

STANDARD PLANS



COUNTY OF ORANGE

ORANGE COUNTY
PUBLIC WORKS DEPARTMENT

SEPTEMBER 2018 EDITION

KHALID BAZMI, COUNTY ENGINEER

STANDARD PLANS

RESOLUTION NO. 18-097

STANDARD PLANS 112 THROUGH 633

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (2012 EDITION)

PUBLIC WORKS STANDARDS, INC.

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2012 EDITION, ARE PUBLISHED AND DISTRIBUTED BY:

BNI BUILDING NEWS, DIVISION OF BNI PUBLICATIONS, INC.
990 PARK CENTER DRIVE, SUITE E,
VISTA, CA 92081 (760) 734-1113, FAX: (760) 734-1540

STANDARD PLANS 1100 THROUGH 1810

STANDARD PLANS FOR COUNTY OF ORANGE ORANGE COUNTY PUBLIC WORKS DEPARTMENT

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PREFACE

The Standard Plans for Public Works Construction of the Public Works Standards, Inc. are hereinafter called SPPWC.

It is County of Orange, OC Public Works Department (OCPW)'s intent to adopt the latest edition of the SPPWC Standard Plans and Standard Specifications for Public Works Construction (Greenbook) as published by BNI Building News (except for Sections 209, 214, 307 and 312) except where current OCPW Standard Plans, or portions thereof, should be retained on the basis of cost or safety or where portions of OCPW Standard Plans can be used with SPPWC Standard Plans in a way that meets special OCPW needs and does not adversely affect the benefits of standardization.

There are three categories of Standard Plans:

- 1) OCPW has adopted SPPWC Standard Plans with or without conditions.
- 2) OCPW has a Standard Plan which addresses a subject but SPPWC does not.
- 3) SPPWC has a Standard Plan which addresses a subject but OCPW does not.

This edition of the OCPW Standard Plans includes the first two categories. The third category has not yet been adopted by OCPW. SPPWC has a number of Standard Plans that have no equivalent OCPW Standard Plans. Although it is intended to consider such Standard Plans for adoption by OCPW, time has precluded a review of such SPPWC Standard Plans and, therefore, such SPPWC Standard Plans shall not be used for OCPW projects at this time.

The adopted SPPWC Standard Plans (with and without conditions) are now included in this edition of OCPW Standard Plans. The SPPWC Standard Plans are copyrighted and published by BNI Books, Division of Building News, Inc., (990 Park Center Drive, Suite E, Vista, CA 92081, (760) 734-1113). Therefore, OCPW has included the adopted SPPWC Standard Plans in their entirety without making revisions directly on the SPPWC Standard Plans. OCPW conditions, if any, are located immediately following the SPPWC Standard Plans.

Construction plan call-outs should include the appropriate letter prefix: such as "Construct per SPPWC 312-1" or "Construct per OCPW 1101". Where the call-out omits the letter prefix, the OCPW Standard Plan shall apply unless otherwise directed by the Engineer (see definition below). Where an SPPWC Standard Plan is called out which has been approved by OCPW with conditions, the plan call-out as an example would be identified as "OCPW 100-0-OC". In this case, the SPPWC Standard Plan is given the suffix OC. However, a plan call-out for an SPPWC Standard Plan shall automatically include the OCPW conditions, if any.

OCPW and SPPWC Standard Plans may be used by reference, for example, "Construct per OCPW 100-0-OC" or the standard plans may be reproduced on project drawings submitted for OCPW approval. However, where standard plans are reproduced in the drawings, the entire standard plan shall be reproduced. The SPPWC Standard Plans are copyrighted and may not be reproduced except for use on OCPW plans as noted above.

The users of these Standard Plans should also be aware that the SPPWC Standard Plans are unsigned. Where Standard Plans (either OCPW or SPPWC) have been approved by OCPW, OCPW's approval is an approval that the adopted Standard Plan is suitable for general OCPW use. The project proponent, by including the Standard Plans (by reference or reproduction) in project plans, assumes a professional engineer's responsibility for their use.

In addition to the adoption of a portion of SPPWC Standard Plans, OCPW has also adopted a portion of the Department of Transportation, State of California Standard Plans and Specifications latest Edition. Due to their availability, those Standard Plans are not included in this booklet. The following are the portion of Standard Plans, Department of Transportation, State of California, OCPW has adopted:

1. The portion covering "Signals, Lighting and Electrical Systems."
2. The portion covering "Bridges".
3. Standard Plans A77A1 through A77K2 covering "Metal Beam Guard Railing".

