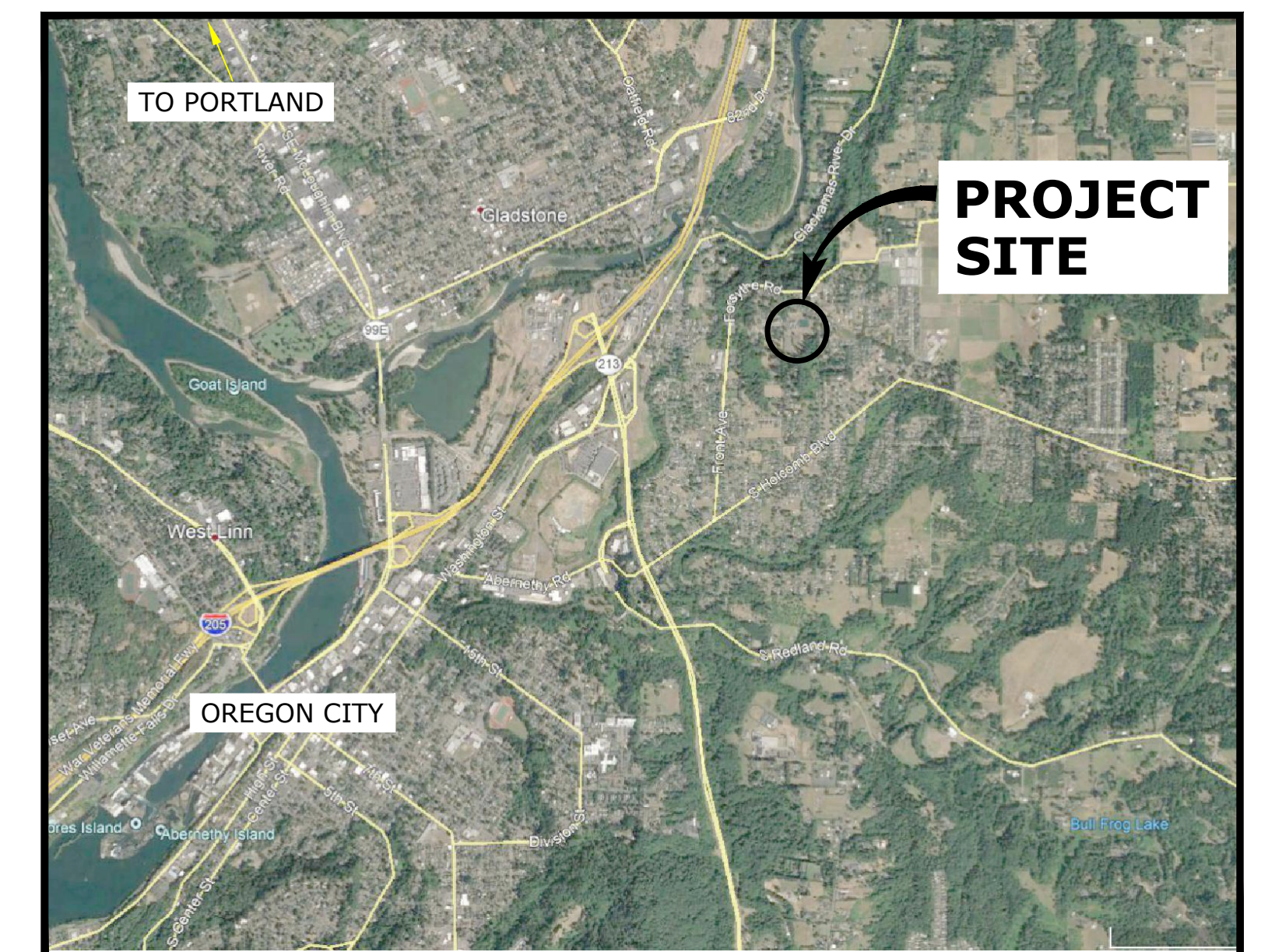
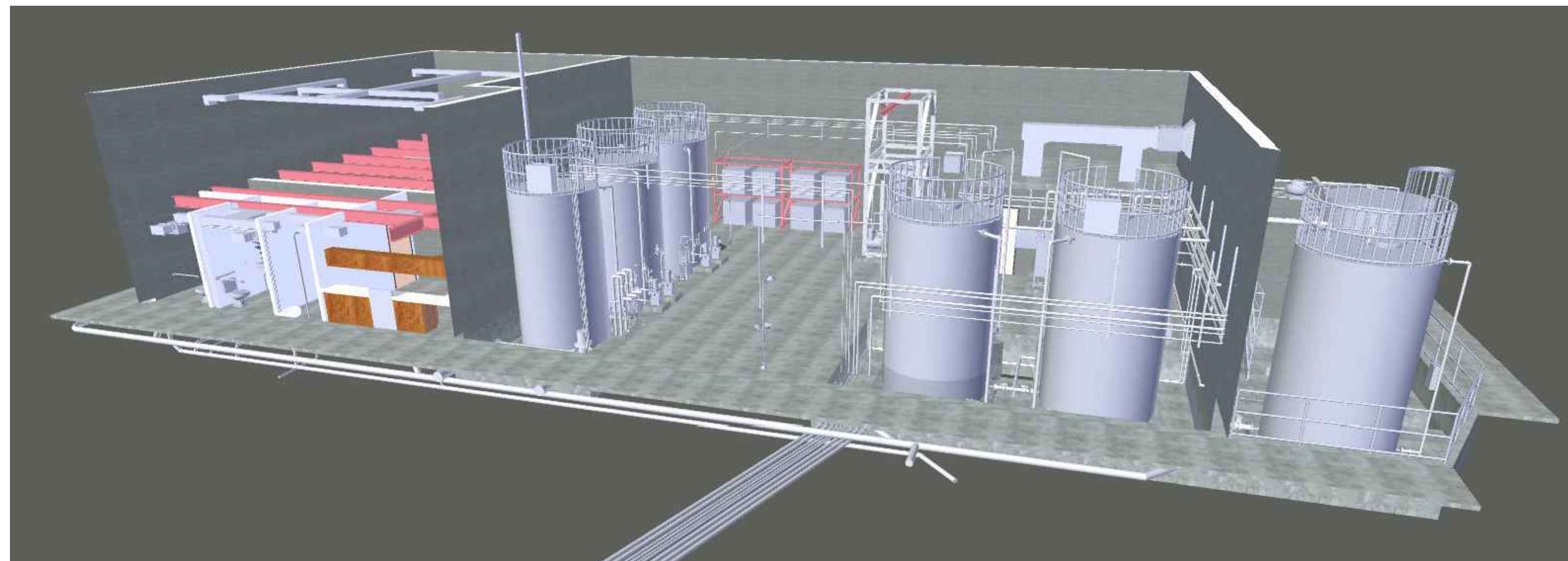




WATER QUALITY SYSTEMS BUILDING

AUGUST 2026
SFWB WATER QUALITY
SYSTEMS BUILDING

BID SET



VICINITY MAP
SCALE: NTS



\\EgnyteDrive\Conisor Files_V-W\Projects\OR\South Fork Water\2025\W253326OR.00\12 CADD\12-5 Sheets\SHEET INDEX.dwg G-001 7/29/2026 11:49 AM JUSTIN.DEUEL 24:3s (LMS Tech)

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DISCIPLINE

G	GENERAL
C	CIVIL
ESC	EROSION & SEDIMENT CONTROL
TR	TREE PRESERVATION, REMOVAL, & MITIGATION
L	LANDSCAPE
S	STRUCTURAL
A	ARCHITECTURAL
P	PLUMBING
M	MECHANICAL
H	HVAC
E	ELECTRICAL
I	INSTRUMENTATION & CONTROLS
GE	GENERAL ELECTRICAL
GS	GENERAL STRUCTURAL

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2	ELEVATIONS (vertical views)
3	SECTIONS (sectional views, wall sections)
4	LARGE-SCALE VIEWS (plans, elevations, stair sections, or sections that are not details)
5	DETAILS
6	SCHEDULES AND DIAGRAMS
7	USER DEFINED (for types that do not fit into any categories, including typical detail sheets)
8	USER DEFINED (for types that do not fit into any categories)
9	3D REPRESENTATIONS (isometrics, perspectives, photographs)

