



ENGINEERING CLARIFICATION

EC TITLE: Piping Colors
PROJECT: 3 Kings Water Treatment Plant

EC NO.: 88
DATE: 1/22/2021
STATUS: Open

SECTION 1: BY CONTRACTOR

QUESTION:

Pipe Coating and Label colors required updating per Owner direction.

DRAWING NO.: _____ **POTENTIAL COST IMPACT:** _____
SPECIFICATION SECTION: 40 27 00Process Piping—General **POTENTIAL SCHEDULE IMPACT:** _____

PROPOSED SOLUTION:

See attached revised pipe schedule.

COMMENTS:

INITIATOR: Rasmussen, Mitchell

PRIORITY: Normal
REQUESTED RESPONSE DATE: 2/5/2021

SECTION 2: BY REVIEWER

RESPONSE:

COMMENTS:

REVIEWED BY: _____

REVIEWED DATE: _____

PIPING SCHEDULE

SERVICE	FLOW STREAM IDENTIFICATION	EXPOSURE	SIZE, INCHES	PIPING MATERIAL	PIPE SPEC SECTION	JOINT TYPE	INSULATION (00_42_13)	HEAT TRACE (00_05_33)	DESIGN PRESSURE (PSIG)	TEST TYPE (00_80_01)	TEST PRESSURE (PSIG)	PIPE COATING SYSTEM, NOTE 7	PIPE LINING	PIPE FIELD COLOR (10 J4 00), NOTE 12	PIPE LABELING BAND COLOR (10 J4 00)	PIPE LABELING TEXT (10 J4 00)	PIPE LABELING LABEL TEXT (10 J4 00)	NOTES	
SAMPLE	SA	BUR	ALL	PVC	40 27 00 10	W	NONE	NONE	VARIES	H	VARIES	NONE	NONE	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS. EC 8	
		ENCASED	ALL	PVC	40 27 00 10	W	NONE	NONE	VARIES	H	VARIES	NONE	NONE	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS.	
STORM DRAIN	SD	EXP-IN	ALL	PVC	40 27 00 10	W	NONE	NONE	VARIES	H	VARIES	NONE	NONE	WHITE	—	BLACK	—	SA, SAMPLE	
		BUR	ALL	CFRP	33 05 01 08	BSF	NONE	NONE	NONE	—	—	NONE	NONE	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS.	
SULFURIC ACID	SFA	EXP	ALL	PVC	40 27 00 10	W, FLG	NONE	NONE	5	G	10	SYSTEM 25	NONE	—	—	WHITE	—	SD, STORM DRAIN	
		BUR/ENCASED	ALL	PVDF TUBE	40 27 00 18	PUSH-FIT, BARBED	YES, SEE NOTE 9	YES, SEE NOTE 9	30	H	50	NONE	NONE	—	—	—	—	SFA, SULFURIC ACID	
SOFTENED WATER	SFW	EXP-IN	ALL	316 SST	40 27 00 08	W	NONE	NONE	30	H	50	NONE	NONE	SAFETY YELLOW	RED	BLACK	—	SFA, SULFURIC ACID	
		EXP-IN	ALL	PVC	40 27 00 10	W	NONE	NONE	50	H	80	NONE	NONE	DARK GREEN	—	WHITE	—	SFW, SOFTENED WATER	
SODIUM HYDROXIDE	SH	BUR/ENCASED	ALL	PVC TUBE	40 27 00 10	PUSH-FIT, BARBED	YES, SEE NOTE 9	YES, SEE NOTE 9	30	H	50	NONE	NONE	—	—	—	—	SH, SODIUM HYDROXIDE	
		EXP-IN	ALL	PVC	40 27 00 10	W	NONE	NONE	30	H	50	NONE	NONE	SAFETY YELLOW	GREEN	BLACK	—	SH, SODIUM HYDROXIDE	
SODIUM HYPOCHLORITE CONCENTRATED	SHC	EXP-IN	ALL	CPVC	40 27 00 11	W	NONE	NONE	0	NONE	NONE	NONE	SAFETY YELLOW	ORANGE	BLACK	—	—	SHC, SODIUM HYPOCHLORITE CONCENTRATED	
SODIUM HYPOCHLORITE SOLUTION	SHS	BUR/ENCASED	ALL	PVC TUBE	40 27 00 10	PUSH-FIT, BARBED	YES, SEE NOTE 9	YES, SEE NOTE 9	35	H	60	NONE	NONE	—	—	—	—	SHS, SODIUM HYPOCHLORITE SOLUTION	
