



# KLAMATH RIVER RENEWAL CORPORATION FALL CREEK FISH HATCHERY

VOLUME 2 - CONSTRUCTION DRAWINGS OCTOBER, 2020

ISSUED FOR CONSTRUCTION

### **DOUGLAS COUNTY** COOS COUNTY HAMEY COUNTY KLAMATH COUNTY MEDFORD JOSEPHINE COUNTY LAKE COUNTY CURRY COUNTY KLAMATH FALLS \*ALTAMONT ASHLAND **JACKSON COUNTY** CALIFORNIA CALIFORNIA NEVADA **PROJECT** COUNTY **LOCATION** - KLAMATH RIVER SISKIYOU COUNTY MODOC COUNTY WASHOE COUNTY SHASTA COUNTY LASSEN COUNTY TRINITY COUNTY RIVER | COUNTY REDDING • SUSANVILLE TENAMA RED BLUFF **PLUMAS COUNTY LOCATION MAP JACKSON COUNTY ASHLAND** PROJECT I **LOCATION** COPCO ROAD — OREGON CALIFORNIA COPCO ROAD — — KLAMATH RIVER

KLAMATH RIVER

VICINITY MAP

DESCRIPTION

SISKIYOU COUNTY

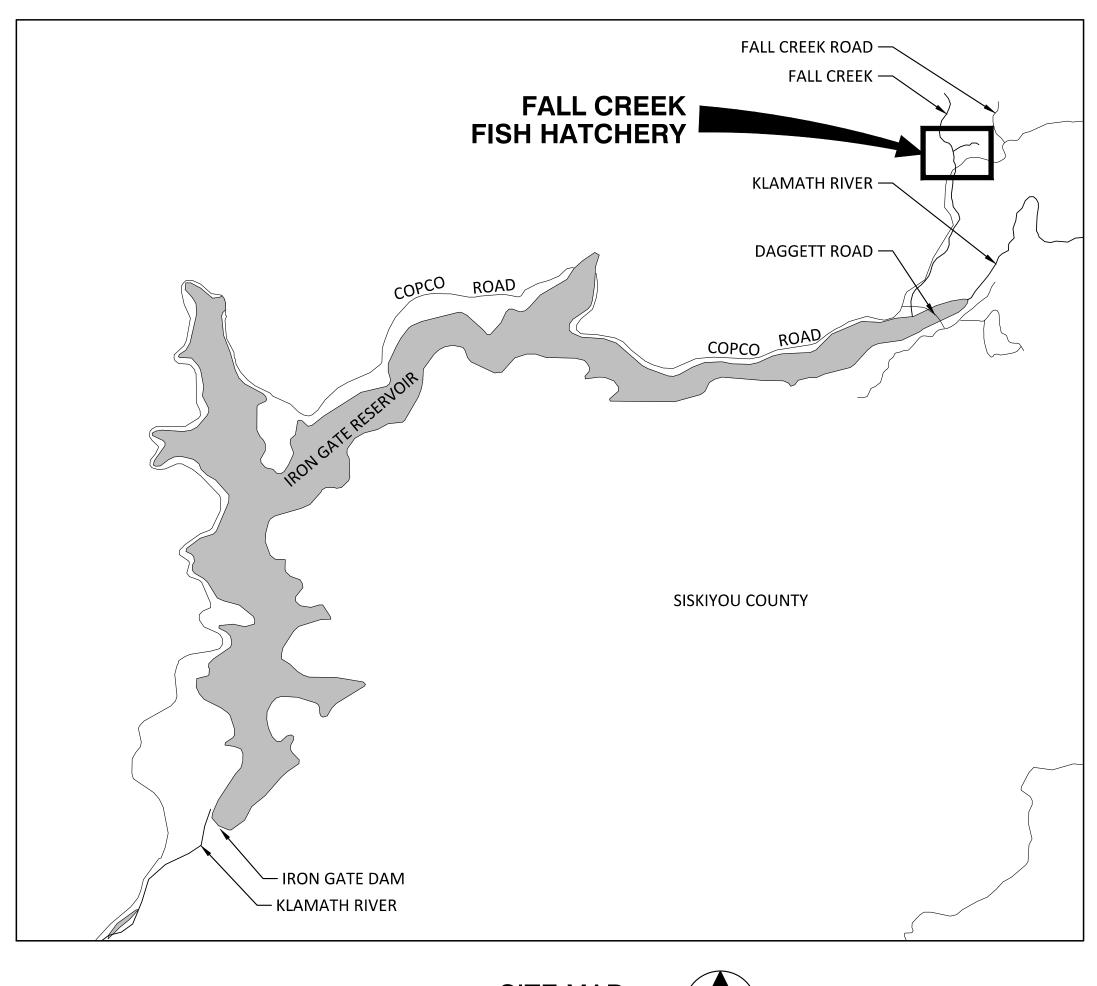
0 10/28/20 MDM ISSUED FOR CONSTRUCTION

REV DATE BY

- IRON GATE RESERVOIR

## KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY ISSUED FOR CONSTRUCTION











KLAMATH RIVER RENEWAL CORPORATION	DESIGNED J. BURNS	DRAWING
FALL CREEK FISH HATCHERY	DRAWN R. GUERRERO	
LOCATION MAP, VICINITY MAP AND SITE MAP	CHECKED V. AUTIER  PROJECT DATE 10/28/20	G001

		DRAWING INDEX	
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
		GENERAL	
	0004	COVER SHEET	X
1	G001	LOCATION MAP, VICINITY MAP AND SITE MAP  DRAWING INDEX 1	X
3	G002 G003	DRAWING INDEX 1  DRAWING INDEX 2	X
	G003	STANDARD ABBREVIATIONS	X
<u>.</u> 5	G005	STANDARD SYMBOLS	X
6	G006	OVERALL PROJECT PLAN AND PROJECT CONTROL	X
7	G007	SUPPLY PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA	Х
8	G008	DRAIN PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA	Х
9	G009	WASTE DRAIN PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA	X
10	G010	PIPING SCHEDULE	X
11	G011	CONTRACTOR STAGING AREA	X
		EROSION AND SEDIMENT CONTROL	
12	EC001	EROSION AND SEDIMENT CONTROL STANDARD DETAILS 1	X
13	EC002	EROSION AND SEDIMENT CONTROL STANDARD DETAILS 2	X
14	EC100	EROSION AND SEDIMENT CONTROL KEY PLAN	X
15	EC101	EROSION AND SEDIMENT CONTROL NORTH PLAN	X
16	EC102	EROSION AND SEDIMENT CONTROL DAM B DIAN	X
17	EC210	EROSION AND SEDIMENT CONTROL DAM B PLAN	X
18	D100	DEMOLITION  SITE DEMOLITION KEY PLAN	X
19	D100	ENLARGED FLUME DEMO PLAN AND PHOTOS	X
20	D101	ENLARGED FLOWE DEMO PLAN AND PHOTOS  ENLARGED RACEWAY DEMO PLAN AND PHOTOS	X
21	D102	ENLARGED DAM A DEMO PLAN AND SECTIONS	X
22	D104	DAM A DEMO SECTIONS AND PHOTOS	X
23	D105	ENLARGED DAM B DEMO PLAN AND SECTIONS	X
24	D601	IRON GATE HATCHERY EQUIPMENT RELOCATION PLAN	Х
25	D602	IRON GATE HATCHERY CROWDER MODIFICATION	X
	•	CIVIL	•
26	GC001	CIVIL GENERAL NOTES	Х
27	GC002	CIVIL STANDARD DETAILS 1	X
28	GC003	CIVIL STANDARD DETAILS 2	X
29	GC004	CIVIL STANDARD DETAILS 3	X
30	GC005	CIVIL STANDARD DETAILS 4	X
31	GC006	CIVIL STANDARD DETAILS 5	X
32	GC007	SITE COORDINATES	X
33	GC008	PIPING COORDINATES	X
34 35	C100 C101	OVERALL SITE KEY PLAN	X
36	C101	SITE LAYOUT NORTH PLAN SITE LAYOUT SOUTH PLAN	X
37	C102	SITE GRADING NORTH PLAN	X
38	C104	SITE GRADING SOUTH PLAN	X
39	C104	SITE RESTORATION NORTH PLAN	X
40	C106	SITE RESTORATION SOUTH PLAN	X
41	C107	SITE YARD PIPING NORTH PLAN	X
42	C108	SITE YARD PIPING SOUTH PLAN	X
43	C109	STORM DRAIN PIPING NORTH PLAN	Х
44	C110	STORM DRAIN PIPING SOUTH PLAN	Х
45	C111	SITE CIVIL SECTIONS 1	Х
46	C112	SITE CIVIL SECTIONS 2	X
47	C113	SITE CIVIL SECTIONS 3	X
48	C114	SITE CIVIL SECTIONS 4	X
49	C200	DAM A INTAKE PLAN	X
50	C201	DAM A INTAKE SECTIONS	X
51	C202	DAM A MODIFICATIONS PLAN	X
52	C203	DAM A MODIFICATIONS SECTIONS	X
53	C204	DAM A FRENCH DRAIN SECTIONS AND DETAILS	X
54	C210	DAM B MODIFICATIONS PLAN AND PHOTOGRAPH	X
55	C211	DAM B MODIFICATIONS SECTIONS	X
56	C212	DAM B FRENCH DRAIN SECTIONS AND DETAILS	X
57 50	C215	METER VAULT PLAN AND SECTION	X
58	C300 C301	COHO BUILDING WATER SUPPLY PLAN AND PROFILE  COHO BUILDING DRAIN PLAN AND PROFILE	X
59		I COTTO DOTEDINO DIVATA ELAN AND ENOETLE	ı ^

OWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
61	C303	COHO BUILDING FISH RELEASE PIPE PLAN AND PROFILE	X
62	C400	CHINOOK RACEWAYS WATER SUPPLY PLAN	Х
63	C401	CHINOOK RACEWAYS WATER SUPPLY PROFILE	Х
64	C402	CHINOOK RACEWAYS DRAIN PLAN AND PROFILE	Х
65	C403	CHINOOK RACEWAYS WASTE DRAIN PLAN AND PROFILE	Х
66	C404	CHINOOK RACEWAYS FISH RELEASE PIPE PLAN AND PROFILE	Х
67	C500	CHINOOK INCUBATION BUILDING WATER SUPPLY PLAN AND PROFILE 1	X
68	C501	CHINOOK INCUBATION BUILDING WATER SUPPLY PLAN AND PROFILE 2	X
69	C502	CHINOOK INCUBATION BUILDING DRAIN PLAN AND PROFILE	X
70	C503	CHINOOK INCUBATION BUILDING WASTE DRAIN PLAN AND PROFILE SPAWNING BUILDING, ADULT HOLDING, FISH BARRIER AND FISH LADDER SITE LAYOUT	X
71 72	C600 C601	ADULT HOLDING WATER SUPPLY PLAN AND PROFILE 1	X
73	C601	ADULT HOLDING WATER SUPPLY PLAN AND PROFILE 2	X X
73 	C602	ADULT HOLDING WATER SUPPLY PLAN AND PROFILE 3	X X
	C604	ADULT HOLDING WATER SOFT ET PLAN AND PROFILE	$\frac{\lambda}{\lambda}$
	C605	SETTLING POND DRAIN PIPE PLAN AND PROFILE	X
77	C610	ADULT HOLDING AND SETTLING PONDS PLAN	X
 78	C611	ADULT HOLDING AND SETTLING PONDS SECTIONS AND DETAILS 1	X
79	C612	ADULT HOLDING AND SETTLING PONDS SECTIONS AND DETAILS 2	X
80	C620	FISH BARRIER SECTIONS	X
81	C630	FISH LADDER PROFILE	X
82	C631	FISH LADDER DETAILS	X
		ARCHITECTURAL	•
83	A300	COHO BUILDING CODE PLAN AND ASSEMBLY TYPES	Х
84	A301	COHO BUILDING DOOR SCHEDULE AND DETAILS	Х
85	A302	COHO BUILDING OVERALL FLOOR PLAN	Х
86	A303	COHO BUILDING ROOF PLAN	Х
87	A304	COHO BUILDING EXTERIOR ELEVATIONS 1	Х
88	A305	COHO BUILDING EXTERIOR ELEVATIONS 2	Х
89	A306	COHO BUILDING SECTIONS 1	Х
90	A307	COHO BUILDING DETAILS 1	Х
91	A500	CHINOOK INCUBATION BUILDING CODE PLAN AND ASSEMBLY TYPES	Х
92	A501	CHINOOK INCUBATION BUILDING DOOR SCHEDULE AND DETAILS	Х
93	A502	CHINOOK INCUBATION BUILDING FLOOR PLAN	X
94	A503	CHINOOK INCUBATION BUILDING ROOF PLAN	X
95	A504	CHINOOK INCUBATION BUILDING EXTERIOR ELEVATIONS 1	X
96 97	A505 A506	CHINOOK INCUBATION BUILDING SECTIONS 1 CHINOOK INCUBATION BUILDING DETAILS 1	X
98	A506 A507	CHINOOK INCUBATION BUILDING DETAILS 1  CHINOOK INCUBATION BUILDING DETAILS 2	X
99	A600	SPAWNING BUILDING CODE PLAN	X X
100	A600 A601	SPAWNING BUILDING CODE PLAN  SPAWNING BUILDING DOOR SCHEDULE AND DETAILS	X
101	A602	SPAWNING BUILDING OVERALL FLOOR PLAN	X
102	A603	SPAWNING BUILDING ROOF PLAN	X
103	A604	SPAWNING BUILDING ROOF FLAN  SPAWNING BUILDING EXTERIOR ELEVATIONS 1	X
104	A605	SPAWNING BUILDING SECTIONS 1	X
105	A606	SPAWNING BUILDING DETAILS 1	X
	1	STRUCTURAL	.1
106	GS001	STRUCTURAL GENERAL NOTES	Х
107	GS002	STRUCTURAL STANDARD DETAILS 1	Х
108	GS003	STRUCTURAL STANDARD DETAILS 2	Х
109	GS004	STRUCTURAL STANDARD DETAILS 3	Х
110	GS005	STRUCTURAL STANDARD DETAILS 4	Х
111	GS006	STRUCTURAL STANDARD DETAILS 5	X
112	GS007	STRUCTURAL STANDARD DETAILS 6	X
113	GS008	STRUCTURAL STANDARD DETAILS 7	X
114	GS009	STRUCTURAL STANDARD DETAILS 8	X
115	S100	OVERALL STRUCTURAL SITE KEY PLAN	X
116	S200	INTAKE FOUNDATION AND TOP PLAN	X
117	S201	INTAKE SECTIONS AND DETAILS	X
118	S205	DAM A SECTIONS	X
119	S206	DAM B MODIFICATIONS DI AN	X
120	S210	DAM B MODIFICATIONS PLAN	X
121	S211	DAM B MODIFICATIONS SECTIONS	X

