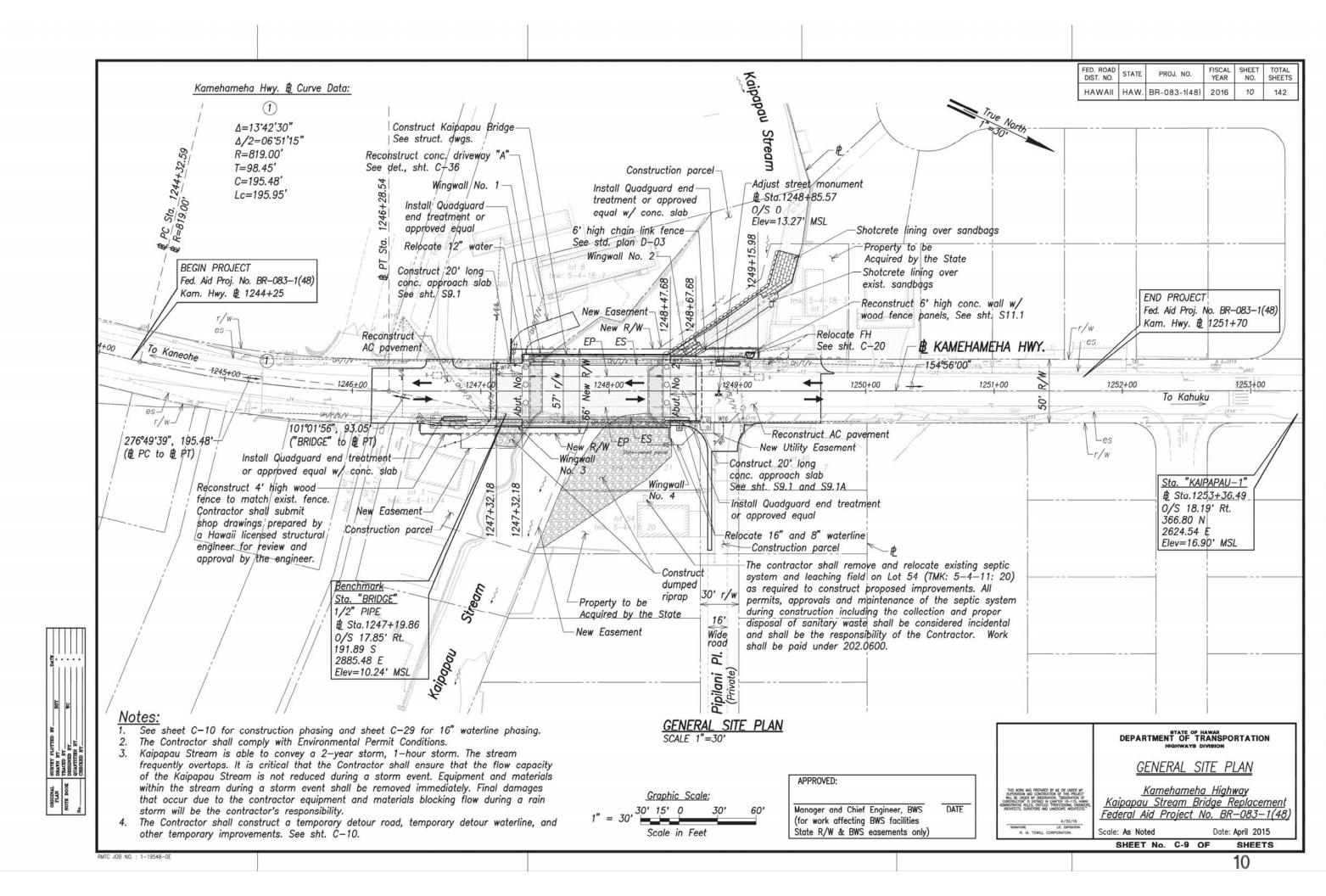
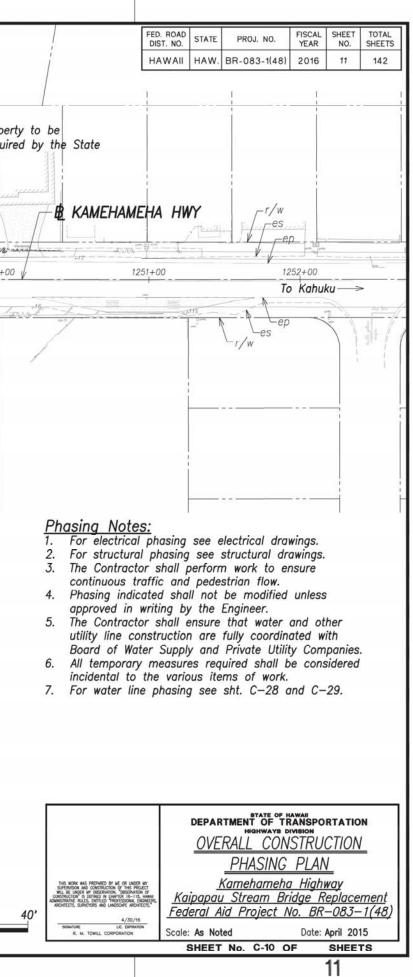
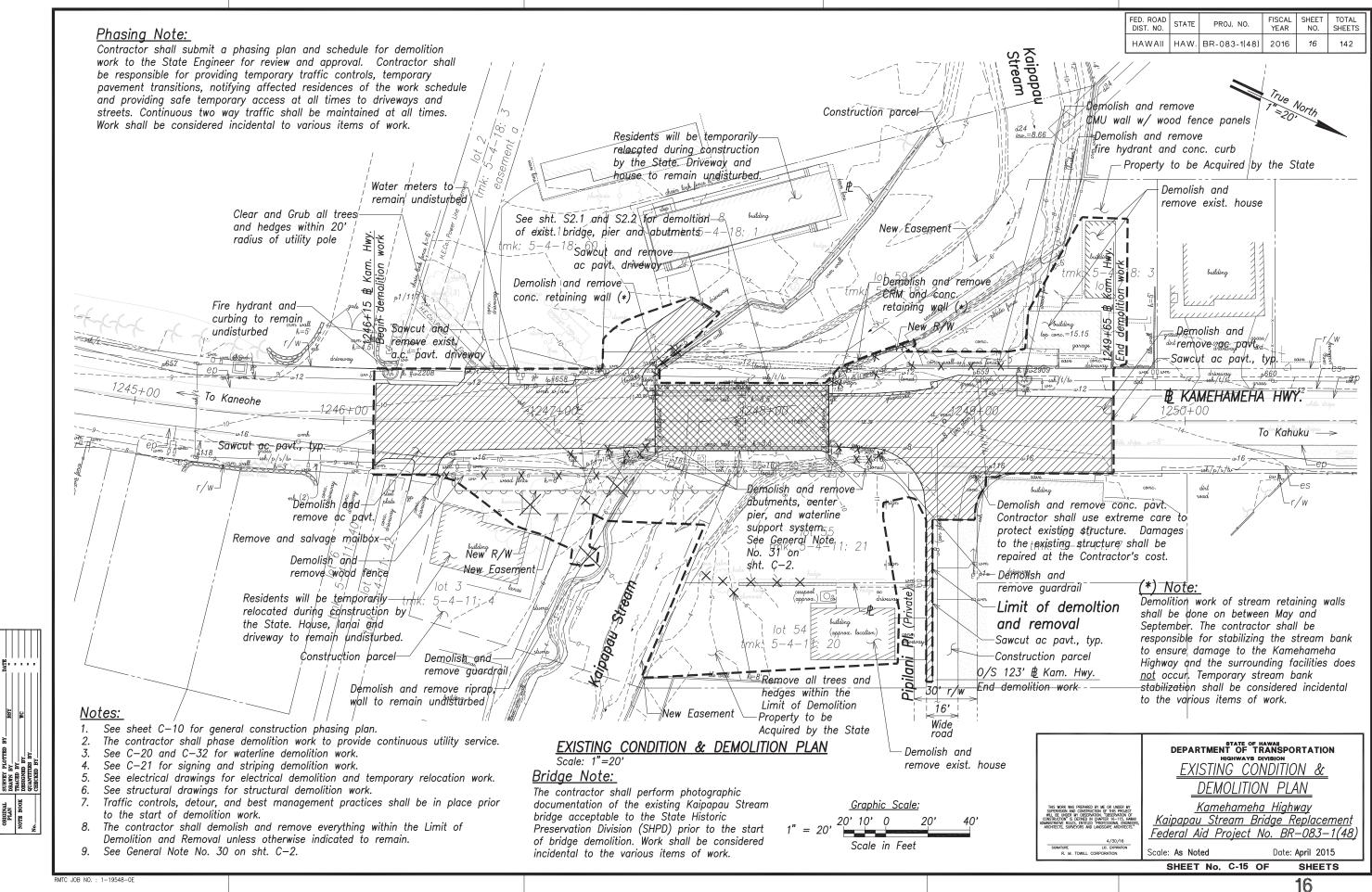
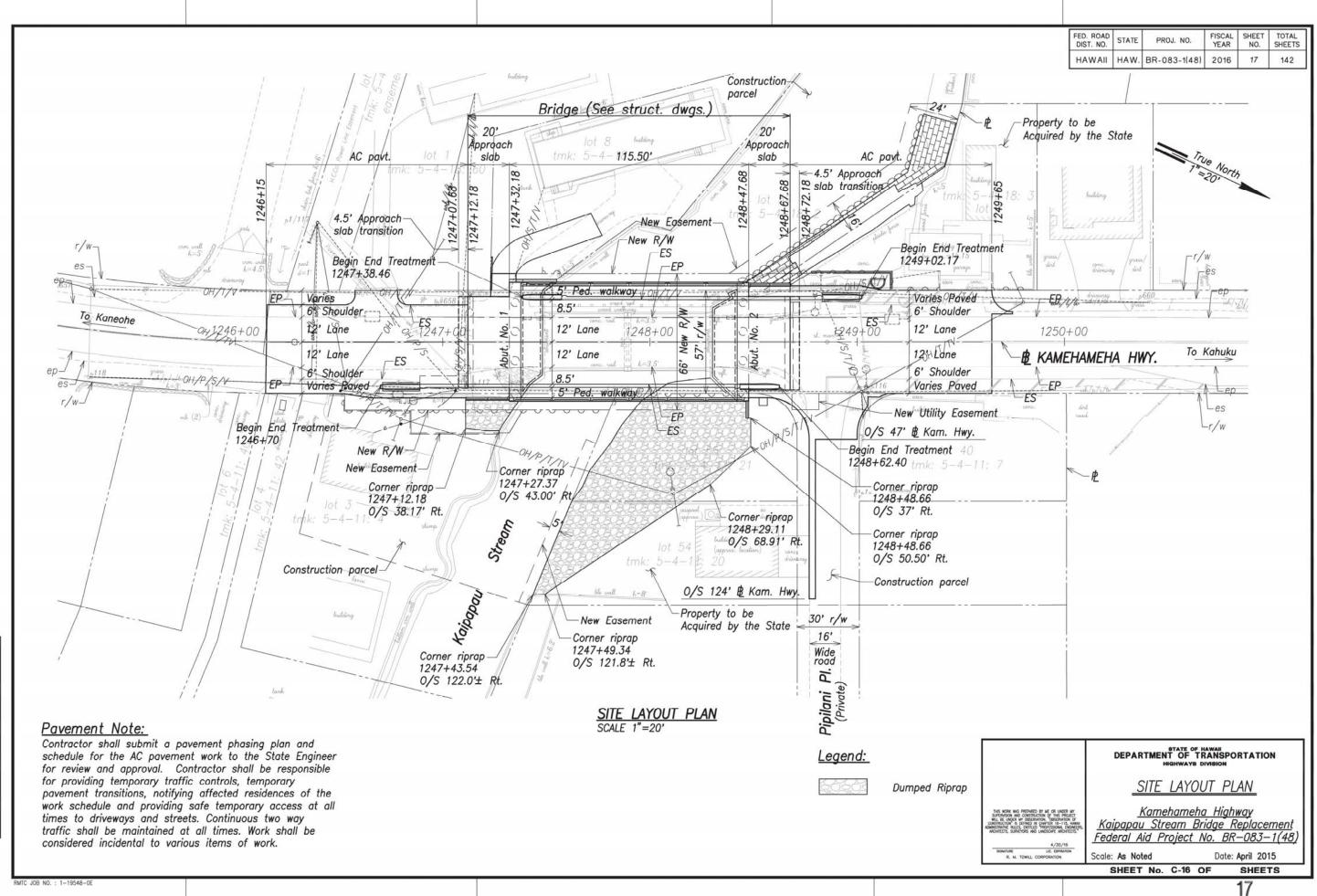
Attachment A – 2: Construction Plans/Drawings



