



## **PROJECT INDEX**

\_

<u>SHEET</u>	DESCRIPTION
G101	COVER SHEET WITH VICINITY MAF
G102	PROJECT INDEX AND LEGEND
G103	GENERAL NOTES
CP101	CULVERT PLAN AND PROFILE
CP102	CULVERT PLAN AND PROFILE
DP101	DITCH PLAN AND PROFILE

## <u>UTILITIES</u>

AIR	Compressed Air
FO	Fiber Optic Cable
GG	Gas Pipeline
OHP®	Overhead Power Line
SS	Sanitary Sewer
@	Overhead Signal Line
UGE	Underground Signal Line
• — — — • — — • — — • — — — — — — — — —	Steam Line
SD	Storm Drain
T	Telephone
UGE	Underground Electric
WW	Water Main
	Underground Wire
	Under Drain
<sub>o</sub> V.	Valve
<sub>о</sub> М.Н.	Manhole
□ C.B.	Catch Basin
。F.H.	Fire Hydrant
•	Junction Box
Ð	Electric Meter
٩	Gas Meter
	Water Meter
<sub>o</sub> M.W.	Monitoring Well
oPUMP	Pump
PROPERTY	,
	Section Line
	Center Section Line
	Parcel or Easement Line
	Right of Way
	Former Right of Way
	Right of Way to be Acquired

----- Foreign Right of Way





e (s)
ond i
, on a
Pipe
_
Э

	TE OF T	+15°
CH.	ANSOTHI	OUM
1	97349	
Sec.	SIONAL EN	NGINE COM
0	J hanse	othi_

100% PLANS

ortable\$\$ itable\$\$ ne.dgn fel\$\$

### **ABBREVIATIONS**

STRUCTURES

Bldg.

ıte	(s)

cond (s)

Br. CB CPT CIP CMP CMPA CSP Culv. DI DPGBD DPGOD EBW F L F F GIP Hdw NBW PCB PSCT RCA RCB RCP SBW SSP SPTBD SPTOD SPP TPGBD TPGOD TPTBD TPTOD TTBD TTOD TWB VCP Viad. WBW WIP TRACK ATR Above Top of Rail Align. BBR Alignment Below Base of Rail Centers Continuous Welded Rail Cntrs. CWR DSPD Double Switch Point Derail EOT End of Track Head Hardened ΗH Hand Throw Jointed Rail Left Hand ΗT Jtd. LH LLT Last Long Tie ML MM Main Line Mile Marker MP Mile Post Not Sufficient Clearance Other Track Material Point of Compound Curve NSC OTM PCC PC Point of Curve PCS Point of Curve to Spiral POC Point on Curve PF 1/2" Point of Frog Point of Intersection Point of Intersection of Turnout Point of Spiral PI PITO PS PSC Point of Spiral to Curve POS PT POT Point on Spiral Point of Tangent Point of Tangent Point of Switch Point of Vertical Curve Point of Vertical Intersection Pt. Sw. PVC PVI PVT Point of Vertical Tangent RH **Right Hand** SH SSPD Second Hand Single Switch Point Derail Track Centers Track Feet TC T.F. Trk. T/R Track Top of Rail

	TO Turnout UXO Universal Cross-Over X-Over Cross-Over
DRAWN BY: CHECKED BY:	PORT OF BROWNSVILLE
СХО	LOCATION & DESCRIPTION:
DATE: 9/9/2022	DRAINAGE IMPROVEMENTS
G1Ø2	SHEET TITLE: INDEX AND LEGEND

