

# FIRE HYDRANT COLOR SCHEDULE

## RENO

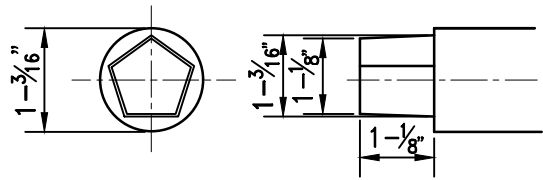
ALL HYDRANTS TO BE FACTORY ENAMELED SAFETY RED.

## SPARKS

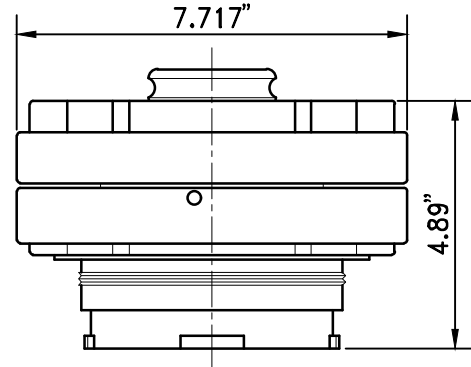
PUBLIC HYDRANTS TO BE FACTORY ENAMELED SAFETY YELLOW.  
PRIVATE HYDRANTS TO BE FACTORY ENAMELED SAFETY RED.

## WASHOE COUNTY

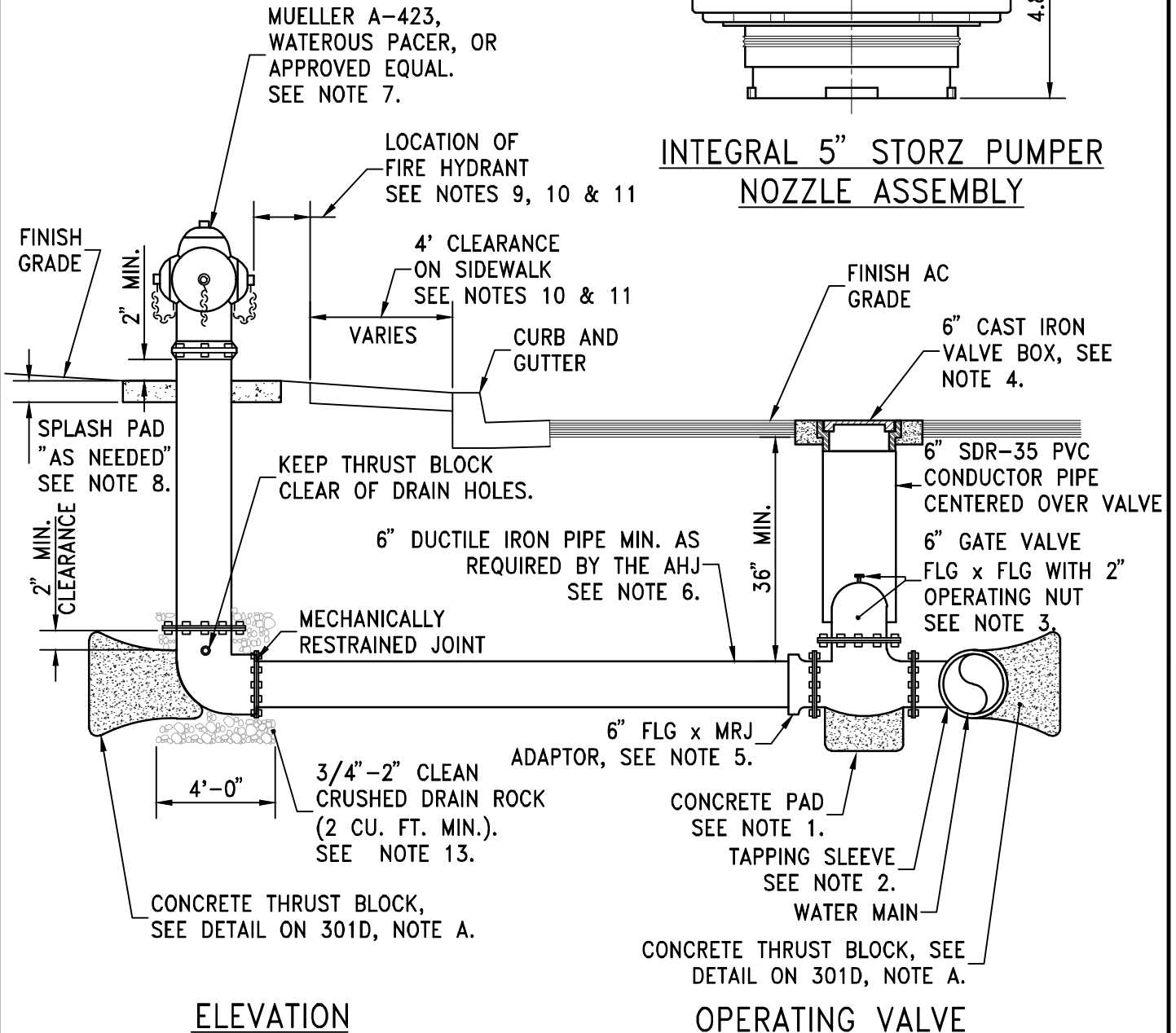
PUBLIC HYDRANTS TO BE FACTORY ENAMELED SAFETY RED.  
PRIVATE HYDRANTS TO BE FACTORY ENAMELED SAFETY RED WITH HIGH REFLECTIVE WHITE TOP.



