

**GENERAL MEETING OF THE BOARD OF DIRECTORS  
OF THE  
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

**RESOLUTION NO. 25-001**

**PROHIBITING THE OPERATION OF CERTAIN MOTOR VEHICLES  
ON MOBILITY AUTHORITY TOLL FACILITIES PURSUANT TO  
THE HABITUAL VIOLATOR PROGRAM**

WHEREAS, Transportation Code, Chapter 372, Subchapter C, authorizes toll project entities, including the Central Texas Regional Mobility Authority (Mobility Authority), to exercise various remedies against certain motorists with unpaid toll violations; and

WHEREAS, Transportation Code §372.106 provides that a “habitual violator” is a registered owner of a vehicle who a toll project entity determines:

- (1) was issued at least two written notices of nonpayment that contained:
  - (A) in the aggregate, 100 or more events of nonpayment within a period of one year, not including events of nonpayment for which: (i) the registered owner has provided to the toll project entity information establishing that the vehicle was subject to a lease at the time of nonpayment, as provided by applicable toll project entity law; or (ii) a defense of theft at the time of the nonpayment has been established as provided by applicable toll project entity law; and
  - (B) a warning that the failure to pay the amounts specified in the notices may result in the toll project entity’s exercise of habitual violator remedies; and
- (2) has not paid in full the total amount due for tolls and administrative fees under those notices; and

WHEREAS, the Mobility Authority previously determined that the individuals listed in Exhibit A are habitual violators, and these determinations are now considered final in accordance with Transportation Code, Chapter 372, Subchapter C; and

WHEREAS, Transportation Code §372.109 provides that a final determination that a person is a habitual violator remains in effect until (1) the total amount due for the person’s tolls and administrative fees is paid; or (2) the toll project entity, in its sole discretion, determines that the amount has been otherwise addressed; and

WHEREAS, Transportation Code §372.110 provides that a toll project entity, by order of its governing body, may prohibit the operation of a motor vehicle on a toll project of the entity if:  
(1) the registered owner of the vehicle has been finally determined to be a habitual violator; and

(2) the toll project entity has provided notice of the prohibition order to the registered owner; and

WHEREAS, the Executive Director recommends that the Board prohibit the operation of the motor vehicles listed in Exhibit A on the Mobility Authority's toll roads, including (1) 183A Toll; (2) 290 Toll; (3) 71 Toll; (4) MoPac Express Lanes; (5) 45SW Toll; and (6) 183 Toll.

NOW THEREFORE, BE IT RESOLVED that the motor vehicles listed in Exhibit A are prohibited from operation on the Mobility Authority's toll roads, effective January 29, 2025; and

BE IT FURTHER RESOLVED that the Mobility Authority shall provide notice of this resolution to the individuals listed in Exhibit A, as required by Transportation Code §372.110; and

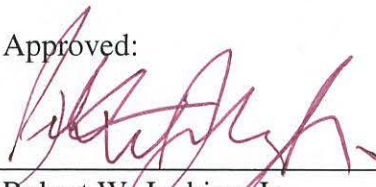
BE IT IS FURTHER RESOLVED that the prohibition shall remain in effect for the motor vehicles listed in Exhibit A until the respective habitual violator determinations are terminated, as provided by Transportation Code §372.110.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January 2025.

Submitted and reviewed by:

  
\_\_\_\_\_  
James M. Bass  
Executive Director

Approved:

  
\_\_\_\_\_  
Robert W. Jenkins, Jr.  
Chairman, Board of Directors

**Exhibit A**



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

#	Full Name	County	ZipCode	License Plate	Plate State	Number of Tolls
1	WASTEWATER TRANSPORT SERVICES	Travis	78721	129B71	TX	1101
2	DYLAN REEVES TEENA REEVES	Williamson	78613	SJD0333	TX	1984
3	DAVIS POOL STEEL LLC	Travis	78660	VGZ0913	TX	749
4	THEADOSIA LAREL MCNEIL	Williamson	78641	TXN8189	TX	1600
5	FRANCISCO R ALVARADO PINTO	Travis	78752	SXT1057	TX	2102
6	MAKAILA NICOLE WARD	Williamson	78729	VBP7655	TX	1432
7	DAVID NATAL JR	Travis	78744	VKZ7168	TX	1742
8	MAXIMILIANO GONZALEZ GARCIA	Travis	78653	VCB4801	TX	563
9	JESSE DA CRUZ	Williamson	78642	RFF6175	TX	1261
10	ARIAN VALDES	Williamson	78664	VDP8230	TX	1267
11	QUARTERIO VON STEVEN NASH	Williamson	78681	VFL6751	TX	1337
12	RUSSIA CHANNEL MARKS	Williamson	78729	VCB3154	TX	1105
13	MICHELLE LEE MCGILL	Travis	78660	TWL6802	TX	645
14	NATALYA DIAMANTE SERRANO	Caldwell	78616	VBN3773	TX	1232
15	ROBERT HERNANDEZ JR	Williamson	78641	B23282T	TX	1209
16	SILEASHA ONTRA BREWSTER NICOLAS BRYANT LOTT	Williamson	78717	SDH7211	TX	489
17	JORGE RODRIGUEZ	Travis	78719	LDZ3017	TX	1344
18	DAVID MIKESKA	Williamson	76574	TLL0524	TX	1228
19	MARIA DELIA GUTIERREZ GALVAN	Travis	78754	VFX9688	TX	1152
20	MAIKEL RIVERO GONZALEZ	Ector	79763	SWG4772	TX	1159
21	DEEA DIANE COLEMAN LACEY	Travis	78754	VJF4310	TX	1162
22	ESTRELLA MONTOYA	Bastrop	78621	VHK1692	TX	1277
23	LATASHA RUTH BROWN	Bell	76549	VFS2792	TX	1341
24	NICKI LAVERNE CRAWFORD	Travis	78728	TXF5851	TX	927
25	PREMIUM CUTS LAWN SERVICE AND MAINTENANCE, INC.	Travis	78708	VDF7547	TX	454
26	PREMIUM CUTS LAWN SERVICE AND MAINTENANCE INC	Travis	78708	VDG3942	TX	486
27	TERENCE RODNEY OWENS	Travis	78617	VFS9009	TX	1341
28	AL CLAWSON DISPOSAL INC	Williamson	76537	SVX3810	TX	677
29	MARIA FLORES BERNARDO CASTRO PEREZ	Travis	78753	LDY3732	TX	1145
30	BRODIE FITZGERALD HALLFORD ASHLYNE PAIGE HALLFORD	Williamson	78641	THZ4926	TX	905
31	JOHN GUANDARU GATHOGA	Ector	79765	198C012	TX	311
32	NGOZI TOURAY ELLISON	Bexar	78238	SXH9576	TX	1041
33	AUSTIN FORMULA UTILITIES LLC	Travis	78749	TPY0625	TX	606
34	JUAN CARLOS CABRERA TORRES	Williamson	78613	VKY3165	TX	1073
35	ANGEL GIOVANNY RENDON SANCHEZ	Travis	78660	TXP3471	TX	1029





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

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36	FORD MOTOR CREDIT COMPANY	NULL	30348	FLD3171	GA	1050
37	KENNETH MORRIS THOMPSON	Bastrop	78602	VCZ4310	TX	1151
38	KARTHEEK BHASHYAM ALGEBRAIT LLC	Travis	78747	VFT6530	TX	893
39	RODOLFO LEDESMA CRESPO ISACHI LEDESMA SUAREZ	Williamson	78665	VFS9294	TX	1024
40	JAMES EARL MOSLEY JR	Travis	78758	SHB4325	TX	1457
41	FRANCISCO J BARAJAS GUTIERREZ	Hays	78640	VKT0411	TX	1120
42	KAVAN FRA YARBER	Potter	79124	SCH5682	TX	1108
43	YUNUS HOJIYEV	Williamson	78665	VJD9274	TX	956
44	CHRISTOPHER DESHUWN STINSON	Williamson	78613	TZG8166	TX	990
45	DANA FAY FISHER FLINT FISHER	Bastrop	78621	LBB6364	TX	1221
46	SHELLY WADE FARRIS	Williamson	78626	FWW8494	TX	235
47	BRYANA CHRISTINE TORRANCE	Williamson	78681	TCX7245	TX	1100
48	NANCY PERALEZ GARCIA	Lubbock	79364	TMK9392	TX	981
49	DANIEL ALEXANDER GONZALEZ	Williamson	78729	VKZ6677	TX	949
50	JOSE LUIS VILLEDA-CHAVEZ	Travis	78735	LGV3284	TX	534
51	VERSIE BAKER JOHNSON	Hill	76645	HPY8541	TX	877
52	DELEIA LATRECE BEDOLLA	Travis	78758	VJF3247	TX	1094
53	CANDY SAMORA HERIBERTO LUNA	Matagorda	77465	TRF2256	TX	1161
54	LUIS ALEXANDER PORTE GOMEZ	Travis	78724	TZG3407	TX	1144
55	ANGEL LEE OLMOS	Travis	78724	VJF3474	TX	1390
56	LONESTAR CONCRETE	Bexar	78251	1N55133	TX	235
57	JAYE STARK	Williamson	78642	VKN4446	TX	758
58	STANLEY ROBBY HERARD	Travis	78744	VCY5603	TX	1109
59	KHRISTOPHER GORDON	Travis	78726	SDJ1667	TX	312
60	ZACHARY T EKE	Travis	78617	TDD3644	TX	855
61	AUSTIN WAREHOUSE & DISTRIBUTION INC	Williamson	76527	1L37417	TX	282
62	BREANA NICOLE WADE	Travis	78723	VJM5839	TX	889
63	ENEDINO GARCIA HERNANDEZ PATRICIA CRYSTAL GARCIA	Bastrop	78602	SYJ8501	TX	1013
64	BRANDON LEE GOERING	Williamson	78642	NZY3496	TX	760
65	TRACY ORONA	Williamson	78641	VFJ9495	TX	844
66	VERONICA BEATRIX ESTRADA HUGO ALEXANDER ESTRADA	Williamson	78641	SSL9279	TX	783
67	DAB SPECIALIZED TRANSPORT, LLC	Williamson	78613	R673162	TX	213
68	GABE RAMOS-COOL	Travis	78720	NZB2759	TX	1159
69	MARIA TERESA MOTA	Travis	78721	VJF0577	TX	990
70	SAUL CRUZ SANTANA	Travis	78660	VHG4061	TX	641
71	KRISTINA SUE KENT	Williamson	78628	MHC0312	TX	849



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

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72	MARY RODRIGUEZ MARTINEZ RICHARD GOVEA JR	Caldwell	78616	RDZ5864	TX	1192
73	BRADLEY MARK COWAN STACIE LYNN COWAN	Williamson	78641	SSL9870	TX	862
74	SARAH ELIZABETH LISTER	Williamson	78681	VFN2567	TX	308
75	EMILY PEREZ JAIMES	Bastrop	78621	VFT8078	TX	1067
76	GERALDINE SALAZAR GARCIA	Williamson	78641	VBG6868	TX	766
77	SAVAGE LAND SOLUTIONS	Hays	78676	NYL4279	TX	529
78	JOE BRENA	Travis	78724	VFT1162	TX	1279
79	BOBBY EARL MCGRAW	Burnet	78611	RWV4542	TX	816
80	PREMIUM CUTS LAWN SERVICE	NULL	78708	VGB7714	TX	321
81	ROMAN GAMBOA GUTIERREZ	Gregg	75602	TMS4740	TX	853
82	KRISTOPHER SHADD FRIDAY II STEPHANIE CASTILLO-CRUZ	Travis	78745	TZH2836	TX	828
83	ASHSHAWA SHARIE MCKNIGHT	Williamson	78641	VFY7920	TX	702
84	ANGELINE HELEN BOLES KEYUN ARTRELL BOYD	Bell	76502	LJV9493	TX	1013
85	OSVALDO MARTIN MOCTEZUMA	Williamson	78628	VBP3582	TX	325
86	ROBERT WILLIAM ABERNATHY	Williamson	78641	VDN6683	TX	825
87	JOAN PICANTE SANTILLANA	Williamson	78729	NDW9533	TX	838
88	CARLOS CASTILLO	Bastrop	78621	GVB4400	TX	942
89	Ross Wagliardo	NULL	78741	SLP1779	TX	814
90	ROBERT ALAN PRYOR	San Saba	76877	2VFJW	TX	826
91	ORFANELI TORRES HERNANDEZ	NULL	78617	VDY3254	TX	899
92	RAYMOND C RIVERA	Travis	78744	VFT1131	TX	1109
93	PRESLY SMITH	Travis	78617	VCB5782	TX	946
94	BRIAN LEE DOBBINS	Jasper	77612	RPT3259	TX	1001
95	KAROLYNE MARIAH ZAMORA	Travis	78741	TTG1678	TX	931
96	PRESLIE M MARTIN SANDRA K ROBERTSON-MARTIN	Williamson	78665	TPC2914	TX	702
97	CAYETANO D RAMIREZ	Bell	76504	HDY2535	TX	818
98	KYLE WAYNE HALLADAY	Williamson	78641	VKX7699	TX	797
99	EDGAR G ONTIVEROS OLGA MICHELL HERNANDEZ-CORNEJO	Travis	78653	RRY4978	TX	1036
100	NICHOLAS ANTHONY ORONA	Travis	78758	VJF4393	TX	964
101	JOSE G RODRIGUEZ	Travis	78660	SFL2547	TX	337
102	LISANNE STELLA HOLEWYNE	Travis	78752	VJF5623	TX	979
103	MICHAEL ANDRE MORENO MARTHA MORENO	Travis	78744	VBP1177	TX	969
104	HUGO MANUEL FRANCO MONTENEGRO	Williamson	78641	VJM2973	TX	786
105	CEARA SANFORD	Williamson	78634	TTK7135	TX	926
106	MADEIRA PILAR HERRERA	Williamson	78641	VFN6394	TX	681
107	ARMANDO MARQUEZ JR	Travis	78617	LJJ3056	TX	966



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

108	ROBERTO ESCAMILLA JR	Travis	78752	VGG5447	TX	770
109	NOVALEIGH LEDESMA	Travis	78617	TXF1590	TX	916
110	STATEWIDE TOWING RECOVERY RESCUE RDSIDE TRANSPORT, INC.	Travis	78753	T8420K	TX	435
111	ERIK HEINRICH STRICKLAND	Travis	78748	THZ5687	TX	206
112	ROBERT LEONIDAS CAIN	Travis	78653	VCZ5115	TX	848
113	EARL DILLON RINCON	Travis	78744	DMF8202	TX	663
114	CARLOS EDUARDO KEA MONEKIA NATASHA KEA	Williamson	78634	SLP1985	TX	171
115	MADELYN MICHELLE OROZCO	Williamson	78613	RZG9054	TX	788
116	ROY SHANE BRAY RYAN DOUGLAS WILLIS JR	Williamson	78642	VGG1068	TX	718
117	MARIA C PEREZ	Bastrop	78602	VHK1139	TX	496
118	ROGELIO RAMIREZ GREGORIA VELASQUEZ-ALVAREZ	Travis	78741	NYZ8871	TX	823
119	T AND A CLEANERS LLC	Williamson	78664	LZR6277	TX	667
120	CONNOR JOSEPH MCCAMPBELL	Travis	78723	VKZ0378	TX	777
121	JOHN GREGORY AGUILAR	Travis	78745	RBV4960	TX	705
122	LAYNA ELIZABETH COPELAND	Williamson	78641	VNC8552	TX	744
123	JOHN RUSSELL JOHNSON AMANDA NICOLE HAZELWOOD	Bastrop	78957	RHZ5916	TX	789
124	GARCIA DEARING INVESTMENTS, INC	Travis	78702	VHK0215	TX	777
125	WENDY MARIELA CARRILLO	Williamson	78641	RBX0844	TX	756
126	KEEGAN HIBBS	Williamson	78613	TWJ8935	TX	489
127	ROBERT KEITH MCKINNEY JR	Travis	78722	VJG2828	TX	800
128	CALEB BESA RITA BESA	Bastrop	78602	TCR3177	TX	752
129	ELIZABETH REYES EULOGIO REYES	Travis	78757	VCX8206	TX	682
130	SAMIR KASSEM	Bexar	78240	KYN2803	TX	803
131	CALVIN MINICK	Travis	78754	RFF1982	TX	883
132	ELIAS CENICEROS	Travis	78660	LYX9328	TX	898
133	TOMMY BOSWELL IV DBA COMPLETE SEAL COATING & CR	Burnet	78605	RYX0076	TX	340
134	TERREN RENEE HOKES	Williamson	78613	TXT4462	TX	728
135	ITORO HENCE	Williamson	78641	C976683	TX	698
136	GREGORY MARTIN KIDWELL JR	Williamson	78646	TYR7701	TX	495
137	UMESH SAMPATH GUNASEKARA KRISTEN ELIZABETH HARTNETT	Williamson	78664	NXH8378	TX	343
138	PATRICK QUIROZ ANTONIO	Travis	78758	VHC2714	TX	873
139	JEAN CARLOS F CENTENO CHICAS	Travis	78744	VKJ8133	TX	882
140	ANNALLYSIA ALLISON	Travis	78653	VCY9960	TX	906
141	LEGACY ARBOR CARE LLC.	Williamson	78641	RRZ9948	TX	371
142	RONALD FRANCIS EDWARDS	Travis	78653	SYS6935	TX	912
143	CASSANDRA MARIE MARINEZ	Travis	78747	TXN8260	TX	371



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

144	JERVONI MARCEL FRANKLIN	Williamson	78613	MZB8811	TX	1236
145	BELOVE ZURI RIDGEWAY	Williamson	76537	THZ7603	TX	351
146	CALEB AARON ROGERSON ASHLINN FAE RUTHERFORD	Hays	78640	VCN1516	TX	781
147	BROOKE ERIN MURRAY	Bastrop	78612	VFK8227	TX	302
148	MARIA GUADALUPE ROJAS GUTIERREZ	Travis	78660	SRL1344	TX	1020
149	AMANDA CARROLL VIDAL	Williamson	78641	VFL8500	TX	656
150	NAEQUWAN LAVAR WHITE	Williamson	78641	TZH1555	TX	607
151	GERARDO RENE MARQUEZ JR	Travis	78724	VCX9511	TX	1049
152	RUDIS FIGUEROA AMAYA	Travis	78753	TTC3295	TX	795
153	EZEQUIEL MARTINEZ RAMIREZ	Travis	78758	NLK7958	TX	394
154	JOSE PANTOJA MARIA DEL SOCORRO MORENO	Caldwell	78644	VJS9163	TX	717
155	VICTORIA MENDOZA CORRALES	Williamson	78665	NPT6123	TX	199
156	CA TARIUS DE COKTA HARDEMAN	Travis	78725	VFV0232	TX	1055
157	ANTONIO DEL PINO THALIA DEL PINO MONTENEGRO	Caldwell	78616	SJL1644	TX	731
158	ANTONITA INEZ YOUNG VIRGIL FRANCIS YOUNG III	Williamson	78634	GV14RJ	TX	311
159	NANCY QUICK GASKI	Williamson	78633	PCJ5700	TX	715
160	MISLEY ROMAGUERA ROSALES	Tarrant	76110	1N22676	TX	204
161	WHITNEY WRENE BLOCK KYREN MYKAEL BLOCK	Williamson	78642	VJR9109	TX	683
162	MARISOL FAJARDO ALBERTO MARTINEZ	Milam	76567	VBP1391	TX	790
163	ANNA SALAZAR	Caldwell	78616	RPT5162	TX	696
164	BRIANNA RAE ROGERS	Travis	78660	VHB8715	TX	756
165	TEXAS PRIDE	Travis	78744	RBW5824	TX	713
166	JESUS FERNANDO OVIEDO	Travis	78724	VJF0277	TX	783
167	KRISTI LYN FENTON	Travis	78728	GYS5914	TX	166
168	DESTINY JULIETTE GILL	Williamson	78641	TRR2760	TX	663
169	CRISTAL OSORIO OLIVARES	Travis	78725	VBK4341	TX	735
170	CHARLES DALE JACQUIER	Travis	78660	VCD7680	TX	653
171	CHRISTOPHER TATE	Williamson	78641	SYJ7800	TX	663
172	TARA HERNANDEZ	Travis	78750	NYZ6966	TX	758
173	COBY DARRELL PERRY	Williamson	78641	TXN8274	TX	713
174	MICHELLE BLINDER	Williamson	78613	VDF5371	TX	682
175	SHELLEY A SHAW	Williamson	78641	VHC6927	TX	668
176	ROBERTO HERNANDEZ HERNANDEZ	Harris	77096	PDB3491	TX	664
177	JOSE RAMIREZ	Williamson	78626	BL52367	TX	874
178	DAVID J HERNANDEZ SR	Williamson	78634	RNG3129	TX	779
179	LACEY NICOLE CADDELL	Williamson	78626	VND0173	TX	804



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

180	DORINA ROSS	Williamson	78665	TJW5180	TX	229
181	DEMETRIST L WALLACE	Travis	78653	VBP3866	TX	858
182	DEMITRICE D. HORNSBY	Williamson	78664	VKX5644	TX	842
183	ZACHARY ISAIAH MATA	Travis	78702	VCZ4407	TX	705
184	MARIA DEL CARMEN MARQUEZ	Williamson	78664	VCB9216	TX	628
185	KENNEDY ROSS SELBY DEANNTWONE S DAVIS	Williamson	78641	VCB7347	TX	660
186	DELANE TRAVIS SHEPPARD	Williamson	78642	SLP5241	TX	662
187	MIGUEL SALAZAR GONZALEZ	Travis	78724	VBP3618	TX	496
188	SHEYLA SARAI ORTEGA	Travis	78745	TZH4282	TX	754
189	MARINA REY ESPINOZA	Hays	78640	RHS9894	TX	845
190	CHANCETON TREVON CHASE	Williamson	78664	VCZ0546	TX	659
191	TYBRESHA LASHAWN DRISDALE	Travis	78660	VBP4292	TX	272
192	RUBBER RIOS GUERRA	Travis	78754	1N30905	TX	186
193	ASHLEY NICOLE SPELLINGS	Williamson	78641	TXZ0025	TX	653
194	EPIX ENT LLC	Williamson	78634	TYB0234	TX	732
195	EDWARD BAILEY HUNSUCKER M CAROLINE JONES	McLennan	76657	VL4055	TX	638
196	MADISON MERAINIE ORTIZ	Travis	78653	TXN8162	TX	831
197	REDLINE MASONRY STUCCO LLC	Williamson	78664	VJF2551	TX	298
198	CORDARIUS LAMAR JOHNSON	Travis	78728	SJL8249	TX	780
199	ADANA ALT	Williamson	78642	SMK9563	TX	658
200	DAVID QUINONEZ DAVID QUINONEZ II	Williamson	76574	VHC1209	TX	617
201	BRIAN SCOTT WASHINGTON JR	Bastrop	78602	TZZ1932	TX	262
202	SHANDRE LAMAR LEWIS	Travis	78617	VFT1117	TX	742
203	RAILEY JO SHOESMITH	McLennan	76657	LSN9450	TX	559
204	LINETTE BONET MARTINEZ	Williamson	78628	VLS8830	TX	660
205	AMANDA NICOLE STEWART TYLER MICHAEL THOMAS BURTON	Bastrop	78621	VBY3016	TX	788
206	ROCKY SANTA ANA	Travis	78753	RWB5668	TX	580
207	NEIL J KEANE JR	Travis	78754	VBG6069	TX	616
208	KELVY LAJUAN FOSTER JR	Williamson	78665	VKN4401	TX	740
209	COBY SONNIER DBA BAR M RANCH	Wharton	77420	1L87900	TX	168
210	JIM WILLIAM PONS JR	Burnet	78605	VBG3055	TX	533
211	AMY GRAF MARQUEZ	Lampasas	76550	TPH5433	TX	644
212	KERRY LYNN HENDERSON JR VICKI ANN MULKEY	Bastrop	78621	VJF3396	TX	838
213	OSCAR ROY JR BLAKE	Travis	78617	TWL8770	TX	682
214	ROBERT DANIEL SANCHEZ	Travis	78660	RCD2066	TX	631
215	COLLEEN MARIE BERRYMAN	Travis	78653	VFT5445	TX	833



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

216	TYRONE PERRY JR	Travis	78617	VCY4565	TX	691
217	RACHEL LYNETTE ELLIS	Williamson	78642	VLM1066	TX	636
218	BRITTANI AMBER KORIOTH	Travis	78660	VFT8790	TX	475
219	KIRSTIN BOONE MORALES GERARDO A MORALES	Williamson	78641	B21856P	TX	636
220	MARTIAS A D SCHOEN	Coryell	76522	VFH3715	TX	626
221	LILIANA RODRIGUEZ SOSA DEISY SOSA ESPINOZA	Travis	78653	VJD9496	TX	878
222	MOLLY ELIZABETH ADAMS	Williamson	78641	B0NC	TX	529
223	PEDROLUIS ISAAC SANTIAGO PAGAN	Travis	78653	RLK3215	TX	793
224	MICHELE LYNN MITCHELL	Williamson	78641	VCK9656	TX	638
225	DANNIER GARCIA MARTINEZ	Travis	78653	VKY4155	TX	795
226	ALICEN MARIE FRESE	Williamson	78642	VHB9061	TX	633
227	CLIFFORD STAFFORD	Travis	78748	NNL9370	TX	808
228	ARIEL MARTIN TORRES YURIXI DIAZ PEREGRINO	Harris	77084	SNV3923	TX	626
229	ILYA KUKLIN	Travis	78652	RYH4761	TX	359
230	SAS TOWING AND RECOVERY INC	Williamson	78642	K194404	TX	308
231	TAYLOR MARIE WILLIAMS	Bell	76504	RCC2905	TX	510
232	CHRISTOPHER CONRAD ZAIONTZ III	Williamson	78633	TYR7184	TX	543
233	AMY QUINTERO MARY QUINTERO	Travis	78702	VBP2551	TX	678
234	LIZBETH COLE TOSHI DANE COLE	Travis	78749	TVK4343	TX	289
235	ANDREA MELISSA VARGAS	Williamson	78628	VFS7465	TX	615
236	DAYANA ALCANTARA PEREZ YURAY ALEXEI FUENTES ZALDIVAR	Travis	78728	VHC1900	TX	602
237	ALEXANDER KLOSZEWSKI	Hays	78666	RFP6336	TX	587
238	IVAN STEVEN HERNANDEZ TORO	Williamson	78664	TLV8165	TX	176
239	JOSUE SANTIAGO PIMENTEL	Travis	78759	TXJ8630	TX	843
240	JEFFERY EUGENE DOHRMAN	Williamson	78613	VJS1939	TX	608
241	KINDAL RAE MITCHELL	Williamson	78641	VFT3259	TX	509
242	JOANN JIMERSON DEWITTY	Travis	78702	SPW6583	TX	701
243	BRIDGET ALEXANDRA V GONZALEZ OSCAR DAMIAN-PELAEZ	Travis	78721	DXW7351	TX	684
244	CHRISTINA MARIE SEELKE CHRISTOPHER REECE KEATE	Travis	78727	SYL7613	TX	230
245	ANDREA MICHELLE REESING	Williamson	78641	VFS8895	TX	533
246	LASHAWN ALIZAE DAVIS	Hays	78610	VJF2444	TX	703
247	RYAN PATRICK AMBROSE	Williamson	78642	VCY2512	TX	587
248	TIMOTHY LEE CORNWELL	Williamson	78634	TTK6980	TX	708
249	SAMANTHA NICHOLE ESQUIVEL	Williamson	78681	VJG3505	TX	701
250	LYNN MCINTOSH WHITAKER	Travis	78724	TYW8209	TX	709
251	MARSHA DURANGO	Bexar	78297	VHL5828	TX	505



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

252	MEAGAN ELIZABETH SAXTON SHANE LEON SAXTON	Williamson	78642	TLN8000	TX	288
253	ARIANNA CHARELLE MOSS	Travis	78653	VFV0316	TX	788
254	AMANDA R LOVE	NULL	36305	38A5MH4	AL	777
255	LEONARDO RIVERA SALINAS	Bastrop	78621	TCN7255	TX	286
256	ABELARDO LOPEZ LUGO ELIZABETH VERA LOPEZ	Travis	78617	STL4234	TX	563
257	BRIANO DAVID RUIZ	Hays	78610	RFC9517	TX	669
258	EDNA BALBOA	Williamson	78641	SRD5423	TX	584
259	JAMILA MOSI COLEMAN DEMETRIUS WAYLAN SIMPLES	Travis	78653	VBV2760	TX	794
260	LONESTAR CONCRETE	Bexar	78251	1N55131	TX	143
261	JUANA MARTINEZ MIRALRIO	Travis	78724	THZ8377	TX	704
262	GONTER STEVE MENOCAL	Travis	78728	VHB9501	TX	588
263	SAVANNAH LEANNE HARRIS	Caldwell	78616	HTL2130	TX	788
264	MINERVA RUIZ VELA	Bell	76504	THZ8828	TX	242
265	JULIAN ALEXANDER HERNANDEZ MARK ANTHONY HERNANDEZ	Travis	78660	VKZ4446	TX	493
266	FRANCISCO GERARDO CARRILLO SERNA	Williamson	78664	VBV7248	TX	275
267	ROSE MARY HERNANDEZ	Travis	78702	VCZ4379	TX	795
268	LUIS A. REYES	Harris	77070	CT4V234	TX	836
269	SAVANNAH LEIGH PEREZ EDWIN MANUEL PEREZ	Williamson	78642	VFS9415	TX	599
270	DYLAN KODIAK DUNCKLEY PAGE	Travis	78726	VJG0100	TX	574
271	MARGARITO CORONADO TONI CASTILLO CORONADO	Travis	78617	VCZ4925	TX	647
272	VANESHIA M MYERS	NULL	39503	HAR882	MS	741
273	TOLBERT SHAWN PATTERSON	Burnet	78605	TXP2790	TX	581
274	HANNA MARIE CHAMBERLAIN	Travis	78744	RHS9540	TX	507
275	GERARDO A PALACIOS	Williamson	78641	VFL8562	TX	500
276	DAVID LOPEZ IBARRA	Travis	78617	VKY3618	TX	639
277	MARION L MCELVAINE	Williamson	78641	VFZ0690	TX	548
278	NADIA ASTRAIN	Williamson	78664	RSN2469	TX	380
279	JEREMY LEE GALLARDO	Williamson	78634	THZ3736	TX	573
280	DANIEL STACY	Hays	78610	SCL7400	TX	417
281	BRIANNA ROSE GONZALES TONI MIKAYLA GONZALES	Hays	78610	VCB9345	TX	621
282	ALEJANDRO HERNANDEZ ESCOBEDO	Hamilton	76457	SPC4241	TX	564
283	ANTHONY AUSTIN ALVAREZ	Travis	78617	RMN5976	TX	597
284	TIMMIE DWAYNE SCOTT JR	Travis	78744	VJD9468	TX	657
285	SARAH HANSEN	Williamson	78641	RPK0952	TX	560
286	LEONOR REYES	Cameron	78521	VGC2411	TX	711
287	DARDEN ZANE BENNETT	Coryell	76522	TYW8237	TX	653





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

288	GEORGE DANIEL HEMPE	Travis	78727	STC0364	TX	494
289	APRIL JANEL GARZA LARRZ EVAN GARDNER-GREENE	Travis	78721	VBY6336	TX	736
290	JUAN G ESPINOZA-MARTINEZ	San Patricio	78390	TYY4322	TX	495
291	BRUCE CARTER LADARIUS ARNEZ CARTER	Travis	78653	VJD9092	TX	737
292	ELIZABETH DYESS COVEY	Williamson	78613	VFS7216	TX	378
293	DANNY JESUS RAMOS JAIMES	Hays	78640	TPX1344	TX	392
294	ALYSSA MONIQUE MORENO	Travis	78728	TGM7540	TX	529
295	ABBEY LAYNE PIKE	Bell	76504	RYS2899	TX	694
296	DOMINICK RAMIREZ	Travis	78744	VJF2546	TX	663
297	DEBORAH LYNN FEARCE	Travis	78724	THZ8795	TX	710
298	BLANCA GUADAL MARMOLEJO RIVERA	Travis	78754	VFT3348	TX	710
299	TICHINA GOLD	Travis	78753	TRS0259	TX	675
300	MARIA ELIDA HOBBS RYAN DAVID HOBBS	Williamson	78641	VDJ9657	TX	551
301	HAYDE ABIGAIL MANZANARES PALMA	Bastrop	78621	VCX9705	TX	632
302	JONATHAN LEE HOLDER	Williamson	78641	VHJ3285	TX	552
303	HILARIO MEXQUITIC TORRES	Travis	78719	JGH8395	TX	630
304	LEILA MARIE ANDERSON	Hays	78640	THZ7287	TX	615
305	OTELIA CURTICE JEMECA BUNTON	Bastrop	78621	VJF0287	TX	703
306	DILLI BAHADUR SHRESTHA	Williamson	78626	SVX3359	TX	534
307	TOLGA TURGUT ULUCAY	Travis	78758	VCY4364	TX	561
308	JAYAHNA FONSECA	Travis	78753	THZ7713	TX	677
309	AURORA GAVALDON	Denton	76205	NMP5533	TX	524
310	EMMA KATE WHITAKER	Travis	78741	RFG0048	TX	449
311	DAVID PIERCE	Williamson	78613	TRM2708	TX	432
312	NICHOLAS GARY TYREE	Williamson	78634	VFL8241	TX	657
313	AYLISSA TA QUEEN	NULL	21401	4FL0379	MD	642
314	BRANDON WHITFIELD	Travis	78704	5854F62	TX	667
315	COURTNEY DIAN WIGLEY	Williamson	78729	VDF6225	TX	695
316	TYLER STAEBELL BETH STAEBELL	Williamson	78628	VDJ3685	TX	340
317	BRITNEY A DAVIS	Bexar	78218	VFJ4832	TX	548
318	SUSAN BRANHAM SMITH	Travis	78660	SWK9748	TX	478
319	ALBERTO MARTINEZ RESENDIZ	Williamson	78729	MBD7383	TX	284
320	BRYAN BANKHEAD	Williamson	78613	JBN4961	TX	396
321	MARSHA MICHELLE RIVERA	Bastrop	78612	VJF3369	TX	610
322	MARIA FERNANDA GARCIA GUTIERREZ	Travis	78660	VFT1438	TX	638
323	AYMEE OLVERA	Travis	78744	VCY2191	TX	565





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

324	GABRIEL RAMON TORRES	Travis	78747	RFF0550	TX	467
325	SUMMER A WILLIAMS	Travis	78727	TNK5282	TX	257
326	WILLIE JAMES HOPES	Bastrop	78602	1H16137	TX	215
327	LISANNE STELLA HOLEWYNE	Travis	78759	VFT4274	TX	439
328	ISAIAS LOPEZ ARZATE	Bexar	78109	TPF0339	TX	304
329	TRACY LYNN HENRY	Williamson	78664	TPX1617	TX	450
330	GLORIA NICOLE BARRAGAN	Travis	78741	VCZ4354	TX	501
331	JONATHAN EDWARD ARCAYA	Williamson	78664	VBP1722	TX	469
332	NOAH ALEXANDER MURPHY	Williamson	78641	SJK5884	TX	540
333	CALEB PHILLIPS	Williamson	78641	RNZ3464	TX	521
334	JOSE LUIS JONES JR	Williamson	78641	5894K82	TX	545
335	JOSHUA WILLIAMS	Travis	78726	TSM0428	TX	407
336	DANAYSIA T-LYNN SINEGAL	Travis	78617	VCZ4390	TX	608
337	THE BURT GROUP INC	Travis	78758	TWL7196	TX	578
338	ANGELINA YAZZMYN MEDRANO PEREZ	Travis	78660	TWN3906	TX	590
339	CAESARAE RENE GUILBEAU	Travis	78702	VCY1287	TX	678
340	ANITA ANN BAKER	Travis	78753	VCZ4332	TX	525
341	REBECCA MARIE LAYCOCK	Williamson	78613	SWT2728	TX	447
342	JOSHUA A WILLER	Travis	78645	TXJ8410	TX	456
343	JESUS G CERVANTES GUERRERO	Hidalgo	78538	VFN0234	TX	612
344	THEO SUNNYBOY GRAY	Williamson	78634	VFT5215	TX	597
345	CASANDRA LEE LEYVA	Travis	78617	TZH2032	TX	530
346	WKP ENTERPRISES INC.	Williamson	78626	SVY4687	TX	241
347	JESUS A MENDOZA CONCHI	Travis	78617	VBP2651	TX	548
348	ABBY CHRISTINE GONZALES	Travis	78745	VKY3385	TX	643
349	SAMANTHA RAE FREDERICK	Coryell	76522	TLG0189	TX	525
350	ROBERT ANDREW BUSBY JORDYN MICHELLE BUSBY	Williamson	78641	GETS1CK	TX	539
351	CRESTINA HAROS ORNELAS	Travis	78617	VCY0931	TX	554
352	JESSICA MARIE GUY	Williamson	78641	VBV3501	TX	535
353	ANA LILIA MORTERA DE PEREZ SUNNY PEREZ	Williamson	78641	VCR7398	TX	558
354	CARL ERVING COLSTON	Harris	77338	RKM0814	TX	358
355	FERNANDO FABIAN BUENDIA CARDENAS	Bastrop	78621	VBV3065	TX	673
356	GERMAN RAMIREZ FRANCISCO J RAMIREZ ALVARADO	Travis	78754	TNL7355	TX	598
357	MIZAEAL ALVARADO ALMA MUNOZ	Travis	78745	VBP1354	TX	700
358	ENDZONE CONSTRUCTION SERVICES	Bastrop	78602	VGZ7220	TX	464
359	ANA SALLY ALFARO	Williamson	76574	NKY0419	TX	527



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

360	ANGEL GABRIEL MACIAS MORAN	Williamson	78641	VJS0452	TX	537
361	JUNGMIN KIM KAYOUNG PARK	Williamson	78642	TTK7190	TX	516
362	LATERYN SAEVON ALEXANDER	Williamson	78641	NDW9746	TX	457
363	MELISSA DIANE KEMP MATTHEW NEWTON	Bastrop	78621	VCZ5565	TX	708
364	BENNY BREWER JR CELESTE ELIZABETH SERRANO	Travis	78754	TCN9172	TX	613
365	HAMMED SHOFOLUWE	Harris	77083	0C1513K	TX	605
366	MADISON M. AMARO	Hays	78666	SGY9586	TX	498
367	SIERRA FAITH WOOD	Williamson	78641	TGM6330	TX	558
368	HENRIETTA NORFLEET	NULL	38661	2001N14	MS	647
369	JAMES EDWARD LEBLANC	Williamson	78665	VCW0125	TX	542
370	ISABELLA TENORIO POVEDA	Travis	78660	VDS8376	TX	621
371	LUIS ALEJANDRO RANGEL SARQUIS	Travis	78758	VCZ1945	TX	512
372	DARWIN TOMAS FAJARDO JUAREZ	Dallas	75219	SDH7547	TX	593
373	CRISTAL ALEMAN	Travis	78741	VBP3564	TX	681
374	LATASH KING	NULL	78713	TXJ6015	TX	267
375	GRAYSON COLE NICKEL	Bastrop	78621	DAY0TE	TX	634
376	VERONICA VARGAS	Williamson	78615	NNL1345	TX	652
377	BRIAN A ESCOBAR	Williamson	78642	VNG3135	TX	518
378	LESLIE ANNETTE PARRISH SEAN CHRISTOPHER STEWART	Liberty	77575	LKM9669	TX	629
379	AJP CONSTRUCTION INC	Hays	78640	LMT2047	TX	167
380	CARY JOSEPH YAROSH	Travis	78732	VJG2155	TX	725
381	EDWIN D PINEDA	Bastrop	78612	VGB0747	TX	591
382	JOSE M HERNANDEZ HERRERA MAIRA BERENIZ RAMIREZ	Bastrop	78612	VCB9201	TX	556
383	JACOB ANTHONY BROYLES	Williamson	78613	VCB5439	TX	580
384	DAVID MICHAEL STOKELY	Harris	77449	RGP8150	TX	543
385	ANA VICTORIA MATTIAS ISRAEL IKIE HERNANDEZ	Travis	78754	TCB0490	TX	280
386	AMBER DANISE NELSON	Milam	76567	VBV2700	TX	630
387	EROALDO LOPEZ	Travis	78660	SLJ7943	TX	477
388	TIFFANY RENIE MCCOY	Williamson	78613	VBX5625	TX	485
389	OSLIN YADIR PORTILLO ALAS SANDRA MICHEL GOULART	Hays	78640	VBG5845	TX	628
390	MARGOT RENEE RICHARDS NATASHA RICHARDS	Travis	78653	SWL0612	TX	629
391	CHRISTINA RENEE KOTERBA	Bastrop	78957	VJS3078	TX	522
392	LAWRENCE JUSTIN PHILLIPS	Williamson	78641	TZH1344	TX	469
393	VICTORIA IRENE GAINES	Williamson	78642	VKX8232	TX	507
394	HAKIM ALI	Travis	78723	TZH1999	TX	561
395	Maria p zamago	Hays	78640	PCC0825	TX	577



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

396	JOANNA TARIYE EMBERRU PERE OGHENEMARO EGBI	Harris	77449	TLK8156	TX	524
397	PAUL EDWARD STELLY JR	Travis	78653	VKY2037	TX	667
398	DEVION TYREL REED	Bastrop	78612	VFH3977	TX	518
399	PRO GRADE LLC	Travis	78653	TZG6358	TX	230
400	TEXAS PRIDE	Travis	78744	TTB5948	TX	564
401	TRASHAWN ANTHONY CARMELENGO	Bexar	78254	RPH7122	TX	507
402	NICHOLAS MOLESKI	NULL	58104	267EAJ	ND	580
403	MICHAEL RUIZ	Atascosa	78065	TY9832	TX	230
404	BESSIE G WALKER	Travis	78724	CM8M513	TX	502
405	GILDA YESIMAR GUARDIA CUMANA ALEXANDER C HAWKINS WILLIAN	Travis	78750	TKN2353	TX	517
406	ANISSA CHEREE DAVIS	Travis	78653	MHD3902	TX	691
407	CHANDRIKA VITHINIA MCINTOSH	Travis	78653	TXN6075	TX	708
408	RITE WAY TUNNELING & STRUCTURAL REPAIR LLC	Williamson	78646	VJG9166	TX	547
409	JACQUELYN MICHELLE HUFFORD	Williamson	78641	JN35M	TX	505
410	ROBERT CIRIO SELVERA	Travis	78744	VFS3258	TX	609
411	JEANETTE MARIE PAEZ	Bastrop	78602	VCB5456	TX	524
412	KEVIN MORALES ROMERO	Travis	78754	5896C36	TX	506
413	DAN L BAILEY	NULL	99501	LKL166	AK	549
414	WILSON JOEL CALIXTO	Travis	78758	VJF3306	TX	530
415	KAMERON RADCLIFFE	Williamson	78626	VCB4979	TX	579
416	TIMOTHY HABAKKUK BRIGGS	Bell	76501	VGf8578	TX	542
417	EDUARDO ANAYA JR	Williamson	78626	SPX7727	TX	494
418	ERNESTO GONZALEZ MARTINEZ	Caldwell	78616	RNK9123	TX	517
419	Zachary L Herrera	Bastrop	78612	FJL0818	TX	551
420	GINGER RENEE LONGORIA	Travis	78744	VFL7159	TX	547
421	CLAUDIA M DE JESUS ALBARRAN	Bastrop	78957	VGB0732	TX	495
422	JACK MICHAEL EWERT	Travis	78728	TYV6863	TX	252
423	ANDREW HENRY ROBLES	Harris	77346	TZK2859	TX	445
424	DESTINI LAURYN TAYLOR THOMAS	Travis	78747	VBP8281	TX	500
425	MELISSA WHITE AUTREY	Williamson	78613	BY9C445	TX	548
426	SERGIO A SALDANA	Williamson	78641	VBD6797	TX	503
427	TIFFANY MARIE HAYWOOD	Travis	78744	5893Y48	TX	512
428	PALEMON GONZALES-GARCIA	Travis	78617	MHD2386	TX	647
429	KRISTIN MIRACLE	Williamson	78641	RGW4088	TX	419
430	FISHER CRITICAL SERVICES LLC TYLER RAY FISHER	Williamson	78642	TRT7746	TX	426
431	CELSO F SANCHEZ LEDEZMA	Travis	78753	TDP0840	TX	602



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

432	HEATH WAYNE HEMPHILL	Williamson	78642	NLJ6026	TX	501
433	DONALD RAY MITCHELL JR.	Caldwell	78644	VFT1197	TX	483
434	ULISSY OLIVA JIMENEZ	Travis	78753	VJD7584	TX	505
435	MEAGAN JUSTINE PAIGE ZAVALA	Williamson	78664	VDJ9745	TX	433
436	MATTHEW THOMAS DELAUGHTER LUPITA LOPEZ	Williamson	78613	TWN6337	TX	467
437	STEPHANIE BRIE LUTRINGER JASON WAYNE OWINGS	Williamson	78681	LFP7274	TX	522
438	SABRINA RAMOS	Travis	78759	TXN8215	TX	488
439	JESSICA MONIQUE NEAL	Travis	78653	VFS2693	TX	652
440	MARK ALLEN	Williamson	78641	LDZ3114	TX	461
441	MICHAEL DORSEY JR WENDY MARIELA CARRLLO	Travis	78660	M1KEDZ	TX	463
442	MAIRA CHRISTAVEL ORTIZ JULIO ROBERTO ORTIZ CASTILLO	Bastrop	78602	VCZ5482	TX	523
443	ABEL MERCEDS MONTANO JR SAMANTHA MICHELE CAMPBELL	Travis	78660	MWX1231	TX	548
444	AMANDA MARIE FALCON	Travis	78617	TZH1981	TX	545
445	EDRIC KESHAWN CLARKE	Williamson	76537	TVH6161	TX	575
446	MIGUEL GIL ESQUIVEL	Travis	78728	TYL7386	TX	514
447	JUAN ANTONIO GUILLEN	Travis	78660	VCB5469	TX	622
448	KERIN NUNEZ	Orange	77611	THM8750	TX	491
449	TIMOTHY HAROLD HAPGOOD	Williamson	78641	NCK8938	TX	484
450	ROBERT CUTRIGHT	Bastrop	78621	RNY6984	TX	655
451	MARQUIS WALKER	Travis	78721	VFT1223	TX	677
452	GLADYS SCOTT DURHAM	Bell	76549	VGG3934	TX	582
453	TAYLOR NICHOLE GARNER	Travis	78748	RFF3527	TX	536
454	DESTINI NICHOLE WASHINGTON	Travis	78660	TZH6982	TX	399
455	SHERYL ANN BARTEK EDUARDO M CASTILLO	Travis	78759	TWN7243	TX	483
456	SARAH ANNE COLLEY	Travis	78653	JPF7838	TX	583
457	PETER DUNCAN DWORACZYK	Hays	78610	VGZ1487	TX	577
458	ARMANDO RICHARD RIVERA	Williamson	78641	VDJ9663	TX	430
459	BILLY MORRIS DAVENPORT	Williamson	78681	LVN8020	TX	479
460	CLAUDIA CONWAY	Williamson	78641	RZX4849	TX	399
461	MARIA STEPHENS	Williamson	78613	RJM3677	TX	475
462	JASMINE DIJON DANIEL	Travis	78653	TZG6474	TX	605
463	SAM HILL	Williamson	78717	5RKKH	TX	539
464	Jennifer M Lack	Williamson	78641	RBW3424	TX	373
465	CANDACE CHERRI MALEY	Hays	78676	RHB8809	TX	648
466	NATIVIDAD NEPOMUCENO MANRRIQU	Travis	78758	TWS1728	TX	575
467	PRIMITIVO MARTINEZ JR	Travis	78724	RLD9033	TX	657



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

468	DIANA GAIL SMITH	Williamson	78729	TCX6637	TX	500
469	ANDREW JOSEPH BAXA	Caldwell	78644	VJS9051	TX	466
470	ANDREW MARTINEZ	Travis	78724	VFS8310	TX	538
471	JASMINE TISHAE PENNICK	Travis	78726	TWL8314	TX	340
472	HILDA REYES MONDRAGON	Travis	78744	TCY0350	TX	532
473	JOE MARTIN	NULL	39040	YA2421	MS	475
474	RANDALL EDMOND MCDOUGLE	Travis	78727	VFT6489	TX	478
475	MICHAEL RUIZ	Atascosa	78065	SWW0078	TX	465
476	JONATHAN JOSEPH VAUGHAN	Harris	77090	LGZ2343	TX	446
477	RENA KAYE DAVIDSON	Williamson	78641	TBS4452	TX	455
478	SCOTT GRAHAM CRAWFORD	Williamson	78641	TDD3677	TX	528
479	MELISSA JOANNE SCHULTZ	Williamson	78729	TRX4136	TX	456
480	SAMUEL JOHN TEMPLEMAN	Travis	78744	SSK8985	TX	462
481	ADRIANA BOYDLEWIS	Williamson	78664	RJM6599	TX	454
482	COLLIN GRIFFITH BOYER	Williamson	78729	MJL5098	TX	494
483	CAYETANO JERRY RODRIGUEZ III	Travis	78721	NXL6450	TX	570
484	KEILA SARAI GALAN	Williamson	78665	VCY4454	TX	545
485	KENNY GRANT	Bastrop	78621	PFP4110	TX	592
486	MARCO ROLANDO MUNOZ	Hays	78640	VGZ2345	TX	569
487	RYDER TRUCK RENTAL LT 757518	NULL	33178	128Z95	FL	526
488	JOHNLIN BENJAMON DAVIS	Travis	78728	VCZ4377	TX	477
489	ROLANDO CANTU	Hays	78640	KRP0256	TX	477
490	ANTHONY MARTINEZ CASTILLO VICTORIA LUISA ESCOBEDO	Comal	78130	VHG5123	TX	640
491	AMERICREDIT FINANCIAL SERVICES INC	NULL	21094	VCY2209	MD	524
492	ZELDA ANN ZAMORA	Travis	78748	VBY8014	TX	410
493	LETICIA BARRIENTOS RESENDIZ	Travis	78617	VCY3723	TX	518
494	ALFREDO LEDESMA	Travis	78741	SLL1485	TX	268
495	NICHOLAS L BUCHANAN	Williamson	78613	TZH0979	TX	415
496	SECUNDINO RODRIGUEZ	Caldwell	78616	TGP0974	TX	502
497	WILLIAM BOYD PATRICK AMBER MICHELLE PATRICK	Smith	75762	MTT0301	TX	327
498	JASON RICHARD EWING	Williamson	78681	TWN5633	TX	405
499	SHANEQUE SHERELL MANOR	Travis	78702	VCD7136	TX	592
500	DERRIUS LOUIS WILSON	Travis	78653	VFH3705	TX	592
501	ISMAEL HERRERA YANEZ II	Caldwell	78656	KSD5149	TX	552
502	MICHELLE RENAE DAFFRON	Ellis	75165	SSV5044	TX	365
503	JASON BRIBIESCA	Travis	78752	TZG9504	TX	358



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

504	JACIEL ISAI GALINDO SANTILLAN	NULL	78725	VBP1138	TX	554
505	TONYA ROCHELLE SWIST	Bastrop	78621	VCY4596	TX	540
506	COLLIN REED MCGIFFORD	Travis	78752	VDD5688	TX	525
507	ASHLEY PERALTA JIMENEZ	Bastrop	78612	VGX7337	TX	472
508	KENNEDY BRYN DAVIS	Travis	78660	TWN3699	TX	359
509	CHRISTIAN RIVERS SCHUMANN ROSANNA JO CHAPA	Travis	78722	SPZ4151	TX	501
510	MICHAEL JAMES	Travis	78653	MSF2818	TX	597
511	SYDNEY CORBIN	Travis	78724	VCY9835	TX	554
512	CHRISTOPHER FLORES JR	Travis	78660	TMT9703	TX	335
513	ALEXANDER NICHOLAS THORNBURG	Williamson	78641	VFL4573	TX	445
514	TAYLOR SALICRUP	Williamson	78641	SXG3996	TX	377
515	TYLER LYNN HAMILTON	Williamson	78642	VCY9766	TX	453
516	SUSANNA RUFAIL CHIARAMONTE	Travis	78704	SFJ2697	TX	510
517	CHRISTOPHER WILLIAM BUCK	Williamson	78633	VJS0896	TX	453
518	RORY TERRY	Williamson	78642	VFL6750	TX	453
519	SONJA CHERELLE BROWN DEMETRIUS ALEXANDER DAVIS	Bell	76543	SRS2659	TX	510
520	MIGUELZARAGOZA FERNANDEZ, SONIA ZARAGOZA	Hays	78610	5812J41	TX	622
521	ALBA CABRERA-ROJAS	Travis	78653	RBN7692	TX	534
522	LATOYA DELORES HAYWOOD	Travis	78725	TSN9708	TX	633
523	PATRICIA LYNNENE DELACERDA	Williamson	78664	TTB9713	TX	465
524	ANNA JO EPPLEY	Williamson	78664	TLV7418	TX	227
525	EDUARDO ANTHONY AVILES	Caldwell	78616	VBP3175	TX	449
526	VICTORIA ANN MARIN	Travis	78741	THZ8070	TX	478
527	BURGESS HOME SERVICES LLC	Hays	78620	TZD9050	TX	408
528	SAMANTHA ANN CUMMINS DIANA GAY CUMMINS	Williamson	78613	TYR7385	TX	465
529	JENNIFER JONES ANDRE JONES	Williamson	76574	VHC0860	TX	453
530	MATTHEW E CLARK	NULL	33020	37DZMQ	FL	454
531	ROSE MARIE SCOTT	Williamson	78641	NDR2043	TX	427
532	FERRA'S COMPANY LLC	Hays	78640	1M32891	TX	120
533	RYAN ALAN DICKINSON	Travis	78738	RZC6180	TX	544
534	JUAN MARTIN ROMERO	Travis	78747	MNZ0648	TX	235
535	MELIAH ALYSSE GONZALEZ	Hays	78666	TDR2729	TX	421
536	TIMOTHY CLANCY	Travis	78723	RBR8847	TX	496
537	IZELIA KATHLEEN DAVIS	Williamson	76574	TWL5160	TX	501
538	LUZ KETZAVEL HERNANDEZ	Travis	78744	VCZ4339	TX	464
539	BARBARA BENSON-PADGETT	Travis	78731	8XD	TX	711



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

540	BERHANU TESHAGER ALAZE	Travis	78660	VCY5709	TX	462
541	GABRIEL SOTO	Travis	78653	LDY7761	TX	553
542	CORI GILL	Travis	78749	NRZ5074	TX	229
543	AUDREY SUNSHINE ALTSTATT	Travis	78660	JWH4793	TX	488
544	ETHAN RUSSELL PARGO DONOVAN JOEL PARGO	Travis	78653	SHP5472	TX	520
545	JEREMY FRANKLIN JAMES	Williamson	78613	JP38S	TX	589
546	EVAN LEROY PETERSON	Williamson	78641	STN4529	TX	374
547	BRADLEY WALTER COOK	Burnet	78611	TLV3987	TX	454
548	JOHNNIE E MARTIN III	Travis	78725	VBP3764	TX	542
549	ALFREDO GOMEZ	Travis	78754	VBN6942	TX	493
550	NUNEZ E AMADOR	NULL	38111	BQD4035	TN	455
551	JUSTIN LAROY EDWARDS	Travis	78645	TZG4298	TX	400
552	CAPITAL REYES DISTRIBUTING LLC	NULL	54956	1N31087	WI	177
553	KEDDRICK JA MON CHATMON	Travis	78721	VBP7962	TX	515
554	PHANEENDRA RAMPALLI	Williamson	78641	SWY4444	TX	383
555	NINA DEMETRO	Williamson	78717	TXN9040	TX	445
556	CHARLES RAY HOLLAWAY	Williamson	78642	KLV6041	TX	412
557	CALLY DAWN SHAPSHAK	Williamson	78641	CALLYS	TX	416
558	TYLER COLE THIBODEAUX	Williamson	76574	MSD4140	TX	285
559	MAXINE ANDREA ALBA	Williamson	76574	TWN8295	TX	480
560	HILARY BEEZLEY	Williamson	78634	JBD8977	TX	164
561	SAMANTHA CALDERON	Williamson	78641	NSB5335	TX	367
562	JASON TRAVIS CRAGG	Williamson	78641	VBP1350	TX	434
563	KAITLYN JANELLE DIAZ GABRIEL LEE TREVINO	Bastrop	78612	TTB9820	TX	451
564	RUBENA LEE BURDITT	NULL	78681	VKY3361	TX	597
565	JUSTIN JAMES BROWN	Williamson	78664	VFZ0928	TX	420
566	ERIC PORFIRIO ROCHA ALVAREZ ROCIO MONDRAGON-CHAVEZ	Travis	78744	VBP2317	TX	469
567	SYLVIA FLORES OSORIO	Harris	77504	VJD9248	TX	471
568	ERIC CHARLES WHITE AUBREY LILLIAN LYNN WHITE	Bastrop	78602	VBP3837	TX	476
569	MADELINE ANGELA SONNTAG	Travis	78735	DNB7987	TX	482
570	MARY RAMIREZ	Travis	78744	TZH3265	TX	467
571	RACHAEL MARY PRESTON	Travis	78734	VBP1871	TX	188
572	CIERRA KAILEE GIBSON	Bastrop	78621	TZG5311	TX	548
573	MICHAEL RAY CRAVEY MICHAEL LINCOLN CRAVEY	Williamson	78628	TGM7535	TX	379
574	ZOE SMITH BOTTOMS SHELBY LYNN PETERSON	Caldwell	78644	TSN8986	TX	383
575	APRIL PHICHITCHAREUNSAK	Williamson	78626	NNK8105	TX	249





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

576	JOSHUA AUGUSTAS SCALES	Williamson	78613	VFS7390	TX	571
577	ELENA JOSSELINE VASQUEZ NUNEZ	Travis	78758	TGN9511	TX	481
578	ANDREW THOMAS BENYS	Travis	78725	VJG1216	TX	529
579	META READY MIX & HAULING LLC	Travis	78660	RPX8076	TX	247
580	PASTOR BENITEZ LOZA	Williamson	78626	RTP0776	TX	427
581	ANGELICA RODRIGUEZ MAYIC	Travis	78761	VCZ1256	TX	433
582	STATEWIDE TOWING	Travis	78753	NJR7407	TX	531
583	ALEXANDRA ROSSI	Williamson	78641	VHC3020	TX	423
584	JOHN MICHAEL VALADEZ NAOMI JANE ZAVALA	Kerr	78028	TGX8710	TX	432
585	ANA HERNANDEZ	Travis	78725	NCD3878	TX	449
586	JOSE HERNANDEZ JR	Williamson	78641	5904Z31	TX	423
587	ARIEL CHANEL RESENDEZ	Williamson	78613	DFX7920	TX	392
588	TAYSIA DANIELLE SATTERWHITE	Travis	78723	TRR2205	TX	461
589	KYLE GREGORY GALLOWAY	Bexar	78247	MYC5144	TX	593
590	KIMBERLY MOELLER	Travis	78653	RSY0391	TX	535
591	DANIEL A YAPLE	Travis	78741	LNJ8425	TX	443
592	YADIRA MONDRAGON	Travis	78617	VBN3837	TX	462
593	VARICK TYRONE TUCKER	Travis	78660	SCX6231	TX	489
594	JASMINE MARIE SANDERS	Travis	78723	TCP0802	TX	336
595	MELISSA MARTINEZ	Travis	78744	TSC4464	TX	494
596	JUAN FRANCISCO MARTINEZ	Dallas	75253	JWZ0022	TX	418
597	FERRA'S COMPANY LLC	Hays	78640	1M21686	TX	118
598	KAMAL MAHMUOD ALSHIHABI	Caldwell	78644	KRF2385	TX	429
599	BELEN JAIMES JR IVAN MALDONADO	Hays	78640	TNL8623	TX	371
600	JONATHAN PATRICK STRADER	Williamson	76527	GV49WB	TX	354
601	JOSHUA SCOTT BLACKWELL LSE	Williamson	78717	TXP3968	TX	362
602	EBONY MICHELLE PERKINS	Travis	78653	TTB5964	TX	579
603	TODD JAMES BURNSIDE	Bastrop	78602	TBY3556	TX	468
604	EDWARD S CHAMBERLAIN LINA ESTHER E CHAMBERLAIN	Travis	78653	SDH2536	TX	497
605	BRYSON DA-RON HILL	Travis	78653	TVF4615	TX	561
606	CAMERON EDWARD-LEO HAUSMAN	Comal	78130	VBB3348	TX	464
607	YAQAR LAEL ELMORE	Coryell	76522	RBD4236	TX	413
608	K&D RAMBLIN EXPRESS INC	Wharton	77488	1XS014	TX	151
609	JUSTIN JACK STEWART	Travis	78617	TYW8537	TX	458
610	PAIGE CLAYTON TAYLOR	Williamson	78665	VFL6967	TX	490
611	NICOLE A ROBINA	NULL	7083	M54SHW	NJ	389





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

612	SHAREEF HATEM ALYOUSEF	Harris	77086	VGW0954	TX	496
613	CHRISTIAN NOEL CORNELIUS	Travis	78744	VGX2237	TX	478
614	NORAH WHITSON	Travis	78723	SPC1517	TX	402
615	JEAN C. F. CENTENO CHICAS	Travis	78753	VBK3838	TX	509
616	BAILEY NICOLE STARR LUTHER JAMES STARR IV	Travis	78617	VKX8061	TX	445
617	KRYSTYN LEA DANKMEYER	Williamson	78613	TYN5109	TX	369
618	MAKAYLA JEANETTE WILKERSON	Travis	78724	VBK5404	TX	430
619	EYERI ORTIZ MEJIA	Travis	78754	TGP0524	TX	440
620	LUZ MARIA ZARAGOZA CARRILLO	Bastrop	78621	VBP1946	TX	529
621	ROBERTO CALDERON ROBERTO CALDERON JR	Travis	78617	RNL1369	TX	446
622	JOSHUA HERNANDEZ	Travis	78660	SLL4976	TX	553
623	CONNIE FRANCES CORTEZ	Williamson	78681	SVX1806	TX	428
624	MANUEL CORNELIO CALDERON	Travis	78752	VFT1694	TX	443
625	CHRISTOPHER ANDREW HALL	Williamson	78626	DNL4635	TX	441
626	ELIZABETH KAYE STONE	Bastrop	78612	VHC3452	TX	485
627	ARTURO ALEJANDRO LEAL	Williamson	78641	STL8995	TX	375
628	BAILEY CHAPPELL JONES	Williamson	78664	LKD7994	TX	256
629	JASON EDWARD HECK	Williamson	78613	VBP3773	TX	494
630	SHAMSUL HAQ NIAZY	Travis	78660	SJL1399	TX	424
631	TIFFANY MARIE GONZALES	El Paso	79930	TVY0771	TX	431
632	TEODORO VARGAS JR MELISSA GALVEZ	Williamson	78664	PZB8406	TX	318
633	FRANCISCO RUIZ	Travis	78748	HTM5724	TX	378
634	MIGUEL ANGEL LANES OLIVARES	Williamson	78613	VCB6929	TX	473
635	ALEXIA RENEE SELVERA ALEMAN JOSEPH HERNANDEZ	Travis	78660	VJD9000	TX	454
636	EDWIN VAUGHAN SHANNON	Williamson	78664	RRK7692	TX	282
637	MEGAN SAUBER	Williamson	78641	NYH2421	TX	392
638	ALEXANDER CHRISTOPHER FIELDS	Travis	78741	KDT2965	TX	459
639	DARVIN DAVID CASTRO	Bastrop	78602	SHZ8522	TX	554
640	DYLAN WILSON	Burnet	78605	VGH1998	TX	422
641	ESPERANSA CHAPA TREVINO DENA MEJORADO	Williamson	78664	VFL6754	TX	725
642	JOSE DANIEL PEREZ GUTIERREZ	Bastrop	78659	SLJ0049	TX	426
643	CRYSTAL SANCHEZ	Travis	78721	DWV2984	TX	423
644	ERICA DEMI MCGEE SAMUEL JOSE PEREZ	Bastrop	78650	TZG0521	TX	507
645	PORSCHE AUSTIN	Travis	78759	TTK5493	TX	417
646	JARAD BRADLY HORN JENNIFER RENEE REZA	Williamson	78681	VCY6135	TX	358
647	LINDSEY NICOLE LAY-WOOD AARON SCOTT LAY	Williamson	78642	TYW0139	TX	408



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

648	CAPITAL REYES	NULL	54956	1N33447	WI	143
649	RAFAEL JOSE MONTES CASTELLANO, AMBERLY X INFANTE H	Travis	78738	5804N80	TX	416
650	DOMINIQUE LASHAWN WRIGHT	Williamson	76574	VFS4987	TX	557
651	CHASE HOLDEN COURSEY	Williamson	78633	TDZ3950	TX	366
652	ERNEST XA TAYLOR, JR	NULL	70068	131DYZ	LA	441
653	CELEST GARZA	Travis	78660	KVL5221	TX	511
654	LEKEITH KNEELAND	Hays	78640	RSX9818	TX	345
655	ABIGAIL MARJORIE KEPHART	Travis	78756	LXX4852	TX	195
656	ANALYSSA MARISELA ARANA	Caldwell	78644	SLM2352	TX	419
657	SIMON LUCAS SCHRICKSENASAC	Travis	78746	TCW6485	TX	598
658	KAYLA SIERA LOPEZ ANITA ALYCE ONTIVEROS	Travis	78617	TWN7733	TX	438
659	GEOFFREY DAVID SANCHEZ	Hays	78640	BL99967	TX	435
660	ALVIN CYRUS KONG	Williamson	78642	STN4147	TX	386
661	MICHELLE JANEEN FORSTON	Williamson	78626	RMN5614	TX	430
662	YELEN SUCEL GARRIDA PELLICIER	Travis	78759	TBC9179	TX	401
663	TELESFORO MARTINEZ	Travis	78752	TYL6089	TX	407
664	MADISON AARON MUNA AYAHNA DOMONIQUE REYES	Travis	78653	TKM9871	TX	480
665	CARLOS ARMANDO LANDINEZ	Harris	77021	VCT0804	TX	494
666	STANLEY STEEMER	Travis	78754	VHK0356	TX	434
667	JANET NATALY MARTINEZ	Travis	78744	RHS4354	TX	394
668	HECTOR SALVADOR MACIAS	Hidalgo	78503	RZH6563	TX	400
669	TEJANIQUE KIEBRJON GIBBS VERONDA SHARAE SPENCE	Travis	78702	VBG6766	TX	488
670	JOSHUA VELASQUEZ ESTRADA	Travis	78759	TLK9773	TX	415
671	MARIA DEL CARMEN PERU	Bastrop	78612	TZH7537	TX	429
672	JERRY B MARQUEZ JR	Williamson	78641	LNT1713	TX	398
673	TOMAS RUBIO BOTELLO	Travis	78753	KXD6564	TX	528
674	DORA MARIA BARAJAS RAMOS	Travis	78653	VCX9556	TX	452
675	DAVE TURNER KELSEY BENSON	Bell	76549	VFS5444	TX	478
676	SANTOS H RODRIGUEZ JR	Travis	78741	LRH6659	TX	392
677	EDUARDO AGUSTIN RAMIRES MORENO	Bastrop	78621	TYR7617	TX	354
678	CRISTHIAN M MALDONADO YVETTE TORRES-ARIAS	Travis	78653	VCY9900	TX	513
679	VICTORIA NATALIE FLORINDO	Williamson	78664	SJS2785	TX	401
680	ALEJANDRO LOPEZ MALAGON	Travis	78617	VBP2437	TX	408
681	MARIA LETICIA COLFER MATTHEW BRIAN COLFER	Williamson	78642	TYW0902	TX	326
682	JOY DEVLIN	Williamson	78613	RLK3493	TX	368
683	EVELYN MALDONADO MONTERO	Travis	78723	TWL5041	TX	496



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

684	ROSE MARY CAVIL	Travis	78660	TZH0949	TX	374
685	5-F MECHANICAL GROUP INC	Travis	78728	VFL8218	TX	448
686	JOSE MANUEL ARREDONDO RANGEL DEYANIRA J RODRIGUEZ FAVILA	Williamson	78641	TZG6558	TX	327
687	ELIHU ABRAN GUTIERREZ LOPEZ	Travis	78721	TZZ2324	TX	473
688	BRYAN ALEXIS DE LEON	Travis	78754	TSH7080	TX	599
689	SA&H WESTERN HOLDINGS LLC DBA DANIEL'S PLUMBING & AIR CONDIT	Travis	78753	TGP0282	TX	391
690	TAYLOR N GARNER	Travis	78748	VKX4654	TX	449
691	JOHN WAYNE BEDFORD	Travis	78724	3TGYG	TX	457
692	JORDAN D PULLIN	Travis	78724	TTC5902	TX	454
693	EMMA MARGARITA PAYTON	Lampasas	76539	TXD8752	TX	454
694	PRO CRETE LLC	Williamson	78641	TYR7915	TX	254
695	PHILIP SIMON WALENTA	Williamson	78641	TXT3227	TX	373
696	KUTI FERENC	Travis	78759	TRN8207	TX	407
697	BELEN AGUSTINA ZARZA SANCHEZ	Travis	78756	TJB1688	TX	402
698	MISTY DAWN MORRIS	Bastrop	78612	RBN7408	TX	429
699	TANISHA E GRANT	Bell	76549	SYS4326	TX	338
700	JOSEPH ALAN HERZER	Williamson	78634	HYS6803	TX	367
701	JOSEPH PETER BARTMAN	Travis	78653	TZH8772	TX	473
702	ANABEL HERNANDEZ HECHAVARRIA	Travis	78660	LWL6597	TX	364
703	HUGO ALVAREZ	Travis	78660	TYH4280	TX	395
704	RODNEY EMILE BERTRAND-MORINE	Williamson	78626	RJM1108	TX	288
705	EDWARD LEE KIELY III	Llano	78609	NVG5906	TX	382
706	LEROY BARO GIRAL	Travis	78744	TY9934	TX	383
707	LAURA LEIGH VICKERY	Travis	78660	VDD6366	TX	479
708	AIYESHA SHIAKIRA JEWS	Bell	76542	SRS6475	TX	423
709	KIRSTY LEIGH MCCRAY	Williamson	78634	NDR0308	TX	410
710	ROBERT POMPA	Travis	78753	TYH0795	TX	481
711	ANNETTE DENISE KVETON	Travis	78756	SHB9385	TX	416
712	AARON JACOB ORTA	Travis	78703	STL0506	TX	470
713	BRUCE REMONE ALLEN	Caldwell	78616	VKZ5183	TX	415
714	MARIO ALFREDO GARCIA WENDOLYN LARA TREVINO	Williamson	78613	VFM8640	TX	274
715	LORETTA ANN CARTER	Travis	78744	TZH8088	TX	387
716	WHITNEY MARIE KILLINGHAM-LUCKY	Travis	78753	TWJ8170	TX	422
717	AMANDA NICOLE MORRIS	Williamson	78628	SNL6341	TX	366
718	STEVE EDWARD TREVINO	Hays	78610	VCB2920	TX	367
719	ROSANNA UDALL	Travis	78653	JYG6545	TX	487



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

720	DARIN D CAMPBELL	Travis	78653	LVN1453	TX	303
721	ALYSSA MARIE GUAJARDO	Hays	78640	NPF3381	TX	421
722	JOSHUA DAVID COOPER BRITTANY JAE LAWRENCE	Williamson	78613	VDJ9894	TX	382
723	BENIGNO SANTOS MARROQUIN II	Harris	77502	LYH5266	TX	511
724	TIFFANY HOLLIDAY	Coryell	76522	VBG2513	TX	373
725	KEITH LAMONT BLAKEMORE ROSHANNA SHAVON BLAKEMORE	Travis	78721	VCW0156	TX	533
726	JUAN ANTONIO GARCIA	Travis	78744	TWL4766	TX	485
727	MARIA FATIMA DOMINGUEZ	Williamson	78634	DTT9528	TX	414
728	MONYAE LATRAY MATHIS	Harris	77044	TNL1870	TX	428
729	JEFF RINEHART	Williamson	78613	GM79BT	TX	486
730	LEMICHAEL DEANGELO CURRY	Travis	78731	TXV7780	TX	399
731	CRYSTAL ANN RIOS	Travis	78723	KST0091	TX	430
732	AMELIA ROSE KINNEY NATHANIEL AMADEO QUITZAU	Hays	78610	SGV4309	TX	448
733	KASSANDRA SIERRA MEYER	Williamson	78665	SMY4289	TX	161
734	PEARCE PERLINGER	Williamson	78681	GRB4691	TX	440
735	JOHN LOCKE ALDERSON III	Travis	78741	SBY3426	TX	440
736	ANGELICA C CARBAJAL-LOPEZ	Travis	78724	TNK8979	TX	411
737	YORDENIS MORALES	Travis	78724	VFB6029	TX	391
738	JOSHUA MICHAEL PHILLIPS MICHAEL JEFFREY PHILLIPS	Harris	77095	SCP8359	TX	436
739	WYATT WALLACE MITTEL	Williamson	78681	SMK9592	TX	304
740	KATHERINE ANN MCPHERSON LAURA LYNN BRADFORD	Williamson	78628	VDJ9844	TX	327
741	JOSE J GARCIA MORALES	Travis	78745	RHS0123	TX	183
742	JOSE ALEJANDRO RAMIREZ	Burnet	78605	TCD6089	TX	351
743	MALIK RASHAUN JONES	Bell	76548	TXN7425	TX	371
744	ALFREDO GOMEZ	Travis	78754	TZG6897	TX	420
745	MONIQUE DESHAYE STONUM	Travis	78744	VFT1093	TX	413
746	CARLA RENEE WASHINGTON	Taylor	79603	SFL1094	TX	438
747	MARIA VENCES GRABIEL VENCES-VEGA	Bastrop	78659	TXT4919	TX	429
748	DUSTIN CARLICE FERGUSON DOUGLAS RAY FERGUSON	Williamson	78642	VBG6660	TX	367
749	MICHAEL JIMMUNT ROACH ANDREA TEAUNA ROACH	Williamson	78641	VGf8481	TX	325
750	JESSICA JAIMES	Travis	78725	NPW9894	TX	371
751	ALAN MARTINEZ	Travis	78745	VFT8776	TX	409
752	ELIZABETH CHRIST LANGFORD	Williamson	78641	VCY3027	TX	385
753	MICHAEL TERRELL ALEXANDER	Travis	78752	VBP1218	TX	387
754	BILTRAND B ANDREWS SR	Bastrop	78612	JFJ7404	TX	394
755	LUIS MIGUEL GONZALEZ PALACIOS	Caldwell	78648	VJS9246	TX	370



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

756	FAATIMAH KADIJAH AHMAD	Travis	78724	VBK6239	TX	410
757	TIWANNA MARIE MATHEW	Hays	78666	TNM3283	TX	408
758	DANIEL ALEJANDRO ALANIZ	Travis	78753	KNP0868	TX	392
759	ANDRES REYES MARTINEZ	Travis	78653	TCX2590	TX	412
760	MEQUIAS ARANA JR MABELL Q ARANA	Bastrop	78621	GCL9207	TX	499
761	MICHAEL HENDERSON	Bastrop	78602	TTB6349	TX	377
762	MISTY MARIE NOVOTNY	Williamson	78641	TVK0949	TX	358
763	MARIA D MEDINA HERNANDEZ	Bastrop	78612	TBM6870	TX	374
764	PATRICIA BARRON SOLORZANO	Burnet	78654	VBK4651	TX	135
765	JAIME RODRIGUEZ	Travis	78754	VHJ3286	TX	412
766	ROSA OLIVIA ZARATE	Travis	78753	TZG4201	TX	411
767	MACHANDA MORRIS	Travis	78745	VCY4552	TX	456
768	MA LORENA HERNANDEZ GONZALEZ	Hays	78640	TWL5205	TX	389
769	KIMBERLY KAY HARRINGTON	Williamson	78613	2LUCKE	TX	407
770	VINCENT SENZARIN DECENSO	Travis	78702	VFS8879	TX	403
771	RICHARD ANTHONY HERNANDEZ	Bastrop	78602	TJW1659	TX	402
772	MATTHEW RYAN FLEETWOOD CHERYL ANN FLEETWOOD	Burnet	78611	VJR8766	TX	365
773	RUBEN CASTRO JR	Bastrop	78602	SNL7562	TX	421
774	TERESA RODRIGUEZ SAUCEDO	Travis	78723	4LRNK	TX	473
775	DIANA SANCHEZ	Travis	78653	VFS6324	TX	452
776	JOSHUA SANCHEZ	Travis	78617	5900N59	TX	444
777	JAZMIN CARINA REYES	Travis	78741	TVH4032	TX	471
778	CORDERO REYES ESTELA MEJIA	Bell	76548	JJG3606	TX	366
779	LINDA GAIL HARVEY	Williamson	78613	LNW3426	TX	338
780	SOPHIA M HERNANDEZ ENRIQUE HERNANDEZ	Bastrop	78621	VBP1136	TX	455
781	MICKEY JONATHAN MOLAD	Travis	78653	PYZ7653	TX	458



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

782	MARK AVANT BELL JR	Bell	76542	RYT1306	TX	425
783	ISAAC CORRAL	Dallas	75040	114370M	TX	121
784	JOSE LUIS ROJAS HERNANDEZ	Travis	78741	MDD5793	TX	393
785	ADAM CASTILLO	Travis	78617	5915A91	TX	388
786	DEMARCUS M LEBLANC	NULL	85306	V5A5SN	AZ	308
787	LAUREN NICOLE WESTON	Travis	78728	VBP3464	TX	401
788	ISAIAH PATRICK STEVENSON	Travis	78645	STN4031	TX	428
789	JAMILLY MARCHE PLATT	Williamson	78641	VBG4186	TX	338
790	GEOFFREY DANIEL CANDIA	Hays	78640	VHC7832	TX	370
791	TANNER VANCE JONES	Travis	78745	PYZ7968	TX	313
792	IRA HILL	Travis	78660	NZB2512	TX	192
793	LEXY ROSARIO RAMIREZ JOHN BRAXTON HARDY	Travis	78660	SIK9317	TX	313
794	VK HEATING AND COOLING LLC	Williamson	78641	TSN9057	TX	342
795	CHRISTON D ROBINSON	Williamson	78664	RPG2370	TX	307
796	EVAN JAMES WILLIAMSON	NULL	89002	339ZPH	NV	325
797	JUAN CARLOS LARA LARA	Orange	77630	SCL5157	TX	434
798	ERIC ANTHONY CHANCE	Williamson	78641	TLK1050	TX	337
799	ANGELINA RAE RODRIGUEZ	Travis	78753	TZZ1974	TX	364
800	TED WILLIAM FINCH	Williamson	78641	RWR7980	TX	283
801	JOSE ALFREDO RODRIGUEZ	Bastrop	78621	VBP1083	TX	446
802	GERALD TRENT AVERA	Brazoria	77578	MHT0227	TX	314
803	MAGALY STEPHANY PEDRAZA CASTEL AN	Bastrop	78953	VDP6779	TX	396
804	ROSA ELVIRA PALACIOS VASQUEZ	Hays	78610	TZG8949	TX	379
805	MICHELLE ELIZABETH BANCHS	Williamson	78613	VFT1091	TX	252
806	MELYSY KAY DODD	Williamson	78641	TSG0714	TX	325
807	BEATRICE AGUILERA	Travis	78757	PZC0774	TX	363
808	JIMMY EDUARDO CHILE	Williamson	78641	RHM5536	TX	362
809	MIGUEL ARICIAGA	Travis	78758	FPF4951	TX	443
810	ANDREA MORGAN CRAIG	Travis	78724	VFT3172	TX	460
811	CHRISTINA MARIA DOMINGUEZ JESSIE JUNIOR AQUIRRE	Williamson	78681	SPZ5159	TX	433
812	JESSICA ALMAGUER VASQUEZ, ABRAHAM SANTIAGO VASQUEZ	Travis	78653	5812R14	TX	481
813	JACOB RYAN KNOCHE	Travis	78704	THJ3309	TX	280
814	BENJAMIN MATTHEW WRIGHT	Hays	78610	VCD5243	TX	368
815	JODY DONNELL SMITH	Williamson	78664	TWN3881	TX	215
816	COLTON WYATT WILLEVER SCOTT ALAN DUNCAN	Waller	77445	TYV8108	TX	165
817	YURILEY MORE-CASTILLERO ISCANDEL GARCIA-GARCIA	Harris	77081	VJW2323	TX	356



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

818	FERNANDO FABIAN PEREZ JR	Travis	78741	TYW8545	TX	425
819	JAVIER MONTOYA	Bastrop	78621	RXX8332	TX	187
820	CODY BLAKE LOVELESS ANA MARIE WALKER	Travis	78758	VBG4770	TX	363
821	JONATHAN ISAIAH ANTONIO RUIZ	McLennan	76708	SSJ6697	TX	261
822	MARISSA CARMEN CHUMBLEY SCOTT ALAN CHUMBLEY	Williamson	78642	VCH5064	TX	329
823	THANH T NGUYEN NICHOLAS NHAN NGUYEN	Travis	78660	MND4108	TX	357
824	YURELYS PERERA HERNANDEZ RENE VALDES-QUESADA	Williamson	76574	NVG3209	TX	246
825	MASHARI S REEVES	NULL	80538	CCLB64	CO	245
826	ADRIANA RASSINE CHANELLEGARCIA	Williamson	78641	VCB7049	TX	337
827	ANIVAL ZUNIGA	NULL	78656	6013P86	TX	459
828	SHELBY LYNN CROWE	Travis	78741	VJF4573	TX	371
829	DATRON DEANDRE ALLEN	Williamson	78613	VFT9676	TX	357
830	JOHN ANTHONY CABRERA	Travis	78744	RLF5014	TX	399
831	ELENO MARTINEZ	Travis	78753	VBN4337	TX	427
832	LATYVIA SHONTE MADDOX	Bell	76549	LXF0531	TX	406
833	PHILLIP ROLAND GARCIA	Travis	78722	VDD5672	TX	374
834	AMBER LYNN HERRERA JOSEPH THOMAS BARR	Williamson	78628	TXJ4454	TX	348
835	ANGELENA MONIQUE COLLIER	Bastrop	78602	VCY6684	TX	392
836	EDWARD FLORES JR	Travis	78617	VBP1011	TX	402
837	GEORGE MICHAEL MONTOYA	Austin	77474	TKW3916	TX	413
838	DESTINY MULLINS	Williamson	78626	SWR7804	TX	319
839	LAURA SALDIVAR DIEGO ALEJANDRO FACUNDO	Williamson	78634	TRX2403	TX	392
840	JOANN J LOCURTO	NULL	32259	42BDET	FL	306
841	BOBBY JOE SOTELO	Williamson	78613	191738K	TX	124
842	ROBERT TEMPLE ADAY	Williamson	78665	VJS1914	TX	200
843	ASHLEY ANDREA GUERRA	Williamson	78613	VCY4954	TX	353
844	RODOLFO TORRES VILLARREAL	Williamson	78634	VFT9298	TX	416
845	MARIVEL ALVAREZ	Lubbock	79407	TVG8766	TX	337
846	IRVIN JOSE LOYOLA ROBLES	Hays	78640	VJF2117	TX	395
847	RICHARD TODD DOUGLASS	Travis	78617	TSC4088	TX	362
848	ISAAC RICHARD LUCIO	Travis	78741	TWL7335	TX	354
849	ALFREDO GOMEZ	Travis	78754	TZF1894	TX	398
850	MIGUEL ANGEL CRUZ SALINAS	Travis	78744	RLG2850	TX	390
851	R & D MOTORS INC	Travis	78751	3N7307P	TX	432
852	GREGORY THOMAS GUNDERSEN	Williamson	78641	VCB9653	TX	359
853	JORDAN UZONI	Travis	78702	RFP2295	TX	347





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

854	MOHAMED ELSAYED MOH ABDELSALAM	Williamson	78641	STK6818	TX	309
855	WHITNEY M NEEL	Guadalupe	78155	TJB0456	TX	380
856	GENCY STEVEN ALAS	Travis	78744	VFS2974	TX	344
857	JAMES HARLYN THOMPSON CHRISTINA LORRAINE THOMPSON	Williamson	78634	RWY0229	TX	373
858	CHRISTOPHER PATTON	Williamson	78664	CH7M910	TX	385
859	ALEXANDER TARTAKOVSKY	Travis	78745	TWJ0366	TX	393
860	TYKEISHA LAVETTE HOODYE	Bastrop	78602	NND2335	TX	407
861	ANTHONY WAYNE WALKER	Bell	76542	NYV3503	TX	347
862	FELICIANO DIAZ SR	Nueces	78404	CX9C623	TX	407
863	LETICIA CELESTE REYNA	Williamson	78613	VFS6517	TX	373
864	DAVID LUIS CRUZ MAURAS	Travis	78721	VBP2237	TX	386
865	ALEXIS GARCIA	Webb	78046	TPW8659	TX	382
866	EMILIO E WILLIAMS SR	Williamson	78665	MBT7999	TX	350
867	KAYLA ANGIE SUASTE-GUTIERREZ	Bastrop	78612	VBN8102	TX	363
868	TED FINCH	Williamson	78641	RVG1828	TX	208
869	DAVID GLEN RAY MELORA CLAUDETTE RAY	Llano	78609	MPJ1596	TX	327
870	MICHAEL SHAPSHAK	Williamson	78641	NVX0058	TX	331
871	JADEN ASHLEY MORIARTY	Travis	78734	TXP3616	TX	431
872	YULIANA YOLANDA JIMENEZ	Caldwell	78644	RYX3562	TX	340
873	APRIL DAWN MCCLINTOCK JAMES RUSSELL MCCLINTOCK	Williamson	78664	TBD1316	TX	253
874	DAVID MELGAR	Williamson	78633	VFS7002	TX	310
875	ELLICE CHRISTINA BROWN	Travis	78759	RGW3388	TX	340
876	MARK ANTHONY PITZ LAURESSA ENGLISH PITZ	Travis	78660	SVY5363	TX	393
877	CALVINESHA JAMIKA HARVEY RYKIESHA LEANDRA COOK	Travis	78721	5907F56	TX	356
878	ERIC DANIEL RAMIREZ	Travis	78660	NCF5000	TX	287
879	FABIAN RENAY MOJICA	Caldwell	78656	STN3665	TX	442
880	GERARDO CASTRO JR	Grayson	75090	TSM3159	TX	334
881	RYAN BURKE	Travis	78725	SPZ4489	TX	453
882	CHRISTOPHER LEE BRESSER KAITLYN GRACE BRESSER	Williamson	78641	TWK3626	TX	322
883	CESAR MENDEZ FLORES	Harris	77038	VCN7418	TX	356
884	GERARDO MORALES TONCHE	Travis	78702	VCY5376	TX	350
885	JESSI DIGIACOMO	Hays	78640	RFN8780	TX	362
886	ADRIAN LOPEZ YESENIA ALMAZAN	Bastrop	78621	THZ8995	TX	415
887	COURTNEY LEE WEEMS JEFF CLARK WHITTEN	Williamson	78642	VBG5164	TX	326
888	TODD DANIELS	Jefferson	77707	BYJ2065	TX	160
889	EDSEL ANTONIO RIVERA HALEY VICTORIA RIVERA	Travis	78724	TZG8350	TX	462





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

890	BRUNEL DAVID MOUNDZABI	Travis	78753	TZL6859	TX	363
891	JEREMY ALLEN COLTHARP JULIE ANNE COLTHARP	Travis	78741	VFS9774	TX	327
892	VIOLETA LOPEZ ORTIZ WENCESLAO IBARRA GALARZA	Travis	78617	TZZ2094	TX	366
893	BLAIR HOLLAND MATHIS	Travis	78758	TXT1349	TX	311
894	DEVIN MICHELLE WATKINS	Travis	78753	VCY2564	TX	431
895	CUSTODIO REYES TINOCO	Caldwell	78616	VLC5243	TX	334
896	RODRIGO GARCIA MORA	Travis	78653	VJF5541	TX	352
897	ADRIAN GARCIA	Travis	78653	CL4W068	TX	432
898	VINCENT EARL NICHOLSON	Bastrop	78602	SMW6629	TX	430
899	MARK WILLIAM BENFORD	Travis	78759	THZ7014	TX	341
900	EVERETT ALAN ESCOBAR	Caldwell	78656	JKJ1201	TX	363
901	RAUL RODRIGUEZ TORRES	Travis	78753	TTC3178	TX	399
902	KIMBERLY BRYCE MAYNARD LARRY VANCE YOUNG	Hays	78666	VCY7426	TX	346
903	BORIS ERNESTO GIRON ALVARENGA	Harris	77093	RKP8071	TX	358
904	NICHOLAS DANIEL OSBORNE KIRSTEN ANNMARIE ANDERSON	Bastrop	78621	TWL2636	TX	437
905	BLANCA N GUTIERREZ RIVERA	Harris	77020	NZM0603	TX	352
906	MEGIN ELIZABETH SOLIZ	Hays	78640	TVN4624	TX	336
907	ALEJANDRO RAFAEL ZAYAS BENITEZ	Travis	78728	TZG5168	TX	340
908	LINDSEY ROSALES	Travis	78660	TDP0826	TX	408
909	KARMEN KYNARD	Travis	78660	MTX9999	TX	379
910	STANLEY STEEMER	Travis	78754	VHK1129	TX	381
911	EMILY ELIZABETH GANSEL	Travis	78758	RLC7136	TX	383
912	MIGUEL ANGEL DOMINGUEZ SIXTO	Travis	78728	TZH5196	TX	355
913	JORDAN DESHAY WILLIAMS-KING DESHAY ERICA KING	Williamson	76537	TPC4394	TX	196
914	MARCHELLE MARIQUE ALYSSA FOWLER	Williamson	78729	TXP6281	TX	392
915	ANGELICA MARIE RODRIGUEZ	Travis	78747	TYW8527	TX	374
916	KAILEY BROOKE BARKER	Travis	78758	VCY2618	TX	319
917	AARON DANIEL PITTS	Williamson	78633	VCZ2424	TX	327
918	RICHARD C GONZALES AURORA CASTILLO GONZALES	Bastrop	78621	VFH3738	TX	403
919	J EXALTACION CARRENO MUNOZ	Travis	78617	RRS9418	TX	351
920	ALEXANDRIA KAITLIN BERGER	Williamson	78613	TWL7536	TX	310
921	RDO, UNIVERSAL FLEET MNGT	NULL	78366	VGZ7239	TX	337
922	GILBERT LOPEZ ERACLIA LOPEZ	Travis	78747	TLL1818	TX	402
923	AUSTIN GLENN LEVEE	McLennan	76706	TJS5481	TX	308
924	JOSE JOAQUIN VELANDIA	Harris	77066	VCL9170	TX	334
925	VICTOR ALFONSO MARTINEZ ROCHA	Williamson	78641	VBD6581	TX	343



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

926	LEVI JOSUE ESPINOZA RIVERA	Travis	78744	TXP1974	TX	327
927	MICAH DAVID KORESKI	Bastrop	78621	JMM9757	TX	368
928	GABRIEL RODRIGUEZ	Travis	78653	VCY9010	TX	397
929	CHESTER L JOHNSON III	Travis	78653	5846S21	TX	471
930	JACOBO LOPEZ JAIMES	Caldwell	78644	SLP8787	TX	344
931	DIANA N VARGAS IBANIA DINOSCA MERAZ	Travis	78753	SPC2261	TX	347
932	GABRIELA ALONSO	Travis	78744	TLL5386	TX	283
933	PAVEL STANKEVICH	Travis	78732	VCB4736	TX	340
934	JAMES TYLOR CAVENDER	Williamson	76578	RMR6268	TX	284
935	MATTHEW SHANE HANSIN	Travis	78660	SRZ9803	TX	339
936	JACOB RYAN RUSSELL	Harris	77023	TNV3089	TX	412
937	NATHANIEL GEORGE SATTLER	Travis	78728	TXS9777	TX	404
938	CORDELL RICHARD THOMAS	Travis	78660	TTK7084	TX	372
939	GUADALUPE HERNANDEZ ESQUIVEL JESUS ARELLANO	Bastrop	78957	THZ8840	TX	347
940	IRIS MARIE VALLES NICOLAS VALLES	Travis	78617	TJB5654	TX	327
941	MATTHEW ISIAH BANDERA	Travis	78725	TWH2449	TX	356
942	VENESSA BENAVIDEZ TERRANCE DEWAYNE CALDWELL	Harris	77039	NVJ5016	TX	454
943	SANTIAGO MARTINEZ VASQUEZ	Travis	78742	VKY5818	TX	321
944	JAMAR BURLESON	Williamson	78664	TLV5374	TX	143
945	AYLIN LIZBETH POMPA	Caldwell	78616	VHK0352	TX	373
946	LEXI MICHELLE HART BRANDON MICHAEL HART	Bastrop	78621	TZG4049	TX	452
947	DAVID ALEJANDRO IRLAN KEITH JACQUELINE MARIE KERR	Travis	78702	SHB3250	TX	387
948	HILLARY CLAIRE FAULK	Travis	78744	TXN9652	TX	319
949	HORACE NORMAN BARTON III	Travis	78726	RGH6729	TX	361
950	ROBERTA GEORGETTE ROGERS	Williamson	78729	VCY3859	TX	361
951	JUSTIN ADRIAN GARCIA KAMIE RANAE RODRIGUEZ	Cameron	78550	TYN9018	TX	361
952	DANIELA MONTESINOS	Williamson	78641	RVV5888	TX	318
953	ISAAC ORTEGA-BELLO	Travis	78744	VGB9970	TX	335
954	VIRGINIA RODRIGUEZ YBARRA	Travis	78741	VFS6836	TX	484
955	HEATHER V RANEY ROBERT MARC HALL	Travis	78728	TRX3342	TX	242
956	JOSE TRINIDAD PEREZ PEREZ	Travis	78653	VFS2851	TX	358
957	YAIDELI GURE	Dallas	75211	TNN8399	TX	351
958	MICHAEL J MARRUFO	Travis	78660	TXN6628	TX	320
959	JOHN GREGORY PETERSEN	Travis	78723	5749P45	TX	409
960	ABDUL BAKAR JEJOTE	Williamson	78628	VJS3108	TX	338
961	ALAN Y ENRIQUEZ	Travis	78660	VBH6955	TX	461



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

962	BERENICE DE LA SANCHIA	Travis	78723	TJS8145	TX	341
963	JORGE CLEMENTE CASTILLO	Bexar	78207	VJM2903	TX	397
964	MAIKEL RODRIGUEZ	Williamson	78626	VDP8367	TX	408
965	BRYAN RODRIGUEZ NIETO	Travis	78724	KYT7961	TX	409
966	CHARLES ANTHONY GARCIA JR	Williamson	78641	VFG3644	TX	324
967	CHARLES RAY HOLLAWAY	Williamson	78613	MVD1036	TX	290
968	TERA DAWN MARTIN	Travis	78660	VCY7082	TX	331
969	ELIZZABETH HIGAREDA HERNANDEZ	Williamson	78641	VBP1272	TX	375
970	LAWRENCE ALLEN DESHETLER	Montgomery	77306	DK3L102	TX	395
971	JAMES CRAIG WATSON	Williamson	78641	RYZ6843	TX	309
972	MATTHEW DUDLEY	Williamson	78729	JD66W	TX	298
973	WALT KEVOYNE PIERCE	Williamson	78634	VBX6490	TX	354
974	MAYRA CONTRERAS AALIYAH M REAH LOPEZ	Travis	78741	TXT2520	TX	364
975	LAYLA MORALES	Travis	78724	5843T41	TX	402
976	KIAURA MATRELLE WEATHERS	Williamson	78729	VJM6866	TX	346
977	SIVA RAMA RAJU SARIPALLI	Williamson	78641	SWM5398	TX	305
978	SERGIO ANTONIO JAVIER CHICAS EVA MARIE BOUDREAUX	Orange	77632	RKF9253	TX	348
979	ROEL RODRIGUEZ RUEDA	Travis	78752	TYH0773	TX	332
980	AMANDA BLAKE BUSTO LEONIEL M BUSTO	Caldwell	78648	VBG3671	TX	326
981	KRISTIYAN DRAGOMIROV EXPRESS ESTATE CORPORATION	Williamson	78641	TZH3722	TX	295
982	RITA COROMOTO JAIMES DE CHACON	Travis	78660	VJR6091	TX	300
983	LUCIANO TREVINO	Bastrop	78957	RCS5006	TX	360
984	CHERESE DWAVONNE WALKER	Williamson	78641	LMJ7417	TX	345
985	DALE THOMAS PALUSZCYK	Williamson	78633	VCB3481	TX	337
986	MAMADOU OURY BARRY	Williamson	78642	TXP5145	TX	327
987	AUNJANEICE MARIE THOMAS	Bastrop	78602	TZG7954	TX	352
988	ANTHONY ROMERO III	Travis	78736	NTL0186	TX	365
989	YAIMARA GONZALEZ DIAZ	Williamson	78628	VDS7985	TX	332
990	JAMES CASTRO	Travis	78653	NPF2414	TX	438
991	JOE D YBARRA	Travis	78660	87TLZ7	TX	401
992	BRADLEY TYSON	Williamson	78628	VFL8916	TX	314
993	EDGAR ANTONIO ALVAREZ MORALES	Travis	78753	TXP5166	TX	290
994	RODERICK DEMOND TENNISON JR	Travis	78725	VCN9674	TX	367
995	STEPHANIED FISHER	Travis	78660	AR90244	TX	359
996	EDWARD PAUL COLEMAN III	Travis	78617	VKX4287	TX	379
997	WILLIAM MARTIN III	Travis	78714	CP2X858	TX	231