		EXP-IN	ALL	PVC	40 27 00 10	W	NONE	NONE	35	H	60	NONE	NONE	SAFETY YELLOW	ORANGE	BLACK	—	SHS, SODIUM HYPOCHLORITE SOLUTION	
SLUMP PUMP DISCHARGE	SPD	EXP/BUR	ALL	CPVC	40 27 00 11	W	NONE	NONE	10	H	50	NONE	NONE	LIGHT BROWN	—	BLACK	—	SPD, SLUMP PUMP DISCHARGE	
		BUR	ALL	DI	40 27 00 01	PRE	NONE	NONE	25	H	40	SYSTEM 8	CEMENT MORTAR	—	—	—	—	—	
SCREENED RAW WATER	SRW	ENCASED	ALL	DI	40 27 00 01	ML NOTE 8	NONE	NONE	5	H	10	SYSTEM 7	CEMENT MORTAR	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS.	
		EXP-IN	< 6"	WST, DI	33 05 01 01	W, FLG	NONE	NONE	300	H	450	SYSTEM 5	CEMENT MORTAR	21GM FAIRWAY	—	—	—	SRW, SCREENED RAW WATER	
		EXP-IN	> 6", < 18"	WST	33 05 01 01	W, FLG	NONE	NONE	JUDGE + 300 ROCKPORT + 25	H	JUDGE + 450 ROCKPORT + 120	SYSTEM 5	CEMENT MORTAR	21GM FAIRWAY	—	WHITE	—	SRW, SCREENED RAW WATER	
		EXP-IN	≥ 18"	DI	40 27 00 01	FLG	NONE	NONE	—	H	—	SYSTEM 5	CEMENT MORTAR	21GM FAIRWAY	—	WHITE	—	SRW, SCREENED RAW WATER	
SANITARY DRAIN	SS	BUR	ALL	PVC	33 05 01 03	W	NONE	NONE	5	G	10	NONE	NONE	BLACK	—	WHITE	—	DWW FITTINGS SHALL APPLY	
		EXP-IN	ALL	CFRP	33 05 01 03	HUBLESS	NONE	NONE	5	H	10	NONE	NONE	BLACK	—	WHITE	—	SS, SANITARY SEWER	
SETTLED WATER	SW	PRENUM	ALL	CFRP	22 10 01 03	HUBLESS	NONE	NONE	5	G	10	NONE	NONE	BLACK	—	WHITE	—	DWW FITTINGS SHALL APPLY	
		BUR	ALL	DI	40 27 00 01	PRE	NONE	NONE	25	H	40	SYSTEM 8	CEMENT MORTAR	21GM FAIRWAY	—	—	—	SW, SETTLED WATER	
SCREENINGS WASTE	SWW	EXP-IN	ALL	DI	40 27 00 01	PRE	NONE	NONE	25	H	40	SYSTEM 5	CEMENT MORTAR	21GM FAIRWAY	—	WHITE	—	SWW, SCREENINGS WASTE	
		EXP-IN	ALL	GLVSTL	40 27 00 07	W	NONE	NONE	NONE	NONE	NONE	NONE	NONE	DARK BROWN	—	BLACK	—	SWW, SCREENINGS WASTE	
THICKENING AID POLYMER	TAP	EXP-IN	ALL	PVC TUBE	40 27 00 10	QUICK CONNECT	NONE	NONE	5	H	10	NONE	NONE	SAFETY ORANGE	GREEN	BLACK	—	TAP, THICKENING AID POLYMER	
		BUR/ENCASED	ALL	PVC TUBE	40 27 00 10	PUSH-FIT, BARBED	YES, SEE NOTE 9	YES, SEE NOTE 9	25	H	40	NONE	NONE	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS. EC 8	
THICKENING AID POLYMER SOLUTION	TAPS	EXP-IN	ALL	PVC	40 27 00 10	W	NONE	NONE	25	G	40	NONE	NONE	SAFETY ORANGE	GREEN	BLACK	—	TAPS, THICKENING AID POLYMER SOLUTION	
		BUR	ALL	PVC DR18	33 05 01 09	MJ	NONE	NONE	5	G	10	NONE	NONE	—	—	—	—	—	
TREATED EFFLUENT	TE	ENCASED	ALL	DI	40 27 00 01	ML NOTE 8	NONE	NONE	5	G	10	SYSTEM 7	CEMENT MORTAR	—	—	WHITE	—	TE, TREATED EFFLUENT	
		BUR	ALL	PVC DR18	33 05 01 09	MJ	NONE	NONE	60	H	90	NONE	NONE	14SF PURPLE RAIN	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS. EC 8	