	Construction Parce	
	Residents will be temporarily	A CFR
	True North	
	=20. th	popor
	$\frac{1}{3}$ $\frac{1}{5}$ $\frac{1}$	Kaipanan Prope
	New R/W	tmk 5-4-18: 3 lot 7
		CONSTANT ON CONTRACT OF THE
	To Kaneohe 1245+00 11 94246+00 9400 9400 9400 9400 920 5 21248+00 92	1249+00+00 10 11 1250+0
		0H/I/I
		W16
	New R/W TA TS 2+00	New Utility Easement
	Residents will be temporarily be relocated during	tmk, 5-4-11; 7
	construction by the State.	Hipilani
	Construction Parcel	Pipi
	New Easement	Construction Parcel
	Property to be Acquired by the State	30' r/w 16' Wide road
	OVERALL CONSTRUCTION PHA	SING PLAN
	Suggested Construction Sequence of Major Constuction Items:	
	1 Install best management practices/erosion control measures. See Notes sheets and sht. C-17.	
	Install temporary 12" waterline and relocate existing 12" water line. See 12" Waterline Plan and Profile, sht. C-20. Relocate electrical utilities. See electrical drawings for temporary and permanent electrical relocation phasing.	
	3 Construct trial and load test drilled shafts and perform load test. See structural drawings.	
	4 Construct detour roadway and temporary bridge. See sht. $C-22$ to $C-27$ and stuctural drawings.	
	5 Demolish existing Kaipapau Stream bridge. See sht. C–15 and structural drawings. Expose existing 16" water line jacket and concrete s	upport system.
¥	6 Construct Phase 1 new Kaipapau Stream bridge. See Construction Sequence, Phase 1 of structural drawings, shts. S0.7, S0.7A, and S0.7	'В.
NSY	7 Partially remove Detour roadway and temporary bridge. Construct temporary pavement transitions, signing and pavement markings. Temporary work shall be considered incidental to the various items of work. Construct Phase 2 of new Kaipapau Stream bridge. See Construction Sequence, Phase 2 of structural drawings, shts. S0.8, S0.8A, and S0.8B.	
100 C	7A Remove remainder of Detour roadway and temporary bridge.	
SURVEY PLOTTED BY DAATH BY TEACED BY QLANTTEB BY CEBCKED BY	8 Construct sand bags and shotcrete lining along north bank, upstream of Kaipapau Stream bridge. See sht. C-18.	
LL SUR DRA OK DESI QUAL	9 Construct dumped riprap along north and south bank, downstream of Kaipapau Stream bridge. See sht. C-16 and C-18.	
ORIGINAL PLAN NOTE BOOK No.	10 Construct AC pavement. See sht. C–16. The contractor shall submit a pavement phasing plan and schedule for Engineer's review and approval.	<u>Graphic Scale:</u> 1" = 20' ^{20'} 10' 0 20'
	11 Construct final signing and pavement markings. See sht. C-21.	Scale in Feet
	RMTC JOB NO. : 1-19548-0E	