The term "ENGINEER" as it appears in this document is defined as: The County Engineer, OC Public Works Department, acting either directly or through authorized agents (such as Resident Engineer or Resident Inspector), such agent acting within the scope of the particular duties delegated to them.

The term "GEOTECHNICAL ENGINEER" as it appears in this document is defined as: The Professional Engineer and Manager in responsible charge for the operation and performance of the OC Public Works, Materials Laboratory and all reports and tests performed therein or on his behalf, or his duly assigned designee.

<u>Acronym or Abbreviation</u>	<u>Word or Words</u>
AASHTO	American Association of State Highway and Transportation Officials
AB	Aggregate Base
ABS	Acrylonitrile Butadiene Styrene
AC	Asphalt Concrete
ACP	Asbestos-Cement Pipe
ADA	Americans with Disabilities Act
ADAAG	Americans with Disability Act Accessibility Guidelines
ADT	Average Daily Traffic
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
Approx.	Approximate
ARHM	Asphalt Rubber Hot Mix
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
BC	Beginning of Curve
BCR	Beginning of Curb Return
Bldg.	Building

BMP	Best Management Practice
CAB	Crushed Aggregate Base
CAPA	Corrugated Aluminum Pipe Arch
CAP	Corrugated Aluminum Pipe
CASQA	California Stormwater Quality Association
CCTV	Closed Circuit TV
CF	Cubic Feet
CHDPE	Corrugated High Density Polyethylene
CI	Cast Iron
CIP	Cast-In-Place or Cast Iron Pipe
CIPCP	Cast-In-Place Concrete Pipe
CIPP	Cured-In-Place Pipe
CL	Centerline
Clr.	Clearance
CMB	Crushed Miscellaneous Base
CMP	Corrugated Metal Pipe
CMU	Concrete Masonry Unit
Conc.	Concrete
Const.	Construction
CSP	Corrugated Steel Pipe
CSPA	Corrugated Steel Pipe Arch
Ctr.	Center
CY	Cubic Yard
Det.	Detail
Dia.	Diameter
DIP	Ductile Iron Pipe
Dwy.	Driveway
EC	End of Curve
ECR	End of Curb Return
EG	Edge of Gutter
Elev.	Elevation
EM	Engineer Manual
EP	Edge of Pavement
EPA	Environmental Protection Agency
Exist.	Existing
Exp. Jt.	Expansion Joint
FG	Finished Grade
FL	Flow Line
fps	Feet per Second
FS	Finished Surface
FT	Foot (Feet)
Gal	Gallon
Galv.	Galvanized
HC	House Connection
HCSP	High Carbon Steel Pipe
HD	Hole Diameter
HDPE	High Density Polyethylene
Hex.	Hexagon
HPSV	High Pressure Sodium Vapour

ID	Inside Diameter
in	Inch
Inv.	Invert
ITE	Institute of Transportation Engineers
JS	Junction Structure
LS	Lump Sum
Max.	Maximum
Min.	Minimum
MUTCD	Manual on Uniform Traffic Control Devices
N/A	Not Applicable
NC	National Coarse
NEC	National Electrical Code
Non-Reinf.	Non-Reinforced
NS	Native Soil
oc	On-Center
OCVCD	Orange County Vector Control District
OD	Outside Diameter
PC	Portland Cement
PCC	Portland Cement Concrete
PE	Polyethylene
PI	Point of Intersection
PL	Property Line
PLI	Pounds per Linear Inch
psf	Pounds per Square Foot
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
R	Radius or Resistance Value
RC	Reverse Curve
RC	Relative Compaction
RCB	Reinforced Concrete Box
RCP	Reinforced Concrete Pipe
RCV	Remote Control Valve
RPM	Raised Pavement Marker
RW	Reclaimed Water
R/W or ROW	Right-of-Way
SDR	Standard thermoplastic pipe dimension ratio (ratio of pipe OD to minimum wall thickness)
sf	Square Foot (Feet)
Sq. Ft.	Square Foot (Feet)
SI	International System of Units (Metric)
SPPWC	Standard Plans for Public Works Construction
Std.	Standard
SWPPP	Storm Water Pollution Prevention Plan
TC	Top of Curb
TCP	Traffic Control Plan
Typ.	Typical
UL	Underwriters' Laboratories Inc.
Var.	Varies
VCP	Vitrified Clay Pipe

Vert.	Vertical
WATCH	Work Area Traffic Control Handbook
WPJ	Weakened Plane Joint
WWM	Welded Wire Mesh
UF	Underground Feeder
Ult.	Ultimate
USACE	United States Army Corps of Engineers

