

Exhibit A
Bridging Documents

DRAFT

MFRO Facility

Conceptual Design Report

BLACK & VEATCH PROJECT NO. 198777

PREPARED FOR

City of Escondido

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Appendix A MFRO System Storage Volume Evaluation Model Output

LIST OF ABBREVIATIONS

The following abbreviations and acronyms are used in this report:

Avg.	Average
%	Percent
°C	Degrees Celsius
°F	Degrees Fahrenheit
µS	Micro Seconds
ACI	American Concrete Institute
AFD	Adjustable Frequency Drives
Ag.	Agriculture
AOP	Advanced Oxidation Process
APN	Assessor’s Parcel Number
ASCE	American Society of Civil Engineers
B&V	Black & Veatch Corporation
CIP	Clean in Place
CBC	California Building Code
CCPP	Calcium carbonate precipitation potential
CDR	Conceptual Design Report
City	City of Escondido
CMU	Concrete Masonry Unit
tpCPVC	Chlorinated Polyvinyl Chloride
E	East
EGAP	Escondido Growers of Agriculture Preservation
ERD	Energy Recovery Device
FRP	Fiber-Reinforced Plastic
ft	Feet
gal	Gallons
gfd	Gallons per Square Foot of Membrane Area per Day
gph	Gallons per Hour
gpm	Gallons per Minute
HARRF	Hale Avenue Resource Recovery Facility
HIS	Hydraulic Institute Standards
HMI	Human Machine Interface

hp	Horsepower
HVAC	Heating, Ventilation, and Air Conditioning
Hz	Hertz
I&C	Instrumentation and Control
IFC	International Fire Code
kW	Kilowatts
LSI	Langelier Saturation Index
Max.	Maximum
MCC	Motor Control Centers
MF	Membrane Filtration
MFRO	Membrane Filtration Reverse Osmosis
MFRO Facility	MFRO Facility for Agriculture
MFSS	MF System Supplier
mg/L	Milligram per Liter
mgd	million gallons per day
Min.	Minimum
MW	Maintenance Wash
N	North
No.	Number
NTU	Nephelometric Turbidity Unit
PCS	Plant Control System
pH	Potential of Hydrogen
PHWWF	peak hour wet weather flow
PLCs	Programmable Logic Controllers
psi	Pounds per Square Inch
PVC	Polyvinyl Chloride
RO	Reverse Osmosis
ROSS	Reverse Osmosis System Supplier
S.A.R.	Sodium Adsorption Ratio
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric
SG	Specific Gravity
TBD	To be Determined
TDS	Total Dissolved Solids
TM	Technical Memorandum
UF	Ultrafiltration
UV	Ultraviolet light
V	Volts
VFD	Variable Frequency Drive

1 Introduction

The City of Escondido (City) has elected to implement a Potable Reuse Water Program (Reuse Program) that was originally conceptualized by the Recycled Water Master Plan. Black & Veatch (B&V) and Brown and Caldwell had further defined the Reuse Program in the Potable Reuse Program Feasibility Study (Feasibility Study) that was completed in August 2014. The Program is intended to delay or defer wastewater effluent outfall improvement requirements through Year 2050, expedite a new, high quality water supply to local agricultural growers and to help promote and support local economy and agriculture.

The Reuse Program generally includes a pipeline extension from the existing recycled water supply system to a decentralized treatment site (Decentralized Site), the development of a brine reject waste return pipeline from the Decentralized Site to the Hale Avenue Resource Recovery Facility (HARRF) and a new agriculture recycled water conveyance and distribution system. The Decentralized Site will be comprised of the Membrane Filtration Reverse Osmosis Facility for Agriculture (MFRO Facility).

Under previous contract B&V developed the contract documents for the MFRO Facility. However due to public opposition of the facility at the original site, a new site has been secured by the City for the MFRO Facility. The purpose of this Technical Memorandum (TM) is to conceptually evaluate and define improvement requirements for the MFRO Facility at the new site. More specifically, the main objectives of this TM are summarized below.

- Evaluate and further define the supply and demand conditions of the MFRO Facility.
- Define advanced water purification process requirements and facility footprints for the MFRO Facility.
- Present conceptual process flow schematics.
- Identify project site development parameters and considerations.
- Develop a conceptual site plan facility arrangement for the MFRO Facility.

1.1 PROJECT DESCRIPTION

The MFRO Facility will provide advanced treatment for Title 22 quality recycled water produced at HARRF. The facility will utilize low pressure membrane filtration (MF) followed by reverse osmosis (RO) technologies sized for a total production capacity of 2.0 million gallons per day (mgd). As discussed in the Feasibility Study, only a portion of the

water used for agriculture will undergo MF/RO treatment in order to reduce TDS and chloride concentrations. Since MF/RO treated water is of better quality than what is required for agriculture irrigation, Title 22 quality recycled water direct from HARRF will be blended with MFRO treated product water on-site at the MFRO Facility. Blending will occur through the product water tank. A pumping station will be installed to supply blended recycled water to agricultural customers.

1.2 PROJECT LOCATION

The proposed site, zoned as commercial property, is located on the southeast corner of the N. Ash Street and E. Washington Avenue intersection. The MFRO Facility will be located in the City of Escondido on the undeveloped parcel APN No. 230-141-01. The project site consists of 4.5 acres and is bound by residential development to the east and N. Ash Street to the west, with commercial development west of N. Ash Street. The southern end of the site is bound by the Escondido Creek storm channel while the northern end is bound by E. Washington Avenue, with residential and commercial development north of E. Washington Avenue. The project site is presented on Figure 1-1.

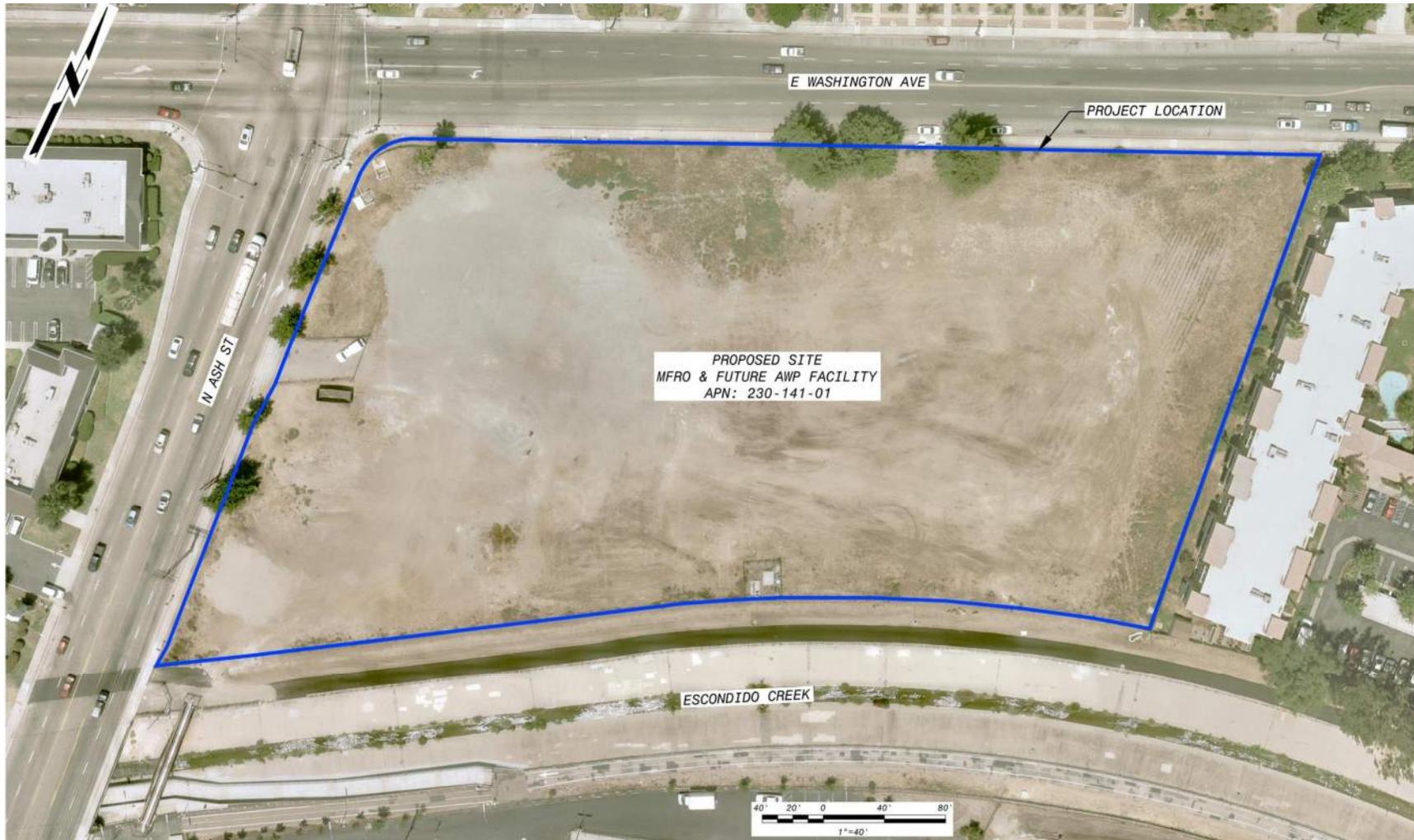


Figure 1-1 Project Location

2 System Analysis

2.1 OVERVIEW

The Feasibility Study had conceptually evaluated the City's existing recycled system to determine treatment and supply system planning requirements. Additional MFRO Facility influent, effluent and equalization hydraulic analyses have been performed under this project to better define design criteria.

2.2 INFLUENT HYDRAULIC ANALYSIS

The MFRO facility will be supplied by a 24-inch pipeline connection to the existing recycled system as discussed in Section 3.1. The existing recycled system irrigation period is generally between the hours of 6:00 p.m. to 6:00 a.m., with one large user that operates 24 hours a day (Sempra Power Plant). The Sempra Power Plant demand is the largest and most consistent, but the system does experience higher flows during the evening when a majority of the landscape irrigation systems are operating. This variability was a key consideration for the MFRO Facility operation since the most optimal membrane treatment facilities operate 7 days a week 24 hours a day except when down for cleaning or down for seasonal storage. Therefore, the design approach for the new MFRO Facility will be to treat recycled water continuously over a 24-hour period through the membranes and blend with HARRF Title 22 recycled water even during low demand periods. Operating the system in this method will help to prolong the life of the membranes and allow for a regular maintenance program.

In support of the design effort, a brief hydraulic analysis was performed using the City's existing recycled water model developed in the June 2011 Recycled Water Master Plan. The analysis focused on the following questions:

- Can the piping network provide adequate service pressures within both the existing system and the new agricultural system?
- Can the membranes operate consistently over a 24-hour period?
- What are the pumping rates and pressure requirements to serve the new agricultural system?

Modeling results predicted that the above questions can be addressed. The three keys to achieving this are: 1) using the pipeline sizes previously proposed in the August 2014 Potable Reuse Program Feasibility Study (Draft); 2) having adequate onsite storage at the MFRO Facility site and adequate in-zone storage at the Hogback Tank site; and 3) managing the timing and magnitude of demands in the existing recycled and new agricultural

systems. With these parameters in place, the model predicted that the MFRO Facility can be supplied for continuous treatment while maintaining adequate service pressures to both existing and agricultural customers. Pumping requirements are also discussed later in this document.

The limitations with this analysis is that the model used was from the City's 2011 Recycled Water Master Plan and may vary from actual conditions in the existing system. While the model appeared to produce reasonable results, continued development of this tool would be valuable as the new agricultural system continues to be developed and brought on-line.

2.3 HARRF RECYCLED WATER QUALITY

The MFRO facility will receive HARRF Title 22 recycled water. HARRF has a permitted wastewater treatment capacity of 18 mgd and 9 mgd tertiary capacity. The plant uses conventional activated sludge for secondary treatment and includes the following major processes: influent pump station, bar screens, grit chambers, primary clarifiers; aeration basins, secondary clarifiers; tertiary filters and chorine disinfection. Historical water quality of HARRF recycled water is provided in Table 2-1 below.

Table 2-1 Summary of HARRF Recycled Water Quality

PARAMETER ¹	N (NO. OF DATA POINTS)	TYPICAL AVERAGE	TYPICAL MINIMUM	TYPICAL MAXIMUM	90TH PERCENTILE
Temperature ² (Deg C)	85	26.6	21.9	30.9	29.2
Conductivity (µS/cm)	59	1576	1378	1812	1719
pH (standard units)	98	7.7	7.5	7.9	7.8
Total Dissolved Solids (mg/L)	57	923	811	1029	1000
Turbidity (NTU)	153	1	0.5	1.6	1.3
Alkalinity (mg/L as CaCO ₃)	53	181	119	241	201
Chloride (mg/L)	30	188	166	221	205
Fluoride (mg/L)	30	0.72	0.46	0.84	0.81

PARAMETER ¹	N (NO. OF DATA POINTS)	TYPICAL AVERAGE	TYPICAL MINIMUM	TYPICAL MAXIMUM	90TH PERCENTILE
Sulfate (mg/L)	30	196	137	267	250
Nitrate (mg-N/L)	31	6	1	17	12
Total Organic Carbon ² (mg/L)	9	12.9	10.2	16.4	15.1
Calcium (mg/L)	11	66	48	88	84
Iron (µg/L)	10	76	52	100	95
Magnesium (mg/L)	11	26	21	31	31
Potassium (mg/L)	8	19	18	21	21
Ortho Phosphate (mg- P/L)	13	0.9	0.1	2	1.4
Total Phosphate ² (mg-P/L)	11	1.2	0.2	3	2.4
Silica (mg/L)	7	14.6	13.0	16.9	16.8
Sodium (mg/L)	12	171	150	188	187
Aluminum (µg/L)	8	404	272	560	560
Barium (µg/L)	9	32	18	54	47
Manganese (µg/L)	10	55	31	113	90
Strontium (µg/L)	3	924	921	936	933
Ammonia (mg/L-N)	31	16	0.8	33	26
TKN (mg/L-N)	30	18	0.8	35	28
Color (std. units)	4	18	15	21	20

1. All parameters measured in HARRF recycled water (i.e. tertiary effluent) between 2009 and 2014 unless indicated otherwise. Sampling period varies by parameter.

2. Measured in HARRF secondary effluent (2012-2014).

2.4 TREATED WATER QUALITY OBJECTIVES

The Feasibility Study discussed water quality requirements for the City's agriculture producers with a key focus on avocado production which is one of the most important crops grown in Escondido. The limits of various water quality parameters that can diminish avocado crop productivity are provided in Table 2-2. This information was obtained based on meetings with members of the Escondido Growers of Agriculture Preservation (EGAP) as well as published information in the literature. Based on discussions with EGAP, it is desired to reduce the chloride concentration to 80 mg/L to prevent leaf burn, root rot and the need for excessive flushing. However, chloride concentrations up to 100 mg/L can be tolerated. It should be noted that historical water quality provided by the City shows the average chloride concentration in raw source water supplies varies as follows: Lake Henshaw = 39 mg/L; Dixon Lake = 80 mg/L; and imported water via SDCWA = 81 mg/L. The average chloride concentration of the treated water from the Escondido-Vista Water Treatment Plant is 75 mg/L.

Table 2-2 Agriculture Water Quality Criteria for Key Parameters

PARAMETER	UNITS	CONCENTRATION
Total Dissolved Solids (TDS)	mg/L	540-600
Chloride	mg/L	80 (maximum 100)
Sodium Adsorption Ratio (S.A.R)	ratio	10
Electrical Conductivity	μS/cm	500-1,000
Boron	mg/L	<0.5
pH	---	6.5-7.0

The water quality of the blended water will vary, based on the blend ratio of Title 22 recycled water bypass to RO permeate. Table 2-3 summarizes the estimated water quality for blend ratios ranging from 0 to 1.95, which corresponds to initial total recycled water flows available for agricultural users of 0.5 to 5.9 mgd. The initial minimum flow condition would occur during times when Title 22 recycled water is not available for blending and the MFRO facility is operating at minimum production flow of 0.5 mgd. The initial average and maximum total blend flows represent the estimated 2050 summer agriculture recycled water demands as identified in the Feasibility Study. During such conditions, it is anticipated that the MFRO facility would be operated at the initial design production

capacity of 2 mgd. An example blending scenario for the future condition of increasing the RO permeate capacity by 1 mgd is also shown.

With the exception of pH, the agricultural water quality requirements are only exceeded when the blending ratio is above 1. Because the RO process rejects the majority of the minerals in the feedwater, the RO permeate is corrosive and can damage the downstream storage and conveyance system. As a result, chemical post treatment to adjust the pH and stabilize the water for corrosion control will be provided. The post treatment strategy is presented in Section 3.3.9.

Table 2-3 Estimated Water Quality under Various Blending Conditions

PARAMETER	UNITS	FLOW VALUES			
		INITIAL MIN.	INITIAL AVG.	INITIAL MAX.	FUTURE MAX.
Projected Blend Capacity					
Title 22 Bypass: RO Permeate	ratio	0.00	0.48	1.95	1.30
Title 22 Bypass flow	mgd	0.00	0.95	3.90	4.00
RO Permeate flow	mgd	0.50	2.00	2.00	3.00
Total Blend flow	mgd	0.50	2.95	5.89	7.00
Estimated Blend Water Quality (before post treatment)					
Calcium	mg/L	3	23	45	38
Magnesium	mg/L	1	9	18	15
Sodium	mg/L	7	60	115	100
TDS	mg/L	37	324	623	538
Chloride	mg/L	8	66	127	110
Boron	mg/L	0.21	0.26	0.30	0.29
pH	-----	4.9	6.5	7.0	7.0
Conductivity	μS/cm	63	554	1063	918
S.A.R	ratio	0.9	2.7	3.7	3.4

Note: Estimated blend water quality shown is based on typical average values measured in HARRF recycled water (2009-2014) and RO rejection of 96% for all constituents with the exception of boron (assumed rejection of 40%).

2.5 SYSTEM SUPPLY, PHASING AND DEMAND ANALYSIS

The agriculture recycled water distribution system will be constructed in several phases. System demands will increase as the distribution system is expanded and additional users come online. The MFRO Facility treatment, conveyance, blending storage, and water quality design will be based on treating and supplying the range of demands between the initial minimum and maximum flow demands.

To be able to meet the demand over this range, the MFRO Facility design will take into account the existing 1.2 million gallon potable water reservoir, Hogback Reservoir, being converted to agriculture recycled water storage. The reservoir would have an operating band of 1,145 ft low water level to 1,178 ft high water level.

3 Treatment Plant Processes and Other Systems

3.1 INFLUENT PIPING SYSTEM

An existing 18,500 feet long 24-inch diameter pipeline will convey Title 22 recycled water from HARRF to the MFRO Facility. The influent pipeline will enter the project site from the Escondido Creek storm channel. The influent pipeline will branch onsite to supply flows to the product water blend tank and to the MFRO Facility treatment system. Per hydraulic analysis, the onsite influent pressure will vary depending on supply and demand conditions. Pressure reducing/sustaining valves will be provided to break influent system pressure heads to approximately 5-10 psi. Flow meters will also be provided upstream of both the product water tank and MF influent tank.

3.2 MFRO FACILITY TREATMENT PROCESSES

Table 3-1 summarizes the minimum and maximum conceptual design flow rates for the various equipment associated with the MFRO Facility. The flow requirements are based on the minimum equipment recovery values (defined as the ratio of product water to feed flow) for the various unit processes. The total future design flow rate based on additional equipment installation is also summarized. The minimum flow condition assumes 100% RO permeate with no blending with Title 22 recycled water; the maximum condition is based on the anticipated 2050 New Agriculture Demands under summer conditions as identified in the Feasibility Study.

Note the facility influent piping system and agriculture pump station will be designed to a worst case peak hour wet weather flow (PHWWF) condition not indicated on Table 3-1. As discussed in the Feasibility Study, approximately 10.48 mgd (7,280 gpm) will need to be conveyed from HARRF, through the MFRO Facility recycled water system and to the agricultural wet weather storage pond.

Table 3-1 MFRO Facility Process Design Flows

DESCRIPTION	INITIAL MIN FLOW ¹	INITIAL MAX FLOW ^[1]	TOTAL FUTURE
HARRF Tertiary Effluent	0.679 mgd (471 gpm)	6.60 mgd (4,580 gpm)	7.97 mgd (5,537 gpm)
Process Influent	0.679 mgd (471 gpm)	2.72 mgd (1,886 gpm)	4.07 mgd (2,828 gpm)
Title 22 Recycled Water Influent (For Blending)	N/A	3.88 mgd (2,694 gpm)	3.90 mgd (2,709 gpm)

DESCRIPTION	INITIAL MIN FLOW ¹	INITIAL MAX FLOW ^[1]	TOTAL FUTURE
Strainer Recovery Rate ²	99%	99%	99%
MF Feed Water	0.672 mgd (467 gpm)	2.69 mgd (1,867 gpm)	4.03 mgd (2,800 gpm)
MF Recovery Rate ²	93%	93%	93%
MF Filtrate	0.631 mgd (438 gpm)	2.53 mgd (1,754 gpm)	3.79 mgd (2,630 gpm)
MF Back Wash ^{2,3}	0.473 mgd (329 gpm)	1.89 mgd (1,315 gpm)	1.89 mgd (1,315 gpm)
RO Feed Rate	0.631 mgd (438 gpm)	2.53mgd (1,754 gpm)	3.79 mgd (2,630 gpm)
RO Recovery Rate ²	80 %	80 %	80%
RO Permeate	0.505 mgd (351 gpm)	2.02 mgd (1,403 gpm)	3.00 mgd (2,083 gpm)
RO Concentrate ⁴	0.126 mgd (88 gpm)	0.505 mgd (351 gpm)	0.788 mgd (547 gpm)
Final Blended Effluent (RO permeate + Title 22 Recycled Water)	0.51 mgd (350 gpm)	5.9 mgd (4,097 gpm)	6.90 mgd (4,791 gpm)

1. Minimum flows based on 100% RO permeate with no Title 22 recycled water blending. Maximum flows based on estimated 2050 New Agriculture Demands under summer conditions, as identified in the Feasibility Study.
2. Estimated values based on non-concurrent backwashing of membrane trains, actual values to be determined and confirmed from selected membrane system supplier.
3. Backwash frequency and duration to be determined by MFSS; typically for 1 minute duration every 30 minutes.
4. RO concentrate to be disposed to the City's 16" diameter brine line, which was in design/construction at the time this report was prepared.

Figure 3-1 presents a conceptual process flow schematic for all major components of the MFRO Facility. Major MFRO Facility system components are discussed and conceptual design criteria established in Section 3.4.

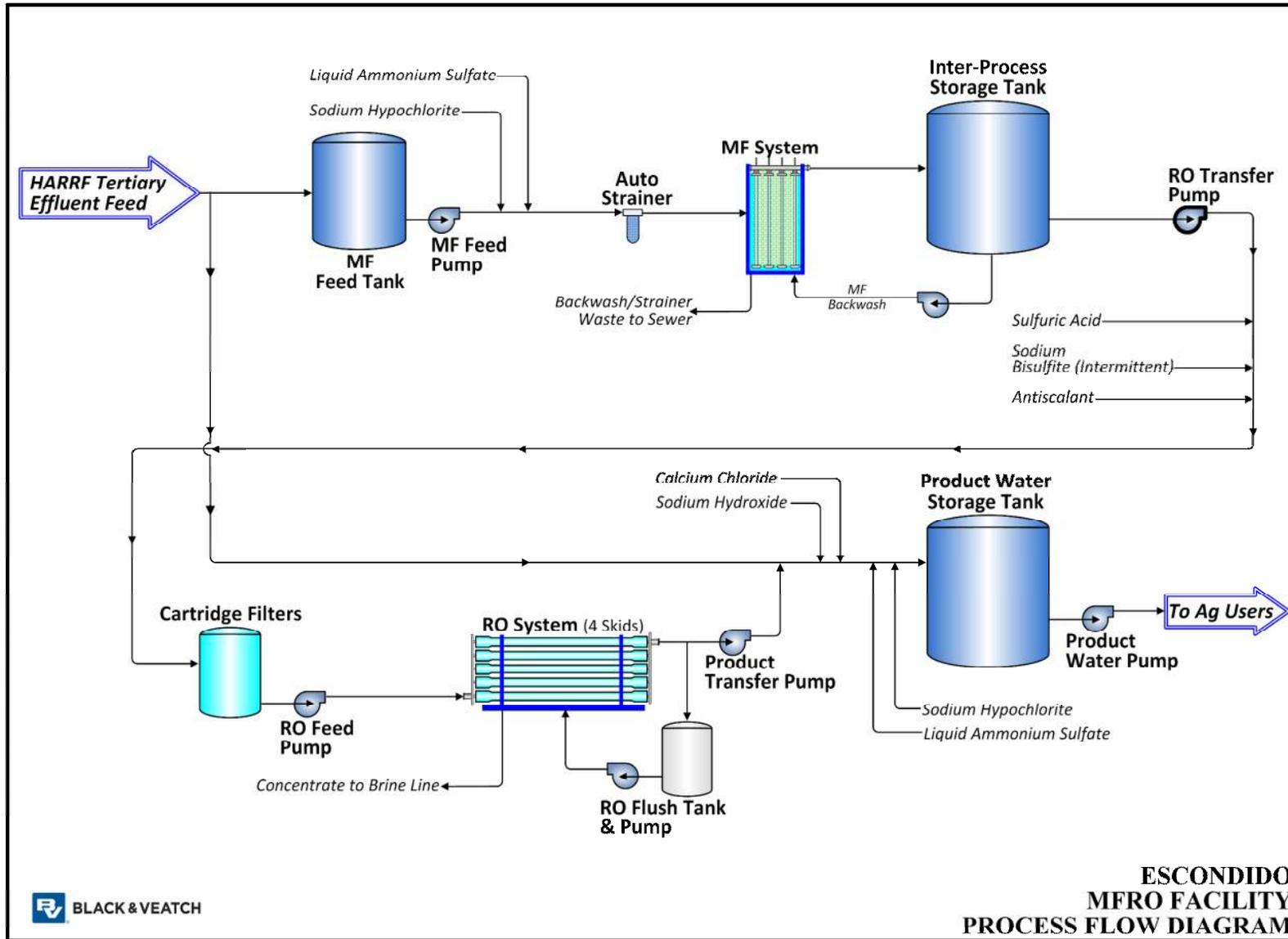


Figure 3-1 MFRO Facility Process Flow Diagram

3.3 TREATMENT PROCESS DESCRIPTION AND CRITERIA

The following sections provide a general discussion of the process equipment requirements for the MFRO Facility. Each section also includes a table which presents preliminary facility and equipment design criteria. The primary purpose of evaluating preliminary equipment design criteria during conceptual design is to more reasonably define conceptual building and facility layouts. Table 3-2 below identifies the specific treatment processes that will be utilized by the MFRO facility as shown on Figure 3-1.

Table 3-2 Treatment Facility Process Matrix

DESCRIPTION	MFRO FACILITY PROCESS
Influent MF Feed Tank	Yes
Strainers and MF Feed Pump Station	Yes
MF System	Yes
MF Filtrate Inter-process Storage Tank	Yes
RO Transfer Pump Station and Cartridge Filters	Yes
RO High Pressure Feed Pump Station	Yes
RO System	Yes
Product Water Transfer Pump Station	Yes
UV/AOP System	City may install UV/AOP in the future for demonstration testing.
Product Water Storage Tank	Yes, Blend Storage Tank
Product Water Pump Station and Transient Protection	Yes, Agriculture Pump Station
Sodium Hypochlorite	Yes
Liquid Ammonium Sulfate	Yes
Sulfuric Acid	Yes
Sodium Bisulfite	Yes
Threshold Inhibitor	Yes
Sodium Hydroxide	Yes
Calcium Chloride	Yes
MF CIP Citric Acid and Sodium Hydroxide	Yes

3.3.1 Influent MF Feed Tank

An influent storage or MF feed tank will be provided for the MFRO Facility to ensure an uninterrupted supply to the downstream treatment processes. The tank will be sized to

provide a minimum retention time to allow for constant feed to the MF system. The influent MF feed tank is also sized to provide adequate storage to meet diurnal variations in the available HARRF tertiary effluent and demands in the agriculture recycled water system. The conceptual design criteria for the MF feed tank is summarized in Table 3-3.

Table 3-3 Influent MF Feed Tank Design Parameters

DESCRIPTION	VALUE
Quantity	1
Tank Type	Conventional Cast-In-Place or Pre-Stressed Concrete ¹
Minimum Retention Time, min.	30
Approx. Storage Capacity Required (Useable), gal	300,000 ²

1. Tank material to be finalized in detailed design.
2. Based on storage volume evaluation for total future flow condition; see Appendix A for model output.

3.3.2 MF Feed Pump Station and Strainers

The MFRO Facility will be equipped with a MF feed pump station that will transfer water from the MF feed storage tank to the MF system. The pumps will provide the required driving pressure across the membrane modules to produce filtrate under variable conditions of membrane fouling and operating pressure. Each pump will be equipped with a variable speed drive to control the pump speed to maintain a fixed pressure in the delivery pipeline.

Prior to entering the membrane units, the feed water would be passed through self-cleaning automatic strainers. The strainers would remove large particles and debris that could potentially damage the membranes. The final design micron rating of the strainers will be based on the requirements of the selected MFSS.

The conceptual design criteria for the MF feed pump station and auto strainers are summarized in Table 3-4.

Table 3-4 MF Feed Pump Station and Strainer Design Parameters

DESCRIPTION	VALUE
Quantity	3 (2 duty, 1 standby)
Type	Vertical Turbine, Barrel Mounted

DESCRIPTION	VALUE
Capacity per pump, gpm	950
Rated Head, feet	170
Drive	Variable Frequency
Power per pump (Brake/Motor), hp	51/60
Quantity	2
Type	Inline Auto Backwashing Strainers
Screen Opening Size, micron	250- 500
Capacity @ Clean Condition Head Loss, gpm	943
Motor, V/Hz/ph	120/60/1
Foot Print (includes all units, with piping and valves) Length (ft) / Width (ft)	16 / 9

3.3.3 Membrane Filtration System

Microfiltration or ultrafiltration (UF) membranes will be provided for membrane filtration (MF) system at the MFRO Facility as a pretreatment process for the RO system. MF is a physical separation process in which suspended/colloidal solids are removed from the feed stream through a porous membrane. MF provides a stable, high-quality feed stream for RO systems, while minimizing colloidal and particulate fouling of RO membranes. There are currently two configurations available for MF systems: submerged and pressurized systems. For the submerged system, the membranes are installed within basins and the filtrate drawn out by pulling a vacuum on the lumen side of the membranes. The membranes for a pressurized system are installed within vertical pressure vessels, arranged in racks and placed on a concrete slab. Although the configurations are very different, the performance and filtrate water quality of the membranes are essentially the same.

Based on discussions with the City during the conceptual design, it was decided to only consider pressurized MF systems for the MFRO Facility for the reasons presented herein. The pressurized membrane configuration for facilities < 10 mgd will have a lower construction cost for at least two reasons: (1) the systems will not require expensive coated steel or stainless steel membrane tanks; and (2) the system will not need a taller process structure to enclose the submerged membrane tanks. In addition, previous data have shown that pressure systems have cost advantage for lower capacity facilities

especially with treatment capacities less than 10 mgd. The pressurized system is also preferred from an operations perspective in terms of having easy access to the membrane modules for maintenance and the ability to visually inspect individual membrane modules during membrane integrity testing.

The conceptual design criteria for the MF system is summarized in Table 3-5. During the final design, the MF system design criteria will be further developed based on the MF Filtration System equipment specification and specific system requirements of the selected MF System Supplier (MFSS).

The conceptual design for the MFRO Facility is based on 2 duty MF skids and room for 1 future skid. Based on the preliminary initial agricultural reuse demands presented in Section 2, it may be necessary to design the skids to operate with a lower initial production capacity until the demand increases.

As previously discussed with the City, the MF system with no redundant skids, as it is deemed a non-critical facility and during temporary shutdowns the agricultural user demand could be met with blending Title 22 recycled water with potable water at the Hogback Tank. Also, if one unit was taken down for routine maintenance or cleaning, the plant could operate at a reduced production capacity, which would increase blend ratio of Title 22 recycled water: RO permeate; thereby increasing constituent concentrations of the recycled water sent to agriculture users.

As indicated, the MF system will be provided with a complete clean-in-place (CIP) system to clean and condition the membranes. The system consists of chemical addition, air scour, and reverse filtration pumping systems and the associated piping and controls.

Table 3-5 Membrane Filtration System Design Parameters

DESCRIPTION	VALUE
MF System	
Net Filtrate Flow, Design, gpm (24 hour basis)	1,754
Net Filtrate Flow, Minimum, gpm (24 hour basis)	868
No. of Skids	3 (2 duty, 1 future)
Redundancy	none
Capacity Per Skid, gpm	868
Recovery, minimum, %	93
Instantaneous Flux ≥ 20 °c, Maximum, gfd	25
Backwash Interval, min.	25-30
Maintenance Wash Interval, minimum, per week	1
CIP Interval, Minimum, per month	1
Typical CIP Duration, per skid, per clean	4-6 hours
Estimated Foot Print (per skid), Length (ft) / Width (ft)	38 / 6
MF CIP System	
Strainer	
Quantity	2
Type	Inline basket
MF CIP Heaters	
Quantity	2
Size, kW	63
MF CIP Tanks	
Quantity	2
MF CIP Tank, Gallons	3,900
MF CIP Pumps	
MF CIP Pumps	Provided by MFSS
No. of Pumps	2 (1 duty, 1 standby)
Pump type	Horizontal End Suction Centrifugal
Citric Acid Tote (50% w/w SG=1.5)	
Monthly use, gallons	200
Capacity, gallons	200 to 400

DESCRIPTION	VALUE
Citric Acid Transfer Pumps	
No. of Pumps	2 (1 duty, 1 standby)
Pump Type	Diaphragm Metering
Caustic Tote (25% w/w, SG=1.27)	
Monthly use, gallons	157
Capacity, gallons	400
Caustic Transfer Pumps	
No. of Pumps	2 (1 duty, 1 standby)
Pump Type	Diaphragm Metering
Sodium Hypochlorite (12.5% w/w, SG=1.2)	
Monthly use gallons (CIP + MW)	114
Capacity, gallons	NA / bulk storage
Sodium Hypochlorite Transfer Pumps	
2 (1 duty, 1 standby)	2 (1 duty, 1 standby)
Diaphragm Metering	Diaphragm Metering
Type	Inline basket

3.3.4 MF Filtrate Inter-Process Storage Tank

An inter-process storage tank would be provided between the MF and RO systems to equalize the MF filtrate flows prior to being fed to the RO systems. The inter-process tank will be sized for a retention time between the MF and RO processes as shown in Table 3-6. The inter-process storage tank also provides filtrate supply for MF system operation activities including: backwash, maintenance wash and CIP. As part of the final design, the selected MFSS shall confirm that the minimum storage capacity indicated in the table is sufficient to maintain operation of the downstream RO system at the design feed flow (under minimum RO recovery conditions) on a continuous basis, 24 hour per day, 7 days per week while accounting for additional storage capacity that is required when one duty MF skid is offline for daily membrane integrity testing and other maintenance activities. The minimum storage volume requirement shall be increased, if deemed necessary, to meet these requirements.

Table 3-6 Inter-Process Storage Tank Design Parameters

DESCRIPTION	VALUE
INTER-PROCESS STORAGE TANK	
Quantity	1
Tank Type	Conventional Cast-In-Place or Pre-Stressed Concrete ¹
Residence Time, minimum, min.	60
Minimum Storage Capacity (Useable), gal	159,000 ²

1. Tank material to be finalized in detailed design.
2. Minimum useable storage capacity to be confirmed with MFSS during the final design.

3.3.5 Reverse Osmosis Transfer Pump Station and Cartridge Filters

RO transfer pumps would pump MF filtrate from the inter-process storage tank through the cartridge filters to the suction side of the RO feed pumps. Cartridge filters are recommended immediately ahead of the RO system to guard against solids entering the system between the processes from process tanks, gaskets, chemical impurities and other like causes. The spiral wound RO elements can be easily clogged by suspended matter and debris, shortening membrane life. Cartridge filters would consist of wound hollow core polypropylene elements and should be replaced when the differential pressure from a clean state of roughly 2-4 psi increases to a fouled condition of 15 psi. Based on experience at similar facilities, if biofouling is controlled using chloramines, the cartridge filters should only require replacement every 6-9 months. The conceptual design criteria for the RO transfer pump stations and cartridge filters are provided in Table 3-7.

Table 3-7 RO Transfer PS and Cartridge Filters Design Parameters

DESCRIPTION	VALUE
RO Transfer Pumps	
Quantity	4 (4 duty)
Type	Vertical Turbine, Barrel Mounted
Capacity per pump, gpm	438
Rated Head, feet	170
Drive	Variable Frequency
Power per pump, Brake/Motor, hp	25/30
Cartridge Filters	

DESCRIPTION	VALUE
Quantity	2 (2 duty)
Type	Horizontal Pressure Vessel
Rated Capacity per unit, gpm	877
Nominal Pore Size, micron	5
Estimated Cartridge Filter Vessel Footprint, Length (ft) / Width (ft) / Height (ft)	5 / 2.5 / 4.5

3.3.6 Reverse Osmosis Feed Pump Station & Energy Recovery Considerations

The RO feed pumps would boost the pressure of the RO feed water to the RO membranes. To allow for different operating conditions on individual membrane trains, as determined by the degree of membrane fouling, each RO train would be served by its own, dedicated variable speed feed pump. Each pump would be a vertical turbine type mounted in a dedicated suction can. The speed of each RO feed pump would be controlled to maintain the permeate flow set-point of its respective RO train. As the membranes age and fouling of the membranes increases the required feed pressure would increase to maintain the same product flow. The conceptual design criteria for the RO feed pump station are provided in Table 3-8.

B&V discussed the advantages, limitations, and relative costs of incorporating Energy Recovery Devices (ERDs) into the RO system design with the City staff during the original MFRO Facility design phase. Based on the outcome of the discussions, the City decided to not incorporate the use of ERDs into the MFRO Facility at that time. However, in lieu of an ERD, each RO train should be equipped with a booster pump to increase the first stage concentrate flow pressure before it enters the second stage. This reduces energy consumption and also helps balance the fluxes between the two stages.

Table 3-8 RO Feed Pump Station

DESCRIPTION	VALUE
RO Feed Pump Station	
Quantity	4 (4 duty)
Type	Vertical Turbine, Barrel Mounted
Rated Capacity per pump, gpm	410
Discharge Pressure, psi	178
Drive	Variable Frequency

DESCRIPTION	VALUE
Power per pump, hp	75

3.3.7 Reverse Osmosis System

The RO system is a high pressure membrane process designed to remove dissolved constituents from the process feed water. Permeate produced by RO vessels will be combined into one permeate stream. The conceptual design criteria for the RO system are provided in Table 3-9.

The conceptual design criteria established a design and minimum recovery of 85 and 80 percent, respectively, as indicated in Table 3-9. This will allow optimization of the concentrate production while maintaining acceptable saturation levels of dissolved constituents to control membrane cleaning requirements. Only a portion of the water used for agricultural reuse will undergo RO treatment in order to reduce TDS and chloride concentrations.

Based on the noncritical nature of the facilities, the RO system was designed without redundancy. Therefore, if one RO skid is taken offline for cleaning or maintenance, the facility would operate at a reduced production capacity. For example, with one RO train offline, the maximum production capacity of the MFRO Facility would be reduced by 25% (i.e. 2.0 mgd to 1.5 mgd). However, space for a future 1.0 MGD RO unit is provided within the MFRO Facility.

Similar to the MF membranes, the RO membrane elements will require periodic cleaning to restore permeability. The RO membranes are typically cleaned when the permeability has reduced to approximately 85% percent of the initial stable conditions. However, a sudden drop in permeability may be grounds for cleaning sooner. Typically, the required cleaning frequency varies from once every three to six months to once per year.

The CIP system will be provided by the RO System Supplier (ROSS) per the RO System specification requirements developed as part of the final design. The general requirements for the CIP system are provided in Table 3-9.

The chemicals required for making the low and high pH CIP solutions (citric acid, sodium hydroxide, proprietary high pH cleaners) will be stored in the chemical feed building and pumped to the CIP tanks for dilution. Based on previous discussions with the City, all chemical systems will be liquid based. The makeup water for the CIP solutions will be pumped from the RO Flush Tank.

Table 3-9 RO System Design Parameters

DESCRIPTION	VALUE
RO System General	
Quantity of Trains	4 (4 duty)
Design Capacity, RO permeate, mgd	0.5
Maximum system design flux, gfd	12
Maximum first stage flux, gfd	13
Design/Minimum Recovery, %	85/80
Pressure Vessel Racks	
Number of Pressure Vessels per Train	18
Number of Stage 1 Pressure Vessels	10
Number of Stage 2 Pressure Vessels	5
Number of Stage 3 Pressure Vessels	3
Number of Membrane Elements per Vessel	6
Design Pressure, psig	450
Estimated RO Skid Foot Print (per Skid), Length (ft) / Width (ft)	30 / 9
Membrane Elements	
Number of elements per train	108
Area Per Element, sq. ft.	400
Maximum System Design Flux, gfd	12
Element Type	High Rejection Polyamide Composite
Average Salt Rejection, %	>99.5
RO CIP Chemical System	
RO CIP Tank	
Quantity	2
Type	FRP, Vertical Cylindrical, Dome Top, Flat Bottom
Usable Volume, gallons	1,500
RO Neutralization Tank	
Quantity	1
Type	FRP, Vertical Cylindrical, Dome Top, Flat Bottom
Usable Volume, gallons	3,000
RO CIP Heaters	

DESCRIPTION	VALUE
Quantity, per tank	2 (1 lead, 1 lag)
Type	Flanged Immersion
Power, kW	24
RO CIP Pump	
Quantity	2 (1 duty, 1 standby)
Type	Horizontal Centrifugal
Capacity per pump, gpm	500
Rated Head, feet	140
Power, hp	40
RO CIP pH Adjustment Dose Pump	
Quantity	1
Type	Diaphragm Metering

3.3.8 RO Flush System

When an RO train is shut down, residual feed water remains in the membrane elements. If the train is to remain offline for a period in excess of 30 minutes, the membranes should be flushed with permeate to ensure against fouling. The permeate flush is a low pressure, low flow process in which approximately two pressure vessel volume exchanges would be pumped through the train to waste. The system will be designed to activate automatically following a shut down if the train was not restarted in a prescribed amount of time (typically 20 minutes). Operators may also manually initiate flushing of an offline train. The conceptual design criteria for the RO Flush Systems are provided in Table 3-10.

Table 3-10 RO Flush System Design Criteria

DESCRIPTION	VALUE
RO Flush System	
RO Flush Tank	
Quantity	1
Type	Vertical Cylindrical, Flat Top
Total Storage Volume Required, gal	4,000

DESCRIPTION	VALUE
RO Flush Pumps	
Type	Horizontal Centrifugal
Quantity	2 (1 duty, 1 standby)
Capacity per unit, gpm	300
Rated Head, feet	140
Power per pump, hp	20

3.3.9 Post Treatment / Stabilization Chemical Addition

The RO permeate will be blended with Title 22 recycled water and stored in the Product Water Storage Tank prior to being pumped to the agricultural recycled water distribution system. Depending on the amount of Title 22 recycled water flow available for blending and the agriculture user demand, the ratio of Title 22 water to RO permeate is anticipated to range from 0 to 2.0. The blended water quality must minimize corrosion of the downstream components of the MFRO Facility including the concrete product water storage tank, pumping equipment, distribution system, and various components of the irrigation systems owned and maintained by the agriculture recycled water users. The stabilization goals for the blend water are provided in Table 3-11.

The two corrosion indices considered are Langelier saturation index (LSI) and calcium carbonate precipitation potential (CCPP). The LSI is a non-quantitative general indication of corrosivity, which is defined as the difference between the actual pH (measured) and the pH at which the water is saturated with calcium carbonate (calculated). In general, water with a negative LSI is considered aggressive while a positive LSI indicates the water is scale forming (non-aggressive). The CCPP is a quantitative indication of calcium carbonate precipitation potential where the values are expressed in mg/L as CaCO₃. Values indicate the amount of calcium carbonate that would dissolve (negative values) or precipitate (positive values) to reach equilibrium.

Table 3-11 Stabilization Goals for Blend Water Quality

CONSTITUENT	BLENDED WATER QUALITY GOAL
pH	7.5-8.5
Alkalinity (mg/L as CaCO ₃),	40
LSI	+0.1 - +0.5
CCPP (mg/L as CaCO ₃)	+2.0 - +8.0

Various post treatment alternatives can be used to achieve the stabilization goals presented above. One method for stabilizing RO permeate is the use of decarbonation towers to strip carbon dioxide to increase pH followed by lime which adds alkalinity and hardness. Though this method offers potential cost savings over other alternatives, the use of lime has been shown to be very O&M intensive and difficult to control dosing. This alternative was discussed with the City during the conceptual design and eliminated for further consideration.

Three other chemical treatment alternatives were considered to stabilize the blend water including:

- Alternative 1: Calcium Chloride (CaCl_2) + Sodium Hydroxide (NaOH) + Sodium Bicarbonate (NaHCO_3)
- Alternative 2: CaCl_2 + NaOH + Carbon Dioxide (note: in this alternative carbon dioxide is added to form alkalinity while maintaining a lower pH)
- Alternative 3: CaCl_2 + NaOH

Alternatives 1 and 2 were eliminated for further consideration due to the need for a large chemical storage silos required to store bulk chemicals (which, due to height requirements, would likely need to be outdoors) and the need for outdoor gaseous storage for carbon dioxide, respectively.

The required dose rates to meet the stabilization goals for Alternative 3 were estimated using Water!Pro™ Corrosion Control and Treatment Process Analysis Program Version 3. The model inputs included RO permeate and bypass water quality for various constituents which were estimated using RO modeling software and historical water quality data (average values) from HARRF. The chemical dose rates required to meet stabilization goals for Alternative 3 under various blending scenarios are provided in Table 3-12. The results show calcium chloride would only be required for the blend conditions below 0.4 and the amount of sodium hydroxide required decreases with increasing blend ratio. As indicated, the analysis was done for two different feed pH conditions (i.e. 6.8 and 7.0). The primary purpose of lowering the feed pH is to lower the scaling potential of the RO concentrate to reduce the risk of membrane fouling, particularly in the third stage tail end elements. The results were used to size the chemical storage and dosing systems associated with the post treatment system.

Table 3-12 Chemical Post Treatment Chemical Dosing Requirements

BLEND RATIO (TITLE 22 RECYCLED WATER : RO PERMEATE)	CHEMICAL DOSING REQUIREMENT (MG/L) TO ACHIEVE STABILIZATION GOALS AT DIFFERENT BLENDING CONDITION		
	SULFURIC ACID @ RO FEED	CALCIUM CHLORIDE @ RO PERMEATE	SODIUM HYDROXIDE @ RO PERMEATE
RO Feed pH 6.8			
0:1	39	60	60
0.4:1	39	0	29
1:1	39	0	23
2:1	39	0	17
RO Feed pH 7.0			
0:1	22	60	35
0.4:1	22	0	24
1:1	22	0	19
2:1	22	0	15

3.3.10 Product Water Storage Tank

As indicated in Section 2, the MFRO Facility product water will be blended with Title 22 recycled water to meet agricultural water quality requirements. A product water storage tank will be installed to provide flow storage equalization for MFRO product water, influent flow blend bypass and varying agriculture recycled water demands. Table 3-13 provides the conceptual design criteria associated with the product water storage tank. MFRO Treated and raw Title 22 recycled water bypass influent flows will be blended by use of an inline static mixer.

Table 3-13 MFRO Product Water Storage Tank

DESCRIPTION	VALUE
Blend Tank	
Quantity	1
Tank Type	Pre-stressed Concrete, Partially Buried
Storage Capacity (Useable), gal	800,000 ¹

1. Based on storage volume evaluation for total future flow condition; see Appendix A for model output.

3.3.11 Product Water Pump Station

The product water pump station will supply product water from the MFRO Facility to the Hogback Reservoir and agriculture distribution system. Table 3-14 summarizes the design criteria for the product water pump station. Pump station design will be consistent with HIS standards. The pump station will consist of five pumps (four duty and one standby), each rated for 1,820 gpm to meet PHWWF capacity requirements of 7,280 gpm (10.48 mgd). Pumps will be electric motor driven and equipped with variable frequency drives to supply wide varying seasonal demands. Based on the generally accepted VFD operating range (approximately 60% to 100%) each pump will have a total pump capacity of 1,090 to 1,820 gpm.

The individual pump trains will be provided with an isolation valve, check valve and other necessary appurtenances. A magnetic flow meter will be provided on the main discharge header. Individual pump train flow meters will not be provided to minimize overall pump station and discharge piping footprint.

A stand-by engine generator for the MFRO Facility will be sized to support the operation of this pump station, allowing for distribution of the product water during power outages.

System transient modeling will be performed during detailed design to determine surge mitigation requirements. Surge mitigation improvements will likely include air release vacuum valves at critical locations in the conveyance system and a surge tank with supporting compressed air system.

Table 3-14 Product Water Pump Station Design Parameters

DESCRIPTION	VALUE
Quantity	5 (4 duty, 1 standby)
Type	Vertical Turbine, Barrel Mounted
Capacity per pump (60%/100% speed), gpm	1,090/1,820
Rated Head, feet	550
Discharge Pressure, psi	240 psi
Drive	Variable Frequency
Power per pump, Brake/Motor, hp	332/350
Surge Mitigation System	Surge Tank with Compressed Air System

3.4 CHEMICAL FEED AND STORAGE SYSTEMS

The MFRO Facility processes will require chemical feed and storage facilities for treatment. Chemical storage shall be supplied via bulk storage tanks and totes. Chemical dosing shall be accomplished via metering pumps to various feed points. Table 3-15 summarizes delivery type, feed point and the purpose for the chemical to be utilized by the MFRO Facility. See the following sections for conceptual design requirements for the equipment associated with each chemical.

Table 3-15 MFRO Facility Chemical Summary

CHEMICAL	CHEMICAL DELIVERY & STORAGE	DOSING LOCATION / PURPOSE
Sodium Hypochlorite, 12.5%	Bulk	MF Feed / Chloramine Biofouling MF CIP / Membrane Cleaning and Neutralization Blend Water / Chloramine Disinfection Residual
Liquid Ammonium Sulfate, 40%	Tote	MF Feed / Chloramine Blend Water / Chloramine
Sulfuric Acid, 93%	Bulk	RO Feed / pH Adjustment
Sodium Bisulfite, 25%	Tote	MF CIP / Neutralization RO Feed / Membrane Preservation
Antiscalant, 100%	Tote	RO Feed / Limit Scaling
Sodium Hydroxide, 50%	Bulk	MF CIP / Membrane Cleaning and Neutralization RO CIP / Membrane Cleaning and Neutralization Blend Water / pH and Alkalinity Adjustment
Calcium Chloride, 38%	Bulk	Blend Water / Increase Hardness
Citric Acid, 50%	Tote	MF CIP / Membrane Cleaning and Neutralization RO CIP Tank / Membrane Cleaning and Neutralization
Proprietary RO Base	Tote	RO CIP Tank / Membrane Cleaning

Chemical storage and feed systems will be located inside the Chemical Feed Building and provided with separate containment areas for incompatible chemicals as specified by the 2012 International Fire Code (IFC).

Chemical systems that are rated as hazardous and include chemical storage above the maximum allowable quantity require secondary containment, sprinklers, and ventilation. Secondary containment must be sized for the single largest tank plus the volume from 20

minutes of sprinkler water, per the IFC. As a best practice Black & Veatch provides secondary containment for all chemicals.

The IFC also has requirements for separation of incompatible materials. When incompatible materials are stored in volumes greater than 0.5 gallons they must be separated by 20 feet or by a noncombustible partition extending not less than 18 inches above and to the sides of the stored material.