NO.	DATE	BY	REVISION

NOTICE

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

KKS
DESIGNED
JLC
DRAWN
ANB
CHECKED

REGISTERED PROFESSIONAL
ENGINEER
86408BE
OREGON
SEPTEMBER 12, 2011
ADAM N. BLAIR
RENEWS 12-31-27

BID SET

consor

Stantec

South Fork
WATER
PURE WATER SINCE 1915

WATER QUALITY SYSTEMS BUILDING

GENERAL

SHEET INDEX

SHEET

G-001

PROJECT NO.:	W253326OR	SCALE:	AS SHOWN	DATE:	AUGUST 2026
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@	AT	CMU	CONCRETE MASONRY UNIT	FM	FORCE MAIN	KW	KILOWATT	PROP	PROPERTY	TEMP	TEMPERATURE / TEMPORARY
AABC	ASSOCIATED AIR BALANCE COUNCIL	CND	CONDUIT	FO	FIBER OPTIC	KWY	KEYWAY	PRV	PRESSURE REDUCING VALVE	T&G	TONGUE & GROOVE
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS	CO	CLEANOUT	FOC	FACE OF CONCRETE	L	LENGTH	PS	PUMP STATION/PRIMARY SLUDGE	THK	THICK / THICKNESS
AB	ANCHOR BOLT	COAG	COAGULANT	FOF	FACE OF FINISH	LAB	LABORATORY	PSIG	POUNDS PER SQUARE INCH GAUGE	THRD	THREAD (ED)
ABE	AERATION BASIN EFFLUENT	COL	COLUMN	FOM	FACE OF MASONRY	LAV	LAVATORY	PSL	PIPE SLEEVE	THRU	THROUGH
ABI	AERATION BASIN INFLUENT	COMB	COMBINATION	FOS	FACE OF STUDS	LB	POUND	PSPT	PIPE SUPPORT	TOC	TOP OF CONCRETE
ABAN(D)	ABANDON(ED)	CONC	CONCRETE	FPM	FEET PER MINUTE	LF	LINEAR FOOT	PV	PLUG VALVE	TOG	TOP OF GRATING
ABS	ACRYLONITRILE BUTADIENE STYRENE	CONN	CONNECTION	FPS	FEET PER SECOND	LIN	LINEAL	PVC	POLYVINYL CHLORIDE	TOW	TOP OF WALL
ABV	ABOVE / ALCOHOL BY VOLUME	CONST	CONSTRUCTION	FRP	FIBERGLASS REINFORCED PLASTIC	LOC	LOCATION	PVMT	PAVEMENT	TP	TEST PIT / TOP OF PAVEMENT / TURNING POINT
ABV	ABOVE / ALCOHOL BY VOLUME	CONT	CONTINUOUS / CONTINUATION	FT	FEET / FOOT	LONG	LONGITUDINAL	PWR	POWER		
AC	ASPHALTIC CONCRETE	CONTR	CONTRACT(OR)	FTG	FOOTING	LP	LOW PRESSURE			TRANS	TRANSITION
ACP	ASPHALTIC CONCRETE PAVING	COOC	CITY OF OREGON CITY	FUT	FUTURE	LPT	LOW POINT	QTY	QUANTITY	TST	TOP OF STEEL
ADJ	ADJUSTABLE	COORD	COORDINATE	FXTR	FIXTURE	LRG	LARGE			TW	TOP OF WALL
ADJC	ADJACENT	COP	COPPER			LS	LONG SLEEVE / LUMP SUM	RAD	RADIUS	TYP	TYPICAL
AFF	ABOVE FINISHED FLOOR	CORP	CORPORATION	G	GAS	LT	LEFT	RC	REINFORCED CONCRETE	UG	UNDERGROUND
AFG	ABOVE FINISHED GRADE	CORR	CORRUGATED	GA	GAUGE	LVL	LEVEL	RCP	REINFORCED CONCRETE PIPE	UH	UNIT HEATER
AHR	ANCHOR	CP	CONTROL POINT	GAL	GALLON	LWL	LOW WATER LINE	RD	ROAD / ROOF DRAIN	UN	UNION
AL	ALUMINUM	CPLG	COUPLING	GALV	GALVANIZED			RDCR	REDUCER	UON	UNLESS OTHERWISE NOTED
ALT	ALTERNATE	CPVC	CHLORINATED POLYVINYL CHLORIDE	GC	GROOVED COUPLING	MAN	MANUAL	REF	REFERENCE	USGS	UNITED STATES GEOLOGIC SURVEY
AMP	AMPERE	CR	CRUSHED ROCK	GFA	GROOVED FLANGE ADAPTER	MAT	MATERIAL	REINF	REINFORCE(D)(ING)(MENT)	UW	UTILITY WATER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	CRZ	CRITICAL ROOT ZONE	GI	GALVANIZED IRON	MAU	MAKEUP AIR UNIT	REQ'D	REQUIRED		
		CS	COMBINED SLUDGE	GIP	GALVANIZED IRON PIPE	MAX	MAXIMUM	RESTR	RESTRAINED		
APPROX	APPROXIMATE	CSP	CONCRETE SEWER PIPE	GJ	GRIP JOINT	MCC	MOTOR CONTROL CENTER	RFCA	RESTRAINED FLANGE COUPLING	V	VENT / VOLT
APPVD	APPROVED	CT	COURT	GL	GLASS	MCP	MASTER CONTROL PANEL		ADAPTER	VAC	VACUUM
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	CTR	CENTER	GLV	GLOBE VALVE	MECH	MECHANICAL	RM	ROOM	VB	VACUUM BREAKER
ARCH	ARCHITECTURAL	CU	CUBIC	GND	GROUND	MET	METAL	RND	ROUND	VBOX	VALVE BOX
ARV	AIR RELEASE VALVE	CULV	CULVERT	GPD	GALLONS PER DAY	MFR	MANUFACTURER	RO	ROUGH OPENING	VC	VERTICAL CURVE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	CV	CONTROL VALVE	GPH	GALLONS PER HOUR	MGD	MILLION GALLONS PER DAY	R/W	RIGHT-OF-WAY	VERT	VERTICAL
		CW	CLOCKWISE / COLD WATER	GPM	GALLONS PER MINUTE	MH	MANHOLE	RPBD	REDUCED PRESSURE BACKFLOW PREVENTION DEVICE	VFD	VARIABLE FREQUENCY DRIVE
ASSN	ASSOCIATION	CY	CUBIC YARDS	GPS	GALLONS PER SECOND	MIN	MINIMUM			VOL	VOLUME
ASSY	ASSEMBLY	CYL	CYLINDER LOCK	GR	GRIT	MIPT	MALE IRON PIPE THREAD	RPM	REVOLUTIONS PER MINUTE	VCP	VITRIFIED CLAY PIPE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS			GR LN	GRADE LINE	MISC	MISCELLANEOUS	RR	RAILROAD	VTR	VENT THROUGH ROOF
		DC	DIRECT CURRENT	GRTG	GRATING	MJ	MECHANICAL JOINT	RST	REINFORCED STEEL		
ATM	ATMOSPHERE	DEFL	DEFLECTION	GV	GATE VALVE	MON	MONUMENT / MONOLITHIC	RT	RIGHT	W1	POTABLE WATER
AUTO	AUTOMATIC	DET	DETAIL	GRVL	GRAVEL	MOT	MOTOR			W2	NON-POTABLE WATER
AUX	AUXILIARY	DI	DUCTILE IRON	GYP	GYPSUM	MP	MILEPOST	SALV	SALVAGE	W/	WITH
AVE	AVENUE	DIA	DIAMETER			MSL	MEAN SEAL LEVEL	SAN	SANITARY	W/IN	WITHIN
AVG	AVERAGE	DIM	DIMENSION			MTD	MOUNTED	SC	SOLID CORE	W/O	WITHOUT
AWWA	AMERICAN WATER WORKS ASSOCIATION	DIR	DIRECTION	HB	HOSE BIBB			SCE	SECONDARY CLARIFIER EFFLUENT	W/W	WALL TO WALL
		DIST	DISTANCE	HDPE	HIGH DENSITY POLYETHYLENE	NA	NOT APPLICABLE	SCHED	SCHEDULE	WD	WOOD
B&S	BELL & SPIGOT	DN	DOWN	HDR	HEADER	NC	NORMALLY CLOSED	SCM	SCUM	WF	WIDE FLANGE
BC	BOLT CIRCLE	DR	DRAIN	HDWE	HARDWARE	NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU	SCRN	SCREENINGS	WH	WATER HEATER
BF	BOTH FACE	DS	DIGESTER SLUDGE	HGR	HANGER			SD	STORM DRAIN	WI	WROUGHT IRON
BFD	BACKFLOW PREVENTION DEVICE	DWG	DRAWING	HGT	HEIGHT	NF	NEAR FACE	SDL	SADDLE	WM	WATER METER
BFILL	BACKFILL	DWL	DOWEL	HH	HANDHOLD	NIC	NOT IN CONTRACT	SDR	STANDARD DIMENSION RATIO	WP	WORKING POINT / WATERPROOFING
BFV	BUTTERFLY VALVE	DWV	DRAIN WASTE AND VENT	HM	HOLLOW METAL	NO / NO.	NORMALLY OPEN / NUMBER	SECT	SECTION	WS	WATER SERVICE
BHP	BRAKE HORSEPOWER	DWY	DRIVEWAY	HMAC	HOT MIX ASPHALT CONCRETE	NOM	NOMINAL	SHLDR	SHOULDER	WT	WEIGHT
BKGD	BACKGROUND			HNDRL	HANDRAIL	NORM	NORMAL	SHT	SHEET	WTP	WATER TREATMENT PLANT
BLDG	BUILDING	E OR ELEC	ELECTRICAL	HOA	HAND-OFF-AUTO	NRS	NON-RISING STEM	SIM	SIMILAR	WTRT	WATERTIGHT
BLVD	BOULEVARD	EA	EACH	HOR	HAND-OFF-REMOTE	NTS	NOT TO SCALE	SLP	SLOPE	WWF	WELDED WIRE FABRIC
BM	BENCHMARK / BEAM	ECC	ECCENTRIC	HORIZ	HORIZONTAL			SLV	SLEEVE	WQS/	
BMP	BEST MANAGEMENT PRACTICES	EFC	EACH FACE	HP	HIGH PRESSURE / HORSEPOWER	O TO O	OUT TO OUT	SOLN	SOLUTION	WQSB	WATER QUALITY SYSTEMS BUILDING
BO	BLOW-OFF	EL	ELEVATION	HPT	HIGH POINT	OC	ON CENTER / OREGON CITY	SP	SOIL PIPE / SEWER PIPE		
BOC	BACK OF CURB	ELB	ELBOW	HPG	HIGH PRESSURE GAS	OD	OUTSIDE DIAMETER	SPCL	SPECIAL	X SECT	CROSS SECTION
BS	BOTH SIDES / BRINE SOLUTION	ENCL	ENCLOSURE	HPT	HIGH POINT	OF	OVERFLOW / OUTSIDE FACE	SPEC(S)	SPECIFICATION(S)	XFMR	TRANSFORMER
BSMT	BASEMENT	EOP	EDGE OF PAVEMENT	HR	HOUR	OPNG	OPENING	SPG	SPACING		
BTF	BOTTOM FACE	EQ	EQUAL	HSB	HIGH STRENGTH BOLT	OPP	OPPOSITE	SPL	SPOOL	YD	YARD DRAIN / YARD
BTU	BRITISH THERMAL UNIT	EQL SP	EQUALLY SPACED	HV	HOSE VALVE	ORIG	ORIGINAL	SPRT	SUPPORT	YH	YARD HYDRANT
BV	BALL VALVE	EQUIP	EQUIPMENT	HVAC	HEATING, VENTILATION, AIR CONDITIONING	OSHG	ONSITE SODIUM HYPOCHLORITE GENERATION	SQ	SQUARE	YR	YEAR
BW	BOTH WAYS	ESMT	EASEMENT			OVHD	OVERHEAD	SQ FT	SQUARE FOOT		
		EW	EACH WAY	HW	HOT WATER			SQ IN	SQUARE INCH		
C	CELSIUS	EXC	EXCAVATE	HWL	HIGH WATER LINE			SQ YD	SQUARE YARD	ZN	ZINC
C TO C	CENTER TO CENTER	EXIST	EXISTING	HWY	HIGHWAY	P&ID	PROCESS & INSTRUMENTATION DIAGRAM	SS	SANITARY SEWER		
CA	COMPRESSED AIR	EXP	EXPANSION	HYD	HYDRANT	PA	PROCESS AIR	SST	STAINLESS STEEL		
CAK	BIOSOLIDS CAKE	EXP BT	EXPANSION BOLT	HYDR	HYDRAULIC	PC	POINT OF CURVE	ST	STREET		
CARV	COMBINATION AIR RELEASE VALVE	EXP JT	EXPANSION JOINT			PCC	POINT OF COMPOUND CURVE	STA	STATION		
CAS	CAUSTIC SODA	EXT	EXTERIOR	I&C	INSTRUMENTATION & CONTROL	PCVC	POINT OF CURVATURE ON VERTICAL CURVE	STD	STANDARD		
CATV	CABLE TELEVISION			ID	INSIDE DIAMETER			STL	STEEL		
CB	CATCH BASIN	F	FAHRENHEIT	IE	INVERT ELEVATION	PERF	PERFORATED	STOR	STORAGE		
CCP	CONCRETE CYLINDER PIPE	F TO F	FACE TO FACE	IF	INSIDE FACE	PERM	PERMANENT	STR	STRAIGHT		
CCW	COUNTER CLOCKWISE	FAB	FABRICATE	IMPVT	IMPROVEMENT	PERP	PERPENDICULAR	STRUCT	STRUCTURE / STRUCTURAL		
CFM	CUBIC FEET PER MINUTE	FB	FLAT BAR	IN	INCH	PG	PRESSURE GAUGE	SUBMG	SUBMERGED		
CFS	CUBIC FEET PER SECOND	FCA	FLANGED COUPLING ADAPTER	INCC	INCLUDE(D)(ING)	PH	PIPE HANGER	SUCT	SUCTION		
CHAN	CHANNEL	FCO	FLOOR CLEANOUT	INFL	INFLUENT	PI	PRIMARY INFLUENT	SV	SOLENOID VALVE		
CHEM	CHEMICAL	FD	FLOOR DRAIN	INJ	INJECTION	PIVC	POINT OF INTERSECTION ON VERTICAL CURVE	S/W	SIDEWALK		
CHFR	CHAMFER	FDN	FOUNDATION	INSTL	INSTALLATION / INSTALL			SWD	SIDEWATER DEPTH		
CHKV	CHECK VALVE	FE	FINAL EFFLUENT	INSUL	INSULATION	PL OR P/L	PROPERTY LINE / PLATE / PLASTIC	SWGR	SWITCH GEAR		
CI	CAST IRON	FEXT	FIRE EXTINGUISHER	INTR	INTERIOR	PLBG	PLUMBING	SYMM	SYMMETRICAL		
CIP	CAST IRON PIPE	FF	FAR FACE/FINISHED FLOOR	INV	INVERT	PLE	PLANE END	SYS	SYSTEM		
CIPC	CAST IN PLACE CONCRETE	FGL	FIBERGLASS	IP	IRON PIPE	PNL	PANEL				
CISP	CAST IRON SOIL PIPE	FH	FIRE HYDRANT	IP	IRON PIPE	POC	POINT OF CURVATURE	T OR TEL	TELEPHONE		
CJ	CONSTRUCTION JOINT	FIN	FINISH(ED)	IP	IRON PIPE	POL	POLYMER	T&B	TOP & BOTTOM		
CL OR C/L	CENTER LINE	FIP	FEMALE IRON PIPE THREAD	IR	IRON ROD	POLY	POLYETHYLENE	TAN	TANGENCY		
CL2	CHLORINE	FITG	FITTING	IRRIG	IRRIGATION	PP	POWER POLE	TB	THRUST BLOCK		
CLG	CEILING	FL	FLOOR LINE			PRC	POINT OF REVERSE CURVATURE	TBM	TEMPORARY BENCHMARK		
CLJ	CONTROL JOINT	FLEX	FLEXIBLE	JT	JOINT	PREP	PRECAST	TC	TOP OF CONCRETE / TOP OF CURB		
CLR	CLEAR	FLG	FLANGE	JUNC	JUNCTION	PRESS	PRESSURE	TCE	TEMPORARY CONSTRUCTION EASEMENT		
CLSM	CONTROLLED LOW STRENGTH MATERIAL	FLL	FLOW LINE	KPL	KICK PLATE	PRKG	PARKING	TDH	TOTAL DYNAMIC HEAD		
CMP	CORRUGATED METAL PIPE	FLR	FLOOR	KVA	KILOVOLT AMPERE						