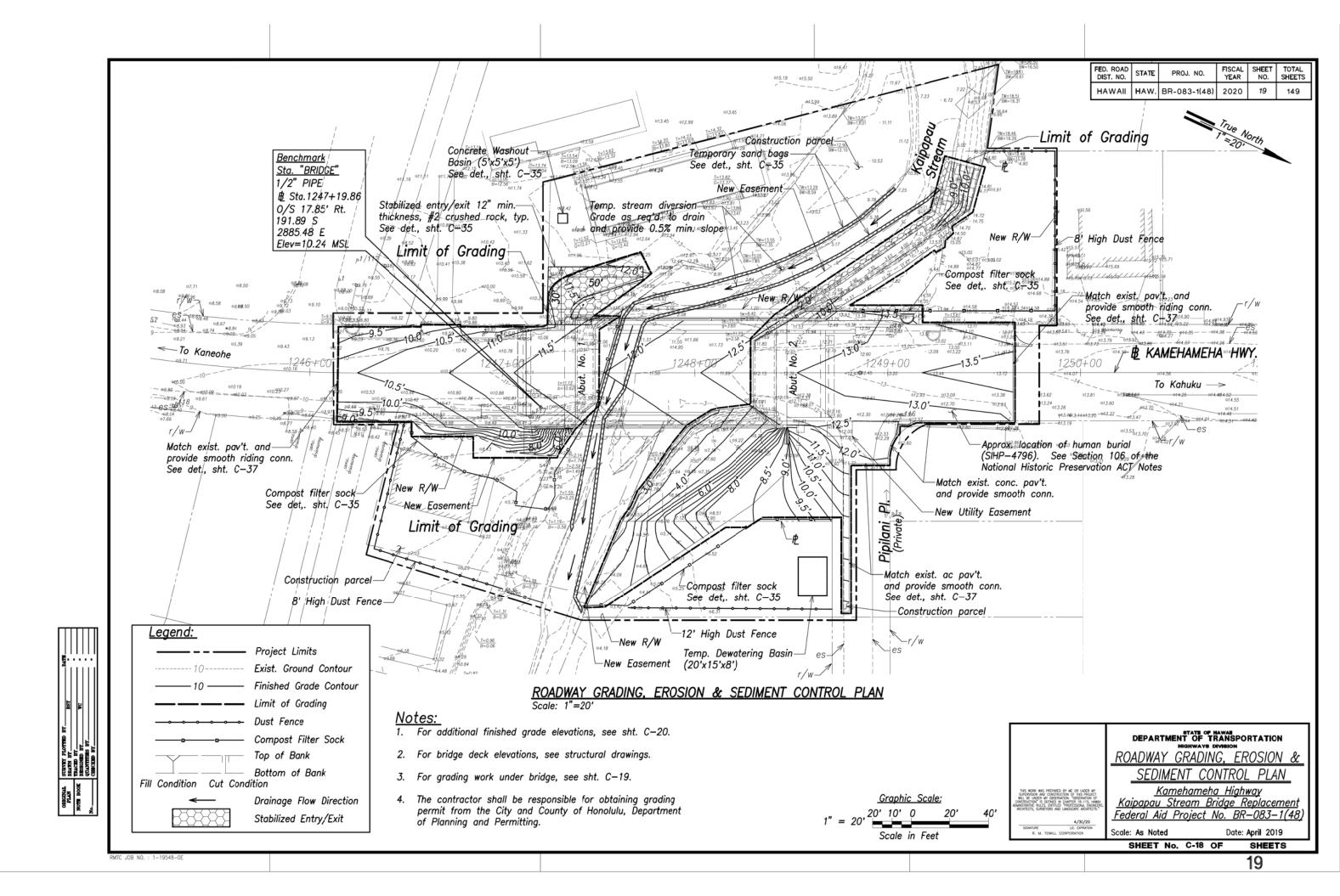


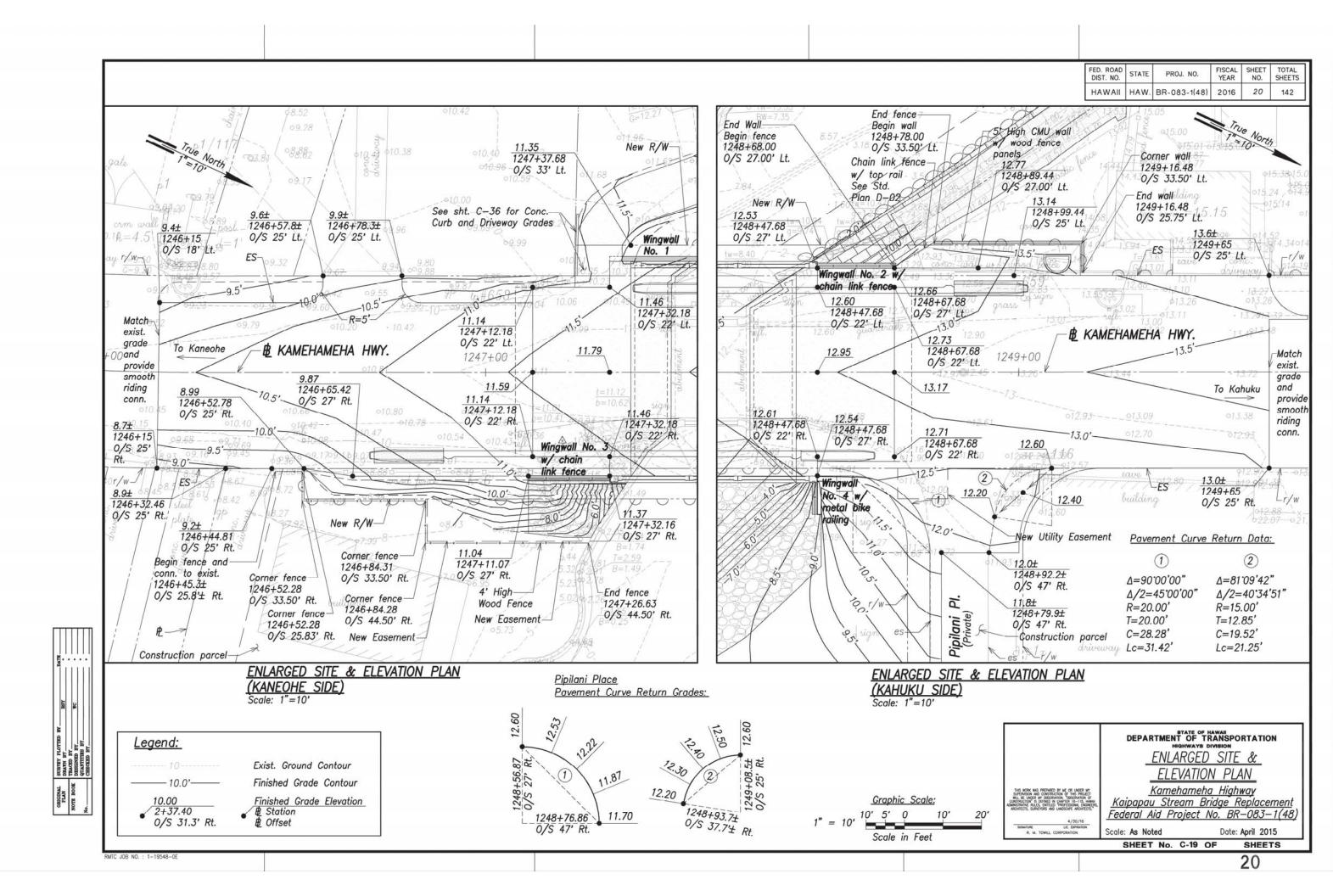
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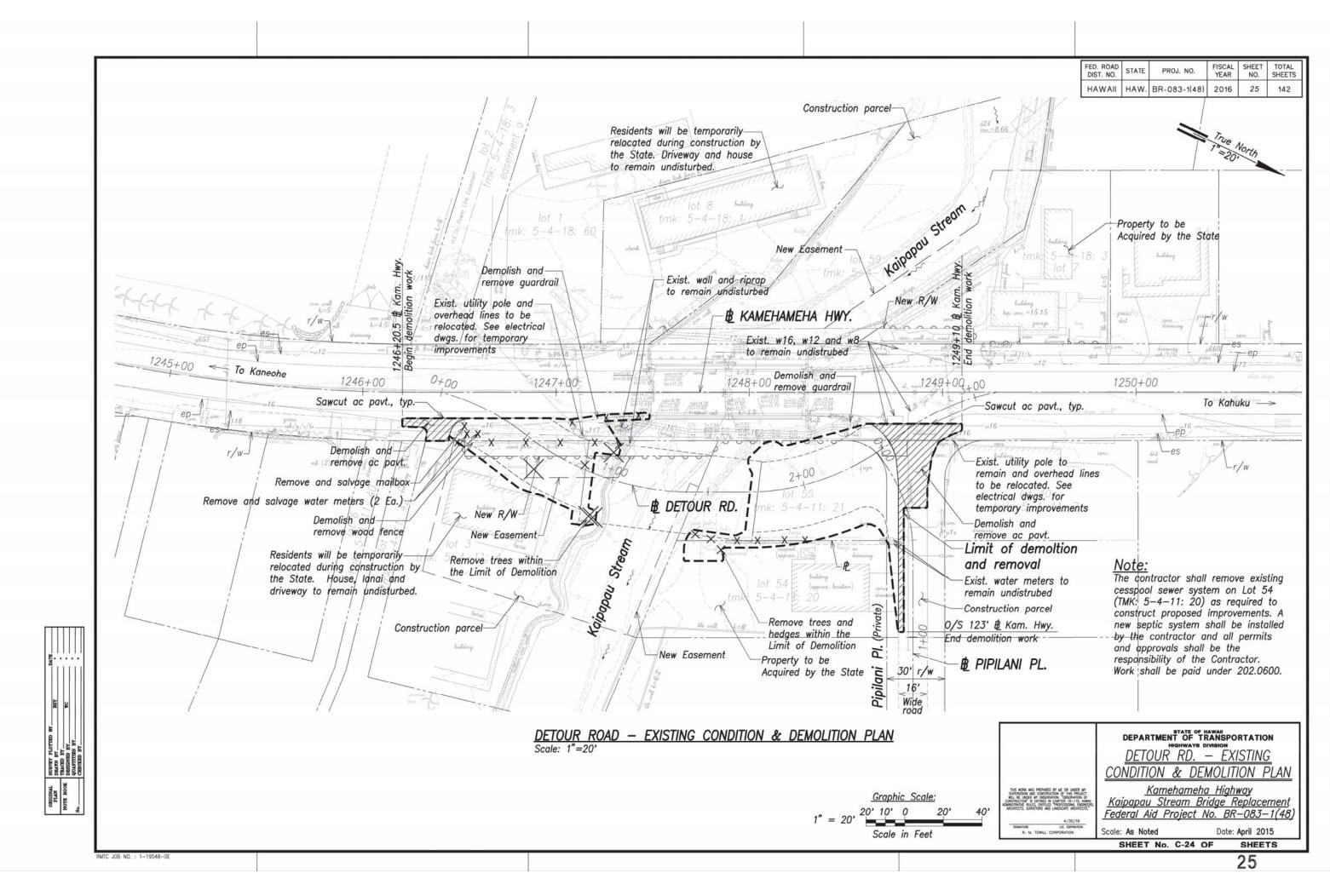
PLAN PLAN