The chemical areas in the Chemical Storage Building will be separated into acids and bases such that incompatible chemicals are kept separate. There will be two separate areas for the basic chemicals and two containment areas for the acidic chemicals. These areas will be oriented such that a noncombustible partition can be installed to keep them separate. The sulfuric acid will be stored in the Chemical Storage Building in a dedicated room.

Table 3-16 lists the chemical hazard rating and the maximum allowable storage quantity that is not regulated by the IFC. Hazardous chemicals exceeding the maximum allowable storage quantity require secondary containment, sprinklers, and ventilation as stipulated by the IFC. Table 3-17 lists all the chemicals at the MFRO Chemical Building and their incompatibilities.

Chemical piping shall be provided with mitigation measures for freezing, as required, based on the freezing point of each chemical and installation locations of the piping to prevent freezing.

Table 3-16 Chemical Hazard Ratings

CHEMICAL	HAZARD RATING	MAXIMUM ALLOWABLE QUANTITY ¹	MAXIMUM ALLOWABLE QUANTITY EXCEEDED?
Sodium Hypochlorite, 12.5%	Health Hazard – Corrosive	500 gallons	Yes
Liquid Ammonium Sulfate, 40%	None	None	No
Sulfuric Acid, 93% ²	Physical – Class 2 Water Reactive	50 pounds (3.2 gallons of 93% sulfuric acid)	Yes ³
Sodium Bisulfite, 25%	Health Hazard – Corrosive	500 gallons	No
Antiscalant, 100%	None	None	No
Sodium Hydroxide, 50%	Health Hazard – Corrosive	500 gallons	Yes
Calcium Chloride, 38%	None	None	No

CHEMICAL	HAZARD RATING	MAXIMUM ALLOWABLE QUANTITY ¹	MAXIMUM ALLOWABLE QUANTITY EXCEEDED?
Citric Acid, 50%	None	None	No
Proprietary MF Base	Unknown	Unknown	Unknown

1. The maximum quantity that is not regulated by the IFC. Above this quantity, secondary containment, sprinklers, and ventilation are required as stipulated by the IFC.
2. Storage of sulfuric acid in amounts greater than 25 tons (3,247 gallons of 93% sulfuric acid) requires a detached building.
3. Sulfuric acid storage amount exceeds the maximum allowable quantity, thus it is subject to the requirements in Chapter 50 of the IFC. However, the storage amount does not exceed 25 tons, thus a detached building is not required.

Table 3-17 Incompatible Materials

CHEMICAL	CHEMICAL TYPE	SODIUM HYPOCHLORITE	AMMONIUM SULFATE	SULFURIC ACID	SODIUM BISULFITE	ANTISCALANT	SODIUM HYDROXIDE	CALCIUM CHLORIDE	CITRIC ACID	PROPRIETARY RO BASE
Sodium Hypochlorite, 12.5%	Base, Oxidizer	-					None			None
Liquid Ammonium Sulfate, 40%	Acid		-		None	None		None	None	
Sulfuric Acid, 93%	Acid			-						
Sodium Bisulfite, 25%	Acid		None		-	None		None	None	
Antiscalant, 100%	Acid		None		None	-		None	None	
Sodium Hydroxide, 50%	Base	None					-			None
Calcium Chloride, 38%	Acid		None		None	None		-	None	
Citric Acid, 50%	Acid		None		None	None		None	-	
Proprietary MF Base	Base	None					None			-

1. "I" indicates incompatible chemicals

3.5 CHEMICAL EQUIPMENT REQUIREMENTS

Nine chemicals will be used at the MFRO facility for various purposes. Conceptual design criteria associated with the equipment required for each chemical is included herein. For chemicals that require small storage volumes (i.e. liquid ammonium sulfate, sodium bisulfite, antiscalant, citric acid and proprietary membrane cleaning chemicals) the conceptual design is based on chemicals being delivered to the site in totes and then transferred to a bulk storage tank. Based on discussions with the City, it would be acceptable as part of the final design to feed these chemicals directly from the totes thereby eliminating the need for bulk tanks and transfer pumps so long as a spare tote is provided for each chemical and the totes are located in a chemical containment area.

3.5.1 Sodium Hypochlorite System

One sodium hypochlorite system will be provided to feed chemical to the following feed points:

- MF Feed
- RO Permeate/Title 22 bypass blend (prior to entering the Product Water Storage Tank)
- MF CIP

Sodium hypochlorite will be delivered to the site by tanker truck and stored in one vertical, flat bottom FRP storage tank located inside the MFRO Chemical Building. The bulk storage tank will be sized for an entire bulk truckload of sodium hypochlorite. Metering pumps will pump the sodium hypochlorite from the bulk storage tank to the application points. A separate set of metering pumps is provided for the MF Feed and the RO Permeate feed points to avoid a cross contamination. Table 3-18 lists the entire design basis for the sodium hypochlorite system.

Table 3-18 Sodium Hypochlorite Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Sodium Hypochlorite	
Chemical Information	
Delivered Chemical	12.5% Sodium Hypochlorite (10.6% as Cl ₂), SG = 1.175, Freezing Point = -3°F
Feed Chemical	10% Sodium Hypochlorite (8.8% as Cl ₂), SG = 1.175, Freezing Point = -3°F

DESCRIPTION	DESIGN CRITERIA
Sodium Hypochlorite	
Feed Points	MF Feed RO Permeate/Title 22 Bypass Blend MF CIP (pumps by Membrane Supplier)
Chemical Dosage as 100% Chlorine¹	
Maximum, mg/L	5
Average, mg/L	3
Minimum, mg/L	1
Plant Flow – MF Feed	
Maximum, mgd	2.69
Average, mgd	2.69
Minimum, mgd	0.67
Chemical Feed Flow – MF Feed	
Maximum (as 10% NaOCl), gph	5.6
Average (as 12.5 NaOCl), gph	2.7
Minimum (as 12.5% NaOCl), gph	0.2
Plant Flow – RO Permeate/Title 22 Bypass Blend	
Maximum, mgd	2
Average, mgd	2
Minimum, mgd	0.5
Chemical Feed Flow – RO Permeate/Title 22 Bypass Blend	
Maximum (as 10% NaOCl), gph	4.0
Average (as 12.5 NaOCl), gph	2.0
Minimum (as 12.5% NaOCl), gph	0.2
Chemical Storage	
Storage Type	Vertical, Cylindrical, FRP Tank
Number of Tanks	1
Tank Volume, gal	5700
Tank Diameter, ft	9
Tank Straight Side Height, ft	13

DESCRIPTION	DESIGN CRITERIA
Sodium Hypochlorite	
Days of Storage, AVG/MAX	45/27
Future Demand (50% Flow increase) Days of Storage, AVG/MAX (Chemical Feed Flow)	30/18
Level Indication	Sight gauge Pressure Transducer
Feed Equipment – MF Feed Point	
Pump Type	Peristaltic
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph ²	0.2 to 5.6
Turndown Ratio	28:1
Control	Flow-pace control Manual and automatic start-stop Manual and Automatic
Feed Equipment – RO Permeate/Title 22 Bypass Blend Feed Point	
Pump Type	Peristaltic
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph ²	0.2 to 5.6
Turndown Ratio	28:1
Control	Flow-pace control Manual and automatic start-stop Manual and Automatic
Feed Equipment – MF MW and CIP Feed Point	
Pump Type	Provided by Membrane Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	TBD

DESCRIPTION	DESIGN CRITERIA
Sodium Hypochlorite	
Piping/Valves	
Pipe Material	Schedule 80 CPVC
Valve Type	Diaphragm

1. These dosages are the same for the MF Feed and the RO Permeate/Title 22 Bypass Blend feed points.
2. Metering pump capacities are identical so that the MF Feed and RO Permeate/Title 22 Bypass Blend pump models will be the same for system simplification.

3.5.2 Liquid Ammonium Sulfate System

One liquid ammonium sulfate system will be provided to feed chemical to the following feed points for the purpose of chloramines:

- MF Feed
- RO Permeate/Title 22 bypass blend (prior to entering the Product Water Storage Tank)

Ammonium sulfate will be delivered to the site in totes, and metering pumps will pump the ammonium sulfate from the totes to the application points. A separate set of metering pumps is provided for the MF Feed and the RO Permeate feed points to avoid a cross contamination. Table 3-19 lists the design basis for the ammonium sulfate system.

Table 3-19 Liquid Ammonium Sulfate Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Liquid Ammonium Sulfate	
Chemical Information	
Delivered Chemical	40% Ammonium Sulfate, 10.3% ammonia (NH ₃) SG = 1.228, Freezing Point = -5.3° F
Fed Chemical	40% Ammonium Sulfate, 10.3% ammonia (NH ₃) SG = 1.228, Freezing Point = -5.3° F
Feed Point	MF Feed RO Permeate/Title 22 Bypass Blend
Chlorine Concentration, mg/L of Chlorine¹	
Maximum, mg/L	5
Average, mg/L	3
Minimum, mg/L	1

DESCRIPTION	DESIGN CRITERIA
Liquid Ammonium Sulfate	
Chemical Dosage, mg/L as Ammonia (NH₃)¹	
Maximum, mg/L (based on 3 parts Cl ₂ to 1 part NH ₃)	1.67
Average, mg/L (based on 4 parts Cl ₂ to 1 part NH ₃)	0.75
Minimum, mg/L (based on 5 parts Cl ₂ to 1 part NH ₃)	0.2
Plant Flow – MF Feed Point	
Maximum, mgd	2.69
Average, mgd	2.69
Minimum, mgd	0.67
Chemical Feed Flow, as 40% Ammonium Sulfate – MF Feed Point	
Maximum, gph	1.48
Average, gph	0.66
Minimum, gph	0.04
Plant Flow – RO Permeate/ Title 22 Bypass Blend	
Maximum, mgd	2
Average, mgd	2
Minimum, mgd	0.5
Chemical Feed Flow, as 40% Ammonium Sulfate – RO Permeate/ Title 22 Bypass Blend	
Maximum, gph	1.1
Average, gph	0.49
Minimum, gph	0.03
Chemical Storage	
Storage Type	Vertical, Cylindrical, FRP TankTote
Number of TanksTotes	13
Tank-Tote Volume, gal	850300
Diameter, ft	4
Straight Side Height, ft	10
Days of Storage, AVG/MAX (Chemical Feed Flow)	3133/4415

DESCRIPTION	DESIGN CRITERIA
Liquid Ammonium Sulfate	
Future Demand (50% Flow increase) Days of Storage, AVG/MAX (Chemical Feed Flow)	21/9
Level Indication	Sight Gauge Scale
Feed Equipment – MF Feed Point	
Pump Type	Peristaltic
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph ²	0.03 to 1.48
Turndown Ratio	50:1
Control	Flow-pace control Manual and automatic start-stop Manual and Automatic
Feed Equipment – RO Permeate/Title 22 Bypass Blend Feed Point	
Pump Type	Peristaltic
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph ²	0.03 to 1.48
Turndown Ratio	50:1
Control	Flow-pace control Manual and automatic start-stop Manual and Automatic
Piping/Valves	
Pipe Material	Schedule 80 PVC
Valve Type	Ball

1. These dosages are the same for the MF Feed and the RO Permeate/Title 22 Bypass Blend feed points.
2. Metering pump capacities are identical so that the MF Feed and RO Permeate/Title 22 Bypass Blend pump models will be the same for system simplification.

3.5.3 Sulfuric Acid System

One sulfuric acid system will be provided to feed chemical to the following feed points for the purpose of pH adjustment:

- RO Feed

Sulfuric acid will be delivered to the site by tanker truck and stored in one vertical, flat bottom lined steel storage tank located inside the MFRO Chemical Building. The bulk storage tank will be sized for an entire bulk truckload of sulfuric acid. Metering pumps will pump the sulfuric acid from the bulk storage tank to the application point. Sulfuric acid will be located in a dedicated room due to its hazardous properties. Table 3-20 lists the design basis for the sulfuric acid system.

Table 3-20 Sulfuric Acid Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Sulfuric Acid	
Chemical Information	
Delivered Chemical	93% Sulfuric Acid, SG = 1.84, Freezing Point = 30°F
Fed Chemical	93% Sulfuric Acid, SG = 1.84, Freezing Point = 30°F
Feed Point	RO Feed
Chemical Dosage as 100% Sulfuric Acid	
Maximum, mg/L	82
Average, mg/L	39
Minimum, mg/L	22
Process Stream Flow	
Maximum, mgd	2.5
Average, mgd	2.5
Minimum, mgd	0.63
Chemical Feed Flow, as 93% Sulfuric Acid	
Maximum, gph	5.0
Average, gph	2.4
Minimum, gph	0.34
Chemical Storage	
Storage Type	Vertical, Cylindrical, Lined Steel Tank
Number of Tanks	1
Tank Volume, gal	3200
Diameter, ft	8
Straight Side Height, ft	10

DESCRIPTION	DESIGN CRITERIA
Sulfuric Acid	
Days of Storage, AVG/MAX (Chemical Feed Flow)	56/27
Future Demand (50% Flow increase) Days of Storage, AVG/MAX (Chemical Feed Flow)	38/18
Level Indication	Sight Gauge Pressure Transducer
Feed Equipment	
Pump Type	Motorized Diaphragm
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	0.3 to 5
Turndown Ratio	16.6:1
Control	Flow-pace control Manual and automatic start-stop Manual and automatic stroke length and stroke speed control
Dilution Water	
Water flow, GPM	3.0
Post-diluted sulfuric acid concentration	5%
Control	Manual
Piping/Valves	
Pipe Material	Alloy 20
Valve Type	Ball

3.5.4 Sodium Bisulfite System

One sodium bisulfite system will be provided to feed chemical to the following feed points for the purpose of biofouling control:

- MF MW and CIP Neutralization System
- MF Backwash Pumps
- RO Feed

Sodium bisulfite will be delivered to the site in totes ~~and transferred into one vertical, flat bottom FRP storage tank located inside the MFRO Chemical Building. The storage tank will be sized for an entire tote of sodium bisulfite.~~ and Metering metering pumps will pump the sodium bisulfite from the ~~storage tank~~ totes to the application points. Table 3-21 lists the design basis for the sodium bisulfite system.

Table 3-21 Sodium Bisulfite Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Sodium Bisulfite	
Chemical Information	
Delivered Chemical	25% Sodium Bisulfite, SG = 1.19, Freezing Point = -4° F
Fed Chemical	25% Sodium Bisulfite, SG = 1.19, Freezing Point = -4° F
Feed Point	MF CIP (pumps provided by Membrane Supplier) MF Backwash Pumps Effluent RO Feed
Chemical Dosage as 100% Sodium Bisulfite	
Maximum, mg/L	4
Average, mg/L	4
Minimum, mg/L	4
Plant Flow	
Maximum, mgd	2.5
Average, mgd	2.5
Minimum, mgd	0.63
Chemical Feed Flow, as 25% Sodium Bisulfite	
Maximum, gph	1.4
Average, gph	1.4
Minimum, gph	0.3
Chemical Storage	
Storage Type	Vertical, Cylindrical, FRP Tank <u>Tote</u>
Number of Tanks <u>Totes</u>	13 <u>13</u>
Tank-Tote <u>Tote</u> Volume, gal	1000 <u>300</u>
Diameter, ft	5

DESCRIPTION	DESIGN CRITERIA
Sodium Bisulfite	
Straight Side Height, ft	9
Days of Storage, AVG/MAX	3027/3027
Future Demand (50% Flow increase) Days of Storage, AVG/MAX (Chemical Feed Flow)	1918/1918
Level Indication	Sight gauge Pressure Transducer <u>Scale</u>
Feed Equipment – MF CIP Feed Point	
Pump Type	Provided by Membrane Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	TBD
Feed Equipment – MF Backwash Pumps Effluent Feed Point	
Pump Type	Provided by Membrane Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	Flow-pace control Manual and automatic start-stop Manual and Automatic
Feed Equipment – RO Feed Point	
Pump Type	Motorized Diaphragm
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	0.3 to 1.4
Turndown Ratio	4.7:1
Control	Flow-pace control Manual and automatic start-stop Manual and automatic stroke length and stroke speed control
Piping/Valves	
Pipe Material	Schedule 80 PVC

DESCRIPTION	DESIGN CRITERIA
Sodium Bisulfite	
Valve Type	Ball

3.5.5 Antiscalant System

One antiscalant system will be provided to feed chemical to the following feed points for the purpose of scale prevention:

- RO Feed

Antiscalant will be delivered to the site in totes ~~and transferred into one vertical, flat bottom FRP storage tank located inside the MFRO Chemical Building. The storage tank will be sized for an entire tote of antiscalant-, and Metering metering~~ pumps will pump the antiscalant from the ~~storage tank~~totes to the application points.

Table 3-22 Antiscalant Feed and Storage Design Parameters

DESCRIPTION	DESIGN CRITERIA
Antiscalant	
Chemical Information	
Delivered Chemical	100% Antiscalant, SG = 1.09, Freezing Point = 0° F
Fed Chemical	100% Antiscalant, SG = 1.09, Freezing Point = 0° F
Feed Point	RO Feed
Chemical Dosage as 100% Antiscalant	
Maximum, mg/L	5
Average, mg/L	3
Minimum, mg/L	1
Plant Flow	
Maximum, mgd	2.5
Average, mgd	2.5
Minimum, mgd	0.63
Chemical Feed Flow, as 100% Antiscalant	
Maximum, gph	0.48

DESCRIPTION	DESIGN CRITERIA
Antiscalant	
Average, gph	0.29
Minimum, gph	0.02
Chemical Storage	
Storage Type	Vertical, Cylindrical, FRP Tank <u>Tote</u>
Number of Tanks <u>Totes</u>	1
Tank Volume, gal	400 <u>300</u>
Diameter, ft	4
Straight Side Height, ft	6
Days of Storage, AVG/MAX	5843/3526
Future Demand (50% Flow increase) Days of Storage, AVG/MAX (Chemical Feed Flow)	3829/2317
Level Indication	Sight gauge Scale
Feed Equipment	
Pump Type	Motorized Diaphragm
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	0.02 to 0.5
Turndown Ratio	25:1
Control	Flow-pace control Manual and automatic start-stop Manual and automatic stroke length and stroke speed control
Piping/Valves	
Pipe Material	Schedule 80 PVC
Valve Type	Ball

3.5.6 Sodium Hydroxide System

One sodium hydroxide system will be provided to feed chemical to the following feed points for the purpose of pH adjustment:

- MF CIP
- RO Permeate

Sodium hydroxide will be delivered to the site by tanker truck and stored in one vertical, flat bottom carbon steel storage tank located inside the MFRO Chemical Building. The bulk storage tank will be sized for an entire bulk truckload of sodium hydroxide. Metering pumps will pump the sodium hydroxide from the bulk storage tank to the application points. Table 3-23 lists the design basis for the sodium hydroxide system.

Table 3-23 Sodium Hydroxide Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Sodium Hydroxide	
Chemical Information	
Delivered Chemical	50% Sodium Hydroxide, SG = 1.53, Freezing Point = 55° F
Fed Chemical	50% Sodium Hydroxide, SG = 1.53, Freezing Point = 55° F
Feed Point	MF CIP (pumps by Membrane Supplier) RO Permeate
Chemical Dosage as 100% Sodium Hydroxide	
Maximum, mg/L	80
Average, mg/L	60
Minimum, mg/L	15
Plant Flow	
Maximum, mgd	2
Average, mgd	2
Minimum, mgd	0.5
Chemical Feed Flow, as 50% Sodium Hydroxide	
Maximum, gph	8.8
Average, gph	6.5
Minimum, gph	0.4
Chemical Storage	
Storage Type	Vertical, Cylindrical, Carbon Steel Tank
Number of Tanks	1
Tank Volume, gal	5500
Diameter, ft	9
Straight Side Height, ft	13

DESCRIPTION	DESIGN CRITERIA
Sodium Hydroxide	
Straight Side Height, ft	13
Days of Storage, AVG/MAX	35/26
Future Demand (50% Flow increase) Days of Storage, AVG/MAX (Chemical Feed Flow)	23/17
Level Indication	Sight gauge Pressure Transducer
Feed Equipment – MF CIP System	
Pump Type	Provided by Membrane Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	TBD
Feed Equipment – RO Permeate	
Pump Type	Motorized Diaphragm
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	0.4 to 8.8
Turndown Ratio	22:1
Control	Flow-pace control Manual and automatic start-stop Manual and automatic stroke length and stroke speed control
Piping/Valves	
Pipe Material	Carbon steel or <u>CPVC (material to be finalized during design; CPVC preferred by the City)</u>
Valve Type	Plug

3.5.7 Calcium Chloride System

One calcium chloride system will be provided to feed chemical to the following feed points for the purpose of hardness addition:

- RO Permeate

Calcium chloride will be delivered to the site by tanker truck and stored in one vertical, flat bottom FRP storage tank located inside the MFRO Chemical Building. The bulk storage tank will be sized for an entire bulk truckload of calcium chloride. Metering pumps will pump the calcium chloride from the bulk storage tank to the application points. Table 3-24 lists the design basis for the calcium chloride system.

Table 3-24 Calcium Chloride Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Calcium Chloride	
Chemical Information	
Delivered Chemical	38% Calcium Chloride, SG = 1.392, Freezing Point = 48° F
Fed Chemical	38% Calcium Chloride, SG = 1.392, Freezing Point = 48° F
Feed Point	RO Permeate
Chemical Dosage as 100% Calcium Chloride	
Maximum, mg/L	60
Average, mg/L	60
Minimum, mg/L	N/A
Plant Flow	
Maximum, mgd	2
Average, mgd	2
Minimum, mgd	0.5
Chemical Feed Flow, as 38% Calcium Chloride	
Maximum, gph	9.5
Average, gph	9.5
Minimum, gph	N/A
Chemical Storage	
Storage Type	Vertical, Cylindrical, FRP Tank
Number of Tanks	1
Tank Volume, gal	8000
Diameter, ft	10
Straight Side Height, ft	15
Days of Storage, AVG/MAX	35/35

DESCRIPTION	DESIGN CRITERIA
Future Demand (50% Flow increase) Days of Storage, AVG/MAX	23/23
Level Indication	Sight gauge Pressure Transducer
Feed Equipment	
Pump Type	Peristaltic
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	9.5
Turndown Ratio	50:1
Control	Flow-pace control Manual and automatic start-stop Manual and Automatic
Piping/Valves	
Pipe Material	CPVC
Valve Type	Ball

3.5.8 Citric Acid

One citric acid system will be provided to feed chemical to the following feed points for the purpose of pH adjustment:

- MF CIP
- RO CIP

Citric acid will be delivered to the site in totes and located inside the MFRO Chemical Building. Metering pumps will pump the citric acid from the storage tote to the application points. Table 3-25 lists the design basis for the citric acid system.

Table 3-25 Citric Acid Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Citric Acid	
Chemical Information	
Delivered Chemical	50% Citric acid, SG = 1.24, Freezing Point = 32° F

DESCRIPTION	DESIGN CRITERIA
Citric Acid	
Fed Chemical	50% Citric acid, SG = 1.24, Freezing Point = 32° F
Feed Points	MF CIP (pumps by MF Supplier) RO CIP (pumps by RO Supplier)
Chemical Storage	
Storage Type	Tote
Number of Totes	One
Tote Volume, gal	300
Days of Storage, AVG/MAX	TBD (based on membrane and RO supplier)
Level Transmitter	Scale
Feed Equipment – MF CIP Feed Point	
Pump Type	Provided by Membrane Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	TBD
Feed Equipment – RO CIP Feed Point	
Pump Type	Provided by RO Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	TBD
Piping/Valves	
Pipe Material	Schedule 80 PVC
Valve Type	Ball

3.5.9 Proprietary RO Base

One proprietary RO base system will be provided to feed chemical to the following feed points for the purpose of cleaning the RO membranes.

- RO CIP

A proprietary basic blend will be delivered to the site in totes and located inside the MFRO Chemical Building. Metering pumps will pump the proprietary basic blend from the storage tote to the application points. Table 3-26 lists the design basis for the proprietary RO base system.

Table 3-26 Proprietary RO Base Feed and Storage Design Criteria

DESCRIPTION	DESIGN CRITERIA
Proprietary RO Base	
Chemical Information	
Delivered Chemical	Concentration, SG, and Freezing Point are TBD
Fed Chemical	Concentration, SG, and Freezing Point are TBD
Feed Points	RO CIP (pumps by RO Supplier)
Chemical Storage	
Storage Type	Tote
Number of Totes	One
Tote Volume, gal	300
Days of Storage, AVG/MAX	TBD (based on RO supplier)
Level indication	Scale
Feed Equipment – RO CIP Feed Point	
Pump Type	Provided by RO Supplier
Number of pumps	2 (1-Duty, 1-Standby)
Pump Capacity, gph	TBD
Turndown Ratio	TBD
Control	TBD
Piping/Valves	
Pipe Material	TBD
Valve Type	TBD

3.6 PROCESS WASTE STREAMS

3.6.1 Brine Waste Pipeline

RO concentrate will be discharged to the HARRF outfall through a 16-inch dedicated brine pipeline. A new manhole will be provided to tie into the existing brine line along the storm drain channel.

3.6.2 Sanitary Sewer

Waste streams including MF strainer backwash, MF backwash, MF/RO CIP, as well as miscellaneous wastes (from tank/floor drains, chemical containment sumps, etc.) and sanitary sewer waste will be discharged to an onsite sanitary sewer and conveyed to HARRF for treatment. Blending, dilution, or neutralization of chemical solutions may be required prior to discharge. Chemical neutralization requirements will be evaluated during preliminary design. If required, each of the waste streams would be collected and directed to a waste equalization tank where the waste flows can be equalized and neutralized prior to disposal to the sanitary sewer.

3.6.3 Other Waste Streams

Drainage from bulk chemical containment areas would be collected within separate spill containment curbs or pits each with a collection sump. Each sump would be equipped with a drain valve with an extended handle and alarm. Liquid collected in the sumps, if determined to be non-hazardous or neutralized, can be drained to the sanitary sewer system. If determined to be hazardous, the contents would be pumped using a portable pump to a tank truck to be disposed of as a hazardous material offsite.

3.7 ELECTRICAL

Electrical power for the MFRO Facility will be supplied by San Diego Gas & Electric (SDG&E). It is assumed that medium voltage power will be brought on site to a lineup of medium voltage switchgear north of the MFRO Facility. Utility service shall be routed from the medium voltage switchgear to a secondary unit transformer located outside the MFRO Electrical Room. Service entrance details will be coordinated with the electric utility during detailed design. MFRO Facility switchgear, Motor Control Centers (MCC), Adjustable Frequency Drives (AFD), low voltage power panels, and other miscellaneous electrical equipment would be installed in a MFRO Facility process building electrical room. Electrical power equipment types and load requirements will be evaluated in detail during design.

3.8 INSTRUMENTATION AND CONTROL

The MFRO Facility will include provision for an automated Plant Control System (PCS). The PCS provides automated monitoring and data acquisition for multiple data points for each process system and sub-system throughout the facility. This is achieved utilizing a series of programmable logic controllers (PLCs) to be installed throughout the MFRO Facility. The PLCs, in conjunction with control human machine interface (HMI) software and hardware, will provide all process monitoring, process status, and archival process storage and reporting for the facility. The majority of the facility's process monitoring and control systems added under this project will consist of I&C systems designed for automatic and manual control of the systems via the PCS. In each instance, the facility will utilize PCS hardware and software matching what is currently in use at HARRF. HMI operator workstations will be located on site to provide full control of all plant facility systems. In addition, duplicate HMI control screens will be accessible via the HMI workstations at HARRF. The HARRF PCS will communicate to the facility PCS via fiber optic cabling to be installed linking the two facilities. The fiber optic conduit will be installed as part of a pipeline project, however the fiber optic cable installation will be part of the MFRO project. The design will stress efficient monitoring and control of equipment and process conditions. The system design will anticipate and facilitate the integration of future plant expansions. The I&C design will be in accordance with local codes, the criteria outlined in this report and other requirements applicable to a water treatment facility. Instrumentation and Control will be evaluated during preliminary design.

4 Site Plan Development

4.1 FACILITY SITE PLAN ALTERNATIVES

The site plan has been developed for the MFRO Facility, as shown on Figure 4-1. The site plan is based on preliminary equipment, storage and building footprint requirements and other site considerations as discussed in the following sections.

4.2 SITE CONSIDERATIONS

4.2.1 Building Code Design Criteria

Effective on January 01, 2017, the California Building Code (CBC) 2017 became the standard that all new building design and construction must comply with going forward. The new code has several changes from the previous code that cover all areas of administrative, design, construction and inspection. Many of the code provisions remain the same, or relatively consistent with the past code. However, some of the most significant changes that may be relevant to this project include the following:

- Rewriting and reorganizing of the structural concrete code, ACI 318-14, intended to bring enhanced clarity and consistency in application.
- Revisions to seismic ground motions and site coefficients in calculating the design lateral forces.
- Revisions to the design wind speed maps for several regions.

Specific design loads and the required design procedures have been revised to reflect the latest scientific knowledge. The CBC 2016 includes these changes by reference to the latest edition of ASCE 7-16, which was published in the Fall of 2016. Changes from ASCE 7-10 to ASCE 7-16 are many and their impact can be far-reaching on design and construction from what resulted from previous codes. The title of the standard has changed to Minimum Design Loads and Associated Criteria for buildings and other structures.

Based on our preliminary review of the latest code changes, we believe the structures for this project based on design using the CBC 2016 would result with similar structural member sizes as those based on the CBC 2013 code. The seismic lateral design loads most likely will be larger using the CBC 2016 and can be confirmed during detailed design.

4.2.2 Facility Arrangement, Equipment Screening and Acoustics

The facility layouts were generally developed to provide maintenance access, to screen equipment from view and to mitigate potential noise impacts. Pumping equipment will be

located inside buildings. Chemical feed and storage equipment will be located inside the Chemical Building.

4.2.3 Zoning and Development Criteria

The project site is zoned general commercial and is bordered by both residential and commercial development. Per the approved Conditional Use Permit (CUP, Case No. PHG 16-0014 ENV16-0009) all buildings and structures will be limited to a maximum height of 31-feet. Minimum setbacks established for the facility by the CUP are as follows:

Front (west):	24' to Process Bldg. and 19' to Generator
Rear (east)	256' to Chemical Bldg.
Street Side (north):	41' – 84' to MF/RO Bldg.
Interior Side (south):	25' to Chemical Bldg. 61' to Process Bldg. 21' to PW Storage Tank 17' to Inter Process Tank 19' to Generator

4.2.4 Building Layouts and Architecture

A process building will be provided for the MFRO Facility to protect membrane equipment from inclement weather. The building would be constructed using a pre-manufactured building system. The building system is comprised of a steel structure, which supports walls and standing seam metal roof with varying roofline. Standard translucent panels would be distributed on the roof to provide controlled natural light to the equipment room. Per the Final Settlement Agreement with the adjacent property owners in the case SNR 27 Spring of Escondido Owner, LLC, dba the Spring of Escondido v. City of Escondido, et al. (Settlement Agreement and Release, 2017) and the requirements of the CUP, the buildings will be treated with stucco facades (light cream/tan upper building area with darker base-wainscot) and provided with storefront type glass windows along the northern elevation of the process building to look similar to large commercial storefronts.

The MFRO Facility process building would be approximately 21,660 square feet with dimensions of approximately 190 feet long by 114 feet wide. The building would be divided into an equipment room to house the MF and RO equipment, electrical room, control room, laboratory and administration room. The administration room will include a kitchenette and tables and chairs for meetings and tours. Two restrooms will also be provided. High-pressure RO feed pumps will be located indoors due to noise concerns.

Mechanical piping through the treatment process will be located in a grating-covered concrete pipe trench.

Based on conceptual design calculations and equipment sizing, the MFRO Facility Chemical building would be approximately 14,040 square feet. The MFRO Facility Chemical building would have dimensions of approximately 120 feet long by 117 feet wide. The buildings would house chemical storage and feed equipment. Electrical rooms will be provided. In addition, the MFRO Facility Chemical building would house the MF feed and product water pumps.

4.2.5 Site Access

Facility site access will be provided from E Washington Avenue as shown on the site plans. The gates are setback approximately 20-feet for turn-off parking. The west gate will need to be set back far enough to allow the chemical delivery truck to park outside the gate without impacting traffic.

4.2.6 Security Wall and Fencing

Security walls and fencing for the MFRO Facility were discussed with the City as summarized below.

- North Side: Ornamental steel fencing along property line on E Washington Avenue.
- East side: Decorative CMU block wall along property line between property and residential property.
- South Side: Ornamental steel fencing along property line at storm channel.
- West side: Decorative CMU block shall be provided near the southern end of the western perimeter; ornamental steel fencing along the remainder of the property line on N Ash Street.

4.2.7 Landscape Areas

Landscaping shall comply with the Conditions of Approval included with the CUP as well as the requirements of the Settlement Agreement and Release, 2017. Special emphasis shall be placed on screening the project from view from the property adjacent to the eastern property line, as well as screening the proposed backup generator from the street.

Landscape will components will and consist of low maintenance, low demand and fast growing plantings. A connection to the facility influent pipeline will be provided with metering for landscape irrigation. Effluent management bio-retention areas and other best management practices will also be incorporated into landscape design. Landscaping in the Caltrans Right-of-Way may require an encroachment permit from Caltrans.

4.2.8 Noise Mitigation

Per the requirements of the CUP, all project-generated noise shall conform to the City's Noise Ordinance (Ordinance 90-08) and the mitigation measures identified in the Mitigated Negative Declaration (ENV 16-0009).

4.3 EXISTING UTILITIES

Preliminary utility evaluations have been performed. Existing utilities that border the project site and proposed connections are summarized below.

4.3.1 Potable Water

An existing 10-inch asbestos concrete pipeline is located in E Washington Avenue north of the project site. An existing 18-inch welded steel pipeline is located in N Ash Street west of the site. Potable water will be supplied to the facility by the 10-inch pipeline in Washington Avenue. A wet-tap connection to the existing pipeline may be required to mitigate shutdown. The potable water pipeline will be extended on site and looped back to the existing 10-inch line in Washington Avenue. As discussed with the City, fire flow demands will be served by the potable water system. The existing water meters that were planned to serve the site will be abandoned and replaced with meters with fire flow capacity.

4.3.2 Sanitary Sewer

An existing 27-inch (material unknown) sewer pipeline is located on the north side of the Escondido Creek drainage channel, along the southern boundary of the project site. An onsite sewer system will be provided to convey facility wastewater flows to the existing sewer pipeline. The onsite sewer system will connect to the existing sewer pipeline via an existing manhole, also located near the southern boundary of the site.

4.3.3 Storm Drain

An existing 69-inch storm drain is located in N Ash Street with a 24-inch branch to a curb inlet at the corner of N Ash Street and E Washington Avenue. The Escondido Creek drainage channel is also located south of the project site. Storm water will drain through bio retention areas and runoff to either the existing storm drain and/or to the Escondido Creek drainage channel. Projected storm water flow rates and existing storm drain system capacity will be evaluated during design to determine the point of discharge.

4.3.4 Electrical

From preliminary evaluation, SDG&E power can be provided from existing overhead electric or underground conduit located within E Washington Ave or N Ash Street. A new electrical service will be provided for the site.

4.3.5 Gas

An existing SDG&E ¾-inch gas stub is located on the site. It is anticipated that a new larger gas service will be provided to the site from E Washington Avenue. The size will be confirmed during detailed design.

4.3.6 Telephone

Telephone service will not be provided to the site. Fiber optic cable will be utilized for communication back to HARRF or emergency services.

4.3.7 Fiber Optics

The existing fiber optic conduit is located on the north side of the Escondido Creek drainage channel, south of the site. The conduit will be utilized for fiber optic cable installation for communication back to HARRF. The fiber optics cable will be installed as part of the MFRO Facility construction.

4.4 ONSITE PIPELINE CORRIDOR

Access maintenance driveways will serve as the onsite facility pipeline corridors. The sanitary sewer, Title 22 recycled water influent pipeline, brine pipeline, fiber optic, and agriculture supply pipeline will enter the project site from the Escondido Creek drainage channel. Potable water, electrical and gas will enter the site from E Washington Avenue. Pipeline corridors will be designed to mitigate excessive pipeline crossings onsite and to provide area for future pipe installations as required.

Appendix A MFRO System Storage Volume Evaluation Model Output

Exhibit B
Contractor Insurance Requirements

Exhibit C
Funding Agreement

Exhibit C

The funding agreement between the City and the CWSRF needs to be revised in order to provide for the change in siting of the Project. When the funding agreement is approved by the CWSRF, that document shall be set forth as Exhibit C to this Agreement and incorporated herein as if originally included.

Exhibit D
General Conditions

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SECTION A-00700 - GENERAL CONDITIONS

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ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated in this Article 1, with meanings applicable to both the singular and plural forms thereof. Descriptions of these terms are binding, and form an integral part of these General Conditions.

Addenda – Written or graphic representations issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

Agreement – The written Public Improvement Agreement Contract between the City and the CONTRACTOR covering the Work to be performed; other documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment – The form accepted by the City which is to be used by the CONTRACTOR to request progress payments or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

Approval – The written authorization by the Engineer or City for specific applications. Approvals required by the Escondido City Council shall mean the approval of a specific resolution by that Council.

Asbestos – Any material that contains more than one percent (1%) asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

As directed, accepted, rejected, approved, or others of similar meaning which authorize any exercise of judgment shall be distinctly understood to mean that such power to direct, accept, reject, and approve shall be vested only in the City and/or the Engineer.

As shown, as indicated, and as detailed refer to drawings accompanying the specification.

Bid – The offer or proposal of the Bidder, submitted on the prescribed form, setting forth the price or prices for the Work.

Bonds – Bid, performance, and Payment Bonds as well as other instruments of security.

Called For – As called for, shown, noted, and/or indicated in the specifications and/or drawings.

City – The City of Escondido with whom the CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

Clarification – A document issued by the Engineer to the CONTRACTOR that interprets the requirement(s) and/or design intent of the Contract Documents, which may not represent an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times.

Competent Person – *"One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and has authorization to take prompt corrective measures to eliminate them."* Excerpt from the California Occupational Safety and Health Standards Board.

Confined Space – *"Confined space means a space that:*

- (1) *Is large enough and so configured that an employee can bodily enter and perform assigned work;*
- (2) *Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and*
- (3) *Is not designed for continuous employee occupancy."* Excerpt from Title 8, General Industry Safety Orders Section 5157.

Construction Administration Documents: Terms, uses and protocols- Notwithstanding any other provisions in the General Conditions, the following terms and definitions shall be used.

- (1) **CCD** – The term "CCD" shall mean Construction Change Directive. The CCD is a written instrument prepared by the City or its designee and submitted to the CONTRACTOR. The CCD is a written order directing a change in the Work and stating the required pricing method, if any, in the contract sum, and the Contract Time adjusted to reflect a previously approved Fragnet, if any. The CCD, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions, or other revisions within. The CCD shall become

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effective when the City has signed the CCD (CONTRACTOR signature is not required). If the CCD results in additional time, the CONTRACTOR shall provide a Fragnet Submittal within **fourteen (14) days**. If the Fragnet Submittal is approved, the Contract Time adjustment shall be incorporated into originating CCD, or incorporated into a separate CCD and/or a Change Order (CO). The approved Fragnet, if any, shall become incorporated into the next monthly schedule update to reflect the time impact(s).

- (2) **CO** – The term "CO" shall mean Change Order. The Change Order shall state the change in Work and the contract sum and/or time adjustments, if any. RFP's, FO's and/or CCDs may be incorporated into a Change Order after any adjustments in the contract sum and/or time have been reviewed and accepted by the City. The Change Order and items contained therein cannot be incorporated into the progress payments until the Change Order has been fully executed and accepted by the Contractor and the City.
- (3) **COR** – The term "COR" shall mean Change Order Request. The COR is a written instrument prepared by the CONTRACTOR and submitted to the City. The COR is the CONTRACTOR's method for requesting the full and complete terms for changes in the contract sum and/or time, if any. All of the terms of the COR need to be presented without reservations so that the City and/or Engineer can consider the full impact of the COR. The request shall provide an explanation of the basis for entitlement referenced by or based on the Contract Documents. The City shall endeavor to respond to the COR on or within **twenty-one (21) days** of receipt.
- (4) **FO** – The term "FO" shall mean Field Order. A Field Order may be approved by the Inspector, at the City's discretion. A written order signed by the City, which may or may not involve a change in the Work, without invalidating the Contract, within the general scope of the Contract. If the FO results in additional time, the CONTRACTOR shall provide a Fragnet Submittal within **fourteen (14) days**. If the Fragnet Submittal is approved, the Contract Time adjustment shall be incorporated into the next monthly schedule update to reflect the time impact, if any.
- (5) **RFI** – The term "RFI" shall mean Request for Information. An RFI is a written instrument prepared by the CONTRACTOR and submitted to the City or its designee. An RFI shall be considered a tool for requesting additional information above and beyond that which is available in the Contract Documents and all reference standards, as well as fulfilling the Contract coordination requirements for which the CONTRACTOR is obligated to perform. The RFI shall not be used for requesting design and/or material substitutions.

Prior to issuing an RFI, the CONTRACTOR, Subcontractors, material suppliers and the like shall thoroughly review the Contract Documents and refer to all reference standards for the information sought.

When submitting an RFI, the document shall specify the date issued and the date the information is needed by. However, the contractual response time shall be **fourteen (14) days** from the date the City or its designee receives the RFI. The CONTRACTOR shall plan its work and submit questions in sufficient time to accommodate the response time. For those contracts requiring a CPM schedule, the CONTRACTOR shall include in the RFI the CPM Activity Number and the originating Subcontractor.

The CONTRACTOR shall make efforts to coordinate the work in a timely fashion so as to alleviate priority RFIs. If the RFI is considered a priority, the CONTRACTOR shall state the word "Priority" on the document, and the CONTRACTOR shall provide weekly

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RFI Priority Schedules. The CONTRACTOR shall issue and maintain weekly RFI Priority Schedules.

The RFI Priority Schedule shall include a listing of pending requests, including the most current request, which ranks the RFIs in order of priority. The Engineer shall endeavor to respect the CONTRACTOR's requested order of priorities and requested response dates.

The Engineer's response to the RFI shall be considered a Supplemental Instruction (SI) in which the contract sum and/or time is not altered. If the RFI response alters the contract sum and/or time, a Construction Change Directive (CCD) or a Request for Proposal (RFP) may be issued for the changed condition(s).

Should the CONTRACTOR determine the response to the RFI creates changes in the contract sum and/or time, the CONTRACTOR must submit a Change Order Request (COR) to the City for review and decision along with a Fragnet if required.

- (6) **RFP** – The term "RFP" shall mean Request for Proposal. The RFP is a written instrument prepared by the City and submitted to the CONTRACTOR. The RFP is a request for changes in the contract sum and/or time, and a proposal for potential change in contract conditions, for which the contract sum and/or time may or may not be affected. The CONTRACTOR shall provide the full and complete terms of the request in a Change Order Request (COR) within **fourteen (14) days**: If the RFP results in added time, the CONTRACTOR shall provide a Fragnet Submittal within the same **fourteen (14) days**. If the City accepts the full terms of the RFP, the RFP shall be incorporated into a Construction Change Directive (CCD) and/or a Change Order (CO), and/or a Field Order (FO) and the approved Fragnet, if any, shall become incorporated into the next monthly schedule update to reflect the time impact(s).
- (7) **SI** – The term "SI" shall mean Supplemental Instruction. The SI is a written instrument prepared by the Engineer and submitted to the CONTRACTOR. The SI can order changes in the Work that do not affect the contract sum and/or time. Supplemental Instructions can also be made in an RFI response by issuing a formal SI document or by written letter from the City's or its designee's office.

Contract Price – The total monies payable by the City to the CONTRACTOR under the terms and conditions of the Contract Documents.

Contract Time – The duration of the Project as defined in the Agreement.

Contractor – The individual, partnership, corporation, joint venture, or other legal entity with whom the City has executed the Agreement.

Day – Days shall be considered calendar days and measured from midnight to the next midnight.

Defective work- Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or Work that has been damaged prior to the final payment.

Deficiency List – A list maintained by the City, representing an ongoing list of items that do not conform to the Contract Documents. The Deficiency List is added to the Punch-List when the CONTRACTOR asserts that the Work is complete.

Deficiency Notice – A notice from the City to the CONTRACTOR describing work that does not conform to the Contract Documents.

Delay Days – Delay Days shall be considered working days. Assuming a 5-day workweek, delay days shall be converted into calendar days by a factor of 1.4. Hence 10 Delay Days equal 14 Calendar Days. Delay Days will be evaluated and identified as one of the three categories listed below. Excusable delays will create adjustments in the Contract Time. Compensable delays will create

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adjustments in both the contract sum and Contract Time. In the event of concurrent delays caused by the City and CONTRACTOR or its subcontractors, material men or suppliers, no delay damages are recoverable by either the City or the CONTRACTOR, but an extension in time shall be granted for each contemporaneous Delay Day occurring on the critical path. Contemporaneous delays shall be evaluated using a schedule fragnet(s), schedule updates, daily reports, notices, and any other records of delaying events. In the event of a delay, the CONTRACTOR shall provide a Notice of Delay in accordance with Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE" and submit a schedule fragnet depicting the delay with all substantiating documentation within **fourteen (14) days** of the event.

<u>Excusable & Compensable</u>	<u>Excusable & Non-Compensable</u>	<u>Inexcusable</u>
Delays caused by the City, the Engineer, or the City's separate Contractor(s).	<ol style="list-style-type: none"> 1. Unusual weather 2. Strikes or labor shortages 3. Acts of God 4. Fires, war, acts of government & pestilence 5. Unusual and unanticipated delays in manufacturing and/or deliveries of materials and/or equipment 6. Concurrent Delays 	Delays caused by the CONTRACTOR, Subcontractor(s), material-men or suppliers.

- (1) **Concurrent Delay** – Delays caused by both the Contractor and the City and occurring at the same time; existing together, relating to same activity or activities, and affecting the critical path.
- (2) **Contemporaneous Delay** – Delays existing or happening in the same period of time.

Drawings – The drawings, plans, maps, profiles, diagrams, and other graphic representations which indicate the character, location, nature, extent, and scope of the Work and which have been prepared by the Engineer and are included and/or referred to in the Contract Documents. Shop Drawings are not Drawings as so defined.

Effective Date of the Agreement – The Effective Date is indicated in the Agreement, but if no such date is indicated, the Effective Date is when the Agreement is signed and delivered by the last of the two parties.

Engineer – The individual, partnership, corporation, joint venture, or other legal entity designated by the City, if any is so designated, in the Supplementary General Conditions. Such designation may include more than one individual or entity, and may be changed by the City with written notification to the CONTRACTOR.

Engineer of Work - The responsible Engineer who wet stamped and signed the Contract Specifications and Drawings. The responsibilities of the Engineer of Work are set forth in California Business and Professions code and other laws as may be applicable. The responsibilities under law of the Engineer of Work are not modified by these General Conditions.

Fragnet –Also known as a "Sub-network." Refer to the specification section titled CONSTRUCTION SCHEDULING for the definition of a Fragnet and the requirements thereof. A Fragnet will be required for time impact analysis and time extensions. CONTRACTOR's failure to provide a Notice of Delay within **24 hours**, and submit a Fragnet for time impact analysis and time extension(s) on or within **14 days** of the delaying event, shall forfeit and invalidate all considerations for time and/or payment. (Refer to the definition of "Delay Days" for additional information.) The costs to prepare Fragnets and schedule updates resulting from approved Fragnets

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are part of the Work, regardless of number and difficulty. The City will provide a response to the Fragnet on or within **14 days**.

Hazardous Waste – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6906), as amended from time to time.

Inspector – The City's appointed representative(s) for inspection of in-progress or completed Work.

Laws and Regulations; Laws or Regulations – Any and all applicable laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

Materials – Materials incorporated in the project or used or consumed in the performance of the Work.

Milestone – A principal event specified in the Contract Documents relating to an intermediate completion date of a separately identifiable part of the Work or a period of time within which the separately identifiable part of the Work should be performed prior to Project Completion of all the Work.

Notice of Award – The written notice by the City to the apparent successful bidder stating that, upon compliance by the apparent successful bidder with the precedent conditions enumerated therein within the time specified, the City will enter into an Agreement.

Notice of Completion – A form signed by the City indicating that the Work is Complete ("Project Completion") and stating the date of completion. After acceptance of the Work by the City's governing body, the Escondido City Council, and due authority is given to the Deputy Director of Public Works, the form is signed by the Deputy Director of Public Works and filed with the San Diego County Recorder. This filing starts the 30-day lien filing period on the Work.

Notice to Proceed – The written notice issued by the City to the CONTRACTOR authorizing the CONTRACTOR to proceed with the Work and establishing the date of commencement of the Contract Times.

Partial Utilization – Use by the City of a completed part of the Work for the purpose for which it is intended prior to Project Completion.

Project – The total construction project of which the Work to be provided under the Contract Documents may be the whole or a part as indicated elsewhere in the Contract Documents.

Project Completion – The acceptance by the Escondido City Council of the Work of improvement (as in the Notice of Completion).

Project Documents and/or Contract Documents – Includes collectively, to wit: Notice Inviting Sealed Bids/Notice to Contractors, Instructions to Bidders, Bid Form, Designation of Subcontractors, Workers' Compensation Certificate, Change Orders, Shop Drawing Transmittals, Information Required of CONTRACTOR, Non-collusion Affidavit, Faithful Performance Bond, Payment Bond, Insurance Certificates, Guarantees, General Conditions, Supplementary General Conditions, Special Conditions, Plans, Drawings, Specifications, the Agreement and all modifications, addenda, and amendments thereto.

Provide – Term shall include "provide complete in place," that is, "furnish and install."

Punch-List – A list generated by the Engineer, in conjunction with the City, of missing work, of damaged existing facilities, and a list of any and all work described by the Contract Documents that has not been completed in conformance with the Contract Documents. A Punch-List may be amended by the City from time to time based on the results of CONTRACTOR re-work and the discovery of additional non-conforming work.

Resident Project Representative – The authorized representative of the City/Engineer who is assigned to the Site or any part thereof.

Safety Orders/Records – Those issued by the Division of Industrial Safety and OSHA standards for construction.

Samples – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

Shop Drawings – All drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate some portion of the Work.

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Site – The physical locale where the Project is to be constructed, including all public rights-of-way, utilities, improvements, and shall be limited solely by formal, recorded property lines adjacent to the physical locale where the Project is to be constructed.

Specifications – Those technical or additional project management provisions that are binding on the Work as described in the Supplementary General Conditions.

Stipulated Prices or Markups – Prices or markups set forth as a condition of the Contract.

Stop Notice – A legal remedy for subcontractors and suppliers who contribute to public works but who are not paid for their work, which secures payment from construction funds possessed by the City. The Stop Notice may also be issued by public entities, such as the department of Labor, as a notice to withhold due to failure to pay the required wages to workers.

Subcontractor – A licensed entity of any tier (whether having a direct contractual relationship with Contractor or another Subcontractor) that provides labor to the Project and/or furnishes material worked to a special design according to plans, drawings, and specifications of this work, but does not include one who merely furnishes material not so worked.

Supplementary General Conditions – The part of the Contract Documents which make additions, deletions, or revisions to these General Conditions.

Supplier – A manufacturer, fabricator, distributor, material-man, or vendor having a direct contract with the CONTRACTOR or with any Subcontractor to furnish materials, equipment, or product to be incorporated in the WORK by the CONTRACTOR or any Subcontractor.

Surety – The person, firm, or corporation that executes as surety the CONTRACTOR's Bid Security, faithful performance bond and/or payment bond.

Utilities – All pipelines, conduits, ducts, cables, wires, tracks, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground or above the ground to furnish any of the following services or materials: water, sewage, sludge, drainage, fluids, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic control, or other control systems.

Work – The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

Workers – Workers include laborers, workers, and mechanics.