				NOTICE 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE		KKS DESIGNED JLC DRAWN ANB CHECKED		REGISTERED PROFESSIONAL ENGINEER 86408BE SEPTEMBER 12, 2019 ADAM N. BLAIR RENEWS 12-31-27		BID SET				 PURE WATER SINCE 1915 WATER QUALITY SYSTEMS BUILDING				GENERAL ABBREVIATIONS				SHEET G-002	
NO.				DATE		BY		REVISION		PROJECT NO.: W253326OR				SCALE:		AS SHOWN		DATE:		AUGUST 2026			

\\EgnyteDrive\Conisor Files_-W\Projects\OR\South Fork Water\2025\W253326OR.00\12 CADD\12-5 Sheets\G-004 GENERAL NOTES - 1.dwg G-004 7/29/2026 10:46 AM JUSTIN.DEUEL 24.3s (LMS Tech)

GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO MOST RECENT EDITION OF THE ODOT/APWA OREGON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS ADOPTED AND MODIFIED BY THE CITY OF OREGON CITY.
2. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND LICENSES BEFORE STARTING CONSTRUCTION. A CITY BUSINESS LICENSE IS REQUIRED.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND ARRANGE FOR THE RELOCATION OF ANY UTILITIES IN CONFLICT WITH THE PROPOSED CONSTRUCTION. THE LOCATIONS, DEPTH AND DESCRIPTION OF EXISTING UTILITIES SHOWN WERE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. THE ENGINEER OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. ADDITIONAL UTILITIES MAY EXIST WITHIN THE WORK AREA.
4. OREGON LAW REQUIRES THAT THE RULES ADOPTED BY OREGON UTILITY NOTIFICATION CENTER BE FOLLOWED. THOSE RULES ARE SET FORTH IN OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER OR ACCESSING VIA INTERNET AT WWW.CALLBEFOREYOU.DIG.ORG OR CALL BEFORE YOU DIG (800) 332-2344.
5. THE CONTRACTOR SHALL MAKE PROVISIONS TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED UTILITIES USING MATERIALS AND METHODS APPROVED BY THE UTILITY OWNER. NO SERVICE INTERRUPTIONS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN AGREEMENT WITH THE UTILITY PROVIDER.
6. ALL WATER LINE CROSSINGS SHALL BE IN CONFORMANCE WITH OAR CHAPTER 333. THE CITY MAY REQUIRE MORE STRINGENT STANDARDS.
7. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER AND CITY OF OREGON CITY PUBLIC WORKS CONSTRUCTION INSPECTOR STAFF 48 HOURS IN ADVANCE OF STARTING CONSTRUCTION AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS, EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS.
8. CONTRACTOR SHALL REMOVE AND DEPOSE OF TREES, STUMPS, BRUSH, ROOTS, TOPSOIL, AND OTHER MATERIAL IN THE ROADWAY AND WHERE INDICATED ON THE PLANS. MATERIAL SHALL BE DISPOSED OF IN SUCH A MANNER AS TO MEET ALL APPLICABLE REGULATIONS. CONTRACTOR SHALL ENSURE RECIPIENTS OF FILL MATERIALS REMOVED OFFSITE ARE PERMITTED TO RECEIVE SAID MATERIALS REGARDLESS OF THE RECEIVING JURISDICTION. CITY REQUIRES A GRADING PERMIT PER OREGON CITY MUNICIPAL CODE CHAPTER 15.48 FOR A SINGLE SITE TO RECEIVE OVER 10 CUBIC YARDS OF MATERIAL UNLESS THE GRADING WORK IS ALREADY COVERED IN ANOTHER CONSTRUCTION PERMIT. CONTRACTOR IS RESPONSIBLE FOR MEETING OTHER JURISDICTIONS' GRADING/FILL REQUIREMENTS WHEN APPROPRIATE.
9. CONSTRUCTION VEHICLES INCLUDING TRAILERS SHALL PARK ON THE CONSTRUCTION SITE OR AT A LOCATION(S) INDICATED ON THE APPROVED PLAN. THIS INCLUDES ALL SUBCONTRACTORS' VEHICLES AND TRAILERS. HOURS OF CONSTRUCTION SHALL BE 7 AM TO 6 PM, MONDAY THROUGH FRIDAY; 9 AM TO 6 PM SATURDAY. CONSTRUCTION IS PROHIBITED ON SUNDAY. CONSTRUCTION ACTIVITIES INCLUDE ALL FIELD MAINTENANCE OF EQUIPMENT, REFUELING, AND PICK-UP AND DELIVERY OF EQUIPMENT AS WELL AS THE ACTUAL CONSTRUCTION ACTIVITY.
10. THE CONTRACTOR SHALL SUBMIT A 15% MAINTENANCE BOND/GUARANTEE AS REQUIRED BY THE CITY OF OREGON CITY. THE AMOUNT OF THE GUARANTEE IS 15% OF THE PUBLIC IMPROVEMENTS COST.
11. THE CONTRACTOR SHALL KEEP AN APPROVED SET OF PLANS ON THE PROJECT SITE AT ALL TIMES.
12. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT "REDLINE DRAWINGS" TO PROJECT ENGINEER FOR PREPARATION OF RECORD DRAWINGS. "REDLINE DRAWINGS" DOCUMENT ALL DEVIATIONS AND REVISIONS TO THE APPROVED PLANS; THEY ALSO RECORD A DESCRIPTION OF CONSTRUCTION MATERIALS ACTUALLY USED (PIPE MATERIAL, ETC.). FROM THE INFORMATION CONTAINED ON THESE REDLINE DRAWINGS, AS WELL AS ANY NOTES RECORDED BY THE PROJECT ENGINEER, THE PROJECT ENGINEER SHALL PREPARE AND SUBMIT RECORD DRAWINGS TO PUBLIC WORKS ENGINEERING DEVELOPMENT SERVICES (PAPER COPY FIRST FOR CITY APPROVAL AND THEN HIGH-RESOLUTION ELECTRONIC PDF FILE AS DIRECTED BY CITY STAFF). RECORD DRAWINGS ARE REQUIRED FOR ANY PUBLIC IMPROVEMENTS, AS WELL AS FOR ANY (PUBLIC OR PRIVATE) STORMWATER MANAGEMENT QUANTITY OR QUALITY CONTROL FACILITY. CITY ACCEPTANCE OF ANY PUBLIC IMPROVEMENTS ARE TIED TO THE SUBMITTAL OF THESE RECORD DRAWINGS. CAD-GENERATED PLANS SHALL ALSO HAVE ELECTRONIC RECORD DRAWINGS SUBMITTED TO THE CITY IN COMPLIANCE WITH THE DIGITALMAPPING REQUIREMENTS. COMPLY WITH LATEST CITY STANDARD FOR AS-BUILT RECORD DRAWINGS AND SURVEY.
13. CONTRACTOR SHALL ERECT AND MAINTAIN TEMPORARY TRAFFIC CONTROL PER THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), PART 6, AND DEVIATIONS TO THE MUTCD AS ADOPTED AND MODIFIED BY ODOT. SHOULD WORK BE IN AN EXISTING PUBLIC RIGHT OF WAY THAT IS OPEN TO TRAFFIC, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO APPROPRIATE CITY, COUNTY, AND STATE PERSONNEL FOR APPROVAL. APPROVALS SHALL BE OBTAINED PRIOR TO START OF WORK.
14. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET THE INTENT OF THE PROJECT CONTRACT DOCUMENTS, APPLICABLE AGENCY REQUIREMENTS AND OTHER WORK AS NECESSARY TO PROVIDE A COMPLETE PROJECT.

15. THERE SHALL BE NO ALTERATION OR VARIANCE FROM THE APPROVED PLANS. THE MINIMUM SUBMITTAL REQUIREMENTS FOR PLAN REVISIONS ARE AS FOLLOWS:
 - PLAN REVISIONS SHALL BE SUBMITTED ON AN 8½" X 11" SHEET (MINIMUM) WITH A 2" BY 2" BLOCK SPACE FOR CITY APPROVAL; AND
 - PLAN REVISION SHALL BE WET STAMPED AND SIGNED BY PROJECT ENGINEER, AND
 - ANY REQUIRED ENGINEERING CALCULATIONS, OR OTHER AGENCY APPROVALS, SHALL BE INCLUDED WITH THE SUBMITTED REVISION.
 - UPON APPROVAL OF THE SUBMITTED REVISIONS, THE CITY ENGINEER SHALL AFFIX AN APPROVAL STAMP TO THE REVISED PLAN SKETCH AND THE PLAN SHALL BE RETURNED TO THE PROJECT ENGINEER. IT IS THE RESPONSIBILITY OF THE PROJECT ENGINEER TO DISTRIBUTE THE APPROVED PLAN REVISION TO ALL PARTIES TO WHOM THE ORIGINAL APPROVED PLANS WERE ISSUED. ALL APPROVED REVISIONS SHALL BE AFFIXED TO THE CONSTRUCTION FIELD PRINTS (ALSO KNOWN AS THE CONTRACTOR'S "REDLINE DRAWINGS").
16. CONTRACTOR SHALL PROVIDE EFFECTIVE EROSION PROTECTION TO INCLUDE, BUT NOT LIMITED TO, GRADING, DITCHING, HAY BALES, SILT FENCING, AND SEDIMENT BARRIERS TO MINIMIZE EROSION AND IMPACT TO ADJACENT PROPERTY. SEE SEPARATE EROSION AND SEDIMENT CONTROL NOTES AND APPROVED PLANS.
17. OPEN TRENCHES SHALL BE STRICTLY LIMITED TO A MAXIMUM OF 100 LINEAR FEET WITHIN ACTIVE STREET RIGHTS-OF-WAY UNLESS LIMITED TO A LESSER AMOUNT BY PERMIT. NO TRENCHES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT. USE OF STEEL PLATES OVERNIGHT SHALL BE KEPT TO A MINIMUM AND IF USED SHALL BE FIRMLY SECURED WITH PINS AND COLD OR HOT A/C MIX.
18. CONTRACTOR SHALL MAINTAIN AND COORDINATE ACCESS TO ALL AFFECTED PROPERTIES.
19. ANY PAVEMENT DISTORTION CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE TEMPORARILY REPAIRED SAME DAY OF OCCURRENCE (OR IN A TIME PERIOD AGREED TO WITH THE CITY INSPECTOR), USING COLD OR HOT A/C MIX. OWNER/CONTRACTOR SHALL BE REQUIRED TO MAINTAIN REPAIRED AREAS UNTIL CITY FINAL ACCEPTANCE IS GRANTED.
20. IF GROUND WATER SPRINGS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE PROJECT ENGINEER. THE PROJECT ENGINEER SHALL DIRECT THE CONTRACTOR TO TAKE MEASURES TO ENSURE THAT WATER IS NOT CONVEYED THROUGH UTILITY TRENCHES AND THE NATURAL FLOW PATH OF THE SPRING IS ALTERED AS LITTLE AS PRACTICABLE. THE PROJECT ENGINEER SHALL SUBMIT A REPORT SUMMARIZING THE FINDING TO THE CITY. IMPACTS AND MITIGATION SHALL BE ADDRESSED FOR CITY APPROVAL.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS BEFORE THE START OF WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS AND OTHERWISE VERIFY ALL DIMENSIONS AND EXISTING CONSTRUCTION CONDITIONS INDICATED AND/OR SHOWN ON THE PLANS. SHOULD ANY ERROR OR INCONSISTENCY EXIST, THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK AFFECTED UNTIL REPORTED TO THE PROJECT ENGINEER FOR CLARIFICATION OR CORRECTION.
22. ANY INSPECTION BY THE CITY, COUNTY, STATE, FEDERAL AGENCY OR PROJECT ENGINEER SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN COMPLIANCE WITH THE APPLICABLE CODES, REGULATIONS, CITY STANDARDS AND PROJECT CONTRACT DOCUMENTS.
23. PROJECT PLANS SHALL ALWAYS HAVE AN ENGINEER-OF-RECORD PERFORMING THE FUNCTION OF PROJECT ENGINEER. IF THE PROJECT ENGINEER IS CHANGED DURING THE COURSE OF THE WORK, THE CITY SHALL BE NOTIFIED IN WRITING AND THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT ENGINEER HAS AGREED TO ACCEPT THE RESPONSIBILITIES OF THE PROJECT ENGINEER. THE NEW PROJECT ENGINEER SHALL PROVIDE WRITTEN NOTICE OF ACCEPTING PROJECT RESPONSIBILITY TO THE CITY WITHIN 72 HOURS OF ACCEPTING THE POSITION AS PROJECT ENGINEER.
24. FOR UTILITY TRENCHES 12-FEET IN DEPTH AND UNDER; COMPLETE A MINIMUM OF ONE COMPACTION DENSITY TEST AT APPROXIMATELY ONE HALF OF THE TRENCH DEPTH AND AN ADDITIONAL TEST AT OR NEAR THE SURFACE. FOR TRENCHES OVER 12-FEET IN DEPTH; COMPLETE ONE COMPACTION DENSITY TEST AT APPROXIMATELY 4-FEET ABOVE THE PIPE, ONE TEST AT OR NEAR THE SURFACE AND ONE ADDITIONAL TEST APPROXIMATELY HALF WAY IN BETWEEN. COMPACTION DENSITY TESTS SHALL BE PERFORMED AT A MINIMUM EVERY 100 FEET.
25. ALL EXISTING PIPE 6 INCHES IN DIAMETER AND GREATER THAT ARE REQUIRED TO BE ABANDONED IN PLACE SHALL BE FILLED WITH CLSM, CDF OR OTHER MATERIAL AS APPROVED BY THE CITY ENGINEER.
- SANITARY SEWER NOTES:
1. ALL TRENCH EXCAVATION SHALL BE IN CONFORMANCE WITH OREGON CITY STANDARD DRAWING FOR PIPE BEDDING AND BACKFILL, AND SHALL BE CLASSIFIED AS EITHER ROCK OR COMMON EXCAVATION. ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE DISPOSED OF TO AN APPROVED SITE.
2. PIPE BEDDING AND TRENCH BACKFILL MAY BE CLASS A ON ALL SEWER LINES OUTSIDE PUBLIC STREETS OR OUTSIDE OF PAVED AREAS. TRENCH BACKFILL SHALL BE CLASS B IN ALL PUBLIC STREETS OR PAVED AREAS IN THE PROJECT AS OUTLINED IN OREGON CITY STANDARD DRAWING FOR PIPE BEDDING AND BACKFILL. THE CLASS B BACKFILL SHALL EXTEND A MINIMUM OF THREE FEET (3') BEYOND THE EDGE OF STREET OR HARD SURFACED AREAS. CDF BACKFILL MAY BE REQUIRED INSTEAD OF CLASS B AS APPLICABLE PER OREGON CITY PAVEMENT CUT STANDARD.
3. TRENCH BACKFILL COMPACTION SHALL BE 95% OF AASHTO T-180 MODIFIED PROCTOR FROM TOP OF PIPE ZONE UP TO ROAD BASE. CONTRACTOR TO DETERMINE TYPE OF EQUIPMENT AND METHOD TO USE TO ACHIEVE THE REQUIRED COMPACTION. 95% COMPACTION, AASHTO T-180, IS REQUIRED IN PUBLIC STREETS AND PAVED AREAS, 85% COMPACTION OF AASHTO T-99 IN NON-PAVED OR UNIMPROVED AREAS.