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

998	JORDAN SLINGSBY	Bell	76571	TGB3850	TX	345
999	ROBERTO ANDRES CONTRERAS	Travis	78758	RBJ4705	TX	353
1000	ARTURO JR GONZALEZ	Williamson	78626	JMM8385	TX	427
1001	SARA CAMP	Travis	78750	TXT3297	TX	237
1002	DARWIN RAMO MARTINEZ GUTIERREZ	Travis	78741	TLW8592	TX	406
1003	LATOYA NICOLE DUFFEY	Williamson	78634	KGW4087	TX	376
1004	CARLOS D BALCAZAR LABRADA	Travis	78728	VHC1934	TX	333
1005	GABRIELA EDITH GOVEA JORGE AROLDLO CRISOSTOMO LOPEZ	Travis	78721	VBP1554	TX	352
1006	NYESHA RASHAY RODGERS	Travis	78721	VKY4715	TX	417
1007	TASIA WILSON	Dallas	75216	TSD3106	TX	337
1008	DANIEL CANTU	Travis	78653	NKX9814	TX	410
1009	MATTHEW GARZA	Hidalgo	78502	SKS3217	TX	309
1010	EDEN JAMIE SPARKS	Travis	78754	TPR8376	TX	385
1011	SHANNON DALE HARGRAVE WILLIAM JACK HARGRAVE	Hays	78640	KST9925	TX	359
1012	ARIEANE MICHELLE SHANKS	Travis	78724	TZH6422	TX	369
1013	SHIRLEY ANN WALKER	Travis	78653	VBP8219	TX	393
1014	ALEXIS ANN FIELDS	Travis	78753	TWK3239	TX	404
1015	TIFFANY BETH SNIEDER	Travis	78725	TZH2882	TX	327
1016	KELLY MARIE ESQUIVEL ARTURO A ARREDONDO VALOR	Travis	78617	PZB0210	TX	350
1017	CATERINA MERCEDES VILLATORO	Williamson	76574	5919J99	TX	310
1018	MARIA JULIA MONTALVO MARTINEZ	Bastrop	78612	NCG1730	TX	384
1019	ALEXANDRA MARIE MASHBURN	Williamson	78633	TJB1438	TX	311
1020	NZHARI MONAI SESSOMS	Travis	78660	VGH1950	TX	302
1021	ALFREDO ARIAS SARAO	Travis	78617	TLM4882	TX	311
1022	JOSEPH ALAN HERZER	Williamson	78634	TNL9214	TX	283
1023	JASON OLDS	Williamson	78717	RDH2139	TX	332
1024	BRANDON DIONTE BANKS	Bell	76542	TXP5611	TX	338
1025	TYLER WOLFE	Travis	78756	RYX5257	TX	319
1026	JAMES FRICK	Travis	78738	RCS5273	TX	224
1027	JUSTIN D BURKETT	Travis	78653	THZ8896	TX	405
1028	BRITTANY MARIE FERTITTA	Williamson	78665	VCB3564	TX	382
1029	KEILA GONZALEZ RODRIGUEZ	Williamson	78642	VHC1791	TX	282
1030	CHARLOTTE COLLINS	Travis	78660	MKD6586	TX	344
1031	PARK MAKER TOWING	Travis	78745	T7669L	TX	295
1032	LATRICE EVON EASLEY	Travis	78754	TZG2254	TX	374
1033	MARTHA RODRIGUEZ	Travis	78758	CNR3928	TX	285



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1034	ALYSSA SCHULTZ	Travis	78725	MMY3784	TX	361
1035	LAKEISHA YVONNE SHEFFIELD	Travis	78754	VFV0491	TX	371
1036	BRENDA DENISE ROBLEDO JOHN ANTHONY AMADOR	Travis	78725	TLY2381	TX	360
1037	ALAN DESHON GUYTON ALAN DESHON GUYTON JR	Travis	78653	VFH4076	TX	397
1038	PEDRO DEMETRIO IZAGUIRRE	Travis	78758	TNM0964	TX	311
1039	MARIA STEWARD-CATER CALEB LEE	Bell	76549	TXD8732	TX	357
1040	ADDISON PALMA BRIDGES	Travis	78660	SPZ6616	TX	287
1041	HARRISON CHRISTIAN LEWIS JONATHAN HERNANDEZ	Travis	78734	VFS4709	TX	291
1042	DYLAN RICHEY DOMINIQUE RICHEY	Williamson	78613	TVF4786	TX	326
1043	CALVIN LEMONT ROBERTS	Travis	78702	VFT9289	TX	334
1044	AUSTIN DALE ADAMS	Travis	78731	NNL5780	TX	317
1045	JOSHUA SAUCEDA BLAIR	Travis	78723	TWL1156	TX	366
1046	SALUD RUBEN LARA TORRES	Webb	78043	TVW4453	TX	382
1047	ROBERT D ALFIERI	Travis	78751	LGT4509	TX	330
1048	MEREDITH SPAIN	Travis	78653	NRM8335	TX	386
1049	MARIANA NICOLASA OBRAJERO AQUINO	Travis	78724	VKJ4216	TX	354
1050	BRIANNA SCOTT	Lee	78942	TCX0910	TX	366
1051	CHRISTOPHER LEE JAMES	Williamson	78664	TXT5383	TX	244
1052	ALYSSA ANN RODRIGUEZ	Williamson	78641	PCJ7966	TX	254
1053	RONDA LEE MELENDEZ OSCAR MELENDEZ JR	Williamson	78717	TWL0623	TX	311
1054	KEELYN A HOGG	Williamson	78634	THJ4691	TX	380
1055	HAILY MARIE LEWIS	Travis	78727	5377B46	TX	121
1056	ANISSA DAWN SALAZAR	Williamson	78613	NXJ4509	TX	277
1057	FLASH DELIVERY LLC ROSA M GOMEZ	Bexar	78221	BF08209	TX	340
1058	ANDRE YANCY	Bastrop	78612	TLL0379	TX	320
1059	JAHNAE ALEXUS WILLIAMS	Travis	78660	VHC0517	TX	357
1060	CAROLYN MICHELLE LEISZ ALAN DAIL CARTER	Williamson	78665	NPH4852	TX	301
1061	TIFFANY MARIE GARCIA	Travis	78724	TRS0703	TX	365
1062	DAVID S CUSIMANO	Harris	77388	MVM4180	TX	305
1063	ANGELITA MARIE MARTINEZ	Travis	78745	TRR2177	TX	370
1064	DANIEL ELIAS	NULL	39503	121HA1	MS	434
1065	ERICA TRE HUYNH	Williamson	78613	TBD0241	TX	310
1066	KYRA JADZIA SYLVENIA DAVIS	Travis	78754	VCB6959	TX	361
1067	JO LYN GUEBARA	Williamson	78613	VGB0426	TX	402
1068	QUINTON CHANCE ROSETTE	Travis	78653	TZG8041	TX	263
1069	BRIAN TOMLINSON	Williamson	78634	TYV9221	TX	329



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1070	JOSE B ALDABA-GONZALEZ	Travis	78660	TNL6915	TX	276
1071	STANLEY STEEMER	Travis	78754	VHK1128	TX	337
1072	JUAN CARLOS GORDILLO OREGON	Travis	78724	RLN7602	TX	351
1073	BRYAN THOMAS ZEKAN	Williamson	78634	VFL7529	TX	329
1074	OSVALDO ARCE RAMIREZ	Travis	78702	RRY0374	TX	350
1075	CHARLES ALLEN NICHOLSON	Williamson	78641	VCZ3860	TX	274
1076	CARLOS GERMAN CORTEZ DURAN	Hays	78640	MLL5410	TX	331
1077	ASHLEY HUCK MARK HUCK	Collin	75025	HYW0497	TX	188
1078	NANCY SANDOVAL TOVAR JOHN EURESTE TOVAR	Hays	78610	BCC5109	TX	404
1079	DEANNA LATRICE LOTT	Williamson	78641	TXT5414	TX	293
1080	ANDREW LAIN OWEN	Williamson	78613	TNV8384	TX	291
1081	DAVE DULATRE MAPALO	Williamson	78641	GV68HC	TX	289
1082	MARTINIANO VALDEZ-ESTRADA	Travis	78725	LNK8309	TX	307
1083	MAYELA TERESA BERMUDEZ	Travis	78741	VBG3061	TX	329
1084	GERALDINE GARCIA	Travis	78660	NJY2760	TX	318
1085	CYNTHIA GONZALES ALEXANDER	Travis	78617	TNK9830	TX	313
1086	LEONARD JAMES WASHINGTON	Williamson	78646	2RRKV	TX	338
1087	JERRY DOUGLAS GRAF	Williamson	78642	TXT4488	TX	258
1088	LINDA MARISOL CANTU	Caldwell	78616	TZH1466	TX	331
1089	JORDYN LINN MULLINS	NULL	77450	TCJ0772	TX	257
1090	COURTNEY ELIZABETH MERRITT NICHOLAS JEROME GATES	Williamson	78641	RGC5915	TX	262
1091	ROBBY LEE CASTILLO	Lubbock	79416	KVN6585	TX	338
1092	JOSE CARLOS LOERA GARCIA	Bell	76542	TYN3865	TX	352
1093	NATALIE MARIE WEINGART JOHN FLAD	Travis	78744	RYH5012	TX	372
1094	JULIAN OSORIO	Travis	78617	RWT9807	TX	342
1095	ADRIANA LOPEZ PEREZ	Caldwell	78616	RYJ5137	TX	337
1096	MARK CHRISTOPHER DIONNE JR	Williamson	78641	TYN6520	TX	300
1097	MOISES SANTIAGO MARTINEZ	Travis	78617	MBL7116	TX	331
1098	JENNIFER ANN DAVIDSON	Hays	78640	JFR6575	TX	327
1099	WILLNISHA VERNELL ROBERSON	Bastrop	78621	VCB6954	TX	364
1100	MICHAEL ROLAND ANDERSON	Williamson	78681	SZD1994	TX	193
1101	FIDENCIO ANDRES JARAMILLO	Burnet	78605	FSP0956	TX	284
1102	ROBERT LEE RODRIGUEZ-CORONEL	Coryell	76522	NDN8322	TX	323
1103	FLORENCE BUIGUT	Travis	78660	SWR8863	TX	361
1104	AMBER MAKAYE LEONARD	Hays	78640	NFY0981	TX	297
1105	MA CRUZ JAIMES NAVARRO	Travis	78724	VFB5892	TX	361



CENTRAL TEXAS REGIONAL  
**MOBILITY AUTHORITY**

## CTRMA Prohibited Vehicles

1106	LINDSEY DANIELLE HEREFORD	Williamson	78633	RNJ9573	TX	289
1107	DANIEL CHAVEZ	Williamson	78681	RWT8022	TX	305
1108	JESUS MARTINEZ MELANIA COSTILLA	Travis	78741	NKY7346	TX	322
1109	TRAVONNA D MITCHELL	Williamson	78626	SXN9732	TX	328
1110	VICTOR RAMON CRUZ	Williamson	78642	VFG4689	TX	263
1111	VICTOR ALLEN CELANIA	Travis	78660	TZG4513	TX	304
1112	EMILY ANN CARTWRIGHT	Travis	78750	TWL6331	TX	284
1113	OSCAR ALONSO SUAREZ MILEIVI BENITEZ IZQUIERDO	Travis	78741	RHW2320	TX	318
1114	OSCAR J MAYBELIN	Travis	78744	0C0574J	TX	334
1115	LESLIE VIRGINIA NAVARRO	Bastrop	78957	VCD5419	TX	346
1116	QUANTAI TERRELL WRIGHT	Bell	76548	TTB4550	TX	379
1117	ROBERTO CANAS	Bastrop	78621	VFS3017	TX	376
1118	MARCUS JACKSON HENDERSON	Williamson	78641	VDJ9479	TX	273
1119	ADOLFO VASQUEZ JIMENEZ MAYRA GUADALUPE JIMENEZ	Travis	78617	TSC4060	TX	330
1120	MAURICE WALKER III	Travis	78617	VGB1375	TX	344
1121	DANIEL GOLD WILSON	Travis	78759	SDG5829	TX	248





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1122	TAWNYA MARIE LEACH	Caldwell	78644	PZB0656	TX	298
1123	ALEJANDRA GUTIERREZ TREVINO	Travis	78754	MND3553	TX	322
1124	JACK LEE	Williamson	76574	TBC9279	TX	326
1125	Comfortable Bus LLC	NULL	59806	429045D	MT	339
1126	TED ALLEN PARSONS	Travis	78617	TWN8500	TX	401
1127	JENNIFER MARIE LACK	Williamson	78641	TFZ6383	TX	280
1128	JUAN C DOMINGUEZ	NULL	93905	20181R1	CA	313
1129	ADONNA FELICIA SOTO	Bell	76542	SHN6964	TX	242
1130	RAMON MARTINEZ-LOPEZ	Williamson	78664	RKC9511	TX	405
1131	GRADE A LOGISTICS LLC	Travis	78724	TXN6382	TX	373
1132	DEREK JAMES HENKE DALLAS R DOOL	Bastrop	78602	NJP4260	TX	351
1133	ASHLEY LATRILLE COLES	Travis	78723	VCD8187	TX	467
1134	MIGUEL ANGEL JAIMES JAIMES	Travis	78724	VJF3251	TX	378
1135	BRANDY RENEE BAYLOR	Travis	78724	RWV2114	TX	354
1136	THOMAS RYAN AMEZCUA	Travis	78727	LKB2019	TX	320
1137	CRYSTAL DAWN MENDOZA	Travis	78725	VCY3402	TX	372
1138	DAVID DESHAWN EVANS	Travis	78723	TNJ2891	TX	335
1139	JEANNOT NKAMBA BONGOLE	Travis	78721	VCZ2085	TX	367
1140	ROBERTO JOVEL VILLATORO VIEDA	Hays	78640	760100M	TX	150
1141	ODEKO TX LLC	Williamson	78641	TYR7797	TX	299
1142	EGLYS MENDOZA	NULL	40219	J0D293	KY	267
1143	MARK A CUNNINGHAM	Travis	78753	VFT1079	TX	422
1144	CAROLYN RENEE GLUTH	Williamson	78717	TLN8169	TX	226
1145	WILLIAM HOWARD RIVERS	Travis	78754	TXN5565	TX	330
1146	PATRICIA LAURENDA LEWIS	Travis	78660	NGC3776	TX	352
1147	ABEL DAVID GARCIA	Travis	78753	TZG9538	TX	290
1148	ELLA MARIE KNIGHTEN	Travis	78754	5826C23	TX	440
1149	DANNY VELASQUEZ	Bastrop	78621	VCY5658	TX	371
1150	WILLIAM PEEBLES	Travis	78753	VJR6164	TX	293
1151	AMY BIGLEY HURST	Williamson	78615	VFL7023	TX	304
1152	CLAIRE CASADEMUNT	Travis	78758	SPZ7074	TX	292
1153	NICOLE ACHIENG ONYANGO	Williamson	78641	TLV3995	TX	294
1154	LOLITA M EDWARDS	Bexar	78253	TDP6514	TX	345
1155	AMANDA JO SALINAS	Williamson	78642	TWK3681	TX	283
1156	SCOTT L HARVEY	Travis	78741	LRH2410	TX	369
1157	SUE SLAGLE PINA	Williamson	78681	SBY6272	TX	305





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1158	MICHAEL DAVID OWENS	Robertson	76629	TDX2388	TX	332
1159	CARLOS J AVILA-BANEGAS MARTA E AVILA-BANEGAS	Travis	78617	GMN5049	TX	295
1160	CONNIE WALLER BURKETT	Williamson	78642	RGW5617	TX	294
1161	CAROL MICHELLE BLAKE GILLESPIE	Lubbock	79407	TGZ7867	TX	272
1162	ROSALBA JARAMILLO MERCADO	Travis	78728	TXN9009	TX	274
1163	SHIRLEY NANETTE LEWIS	Travis	78653	RTG4166	TX	360
1164	LORI CASE	Williamson	78634	TXT5824	TX	246
1165	MANUEL ROBERT FUENTES JR	Hays	78640	VBN6495	TX	317
1166	THERESA DELGADO GARCIA	De Witt	77954	NXM4857	TX	360
1167	TAYLOR QUIROZ ILKA NAOMI ZAVALA	Travis	78728	VBB1841	TX	355
1168	RICARDO HERNANDEZ	Travis	78747	SBR0420	TX	366
1169	DYLAN MICHAEL GLEASON	Williamson	78613	TY9905	TX	321
1170	JACKSON CHRISTOPHER MASSEY DONNA JEAN CAMPBELL	Hays	78610	TJW3459	TX	309
1171	EDDIE FRANCO JR	Williamson	78717	TWN7896	TX	219
1172	JULIO JARAMILLO	Caldwell	78644	GV62HB	TX	322
1173	C REYNA ARENAS	Travis	78617	RHS3900	TX	307
1174	MARK ANTHONY GARCIA	Travis	78748	TLV2214	TX	328
1175	CASSANDRA FLORES	Williamson	78626	RWT9858	TX	211
1176	AUDREY SYKOWSKI BRISIEL	Williamson	78642	PDP2316	TX	300
1177	ELLA DANE PORTERFIELD	Harris	77008	RXS2463	TX	277
1178	FRANCISCO JAVIER DIAZ-HILDAGO	Travis	78752	LZP2746	TX	368
1179	MARIA NICHOLE ACEVEDO	Williamson	78664	SXG6943	TX	332
1180	SIERRA AALON JOHNSON	Travis	78724	NNG8396	TX	330
1181	AZAEAL QUINTERO GOMEZ	Travis	78754	VKY3456	TX	383
1182	LAINIEY MICHELLE SHORE	Williamson	78681	TLV3864	TX	236
1183	BOOKER T BELL JR	Travis	78754	VBN7699	TX	365
1184	CANDACE JO MEYER	Travis	78747	CDD2254	TX	294
1185	SHYANNE TAMIA ROCHELL CLARKSON	Travis	78660	NYZ2895	TX	327
1186	MARK SAVERIO PORCELLO JR	Williamson	78642	RNG1125	TX	287
1187	ARAMAND FRANK ZAYED	Williamson	78717	RRY1895	TX	263
1188	DAMIAN ALVAREZ AGUILERA	Hays	78640	TYN1485	TX	331
1189	STEVEN J WALKER	NULL	39401	070FRA	MS	297
1190	DANIEL A MORALES	Bastrop	78662	SJS0160	TX	314
1191	SEVON BARIKI WALLACE	Travis	78653	5680T89	TX	366
1192	STEVEN PAUL RODRIGUEZ	Travis	78617	5759R88	TX	294
1193	HEIDI BURNS	Travis	78748	VBP7506	TX	313



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1194	JASON ALVIN RIVERA	Travis	78745	TGP0993	TX	348
1195	BRIAN NAVARRO	Travis	78653	VKY3026	TX	319
1196	BRISSA LIZBETH PALACIOS	Brown	76801	KDC9933	TX	290
1197	TROY MICHAEL AUTIN	Travis	78660	SYK5242	TX	310
1198	WOODNAESHA LANIEL HORNSBY	Travis	78727	VCY4519	TX	315
1199	LENNORA LIN HANOVER-SYNORACKI	Travis	78660	NNY4747	TX	329
1200	TORIBIO GARCIA RODRIGUEZ	Williamson	78641	TNM2396	TX	148
1201	REBECCA SUE DOUGHERTY	Hill	76692	TGY4812	TX	311
1202	LAPRINSICA ZYQUISE BROOKS	Bell	76542	RPJ5238	TX	302
1203	CLAUDIO MEZA	Williamson	78641	DN4S291	TX	307
1204	DOUGLAS LAMONT PRICE	Bastrop	78621	TGN7361	TX	319
1205	ANGEL DAVID IBARRA	Travis	78758	SJL1755	TX	246
1206	ADAM DOUGLAS DARLEY SARAH ROBERTSON DARLEY	Williamson	78642	RCC8400	TX	275
1207	RICHARD CHRISTOPHER TOVAR	Travis	78744	VBP2760	TX	332
1208	OMAR D SANTOS LOPEZ	NULL	33463	RNY63	FL	331
1209	CLAYTON SMITH	Williamson	78641	RXV2189	TX	290
1210	AUSTEN WILEY HORTON VANESSA CHAMBERS HORTON	Travis	78728	TRP9930	TX	268
1211	ALEXANDRA LISSET VALDEZ GARCIA	Travis	78617	TRR0386	TX	273
1212	PLACIDA PEREZ	Travis	78617	RRY3272	TX	292
1213	CECILIA LOURDES MONTEMAYOR	Williamson	78665	VCX8836	TX	249
1214	MELCHOR CASIANO HILARIO SANTOS	Travis	78753	SKX9889	TX	282
1215	DIANA MORENO	Travis	78725	TYW1007	TX	355
1216	BRANDON JAMES MCCLOUD	Travis	78750	TZG9707	TX	277
1217	JOSE M CURIEL LOPEZ FRANCISCO JOSE CURIEL	Hays	78610	GVC3488	TX	317
1218	JAMILA KAHANY	Travis	78728	TSP7251	TX	274
1219	MONICA NICOLE RODRIGUEZ	Hays	78666	HRV0917	TX	334
1220	LORENZO ANTONIO GALICIA	Travis	78725	TTF7026	TX	348
1221	GINA MARIE ESPARZA	Hays	78640	TMP5074	TX	338
1222	FRANCISCO JAIMES	Bastrop	78612	VKT0508	TX	289
1223	JUANA ROSARIO VARGAS RAMOS	Colorado	78962	TMT0941	TX	286
1224	TAYLOR DOMINIQUE CONALER	Travis	78741	VCY6551	TX	330
1225	SHERRY M EVANSON	NULL	31525	SBI6394	GA	324
1226	JUAN RICARDO PALMA GUERRERO	Caldwell	78616	TLY3348	TX	194
1227	JESSICA RANAE LINNEY ANTHONY GABRIEL LINNEY	Fort Bend	77406	TWY5185	TX	192
1228	SHANNON COBB	Williamson	78641	VCB3013	TX	292
1229	TIFFANY PHAM	Travis	78660	RLG6375	TX	323



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1230	HOSEA RAMON PERKINS	Travis	78734	ADD1TUP	TX	318
1231	ANGEL-ANTONIO JUAN MARCANO- VELAZQUEZ	Travis	78660	TVW0686	TX	345
1232	ANA C GUTIERREZ	Caldwell	78616	SBZ9748	TX	305
1233	TAYLOR MARY CAFFERATA TYLER DOUGLAS CAFFERATA	Hays	78640	VBP1328	TX	306
1234	STEPHEN PATRICK PFITZNER	Williamson	78628	TFZ6926	TX	245
1235	VALERIE MICHELLE COSME	Travis	78704	TXN8100	TX	267
1236	BRIAN BRAY	Williamson	78641	RPH6759	TX	278
1237	CHAD ERIC JONES	Guadalupe	78155	TWL2512	TX	287
1238	NERI ORTIZ MENTADO	Travis	78753	VKY3419	TX	256
1239	MARC EDWARD CALDERON	Bastrop	78602	VCB9760	TX	308
1240	LEANDRO ROJAS SALINAS	Burnet	78605	NCJ6335	TX	165
1241	YULEIDYS DIAZ DIXON LENDYS DIAZ MORALES	Williamson	76537	SYJ6846	TX	293
1242	TEXAS DEPT OF PUBLIC SAFETY	Travis	78773	TZG7635	TX	279
1243	DANIEL MALDONADO NAJERA	Williamson	78634	5727T45	TX	342
1244	YELLOW AIRAM PIKE-HEGAR	Travis	78728	TXN1923	TX	233
1245	TANIA MICHELLE PRIMUS	Williamson	78665	TRX3595	TX	145
1246	JORDAN CHASE ALVAREZ	Travis	78753	VCB7355	TX	251
1247	JEANNE MICHELLE SMITH SKYLAR RAIN ALVIAR	Williamson	78641	TSN9807	TX	250
1248	MICHAEL ROBERT LEHNER TERRI LYNNE LEHNER	Williamson	78717	MHD2275	TX	258
1249	LUPE CORONADO NOAH CORONADO	Lubbock	79363	SPL6113	TX	224
1250	VERONICA GONZALES	NULL	78660	TZH0285	TX	306
1251	GIOVANNA MARINELLA MARTIN	Williamson	78717	TLM0499	TX	273
1252	ALFREDO ESPINOSA LEDESMA JESUS A. SANCHEZ LEDESMA	Travis	78741	MTC1086	TX	310
1253	JENNIFER ACEVEDO	Bastrop	78621	VBK4951	TX	351
1254	LAURA LAVERNE GARRISON	Travis	78724	VCB9209	TX	428
1255	NORMA CARTER	Travis	78653	VJF0390	TX	338
1256	SAVANNAH LYNN WILLIS	Williamson	76537	VDD9951	TX	295
1257	FRANCES RAMIREZ CROSSLEY	Williamson	78641	RWG9537	TX	265
1258	GARRETT L SHERRILL	Williamson	78641	TCY2174	TX	212
1259	DEMERE JEANETTE SILVERSON	Williamson	78717	TYD9791	TX	243
1260	DENITA L ABEYONCE SATTERWHITE	Travis	78617	VJF3300	TX	329
1261	DENIS ALBERTO MARQUINA REYES JAYLIN YANINI ZAVALA REYES	Travis	78617	TRR0937	TX	269
1262	MICHAEL RYCKMAN	Comal	78130	LFT3299	TX	278
1263	GRACIELA MARIN SANDOVAL	Caldwell	78616	RWW9416	TX	303
1264	NADINE JEWEL CELESTE ZARATE	Travis	78752	TRR2216	TX	380
1265	EULISES RENE AMAYA MURILLO	Williamson	78729	TZH5422	TX	247



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1266	YASMIN ANAYA MUNOZ LEONEL ESPINOZA DIAZ	Bastrop	78621	TWK7791	TX	353
1267	CHRISTINA MAO	Bell	76549	RBX9873	TX	267
1268	KENISHA PERKINS	Travis	78753	5817H46	TX	326
1269	MAYELA SERRAN-DE-LOS-SANTOS ONESIMO CASTELLANOS	Travis	78724	JGH3166	TX	303
1270	MACEY ROSE FRERS	Bastrop	78621	VKY4780	TX	386
1271	ERICK SANCHEZ GUZMAN	Travis	78660	RTF9178	TX	217
1272	FERNANDO QUINONES	Travis	78725	LZP4922	TX	310
1273	ARMANDO MARTINEZ MARTINEZ	Williamson	78634	VFT6854	TX	319
1274	XHAVIER MARTINEZ	Travis	78744	5418J16	TX	363
1275	MUSTAFA ABBAKR	Travis	78653	TWK2771	TX	346
1276	JAZMYN ALEXIS CARTER-NABORS ADRIANNA NICOLE CARTER	Travis	78724	TWL3635	TX	320
1277	NICKOLAS JAMES ONEILL	Hays	78640	TBD4047	TX	288
1278	MONICA V HERNANDEZ	Travis	78653	MAJ1K7	TX	335
1279	ASTARIA MILAN GERMANY	Travis	78705	VBP1603	TX	293
1280	PHILIP AUGUSTUS WEAVER IV	Williamson	78665	CNN9492	TX	308
1281	DANIEL LOYOLA MARTINEZ	Bexar	78211	RJN3766	TX	287
1282	ROBERT ANTHONY PRIMM-HEIMERMAN	Williamson	76574	NGN9169	TX	286
1283	YANET MARICELA MUNOZ MUNOZ YANET BERENICE VERA MUNOZ	Hays	78666	VBV4092	TX	345
1284	JOHEL FRAN TRIGUEROS VALDEZ	Caldwell	78644	VFS2802	TX	314
1285	VERONIKA PELE	Hays	78610	BZ9D580	TX	301
1286	5-F MECHANICAL GROUP, INC	Travis	78728	TWN8259	TX	178
1287	JOSEPH SORIANO	Travis	78617	RLP2043	TX	304
1288	SERGIO ADRIAN MENDEZ	Hays	78640	TTC8088	TX	195
1289	JENNIFER ANGULO	Travis	78726	TFZ6312	TX	257
1290	SKIP VARGAS	Williamson	78665	NWK9491	TX	324
1291	SHAUN-PAUL BAERVELDT	Hays	78737	NND9204	TX	313
1292	AMBER ROSE KLUG	Harris	77339	RVC9779	TX	229
1293	MICHAEL WILLIAMS	Walker	77340	NPV7158	TX	286
1294	ROGELIO RAUL IBARRA	Brown	76801	LFP4434	TX	272
1295	JEFFERY BRIAN LOTHINGER	Williamson	78628	RWW4718	TX	269
1296	WILLIAM JANOUSEK	Travis	78660	RLF5481	TX	281
1297	BRIGETTE WALTERS	Hays	78640	MKW2691	TX	315
1298	CHRIS MALTOS	Bexar	78210	TBL8336	TX	233
1299	GLORIA ANN HERNANDEZ	Travis	78744	3TGZD	TX	294
1300	CHRISTOPHER VARGAS	Hays	78610	VJG3435	TX	362
1301	CHRISTOPHER DESHON BROWN JR.	Travis	78704	5927D30	TX	328



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1302	MARANDA ELICE MULRONEY	Williamson	78641	TVJ9943	TX	261
1303	DERRICK DENEAL CLEMONS JR	Travis	78753	VFT8210	TX	277
1304	VICENTE JOSE BELANDRIAL LEAL	Williamson	78626	5757Z43	TX	258
1305	AUSTIN PARK KINGSBERY AMY KRISTIN KINGSBERY	Williamson	78681	KDB6828	TX	250
1306	RODOLFO LOPEZ	Travis	78745	NRL2295	TX	300
1307	AMARISSA DANIELLE TORRES	Bastrop	78612	VGB2262	TX	296
1308	LANE ERICH LAECHELIN	Travis	78702	TXP1534	TX	318
1309	KENLEE MAE SMITH	Williamson	78665	SVX1805	TX	298
1310	CELINE STACY JOHNSON	Bastrop	78621	VFS5375	TX	336
1311	JOHN WAYNE NEILL	Travis	78660	SJD2378	TX	280
1312	JORDAN FOX	Travis	78660	B19393N	TX	306
1313	DOMINGA LOPEZ-BARR MICHAEL JEROME BARR	Travis	78724	TFP7352	TX	370
1314	NICHOLAS COTTRELL DAVIS	Williamson	78729	GYD2165	TX	258
1315	JOSE LUIS VILLALTA	Harris	77083	RRH5867	TX	265
1316	CARL F HUNTER 2ND	Williamson	78729	TLV7089	TX	295
1317	PEDRO PEREZ	Williamson	78641	MKV6545	TX	259
1318	MARTHA GARCIA VANVOORHIS	Williamson	78641	VJR8946	TX	268
1319	LARRY RAY CONCHOLA	NULL	78654	NZB6042	TX	385
1320	OMARI NICHOLAS HILL	Travis	78660	TTC9542	TX	299
1321	MERON GIRMAY GEBREMEDHIN	Travis	78660	TZW7485	TX	269
1322	NICOLE SHADON KRIEG EUGENE EDWIN KRIEG	Travis	78653	TTC8389	TX	292
1323	MEISHA SIMONE HEARN	Travis	78660	TYW0897	TX	287
1324	JAMES PIZZITOLA	Williamson	78665	LLY7145	TX	156
1325	NATALIE ROSE DE LA CRUZ JONATHAN LUIS RODRIGUEZ	Travis	78752	VCX8995	TX	292
1326	WILLIAM A CHRISTIAN, TINA T CHRISTIAN	Travis	78745	5809T41	TX	301
1327	J J KELLER & ASSOCIATES	NULL	54956	1N44135	WI	100
1328	EMMANUEL L JONES	NULL	53209	ASB5153	WI	310
1329	Jorge A Labrador	Fayette	78956	JYD2971	TX	274
1330	KRISHNA CHAITANYA KOMMINENI	Williamson	78641	VCY9238	TX	257
1331	SERGIO RENE REYNA JR	Travis	78753	VBP3474	TX	341
1332	BLANCA D GUTIERREZ TREVINO	NULL	78260	TBD1176	TX	338
1333	BRODIE ELIJAH MORALES	Williamson	78634	TZG7537	TX	289
1334	YURIDIA SANCHEZ ARELLANO	Travis	78617	SIK4351	TX	260
1335	SELINA SEPULVEDA	Bell	76548	RYS7971	TX	264
1336	AMANDA GUERRA	Hays	78640	TVM1297	TX	290
1337	EZEQUIEL MARTINEZ RAMIREZ SR YONATAN MARTINEZ-DURAN	Travis	78758	SMY0089	TX	278



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1338	GRACIELA CORREA	Travis	78724	MTY1980	TX	345
1339	LINDA MEZA VICTOR G MEZA	Travis	78750	TXN5989	TX	288
1340	ALEXANDER FLORES	Bastrop	78602	TZZ2611	TX	296
1341	TOMMY DOAK FORESTER	Caldwell	78648	STS5617	TX	281
1342	ROSAURA VENCES JAIMES	Bastrop	78659	TCY4430	TX	296
1343	AMY DAYANA SAC	Collin	75075	NCT2247	TX	364
1344	ASHLEY MARIA QUINTANILLA THOMAS CLINTON SHARP JR	Hays	78610	MNF7894	TX	272
1345	JUAN ROMERO COTTS	Travis	78724	TNL9645	TX	326
1346	ERIN GERMAINE GLENN	Williamson	78681	CNR7724	TX	301
1347	GUADALUPE JESUS MEDINA	Travis	78741	NCD0480	TX	386
1348	DEVIN MCMULLIN	Williamson	78665	VDJ9557	TX	252
1349	MARY KATHRYN ZAMBRANO	Travis	78744	TTG2053	TX	262
1350	ISAIAH NICHOLAS ARMENDAREZ	Bastrop	78621	VBD2779	TX	319
1351	ABDULLAH AMER AL KHAFI	Williamson	78664	B21442X	TX	213
1352	MARY KRISTINE BIEHL SUELLEN JACOBSEN	Williamson	76574	FSP1056	TX	293
1353	ARTON SIMON LEWIS JR	Travis	78725	90BABY	TX	319
1354	CASSIE GAUNA	Williamson	78634	TLL6689	TX	235
1355	JAVIER ALBERTO DURAN	Travis	78754	SHB6983	TX	206
1356	ANGELICA NOEMA FERNANDEZ	NULL	78724	5504X79	TX	333
1357	CHARLES VERNARD ALLEN JR.	Travis	78725	VCY3230	TX	301
1358	LORENZO CEBALLOS CRUZ	Travis	78653	VCY3455	TX	340
1359	RUBYN LEVAR CARTER	Travis	78754	5889K57	TX	337
1360	ALEX SAAL	Travis	78722	SHC4625	TX	261
1361	GEORGE ESPINOSA	Williamson	78634	MHB7916	TX	286
1362	HECTOR RODRIGUEZ JR	Travis	78747	TSC3733	TX	255
1363	JOSE ANTONIO CARRILLO MARTHA ANGELICA ARIAS CORNEJO	Travis	78653	MNZ3335	TX	320
1364	JENNIFER P JARAMILLO	Travis	78721	KLK8858	TX	290
1365	JOHN KEITH CAWOOD	Travis	78754	SYK3494	TX	298
1366	JUAN ALBERTO ESTRADA	Harris	77502	VCT0650	TX	253
1367	MISTY DUDLEY HENDERSON	Williamson	78729	TVJ9949	TX	236
1368	KASSAN ISMAEL KADOUR	Williamson	78641	VCY7940	TX	248
1369	JOSE LUIS MUNOZ MORALES JR	Llano	78609	MHD5248	TX	233
1370	Monica Escalante	Hays	78640	TNK9595	TX	288
1371	BRIE CELESTE DAVIS	Travis	78660	RYY0608	TX	175
1372	CAYLIX MAURICEO BARRETT	Travis	78653	VGP5544	TX	317
1373	CARRIE CAMILLE ALEJO	Williamson	78642	TWN7530	TX	256



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1374	NIKKOLE HODGES TONY HODGES	Williamson	78664	AW21976	TX	259
1375	CAMERON RYAN GREGORY	NULL	76544	TRX9107	TX	254
1376	TORIANA NACOLE ONTIVEROS	Bastrop	78621	VFH4002	TX	310
1377	LEAH SMALLEY	Williamson	78664	TMT9597	TX	181
1378	JAVIER MONTOYA	Bastrop	78621	TGM3853	TX	314
1379	HELEN JOYCE VASQUEZ	Bastrop	78602	VFS8726	TX	298
1380	JIM DRESSER	Williamson	78641	FMV5906	TX	274
1381	ISAAC KENNETH JONES NORMA MARSHALL JONES	Travis	78763	TRP6416	TX	268
1382	ALTEC INDUSTRIES, INC (LSE)	Comal	78130	SKP5089	TX	309
1383	YESENIA ARCE SANCHEZ	Bastrop	78621	TCN6556	TX	337
1384	KARINA CASTANEDA	Travis	78617	PFP2558	TX	263
1385	SHAKIRA HAMILTON-ADAMS	Bastrop	78602	KVS4006	TX	292
1386	ELIGIO BALBUENA VENCES	Bastrop	78957	LZP5063	TX	294
1387	JOHN LEONARD JAMES	Travis	78726	LKJ0010	TX	198
1388	MOISES GONZALEZ CRUZ	Travis	78725	KGX1535	TX	369
1389	SAMUEL ANDREW PEREZ	Travis	78744	PZB1340	TX	284
1390	SELAMAWIT IDO ABEBE	Williamson	78642	VCY6608	TX	252
1391	MONICA PUTNAM	Travis	78660	NXY7969	TX	311
1392	MIKAIEL PANAYOTIS A PILIARIS	Travis	78752	SIK2637	TX	204
1393	KOOLCOTE OF TEXAS	Williamson	78634	NZG0137	TX	234
1394	ELVIRA CARRILLO ABUNDIS	Travis	78653	VCY3638	TX	335
1395	KAYLA ANN MCLEOD	Travis	78704	TWL1258	TX	267
1396	HEBER GARCIA-DELGADO	Bastrop	78659	SCL1377	TX	255
1397	FORTINO OVIEDORANGEL SANDRA PAOLA MUNOZ OVIEDO	Travis	78724	TTC8654	TX	317
1398	BENJAMIN MICHAEL DELAGARZA MARISA MUNOZ DELAGARZA	Travis	78653	VHM0569	TX	339
1399	ANGELA TERESA MARIE FLEMING	Williamson	78642	TWC2322	TX	255
1400	REBECKA JO BLEVINS LARRY EARL BLEVINS JR	Travis	78645	VGH6408	TX	251
1401	BETZABETH CARLIN	Williamson	78641	SLP3637	TX	221
1402	CHANDLER TREVEION SMITH	Travis	78724	TWL7219	TX	297
1403	GUSTAVO DELAROSA JR	Bastrop	78602	SSH8069	TX	256
1404	JOSHUA M YOUNG	NULL	88316	BDMA13	NM	248
1405	AUSTIN STAR SERVICES, LLC	Travis	78617	MBD6969	TX	265
1406	ANDREA NICOLE TEALER	Travis	78653	VCX9488	TX	313
1407	JAMAL TEALER	Travis	78758	TNL1395	TX	263
1408	W&B PEPE'S TACO LLC WENJIE LI	Travis	78660	TZH7159	TX	261
1409	VICTORIA MCKINNEY	Travis	78645	JHD8154	TX	257





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1410	MARK ELSWORTH LOPEZ	Hays	78640	SDG4323	TX	277
1411	TERESA IBARRA SERRANO JESUS SERRANO ALVARADO	Williamson	78641	SML2168	TX	240
1412	ARMANDO VAZQUEZ OVALLE	Bastrop	78612	VCX7988	TX	279
1413	SCOTT SHAFFER	Williamson	78634	SZD2111	TX	272
1414	STEPHEN ERNEST GUZMAN	Travis	78617	5720T94	TX	281
1415	ERASMO HERRERA JR	Travis	78747	T7660L	TX	208
1416	EYBY JULISSA CONTRERAS ALBERTO	Caldwell	78616	VJF5981	TX	261
1417	GERALD BAILEY	Williamson	78641	SKJ8210	TX	206
1418	CHRISTINA INEZ GARCIA	Travis	78617	VCY4538	TX	288
1419	CORINTHIA CASEY	Bastrop	78621	VBP1388	TX	255
1420	HB&M DRILLING	Midland	79706	TGH6359	TX	261
1421	NEXLEGACY LLC KENDRICK DURIEL WHITTINGTON	Williamson	78634	SNT8990	TX	243
1422	SHANE ANTHONY RANDIG KATELYN MARIE RANDIG	NULL	78660	TRR8971	TX	269
1423	JORDI CARRION ANTONIO	Travis	78753	RLF4312	TX	258
1424	CARLOS ALFONSO MOLINA YESENIA SUAREZ-TREJO	Williamson	78642	VBN8641	TX	236
1425	LATONYA MCDOW	Travis	78753	MXJ4206	TX	233
1426	CHEVY LAVERNE HOOD HATTIE GAIL COFFEY	Williamson	78641	TVN0481	TX	235
1427	RUTH CAROLYN SHEARIN JESSICA MARIE ZARATE	NULL	72616	TVH3316	AR	205
1428	YOLANDA LYNN LEAFA	Williamson	78665	TYR6917	TX	232
1429	RAEMON NOBLE LOTT	Williamson	78641	LMT0878	TX	263
1430	LINDSEY NICOLE JOHNSON	Travis	78652	TXS9054	TX	264
1431	BONNIE S SINGLETON	Williamson	78613	TJW7058	TX	234
1432	DUFFY L BUNTON	Travis	78721	SPX7463	TX	130
1433	FABIAN M OCASIO	Bell	76542	RCD4020	TX	267
1434	CHRISTINE LOUISE VALDEZ ARMANDO HERNANDEZ VALDEZ	Williamson	78626	RBZ5683	TX	286
1435	DOMINIQUE L MONIQUE STREET	Williamson	78641	5806J22	TX	234
1436	TOCCARRA MECHEL JOHNSON	Travis	78660	TPC2426	TX	185
1437	SIMON PANIAGUA GUILLERMOCOVARRUBIAS SANTANDER	Williamson	78634	SSL9115	TX	289
1438	LUIS CANTU	Williamson	78664	RWW7084	TX	236
1439	SUNKAJHA LENE DAVIS	Travis	78758	VCX9455	TX	309
1440	JESSICA YUSMELY RAMOS SUAREZ	NULL	78613	TXT5496	TX	248
1441	ALEX CANTU	Travis	78704	VFV0212	TX	292
1442	JASON CHRISTOPHER CARTER	Bastrop	78621	VBV5016	TX	167
1443	RAIZA EMILIA TORRES JOSE ABAD OJEDA	Travis	78747	RBV5223	TX	254
1444	TRADE READY DECONSTRUCTION	Williamson	78642	RDX3110	TX	113
1445	JOHNATHON DILLON GREY	Travis	78741	TDZ4843	TX	220



## CTRMA Prohibited Vehicles

CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

1446	CHRISTOPHER PAUL BARTLETT	Williamson	76574	VBK9450	TX	300
1447	EDWARD FLOYD	Ellis	75125	RLF7979	TX	290
1448	MICHAEL KYLE	Travis	78660	RYW3106	TX	290
1449	STANLEY MONTGOMERY	Williamson	78664	TTC3864	TX	291
1450	HOOK EM UP MOVING	Williamson	78641	TZG8433	TX	233
1451	JUAN ANTONIO SANCHEZ	Travis	78660	SYJ1361	TX	169
1452	DAMARIS RUIZ DEHEZA	Travis	78653	TTN9634	TX	311
1453	CHLOE CATHERINE GOODE	Bastrop	78621	VKZ0355	TX	298
1454	VERONICA TERRAZAS DOMINGO CARBAJAL VARGAS	Travis	78741	TXP5736	TX	237
1455	LAURA AGUILAR	Travis	78724	TSH7637	TX	315
1456	STUART DEAN MOTLEY	Travis	78751	RBV7192	TX	249
1457	YESSICA DEGOLLADO-VELEZ	NULL	78653	VCZ0724	TX	383
1458	KRISTEEN JOHNSON	Travis	78759	MLV8779	TX	262
1459	ROBERT CHARLES JONES	Williamson	76537	TWN6885	TX	277
1460	TIRSO SANCHEZ GARCIA	Bastrop	78612	SCL0696	TX	255
1461	REMIGIO RUBEN CASTILLO	Travis	78660	SWT3219	TX	253
1462	JASON JARRETT JOHNSON	Travis	78724	VFT1140	TX	348
1463	CHELSEY ARLENE TALLEY TUITANO TUATAGALOA	Williamson	78664	RYZ5028	TX	241
1464	LOURDES MOHAMMADINE	Williamson	78634	MPX4343	TX	357
1465	DONALD LEE YATES	Travis	78731	VY4501	TX	235
1466	JESSICA LORENCE	Williamson	78729	LYR5003	TX	245
1467	ALEXIS THOMPSON	Travis	78704	5694P76	TX	308
1468	KRYSTAL LYNN CHANDLER JOHN JOE ZUNIGA	Williamson	78613	VHC0712	TX	371
1469	VICTORIA B RITTER	Lampasas	76550	GW8592	TX	265
1470	Van D Fisher	Travis	78744	TZH1638	TX	292
1471	THAER ZABEN	Travis	78748	TZH4375	TX	271
1472	ERIN LESLIE FENNELL	Williamson	78634	RXV2167	TX	275
1473	JOSHUA XAVIER WASHINGTON	Travis	78704	GJK6845	TX	263
1474	WILLIAM MCCLAIN BONAR	Williamson	78665	TPC2762	TX	209
1475	GWENDOLYN ANN WILLIAMS	Travis	78723	PCC2048	TX	304
1476	OMAR OSMEL ALEMAN MARIN	Williamson	78664	TYH0657	TX	243
1477	JENNA RENEE FISBECK	Travis	78758	RHR8697	TX	260
1478	MCKENZIE JAMES WILLIAMS ABRIANNA ELENA DUMAS	Hays	78640	TXT1974	TX	253
1479	ROBERT E DUNN	Hays	78620	RSB0973	TX	183
1480	SHAMIM R ALI	Williamson	78641	HHD7822	TX	226
1481	SAMUEL BENJAMIN GRAY	Williamson	78664	SYK3286	TX	225



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1482	MARVIN LEWIS JONES	Bexar	78209	VBY5479	TX	230
1483	LEO URQUIDES	Bastrop	78602	TLR2260	TX	261
1484	JOHN G DOLAN	Williamson	78613	NXM2661	TX	253
1485	STEFFANIE MARIE MAYNARD	Bastrop	78602	NPF6436	TX	260
1486	RITA FAY ANDERSON TONY GIPSON	Travis	78754	VBP7232	TX	271
1487	VICTORIA ESTHER ALVAREZ	Travis	78702	TRR7972	TX	305
1488	DAVID JIMENEZ REYES	Travis	78723	TJW6103	TX	255
1489	MAURI RAE MERRITT	Bell	76513	TXN9455	TX	240
1490	JAMES LYNN TUGGLE	Hays	78610	LZR2613	TX	235
1491	ERIC EINAR OSTERHOLM KATERYNA MOSTYTSKA	Williamson	78717	SVW3380	TX	299
1492	JOSE ORLANDO CONTRERAS NAVARRO	Travis	78747	TLM3880	TX	239
1493	MICHELLE REBECCA LANGSTON	Travis	78617	TZH7625	TX	281
1494	ELLEN DOMINGUEZ CERDA ELIASAR HILARIO CERDA III	Caldwell	78616	VJD9283	TX	260
1495	Oliver Mystique Ladawn	Travis	78660	ON3525V	TX	263
1496	JOHN ANTHONY ROBLES	Travis	78744	5744J48	TX	280
1497	JULIAN GAVRIEL RANGEL	Bell	76502	STG1967	TX	253
1498	MARGARET ROSE MARTIN RYAN ALEX BATY	Williamson	78628	VCB5605	TX	235
1499	DEBORAH LEE MENDEZ	Hays	78610	VBB3635	TX	256
1500	MARQUETTE CHAUNCEY DAVIS	Williamson	78634	SZF2166	TX	193
1501	EUSSER ANTHONY DARLING	Williamson	78641	SJC9240	TX	212
1502	PEDRO LOPEZ JAIMES	Travis	78758	TNM3109	TX	279
1503	TFA TEXAS FIRE ALARM LLC - LSE	Dallas	75247	SLV9230	TX	243
1504	FATOUmata KEITA	Travis	78653	VFS6971	TX	361
1505	BLAINE CHRISTOPHER SCHULTZ	Travis	78725	VFZ0686	TX	264
1506	GORDON ANDREW TIMMONS	Williamson	78641	VFS4635	TX	231
1507	MARQUES TAYLOR NUNLEY	Travis	78758	TYP8085	TX	274
1508	JOHNNY JOE RENDON	Bastrop	78602	TZZ1767	TX	320
1509	JORDAN CHRISTOPHER BAKER	Williamson	78613	VGH2097	TX	178
1510	JUSTIN WILLIAM PENDLETON	Hays	78640	KSS8119	TX	262
1511	RICARDO IBARRA ZERTUCHE RACHEL QUIROZ IBARRA	Hays	78640	TNL0784	TX	261
1512	ERIC LEE PRADO	Cameron	78520	NJH1435	TX	252
1513	CLAUDIO ANTONIO LOPEZ-SANCHEZ MELISSA GENAY LOPEZ	Hays	78666	NZB8314	TX	293
1514	DAN ENGLISH III	Travis	78660	RYW4132	TX	255
1515	JESUS SOLORZANO LUVIANO	Travis	78723	VBP5989	TX	280
1516	ROSE MARIE GALAVIZ	Williamson	78717	3PRJN	TX	228
1517	RODOLFO ARELLANO MACIAS	Travis	78758	RTG9131	TX	243



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1518	JESSICA LEE STOTLAND	Williamson	78628	KLV6998	TX	281
1519	JULIO CESAR ESTEVES MEJIA EVA NOHEMY RIVERA PAZ	Hays	78640	VBM7045	TX	252
1520	BRANDEN LEE HILL	Williamson	78664	NTX9465	TX	217
1521	ROBERT DARYL LIPPE	Williamson	76537	RBX4340	TX	245
1522	BARTHOLOMEW A SAGRAVES	Williamson	78634	508BLSP	TX	229
1523	JOSE PABLO MEDELLIN	Travis	78660	TZH7929	TX	241
1524	HOLLI RENEE HILDERBRAND	Williamson	78729	NGN8999	TX	245
1525	BRUCE W MCKINZEY	Williamson	78641	JYF8502	TX	261
1526	MEGAN MICHELLE GEPNER MORGAN MICHELLE GEPNER	Bastrop	78612	TKM3882	TX	277
1527	OCAMPO RAFAELA	Travis	78753	KBY3617	TX	311
1528	YVETTE MARIE DIFFUT JIMENEZ	Hays	78666	TWL8775	TX	310
1529	JOSE A BRACETTY VELAZQUEZ	Williamson	78626	TZH1350	TX	243
1530	STEPHANIE DEANN ZIMMERHANZEL	Williamson	76537	LGL1349	TX	262
1531	VIRGINIA CASTRO REYNA JOE ANTHONY REYNA	Wharton	77437	TKM2666	TX	241
1532	REMY MARCEL JULES	Williamson	76537	VHC0453	TX	273
1533	RICKEY JOE WALKER	Travis	78759	TWN7551	TX	324
1534	JOHANNA MARICELA GONZALEZ	Williamson	78642	TXT0431	TX	213
1535	NICOLA JANE MICHELLE ALLEYNE	Travis	78660	GZC3306	TX	145
1536	JUSTIN TAYLOR CLAKLEY	Bell	76534	RLM2995	TX	191
1537	TANIA LARA RIVERA	Travis	78660	TZH4695	TX	214
1538	ANGELICA MARIE ARANDA	Hays	78610	TYW7805	TX	237
1539	JESUS VELAZQUEZ RICO	Travis	78744	TXJ9095	TX	291
1540	ADRIANA MARTINEZ RENTERIA	Williamson	78642	TNK9051	TX	202
1541	ARRYON LEWIS MAIDEN	Williamson	78729	TNM0588	TX	198
1542	LOGAN JACOB SHAW	Williamson	78641	VCB5783	TX	226
1543	NAIRIM I HIDALGO ALVAREZ	Fort Bend	77441	TTR4224	TX	240
1544	RHET KENDALL	Travis	78705	RFN9415	TX	185
1545	ITZEL ANAHI FRIAS	Travis	78744	TZH2065	TX	283
1546	SKYLEUR HENRY BANKS	Bexar	78109	RJN7346	TX	335
1547	REPUBLIC WASTE SERVICES OF TEXAS	Tarrant	76011	TWX1021	TX	246
1548	DENNIS, MIMZIE KALMBACH	Williamson	78641	5842P17	TX	229
1549	ZACHARY GOODFRIEND CHRISTIE	Travis	78735	TLJ8638	TX	216
1550	RICHARD NICHOLAS GRADY REBEKAH MARIE GRADY	Williamson	78641	TXT1620	TX	226
1551	IVAN JUAREZ CARRERA	Travis	78744	SFZ5729	TX	295
1552	ROMARIO ZALAZAR GALVEZ	Bastrop	78621	TVK7284	TX	168
1553	ROLANDO ORO CAMPO	Williamson	78641	5745B48	TX	205



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1554	STEPHANIE GRACE DALIDA	Travis	78725	VCX8889	TX	358
1555	EMMANUEL PADILLA	Travis	78738	LHS2757	TX	316
1556	NAKIA LAREE HILL	Travis	78724	VFT2007	TX	316
1557	RACHAEL LIMON RODRIGUEZ BERARDO RODRIGUEZ	Hays	78610	RTL2967	TX	307
1558	LUIS GERARDO RIOS JR	Williamson	78641	TXN4461	TX	293
1559	JONATHAN MATTHEW PARRA	Travis	78705	5622C54	TX	274
1560	HELEN MORTIMER	Denton	76227	NTD1747	TX	291
1561	SARAH N STEARNS	NULL	32179	Y068XU	FL	262
1562	REGINA GONZALES SANCHEZ JOSE ELIGIO SANCHEZ JR	Williamson	78634	NLJ3199	TX	275
1563	DEVON MARCELL CLARKSON	Williamson	78665	TXN8732	TX	234
1564	GARY LOUIS ALEXANDER	Travis	78723	KNP8203	TX	263
1565	CYNTHIA ELAINE GUERRA EVELYN AGUILAR HERNANDEZ	Travis	78724	VBN4000	TX	283
1566	GILBERT ESPINOZA	Williamson	78641	5685N19	TX	235
1567	KANE DESIRE BORJAS	Williamson	78613	RSY0057	TX	183
1568	ROGER DALE WOODWORTH	Caldwell	78616	VJS9010	TX	227
1569	AMY NICOLE SHELPAK BARCASE	Williamson	78642	TXN5173	TX	246
1570	RANDALL RENE MARTINEZ MAYRA ABIGAIL MARTINEZ	Hays	78640	MCX8654	TX	238
1571	MARK QUINCY LE BARON-STUBBS	Williamson	78628	TRR8109	TX	222
1572	ANDREA TREVINO	Bexar	78230	MJV4569	TX	338
1573	CESAR MONDRAGON MERCADO	Travis	78660	TWL7065	TX	200
1574	ELIZABETH CARDIEL	Bastrop	78621	NBN6302	TX	348
1575	ERICK GONZALO GALLAGA	Montgomery	77378	TVM7727	TX	228
1576	BHANU TEJA DODDA	NULL	21075	3EJ4963	MD	262
1577	JULIO C CAMPOS BENITEZ	Travis	78753	TBC8107	TX	235
1578	JAMES TYLOR CAVENDER MELISSA MOODY	Williamson	76578	LBV4497	TX	298
1579	ZYSHONNE DELAIN THOMPSON	Williamson	78664	TNM1962	TX	284
1580	JOSE HELGAI CHAVEZ ABBY LETICIA RUIZ AGUILAR	Hays	78666	VCD6231	TX	258
1581	LUIS D ZAMORA PADILLA	Travis	78746	TSN7672	TX	252
1582	WENDY FIORELLA ASCUE PFLUCKER	Williamson	78641	DRJ4014	TX	225
1583	ROGELIO FRANCISCO RUIZ	Williamson	78642	TRY8914	TX	224
1584	NEPHI CHYNOWETH	Travis	78754	DNM2896	TX	240
1585	JOSE JESUS RODRIGUEZ VIDALES AURORA OLGUIN-MALDONADO	Bastrop	78621	RGW3395	TX	289
1586	ALAN SIMENTAL	Travis	78744	SVY4852	TX	258
1587	MASON GERALD WARREN	Travis	78726	TCN8257	TX	202
1588	DEBORAH ANN GILL	Travis	78727	TPC3534	TX	216
1589	GABRIELA HURTADO	Travis	78753	VCX9334	TX	252



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1590	RAYMOND FLORES	Williamson	78641	5678L24	TX	218
1591	ADELA ISABEL MORALES SYLVIA MORALES	Travis	78617	SDH7202	TX	298
1592	HERMAN JONES JR	Travis	78745	DFY0053	TX	230
1593	ALEXIS MORALES	Bastrop	78602	TRM1318	TX	287
1594	VIVIANA ARMENDARIZ DOMINGUEZ	Hays	78640	RYX6269	TX	260
1595	DONNA LOU SCENTERS JUSTIN DAVID RICHARDSON	Travis	78617	TRR4813	TX	245
1596	DEBBIE BERNAL	Travis	78757	SPV9812	TX	291
1597	ANDREW TOBIN ROSS	Williamson	78626	TZG0240	TX	242
1598	JUSTIN BRANDT THOMPSON	Williamson	78628	TRB9865	TX	194
1599	PAULINA NICOLE HERNANDEZ DIANA GALINDO RODRIGUEZ	Travis	78617	SYJ6565	TX	248
1600	MADELINE HOLCOMB	Williamson	78613	JJF6415	TX	160
1601	MARY PAYAN GARCIA	Travis	78758	TNJ2678	TX	264
1602	JESSE GONZALES YOLISMA CASTRO	Williamson	78634	TTC5368	TX	229
1603	CODY WAYNE CAMPBELL	Williamson	78633	TXT4413	TX	215
1604	MARTIN ISAAC WASHINGTON	Bexar	78216	CKV7024	TX	230
1605	EDGAR ESQUIVEL MORENO OERTER K CAJAS-CALDERON	Travis	78660	TLL8272	TX	289
1606	RUBEN PEDRAZA PONCE	Travis	78744	VCZ2852	TX	261
1607	JESSE D. JACKSON	Travis	78750	VCD6221	TX	243
1608	CRYSTAL GUTIERREZ	Williamson	78665	TWK3296	TX	257
1609	MOLLY ROSE KNOTT	Williamson	78642	TRP8097	TX	227
1610	DESIREE MONIQUE MERIWETHER	Williamson	78634	TWL5568	TX	275
1611	AMANDA KRISTI AMAYA	Williamson	78634	TSG8772	TX	268
1612	OCTAVIO RAMIREZ PEREZ	Travis	78750	TNL2254	TX	239
1613	JONZES LLC ROY L JONES II	Travis	78660	TZY6885	TX	229
1614	BRIANNE K BYERLY	Nacogdoches	75965	LTZ2453	TX	237
1615	JUAN YANEZ	Williamson	78664	BH41819	TX	234
1616	CARLOS ABRAHAM VILLAFANA DIAZ	Caldwell	78616	VGZ4031	TX	220
1617	ANGEL ALFONSO GONZALEZ SR	Travis	78653	TGN8012	TX	285
1618	JOHN THORPE	Hays	78666	RCN5717	TX	267
1619	LESLIE LEON WORTON DARREN L WORTON	Hunt	75402	RBM4492	TX	246
1620	MAREN BARWIS	Travis	78752	STL6767	TX	221
1621	DESIREE RACHELLE GARCIA	Travis	78704	TYR0858	TX	252
1622	JAMAL CRESHON SMITH	Travis	78660	TLL9719	TX	287
1623	JEFFERY LESCHUCK	Williamson	78665	LBK9164	TX	219
1624	BRENDA NIETO	Williamson	78641	JYP9273	TX	230
1625	TONI ANISHA HENRY RAYMON EARNELL BLACKMON	Williamson	78634	PDM6453	TX	257



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1626	QUENTIN CHARLES ALDRIDGE	Williamson	78634	SDL2700	TX	239
1627	JOHNATHAN WARREN	Travis	78727	THZ5310	TX	225
1628	RICHARD F DATHE	Williamson	78681	SLT4046	TX	217
1629	RENE AGUILERA ORTIZ	Williamson	78633	TWL5619	TX	217
1630	JOSE A GORDONES CARVAJAL	Travis	78759	VCZ2165	TX	253
1631	GRUPO HERMANOS MANZANO LLC	Travis	78723	SPC7280	TX	223
1632	DARREN AND CRYSTAL VALENTINE	Williamson	78634	JCR3016	TX	232
1633	YESENIA LIZETH DOMINGUEZ ESCOBAR	Travis	78617	TXP4512	TX	270
1634	WESLEY SCOTT RAMSEY	Williamson	78628	5735N21	TX	202
1635	YELITZA E CRESPO PEREIRA	Williamson	76574	VHB9522	TX	268
1636	FABIAN MANUEL MORENO	Travis	78702	RZM7385	TX	255
1637	FLORA FELECIA WILLIAMS	Williamson	78664	DB8H939	TX	253
1638	DIEGO ARTURO MARTINEZ	Travis	78701	HSY8724	TX	270
1639	GEOFFREY GONZALES	Hays	78666	SXN7515	TX	165
1640	RANDI RENEE RAGSDALE	Travis	78745	LUNCHBX	TX	275
1641	AUDRA CLARICE CHAVEZ MARK ANTHONY CHAVEZ	Travis	78754	VCX9588	TX	392
1642	CORTEZ LYMONT DOWDY	Travis	78752	TNM3244	TX	257
1643	JAZLIN ARRIAZA	Williamson	78664	VCY2958	TX	210
1644	JOSE PABLO MARTINEZ BETANCOURT	Travis	78753	TNL1695	TX	218
1645	MIRANDA BETH ERLANSON	Williamson	78665	TNZ9079	TX	244
1646	YOLANDA PEREZ SANTANA	Hidalgo	78589	VRGMAN1	TX	277
1647	SAMUEL AARON MARTINICO	Travis	78702	THZ7533	TX	237
1648	CARL W WILBURN	Williamson	78665	TYN4625	TX	233
1649	DEBBIE ROBERTS FORTNER	Lampasas	76853	TRX8833	TX	193
1650	AVERY CHAPMAN	Williamson	78664	SWT1883	TX	200
1651	KIMBERLY MARIE KNUDSEN	Hays	78640	VBN3588	TX	245
1652	BORHANE CHAIEB	Travis	78731	RFF9866	TX	216
1653	COURTNEY INOCENCIO	Williamson	78634	NXJ4438	TX	263
1654	MICHAEL ANTHONY PRICE SHEREE JANAE PRICE	Williamson	78664	LVL3100	TX	253
1655	BLANCA CASTILLO	Travis	78744	KVM6010	TX	241
1656	SUSANA SINDULFA VELASQUEZ CIFUENTES	Bastrop	78621	TLL1523	TX	268
1657	SHAWN MICHAEL HOBBLE	Williamson	78628	SLC5481	TX	200
1658	SAN JUAN SALAZAR	Caldwell	78644	VJS9221	TX	233
1659	WILLIAMS SCOTSMAN INC	NULL	46241	3511815	IN	229
1660	ENRIQUE PEREZ	Bastrop	78621	RWW9731	TX	292
1661	MADISON MARIE TAYLOR	Travis	78744	TVM1819	TX	228





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1662	SARA LEE MEDRANO ISRAEL TINOCO	Travis	78704	TZH7813	TX	265
1663	CRISTIAN B BERRUQUIN-CAMILO	Bastrop	78650	TLY3521	TX	272
1664	JOHN RAFAEL VALOR	Harris	77375	LJM0997	TX	229
1665	MANUEL WAYLAND MATHIS	Williamson	78642	SHP6314	TX	207
1666	LUIS ENRIQUE PEREZ ZAMUDIO	Travis	78744	TSC4206	TX	144
1667	SCOTTY LEE PETERSON TAWANA SHONTE PETERSON	Coryell	76522	SHB5299	TX	185
1668	DEIDRA CAPREE JONES	Travis	78721	TZH5373	TX	254
1669	DENNIS GOMEZ-LEIJA KRYSTLE DAWN ALEXANDER	Travis	78660	TWT1983	TX	224
1670	ADAN GARZA JR	Travis	78723	THZ9225	TX	240
1671	RYAN CHRISTOPHER KIERNAN	Williamson	78665	SNB4319	TX	207
1672	JON ERVIN RADKE	Dallas	75042	TYL4172	TX	176
1673	RAIKELY RAMIREZ TOLEDO	Travis	78741	VFS3675	TX	243
1674	AMANDA MARIE VASQUEZ EDWARD GARZA VASQUEZ	Travis	78617	TZH0626	TX	231
1675	JAHMAAL RAY DUMES	Travis	78660	TKT6216	TX	242
1676	DRELON LANG	Travis	78754	5856R91	TX	275
1677	JAIRO ARMANDO RAMIREZ MENDEZ	Bastrop	78612	NPX6451	TX	213
1678	AMANDA VALLEJO CARLOS DE LA FUENTE	Travis	78617	TZH3167	TX	124
1679	Janie Schick	Williamson	78665	RWV1701	TX	162
1680	EDUARDO ANTONIO GUZMAN JR	Hays	78666	TGM6888	TX	222
1681	WAYNE LUKE EVERETT	Montgomery	77372	TMN2924	TX	253
1682	TIMOTHY E FORD DANIELLE CAITLIN SNELL	Bastrop	78602	VBP0726	TX	242
1683	SALMAT KEHINDE OLADIPUPO	Travis	78744	THJ4596	TX	228
1684	DAVID ALVAREZ	Travis	78617	TJB6692	TX	239
1685	JOSEPH ELIAS CABELLO	Williamson	78665	TTC5459	TX	254
1686	SIMON MARTINEZ	Travis	78723	TWL6577	TX	238
1687	CLAUDIA A DELGADO	Cameron	78521	SLN4733	TX	293
1688	STEVEN E BUSH	NULL	34786	47DFUR	FL	235
1689	MARTHA MUNOZ PRIMERO ALEJANDRO PRIMERO	El Paso	79928	SHY5198	TX	223
1690	NICKOL SOFIA SOLORZANO GARCIA	Williamson	78634	TZH2609	TX	237
1691	VINCENT DELUNA	Travis	78725	KLV8103	TX	299
1692	JAMES PEREZ RIVERA	Bastrop	78621	SHJ9200	TX	251
1693	JUANA VASQUEZ	Dallas	75181	SGC5228	TX	187
1694	MARICELA ANGLICA DELGADO	Travis	78702	TYW8006	TX	274
1695	RYAN JACOBS	Williamson	78642	5770C21	TX	202
1696	CHERHONDA EVETTE ARCHER	Travis	78653	VCY1067	TX	283
1697	EDWIN J GONZALEZ	Travis	78742	TLM4839	TX	231



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1698	MARICELA CELESTE JIMENEZ	Bastrop	78612	VCB9017	TX	221
1699	MARIANO GARCIA TAPIA	Travis	78617	THZ8696	TX	238
1700	RUBEN BETANCOURT PENA JASON HOWARD SMITH	Travis	78653	NRL7929	TX	269
1701	CYNTHIA DANAY ROSS CODY CHRISTOPHER CHRISLEY	Travis	78660	SPC9097	TX	264
1702	CRYSTAL MARIBEL ROSAS	Bastrop	78612	TZH2569	TX	247
1703	DOMINIC LEIBAS	Hays	78640	TGN8818	TX	193
1704	AYMEN TAIF MUSTAFA AL OBAIDI	Travis	78741	TLG7225	TX	212
1705	patricia rivera	Harris	77074	0C7135D	TX	278
1706	CHRISTOPHER PARRATTO	Williamson	78717	RMN7074	TX	192
1707	ANGELICA MARIA SILVESTRE	Travis	78719	TGN7451	TX	225
1708	TEDDIE SUE HYTREK STACYWAYNE HYTREK	Williamson	78641	TJW7377	TX	195
1709	RIORDAN EDWARD BAKER	Travis	78747	TRR4566	TX	288
1710	MOLLY FLY	Travis	78749	DRL1512	TX	217
1711	JOSE DOUGLAS BONILLA	Travis	78744	RCV0111	TX	222
1712	RIVERFRONT TECHNOLOGY CONS MARK KENNETH LEWANDOWSKI	Travis	78756	RGW3492	TX	148
1713	WESLEY LANE MCCOY	Travis	78741	DNM8256	TX	222
1714	RYAN LALIBERTE	Travis	78750	MNR4973	TX	224
1715	BRAD FREILEY	McLennan	76712	GHN7556	TX	262
1716	SABRINA KAYE GREENE	Williamson	78641	5746J73	TX	204
1717	LINDA ZAMORA	Hays	78640	TMP3616	TX	273
1718	VINCENT RAY HOWARD	Williamson	78642	RRK8547	TX	204
1719	CARRIE ANN CHELICH	Travis	78741	RRX5231	TX	200
1720	ROLLING PLAINS CONSTRUCTION INC	Dallas	75150	TTN2054	TX	200
1721	KAMAREON LAMONT HOGUE	Bell	76542	RLF8984	TX	213
1722	CHRISTIE JANINE SPIVEY	Travis	78653	TXN1554	TX	255
1723	MEAGAN ELIZABETH SAXTON	Llano	78609	VDN2534	TX	214
1724	STEPHANIE JULIANNA GOOCHER	Williamson	78681	TRR0888	TX	182
1725	LUIS GARCIA	Travis	78744	KCZ2982	TX	247
1726	ANDRE DESHUN COLLINS	Travis	78660	STK5832	TX	228
1727	ALMA N MEDINA	Travis	78758	JCY1943	TX	238
1728	OMAR SERRANO	Travis	78724	TZG0871	TX	240
1729	SAN JUANITA MARIA GARCIA	Travis	78752	RTG4663	TX	245
1730	CLAUDIA JACKMAN	Travis	78660	RYX9350	TX	177
1731	DAIMEAN JOE CORREA	Hays	78640	TNL1930	TX	106
1732	SAVANAH AMARI GILSTRAP	Williamson	78717	5831A83	TX	214
1733	LORENA SOCORRO MONTENEGRO	Travis	78759	TZG0607	TX	186



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1734	IVAN RAMIREZ GONZALEZ	Travis	78724	NRL7182	TX	272
1735	MARIAN G BENITEZ	Bastrop	78612	KFF7809	TX	230
1736	CRISTIAN ROLANDO ALVARENGA JACO	Travis	78660	SPV9712	TX	234
1737	JASON CASSIDY FULLER	Travis	78727	TPY1154	TX	267
1738	ROBERT SOTO CRISELDA SOTO	Bastrop	78602	VB9831	TX	245
1739	TYRONE BENFORD	Bastrop	78602	TGM7127	TX	266
1740	KACY MICHELLE REDFORD	Hays	78610	STL6580	TX	223
1741	ERIKA LYNN WALTERS MARR JUSTIN CARL MARR	Williamson	78641	VCV7184	TX	199
1742	CLIFTON DWAYNE LOTT III	Williamson	78641	TXP0062	TX	209
1743	FRANCISCO OBREGON SANCHEZ YASMINE DURAN	Fayette	78945	TLL2728	TX	233
1744	LEUDIS MATOS TORRES	Travis	78757	TXJ8457	TX	255
1745	CHIMENE LOREN KIRKPATRICK	Hays	78640	HN5671	TX	205
1746	DAWN RAINES	Travis	78727	DP5B273	TX	273
1747	ALICE MARTINEZ VALLEJO	Travis	78617	TZH8500	TX	233
1748	GREGORY ALAN HAJER	Williamson	78642	TX5604	TX	175
1749	JENY SARAI MEDINA DUARTE	Travis	78752	5974N87	TX	223
1750	KIMBERLY MARIE WALTER	Williamson	76574	TMC0190	TX	248
1751	ALANA CHANDLER WEBRE	Travis	78653	NRL7103	TX	260
1752	MARIO MOTA	Harris	77080	SFG1822	TX	257
1753	ASHLEY LEANOR TORRES	Williamson	76574	TLL9778	TX	273
1754	DARREL GLEN GIBSON	Travis	78759	SLK6093	TX	249
1755	RUSTIN JACK DARTER	Williamson	76574	TVH8178	TX	258
1756	MATTHEW FRANKLIN MILLER	Brazos	77802	RWY1146	TX	225
1757	ANDRES ALBERTO LOPEZ MELISSA ANAHI LOPEZ	Cameron	78521	STH3168	TX	218
1758	YVONNE CYNTHIA PEREZ	Travis	78750	DPD1301	TX	262
1759	KEVIN ALAIN SANTOS ARREOLA	Travis	78753	TRR4239	TX	197
1760	TOMMY LEE PENALBER	Williamson	78613	VCB6003	TX	241
1761	AJA RENEE MATTISON	Hays	78666	TLL2087	TX	232
1762	DELFINO ALDANA CHEGUE MARIA DELAPAZ GARCIADIE CHEGUE	Travis	78724	SHB7533	TX	250
1763	PATRICK LYNN WARREN	Waller	77445	RRD9450	TX	249
1764	AALIYAH DASANI TAYLOR	Williamson	78613	TMT7467	TX	255
1765	VANCE TAYLOR KAISER KELLY JEAN KAISER	Bastrop	78957	TTG1796	TX	220
1766	ANDREW M ORTIZ JR JENNIFER ANNETTE ORTIZ	Travis	78617	VCB4156	TX	234
1767	MASON AUSTIN MOSES	Williamson	76574	SNL6116	TX	223
1768	ANDRES ESPINOZA	Williamson	78681	TYH4400	TX	204
1769	DONNA NOVAK WOLFE	Comal	78130	HSS9889	TX	213



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1770	TEVIN JUAN MIMS	Williamson	78664	VCY6893	TX	230
1771	KAYLA PATINO	Travis	78752	VFT1707	TX	239
1772	PEYTON DELANEY RECK CAROLYN KIRSTINE RECK	Williamson	78641	NRK8786	TX	213
1773	ANASTASIO RODRIGUEZ ORTIZ	Hays	78610	SDH4631	TX	240
1774	JAIME PICOS	Hays	78666	SVW0334	TX	246
1775	MIGUEL DE LA RIVA TOMASA ANA DE LA RIVA	Burnet	78605	SLP3444	TX	227
1776	MARIAN ANGELYSSA MAXWELL	Travis	78724	TNL6148	TX	267
1777	ANNIE PARK-POGUE	Williamson	78642	TTC8602	TX	208
1778	AISHA HILL	Travis	78741	SJM0290	TX	233
1779	CHELSIE RENAE PAGE	Travis	78728	RLK4644	TX	228
1780	ESMERALDA ELIZABETH ESQUIVEL LUCAS BENITO ONTIVEROS	Bastrop	78621	SLP9722	TX	256
1781	RONALD PERRY ROSSBERG	Burnet	78611	KJY5549	TX	210
1782	JENIFER ASHLEY TURNER	Travis	78728	TWK7165	TX	174
1783	ARACELY CASTRO ANTONIO SAUCEDO	Bastrop	78621	TLL3019	TX	258
1784	ALEXIS LIYANA ADAMS RUBEN ADAMS	Williamson	78681	RBB2542	TX	187
1785	ASUNCION ANDRADE GONZALEZ	Fayette	78945	TNL8313	TX	214
1786	SAHITH VASIREDDY	Williamson	78641	TMV1283	TX	207
1787	QUENTIN FRANKLIN BERRY	Williamson	78665	TXN6370	TX	234
1788	LAMIRACLE JOYLYNN JUSTICE	Travis	78724	TXN6105	TX	261
1789	DECARLOS QU VARMALL	NULL	70068	201CSV	LA	215
1790	RUBEN ALEJANDRO PONCE	Travis	78660	SHR8539	TX	280
1791	PONCE MOTORS LLC	Travis	78728	4N5597M	TX	217
1792	EMILY SMEDLEY	Travis	78704	RNL1752	TX	264
1793	MARIA MAYTE GONZALEZ ZARAGOSA GONZALEZ	Travis	78724	NCF7453	TX	268
1794	ERICA FELICE RIVERA	Travis	78727	SPC7795	TX	208
1795	RUBI A CASTILLO AGUILAR	Travis	78724	STK0539	TX	276
1796	TRENT ONEAL JACKSON JR	Bastrop	78621	5842R67	TX	263
1797	JONATHON SAWYER JR	Williamson	78729	VBR8179	TX	247
1798	TAKYRA TISHAY DAVIS	Travis	78653	5735F45	TX	256
1799	YOANA NORALBA VALERO	Val Verde	78840	SLT1051	TX	291
1800	ANTHONY SCOTT CHILDRESS	NULL	75072	RLV9466	TX	223
1801	NATALI GARCIA SANDY FUENTES	Lampasas	76550	TYN7578	TX	208
1802	JENNIFER A BORJA JAIMES	Travis	78758	VJF2456	TX	249
1803	ADELINE DIAZ GRISELDA RODRIGUEZ	Dallas	75217	RJR8224	TX	197
1804	CALEB S ISAACKS	Travis	78759	LNJ5389	TX	257
1805	JOSE SEBASTIAN MARTINEZ	Williamson	78641	TNL4158	TX	195



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1806	ZACHARY TAYLOR SMITH	Williamson	78642	VBG2813	TX	176
1807	AARON MICHAEL BERNARD TIFFANEE ROXANNE BERNARD	Travis	78660	RYS2806	TX	209
1808	MEGAN LANCASTER	Travis	78749	GGV1126	TX	231
1809	CHRISTIAN JOEL PELLOT VALENTIN AEJA LEANN SUE PELLOT-VALENTIN	Travis	78741	SPZ7441	TX	235
1810	TIMOTHY VASUT	Williamson	78665	TJW2353	TX	183
1811	DARWIN CHIRINOS PARTIDA	NULL	78741	VJF2466	TX	226
1812	BRIAN JOSEPH HAUSLER DEVAN LEIGH BROWNSON	Bastrop	78659	TPX2880	TX	155
1813	NICHOLAS REDWINE	Williamson	78634	DBM2082	TX	237
1814	ROBERT EDWARD JASPER	Comal	78130	TSM6099	TX	230
1815	JONATHAN BRANCH	Travis	78660	TMR0310	TX	156
1816	JASON ANTHONY GRIBBEN	Williamson	78642	TVH6559	TX	208
1817	ROSE MARIE SCOTT	Williamson	78641	NHY4547	TX	200
1818	ROISHANA AIYANA WOODS	Travis	78653	TZH7549	TX	292
1819	KERRI MICHELLE PITRE	Hays	78610	RTG5968	TX	201
1820	ROXANNE HERRERA	Travis	78653	FJC5495	TX	267
1821	AVESSA LYNETTE JALOMO ELMA NOEMI VASQUEZ	Williamson	78641	TYV7419	TX	210
1822	SAMANTHA JEAN GARZA MICHAEL ANGEL GARZA JR	Travis	78660	JYP8477	TX	203
1823	CHARLES ALAN MAYER	Lee	78942	VDD3857	TX	249
1824	ROGELIO LOPEZ FERNANDEZ	Travis	78753	FTD8181	TX	294
1825	JESUSITA LOERA	Travis	78741	TZH4255	TX	200
1826	HAYLEE KRISTINE CASTELLON	McLennan	76710	TMF2864	TX	212
1827	JOSEPH KEITH PARRIS	Hays	78640	TBM7919	TX	228
1828	MELINDA D CAMARILLO HERNANDEZ	Travis	78702	TWL4018	TX	267
1829	IVIS ROLANDO MARQUEZ LOPEZ	Travis	78725	PZJ9767	TX	248
1830	PAUL DAVID COMPTON	Williamson	78613	TMR3298	TX	169
1831	JONATHAN DEREK LINGER	Williamson	78613	TBC6531	TX	226
1832	MANUEL LARA GONZALEZ MANUEL GONZALEZ NUNEZ	Williamson	78641	NLJ4789	TX	210
1833	JOHANNA VERALY PORTILLO GUERVARA	Bell	76541	TNW4788	TX	234
1834	SILVIA DE LEON BENSOR RUBEN HERNANDEZ GONZALEZ	Travis	78617	LDY9064	TX	227
1835	KAREN SHALENE WELLS	Williamson	78613	RGW5326	TX	320
1836	DEVIN JAWANN TOWNSEND	Travis	78660	MYR7225	TX	233
1837	CHELSEA LEANN SUTTLE	Williamson	78642	TX0543	TX	198
1838	MADISON RENEE MORGAN	Williamson	78642	TVH4577	TX	173
1839	DAVONTEE T GALLON	NULL	32340	11DPEC	FL	217
1840	KENT HADNOT	Travis	78727	5VLFK	TX	235
1841	JOSEPHINE MAXINE LIMAS MARCO ADRIAN VALDEZ	Travis	78748	TPX1070	TX	219



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1842	PRECIOUS PAMELA CLARK	Williamson	78641	VGH2524	TX	197
1843	DELLA LUIESE PRICE	Travis	78702	NKY1355	TX	178
1844	JASON ANTHONY	Hays	78610	MWS5351	TX	168
1845	KARLA PATRICIA ESCOBAR	Williamson	78665	TNM0713	TX	203
1846	JENNIFER V MEDINA MEDINA	Williamson	78729	TPK8779	TX	267
1847	ABIGAIL DOMINGA CALLAZO	Bastrop	78621	TZG4645	TX	257
1848	OLIVER LIAM DEREK KETTERING THOMAS HAN GARCIA	Bexar	78239	VBF1298	TX	267
1849	PAMELA JEAN WILLIAMS	Williamson	78642	TVH6163	TX	194
1850	NOELY JANIANNI QUINTERO CRUZ	Travis	78738	TVC4779	TX	218
1851	MARIA B RAMIREZ CONTRERAS	Tarrant	76106	NNP0721	TX	202
1852	ROLONDA HEATHER GRANT	Travis	78759	TXP4069	TX	220
1853	COLIN MICHAEL GOLDEN	Travis	78759	LXG0803	TX	236
1854	ROXANNE MARIE JACKSON	Hays	78610	DH5L487	TX	230
1855	JOSEPH L HARROLD SACHET NICHOL HARROLD	Williamson	78613	VCK7767	TX	311
1856	HEATHER MARIE CHALAMBAGA ISAI DEL VALLE CHALAMBAGA	Travis	78727	TLL9718	TX	189
1857	DANIEL SEAN MEEKER	Williamson	78634	TSN7966	TX	164
1858	JOSEPH MARTY HUDSON	Hays	78737	RWX9975	TX	241
1859	JAIDEN RUBEN SMITH	Bastrop	78621	TWJ9632	TX	228
1860	CHANCE WARREN LOTT	NULL	78628	5753S70	TX	210
1861	JEFF NORRIS	Travis	78744	FDM0628	TX	265
1862	JORGE A GONZALEZ FERRANT ANA L REYNA LARA	Travis	78759	TRP2978	TX	221
1863	ALLISON AMIRA FRASER	Williamson	78642	VDJ9304	TX	202
1864	JOHNATHAN STEBBINS HAUGH	McLennan	76705	SCK4860	TX	228
1865	KYLE JAMISON BROWN	Williamson	78641	TRX0904	TX	234
1866	JOE MICHAEL CAMPOS	Travis	78660	TCX7550	TX	235
1867	ALEXANDREA NICHOLS	Travis	78660	TJB7050	TX	198
1868	ANGEL D J MARTINEZ VILLAMAYOR SHERELIN D BOLIVAR VASQUEZ	Williamson	78681	TYV6949	TX	188
1869	SHAQUEL SHARVALIA CUNNINGHAM	NULL	76533	TGZ7048	TX	210
1870	JARED LYNN WRIGHT JARED LUKE WRIGHT	Williamson	78613	PYB4012	TX	199
1871	JUAN ESTRADA JR	Travis	78660	TPX0809	TX	230
1872	JOSHUA GRAYCKOWSKI	Hays	78610	TMF1705	TX	218
1873	BRAND X INTERIOR INC ROBERT WAYNE KNOX	Hays	78666	LWP4545	TX	231
1874	DAVID ISAIAH MARTINEZ BONNIE DARLENE ENGLAND	Williamson	78641	VFL5279	TX	187
1875	JUSTINE MARIE GONZALEZ	Williamson	76537	VFT9078	TX	218
1876	JOSE OMAR ARENAS DURAN	Bastrop	78621	TXJ1416	TX	250
1877	NICHOLAS ADAM WEAVER	Williamson	78641	LKD2432	TX	186



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1878	ANTONIO GONZALEZ BALDERAS	Travis	78660	TDD4282	TX	224
1879	MARIVEL D FORTENBERRY	NULL	78641	JSX6244	TX	171
1880	JOSE ANTONIO GONZALEZ SOTO MARIA ISBEY PONCE DE GONZALEZ	Travis	78758	RYX6332	TX	259
1881	LISA WARREN	Williamson	78642	SRP7238	TX	202
1882	SELENA MARIE VRABEL	Travis	78653	VCB6276	TX	277
1883	JAMES THOMAS GUARD	Williamson	78729	TNL4993	TX	182
1884	YVETTE D MILLER	NULL	29406	WRH500	SC	223
1885	DAVID ALLEN SMITH II	Travis	78660	NXK9626	TX	180
1886	SANTIAGO RIOS BALDERAS	Travis	78724	TGP0588	TX	240
1887	CATELIN AVERY DALTON	Williamson	78665	SZD1888	TX	182
1888	MARIA AVILES	Travis	78744	NDP7841	TX	237
1889	MA. GUADALUPE RODRIGUEZ	Travis	78653	TGN3897	TX	250
1890	KAY SUAREZ-CASTANON SALVADOR CASTANON RODRIGUEZ	Travis	78723	JYW3600	TX	217
1891	MICHELLE RIDDLE DUSTIN K RIDDLE	Travis	78617	SRC3705	TX	220
1892	RICHARD EDWARD CHRISE	Waller	77445	TFN9684	TX	201
1893	BONNIE FOREMAN HUDSPETH	Williamson	78613	TXT4369	TX	184
1894	MARISA ANN RIOJAS	Hays	78610	NXM2757	TX	222
1895	THOMAS WAYNE SECHELSKI JR	Brazos	77845	PBH2965	TX	247
1896	NORMA LETICIA RODRIGUEZ	Williamson	78729	TWS1583	TX	151
1897	SHERIDAN BRODERICK	Caldwell	78644	RFC9692	TX	223
1898	JEREMIAH MARCUS BEAUDETTE	Bexar	78249	JSF8815	TX	240
1899	CATASTROPHIC SOLUTIONS	Travis	78753	STK2683	TX	278
1900	GLENNYS MARIA GOMEZ OCARIZ	Williamson	78717	PCJ3216	TX	175
1901	EDGARDO E PEREZ CERVANTES DULCE JURIANA RAMIREZ	Hidalgo	78539	GVV5656	TX	244
1902	DUSTIN TODD WHITEHEAD	Williamson	76527	TGN7631	TX	203
1903	DASHANAY ADAMS	Hays	78640	NDP7606	TX	223
1904	RUBIER SARMIENTO LEAL	Williamson	78664	TNW3408	TX	202
1905	ILSE ASHBROOK	Travis	78741	TGN9843	TX	196
1906	REBECCA CANTOS-BUSCH	Travis	78744	SLL2590	TX	265
1907	JAVIER E PEREZ	Williamson	78628	5786D99	TX	197
1908	ALBERTO ROSALES AVA ROSALES	Travis	78741	SRZ8454	TX	199
1909	JASMIN MIREYA SMITH DAVID DILLON SMITH	Bastrop	78621	TWL6928	TX	239
1910	NATACHA RODRIGUEZ	Travis	78728	TTW3256	TX	206
1911	JOSE R COLLADO PORTORREAL	Williamson	78681	STK5407	TX	212
1912	TRANSCO LIVERY SERVICES DBA CAREY LIMOUSINE OF AUSTIN	Travis	78725	TXJ7419	TX	229
1913	ASHLEY MARQUETT YOUNG-PINKSTON	Williamson	78634	VFS9309	TX	212





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1914	MANDY EDWARDS	Williamson	78642	TSX0885	TX	200
1915	CIPRIANA RUBIO	Travis	78744	RBD3939	TX	231
1916	DARIEN ROBERT MOORE	Hays	78640	PZB9743	TX	198
1917	AMANDA ABRAMS	Williamson	78717	TXT5879	TX	229
1918	AARON T MERIMON	Travis	78744	5767Z45	TX	190
1919	JONATHAN ZAMARRIPA	Bexar	78239	0C8191J	TX	242
1920	IAN SPORN	Caldwell	78644	SBX9891	TX	254
1921	SARAH ELIZABETH WHATLEY CHAD MICHAEL MAYS	Williamson	78626	RKC8537	TX	208
1922	ARBURNAE NESHA GARNER	Travis	78702	TNM1291	TX	236
1923	LYRIC WYATT	Travis	78745	SJL3175	TX	208
1924	MICHELLE PEREDA SURIGAO	Bexar	78244	CF5H960	TX	212
1925	LEYRIN YOLANY CHIRINOS NUNEZ	Travis	78741	SBY1438	TX	242
1926	ALEXIS MICHAL THOMPSON MARISSA VICTORIA GOMEZ	Travis	78724	TXH0138	TX	310
1927	NICO D LOCKHART CAMPBELL	Travis	78757	TGN0917	TX	221
1928	JERRY WAYNE MCGOVERN SHANNON LEE SNOW	Bastrop	78953	TLY2500	TX	210
1929	NOE FLORES-ITURBIDE	Hays	78640	TWS2024	TX	209
1930	ERIKA MARTEL	Travis	78660	LLY6986	TX	190
1931	GLORIA BUSTER PAYNE	Bell		BJC1163	TX	205
1932	MIGUEL A CARVAJAL-LEONI	Travis	78727	SPF0064	TX	208
1933	CAYTLIN NICOLE GARZA	Williamson	78664	TFZ6404	TX	217
1934	SHANNA BETH TAYLOR	Lampasas	76550	NNL5316	TX	202
1935	LUIS FRANCO RAMIREZ	Travis	78617	TRS0749	TX	208
1936	ADRIANA MIREYA RAMOS MEDRANO	Travis	78653	TNM2524	TX	257
1937	RONALD LOPEZ GONZALEZ	NULL	33129	BU67FW	FL	257
1938	MALLERY SORAYDA GARCIA	Bastrop	78602	TSP0713	TX	213
1939	BRENT LEE CARPENTER CHELSEA LAINE CARPENTER	Erath	76401	FPX5713	TX	228
1940	JESUS VALENZUELA ARREOLA	Travis	78753	TXN6277	TX	165
1941	LINDA KAY NETHERLAND	Travis	78748	5802B52	TX	232
1942	JORGE G CERDA CASTRO PABLO E CERDA CASTRO	Bastrop	78621	TCW6347	TX	267
1943	JENNIFER B BEST PAUL F BEST JR	Williamson	78681	TFZ7422	TX	167
1944	SONIA BANDA NINO	Travis	78744	TWZ5346	TX	239
1945	FAHIM AHMAD	Travis	78744	RHR9584	TX	208
1946	JESICA ZULEYMI SANTA MARIA SAL DONA	Milam	76520	RYW5816	TX	266
1947	JOSE GUADALUPE PENA LUCIO	Caldwell	78656	RBX5613	TX	204
1948	LORI MICHELLE EDWARDS	Hays	78640	RMR2119	TX	233
1949	FRANCISCO D CORTES CONTRERAS	Kaufman	75160	TZJ5025	TX	206



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

1950	TRACY D MARTIN-GARCIA MCKENZIE RAE HAMILTON	Hays	78610	VCD5381	TX	177
1951	BRIANNA TAYLOR JORDAN	Travis	78645	TFZ7712	TX	186
1952	JUAN F JIMENEZ LLC	NULL	46222	TQF702	IN	204
1953	JOHNSON OLUMIDE ATIBIOKE	Tarrant	76137	TYT9549	TX	202
1954	JOANNE Y RIGNEY	Travis	78754	FPJ2178	TX	233
1955	MARTIN BERNAL	Williamson	78646	CVP0823	TX	189
1956	MELINDA CALINA GOMEZ	Travis	78745	VCY8799	TX	238
1957	LIZETTE T REYES	Williamson	78641	SNL4648	TX	189
1958	JULIA BLAYN WOOTERS	Williamson	78665	TWN5817	TX	220
1959	CARMEN MARTINEZ JENNIFER LOPEZ	Travis	78741	SSY8191	TX	238
1960	JOSUE DAVID MALDONADO NICOLAS	Travis	78753	SYJ9547	TX	196
1961	MIKLYNN KRYSTAL SUSTAITA MAKAYLA KRYSTAL FIGUEROA	Bastrop	78612	SPB0586	TX	217
1962	JOHANA G BRICENO ROMERO	Jim Wells	78333	NCK3703	TX	224
1963	TYLER RUTH THOMAS DARRYL SCOTT DITTMAR	Travis	78748	SJL2598	TX	241
1964	SHELBIE HILL	Bastrop	78621	TRR2173	TX	226
1965	NICHOLAS GILL DARRAH DAVID DWIGHT DARRAH	Williamson	78634	MNZ6112	TX	207
1966	TABATHE L MEANS	Travis	78759	STL5984	TX	227
1967	BOBBI STOLL	Bell	76548	SRR8698	TX	236
1968	ISMAEL GUTIERREZ FRANCO	Williamson	76574	TBS4601	TX	234
1969	NATALIE MARTINEZ	Travis	78758	HMH2280	TX	188
1970	BRANDY MICHELE FORD	Williamson	78634	TLL4993	TX	212
1971	JAIME TOMAS DOMINGEZ GOMEZ	Travis	78724	5915S85	TX	212
1972	JUDY L BENTON EDGAR A BENTON JR	Fayette	78945	FND9791	TX	209
1973	YZAMAR RIVERA JENNY PRISCILLA RIVERA	Travis	78758	TZG9613	TX	203
1974	DAMONIQUE LAREESE PRESLEY	Montgomery	77354	VFY4448	TX	264
1975	TIFFANY ANN NICOLE VASQUEZ HECTOR R AGUILAR	Hays	78610	RBW1834	TX	201
1976	JOHN FRANCIS MALEY EMILY RAE MALEY	Bexar	78255	STABBY	TX	197
1977	REBECCA ANN YBARRA JULIAN LOUIS MARTINEZ	Travis	78744	VCN4049	TX	225
1978	TRAVIS GLENN WOODARD DIANA ALVIDREZ WOODARD	Williamson	78641	THJ5435	TX	219
1979	ROBERT CASTILLO	Hays	78610	TNL1134	TX	183
1980	MARTHA ELENA COLUNGA DELGADO JOANNA RUBY COLUNGA DELGADO	Travis	78754	TRR1486	TX	242
1981	DAX STAVE CASTRO-GOMEZ	Hays	78610	STS5427	TX	212
1982	CARLOS ALBERTO VENCES-GUZMAN	Travis	78653	MYT1467	TX	254
1983	DANNY FUENTES NATAL	Hays	78640	TXN8848	TX	233
1984	DEVIN SERGEY BLAKE	Williamson	78628	5803P51	TX	177
1985	JEREMIAH NICK VELASQUEZ	Lubbock	79363	NKY0437	TX	219



## CTRMA Prohibited Vehicles

CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

1986	RUTH JONES	Travis	78653	HYB5647	TX	229
1987	HECTOR REVOLORIO CRISOSTOMO ESPERANZA CRISOSTOMO LOPEZ	Travis	78741	SPW9256	TX	210
1988	JOSE JAVIER MORENO MOSQUEDA JUAN ANDRES SEIJAS BRA	Travis	78723	5936G99	TX	226
1989	MARCUS LINWOOD CARTER JR	Williamson	78641	MYS8590	TX	206
1990	BRUCE CARTER DELPHANIE LASHAE PARKER	Travis	78653	TXT2616	TX	246
1991	BEATRICE ESPINOZA ESTRADA	Travis	78725	LVL1946	TX	216
1992	ELOY ELIBERTO RICO	Travis	78728	SNZ2582	TX	172
1993	JACQUELINE CARBAJAL HERNAN CARBAJAL	Travis	78660	NCD5073	TX	267
1994	AL MANSOUR GROUP LLC	Williamson	78681	SFR2601	TX	207
1995	JACK RYAN JEFFERY	Travis	78741	STK6052	TX	200
1996	KARIJO LYNN STILWELL	Williamson	78641	TZH0303	TX	191
1997	NICKOLE ALEXANDRA CRAWFORD	Williamson	78665	PYB8522	TX	229
1998	BRITTON CALVIN	Travis	78660	TZH3296	TX	224
1999	ANGEL DIAZ VEGA	Bexar	78237	RBD8621	TX	177
2000	TYRONE PAUL JACKSON	Travis	78741	TWK8535	TX	203
2001	JOSEPH FRANK MARTINEZ JR LAMANDA GAIL MARTINEZ	Bastrop	78957	GV89MY	TX	230
2002	ROSALBA MARTINEZ TOVAR PEDRO ALONSO MARTINEZ	Bexar	78211	SJT2072	TX	219
2003	ANALI HERNANDEZ VAZQUEZ	Caldwell	78644	SVT2341	TX	228
2004	MICHAEL GUAJARDO	Williamson	78665	SJR9940	TX	226
2005	MONICA YVETTE BROWN, QUENTIN LAVAR GOODE	Travis	78660	5755X29	TX	143
2006	SEAN ISAAC ADAMES	Bexar	78217	TLP0379	TX	212
2007	CHRISTY PARRISH	Lampasas	76539	SRS8459	TX	189
2008	PETER DAVID RUSSIAN	Travis	78660	RFF5340	TX	218
2009	SHANE SURNAN ADEN	Travis	78660	TRR9592	TX	227
2010	LAURYN NICHOLE SEPHUS	Travis	78653	TWL3494	TX	211
2011	DAVID PEREZ JR SUSANA GUTIERREZ PEREZ	Travis	78759	NTY5724	TX	200
2012	ADRIAN JAMES SIERRA STEPHANIE NICOLE HERNANDEZ	Williamson	78665	TBS4822	TX	216
2013	AUS-TEX SANDBLASTING & COATING NAVEL GARCIA	Travis	78617	VJF2468	TX	153
2014	TIMOTHY BURGESS	Williamson	78626	NHY4341	TX	186
2015	AMARIS MARIA GARZA	Bastrop	78612	SHC4519	TX	203
2016	LINDA MARIE LOMAX	Bastrop	78650	VCY8537	TX	249
2017	DIANN CARTWRIGHT SPARKS MAGGIE LEEANN TAQUI CARTWRIGHT	Fayette	78945	MVD8894	TX	209
2018	J3 CONTRACTORS LLC (LESSEE)	Bastrop	78602	RYX1556	TX	197
2019	ITZEL STEPHANIA HOLGUIN JOSE DE JESUS ALONSO	Travis	78753	VBP1431	TX	180
2020	J MARCOS GUERRERO WILLIAM IRAM GUERRERO	NULL	49509	TCX4741	MI	189
2021	JAQUELIN H BENITEZ D RODRIGUEZ	Travis	78724	TLL9827	TX	311