ARTICLE 2 – PRELIMINARY MATTERS

2.1 DELIVERY OF BONDS AND INSURANCE CERTIFICATES. When the CONTRACTOR delivers the signed Agreement to the City, the CONTRACTOR shall also deliver to the City such Bonds and insurance policies and certificates and documents as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

2.2 COPIES OF DOCUMENTS. The City will furnish to the CONTRACTOR as many copies of the Contract Documents specified in the Instructions to Bidders. Additional copies will be provided, upon request, at the cost of duplication.

2.3 ESCROW OF BID DOCUMENTS

A. SCOPE:

1. The CONTRACTOR shall submit, within **ten (10) days** after the award of contract one (1) copy of all documentary information generated in preparation of the bid price for the project. This material is hereinafter referred to as the "Escrow Bid Documents." The Escrow Bid Documents will be held in escrow for the duration of the contract.

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2. The CONTRACTOR agrees that the Escrow Bid Documents constitute all of the information used in preparation of the bid, and that no other bid preparation information will be considered in resolving claims.
 3. Nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract.
- B. **PROPERTY:** The Escrow Bid Documents are and will always remain the property of the CONTRACTOR, subject only to joint review by the City and the CONTRACTOR, as provided in paragraph (G) "EXAMINATION." The City stipulates and expressly acknowledges that the Escrow Bid Documents constitute trade secrets and are proprietary and confidential. This acknowledgment is based on the City's express understanding that the information contained in the Escrow Bid Documents is not known outside the CONTRACTOR's business, is known only to a limited extent and only by a limited number of employees of the CONTRACTOR, is safeguarded while in CONTRACTOR's possession, is extremely valuable to CONTRACTOR and could be extremely valuable to CONTRACTOR's competitors by virtue of it reflecting CONTRACTOR's contemplated techniques of construction. The City acknowledges that the CONTRACTOR expended substantial sums of money in developing the information included in the Escrow Bid Documents and further acknowledges that it would be difficult for a competitor to replicate the information contained therein. The City further acknowledges that the Escrow Bid Documents and the information used in the CONTRACTOR's business were intended to give the CONTRACTOR an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. The City agrees to safeguard the Escrow Bid Documents and all the information contained therein against disclosure to the fullest extent permitted by law.
- C. **PURPOSE:** Escrow Bid Documents will be used to assist in the negotiation for the settlement of claims. They will not be used for evaluation of the CONTRACTOR's anticipated methods of construction or to assess the CONTRACTOR's qualification for performing the Work.
- D. **FORMAT AND CONTENTS:**
1. CONTRACTOR may submit Escrow Bid Documents in the usual cost-estimating format. Escrow Bid Documents shall be adequate to enable complete understanding and proper interpretation for their intended use.
 2. Escrow Bid Documents shall clearly itemize the estimated costs of performing the Work. Items shall be separated into sub-items as required to present a complete and detailed cost estimate and allow a detailed cost review. The Escrow Bid Documents shall include all quantity takeoffs, labor, equipment, calculations of rate production and progress, copies of quotations from Subcontractors and suppliers, memoranda, narratives, consultant's reports, add/deduct sheets, and all other information used by the CONTRACTOR to arrive at the prices contained in the bid proposal. Estimated costs shall be broken down into the CONTRACTOR's usual estimate categories such as direct labor, repair labor, material, equipment, construction equipment operation, construction equipment ownership, expendable materials, materials and Subcontractor cost as appropriate. Plant and equipment, indirect costs shall be detailed in the CONTRACTOR's usual format. The CONTRACTOR's allocation of plant and equipment, indirect costs, contingencies, markup and other items shall be included.
 3. All costs shall be identified for all items. Sub-items amounting to less than \$10,000.00 estimated unit costs are acceptable without a detailed cost estimate,

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provided that labor, equipment, materials, construction equipment, expendable materials and subcontracts, as applicable, are included, provided that indirect costs, contingencies, and markups, as applicable, are allocated.

4. Bidding materials provided by the City shall not be included in the Escrow Bid Documents unless needed to comply with the requirements of this specification.

E. SUBMITTAL:

1. The Escrow Bid Documents shall be submitted by the CONTRACTOR in a sealed container(s) within **10 days** after the day of award of the contract. The container shall be clearly marked on the outside with the CONTRACTOR's name, date of submittal, project name and the words "Escrow Bid Documents."
2. The Escrow Bid Documents shall be accompanied by an index to inventory the contents of the submittal and a Bid Documentation Certification, signed by the individual who executed the bidding proposal, stating that the material in the Escrow Bid Documents constitutes all documentary information used in preparation of the bid and that he/she has personally examined the contents of the Escrow Bid Documents container and has found that the documents in the container(s) are complete and organized as shown by the CONTRACTOR's index.
3. The City shall examine the index. This examination is to ensure that the index is detailed and complete and conforms to the "format and contents" as stated in paragraph (D) above. If all the documentation required in paragraph (D) "FORMAT AND CONTENTS" has not been indexed in the original submittal a revised index shall be submitted at the CITY's discretion. Timely submission of complete Escrow Bid Documents is an essential element of the CONTRACTOR's responsibility. Failure to provide the necessary Escrow Bid Documents may be sufficient cause for the CITY to assess damages under the contract. If the CONTRACTOR's proposal is based on subcontracting any part of the Work, each Subcontractor, whose total subcontract price exceeds the lesser of five percent (5%) of the total contract price proposed by the CONTRACTOR or \$200,000 shall provide separate Escrow Bid Documents to be submitted with those of the CONTRACTOR. These submittals will be examined in the same manner and at the same time as the examination described above. If the CONTRACTOR wishes to subcontract any portion of the Work or requests substitutions of any Subcontractor after award, the CITY retains the right to require the CONTRACTOR to submit Escrow Bid Documents from the proposed Subcontractor before the subcontract or substitution is approved.

- F. STORAGE: The escrow bid documents will be placed in escrow, for the life of the contract, in a mutually agreeable institution. The city will pay the cost of storage.

G. EXAMINATION:

1. The Escrow Bid Documents shall be examined by the City, the Engineer and CONTRACTOR, at any time deemed necessary by either the City or the CONTRACTOR, to assist in the negotiation for the settlement of claims.
2. Examination of the Escrow Bid Documents is subject to the following conditions:
 - a. As trade secrets, the Escrow Bid Documents are proprietary and confidential as described in paragraph (B).

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- b. The City and the CONTRACTOR shall each designate, in writing to the other party and a minimum of **five (5) days** prior to examination, representatives who are authorized to examine the Escrow Bid Documents. No other person shall have access to the Escrow Bid Documents.
 - c. Access to the Escrow Bid Documents under this paragraph will take place only in the presence of duly designed representatives of both the City and the CONTRACTOR.
- H. FINAL DISPOSITION: The escrow bid documents will be returned to the contractor at such time as the contract has been completed and final settlement has been achieved.
- 2.4 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED. The Contract Times will start to run on the commencement date stated in the Notice to Proceed.
- 2.5 STARTING THE WORK
- A. The CONTRACTOR shall begin to perform the Work on the commencement date stated in the Notice to Proceed, but no Work shall be done at the Site prior to said commencement date. The Work shall be commenced immediately after Notice to Proceed, and shall be diligently prosecuted until completion.
 - B. Before undertaking each part of the Work, the CONTRACTOR shall review the Contract Documents in accordance with Article 3 of these General Conditions.
- 2.6 CONTINUING THE WORK. The CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the City may otherwise agree in writing.
- 2.7 PRECONSTRUCTION MEETING. A preconstruction meeting shall be called after the award and execution of the Contract and prior to construction. The CONTRACTOR (a Principal and Project Superintendent) shall attend. The CONTRACTOR shall plan on spending no less than **four (4) hours** of time with Subcontractor(s) and project superintendent(s) for this meeting.
- 2.8 CITY OBSERVED HOLIDAYS. CONTRACTOR is required to observe City holidays. The City observes the following holidays:
- 1. New Years Day
 - 2. Martin Luther King, Jr. Day
 - 3. Presidents' Day
 - 4. Memorial Day
 - 5. Independence Day
 - 6. Labor Day
 - 7. Veterans Day
 - 8. Thanksgiving Day
 - 9. Day after Thanksgiving
 - 10. Christmas Day

ARTICLE 3 – INTENT AND USE OF CONTRACT DOCUMENTS

3.1 CONTRACTOR MUST REVIEW CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS

- A. Drawings and Specifications are intended to be complementary (that which is required by one shall be required by the other; to the extent there is more than one reference which exists, the reference requiring the more stringent and/or best standards and requirements shall be furnished and installed) and delineate and describe the Project and its component parts to such a degree as will enable a skilled and competent CONTRACTOR to intelligently bid upon the Work, coordinate the Work and to carry out the Work to a successful conclusion
- B. Drawings and Specifications are intended to comply with all laws, ordinances, rules and regulations of constituted authorities having jurisdiction, and where referred to in the Project Documents, these laws, ordinances, rules and regulations shall be considered as a part of the Agreement within the limits specified. The CONTRACTOR shall bear all expenses of correcting Work done contrary to applicable laws, ordinances, rules and regulations and if the CONTRACTOR performed the Work (1) without first consulting the City for further instructions regarding the Work, or (2) disregarded the City's instructions regarding the Work.
- C. Questions regarding interpretation of drawings and specifications shall be submitted in writing to be clarified by the City; provided, however, that in the event the City determines that CONTRACTORS requests for information (RFI's) are not justified or do not reflect adequate or competent supervision, coordination, and / or knowledge by the CONTRACTOR or its Subcontractors, CONTRACTOR shall be required to pay the City's reasonable and customary fees in processing and responding to such requests. Should the CONTRACTOR commence Work or any part thereof without seeking clarification, and/or performing its own coordination obligations, the CONTRACTOR waives any claim for extra Work or damages as a result of any ambiguity, conflict or lack of information.
- D. Figured dimensions on drawings shall govern, but Work not dimensioned or mis-described shall be as directed. Work not particularly shown, mis-described or specified shall be the same as similar parts that are shown or specified. Large scale drawings shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials, workmanship, and installation procedures. Drawings and specifications are intended to be fully cooperative and to agree. If through the process of contract-required coordination, CONTRACTOR observes that drawings and specifications are in conflict, CONTRACTOR shall promptly notify the City in writing, and any necessary changes shall be adjusted as provided in Article 10 titled CHANGES IN THE Work; provided, however, that the specification calling for the higher quality material or workmanship shall prevail without additional cost to the City.

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- E. Materials or Work described in words, which so applied, have a well known technical or trade meaning shall be deemed to refer to such recognized standards.
- F. It is not the intention of the Agreement to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of such "trade name" or "trade term" shall be considered a sufficient notice to CONTRACTOR that it will be required to complete the Work so named with all its incidental and accessory items according to the best practices of the trade.
- G. The naming of any material and/or equipment shall mean furnishing and installing, including all incidental and accessory items thereto and/or labor necessary to achieve full and complete functioning of the material and/or equipment according to the best practices of the trade(s) involved, unless specifically noted otherwise.

3.2 AGREEMENT TO THOROUGHLY REVIEW DETAIL DRAWINGS AND INSTRUCTIONS

- A. All parts of the described and shown construction drawings shall be of the best quality of their respective kinds and in executing the Agreement, the CONTRACTOR agrees to use all diligence to become fully informed as to the required construction and finish, and in no case to proceed with the different parts of the Work without obtaining first from the City such directions and/or drawings as may be necessary for the proper performance of the Work.
- B. In case of ambiguity, conflict, or lack of information, the City shall furnish additional instructions by means of drawings or otherwise, as necessary for proper execution of the Work. All such drawings and instructions shall be consistent with Project Documents, true developments thereof, and reasonably inferable therefrom. Such additional instructions shall be furnished with reasonable promptness, provided that CONTRACTOR informs the City of the relationship of the request to the critical path of construction. Refer to the term, use and protocol of an RFI defined in Article 1 entitled "Definitions" under "Construction Administration Documents."
- C. Work shall be executed in conformity therewith and CONTRACTOR shall do no Work without proper drawings and instructions.
- D. The City may furnish necessary additional details to more fully explain the Work, which details shall be considered as part of the Project Documents.
- E. Should any details be more elaborate, in the opinion of the CONTRACTOR, than scale drawings and specifications warrant, CONTRACTOR shall give written notice thereof to the Engineer within **21 days** of receipt. In case no notice is given to the Engineer within **21 days**, it will be assumed the details are reasonable development of the scale drawings. In case proper notice is given, then it will be considered, and if found justified, the Engineer will either modify the drawings or shall recommend a change order for any extra Work that may be involved.
- F. If it is found at any time, before or after completion of the Work, that the CONTRACTOR has varied from the drawings and/or specifications, in materials, quality, form, finish, or in the amount or value of the materials and labor used, the City shall take the issue under advisement and consider the following options:
 - 1. That all such improper Work should be removed, remade, replaced, and all Work disturbed by these changes be made good at the CONTRACTOR's expense; or

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2. That the City deduct from any amount due CONTRACTOR, the sum of money equivalent to the difference in value between the Work performed and that called for by the drawings and specifications. The City shall determine such difference in value. The City, at its option, may pursue a recommendation made by the Engineer.
- 3.3 REFERENCED STANDARD. No provision of any referenced standard specification, manual or code shall be effective to change the duties and responsibilities of the City, the CONTRACTOR, the Engineer, or any of their consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to the City, Engineer, or any of Engineer's consultants, agents, or employees any duty or authority to direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.
- 3.4 AMENDING CONTRACT DOCUMENTS. The Contract Documents may be amended only in writing to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by a Change Order (pursuant to Article 10-CHANGES IN THE WORK).
- 3.5 NO ASSIGNMENT. The CONTRACTOR shall not assign, transfer, convey, sublet or otherwise dispose of this Agreement or of its rights, title or interest in or to the same or any part thereof. If the CONTRACTOR shall assign, transfer, convey, sublet or otherwise dispose of the Agreement or its right, title or interest therein, or any part thereof, such attempted or purported assignment, transfer, conveyance, sublease or other disposition shall be null, void and of no legal effect whatsoever; and the Agreement may, at the option of the City, be terminated, revoked and annulled, and the City shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the CONTRACTOR, and to its purported assignee or transferee.
- 3.6 REUSE OF DOCUMENTS. Neither the CONTRACTOR, nor any Subcontractor or Supplier, nor any other person or organization performing any of the Work under a contract with the City shall have or acquire any title to or ownership rights in any of the Drawings, Technical Specifications, or other documents used on the Work, and they shall not reuse any of them on the extensions of the Project or any other project without written consent of City.

ARTICLE 4 – SITE OF THE WORK

- 4.1 AVAILABILITY OF LANDS. The City will furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the City, unless otherwise provided in the Contract Documents. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided, that the CONTRACTOR shall not enter upon nor use any property not under the control of the City until a written temporary construction easement agreement has been executed by the CONTRACTOR and the property owner, and a copy of said easement furnished to the Engineer prior to said use; and, neither the City nor the Engineer will be liable for any claims or damages resulting from the CONTRACTOR's trespass on or use of any such properties. The CONTRACTOR shall provide the City with a signed release from the property owner confirming that the lands have been satisfactorily restored upon completion of the Work.

4.2 SOILS INVESTIGATION REPORT & CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS

- A. SUBSURFACE EXPLORATIONS: Reference is made to the Supplementary General Conditions for identification of those reports of explorations and tests, if any, of subsurface conditions at the Site that have been utilized by the City or its Engineer in the preparation of the Contract Documents.
- B. SOILS INVESTIGATION REPORT. When a soils investigation report has been prepared or referenced by the City or its Engineer to assist with the design of the facility, such report is available for the CONTRACTOR's use in preparing its bid and Work under this Agreement. All soil and test-hole data, water table elevations, and soil analyses shown on the drawings or included in the Specifications apply only at the location of the test holes and to the depths indicated. Geotechnical reports for the test holes, if any, which have been drilled are available from the City. Any additional subsurface exploration shall be done by the CONTRACTOR or Bidder at their own expense. The indicated elevation of a water table is that which existed on the date when test holes were made and the level of the groundwater was determined. It is the CONTRACTOR's responsibility to determine the level of ground water or water table at the time of project construction. A difference in elevation between the level of ground water or water table indicated on the soil boring logs and groundwater actually encountered during construction is a risk of the CONTRACTOR's bid amount, and will not be considered as a basis for extra Work or additional compensation.
- C. CONTRACTOR SHALL NOTIFY THE CITY OF UNKNOWN CONDITIONS. If, during the course of Work under this Agreement, CONTRACTOR encounters subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in contract activities of the character provided for in the Contract Documents, then CONTRACTOR shall notify the City of the discovery of the condition before the condition is materially changed, disturbed and/or covered, and before any additional Work is performed. The CONTRACTOR must notify the City, in writing of unforeseen conditions, or differing Site conditions, promptly upon their discovery and before they are disturbed. Reference Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE".
- D. WARNING: THE CITY DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. SOILS INVESTIGATION REPORTS ARE PROVIDED FOR CONTRACTOR'S INFORMATION ONLY. THE CITY OF ESCONDIDO DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION. IF ANY CONTRACTOR WISHES TO PERFORM A PRE-BID SITE INSPECTION, WHICH INCLUDES SOILS TESTING, A METHOD TO DO SO IS AVAILABLE AND IS DESCRIBED IN PARAGRAPHS 4.7 and 4.8 OF THE "INSTRUCTIONS TO BIDDERS".

4.3 PHYSICAL CONDITIONS - UNDERGROUND UTILITIES

- A. The information and data indicated in the Contract Documents with respect to existing underground Utilities at or contiguous to the Site are based on information and data furnished to the City or the Engineer by the owners of such underground Utilities. The Contract plans depict the various utilities as they are believed to exist, however, the

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CONTRACTOR shall not rely on the locations and depths indicated. The CONTRACTOR shall comply with California Government Code Section 4216 ("Section 4216"). The CONTRACTOR shall determine the location and depth of all utilities that are indicated and those that are not indicated as follows:

1. As provided in Section 4216, at least **2 working days** prior to commencing any excavation, but not more than **14 calendar days**, the CONTRACTOR shall contact the regional notification center (Underground Service Alert of Southern California) and obtain an inquiry identification number. Refer to Article 6.28.
2. Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, or cable television are shown on the Plans, the CONTRACTOR shall assume that every property parcel will be served by a service connection of each type of utility.
3. Section 4216 does not require the Local Agency to mark out non-pressurized sewer lines, non-pressurized storm drains or other non-pressurized drain lines.
4. The California Department of Transportation, CALTRANS, is not required by Section 4216 to become a member of the regional notification center. The CONTRACTOR shall call CALTRANS directly for location of its subsurface installations.
5. The CONTRACTOR shall determine the location and depth of all utilities (the top and the bottom), including joint trenches and service connections, which have been marked by the respective owners and which may affect or be affected by its operations. The CONTRACTOR shall determine the location and depth of all utilities not required to be marked out by the Local Agency.
6. The CONTRACTOR shall further determine the location and depths of all utilities that were not known or indicated on the project plans, but, after CONTRACTOR compliance with Section 4216, were marked out by the utility owners.
7. The CONTRACTOR shall not assume that existing utilities are buried at depths and locations specified in the pertinent standard drawings. In Escondido, existing utilities are frequently found at depths and locations that are not in conformance with the existing standard drawings.
8. The CONTRACTOR shall have the responsibility for coordinating as many call-backs of utility owners and CONTRACTOR mobilizations as may be required to determine the exact location, or identity, of all utilities. Utilities that are indicated on the Contract plans in a certain location, and are marked out in a different location by the utility owner, are considered by this Contract to be the same utility. The City is not responsible for errors in mark-outs made by the Utility owners.
9. The CONTRACTOR shall have full responsibility for the safety and protection of all existing utilities, to the extent allowed by California Government Code Section 4215, and repairing any damage thereto resulting from the Work. The CONTRACTOR shall use hand tools and/or vacuum equipment and use reasonable care to protect existing utilities.
10. Unknown Utility on the Contract plans, but marked out in the field by the utility owner: The Work of potholing, protecting in place, trenching over or under, repairing the road surface, backfilling with the utility owner's preference of material, plotting on the record drawings, and describing a previously unknown utility is fully contemplated by the City as being a regular occurrence on trenching projects.

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11. Unknown utilities not marked out by the utility owner: Should the CONTRACTOR come across utilities that are not known nor marked out by the utility owner, the CONTRACTOR shall immediately call Underground Service Alert and the City. The City is not responsible for the consequences of the failure of a Utility owner to mark out its facilities.
 12. Abandoned Utilities. Abandoned utilities are considered as unknown utilities for the purpose of CONTRACTOR payment, unless they are indicated on the project plans.
 13. The CONTRACTOR shall call for a "standby inspector" when requested to do so by a utility owner, and follow their direction.
- B. Locating Subsurface Installations (excerpted from California Government Code section 4216):
1. The excavator shall determine the exact location of subsurface installations in conflict with the excavation by excavating with hand tools within the area of the approximate location of subsurface installations as determined by the field marking provided in accordance with (California Government Code) section 4216.3 before using any power-operated or power-driven excavating or boring equipment within the approximate location of the subsurface installation, except that power-operated or power-driven excavating or boring equipment may be used for the removal of any existing pavement if there are no subsurface installations contained in the pavement. If mutually agreeable with the operator (*the operator is the owner of the Utility in this case*) and the excavator (*the excavator is the CONTRACTOR in this case*), the excavator may utilize power-operated or power-driven excavating or boring equipment within the approximate location of a subsurface installation and to any depth. (*Clarification added*)
 2. If the exact location of the subsurface installation cannot be determined by hand excavating in accordance with subdivision B1, the excavator (the CONTRACTOR) shall request the operator (the owner of the Utility) to provide additional information to the excavator, to the extent that information is available to the operator, to enable the excavator to determine the exact location of the installation. (*Clarification added*)

4.4 HAZARDOUS MATERIALS

- A. The provisions of Articles 4.2, 4.3, and 4.4 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site.
- B. Reference is made to the Supplementary General Conditions for identification of those reports and drawings relating to Asbestos, Hazardous Waste, PCBs, Petroleum and/or Radioactive Material identified at the Site that have been utilized by the Engineer in the preparation of the Contract Documents, if any.
- C. Copies of these reports and drawings may be examined at the office of the City during regular business hours. Please make an appointment. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports and drawings, except for such physical dimensions that can be field verified; however, the interpretation of such technical data, including any interpolation or extrapolation thereof, and opinions contained in such reports and drawings are not to be relied on by the CONTRACTOR.

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- D. The City shall be responsible for any Asbestos, Hazardous Waste, PCBs, Petroleum, or Radioactive Material uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the Site. The City will not be responsible for any such material brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

4.5 REFERENCE POINTS

- A. The City will provide access to the bench-mark book maintained by the City Surveyor, and provide any survey reference material that may be on file. The CONTRACTOR shall furnish all other lines, grades, and bench-marks required for proper execution of the Work.
- B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks and in case of their removal or destruction by any party, the CONTRACTOR shall be responsible for the accurate replacement of such reference points by personnel qualified under the applicable state codes governing land surveyors. The recording of any replacement corners, or other points, shall be the responsibility of the CONTRACTOR.

ARTICLE 5 – RESERVED

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

None of the following responsibilities, as between City and CONTRACTOR, shall be delegated by CONTRACTOR to another individual or entity.

6.1 COMMUNICATIONS.

- A. Written communications shall be directly to the City, however, the City reserves the right to direct the CONTRACTOR to communicate directly with a construction manager or other consultant, and to copy the City with correspondence.
- B. Notice to Surrounding Properties. CONTRACTOR must provide Notice of Construction to all property owners and businesses at least 3 days before commencement of such work. A sample form notice is found in the Proposed Contract Documents, at page A-00670-1.

6.2 INDEPENDENT CONTRACTOR. CONTRACTOR is and shall at all times be deemed to be an independent CONTRACTOR and shall be wholly responsible for the manner in which it performs the services required of it by the terms of the Project Documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the City and CONTRACTOR or any of CONTRACTOR's subcontractors (of

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every tier), suppliers, agents or employees. CONTRACTOR assumes exclusively the responsibility for the acts of its subcontractors (of every tier), suppliers, agents, and employees as they relate to the services to be provided during the course and scope of their employment. CONTRACTOR, its subcontractors (of every tier), suppliers, agents and employees shall not be entitled to any rights or privileges of City employees and shall not be considered in any manner to be City employees. The City shall be permitted to monitor all the activities of the CONTRACTOR to determine compliance with the terms of the Project Documents.

- 6.3 CONTRACTOR LICENSE. CONTRACTORS are required by law to be licensed and regulated by the Contractors' State License Board. Any CONTRACTOR not so licensed is subject to penalties under the law, and the contract will be considered void pursuant to Section 7028.7 of the Business and Professions Code. Any questions concerning a CONTRACTOR may be referred to the Registrar, Contractors' State License Board, 3132 Bradshaw Road, P.O. Box 2600, Sacramento, CA 95826. CONTRACTOR shall be duly licensed at all times during performance. Substantial compliance shall not be sufficient.
- 6.4 CONTRACTOR REGISTRATION: CONTRACTOR, as well as any subcontractors, shall be registered pursuant to Cal. Lab. Code § 1725.5 to be qualified to bid on, be listed in a bid proposal, (subject to the requirements of Section 4104 of the Public Contract Code) or engage in the performance of any public work contract that is subject to the requirements of Chapter 1, Part 7, Division 2 of the California Labor Code.
- 6.4 CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY. Before CONTRACTOR makes any change in the name or legal nature of the CONTRACTOR's entity, CONTRACTOR shall first notify the City in writing and cooperate with the City in making such changes as the City may request in the Project Documents.
- 6.5 CONTRACTOR SUPERINTENDENT. During progress of the Work, CONTRACTOR shall keep on the Work site a competent, English-speaking Superintendent satisfactory to the City. Before commencing the Work herein, CONTRACTOR shall give written notice to the City of the name, qualifications and experience of such Superintendent. If, at any time, the Superintendent is found unsatisfactory by the City, CONTRACTOR shall replace the Superintendent with one acceptable to the City. Superintendent shall not be changed or removed from the project except with written consent of the City, unless a Superintendent proves to be unsatisfactory to CONTRACTOR and ceases to be in its employ, in which case, CONTRACTOR shall notify the City in writing and replace said Superintendent with one acceptable to the City. Superintendent shall represent CONTRACTOR and all directions given to Superintendent shall be as binding as if given to CONTRACTOR. During planned absences longer than one Workday (e.g. vacation), CONTRACTOR shall, at least **ten (10) days** prior, provide written notice to the City the name of the individual proposed to assume the responsibilities of Superintendent during his/her absence.
- 6.6 CONTRACTOR SUPERVISION. Without a right to claim additional reimbursement, CONTRACTOR shall staff the project with a sufficient number of experienced, skilled and knowledgeable personnel to meet the needs (both administrative and supervisory) of the Project, and shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the Work in accordance with the Project Documents. CONTRACTOR shall carefully study and compare all plans, drawings, specifications, and other instructions and shall at once report to the City any error, inconsistency or omission which CONTRACTOR or its employees may discover. The CONTRACTOR represents itself to the City as a skilled, knowledgeable, and experienced CONTRACTOR. The CONTRACTOR shall carefully study and compare the Project Documents with each other, and shall at once report to the City any errors, inconsistencies, or omissions discovered. The CONTRACTOR shall be liable to the City for damage resulting from errors, inconsistencies, or omissions in the Project Documents that the CONTRACTOR recognized and which CONTRACTOR knowingly failed to

report and which a similarly skilled, knowledgeable, and experienced CONTRACTOR would have discovered.

- 6.7 FIELD MEASUREMENTS, LAYOUT, RECORD DRAWINGS AND FIELD ENGINEERING. The CONTRACTOR shall verify all indicated dimensions at its expense before ordering materials or equipment, or before performing Work. The CONTRACTOR shall take field measurements, verify field conditions, and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Project Documents before commencing Work. Errors, inconsistencies or omissions discovered shall be reported to the City at once. Upon commencement of any item of Work, the CONTRACTOR shall be responsible for dimensions related to such item of Work and shall make any corrections necessary to make Work properly fit at no additional cost to the City. This responsibility for verification of dimensions is a non-delegable duty and may not be delegated to Subcontractors or agents. The CONTRACTOR shall keep up-to-date record drawings of this project through the course of the project. The City shall approve these record drawings periodically, and the release of progress payments may be delayed if the record drawings are not kept up to date. After the project punch- list has been completed, the CONTRACTOR shall supply a single clean set of accurate blue-line (as-built) plans to the City. Failure to submit these as-builts will delay the Final Notice of Completion and final payment.
- 6.8 DETAILS OF THE WORK. Omissions from the plans, drawings or specifications, or the mis-description of customary and usual details of Work which are manifestly necessary to carry out the intent of the plans, drawings and specifications, or which are customarily performed, shall not relieve the CONTRACTOR from performing such omitted or mis-described Work, but they shall be performed as if fully and correctly set forth and described in the plans, drawings and specifications.
- 6.9 MEANS AND METHODS. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Project Documents. The CONTRACTOR shall be solely responsible for all safety precautions and programs incidental thereto.
- 6.10 SUBCONTRACTORS
- A. CONTRACTOR agrees to bind every Subcontractor by terms of the Project Documents as far as such terms are applicable to Subcontractor's Work. If CONTRACTOR shall subcontract any part of the Work, CONTRACTOR shall be as fully responsible to the City for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, as it is for acts and omissions of persons directly employed by CONTRACTOR. Nothing contained in Project Documents shall create any contractual relation between any Subcontractor and the City, nor shall the Contract Documents be construed to be for the benefit of any Subcontractor.
- B. The City's consent to any Subcontractor shall not in any way relieve CONTRACTOR of any obligations under the Project Documents and no such consent shall be deemed to waive any provision of any Project Document.
- C. CONTRACTOR must submit with its bid a Designation of Subcontractors pursuant to the Subletting and Subcontracting Fair Practices Act. If CONTRACTOR specifies more than one Subcontractor for the same portion of Work or fails to specify a Subcontractor, and such portion of the Work exceeds one-half of one percent of the total bid, CONTRACTOR agrees that it is fully qualified to perform and shall perform such Work itself, unless CONTRACTOR provides for substitution or addition of Subcontractors. Substitution or addition of Subcontractors shall be permitted only as authorized under the

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Subletting and Subcontracting Fair Practices Act, California Public Contract Code Section 4100, et seq.

- D. In accordance with California Business and Professions Code Section 7059, if CONTRACTOR is designated as a "specialty CONTRACTOR" (as defined in Section 7058 of the Business and Professions Code), all of the Work to be performed outside of the CONTRACTOR's license specialty shall be performed by a licensed Subcontractor in compliance with the Subletting and Subcontracting Fair Practices Act, California Public Contract Code Section 4100, et seq.
- E. INELIGIBLE SUBCONTRACTOR. Pursuant to Public Contract Code Section 6109, no CONTRACTOR may perform Work on a public works project with a subcontractor who is ineligible to perform Work on the project pursuant to sections 1777.1 or 1777.7 of the Labor Code.
- F. A copy of each subcontract, if in writing, or, if not in writing, then a written statement signed by the CONTRACTOR giving the name of the Subcontractor and the terms and conditions of such subcontract, shall be filed with the City before the Subcontractor begins Work. Each subcontract shall contain an express reference to and incorporate the Agreement between the City and the CONTRACTOR and the terms of that Agreement and all parts of the Project Documents shall be made a part of such subcontract insofar as applicable to the Work covered thereby. Each subcontract will provide for termination in accordance with the Article entitled City's RIGHT TO TERMINATE AGREEMENT of these General Conditions. Each subcontract shall provide for its annulment by the CONTRACTOR at the order of the City if in the City's opinion the Subcontractor fails to comply with the requirements of the Project Documents insofar as the same may be applicable to this Work. Nothing herein contained shall relieve the CONTRACTOR of any liability or obligation hereunder.

6.11 DUTY TO PROVIDE FIT WORKERS

- A. CONTRACTOR and Subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ on the Work any unfit person or anyone not skilled in the Work assigned to such person. It shall be the responsibility of CONTRACTOR to ensure compliance with this Article.
- B. Any person in the employ of the CONTRACTOR or Subcontractors whom the City or Engineer may deem incompetent, unfit, troublesome or otherwise undesirable shall be excluded from the Work site and shall not again be employed on it except with the written consent of the City.

6.12 OVERTIME.

- A. Except as otherwise provided in this Article, the CONTRACTOR shall receive no additional compensation for overtime Work, i.e., Work in excess of **8 hours** in any **1 calendar day** or **40 hours** in any **1 calendar week**, even though such overtime Work may be required under emergency conditions and may be ordered by the City in writing. Additional compensation will be paid to the CONTRACTOR for overtime Work only in the event extra Work is ordered by the City and the Change Order specifically authorizes the use of overtime Work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime Work of a similar nature in the same locality.
- B. All increased or additional costs of inspection and/or testing, performed by or on behalf of the City, during overtime Work by the CONTRACTOR which is allowed solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The City

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has the authority to deduct the costs of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR. Payment for inspection overtime beyond a normal Workday (9 hours), Saturdays, Sundays or Union observed holidays will be deducted from the CONTRACTOR's payment at the rate of One Hundred Twelve Dollars and Fifty Cents (\$112.50) per hour (one hour minimum) pursuant to City of Escondido Resolution No. 2007-115(RR).

6.13 MATERIALS AND WORK

- A. Except as otherwise specifically stated in this Agreement, CONTRACTOR shall provide and pay for all materials, supplies, tools, equipment, labor, transportation, administration, management, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete the Project within the specified time.
- B. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted or specified free from defects, and workmanship shall be of excellent quality.
- C. Materials shall be furnished in ample quantities and at such times as to insure uninterrupted progress of Work and shall be stored properly and protected as required.
- D. CONTRACTOR shall, after issuance of the Notice to Proceed by the City, place orders for materials and/or equipment as specified so that delivery may be made without delays to the Work. CONTRACTOR shall, upon demand by the City, furnish to the City documentary evidence showing that orders have been placed.
- E. The City reserves the right, due to any neglect in not complying with the above instructions, to place orders for such materials and/or equipment as it may deem advisable in order that the Work may be completed by the date specified in the Agreement, and all expenses incidental to the procuring of these materials and/or equipment shall be paid for by the CONTRACTOR.
- F. No materials, supplies, or equipment for Work under this Agreement shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. CONTRACTOR warrants good title to all material, supplies, and equipment installed or incorporated in the Work and agrees upon completion of all Work to deliver the premises, together with all improvements and appurtenances constructed or placed thereon by it, to the City free from any claims, liens, or charges. CONTRACTOR further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Agreement shall have any right to any lien upon the premises or any improvement or appurtenance thereon, except that CONTRACTOR may install metering devices or other equipment of utility companies or of political subdivisions, title to which is commonly retained by the utility company or political subdivision. In the event of installation of any such metering device or equipment, CONTRACTOR shall advise the City as to the owner thereof.
- G. Nothing contained in this Article, however, shall defeat or impair the rights of persons furnishing material or labor under any bond given by CONTRACTOR for their protection or any rights under any law permitting such persons to look to funds due CONTRACTOR in the hand of the City, and this provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all

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persons furnishing materials or labor when no formal contract is entered into for such materials or labor.

- H. Materials and/or equipment and the attendant liability for its protection and safety shall remain with the CONTRACTOR until incorporated in the Work and accepted by the City, no part of the materials and/or equipment shall be removed from its place of storage except for immediate installation in the Work; and CONTRACTOR shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to the City or its authorized representative.
- 6.14 ACCESS TO CONTRACTOR'S RECORDS. The CONTRACTOR agrees that the City (including the City's designees) have the right to access, review, obtain and copy upon reasonable written notice (which shall be no greater than **3 working days**), all Records pertaining to the Agreement and/or the Project, including the bid. The CONTRACTOR agrees to provide the City with any relevant information requested and shall permit the State or the City access to its premises upon reasonable notice for purposes of interviewing employees and inspecting Records. The CONTRACTOR agrees to maintain such Records for a period of **3 years** after final payment under the contract. Should the project be funded by the State Revolving Fund, the CONTRACTOR shall maintain records for **20 years**.
- 6.15 CONTRACTOR SUBSTITUTION OF "OR EQUAL" ITEMS
- A. CONTRACTOR shall follow all instructions and requirements set forth in the "INSTRUCTIONS TO BIDDERS", for compliance with this Article.
- B. Whenever in specifications any materials, process, service or equipment is indicated or specified by brand name, trade name, proprietary name or by name of manufacturer, such specification shall be deemed to be used for the purpose of facilitating description of material, process, service or equipment desired and shall be deemed to be followed by the words "or equal", CONTRACTOR may, unless otherwise stated, offer any material, process, service, or equipment which shall be substantially equal or better in every respect to that so indicated or specified subject to the City's approval.
- C. If material, process, service, or equipment offered by CONTRACTOR is not, in the City's sole discretion determined to be, equal or better in every respect to that specified, then CONTRACTOR shall furnish the material, process, service, or equipment specified. The burden of proof as to equality of any material, process, service, or equipment shall rest with CONTRACTOR. This provision authorizing submission of "or equal" substantiating data shall not in any way authorize an extension of time for performance of this Agreement.
- D. "Or equal" and substitution requests with substantiating data shall be submitted for consideration no later than **14** calendar days prior to bid opening.
- E. The City may choose to allow an "or equal" substitution, if the City determines, in its sole discretion, that the requested substitution is an equal product, and that there is a cost savings resulting in a deductive change order, an increase in the performance with the substituted product, or any other reason deemed by the City to be in the City's best interest to allow the substitution.
- F. If a CONTRACTOR initiated material substitution occurs after the Award of Contract, CONTRACTOR must establish that the specified material is no longer being manufactured or available, that the substituted material is the best possible material

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substitution for that which is no longer available, or that there is some other benefit to the City in approving said substitution.

- G. If the City allows the substitution anytime after the Award of Contract, the CONTRACTOR will be responsible for reasonable fees incurred by the Engineer or Engineer's consultants in reviewing the proposed substitution which fees may be deducted from progress payments to CONTRACTOR.
- H. In the event CONTRACTOR furnishes material, process, service, or equipment more expensive than that specified, any difference in cost of such material, process, service, or equipment so furnished shall be borne by CONTRACTOR. Any engineering, design fees, or approval agencies' fees required to make adjustments in material or Work of all trades directly or indirectly affected by the approved substituted items shall be borne entirely by CONTRACTOR. Any difference in cost between an approved substitution that is lower in cost than the originally specified item shall be refunded by CONTRACTOR to the City.
- I. All costs associated with and caused by a CONTRACTOR's "or equal" submittal, including any consequential design changes needed to accommodate the "or equal", and any delay caused to the project schedule resulting from the review of the requested "or equal" submittal shall be borne by the CONTRACTOR.

6.16 PERMITS

- A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including the furnishing of insurance and bonds if required by such agencies. The enforcement of such requirements shall not be made the basis for claims for additional compensation by CONTRACTOR. When necessary, the City will assist the CONTRACTOR, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids. The CONTRACTOR shall pay all charges of utility owners for inspection or connections to the Work. Compensation for all permit fees is included in the Lump Sum payment for Mobilization.
- B. Reserved.
- C. Prior to beginning Work, the CONTRACTOR shall obtain a no-fee Encroachment Permit from the office of the City of Escondido Field Engineer, 201 N. Broadway, unless otherwise specified in the Supplemental General Conditions. CONTRACTOR shall adhere to all requirements and provisions of said Encroachment Permit as though fully set forth herein.
- D. The CONTRACTOR shall be responsible for complying with the requirements of all permits acquired by the City.

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Except for the permits specifically set forth in 'A' above, the CONTRACTOR shall acquire all permits required by Laws or Regulations, including, without limitation, the following specific permits (if applicable):

1. State permits to construct and/or operate sources of air pollution.
2. Certificates and permits are required for sources such as, but not limited to:
 - a. Fuel burning equipment
 - b. Gasoline and petroleum distillate storage containers
 - c. Land disturbing activities
 - d. Processing equipment (sand, gravel, concrete batch plant, etc.)
 - e. Odors
3. Stormwater Permit.
4. Permit-Required Confined Space

The workplace in which the Work is to be performed may contain permit-required confined spaces (permit spaces) as defined in 29 CFR 1910.146 and, if so, permit space entry is allowed only through compliance with a confined space entry program meeting the requirements of 29 CFR 1910.146.

5. Others as required in the Supplementary General Conditions.

6.17 **PATENT FEES AND ROYALTIES.** The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of the City or the Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed by the City in the Contract Documents. The CONTRACTOR's indemnification obligation under this Article, for all claims and liabilities arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents shall be in accordance with Article 6.16 of these General Conditions.

6.18 **LAWS AND REGULATIONS.** The CONTRACTOR shall observe and comply with all Laws and Regulations which in any manner affect those engaged or employed on the Work, the materials used in the Work, or the conduct of the Work. If any discrepancy or inconsistency should be discovered between the Contract Documents and any such Laws or Regulations, the CONTRACTOR shall report the same in writing to the Engineer. Any particular Law or Regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations. The CONTRACTOR's indemnification obligations for all claims or liability arising from violation of any such law, ordinance, code, order, or regulation, whether by CONTRACTOR or by its employees, Subcontractors or Suppliers shall be in accordance with Article 6.16 of these General Conditions.

6.19 **TAXES.** The CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by the CONTRACTOR in accordance with the laws and regulations of the place of the Project which are applicable during the performance of the Work.

6.20 **USE OF PREMISES.** The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site, the land and areas identified in and permitted by the Contract Documents, and the other land and areas permitted by Laws and

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Regulations, rights-of-way, permits, and easements. The CONTRACTOR shall assume full liability and responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the City or the Engineer by any such owner or occupant because of the performance of the Work, the CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim through litigation at the CONTRACTOR's sole liability any expense. The CONTRACTOR's indemnification obligations for all claims and liability, arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any such owner or occupant against the City, the Engineer, their consultants, subconsultants, and the officers, directors, employees and agents of each and any of them to the extent caused by or based upon the CONTRACTOR's performance of the Work shall be in accordance with Article 6.25 of these General Conditions.

6.21 SAFETY AND PROTECTION

- A. The CONTRACTOR shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
1. All persons at the Site and other persons and organizations who may be affected thereby;
 2. All the Work materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, mailboxes, and utilities not designated for removal, relocation, or replacement in the course of the performance of the Work.
- B. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property or to the protection of persons or property from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and in accordance with Article 14.11. that the Work is acceptable.
- C. During the entire construction period, it shall be the responsibility of the contractor to maintain conditions at the project location so as to meet in all aspects the requirements of the California Code of Regulations, Title 8, Industrial Relations, Chapter 4, Division of Industrial Safety Orders CAL/OSHA. This provision shall cover the CONTRACTOR's employees and all other persons working upon or visiting the project location. To this end, the Contractor shall inform himself and his representatives of CAL/OSHA standards.
- D. The CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
- E. MSDS. Materials that contain hazardous substances or mixtures may be required on the Work. A Material Safety Data Sheet (MSDS.) shall be made available at the Site by the CONTRACTOR for every hazardous product used. Material usage shall strictly conform to OSHA safety requirements and all manufacturer's warnings and application instructions

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listed on the MSDS and on the product container label. The CONTRACTOR shall be responsible for the exchange of every MSDS or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

- F. The CONTRACTOR shall notify the City if it considers a specified product or its intended use to be unsafe. This notification must be given to the City prior to the product being ordered, or if provided by some other party, prior to the product being incorporated in the Work.
 - G. **CONFINED SPACES.** The CONTRACTOR will not enter any confined space without using a Confined Space Entry Permit. The CONTRACTOR shall be responsible for implementing, administering and maintaining a confined space entry program (CSEP) in accordance with Sections 5156, 5157 and 5158, Title 8, CCR.
 - H. The CONTRACTOR shall provide a **COMPETENT PERSON** for all excavation operations.
- 6.22 **EMERGENCIES.** In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR, without special instruction or authorization from the City or Engineer, is obligated to immediately act to prevent threatened damage, injury, or loss. CONTRACTOR shall give City prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If City determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Change Order will be issued to document the action.
- 6.23 **SUBMITTALS.** The City requires submittals for all materials, equipment, parts and systems.
- A. **SHOP DRAWINGS**
 - 1. The City may designate a consultant to receive and review submittals and may require the CONTRACTOR to transmit the submittals to that consultant. Commensurate with the requirements of the project schedule, the CONTRACTOR shall check and verify all field measurements and shall submit to the City six (6) copies, checked, coordinated and approved by CONTRACTOR, of all shop or setting list drawings, schedules, and materials list required for the Work of various trades: If this project consists of any remodel / modernization Work, field dimensions require verification prior to the preparation of the Shop Drawings. The City shall review such drawings, schedules and materials list only for conformance with the design concept of Project and compliance with information given in Project Documents, and return with notations and with guidance as to required corrections within **30 days**. CONTRACTOR shall make any corrections required by the City, file three (3) corrected copies with the City, and furnish such other copies as may be needed for construction within **30 days**. The City's approval of such drawings, schedules, or materials list shall not relieve CONTRACTOR from responsibility for deviations unless CONTRACTOR has in writing called the City's attention to such deviations at time of submission by clearly writing the phrase "**DEVIATION REQUEST**" in bold type at the head of the submittal, and secured the City's written approval, nor shall it relieve CONTRACTOR from responsibility for errors in shop drawings or schedules.

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2. The City is entitled to additional review time. The additional review time may be required to review complex and difficult submittals, including but not limited to structural steel shop drawings, mechanical equipment, electrical equipment, and special system components and parts. The CONTRACTOR shall breakout critical submittals into separate packages so as to expedite the review process of an individual item. The coordination of the overall submittal packages shall be the responsibility of the CONTRACTOR.
3. Shop Drawings requiring "**Deferred Approval**" require a substantial amount of time for City review and approval. The Project Documents will identify those shop drawings requiring Deferred Approval, if any. The Contractor shall apply its skill and knowledge to expedite the Deferred Approval(s) from preparation to approval. The Contractor shall schedule the project activities to avoid critical path delays as a result of the Deferred Approval process. Notwithstanding anything to the contrary herein, the CONTRACTOR shall make submittals of all Deferred Approvals to the City within **120 days** of the Award of Contract. The City shall review such Deferred Approval submittal, and shall return as approved or disapproved with guidance as to the required corrections within **60 days**. If resubmittals are required, the City shall endeavor to review and return the resubmittal within **60 days**. CONTRACTOR shall allow sufficient time in its scheduling for corrections and resubmittals of Deferred Approval items in conformance with these requirements.
4. All submittals of shop drawings, catalog cuts, data sheets, schedules and material lists shall be complete and shall conform to contract drawings and specifications. The CONTRACTOR shall prepare layout and coordination drawings to demonstrate the accuracy and fit of the materials and Work.
5. The term "shop drawing" as used herein shall be understood to include, but not be limited to, coordination efforts by CONTRACTOR involving detail design calculations for the development of the Shop Drawing, fabrication and installation drawings, lists, graphs and operating instructions.
6. Shop drawings shall be submitted at a time sufficiently early to accommodate the rate of construction progress required under the Project Documents. CONTRACTOR will be required to pay the City or its consultant's reasonable and customary fees in order to expedite review of Shop Drawings which are not submitted in a timely fashion.
7. All submittals shall be accompanied by an accurately completed transmittal form using the format bound herein, or as approved by the City. Any shop drawing submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal. The CONTRACTOR may authorize a material or equipment supplier to deal directly with the City with regard to Shop Drawings. However, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the CONTRACTOR.
8. Normally, a separate transmittal form shall be used for each specific item, scheduled activity task, or class of material or equipment for which a submittal is required. However, due to the critical nature of a submittal, a submittal can be broken into separate sub-submittals in order to obtain the review of a more

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critical portion(s) of a submittal prior to the review of other sub-submittals. The transmittal form shall include the CPM Activity / Submittal Task Number, Early Start (ES), Early Finish (EF), Late Finish (LF) and the float for the activity. Transmittal of shop drawings on various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole.

9. CONTRACTOR's review and approval of Shop Drawings and submittals shall include the following stamp:

"The CONTRACTOR has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the Shop Drawings or submittal that does not conform to the Project Documents. This Shop Drawing or submittal has been coordinated with all other shop drawings and submittals received to date by CONTRACTOR and this duty of coordination has not been delegated to Subcontractors, material suppliers, the Engineer, or the architects on this project. The Contractor also indicates that it has not relied upon the dimensions shown on the drawings, specifications and schedules, and that the Contractor has double-checked all dimensions for accuracy and fit.

Signature of CONTRACTOR"

10. Within **30 days** after receipt of Shop Drawings, the City will endeavor to return one or more prints of each drawing to CONTRACTOR with City's comments noted thereon. The CONTRACTOR shall make a complete and acceptable submittal to the City by the second submission of drawings. The City shall withhold funds due the CONTRACTOR to cover additional costs of the City's review beyond the second submission and any other costs incurred by the City.
11. If prints of the shop drawing are returned to the CONTRACTOR marked "**NO EXCEPTIONS TAKEN**," formal revision of said drawing will not be required. If prints of the drawing are returned to the CONTRACTOR marked "**MAKE CORRECTIONS NOTED**," formal resubmittal of said drawings will not be required. If prints of the drawing are returned to the CONTRACTOR marked "**REVISE AND RESUBMIT**," the CONTRACTOR shall revise said drawing and shall resubmit six (6) copies of the revised drawing to the City. If prints of the drawing are returned to the CONTRACTOR marked "**REJECTED RESUBMIT**," the CONTRACTOR shall resubmit six (6) new copies of the drawing to the ARCHITECT. Submittals being resubmitted for revisions or submitted due to previous rejection, the CONTRACTOR shall provide a written response indicating the nature of the correction(s) and/or cloud the revised item(s).
12. Fabrication of an item shall not be commenced before the City has reviewed the pertinent Shop Drawings and returned copies to the CONTRACTOR marked with "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED." Revisions indicated on shop drawings shall be considered as changes necessary to meet the requirements of the Project Documents and shall not be taken as the

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basis of claims for extra Work. The review of such drawings by the City will be limited to checking for general agreement with the Project Documents, and shall in no way relieve the CONTRACTOR of responsibility for errors or omissions contained therein, nor shall such review operate to waive or modify any provision contained in the Project Documents. Fabricating dimensions, quantities of material, applicable code requirements, and other contract requirements shall be the CONTRACTOR's responsibility.

13. No Work represented by required Shop Drawings shall be purchased or commenced until the applicable submittal has been approved. The Work shall conform to the approved Shop Drawings and all other requirements of the Project Documents. The CONTRACTOR shall not proceed with any related Work which may be affected by the Work covered under Shop Drawings until the applicable Shop Drawings have been approved, particularly where piping, machinery, and equipment and the required arrangements and clearances are involved.
14. Except where the preparation of a Shop Drawing is dependent upon the approval of a prior shop drawing, all shop drawings pertaining to the same class or portion of the Work shall be submitted simultaneously.
15. THE CONTRACTOR SHALL HAVE NO CLAIM FOR DAMAGES OR EXTENSION OF TIME DUE TO ANY DELAY RESULTING FROM THE CONTRACTOR HAVING TO MAKE THE REQUIRED REVISIONS TO SHOP DRAWINGS UNLESS REVIEW BY THE CITY IS DELAYED BEYOND THE TIME PROVIDED HEREIN AND THE CONTRACTOR CAN ESTABLISH THAT IT BEARS NO RESPONSIBILITY FOR CAUSING AND/OR CONTRIBUTING TO THE DELAY AND THAT THE CITY'S DELAY IN REVIEW ACTUALLY RESULTED IN A DELAY TO THE CRITICAL PATH IN THE CONTRACTOR CONSTRUCTION SCHEDULE.