4. SUBSEQUENT SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY OF OREGON CITY.
5. ALL SEWER LINES SHALL BE TESTED AND VIDEO INSPECTED BY THE CONTRACTOR PER LATEST EDITION OF APWA/ODOT OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION WITH THE FOLLOWING EXCEPTIONS:
 - ALL LINES SHALL BE VIDEO INSPECTED DOWNSTREAM, WITH THE FLOW.
 - WATER SHALL BE INTRODUCED TO THE LINES PRIOR TO VIDEO INSPECTION TO ASSIST IN LOCATING BELLIES AND DEFORMATIONS OF THE PIPE.
 - A 1" REFERENCE BALL SHALL BE MOUNTED IN FRONT OF THE CAMERA, IN FULL VIEW, IN THE INVERT OF THE PIPE TO FACILITATE DETERMINING COMPLIANCE WITH THE STANDARDS. FOR PIPE SIZES 4" THRU 15", DEVIATIONS SHALL NOT EXCEED 1/32 INCH PER INCH OF PIPE DIAMETER. FOR PIPE SIZES 16" THRU 72", DEVIATIONS SHALL NOT EXCEED 1/2 INCH.
 - CONTROL THE FLOW INTO THE SEGMENT TO BE TESTED. IF REQUIRED, PERFORM BYPASS PUMPING.
 - SERVICE LATERALS SHALL BE VIDEO INSPECTED FROM THE CLEANOUT TO THE MAINLINE.
 - PIPE VIDEO SHALL BE SUBMITTED TO THE CITY ON A FLASH DRIVE OR DVD ONLY.
6. ALL MANHOLES SHALL BE VACUUM TESTED PER APWA/ODOT OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION.
7. PAVEMENT RESURFACING, WHERE REQUIRED SHALL CONFORM TO OREGON CITY PAVEMENT CUT STANDARDS OR THE CONTRACT DOCUMENTS, WHICHEVER IS GREATER.
8. PROJECT ENGINEER OF RECORD RESERVES THE RIGHT TO ADJUST GRADES OR ALIGNMENT TO ACCOMMODATE OTHER UTILITIES AS REQUIRED; SUCH ADJUSTMENTS SHALL BE REVIEWED BY THE CITY OF OREGON CITY ENGINEERING STAFF, AND APPROVED BY THE CITY PRIOR TO COMMENCING WORK.
9. ALL PVC SEWER PIPE SHALL CONFORM TO ASTM D3034, SDR35 SPECIFICATIONS AND SHALL BE CLEARLY MARKED AS SUCH AND SHALL PROVIDE A MINIMUM OF 4' OF COVER (MEASURED FROM TOP OF PIPE TO FINISHED GRADE); UNLESS THE COVER REQUIREMENT CANNOT BE MET, IN WHICH CASE THE PIPE MATERIAL SHALL BE CHANGED TO PVC C-900 SDR 25 OR APPROVED EQUAL.
10. ALL MANHOLES LOCATED IN UNIMPROVED EASEMENTS AND RIGHT OF WAYS SHALL BE PROVIDED WITH TAMPER PROOF LIDS, BE INSTALLED TWO FEET (2') ABOVE EXISTING GRADE AND MARKED WITH A MARKER POST PER OREGON CITY STANDARDS UNLESS OTHERWISE NOTED.
11. SANITARY SEWER LINES CROSSING LESS THAN 12 INCHES ABOVE OR BELOW ANOTHER PUBLIC UTILITY SHALL BE CONSTRUCTED WITH PVC C-900 OR APPROVED EQUAL, WITH A COMPLETE STICK OF PIPE, CENTERED AT THE CROSSING.
12. MANHOLE WORKMANSHIP: ALL MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH APWA/ODOT OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ALL APPLICABLE OREGON CITY STANDARD DRAWINGS.
13. ALL SANITARY SEWER SERVICE LATERALS SHALL HAVE A 2-WAY CLEANOUT PER OREGON CITY STANDARD DRAWINGS.
14. SANITARY SEWERS CROSSING A WATER MAIN SHALL BE MADE AT APPROXIMATELY 90 DEGREES TO THE WATERLINE ALIGNMENT, HAVE EIGHTEEN (18) INCHES MINIMUM VERTICAL CLEARANCE CROSSING UNDER WATERLINE, AND ONE FULL PIPE LENGTH CENTERED AT WATERLINE CROSSING.
- STORM DRAIN NOTES:
1. PIPE RULES:
 - TEN-INCH DIAMETER PIPE OR SMALLER SHALL BE PVC STORM DRAINPIPE CONFORMING TO EITHER ASTM D-3034, OR SEAMLESS PVC PIPE CONFORMING TO ASTM F794 UNLESS OTHERWISE NOTED ON THE APPROVED PLANS. CONCRETE PIPE CONFORMING TO ASTM C-14, CLASS 3 IS ALSO ACCEPTABLE. WATERTIGHT GASKETS ARE REQUIRED ON ALL PIPE SIZES.
 - TWELVE-INCH THROUGH 48-INCH DIAMETER PIPE (FOR STORM DRAIN PIPE – BUT NOT FOR CULVERTS) MAY BE ONE OF THE FOLLOWING, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS:
 - CLASS V REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76. WATER TIGHT JOINTS REQUIRED. WHEN USED IN PUBLIC RIGHT-OF-WAY THERE MUST BE ONE-FOOT MINIMUM COVER FROM ROADWAY SUBGRADE.
 - DUCTILE IRON; CLASS 50 WALL THICKNESS FOR PIPE SIZES UP TO 12 INCHES; CLASS 51 WALL THICKNESS FOR 14 INCH AND LARGER; WATER TIGHT GASKETS REQUIRED. WHEN USED IN PUBLIC RIGHT-OF-WAY THERE MUST BE TWO-FOOT MINIMUM COVER FROM ROADWAY SUBGRADE UNLESS CLASS 52 IS USED ALLOWING A ONE-FOOT MINIMUM COVER.
 - CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE (HDPE) – SMOOTH INTERIOR (ADS N- 12 OR EQUIVALENT, MAXIMUM 30-INCH DIAMETER CONFORMING TO AASHTO M-294) (WITH WATERTIGHT GASKETS). WHEN USED IN PUBLIC RIGHT-OF-WAY THERE MUST BE TWO- FOOT MINIMUM COVER FROM ROADWAY SUBGRADE. CONCRETE HEADWALLS/TREATMENTS ARE REQUIRED FOR ANY EXPOSED ENDS.