TABLE OF CONTENTS

SPPWC STANDARD PLANS

SECTION 1

Street Improvements

112-2-OC	SPPWC Standard Plan - Curb and Sidewalk Joints
120-2-OC	SPPWC Standard Plan - Curb and Gutter - Barrier
122-2-OC	SPPWC Standard Plan - Cross and Longitudinal Gutters
133-3-OC	SPPWC Standard Plan - Asphalt Concrete Pavement Replacement
140-3-OC	SPPWC Standard Plan - Median Taper
141-2-OC	SPPWC Standard Plan - Median Flare

SECTION 3

Flood Control and Storm Drain Facilities

312-4-OC	SPPWC Standard Plan - Catch Basin Manhole Frame and Cover
320-2-OC	SPPWC Standard Plan - Manhole Pipe-to-Pipe Main Line ID = 36" (900 mm) or Larger (Junction Structure - Type II)
321-2-OC	SPPWC Standard Plan - Manhole Pipe-to-Pipe (One or Both Main Line IDs 33" (825 mm) or Smaller) (Junction Structure - Type I)
322-2-OC	SPPWC Standard Plan - Manhole Pipe-to-Pipe (Large Side Inlet) (Junction Structure - Type III)
326-2-OC	SPPWC Standard Plan - Manhole Shaft 36" (900 mm) Without Reducer
331-3-OC	SPPWC Standard Plan - Junction Structure - Pipe to Pipe Inlet ID \geq 24" (600 mm) or OD > 1/2 Main Line ID (Junction Structure - Type IV)
332-2-OC	SPPWC Standard Plan - Junction Structure - Pipe to Pipe (ID \leq 24" (600 mm)) (Junction Structure - Type VI)
333-2-OC	SPPWC Standard Plan - Junction Structure - Pipe to RCB
340-2-OC	SPPWC Standard Plan - Transition Structure Pipe to Pipe
380-4-OC	SPPWC Standard Plan - Concrete Collar for RCP 12" through 72"

SECTION 5

Landscaping and Irrigation Systems

500-2	SPPWC Standard Plan - Landscape Irrigation Symbols
501-3-OC	SPPWC Standard Plan - Electrical Service
502-3-OC	SPPWC Standard Plan - Angle Valve
505-3-OC	SPPWC Standard Plan - Hose Bibb Valve
506-3-OC	SPPWC Standard Plan - Remote Control Valve
507-3-OC	SPPWC Standard Plan - Remote Control Valve with Quick Coupler
508-3-OC	SPPWC Standard Plan - Thrust Blocks for Plastic Pipe
509-3-OC	SPPWC Standard Plan - Irrigation Sprinkler Head

SPPWC STANDARD PLANS (Continued)

Landscaping and Irrigation Systems (Cont'd)

510-3-OC	SPPWC Standard Plan - Vacuum Breaker Assembly
512-3- OC	SPPWC Standard Plan - Backflow Preventer Assembly Reduced Pressure Type
513-3-OC	SPPWC Standard Plan - Electrical Pull Box
514-3-OC	SPPWC Standard Plan - Irrigation Controller Enclosure
517-3-OC	SPPWC Standard Plan - Swing Joint Assembly
518-3-OC	SPPWC Standard Plan - Tree Staking
519-3-OC	SPPWC Standard Plan - Tree Well
520-4-OC	SPPWC Standard Plan - Tree Planting
521-3-OC	SPPWC Standard Plan - Pressure Regulator Installation

SECTION 6

General Facilities

Protective Facilities

600-3-OC	SPPWC Standard Plan - Chain Link Fence and Gates
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Subsurface Access

630-4-OC	SPPWC Standard Plan - 24" Manhole Frame and Cover
633-1-OC	SPPWC Standard Plan - 36" Manhole Frame and Cover

TABLE OF CONTENTS

OCPW STANDARD PLANS

Standard Street Sections

1100	Principal Highway Typical Sections
1101	Major Highway Typical Sections
1102	Major Highway Bridge Sections
1103	Primary Highway Typical Sections
1104	Primary Highway Bridge Sections
1105	Secondary Highway Typical Sections
1106	Secondary Highway Bridge Sections
1107	Other Street Improvements
1108	Rural Secondary Highway Typical Sections
1109	Rural Local Street Typical Section
1110	Rural Local Street Typical Section
1111	Curb Return Radius and Corner Cut-Off
1112	Standard Knuckle
1113	Standard Cul-De-Sac
1114	Landscaped Median Typical Section
1115	Curb Ramp
1117	Intersection Sight Distance
1118	Left-Turn-In-Only Median Opening
1119	Raised Median Nose Location
1120	Bus Turnouts and Pads
1150	Traffic Control: Spacing For Lane and Shoulder Closures
1151	Traffic Control: Shoulder Closure On Arterial Highways
1152	Traffic Control: Lane Closure with Partial Shoulder Use
1153	Traffic Control: Typical Lane Closure
1154	Traffic Control: Typical Half Road Closure
1155	Traffic Control: Lane Closure with Reversible Control
1156	Traffic Control: T-Intersection
1157	Traffic Control: Minor Residential Street Work
1158	Traffic Control: Sidewalk Closures
1159	Traffic Control: Cul-De-Sac