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2022	MAUREEN RYAN MCFADDEN	Williamson	78613	JDR9509	TX	240
2023	EVELYN CARINA MOLINA	Liberty	77327	TNF0462	TX	233
2024	ARLENE MICHELLE MARTINEZ	Travis	78758	SCP9759	TX	168
2025	CORDEJA MONIQU HOPES HAWTHORNE	Travis	78702	VBP7457	TX	237
2026	NOAH MATTHEW MARK SALES	Travis	78724	TLD6539	TX	255
2027	HANNAH NOEL RANG	Travis	78728	VFS6202	TX	198
2028	GRISelda GALINDO LOPEZ	Travis	78744	LDZ0617	TX	230
2029	EDUARDO PEREZ-ALONSO	Travis	78617	TDZ6103	TX	229
2030	DAKAR AUTO SALES LLC	Bell	76541	3N4541V	TX	252
2031	JOSHUA STEPHEN DURHAM	Hays	78640	THZ8893	TX	190
2032	RDO, UNIVERSAL FLEET MANAGEMENT	NULL	78366	VDB6742	TX	204
2033	JOHN WAYNE FUEDO II	Travis	78741	VCX9441	TX	204
2034	JENNIFER LYNN NESBY	Williamson	78634	LZX1764	TX	229
2035	EDWARD RAYMOND CLARK	Hays	78640	MWH8570	TX	198
2036	YADIRA C RODRIGUEZ MARTINEZ FREDDY M RODRIGUEZ MARTINEZ	Travis	78759	VBP4293	TX	197
2037	ADAN CORIA BOLANOS REINA RODRIGUEZ MAYA	Travis	78753	NCC4228	TX	224
2038	DAVID LEE MUNIZ	Travis	78753	TRR3474	TX	224
2039	JOSHUA MONROE KVAVLE	Travis	78704	TXJ7679	TX	151
2040	ELVIA M MENDEZ	Travis	78754	KNN5107	TX	230
2041	CECILIA GARCIA HERNANDEZ	Travis	78753	TRP8830	TX	173
2042	VERONICA RODELA RODRIGUEZ	Williamson	78717	TWK3615	TX	162
2043	FRANCISCA BERNAL MENDIETA	Williamson	78634	TJB0840	TX	222
2044	YENYSE M MEDINA	Bastrop	78621	TGS4742	TX	224
2045	KEVIN DALE OQUINN	Williamson	78664	SJL6378	TX	221
2046	JOHN DALTON GOODSON	Bastrop	78602	RRK0118	TX	204
2047	STEPHANIE FERNANDEZ ACEVEDO	Travis	78750	STL3005	TX	205
2048	AMANDA FLORES	Travis	78725	TWS9140	TX	235
2049	JOHN JOSEPH ZAMORA JR	Williamson	78634	TCY9167	TX	164
2050	JAMES KE STANFIELD	NULL	71067	Z293224	LA	192
2051	DANIEL DE LEON PUENTE	Travis	78747	MSF5296	TX	207
2052	MANDY BETH CAMERON	Williamson	78664	TDG9064	TX	168
2053	ANIVAL ZUNIGA	Caldwell	78656	VBV6589	TX	235
2054	ELIAZAR MARTINEZ	NULL	87048	HBP0025	NM	139
2055	BRADLEY WAYNE JONES	Williamson	78627	SSV7311	TX	176
2056	JUSTIN MICHAEL PERREAULT	Williamson	78613	GJZ6540	TX	164
2057	JANEECE DE LUNA	Travis	78745	NRJ4002	TX	206



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2058	VIVIAN GLORIA PEREZ VICTOR MIRELES PEREZ	Williamson	78626	RYH7244	TX	227
2059	MARIA ESTHER MORALES JULIAN AMAYA	Travis	78653	VCY6241	TX	245
2060	NATALIA ANEZ II	Williamson	78717	TJW5965	TX	147
2061	TERRI LYNN CEBALLOS LIONEL CEBALLOS	Travis	78653	TPC4464	TX	214
2062	JOYCELYN ROSHAWN TILLIS	Williamson	78634	SVC3097	TX	204
2063	DAVID HUERTA	NULL	80909	CPVL58	CO	214
2064	JOHN CURTIS PROCH	Fayette	78945	TKS9702	TX	196
2065	DEBORA R CANO	Travis	78725	LYV5930	TX	216
2066	ALFONSO MARTINEZ MORALES	Bastrop	78602	VBP2518	TX	194
2067	KARLA J SOLORIZANO RENTERIA	Williamson	78613	TYR7673	TX	193
2068	CALEB PAUL CUMMINGS	Hays	78610	TRR0020	TX	211
2069	NATALIE SANDERS	Travis	78704	TZG1059	TX	229
2070	ROSITA JUDY YORK	Travis	78660	TRX3847	TX	163
2071	DAMON BRIAN PARISHER SONIA PARISHER	Burnet	78605	TTK0558	TX	184
2072	SHERRIE L WILLIAMS	Travis	78747	4VTZG	TX	209
2073	DANIEL CARREON BARNES	Travis	78653	THZ2598	TX	256
2074	FERNANDA LOPEZ	Williamson	78634	5737T13	TX	161
2075	JOSHUA CLERMONT	Caldwell	78616	TXJ8833	TX	183
2076	LEONARD JOHN FARIAS	Nueces	78413	TWJ4965	TX	222
2077	ERIKA DEL RIO-RIOJAS	Bastrop	78621	TZG6352	TX	229
2078	BRIDGETT PARDO HINOJOSA IZABEL MARIAH HINOJOSA	Travis	78744	TJB6301	TX	278
2079	Jonelli Bercasio-McGinnis	Williamson	78642	TWL0378	TX	184
2080	BRITTANY NICOLE RYAN	Williamson	78665	VBN6171	TX	198
2081	KATIE ANNE COURREGES, CALEB AUSTIN COURREGES	Williamson	78628	5849H49	TX	180
2082	JENESSA LIZETTE BUENAVISTA, JOSE ROBERTO GONZALES	Travis	78653	5913A58	TX	237
2083	SERGIO OROZCO	Travis	78617	TRR4055	TX	198
2084	REDLINE MASONRY STUCCO LLC	Williamson	78664	VJF2688	TX	192
2085	JOHN PAUL VILLEGAS	Travis	78617	HBV1490	TX	209
2086	AGUSTIN OCHOA ESPINO	Hays	78610	TCW6015	TX	179
2087	DESTINY LAWRENCE DEVAN CRAIG	Travis	78617	TZG2576	TX	222
2088	ALICIA PALACIOS	Travis	78753	TVM3007	TX	205
2089	NICHOLAS PARENTI	Travis	78724	KLT2298	TX	240
2090	KATHRYN ANN MILLER JEROD PAUL DUNCAN	Harris	77493	TGV0841	TX	163
2091	PEDRO CHAVERRI RODRIGUEZ PEDRO ANGEL CHAVERRI AGUIRRE	Travis	78725	VFL6743	TX	303
2092	TRAVIS BRANDON MAYNARD	Williamson	78613	5706D32	TX	182
2093	MARSHA DURANGO	Bexar	78297	VGY1992	TX	177



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2094	ALVIE SOLOMON YOUNG JR.	Williamson	78641	5958S60	TX	189
2095	BRENDA LEIGH FARRIS	Travis	78754	TXH0746	TX	203
2096	ROBERTO MARTINEZ MONS KEILA MARTINEZ QUESADA	Williamson	76527	VCY6356	TX	208
2097	RAYFORD JEARRELL WASHINGTON	Travis	78660	TRR2213	TX	205
2098	AYMAN KOTOB	Travis	78660	DR7G387	TX	225
2099	JESSICA DURLING	Williamson	78729	NLS0267	TX	188
2100	CHRISTIAN THOMAS GARCIA	Williamson	78641	HKS1446	TX	173
2101	SYLVIA ROWE COLBY ASTIN ROWE	Montgomery	77386	NKD8475	TX	200
2102	LEVITY POOLS LLC (LESSEE)	Williamson	78613	SWM9337	TX	180
2103	AYESSA DENISE BANUIOS	Travis	78741	MKW9158	TX	185
2104	GILBERTO AMAYA	Travis	78741	VBP1375	TX	187
2105	KATHERINE KASSANDRA MEDINA	Coryell	76522	TGZ6311	TX	185
2106	DENISE LANE WHITE JOHN PAUL WHITE	Cooke	76240	DYV5164	TX	244
2107	RANDALL DEJUAN RUDOLPH	Williamson	78626	TZH7535	TX	212
2108	JENILEE MARYSA WOODFIN RYAN HUDSON	Tarrant	76123	SWB3320	TX	183
2109	PLUMB DOCTORS INC (LESSEE)	Williamson	78681	SJF2496	TX	185
2110	YORDANIS MORALES CALDERON	NULL	85035	K9A14V	AZ	224
2111	PEDRO HERNANDEZ RANGEL	Travis	78728	VCZ1364	TX	179
2112	TAYLOR LEE SCHAFFNER	Travis	78759	TGM8878	TX	159
2113	JESSICA HANLON (LSE)	Williamson	78717	TSN7702	TX	165
2114	BLAKE ALVIN DOERRING	Travis	78741	TYW8125	TX	178
2115	NICOLAS GERARDO CARBAJAL	Travis	78653	DWV5351	TX	238
2116	CARLOS MALAGON	Travis	78723	MXK0165	TX	257
2117	ROBERT JAMES DEVRIES	Travis	78732	VGX9751	TX	245
2118	DIANE MARIE MORALES	Bexar	78222	TFY9122	TX	230
2119	DAVID ANTHONY VERA II	Travis	78747	TRP3432	TX	241
2120	BRANDON K BROWN	NULL	71118	Z598122	LA	187
2121	ASHLEY RALEY	Lampasas	76539	SFN0048	TX	184
2122	MICHAEL WILHOOVER WEEMS	Williamson	78641	RCR4597	TX	183
2123	CESAR CRUZ	Travis	78744	SKD6874	TX	174
2124	DANIEL GRANDE PEREZ	Williamson	78641	SHN7871	TX	166
2125	ENRIQUE JAVIER MARTINEZ	Travis	78617	5700U46	TX	184
2126	CHARLES CLARENCE WATTS	Travis	78747	SCW2643	TX	207
2127	FRANCINE APRIL HERRERA OSCAR MANUEL SIFUENTES	Fayette	78945	TLW7338	TX	202
2128	JESSE LEE DIAMOND III	Bell	76544	SXH5437	TX	173
2129	JENNIE MAE WEEDEN STEVE DEWAYNE WEEDEN	Hays	78610	NYZ6334	TX	195



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2130	JESUS MARTINEZ LOPEZ	Caldwell	78644	TJB1879	TX	195
2131	PATRICK J VELA	Travis	78660	TMS1618	TX	157
2132	RAMON B JIMENEZ DAZA	NULL	32224	CH551C	FL	178
2133	SANDRA TERASA NORWOOD-SLOAN	Travis	78669	TRD0115	TX	206
2134	PATRICIA ILENE BROWN	Bastrop	78602	TLL3982	TX	192
2135	RAQUEL CANDELARIA ESQUIVEL	Travis	78728	TTC1634	TX	188
2136	YANNY LOZANO VAZQUEZ	Travis	78752	SVW8453	TX	203
2137	JOSE LUIS RODRIGUEZ JARAMILLO	Travis	78724	TRP6390	TX	224
2138	ELIAS NIETO COLIS	Travis	78753	TZH5278	TX	218
2139	JOSE JOEL RAMIREZ FIGUEROA	Travis	78617	RLF2794	TX	204
2140	GRETCHEN HALLE	Williamson	78628	MMMP1E	TX	190
2141	ROGELIO VAZQUEZ CERDA YESENIA DELVALLE VAZQUEZ-CERDA	Travis	78617	TJW4956	TX	205
2142	MIGUEL CRUZ	Galveston	77551	NNB4350	TX	189
2143	DAVID GOVEA	Travis	78660	SSK0187	TX	181
2144	DAMION D GARNER	Harris	77383	TWX5257	TX	198
2145	MICHELLE VALDERAS	Williamson	78613	RRZ6677	TX	177
2146	MENDA KAE SPECKELS	Hays	78610	RXX8949	TX	192
2147	ROSALBA LOPEZ AGUILLON	Travis	78653	TZH3516	TX	218
2148	LISA COMSTOCK	Travis	78653	DWC1741	TX	228
2149	WILLIAM MARCUS MACKENZIE DE LEON	Travis	78617	FVP8582	TX	208
2150	CHRISTOPHER DONALD MULLINS	Travis	78754	RTL9615	TX	211
2151	RICARDO JIMENEZ JR	Travis	78747	SGM0329	TX	205
2152	DAVID GRANADA SIMENTAL	Travis	78617	VBP3163	TX	197
2153	LUIS ENRIQUE MORILLO LOZANO	Williamson	78641	TSR9086	TX	167
2154	JOE MORALES	Bastrop	78621	KBY1429	TX	209
2155	JUAN CARLOS LEYVA	Travis	78744	TWL0094	TX	180
2156	MARTELL TRUMAIN JACKSON	Travis	78653	RYZ3178	TX	238
2157	WILLIAM R UZHCA	Travis	78741	TYW8231	TX	168
2158	JAIME NICOLE SMITH	Denton	76205	TRX3793	TX	232
2159	KENNETHRAY DRAKE	Bell	76549	SHP2556	TX	190
2160	LORETTA MITCHELL ANTOIETTE CLAY	Travis	78745	TJB2333	TX	208
2161	FRANCISCO BERNAL	Williamson	78613	PZB8983	TX	184
2162	KRIS LEE VOLNEY EMILY SPADE VOLNEY	Travis	78660	NJJ7343	TX	158
2163	DEAN HOLT BETTIS	Travis	78728	PYB2963	TX	147
2164	TABITHA LEE MCDONNEL	Travis	78660	SVW8779	TX	173
2165	SYLVIA ANN GARCES, CONNIE ANNE ARROYO	Williamson	78729	5696X12	TX	180





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2166	GABRIEL RENE CASTILLO	Williamson	78665	PCJ6831	TX	196
2167	DUSTIN MICHEAL BULL	Travis	78728	TRY7183	TX	180
2168	CHRISTOPHER KYLE MARSHALL	Caldwell	78644	5677W85	TX	187
2169	JOSE REFUGIO ARGOTE LOPEZ	Bastrop	78612	TVF4394	TX	183
2170	CHELSEA VALENTINE	Presidio	79843	RYX7803	TX	202
2171	GEISER OSEAS MARTINEZ SALGUERO MARCO MARTINEZ SALGUERO	Travis	78727	SPW2847	TX	187
2172	DALE WILLIAM COON	Montgomery	77304	TPJ3314	TX	200
2173	TOMMY GIBBY	Bexar	78260	SHR2373	TX	262
2174	MELISSA G ALMAGUER JOHN ANTHONY ALMAGUER	Travis	78653	TWJ8177	TX	195
2175	JOHN CARLO GUMBOC MADRIO	Travis	78727	5789X15	TX	137
2176	WINDOW PORTERS	Bexar	78203	VGZ7240	TX	219
2177	RICHARD GRIFFIN MENCHACA	Travis	78758	BXH8337	TX	256
2178	HECTOR HUGO SOSA	Travis	78727	5746S26	TX	180
2179	WHITESTONE CIVIL CONSTRUCTION LLC	Williamson	78642	TRX2405	TX	117
2180	REBECCA NICOLE ZAPATA	Travis	78749	VBN6827	TX	208
2181	JEREMY WAYNE BOYD	Comal	78130	KYN6116	TX	194
2182	JOSHUA COLE STEPHENS	Montgomery	77356	5735T15	TX	196
2183	ELIZABETH LYNN CASTILLO DONALD ANTHONY CASTILLO	Travis	78660	HZJ8909	TX	214
2184	MICHAEL CURTIS MOTT	Bastrop	78602	TZZ1817	TX	211
2185	ELISABET MORA HERRERA	Bastrop	78602	TWL0364	TX	217
2186	MISTY DAWN HARTMAN RANDY ALEX VASQUEZ	Travis	78701	VBG3747	TX	168
2187	PAULA AYALA	Cameron	78550	CRS5402	TX	233
2188	JORGE PACHUCA TIRADO	Travis	78617	TZZ2388	TX	194
2189	ALAN G TORRES YANEZ EIDEE PAOLA ORNELAS REYES	Travis	78725	THJ4313	TX	252
2190	LISA ANN ESPARAZA	Hays	78640	TTB6553	TX	188
2191	KIARA MONAE DOYLE	Travis	78725	TZG2280	TX	245
2192	CORISA MARIE RUIZ	Hays	78640	MNX1154	TX	227
2193	RAFAEL OLIVARES MARTINEZ	Travis	78753	TPS9129	TX	188
2194	YOLANDA MARIE SANCHEZ	Williamson	78642	TXT3065	TX	170
2195	JACK DAVID VAUGHAN	Williamson	78634	5783L79	TX	201
2196	JUAN MENDIETA	Travis	78744	RBW5930	TX	217
2197	JUSTIN MCDONALD	Bexar	78109	SKP0219	TX	218
2198	LUIS REBOLLAR LOPEZ	Bell	76543	SRS8565	TX	200
2199	KENNETH A WYKOFF	Travis	78653	1YK0FF	TX	222
2200	ANTHONY RAY SANDOVAL	Williamson	78665	SYS4185	TX	186
2201	JUAN GRANADO	Travis	78617	TNM2666	TX	202



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2202	YOSBEL BENITEZ NUEZ	Travis	78753	TCW9986	TX	223
2203	VERONICA GONZALEZ JOSE F GONZALEZ HERRERA	Travis	78653	TGN0460	TX	222
2204	GILBERTO TOVAR	Travis	78660	BR34765	TX	173
2205	JESSICA MARIE LOPEZ	NULL	78640	5716N93	TX	176
2206	SHUAIB CHAMBERS	NULL	78660	5683C54	TX	190
2207	KAYLA SIERA LOPEZ	Travis	78617	TRR3669	TX	194
2208	ANGELYN EGGERT MIKULEC	Bastrop	78957	NSL4672	TX	207
2209	WILLIAM ELIAS ROE, TAMARA CRYAR	Williamson	78641	5528G95	TX	154
2210	JOSE LUIS RAMIREZ MIRANDA NADIA V REYNA	Travis	78744	THZ3760	TX	192
2211	IRENE GUILLEN RAMIREZ	Travis	78724	PCC4914	TX	230
2212	Brad J Andrepont	Travis	78653	RWV3986	TX	225
2213	RICARDO GUILLERMO GARCIA BROL	Williamson	78634	VFT6340	TX	241
2214	MARIA ROJAS JESUS ROJAS	Williamson	78641	DN4V981	TX	180
2215	ANTHONY LEE GONZALEZ	Ector	79763	TNM6010	TX	167
2216	RONALD JASON YEPMA	Travis	78758	VBP6022	TX	177
2217	NATHANIAL BANKS III	Travis	78758	SRR8142	TX	191
2218	BRANDON LEE HARPER	Montgomery	77357	BRANDON	TX	191
2219	ERIC REED	Bell	76549	TPY5548	TX	194
2220	ANDI ASHIA KEMICO HODGE	Hays	78610	TCY3260	TX	188
2221	JENNIFER ANN CHACON	Williamson	78717	5905U30	TX	202
2222	JESSE RAY ROMO-GALABEAS MACKENZIE ALLISON BOYLES	Travis	78741	5929Z98	TX	203
2223	DUKE CLEON JONES	Williamson	78634	5895V81	TX	212
2224	MICHAEL DEWAYNE HOWELL SADARION RACHELL HOWELL	Williamson	78665	SMF9104	TX	164
2225	MARLON JESUS HERNANDEZ SANCHEZ	Fort Bend	77498	VCW4523	TX	110
2226	WILLIAM SALVADOR RODRIGUEZ	Williamson	78642	5669R63	TX	175
2227	TRISTAN ALEXANDER BROOKS STEVEN LANE LAW	Burnet	78605	TMT7688	TX	162
2228	EDDIE DWAYNE MUSGRAVE LISA GUAJARDO MUSGRAVE	Archer	76351	HPJ7785	TX	180
2229	MARILY SOTO ORTIZ JOSE ANTONIO GAMEZ GONZALEZ	Williamson	78634	MKW5519	TX	186
2230	JULIE PATRICIA DUFFY	Travis	78724	TVH3820	TX	241
2231	CARLOS RAFAEL ROJAS SANTIAGO	Bexar	78227	SNZ6538	TX	181
2232	PAUL HERNANDEZ ENRIQUEZ MARIA D CASTILLO CAMPUSANO	Travis	78617	SLR0263	TX	186
2233	MATTHEW ALEXANDER WHITE	Bastrop	78602	TXT3661	TX	196
2234	EDUARDO MOLINA-GUEL	Bexar	78207	NDX7158	TX	175
2235	CODY ALLEN	Travis	78724	VBP6056	TX	183
2236	DO WHAT IT DO ENTERPRISE LLC	Travis	78653	TWK6637	TX	190
2237	JUAN ROMAN CORTES	Bastrop	78612	TCX5476	TX	183



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2238	RITA YVONNE GOMEZ MIA RENAE GOMEZ	Travis	78653	TRP6635	TX	238
2239	GUADALUPE LOZANO STEFANIE ANN LOZANO	Lampasas	76539	TLH7218	TX	175
2240	LYNDSEY PERRIN	Williamson	78628	SSS1201	TX	156
2241	COURTENAY ELOIS HINCKLEY STUART LAING HINCKLEY	Williamson	78641	TJB0185	TX	209
2242	DONALD WAYNE MOORE	Bell	76542	RWV2490	TX	211
2243	STEPHANIE NICOLE PETTIETTE	Hays	78640	TBD6249	TX	181
2244	MEGHAN MARTHA CORBETT ASHLEY MARIE ROBBINS	NULL	85018	VCY1112	AZ	176
2245	WILLIAM LEE GARZA	Travis	78744	TWL5339	TX	202
2246	FERMIN FLORES JR REBEKAH FLORES	Williamson	78641	TDD4258	TX	172
2247	ERICA DELGADO	Williamson	78641	GKZ2919	TX	177
2248	MARTIN DOMINGUEZ CABRERA	Harris	77001	SYC4966	TX	196
2249	NATASHA JOHNSON	Travis	78725	RWV0405	TX	228
2250	JOSE HERNANDEZ-LEON	Travis	78617	TNX6319	TX	187
2251	ROBERT JAMES LEWIS	Guadalupe	78155	TMP3843	TX	196
2252	PAMELA BAGGETT	Williamson	78641	SJF1866	TX	176
2253	PREMKUMAR NAGULA	Travis	78653	TGH1044	TX	193
2254	BRYAN GOMEZ	Travis	78617	SVW8922	TX	199
2255	MAYORI PAOLA MUNOZ CRUZ	Travis	78741	TGM9957	TX	207
2256	ALICIA VAZQUEZ MARTINEZ	Travis	78728	DWC6335	TX	171
2257	TARRON EARTHMAN, TARRON EARTHMAN	Travis	78617	5517Z49	TX	199
2258	DENISSE ARACELI RODRIGUEZ GUERRERO	Travis	78660	TNL3779	TX	208
2259	JUNIOR ALBERTO LOPEZ RODRIGUEZ	Travis	78741	TXP5185	TX	175
2260	CRAIG HAROLD BURNS RICHARD DELL TISON	Caldwell	78644	SZD2606	TX	188
2261	ALIYAH KATHERYN HALE	Bastrop	78621	TTB0158	TX	209
2262	DAYLAN LAMOND ADAMS	Travis	78724	TLK8105	TX	209
2263	MARIA YOLANDA RIOS DERAMIREZ	Caldwell	78616	BLUSUB1	TX	172
2264	BRIAN SHANE SWARTZ	Williamson	78641	TVN1141	TX	167
2265	MERCEDE CHERRELL THOMAS	Bell	76502	SXH0581	TX	202
2266	PETE GABRIEL GARANZUAY	Navarro	75110	SZH1799	TX	195
2267	JENNIFER MICHELLE HINES ELIZABETH MANNING ELLISON	Williamson	78642	TLV7467	TX	151
2268	KRISTY MOORE RAMON MOORE	Bastrop	78602	TBS4129	TX	190
2269	RYAN DEE BROWN	Travis	78759	TLM2629	TX	165
2270	TINA M TEMPLETON	Bastrop	78602	DN2W767	TX	177
2271	ERIC PRICE	Williamson	78665	RFN7409	TX	209
2272	VS INTERIOR EXTERIOR DESIGNS	Travis	78653	VCY4423	TX	208
2273	SAMUEL OWEN HOLLAND	McLennan	76711	SXG6339	TX	161



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2274	JERRY WAYNE HANLEY ELDA SUSANA HANLEY	Williamson	78681	TRG7921	TX	142
2275	JOE ANGEL CARRASCO	Hays	78610	RPF8937	TX	190
2276	LORI WILLIAMS	Williamson	78641	MRG1675	TX	157
2277	TROY WILLIAM REIM AUTUMN ROSE REIM	Williamson	78634	TSH8082	TX	209
2278	JUAN CRUZ MARTINEZ	Dallas	75212	TMF1376	TX	174
2279	JESSICA J HERNANDEZ RODRIGUEZ	Bastrop	78621	SKK2975	TX	203
2280	PROGRESSIVE VENTURES AUTO PLEX LLC	Bexar	78211	2N0516Z	TX	187
2281	ASH OGUNLEYE	Williamson	78641	SSL9598	TX	161
2282	ANGELIQUE RACQUEL MADRIL	Travis	78744	RNL1990	TX	177
2283	JUAN MANUEL PALENCIA PAULA AVILES	Travis	78725	VBN6600	TX	225
2284	GLISEHT ANABEL GARCIA ORTUNO	Travis	78660	HTM7902	TX	191
2285	JOSEPH HERMAN ECKELS	Travis	78645	RTG4407	TX	153
2286	KENDALL BOYD	Williamson	78641	GNP6294	TX	167
2287	VONI DWAYNE ALEX PRUITT	Travis	78745	TXN8249	TX	206
2288	DOMINGO QUIROZ-TIBURCIO	Travis	78758	TXP5677	TX	274
2289	GABRIEL WYNN TEAKELL	Hays	78666	RHS2918	TX	200
2290	JUAN ANGEL RODRIGUEZ	Travis	78653	TWL1155	TX	205
2291	LAURA GAYLE ALONZO	Bastrop	78602	VDF6794	TX	199
2292	JENIKA GUZMAN	Comal	78070	5607W45	TX	214
2293	ROMOLUS J TUCKER	NULL	34482	Z273BC	FL	171
2294	RONNIE JOE HARDEMAN	Travis	78745	5704N61	TX	202
2295	PRES WELLS	Travis	78753	THZ5479	TX	217
2296	JOSHUA AUGUST ANDREWS	Williamson	78613	JK16V	TX	205
2297	MIGUEL ANGEL GODINEZ ZUNIGA	Bastrop	78621	VJF4973	TX	218
2298	MARLON RICARDO JAMBOOS REYES	Williamson	78613	5490R98	TX	165
2299	KELLY ROSALES	Williamson	78613	RNG3281	TX	124
2300	BRITTNEY RACHELLE BARROSO	Travis	78734	SVW4442	TX	176
2301	JESSICA ROSE EVANS	Travis	78748	RWW0544	TX	164
2302	JAMES GREGORY ROLFE	Travis	78752	TWL6475	TX	195
2303	ROYCE WAYNE SLAVEN	Comal	78130	RMN7020	TX	188
2304	JUDITH VICENCIO DE AGUILERA	Travis	78724	TWL3295	TX	180
2305	ALEXI ALEXANDER MARTINEZ CRUZ	Bexar	78220	VBV5441	TX	191
2306	IRVING GUERRERO VILLANUEVA	Brazos	77803	TKM1897	TX	171
2307	PENDO NYAWINO MUGOWA	Williamson	78613	TTB9052	TX	203
2308	KIMBERLY SOTELO	Williamson	78664	TSK5040	TX	188
2309	TROY CHRISTIAN ANDERSEN	Hays	78640	TXR3630	TX	164



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2310	ANA CECIBEL AGUILAR	Bell	76549	RYS6509	TX	203
2311	YURLEY D VILLARREAL OLARTE	Williamson	78681	5732Z38	TX	208
2312	VICTOR M LOPEZ	Travis	78753	SBY3623	TX	165
2313	ARTASIA MARIE DNELL CLARK	Travis	78723	5667A68	TX	213
2314	AMERIKA MONIQUE MANOR	Bastrop	78602	SHC2958	TX	233
2315	HECTOR GONZALES HERNANDEZ	Hays	78610	VFY0042	TX	200
2316	DOGGETT AUTO BMT - T, LLC DOGGETT TOYOTA	Jefferson	77706	4N3505M	TX	224
2317	CAPITOL VENDING & COFFEE	Travis	78702	FNR0022	TX	204
2318	GERMAN MARTINEZ	Williamson	78664	VBP8170	TX	201
2319	NICOLAS ELIZALDE MORALES	Travis	78653	TWL5615	TX	170
2320	GILBERTO MERCADO SR	Travis	78660	KJF6930	TX	185
2321	NATALIE GRACE MELTON DANATHAN DANTE MELTON	Nueces	78418	TFX4850	TX	158
2322	TRAVIS L STEVENSON	Williamson	78641	LFJ9211	TX	161
2323	RAMON LUEVANOS	Burnet	78611	RRZ0766	TX	167
2324	JESSE MUNGUIA	Bastrop	78957	SHZ8163	TX	172
2325	JUAN DANIEL LOPEZ KATIA VANESSA VELASQUEZ	Travis	78753	VBP3476	TX	204
2326	GERALD EDWARD BAILEY	Williamson	78641	VKZ6168	TX	147
2327	COLEY RAY DOOL	Bastrop	78662	SPN4770	TX	180
2328	TIMOTHY JORDAN JOHNSON	Travis	78754	TTB9745	TX	202
2329	ALEXSANDER CORTEZ	Travis	78747	SKS2048	TX	181
2330	KRISSANDRA L JOHNSON-NEALEY SID DEON JOHNSON-NEALEY	Travis	78754	TVH5562	TX	199
2331	MELISSA NEIDA RODRIGUEZ	Hays	78610	TLL9635	TX	176
2332	MARIE MARTINEZ	Coryell	76522	5786N31	TX	169
2333	TREVOR JAMES TREPANIER JILL RENEE HAXBY	Bell	76542	TGB4502	TX	182
2334	DAJENE ANNTONINETTE BROWNE	Williamson	78641	VBG2823	TX	165
2335	FRANK GONZALES JR	Burnet	78654	VCY3910	TX	132
2336	JENNIFER UNDERWOOD	Travis	78660	CJL9708	TX	205
2337	LEDALJA MONTANIQUE JAMES	Travis	78758	TXP6273	TX	211
2338	THAI LEMARQUE WEST	Travis	78744	TNL3885	TX	222
2339	KALISHA SHAVETT FINLEY	Coryell	76522	TGZ6449	TX	171
2340	NATIVIDAD PRIETO	Harris	77060	JLV4697	TX	227
2341	AUBREON WASHINGTON	Bastrop	78621	5439F56	TX	204
2342	JASMINE SANCHEZ TAYLOR	Williamson	78665	TSS0747	TX	180
2343	LINDSAY NOELLE SANDOVAL ANDRES DELRIO SANDAL JR	Hays	78610	RTF8704	TX	185
2344	JERA ANN TRUITT	Williamson	78613	TZY0297	TX	155
2345	ASHLEY KOVACIC	Williamson	78613	RMN6574	TX	162



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2346	MYKELA RENEE FRUGE-CRAYTON	Bell	76543	TYX6862	TX	218
2347	JULIAN CORDOVA GRANADOS	Bexar	78225	THH0955	TX	161
2348	LOYD L JENKINS	NULL	36105	3A0566X	AL	201
2349	ISIDRO C HERNANDEZ ANGEL HERNANDEZ	Travis	78725	GSX2879	TX	253
2350	LUIS FERNANDO NUNEZ OTOPO	Harris	77095	TKT8526	TX	184
2351	BIANCA CELESTE MADRIGAL	Williamson	78613	GNT9438	TX	201
2352	MIRTHA VELA CANALES	Hidalgo	78572	KHH0888	TX	159
2353	LESTER ERVIN GREEN	Travis	78653	TZG1391	TX	192
2354	ORQUIDEA GARCIA	Travis	78736	TTB6612	TX	180
2355	LIZETTE MARIE LUJAN CHRISTIAN EVERETTE RAMIREZTAPI	Travis	78653	TVM3239	TX	208
2356	NANCY CARREON	NULL	78644	5781F39	TX	192
2357	WAYNE DONALD THURBER	Aransas	78382	FLYDAWG	TX	193
2358	GLENN ALBERT NOLAN BONNER	Travis	78725	SVW8984	TX	219
2359	JEONY H MENDOZA	Caldwell	78644	TMP4475	TX	160
2360	STEPHANIE RICE	Travis	78739	RNK3138	TX	189
2361	SCOTTICIA DASHINE BENNETT	Travis	78705	TBD9942	TX	193
2362	JANA ELLEN HOLLEY JAMIE MICHELLE HOLLEY	Travis	78660	TPC4493	TX	194
2363	RANDI HEAPS	Burnet	78605	TZC2748	TX	154
2364	MARYAEL AYANNA CARTER	Travis	78617	TZG5713	TX	185
2365	JOAO VATA	Bexar	78223	TZH3263	TX	192
2366	ANDRES MATIAS PORRAS HERNANDEZ ANDREA PORRAS MUNOZ	Travis	78645	TCN7997	TX	160
2367	CHRISTOPHER D WILLIAMS	Williamson	78613	DX1J886	TX	173
2368	EMMANUEL LARTEY HOOPER JR	Travis	78741	PDY0741	TX	189
2369	MARTIN MORENO MUZQUIZ	Travis	78617	TTC9446	TX	195
2370	DANIEL ROLANDO S HERNANDEZ	Travis	78744	VDS8513	TX	190
2371	CYNTHIA OCHOA MONTEMAYOR	Hays	78610	RTG6116	TX	172
2372	ANA MARIE CONTRERAS ISRAEL ROCHA	Caldwell	78644	VJS9034	TX	255
2373	TRISTAN RYAN BROWN	Denton	76210	RHS1264	TX	152
2374	RICARDO MARTINEZ	Williamson	78641	SVX1716	TX	165
2375	CHARLES STEVENS LEE	Travis	78660	TZG4453	TX	142
2376	NAYEM KARIM MUNGUIA	Williamson	78634	5806G47	TX	187
2377	DAISY GONZALEZ ROSALIA A SALINAS SALAZAR	Williamson	78664	SJN8623	TX	178
2378	PREMIER COMMERCIAL FLOORS LLC SHAYAM GUMANSINGH	Williamson	78641	GV69GK	TX	158
2379	JOSE ANGEL GONZALEZ ALVARADO	Travis	78617	TLL4463	TX	177
2380	DONNA CRITES	Burnet	78608	RSX8125	TX	157
2381	BILLY JOEL FUCHS	Milam	76567	B22839V	TX	161



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2382	BRANDON EMANUEL MARTINEZ	Travis	78744	RWT6225	TX	155
2383	MIGUEL ANGEL REYNA HERNANDEZ	Travis	78617	VHC3493	TX	173
2384	YOSNIEL MENENDEZ CASTRO	Travis	78731	TRP4146	TX	171
2385	ALYNNIA GRIMES	Travis	78732	TBY0135	TX	133
2386	JACOB ALI ALVARADO	Hidalgo	78577	TZW5753	TX	164
2387	PAOLA MICHELL ALVARADO FLORES	Travis	78754	VJF2184	TX	194
2388	GARRETT IVA PAYNE	Llano	78657	SWK7219	TX	157
2389	ALVARO JOSE SOZA JARQUIN, MERLING V CASTILLO DE SO	Bastrop	78621	5908N71	TX	206
2390	SAMUEL DWIGHT YETT	Williamson	78664	BFB8705	TX	177
2391	MARIO OCHOA RAY THOMAS OCHOA	Hidalgo	78504	SKT1669	TX	205
2392	CARLOS EDUARDO MEJIA LOPEZ	Travis	78724	VCY5327	TX	224
2393	JAZMIN PENA SANCHEZ	Travis	78724	VFT2537	TX	221
2394	KAYLEE NICOLE OCHOA	Travis	78759	TNL5507	TX	167
2395	DOUGLAS ALEXSANDER VIDES	Caldwell	78644	RVB2593	TX	174
2396	RAUL FRAUSTO MARTINEZ	Hays	78640	TDF6888	TX	174
2397	JUAN MANUEL RAMIREZ MARTHA RODELA RAMIREZ	Travis	78741	HFC0734	TX	187
2398	ALYSSA KAYE WINTERS	Williamson	78613	TWH5301	TX	157
2399	BARBIE MCCARTNEY	Williamson	78641	RWX8667	TX	148
2400	SHELINA ANN FAURIE	NULL	78522	TRP6453	TX	152
2401	VERONICA MARTINEZ BRITO	Williamson	78634	SSL7939	TX	170
2402	WILLIAM JONATHAN LUCKEY, SHAINA MICHELLE MOSELEY	Bastrop	78602	5915J24	TX	206
2403	KELVIN VICENTE RIOS RUIZ	Williamson	78717	VFS7203	TX	143
2404	DAYANNIS CORRALES MARTINEZ	Williamson	78626	VBG5024	TX	174
2405	CHRISTINE OLIVIA MCCORKLE JOSEPH K MCCORKLE	Travis	78660	MDW6909	TX	178
2406	SAMUEL BLAIR	Travis	78758	TLL6190	TX	190
2407	TROYVIEA DURRON THOMAS	Dallas	75052	TDF6392	TX	168
2408	TINA MARIE BOUCHER MICHAEL GORDON ANDERSON	Williamson	78681	TVH6489	TX	173
2409	MELVIN FIGUEROA RODAS	Travis	78753	TZG6989	TX	191
2410	ARTURO VALLECILLO	Williamson	78634	SRR5625	TX	184
2411	BRYAN DUKE	Bell	76549	RPJ5735	TX	281
2412	TIFFANY NICOLE RANGEL	Williamson	78626	TVH4825	TX	176
2413	KAITLYN NICHOLE FERGUSON	Bell	76549	RBN2554	TX	166
2414	SSH AUTO LEASE MANAGEMENT CO LLC DBA RENT2OWNHQ	Bexar	78227	VDF8921	TX	190
2415	DANIELLE GALLON	Williamson	78642	JXX0427	TX	140
2416	AM FAM CONNECT PRO&CAS INS CO 456	Harris	77038	TDY7740	TX	198
2417	STEPHEN JOHN MARENGO JR	Travis	78660	PYB8565	TX	151





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2418	JOSE LUIS CRUZ JR	Travis	78741	LMB2380	TX	181
2419	CONCEPCION ALEJANDRA RENDON	Hays	78610	TDF6177	TX	181
2420	EDUARDO ANDRES MELGAR OSORIO	Harris	77020	SVH3513	TX	176
2421	CASSANDRA VECERA BLAKE VECERA	Williamson	78641	TVR7222	TX	155
2422	GARY DESHAUN JACKSON	Travis	78754	TPG9429	TX	236
2423	JUAN DIEGO HERNANDEZ CAZARES SOFIA LOPEZ MENDOZA	Travis	78744	TZG2611	TX	168
2424	GARY WAYNE SIMPSON	Bell	76541	SRS6548	TX	188
2425	KENNETH DUANE RUSSELL	Hays	78610	NDR2924	TX	178
2426	FERNANDO BALDERAS IBARRA	Travis	78724	THZ9820	TX	228
2427	RYNELL DEON PARSON CARLA MARCELLE PARSON	Williamson	78642	TMV0111	TX	149
2428	VICTORIA ANN COKE	Travis	78745	VBP1643	TX	212
2429	STEPHANIE NANCY GONZALES-RAMOS ALEX SAMIR MELENDEZ	Travis	78731	KLV3683	TX	168
2430	JOHN FITZGERALD FORD	Williamson	78642	TRX1082	TX	140
2431	JUAN ANTONIO VAZQUEZ NAVA	Travis	78617	5738F55	TX	211
2432	MYLES MADISON WALEY	Lampasas	76550	TWB0222	TX	136
2433	RICHARD GIBSON	Williamson	78613	RCD4346	TX	173
2434	FREDDIE BROWN JR	Travis	78653	SYJ7028	TX	207
2435	GABRIEL RAMIREZ JR	Williamson	78664	TWN5669	TX	156
2436	EDWARD TAGOE JACQUELINE ANNETTE THOMAS	Bastrop	78612	RTJ7632	TX	170
2437	BRIGIDO MORENO	Travis	78617	79JXV6	TX	212
2438	KRISTEN VERNELL BYNUM	Bexar	78216	RWT9039	TX	201
2439	NOSLEN INOSGAR ESCOBAR OROZCO	Travis	78660	TNL1949	TX	171
2440	BLAINE MICHAEL PARISH	Bastrop	78602	MTC0796	TX	178
2441	MARINA D CARMEN CRUZ PEREZ	Bastrop	78621	TJW1978	TX	203
2442	JEFFERY NIETO ELOISA CARRILLO NIETO	Travis	78750	TTB6968	TX	177
2443	X-RAIN IRRIGATION	Fort Bend	77498	SHF6937	TX	105
2444	CARLOS VASQUEZ	Travis	78617	SGR0942	TX	170
2445	CLEAR REFLECTIONS POOLS & SPA, JOHNATHAN ROBERT BROWN	Travis	78734	RBR2485	TX	174
2446	MARIO RENE CANTU	Travis	78748	RWW0981	TX	190
2447	MARK EDWARD MARTIN	Mills	76844	SSM1777	TX	145
2448	DANNY BUCHER	Williamson	78634	OC8412C	TX	178
2449	ALEJANDRO CRUZ	Travis	78741	STL8675	TX	231
2450	KENDALL MARIE MISTRETTA	Williamson	78641	TWJ1951	TX	145
2451	ELEAZAR ALVAREZ CASTILLO	Bastrop	78612	TLV3830	TX	170
2452	MARKELL F AUTRY	Williamson	78634	THZ4878	TX	186
2453	BROOKE TAYLOR ARCHIBALD ERIK WILLIAM MENSENDIEK	Travis	78753	SYK4116	TX	173



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2454	KEVIN FUENTES CANELAS	Travis	78758	5686U83	TX	180
2455	CHARLES VON ROSENBERG	Williamson	76574	TNL1125	TX	174
2456	SHALLEN LEIGH BOWERS	Williamson	78641	5773H95	TX	152
2457	CRISTINA MARIE OJEDA EDGAR CALVO OJEDA	Travis	78735	NRL3487	TX	210
2458	LEIGH E CROSSNO	Travis	78728	SCG1045	TX	165
2459	JOHN H WILKERSON JR	Lampasas	76539	RPW7077	TX	159
2460	ANA CECILIA SILVA ARTURO BANUELOS-JIMENEZ	Bastrop	78621	PZN9840	TX	196
2461	RAVEN	Blanco	78606	JVN6496	TX	158
2462	MARGARITO LEIJA NINO	Caldwell	78644	RBS6776	TX	174
2463	JOHN MARSHALL HUNTINGTON	Travis	78745	DLG8429	TX	225
2464	DAVID DISRAELI	Williamson	78613	RPJ9755	TX	241
2465	BRANDON WYATT DAVIS	Hays	78610	JXL2454	TX	166
2466	GOLD STAR LEAK AND REPAIR LLC	Williamson	78630	SDH2542	TX	138
2467	GREGORY NOACK	Travis	78750	NRM6317	TX	161
2468	ARLENE YVETTE ESTRADA	Caldwell	78644	SYP4863	TX	173
2469	CODY RAY CRISWELL AUSTIN T SIDES	Williamson	78641	VBG3872	TX	152
2470	AMBER NICOLE DUENEZ	Hays	78666	TWG2662	TX	172
2471	ASHLEY RENAE CUNNINGHAM	Travis	78744	5840P34	TX	179
2472	LISA ANZALDUA	Caldwell	78644	VCV5416	TX	173
2473	JESELL ANGEL CORONADO	Hays	78640	TTG2345	TX	172
2474	FELIPE RAMON TORRES RAMIREZ	Travis	78752	TXP3639	TX	138
2475	CATHERINE GNE SUAREZ	Travis	78753	KSF2297	TX	248
2476	MANUEL DEJESUS VASQUEZ JR	Harris	77396	TSZ2606	TX	192
2477	LUIS ALEJANDRO CANTU	Hidalgo	78560	TJR2361	TX	179
2478	CHRISTOPHER MATTHEW LEE ROSE	Travis	78726	SZD1974	TX	172
2479	MARTIN NARCISO VELEZ-VEGA	Travis	78747	MCJ2589	TX	159
2480	EDWARD EARL E SMITH JR	Williamson	78664	RFF6134	TX	151
2481	MIGUEL ISIDORO VIDAL	Hays	78610	TRP6883	TX	173
2482	BRYAN CUMMINS	Travis	78738	TPC4999	TX	141
2483	HUGO A CANTU	Williamson	78642	VJR9070	TX	158
2484	NICHOLAS ALLEN AUTEN MARY LOUISE AUTEN	Coryell	76522	STW9092	TX	129
2485	CINDY THANH NGUYEN	Travis	78731	TRR5347	TX	191
2486	ALEXUS MARSCNAN DENNIS	Travis	78747	THZ8810	TX	169
2487	CHRIS EARL POWERS	Blanco	78606	NNV7555	TX	169
2488	EDUARDO OCHOA GALLEGOS	Travis	78725	TJM4183	TX	197
2489	VILMA YUDILI MARTINEZ GALAVIZ	Travis	78744	BWD5702	TX	162



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2490	LOGAN MICHAEL ROBERTS	Travis	78702	TYW7538	TX	166
2491	PRECIOUS ROCHELLE KENNON	Travis	78758	TZG0782	TX	158
2492	CHARLES CONTRERAS	Travis	78758	TWK6778	TX	150
2493	KIMBERLY DAWN JACKSON	Travis	78660	RWG9932	TX	172
2494	ISRAEL MALDONADO ANASTASIO	Bastrop	78621	VCB4303	TX	166
2495	OCTAVIUS OLANDO RATLIFF	Williamson	78626	STN6297	TX	154
2496	ALBA LUZ CABRERA-ROJAS	Travis	78653	5827T99	TX	200
2497	SARAH MARGARET TATE	Williamson	78634	TXN4924	TX	164
2498	PAULINA ESMERALDA CHAVEZ JARAMILLO	Travis	78750	SJK8669	TX	158
2499	DANIEL APARICIO	Williamson	78664	TXP3640	TX	189
2500	DESTINY DEANNE DELAGARZA	Bastrop	78612	TKW7577	TX	168
2501	ANEL L GUTIERREZ ZEQUEIDA	Travis	78721	TSC4613	TX	187
2502	MARCIAL ESTRADA CASTANON BRYAN F ESTRADA ROJAS	Hays	78640	TJB6163	TX	170
2503	LIVORIO MELENDEZ FERNANDEZ	Williamson	78641	TXT3833	TX	147
2504	FRANK SELL	Bastrop	78602	TNV5292	TX	191
2505	JACOBI FOXX ADORE HOLLIDAY	Travis	78753	SJC9656	TX	166
2506	ANYE DARVEI FUENTES	Williamson	78664	TWK5156	TX	149
2507	STACY PENNARTZ SCOTT DAVID EUGENE SCOTT	Williamson	76537	NPJ2120	TX	199
2508	MICHAEL OLUWATOMI EFENARO ADEFUNKE OLUSOLA EFENARO	Travis	78715	NNC0259	TX	159
2509	LADAESHA MARSHAY TURMAN	Bastrop	78621	5783Z16	TX	183
2510	SAMANTHA MOZELLE MARROQUIN	Williamson	78634	TLV6125	TX	169
2511	ROBERT ANTHONY GUERRA	Lampasas	76550	3VHSM	TX	154
2512	MIGUEL ANGEL ALVAREZ LAURAN MICHELLE HERNANDEZ	Hays	78610	MNZ5324	TX	181
2513	DORIS J JOHNSON	Travis	78753	DDG6023	TX	187
2514	SAVANNAH J ELAHI	Bexar	78239	BDB4012	TX	141
2515	GREGLEN PELE	Hays	78610	DLV0483	TX	169
2516	CADENCE CORNELIUS	Hays	78666	TKM9125	TX	161
2517	MILES STANLEY KELLER MATTHEW SEAN KELLER	San Patricio	78336	NYD6198	TX	165
2518	SCOTTY MACK MARTIN JR	Hays	78640	SSH6572	TX	166
2519	REBEKAH LAUREN TURNER	Bastrop	78612	SPC4554	TX	167
2520	ERIK RICHARD HEARD	Travis	78653	SDG5840	TX	195
2521	CARLOS AMADOR VILELA SANCHEZ	Williamson	78613	PCN7502	TX	162
2522	NICHOLAS AARON MADDEN AMBER MICHELLE MADDEN	Bexar	78109	SHP8644	TX	172
2523	CARLOS CONSTANTINO SANDOVAL	Travis	78660	TRX3825	TX	142
2524	ASHLEY VICK, JAMES WRIGHT	Williamson	78642	5733Z29	TX	130
2525	ENRIQUE RECIO JR	Williamson	78613	ER111	TX	202



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2526	ALZU AUTO SALES LLC	Bexar	78251	4N2854S	TX	155
2527	JOSE GUADALUPE MEDINA GONZALEZ	Travis	78653	MNZ6800	TX	185
2528	MARC SHANNON BLEAN	Burnet	78611	VBH7683	TX	148
2529	MONICA MARIE RUIZ KALEB ROY RUIZ	Hidalgo	78537	THD5800	TX	168
2530	SHANTA M MORRIS	NULL	78664	TXP1735	TX	165
2531	EMILY GRACE EVANS	Williamson	76537	RLF2667	TX	151
2532	KEN LARRY JACKSON	Travis	78736	VFS6431	TX	157
2533	DARWIN TOMAS FAJARDO JUAREZ	Dallas	75219	SDH7579	TX	169
2534	TAMEKA L HUNTER	Bell	76543	BXP2873	TX	130
2535	VANESSA GARCIA	Hays	78640	SXG4592	TX	166
2536	SHARAE ANTOINETTE KEMPER	Fort Bend	77545	THD8217	TX	174
2537	CLAUDE EDWARD THOMAS JR	Travis	78660	TXS8872	TX	186
2538	DIEGO FRANCISCO MALDONADO	NULL	78634	TTB9890	TX	153
2539	BLANCA ESTELLA ALVAREZ	Williamson	78613	THZ7085	TX	162
2540	ZACHARIAS DANIEL GARZA	Bastrop	78602	5488G83	TX	178
2541	ROBERT EDWARD GUARINO	Williamson	78613	RLF4208	TX	161
2542	BRAYAN J MALDONADO MARTINEZ JENNIFER JANETH GARAY	Burnet	78605	VCB5898	TX	133
2543	JARROD SCOTT MORGAN TASHA MARIE MORGAN	Collin	75002	TMW4023	TX	170
2544	HOMERO DE LA CRUZ ESQUIVEL	Caldwell	78648	TVM3009	TX	169
2545	STEPHEN RAY HUTCHISON II	Bastrop	78621	TVF4640	TX	203
2546	JENNIFER JAIMES JAIMES	Travis	78744	TYW7656	TX	166
2547	LUIS ALONSO CASTILLO	Travis	78748	NNM5172	TX	177
2548	DELMAS SANJOSE RONEY II	Williamson	76574	TRP2932	TX	187
2549	KAYLA MARIE WORD	Travis	78744	THZ8188	TX	161
2550	ADRIANA E BECERRA GALICIA	Harris	77449	SGJ2334	TX	162
2551	TRANSCO LIVERY SERVICES, INC.	Travis	78725	5645K16	TX	178
2552	ANGEL CASAS DELGADO	Travis	78725	STK0425	TX	232
2553	NATALIE TREVINO	Travis	78744	LFG1647	TX	191
2554	GABRIEL THOMAS HOUGH	Bastrop	78602	5541V62	TX	166
2555	MARIO PLAZA GUERRA	Travis	78744	TXP5077	TX	176
2556	MARTIN MARQUEZ JR	Travis	78653	5763R70	TX	204
2557	ANAKAREN DIAZ MARTINEZ	Travis	78724	TRY8239	TX	190
2558	ANGELICA RICO-BAKER THAD SEBASTIAN SCHMIDT	Bell	76548	TBD4807	TX	162
2559	NICHOLAS DANIEL RUGGIERO, CYNTHIA R AMRHEIN	Travis	78653	5758B92	TX	190
2560	EDMUNDO SALAS SANTES	Travis	78753	5686A83	TX	159
2561	BRIGHAM T BREDNICH	Travis	78758	SBX9174	TX	180



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2562	SHARMONE REQUELL HOGG	Williamson	78613	THZ8413	TX	279
2563	XAVIER CYRIL WYNN	Williamson	78681	RVG2376	TX	255
2564	MICHAEL LEE SEGURA	Travis	78617	TTB9376	TX	173
2565	CASSANDRA ALETHEA GARCIA	Bastrop	78621	TCX7229	TX	192
2566	ROSHANDA SMILEY	Hays	78640	SCC1917	TX	237
2567	TRISTEN CHARLES ALEKSINES	Williamson	78626	RLK5012	TX	154
2568	ANDREA MARIE JARAMILLO	Guadalupe	78155	TNZ5816	TX	159
2569	REBECCA BRACE EMBRY	Travis	78660	KKB9659	TX	174
2570	JOSE TORRES	Bastrop	78621	DZB1716	TX	175
2571	JACINTO MARIN GUILLAUME	Williamson	78681	TXH8129	TX	139
2572	DUSTIN WAYNE LOCKLIN	Milam	76520	RWT8185	TX	189
2573	GIOVANNI MARTINEZ	Rockwall	75189	MDZ8592	TX	187
2574	BRANDON TROTMAN	Travis	78653	TMP4537	TX	206
2575	NELI SORIA	Travis	78725	RBW5463	TX	166
2576	SAMANTHA SERINO	Bastrop	78602	BX96102	TX	177
2577	BRANDON & TRAVIA ENTERPRISE LLC	Travis	78712	TLL8285	TX	196
2578	STEVEN JASON JEFFERSON	Williamson	78681	SYS4701	TX	157
2579	LACY LASHA ALLEN SPEARS	Travis	78723	TTC1563	TX	221
2580	COLE ZACHARY BRYANT	Williamson	78681	RFN7497	TX	135
2581	THEOPHILUS MARVEON MCFARLAND JOURNEE ANTOINETTE GREEN	Travis	78702	TZH7616	TX	166
2582	JOSEPH BRANDON CASTILLO	Williamson	78717	TYH2158	TX	133
2583	ANA KAREN RIVERA IBARRA	Hays	78640	SPV9821	TX	153
2584	JESUS MANUEL CASTILLO MORIN	Travis	78725	TTC0706	TX	158
2585	SANTANA RODRIGUEZ JAIMES	Caldwell	78644	NCD6661	TX	148
2586	GRACIELA MIRANDA	Bastrop	78612	5769R96	TX	175
2587	WHITNEY NICOLE SORRELLS	Travis	78617	RBX1810	TX	171
2588	LISA MICHELLE GLASCO, JULIUS EARL MORROW JR	Travis	78723	5957Z43	TX	188
2589	KENDALL VALDIS MCGEE	Travis	78758	MHC8008	TX	158
2590	MARTIN R RANGEL	Hays	78640	STS5445	TX	162
2591	CYD MCCOOL	Travis	78759	TMR2321	TX	156
2592	DANIEL JOLOMI APO FRAME AMO LLC	Travis	78758	TZY3924	TX	152
2593	ERNESTO NAVA	Williamson	78613	5750K43	TX	146
2594	WYATT A SILER	Travis	78744	SNT1559	TX	166
2595	JAVIER MANZANARES	Travis	78741	5432X57	TX	152
2596	MICHAEL EAST	Williamson	78642	DBL9651	TX	144
2597	MARK JAMES WARREN	Hays	78640	TXP2842	TX	161



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2598	SIMON P MACIAS	Bastrop	78662	NND2485	TX	168
2599	CORTLAN JAMAL HARPER	Hays	78666	TPN6977	TX	164
2600	MARQUEL RASHAD JEROME ROSE	Travis	78728	TSH7335	TX	149
2601	SHAQUEETA MA SPEARS	NULL	46312	TPS358	IN	168
2602	STEPHEN OBENSHAIN	Williamson	78613	TVH6615	TX	181
2603	EDUARD COELLO	Travis	78724	DYX9660	TX	198
2604	JOHN LEROY MOFFITT III	Comal	78070	TWJ0847	TX	143
2605	STEPHEN A ESKOLA	Lampasas	76550	LNT2519	TX	143
2606	QUIERDA TESS YERKES	Travis	78704	SJL0155	TX	161
2607	FRANCISCO D CORTES-CONTRERAS	Kaufman	75160	KRP7173	TX	150
2608	NOELLE HAVEN BROWN	Travis	78653	GXR5683	TX	182
2609	JOSHUA SALDANA	Hays	78640	MHH5348	TX	159
2610	KAMARIA RACHELLE PRIMAS	Travis	78747	5948U69	TX	177
2611	DBA PREMIER AC SERVICE LLC JUAN CARLOS ALVARADO	Williamson	78634	TGN7304	TX	152
2612	LUETTA YVONNE CAMPBELL	Travis	78725	TRP9717	TX	205
2613	DIANA LYNN MCINTOSH-BATTS	Travis	78724	NPM0827	TX	176
2614	JORGE JOSE MARTINEZ CAYAMA	Travis	78660	TVW0612	TX	175
2615	HERNAN SEGOVIA	Dallas	75042	MWR0070	TX	112
2616	FRANCISCO DEL CAMPO MACHADO RAYSEL PEREZ ZORRILLA	Travis	78753	VFS6796	TX	152
2617	MARIA A ALVISO	Bexar	78263	LCF9411	TX	178
2618	ANDREA SILVA	Nueces	78411	SRB3586	TX	162
2619	CHARLES AUDREY JOHNSON	Caldwell	78644	7TTPV	TX	157
2620	SOPHIA MACHADO SANCHEZ BENITO SANCHEZ III	Caldwell	78616	SPW8432	TX	153
2621	TIMOTHY SHANE REED	Bastrop	78957	SWR0691	TX	152
2622	LAWRENCE SCOTT SPENCER	Bastrop	78621	TPX1016	TX	181
2623	JOSE GREGORIO GUEVARA	Dallas	75224	TNV5944	TX	187
2624	LAURA SEPULVEDA-STOLL	Williamson	78729	GZZ2303	TX	207
2625	JADE IM BRYANT	NULL	71101	265DRP	LA	154
2626	SERGIO RANGEL CASTANON	Hays	78610	PCC1285	TX	166
2627	SSH AUTO LEASE MANAGEMENT CO LLC DBA RENT2OWNHQ	Bexar	78227	TWC5315	TX	174
2628	SARAH EMILY COVEY	Burnet	78605	MXB1857	TX	145
2629	RODGER ADAM GARRETT	Hays	78640	SHB6590	TX	171
2630	JOSE GERARDO GARCIA	Travis	78735	RBB0933	TX	150
2631	SHREVE ENERGY LLC	NULL	71101	612GKM	LA	163
2632	PATRICE LASHAY OWENS	Bastrop	78621	TZG6917	TX	190
2633	KATHRYN SUZANNE KIRCHHOFF JAMES EDWARD BAUGH	Travis	78645	TLD2390	TX	145



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2634	JOSEPH WILLIAM CARROL FONTAINE	Lampasas	76539	5670H41	TX	145
2635	RUDY TORRES JR	Travis	78617	5924L94	TX	160
2636	MELISSA RICHELLE MOORE	Travis	78617	SYJ7872	TX	160
2637	JOHNNY B SAPP	Burnet	78654	SSH6654	TX	158
2638	LAURA VERONICA CRUZ PALLARES	Tarrant	76010	NXV2296	TX	154
2639	MARIA EDELMIRA AGUILAR SEVILLA	Travis	78753	TXN4630	TX	156
2640	GABRIELA CORNEJO	Travis	78704	TFZ7485	TX	176
2641	BRENDAN MICHAEL EASTWOOD	Travis	78748	SRR6736	TX	138
2642	BLANCA ESPERANZA CASTORENA	Williamson	78665	VBG2841	TX	155
2643	KEVIN LAMONT CLAY JR	Williamson	78664	TYR7616	TX	153
2644	Nikki Jensen	Travis	78703	RLG7281	TX	178
2645	KRISTINE FRENCH TAPP	Bell	76502	LCH0976	TX	121
2646	ISMAEL GUTIERREZ FRANCO	Williamson	76574	TLK9413	TX	195
2647	MARIA TERESA OVALLE STACEY LYNN CARRIZALES	Travis	78748	THZ2325	TX	161
2648	JONATHAN LEE HENRY FLORENCIA CASTILLO HENRY	Harris	77012	TFZ2056	TX	193
2649	AMY B HOGAN	Travis	78759	TLM4239	TX	136
2650	BRENDA VILLALOBOS-RODRIGUEZ	Travis	78758	PPF6218	TX	148
2651	DEREK KENNETH MARLER	Williamson	78642	GYR9819	TX	118
2652	GRECHEEL RODRIGUEZ CABALLERO KENIN Y MESA ALFONSO	Travis	78753	VDG4307	TX	151
2653	JESSICA MARTINEZ	Travis	78660	TXJ7503	TX	160
2654	STEVE WAYNE LITTLE	Williamson	78641	5638L29	TX	119
2655	STEPHEN CARLOS KIRK	Travis	78704	TGN2676	TX	155
2656	JOSHUA DAVID SCHWASS	Travis	78759	TLL5706	TX	157
2657	SHELLEY LA RON DAVIS	Travis	78724	TXP3480	TX	184
2658	SYMPHONI CIARRA NIXON	Williamson	76537	SYK0016	TX	185
2659	MARIO LOPEZ GALAVIZ	Bastrop	78621	5742B69	TX	181
2660	MARIBEL GUZMAN	Travis	78617	5539N78	TX	169
2661	DECEMBER STARR GARCIA	Williamson	78717	TVH5433	TX	183
2662	GERALD EARL EAVES	Comal	78133	MNX9060	TX	144
2663	JEANNETTE HERNANDEZ MUNIZ	Travis	78728	5378Y39	TX	139
2664	ALEJANDRO L CARDONA	Travis	78701	MXP4600	TX	128
2665	NADIA SHANTELLE ROGERS	Bastrop	78602	TWL8727	TX	153
2666	YUNI TORRES HORTA	Travis	78744	TNY5387	TX	165
2667	NICHOLAS CRAFT CANNON	Travis	78617	5734J16	TX	161
2668	READY2DRIVE	Harris	77234	TSY9848	TX	162
2669	AGUSTIN RODRIGUEZ	Travis	78744	BG92498	TX	155





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2670	RICHARD ROCHA JR	Travis	78660	KXC9606	TX	103
2671	MAKENNA RENEE HOLLAND	Travis	78747	SHP7834	TX	152
2672	FREDDY QAQISH	Harris	77433	THY8277	TX	155
2673	JAZMIN ARROYO	Bexar	78245	RML5924	TX	157
2674	EDWARD RESENDEZ	Williamson	78681	NFW9528	TX	132
2675	LESLEY ANDREA LOPEZ	Travis	78753	TXP6299	TX	141
2676	JOHN SUBOCZ	Travis	78747	SLK2950	TX	144
2677	VERONICA REYNA GONZALES DAVID JOSEPH GONZALES	Hays	78610	AA51042	TX	161
2678	ANGIE MARIA AMBROSE	Williamson	78641	5642W88	TX	125
2679	JHOAN ALFREDO PALOMO ZEPEDA YOSELYN SUYAPA PALOMO ZEPEDA	Travis	78753	TRP4222	TX	160
2680	ALLANNA DAVIS	Bexar	78109	RWN4676	TX	172
2681	JOSE J SANTIAGOGONZALEZ ARELIS SANTIAGO	Bexar	78244	GCS4457	TX	145
2682	NORTH BY NORTHWEST LAWNS, LLC	Travis	78728	SNF9052	TX	135
2683	HERLINDA SALAZAR HERNANDEZ	Bastrop	78621	TRP9761	TX	181
2684	LUISA PEREZ HERNANDEZ	Travis	78705	TRR2434	TX	123
2685	ANSU KAIKI	Williamson	78633	SNL7417	TX	131
2686	DANIEL ALEJANDRO DIAZ	Williamson	78665	TNL4042	TX	155
2687	EMMETT TILLMAN WOODS	Travis	78723	TZH5254	TX	177
2688	PHILLIP NEIL DAVIS	Bastrop	78612	VCB8897	TX	167
2689	PRISCILLA CASTILLO	Burnet	78605	SPX7264	TX	143
2690	MARGARITA BARCENAS URIBE MANUEL DE JESUS DUBON ARRIAZA	Travis	78744	SPC2082	TX	165
2691	DASIA RAVON EUBANKS	Travis	78744	TNL0730	TX	141
2692	CYNTHIA RODRIGUEZ DURAN	Caldwell	78616	TZD8118	TX	173
2693	CEDRICK EUGENE LOERA	Travis	78724	SRP7369	TX	181
2694	JULISSA ABRIL ALTAMIRANO URQUIZA	Travis	78753	STL4515	TX	155
2695	MICHAEL STEWART COCKRELL	Williamson	78641	5607U54	TX	143
2696	TREVOR WELDON LATHEN	Travis	78660	5750C25	TX	125
2697	DEEA DIANE COLEMAN LACEY	Travis	78754	5323C40	TX	139
2698	CONNIE PAULINE GONZALEZ JOSE MANUEL GONZALEZ	Bell	76511	MLV7417	TX	156
2699	CHARLES RAY GUIDRY JR	Hays	78666	GNB9029	TX	174
2700	HILLARY NICOLE PINEDA CASTRO	Williamson	76537	PYB2739	TX	163
2701	PRISCILLA ANN OCHOA	Travis	78724	TZG9032	TX	187
2702	CIJA WILLIAMS	Travis	78653	4TNYK	TX	181
2703	RONALDINO CABRERA LOPEZ	Travis	78752	TCY3441	TX	166
2704	CRAIG UROFSKY	Burnet	78611	HNL5427	TX	140
2705	ANTHONY RAY PINKSTON JR	Travis	78724	5662A88	TX	172



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2706	MIRIAM AMBAYE	Travis	78724	KJD6112	TX	141
2707	DAVID HENRY BENNETT	Travis	78744	JRF9969	TX	148
2708	JOSE IVAN DEL CID SERRANO	Montgomery	77386	SXV6938	TX	199
2709	CHRISTIE GADERSON	Travis	78704	SJK3539	TX	171
2710	JOSHUA AARON CASTILLE JR	Bastrop	78957	TWJ9584	TX	164
2711	ELIJAH JORDAN MARRERO	NULL	78617	5628X85	TX	138
2712	LUEELLA LORENE SHELTON	Bastrop	78602	QNLU	TX	141
2713	JAMEISHA SPENCER SCOTT	Travis	78653	GRC3574	TX	181
2714	OSCAR ROSALES JUAREZ	Bastrop	78602	5750Y37	TX	156
2715	SAMUEL SANTANA MARTINEZ	Travis	78753	SDH6204	TX	171
2716	ROGELIO PUENTE MUNOZ	Travis	78752	THZ6816	TX	195
2717	JERONIMO JAIMES	Bastrop	78612	TWJ9314	TX	156
2718	ANNA MARIA VILLARREAL	Travis	78725	5786A43	TX	171
2719	GRISelda SANCHEZ MORALES	Travis	78617	THZ6543	TX	193
2720	FRANCISCO CAMPOS LOZANO	Travis	78753	5761T40	TX	171
2721	MARISELA ANN MORENO-ARROYO	Bastrop	78621	5907C25	TX	181
2722	MICHAEL LEE RARDIN JOSHUA RARDIN	Bell	76504	VBH6894	TX	151
2723	DAMIEN JOSEPH CAPRETTA NATALIE TATIANA OLSON	Williamson	78641	TWK2869	TX	136
2724	PATRICK LEE HYNES II	Travis	78617	TJW2435	TX	194
2725	MICHAEL JAMES COLEMAN JOYCE ANN COLEMAN	Travis	78653	RFP1401	TX	172
2726	JORGE LUIS PENA PALOMARES	Travis	78660	5937F40	TX	239
2727	NISHA BAGEPALLI	Travis	78757	NXK8738	TX	141
2728	RAMIRO OLVERA	Hays	78640	KTR1442	TX	163
2729	MILA RAIN BRUCE	Williamson	78613	TVH4953	TX	136
2730	ZACHARY MICHAEL URQUIDI	Travis	78660	SVV9609	TX	164
2731	JACOB MICHAEL GONZALES	Dallas	75019	TDL3947	TX	138
2732	MELYNDA RAE WRIGHT	Travis	78653	JSC3550	TX	169
2733	CONNOR BRIAN BALE	Travis	78702	TTB5162	TX	154
2734	OMAR RIGOBERTO MARTINEZ AREVALO	Travis	78617	TNM3202	TX	140
2735	THOMAS HENRY ROBINSON LINDA BROWN ROBINSON	Travis	78754	NTX9985	TX	217
2736	ESPERANZA MEJIA-CARCAMO	Travis	78719	JYR3790	TX	166
2737	ADRIAN ALONZO DAY	Travis	78758	TWK8544	TX	217
2738	TRACEY MICHELLE MILLER	Williamson	78628	PYK4034	TX	140
2739	CHELSEA C YOUNG	Travis	78660	THZ9038	TX	169
2740	DENNIS MICHAEL FEGAN JR	Williamson	78641	TVN0470	TX	128
2741	YASMANY VALDES PENTON	Travis	78744	5914R93	TX	170



## CTRMA Prohibited Vehicles

CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

2742	LUCIANA SWIFT	Travis	78660	TWC3594	TX	157
2743	GREGORY ONEAL BARNES	Williamson	78664	VFZ0684	TX	152
2744	SIMONA RAE HARRISON RYAN ANGEL PALMA	Williamson	78665	VHB9916	TX	135
2745	CHASITY ANN HYATT, RUDY OLGUIN JR	Bastrop	78621	5676T82	TX	168
2746	LAWRENCE EDWORD CREED	NULL	75033	VDY6901	TX	169
2747	FRANKIE GIOVANNI GONZALEZ	Bexar	78109	TDH6034	TX	138
2748	JOSHUA R EATON	Hays	78737	RPJ5270	TX	157
2749	GUILLERMO PEREZ MARIA JUANA ARCE	Travis	78725	RRX8251	TX	171
2750	VICTOR MONROE PIERCE III	Brazos	77808	FKW7492	TX	138
2751	JAMES DANIELS	Hays	78610	RCC2576	TX	154
2752	ANGELINA ZARATE ZARATE	Hays	78610	TCW6463	TX	149
2753	ARLY VILLEGAS RODRIGUEZ	Travis	78617	5644D91	TX	147
2754	DONELL R PAYNE	Dallas	75116	SMT1169	TX	144
2755	MARIAH JONES	Lampasas	76550	SHB3159	TX	130
2756	ARZU ALIKHLALOVA	Williamson	78641	5966A98	TX	136
2757	MARISOL GARZA	Travis	78724	TLL0314	TX	154
2758	LAJUANA DUKES SMITH	Travis	78753	TXT5647	TX	241
2759	ROSALINDA GOMEZ	Travis	78745	TNL8317	TX	173
2760	BRANDON L GONZALEZ	NULL	60060	3577173B	IL	138
2761	AMY MARIE HALSELL	Hays	78640	NNM7870	TX	151
2762	RIGOBERTO JUAREZ PIZANO	Travis	78724	TRR6362	TX	154
2763	DANIEL CERDA VAZQUEZ	Bastrop	78602	VFH4178	TX	168
2764	GERMAINE LORENZO PARKS	Travis	78758	KVM3134	TX	174
2765	FELISBERTO PINTO	Travis	78617	5777V67	TX	135
2766	RAVEN SIMONE BUCKLEY	Bell	76543	STJ5163	TX	168
2767	HANSEL MANUEL VANEGAS FRANCO	Travis	78660	TZH3196	TX	144
2768	SHUKURAT AYOMIDE SEBIOTIMO	Harris	77013	TPT8971	TX	202
2769	TY-ANGELA BRIANNE LEFRIDGE	Travis	78653	5882G95	TX	166
2770	ANJUNITA A WOODS-FLETCHER	Bell	76543	HLZ9274	TX	151
2771	CHAZ RYAN LANDERS	Williamson	78634	5446S70	TX	139
2772	SONIA LIZBETTE ZALDIVAR ESPANA, STEPHANIE E GIRON	Travis	78704	5621C21	TX	140
2773	Michael D Jones	Travis	78750	NLJ8352	TX	140
2774	THOMAS LAMONT REED	Bastrop	78621	HXG5856	TX	179
2775	JOSHUA E. STEWART	Travis	78660	DRS0891	TX	113
2776	MARCUS AMARO	Travis	78660	SXF2346	TX	143
2777	FRIDA MARIANNA ESCAMILLA	Travis	78753	TZR0317	TX	153



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2778	OLE B LARSEN	NULL	85086	H1A9EK	AZ	154
2779	AMY QUINTANILLA	Williamson	76574	TLL0464	TX	154
2780	ANA MARIA RODRIGUEZ HECTOR HUGO RODRIGUEZ-IBARRA	Williamson	78626	JNP2542	TX	117
2781	NICOLE OLIVIA CARROLL	Travis	78652	SRW0126	TX	146
2782	ALEXANDER CONNOR RYERSON	NULL	78723	5669F85	TX	156
2783	DOMINIQUE DEDEAUX	Williamson	78665	TBC3693	TX	136
2784	LOIS RETRICE ROBERTS	Travis	78702	5787C11	TX	169
2785	GARY DWAYNE SMITH	Titus	75455	TLJ8805	TX	166
2786	CECILIA R HUNTER	Ellis	75119	TCG9478	TX	155
2787	DAYANA PENA VILTRE	Travis	78741	TZH3881	TX	149
2788	DARLENA MASHELL BROOKS	Travis	78724	RWW3167	TX	181
2789	MARLIN DALE THOMAS	Travis	78653	TYV7954	TX	174
2790	ASHLEY MARIE MINJAREZ	Travis	78653	5760K71	TX	153
2791	JOSE M SEVILLA ESTEFANI HERRERA	Williamson	78665	TRP3230	TX	166
2792	MEREDITH FONTENOT GODOY MARY FONTENOT WELLS	Williamson	78641	SIK6409	TX	127
2793	URBAN DIRT	Travis	78758	5740U99	TX	132
2794	SHERA D LAMI	Williamson	78641	TCX2320	TX	142
2795	CHRISTOPHER AMOS-ROY MORRISON	Travis	78754	THZ4736	TX	218
2796	CORINA VILLANUEVA	Travis	78753	RGW3306	TX	157
2797	LAYNA ELIZABETH COPELAND	Williamson	78641	5715R16	TX	136
2798	JUAN C PEREZ TRUJILLO MIRNA GARZA PEREZ	Starr	78582	KTX7602	TX	133
2799	MARY TERESA ARREDONDO	Travis	78617	RLG0145	TX	144
2800	GABRIELLE ROCHELLE JONES	Williamson	78664	RYZ7935	TX	161
2801	DIVAD ROBERTSON	Bastrop	78621	VCY4499	TX	181
2802	CLINTON T JONES	Burnet	78608	5296V96	TX	110
2803	SILVIA ATIM	Williamson	78613	LSB2409	TX	153
2804	CARLOS HUMBERTO ORTEGA	Travis	78728	GRB2744	TX	135
2805	AYALY IRENE HERNANDEZ	Williamson	78664	TZH3984	TX	147
2806	Efrain E Garcia	Travis	78762	LRY2705	TX	145
2807	NERIAH MALA TOLLIVER	Travis	78727	TWN5668	TX	134
2808	MARY P LETOURNEAU	NULL	33140	02BLLZ	FL	140
2809	CORY ALLEN WELCH	Williamson	78641	5818U78	TX	123
2810	LEATRICE S JONES	NULL	31324	YUV585	GA	137
2811	EFRAIN RODRIGUEZ JAIMES	Bastrop	78612	VHC3478	TX	137
2812	RAMON CERDA	Bastrop	78621	VFH3792	TX	178
2813	EDUARDO ROBLEDO	Williamson	78613	HRX3900	TX	111



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2814	RICHARD LEE WRIGHT JR	Travis	78748	TGN8240	TX	146
2815	FELIX OR MONTOYA	NULL	97756	288MZH	OR	135
2816	BRANDON CHRISTOPHER ROG HESTER	Williamson	78641	5435P66	TX	132
2817	CRISTINA VICTORIA PEREZ	Travis	78617	VCY4535	TX	154
2818	ANTHONY BRYANT HENRY JR	Travis	78758	TCX7483	TX	149
2819	CASEY BLYTHE	Fayette	78963	5650J15	TX	135
2820	PEYTON LEIGH BRACAMONTEZ JESSE BRACAMONTEZ	Travis	78727	KLF6684	TX	105
2821	BRAYAN ALEXANDER VELASQUEZ PINEDA	Bastrop	78612	TTB6018	TX	156
2822	CARLOS D MARTINEZ MERCADO	NULL	68107	WPS489	NE	158
2823	EFRAIN SALAZAR MARTINEZ	Travis	78617	5670N15	TX	155
2824	IGNACIO RODRIGUEZ JR	Hidalgo	78537	SFK7524	TX	183
2825	RICHARD ALEXANDER SILVA	Harris	77032	RMS1842	TX	152
2826	BEVERLY SHONTELL RODRIGUEZ PABLO MANUEL RODRIGUEZ JR	Bell	76544	TLM5654	TX	158
2827	LAJEAN BURNETT	Travis	78660	RHR8220	TX	154
2828	ALISBET B OLAZABAL MUNIZ, MELVA J AGUIAR RODRIGUE	Travis	78744	5763S88	TX	150
2829	LUIS ENRIQUE MEZA MARIA TERESA MEZA	Travis	78759	KNM5666	TX	135
2830	ARIEL CHRISTINE CASILLAS ANGELLO FELAN-CASILLAS	Travis	78617	TNM1752	TX	137
2831	JESUS BENITEZ HERNANDEZ	Travis	78660	TKW1462	TX	199
2832	EDWIN PLASEK JOYCE PLASEK	Ellis	75120	T5891C	TX	151
2833	CLAYTON WAYNE TOMLIN	Williamson	78642	SML0953	TX	132
2834	JUAN MENDOZA LOPEZ	Travis	78617	LVL0310	TX	140
2835	ANTHONY TABIRA YESENIA DEL CARMEN FLORES	Bastrop	78621	THH8315	TX	177
2836	ADOLFO PARRA ESPINOSA	Bastrop	78612	TJW0972	TX	141
2837	RODRIGO FERRAZA SANCHEZ	Travis	78752	TVF4327	TX	163
2838	JENNICA BROOKE WHEELER CAMERON LOUIS MARTIN	Lee	78948	SCG1070	TX	160
2839	PAUL BRYAN DABNEY	Polk	77351	SZY1377	TX	150
2840	CELIA ANAHI GALARZA	Travis	78617	TGN5128	TX	138
2841	DIANA D BLAIR	NULL	77587	BU63822	TX	176
2842	ESBEYDE V CORNEJO	Travis	78617	FVY2099	TX	138
2843	LUIS ALBERTO DIAZ JR	Williamson	78641	SCM1746	TX	130
2844	SALATIEL MARTINEZ FIERRO	Hays	78640	RZJ2367	TX	136
2845	RUBY MYSTIC MESSIER	Kendall	78006	RZB9713	TX	163
2846	GONZALO DIEGO OSORIO	Caldwell	78616	PZB0789	TX	182
2847	BRITTNEY LOUISE BURTON	Hays	78640	TBM5757	TX	174
2848	ROBERT LEE SANCHEZ-SILVA MAYRA GONZALEZ SILVA	Williamson	78634	TNL4025	TX	142
2849	JUAN MANUEL AVILA AVILA	Travis	78747	VFT5091	TX	139



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2850	JOSEPH B JOHNSON	Travis	78653	THJ3737	TX	157
2851	KAMAR HEATH, LINDSEY WASHINGTON	NULL	78641	5501P48	TX	126
2852	CHRISTA EVONNE FORTUNE	Hays	78640	TJB3742	TX	145
2853	REY DAVID UGALDE	Harris	77449	TWX8883	TX	145
2854	DARWIN N CARVAJAL MARTINEZ	Bastrop	78621	VBP3217	TX	152
2855	JONATHAN CARMONA	Travis	78748	5720Z54	TX	164
2856	MICHAEL ANTHONY SOZA JR	NULL	73301	TJB5244	TX	129
2857	FRANCISCO LUIS VILLAMIZAR	Travis	78702	5784P39	TX	142
2858	RANISSA L STEWART	Williamson	78664	NDR3509	TX	144
2859	JOSE OMAR ARENAS DURAN	Bastrop	78621	VBP2550	TX	160
2860	JASON ANTHONY MCNULTY	Williamson	78628	TTC8122	TX	129
2861	PATRICK NEAL ALDRIDGE	Bastrop	78602	VHK1715	TX	176
2862	SAMANTHA RIVERO SPENCER DEREK VICTOR SPENCER JR	Bastrop	78602	GS93ZR	TX	157
2863	LUIS ENRIQUE TOVAR ARACELY LEIJA SALAS	Travis	78721	JDG6407	TX	166
2864	JOHN JONES	Hidalgo	78501	1NSPCE	TX	121
2865	WILSON A BERMUDEZ CAYUNA WUILLMER M BERMUDEZ MATA	Williamson	78613	TWK5929	TX	140
2866	MICHAEL LEE BARKER	Bastrop	78621	TPX1000	TX	165
2867	TINA TERRELL	Bastrop	78621	NFZ6230	TX	168
2868	MERRICK ENTERPRISES, INC DBA SAFE AND SOUND TECHNOLOGIES	Collin	75070	VDR7582	TX	138
2869	CHARLES EDWARD HOWARD III NATALIE SUSAN FARRIS	Bastrop	78621	TVF3486	TX	154
2870	SYDNEE YVONNE HERNANDEZ	Hays	78666	DF1D536	TX	145
2871	GERARDO MARTINEZ	NULL	88063	RRG595	NM	122
2872	BRANDY LEIGH CYKALA	Williamson	78641	JRG2018	TX	110
2873	YURI I GONZALEZ	Travis	78653	STK5237	TX	160
2874	ANDREINA DEL VALLE SALAZAR	Waller	77423	TYL7272	TX	151
2875	SAMANTHA ROGRIGUEZ	Williamson	78642	5683D44	TX	112
2876	SCENIA M. TUCKER	Travis	78722	MNZ0529	TX	136
2877	TRAVIS AMBROSE JARRELL	Bastrop	78612	5776W73	TX	135
2878	EVA LOPEZ TORRES	Harris	77484	PYN4336	TX	152
2879	JOSE ANGEL MARTINEZ ALEMAN	Hidalgo	78542	VDD1880	TX	154
2880	FREDYS A MENDIETA MANZANARES	Harris	77089	SGK0969	TX	142
2881	SSH AUTO LEASE MANAGEMENT CO LLC DBA RENT2OWN HQ	Bexar	78227	TYZ0039	TX	129
2882	CRAIG DAVID RIEDEL	Travis	78617	5552Y37	TX	127
2883	LAURA SANCHEZ	Bastrop	78621	TBS4429	TX	154
2884	HECTOR CAMARILLO JR HECTOR CAMARILLO	Cameron	78521	SYG9401	TX	138
2885	CARLOS EDUARDO MEMBRENO TERAN	Travis	78758	SVW9011	TX	141



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2886	KAMMICA KATREESE FULLER	Travis	78660	TTC1245	TX	137
2887	WILLIAM ANDREW UNDERWOOD	Williamson	78633	NRL4508	TX	105
2888	GARRETT LEE WILLIAMS	Travis	78753	TZY9157	TX	126
2889	ERIC C ENGLISH	Williamson	78641	SZX3708	TX	129
2890	JONATHAN SAMUEL AGUILAR	Bastrop	78612	RHS4047	TX	141
2891	BRITNEY J JIMENEZ JALOMO	Bastrop	78621	TPX0772	TX	157
2892	ARACELI ARREOLA CORTES	Travis	78653	TMT8183	TX	164
2893	DIEGO HILARIO PEREZ RODRIGUEZ	Travis	78747	TSC4180	TX	122
2894	ANDREW CAPETILLO CRUZ MEDINA CAPETILLO	Travis	78744	SWX5557	TX	135
2895	FRANKIE LEE HUTCHISON JR	Travis	78660	TXN2499	TX	141
2896	LETICIA M BELTRAN	Travis	78759	5957X43	TX	153
2897	JUSTIN BERNARD WINKFIELD DINA ELIZABETH WINKFIELD	Williamson	78626	TRX1818	TX	139
2898	PAUL ALEXANDER RAMSEY	Travis	78745	SMG7589	TX	148
2899	ALPACINO MONREAL	Travis	78653	THZ4234	TX	152
2900	JUAN ANGEL RAMIREZ	Caldwell	78644	SLM2427	TX	132
2901	BREANNA TENORIO	Hays	78640	TDF5457	TX	201
2902	JENNIFER DOAN BALDERRAMA	Williamson	78634	SLP3091	TX	143
2903	AT&T SERVICES INC	NULL	63101	GVD1549	MO	135
2904	BARBIE LYNN LUCIO ELIZABETH TINA HERNANDEZ	Hays	78640	TRR4565	TX	136
2905	DAVID WAYNE EDWARDS	Aransas	78382	NJP1766	TX	149
2906	MALIK KHALID DEAN	Dallas	75201	SPK2054	TX	170
2907	ELIANA LECHUGA-SOTO	Caldwell	78616	TSC3213	TX	131
2908	CLAYTON LOUIS ANDERSON STEFANIE DENISE SMITH	Williamson	76574	SYJ8403	TX	151
2909	MIGUEL ANGEL MURILLO	Lampasas	76539	MXR9809	TX	105
2910	RODRIGO RODRIGUEZ MARIA V RODRIGUEZ	Victoria	77901	SDL3038	TX	192
2911	RUTTIS AMELIA BAQUEDANO MARADIAGA	Guadalupe	78638	SXP3541	TX	123
2912	GERALD LAWRENCE MURPHY JR BURGANDI JADE MURPHY	Williamson	78642	TGV6197	TX	117
2913	TENEISHA QUESHA PLUMMER	Travis	78723	SPF0839	TX	185
2914	SARAH N ALMEIDA	Travis	78747	MRW3541	TX	137
2915	MARIA LETISIA ROSAS	Williamson	78641	TSN9448	TX	113
2916	VIRGEN CARIDAD MONTERO RECIO	Travis	78745	TBK7213	TX	132
2917	DARION RAYSEAN BROWN	Travis	78723	VBP4035	TX	116
2918	RIZEM AKEL EL KANAFANI	Collin	75287	TNV9139	TX	137
2919	CAROLINE HIEN VU	Harris	77008	TTR3873	TX	122
2920	ETHAN RAY	Williamson	78628	TJW6797	TX	112
2921	YADEL RICHARD APUD NOY	Travis	78758	5676L85	TX	125





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2922	WILBER JOHAN LEON SANCHEZ	Harris	77493	VCL2866	TX	138
2923	ANTHONY DANIEL DODD	Travis	78660	RGP2556	TX	154
2924	CANDI ANN JONGSAMRAN	Bastrop	78621	TXZ8476	TX	161
2925	RYAN ALEXIS BRUTON JEREMY SCOTT BRUTON	Bastrop	78602	THJ7184	TX	146
2926	GLENDA MARIE FALTYSEK	Lavaca	77984	THJ3090	TX	135
2927	GAIL GATLIN BRANDON KENYA JENAY EDWARDS	Williamson	78729	TZG6546	TX	151
2928	MICHAEL BENJAMIN TAKLA	Williamson	78641	SYS3931	TX	115
2929	ANDREA ATONAL TEXIS EDUARDO TECUAPACHO LUNA	Harris	77013	SVL3442	TX	147
2930	IMANI NIRAE HOLMES	Travis	78754	TRP9458	TX	145
2931	ERLUIZ S ROSALES MARQUINA	Fort Bend	77494	TWY6600	TX	129
2932	ANNICEA ROCHELLE SORRELLS	Travis	78752	TVF3375	TX	152
2933	JAMES GARCIA	Hays	78610	TCX5891	TX	150
2934	HITZEL RODRIGUEZ	Travis	78744	RBX1977	TX	145
2935	JERRELL ALEXANDER FREEMAN	Travis	78738	TXP2836	TX	126
2936	FORTUNATO SANCHEZ HERNANDEZ	Travis	78617	TXN2816	TX	122
2937	PHILLIP TANNER GREEN	Bastrop	78957	RRM4897	TX	134
2938	RICHARD PETER MUNIZ	Travis	78653	5702C54	TX	156
2939	JAMES TERRILL SHORT	Travis	78724	SVW3190	TX	166
2940	JENNIFER HUTSON RHETT DANIEL HUTSON	Williamson	78642	TLV5972	TX	116
2941	ALEJANDRA ENRIQUEZ PENA	Travis	78744	TXN3784	TX	137
2942	HUGO AL MATA	Travis	78721	TNW745	TX	135
2943	STEVEN OLIVER RECTOR	Williamson	78665	VFS2781	TX	141
2944	SCOTT CURRAN	Caldwell	78616	NTZ1086	TX	133
2945	CM&M PLUMBING LLC	Williamson	78615	5452G46	TX	120
2946	RAHAB ABISAI AGUILAR VALENZUELA	Travis	78758	TLM4341	TX	136
2947	CYNTHIA LEA CROWELL	Travis	78746	LBV6881	TX	126
2948	SILVESTRE GUTIERREZ GARRIDO	Travis	78758	RBV9959	TX	129
2949	NELSON HUMBERTO ASENSO GUIFARR	Travis	78758	5602B92	TX	128
2950	MIGUEL ANGEL GARCIA	Williamson	78641	5644U51	TX	104
2951	CHRISTOPHER JEROME REED JR, ROSE MARIE RODRIGUEZ	NULL	78660	5543T27	TX	139
2952	SILVIA ELISA MENDOZA, MICHAEL ANTHONY GUERRERO	Travis	78748	5702S29	TX	123
2953	JUAN PABLO MARTINEZ	Travis	78702	THJ4998	TX	126
2954	CHRISTIE SHOOK	Williamson	78641	TJW5493	TX	143
2955	ESPERANZA RIVERA SIFUENTES	Bastrop	78659	TWL1099	TX	122
2956	VICTOR FITE LEMLEY	Travis	78660	KGZ8074	TX	137
2957	DYLAN LEE FERCH	Williamson	78626	NXK7376	TX	173



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2958	HAROLD LLOYD RAINES	Travis	78653	5794V31	TX	163
2959	ANGELIA SHUNTA WILLIAMS	Travis	78753	TWN6398	TX	171
2960	DARIEN F PAYNE	NULL	85225	HBA1SK	AZ	130
2961	DOMINICK JERROD JOHNSON	Travis	78617	5704C88	TX	133
2962	EMYRTH EDELIO MORA GOMEZ	Travis	78736	TMV0667	TX	132
2963	JULISSA PORTALES-GALVAN	Bexar	78239	TDG7912	TX	183
2964	MICHAEL J PROUD	Travis	78759	RWW0536	TX	156
2965	EDWARD MICHAEL GENTRY	Travis	78750	TCN9517	TX	125
2966	ANDERSON RONALDO REYES GIRON	Travis	78754	TZG3258	TX	140
2967	PAULREIONA AIONA CARY	Hays	78666	RKG4639	TX	131
2968	JORGE UBALDO MONTOYA SAUCEDO BLANCA YUDITH LOPEZ	Travis	78744	SVW1407	TX	131
2969	DEMITRICE D. HORNSBY	Williamson	78664	5657U21	TX	157
2970	KEYTON WAYNE NELSON	Williamson	78729	HLZ4829	TX	114
2971	DEVIN AUSTIN MCCOMB	Travis	78754	SDS0117	TX	173
2972	YENIER LAGUNA	Travis	78753	TYN1483	TX	121
2973	VINCENT SEBASTIAN ASCENCIO	Travis	78653	SWY9089	TX	158
2974	ADISNEY PEREZ BATISTA	Travis	78753	VDF5854	TX	126
2975	CAL BURGESS	Travis	78749	TRP4512	TX	132
2976	DONALD EDWIN WESTBROOK JR	NULL	75669	GGT4375	TX	129
2977	JENNIFER MARIE HIDROGO	Travis	78735	TVK0967	TX	129
2978	ANTHONY CHARLTON MARIYA CHARLTON	Travis	78759	RPM2654	TX	136
2979	JADE ANN GARZA ALBERT GARZA	Travis	78724	THZ7703	TX	139
2980	JUNIOR DJESUS TALAVERA CORDOVA	Bastrop	78659	TZZ1721	TX	133
2981	JOSHUA BRANDON ROBLES	Travis	78754	TWN5983	TX	121
2982	AUSTIN RIG AND CRATE LLC	Hays	78610	1L21813	TX	132
2983	LORETTA MARIE LOZANO	Travis	78744	TGZ2645	TX	138
2984	DANIELA BALDERAS	Travis	78753	TWK8921	TX	152
2985	DENAIR LEVELL MITCHELL	Williamson	78641	SYS5156	TX	117
2986	TANYA VERNETTA MCCALLISTER TAKAI BLAKE NELSON	Bell	76549	PDY4193	TX	149
2987	CONNIE ANDREA LOZANO	Travis	78725	5741R16	TX	157
2988	JAMES DARREL WALLIN TERRY DANEICE WALLIN	Williamson	78615	RWW4893	TX	139
2989	JENNY CLIFTON	Travis	78653	NTY8516	TX	169
2990	SAN JUANITA SCHAFER	Williamson	78641	MKG1835	TX	136
2991	TANYA MARGOT CANTU ANTHONY LAMARR SMITH	Williamson	78634	TDD5446	TX	120
2992	VICTOR MANUEL THOMAS	Victoria	77901	STK9836	TX	135
2993	MARIA CHRISTINA HUITRON	Hays	78640	VFT7012	TX	128



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

2994	CARLOS MANUEL ALVARADO URREA	Travis	78752	VCZ1937	TX	114
2995	VELMA DENISE SLAUGHTER	Bell	76542	THG9518	TX	137
2996	ARI	Fort Bend	77494	HZW5640	TX	110
2997	TERRY CAMRON WESTERFIELD	Travis	78741	RHT1463	TX	120
2998	NADIA MICHELLE HARPER	Travis	78725	TXP1565	TX	143
2999	LINDA LEE MESSING	Travis	78723	TJN5880	TX	153
3000	MIGUEL FAJARDO FRANCO	Fort Bend	77053	TKV9161	TX	127
3001	WHEELS AMERICA DALLAS 1 LLC	Dallas	75237	TMC9325	TX	131
3002	JUAN ARANDA LLANAS	NULL	78741	SJK9973	TX	121
3003	ANDICE CNE SMITH	Lavaca	77964	MMW6039	TX	136
3004	ANGEL CORTES JR	Bexar	78254	SSR4380	TX	140
3005	IRIS A HERNANDEZ	Travis	78748	5166X46	TX	144
3006	JOSE CIRILO LOPEZ CORRAL NORMA JARAMILLO LOPEZ	Hidalgo	78570	TDF2275	TX	209
3007	JOSE TREJO	Travis	78653	RWT8996	TX	145
3008	RYLEE CHEYENNE HALLFORD, WILSON REECE DURHAM	Travis	78754	5801A92	TX	147
3009	COURTNEY LSHON CLEMONS	Williamson	78634	TPC4849	TX	135
3010	ELISA MOLINA	Travis	78724	5675B77	TX	144
3011	KELLY ANN COLE	Williamson	78641	MZC3603	TX	112
3012	TRYBE PAYMENT SOLUTIONS INC	Tarrant	76102	VOLTY	TX	108
3013	BRUCE LEE RENE HERNANDEZ	Kaufman	75147	TNV4003	TX	117
3014	THOMAS DOMINGUEZ III	Travis	78747	TXP3833	TX	152
3015	KATELYNN TAYLOR	Williamson	78641	5590S80	TX	114
3016	TIFFANY DAVIS	Travis	78744	TRT9668	TX	140
3017	CHRISTOPHER LEE URIAS	Hays	78610	TLL6380	TX	135
3018	LEEMAR LAMAR BRATLEY JR	Travis	78724	TLV2484	TX	143
3019	CASSANDRA TOVAR ZAMORA ETHAN A HARDEN	Hays	78640	TWJ9010	TX	154
3020	BROOKE ANN NAGLE CALEB DANIEL HINOJOSA	Williamson	78626	VBG6089	TX	130
3021	DANIEL OLMOS-PUENTE	Travis	78744	VCZ4369	TX	129
3022	JORGE LUIS MUNOZ NAVA	Williamson	78642	TWL7085	TX	143
3023	HALEIGH CAROLYN PAGE CALEB ANDREW HERNANDEZ	Williamson	76574	SMW8766	TX	142
3024	NOE AMAYA REYES	Travis	78758	HXZ8441	TX	118
3025	AARON STEPHEN BATES	Travis	78703	TXP3712	TX	121
3026	KELLIE KATHLEEN MANZANO	Williamson	78641	5722T66	TX	107
3027	DAVID MARTINEZ ENRIQUEZ	McLennan	76707	GWG8814	TX	127
3028	NELSI JOHANA FLORES REGINO, ERIC DANIEL RODRIGUEZ	Travis	78744	5789N96	TX	121
3029	AMANDA WALLACE	Travis	78754	TTC1447	TX	198



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3030	KYLE TAYLOR MCKAY WILLIAM HOWARD POWERS JR	Travis	78653	MVC3737	TX	129
3031	KANESIA NICOLE COLEMAN	Travis	78702	5458T54	TX	139
3032	DEBORAH LYNN MAUZERALL	Hays	78737	SWM5823	TX	151
3033	ANTHONY JONES	NULL	45504	KES7449	OH	110
3034	JUAN DIEGO CAZARES JR	Travis	78724	SHN5107	TX	148
3035	JOSE ALBERTO LOPEZ ADAME	Bastrop	78957	5459R94	TX	127
3036	ZACK MOYAMBO	Travis	78705	TWL6799	TX	162
3037	ELECTRA RODRIGUEZ	Travis	78747	THZ2862	TX	121
3038	MIGUEL PEREZ	Bastrop	78621	VDP7530	TX	149
3039	MARIA DE JESUS ALVAREZ MEDINA	Travis	78653	5698V59	TX	147
3040	WENDY MOORE BILLIE KAYE HOUSTON VANTREASE	McLennan	76664	TBC2417	TX	118
3041	JACQUELYN MIRANDA NOBLES	Travis	78744	5722N55	TX	185
3042	MICHAEL PITTMAN	Travis	78702	GSM2911	TX	152
3043	FRANCISCO JAVIER MOLINA ROMERO	Hidalgo	78574	TNK6631	TX	127
3044	SPENSER GLEN RIOJAS	Travis	78704	RFF6869	TX	158
3045	ELLA RUTH ASHE ELLA F ASHE	Bell	76501	RRV1035	TX	119
3046	LATANA LYNN JACKSON MARK ANTHONY HOLLAND	Hays	78640	SPW6311	TX	124
3047	SHELBY RENE STURM	Travis	78660	VHC0031	TX	121
3048	MARTHA ELENA COLUNGA DELGADO	Travis	78754	TPF3953	TX	123
3049	ALBERTO JOA PORTUONDO	Travis	78753	TRS0620	TX	123
3050	CHRISTINA DELUNA CALVO	Travis	78617	TZG5066	TX	128
3051	KENYANNA MO NAE CLARK	Travis	78660	VFT9094	TX	163
3052	DANIELLE NICOLE LATIMER	Hays	78610	TXZ1607	TX	116
3053	ROBERT DELGADO JR	Travis	78724	6KSND	TX	120
3054	CONCEPCION GONZALES JR	Caldwell	78616	VFK8293	TX	114
3055	MICHA HEATHER L BREWTON	NULL	29306	VUW431	SC	115
3056	KAYLA ROSE SANCHEZ	Travis	78617	VKY3384	TX	130
3057	CAMERON SPAULDING	Hays	78666	SGS2190	TX	107
3058	SCOTT EUGENE GUSTAFSON II	Williamson	78641	5658C39	TX	115
3059	LAJALA JACKSON	Travis	78653	TLL0243	TX	149
3060	FIRST STUDENT	Harris	77075	1298937	TX	152
3061	SHAUNEA OTIS	Travis	78660	TRR2290	TX	137
3062	CRUZ RODRIGUEZ MARTINEZ	Travis	78617	5678T98	TX	117
3063	SAMANTHA LOPEZ	Travis	78745	TLG1338	TX	140
3064	JESSICA ANN-MARIE RUIZ	Milam	76567	SWM4073	TX	141
3065	ERIC VERA TREJO	Travis	78725	VFS2608	TX	146