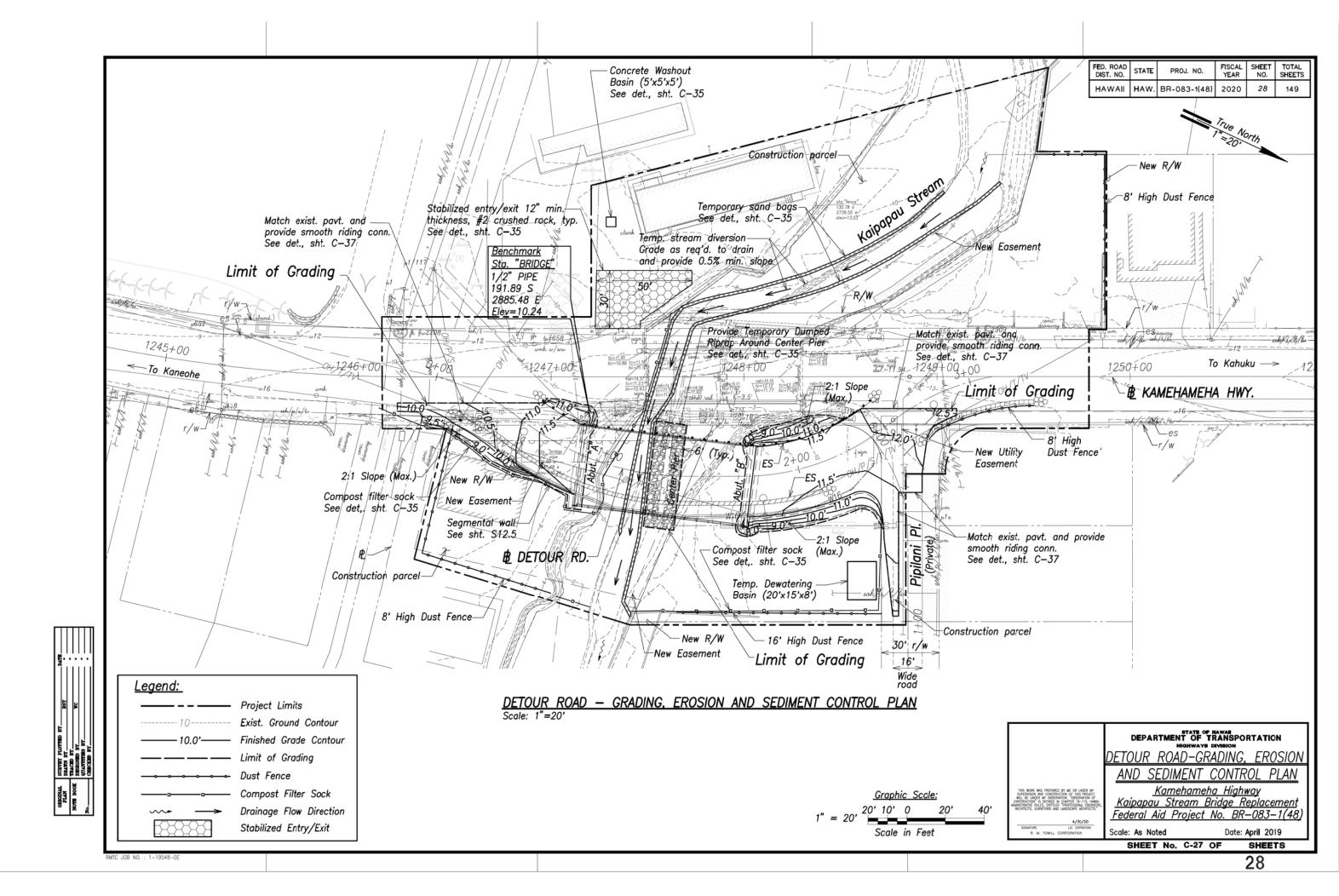


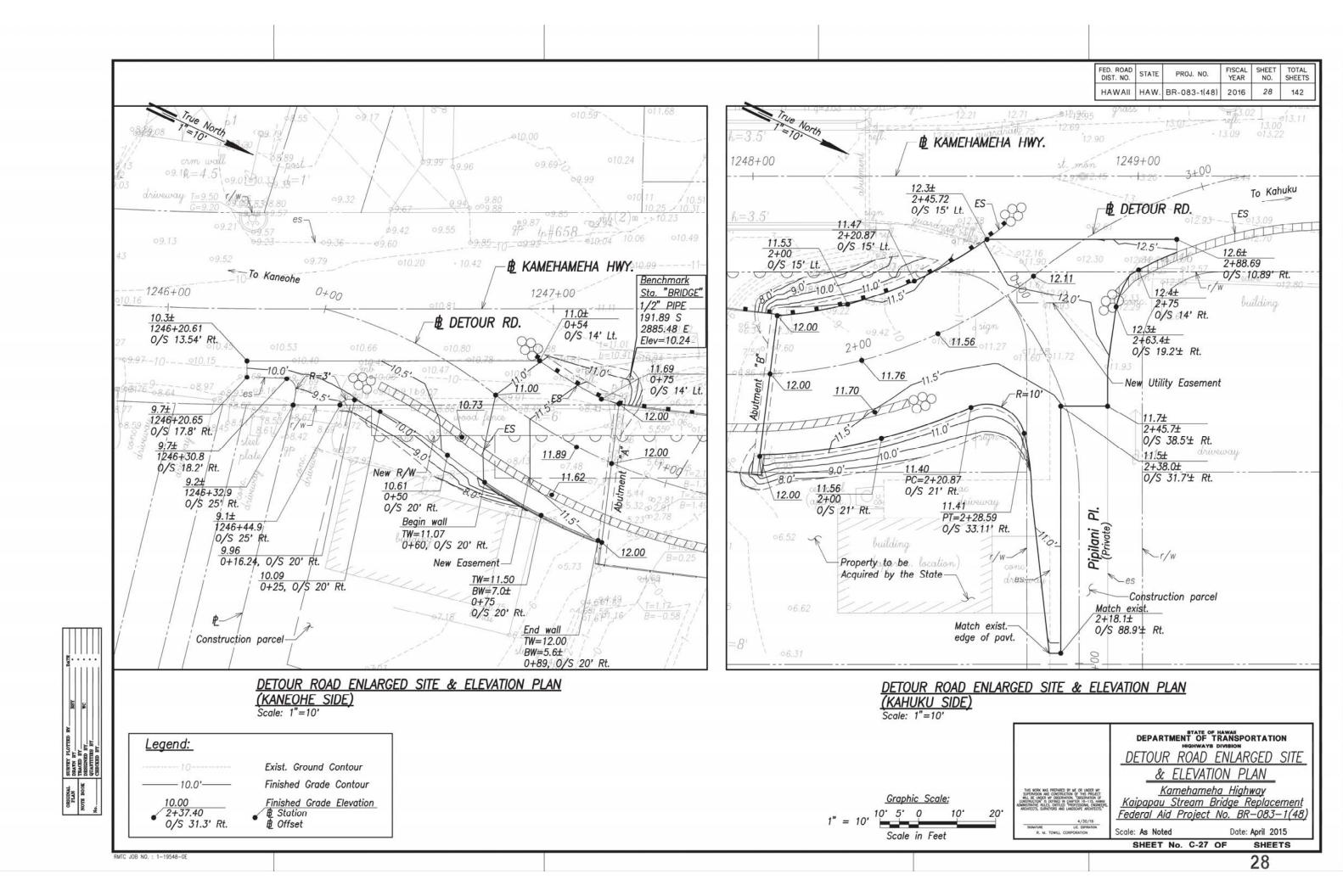


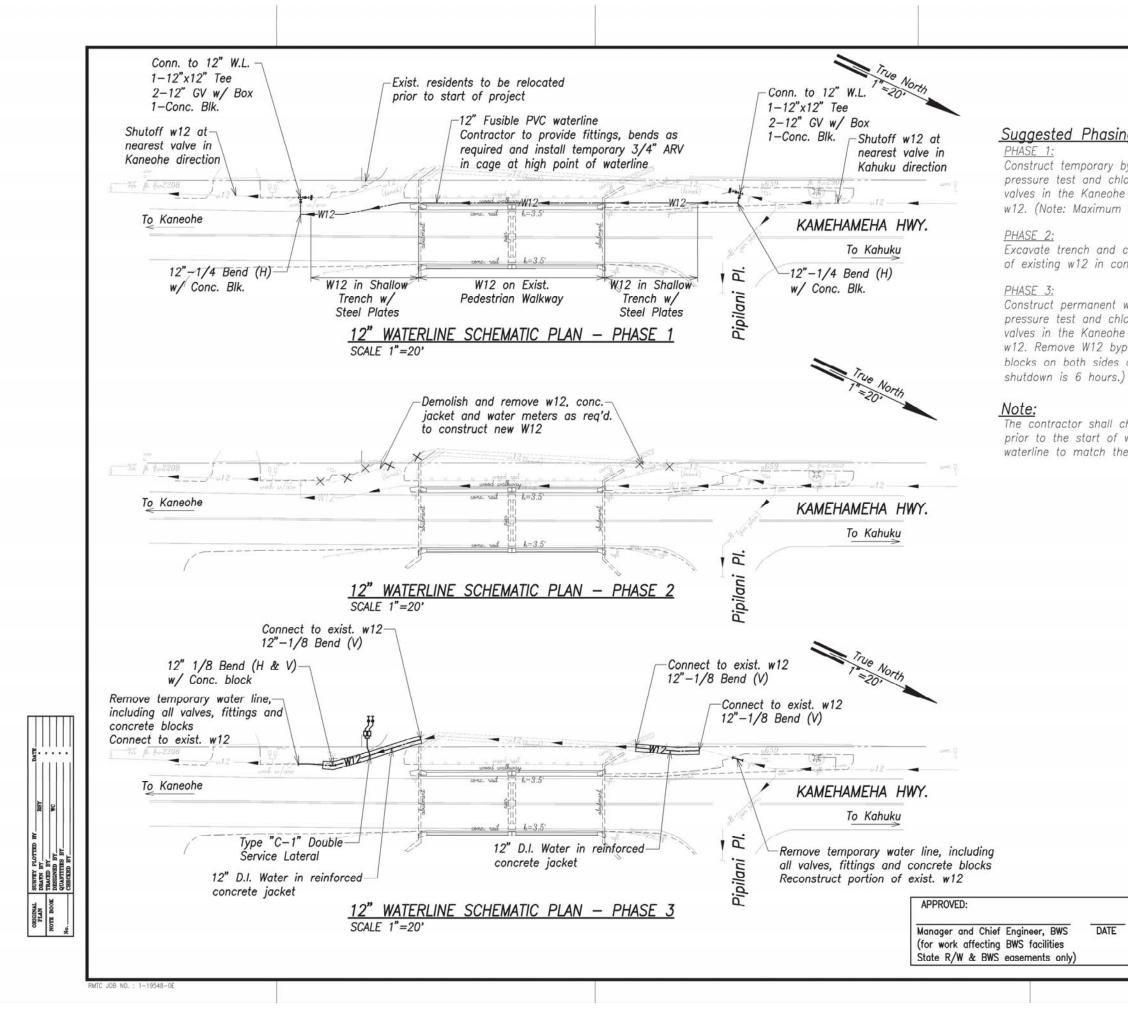
True North 0 Install Type "C-1" Double Service Lateral-(A) Sta. 1246+99.7± Hwy., and reconnect exist. service 0/S 17.5'± Lt. Sta. 1247+26.80 Hwy., 0/S 21.2'± Lt. =Sta. 0+00.0± 12" W.L. See BWS Std. Det., L12, L16 and M3 Relocate 12" Waterline Deflect 4.0° -Cut and plug 1+00 28 LF RCJ Std. 1298+62.3 Hwy exist. w6 0+00 0/8/23.8+99 45 LF RCJ (B) Connect to exist. w12 1-6" Plug Relocate 12" Waterline (D)Deflect 5.0° Sta. 1247+49.3± Hwy., New R/W 1-Hubclamp B 0/S 28.2'± Lt. -w12 to remain -(C) 15.15 w/ strong * (A)(E) =Sta. 0+51.0± 12" W.L. "back tie (c)Materials for conn. Y 1-Conc. block 1290 1-12" Sleeve, 12" long 15 8± LF 12" D.I.P., Cl. 52 E <u>Temp. for testing</u> 1-12" Cap w/4" C.O. 6 -W1 (F)1248+00 240+00 1247+00 1-Conc. block uB pretty -Exist. pedestrian bridge B Kamehameha Hwy. Contractor to verify 101 invert and location (G) Cut and plug exist. w8 at main. Install temporary 12" fusible PVC waterline. Lay Sta. 1247+10.50 Hwy.,temporary 12" waterline on existing pedestrian walkway. Remove valve and box. Salvage frame (C) Connect to exist. w12 0/S 16.70' Lt. In areas outside of the existing pedestrian walkway and and cover. Sta. 1246+96± Hwy., =Sta. 0+10.55 12" W.L. 1-8" Plug provide temporary ADA accessible route, place temporary 0/S 17.4'± Lt. and 1-12" 1/8 Bend (H & TV) 1-Hubclamp w/ strong back tie waterline in shallow open trench and cover with steel Sta. 1248+90± Hwy., 1-Conc. block plates. See Temporary Waterline Notes on this sheet. 1-Conc. block 0/S 19.2'± Lt. See sht. C-29 for Phase when work <u>Materials for conn.</u> 1–12" x 12" Tee 12-INCH WATERLINE PLAN shall be performed. 1249+10 臣 Kam. Hwy. FH Conn. Scale: 1"=20 Notes: 2-12" GV, 150# 1. The existing Finished Grade along w12 2-Valve box w/ cover and toning 1-Conc. block w/ New Kaipapau Exist. ground along w12 28 LF RCJ an independe struct. struts Stream Bridge Water Supply Temp. for testing 1-12" Cap w/4" C.O. 45 LF RCJ 4' Min. shall be imi Cover the water sy 1-Conc. block 10 2 10 W12 Demolish an Contractor to verify W6 3. Dewatering 1 invert and location Approx. location Ir. 202.0520. of exist. arv N12 V Dewatering Approx. location considered of exist. 12" Approx. location compensation Contractor to verify Normal Internation of w12 of 1. The temporary Sinv. and location of w12 of 1. The temporary Starting constru-with the Board 1-12"x12" Tee 1-Conc. Block 1-Conc. Block waterline (w12) of exist. 12" C.I. 12" D.I. waterline waterline (w12) inv. Inv. See Note 3, this sht. 0 inv. and location of w12 13 Temporary Bypass Conn. to w12 13 14 -..... 1-12"x12" Tee 8.6± (W12 1-Conc. Block w12 & W12 6.0± The tempora Inv. exist. 12" C.I. 2 Contractor to verify inv. and location of w12 1+46± 0+11 waterline (approx.) unless other 51± Contractor to 1-12" 1/8 Bend (H & TV) 3. (-)10(-)10Conn. to w12 ARV in cage Conn. to w12 1-12" D.I. Coupling 1-12" D.I. Coupling 4. The contract -3.0± W12 & w12 Contractor to verify W12 6.0± ğ. . . . 0+20 1+68.61 8.2± (W12 at all times 111 5. The contract 1-12" 1/8 Bend (BV) 1-12" 1/8 Bend (TV) Conn. to w12 waterline ins invert and location -12" D.I. Coupling W12 3.0± 1+57.48 8.1± (W12 w12 & W12 -3.0± of 12" W Contractor to verify 1-12" 1/8 Bend (BV) (-)20 (-)20invert and location SURFEY PLOTTED DRAFN BY TRACED BY DESIGNED BY QUANTITIES BY CHECKED BY Graphic Scales: 4' 2' 0 8' 4' APPROVED: ORIGINAL PLAN NOTE BOOK Scale in Feet 12-INCH WATERLINE PROFILE Manager and Chief Engineer, BWS DATE 20' 10' 0 20' 40 = 20' (for work affecting BWS facilities Scales: 1"=20' Horiz. State R/W & BWS easements only) 1"=4' Vert. Scale in Feet 2+00 0+00 1+00RMTC JOB NO. : 1-19548-0E