THICKENED SOLIDS	TSL	ENCASED	ALL	DI	40 27 00 01	ML NOTE 8	NONE	NONE	40	H	50	SYSTEM 7	CEMENT MORTAR	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS. EC 8	
		EXP-IN	ALL	DI	40 27 00 01	FLG	NONE	NONE	120	H	180	SYSTEM 4	CEMENT MORTAR	—	—	BLACK	—	TSL, THICKENED SOLIDS	
THROTT SPRING WATER	TSW	BUR	SEE NOTES	PVC DR18	33 05 01 09	BSF	NONE	NONE	10	H	20	NONE	NONE	DEER AMBER CANYON	—	—	—	DWW FWT MATERIAL AS SHOWN ON DRAWINGS. EC 8	
		EXP-IN	ALL	DI	40 27 00 01	PRE	NONE	NONE	10	H	20	SYSTEM 7	CEMENT MORTAR	—	—	—	—	TSW, THROTT SPRING WATER	
TEMPERED POTABLE WATER	TW	ENCASED	ALL	DI	40 27 00 01	ML NOTE 8	NONE	NONE	10	H	20	SYSTEM 7	CEMENT MORTAR	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS. EC 8	
		EXP-IN	ALL	DI	40 27 00 01	FLG	NONE	NONE	10	H	20	SYSTEM 5	CEMENT MORTAR	21GM FAIRWAY	—	WHITE	—	TW, TEMPERED POTABLE WATER	
UNTHICKENED SOLIDS	USL	ALL	ALL	CFRP	22 10 01 03	W	YES	SEE NOTES	80	H	120	NONE	NONE	—	—	—	—	HEAT TRACE SHALL BE APPLIED TO OUTDOOR SAFETY STATIONS ONLY	
		BUR	ALL	PVC DR18	33 05 01 09	MJ	NONE	NONE	25	H	40	NONE	NONE	—	—	—	—	UNLESS OTHERWISE SHOWN ON DRAWINGS. EC 8	
UV TREATED WATER	UVTW	ENCASED	ALL	DI	40 27 00 01	ML NOTE 8	NONE	NONE	25	H	40	SYSTEM 7	CEMENT MORTAR	—	—	—	—	USL, UNTHICKENED SOLIDS	
		EXP-IN	ALL	DI	40 27 00 01	FLG	NONE	NONE	25	H	40	SYSTEM 5	CEMENT MORTAR	—	—	BLACK	—	USL, UNTHICKENED SOLIDS	
SANITARY VENT	V, VTR	SUB	ALL	316 SST	40 27 00 08	W, FLG	NONE	NONE	25	H	40	NONE	NONE	—	—	—	—	V, VTR, SANITARY VENT	
		EXP-IN	ALL	DI	40 27 00 01	FLG	NONE	NONE	5	H	10	SYSTEM 25	CEMENT MORTAR	—	—	WHITE	—	V, VTR, SANITARY VENT	
UTILITY WATER, POTABLE WATER	W1	PRENUM	ALL	CFRP	22 10 01 03	HUBLESS	NONE	NONE	—	—	—	NONE	NONE	BLACK	—	WHITE	—	V, VTR, SANITARY VENT	
		BUR	< 6"	DI	40 27 00 01	PREL FLG	NONE	NONE	VARIES	H	150	SYSTEM 8	CEMENT MORTAR	—	—	—	—	—	
UTILITY WATER, NON-POTABLE WATER	W2	BUR	2 6"	PVC DR18	33 05 01 09	BSF	NONE	NONE	VARIES	H	150	NONE	NONE	—	—	—	—	—	
		EXP-IN	ALL	CFRP	22 10 01 03	W	YES	NONE	80	H	120	NONE	NONE	—	—	BLACK	—	W2, UTILITY WATER, NON-POTABLE WATER	
DRAIN, PROCESS SPECIFIC	XX/D	BUR	ALL	DI	40 27 00 01	PREL FLG	NONE	NONE	80	H	120	SYSTEM 8	CEMENT MORTAR	—	—	—	—	W2, UTILITY WATER, NON-POTABLE WATER	
		EXP-IN	ALL	CFRP	22 10 01 03	W	YES	NONE	80	H	120	SYSTEM 8	CEMENT MORTAR	—	—	—	—	W2, UTILITY WATER, NON-POTABLE WATER	
IN-PLANT DRAIN, PROCESS SPECIFIC	XX/PD	MATCH SERVICE PIPE, UNLESS OTHERWISE NOTED ON DRAWINGS																	
OUTER-DRAIN, PROCESS SPECIFIC	XX/OD	MATCH SERVICE PIPE, UNLESS OTHERWISE NOTED ON DRAWINGS																	
VENT, PROCESS SPECIFIC	XX/V	MATCH SERVICE PIPE, UNLESS OTHERWISE NOTED ON DRAWINGS																	