- POLYVINYL CHLORIDE (PVC), SEAMLESS, SEWER PIPE: (SDR 35, MEETING REQUIREMENTS OF ASTM D3034 FOR PIPES UP TO 15-INCH), (ASTM F-679 FOR PIPES 18 TO 27 INCHES), (ASTM F- 794 FOR PIPES UP TO 30 INCHES), (AWWA C-900 DR 18 FOR UP TO 12-INCH), (AWWA C-900 DR 21 FOR PIPES 14 TO 30-INCHES). WHEN USED IN PUBLIC RIGHT-OF-WAY, THE MINIMUM COVER SHALL BE TWO-FOOT MINIMUM COVER FROM ROADWAY SUBGRADE, EXCEPT FOR C-900, WHICH REQUIRES ONE-FOOT MINIMUM COVER FROM ROADWAY SUBGRADE. WATER TIGHT GASKETS REQUIRED. CONCRETE HEADWALLS/TREATMENTS ARE REQUIRED FOR ANY EXPOSED ENDS.
- C. PERFORATED PIPE SHALL BE HDPE PIPE CONFORMING TO AASHTO M-294 OR PVC PIPE CONFORMING TO EITHER ASTM D3034 OR ASTM 2729, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS OR STANDARD DRAWINGS.
- D. CULVERT PIPE SHALL BE CLASS V REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS. WHEN USED IN PUBLIC RIGHT-OF-WAY THERE MUST BE ONEFOOT MINIMUM COVER FROM ROADWAY SURFACE.
2. ALL TRENCH EXCAVATION SHALL BE IN CONFORMANCE WITH OREGON CITY STANDARD DRAWING FOR PIPE BEDDING AND BACKFILL, AND SHALL BE CLASSIFIED AS EITHER ROCK OR COMMON EXCAVATION. ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE DISPOSED OF TO AN APPROVED SITE.
3. PIPE BEDDING AND TRENCH BACKFILL MAY BE CLASS A ON ALL SEWER LINES OUTSIDE PUBLIC STREETS OR OUTSIDE OF PAVED AREAS. TRENCH BACKFILL SHALL BE CLASS B IN ALL PUBLIC STREETS OR PAVED AREAS IN THE PROJECT AS OUTLINED IN OREGON CITY STANDARD DRAWING FOR PIPE BEDDING AND BACKFILL. THE CLASS B BACKFILL SHALL EXTEND A MINIMUM OF THREE FEET (3') BEYOND THE EDGE OF STREET OR HARD SURFACED AREAS. CDF BACKFILL MAY BE REQUIRED INSTEAD OF CLASS B AS APPLICABLE PER OREGON CITY PAVEMENT CUT STANDARD.
4. TRENCH BACKFILL COMPACTION SHALL BE 95% OF AASHTO T-180 MODIFIED PROCTOR FROM TOP OF PIPE ZONE UP TO ROAD BASE. CONTRACTOR TO DETERMINE TYPE OF EQUIPMENT AND METHOD TO USE TO ACHIEVE THE REQUIRED COMPACTION. 95% COMPACTION, AASHTO T-180, IS REQUIRED IN PUBLIC STREETS AND PAVED AREAS, 85% COMPACTION OF AASHTO T-99 IN NON- PAVED OR UNIMPROVED AREAS.
5. MANHOLE WALLS SHALL BE PRECAST REINFORCED CONCRETE MANHOLES OF THE SIZE REQUIRED PER MANUFACTURER'S RECOMMENDATIONS FOR THE PIPE SIZES AND NUMBER OF OPENINGS.
6. BOX CULVERT SHALL BE PRECAST REINFORCED BOX CULVERT SECTIONS MEETING THE REQUIREMENTS OF ASTM C-850, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
7. IF DRAINAGE FIELD TILE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE CITY'S INSPECTOR. THE INTENT WILL BE TO CONNECT ANY FUNCTIONING DRAIN TILE SYSTEM TO THE STORM DRAIN SYSTEM IN AN APPROPRIATE MANNER. SUCH CONNECTION MUST BE NOTED ON THE AS-BUILT DRAWINGS AND MUST BE APPROVED BY THE PROJECT ENGINEER AS WELL AS THE CITY'S INSPECTOR.
8. ALL HOUSE SERVICE STUBOUTS SHALL BE A MINIMUM OF THREE FEET (3') BEYOND EASEMENT OR RIGHT- OFWAY LINE AND SHALL BE MARKED WITH A PRESSURE TREATED 2" X 4" (PAINTED WHITE WITH THE LABEL OF "STM") FOR FUTURE LOCATION. SERVICE STUBOUTS SHALL BE A MINIMUM OF 6-INCH DIAMETER PIPE AT MINIMUM SLOPE OF 1%. CURB SHALL BE STAMPED ABOVE STORM SERVICE WITH THE LABEL "ST". TRACER WIRE SHALL BE INSTALLED WITH SERVICE STUBOUTS.
9. ALL MANHOLES LOCATED IN UNIMPROVED EASEMENTS AND RIGHT OF WAYS SHALL BE PROVIDED WITH TAMPER PROOF LIDS, BE INSTALLED TWO FEET (2') ABOVE EXISTING GRADE AND MARKED WITH A MARKER POST PER OREGON CITY STANDARDS UNLESS OTHERWISE NOTED.
10. ALL MATERIALS INSPECTIONS AND TESTS ARE TO BE IN ACCORDANCE WITH CITY OF OREGON CITY AND/OR ODOT/APWA STANDARD SPECIFICATIONS. ALL SECTIONS FAILING TO PASS THE REQUIRED TESTS AND INSPECTIONS SHALL BE LOCATED AND REPAIRED. AFTER REPAIR, THESE SECTIONS SHALL BE RETESTED AND INSPECTED UNTIL FOUND ACCEPTABLE BY THE CITY.
11. ALL STORM PIPING SHALL BE VIDEO INSPECTED BY THE CONTRACTOR PER LATEST EDITION OF ODOT/APWA STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND SUBMITTED TO THE CITY INSPECTOR WITH A WRITTEN REPORT. BEFORE ACCEPTANCE BY THE CITY, STORMWATER PIPE SHALL BE SHOWN CLEAR OF ANY DEBRIS, ROCKS, GRAVEL, SAND, SILT, OTHER FOREIGN MATERIAL, AND GRADE/ALIGNMENT DEVIATIONS IN EXCESS OF THE STANDARD SPECIFICATIONS. ALL STORM PIPING SHALL BE VIDEO INSPECTED PER NOTE 5 OF THE SANITARY SEWER NOTES.
12. CONTRACTOR REQUIRED TO INSTALL "PROTECTING YOUR NEIGHBORHOOD STREAM" SIGNAGE AT ALL PUBLIC WATER QUALITY FACILITIES. SIGNS CAN BE PURCHASED FROM CITY OF OREGON CITY PUBLIC WORKS, CONTACT THE WASTEWATER/STORMWATER MANAGER AT 971-204-4600. MOUNT THE SIGN TO AN 8' LONG BY 6-INCH X 4-INCH TREATED LUMBER POST WHICH IS SET IN CONCRETE AND BURIED A MINIMUM 30" IN THE GROUND. SIGN SHALL FACE PUBLIC STREET, SIDEWALK, ETC.

COOC STD NOTES VERSION (12/31/2025)

				NOTICE 012 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE		KKS DESIGNED JLC DRAWN ANB CHECKED		REGISTERED PROFESSIONAL ENGINEER 86408BE SEPTEMBER 12, 2026 OREGON ADAM N. BLAIR RENEWES 12-31-27		BID SET		consor Stantec		South Fork WATER PURE WATER SINCE 1915 WATER QUALITY SYSTEMS BUILDING				GENERAL GENERAL NOTES - 1				SHEET G-004	
NO.	DATE	BY	REVISION									PROJECT NO.: W253326OR		SCALE: AS SHOWN		DATE: AUGUST 2026							

\\EgnyteDrive\Conisor Files_-W\Projects\OR\South Fork Water\2025\W253326OR.00\12 CADD\12-5 Sheets\GENERAL NOTES - 2.dwg G-005 7/29/2026 10:46 AM JUSTIN.DEUEL 24.3s (LWS Tech)

WATER SYSTEM NOTES:

1. ALL WORK AND MATERIALS SHALL COMPLY WITH THE APPLICABLE SECTIONS OF CITY OF OREGON CITY PUBLIC WORKS STANDARDS, OREGON STATE HEALTH DIVISION ADMINISTRATIVE RULES, CHAPTER 333, RECENT EDITION OF AWWA STANDARD SPECIFICATIONS AND ODOT/APWA STANDARD SPECIFICATIONS FOR CONSTRUCTION.
2. WATERLINE SHALL BE DUCTILE IRON PIPE, FACTORY CEMENT-MORTAR LINED AND SEAL- COATED, CONFORM WITH LATEST REVISION OF ANSI/AWWA C151/A21.5, ANSI/AWWA C104/A21.4, ANSI/AWWA C111/A21.11, AND ASTM A536, AND BE STANDARD THICKNESS CLASS 52 UNLESS SPECIFIED OTHERWISE. FULL PIPE SECTIONS SHALL BE 18 FEET IN LENGTH. ALL TEES, BENDS, VALVES AND BLOW-OFF LOCATIONS SHALL BE RESTRAINED WITH MEGA-LUG FOLLOWER, OR APPROVED EQUAL. PUSH-ON TYPE JOINTS SHALL BE RESTRAINED WITH FIELD-LOK GASKET, OR APPROVED EQUAL.
3. ALL PIPE SHALL HAVE A MINIMUM COVER OF 36 INCHES BELOW THE FUTURE FINISHED GRADES IN EASEMENTS AND STREET RIGHTS-OF-WAY UNLESS SPECIFIED OTHERWISE OR OTHER MEASURES ARE APPROVED BY THE CITY ENGINEER. PIPES TWELVE (12) INCHES AND LARGER SHALL HAVE A DEPTH OF FORTY EIGHT (48) INCHES OR GREATER AS DETERMINED AND APPROVED BY THE SFWB STAFF.
4. GATE VALVES SHALL BE DUCTILE IRON BODY, CONFORM TO LATEST REVISION OF AWWA C509, AND SHALL BE UL LISTED AND FM APPROVED. BUTTERFLY VALVES SHALL BE DUCTILE IRON BODY AND CONFORM TO AWWA C-504.
5. COPPER TUBING SHALL BE TYPE "K" SOFT FOR 1" SERVICE LINES WITH A 5/8X3/4" OR 3/4" OR 1" WATER COPPER SHALL BE TYPE "L" RIGID FOR 2" SERVICE LINES WITH EITHER A 1-1/2" OR 2" WATER METER. SERVICE TAPS SHALL BE A MINIMUM 18-INCHES FROM WATER MAIN JOINTS AND FITTINGS, AND MINIMUM 18-INCHES FROM ANOTHER TAP.
6. FIRE HYDRANT ASSEMBLIES SHALL BE INSTALLED PER CITY STANDARD DRAWINGS. FIRE HYDRANTS SHALL BE CENTURION FIRE HYDRANT AS PRODUCED BY MUELLER CO., WITH A FIVE AND 1/4-INCH VALVE OPENING, THREE PORT NOZZLES, TWO 2-INCH HOSE NOZZLES, AND 4-INCH THREADED PUMPER NOZZLE. ALTERNATIVE FIRE HYDRANT MANUFACTURERS AND MODELS ARE: CLOW VALVE COMPANY, MEDALLION MODEL NO. F 2545 AND KENNEDY GUARDIAN K81-D. ALL FIRE HYDRANTS INSTALLED FOR A PARTICULAR PROJECT SHALL BE THE SAME MANUFACTURER AND MODEL.
7. FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ASTM A536, ANSI/AWWA C110/A21.10, ANSI/AWWA C104/A21.4, AND ANSI/AWWA C153/A21.53. FITTINGS SHALL HAVE CAST UPON THEM THE MANUFACTURER'S IDENTIFICATION, PRESSURE RATING, NOMINAL DIAMETERS OF OPENINGS, AND THE NUMBER OF DEGREES OR FRACTIONS OF A CIRCLE FOR ALL BENDS. FITTINGS SHALL BE COATED INSIDE WITH CEMENT MORTAR WITH AN ASPHALTIC SEAL-COAT. WHEN SPECIFIED, FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT (MJ) OR FLANGE JOINT (FLG) CONFORMING TO AWWA C153 AND C110.
8. ALL TEES, BENDS, VALVES AND BLOW-OFF LOCATIONS SHALL, UNLESS OTHERWISE NOTED, HAVE POURED IN PLACE CONCRETE THRUST BLOCKS CONFORMING TO THE CITY STANDARD DRAWINGS. ALL FITTINGS SHALL BE RESTRAINED WITH A MEGA-LUG FOLLOWER, OR APPROVED EQUAL.
9. ALL TRENCH EXCAVATION SHALL BE IN CONFORMANCE WITH OREGON CITY STANDARD DRAWING FOR PIPE BEDDING AND BACKFILL, AND SHALL BE CLASSIFIED AS EITHER ROCK OR COMMON EXCAVATION. ALL EXCESS MATERIAL FROM THE TRENCH EXCAVATION SHALL BE DISPOSED OF TO AN APPROVED SITE.
10. PIPE BEDDING AND TRENCH BACKFILL MAY BE CLASS A ON ALL WATER LINES OUTSIDE PUBLIC STREETS OR OUTSIDE OF PAVED AREAS. TRENCH BACKFILL SHALL BE CLASS B IN ALL PUBLIC STREETS OR PAVED AREAS IN THE PROJECT AS OUTLINED IN OREGON CITY STANDARD DRAWING FOR PIPE BEDDING AND BACKFILL. THE CLASS B BACKFILL SHALL EXTEND A MINIMUM OF THREE (3) FEET BEYOND THE EDGE OF STREET OR HARD SURFACED AREAS. CDF BACKFILL MAY BE REQUIRED INSTEAD OF CLASS B AS APPLICABLE PER OREGON CITY PAVEMENT CUT STANDARD.
11. TRENCH BACKFILL COMPACTION SHALL BE 95% OF AASHTO T-180 MODIFIED PROCTOR FROM TOP OF PIPE ZONE UP TO ROAD BASE. CONTRACTOR TO DETERMINE TYPE OF EQUIPMENT AND METHOD TO USE TO ACHIEVE THE REQUIRED COMPACTION. 95% COMPACTION, AASHTO T-180, IS REQUIRED IN PUBLIC STREETS AND PAVED AREAS, 85% COMPACTION OF AASHTO T-99 IN NON-PAVED OR UNIMPROVED AREA.
12. ALL SANITARY SEWER LINES WITHIN TEN (10) FEET Laterally OR EIGHTEEN (18) INCHES VERTICALLY OF A WATER MAIN SHALL BE ENCASED IN CONCRETE OR CONSTRUCTED OF DUCTILE IRON WATER PIPE WITH WATERTIGHT JOINTS.
13. SANITARY SEWERS CROSSING A WATER MAIN SHALL BE MADE AT APPROXIMATELY 90 DEGREES AND HAVE EIGHTEEN (18) INCHES OF VERTICAL CLEARANCE. OTHERWISE, THE SANITARY SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON WATER PIPE WITH WATERTIGHT JOINTS FOR A DISTANCE OF NINE (9) FEET FROM BOTH SIDES OF THE WATER LINE.
14. THE MAXIMUM ALLOWABLE JOINT DEFLECTION SHALL NOT EXCEED TWELVE (12) INCHES PER EIGHTEEN (18) FEET OF LAYING LENGTH.
15. THE VALVE STEM FOR BUTTERFLY VALVE SHALL BE LOCATED ON THE STREET CENTERLINE SIDE OF THE WATERLINE UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED IN THE FIELD. BUTTERFLY VALVES SHALL ONLY BE USED AS REPLACEMENTS OF EXISTING BUTTERFLY VALVES OR WHERE COVER IS LESS THAN FORTY EIGHT (48) INCHES AS DETERMINED AND APPROVED BY THE SFWB STAFF.