	1	DRAWING INDEX	T
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
123	S215	METER VAULT PLANS AND SECTIONS	Х
124	S300	COHO BUILDING FOUNDATION PLAN	X
125	S301	COHO BUILDING TOP PLAN	X
126	S302	COHO BUILDING ROOF FRAMING PLAN	Х
127	S303	COHO BUILDING SECTIONS 1	Х
128	S304	COHO BUILDING SECTIONS 2	Х
129	S305	COHO BUILDING SECTIONS 3	Х
130	S306	COHO BUILDING SECTIONS AND DETAILS	Х
131	S307	COHO BUILDING INCUBATION STACK FRAME SECTIONS AND DETAILS	Х
132	S308	COHO BUILDING HEAD TANK SUPPORT PLAN AND SECTIONS	Х
133	S310	COHO RACEWAY BANK 1 RESTORATION PLAN	Х
134	S311	COHO RACEWAY BANK 1 RESTORATION SECTIONS	Х
135	S312	COHO RACEWAY BANK 1 RESTORATION SECTIONS AND DETAILS	Х
136	S320	COHO RACEWAY BANK 2 PLAN	Х
137	S321	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 1	Х
138	S322	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 2	X
139	S400	CHINOOK RACEWAYS #1-4 PLAN	X
140	S401	CHINOOK RACEWAYS #5-8 PLAN	X
141	S402	CHINOOK RACEWAYS SECTIONS 1	X
142	S403	CHINOOK RACEWAYS SECTIONS 2	X
143	S404	CHINOOK RACEWAYS SECTIONS AND DETAILS	X
144	S405	CHINOOK RACEWAYS BIRD NETTING PLAN	X
145	S406	CHINOOK RACEWAYS BIRD NETTING SECTIONS AND DETAILS 1	X
146	S407	CHINOOK RACEWAYS BIRD NETTING SECTIONS AND DETAILS 2	X
147	S407	CHINOOK RACEWAYS BIRD NETTING SECTIONS AND DETAILS 3	X
147	S410	CHINOOK RACEWAYS FISH RELEASE PIPE SUPPORT PLAN AND ELEVATION	X
149	S411	CHINOOK RACEWAYS FISH RELEASE PIPE SUPPORT SECTIONS AND DETAILS	X
			X
150	S500	CHINOOK INCUBATION BUILDING FOUNDATION PLAN	
151	S501	CHINOOK INCUBATION BUILDING TOP PLAN	X
152	S502	CHINOOK INCUBATION BUILDING ROOF FRAMING PLAN	X
153	S503	CHINOOK INCUBATION BUILDING SECTIONS 1	X
154	S504	CHINOOK INCUBATION BUILDING SECTIONS 2	X
155	S505	CHINOOK INCUBATION BUILDING SECTIONS AND DETAILS	X
156	S506	CHINOOK INCUBATION BLDG INCUBATION STACK SECTIONS AND DETAILS	X
157	S600	SPAWNING BUILDING FOUNDATION PLAN	X
158	S601	SPAWNING BUILDING TOP PLAN	X
159	S602	SPAWNING BUILDING ROOF FRAMING PLAN	X
160	S603	SPAWNING BUILDING SECTIONS 1	X
161	S604	SPAWNING BUILDING SECTIONS 2	X
162	S605	SPAWNING BUILDING SECTIONS AND DETAILS	Х
163	S610	SETTLING PONDS AND ADULT HOLDING PONDS PLAN	Х
164	S611	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS 1	Х
165	S612	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS 2	Х
166	S613	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 1	X
167	S614	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 2	Х
168	S615	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 3	X
169	S620	FISH BARRIER FOUNDATION PLAN	Х
170	S621	FISH BARRIER TOP PLAN	Х
171	S622	FISH BARRIER SECTIONS	Х
172	S623	PICKET BARRIER DETAILS	X
173	S624	PICKET BARRIER SECTIONS AND DETAILS	X
174	S630	FISH LADDER FOUNDATION PLAN	X
175	S631	FISH LADDER TOP PLAN	X
	S632	FISH LADDER SECTIONS AND DETAILS	X









KLAMATH RIVER RENEWAL CORPORATION	DESIGNED J. BURNS
FALL CREEK FISH HATCHERY	DRAWN R. GUERRERO
DRAWING INDEX 1	CHECKED V. AUTIER

DRAWING

PROJECT DATE <u>10/28/20</u>

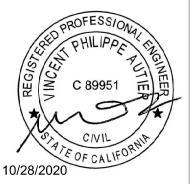
G002

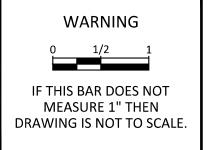
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REV DATE BY DESCRIPTION

		DRAWING INDEX	
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
		MECHANICAL	
177	GM001	MECHANICAL EQUIPMENT SCHEDULES 1	X
178	GM002 GM003	MECHANICAL EQUIPMENT SCHEDULES 2  MECHANICAL EQUIPMENT SCHEDULES 3	X
179 180	GM004	MECHANICAL EQUIPMENT SCHEDULES 4	X
181	GM005	MECHANICAL EQUIPMENT SCHEDULES 5	X
182	GM006	MECHANICAL STANDARD DETAILS 1	Х
183	GM007	MECHANICAL STANDARD DETAILS 2	Х
184	GM008	MECHANICAL STANDARD DETAILS 3	X
185	GM009	MECHANICAL STANDARD DETAILS 4	X
186 187	GM010 M100	OVERALL MECHANICAL SITE KEY PLAN	X
188	M200	INTAKE MECHANICAL PLAN	X
189	M201	INTAKE MECHANICAL SECTIONS AND DETAILS 1	X
190	M202	INTAKE MECHANICAL SECTIONS AND DETAILS 2	Х
191	M210	DAM B MODIFICATIONS MECHANICAL PLAN	Х
192	M211	DAM B MODIFICATIONS MECHANICAL SECTIONS AND DETAILS	Х
193	M215	METER VAULT PLAN AND SECTIONS	X
194	M300	COHO BUILDING MECHANICAL PLAN  COHO BUILDING SUPPLY PIPING PLAN	X
195 196	M301 M302	COHO BUILDING SUPPLY PIPING PLAN  COHO BUILDING DRAIN PIPING PLAN	X
197	M303	COHO BUILDING WASTE DRAIN PIPING PLAN	X
198	M304	COHO BUILDING UTILITY WATER PIPING PLAN	X
199	M305	COHO BUILDING PIPING SECTIONS 1	Х
200	M306	COHO BUILDING PIPING SECTIONS 2	Х
201	M307	COHO BUILDING PIPING SECTIONS 3	Х
202	M310	COHO BUILDING INCUBATION STACKS PLAN AND SECTIONS	X
203	M311	COHO BUILDING INCUBATION STACKS SECTIONS AND DETAILS 1	X
204	M312 M313	COHO BUILDING INCUBATION STACKS SECTIONS AND DETAILS 2 COHO BUILDING WORKING VESSELS PLAN, SECTIONS, AND DETAILS	X
203	M320	COHO RACEWAY BANK 1 PLAN	X
207	M321	COHO RACEWAY BANK 1 SECTIONS AND DETAILS	X
208	M322	COHO RACEWAY BANK 2 PLAN	Х
209	M323	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 1	Х
210	M324	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 2	Х
211	M330	COHO BUILDING FEEDING VESSELS PLAN	X
212	M331	COHO BUILDING FEEDING VESSELS SECTIONS AND DETAILS	X
213	M400 M401	CHINOOK RACEWAYS #1-4 PLAN CHINOOK RACEWAYS #5-8 PLAN	X
214	M402	CHINOOK RACEWAYS #5-8 FLAN  CHINOOK RACEWAYS SECTIONS 1	X
216	M403	CHINOOK RACEWAYS SECTIONS 2	X
217	M404	CHINOOK RACEWAYS SECTIONS AND DETAILS	Х
218	M500	CHINOOK INCUBATION BUILDING MECHANICAL PLAN	Х
219	M501	CHINOOK INCUBATION BUILDING SUPPLY PIPING PLAN	Х
220	M502	CHINOOK INCUBATION BUILDING DRAIN PIPING PLAN	X
221	M503	CHINOOK INCUBATION BUILDING WASTE DRAIN PIPING PLAN	X
222	M504 M505	CHINOOK INCUBATION BUILDING UTILITY WATER PIPING PLAN CHINOOK INCUBATION BUILDING UTILITY WATER PIPING SECTIONS	X
223	M510	CHINOOK INCUBATION BUILDING UTILITY WATER PIPING SECTIONS  CHINOOK INCUBATION BLDG INCUBATION STACKS PLAN AND SECTIONS	X
225	M511	CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 1	X
226	M512	CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 2	X
227	M513	CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 3	X
228	M514	CHINOOK INCUBATION BUILDING WORKING VESSELS PLAN AND SECTIONS	Х
229	M600	SPAWNING BUILDING MECHANICAL PLAN	X
230	M601	SPAWNING BUILDING UTILITY WATER PIPING PLAN	X
231	M602 M603	SPAWNING BUILDING UTILITY WATER PIPING SECTIONS AND DETAILS 1  SPAWNING BUILDING UTILITY WATER PIPING SECTIONS AND DETAILS 2	X
232	M610	SETTLING PONDS AND ADULT HOLDING PONDS MECHANICAL PLAN	X
234	M611	SETTLING PONDS AND ADULT HOLDING PONDS PIPING PLAN	X
235	M612	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 1	X
236	M613	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 2	X
237	M614	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 3	Х
238	M615	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 4	X
239	M616	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 5	X
240	M617	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 6	Х