OPERATING NUT - PENTAGON



INTEGRAL 5" STORZ PUMPER NOZZLE ASSEMBLY



ELEVATION

OPERATING VALVE

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

AHJ

DRAWING No.

RENO

R-301A

SPARKS

S-301A

W/C

W-23A



DATE: 1/2020



# FIRE HYDRANT

**NOTES:**



1. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY AUTHORITY HAVING JURISDICTION (AHJ). CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY AHJ.
  
2. TAPPING SLEEVE  
HOT-TAP TAPPING SLEEVES SHALL BE FULL-CIRCLE ASTM A 240, TYPE 304 STAINLESS STEEL WITH FULL CIRCUMFERENCE GASKETS THROUGHOUT SLEEVE LENGTH WITH AWWA C207 CLASS D ANSI 150 LB. DRILLING ASTM A 240, TYPE 304 STAINLESS STEEL FLANGE. TYPE 304 STAINLESS STEEL STUD BOLTS, HEAVY HEX NUTS, AND WASHERS SHALL BE INCLUDED. HEAVY HEX NUTS AND STUD BOLTS SHALL BE COATED TO PREVENT GALLING. TYPE 304 STAINLESS STEEL TEST PLUG SHALL BE INCLUDED WITH THREADS COATED TO PREVENT GALLING. TAPPING SLEEVE SHALL BE RATED FOR A TEST PRESSURE OF 300 PSI AND WORKING PRESSURE OF 200 PSI. TAPPING SLEEVE SHALL BE ROMAC STYLE "SST" STAINLESS STEEL TAPPING SLEEVE AS MANUFACTURED BY ROMAC INDUSTRIES, INC.; SMITH-BLAIR 663 STAINLESS STEEL FLANGE TAPPING SLEEVE AS MANUFACTURED BY SMITH-BLAIR, INC.; OR EQUAL.  
  
ALL WATER MAIN SHUT DOWNS AND/OR INSTALLATION OF TAPPING SLEEVES SHALL BE COORDINATED WITH THE WATER PURVEYOR IN THE AREA AND CONFORM TO THEIR REQUIREMENTS.
  
3. GATE VALVE  
GATE VALVE SHALL BE 6-INCH, FLG X FLG AND SHALL MEET AWWA C515, DUCTILE IRON BODY, NON-RISING STEM, RESILIENT-SEATED VALVE. GATE VALVE SHALL BE EQUIPPED WITH A 2-INCH OPERATING NUT FOR BURIED SERVICE. GATE VALVE SHALL BE FUSION EPOXY LINED AND COATED. ALL VALVES FOR BURIED SERVICE SHALL BE POLYETHYLENE ENCASED PER AWWA C105. GATE VALVE SHALL BE A MUELLER A-2361 RESILIENT WEDGE GATE VALVE; AMERICAN AVK COMPANY SERIES 65 AWWA C515 DUCTILE IRON GATE VALVE; OR APPROVED EQUAL.
  
4. 6" VALVE BOX SHALL BE D&L #8044 & #8056 OR APPROVED EQUAL. CASTINGS SHALL BE CAST IRON GRAY AND MEET THE REQUIREMENTS OF ASTM A48-74, CLASS 30B, NO PAINT.
  
5. 6-INCH FLG X MRJ ADAPTOR  
6-INCH FLG X MRJ ADAPTOR SHALL BE DUCTILE IRON AND MEET THE REQUIREMENTS OF AWWA STANDARDS C110/C153 AND C104. ALL FITTINGS SHALL BE POLYETHYLENE ENCASED PER AWWA C105. ADAPTOR SHALL BE ASPHALTIC COATED WITH CEMENT-MORTAR LINING PER AWWA C110/C153 AND C104.
  