B. PAYROLL SUBMITTALS

1. Copies of all payrolls shall be submitted weekly to the City. Payrolls shall contain the full name, address and social security number of each employee, the employee's correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. They shall also indicate apprentices and ratio of apprentices to journeymen. The employee's address and social security number need only appear on the first payroll on which that name appears. The payroll shall be accompanied by a "Statement of Compliance" signed by the employer or the employer's agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those required by the Contract. The CONTRACTOR shall be responsible for the submission of copies of payrolls of all subcontractors. The CONTRACTOR shall ensure that the payrolls match the Daily Work Reports. The CONTRACTOR shall certify that no Work was done on the job if no Work was done on the job.
2. If by the 15th of the month, the CONTRACTOR has not submitted satisfactory payrolls for all Work performed during the monthly period ending on or before the 1st of that month, the City will retain an amount equal to five percent (5%) of the estimated value of the Work performed (exclusive of Mobilization) during the month from the next monthly estimate, except that this retention shall not exceed \$10,000 nor be less than \$1,000. Retentions for failure to submit

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satisfactory payrolls shall be additional to all other retentions provided for in the Contract. The retention for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory payrolls for which the retention was made are submitted.

3. The CONTRACTOR shall also submit a second copy of all certified payrolls with all personal information fully redacted. The CONTRACTOR and each subcontractor shall preserve their payroll records for a period of **3 years** from the date of completion of the Contract. The form of the certification shall be as follows:

I, _____ (print name), the undersigned, am _____ (position in business) with the authority to act for and on behalf of

(Name of business and/or CONTRACTOR), certify under penalty of perjury that the records or copies thereof submitted and consisting of _____ (description, number of pages) are the originals or true, full and correct copies of the originals which depict the payroll record(s) of the actual disbursements by way of cash, check, or whatever form to the individual or individuals named.

Dated: _____

Signature: _____

- C. **SUBMITTAL OF HOME OFFICE OVERHEAD.** CONTRACTOR shall furnish within **7 days** after the Notice to Proceed, a certified statement and detailed calculation from its accountant establishing the job site and pro rata home office overhead rates for CONTRACTOR and major Subcontractors, as determined by the City. Such shall be updated quarterly and filed with the City.
- D. **SUBMITTAL OF HOURLY RATES.** CONTRACTOR shall furnish within **7 days** after the Notice to Proceed, a complete listing of CONTRACTORS and Subcontractors hourly labor rates, indicating the direct hourly wage rate, payroll taxes and insurance costs.
- E. **ESCROW BID DOCUMENTS.** The Escrow Bid Documents shall be submitted by the CONTRACTOR in a sealed container(s) within **10 days** after the day of award of the contract. The container shall be clearly marked on the outside with the CONTRACTOR's name, date of submittal, project name and the words "Escrow Bid Documents."
- F. **SWPPP/BMP.** CONTRACTOR shall submit the required Storm Water Pollution Prevention Plan or Best Management Practices, before commencement of any Work.

6.24 **CONTRACTOR'S GENERAL WARRANTY AND GUARANTEE**

- A. CONTRACTOR warrants that the Work (which includes all equipment furnished by CONTRACTOR as part of the materials) shall:
1. Be free from defects in workmanship, integration and material; be free from defects in any design performed by CONTRACTOR;

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2. Be new, and conform and perform to the requirements stated in the specifications and where detail requirements are not so stated, shall conform to applicable industry standards; and
 3. Be suitable for the use stated in the specifications.
- B. The warranty period for discovery of defective Work shall commence on the date stamped on the Notice of Completion verifying County recordation and continue for the period set forth in the specifications or for **1 year** if not so specified. If, during the warranty period, the Work is not available for use due to defective Work, such time of unavailability shall not be counted as part of the warranty period. The warranty period for corrected defective Work shall continue for a duration equivalent to the original warranty period.
- C. The City shall give CONTRACTOR prompt written notice after discovery of any defective or incomplete Work. CONTRACTOR shall correct any such defective or incomplete Work, as well as any damage to any other part of the Work resulting from such defective or incomplete Work, and shall provide repair, replacement, or reimbursement, at its sole expense, in a manner approved by the City and with due diligence and dispatch as required to make the Work ready for use by the City, ordinary wear and tear, unusual abuse or neglect excepted. Such corrections shall include, but not be limited to, any necessary adjustments, modifications, changes of design (unless of City's design), removal, repair, replacement or reinstallation, and shall include all necessary parts, materials, tools, equipment, transportation charges and labor as may be necessary, and cost of removal and replacement of Work shall be performed at a time and in such a manner so as to minimize the disruption to the City's use of the Work.
- D. In the event of failure of CONTRACTOR or Surety to commence and pursue with diligence any such repairs or replacements within **10 days** after being notified in writing, the City is hereby authorized to proceed to have defects repaired or replaced and made good at the expense of the CONTRACTOR and the Surety who hereby agree to pay any costs and charges therefore immediately on demand.
- E. If, in the opinion of the City, defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the City or to prevent interruption of operations of the City, the City will attempt to give the written notice required by this Article. If the CONTRACTOR or Surety cannot be contacted or neither complies with the City's requirements for correction within a reasonable time as determined by the City, the City may, notwithstanding the provisions of this Article, proceed to make such correction or provide such attention and the costs of such correction or attention shall be charged against the CONTRACTOR and Surety. Such action by the City will not relieve the CONTRACTOR and Surety of the guarantees provided in this Article or elsewhere in the Project Documents.
- F. This Article does not in any way limit the guarantees on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. CONTRACTOR shall furnish to City all appropriate guarantee or warranty certificates upon completion of the Project or upon request by the City.
- G. All guarantees required under this Article shall be in writing on a Guarantee form approved by the City.
- H. CONTRACTOR shall provide to the City instruction manuals for all items which require same.

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- I. Nothing herein shall limit any other rights or remedies available to the City, and any and all written/express guarantees are in addition to rights provided under California law, including the rights granted under Code of Civil Procedure sections 337.1 and 337.15.
 - J. CONTRACTOR warrants and guarantees that all Work will be in accordance with the Project Documents and will not be defective. The CONTRACTOR shall guarantee all parts of the Work against defective materials or workmanship furnished by the CONTRACTOR for a period of **1 year** from the date of final acceptance by the City.
- 6.25 RESERVED
- 6.26 CONTRACTOR'S DAILY REPORTS. At the close of each working day, the CONTRACTOR shall submit a daily report to the Inspector, on forms approved by the City, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized concerning extra Work items. Extra or disputed work shall be specifically described and separated from Contract Work on the report. An attempt shall be made to reconcile the report daily, and the Inspector and the CONTRACTOR shall sign it. In the event of disagreement, pertinent notes shall be entered by each party to explain points that cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR.
- 6.27 CONTRACTOR PAYMENTS. To each of its subcontractors, not later than the **5th day** following each payment to CONTRACTOR by the City the respective amounts allowed CONTRACTOR on account of Work performed by the respective subcontractor's to the extent of such subcontractor's interest therein. If CONTRACTOR does not pay one or more SUBCONTRACTORS the amount (less retention) applied for and received in a payment application, CONTRACTOR shall return said amount back to the City within **5 days**.
- 6.28 DIAL BEFORE YOU DIG. The CONTRACTOR shall make notification to the regional notification center for utility markouts and keep a record of the inquiry identification number.

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The CONTRACTOR shall follow the requirements of California Government Code Section 4216-4216.9. Refer to Article 4.3.

6.29 DOCUMENTS ON WORK. CONTRACTOR shall keep on the job site at all times one legible copy of all Project Documents, including addenda and change orders, and Title 19 of the California Code of Regulations, and all approved drawings, plans, schedules and specifications. Said documents shall be kept in good order and available to the City, Engineer, architect, and all authorities having jurisdiction. CONTRACTOR shall be acquainted with and comply with the provisions of said regulations as they relate to this Project. CONTRACTOR shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project, particularly Titles 8 and 17.

6.30 TEMPORARY UTILITIES

A. All utilities, including but not limited to electricity, water, gas, and telephone used on the Work shall be furnished and paid for by CONTRACTOR. CONTRACTOR shall furnish and install necessary temporary distribution systems, including meters, if necessary, from distribution points to all points on the site where the utility is necessary to carry on the Work. Upon completion of the Work, CONTRACTOR shall remove all temporary distribution systems.

B. If this Contract is for a modernization, reconstruction and or an addition to existing building(s),

1. CONTRACTOR may, with written permission of the City, use the City's existing utilities by making prearranged payments to the City for utilities used by CONTRACTOR for construction.

2. CONTRACTOR shall arrange, schedule and pay for all temporary utilities to the entire facility and/or portion(s) of the facility, including but limited to electrical power, water and gas. The entire facility and/or portion of the facility shall be any area that is affected by a utility disruption and/or affects the function and use of the facility.

6.31 SANITARY FACILITIES. The CONTRACTOR shall provide sanitary temporary toilet and hand washing facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The toilet facilities shall be maintained in a sanitary condition at all times and shall be left at the site until removal is directed by the Inspector. Use of toilet facilities in the Work under construction shall not be permitted.

6.32 CLEANING UP

A. For Projects located in the Right-of-Way the CONTRACTOR shall, on a continuous basis, keep Work site free from CONTRACTOR generated debris such as waste, rubbish, and excess materials, dirt, mud, dust, and non-functioning equipment caused by this Work and shall follow the Technical Specifications "TEMPORARY ENVIRONMENTAL CONTROLS & CONSTRAINTS" and "TEMPORARY ENCROACHMENT, MAINTENANCE, AND RESTORATION OF THE CITY RIGHT-OF-WAY".

B. For Building Projects, or projects that are off the street, CONTRACTOR shall at all times keep Work site free from CONTRACTOR generated debris such as waste, rubbish, and excess materials and equipment caused by this Work, at the least on a daily basis. CONTRACTOR shall not leave debris under, in, or about the Work site. Upon completion of CONTRACTOR Work, CONTRACTOR shall clean all interior and exterior materials

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installed by CONTRACTOR, and in addition to, all buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected as a direct or indirect result of the CONTRACTOR Work. Such cleaning shall consist of polishing all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment. If the project consists of any street improvements (paving / gutter and/or sidewalk surfaces), drain inlets and any pipeline facilities, such Work shall also be free of any debris and sediments.

6.33 WAGE RIGHTS [Job Site Notices]

- A. Pursuant to the provisions of the Labor Code, the governing board of the City has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime Work in the locality in which this public Work is to be performed for each craft, classification or type of worker needed for this Project from the Director of the Department of Industrial Relations ("Director.") These rates are on file with the Clerk of the City's governing board and copies will be made available to any interested party on request. CONTRACTOR shall post a copy of such wage rates at the Work site.
- B. Holiday and overtime Work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Agreement applicable to each particular craft, classification or type of worker employed.
- C. CONTRACTOR shall pay and shall cause to be paid each worker engaged in Work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the CONTRACTOR or any Subcontractor and such workers.
- D. If during the period this bid is required to remain open, the Director of Industrial Relations determines that there has been a change in any prevailing rate of per diem wages in the locality in which this public Work is to be performed, such change shall not alter the wage rates in the Notice Calling for Bids or the contract subsequently awarded.
- E. Pursuant to Labor Code section 1775, CONTRACTOR and any subcontractor shall as a penalty to the City, forfeit fifty dollars (\$50) for each calendar day, or portion thereof, for each worker paid less than the prevailing rate of per diem wages, determined by the Director, for such craft or classification in which such worker is employed for any public Work done under the Agreement by CONTRACTOR or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commission and shall be based on consideration of the CONTRACTOR's or subcontractor's mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage, or the previous record of the CONTRACTOR in meeting his or her prevailing rate of per diem wage obligations, or the CONTRACTOR's or subcontractor's willful failure to pay the correct prevailing rate of per diem wages. A mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage is not excusable if the CONTRACTOR or subcontractor had knowledge of his or her obligations under this part. The difference between such prevailing rate of per diem wage and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing rate of per diem wage shall be paid to each worker

by the CONTRACTOR or subcontractor.

- F. Any workers employed to perform Work on the Project, which Work is not covered by any craft or classification listed in the general prevailing rate of per diem wages determined by the Director shall be paid not less than the minimum rate of wages specified therein for the craft or classification which most nearly corresponds to Work to be performed by them, and such minimum wage rate shall be retroactive to time of initial employment of such persons in such craft or classification.
- G. Pursuant to Labor Code section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, and vacation pay.
- H. CONTRACTOR shall post at appropriate conspicuous points on the site of the Project, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned.

6.34 HOURS OF WORK

- A. As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, **8 hours** of labor shall constitute a legal day's Work. The time of service of any worker employed at any time by the CONTRACTOR or by any Subcontractor on any subcontract under this Agreement upon the Work or upon any part of the Work contemplated by this Agreement shall be limited and restricted by the Agreement to **8 hours** per day, and **40 hours** during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of CONTRACTOR in excess of **8 hours** per day and **40 hours** during any one week, shall be permitted upon this public Work upon compensation for all hours worked in excess of **8 hours** per day at not less than one and one-half times the basic rate of pay.
- B. The CONTRACTOR shall keep and shall cause each Subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by CONTRACTOR in connection with the Work or any part of the Work contemplated by this Agreement. The record shall be kept open at all reasonable hours to the inspection of the City and to the Division of Labor Standards Enforcement, Department of Industrial Relations.
- C. Pursuant to Labor Code section 1813, the CONTRACTOR or subcontractor shall pay to the City a penalty of twenty-five Dollars (\$25) for each worker employed in the execution of this Contract by the CONTRACTOR or by any Subcontractor for each calendar day during which such worker is required or permitted to Work more than **8 hours** in any one calendar day and **40 hours** in any one calendar week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.
- D. Any Work necessary to be performed at the Contractor's request or due to the Contractor's actions after the normal working hours of 7:00 a.m. to 4:30 p.m., Monday through Friday, or on weekends or City Holidays, shall be performed without any additional expense to the City. If Contractor seeks to Work after regular working hours, or weekends or holidays, written notice shall be given and costs for inspection, if incurred by the City, shall be reimbursed within **3 days** of presentation or the City may issue, unilaterally, a deductive Change Order crediting the same.

6.35 APPRENTICES

- A. The CONTRACTOR acknowledges and agrees that, if this Agreement involves a dollar amount greater than or a number of working days greater than that specified in Labor Code section 1777.5, this Agreement is governed by the provisions of Labor Code section 1777.5. It shall be the responsibility of the CONTRACTOR to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticing occupations.
- B. Apprentices of any crafts or trades may be employed and, when required by Labor Code section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.
- C. Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he or she is employed, and shall be employed only at the Work of the craft or trade to which he or she is registered.
- D. Only apprentices, as defined in section 3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at section 3070), Division 3 of the Labor Code, are eligible to be employed on public works. The employment and training of each apprenticeship shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he or she is training.
- E. Pursuant to Labor Code section 1777.5, the CONTRACTOR and any Subcontractors employing workers in any apprenticeship craft or trade in performing any Work under this Agreement shall apply to the applicable joint apprenticeship committee for a certificate approving the CONTRACTOR or Subcontractor under the applicable apprenticeship standards for the employment and training of apprentices.
- F. Every CONTRACTOR and Subcontractor shall submit contract award information to the applicable joint apprenticeship committee which shall include an estimate of journeyman hours to be performed under the Agreement, the number of apprentices to be employed and the approximate dates the apprentices will be employed.
- G. If the CONTRACTOR or Subcontractor willfully fails to comply with Labor Code Section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:
 - 1. Be denied the right to bid on any subsequent project for one year from the date of such determination; and
 - 2. Forfeit as a penalty to the City fifty dollars (\$50) per day for each calendar day of noncompliance, which shall be withheld from any payment due or to become due under the terms of this Agreement. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council.
- H. The CONTRACTOR and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.
- I. CONTRACTOR shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and Title 8, California Code of Regulations, section 200 et seq.

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Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California.

6.36 FIRST AID. The CONTRACTOR shall maintain emergency first aid treatment for CONTRACTOR's workers on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A., Sec. 651 et seq.).

6.37 PROTECTION OF PERSONS AND PROPERTY

- A. The CONTRACTOR, (on behalf of itself, all Subcontractors and Suppliers (of every tier), shall be responsible for all damages to persons or property (whether furnished or installed, owned or not owned) that occur as a result of its fault or negligence in connection with the prosecution of this Agreement and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and Work performed until completion and final acceptance by the City. The CONTRACTOR shall remove all mud, water, or other elements as may be required for the proper protection and prosecution of its work, including the placement of gravel beds and gravel roads for access to and around the Work. CONTRACTOR shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions. All Work shall be solely at the CONTRACTOR's risk with the exception of damage to the Work caused by "acts of God" as defined in Public Contract Code Section 7105.
- B. CONTRACTOR shall take, and require Subcontractors to take, all necessary precautions for the safety of workers and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to the Work site and to provide a safe and healthful place of employment. CONTRACTOR shall furnish, erect and properly maintain at all times, as directed by the City or Engineer or as required by the conditions and progress of Work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction. CONTRACTOR shall designate a responsible employee, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. The name and position of the person so designated shall be reported in writing to the City by CONTRACTOR. CONTRACTOR shall correct any violations of safety laws, standards, orders, rules, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected immediately by the CONTRACTOR at CONTRACTOR's expense.
- C. In an emergency affecting safety of person or of Work or of adjoining property, CONTRACTOR, without special instruction or authorization from the City, architect or Engineer, is hereby permitted to act, at its discretion, to prevent such threatened loss or injury; and CONTRACTOR shall so act if so authorized or instructed by the City, architect or Engineer. Any compensation claimed by CONTRACTOR on account of emergency Work shall be determined by written agreement with the City.
- D. CONTRACTOR shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property, mailboxes (including temporary re-location) and structures (including, without limitation, protection from settlement or loss of lateral

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support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

- 6.38 ACCESSIBILITY REQUIREMENTS: Construction shall be in conformance with all applicable codes per the Department of the State Architect, Title 24 Guidelines for Accessibility by Disabled Persons.

ARTICLE 7 – OTHER WORK

7.1 OTHER CONTRACTS

- A. CONTRACTOR is aware that this Project site may be split into several phases, and or separate contracts. The City reserves the right to let other contracts in connection with this Work, and it shall be the duty of the CONTRACTOR to actively schedule and coordinate its Work with the City's forces, City's Contractor(s) and or other multiple prime contracts. No extra costs or delays shall be considered as a result of any such scheduling, coordination and cooperation. CONTRACTOR shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their Work and shall properly connect and coordinate its Work with such other contractors.
- B. If any part of CONTRACTOR's Work depends for proper execution or results upon Work of any other Contractor, the CONTRACTOR shall inspect and promptly report to the City in writing any defects in such Work that render it unsuitable for such proper execution and results. CONTRACTOR will be held accountable for damages to the City for that Work which it failed to inspect or should have inspected. CONTRACTOR's failure to inspect and report shall constitute its acceptance of other CONTRACTOR's Work as fit and proper for reception of its Work, except as to defects which may develop in other CONTRACTOR's Work after execution of CONTRACTOR's Work.
- C. To ensure proper execution of its subsequent Work, CONTRACTOR shall measure and inspect Work already in place and shall at once report to the City in writing any discrepancy between executed Work and Project Documents.
- D. It is the obligation of CONTRACTOR to ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by City in prosecution of the Project to the end that CONTRACTOR may perform this Agreement in the light of such other contracts, if any.
- E. Nothing herein contained shall be interpreted as granting to CONTRACTOR exclusive occupancy at the site of the Project. CONTRACTOR shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, the City shall decide which contractor shall cease Work temporarily and which contractor shall continue or whether Work can be coordinated so that contractors may proceed simultaneously.
- F. If the Project is split into phases then CONTRACTOR has made allowances for any delays or damages which may arise from coordination with contractors for other phases. If any delays should arise from a contractor working on a different phase, CONTRACTOR's sole remedy for damages, including delay damages, shall be against the contractor who caused such damage and not the City. CONTRACTOR shall provide access to contractors for other phases as necessary to prevent delays and damages to contractors working on other phases of construction.

7.2 INTEGRATION OF WORK

- A. CONTRACTOR shall perform all cutting, fitting, patching, and preparation of Work as required to make its several parts come together properly, and fit it to receive or be received by Work of other contractors; including both the CONTRACTOR's and City's forces. In the event of clarifications, the CONTRACTOR shall follow all Supplemental Instructions (SI's) given by the City.
- B. All costs caused by defective or ill-timed Work shall be borne by CONTRACTOR.
- C. CONTRACTOR shall not endanger any Work by cutting, excavating, or otherwise altering Work and shall not cut or alter Work of any other CONTRACTOR without the written consent of the City. CONTRACTOR shall be solely responsible for protecting existing Work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.
- D. When modifying existing Work or installing new Work adjacent to existing Work, CONTRACTOR shall match, as closely as conditions of the site and materials will allow, the finishes, textures, and colors of the original Work, refinishing existing Work as required, at no additional cost to the City.

ARTICLE 8 – THE CITY'S RESPONSIBILITIES

- 8.1 COMMUNICATIONS. Except as may be otherwise provided in these General Conditions or the Supplementary General Conditions, the City will communicate directly with the CONTRACTOR.
- 8.2 OBSERVATIONS ON THE SITE. The City will make observations on the Site during construction to monitor the progress and quality of the Work and to determine, in general, if the Work is proceeding in accordance with the Project Documents. Neither, the City, the Engineer, nor their representatives will be required to make exhaustive or continuous inspections to check the quality or quantity of the Work.
- 8.3 PROJECT REPRESENTATION. The City may furnish a third party or a City employee to act as Resident Project Representative to assist in observing the performance of the Work.
- 8.4 CLARIFICATIONS, REQUESTS FOR INFORMATION. The City will issue with reasonable promptness such answers to requests for information (RFI) which shall be consistent with or reasonably inferable from the overall intent of the Project Documents.
- 8.5 AUTHORIZED VARIATIONS IN WORK. The City may authorize the execution of variations in the Work from the requirements of the Project Documents complying with Articles 10, 11, and 12 of these General Conditions that cover changes in the Work, Contract Price, and Contract Times.
- 8.6 REJECTING WORK. The City has the authority to reject Work not in accordance with the Contract Documents and will also have authority to require special inspection or testing of the Work as provided in Article 13.
- 8.7 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS
 - A. The City will review all CONTRACTOR submittals.
 - B. The City's responsibilities for Change Orders are set forth in Articles 10, 11, and 12.
 - C. The City's responsibilities for Applications for Payment are set forth in Article 14.

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- 8.8 DECISIONS ON DISPUTES. The City will be the interpreter of the requirements of the Contract Documents and of the acceptability of the Work thereunder. Disputes, and other matters relating to the acceptability of the Work and interpretation of the requirements of the Contract Documents pertaining to the performance of the Work shall be determined by the City. Any requests from the CONTRACTOR with respect to changes in the Contract Price or Contract Times shall be resolved in accordance with the requirements set forth in Articles 10, 11, 12, 16 and 17.
- 8.9 LIMITATION OF CITY'S RESPONSIBILITIES
- A. Neither the City's authority to act under this Article or other provisions of the Contract Documents nor any decision made by the City in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the City to the CONTRACTOR, any Subcontractor, any Supplier, any surety for any of them, or any other person or organization performing any of the Work.
- B. Whenever in the Project Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory," or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the City as to the Work, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the Work for compliance with the requirements of the Project Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Project Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to the City any duty or authority to supervise or direct the performance of the Work.
- C. The City shall not supervise, direct or have control or authority over, nor be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The City will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Project Documents.
- 8.10 LANDS, EASEMENTS, AND SURVEYS. The City's duties in respect of providing lands and easements and providing engineering survey data to establish reference points are set forth in Article 4
- 8.11 REPORTS AND DRAWINGS. The City will identify to the CONTRACTOR copies of reports of physical conditions at the Site and drawings of existing structures which have been utilized in preparing the Contract Documents, in the Supplementary General Conditions.
- 8.12 SUSPENSION OF Work. The City's right to stop Work or suspend Work is set forth in Article 15.
- 8.13 TERMINATION OF AGREEMENT. The City's right to terminate services of the Contractor is set forth in Article 15.
- 8.14 UNDISCLOSED HAZARDOUS ENVIRONMENTAL CONDITIONS. The City's responsibility with respect to an undisclosed hazardous environmental condition is set forth in Article 4.4.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.1 THE ENGINEER OF WORK

- A. The City may retain the Engineer of Work to assist the City with post-design services. The Engineer of Work's status during construction is addressed in the Supplemental General Conditions.
- B. The Engineer will make observations on the Site during construction to monitor the progress and quality of the Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Engineer will not be required to make exhaustive or continuous inspections to check the quality or quantity of the Work.

ARTICLE 10 – CHANGES IN THE WORK

10.1 GENERAL

- A. CO, FO, CCD. Without invalidating the Agreement and without notice to any surety, the City may at any time or from time to time, order additions, deletions, or revisions in the Work. Such additions, deletions or revisions will be authorized by a Change Order (CO), Field Order (FO) or Construction Change Directive (CCD) as defined in Article 1. Upon receipt of any such document, notwithstanding the issuance, execution, and approval of a Change Order, CONTRACTOR shall promptly proceed to implement the additions, deletions, or revisions in the Work in accordance with the applicable conditions of the Contract Documents. A CO, FO and CCD may be issued to the CONTRACTOR at any time.
- B. UNILATERAL CHANGE ORDER If the City and CONTRACTOR fail to agree to the quantification of costs and/or time to be placed into a Bilateral Change Order, the City, at its own discretion, may issue a Unilateral Change Order for those costs and/or time impacts that is deemed appropriate for the changed Work conditions. Notwithstanding the issuance, execution, and approval of a Change Order, the CONTRACTOR shall proceed immediately with the changed Work upon receipt of a Construction Change Directive (CCD), or Field Order (FO). Should the CONTRACTOR disagree with any terms and conditions set forth in an approved Unilateral Contract Change Order, the CONTRACTOR shall submit a written protest to the City within **fifteen (15) days** after the receipt of the approved Unilateral Contract Change Order. The protest shall state the points of disagreement, and, if possible, the Contract Specification references, quantities and costs involved. If a written protest is not submitted to the City, payment will be made as set forth in the approved Unilateral Contract Change Order, and that payment shall constitute full compensation for all Work included therein or required thereby. Unprotested, approved Unilateral Contract Change Orders will be considered as executed Contract Change Orders as that term is used in Articles 10, 11, and 12.
- C. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified, or supplemented by Change Order, except in the case of an emergency.
- D. If notice of any change in the Work is required to be given to a surety, the giving of any such notice shall be the CONTRACTOR's responsibility. If the change in the Work affects the Contract Price, the City may require an adjustment to the amount of any applicable Bond and the amount of each applicable Bond shall be adjusted accordingly.

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- E. If the City and the CONTRACTOR are unable to agree as to the extent, if any, of an increase in the Contract Price or an extension or shortening of the Contract Times that may be allowed as a result of a Field Order, the City may direct the CONTRACTOR to proceed as outlined in Article 11.2. in order to minimize the impact on and delays to the Work, and the CONTRACTOR may make a claim as provided in Articles 11, 12 and 17.
- F. The City of Escondido has the sole authority to approve or disapprove or to delegate the approval or disapproval of Contract Change Orders.

10.2 ALLOWABLE QUANTITY VARIATIONS

- A. In the event of an increase or decrease in the quantity of any bid item under a unit price contract, the total amount of Work actually done or materials or equipment furnished will be paid for according to the unit price established for such Work under the Contract Documents, wherever such unit price has been established; provided, that an adjustment in the Contract Price may be made for changes which result in an increase or decrease in excess of twenty-five percent (25%) of the estimated quantity of any unit price bid item of the Work.
- B. In the event a part of the Work is to be entirely eliminated and no lump sum or unit price is named in the Contract Documents to cover such eliminated Work, the price of the eliminated Work shall be agreed upon by the City and the CONTRACTOR by Change Order. The schedule of values submitted by CONTRACTOR shall be referred to in evaluating the price to be reduced, but shall not be determinative unless both parties agree.

ARTICLE 11 – CHANGE OF CONTRACT PRICE

11.1 GENERAL

- A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the Work. All duties, responsibilities, and obligations whether implied, inferred or express, assigned to or undertaken by the CONTRACTOR to complete the Work shall be at its expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following three ways:
 - 1. **UNIT PRICES.** Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved;
 - 2. **AGREED UPON LUMP SUM.** By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Article 11.4; or
 - 3. **COST OF WORK.** On the basis of the cost of the Work, force account payment (determined as provided in Article 11.2) plus the CONTRACTOR's overhead and profit (determined as provided in Article 11.3).
- C. AGREED ENTITLEMENT. When the City is in agreement regarding entitlement due the CONTRACTOR on a particular issue that the CONTRACTOR has brought to the attention of the City with a notice, and finds that there is a clear entitlement for additional compensation, the CONTRACTOR and the City will choose a method to be used for

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calculating the value of the extra Work from the three methods described in Article 11.1.B.1, 2, or 3 above.

1. CHANGE USING UNIT PRICES METHOD. When a change in Contract Price using unit prices is applied, described in Article 11.1.B.1 (UNIT PRICES), a Field Order, signed by the City, will be given to the CONTRACTOR. The increase in line item quantities shall be tracked and documented in the daily extra Work report (Article 11.4) which must identify the quantities used/consumed/handled and shall be presented to the City's on-site representative on a daily basis for review, for pertinent comments, and counter-signature. The CONTRACTOR will invoice the City for the line item quantity used for the extra Work following the conditions of Article 14, "PAYMENTS TO CONTRACTOR, RETENTION AND COMPLETION". A reconciliation Contract Change Order will be executed when the final quantities used are known. The Contract Change Order will account for the over or under amount of line item quantities.
2. CHANGE USING AGREED UPON LUMP SUM METHOD. When the payment method described in Article 11.1.B.2 (LUMP SUM) is used, a Field Order or a Contract Change Order, signed by the City, will be given to the CONTRACTOR. The CONTRACTOR will invoice the City for the extra Work following the conditions of Article 14.
3. CHANGE USING FORCE ACCOUNT "COST OF Work" METHOD. When no agreement can be reached on the method of payment for the extra Work, the method described in Article 11.1.B.3 (COST OF WORK), force account payment (determined as provided in Article 11.2) shall be used. A Field Order will be given to the CONTRACTOR, signed by the City, describing the Work. The City reserves the right to place a "not to exceed" amount on the Field Order based on a City cost estimate. If the approximate value of the cost of extra Work approaches the "not to exceed" value, the CONTRACTOR shall notify the City in order that a further decision may be made as to how to proceed. When the extra Work is completed a Contract Change Order for the accumulated total value of the extra Work shall be executed, should the value of the Work exceed the Field Order allowance. The extra Work shall be documented in the Daily Extra Work Report (Article 11.4).

D. DISAGREEMENT REGARDING ENTITLEMENT. When there is no agreement between the CONTRACTOR and the City on an issue of Work that has not yet been started that the CONTRACTOR has brought to the City pursuant to Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE", and the City does not find that there is any entitlement for additional compensation due the CONTRACTOR, the Work in question may be designated "DISPUTED WORK". During the performance of any such "DISPUTED WORK" the CONTRACTOR shall:

1. Although not to be construed as proceeding under agreed-upon extra Work provisions, the CONTRACTOR shall keep and furnish records breaking down the Work as described in the following Article 11.2. Daily records shall be furnished according to Article 11.4.
2. The CONTRACTOR shall continue with the disputed Work according to Article 2.6.

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11.2 COST OF WORK - FORCE ACCOUNT (BASED ON TIME AND MATERIALS)

- A. GENERAL: The term "cost of Work" means the sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra Work. Except as otherwise may be agreed to in writing by the City, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall include the costs itemized in Article 11.3.D.1. to be compensated for as a part of the stipulated overhead and profit allowance.
- B. LABOR: The costs of labor will be the actual cost for wages prevailing for each craft or type of workers performing the extra Work at the time the extra Work is done, plus employer payments of payroll taxes, workers compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. Labor costs for equipment operators and helpers will be paid only when such costs are not included in the invoice for equipment rental. The labor costs for foremen shall be proportioned to all of their assigned Work and only that applicable to extra Work shall be paid. Non-direct labor costs including superintendence shall be considered part of the markup set out in Article 11.3. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the Site, or in the absence of such labor, established by collective bargaining agreements for the type of workmen and location of the extra Work, whether or not the operator is actually covered by such an agreement.
- C. MATERIALS: The cost of materials reported shall be at invoice or lowest current price at which materials are locally available and delivered to the Site in the quantities involved, plus the cost of freight, delivery and storage, subject to the following:
1. All trade discounts and rebates shall accrue to the City, and the CONTRACTOR shall make provisions so that they may be obtained;
 2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the City. Except for actual costs incurred in the handling of such materials, markup will not be allowed;
 3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra Work items or the current wholesale price for such materials delivered to the Site, whichever price is lower; and
 4. If in the opinion of the City the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the Site less trade discount. The City reserves the right to furnish materials for the extra Work and no claim will be allowed by the CONTRACTOR for costs and profit on such materials.
- D. EQUIPMENT: The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the "Labor Surcharge and Equipment Rental Rates" published by the State of California Business, Transportation & Housing Agency (CALTRANS). Such rental rate will be used to compute payments for

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equipment whether the equipment is under the CONTRACTOR's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment will be the rate resulting in the least total cost to the City for the total period of use. If it is deemed necessary by the CONTRACTOR to use equipment not listed in the publication specified, an equitable rental rate for the equipment will be established by the City. The CONTRACTOR may furnish cost data which might assist the City in the establishment of the rental rate. Payment for equipment shall be subject to the following:

1. All equipment shall, in the opinion of the City, be in good working condition and suitable for the purpose for which the equipment is to be used;
 2. Before construction equipment is used on the extra Work, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the City a description of the equipment with its identifying number;
 3. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer;
 4. Individual pieces of equipment or tools having a replacement value of \$250 or less, whether or not consumed by use, will be considered to be small tools and no payment will be made therefore.
- E. EQUIPMENT RENTAL TIME: The rental time to be paid for equipment on the Site will be the time the equipment is in productive operation on the extra Work being performed and, in addition, will include the time required to move the equipment to the location of the extra Work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra Work, even though located at the Site of the extra Work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the Site of the extra Work on other than the extra Work. Rental time will not be allowed while equipment is inoperative due to breakdowns. The rental time of equipment on the Work site will be computed subject to the following:
1. When hourly rates are listed, any part of an hour less than **thirty (30) minutes** of operation will be considered to be half-hour (1/2 – hour) of operation, and any part of an hour in excess of **30 minutes** will be considered **1 hour** of operation;
 2. When daily rates are listed, any part of a day less than **4 hours** operation will be considered to be **1/2 – day** of operation. When owner-operated equipment is used to perform extra Work to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in this Article.
 3. Payment for the equipment will be made in accordance with the provisions in Article 11.

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F. SURETIES: All Work performed hereunder shall be subject to all of the provisions of the Contract Documents and the CONTRACTOR's sureties shall be bound with reference thereto as under the original Agreement. Copies of all amendments to Bonds or supplemental Bonds shall be submitted to the City for review prior to the performance of any Work hereunder.

11.3 OVERHEAD & PROFIT (O&P) PERCENTAGE SCHEDULE. The allowance for overhead and profit must not exceed the values in the Overhead & Profit Schedule table below.

A. For Change Orders, whether additive or deductive and work classified as Extra Work, the allowance for overhead and profit must include full compensation for superintendence, insurance premiums, bond premiums, taxes, field office expense, extended overhead, home office overhead, and any other items of expense e.g., Change Order estimating and preparation cost, claims preparation cost, schedule analysis, project management, and field engineering.

B. Extended overhead must be any and all costs incurred either in the field or at your office resulting from Extra Work excluding direct costs related to direct hourly labor, equipment, or materials necessary to complete the Extra Work.

C. Overhead & Profit Schedule table

O & P Schedule		
Component	Overhead	Profit
Labor	10%	10%
Material	10%	5%
Equipment	10%	5%
Subcontractor Extra Work	3.5%	1.5%

D. Work paid under Allowance Bid items for permits, governmental fees, or direct payments specified in the Contract Documents will not be subject to any markups.

E. When all or any part of the Extra Work is performed by a Subcontractor, the allowance specified herein will be applied to the labor, materials, and equipment costs of the Subcontractor, to which you may add 5% of the Subcontractor's total cost for the Extra Work.

F. Regardless of the number of hierarchical tiers of Subcontractors, the 5% which is your allowance 3.5% (for overhead) and 1.5% (for profit) may be applied one time only to the performing Subcontractor's total cost.

G. You will only be reimbursed, with 6% markup, for the warranty extensions beyond the time required by the Contract Documents if requested by the City.

H. The O&P Schedule shall be used for "Negotiated Sum" (described in Article 11.1.B.2) and/or "Time and Materials" (described in Article 11.1.B.3) Work. Unit Price Work shall not have the overhead and profit markup applied to the Work, on the basis that the Unit Price includes overhead and profit margins.

CONTRACTOR shall set up separate cost codes for each extra Work item and account for all labor, materials and equipment for each cost code. This includes using said cost codes for all labor expended on extra Work, and coding delivery tickets and P.O.'s as well. The same cost code shall appear on the daily report to account for labor, materials and

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equipment devoted/used that day for each extra Work item. Failure to comply with this requirement shall be a waiver of the right to collect the same.

- E. IT IS EXPRESSLY UNDERSTOOD THAT THE VALUE OF SUCH EXTRA WORK OR CHANGES, AS DETERMINED BY ANY OF THE AFOREMENTIONED METHODS, EXPRESSLY INCLUDES ANY AND ALL OF CONTRACTOR'S COSTS AND EXPENSES, BOTH DIRECT AND INDIRECT, RESULTING FROM EFFORTS TO IDENTIFY, QUOTE AND/OR NEGOTIATE THE CHANGE(S) AS WELL AS ADDITIONAL TIME REQUIRED ON THE PROJECT, OR RESULTING FROM DELAYS TO THE PROJECT, INCLUDING BUT NOT LIMITED TO ACCELERATION, CUMULATIVE AFFECT OF THE CHANGE(S), EXPEDITING THE WORK, FRAGNETS, ETC.

NO RESERVATION OF RIGHTS, EXPRESS OR IMPLIED, WILL BE PERMITTED OR ALLOWED.

11.4 CONTRACTOR'S DAILY EXTRA WORK REPORT

- A. General. At the close of each working day, the CONTRACTOR shall submit a daily report to the Inspector, on forms approved by the City, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized concerning extra Work items. An attempt shall be made to reconcile the report daily, and the Inspector and the CONTRACTOR shall sign it. The report shall clearly differentiate between extra or disputed Work and Contract Work. In the event of disagreement, pertinent notes shall be entered by each party to explain points that cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR. The CONTRACTOR shall organize and forward copies of the CONTRACTOR's and Inspector's reports to the City upon the completion of each "Time and Material" activity.
- B. CONTRACTOR shall maintain its records in such a manner as to provide a clear distinction between the direct costs of any extra Work and/or deductive Work and the original Contract Work. This requirement pertains to the costs for wholly or partially approved Change Order Requests (COR's), Construction Change Directives (CCD's), Change Orders (CO's), Field Orders (FO's), and Work CONTRACTOR considers to be potential Change Orders.

- 11.5 CONTRACTOR SHALL PROVIDE NOTICE. If the CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligates the City to pay additional compensation to CONTRACTOR or to grant an extension of time, or constitutes a waiver of any provision in the Agreement, the CONTRACTOR shall provide written "Notice" to the City **within 5 days** after sustaining of such damage, or being notified of an adverse decision, and provide within **14 days** of the event the factual basis supporting the claim (unless otherwise specified). For requests for additional compensation for alleged changed conditions, such as finding rock, notice shall be made before the condition instigating the notice is disturbed. The written "Notice" shall state the summary points for which the factual bases will support the claim and cite in detail the Project Documents (including plans and specifications) upon which the claim is to be based. CONTRACTOR's failure to notify the City within such a period shall be deemed a waiver and relinquishment of such a claim. If such notice is given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions. In addition, on or before the end of the month for which the claim has been filed, the CONTRACTOR shall also file with the City the **WAIVER AND RELEASE FORMS**, for which the claim and the amount of the claim is identified. If the claim is

not indicated on the **WAIVER AND RELEASE FORMS**, CONTRACTOR's claim shall be forfeited and invalidated and it shall not be entitled to consideration for time or payment on account of any such claim.

- 11.6 **COSTS RELATING TO WEATHER/ FORCE MAJEURE.** The CONTRACTOR shall have no claims against the City for damages for any injury to Work, materials, or equipment, resulting from the action of the elements whether caused by weather, earthquakes, or other natural events. If, however, in the opinion of the City, the CONTRACTOR has made all reasonable efforts to protect the materials, equipment, and Work, the CONTRACTOR may be granted a reasonable extension of Contract Times to make proper repairs, renewals, and replacements of the Work, materials, or equipment. All costs incurred as a result of any force majeure, including abnormally or unusually severe weather, earthquakes or other natural perils shall not be compensable from the City and the risks associated therewith shall be exclusively borne by CONTRACTOR. To the extent CONTRACTOR elects to protect itself from any/all of said risks, it shall insure against the same.

ARTICLE 12 – CHANGE OF CONTRACT TIMES

12.1 GENERAL

- A. Contract times are stated in the Notice Inviting Sealed Bids, Section 00030, The Public Improvement Agreement, and the Supplemental General Conditions, Section 00800, of these Contract Documents.
- B. The Contract Times may only be changed by a Change Order. Any claim for an extension of the Contract Times shall be based on written notice delivered by the CONTRACTOR to the City promptly (but in no event later than 24 hours) after the start of the event giving rise to the claim and stating the general nature of the claim. Reference Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE". Notice of the extent of the claim with supporting data shall be delivered within **5 days** after the start of such event (unless the City allows an additional period of time for the submission of additional or more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR is entitled as a result of said event. All claims for adjustment in the Contract Times will be determined by the City. No claim for an adjustment in the Contract Times will be valid if not submitted in accordance with the requirements of this Article 12.1.B. An increase in Contract Times does not mean that the CONTRACTOR is due an increase in Contract Price. Only compensable time extensions will result in an increase in Contract Price.
- C. Extra Work executed by the CONTRACTOR in conjunction, simultaneously or concurrently with the Work does not create a compensable time extension.
- D. Extra Work executed by the CONTRACTOR during Contract Schedule Float does not create a compensable time extension.
- E. The value of time expended on extra Work is fully compensated by the markups for overhead and profit found on the table in Article 11.3.
- F. All time limits stated in the Contract Documents are of the essence of the Agreement.
- G. When CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost on the critical path of the Work due to such delay, if a claim is made therefore as provided in Article 12.1.B. Delays beyond the control of CONTRACTOR shall include, but not be limited

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to, acts or neglect by the City; acts or neglect of those performing other Work as contemplated by Article 7; and fires, floods, epidemics, abnormal weather conditions, or acts of God. Delays attributable to and within the control of any Subcontractor or Supplier (of any tier) shall be deemed to be delays within the control of the CONTRACTOR.

H. In no event will the City be liable to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for any increase in the Contract Price or other damages arising out or resulting from the following:

1. Delays caused by or within the control of CONTRACTOR;
2. Delays beyond the control of both the City and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by those performing other Work as contemplated by Article 7; or
3. City-caused/responsible delays, concurrent with items 1 and/or 2 above.

12.2 EXTENSIONS OF CONTRACT TIMES FOR DELAY DUE TO WEATHER. The CONTRACTOR's construction schedule shall anticipate delay due to seasonal weather.

12.3 OWNERSHIP OF PROJECT SCHEDULE FLOAT/EARLY COMPLETION SCHEDULE

A. Total Float is the number of days by which a part of the Work in the Construction Schedule may be delayed from its early dates without necessarily extending the Contract Time. Contract Float is the number of days between the CONTRACTOR's anticipated date for early completion of the Work, or specified part, and the corresponding Contract Time. Total float and Contract Float belong to the Project and are not for the exclusive benefit of any party. They shall be available to the City, the construction manager, their consultants, or the CONTRACTOR, to accommodate changes in the Work, or to mitigate the effects of events which may delay performance or completion. The City will monitor and optimize the use of float for the benefit of the Project.

B. IF CONTRACTOR SUBMITS A REVISED SCHEDULE SHOWING AN EARLIER COMPLETION DATE FOR THE PROJECT, THE CITY'S ACCEPTANCE OF THIS REVISED SCHEDULE SHALL NOT ENTITLE CONTRACTOR TO ANY DELAY CLAIM OR DAMAGES DUE TO ANY SUCH REVISED SCHEDULE. CONTRACTOR AND ALL SUBCONTRACTORS SHALL INCLUDE, AS DEEMED APPROPRIATE, SUFFICIENT AMOUNTS TO COVER THE HOME OFFICE AND FIELD OVERHEAD COSTS COMMENSURATE WITH THE PUBLISHED CONTRACT DURATION. FAILURE TO INCLUDE OVERHEAD COSTS IN THEIR BIDS THROUGH THE CONTRACT DURATION SHALL BE AT THE RISK OF CONTRACTOR AND ITS SUBCONTRACTORS.

12.4 EXTENSION OF TIME - LIQUIDATED DAMAGES

A. The CONTRACTOR and the City hereby agree that the exact amount of damages for failure to complete the Work within the time specified is extremely difficult or impossible to determine. CONTRACTOR shall be assessed the sum set forth in the **Agreement**, as liquidated damages for each and every day the Work required under the Project Documents remains unfinished past the time for completion, as set forth in the **Agreement**, and any extensions of time granted by the City to the CONTRACTOR under the terms of the Project Documents. The CONTRACTOR will pay to the City or the City may retain from amounts otherwise payable to the CONTRACTOR, said amount for each day after failure to meet the requirements of the contract completion as scheduled in the Agreement. For purposes of this article, the Work shall be considered "complete" in accordance with these General Conditions, except that the Work may be considered

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complete without formal acceptance by the City Council so long as the City Council, at its next regularly scheduled meeting, accepts the Work.

- B. CONTRACTOR shall not be charged for liquidated damages, as set forth above, because of any delays in completion of Work which are not the fault or negligence of CONTRACTOR, including but not restricted to acts of God, as long as CONTRACTOR informs City of such events. As soon as CONTRACTOR become aware of any delay and no later than **14 days** from the commencement of the delay, CONTRACTOR shall notify the City in writing of causes of delay in accordance with the contract scheduling specifications. CONTRACTOR shall provide documentation and justification to substantiate the delay and its relation to the Project's critical path. Extension of time shall apply only to that portion of Work affected by the delay, and shall not apply to other portions of Work not so affected.

ARTICLE 13 – INSPECTIONS AND TESTS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

- 13.1 **AUTHORITY OF INSPECTOR.** Any Work performed by the CONTRACTOR upon the instructions or comments by the Inspector may be confirmed by the CONTRACTOR, at the CONTRACTOR's option, in writing by the City. Any extra Work performed without the written instruction of the City shall be at CONTRACTOR's sole cost and expense and there will be no delay damages incurred by City for such Work.
- 13.2 **INSPECTION.** No Work shall be carried on except with the knowledge of the Inspector(s). The Inspector shall have free access to any or all parts of Work at any time. CONTRACTOR shall furnish Inspector reasonable opportunities for obtaining such information as may be necessary to keep Inspector fully informed respecting progress and manner of Work and character of materials. Inspection of Work shall not relieve CONTRACTOR from any obligation to fulfill the Project Documents. Inspector shall have authority to stop Work whenever provisions of Project Documents are not being complied with and such noncompliance is discovered. CONTRACTOR shall instruct its employees accordingly.
- 13.3 **NOTICE OF DEFECTIVE Work.** Prompt notice of Defective Work known to the City will be given to the CONTRACTOR. Defective Work discovered or uncovered will be noticed to the CONTRACTOR as soon as practicable. All Defective Work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13. Defective Work may be rejected even if approved by prior inspection.
- 13.4 **ACCESS TO WORK.** The City, Engineer, their consultants, subconsultants, other representatives and personnel of the City, independent testing laboratories, and governmental agencies with jurisdictional interests shall have access to the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access, including sheeting and shoring as may be necessary, and advise them of CONTRACTOR's Site safety procedures, and programs so that they may comply therewith as applicable.
- 13.5 **INSPECTIONS AND TESTS**
 - A. The CONTRACTOR shall give the City not less than **2 working days** notice of readiness of the Work for all required general inspections, tests, or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. Specialty inspections shall be scheduled **7 days** in advance.

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- B. The City shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
1. For inspection, tests, or approvals covered by Articles 13.5.C. and 13.5.D. below;
 2. That costs incurred in connection with tests or inspections conducted pursuant to Article 13.5.G. shall be paid for by the CONTRACTOR.
- C. If Laws and Regulations of any public body having jurisdiction require any Work (or any part thereof) to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals; pay all costs in connection therewith; and furnish the City the required certificates of inspection or approval.
- D. The CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for the City's acceptance of materials or equipment to be incorporated in the Work or acceptance of materials, mix designs, or equipment submitted for approval prior to the CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to the City.
- E. The City will make, or have made, such inspections and tests as the City deems necessary to see that the Work is being accomplished in accordance with the requirements of the Contract Documents. Unless otherwise specified in the Supplementary General Conditions, the cost of such inspection and testing will be borne by the City. In the event such inspections or tests reveal non-compliance with the requirements of the Contract Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the City, as well as the cost of subsequent reinspection and retesting. Neither observations by the Engineer nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.
- F. If any Work that is to be inspected, tested, or approved is covered without written concurrence of the City, it must, if requested by the City, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense.
- G. If any Work is covered contrary to the written request of the City, it must, if requested by the City, be uncovered for the City's observation and recovered at the CONTRACTOR's expense.
- H. If the City considers it necessary or advisable that covered Work be observed by the City or inspected or tested by others, the CONTRACTOR, at the City's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the City may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is Defective Work, the CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including but not limited to, fees and charges of engineers, architects, attorneys, and other professionals. However, if such Work is not found to be Defective Work, the CONTRACTOR will be allowed an increase in the Contract Price, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a request for additional compensation therefore as provided in Articles 10, 11 and 12.

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- I. All initial tests shall be performed under the direction of the City. All re-testing due to failure shall be performed under the direction of the City, and the cost of all re-testing shall be borne by the CONTRACTOR. The costs and potential loss of productivity to accommodate re-testing shall be borne by the CONTRACTOR.
 - J. A City Inspector, or designee, may be required on the job site at all times Work is in progress as determined by the City. Inspection will be required by the appropriate agency for the following type of Work: trenching, special or sand bedding, laying pipe, any welding, backfill, compaction and pavement replacement. Special Work hours required by the Contract are considered normal hours.
- 13.6 THE CITY MAY STOP THE WORK. If Defective Work is identified, the City may order the CONTRACTOR to stop performance of the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the CONTRACTOR or any other party.
- 13.7 CORRECTION OR REMOVAL OF DEFECTIVE WORK. If required by the City, the CONTRACTOR shall promptly either correct all Defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by the Engineer, remove it from the Site and replace it with non-defective Work. The CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such correction or removal, including but not limited to fees and charges of engineers, architects, attorneys, and other professionals made necessary thereby.
- 13.8 ACCEPTANCE OF DEFECTIVE WORK. If, instead of requiring correction or removal and replacement of Defective Work, the City prefers to accept the Defective Work, the City may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the City's evaluation of and determination to accept such Defective Work. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and the City shall be entitled to an appropriate decrease in the Contract Price.
- 13.9 THE CITY MAY CORRECT DEFECTIVE WORK
- A. If the CONTRACTOR fails within a reasonable time after written notice from the City to correct Defective Work, or to remove and replace Defective Work as required by the City in accordance with Article 13.7, or if the CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if the CONTRACTOR fails to comply with any other provision of the Contract Documents, the City may, after **7 days** written notice to the CONTRACTOR, correct and remedy any such deficiency.
 - B. In exercising the rights and remedies under this paragraph, the City shall proceed with corrective and remedial action. In connection with such corrective and remedial action, the City may exclude the CONTRACTOR from all or part of the Site, take possession of all or part of the Work, and suspend the CONTRACTOR's services related thereto and incorporate in the Work all materials and equipment for which the City has paid the CONTRACTOR whether stored at the Site or elsewhere. The CONTRACTOR shall provide the City, City's representatives, Engineer, and Engineer's consultants access to the Site to enable the City to exercise the rights and remedies under this Article.
 - B. All direct, indirect, and consequential costs and damages incurred by the City in exercising the rights and remedies under this paragraph will be charged against the CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the City shall be entitled to an appropriate

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decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, the City may make a claim therefore as provided in Article 11. Such claim will include, but not be limited to, all costs of repair or replacement of Work of others, destroyed or damaged by correction, removal, or replacement of CONTRACTOR's Defective Work and all direct, indirect, and consequential damages associated therewith.