	to exist.		DIS	ROAD	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Sta. 124 0/S 24.	18+43.9± 6'± Lt.	Hwy.,	НА	WAII	HAW.	BR-083-1(48	2016	21	142
=Sta. 1.	+46.0±			G		0	21	(i)	
1-12" S	<u>for con</u> leeve, 12	?" long		F	Sta.	Connection 1249+10	Hwy.		
8± LF 1	12" D.I.P. or testing	, CI. 5	2		0/9	2" x 6" Ta	onina Te	e (M.I	x FF)
1-12" C	`ap w/4"	C.O.			1-6	2" x 6" Tap " 1/4 Bend	(BV)		~ ' ' '
1-Conc. Contract	block or to ve	rifv				" GV (MJ x alve box	FE), CI	. 150	
	nd locatio					H (Ht.=6'-4 H Extension			
	to exist.				1—F	H Marker	1		
Sta. 124 0/S 23.	48+71.9± 3'± Lt.	Hwy.,				H Curb gua LF 6" D.I.P.			
=Sta. 1.	+74± 12 for con				1-0	onc. block onc. block		at atra	ite
1-12" S	leeve, 12	2" long			See	BWS Std. I	Det. FH4	and	
8± LF 1 1-12" 1	12" D.I.P. /8 Bend	, CI. 5	2			Profile, see p. for Testi		-37	
Temp. fo	or testing	1			1-6	" cap w/ 2	-1/2"	C.O.	
1-12" C 1-Conc.	ap w/4" block	<i>C.O.</i>			1-0	onc. block			
Contract	or to ve								
	nd locatio								
waterline	es shown	on the	ese p ard (olans of Wa	were	located usir	ig recol contrac	rd drav tor sh	vings all make
ent chec	k by pro	bing th	e wa	iterlin	es an	ipply. The d coordinati	ng with	the B	oard of
						e waterlines e Engineer			
stem.								1	
						to constructionsidered in			n No.
for install	lation of	the te	moor		nd ne	rnanent wat	er evet	am shi	all be
ncidental	to Item	No. 62	24.10	103 W	ater S	Systems. No	additio	nal	III De
n will be	2 I	1.2.2	ewate	ering.					
Waterl			nstru	cted.	teste	d and in—se	ervice p	rior to	
struction	of perm	anent	water	syst	em. T	he contracto	or shall	coord	inate
ard of We m down	time sho	nll be s	(S) fo Six (6	or sh 5) hoi	ut-doi urs un	vn of the 1 less otherw	2—inch ise appi	wateri roved	ine. by the
contracto fected by	r shall b	e resp	onsib	le for	provi	ding advanc	ed noti	ficatior	n to
ny water	ine shall	not b	e in-			more than	two (2) mon	ths
wise app	roved by	the B	WS.	as re	auirea	and install	tempo	rary 3	/4"
at high	point of	f temp	orary	wate	rline				_
tor shall that me					ing so	fe temporal	y peae	strian	access
tor shall stallation.	be respo	onsible	for p	provid	ing tro	affic control	s during	g temp	oorary
		_	_						_
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					<u></u>		PROFIL		
	THIS WORK WAS PRET SUPERMISION AND CON	WRED BY WE OR UN STRUCTION OF THIS ISERVIATION. TOPPLET	DER MY PROJECT NTON OF		. 1	Kamehameh	a High	way	
	THIS WORK WAS PRET SUPERVISION AND COM WILL BE UNDER WY OR CONSTRUCTOR ⁴ IS DEPIN ADMINISTRATIVE RULES, DV ARCHITECTS, SURVEYORS	ED IN CHAPTER 16-1 TILED PROFESSIONAL AND LANDSCAPE AR	ENGNEERS, CHITECIS.			<u>i Stream B</u> id Project			
	SONATURE R. M. TOW	4/30/ UC DIPH			: As No			April 20	
+00		Art A/72				No. C-20		SHEE	
								21	









FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-083-1(48)	2016	29	142

Suggested Phasing for Work on 12" Waterline:

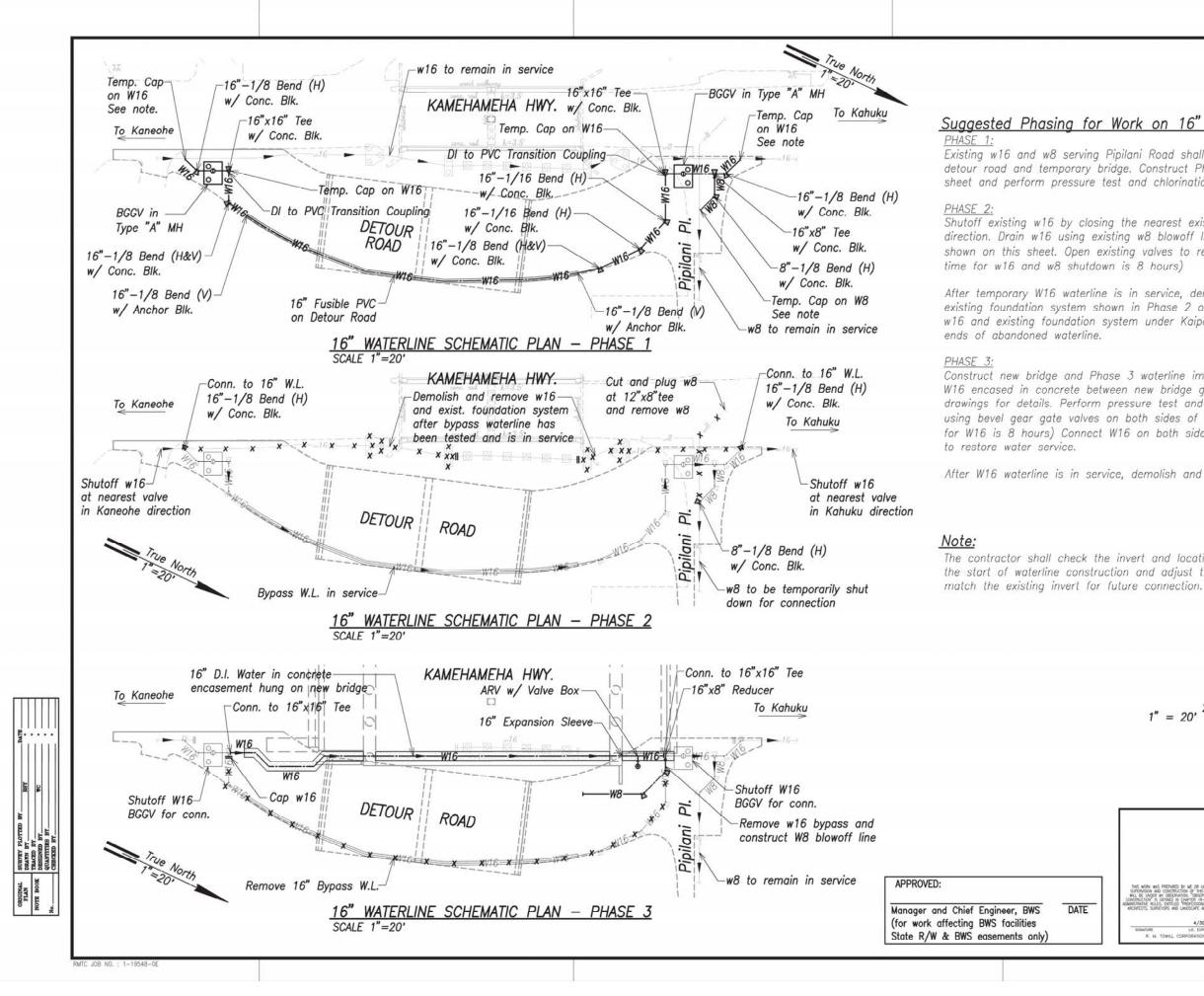
Construct temporary bypass waterline improvements shown on this sheet and perform pressure test and chlorination. Shutoff existing w12 by closing the nearest existing valves in the Kaneohe and Kahuku direction and make connections to the existing w12. (Note: Maximum allowable time for w12 shutdown is 6 hours.)

Excavate trench and construct shoring for new W12 improvements. Remove portions of existing w12 in concrete jacket required to construct new improvements.

Construct permanent waterline improvements shown on this sheet and perform pressure test and chlorination. Shutoff existing w12 by closing the nearest existing valves in the Kaneohe and Kahuku direction and make connections to the existing w12. Remove W12 bypass waterline, including all gate valves, fittings and concrete blocks on both sides of existing bridge. (Note: Maximum allowable time for w12 shutdown is 6 hours.)

The contractor shall check the invert and location of the existing 12-inch waterline prior to the start of waterline construction and adjust the invert of the new 12-inch waterline to match the existing invert for future connection.

Graphic Scale: 20' 10' 0 20 40 = 20 Scale in Feet DEPARTMENT OF TRANSPORTATION WATERLINE PHASING PLAN Kamehameha Highway Kaipapau Stream Bridge Replacement DATE Federal Aid Project No. BR-083-1(48) R. M. TOWEL CORPOR Scale: As Noted Date: April 2015 SHEET No. C-28 OF SHEETS 29



[FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	HAWAII	HAW.	BR-083-1(48)	2016	30	142

Suggested Phasing for Work on 16" Waterline:

Existing w16 and w8 serving Pipilani Road shall remain in service at all times. Construct detour road and temporary bridge. Construct Phase 1 waterline improvements shown on this sheet and perform pressure test and chlorination.

Shutoff existing w16 by closing the nearest existing valves in the Kaneohe and Kahuku direction. Drain w16 using existing w8 blowoff line. Construct Phase 2 waterline improvements shown on this sheet. Open existing valves to restore water service. (Note: Maximum allowable

After temporary W16 waterline is in service, demolish and remove the existing w16 and existing foundation system shown in Phase 2 on this sheet. Abandon-in-place the existing w16 and existing foundation system under Kaipapau Stream. The contractor shall plug both

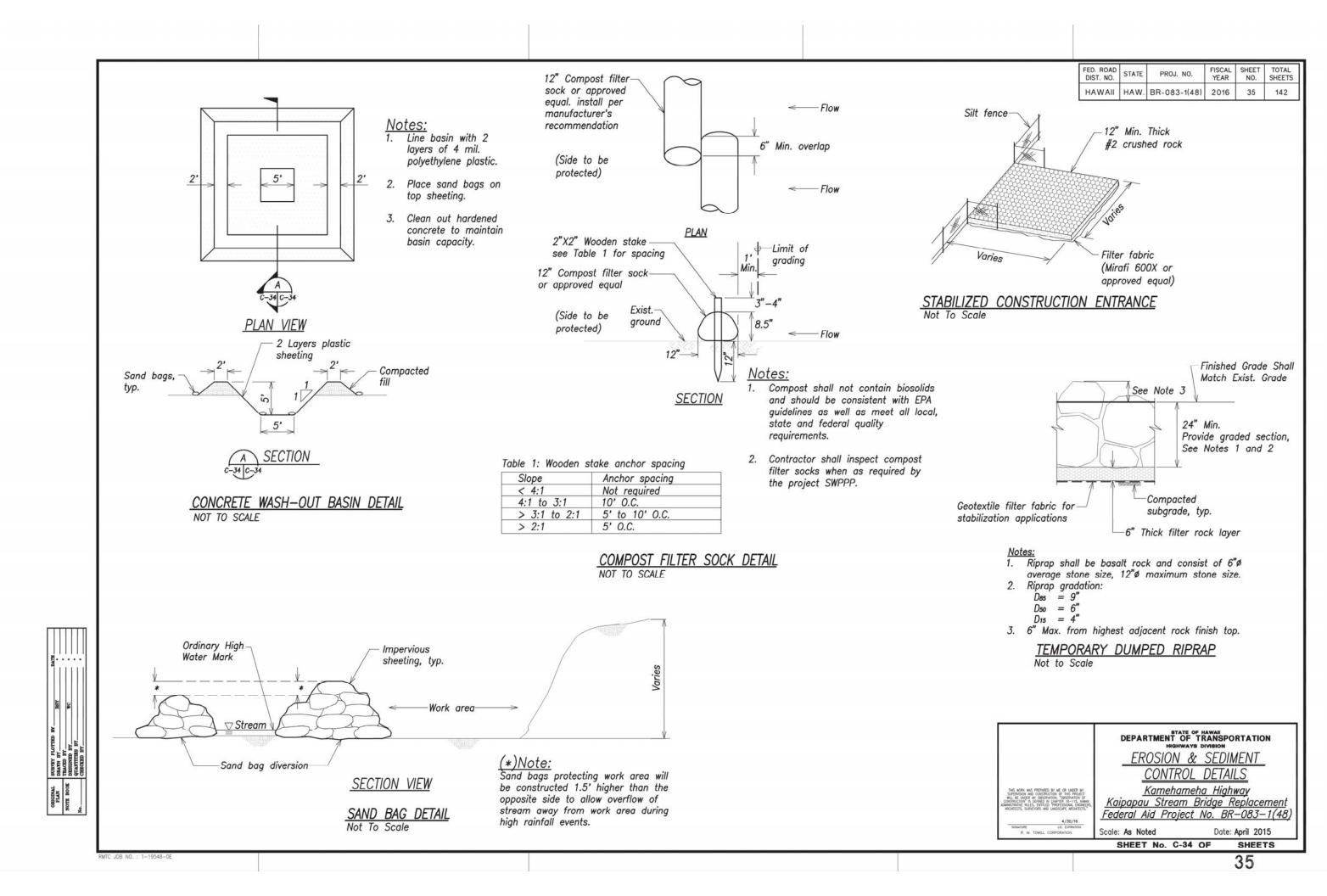
Construct new bridge and Phase 3 waterline improvements, including W8 blowoff line and W16 encased in concrete between new bridge girders, as shown on this sheet. See structural drawings for details. Perform pressure test and chlorination. Shutoff W16 bypass waterline using bevel gear gate valves on both sides of new bridge. (Note: Maximum allowable time for W16 is 8 hours) Connect W16 on both sides of new bridge. Open bevel gear gate valves