#### **GENERAL NOTES**

- 1. No work whatsoever shall be commenced without first notifying the POB Engineer
- The Contractor shall comply with all Federal, State, County, and City Laws and Ordinances and Regulations of OSHA, and NPDES related to the safety and character of the work, equipment and labor personnel. 2.
- Contractor shall be responsible for coordinating with all Utility agencies.
- Contractor shall protect in place (by any means necessary) all existing utilities to remain unless otherwise specified herein, contractor shall be responsible for the complete repair at his expense, for any damage to existing utilities, structures, or other site features, as a result of his work.
- 5. Prior to placing curbs, pavements, base, subbase, track, etc., all underground utilities shall be installed, backfill completed, and the Engineer notified by each of the utility companies having facilities within the work area, that the utility installation has satisfactorily passed acceptance tests.
- Contractor shall verify locations and elevations of existing utilities 6. whether known or unknown prior to beginning construction
- 7. Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, and pipelines not located prior to construction shall be brought to the attention of the Engineer for determiniation of appropriate action such as removal or treatment in a manner judged suitable to the Engineer
- Contractor shall coordinate location of all proposed utilities with POB to 8 assure accuracy of utility connections and compliance with local codes.
- Any existing conditions found to be a variance with these drawings must be immediately reported to the Engineer
- 10. Contractor shall maintain and clean to the satisfaction of the Engineer, all access and service roads used during construction
- 11 Contractor shall perform all construction in such a manner as to protect adjacent existing track, and other site elements which are to remain in service
- 12. No field changes will be permitted without direct written authorization from the POB Engineer or his representative.
- 13. Contractor shall coordinate work which affects adjacent property owners. Any questions or agreements between adjacent property owners and contractor shall be made in writing. A copy of such agreement shall be provided to the POB Engineer or his representative
- 14. The POB Contractor is responsible for implementing a Stormwater Pollution Prevention Plan (SWPPP) to comply with State regulations. General specifications and typical erosion control details are included in the plan set
- 15. Where existing culverts are to be replaced, the Contractor shall expose existing drainage structures and field verify size and type before ordering
- 16. Contractor shall maintain at least one access to all affected business. If ecessary, multiphase construction shall be utilized
- 17. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The contractor will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor and all subcontractors to adhere to OmniTRAX, Brownsville and Rio Grande International Railroad, and Port of Brownsville safety rules and roguitatione for work on either the safety rules and the safety rules are safety rules and the safety rules are safety rules and the safety rules are safety rules ar regulations for work on site.

## SURVEY NOTES

1. The Contractor is responsible for the preservation of all survey control monuments. In the event monuments are damaged or destroyed by the contractor, the Engineer will replace the monument solely at the contractor's expense.

2. Survey collected by SurvWest in March 2021.

	DATUM
HORIZONTAL	STATE PLANE (NAD 83 DATUM) TEXAS- SOUTH ZONE US SURVEY FOOT
VERTICAL	NAVD 88 GEOID 12B

## TRAFFIC NOTES

- All barricades, warning signs, lights, devices, etc. for the guidance of vehicle traffic and pedestrians must conform to the installation shown in the Manual on Uniform Traffic Control Devices (TxMUTCD), current edition. 1
- Contractor shall make twice daily inspections of barricades and flashing lights to ensure proper placement and functioning of warning devices. 2.
- Grade crossings closed to traffic during construction shall be barricaded in 3. dance with the MUTCD
- RL Ostos Road to remain open during construction of the project. Contractor responsible for traffic control plans to maintain traffic in both directions on RL Ostos Road. 4.
- The Contractor is responsible for the prompt replacement and/or repair of all 5. traffic control devices and appurtenances damaged or disturbed due to construction
- The Contractor shall provide a Traffic Control Plan in accordance with the Texas Manual on Uniform Traffic Control Devices (TxMUTCD).

#### SITE CIVIL SPECIFICATIONS

- TxDOT Specifications
- 110 EXCAVATION 132 EMBANKMENT

- 132 EMBANKMENT
  132 EMBANKMENT
  160 TOPSOIL
  164 SEEDING FOR EROSION CONTROL
  216 PROOF ROLLING
  400 EXCAVATION AND BACKFILL FOR STRUCTURES
  402 TRENCH EXCAVATION PROTECTION
  421 HYDRAULIC CEMENT CONCRETE
  432 RIPRAP
  440 REINFORCEMENT FOR CONCRETE
  462 CONCRETE BOX CULVERTS AND DRAINS
  464 REINFORCED CONCRETE PIPE
  465 JUNCTION BOXES, MANHOLES, AND INLETS
  466 HEADWALLS AND WINGWALLS
  467 SAFETY END TREATMENTS
  506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS