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DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR
			CONSTRUCTION
241	M618	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 7	X
242	M619	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 8	X
243	M620	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 9  HVAC	X
244	GH001	HVAC SCHEDULES	x
245	GH002	HVAC STANDARD DETAILS	X
246	GH003	HVAC & CONTROLS OPERATIONS DIAGRAM	X
247	H215	METER VAULT HVAC PLAN AND SECTIONS	X
248	H300	COHO BUILDING HVAC PLAN	X
249	H500	CHINOOK INCUBATION BUILDING HVAC PLAN	X
250	H600	SPAWNING BUILDING HVAC PLAN	X
		ELECTRICAL	
251	GE001	STANDARD ELECTRICAL ABBREVIATIONS AND DEVICE INDEXES	Х
252	GE002	ELECTRICAL STANDARD SYMBOLS 1	Х
253	GE003	ELECTRICAL STANDARD SYMBOLS 2	Х
254	GE004	ELECTRICAL LUMINAIRE SCHEDULE AND PANEL SCHEDULES	Х
255	GE005	ELECTRICAL PANEL SCHEDULES	Х
256	GE006	ELECTRICAL DUCT BANK SCHEDULE	Х
257	GE007	ELECTRICAL CONDUIT SCHEDULE	Х
258	GE008	ELECTRICAL CABLE SCHEDULE	Х
259	GE009	ELECTRICAL STANDARD DETAILS 1	Х
260	GE010	ELECTRICAL STANDARD DETAILS 2	Х
261	E001	ELECTRICAL OVERALL ONE-LINE DIAGRAM	Х
262	E100	OVERALL ELECTRICAL SITE KEY PLAN	Х
263	E101	ELECTRICAL SITE NORTH PLAN	Х
264	E102	ELECTRICAL SITE SOUTH PLAN	Х
265	E200	INTAKE STRUCTURE POWER AND LIGHTING PLAN	Х
266	E201	METER VAULT POWER PLAN	Х
267	E300	COHO BUILDING POWER AND LIGHTING PLAN	Х
268	E400	CHINOOK RACEWAYS #1-4 POWER PLAN	Х
269	E401	CHINOOK RACEWAYS #5-8 POWER PLAN	Х
270	E500	CHINOOK INCUBATION BUILDING POWER AND LIGHTING PLAN	X
271	E501	CHINOOK INCUBATION BUILDING ELEC ROOM POWER AND LIGHTING PLAN	Х
272	E502	SCADA CABINET LAYOUT AND BILL OF MATERIALS	X
273	E503	SCADA CABINET CONTROL DIAGRAM 1	Х
274	E504	SCADA CABINET CONTROL DIAGRAM 2	Х
275	E505	SCADA CABINET CONTROL DIAGRAM 3	X
276	E506	HATCHERY INSTRUMENTATION AND CONTROL BLOCK DIAGRAM	Х
277	E600	SPAWNING BUILDING POWER AND LIGHTING PLAN	Х
278	E610	SETTLING PONDS AND ADULT HOLDING PONDS POWER PLAN	Х
279	E611	WET WELL PUMP CONTROL PANEL LAYOUT AND BILL OF MATERIALS	Х
280	E612	WET WELL PUMP CONTROL PANEL CONTROL DIAGRAM	X
		INSTRUMENTATION	
281	GI001	INSTRUMENTATION AND EQUIPMENT LEGEND	X
282	GI002	GENERAL MECHANICAL PROCESS LEGEND	X
283	1200	PROCESS & INSTRUMENTATION DIAGRAM INTAKE	X
284	1300	PROCESS & INSTRUMENTATION DIAGRAM COHO BUILDING	X
285	1400	PROCESS & INSTRUMENTATION DIAGRAM CHINOOK RACEWAYS	X
286	1500	PROCESS & INSTRUMENTATION DIAGRAM CHINOOK INCUBATION BUILDING	Х
287	1600	PROCESS & INSTRUMENTATION DIAGRAM SETTLING AND ADULT HOLDING PONDS	X









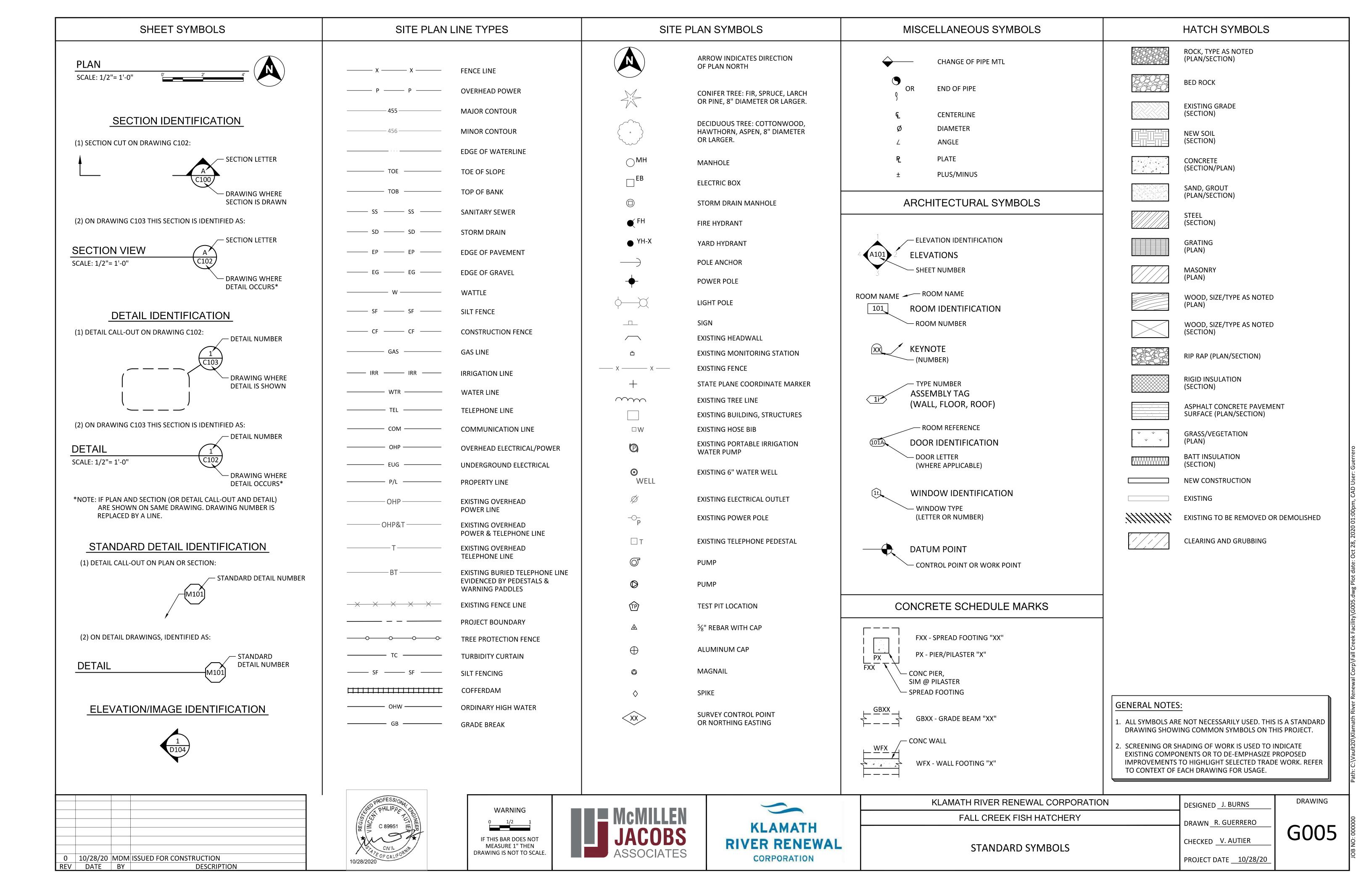
KLAMATH RIVER RENEWAL CORPORATION	DESIGNED J. BURNS
FALL CREEK FISH HATCHERY	DRAWN R. GUERRERO
DRAWING INDEX 2	CHECKED V. AUTIER
DRAWING INDLX 2	PROJECT DATE <u>10/28/20</u>