16. HYDROSTATIC TESTS: THE TEST SHALL CONFORM WITH AWWA C600, WITH THE EXCEPTION THAT THE TEST DURATION SHALL BE 60 MINUTES WITH ZERO LOSS IN PRESSURE ALLOWED. THE TEST PRESSURE SHALL BE 150 PSI AT THE HIGHEST POINT OF ELEVATION IN ANY SECTION OR ONE AND A HALF TIMES THE WORKING PRESSURE, AS DETERMINED BY THE ENGINEER. THE DURATION AND PRESSURE SHALL BE MONITORED BY SFWB STAFF. TEST GAUGE SHALL BE BOURDON TUBE PRESSURE GAUGE MODEL 332.54 LIQUID FILLED IN 1 PSI INCREMENTS OR EQUAL, AS APPROVED BY THE CITY ENGINEER.
17. DISINFECTION: PIPELINES SHALL BE FLUSHED AND DISINFECTED BEFORE PLACING INTO SERVICE. DISINFECTION SHALL CONFORM WITH AWWA C651. DISINFECTION OF THE WATER SYSTEM SHALL BE COMPLETED WITHIN 15 DAYS OF PASSING THE HYDROSTATIC TEST AND SHALL BEGIN ON A MONDAY OR A TUESDAY. SUPER-CHLORINATE THE NEW PIPELINE FOR A MINIMUM OF 24 HOURS, NO MORE THAN 36 HOURS. AFTER 24 HOURS THE CHLORINE CONCENTRATION MUST BE A MINIMUM OF 10 PPM, AT WHICH TIME THE PIPELINE IS FLUSHED UNTIL RESIDUAL CHLORINE LEVEL IS MET (NOMINAL 1 PPM). PIPELINE SHALL REMAIN IN STATIC CONDITION WITH DISTRIBUTION WATER (NOMINAL 1 PPM CHLORINE RESIDUAL) A MINIMUM OF 16 HOURS, THEN TAKE TWO (2) BACTERIOLOGICAL SAMPLES 15 MINUTES APART WHILE LEAVING THE WATER RUNNING AT THE SAMPLE LOCATIONS. HIGHLY CHLORINATED WATER USED FOR DISINFECTION SHALL NOT BE DISCHARGED INTO THE CITY'S MUNICIPAL SEPARATE STORM SEWER SYSTEM OR SURFACE WATERS. COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS CONCERNING DISCHARGE OF CHLORINATED WATER SHALL BE FOLLOWED. FINAL CONNECTIONS TO THE CITY WATER MAIN SHALL BE MADE WITHIN 2 WEEKS OF PASSING BACTERIOLOGICAL TESTING.
18. WATER LINE VALVE ABANDONMENT REQUIRES REMOVAL OF THE VALVE FROM THE TEE OR MAINLINE PIPING, IN ITS ENTIRETY. A FLANGE CAP, MJ PLUG OR MJ CAP SHALL BE INSTALLED AT THE REMOVAL POINT. COORDINATION WITH WATER OPERATIONS REQUIRED FOR WATER MAIN SHUTDOWN.
19. POTABLE WATER (BLUE) OMNI MARKER BALLS SHALL BE INSTALLED AT ALL HORIZONTAL BENDS AND OVER CENTER LINE OF PIPE AT NO GREATER THAN 100 LF INTERVALS.

STREET SYSTEM NOTES:

1. ENGINEERED FILL SHALL BE PLACED ON AREAS STRIPPED OF ALL ORGANIC MATERIALS IN LIFTS NOT TO EXCEED 8-INCHES IN DEPTH AND EACH LAYER SHALL BE SEPARATELY AND THOROUGHLY COMPACTED. FILL MATERIALS SHALL BE PLACED WITHIN 2% OF THE OPTIMUM MOISTURE AND NO LESS THAN 95% COMPACTION PER AASHTO T 180. CONTRACTOR SHALL SUBMIT TEST RESULTS TO THE ENGINEER OF RECORD AND CITY PUBLIC WORKS INSPECTOR.
2. MATERIAL IN SOFT SPOTS WITHIN THE ROADWAY SHALL BE REMOVED TO THE DEPTH REQUIRED TO PROVIDE A FIRM FOUNDATION AND SHALL BE REPLACED WITH 1-1/2"-0" CRUSHED ROCK. THE ENTIRE SUBGRADE SHALL BE THOROUGHLY COMPACTED AT THE LOWEST MOISTURE CONTENT AT WHICH A HANDFUL OF SOIL CAN BE MOLDED BY A FIRM CLOSING OF THE HAND. MINIMUM OF 95% COMPACTION AASHTO T 180 REQUIRED.
3. THE SUB GRADE SHALL BE COMPACTED PER ODOT/APWA PART 3, SECTION 00330. CONTRACTOR SHALL SUBMIT TEST RESULTS TO THE ENGINEER OF RECORD AND CITY PUBLIC WORKS INSPECTOR. THE REQUIRED DENSITY OF TREATED AND UNTREATED SUBGRADE MATERIALS SHALL NOT BE LESS THAN 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T 180.
4. CONTRACTOR SHALL NOTIFY THE ENGINEER AND CITY WHEN SUBGRADE IS COMPLETE, 24 HOURS PRIOR TO PLACEMENT OF ROCK BASE MATERIAL, AND 24 HOURS PRIOR TO FINAL PAYING FOR AN INSPECTION OF THE FAILURE TO DO SO WILL MAKE ANY SUBGRADE FAILURE OR DRAINAGE PROBLEMS THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE AGGREGATE ROAD BASE SHALL BE COMPACTED PER ODOT/APWA PART 6, SECTION 00640 AND WITH MATERIALS MAINTAINED WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT. CONTRACTOR SHALL BEGIN COMPACTION OF EACH LAYER IMMEDIATELY AFTER THE MATERIAL IS SPREAD AND CONTINUE UNTIL A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DENSITY HAS BEEN ACHIEVED USING AASHTO T 180. CONTRACTOR SHALL SUBMIT TEST RESULTS TO THE ENGINEER OF RECORD AND CITY PUBLIC WORKS INSPECTOR. TESTING FREQUENCY SHALL BE ONE TEST PER EVERY 100 LINEAR FEET MINIMUM AND MORE FREQUENTLY AT THE DISCRETION OF THE CITY PUBLIC WORKS INSPECTOR IF TESTS ARE NOT MEETING A MINIMUM OF 95% COMPACTION PER AASHTO T-180.
6. ASPHALT CONCRETE PAVEMENT MIX SHALL BE DESIGNED FROM A MIX FORMULA APPROVED BY ODOT FOR MATERIAL USED OR AS NOTED ON THESE PLANS. CONTRACTOR TO PROVIDE ENGINEER OF RECORD AND CITY WITH CERTIFICATE OF COMPLIANCE FROM ASPHALT PAVEMENT PLANT UNLESS OTHERWISE INDICATED.
7. THE ASPHALT CONCRETE PAVEMENT MIX SHALL BE COMPACTED PER ODOT/APWA PART 7, SECTION 00744 WITH TESTING BY NUCLEAR GAUGE TO AT LEAST 92% OF THEORETICAL MAXIMUM DENSITY (RICE DENSITY) PER AASHTO T 209 ON ALL LIFTS. CONTRACTOR SHALL SUBMIT TEST RESULTS TO THE ENGINEER AND CITY. TESTING FREQUENCY SHALL BE ONE TEST PER EVERY 100 LINEAR FEET MINIMUM AND MORE FREQUENTLY AT THE DISCRETION OF THE CITY PUBLIC WORKS INSPECTOR IF TESTS ARE NOT MEETING A MINIMUM OF 92% COMPACTION PER AASHTO T-209COMPACTED ¾"—0"— CRUSHED ROCK BASE COURSE.
8. EXCESS EXCAVATION MAY BE SPREAD AND COMPACTED EVENLY ON THE SITE IN DEPTHS OF LESS THAN ONE FOOT PER THE SITE GRADING PLAN. VEGETATION AND TOPSOIL TO BE STRIPPED ON FILL AREAS PRIOR TO FILLING. COMPACTION OF 95% OF AASHTO T 180 IS REQUIRED IN BUILDABLE AREAS. CONTRACTOR SHALL ACHIEVE 85% COMPACTION IN NON-BUILDABLE AREAS. PROPER CITY OR COUNTY FILL PERMIT SHALL BE OBTAINED IF EXCESS EXCAVATION IS HAULED OFF SITE.
9. MONUMENT BOX LOCATIONS SHALL BE PLACED AT THE BEGINNING, END, CENTERLINE INTERSECTION, POINT OF CURVATURE AND POINT OF TANGENCY FOR ALL STREETS, AND IN ACCORDANCE WITH CLACKAMAS COUNTY SURVEYOR STANDARDS. CONTACT PROJECT SURVEYOR FOR REQUIRED LOCATIONS. THE CONTRACTOR SHALL INSTALL THE MONUMENT BOXES IN STREET AREAS WHERE MARKED BY THE SURVEYOR AND IN ACCORDANCE WITH CLACKAMAS COUNTY MONUMENT STANDARDS AND CITY STREET STANDARDS.
10. ALL MATERIALS, INSPECTIONS, AND TESTS SHALL BE IN ACCORDANCE WITH CITY OF OREGON CITY STANDARD SPECIFICATIONS AND THE MOST RECENT EDITION OF THE OREGON ODOT/APWA STANDARD SPECIFICATIONS FOR CONSTRUCTION.
11. MONOLITHIC CURB AND GUTTER IS REQUIRED UNLESS OTHERWISE NOTED.
12. PROOF ROLL WITH A LOADED WATER TRUCK OR 10-11 CUBIC YARDS LOADED GRAVEL TRUCK IS REQUIRED PRIOR TO CURB PLACEMENT AND PRIOR TO PAVING.
13. CONTRACTOR SHALL INSTALL ADA RAMPS AND SIDEWALKS AS SHOWN IN ACCORDANCE WITH CITY STANDARD DRAWINGS.
14. ADA RAMPS AND SIDEWALKS SHALL BE A MINIMUM OF 4-INCH THICK CONCRETE WITH 2-INCHES OF COMPACTED ¾"—0"— CRUSHED ROCK BASE COURSE.
15. DRIVEWAY APPROACHES SHALL BE A MINIMUM OF 6-INCH THICK CONCRETE WITH 6-INCH BY 6- INCH 10 GAUGE STEEL MESH ON TOP OF BLOCKS OVER 2-INCHES OF COMPACTED ¾"—0"— CRUSHED ROCK BASE COURSE.
16. ALL CONCRETE SHALL BE AIR ENTRAINED, MINIMUM 4.5%, WITH A MINIMUM COMPRESSIVE BREAKING STRENGTH OF 4,000 PSI AFTER 28 DAYS.
17. PRIOR TO INSTALLATION OF CURB AND GUTTER, ADA RAMPS OR SIDEWALK, THE PROJECT ENGINEER OF RECORD AND CITY PUBLIC WORKS INSPECTOR SHALL BE CONTACTED TO INSPECT STRING LINE, FORMWORK, BASE COMPACTION, AND RELATED ITEMS.
18. EXISTING PRIVATE UTILITIES SHALL BE RELOCATED IF NECESSARY. CONTRACTOR SHALL COORDINATE THIS WORK.
19. ALL UTILITY CROSSINGS SHALL BE PLACED PRIOR TO PROOF ROLL TEST FOR CURB INSTALLATION. THE NUMBER OF CROSSINGS, EXACT LOCATION, DEPTH, CONDUIT TYPE, ETC. SHALL BE SPECIFIED BY THE PRIVATE UTILITY CARRIERS. CONTRACTOR SHALL COORDINATE.
20. CONTRACTOR SHALL CONTACT CITY PUBLIC WORKS INSPECTOR TO SCHEDULE PRE-PAVING CONFERENCE PRIOR TO COMMENCING PAVING OPERATIONS.