#### GRADING AND DRAINAGE:

- Portions of the parcel line are included in the mapped 100 Year Floodplain Zone AE (EL 11 and EL 12) as shown on the FEMA Flood Insurance Rate Map Number 48061C0585F dated February 2018. Portions of the parcel are also included in the 500 Year Floodplain Zone.
- The underground utilities shown have been located from the field survey information and existing drawings. The Engineer makes no guarantees that the underground 2. utilities shown comprise all such utilities in the area, either in service or abandoned. The Engineer further does not warrant that the underground utilities shown are in the exact location indicated though they were located as accurately as possible from the information available. The Engineer has not physically located the underground utilities. The Contractor shall confirm the location of all utilities prior to the commencement of excavation.
- 3. A minimum of (4-6) inches of topsoil is to be uniformly distributed over areas stripped for construction beyond those areas covered by structures or paving.
- Proper construction procedures shall be followed on all improvements within this parcel so as to prevent the silting of any watercourse or wetlands in accordance with the regulations of the Texas Commision on Environmental Quality (TCEQ) and conservation 4. guidelines for soil erosion and sediment pollution control. In addition, the Contractor shall strictly adhere to the Stormwater Pollution Prevention Plan contained herein.
- All site work, materials or construction, and construction methods for earthwork and storm drainage work shall conform to the specifications and details and 5. applicable project specifications. Otherwise, this work shall conform to TXDOT specifications and the Project Geotechnical Report. All fill material understructures and paved areas shall be per the above stated applicable specifications, and/or Project Geotechnical Report, and shall be placed in accordance with the applicable specifications under the supervision of a qualified Professional Engineer.
- 6. All disturbance incurred to town, county, or commonwealth property due to construction shall be restored to its previous condition or better, to the satisfaction of the Port of Brownsville
- All construction shall comply with Brownsville and Rio Grande Railroad, Port of Brownsville, Cameron County, and TxDOT specifications. All construction within a Department of Transportation ROW shall comply with all Department of Transportation standards. Where specifications or standards are in conflict, the more stringent specification of standard shall apply.
- If impacted or contaminated soil is encountered by the Contractor, the Contractor 8. shall suspend excavation work of impacted soil and notify the Owner and/or Owner's Environmental Consultant prior to proceeding with further work in the impacted soil location until further instructed by the Owner and/or Owner's Environmental Consultant
- 11. For compaction, use following guidelines: A minimum of one test per 2500 SF per lift or as noted below: A. Compacted Subgrade soils: At least three tests per subgrade area within length of fill area, A minimum of two tests per day.
- 12. Shop Drawings: The Contractor shall submit shop drawings of materials and structures for review and approval prior to delivery to the site. Allow 14 working days for review



table\$ ble\$\$

DRAWN BY:	PORT OF BROWNSVILLE
CHECKED BY:	
CXO	LOCATION & DESCRIPTION:
DATE: 9/9/2022	DRAINAGE IMPROVEMENTS
SHEET NUMBER:	
G1Ø3	GENERAL NOTES



L o d L o d L o d

÷ ÷ ÷ ;



able\$\$ |e\$\$ dgn

ort. ame

\$



	<sup>™</sup> ST	HW=7 3:1- 30 DEG BENÍ A 115+51.10 37.65′ R			4" CON RIPRAF	IC
T_A-03 0′		0.1%				10
	F	PROP PW-2 4 Hw 3	45° /= 7 3: 1	بن ۲ س ۲ س ۲ س	SEL 100YR	= 8.73' = 7.03'
ERT A RCB LF	0.1%	30 DEG BF STA 115+51. E = 1.	END • 16 80'		4" CONC RIPRAP	5
		END C BEG STA 1 F	ULVERT A IN DITCH- 15+62.00 = 1.82			0
	1	15+00			116	+00
DRAU	WN BY: CKED BY:		PORT OF	BROWNS	ILLE	
DATE 9/	CXO E: (14/2022	LOCATION & DESC	CRIPTION: DRAINAGE	IMPROV	EMENTS	
SHEE (	CP102	SHEET TITLE:	CULVER	T PLAN	AND PROF	ILE
						filename.d



ortable\$\$ table\$\$ dme.dgn

DRAWN BY:		PORT O	F	BROWNSV	TIIF		
CHECKED BY:	LOCATION & DESCR			DROWINGV	1666		
DATE: 9/14/2022	ECCATION & DESCH	DRAINAC	GΕ	IMPROVE	MENTS		
SHEET NUMBER: CP103	SHEET TITLE:	CULV	ER	T PLAN A	ND PR	OF I	LE