Curb, Sidewalk, Apron, Gutter and Mailbox Details

1201	Concrete Rolled Curb
1204	Sidewalk on Expansive Soils
1205	Sidewalk Details
1206	Alley Intersection
1208	Special Cross Gutter (Steep Grade)
1209	Depressed Curb Driveway Approach
1210	Flared Depressed Curb Driveway Approach
1211	Single Unit Mailbox Detail
1212	Multi Unit Mailbox Detail

OCPW STANDARD PLANS (Continued)

Grading and Drainage Details

1301	Inlet Type I
1302	Inlet Type II
1303	Inlet Type III
1304	Inlet Type IV
1305	Inlet Type V
1306	Miscellaneous Curb Inlet Details and Notes
1307	Miscellaneous Inlet Details and Notes
1308	Local Depression
1309	Parkway Culvert - Type "A", "B", "C", and Details & Notes
1318	Transverse Joint Details
1319	Reinforced Concrete Pipe - Bedding Detail
1320	Hillside Lot and Common Sideyard Drainage
1321	Terrace and Down Drain
1322	Benching for Compacted Fill
1323	Canyon Subdrain
1324	Debris Wall
1325	Channel Weepholes and Drainage Galleries
1326	Pipe Entrance to Earth Channel
1327	Desilting Basin
1328	Sandbag Velocity Reducer
1329	Street Desilting Basin - Vehicle Access Ramp
1330	Temporary Drainage Inlet
1331	Downdrain to Pipe Transition
1332	Interceptor Drain
1333	Concrete Pipe Slope Anchor
1334	Overside Drains

Signs, Barricades, Monuments, Lighting Details & Fencing

1401	Dead End and Widened Section Signing
1402	Markers
1405	Survey Monument Type "A"
1406	Survey Monument Type "B"
1407	Special Provisions - Street Name Sign
1408	Advance Street Name Sign
1409	Traffic Sign Placement
1410	Parkway Obstruction
1411	Street Lighting
1416	Crosswalk Detail
1417	Sign Post Installation
1418	Project Information Sign
1419	Road/Trail Closure Sign

OCPW STANDARD PLANS (Continued)

Manhole Details

1501	Non-Reinforced Concrete Concentric Cone Manhole
1502	Non-Reinforced Concrete Eccentric Cone Manhole
1503	36" Reinforced Concrete Manhole
1504	48" Reinforced Concrete Manhole
1505	Flat Top Manhole Covers
1506	Reinforced Concrete Box Manhole
1507	Manhole Steps
1508	Deep Manhole Landings
1509	Manhole/Valve Cover Adjustment to Grade Detail

Standard Park Details

1602	Buried Electrical Wiring on Park Property
1603	Security Enclosure
1611	Picnic Table Slab
1612	Trash Receptacle Installation
1613	Drinking Fountain and Sump
1621	Asphalt and Concrete Walks
1631	Play Lot Drain
1641	Sign Footing
1682	Header Details
1685	Mow Strip
1690	Baseball Diamond Drainage Patterns

Landscape and Irrigation Details

1700	Street Tree List
1701	Drought Tolerant Plants
1708	Tree Root Barrier
1753	Pop-Up Head Sprinkler (6 Inch)
1760	Irrigation Line Trenching
1761	Gate Valve
1762	Quick Coupler Valve in Box

Notes, Special Provisions and Miscellaneous Details

1801	Spec. Prov. - General Notes
1802	Spec. Prov. - Soil and Base Treatment
1803	Spec. Prov. - Portland Cement Concrete
1804	Spec. Prov. - Untreated Base Materials
1805	Spec. Prov. - Asphalt Concrete
1806	Spec. Prov. - Earthwork
1807	Spec. Prov. - Concrete Median Paving
1808	Spec. Prov. - Geotextiles
1809	Spec. Prov. - Stonework
1810	Spec. Prov. - Steel Plate Bridging