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3066	BRYCE LEVON JONES	Travis	78660	5744G55	TX	141
3067	JOAN MARIE SEARS	Gonzales	78632	LLJ7646	TX	120
3068	RODERECKUS RAMONE BELL	Travis	78653	TRX1947	TX	139
3069	CARMEN KATHLEEN CASTRO	Travis	78660	5705C64	TX	142
3070	CARLOS DAVID ALVAREZ MARTINEZ	Travis	78728	TLM4721	TX	110
3071	JACOB WAYNE GOETZMAN	Bastrop	78957	RFG4074	TX	128
3072	CHARITH KAVINDA HEMASIRI	Williamson	78717	TLF0882	TX	119
3073	ERIKA MARIE TORRES	Travis	78653	TBN8243	TX	135
3074	QUINTIN LORENZ WALKER	Travis	78660	VFT1212	TX	123
3075	RAUL GONZALEZ MONTALVO RIGAN NAUN ESPINOZA	Travis	78725	SDG7461	TX	152
3076	TREVEON JAVON PARKER	Harris	77021	TKS5801	TX	151
3077	LINDA MALDONADO LOPEZ	Travis	78744	LMJ9820	TX	114
3078	CLARA SOFIA SANTA PIEDRAHITA	Williamson	76527	SVF3682	TX	115
3079	AGUSTIN GALICIA NAVA	Travis	78753	5734S98	TX	134
3080	ANTONY FLORENCIO CHUB TEEC	Bexar	78259	SLR8505	TX	137
3081	ANTONIO ISRAEL SOZA JR	Harris	77085	MCF7410	TX	121
3082	MIKO DI WADY	Bexar	78249	385GQI	TX	124
3083	MOHAMED M MOHAMED ROWA OSAMA HASSAN SHAFIEG	Travis	78724	TENGA	TX	137
3084	SHARENA T JANEA ERVIN	Travis	78759	5785P27	TX	132
3085	KATHRYN ANN GREATHOUSE	Travis	78660	5183T30	TX	105
3086	CONNOR LANNI	NULL	78613	5587K45	TX	159
3087	ERIC CHARLES LEMACKS	Travis	78653	5692X80	TX	112
3088	AARON RAMOS	Hidalgo	78570	FVS6927	TX	141
3089	RAMON ERNESTO NAVARRATE LAU	Tarrant	76108	5694A95	TX	128
3090	ALEXANDER CASTOR RAMOS	Jefferson	77642	VFS0202	TX	137
3091	SARAI TERESA DEL MERCADO, JESUS DEL MERCADO	El Paso	79924	5594Y96	TX	136
3092	MARIAH CHRISTINE MARTINEZ	Travis	78705	RRR6289	TX	126
3093	DEANDRE FLUDD	Travis	78741	TXP4587	TX	113
3094	ABSALON MARTINEZ	Williamson	78613	MKV7310	TX	126
3095	ADELLA VASQUEZ ESTRADA	Travis	78753	9TNYK	TX	114
3096	TIMOTHY DEWAYNE GROVES JR	Hays	78640	RFF6875	TX	130
3097	ADOLFO FIGUEROA MARTINEZ	Williamson	78717	SWT2658	TX	121
3098	TONI MICHELLE INOUE	Bexar	78245	JPZ2472	TX	139
3099	CHERRE S JANEUX	Williamson	78613	LGK1199	TX	181
3100	KELLY JEROME SHAW	Bastrop	78602	TGN1352	TX	123
3101	ARI FLEET	NULL	66222	KSD4910	KS	134



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3102	VICTORIA LYNN HANIFIN	Travis	78722	TWK8632	TX	112
3103	MERLING JAHASARY ALTAMIRANO	Travis	78741	THZ6051	TX	124
3104	NGUYEN VU	Travis	78653	RLF8435	TX	124
3105	LESTER DOMINGUEZ RODRIGUEZ	Williamson	78626	5668N40	TX	104
3106	SERGIO OSBALDO LOPEZ RODRIGUEZ	Caldwell	78644	TMP5115	TX	106
3107	SANDRA CANALES	Travis	78617	5713D73	TX	126
3108	FISHER CRITICAL SERVICES LLC	Williamson	78642	5457G99	TX	104
3109	PATRICK DONNELLE BYARS	Williamson	78634	SVN6208	TX	118
3110	ASHLEY NICOLE ALEXANDER	Williamson	78641	VCB7189	TX	110
3111	GAMALIEL VARGAS RAMIREZ	Travis	78744	TGN4374	TX	130
3112	ANGELO OBADIAH MITCHELL SR DEJANAE SANTRYSE BROWN	Bell	76542	TGB3233	TX	118
3113	FRANKIE LEE DONES, JOHN PAUL MEDRANO	Travis	78723	5860L74	TX	178
3114	DENIZE JORDAN	NULL	78605	5490H30	TX	103
3115	KIRA ISABELLA ALEXANDRE	Travis	78669	TLV2890	TX	135
3116	TROY DELGADO-ALMADA	NULL	89523	345U91	NV	134
3117	CALEB MICHAIAH LAWSON VICTORIA GRACE LAWSON	Travis	78660	TKM9494	TX	123
3118	ADAN MIRANDA SALINAS	Travis	78653	5553P27	TX	133
3119	ISIAH HERNANDEZ	Bastrop	78602	5788D97	TX	117
3120	TORY JIMMIE ALDERETE	Williamson	78665	5787B39	TX	193
3121	EDITH VAQUERO	Bastrop	78621	TVF4728	TX	145
3122	AZIA MARIE MOORE	Travis	78653	5695W30	TX	138
3123	LUIS GERARDO FLORES RAMIREZ MARISSA JOHANA FLORES	Hidalgo	78542	RJB3330	TX	117
3124	AUSTIN WAYDE PORCH	Williamson	78613	TXD9827	TX	157
3125	FAITH ENO	Travis	78758	LGN2183	TX	126
3126	MICHELE RENAE SELLS	Williamson	78642	TDD4110	TX	114
3127	RUQUAYYA KARRIEM SHABAZZ	NULL	76548	SNL6372	TX	125
3128	TREVOR HEWITT MCCLANAHAN LISA PAULETTE GRIFFIN	Bastrop	78957	TDC8735	TX	129
3129	ANA L GALLARDO	Travis	78617	RNK2144	TX	124
3130	MARTIANO HANDY JR	Travis	78744	TBC8727	TX	109
3131	JACQUELINE TAYLOR CLAYTON	Washington	77880	VCB2814	TX	124
3132	NONA CHARNELL GARZA	Travis	78617	5760D64	TX	136
3133	NEAMAN WAYNE HUGHES	Nueces	78412	VCX7956	TX	117
3134	PEDRO EMIGDIO DELGADO	Liberty	77535	TTS4459	TX	131
3135	DAVID WILLIAM FELTES	Williamson	78681	TWL3479	TX	106
3136	ORLANDO JOSE ORTIZ RODRIGUEZ	Hays	78640	5503D55	TX	130
3137	MYCAYLA YVONNE FORCEY ISIAH PAUL GRICE	Travis	78728	TFZ6228	TX	119



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3138	ORLIN ADONAY ALVARDO ORELLANA	Bastrop	78621	TXN6342	TX	133
3139	COREY DAVONTE CRANE	Travis	78723	TTC5910	TX	132
3140	ANDREW MILTON PARSONS, KELLY ERIN GRAY	Travis	78702	5474P55	TX	125
3141	CODY SHANE SELLERS	Hays	78666	DW9S743	TX	128
3142	TOMMY G MILES III	Caldwell	78644	5360K45	TX	106
3143	ANGEL GISSEL BENAVIDES	Bastrop	78602	5443V58	TX	159
3144	MIKE ELIAS MUNOZ AMY REBECCA MUNOZ	Hays	78610	TGN6661	TX	128
3145	RALPH ELLIOTT PEARSON MARIA RODRIGUEZ PEARSON	Lee	78947	TDF2999	TX	135
3146	ALEXIS ARIEL CONELY	Travis	78747	SJL9450	TX	120
3147	WILMER ANTONIO HERRERA AGUIRRE	Caldwell	78616	TCX3217	TX	113
3148	KELSEY J WALTON	NULL	78653	VDL2954	TX	155
3149	MOSES AARON TROTTER	Travis	78731	JSH7060	TX	111
3150	LETICIA HERRERA ALVARENGA	Travis	78653	RJM0860	TX	132
3151	ARI FLEET	NULL	66222	KJD5520	KS	116
3152	MAX AGUILAR	Bastrop	78957	GGY6903	TX	124
3153	CARLOS PEREZ	Travis	78753	5333J99	TX	139
3154	LORI ANN MONTOYA	Williamson	78664	TTK6804	TX	121
3155	Greg Phea	Travis	78753	0C6399E	TX	146
3156	ANALISE ESPINOZA	Travis	78752	RBW6770	TX	129
3157	DOMANICK DEUNTAE DARDEN	Bexar	78245	KZF8697	TX	159
3158	EARL WAYNE DUNCAN JR	Harris	77018	TFS1519	TX	111
3159	KELVIN JERIOD JONES	Bell	76542	SRR6084	TX	124
3160	KEILA GONZALEZ RODRIGUEZ	Williamson	78642	5460X20	TX	104
3161	JERRAND A LEE	Dallas	75104	PZL3975	TX	122
3162	MINUTEMAN TRUCKS INC	NULL	2081	V22025	MA	113
3163	ANTHONY JOE LOUIS RAMIREZ	Travis	78747	5532B40	TX	118
3164	SERGIO REYES ALVARADO	Travis	78745	5594B15	TX	124
3165	UBALDO CHAVARRIA BENAVIDEZ	Hays	78640	TLH8798	TX	115
3166	ALEXIS HERNANDEZ	Bastrop	78621	5753V64	TX	144
3167	CODY TRAVIS GONZALEZ	Travis	78754	1F1F1TS	TX	154
3168	YAMILEX TIJERINA QUIRINO GARZA TIJERINA	Hidalgo	78577	MZG1240	TX	143
3169	ALI MUSTAFA ISMAEL	Travis	78728	5719L63	TX	114
3170	CHEROKEITH ALEXIS GRAY	Bell	76548	JXJ2875	TX	158
3171	QUANDRE TAJUAN DIGGS	Travis	78660	SWZ9457	TX	115
3172	DIEGO A CASTRO MUNOZ	Hays	78640	5761D68	TX	105
3173	MARY BASSETT CHRISTOPHER GORDON BASSETT	Travis	78725	SLK3216	TX	126





CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3174	MARIA BECERRA	Travis	78741	5762F98	TX	115
3175	DAKOTAH RIVERS	NULL	74426	NCG716	OK	110
3176	ANDREW PENA GONZALES	Travis	78653	TTC9261	TX	132
3177	WESLEY MORENO ROCHA JR	Bastrop	78612	5534P44	TX	115
3178	KEITH CHARVELLE MCCLAIN	Bell	76542	TXT5640	TX	104
3179	TAMI LYNN FISHER	Caldwell	78644	5591L30	TX	115
3180	LEON WALLACE IV	Bastrop	78621	GV94RR	TX	137
3181	ADAN ARREDONDO	Brazoria	77511	0C0164C	TX	110
3182	DESTANEE DENISE NELSON	Bastrop	78621	TWL8472	TX	140
3183	SAMANTHA MARIE LYNN JACKSON	Williamson	78664	TYW0589	TX	113
3184	WAKEFIELD POOL AND SPA LLC	Williamson	78729	VBK9386	TX	101
3185	CLAUDIA PEREZ ZUMAQUERA	Williamson	78665	5703J53	TX	121
3186	RENARD LAMARR PRYOR	NULL	33405	NLK7394	FL	110
3187	EVELYN MIRANDA DELEON JIMMY JOE DELEON	Gonzales	78629	VCL1612	TX	118
3188	CATASTROPHIC SOLUTIONS	Travis	78753	STK2570	TX	118
3189	CARLOS FABRICIO MEDINA GEORGE	Bastrop	78621	SDD7356	TX	128
3190	FRANCES ANNETTE HAWKINS	Williamson	78665	TTB7023	TX	104
3191	DANIEL JR RAMIREZ ZARATE	Dallas	75212	TLH3148	TX	129
3192	EDGAR RONCES DIAZ	Travis	78747	MTX4724	TX	125
3193	DALLAS EVAN LOVE ALISHA MICHELLE LOVE	Travis	78748	HVX8436	TX	120
3194	BRITNEY MICKELSEN	Travis	78724	RFF2515	TX	146
3195	JUAN ANGEL RIOS	Bastrop	78602	5489X40	TX	118
3196	DECRAYON LARAY BANKS	Bastrop	78621	5753L44	TX	139
3197	PAULA MARISELA BENITEZ MARIO LOPEZ	Bell	76543	TYN7036	TX	100
3198	BRENDA SUE HATCHER	Williamson	78634	JYR0166	TX	169
3199	ANTHONY CHARLES FAISON	Travis	78753	THZ4094	TX	114
3200	ERIC LEE RIOS	Travis	78617	VFS2540	TX	115
3201	DONETRIA LAVERNE GREEN	Bastrop	78621	THZ7840	TX	133
3202	MARIO SOTO GARCIA	Hidalgo	78516	NCK1046	TX	125
3203	MAURICE ALLISON	Llano	78657	5716J52	TX	105
3204	NANCY ARROYO	Bastrop	78621	5780Y55	TX	131
3205	YOANIS AYARDE CHACON	Travis	78744	TNW4978	TX	120
3206	ANTHONY TEJEDA	Travis	78653	TRP3116	TX	130
3207	BOBSEWEN INTERNATIONAL, LLC	Travis	78702	3N3861N	TX	107
3208	FRANCISO ROGELIO SERNA GARCIA ELIZABETH MENDEZ	Williamson	78634	TMS0379	TX	109
3209	THURMOND S GROOVER	NULL	30802	YUN004	GA	107



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3210	DALASHA SHORTER	Travis	78728	5521Z23	TX	123
3211	ALDO JOSE RIOS TORUNO	Travis	78617	DB4F012	TX	113
3212	BROOKLENE NEVAEH WILLIAMS	Williamson	78641	5587V47	TX	108
3213	CHARLETTA MAXWELL	Travis	78653	SVW8351	TX	146
3214	JAIME OJEDA OJEDA AUTO CENTER	Harris	77093	3N9145T	TX	118
3215	URIEL CASTELAN	Bastrop	78621	VCB5229	TX	124
3216	ERICK A FIGUEROA	Bexar	78244	THG7996	TX	112
3217	SHILA ANN HAMILTON	Grayson	75020	TRV8153	TX	108
3218	BREYLE BRESHAY RIVERS	Travis	78724	5658S48	TX	152
3219	DAVID SAMUELS	Williamson	78717	5575B25	TX	137
3220	KORA JACKSON	Travis	78653	5844X24	TX	127
3221	MICHELLE GUTIERREZ	Lee	77853	5720B58	TX	124
3222	JAYE STARK	Williamson	78642	5809R12	TX	101
3223	VICTORIA ROSALES	Williamson	76574	TLK9626	TX	123
3224	MANUEL SANTOS AMADOR JR	Travis	78744	TWL6061	TX	102
3225	AYAMEY LISBET SUAREZ FLORES	Denton	75077	TRS7034	TX	112
3226	MARIO ALBERTO FLORES CUELLAR	Bexar	78237	TDS1664	TX	106
3227	JOE MICHAEL FLORES	Williamson	78634	TTC1651	TX	100
3228	WALK STREETS MANAGEMENT, LLC DBA RABBIT EV	Travis	78704	THZ8346	TX	109
3229	MOISES GARCIA RODRIGUEZ	Bastrop	78602	NYD7938	TX	108
3230	EDWARD JAMES RENTERIA	Travis	78702	5598G84	TX	129
3231	CHRISTINA SANTOS HECTOR SANTOS	Hays	78640	BYT3384	TX	115
3232	ROBERT KIRKPATRICK	NULL	76108	5572P34	TX	112
3233	ROBERTO RAMON GUERRERO	Hidalgo	78557	VDD2475	TX	101
3234	HEYDI D CASTELLANOS OSORIO	Travis	78758	TXN9442	TX	137
3235	ANGELA CHAVEZ	Travis	78660	TCX5346	TX	120
3236	FERNANDO MONDRAGON LIBERATO	Travis	78725	5368K23	TX	123
3237	VANNIE MITCHELL	Travis	78660	5909H25	TX	120
3238	KARL DOMINIC TORRES	Hays	78666	TLM5192	TX	102
3239	ASHLEY MEADOWS BAUTISTA	Travis	78660	VJF5342	TX	115
3240	KYLER JACOB PARSON HEATHER RAE PARSON	Bastrop	78621	TTB9720	TX	130
3241	AMELIA MICHELLE VILLARREAL	Travis	78751	TBD6705	TX	115
3242	GILBERTO GARCIA TRIPLE SEVEN AUTO SALES	Travis	78721	3N1384W	TX	120
3243	STEPHEN DANIEL HATHAWAY TRACY GAYLE HATHAWAY	Williamson	78634	TBS4968	TX	114
3244	MICHAEL GIRMA AREFAINE	Harris	77079	SGR1551	TX	105
3245	BRYANT CONSTRUCTION ENDEAVORS LLC	Williamson	78613	RFP2352	TX	119



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3246	TIFFINIE HARRIS	Travis	78754	VCT0215	TX	100
3247	COLBY WAYNE LASATER	Van Zandt	75117	JJG4252	TX	121
3248	ALVARO CONTRERAS ESPINOZA	Hays	78610	VBG3081	TX	114
3249	GREGORIA BRENA	McLennan	76708	CD3L500	TX	102
3250	BASILIO MACIAS CEDILLO MYRNA P RODRIGUEZ ANDRADE	Travis	78725	SYZ3852	TX	114
3251	MODENA HAGGARD DAILEY	Williamson	78613	TTG1618	TX	105
3252	JUAN RODRIGUEZ JR	Travis	78747	5384L57	TX	104
3253	GRACE S GONZALES	Travis	78744	NCK7961	TX	118
3254	JASMINE LYSETTE LUNA	Bastrop	78659	STS4077	TX	105
3255	URBAN DIRT	Travis	78758	5740V79	TX	115
3256	Kiana Tr Stotts	Travis	78704	451502C	TX	112
3257	TYRONE GANT	Burnet	78654	ZJA6AJ	TX	110
3258	LUTHER NUNCIO JR	Hays	78640	DT7H075	TX	105
3259	ODON GARCIA JR	Starr	78582	TRB6059	TX	113
3260	DESTINEE SIERRA VELEZ	Travis	78653	5584P62	TX	116
3261	CHRISTIAN EDWARD TOVAR	Bexar	78226	RYD7350	TX	111
3262	BERENICE TORRES	Bastrop	78621	TLY3136	TX	107
3263	ZEKEIA ZERSHUN NEALY LINDA JOYCE NEALY	Dallas	75237	MTL8473	TX	117
3264	YASNIER SOSA CLAVERO	Travis	78753	5379S41	TX	103
3265	JUAN J ROBLES	Bastrop	78602	TLV5269	TX	121
3266	SHERRY RENEE WYSOCKI JASON JAMES FLACK	Travis	78660	TRP7499	TX	106
3267	MELODY MORRIS RUTHERFORD	Williamson	78613	NDP1094	TX	111
3268	WILLIAM TAYLOR ONEAL	Hays	78620	PZC4688	TX	110
3269	ALEJANDRO CABADAS	Travis	78759	TRG8713	TX	148
3270	JUAN IGNACIO GONZALEZ FRANCISCA MARTINEZ GONZALEZ	Hidalgo	78542	TGJ5703	TX	129
3271	TEDDY BAZIZANE	Travis	78724	TCX9342	TX	108
3272	TAYLOR M VULGAMORE	NULL	83703	0041GG	ID	117
3273	AZUCENA RODRIGUEZ VENCES	Bastrop	78621	VBV7171	TX	118
3274	ANTHONY JONES	Travis	78748	5815K58	TX	105
3275	OLGA LYDIA AGUILAR	Bell	76542	TGB4356	TX	106
3276	ROSA JESSICA ELIZALDE SANTOS	Travis	78724	VHK0438	TX	106
3277	JOSE TITO FUENTES	Hays	78640	GNR6783	TX	109
3278	NANCY IRENIA C. DE RAMIREZ	Travis	78724	RBV5967	TX	116
3279	DERRICK AUDIAIOUS STEPHON DURS	Travis	78753	5754Y80	TX	131
3280	PORSCHE M CLARK	Bastrop	78602	5368P87	TX	114
3281	GENTILE NYAMUCHO	Travis	78754	SMY5013	TX	143



CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

## CTRMA Prohibited Vehicles

3282	JESUS JAIMES	Williamson	78613	VGH1932	TX	126
3283	STEPHEN GLENN STIDHAM ASHANTI SHANAE STIDHAM	NULL	45714	TLL6210	OH	104
3284	CENTEX MATERIALS LLC	Travis	78741	VFS4180	TX	105
3285	VINCENT LARAY WADE	Harris	77016	5598W16	TX	111
3286	LETITIA POWERS	Harris	77429	TPR4219	TX	113
3287	ARI FLEET	NULL	66222	KJD5519	KS	108
3288	ISMAEL ILEAN MENDEZ	Harris	77028	NBC9678	TX	107
3289	SEBASTIAN FELIX LARA DRISCOLL	Hays	78610	5787J13	TX	108
3290	ROMAN BARAJAS DIAZ	Travis	78724	5482N93	TX	106
3291	ARIEL CELESTE VANTRELL SIMPSON	Travis	78721	5786U13	TX	113
3292	JEFFREY LEE ANDERSON	Travis	78721	TGN8115	TX	116
3293	STACY CHRISTINE BAKER	Travis	78750	TWL1032	TX	130
3294	MAIK REINCKE	Travis	78744	RFF4508	TX	101
3295	LISANDRA SANTANA DE ARMAS	Travis	78744	5714F21	TX	100
3296	HALEY MESHELL SMITH SAMUEL THOMAS BASS	Harris	77062	TSK0241	TX	106
3297	CLARA ROSMERY ZUNIGA	Travis	78744	SIK4893	TX	111
3298	GENESSA ARLENE ELLISON	Hays	78666	VCD6203	TX	106
3299	PHILLIP RYE DURBIN	Williamson	78641	TBD3987	TX	115
3300	NAKEIA WASHINGTON	Travis	78745	5471D42	TX	108
3301	CHRISTINA MARIE ROWEHL	Travis	78736	TWK7127	TX	107
3302	AUSTIN MOORHEAD, TAMMY REEVES	Travis	78750	5558F20	TX	103
3303	TRISTIAN EARL GRIFFIN	Williamson	78634	RYV5874	TX	101
3304	MARISSA ARACELI GARCIA, FRANCISCO ALEXANDER CASTIL	Travis	78617	5166L75	TX	106
3305	MARIE GORMAN	NULL	78602	5670J95	TX	103
3306	CAROLYN MCGINTY, AIDAN MCGINTY	Travis	78759	5480X90	TX	102
3307	VINCENT CHATHAM HAVERTY MARQUECE DEMONTAE HAVERTY	Travis	78724	TNL7999	TX	106
3308	JUSTIN RAYMOND HARDY	Bastrop	78621	RBX4226	TX	111
3309	BETSAIDA ES DE LA CRUZ ROMERO	Hidalgo	78589	TWM8855	TX	109
3310	JOSHUA MICHAEL BRADY	Williamson	78634	5461U49	TX	112
3311	DESTINY THOMAS	NULL	78728	5574G66	TX	124
3312	BUKURU PASCAL	Travis	78653	TZG0643	TX	101
3313	CURTIS DALE HAGAR	Williamson	78626	5564K23	TX	107
3314	NICOLINO JOSEPH DEL PRIORE	Lee	78942	TZK2060	TX	102
3315	CHRISTINE SALINAS CONSTANCIO	Travis	78724	5688Y49	TX	119
3316	ALTERNATIVE ENVIROMENTAL & RECYCLING SERVICES INC	Williamson	76578	TBS2583	TX	108
3317	LAUREN CASTANO	Bexar	78223	NZW4099	TX	108



## CTRMA Prohibited Vehicles

[illegible]

**GENERAL MEETING OF THE BOARD OF DIRECTORS  
OF THE  
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

**RESOLUTION NO. 25-002**

**APPROVING A CONTRACT WITH ELECNOR BELCO ELECTRIC, INC.  
FOR METAL BEAM GUARD FENCE REPLACEMENT AND INTELLIGENT  
TRANSPORTATION SYSTEM CABINET UPGRADES ON 290 TOLL**

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) desires the replacement of metal beam guard fence and intelligent transportation system cabinet upgrades along the 290 Toll mainlanes and ramps from 183 Toll to East of SH 130 Toll (the "Project"); and

WHEREAS, the Mobility Authority staff advertised the Project on November 13, 2024, and received three (3) bids by the bid opening on January 15, 2025; and

WHEREAS, the bids were reviewed by engineering staff who determined the lowest responsive and responsible bidder to be Elecnor Belco Electric, Inc.; and

WHEREAS, after reviewing the engineering staff's evaluation, the Executive Director recommends that the Board approve a contract with Elecnor Belco Electric, Inc. for the Project in an amount not to exceed \$2,449,888.00 and in the form published in the bid documents attached hereto as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors approves a contract with Elecnor Belco Electric, Inc. for the replacement of metal beam guard fence and intelligent transportation system cabinet upgrades along the 290 Toll from 183 Toll to East of SH 130 Toll in an amount not to exceed \$ 2,449,888.00, and hereby authorizes the Executive Director to finalize and execute the contract in the form or substantially the same form published in the bid documents attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January 2025.

Submitted and reviewed by:



James M. Bass  
Executive Director

Approved:



Robert W. Jenkins, Jr.  
Chairman, Board of Directors

**Exhibit A**





CENTRAL TEXAS REGIONAL  
**MOBILITY AUTHORITY**

**290E Metal Beam Guard Fence & ITS Cabinet  
Upgrades Maintenance Project**

CTRMA Contract No.: 25290E22701M

Bid Documents

Advertisement: November 13, 2024

Pre-Qualification Deadline: 12:00PM December 20, 2024

Bid Date: 2:00 PM January 15, 2025

Central Texas Regional Mobility Authority

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290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT

CTRMA CONTRACT NO. 25290E22701M

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BID DOCUMENTS  
CONTRACT AND CONTRACT BOND  
SPECIAL PROVISIONS  
SPECIAL SPECIFICATIONS  
PLANS

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January 15, 2025

Central Texas Regional Mobility Authority

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290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT

CTRMA CONTRACT NO. 25290E22701M

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TABLE OF CONTENTS

	<u>Page</u>
Invitation to Bid.....	1
Bid Document Checklist.....	3
Unofficial Bid Form (To receive Official Bid Form, request via the project's CivCast website ( <a href="https://www.civcastusa.com/project/66febaccb78f62c65ffa353e/summary">https://www.civcastusa.com/project/66febaccb78f62c65ffa353e/summary</a> ).....	5
Bid for 290E Metal Beam Guard Fence & ITS Cabinet Upgrades Maintenance Project.....	7
Non-Collusion Affidavit .....	9
Debarment Affidavit .....	11
Child Support Statement.....	13
Certification to Not Boycott Israel.....	15
Certification to Not Discriminate Against Firearm Entities or Firearm Trade Associations.....	16
Certification to Not Boycott Energy Companies.....	17
Prohibition on Certain Telecommunications Equipment or Services.....	18
Bid Bond.....	19
Contract Agreement .....	21
Information About Proposer Organization.....	24
Performance Bond.....	27
Payment Bond .....	30
Receipt of Addenda.....	32
Engineer's Seal.....	33

## TABLE OF CONTENTS

Page

General Notes .....	Section A
Specifications List, Special Provisions & Special Specifications .....	Section B

### Attachments

Plan Sheets

# CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

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## 290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES MAINTENANCE PROJECT

CTRMA CONTRACT NO. 25290E22701M

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### INVITATION TO BID

Electronic proposal forms for the above project shall be submitted via the project's CivCast <https://www.civcastusa.com/project/66febaccb78f62c65ffa353e/summary> to the Central Texas Regional Mobility Authority (Authority), by **2:00 PM local time, January 15, 2025**. The bids will be publicly posted via the project's CivCast website within 48 hours after the bids are opened.

The contractor will have one hundred twenty (120) working days after the date stated in the written Full Notice to Proceed to achieve full completion of all work. The Authority reserves the right to make changes in the work to complete the contract, as defined in the specifications.

A Full NTP will be issued no later than 180 calendar days after award for the Contractor to begin work. Time charges will begin accruing upon issuance of the Full NTP.

The complete list of quantities is located in the Bid Form. The principal items of work are as follows:

- Metal Beam Guard Fence End Treatment Install/Removal
- Mow Strip Install/Removal
- Metal Beam Guard Fence Install/Removal
- ITS Cabinets Standardization/Upgrading

The Official Bid Form for this Contract will be made available to prospective bidders who have met all prequalification requirements on or before 5:00 PM local time, on December 23, 2024 via the project's CivCastUSA website <https://www.civcastusa.com/project/66febaccb78f62c65ffa353e/summary>.

Prequalification requirements:

- Be registered with State of Texas,
- Be fully prequalified by Texas Department of Transportation (TxDOT),
- Have a bidding capacity per TxDOT prequalification system of \$3,000,000
- Submit a valid Non-Collusion Affidavit, Debarment Affidavit, and Child Support Statement,

The deadline for meeting the prequalification requirements and still obtaining an Official Bid Form is December 20, 2024 at Noon.

The Authority cannot be held liable in the event a party is unable to submit a valid bid due to delay in the prequalification procedure. Securing prequalification through TxDOT and the timing thereof, shall at all times be the sole responsibility of the Prospective Bidder.

Complete Contract documents will be available on November 13, 2024 for potential bidders and others through the Authority's website ([www.mobilityauthority.com](http://www.mobilityauthority.com)) and CivCast's website <https://www.civcastusa.com/project/66febaccb78f62c65ffa353e/summary>.

Standard Specifications (Texas Department of Transportation "Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges", September 1, 2024) which form an integral part of this Contract, are available on line at the Texas Department of Transportation (TxDOT) website (<https://www.txdot.gov/business/resources/txdot-specifications.html>).

The contract will be awarded in accordance with the Authority's Procurement policy. A copy of the Procurement Policy is available online at the Authority website: (<https://www.mobilityauthority.com/about/policy-disclaimers/code>).

For more information, please submit a question to the project team through CivCast.com.

Each bid must be accompanied by a Bid Guaranty consisting of a Bid Bond (on the form provided) in the amount of at least five percent (5%) of the Total Bid Amount. The apparent low bidder shall deliver the original sealed Bid Bond to CTRMA within five (5) calendar days of such notification.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY  
James Bass, Executive Director  
Austin, Texas

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

CTRMA CONTRACT NO. 25290E22701M

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**BID DOCUMENT CHECKLIST**

Prior to submitting a bid, prospective bidders should review the checklist below to ensure that the bid is accepted and not declared nonresponsive. No joint venture participants will be allowed.

**Bid Document:**

- Are you aware if your affiliates are bidding on the same project?
- Are you pre-qualified by TxDOT through the Confidential Questionnaire process and have a bidding capacity of \$3,000,000?
- Have you submitted a valid Non-Collusion Affidavit, Debarment Affidavit, and Child Support Statement in order to receive an Official Bid Form?

**Bid Document Preparation:**

- Is the bid being submitted on the Official Bid Form via the CivCast website?
- Are you submitting only one bid for this project?
- Is the bid signed by your company representative or each joint venture participant?
- Have you entered prices for all bid items?
- Does the bid document contain all items included in the Official Bid Form?
- Does the bid document contain a total bid value?
- Is the bid free of any additional conditions not included in the bid document provided to you?
- Have you electronically submitted a complete and executed Bid Bond?
- Have you acknowledged each Addendum on CivCast?



Bid Bonds:

- Is the bid bond signed by the surety?
- Is the bid bond signed by the company representative?
- Is the exact name of the contractor(s) listed as the principal?
- Is the impressed surety seal affixed to the bid bond?
- Does the name on the surety seal match the name of the surety on the bond?
- Is the bond dated on or earlier than the letting date of the project?
- Is the signer for the surety listed on the power of attorney attached to the bond?
- Is the surety authorized to issue the bond?

Bid Document Submission:

- Are you aware of the time and date deadline for submission for the bid document?
- Are you submitting a complete bid document?

## 290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES MAINTENANCE PROJECT

### Unofficial Bid Form

To receive Official Bid Form, request via the project's CivCast website.

ITEM NO.	DESC. CODE	DESCRIPTION	UNIT	QTY	UNIT PRICE
0104	7006	REMOV CONC (RIPRAP)	SY	464.9	
0132	7003	EMBANK (FNL)(OC)(TY B)	CY	197.0	
0164	7004	BROADCAST SEED (PERM_URBAN_CLAY)	SY	7,260.0	
0432	7001	RIPRAP (CONC)(4 IN)	CY	17.1	
0432	7013	RIPRAP (MOW STRIP)(4 IN)	CY	53.0	
0500	7001	MOBILIZATION	LS	1.0	
0502	7001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	6.0	
0503	7002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	4.0	
0505	7001	TMA (STATIONARY)	DAY	90	
0506	7044	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	630.0	
0506	7046	BIODEG EROSN CONT LOGS (REMOVE)	LF	630.0	
0540	7001	MTL W-BEAM GD FEN (TIM POST)	LF	187.5	
0540	7002	MTL W-BEAM GD FEN (STEEL POST)	LF	425.0	
0540	7005	MTL BEAM GD FEN TRANS (THRIE-BEAM)	EA	1.0	
0540	7015	DOWNSTREAM ANCHOR TERMINAL SECTION	EA	3.0	
0542	7001	REMOVE METAL BEAM GUARD FENCE	LF	315.0	
0542	7003	REMOVE DOWNSTREAM ANCHOR TERMINAL	EA	3.0	
0542	7004	RM MTL BM GD FENCE TRANS (THRIE-BEAM)	EA	1.0	
0544	7001	GUARDRAIL END TREATMENT (INSTALL)	EA	63.0	
0544	7003	GUARDRAIL END TREATMENT (REMOVE)	EA	63.0	
0618	7021	CONDT (PVC) (SCH 40) (1")	LF	130.0	
0618	7030	CONDT (PVC) (SCH 40) (2")	LF	2,755.0	
0618	7031	CONDT (PVC) (SCH 40) (2") (BORE)	LF	1,500.0	
0618	7078	CONDT (RM) (2")	LF	25.0	
0620	7002	ELEC CONDR (NO.14) INSULATED	LF	1,665.0	
0620	7009	ELEC CONDR (NO.6) BARE	LF	205.0	
0620	7010	ELEC CONDR (NO.6) INSULATED	LF	670.0	
0620	7011	ELEC CONDR (NO.4) BARE	LF	780.0	
0620	7012	ELEC CONDR (NO.4) INSULATED	LF	1,560.0	
0620	7015	ELEC CONDR (NO.2) BARE	LF	6,040.0	
0620	7016	ELEC CONDR (NO.2) INSULATED	LF	12,080.0	
0620	7017	ELEC CONDR (NO.1) BARE	LF	2,200.0	
0620	7018	ELEC CONDR (NO.1) INSULATED	LF	4,400.0	
0620	9001	ELEC CONDR (REM)	LF	22,665.0	
0624	7002	GROUND BOX TY A (122311)W/APRON	EA	7.0	
0624	7008	GROUND BOX TY D (162922)W/APRON	EA	8.0	
0628	7160	ELC SRV TY D 120/240 060(SS)GS(N)SP(O)	EA	2.0	
0628	9001	STEP DOWN TRANSFORMER	EA	7.0	
0628	9002	STEP UP TRANSFORMER	EA	4.0	
0628	9003	MODIFY ELECTRICAL SERVICE	EA	11.0	
0628	9004	SAFETY SWITCH	EA	19.0	
0658	7018	INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2	EA	85.0	
6005	9001	RVSD COMM CABLE	EA	2,150.0	
6005	9002	CCTV COMM CABLE	LF	165.0	
6005	9003	REMOVE RVSD COMM CABLE	LF	805.0	
6007	9001	BBU SYSTEM	EA	19.0	

6010	7005	RELOCATE RVSD	EA	3.0	
6010	9003	RVSD IN-CABINET EQUIPMENT	EA	15.0	
6011	7004	ITS POLE MNT CAB (TY 3)(CONF 2)	EA	18.0	
6011	7019	ITS POLE (30 FT)(90 MPH)	EA	2.0	
6011	9001	REMOVE SMALL EQUIPMENT ENCLOSURE POLE MNT	EA	8.0	
6011	9002	MODIFY SMALL EQUIPMENT ENCLOSURE TRUSS MNT	EA	6.0	
6011	9003	MODIFY SMALL EQUIPMENT ENCLOSURE POLE MNT	EA	1.0	
6011	9004	REMOVE DEVICE POLE	EA	2.0	
6018	9001	RELOCATE CCTV IN-CABINET EQUIPMENT	EA	7.0	
6027	7001	FIBER OPTIC CBL (SINGLE-MODE)(12 FIBER	LF	5,025.0	
6027	7004	FIBER OPTIC FUSION SPLICE	EA	150.0	
6027	7019	FIBER OPTIC CBL (SNGLE-MODE)(24 FIBER)	EA	265.0	
6027	7021	PRETERMINATED FIBER OPTIC PATCH PANEL (12 POSITION)	EA	21.0	
6027	9001	FIBER OPTIC SPLICE ENCLOSURE (TYPE 2)	EA	8.0	
6027	9002	MODIFY SPLICE ENCLOSURE	EA	3.0	
6050	7004	ITS GRND MNT CAB (TY 4)(CONF 2)	EA	1.0	
6058	9001	RELOCATE RWIS IN CABINET EQUIPMENT	EA	1.0	
RMA-7101	9001	ETHERNET MEDIA CONVERTER	EA	1.0	
RMA-7102	9001	F&I RPMU	EA	19.0	
RMA-7103	9001	FIELD ETHERNET SWITCH	EA	19.0	
		CONTINGENCY ALLOWANCE	LS	1.0	\$240,000
		FORCE ACCOUNT	LS	1.0	\$115,000

(NOTE: Bidders shall **not** remove this bidding form from attached documents.)

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

**CTRMA CONTRACT NO. 25290E22701M**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT CONTRACT**

To the Central Texas Regional Mobility Authority  
3300 N I-35, Suite 300  
Austin, Texas 78705

Gentlemen:

I/we, the undersigned, declare: that no other person, firm or corporation is interested in this Bid; that I/we have carefully examined the Plans, Standard Specifications, Special Provisions, and all other documents pertaining to this Contract which form a part of this Bid as if set forth at length herein; that I/we understand that the quantities of items shown herein below are approximate only; that I/we have examined the location of the proposed work; that I/we agree to bind myself/ourselves, upon award to me/us by the Central Texas Regional Mobility Authority under this Bid, to enter into and execute a Contract, for the project named above; that I/we agree to start work within thirty (60) calendar days after the date stated in the written Notice-to-Proceed (Item 8.1 of the Specifications), to furnish all necessary materials, provide all necessary labor, equipment, tools and plant, pay for all required insurance, bonds, permits, fees and service, and do all required work in strict compliance with the terms of all documents comprising said Contract, and to fully complete the entire project within one hundred twenty (120) working days after Notice-to-Proceed; and that I/we agree to accept as full compensation for the satisfactory prosecution of this project the contractual bid amount after it is adjusted based on the terms and conditions specified in the contract.

The quantities shown in the above schedule of items are considered to be approximate only and are given as the basis for comparison of bids. The Authority may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. Any increase or decrease in the amount of any item or portion of work will be added or deducted from the total Contract bid price based on the terms and conditions specified in TxDOT Specification Item 4. It is understood that payment for this project will be by unit prices bid.

The cost of any work performed, materials furnished, services provided, or expenses incurred, whether or not specifically delineated in the Contract documents but which are incidental to the scope and plans, intent, and completion of this Contract, have been included in the price bid for the various items scheduled hereinabove.

Accompanying this Bid is a bid guaranty consisting of a Bid Bond (on the form provided) in the amount of at least five percent (5%) of the Official Total Bid Amount. It is hereby understood and agreed that said Bid Bond is to be forfeited as liquidated damages in the event that, on the basis of this Bid, the Authority should award this Contract to me/us and that I/we should fail to execute and deliver said Contract and the prescribed Contract Bond, together with the proof of proper insurance coverage and other necessary documents, all within fifteen (15) calendar days after award of the Contract; otherwise, said check or bond is to be returned to the undersigned.

Business Name of Bidder \_\_\_\_\_

Type of Organization	Individual	<input type="checkbox"/>
	Partnership	<input type="checkbox"/>
	Corporation	<input type="checkbox"/>

Address of Bidder: \_\_\_\_\_

\_\_\_\_\_

Signature of Owner,  
Partner or Corp. Officer: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

**CTRMA CONTRACT NO. 25290E22701M**

**\*\*\*\*\***

**NON-COLLUSION AFFIDAVIT**

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

I, \_\_\_\_\_, of the  
City of \_\_\_\_\_, County of \_\_\_\_\_ and State of  
\_\_\_\_\_, being of full age and duly sworn according to law on my oath  
depose and say:

That I am \_\_\_\_\_ (Title) of  
\_\_\_\_\_, the Bidder making  
the Bid submitted to the Central Texas Regional Mobility Authority, on the 11<sup>th</sup> day of  
December, 2024, for Contract No. 25290E22701M in connection with 290E Metal Beam Guard  
Fence & ITS Cabinet Upgrades Maintenance Project; that I executed the said Bid with full  
authority to do so;

The said Bidder has not, directly or indirectly, entered into any combination or  
arrangement with any person, firm or corporation or entered into any agreement, participated in  
any collusion, or otherwise taken any action in restraint of free, competitive bidding or which  
would increase the cost of construction or maintenance in connection with the said Contract; that  
no person or selling agency has been employed or retained to solicit or secure the said Contract  
upon an agreement or understanding for a commission, percentage, brokerage or contingent fee,  
except bona fide full-time employees;

And that said Bidder is or has been a member of the following highway contractors' association during the preceding twelve months:

Name of Association	Location of Principal Office
_____	_____
_____	_____
_____	_____

I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed  
before me this \_\_\_\_\_  
day of \_\_\_\_\_,  
20\_\_\_\_.

By: \_\_\_\_\_  
Person Signing Bid

Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_



**Central Texas Regional Mobility Authority**

**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

**CTRMA CONTRACT NO. 25290E22701M**

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**DEBARMENT AFFIDAVIT**

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

I, \_\_\_\_\_, of the City  
of \_\_\_\_\_, County of \_\_\_\_\_ and State of  
\_\_\_\_\_, being of full age and duly sworn according to law on my oath  
depose and say:

That I am \_\_\_\_\_ (Title) of  
\_\_\_\_\_, the Bidder making  
the Bid submitted to the Central Texas Regional Mobility Authority, on the 9<sup>th</sup> day of January,  
2025, for Contract No. 25290E22701M in connection with the 290E Metal Beam Guard Fence &  
ITS Cabinet Upgrades Maintenance Project; that I executed the said Bid with full authority to do  
so;

The said Bidder has not been excluded or disqualified from doing business on State or  
Federal projects;

And that said Bidder is or has been a member of the following highway contractors'  
association during the preceding twelve months:

Name of Association	Location of Principal Office
_____	_____
_____	_____
_____	_____

I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed  
before me this \_\_\_\_\_  
day of \_\_\_\_\_,  
20\_\_\_\_.

By: \_\_\_\_\_  
Person Signing Bid

Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

## **CHILD SUPPORT STATEMENT**

**Under section 231.006, Family Code, the vendor or applicant certifies that the individual or business entities named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated, and payment may be withheld if this certification is inaccurate.**



## CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS

Under Family Code, Section 231.006, \_\_\_\_\_  
Certifies that \_\_\_\_\_,  
as of \_\_\_\_\_ is eligible to receive a grant, loan or payment and acknowledges  
that any contract may be terminated and payment may be withheld if this certification is inaccurate.

List below the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the bid or application. This form must be updated whenever any party obtains a 25% ownership interest in the business entity.

NAME <i>(please print legibly, if handwritten)</i>	SOCIAL SECURITY NUMBER

Family Code, Section 231.006, specifies that a child support obligor who is more than thirty (30) days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

Except as provided in Family Code, Section 231.302(d), a social security number is confidential and may be disclosed only for the purposes of responding to a request for information from an agency operating under the provisions of Subchapters A and D of Title IV of the federal Social Security Act (42 U.S.C. Sections 601 et seq. and 651 et seq.)

### **CERTIFICATION TO NOT BOYCOTT ISRAEL**

Pursuant to Texas Government Code 2271.002, the Mobility Authority must include a provision requiring a written verification that the Contractor does not boycott Israel and will not boycott Israel during the term of the Contract. By signing the contract, the Contractor certifies that it does not boycott Israel and will not boycott Israel during the term of this contract.

Violation of this certification may result in action by the Mobility Authority.

## **CERTIFICATION TO NOT DISCRIMINATE AGAINST FIREARM ENTITIES OR FIREARM TRADE ASSOCIATIONS**

Pursuant to Texas Government Code 2274.002, the Department must include a provision requiring a written verification affirming that the Contractor:

- 1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, as defined in Government Code 2274.001, and
- 2) will not discriminate against a firearm entity or firearm trade association during the term of the contract.

This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing, the Contractor certifies that it does not discriminate against a firearm entity or firearm trade association as described and will not do so during the term of this contract.

"Discriminate against a firearm entity or firearm trade association" means, with respect to the entity or association, to: (1) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; (2) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or (3) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association. "Discriminate against a firearm entity or firearm trade association" does not include: (1) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories; (2) a company's refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency, or for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity's or association's status as a firearm entity or firearm trade association.

Violation of this certification may result in action by the Department.

## **CERTIFICATION TO NOT BOYCOTT ENERGY COMPANIES**

Pursuant to Texas Government Code 2274.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott energy companies, as defined in Government Code 809.001, and will not boycott energy companies during the term of the contract. This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing, the Contractor certifies that it does not boycott energy companies and will not boycott energy companies during the term of this contract. “Boycott” means taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: (1) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (2) does business with a company described by (1).

Violation of this certification may result in action by the Department.



## **PROHIBITION ON CERTAIN TELECOMMUNICATIONS EQUIPMENT OR SERVICES**

The Federal Register Notice issued the Final Rule and states that the amendment to 2 CFR 200.216 is effective on August 13, 2020. The new 2 CFR 200.471 regulation provides clarity that the telecommunications and video surveillance costs associated with 2 CFR 200.216 are unallowable for services and equipment from these specific providers. OMB's Federal Register Notice includes the new 2 CFR 200.216 and 2 CFR 200.471 regulations.

Per the Federal Law referenced above, use of services, systems, or services or systems that contain components produced by any of the following manufacturers is strictly prohibited for use on this project. Therefore, for any telecommunications, CCTV, or video surveillance equipment, services or systems cannot be manufactured by, or have components manufactured by:

- Huawei Technologies Company,
- ZTE Corporation (any subsidiary and affiliate of such entities),
- Hyatera Communications Corporation,
- Hangzhou Hikvision Digital Technology Company,
- Dahua Technology Company (any subsidiary and affiliate of such entities).

Violation of this requirement will require replacement of the equipment at the contractor's expense.

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

**CTRMA CONTRACT NO. 25290E22701M**

**\*\*\*\*\***

**BID BOND**

KNOW ALL PERSONS MEN BY THESE PRESENTS,  
that \_\_\_\_\_, as Principal/Contractor, and  
\_\_\_\_\_, as Surety, legally authorized to do  
business in the State of Texas, are held and firmly bounded unto the Central Texas Regional  
Mobility Authority, as Authority, in the amount of at least five percent (5%) percent of the Total  
Bid amount, on which the Contract is awarded lawful money of the United States of America, for  
the payment of which, well and truly to be made, we bind ourselves, our heirs, executors,  
administrators, successors and assigns, jointly and severally and firmly by these presents:

WHEREAS, the Contractor is herewith submitting its Bid for Contract No.  
25290E22701M, entitled 290E Metal Beam Guard Fence & ITS Cabinet Upgrades Maintenance  
Project, and

NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall be  
awarded the Contract upon said Bid and shall, within fifteen (15) calendar days after the date of  
written notice of such award, enter into and deliver a signed Contract and the prescribed  
Performance Bond for the faithful performance of the Contract, together with the required proof of  
proper insurance coverage and other necessary documents, then this obligation shall be null and  
void; otherwise, to remain in full force and effect, and the Contractor and Surety will pay unto the  
Authority the difference in money between the amount of the Total Amount written in the Bid of  
said Contractor and the amount for which the Authority may legally contract with another party to  
perform the said work, if the latter amount be in excess of the former; but in no event shall the  
Surety's liability exceed the penal sum hereof.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

PRINCIPAL/CONTRACTOR

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Address

Witness or Attest:

\_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title:

(Affix Corporate Seal Here)

SURETY:

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Address

Witness or Attest:

\_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title:

(Attach evidence of Power of Attorney)

(Affix Corporate Seal Here)

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

CTRMA CONTRACT NO. 25290E22701M

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**CONTRACT AGREEMENT**

THIS AGREEMENT, made this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, between the Central Texas Regional Mobility Authority, 3300 N. I-35, Suite 300, Austin, Texas, 78705, hereinafter called the "Authority" and \_\_\_\_\_, or his, its or their successors, executors, administrators and assigns, hereinafter called the Contractor.

WITNESSETH, that the Contractor agrees with the Authority for the consideration herein mentioned, and at his, its or their own proper cost and expense, to do all the work and furnish all the materials, equipment, teams and labor necessary to prosecute and complete and to extinguish all liens therefore, Contract No. 25290E22701M, entitled 290E Metal Beam Guard Fence & ITS Cabinet Upgrades Maintenance Project, in the manner and to the full extent as set forth in the Plans, Standard Specifications, Special Provisions, Bid (for the basis of award stated herein below) and other documents related to said Contract which are on file at the office of the Authority and which are hereby adopted and made part of this Agreement as completely as if incorporated herein, and to the satisfaction of the Authority or its duly authorized representative who shall have at all times full opportunity to inspect the materials to be furnished and the work to be done under this Agreement.

This Contract is awarded on the basis of the official total Bid Amount based on the unit prices bid of \_\_\_\_\_ dollars and \_\_\_\_\_ Cents (\$ \_\_\_\_\_).

In consideration of the foregoing premise, the Authority agrees to pay the Contractor for all items of work performed and materials furnished at the amount of the unit prices bid therefore in the Bid submitted for this Contract, subject to any percentage reductions in the total Contract amount that may be named in the Bid corresponding to the basis of award stated in the above paragraph, and subject to the conditions set forth in the Specifications.

The Contractor agrees as follows:

- a. I/WE will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor.

- b. I/WE agree it is the policy of the Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color or national origin, age or disability. Such action shall include: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and on-the-job training.
- c. I/WE agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- d. I/WE in any solicitations or advertising for employees placed by or on behalf of itself, will state that it is an equal opportunity employer.
- e. I/WE agree to adhere to all federal/state regulations including, but not limited to, American Disabilities Act, Equal Employment Opportunity, submitting certified payrolls, and participating in Contractor/Subcontractor labor standard reviews.
- f. Notices and advertisements and solicitations placed in accordance with applicable state and federal law, rule or regulation, shall be deemed sufficient for the purposes of meeting the requirements of this section.
- g. Contract Time - The contractor will have one hundred twenty (120) working days after the date stated in the written Full Notice-to-Proceed to Fully complete the project.
- h. Failure by Contractor to fulfill these requirements is a material breach of the Contract, which may result in the termination of this Contract, or such other remedy, as the Authority deems appropriate.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement the day and year written above.

Sworn to and Subscribed

CENTRAL TEXAS REGIONAL MOBILITY  
AUTHORITY

before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_\_\_.

By: \_\_\_\_\_  
James Bass  
Executive Director

\_\_\_\_\_  
Notary Public

My commission expires:

\_\_\_\_\_

Sworn to and subscribed  
before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
by: \_\_\_\_\_  
Notary Public

My commission expires:  
\_\_\_\_\_

CONTRACTOR:

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Address

\_\_\_\_\_

Title

(Affix Corporate Seal Here)

## INFORMATION ABOUT PROPOSER ORGANIZATION

Proposer's business address:

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(No.) (Street) (Floor or Suite)

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(City) (State or Providence) (ZIP or Postal Code) (Country)

State or County of Incorporation/Formation/Organization: \_\_\_\_\_

Signature block for a corporation or limited liability company:

Company: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Additional Requirements:

- A. If the proposer is a corporation, enter state or country of incorporation in addition to the business address. If the proposer is a partnership, enter state or country of formation. If the proposer is a limited liability company, enter state or country of organization.
- B. Describe in detail the legal structure of the entity making the Bid. If the proposer is a partnership, attach full name and addresses of all partners and the equity ownership interest of each entity, provide the aforementioned incorporation, formation and organization information for each general partner and attach a letter from each general partner stating that the respective partner agrees to be held jointly and severally liable for any and all of the duties and obligations of the proposer under the Bid and under any contract arising therefrom. If the proposer is a limited liability entity, attach full names and addresses of all equity holders and other financially responsible entities and the equity ownership interest of each entity. If the proposer is a limited liability company, include an incumbency certificate executed by a Secretary thereof in the form set on the following page listing each officer with signing authority and its corresponding office. Attach evidence to the Bid and to each letter that the person signing has authority to do so.
- C. With respect to authorization of execution and delivery of the Bid and the Agreements and validity thereof, if any signature is provided pursuant to a power of attorney, a copy of the power of attorney shall be provided as well as a certified copy of corporate or other appropriate resolutions authorizing said power of attorney. If the Proposer is a corporation, it shall provide evidence of corporate authorization in the form of a resolution of its governing body certified by an appropriate officer of the corporation. If the Proposer is a limited liability company, evidence of authorization would be in the form of a limited company resolution and a managing member resolution providing such authorization, certified by an appropriate officer of the managing member. If the Proposer is a partnership, evidence of authorization shall be provided for the governing body of the Proposer and for the governing bodies of each of its general partners, at all tiers, and in all cases certified by an appropriate officer.
- D. The Proposer must also identify those persons authorized to enter discussions on its behalf with the Authority in connection with this Bid, the Project, and The Agreement. The Proposer shall submit with its Bid a power of attorney executed by the Proposer and each member, partner of the Proposer, appointing and designating one or more individuals to act for and bind the Proposer in all matters relating to the Bid.



INCUMBENCY CERTIFICATE

The undersigned hereby certifies to the Central Texas Regional Mobility Authority that he/she is the duly elected and acting \_\_\_\_\_ Secretary of \_\_\_\_\_ (the “Company”), and that, as such, he/she is authorized to execute this Incumbency Certificate on behalf of the Company, and further certifies that the persons named below are duly elected, qualified and acting officers of the Company, holding on the date hereof the offices set forth opposite their names.

NAME:

OFFICE:

\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_

IN WITNESS WHEREOF, the undersigned has executed this Incumbency Certificate this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
  
\_\_\_\_\_  
Secretary

Central Texas Regional Mobility Authority

290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT

CTRMA CONTRACT NO. 25290E22701M

\*\*\*\*\*

PERFORMANCE BOND

STATE OF TEXAS

COUNTY OF \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_

\_\_\_\_\_ of the City of \_\_\_\_\_

County of \_\_\_\_\_, and State of \_\_\_\_\_, as principal,  
and

\_\_\_\_\_ authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto the Central Texas Regional Mobility Authority (Authority), in the penal sum of

\_\_\_\_\_ Dollars

(\$\_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Authority, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the "Contract"), to which the said Contract, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Agreement and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by the Contract agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Contract and the Contract Documents hereto annexed, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the work performed thereunder, or to the Contract Documents referenced therein, shall in anyway affect the obligations on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms on the Agreement, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
PHONE NUMBER

(\_\_\_\_\_) \_\_\_\_\_  
PHONE NUMBER

(\_\_\_\_\_) \_\_\_\_\_  
PHONE NUMBER

The name and address of the Resident Agency of Surety is:

\_\_\_\_\_  
\_\_\_\_\_

(\_\_\_\_\_) \_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
SIGNATURE OF LICENSED LOCAL  
RECORDING AGENT appointed to countersign  
on behalf of Surety (Required by Art. 21.09 of the  
Insurance Code)

\*\*\*\*\*

I, \_\_\_\_\_, having executed Bonds  
SIGNATURE

for \_\_\_\_\_ do hereby affirm I have  
NAME OF SURETY

verified that said Surety is now certified with Authority from either: (a) the Secretary of the Treasury of the United States if the project funding includes Federal monies; or (b) the State of Texas if none of the project funding is from Federal sources; and further, said Surety is in no way limited or restricted from furnishing Bond in the State of Texas for the amount and under conditions stated herein.

Central Texas Regional Mobility Authority

290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT

CTRMA CONTRACT NO. 25290E22701M

\*\*\*\*\*

PAYMENT BOND

STATE OF TEXAS  
COUNTY OF \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_

\_\_\_\_\_ of the City of \_\_\_\_\_

County of \_\_\_\_\_, and State of \_\_\_\_\_, as Principal  
(hereinafter referred to as the "Principal"), and

\_\_\_\_\_ authorized under the laws of the State of Texas to act as Surety on bonds for principals (hereinafter referred to as the "Surety"), are held and firmly bound unto Central Texas Regional Mobility Authority, (hereinafter referred to as the "Authority"), in the penal sum of

\_\_\_\_\_ Dollars

(\$\_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Authority, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the "Contract"), to which the said Contract, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work performed thereunder, or to the other Contract Documents accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder or to the other Contract Documents accompanying the same.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
( )

\_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
( )

\_\_\_\_\_  
PHONE NUMBER

The name and address of the Resident Agency of Surety is:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
( )

\_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
SIGNATURE OF LICENSED LOCAL  
RECORDING AGENT appointed to countersign  
on behalf of Surety (Required by Art. 21.09 of the  
Insurance Code)

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

CTRMA CONTRACT NO. 25290E22701M

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**RECEIPT OF ADDENDA**

Receipt of addendum, if issued, must be acknowledged electronically on the CivCast website.

Failure to confirm receipt of all addenda issued will result in the bid being deemed non-responsive.

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Signature

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Date

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

**CTRMA CONTRACT NO. 25290E22701M**

\*\*\*\*\*

**ENGINEER'S SEALS**

The enclosed Specifications, Special Provisions, General Notes, and Specification Data in this document have been selected by me, or under my responsible supervision as being applicable to this project.



Alteration of a sealed document without proper notification to the responsible engineer is an offence under the Texas Engineering Practice Act.



**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

## **GENERAL NOTES:**

### **GENERAL**

Perform work during good weather. If work is damaged by a weather event, the Contractor is responsible for all costs associated with replacing damaged work.

Remove and replace, at the Contractor's expense, and as directed by the Engineer, all defective work, which was caused by the Contractor's workforce, materials, or equipment.

The "Engineer" shall be the Mobility Authority's consultant identified by the Mobility Authority at the pre-construction meeting.

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Intelligent Transportation Systems (ITS) Infrastructure and Toll Collection System Infrastructure exists within the limits of this project and the system must remain operational throughout construction. Backbone and hub communication fiber links are critical and must be maintained during the duration of the project. Use caution if working in these areas to avoid damaging or interfering with existing facilities and infrastructure. In the event of TxDOT system damage, notify TxDOT at (512) 974-0883 and the Toll Operations Division at (512) 874-9177 within one hour of occurrence. In the event of Mobility Authority Toll system or ITS system damage, notify the Mobility Authority Director of Operations at (512) 996-9778 within one hour of occurrence. Failure of the Contractor to repair damage within 8 hours of occurrence to any infrastructure that conveys any corridor information to TxDOT/Mobility Authority will result in the Contractor being billed for the full cost of emergency repairs performed by others. Damage to any toll collection system infrastructure impacting the ability of the TxDOT/Mobility Authority to collect, process or transmit transactions will result in the Contractor being billed for lost revenue damages. Revenue damages will be based on historical revenue collected from the affected gantries.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed by the Engineer. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Engineer. Consider subsidiary to pertinent items.

Protect all areas of the right of way (ROW), which are not included in the actual limits of the proposed construction areas, from disturbance. Restore any area disturbed because of the Contractor's operations to a condition as good as, or better than, before the beginning of work at no cost to the Mobility Authority.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Remove all loose Formwork and other Materials from the Floodplain or drainage areas, daily, which could float off in a Stormwater Event, as directed by the Engineer.

Damage to existing pipes, inlets, and SETs due to Contractor operations will be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the ROW, will be as directed by the Engineer. Use of ROW for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of ROW but will cooperate in the use of the ROW with the city/county, various public utility companies and other contractors as required.

Meet weekly with the Engineer to notify of planned work for the upcoming week. Provide a three-week "look ahead", as well as all work performed over the past week.

Coordinate and obtain approval for all work over existing roadways.

The Project Superintendent will always be available to contact when work is being performed, including subcontractor work. The Superintendent will be available and on-call 24 hours a day.

During evacuation periods for Hurricane events the Contractor will cooperate with the Mobility Authority and TxDOT for the restricting of Lane Closures and arranging for Traffic Control to facilitate Coastal Evacuation Efforts.

Overhead and underground utilities may exist in the vicinity of the project. The exact location of underground utilities may not be known. Refer to ITEM 5 – CONTROL OF THE WORK, for utility rates. If working near power lines, comply with the appropriate sections of Local Legal Requirements, Texas State Law, and Federal Regulations relating to the type of work involved.

Contractor is responsible for all toll charges incurred by Contractor vehicles.

Contractor shall refrain from using vehicles on the Shared Use Path project wide. No equipment, materials, etc. shall be on the SUP or blocking public access to SUP.

#### **ITEM 4 – SCOPE OF WORK**

Final cleanup will include the removal of excess material considered detrimental to vegetation growth along the front slope of the ditch. Materials, as specified by the Engineer, will be removed at the Contractor's expense.

#### **ITEM 5 – CONTROL OF THE WORK**

Provide a 48-hour advance email notice to [AUS\\_Locate@txdot.gov](mailto:AUS_Locate@txdot.gov) to request illumination, traffic signal, ITS, or toll equipment utility locates on TxDOT's system (US 290). Provide 2-week advance notice to the Engineer to request locates on the Mobility Authority's system (290E).

Before the Mobility Authority or its contractor begins work on State right of way, the entity performing the work shall provide TxDOT with a fully executed copy of TxDOT's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

the Certificate of Insurance for all persons and entities working on State right of way. This coverage shall be maintained until all work on TxDOT right of way is complete. If coverage is not maintained, all work on State right of way shall cease immediately, and TxDOT may recover damages and all costs of completing the work.

Cooperate and coordinate with other Contractors working within the limits or adjacent to the limits.

**Electronic Shop Drawing Submittals:**

Submit electronic shop drawing submittals according using the Mobility Authority's Electronic Data Management System (EDMS), which will be established for the Project prior to commencing construction. Submittals will be addressed to the Engineer and additional staff, as appropriate.

**ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES**

Refer to the Environmental Permits, Issues and Commitments (EPIC) plan sheets for additional requirements and permits. Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period of time exceeding 14 calendar days. Track all exposed soil, stockpiles and slopes. Tracking consists of operating 2 tracked vehicles or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work is subsidiary.

Do not park equipment where driver sight distance to businesses and side street intersections is obstructed, especially after work hours. If it is necessary to park where drivers' views are blocked, make every effort to flag traffic accordingly. Give the traveling public first priority.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

**Law Enforcement Personnel.**

A maximum combined rate of \$70 per hour for the law enforcement personnel and the patrol vehicle will be allowed. Any scheduling fee is subsidiary per Standard Specification 502.4.2.

Cancel law enforcement personnel when the event is canceled. Cancellation, minimums or "show up" fees will not be paid when cancellation is made 12 hours prior to beginning of the event. Failure to cancel within 12 hours will not be cause for payment for cancellation, minimums, or "show up" time. Payment of actual "show up" time to the event site due to cancellation will be on a case by case basis at a maximum of 2 hours per officer. Contractor must use CTRMA provided form to be reimbursed.

Alterations to the cancellation and maximum rate must be approved by the Engineer or pre-determined by official policy of the officers governing authority.

**Back Up Alarm**

For hours 9 P to 5 A, utilize a non-intrusive, self-adjusting noise level reverse signal alarm. This is subsidiary.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

## **ITEM 8 – PROSECUTION AND PROGRESS**

The Contractor will have 120 working days from NTP to have all installations complete.

Electronic versions of schedules will be saved in native format and delivered in native and PDF formats.

Working days will be charged based on a standard workweek.

Provide via email a 3-week look-ahead schedule in Gantt chart format. Submit weekly by noon on Friday. Designate each activity as night or day shift and include the name of the foreman or contractor. The chart shall have a specific section dedicated solely to lane closures and detours. Each lane closure and detour shall be an individual item on the schedule.

Lane Closure Assessments will be assessed as shown in the **Table 1** below.

Any unauthorized lane closures will be assessed to the Contractor as noted in **Table 1** below.

All Lane Closure Assessments for the Contractor will be subtracted from the value of the payment application for that associated period.

**Table 1: Lane Closure Assessment Rates**

Lane Closure Period	Late Charges (Per Lane)			
	290 Toll		US 290	
	Lane	Shoulder	Lane	Shoulder
>0-15 mins	\$1,000	\$1,000	\$1,000	\$1,000
>15-30 mins	\$2,000	\$2,000	\$2,000	\$2,000
>30-45 mins	\$3,000	\$3,000	\$3,000	\$3,000
>45-60 mins	\$4,000	\$4,000	\$4,000	\$4,000
Every additional 15-minute interval after 1 hour	\$2,000	\$2,000	\$2,000	\$2,000

For example: If the contractor has one lane of traffic closed on US 290 until Monday at 5:32 a.m., the contractor is 32 minutes outside of the allowable lane closure period. The late charges will be accrued as follows:

$$1 \text{ lane closed} \times [\$1,000 + \$1,000 + \$1,000] = \$3000$$

Emergency lane closures are not subject to lane closure assessments. Emergency lane closures are defined as closures caused by circumstances other than those caused by the contractor and shall be approved by the Mobility Authority.

Refer to Table 2. Allowable Lane Closure of Item 502 – Barricades, Signs, and Traffic Handling for available lane closure times.

Lane Closure Assessments for unauthorized shoulder closures will apply to both the main lane shoulders and to the general-purpose lane shoulders.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

## **ITEM 9 – MEASUREMENT AND PAYMENT**

Provide full-time, off-duty, uniformed, certified peace officers in officially marked vehicles, as part of traffic control operations, as directed by the Engineer.

Show proof of certification by the Texas Commission on Law Enforcement Standards.

No payment will be made for peace officers unless the Contractor completes the proper tracking form. Submit invoices that agree with the tracking form for payment at the end of each month, when approved services were provided. Request the tracking form from TxDOT.

No payment for officers used for moving equipment without prior written approval.

Cancel “Off-Duty” Peace Officers and their Motor Vehicle Units when the Scheduled Lane closures are canceled. Failure to cancel the Off-Duty Officers and their respective Motor Vehicle Units will not be the cause for payment, by Mobility Authority, for “Show Up” time.

## **ITEM 104 – REMOVING CONCRETE**

Saw or mill existing asphalt and concrete pavement along neat lines where portions are to be left in place temporarily or permanently.

Properly dispose of unsalvageable material in accordance with federal, state, and local regulations.

Riprap must be disposed of on the same day as removal. At all times, the Contractor shall ensure that the temporary stockpiles are not left within the Clear Zone.

## **ITEM 164 – SEEDING FOR EROSION CONTROL**

Obtain vegetation establishment of all seeded areas, including adequate coverage, prior to “Final Acceptance.” If all other work is complete, time charges may be suspended, until adequate coverage is established.

Provide measurements for payment of seeding for erosion control quantities before seeding.

## **ITEM 168 – VEGETATIVE WATERING**

Water all areas of project to be seeded or sodded at a rate of one quarter inch per week for a minimum of 12 weeks from the date the area is seeded or sodded.

Maintain the seedbed in a condition favorable for the growth of grass. Watering can be postponed immediately after a rainfall on the site of ½ inch or greater but will be resumed before the soil dries out. Continue watering until final acceptance.

Obtain water at a source that is metered (furnish a current certification of the meter being used) or furnish the manufacturer’s specifications showing the tank capacity for each truck used. Notify the Engineer, each day that watering takes place, before watering, so that meter readings or truck counts can be verified.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Vegetative Watering is subsidiary to pertinent Sodding and Seeding Items.

Keep the Engineer informed of areas where Vegetative Watering has been performed.

**ITEM 432 – RIPRAP**

Mow strip riprap will be 4 in. and all other riprap will be 5 in. unless otherwise shown on the plans or in the pay items.

Saw-cut existing riprap then epoxy 12 in long No. 4 bars 6 in. deep at a maximum spacing of 18 in. in each direction to tie new riprap to existing riprap. This work is subsidiary.

**ITEM 502 – BARRICADES, SIGNS, AND TRAFFIC HANDLING**

Cover, relocate or remove existing signs that conflict with traffic control. Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Do not set up traffic control when the pavement is wet.

Maintain access to all streets and driveways at all times, unless otherwise approved. Considered subsidiary to the pertinent Items.

Table 2. Allowable Lane Closure

Roadway	Limits	Allowable Closure Time*
		Weekday
290 Toll	US 183 to East of Parmer Lane	9 PM to 5 AM
US 290	US 183 to East of Parmer Lane	9 PM to 5 AM

\* Allowable Closure Time includes setup and cleanup time.

For roadways without defined allowable closure times, nighttime lane closures will be allowed from 8 P to 5 A. Unless stated, daytime or Friday night lane closures will not be allowed and one lane in each direction will remain open at all times for all roadways.

Full mainlane closures will not be allowed. Full ramp closures must be approved by the Engineer.

Law Enforcement Officers required for lane closures.

No closures will be allowed on Friday nights.

No closures will be allowed the weekends adjacent to, working day prior, and working day after the National Holidays defined in the Standard Specifications and Easter weekend. No closures will be allowed on Friday and the weekends for Austin City Limits Fest, Formula 1 United States Grand Prix, South by Southwest, UT home football games, Republic of Texas Rally, Rodeo Austin or other special events that could be impacted by the construction. All lanes will be open by noon of the day before these special events. The closure restrictions may be amended by the Engineer.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

To account for directional traffic volumes, begin and end times of closures may be shifted equally by the Engineer. The closure duration will remain. Added compensation is not allowed.

Submit a request for a lane closure notification (LCN) to the Mobility Authority using the CTRMA's electronic document management system. Receive concurrence prior to implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation.

Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal. Provide 2-hour notice prior to implementation and immediately upon removal of the closure.

Submit the request a minimum of 48 hours prior to the closure and by the following deadline immediately prior to the closure: 11A on Tuesday or 11A on Friday.

For all roadways: Submit request for traffic detours and full roadway closures 7 days prior to implementation.

Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

In the case of an unauthorized lane closure, all approved LCNs will be revoked until a meeting is held between the contractor and the Engineer. No lane closure notices will be approved until the meeting is concluded.

Meet with the Engineer prior to lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Take immediate action to modify traffic control, if at any time backup (queuing) becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures.

Coordinate Main Lane closures with adjacent projects including those projects owned by other agencies and departments.

Maximum lane closure length shall be 2 miles.

Do not setup lane and/or shoulder closures on both sides of road at the same time.

Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work will be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Maintain a minimum of 2 through lanes in each direction on the 290E mainlanes.

Shadow Vehicle with TMA is required for setup/removal of traffic control devices.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

**ITEM 503 – PORTABLE CHANGEABLE MESSAGE SIGN**

Provide 4 “Electronic” Portable Changeable Message Sign(s) (EPCMS) as part of the traffic control operation for the duration of the project. All EPCMS will be exclusive to this project, unless otherwise approved. Placement location and message as directed by the Engineer.

Place appropriate number of “Electronic” Portable Changeable Message Signs (EPCMS) at locations requiring lane closures for one-week prior to the closures, or as directed by the Engineer. Obtain approval for the actual message that will appear on the boards. If more than two phases of a message are required per board, provide additional EPCMS’s to meet the two-phases-per-board requirement. Provide a replacement within 12 hours. EPCMS will be available for traffic control, event notices, roadway conditions, service announcements, etc.

**ITEM 505 – TRUCK MOUNTED ATTENUATOR AND TRAILER ATTENUATOR**

A TMA/TA shall be used when installing and removing a TCP setup.

The contractor will be responsible for determining if one or more operations will be ongoing at the same time to determine the total number of TMA/TA required for the project.

TMA/TA used to protect damaged attenuators will be paid by the day using the force account item for the repair.

**ITEM 506 – TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS**

Install, maintain, remove erosion, sedimentation, and environmental control measures in areas of the right of way utilized by the contractor that are outside the limits of disturbance required for construction. Permanently stabilize the area. This work is subsidiary.

Consider the SW3P for this project to consist of the following item, as directed by the Engineer:

Erosion Control Logs

**ITEM 540 – METAL BEAM GUARD FENCE**

The modified standard GF(31)-19 (MOD) included in the plan set provides details for MBGF runs with post spacings reduced in half. MBGF with half post spacing shall be paid under bid item 540-7002 as shown on the reduced post spacing location plan sheets.

Adjust the limits of the Metal Beam Guard Fence (MBGF) to meet field conditions. Stake the locations for approval prior to installation. Install all permanent MBGF and delineators before opening the road to traffic.

Furnish round timber posts. Furnish steel posts at locations where the minimum embedment shown on the plans for wooden posts cannot be achieved or where the modified standard GF (31)-19(MOD) is specified. Field verify the steel post lengths before fabrication. Steel posts shall be subsidiary to Item 540.

Adjust MBGF placement to meet TxDOT Standard GF(31)MS-19. MBGF block-outs must be placed over the curb so that the W-beam is directly over or in front of the curb, refer to Curb Option (1)-(3) in the standard.



**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Backfill and shoulder up of area around fence and mow strip will be paid using embankment item

#### **ITEM 542 – REMOVING METAL BEAM GUARD FENCE**

Contractor may reuse steel posts, composite blocks, and metal beam rail elements that are undamaged, rust free, and dent free, and in compliance with current standards. Structurally sound rust spots with the largest dimension of 4 in. may be cleaned and repaired in accordance with 540.3.5 Galvanizing Repair. Contractor may punch or field drill holes in the metal rail element to accommodate post spacing. Additional holes for splice or connections are not allowed. The holes shall be spaced in accordance with the latest standard and shall not be closer than the minimum spacing shown on the standard. Reuse and repair work will not be paid separately.

Only remove metal beam guard fence that can be replaced in the same shift. Metal beam guard fence that is not replaced in the same shift must be protected by a TMA/TA. TMA/TA used to protect incomplete metal beam guard fence will not be paid and is considered subsidiary to pertinent items.

#### **ITEM 600s – ITS, TOLLING, LIGHTING, SIGNING, MARKINGS, AND SIGNALS**

Use materials from Material Producer List as shown on the TxDOT website (TxDOT.gov > Business > Resources). Furnish new material as required per Standard Specification.

Meet the requirements of the NEC, Texas MUTCD, TxDOT standards, and TxDOT Standard Specifications. If existing elements shown to remain do not meet the codes or specifications, provide notice to the Engineer.

Do not store any equipment or material of any kind in the vicinity of a tolling gantry without explicit approval from the Mobility Authority.

Prior to performing any work within or in the general vicinity of a toll pad or tolling gantry infrastructure contact the Mobility Authority to coordinate construction procedures and methods.

Provide all service, equipment and material required to provide a functional item and interface with existing equipment and software.

For CTRMA ITS contact Cory Bluhm ([cbluhm@ctrma.org](mailto:cbluhm@ctrma.org)).

Provide a 30 -day advance email notice to the Engineer for equipment to be provided by CTRMA.

Provide equipment that requires CTRMA programming or configuration to the Mobility Authority thirty (30) days in advance. Prior to relief of maintenance, completion of a Test Period is required for signals and ITS equipment in accordance with Item 680.3.1.7. Response time to reported trouble calls shall be less than 2 hours.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Maintain the existing CTRMA and TxDOT ITS equipment and fiber optic communications and keep hub buildings operational during construction, unless otherwise approved by the Engineer. TxDOT ITS downtime is allowed from 12 AM to 4 AM and must be approved in advance by the Engineer. CTRMA ITS downtime is allowed from 10 PM to 6 AM with approval from the Mobility Authority. Downtime resulting from unplanned outages is restricted to one (1) time per hub or ITS equipment. Submit the request seven (7) days prior. When modifications to existing CTRMA ITS equipment result in downtime of devices, notify the Mobility Authority in advanced with the estimated outage duration for review and approval. In the event the outage duration exceeds seven (7) days, the Mobility Authority reserves the right to request temporary measures to establish connectivity and power to the device for functional operation.

City of Austin fiber optic communications are located within the project limits and shall be maintained as operational during construction, unless otherwise approved by the Engineer.

Definitions of abbreviations used to designate ITS equipment, material, etc. can be provided by the Engineer.

Provide email notice to the Mobility Authority sixty (60) business days prior to begin work that impacts tolling equipment. Attend a pre-construction meeting with the Mobility Authority prior to begin work.

Verify the location of all utilities (overhead and underground) and notify the Engineer of any discrepancies before beginning construction. Contact utility companies forty-eight (48) hours prior to construction and take "caution" in areas where utilities are close together to avoid damaging the utilities. Both TxDOT owned and CTRMA owned ITS and Electronic Toll Collection (ETC) systems infrastructure may exist within the limits of this project. All ITS and ETC systems must remain operational throughout project construction. The exact location of underground ITS infrastructure may not be known. Backbone and hub communication fiber links are critical and must be maintained for the duration of the project and beyond.

Throughout the project limits the existing ductbank contains fiber optic communications for CTRMA, TxDOT, and City of Austin. Prior to modifications of the cabling or ductbank, coordinate with the Mobility Authority for site specific direction on conduit assignments and cable identification. Ensure all cables within each UCV, ground box, and cabinet are properly labeled with waterproof tags with ten (10) feet of the entrance and exit point of the enclosure. Tags shall clearly and legibly identify the owner, origin and destination, date of installation, and strand count for fiber optic cables.

Tie new conduit into existing underground cable vaults (UCV) using an available conduit knockout. New drilled entries into the vault wall are prohibited with prior approval from the Engineer and Mobility Authority. For connections to existing UCV with operational fiber optic communications the Engineer is required to be present during all work. Notify the Engineer a minimum of five (5) days prior to proposed work to schedule on-site inspection.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

### **ITEM 618 – CONDUIT**

Fit PVC and HDPE conduit terminations with bell ends.

The locations of conduit and ground boxes are diagrammatic, shift as directed to accommodate field conditions.

Install conduit in an area not exceeding 2 feet in any direction from a straight line.

Install open trench conduit at a minimum depth of 2 feet below finished grade. Installation of the conduit by jacking or boring method will be at a depth of at least 1 foot below the bottom of the base material of the roadway. Boring installations below MSE walls shall not disturb the area within or directly below the portion MSE wall earth fill in which the wall soil reinforcement is placed. Maintain a minimum depth of 5 feet below the bottom of the MSE wall footing/levelling pad and reinforcement.

Provide a detailed installation plan for all proposed bores beneath roadways and structures, including MSE walls and spread footings, for review and approval by the Engineer. At a minimum, the installation plan shall include the installation date, bore pit locations, minimum depth to be maintained below roadways and MSE wall footings, and required temporary traffic control including roadway, shoulder, or lane closures.

Install a high tension, non-metallic pull rope in all conduit runs. The pull ropes are for future use. Cap all empty conduit using standard weather tight conduit caps as directed. This work is subsidiary.

Use a coring device when drilling holes through concrete structures.

When using existing conduit, ensure that all conduits have bushings and cleaned of dirt, mud, grease, and other debris. Re-strap existing or relocated conduit per the specification. This work is subsidiary.

Replacement of existing conduit that is unusable will be paid using the existing bid items.

Consider all fittings, brackets, and junction boxes necessary to complete the installations subsidiary to the pertinent Items.

All conduit trenches shall be back filled completely to provide safe crossing by the end of each working day or whenever the work zone becomes inactive. Any area that cannot be back filled in the same day/night operation shall not be opened.

Restore all conduit trenches to their original condition, including soil back fill and restoring turf vegetation.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

In locations where existing hardscape, landscape, or other roadside features will be impacted by the installation of open trench conduit, bore conduits to avoid disturbance with approval from the Engineer.

Stakes or other physical method shall be installed to hold down conduit prior to placement of concrete/flow fill encasement.

Minimum distance between HDPE conduit joints will be 200 feet.

#### **ITEM 620 - ELECTRICAL CONDUCTORS**

Identify the conductors as shown on the Electrical Details Standard Sheets when two or more conductors are present in one conduit or enclosure. Use identification tag with two plastic straps. Each tag will indicate circuit number, letter, or other identification as shown on the plans.

Bond grounding conductors, which share the same conduit, junction box or structures, together at every accessible point, in accordance with the Electrical Detail Standard Sheets and the latest edition of the National Electrical Code (NEC).

All wiring will be in accordance with the National Electrical Code (NEC) and the appropriate Department standard sheets.

Installing electrical conductors within the same conduit as fiber optic communications is prohibited. The collocation of electrical conductors in the same conduit as low-voltage signal cabling is prohibited, unless otherwise approved by the Engineer.

#### **ITEM 624 – GROUND BOXES**

Ground box locations shown on the plans are approximate. The ground boxes shall not be placed in sidewalks or driveways unless otherwise shown in the plans. Alternate ground box locations shall be as directed by the Engineer.

New metal ground box covers, except those installed for fiber optic cable, shall be grounded.

All new ITS ground boxes, not in riprap or pavement, will be constructed with concrete aprons.

For CTRMA owned ground boxes legibly imprint each ground box cover with a permanently marked logo in letters at least 1 inch high as follows: “CTRMA ITS”, unless otherwise directed. Glue in logos are prohibited.

Aggregate for fill under the box shall be crushed, have a maximum size of  $\frac{3}{4}$  in., minimum size of  $\frac{1}{4}$  in., and requirements per Item 302 are waived.

#### **ITEM 628 – ELECTRICAL SERVICES**

Make arrangements with the utility company for all work and materials provided by the utility company. Accounts for Mobility Authority maintained lighting and ITS will be placed in the name of the Mobility Authority.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Place temporary electrical services in Contractor's Name. Costs for connection charges, meter charges, consumption charges, and other charges for temporary electrical service are not reimbursable for payment.

The service enclosures in this Contract will have provisions for pad locking the enclosure shut.  
Modify Electrical Service

The work performed and materials furnished in accordance with this Item will be paid for at the unit price bid for "Modify Electrical Service." Electrical service modification includes all work performed, materials, and equipment necessary to modify the load-side of the electrical service to complete the work shown in the Plans. Work anticipated under this pay item, at a minimum, includes furnish and installation of new breakers into the service panel and disconnecting of existing circuits from the service panel.

#### Safety Disconnect Switch

Furnish and install switches that are HP rated and meet Federal and NEMA Specifications with NEMA Type 4X (stainless steel) enclosures, and with metal factory nameplates that are front cover mounted and contain a permanent record of switch type, catalog number, and HP rating. Provide switch with visible blades, reinforced fuse clips, and non-teasible, positive, quick make-quick break mechanisms. Provide switch assembly plus operating handle as an integral part of the enclosure base.

Use switches with defeat able door interlocks that prevent the door from opening when the operating handle is in the ON position, and whose handle position is easily recognizable and is pad lockable in the OFF position. Use heavy-duty switches with line terminal shields.

Non-fusible Switch Assemblies: Furnish and install NEMA KS 1; HD type, load interrupter enclosed knife switch.

Enclosures: Furnish and install NEMA KS 1 type enclosure as shown in the Contract Documents.

Installation: Install safety disconnect switches where indicated in the Contract Documents or where required by the Engineer. Use separate conduits for line and load conductors. Install fuses in fusible safety disconnect switches. Install pole mounted service disconnects a minimum of 4 feet above grade when measured from the bottom of the disconnect.

#### Electrical Power Transformer

Provide a dry type, air-cooled, factory assembled transformer. All units must be UL listed under the requirements of UL 5085 and UL 1561, IEEE Standard 259, and meet the requirements of NEMA ST-20. Provide transformers for the primary and secondary voltages indicated on the Plans. Provide two 2.5% full capacity below normal taps and two 2.5% above normal taps on the primary side. All taps are full capacity taps

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Enclosure: Use an enclosure conforming to NEMA Standards for Type 3R, made of hot-dip galvanized steel, aluminum, stainless steel or other materials approved by the Engineer. Electrical Rating: Transformer electrical ratings may range from 3 KVA to 300 KVA, 120V to 600 V, single phase or three phase, primary or secondary, as shown in the plans.

Temperature classifications: Transformers rated less than 15 KVA shall utilize Class 180 or 185 insulation systems, with a 115°C or lower winding temperature rise. Transformers rated 15 KVA and greater shall utilize Class 220 insulation systems, with a 150°C or lower winding temperature rise. The transformer shall utilize an insulation system that has been properly temperature classified in accordance with NEMA ST-20. Encapsulated transformers rated 15KV A to 25KV A using a Class 180 or 185 insulation system with a 115°C or lower winding temperature rise may be utilized if approved by the Engineer. Transformer windings shall be all aluminum or all copper.

Load rating: Furnish and install transformers with load ratings as described in the Plans. Transformers shall be capable of operating continuously at 100 percent of nameplate rating in an ambient temperature not exceeding 40°C. Transformers 5 KVA and above shall be capable of meeting overload requirements per ANSI C57.96 with normal life maintained.

Sound rating: Sound levels shall not exceed the following:

Transformer Rating (KVA)	Average Sound Level Decibels per NEMA ST-20
0-9	40
10-50	45
51-150	50
150-300	55

Installation: Follow installation procedures recommended by NEMA ST-20, National Electric Code (NEC), and National Electrical Safety Code (NESC). Set the ground mount transformer unit level on the pad and secured to the pad with bolts. Pole mount transformers are required to be fastened securely to the pole using bolts, stainless steel straps, or galvanized strut channel.

Conduct field acceptance testing in accordance with TxDOT Specifications. Perform local field inspection at each site to verify and confirm the following:

1. Check wiring connections for damage and torque, as applicable, prior to energizing the transformer. 872 FY 2024-25
2. Check grounding and bonding of transformer enclosure. Ensure that separately derived systems, which are required to be grounded by the NEC 250.30 or the

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Plans, are fitted with an appropriately installed and sized system bonding jumper in accordance with the NEC 250.30.

3. Measure primary and secondary voltages under normal load conditions.

#### **ITEM 6005 – NETWORKING INTELLIGENT TRANSPORTATION SYSTEM (ITS) COMMUNICATIONS CABLE**

Reutilize existing ITS communication cabling for relocated field devices wherever feasible. Prior to removing cabling, measure the total length of the existing end-to-end cable run to determine if sufficient material is available to facilitate connection at the proposed location – including horizontal and vertical lengths and slack requirements. Splicing of ITS communications cable is prohibited. Install new run of cabling at all locations where the existing does not provide sufficient length.

Ensure RVSD communication cable is capable of transmitting RS-485 and is compatible with Wavetronix Smart Sensor and Wavetronix Smart Sensor HD devices and in-cabinet equipment.

Installation of cable includes termination of cable into in-cabinet equipment and end-device. Installation includes all cable, connectors, and any other equipment or materials required to interconnect the end device to in-cabinet equipment as shown in the Plans.

Removal of cable includes all work necessary to disconnect existing cable from the end device and in-cabinet equipment and remove the entire run of cable as shown in the Plans.

#### **ITEM 6007 – BATTERY BACK UP UNIT FOR SIGNALS**

The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for “BBU System”. Provide an Alpha FXM 350 or equivalent. BBU assemblies shall be designed for installation into a TxDOT Type 3 ITS Cabinet, w/ a 19-inch EIA standard rack, to provide battery backup functionality for intelligent transportation system (ITS) devices. BBU assemblies shall include batteries provided by the UPS manufacturer or in accordance with manufacturer’s requirements.

UPS assemblies used to provide backup power in an ITS cabinet shall provide a minimum of 350 watts (at 120 VAC) of continuous backup power for a minimum of two (2) hours.

#### **ITEM 6010 – ITS RADAR VEHICLE SENSING DEVICE**

##### **Furnish and Install of RVSD In-Cabinet Equipment**

The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for “ITS RVSD In-Cabinet Equipment”. RVSD in-cabinet equipment shall be din-rail mounted and, at a minimum, include the following:

- Serial Device Server: Serial Comm ETH-SER-EE9 or equivalent
- 120VAC to 24VDC Power Supply: Puls Dimension CP5.241 or equivalent
- Cables, connectors, and associated equipment

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

This price is full compensation for furnishing, installing, and configuring all RVSD in-cabinet equipment. This price is also full compensation for testing the completed installation including RVSD equipment, serial device servers, power supplies, cables, connectors, and associated equipment; and for all labor, tools, equipment, documentation, testing, training, software, warranty, and incidentals necessary to complete the work.

Serial interconnect cabling between the RVSD field device and the in-cabinet equipment shall be paid for by bid item 6005 - "RVSD Comm Cable".

#### Relocation of RVSD Field Equipment

Relocate RVSD Field Equipment from the existing ITS pole to the new ITS pole. The work performed and materials furnished by the unit bid price for "ITS RVSD (Data Collection Only) (Relocate)" also includes the furnishing and installing of materials required to mount the existing device to the new ITS pole (e.g., stainless steel banding, pole adapter mounts, etc.). New RVSD in-cabinet equipment will be paid for by the unit bid price for "RVSD In-Cabinet Equipment".

#### Relocation of RVSD In-Cabinet Equipment

The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "ITS RVSD In-Cabinet Equipment (Relocate)". RVSD in-cabinet equipment shall be din-rail mounted and, at a minimum, includes the serial device server, power supply (120VAC-24VDC), surge protection device(s), cabling, and any other materials within the RVSD subsystem. This price is full compensation for relocating all RVSD in-cabinet equipment and making existing RVSD field equipment fully operational; furnishing and installing additional cables or connectors; for testing, delivery and storage of components designated for salvage or reuse; and all testing, software, equipment, any required equipment modifications for electrical service, labor, materials, tools, and incidentals necessary to complete the work.

### **ITEM 6011 – INTELLIGENT TRANSPORTATION SYSTEM (ITS) POLE WITH CABINET**

#### ITS Pole Mnt Cab (TY 3) (CONF 2)

The work performed and materials furnished in accordance with this Item will be paid for at the unit price bid for "ITS Pole Mnt Cab (TY 3) (CONF 2)." Unit price includes all work performed, materials, and equipment necessary to mount the cabinet to the pole or concrete column structure. For mounting to concrete column structures this pay item also includes furnishing and installing rigid galvanized steel (RGS) above ground conduit from the underground connection into the cabinet base, galvanized steel channel struts, and a 6" concrete maintenance pad as shown in the Plans; testing, delivery, and storage of components designated for salvage or reuse; and all testing, equipment, labor, materials, tools, and incidentals.



**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

#### Remove Small Equipment Enclosure Pole

The work performed and materials furnished in accordance with this Item will be paid for at the unit price bid for “Remove Small Equipment Enclosure Pole Mnt”. Removal is for 11.75” x 12.75” x 18” small equipment enclosure strap mounted to existing 4” aluminum pedestal pole.

#### Modify Small Equipment Enclosure

The work performed and materials furnished in accordance with this Item will be paid for at the unit price bid for “Modify Small Equipment Enclosure Truss Mnt”. Unit price includes all work performed, materials, and equipment necessary to remove the back panel from the existing 11.75” x 12.75” x 18” small equipment enclosure. Following enclosure modification, the enclosure will remain to be utilized as a junction box as shown in the Plans.

Truss mounted enclosures are aerially mounted to the truss and column of an overhead sign bridge. Pole mounted enclosures are steel band mounted to existing CCTV or 4” aluminum device poles.

### **ITEM 6018 – DIGITAL CLOSED-CIRCUIT TELEVISION (CCTV) FIELD EQUIPMENT**

#### Relocate CCTV – In Cabinet Equipment

The work performed and materials furnished in accordance with this Item will be paid for at the unit price bid for “Relocate CCTV In-Cabinet Equipment.” CCTV in-cabinet equipment, at a minimum, includes the CCTV power supply, power-over Ethernet (POE) injector, cabling, and any other materials within the CCTV subsystem. This price is full compensation for relocating CCTV in-cabinet equipment from the existing cabinet/equipment enclosure into the new cabinet; making existing CCTV field equipment fully operational as shown on the plans; furnishing and installing additional cables, connectors, and surge protection devices as shown on the plans; testing, delivery, and storage of components designated for salvage or reuse; and all testing, equipment, labor, materials, tools, and incidentals.

Designation of existing CCTV communication interconnect cabling between the existing CCTV field device and POE injector is shown in the Plans. If CCTV communication cabling is to remain, this unit price bid includes all work performed and materials to protect the cabling during construction and terminate cabling to return CCTV field equipment to fully operational. All work performed and materials furnished to remove and replace existing CCTV communications cabling (i.e., CAT 5e Ethernet) shall be paid for by bid item 6005 - (ITS) Communications Cable.

### **ITEM 6027 – INTELLIGENT TRANSPORTATION SYSTEM (ITS) FIBER OPTIC CABLE**

Perform all fiber work as shown in the plans. Fiber work shall be done on the Orange buffer tube only. Make no modifications to the blue, green, and brown buffer tubes.

**Project Number:** 25290E22701M

**County:** Travis

**Highway:** 290 Toll

Modifying the fiber optic splice tray shall include all work required to modify the existing fiber splicing configurations to match the Plans. Splice tray modifications do not include any proposed fiber optic fusion splicing.

Modifying the fiber optic splice enclosure shall include all work performed, materials, and equipment required to modify the existing fiber splice enclosure to match the Plans, including splice trays, buffer fan out kits, etc. Splice enclosure modifications do not include any proposed fiber optic fusion splicing.

#### **ITEM 6050 – ITS GROUND MOUNTED CABINET**

Provide an aluminum cabinet riser base with dimensions and bolt pattern to accommodate a TxDOT Standard Type 4 (Caltrans Type 332) for each ground mounted cabinet installation. Provide riser with a minimum height of eighteen (18) inches. Install a watertight gasket or silicone caulk sealant between the cabinet riser base and the Type 4 cabinet to prevent water intrusion.

Rigidly affix safety disconnect switch and electrical power transformer to the non-door side of the cabinet enclosure. Ensure all electrical equipment is provided a bonded ground connection in accordance with NEC. Install rigid galvanized steel conduit for aboveground installations terminating into the bottom of the enclosures with necessary connection hardware – including conduit bodies, locknuts, washers, and bushings. Provide flexible conduit to maneuver around the concrete cabinet foundation and transition to underground conduit, as necessary. Install aboveground to underground conduit transitions a minimum of six (6) inches below grade.

#### **ITEM 6058 – ROAD WEATHER INFORMATION SYSTEM**

The work performed and materials furnished in accordance with this Item will be paid for at the unit price bid for “Relocate RWIS In-Cabinet Equipment.” RWIS in-cabinet equipment, at a minimum, includes the Remote Processing Unit (RPU), serial media converter, power supply, cabling, and any other materials within the RWIS subsystem. This price is full compensation for relocating RWIS in-cabinet equipment from the existing cabinet/equipment enclosure into the new cabinet; making existing RWIS field equipment fully operational as shown on the plans; furnishing and installing additional cables, connectors, and surge protection devices as shown on the plans; testing, delivery, and storage of components designated for salvage or reuse; and all testing, equipment, labor, materials, tools, and incidentals.

**Central Texas Regional Mobility Authority**

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**290E METAL BEAM GUARD FENCE & ITS CABINET UPGRADES  
MAINTENANCE PROJECT**

CTRMA CONTRACT NO. 25290E22701M

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**SPECIFICATION LIST**

**PREFACE:**

The "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" of the Texas Department of Transportation, 2024, as amended and augmented by the Supplemental Specifications following, shall govern the performance of the Contract. These specifications hereby are made a part of the Contract as fully and with the same effect as if set forth at length herein.

Attention is directed to the fact that any other documents printed by the Texas Department of Transportation modifying or supplementing said "Standard Specifications", such as Standard Supplemental Specifications, Special Provisions (by the Department), Notice to Bidders, etc., do not form a part of this Contract nor govern its performance, unless specifically so-stated in the Supplemental Specifications herein contained.

Attention is directed to the use of "Proposal" in standard TxDOT documents included in this contract (Standard Specifications, Special Provisions, & Special Specifications) is equivalent to "Bid" in the Mobility Authority's documents. This shall be accounted for when working contract documents prepared by the Mobility Authority with those standards prepared by TxDOT.

Attention is directed to the use of "Department" in standard TxDOT documents included in this contract (Standard Specifications, Special Provisions, & Special Specifications) is equivalent to "Mobility Authority" in the Mobility Authority's documents.

References made to specific section numbers in these Special Provisions, or in any of the various documents which constitute the complete Contract Documents, shall, unless otherwise denoted, be construed as referenced to the corresponding section of the "Standard Specifications" issued by the Texas Department of Transportation in 2024.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY  
GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

(STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS)

WHERE DISCREPANCIES OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS, THE FOLLOWING DESCENDING ORDER OF PRIORITY SHALL GOVERN: (1) SPECIAL CONDITIONS, (2) SPECIAL PROVISIONS TO SPECIAL SPECIFICATIONS, (3) SPECIAL SPECIFICATIONS, (4) SPECIAL PROVISIONS, AND (5) STANDARD SPECIFICATIONS.

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION SEPTEMBER 1, 2024. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE.