DRAWING

G003

		<del></del>	T		I	
A/C AIR CONDITIONING	CLR CLEAR CMH COMMUNICATION MANHOLE	F TO F FACE TO FACE FAB FABRICATE	I INSTRUMENTATION (DV	, ·	RESIL RESILIENT RET RETAINING, RETURN	UTIL UTILITY
A/E ARCHITECT/ENGINEER A ARCHITECTURAL (DWG DISCIPLINE), AMP	CMU CONCRETE MASONRY UNIT	FAB FABRICATE FBO FURNISHED BY OWNER	ID INSIDE DIAMETER, INTE	NAT NATURAL	REV REVISION, REVERSE	V VENT, VELOCITY, VOLT
AB ANCHOR BOLT	CO CLEAN OUT, CONCRETE OPENING	FC FLUSHING CONNECTION	IF INSIDE FACE	NC NORMALLY CLOSED	RFL REFLECTED, REFLECTOR	VA VOLT AMPERE
ABC AGGREGATE BASE COURSE	COL COLUMN	FCA FLANGED COUPLING ADAPTER	IH INTAKE HOOD	NEG NEGATIVE	RGS RIGID GALVANIZED STEEL	VAC VACUUM
ABAN ABANDON	COM COMMON COMB COMBINATION	FCV FIXED CONE VALVE	IMP IMPACT IN INCH	NF NEAR FACE, NON-FUSED NG NATURAL GAS	RH RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY	VAR VARNISH, VARIABLE, VOLT AMPERES REACTIVE VB VAPOR BARRIER, VINYL BASE, VALVE BOX
AC ALTERNATING CURRENT ACST ACOUSTIC	COMM COMMUNICATION	FD FLOOR DRAIN FDC FLEXIBLE DUCT CONNECTION	INC INCLUDE, INCANDESCEN		RL REQUIRED LAP	VC VERTICAL CURVE
AD ADDENDUM, AREA DRAIN	COMP COMPOSITION, COMPRESSIBLE, COMPOSITE	FDR FEEDER	INF INFLUENT	NO NORMALLY OPEN, NUMBER	RND ROUND	VCT VINYL COMPOSITION TILE, VERTICAL
ADDL ADDITIONAL	CONC CONCENTRIC, CONCRETE	FE FLANGED END	INSTR INSTRUMENTATION	NOM NOMINAL	RNG RENEWABLE NATURAL GAS	CENTERLINE
ADH ADHESIVE	CONN CONNECTION	FEC FIRE EXTINGUISHER CABINET	INSUL INSULATION	NPS NOMINAL PIPE SIZE	RO ROUGH OPENING	VEL VELOCITY
ADJ ADJUSTABLE, ADJACENT	CONST CONSTRUCTION CONT CONTINUOUS, CONTINUED	FEXT FIRE EXTINGUISHER FF FAR FACE, FACTORY FINISH, FLAT FACE	INT INTERIOR, INTERSECTIO INTR INTERMEDIATE, INTERIO		ROW RIGHT-OF-WAY RPM REVOLUTIONS PER MINUTE	VENT VENTILATION VERT VERTICAL
AF AMP FRAME, AMP FUSE AFF ABOVE FINISH FLOOR	COORD COORDINATE	FG FINISHED GRADE	INV INVERT	NTS NOT TO SCALE	RR RAILROAD	VS VERSES, VAPOR SEAL
AFG ABOVE FINISH GRADE	CORR CORROSIVE, CORRUGATED	FIG FIGURE	IPS IRON PIPE SIZE	NWL NORMAL WATER LEVEL	RT RIGHT	VOL VOLUME
AGGR AGGREGATE	CP CHECKER PLATE, CONTROL POINT	FH FIRE HYDRANT	IPT INTERNAL PIPE THREAD			VPC VERTICAL POINT OF CURVATURE
AIC AMPS INTERRUPTING CAPACITY	CPLG COUPLING	FIN FINISH	IRR IRRIGATION	O TO O OUT-TO-OUT	S SOUTH, SINK, STRUCTURAL (DWG DISCIPLINE)	VPI VERTICAL POINT OF INTERSECTION
ALIG ALIGNMENT	CSK COUNTERSINK CTR CENTER	FL FLOW, FLOW LINE FLEX FLEXIBLE	ISO ISOMETRIC	OA OUTSIDE AIR, OVERALL OC ON CENTER	SA SUPPLY AIR SAN SANITARY	VPT VERTICAL POINT OF TANGENCY VTR VENT THROUGH ROOF
ALUM ALUMINUM ALT ALTERNATE, ALTITUDE	CTRL CONTROL	FLG FLANGE	JB JUNCTION BOX	OCPD OVER CURRENT PROTECTION DEVICE	SC SOLID CORE	VWC VINYL WALL COVERING
AMB AMBIENT	CU COPPER, CUBIC	FLOR FLUORESCENT	JCT JUNCTION	OD OUTSIDE DIAMETER	SCH SCHEDULE	
ANC ANCHOR	CW CLOCKWISE	FLR FLOOR	JF JOINT FILLER	OH OVERHEAD	SCHEM SCHEMATIC	W/ WITH
AP ACCESS PANEL	CY CUBIC YARD	FLS FLASHING, FLUSH	JT JOINT	OPNG OPENING	SCRN SCREEN	W/O WITHOUT
APRX APPROXIMATE	d PENNY (NAIL MEASURE)	FND FOUNDATION FNC FENCE	K KIP	OPP OPPOSITE OPT OPTIONAL	SE STEEL/ALUMINUM EDGE	W WATT, WEST, WIDE, WINDOW, WIRE, WIDE
APVD APPROVED ARCH ARCHITECTURAL ARV AIR RELEASE VALVE	D DEEP, DIFFUSER	FO FINISHED OPENING	KB KNEE BRACE	ORD OVERFLOW ROOF DRAIN	SEC SECONDARY, SECONDS SECT SECTION	FLANGE BEAM WC WATER CLOSET, WATER COLUMN
ASSY ASSEMBLY	DB DUCT BANK, DECIBEL, DRY BULB	FOB FLAT ON BOTTOM	KCMIL THOUSAND CIRCULAR N		SEP SEPARATE	WD WIDTH
AT AMP TRIP	DBA DEFORMED BAR ANCHOR	FOC FACE OF CONCRETE, FACE OF CURB, FIBER	KD KNOCK DOWN	OVFL OVERFLOW	SF SQUARE FOOT	WF WIDE FLANGE, WASH FOUNTAIN
ATM ATMOSPHERE	DBL DOUBLE	OPTIC CABLE	KO KNOCK OUT	OVHG OVERHANG	SH SHOWER	WG WIRE GLASS, WATER GAGE
AUTO AUTOMATIC	DC DIRECT CURRENT DEG DEGREE	FOF FACE OF FINISH FOM FACE OF MASONRY	KSI KIPS PER SQUARE INCH	OZ OUNCE	SHT SHEET	WH WALL HYDRANT, WEEP HOLE
AUX AUXILIARY AVE AVENUE	DEG DEGREE DEG C DEGREE CENTIGRADE	FOS FACE OF STUDS	L ANGLE, LENGTH, LAVAT	P PAINT, PROCESS (DWG DISCIPLINE)	SHTG SHEATHING SIM SIMILAR	WL WATER LEVEL WLD WELDED
AVE AVENDE AVG AVERAGE	DEG F DEGREE FAHRENHEIT	FOT FLAT ON TOP	LAM LAMINATE	PAR PARALLEL, PARAPET	SL SLOPE	WM WIRE MESH
AWG AMERICAN WIRE GAGE	DEMO DEMOLITION	FPT FEMALE PIPE THREAD	LATL LATERAL	PB PANIC BAR, PULL BOX	SLTD SLOTTED	WP WATERPROOF, WORKING POINT
	DEP DEPRESSED	FR FRAME	LB LAG BOLT, POUND	PBD PARTICLE BOARD	SLV SLEEVE	WTHP WEATHERPROOF
B/B BACK TO BACK	DEPT DEPARTMENT DET DETAIL	FRP FIBERGLASS REINFORCED PLASTIC FS FLOOR SINK, FAR SIDE	LDR LEADER LF LINEAR FOOT	PC POINT OF CURVE, PIECE, PRECAST PCC POINT OF COMPOUND CURVATURE	SMLS SEAMLESS	WS WATERSTOP, WATER SURFACE
BAL BALANCE	DI DETAIL DI DROP INLET, DUCTILE IRON	FT FEET, FOOT	LG LONG	PCF POUNDS PER CUBIC FOOT	SOG SLAB ON GRADE SP SOUNDPROOF, STANDPIPE	WSEL WATER SURFACE ELEVATION WT WEIGHT, WATER TIGHT
BBD BULLETIN BOARD BC BASE CABINET, BOTTOM CHORD, BOLT	DIA DIAMETER	FTG FOOTING, FITTING FUR FURRED, FURRING	LH LEFT HAND	PCT PERCENT	SPC SPACING	WWF WELDED WIRE FABRIC
CENTER, BOLT CIRCLE	DIAG DIAGONAL, DIAGRAM	FURN FURNITURE, FURNISH	LIN LINEAR	PE PLAIN END	SPEC SPECIFICATION	
BD BOARD	DIFF DIFFERENTIAL, DIFFERENCE	FUT FUTURE	LIQ LIQUID	PED PEDESTAL	SPLY SUPPLY	XS EXTRA STRONG
BE BOTH ENDS, BELL END	DIM DIMENSION DISCH DISCHARGE	FV FACE VELOCITY FW FIELD WELD, FIRE WALL	LL LIVE LOAD LLH LONG LEG HORIZONTAL	PEMB PRE-ENGINEERED METAL BUILDING PEN PENETRATION	SPT SET POINT	XXS DOUBLE EXTRA STRONG
BF BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET	DISCH DISCHARGE DIST DISTANCE, DISTRIBUTION	FWD FORWARD	LLV LONG LEG HORIZONTAL	PERF PERFORATED	SQ SQUARE SR SHORT RADIUS	XSECT CROSS SECTION
BFV BUTTERFLY VALVE	DIV DIVISION	FWE FURNISHED WITH EQUIPMENT	LMLU LIQUID MARKER LECTUF		SS SERVICE SINK	YH YARD HYDRANT
BITUM BITUMINOUS	DL DEAD LOAD	FXTR FIXTURE	LNG LONGITUDINAL	PERP PERPENDICULAR	SST STAINLESS STEEL	YS YIELD STRENGTH
BKG BACKING	DN DOWN		LOC LOCATION	PF POWER FACTOR	ST STREET	
BL BASE LINE	DP DEPTH DS DOWN SPOUT	G GRILLE, GROUND, GENERAL (DWG DISCIPLINE)	LP LOW POINT LPS LOW PRESSURE SODIUN	PH PHASE PI POINT OF INTERSECTION	STA STANDARD	
BLDG BUILDING	DS DOWN SPOUT  DT DOUBLE TEE, DRIP TRAP ASSEMBLY	GA GAGE (METAL THICKNESS) GAL GALLON	LPS LOW PRESSURE SODIUN LR LONG RADIUS	PKG PACKAGE	STD STANDARD STIF STIFFENER	
BLK BLOCK BLKG BLOCKING	DUP DUPLICATE	GALV GALVANIZED	LT LEFT	PL PLATE, PROPERTY LINE	STIR STIRRUP	
BM BENCHMARK, BEAM	DWG DRAWING	GB GRADE BREAK	LTD LIMITED	PLBG PLUMBING	STL STEEL	PROJECT SPECIFIC:
BOC BACK OF CURB	DWL DOWEL	GD GUARD	LTG LIGHTING	PLF POUNDS PER LINEAR FOOT	STOR STORAGE	I NOJECT SI ECITIC.
BOD BOTTOM OF DUCT	E FACT FLECTBLOAL (DIAGO DISCIPLIATE)	GEN GENERAL	LTL LINTEL LTNG LIGHTNING	PNEU PNEUMATIC	STR STRUCTURAL, STRAIGHT	CDFW CALIFORNIA DEPARTMENT OF FISH AND
BOG BOTTOM OF LOUVER	E EAST, ELECTRICAL (DWG DISCIPLINE) EA EACH, EXHAUST AIR	GFCI GROUND FAULT CIRCUIT INTERRUPTER GL GLASS	LTNG LIGHTNING LV LOW VOLTAGE	POL POLISH POS POSITIVE, POSITION	SUB SUBSTITUTE SUC SUCTION	WILDLIFE
BOL BOTTOM OF LOUVER BOP BOTTOM OF PIPE	EC ELECTRICAL CONTRACTOR	GP GUY POLE	LVR LOUVER	PP POLYPROPYLENE, POWER POLE	SUSP SUSPENDED	FCFH FALL CREEK FISH HATCHERY
BOR BOTTOM OF REGISTER	ECC ECCENTRIC	GR GRADE	LW LIGHTWEIGHT	PRC POINT OF REVERSE CURVATURE	SY SQUARE YARD	IGFH IRON GATE FISH HATCHERY KRRC KLAMATH RIVER RENEWAL CORPORATION
BOT BOTTOM	EDB ELECTRICAL DUCT BANK	GRND GROUND	LWC LIGHTWEIGHT CONCRET		SYM SYMBOL	OHWM ORDINARY HIGH WATER MARK
BOU BOTTOM OF UNIT	EE EACH END	GRTG GRATING	LWL LOW WATER LEVEL	PREFAB PREFABRICATED	SYMM SYMMETRICAL	PEMB PRE-ENGINEERED METAL BUILDING
BP BASE PLATE	EF EACH FACE EG EXISTING GRADE	GT GREASE TRAP GWB GYPSUM WALLBOARD	M MECHANICAL (DWG DIS	PRELIM PRELIMINARY PREP PREPARE	SYN SYNTHETIC SYS SYSTEM	CGP CONSTRUCTION GENERAL PERMIT
BRG BEARING BRGP BEARING PLATE	EGL ENERGY GRADE LINE	GYP GYPSUM HARDBOARD	MA MIXED AIR	PRES PRESSURE	JIJ JIJILIVI	
BRKT BRACKET	EFF EFFLUENT, EFFICIENCY		MAINT MAINTENANCE	PROP PROPERTY	T&B TOP AND BOTTOM	
BS BOTH SIDES	EHH ELECTRICAL HANDHOLE	н нібн	MAN MANUAL	PROT PROTECTION	T&G TONGUE AND GROOVE	
BTU BRITISH THERMAL UNIT	EIFS EXTERIOR INSULATION & FINISH SYSTEM	HB HOSE BIB	MAOP MAXIMUM ALLOWABLE		T TILE, TREAD	CENTED AT MOTEC
BTW BETWEEN	EJ EXPANSION JOINT EL ELBOW, ELEVATION	HBD HARDBOARD HC HANDICAPPED, HOLLOW CORE, HORIZONTAL	PRESSURE MATL MATERIAL	PSI POUNDS PER SQUARE INCH PSIA POUNDS PER SQUARE INCH ABSOLUTE	TA TEMPERED AIR TAN TANGENT	GENERAL NOTES:
BTWLD BUTT WELD BV BALL VALVE	ELEC ELECTRICAL	CURVE	MAX MAXIMUM	PSIG POUNDS PER SQUARE INCH ABSOLUTE	TAN TANGENT TBM TEMPORARY BENCHMARK	1. THESE ABBREVIATIONS APPLY TO THE ENTIRE
BW BOTH WAYS	EMBD EMBEDDED	HC HORIZONTAL CENTERLINE	MB MACHINE BOLT	PT POINT, POINT OF TANGENCY	TEMP TEMPORARY, TEMPERATURE	SET OF CONTRACT DRAWINGS.
BYP BYPASS	EMER EMERGENCY	HDR HEADER	MBR MEMBER	PTN PARTITION	THK THICK	
CTO C CENTED TO CENTED	EMH ELECTRICAL MANHOLE	HDW HARDWARE	MCJ MASONRY CONTROL JO MECH MECHANICAL	NT PVC POLYVINYL CHLORIDE PVMT PAVEMENT	THRD THREAD	2. LISTING OF ABBREVIATIONS DOES NOT IMPLY
C TO C CENTER TO CENTER C&G CURB & GUTTER	ENCL ENCLOSURE ENGR ENGINEER	HEX HEXAGONAL HH HANDHOLE	MED MEDIUM	PWD PLYWOOD	THRU THROUGH TOB TOP OF BOLT, TOP OF BANK, TOP OF BEAM	ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
C CHANNEL SHAPE, CENTIGRADE,	ENTR ENTRANCE	HM HOLLOW METAL	MFR MANUFACTURER	PZ PIEZOMETER	TOC TOP OF CURB, TOP OF CONCRETE	CONTRACT DRAWINGS.
CONDUIT, CIVIL (DRAWING DISCIPLINE)	EOP EDGE OF PAVEMENT	HORIZ HORIZONTAL	MH MANHOLE, METAL HALI		TOD TOP OF DUCT	3. ABBREVIATIONS SHOWN ON THIS SHEET
CAB CABINET	EOW EDGE OF WATER	HP HIGH POINT, HORSEPOWER	MIN MINIMUM MIR MIRROR	Q RATE OF FLOW	TOF TOP OF FOOTING	INCLUDE VARIATIONS OF THE WORD. FOR
CAP CAPACITY	EQ EQUAL EQUIP EQUIPMENT	HPC HORIZONTAL POINT OF CURVATURE HPS HIGH PRESSURE SODIUM	MISC MISCELLANEOUS	QTR QUARTER QTY QUANTITY	TOG TOP OF GRATING TOL TOLERANCE, TOP OF LEDGER	EXAMPLE, "MOD" MAY MEAN MODIFY OR
CAT CATALOG CAV CAVITY	EQUIV EQUIVALENT	HPT HORIZONTAL POINT OF TANGENCY	MJ MECHANICAL JOINT	QUAL QUALITY	TOL TOLERANCE, TOP OF LEDGER  TOM TOP OF MASONRY	MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING; "REINF" MAY MEAN EITHER
CB CATCH BASIN	ES EACH SIDE, EQUAL SPACE, EMERGENCY	HR HOUR	MMB MEMBRANE		TOP TOP OF PLATE	REINFORCE OR REINFORCING.
CCB CONCRETE BLOCK	SHOWER	HS HEADED STUD, HIGH STRENGTH	MO MASONRY OPENING	R&R REMOVE AND REPLACE	TOPO TOPOGRAPHY	
CCW COUNTER CLOCKWISE	ESEW EMERGENCY SHOWER AND EYE WASH	HSS HOLLOW STRUCTURAL SHAPE	MOD MODULAR, MODIFY	R&S REMOVE AND SALVAGE	TOS TOP OF SLAB, TOP OF STEEL	4. SCREENING OR SHADING OF WORK IS USED
CF CUBIC FEET (FOOT)	EST ESTIMATE	HT HEIGHT	MON MONUMENT MPT MALE PIPE THREAD	R RADIUS, REGISTER, RISER	TOW TOP OF WALL	TO INDICATE EXISTING COMPONENTS OR TO
CHFR CHAMFER	EW EACH WAY, EMERGENCY EYE/FACE WASH EWC ELECTRIC WATER COOLER	HV HIGH VOLTAGE HVAC HEATING, VENTILATION & AIR CONDITIONING	MSL MEAN SEA LEVEL	RA RETURN AIR RB RESILIENT BASE, ROCK BERM	TP TELEPHONE POLE, TOE PLATE, TRAP PRIMER TPG TOPPING	DE-EMPHASIZE PROPOSED IMPROVEMENTS
CHD CHORD CHH COMMUNICATION HANDHOLE	EWEF EACH WAY, EACH FACE	HWD HARDWOOD	MT MOUNT	RCPT RECEPTACLE	TRANS TRANSITION	TO HIGHLIGHT SELECTED TRADE WORK.  REFER TO CONTEXT OF EACH SHEET FOR
CI CURB INLET	EWTB EACH WAY, TOP AND BOTTOM	HWL HIGH WATER LEVEL	MU MASONRY UNIT	RD ROOF DRAIN	TRD TRENCH DRAIN	USAGE.
CIP CAST-IN-PLACE	EXC EXCAVATION	HYD HYDRAULIC HZ HERTZ, CYCLES PER SECOND	MULL MULLION	REC RECESS	TYP TYPICAL	
CIPB CONCRETE INTERLOCKING PAVER	EXH EXHAUST		MV MEDIUM VOLTAGE MW MONITORING WELL	RECD RECEIVED RECT RECTANGULAR	II LIDINIAL	5. SEE SHEET GIOO2 FOR PROJECT SPECIFIC
BALLAST	EXIST EXISTING EXP EXPANSION, EXPOSED		IVIVV IVIOINTONING WELL	RECT RECTANGULAR RED REDUCER	U URINAL UG UNDERGROUND	EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS AND PIPING SYSTEM
CIRC CIRCULATION, CIRCULAR CJ CONSTRUCTION JOINT, CONTROL JOINT	EXT EXTERIOR, EXTERNAL, EXTENSION			REF REFERENCE	ULT ULTIMATE	ABBREVIATIONS AND PIPING SYSTEM ABBREVIATIONS.
CKT CIRCUIT				REINF REINFORCING	UNFN UNFINISHED	A SEINE VIII (11014).
CL CENTERLINE, CLASS, CLOSE		<u> </u>		REQD REQUIRED	UNO UNLESS NOTED OTHERWISE	
	PROFESSION.			KI AMATH	RIVER RENEWAL CORPORATION	DECICNED LIBITIONS DRAWING
		WARNING				DESIGNED J. BURNS
	PHILIPPE	\\ \( \)			L CREEK FISH HATCHERY	
	PHILIPPE A				LE ONLE IN THE TOTAL TOT	DRAMNI R GLIFRRERO
	PHILIPAE OF SUPERIOR OF SUPERI	0 1/2 1 ENDER	McMILLEN	KLAMATH	LE ORLEIKT IOITTI/KT OFILIKT	DRAWN R. GUERRERO
	PHILIPAE SOLUTION C 89951	0 1/2 1 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		KLAMATH DIVED DENEWAL		G004
		0 1/2 1  IF THIS BAR DOES NOT  MEASURE 1" THEN	<b>JACOBS</b>	KLAMATH DIVED DENEWAL	NDARD ABBREVIATIONS	CHECKED V. AUTIER GOO4
0 10/28/20 MDM ISSUED FOR CONSTRUCTIO REV DATE BY DESCR	10/28/2020	0 1/2 1 □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		KLAMATH DIVED DENEWAL		G004