6. 6-INCH MINIMUM DUCTILE IRON LATERAL PIPE  
ALL DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF AWWA STANDARDS C151, C104, AND C111 WITH PRESSURE CLASS 350, STANDARD CEMENT LINING, BITUMINOUS COATING, AND SHALL BE NSF-61 CERTIFIED. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE ENCASED WITH THICKNESS OF 4 MIL AND BE BLACK IN COLOR. MATERIAL SHALL BE HIGH-DENSITY, CROSS-LAMINATED FILM CONFORMING TO SECTION 4.1.3 OF AWWA STANDARD C105. TUBE SIZE SHALL BE AS LISTED IN TABLE 1 OF SAME STANDARD. DUCTILE IRON PIPE SHALL BE EQUIPPED WITH TYTON TYPE BELL AND SPIGOT JOINTS. DUCTILE IRON PIPE SHALL BE TYTON DUCTILE IRON PIPE AS MANUFACTURED BY U.S. PIPE, GRIFFIN TYTON JOINT DUCTILE IRON PIPE AS MANUFACTURED BY GRIFFIN PIPE PRODUCTS CO., INC., OR APPROVED EQUAL. EXCEPTIONS FOR PRIVATE INSTALLATION UPON APPROVAL FROM AHJ.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION		AHJ	DRAWING No.
 	<b>NOTES - FIRE HYDRANT</b>		RENO
			R-301B
			SPARKS
			S-301B
		W/C	W-23B
		DATE: 1/2020	

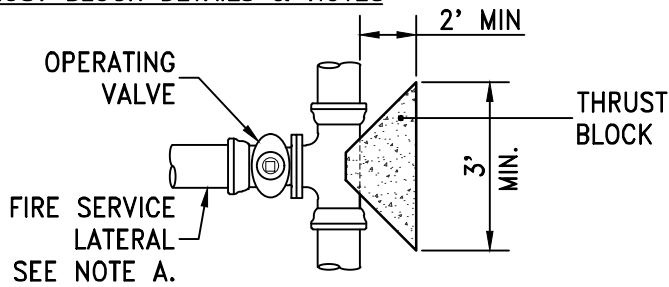
NOTES CONT:

7. MUELLER A-423 OR AMERICAN WATEROUS PACER WB67-250 WITH 5-1/4" VALVE OPENING OR FIRE DEPARTMENT APPROVED EQUAL. RISER SHALL BE 4 FT OR 5 FT AND RISER TYPE SHALL BE SAME AS THE FIRE HYDRANT MANUFACTURER. HYDRANTS MUST BE FACTORY PAINTED TO BE ACCEPTED. ALL HYDRANTS SHALL HAVE TWO 2-1/2" HOSE NOZZLES AND ONE FACTORY INSTALLED INTEGRAL 5" STORZ PUMPER NOZZLE ASSEMBLY.
8. IF PROPOSED HYDRANT LOCATION IS WITHIN PARKWAY OR LANDSCAPE WHERE NO CONCRETE EXISTS, PLACE 36" DIAMETER ROUND OR 36" x 36" SQUARE, 4" THICK REINFORCED CONCRETE SPLASH PAD AS REQUIRED BY THE AHJ. NO FENCES, LANDSCAPE FEATURES, OR OTHER OBSTRUCTIONS SHALL BE ALLOWED WITHIN 3-FEET OF ANY PORTION OF A FIRE HYDRANT. CLEARANCE IS MEASURED FROM ALL OBSTRUCTIONS TO THE NEAREST POINT ON THE FIRE HYDRANT.
9. FIRE HYDRANTS SHALL BE INSPECTED BY AHJ INSPECTOR. INSPECTIONS SHALL BE SCHEDULED A MINIMUM OF TWO BUSINESS DAYS PRIOR AND INSPECTIONS SHALL BE PERFORMED DURING REGULAR BUSINESS HOURS. CONTACT AHJ FIRE PREVENTION BUREAU TO SCHEDULE INSPECTIONS.
10. FIRE HYDRANTS SHALL BE PLACED WITHIN THE RIGHT-OF-WAY OR EASEMENT GRANTED OUTSIDE THE RIGHT-OF-WAY. FIRE HYDRANT PLACED WITHIN PEDESTRIAN WALKWAY AND/OR SIDEWALKS SHALL PROVIDE FOR A MINIMUM OF 4 FT CLEARANCE IN ACCORDANCE WITH PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).
11. AHJ APPROVAL IS REQUIRED FOR HYDRANT LOCATION WHERE NO SIDEWALK EXISTS BEHIND CURB OR WHERE A LANDSCAPE STRIP IS BETWEEN THE CURB AND THE SIDEWALK.
12. FIRE HYDRANTS SHALL BE TESTED BY THE AHJ PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.
13. FOR TRENCH EXCAVATION/BACKFILL SPECIFICATIONS SEE DETAIL BELOW. ALL DRAIN ROCK SHALL BE PLACED PRIOR TO INSPECTION AND BACKFILL.