- NOTES:**
- AT TRANSITION BETWEEN ENCASED AND EXPOSED OR BURIED CONDITIONS, SHOP APPLY POLYURETHANE COATING AS SHOWN ON DRAWINGS.
 - AT TRANSITION BETWEEN ENCASED AND EXPOSED CONDITIONS, FACTORY PRIME WITH EPOXY AS SHOWN ON DRAWINGS. MINIMUM COATS: COVER-1 COAT 2.5 MIPF. AT TRANSITION BETWEEN ENCASED AND BURIED CONDITIONS, PROVIDE ASPHALTIC COATING AND V-80 ENHANCED POLYETHYLENE ENCASEMENT AS SHOWN ON THE DRAWINGS.
 - NOT USED.
 - EXCEPT FOR APPLICATIONS REQUIRING ENGINEERED PVC DOUBLE WALL CONTAINMENT PIPING (40 27 00 15), AS SHOWN ON DRAWINGS.
 - PRESSURE TESTING OF THE HEAT POLYMER LINES IS BETWEEN THE TOTES AND THE POLYMER BLENDING UNITS SHALL BE PERFORMED WITH FOOD GRADE MINERAL OIL.
 - TRADITIONAL OPAQUE PVC MAY BE USED AS AN ALTERNATE TO CLEAR PVC PIPING, PROVIDED THAT SHORT SECTIONS OF CLEAR PVC ARE USED AT MANUAL LEAK DETECTION LOCATIONS.
 - COATING SYSTEM NUMBERS AS SPECIFIED IN SECTION 09 80 00.
 - FLOOR PIPES TO HAVE FLANGED JOINT AS SHOWN ON DRAWINGS.
 - PIPE SCHEDULE INFORMATION DESCRIBES THE FLEXIBLE TUBING, EXCEPT FOR INSULATION AND HEAT TRACE WHICH DESCRIBE THE CONTAINMENT PIPING. SIZE AND MATERIAL FOR CONTAINMENT AND CONDUIT PIPING ARE AS SHOWN ON DS-3-C-6003 AND AS SPECIFIED IN SECTION 40 27 00.
 - PIPE SCHEDULE INFORMATION DESCRIBES RIGID PIPING OR THE CONTAINMENT PIPE (FOR FLEX TUBE IN CONTAINMENT PIPING APPLICATIONS), EXCEPT FOR DESIGN AND TEST PRESSURE WHICH ARE FOR THE FLEX TUBING. FLEX TUBING SHALL BE PVC TUBE AS SPECIFIED IN 40 27 00 10.
 - PIPE SCHEDULE INFORMATION DESCRIBES RIGID PIPING OR THE CONTAINMENT PIPE (FOR FLEX TUBE IN CONTAINMENT PIPING APPLICATIONS), EXCEPT FOR DESIGN AND TEST PRESSURE WHICH ARE FOR THE FLEX TUBING. FLEX TUBING SHALL BE PVDF TUBE AS SPECIFIED IN 40 27 00 15.
 - PIPE FIELD COLOR INDICATES COATING COLOR IF COATING SYSTEM SPECIFIED. OTHERWISE COLOR INDICATES LABEL COLOR. STANDARD TRAFIC COLOR CARD USED AS DESIGN BASIS FOR PIPE COATING FIELD COLOR. PROVIDE AS SHOWN OR SIMILAR.
 - PIPE SPRINKLER PIPING (DESIGNED AND PROVIDED BY OTHERS) SHALL BE PAINTED SAFETY RED, SIMILAR TO TRAFIC LIGHT SAFETY RED. **EC 8**