0 10/28/20 MDM ISSUED FOR CONSTRUCTION
REV DATE BY DESCRIPTION



**(21)** 

AND PROJECT CONTROL

2486.74

2498.50

2498.31

**MAGNAIL** 

**MAGNAIL** 

**MAGNAIL** 

6463269.16

6463309.69

6463346.89

6463218.66 2503.68 6463209.10 2504.32 GMA-236 2606701.04 6463317.49 2510.86  $\langle 22 \rangle$ 2606747.25 6463251.91 GMA-237 2506.06 **(23)** 2606859.31 6463126.43 2510.37 GMA-238 **24** 6463267.05 GMA-239 2606868.09 2514.47

OVERALL PLAN AND PROJECT CONTROL GMA-227 2606319.23 6463224.09 2494.50 **MAGNAIL** NOTE: \* INDICATES CONTROL POINT IS OUTSIDE OF PLAN VIEW AREA AND NOT SHOWN.

GMA-224

GMA-225

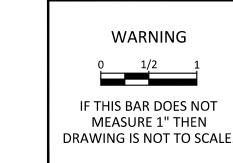
GMA-226

0 10/28/20 MDM ISSUED FOR CONSTRUCTION

DESCRIPTION

REV DATE BY

SCALE: 1"= 30'







2606158.50

2606322.86

2606279.24

LU AMATU DIVED DENEMAL CODDODATION	
KLAMATH RIVER RENEWAL CORPORATION DESIGN	ied <u>A. Leman</u>
FALL CREEK FISH HATCHERY	J. LAHMON
	ED V. AUTIER

MON UTIER PROJECT DATE 10/28/20

ELEV

2496.70

2499.27

2502.11

2500.25

2504.21

2502.67

G006

**DRAWING** 

**DESCTIRPTION** 

SPIKE

SPIKE

SPIKE

MAGNAIL

ALUM\_CAP

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SPIKE

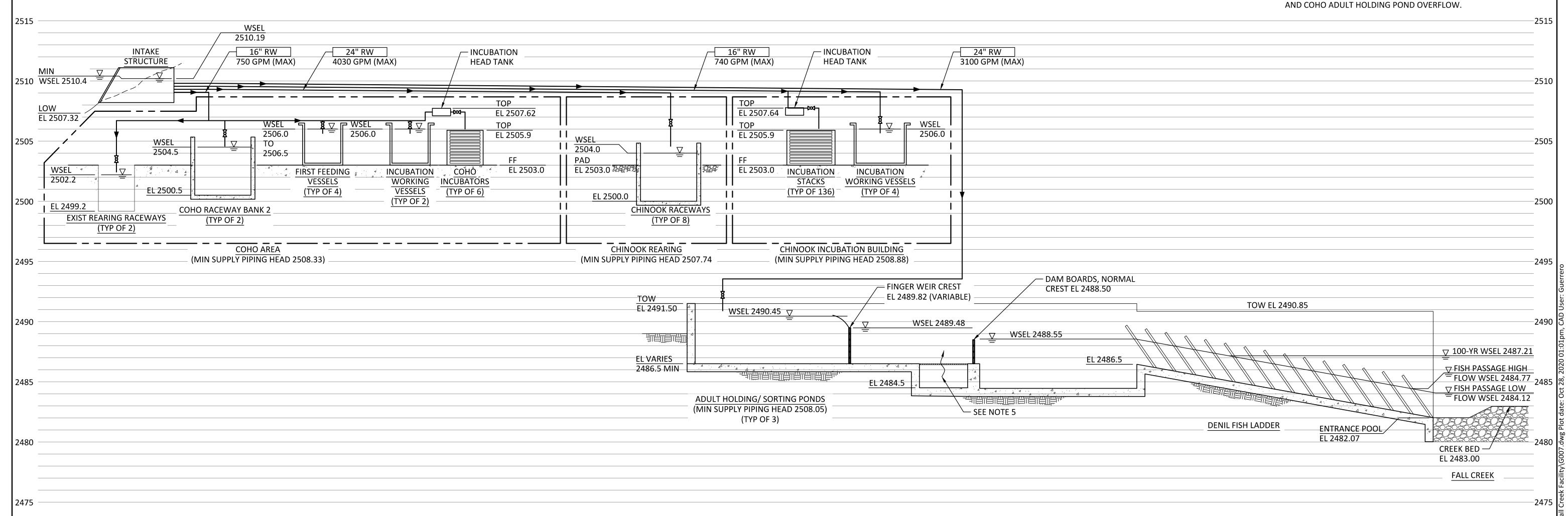
MAG W SHINER

MAG W FLASHER

SUPPLY DESIGN CRITERIA				
DESCRIPTION	VALUE			
INTAKE SCREEN PERCENT OPEN AREA	50%			
INTAKE SCREEN PERCENT OCCLUDED	40%			
INTAKE LOSSES	0.21 FT			
SUPPLY PIPING HAZEN-WILLIAMS COEFFICIENT	120			
MAXIMUM WATER RIGHT	10 CFS			
INTAKE PIPING MINIMUM ALLOWABLE VELOCITY	1.5 FT/S			
INTAKE PIPING MAXIMUM ALLOWABLE VELOCITY	5.0 FT/S			

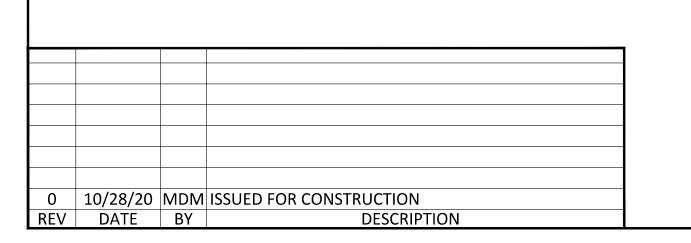
#### SHEET NOTES:

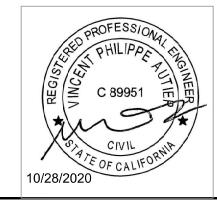
- 1. DRAIN PIPING, WASTE DRAIN PIPING, UTILITY WATER PIPING, AND FISH RELEASE PIPING NOT SHOWN ON THIS SHEET FOR CLARITY.
- 2. SUPPLY PIPING HYDRAULICS WERE EVALUATED UNDER 5
  DIFFERENT SCENARIOS TO ACCOUNT FOR CONTINGENCIES IN PIPE
  ROUGHNESS, OPERATIONAL CHANGES, ADDITIONAL INTAKE
  LOSSES, AND ALTERNATIVE MINOR LOSS ACCOUNTING. THE
  PIPING SYSTEM WAS FOUND TO PROVIDE THE REQUIRED DESIGN
  FLOWS TO ALL DEMAND NODES IN EACH OF THE SCENARIOS.
  REPORTED SUPPLY HEAD ON THIS SHEET REFERS TO THE SUPPLY
  DESIGN CRITERIA, AS SHOWN, AND FLOW RATES AS INDICATED ON
  THIS SHEET.
- 3. SUPPLY PIPING TO THE SPAWNING BUILDING IS USED FOR UTILITY WATER ONLY, AND THEREFORE IS NOT SHOWN ON THIS SHEET. SUPPLY TO THE SPAWNING BUILDING WILL BE TAPPED FROM THE ADULT HOLDING SUPPLY PIPE.
- 4. FLOW RATES INDICATED AS MAXIMA ARE ANNUAL MAXIMA BASED ON BIOPROGRAM DEMANDS FOR EACH OF THE FACILITIES. MAXIMUM FLOWS DO NOT OCCUR SIMULTANEOUSLY. AT ALL TIMES DURING THE YEAR, BIOPROGRAM DEMANDS ARE WITHIN THE 10 CFS WATER RIGHT.
- 5. WATER SUPPLIED THROUGH DIFFUSER PLATE FROM CHINOOK