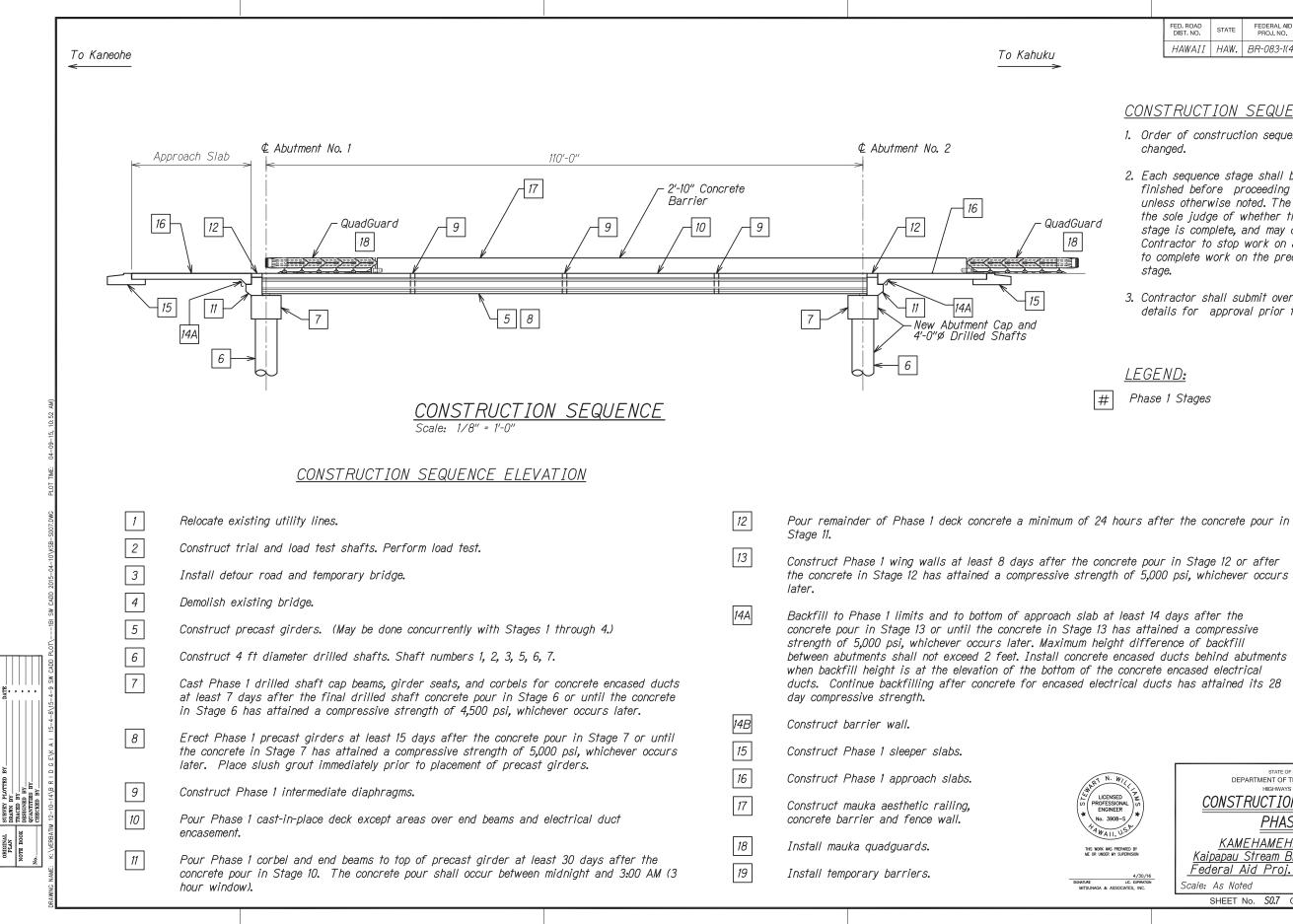
After W16 waterline is in service, demolish and remove the bypass waterline.

The contractor shall check the invert and location of the existing 16-inch waterline prior to the start of waterline construction and adjust the invert of the new 16-inch waterline to

Graphic Scale: 20' 10' 0 40' 20 Scale in Feet

TE Dis wow ws PRPHED BY W. SPECTATION OF CONTRACT OF THE READ OF TH			DEPARTMENT OF	OF HAWAII TRANSPORTATION YS DIVISION
TE 4/30/16 90000000 R. M. TOWELL CORPORATION 4/30/16 9000000 R. M. TOWELL CORPORATION K. M.			<u>16" WATERLINE</u>	E PHASING PLAN
R. M. TOWELL CORPORATION Scale: As Noted Date: April 2015	E	ARCHITECTS, SURVEYORS AND LANCSCAPE ARCHITECTS."	Kaipapau Stream	Bridge Replacement
SHEET No. C-29 OF SHEETS		SIGNATURE LIE. EXPRATION	Scale: As Noted	Date: April 2015
			SHEET No. C-29	OF SHEETS





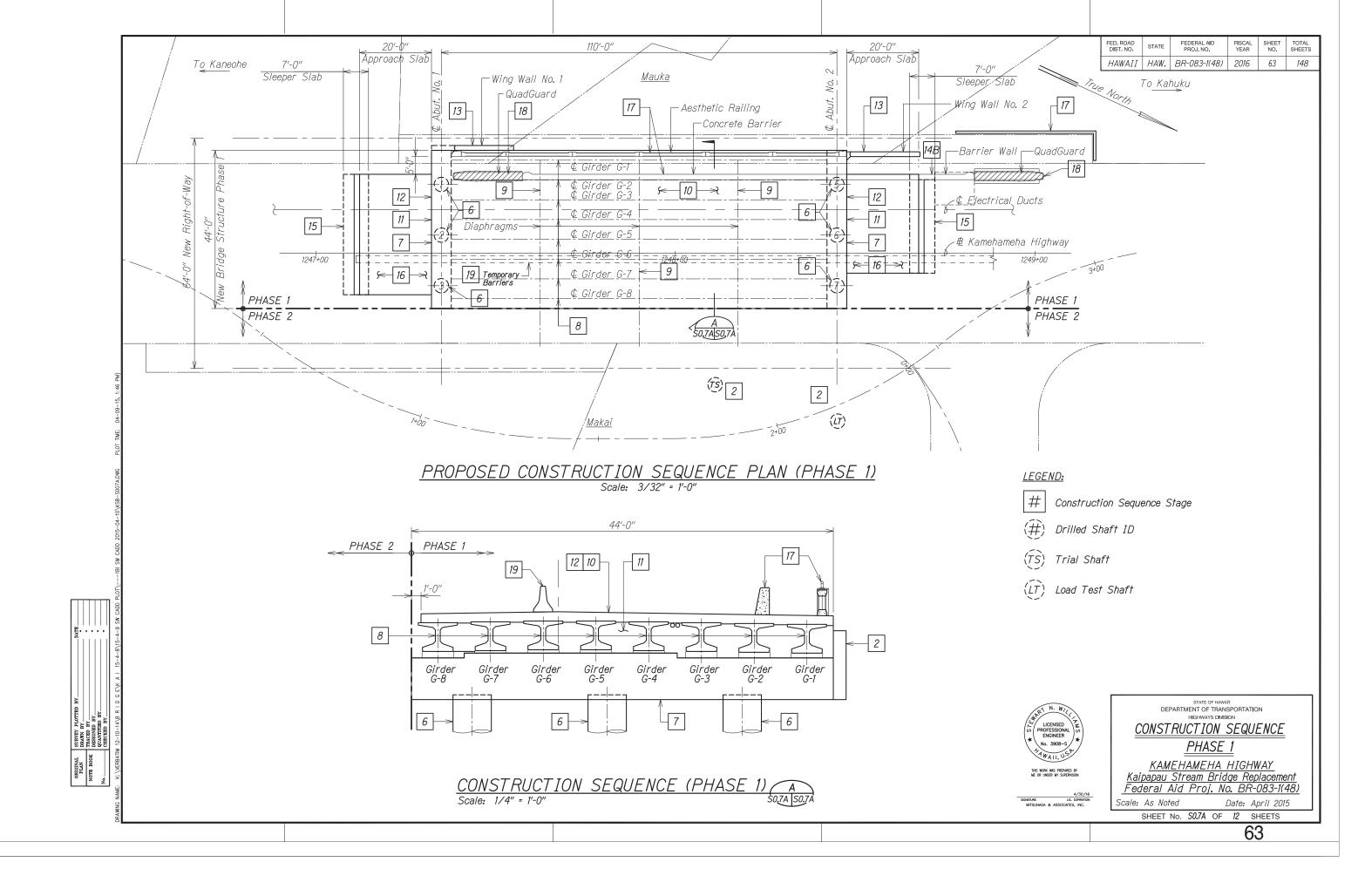
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		FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
ahuku		HAWAII	HAW.	BR-083-1(48)	2016	62	148
- QuadGuard [18] 15] nd	 Orda chai Eac finis unle the stag Coni to c stag Coni 	er of con nged. h sequend shed befo sole judg ge is com, tractor to omplete w ge.	struct ce sta vre pi vise n plete, o stop vork o hall su	<u>SEQUEN</u> tion sequence ge shall be roceeding to toted. The Er whether the and may diru work on a s n the precee ubmit overwe val prior to to	e shall comple the ne ngineer sequer ect the sequence ding s	not b tely ext sta will nce e ce sta requent ehicula	age be ge ce
#	<u>LEGE</u> Phase	<u>ND:</u> 1 Stages					

the concrete in Stage 12 has attained a compressive strength of 5,000 psi, whichever occurs

between abutments shall not exceed 2 feet. Install concrete encased ducts behind abutments