ITEMS 1-9 GENERAL REQUIREMENTS AND COVENANTS

ITEM 104 REMOVING CONCRETE

ITEM 164 SEEDING FOR EROSION CONTROL (162) (166) (168)

ITEM 168 VEGETATIVE WATERING

ITEM 432 RIPRAP (247) (420) (421) (431) (440)

ITEM 500 MOBILIZATION

ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING

ITEM 503 PORTABLE CHANGEABLE MESSAGE SIGN

ITEM 505 TRUCK-MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)

ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS (161)

ITEM 540 METAL BEAM GUARD FENCE (421) (441) (445) (529)

ITEM 542 REMOVING METAL BEAM GUARD FENCE

ITEM 544 GUARDRAIL END TREATMENTS

ITEM 618 CONDUIT

ITEM 620 ELECTRICAL CONDUCTORS

ITEM 623 INTELLIGENT TRANSPORTATION SYSTEM (ITS) GROUND BOXES

ITEM 624 GROUND BOXES

ITEM 628 ELECTRICAL SERVICES

ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL PROVISION TO ITEM 000 (000---001)

SPECIAL PROVISION TO ITEM 000 (000---016)

SPECIAL PROVISION TO ITEM 000 (000---017---RMA)

SPECIAL PROVISION TO ITEM 000 (000---019L)

SPECIAL PROVISION TO ITEM 000 (000---031)

SPECIAL PROVISION TO ITEM 001 (001---001---RMA)

SPECIAL PROVISION TO ITEM 002 (002---001)

SPECIAL PROVISION TO ITEM 002 (002---001---RMA)

SPECIAL PROVISION TO ITEM 003 (003---001---RMA)

SPECIAL PROVISION TO ITEM 004 (004---001---RMA)

SPECIAL PROVISION TO ITEM 004 (004---002---RMA)

SPECIAL PROVISION TO ITEM 005 (005---001---RMA)

SPECIAL PROVISION TO ITEM 006 (006---001---RMA)

SPECIAL PROVISION TO ITEM 007 (007---001---RMA)

SPECIAL PROVISION TO ITEM 008 (008---001)

SPECIAL PROVISION TO ITEM 008 (008---002---RMA)

SPECIAL PROVISION TO ITEM 008 (008---009---RMA)

SPECIAL PROVISION TO ITEM 009 (009---001---RMA)

SPECIAL SPECIFICATIONS:

SS 6005 NETWORKING INTELLIGENT TRANSPORTATION SYSTEM (ITS) COMMUNICATIONS CABLE

SS 6007 BATTERY BACK-UP SYSTEM FOR SIGNAL CABINETS

SS 6010 INTELLIGENT TRANSPORTATION SYSTEM (ITS) RADAR VEHICLE SENSING DEVICE

SS 6011 INTELLIGENT TRANSPORTATION SYSTEM (ITS) POLE WITH CABINET

SS 6018 DIGITAL CLOSED-CIRCUIT TELEVISION (CCTV) FIELD EQUIPMENT

SS 6027 INTELLIGENT TRANSPORTATION SYSTEM (ITS) FIBER OPTIC CABLE

SS 6050 INTELLIGENT TRANSPORTATION SYSTEM (ITS) GROUND-MOUNTED CABINET

SS 6058 ROADWAY WEATHER INFORMATION SYSTEM

SS 7101-RMA INTELLIGENT TRANSPORTATION SYSTEM (ITS) MEDIA CONVERTER

SS 7102-RMA INTELLIGENT TRANSPORTATION SYSTEM (ITS) REMOTE POWER MANAGEMENT UNIT (RPMU)

SS 7103-RMA INTELLIGENT TRANSPORTATION SYSTEM (ITS) FIELD ETHERNET SWITCH

GENERAL:

THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

# Special Provision to Item 000

## Nondiscrimination



### 1. DESCRIPTION

All recipients of federal financial assistance are required to comply with various nondiscrimination laws, including Title VI of the Civil Rights Act of 1964, as amended (Title VI). Title VI forbids discrimination against anyone in the United States on the grounds of race, color, or national origin by any agency receiving federal funds.

The Texas Department of Transportation, as a recipient of federal financial assistance, and under Title VI and related statutes, ensures that no person will on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment in accordance with 42 USC 2000d-3), color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

### 2. DEFINITION OF TERMS

Where the term "Contractor" appears in the following six nondiscrimination clauses, the term "Contractor" is understood to include all parties to Contracts or agreements with the Department.

### 3. NONDISCRIMINATION PROVISIONS

During the performance of this Contract, the Contractor agrees as follows.

- 3.1. **Compliance with Regulations.** The Contractor must comply with the Regulations pertinent to nondiscrimination in federally assisted programs of the United States Department of Transportation 49 CFR 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Contract.
- 3.2. **Nondiscrimination.** The Contractor, regarding the work performed during the Contract, must not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor must not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.
- 3.3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, the Contractor must notify each potential subcontractor or supplier of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 3.4. **Information and Reports.** The Contractor must provide all information and reports required by the Regulations or directives issued pursuant thereto, and must permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Recipient or the Department to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor must so certify to the Recipient, or the Department as appropriate, and must set forth what efforts it has made to obtain the information.
- 3.5. **Sanctions for Noncompliance.** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Recipient must impose such Contract sanctions as it or the Department may

determine to be appropriate, including, but not limited to actions defined in Article 7.1., "Ethics," or Article 5.1., "Authority of Engineer."

- 3.6. **Incorporation of Provisions.** The Contractor must include the provisions of Sections 3.1–3.6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor must take such action with respect to any subcontract or procurement as the Recipient or the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.



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# Special Provision 000

## Important Notice to Contractors

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### 1. GENERAL

In accordance with Texas Transportation Code §223.012, the Engineer will evaluate Contractor performance based on quality, safety, and timeliness of the project.

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### 2. DEFINITIONS

- 2.1. **Project Recovery Plan (PRP).** A formal, enforceable plan developed by the Contractor, in consultation with the District, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct project-specific performance deficiencies.

In accordance with 43 TAC §9.23, the District will request a PRP if the Contractor's performance on a project is below the Department's acceptable standards and will monitor the Contractor's compliance with the established plan.

- 2.2. **Corrective Action Plan (CAP).** A formal, enforceable plan developed by the Contractor, and proposed for adoption by the Construction Division or Maintenance Division, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct statewide performance deficiencies.

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### 3. CONTRACTOR EVALUATIONS

In accordance with 43 TAC §9.23, the Engineer will schedule evaluations at the following intervals, at minimum:

- interim evaluations at or within 30 days after the anniversary of the Notice to Proceed, for Contracts extending beyond 1 yr. and
- final evaluation, upon project closeout.

In case of a takeover agreement, neither the Surety nor its performing Contractor will be evaluated.

In addition to regularly scheduled evaluations, the Engineer may schedule an interim evaluation at any time to formally communicate issues with quality, safety, or timeliness. Upon request, work with the Engineer to develop a PRP to document expectations for correcting deficiencies.

Comply with the PRP as directed. Failure to comply with the PRP may result in additional remedial actions available to the Engineer under Item 5, "Control of the Work." Failure to meet a PRP to the Engineer's satisfaction may result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a PRP, including consideration of sufficient time.

Follow the escalation ladder if there is a disagreement regarding an evaluation or disposition of a PRP. The Contractor may submit additional documentation pertaining to the dispute. The District Engineer's decision on a Contractor's evaluation score and recommendation of action required in a PRP or follow-up for noncompliance is final.

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**4. DIVISION OVERSIGHT**

Upon request of the Construction Division or Maintenance Division, develop and submit for Division approval a proposed CAP to document expectations for correcting deficiencies in the performance of projects statewide.

Comply with the CAP as directed. The CAP may be modified at any time up to completion or resolution after written approval of the premise of change from the Division. Failure to meet an adopted or revised adopted CAP to the Division's satisfaction within 120 days will result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Division will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a CAP, including consideration of sufficient time and associated costs as appropriate.

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**5. PERFORMANCE REVIEW COMMITTEE**

The Performance Review Committee, in accordance with 43 TAC §9.24, will review at minimum all final evaluations, history of compliance with PRPs, any adopted CAPs including agreed modifications, any information about events outside a Contractor's control contributing to the Contractor's performance, and any documentation submitted by the Contractor and may recommend one or more of the following actions:

- take no action,
- reduce the Contractor's bidding capacity,
- prohibit the Contractor from bidding on one or more projects,
- immediately suspend the Contractor from bidding for a specified period of time, by reducing the Contractor's bidding capacity to zero, or
- prohibit the Contractor from being awarded a Contract on which they are the apparent low bidder.

The Deputy Executive Director will determine any further action against the Contractor.

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**6. APPEALS PROCESS**

In accordance with 43 TAC §9.25, the Contractor may appeal remedial actions determined by the Deputy Executive Director.

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## **Special Provision 000**

### **Certificate of Interested Parties (Form 1295)**

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Submit a Form 1295, "Certificate of Interested Parties," in the following instances:

- at contract execution for contracts awarded by the Mobility Authority;
- at any time there is an increase of \$300,000 or more to an existing contract (change orders, extensions, and renewals); or
- at any time there is a change to the information in Form 1295, when the form was filed for an existing contract.

Form 1295 and instructions on completing and filing the form are available on the Texas Ethics Commission website.

# Special Provision to Item 000

## Small Business Enterprise in State-Funded Projects



### 1. DESCRIPTION

The purpose of this Special Provision is to implement the Texas Department of Transportation's policy of ensuring that SBEs have an opportunity to participate in the performance of Contracts. If the SBE goal is greater than zero, Section 2.1., "Article A—SBE Goal is Greater than Zero," will apply to this Contract; otherwise, Section 2.2., "Article B—No SBE Goal," will apply. The percentage goal for SBE participation in the work to be performed under this Contract will be in accordance with the proposal.

### 2. DEFINITIONS

A Small Business Enterprise (SBE) is a firm certified as such by the Texas Department of Transportation. Firms certified as Historically Underutilized Businesses (HUBs) by the Texas Comptroller of Public Accounts and as Disadvantaged Business Enterprises (DBEs) by the Texas Uniform Certification Program automatically qualify as SBEs.

#### 2.1. Article A—SBE Goal is Greater than Zero.

##### 2.1.1. **Policy.** The Owner is committed to providing contracting opportunities for small businesses. Therefore, it is the Owner's policy to develop and maintain a program to facilitate contracting opportunities for small businesses. Consequently, the requirements of the Owner's SBE Program apply to this Contract as follows.

The Contractor will make a good faith effort to meet the SBE goal for this Contract.

The Contractor and any subcontractors will not discriminate on the basis of race, color, national origin, age, disability, or sex in the award and performance of this Contract. These nondiscrimination requirements must be incorporated into any subcontract and purchase order.

After a conditional award is made to the low Bidder, the Owner will determine the adequacy of a Contractor's efforts to meet the Contract goal, in accordance with Section 2.1.2., "Contractor's Responsibilities." If the requirements in accordance with Section 2.1.2., "Contractor's Responsibilities," are met, the Contract will be forwarded to the Contractor for execution.

The Contractor's performance in meeting the SBE goal during the construction period of the Contract will be monitored by the Owner.

##### 2.1.2. **Contractor's Responsibilities.** These requirements must be satisfied by the Contractor. An SBE Contractor may satisfy the SBE requirements by performing at least 25% of the Contract work with their own organization in accordance with Item 8, "Prosecution and Progress."

The Contractor must complete an SBE Commitment Agreement Form for each SBE-certified firm the Contractor intends to use to satisfy the SBE goal. The SBE Commitment Agreement Form must be submitted to the Owner so as to arrive no later than 5 P.M. on the 10th business day, excluding national holidays, after the conditional award of the Contract. When requested, additional time not to exceed 7 business days, excluding national holidays, may be granted based on documentation submitted by the Contractor.

A Contractor that cannot meet the Contract goal, in whole or in part, must document the good faith efforts taken to meet the SBE goal. The Owner will consider as good faith efforts all documented explanations that are submitted and that describe a Contractor's failure to meet an SBE goal or obtain SBE participation, including:

- advertising in general circulation, trade association, and minority- or women-focused media regarding subcontracting opportunities,
- dividing the Contract work into reasonable portions in conformance with standard industry practices,
- documenting reasons for rejection or meeting with the rejected SBE to discuss the rejection,
- providing qualified SBEs with adequate information pertinent to bonding, insurance, plans, Specifications, scope of work, and the requirements of the Contract,
- negotiating in good faith with qualified SBEs, not rejecting qualified SBEs that are also the lowest responsive Bidder; and
- using the services of available minorities and women; community organizations; Contractor groups; local, state, and federal business assistance offices; and other organizations that provide support services to SBEs.

The good faith effort documentation is due to the Owner at the time and place in accordance with this Section. The Owner will evaluate the Contractor's documentation. If it is determined that the Contractor has failed to meet the good faith effort requirements, the Contractor will be given an opportunity for reconsideration by the Owner.

Should the Bidder to which the Contract is conditionally awarded refuse, neglect, or fail to meet the SBE goal or demonstrate to the Owner's satisfaction sufficient efforts to obtain SBE participation, the proposal guaranty filed with the bid will become the property of the Owner, not as a penalty, but as liquidated damages to the Owner.

The Contractor must not terminate an SBE subcontractor submitted on a commitment agreement for a Contract with an assigned goal without the prior written consent of the Owner.

The Contractor must designate an SBE contact person who will administer the Contractor's SBE program and who will be responsible for submitting reports, maintaining records, and documenting good faith efforts to use SBEs.

The Contractor must inform the Owner of the representative's name, title, and telephone number within 10 days of beginning work.

**2.1.3. Eligibility of SBEs.** The Texas Department of Transportation certifies the eligibility of SBEs.

Firms certified as SBEs are listed on the Texas Department of Transportation's online directory located at <https://txdot.txdotcms.com/>.

Only firms certified at the time of letting or at the time the commitments are submitted are eligible to be used in the information furnished by the Contractor in accordance with Section 2.1.2., "Contractor's Responsibilities."

Certified HUBs and DBEs are eligible as SBEs.

The Texas Department of Transportation's SBE Program is governed by 43 TAC, Chapter 9, Subchapter K, "Small Business Enterprise (SBE) Program."

**2.1.4. Determination of SBE Participation.** SBE participation will be counted toward meeting the SBE goal in this Contract in accordance with the following.

A Contractor will receive credit for all payments actually made to an SBE for work performed and costs incurred in accordance with the Contract, including all subcontracted work.

An SBE Contractor or subcontractor may not subcontract more than 75% of a Contract. The SBE must perform no less than 25% of the value of the Contract work with their own organization in accordance with Item 8.

An SBE may lease equipment consistent with standard industry practice. An SBE may lease equipment from the prime Contractor if a rental agreement, separate from the subcontract specifying the terms of the lease arrangement, is approved by the Owner before the SBE starting the work in accordance with the following.

- If the equipment is of a specialized nature, the lease may include the operator. If the practice is generally acceptable with the industry, the operator may remain on the lessor's payroll. The operator of the equipment must be subject to the full control of the SBE, for a short term, and involve a specialized piece of heavy equipment readily available at the jobsite.
- For equipment that is not specialized, the SBE must provide the operator and be responsible for all payroll and labor compliance requirements.

- 2.1.5. **Records and Reports.** The Contractor must submit monthly reports of SBE payments (including payments to HUBs and DBEs) to the Owner's Office after work begins. These reports will be due within 15 days after the end of a calendar month.

These reports will be required until all SBE subcontracting or supply activity is completed. The SBE Progress Report must be used for monthly reporting. Upon completion of the Contract and before receiving the final payment, the Contractor must submit the SBE Final Report to the Owner's Office. These forms may be obtained from the Owner and reproduced as necessary. The Owner may verify the amounts being reported as paid to SBEs by randomly requesting copies of invoices and cancelled checks paid to SBEs. When the SBE goal requirement is not met, documentation supporting good faith efforts, in accordance with Section 2.1.2., "Contractor's Responsibilities," must be submitted with the SBE Final Report.

SBE subcontractors and suppliers should be identified on the monthly report by SBE certification number, name, and the amount of actual payment made to each during the monthly period. These reports are required regardless of whether SBE activity has occurred in the monthly reporting period.

All such records must be retained for 3 yr. following completion of the Contract work and be available at reasonable times and places for inspection by authorized representatives of the Owner.

- 2.1.6. **Compliance of Contractor.** To ensure compliance with SBE requirements of this Contract, the Owner will monitor the Contractor's efforts to involve SBEs during the performance of this Contract. This will be accomplished by a review of monthly reports submitted by the Contractor indicating their progress in achieving the SBE Contract goal and by compliance reviews conducted by the Owner.

A Contractor's failure to comply with the requirements of this Special Provision will constitute a material breach of this Contract. In such a case, the Owner reserves the right to employ remedies as the Owner deems appropriate in the terms of the Contract.

## 2.2. **Article B—No SBE Goal.**

- 2.2.1. **Policy.** It is the Owner's policy that SBEs will have an opportunity to participate in the performance of Contracts.

- 2.2.2. **Contractor's Responsibilities.** If there is no SBE goal, the Contractor must offer SBEs an opportunity to participate in the performance of Contracts and subcontracts. If an SBE is used, the requirements in accordance with Section 2.1.4., "Determination of SBE Participation," will apply.

- 2.2.3. **Prohibit Discrimination.** The Contractor and any subcontractor will not discriminate on the basis of race, color, national origin, religion, age, disability, or sex in the award and performance of Contracts. These nondiscrimination requirements must be incorporated into any subcontract and purchase order.

- 2.2.4. **Records and Reports.** The Contractor must submit annual reports pertinent to SBEs (including HUBs and DBEs) to the Owner's Office by August 31 or at project completion, whichever comes first.

These reports will be required until all SBE subcontracting or supply activity is completed. The SBE Progress Report must be used for reporting. Upon completion of the Contract and before receiving the final payment, the Contractor must submit the SBE Final Report to the Owner's Office. These forms may be obtained from the Owner and reproduced as necessary. The Owner may verify the amounts being reported as paid to SBEs by randomly requesting copies of invoices and cancelled checks paid to SBEs.

SBE subcontractors and suppliers should be identified on the report by SBE certification number, name, and the amount of actual payment made.

All such records must be retained for 3 yr. following completion of the Contract work and be available at reasonable times and places for inspection by authorized representatives of the Owner.

## Special Provision 000

### Schedule of Liquidated Damages



For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated Damages per Working Day
From More Than	To and including	
0	1,000,000	760
1,000,000	3,000,000	968
3,000,000	5,000,000	1107
5,000,000	15,000,000	1527
15,000,000	25,000,000	2095
25,000,000	50,000,000	3072
50,000,000	Over 50,000,000	5093

In addition to the amount shown in Table 1, the Liquidated Damages will be increased by the amount shown in Item 8 "Prosecution and Progress," of the General Notes for Road User Cost (RUC), when applicable.



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# Special Provision to Item 1

## Abbreviations and Responsibilities

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Item 1, "Abbreviations and Definitions," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 1.** is supplemented with the following:

### **1.0. General Statement:**

For this Contract, the Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges, September 1, 2024 (the "Texas Standard Specifications"), all documents referenced therein, and all manuals, bulletins, supplements, specifications, and similar materials issued by the Texas Department of Transportation ("TxDOT"), or any predecessor or successor thereto, which are applicable to this Contract, are hereby modified with respect to the terms cited below and no others are changed hereby.

The term "State", "State of Texas", "State Highway Agency", "State Highway Department Of Texas", "State Department of Highways and Public Transportation", "Texas State Department Of Highways and Public Transportation", "Texas Department of Transportation", "Department", "Texas Turnpike Authority", "State Department of Highways and Public Transportation Commission", "Texas Department of Transportation Commission", "Texas Transportation Commission", or "State Highway Commission", shall, in the use of The Texas Standard Specifications, Special Provisions and Special Specifications and General Notes and Specification Data pertaining thereto, and required contract provisions for Federal-Aid construction contracts, for all work in connection with Central Texas Regional Mobility Authority, projects and all extensions enlargements, expansions, improvements, and rehabilitations thereto, be deemed to mean Central Texas Regional Mobility Authority, unless the context clearly indicates a contrary meaning.

**Article 2, "Abbreviations,"** is supplemented with the following:

CTRMA Central Texas Regional Mobility Authority

**Article 3.28., "Commission",** is voided and replaced by the following:

3.28. Commission. The Central Texas Regional Mobility Authority Board or authorized representative.

**Article 3.33., "Construction Contract",** is voided and replaced by the following:

3.33. Construction Contract. The agreement between the Central Texas Regional Mobility Authority and the Contractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract Documents.

**Article 3.46., "Debar (Debarment)",** is voided and replaced by the following:

3.46 Debar (Debarment). Disqualification of an entity from bidding on or entering into a Contract with the Mobility Authority, federal government or state government, from participating as a subcontractor under a Contract with the Mobility Authority, federal government or state government, and from participating as a supplier of materials or equipment to be used under a Contract with the Mobility Authority, federal government or state government. Refer to 43 TAC 1.2, "Definitions".

**Article 3.47., "Department"**, is voided and replaced by the following:

3.47. Department. Central Texas Regional Mobility Authority, unless the context clearly indicates a contrary intent and meaning.

**Article 3.48., "Departmental Material Specifications"**, is voided and replaced by the following:

3.48. Departmental Material Specifications (DMS). Reference specifications for various materials published by the Texas Department of Transportation Materials and Tests Division (MTD).

**Article 3.55., "Engineer"**, is hereby deleted and replaced by the following:

3.55 Engineer. The Central Texas Regional Mobility Authority Coordinator or their duly authorized representative.

**Article 3.77., "Letting Official"**, is hereby deleted and replaced by the following:

3.77. Letting Official. An employee of the Central Texas Regional Mobility Authority empowered by the Central Texas Regional Mobility Authority to officially receive bids and close the receipt of bids at a letting.

**Article 3.107., "Proposal Form"**, is voided and replaced by the following:

3.107. Proposal Form. The document issued by the Central Texas Regional Mobility Authority for a proposed Contract that includes:

- the specific locations (except for non-site-specific work) and description of the proposed work;
- an estimate of the various quantities and kinds of work to be performed or materials to be furnished;
- a schedule of items for which unit prices are requested;
- the number of working days within which the work is to be completed (or reference to the requirements); and
- the special provisions and special specifications applicable to the proposed Contract.

**Article 3.113., "Referee Tests"**, is voided and replaced by the following:

3.113. Referee Tests. Tests requested to resolve differences between Contractor and Engineer test results. The referee laboratory is a mutually agreed to 3rd party commercial laboratory.

**Article 3.135., "State"**, is voided and replaced by the following:

3.135. State. Central Texas Regional Mobility Authority.

**3.163. Mobility Authority.** The Central Texas Regional Mobility Authority, an agency created under Texas Transportation Code Chapter 370 and approved by the Texas Transportation Commission, together with its members, partners, employees, agents officers, directors, shareholders, representatives, consultants, successors, and assigns. The Mobility Authority's principal office is presently located at 3300 N. I-35, Suite 300, Austin, Texas 78705.

**3.164. Bid Form.** The form provided by the Mobility Authority used by the bidder to submit a bid. Electronic bid forms for the project shall be submitted via the project's CivCast website.

**3.165. Full Completion of all Work (or to Fully Complete all Work).** The completion of all work specified under this Contract as evidenced by the Formal Acceptance thereof by the Mobility Authority.

**3.166. Standards.** Whenever the Plans and/or Specifications refer to "Standard Sheets" or "Design Details" such reference shall be construed to mean the set of drawings issued by the Design Divisions, Texas Department of Transportation, and entitled "Standard Sheets". Only those standards or standard drawings specifically referred to by number on the Plans or in the various Contract Documents are applicable to work on this Contract.

Whenever in the various Contract Documents term, "Department" or "State" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority." Similarly, the term, "Executive Director" shall be replaced by the term, "Central Texas Regional Mobility Authority Coordinator".

Whenever in the Texas Department of Transportation Specifications and Standard Drawings the term, "Department" or "Texas Department of Transportation" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority," except in references to said Texas Department of Transportation as being the author of certain Specifications and Standard Drawings, and in reference to said Department as the agency prequalifying prospective Bidders.

Whenever in the Texas Department of Transportation Specifications and Standard Drawing the term, "District Engineer" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority Coordinator.

**3.167. Substantial Completion.** Substantial Completion shall be defined as occurring when all of the following conditions are met:

- All project work requiring lane or shoulder closures or obstructions is completed, and traffic is utilizing the lane arrangement as shown on the plans for the finished roadway.
- All signs, traffic control devices, and pavement markings are in their final position at this time.
- All sidewalks and shared use paths are opened for public use.

**3.168. Provisional Award.** Award given by the Mobility Authority to the Contractor after the Board of Directors approves the contract and is contingent on TxDOT approval. The Contractor is not required to provide bonds, insurance or their SBE Commitment Agreement Form.

## Special Provision to Item 2

### Instructions to Bidders



Item 2, "Instructions to Bidders," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 2.2., "Eligibility of Bidders,"** is supplemented by the following.

- 2.3. **Technical Qualification.** The Department will not accept bids from Bidders that have not met the technical qualifications established by the Traffic Safety Division. Technical qualification is required for certain categories of Intelligent Transportation Systems (ITS) work. This technical qualification is in addition to all other Bidder qualifications required by the Department.

Electronically submit ITS Technical Qualification Forms and supporting documentation demonstrating the capability of the Bidder or the Bidder's proposed subcontractors to successfully perform the categories of work in accordance with Sections 2.3.1.–2.3.7 of this Specification. Use the ITS Technical Qualification Form pertinent to each work category. Submit the forms and supporting documentation by 12:00 P.M. (CST), 10 calendar days before bid opening, to ITS\_Tech\_Qual@txdot.gov. Incomplete submittals or submittals that do not meet the technical qualifications will be rejected, and additional information will be required. Failure to submit the qualification forms and supporting documentation by the deadline will be sufficient reason for declaring the bid nonresponsive in accordance with Article 2.7., "Nonresponsive Bid." The categories of work pertinent to this Contract are listed in "Important Notice to Contractors" Special Provisions in the Contract.

ITS Technical Qualification Forms and additional information on becoming a qualified Bidder may be found on the Department's website or by contacting the Traffic Safety Division by email at ITS\_Tech\_Qual@txdot.gov or by calling (512) 416-3118.

Once a Bidder or the Bidder's proposed subcontractor has been approved as having met the requirements of this Special Provision, any substitutions or replacement contractors must be submitted to the Traffic Safety Division for approval before performing work on the pertinent work category.

A Bidder or the Bidder's proposed subcontractor must have the level of expertise needed to successfully complete the work. The experience requirements for each work category listed below include three completed projects, one of which must have been completed within the past 5 yr. Vendor reference statements for equipment experience are required under certain work categories but may be waived if the Bidder has acceptable documentation from a vendor demonstrating their experience installing the equipment without onsite assistance.

- 2.3.1. **Category A. Pulling Fiber Optic Cable.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. continuous existence offering services in the installation of fiber optic cable through an outdoor conduit system and terminating in ground boxes, field cabinets or enclosures, or buildings; and
- **Completed Projects.** Three completed projects where the personnel pulled fiber optic cable, minimum 5 mi. in length, through an outdoor conduit system for each project. The completed fiber optic cable systems must have been in continuous satisfactory operation for at least 1 yr.

2.3.2.

**Category B. Splicing and Testing of Fiber Optic Cable.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. continuous existence offering services in the fields of fusion splicing and testing of fiber optic cable installed through a conduit system and terminating in ground boxes, field cabinets or enclosures, or buildings. Experience must include the following:
  - termination of at least 48 fibers within a fiber distribution frame,
  - optical time-domain reflectometer (OTDR) testing and measurement of end-to-end attenuation of single-mode and multi-mode fibers,
  - system troubleshooting and maintenance,
  - training of personnel in system maintenance,
  - use of watertight splice enclosures, and
  - fusion splicing of fiber optic cable that meets the tolerable decibel (dB) losses shown in Table 1; and

**Table 1**  
**Sample Table**

Mode	dB Loss Range
Single mode	0.05–0.10
Multi-mode	0.20–0.30

- **Completed Projects.** Three completed projects where the personnel performed fiber optic cable splicing and terminations, system testing, and system troubleshooting and maintenance during the project and provided training on system maintenance. Each project must have consisted of a minimum 5-mi. length of fiber optic cable. The completed fiber optic cable systems must have been in continuous satisfactory operation for at least 1 yr.

2.3.3.

**Category C. System Integration.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. of providing system integration on wire line and wireless projects including, but not limited to, programming of Layer 2 Ethernet switches, integrating into existing systems, and coordination with traffic management centers; and
- **Completed Projects.** Three completed projects requiring system integration and configuration of hardware including, but not limited to, Ethernet switches, video encoders and decoders, and radios.

2.3.4.

**Category D. Dynamic Message Sign (DMS) Installation.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. continuous existence offering services in the installation of DMS signs;
- **Completed Projects.** Three completed projects consisting of at least two signs in each project where the personnel installed, integrated, and tested DMS on outdoor, permanently mounted overhead structures and pertinent sign control equipment. The completed sign system installations must have been in continuous satisfactory operation for at least 1 yr.; and
- **Equipment Experience.** One project (may be one of the three projects in the preceding bulleted item) in which the personnel worked in cooperation with technical representatives of the equipment supplier to perform the installation, integration, or acceptance testing of the work. The Contractor will not be required to furnish equipment on this project from the same supplier that was referenced in the qualification documentation.

2.3.5.

**Category E. Closed-Circuit Television (CCTV) Equipment Installation.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. continuous existence offering services in the installation of CCTV camera systems;
- **Completed Projects.** Three completed projects consisting of at least five cameras in each project where the personnel installed, tested, and integrated CCTV cameras on outdoor, permanently mounted

structures and pertinent camera control and transmission equipment. The completed CCTV camera system installations must have been in continuous satisfactory operation for at least 1 yr.; and

- **Equipment Experience.** One project (may be one of the three projects in the preceding bulleted item) in which the personnel worked in cooperation with technical representatives of the equipment supplier to perform installation, integration, or acceptance testing of the work. The Contractor will not be required to furnish equipment on this project from the same supplier that was referenced in the qualification documentation.

2.3.6.

**Category F. Wireless Communications.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. continuous existence offering services in the installation of wireless communications. Experience must include the following:
  - conducting radio installation studies, which include signal noise studies, spectrum analysis, antenna gain and radio power calculations, system attenuation, and measurement of standing wave ratios;
  - installation, troubleshooting, and repair of broadband radio systems, which include equipment installation, configuration of radios, antenna calibration, and cabling; and
  - installation, troubleshooting, and repair of interconnected Ethernet networks (local area network [LAN] and wide area network [WAN]), which include cabling, switch or router configuration, and network analysis;
- **Completed Projects.** Three projects consisting of wireless communications installation, troubleshooting, and repair. Each project must include transmitting signals over a minimum 1-mi. distance and installation of at least three devices; and
- **Equipment Experience.** One project (may be one of the three projects in the preceding bulleted item) in which the personnel worked in cooperation with technical representatives of the equipment supplier to perform installation, integration, or acceptance testing of the work. The Contractor will not be required to furnish equipment on this project from the same supplier that was referenced in the qualification documentation.

2.3.7.

**Category G. Radar Detection Systems.** Meet the following experience requirements.

- **Minimum Experience.** Three yr. continuous existence offering services in the installation of radar detection systems. Experience must include the following:
  - freeway and arterial management;
  - forward-fire and side-fire applications;
  - single-zone and dual-beam detection; and
  - equipment setup, testing, and troubleshooting;
- **Completed Projects.** Three projects consisting of installation, configuration, and setup of radar detection systems; and
- **Equipment Experience.** One project (may be one of the three projects in the preceding bulleted list) in which the personnel worked in cooperation with technical representatives of the equipment supplier to perform installation, integration, or acceptance testing of the work. The Contractor will not be required to furnish equipment on this project from the same supplier that was referenced in the qualification documentation.

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## Special Provision to Item 2

### Instructions to Bidders

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Item 2, "Instructions to Bidders" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 3., "Issuing Proposal Forms,"** first two sentences are replaced with the following:

Mobility Authority will issue an Official Bid Form to a prequalified Bidders. The online bid form will be made available to the prequalified bidders on the CivcastUSA website: <https://www.civcastusa.com/project/66febaccb78f62c65ffa353e/summary>

Prequalification requirements:

- Be registered with State of Texas,
- Be fully prequalified by Texas Department of Transportation (TxDOT),
- Have a bidding capacity per TxDOT prequalification system of \$3,000,000,
- Email a valid Non-Collusion Affidavit, Debarment Affidavit, , and Child Support Statement to [Barath.PasupathyNathan@atkinsrealis.com](mailto:Barath.PasupathyNathan@atkinsrealis.com) and [Beteseb.Shibikom @atkinsrealis.com](mailto:Beteseb.Shibikom @atkinsrealis.com) and include a phone number, email address and physical address for point of contact.

**Article 2.3., "Issuing Proposal Forms,"** is supplemented by the following:

The Department may not issue a proposal form if one or more of the following apply:

- The Contractor has been defaulted in accordance with Article 8.7., "Default of Contract" (a default for performance) on a previous Contract with the Department within the last 3 years
- The Contractor is not in compliance with Texas Government Code Sections 2155.089 and 2262.055.

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## Special Provision to Item 3

### Award and Execution of Contract

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Item 3, "Award and Execution of Contract" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 1, "Award of Contract,"** is deleted in its entirety and replaced with the following:

The Mobility Authority will award or reject the Contract within 60 calendar days after the opening of the proposal at the sole discretion of the Mobility Authority.

**Article 4.3., "Insurance,"** is supplemented by the following:

The Contractor shall be the named insured, and the following entities shall be endorsed as additional insureds on a primary and non- contributory basis: Central Texas Regional Mobility Authority, Texas Department of Transportation.

These entities shall be additional insureds to this policy with respect to liability arising out of the acts, errors, and omissions of any member of the Contractor and Subcontractors whether occurring on or off of the site, notwithstanding any other provisions of the Contract Documents.

The Authority Board, the Authority, Texas Department of Transportation, the State of Texas, the Commission and their respective successors, assigns, officeholders, officers, directors, commissioners, consultants and employees shall be listed as "additional insureds" with respect to any insurance for which the contractor must obtain an "additional insured" rider or amendment.

The Commercial General Liability, Automobile Liability and Excess Liability policies shall be endorsed to name CTRMA as an additional insured for any claims arising out of this project. The Contractor shall provide CTRMA with certificates of insurance from all contractors and subcontractors. The certificates shall state that each Contractor waives all rights of subrogation against the CTRMA and that coverage shall not be modified or cancelled without thirty (30) days written notice to CTRMA.

**Table 2** is deleted in its entirety and replaced with the following:

Type of Insurance	Amount of Coverage
Commercial General Liability Insurance	Including products/completed operations liability and contractual liability , in the amount of \$1,000,000 per occurrence for bodily injury and property damage
Business Automobile Policy	In the amount of \$1,000,000 per occurrence for bodily injury and property damage
Workers' Compensation	Providing statutory benefits, and Employers Liability with limits of \$1,000,000
Excess Liability Insurance	In the amount of \$5,000,000 per occurrence and aggregate



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## Special Provision to Item 4

### Scope of Work

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Item 4, "Scope of Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 4.4., "Changes in the Work,"** Delete the following two paragraphs:

"If the changes in quantities or the alternations do not significantly change the character of the work under the Contract, the altered work will be paid for at the Contract unit price. If the changes in quantities or the alterations significantly change the character of the work, the Contract will be amended by a change order. If no unit price exists, this will be considered extra work and the Contract will be amended by a change order. Provide cost justification as requested, in an acceptable format.

Payment will not be made for anticipated profits on work that is eliminated."

and replace with the following:

"The Engineer may require deviations to the Work through a written directive. Payment for the deviations and quantity overruns will be made through the Contingency Allowance. Deviations and quantity overruns will be paid for at the unit prices submitted at the bidding stage. Deviations requiring new unit prices will be negotiated and made through the Contingency Allowance. Costs exceeding the Contingency Allowance will be addressed using the change order process.

Upon completion of the Work, the total contract value will be adjusted to provide for the difference, if any, between the total amount of expenditures from the Contingency Allowance and the original amount of the Contingency Allowance. The Contractor is not entitled to all or any part of an unexpended balance of the Contingency Allowance.

When changes are made that do not fall under the Contingency Allowance, the Contract will be amended by a Change Order. Provide cost justification as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated."

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## Special Provision to Item 4

### Scope of Work

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Item 4, "Scope of Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 4.7., "Dispute or Claims Procedure,"** Delete the paragraphs under this article in their entirety and replace with the following:

"The dispute resolution policy promotes a cooperative attitude between the Engineer, Contractor, and Contractor's subcontractors working through the Contractor. Emphasis is placed on resolving issues while they are still current, at the project office, and in an informal manner with the Engineer. Open sharing of information is encouraged by all parties involved so the information provided completely and accurately reflects the issues and facts. If information is not shared, decisions may be limited to relying on the documentation that is available for review.

If the dispute cannot be resolved at the project level, initiate the Contract claims procedure by submitting a claim to the Mobility Authority's Director of Engineering.

If the claim cannot be resolved between the Contractor and the Director of Engineering, the contractor may escalate the claim by submitting the claim to the Executive Director of the Mobility Authority.

The Contractor, or subcontractor through the Contractor, will file a Contract claim request and a detailed report that provides the basis for the claim. The detailed report will include relevant facts of the claim, cost or other data supporting the claim, a description of any additional compensation requested, and documents supporting the claim.

The claim must include the following certification: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Mobility Authority is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

If a claim has been submitted and the Contractor wishes to resume negotiations with the Engineer, notify the Director of Engineering in writing of the intent to resume negotiations at the Engineer level and request review of the claim be suspended by the Director of Engineering pending the outcome of the negotiations.

File a claim after completion of the Contract or when required for orderly performance of the Contract. For a claim resulting from enforcement of a warranty period, file the claim no later than 1 yr. after expiration of the warranty period. For all other claims, file the claim no later than 1 yr. after the date the Mobility Authority issues notice to the Contractor that they are in default, the date the Mobility Authority terminates the Contract, or the date of final acceptance of the Contract. It is the Contractor's responsibility to submit requests in a timely manner.

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## Special Provision to Item 5

### Control of the Work

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Item 5, "Control of the Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 5.12., "Final Acceptance,"** is supplemented by the following:

Contractor warrants all materials and workmanship and that the work is in conformance with the Bid Documents and Plans included in this Contract for a period of one year from the date of the Certificate of Final Acceptance of the entire project. Said warranty binds Contractor to correct any work that does not conform with such Bid Documents and Plans or defects in workmanship or materials furnished under this Contract which may be discovered within said one year period. Contractor must, at its own expense, correct any such defect within 30 days after receiving written notice of such defect from Mobility Authority by repairing the same to the condition called for in the Contract. Should Contractor fail or refuse to repair such defect within said 30-day period or to provide acceptable assurances that such repair work will be completed within a reasonable time thereafter, Mobility Authority may repair or cause to be repaired any such defect by calling the Contractor's Warranty Bond.

## Special Provision to Item 6

### Control of Materials

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Item 6, "Control of Materials," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 4., "Sampling, Testing, and Inspection,"** is supplemented by the following:

Quality Control testing of all materials, construction items, or products incorporated in the work shall be performed by the Contractor according to the contract specifications at the Contractor's expense.

Quality Assurance sampling and testing for acceptance will be performed by the Mobility Authority's Construction Representative/Observer in accordance with the Quality Control (QC) / Quality Assurance (QA) program outlined in the Quality Assurance Plan (QAP). The cost of such tests will be incurred by the Mobility Authority and coordinated by the Mobility Authority's Construction Representative/Observer through funds made available to the Construction Representative/Observer under his/her agreement with the Mobility Authority for the professional services related to construction engineering and inspection on the Project.

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## Special Provision to Item 7

### Legal Relations and Responsibilities

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Item 7, "Legal Relations and Responsibilities" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Under **Article 7.3., "Laws To Be Observed"**, **Article 7.5., "Patented Devices, Materials and Processes"**, **Article 7.12., "Responsibility For Hazardous Materials"**, and **Article 7.15., "Responsibility For Damage Claims"**, "State" is voided and replaced by "Central Texas Regional Mobility Authority and TxDOT".

**Article 7.3., "Laws To Be Observed,"** is supplemented by the following:

By entering into Contract, the Contractor agrees to provide or make available to the Mobility Authority records, including electronic records related to the Contract for a period of 3 years after the final payment. No person or entity other than TxDOT may claim third -party beneficiary status under this Contract or any of its provisions, nor may any non-party sue for personal injuries or property damage under this Contract.

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## Special Provision to Item 8

### Prosecution and Progress

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Item 8, "Prosecution and Progress," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 8.6., "Failure to Complete Work on Time,"** is supplemented by the following.

- 6.1. **Lane Closure Assessment Fees.** Monetary assessment, as shown on the plans, will be made against the Contractor for any lane closure or obstruction that overlaps into the peak-hour traffic for each time increment shown on the plans or portion thereof, per lane, regardless of the length of lane closure or obstruction.
- 6.1.1. **Definition of Terms.** For this Contract, the following definitions apply.
  - 6.1.1.1. **Time Increment.** Any continuous defined increment of time or portion thereof for a period beginning at that point when lanes are closed or obstructed by the Contractor's operations.
  - 6.1.1.2. **Assessment Fee.** The amount shown on the proposal for each defined time increment, representing the average cost of interference and inconvenience to the road user for each lane closed or obstructed during peak-hour traffic. The Engineer may allow a proportional fee assessment for closures that do not involve an entire defined time increment.
  - 6.1.1.3. **Closure or Obstruction.** When the Contractor's operations result in a reduced lane width of the travel way or shoulder less than that shown on the plans.
  - 6.1.1.4. **Peak-Hour Traffic Times.** Schedule of days and times described in the General Notes when lane closures or obstructions are not allowed.
- 6.1.2. **Fee Calculation and Collection.** The assessment fee will be deducted from the amount due to the Contractor on the monthly construction estimate, and thus retained by the Department. The Engineer will determine the time of overlap of lane closures or obstructions for calculating the assessment fee. The fee is based on road user costs and is assessed not as a penalty, but for added expense incurred by the traveling public.

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## Special Provision to Item 8

### Prosecution and Progress

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Item 8, "Prosecution and Progress," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 8.5., "Project Schedules"** is supplemented by the following

The progress schedule required for this project is the critical path method schedule (CPM schedule) as described herein. The Contractor shall prepare and submit for review and acceptance a cost loaded schedule of proposed working progress for the entire contract duration. The Engineer will provide a template with milestones from other contracts and non-construction activities for the Contractor to use in the development of their schedule. The Engineer shall also provide a Work Breakdown Structure (WBS) as well as the required report layouts for the Contractor to use to develop the progress schedule for this Contract.

Immediately after receipt of notice of award, the Division Engineer and the Contractor will establish a mutually agreeable date on which the preconstruction meeting will be held. The Contractor's project superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of the work shall attend the preconstruction conference.

After work on the project has begun, construction conferences will be held periodically. The construction conferences are to be scheduled at times that are mutually agreeable to both the project superintendent and the Resident Engineer. It shall be the superintendent's responsibility to attend the conferences.

**Section 8.5.2 "Progress Schedule"** is supplemented by the following:

The Contractor shall provide a schedule that shows the various activities of Work in sufficient detail to demonstrate a reasonable and workable plan to complete the Project by the Original Contract Completion Date and any interdependent milestones identified by the Engineer or required by Contract. Show the order and interdependence of activities and the sequence for accomplishing the Work. Describe all activities in sufficient detail so that the Engineer can readily identify the Work and measure the progress of each activity.

**Section 8.5.3 "Schedule Format"** is supplemented by the following:

The Contractor shall use a compatible version of Oracle Primavera P6 or comparable scheduling software to generate the CPM schedule. It is the Contractor's responsibility to verify with the Engineer the software and version being used for this project and shall maintain the required version for the entire contract duration. The use of Microsoft Project and Primavera Project Planner (P3) and other scheduling software is prohibited.

The progress schedule shall contain the following Administrative Identifier Information:

- (1) Project Name
- (2) Contract Number
- (3) Date of Contract
- (4) Construction Completion Date
- (5) Contractor's Name
- (6) Contractor's Contact Information

The CPM schedule must reflect the scope of work and include the following:

- (1) Clear identification of tasks to be completed based on Section or Special Provisions included in the Project Manual and as listed in Pay Items, including subcontractor work activities.
- (2) Include calculations of resources required (Cost, Labor, Equipment) for constructing all facilities within the Contract duration. Specific calculations shall be provided to show quantities, manpower / crews, and equipment to support the critical path. The Contractor shall be capable of calculating the maximum crew size anticipated if any activities become critical, so the Contractor is prepared when a critical path changes or a new path occurs.
- (3) Float for each Activity.
- (4) Activities for submittals (shop drawings).
- (5) Punchlist activities with sufficient duration for the Engineer's inspection and acceptance before the final completion date
- (6) Activities for submittal review time by the Engineer, including time range showing start and end dates.
- (7) Working and shop drawing preparation, submittal, and review for acceptance.
- (8) Material and equipment procurement, fabrication and delivery; identify any long lead items as separate activities.
- (9) Owner furnished and/or installed materials and equipment shall be identified as separate activities.
- (10) NTP / Start of construction
- (11) Required phasing
- (12) Maintenance of traffic requirements as required by the contract (if any)
- (13) Intermediate completion dates (if any)
- (14) Identified interdependent milestones (if any)
- (15) Seasonal limitation/observation periods/moratoriums
- (16) Beginning and end of each traffic control work area and road openings
- (17) Other similar activities and project milestones established in the Contract Documents.
- (18) Substantial Completion Date
- (19) Final Acceptance Date
- (20) All required Reports layouts as requested by the Engineer

**Section 8.5.4 "Activity Format"** is supplemented by the following:

Activity requirements are discussed in further detail as follows:

- (1) Activity Identification (ID) - Assign each activity a unique identification number. The format for the identification number will be provided by the Engineer. All activities must begin with the same activity ID prefix as provided by the Engineer.
- (2) Activity Description - Assign each activity an unambiguous descriptive word or phrase. For example, use "Excavate Area A," not "Start Excavation."
- (3) Activity Codes – The Engineer will provide the activity code dictionary in the template. The Contractor will assign the appropriate codes to each activity.
- (4) Activity Original Duration - Assign a planned duration in working days for each activity. Do not exceed a duration of 10 working days for any activity unless accepted by the Engineer. Each activity shall have a minimum duration of 1 working day. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities in order to meet the duration requirements of this paragraph.
- (5) Finish-to-Start Relationships - Unless allowed in writing by the Engineer, use only finish-to-start relationships with no leads or lags to link activities. All activities, except the first activity, shall have a predecessor(s). All activities, except the final activity, shall have a successor(s).
- (6) Calendars – The Engineer will provide pre-defined calendars as part of the template. The Contractor shall assign these pre-defined calendars to the appropriate activities. The Contractor may create new projectspecific



calendars to represent their standard work schedule using the pre-defined calendars as a basis. The Contractor may not edit pre-defined calendars.

- (7) Constraints – Unless allowed in writing by the Engineer, do not use constraints in the schedule.
- (8) Resources – Manpower and equipment shall be reflected for all activities. Incidental costs to construction shall be equally spread out across all activities. Front loaded schedules are not allowed.
- (9) The schedule shall show the total cost of performing each activity and shall include the total labor, material, equipment and general conditions.
- (10) The sum of cost for all activities shall equal the total Contract.
- (11) The summed value of that portion of the activities allocated to each Contract bid item shall equal the total value of the corresponding Contract bid item.
- (12) The Contractor shall allocate a value for unit price or lump sum contract bid items to each activity in the schedule. No Lump sum amounts should exceed \$100,000.

**Section 8.5.5.2 “Critical Path Method”** The first paragraph is voided and replaced by the following:

The Contractor shall submit to the Engineer within the timeframes specified the baseline CPM schedule in a bar chart format showing the critical path in red, using both hard copy and in electronic formats. Electronic formats shall be compatible with the Engineer’s computer systems. Also, submit the following information:

- (1) Written narrative – Explains the sequence of work, the controlling operations, intermediate completion dates, milestones, project phasing, anticipated work schedule and estimated resources. In addition, explain how permit requirements, submittal tracking and coordination with subcontractors, utility companies, railroads and other third party entities will be performed. The narrative shall itemize and describe the critical path (i.e. access limitations, constraints, shift work), and compare early and late date or Contract Milestone activities, and describe any critical resources.
- (2) CPM Schedule in a Bar Chart Format – Include the Administrative Identifier Information discussed above on the first page of the schedule. For each activity on the chart, indicate the Activity ID, Activity Description, Original Duration, Remaining Duration, Changes to Duration, Total Float, Early Start Date, Early Finish Date, and Calendar Name. Use arrows to show the relationships among activities.
- (3) Identify the critical path of the project on the bar chart. The critical path is defined as; 1) the sequence of activities that must be completed “on time” to ensure that the project finished on time. 2) the longest path of activities in the project that determines the project finish date.
- (4) No more than 10% of activities may be critical or near critical. Critical Activities will have a total float equal to zero. “Near critical” is defined as float in the range of 1 to 10 working days.
- (5) Six Week Look Ahead CPM Schedule in a Bar Chart Format – This schedule will have all the same requirements of the CPM schedule in bar chart format except that it shall be limited to those activities that have an early start or early finish within a six-week period of the data date.
- (6) Logic Diagram – Submit a diagram in PERT chart format showing the logic of the CPM schedule.
- (7) Activity ID Sort – Submit a listing of all activities included in the CPM schedule sorted by ascending Activity Identification Number.
- (8) Total Float Sort – Submit a listing of all activities included in the CPM schedule sorted by increasing total float and by early start date.
- (9) All float belongs to the Project and is a shared commodity between the Contractor and the Mobility Authority and is not for the exclusive use or benefit of either party. The Contractor shall notify the Engineer in writing for acceptance before using any float.
- (10) Detailed Predecessor/Successor Sort – Submit a listing of all activities included in the CPM schedule indicating the activities that immediately precede and immediately succeed that activity in the schedule logic.
- (11) Scheduling Statistics Report – Submit a report of CPM schedule statistics, including number of activities, number of activities on the longest path, number of started activities, number of completed activities, number of relationships, percent complete, and number and type of constraints.

- (12) A resource curves / Metric tracking reports (EVM) corresponding to the milestones and work activities established above.

**Section 8.5.5.2.2 “Baseline Schedule”** The second paragraph is voided and replaced by the following:

The Contractor shall submit a progress schedule for the entire duration of the Contract to the Engineer 30 calendar days following the contract award date. After review of the schedule the Engineer shall schedule a Baseline CPM Schedule meeting with the Contractor to review the schedule and identify any changes or corrections. Within 7 calendar days of the CPM Schedule meeting, the Contractor shall make any necessary adjustments to address all review comments and resubmit network diagrams and reports for the Engineer’s review. The complete baseline schedule shall be submitted and accepted no later than (45) forty-five days after contract award date. The complete progress schedule shall be accepted by the Engineer before any payments will be processed for the project.

**Section 8.5.5.2.3 “Progress Schedule”** is supplemented by the following

The Engineer may withhold pay estimates if the updated CPM schedule is not submitted as required by this section. For each updated CPM schedule, identify the actual start and finish dates for all completed activities, the actual start date and remaining duration for all activities in progress, the difference in duration of all activities since the last update and any exceptional reports associated with the update. Only accepted changes will be incorporated into the monthly progress schedule update. The schedule should represent the actual work performed and should be progressed with actuals for all the schedule activities. The final schedule will be utilized as the project actual “As Built” schedule.

Provide a written narrative that identifies any changes or shifts in the critical path and submit reasons for the changes or shifts in the critical path. Identify any changes in logic for the updated CPM schedule and submit reasons for changes to the schedule logic. In addition to the written narrative, submit the following with each updated CPM schedule:

- (1) CPM Schedule in Bar Chart Format
- (2) Four Week Look Ahead CPM Schedule in Bar Chart Format
- (3) Logic Diagram
- (4) Activity ID Sort
- (5) Total Float Sort
- (6) Detailed Predecessor/Successor Sort
- (7) Schedule Metrics and Earned Value (Schedule, Cost, Labor) Reports

The Contractor must submit a statement that there were no changes in the schedule logic, activity durations, or calendars since the previous update in lieu of submission of items (3), (5), and (6). Acceptance of schedule updates by the Engineer does not revise the Contract Documents.

A monthly schedule update meeting shall be held each month following Notice to Proceed to review monthly schedule update submittals, critical path items and recovery schedules. The Contractor shall be represented in the meeting by the Contractor’s scheduler, project manager and general superintendent. As necessary the Contractor may be also asked to attend a coordination meeting to discuss the schedule impacts to other contractors.

If the Project completion date changes or if the project schedule overrun is anticipated to exceed 5%, the Contractor shall submit a revised progress schedule to the Engineer for review and acceptance. If plan revisions are anticipated to change the sequence of construction in such a manner as will affect the progress, but not the completion date, then the Contractor may submit a revised progress schedule for review and acceptance. The Project completion date shall remain unchanged.

**Section 8.5.5.3 “Notice of Potential Time Impact”** is supplemented by the following

“Contractor shall not be eligible for Change Order(s) for additional compensation for additional costs, including costs for developing and executing a Recovery Schedule(s), and delay and disruption damages, or additional Days incurred directly or indirectly from the virus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease known as COVID-19, including any disruptions to, and delays or interruptions in, construction of the Project in accordance with the Contract and any approved Baseline Schedule.”

**Section 8.5.5 “Schedule Types”** is supplemented by the following:

**Section 8.5.5.5 Recovery Schedule**

If the progress schedule projects a finish date for the Project beyond the original Completion Date, the Contractor shall submit a revised schedule showing a plan to finish by the original Completion Date. The Mobility Authority will withhold Pay Estimates until the Engineer accepts the revised schedule. No additional compensation for developing and executing a recovery schedule(s) shall be reimbursed to the Contractor. The Engineer will use the schedule to evaluate time extensions and associated costs requested by the Contractor.

- (1) In the event Work or related construction activities shown on the Contractor's Progress Schedule fall behind schedule to the extent that dates established as contractual Completion Dates are in jeopardy, the Contractor shall prepare and submit to the Engineer, at no additional cost or time to the Mobility Authority, a Recovery Schedule showing intent to remedy delays and to regain originally scheduled time of completion of Work within a timely manner. This includes delays due to unforeseen conditions.
- (2) Recovery Schedule shall be submitted in such form and detail appropriate to the delay or delays, explaining and displaying how the Contractor intends to reschedule those activities and reestablish compliance with the accepted baseline Construction Progress Schedule during the immediate subsequent pay period or as permitted by Engineer. This shall include a schedule diagram comparing the original and the revised sequence of activities, identifying all affected activities.
- (3) Upon determining the requirement for a Recovery Schedule:
  - a. Within five (5) calendar days, the Contractor shall present to Engineer a proposed Recovery Schedule. The Recovery Schedule shall represent the Contractor's best judgment as to how to best reorganize the Work and achieve progress to comply with the accepted Construction Progress Schedule.
  - b. Changes to Contractor's means and methods, such as increased labor force, working hours, overtime, additional equipment and other means shall not constitute the basis for changes to the Contract Sum or Contract Time.
  - c. Recovery Schedule shall show remedies to bring Work back on schedule up-to-date within the immediate subsequent pay period.
  - d. The Recovery Schedule shall be prepared to a similar level of detail as the Construction Progress Schedule.
  - e. Five (5) calendar days prior to the expiration of the Recovery Schedule, Contractor shall document to the Engineer that the Work schedule has regained, or is on-track to regain, compliance with the Construction Progress Schedule.
- (4) Failure to submit Recovery Schedule in a timely manner may result in Termination of the Contract for Cause as determined by the Engineer.
- (5) Failure to achieve compliance with the accepted Construction Progress Schedule despite implementing Recovery Schedule may result in Termination of the Contract for Cause as determined by the Engineer.
- (6) Termination of Contract For Cause: In the event Contractor defaults on the terms of the Contract, including failure to maintain the Construction Progress Schedule, Engineer will assess the level of completion of the Work achieved by the Contractor and compare amount of available funds against anticipated costs required for the Mobility Authority to complete the Work, including anticipated Liquidated Damages resulting from delay, if any. Engineer will determine amount of payment due to Contractor for Work completed prior to date of Termination of Contract for Cause, if any. In the event available funds are not sufficient for the Mobility Authority to complete the Work, the Mobility Authority will withhold such funds from the amount due the Contractor.
- (7) If, in the opinion of the Engineer, the Contractor has sufficiently regained compliance with the Construction Progress Schedule, the use of the Construction Progress Schedule will be resumed. Contractor shall update and submit the Construction Progress Schedule clearly identifying Work to date and how the Contractor intends to achieve timely completion for the remainder of the Work in accordance with the Construction Documents.

## Special Provision to Item 9

### Measurement and Payment

Item 9, "Measurement and Payment," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 9.5., "Progress Payments,"** Delete this section of the Specifications in its entirety and substitute with the following:

Partial payments will be made once each month covering work performed and materials complete-in-place in accordance with the Contract. The invoice form to be submitted each month will be provided to the Contractor in Microsoft Excel format. The Contractor must be able to use Microsoft Excel to complete the invoice form. Partial payments will be made on the value of work performed based on approximate estimates prepared by the Engineer, provided, however, that no estimate shall be certified or payment made where the net amount receivable by the Contractor is less than Five-hundred Dollars (\$500.00).

The Engineer will review the partial payment estimate with the Contractor's representative prior to each partial payment.

Total Contract value shall be considered to mean the original amount of the Contract, except when the Contract is increased or decreased by a supplemental agreement in which case the adjusted total shall be used.

The Mobility Authority reserves the right to withhold the payment of any partial or final estimate voucher or any sum or sums thereof from such vouchers in the event of the failure of the Contractor to promptly make payment to all persons supplying equipment, tools or materials, or for any labor used by the Contractor in the prosecution of the work provided for in the Contract, and for any other cause as determined by the Mobility Authority in its sole discretion, including overpayment on previous partial payments.

**Article 9.8., "Retainage,"** is supplemented with the following:

The Mobility Authority shall not withhold funds from payments to be made to Contractor for the Work until such time as 95% of the Adjusted Contract Price has been paid to the Contractor. Following completion of and payment for 95% of the Adjusted Contract Price, the Mobility Authority shall withhold, the remaining 5% of the Adjusted Contract Price pursuant to the terms described below.

The remaining 5% for the Work, subject to reduction as specified below, shall be held by the Mobility Authority until Final Acceptance. At such time, and provided the Contractor is not in breach or default hereunder, the Mobility Authority shall release to Contractor all withheld in connection with the Work other than amounts applied to the payment of Losses or which the Mobility Authority deems advisable, in its sole discretion, to retain to cover any existing or threatened claims. The Contractor must further warrant, to the satisfaction of the Mobility Authority, that there are no outstanding claims or liens by any subcontractors or other parties with respect to the Work.

The prime contractor shall make full payment of amounts due to subcontractors within 10 calendar days following the satisfactory completion of the subcontractor's work. Satisfactory completion of the subcontractor's work shall be defined as approval, acceptance, and payment for the subcontractor's work by the Mobility Authority including the submittal and acceptance of all information, deliverables or other documents required by the contract.

Prior to the release of the remaining 5% by the Mobility Authority pursuant to the terms hereof, such amounts shall be held by the Mobility Authority. Upon the release of the remaining 5%, the Contractor shall not be entitled to any interest income that has accrued upon the amounts of the remaining 5% released to Contractor.

**Article 9.9., “Payment Provisions for Subcontractors,”** is supplemented with the following:

The Mobility Authority may pursue actions against the Contractor, including withholding of estimates and suspending the work, for noncompliance with the subcontract requirements of this Section upon receipt of written notice with sufficient details showing the subcontractor has complied with contractual obligations as described in this Article.

These requirements apply to all tiers of subcontractors. Incorporate the provisions of this Article into all subcontract or material purchase agreements.

# Special Specification 6005

## Networking Intelligent Transportation System (ITS) Communications Cable



### 1. DESCRIPTION

Furnish, install, and test twisted-pair cable for networking and telecommunication uses in the field environment.

### 2. MATERIALS

2.1. **General Requirements.** Provide new cable and connectors that are in conformance with the details shown on the plans and in the Specifications. The cable must be free of deformations, holes, splits, and splices.

ITS networking copper cables must be constructed for installation in an outdoor underground conduit environment. All cable provided for underground installation must contain the outside plant designation for outdoor usage and must be rated non-plenum.

Provide cable in compliance with the most current version of the following industry standards:

- NFPA National Electric Code (NEC),
- Rural Electrification Administration (REA) -PE-22 (7 CFR 1755.403), PE-39 (7 CFR 1755.390),
- ANSI /TIA-568-C, EIA/TIA-568-B.2-2001 (Category 5E Cable),
- EIA-232, EIA-422, EIA-485,
- TSB-36, and
- Underwriters Laboratory (UL).

Included in this Item are the ITS cable types listed in Table 1.

**Table 1**  
**Common Networking ITS Communication Cable Types**

Cable Type	Nominal AWG Gauge	Application
category 5e Ethernet cable	#24 AWG	Standard 100Base-Tx, Gigabit Ethernet, up to 100 MHz bandwidth performance
category 6 Ethernet cable	#24 AWG	Gigabit Ethernet; up to 250MHz bandwidth performance
category 7 Ethernet cable	#24 AWG	10-Gigabit Ethernet, up to 600 MHz bandwidth performance. <u>Category 7 cable is not typically utilized for ITS device applications.</u> Category 7 cable applications include high bandwidth performance at network layer switches with 10 Gigabit connections.
serial communications cable (RS-232, RS-422, RS-485)	#22, #24 AWG	Serial port applications, low bandwidth, and small data rate transmission (<100 kb/s)
shielded twisted pair cable	#18-24 AWG	Telephone communications, below 16 MHz bandwidth performance
unshielded twisted pair (UTP) cable	#18-24 AWG	

Included in this Item are all terminating connectors and associated equipment required for installation and testing in a field environment.

Provide cable conforming to the gauge, type, and length shown on the plans. Ensure the cable gauge supplied meets the bandwidth requirements specific to the cable application and run length.

Provide signal amplification or repeater locations for communications cable runs as shown on the plans and in the Specifications.

When selecting serial communications cable for longer cable runs, verify the conductor gauge to be provided will meet signal loss requirements for cable application. Refer to Table 2 for typical cable distance limitations for ITS serial communications cable.

**Table 2**  
**Typical Network Communications Cable**  
**Distance Limitations**

Cable Type	Recommended Maximum Cable Run <sup>1</sup>
RS-232	50 ft.
RS-422 (4 wire system)	500 ft.
RS-485 (2 wire system)	500 ft.
category 5e	300 ft.
category 6	300 ft.

1. Cable distance limitation to be verified according to manufacturer for the cable application.

All cable provided must be manufactured with permanent markings at approximate 2-ft. intervals on the outer jacket according to manufacturer name, serial number, type, UL list and classification for identification purposes. All pairs must be color coded using standard North American communication industry colors to uniquely identify each pair in the cable.

- 2.2. **Physical Requirements.** Provide networking communications cable meeting the following physical requirements.
- 2.2.1. **Conductor.** All networking cable must be constructed of solid bare copper conductor.
- 2.2.2. **Insulation.** All networking cable must be of foamed, cellular dielectric construction. Dielectric material must adhere to and support the center cable conductor.
- 2.2.2.1. **Insulation Material.** Serial communications cable insulation must be high-density polyethylene (HDPE) or equivalent. Ethernet networking cable insulation must be polyolefin or HDPE. UTP cable insulation must be polyethylene, polyolefin, polypropylene, or fluorinated ethylene propylene.
- 2.2.3. **Shielding.** Serial communications cable shielding must contain combination foil-polyester and copper braid shield to reduce EMI interference. Ethernet networking cable must contain a combination foil-polyester shield.
- 2.2.3.1. **Coverage.** Serial communications cable must be constructed of 100% effective foil coverage, minimum 65% braided coverage. Ethernet networking cable (category 5e, 6, 7) must contain 100% effective foil cover.
- 2.2.4. **Outer Jacket.** Outer jacket must be rated for heavy duty ultraviolet (UV) exposure, sunlight, oil, and weather resistance necessary for outdoor installation.
- 2.2.4.1. **Jacket Material.** All networking cable outer jackets must be of PVC or polyethylene construction.
- 2.2.5. **Connectors.** Connectors must be matching, weather resistant, water and moisture proof, and outdoor-rated hardware that meet cable operating voltage, temperature, and impedance characteristics. Connectors must prevent the entry and collection of moisture to the cable and electrical connection point. Provide cable sealant during installation to seal connections from moisture and corrosion.

- 2.3. **Electrical and Mechanical Requirements.** Ethernet networking cable as shown on the plans must be in accordance with the TIA/EIA-568-C standard, and according to performance characteristics defined in TIA/EIA-568-C.4-1. All Ethernet networking cable provided must meet IEEE 802.3af and IEEE 802.3at for Power over Ethernet (PoE) applications.
- Serial communications cable and UTP must conform to the following requirements:
- 2.3.1. **Capacitance.** Serial communications cable capacitance must not exceed 35 picofarads (pF) per foot of cable. UTP cable capacitance must not exceed 15 pF per foot of cable.
- 2.3.2. **Inductance.** Serial communications cable inductance must not exceed 0.30 microhenry's (μH) per foot of cable.
- 2.3.3. **Impedance.** Provide 100-ohm nominal impedance for UTP cables and according to the manufacturer recommendation for cable application.
- 2.3.4. **Attenuation.** Attenuation of the cable must be compliant with requirements of the proposed application.
- 2.3.5. **Resistance.** The DC resistance of the serial communications cable inner conductor must not exceed 20 ohms per 1000 ft.
- 2.4. **Environmental Design Requirements.**
- 2.4.1. **Installation Temperature Rating.** Cable must be rated for an outside ambient temperature range of -20°F to 165°F.
- 2.4.2. **Storage Temperature Rating.** Cable must be rated for a storage temperature range of -40°F to 165°F.

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### 3. CONSTRUCTION METHODS

- 3.1. **General.** Cable must be installed in accordance with the following industry procedures:
- ANSI/TIA -568-C,
  - BICSI Telecommunications Distribution Methods Manual (TDMM) and Information Transport Systems Installation (ITSIM),
  - NFPA National Electric Code (NEC),
  - USDA Construction of Direct Buried Plant, and
  - ICEA Standard for Aerial Service Wire - ANSI/ICEA 5-89-648.
- 3.1.1. **Cable Storage.** All uninstalled cable must be stored according to manufacturer recommended bend radius and cable reel requirements.
- 3.1.2. **Cable Labeling.** All cable must be labeled using pre-laminated labels with UV protection according to usage at all terminations. Provide weatherproof labels rated for outdoor use.
- 3.1.3. **Installation Procedure.** All cable must be inspected and tested for continuity when received, with results compared with factory pre-shipping tests. Inspect the cable nomenclature to make certain that the correct product has been received. Notify the supplier (or manufacturer) of all discrepancies for immediate correction.

Install the network cable routed as shown on the plans and follow the manufacturer recommendations for installation.



Ensure that all exposed cable ends are covered and protected against moisture and dust penetration at all times during installation. Protect cable ends during storage, cable pulls, and post-installation.

- 3.1.4. **Conduit Fill Requirements.** Install cable as shown on the plans and ensure that NEC and TIA/EIA fill requirements must be met for all cable runs.
- 3.1.5. **Cable Slack Requirements.** Provide 25 ft. cable slack maximum in pull boxes and per manufacturer requirements.
- 3.1.6. **Spacing Requirements.** Provide minimum 12-in. spacing between electrical power cable and communications cable types as described for underground installations within NEC Sections 840.44 and 840.47.
- 3.2. **Testing.** Procedures for the tests noted below are to be in accordance with industry standard practice and recorded in accordance with ANSI/TIA/EIA rules for documentation for the cable type. Perform tests in accordance with testing requirements in this Item. For all tests, provide test forms to be used that compare measured results with threshold values. The following tests must be performed, recorded, and submitted to verify the cable performance and installation:
- 3.2.1. **Cable Continuity.** Perform cable continuity test for center conductor and shield continuity and record results. The test must be performed on received cable reels to identify any discrepancies and upon final installed cable interconnections. Test continuity of each pair to show a resistance of not more than 8 ohms per 1000 ft. of conductor. Use meter with a minimum input resistance measurement to be in accordance with RUS 7 CFR 1755.403 Copper Cable Telecommunications Plant Measurements.
- 3.2.2. **Time Domain Reflectometry (TDR).** Perform TDR test for impedance continuity per manufacturer recommendations in coaxial cable interconnections and record results.
- 3.2.3. **Ground Resistance.** Use a Megohmmeter to perform ground resistance testing of all conductors including the shield, and conductor-to-conductor, including all individual conductors to the shield. Ensure that all conductor tests, including the shield, read infinity to ground, and from conductor to conductor and all individual conductors to the shield, read infinity. Replace cable not meeting the infinity test result at no expense to the department, whether one or multiple readings per cable are defective.
- 3.2.4. **Visual Inspection.** Where cable installation is visible, perform visual inspection (with a Department representative) to verify any evidence of the following:
- cable damage (cracks, shield damage, kinks, knots, jacket damage, crushed cable),
  - bend radius violations (at conduit fittings, cabinet locations), and
  - cable crimping method—use of manufacturers specified cable crimp tool only (use of pliers not permitted).
- 3.3. **Documentation.** Submit three copies of the following materials for each cable type provided for approval prior item supply:
- manufacturer cutsheets and complete specifications (physical, electrical, mechanical, and environmental),
  - manufacturer warranty information,
  - independent test lab certification, and
  - blank test forms.
- Submit three copies of the following materials for each cable run provided for approval post installation:
- test results,
  - completed test forms,

- cable continuity test,
- TDR test,
- "As-built" documentation for cable path as shown on the plans,
- complete maintenance and trouble-shooting procedures, and
- furnish additional information as shown on the plans.

3.4. **Warranty.** Warrant all cable against defects or failure in design, materials, and workmanship in conformance with the manufacturer's standard warranty.

Supply cable with no less than 95% of the manufacturer's warranty remaining on the date that equipment invoices are submitted for final payment. Any material with less than 95% warranty remaining will be rejected.

Warrant all cable furnished and installed to perform in conformance with the manufacturer published specifications for a period of 1 yr. after final acceptance of the project by the Department. Provide for "on-site" repair or replacement within two working days and at no cost to the Department. Repair or replace any defective cable, at the manufacturer's option, at no cost to the Department.

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#### 4. **MEASUREMENT**

This Item will be measured by the foot of cable or by each connector.

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#### 5. **PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "ITS Communications Cable (Ethernet)," "ITS Communication Cable (Serial)," and "ITS Communication Cable Connector." For twisted pair communications cable runs, work performed, and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "ITS Communications Cable" of the type, size, and number of pairs specified. The price is full compensation for furnishing, installing, splicing, and testing cable and connectors, as well as for installation equipment, materials, tools, and incidentals.

# Special Specification 6007

## Battery Back-Up System for Signal Cabinets



### 1. DESCRIPTION

Install a battery back-up (BBU) system for traffic signals that provides reliable emergency power in case of utility power failure or interruption. The BBU system should also function as a power conditioner or voltage regulation device.

The BBU system should consist of inverter/charger, manual bypass switch, power transfer switch or automatic bypass switch, batteries, battery monitoring device, wiring, external cabinet or stand-alone cabinet, concrete pad, all necessary hardware and software, and any associated equipment required to operate in a field environment.

The BBU system should be able to operate a light-emitting diode- (LED-) only signalized intersection (700-W load) for 4 hr. of full runtime when utility power is disabled and under ambient temperature of 25°C. The BBU system should switch the intersection to flash mode of operation when approximately 40% of battery charge is remaining, using relay contact connection points on the front panel of the unit. The BBU system should operate the intersection in the flash mode of operation (300-W load) for an additional 2 hr. BBU system components must be rated for a minimum 1,400-W load capacity.

Design the BBU system for outdoor applications in accordance with NEMA TS2-2003, Section 2. All components of the BBU system should be rated to operate under temperature extremes of -34°C—+74°C.

### 2. DEFINITIONS

- 2.1. **Automatic Bypass Switch.** A unit connected between the utility power supply and the inverter/charger that can automatically switch power to the controller cabinet service panel from inverter output power to utility line power.
- 2.2. **BBU System.** Includes, but is not limited to, a manual bypass switch, automatic bypass switch or power transfer switch, inverter/charger, batteries, battery monitoring device, wiring, external cabinet, and any necessary hardware for system operation.
- 2.3. **BBU System Software.** All software associated with operation, programming, and functional requirements of the BBU system.
- 2.4. **Battery Monitoring Device.** The device that monitors battery temperatures and charge rate of the batteries used in the BBU system.
- 2.5. **Batteries.** Standard 12-V batteries wired in series to create 36-V DC – 96-V DC storage.
- 2.6. **Boost.** When enabled, the BBU system inverter/charger should automatically switch into this mode to raise the utility line voltage when it drops below a preset limit. The limit may be user-defined or use manufacturer default settings (typically 100 V AC).
- 2.7. **Buck.** When enabled, the unit should automatically switch into this mode to reduce the utility line voltage when it rises above a preset limit. The limit may be user-defined or use manufacturer default settings (typically 135 V AC).
- 2.8. **External or Stand-Alone Cabinet.** The structure that houses the system components or batteries.

- 2.9. **Inverter/Charger.** The unit that converts the DC voltage input into 120-V AC output for the traffic signal cabinet to operate. At minimum, the inverter/charger should be rated for 1,400 W.
- 2.10. **Inverter Line Voltage.** The power supplied from the BBU system inverter to the traffic signal cabinet.
- 2.11. **Manual Bypass.** Manual switch that allows user to bypass BBU power to service system equipment. The manual bypass switch switches utility line power directly to cabinet.
- 2.12. **Power Transfer Switch.** A unit connected between the utility power supply and the inverter/charger that can automatically switch from utility line power to inverter output power. The power transfer relay may be a separate unit or combined with the manual bypass switch. In case of battery voltage loss, the power transfer switch must automatically return to utility line power.
- 2.13. **Signal Operation Mode.** A signalized intersection generating a 700-W load when running in normal operation.
- 2.14. **Signal Flash Mode.** A signalized intersection generating a 300-W load when running in the flash mode of operation.
- 2.15. **Utility Line Voltage.** The 120-V AC power supplied to the BBU system.

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### 3. EQUIPMENT

Ensure electrical materials and construction methods conform to NEC and additional local utility requirements. Furnish BBU systems prequalified by the Department. The Traffic Operations Division maintains an MPL of prequalified BBU systems. Ensure all materials and construction methods conform to the details shown on the plans, this Specification, and the pertinent requirements of the following Items.

- Item 420, "Concrete Substructures"
- Item 620, "Electrical Conductors"

Provide and install a BBU system that can fulfill the following requirements.

- 3.1. **Method of Operation.** The BBU system should operate using one or more of the following methods.
- 3.1.1. **Buck-and-Boost Method.** When the buck-and-boost functions are enabled, they should set the upper and lower control limit allowable for the utility line voltage.
- If the utility line voltage fluctuates above or below the buck-and-boost values, the BBU system should raise or lower the voltage by approximately 10%–15% of the utility line voltage to bring the voltage back within the upper and lower control limits. Provide a buck-and-boost system with preset manufacturer defaults.
- If the utility line voltage falls above or below the functional capabilities of buck and boost, then the BBU system must transfer power from the utility line voltage to the inverter line voltage.
- 3.1.2. **Standby Method.** The standby method should set upper and lower control limits for the utility line power. If the utility line voltage falls above or below the upper or lower control limits, then the BBU system should transfer power from the utility line voltage to the inverter line voltage.
- 3.1.3. **Continuous Operating Mode, Double Conversion Method.** The continuous method always supplies the cabinet with inverter line voltage. This method requires the disabling of buck-and-boost functions.
- 3.2. **BBU System Capabilities.** The BBU system should be able to provide 1,400-W peak load, with at least 80% inverter efficiency, for at least 10 sec.

The BBU system should be able to provide 700-W signal operation load for at least 4 hr., and then switch to and provide 300-W signal flash load for an additional 2-hr. minimum, when batteries are fully charged.

When the BBU system runs on battery power, the inverter/charger should enable a user to select the voltage at which the transition from normal operating load to flash mode occurs (usually 47.5 V), using relay contacts and connection points on the front panel of the inverter/charger.

The allowed transfer time, from disruption of normal utility line voltage to stabilized inverter line voltage from batteries, should be less than 65 milliseconds. The same allowable transfer time must also apply when switching from inverter line voltage to utility line voltage.

The BBU system should bypass utility line voltage whenever the voltage is outside the manufacturer's default, or a user-programmed voltage range,  $\pm 2$  V AC.

When the utility line power has been restored to a normal operating voltage for more than a user-defined setting (default 30 sec.), the BBU system should transfer from inverter line voltage to utility line voltage. The BBU system should be equipped to prevent malfunction feedback to the cabinet or the utility service.

Provide a BBU system that is compatible with TS1, TS2, and Model 170/2070 controllers and cabinet components for full runtime operation.

Unless the plans indicate otherwise, provide a BBU system in an external battery cabinet. When indicated by the plans, provide a BBU system that can be shelf-mounted in NEMA TS-1 and NEMA TS-2 cabinets, or rack-mounted for Model 170/2070 332 cabinets. Provide a manual bypass that can be shelf-mounted or attached to the side of the signal cabinet. Provide interconnect cables that are no less than 10 ft. long.

Relay contact wiring for each set of NO/NC relay contact closure terminals should be no less than 6 ft. long and #18 AWG wire. Use manufacturer recommendations for size of wire for any cable's lengths greater than 10 ft.

The BBU system should have lightning surge protection compliant with IEEE/ANSI C 62.41 and UL 1449. Provide lightning surge protection to the utility line voltage entering the inverter/charger. The surge protection device should be easily accessible and mounted externally from the inverter/charger.

The BBU system, including batteries and hardware, should be easily replaceable and should not require any special tools for installation.

The BBU system should operate in automatic fail-safe mode. Should a breaker trip the inverter/charger or power transfer switch on, the system must automatically operate from utility line power and bypass the BBU system.

As stated above, in addition to the inverter/charger, provide BBU with an external manual bypass switch and either an external automatic transfer switch or external automatic bypass switch.

The BBU system must be able to log up to 100 events. Events should date- and time-stamp faults with utility line voltage and battery voltages. At a minimum, the BBU system should log an event when:

- the utility line voltage falls above or below the upper or lower control limits,
- the BBU system automatically switches to battery power, or
- self-monitoring BBU system components fail.

3.3. **Displays, Controls, Diagnostics, and Maintenance.** The BBU system should include a front panel display. All applicable programmable functions of the operational methods described in this Specification should be viewable from the front panel display.

All events described in Section 3.2., "System Capabilities," should be viewable from the front panel display.

The BBU system software should be programmable from the front panel of the inverter/charger using a keyboard or momentary buttons, allowing user to step through menu-driven software.

Provide a 10/100 Ethernet port on the front panel of the inverter/charger.

Provide a RS232 port on the front panel of the inverter/charger.

Include software for the BBU system's operational needs. The user/operator should be able to access the system software via the Ethernet and RS232 ports on the front panel of the inverter/charger. The user should be able to read logged events and change programmable parameters from the keyboard, laptop, or local area network by the Ethernet port.

System software must be upgradeable by the RS232 port on the front panel of the inverter/charger.

- 3.4. **Inverter/Charger.** The inverter/charger is the unit that provides voltage regulation, conditioning of utility line power, DC voltage input conversion into 120-V AC output for the traffic signal cabinet to operate, emergency backup power upon loss of utility power, and temperature-compensated battery charging. At a minimum, the inverter/charger should be rated for 1,400 W. Provide at least six sets of Normally Open (NO) and Normally Closed (NC) single-pole double-throw dry contact relay closures on the front face of the inverter/charger, labeled to identify each contact. The relay closures should consist of NO/NC contact closures energized whenever the unit switches to battery power (label or mark contacts as "on battery" or equivalent), and a second set of NO/NC contact closures should be energized whenever the battery approaches 40% remaining capacity (label or mark contact as "low battery" or equivalent), which must determine when the unit will switch from normal operation to flash. A third set of NO/NC contact closures should be energized after a user-settable time after the unit switches to battery power. The contact may be labeled "timer." The remaining relays should be user-definable.

Operating temperature range for the inverter/charger and power transfer relay should be -34°F--74°F. When battery power is used, the BBU system output voltage must be between 110 V AC and 125 V AC, pure sine wave output, ≤3% THD, 60 Hz ±3 Hz.

- 3.5. **Manual Bypass Switch.** The manual bypass switch should be provided as a separate unit external to the inverter/charger unit. The manual bypass switch must consist of housing, two-position switch, terminal blocks, internal wiring, service outlet, circuit breakers, and mounting hardware. The components should be rated at least 240 V AC/30 A. Provide the manual bypass switch with No. 8 terminal blocks. The manual bypass switch should be two-position and allow the user to switch utility line power directly to the cabinet service panel. The switch positions must provide the following functions.
- In the "Bypass" position, the inverter is bypassed, and utility power is removed from the BBU and passed directly to the signal power panel.
  - In the "UPS" position, the inverter/switch is powered, and the signal circuits are supplied by the output of the inverter.

When the manual bypass switch is in the "Bypass" position, the user may replace the automatic bypass switch (or transfer switch) and the inverter/charger without interrupting power to the intersection. Provide the manual bypass switch with overcurrent protection (20-A circuit breaker).

- 3.6. **Power Transfer Switch.** These requirements are for BBU systems provided with a power transfer switch. The power transfer switch must operate such that the inverter/charger input and cabinet power panel are supplied with power from the utility line. If the utility line power is lost or requires conditioning (buck or boost), the power transfer switch must automatically connect the inverter/charger output to the cabinet power panel such that the inverter/charger output provides the power. In case of inverter/charger failure, battery failure, or complete battery discharge, the power transfer should revert to the NC (de-energized) state, where utility line power is connected to the cabinet service panel.

Size the wire going to the power transfer switch from the manual bypass switch, to and from the inverter/charger, and from the manual bypass switch to utility power service according to the system requirements.

- 3.7. **Automatic Bypass Switch.** These requirements are for BBU systems provided with an automatic bypass switch. The automatic bypass switch must operate such that the inverter/charger input is supplied with power from the utility line and the cabinet power panel is supplied with power from the output of the inverter/charger. In case of inverter/charger failure, battery failure, or complete battery discharge, or other loss of power from the output of the inverter/charger, the automatic bypass switch should revert to the NC (de-energized) state, where utility line power is connected to the cabinet service panel.

- 3.8. **Batteries.** Provide batteries from the same manufacturer and vendor as the BBU system.

Individual batteries should be 12-V type, easily replaceable, and available for purchase, or common off-the-shelf equivalent.

Select batteries sized and rated to operate a 700-W load for 4 hr. (normal operation) followed by a 300-W load for 2 hr. (flash operation), for a total of 6 hr.

Battery configuration should consist of 12-V batteries arranged for total voltages of 36, 48, 60, 72, 84, or 96.

Batteries should be deep-discharge, sealed prismatic lead-calcium based, valve-regulated, and maintenance-free.

Batteries should operate over a temperature range of -34°F—+74°F.

Batteries should indicate maximum recharge data and recharging cycles, and manufacturer defaults on the inverter/charger should not allow the recharging process to exceed the batteries' maximum values.

Connect the battery interconnect wiring to the inverter unit using a modular harness with red and black cabling that terminates into a typical power-pole style connector. Equip the harness with mating power flag-style connectors for batteries and a single insulated plug-in style connection to inverter/charger unit. Harness should allow batteries to be quickly and easily connected in any order, and keyed to ensure proper polarity and circuit configuration. Size the fusible link or device accordingly with BBU system requirements. To protect against currents exceeding each battery current rating, provide links within 3 in. of the negative and positive leads of each battery. Provide fusible links made of insulated stranded wire.

Provide insulated covers at the connection points (posts) to prevent accidental shorting.

Provide battery cables to connect battery to battery harness main cable at least 18 in., or long enough to accommodate the battery covers provided with the battery ground box, whichever is longer. Size the battery harness accordingly with BBU system requirements.

- 3.9. **Battery Monitoring System.** The BBU system should use a temperature-compensated battery charging system. The charging system should compensate over 2.5 mV/°C–4.0 mV/°C per cell.

Use a temperature sensor to monitor the temperature and regulate the charge rate of the batteries. Unless required otherwise by the plans, provide a temperature sensor wire as follows.

- 8 ft. long if external side-mounted cabinet is attached to existing controller cabinet
- 8 ft. long if batteries are housed in traffic signal base used for cabinet foundation and are stored on shelf within base
- 8 ft. long if a stand-alone cabinet is used

Should the temperature sensor fail, the inverter/charger should not allow the BBU system to overcharge the batteries. The BBU system should provide an alarm should the temperature sensor fail.

Recharge time for the batteries to obtain 80% or more of full battery charge capacity should not exceed 20 hr. at 70°F.

Batteries should not be allowed to charge when the battery temperature exceeds 50°F.

The BBU system should monitor battery strings within a system and set a fault indicator if the battery voltage falls below normal operating voltage.

- 3.10. **Battery Housing.** Unless plans require otherwise, provide an external battery cabinet or stand-alone BBU and battery cabinet as specified below.

- 3.10.1. **External Battery Cabinet.** The external cabinet should be NEMA Type 3R all-aluminum with stainless steel hardware, or approved equivalent. Design the external cabinet to attach on the side of a TS2 Size 6 base-mount cabinet. Mount the batteries, inverter, transfer switches, manual bypass, and associated hardware in the external cabinet.

Equip the external cabinet with proper ventilation, electric fan, and air filter in accordance with NEMA TS2.

Equip external cabinets with a door opening to the entire cabinet. Attach the door to the cabinet with a full-length stainless steel piano hinge or four two-bolts-per-leaf hinges. Provide a door with the same latch and lock mechanism as required for a standard traffic signal cabinet. In addition, provide a padlock clasp.

When using battery ground boxes, an external cabinet is required for the non-battery components.

- 3.10.2. **Stand-Alone BBU and Battery Cabinet.** When required for installation by the plans, provide a stand-alone cabinet conforming to the specifications of the external BBU and battery cabinet, except that it must not mount to the controller cabinet. Design the stand-alone cabinet to attach to a concrete pad.

- 3.11. **Concrete Pad.** Provide a Class B concrete pad as a foundation for stand-alone cabinets. For external cabinets, extend the controller foundation to provide a Class B concrete pad under the external cabinet.

- 3.12. **Documentation.** Provide operation and maintenance manuals. The operation manual should include a block diagram schematic of system hardware components. The manual should include instructions for programming and viewing software features. The manual should also include uploading and downloading (communications protocol) requirements by RS232 or Ethernet port.

Provide board-level schematics when requested.

Provide battery documentation and replacement information.

- 3.13. **Testing.** The Department reserves the right to test BBU systems to ensure quality assurance on unit before installation and random sampling of units being provided to the State. BBU systems that fail must be removed from the Qualified Products List (QPL).

Department QPL testing procedures must check compliance with the criteria of this Specification, including the following.

- Event logging for fault and alarm conditions
- Demonstrated use of one or more of the operating methods described in Section 3.1., "Method of Operation"
- Testing of ability to power a 700-W load for 4 hr., transfer to flash mode, and power a 300-W load for additional 2 hr., at an ambient temperature of +75°F
- Testing of all components in environmental chamber (temperature ranges from -30°F to +74°F) following NEMA TS2 2003, Section 2.

- 3.14. **Warranty, Maintenance, and Support.** Provide a BBU with a warranty that requires the manufacturer to replace failed BBUs when non-operable due to defect in material or workmanship within 5 yr. of date of purchase from manufacturer. Supply a BBU with no less than 95% of the manufacturer's warranty remaining on the date when the BBU is installed and begins operating. The replacement BBU must meet this Specification. The Contractor must manage any warranty issues until the date of final acceptance.



Batteries should be warranted for full replacement for 5 yr. Batteries must be defined as bad if they are not able to deliver 80% of battery rating.

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**4. MEASUREMENT**

This Item will be measured by each BBU system installed.

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**5. PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "BBU System" of the type of BBU cabinet specified. This price is full compensation for furnishing, installing, and testing the completed BBU system and associated equipment; mounting hardware; Class B concrete pad; software; conduit; conductors; and equipment, labor, tools, and incidentals.

# Special Specification 6010

## Intelligent Transportation System (ITS) Radar Vehicle Sensing Device



### 1. DESCRIPTION

Furnish, install, relocate, or remove Intelligent Transportation System (ITS) radar vehicle sensing device (RVSD) system at locations shown on the plans, or as directed.

### 2. MATERIALS

- 2.1. **General.** Except as allowed for relocation of RVSD equipment, ensure all equipment and component parts are new and in an operable condition at time of delivery and installation. Ensure all RVSD within the project are from the same manufacturer. RVSD are further classified by the type of functions they can perform. The primary classifications are RVSD (data collection only) and RVSD (data collection and wrong-way alarm).

Provide RVSD field equipment that is compatible with existing infrastructure and software located in the Department's Traffic Management Centers (TMCs) across the state or as directed.

RVSD system equipment must include the following:

- radar vehicle sensing devices,
- mounting assembly and hardware,
- all cabling and connector assemblies, and
- associated devices required to integrate into communication system.

RVSD must be a roadside sensor, or group of sensors, that accurately provides volume, speed, occupancy, and classification data for the roadway segment where they are installed.

Ensure sensor is designed and constructed with subassemblies, circuits, cards, and modules to maximize standardization and commonality. Ensure all external parts and surfaces are designed to protect against corrosion, fungus, and moisture deterioration.

Design the equipment for ease of maintenance. Provide component parts that are readily accessible for inspection and maintenance. Provide test points for checking essential voltages and waveforms.

RVSD must self-recover from power failure once power is restored.

Sensor must be provided with a mounting bracket designed to mount directly to a pole, mast-arm, or other structure. Ensure bracket is designed such that the sensor can be tilted both vertically and horizontally for alignment and then locked into place after proper alignment is achieved. All hardware must be designed to support the load of the RVSD sensor and mounting bracket.

- 2.2. **Configuration.** Each RVSD system consists of roadside sensors as shown on the plans. Ensure the RVSD system detects a minimum of eight lanes. Ensure lane width, medians, and geometry are configurable. Traffic barriers must not interfere with detection.

Ensure RVSD does not require tuning or recalibration to maintain performance once initial calibration and configuration is complete. RVSD must not require cleaning or adjustment to maintain performance.

Ensure RVSD can detect vehicles within a range of 10 to 200 ft. from the sensor and can simultaneously detect vehicles in all lanes within the detection range of the radar.

- 2.3. **Automatic Detection.** Once installed and aligned, ensure the sensor automatically detects vehicle volume, speed, and occupancy. Ensure only minor operator input is required for setup, such as verification of lane configuration and distance from sensor. Ensure the sensor tunes out stationary objects to omit false readings.

- 2.4. **Data Collection.** The RVSD must automatically calibrate vehicle speed, detection level, and sensitivity. Ensure RVSD provides accurate, real-time volume, average speed, and occupancy for each lane detected.

RVSD must provide user configurable settings for collection and polling intervals. Interval configurations must include options ranging from 20 sec. to 15 min. or more.

RVSD must be able to correctly categorize detected vehicles into a minimum of three user definable length-based classification bins.

Ensure RVSD sensor performance is not affected by environmental conditions such as shadows, glare, wind, rain, heat, or snow. Ensure speed detection is accurate without requiring vehicle length for calculations.

Ensure RVSD system includes remote connection capabilities allowing an operator to update configuration and firmware as well as download interval data. In the event of communication loss, ensure RVSD stores and transfers data upon communication restoration and subsequent request for data.

Ensure RVSD sensor provides non-volatile memory for configuration settings and for local storage. The sensor must store a minimum of 3 hr. of data for all data collected over eight travel lanes at 20-sec. intervals. Ensure local storage data is overwritten in a first-in, first-out manner.

Ensure RVSD supports the Department's Transportation Sensor System Protocol Document (TSS-protocol) as detailed in the *TSS Tools* link on the Department's website (<http://www.txdot.gov/business/resources/engineering-software.html>).

- 2.5. **Accuracy.** Ensure RVSD accuracy meets or exceeds the following requirements during nominal conditions:

- Sensor volume data accuracy is within 5% of actual per direction of travel.
- Sensor average speed data is accurate within 5 mph per direction of travel.
- Individual lane speed accuracy is within 10 mph of actual.
- Individual vehicle speed accuracy is within 5 mph for 90% of measurements.
- Vehicle classification data is accurate for 90% of detected vehicles.

- 2.6. **Functional Requirements for RVSD with Wrong-way Alarms.** RVSD with wrong-way alarms must be capable of detecting and reporting direction of travel for each vehicle detected as well as include all features and functions required for Data Collection RVSD.

The RVSD sensor must automatically determine if a vehicle is traveling in the opposite direction for which the lane is configured.

Ensure the RVSD can detect real-time vehicle direction of travel.

- 2.7. **Cabling.** Supply the RVSD with all cabling of the appropriate length for each installation site.

- 2.8. **Communication.** RVSD must be remote accessible and provide communication options including RS-232, RS-485, and TCP/IP.

RVSD communication through RS-232 or RS-485 must include an internal RS-232, RS-485 communication port. Each serial communication port must support the following baud rates: 9600, 19200, 38400, 57600, and

115200. Additionally, the RS-232 port must be full-duplex and must support true request to send (RTS) and clear to send (CTS) hardware handshaking for interfacing to various communication devices.

RVSD system must produce interval data packets containing all available criteria as detailed in TSS-protocol.

- 2.9. **Software.** Ensure the RVSD manufacturer includes all software required to configure and monitor operation of RVSD field equipment locally and remotely. RVSD software must be a stable production release.

Software must allow the user to configure, operate, exercise, diagnose, and read current status of all RVSD features and functions using a laptop computer.

RVSD system computer software must be able to communicate with RVSD field devices using TCP/IP and serial connections, including cellular modem connections. The software must provide for local and remote configuration and monitoring, including a graphical user interface (GUI) that displays all configured lanes and provides visual representation of all detected vehicles.

System software must provide the user complete control over the configuration and setup process for RVSD devices and allow the user to load new firmware into non-volatile memory of RVSD field devices locally and over any supported communication channel including TCP/IP networks.

Software must include the ability to save a local copy of RVSD field device configurations and load saved configurations to RVSD field devices.

Ensure the software allows the operator to change the baud rate via a drop-down list, add response delays for the communication ports to allow for communication stabilization, switch between data pushing and data polling, and change the RVSD's settings for Flow Control between none and RTS/CTS. Ensure the software automatically selects the correct baud rate and serial communication port from up to 15 serial communication ports.

The software must include the ability to retrieve and store data collected by RVSD field devices.

Ensure all licenses required for operation and use of software are included at no additional cost.

Software updates must be provided at no additional cost during the warranty period.

- 2.10. **Mechanical.** Ensure that all parts are fabricated from corrosion resistant materials, such as plastic, stainless steel, aluminum, or brass.

Ensure that all screws, nuts, and locking washers are stainless steel. Do not use self-tapping screws.

Ensure equipment is clearly and permanently marked with manufacturer name or trademark and part number as well as date of manufacture or serial number.

Ensure RVSD system is modular in design for ease of field replacement and maintenance. Ensure cable connector design prohibits improper connections. Cable connector pins are plated to improve conductivity and resist corrosion. RVSD sensor dimensions must not exceed 14 in. by 11 in. by 7 in.

Ensure the RVSD housing is a weather resistant, ultraviolet (UV) resistant material. RVSD sensor must meet NEMA 250 4X requirements. Ensure all gasket and sealant materials are UV resistant and intended to be used in outdoor environment with exposure to the sun.

All printed circuit boards (PCB) must have conformal coating.

- 2.11. **Electrical.** Ensure the RVSD system operates on nominal 120 V<sub>AC</sub>. Provide a transformer with any system device that requires a nominal operating voltage other than 120 V<sub>AC</sub>. Ensure RVSD sensor operates between

12 V<sub>DC</sub> and 28 V<sub>DC</sub> utilizing 10 W or less. Ensure equipment is designed to protect personnel from exposure to high voltage during installation, operation, and maintenance.

- 2.12. **Environmental.** All RVSD system components must operate properly during and after being subjected to the environmental testing procedures described in NEMA TS2, Section 2. RVSD sensor must be able to withstand the maximum wind load defined in the Department's basic wind velocity zone map standard without any damage or loosening from structure.

- 2.13. **Connectors and Harnesses.** External connections exposed to the outdoor environment must be made with weatherproof connectors. Connectors must be keyed to ensure correct alignment and mating.

Ensure all conductors are properly color coded and identified. Ensure that every conductive contact surface or pin is gold-plated or made of a noncorrosive, nonrusting, conductive metal.

Ensure power and data cable connectors exposed to the elements are IP 67 compliant. Ensure all conductors that interface with the connector are encased in one jacket.

RS-485 and RS-232 communication cables must:

- be shielded, twisted pair cable with a drain wire;
- have a nominal capacitance conductor to conductor @ 1Khz  $\geq$  26pF/ ft.;
- have nominal conductor DC resistance @ 68°F  $\leq$  15 ohms/1000 ft.;
- be one continuous run with no splices; and
- be terminated only on the two farthest ends of the cable.

- 2.14. **Documentation.** Provide hardcopy operation and maintenance manuals, along with a copy of all product documentation on electronic media. Include the following documentation for all system devices and software:

- operator manuals,
- installation manuals with installation procedures,
- maintenance and troubleshooting procedures, and
- manufacturer's specifications (functional, electrical, mechanical, and environmental).

Provide certification from an independent laboratory demonstrating compliance with NEMA TS2 environmental requirements for temperature, humidity, transients, vibration, and shock.

RVSD system must transmit in the 10.50–10.55 GHz or 24.00–24.25 GHz frequency band and meets the power transmission and frequency requirements of CFR 47. Ensure FCC certification is displayed on each device according to FCC rules. Provide third party test results for CFR 47, Part 15 (Section 15.245 or 15.249).

The RVSD enclosure must be in accordance with criteria set forth in the NEMA 250 Standard for Type 4X enclosures. Provide third party enclosure test results demonstrating the sensor enclosure meets Type 4X criteria.

Ensure the RVSD system manufacturer has a quality assurance program for manufacturing RVSD as described in this Specification. Manufacturer of the RVSD must be ISO 9001 certified or provide a copy of the company quality manual for review.

The RVSD must pass testing to ensure functionality and reliability before delivery. These include functional tests for internal subassemblies, a 24-hr. minimum unit level burn-in test, and a unit functionality test. Test results and supporting documentation, including serial number tested, must be submitted for each RVSD. If requested, manufacturing data per serial number must be provided for each RVSD.

- 2.15. **Warranty.** Warrant the equipment against defects or failure in design, materials, and workmanship for a minimum of 5 yr. or in conformance with the manufacturer's standard warranty if that warranty period is greater. The start date of the manufacturer's standard warranty will begin after the equipment has

successfully passed all tests contained in the final acceptance test plan. Any equipment with less than 90% of its warranty remaining after the final acceptance test is completed will not be accepted by the Department. guarantee that equipment furnished and installed for this project performs according to the manufacturer's published specifications. Assign, to the Department, all manufacturer's normal warranties or guarantees on all electronic, electrical, and mechanical equipment, materials, technical data, and products furnished for and installed on the project.