21. FURNISH A TWELVE-FOOT (12-FOOT) STRAIGHTEDGE. TEST WITH A TWELVE-FOOT (12-FOOT) STRAIGHTEDGE PARALLEL TO AND PERPENDICULAR TO THE CENTERLINE, AS DIRECTED. THE PAVEMENT SURFACE SHALL NOT VARY BY MORE THAN ONE-QUARTER-INCH (1/4 INCH). MARK AREAS NOT MEETING THE SURFACE TOLERANCE. THESE TOLERANCES SHALL APPLY WHEN WATER VALVE BOXES, MANHOLE CASTINGS AND OTHER UTILITY APPURTENANCES CAN BE ADJUSTED BEFORE OR DURING THE PAVING OPERATIONS.
22. ALL NEW CURB, SIDEWALK, ADA RAMPS AND DRIVEWAYS SHALL BE FREE OF CRACKS, CHIPS, SPALLS AND OTHER DEFECTS. ALL REPAIRS TO THESE FACILITIES REQUIRE REMOVAL AND REINSTALLATION, SUCH REMOVAL SHALL BE TO THE NEAREST CONTRACTION OR EXPANSION JOINT.
23. STOP BARS REQUIRED AT ALL STOP SIGNS.
24. PLACEMENT OF ASPHALT CONCRETE PAVEMENT PER ODOT STANDARD CONSTRUCTION SPECIFICATION 00744.40 WITH THE FOLLOWING EXCEPTIONS:
 - ACP PLACEMENT IS PROHIBITED DURING PERIODS OF PRECIPITATION. PRECIPITATION IS DEFINED AS (BUT NOT LIMITED TO) MIST, DRIZZLE, SHOWERS, RAIN, HAIL, SNOW, ETC.
 - 2 INCHES – 2 1/2 INCHES THICKNESS ACP PLACEMENT ALL YEAR: SURFACE TEMPERATURE SHALL BE A MINIMUM 40 DEGREES, AIR TEMPERATURE SHALL BE MINIMUM 40 DEGREES AND RISING TO A MINIMUM 43 DEGREES.

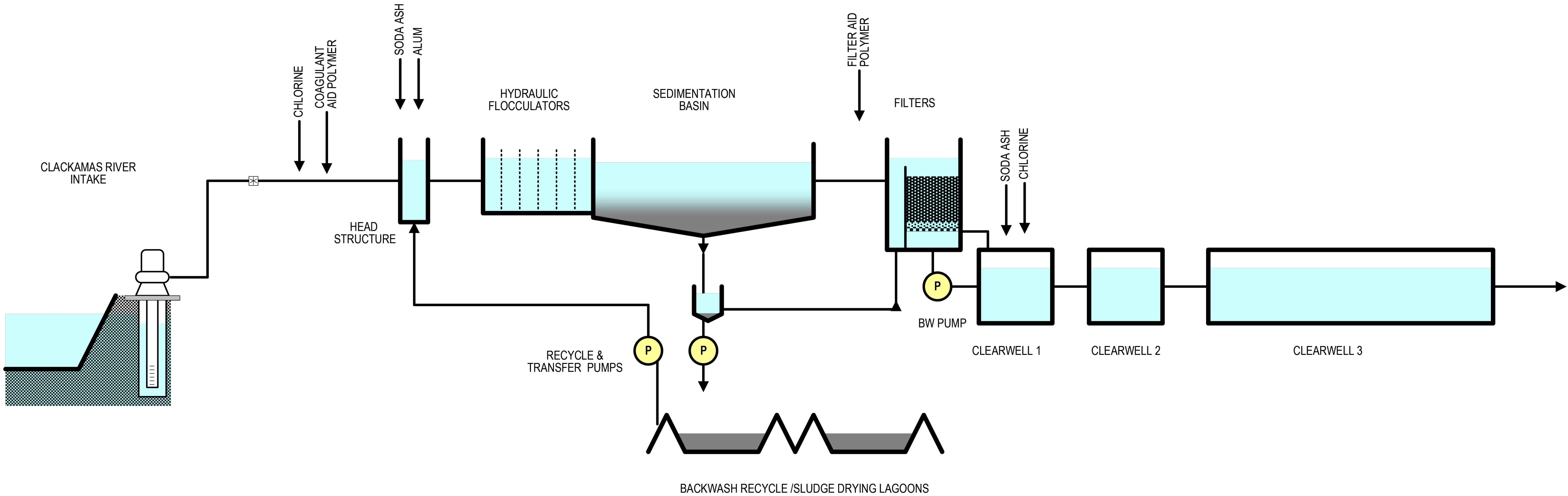
ENGINEERED GRADING NOTES

1. PROJECT GRADING LIMITS SHALL BE WITHIN THE PROJECT’S PROPERTY BOUNDARY AND/OR STREET RIGHT-OF WAY, UNLESS OTHERWISE SHOWN ON PLANS. NO GRADING SHALL BE CONDUCTED IN WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS UNLESS SPECIFICALLY SHOWN ON THE APPROVED PLANS.
2. THE IDENTIFICATION OR REMOVAL OF UNSUITABLE MATERIAL SHALL BE DONE WITH CONSULTATION WITH THE PROJECT ENGINEER OR PROJECT’S GEOTECHNICAL ENGINEER.
3. REMOVE AND DISPOSE OF ALL ORGANIC AND/OR UNSUITABLE MATERIALS, INCLUDING TREES, STUMPS, ROOTS, BRUSH, AND GRASS IN SUCH A MANNER TO MEET ALL APPLICABLE REGULATIONS. ON-SITE DISPOSAL SHALL BE AS DETERMINED BY THE PROJECT ENGINEER OR PROJECT’S GEOTECHNICAL ENGINEER.
4. STOCKPILE EXCESS SOIL MATERIAL ON-SITE AS DIRECTED BY THE PROJECT ENGINEER, PROJECT’S GEOTECHNICAL ENGINEER, OR APPROVED PLANS (UNLESS APPROVED PLANS IDENTIFY EXCESS EXCAVATION IS TO BE REMOVED FROM THE SITE).
5. THE CONTRACTOR SHALL PROTECT ALL TREES NOT SPECIFICALLY SHOWN TO BE REMOVED ON APPROVED PLANS.
6. GRADE THE SITE TO THE ELEVATIONS SHOWN ON THE DRAWING WITH THE NECESSARY ADJUSTMENTS TO ACCOMMODATE THE FINISH GRADES AS SPECIFIED. SHAPE FUTURE PAVED AREAS PER THE PLANS TO A SUBGRADE ELEVATION THAT WILL ACCOMMODATE FUTURE BASE ROCK AND PAVING.
7. STRAIGHT GRADES SHALL BE RUN BETWEEN FINISH GRADE AND/OR FINISH CONTOUR LINES SHOWN, UNLESS OTHERWISE NOTED. FINISH GRADES ARE TO DRAIN AS INDICATED ON THE PLANS. ROUGH GRADING SHALL BE FINISHED BY BLADING AND RAKING TO REASONABLE SMOOTH CONTOURS WITH GENTLE TRANSITIONS.
8. ALL CUT OR FILL SLOPES SHALL BE CONSTRUCTED AT NO STEEPER THAN FOUR (4) HORIZONTAL TO ONE (1) VERTICAL UNLESS OTHERWISE SHOWN ON APPROVED PLANS.
9. AREAS TO RECEIVE FILL MATERIALS SHALL BE PREPARED BY REMOVING ALL ORGANIC AND UNSUITABLE MATERIALS AND "PROOF ROLLED". BENCHING MAY BE REQUIRED. MATERIAL IN SOFT SPOTS WITHIN A PROPOSED BUILDING ENVELOPE, PAVED AREA, OR SIDEWALK AREA SHALL BE REMOVED TO THE DEPTH REQUIRED (AS DIRECTED BY THE PROJECT ENGINEER OR THE PROJECT’S GEOTECHNICAL ENGINEER) AND SHALL BE REPLACED WITH SUITABLE BACKFILL.
10. THE CONSTRUCTION OF STRUCTURAL FILLS AND/OR EXCAVATIONS CONNECTED WITH ANY PUBLIC IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE WRITTEN RECOMMENDATIONS MADE BY THE PROJECT’S GEOTECHNICAL ENGINEER IN AN APPROVED REPORT.
11. COMPACTION TESTS AND REPORTS FOR EACH LOT SHALL BE CONDUCTED BY AN APPROVED TESTING LABORATORY, TEST FREQUENCY SHALL BE PER THE PROJECT ENGINEER, OR PROJECT’S GEOTECHNICAL ENGINEER. TESTING TO COMMENCE WITH FILL ACTIVITIES AND AS A MINIMUM, ONE TEST WILL BE TAKEN FOR EVERY 500 CUBIC YARDS PLACED.
12. IF DUSTY CONDITIONS EXIST, THE PERMITTEE SHALL APPLY A FINE SPRAY OF WATER ON THE SURFACE TO CONTROL THE DUST.
13. ENGINEERED FILL IN THE BUILDING ENVELOPE SHALL BE CERTIFIED BY THE PROJECT ENGINEER. THIS CERTIFICATION SHALL BE SENT TO THE CITY BUILDING OFFICIAL UPON SUBMISSION OF THE BUILDING PERMIT IF IT HAS NOT ALREADY BEEN RECEIVED BY THE CITY BUILDING OFFICIAL.