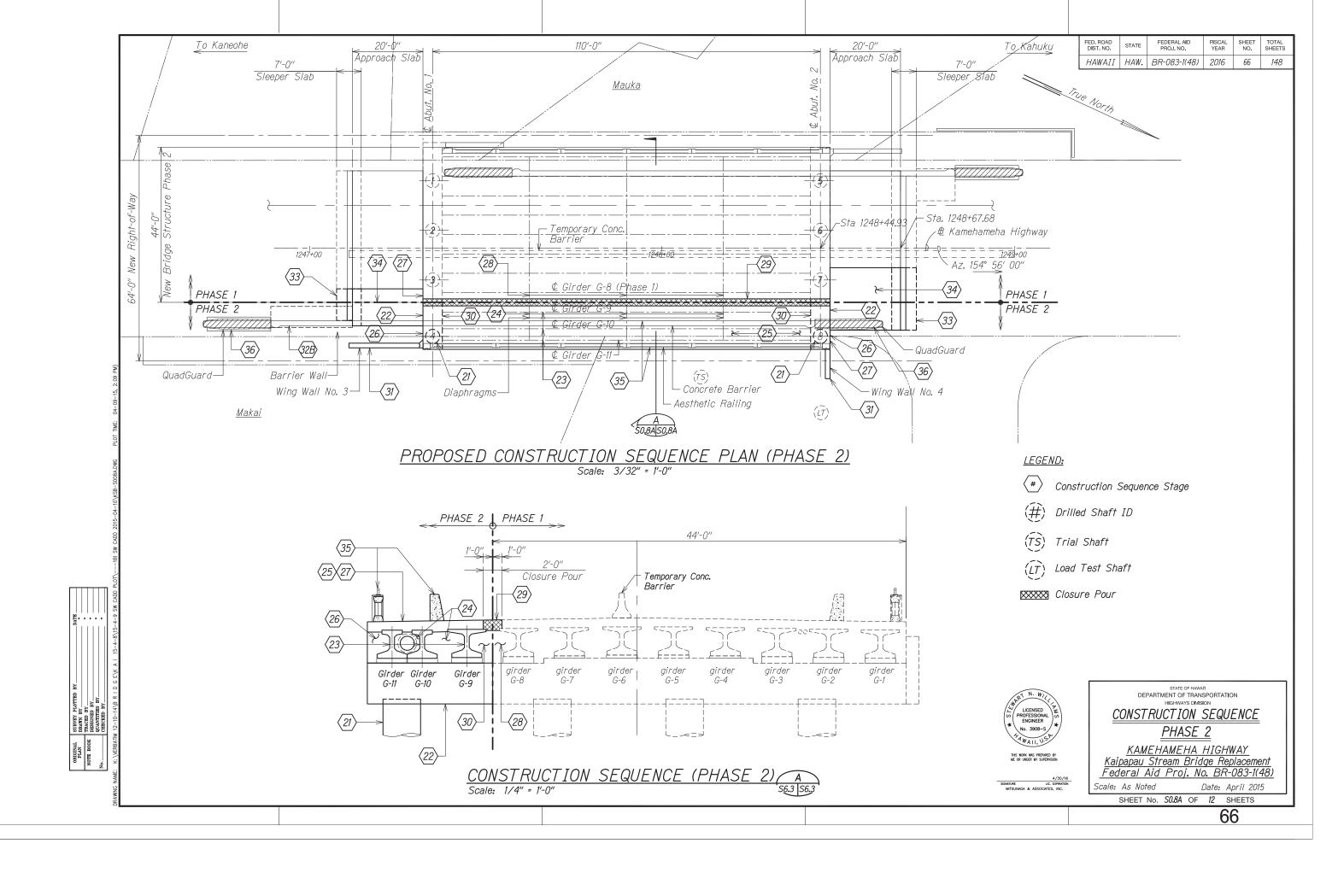
LICENSED PROFESSIONAL EXCINCT STORAGE No. 3908-5 Martin Martines M	STATE OF HAWAM DEPARTMENT OF TRANSPORTATION HIGHWAYS DIMBION <u>CONSTRUCTION SEQUENCE</u> <u>PHASE 1</u> <u>KAMEHAMEHA HIGHWAY</u> <u>Kaipapau Stream Bridge Replacement</u> <u>Federal Aid Proj. No. BR-083-1(48)</u> <u>Scale: As Noted</u> Date: April 2015 SHEET NO. 50.7 OF 12 SHEETS
	62



Stri	uctural			Refe	rences			Waterline	Exist Bridge	Detour	Detour Off Pea			FED. ROAD DIST. NO. STATE PROJ. NO. FISCAL YEAR SHEE NO. HAWAII HAW. BR-083-1(48) 2016 64
Const St	truction tage	Description	Civil	Electrical	Geote	ech.	Structural	Work	Open	Open	Lane Closures Anticipated		Remarks	<u>CONSTRUCTION SEQUENCE NOTES:</u>
Mobiliz		 Prior to Site Mobilization, the Contractor shall submit required BMP's and other Municipal and National permit applications as indicated in the project Plans, Special Provisions and Specifications. The Contractor shall submit Prefabricated Steel Beam Bridge Structural Computations and Erection drawings to the Owner for Review and Approval Prior to Fabrication. 	Civil Sequence See C-10. See Civil[7]				Structural Sequence SO. 7, SO. 7A, SO. 8, SO. 8A		Exist Bridge Open to Traffic					 Order of construction sequence shall changed unless authorized in writing Engineer. Each sequence stage shall be completed
	1	 Install approved BMP measures. Relocate Existing overhead utility lines. Install temporary 12" fusible PVC waterline on existing (upstream) pedestrian walkway. 	C–15,16,17, C–20, C–28, see Civil [2]	E-8, E-9, E-10, E-11				Temporary 12" fusible PVC waterline						finished before proceeding to the ne unless otherwise noted. The Engine be the sole judge of whether the se stage is complete, and may direct t Contractor to stop work on a seque
	2	1. Construct Trial and Load Test shafts * 2. Perform Load Test. Demobilize drilled shaft equipment off site.	See Civil 3		Special di equipmen		<i>S1.1, S8.3</i>					Pro	pecial rovisions potion 511	stage to complete work on the prec sequence stage. 3. Contractor shall submit overweight v
	3	 Install Detour Pier, Abutments and Temporary Bridge. Construct Civil Phase 1 waterline Improvements C-29; C-30. Construct Detour Approach Retaining Wall, Fills and Roadway - chainlink fence see C-23. Construct Civil Phase 2 waterline improvements-see C-29; C-31. 	See Civil 4 C-23, C-29, C-30, C-31, C-32	E-10, E-11, E-15	Excavatic Bracing- Prov. 20.	on Spec. 5*	512.1, 512.2 512.3, 512.4 512.5	Civil Phase 1 & 2 (W16) waterline work-see C-29, C-30.		Detour Open to Traffic		Bra ant ups	rcavation acing ticipated stream of tour.	details for approval prior to their us 4. Construction shall be conducted suc no construction debris, wash water contaminants shall enter the Stream 5. Closing of the Prefabricated Steel Bo
	4	1. Relocate existing water line W12 (prior to existing bridge demolition) – see C-20, C-28. 2. Demolish existing bridge.	See Civil 5 C-20, C-28		Excavatio Bracing- Prov. 203	on Spec. 5*	<i>S2.1, S2.2</i>	Relocate Exist W12 waterline C-20, C-28.	Exist Bridge Demolition			ups	cc. Bracing stream of isting.	Bridge Structure: (a) If for any reason or at any time Prefabricated Beam Bridge Struc
	5	Construct precast girders. (May be done concurrently with stages 1 through 4.)	See Civil 6				S4.x series							ability to safely carry traffic is in question, the Contractor shall be
	6	Construct 4 ft. diameter drilled shafts. 1, 2, 3, 5, 6, 7. *			Special di equipmen	t* .	S1.1,S1.2,S6.1, S6.2,S8.1,S8.2					Śe	ecial Provisions ection 511	responsible for immediately takin actions necessary to protect the
	7	Cast phase 1 drilled shaft cap beams, girder seats, and corbels for concrete encased ducts at least 7 days after the final drilled shaft concrete pour in stage 6 or until the concrete in stage 6 has attained a compressive strength of 4,500 psi, whichever occurs later.			Structure Excavatio Bracing p Spec Pro	n ber v 205	SO.7, SO.7A, S6.x series					Stri	rks [7] through are PHASE 1. suctural see [20] PHASE 2	by closing, repairing and reopen Prefabricated Steel Truss Bridge. When the Contractor closes the (b) Prefabricated Steel Beam Bridge
	8	Erect phase 1 precast girders at least 15 days after the concrete pour in stage 7 or until the concrete in stage 7 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.			Required Makai Lin	nit	SO. 7, SO. 7A, S1.2, S1.3, S6., series							Structure, the Contractor shall immediately notify the Engineer appropriate Law Enforcement Ag Closing of the Prefabricated Stee
	9	Construct phase 1 intermediate diaphragms.					SO. 7, SO. 7A, S5.x series							(c) Bridge shall be included as incid
	10	Pour phase 1 cast-in-place deck except areas over end beams and duct encasement.					50.7,50.7A 51.6,53.1,53.2							Maintenance of Traffic Control.
	11	Pour phase 1 end beams to top of precast girder and corbel at least 30 days after the concrete pour in Stage 10. The concrete pour shall occur between midnight and 3:00 AM (3 hours).					S0.7,S0.7A, S6.x series					Pla	oncrete acement † Night	6. The Contractor shall phase 16 inch (W16) to allow no more than 8 hou down time. Liquidated Damages of
PHASE	12	Pour remainder of phase 1 deck concrete a minimum of 24 hours after the concrete pour in stage 11.					\checkmark							\$100,000 per day will be imposed in Contractor exceeds the 8 hour rest.
7	13	Construct phase 1 wing walls at least 8 days after the concrete pour in stage 12 or after the concrete in stage 12 has attained a compressive strength of 5,000 psi, whichever occurs later.					S0.7,S0.7A, S7.x series				Lane Closure Duration Approx 3 we each abutme	eks		l
STRUCTUR	14	Backfill to phase 1 limits and to bottom of approach slab and at least 14 days after the concrete pour in Stage 13 or until the concrete in Stage 13 has attained a compressive strength of 5,000 psi, whichever occurs later. Maximum height difference of backfill between abutments shall not exceed 2 feet. Install concrete encased ducts when backfill height is at the elevation of bottom of concrete encased ducts. Continue backfilling after concrete for encased ducts has attained its 28 day compressive strength.		Signal Corps Work E-1, E-5 E-12, E-13, E-16	5		50.7,50.7A,56.x 59.x				with Further Lane Closure Duration Approx 2 we each approad	eks		
	15	Construct phase 1 sleeper slabs.												
	16	Construct phase 1 approach slabs.		Signal Corps Work E-1, E-5 E-12,E-13,E-i			\checkmark				\downarrow			
	17	Construct mauka aesthetic railings and concrete barrier.	ļ											
	18	Install mauka quadguards.											\downarrow	
	19	Install Temporary Barriers and Temporary Striping on PHASE I of New Bridge.	See Civil for Barriers	,									LICENSED PROFESSIONAL BOOK NS PREVEND BY MK OF UNDER MY SHERMSON HE OR UNDER MY SHERMSON	DEPARTMENT ^{STATE OF HAWAII} DEPARTMENT ^{STATE} OF TRANSPORTATIO HIGHWAYS DIVISION <u>OVERALL CONSTRUCTION SEQUI</u> <u>STRUCTURAL PHASE 1</u> <u>Kamehameha Highway</u> <u>Kaipapau Stream Bridge Replac</u> <u>Federal Aid Project No. BR-083</u>
1												SIGNA		