- D. The CONTRACTOR shall not be allowed an extension of Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by the City of the City's rights and remedies under this paragraph.

13.10 CORRECTION PERIOD

- A. The correction period for Defective Work shall be the longer of:
 - 1. One year after the date of final acceptance;
 - 2. Such time as may be prescribed by Laws and Regulations;
 - 3. Such time as specified by the terms of any applicable special guarantee required by the Contract Documents; or
 - 4. Such time as specified by any specific provision of the Contract Documents.
- B. If, during the correction period as defined in Article 13.10A above, any Work is found to be Defective Work, the City shall have the same remedies as set forth in Articles 13.7, 13.8, and 13.9 above.
- C. Where Defective Work (and damage to other Work resulting therefrom) has been corrected, removed, or replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of **1 year** after such correction or removal and replacement has been satisfactorily completed.

ARTICLE 14 – PAYMENTS TO CONTRACTOR, RETENTION AND COMPLETION

14.1 APPLICATION FOR PROGRESS PAYMENT

- A. On the 25th of each month, the CONTRACTOR shall submit to the City for review, the Application for Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the Application for Payment and accompanied by the appropriate waiver(s) and release upon "Progress Payment" and such supporting documentation as is required by the Project Documents.
- B. The Application for Payment shall identify, as a subtotal, the estimated amount of the CONTRACTOR total earnings to date; plus the value of materials stored at the Site, pursuant to Article 14.1.K, which have not yet been incorporated in the Work; and less a deductive adjustment for materials installed which were not previously incorporated in the Work, but for which payment was allowed under the provisions for payment for materials stored at the Site, but not yet incorporated in the Work.
- C. The net payment due the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted five percent (5%) retention and the total amount of all previous payments made to the CONTRACTOR. The City shall have the right to issue joint checks to CONTRACTOR and SUBCONTRACTOR and/or Suppliers.

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- D. Work completed as estimated shall be an estimate only and no inaccuracy or error in said estimate shall operate to release CONTRACTOR or Surety from any damages arising from such Work or from enforcing each and every provision of this Agreement, and the City shall have the right subsequently to correct any error made in any estimate for payment.
- E. CONTRACTOR SHALL NOT BE ENTITLED TO HAVE ANY PAYMENT ESTIMATES PROCESSED OR BE ENTITLED TO HAVE ANY PAYMENT FOR WORK PERFORMED SO LONG AS ANY LAWFUL OR PROPER DIRECTION CONCERNING WORK, OR ANY PORTION THEREOF, GIVEN BY THE CITY OR ENGINEER SHALL REMAIN UNCOMPLIED WITH BY THE CONTRACTOR.
- F. The City has discretion to require from the CONTRACTOR any of the following information with the application for payment:
1. Certified payroll covering the period of the prior application for payment;
 2. Unconditional waivers and releases from all Subcontractors/suppliers for which payment was requested under the prior application(s) for payment;
 3. Receipts or bills of sale for any items.
 4. Signature of the Inspector, confirming that the maintenance of the Record Drawings is being kept up-to-date, and that the Record Drawings are not being used as a construction set.
- G. NO PAYMENT BY THE CITY HEREUNDER SHALL BE INTERPRETED TO IMPLY THAT THE CITY HAS INSPECTED, APPROVED, OR ACCEPTED ANY PART OF THE WORK. The final payment of **5%** of the value of the Work done under this Agreement, if unencumbered, shall be made within **55 days** after the City records the Notice of Completion. ACCEPTANCE WILL BE MADE ONLY BY ACTION OF THE ESCONDIDO CITY COUNCIL.
- H. Payments for Change Order items can be included into the monthly progress payments, only after the Change Order has been fully executed and approved by the CITY and the CONTRACTOR, and only to the extent that Change Order Work has been performed.
- I. The value of materials stored at the Site shall be an amount based upon the value of all acceptable materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing; provided, each such individual item has a value of more than \$5,000 and will become a permanent part of the Work. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the City's interest therein, all of which will be satisfactory to the City.
- J. Unless otherwise provided, on or before making request for final payment of the undisputed amount due under the Agreement, CONTRACTOR shall submit to the City, in writing a summary of all claims for compensation under or arising out of this Agreement which were timely submitted. The acceptance by CONTRACTOR of the payment of the final amount shall constitute a waiver of all claims against the City under or arising out of this Agreement, except those previously made, in a timely manner and in writing, and identified by CONTRACTOR as unsettled at the time of CONTRACTOR's final request for payment.

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- K. Materials included in the progress payments shall be stored properly and protected as required to prevent damage, including but not limited to, rust, dents, scratches, and decay. Materials stored on-site and subject to payment, shall be gated and secured to prevent theft and/or vandalism. When the CONTRACTOR requests payment for materials not incorporated in the Work, the following terms and conditions shall apply:
1. For permanent materials delivered to the project site, or stored in an approved location off-site, an allowance of one-hundred percent (100%) of the material costs plus freight charges as invoiced may be made. The allowance will be based upon validated invoices or bills for such materials, including freight charges, and a copy thereof shall be made a part of the documented records for the project. All permanent materials approved for payment will have been tested by the City for compliance with the requirements of the Project Documents. Payment will only be made for permanent materials that conform to the requirements of the Project Documents.
 2. No allowance shall be made for fuels, form lumber, falsework, temporary structures or other materials of any kind that will not become an integral part of the finished contraction.
 3. All permanent materials, for which an allowance is requested, shall be stored in an approved manner where damage is not likely to occur. If any of the stored materials are lost or become damaged in any manner, CONTRACTOR shall be responsible for repairing or replacement of such damaged materials. The value of the lost or damaged materials shall be deducted from the CONTRACTOR's subsequent progress payments until replacement has been accomplished.
 4. Permanent materials, for which payment has been made, either wholly or partially, shall not be removed from the approved location until such time that it is incorporated into the Work, unless approved by the City and/or the Engineer.
 5. The following must accompany the written request for payment of stored materials:
 - a. Consent of the Surety specifying the material type and the bid items in which the material is to be used.
 - b. Validating invoices showing that payment for the material has been made.
 - c. A written statement from CONTRACTOR attesting that the invoices, as submitted do not include charges and/or fees for placing, handling, erecting or any other charges and/or markups other than the actual material cost, sales tax if applicable, and freight charges.
 - d. Bill of lading showing delivery of the material.
 - e. Inspection test reports, and certifications if required by the Contract Documents.
 - f. CONTRACTOR shall obtain a negotiable warehouse receipt, endorsed over to the City for materials and/or equipment stored in an off-site warehouse.
 - g. Certificate of insurance clearly indicating that the materials or equipment is fully insured against theft, fire, vandalism, malicious mischief, as well as other coverage required under the Project Documents.
 6. Nothing in these General Conditions shall be interpreted as requiring the City to pay for stored materials. The City shall decide on a case-by-case basis whether stored materials can be paid for. Some factors the City will consider are:

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CONTRACTOR's ability to meet the Project Schedule and milestones, the effectiveness of CONTRACTOR's quality control plan, how record drawings are being maintained and kept up, the status of the material submittals, and the on-going cleanliness of the Project and the Project Site. No payment will be made for stored materials that have not been submitted and accepted.

- 7. If the permanent materials are stored off-site, CONTRACTOR must pay the City's representative's transportation and lodging to see the permanent materials.
- 8. Full title to the materials and/or equipment shall vest with the City at the time of delivery to the site, warehouse or other storage location.

14.2 UNIT PRICE BID SCHEDULE. Progress payments on account of unit price Work will be based on the number of units completed as determined by the City and/or its representative.

14.3 SCHEDULE OF VALUES (LUMP SUM PRICE BREAKDOWN)

A. CONTRACTOR shall furnish on a form approved by the City:

- 1. Within **10 days** of award of the contract and commensurate with the specification section entitled **CONSTRUCTION SCHEDULES**, provide a detailed preliminary estimate giving a complete breakdown of contract price for each area of the project and/or site, which shall include all Subcontractor/supplier agreements showing the dollar amounts of these agreements to justify the schedule of values, and showing separate line items for the material cost(s) and installation cost(s).
- 2. A periodical itemized estimate of Work done for purpose of making partial payments thereon, that is until the cost loaded CPM construction schedule has been developed (if required by the Contract).
- 3. Within **10 days** of a request by City, a schedule of estimated monthly payments which shall be due CONTRACTOR under the **Agreement**.

B. Values employed in making up any of these schedules are subject to the City's written approval and will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from contract price.

- 1. Unless otherwise agreed in writing, payment for CONTRACTOR's mobilization costs shall be cost loaded as follows:

Mobilization Payment Schedule	
Upon Mobilization	50% of Mobilization item may be billed for bonding, insurance and yard set-up costs
25%	10% of Mobilization item may be billed
50%	10% of Mobilization item may be billed
75%	10% of Mobilization item may be billed
100% (clean up completed)	20% remaining to pay for de mobilization

14.4 ALLOWANCES

A. The following costs shall be included in all allowances;

- 1. Cost of the product to CONTRACTOR or Subcontractor, less applicable trade discounts.
- 2. Delivery to the site.

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3. Applicable taxes.
- B. CONTRACTOR costs included in the Contract Sum include, but are not limited to;
1. Arrangement of product(s) shipping and handling at site, including unloading, uncrating, and storage.
 2. Protection of products from the elements and from damage.
 3. Labor for installation, adjustments and finishing products.
 4. Product warranties.
 5. Scheduling changes and updates.
 6. Other expenses required to complete installation.
 7. CONTRACTOR and Subcontractor(s) overhead and profit.
- C. The adjustments in costs will be made if the net cost is more or less than the specified amount of the allowance. The net cost of the adjustment shall be the amount of the difference between the specified allowance and the actual cost of the material, with the exception of a not-to-exceed fifteen percent (15%) mark-up for overhead and profit. The Contract Sum will be adjusted by Change Order.
1. Submit any claims for anticipated additional costs, or other expenses caused by the selection of the allowance, prior to execution of the Work.
 2. Submit documentation for actual additional costs, or other expenses caused by the selection the allowance, prior to execution of the Work.
 3. Failure to submit claims within the designated time will constitute a waiver of claims for additional costs.
- D. City may separately bid the materials, subject to the specified allowances. The successful bidder will be assigned to CONTRACTOR, and shall be considered a Subcontractor to the CONTRACTOR. Upon assignment, the CONTRACTOR shall all make the necessary submittals, prepare necessary shop drawings and coordinate all related Work. CONTRACTOR shall make all necessary adjustments and revisions to the Project Schedule for such allowances and Subcontractor assignments.

14.5 WAIVER, CONDITIONAL RELEASE, RELEASE OF CLAIMS

- A. Commensurate with the statutes of Public Contract Code section 7100 et seq., provisions in public works contracts with public entities which provide that acceptance of a payment otherwise due a CONTRACTOR is a waiver of all claims against the public entity arising out of the Work performed under the contract or which condition the right to payment upon submission of a release by the CONTRACTOR of all claims against the public entity arising out of performance of the public Work are against public policy and null and void. This section shall not prohibit a public entity from placing in a public works contract and enforcing a contract provision which provides that payment of undisputed contract amounts is contingent upon the CONTRACTOR furnishing the public entity with a release of all claims against the public entity arising by virtue of the public works contract related to those amounts. The CONTRACTOR from the operation of the release may specifically exclude disputed contract claims in stated amounts.
- B. Neither the City nor original CONTRACTOR by any term of their contract, or otherwise, shall waive, affect, or impair the claims and liens of other persons whether with or without notice except by their written consent, and any term of the contract to that effect

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shall be null and void. Any written consent given by any claimant pursuant to this subdivision shall be null, void, and unenforceable unless and until the claimant executes and delivers a waiver and release. Such a waiver and release shall be binding and effective to release the City, construction lender, and surety on a payment bond from claims and liens only if the waiver and release follows substantially one of the forms set forth in this section and is signed by the claimant or his or her authorized agent, and, in the case of a conditional release, there is evidence of payment to the claimant. Evidence of payment may be by the claimant's endorsement on a single or joint payee check that has been paid by the bank upon which it was drawn or by written acknowledgment of payment given by the claimant.

- C. No oral or written statement purporting to waive, release, impair or otherwise adversely affect a claim is enforceable or creates any estoppel or impairment of a claim unless:
 - 1. It is pursuant to a waiver and release prescribed herein, or
 - 2. The claimant had actually received payment in full for the claim.
- D. This section does not affect the enforceability of either an accord and satisfaction regarding a bona fide dispute or any agreement made in settlement of an action pending in any court provided the accord and satisfaction or agreement and settlement make specific reference to the, stop notice, or bond claims.
- E. The waiver and release given by any claimant hereunder shall be null, void, and unenforceable unless it follows substantially the following forms in the following circumstances. Each waiver in this provision shall contain the following language, in at least as large a type as the largest type otherwise on the document:

-ARTICLE CONTINUES ON NEXT PAGE -

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1. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce the payment of, a progress payment and the claimant is not, in fact, paid in exchange for the waiver and release or a single payee check or joint payee check is given in exchange for the waiver and release, the waiver and release shall follow substantially the form:

CONDITIONAL WAIVER AND RELEASE UPON "PROGRESS PAYMENT"

Upon receipt by the undersigned of a check from: _____
 (Maker of Check)
 in the sum of \$ _ payable to: _____ (Amount of Check)
 (Payee or Payees of Check)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of

_____ located at: _____
 (CITY) (Job Description)

to the following extent. This release covers a progress payment for labor, services, equipment, or material furnished to

_____ through: _____
 (Your Customer) (Date)

only and does not cover any retention's retained before or after the release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon Work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment. Before any recipient of the document relies on it, said party should verify evidence of payment to the undersigned.

_____ (Company Name) _____ (Date)

By: _____
 (Title)

Exclusions: Listing of Claims, of which Notice has been given:

1. Claim for: _____ In the amount of: \$ _____
2. Claim for: _____ In the amount of: \$ _____
3. Claim for: _____ In the amount of: \$ _____
4. Claim for: _____ In the amount of: \$ _____
5. Claim for: _____ In the amount of: \$ _____

- 2. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce payment of, a progress payment and the claimant asserts in the waiver it has, in fact, been paid the progress payment, the waiver and release shall follow substantially the following form:

UNCONDITIONAL WAIVER AND RELEASE UPON "PROGRESS PAYMENT"

The undersigned has been paid and has received a progress payment in the sum of \$ _____ for labor, services, equipment, or material furnished to

(Your Customer)

on the job of: _____ located at: _____
(CITY) (Job Description)

and does hereby release any mechanic's lien, stop notice, or bond right that the undersigned has on the above referenced job to the following extent. This release covers a progress payment for labor, services, equipment, or materials furnished to

_____ through: _____
(Your Customer) (Date)

only and does not cover any retention's retained before or after the release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon Work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment.

(Company Name) (Date)

By: _____
(Title)

Exclusions: Listing of Claims, of which Notice has been given:

- 1. Claim for: _____ In the amount of: \$ _____
- 2. Claim for: _____ In the amount of: \$ _____
- 3. Claim for: _____ In the amount of: \$ _____
- 4. Claim for: _____ In the amount of: \$ _____
- 5. Claim for: _____ In the amount of: \$ _____

"NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM."

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- 3. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce the payment of, a final payment and the claimant is not, in fact, paid in exchange for the waiver and release or a single payee check or joint payee check is given in exchange for the waiver and release, the waiver and release shall follow substantially the form:

CONDITIONAL WAIVER AND RELEASE UPON "FINAL PAYMENT"

Upon receipt by the undersigned of a check from _____

in the sum of \$ _____ payable to: _____

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of

_____ located at: _____
(CITY) (Job Description)

This release covers the final payment to the undersigned for all labor, services, equipment, or material furnished on the job, except for disputed claims for additional Work in the amount of \$ _____

Before any recipient of this document relies on it, the party should verify evidence of payment to the undersigned.

(Company Name) (Date)

By: _____
(Title)

Exclusions: Listing of Claims, of which Notice has been given:

- 1. Claim for: _____ In the amount of: \$ _____
- 2. Claim for: _____ In the amount of: \$ _____
- 3. Claim for: _____ In the amount of: \$ _____
- 4. Claim for: _____ In the amount of: \$ _____
- 5. Claim for: _____ In the amount of: \$ _____

- 4. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce payment of, a final payment and the claimant asserts in the waiver it has, in fact, been paid the final payment, the waiver and release shall follow substantially the form:

UNCONDITIONAL WAIVER AND RELEASE UPON "FINAL PAYMENT"

The undersigned has been paid in full for all labor, services, equipment or material

furnished to: _____
(Your Customer)

on the job of: _____ located at: _____
(CITY) (Job Description)

and does hereby waive and release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job, except for disputed claims for extra Work in the amount of \$ _____.

(Company Name) (Date)

By: _____
(Title)

Exclusions: Listing of Claims, of which Notice has been given:

- 1. Claim for: _____ In the amount of: \$ _____
- 2. Claim for: _____ In the amount of: \$ _____
- 3. Claim for: _____ In the amount of: \$ _____
- 4. Claim for: _____ In the amount of: \$ _____
- 5. Claim for: _____ In the amount of: \$ _____

"NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM."

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14.6 RETENTION. The City shall retain 5% percent of the estimated value of the Work done as part security for the fulfillment of the CONTRACT by the CONTRACTOR.

14.7 SUBSTITUTION OF SECURITIES, ESCROW ACCOUNT

A. Pursuant to the requirements of Public Contract Code Section 22300, upon CONTRACTOR's request, the City will make payment to CONTRACTOR of any earned retention funds withheld from payments under this Agreement if CONTRACTOR deposits with the City or in escrow with a California or federally chartered bank acceptable to the City, securities eligible for the investment pursuant to Government Code Section 16430 or bank or savings and loan certificates of deposit, upon the following conditions:

1. CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.
2. All expenses relating to the substitution of securities under Section 22300 and under this Article, including, but not limited to the City's overhead and administrative expenses, and expenses of the escrow agent shall be the responsibility of the CONTRACTOR.
3. If CONTRACTOR shall choose to enter into an escrow agreement, such agreement form shall be provided by the City upon request, and which shall allow for the conversion to cash to provide funds to meet defaults by the CONTRACTOR including, but not limited to, termination of the CONTRACTOR's control over the Work, stop notices filed pursuant to law, assessment of liquidated damages or amounts to be kept or retained under the provisions of the Project Documents.
4. Securities, if any, shall be returned to CONTRACTOR only upon satisfactory completion of the Agreement.

B. To minimize the expense caused by such substitution of securities, CONTRACTOR shall, prior to or at the time CONTRACTOR requests to substitute security, deposit sufficient security to cover the entire amount to be then withheld and to be withheld under the General Conditions of this Agreement. Should the value of such substituted security at any time fall below the amount for which it was substituted, or any other amount which the City determines to withhold, CONTRACTOR shall immediately and at CONTRACTOR's expense deposit additional security qualifying under Section 22300 until the total security deposited is no less than equivalent to the amount subject to withholding under the Agreement.

C. In the alternative, under Section 22300, the CONTRACTOR may request City to make payment of earned retentions directly to the escrow agent at the expense of the CONTRACTOR. Also at the CONTRACTOR's expense, the CONTRACTOR may direct investment of the payments in securities, and the CONTRACTOR shall receive interest earned on such investment upon the same conditions as provided for securities deposited by CONTRACTOR. Upon satisfactory completion of the contract, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by escrow agent from the City pursuant to the terms of Section 22300. If CONTRACTOR elects to receive interest on monies withheld in retention by the City, CONTRACTOR shall, at the request of any subcontractor, make that option available to the subcontractor regarding any monies withheld in retention by the CONTRACTOR from the subcontractor. If the CONTRACTOR elects to receive any interest on any monies withheld in retention by the City, then the subcontractor shall receive the identical rate of interest received by the

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Contractor on any retention monies withheld from the subcontractor by the CONTRACTOR, less any actual pro rata costs associated with administering and calculating that interest. In the event the interest rate is a fluctuating rate, the rate for the subcontractor shall be determined by calculating the interest rate paid during the time that retentions were withheld from the subcontractor. If the CONTRACTOR elects to substitute securities in lieu of retention, then, by mutual consent of the CONTRACTOR and subcontractor, the subcontractor may substitute securities in exchange for the release of monies held in retention by CONTRACTOR. This shall apply only to those subcontractors performing more than five percent (5%) of the CONTRACTOR's total bid. The CONTRACTOR shall not require any subcontractor to waive any provision of this section.

- D. If any provision of this Article shall be found to be illegal or unenforceable, then, notwithstanding, the remainder of this Article shall remain in full force and effect, and only such provision shall be deemed stricken.

14.8 CONTRACTOR'S WARRANTY OF TITLE, ASSIGNMENT OF ANTITRUST ACTIONS.

- A. Public Contract Code Section 7103.5 provides:

1. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the CONTRACTOR or Subcontractor offers and agrees to assign to the awarding body (the City) all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the CONTRACTOR, without further acknowledgment by the parties.
2. CONTRACTOR, for itself and all Subcontractors, agrees to assign to the City all rights, title, and interest in and to all such causes of action CONTRACTOR and all Subcontractors may have under the Agreement. This assignment shall become effective at the time the City tenders final payment to the CONTRACTOR, and CONTRACTOR shall require assignments from all Subcontractors to comply herewith.

14.9 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

- A. The City's designee will, within **7 days** after receipt of each Application for Payment, either indicate approval by counter-signature on the application for progress payment, or return the application to the CONTRACTOR indicating in writing the City's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the application. **30 days** after presentation of the Application for Payment with the City's recommendation, the amount recommended will become due and when due, will be paid by the City to the CONTRACTOR.
- B. The City may withhold a sufficient amount or amounts of any payment or payments otherwise due to CONTRACTOR, as in its judgment may be necessary to cover:
1. Payments which may be past due and payable for just claims against CONTRACTOR or any Subcontractors, or against and about the performance of Work on the Project.
 2. The cost of defective or incomplete or damaged Work which CONTRACTOR has not remedied.

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3. Liquidated damages assessed against CONTRACTOR.
4. Penalties for violation of labor laws.
5. The cost of materials ordered by the City pursuant to Article 13.
6. The cost of completion of this Agreement if there exists a reasonable doubt that this Agreement can be completed for the balance then unpaid to CONTRACTOR.
7. Damage caused by CONTRACTOR to another contractor.
8. Site clean-up provided by the City (or others on contract to the city) on behalf of the CONTRACTOR for failure of the CONTRACTOR to provide timely and adequate clean up as required by the Project Documents, in the opinion of the City.
9. Payments to indemnify, defend, or hold harmless the City.
10. Any payments due to the City including but not limited to payments for failed tests, utilities or imperfections.
11. Extra services for the Engineer, including but not limited to, services rendered in the evaluation of CONTRACTOR substitution requests, Requests For Information (RFI's), Change Order Requests (COR's) and Claims.
12. Extra services for the INSPECTOR including but not limited to re-inspection required due to CONTRACTOR's failed tests or installation of unapproved or defective materials and CONTRACTOR's requests for inspection and CONTRACTOR's failure to attend the inspection, and Work performed after regular Work hours, or during weekend and/or holidays.
13. Stop Notices/Liens have been filed in connection with the Work and the City has exercised its discretion to not accept a specific Bond intended to discharge of such Liens.
14. Claims by third party entities and/or individuals.
15. Persistent failure to comply with directions given to perform.
16. Costs and/or damages resulting from delay, termination and/or other causes which increase or which may increase the City's costs in administering the contract.
17. There are other items entitling the City to a set-off against the amount recommended.

The City must give the CONTRACTOR written notice stating the reasons for such action and pay the CONTRACTOR in the next application for progress payment, the amount so withheld, or any adjustment thereto agreed to by the City and CONTRACTOR, when CONTRACTOR corrects to the City's satisfaction the reason for such action.

- C. If the above grounds are in the opinion of the City removed by or at the expense of CONTRACTOR, payment shall be made for amounts withheld because of them.
- D. PAYMENTS WITHHELD. The City may apply such withheld amount or amounts to payment of such claims or obligations at its discretion. In so doing, the City shall make such payments on behalf of CONTRACTOR. If any payment is so made by the City, then such amount shall be considered as a payment made under contract by the City to CONTRACTOR and the City shall not be liable to CONTRACTOR for such payments

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made in good faith. Such payments may be made without prior judicial determination of claim or obligations. The City will render CONTRACTOR an accounting of such funds disbursed on behalf of CONTRACTOR. To minimize/avoid claims of interference and/or that proposed payment was improper, the City shall endeavor to communicate to CONTRACTOR as to the CONTRACTOR's opinion regarding any proposed payment to a third party individual/entity, prior to City making the same. If CONTRACTOR fails to respond in writing detailing the reason(s) for making any such payment within two (2) working days, City shall have the right, but not the duty, to make any such payment without concern that CONTRACTOR will later claim such payment was improper and/or interfered with CONTRACTOR's relationship and/or prospective economic advantage. In such event, all such claims by CONTRACTOR shall be deemed waived.

- E. As an alternative to payment of such claims or obligations, the City, in its sole discretion, may reduce the total contract price as provided in the Article 13.

14.10 PARTIAL OCCUPATION /UTILIZATION

- A. The City reserves the right to occupy buildings and/or portions of the site at any time before completion, and such occupancy shall not constitute final acceptance of any part of Work covered by this Agreement, nor shall such occupancy extend the date specified for completion of the Work, nor shall any such occupancy affect any liquidated damages. The City shall have the right to utilize or place into service any item of equipment or other usable portion of the Work prior to completion of the Work. Whenever the City plans to exercise said right, the CONTRACTOR will be notified in writing by the City, identifying the specific portion or portions of the Work to be so utilized or otherwise placed into service.
- B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all of the Work shall be borne by the CONTRACTOR. Upon issuance of said written notice of Partial Utilization, the City will accept responsibility for the protection and maintenance of all such items or portions of the Work described in the written notice.
- C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the Work, regardless of whether a portion thereof has been partially utilized by the City, and the CONTRACTOR's **1 year** correction period shall commence only after the date of Project Completion for the entire Work.

14.11 PROJECT COMPLETION

- A. The City shall accept completion of the Agreement and have the Notice of Completion recorded when the entire Work including CONTRACTOR's Punch List(s) and City's final review comments shall have been completed to the satisfaction of the City. The Work may only be accepted as complete by action of the Escondido City Council. Completion means final completion, and the concept of substantial completion shall not apply to this Agreement.

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- B. However, the City, at its sole option, may accept completion of the Agreement and have the Notice of Completion recorded when the entire Work including individual portions of the Work shall have been completed to the satisfaction of the City, except for minor corrective items, as distinguished from incomplete items.
 - C. A final walk through of the Project to determine completion of the Agreement and to record the Notice of Completion shall occur only upon a valid claim by CONTRACTOR that the Project is complete except for minor corrective items. Any erroneous claims of completion by CONTRACTOR resulting in a premature walk through shall be at CONTRACTOR's sole cost and expense and the City shall make adjustments to the Contract Price by reducing the amount thereof to pay for any costs incurred by the City due to the erroneous claims by the CONTRACTOR that the Project is complete. Minor corrective items shall be identified in the final walk through of the Project.
 - D. If the CONTRACTOR fails to complete the minor corrective items prior to the expiration of the **35 day** period immediately following recording of the Notice of Completion, the City shall withhold from the final payment an amount equal to twice the estimated cost, as determined by the City, of each item until such time as the item is completed. At the end of such **35 day** period, if there are items remaining to be corrected, the City may elect to proceed as provided in the Article 13.
- 14.12 FINAL APPLICATION FOR PAYMENT. After the CONTRACTOR has completed all of the Work, the punch-list, and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up as-built record documents and other documents, all as required by the Project Documents, and after the Engineer and the City have indicated that the Work is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective unconditional waiver releases (Reference Article 14.5) by CONTRACTOR and all SUBCONTRACTORS/suppliers that filed preliminary notices of all previous progress payments, conditional waiver and release upon "final payment", and waivers or releases of all Liens arising out of or filed in connection with the Work.
- 14.13 FINAL PAYMENT AND ACCEPTANCE
- A. If, on the basis of the City's observation of the Work during construction and final inspection, and the City's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the City is satisfied that the Work has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the City designee will recommend payment of the final application for progress payment.
 - B. After acceptance of the Work by the Escondido City Council, the City will make final disposition to the CONTRACTOR of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including the following items:
 - 1. Liquidated damages, as applicable; and
 - 2. Amounts withheld by the City under Article 14.9.B. which have not been released.
 - C. As a condition of final payment, the CONTRACTOR shall be required to execute a release releasing the City from any and all claims of liability for payment on the Project except for such amounts as may be specifically described and excluded from the release.

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- 14.14 RELEASE OF RETENTION AND OTHER DEDUCTIONS. After recording the Notice of Completion with the San Diego County Recorder's Office to initiate the Lien period, and not more than **55 calendar days** thereafter, the City will release to the CONTRACTOR the retention funds withheld pursuant to the Agreement, less any deductions to cover pending claims against the City.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.1 CITY'S RIGHT TO TERMINATE AGREEMENT

- A. If the CONTRACTOR refuses or fails to complete the Work or any separable part thereof with such diligence as will ensure its completion within the time specified or any extension thereof, or fails to complete said Work within such time, or if the CONTRACTOR should file a petition for relief as a debtor, or should relief be ordered against CONTRACTOR as a debtor under Title 11 of the United States Code, or if CONTRACTOR should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should refuse or should fail to supply enough properly skilled workers or proper materials to complete the Work in the time specified, or if CONTRACTOR should fail to make prompt payment to Subcontractors for materials or labor, or disregard laws or ordinances or instructions of the City, or if CONTRACTOR or its Subcontractors should otherwise violate any provision of this Agreement, including, but not limited to, the performance of defective Work, disregard or violate the Laws or Regulations of any public body having jurisdiction; disregard or violate provisions of the Contract Documents or City's instructions; fail to prosecute the Work according to the approved progress schedule; fail to provide a qualified superintendent, competent workmen, or materials or equipment meeting the requirements of the Contract Documents; or disregard the authority of the City, then the City may, without prejudice to any other right or remedy, serve written notice upon CONTRACTOR and its surety of City's intention to terminate this agreement. Such notice shall contain the reasons for such intention to terminate. Unless within **seven (7) days** after the service of such notice such condition shall cease or such violation shall cease and arrangements satisfactory to the City for the correction thereof have been made, this Agreement shall cease and terminate. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished to the City's satisfaction.
- B. In the event of any such termination, the City shall immediately serve written notice thereof upon surety and CONTRACTOR, and surety shall have the duty to take over and perform this Agreement, provided, however, that if surety within **7 days** after service upon it of notice of termination does not give the City written notice of its intention to unqualifiedly by honor its duty to take over and perform this Agreement, or does not commence actual, on site performance thereof within **15 days** after service of the notice of termination by the City on surety, the City may take over the Work and prosecute it to completion by Agreement or by any other method it may deem advisable for the account and at the expense of CONTRACTOR, and CONTRACTOR and its surety shall be liable to the City for any excess cost or other damages, including the added time devised by City personnel and/or consultants, including attorneys, occasioned by the City thereby. Time is of the essence in this Agreement. If the City takes over the Work as herein above provided, the City may, without liability for so doing, take possession of and utilize in completing the Work such materials, supplies, equipment and other property belonging to the CONTRACTOR as may be on the site of the Work and necessary therefore.

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- C. If the expense of finishing the Work, including compensation for additional engineering, architectural, managerial, legal, consulting, personnel, and administrative services, shall exceed the unpaid balance of the Agreement, CONTRACTOR and/or its surety shall pay the difference to the City. Expense incurred by the City as herein provided, and damage incurred through CONTRACTOR's default, shall be certified to City by the Engineer, or ARCHITECT if applicable. If the unpaid balance under the Agreement shall exceed the expense of finishing the Work, including compensation for additional architectural, managerial, legal, consulting, personnel, and administrative services, such excess shall be paid to CONTRACTOR or its creditor(s).
- D. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the City may then issue the notice of termination.
- E. In the event that sufficient funds are not appropriated to complete the Project or the City determines that sufficient funds are not available to complete the Project, the City may terminate or suspend the completion of the Project at any time by giving written notice to the CONTRACTOR. In the event that the City exercises this option, the City shall pay for any and all Work and materials completed or delivered onto the site, and the value of any and all Work then in progress and orders actually placed which cannot be canceled up to the date of notice of termination. The value of Work and materials paid for shall include a factor of fifteen percent (15%) for the CONTRACTOR's overhead and profit and there shall be no other costs or expenses paid to CONTRACTOR. All Work, materials and orders paid for pursuant to this provision shall become the property of the City. The City may, without cause, order CONTRACTOR in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as the City may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.
- F. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the City.

15.2 TERMINATION OF AGREEMENT BY THE CITY FOR CONVENIENCE

- A. Upon **7 days** written notice to the CONTRACTOR the City may, without cause and without prejudice to any other right or remedy of the City, elect to terminate the Agreement. In such case, the CONTRACTOR shall be paid (without duplication of any items):
 - 1. For completed and acceptable Work executed in accordance with the Contract Documents, prior to the effective date of termination, including fair and reasonable sums for overhead and profit of such Work;
 - 2. For expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. For all reasonable claims, costs, losses, and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. For reasonable expenses directly attributable to termination.
- B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

ARTICLE 16 – CONSTRUCTION CLAIMS, WAIVER AND RELEASE FORMS, DISPUTES, FALSE CLAIMS ACT.

16.1 CONTRACTOR CLAIMS

- A. NOTICE. If the CONTRACTOR shall claim compensation for any damage sustained by reason of the acts of the City or its agents, or if the CONTRACTOR disagrees with the City's or Engineer's/Architect's decisions regarding a CONTRACTOR's Change Order Request (COR), the CONTRACTOR shall provide written "Notice" to the City **within 5 days** after sustaining of such damage, or being notified of an adverse decision, and provide within **14 days** of the event the factual basis supporting the claim (unless otherwise specified). The written "Notice" shall state the summary points for which the factual bases will support the claim and cite in detail the Project Documents (including plans and specifications) upon which the claim is to be based. CONTRACTOR's failure to notify the City within such a period shall be deemed a waiver and relinquishment of such a claim. If such notice is given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions.
- B. WAIVER AND RELEASE FORMS. In addition, on or before the end of the month for which the claim has been filed, the CONTRACTOR shall also file with the City the **WAIVER AND RELEASE FORMS**, for which the claim and the amount of the claim is identified. If the claim is not indicated on the **WAIVER AND RELEASE FORMS**, CONTRACTOR's claim shall be forfeited and invalidated and it shall not be entitled to consideration for time or payment on account of any such claim.
- C. REQUIRED DOCUMENTATION FOR CLAIMS FOR TIME: Fragnet – Sometimes known as a "Sub-network". A Fragnet will be required for time impact analysis and time extensions. CONTRACTOR's failure to provide a "Notice of Delay" within **24 hours**, and submit a Fragnet for time impact analysis and time extension(s) on or within **14 days** of the delaying event, shall forfeit and invalidate all considerations for time and/or payment. The costs to prepare Fragnets and schedule updates resulting from approved Fragnets are part of the Work, regardless of number and difficulty. The City will provide a response to the Fragnet on or within **14 days** from the completed submission.
- D. Except for tort claims, all claims by the CONTRACTOR for a time extension, payment of money or damages arising from Work done by, or on behalf of, the CONTRACTOR pursuant to the Agreement and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or as to the amount of payment which is disputed by the City of \$375,000 or less, is subject to the settlement and arbitration provisions procedures set forth in Public Contract Code Section 20104, et seq. The text of those provisions are provided in full in Article 17.
- E. All of the following claims by the CONTRACTOR are subject to the claim resolution procedures set forth in Public Contract Code Section 9204. The text of that section is provided in full in Article 17.
1. A time extension;
 2. Payment of money or damages arising from Work done by, or on behalf of, the CONTRACTOR pursuant to the Agreement and payment of which is not otherwise expressly provided for, or CONTRACTOR is not otherwise entitled to; and
 3. Payment of an amount that is disputed by the City.

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- F. Any claim must be a separate demand sent by registered mail or certified mail with return receipt requested. The CONTRACTOR shall furnish reasonable documentation to support the claim, which shall include all of the materials described in Section 16.1.
- G. The City shall conduct a reasonable review of the claim within **45 days** and shall provide the CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed. The City and the CONTRACTOR may, by mutual agreement, extend the time period for response. Any payment due on an undisputed portion of the claim shall be processed and made within **60 days** after the City issues its written statement.
- H. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim because of privity of contract does not exist, the CONTRACTOR may present a claim to the City on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing that the CONTRACTOR present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the City shall furnish reasonable documentation to support the claim, which shall include all of the materials described in Section 16.1. Within **45 days** of receipt of this written request, the CONTRACTOR shall notify the subcontractor in writing as to whether the CONTRACTOR presented the claim to the City. If the CONTRACTOR did not present the claim, the CONTRACTOR must provide the subcontractor with a statement of the reasons for not presenting the claim to the City.

16.2 DISPUTES –THE CITY'S AND ENGINEER'S DECISIONS

- A. If the CONTRACTOR disputes the City's written response to the claim, or if the City does not respond to the claim within the time prescribed, the CONTRACTOR may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. The CONTRACTOR must send the demand by registered mail or certified mail, return receipt requested. Upon receipt, the City shall schedule a meet and confer conference within **30 days** for settlement of the dispute.
- B. If any portion of the claim remains in dispute after the meet and confer conference, the City shall provide the CONTRACTOR a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed within **10 business days** following the conclusion of the conference. Any payment due on an undisputed portion of the claim shall be processed and made within **60 days** after the City issues its written statement. Any disputed portion of the claim, as identified by the CONTRACTOR in writing, shall be submitted to nonbinding mediation. The City shall conduct a reasonable review of the claim within **45 days** and shall provide the CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed. The City and the CONTRACTOR may, by mutual agreement, extend the time period for response. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement.
- C. The City and CONTRACTOR shall mutually agree to a mediator within **10 business days** after the disputed portion of the claim has been identified in writing. The City and the CONTRACTOR shall share the associated costs of mediation equally. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside Section 9204. The mediation

conducted shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

D. Failure by the City to respond to a claim from the CONTRACTOR within the time periods described above or to otherwise meet the time requirements described above shall result in the claim being deemed rejected in its entirety.

E. Amounts not paid in a timely manner as outlined above will bear interest at 7% per year.

16.3 FALSE CLAIMS ACT CERTIFICATION. All claims submitted by the CONTRACTOR shall be accompanied by a notarized certificate containing the following language:

Under penalty perjury and with specific reference to the California False Claims Act, Government Code Section 12650 et. seq., the undersigned,

_____ (name)

of

_____ (title)

_____ (company)

hereby certifies that the claim for the additional compensation and time, if any, made herein for the Work on this Contract is a true statement of the actual costs incurred or estimated future costs, and time sought, and is fully documented and supported under the Agreement.

Dated _____

/s/ _____

Subscribed and sworn before me this _____ day

of _____

Notary Public

My Commission Expires _____

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

ARTICLE 17 – MISCELLANEOUS

17.1 GIVING NOTICE

A. Any notice from one party to the other or otherwise under the Agreement shall be in writing and shall be dated and signed by party giving such notice or by a duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in one of the following manners, and copied to the City:

1. If notice is given to the City, by personal delivery thereof to the City or by deposit in the United States mail, enclosed in a sealed envelope addressed to the City, and sent by registered or certified mail with postage prepaid;

2. If notice is given to CONTRACTOR, by personal delivery thereof to said CONTRACTOR or to CONTRACTOR's superintendent at the site of the Project,

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or by deposit in the United States mail, enclosed in a sealed envelope addressed to said CONTRACTOR at its regular place of business or at such address as may have been established for the conduct of Work under this Agreement, and sent by registered or certified mail with postage prepaid;

3. If notice is given to the surety or other persons, by personal delivery to such surety or other person or by deposit in the United States mail, enclosed in a sealed envelope, addressed to such surety or person at the address of such surety or person last communicated by the surety or other person to the party giving notice, and sent by registered or certified mail with postage prepaid.

- 17.2 **TITLE TO MATERIALS FOUND ON THE WORK.** The City reserves the right to retain title to all soils, stone, sand, gravel, and other materials developed and obtained from excavations and other operations connected with the Work. Unless otherwise specified in the Contract Documents, neither the CONTRACTOR nor any Subcontractor shall have any right, title, or interest in or to any such materials. The CONTRACTOR will be permitted to use in the Work, without charge, any such materials which meet the requirements of the Contract Documents.
- 17.3 **RIGHT TO AUDIT.** If the CONTRACTOR submits a claim to the City for additional compensation, the City shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR's Documents and books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR's plant, or such parts thereof, as may be or have been engaged in the performance of the Work. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon Subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such representatives as the City deems desirable during the CONTRACTOR's normal business hours at the office of the CONTRACTOR. The CONTRACTOR shall make available to the City for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the City.
- 17.4 **SURVIVAL OF OBLIGATIONS.** All representations, indemnifications, warranties, and guaranties made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work or termination or completion of the Agreement.
- 17.5 **CONTROLLING LAW.** This Agreement is to be governed by the law of the state of California, in which the Project is located, with venue in North San Diego County.
- 17.6 **SEVERABILITY.** If any term or provision of this Agreement is declared invalid or unenforceable by any court of lawful jurisdiction, the remaining terms and provisions of the Agreement shall not be affected thereby and shall remain in full force and effect.
- 17.7 **WAIVER.** The waiver by the City of any breach or violation of any term, covenant or condition of this Agreement or of any Agreement provision, ordinance, or law shall not be deemed to be a waiver of any other term, covenant, condition, ordinance, or law or of any subsequent breach or violation of the same or of any other term, covenant, condition, ordinance, or law. The subsequent payment of any monies or fee by the City which may become due hereunder shall not be deemed to be a waiver of any preceding breach or violation by CONTRACTOR or any term, covenant, condition of this Agreement or of any applicable law or ordinance.

- 17.8 PROHIBITED INTERESTS. No official of the City who is authorized in such capacity and on behalf of the City to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Project, shall become directly or indirectly interested financially in this Project or in any part thereof. No officer, employee, Engineer, attorney, architect or inspector of or for City who is authorized in such capacity and on behalf of the City to exercise any executive, supervisory or other similar functions in connection with construction of Project shall become directly or indirectly interested financially in this Project or in any part thereof. CONTRACTOR shall receive no compensation and shall repay the City for any compensation received by or from CONTRACTOR hereunder, should CONTRACTOR aid, abet or knowingly participate in violation of this Article.
- 17.9 California Public Contract Code § 9204. Legislative findings and declarations regarding timely and complete payment of contractors for public works projects; claims process.
- (a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.
 - (b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.
 - (c) For purposes of this section:
 - (1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
 - A. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.
 - B. Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
 - C. Payment of an amount that is disputed by the public entity.
 - (2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.
 - (3)
 - A. "Public entity" means, without limitation, except as provided in subparagraph B., a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.
 - B. "Public entity" shall not include the following:
 - (i) The Department of Water Resources as to any project under the jurisdiction of that department.
 - (ii) The Department of Transportation as to any project under the jurisdiction of that department.
 - (iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

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- (iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.
 - (v) The Military Department as to any project under the jurisdiction of that department.
 - (vi) The Department of General Services as to all other projects.
 - (vii) The High-Speed Rail Authority.
- (4) “Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.
- (5) “Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.
- (d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.
- (B) The claimant shall furnish reasonable documentation to support the claim.
- (C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.
- (D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.
- (2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.
- (B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection

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with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

- (C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
 - (D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
 - (E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.
- (3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
 - (4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
 - (5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.
- (e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.
 - (f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.
 - (g) This section applies to contracts entered into on or after January 1, 2017.
 - (h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.
 - (i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.

17.10 California Public Contract Code § 20104. Application of article; provisions included in plans and specifications.

- (a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a contractor and a local agency.
- (2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.
- (b) (1) "Public work" means "public works contract" as defined in Section 1101 but does not include any work or improvement contracted for by the state or the Regents of the University of California.
- (2) "Claim" means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.
- (c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.
- (d) This article applies only to contracts entered into on or after January 1, 1991.

17.11 California Public Contract Code § 20104.2. Claims; requirements; tort claims excluded.

For any claim subject to this article, the following requirements apply:

- (a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.
- (b) (1) For claims of less than fifty thousand dollars (\$50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.
- (2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.
- (3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.
- (c) (1) For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.
- (2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.
- (3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.
- (d) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local

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agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

- (e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.
- (f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

17.12 California Public Contract Code § 20104.4. Civil action procedures; mediation and arbitration; trial de novo; witnesses.

The following procedures are established for all civil actions filed to resolve claims subject to this article:

- (a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.
- (b)
 - (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act (Title 4 (commencing with Section 2016.010) of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.
 - (2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.
 - (3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.
- (c) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

Exhibit D (Page 82 of 82)

17.13 California Public Contract Code § 20104.6. Payment on undisputed portion of claim; interest on arbitration awards or judgments.

- (a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.
- (b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

Exhibit E

**Integrated Regional Waste Management
Program Grant**

GRANT AGREEMENT FOR THE INTEGRATED REGIONAL WATER MANAGEMENT PROGRAM RELATED TO 2015 PROPOSITION 84 INTEGRATED REGIONAL WATER MANAGEMENT (IRWM) IMPLEMENTATION GRANT BETWEEN SAN DIEGO COUNTY WATER AUTHORITY AND CITY OF ESCONDIDO

PROJECT NO. 8-80046
(AGREEMENT NO. 84-4-8-80046)

This Agreement between the San Diego County Water Authority, a county water authority (Water Authority), and City of Escondido, a Local Project Sponsor (LPS), sets forth the understanding of the Water Authority and the LPS (collectively Parties) for distribution of a grant award from the State of California Department of Water Resources (State). The Effective Date of this Agreement is April 24, 2017.

RECITALS:

1. WHEREAS, in November 2006, California voters approved Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act, to assist in financing projects associated with the Integrated Regional Water Management (IRWM) Plan pursuant to Chapter 8 (commencing with Section 79560 Division 26.5 of the California Water Code (CWC)), collectively referred to as IRWM Program.
2. WHEREAS, in September 2013, the IRWM Plan was adopted by the San Diego Regional Water Management Group.
3. WHEREAS, in September 2011 an MOU signed among the City of San Diego, County of San Diego, and Water Authority for the San Diego Regional Water Management Group (RWMG), and the Parties' roles regarding the San Diego IRWM Plan and the division of responsibilities for administration of IRWM grant monies through June 2016.
4. WHEREAS, in May 2016, an amendment to the MOU executed in September 2011 was approved to extend the San Diego Regional Water Management Group (RWMG), and the Parties' roles regarding the San Diego IRWM Plan and the division of responsibilities for administration of IRWM grant monies through June 2019.

The Recitals are incorporated herein, and the Parties do agree as follows:

1. **DEFINITIONS:** The following words and terms, unless otherwise defined, shall mean:
 - a) LPS means Local Project Sponsor. An LPS is a proponent of individual projects that will be funded as part of the IRWM Program grant from the State. The role of an LPS could be performed by entities such as the Water Authority, County of San Diego, City of San Diego, Water Authority member agency, a municipality, a joint powers

authority, a local public agency, a non-profit 501(c) (3) or a Native American tribe. The LPS for this Agreement is City of Escondido.

- b) Grant Agreement means the Grant Agreement no. 4600011516 between the San Diego County Water Authority and the State of California, dated December 19, 2016, for the disbursement of \$31,131,415 in grant funds.
 - c) Project (8- 80046): Escondido Advanced Water Treatment for Agriculture.
 - d) LPS Agreement (Agreement): This agreement between the Water Authority and the Local Project Sponsor for the performance of the project and receipt of the grant funds allocated for that project.
2. **TERM OF AGREEMENT:** The term of this Agreement begins on the Effective date and terminates on August 5, 2022 or when all Parties' obligations under this Agreement have been fully satisfied, whichever occurs earlier.
 3. **TOTAL PROJECT COSTS:** The reasonable total cost of the Project is estimated to be \$31,210,746. These costs are summarized in Exhibit B, Budget. The LPS shall fund the difference between the estimate of total project costs and the amount specified in paragraph 4, Grant Amount. The LPS is only responsible for funding the difference for its project (Funding Match and Other Cost Share) as shown on Exhibit B, Budget.
 4. **GRANT AMOUNT:** The maximum amount payable by the State under the LPS Agreement for this Project shall not exceed \$2,000,000.
 5. **LPS COST SHARE:** LPS agrees to fund the difference between the Total Project Cost and the Grant Amount (amount specified in Paragraph 4). Cost Share consists of Funding Match and Additional Cost Share, as documented in Exhibit B. LPS cost share for the project funded through this Agreement is estimated to be \$29,210,746.

Additional Cost Share is the amount necessary to fund the project above the Grant Amount and the Funding Match. The Additional Cost Share for this project is \$18,290,474. Additional Cost Share will not be reviewed by the Water Authority or the State for invoicing purposes; however, the LPS is required to maintain all financial records associated with the project in accordance with Exhibit G (State and Water Authority Audit Document Requirements and Funding Match Guidelines for Local Project Sponsor).

6. **FUNDING MATCH:** Funding Match is defined as the minimum amount of LPS Cost Share required, and cannot include other State funds, unless a Disadvantaged Community project waiver is granted. The LPS Funding Match for this project is estimated to be \$10,920,272. LPS's Funding Match may include in-kind services that are part of Exhibit A (Work Plan) and performed after January 1, 2011.

7. LPS RESPONSIBILITIES:

- a) Faithfully and expeditiously perform or cause to be performed all project work as described in Exhibit A, Work Plan and in accordance with Exhibit B, Budget and Exhibit C, Schedule.
- b) Accept and agree to comply with all terms, provisions, conditions, and written commitments of this Agreement, including all incorporated documents, and to fulfill all assurances, declarations, representations, and statements made by LPS in the grant application, documents, amendments, and communications filed in support of its request for Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 financing.
- c) Comply with all applicable California laws and regulations.
- d) Implement the project(s) in accordance with applicable provisions of the law.
- e) Fulfill its obligations under the LPS and Grant Agreements, and be responsible for the performance of the project.
- f) Perform the scope of work for this project including project construction and management, oversight, compliance and operations and maintenance associated with the project. LPS shall also be solely responsible for work and for persons or entities engaged in work, including, but not limited to, subcontractors, suppliers, and all providers of services under this Agreement. LPS shall fulfill its obligations in a manner that is consistent with this Agreement, the Grant Agreement (4600011516) and the IRWM Program.
- g) Be responsible for all disputes arising out of its contracts for work including, but not limited to, bid disputes and payment disputes with its contractors and consultants or other entities. State or Water Authority will not mediate disputes between the LPS and any other entity regarding performance of work.
- h) Promptly perform, or cause to be performed, all IRWM Program work as described in the scope of work for the Project identified in Exhibit A, Work Plan. LPS shall be responsible for oversight, compliance, and operations and maintenance of Project(s) identified in the Grant Agreement. LPS or its representatives shall perform regular inspections of any construction work in progress.
- i) LPS is solely responsible for design, construction, and operation and maintenance of project(s) identified in Exhibit A. Review or approval of plans, specifications, bid documents, or other construction documents by State or the Water Authority is solely for the purpose of proper administration of grant funds and shall not relieve or limit responsibilities of LPS with regard to its contractual obligations.