COOC STD NOTES VERSION (12/31/2025)

				NOTICE 0 1/2 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	KKS DESIGNED JLC DRAWN ANB CHECKED	REGISTERED PROFESSIONAL ENGINEER 86408BE OREGON SEPTEMBER 12, 2015 ADAM N. BLAIR RENEWS 12-31-27	BID SET	consor Stantec	South Fork WATER PURE WATER SINCE 1915 WATER QUALITY SYSTEMS BUILDING	GENERAL GENERAL NOTES - 2				SHEET	G-005
NO.	DATE	BY	REVISION							PROJECT NO.:	W253326OR	SCALE:	AS SHOWN	DATE:	AUGUST 2026

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BASIS OF DESIGN

PLANT FLOW (SEE NOTE 1)

MIN FLOW	6	MGD
AVG FLOW	9	MGD
MAX FLOW	30	MGD
BUILDOUT FLOW	52	MGD

ON-SITE HYPOCHLORITE SYSTEM

CHLORINE DOSE

MIN DOSE	2	MG/L
AVG DOSE	3	MG/L
MAX DOSE	5	MG/L

ON-SITE HYPOCHLORITE GENERATION

NO. GENERATORS	2	EA
GENERATOR CAPACITY (EA)	900	PPD
CHLORINE SOLUTION STRENGTH	0.8	%

BRINE STORAGE

NO. BRINE TANKS	1	
BRINE TANK CAPACITY	7,100	GAL
DIAMETER	9	FT
HEIGHT	15	FT

SODIUM HYPOCHLORITE STORAGE

NO. STORAGE TANKS	2	
TANK CAPACITY, EA	10,000	GAL
DIAMETER	10.5	FT
HEIGHT	15	FT

DOSING PUMPS

TYPE	DIAPHRAGM (DOUBLE SIMPLEX)	
NO. OF PUMPS	3	EA
PUMP CAPACITY, EA	660	GPH

LIQUID ALUM (ALUMINUM SULFATE HYDRATE, 14) FEED SYSTEM

ALUM DOSE

MIN DOSE	4	MG/L
AVG DOSE, TYPICAL	5	MG/L (SEE NOTE 2)
AVG DOSE, RAIN ON SNOW	85	MG/L (SEE NOTE 2)
WEIGHTED AVG DOSE	10	MG/L (SEE NOTE 2)

ALUM STORAGE

SOLUTION STRENGTH	50	%
NO. OF BULK TANKS	2	EA
TANK CAPACITY, EA	6,000	GAL
DIAMETER	8.5	FT
HEIGHT	16	FT

DOSING PUMPS

TYPE	DIAPHRAGM (SIMPLEX)	
NO. OF PUMPS	2	EA
PUMP CAPACITY, EA	77	GPH

COAGULANT AID POLYMER (MAGNAFLOC LT-7990) FEED SYSTEM

POLYMER DOSE

MIN DOSE	0.5	MG/L
AVG DOSE	0.5	MG/L
MAX DOSE	1.8	MG/L

POLYMER STORAGE

SOLUTION STRENGTH	97	%
NO. OF BULK TANKS	1	EA
TANK CAPACITY, EA	6,000	GAL
DIAMETER	8.5	FT
HEIGHT	16	FT

DOSING PUMPS

TYPE	DIAPHRAGM (SIMPLEX)	
NO. OF PUMPS	2	EA
PUMP CAPACITY, EA	26	GPH (SEE NOTE 3)

SODA ASH FEED SYSTEM

SODA ASH FEED SYSTEM

MIN DOSE	4	MG/L
AVG DOSE	12	MG/L
MAX DOSE	41	MG/L (SEE NOTE 4)

SODA ASH STORAGE AND FEED SYSTEM

NO. VOLUMETRIC DRY FEEDERS	1 + 1 (FUTURE)	
CAPACITY (WEIGHT)	116	LB/HR
NO. BULK BAGS ON HOIST	1	EA
NO. BULK BAGS IN STORAGE	4	EA

SODA ASH MIXING TANK

NO. TANKS	1	EA
VOLUME	200	GAL

NOTES:

1. BASIS OF DESIGN CRITERIA FOR SELECTION OF CHEMICAL STORAGE SIZING IS MINIMUM 30 DAYS OF STORAGE AT BUILDOUT PLANT FLOW FOR AVERAGE DOSE CONDITIONS AND AVERAGE PLANT OPERATING HOURS (10 HOURS PER DAY). THIS CRITERIA DOES NOT APPLY TO STORAGE OF SODIUM HYPOCHLORITE.

2. DESIGN DOSE FOR LIQUID ALUM HAS BEEN SELECTED BASED ON A WEIGHTED AVERAGE DOSE FOR ASSUMED ANNUAL DURATIONS FOR TYPICAL PLANT WATER QUALITY AND PLANT WATER QUALITY DURING RAIN ON SNOW EVENTS. RAIN ON SNOW EVENTS THAT REQUIRE HIGHER ALUM DOSING ARE ASSUMED TO OCCUR 21 DAYS EACH YEAR DURING WINTER PLANT FLOWS AT MAX 10 MGD.

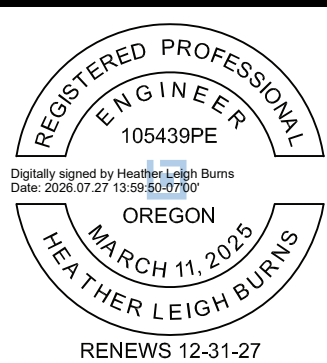
3. COAGULANT AID POLYMER WILL BE TRANSPORTED TO DOSING POINT WITH CARRIER WATER.

4. SODA ASH MAXIMUM DOSE CONDITIONS OCCUR DURING WINTER PLANT FLOWS CONCURRENT WITH MAXIMUM DOSE CONDITIONS FOR ALUM. PLANT FLOWS AT MAX DOSE (WINTER) CONDITIONS ARE ASSUMED 10 MGD.

NO.	DATE	BY	REVISION

NOTICE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

NDH
DESIGNED
JLC
DRAWN
HLB
CHECKED



BID SET



GENERAL			
PROCESS FLOW DIAGRAM			
PROJECT NO.:	W253326OR	SCALE:	AS SHOWN
DATE:	AUGUST 2026		

SHEET
G-006

\\EgnyteDrive\Conсор Files_V-W\Projects\OR\South Fork Water\2025\W253326OR.00\12 CADD\12-5 Sheets\PIPING SCHEDULE.dwg G-007 7/29/2026 10:46 AM JUSTIN.DEUEL 24.3s (LMS Tech)

PIPE SCHEDULE											
SERVICE	IDENTIFICATION	INSTALLATION	PIPE SIZE	PIPE MATERIAL	JOINT TYPE	PIPE WORKING PRESSURE	PIPE TEST PRESSURE	PIPE SPECIFICATION	COATING SPECIFICATION AND SYSTEM	PIPE COLOR	REMARKS
PROCESS PIPING											
ALUM	AL	I	1/2"	PVC	SW, FL, THD	130 PSI	200 PSI	40 05 13	09 90 00 - SYSTEM 104	ORANGE	
		I	3/8"	PBT	BARBED	130 PSI	200 PSI	40 05 13	09 90 00 - SYSTEM 104	ORANGE	ROUTE IN SCH 80 PVC CONDUIT
		BI	3/8"	PBT	BARBED	130 PSI	200 PSI	40 05 13	-	-	ROUTE IN SCH 80 PVC CONDUIT THROUGH UTILITY TRENCH
BRINE SOLUTION	BS	I	1/2-2"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	GREEN	
		O	2-4"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	WHITE	2"-BS TO SODIUM HYPOCHLORITE GENERATORS TO BE INSULATED AND HEAT TRACED. DO NOT COAT INSULATION.
COMPRESSED AIR	CA	I	1"	SST	THD	150 PSI	175 PSI	43 05 10	-	-	
STORM DRAIN	SD	S	8"	CLDI	FL, RMJ	25 PSI	50 PSI	33 11 10	09 90 00 - SYSTEM 102	DARK GREY	VERIFY IF SHOP PRIMED BEFORE SURFACE PREP PER SECTION 09 90 00
FLOC AID POLYMER	FAP	I	1/2"-3"	PVC	SW, FL, THD	175 PSI	200 PSI	40 05 13	09 90 00 - SYSTEM 104	ORANGE WITH GREEN BAND	
		I	1/4"	PBT	BARBED	175 PSI	200 PSI	40 05 13	09 90 00 - SYSTEM 104	ORANGE WITH GREEN BAND	ROUTE IN SCH 80 PVC CONDUIT
		BI	1/4"	PBT	BARBED	175 PSI	200 PSI	40 05 13	-	-	ROUTE IN SCH 80 PVC CONDUIT THROUGH UTILITY TRENCH
SODA ASH	SA	I	1-1/2"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	LIGHT GREEN WITH ORANGE BAND	
		BI	1-1/2"	PBT	BARBED	25 PSI	50 PSI	40 05 13	-	-	
		BI	2-1/2"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	-	-	
SODIUM HYPOCHLORITE	SHC	I	1"-3"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	YELLOW	
		I	1"	PBT	BARBED	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	YELLOW	ROUTE IN SCH 80 PVC CONDUIT
		BI	1"	PBT	BARBED	25 PSI	50 PSI	40 05 13	-	-	ROUTE IN SCH 80 PVC CONDUIT THROUGH UTILITY TRENCH
SOFTENED WATER	SW	I	1"-2"	PVC	SW, FL, THD	75 PSI	150 PSI	40 05 13	09 90 00 - SYSTEM 104	GREEN	
	SW	O	2"	PVC	SW, FL, THD	75 PSI	150 PSI	40 05 13	09 90 00 - SYSTEM 104	GREEN	2"-UW TO BRINE TANK TO BE INSULATED AND HEAT TRACED - DO NOT COAT INSULATION
UTILITY WATER	UW	I	1"-3"	PVC	SW, FL, THD	75 PSI	150 PSI	40 05 13	09 90 00 - SYSTEM 104	GREEN	
		I	1/2"	PBT	BARBED	75 PSI	150 PSI	40 05 13	-	-	
		B	3"	PVC	SW, FL, THD	75 PSI	150 PSI	40 05 13	-	-	
		B	6"	CLDI	FL, RMJ	75 PSI	150 PSI	33 11 10	-	-	SEE 33 11 10
VENT	VENT	I	6"-8"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	WHITE	DO NOT COAT PIPE WHERE NOTED TO BE CLEAR
		O	8"	PVC	SW, FL, THD	25 PSI	50 PSI	40 05 13	09 90 00 - SYSTEM 104	WHITE	
PLUMBING PIPING											
HOT WATER	HW	SEE PLUMBING SHEETS									
POTABLE WATER	PW										

INSTALLATION ABBREVIATIONS:

B BURIED
BI BURIED IN PVC CONDUIT
E ENCASE
I INSIDE EXPOSED
O OUTSIDE EXPOSED
S SUBMERGED

NOTES:

1. PLUMBING PIPING SHOWN FOR COORDINATION PURPOSES FOR PIPING ROUTING BETWEEN PLUMBING AND PROCESS SHEETS. DEFER TO PLUMBING SCHEDULES FOR FULL SPECIFICATIONS.
2. SEE CIVIL SHEETS FOR CIVIL PIPING.

PIPE MATERIAL ABBREVIATIONS:

CLDI CEMENT LINED DUCTILE IRON PIPE
CU COPPER PIPE
PVC POLYVINYL CHLORIDE
PBT POLY BRAIDED TUBING
SST STAINLESS STEEL

JOINT TYPE ABBREVIATIONS:

BARBED BARBED
FL FLANGED
RMJ RESTRAINED MECHANICAL JOINT
SW SOLVENT WELDED
THD THREADED

VALVE SCHEDULE										
VALVE NAME	VALVE ID	SERVICE ID(S)	INSTALLATION	SIZE	SPECIFIED VALVE NAME	WORKING PRESSURE	TEST PRESSURE	VALVE SPECIFICATION	ACTUATOR	REMARKS
PROCESS PIPING										
BUTTERFLY VALVE	BFV	BS	O	2"	PLASTIC BUTTERFLY VALVE	25 PSI	50 PSI	40 05 51	ELECTRIC	
BALL VALVE	BV	AL, FAP, SA, SHC, SW,	I	1/2"-3"	PLASTIC BALL VALVE	25 PSI	50 PSI	40 05 51	MANUAL	
		UW	I	1"-2"	PLASTIC BALL VALVE	75 PSI	150 PSI	40 05 51	MANUAL	
SOLENOID VALVE	SV	UW	I	2"	SOLENOID VALVE	75 PSI	150 PSI	40 05 51	ELECTRIC	
3-WAY VALVE	-	D	S	8"	3-WAY PLUG VALVE	25 PSI	150 PSI	40 05 51	MANUAL	

INSTALLATION ABBREVIATIONS:

I INSIDE EXPOSED
O OUTSIDE EXPOSED
S SUBMERGED

NO.	DATE	BY	REVISION

NOTICE

01/2

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

WK

DESIGNED

JLC

DRAWN

HLB

CHECKED

REGISTERED PROFESSIONAL ENGINEER

106439PE

Digitally signed by Heather Leigh Burns

Date: 2026.07.27 13:09:00Z

OREGON

MARCH 11, 2025

HEATHER LEIGH BURNS

RENEWS 12-31-27

BID SET

 consor

 Stantec

 South Fork WATER

PURE WATER SINCE 1915

WATER QUALITY SYSTEMS BUILDING

GENERAL

PIPING SCHEDULE

PROJECT NO.: W253326ORSCALE:AS SHOWNDATE:AUGUST 2026

SHEET

G-007