			* • · · · · · · · ·
	Approach Slab		∉ Abutment No. 1 →
			0" Concrete rier
	(34) (30)(27) - QuadGuard - (24)(28) - (24)(28)	25	
		//	
[<i>V</i>	
33	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		26 30 New Abutment Cap 4'-0"Ø Drilled Sha
	<u>CONSTRUCTION SEQUENC</u> Scale: 1/8" = 1'-0"	<u>E</u>	Ι
	LEGEND:		
$\langle \# \rangle$	Phase 2 Stages		
	<u>CONSTRUCTION SEQUENCE ELEVATION</u>		
$\langle 20 \rangle$	Partially remove temporary bridge as required to construct Phase 2 of Kaipapau Stream Bridge Construct 4 ft diameter shafts —Shaft nos. 4 and 8.	<i>(29)</i>	Pour Phase 2 cast-in-place deck closure except over deck closure pour shall be VESLMC. (See Special Pr
$\langle 21 \rangle$ $\langle 22 \rangle$	Cast Phase 2 drilled shaft cap beams, girder seats, and corbels for concrete jacketed	$\langle 30 \rangle$	Pour Phase 2 corbel and end beam closure from top Material for end beam closure pour shall be VESLM
	waterline at least 7 days after the final drilled shaft concrete pour in Stage 21 or until the concrete in Stage 21 has attained a compressive strength of 4,500 psi, whichever occurs later.	$\langle 31 \rangle$	
< <u>23</u> >	Erect Phase 2 precast girders at least 15 days after the concrete pour in Stage 22 or until the concrete in Stage 22 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.	<32A>	Backfill to bottom of approach slab at least 14 days until the concrete in stage 31 has attained a compre
<u>\</u> 24	Construct Phase 2 intermediate diaphragms between girders G-9 and G-10, install dowels connecting G-10 and G-11, and install W16 with light-weight concrete jacket between girders G-10 and G-11.		occurs later. Maximum height difference of backfil. Install jacketed waterline behind abutments when ba bottom of the jacketed waterline. Continue backfillin attained its 28 day compressive strength.
<i>(25)</i>	Pour Phase 2 cast-in-place deck except areas over end beams and closure pour.	32B	Construct Barrier Wall.
(26)	Pour Phase 2 corbel and end beams (except at closure pour) to top of precast girder at least 30 days after the concrete pour in Stage 25. The concrete pour shall occur between midnight	33	Construct Phase 2 sleeper slabs.
_	and 3:00 AM (3 hour window).	$\langle 34 \rangle$	Construct Phase 2 approach slabs.
27	Pour remainder of Phase 2 deck concrete (except at closure pour) a minimum of 24 hours after the concrete pour in Stage 26.	35	Constuct Makai aesthetic railing and concrete barrier.
<i>\</i> 28 <i>\</i>	Pour Phase 2 intermediate diaphragms between girders G-8 and G-9 at least 4 days after the	$\langle 36 \rangle$	Install Makai quadguards.
<u> </u>	concrete pour in Stage 27.		

	FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
nuku	HAWAII	HAW.	BR-083-1(48)	2016	65	148
1. Ord chai 2. Eac finis unle the stag Con	er of con nged. h sequend shed befo sso otherv sole judg ge is com, tractor to	Sort of the state	<u>SEQUEN</u> ion sequence ge shall be roceeding to oted. The Er whether the and may dir work on a s n the precee	e shall comple the ne ngineer sequen sequen	not b tely ext sta will nce e ce sta	age be ge
	tractor si		ubmit overwe val prior to t			ar
r end beams. Material rovisions). p of drilled shaft cap IC. (See Special Provis	beam to t					
the concrete pour in S rength of 5,000 psi, wh						
s after the concrete pou essive strength of 5,000 Il between abutments sh ackfill height is at the ing after concrete for j.) psi, whi all not ex elevation	ichever xceed of the	- 2 feet. ?			
		DEI	STATE OF HAWA PARTMENT OF TRANS HIGHWAYS DMS	SPORTATIC	DN	
LICENSED PROFESSIONAL ENGINEER ENGINEER WAILI, US THE WORK MIS PREPARED BY ME OR UNDER MY SUPERMISION	<u>Kai</u> <u>Fea</u> Scale:	<u>KAM</u> papau		<u>2</u> HIGHV ge Rep b. BR- Date: A	VAY blaceme 083-1(+	<u>48)</u>



	uctural truction	KAIPAPAU STREAM BRIDGE			rences		Waterline		e Detour	Detour Off P Lane Closure
	tage		Civil	Electrical	Geotech.	Structural	Work	Open	Open	Anticipatea
	20>	 Open PHASE I of New Bridge to traffic. Close Temporary Bridge and Detour Roadway to traffic. Remove Mauka portion of Temporary Bridge Only (Remainder to remain in place to support construction equipment for construction of PHASE 2 portion of New Bridge and to support temporary W16 until Final W16 is constructed). 				<i>S0.8, S0.8A</i>		PHASE I of New Bridge Open to Traffic to allow Detour Closure	Close Detour and Remove Limited Portion of Temporary Bridge	Not Applicable
	$\langle 21 \rangle$	Construct 4 ft. diameter drilled shafts – Shaft nos. 4 and 8.	See Civil 6		Special drilling equipment*	51.1, 51.2, 56. 56.2, 58.1, 58.	2		Detour Closed	1
	<i>22</i>	Cast Phase 2 drilled shaft cap beams, girder seats, and corbels for concrete jacketed waterline at least 7 days after the final drilled shaft concrete pour in stage 21 or until the concrete in stage 2. has attained a compressive strength of 4,500 psi, whichever occurs later.	1		Structure Excavation Bracing per Spec for 205 Required at Approaches.	SO.8, SO.8A, S6.x series				
	<i>23</i>	Erect Phase 2 precast girders at least 15 days after the concrete pour in stage 22 or until the concrete in stage 22 has attained a compressive strength of 5,000 psi, whichever occurs later. Place slush grout immediately prior to placement of precast girders.				S0.8, S0.8A, S1.2, S1.3, S6.x series	Civil Phase 3 (W16) waterline improvement seeC-29,C32			
	24	Construct Phase 2 intermediate diaphragms between girders G-9 and G-10 and light-weight W16 concrete jacket between girders G-10 and G-11.	C-29, C-30			SO.8,SO.8A, S5.x series				
	<i>25</i>	Pour Phase 2 cast-in-place deck except areas over end beams and closure pour.				S0.8,S0.8A S1.6,S3.1,S3.2				
2	(26)	Pour Phase 2 end beams (except at closure pour) to top of precast girder and corbel at least 30 days after the concrete pour in Stage 25. The concrete pour shall occur between midnight and 3:00 AM (3 hours).				50.8,50.8A, 56.x series				
PHASE	27 >	Pour remainder of Phase 2 deck concrete (except at closure pour) a minimum of 24 hours after the concrete pour in stage 25.				\checkmark				
	28 >	Pour Phase 2 intermediate diaphragms between girders G–8 and G–9 at least 4 days after the concrete pour in stage 27.								
STRUCTURAL	29 >	Pour Phase 2 cast-in-place deck closure except over end beams. Material for cast-in-place deck closure pour shall be VESLMC.								
0)	30 >	Pour Phase 2 end beams closure from top of drilled shaft cap beam to top of deck. Material for end beam closure pour shall be VESLMC.								
	$\langle 31 \rangle$	Construct Phase 2 wing walls at least 8 days after the concrete pour in stage 30 or after the concrete in stage 30 has attained a compressive strength of 5,000 psi, whichever occurs later.				SO.8,SO.8A, S7.x series				
	<i>32</i>	Backfill to bottom of approach slab at least 14 days after the concrete pour in Stage 31 or until the concrete in Stage 31 has attained a compressive strength of 5,000 psi, whichever occurs later. Maximum height difference of backfill between abutments shall not exceed 2 feet. Install jacketed waterline when backfill height is at the elevation of bottom of the jacketed waterline. Continue backfilling after concrete for jacketed waterline has attained its 28 day compressive strength.				50.8,50.8A,56.x 59.x				
	$\langle 33 \rangle$	Construct Phase 2 sleeper slabs.								
	34	Construct Phase 2 approach slabs.								
	<i>35</i>	Construct Makai aesthetic railings and concrete barrier.								
	(36)	Install Makai guadguards. Remove Detour; construct stream hardening. Remove Temporary Barriers at New Bridge. Open Phase 1 and Phase 2 of New Bridge to traffic.	See Civil Z thru Z	Permanent Electrical Plan See E-12,E-13 E-14	Ş		Remove tem W16 at Closed Detour	p PHASE I and PHASE 2 of New Bridge Open	Remove Remainder of Detour	

RMTC JOB NO. : 1-19548-0E

		FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
^r Peak ures	Remarks	HAWAII	HAW.	BR-083-1(48)	2016	67	148
	Remarks Close Detour; Open PHASE 1 of New Bridge: Start Construction of PHASE 2 of New Bridge *Special Provisions Section 511 Special Provisions Section 205 Concrete Placement At Night	 Orn ch En 2. Ea fin un be sta Co sta se Co de Co co 5. Cla Br. (a) Ch Br. (a) Ch Co co co co co co co co co co co co co co	der of anged gineer. ich seq ished b less of age is artracto age to quence ntracto tails fo nstructo constructo constructo poing of dige St) If for Brefa by clo Prefa Structo imme appro) Closin Bridge Maint e Conto (00,000	<u>TION SEQUEN</u> construction si unless authoriz unless authoriz before proceed therwise noted. ole judge of wi complete, and or to stop work complete work stage. or shall submit or approval prior tion shall be con- ruction debris, ants shall ente f the Prefabric fructure: any reason or bricated Beam v to safely carri- tion, the Contra- trosing, repairing bricated Steel the Contractor bricated Steel the Contractor the Contractor the Contractor the Contrac	equence red in w hall be ing to the The E half be in The E half of the or to the or to the or to the or to the or to the or to the or the S ated St ated St ated St ated St ated St ated St ated St correct and re Truss B correct and re frice Cont ase 16 a than b correct at any or contect and re frice Cont ase 16 a than b correct a than b corect a than b correct a	shall r rriting b complet he next ingineer the sequence preced ight vek eir use. d such vater or tream d such vater or tream cate or tream tream tream tream tream time, Structu. c is in all be taking t the p opening ridge hall neer an t Agen t Agen t Steel inciden rol. inch was ses of sed if t	y the tely stage will uence e eding nicular that other Waters. m the re's the the the cy. Beam tal to aterline of the
	N. W//- UCENSED UCENSED N. 3308-5 4 4 4 4 4 4 4 4 4 4 4 4 4	<i>Ka</i> <i>Fed</i> Scale:	<u>VERAL</u> ipapau eral A AS NO	TTENT OF HA HIGHWAYS DI HIGHWAYS DI STRUCTURAL Kamehameha J Stream Bri No. SO.8B O	TION S <u>PHASE</u> <u>Highv</u> <u>dge Re</u> <u>lo. BR</u> - Date:	<u>SEQUEI</u> <u>2</u> vay eplacei	<u>ment</u> 1 <u>(48)</u> 15
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