- j) Determine insurance and bonding requirements to be imposed on all Consultants/Contractors performing the scope of work on behalf of the LPS. This includes requiring its Consultants/Contractors to name the San Diego County Water Authority its directors, officers, employees and agents and the State of California its directors, officers, employees and agents as additional insured on their Commercial General Liability policy, and the policy shall be endorsed with use of an ISO form CG 20 10 11 85 or a substantially equivalent insurance form.
8. **GENERAL CONDITIONS:** Water Authority shall have no obligation to disburse money for a project under this agreement until LPS has satisfied the following conditions (if applicable):
- a) LPS shall demonstrate the availability of sufficient funds to complete the project, as stated in the Grant Award/Commitment Letter, by submitting the most recent three (3) years of audited financial statements and an Audited Financial Statement Summary.
 - b) LPS must demonstrate compliance with the groundwater compliance options set forth on page 13 and 14 of the IRWM Program Guidelines, dated May 2015.
 - c) For the term of this agreement, LPS submits timely Quarterly Progress Reports as required by Paragraph 19, Submission of Reports.
 - d) LPS submits deliverables as specified in Paragraph 19, Submission of Reports of this Agreement and in Exhibit A, Work Plan.
 - e) Prior to the beginning of construction or implementation activities, LPS shall submit the following to the Water Authority:
 - 1. Final plans and specifications certified by a California Registered Civil Engineer or Geologist as applicable, for the approved project listed in Exhibit A, Work Plan of this Agreement.
 - 2. Environmental Documentation
 - 1. LPS submits to the Water Authority, to be submitted to the State, all applicable environmental permits,
 - 2. Documents that satisfy the CEQA process are received by the Water Authority and the State,
 - 3. State has completed its CEQA compliance review as a Responsible Agency, and
 - 4. LPS receives written concurrence from the State of Lead Agency's CEQA documents and State notice of verification of environmental permit submittal.

State's concurrence of Lead Agency's CEQA documents is fully discretionary and shall constitute a condition precedent to any work (i.e., construction or implementation activities) for which it is required. Once CEQA documentation has been completed, State will consider the environmental documents and decide whether to continue to fund the projects or to require changes, alterations or other mitigation. LPS must also demonstrate that it has complied with all applicable requirements of the National Environmental Policy Act (NEPA) by submitting copies of any environmental documents, including environmental impact statements, Finding of No Significant Impact, and mitigation monitoring program as may be required prior to beginning construction/ implementation.

LPS shall submit environmental documentation listed on the IRWM Environmental Documentation Submittal Requirements provided by the Water Authority from DWR, as applicable.

3. A monitoring plan as required by Paragraph 21, "Project Monitoring Plan Requirements."

9. DISBURSEMENT BY STATE AND PAYMENT BY WATER AUTHORITY:

Following the review of each invoice, the Water Authority will approve the invoice and disburse payment subject to the availability of funds through normal State and Water Authority processes. Funds will be disbursed by the Water Authority in response to each approved invoice within forty-five (45) days of receipt of funds from the State. No disbursement shall be required at any time in any manner which is in violation of, or in conflict with federal or state laws, or regulations or which may require any rebates to the federal government or any loss of tax-free status on state bonds, pursuant to any federal statute or regulation. Any and all money disbursed by the Water Authority under this Agreement and all interest earned by LPS shall be used solely to pay eligible costs.

10. ELIGIBLE PROJECT COSTS: Costs as described in Exhibit A, Work Plan and in accordance with Exhibit B, Budget and Exhibit C, Schedule.

LPS shall apply State funds received only to Eligible Project Costs in accordance with applicable provisions of the law and Exhibit B. Eligible project costs include the reasonable costs of studies, engineering, design, land and easement acquisition, legal fees, preparation of environmental documentation, environmental mitigations, monitoring, and project construction. Reasonable administrative expenses may be included as Eligible Project Costs and will depend on the complexity of the project preparation, planning, coordination, construction, acquisitions, and implementation. Reasonable administrative expenses are the necessary costs incidentally but directly related to the projects including the portion of overhead and administrative expenses that are directly related to the projects included in this Agreement in accordance with the standard accounting practices of the LPS. Work performed on the projects after January 17, 2014 shall be eligible for reimbursement with State grant funds.

Costs that are not eligible for reimbursement with State funds cannot be counted as Funding Match. Costs that are not eligible for reimbursement include, but are not limited to the following items:

- a) Costs, other than those noted above, incurred prior to the award date of the Grant.
- b) Operation and maintenance costs, including post construction performance and monitoring costs.
- c) Purchase of equipment not an integral part of a project.
- d) Establishing a reserve fund.
- e) Purchase of water supply.
- f) Monitoring and assessment costs for efforts required after project construction is complete.
- g) Replacement of existing funding sources for ongoing programs.
- h) Travel and per diem costs (per diem includes subsistence and other related costs).
- i) Support of existing agency requirements and mandates (i.e., punitive regulatory agency requirement).
- j) Purchase of land in excess of the minimum required acreage necessary to operate as an integral part of a project, as set forth and detailed by engineering and feasibility studies.
- k) Payment of principal or interest of existing indebtedness or any interest payments unless, the Water Authority and the State agree in writing to the eligibility of the costs for reimbursement before the debt is incurred, and the purposes for which the debt is incurred are otherwise eligible for reimbursement. However, this will only be allowed as LPS cost share (i.e., Funding Match).
- l) Overhead not directly related to project costs.

11. **METHOD OF PAYMENT:** Submit a copy of invoice for costs incurred and supporting documentation to the IRWM Grant Administrator via the Proposition 84 Webtool (webtool) or another electronic means as directed by the Water Authority's Grant Administrator. Invoices submitted via the webtool shall include the following information:

- a) Reimbursement
 1. Costs incurred for work performed in implementing the projects during the period identified in the particular invoice.
 2. Costs incurred for any interests in real property (land or easements) that have been necessarily acquired for the projects during the period identified in the particular invoice for the implementation of a project.

3. Invoices shall be submitted on forms provided by the Water Authority and shall meet the following format requirements:
 - (i) Invoices must contain the date of the invoice, the time period covered by the invoice, and the total amount due.
 - (ii) Invoices must be itemized based on the categories (i.e., tasks) specified in Exhibit B. The amount claimed for salaries/wages/consultant fees must list the classification or title of each staff/consultant claiming labor costs and include a calculation formula (i.e., hours or days worked times the hourly or daily rate = the total amount claimed).
 - (iii) Sufficient evidence (i.e., receipts, copies of checks or other proof of payment, time sheets) as determined by the Water Authority and the State must be provided for all costs included in the invoice. Additional Cost Share shall be accounted for separately in the progress reports.
 - (iv) Each invoice shall clearly delineate those costs claimed for reimbursement from the State's Grant Amount, as depicted in Paragraph 4, Grant Amount and those costs that represent LPS's Funding Match, as applicable, in Paragraph 6, Funding Match.
 - (v) The Water Authority will notify the LPS, in a timely manner, when, upon review of an invoice, if the Water Authority or the State determines that any portion or portions of the costs claimed are not eligible costs or are not supported by documentation or receipts acceptable to the Water Authority or the State. LPS may, within fifteen (15) calendar days of the date of receipt of such notice, submit additional documentation to the Water Authority to cure such deficiency(ies). If LPS fails to submit adequate documentation curing the deficiency(ies), the Water Authority will adjust the pending invoice by the amount of ineligible, unsupported or unapproved costs. After the disbursement requirements in Paragraph 8, General Conditions, are met and approved by the Water Authority and the State, the Water Authority, will disburse the whole or portions of State funding to the LPS, following receipt from LPS via US mail, express mail delivery, or from Prop 84 Grants Website (webtool) of an invoice for costs incurred, including the Required Local Cost Share, and timely Quarterly Progress Reports as required by Paragraph 19, Submission of Reports. Invoices shall be submitted no more frequently than quarterly, unless approved in advance by the Water Authority, in arrears, bearing the Grant Agreement, Agreement and the Project Numbers. Invoices submitted beyond the quarterly invoicing schedule must be accompanied by a Progress Report. All invoices must be certified to be true and accurate and submitted by an official representative of the project.

b) Advanced Payment

Water Code §10551 authorizes advance payment by State for projects which are sponsored by a nonprofit organization; a disadvantaged community (DAC); or, the proponent of a project that benefits a DAC. If these projects are awarded less than \$1,000,000 in grant funds, the project proponent may receive an advanced payment of 50% of the grant award; the remaining 50% of the grant award will be reimbursed in arrears. Within seventy-five (75) calendar days of execution of the Grant Agreement, the LPS shall provide the Water Authority an Advanced Payment Request. The Advanced Payment Request must contain the following:

1. A response from the Local Project Sponsor stating whether it wishes to receive the advanced payment or not.
2. If the Local Project Sponsor is requesting the advanced payment, the request must also include:
 - (i) A funding plan which shows how the advanced funds will be expended within 18 months of this Grant Agreement's execution. (i.e., for what, how much, and when).
 - (ii) A discussion of the Local Project Sponsor's financial capacity to complete the project once the advance funds have been expended.
3. If a Local Project Sponsor is requesting advanced payment, the LPS shall also submit a single Advance Payment Invoice (submitted via the webtool), containing the request of the project to received grant funding. Within sixty (60) calendar days of receiving the Advanced Payment Invoice and subject to the availability of funds, State will authorize payment of the advanced funds sought of fifty percent (50.0%) of the grant award for the qualified project. The Water Authority shall be responsible for the timely distribution of the advanced funds to the individual Local Project Sponsors, estimated to be within 3 weeks of receipt from the State.

The Advance Payment Invoice shall be submitted on forms provided by the Water Authority and shall meet the following format requirements:

1. Invoice must contain the date of the invoice, the time period covered by the invoice, and the total amount due.
2. Invoice must be itemized based on the categories (i.e., tasks) specified in Exhibit B, Budget.
3. Water Authority Grants Administrator will notify the LPS, in a timely manner, when, upon review of an Advance Payment Invoice, the State determines that any portion or portions of the costs claimed are not eligible costs. LPS may, within fifteen (15) calendar days of the date of receipt of such notice, submit additional documentation to cure such deficiency(ies). After the disbursement requirements in Paragraph 8, Basic Conditions (8a and 8b) only are met, State, via the Water

Authority, will disburse the whole or portions of State funding to Grantee, following receipt from LPS via the webtool, an invoice for costs incurred, including Cost Share, and timely Progress Reports as required by Paragraph 19, Submission of Reports.

On a quarterly basis, the LPS will submit an Accountability Report to the Water Authority that demonstrates how actual expenditures compare with the scheduled budget. The Accountability Report shall include the following information:

1. An itemization of how advanced funds have been expended to date (Expenditure Summary), including documentation that supports the expenditures (i.e., contractor invoices, receipts, personnel hours, etc.). Invoices must be itemized based on the categories (i.e., tasks) specified in Exhibit B, Budget.
2. A funding plan, which shows how the remaining advanced funds will be expended.
3. Documentation that the funds were placed in a non-interest bearing account, including the dates of deposits and withdrawals from that account.

The Water Authority's Grants Administrator will notify the LPS in a timely manner when, upon review of the Expenditure Summary and notification from the State, that it determines that any portion or portions of the expenditures claimed are not eligible costs. LPS may, within fifteen (15) calendar days of the date of receipt of such notice, submit additional documentation to cure such deficiency(ies). If costs are not consistent with the tasks in Exhibit B, Budget, the Water Authority and the State will reject the claim and remove the costs from the Expenditure Summary.

Once Grantee has expended all advanced funds, then the method of payment will revert to the reimbursement process specified in Paragraph 11a). Method of Payment, Reimbursement, and any remaining requirements of Paragraph 8. General Conditions.

12. **REPAYMENT OF ADVANCES:** The Water Authority may demand repayment from the LPS of all or any portion of the advanced State funding along with interest at the California general obligation bond interest rate at the time the State notifies the Water Authority, as directed by State, and take any other action that it deems necessary to protect its interests for the following conditions:
 - a) A project is not being implemented in accordance with the provisions of this Agreement.
 - b) LPS has failed in any other respect to comply with the provisions of this Agreement, and if Agreement does not remedy any such failure to Water Authority and State's satisfaction.

Repayment amounts may also include:

- c) Advance funds which have not been expended within 18 months of the Grant Agreement's execution by the Local Project Sponsor.
- d) Actual costs incurred are not consistent with the Exhibit A (Work Plan) activities, not supported, or are ineligible.
- e) At the completion of the project, the funds have not been expended.

For conditions 12c) and 12d), repayment may consist of deducting the amount from future reimbursement invoices.

The Water Authority may consider the LPS's refusal to repay the requested advanced amount a substantial breach of this Agreement subject to the default provisions in Paragraph 14, "Default Provisions." If the Water Authority notifies the LPS of its decision to demand repayment or withhold the entire funding amount from the LPS pursuant to this paragraph, this Agreement shall terminate upon receipt of such notice by the Water Authority and the State, through the Water Authority, shall no longer be required to provide funds under this Agreement and the Agreement shall no longer be binding on either party.

13. WITHHOLDING OF GRANT REIMBURSEMENT BY THE WATER

AUTHORITY: If the Water Authority determines that a project is not being implemented in accordance with the provisions of this Agreement, or that LPS has failed in any other respect to comply with the provisions of this Agreement, and if LPS does not remedy any such failure to the Water Authority or State's satisfaction, the Water Authority may withhold from LPS all or any portion of the State funding and take any other action that it deems necessary to protect its interests. Where a portion of the State funding has been disbursed to the LPS and the Water Authority notifies the LPS of its decision not to release funds that have been withheld pursuant to Paragraph 14, Default Provisions, the portion that has been disbursed shall thereafter be repaid immediately with interest at the California general obligation bond interest rate at the time the Water Authority notifies the LPS, as directed by State. The Water Authority may consider the LPS's refusal to repay the requested disbursed amount a contract breach subject to the default provisions in Paragraph 14, Default Provisions." If the Water Authority notifies the LPS of its decision to withhold the entire funding amount from LPS pursuant to this paragraph, this Agreement shall terminate upon receipt of such notice by LPS and the Water Authority shall no longer be required to provide funds under this Agreement and the Agreement shall no longer be binding on either party.

14. DEFAULT PROVISIONS: LPS will be in default under this Agreement if any of the following occur:

- a) Substantial breaches of this Agreement, or any supplement or amendment to it, or any other agreement between LPS and the Water Authority evidencing or securing LPS's obligations.

- b) Making any false warranty, representation, or statement with respect to this Agreement or the application filed to secure this Agreement.
- c) Failure to maintain an IRWM Plan that meets the requirements contained in Part 2.2 of Division 6 of the California Water Code (CWC) commencing with Section 10530.
- d) Failure to operate or maintain projects in accordance with this Agreement.
- e) Failure to make any remittance required by this Agreement.
- f) Failure to comply with Labor Compliance Program requirements, as required by Paragraph 18, Labor Compliance.
- g) Failure to submit timely progress reports.
- h) Failure to routinely invoice the Water Authority.
- i) Failure to meet any of the requirements set forth in Paragraph 15, Continuing Eligibility.

If an event of default occurs, the Water Authority shall provide a notice of default to the LPS and shall give LPS at least five (5) calendar days to cure the default from the date the notice is sent via first-class mail to the LPS. If the LPS fails to cure the default within the time prescribed by the Water Authority, the Water Authority may do any of the following:

- a) Declare the funding be immediately repaid with interest, which shall be equal to State of California general obligation bond interest rate in effect at the time of the default.
- b) Terminate any obligation to make future payments to LPS.
- c) Terminate the Agreement.
- d) Take any other action that it deems necessary to protect its interests.

If the Water Authority finds it necessary to enforce this provision of this Agreement in the manner provided by the law, the LPS agrees to pay all costs incurred by the Water Authority including, but not limited to, reasonable attorneys' fees, legal expenses, and costs.

15. **CONTINUING ELIGIBILITY:** LPS must meet the following ongoing requirement(s) to remain eligible to receive State funds.

- a) An urban water supplier that receives grant funds governed by this Agreement shall:
 - 1. Maintain compliance with the Urban Water Management Planning Act (CWC§10610 et. seq.) and Sustainable Water Use and Demand Reduction, Part 2.55. of Division 6 (CWC§10608 et. Seq.). Urban water suppliers that submitted AB 1420 compliance Table 2 in 2015 Implementation Grant Application must submit, until June 30, 2016 either:
 - (i) List of tasks to implement the best management practices listed in AB 1420 compliance Table 2 and a corresponding schedule and budget or;

- (ii) The progress toward the 2015 interim Gallons per Capita per Day (GPCD) target. If not meeting the interim target also include a schedule, financing plan, and budget for achieving the GPCD, as required pursuant to Water Code §10608.24.

By July 1, 2016, all urban water suppliers must submit documentation that demonstrates they are meeting the 2015 interim GPCD target. If not meeting the interim target, also include a schedule, financing plan, and budget for achieving the GPCD, as required pursuant to Water Code §10608.24. Starting June 30, 2017, those urban water suppliers that did not meet their 2015 GPCD target must also submit, by June 30, annual reports that include a schedule, financing plan, and budget for achieving the GPCD (Water Code §10608.24).

- 2. Have their 2010 UWMP deemed consistent by DWR. The 2015 UWMP update must be submitted to DWR by July 1, 2016. If the 2015 UWMP is not submitted to DWR by July 1, 2016, funding disbursements to the urban water supplier will cease until the 2015 UWMP is submitted. If the 2015 UWMP is deemed inconsistent by DWR, the urban water supplier will be ineligible to receive funding disbursements until the inconsistencies are addressed and DWR deems the UWMP consistent. For more information, visit the following website: <http://www.water.ca.gov/urbanwatermanagement>
- b) An agricultural water supplier receiving grant funding must:
 - 1. Comply with Sustainable Water Use and Demand Reduction requirements outlined in Part 2.55 (commencing with §10608) of Division 6 of the Water Code. Before July 1, 2016, submit a schedule, financing plan, and budget for implementation of the efficient water management practices, required pursuant to Water Code §10608.48.
 - 2. Have their Agricultural Water Management Plan (AWMP) deemed consistent by DWR. The most recent AWMP update must have been submitted to DWR by December 31, 2015. To maintain eligibility and continue funding disbursements, an agricultural water supply must have their 2015 AWMP deemed consistent by DWR on or before October 1, 2016. For more information, visit the following website: <http://www.water.ca.gov/wateruseefficiency/agricultural/agmgmt.cfm>.
 - 3. Grantees diverting surface water must maintain compliance with diversion reporting requirements as outlined in Part 5.1 of Division 2 of the Water Code.
 - 4. Projects with potential groundwater impacts must demonstrate compliance with the groundwater compliance options set forth on pages 14 and 15 of the IRWM Program Guidelines, dated May 2015.
- c) Project Proponents that have been designated as monitoring entities under the California Statewide Groundwater Elevation Monitoring (CASGEM) Program must maintain reporting compliance, as required by CWC§ 10932 and the CASGEM Program.

16. **PERMITS, LICENSES, APPROVALS, AND LEGAL OBLIGATIONS:** LPS shall be responsible for obtaining any and all permits, licenses, and approvals required for performing any work under this Agreement, including those necessary to perform design, construction, or operation and maintenance of the Projects. LPS shall be responsible for observing and complying with any applicable federal, state, and local laws, rules or regulations affecting any such work, specifically those including, but not limited to, environmental, procurement, and safety laws, rules, regulations, and ordinances. LPS shall provide copies of permits and approvals to the Water Authority.
17. **RELATIONSHIP OF PARTIES:** LPS is solely responsible for design, construction, and operation and maintenance of projects within Exhibit A, Work Plan. Review or approval of plans, specifications, bid documents, or other construction documents by the Water Authority and the State is solely for the purpose of proper administration of funds by the Water Authority or the State and shall not be deemed to relieve or restrict responsibilities of the LPS under this Agreement.
18. **LABOR COMPLIANCE:** LPS agrees to comply with all applicable California Labor Code requirements as stated in D.27 of Exhibit D, Standard Conditions. LPS must, independently or through a third party, adopt and enforce a Department of Industrial Relations-certified Labor Compliance Program (LCP) meeting the requirements of Labor Code Section 1771.5 for projects funded by: Proposition 84 (Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006; PRC Sections 75075 *et seq.*) or other funding source requiring an LCP.

At the Water Authority's request, LPS must promptly provide proof of LPS compliance with this requirement.

19. **SUBMISSION OF REPORTS:** The submittal and approval of all reports is a requirement for the successful completion of this Agreement. Reports shall meet generally accepted professional standards for technical reporting and shall be proofread for content, numerical accuracy, spelling, and grammar prior to submittal to the Water Authority. All reports shall be submitted to the Water Authority's Grants Administrator, and shall be submitted via the Water Authority's Prop 84 Web tool, or as directed by the Grant Administrator. If requested, LPS shall promptly provide any additional information deemed necessary by the Water Authority for the approval of reports. Reports shall be presented in the formats described in the applicable portion of Exhibit E, Report Formats and Requirements. The timely submittal of reports is a requirement for initial and continued disbursement of State funds. Submittal and subsequent approval by the Water Authority and by the State, of a Project Completion Report is a requirement for the release of any funds retained for such projects.
 - a) **Progress Reports:** LPS shall submit progress reports on a quarterly basis to meet the State's requirement for disbursement of funds. The reporting period shall not exceed one quarter in length. The report must be submitted by the due date as set by the Water Authority. The progress reports shall be uploaded to the Water Authority's Prop

84 Grant Website (Web tool) or as directed by the Water Authority's Grant Administrator fifteen (15) calendar days after the end of the previous quarter. Quarter period cycle will be determined after execution of this Agreement by the Water Authority. The progress reports shall provide a brief description of the work performed during the reporting period including: LPS's activities, milestones achieved, any accomplishments, deliverables submitted, costs incurred during the period and to date, upcoming work and any problems encountered in the performance of the work under this Agreement. Reporting issues must be resolved within the deadline specified by the Water Authority or an invoice associated with a progress report may not be processed. Reporting format is specified in Exhibit E, Report Formats and Requirements.

- b) Accountability Report: LPS shall submit, on a quarterly basis, an Accountability Report containing at a minimum:
1. An itemization of how advanced funds have been expended to date (Expenditure Summary), including documentation that supports the expenditures (i.e., contractor invoices, receipts, personnel hours, etc.). Invoices must be itemized based on the categories (i.e., tasks) specified in Exhibit B.
 2. A funding plan which shows how the remaining advanced funds will be expended.
 3. Provides an accounting of distributing the advanced funds to the appropriate Local Project Sponsor.
 4. Documents that the funds were spent on eligible reimbursable costs.
 5. Documentation that the funds were placed in a non-interest bearing account, including the dates of deposits and withdrawals from that account.
- c) Water Management Status Report: Until June 30, 2016, LPS shall submit status reports on implementation of either AB 1420 status or SBx7-7 water conservation status for the urban water suppliers that submitted an AB 1420 compliance Table 2 in the 2015 Implementation Grant Application. AB 1420 status reports shall be uploaded into the webtool no later than fifteen (15) calendar days after execution of this agreement. SBx7-7 GPCD status reports shall be uploaded via the webtool no later than June 30, 2016. By July 1, 2016 all urban water suppliers must submit an UWMP that demonstrates they are meeting the 2015 interim SBx7-7 GPCD target. If the urban water supplier is not meeting the interim target, then the urban water suppliers must also submit with its UWMP, a schedule, financing plan, and budget for achieving the GPCD (Water Code §10608.24). Starting June 30, 2017, those urban water suppliers that did not meet their 2015 GPCD target must also submit, by June 30, annual reports that include a schedule, financing plan, and budget for achieving the GPCD (Water Code §10608.24). Failure to progress on implementation may result in continuing grant eligibility actions under Paragraph 15, Continuing Eligibility.

Before July 1, 2016, all agricultural water suppliers must submit a schedule, financing plan, and budget for implementation of the efficient water management practices, required pursuant to Water Code §10608.48 to comply with Sustainable Water Use and Demand Reduction requirements outlined in Part 2.55 (commencing with §10608) of Division 6 of the Water Code.

- d) Project Completion Report: LPS shall prepare and submit to the Water Authority a separate Project Completion Report for each project. LPS shall submit a Project Completion Report within sixty (60) calendar days of projects completion. Project Completion Report(s) shall include, in part, a description of actual work done, any changes or amendments to each project, and a final schedule showing actual progress versus planned progress, copies of any final documents or reports generated or utilized during a project and status of goals and targets accomplished by the project. The Project Completion Report shall also include, if applicable, certification of final project by a California Registered Professional (Civil Engineer or Geologist, as appropriate) and consistent with Standard Conditions in Exhibit D, Section D.19, Final Inspections and Certification of Registered Professional. A DWR "Certification of Project Completion" form will be provided by the Water Authority from the State.
 - e) Post-Performance Reports: LPS shall submit Post-Performance Reports. Post-Performance Reports shall be submitted to the Water Authority within sixty (60) calendar days after the first operational year of a project has elapsed. This record keeping and reporting process shall be repeated annually for a total of 10 years after the completed projects begins operation and in accordance with the Post Performance Schedule submitted by the LPS with the project Completion Report.
20. **OPERATION AND MAINTENANCE OF PROJECT**: For the useful life of construction and implementation projects and in consideration of the funding made by the State, LPS agrees to ensure or cause to be performed the commencement and continued operation of each project, and shall ensure or cause each project to be operated in an efficient and economical manner; shall ensure all repairs, renewals, and replacements necessary to the efficient operation of the same are provided; and shall ensure or cause the same to be maintained in as good and efficient condition as upon its construction, ordinary and reasonable wear and depreciation excepted. The State and Water Authority shall not be liable for any cost of such maintenance, management, or operation. LPS or their successors may, with the written approval of the Water Authority, transfer this responsibility to use, manage, and maintain the property. For purposes of this Agreement, "useful life" means period during which an asset, property, or activity is expected to be usable for the purpose it was acquired or implemented; "operation costs" include direct costs incurred for material and labor needed for operations, utilities, insurance, and similar expenses, and "maintenance costs" include ordinary repairs and replacements of a recurring nature necessary for capital assets and basic structures and the expenditure of funds necessary to replace or reconstruct capital assets or basic structures. Refusal of LPS to ensure operation and maintenance of the projects in accordance with this provision may, at the option of the Water Authority, be considered a breach of this Agreement and may be treated as default under Paragraph 14, Default Provisions.

21. **PROJECT MONITORING PLAN REQUIREMENTS:** LPS Shall develop and submit to the Water Authority a Project Monitoring Plan that incorporates:

- a) Project Performance Monitoring Table requirements outlined in the 2015 Proposition 84 IRWM Implementation Grant Proposal Solicitation Package (pages 20 and 21), and
- b) the guidance provided in Exhibit H, Project Monitoring Plan Guidance. A Project Monitoring Plan shall be submitted to the Water Authority prior to disbursement of State funds for construction or monitoring activities.

22. **STATEWIDE MONITORING REQUIREMENTS:** LPS shall ensure that all groundwater projects and projects that include groundwater monitoring requirements are consistent with the Groundwater Quality Monitoring Act of 2001 (Part 2.76 (commencing with Section 10780) of Division 6 of California Water Code) and, where applicable, that projects that affect water quality shall include a monitoring component that allows the integration of data into statewide monitoring efforts, including where applicable, the Surface Water Ambient Monitoring Program carried out by the State Water Resources Control Board. See Exhibit F, Requirements for Statewide Monitoring and Data Submittal, for web links and information regarding other State monitoring and data reporting requirements.

23. **INDEMNIFICATION:**

- a) To the fullest extent permitted by law, the LPS shall:
 1. immediately defend, and
 2. indemnify the Water Authority, the State, and their directors, officers, and employees from and against all liabilities including, regardless of nature or type arising out of or resulting from LPS' performance of services under this agreement including but not limited to any claims or damages arising from planning, design, construction, maintenance and/or, or any negligent or wrongful act or omission of the LPS or LPS' officers, employees, agents, or subcontractors and in any breach of this Agreement. Liabilities subject to the duties to defend and indemnify include, without limitation all claims, losses, damages, penalties, fines, and judgments; associated investigation and administrative expenses; defense costs, including but not limited to reasonable attorneys' fees; court costs; and costs of alternative dispute resolution. The LPS' obligation to indemnify applies unless it is adjudicated that its liability was caused by the sole negligence or willful misconduct of an indemnified party. If it is finally adjudicated that liability is caused by the comparative active negligence or willful misconduct of an indemnified party, the LPS indemnification obligation shall be reduced in proportion to the established comparative liability of the indemnified party.

- b) The duty to defend is a separate and distinct obligation from the LPS's duty to indemnify. The LPS shall be obligated to defend, in all legal, equitable, administrative, or special proceedings, with counsel approved by the Water Authority and State, the Water Authority and State, their directors, officers, and employees, immediately upon tender to the LPS of the claim in any form or at any stage of an action or proceeding, whether or not liability is established. An allegation or determination of comparative active negligence or willful misconduct by an indemnified party does not relieve the LPS from its separate and distinct obligation to defend Water Authority and State. The obligation to defend extends through final judgment, including exhaustion of any appeals.
- c) The review, acceptance or approval of the LPS's work or work product by any indemnified party shall not affect, relieve or reduce the LPS's indemnification or defense obligations. This Section survives completion of the services or the termination of this contract. The provisions of this Section are not limited by and do not affect the provisions of this contract relating to insurance.

24. **TERMINATION, IMMEDIATE REPAYMENT, INTEREST:** The Agreement may be terminated by written notice at any time before completion of the IRWM Program at the option of Water Authority or State if LPS breaches the Agreement and has been asked to cure the breach within a reasonable time and fails to do so. If the Agreement is terminated, LPS shall, upon demand, immediately repay to State an amount equal to the amount of grant funds disbursed to LPS. Interest shall accrue on all amounts due at the legal rate of interest allowed by law from the date that notice of termination is mailed to LPS to the date of full repayment.

25. **INSURANCE:**

- a) The LPS shall procure and maintain during the period of performance of this Agreement insurance from insurance companies admitted to do business in the State of California, as set forth in this Section or as additionally required by supplemental condition. An approved combination of pooled and self-insurance coverage is an acceptable alternative for general liability, auto coverage, or workers comp. These policies shall be primary insurance as to the Water Authority so that any other coverage held by the Water Authority shall not contribute to any loss under the LPS's insurance. Coverage may be provided by a combination of primary and excess insurance policies, provided all insurers meet the requirements of this Section.
- b) All insurance shall cover occurrences during the coverage period.
- c) The coverage amount of each policy of insurance shall be as required by the Water Authority.
 - 1. The following insurance and limits are required for the agreement:
 - Commercial General Liability:** Coverage at least as broad as ISO form GC 00 01 10 01 Limit per occurrence and aggregate: \$2,000,000

- d) The insurance policies shall be endorsed as follows:
1. For the general commercial liability as well as excess or umbrella insurance covering risks within the scope of that type insurance, the San Diego County Water Authority its directors, officers, employees and agents and the State of California its directors, officers, employees and agents are included as additional insureds with regard to liability and defense of suits or claims arising from the operations, products and activities performed by or on behalf of the Named Insured. The LPS's insurance applies separately to each insured, including insureds added pursuant to this paragraph, against whom claim is made or suit is brought except with respect to the policy limits of liability. The inclusion of any person or entity as an insured shall not affect any right which the person or entity would have as a claimant if not so included. Any failure of the named insureds to comply with reporting provisions of the policy or breaches or violations of warranties shall not affect coverage provided to the insureds added pursuant to this paragraph. The additional insured endorsement shall provide coverage at least as broad as ISO form CG 20 10 11 85.
 2. The LPS's endorsement of insurance shall include a waiver of any rights of subrogation against the Water Authority, and its directors, officers, employees and agents and the State of California and its directors, officers, employees and agents.
 3. The LPS's insurance shall be primary. Any other insurance or self-insurance available to the Water Authority or persons stated in paragraph (1) shall be in excess of and shall not contribute to the Contractor's insurance.
 4. The insurance shall not be canceled or materially reduced in coverage except after 30 days prior written notice receipted delivery has been given to the Water Authority, except 10 days' notice shall be allowed for non-payment of premium.
- e) Unless otherwise specified, the insurance shall be provided by an acceptable insurance provider, as determined by the Water Authority, which satisfies the following minimum requirements: An insurance carrier admitted to do business in California and maintaining an agent for process within the state. Such insurance carrier shall maintain a current A.M. Best rating classification of "A- (A minus) " or better and a financial size of \$10 million to \$24 million (Class V) or better, or a Lloyds of London program provided by syndicates of Lloyds of London and other London insurance carriers, providing all participants are qualified to do business in California and the policy provides for an agent for process in the state and the program assures a financial capability at least equal to the required classification and size for admitted insurers.
- f) Certificates of insurance and endorsements shall be provided by the LPS and approved by the Water Authority before execution of the Agreement. Endorsements

may be provided on forms provided by the Water Authority, or substantially equivalent forms provided by the insurer.

26. **PERFORMANCE EVALUATION:** Upon completion of this Agreement, LPS's performance will be evaluated by the State and a copy of the evaluation will be placed in the Water Authority and State files and a copy sent to the LPS.
27. **LAWS VENUE:** This Agreement shall be interpreted in accordance with the laws of the state of California. If any action is brought to interpret or enforce any term of this Agreement the action shall be brought in a state or federal court in San Diego County.
28. **ASSIGNMENT:** A Party shall not assign, sublet, or transfer this Agreement or any rights or interest in this Agreement without the written consent of the Water Authority, which may be withheld for any reason.
29. **INTEGRATION:** This Agreement represents the entire understanding of the Parties as to those matters contained herein. No prior oral or written understanding should be of any force or effect with respect to those matters covered hereunder. This Agreement may not be modified or altered except in writing signed by the Parties.
30. **NOTIFICATION OF WATER AUTHORITY:** LPS shall promptly notify the Water Authority in writing of the following occurrences:
 - a) Events or proposed changes that could affect the scope, budget, or work performed under this Agreement. LPS agrees that no substantial change in the scope of a project will be undertaken until written notice of the proposed change has been provided to the Water Authority and the State and the Water Authority has given written approval for such change. Substantial changes generally include changes to the work plan, schedule or term, and budget.
 - b) Any public or media event publicizing the accomplishments and/or results of this Agreement and provide the opportunity for attendance and participation by the Water Authority and State's representatives. LPS shall make such notification at least twenty-one (21) calendar days prior to the event.
 - c) Final inspection of the completed work on a project by a California Registered Professional (Civil Engineer or Geologist, as appropriate), in accordance with Standard Condition D.19 in Exhibit D. LPS shall notify the Water Authority of the inspection date at least twenty-one (21) calendar days prior to the inspection in order to provide the Water Authority and the State the opportunity to participate in the inspection.
31. **NOTICES:** Any notice, demand, request, consent, or approval that either party desires or is required to give to the other party under this Agreement shall be in writing. Notices may be transmitted by any of the following means:
 - a) By delivery in person.
 - b) By certified U.S. mail, return receipt requested, postage prepaid.

- c) By “overnight” delivery service; provided that next-business-day delivery is requested by the sender.
- d) By electronic means.

Notices delivered in person will be deemed effective immediately on receipt (or refusal of delivery or receipt). Notices sent by certified mail will be deemed effective given five (5) calendar days after the date deposited with the U. S. Postal Service. Notices sent by overnight delivery service will be deemed effective one (1) business day after the date deposited with the delivery service. Notices sent electronically will be effective on the date of transmission, which is documented in writing. Notices shall be sent to the addresses set forth in Paragraph 32. Either Party may, by written notice to the other, designate a different address that shall be substituted for the one below.

32. **PROJECT MANAGERS:** Any party may change its Project Manager upon written notice to the other parties.
- a) Water Authority’s Project Manager shall be Mark Stadler, Principal Water Resources Specialist. Water Authority’s Project Manager shall be its representative for the administration of this Agreement and shall have full authority to act on behalf of the Water Authority, including authority to execute all payment requests.
 - b) LPS’s Project Manager, Angela Morrow, Deputy Director, shall be its representative for the administration of this Agreement and shall have full authority to act on behalf of LPS, including authority to execute all payment requests, demand, request, consent, or approval that either party desires or is required to give to the other party under this Agreement shall be in writing.

33. **PROJECT REPRESENTATIVES:** The Project Representatives during the term of this Agreement are as follows:

City of Escondido
Angela Morrow, P.E.
Deputy Director
1521 S. Hale Avenue
Escondido, CA 92029
Phone: (760) 839-6290 ext. 7030
Email: amorrow@escondido.org

San Diego County Water Authority
Loisa Burton
Grant Administrator
4677 Overland Ave.
San Diego CA 92123
Phone: (858) 522-6739
E-mail: lburtonr@sdcwa.org

Either party may change its Project Representative or Project Manager upon written notice to the other party.

34. **STANDARD PROVISIONS.** The following Exhibits are attached and made a part of this Agreement by this reference:

Exhibit A – Work Plan
Exhibit B – Budget

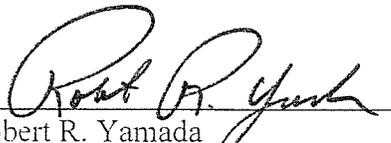
- Exhibit C – Schedule
- Exhibit D – Standard Conditions
- Exhibit E – Report Formats and Requirements
- Exhibit F – Requirements for Statewide Monitoring and Data Submittal
- Exhibit G – State and Water Authority Audit Document and Funding Match Guidelines for Local Project Sponsor
- Exhibit H – Project Monitoring Plan Guidance

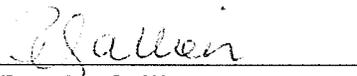
35. **SIGNATURES:** The individuals executing this Agreement represent and warrant that they have the legal capacity and authority to do so on behalf of their respective legal entities.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the last date below:

SAN DIEGO COUNTY WATER AUTHORITY

Approved as to form and legality:

By: 
 Robert R. Yamada
 Director of Water Resources

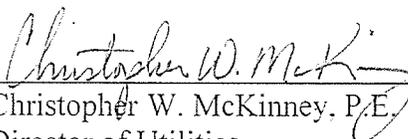
By: 
 Rosann Gallien
 Deputy General Counsel

Date: 4/24/17

Date: 4/19/17

CITY OF ESCONDIDO

Approved as to form and legality:

By: 
 Christopher W. McKinney, P.E.
 Director of Utilities

By: 
 Michael R. McGuinness
 City Attorney

Date: April 4, 2017

Date: April 4, 2017

**EXHIBIT A
WORK PLAN**

PROJECT 8: Escondido Advanced Water Treatment for Agriculture

IMPLEMENTING AGENCY: City of Escondido

PROJECT DESCRIPTION: Construct a membrane filtration (MF) and reverse osmosis (RO) Facility to treat recycled water to agricultural customers' standards by reducing chloride concentrations to improve the quality of recycled water and allow growers to continue to use highly reliable and locally-produced recycled water for irrigation. The facility will produce 2.0 million gallons per day (MGD) of treated water, yielding an estimated 4,440 AFY of desalted recycled water.

Budget Category (a): Direct Project Administration

Task 1 Project Management

Manage grant agreement including compliance with grant requirements, and preparation and submission of supporting grant documents and coordination with the Grantee. Prepare invoices including relevant supporting documentation for submittal to DWR via the Grantee. This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

Deliverables:

- Environmental Information Form (EIF)
- Financial Statements
- Invoices
- Other Applicable Project Deliverables

Task 2 Labor Compliance Program

Take all measures necessary to ensure compliance with applicable California Labor Code requirements, including, preparation and implementation of a labor compliance program or including any payments to the Department of Industrial Relations under Labor Code Section 1771.3.

Deliverables:

- Proof of labor compliance upon request

Task 3 Reporting

Prepare progress reports detailing work completed during reporting period as outlined in Exhibit G of this Agreement. Submit reports to the Grantee for review and inclusion in a progress report to be submitted to DWR.

Prepare Draft Project Completion Report and submit to DWR via the Grantee for DWR Project Manager's comment and review no later than 90 days after project completion. Prepare Final Report addressing Grantee/DWRs comments. The report shall be prepared and presented in accordance with the provision of Exhibit G.

Deliverables:

- Project Progress Reports
- Project Completion Report

Budget Category (b): Land Purchase/Easement

Task 4 Land Purchase/Easement

The 4.56-acre MF/RO Facility site is currently owned by the City. No additional land or easement is necessary to complete construction of the MF/RO facility.

Budget Category (c): Planning/Design/Engineering and Environmental Documentation

Task 5 Feasibility Studies

The City completed the *MF/RO Facilities Plan* in 2014. No additional feasibility studies will be prepared.

Deliverables:

- A copy of MF/RO Facilities Plan

Task 6 CEQA Documentation

Prepare and circulate an Initial Study/Mitigated Negative Declaration (IS/MND). The IS/MND will be drafted, circulated for public review, and certified by the Escondido City Council. All required Tribal notifications (per PRC §75102) will be completed during the IS/MND process. All associated CEQA mitigation measures shall be addressed and incorporated into the final design. File Notice of Determination with State Clearinghouse. Prepare letter stating no legal challenges (or addressing legal challenges).

Deliverables:

- Final MND
- Copy of Notice of Determination
- No Legal Challenges letter

Task 7 Permitting

Obtain all necessary federal, state, and local permits. Permits may include:

- National Pollutant Discharge Elimination System (NPDES) permit amendment for the brine discharge

- Clean Water Action Section 401 Water Quality Certification from the San Diego Regional Water Quality Control Board
- Construction General Permit coverage from the State Water Resources Control Board
- San Diego Air Pollution Control District
- City of Escondido Encroachment Permit
- City of Escondido Building Permit

Additional permits may be required and will be obtained as necessary.

Deliverables:

- Copy of all required permits

Task 8 Design

Complete preliminary design and final design including the pre-engineering report of the facility.

Deliverables:

- 100% Design Plans and Specifications

Task 9 Project Monitoring Plan

Develop and submit a Project Monitoring Plan. Along with the Project Performance Measures Table provided by DWR Project Manager, the Project Monitoring Plan (as described in Exhibit J) will include baseline conditions, a brief discussion of monitoring systems to be used, methodology of monitoring, frequency of monitoring, and location of monitoring points.

Deliverables:

- Project Monitoring Plan

Budget Category (d): Construction/Implementation

Task 10 Construction Contracting

Activities necessary to secure a contractor and award the contract include: develop bid documents, prepare advertisement and contract documents for construction contract bidding, conduct pre-bid meeting, bid opening and evaluation, selection of the contractor, award of contract, and issuance of notice to proceed.

Deliverables:

- Bid documents
- Proof of Advertisement
- Award of contract

- Notice to proceed

Task 11 Construction Administration

Review contractor submittals, answer requests for information, and issue work directives. A full time engineering construction observer will be on site for the duration of the project. Construction observer duties include: documenting of pre-construction conditions, daily construction diary, preparing change orders, addressing questions of contractors on site, reviewing/ updating project schedule, reviewing contractor log submittals and pay requests, forecasting cash flow, notifying contractor if work is not acceptable.

Deliverables:

- Notice of Completion

Task 12 Construction/Implementation Activities

Construction/Implementation activities likely include, but are not limited to the following:

Subtask 12.1: Mobilization and Insurance Cost – Mobilize and cover insurance costs for the project construction.

Subtask 12.2: Yard Piping and Sitework – A surge tank, process valves, various pipe and fittings, and magnetic flow meters will be installed. Sitework includes excavation for partially buried tanks and yard piping; construction of sidewalks, driveways, asphaltic concrete pavement, a 6 feet high fence; and concrete masonry wall around the site.

Subtask 12.3: MF/RO Process Building - An approximately 21,660 square foot (SF) pre-engineered metal building will be constructed to house MF and RO process units. Plumbing, HVAC, thermal and moisture protection, and electrical connections will be provided to the building. MF average process design flow is approximately 1,754 gallons per minute (gpm). Approximately two skids of MF will be provided. RO transfer pumps will pump MF filtrate from the inter-process storage tank through the cartridge filters to the suction side of the RO feed pumps. Approximately four 438 gpm capacity and 30 horsepower (HP) RO feed transfer pumps will be installed. In addition, an estimated four 75 HP RO feed pumps will boost the pressure of the RO feed water to the RO membranes. Approximately four trains of 0.5 mgd permeate capacity RO system with an 80% recovery rate will be installed. Instrumentation including flow meters, temperature and pressure transmitters, pressure switches, turbidity, pH, Cl₂, and NH₃ analyzers will be installed to MF/RO process units within the building.

Subtask 12.4: Inter-Process Storage Tank – Construct a concrete inter-process storage tank for MF effluent flow equalization. The inter-process tanks will be sized for a 60-minute retention time between process MF and RO processes. Storage capacity of the tank is approximately 159,000 gallons, with an expected diameter of 40 feet, and height of 19 feet.

Subtask 12.5: Chemical Storage Building – Construct an estimated 14,040 sq. ft. pre-engineered metal building to house the chemical storage tanks and feed system for the MF/RO process. The chemical storage building will include, approximately six tanks, one for each of the following chemicals: Sodium Hypochlorite, Liquid Ammonium Sulfate, Sulfuric Acid, Sodium Bisulfate, Antiscalant, Sodium Hydroxide and Calcium Chloride. In addition totes for citric acid and proprietary RO Base will also be provided. Tank heaters and chemical transfer pumps will also be provided.

Subtask 12.6: Product Water Storage and MF/Ultrafiltration (UF) Feed Tanks – Construct the MF/RO Facility including a MF/UF feed tank that will store and send Title 22 water to the Membrane Filtration system. Approximately three (2 duty, 1 standby) 955 gpm capacity, 60 HP transfer pumps will be installed. The MF/RO Facility product water will be blended with Title 22 recycled water to meet agriculture reuse water quality requirements. An approximately 300,000 gallon capacity MF/UF feed tank for influent storage will be installed partially buried. An approximately 0.8 MG capacity concrete storage blend tank for agriculture reuse storage will be installed partially buried. The agriculture pump station will supply agriculture reuse water to the Hogback Reservoir and agriculture distribution system. The pump station will consist of approximately five pumps (4 duty, 1 standby), each rated for approximately 1,820 gpm to meet peak flow demands.

Subtask 12.7: HARRF Improvements – Require some electrical and instrumentation and control hardware and software improvements at HARRF including installation or upgrades to fiber optic patch panel, rack-mounted firewall router, MF/RO workstation, and fiber optic network cable.

Subtask 12.8: Project Closeout – Complete all activities for overall project closeout, such as final inspections, construction checklists, site clean-up/demobilization, and other closeout activities.

Deliverables:

- Photographic documentation

**EXHIBIT B
BUDGET**

Project Budget					
Project 8: Escondido Advanced Water Treatment for Agriculture					
	Budget Category	Grant Amount	Funding Match	Additional Cost Share	Total Cost
(a)	Direct Project Administration	\$ -	\$ 131,936	\$ -	\$ 131,936
(b)	Land Purchase	\$ -	\$ -	\$ -	\$ -
(c)	Planning/Design/ Engineering/ Environmental Documentation	\$ -	\$ 2,063,910	\$ -	\$ 2,063,910
(d)	Construction/ Implementation	\$ 2,000,000	\$ 8,724,426	\$ 18,290,474	\$ 29,014,900
	Grand Total	\$ 2,000,000	\$ 10,920,272	\$ 18,290,474	\$ 31,210,746

**EXHIBIT C
SCHEDULE**

Project 8: Escondido Advanced Water Treatment for Agriculture			
Budget Category/Task		Start Date	End Date
(a)	Direct Project Administration	1/12/2017	8/23/2019
Task 1	Project Management	1/12/2017	8/23/2019
Task 2	Labor Compliance Program	10/2/2017	6/21/2019
Task 3	Reporting	1/12/2017	8/23/2019
(b)	Land Purchase/Easement	N/A	N/A
Task 4	Land Purchase/Easement	N/A	N/A
(c)	Planning/Design/Engineering/ Environmental Documentation	10/1/2014	9/27/2017
Task 5	Feasibility Studies and Planning Efforts	N/A	N/A
Task 6	CEQA Documentation	10/1/2014	1/31/2017
Task 7	Permitting	2/1/2017	9/29/2017
Task 8	Design	10/1/2014	7/11/2017
Task 9	Project Monitoring Plan	5/1/2017	6/27/2017
(d)	Construction/Implementation	10/2/2017	6/21/2019
Task 10	Construction Contracting	N/A	N/A
Task 11	Construction Administration	10/2/2017	6/21/2019
Task 12	Construction/Implementation	10/2/2017	6/21/2019
12.1	Mobilization and Insurance	10/2/2017	11/10/2017
12.2	Yard Piping and Sitework	11/13/2017	2/16/2018
12.3	MFRO Process Building	2/19/2018	5/25/2018
12.4	Inter Process Storage Tank	5/28/2018	8/31/2018
12.5	Chemical Storage Building	9/3/2018	12/7/2018
12.6	Product Water Storage and MF Feed Tanks	12/10/2018	3/15/2019
12.7	HARRF Improvements	3/18/2019	5/10/2019
12.8	Project Closeout	5/13/2019	6/21/2019

EXHIBIT D
STANDARD CONDITIONS

1. **ACCOUNTING AND DEPOSIT OF FUNDING DISBURSEMENT:**

- a) Separate Accounting of Funding Disbursements and Interest Records: Local Project Sponsor shall account for the money disbursed pursuant to this Local Project Sponsor Agreement separately from all other LPS funds. LPS shall maintain audit and accounting procedures that are in accordance with generally accepted accounting principles and practices, consistently applied. LPS shall keep complete and accurate records of all receipts, disbursements, and interest earned on expenditures of such funds. LPS shall require its contractors or subcontractors to maintain books, records, and other documents pertinent to their work in accordance with generally accepted accounting principles and practices. Records are subject to inspection by the Water Authority and the State at any and all reasonable times.
- b) Fiscal Management Systems and Accounting Standards: The LPS agrees that, at a minimum, its fiscal control and accounting procedures will be sufficient to permit tracing of grant funds to a level of expenditure adequate to establish that such funds have not been used in violation of state law, this Agreement or the 2015 Proposition 84, Integrated Regional Water Management (IRWM) Implementation Grant Agreement (4600011516).
- c) Disposition of Money Disbursed: All money disbursed pursuant to this Agreement shall be deposited, administered, and accounted for pursuant to the provisions of applicable law.
- d) Remittance of Unexpended Funds: LPS shall remit to the Water Authority any unexpended funds that were disbursed to the LPS under this Agreement and were not used to pay Eligible Project Costs within a period of thirty (30) calendar days from the final disbursement from the Water Authority to the LPS of funds or, within fifteen (15) calendar days of the expiration of the Agreement, whichever comes first.

2. **ACKNOWLEDGEMENT OF CREDIT:** LPS shall include appropriate acknowledgement of credit to the State and to all cost-sharing partners for their support when promoting the Project or using any data and/or information developed under this Agreement. During construction of the project, LPS shall install a sign at a prominent location, which shall include a statement that the project is financed under the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, administered by State of California, Department of Water Resources. LPS shall notify the Water Authority that the sign has been erected by providing a site map with the sign location noted and a photograph of the sign.

3. **AIR OR WATER POLLUTION VIOLATION:** Under State laws, the LPS shall not be:

- a) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district;
 - b) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or
 - c) finally determined to be in violation of provisions of federal law relating to air or water pollution.
4. **AMENDMENT:** This Agreement may be amended at any time by mutual agreement of the Parties, except insofar as any proposed amendments are in any way contrary to applicable law. Requests by the LPS for amendments must be in writing stating the amendment request and the reason for the request. The Water Authority and the State shall have no obligation to agree to an amendment.
5. **AMERICANS WITH DISABILITIES ACT:** By signing this Agreement, LPS assures the Water Authority and the State that it complies with the Americans with Disabilities Act (ADA) of 1990, (42 U.S.C. 12101 *et seq.*), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA.
6. **APPROVAL:** This Agreement is of no force or effect until signed by all parties to the agreement. LPS may not submit invoices or receive payment until all required signatures have been obtained.
7. **AUDITS:** The State or the Water Authority reserves the right to conduct an audit at any time between the execution of this Agreement and the completion of Project, with the costs of such audit borne by the Water Authority or the State. After completion of the Project, the State or the Water Authority may require LPS to conduct a final audit to State's specifications at LPS expense, such audit to be conducted by and a report prepared by an independent Certified Public Accountant. For post completion audits initiated by the Water Authority, costs of independent auditor firm will be borne by the Water Authority provided that no misappropriation of funds is discovered as a result of such audit. Failure or refusal by LPS to comply with this provision shall be considered a breach of this Agreement, and the Water Authority or the State may elect to pursue any remedies provided in Paragraph 13, Withholding of Grant Reimbursement by the Water Authority (or take any other action it deems necessary to protect its interests).