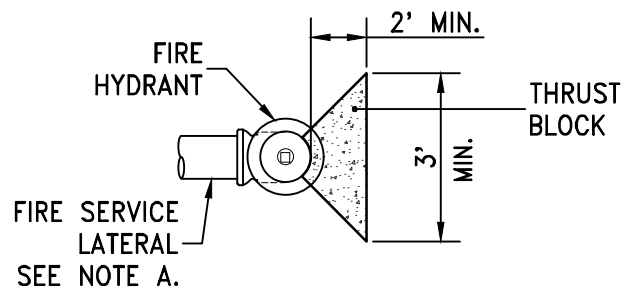
TRENCH EXCAVATION/BACKFILL	
AHJ	DETAIL #
RENO	R-122
SPARKS	S-116
WASHOE COUNTY	W-22

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION			AHJ	DRAWING No.
 	<h1>NOTES - FIRE HYDRANT</h1>		RENO	R-301C
			SPARKS	S-301C
			W/C	W-23C
			DATE: 1/2020	

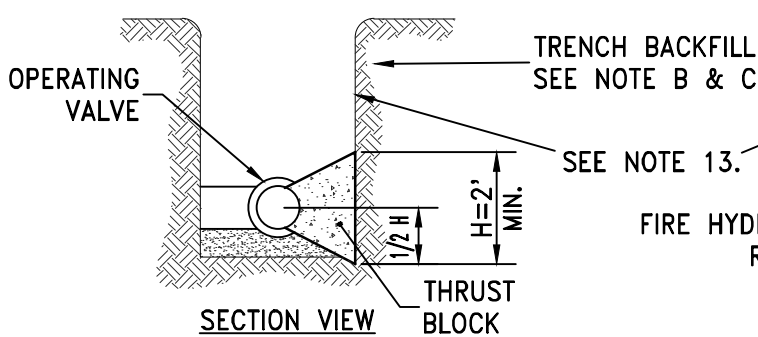
**THRUST BLOCK DETAILS & NOTES**



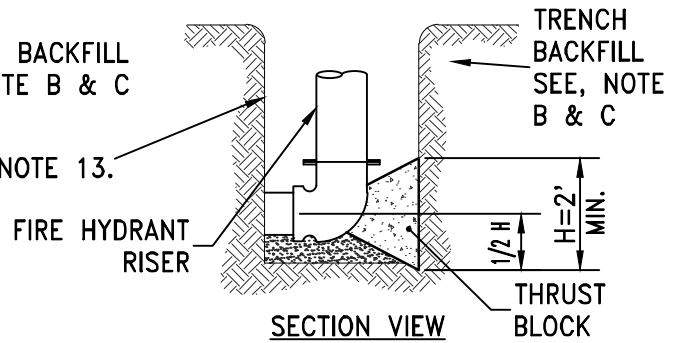
**THRUST BLOCK AT OPERATING VALVE - PLAN VIEW**



**THRUST BLOCK AT FIRE HYDRANT - PLAN VIEW**



**SECTION VIEW**



**SECTION VIEW**

**THRUST BLOCK NOTES**

- A. THRUST BLOCK SIZE ASSUMES MAXIMUM 6" DIAMETER FIRE HYDRANT SERVICE. THRUST BLOCKS FOR LARGER SERVICES REQUIRE APPROVAL OF AHJ.
- B. THE THRUST BLOCK DESIGN SHALL BE BASED ON THE FORCE RESISTING CAPACITY OF THE NATIVE SOILS AS STATED IN THE SOILS EVALUATION REPORT SPECIFIC TO THE PROJECT SITE. THE CALCULATIONS SHOWN WITH THE THRUST BLOCK DESIGN AND SIZING TABLE SHALL BE BASED ON THE REQUIREMENTS OF THE MOST CURRENT NFPA 24, ARTICLE 10.8.2 REQUIREMENTS. THE SOIL EVALUATION REPORT OR A SINGLE PAGE, STAMPED SUMMARY SHALL BE SUBMITTED WITH THE PROJECT PLANS.
- C. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL. IN CASES WHERE THIS IS NOT PRACTICAL, BACKFILL AREA BEHIND WHERE THRUST BLOCK WILL BE PLACED WITH AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION, CUT-BACK COMPACTED AGGREGATE BASE TO EXPOSE A FIRM SURFACE, THEN PLACE THRUST BLOCK.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

AHJ

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**NOTES - FIRE HYDRANT**

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R-301D

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