Malfunctioning equipment must be repaired or replaced at the Contractor's expense before completion of the final acceptance test plan. Furnish replacement parts for all equipment within 10 days of notification of failure by the Department.

During the warranty period, technical support must be available via telephone within 4 hr. of the time a call is made by a user, and this support must be available from factory certified personnel.

- 2.16. **Training.** Conduct a training class for a minimum of 8 hr., unless otherwise directed, for up to ten representatives designated by the Department on installation, configuration, operation, testing, maintenance, troubleshooting, and repair. Submit a training session agenda, a complete set of training material, the names and qualifications of proposed instructors, and proposed training location for approval at least 30 days before the training. Conduct training within the local area unless otherwise directed. Provide one copy of course material for each attendee. Ensure that training includes:
- "hands-on" operation of system software and equipment;
  - explanation of all system commands, their function and usage; and
  - system "troubleshooting," operation, and maintenance.

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### 3. CONSTRUCTION

- 3.1. **System Installation.** Install RVSD system devices according to the manufacturer's recommendations to achieve the specified accuracy and reliability. Completion of the work must present a neat, workmanlike, and finished appearance.

If the RVSD is to be mounted near large planar surfaces (sound barrier, building, parked vehicles, etc.), verify the final placement meets manufacturer recommendations for installation and clearance.

Ensure installation and configuration of software on Department computers is included with the RVSD system.

- 3.2. **Mechanical Components.** Ensure that all fasteners, including bolts, nuts, and washers with a diameter less than 5/8 in. are Type 316 or 304 stainless steel and meet the requirements of ASTM F593 and ASTM F594 for corrosion resistance. Ensure that all bolts and nuts 5/8 in. and over in diameter are galvanized and meet the requirements of ASTM A307. Separate dissimilar metals with an inert dielectric material.

- 3.3. **Wiring.** All wiring and electrical work supplying the equipment must meet the requirements of the most current version of the National Electrical Code (NEC). Supply and install all wiring necessary to interconnect RVSD sensors to the field cabinet and accessories necessary to complete the work. If additional cables are required, the Contractor must furnish and install them at no additional cost to the Department. Provide conductors at least the minimum size indicated on the plans and insulated for 600 V.

Cables must be cut to proper length before assembly. Provide cable slack for ease of removal and replacement. All cable slack must be neatly laced with lacing or straps in the bottom of the cabinet. Ensure cables are secured with clamps and include service loops.

- 3.4. **Electrical Service.** The Contractor is responsible for checking the local electrical service to determine if a modification is needed for the equipment.

- 3.5. **Grounding.** Ensure all RVSD system devices, cabinets, and supports are grounded in conformance with the NEC and manufacturer recommendations.

- 3.6. **Relocation of RVSD Field Equipment.** Perform the relocation in strict conformance with the requirements herein and as shown on the plans. Completion of the work must present a neat, workmanlike, and finished appearance. Maintain safe construction practices during relocation.

Inspect the existing RVSD field equipment with a representative from the Department and document any evidence of damage before removal. Conduct testing in accordance with Section 4.9, "Relocation and Removal." Remove and deliver equipment that fails inspection to the Department.

Before removal of existing RVSD field equipment, disconnect and isolate the power cables from the electric power supply and disconnect all communication cabling from the equipment located inside the cabinet. Coil and store power and communication cabling inside the cabinet until it can be relocated. Remove existing RVSD field equipment as shown on the plans only at such time as authorized.

Use care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved) at no cost to the Department.

Make all arrangements for connection to power and communications including any permits required for the work to be done under the Contract. Provide wire for the power connection at least the minimum size indicated on the plans and insulated for 600 V.

- 3.7. **Removal of RVSD Field Equipment.** Perform the removal in strict conformance with the requirements herein and as shown on the plans. Completion of the work must present a neat, workmanlike, and finished appearance. Maintain safe construction practices during removal.

Inspect the existing RVSD field equipment with a representative from the Department and document any evidence of damage before removal. Conduct testing in accordance with Section 4.9, "Relocation and Removal."

Disconnect and isolate any existing electrical power supply before removal of existing field equipment.

Use care to prevent damage to any support structures. Any equipment or structure damaged or lost must be replaced by the Contractor (with items approved) at no cost to the Department.

All materials not designated for reuse or retention by the Department will become the property of the Contractor and be removed from the project site at the Contractor's expense. Deliver items to be retained by the Department to a location shown on the plans or General Notes. The Contractor is fully responsible for any removed equipment until released.

- 3.8. **Contractor Experience Requirements.** Contractor or designated subcontractor must meet the following experience requirements:

- 3.8.1. **Minimum Experience.** Three years of continuous existence offering services in the installation of RVSD systems. Experience must include freeway and arterial management, forward fire and side fire applications, single zone and dual beam detection, and equipment setup, testing, and troubleshooting.

- 3.8.2. **Completed Projects.** Three completed projects where personnel installed, tested, and integrated RVSD field equipment. The completed installations must have been in continuous satisfactory operation for a minimum of 1 yr.

- 3.8.3. **Equipment Experience.** One project (may be one of the three projects in the preceding paragraph) in which the personnel worked in cooperation with technical representatives of the equipment supplier to perform installation, integration, or acceptance testing of the work. The Contractor will not be required to furnish equipment on this project from the same supplier who was referenced in the qualification documentation.

Submit the names, addresses, and telephone numbers of the references that can be contacted to verify the experience requirements given above.

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## 4. TESTING

Ensure that the following tests are performed on equipment and systems unless otherwise shown on the plans. The Department may witness all the tests.

- 4.1. **Test Procedures Documentation.** Provide an electronic copy of the test procedures and blank data forms 60 days before testing for each test required on this project. Include the sequence of the tests in the procedures. The Engineer must approve test procedures before submission of equipment for tests. Conduct all tests in accordance with the approved test procedures.

Record test data on the data forms, as well as quantitative results. Ensure the data forms are signed by an authorized representative (company official) of the equipment manufacturer.

- 4.2. **Design Approval Test.** Ensure that the RVSD has successfully completed a design approval test that confirms compliance with the environmental requirements of this Specification.

Provide a certification and test report from an independent testing laboratory as evidence of a successfully completed design approval test. Ensure that the testing by this laboratory is performed in accordance with the requirements of this Specification.

- 4.3. **Demonstration Test.** Conduct a demonstration test on applicable equipment at an approved Contractor facility. Notify the Engineer 10 working days before conducting this testing. Perform the following tests:

- 4.3.1. **Examination of Product.** Examine each unit carefully to verify that the materials, design, construction, markings, and workmanship comply with the requirements of this Specification.

- 4.3.2. **Continuity Tests.** Check the wiring to determine conformance with the requirements of this Specification.

- 4.3.3. **Operational Test.** Operate each unit for at least 15 min. to permit equipment temperature stabilization and observation of a sufficient number of performance characteristics to ensure compliance with this specification.

- 4.4. **Stand-Alone Test.** Conduct a Stand-Alone Test for each unit after installation. The test must exercise all stand-alone (non-network) functional operations. Notify the Engineer 5 working days before conducting this test.

- 4.4.1. **Performance Test.** Ensure the RVSD meets functional performance requirements of Section 2.5., "Accuracy," by using the following test methods:

Verify volume and classification accuracy by performing a manual count on each lane of detection. Volume and classification data reported by the sensor must meet the volume and classification data accuracy requirements in Section 2.5., "Accuracy," when compared with data collected manually.

Verify speed accuracy by comparing sensor speed data to speeds data collected with a laser speed gun, radar speed gun, or by video speed trap using frame rate as a time reference. Vehicle speeds must be collected and averaged over a minimum of ten vehicles. Speed data must meet the speed data accuracy requirements in Section 2.5., "Accuracy," when compared to average speeds collected using laser, radar, or video.

Verify wrong-way detection accuracy by reversing the configured direction of travel for at least one travel lane. Verify vehicles detected in a reversed lane are classified as wrong-way vehicles and properly counted. Volume reported for vehicles classified as wrong-way must meet the volume data accuracy requirement in Section 2.5., "Accuracy."



4.5. **System Integration Test.** Conduct a system integration test on the complete functional system. Demonstrate all control and monitor functions for each system component for 72 hr. Supply two copies of the system operations manual before the system integration test. Notify the Engineer ten working days before conducting this testing.

4.6. **Consequences of Test Failure.** If a unit fails a test, submit a report describing the nature of the failure and the actions taken to remedy the situation before modification or replacement of the unit. If a unit requires modification, correct the fault and then repeat the test until successfully completed. Correct minor discrepancies within 30 days of written notice to the Engineer. If a unit requires replacement, provide a new unit and then repeat the test until successfully completed. Major discrepancies that will substantially delay receipt and acceptance of the unit will be enough cause for rejection of the unit.

If a failure pattern develops in similar units within the system, implement corrective measures, including modification or replacement of units, to all similar units within the system as directed. Perform the corrective measures without additional cost or extension of the Contract period.

4.7. **Final Acceptance Test.** Conduct a final acceptance test on the complete functional system. Demonstrate all control, monitoring, and communication requirements and operate the system for 90 days. The Engineer will furnish a letter of approval stating the first day of the final acceptance test. The completion of the final acceptance test occurs when system downtime due to mechanical, electrical, or other malfunctions to equipment furnished or installed does not exceed 72 hr. and any individual points of failure identified during the test period have operated free of defects.

4.8. **Consequences of Final Acceptance Test Failure.** If a defect within the system is detected during the final acceptance test, document and correct the source of failure. Once corrective measures are taken, monitor the point of failure until a consecutive 30-day period free of defects is achieved.

If after completion of the initial test period, the system downtime exceeds 72 hr. or individual points of failure have not operated for 30 consecutive days free of defects, extend the test period by an amount of time equal to the greater of the downtime in excess of 72 hr. or the number of days required to complete the performance requirement of the individual point of failure.

4.9. **Relocation and Removal.**

4.9.1. **Pre-Test.** Tests may include, but are not limited to, physical inspection of the unit and cable assemblies. Include the sequence of the tests in the procedures along with acceptance thresholds. Contractor to resubmit, if necessary, rejected test procedures for final approval within ten days. Review time is calendar days. Conduct all tests in conformance with the approved test procedures.

Conduct basic functionality testing before removal of RVSD field equipment. Test all functional operations of the equipment in the presence of representatives of the Contractor and the Department. Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment becomes the responsibility of the Contractor until accepted by the Department. Compare test data before removal and after installation. The performance test results after relocation must be equal to or better than the test results before removal. Repair or replace those components within the system that failed after relocation but passed before removal.

4.9.2. **Post-Test.** Testing of the RVSD field equipment is to relieve the Contractor of system maintenance. The Contractor will be relieved of the responsibility for system maintenance in accordance with Item 7, "Legal Relations and Responsibilities," after a successful test period. The Contractor will not be required to pay for electrical energy consumed by the system.

After all existing RVSD field equipment has been installed, conduct approved continuity, stand alone, and performance tests. Furnish test data forms containing the sequence of tests including all the data taken as well as quantitative results for all tests. Submit the test data forms to the Engineer at least 30 days before the day the tests are to begin. Obtain Engineer's approval of test procedures before submission of equipment for tests. Send at least one copy of the data forms to the Engineer.

Conduct an approved stand-alone test of the equipment installation at the field sites. At a minimum, exercise all stand-alone (non-network) functional operations of the field equipment installed per the plans as directed. Complete the approved data forms with test results and turn over to the Engineer for review and either acceptance or rejection of equipment. Give at least 30 working day's notice before all tests to permit the Engineer or his representative to observe each test.

The Department will conduct approved RVSD field equipment system tests on the field equipment with the central equipment. The tests will, as a minimum, exercise remote control functions and confirm communication with field equipment.

If any unit fails to pass a test, prepare and deliver a report to the Engineer. Describe the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test until the unit passes successfully, at no additional cost to the Department or extension of the Contract period.

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## 5. MEASUREMENT

RVSD for data collection only will be measured by each unit furnished and installed, installed, relocated, or removed. RVSD for data collection and wrong-way alarm will be measured by each system furnished and installed, installed, relocated or removed.

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## 6. PAYMENT

- 6.1. **Furnish and Install.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price for "ITS RVSD (Data Collection Only) System" and "ITS RVSD (Data Collection and Wrong-way alarm) System." This price is full compensation for furnishing, installing, configuring, integrating, and testing the completed installation including RVSD equipment, voltage converters or injectors, cables, connectors, associated equipment, and mounting hardware; and for all labor, tools, equipment, any required equipment modifications for electrical service, documentation, testing, training, software, warranty, and incidentals necessary to complete the work.
- 6.2. **Install Only.** The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "ITS RVSD (Data Collection Only) (Install Only)" and "ITS RVSD (Data Collection and Wrong-way alarm) (Install Only)." This price is full compensation for installing, configuring, integrating, and testing the completed installation including RVSD equipment, voltage converters or injectors, cables, connectors, associated equipment, and mounting hardware; and for all labor, tools, equipment, any required equipment modifications for electrical service, documentation, testing, training, software, and incidentals necessary to complete the work.
- 6.3. **Relocate.** The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "ITS RVSD (Data Collection Only) (Relocate)" and "ITS RVSD (Data Collection and Wrong-way alarm) (Relocate)." This price is full compensation for relocating and making fully operational existing RVSD field equipment; furnishing and installing additional cables or connectors; for testing, delivery and storage of components designated for salvage or reuse; and all testing, training, software, equipment, any required equipment modifications for electrical service, labor, materials, tools, and incidentals necessary to complete the work.
- 6.4. **Remove.** The work performed and materials furnished in accordance with this Item will be paid for at the unit bid price for "ITS RVSD (Data Collection Only) (Remove)" and "ITS RVSD (Data Collection and Wrong-way alarm) (Remove)." This price is full compensation for removing existing RVSD equipment; removal of cables and connectors; for testing, delivery and storage of components designated for salvage; and all testing, training, software, equipment, labor, materials, tools, and incidentals necessary to complete the work.

# Special Specification 6011

## Intelligent Transportation System (ITS) Pole with Cabinet



### 1. DESCRIPTION

Furnish, install, relocate, or remove Intelligent Transportation System (ITS) pole structures and pole mounted cabinets of the various types and sizes at locations shown on the plans, or as directed.

1.1. **ITS Equipment Application.** At a minimum, the ITS pole structure serves as the structural support for the following ITS equipment applications:

- closed circuit television (CCTV),
- fixed video,
- microwave vehicle detector (MVD) or radar vehicle sensing device (RVSD),
- bluetooth equipment,
- wireless radio equipment,
- environmental sensor station (ESS),
- solar power system, and
- pole mounted cabinets.

Ensure the equipment, design, and construction use the latest available techniques with a minimum number of different parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality.

Design the equipment for ease of maintenance. All component parts must be readily accessible for inspection and maintenance. The only tools and test instruments required for maintenance by maintenance personnel must be simple hand-held tools, basic meters, and oscilloscopes.

### 2. MATERIALS

Provide materials that are in accordance with the details shown on the plans or as directed, the requirements of this Item, and the pertinent requirements of the following Items:

- Item 416, "Drilled Shaft Foundations"
- Item 421, "Hydraulic Cement Concrete"
- Item 440, "Reinforcement for Concrete"
- Item 441, "Steel Structures"
- Item 442, "Metal for Structures"
- Item 445, "Galvanizing"
- Item 449, "Anchor Bolts"
- Item 496, "Removing Structures"
- Item 618, "Conduit"
- Item 620, "Electrical Conductors"
- Item 740, "Graffiti Removal and Anti-Graffiti Coating."

2.1. **Anchor Bolts.** Provide anchor bolts, nuts, and washers that are in accordance with the details shown on the plans, the requirements of this Item, and Item 449, "Anchor Bolts."

Furnish “medium strength, mild steel” anchor bolts for anchor bolts 1 in. or less in diameter, unless otherwise shown on the plans. Furnish “alloy steel” anchor bolts for anchor bolts greater than 1 in. diameter, unless otherwise shown on the plans.

- 2.2. **ITS Poles.** Provide material for pole shafts that is in accordance with the requirements on the plans and the requirements of ASTM A1011 SS Grade 50, A572 Grade 50, A1011 HSLAS Grade 50, or A595 Grade A. Material thicknesses in excess of those stipulated under A1011 will be acceptable, providing it meets all other ASTM A1011 requirements and the requirements of this Specification. A595 Grade A material must have a minimum of 50 ksi yield strength adjacent to base welds after fabrication.

Fabrication plants that produce steel ITS poles must be approved in accordance with [DMS-7380](#), “Steel Non-Bridge Member Fabrication Plant Qualification.” The Department maintains an MPL of approved ITS pole fabrication plants.

- 2.3. **ITS Pole Mounted Cabinet.** Provide ITS pole mounted cabinets to house ITS field equipment as shown on the plans or as directed. ITS equipment applications inside the cabinet may include, but is not limited to:

- CCTV field equipment,
- fixed video,
- radar vehicle sensing device (RVSD),
- dynamic message sign (DMS) or lane control signal (LCS) controller,
- bluetooth equipment,
- highway advisory radio (HAR),
- media conversion equipment,
- hardened ethernet switch,
- wireless radio equipment,
- environmental sensor station (ESS),
- roadway weather information system (RWIS), and
- solar power system.

Provide the cabinet with fully wired back panels, with all the necessary terminal boards, wiring, harnesses, connectors, and attachment hardware for each cabinet location. Place all terminals and panel facilities on the lower portion of the cabinet walls below all shelves.

Typically, an ITS pole mounted cabinet may contain, but is not limited to, the following:

- 19-in. EIA rack,
- adjustable shelves,
- fan and thermostat,
- cabinet light,
- back panel,
- surge protection,
- terminal strips,
- interconnect harnesses with connectors,
- “Door Open” connection to back panel,
- ITS equipment hardware (as listed in Section 2.3.), and
- all necessary installation and mounting hardware.

Ensure all cabinets are identical in size, shape, and quality for each type as provisioned on the plans or as directed. Equip and configure the cabinet setup as defined in this Specification and as detailed in the ITS pole with cabinet standards.

Submit details of the cabinet design and equipment layout for each cabinet to the Engineer for review and approval before fabrication.

## 2.4. Electrical Requirements.

2.4.1. **Primary Input Power Interruption.** Use material that meets all the requirements in Section 2.1.4., "Power Interruption" of the National Electrical Manufacturers Association (NEMA) Standard TS2 for traffic control system, or most current version.

2.4.2. **Power Service Transients.** Use material that meets all the requirements in Section 2.1.6., "Transients" of the NEMA Standard TS2 for traffic control system, or most current version.

2.4.3. **Power Service Protection.** Ensure that equipment contains readily accessible, manually resettable, or replaceable circuit protection devices (such as circuit breakers or fuses) for equipment and power source protection. Provide circuit breakers or fuses sized such that no wire, component, connector, PC board, or assembly is subjected to sustained current in excess of their respective design limits upon failure of any single circuit element or wiring.

2.4.4. **Power Distribution Panel.** Provide cabinets with a 120 VAC +/- 5 VAC power distribution panel. Provide the following components on the panel:

2.4.4.1. **Duplex Receptacles.** Provide two 120 VAC NEMA Type 5-15R duplex receptacles, or as shown on the plans, protected by a circuit breaker. Permanently label duplex receptacles "For Internal ITS Equipment Only." Install duplex receptacles in an isolated location and provide a clear 1/8 in. thick removable cover made from transparent thermoplastic material to cover the duplex receptacles. Ensure this cover is installed as not to interfere with the functional operation within the cabinet and allows enough space to plug in AC adapters and any necessary equipment. Submit alternative cover material for approval as part of the documentation submittal requirement.

2.4.4.2. **Ground Fault Circuit Interrupter (GFCI) Duplex Receptacles.** Provide at least one 120 VAC NEMA Type 5-15R GFCI duplex receptacle, or as shown on the plans, protected by a circuit breaker. This GFCI duplex receptacle is intended for maintenance personnel and is not to be used to serve equipment inside the cabinet. Permanently label GFCI duplex receptacles "For Personnel Use." Install GFCI duplex receptacles in a readily accessible location.

Provide a 120 VAC, rack mountable outlet strip with 6 NEMA Type 5-15R receptacles with surge suppression. Plug outlet strip into GFCI duplex receptacle and label for personnel use.

**Circuit Breakers.** Determine the ampere rating, quantity, and configuration for main, accessory, spare, and equipment circuit breakers to support ITS equipment loads as shown on the plans. Provide Underwriters Laboratories (UL) 489 listed circuit breakers capable of operating in accordance with Section 2, "Environmental Standards and Test Procedures" of NEMA TS2-2003, or most current version. Provide circuit breakers with an interrupt capacity of 5,000 A. and insulation resistance of 100 megohms at 500 VDC. Provide minimum ampere rating for the following circuit types:

2.4.4.2.1. **Main Breaker.** Size the main circuit breaker such that the load of all branch circuits is less than the main circuit breaker ampere rating in conformance with the most current version of the National Electrical Code (NEC).

2.4.4.2.2. **Accessory Breaker.** Minimum 15 A. Size accessory circuit breaker to protect lighting, door switches, fans, and GFCI duplex receptacle in conformance with the most current version of the NEC.

2.4.4.2.3. **Equipment Breakers.** Minimum 15 A. Size equipment circuit breaker to protect ITS equipment and duplex receptacles in conformance with the most current version of the NEC.

2.4.4.2.4. **Spare Equipment Breaker.** Minimum 20 A. Provide one spare equipment breaker for future use.

Furnish breakers, which are in addition to any auxiliary fuses, with the electronic equipment to protect component parts. Provide 3-terminal lightning arrestor to protect the load side of all circuit breakers. Connect

the arrester into the circuit with size 8 AWG or larger stranded copper conductors. Connect arrester to the line filter as recommended by the manufacturer.

- 2.4.4.3. **Power Line Surge Protection.** Provide and install power line surge protection devices that meet the requirements of Section 2.6.

- 2.4.4.4. **Power Cable Input Junction Terminals.** Provide power distribution blocks suitable for use as a power feed and junction points for 2 and 3 wire circuits. Accommodate up to No. 4 AWG conductors on the line side of each circuit. Provide appropriately sized lugs at the junction terminals for conductors larger than a No. 4 AWG when shown on the plans.

Electrically isolate the AC neutral and equipment ground wiring from the line wiring by an insulation resistance of at least 10 megohms when measured at the AC neutral. Color code the AC neutral and equipment grounding wiring white and green respectively in conformance with the most current version of the NEC.

Utilize the back panel to distribute and properly interconnect all cabinet wiring related to the specific complement of equipment called out on the plans. Each item of equipment including any furnished by the Department must have the cable harness properly terminated at terminal boards on the back panel. Ensure all functions available at the equipment connector are carried in the connector cable harness to the terminal blocks from the power distribution panel mounted on the left side panel of the cabinet.

- 2.4.5. **Alternative Power Option.** When shown on the plans, accommodate renewable electrical power source for the design load specified in accordance with "ITS Solar Power System" Specification. Renewable electrical power source may, or may not, be integrated with public utility electrical services, as shown on the plans or as directed. Accommodate solar system components including batteries and solar charge controller when shown on the plans.

- 2.4.6. **Wiring.** Ensure all cabinet wiring identified by insulated pre-printed sleeving slipped over the wire before attachment of the lug or making the connection. Supply enough text on wire markers in plain words or abbreviations with enough level of detail so that a translating sheet will not be required to identify the type and size of wire.

Cut all wires to the proper length before assembly. Ensure no wires are doubled back to take up slack. Ensure harnesses to connectors are covered with braided cable sleeves. Secure cables with nylon cable clamps.

Provide service loops to facilitate removal and replacement of assemblies, panels, and modules. Use insulated parts and wire rated for at least 600 V. Color-code harnesses and wiring.

Route and bundle all wiring containing line voltage AC separately and shield from all low voltage, i.e., control circuits. Cover all conductors and live terminals or parts, which could be hazardous to maintenance personnel, with suitable insulating material.

Provide AC internal cabinet wiring identified in accordance with the most current version of the NEC. Provide white insulated conductors for AC neutral. Provide green insulated conductors for equipment ground. Provide any color different from the foregoing on other conductors in accordance with the most current version of the NEC. For equipment that requires grounding, provide grounding conductors, and do not use conduit for grounding. Provide No. 22 AWG or larger stranded conductors for internal cabinet wiring. Provide conductors that are UL-listed THHN in accordance with the most current version of the NEC. Ensure the insulation has at least a thickness of 10 mm. Ensure all wiring containing line voltage is at least size No. 14 AWG. No strands of any conductor may be trimmed to "fit" the wiring into the breaker or terminal block.

- 2.4.7. **Terminal Strips.** Provide terminal strips located on the back panel that are accessible to the extent that it is not necessary to remove the electronic equipment from the cabinet to make an inspection or connection.

Ensure terminal blocks are 2 position, multiple pole barrier type.

Provide shorting bars in each of the positions provided along with an integral marking strip.

Arrange terminal blocks such that they will not upset the entrance, training, and connection of incoming field conductors.

Identify all terminals with legends permanently affixed and attached to the terminal blocks.

Ensure not more than three conductors are brought to any one terminal screw.

Ensure no electrically energized components or connectors extend beyond the protection afforded by the barriers.

Locate all terminal blocks below the shelves.

Ensure terminals used for field connections are secure conductors by means of a No. 10-32 nickel or cadmium plated brass binder head screw.

Ensure terminals used for interwiring connections, but not for field connections, are secure conductors by means of a No. 5-32 nickel plated brass binder head screw.

Terminate all connections to and from the electronic equipment to an interwiring type block. These blocks will act as intermediate connection points for all electronic equipment input and output.

Provide termination panels that are used to distribute and properly interconnect all cabinet wiring related to the specific complement of equipment as shown on the plans. Provide properly terminated cable harnesses for each item including any furnished by the Department. Provide all functions available at the equipment terminals that are carried in the connector cable harness.

- 2.4.8. **Cabinet Internal Grounding.** The cabinet internal ground consists of at least one ground bus-bar permanently affixed to the cabinet and connected to the grounding electrode.

Use bare stranded No. 4 AWG copper wire between bus-bars and between the bus-bar and grounding electrode when providing multiple bus-bars.

Ensure each copper ground bus-bar has a minimum of 12 connection points, each capable of securing bare conductor ranging in size from No 4 AWG to No 14 AWG.

Return AC neutral and equipment ground wiring to these bus-bars.

- 2.4.9. **Door Switch.** Provide door switch meeting the following requirements:

- momentary, pin-type door switch:
- installed in the cabinet or on the door: and
- connected to a terminal so that the equipment installed in the cabinet can confirm input is connected to logic ground when the cabinet door is open.

Provide two momentary, pin type door switches for each door provided with the cabinet. Wire one switch to turn on the cabinet lights when the door is open and off when the door is closed. Wire the other in parallel to a terminal block to detect a cabinet intrusion condition.

- 2.5. **Mechanical Requirements.**

- 2.5.1. **Size and Construction.** Provide ITS pole mounted cabinets meeting the configuration types detailed in the Statewide ITS pole with cabinet standards.

**Table 1**  
**Minimum Cabinet Internal Dimensions**

	Depth (in.)	Width (in.)	Height (in.)
Type 1	12 <sup>1</sup>	24	24
Type 2	18	24	36
Type 3	20	24	41

1. Minimum dimension for cabinet provided without EIA 19 in. rack assembly.  
Provide 18 in. minimum depth when providing EIA 19 in. rack assembly.

Determine the suitability of the listed cabinet configuration types for the equipment at each field location identified on the plans or as desired.

- 2.5.2. **Ventilation.** Provide the cabinet with vent openings to allow cooling of electronic components.

Locate louvered air intake vent openings on the lower portion of the cabinet doors and covered fully on the inside with a commercially available disposable three layer graded pleated type filter of minimum size 6 in. (high) x 12 in. (wide) for Type 1 cabinet and 12 in. (high) x 16 in. (wide) for Type 2 and 3 cabinets. Size the louvered intake area and filter to allow maximum filtered air flow and cooling, securely mounted so that any air entering the cabinet must pass through the filter. Ensure the cabinet opening for intake of air is large enough to accommodate filter size. Screen the exhaust to prevent entry of insects. Provide the screen openings no larger than 0.0125-sq. in.

Provide a minimum of two thermostatically controlled fans that are adjustable with an adjustment range of 70 to 110°F. Provide a press-to-test switch to test the operation of the fan. Provide a fan with a capacity of at least 110 cfm each.

There is no opening on the roof of the cabinet.

- 2.5.3. **Lighting.** Provide minimum 15 W fluorescent fixtures above each door inside the cabinet, each with clear shatter proof lens. NEMA TS2 rated light-emitting diode (LED) fixtures are acceptable instead of fluorescent light fixtures. Determine the appropriate number of fixtures to achieve at least 1000 lumens to illuminate the equipment. Position the fixtures to provide illumination to the face of the equipment in the cabinet and not into a technician's eyes.

- 2.5.4. **Exterior Finish.** Provide cabinets with a smooth aluminum finish and the exterior in its unpainted natural color.

When shown on the plans or as directed, provide cabinets with an anti-graffiti coating in accordance with Item 740, "Graffiti Removal and Anti-Graffiti Coating."

- 2.5.5. **Serial Number.** Provide the cabinets with a serial number unique to the manufacturer, preceded by an assigned two-letter manufacturer's code. Provide at least a 0.2 in. letter height. Stamp the entire identification code and number on a metal plate which is riveted to the cabinet, stamp directly on the cabinet wall, or engrave on a metalized mylar plate that is epoxied on the upper right hand cabinet side wall.

- 2.5.6. **Modular Design.** Provide cabinets that have a modular design and allows ITS equipment to be installed in a variety of mounting configurations as detailed on the plans or as directed.

Provide Type 1 and Type 2 cabinets with two unistrut or DIN rail channels on each side wall of the cabinet for mounting power panel and auxiliary ITS equipment. Provide a 19 in. EIA rack assembly only when noted on the plans or in the General Notes.

Provide Type 3 cabinets with an EIA 19 in. rack assembly, sized appropriately based on cabinet type inside height dimension and is accessible from either door. Provide a rack with a minimum of one 1RU (RU = rack



unit) horizontal power strip. Provide two unistrut or DIN rail channels on each side wall of the cabinet for mounting power panel and auxiliary ITS equipment.

- 2.5.7. **Shelves.** Provide adjustable shelves in each cabinet as required to support the equipment as specified on the plans. Ensure shelf adjustment at 1 RU intervals in the vertical position. Provide shelves that can be mounted to an EIA 19 in. rack cage or unistrut channel as detailed in the standards.

Provide shelves that are removable and capable of supporting the electronic equipment. Provide a minimum of 2 in. between the back and front edge of the shelf to back inside wall and door of the cabinet respectively to allow room for the equipment cables and connectors.

Provide each cabinet type with at least one slide out drawer with telescoping drawer guides to allow full extension from the rack frame. Provide at least 1.75 in. (high) x 16 in. (wide) drawer sized appropriately for the cabinet with a hinged lid to allow access to storage space.

- 2.5.8. **Mounting Hardware.** Provide cabinets with the appropriate "U" channel mounting brackets, stiffening plates, anchor bolts, and any other necessary hardware to mount the cabinet on the ITS pole structure. Provide mounting brackets made of 0.250 in. thick steel.

Weld cabinet mounting plates to the pole. This may be done in the field for transport reasons. Do not band the cabinet or mounting plates to the pole. Design the cabinet for pole mounting and reinforce at the points of attachment to the pole.

- 2.6. **Surge Protective Devices (SPD).** Provide SPDs to protect electronics from lightning, transient voltage surges, and induced current. Install SPDs on all power, data, video, and any other conductive circuit.

- 2.6.1. **120 V or 120/240 V SPD at Service and ITS Cabinet Power Distribution Panel.** Install an SPD at the closest termination or disconnection point where the supply circuit enters the cabinet. Locate the SPD on the load side of the cabinet power distribution panel breakers and ahead of any and all electronic devices. Keep leads as short as possible with all conductor bends formed to the maximum possible radius. Connect the SPD ground lead directly to the ground bus. Use of wire nuts is prohibited. Install in conformance with manufacturers recommendations.

Provide UL Listed Type 1 or Type 2 SPD and labeled to UL1449 Third Edition, posted at UL.com, under Certifications UL Category Code VZCA, and have a 20 kA I-nominal rating. Provide SPD rated as NEMA 4. SPD with integral EMI/RFI line filtering may be required if shown on the plans.

Do not exceed 700 V on the voltage protection rating (VPR) on any mode (L-N, L-G, and N-G).

Do not exceed 150 V on the maximum continuous operating voltage (MCOV).

Equal or exceed 40 kA the SPD surge current rating per mode (L-N), (L-G), (N-G).

Equal or exceed 50 kA or the available short circuit current, whichever is higher for the SPD short circuit current rating (SCCR).

Provide SPD with directly connected metal oxide varistors (MOV) exceeding 32 mm in diameter with thermal safety disconnectors. Gas tube and spark gap SPD are not permitted. Ensure each MOV's operational status can be monitored via visual indicator, including N-G mode.

Provide SPD with one set of normally open (NO), normally closed (NC) Form C contacts for remote monitoring.

Ensure the SPD utilized for AC power does not dissipate any energy and does not provide any series impedance during standby operation. Return the unit to its non-shunting mode after the passage of any surge and do not allow the shunting of AC power.

- 2.6.2. **Parallel SPD for 120 V Equipment.** Install an SPD inside of the cabinet on the power distribution to the equipment. Keep leads as short as possible with all conductor bends formed to the maximum possible radius. Connect the SPD ground lead directly to the ground bus. Use of wire nuts is prohibited. Install in conformance with manufacturers recommendations.

Provide UL Listed Type 1 or Type 2 SPD labeled to UL1449 Third Edition, posted at UL.com, under Certifications UL Category Code VZCA, and have a 20 kA I-nominal rating. Provide SPD rated as NEMA 4.

Do not exceed 700 V on the voltage protection rating (VPR) on any mode (L-N and N-G).

Do not exceed 150 V on the maximum continuous operating voltage (MCOV).

Equal or exceed 40 kA the SPD surge current rating per mode (L-N) and (N-G).

Equal or exceed 50 kA or the available short circuit current, whichever is higher for the SPD short circuit current rating (SCCR).

Provide SPD with directly connected metal oxide varistors (MOV) exceeding 32 mm in diameter with thermal safety disconnectors. Gas tube and spark gap SPD are not permitted. Ensure each MOV's operational status can be monitored via visual indicator, including N-G mode.

Provide SPD with one set of normally open (NO), normally closed (NC) Form C contacts for remote monitoring.

- 2.6.3. **Low-Voltage Power, Control, Data and Signal Systems SPD.** Install a specialized SPD on all conductive circuits including, but not limited to, data communication cables, coaxial video cables, and low-voltage power cables. Ensure that these devices comply with the functional requirements shown in Table 2 for all available modes (i.e., power L-N, N-G; data and signal center pin-to-shield, L-L, L-G, and shield-G where appropriate).

These specialized SPD must have an operating voltage matching the characteristics of the circuit. Ensure that these specialized SPD are UL 497B or UL 497C Listed, as applicable.

Provide the SPD with three stages of surge suppression in a Pi ( $\pi$ ) configuration. The first stage (primary side) consists of parallel-connected gas discharge tubes (GDTs). The second stage consists of a series connected resistor or inductor. The third stage (secondary side) consists of parallel-connected transorbs or silicone avalanche diodes (SADs).

Ground the SPD to the DIN rail and a wire terminal connection point. (Grounding solely through the DIN rail connection is not adequate and does not meet the performance or intent of this Specification.)

Install coaxial SPDs in a manner that prevents ground loops and resulting signal deterioration. This is usually caused where the cable has different references to ground at either end and connecting SPDs at both ends that have only pin to shield protection completes a ground loop circuit through the shield. SPDs having pin to shield protection, and separate shield to ground protection are acceptable to eliminate ground loops.

**Table 2**  
**SPD Minimum Requirements**

Circuit Description	Maximum Continuous Operating Voltage (MCOV)	Frequency/ Bandwidth/ Data Rate	Surge Capacity	Maximum Let-Through Voltage
12 VDC	15-20 V	N/A	5 kA per mode (8×20 μs)	<150 Vpk
24 VAC	30-55 V	N/A	5kA per mode (8×20 μs)	<175 Vpk
48 VDC	60-85 V	N/A	5 kA per mode (8×20 μs)	<200 Vpk
Coaxial Composite Video	4-8 V	Up to 1.5 GHz	10 kA per mode (8×20 μs)	<100 Vpk
RS422/RS485	8-15 V	Up to 10 Mbps	10 kA per mode (8×20 μs)	<30 Vpk
T1	13-30 V	Up to 10 Mbps	10 kA per mode (8×20 μs)	<30 Vpk
Ethernet Data	7-12 V	Up to 100 Mbps	3kA per mode (10×1000 μs)	<30 Vpk

2.7. **Environmental Design Requirements.** Provide cabinets that meet the functional requirements of this Item during and after subsection to any combination of the following requirements:

- ambient temperature range of -30 to 165°F;
- temperature shock not to exceed 30°F per hour, during which the relative humidity does not exceed 95%;
- relative humidity range not to exceed 95% over the temperature range of 40 to 110°F; and
- moisture condensation on all surfaces caused by temperature changes.

2.8. **Vibration.** Material used must show no degradation of mechanical structure, soldered components, plug in components or satisfactory operation in accordance with the manufacturer's equipment specifications after being subjected to the vibration test as described in the NEMA standard TS2, Section 2.2.8., "Vibration Test," or the latest revision.

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### 3. FABRICATION

3.1. **Anchor Bolts.** Fabricate anchor bolts, nuts, and washers in accordance with the details shown on the plans and Item 449, "Anchor Bolts." Galvanize these items in accordance with Item 445, "Galvanizing."

Provide two circular steel templates as shown on the plans conforming to ASTM A36 for each assembly. Tack weld the lower anchorage nuts to the lower template in the shop. Perform this welding with an appropriate jig to ensure that the anchor bolt is perpendicular to the template. Shipping of the anchor bolt cage in its assembled condition is not required.

- 3.2. **ITS Poles.** Fabricate ITS poles in accordance with the details shown on the plans, this Item, and Item 441, "Steel Structures." Alternate designs are not acceptable unless approved by the Department.

Provide properly fitting components. Provide round, octagonal (8-sided), or dodecagonal (12-sided) pole shafts tapered to the heights shown on the plans.

Permanently mark, at a visible location when erected, ITS pole base plates with the design wind speed. Locate the handholes, as shown on the plans, opposite of the direction of traffic flow.

Permanently mark, at a visible location when erected, ITS pole base plates with the fabrication plant's insignia. Place the mark on the pole base plate adjacent to the handhole access compartment.

Provide circumferential welds only at the ends of the shaft. Provide no more than two longitudinal seam welds in shaft sections. Provide 100% penetration within 6 in. of circumferential base welds and 60% minimum penetration at other locations along the longitudinal seam welds, unless otherwise specified. Use a welding technique that minimizes acid entrapment during later galvanizing. Hot-dip galvanize all fabricated parts in accordance with Item 445, "Galvanizing."

Perform at least 10% ultrasonic testing (UT) of longitudinal seam welds on the pole shafts. Use a Department-approved UT procedure to ensure 60% or 85% minimum penetration where specified. Perform testing at a minimum of three locations on each shaft section (at both ends and middle). The minimum length of each test area must be 10 in. If minimum penetration is not achieved in any of the tested areas, test an additional 24 in. beyond the originally selected test areas requiring 60% or 85% penetration. Test the entire shaft seam weld if any locations within the additional 24 in. test areas does not achieve 60% or 85% penetration. Repair the deficient areas with a Department-approved repair procedure and retest.

Fabricate air terminal and bracket assembly to serve as a lightning arrestor in conformance with ITS pole air terminal details and IEEE standards for lightning protection. Bond air terminal with air terminal bracket via clad weld or other approved bolted connection.

- 3.3. **Cabinet.** Continuously weld all exterior seams for cabinet and doors. Fill edges to a radius of 0.03125 in. minimum. Smooth exterior welds.

Welding on aluminum cabinets are done by the gas metal arc (MIG) or gas tungsten arc (TIG) process using bare aluminum welding electrodes. Ensure electrodes are in accordance with the requirements of the American Welding Society (AWS) A5.10 for ER5356 aluminum alloy bare welding electrodes.

Procedures, welding machines, and welding machine operators for welding on aluminum must be qualified and be in accordance with the requirements of AWS B3.0, "Welding Procedures and Performance Qualification," and to the practices recommended in AWS C5.6.

Construct all cabinets of welded sheet aluminum with a thickness of at least 0.125 in. meeting NEMA 3R standards. Do not allow wood, wood fiber product, or flammable products in the cabinet. Seal cabinet structure to prevent the entry of rain, dust, and dirt.

Provide a sunshield on the exterior top of the cabinet to reflect solar rays and mitigate temperature build-up inside the cabinet. Construct sunshield out of 0.125 in. thick aluminum and provide a minimum of 1.25 in. clearance above the top of cabinet secured in four locations.

Attach aluminum lifting eyes or ears to the top of the cabinet to permit lifting the cabinet with a sling. Lifting eyes may be permanently fabricated to the cabinet frame as long as they do not interfere with the construction and operation of the sunshield. Manufacturer may provide removable lifting eyes that can be removed after installation. Seal any penetrations to the cabinet exterior or sunshield after removal of lifting eyes.

Ensure cabinets are in accordance with the requirements of ASTM B209 for 5052-H32 aluminum sheet.

- 3.3.1. **Door.** Provide sturdy and torsionally rigid cabinet doors that substantially cover the full area of the cabinet access opening. Attach cabinet doors by a minimum of two heavy duty hinges or full length hinge. Provide stainless steel hinge pins.

Fabricate the doors and hinges to withstand a 100 lb. per vertical ft. force applied to the outer edge of the door when open without permanent deformation or impairment of the door or cabinet body when the load is removed.

Fit the cabinet doors with Number 2 Corbin locks and aluminum or chrome plated handles with a minimum 3/8 in. drive pin and a 3-point latch. Design the lock and latch so that the handles cannot be released until the lock is released. Provide a locking ring for a padlock along with a padlock. Provide two keys for the door and two keys for the padlock with each cabinet. Locate the lock clear of the arc of the handle. Keys must be removable in the locked position only. Mount locks with two stainless steel machine screws. Provide cabinet doors with a catch mechanism to hold the door open at two positions: 90° and 120°.

Fabricate the door and door stop mechanism to withstand a simulated wind load of 5 lb. per sq. ft. applied to both inside and outside surfaces without failure, permanent deformation, or compromising of door position.

Provide cabinets without auxiliary police doors.

Provide a gasket to act as a permanent and weather resistant seal at the cabinet door facing. The gasket material must be of a non-absorbent material and maintain its resiliency after long term exposure to the outdoor environment.

Provide a gasket with a minimum thickness of 0.25 in. Locate the gasket in a channel provided for this purpose either on the cabinet or on the door. An "L" bracket is acceptable instead of this channel if the gasket is fitted snugly against the bracket to ensure a uniformly dust and weather resistant seal around the entire door facing.

- 3.3.2. **Mechanical Components.** Ensure all external screws, nuts, and locking washers are stainless steel. Do not use self-tapping screws unless specifically approved.

Ensure all parts are made of corrosion resistant material, such as plastic, stainless steel, aluminum, or brass.

Ensure all materials used in construction are resistant to fungus growth and moisture deterioration.

Separate dissimilar metals by an inert dielectric material.

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## 4. CONSTRUCTION

- 4.1. **Installation.** Locate ITS poles as shown on the plans unless otherwise directed to secure a more desirable location or to avoid conflict with utilities. Stake the ITS pole locations for verification.

Use established industry and utility safety practices when working near underground or overhead utilities. Consult with the appropriate utility company before beginning such work.

Construct foundations for new ITS poles in accordance with Item 416, "Drilled Shaft Foundations," and the details shown on the plans." Orient anchor bolts as shown on the plans. Install conduit per Item 618, "Conduit."

Identify all items of a shipment with a weatherproof tag. This tag minimally must identify manufacturer, contract number, date, and destination of shipment.

Erect poles after foundation concrete has attained its design strength as required on the plans and Item 421, "Hydraulic Cement Concrete." Coat anchor bolt threads and tighten anchor bolts in accordance with Item 449, "Anchor Bolts." Do not grout between the base plate and the foundation.

Mount the pole-mounted cabinet to the backside of the ITS pole, with door either parallel or perpendicular to the roadway, away from the direction of traffic flow, as shown on the plans. Mount cabinet plumb in all directions.

For ITS pole sites located on slopes greater than 4H:1V, mount the pole-mounted cabinet to the backside of the ITS pole, from the perspective parallel to the roadway with the door facing the direction of traffic flow as shown on the plans.

Install grounding conductor from cabinet and ITS pole air terminal inside a minimum 1-in. PVC conduit within the foundation. Bond grounding conductors to the primary ground rod as part of the grounding ring in conformance with the ITS grounding details.

Construct reinforced maintenance pad, when required, with Class A concrete in accordance with Item 421, "Hydraulic Cement Concrete." Provide reinforcing steel in accordance with Item 440, "Reinforcing Steel."

- 4.2. **Relocation.** Before removal of the existing pole structure or cabinet, disconnect and isolate the power cables from the electric power supply and disconnect all cables (power and communication) from the equipment and remove any ITS equipment, associated mounting brackets, pole mounted cabinet, and cabling from the pole structure. Remove existing pole structure as shown on the plans only at such time as authorized.

Inspect the existing pole structure, with a representative from the Department, and document any evidence of structural stress cracks or fatigue before removal. Remove and deliver to the Department, existing pole structures that fail structural inspection to an address to be supplied by the Department.

Remove the existing pole structure in a manner acceptable to the Engineer using a method that does not cause undue overstress or damage to the structure or appurtenances attached.

Use a crane of enough capacity to remove the pole. Disconnect and relocate the existing pole structure from and to the foundation as shown on the plans in a manner acceptable to the Engineer.

When the poles are laid down, place the poles on timber cribbing so that the poles lie reasonably straight to prevent any damage or deterioration.

Maintain safe construction and operation practices at all times. Handle the poles in such a manner during removal to prevent damage to the pole's exterior finish. The Contractor will be responsible for any damage to poles.

Unless otherwise shown on the plans, remove abandoned concrete foundations, including steel, to a depth of at least 2 ft. below final grade in accordance with Item 496, "Removing Structures." Backfill the excavation with materials equal in composition and density to the surrounding area. Replace any surfacing material with similar material to an equivalent condition.

Supply all new anchor bolts required for the installation of the ITS pole structure. Match bolt dimensions and lengths previously used or as shown on the plans and as directed. Provide anchor bolts in accordance with Item 449, "Anchor Bolts."

Move existing poles to the locations shown on the plans or as directed. Construct new foundations for relocated ITS poles in accordance with Item 416, "Drilled Shaft Foundations," and the details shown on the plans. Install conduit per Item 618, "Conduit." Install existing poles on new foundations in accordance with Section 4.1., "Installation." Do not grout between the base plate and foundation.

- 4.3. **Removal.** Use established industry and utility safety practices when removing poles and assemblies located near overhead or underground facilities. Consult with the appropriate utility company before beginning work.

Inspect the pole and cabinet, where included, with a representative from the Department, and remove any ITS equipment, associated mounting hardware, and cabling still attached to the pole or inside the cabinet

before commencing work. Inspect the existing pole and cabinet in place, with a representative from the Department, and document any evidence of damage to the representative before removal.

Before removal of the existing pole structure or cabinet, disconnect and isolate the power cables from the electric power supply and disconnect all cables (power and communication) from the equipment. Remove and coil existing cabling to the nearest ITS ground box or as identified on the plans.

Carefully remove the cabinet from the pole structure. Avoid damage or injury to surrounding objects or individuals. Deliver the cabinet to an address to be supplied by the Department.

Carefully remove the pole from the foundation in accordance with Item 496, "Removing Structures." Avoid damage or injury to surrounding objects or individuals. Separate the pole at the slip-fitted connections, if applicable. If the pole cannot be separated, transport the complete pole or partially separate the pole to make it transportable. Deliver the pole structure to an address to be supplied by the Department.

Unless otherwise shown on the plans, remove abandoned concrete foundations, including steel, to a depth of 2 ft. below final grade in accordance with Item 496, "Removing Structures." Backfill the excavation with materials equal in composition and density to the surrounding area. Replace surfacing material with similar material to an equivalent condition.

#### 4.4. **Testing.**

##### 4.4.1. **Installation.** Unless otherwise shown on the plans, perform the following tests on cabinets supplied through this Item.

##### 4.4.1.1. **Test Procedures Documentation.** Provide five copies of the test procedures to include tests identified in Section 4.4.2. through Section 4.4.4. inclusive and blank data forms to the Engineer for review and comment at least 45 days before testing for each test required on this project. Include the sequence of the tests in the procedures. The Engineer will comment, approve, or reject test procedures within 30 days after Contractor submittal of equipment for tests. Contractor to resubmit if necessary rejected test procedures for final approval within 10 days before testing. Review time is calendar days. Conduct all tests in conformance with the approved test procedures. The Department may witness all tests.

Record test data on the data forms and quantitative results. No bid item measurement or payment will be made until the Engineer has verified the test results meet the requirements of the Specification. The data forms for all tests, except design approval tests, must be signed by an authorized representative of the Contractor.

Provide written notice to the Engineer within 48 hr. of discovery of any testing discrepancy performed in testing by the Contractor. Furnish data forms containing the acceptable range of expected results and measured values.

##### 4.4.1.2. **Design Approval Test.** Conduct a design approval test on 10% of the total number of cabinets supplied as part of the project, with at least one of each type of cabinet used on the project.

Certification from an independent testing laboratory of a successfully completed design approval test is acceptable. Ensure that the testing by this laboratory is performed in accordance with the requirements of this Specification. Failure of independent tests to comply with the requirements of this Specification will be grounds for rejection of any certification.

Provide a copy of the certification to the Engineer. The data forms for the design approval tests must be signed by an authorized representative (company official) of the equipment manufacturer or by an authorized representative of an independent testing facility.

Notify the Engineer ten working days before conducting this testing. The Department may witness all the tests. Perform the following tests:

- 4.4.1.2.1. **Power Service Transients.** Provide equipment that meets the performance requirements, specified in this Item, when subjected to the power service transients as specified in NEMA TS2, Section 2.2.7.2, "Transient Tests (Power Service)", or most current version.
- 4.4.1.2.2. **Temperature and Condensation.** Provide equipment that meets the performance requirements, specified in this Item, when subjected to the following conditions in the order specified below.
- Stabilize the equipment at -30°F and test as specified in NEMA TS2, Sections 2.2.7.3., "Low-Temperature Low-Voltage Tests" and 2.2.7.4., "Low-Temperature High-Voltage Tests," or most current version.
  - Allow the equipment to warm up to room temperature in an atmosphere with relative humidity of at least 40%. Operate the equipment for 2 hr., while wet, without degradation or failure.
  - Stabilize the equipment at 165°F and test as specified in NEMA TS2, Sections 2.2.7.5., "High-Temperature High Voltage Tests" and 2.2.7.6., "High-Temperature Low-Voltage Tests," or most current version.
- 4.4.1.2.3. **Relative Humidity.** Provide equipment that meets the performance requirements, specified in this Item, within 30 min. of being subjected to a temperature of 165°F and a relative humidity of 18% for 48 hr.
- 4.4.1.2.4. **Vibration.** Provide equipment that shows no degradation of mechanical structure, soldered components, or plug-in components and will operate in accordance with the manufacturer's equipment specifications after being subjected to the vibration tests as described in NEMA TS2, Section 2.2.8., "Vibration Test," or most current version.
- 4.4.1.2.5. **Power Interruption.** Provide equipment that meets the performance requirements, specified in this Item, when subjected to nominal input voltage variations as specified in NEMA TS2, Section 2.2.10., "Power Interruption Test," or most current version.
- 4.4.1.3. **Stand-Alone Tests.** Conduct a stand-alone test for each cabinet after installation. Exercise all stand-alone (non-network) functional operations consisting of the following, at a minimum:
- 19-inch EIA rack,
  - adjustable shelves,
  - locking mechanism,
  - fan and thermostat,
  - cabinet light,
  - back panel,
  - circuit breakers,
  - surge protection,
  - grounding system,
  - terminal strips,
  - interconnect harnesses with connectors,
  - cabinet attachment to pole,
  - weatherproofing, and
  - "Door Open" connection to back panel.

Notify the Engineer five working days before conducting this test. The Engineer may witness all the tests.

- 4.4.1.4. **Consequences of Test Failure.** If a unit fails a test, submit a report describing the nature of the failure and the actions taken to remedy the situation before modification or replacement of the unit. If a unit requires modification, correct the fault and then repeat the test until successfully completed. Correct minor discrepancies within 30 days of written notice to the Engineer. If a unit requires replacement, provide a new unit and then repeat the test until successfully completed. Major discrepancies that will substantially delay receipt and acceptance of the unit will be enough cause for rejection of the unit.



Failure to satisfy the requirements of any test is considered a defect and the equipment is subject to rejection. The rejected equipment may be offered again for retest provided all noncompliance has been corrected.

If a failure pattern develops in similar units within the system, implement corrective measures, including modification or replacement of units, to all similar units within the system as directed. Perform the corrective measures within 30 calendar days without additional cost or extension of the contract period.

4.4.1.4.1. **Consequences of Design Approval Test Failure.** If the equipment fails the design approval test, correct the fault within 30 days and then repeat the design approval test until successfully completed.

4.4.1.4.2. **Consequences of Stand-Alone Test Failure.** If the equipment fails the stand-alone test, correct the fault within 30 days and then repeat the stand-alone test until successfully completed.

4.4.2. **Relocation.**

4.4.2.1. **Pre-Test.** Conduct performance testing before removal of ITS pole mounted cabinet. Test the following components or equipment, at a minimum, and document functional operations in the presence of representatives of the Contractor and the Department.

- locking mechanism,
- fan and thermostat,
- cabinet light,
- back panel,
- circuit breakers,
- surge protection system,
- grounding system, and
- "Door Open" connection to back panel.

Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment becomes the responsibility of the Contractor until accepted by the State. Compare test data before removal and test data after installation.

4.4.2.2. **Post Test.** Testing of the ITS pole mounted cabinet is for the purpose of relieving the Contractor of maintenance of the system. The Contractor will be relieved of the responsibility for maintenance of the system in accordance with Item 7, "Legal Relations and Responsibilities," after a successful test period. The Contractor will not be required to pay for electrical energy consumed by the system.

After all existing ITS equipment has been installed, perform the same functional operation test described under Section 4.4.2.1. Furnish test data forms containing the sequence of tests including all the data taken and quantitative results for all tests. Submit the test data forms to the Engineer at least 30 days before the day the tests are to begin. Obtain Engineer's approval of test procedures before submission of equipment for tests. Send at least one copy of the data forms to the Engineer.

The performance test results after relocation must be equal to or better than the test results before removal. Repair or replace those components within the system which failed after relocation but which passed before removal.

The Department will conduct approved ITS equipment system tests on the field equipment hardware with the central equipment. The tests will, as a minimum, exercise all remote-control functions and display the return status codes from the controller.

If any unit fails to pass a test, prepare a report and deliver it to the Engineer. Describe in the report the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test until the unit passes successfully, at no additional cost to the Department or extension of the contract period.

4.5. **Documentation.** Submit documentation for this Item consisting of the following:

4.5.1. **ITS Pole.** Shop drawings should clearly detail the following for the ITS poles submitted for the project:

- physical pole drawings,
- weatherheads,
- anchor bolts,
- material list,
- lightning suppression,
- cabinet mounting attachments (when cabinet required), and
- grounding system.

4.5.2. **Pole Mounted Cabinet.** Shop drawings should clearly detail the following for ITS pole mounted cabinets when required as shown on the plans:

- dimensions,
- power distribution panel,
- shelves,
- surge suppression,
- door,
- back panel,
- gasket,
- outlets,
- door look,
- circuit breakers,
- materials list,
- power cable terminals,
- exterior finish,
- wiring diagrams,
- ventilation,
- cabinet grounding,
- terminal strips,
- environmental parameters,
- harnesses,
- filter, and
- connectors.

Submit shop drawings, signed, sealed, and dated by a registered professional engineer in Texas showing the fabrication and erection details for each ITS pole including the ITS cabinet and mounting details in accordance with Item 5, "Control of the Work."

Provide at least two complete sets of operation and maintenance manuals in hard copy format in addition to a CD/DVD or removable flash drive that include the following:

- complete and accurate schematic diagrams;
- complete installation procedures;
- complete performance specifications (functional, electrical, mechanical, and environmental) on the unit;
- complete parts list including names of vendors for parts not identified by universal part number such as JEDEC, RETMA, or EIA;
- pictorial of component layout on circuit board;
- complete maintenance and trouble-shooting procedures;
- complete stage-by-stage explanation of circuit theory and operation;
- recovery procedures for malfunction; and
- instructions for gathering maintenance assistance from manufacturer.

Identify material which is copyrighted or proprietary in nature as part of the documentation submittal. The Department will take proper provisions to secure such material and not distribute without written approval.

Provide Department with certification documentation verifying conformance with environmental and testing requirements contained in the Special Specification. Certifications may be provided by the manufacturer or through independent labs.

- 4.6. **Warranty.** The start date of the manufacturer's standard warranty will begin when the stand-alone test plan has been approved. Any equipment with less than 95% of its warranty remaining at the beginning of the stand-alone test will not be accepted by the Department. Guarantee that equipment furnished and installed for this project performs according to the manufacturer's published specifications. Warrant the equipment against defects or failure in design, materials, and workmanship for a minimum of five years or in conformance with the manufacturer's standard warranty if warranty period is greater. Assign, to the Department, all manufacturer's normal warranties or guarantees on all electronic, electrical, and mechanical equipment, materials, technical data, and products furnished for and installed on the project. Repair or replace, at the manufacturer's option, defective equipment during the warranty period at no cost to the Department.

Repair or replace equipment at the Contractor's expense before beginning testing in the event of a malfunction or failure. Furnish replacement parts for all equipment within 30 days of notification of failure by the Department.

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## 5. MEASUREMENT

This Item will be measured as each unit furnished, installed, relocated, or removed as shown on the plans, excluding new foundations and conduit.

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## 6. PAYMENT

- 6.1. **Furnish and Install.** The work performed and materials furnished in accordance with this Item and measured as provided for under "Measurement" will be paid for at the unit price bid for "ITS Pole" of the type and height specified, including COSS/OSB extension, and "ITS Pole Mount Cabinet" of the type and configuration specified. This price is full compensation for furnishing, fabricating, and erecting ITS pole structures as shown on the plans; for furnishing, fabricating, and installing ITS pole mounted cabinets as shown on the plans; for furnishing and placing anchor bolts, nuts, washers, and templates; conducting cabinet testing; and equipment, materials, labor, tools, and incidentals necessary to provide an ITS pole structure or pole mounted cabinet complete in place and ready for the attachment of ITS equipment.

New drill shaft foundations will be paid for under Item 416, "Drilled Shaft Foundations." New conduit will be paid for under Item 618, "Conduit."

- 6.2. **Install Only.** The work performed and materials furnished in accordance with this Item and measured as provided for under "Measurement" will be paid for at the unit price bid for "ITS Pole (Install Only)" of the type and height specified, including COSS/OSB extension, and "ITS Pole Mount Cabinet (Install Only)" of the type and configuration specified. This price is full compensation for erecting ITS pole structures and installing ITS pole mounted cabinets furnished by the Department as shown on the plans; for installing and placing anchor bolts, nuts, washers, and templates; conducting cabinet testing; and equipment, materials, labor, tools, and incidentals necessary to provide an ITS pole structure or pole mounted cabinet, complete in place, and ready for the attachment of ITS equipment.

New drill shaft foundations will be paid for under Item 416, "Drilled Shaft Foundations." New conduit will be paid for under Item 618, "Conduit."

- 6.3. **Relocate.** The work performed and materials furnished in accordance with this Item and measured as provided for under "Measurement" will be paid for at the unit price bid for "ITS Pole (Relocate)" of the type and height specified, including COSS/OSB extension, and "ITS Pole Mount Cabinet (Relocate)" of the type

and configuration specified. This price is full compensation for removing existing ITS pole structures or pole mounted cabinets as shown on the plans; removing existing foundations; backfilling and surface placement; hauling and erecting ITS pole structures; hauling and installing ITS pole mounted cabinets; furnishing and placing anchor bolts, nuts, washers, and templates; conducting cabinet testing; and equipment, materials, labor, tools, and incidentals necessary to relocate existing ITS pole structures or pole mounted cabinets, complete in place, and ready for the attachment of ITS equipment.

New drill shaft foundations will be paid for under Item 416, "Drilled Shaft Foundations." New conduit will be paid for under Item 618, "Conduit."

- 6.4. **Remove.** The work performed and materials furnished in accordance with this Item and measured as provided for under "Measurement" will be paid for at the unit price bid for "ITS Pole (Remove)" of the type and height specified, including COSS/OSB extension, and "ITS Pole Mount Cabinet (Remove)" of the type and configuration specified. This price is full compensation for removing existing ITS pole structures and pole mounted cabinets as shown on the plans; removing existing foundations; backfilling and surface placement; loading and hauling; and equipment; materials, labor, tools, and incidentals necessary to complete the removal of existing ITS pole structures and pole mounted cabinets.

# Special Specification 6018

## Digital Closed-Circuit Television (CCTV) Field Equipment



### 1. DESCRIPTION

Furnish, install, relocate, or remove closed-circuit television (CCTV) field equipment at locations shown on the plans, or as directed.

### 2. MATERIALS

2.1. **General Requirements.** Fabricate, provide, assemble, and install materials that are new, corrosion-resistant, and in strict accordance with the details shown on the plans and in the Specifications.

Provide CCTV field equipment that is compatible with software currently in operation to interface with the existing equipment and software located in the Department's Traffic Management Control (TMC) Centers across the state.

CCTV field equipment must include the following.

- Color video camera units
- Camera lenses, filters, control circuits, and accessories
- Camera housing
- Medium-duty pan and tilt units with click-and-drag position control
- Video and camera control and power cable connectors and assemblies
- Video, data, and power surge suppression
- Built-in ID generator

2.2. **Functional Requirements for Digital CCTV.** Provide color video cameras that produce digital video in standard definition or high definition that meet the following functional requirements.

2.2.1. **General.**

2.2.1.1. **Digital Signal Processing (DSP).**

- Digital zoom
- Auto and manual iris control
- Auto and manual exposure control with built-in frame buffer
- Auto and manual focus control
- Built-in ID generator, with white letters on black outline minimum or approved equivalent

2.2.1.2. **Image Pickup Device.** Progressive scan digital CCD or CMOS sensor, 1.2-megapixel (1,200,000 pixels) or better.

2.2.1.3. **Resolution.** Support the following resolutions.

- 720p (1,280-pixel × 720-pixel array)
- 1,080p (1,920-pixel × 1,080-pixel array)
- D1 (720-pixel × 480-pixel array)
- CIF (352-pixel × 240-pixel array)
- VGA (640-pixel × 480-pixel array) at minimum depending on video stream configuration

- 2.2.1.4. **Frame Rate.** Allow user-selectable frame rates at 30, 15, seven, four, two, and one frame per second.
- 2.2.1.5. **Data Rate.** Scalable from 64 Kbps to 8 Mbps.
- 2.2.1.6. **Video Stream Format.** Allow simultaneous encoding and transmission of at least two configurable digital video streams in conformance with Moving Picture Experts Group- (MPEG-) 4, Part 10 (H.264). Support configuration of the following at minimum.
- H.264
  - H.265
  - H.264 + H.264
- 2.2.1.7. **Video Stream.** Support uni-cast (one-to-one) and multi-cast (one-to-many).
- 2.2.1.8. **Aspect Ratio.** Support width-to-height aspect ratio of 16:9.
- 2.2.1.9. **Image Quality.** Ensure that video produced by the camera is true; accurate; distortion-free; and free of transfer smear, oversaturation, and any other image defect that negatively impacts image quality under all lighting and weather conditions in color and monochromatic modes.
- 2.2.1.10. **Wide Dynamic Range (WDR).** Operation with manual override option.
- 2.2.1.11. **Overexposure Protection.** Minimize glare and incur no permanent damage to the camera when pointed directly at strong light sources, including the sun, for brief periods.
- 2.2.1.12. **Geometric Distortion.** Zero.
- 2.2.1.13. **Signal-to-Noise Ratio (AGC Off).** Minimum 50 dB (weighted at 4.5 MHz).
- 2.2.1.14. **Electronic Shutter Speed.** Automatic shutter that is user selectable down to at least 1/10,000 sec.
- 2.2.1.15. **Electronic Image Stabilization.** User-selectable on or off electronic image stabilization at 5 Hz and 10 Hz minimum.
- 2.2.1.16. **Day (Color) and Night (Mono).** Auto and manual switchover and iris control with user-selectable modes for auto and manual control capabilities.
- 2.2.1.17. **Auto White Balance.** Color quality that is maintained by a continuous through-the-lens automatic white balance for color temperatures from 2,850 K to greater than 5,100 K with less than 10-IRE unit unbalance.
- 2.2.1.18. **Inverted Operation.** Automatic image inversion or “flip” when rotating through 0° or 180° vertical tilt positions when not an integrated unit.
- 2.2.1.19. **Mean Time Before Failure.** At least 43,800 hr. or 5 yr. without mechanical malfunction or failure. Act of God failures are exempt.
- 2.2.2. **Lens.** Provide an integral lens assembly for each camera with the following features.
- An f/1.6 or better glass multi-coated zoom lens with variable focal lengths with a minimum 30X zoom range
  - 12X auto and manual digital zoom minimum
  - Automatic and manual focus and iris control
- Provide lenses with capabilities for remote control of the zoom, focus, and iris operations. Provide mechanical or electrical means to protect the motors from over-running in extreme positions. Lens and controller system must be capable of auto iris and remote manual iris operation. Lens must be capable of

auto and manual zoom and focus control. Use motorized iris as opposed to auto iris type for system control capability.

- 2.2.3. **Network Interface Requirements.** Provide CCTV field equipment that can integrate with the Department's Lonestar™ software and into the Department's TMC CCTV control sub-systems by NTCIP 1205 Version 1.08 or higher, Open Network Video Interface Forum (ONVIF), or approved equal. Support Cohu, Pelco D, or Pelco P protocols, or approved equal, for control.

Provide camera equipment with a local area network (LAN) connection that supports the requirements detailed in IEEE 802.3 for 10/100 Ethernet connections for half-duplex or full-duplex, and provide auto negotiation. Provide equipment with at least one Ethernet port that has a 10/100 Base-TX connection. Provide connectors that conform to EIA and TIA requirements.

Support, at minimum, RTP, RTSP, UDP/IP, TCP/IP, IPv4, HTTP, IGMPv2, DHCP, NTP, IEEE 802.1x, Ethernet 802.3u, SNMP, RADIUS Key, and Telnet.

Provide camera equipment that supports local and remote configuration and management. Configuration and management functions must include access to all user-programmed features, including, but not limited to, network configuration, video settings, device monitoring, control setting, and security functions. Configuration and management must be achieved by serial login, Telnet login, web-based interface, or manufacturer software. Provide manufacturer software with camera for local configuration, system maintenance, and management control.

- 2.3. **Cable Assembly.** Provide camera power and communication cable assembly equipped with cables used for video feed; camera control, including PTZ function; communications signaling; and power supply. Camera power and communication cable may be configured as a composite cable or series of isolated cables. The following cable functions may be required depending on the data and video communication interface requirements, as shown on the plans.

- 2.3.1. **Ethernet.** Provide a shielded twisted pair (STP) Category 6 (or equivalent) at minimum rated for outdoor use in conformance with TIA/EIA 568B. Cable must not exceed an attenuation of 30 dB per 300 ft. of cable at 100 MHz.

- 2.3.2. **Power.** Provide three-wire, insulated for 300 V minimum, 115-VAC or 24-VAC power cabling between the camera and the power supply. If 24-VAC power is required, provide needed power supply conversion equipment.

Power may be achieved using Power over Ethernet (PoE) by a power supply or mid-span PoE injector, that must be considered part of the camera unit, and must conform to IEEE 802.3af or IEEE 802.3at or latest revision.

Provide power and communication cable assembly the entire length of the camera support structure from the camera to the cabinet with an additional 25 ft. of slack in the cabinet. Determine the appropriate length required for each site. The cable assembly must be considered part of the camera unit.

Provide any necessary data, video, or power conversion hardware to successfully integrate the camera unit into the field equipment cabinet hardware components and onto the communications backbone.

- 2.4. **Video Encoding Interoperability.** Video encoding and decoding equipment may be used by software or hardware means. Ensure camera's encoded video is interoperable with hardware and software decoders from other manufacturers. Ensure the camera's encoded video can be decoded by at least two other manufacturer's software or hardware decoders that are in use by the Department. Contact the Department for decoders supported before procurement of camera unit.

- 2.5. **Camera Housing.** Provide camera housing assembly and hardware material that reflects sunlight.

Provide camera housing with a sunshield to reduce the solar heating of the camera. The total weight of the camera (including housing, sunshield, and all internal components) must not exceed 25 lb.

Construct viewing window so that unrestricted camera views can be obtained at all camera and lens positions.

Provide gaskets at cable entry point to the camera housing to prevent moisture or dust entry.

When shown on the plans or identified in the General Notes, provide heating or cooling functionality with temperature sensors to maintain internal temperatures within the manufacturer-required operating temperature range.

- 2.6. **Pan-Tilt Unit.** Furnish and install a medium-duty anodized aluminum weatherproof pan-tilt unit at each camera site, conforming to NEMA 4X and IP-66 rating or better, when not integral to the camera unit and housing. Provide mounting adapter and required attachment hardware to install the pan-tilt unit to the pole or mounting bracket. Identify the type of mounting bracket and bolt pattern on shop drawings.

Provide a unit capable of at least 180° vertical range of movement and horizontal movement of 360°, full, continuous-rotation movement.

Provide a unit that has a pan and tilt speed of 20° per second minimum and is user-adjustable through the full speed range. Unit must be capable of simultaneous pan-tilt movements with variable pan-tilt positioning control allowing variable speeds that are proportional through the zoom range.

Provide pan-tilt unit with drive accuracy and drive repeatability of less than 1° and an automatic pre-position speed of 120° per second minimum to a user-defined preset position that is user-adjustable.

Provide a pan-tilt unit, when not integral to the camera housing, that can maintain static position and does not move by more than 1° in any direction in speeds greater than 35 mph.

Ensure that the pan-tilt unit has seals and gaskets to protect the motors, gears, and cables and that the seals and gaskets are resistant to ozone, ultraviolet radiation, and other pollutants inherent to all local environmental conditions.

When shown on the plans or identified in the General Notes, provide pan-tilt unit with heater that conforms to NEMA 4X when not integral to the camera unit and housing.

- 2.7. **Preset Functions.** Provide a camera unit capable of storing at least 62 presets for pan, tilt, zoom, and focus settings.

Provide a camera unit capable of user-programmable tours with at least four tours of up to 32 presets per tour. Any tours may be programmed for panning tours.

Provide a camera unit capable of user-programmable sector zones with at least eight zones allowing right and left pan limitations.

Provide a camera unit capable of user-programmable privacy zones with at least eight zones and click-and-drag position control by software.

- 2.8. **Connectors.** Provide and install connectors that are compatible with the communications equipment interfaces identified in Section 2.2.3. Network Interface and Section 2.3. Cable Assembly. Supply all mating connectors. Provide all connector pins and mating connectors that are plated to achieve good electrical connection and resistance to corrosion.

- 2.9. **Source ID Generator.** Use a built-in ID generator to insert camera ID over each of the camera-generated videos.



Provide at least two lines of alphanumeric, case-specific text supporting at least 20 ASCII characters per line, with a minimum character height of 20 pixels, that is user-programmable for displaying any combination of ID information consisting of at least camera, preset, privacy mask, low-pressure warning, compass, and time and date.

Allow user-selectable location of text to be displayed on the video image at the extreme top or bottom. Text display on the side of the image display is prohibited.

Automatically display the programmed ID with its associated video signal that can be turned on or off by user command.

In the event of signal loss or video signal failure, ID generator must automatically pass through failure message to display over video.

Submit list of available text displays to the Department as part of the documentation requirements.

- 2.10. **Cabinet Installation.** Install video communication equipment in a pole-mounted equipment cabinet or in a ground-mounted equipment cabinet as shown on the plans. Meet the following criteria.
- Contains all the lightning protection devices for data and video.
  - Grounded to earth ground.
  - Provides connectors for all inputs and outputs for data and video and additional ports for testing video and communications. Use the external connectors for testing and for connections to communication devices.
- 2.11. **Surge Protection.** Provide surge protection for the camera meeting the following requirements.
- **Mounting Adapter.** Electrically bonded to mounting structure.
  - **Pan-Tilt Mechanism.** Electrically bonded to mounting adapter.
  - **Camera Housing.** Electrically bonded to pan-tilt mechanism.
  - **Power and Control Cable Surge Protector.** Integrated into cabinet surge protection system.
- 2.12. **Power Requirements.** Provide CCTV field equipment meeting all its specified requirements when the input power is 115 VAC  $\pm 20\%$ , 60 Hz  $\pm 3$  Hz. Maximum power required must not exceed 200 W, including optional equipment.
- Provide appropriate voltage conversion, power injectors, or other power supply hardware if the camera equipment or any camera-related ancillary devices require operating voltages other than 115 VAC  $\pm 20\%$ , such as 24 VAC or 12 VDC from solar power systems, or rely on PoE. Appropriate voltage converters or injectors must accept an input voltage of 115 VAC or 12 VDC from solar power systems as shown on the plans.
- 2.13. **Primary Input Power Interruption.** Provide CCTV field equipment that meets NEMA TS2, Section 2.1.4., "Power Interruption," for traffic control system or most current version.
- 2.14. **Power Service Transients.** Provide CCTV field equipment that meets NEMA TS2, Section 2.1.6., "Transients, Power Service" or most current version.
- 2.15. **Power Service Protection.** Provide equipment that contains readily accessible, manually resettable or replaceable circuit protection devices (such as circuit breakers or fuses) for equipment and power source protection. Provide circuit breakers or fuses sized appropriately such that no wire, component, connector, PC board, or assembly is subject to current loads more than their respective design limits upon failure of any single circuit element or wiring.
- 2.16. **Modular Design.** Provide CCTV field equipment hardware installed inside the cabinet that is modular in design and that can be either shelf-mountable or EIA 19-in. rack mountable. Clearly identify modules and

assemblies with name, model number, serial number, and any other pertinent information required to facilitate equipment maintenance.

- 2.17. **Connectors and Harnesses.** Make all external connections using connectors that are uniquely keyed to preclude improper hookups. Color-code and appropriately label with UV-resistant material all wires to and from the connectors. Provide connecting harnesses of appropriate length and terminated with matching connectors for interconnection with the communications system equipment. Provide corrosion-resistant plated pins and mating connectors to improve conductivity. All connectors using solder-type connections must have each soldered connection covered by a piece of heat-shrink tubing securely shrunk to protect the connection for short-circuiting.
- Provide a wiring diagram detailing wire function and connector pin-out.
- 2.18. **Environmental Design Requirements.** Provide equipment that conforms to NEMA TS2-2003 (R2008), International Electrotechnical Commission (IEC) 60529, and NEMA 250-2008 or most current version, for the following categories.
- 2.18.1. **Temperature.** Provide equipment that conforms to NEMA TS2, Section 2.1.5.1, or latest revision, and meets all the specified requirements during and after being subjected to any combination of the following conditions.
- Ambient temperature range of -30°F–165°F
  - Temperature shock not exceeding 30°F per hour
  - Relative humidity of 0%–100%
- Moisture condensation on all exterior surfaces caused by temperature changes
- Provisions for a heater and blower function are required to maintain internal temperatures within the manufacturer's operating temperatures for temperature ranges internal to the camera unit not conforming to NEMA TS2, Section 2.1.5.1.
- 2.18.2. **Vibration.** Provide equipment that conforms to NEMA TS2, Section 2.1.9. and Section 2.2.3., or most current version, and meets all the specified requirements during and after being subjected to a vibration of 5 Hz–30 Hz up to 0.5 g applied in each of three mutually perpendicular planes for 30 min.
- 2.18.3. **Shock.** Provide equipment that conforms to NEMA TS2, Section 2.1.10. and Section 2.2.4., or most current version, and does not yield permanent mechanical deformation or any damage that renders the unit inoperable when subjected to a shock of 10 g applied in each of three mutually perpendicular planes for 30 min.
- 2.18.4. **Environmental Contaminants.** Provide equipment that conforms to IEC 60529, Section 14.2.6, or most current version, for IP-66 or greater rating when providing a pressurized unit.
- Provide equipment that conforms to IEC 60529, Section 14.2.7., or most current version, for IP-67 or greater rating when providing a non-pressurized unit.
- 2.18.5. **External Icing.** Provide equipment that is tested to conform to NEMA 250-2003, Section 5.6 or latest revision.
- 2.18.6. **Corrosion.** Provide equipment that is tested to conform to NEMA 250-2003, Section 5.10. or latest revision, when located in Coastal Districts. Coastal Districts are Beaumont (BMT), Corpus Christi (CRP), Houston (HOU), Pharr (PHR), and Yoakum (YKM).
- 2.18.7. **Wind Rating.** Equipment must be operational in adverse weather conditions and able to withstand wind loads in accordance with Department's basic wind velocity zone map standard as shown on the plans without permanent damage to mechanical and electrical equipment.

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### 3. CONSTRUCTION

- 3.1. **General.** Maximize standardization and consistency by using industry-standard techniques in equipment design and construction, with the minimum number of parts, subassemblies, circuits, cards, and modules. Design equipment for ease of maintenance.

Provide mounting bracket assemblies or apparatus to mount equipment on the following structures as detailed on the plans or in the ITS standards.

- ITS pole
- Overhead sign bridge or cantilever overhead sign structure
- Retaining wall
- Concrete column or parapet

Provide mounting bracket design with documentation submitted for approval before fabrication. Include all mounting plates, screws, bolts, nuts, washers, and ancillary hardware needed to fabricate the entire mounting bracket.

- 3.2. **Mechanical Components.** Provide stainless steel external screws, nuts, and locking washers. Self-tapping screws are not acceptable.

Provide parts that are made of corrosion-resistant material (e.g., plastic, stainless steel, anodized aluminum, or brass).

Protect all materials used in construction from fungus growth and deterioration due to sustained moisture.

Separate dissimilar metals by an inert dielectric material.

- 3.3. **Wiring.** Provide wiring that meets the NEC most current version. Provide wires that are cut to proper length before assembly. It is not acceptable to “double-back” wires to take up slack inside the cabinet. Lace wires neatly with nylon lacing or plastic straps. Organize cables inside the cabinet and secure cables with clamps. Provide service loops at connection points when connecting to hardware inside the cabinet. No splicing of cables or exposed wiring is allowed. Clearly label all wiring.

- 3.4. **Relocation of CCTV Field Equipment.** Perform the relocation in strict conformance with the requirements herein and as shown on the plans. Completion of the work must present a neat, workmanlike, and finished appearance. Maintain safe construction practices during relocation.

Inspect the existing CCTV field equipment with a representative from the Department, and document any evidence of damage before removal. Conduct a pre-removal test in accordance with the testing requirements contained in this Specification to document operational functionality. Remove and deliver to the Department existing CCTV field equipment that fails inspection.

Before removal of existing CCTV field equipment, disconnect and isolate the power cables from the electric power supply and disconnect all communication cabling from the equipment located inside the cabinet. Coil and store power and communication cabling inside the cabinet until it can be relocated. Remove existing CCTV field equipment as shown on the plans only when authorized.

Use care to prevent damage to any support structures. Any portion of CCTV field equipment or camera pole structure damaged or lost must be replaced by the Contractor at their expense. Contractor must document and report to the Department any existing damage to equipment before removal.

Make all arrangements for connection to the power supply and communication source, including any permits required for the work under the Contract. Provide wire for the power connection at least the minimum size indicated on the plans and insulated for 600 V. Meet the requirements of the NEC most current version.

- 3.5. **Removal of CCTV Field Equipment.** Disconnect and isolate any existing electrical power supply before removal of existing CCTV field equipment.

Perform removal in strict conformance with this Specification and the lines, grades, details, and dimensions shown on the plans. Completion of the work must present a neat, workmanlike, and finished appearance.

Any portion of the CCTV field equipment or cabinet internal components damaged or lost must be replaced by the Contractor (with items requiring approval) at no cost to the Department.

All materials not designated for reuse or retention by the Department will become the property of the Contractor and be removed from the project site at the Contractor's expense. Deliver items to be retained by the Department to a location shown on the plans or in the General Notes. The Contractor is fully responsible for any removed equipment until released.

- 3.6. **Contractor Experience Requirements.** Contractor or designated subcontractor must meet the following experience requirements.

- 3.6.1. **Minimum Experience.** Three years of continuous existence offering services in the installation of CCTV camera systems.

- 3.6.2. **Completed Projects.** Three completed projects consisting of at least five cameras in each project where the personnel installed, tested, and integrated CCTV cameras on outdoor, one or more permanently mounted structures and related camera control and transmission equipment. The completed CCTV camera system installations must have been in continuous satisfactory operation for at least 1 yr.

- 3.6.3. **Equipment Experience.** Three projects (may be the three in Section 3.6.2., "Completed Projects") in which the personnel worked in cooperation with technical representatives of equipment suppliers to perform specific stages of work. The Contractor is not required to furnish equipment on this project from the supplier that furnished documentation demonstrating this experience.

Submit the names, addresses, and telephone numbers of the references that can be contacted to verify the experience requirements.

- 3.7. **Documentation Requirements.** Provide at least two complete sets of operation and maintenance manuals in bound hard-copy format, as well as an electronic copy in Adobe PDF format on a CD/DVD or removable flash drive, that include the following.

- Complete and accurate wiring schematic diagrams.
- Complete installation procedures.
- Compliance matrix documenting conformance to this Specification.
- Complete performance specifications (functional, electrical, mechanical, and environmental) on the unit
- Complete parts list, including names of vendors for parts not identified by universal part number, such as JEDEC, RETMA, or EIA.
- Pictorial of component layout on circuit board.
- ID generator list of text display options.
- Complete maintenance and troubleshooting procedures.
- Complete stage-by-stage explanation of circuit theory and operation.
- Testing procedures and blank test forms.
- Recovery procedures for malfunction.
- Instructions for gathering maintenance assistance from manufacturer.
- Certification documentation verifying conformance with environmental and testing requirements contained in the Special Specification. Certifications may be provided by the manufacturer or independent laboratories.

Identify material that is copyrighted or proprietary in nature as part of the documentation submittal. The Department will comply with sensitive material, secure submittal documentation, and not distribute without written approval.

### 3.8. **Testing.**

3.8.1. **New Installations.** Unless otherwise shown on the plans, perform the following tests on the applicable equipment or systems.

3.8.1.1. **Test Procedures Documentation.** Provide five copies of the test procedures, including tests identified in Section 3.8.1.2. "Design Approval Test," Section 3.8.1.7. "Consequences of Test Failure," and blank data forms, to the Engineer for review and comment as part of material documentation requirements for each test required on this project. Include the sequence of the tests in the procedures. The Engineer will comment, approve, or reject test procedures within 30 days after Contractor submittal of test procedures. Contractor must resubmit if necessary rejected test procedures for final approval within 10 days. Review time is in calendar days. Conduct all tests in accordance with the approved test procedures.

Record test data on the data forms, as well as quantitative results. No bid item measurement or payment will be made until the Engineer has verified the test results meet the minimum requirements of the Specification. The data forms for all tests, except design approval tests, must be signed by an authorized representative of the Contractor.

Provide written notice within 48 hr. of discovery of any testing discrepancy identified during testing by the Contractor. Furnish data forms containing the acceptable range of expected results as well as the measured values.

3.8.1.2. **Design Approval Test.** Conduct a design approval test on one randomly selected unit from the prototype design manufacturing run. If only one design prototype is manufactured, perform this test on that unit. If supplying multiple types of equipment, provide and test a sample of each type.

Certification from an independent testing laboratory of a successfully completed design approval test is acceptable. Ensure that the testing by this laboratory is performed in accordance with this Specification. Failure of independent tests to comply with this Specification will be grounds for rejection of any certification.

Provide a copy of the certification to the District in which this Contract is executed. The data forms for the design approval tests must be signed by an authorized representative (company official) of the equipment manufacturer or by an authorized representative of an independent testing facility.

Notify the Engineer 10 working days before conducting this testing. The Department may witness all the tests. Perform the following tests.

3.8.1.2.1. **Power Service Transients.** Provide equipment that meets the performance requirements specified herein when subjected to the power service transients as specified in NEMA TS2, Section 2.2.7.2, "Transient Tests (Power Service)." of the NEMA TS2 standard, most current version.

3.8.1.2.2. **Temperature and Condensation.** Provide equipment that meets the performance requirements specified herein when subjected to the following conditions in the order specified below.

- Stabilize the equipment at -30°F and test as specified in NEMA TS2, Section 2.2.7.3, "Low-Temperature Low-Voltage Tests," and Section 2.2.7.4, "Low-Temperature High-Voltage Tests." of the NEMA TS2 standard, most current version
- Allow the equipment to warm up to room temperature in an atmosphere with relative humidity of at least 40%. Operate the equipment for 2 hr., while wet, without degradation or failure.
- Stabilize the equipment at 165°F and test as specified in NEMA TS2, Section 2.2.7.5, "High-Temperature High Voltage Tests," and Section 2.2.7.6, "High-Temperature Low-Voltage Tests." of the NEMA TS2 standard, most current version

- 3.8.1.2.3. **Relative Humidity.** Provide equipment that meets the performance requirements specified herein within 30 min. of being subjected to a temperature of 165°F and a relative humidity of 18% for 48 hr.
- 3.8.1.2.4. **Vibration.** Provide equipment that shows no degradation of mechanical structure, soldered components, or plug-in components and operates in accordance with the manufacturer's equipment specifications after being subjected to the vibration tests as described in NEMA TS2, Section 2.2.8, "Vibration Test" of the NEMA TS2 standard, most current version.
- 3.8.1.2.5. **Power Interruption.** Provide equipment that meets the performance requirements specified herein when subjected to nominal input voltage variations as specified in NEMA TS2, Section 2.2.10., "Power Interruption Test." of the NEMA TS2 standard, most current version.
- 3.8.1.3. **Demonstration Test.** Conduct a demonstration test on applicable equipment at an approved Contractor facility. The Contractor may submit procedures and results from previous contracts in the same District as this Contract provided the materials and equipment are identical and results are less than 5 yr. old. Notify the Engineer 10 working days before conducting this testing. The Department may witness all the tests. Perform the following tests.
- 3.8.1.3.1. **Examination of Product.** Examine each unit carefully and document that the materials, design, construction, markings, and workmanship comply with this Specification.
- 3.8.1.3.2. **Continuity Tests.** Check the wiring to determine conformance with the requirements of the appropriate paragraphs of this Specification.
- 3.8.1.3.3. **Operational Test.** Operate each unit for at least 15 min. to permit equipment temperature stabilization and an adequate number of performance characteristics to ensure compliance with this Specification.
- 3.8.1.4. **Field Acceptance (Stand-Alone) Test.** Conduct a field acceptance test for each unit after installation as required by the Engineer to demonstrate compliance with the functional requirements of this Specification. Exercise all stand-alone (non-network) functional operations. Notify the Engineer 5 working days before conducting this test. The field acceptance test may consist of the following.
- 3.8.1.4.1. **Physical Construction.** Document physical construction is completed in accordance with the plans and Specification.
- 3.8.1.4.2. **Electrical and Communication.** Document that all connectors for grounding, surge suppression, and electrical distribution are tightened correctly. Document all power supplies and circuits are operating under the proper voltages. Document all power and communications cables are terminated correctly, secured inside the cabinet, and fitted with appropriate connectors.
- 3.8.1.4.3. **Video Signal.** For analog signal format, conduct an impedance test, through a short 75-ohm coaxial cable connected to an oscilloscope waveform monitor, to ensure 75-ohm output impedance to conform to NTSC standards.
- Using a digital, hand-held, battery-operated meter, conduct a test and measure the following video signal characteristics, if applicable.
- 3.8.1.4.3.1. **Sync.** Document the amplitude of the video synchronizing pulse and check for correct video level, coaxial cable continuity, and correct termination at 40 IRE.
- 3.8.1.4.3.2. **Luminance.** Document the white level and correct brightness setting at 100 IRE.
- 3.8.1.4.3.3. **Composite.** Document the overall amplitude of the video signal is at 140 IRE or 1 V peak to peak.
- 3.8.1.4.3.4. **Color Burst.** Document color burst amplitude at 40 IRE.

- 3.8.1.4.3.5. **Ground Loop.** Document that no ground loop exists in the video picture. Ground loop voltages in a video signal cause bars to be present on the video picture.
- Document video image is present and free of oversaturation and any other image defect in color and monochrome modes.
- Document video support of uni-cast and multi-cast video transmission modes.
- Document the video signal from the camera is present and of consistent quality at all connection points between the camera, the cabinet, and any video conversion hardware.
- 3.8.1.4.4. **Communication.** For digital camera models, document network connection to the camera by ping or Telnet session from a remote PC.
- 3.8.1.4.5. **Pan-Tilt Mechanism.** Exercise pan, tilt, zoom, and focus on all directions, and execute at least three other unique programming commands, specified by the Department, to ensure that the communication link between the cabinet and the camera is functioning properly.
- 3.8.1.5. **System Integration Test.** Conduct a system integration test on the complete functional system. Demonstrate all control and monitor functions for each system component for 72 hr. Notify the Engineer 10 working days before conducting this testing. The Department may witness all the tests.
- Provide systems integration test procedures for proper adjustment and calibration of subsystem components. Proper adjustment and calibration involve documenting settings used to meet functional requirements while providing a margin for adjustment when future conditions change. Use the Department control software (when available) to perform subsystem testing. At minimum, use this software to verify commands and confirmations, as well as detector actuations and occupancy dwell time. The Contractor must be familiar with any existing Department equipment and software.
- The failure of any one component material or equipment item in a system integration test is justification for rejecting the entire subsystem. Each subsystem component must function as a complete integrated subsystem for a minimal continuous 72-hr. period during the system integration test.
- 3.8.1.6. **Final Acceptance Test.** Following completion of the demonstration test, stand-alone test, and system integration test for all subsystems, provide completed data forms containing all the data taken, including quantitative results for all tests, a set of as-built working drawings, and a written request to begin a data communication and final acceptance test. Provide as-built working drawings indicating the actual material, equipment, and construction of the various subsystem components, including established and calculated XY coordinates based on project control points, when shown on the plans. Perform field surveying and calculations under the supervision of and sealed by a licensed land surveyor.
- Within 10 calendar days of the request, execute a data communications test using a Department-supplied software program or Contractor-supplied software approved by the Department. The data communications test may be executed by the Engineer or the Contractor with prior approval. The purpose of this test is to verify that the communications plant will operate with application software provided by the State.
- Perform the data communications test for 72 hr. If a message error or component failure occurs anywhere in the network, resume the test once repairs are completed. All components of the communications network must operate as an integral system for the duration of the test.
- A message error is defined as the occurrence of a parity error, framing error, or data error in any component of the message. The error-free message rate is defined as the ratio of the number of messages in which no message error occurs to the number of messages transmitted. The error-free message rate must exceed 99.99% for acceptable transmission quality, for the system and each component of the network.

Provide all additional test results for review once a successful data communications test has been completed. If all the requirements of this Specification have been satisfied, Contract time must stop, and all subsystems must be placed into operation and operate as a complete system for 90 days.

Notify the Engineer of any defects suspected in integration or function of material or equipment. Investigate any suspected defects and correct if necessary. Provide a report of finding within 2 calendar days of notice of any suspected defects. Describe the nature of any defects reported and any corrective action taken in the report. The integrated subsystems must operate defect-free as a single complete system for at least 72 hr. during a 30-calendar day review period. If the number of defects or frequency of failures prevents any subsystems from operating as described above, the Engineer may reject the entire subsystems integration test results and resume Contract time. Provide any necessary corrections and resubmit subsystems integration test results and a request to begin a final acceptance test that may include as-built plans and a data communications test.

The CCTV field equipment under this Specification will not be accepted until the system, including all subsystems, has operated satisfactorily for 90 days and in full compliance with the plans and Specifications after approval of all submitted test results and reports.

- 3.8.1.7. **Consequences of Test Failure.** If a unit fails a test, submit a report describing the nature of the failure and the actions taken to remedy the situation before modification or replacement of the unit. If a unit requires modification, correct the fault, and then repeat the test until successfully completed. Correct minor discrepancies within 30 days of written notice. If a unit requires replacement, provide a new unit, and then repeat the test until successfully completed. Major discrepancies that will delay receipt and acceptance of the unit will be enough cause for rejection of the unit.

Failure to satisfy the requirements of any test is considered a defect, and the equipment is subject to rejection. The rejected equipment may be offered again for retest provided all noncompliance has been corrected.

If a failure pattern develops in similar units within the system, implement corrective measures, including modification or replacement of units, on all similar units within the system as directed. Perform the corrective measures without additional cost or extension of the Contract period.

- 3.8.1.7.1. **Consequences of Design Approval Test Failure.** If the equipment fails the design approval test, correct the fault within 30 days and then repeat the design approval test until successfully completed.
- 3.8.1.7.2. **Consequences of Demonstration Test Failure.** If the equipment fails the demonstration test, correct the fault within 30 days and then repeat the demonstration test until successfully completed.
- 3.8.1.7.3. **Consequences of Field Acceptance (Stand-Alone) Test Failure.** If the equipment fails the stand-alone test, correct the fault within 30 days and then repeat the stand-alone test until successfully completed.
- 3.8.1.7.4. **Consequence of System Integration Test Failure.** If the equipment fails the system integration test, correct the fault within 30 days and then repeat the system integration test until successfully completed.
- 3.8.1.7.5. **Consequences of Final Acceptance Test Failure.** If a defect within the system is detected during the final acceptance test, document and correct the source of failure. Once corrective measures are taken, monitor the point of failure until a 30-consecutive-day period free of defects is achieved.

If after completion of the initial test period the system downtime exceeds 72 hr. or individual points of failure have not operated for 30 consecutive days free of defects, extend the test period by an amount of time equal to the greater of the downtime more than 72 hr. or the number of days required to complete the performance requirement of the individual point of failure.

- 3.8.2. **Relocation and Removal.**



- 3.8.2.1. **Pre-Test.** Provide five copies of the test procedures, including tests of the basic functionality of the unit and blank data forms, to the Engineer for review and comment as part of material documentation requirements. Functionality tests may include, but are not limited to, physical inspection of the unit and cable assemblies, lens iris and zoom control, video signal, and pan-tilt mechanism. Include the sequence of the tests in the procedures along with acceptance thresholds. The Engineer will comment, approve, or reject test procedures within 30 days after Contractor submittal of test procedures. Contractor must resubmit if necessary rejected test procedures for final approval within 10 days. Review time is in calendar days. Conduct all tests in accordance with the approved test procedures.

Conduct basic functionality testing before removal of CCTV field equipment. Test all functional operations of the equipment in the presence of Contractor and Department representatives. Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment will become the responsibility of the Contractor until accepted by the Department. Compare test data before removal and test data after installation. The performance test results after relocation must be equal to or better than the test results before removal. Repair or replace those components within the system that failed after relocation but passed before removal.

- 3.8.2.2. **Post-Test.** Testing of the CCTV field equipment is to relieve the Contractor of system maintenance. The Contractor will be relieved of the responsibility for maintenance of the system in accordance with Item 7, "Legal Relations and Responsibilities," after a successful test period. The Contractor is not required to pay for electrical energy consumed by the system.

After all existing CCTV field equipment has been installed, conduct approved continuity, stand-alone, and equipment system tests. Furnish test data forms containing the sequence of tests, including all the data taken as well as quantitative results for all tests. Submit the test data forms at least 30 days before the day the tests are to begin. Obtain approval of test procedures before submission of equipment for tests. Send at least one copy of the data forms to the Engineer.

Conduct an approved stand-alone test of the equipment installation at the field site. At minimum, exercise all stand-alone (non-network) functional operations of the field equipment with all the equipment installed per the plans as directed. Complete the approved data forms with test results and submit to the Engineer for review and either acceptance or rejection of equipment. Provide at least 30 working days' notice before all tests to permit the Engineer or their representative to observe each test.

The Department will conduct approved CCTV field equipment system tests on the field equipment with the central equipment. The tests must, at minimum, exercise all remote control functions and display the return status codes from the controller.

If any unit fails to pass a test, prepare and deliver a report to the Engineer. Describe in the report the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test until the unit passes successfully, at no additional cost to the Department or extension of the Contract period.

- 3.9. **Warranty.** Warrant the equipment against defects or failure in design, materials, and workmanship for at least 3 yr. or in accordance with the manufacturer's standard warranty if that warranty period is greater. The start date of the manufacturer's standard warranty will begin after the equipment has successfully passed all tests contained in the final acceptance test plan. Any CCTV field equipment with less than 90% of its warranty remaining after the final acceptance test is completed will not be accepted by the Department. Guarantee that equipment furnished and installed for this project performs according to the manufacturer's published specifications. Assign, to the Department, all manufacturer's normal warranties or guarantees on all electronic, electrical, and mechanical equipment, materials, technical data, and products furnished for and installed on the project.

CCTV field equipment must be repaired or replaced at the Contractor's expense before completion of the final acceptance test plan in the event of a malfunction or failure. Furnish replacement parts for all equipment within 10 days of notification of failure by the Department.

- 3.10. **Training.** Conduct a training class on installation, operations, programming hardware settings, IP programming, port settings, testing, maintenance, troubleshooting, and repair of all equipment specified herein for at least 24 hr., unless otherwise directed, for up to 10 representatives designated by the Department. Submit to the Engineer for approval 10 copies of the training material at least 30 days before the training begins. Conduct training within the local area unless otherwise authorized. Consider operations using Department's Lonestar software when developing training modules.

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#### 4. MEASUREMENT

This Item will be measured by each CCTV field equipment unit and mounting apparatus furnished, installed, relocated, or removed, of the types specified as shown on the plans, or as directed.