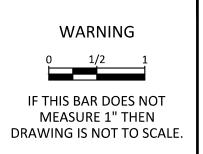


SUPPLY PIPING HYDRAULIC PROFILE

SCALE: NTS











KLAMATH RIVER RENEWAL CORPORATION	DESIGNED J. BURNS
FALL CREEK FISH HATCHERY	DRAWN R. GUERRERO
SUPPLY PIPING HYDRAULIC PROFILE	CHECKED V. AUTIER
AND DESIGN CRITERIA	PROJECT DATE <u>10/28/20</u>

DRAWING

G007

DRAIN PIPING DESIGN CRITERIA	
DESCRIPTION	VALUE
MAXIMUM FLOW DEPTH - % INNER DIAMETER	75%
MINIMUM SELF-CLEANING VELOCITY	2.0 FT/S
ADULT HOLDING ORIFICE COEFFICIENT	0.62
ADULT HOLDING NUMBER OF ORIFICES	3
PRESSURE PIPE ROUGHNESS COEFFICIENT	6.0x10 <sup>-5</sup> IN
OPEN CHANNEL PIPE ROUGHNESS COEFFICIENT	0.013

#### SHEET NOTES:

- 1. DISCHARGE LISTED IS MAXIMUM DESIGN FLOW. FLOW DEPTH CORRESPONDS TO THE MAXIMUM DESIGN FLOW.
- 2. ALL SUPPLY PIPING, WASTE DRAIN PIPING, UTILITY WATER PIPING, AND FISH RELEASE PIPING NOT SHOWN ON THIS SHEET FOR
- 3. PIPE INLET CONFIGURATIONS AT THE COHO AREA RACEWAYS ALLOW FOR SUFFICIENT AIRFLOW TO AERATE THE UPPER REACH OF THE DRAIN PIPE.
- 4. 24"Ø CHINOOK RACEWAYS DRAIN PIPE EQUIPPED WITH VENT PIPE TO EL 2506.00 THAT WILL SERVE TO AERATE THE CHINOOK RACEWAYS DRAIN AND THE TRUNK LINE.
- 5. PIPE RISERS AT THE ADULT HOLDING PONDS WILL INDUCE THE DRAIN PIPE TO FILL AT APPROX EL 2494.80 WHEN THE FULL 10 CFS IS CONVEYED BY THIS PIPELINE TO THE ADULT HOLDING PONDS. THIS WILL BE THE MAXIMUM ELEVATION ATTAINED BY THE PRESSURE FLOW, AND FOR LOWER FLOW RATES, THIS ELEVATION WILL BE SLIGHTLY LOWER. IN NO CASE DOES THE PRESSURE FLOW CAUSE AN INUNDATION OF THE UPPER SITE DRAIN SYSTEMS.

DRAWING

G008

DESIGNED J. BURNS

DRAWN R. GUERRERO

PROJECT DATE <u>10/28/20</u>

CHECKED V. AUTIER

#### **ABBREVIATIONS:**

S = PIPE SLOPE

KLAMATH RIVER RENEWAL CORPORATION

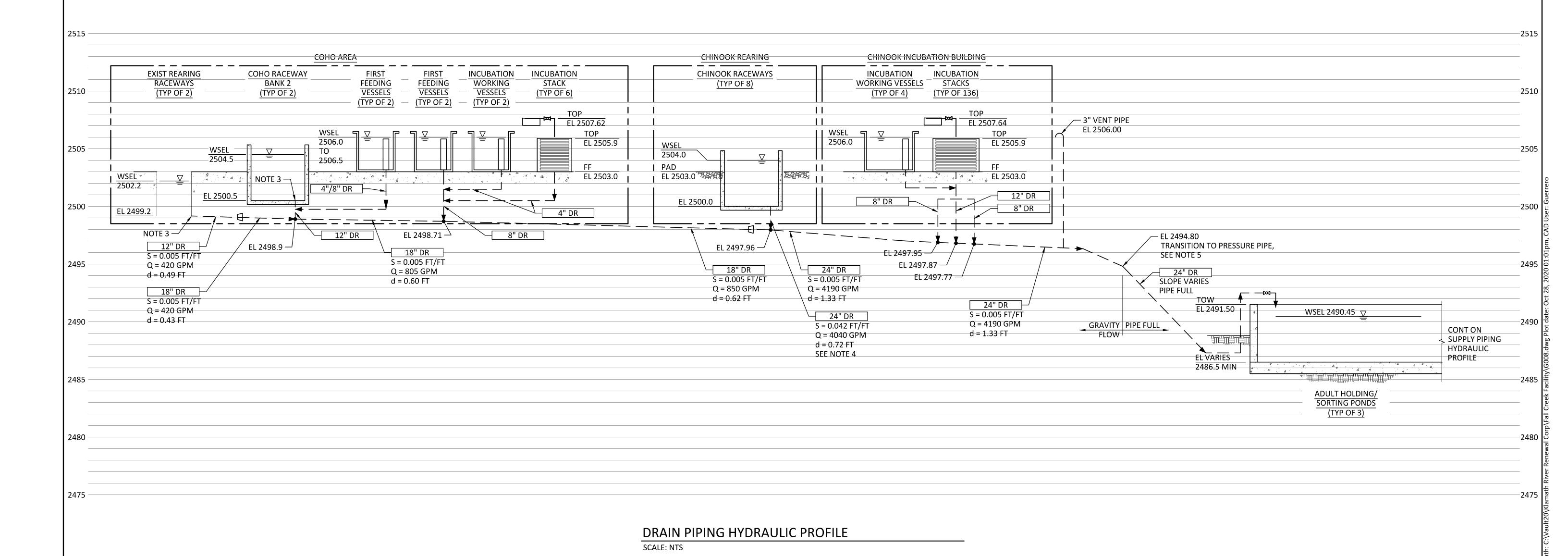
FALL CREEK FISH HATCHERY

DRAIN PIPING

HYDRAULIC PROFILE

AND DESIGN CRITERIA

- Q = MAXIMUM DISCHARGE
- d = FLOW DEPTH



**KLAMATH** 

RIVER RENEWAL

CORPORATION

WARNING

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

0 10/28/20 MDM ISSUED FOR CONSTRUCTION

DESCRIPTION

REV DATE BY

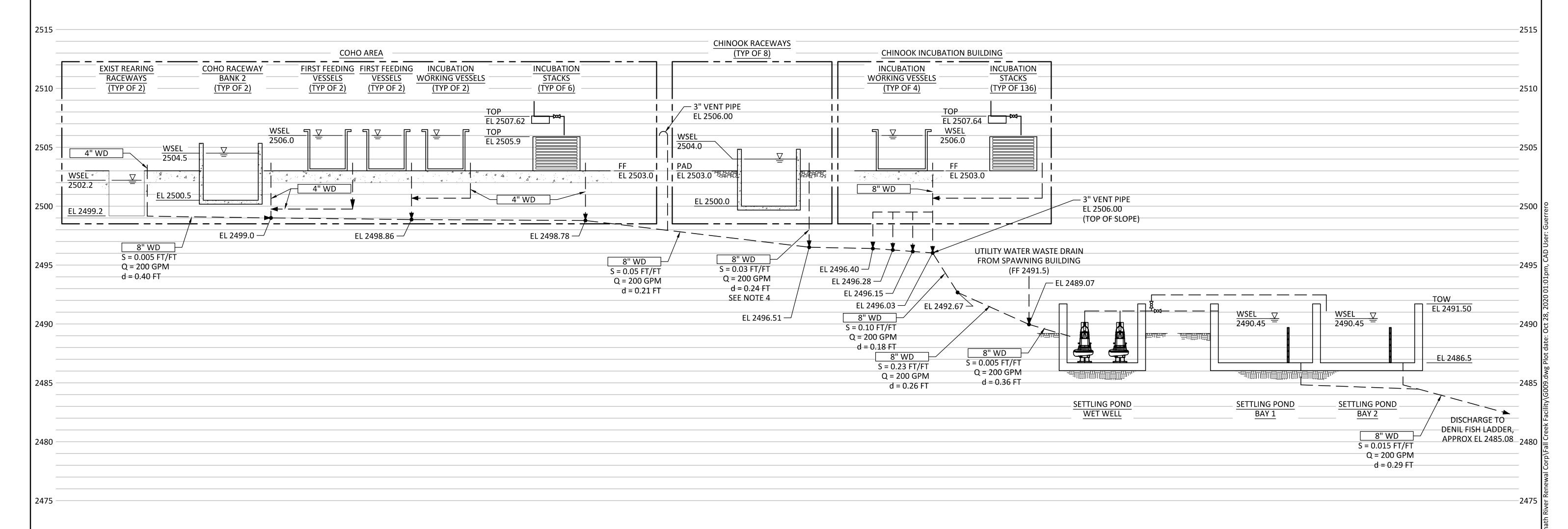
WASTE DRAIN PIPING DESIGN CRITERIA		
DESCRIPTION	VALUE	
MAXIMUM FLOW DEPTH - % INNER DIAMTER	75%	
MINIMUM SELF-CLEANING VELOCITY	2.0 FT/S	
DESIGN SETTLING VELOCITY	0.00151 FT/S	
CLEANING MAXIMUM FLOW RATE, SEE NOTE 3	200 GPM	
SETTLING POND WEIR COEFFICIENT	3.33	
OPEN CHANNEL PIPE ROUGHNESS COEFFICIENT	0.013	

#### SHEET NOTES:

- 1. AT EACH POND OR VAT A RISER PIPE WILL BE PROVIDED AT GRADE SUCH THAT POND WASTE CAN BE VACUUMED TO THE WASTE DRAIN SYSTEM.
- 2. ALL SUPPLY PIPING, DRAIN PIPING, UTILITY WATER PIPING, AND FISH RELEASE PIPING NOT SHOWN ON THIS SHEET FOR CLARITY.
- 3. MAXIMUM CLEANING RATE IS CONTROLLED BY THE SIZE OF THE TWO SETTLING POND BAYS, AND THEREFORE THE PIPELINE WAS SIZED FOR THIS CONDITION. IT IS ASSUMED THAT THIS WILL ALLOW FOR THE OPERATION OF (2) VACUUMS SIMULTANEOUSLY.
- 4. CHINOOK RACEWAYS WASTE DRAIN PIPE EQUIPPED WITH VENT PIPE TO EL 2506.00. CHINOOK RACEWAY WASTE DRAIN VENT PIPE SERVES TO VENTILATE THE WASTE DRAIN PIPE AND THE TRUNK
- 5. WASTE DRAINPIPE DISCHARGES TO WET WELL WITH (2) SUBMERSIBLE NON-CLOG SUMP PUMPS. PUMP CONFIGURATION, STARTS/STOPS, AND ALARMS ARE SHOWN ON SHEET M614.

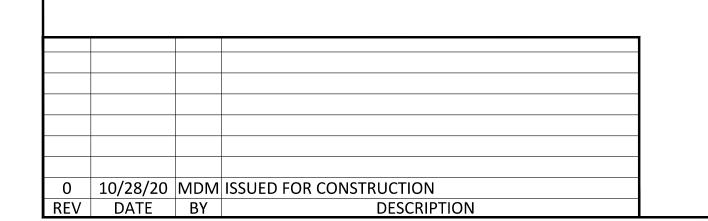
#### **ABBREVIATIONS:**

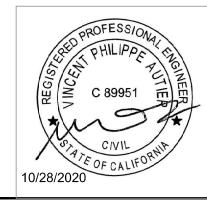
- S = PIPE SLOPE
- Q = MAXIMUM DISCHARGE
- d = FLOW DEPTH

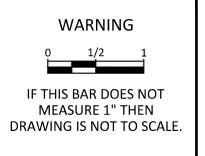


WASTE DRAIN PIPING HYDRAULIC PROFILE

SCALE: NTS











KLAMATH RIVER RENEWAL CORPORATION	
FALL CREEK FISH HATCHERY	
WASTE DRAIN PIPING	
HYDRAULIC PROFILE	
AND DESIGN CRITERIA	

DRAWING

DESIGNED J. BURNS

DRAWN R. GUERRERO

CHECKED V. AUTIER

PROJECT DATE <u>10/28/20</u>

G009

A. PIPES SO DESIGNATED SHALL SHOW ZERO LEAKAGE.

- PIPES SO DESIGNATED SHALL SHOW ZERO LEAKAGE FOR UNBURIED PIPE AND NOT MORE THAN 0.02 GALLON PER HOUR PER INCH DIAMETER PER 100 FEET OF BURIED PIPE.
- PIPES SO DESIGNATED SHALL NOT SHOW A LEAKAGE OF MORE THAN 0.15 GALLON PER HOUR PER INCH OF DIAMETER PER 100 FEET OF PIPE.
- PIPES SO DESIGNATED SHALL NOT SHOW A LOSS OF PRESSURE OF MORE THAN 5 PERCENT.
- PIPE SO DESIGNATED SHALL NOT SHOW A LOSS OF VACUUM OF MORE THAN 4 INCHES MERCURY COLUMN.