ortable\$\$ ntable\$\$ ne.dgn

									x7
RACK	S								IV.=
TRACK	:S								/
TRACK	:S _ s _	s	s —	— s — s -	ss	s	— <b>—</b> s —		1
	5	3	,			3	<u> </u>		
		1 ·	25-	 + ØØ			←		
		، ۱ 					<u>+</u>		
						I	→́		
~~	~		~_	~~~	×~~~	~~	~~		
						-	Ì		
~~_ \		<u> </u>	~+		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	/	F		
41L				— <b>⊨</b> A-4*		1	Ĕi	ND DITCH	
					r	<u>                                     </u>	5	IA 126+1:	
		E		MENT LE					
" U-0 G64-	-22	HMA IN PER TX	r B COT	-	LAY	UNU   ER RI	EINF #	UAL 6 BARS	
ı EM 8" FI	341 RS		N PI		01. XX 8" F	∠° u-l XIST	SURGR	WHT Anf	
TY A	GR	1-2)(FI	INAL ITF	  M 247	× 95%	MOD	IFIED f	PROCTOR	
00/1									
									20
									10
				EN EN	р рітсн	]			
				STA 126 ] =	5+11.43 2.90′	h			
						\ \			
<del>\</del>		.~~~~	~						
									Ø
0		1:	25+I	00	12	6+ØØ		:	<b></b>
	DRAW	N BY:							
	CHECK	ED BY:			PORT O	F BR	OWNSV	ILLE	
	DATE:		LOCA	TION & DESC	RIPTION:	E IM		AENTS	
	9, SHEET	(9/2022 NUMBER:	SHFF	T TITLE:					
		101			DITC	H PL	AN AN	D PROFI	LE



DITCH SECTION A-1



DITCH SECTION A-3







DITCH SECTION A-4



	DRAWN BY:	PORT OF BROWNSVILLE
Î	CHECKED BY:	
	LXU	LOCATION & DESCRIPTION:
	DATE: 9/9/2022	DRAINAGE IMPROVEMENTS
	SHEET NUMBER:	
	DP1Ø2	SHEET TITLE: DITCH CROSS SECTIONS



colortable\$\$ centable\$\$ lendme.dgn nodel\$\$ date\$\$



						0
			:;			
DRA	WN BY: CKED BY:		PORT OF	BROWNSV	ILLE	
DATI 97	CXO E: (14/2022	LOCATION & DES	DRAINAGE	IMPROVE	MENTS	
С	P105	SHEET TITLE:	CULVE	RT PLAN	AND PROF	ILE



CULVERT SECTION B-1



CULVERT SECTION B-2



CULVERT SECTION B-3





DRAWN BY:	
	PORT OF BROWNSVILLE
CHECKED BY:	
CXO	LOCATION & DESCRIPTION:
DATE: 9/9/2022	DRAINAGE IMPROVEMENTS
SHEET NUMBER:	
CP1Ø6	CULVERT CROSS SECTIONS

# BOX CULVERT SUPPLEMENT SHEET ~ WINGS AND END TREATMENTS

																Revision	1: 2/3/2020	J. Bridae	DIVISION
Culvert Station	Description	Max	Applicable	Applicable	Skew	Side	Т	U	С	Hw	А	В	Lw	L+w	A+w	Riprap	Class	Class	Total
and/or Creek Name	of Box Culert	Fill	Box Culver-	Wingwall	Angle	Slope or	Culvert	Culvert	Estimated	Height	Curb to	Offset	Length	Culvert	Anchor	Apron	"C"	" C "	Wingwall
	No.Spans ~	Height	Standard	or End	(0,15,	Channe I	Top Slab	Wall	Curb	of	End of	of End of	of Longest	Toewall	Toewall		Conc.	Conc.	Area
	Span X			Treatment	30° or	Slope	Thick's	Thick's	Height	Wing	Wingwall	Wingwall	Wingwall	Length	Length		(Curb)	(Wing.)	
	Height	(f+)		Standard	45°)	(SL:1)	(in)	(in)	(f+)	(f+)	(f+)	(f+)	(f+)	(f+)	(f+)	(C.Y.)	(CY)	(CY)	(SF)
STA 110+07.77 RT ()	1 ~ 6' X 4'	8′	SCP-6	PW-1	0	3:1	7 "	7 "	0.000	4.583	NZA	N∕A	13.750	7.167	N∕A	0.0	0.0	9.2	126
STA 115+62.00 RT ()	1 ~ 6' X 4'	7′	SCP-6	PW-2	45	3:1	7 "	7 "	0.000	4.583	N⁄A	N∕A	15.203	10.135	N/A	0.0	0.0	10.1	133
STA 121+03.75 RT ()	1 ~ 6' X 4'	5′	SCP-6	SETB-PD	0	6:1	7 "	7 "	0.000	4.333	N⁄A	N∕A	24.500	NZA	7.167	0.0	0.0	6.4	N/A
STA 121+83.06 RT ()	1 ~ 6' X 4'	5′	SCP-6	SETB-PD	0	6:1	7 "	7 "	0.000	4.333	N⁄A	N∕A	24.500	NZA	7.167	0.0	0.0	6.4	N/A
STA 115+53.00 RT (2)	1 ~ 6' X 4'	5′	SCP-6	FW-S	45	3:1	7 "	7 "	0.000	4.333	12.000	20.785	24.000	NZA	N/A	3.5	0.0	5.9	84