Pursuant to Government Code Section 8546.7, the LPS shall be subject to the examination and audit by the California State Auditor and the Water Authority for a period of three years after completion of Grant Agreement no. 4600011516. All records of Local Project Sponsor and its subcontractors shall be preserved for at least three (3) years after Grant Agreement no. 460011516 between the State and the Water Authority is completed or after final billing or by October 2, 2025, whichever is later. Please see Exhibit G (Water Authority and State Audit Document Requirements and Funding

Match Guidelines), for a listing of documents/records that the State Auditors and the Water Authority will need to review in case of an audit.

8. **BUDGET CONTINGENCY:** If the State's Budget Act of the current year covered under this Agreement does not appropriate sufficient funds for the Proposition 84 Implementation Grant Program, this Agreement shall be of no force and effect. This provision shall be construed as a condition precedent to the obligation of State and the Water Authority to make any payments under this Agreement. In this event, the Water Authority shall have no liability to pay any funds whatsoever to the LPS or to furnish any other considerations under this Agreement and LPS shall not be obligated to perform any provisions of this Agreement. Nothing in this Agreement shall be construed to provide LPS with a right of priority for payment over any other LPS.

The Water Authority will not make payments of any kind, including advances or reimbursements, until State funding is made available by the State Treasurer. If the State ceases payment, the Water Authority has no obligation to make payments for any work done and not reimbursed by the State.

If the State funding for any fiscal year after the current year covered by this Agreement is reduced or deleted by the State's Budget Act for purposes of this program, the Water Authority shall have the option to either cancel this Agreement with no liability occurring to the Water Authority, or offer an amendment that reflects the reduced amount.

9. **CALIFORNIA CONSERVATION CORPS:** As required in Water Code Section 79038(b), LPS shall examine the feasibility of using the California Conservation Corps or community conservation corps to accomplish the habitat restoration, enhancement and protection activities listed in the Exhibit A, Work Plan, and shall use the services of one of these organizations whenever feasible.

10. **CEQA:** Activities funded under this Agreement, regardless of funding source, must be in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code §21000 et seq.). Information on CEQA may be found at the following links:

Environmental Information: <http://resources.ca.gov/ceqa/>

California State Clearinghouse Handbook:

https://www.opr.ca.gov/docs/SCH_Handbook_2012.pdf

11. **CHILD SUPPORT COMPLIANCE ACT:** For any Agreement in excess of \$100,000, the LPS acknowledges in accordance with Public Contract Code 7110, that:

- a) The LPS recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family

support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code; and

- b) The LPS, to the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

12. **CLAIMS DISPUTE:** Any claim that LPS may have regarding performance of this Agreement including, but not limited to, claims for additional compensation or extension of time, shall be submitted to the IRWM Program Manager, within fifteen (15) days of the LPS's knowledge of the claim. The Water Authority and the LPS shall then attempt to negotiate a resolution of such claim and process an amendment to this Agreement to implement the terms of any such resolution.
13. **COMPETITIVE BIDDING AND PROCUREMENTS:** LPS shall comply with all applicable laws and regulations regarding securing competitive bids and undertaking competitive negotiations in LPS's contracts with other entities for acquisition of goods and services and construction of public works with funds provided by State, via the Water Authority, under this Agreement.
14. **COMPUTER SOFTWARE:** LPS certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this Agreement for the acquisition, operation, or maintenance of computer software in violation of copyright laws.
15. **CONFLICT OF INTEREST:** All participants are subject to State and Federal conflict of interest laws. Failure to comply with these laws, including business and financial disclosure provisions, will result in the application being rejected and any subsequent contract being declared void. Other legal action may also be taken. Applicable statutes include, but are not limited to, Government Code, Section 1090 and Public Contract Code, Sections 10410 and 10411, for State conflict of interest requirements.
 - a) **Current State Employees:** No State officer or employee shall engage in any employment, activity, or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any State agency, unless the employment, activity, or enterprise is required as a condition of regular State employment. No State officer or employee shall contract on his or her own behalf as an independent contractor with any State agency to provide goods or services.
 - b) **Former State Employees:** For the two-year period from the date he or she left State employment, no former State officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements, or

any part of the decision-making process relevant to the contract while employed in any capacity by any State agency. For the twelve-month period from the date he or she left State employment, no former State officer or employee may enter into a contract with any State agency if he or she was employed by that State agency in a policy-making position in the same general subject area as the proposed contract within the twelve-month period prior to his or her leaving State service.

- c) Employees of the LPS: Employees of the LPS shall comply with all applicable provisions of law pertaining to conflicts of interest, including but not limited to any applicable conflict of interest provisions of the California Political Reform Act, Cal. Gov't Code § 87100 *et seq.*
- d) Employees and Consultants to the LPS: Individuals working on behalf of a LPS may be required by the Department to file a Statement of Economic Interests (Fair Political Practices Commission Form 700) if it is determined that an individual is a consultant for Political Reform Act purposes.

16. **DELIVERY OF INFORMATION, REPORTS, AND DATA:** LPS agrees to expeditiously provide throughout the term of this Agreement, such reports, data, information, and certifications as may be reasonably required by the Water Authority and the State.
17. **DISPOSITION OF EQUIPMENT:** LPS shall provide to the Water Authority, not less than forty-five (45) calendar days prior to submission of the final invoice, an itemized inventory of equipment purchased with funds provided by the State, via the Water Authority. The inventory shall include all items with a current estimated fair market value of more than \$5,000.00 per item. Within seventy-five (75) calendar days of receipt of such inventory the Water Authority shall provide the LPS with a list of the items on the inventory that the State will take title to. All other items shall become the property of the LPS. The Water Authority shall arrange for delivery from the LPS to the State, the items for which the State will take title. Cost of transportation, if any, shall be borne by the State.
18. **DRUG-FREE WORKPLACE CERTIFICATION:** Certification of Compliance: By signing this Agreement, LPS, its contractors or subcontractors hereby certify, under penalty of perjury under the laws of State of California, compliance with the requirements of the Drug-Free Workplace Act of 1990 (Government Code 8350 *et seq.*) and have or will provide a drug-free workplace by taking the following actions:
 - a) Publish a statement notifying employees, contractors, and subcontractors that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees, contractors, or subcontractors for violations, as required by Government Code Section 8355(a)(1).

- b) Establish a Drug-Free Awareness Program, as required by Government Code Section 8355(a)(2) to inform employees, contractors, or subcontractors about all of the following:
 - 1. The dangers of drug abuse in the workplace,
 - 2. LPS's policy of maintaining a drug-free workplace,
 - 3. Any available counseling, rehabilitation, and employee assistance programs, and
 - 4. Penalties that may be imposed upon employees, contractors, and subcontractors for drug abuse violations.
- c) Provide, as required by Government Code Sections 8355(a)(3), that every employee, contractor, and/or subcontractor who works under this Agreement:
 - 1. Will receive a copy of the LPS' drug-free policy statement, and
 - 2. Will agree to abide by terms of LPS' condition of employment, contract or subcontract.

19. **FINAL INSPECTIONS AND CERTIFICATION OF REGISTERED**

PROFESSIONAL: Upon completion of the Project, LPS shall provide for a final inspection and certification by the appropriate registered professional (California Registered Civil Engineer or Geologist) that the project has been completed in accordance with submitted final plans and specifications and any modifications thereto and in accordance with this Agreement. LPS shall notify the Water Authority of the inspection date at least twenty-one (21) calendar days prior to the inspection in order to provide the Water Authority and the State the opportunity to participate in the inspection.

20. **LPS COMMITMENTS:** LPS accepts and agrees to comply with all terms, provisions, conditions and commitments of this LPS Agreement, including all incorporated documents, and to fulfill all assurances, declarations, representations, and statements made by the LPS in its application, documents, amendments, and communications filed in support of its request for funding.

21. **LPS NAME CHANGE:** Water Authority's approval is required to change the LPS's name as listed on this Agreement. Upon receipt of legal documentation of the name change the Water Authority will process an amendment to the Agreement after receipt of State approval. Payment of invoices presented with a new name cannot be paid prior to approval by the Water Authority and the State of said amendment.

22. **GOVERNING LAW:** This Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.

23. **INDEPENDENT CAPACITY:** LPS, its agents and employees in the performance of this Agreement, shall act in an independent capacity and not as officers, employees, or agents of the Water Authority or the State.
24. **INSPECTION OF BOOKS, RECORDS, AND REPORTS:** During regular office hours, each Party and their duly authorized representatives shall have the right to inspect and to make copies of any books, records, or reports of either party pertaining to this Agreement or matters related hereto. Each Party shall maintain and shall make available at all times for such inspection accurate records of all its costs, disbursements, and receipts with respect to its activities under this Agreement. Failure or refusal by LPS to comply with this provision shall be considered a breach of this Agreement, and the Water Authority or the State may withhold disbursements to LPS or take any other action it deems necessary to protect its interests.
25. **INSPECTIONS OF PROJECT BY STATE:** State and the Water Authority shall have the right to inspect the work being performed at any and all reasonable times during the term of the Agreement. This right shall extend to any subcontracts, and LPS shall include provisions ensuring such access in all its contracts or subcontracts entered into pursuant to its Agreement with the Water Authority.
26. **INVOICE DISPUTES:** In the event of an invoice dispute, payment will not be made until the dispute is resolved and a corrected invoice submitted. Failure to use the webtool or the physical address exactly as directed or provided may result in return of the invoice to the LPS. Payment shall be deemed complete upon deposit of the payment, properly addressed, postage prepaid, in the United States mail. Any claim that LPS may have regarding the performance of this Agreement including, but not limited to claims for additional compensation or extension of time, shall be submitted to the IRWM Project Manager within thirty (30) calendar days of LPS's knowledge of the claim. The Water Authority and LPS shall then attempt to negotiate a resolution of such claim and process an amendment to the Agreement to implement the terms of any such resolution.
27. **LABOR CODE COMPLIANCE:** The LPS will be required to keep informed of and take all measures necessary to ensure compliance with applicable California Labor Code requirements, including, but not limited to, Section 1720 *et seq.* of the California Labor Code regarding public works, limitations on use of volunteer labor (California Labor Code Section 1720.4), labor compliance programs (California Labor Code Section 1771.5) and payment of prevailing wages for work done and funded pursuant to these Guidelines, including any payments to the Department of Industrial Relations under Labor Code Section 1771.3.
28. **NONDISCRIMINATION:** During the performance of this Agreement, LPS and its contractors or subcontractors shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex (gender), sexual orientation, race, color, ancestry, religion, creed, national origin (including language use restriction), pregnancy, physical disability (including HIV and AIDS);

mental disability, medical condition (cancer/genetic characteristics), age (over 40), marital status, and denial of medial and family care leave or pregnancy disability leave. LPS and its contractors or subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. LPS and its contractors or subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12990 (a-f) *et seq.*) and the applicable regulations promulgated there under (California Code of Regulations, Title 2, Section 7285 *et seq.*). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part hereof as if set forth in full. LPS and its contractors or subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

LPS shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this Agreement.

29. **NO DISCRIMINATION AGAINST DOMESTIC PARTNERS:** For contracts over \$100,000 executed or amended after January 1, 2007, the LPS certifies by signing this Agreement, under penalty of perjury under the laws of State of California that LPS is in compliance with Public Contract Code Section 10295.3.
30. **OPINIONS AND DETERMINATIONS:** Where the terms of this Agreement provide for action to be based upon, judgment, approval, review, or determination of either party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.
31. **PERFORMANCE AND ASSURANCES:** LPS agrees to faithfully and expeditiously perform or cause to be performed all Project work as described in Exhibit A "Work Plan" and to apply State funds received, via the Water Authority, only to Eligible Project Costs in accordance with applicable provisions of the law. If the Water Authority must enforce this provision by legal action, LPS shall pay all costs incurred by the Water Authority including, but not limited to, reasonable attorney's fees, legal expenses, and other costs.
32. **PRIORITY HIRING CONSIDERATIONS:** If this Agreement includes services in excess of \$200,000, the LPS shall give priority consideration in filling vacancies in positions funded by the Agreement to qualified recipients of aid under Welfare and Institutions Code Section 11200 in accordance with Pub. Contract Code §10353.
33. **PROHIBITION AGAINST DISPOSAL OF PROJECT WITHOUT WATER AUTHORITY AND STATE PERMISSION:** The LPS shall not sell, abandon, lease, transfer, exchange, mortgage, hypothecate, or encumber in any manner whatsoever all or

any portion of any real or other property necessarily connected or used in conjunction with the Projects, or with LPS's service of water, without prior permission of the Water Authority. LPS shall not take any action, including but not limited to actions relating to user fees, charges, and assessments that could adversely affect the ability of LPS to meet its obligations under this Agreement, without prior written permission of the Water Authority. Water Authority may require that the proceeds from the disposition of any real or personal property be remitted to the Water Authority.

34. **REMEDIES NOT EXCLUSIVE:** The use by either party of any remedy specified herein for the enforcement of this Agreement is not exclusive and shall not deprive the party using such remedy of, or limit the application of, any other remedy provided by law.
35. **RETENTION:** Notwithstanding any other provision of this Agreement, the Water Authority shall, for each project, withhold five percent (5.0%) until January 1, 2018 and ten percent (10.0%), thereafter, of the funds requested by LPS for reimbursement of Eligible Costs. Each project in this Agreement will be eligible to release its respective retention when that project is completed and LPS has met requirements of Paragraph 18, "Submissions of Reports" as follows: At such time as the "Project Completion Report" required under Paragraph 19, Submission of Reports, is submitted to and approved by the Water Authority, the Water Authority after receipt of funds from the State shall disburse the retained funds as to that project to LPS, except in the case of the last project to be completed under Grant Agreement no. 4600010901, in which case retention for such project will not be disbursed until the "Grant Completion Report" is submitted to and approved by the Water Authority and the State.
36. **RIGHTS IN DATA:** LPS agrees that all data, plans, drawings, specifications, reports, computer programs, operating manuals, notes and other written or graphic work produced in the performance of this Agreement shall be made available to the State and the Water Authority and shall be in the public domain to the extent to which release of such materials is required under the California Public Records Act., Cal. Gov't Code §6250 *et seq.* LPS may disclose, disseminate and use in whole or in part, any final form data and information received, collected and developed under this Agreement, subject to appropriate acknowledgement of credit to State for financial support. LPS shall not utilize the materials for any profit-making venture or sell or grant rights to a third party who intends to do so. The State shall have the right to use any data described in this paragraph for any public purpose.
37. **SEVERABILITY:** Should any portion of this Agreement be determined to be void or unenforceable, such shall be severed from the whole and the Agreement shall continue as modified.
38. **STATE AND WATER AUTHORITY REVIEWS:** The Parties agree that review or approval of projects applications, documents, permits, plans, and specifications or other project information by the state and the Water Authority is for administrative purposes

only and does not relieve the LPS of their responsibility to properly plan, design, construct, operate, maintain, implement, or otherwise carry out the projects.

39. **SUSPENSION OF PAYMENTS:** This Agreement may be subject to suspension of payments or termination, or both, and LPS may be subject to debarment if the State or the Water Authority determines that:
 - a) LPS, its contractors, or subcontractors have made a false certification, or
 - b) LPS, its contractors, or subcontractors violate the certification by failing to carry out the requirements in this Agreement.

40. **SUCCESSORS AND ASSIGNS:** This Agreement and all of its provisions shall apply to and bind the successors and assigns of the parties. No assignment or transfer of this Agreement or any part thereof, rights hereunder, or interest herein by the LPS shall be valid unless and until it is approved by the Water Authority and made subject to such reasonable terms and conditions as the Water Authority may impose.

41. **TERMINATION BY LPS:** Subject to the Water Authority and State approval which may be reasonably withheld, LPS may terminate this Agreement and be relieved of contractual obligations. In doing so, LPS must provide a reason(s) for termination. LPS must submit all progress reports summarizing accomplishments up until termination date.

42. **TERMINATION FOR CAUSE:** Subject to the right to cure under Paragraph 14, Default Provisions of this Agreement, the State may terminate this Agreement and be relieved of any payments if LPS fails to perform the requirements of this Agreement at the time and in the manner herein, provided including but not limited to reasons of default under Paragraph 14, Default Provisions.

43. **TERMINATION WITHOUT CAUSE:** The Water Authority may terminate this Agreement without cause with at least thirty (30) days advance written notice. The LPS shall be reimbursed for all reasonable expenses incurred up to the date of termination.

44. **THIRD PARTY BENEFICIARIES:** The parties to this Agreement do not intend to create rights in, or grant remedies to, any third party as a beneficiary of this Agreement, or any duty, covenant, obligation or understanding established herein.

45. **TIMELINESS:** Time is of the essence in this Agreement.

46. **TRAVEL:** LPS agrees that travel and per diem costs shall NOT be eligible for reimbursement with State funds, and shall NOT be eligible for computing LPS cost match. Travel includes the costs of transportation, subsistence, and other associated costs incurred by personnel during the term of this LPS Agreement.

47. **WAIVER OF RIGHTS:** No provision of this Agreement shall be deemed waived unless expressly waived in writing. It is the intention of the parties that from time to time either party may waive any of its rights under this Agreement unless contrary to law. Any waiver by either party of rights arising in connection with the Agreement shall not be deemed to be a waiver with respect to any other rights or matters, and such provisions shall continue in full force and effect.

48. **WORKERS' COMPENSATION:** LPS affirms that it is aware of the provisions of Section 3700 of the California Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and LPS affirms that it will comply with such provisions before commencing the performance of the work under this Agreement and will make its contractors and subcontractors aware of this provision.

EXHIBIT E
REPORT FORMATS AND REQUIREMENTS

The following reporting formats should be utilized. Please obtain the Water Authority's approval before submitting a report in an alternative format.

QUARTERLY PROGRESS REPORT

Progress Reports shall generally use the following format. This format may be modified as necessary to effectively communicate information.

Local Project Sponsor shall submit Quarterly Progress Reports on a consistent basis to meet the Water Authority's and State's requirements for disbursement of funds. The quarterly progress report should describe the work performed during the reporting period. For each project, discuss the following at the task level, as organized in Exhibit A Work Plan.

Project Status

Describe the work performed during the time period covered by the report, organized by Exhibit A, "Work Plan" tasks/subtasks/categories, including but not limited to:

- Updates on all ongoing tasks.
- Estimates of the percent (%) complete.
- Discussion of any project related work completed this reporting period.
- Milestones or deliverables completed/submitted during the reporting period.
- Scheduling concerns and issues encountered that may delay completion of the task.
- Photo documentation, as required.

Labor Compliance

- Describe labor compliance status for the project.

Cost Information

For each project provide the following:

- Costs-to-date categorized by Grant, Funding Match and "Other Costs", as applicable.
- Percent (%) of total project costs completed.
- A brief description of any DWR approved amendments during the period.
- Estimated project costs to be invoiced (billed) to the Water Authority next quarter.

- If billing prior costs, a certification that costs has never been billed previously must be stated.

EQUIPMENT INVENTORY

Description of item purchased, quantity and total amount of any equipment purchased over \$5,000.

Schedule Information

A list of any changes approved to the Schedule in accordance with Local Project Sponsor Agreement and a revised schedule, by task, *if* changed from latest reported schedule.

Anticipated Activities Next Quarter

Discuss the following at the project level, as organized in Exhibit A, Work Plan:

- Description of anticipated activities for the next reporting period.
- Anticipated billing (cash flow) to the Water Authority next reporting period.

ACCOUNTABILITY REPORT (As applicable)

LPS shall submit, on a quarterly basis, an Accountability Report containing at a minimum:

- An itemization of how advanced funds have been expended to date (Expenditure Summary), including documentation that supports the expenditures (i.e., contractor invoices, receipts, personnel hours, etc.). Invoices must be itemized based on the categories (i.e., tasks) specified in Exhibit B.
 - A funding plan which shows how the remaining advanced funds will be expended.
 - Provides an accounting of distributing the advanced funds to the appropriate Local Project Sponsor.
 - Documents that the funds were spent on eligible reimbursable costs.
 - Documentation that the funds were placed in a non-interest bearing account, including the dates of deposits and withdrawals from that account.
 - Any other information, required in the Accountability Form provided by the State, via the Water Authority.

PROJECT COMPLETION REPORT

Project Completion Reports shall generally use the following format.

EXECUTIVE SUMMARY

Should include a brief summary of project information and include the following items:

- Brief description of work proposed to be done in the original Grant application.
- Description of actual work completed and any deviations from Exhibit A. List any official amendments to this Local Project Sponsor's Agreement, with a short description of the amendment.

Reports and/or Products

The following items should be provided, unless previously submitted as a deliverable:

- Electronic copies of any data collected, not previously submitted.
- Provide a copy of any final technical report or study, produced for this project as described in the Work Plan, if applicable.
- As-built drawings.
- Final geodetic survey information.
- Project photos.
- Discussion of problems that occurred during the work and how those problems were resolved.
- A final project schedule showing actual progress versus planned progress.

Costs and Dispositions of Funds

Provide a list showing the following:

- The date each invoice was submitted to the Water Authority and the State.
- The amount of the invoice.
- The date the check was received.
- The amount of the check (If a check has not been received for the final invoice, then state this in this section.).
- A summary of the payments made by the LPS for meeting its cost sharing obligations under this Local Project Sponsor Agreement.
- A summary of final funds disbursement including:
 - Labor cost of personnel of agency/ major consultant /sub-consultants. Indicate personnel, hours, rates, type of profession and reason for consultant (i.e., design, CEQA work, etc.).
 - Project cost information, shown by material, equipment, labor costs, and any change orders.
 - Any other incurred cost detail.
- A statement verifying separate accounting of funding disbursements.
- Summary of project cost including the following items:
 - Accounting of the cost of project expenditure;
 - Include all internal and external costs not previously disclosed; and
 - A discussion of factors that positively or negatively affected the project cost and any deviation from the original project cost estimate.

Additional Information

- Benefits derived from the project, with quantification of such benefits provided, if applicable.
- A final project schedule showing actual progress versus planned progress as shown in Exhibit B.
- Certification from a California Registered Professional (Civil Engineer or Geologist, as appropriate) that the project was conducted in accordance with the approved work plan and any approved modifications thereto.

Submittal schedule for the Post Performance Report and an outline of the proposed reporting format.

POST-PERFORMANCE REPORT

Report should be concise, and focus on how (each/the) project is actually performing compared to its expected performance; whether the project is being operated and maintained, and providing intended benefits as proposed.

Reports and/or products

- Time period of the annual report (i.e., January 2016 through December 2016).
- Short project description.
- Discussion of the project benefits.
- An assessment of any explanations for any differences between the expected versus actual project benefits in meeting IRWM priorities as stated in the original IRWM Implementation Grant application. Where applicable, the reporting should include quantitative metrics, for example, new acre-feet of water produced that year, acres of wildlife habitat added, etc.
- Summary of any additional costs and/or benefits deriving from the project since its completion, if applicable.
- Continued reporting on meeting the Output Indicators and Targets discussed in the Project Monitoring Plan discussed in Paragraph 21 of this Agreement.
- Any additional information relevant to or generated by the continued operation of the project.

EXHIBIT F

REQUIREMENTS FOR STATEWIDE MONITORING AND DATA SUBMITTAL

Surface and Groundwater Quality Data:

Groundwater quality and ambient surface water quality monitoring data that include chemical, physical, or biological data shall be submitted to the State as described below, with a narrative description of data submittal activities included in project reports, as described in Exhibit E (Report Formats and Requirements).

Surface water quality monitoring data shall be prepared for submission to the California Environmental Data Exchange Network (CEDEN). The CEDEN data templates are available on the CEDEN website. Inclusion of additional data elements described on the data templates is desirable. Data ready for submission should be uploaded to your CEDEN Regional Data Center via the CEDEN website. CEDEN website: <http://www.ceden.org>.

If a project's Work Plan contains a groundwater ambient monitoring element, groundwater quality monitoring data shall be submitted to the State for inclusion in the State Water Resources Control Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program Information on the GAMA Program can be obtained at: http://www.waterboards.ca.gov/gama/geotracker_gama.shtml. If further information is required, the Grantee can contact the State Water Resources Control Board (SWRCB) GAMA Program.

Groundwater Level Data:

LPS shall submit to DWR groundwater level data collected as part of this grant. Water level data must be submitted using the California Statewide Groundwater Elevation Monitoring (CASGEM) online data submission system. LPS should use their official CASGEM Monitoring Entity or Cooperating Agency status to gain access to the online submittal tool and submit data. If the data is from wells that are not part of the monitoring network, the water level measurements should be classified as voluntary measurements in the CASGEM system. If the LPS is not a Monitoring Entity or Cooperating Agency, please contact your DWR grant project manager for further assistance with data submittal. The activity of data submittal should be documented in appropriate progress or final project reports, as described in Exhibit E (Report Formats and Requirements). Information regarding the CASGEM program can be found at <http://www.water.ca.gov/groundwater/casgem/>.

EXHIBIT G

STATE AND WATER AUTHORITY AUDIT DOCUMENT REQUIREMENTS AND FUNDING MATCH GUIDELINES FOR LOCAL PROJECT SPONSOR

The list below details the documents/records that State Auditors typically review if an Agreement is being audited. Local project sponsor should ensure that such records are maintained for each State-funded Program/Project. Where applicable, this list of documents also includes documents relating to the local project sponsor's funding match which will be required for audit purposes.

Internal Controls:

1. Organization chart (i.e., Agency's overall organization chart and organization chart for this Agreement's funded project).
2. Written internal procedures and flowcharts for the following:
 - a) Receipts and deposits.
 - b) Cash disbursements.
 - c) State reimbursement requests.
 - d) State funding expenditure tracking.
 - e) Guidelines, policies, and procedures on State-funded Program/Project.
3. Audit reports of the Local Project Sponsor's internal control structure and/or financial statements within the last two (2) years.
4. Prior audit reports on State-funded Program/Project.
5. Advance payment request, Accountability Report and other documents supporting advance payment expenditures, as applicable.

State Funding:

1. Original Local Project Sponsor's Agreement, any approved amendment(s), including budget modification documents.
2. A list of all bond-funded grants, loans or subventions received from the State.
3. A list of all other funding sources for each Program/Project.

Contracts:

1. All subcontractor and consultant contracts and related, if applicable.
2. Contracts between the Water Authority and the Local Project Sponsor, member agencies, and project partners as related to the State-funded Program/Project.

Invoices:

1. Invoices from vendors and subcontractors for expenditures submitted to the Water Authority and the State, for payments under the Agreement.
2. Documentation supporting subcontractor invoices to the Water Authority and the State reimbursement requests and related Local Project Sponsor Agreement budget line items.
3. Reimbursement requests submitted to the State, via the Water Authority, for the Agreement.

Cash Documents:

1. Receipts (copies of warrants) showing payments received from the State, via the Water Authority.
2. Deposit slips and bank statements showing deposit of the payments received from the Water Authority.
3. Cancelled checks or disbursement documents showing payments made to vendors, subcontractors, consultants, and/or agents under the Local Project Sponsor's Agreement.

Accounting Records:

1. Ledgers showing receipts and cash disbursement entries for State funding.
2. Ledgers showing receipts and cash disbursement entries of other funding sources.
3. Bridging documents that tie the general ledger to reimbursement requests submitted to the Water Authority and for the Agreement.

Administration Costs:

1. Provide Cost Allocation model and methodology, if applicable, for allocating administration and overhead costs.
2. Supporting documents showing the calculation of administration costs.

Personnel:

1. List of all contractors and Local Project Sponsor's staff that worked on the State-funded Program/Project.
2. Payroll records including timesheets and ledgers for staff of the local project sponsor.
3. Supporting documentation showing labor rates and indirect labor rate methodology.

Project Files:

1. All supporting documentation maintained in the Program/Project files.
2. All Agreement-related correspondence.

Funding Match Guidelines:

Funding Match consists of non-State funds including in-kind services. In-kind services are defined as work performed or items contributed (i.e., dollar value of non-cash contributions) by the Local Project Sponsor (and potentially other parties involved) directly related to the execution of the scope of work (i.e., volunteer services, equipment use, and facilities). The cost of in-kind service can be counted as funding match in-lieu of actual funds (or revenue) provided by the local project sponsor. Other funding match and in-kind service eligibility conditions may apply. Provided below is guidance for documenting funding match with and without in-kind services.

- a) Although tracked separately, in-kind services shall be documented and, to the extent feasible, supported by the same methods used by the Local Project Sponsor for its own employees. Such documentation should include the following:
 1. Detailed description of the contributed item(s) or service(s).
 2. Purpose for which the contribution was made (tied to Local Project Sponsor's Work Plan).
 3. Name of contributing organization and date of contribution.
 4. Real or approximate value of contribution. Who valued the contribution and how the value was determined (i.e., actual, appraisal, fair market value, etc.), and justification of rate (See item #2, below).
 5. For contributed labor, the person's name, the work performed, the number of hours contributed, and the pay rate applied.
 6. If multiple sources exist, these should be summarized on a table with a summation of cumulative charges.
 7. Source of contribution and whether it was provided by, obtained with, or supported by government funds.
- b) Rates for volunteer or in-kind services shall be consistent with those paid for similar work in the Local Project Sponsor's organization. For example, volunteer service of clearing vegetation performed by an attorney shall be valued at a fair market value for clearing vegetation, not the rate for professional legal services. In those instances, in which the required skills are not found in the recipient organization, rates shall be consistent with those paid for similar work in the labor market. Paid fringe benefits that are reasonable, allowable and allocable may be included in the valuation.
- c) Funding match contribution (including in-kind services) shall be for costs and services directly attributed to activities included in the Local Project Sponsor's Agreement Work Plan. These services, furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as in-kind if the activities are an integral and necessary part of the State-funded Program/Project under the Agreement.

- d) Cash contributions made to a Program/Project shall be documented as revenue and in-kind services as expenditure. These costs should be tracked separately in the Local Project Sponsor's accounting systems.

EXHIBIT H
PROJECT MONITORING PLAN GUIDANCE

Introduction

Please include a brief description of the project (maximum ~150 words) including project location, implementation elements, and need for project (what problem will the project address).

Project Monitoring Plan Components

The Project Monitoring Plan should contain responses to the following questions:

- What are the anticipated project physical benefits?
- What are the corresponding numeric targets for each project benefit?
- How will proposed numeric targets be measured?
- What are the baseline conditions?
- When will the targets be met (upon project completion, five years after completion, etc.)?
- How often will monitoring be undertaken (monthly, yearly, etc.)?
- Where are the monitoring point locations (i.e., meter located at stream mile...)? Include relevant maps.
- How will the project be maintained (i.e., irrigation, pest management, weed abatement)?
- What will be the frequency and duration of maintenance proposed activities?
- Are there any special environmental considerations (i.e., resource agency requirements, permit requirements, CEQA/NEPA mitigation measures)?
- Who is responsible for collecting the samples (who is conducting monitoring and/or maintenance)?
- How, and to whom, will monitoring results be reported (i.e., paper reports, online databases, public meetings)?
- What adaptive management strategies will be employed if problems are encountered during routine monitoring or maintenance?
- What is the anticipated life of the project?

Exhibit F
Key Personnel

Exhibit F (Page 1 of 1)

Filanc/BC Joint Venture

City of Escondido MFRO Project

Name	Job Classification	Project Role
Gary Silverman	Vice President	DB Project Manager
Scott Lacy	Managing Engineer	Design Manager
Vince Diaz	Vice President	Construction Manager
Dusan Stanisic	Managing Engineer	Deputy Design Manager
Wendy Broley	Chief Engineer	Process Subject Matter Expert
Victor Tsai	Managing Engineer	Civil Design Lead
Frank Shadan	Managing Engineer	Electrical Lead
Bryan Zinn	Vice President	I&C Lead
Joshua Coppola	Supervising Designer	BIM/CAD Lead
Paul Bonnici	Managing Engineer	QA/QC Lead
Tony Ruiz	Lead Estimator	Lead Estimator

Exhibit G
Off-ramp Services

Exhibit G – Off-ramp Services

If the City and Contractor fail to reach agreement on a GMP pursuant to Section 6.10 of the Design Build Agreement, the City may require completion of unified sets of plans and specifications for use by the City to solicit competitive bids for construction of the Facilities. In such circumstance, the Contractor will assume responsibilities as the Responsible Charge (hereinafter referred to as “Engineer”) and provide traditional engineering services as summarized herein. Furthermore, the Engineer will provide project management and permitting services as described below.

Project Management

Engineer shall provide Project Management necessary to deliver the services contemplated herein in an effective and timely manner.

Final Design

Using the approved Phase 1 work products for the MFRO Facility, the Engineer shall prepare traditional bidding and contract documents. Engineer shall submit plans and specifications for City review at the 90% design completion, 100% design, and then prepare and submit the bidding documents.

Engineer shall prepare drawings in accordance with City standards and using the latest edition of AutoCAD after submitting templates that demonstrate compliance with the City standards.

The 90% drawing submittal will include near complete plans, sections and elevations and all applicable details. Drawings will include:

- Cover sheet
- Drawing index(ices)
- Notes and abbreviations
- Design Criteria
- Standard details for each discipline
- Civil site layouts and grading, paving, and outside piping plans and sections
- Landscape, irrigation, and exterior lighting plans
- Structural and architectural plans, sections and elevations
- Process schematics and mechanical plans and sections
- Building mechanical including plumbing and HVAC
- Power transmission and distribution system plans and elevations
- Single-line diagrams
- Electrical site plan, schematics and details
- P&IDs and block diagrams
- Security/surveillance system architecture and details
- Reference drawings

City will provide specification sections covering Construction Specification Institute (CSI) Division 0 and Division 1 for incorporation by the Engineer. Engineer shall prepare all other specification sections using

Microsoft Word. Mitigation measures adopted by the City in accordance with the IS/MND and other permit compliance requirements will be incorporated into the specifications.

Designers, checkers, and the Engineer's Project Manager will place signatures in the drawing title blocks and on the cover sheet of the specifications indicating that a thorough QA/QC has been performed and that every aspect of the design is 90% complete.

If the City determines that this submittal is not 90% complete, the submittal will be rejected without further review, and the Engineer will be required to resolve outstanding items and resubmit the 90% submittal. Project specifications shall be prepared in accordance with City standard format.

The 90% submittal will address City comments on the 60% design submittal (from Phase 1) as well as changes resulting from subsequent technical meetings, correspondence, and design changes as required by regulatory and permitting agencies.

Following the 90% submittal review, the City will provide consolidated comments as drawing markups and itemized written comments. Engineer will respond to each comment and submit the responses to the City. Exceptions to comments will require City approval prior to Engineer preparation of the 100% design documents.

The 100% design submittal will address City comments on the 90% design submittal as well as changes resulting from subsequent technical meetings, correspondence, and design changes as required by regulatory and permitting agencies. It is intended as the last submittal requiring City review and comment.

Following the 100% design submittal review, the City will provide consolidated comments as drawing markups and itemized written comments. Engineer will respond to each comment and submit the responses to the City. Exceptions to comments will require City approval prior to Engineer preparation of the bidding documents.

Engineer then shall prepare design-bid-build bidding documents (plans and specifications), addressing City review comments from the 100% design submittal and ready for printing and distribution to potential bidders. Engineer shall submit three (3) hard copies and a PDF copy for City verification of incorporation of comments and final acceptance. The City will finalize the bidding schedule and provide required bidding information to Engineer for incorporation into the bidding documents and specifications.

Final documents will be stamped by a professional engineer(s) licensed in the State of California, for bidding purposes and to secure required permits. The bidding document submittal will include three (3) half-size hard copies of stamped and signed final design drawings, three (3) bound sets of specifications, and a USB flash drive containing an electronic copy or PDF of drawings and specifications.

Construction Cost Estimates

Engineer shall prepare and submit Class 1 OPCC with the 90% and the 100% design documents. The cost

estimate format shall identify and quantify all equipment, materials and labor.

Permitting Services

Engineer shall provide the same permitting services as described in Section 3.3 of the RFP although under different circumstances.

Construction Schedule

Engineer shall prepare an estimated CPM schedule for the MFRO Facility construction and submit schedule to City with 90% design submittal.

Training Plan

Engineer shall consult with City to determine training requirements, and develop training plan that adequately prepares designated staff to operate and maintain the MFRO Facility. The training plan is intended for two purposes: 1) to guide the specifying of General Contractor and equipment manufacturer training requirements and 2) to guide the City and Construction Manager in preparing for training classes in coordination with the Startup, Testing, and Commissioning Plan. The training plan will identify training needs for the MFRO Facility components and systems, training methods (classroom, field and hands-on), and a Microsoft Project schedule in coordination with the construction and startup schedule. The training plan also will identify the responsible party(ies) and the supporting party(ies) for each element of the training program. The plan will include an estimated level of effort for the City, Construction Manager, General Contractor, Engineer, and equipment manufacturer representative(s).

Submit the first draft of the training plan to the City with the bidding documents and finalize the training plan during construction of the MFRO Facility.

Startup, Testing, and Commissioning Plan

In taking the Phase 1 Off-Ramp, the City will forgo the Initial and Final Acceptance Testing requirements of the Contract, yet the MFRO Facility testing requirements are an essential element of the General Contract specifications.

Engineer shall consult with the City to develop a specification section for the Startup, Testing, and Commissioning Plan for the MFRO Facility.

Extended Commissioning/O&M and Training Plan

Engineer shall consult with the City to develop a specification section for the extended commissioning/O&M and training plan for a minimum of (1) one-year extended O&M and training services to be provided by the General Contractor.

Bidding Assistance

While the City will administer the advertisement of the MFRO Facility bidding documents, the Engineer will attend a pre-bid conference and job walk, help respond to bidder inquiries, help prepare required addenda, and provide any other required bidding support to the City.

Following award of the General Contract for construction, Engineer shall prepare and submit conformed plans and specifications, incorporating all addenda, in the same format as the bidding documents.

Engineering Services during Construction

Engineer shall provide the following engineering services during construction in coordination with the City:

- Responding to General Contractor RFIs
- Reviewing General Contractor submittals, including shop drawings and O&M manuals, for conformance with the Contract Documents
- Attending construction meetings
- Answering questions, providing written interpretations of the requirements of the Contract Documents, and evaluating the acceptability of substitute materials and equipment
- Reviewing potential change orders and advising City with regards to validity and value
- Periodically visiting the construction site to assist in checking work quality and resolving field issues
- Participating in substantial completion inspection and punch-list preparation
- Assisting with MFRO Facility startup, testing, and commissioning in accordance with the Startup, Testing, and Commissioning Plan, addressing operational and performance issues identified during startup
- Training assistance in accordance with the training plan
- Preparing record drawings with construction-phase documentation provided by others

PHASE 1 OFF-RAMP FEE

The Time & Materials/Not to Exceed Fee to complete the Phase 1 Off-Ramp based on the scope and assumptions described above is \$2,291,555. The Not to Exceed Fee estimate and hourly rates for Off-ramp Services are provided in Table G-1 below.

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Breakdown of Phase 1 Off-ramp Fee

Name	Project Role	Job Classification	COMPONENT B		
			Rate, \$/hr	Phase 1 Offramp - Total Hours	Phase 1 Offramp - Total \$
Filanc					
Gary Silverman	DB Project Manager	Vice President	\$ 193	48	\$9,264
Vince Diaz	Construction Manager	Vice President	\$ 212	40	\$8,480
Tony Ruiz	Project Estimator	Lead Estimator	\$ 115	124	\$14,260
Matt Appleton	Asst. Construction Manager	Project Manager	\$ 110	-	\$0
Jean Pirkel	Procurement	Purchasing Administrator	\$ 71	-	\$0
Various (composite)	General Estimating	Estimator	\$ 115	64	\$7,360
Brown and Caldwell					
Scott Lacy	Design Manager	Managing Engineer	\$ 250	1,140	\$285,000
Dusan Stanistic	Deputy Design Manager	Managing Engineer	\$ 250	1,080	\$270,000
Scott Turner	GMP Estimator	Senior Construction Engineer	\$ 140	-	\$0
Wade Vaughn	GMP Development/Quality	Vice President	\$ 287	-	\$0
Jay Laba	GMP Estimator, Electrical	Senior Construction Engineer	\$ 140	-	\$0
Maria Thomas	GMP Procurement Specialist	Administrative Manager	\$ 120	-	\$0
William Falla	GMP Procurement Specialist	Administrative Supervisor	\$ 102	-	\$0
Wendy Broley	Process SME	Chief Engineer	\$ 278	129	\$35,862
Victor Tsai	Civil Lead	Managing Engineer	\$ 250	340	\$85,000
Eric Falken	Structural Lead	Managing Engineer	\$ 250	96	\$24,000
Jay Jayakumar	Process Mech Lead	Chief Engineer	\$ 278	112	\$31,136
Frank Shadan	Electrical Lead	Managing Engineer	\$ 250	130	\$32,500
Eli Tilen	Bldg Mech Lead	Executive Engineer	\$ 278	6	\$1,668
Bryan Zinn	I&C Lead	Vice President	\$ 308	-	\$0
Jocelyn Lu	Process	Engineer II	\$ 109	357	\$38,913
Billy Chu	Civil Engineer	Engineer III	\$ 127	957	\$121,539
Anil Pai	Civil Engineer	Supervising Engineer	\$ 210	1,070	\$224,700
Dwight Evans	Structural Engineer	Principal Engineer	\$ 182	50	\$9,100
Daniel Jordan	Structural Designer	Engineer I	\$ 88	213	\$18,744
Nick Cilic	Process Mechanical	Principal Engineer	\$ 182	357	\$64,974
David Calhoun	Process Mechanical	Supervising Engineer	\$ 210	346	\$72,660
Michael Wykosky	Building Mechanical	Principal Engineer	\$ 182	164	\$29,848
Sang Vo	Electrical Engineer	Senior Engineer	\$ 150	466	\$69,900
Melvin Ridley	I&C Engineer	Supervising Engineer	\$ 210	58	\$12,180
Alexander Aquino	I&C Engineer	Principal Engineer	\$ 182	227	\$41,314
Eric Stiles	CAD Designer	Senior Designer	\$ 127	722	\$91,694
Rasa Kulnys	CAD Designer	Designer	\$ 109	1,984	\$216,256
Joshua Coppola	BIM Lead	Supervising Designer	\$ 182	453	\$82,446
Emma Surio	Admin Assistant	Project Analyst	\$ 109	390	\$42,510
Lance Salerno	Startup/Commissioning Specialist	Managing Engineer	\$ 250	200	\$50,000
QA/QC Lead	Assigned Non-Participant	Managing Engineer	\$ 250	324	\$81,000
QA/QC Engineer	Assigned Non-Participant	Supervising Engineer	\$ 210	38	\$7,980
QA/QC Engineer	Assigned Non-Participant	Principal Engineer	\$ 182	200	\$36,400
Other Direct Costs	Repro, Travel		LS	-	\$34,000
Subconsultant and Subcontractors					
Platt/Whitelaw	Architecture				\$120,172
Ninyo & Moore	Geotechnical				
H2O Innovation	MRFO OEM/Operations				
Debbie Burris	Permitting				
Marsha Peterson	Scheduling				
Land Surveying Consultants	Surveying				
KTUA	Landscape Architecture				\$20,695
Big Sky Electric	Electrical				
Helix Environmental	Environmental (SWPP)				
Total Hours				11,885	
Total Dollars					\$ 2,291,555

Exhibit H
Pre-construction Scope of Work



March 25, 2019

Angela Morrow, P.E.
Deputy Director of Utilities / Construction and Engineering
Utilities Department
City of Escondido
1521 S. Hale Avenue
Escondido, CA 92029

**Subject: Escondido MFRO Facility for Agriculture
Phase 1 Scope of Work**

Dear Ms. Morrow,

The Filanc + BC team is excited to begin work as the City's Progressive Design-Builder to collaboratively deliver this important project with you. We recognize that the recent Council direction to change sites to the industrial property on W. Washington Avenue presents both opportunities and challenges for the City. We plan to make the project site change occur smoothly and efficiently.

As acknowledged, the project site change impacts our previous Phase 1 scope and fee submitted on December 20, 2018. We assessed that impact and offer this revised scope of work to align the project with the new site. A revised Phase 1 pricing proposal is attached to reflect the cost impact of the changes. There is also a schedule impact of this change, which we've attempted to quantify based on certain assumptions. We will confirm all assumptions with you prior to executing a Phase 1 Agreement.

PROJECT DESCRIPTION

The MFRO Facility will be located at 901 W. Washington Avenue. It will initially produce 2.0 million gallons per day (mgd) of Title 22 quality recycled water produced at HARRF. The treated water quality will be per the parameters listed in the MFRO Facility Conceptual Design Report, August 2018 by Black & Veatch. This will be done through low pressure membrane filtration (MF) followed by reverse osmosis (RO). These processes will produce water that is of better quality than is required for agricultural irrigation, so the 2 mgd MFRO treated water will be blended with Title 22 recycled water.

The Title 22 recycled water from HARRF will be fed into the MFRO Facility from the nearby existing recycled water line via a new pipeline and MF Feed Tank. Self-cleaning automatic strainers will remove large particles and debris that could potentially damage the membranes. The membrane filtration system will be constructed with three MF skids, two of which will be duty and one for future expansion. The MF system will be provided with a clean-in-place (CIP) system.

There will be one inter-process storage tank to equalize MF filtrate flows being fed to the RO system and provide feed for the MF system filtration backwash pumps. Between the RO transfer pumps and the RO system will be cartridge filters. The RO system is a high-pressure membrane process designed to remove dissolved constituents from the process feed water. Only a portion of the water will go through the RO system to reduce the overall concentration of total dissolved solids and chloride. The

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CIP system will be designed and provided by the RO system supplier. The supplier of both the MF and RO systems is H₂O Innovation.

After post-treatment by the chemical feed, the treated water is blended in a storage tank with Title 22 recycled water. A product pump station will supply the agriculture recycled water to the Hogback Reservoir and the agriculture distribution system. Approximately 4,800 feet of new 24-inch diameter DIP recycled water pipeline will be routed east on Washington Avenue and along Waverly Place and will connect to the existing recycled water pipeline at that location. The pump station will be sized to meet the ultimate summer day demands and wet weather peak demands.

The facility will be designed with no redundancy. Temporary shutdowns shall be minimized. However, in the case of maintenance or temporary shutdowns, Title 22 recycled water will be blended with potable water at the Hogback Reservoir for supply to agriculture users.

Facility arrangements, equipment screening, noise mitigation, building layouts and architecture, security, electrical, I&C and support systems will be based on concepts developed in the MFRO Facility Conceptual Design Report, August 2018 by Black & Veatch, but adjusted for the new site as decided at the design development workshops conducted under Task 4.

PHASE 1 SCOPE OF WORK

Our Phase 1 Scope of Work primarily includes development of 60% design documents and reaching agreement on a final Guaranteed Maximum Price (GMP). As in our original proposal, we recommend additional design, permitting and procurement activities be included in Phase 1 to enable productive work immediately following receipt of Phase 2 NTP. This will help reduce the overall project schedule.

Task 1 – Project Management

Project management includes coordination of the project team; communication and coordination with the City and its consultants; budget and schedule control; document management; training for City personnel; and implementation of a QA/QC program. This task also includes coordination by the Design Manager on all other tasks and design disciplines for a comprehensive and completely functional facility reflecting the needs of the City. The new project site does not change the activities in this task, but it is anticipated Phase 1 will be approximately 4 months longer than the proposed design duration, so project management activity occurs over a longer period and thus will incur more cost. Other Direct Costs include reproduction of design deliverables, training materials, meeting materials, travel allowances for San Diego, Irvine and Phoenix (Stanisic) staff to participate in City meetings and internal QA/QC meetings. Limited travel by cost estimating staff is also expected. Travel costs for similar facility site tours with City staff is also included.

Deliverables:

- Baseline schedule and monthly updates
- Project Management Plan (PMP)
- QA/QC and BIM Plan
- Schedule of values, monthly progress reports and invoices

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- SRF support and documentation to meet SRF requirements (i.e. invoices, good faith effort forms, etc.)

Task 2 – Document Review and Analysis

Research (including seeking information from the City) and evaluate existing documents to assist with the design and construction of the MFRO facility on the new site and the new pipeline alignment. These might include as-built drawings, utility records, technical studies, geotechnical reports, property and easement records and planning documents. These will supplement the information provided with the RFP that pertain to the design criteria of the facility itself and that are still relevant to the new site and pipeline extension. The level of effort associated with this task, previously captured in the Phase 1 Design Documents task, is modestly increased due to the site change.

Deliverables:

- None.

Task 3 – Field Investigations

Environmental, surveying and site geotechnical work will be conducted by earlier and separate contracts directly with the City to allow completion of the 60% design. The environmental work by others should include a Phase 1 Environmental Site Assessment, in addition to the CEQA work required to support the SRF process. If supplemental work is required associated with any of these disciplines prior to the GMP, it is assumed this work would be done through amendments to the City contracts. Time is included in this scope to coordinate directly with those subconsultants, however, their fee is not included in our proposal. Geotechnical work for the pipeline alignment is included in this scope. Ten (10) borings are anticipated along the W. Washington pipeline alignment to a depth of approximately 40 feet. Locations include before and after the intersections with Center City Parkway and Broadway, as these crossings may need to be done by trenchless methods due to traffic considerations. This work includes acquiring City traffic and right-of-way permits, a Caltrans encroachment permit and permit from the County Department of Environmental Health. In addition, it is anticipated that field work under Phase 1 will be required to pothole existing utilities in W. Washington Avenue for the new pipeline alignment. Our fee is based on an assumed 100 potholes by a subcontractor with direct labor for oversight. The potholing effort would include associated traffic control and permitting. No other field investigations are anticipated during Phase 1, including no work associated with remediation of hazardous materials, should they be found on either the site or the pipeline alignment.

Deliverables:

- Potholing report
- Pipeline geotechnical report

Task 4 – Meetings and Workshops

To effectively implement the progressive design build process, multiple meetings and workshops will be conducted during Phase 1. A series of design development workshops will be scheduled to collaboratively define the 60% design, including confirmation of the process train, preparing a new conceptual site plan, product water pipeline concept and mechanical layout, determining architectural

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requirements, and developing the electrical and I&C design. These sessions will be attended by design and construction team members so that value engineering and constructability will be incorporated into the process. Value engineering decisions will be documented in an updated Conceptual Design Report prepared in Task 6. In parallel and integrated with the design development workshops will be another series of workshops focused on developing the GMP. During these meetings, we will work with the City to introduce the initial cost model structure, refine its format, agree to budgets and contingencies, review the results of competitive selections of equipment and subcontractors, maintain a change management log, update the GMP as design decisions are made to track changes and ultimately negotiate a final GMP soon after completion of the 60% design. This is a similar process to the original proposal but is anticipated to involve additional meetings over a longer period because we are starting with less site definition and some of the work done during the proposal phase is no longer useable. Meetings will occur at least monthly over an assumed duration of eight months, with several meetings being conducted as design development workshops to discuss various aspects of the design, as GMP development workshops and as value engineering workshops, all based on project development and needs. In parallel with the design and GMP development workshops will be operator engagement sessions, including an initial classroom session to teach basics of MFRO treatment technology and operations and up to 3 site visits in Southern California for City Operators to tour similar membrane treatment facilities and interact with their peers.

Deliverables:

This task provides much of the opportunity for collaboration inherent in the PDB process. The quantity, duration, frequency, agendas and attendees for meetings and workshops will be determined as Phase 1 progresses and is a function of the how readily topics can be presented, discussed, evaluated and decisions reached regarding design and GMP direction. Key representatives of the project team, including both design and construction personnel, will be involved in these meetings as agendas dictate. The following outlines potential activities in this task, all of which involve preparing agendas, materials and minutes, as well as meeting attendance:

- Bi-weekly progress meetings with City PM and Project Management (1 hour)
- Monthly Project Team progress meetings (when not superseded by workshops in the same time frame) (3 hours)
 - Design Development Workshops Project Kickoff and Design Overview Workshop (8 hours)
 - Treatment Process (8 hours)
 - Site Layout/Architecture/Landscaping (8 hours)
 - Yard Piping and Washington Pipeline (4 hours)
 - Mechanical/O&M (4 hours)
 - Electrical/I&C (6 hours)
- GMP Development Workshops
 - Review preliminary GMP cost model format and structure 2 hours)
 - Review initial GMP cost model (8 hours)
 - Review updated GMP and procurement documentation (8 hours)
 - Review final GMP after submittal (4 hours)

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- Negotiate final GMP (multiple meetings, 4 hours each)
- Operator Engagement
 - Membrane Basic Training (4 hours)
 - Similar Facility Tours (12 hours over two days)
- 60% Design Review Workshop and Comment Review

Task 5 – Grading Design

Prepare a grading design including drawings, calculations and other materials suitable to apply for and obtain a grading permit from the City Engineering Services Department. This will be a stand-alone design package prepared prior to the 60% Design to allow time for permit processing. The grading permit is prerequisite to the first construction activities during Phase 2. An initial application will be submitted, comments will be addressed, and a final application will be resubmitted before pulling the final permit. This task will require approximately the same level of effort as originally planned.