LININGS AND COATINGS

(SEE NOTE 13)

SEE SECTION 09 96 00

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

NOT APPLICABLE

FOR FIELD TEST PROCEDURES AND ADDITIONAL TEST REQUIREMENTS, SEE PIPING SECTION OF SPECIFICATIONS.

NOTE 4

NO SUBSTITUTIONS U.N.O. IN THE SPECIFICATIONS.

PIPING GROUP FUNCTION SHOWN THUS \* SHALL BE INSULATED PER SPECIFICATIONS.

STATIC WATER TEST WITH SURFACE 5-FEET ABOVE HIGH POINT OF

NOTE 7 NOT APPLICABLE.

NOTE 8 NOT APPLICABLE

NOT APPLICABLE

NOTE 9

NOTE 10 NOT APPLICABLE

NOTE 11

NOT APPLICABLE NOTE 12

CHANGE IN PIPING MATERIAL GROUP NUMBER IS INDICATED THUS: ——→

NOTE 13

FOR FULL PIPE LINING AND COATING REQUIREMENTS, SEE SPECIFICATIONS.

NOTE 14 EXPOSED OUTDOOR PIPING SHALL BE PAINTED IN ACCORDANCE WITH SPECIFICATIONS. COLORS TO BE SELECTED BY OWNER.

NOTE 15

NOT APPLICABLE.

NOTE 16

ALL FISH RELEASE PIPE BENDS SHALL HAVE A MINIMUM RADIUS OF 5 TIMES THE PIPE DIAMETER. FITTINGS FOR FISH RELEASE PIPE SHALL BE OF THE SAME MATERIAL AS THE PIPING. ALL FISH RELEASE PIPING SHALL BE FREE OF BURRS AND ROUGH SURFACES. ALL PIPING JOINTS SHALL BE SMOOTH AND FREE OF SURFACE BLEMISHES. INTERNAL BEAD FROM BUTT WELDING SHALL BE REMOVED USING A DEBEADER FOR PIPES UP TO 20"Ø (INTERNAL). ABOVE 20"Ø INTERNAL BEAD SHALL BE REMOVED BY ENTERING THE PIPE.

NOTE 17

FOR HDPE PIPING THE SIZE OF PIPE SHOWN ON DRAWING CALL-OUTS SHALL BE THE NOMINAL PIPE DIAMETER. HDPE PIPE SHALL BE ACCORDING TO THE IRON PIPE SIZE (IPS) CONVENTION, AND THE PIPE WALL THICKNESS AND INNER DIAMETER SHALL BE PER DR RATING REQUIREMENT.

NOTE 18

ALL REFRIGERANT PIPING SHALL CONFORM TO SPECIFICATION 23 23 00 AND SHALL COMPLY WITH ASME B31.5, CHAPTER VI.

KLAMATH RIVER RENEWAL CORPORATION DESIGNED S. ELLENSON FALL CREEK FISH HATCHERY DRAWN R. GUERRERO

CHECKED J. BOAG

FIELD TEST REQUIREMENTS

(SEE NOTE 3 AND NOTE 4)

TEST

MEDIUM

WATER

WATER

WATER

WATER

**VACUUM** 

WATER

WATER

WATER

SEE NOTE 18

**MINIMUM TEST** 

PRESSURE PSI

10

10

50

125

15 IN Hg

10

SEE NOTE 6

SEE NOTE 6

LEAKAGE ALLOWANCE

(SEE NOTE 2)

(A)

(B)

(A)

(A) (D)

(A)

(C)

**GROUF** 

NO.

11

15

16

24

31

ASTM D1785.

(NOTE 17)

PIPE MATERIAL

STEEL, ASTM A53, SCHEDULE 40, BLACK WELDED, GALVANIZED

(AWWA C151 AND MODIFIED PER SECTION 40 23 19)

STAINLESS STEEL, TYPE 316, ASTM A312, SCHEDULE 10S

POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT.

HIGH DENSITY POLYETHYLENE (HDPE) ASTM D3350 - DR26

COPPER, ASTM B88, TYPE K, SOFT TEMPERED WHERE BURIED, HARD

DUCTILE IRON, ASME A21.51,

TEMPERED WHERE EXPOSED.

(PER SECTION 23 23 00)

ALLOWABLE PIPING MATERIAL GROUP NO.

(SEE NOTE 1 AND 4)

**BURIED PIPING** 

(SEE NOTE 13)

SMALLER AND LARGER

16

2,11,16

16

15,16

16

4" DIA

16

31

11,16

16

2,15,16

16

16

**EXPOSED PIPING** 

(SEE NOTE 14)

SMALLER

2,16

2,11,16

16

15,16

16

24

3" DIA AND 4" DIA AND 3" DIA AND

LARGER

11,16

16

2,15,16

**FUNCTION** 

THIS LIST MAY INCLUDE FLUIDS NOT USED IN THIS PROJECT

(\* SEE NOTE 5)

COMMONLY USED FUNCTIONS

FR FISH RELEASE (NOTE 16)

UW UTILITY WATER (NOT-POTABLE)

SUC STRUCTURAL UNDERDRAIN COLLECTOR

DR DRAIN

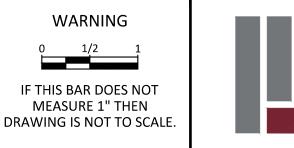
VT VENT

RW RAW WATER

WD | WASTE DRAIN

SDR STORM DRAIN

REFRIGERANT





PIPING MATERIAL SCHEDULE (SEE NOTE 1)

CATALOG.

ALLOWED)

SOLDER)

AND TRANSITIONS.

FITTINGS / JOINTS

2½" AND SMALLER, MALLEABLE IRON, ASME B16.3, THREADED,

B16.1, 125 PSI FLANGED OR MECHANICAL COUPLING.

BANDED, GALVANIZED 150 PSI. 3" AND LARGER, CAST IRON, ASME

DUCTILE IRON AWWA C110 AND MODIFIED PER SECTION 40 23 19,

BELL AND SPIGOT JOINTS (RESTRAINT OR NON-RESTRAINT), MECH

SMALLER, 150 PSI, (PRESS. RATING) 14" AND LARGER, WITH 125 PSI

ASME B16.1 FLANGES. FOR HIGHER PRESS. RATING, REFER TO MFTR

SOCKET WELDED FITTINGS SCHEDULE 40S (NO THREADED JOINTS

POLYVINYL CHLORIDE, SCHEDULE 80, NORMAL IMPACT, SOCKET

(SOLVENT & GLUE SHALL BE COMPATIBLE WITH FLUID SERVICE)

SOLDER, FOR COMPRESSED AIR PIPING USE 95-5 TIN-ANTIMONY

WROUGHT COPPER OR CAST BRONZE, ASME B16.22, SOLDER JOINT,

150 PSI, OR COMPRESSION FITTINGS. (FOR OXYGEN PIPING USE SILVER

HDPE THERMAL BUTT WELD; FLANGE CONNECTIONS AT ALL VALVES

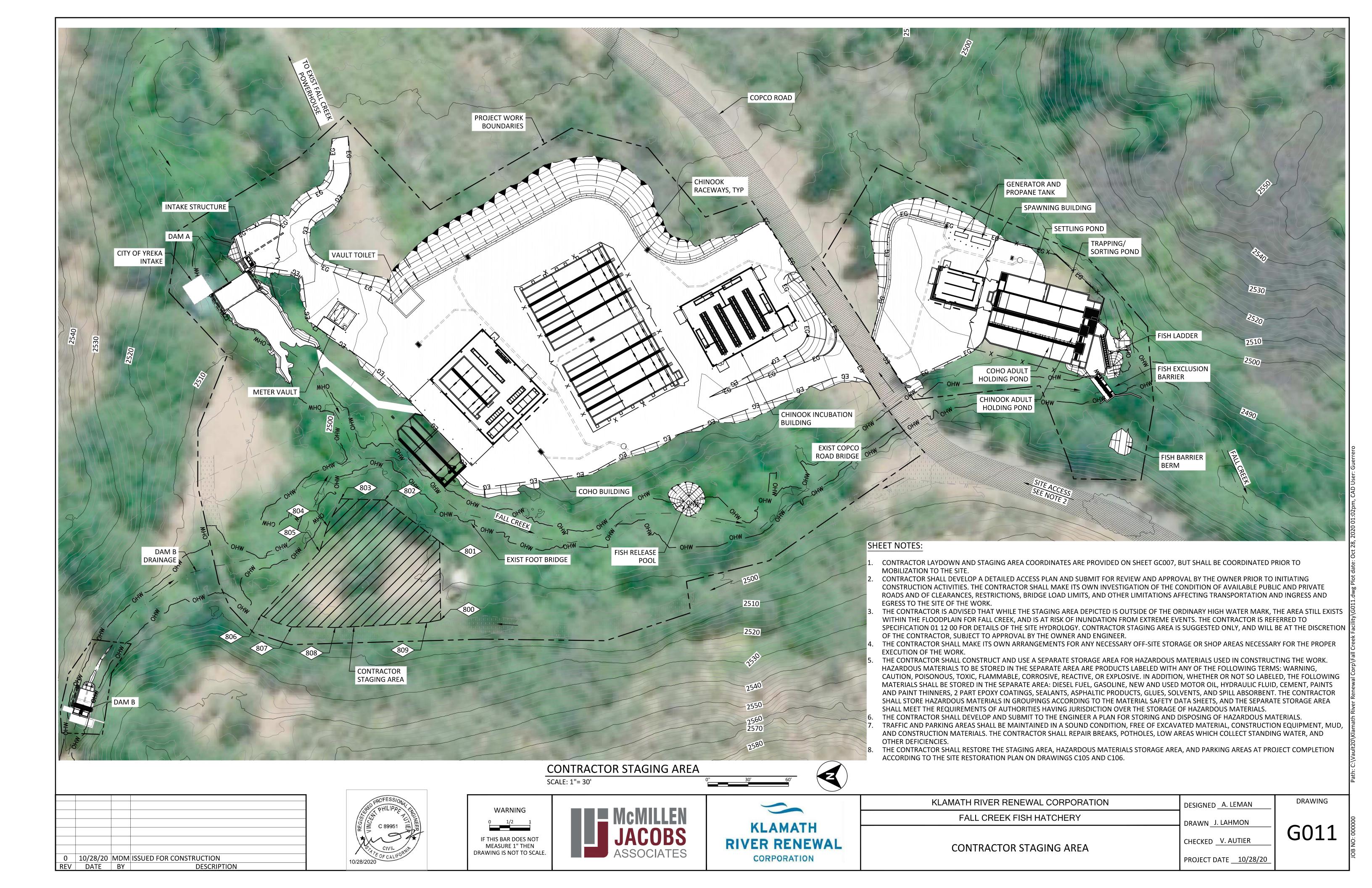
SOLVENT WELD JOINTS, ASTM D2467 PER SECTION 40 23 22.