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#### 5. PAYMENT

- 5.1. **Furnish and Install.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "CCTV Field Equipment (Analog)," "CCTV Field Equipment (Digital)," and "CCTV Field Controller." This price is full compensation for making fully operational CCTV field equipment, including any voltage converters or injectors; cables and connectors as shown on the plans; and all documentation, testing, training, software, equipment, labor, materials, tools, and incidentals.
- The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for CCTV field equipment mounting assemblies will be paid for at the unit price bid for "CCTV Mount (Pole)," "CCTV Mount (Post)," "CCTV Mount (Wall)," "CCTV Mount (Parapet)," "CCTV Mount (Pendant)," and "CCTV Mount (Mast)." This price is full compensation for furnishing and installing mounting bracket assemblies; mounting bracket hardware; and all equipment, labor, materials, tools, equipment, and incidentals necessary to mount CCTV field equipment to mounting structures as shown on the plans.
- 5.2. **Install Only.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "CCTV Field Equipment (Analog) (Install Only)" and "CCTV Field Equipment (Digital) (Install Only)." This price is full compensation for making fully operational CCTV field equipment, including any voltage converters or injectors; furnishing and installing additional cables and connectors as shown on the plans; and all documentation, testing, training, software, equipment, labor, materials, tools, and incidentals.
- 5.3. **Relocate.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for relocation of CCTV field equipment will be paid for at the unit price bid for "Relocate CCTV Field Equipment." This price is full compensation for relocating and making fully operational existing CCTV field equipment as shown on the plans; furnishing and installing additional cables or connectors as shown on the plans; testing, delivery, and storage of components designated for salvage or reuse; and all testing, training, software, equipment, labor, materials, tools, and incidentals.
- 5.4. **Remove.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" for removal of CCTV field equipment will be paid for at the unit price bid for "Remove CCTV Field Equipment." This price is full compensation for removing existing CCTV field equipment as shown on the plans; removal of cables and connectors; testing, delivery, and storage of components designated for salvage; and all testing training, software, equipment, labor, materials, tools, and incidentals.

# Special Specification 6027

## Intelligent Transportation System (ITS) Fiber Optic Cable



### 1. DESCRIPTION

Furnish, install, relocate, and remove Intelligent Transportation System (ITS) fiber optic cable, fiber patch panels, and splice enclosures as shown on the plans.

### 2. MATERIALS

- 2.1. **General Requirements.** Provide, assemble, fabricate, and install materials that are new, corrosion-resistant, and in conformance with the details shown on the plans and in these Specifications.

Furnish, install, splice, and test new fiber optic cable. Provide splicing kits, fiber optic cable caps, connectors, moisture or water sealants, terminators, splice trays, fiber optic jumpers, pig tails, fiber patch panels, fiber interconnect housing, and accessories necessary to complete the fiber optic network. Provide equipment necessary for installation, splicing, and testing.

- 2.2. **Cable Requirements.** Furnish all-dielectric, dry-filled, gel-free, loose tube fiber optic cable, with low water peak, suitable for underground conduit environments or aerial applications.

Furnish self-supporting, all-dielectric, dry-filled, gel-free, loose tube fiber optic cable, with low water peak suitable for aerial applications when not lashing to strand cable.

All fiber optic cable furnished must have a design life of 20 yr. when installed to the manufacturer's specifications.

Splice fiber optic cables in ground boxes, field cabinets, or buildings. Terminate fiber optic cables in field cabinets and buildings that comply with the details shown on the plans and in this Specification.

Provide fiber optic cable from the same manufacturer and confirm the manufacturer is ISO-9001 certified. Ensure the cables meet or exceed United States Department of Agriculture Rural Utilities Service (RUS) CFR § 1755.900, ANSI/ICEA S-87-640, and Telecommunications Industry Association/EIA- (TIA/EIA-) 492CAAB.

- 2.3. **Optical Requirements.**

- 2.3.1. **Optical Fiber.** Provide ITU G.652 single-mode fiber optic cable with a core diameter of 8.3 microns ( $\mu\text{m}$ )  $\pm 0.7 \mu\text{m}$  and a cladding diameter of  $125 \mu\text{m} \pm 0.7 \mu\text{m}$ . Provide optical fiber made of glass consisting of a silica core surrounded by concentric silica cladding, free of imperfections and inclusions.

- 2.3.2. **Core and Clad Concentricity.** Provide an offset between the center of the core and cladding less than  $0.5 \mu\text{m}$ .

- 2.3.3. **Mode Field Diameter.** Provide single-mode fiber optic cable with the effective area or mode field diameter of the fiber  $9.2 \mu\text{m} \pm 0.4 \mu\text{m}$  at 1,310 (nanometers [nm]) and  $10.5 \mu\text{m} \pm 1.0 \mu\text{m}$  at 1,550 nm.

- 2.3.4. **Primary Coating.** Provide fiber with a coating diameter of  $250 \mu\text{m} \pm 15 \mu\text{m}$ .

- 2.3.5. **Attenuation.** Provide single-mode fiber optic cable with nominal attenuation of 0.35 dB/km maximum at a wavelength of 1,310 nm and nominal attenuation of 0.25 dB/km maximum at a wavelength of 1,550 nm.
- Attenuation at water peak must be less than 0.35 dB/km at 1,383 nm.
- 2.3.6. **Bandwidth and Dispersion.** Provide single-mode fiber optic cable with a maximum dispersion of:
- 3.2 ps/nm-km at a wavelength of 1,310 nm, and
  - 18 ps/nm-km at a wavelength of 1,550 nm.
- Zero-dispersion wavelength must be between 1,300 nm and 1,324 nm, and the zero-dispersion slope at the zero-dispersion wavelength must be less than 0.092 ps/(nm<sup>2</sup>·km).
- The cutoff wavelength must be less than 1,260 nm for single mode fibers specified to operate at 1,310 nm. The cutoff wavelength must be less than 1,480 for single mode fibers specified to operate only at 1,550 nm or higher.
- The macrobend attenuation per 100 turns must not exceed 0.05 dB at 1,310 nm and 1,550 nm.
- 2.3.7. **Mechanical Requirements (Tensile Strength).** Provide a cable withstanding a pulling tension of 600 lbf without increasing attenuation by more than 0.8 dB/mi when installing in underground conduit systems in accordance with EIA-455-33A. Conduct an impact test in accordance with TIA/EIA-455-25C (FOTP-25) and a compression load test in accordance with TIA/EIA-455-41A (FOTP-41).
- For -dielectric self-supporting cable (ADSS) and other self-supporting cables, meet tensile strength requirements in accordance with Section 25, "Loading of Grades B and C," of the NESC, for the maximum span and sag information as shown on the plans for aerial construction.
- 2.3.8. **Bend Radius.** Provide a cable withstanding a minimum bending radius of 10 times its outer diameter during operation, and 20 times its outer diameter during installation, removal, and reinstallation without changing optical fiber characteristics. Test the cable in accordance with EIA-455-33A.
- 2.3.9. **Buffering.** Use a buffering tube or jacket with an outer diameter of 1.0–3.0 mm containing 12 individual fiber strands. The fibers must not adhere to the inside of the buffer tube.
- 2.3.10. **Color Coding.** Provide fiber and buffer tubes with a color coating applied to them by the manufacturer. Coating must not affect the optical characteristics of the fiber. Provide color configuration in accordance with TIA/EIA-598 as follows:
- |             |            |              |
|-------------|------------|--------------|
| ■ 1. Blue   | ■ 5. Slate | ■ 9. Yellow  |
| ■ 2. Orange | ■ 6. White | ■ 10. Violet |
| ■ 3. Green  | ■ 7. Red   | ■ 11. Rose   |
| ■ 4. Brown  | ■ 8. Black | ■ 12. Aqua   |

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### 3. EQUIPMENT

- 3.1. **Cable Type.** Provide cables with a reverse oscillation or planetary stranding structure.

Jacket construction and group configuration should separate at splice points to cut and splice one set of fibers while the others remain continuous. Cable jackets must have a ripcord to aid in the removal of the outer jacket. Submit cable designs for approval.

Strand loose buffer tubes around a dielectric central anti-buckling strength member. Provide dielectric aramid or fiber glass strength members with specified strength for the cable. Provide cable with a water-blocking material that is non-hygroscopic, non-nutritive to fungus, non-conductive, non-toxic, and homogeneous. The water blocking material must comply with TIA/EIA-455-81B and 455-82B as well as TIA/EIA-455-98.

Ensure a polyethylene inner jacket is applied over the cable core, and that the entire cable is enclosed with a polyethylene outer jacket. Ensure the outer jacket contains black carbon to provide ultraviolet (UV) protection for the cable. Ensure each cable is marked with the manufacturer's name, the date of manufacture (mo. and yr.), the fiber count (example 48F SM), and sequential length markings at maximum 2-ft. increments, measured in U.S. units.

For aerial installation, provide standard fiber optic cable lashed to steel messenger cable or ADSS in accordance with the IEEE 1222 Standard for "Testing and Performance for All-Dielectric Self-Supporting (ADSS) Fiber Optic Cable for Use on Electric Utility Power Lines," or most current version. Provide ADSS cable in conformance with the maximum span distance, weather load rating, and allowable sag as shown on the plans. "Figure 8" self-supporting cable with integrated messenger cable within the outer jacket for aerial installation is acceptable.

3.1.1. **Cable Size.** Furnish cables with a maximum diameter not exceeding 19 mm.

3.1.2. **Environmental Requirements.** Provide cable that functions in a temperature range from -40°F–158°F.

3.2. **Fiber Optic Accessories.**

3.2.1. **Splice Enclosures.** Furnish and install one of three types of underground splice enclosures at locations shown on the plans to accommodate the cables being spliced at that point. The types are as follows.

- **Type 1.** Four cable entry ports total—two ports to accommodate backbone fiber of up to 144 fibers and two ports for drop cables of up to 48 fibers.
- **Type 2.** Six cable entry ports total—four ports to accommodate backbone or arterial cables of up to 144 fibers and two ports for drop cables of up to 48 fibers.
- **Type 3.** Eight cable entry ports total—four ports to accommodate backbone or arterial cables of up to 144 fibers and four ports for drop cables of up to 48 fibers.

Provide the end cap of the canister splice closure with re-enterable quick-seal cable entry ports to accommodate additional branch cables or backbone cables. Provide fiber optic splice enclosures with strain relief, splice organizers, and splice trays from the same manufacturer as the splice enclosure. Select the appropriate splice enclosure type based on the number of splices called for on the plans. Suspend splice closures off floor of the ground box and secure to cable rack assembly on side wall of ground box.

For end of reel splicing, use a fiber optic splice enclosure sized to accommodate full cable splice in one enclosure. Fiber optic splice enclosure must be of the same manufacturer as other supplied on a project.

Comply with the Telcordia Technologies' GR-711-CORE standard and applicable NEC requirements.

Contain optical fiber splices within a splice enclosure, providing storage for fiber splices, non-spliced fiber, and buffer tubes. Provide enough space inside the enclosure to prevent micro-bending of buffer tubes when coiled.

Ensure that the splice enclosure maintains the mechanical and environmental integrity of the fiber optic cable, encases the sheath opening in the cable, and organizes and stores optical fiber. Ensure hinges and latching devices are stainless steel or of a non-corrosive material designed for harsh environments. Ensure that the enclosure is airtight and prevents water intrusion. Ensure that splice enclosures allow re-entry and are hermetically sealed to protect internal components from environmental hazards and foreign material such as moisture, dust, insects, and UV light.

3.2.2. **Field Rack Mount Splice Enclosures.** Provide a 19-in. EIA rack-mounted splice enclosure module to hold spliced fibers as shown on the plans inside field equipment cabinets or buildings.

Splice or terminate fibers inside rack-mounted fiber optic splice enclosures. Provide an enclosed unit designed to house at least four cables, sized to accommodate the cables shown on the plans plus future expansion.

Provide splice enclosures containing mounting brackets with a minimum of four cable clamps. Install cable according to manufacturer recommendations for the cable distribution panel.

- 3.2.3. **Fiber Patch Panels.** Provide fiber patch panels that are compatible with the fiber optic cable being terminated and color-coded to match the optical fiber color scheme. Coil and protect a maintenance loop of at least 5 ft. of buffer tube inside the rack mount enclosure, patch panel, or splice tray. Allow for future splices in the event of a damaged splice or pigtail.

- 3.2.3.1. **Cabinet.** Terminate or splice fibers inside the compact and modular fiber patch panel in the cabinet. Provide fiber patch panel for installation inside a 19-in. EIA rack and sized appropriately to accommodate the fiber terminations shown on the plans or as directed. Furnish and install factory-pre-terminated simplex connector patch panel modules with integrated pigtail cable in a protective housing at locations called for in the plans to accommodate the cables being terminated at that point. Each module needs to have a minimum of six fiber termination or connection capabilities. Provide modules with a removable cover having six pre-connectorized fiber pigtails, interconnection sleeves, and dust caps installed by the manufacturer. Provide a 12-fiber or greater fusion splice tray capability housing, each tray holding 12 fusion splices as shown on the plans. Furnish patch panel housing with an epoxy fill material that is environmentally and temperature stable to permanently secure the connectors and the cable inside the housing to protect the fiber optic components from vibration and shock. Provide housing with strain relief boot around the exiting pigtail cable to provide bend radius protection and short-term retention of at least 200 lbf. Provide housing with integrated mounting notches. Provide patch panel with ST connectors and dust caps installed by the manufacturer. Stack splice trays on a rack to permit access to individual trays without disturbing other trays. Locate splice trays in a rack within a pull-out shelf. Protect the housing with doors capable of pivoting up or down. Document the function of each terminated or spliced fiber, along with the designation of each connector, on labels or charts located either on the inside or outside of the housing door. Provide labels or charts that are UV-resistant design for harsh environments and used inside field equipment cabinets. Use permanent marker or method of identification that can withstand harsh environments. Provide each housing with strain relief. Terminate single-mode fiber optic cable with SC connectors to the patch panels, unless otherwise shown on the plans. Document the designation of each connector on labels and charts. Place charts in the cabinet in an approved heavy plastic envelope.

Install the fiber patch panel as an integral unit as shown on the plans.

- 3.2.3.2. **Building.** Provide a fiber patch panel with a modular design allowing interchangeability of connector panel module housing and splice housing within the rack, as shown on the plans.

Provide the number of single-mode fibers, connector panel module housings, and splice housings for the patch panel unit in the building as shown on the plans.

Provide a fiber patch panel unit, installed at a height less than 7 ft., capable of housing eight connector panel module housings or eight splice housings. Protect the housing with doors capable of pivoting up or down and sliding into the unit.

Provide 12 snap-in simplex connector panel modules with each connector panel module housing, each module having six fiber termination or connector capabilities. Use a pre-assembled compact modular unit with a removable cover for the snap-in simplex connector panel module having six pre-connectorized fiber pigtails, interconnection sleeves, and dust caps installed by the manufacturer. Provide each connector panel module housing with a jumper routing shelf, storing up to 5 ft. (minimum) of cable slack for each termination within the housing. Provide the fiber distribution unit with strain relief.

Provide splice enclosure with 24-fusion splice tray capabilities, each splice tray holding 12 or more fusion splices. Stack splice trays on a rack to permit access to individual trays without disturbing other trays. Locate the rack on a pull-out shelf.

Document the function of each terminated or spliced fiber, along with the designation of each connector, on labels or charts located either on the inside or outside of the housing door. Provide labels or charts that are UV-resistant design for harsh environments and used inside field equipment cabinets. Use permanent marker or method of identification can must withstand harsh environments. Also provide documentation of the function of each terminated or spliced fiber along with the designation of each connector on charts or diagrams matching the fiber patch panel configuration and locate inside cabinet document drawer. Provide documentation at the conclusion of fiber terminations and splicing.

Allow terminations only in the fiber interconnect housings placed in the cabinets as shown on the plans or as directed.

- 3.2.4. **Splice Trays.** Use splice tray and fan-out tubing kit for handling each fiber. Provide a splice tray and 12 fiber fan-out tubing with each housing for use with the 250- $\mu$ m coated fiber. The fan-out must occur within the splice tray (no splicing of the fiber required). Allow each tube to fan out each fiber for ease of connectorization. Label fibers in splice tray on a log sheet, securing it to the inside or outside of the splice tray. Provide UV-resistant log sheet suitable for harsh environments, located inside field cabinets or splice enclosures. Provide fan-out tubing with three layers of protection consisting of fluoropolymer inner tube, a dielectric strength member, and a 2.9-mm minimum outer protective PVC orange jacketing.

- 3.2.5. **Jumpers.** Provide fiber optic jumper cables to cross-connect the fiber patch panel to the fiber optic transmission equipment as shown on the plans or as directed. Match the core size, type, and attenuation from the cable to the simplex jumper. Use yellow jumpers and provide strain relief on the connectors. Provide fiber with a 900- $\mu$ m polymer buffer, Kevlar strength member, and a PVC jacket with a maximum outer jacket of 2.4 mm in diameter.

Provide 5-ft. long jumpers, unless otherwise shown on the plans. On the patch panel end of each jumper, provide an SC connector. On the opposite end of the jumper, provide a connector that is suitable to be connected to the fiber optic transmission equipment selected. When providing jumpers for existing equipment, provide connectors suitable to be connected to patch panels and fiber optic transmission equipment in use. Jumpers must have factory-terminated connectors. Field terminations of connectors is prohibited.

- 3.2.6. **Fiber Optic Cable Storage Device.** Furnish fiber optic cable storage device designed to store slack fiber optic cable by means of looping back from device to device on an aerial run. Furnish storage devices that are non-conductive and resistant to fading when exposed to UV sources and changes in weather. Ensure storage devices have a captive design such that fiber-optic cable can be supported when installed in the aerial rack apparatus and the minimum bending radius cannot be violated. Provide stainless steel attachment hardware for securing storage devices to messenger cable and black UV-resistant tie-wraps for securing fiber-optic cable to storage device. Provide tie-wraps that do not damage fiber when securing to storage device. Ensure storage devices are stackable so multiple cable configurations are possible. Ensure cable storage devices furnished are compatible with the type of aerial cable furnished and installed.

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## 4. CONSTRUCTION

Install fiber optic cable in accordance with United States Department of Agriculture Rural Utilities Service CFR § 1755.900 specifications for underground and aerial plant construction without changing the optical and mechanical characteristics of the cables.

Use available machinery, jacking equipment, cable pulling machinery with appropriate tension monitors, splicing and testing equipment, and other miscellaneous tools to install cable, splice fibers, attach connectors, and mount hardware in cabinets employed with the above "Mechanical Requirements." Do not jerk the cable during installation. Adhere to the maximum pulling tensions of 600 lbf. and bending radius of 20 times the cable diameter or as specified by the manufacturer, whichever is greater.

Use installation techniques and fixtures that provide for ease of maintenance and easy access to components for testing and measurements. Take precautions necessary to ensure the cable is not damaged

during transport, storage, or installation. Protect as necessary the cables to prevent damage if being pulled over or around obstructions along the ground.

Where plans call for removal of existing cable to salvage or reuse elsewhere, take care to prevent damaging the existing cable during removal, adhering to the requirements for installation that pertain to removal.

- 4.1. **Packaging, Shipping, and Receiving.** Ensure the completed cable is packaged for shipment on reels. Ensure the cable is wrapped in weather- and temperature-resistant covering. Ensure both ends of the cable are sealed to prevent the ingress of moisture.

Securely fasten each end of the cable to the reel to prevent the cable from coming loose during transit. Provide 6 ft. of accessible cable length on each end of the cable for testing. Ensure that the complete outer jacket marking is visible on these 6 ft. of cable length. Provide each cable reel with a durable weatherproof label or tag showing the Manufacturer's name, the cable type, the actual length of cable on the reel, the Contractor's name, the contract number, and the reel number. Include a shipping record in a weatherproof envelope showing the above information and include the date of manufacture, cable characteristics (e.g., size, attenuation, and bandwidth), factory test results, cable identification number, and any other pertinent information. Ensure that cable delivered has been manufactured within 6 mo. of the delivery date. Ensure that the minimum hub diameter of the reel is at least 30 times the diameter of the cable. Provide the cable in one continuous length per reel with no factory splices in the fiber. Provide a copy of the transmission loss test results as required by the TIA/EIA-455-61 standard, as well as results from factory tests performed before shipping.

- 4.2. **Installation in Conduit.** Install fiber optic cable in conduits in a method that does not alter the optical properties of the cable. If required, relocate existing cable to allow new fiber optic cable routing in conduits.

When pulling the cable, do not exceed the installation bending radius. Use rollers, wheels, or guides that have radii greater than the bending radius. Use a lubricating compound to minimize friction. Use fuse links and breaks to ensure that the cable tensile strength is not exceeded. Measure the pulling tension with a mechanical device and mechanism to ensure the maximum allowable pulling tension of 600 lbf. is not exceeded at any time during installation.

Provide a single 1/C #14 XHHW insulated tracer wire in conduit runs where fiber optic cable is installed. Provide cable that is UL-listed solid copper wire with orange color low-density polyethylene insulation suitable for conduit installation and with a voltage rating of 600 V. When more than one fiber optic cable is installed through a conduit run, only one tracer wire is required. Fuse or join tracer wires used in backbone, arterial, and drop runs, resulting in one continuous tracer wire. Terminate tracer wire at fiber optic test markers or equipment cabinets as identified in the plans for access to conduct a continuity test. Tracer wire will be paid for under Item 620, "Electrical Conductors."

Provide flat pull cord with a minimum tensile strength of 1,250 lb. in each conduit containing fiber optic cable. A traceable pull cord, with a metallic conducting material integral to the pull cord, may be substituted for a 1/C #14 tracer wire only with approval from the Department.

Seal conduit ends with a two-part urethane after installation of fiber optic cable.

- 4.3. **Cable Installation Between Pull Boxes and Cabinets or Buildings.** Do not break or splice a second fiber optic cable to complete a run when pulling the cable from the nearest ground box to a cabinet or building. Pull enough length of cable in the ground box to reach the designated cabinet or building. Pull the cable through the cabinet to coil, splice, or terminate the cable in the cabinet or building. Do not bend the cable beyond its minimum bend radius of 20 times the diameter.

Coil and tie cable inside cabinet, building, or boxes for future splicing or termination as shown in the plans. Cut off and remove the first 10 ft. of pulled or blown fiber stored. Coat the open end of the coiled cable with protective coating and provide a dust cap.



- 4.4. **Aerial Installation.** Use pole attachment hardware and roller guides with safety clips to install aerial run cable. Maintain maximum allowable pulling tension of 600 lb. ft. during the pulling process for aerial run cable by using a mechanical device. Do not allow cable to contact the ground or other obstructions between poles during installation. Do not use a motorized vehicle to generate cable pulling forces. Use a cable suspension clamp when attaching cable tangent to a pole. Select and place cable blocks and corner blocks so as not to exceed the cable's minimum bending radius. Do not pull cable across cable hangers. Store 100 ft. of fiber optic cable slack, for future use, on cable runs that are continuous, without splices or where specified on the plans. Store spare fiber optic cable on fiber-optic cable storage racks of the type compatible with the aerial cable furnished. Locate spare cable storage in the middle of spans between termination points. Do not store spare fiber-optic cable over roadways, driveways, or railroads.

Install standard cable on timber poles by lashing to steel messenger cable. Provide steel messenger cable in accordance with Item 625, "Zinc Coated Steel Wire Strand." Install all-dielectric self-supporting cable (ADSS) cable on timber poles using clinching clamp with cable hanger. Install aerial run cable in accordance with these Specifications and as shown on the plans.

Locate aerial fiber in accordance with the NESC, Section 23, with respect to vertical clearances over the ground; between conductors carried on different supporting structures; and required separation distance of the cable from bridges, buildings, and other structures.

- 4.5. **Blowing Fiber Installation.** Use either the high-air speed blowing (HASB) method or the piston method. When using the HASB method, ensure that the volume of air passing through the conduit does not exceed 600 cu. ft. per min. or the conduit manufacturer's recommended air volume, whichever is more restrictive. When using the piston method, ensure that the volume of air passing through the conduit does not exceed 300 cu. ft. per min. or the conduit manufacturer's recommended air volume, whichever is more restrictive.

- 4.6. **Slack Cable.** Pull and store excess cable slack inside ITS ground boxes as shown on the plans. The following are minimum required lengths of slack cable, unless otherwise directed.

- Ground boxes (No Splice)—25 ft.
- Ground boxes (With Splice)—100 ft.
- Future splice point—100 ft.
- Cabinets—25 ft.

Note that the slack is to be equally distributed on either side of the splice enclosure and secured to cable storage racks within the ground boxes.

Provide proper storage of slack cable, both long-term and short-term. Neatly bind cables to be spliced together from conduit to splice enclosure with tape. Do not over-bind by pinching cable or fiber. Ground and bond the armor when installing armored fiber optic cable. Meet NEC and NESC requirements for grounding and bonding when using armored cable.

- 4.7. **Removal, Relocation, and Reinstallation of Fiber Optic Cable.** Remove fiber optic cable from conduit as shown on plans. Use care in removing existing fiber optic cables so as not to damage them. Provide cable removal and reinstallation procedures that meet the minimum bending radius and tensile loading requirements during removal and reinstallation so that optical and mechanical characteristics of the existing cables are not degraded. Use entry guide chutes to guide the cable out of and into existing or proposed conduit, using lubricating compound where possible to minimize cable-to-conduit friction. Use corner rollers (wheels) with a radius not less than the minimum installation bending radius of cable. Dispose of removed fiber optic cable unless plans show for it to be re-used (relocated/re-installed) or salvaged and delivered to the Department. See the plans for details. Test each optical fiber in the cable for performance and for loss at existing terminations or splices before cutting and removal. Retest following removal and following reinstallation to ensure the removal and reinstallation have not affected the optical properties of the cable. Any fiber optic cable damaged by the Contractor that is to be re-used must be replaced by the Contractor at no cost to the Department, with new fiber optic cable meeting approval. The Engineer reserves the right to reject the fiber based on the test results.

Maintain the integrity of existing cables, conduit, junction boxes, and ground boxes contiguous to the section of cables to be removed. Replace or repair any cables, conduit, junction boxes, or ground boxes damaged during work at the Contractor's expense. The replacement or repair method must be approved before implementation.

- 4.8. **Splicing Requirements.** Fusion-splice fibers as shown on the plans, in accordance with TIA/EIA-568 and TIA/EIA-758.

Use fusion splicing equipment recommended by the cable manufacturer. Clean, calibrate, and adjust the fusion splicing equipment at the start of each shift. Use splice enclosures, organizers, cable end preparation tools, and procedures compatible with the cable furnished. Employ local injection and detection techniques and auto fusion time control power monitoring to ensure proper alignment during fusion splicing.

When approaching end of shift or end of day, complete splicing at the location. Package each spliced fiber in a protective sleeve or housing. Re-coat bare fiber with a protective 8 RTV, gel or similar substance, before application of the sleeve or housing.

Perform splices with losses no greater than 0.10 dB. Use an Optical Time Domain Reflectometer (OTDR) to test splices in accordance with Section 4.13.1.1., "OTDR Tests." Record splice losses on a tabular form and submit for approval.

- 4.9. **Termination Requirements.** Provide matching connectors with 900- $\mu$ m buffer fiber pigtails of enough length and splice the corresponding optical fibers in cabinets where the optical fibers are to be connected to terminal equipment. Buffer, strengthen, and protect pre-terminated fiber assemblies (pigtails) with dielectric aramid yarn and outer PVC jacket to reduce mishandling that can damage the fiber or connection. Pigtails must be duplex-stranding with a yellow PVC outer jacket. Fiber optic pigtails must be factory-terminated with SC connectors, unless otherwise shown on the plans. When providing pigtails for existing equipment, provide connectors suitable to be connected to patch panels and fiber optic transmission equipment in use.

Connectors must meet the TIA/EIA-568 and TIA/EIA-758 standards and be tested in accordance with the Telcordia/Bellcore GR-326-CORE standard. When tested according to TIA/EIA-455-171 (FOTP-171), ensure that the connectors test to an average insertion loss of less than or equal to 0.4 dB and a maximum loss of less than or equal to 0.75 dB for any mated connector. Maintain this loss characteristic for a minimum of 500 disconnections and reconnections with periodic cleanings per EIA-455-21A (FOTP-21). Qualify and accept connectors by connector-to-connector mating using similar fibers. Ensure that the connector operating range is -40°F–167°F. Provide connectors with a yellow color body or boot.

Test connections at the patch panel and splices made between cables to pigtails with the OTDR to verify acceptable losses.

Remove 5 ft. of unused optical fibers at the ends of the system from the buffer tubes and place coiled fibers into a splice tray. Clean the water blocking compound from optical fibers destined for splice tray use.

Install cable tags at splice points identifying key features of each cable, such as cable name or origin and destination and fiber count. Ensure tags are self-laminating or water-resistant. Print the information onto the tags electronically, or write neatly using a permanent marker. Locate tags just before entrance into splice enclosure.

- 4.10. **Mechanical Components.** Provide stainless steel external screws, nuts, and locking washers. Do not use self-tapping screws unless approved. Provide corrosion-resistant material parts and materials resistant to fungus growth and moisture deterioration.

- 4.11. **Experience Requirements.**

- 4.11.1. **Installing Fiber Optic Cable.** The Contractor or designated subcontractor involved in the installation of the fiber optic cable must meet the experience requirements in conformance with the following.

- At least 3 yr. of continuous existence offering services in the installation of fiber optic cable through an outdoor conduit system or aerial and terminating in ground boxes, field cabinets, enclosures, or buildings.
- Completion of at least three projects where the personnel pulled at least 5 mi. in length of fiber optic cable through an outdoor conduit system or aerial for each project. The completed fiber optic cable systems must have been in continuous satisfactory operation for at least 1 yr.

4.11.2. **Splicing and Testing of Fiber Optic Cable.** The Contractor or designated subcontractor involved in the splicing and testing of fiber optic cable must meet the experience requirements in conformance with the following.

4.11.2.1. **Minimum Experience.** At least 3 yr. continuous existence offering services in the fields of fusion splicing and testing of fiber optic cable installed through a conduit system and terminating in ground boxes, field cabinets, enclosures, or buildings. Experience must include the following.

- Termination of a minimum of 48 fibers within a fiber distribution frame
- OTDR testing and measurement of end-to-end attenuation of single-mode and multimode fibers
- System troubleshooting and maintenance
- Training of personnel in system maintenance
- Use of watertight splice enclosures
- Fusion splicing of fiber optic cable that meets the tolerable decibel (dB) losses within the range of 0.05 dB–0.10 dB for single mode

4.11.2.2. **Completed Projects.** At least three completed projects where the personnel performed fiber optic cable splicing and terminations, system testing, and system troubleshooting and maintenance during the project, and provided training on system maintenance. Each project must have consisted of at least 5 mi. of fiber optic cable installed and measured by project length, not linear feet, of fiber installed. The completed fiber optic cable systems must have been in continuous satisfactory operation for at least 1 yr.

4.12. **Documentation Requirements.** Provide at least two complete sets of fiber optic equipment submittal literature documenting compliance with the requirements of this Specification, including operation and maintenance manuals in bound hard copy format and an electronic version in Adobe PDF format on a CD/DVD or removable flash drive, including the following.

- Fiber optic cable literature consisting of manufacturer specification and cut sheets
- Fiber optic equipment literature consisting of manufacturer specification and cut sheets for splice enclosures, patch panels, splice trays, jumpers, cable storage devices, and fiber optic labeling devices
- Complete factory performance data documenting conformance with the performance and testing standards referenced in this Specification, including pre-installation test results of the cable system
- Installation, splicing, terminating, and testing plan and procedures
- Documentation of final terminated or spliced fibers, function, and equipment designation
- OTDR calibration certificate
- Post-installation, post-termination, subsystem, and final end-to-end test results
- Loss budget calculation and documentation
- Complete parts list, including names of vendors
- Complete maintenance and trouble-shooting procedures
- Proof of minimum experience and completed projects

4.12.1. **Installation Practice.** Submit for approval an electronic copy of the Contractor's installation practices 30 working days before installation. Submit installation practices and procedures and a list of installation, splicing, and test equipment used. Provide detailed field quality control procedures and corrective action procedures.

- 4.12.2. **Manufacturer's Certification.** Accompany each reel of fiber optic cable with the manufacturer's test data showing the conformance to the requirements in this Specification.
- 4.12.3. **Test Procedures.** Submit test procedures and data forms for the pre-installation, post-installation, subsystem, end-to-end test, and loss budget calculations for approval. Test procedures will require approval before performing tests. Submit one copy of data forms containing data and quantitative results, as well as an authorized signature. Submit a copy of the OTDR results as a hard copy or electronic copy in PDF format, including OTDR traces and clearly identifying each event (e.g., fusion splice, jumper, and connector) with the measured loss identified.
- 4.13. **Testing.** Perform tests in accordance with testing requirements in this Specification, USDA RUS CFR § 1755.900, and TIA/EIA-455-61 test specifications. For tests, provide test forms to be used that compare measured results with threshold values.

4.13.1. **Test Methods.**

- 4.13.1.1. **OTDR Tests.** Use the OTDR to measure fiber optic cable for overall attenuation (signal loss dB/km); measure fiber cable length; and identify fiber optic cable anomalies, such as breaks. Perform the following four OTDR tests.

- Pre-installation test (Acceptance test)
- Post-installation test
- Post-termination test
- Final end-to-end test

OTDR settings:

- generate a file name for each OTDR scan. The file name must indicate the location or direction from which the test was run, as well as the fiber number being tested;
- set the "A" cursor at the beginning of the fiber trace and set the "B" cursor at the end of the fiber trace. The distance to cursor "B" indicates the length of the fiber cable segment being measured;
- match the index of refraction to the index of the factory report;
- set the loss indicator to dB/km for the acceptance test;
- the reflectance is automatically set internally by the OTDR;
- set the pulse width at a medium range. Change the pulse width to a slow pulse width when an anomaly occurs on the fiber trace so that it can be examined closely;
- set the average at medium speed. Change the average to slow when an anomaly appears on the fiber trace to allow for closer examination of the anomaly; and
- set wavelength at two windows for single-mode cable: 1,310 nm and 1,550 nm.

Provide the current OTDR calibration certificate for the device used, showing the unit has been calibrated within the last year. Show settings on test result fiber scans.

- 4.13.1.2. **Pre-installation Tests.** Test and record the fiber optic cable at the site storage area before installation.

Conduct bi-directional OTDR tests for each fiber strand. Test each optical fiber in the cable from one end with an OTDR compatible with wavelength and fiber type. Check testing for length, point discontinuity, and approximate attenuation. Record each measurement by color, location, and type of fiber measured. Perform a measurement from the opposite end of that fiber in case a measurement cannot be made from one end. Wait for notification if loss per kilometer exceeds manufacturer's test data by more than 0.5 dB/km or point discontinuity greater than 0.05 dB.

Perform this test within 5 days from receipt of the fiber optic cable. Test overall attenuation (dB/km), total cable length, anomalies, and cable problems. Test cable at both wavelengths (1,310 nm and 1,550 nm for single-mode cable). Verify that the cable markings on the outer jacket are within 1% of the total cable length.

Compare factory test results with test results and return to manufacturer if test results are not identical to factory test results. If identical, document the test results. Deliver documentation for future reference.

- 4.13.1.3. **Post-Installation Tests.** Re-test and re-record each optical fiber in the cable after installation, before termination, for loss characteristics. Test both directions of operations of the fiber.

Immediately perform the post-installation test after the fiber optic cable has been installed. Test cable for overall attenuation, cable segment length, and evidence of damage or microbend with the OTDR. Replace any cable segment that is damaged during the test and document test results. Submit test results for approval.

Use the same OTDR settings for post-installation tests as the pre-installation tests.

- 4.13.1.4. **Post-Termination Tests.** Perform the post-termination test after the cable is terminated or spliced, including termination of fiber cable to fiber cable or fiber cable to fiber pigtail and fiber cable to patch panels. Check attenuation, fusion or termination point problems, and overall fiber cable segment. Determine if the attenuation and quality of the termination complies with these Specifications; if not, re-terminate the fiber and re-test until the Specification requirements are met. Test the fiber segment for attenuation and anomalies after termination acceptance. Document and submit test results after fiber segment acceptance.

- 4.13.1.5. **Subsystem Tests.** Perform network subsystem tests after integration to the fiber optic network. Test the capability of the fiber optic cable to transmit video and digital information from node to node. A node is defined as a communication cabinet, hub cabinet, surveillance cabinet, or hub building where network hub switches are located. Complete and submit approved data forms for approval.

Correct and substitute components in the subsystem if the subsystem tests fail and repeat the tests. Components may include cable, jumper, patch panel module, or connector.

Prepare and submit a report if a component was modified as result of the subsystem test failure. Describe in the report the failure and action taken to remedy the situation.

- 4.13.1.6. **Final End-to-End Test.** Perform final end-to-end test after fiber cable segments of the system are terminated using the OTDR and an optical Power Meter and Light Source (PMLS).

Perform part one of the final end-to-end test using OTDR as follows.

- Measure the overall fiber cable system length
- Measure the overall system attenuation
- Check for anomalies

Perform part two of the final end-to-end test using a PMLS as follows:

- Measure the absolute power of the fiber optic signal across all links
- Check for anomalies

Document and submit results after test acceptance.

- 4.13.2. **Loss Budget Calculation and Documentation.** Calculate the total loss budget of the system according to the following calculations and compare the actual loss in each segment of the system to the calculated budget. Submit the results for each section of fiber optic cable in tabular format, reporting if the total loss is within the limits of these Specifications by noting "pass" or "fail" for each segment of fiber. A segment of fiber is defined as one that terminates at each end. Use the following calculations to determine the loss budget for each segment.

- Splice loss budget = number of splices × 0.1 dB/splice
- Connector loss budget = number of connectors × 0.75 dB/connector
- Length loss budget = length of fiber optic cable (measured by OTDR) × 0.35 dB/km for 1,310-nm wavelength or 0.25 dB/km for 1,550 nm wavelength

- Total loss budget = splice loss budget + connector loss budget + length loss budget

Provide loss budget calculation equations on test form to be submitted as part of the documentation requirements. Provide threshold calculations described above along with measured results.

- 4.14. **Training.** Conduct a BISC- or IMSA-certified training class (at least 16 hr.) for up to 10 representatives designated by the Department on procedures of installation, operations, testing, maintenance, and repair of equipment specified within this Specification. Submit for approval 10 copies of the training material at least 30 days before the training begins. Conduct training within the local area unless otherwise authorized. Include the following training material.

- NESC, NEC, and ANSI/TIA 590 code compliance
- Fiber optic cable pulling and installation techniques
- Use of installation tools
- Splicing and terminating equipment and test instruments
- Trouble-shooting procedures
- Methods of recording installation and test data

- 4.15. **Warranty.** Provide a warranty for materials furnished in this Specification. Ensure that the fiber optic cable, the splice enclosures, splice centers, and cable markers have at least a 2-yr. manufacturer's warranty and that 95% of that warranty remains at the date of final acceptance. If the manufacturer's warranties for the components are for a longer period, those longer period warranties must apply. Guarantee that the materials and equipment furnished and installed for this project perform according to the manufacturer's specifications.

Ensure that the manufacturer's warranties for off-the-shelf equipment consisting of splice enclosures, splice trays, connectors, fiber jumper cables, and fiber patch panels are fully transferable from the Contractor to the Department. Ensure that these warranties require the manufacturer to furnish replacements for any off-the-shelf part or equipment found to be defective during the warranty period at no cost to the Department within 10 calendar days of notification by the Department.

Ensure that the manufacturer's warranty for fiber optic cable is fully transferable from the Contractor to the Department. Ensure that the warranty requires the manufacturer to furnish replacement fiber optic cable found to be defective during the warranty period at no cost to the Department within 45 calendar days of notification by the Department.

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## 5. MEASUREMENT

Fiber optic cable installed, relocated, and removed will be measured by the foot. Fiber optic splice enclosures, rack-mounted splice enclosures, fiber optic patch panels, pre-terminated fiber patch panels, fiber patch panel units, and fiber optic jumpers will be measured by each unit installed. Splicing of fiber optic cables will be measured by each fusion splice performed.

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## 6. PAYMENT

### 6.1. Furnish and Install.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Optic Cable" of the various types and number of fibers specified. This price is full compensation for furnishing and installing cable; for pulling through conduit or duct; aerial installation; terminating; testing; and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Optic Splice Enclosure" of the various types.

This price is full compensation for furnishing and installing enclosures whether aerial or underground, and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Rack Mounted Splice Enclosure." This price is full compensation for furnishing and installing enclosures in the building as shown in the plans; for the splice housing with doors, splice trays, and hardware; and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Optic Fusion Splice" for each fusion splice shown on the plans or as directed and performed. This price is full compensation for splicing; testing; and materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Optic Patch Panel" of the various types and sizes specified. This price is full compensation for furnishing and installing patch panels with connector panel modules with factory pre-connectorized fiber pigtails, patch panel housing with doors, and terminating fibers on the panel as shown on the plans or as directed, and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Preterminated Fiber Patch Panels" of the various types and sizes specified. This price is full compensation for furnishing and installing in the cabinet pre-terminated fiber patch panels with pre-connectorized fiber pigtails and terminating fibers on the panel as shown on the plans or as directed, and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Patch Panel Unit." This price is full compensation for furnishing and installing in the building the 7-ft. high 19-in. rack system with supports, rack end caps, inter-bay storage units, and hardware, and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Optic Jumpers." This price is full compensation for furnishing and installing the fiber optic jumpers with factory-terminated connectors as shown on the plans or as directed, and for materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

Conduit will be paid for under Item 618, "Conduit" and Item 619, "Intelligent Transportation System (ITS) Multi-Duct Conduit."

Electrical conductors will be paid for under Item 620, "Electrical Conductors."

- 6.2. **Install Only.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Fiber Optic Cable (Install Only)" of the various types and number of fibers specified. This price is full compensation for installing fiber optic cable furnished by the Department; for pulling through conduit or duct; aerial installation; terminating; testing; and materials, equipment, labor, tools, documentation, warranty, training, and incidentals.

Conduit will be paid for under Item 618, "Conduit" and Item 619, "Intelligent Transportation System (ITS) Multi-Duct Conduit."

Electrical conductors will be paid for under Item 620, "Electrical Conductors."

- 6.3. **Relocate.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Relocate Fiber Optic Cable." This

price is full compensation for relocating cable, regardless of cable size; for pulling through conduit or duct; aerial installation; terminating; testing; and materials, equipment, labor, tools, documentation, and incidentals.

- 6.4. **Remove.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Remove Fiber Optic Cable." This price is full compensation for removing cable for salvage, regardless of cable size or number of cables; testing; returning to the Department; and materials, equipment, labor, tools, documentation, and incidentals.



# Special Specification 6050

## Intelligent Transportation System (ITS)

### Ground-Mounted Cabinet



#### 1. DESCRIPTION

Furnish, fabricate, deliver, install, and test intelligent transportation system (ITS) ground-mounted cabinets, install Department-furnished ITS ground-mounted cabinets, relocate existing ITS ground-mounted cabinets, or remove existing ITS ground-mounted cabinets of the various types and sizes at locations shown on the plans, or as directed.

1.1. **ITS Ground-Mounted Cabinet Application.** Provide ITS ground-mounted cabinet to house ITS field equipment as shown on the plans, or as directed. ITS equipment applications inside the cabinet may include, but are not limited to:

- radar vehicle sensing device,
- wireless Ethernet radio,
- closed-circuit television (CCTV) field equipment,
- Bluetooth reader,
- automatic vehicle identification,
- loop detection equipment,
- dynamic message sign (DMS) equipment,
- DMS controller,
- lane control signal controller units,
- drop or insert multiplexor or demultiplexor,
- data fiber optic transceivers,
- modular fiber distribution housing,
- substrate data multiplexor distribution panel,
- ramp meter control panel,
- fiber optic video transmitter,
- fiber optic splice trays,
- CCTV color video compression system,
- Solar power assembly,
- environmental sensor station,
- highway advisory radio,
- terminal servers,
- surge arrestors,
- hardened Ethernet switches, and
- codecs.

Provide each cabinet complete with internal components, back and side panels, terminal strips, harnesses, and connectors. Provide mounting hardware necessary to provide for installation of equipment as described in this Specification. Typically, an ITS ground-mounted cabinet may contain, but is not limited to, the following.

- 19-in. Electronic Industries Alliance (EIA) racks
- Adjustable shelves
- Fan and thermostat assemblies
- Cabinet lights

- Power distribution panel (as required on the plans or as directed)
- Right or left side panel (as required on the plans or as directed)
- Surge protection
- Terminal strips
- Interconnect harnesses with connectors
- Laptop shelf and slide-out drawer with telescoping drawer guides “door open” connection to back panel
- ITS equipment hardware (as listed in Section 2.1., “Electrical Requirements,” of this Specification)
- All necessary installation and mounting hardware

Ensure cabinets are identical in size, shape, and quality for each type as provisioned in the plans or as directed. Equip and configure the cabinet setup as defined in this Specification and as detailed in the ITS ground-mounted cabinet standards.

Submit details of the cabinet design and equipment layout for each cabinet to the Engineer for review and approval before fabrication.

Ensure the equipment, design, and construction use industry standard techniques with a minimum number of different parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality.

Design equipment for ease of maintenance. Component parts must be readily accessible for inspection and maintenance. Tools and test instruments required for maintenance must be simple handheld tools, basic meters, and oscilloscopes.

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## 2. MATERIALS

Provide new materials that comply with the details shown on the plans, the requirements of this Specification, and the pertinent requirements of the following Items.

- Item 421, “Hydraulic Cement Concrete”
- Item 440, “Reinforcement for Concrete”
- Item 449, “Anchor Bolts”
- Item 618, “Conduit”
- Item 620, “Electrical Conductors”
- Item 656, “Foundations for Traffic Control Devices”
- Item 740, “Graffiti Removal and Anti-Graffiti Coating”

### 2.1. Electrical Requirements.

2.1.1. **Primary Input Power Interruption.** Use material that meets the requirements in Section 2.1.4., “Power Interruption,” of NEMA TS 2 for traffic control system, or most current version.

2.1.2. **Power Service Transients.** Use material that meets the requirements in Section 2.1.6., “Transients,” of NEMA TS 2 for traffic control system, or most current version.

2.1.3. **Power Service Protection.** Ensure that equipment contains readily accessible, manually resettable or replaceable circuit protection devices (such as circuit breakers or fuses) for equipment and power source protection. Provide circuit breakers or fuses sized such that no wire, component, connector, PC board, or assembly is subjected to sustained current in excess of its respective design limits upon failure of any single circuit element or wiring.

2.1.4. **Power Distribution Panel.** Provide cabinets with a 120-VAC  $\pm$ 5-VAC power distribution panel. Provide the following components on the panel.

2.1.4.1. **Duplex Receptacles.** Provide two 120-VAC NEMA Type 5-15R duplex receptacles, or as shown on the plans, protected by a circuit breaker. Permanently label duplex receptacles “For Internal ITS Equipment

Only.” Install duplex receptacles in an isolated location and provide a clear 1/8-in. thick removable cover made from transparent thermoplastic material to cover the duplex receptacles. Ensure this cover is installed as not to interfere with the functional operation within the cabinet and allows enough space to plug in AC adapters and any necessary equipment. Submit alternative cover material for approval as part of the documentation submittal requirement.

- 2.1.4.2. **Ground Fault Circuit Interrupter (GFCI) Duplex Receptacles.** Provide at least one 120-VAC NEMA Type 5-15R GFCI duplex receptacle, or as shown on the plans, protected by a circuit breaker. This GFCI duplex receptacle is intended for maintenance personnel and is not to be used to serve equipment inside the cabinet. Permanently label GFCI duplex receptacles “For Personnel Use.” Install GFCI duplex receptacles in a readily accessible location.

Provide a 120-VAC, rack-mountable outlet strip with six NEMA Type 5-15R receptacles with surge suppression. Plug outlet strip into GFCI duplex receptacle and label for personnel use.

- 2.1.4.3. **Circuit Breakers.** Determine the ampere rating, quantity, and configuration for main, accessory, spare, and equipment circuit breakers to support ITS equipment loads as shown on the plans. Provide UL-489 listed circuit breakers capable of operating in accordance with Section 2, “Environmental Standards and Test Procedures,” of NEMA TS 2-2003, or most current version. Provide circuit breakers with an interrupt capacity of 5,000 A and insulation resistance of 100 megohms at 500 VDC. Provide minimum ampere rating for the following circuit types.

- 2.1.4.3.1. **Main Breaker.** Size the main circuit breaker such that the load of all branch circuits is less than the main circuit breaker ampere rating in conformance with the most current version of the NEC.

- 2.1.4.3.2. **Accessory Breaker.** Minimum 15 A. Size accessory circuit breaker to protect lighting, door switches, fans, and GFCI duplex receptacle in conformance with the most current version of the NEC.

- 2.1.4.3.3. **Equipment Breakers.** Minimum 15 A. Size equipment breaker to protect ITS equipment and duplex receptacles in conformance with the most current version of the NEC.

- 2.1.4.3.4. **Spare Equipment Breaker.** Minimum 20 A. Provide one spare equipment breaker for future use.

Furnish breakers, which are in addition to any auxiliary fuses, with the electronic equipment to protect component parts. Provide three-terminal lightning arrestor to protect the load side of circuit breakers. Connect the arrestor into the circuit with Size 8 AWG or larger stranded copper conductors. Connect arrestor to the line filter as recommended by the manufacturer.

- 2.1.4.4. **Power Line Surge Protection.** Provide and install power line surge protection devices that meet the requirements of NEMA TS 1, Section 2.1.6, “Transients, Power Service.”

- 2.1.4.5. **Power Cable Input Junction Terminals.** Provide power distribution blocks suitable for use as a power feed and junction points for two- and three-wire circuits. Accommodate up to No. 4 AWG conductors on the line side of each circuit. Provide appropriate size lugs at the junction terminals for conductors larger than a No. 4 AWG when shown on the plans.

Electrically isolate the AC neutral and equipment ground wiring from the line wiring by an insulation resistance of at least 10 megohms when measured at the AC neutral. Color code the AC neutral and equipment grounding wiring white and green, respectively, in conformance with the most current version of the NEC.

Use the back panel to distribute and properly interconnect cabinet wiring related to the specific complement of equipment called out on the plans. Each item of equipment, including any furnished by the Department, must have the cable harness properly terminated at terminal boards on the back panel. Ensure all functions available at the equipment connector are carried in the connector cable harness to the terminal blocks from the power distribution panel mounted on the left side panel of the cabinet.

- 2.1.5. **Right Side Panel.** When shown on the plans, for a required ITS application, provide fully wired loop input distribution panel to be mounted on the lower right inside wall when facing the front inside of the door opening of the cabinet. Provide a detailed layout for approval. Provide a panel with the following.
- 2.1.5.1. **Power Distribution.** If any 115-VAC power is needed on the right side panel, it must be obtained from the power distribution terminal board located on the left side panel, which must be fed from the equipment circuit breaker located on the left side panel.
- 2.1.5.2. **Loop Surge Protection.** Mount surge protection for incoming loop pairs on the right side panel.
- 2.1.6. **Back Panel.** When shown on the plans, for a required ITS application, provide cabinet with a fully wired equipment panel to be mounted on the lower rear inside wall of the cabinet. Provide a detailed layout for approval. Panel must include detector terminal boards to accommodate equipment shown on the plans or as directed.
- 2.1.7. **Alternative Power Option.** When shown on the plans, accommodate renewable electrical power source for the design load specified in accordance with "ITS Solar Power System" Specification. Renewable electrical power source may, or may not, be integrated with public utility electrical services, as shown on the plans or as directed. Accommodate solar system components, including batteries and solar charge controller.
- 2.1.8. **Wiring.** Ensure cabinet wiring identified by the use of insulated pre-printed sleeving slipped over the wire before attachment of the lug or making the connection. Supply enough text on wire markers in plain words or abbreviations with enough level of detail so that a translating sheet will not be required to identify the type and size of wire.

Cut wires to the proper length before assembly. Ensure no wires are doubled back to take up slack. Ensure harnesses to connectors are covered with braided cable sleeves. Secure cables with nylon cable clamps.

Provide service loops to facilitate removal and replacement of assemblies, panels, and modules. Use insulated parts and wire rated for at least 600 V. Color code harnesses and wiring.

Route and bundle wiring containing line voltage AC separately, or shield from low voltage; i.e., control circuits. Cover conductors and live terminals or parts, which could be hazardous to maintenance personnel, with suitable insulating material.

Provide AC internal cabinet wiring identified in conformance with the most current version of the NEC. Provide white insulated conductors for AC common. Provide green insulated conductors for equipment ground. Provide any color different from the foregoing on other conductors in conformance with the most current version of the NEC. For equipment that requires grounding, provide ground conductors and do not use conduit for grounding. Provide No. 22 AWG or larger stranded conductors for internal cabinet wiring. Provide conductors that are UL-listed Thermoplastic High Heat-resistant Nylon-coated in conformance with the most current version of the NEC. Ensure the insulation has at least a thickness of 10 mm. Ensure wiring containing line voltage is at least Size No. 14 AWG. No strands of any conductor may be trimmed to "fit" the wiring into the breaker or terminal block.

- 2.1.9. **Terminal Strips.** Provide terminal strips located on the back panel that are accessible to the extent that it is not necessary to remove the electronic equipment from the cabinet to make an inspection or connection.

Ensure terminal blocks are two-position, multiple-pole barrier type.

Provide shorting bars in each of the positions provided, along with an integral marking strip.

Arrange terminal blocks such that they will not upset the entrance, training, and connection of incoming field conductors.

Identify terminals with legends permanently affixed and attached to the terminal blocks.

Ensure not more than three conductors are brought to any one terminal screw.

Ensure no electrically energized components or connectors extend beyond the protection afforded by the barriers.

Locate terminal blocks below the shelves.

Ensure terminals used for field connections are secure conductors by means of a No. 10-32 nickel- or cadmium-plated brass binder head screw.

Ensure terminals used for inter-wiring connections, but not for field connections, are secure conductors by means of a No. 5-32 nickel-plated brass binder head screw.

Terminate connections to and from the electronic equipment to an inter-wiring type block. These blocks will act as intermediate connection points for electronic equipment input and output.

Provide termination panels that are used to distribute and properly interconnect cabinet wiring related to the specific complement of equipment as shown on the plans. Provide properly terminated cable harnesses for each item, including any furnished by the Department. Provide functions available at the equipment terminals that are carried in the connector cable harness.

- 2.1.10. **Cabinet Internal Grounding.** The cabinet internal ground must consist of at least one ground bus-bar permanently affixed to the cabinet and connected to the grounding electrode.

Use bare stranded No. 4 AWG copper wire between bus-bars and between the bus-bar and grounding electrode.

Ensure each copper ground bus-bar has at least 14 connection points, each capable of securing bare conductor ranging in size from No. 4 AWG–No. 14 AWG.

Return AC neutral and equipment ground wiring to these bus-bars.

- 2.1.11. **Door Switch.** Provide a door switch meeting the following requirements.

- Momentary, pin-type door switch
- Installed in the cabinet or on the door
- Connected to a terminal so that the equipment installed in the cabinet can confirm input is connected to logic ground when the cabinet door is open
- Engage cabinet light when the door is opened

Provide two momentary, pin-type door switches for each door provided with the cabinet. Wire one switch to turn on the cabinet lights when the door is open, and off when the door is closed. Wire the other in parallel to a terminal block to detect a cabinet intrusion condition.

- 2.2. **Mechanical Requirements.**

- 2.2.1. **Size and Construction.** Provide ITS ground-mounted cabinets meeting the configuration types detailed in the ITS ground-mounted cabinet standards, as shown in Table 1.

**Table 1**  
**Minimum Cabinet Dimensions**

<b>Type</b>	<b>Depth (in.)</b>	<b>Width (in.)</b>	<b>Height (in.)</b>
4	30	24	66
5	26	44	54
6	26	44	66

Determine the suitability of the listed cabinet configuration types for the equipment at each field location identified on the plans or as directed.

- 2.2.2. **Ventilation.** Provide the cabinet with vent openings to allow cooling of electronic components.

Locate louvered air intake vent openings on the lower portion of the cabinet doors and cover fully inside with a commercially available disposable three-layer graded-pleated type filter with a minimum size of 16 in. (high) × 16 in. (wide) and a thickness of 1 in. For Type 5 cabinet, provide two filters for each door. Securely mount so that any air entering the cabinet must pass through the filter. Ensure the cabinet opening for intake of air is large enough to accommodate filter size. Screen the exhaust to prevent entry of insects. Provide the screen openings no larger than 0.0125 sq. in.

Vent and cool the cabinet by thermostatically controlled electric fans. Provide adjustable thermostat with an adjustment range of 70°F–110°F. Provide a press-to-test switch to test the operation of the fan.

Provide at least four commercially available fans with a capacity of at least 110 cu. ft. per minute each. Provide the total free air opening of the vent large enough to prevent excessive back pressure on the fan.

- 2.2.3. **Lighting.** Provide at least 15-W fluorescent light fixtures above each door inside the cabinet, each with clear shatterproof lens. NEMA TS-2 rated light-emitting diode fixtures are acceptable instead of fluorescent light fixtures. Determine the appropriate number of fixtures to achieve at least 1,000 lumens to illuminate the equipment. Position the fixtures to provide illumination to the face of the equipment in the cabinet and not into a technician's eyes.

- 2.2.4. **Exterior Finish.** Provide cabinets with a smooth aluminum finish and the exterior in its unpainted natural color.

When shown on the plans or as directed, provide cabinets with an anti-graffiti coating in accordance with Item 740.

- 2.2.5. **Serial Number.** Provide the cabinets with a serial number unique to the manufacturer, preceded by an assigned two-letter manufacturer's code. Provide at least a 0.2-in. letter height. Stamp the entire identification code and number on a metal plate riveted to the cabinet, stamp directly on the interior cabinet wall, or engrave on a metalized mylar plate that is epoxied to the cabinet on the upper righthand cabinet side wall.

- 2.2.6. **Modular Design.** Provide cabinets that have a modular design and allow ITS equipment to be installed in a variety of mounting configurations as detailed on the plans or as directed.

Provide Type 4 cabinets with one EIA 19-in. rack cage, sized appropriately based on cabinet type inside height dimension. Provide a rack with at least one 1RU (rack unit) horizontal power strip. Provide two Unistrut or DIN rail channels on each sidewall of the cabinet for mounting power panel and auxiliary ITS equipment.

Provide Type 5 and Type 6 cabinets with two side-by-side EIA 19-in. racks, sized appropriately based on cabinet type inside height dimension. Provide a rack with at least one 1RU horizontal power strip. Provide two Unistrut or DIN rail channels on each sidewall of the cabinet for mounting power panel and auxiliary ITS equipment.

- 2.2.7. **Shelves.** Provide adjustable shelves in each cabinet as required to support the equipment as specified on the plans. Ensure shelf adjustment is at 1RU intervals in the vertical position. Provide shelves that can be mounted to an EIA 19-in. rack cage or Unistrut channel as detailed in the standards.

Provide shelves that are removable and capable of supporting the electronic equipment. Provide at least 2 in. between the back and front edge of the shelf to back inside wall and door of the cabinet, respectively, to allow room for the equipment cables and connectors.

Provide each cabinet type with at least one slide-out drawer with telescoping drawer guides to allow full extension from the rack frame. Provide at least 1.75-in. (high) × 16-in. (wide) × 14-in. (deep) drawer with a hinged lid to allow access to storage space.

- 2.3. **Surge Protective Devices (SPDs).** Provide SPDs to protect electronics from lightning, transient voltage surges, and induced current. Install SPDs on power, data, video, and any other conductive circuit.

- 2.3.1. **120-V or 120/240-V SPD at Service and ITS Cabinet Power Distribution Panel.** Install an SPD at the closest termination or disconnection point where the supply circuit enters the cabinet. Locate the SPD on the load side of the cabinet power distribution panel breakers and ahead of any electronic devices. Keep leads as short as possible with conductor bends formed to the maximum possible radius. Connect the SPD ground lead directly to the ground bus. Use of wire nuts is prohibited. Install in conformance with manufacturer's recommendations.

Provide UL-listed Type 1 or Type 2 SPD labeled "UL1449 Third Edition," posted at UL.com, under Certifications UL Category Code VZCA, with a 20-kA I-nominal rating. Provide SPD rated as NEMA 4. SPD with integral electromagnetic interference/radio frequency interference line filtering may be required if shown on the plans.

Do not exceed 700 V on the voltage protection rating (VPR) on any mode (L-N, L-G, and N-G).

Do not exceed 150 V on the maximum continuous operating voltage (MCOV).

Equal or exceed 40 kA the SPD surge current rating per mode (L-N, L-G, and N-G).

Equal or exceed 50 kA or the available short circuit current, whichever is higher, for the SPD short circuit current rating (SCCR).

Provide SPD with directly connected metal oxide varistors (MOVs) exceeding 32 mm in diameter with thermal safety disconnectors. Gas tube and spark gap SPDs are not permitted. Ensure each MOV's operational status can be monitored via visual indicator, including N-G mode.

Provide SPD with one set of normally open (NO), normally closed (NC) Form C contacts for remote monitoring.

Ensure the SPD used for AC power does not dissipate any energy and does not provide any series impedance during standby operation. Return the unit to its non-shunting mode after the passage of any surge, and do not allow the shunting of AC power.

- 2.3.2. **Parallel SPD for 120-V Equipment.** Install an SPD inside the cabinet on the power distribution to the equipment. Keep leads as short as possible with conductor bends formed to the maximum possible radius. Connect the SPD ground lead directly to the ground bus. Use of wire nuts is prohibited. Install in conformance with manufacturer's recommendations.

Provide UL-listed Type 1 or Type 2 SPD labeled "UL1449 Third Edition," posted at UL.com, under Certifications UL Category Code VZCA, with a 20-kA I-nominal rating. Provide SPD rated as NEMA 4.

Do not exceed 700 V on the VPR on any mode (L-N and N-G).

Do not exceed 150 V on the MCOV.

Equal or exceed 40 kA the SPD surge current rating per mode (L-N and N-G).

Equal or exceed 50 kA or the available short circuit current, whichever is higher, for the SPD SCCR.

Provide SPD with directly connected MOVs exceeding 32 mm in diameter with thermal safety disconnectors. Gas tube and spark gap SPDs are not permitted. Ensure each MOV's operational status can be monitored via visual indicator, including N-G mode.

Provide SPD with one set of NO, NC Form C contacts for remote monitoring.

- 2.3.3. **Low-Voltage Power, Control, Data and Signal Systems SPD.** Install a specialized SPD on conductive circuits, including, but not limited to, data communication cables, coaxial video cables, and low-voltage power cables. Ensure that these devices comply with the functional requirements shown in Table 2 for available modes (i.e., power L-N, N-G; data and signal center pin-to-shield, L-L, L-G; and shield-G where appropriate).

**Table 2**  
**SPD Minimum Requirements**

Circuit Description	MCOV	Frequency/ Bandwidth/ Data Rate	Surge Capacity	Maximum Let-Through Voltage
12 VDC	15 V–20 V	–	5 kA per mode (8 $\mu$ s $\times$ 20 $\mu$ s)	<150 Vpk
24 VAC	30 V–55 V	–	5 kA per mode (8 $\mu$ s $\times$ 20 $\mu$ s)	<175 Vpk
48 VDC	60 V–85 V	–	5 kA per mode (8 $\mu$ s $\times$ 20 $\mu$ s)	<200 Vpk
Coaxial composite video	4 V–8 V	Up to 1.5 GHz	10 kA per mode (8 $\mu$ s $\times$ 20 $\mu$ s)	<100 Vpk
RS422/RS485	8 V–15 V	Up to 10 Mbps	10 kA per mode (8 $\mu$ s $\times$ 20 $\mu$ s)	<30 Vpk
T1	13 V–30 V	Up to 10 Mbps	10 kA per mode (8 $\mu$ s $\times$ 20 $\mu$ s)	<30 Vpk
Ethernet data	7 V–12 V	Up to 100 Mbps	3 kA per mode (10 $\mu$ s $\times$ 1,000 $\mu$ s)	<30 Vpk

- 2.4. **Environmental Design Requirements.** Provide cabinets that meet the functional requirements of this Specification during and after subsection to any combination of the following requirements.

- Ambient temperature range of -30°F–165°F
- Temperature shock at most 30°F per hour, during which the relative humidity does not exceed 95%
- Relative humidity range at most 95% over the temperature range of 40°F–110°F
- Operates with moisture condensation on surfaces caused by temperature changes

- 2.5. **Vibration.** Material used must show no degradation of mechanical structure, soldered components, plug-in components, or satisfactory operation in conformance with the manufacturer's equipment specifications after being subjected to the vibration test as described in NEMA TS 2, Section 2.2.8, "Vibration Test," or the most current version.

### 3. FABRICATION

- 3.1. **Ground-Mounted Cabinet.** Continuously weld exterior seams for cabinet and doors. Fill edges to a radius of 0.03125 in. minimum. Smooth exterior welds.

Welding on aluminum cabinets must be by the gas metal arc (metal inert gas) or gas tungsten arc (tungsten inert gas) process using bare aluminum welding electrodes. Ensure electrodes are in accordance with the requirements of AWS A 5.10 for ER5356 aluminum alloy bare welding electrodes.



Procedures, welding machines, and welding machine operators for welding on aluminum must be qualified and be in accordance with the requirements of AWS B 3.0, "Welding Procedures and Performance Qualification," and with the practices recommended in AWS C 5.6.

Construct cabinets of welded sheet aluminum with a thickness of at least 0.125 in. meeting NEMA 3R standards. Do not allow wood, wood fiber product, or flammable products in the cabinet. Seal cabinet structure to prevent the entry of rain, dust, and dirt.

Provide a sunshield on the exterior top of the cabinet to reflect solar rays and mitigate temperature buildup inside the cabinet. Construct sunshield of 0.125-in. thick aluminum and provide at least 1.25-in. clearance above the top of cabinet secured in four locations.

Attach aluminum lifting eyes or ears to the top of the cabinet to permit lifting the cabinet using a sling. Lifting eyes may be permanently fabricated to the cabinet frame as long as they do not interfere with the construction and operation of the sunshield. Manufacturer may provide removable lifting eyes that can be removed after installation. Seal any penetrations to the cabinet exterior or sunshield after removal of lifting eyes.

Ensure cabinets are in accordance with the requirements of ASTM B209 for 5052-H32 aluminum sheet.

- 3.1.1. **Door.** Provide sturdy and torsionally rigid cabinet doors that overlap and substantially cover the full area of the front of the cabinet. Attach cabinet doors using at least three heavy-duty hinges or full-length hinge. Provide stainless steel hinge pins.

Fabricate the doors and hinges to withstand a 100-lb. per vertical foot force applied to the outer edge of the door when open without permanent deformation or impairment of the door or cabinet body when the load is removed.

Fit the cabinet doors with No. 2 Corbin lock and aluminum or chrome-plated handle with at least a 3/8-in. drive pin and a three-point latch. Design the lock and latch so that the handle cannot be released until the lock is released. Provide a padlock of the type directed. Provide a locking ring for a padlock. Provide two keys for the door and two keys for the padlock with each cabinet. Locate the lock clear of the arc of the handle. Keys must be removable in the locked position only. Mount locks with two stainless steel machine screws. Provide cabinet doors with a catch mechanism to hold the door open at three positions: 90°, 120°, and 160°.

Fabricate the door and door stop mechanism to withstand a simulated wind load of 5 lb. per square foot applied to inside and outside surfaces without failure, permanent deformation, or compromising of door position.

Provide cabinets without auxiliary police doors.

Provide a gasket to act as a permanent and weather-resistant seal at the cabinet door facing. The gasket material must be of a non-absorbent material and maintain its resiliency after long-term exposure to the outdoor environment.

Provide a gasket with a minimum thickness of 0.25 in. Locate the gasket in a channel provided for this purpose either on the cabinet or on the door. An L-bracket is acceptable instead of this channel if the gasket is fitted snugly against the bracket to ensure a uniformly dust and weather-resistant seal around the entire door facing.

- 3.1.2. **Mechanical Components.** Ensure external screws, nuts, and locking washers are stainless steel. Do not use self-tapping screws unless specifically approved.

Ensure all parts are made of corrosion-resistant material, such as plastic, stainless steel, aluminum, or brass.

Ensure all materials used in construction are resistant to fungus growth and moisture deterioration.

Separate dissimilar metals by an inert dielectric material.

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#### 4. CONSTRUCTION

- 4.1. **General.** For ITS cabinets installed on a slope, ensure the cabinet primary door faces and opens to the high side of the slope, and provide safety railing in conformance with the ITS ground-mounted cabinet standards. Safety railing will be supplemental to this Specification. Stake cabinet foundation forms and underground conduit entering the foundation before installation, and secure Department approval before pouring foundation. It is understood that cabinet location may vary from the plans to accommodate field conditions.

Construct the cabinet foundation in accordance with Item 656, unless otherwise specified.

Concrete maintenance pads have been integrated into the foundation design found in the ITS ground-mounted cabinet standards to accommodate door configuration options.

- 4.2. **Mounting Hardware.** Furnish anchor bolts to mount the cabinet to the foundation. Manufacturer will determine the appropriate size anchor bolts by cabinet type and foundation size. Provide appropriate mounting plates and any other necessary hardware to mount the cabinet on a foundation.

- 4.3. **Installation.** Ground the cabinet as depicted in the ITS grounding standards. For retrofit scenarios, measure resistance to ground before installing cabinet in accordance with IEEE 81. Provide additional grounding rods and install additional grounding conductors as detailed in the ITS grounding standards to achieve less than 5 ohms resistance. Additional ground rods and grounding conductors will be supplemental to this Specification.

Immediately before mounting the cabinet on the foundation, apply a bead of silicone caulk to seal the cabinet base to the foundation.

Seal any space between conduit entering the cabinet and the foundation with silicone caulk or approved sealant compound.

Install conduits as shown on the plans or as directed and in accordance with Item 618. Place wiring in a neat and orderly manner grouped with nylon tie-downs.

After wiring is installed, seal the conduits terminated in the cabinet foundation with a duct seal or other similar approved sealant inside the ends of the conduit in the cabinet to prevent moisture, insects, and critters from entering the conduits.

- 4.3.1. **Connection of Lead-In Cable.** Connect the detector lead-in cables, when shown on the plans or as directed, to the detector terminal blocks in the following manner.

Dress each cable into position in conformance with the approved lead-in cable position on the panel (bundle cables together and broken out by their position on the terminal boards).

Place cable as close to the terminal points as possible and left floating.

Ground the cable shield after testing and in conformance with the detector manufacturers' specifications.

- 4.3.2. **Connection of Miscellaneous Cables.** Terminate connection of signal wires, sign control wires, and any other wires required to complete connections for an operational system on terminal blocks.

Design the equipment for ease of maintenance. Component parts must be readily accessible for inspection and maintenance. The only tools and test instruments required for maintenance by maintenance personnel must be simple handheld tools, basic meters, and oscilloscopes.

Mount cabinet plumb in all directions.

- 4.4. **Removal and Replacement of Curbs and Walks.** The Contractor must secure approval before cutting into or removing sidewalks or curbs not shown on the plans to be removed or replaced.

Restore any curbs or sidewalks after work is completed, which have been removed, to equivalent original condition and to the satisfaction of the Engineer.

All completed surfaces that are adjacent to the cabinet foundation must be level and free of trip hazards. Any difference in level of adjacent structures must be addressed in the field and approved by the Department.

- 4.5. **Relocation.** Before removal of the existing cabinet, disconnect and isolate the power cables from the electric power supply and disconnect cables (power and communication) from the equipment.

Inspect the existing cabinet, with a representative from the Department, and document any evidence of structural damage before removal. Remove and deliver to the Department existing cabinets that fail structural inspection to an address to be supplied by the Department.

Remove the existing cabinet in a manner acceptable. Use a method that does not cause undue overstress or damage to the structure or appurtenances attached.

Remove the existing concrete foundation to a depth of at least 2 ft. below finish grade with steel cut off. Backfill the excavation with material equal in composition and density to the surrounding area. Replace any surfacing, such as asphalt pavement, concrete riprap, or brick pavers, with like material to equivalent condition as approved.

Supply new anchor bolts required for the installation of the cabinet. Match bolt dimensions and lengths previously used or as shown on the plans or as directed.

- 4.6. **Removal.** Present the work in a neat, professional finished appearance. Maintain safe construction and operation practices. Use established industry and utility safety practices when removing cabinets near overhead or underground facilities. Consult with the appropriate utility company before beginning work.

Inspect the cabinet, with a representative from the Department, and remove any ITS equipment, associated mounting hardware, and cabling inside the cabinet before commencing work.

Before removal of the existing cabinet, disconnect and isolate the power cables from the electric power supply and disconnect cables (power and communication) from the equipment. Remove and coil existing cabling to the nearest ITS ground box or as identified on the plans.

Carefully remove the cabinet and avoid damage or injury, respectively, to surrounding objects or individuals. Deliver the cabinet to an address supplied by the Department.

Remove the existing foundation to a depth of 2 ft. below grade with steel cut off. Backfill the excavation with material equal in composition and density to the surrounding area. Replace any surfacing, such as asphalt pavement, concrete riprap, or brick pavers, with like material to equivalent condition as approved.

- 4.7. **Testing.**

- 4.7.1. **Installation.** Unless otherwise shown on the plans, perform the following tests on cabinets supplied through this Specification.

- 4.7.1.1. **Test Procedures Documentation.** Provide five copies of the test procedures, including tests identified in NEMA, Section 4.9.2.–Section 4.9.4. inclusive, and blank data forms to the Engineer for review and comment at least 45 days before testing for each test required on this project. Include the sequence of the tests in the procedures. The Engineer will comment on, approve, or reject test procedures within 30 days after

Contractor submittal of equipment for tests. Contractor must resubmit if necessary rejected test procedures for final approval within 10 days before testing. Review time is in calendar days. Conduct tests in conformance with the approved test procedures. The Department may witness tests.

Record test data and quantitative results on data forms. No bid item measurement or payment will be made until the Engineer has verified the test results meet the requirements of the Specification. The data forms for tests, except design approval tests, must be signed by an authorized representative of the Contractor.

Provide written notice to the Engineer within 48 hr. of discovery of any testing discrepancy found in testing by the Contractor. Furnish data forms containing the acceptable range of expected results and measured values.

- 4.7.1.2. **Design Approval Test.** Conduct a design approval test on 10% of the total number of cabinets supplied as part of the project, with at least one of each type of cabinet used on the project.

Certification from an independent testing laboratory of a successfully completed design approval test is acceptable. Ensure that the testing by this laboratory is performed in accordance with the requirements of this Specification. Failure of independent tests to comply with the requirements of this Specification is grounds for rejection of any certification.

Provide a copy of the certification to the Engineer. The data forms for the design approval tests must be signed by an authorized representative (company official) of the equipment manufacturer or by an authorized representative of an independent testing facility.

Notify the Engineer 10 working days before conducting this testing. The Department may witness the tests. Perform the following tests.

- 4.7.1.2.1. **Power Service Transients.** Provide equipment that meets the performance requirements, specified herein, when subjected to the power service transients as specified in NEMA TS 2, Section 2.2.7.2, "Transient Tests (Power Service)," or most current version.

- 4.7.1.2.2. **Temperature and Condensation.** Provide equipment that meets the performance requirements, specified herein, when subjected to the following conditions in the order specified below.

- Stabilize the equipment at -30°F and test as specified in NEMA TS 2, Section 2.2.7.3, "Low-Temperature Low-Voltage Tests," and Section 2.2.7.4, "Low-Temperature High-Voltage Tests," or most current version.
- Allow the equipment to warm up to room temperature in an atmosphere with relative humidity of at least 40%. Operate the equipment for 2 hr., while wet, without degradation or failure.
- Stabilize the equipment at 165°F and test as specified in NEMA TS 2, Section 2.2.7.5, "High-Temperature High Voltage Tests," and Section 2.2.7.6, "High-Temperature Low-Voltage Tests," or most current version.

- 4.7.1.2.3. **Relative Humidity.** Provide equipment that meets the performance requirements, specified herein, within 30 min. of being subjected to a temperature of 165°F and a relative humidity of 18% for 48 hr.

- 4.7.1.2.4. **Vibration.** Provide equipment that shows no degradation of mechanical structure, soldered components, or plug-in components and will operate in conformance with the manufacturer's equipment specifications after being subjected to the vibration tests as described in NEMA TS 2, Section 2.2.8, "Vibration Test," or most current version.

- 4.7.1.2.5. **Power Interruption.** Provide equipment that meets the performance requirements, specified herein, when subjected to nominal input voltage variations as specified in NEMA TS 2, Section 2.2.10, "Power Interruption Test," or most current version.

- 4.7.1.3. **Stand-Alone Tests.** Conduct a stand-alone test for each cabinet after installation. Exercise stand-alone (non-network) functional operations consisting of the following, at minimum.

- 19-in. EIA rack
- Adjustable shelves
- Locking mechanism
- Fan and thermostat
- Cabinet light
- Back panel
- Circuit breakers
- Surge protection
- Grounding system
- Terminal strips
- Interconnect harnesses with connectors
- Weatherproofing
- "Door open" connection to back panel

Notify the Engineer 5 working days before conducting this test. The Engineer may witness all the tests.

- 4.7.1.4. **Consequences of Test Failure.** If a unit fails a test, submit a report describing the nature of the failure and the actions taken to remedy the situation before modification or replacement of the unit. If a unit requires modification, correct the fault and then repeat the test until successfully completed. Correct minor discrepancies within 30 days of written notice to the Engineer. If a unit requires replacement, provide a new unit and then repeat the test until successfully completed. Major discrepancies that will substantially delay receipt and acceptance of the unit are cause for rejection of the unit.

Failure to satisfy the requirements of any test is considered a defect and the equipment is subject to rejection. The rejected equipment may be offered again for retest provided all noncompliance has been corrected.

If a failure pattern develops in similar units within the system, implement corrective measures, including modification or replacement of units, to similar units within the system as directed. Perform the corrective measures within 30 calendar days without additional cost or extension of the Contract period.

- 4.7.1.4.1. **Consequences of Design Approval Test Failure.** If the equipment fails the design approval test, correct the fault within 30 days and then repeat the design approval test until successfully completed.

- 4.7.1.4.2. **Consequences of Demonstration Test Failure.** If the equipment fails the demonstration test, correct the fault within 30 days and then repeat the demonstration test until successfully completed.

- 4.7.1.4.3. **Consequences of Stand-Alone Test Failure.** If the equipment fails the stand-alone test, correct the fault and then repeat the stand-alone test until successfully completed.

- 4.7.2. **Relocation.**

- 4.7.2.1. **Pre-Test.** Conduct performance testing before removal of ITS ground-mounted cabinets. Test functional operations of the equipment and document functional operations in the presence of representatives of the Contractor and the Department.

- Locking mechanism
- Fan and thermostat
- Cabinet light
- Back panel
- Circuit breakers
- Surge protection system

- Grounding system
- "Door open" connection to back panel

Ensure that both representatives sign the test report indicating that the equipment has passed or failed each function. Once removed, the equipment becomes the responsibility of the Contractor until accepted by the Department. Compare test data before removal and test data after installation.

#### 4.7.2.2.

**Post-Test.** Testing of the ITS ground-mounted cabinet is for the purpose of relieving the Contractor of maintenance of the system. The Contractor is relieved of the responsibility for maintenance of the system in accordance with Item 7, "Legal Relations and Responsibilities," after a successful test period. The Contractor is not required to pay for electrical energy consumed by the system.

After existing ITS equipment has been installed, perform the same functional operation test described under NEMA, Section 4.9.2.1. Furnish test data forms containing the sequence of tests, including the data taken and quantitative results for all tests. Submit the test data forms to the Engineer at least 30 days before the day the tests are to begin. Obtain approval of test procedures before submission of equipment for tests. Send at least two copies of the data forms to the Engineer.

The performance test results after relocation must be equal to or better than the test results before removal. Contractor is responsible for repair or replacement of those components within the system that failed after relocation but that passed before removal.

The Department will conduct approved ITS equipment system tests on the field equipment hardware with the central equipment. The tests will exercise remote control functions and display the return status codes from the controller.

If any unit fails to pass a test, prepare a report and deliver it to the Engineer. Describe in the report the nature of the failure and the corrective action needed. If the failure is the result of improper installation or damage during reinstallation, reinstall or replace the unit and repeat the test until the unit passes successfully, at no additional cost to the Department or extension of the Contract period.

#### 4.8.

**Documentation.** Submit documentation for this Specification consisting of the following.

##### 4.8.1.

**Ground-Mounted Cabinet.** Shop drawings should clearly detail the following for ITS ground-mounted cabinets when required as shown on the plans.

- |                   |                            |
|-------------------|----------------------------|
| ■ Dimensions      | ■ Power distribution panel |
| ■ Shelves         | ■ Surge suppression        |
| ■ Door            | ■ Back panel               |
| ■ Gasket          | ■ Outlets                  |
| ■ Door lock       | ■ Circuit breakers         |
| ■ Materials list  | ■ Power cable terminals    |
| ■ Exterior finish | ■ Wiring diagrams          |
| ■ Ventilation     | ■ Cabinet grounding        |
| ■ Terminal strips | ■ Environmental parameters |
| ■ Harnesses       | ■ Connectors               |
| ■ Filter          |                            |

Submit shop drawings, signed, sealed, and dated by a licensed professional engineer in Texas, showing the fabrication, interior configuration, electrical distribution, and cabinet mounting details for each cabinet in accordance with Item 5, "Control of the Work."

Provide at least two complete sets of operation and maintenance manuals in hard copy format in addition to a CD/DVD or removable flash drive that include the following.

- Complete and accurate schematic diagrams
- Complete installation procedures
- Complete performance specifications (functional, electrical, mechanical, and environmental) on the unit
- Complete parts list, including names of vendors for parts not identified by universal part number, such as JEDEC, Radio-Electronics-Television Manufacturers Association, or EIA
- Pictorial of component layout on circuit board
- Complete maintenance and troubleshooting procedures
- Complete stage-by-stage explanation of circuit theory and operation
- Recovery procedures for malfunction
- Instructions for gathering maintenance assistance from manufacturer

Identify material that is copyrighted or proprietary in nature as part of the documentation submittal. The Department will take proper provisions to secure such material and not distribute without written approval.

Provide the Department with certification documentation verifying conformance with environmental and testing requirements contained in the Special Specification. Certifications may be provided by the manufacturer or through independent labs.

- 4.9. **Warranty.** The start date of the manufacturer's standard warranty will begin when the stand-alone test plan has been approved. Any equipment with less than 95% of its warranty remaining at the beginning of the stand-alone test will not be accepted by the Department. Guarantee that equipment furnished and installed for this project performs according to the manufacturer's published specifications. Warrant the equipment against defects or failure in design, materials, and workmanship for at least 5 yr. or in conformance with the manufacturer's standard warranty if warranty period is greater. Assign, to the Department, manufacturer's normal warranties or guarantees on electronic, electrical, and mechanical equipment; materials; technical data; and products furnished for and installed on the project. Repair or replace, at the manufacturer's option, defective equipment during the warranty period at no cost to the Department.

Repair or replace equipment at the Contractor's expense before beginning testing in the event of a malfunction or failure. Furnish replacement parts for equipment within 30 days of notification of failure by the Department.

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## 5. MEASUREMENT

This Item will be measured by each unit furnished, installed, relocated, or removed as shown on the plans or as directed, excluding new conduit.

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## 6. PAYMENT

- 6.1. **Furnish and Install.** The work performed and materials furnished in conformance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "ITS Ground Mount Cabinet" of the type and configuration specified. This price is full compensation for furnishing, fabricating, and installing ITS ground-mounted cabinets as shown on the plans; for forming and setting the cabinet foundation; for furnishing and placing anchor bolts, nuts, and washers; for furnishing and placing electrical conduit in the foundation; for appropriately grounding the cabinet; and for equipment, materials, labor, tools, and incidentals necessary to provide an ITS ground-mounted cabinet, complete in place, and ready for the installation of ITS equipment.

New conduit will be paid for under Item 618 or Item 619, "Intelligent Transportation System (ITS) Multi-Duct Conduit."

- 6.2. **Install Only.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "ITS Ground Mount Cabinet (Install Only)" of the type and configuration specified. This price is full compensation for installing ITS ground-mounted cabinets furnished by the Department as shown on the plans; for forming and setting the cabinet foundation; for furnishing and placing anchor bolts, nuts, and washers; for furnishing and placing electrical conduit in the foundation; for appropriately grounding the cabinet; and for equipment, materials, labor, tools, and incidentals necessary to install an ITS ground-mounted cabinet, complete in place, and ready for the installation of ITS equipment.

New conduit will be paid for under Item 618 or Item 619.

- 6.3. **Relocate.** The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "ITS Ground Mount Cabinet (Relocate)" of the type and configuration specified. This price is full compensation for removing existing ground-mounted cabinets as shown on the plans; for removing existing foundations; for backfilling and surface placement; for hauling and installing ITS ground-mounted cabinets; for furnishing and placing anchor bolts, nuts, and washers; for appropriately grounding the cabinet; and for equipment, materials, labor, tools, and incidentals necessary to relocate an existing ITS ground-mounted cabinet, complete in place, and ready for the installation of ITS equipment.

New conduit will be paid for under Item 618 or Item 619.

- 6.4. **Remove.** The work performed and materials furnished in accordance with this Item and measured as provided for "Measurement" will be paid for at the unit price bid for "ITS Ground Mount Cabinet (Remove)" of the type and configuration specified. This price is full compensation for removing existing ITS ground-mounted cabinets as shown on the plans; for removing existing foundations; for backfilling and surface placement; for loading and hauling; and for equipment, materials, labor, tools, and incidentals necessary to complete the removal of existing ITS ground-mounted cabinets.



# Special Specification 6058

## Roadway Weather Information System



### 1. DESCRIPTION

Furnish and install a Roadway Weather Information System (RWIS) to monitor weather conditions at the locations as shown on the project plans. The RWIS must include bridge deck pavement sensors; pavement sensors with integrated pavement temperature probes; and complete weather station to monitor wind information, air temperature humidity, and other items defined in this Item. The system must be specifically designed for monitoring and displaying pavement surface conditions, pavement temperature, freeze point temperature, pavement friction coefficient, and subsurface temperature. Nonintrusive sensors must be installed at the RWIS sites to monitor roadway surface status conditions, including dry, wet, chemical wet, ice watch, ice warning roadway temperature, and roadway grip or friction coefficient.

Atmospheric or meteorological conditions monitored may include any of the following.

- Air temperature,
- Relative humidity,
- Barometric pressure,
- Accumulated precipitation, and
- Wind or speed direction.

The information from the RWIS sites will be transmitted back to the Transportation Management Center by the Department's Intelligent Transportation System (ITS) network, where the data will be presented to the operations staff. The Department's Lonestar™ software will poll the RWIS to ask for data on a preset time interval specified by the Department to transfer and refresh with current conditions. Data from the RWIS must comply with standard National Transportation Communications for Intelligent Transportation System Protocol (NTCIP).

The RWIS must include all hardware, software, and licenses to operate as follows.

- Nonintrusive surface sensors will measure bridge deck or roadway pavement surface temperature, roadway grip or friction coefficient, and surface wetness, and communicate the data to the remote processing unit (RPU).
- Roadway atmospheric sensors will measure their respective weather parameters and communicate the data from each sensor to the RPU.
- Atmospheric weather sensors will measure their respective weather parameters and communicate the data from each sensor to the RPU.
- RPU will acquire data from all connected sensors. The RPU will process and temporarily store the output from the pavement sensors and atmospheric sensors.
- RWIS server will poll the RPU of each local RWIS system on a scheduled basis. The RPU will respond to the poll and transfer all its data to the RWIS server.
- All data transfers between the RWIS server and local RWIS must be compliant with federal standard NTCIP Environmental Sensor Station (ESS) protocols.
- RWIS user displays will include all sensor and historical data in a Windows-based graphical user interface or browser-based data display format.

### 2. MATERIALS

- 2.1. **RWIS RPU.** Furnish and install a controller-mounted RPU at locations as shown on the project plans.

The RPU must gather, process, and store data from all connected atmospheric sensors, pavement sensors, and camera. The data must be transmitted to Lonestar™ upon polled request by NTCIP ESS protocols.

The RPU must be a ruggedized industrial PC with an operating system using Windows-CE. The unit must have an integrated LCD touch screen; size must be at least 7 in. The integrated LCD touch screen display will allow any person at the site to work on the RWIS site without the need for a service laptop in case of such onsite activities as setups, firmware-uploads data views, extensions, or parameter settings. The RPU must be fully NTCIP-compliant. The RPU must be password-protected.

Integration of new sensors must be accomplished by plugging in digital or analog modules along a DIN rail.

The RPU and module units must allow for the following.

- Galvanic isolation between sensor supply and communication,
- Host communication by RS232 (PC/GPRS-modem), RS485 (EAK),
- Small housing with top hat rail mounting and bus connection,
- Firmware update by RS232,
- Common power supply (24V) for UMB modules and (heated) sensors,
- Online data transfer (no memory),
- Network with up to 32 modules,
- Communication watchdog for reliable sensor function (reset),
- Overvoltage protection for all interfaces,
- LED indication for operation mode,
- Power supply 20 VDC–28 VDC,
- Power consumption 10 VA,
- Ambient temperature -22°F–140°F,
- Relative humidity <90%,
- USB Interface USB2.0B,
- CDMA modem, GPRS modem, Ethernet connectivity, and UMB bus interfaces,
- Display size 7- in.,
- Display resolution 800 × 480 pixel,
- DIN rail and modules,
- Power supply 12 VDC–26 VDC,
- Power consumption <100 mA,
- Ambient temperature -22°F–140°F,
- Relative humidity <95%,
- Protection type Ingress Protection (IP) 20,
- Module width 1-in.,
- RS232 connector DSUB9, and
- Sensor connector screw-type.

The RPU must have the capability of being modified to use solar power or other power sources in place of conventional commercial electric power. Solar-powered RPU sites must operate at least 72 hr. without sunlight or solar charging of the batteries. Autonomy will be calculated based on the type and quantity of sensors as indicated by the plans or as directed and in accordance with Specifications.

The RPU hardware and software must meet the following technical specifications.

The RPU must be able to collect data from all connected sensors and remote pavement sensors, and process, store, and transmit these data to the RWIS server upon polled request. The RPU must be capable of collecting data from the following sensors.

- Wired precipitation radar-based type sensor,
- Wired air temperature and relative humidity sensor,

- Wired road surface and subsurface sensors,
- Wired subsurface sensor,
- All-in-one smart atmospheric sensor,
- Nonintrusive pavement condition and temperature sensor,
- Nonintrusive Doppler radar water level sensor,
- Rain sensor,
- Mechanical and ultrasonic wind speed and direction sensor,
- Barometric pressure sensor, and
- Wired pan-tilt-zoom camera.

The RPU must include an IP66, NEMA 4X-rated lockable aluminum steel AISI 316 enclosure that is resistant to weather, sunshine, deicing chemicals, corrosion, and damage from falling debris (ice, small rocks, and tree branches) and vandalism. The enclosure must be capable of being mounted on poles with an outside diameter range of 6 in.–24 in. The enclosure must house all RPU electronics, power supplies, and communication equipment, and not exceed 30-in. height × 24-in. width × 12-in. depth dimensions.

RPU communication with the server must use federal standard NTCIP ESS protocol, with some manufacturer-specific objects. The server must poll the RPU by one of the following communications modes.

- Ethernet,
- PMPP leased line,
- PMPP spread spectrum radio, or
- PMPP serial fiberoptic.

The RPU must incorporate watchdog circuitry, monitor its own operation, and reset itself if the RPU software enters an indeterminate state. The RPU must also have the capability to be reset by a “user administrator” from the server.

2.2. **RPU Mounting Requirements.** The RPU panel must be enclosed inside an RWIS-specific communication cabinet, traffic signal controller cabinet, ITS cabinet, or communications building as shown on the plans.

2.3. **All-in-One Atmospheric Sensor (Air Temperature/Relative Humidity/Barometric Pressure/Ultrasonic Wind Speed and Direction).** The sensor design must be an all-in-one design within one sensor housing to allow ease of installation, maintenance, and upgrades. The sensors form factor must be of one integrated unit. Multiple sensors are not allowed. The sensor must support remote firmware upgrades without the need for personnel to be onsite; include wind detection with birdproof construction; and be a compact all-in-one weather sensor with low power, heater, aspirated radiation shield, maintenance-free operation, and open communication protocol.

The sensor must measure temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity, air pressure, wind direction, and wind speed.

The measurement technology must be Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS Capacitive/Pressure, 24-GHz Doppler Radar/Precipitation.

The ultrasonic wind sensor must be precise and maintenance-free while delivering measurement of wind velocity and wind direction, as well as calculation of acoustic virtual temperature. The digital or analog output must deliver instantaneous, average, minimum or maximum value with a flexible measuring rate. The unit must be heated to remove frost and ice formation from the sensor.

The sensor must operate within a minimum temperature range of -40°F–140°F at 0%–100% relative humidity and meet an IP66 rating. The sensor must operate to Specifications at cable lengths up to 324 ft. from the RPU.

The sensor must operate within a power range of 11 VDC–32 VDC. The sensor must include RS-485 two-wire serial data communication and resistance level outputs.

Communication and power cable connecting the combined sensor to the RPU must be shielded, with ultraviolet (UV) stable jacket rated for outdoor use. The Contractor is responsible for providing the correct length of cable based on the planned installation.

The sensor must include all mounting hardware necessary to complete the installation.

2.3.1.

**Temperature.**

- **Principle.** NTC.
- **Measuring Range.** -58°F–140°F.
- **Accuracy.**  $\pm 0.2$  (-4°F–122°F), otherwise  $\pm 0.5$  (>-22°F).

2.3.2.

**Relative Humidity.**

- **Capacitive.**
- **Measuring Range.** 0%–100%.
- **Accuracy.**  $\pm 2\%$ .

2.3.3.

**Precipitation (Liquid).**

- **Principle.** 24-GHz Doppler radar.
- **Droplet Size.** 0.011 in.–19 in.
- **Detection Sensitivity.** 0.0003 in/h.
- **Particle Velocity.** 0.2 mph–34.6 mph.
- **Precipitation Types.** Rain/snow.
- **Solid Precipitation.** 0.20 in.–1.18 in.
- **Intensity Range.** 0.00196 in/h–0.00780 in/h.
- **Intensity Resolution.** 0.00039 in/h.
- **Amount Resolution.** 0.0039 in.
- **Accuracy.** 20% under laboratory conditions.
- **Reproducibility.** Typical >90% under laboratory conditions.

2.3.4.

**Air Pressure.**

- **MEMS Capacitive.**
- **Measuring Range.** 300 hPa–1,200 hPa.
- **Accuracy.**  $\pm 0.5$  hPa (32°F–104°F).

2.3.5.

**Wind Direction.**

- **Ultrasonic.**
- **Measuring Range.** 0°–359.9°.
- **Accuracy.** <3° RMSE >2.2 mph.
- **Resolution.** 0.1.
- **Startup Threshold.** 0.67 mph.

2.3.6.

**Wind Speed.**

- **Ultrasonic.**
- **Measuring Range.** 0 mph–134 mph.
- **Accuracy.**  $\pm 0.67$  mph or  $\pm 3\%$  (0 mph–78 mph)  $\pm 5\%$  (>78 mph) RMSE.
- **Resolution.** 0.22 mph.
- **Startup Threshold.** 0.67 mph.

- 2.4. **Precipitation Sensor (Standalone Sensor).** Precipitation detection sensors must be versatile instruments that can function as a precipitation classifier and a precipitation rate meter. The radar-based precipitation sensor must be able to differentiate type, size, and intensity of falling precipitation. The precipitation sensor must sense the onset and cessation of precipitation in the form of rain, snow, sleet, and freezing rain, and must indicate when precipitation is occurring. The sensor must provide all precipitation classification and measurements of intensity. The sensor must operate within a minimum temperature range of -40°F–140°F at 0%–100% relative humidity and meet an IP66, IP67 rating. The sensor must operate to Specifications at cable lengths up to 100 ft. from the RPU.

The sensor must operate within a power range of 12 VDC–30 VDC and use no more than 5W of power. The sensor must include RS-232, RS-485 data communication and 4-mA–20-mA outputs, and be capable of operating to Specifications at cable lengths up to 100 ft. from the RPU.

Communication and power cable connecting the sensor to the RPU must be shielded, with UV stable jacket rated for outdoor use. The Contractor is responsible for providing the correct length of cable based on the planned installation.

Optical precipitation sensors are not allowed. The measuring technology must be Doppler radar. The sensor must support remote firmware upgrades without the need for personnel to be onsite.

- 2.5. **Air Temperature and Relative Humidity Sensor (Standalone Sensor).** The air temperature and relative humidity sensor must have an air-temperature sensing element that measures temperatures within a minimum range of -40°F–140°F with an accuracy within 1° of actual temperature. The relative humidity sensing element must be of the capacitance type and have a measuring range of 10%–100% within 1% of actual humidity levels. The sensor must be protected by UV-stabilized white thermoplastic solar- and wind-radiation shield and meet IP66 rating.

System dew point temperature will be calculated by the system from the air temperature and relative humidity. Both atmospheric sensing elements must be mounted on the RWIS tower at the standard meteorological height of approximately 6 ft. above ground level.

The sensor must operate within a power range of 7 VDC–30 VDC and use no more than 5W of power. The sensor must include RS-485 two-wire serial data communication, 0V–10V, and resistance-level outputs, and be capable of operating to Specifications on cable lengths up to 100 ft. from the RPU.

Communication and power cable connecting the combined sensor to the RPU must be shielded, with UV stable jacket rated for outdoor use. The Contractor is responsible for providing the correct length of cable based on the planned installation.

The sensor must include all mounting hardware necessary to complete the installation.

- 2.6. **In-Pavement Roadway Sensor.** Furnish and install intrusive pavement sensors as shown on the project plans or as directed. The intrusive sensor supplied must be a single solid-state electronic device that is installed in the roadway or bridge deck pavement at the locations as shown on the plans or as directed. Exact sensor placement will be as determined by the Engineer with guidance from the equipment supplier.

The sensor must be constructed of materials that have thermal characteristics similar to common pavement materials. The top of the sensor must be installed with epoxy sealer so the top is flush with the surrounding roadway surface. The sensor must be thermally nonintrusive, providing stable operation over a temperature range of -40°F–140°F. Weather conditions, traffic, or ice control chemicals must not degrade its performance. The sensor must be supplied with 300 ft. of attached molded cable that is waterproofed and sealed as an integral part of the assembly. Each sensor must be capable of operating at extended cable lengths up to 4,000 ft. from the RPU by splicing to direct-burial sensor extension cable.

The in-pavement sensors must allow for the removal of the electronics after installation of the sensor in the roadway. This must be accomplished without the use of coring or other pavement-altering means. The electronics must be field-replaceable. The sensor must support remote firmware upgrades without the need

for personnel to be onsite. Although only one may be required, the in-pavement sensor must allow for two subsurface probes to extend from the housing. Separate subsurface probes from the passive sensor are not allowed.

The sensor must operate within a power range of 9 VDC–14 VDC, typically 12 VDC. The sensor must include RS-485 two-wire serial data communication, baud rate from 2,400 bit/s–38,400 bit/s, Standard 19200. The sensor must meet IP68 rating.

The sensor must electronically sample the following pavement parameters.

