the street tree pattern. Trees shall be planted no closer than six feet (6') from the sidewalk, or ten feet (10') from back of curb or edge of pavement where no sidewalk exists. Trees shall be randomly spaced in informal clusters. Multi-trunk trees are encouraged when planted at least six feet (6') from the back of sidewalk or curb/edge of pavement where no sidewalk exists.

Botanical Name	Common Name
Acer circinatum	Vine Maple
Acer macrophyllum	Big Leaf Maple
Acer palmatum	Japanese Maple
Aesculus californica	California Buckeye
Alnus rhombifolia	White Alder
Arbutus "Marina"	Strawberry Tree
Arbutus Menziesii	Madrone
Arbutus unedo	Strawberry Tree
Arctostaphylos manzanita	Manzanita
Azalea	Azalea
Cercis	Western Redbud
Heteromeles arbutifolia	Toyon
Magnolia stellata	Star Magnolia
Polystichummunnaum	Western Sword Fern
Rhamnus californica	Coffee Berry
Rhododendron	Rhododendron
Ribes sanguineum	Pink Winter current
Ribes viburnifolium	Evergreen current
Salix toruloso	Corkscrew Willow
Schinus molle	Pepper Tree
Spiraea species	Spiraea
Symphoricarpus albus	Common snowberry
Umbellularia californica	California Bay

For further information, please contact the City of Novato Department of Community Development at:

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- **(415) 899-8989**
- **www.novato.org**