Deliverables:

- Grading permit application – draft and final

Task 6 – 60% Design Development

Update the Conceptual Design Report (Black & Veatch, August 2018) to document the design and value engineering decisions made during the collaborative workshops described in Task 4, above. Included will be a construction schedule, detailed staffing plan for the new facility's operation, and 30% level drawings. Continue the development of the design to a nominal 60% level of completion, with certain disciplines or components more complete to facilitate early construction or procurement activities, as determined necessary. Portions of the design being progressed beyond a 60% level include, but are not limited to, civil site preparations and offsite pipelines. All aspects of the design will be presented with enough detail to clearly communicate design intent and support the development of the GMP, including drawings, specifications and calculations. The level of effort to prepare the 60% Design is greater than originally proposed because less of the original Black & Veatch design is applicable to the new site (different hydraulics, asymmetrical site conditions, use of above ground tanks, access and circulation considerations, yard piping options, etc.) as well as the current design scope includes a new 24" pipeline that was not previously contemplated. Other elements of this task include a transient analysis of the piping system and initial coordination with SDG&E for site power and gas service.

Deliverables:

- Update of Conceptual Design Report (Black & Veatch, August 2018)
- Transient analysis and mitigation
- 60% drawings with extended development (~90%) of site preparation/piping and Washington Avenue pipeline
- Technical specifications
- Cable and conduit schedule
- Equipment list and cut sheets
- Summary of design and performance criteria

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- Construction schedule
- MFRO Facility operations staffing plan

Task 7 – Title 22 Engineering Report

Prepare and submit a draft Engineering Report to the SWRCB Division of Drinking Water and RWQCB prior to completing Phase 1. Meet with DDW at least twice to brief them on the scope of the project and define expectations for the report. Incorporate comments to draft and prepare final report. This task will require approximately the same level of effort as originally planned.

Deliverables:

- Title 22 Engineering Report – Draft and Final

Task 8 – GMP Development

Prepare a Guaranteed Maximum Price (GMP) and Phase 2 Proposal to complete the design and construct the project documented in the 60% Design. Multiple meetings to review, craft and negotiate the GMP are included in Task 4. Develop the initial cost model; solicit and evaluate competitive bids for process equipment, materials and subcontractors; and provide multiple updates and revisions leading to a final GMP. The level of effort for this work is greater than the original proposal because much of the estimating work done during the proposal phase will no longer be valid due to design changes associated with the new site.

Deliverables:

- Draft and final GMP package(s),
- Change management log
- SRF-compliant Good Faith Effort

Task 9 – Preliminary Tasks for the 90% Design

Following submittal of the 60% Design, the design team will continue with design development toward the 90% completion level. This will facilitate early completion of the 90% Design in Phase 2, necessary for equipment procurement and pipeline estimating. The level of effort required to complete the 90% Design will be assessed and included in the final GMP. This task will require approximately the same level of effort as originally planned, with additional efforts for the pipeline portion of work.

Deliverables:

- Critical Path Equipment Procurement Packages
- 90% Product Water Pipeline Design

Task 10 – Preconstruction

It is important to deliver water to agricultural customers as soon as possible, so certain permitting and pre-procurement activities are included in Phase 1 to enable productive work following Phase 2 NTP. A grading permit will be processed with the City based on the grading design produced in Task 5. Storm Water Pollution Prevention Plan (SWPPP) will be prepared and uploaded to the State Stormwater

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Multiple Application and Report Tracking System (SMARTS). Encroachment permits will be started with Caltrans for the pipeline alignment in Washington Avenue. The allowance to secure a Building Permit from the City of Escondido identified in RFP Addendum 3 has been deferred to Phase 2 when it is more appropriate to pursue. Other permits will be identified and early coordination with permitting agencies will begin. Early procurement activities for critical POs and subcontracts will include negotiation of commercial terms and potential authorization of submittals to support design. No contractual commitments will be made until Phase 2.

Deliverables:

- SWPPP
- Draft Caltrans encroachment permits
- Early submittal authorizations

PHASE 1 ASSUMPTIONS

1. SRF funding is on hold until environmental documents are approved by the State Water Resources Control Board. 8-10 months is anticipated for that process. Phase 2 cannot be authorized without funding secured.
2. The City will contract directly with an environmental consultant, a geotechnical engineer (site only) and a surveyor and any work required during Phase 1 will be through the original or amended scope of those contracts.
3. City will remove all materials from the portion of the site needed for construction and laydown during Phase 1. That area will be determined during design development.
4. The presence of contaminated soils or groundwater and the associated assessment and remediation design or implementation is not included in this scope.
5. To the extent applicable, design will utilize drawings, specifications, design report and Revit model developed by Black & Veatch for the original design and provided by the City in electronic format. Drawings and specifications produced will be in accordance with BC's standards using Civil 3D and Revit 3D.
6. The scope includes supporting City-led public outreach efforts. We have not included a public outreach plan, organizing public meetings, website hosting or social media development.
7. Acoustical background study is not required.

PHASE 1 FEE

The lump sum fee to complete Phase 1 based on the scope and assumptions described above is **\$2,716,068**. A table detailing the personnel, hours and rates that were used to develop the fee is attached.

Ms. Angela Morrow, P.E.

March 25, 2019

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PROJECT SCHEDULE

The following estimated dates for major milestones are based on our current project understanding and assumptions. These dates will be refined through development of the baseline schedule after project award.

- April 3, 2019 Phase 1 Project Award by City Council
- April 17, 2019 Phase 1 NTP
- September 2019 Submit 60% Design
- October 2019 Submit Final GMP and Phase 2 Proposal
- November 2019 SRF Funding Secured
- November 2019 Complete Negotiation of Final GMP and Phase 2 Proposal
- December 2019 Phase 2 NTP (after GMP, SRF, Council authorization)
- January 2020 Construction Mobilization
- October 2021 Substantial Completion (delivery of water)

We look forward to discussing the Phase 1 work with you at your convenience. Please contact me at (858) 922-5624 or gsilverman@filanc.com to schedule a meeting. Thank you.

Very truly yours,

FILANC + BROWN and CALDWELL JOINT VENTURE



Gary P. Silverman, PE, BCEE, DBIA
Design-Build Project Manager

Attachments:

- Preliminary Lists of Drawings and Specifications
- Phase 1 Fee Schedule

Exhibit H (Page 10 of 18)

PRELIMINARY DRAWING LIST					
Sheet #	Sheet	Description	Design Submittal		
			60%	90%	
			Phase I	Phase II	
1	G-1	Cover Sheet	X	X	
2	G-2	Drawing List	X	X	
3	G-3	General Notes and Code Classification	X	X	
4	G-4	Legend and Abbreviations	X	X	
5	G-5	Process Flow Diagram	X	X	
6	G-6	Process Flow Diagram	X	X	
7	G-7	Design Criteria I	X	X	
8	G-8	Design Criteria II	X	X	
9	G-9	Hydraulic Profile	X	X	
10	C-1	Existing Site and Demolition Plan	X	X	
11	C-2	Overall Site Plan	X	X	
12	C-3	Enlarged Grading and Paving Plan I	X	X	
13	C-4	Enlarged Grading and Paving Plan II	X	X	
14	C-5	Enlarged Grading and Paving Plan III	X	X	
15	C-5	Enlarged Yard Piping Plan I	X	X	
16	C-6	Enlarged Yard Piping Plan II	X	X	
17	C-7	Enlarged Yard Piping Plan III	X	X	
18	C-8	Enlarged Yard Piping Plan IV	X	X	
19	C-10	Enlarged Yard Piping Plan V	X	X	
20	C-9	Recycled Water Pipeline Profiles I		X	
21	C-10	Recycled Water Pipeline Profiles II		X	
22	C-11	Recycled Water Pipeline Profiles III		X	
23	C-12	Recycled Water Pipeline Profiles IV		X	
24	C-13	Recycled Water Pipeline Profiles V		X	
25	C-14	Recycled Water Pipeline Profiles VI		X	
26	C-13	Underdrain Piping Plan	X	X	
27	C-14	Underdrain Vault Plan and Section	X	X	
28	C-15	Site Coordinates and Data	X	X	
29	C-16	Piping Coordinates and Data	X	X	
30	C-17	Details I - Stormwater Detention Basin Sections	X	X	
31	C-18	Details II - Misc Details and Pipeline Profiles	X	X	
32	C-19	Details III - Misc Details	X	X	
33	C-20	Details IV - Chemical Sump Plan and Details	X	X	
34	C-21	Details V - Misc Details	X	X	
35	C-22	Details VI - Misc Details	X	X	
36	C-23	Details VII - Misc Details	X	X	
37	C-24	Details VIII - Misc Details	X	X	
38	C-25	Engine - Generator Plan and Sections	X	X	
39	C-25	Storm Water Management Plan and Details	X	X	
40	C-26	Product Water Pipeline Plan I	X	X	
41	C-27	Product Water Pipeline Plan II	X	X	
42	C-28	Product Water Pipeline Plan II	X	X	
43	C-29	Product Water Pipeline Profile I	X	X	
44	C-30	Product Water Pipeline Profile II	X	X	
45	C-31	Product Water Pipeline Profile III	X	X	
46	C-32	Product Water Pipeline Profile IV	X	X	
47	C-33	Product Water Pipeline Details I	X	X	
48	C-34	Product Water Pipeline Details II		X	
49	C-35	Product Water Pipeline Details III		X	
50	L-1	Landscape Concept Plan	X	X	
51	L-2	Landscape Irrigation Plan		X	
52	L-3	Landscape Planting Details		X	
53	A-1	Chemical Storage Building - Perspectives	X	X	
54	A-2	MFRO Process Building - Perspectives	X	X	
55	A-3	Chemical Storage Building - Life Safety Plan		X	
56	A-4	MFRO Process Building - Life Safety Plan		X	
57	A-5	Chemical Storage Building - Floor Plan	X	X	
58	A-6	Chemical Storage Building - Roof Plan	X	X	
59	A-7	Chemical Storage Building - Building Elevations	X	X	
60	A-8	Chemical Storage Building - Building Elevations	X	X	

Exhibit H (Page 11 of 18)

PRELIMINARY DRAWING LIST			Design Submittal	
Sheet #	Sheet	Description	60%	90%
61	A-9	MFRO Process Building - Floor Plan	X	X
62	A-10	MFRO Process Building - Roof Plan	X	X
63	A-11	MFRO Process Building - Building Elevations	X	X
64	A-12	MFRO Process Building - Building Elevations	X	X
65	A-13	Chemical Storage Building - Wall Sections		X
66	A-14	MFRO Process Building - Enlarged Plans & Ceiling Plan	X	X
67	A-15	MFRO Process Building - Wall Sections		X
68	A-16	MFRO Process Building - Wall Sections		X
69	A-17	General - Schedules	X	X
70	A-18	General - Roof & Wall Details		X
71	A-19	General - Door, Window & Louver Details		X
72	A-20	General - Wall Types & Miscellaneous Details		X
73	S-1	Chemical Storage Building - Foundation Plan	X	X
74	S-2	Chemical Storage Building - Floor Plan	X	X
75	S-3	Chemical Storage Building - Sections I	X	X
76	S-4	Chemical Storage Building - Sections II	X	X
77	S-5	MFRO Process Building - Foundation Plan	X	X
78	S-6	MFRO Process Building - Floor Plan	X	X
79	S-7	MFRO Process Building - Sections I	X	X
80	S-8	MFRO Process Building - Sections II	X	X
81	S-9	MFRO Influent Tank - Foundation and Roof Plans	X	X
82	S-10	MFRO Inter Process Storage Tank - Foundation and Roof Plans	X	X
83	S-11	MFRO Influent and Inter Process Storage Tanks - Sections	X	X
84	S-12	MFRO Product Water Storage Tank - Foundation Plan	X	X
85	S-13	MFRO Product Water Storage Tank - Roof Plan	X	X
86	S-14	MFRO Product Water Storage Tank - Sections	X	X
87	S-15	Inter Process Storage Tank - Sections	X	X
88	S-16	Product Water Storage Tank - Sections	X	X
89	S-17	Engine-Generator Plan and Typical Sub-Grade Sections	X	X
90	S-18	General Structural Notes	X	X
91	S-19	Special Inspections I	X	X
92	S-20	Special Inspections II	X	X
93	S-21	Standard Concrete Reinforcing Details	X	X
94	S-22	Standard Concrete Joint Details	X	X
95	S-23	Concrete Beam and Column Schedule, Sections and Details		X
96	S-24	Miscellaneous Details	X	X
97	S-25	Equipment Base Details	X	X
98	S-26	Equipment Anchor Bolt Details	X	X
99	S-27	Standard Stair, Handrail & Guardrail Details	X	X
100	S-28	Steel Framing & Connection Details	X	X
101	S-29	Exterior Building Curtain Wall Details I	X	X
102	S-30	Exterior Building Curtain Wall Details II	X	X
103	S-31	Steel Stud Framing Details	X	X
104	S-32	Pipe Support Details I	X	X
105	S-33	Pipe Support Details II	X	X
106	M-1	Overall Chemical Storage Building Area Mechanical Plan	X	X
107	M-2	Chemical Storage Building Area Mechanical Plan I	X	X
108	M-3	Chemical Storage Building Area Mechanical Plan II	X	X
109	M-4	Chemical Storage Building Area Mechanical Plan III		X
110	M-5	Chemical Storage Building Area Mechanical Plan IV		X
111	M-6	Agriculture Pump Station Sections	X	X
112	M-7	Agriculture Pump Station Sections	X	X
113	M-8	MF Influent and Product Water Tank Sections	X	X
114	M-9	Chemical Storage Area Sections	X	X
115	M-10	Chemical Storage Area Sections	X	X
116	M-11	Chemical Storage Area Sections	X	X
117	M-12	Surge Tank Plan and Sections	X	X
118	M-13	Surge Tank Plan and Sections	X	X
119	M-14	Surge Control Compressed Air System Plan	X	X
120	M-15A	Influent Piping Plan	X	X
121	M-15	Influent Piping Sections	X	X

Exhibit H (Page 12 of 18)

PRELIMINARY DRAWING LIST			Design Submittal	
Sheet #	Sheet	Description	60%	90%
122	M-16	Influent Piping Sections	X	X
123	M-17	MF Feed Pump Station Sections	X	X
124	M-18	Overall MFRO Process Building Area Mechanical Plan	X	X
125	M-19	MFRO Process Building Area Mechanical Plan I	X	X
126	M-20	MFRO Process Building Area Mechanical Plan II	X	X
127	M-21	MFRO Process Building Area Mechanical Plan III	X	X
128	M-22	MFRO Process Building Area Mechanical Plan IV		X
129	M-23	MFRO Process Building Area Mechanical Plan V		X
130	M-24	MFRO Process Building Area Mechanical Plan VI		X
131	M-25	MF Process Area Sections	X	X
132	M-26	Inter-Process Storage Tank, RO Transfer Pump Sections	X	X
133	M-27	Inter-Process Storage Tank, RO Transfer Pump Sections	X	X
134	M-28	MF Backwash Sections	X	X
135	M-29	Waste Equalization Sections	X	X
136	M-30	RO Process Area Sections	X	X
137	M-31	Mechanical - Chemical Feed Systems I	X	X
138	M-31	Mechanical - Chemical Feed Systems I	X	X
139	M-33	Mechanical - Pump Station Details	X	X
140	M-34	Mechanical - Tank Details	X	X
141	M-35	Mechanical - Pipe Support Details	X	X
142	M-36	Mechanical - Wall Penetration Details	X	X
143	M-37	Mechanical - Miscellaneous Details	X	X
144	P-1	Plumbing Legend, Abbreviations and Notes	X	X
145	P-2	Plumbing Chemical Storage Building Overall Plan	X	X
146	P-3	Plumbing Chemical Storage Building Enlarged Plan I		X
147	P-4	Plumbing Chemical Storage Building Enlarged Plan II		X
148	P-5	Plumbing Chemical Storage Building Enlarged Plan III		X
149	P-6	Plumbing Chemical Storage Building Enlarged Plan IV		X
150	P-7	Plumbing MFRO Process Building Overall Plan	X	X
151	P-8	Plumbing MFRO Process Building Enlarged Plan I		X
152	P-9	Plumbing MFRO Process Building Enlarged Plan II		X
153	P-10	Plumbing MFRO Process Building Enlarged Plan III		X
154	P-11	Plumbing MFRO Process Building Enlarged Plan IV		X
155	P-12	Plumbing MFRO Process Building Enlarged Plan V		X
156	P-13	Plumbing MFRO Process Building Enlarged Plan VI		X
157	P-14	Plumbing Details & Schedules	X	X
158	P-15	Plumbing Waste Riser Diagram		X
159	P-16	Plumbing Waste Riser Diagram		X
160	H-1	HVAC Legend, Abbreviations and Notes	X	X
161	H-2	HVAC Chemical Storage Building Overall Plan	X	X
162	H-3	HVAC Chemical Storage Building Enlarged Plan I		X
163	H-4	HVAC Chemical Storage Building Enlarged Plan II		X
164	H-5	HVAC Chemical Storage Building Enlarged Plan III		X
165	H-6	HVAC Chemical Storage Building Enlarged Plan IV		X
166	H-7	HVAC MFRO Process Building Overall Plan	X	X
167	H-8	HVAC MFRO Process Building Enlarged Plan I		X
168	H-9	HVAC MFRO Process Building Enlarged Plan II		X
169	H-10	HVAC MFRO Process Building Enlarged Plan III		X
170	H-11	HVAC MFRO Process Building Enlarged Plan IV		X
171	H-12	HVAC MFRO Process Building Enlarged Plan V		X
172	H-13	HVAC MFRO Process Building Enlarged Plan VI		X
173	H-14	HVAC Schedules I	X	X
174	H-15	HVAC Schedules II	X	X
175	H-16	HVAC Details		X
176	H-17	HVAC Sequence of Operations		X
177	E-1	Legend, Abbreviations and Notes	X	X
178	E-2	Power Distribution Functional Diagram	X	X
179	E-3	Site Plan	X	X
180	E-4	Interplant Fiber Optic Routing Site Plan	X	X
181	E-5	Duct Bank Sections and Schedules	X	X
182	E-6	Medium Voltage Switchgear One Line Diagram	X	X

Exhibit H (Page 13 of 18)

PRELIMINARY DRAWING LIST			Design Submittal	
Sheet #	Sheet	Description	60%	90%
183	E-7	SWGR - PB One-Line Diagram	X	X
184	E-8	MCC One - Line Diagrams	X	X
185	E-9	MCC One - Line Diagrams	X	X
186	E-10	MCC One - Line Diagrams	X	X
187	E-11	MCC One - Line Diagrams	X	X
188	E-12	MCC One - Line Diagrams	X	X
189	E-13	MCC One - Line Diagrams	X	X
190	E-14	MCC One - Line Diagrams	X	X
191	E-15	Power Panel One - Line Diagrams	X	X
192	E-16	Power Panel One - Line Diagrams	X	X
193	E-17	Power Panel One - Line Diagrams	X	X
194	E-18	Control System One - Line Diagrams	X	X
195	E-19	Control System One - Line Diagrams	X	X
196	E-20	Control System One - Line Diagrams	X	X
197	E-21	Control System One - Line Diagrams	X	X
198	E-22	Control System One - Line Diagrams	X	X
199	E-23	Control System One - Line Diagrams	X	X
200	E-24	Control System One - Line Diagrams	X	X
201	E-25	Miscellaneous One - Line Diagrams	X	X
202	E-26	Miscellaneous One - Line Diagrams	X	X
203	E-27	Schematics	X	X
204	E-28	Schematics	X	X
205	E-29	Schematics	X	X
206	E-30	Fixture and Panel Schedules	X	X
207	E-31	Chemical Storage Building Overall Power Plan	X	X
208	E-32	Chemical Storage Building Power Plan I	X	X
209	E-33	Chemical Storage Building Power Plan II	X	X
210	E-34	Chemical Storage Building Power Plan III	X	X
211	E-35	Chemical Storage Building Power Plan IV	X	X
212	E-36	Chemical Storage Building Overall Lighting Plan		X
213	E-37	Chemical Storage Building Lighting Plan I		X
214	E-38	Chemical Storage Building Lighting Plan II		X
215	E-39	Chemical Storage Building Lighting Plan III		X
216	E-40	Chemical Storage Building Lighting Plan IV		X
217	E-41	MFRO Process Building Overall Power Plan	X	X
218	E-42	MFRO Process Building Power Plan I	X	X
219	E-43	MFRO Process Building Power Plan II	X	X
220	E-44	MFRO Process Building Power Plan III	X	X
221	E-45	MFRO Process Building Power Plan IV	X	X
222	E-46	MFRO Process Building Power Plan V	X	X
223	E-47	MFRO Process Building Power Plan VI	X	X
224	E-48	MFRO Process Building Overall Lighting Plan		X
225	E-49	MFRO Process Building Lighting Plan I		X
226	E-50	MFRO Process Building Lighting Plan III		X
227	E-51	MFRO Process Building Lighting Plan III		X
228	E-52	MFRO Process Building Lighting Plan IV		X
229	E-53	MFRO Process Building Lighting Plan V		X
230	E-54	MFRO Process Building Lighting Plan VI		X
231	E-55	Engine - Generator Power Plan	X	X
232	E-56	Miscellaneous Details	X	X
233	E-57	Miscellaneous Details	X	X
234	E-58	Miscellaneous Details		X
235	E-59	Miscellaneous Details		X
236	I1	Legend and Abbreviations	X	X
237	I2	Legend and Abbreviations	X	X
238	I3	Legend and Abbreviations	X	X
239	I4	PID - Plant Influent Flow	X	X
240	I5	PID - MF/UF Feed Pump Stations	X	X
241	I6	PID - MF/UF Autostrainers	X	X
242	I7	PID - MF/UF System Detail	X	X
243	I8	PID - MF/UF Unit Detail (Typical of Three)	X	X

Exhibit H (Page 14 of 18)

PRELIMINARY DRAWING LIST			Design Submittal	
Sheet #	Sheet	Description	60%	90%
244	I9	PID - Inter-Process Storage Tank and Backwash Pump Stations	X	X
245	I10	PID - RO Transfer Pumps	X	X
246	I11	PID - RO Feed Pretreatment	X	X
247	I12	PID - RO Cartridge Filter	X	X
248	I13	PID - RO System Overview	X	X
249	I14	PID - RO Unit 1 Detail I RO Feed Pump - Typical of Four	X	X
250	I15	PID - RO Unit 1 Detail II RO Vessels - Typical of Four	X	X
251	I16	PID - RO Unit 1 Detail III RO Permeate - Typical of Four	X	X
252	I17	PID - RO Unit 1 Detail IV Ro Concentrate - Typical of Four	X	X
253	I18	PID - RO Plush Pump Stations	X	X
254	I19	PID - Product Water Storage	X	X
255	I20	PID - Agriculture Pump Station	X	X
256	I21	PID - Underdrain Collection Vault	X	X
257	I22	PID - Surge Control System	X	X
258	I23	PID - RO Clean In Place System - Sheet 1 of 2	X	X
259	I24	PID - RO Clean In Place System - Sheet 2 of 2	X	X
260	I25	PID - Surge Compressed Air System	X	X
261	I26	PID - Sodium Hypochlorite Storage Tank	X	X
262	I27	PID - Sodium Hypochlorite Feed System - Sheet 1 of 2	X	X
263	I28	PID - Sodium Hypochlorite Feed System - Sheet 2 of 2	X	X
264	I29	PID - Liquid Ammonium Sulfate Storage Tank	X	X
265	I30	PID - Liquid Ammonium Sulfate Feed System - Sheet 1 of 2	X	X
266	I31	PID - Liquid Ammonium Sulfate Feed System - Sheet 2 of 2	X	X
267	I32	PID - Sulfuric Acid Storage Tank	X	X
268	I33	PID - Sulfuric Acid Feed System	X	X
269	I34	PID - Sulfuric Acid Dilution Panel	X	X
270	I35	PID - Sodium Bisulfite Storage Tank	X	X
271	I36	PID - Sodium Bisulfite Feed System - Sheet 1 of 2	X	X
272	I37	PID - Sodium Bisulfite Feed System - Sheet 2 of 2	X	X
273	I38	PID - Antiscalant Storage Tank	X	X
274	I39	PID - Antiscalant Feed System	X	X
275	I40	PID - Sodium Hydroxide Storage Tank	X	X
276	I41	PID - Sodium Hydroxide Feed System	X	X
277	I42	PID - Calcium Chloride Storage Tank	X	X
278	I43	PID - Calcium Chloride Feed System	X	X
279	I44	PID - Engine Generator	X	X
280	I45	Instrumentation - Network System Control Block Diagram - Sheet 1 of 2	X	X
281	I46	Instrumentation - Network System Control Block Diagram - Sheet 2 of 2	X	X
282	I47	Instrumentation Installation Details		X
283	I48	Instrumentation Installation Details		X
284	I49	Instrumentation Panel Elevation Details		X
285	I50	Instrumentation Panel Elevation Details		X
286	I51	Instrumentation Panel Elevation Details		X

Preliminary Specification List

Division 1 – General Requirements

- 1030 Pre-Procured Equipment and Services
- 1070 Abbreviations of Terms and Organizations
- 1110 Summary of Work
- 1140 Work Restrictions & Constraints
- 1150 State Revolving Fund Requirements
- 1300 Submittals
- 1310 Construction Progress Schedule
- 1380 Construction Photographs
- 1400 Quality Control
- 1450 Structural Test and Special Inspections
- 1500 Temporary Facilities
- 1504 Disinfection and Tie-ins for Potable Pipelines
- 1530 Temporary Right-of-Way Encroachment
- 1560 Temporary Environmental Controls & Constraints
- 1610 General Equipment Stipulations
- 1611 Meteorological and Seismic Design Criteria
- 1612 Product Delivery Requirements
- 1614 Product Storage and Handling Requirements
- 1615 Equipment and Valve Identification
- 1620 Equipment Schedule
- 1630 Pipeline Schedule
- 1650 Commissioning
- 1820 Demonstration and Training

Division 2 - Site Work

- 2050 Demolition
- 2200 Excavation and Fill for Structures
- 2202 Trenching and Backfilling
- 2204 Storm Water Management Systems
- 2512 Asphalt Concrete Paving
- 2522 Concrete Sidewalk, Curb, and Gutter
- 2605 Sanitary Utility Sewerage Manholes, Frames and Covers
- 2606 Manhole and Vault Covers and Accessories
- 2619 Reinforced Concrete Pipe
- 2628 Polyvinyl Chloride (PVC) Sewer Pipe
- 2630 Polyvinyl Chloride (PVC) Pressure Pipe
- 2634 HDPE Pressure Pipe
- 2702 Sewer Pipe Installation and Testing
- 2831 Irrigation Systems
- 2825 Security Fencing and Gates
- 2900 Landscaping

Division 3 - Concrete

- 3100 Concrete Formwork
- 3200 Concrete Reinforcement
- 3250 Concrete Joints and Joint Accessories
- 3300 Cast-in-place Concrete
- 3350 Concrete Placing, Finishing, and Curing
- 3480 Precast Reinforced Concrete Vaults
- 3600 Grout
- 3930 Concrete Crack Repair

Preliminary Specification List

Division 4 – MASONRY

4200 Masonry

Division 5 - Metals

5312 Steel Roof Decking
5520 Handrailing, Guardrailing, and Ladders
5530 Gratings and Cover Plates
5550 Anchorage In Concrete and Masonry
5990 Structural and Miscellaneous Metals

Division 6 – Wood and Plastics

6100 Rough Carpentry
6610 FRP Grating Floor System Supported on Pedestals

Division 7 – Thermal and Moisture Protection

7200 Thermal Insulation
7240 Exterior Stucco Finish System
7321 Tile Roofing
7600 Flashing and Sheet Metal
7700 Roof Specialties and Accessories
7840 Firestopping
7900 Joint Sealants

Division 8 – Doors and Windows

8110 Steel Doors and Frames
8305 Floor Access Doors and Hatches
8331 Overhead Coiling Aluminum Doors
8410 Aluminum Assemblies
8700 Finish Hardware
8800 Glass and Glazing

Division 9 – Finishes

9250 Gypsum Wallboard
9310 Ceramic Tile
9510 Suspended Acoustical Ceilings
9660 Resilient Floor Coverings
9880 Corrosion Protection Lining Systems
9920 Architectural Painting
9940 Protective Coatings

Division 10 – Specialties

10200 Louvers and Vents
10400 Identifying Devices
10800 Toilet Accessories
10990 Miscellaneous Specialties

Division 11 – Equipment

11060 Equipment Installation
11140 Vertical Diffusion Vane Pumps
11150 Submersible Pumps
11532 Inline Static Mixers
11630 Compressed Air Equipment – Base Mounted Compressors

Preliminary Specification List

- 11727 Liquid Chemical Feed System
- 11910 Engine Generators

Division 12 – Furnishings

- 12510 Office Furniture
- 12625 Laboratory Furniture

Division 13 – Special Construction

- 13026 Reverse Osmosis System Installation
- 13031 Membrane Filtration System Installation
- 13110 Corrosion Protection for Pipelines
- 13122 Metal Building Systems
- 13190 Fiberglass Reinforced Plastic Chemical Storage Tanks
- 13192 Steel Chemical Storage Tanks
- 13199 Chemical Storage Tank Installation
- 13500 Instrumentation and Control System
- 13530 Programmable Logic Controllers
- 13550 Software Control Block Descriptions
- 13561 Panel Mounted Instruments
- 13562 Flow Instruments
- 13563 Pressure and Level Instruments
- 13564 Process Analytical Instruments
- 13565 Temperature Instruments
- 13566 Miscellaneous Instruments
- 13570 Panels, Consoles, and Appurtenances
- 13590 Network Systems
- 13591 Metallic and Fiber Optic Communication Cables and Connectors
- 13755 Cleaning and Disinfection of Structures
- 13800 Surge Control System
- 13930 Fire-Suppression Sprinkler Systems

Division 14 – Conveyance Systems

- 14641 Portable Gantry Cranes

Division 15 - Mechanical

- 15010 Valve Installation
- 15020 Miscellaneous Piping and Accessories Installation
- 15050 Basic Mechanical Building Systems Material and Methods
- 15060 Miscellaneous Piping and Pipe Accessories
- 15061 Ductile Iron Pipe
- 15064 Stainless Steel Pipe and Alloy Pipe, Tubing, and Accessories
- 15065 Miscellaneous Steel Pipe, Tubing, and Accessories
- 15067 Plastic Process Pipe, Tubing, and Accessories
- 15069 Cast Iron Soil Pipe
- 15070 Copper Tubing and Accessories
- 15091 Miscellaneous Ball Valves
- 15092 Industrial Butterfly Valves
- 15093 Check Valves
- 15094 Backflow Preventers
- 15095 Solenoid Valves
- 15097 Pinch and Diaphragm Valves
- 15098 Plug Valves
- 15099 Pressure Reducing Valves

Preliminary Specification List

- 15100 Miscellaneous Valves
- 15101 AWWA Butterfly Valves
- 15104 Resilient-Seated Gate Valves
- 15106 Flow Control Valves
- 15108 Air Valves
- 15130 Pressure Gauges
- 15140 Pipe Supports
- 15150 Water Meters
- 15180 Valve Actuators
- 15250 Mechanical Insulation
- 15400 Plumbing
- 15550 Heating Systems Equipment
- 15650 Refrigeration Systems
- 15880 Air Distribution Systems
- 15955 Building Systems Controls
- 15990 Testing, Adjusting, and Balancing

Division 16 – Electrical

- 16050 Electrical
- 16100 Electrical Equipment Installation
- 16150 Adjustable Frequency Drives
- 16220 Common Motor Requirements for Process Equipment
- 16310 Secondary Unit Substation
- 16345 Medium Voltage Vacuum Interrupter Switchgear
- 16346 Low Voltage Switchgear
- 16480 600 Volt Class Motor Control Centers
- 16670 Lightning Protection for Structures
- 16721 Fire Detection and Alarm System
- 16725 Electronic Security Systems

Figures

- 1-02200 Protective System Design Certificate
- 1-02202 Embedments for Conduits
- 2-02202 Protective System Design Certificate
- 1-09940 Coating System Data Sheet
- 2-09940 Coating System Data Sheet
- 1-13500 Instrument Calibration Report
- 1:10-15130 Pressure Gauge Installation F1-F10
- 1-15140(A) Hangers and Supports
- 1-15140(B) Hangers and Supports
- 1-16050 600 Volt, Single Conductor Lighting Cable
- 2-16050 600 Volt, Single Conductor Lighting/Power Cable (XHHW)
- 4-16050 600 Volt, Single Pair Shielded Instrument Cable
- 7-16050 600 Volt, Multiconductor 14 AWG Control Cable

Exhibit I
Regulatory Standards

Exhibit J
Time Schedule Order

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

2375 Northside Drive, Suite 100, San Diego, CA 92108
(619) 516-1990 • Fax (619) 516-1994
<http://www.waterboards.ca.gov/sandiego>

**TIME SCHEDULE ORDER NO. R9-2015-0027
REQUIRING
THE CITY OF ESCONDIDO
HALE AVENUE RESOURCE RECOVERY FACILITY
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN
ORDER NUMBER R9-2015-0026
NPDES PERMIT NO. CA0108944**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds:

FACTUAL BACKGROUND

1. The City of Escondido (Discharger) owns and operates the Hale Avenue Resource Recovery Facility (Facility) located at 1521 S. Hale, Avenue, Escondido, California.
2. The Facility discharges tertiary-treated wastewater to Escondido Creek, a water of the U.S., under waste discharge requirements contained in Order No. R9-2015-0026, adopted by the San Diego Water Board on June 24, 2015. Order No. R9-2015-0026 also serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA0108944).
3. The Facility's treatment system consists of screening, grit removal, chemically enhanced primary sedimentation, aeration, secondary clarification, chlorination, flocculation, filtration, and ultraviolet light (UV) disinfection.
4. Order No. R9-2015-0026 section III.Q prohibits the discharges from the Facility to Escondido Creek unless all of the following conditions have been met:
 - a. The combined discharge to the San Elijo Ocean Outfall (SEOO) from the Facility, the San Elijo Water Pollution Control Facility, and the San Diego Gas and Electric (SDG&E), Palomar Energy Center exceeds the maximum capacity of the outfall, or the San Elijo Joint Powers Authority (SEJPA) has informed the Discharger that Facility discharge to the SEOO must be reduced to accommodate larger than normal wet weather outfall discharge flows.
 - b. The City has implemented all other wastewater management options in the City's wet weather management plan, including maximizing use of available onsite and offsite wastewater and recycled water storage.
 - c. Stream flows recorded at the County of San Diego's stream gauging station located approximately 100 yards upstream of the Facility, exceed an average flow of 300 cubic feet per second during the discharge, and are not below 100 cubic feet per second at any time during the discharge.

d. The mouth of the San Elijo Lagoon is open or the San Diego Water Board approves otherwise.

5. Order No. R9-2015-0026 prescribes the following effluent limitations for the listed constituents in Table 1.

Table 1. Final Effluent Limitations

Constituent	Units	Effluent Limitations	
		MDEL*	AMEL**
N-Nitrosodimethylamine	µg/L	0.015	0.0077
	lbs/day	0.0008	0.0004
Total Trihalomethanes	µg/L	1.1	-
	lbs/day	0.059	-
Ammonia, Un-ionized (NH3)	mg/L	0.025	-
	lbs/day	1.3	-
Total Phosphorus	mg/L	0.1	-
	lbs/day	5.3	-
Total Nitrogen	mg/L	1	-
	lbs/day	53	-
Total Dissolved Solids	mg/L	500	-
	lbs/day	26,688	-
Manganese	mg/L	-	0.05
	lbs/day	-	3.8

* MDEL = Maximum Daily Effluent Limitation

** AMEL = Average Monthly Effluent Limitation

6. Order No. R9-2003-0394 (Previous Order) contained the following effluent limitations for the listed constituents in Table 2.

Table 2. Effluent Limitations from the Previous Order

Constituent	Units	MDEL
N-Nitrosodimethylamine	µg/L	-
	lbs/day	-
Total Trihalomethanes	µg/L	-
	lbs/day	-

Constituent	Units	MDEL
Ammonia, Un-ionized (NH ₃)	mg/L	25
	lbs/day	1877
Total Phosphorus	mg/L	3.0
	lbs/day	225
Total Nitrogen	mg/L	35
	lbs/day	2627
Total Dissolved Solids	mg/L	1100
	lbs/day	82,566
Manganese	mg/L	0.10
	lbs/day	7.5

7. Additionally, Discharge Specification B.9 of the Previous Order prohibits a Facility discharge to Escondido Creek contributing to an increase in nutrient loading to San Elijo Lagoon, the downstream estuarine terminus of Escondido Creek, and from contributing to an increase in biostimulation within the San Elijo Lagoon.
8. Order No. R9-2015-0026 establishes effluent limitations based on the applicable water quality objectives at the point of discharge.
9. Order No. R9-2015-0026 prescribes the effluent limitations for the constituents listed in Tables 1 and 2 that are new and/or more stringent than the effluent limitations in the Previous Order.
10. Table 3 below represents the maximum effluent concentration of the constituents listed as determined from tertiary effluent data from August 2009 through August 2013. As demonstrated by this data, the Discharger is not capable of immediate compliance with the effluent limitations for the listed constituents in Order No. R9-2015-0026.

Table 3. Effluent Data from August 2009 through August 2013

Constituent	Units	Maximum Effluent Concentration
N-Nitrosodimethylamine	µg/L	0.44
Total Trihalomethanes	µg/L	3.57
Ammonia, Un-ionized (NH ₃)	mg/L	32.6
Total Phosphorus	mg/L	0.4

Constituent	Units	Maximum Effluent Concentration
Total Nitrogen	mg/L	37.4
Total Dissolved Solids	mg/L	930
Manganese	mg/L	0.13

11. Under section 303(d) of the 1972 Clean Water Act (CWA), states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On October 11, 2011 the U.S. Environmental Protection Agency (USEPA) gave final approval to California's 2010 section 303(d) List of Water Quality Limited Segments. The 303(d) list includes Escondido Creek impairment listings for dichlorodiphenyltrichloroethane (DDT), enterococcus, fecal coliform, manganese, phosphate, selenium, sulfates, total dissolved solids, total nitrogen, and toxicity. Due to the impairment listing of Escondido Creek for total phosphate, manganese, total dissolved solids, and total nitrogen, assimilative capacity of the receiving water would not be protective of the applicable water quality objective for these constituents. Thus, the discharge of wastewater from the Facility into Escondido Creek must meet the applicable water quality objectives for phosphate, manganese, total dissolved solids, and total nitrogen at the point of discharge.
12. Title 40, Code of Federal Regulations (40 CFR) section 122.44(d)(1)(i) requires effluent limitations to control all pollutants or pollutant parameters that may be discharged at a level that will cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standards. The San Diego Water Board conducted a reasonable potential analysis (RPA) to reevaluate the need for effluent limitations for certain pollutants. Final RPA results demonstrated that effluent limitations were required for ammonia, total phosphorus, total nitrogen, total dissolved solids, manganese, n-nitrosodimethylamine and total trihalomethanes.
13. Immediate compliance with the proposed effluent limitations for n-nitrosodimethylamine, total trihalomethanes, ammonia, total phosphorus, total nitrogen, total dissolved solids and manganese is infeasible.
14. The Discharger reported that the preferred method for achieving compliance with the new and/or more stringent effluent limitations is to reduce Facility wet-weather influent flows such that they are below the available capacity of the SEOO and terminate the discharge to Escondido Creek.

To implement this compliance alternative, the Discharger needs to create 12.0 million gallons per day (MGD) of net reuse or storage of the tertiary effluent. The Discharger has been making diligent progress to accomplish this goal by expanding the Discharger's recycled water system to serve agricultural users in the eastern part of the City of Escondido. This plan is known as the Recycled Water Easterly Main Extension Project (Project), and will be implemented in the following phases:

- a. Phase I: Broadway to Citrus (13,800 linear feet of 24" PVC main & 15" PVC brine line)
 - b. Phase II: Citrus to microfiltration and reverse osmosis (MFRO) facility at Washington and to Hogback Reservoir
 - c. Phase III: Distribution System from Hogback Reservoir with Ponds
 - d. Phase IIIa: Hogback Reservoir Conversion
 - e. Phase IV: Brine Line, Broadway to HARFF
 - f. Phase V: MFRO and Pump Station Facility at Washington Street
15. On January 9, 2015, the Discharger submitted a time schedule to implement the necessary upgrades to comply with the requirements of Order No. R9-2015-0026 within 5.5 years. The Discharger reported that the updated schedule represented a realistic assessment of the shortest practicable time period achievable for implementing the compliance alternatives, recognizing uncertainties associated with activities or approvals that are outside the Discharger's control.

LEGAL BASIS

16. California Water Code (Water Code) section 13300 states:
- "Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements."
17. The Discharger has not discharged treated effluent into the receiving waters since 2005. However, a review of monitoring data indicates that future discharge from the Facility may not consistently achieve compliance with the final effluent limitations for the parameters listed in Table 1 of this Time Schedule Order (TSO). Accordingly, pursuant to Water Code section 13300, a discharge of waste threatens to take place that would violate requirements in Order No. R9-2015-0026 prescribed by the San Diego Water Board.
18. Water Code section 13385, subdivisions (h) and (i), require the San Diego Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations.
19. Section 13385(j)(3) exempts violations of an effluent limitation from mandatory minimum penalties "where the waste discharge is in compliance with ... a time schedule order issued pursuant to section 13300, *if all of the [specified] requirements are met.*" (emphasis added).
20. In accordance with Water Code section 13385(j)(3)(B), mandatory minimum penalties do not apply to a violation of an effluent limitation where:

- a. The waste discharge is in compliance with a TSO issued pursuant to Section 13300 or 13308;
 - b. The discharger is not able to consistently comply with the effluent limitation because it is a new, more stringent limitation that became applicable after adoption of the prior permit; new or modified control measures are necessary in order to comply with the effluent limitation; and
 - c. The new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
21. The effluent limitations in Order No. R9-2015-0026 for the constituents listed in Table 1 of this TSO are new and/or more stringent than the previous Order. As a result, the Discharger is unable to comply with the effluent limitations. It is necessary for the Discharger to implement new or modified control measures to comply with the new and/or more stringent effluent limitations in Order No. R9-2015-0026, these control measures cannot be designed, installed, and put into operation within 30 calendar days.
 22. Pursuant to Water Code section 13385(j)(3)(C), a TSO for bringing the waste discharge into compliance with the effluent limitation must be as short as possible, and shall not exceed 5 years in length.
 23. Pursuant to Water Code section 13385(j)(3)(C)(ii)(II), following a public hearing, and upon a showing that the discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitation, the San Diego Water Board may extend the time schedule for an additional period not exceeding five years in length, if the discharger demonstrates that the additional time is necessary to comply with the effluent limitation.
 24. This TSO includes interim requirements and the dates for their achievement. The interim requirements include both an interim maximum daily effluent limitations for n-nitrosodimethyamine, total trihalomethanes, ammonia, total phosphorus, total nitrogen, total dissolved solids, and manganese as well as actions and milestones leading to compliance with the final effluent limitations for these pollutants. Consistent with the requirements of Water Code sections 13385(j)(3)(C) and 13385(j)(3)(c)(ii)(II), this TSO has established a final compliance date that is as short as possible based on the Discharger's January 9, 2015, compliance schedule submittal and the Discharger's diligent progress in pursuing the Project.
 25. Pursuant to Water Code section 13385(j)(3), full compliance with the requirements of this TSO exempts the Discharger from mandatory minimum penalties for violations of the final daily maximum effluent limitations for n-nitrosodimethyamine, total trihalomethanes, ammonia, total phosphorus, total nitrogen, total dissolved solids, and manganese in Order No. R9-2015-0026 that occur after the effective date of this TSO until its expiration on July 31, 2020.
 26. Pursuant to Water Code sections 13263.3(a), (d)(1)(D), and (d)(3), the Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The

Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters. The San Diego Water Board may require a discharger subject to its jurisdiction to complete and implement a pollution prevention plan if the discharger is subject to a time schedule order issued pursuant to Water Code section 13300 or 13308.

27. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.; CEQA) pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit (Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside (1977) 73 Cal.App.3d 546, 555-556.).
28. The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to issue this TSO concerning compliance with WDRs and provided them with an opportunity to submit their written comments and recommendations pursuant to Water Code Section 13167.5.
29. The San Diego Water Board, in a public meeting , heard and considered all comments on this matter

IT IS HEREBY ORDERED that, pursuant to the Water Code sections 13300 and 13385(j)(3), the Discharger, as operator of the Facility, shall comply with the time schedules set forth below to ensure compliance with the effluent limitations of Order No. R9-2015-0026, NPDES No. CA0108944. Except as modified or superseded by the TSO requirements and provisions set forth below, all of the findings, prohibitions, provisions, and other requirements of Order No. R9-2015-0026, NPDES No. CA0108944 remain in full force and effect.

A. INTERIM EFFLUENT LIMITATIONS

The Discharger shall comply with the following interim effluent limitations, including mass limitation, on the effective date of this TSO. Except as modified or superseded by the interim effluent limitations set forth below, all of the effluent limitations in Order No. R9-2015-0026 remain in full force and effect:

Table 4. Interim Effluent Limitations

Constituent	Units ¹	Daily Maximum
N-Nitrosodimethylamine	µg/L	0.44
	lbs/day	0.023
Total Trihalomethanes	µg/L	3.57
	lbs/day	0.191
Ammonia, Un-ionized (NH ₃)	mg/L	32.6
	lbs/day	1,740
Total Phosphorus	mg/L	3
	lbs/day	160
Total Nitrogen	mg/L	37.4
	lbs/day	1,996

Constituent	Units ¹	Daily Maximum
Total Dissolved Solids	mg/L	1,100
	lbs/day	58,714
Manganese	mg/L	0.1
	lbs/day	5

The Mass Emission Rate (MER) limits in this TSO were calculated using a flow rate of 6.4 MGD and the indicated concentration values. When the discharge flow rate is lower than 6.4 MGD, the MER limits shall be correspondingly lower.

B. COMPLIANCE SCHEDULE

The Discharger shall complete all compliance tasks no later than the specified dates set forth in in Table 5 below.

Table 5. Time Schedule

Task No.	Compliance Date	Compliance Task
1	1/4/2016	Begin construction of Phase I recycled water mains.
2	1/4/2016	Complete design of Phase II recycled water mains.
3	1/4/2016	Begin design of Phase III storage ponds.
4	1/4/2016	Complete design of Phase IV brine line.
5	1/4/2016	Begin design of Phase V microfiltration and reverse osmosis (MFRO) facility.
6	1/2/2017	Complete construction of Phase I recycled water mains.
7	1/2/2017	Begin construction of Phase II recycled water mains.
8	1/2/2017	Complete design of Phase III storage ponds.
9	1/2/2017	Complete design of Phase IIIa reservoir conversion.
10	1/2/2017	Complete design of Phase V MFRO facility.
11	1/2/2018	Begin construction of Phase IV brine line.
12	1/2/2018	Begin construction of Phase V MFRO facility.
13	1/2/2019	Complete construction of Phase II recycled water mains.
14	1/2/2019	Begin construction of Phase III storage ponds.
15	1/2/2019	Begin construction of Phase IIIa reservoir conversion.
16	1/2/2020	Complete construction of Phase IIIa reservoir conversion.

Task No.	Compliance Date	Compliance Task
17	1/2/2020	Complete construction of Phase IV brine line.
18	7/1/2020	Complete construction of Phase V MFRO facility.
19	7/1/2020	Initiate Phase V MFRO facility startup/testing.
20	1/4/2021	Complete construction of Phase III storage ponds.
21	1/4/2021	Complete MFRO startup and testing.
22	1/4/2021	Begin full operation of MFRO, conveyance, and seasonal storage facilities.
23	1/4/2021	Terminate discharge to Escondido Creek.

C. POLLUTION PREVENTION PLAN

The Discharger shall prepare and submit a pollution prevention plan work plan with a time schedule for implementation for approval of the Executive Officer within 120 days of adoption of this TSO, pursuant to Water Code section 13263.3(d)(3).

D. COMPLIANCE SCHEDULE REPORTING REQUIREMENTS

1. The Discharger shall prepare and submit the following to the San Diego Water Board within 30 days after each compliance date specified in Table 5 of this TSO:
 - a. A written submission detailing compliance or noncompliance with the specific schedule date and task;
 - b. If noncompliance is being reported, the written submission shall contain a description of the noncompliance and its cause, steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance; and the anticipated time the noncompliance is expected to continue. The Discharger shall also notify the San Diego Water Board within 30 days by letter when it returns to compliance with the time schedule.

2. The Discharger shall prepare and submit quarterly progress reports of efforts taken by the Discharger towards completing the milestones specified in Table 5 of this TSO and terminating the discharge to Escondido Creek. The reports shall summarize 1) the progress to date; 2) the activities conducted during that quarter; 3) the activities planned for the upcoming quarters; 4) information regarding all delays encountered or anticipated that may affect the future schedule for completion of the actions required; and 5) a description of all efforts made to mitigate those delays or anticipated delays. The reports shall also state whether or not the Facility was in compliance with the interim effluent limitations during the reporting period. Each quarterly report shall be received by the San Diego Water Board by the 15th day of the first month following the reporting period

(January 15, April 15, July 15, and October 15). The first progress report shall be received by the San Diego Water Board by October 15, 2015, and will cover the months of August 1, 2015 through September 30, 2015. Submission of these progress reports shall continue until compliance is achieved.

E. PROVISIONS

1. All technical and monitoring reports required by this TSO are in accordance with Water Code sections 13267 and 13383. The San Diego Water Board needs this information to determine compliance with the TSO and Order No. R9-2015-0026. The Discharger is already subject to similar reporting requirements pursuant to Order No. R9-2015-0026. Therefore, the burdens, including costs, of these reports bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
2. Any person signing a document submitted under this TSO shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”
3. If the Discharger fails to comply with any provision of this TSO, the San Diego Water Board may take any further action authorized by law. The Executive Officer, or his/her delegee, is authorized to take appropriate enforcement action pursuant, but not limited to, Water Code sections 13350 and 13385. The San Diego Water Board may also refer any violations to the Attorney General for judicial enforcement, including injunction and civil monetary remedies.
4. The San Diego Water Board may reopen this TSO at its discretion or at the request of the Discharger, if warranted. Lack of progress towards compliance with this TSO may be cause for the San Diego Water Board to modify the conditions of this TSO.
5. This TSO becomes effective on August 1, 2015 and expires on July 31, 2020.

Exhibit J (Page 11 of 11)

City of Escondido
Hale Avenue Resource Recovery Facility
Escondido Creek

Time Schedule Order No. R9-2015-0027
NPDES NO. CA0108944

I, David W. Gibson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, San Diego Region, on June 24, 2015.



David W. Gibson
Executive Officer

Exhibit K
United States Bureau of Reclamation Title
VXI Grant

Exhibit K

The terms and conditions of the United States Bureau of Reclamation Title VXI Grant has not been finalized by the US Bureau of Reclamation. When the terms and conditions of the Title VXI Grant have been approved and finalized, that document shall be Exhibit K to this Agreement and incorporated herein as if originally included.