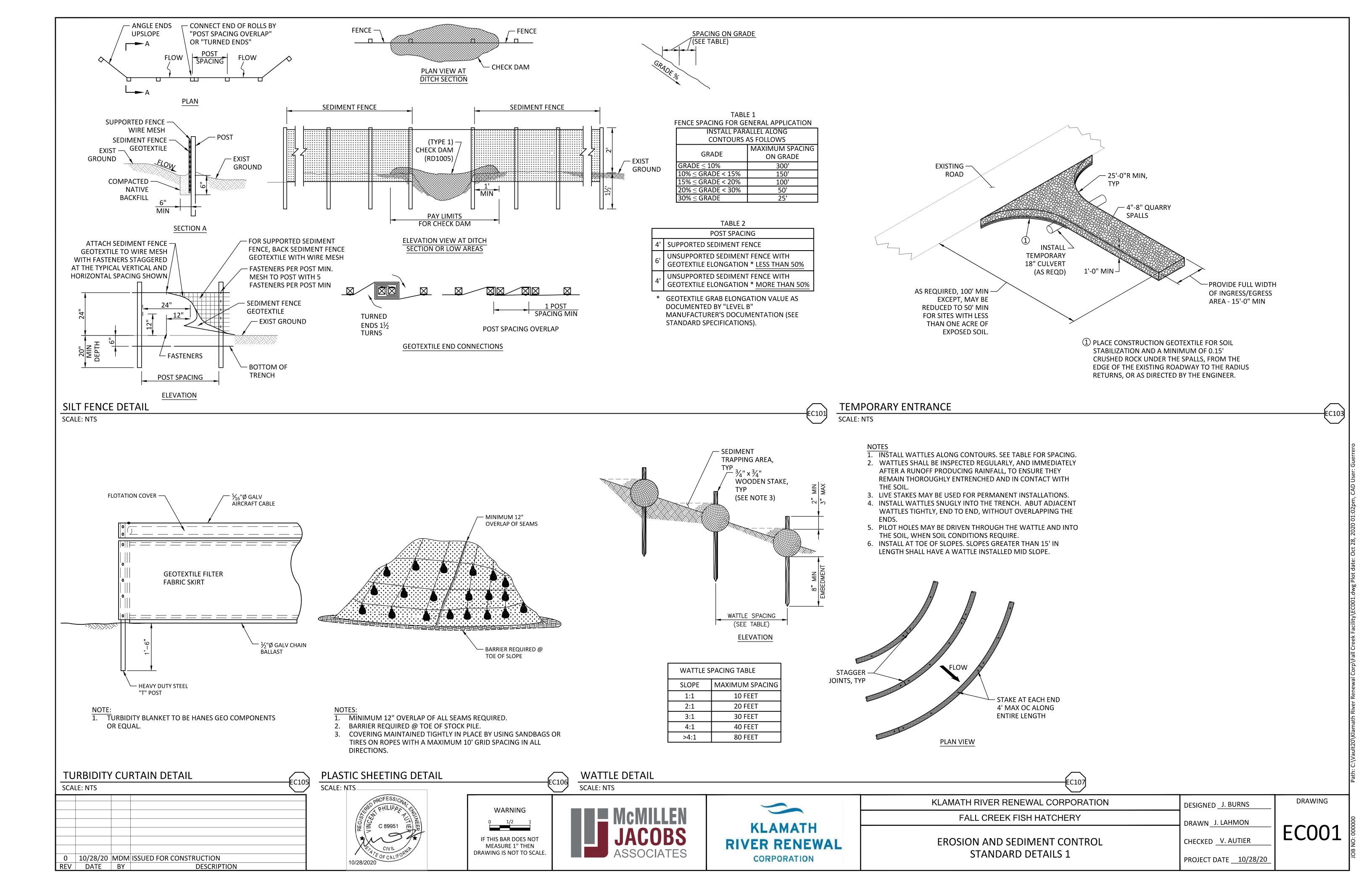
STAINLESS STEEL, TYPE 316 WELDED SLIP-ON FLANGE, ASME B16.3 OR NOT APPLICABLE

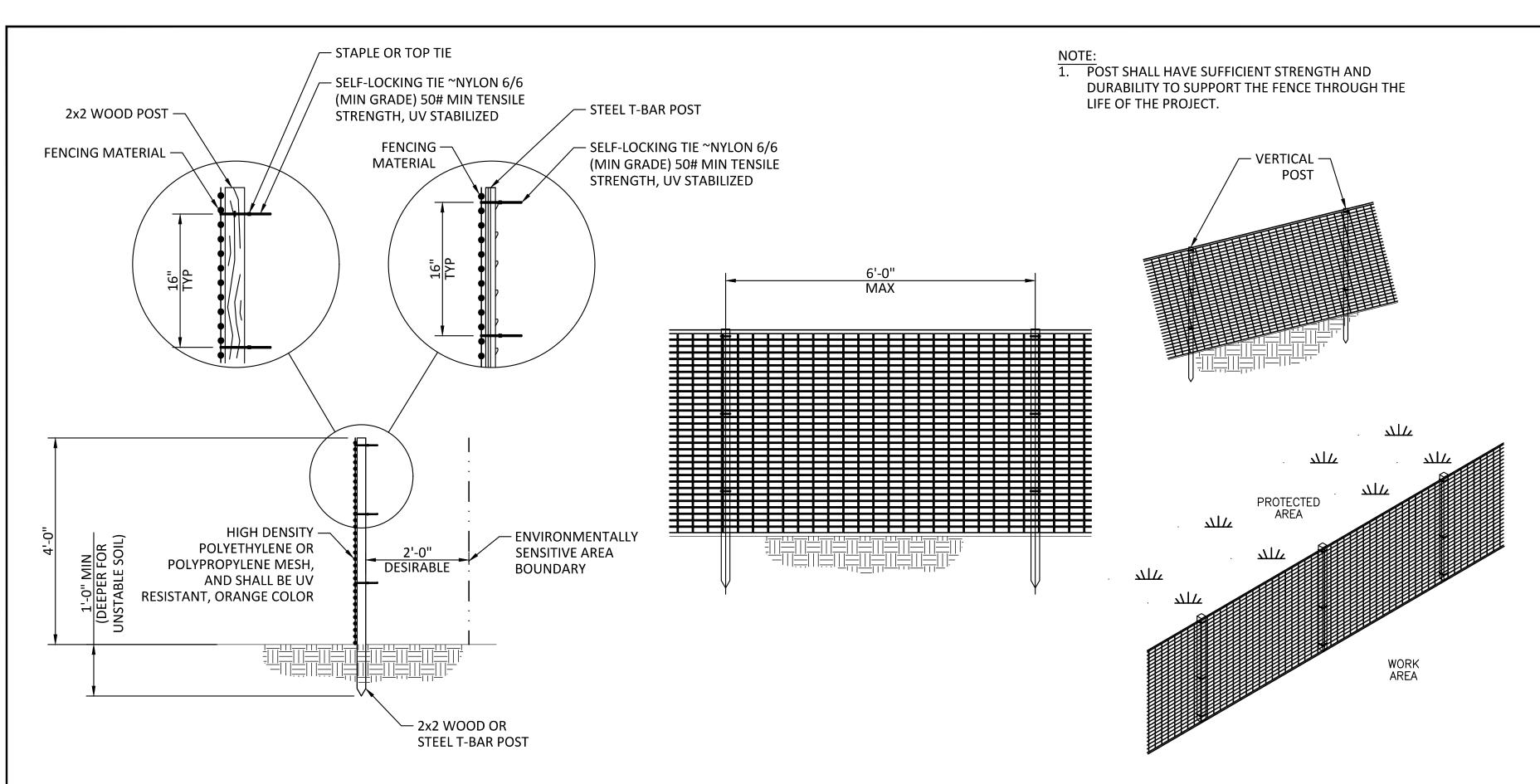
CPLNG, FLGD OR MECH JTS, 250 PSI ,(PRESS. RATING) 12" AND

G010 PROJECT DATE 10/28/20

DRAWING

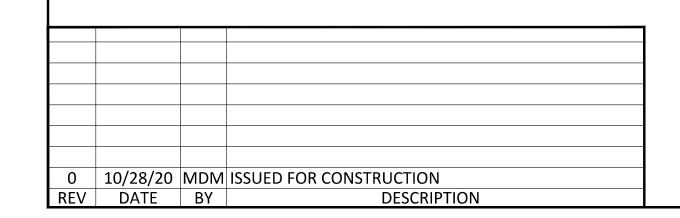






CONSTRUCTION LIMITS FENCE DETAIL

SCALE: NTS









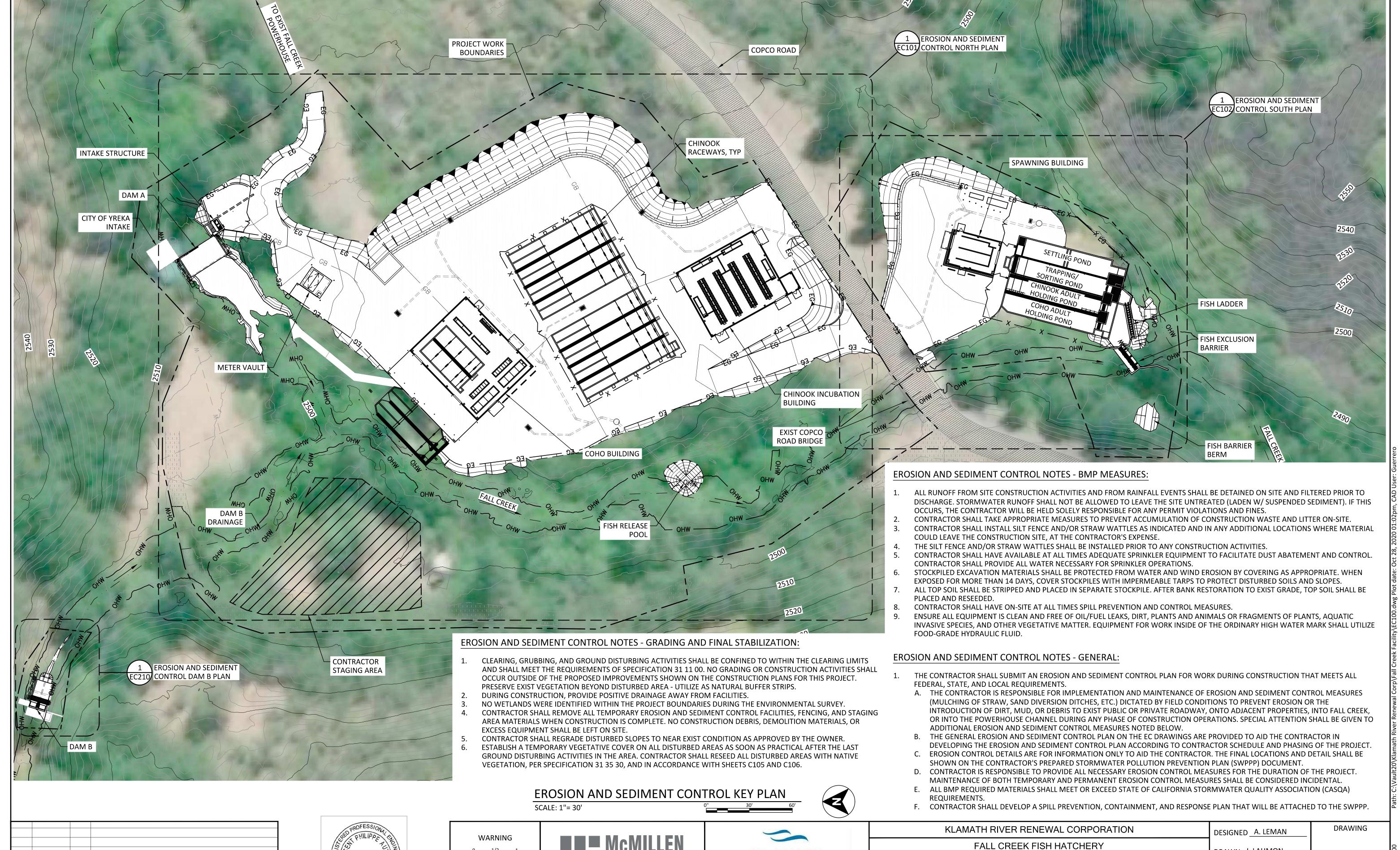


KLAMATH RIVER RENEWAL CORPORATION	DESIGNED J. BURNS
FALL CREEK FISH HATCHERY	DRAWN J. LAHMON
EROSION AND SEDIMENT CONTROL	CHECKED V. AUTIER
STANDARD DETAILS 2	PROJECT DATE 10/28/

DRAWING

PROJECT DATE \_\_\_\_10/28/20\_

EC002



**KLAMATH** 

RIVER RENEWAL

CORPORATION

IF THIS BAR DOES NOT

MEASURE 1" THEN DRAWING IS NOT TO SCALE

0 | 10/28/20 | MDM | ISSUED FOR CONSTRUCTION

DESCRIPTION

REV DATE BY

EC100

DRAWN J. LAHMON

CHECKED V. AUTIER

PROJECT DATE <u>10/28/20</u>

**EROSION AND SEDIMENT CONTROL** 

KEY PLAN