TxDOT September 2000

. Revision: 2/3/2020 Bridge Division

DRAWN BY:	
	PORT OF BROWNSVILLE
CHECKED BY:	
CXO	LOCATION & DESCRIPTION:
DATE:	
9/14/2022	DRAINAGE IMPROVEMENTS
SHEET NUMBER:	· · · · · · · · · · · · · · · · · · ·
BCS	SHEET TITLE:
003	DC3

								SUMMA	ARY OF	DRAINAG	E QUANI	TITIES										
	110	132	160	164	360	302	400	400	400	400	402	432	462	464	465	465	466	466	466	467	496	496
	6002	6001	6003	6001	6002		6002	6003	6005	6009	6001	6001	6011	6005	6126	6143	6166	6183	6196	6215	6004	6016
PLAN SHEET	EXCAVATION (CHANNEL)	EMBANKMENT (FINAL)(O RD COMP)(TY A)	FURNISHING AND PLACING TOPSOIL (4")	BROADCAST SEED (PERM) (RURAL) (SANDY)	CONC PVMT (CONT REINF - CRCP) (8")	1' GRAVEL DRIVEW AY	STRUCT EXCAV (BOX)	STRUCT EXCAV (PIPE)	CEM STABIL BKFL	CEMENT STAB BACKFILL (INLET OR MH)	TRENCH EXCAVAT ION PROTECT ION	RIPRAP (CONC) (4IN)	CONC BOX CULV (6 FT X 4 FT)	RC PIPE (CL III) (24 IN)	INLET (COMPL) (PSL)(FG))(3FTX3F T-3FTX3F T)	INLET (COMPL) (PSL)(FG)(FG)(8FTX8F T-3FTX3F T)	WINGWALL (FW - S) (HW=5 FT)	WINGWALL (PW - 1) (HW=8 FT)	WINGWALL (PW - 2) (HW=7 FT)	SET (TY I)(S= 6 FT)(HW= 4 FT)(6:1) (P)	REMOV STR (SET)	REMOV STR (PIPE)
	CY	CY	SY	SY	SY	SY	CY	CY	CY	CY	LF	СҮ	LF	LF	EA	ΕA	EA	EA	EA	EA	ΕA	ΕA
							•		BASE	BID QUAN	TITIES				· · · · · ·							
SHEET CP101	-	-	150	150	-	-	406	15	137	1 4	168	-	152	16	1	-	-	1	-	-	-	-
SHEET CP102	-	-	1,200	1,200	36	-	1,861	-	455	24	565	20	565	-	2	1	-	-	1	-	4	2
SHEET CP103	-	-	-	-	-	74	179	-	64	-	80	-	80	-	-	-	-	-	-	2	-	3
SHEET DP102	787	-	16,330	16,330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I
TOTAL QTY BASE BID	787	0	17,680	17,680	36	74	2,446	15	656	38	813	20	797	16	3	1	0	1	1	2	4	5
	•								ALTERNA	TE BID QU	JANTITIE	S								•		
SHEET CP101	-	-	150	150	-	-	406	15	137	1 4	168	-	152	16	1	-	-	1	-	-	-	-
SHEET CP102	-	-	1,200	1,200	36	-	1,861	-	455	24	565	20	565	-	2	1	-	-	-	-	4	2
SHEET CP103	-	-	-	-	-	74	179	-	64	-	80	-	80	-	-	-	-	-	-	1	-	3
SHEET DP102	787	-	8,170	8,170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHEET CP104	-	-	2,667	2,667	-	-	287	-	432	24		-	536	-	2	-	-	-	-	-	-	-
SHEET CP105	-	-	-	-	-	-	5	-	8	8	10	-	10	-	-	1	1	-	-	-	-	-
SHEET DP103	-	34,467	16,002	16,002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL QTY ALT BID	787	34,467	28,189	28,189	36	74	2,738	15	1,096	70	823	20	1,343	16	5	2	1	1	0	1	4	5





D	RAWN BY:	
		PORT OF BROWNSVILLE
С	HECKED BY:	
	СХО	LOCATION & DESCRIPTION:
D.	ATE:	DRAINAGE IMPROVEMENTS
	9/13/2022	DIVATINAGE TIMI NOVEMENTS
SF	HEET NUMBER:	SHEET TITLE.
	BCS	DRAINAGE SUMMARY SHEET