- Detectable road conditions (dry/damp/wet/ice or snow/residual salt content/freezing wetness).
- Surface temperature at the sensor head.
- Pavement surface conductivity, friction coefficient.
- Road surface temperature and below-ground temperature, with depth of subsurface up to 3 ft.
- Water film height using radar technology up to a resolution of 0.0004 in.
- Dry is absence of moisture on the surface sensor.
- Trace moisture is when pavement moisture is above freezing (no precipitation).
- Wet is when precipitation has occurred and there is a continuous film of moisture on the pavement sensor.
- Chemically wet is continuous film of water and ice mixture at or below freezing (32°F) with enough chemical to keep the mixture from freezing, and precipitation is not occurring.
- Ice warning is continuous film of ice and water mixture at or below freezing (32°F) with insufficient chemical to keep the mixture from freezing (active precipitation).
- Ice watch is thin or spotty film of moisture at or below freezing (32°F), and precipitation is not occurring.

After bid opening and before Contract execution, the successful Contractor must supply actual field test documentation that substantiates pavement sensor performance.

- 2.7. **Subsurface Temperature Probe.** Furnish and install the subsurface temperature probes in the roadway at a depth of 18 in. The probe will measure the ground temperature below the roadway pavement surface. The temperature-sensing element of the probe must operate over a temperature range of -40°F–140°F.

The probe must be supplied attached to the in-pavement sensor canister with cable that is waterproofed and sealed as an integral part of the assembly. Each sensor must be capable of operating at extended cable lengths up to 4,000 ft. from the RPU.

The wired subsurface sensor must be installed per manufacturer's recommendations to detect temperature at a depth of 18 in. Exact placement of the sensor must be as determined by the field engineer with guidance from the manufacturer. All cabling for the sensor, where it is not embedded in the road, must be installed in conduit at a minimum depth of 36 in. Installation must eliminate all cable splicing. The sensor must be configured and calibrated to function as designed with the RPU.

- 2.8. **Nonintrusive Pavement Condition and Temperature Sensor.** The noninvasive road weather sensor must work with optical technology and measure surface conditions such as wetness, ice, snow, or frost, as well as water film height, ice percentage, and freeze point temperature. It must also provide friction coefficient and optional freeze point data of the pavement and roadway surface. The sensor must support remote firmware upgrades without the need for personnel to be onsite. The sensor must measure the roadway parameters using infrared technology. Laser technology is not permitted.

The sensor must be capable of accurate measurements within a minimum range of 7 ft.–40 ft. The sensor must operate in a minimum temperature range of -40°F–140°F at 0%–100% relative humidity. The sensor must measure road surface temperature from -40°F–158°F. The sensor must measure water film height using optical technology for a range of 0 in.–0.0787 in. for water and 0 in.–0.3937 in. for snow. The sensor must meet IP65 rating.

The sensor must be powered from a 9-VDC–30-VDC source and use no more than 4W of power. The sensor must provide RS-232 and RS-485 serial data communication interfaces and be capable of operating to Specifications at cable lengths up to 300 ft. from the RPU for RS-232 and 495 ft. from the RPU for RS-485.

If the RWIS is greater than 25 ft. from the white edge line of the roadway being measured, then the nonintrusive pavement condition sensor must include a steel pole with breakaway assembly per Department standards and underground conduit to install the sensor at an appropriate height to detect conditions of the closest lane of travel.

Communication and power cable connecting the sensor to the RPU must be shielded, with UV stable jacket rated for outdoor use. The Contractor is responsible for providing the correct length of cable based on the planned installation.

The sensor must include all mounting hardware necessary to complete the installation. The quantity of nonintrusive pavement condition sensors and desired sensor detection location must be provided on the plans or directed.

The sensor must include all mounting hardware necessary to complete the installation.

- 2.9. **Wind Speed Sensor (Standalone Sensor).** The wind monitor sensor must be installed at the standard meteorological height of approximately 30 ft. above ground level. The sensor must be mounted such that birds are not able to perch or nest on the sensor. The sensor may be a combination wind speed and direction sensor of lightweight corrosion-resistant construction. The sensor must be based on three-transducer ultrasonic technology and not have any moving parts.

The sensor must have an operating range of 0 ft./sec.–200 ft./sec., with a survival operation limit of 279 ft./sec. Accuracy must be +1 ft./sec. Wind speed resolution must be 1.0 ft./sec. Wind direction accuracy must be +2%. Wind direction resolution must be 1°. The sensor must operate within a minimum temperature range of -40°F–140°F, and the sensor must meet IP66 and IP67 ratings.

The sensor must operate within a power range of 9 VDC–40 VDC and use no more than 30W of power. The sensor must include 0-mV–5,000-mV analog and RS-232/RS-485 digital outputs and be capable of operating to Specifications on cable lengths up to 100 ft. from the RPU.

Communication and power cable connecting the sensor to the RPU must be shielded, with UV stable jacket rated for outdoor use. The Contractor is responsible for providing the correct length of cable based on the planned installation.

The sensor must include all mounting hardware necessary to complete the installation.

- 2.10. **Pan-Tilt-Zoom Camera (Optional).** The pan-tilt-zoom camera must be furnished by the Department and installed per manufacturer recommendations on the RWIS approximately 3 ft. below the top of the structure or on top of the structure or as directed, and configured for a minimum of two preset positions as determined. The installation of the pan-tilt-zoom camera will be paid for under bid item 6010-6011 CCTV FIELD EQUIP (DIGITAL)(INSTL ONLY).

The Contractor is responsible for using the appropriate communication protocol based on RPU-to-sensor connection to maximize communications reliability.

All sensor and camera cables connecting to the RPU must be secured to themselves and the structure every 3 ft. Cables should enter through the bottom of the RPU enclosure, be labeled by sensor type and location where applicable, and connect to the appropriate port on the RPU. All cabling must be installed in a neat and workmanlike manner.

- 2.11. **Nonintrusive Surface Water Level Flood Sensor (Optional Sensor for Roadway Flood Detection).** This device is a surface water measurement sensor that uses maintenance-free radar measurement technology.

The sensor must measure water level and distance to water. The measurement technology must be noncontact pulse radar. Measurement range must be from 1.3 ft.–115 ft. The sensor must be capable of measuring water level or depth to water from a bridge, pier, or mounting arm.

The sensor must operate within a temperature range of -40°F–140°F and meet IP67 rating. The sensor must operate within a power range of 5 VDC–28 VDC. The sensor must include RS-485 serial data communication interface using SDI-12 interface.

Communication and power cable connecting the sensor to the RPU must be shielded, with UV stable jacket rated for outdoor use. The Contractor is responsible for providing the correct length of cable based on the planned installation. The sensor must include all mounting hardware necessary to complete the installation.

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### 3. CONSTRUCTION

Install the RWIS in accordance with the RWIS vendor's recommendations; the plans; Standard Specifications; and all federal, state, and local codes and requirements. The Contractor is responsible for providing all traffic control and safety work zones for the installation of the roadway sensors in conformance with Department traffic control requirements.

To be able to add future measuring points or capabilities into the system, which could include, but not be limited to, data communication, visualization, and alerting by the system, the entire data structure of the system must be provided. This includes, but is not limited to, sensor protocols, RPU protocols, and administrative rights to the system. This will allow a third party, other than the manufacturer, to perform integration into the data structure and software visualization.

3.1. **RWIS System Commissioning.** Upon completion of the RWIS system equipment installation, the system vendor must provide an onsite field engineer to start up and test the entire system. This engineer will make all final sensor connections to the RPU and perform all final system checks, sensor alignments, software setup, and software configuration to provide a fully operational RWIS system.

3.2. **RWIS System Vendor.** Furnish a detailed description (technical cut sheets) of the RWIS to be supplied by the Contractor and the experience of the vendor or manufacturer in supplying such RWIS to other like agencies.

Before any award, the Department may require the Contractor to demonstrate the proposed RWIS can provide interoperability and connectivity to the existing statewide RWIS system. The RWIS equipment vendor chosen by the Contractor must have at least 10 successful RWIS system installations in North America. As part of the equipment approval process, the Department may ask the Contractor to provide the names of at least five agencies, with names, telephone numbers, and contact person to verify said RWIS installations were successful.

3.3. **Warranty.** Provide a limited, onsite warranty covering all equipment for a 24-mo. period from the RWIS commissioning date and 1-yr. telephone technical support at no additional charge to the Department. The technical support must include access to a trained service representative who can respond within 24 hr. to questions related to all RWIS-related equipment problems and maintenance issues.

3.4. **RWIS System Equipment Warranty.** Furnish all RWIS system equipment for this project that will be state-of-the-art and in current manufacture at the time of purchase. The vendor must factory-warranty the RPU and sensors for not less than 36 mo. Batteries will be supported by their respective manufacturer's warranty.

3.5. **Training.** Provide at least 24 hr. of instruction to 10 designated personnel in the operation and maintenance procedures of equipment or systems installed. Provide the training during installation, testing, and integration. Provide the training through practical demonstrations, seminars, and other related technical procedures.



The training session must be conducted by the vendor representative. Furnish a training session agenda, a complete set of training material (manuals and schematics), and the names and qualifications of proposed instructors for approval 60 days before the training. The Department will determine the training location and provide the training facility. Provide one copy of the course material for each person.

Provide training in the following areas of interest and as shown on the plans or as directed.

- Hands-on operation for each type of equipment;
- Explanation of all system commands, their function, and use;
- Required preventive maintenance procedures;
- All equipment servicing procedures; and
- System troubleshooting or problem identification procedures.

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#### 4. MEASUREMENT

This Item will be measured by the complete RWIS installed and by each individual RWIS component installed. The cable will be subsidiary to each component installed.

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#### 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price for "Furnish and Install Roadway Weather Information System," "All-in-One Atmospheric Sensor," "Precipitation Type Sensor," "Air Temperature/Relative Humidity Sensor," "Road Surface Sensor," "Subsurface Sensor," "Non-Intrusive Pavement Condition and Temperature Sensor," "Rain Sensor," "Windspeed/Direction Sensor," "Barometric Pressure Sensor," and "Non-Intrusive Surface Water Level Flood Sensor." This price is full compensation for furnishing, placing, and testing all materials and equipment; mounting equipment; accessories; software licensing; and all tools, labor, supplies, and incidentals. All incidental items, including costs associated with arranging for the manufacturer's representative to be onsite during installation, commissioning, and testing, will not be paid for separately, but will be subsidiary to "Furnish and Install Roadway Weather Information System."

# Special Specification 7101-RMA

## Intelligent Transportation System (ITS) Media Converter

### 1. DESCRIPTION

Furnish, install, and test media converter of the type specified in designated Intelligent Transportation System (ITS) field equipment cabinets as shown on the plans.

An Ethernet media converter is defined as a device that transmits and receives data by means of Ethernet communication and converts Ethernet RJ-45 electrical signals to single mode optical format and from single mode optical format to Ethernet RJ-45 electrical format.

A serial media converter is defined as a device that transmits and receives data by means of serial communication and converts RS-232 communication media for transport over TCP/IP through an Ethernet RJ-45 port. A serial media converter is commonly referenced in the industry as a field terminal server or port server.

### 2. MATERIALS

#### 2.1. Ethernet Media Converter.

**2.1.1. Functional Requirements.** Provide a Ethernet media converter that supports data transmission over Ethernet communication and operates over two single mode or multimode fibers and be full duplex. Provide a media converter with fiber ports to support the network topology as identified on the plans.

Furnish a media converter that is stable, easily configurable with minimal effort, and able to communicate with other media converters through optical modulation. The media converter must have a fail-safe design such that device failure does not cause failure of any other equipment.

Provide a media converter with diagnostic light emitting diodes (LED) for power, receive optical signals present or absent, transmit laser current/over current, and data activity levels (link/speed) for the transmitter and the receiver portion of the device.

#### 2.1.2. Electrical Requirements.

**2.1.2.1. Power Requirements.** Provide a separate power supply providing a maximum 48 VDC for each media converter, to be provided as part of this Item. Maximum power draw must be less than 10 W each.

Provide each separate power supply capable of operating at 120 VAC  $\pm$  15 VAC at 60 Hz.

**2.1.2.2. Surge Protection.** Install media converter in an environment that has protection from power surges and sags.

**2.1.2.3. Power Service Transients.** Supply equipment in accordance with the requirements in the National Electrical Manufacturers Association (NEMA) Standard TS-2 for Traffic Control System, Sec. 2.1.6, "Transients" or latest revision.

**2.1.2.4. Wiring.** Meet the requirements of the most current version of the National Electric Code (NEC). Provide wires that are cut to proper length before assembly. No splicing of cables permitted. Provide cable slacks to facilitate removal and replacement of assemblies, panels, and modules. Doubling back of any wire to take up slack is not permitted. Lace wires neatly together with nylon lacing or outdoor rated plastic straps. Secure the cables inside the cabinet with outdoor rated plastic straps.

**2.1.3. Ethernet Port Configuration.** Provide a media converter with one copper Ethernet RJ-45 port that has the following characteristics:

**2.1.3.1. Interface.** 10/100Base-TX (100 Mb) or 10/100/1000 Base-TX (Gigabit) Ethernet, automatic half/full duplex setting, and link fault pass through with a female RJ-45 connector as shown on the plans.

**2.1.3.2. Medium Dependent Interface.** Automatic Medium Dependent Interface (MDI) and Medium Dependent Interface-Crossed (MDI-X).

2.1.3.3. **Bandwidth.** Up to 328 ft. cable length at 10 Mbps on Category 3, 4, or 5 unshielded twisted-wire pair cable. Up to 328 ft. cable length at 100 Mbps on Category 5e and 6 unshielded twisted-wire pair cable.

2.1.3.4. **Diagnostics.** Provide port with LED link status indicator.

2.1.4. **Fiber Optic Port Configuration.** Provide a media converter with fiber optic interface port as required for the network topology that has the following features:

2.1.4.1. **Interface.** 10/100 Base-X (100 Mb) or 10/100/1000Base-X (Gigabit) Ethernet as shown on the plans.

2.1.4.2. **Optical Connectors.** Provide connectors of the same connector type to be compatible with the fiber interface requirements on patch panel equipment as shown on the plans or as directed.

2.1.4.3. **System bandwidth.** 10/100Base-X up to 2 km at 100 Mbps on multimode fiber optic cable, and up to 20 km at 100 Mbps on single mode fiber optic cable.

10/100/1000Base-X up to 20 km at 1000 Mbps on single mode fiber optic cable.

2.1.4.4. **Media Wavelength.** Media converter must operate in the 1310 nm wavelength for single mode fiber optic cable. Media converter must operate in the 850 nm or 1310 nm wavelength for multimode fiber optic cable as shown on the plans or as directed.

2.1.4.5. **Link Budget/Attenuation.** Single mode and multimode fiber operates over 0 to 21 dB path attenuation.

2.1.5. **Protocols Supported.** Provide a media converter that supports the following protocols:

- IEEE 802.3,
- IEEE 802.3ab 1000Base-T,
- IEEE 802.3u 100 Base-T,
- IEEE 802.3i 10 Base-T, and
- IEEE 802.3x for flow control.

2.1.6. **Visual Indicators.** Provide a media converter that has the following visual indicators:

- power,
- fiber link/activity
- UTP link/activity, and
- full/half duplex.

2.1.7. **Regulatory Approvals.** Provide a media converter that has been certified to the following regulatory standards.

- Product Safety: Underwriters Laboratories (UL) Standard 1950 and 60950,
- Electromagnetic Emissions: Federal Communications Commission (FCC) Part 15, Class A, National
- Electrical Manufacturers Association TS2, or latest revision, and
- Institute of Electrical and Electronic Engineers (IEEE) 802.3 compliant.

## 2.2. Serial Media Converter.

2.2.1. **Functional Requirements.** Provide a serial media converter that supports data transmission over serial and Ethernet communication. Serial data received must be full duplex and conform to all requirements of Electronic Industries Associations (EIA) Standard RS-232, RS-422, and RS-485 governed by the Electronic Components Associations (ECA). Provide a serial media converter that can integrate with existing ITS field equipment and hardware in the field.

Furnish a serial media converter that is stable, capable of plug-and-play operation, and able to communicate with other media converters through optical modulation. The media converter must have a fail-safe design such that device failure does not cause failure of any other equipment.

Provide a serial media converter with diagnostic LED for power, transmit and receive signals present or absent, transmit laser current/over current, and data activity levels (link/speed) for the transmitter and the receiver portion of the device.

2.2.2. **Electrical Requirements.** Meet the requirements specified under Section 2.1.2.

2.2.3. **Ethernet Port Configuration.** Provide a serial media converter meeting the requirements specified under Section 2.1.3, except as modified below:

2.2.3.1. **Interface.** Provide one 10/100Base-TX (100 Mb), automatic half/full duplex setting, and link fault pass through with a female RJ-45 connector as shown on the plans.

2.2.4. **Serial Port Configuration.** Provide a serial media converter with the number of serial ports as shown on the plans.

2.2.4.1. **Interface.** Serial data received must be full duplex and conform to all requirements of Electronic Industries Associations (EIA) Standard RS-232, RS-422, and RS-485 governed by the Electronic Components Associations (ECA).

Provide EIA-232 compatible ports with a minimum of one EIA-422 and EIA-485 switch selectable port.

Provide a RJ-45 to DB-9 crossover cable with each unit for configuration in the field.

2.2.4.2. **Bandwidth.** Cable length drives up to 50 ft. on minimum of 24 American Wire Gauge (AWG) cable at 115 kbps (RS-232).

Cable length drives up to 4000 ft. on minimum of 24 AWG cable at 115 kbps (RS-422/485).

2.2.5. **Protocols Supported.** Provide a serial media converter that supports the following protocols:

- IEEE 802.3,
- IEEE 802.3u 100 Base-T,
- IEEE 802.3i 10 Base-T,
- IEEE 802.3x for flow control,
- Transport Control Protocol (TCP)/User Datagram Protocol (UDP) Socket Services,
- UDP Multicast,
- Telnet (both standard and raw data transfer),
- Reverse Telnet (both standard and raw data transfer),
- Point-to-Point Protocol (PPP),
- Secure Shell (SSH) version 2,
- Secure Sockets Layer (SSL)/Transport Layer Security (TLS),
- Hyper Text Transport Protocol (HTTP), and
- Simple Network Management Protocol (SNMP) version 2.

2.2.6. **Visual Indicators.** Meet the requirements specified under Section 2.1.6.

2.2.7. **Regulatory Approvals.** Meet the requirements specified under Section 2.1.7.

2.2.8. **Additional Features.** Provide a serial media converter that has the following additional features:

- maximum of 50 ms of end-to-end forwarding delay (serial in on one serial server to serial out on the other serial server) for any character in the data stream when used for a serial over IP tunnel,
- maximum of 10 ms of Ethernet-to-serial forwarding delay (from receipt of Ethernet packet to start of serial transmission) for any character in the data stream when used for serial to IP conversion,
- each serial port is accessible using a unique TCP port and IP address combination,
- support simultaneous connections to all serial ports on the unit,
- able to use a raw connection with no Telnet negotiation or interpretation of the data stream,
- able to pass a serial data stream bi-directionally without affecting the content of the data stream, and
- performance is not affected by the content of the data stream.

2.2.9. **Management.** Provide a serial media converter that provides the following management capabilities:

- web browser/HTTP configuration and management,
- telnet configuration and management,
- serial port configuration and management, and
- allow multiple management sessions or automatically terminate existing session when a new session is requested.

### 2.3. Mechanical Requirements.

2.3.1. **Modular Design.** Provide equipment modular in design to allow for ease of component replacement in the field.

Mechanically key sockets and connectors to prevent insertion of unlike functions into the wrong socket or connector.

Clearly identify all modules and assemblies with name, model number, serial number, and any other pertinent information required to facilitate equipment maintenance, inventory, and tracking. All identifying information markings must be permanent, UV resistant and intended for harsh environments

2.3.2. **Connectors.** Make all external connections by means of connectors. Key the connectors to preclude improper hookups. Color code or appropriately mark all wires to and from the connectors. Serial data interface connections must be RS-232, 425, or 485 DB connector types as required for compatibility with the intended device communications protocol.

Plate each and every conductive contact surface or pin with a minimum of 20 microns of gold.

For all installations supply fiber optic patch cables necessary to integrate the Ethernet media converter with the communication equipment and patch panel as shown on the plans, or as directed by the Engineer at no additional cost to the Mobility Authority.

2.3.3. **Copper Connectors.** Input and output connectors must be via pinned connectors configured in a format compatible with the interface requirements of the data communications equipment.

2.3.4. **Harnesses.** Provide connecting harness of appropriate length and terminated with matching connectors for interconnection with the terminal equipment shown on the plans, or as directed by the Engineer.

2.3.5. **Housing.** Provide standard compact serviceable modules.

2.4. **Environmental Design Requirements.** Ensure that equipment conforms to NEMA TS-2-2003 (R2008) and NEMA 250-2008, or most current revision, for the following categories:

2.4.1. **Temperature.** Provide equipment that conforms to NEMA TS-2 Section 2.1.5.1, or latest revision, and meets all the specified requirements during and after being subjected to any combination of the following conditions:

- ambient temperature range of -29°F to 165°F,
- temperature shock not exceeding 30°F per hour,
- relative humidity of 0 to 95%, and
- moisture condensation on all exterior surfaces caused by temperature changes.

2.4.2. **Vibration.** Provide equipment that conforms to NEMA TS-2 Section 2.1.9 and Section 2.2.3, or most current version, and meets all the specified requirements during and after being subjected to a vibration of 5 to 30 Hz up to 0.5g's applied in each of 3 mutually perpendicular planes for 30 min.

2.4.3. **Shock.** Provide equipment that conforms to NEMA TS-2 Section 2.1.10 and Section 2.2.4, or most current version, and does not yield permanent mechanical deformation or any damage that renders the unit inoperable when subjected to a shock of 10g applied in each of three mutually perpendicular planes for 30 min.

## 3.

### CONSTRUCTION

3.1. **General.** Utilize the latest available techniques with a minimum number of parts, subassemblies, circuits, cards, and modules to maximize standardization and commonality.

Design for ease of maintenance, with all component parts readily accessible for inspection and maintenance.

Provide test points for checking essential voltages and waveforms.

**3.2. Mechanical Components.** Use stainless steel for all external screws, nuts, and locking washers. No self tapping screws are allowed unless specifically approved by the Engineer.

Provide corrosion resistant parts, such as plastic, stainless steel, anodized aluminum or brass.

Protect all materials used in construction from fungus growth and moisture deterioration.

Separate all dissimilar metals by an inert dielectric material.

**3.3. Mounting.** Provide all mounting hardware as shown on the plans, or as directed by the Engineer at no additional cost to the Department.

**3.4. Documentation Requirements.** Provide a minimum of 2 complete sets of operation and maintenance manuals, at least 45 days prior to testing, in hard copy format, bound, as well as an electronic version in Adobe PDF format on a CD/DVD or removable flash drive that includes the following:

- complete network configuration diagram which documents locations of installed equipment, serial and model numbers, communication protocol settings, IP address, cabling, power service connections, and fiber assignments,
- complete installation procedures,
- compliance matrix documenting conformance to this specification,
- complete parts list including names of vendors for parts not identified by universal part number such as JEDEC, RETMA, or EIA,
- operations manuals,
- warranty documentation,
- complete maintenance and trouble-shooting procedures,
- testing procedures identifying threshold values,
- recovery procedures for malfunction,
- instructions for gathering maintenance assistance from manufacturer, and
- provide the Department with certification documentation verifying conformance with environmental and testing requirements contained in this special specification. Certifications may be provided by the manufacturer or through independent certified labs.

### **3.5. Testing.**

**3.5.1. General.** Unless otherwise shown on the plans, perform the following tests on the applicable equipment or systems.

**3.5.1.1. Test Procedures Documentation.** Provide 5 copies of the test procedures to include tests identified in Section 3.5.1.2 through Section 3.5.1.7 inclusive and blank data forms to the Engineer for review and comment at least 45 days prior to testing for each test required on this project. Include the sequence of the tests in the procedures. The Engineer will comment, approve, or reject test procedures within 30 days after Contractor submittal of equipment for tests. Contractor to resubmit, if necessary, rejected test procedures for final approval within 10 days prior to testing. Review time is calendar days. Conduct all tests in accordance with the approved test procedures.

Record measured test data on the data forms against threshold values, as well as quantitative results. No bid item measurement or payment will be made until the Engineer has verified the test results meet the minimum requirements of the specification. The data forms for all tests, except design approval tests, must be signed by an authorized representative of the Contractor.

Provide written notice to the Engineer within 48 hr. of discovery of any testing discrepancy identified during testing by the Contractor. Furnish data forms containing the acceptable range of expected results as well as the measured values.

**3.5.1.2. Design Approval Test.** Conduct a design approval test on randomly selected units from the prototype design manufacturing run. If only 1 design prototype is manufactured, perform this test on that unit. If supplying multiple types of the equipment, provide and test a sample of each type.

Certification from an independent testing laboratory of a successfully completed design approval test is acceptable. Ensure that the testing by this laboratory is performed in accordance with the requirements of this

specification. Failure of independent tests to comply with the requirements of this specification are grounds for rejection of any certification.

Provide a copy of the certification to the Department. The data forms for the design approval tests must be signed by an authorized representative (company official) of the equipment manufacturer or by an authorized representative of an independent testing facility.

Notify the Engineer 10 working days before conducting this testing. The Department may witness all the tests. Perform the following tests:

3.5.1.2.1. **Power Service Transients.** The equipment shall meet the performance requirements in this Item when subjected to the power service transients as specified in Section 2.2.7.2, "Transient Tests (Power Service)" of the NEMA TS 2 standard, most current version.

3.5.1.2.2. **Temperature and Condensation.** The equipment shall meet the performance requirements specified in this Item when subjected to the following conditions in the order specified below:

- Stabilize the equipment at -30°F and test as specified in Sections 2.2.7.3, "Low-Temperature Low Voltage Tests" and 2.2.7.4, "Low-Temperature High-Voltage Tests" of the NEMA TS 2 standard, most

current version;

- Allow the equipment to warm up to room temperature in an atmosphere having relative humidity of at least 40%. Operate the equipment for 2 hr., while wet, without degradation or failure; and

- Stabilize the equipment at 165°F and test as specified in Sections 2.2.7.5, "High-Temperature High Voltage Tests" and 2.2.7.6, "High-Temperature Low-Voltage Tests" of the NEMA TS 2 standard, most current version.

3.5.1.2.3. **Relative Humidity.** The equipment shall meet the performance requirements, specified in this Item, within 30 min. of being subjected to a temperature of 165°F and a relative humidity of 18% for 48 hr.

3.5.1.2.4. **Vibration.** The equipment shall show no degradation of mechanical structure, soldered components, or plugin components and shall operate in accordance with the manufacturer's equipment specifications after being subjected to the vibration tests as described in Section 2.2.8, "Vibration Test" of the NEMA TS 2 standard, most current version.

3.5.1.2.5. **Power Interruption.** The equipment shall meet the performance requirements specified in this Item when subjected to nominal input voltage variations as specified in Section 2.2.10 "Power Interruption Test" of the NEMA TS 2 standard, most current version.

3.5.1.3. **Demonstration Test.** Conduct a demonstration test on applicable equipment at an approved Contractor facility. The Contractor may submit procedures and results from previous contracts in the same District as this contract provided the materials and equipment are identical, provided results are less than 5 yr. old. Notify the Engineer 10 working days before conducting this testing. The Department may witness all the tests. Perform the following tests:

3.5.1.3.1. **Examination of Product.** Examine each unit carefully to verify that the materials, design, construction, markings and workmanship comply with the requirements of this Item.

3.5.1.3.2. **Continuity Tests.** Check the wiring to determine conformance with the requirements of the appropriate paragraphs in this Item.

3.5.1.3.3. **Operational Test.** Operate each unit for at least 15 min. to permit equipment temperature stabilization and an adequate number of performance characteristics to ensure compliance with the requirements of this Item.

3.5.1.4. **Field Acceptance (Stand-Alone) Test.** Conduct a field acceptance test for each unit after installation as required by the Engineer in order to demonstrate compliance with the functional requirements with this Item. The test shall exercise all stand-alone (non-network) functional operations. Notify the Engineer 5 working days before conducting this test. The field acceptance test may consist of the following:

3.5.1.4.1. **Physical Construction.** Verify physical construction is completed in accordance with the plans and specification.

3.5.1.4.2. **Electrical and Communication.** Verify that all connectors for grounding, surge suppression, and

electrical distribution are tightened correctly. Verify all power supplies and circuits are operating under the proper voltages. Verify all power and communications cables are terminated correctly, secured inside the cabinet, and fitted with appropriate connectors.

**3.5.1.4.3. Communication Link Quality.** Conduct signal tests for each communication link, including data transmit, data receive, bandwidth, proper operation of alarm and switches, and bit error rate. Document results in a written report to the Engineer.

**3.5.1.5. System Integration Test.** Conduct a system integration test on the complete functional system. Demonstrate all control and monitor functions for each system component for 24 hr. Notify the Engineer 10 working days before conducting this testing. The Department may witness all the tests.

Provide systems integration test procedures for proper adjustment and calibration of subsystem components. Proper adjustment and calibration involves documenting settings used to meet functional requirements while providing a margin for adjustment when future conditions change. Utilize the Department's software (when available) to perform subsystem testing. At a minimum, utilize this software to verify commands and confirms, as well as, detector actuations and occupancy dwell time. The Contractor is responsible for being familiar with any existing Department equipment and software.

The failure of any one component material or equipment item in a system integration test is justification for rejecting the entire subsystem. Each subsystem component must function as a complete integrated subsystem for a minimal continuous 24 hr. period during the system integration test.

**3.5.1.6. Final Acceptance Test.** Following completion of the demonstration test, field acceptance test, and system integration test for all subsystems, provide completed data forms containing all of the data taken, including quantitative results for all tests, a set of "as built" working drawings, and a written request to begin a data communication and final acceptance test. Provide "as built" working drawings indicating the actual material, equipment, and construction of the various subsystem components.

Within 10 calendar days of the request, execute a data communications test using a Department supplied software program or Contractor supplied software approved by the Department. The data communications test may be executed by the Engineer or the Contractor with the prior approval of the Engineer. The purpose of this test is to verify that the communications plan operates with application software provided by the Department.

Perform the data communications test for a period of 72 hr. If a message error or component failure occurs anywhere in the network, resume the test once repairs are completed. All components of the communications network must operate as an integral system for the duration of the test.

A message error is defined as the occurrence of a parity error, framing error, or data error in any component of the message. The error-free message rate is defined as the ratio of the number of messages in which no message error occurs to the number of messages transmitted. The error-free message rate must exceed 99.99% for acceptable transmission quality, both for the system as a whole, and for each component of the network.

Provide all additional test results to the Engineer for review once a successful data communications test has been completed. If all the requirements of this special provision have been satisfied, contract time shall be suspended and all subsystems shall be placed into operation and operate as a complete system for a period of at least 90 calendar days.

Notify the Engineer of any defects suspected in integration or function of material or equipment. Investigate any suspected defects and correct if necessary. Provide a report of findings within 2 calendar days of notice of any suspected defects. Describe the nature of the any defects reported and any corrective action taken in the report. The integrated subsystems must operate defect free as a single complete system for at least 72 continuous hours during the 30 calendar day review period. If the number of defects or frequency of failures prevents all subsystems from operating as described above, the Engineer may reject the entire system integration test results and resume contract time. Provide any necessary corrections and resubmit system integration test results and a request to begin a final acceptance test which may include "as built" plans and a data communications test.

The project will not be accepted, notwithstanding other provisions in the Contract, until the system, inclusive of all subsystems, has operated satisfactorily for a period of 90 days and in full compliance with the plans and specifications after approval of all submitted test results and reports.

**3.5.1.7. Consequences of Test Failure.** If a unit fails a test, submit a report describing the nature of the failure and the actions taken to remedy the situation prior to modification or replacement of the unit. If a unit requires



modification, correct the fault and then repeat the test until successfully completed. Correct minor discrepancies within 14 days of written notice to the Engineer. If a unit requires replacement, provide a new unit and then repeat the test until successfully completed. Major discrepancies that substantially delay receipt and acceptance of the unit are sufficient cause for rejection of the unit.

Failure to satisfy the requirements of any test is considered a defect and the equipment is subject to rejection by the Engineer. The rejected equipment may be offered again for retest provided all noncompliance has been corrected.

If a failure pattern develops in similar units within the system, implement corrective measures, including modification or replacement of units, to all similar units within the system as directed. Perform the corrective measures without additional cost or extension of the contract period.

**3.5.1.7.1. Consequences of Design Approval Test Failure.** If the equipment fails the design approval test, correct the fault within 30 days and then repeat the design approval test until successfully completed.

**3.5.1.7.2. Consequences of Demonstration Test Failure.** If the equipment fails the demonstration test, correct the fault within 30 days and then repeat the demonstration test until successfully completed.

**3.5.1.7.3. Consequences of Field Acceptance (Stand-Alone) Test Failure.** If the equipment fails the stand-alone test, correct the fault within 30 days and then repeat the stand-alone test until successfully completed.

**3.5.1.7.4. Consequence of System Integration Test Failure.** If the equipment fails the system integration test, correct the fault within 30 days and then repeat the systems integration test until successfully completed.

**3.5.1.7.5. Consequences of Final Acceptance Test Failure.** If a defect within the system is detected during the final acceptance test, document and correct the source of failure. Once corrective measures are taken, monitor the point of failure until a 30 consecutive day period free of defects is achieved.

If after completion of the initial test period, the system has not operated for 72 consecutive hours free of defects, extend the 30 day test period by an amount of time equal to 72 consecutive hours to demonstrate performance, in addition to the number of days required to complete the performance requirement of the individual point of failure.

**3.6. Training.** Conduct a training class (minimum of 1 hr., up to 4 hr., unless otherwise noted in the plans) for up to 10 representatives designated by the Department on procedures of installation, operations, testing, maintenance and repair of all equipment specified within this specification for each type of unit provided. Submit to the Engineer for approval, 10 copies of the training material at least 30 days before the training begins. Conduct training within the local area unless otherwise authorized by the Engineer.

**3.7. Warranty.** Warrant the equipment against defects or failure in design, materials, and workmanship for a minimum of 3 yr. or in accordance with the manufacturer's standard warranty if that warranty period is greater. The start date of the manufacturer's standard warranty will begin after the equipment has successfully passed all tests contained in the final acceptance test plan. Any field equipment with less than 90% of its warranty remaining after the final acceptance test is completed will not be accepted by the Department. Guarantee that equipment furnished and installed for this project performs according to the manufacturer's published specifications. Assign, to the Department, all manufacturer's normal warranties or guarantees on all electronic, electrical, and mechanical equipment, materials, technical data, and products furnished for and installed on the project.

Media converters must be repaired or replaced at the Contractor's expense prior beginning the final acceptance test plan in the event of a malfunction or failure. Furnish replacement parts for all equipment within 10 days of notification of failure by the Department.

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#### 4. MEASUREMENT

This Item will be measured by each ethernet media converter or serial media converter

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#### 5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price for "Ethernet Media Converter" and "Serial Media Converter" of the type specified. This price is full compensation for furnishing and installing units including all equipment, all cables and connectors, all documentation and testing; and will include the cost of furnishing all labor, materials, training, warranty, equipment, and incidentals.

## Special Specification 7102-RMA

# Intelligent Transportation System (ITS) Remote Power Management Unit (RPMU)

1.	<b>DESCRIPTION</b> Furnish, install, and test remote power management (RPMU) as shown in the Plans.
2.	<b>MATERIALS</b>
2.1	<b>General.</b> Furnish and install a 19" rack mounted CyberPower PDU41001 or equivalent.
2.2	<b>Configuration and Management.</b> Provide a RPMU that supports local and remote configuration and management, including access to all user-programmable features as well as alarm monitoring, event logging, and diagnostic utilities  Configuration and management functions shall be password protected. The RPMU shall include an event scheduler that can store a minimum of 60 events.  The RPMU shall include LED indicators for relay inputs and outlet status.  Upon loss of communications the RPMU shall maintain each receptacle and relay in its currently stored state of operation.  Upon restoration of electrical power after an outage the RPMU shall automatically restore each receptacle and relay to its previously stored state of operation and all configurable parameters shall be retained. The unit shall support SNMP v2c, including trap notifications of receptacle state changes.
2.3	<b>Communication Interfaces.</b> The RPMU shall have an Ethernet port (RJ45) for local control using a laptop PC and remote control via a network connection.
2.4	<b>Management Capability.</b> The FES shall support all Layer 2 management features and certain Layer 3 features related to multicast data transmission and routing. These features shall include, but not be limited to:
2.5	<b>Mechanical Requirements.</b> All parts shall be made of corrosion-resistant materials such as plastic, stainless steel, anodized aluminum, brass, or gold-plated metal. All fasteners exposed to the elements shall be Type 304 or 316 passivated stainless steel.
2.6	<b>Electrical Requirements.</b> The RPMU shall have a minimum of 8 NEMA 5-15R receptacles, nominal 120 VAC. The RPMU shall have a minimum current capacity of 12 amperes (amps).
2.7	<b>Environmental Requirements.</b> The RPMU shall operate properly during and after being subjected to the environmental testing procedures described in NEMA TS 2-2021, Sections 2.2.7, 2.2.8, and 2.2.9.
2.8	<b>Documentation.</b> Provide hardcopy operation and maintenance manuals, along with a copy of all product documentation on electronic media. Include the following documentation for all system devices and software, <ul style="list-style-type: none"> <li>• operator manuals,</li> <li>• installation manuals with installation procedures,</li> <li>• maintenance and troubleshooting procedures, and</li> <li>• manufacturer's specifications (functional, electrical, mechanical, and environmental).</li> </ul>
3.	<b>CONSTRUCTION</b>
3.1	<b>General.</b> Install the RPMU in accordance with the manufacturer's recommendations. Include a RPMU operation and maintenance manual in the cabinet where the RPMU is installed that includes cabinet wiring schematics, electrical interconnection drawings, parts layout and parts lists.
3.2	<b>Field Acceptance Testing.</b> Provide a field acceptance test plan to the Engineer for approval at least 14 days

prior to commencement of testing. After approval of the acceptance test plan, perform testing of the installed RPMU equipment. Furnish all equipment, software, and supplies necessary for conducting the test.

4.2

**Warranty.** Ensure the RPMU includes a manufacturer's warranty covering defects for a minimum of 3 years from the date of final acceptance in accordance with TxDOT specifications.

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**3. MEASUREMENT**

This Item will be measured by each RPMU.

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**4. PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price for "Remote Power Management Unit". This price is full compensation for furnishing and installing units including all equipment, all cables and connectors as specified in the Plans; all documentation and testing; and will include the cost of furnishing all labor, materials, training, warranty, equipment, and incidentals.

# Special Specification 7103-RMA

## Intelligent Transportation System (ITS) Field Ethernet

### Switch

- |     |   |
|-----|---|
| 1.  | <p><b>DESCRIPTION</b></p> <p>Furnish, install, and test field ethernet switch as shown on the plans.</p>  |
| 2.  | <p><b>MATERIALS</b></p>   |
| 2.1 | <p><b>General.</b> Furnish and install a 19" rack mounted Cisco IE-4010-4S24P Industrial Ethernet Switch or equivalent.</p> <p>The Field Ethernet Switch (FES) shall be compliant with the Code of Federal Regulations Section 200.216 Prohibition on certain telecommunications and video surveillance services or equipment<br/> <a href="https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-C/section-200.216">https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-C/section-200.216</a>.</p> <p>The FES provides wire-speed fast Ethernet connectivity at transmission rates of 100 megabits per second. Each FES shall be managed individually and as a group for switch configuration, performance monitoring, and troubleshooting.</p> <p>The FES shall include Layer 2+ capabilities, including, Quality of Service (QoS), IGMP, rate limiting, security filtering, and general management.</p> <p>The FES shall support half and full duplex Ethernet communications.</p> <p>The FES shall provide 99.999% error-free operation.</p> <p>The FES shall comply with the EIA Ethernet data communication requirements using single-mode fiber optic transmission medium and Category 5E copper transmission medium.</p> <p>The FES shall have a minimum mean time between failures (MTBF) of 10 years, or 87,600 hours, as calculated using the Bellcore/Telcordia SR-332 standard for reliability prediction.</p> <p>Ensure that the field Ethernet switch (FES) provides Ethernet connectivity between devices, systems, and locations as required by the Contract Documents</p> <p>Ensure that the ITS network administrator will be able to manage each FES individually and as a group for switch configuration, performance monitoring, and troubleshooting.</p> <p>Ensure that the FES is fully compatible and interoperable with connected Ethernet devices and the intelligent transportation system network.</p> <p>Ensure the FES provides a switched Ethernet connection for each connected device and at least one open RJ45 Ethernet port for technician access.</p> |
| 2.2 | <p><b>Networking Standards.</b> The FES shall comply with all applicable IEEE networking standards for Ethernet communications, including but not limited to:</p> <ul style="list-style-type: none"> <li>• IEEE 802.1Q standard for Local and Metropolitan Area Networks - Bridges and Bridged Networks used with port-based Virtual Local Area Networks (VLANs) and Rapid Spanning Tree Protocol (RSTP).</li> <li>• IEEE 802.1P standard for QoS.</li> <li>• IEEE 802.3 standard for LAN and Metropolitan Area Network (MAN) access and physical layer specifications.</li> <li>• IEEE 802.3u supplement standard regarding 100 Base TX/100 Base FX.</li> <li>• IEEE 802.3x standard regarding flow control with full duplex operation.</li> </ul>   |
| 2.3 | <p><b>Optical Ports.</b> All fiber optic link ports operate at 1,310 or 1,550 nanometers in single mode. All optical ports are Type ST, SC, LC, or FC only. Mechanical transfer registered jack (MTRJ) type connectors are not allowed.</p>   |

FES shall provide a minimum of four optical 100 Base FX ports capable of transmitting data at 100 megabits per second. FES shall provide optical ports designed for use with a pair of fibers; one fiber will transmit (TX) data and one fiber will receive (RX) data.

The optical ports shall have an optical power budget of at least 15 dB.

- 2.4 **Copper Ports.** FES shall include a minimum of twenty four copper ports. All copper ports shall be Type RJ-45 and shall auto-negotiate speed (i.e., 10/100 Base) and duplex (i.e., full or half). All 10/100 Base TX ports shall meet the specifications detailed in this section and shall be compliant with the IEEE 802.3 standard pinouts. Ethernet over very high speed digital subscriber line (EoVDSL) ports shall support standard telephone-grade twisted copper pair and automatically negotiate the fastest data rate possible depending on cable length and quality.
- 2.5 **Management Capability.** The FES shall support all Layer 2 management features and certain Layer 3 features related to multicast data transmission and routing. These features shall include, but not be limited to:
- An FES that is a port-based VLAN and supports VLAN tagging that meets or exceeds specifications as published in the IEEE 802.1Q standard and has a minimum 4-kilobit VLAN address table.
  - A forwarding/filtering rate that is a minimum of 14,880 packets per second for 10 megabits per second and 148,800 packets per second for 100 megabits per second.
  - A minimum 4 kilobit MAC address table.
  - Support of, at a minimum, IGMP Version 2.
  - Support of remote and local setup and management via secure shell (SSH) and secure Web-based GUI.
  - Support of the Simple Network Management Protocol (SNMP) version 1/2/3. Verify that the FES can be accessed using the resident EIA-232 management port or a telecommunication network.
  - Support of Remote Authentication Dial-In User Service (RADIUS) or Terminal Access Controller Access-Control System Plus (TACACS+)
  - Support of remote monitoring (RMON) of the Ethernet agent and the ability to be upgraded to switch monitoring (SMON), if necessary.
  - Support of Secure Copy (SCP) or Secure File Transfer Protocol (SFTP) and either Network Time Protocol (NTP) or the Simple Network Time Protocol (SNTP). Ensure that the FES supports port mirroring for troubleshooting purposes when combined with a network analyzer.
- 2.6 **Mechanical Requirements.** Every conductive contact surface or pin shall be gold-plated or made of a noncorrosive, nonrusting, conductive metal. Do not use self tapping screws on the exterior of the assembly. All parts shall be made of corrosion-resistant materials, such as plastic, stainless steel, anodized aluminum, brass, or gold-plated metal.
- 2.7 **Electrical Requirements.** The FES shall operate on a nominal Voltage of 120 VAC. Supply an appropriate voltage converter for devices that require operating voltages of less than 120 VAC. The FES shall have diagnostic Light Emitting Diodes (LEDs), including link, TX, RX, and power LEDs.
- 2.8 **Environmental Requirements.** FES shall operate properly during and after being subjected to the environmental testing procedures described in NEMA TS 2 2021, Sections 2.2.7, 2.2.8., and 2.2.9.
- 2.9 **Documentation.** Provide hardcopy operation and maintenance manuals, along with a copy of all product documentation on electronic media. Include the following documentation for all system devices and software,
- operator manuals,
  - installation manuals with installation procedures,
  - maintenance and troubleshooting procedures, and
  - manufacturer's specifications (functional, electrical, mechanical, and environmental).

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### 3. CONSTRUCTION

- 3.1 **General.** Install network devices at the locations shown in the Plans. Ensure that network devices are mounted securely and are fully accessible by field technicians. Ensure that all unshielded twisted pair/shielded twisted

pair Ethernet network cables are compliant with the EIA/TIA-568-B standard.

3.2

**Field Acceptance Testing.** Conduct inspection and testing at the installed equipment location according to the approved test plan. Perform the following:

- Verify that physical construction has been completed as detailed in the Plans.
- Inspect the quality and tightness of ground and surge protector connections.
- Verify proper voltages for all power supplies and related power circuits.
- Connect devices to the power sources.
- Verify all connections, including correct installation of communication and power cables.
- Verify network connection and FES configuration using a laptop PC.

3.3

**Warranty.** Ensure FES have a manufacturer's warranty covering defects for 1 year from the date of final acceptance. Ensure that the manufacturer will furnish replacements for any part or equipment found to be defective during the warranty period at no cost to the Department within 10 calendar days of notification.

---

3.

### MEASUREMENT

This Item will be measured by each field ethernet switch.

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4.

### PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price for "Field Ethernet Switch". This price is full compensation for furnishing and installing units including all equipment, all cables and connectors, all documentation and testing; and will include the cost of furnishing all labor, materials, training, warranty, equipment, and incidentals.

**GENERAL MEETING OF THE BOARD OF DIRECTORS  
OF THE  
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

**RESOLUTION NO. 25-003**

**APPROVING A CONTRACT WITH AARON CONCRETE CONTRACTORS, LLC  
FOR WALL REPAIR ON 290 TOLL**

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) has determined certain repair measures are necessary to stabilize the retaining walls on 290 Toll (the "Project"); and

WHEREAS, the Mobility Authority staff advertised the Project on December 4, 2024, and received two (2) bids by the bid opening on January 14, 2025; and


WHEREAS, the bids were reviewed by engineering staff who determined the lowest responsive and responsible bidder to be Aaron Concrete Contractors, LLC; and

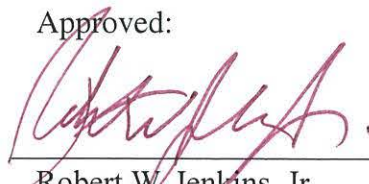
WHEREAS, after reviewing the engineering staff's evaluation, the Executive Director recommends that the Board approve a contract with Aaron Concrete Contractors, LLC for the Project in an amount not to exceed \$1,100,573.00 and in the form published in the bid documents attached hereto as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors approves a contract with Aaron Concrete Contractors, LLC for the repair and stabilization of retaining walls on 290 Toll in an amount not to exceed \$ 1,100,573.00 and hereby authorizes the Executive Director to finalize and execute the contract in the form or substantially the same form published in the bid documents attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January 2025.

Submitted and reviewed by:

  
\_\_\_\_\_  
James M. Bass  
Executive Director

Approved:  
  
\_\_\_\_\_  
Robert W. Jenkins, Jr.  
Chairman, Board of Directors

**Exhibit A**





CENTRAL TEXAS REGIONAL  
**MOBILITY AUTHORITY**

## **290E Parmer Lane Wall Repair Project**

CTRMA Contract No.: 25290E22702M

Bid Documents

Advertisement: December 4, 2024

Pre-Qualification Deadline: 12:00PM January 6, 2025

Bid Date: 2:00 PM January 14, 2025

Central Texas Regional Mobility Authority

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290E PARMER LANE WALL REPAIR PROJECT

CTRMA CONTRACT NO. 25290E22702M

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BID DOCUMENTS  
CONTRACT AND CONTRACT BOND  
SPECIAL PROVISIONS  
SPECIAL SPECIFICATIONS  
PLANS

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December 4, 2024

Central Texas Regional Mobility Authority

290E PARMER LANE WALL REPAIR PROJECT

CTRMA CONTRACT NO. 25290E22702M

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TABLE OF CONTENTS

	<u>Page</u>
Invitation to Bid.....	1
Bid Document Checklist.....	3
Unofficial Bid Form (To receive Official Bid Form, request via the project’s CivCast website ( <a href="https://www.civcastusa.com/project/67116b82b78f622ef5ef4002/summary">https://www.civcastusa.com/project/67116b82b78f622ef5ef4002/summary</a> ).....	5
Bid for 290E Parmer Lane Wall Repair Project Contract.....	6
Non-Collusion Affidavit.....	8
Debarment Affidavit .....	10
Child Support Statement .....	12
Certification to Not Boycott Israel.....	14
Certification to Not Discriminate Against Firearm Entities or Firearm Trade Associations.....	15
Certification to Not Boycott Energy Companies.....	16
Bid Bond.....	17
Contract Agreement .....	19
Information About Proposer Organization .....	22
Performance Bond.....	25
Payment Bond .....	28
Warranty Bond .....	30
Receipt of Addenda.....	33
Engineer’s Seal.....	34

## TABLE OF CONTENTS

Page

General Notes .....	Section A
Specifications List, Special Provisions & Special Specifications .....	Section B

### Attachments

Plan Sheets

# CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

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## 290E PARMER LANE WALL REPAIR PROJECT

CTRMA CONTRACT NO. 25290E22702M

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### INVITATION TO BID

Electronic proposal forms for the above project shall be submitted via the project's CivCast <https://www.civcastusa.com/project/67116b82b78f622ef5ef4002/summary> to the Central Texas Regional Mobility Authority (Authority), by **2:00 PM local time, January 14, 2025**. The bids will be publicly posted via the project's CivCast website within 48 hours after the bids are opened.

The contractor will have forty-eight (48) working days after the date stated in the written Full Notice to Proceed to achieve full completion of all work. The Authority reserves the right to make changes in the work to complete the contract, as defined in the specifications.

The complete list of quantities is located in the Bid Form. The principal items of work are as follows:

- Prestressed Ground Anchors
- Excavation/Embankment
- Traffic Control
- Temporary Retaining Wall

The Official Bid Form for this Contract will be made available to prospective bidders who have met all prequalification requirements on or before 5:00 PM local time, on January 7, 2025 via the project's CivCastUSA website <https://www.civcastusa.com/project/67116b82b78f622ef5ef4002/summary>.

Prequalification requirements:

- Be registered with State of Texas,
- Be fully prequalified by Texas Department of Transportation (TxDOT),
- Have a bidding capacity per TxDOT prequalification system of \$1,000,000
- Submit a valid Non-Collusion Affidavit, Debarment Affidavit, and Child Support Statement,

The deadline for meeting the prequalification requirements and still obtaining an Official Bid Form is January 6, 2025 at Noon.

The Authority cannot be held liable in the event a party is unable to submit a valid bid due to delay in the prequalification procedure. Securing prequalification through TxDOT and the timing thereof, shall at all times be the sole responsibility of the Prospective Bidder.

Complete Contract documents will be available on December 4, 2024 for potential bidders and others through the Authority's website ([www.mobilityauthority.com](http://www.mobilityauthority.com)) and CivCast's website <https://www.civcastusa.com/project/67116b82b78f622ef5ef4002/summary>.

Standard Specifications (Texas Department of Transportation "Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges", September 1, 2024) which form an integral part of

this Contract, are available on line at the Texas Department of Transportation (TxDOT) website (<https://www.txdot.gov/business/resources/txdot-specifications.html>).

The contract will be awarded in accordance with the Authority's Procurement policy. A copy of the Procurement Policy is available online at the Authority website: (<https://www.mobilityauthority.com/about/policy-disclaimers/code>).

For more information, please submit a question to the project team through CivCast.com.

Each bid must be accompanied by a Bid Guaranty consisting of a Bid Bond (on the form provided) in the amount of at least five percent (5%) of the Total Bid Amount. The apparent low bidder shall deliver the original sealed Bid Bond to CTRMA within five (5) calendar days of such notification.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY  
James Bass, Executive Director  
Austin, Texas

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**BID DOCUMENT CHECKLIST**

Prior to submitting a bid, prospective bidders should review the checklist below to ensure that the bid is accepted and not declared nonresponsive. No joint venture participants will be allowed.

**Bid Document:**

- Are you aware if your affiliates are bidding on the same project?
- Are you pre-qualified by TxDOT through the Confidential Questionnaire process and have a bidding capacity of \$1,000,000.
- Have you submitted a valid Non-Collusion Affidavit, Debarment Affidavit, and Child Support Statement in order to receive an Official Bid Form?

**Bid Document Preparation:**

- Is the bid being submitted on the Official Bid Form via the CivCast website?
- Are you submitting only one bid for this project?
- Is the bid signed by your company representative or each joint venture participant?
- Have you entered prices for all bid items?
- Does the bid document contain all items included in the Official Bid Form?
- Does the bid document contain a total bid value?
- Is the bid free of any additional conditions not included in the bid document provided to you?
- Have you electronically submitted a complete and executed Bid Bond?
- Have you acknowledged each Addendum on CivCast?

Bid Bonds:

- Is the bid bond signed by the surety?
- Is the bid bond signed by the company representative?
- Is the exact name of the contractor(s) listed as the principal?
- Is the impressed surety seal affixed to the bid bond?
- Does the name on the surety seal match the name of the surety on the bond?
- Is the bond dated on or earlier than the letting date of the project?
- Is the signer for the surety listed on the power of attorney attached to the bond?
- Is the surety authorized to issue the bond?

Bid Document Submission:

- Are you aware of the time and date deadline for submission for the bid document?
- Are you submitting a complete bid document?



# Unofficial Bid Form

[illegible]

5

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

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**290E PARMER LANE WALL REPAIR PROJECT CONTRACT**

To the Central Texas Regional Mobility Authority  
3300 N I-35, Suite 300  
Austin, Texas 78705

Gentlemen:

I/we, the undersigned, declare: that no other person, firm or corporation is interested in this Bid; that I/we have carefully examined the Plans, Standard Specifications, Special Provisions, and all other documents pertaining to this Contract which form a part of this Bid as if set forth at length herein; that I/we understand that the quantities of items shown herein below are approximate only; that I/we have examined the location of the proposed work; that I/we agree to bind myself/ourselves, upon award to me/us by the Central Texas Regional Mobility Authority under this Bid, to enter into and execute a Contract, for the project named above; that I/we agree to start work within thirty (30) calendar days after the date stated in the written Notice-to-Proceed (Item 8.1 of the Specifications), to furnish all necessary materials, provide all necessary labor, equipment, tools and plant, pay for all required insurance, bonds, permits, fees and service, and do all required work in strict compliance with the terms of all documents comprising said Contract, and to fully complete the entire project within forty-eight (48) working days after Notice-to-Proceed; and that I/we agree to accept as full compensation for the satisfactory prosecution of this project the contractual bid amount after it is adjusted based on the terms and conditions specified in the contract.

he quantities shown in the above schedule of items are considered to be approximate only and are given as the basis for comparison of bids. The Authority may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. Any increase or decrease in the amount of any item or portion of work will be added or deducted from the total Contract bid price based on the terms and conditions specified in TxDOT Specification Item 4. It is understood that payment for this project will be by unit prices bid.

The cost of any work performed, materials furnished, services provided, or expenses incurred, whether or not specifically delineated in the Contract documents but which are incidental to the scope and plans, intent, and completion of this Contract, have been included in the price bid for the various items scheduled hereinabove.

Accompanying this Bid is a bid guaranty consisting of a Bid Bond (on the form provided) in the amount of at least five percent (5%) of the Official Total Bid Amount. It is hereby understood and agreed that said Bid Bond is to be forfeited as liquidated damages in the event that, on the basis of this Bid, the Authority should award this Contract to me/us and that I/we should fail to execute and deliver said Contract and the prescribed Contract Bond, together with the proof of proper insurance coverage and other necessary documents, all within fifteen (15) calendar days after award of the Contract; otherwise, said check or bond is to be returned to the undersigned.

Business Name of Bidder \_\_\_\_\_

Type of Organization	Individual	<input type="checkbox"/>
	Partnership	<input type="checkbox"/>
	Corporation	<input type="checkbox"/>

Address of Bidder: \_\_\_\_\_

\_\_\_\_\_

Signature of Owner,  
Partner or Corp. Officer: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**NON-COLLUSION AFFIDAVIT**

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

I, \_\_\_\_\_, of the  
City of \_\_\_\_\_, County of \_\_\_\_\_ and State of  
\_\_\_\_\_, being of full age and duly sworn according to law on my oath  
depose and say:

That I am \_\_\_\_\_ (Title) of  
\_\_\_\_\_, the Bidder making  
the Bid submitted to the Central Texas Regional Mobility Authority, on the 14<sup>th</sup> day of January,  
2025, for Contract No. 25290E22702M in connection with the 290E Parmer Lane Wall Repair  
Project; that I executed the said Bid with full authority to do so;

The said Bidder has not, directly or indirectly, entered into any combination or  
arrangement with any person, firm or corporation or entered into any agreement, participated in  
any collusion, or otherwise taken any action in restraint of free, competitive bidding or which  
would increase the cost of construction or maintenance in connection with the said Contract; that  
no person or selling agency has been employed or retained to solicit or secure the said Contract  
upon an agreement or understanding for a commission, percentage, brokerage or contingent fee,  
except bona fide full-time employees;

And that said Bidder is or has been a member of the following highway contractors' association during the preceding twelve months:

Name of Association	Location of Principal Office
_____	_____
_____	_____
_____	_____

I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed  
before me this \_\_\_\_\_  
day of \_\_\_\_\_,  
20\_\_\_\_.

By: \_\_\_\_\_  
Person Signing Bid

Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

**Central Texas Regional Mobility Authority**

**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**DEBARMENT AFFIDAVIT**

STATE OF \_\_\_\_\_)

COUNTY OF \_\_\_\_\_)

I, \_\_\_\_\_, of the City  
of \_\_\_\_\_, County of \_\_\_\_\_ and State of  
\_\_\_\_\_, being of full age and duly sworn according to law on my oath  
depose and say:

That I am \_\_\_\_\_ (Title) of  
\_\_\_\_\_, the Bidder making  
the Bid submitted to the Central Texas Regional Mobility Authority, on the 14<sup>th</sup> day of January,  
2025, for Contract No. 25290E22702M in connection with the 290E Parmer Lane Wall Repair  
Project; that I executed the said Bid with full authority to do so;

The said Bidder has not been excluded or disqualified from doing business on State or  
Federal projects;

And that said Bidder is or has been a member of the following highway contractors'  
association during the preceding twelve months:

Name of Association	Location of Principal Office
_____	_____
_____	_____
_____	_____

I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed  
before me this \_\_\_\_\_  
day of \_\_\_\_\_,  
20\_\_\_\_.

By: \_\_\_\_\_  
Person Signing Bid

Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

## **CHILD SUPPORT STATEMENT**

**Under section 231.006, Family Code, the vendor or applicant certifies that the individual or business entities named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated, and payment may be withheld if this certification is inaccurate.**





## CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS

Under Family Code, Section 231.006, \_\_\_\_\_  
Certifies that \_\_\_\_\_,  
as of \_\_\_\_\_ is eligible to receive a grant, loan or payment and acknowledges  
that any contract may be terminated and payment may be withheld if this certification is inaccurate.

List below the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the bid or application. This form must be updated whenever any party obtains a 25% ownership interest in the business entity.

NAME <i>(please print legibly, if handwritten)</i>	SOCIAL SECURITY NUMBER

Family Code, Section 231.006, specifies that a child support obligor who is more than thirty (30) days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

Except as provided in Family Code, Section 231.302(d), a social security number is confidential and may be disclosed only for the purposes of responding to a request for information from an agency operating under the provisions of Subchapters A and D of Title IV of the federal Social Security Act (42 U.S.C. Sections 601 et seq. and 651 et seq.)

## **CERTIFICATION TO NOT BOYCOTT ISRAEL**

Pursuant to Texas Government Code 2271.002, the Mobility Authority must include a provision requiring a written verification that the Contractor does not boycott Israel and will not boycott Israel during the term of the Contract. By signing the contract, the Contractor certifies that it does not boycott Israel and will not boycott Israel during the term of this contract.

Violation of this certification may result in action by the Mobility Authority.

## **CERTIFICATION TO NOT DISCRIMINATE AGAINST FIREARM ENTITIES OR FIREARM TRADE ASSOCIATIONS**

Pursuant to Texas Government Code 2274.002, the Department must include a provision requiring a written verification affirming that the Contractor:

- 1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, as defined in Government Code 2274.001, and
- 2) will not discriminate against a firearm entity or firearm trade association during the term of the contract.

This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing, the Contractor certifies that it does not discriminate against a firearm entity or firearm trade association as described and will not do so during the term of this contract.

"Discriminate against a firearm entity or firearm trade association" means, with respect to the entity or association, to: (1) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; (2) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or (3) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association. "Discriminate against a firearm entity or firearm trade association" does not include: (1) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories; (2) a company's refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency, or for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity's or association's status as a firearm entity or firearm trade association.

Violation of this certification may result in action by the Department.

## **CERTIFICATION TO NOT BOYCOTT ENERGY COMPANIES**

Pursuant to Texas Government Code 2274.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott energy companies, as defined in Government Code 809.001, and will not boycott energy companies during the term of the contract. This provision applies to a contract that:

- 1) is with a Contractor that is not a sole proprietorship,
- 2) is with a Contractor with 10 or more full-time employees, and
- 3) has a value of \$100,000 or more.

By signing, the Contractor certifies that it does not boycott energy companies and will not boycott energy companies during the term of this contract. "Boycott" means taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: (1) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (2) does business with a company described by (1).

Violation of this certification may result in action by the Department.

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**BID BOND**

KNOW ALL PERSONS MEN BY THESE PRESENTS,  
that \_\_\_\_\_, as Principal/Contractor, and  
\_\_\_\_\_, as Surety, legally authorized to do  
business in the State of Texas, are held and firmly bounded unto the Central Texas Regional  
Mobility Authority, as Authority, in the amount of at least five percent (5%) percent of the Total  
Bid amount, on which the Contract is awarded lawful money of the United States of America, for  
the payment of which, well and truly to be made, we bind ourselves, our heirs, executors,  
administrators, successors and assigns, jointly and severally and firmly by these presents:

WHEREAS, the Contractor is herewith submitting its Bid for Contract No.  
25290E22702M, entitled 290E Parmer Lane Wall Repair Project, and

NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall be  
awarded the Contract upon said Bid and shall, within fifteen (15) calendar days after the date of  
written notice of such award, enter into and deliver a signed Contract and the prescribed  
Performance Bond for the faithful performance of the Contract, together with the required proof of  
proper insurance coverage and other necessary documents, then this obligation shall be null and  
void; otherwise, to remain in full force and effect, and the Contractor and Surety will pay unto the  
Authority the difference in money between the amount of the Total Amount written in the Bid of  
said Contractor and the amount for which the Authority may legally contract with another party to  
perform the said work, if the latter amount be in excess of the former; but in no event shall the  
Surety's liability exceed the penal sum hereof.

SIGNED AND SEALED this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

PRINCIPAL/CONTRACTOR

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Address

Witness or Attest:

\_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title:

(Affix Corporate Seal Here)

SURETY:

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Address

Witness or Attest:

\_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title:

(Attach evidence of Power of Attorney)

(Affix Corporate Seal Here)

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**CONTRACT AGREEMENT**

THIS AGREEMENT, made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, between the Central Texas Regional Mobility Authority, 3300 N. I-35, Suite 300, Austin, Texas, 78705, hereinafter called the "Authority" and \_\_\_\_\_, or his, its or their successors, executors, administrators and assigns, hereinafter called the Contractor.

WITNESSETH, that the Contractor agrees with the Authority for the consideration herein mentioned, and at his, its or their own proper cost and expense, to do all the work and furnish all the materials, equipment, teams and labor necessary to prosecute and complete and to extinguish all liens therefore, Contract No. 25290E22702M, entitled 290E Parmer Lane Wall Repair Project, in the manner and to the full extent as set forth in the Plans, Standard Specifications, Special Provisions, Bid (for the basis of award stated herein below) and other documents related to said Contract which are on file at the office of the Authority and which are hereby adopted and made part of this Agreement as completely as if incorporated herein, and to the satisfaction of the Authority or its duly authorized representative who shall have at all times full opportunity to inspect the materials to be furnished and the work to be done under this Agreement.

This Contract is awarded on the basis of the official total Bid Amount based on the unit prices bid of \_\_\_\_\_ dollars and \_\_\_\_\_ Cents (\$ \_\_\_\_\_).

In consideration of the foregoing premise, the Authority agrees to pay the Contractor for all items of work performed and materials furnished at the amount of the unit prices bid therefore in the Bid submitted for this Contract, subject to any percentage reductions in the total Contract amount that may be named in the Bid corresponding to the basis of award stated in the above paragraph, and subject to the conditions set forth in the Specifications.

The Contractor agrees as follows:

- a. I/WE will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor.

- b. I/WE agree it is the policy of the Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color or national origin, age or disability. Such action shall include: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and on-the-job training.
- c. I/WE agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- d. I/WE in any solicitations or advertising for employees placed by or on behalf of itself, will state that it is an equal opportunity employer.
- e. I/WE agree to adhere to all federal/state regulations including, but not limited to, American Disabilities Act, Equal Employment Opportunity, submitting certified payrolls, and participating in Contractor/Subcontractor labor standard reviews.
- f. Notices and advertisements and solicitations placed in accordance with applicable state and federal law, rule or regulation, shall be deemed sufficient for the purposes of meeting the requirements of this section.
- g. Contract Time - The contractor will have forty-eight (48) working days after the date stated in the written Full Notice-to-Proceed to Fully complete the project.
- h. Failure by Contractor to fulfill these requirements is a material breach of the Contract, which may result in the termination of this Contract, or such other remedy, as the Authority deems appropriate.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement the day and year written above.

Sworn to and Subscribed

CENTRAL TEXAS REGIONAL MOBILITY  
AUTHORITY

before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_\_\_.

By: \_\_\_\_\_  
James Bass  
Executive Director

\_\_\_\_\_  
Notary Public

My commission expires:

\_\_\_\_\_



Sworn to and subscribed  
before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
by: \_\_\_\_\_  
Notary Public

My commission expires:  
\_\_\_\_\_

CONTRACTOR:

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Address

\_\_\_\_\_

Title

(Affix Corporate Seal Here)

## INFORMATION ABOUT PROPOSER ORGANIZATION

Proposer's business address:

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(No.) (Street) (Floor or Suite)

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(City) (State or Providence) (ZIP or Postal Code) (Country)

State or County of Incorporation/Formation/Organization: \_\_\_\_\_

Signature block for a corporation or limited liability company:

Company: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Additional Requirements:

- A. If the proposer is a corporation, enter state or country of incorporation in addition to the business address. If the proposer is a partnership, enter state or country of formation. If the proposer is a limited liability company, enter state or country of organization.
- B. Describe in detail the legal structure of the entity making the Bid. If the proposer is a partnership, attach full name and addresses of all partners and the equity ownership interest of each entity, provide the aforementioned incorporation, formation and organization information for each general partner and attach a letter from each general partner stating that the respective partner agrees to be held jointly and severally liable for any and all of the duties and obligations of the proposer under the Bid and under any contract arising therefrom. If the proposer is a limited liability entity, attach full names and addresses of all equity holders and other financially responsible entities and the equity ownership interest of each entity. If the proposer is a limited liability company, include an incumbency certificate executed by a Secretary thereof in the form set on the following page listing each officer with signing authority and its corresponding office. Attach evidence to the Bid and to each letter that the person signing has authority to do so.
- C. With respect to authorization of execution and delivery of the Bid and the Agreements and validity thereof, if any signature is provided pursuant to a power of attorney, a copy of the power of attorney shall be provided as well as a certified copy of corporate or other appropriate resolutions authorizing said power of attorney. If the Proposer is a corporation, it shall provide evidence of corporate authorization in the form of a resolution of its governing body certified by an appropriate officer of the corporation. If the Proposer is a limited liability company, evidence of authorization would be in the form of a limited company resolution and a managing member resolution providing such authorization, certified by an appropriate officer of the managing member. If the Proposer is a partnership, evidence of authorization shall be provided for the governing body of the Proposer and for the governing bodies of each of its general partners, at all tiers, and in all cases certified by an appropriate officer.
- D. The Proposer must also identify those persons authorized to enter discussions on its behalf with the Authority in connection with this Bid, the Project, and The Agreement. The Proposer shall submit with its Bid a power of attorney executed by the Proposer and each member, partner of the Proposer, appointing and designating one or more individuals to act for and bind the Proposer in all matters relating to the Bid.

INCUMBENCY CERTIFICATE

The undersigned hereby certifies to the Central Texas Regional Mobility Authority that he/she is the duly elected and acting \_\_\_\_\_ Secretary of \_\_\_\_\_ (the “Company”), and that, as such, he/she is authorized to execute this Incumbency Certificate on behalf of the Company, and further certifies that the persons named below are duly elected, qualified and acting officers of the Company, holding on the date hereof the offices set forth opposite their names.

NAME:

OFFICE:

\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_  
  
\_\_\_\_\_

IN WITNESS WHEREOF, the undersigned has executed this Incumbency Certificate this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
  
\_\_\_\_\_  
Secretary

**Central Texas Regional Mobility Authority**

**290E PARMER LANE WALL REPAIR  
PROJECT**

CTRMA CONTRACT NO. 25290E22702M

\*\*\*\*\*

**PERFORMANCE BOND**

STATE OF TEXAS

COUNTY OF \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_

\_\_\_\_\_ of the City of \_\_\_\_\_

County of \_\_\_\_\_, and State of \_\_\_\_\_, as principal,  
and

\_\_\_\_\_ authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto the Central Texas Regional Mobility Authority (Authority), in the penal sum of

\_\_\_\_\_ Dollars

(\$\_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Authority, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the "Contract"), to which the said Contract, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Agreement and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by the Contract agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Contract and the Contract Documents hereto annexed, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the work performed thereunder, or to the Contract Documents referenced therein, shall in anyway affect the obligations on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms on the Agreement, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
PHONE NUMBER

(\_\_\_\_\_) \_\_\_\_\_  
PHONE NUMBER

(\_\_\_\_\_) \_\_\_\_\_  
PHONE NUMBER

The name and address of the Resident Agency of Surety is:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(\_\_\_\_\_) \_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
SIGNATURE OF LICENSED LOCAL  
RECORDING AGENT appointed to countersign  
on behalf of Surety (Required by Art. 21.09 of the  
Insurance Code)

\*\*\*\*\*

I, \_\_\_\_\_, having executed Bonds  
SIGNATURE

for \_\_\_\_\_ do hereby affirm I have  
NAME OF SURETY

verified that said Surety is now certified with Authority from either: (a) the Secretary of the Treasury of the United States if the project funding includes Federal monies; or (b) the State of Texas if none of the project funding is from Federal sources; and further, said Surety is in no way limited or restricted from furnishing Bond in the State of Texas for the amount and under conditions stated herein.

**Central Texas Regional Mobility Authority**

**290E PARMER LANE WALL REPAIR  
PROJECT**

CTRMA CONTRACT NO. 25290E22702M

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**PAYMENT BOND**

STATE OF TEXAS  
COUNTY OF \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS: That \_\_\_\_\_

\_\_\_\_\_ of the City of \_\_\_\_\_

County of \_\_\_\_\_, and State of \_\_\_\_\_, as Principal  
(hereinafter referred to as the "Principal"), and

\_\_\_\_\_  
authorized under the laws of the State of Texas to act as Surety on bonds for principals (hereinafter referred to as the "Surety"), are held and firmly bound unto Central Texas Regional Mobility Authority, (hereinafter referred to as the "Authority"), in the penal sum of

\_\_\_\_\_ Dollars

(\$\_\_\_\_\_) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Authority, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the "Contract"), to which the said Contract, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise to remain in full force and effect.



PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work performed thereunder, or to the other Contract Documents accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder or to the other Contract Documents accompanying the same.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
NAME & TITLE

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
( )

\_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
( )

\_\_\_\_\_  
PHONE NUMBER

The name and address of the Resident Agency of Surety is:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
( )

\_\_\_\_\_  
PHONE NUMBER

\_\_\_\_\_  
SIGNATURE OF LICENSED LOCAL

RECORDING AGENT appointed to countersign  
on behalf of Surety (Required by Art. 21.09 of the  
Insurance Code)

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR  
PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**WARRANTY BOND**

**KNOW ALL PERSONS BY THESE PRESENTS**, that the \_\_\_\_\_, a \_\_\_\_\_, as “Principal” and \_\_\_\_\_, as “Surety” or as “Co-Sureties”, each a corporation duly organized under the laws of the State indicated on the attached page, having its principal place of business at the address listed on the attached page, in the State indicated on the attached page, and authorized as a surety in the State of Texas, are hereby jointly and severally held and firmly bound unto the CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY, a regional mobility authority created by Travis County and Williamson County, Texas, as “Obligee”, in the sum of \$1,000,000 (the “Bonded Sum”), for the payment whereof Principal and Surety (or Co-Sureties), bind themselves, and their heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Obligee, has awarded to Principal, a Contract for 290E Parmer Lane Wall Repair Maintenance Project, dated \_\_\_\_\_, 2024 (the “Agreement”), on the terms and conditions set forth therein; and

WHEREAS, Principal is required to furnish a bond guaranteeing the faithful performance of its obligations under the Contract Documents after Final Acceptance, including payment of claims, subcontractors, suppliers, material, men and mechanics, as a condition to release of the Performance Bond and Payment Bond with respect to the Project by Obligee.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if Principal shall promptly and faithfully perform all of its obligations under the Contract Documents, as they may be amended or supplemented, including without limitation the fulfillment of all Warranties, environmental monitoring and landscaping obligations, and payment of claims, subcontractors, suppliers, material, men and mechanics, then this obligation shall be null and void; otherwise this obligation shall remain in full force and effect, it being expressly understood and agreed that the liability of Surety for any and all claims hereunder shall in no event exceed the Bonded Sum.

The following terms and conditions shall apply with respect to this bond:

1. The Contract Documents are incorporated by reference herein.

2. This bond shall inure to the benefit of all subcontractors, suppliers, material, men and mechanics with respect to the Development Work, other than Major Participants having an equity interest in Principal, so as to give a right of action to such persons and their assigns in any suit brought upon this bond.

3. The guarantees contained herein shall survive the final completion of the design and construction called for in the Contract Documents.

4. Whenever Principal shall fail to pay the lawful claims of any of the persons identified in item 2 above with respect to the Development Work, excluding Major Participants having an equity interest in Principal, then Surety shall pay for the same in an amount not to exceed the Bonded Sum.

5. Whenever Principal shall be, and is declared by the Obligees to be, in default with respect to its obligations under the Contract Documents, provided that the Obligees is not then in material default thereunder, Surety shall promptly take one of the following actions with the consent of the Obligees:

- a. arrange for Principal to perform and complete the Agreement;
- b. complete the Development Work in accordance with the terms and conditions of the Contract Documents then in effect, through its agents or through independent contractors;
- c. obtain bids or negotiated proposals from qualified contractors acceptable to the Obligees for a contract for performance and completion of the Development Work (as defined in the Agreement), through a procurement process approved by the Obligees, arrange for a contract to be prepared for execution by the Obligees and the contractor selected with the Obligees's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Agreement, and pay to the Obligees the amount of damages as described in Paragraph 7 in excess of the unpaid balance of the Development Price incurred by the Obligees resulting from the Principal's default; or
- d. waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances, (i) after investigation, determine the amount for which it may be liable to the Obligees and, as soon as practicable after the amount is determined, tender payment therefore to the Obligees, or (ii) deny liability in whole or in part and notify the Obligees citing reasons therefore.

6. If Surety does not proceed as provided in Paragraph 5 with reasonable promptness, Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Obligees to Surety demanding that Surety perform its obligations under this Bond, and the Obligees shall be entitled to enforce any remedy available to the Obligees. If Surety proceeds as provided in Subparagraph 5.d, and the Obligees refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice the Obligees shall be entitled to enforce any remedy available to the Obligees.

7. After the Obligees has terminated the Principal's right to complete the Agreement, and if Surety elects to act under Subparagraph 5.a, 5.b, or 5.c above, then the responsibilities of Surety to the Obligees shall not be greater than those of the Principal under the Agreement, and the responsibilities of

the Obligee to Surety shall not be greater than those of the Obligee under the Agreement. To the limit of the Bonded Sum, but subject to commitment of the unpaid balance of the Development Price to mitigation costs and damages on the Agreement, Surety is obligated without duplication for:

a. the responsibilities of the Principal for correction of defective work and completion of the Development Work;

b. actual damages, including additional legal, design professional and delay costs resulting from Principal's default, and resulting from the actions or failure to act of Surety under Paragraph 5; and

c. Liquidated Damages under the Agreement.

8. No alteration, modification or supplement to the Contract Documents or the nature of the work to be performed thereunder, including without limitation any extension of time for performance, shall in any way affect the obligations of Surety under this bond. Surety waives notice of any alteration, modification, supplement or extension of time.

IN WITNESS WHEREOF, Principal and Surety have caused this bond to be executed and delivered as of \_\_\_\_\_, 20\_\_.

Principal:

\_\_\_\_\_

By: \_\_\_\_\_

Its: \_\_\_\_\_

(Seal)

Surety:

\_\_\_\_\_

By: \_\_\_\_\_

Its: \_\_\_\_\_

(Seal)

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

**\*\*\*\*\***

**RECEIPT OF ADDENDA**

Receipt of addendum, if issued, must be acknowledged electronically on the CivCast website.

Failure to confirm receipt of all addenda issued will result in the bid being deemed non-responsive.

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Signature

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Date

**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

**CTRMA CONTRACT NO. 25290E22702M**

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**ENGINEER'S SEAL**

The enclosed Specifications, Special Provisions, General Notes, and Specification Data in this document have been selected by me, or under my responsible supervision as being applicable to this project.



Alteration of a sealed document without proper notification to the responsible engineer is an offence under the Texas Engineering Practice Act.

**GENERAL NOTES:**

**GENERAL**

The “Engineer” shall be the Central Texas Regional Mobility Authority’s (Mobility Authority) consultant identified by the Mobility Authority at the Pre-Construction Meeting.

References to manufacturer’s trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved by the Mobility Authority.

Perform work during good weather. If work is damaged by a weather event, the Contractor is responsible for all costs associated with replacing damaged work.

If work is performed at Contractor’s option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

Remove and replace, at the Contractor’s expense, and as directed, all defective work, which was caused by the Contractor’s workforce, materials, or equipment.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Contractor is responsible for verifying the location of all utilities (overhead and underground) and notifying the Engineer of any discrepancies before beginning construction. Contractor shall contact utility companies 48 hours prior to construction and take “caution” in areas where utilities are close together to avoid damaging the utilities.

Both TxDOT owned and CTRMA owned Intelligent Transportation Systems (ITS) and Electronic Toll Collection (ETC) Systems Infrastructure may exist within the limits of this project. All ITS and ETC Systems must remain operational throughout project construction. The exact location of underground ITS Infrastructure may not be known. Backbone and hub communication fiber links are critical and must be maintained for the duration of the project and beyond.

Short periods for switchovers must be approved in writing by CTRMA and shall be scheduled with both TxDOT and CTRMA at least 30 days in advance. Scheduled changeovers should occur at night.

Use caution when working near ITS/ETC Infrastructure to avoid damage. Repair any damage to the ITS, ETC, and Infrastructure within 8 hours of occurrence at no cost to TxDOT/CTRMA. In the event of TxDOT system damage, notify TxDOT at (512) 974-0883 and the Toll Operations Division at (512) 874-9177 within one hour of occurrence. In the event of CTRMA system damage, notify the CTRMA Director of Operations at (512) 996-9778 within one hour of occurrence. Failure of the Contractor to repair damage within 8 hours of occurrence to any infrastructure that conveys any corridor information to TxDOT/CTRMA will result in the Contractor being billed for the full cost of emergency repairs performed by others. Upon completion of installation of permanent fiber optic duct bank and cable and switchover from temporary to permanent has been made, remove all temporary fiber optic cable, timber poles,

messenger cable and ground boxes. Temporary conduit to existing ground boxes shall be separated from existing ground boxes and access port to ground box shall be repaired.

Supply litter barrels in enough numbers at locations as directed to control litter within the project. Consider subsidiary to pertinent Items.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Engineer.

Damage to existing pipes and SET's due to Contractor operations will be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

Protect all areas of the right of way (ROW) that are not included in the actual limits of proposed construction areas. Exercise care to prevent damage of trees, vegetation and other natural surroundings. Areas not to be disturbed will be as directed by the Engineer. Restore any area disturbed by the Contractor's operations to a condition as good as, or better than, before the beginning of work.

Coordinate and obtain approval for all work over existing roadways.

The Project Superintendent will always be available to contact when work is being performed, including subcontractor work. The Superintendent will be available and on-call 24 hours a day.

During evacuation periods for Hurricane events the Contractor will cooperate with the Mobility Authority and TxDOT for the restricting of Lane Closures and arranging for Traffic Control to facilitate Coastal Evacuation Efforts.

Overhead and underground utilities may exist in the vicinity of the project. The exact location of underground utilities may not be known. Refer to ITEM 5 – CONTROL OF THE WORK, for utility rates. If working near power lines, gas lines, and other public utility lines, comply with the appropriate sections of Local Legal Requirements, Texas State Law, and Federal Regulations relating to the type of work involved.

Contractor is responsible for all toll charges incurred by Contractor vehicles.

#### **ITEM 4 – SCOPE OF WORK**

Final clean up will include the removal of excess material considered detrimental to vegetation growth along the front slope of the ditch. Materials, as specified by the Engineer, will be removed at the Contractor's expense.



### **ITEM 5 – CONTROL OF THE WORK**

Provide a 48-hour advance email notice to [AUS\\_Locate@txdot.gov](mailto:AUS_Locate@txdot.gov) to request illumination, traffic signal, ITS, or toll equipment utility locates on TxDOT's system (US 290). Provide 2-week advance notice to the Engineer to request locates on the Mobility Authority's system (290E).

Contractor is responsible for verifying the location of any ITS duct bank prior to construction. This work is subsidiary to relevant items of work.

Contractor is responsible to perform Quality Level A (QL-A) Subsurface Utility Engineering (SUE) services for all existing Atmos gas lines within 50-ft of the project limits. The scope of QLA SUE services is described in the [TxDOT Project Development Process Manual](#) Chapter 4 Section 1. Contractor shall pothole a minimum of 2 test holes per gas pipe, at locations approved by the Engineer, to determine the 3-dimensional location of the gas pipes from 5' in front of the MSE wall face to a minimum distance of 50' into the MSE backfill material. Before potholing, the Contractor shall reach out to Atmos Damage Prevention Specialist, Chris Wren, at 512-466-6380. Contractor shall deliver the 3-dimensional location information to the Engineer in an acceptable format. Contractor shall receive approval from the engineer prior to beginning ground anchor installation in the vicinity of any gas line. This work is subsidiary to relevant items of work.

Before the Authority or its contractor begins work on State right of way, the entity performing the work shall provide TxDOT with a fully executed copy of TxDOT's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on the Certificate of Insurance for all persons and entities working on State right of way. This coverage shall be maintained until all work on TxDOT right of way is complete. If coverage is not maintained, all work on State right of way shall cease immediately, and TxDOT may recover damages and all costs of completing the work.

#### **Electronic Shop Drawing Submittals:**

Submit electronic shop drawing submittals according using the Mobility Authority's Electronic Data Management System (EDMS), which will be established for the Project prior to commencing construction. Submittals will be addressed to the Construction, Engineering and Inspections (CE&I) Firm's Resident Engineer (RE) and additional staff, as appropriate.

### **ITEM 6 – CONTROL OF MATERIALS**

Give a minimum of 5 business days notice for materials which require inspection at the Plant.

### **ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES**

Refer to the Environmental Permits, Issues and Commitments (EPIC) plan sheets for additional requirements and permits.

Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period of time exceeding 14 calendar days. Track all exposed soil, stockpiles and slopes. Tracking consists of operating a tracked vehicles or equipment up and down the slope, leaving track marks

perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work is subsidiary.

Do not park equipment where driver sight distance to businesses and side street intersections is obstructed, especially after work hours. If it is necessary to park where drivers' views are blocked, make every effort to flag traffic accordingly. Give the traveling public first priority.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

Maintain positive drainage for permanent and temporary work for the duration of the project. Be responsible for any items associated with the temporary or interim drainage and all related maintenance. This work is subsidiary.

Collect wastewater generated on-site by chemical toilets and transport off the recharge zone and dispose of properly.

#### **DSHS Asbestos and Demolition Notification**

Complete and provide the Texas Department of State Health Services (DSHS) notification form to the Engineer at least 30 calendar days prior to bridge or bridge class culvert removal or renovation. Notify the Engineer via email of any changes to the Work Start and End Dates.

#### **Migratory Birds and Bats.**

Migratory birds and bats may be nesting within the project limits and concentrated on roadway structures such as bridges and culverts. Remove all old and unoccupied migratory bird nests from any structures, trees, etc. between September 16 and February 28. Prevent migratory birds from re-nesting between March 1 and September 15. All methods used for the removal of old nesting areas and the prevention of re-nesting must be submitted to the Mobility Authority 30 business days prior to begin work. This work is subsidiary.

If active nests are encountered on-site during construction, all construction activity within 50 ft. of the nest must stop. Contact the Engineer to determine how to proceed.

No extension of time or compensation payment will be granted for a delay or suspension of work due to the above bird and bat requirements. This work is subsidiary.

#### **Law Enforcement Personnel.**

Submit charge summary and invoices using Mobility Authority-provided forms.

Patrol vehicles must be clearly marked to correspond with the officer's agency and equipped with appropriate lights to identify them as law enforcement. For patrol vehicles not owned by a law enforcement agency, markings will be retroreflective and legible from 100 ft. from both sides and the rear of the vehicle. Lights will be high intensity and visible from all angles.

No payment will be made for law enforcement personnel needed for moving equipment or payment for drive time to/from the event site.

If the Contractor has a field office, provide an office location for a supervisory officer when event requires a supervising officer. This work is subsidiary.

A maximum combined rate of \$70 per hour for the law enforcement personnel and the patrol vehicle will be allowed. Any scheduling fee is subsidiary per Standard Specification 502.4.2.

Cancel law enforcement personnel when the event is canceled. Cancellation, minimums or “show up” fees will not be paid when cancellation is made 12 hours prior to beginning of the event. Failure to cancel within 12 hours will not be cause for payment for cancellation, minimums, or “show up” time. Payment of actual “show up” time to the event site due to cancellation will be on a case by case basis at a maximum of 2 hours per officer.

Alterations to the cancellation and maximum rate must be approved by the Engineer or pre-determined by official policy of the officers governing authority.

### Back Up Alarm

For hours 9 P to 5 A, utilize a non-intrusive, self-adjusting noise level reverse signal alarm. This is not applicable to hot mix or seal coat operations. This is subsidiary.

### ITEM 8 – PROSECUTION AND PROGRESS

The Contractor will have 48 working days from NTP to have all installations complete.

Electronic versions of schedules will be saved in native format and delivered in native and PDF formats.

Working days will be charged based on a standard workweek.

Work is allowed to be performed during the nighttime, with prior approval, per Article 8.3.

Provide via email a baseline schedule in Gantt chart format.

Provide via email a current-week plus a 3-week look-ahead schedule in Gantt chart format. Submit weekly prior to the project meeting or by noon on Friday, whichever comes first. Designate each activity as night or day shift and include the name of the foreman or contractor. The chart shall have a specific section dedicated solely to lane closures and detours. Each lane closure and detour shall be an individual item on the schedule.

Lane Closure Assessments will be assessed as shown in the **Table 1** below.

Any unauthorized lane closures will be assessed to the Contractor as noted in **Table 1** below. All Lane Closure Assessments for the Contractor will be subtracted from the value of the payment application for that associated period.

**Table 1: Lane Closure Assessment Rates**

Lane Closure Period	Late Charges (Per Lane)			
	290E Toll		US 290	
	Lane	Shoulder	Lane	Shoulder
>0-15 mins	\$1,000	\$1,000	\$1,000	\$1,000
>15-30 mins	\$2,000	\$2,000	\$2,000	\$2,000
>30-45 mins	\$3,000	\$3,000	\$3,000	\$3,000
>45-60 mins	\$4,000	\$4,000	\$4,000	\$4,000
Every additional 15-minute interval after 1 hour	\$2,000	\$2,000	\$2,000	\$2,000

For example: If the contractor has one lane of traffic closed on US 290 until Monday at 5:32 a.m., the contractor is 32 minutes outside of the allowable lane closure period. Refer to Item 502 for Allowable Lane Closure Times. The late charges will be accrued as follows:

$$1 \text{ lane closed} \times [\$1,000 + \$1,000 + \$1,000] = \$3000$$

Emergency lane closures are not subject to lane closure assessments. Emergency lane closures are defined as closures caused by circumstances other than those caused by the contractor and shall be approved by the authority.

Refer to Table 2. Allowable Lane Closure for available lane closure times.

Lane Closure Assessments will apply to the shoulder of the main lane and general-purpose lanes.

### **ITEM 9 – MEASUREMENT AND PAYMENT**

Provide full-time, off-duty, uniformed, certified peace officers in officially marked vehicles, as part of traffic control operations, as directed by the Engineer.

Show proof of certification by the Texas Commission on Law Enforcement Standards.

No payment will be made for peace officers unless the Contractor completes the proper Department tracking form. Submit invoices that agree with the tracking form for payment at the end of each month, when approved services were provided. Request the tracking form from the Department.

No payment for officers used for moving equipment without prior written approval.

Cancel “Off-Duty” Peace Officers and their Motor Vehicle Units when the Scheduled lane closures are canceled. Failure to cancel the Off-Duty Officers and their respective Motor Vehicle Units will not be the cause for payment, by Mobility Authority, for “Show Up” time.

### **ITEM 100 – PREPARING RIGHT OF WAY**

Prep ROW must not begin until accessible trees designated for preservation have been protected, items listed in the EPIC have been addressed, and SW3P controls installed in accessible areas.

Burning brush is not allowed.

Backfill material will be Type B Embankment using ordinary compaction.

Follow Item 752.4 Work Methods and Item 752 general notes when removing or working on or near trees and brush.

Unless shown otherwise in the plans or a designated non-mow area, perform trimming or removal for areas within 30 ft. of edge of pavement under construction. Trim or remove to provide minimum of 5 ft. of horizontal clearance and 7 ft. of vertical clearance for the following: guard fence, rails, signs, object markers, and structures. Trim to provide a minimum of 14 ft. vertical clearance under all trees. Trimming shall occur on a quarterly cycle thru the duration of construction and shall include a final cycle prior to Final Acceptance. This work is subsidiary.

Use hand methods or other means of removal if doing work by mechanical methods is impractical. This work is subsidiary to Item 100.

**ITEM 132 – EMBANKMENT TY C**

Do not furnish shale clays. The Engineer must approve the embankment material before use on the project.

TY C Requirements

Description	Percent Retained					LL Max	PI Max	PI Min
	3"	1 3/4"	3/8"	#4	#40			
EMBANKMENT (ORD COMP) (TY C)	0	-	-	-	15-100	45	20	8

**ITEM 164 – SEEDING FOR EROSION CONTROL**

Temporary and Permanent Seeding shall be as described below.

**Temporary Seeding**

Temporary seeding species should be Winter Wheat at 6 lbs./acre for Cool Season and Foxtail Millet at 10 lbs./acre for Warm Season.

**Permanent Seeding**

Common Name	Scientific Name	Habit	lb. PLS/Acre
Prairie Wildrye	<i>Elymus Canadensis</i>	Grass	2.0
Green Sprangletop	<i>Leptochloa Dubia</i>	Grass	1.0
Little Bluestem	<i>Schizachyrium Scoparium</i>	Grass	3.0
Sideoats Grama	<i>Bouteloua Curtipendula</i>	Grass	7.0
Buffalograss	<i>Bouteloua Dactyloides</i>	Grass	15.0
Curly-Mesquite	<i>Hilaria Belangeri</i>	Grass	1.0
Purple Threawn	<i>Artisida Purpurea Var. Purpea</i>	Grass	1.0
Hall's Panicum	<i>Panicum Hallii Var. Hallii</i>	Grass	0.5
Yellow Indiangrass	<i>Sorghastrum Nutans</i>	Grass	2.5
		<b>TOTAL</b>	<b>33.0</b>
Illinois Bundleflower	<i>Desmanthus Illinoensis</i>	Forb	6.0
Indian Blanket	<i>Gaillardia Pulchella</i>	Forb	6.0
Lemon Mint	<i>Mondarda Citriodora</i>	Forb	1.0
Bluebonnet	<i>Lupinus Texensis</i>	Forb	12.0
Pink Evening Primrose	<i>Oenothera Speciosa</i>	Forb	1.0
Black-Eyed Susan	<i>Rudbeckia Hirta</i>	Forb	1.0
Texas Star	<i>Lindheimera Texana</i>	Forb	1.0
Mealy Blue Sage	<i>Salvia Farinacea</i>	Forb	1.5
Partridge Pea	<i>Cassia (Chamaecrista)</i>	Forb	8.0
Plains Coreopsis	<i>Coreopsis Tinctoria</i>	Forb	1.0
		<b>TOTAL</b>	<b>38.5</b>

NOTE: 19 Species Total

### **ITEM 168 – VEGETATIVE WATERING**

Water all areas of project to be seeded or sodded.

Maintain the seedbed in a condition favorable for the growth of grass. Watering can be postponed immediately after a rainfall on the site of ½ inch or greater but will be resumed before the soil dries out. Continue watering until final acceptance.

Obtain water at a source that is metered (furnish a current certification of the meter being used) or furnish the manufacturer's specifications showing the tank capacity for each truck used. Notify the Engineer, each day that watering takes place, before watering, so that meter readings or truck counts can be verified.

This work is subsidiary to pertinent items.

### **ITEM 423 – RETAINING WALLS**

Contractor shall submit temporary retaining wall design, calculation, and shop drawings for approval.

Mow strip shall be 2ft. wide unless otherwise shown on the plans.

### **ITEM 432 - RIPRAP**

Mow strip riprap will be 4 in. and all other riprap will be 5 in. unless otherwise shown on the plans or in the pay items. Provide expansion joints in the mow strip every 50' and transverse construction joints every 10'.

Saw-cut existing riprap then epoxy 12 in. long No. 3 or No. 4 bars 6 in. deep at a maximum spacing of 18 in. in each direction to tie new riprap to existing riprap. This work is subsidiary.

### **ITEM 502 – BARRICADES, SIGNS, AND TRAFFIC HANDLING**

Cover, relocate or remove existing signs that conflict with traffic control. Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Do not set up traffic control when the pavement is wet.

Maintain access to all streets and driveways at all times, unless otherwise approved. Considered subsidiary to the pertinent Items.

Table 2. Allowable Lane Closure

Roadway	Limits	Allowable Closure Time*
		Weekday
290E Toll	SH 130 to Joyce Turner Dr	9 PM to 5 AM
US 290	SH 130 to Joyce Turner Dr	9 PM to 5 AM
Parmer Ln	Old Hwy 20 to SH 130	9 PM to 5 AM

\* Allowable Closure Time includes setup and cleanup time.

For roadways without defined allowable closure times, nighttime lane closures will be allowed from 8 PM to 5 AM. Unless stated, daytime or Friday night lane closures will not be allowed and one lane in each direction will remain open at all times for all roadways.

Full mainlane closures will not be allowed. Full ramp closures must be approved by the Engineer.

No closures will be allowed on Friday night.

No closures will be allowed on the weekends adjacent to, working day prior, and working day after the National Holidays defined in the Standard Specifications and Easter weekend. No closures will be allowed on Friday and the weekends for Austin City Limits Fest, Formula 1 United States Grand Prix, South by Southwest, UT home football games, Republic of Texas Rally, Rodeo Austin, or other special events that could be impacted by the construction. All lanes will be open by noon of the day before these special events. The closure restrictions may be amended by the Engineer.

To account for directional traffic volumes, begin and end times of closures may be shifted equally by the Engineer. The closure duration will remain. Added compensation is not allowed.

Submit an emailed request for a lane closure (LCN) to the Mobility Authority using the CTRMA's electronic document management system. Receive concurrence prior to implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation.

Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal. Provide 2-hour notice prior to implementation and immediately upon removal of the closure.

Submit the request a minimum of 48 hours prior to the closure and by the following deadline immediately prior to the closure: 11AM on Tuesday or 11AM on Friday.

For all roadways: Submit request for traffic detours and full roadway closures 7 days prior to implementation.

Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

In the case of an unauthorized lane closure, all approved LCNs will be revoked until a meeting is held between the contractor and the Engineer. No lane closure notices will be approved until the meeting is concluded.

Meet with the Engineer prior to lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Take immediate action to modify traffic control, if at any time backup (queuing) becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures.

Coordinate Main Lane closures with adjacent projects including those projects owned by other agencies and departments.

Maximum lane closure length shall be 2 miles.

Do not setup lane and/or shoulder closures on both sides of road at the same time.

Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work will be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Maintain a minimum of 1 through lane in each direction, unless otherwise directed in plans.

Shadow Vehicle with TMA is required for setup/removal of traffic control devices.

**ITEM 503 – PORTABLE CHANGEABLE MESSAGE SIGN**

Provide 2 “Electronic” Portable Changeable Message Sign(s) (EPCMS) as part of the traffic control operation. All EPCMS will be exclusive to this project, unless otherwise approved. Placement location and message as directed.

Place appropriate number of “Electronic” Portable Changeable Message Signs (EPCMS) at locations requiring lane closures for one-week prior to the closures, or as directed. Obtain approval for the actual message that will appear on the boards. If more than two phases of a message are required per board, provide additional EPCMS’s to meet the two-phases-per-board requirement. Provide a replacement within 12 hours. EPCMS will be available for traffic control, event notices, roadway conditions, service announcements, etc.

**ITEM 506 – TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS**

Install, maintain, remove control measures in areas of the right of way utilized by the Contractor that are outside the limits of disturbance required for construction. Permanently stabilize the area. This work is subsidiary.

**ITEM 512 – PORTABLE TRAFFIC BARRIER**

Any increase in temporary barrier quantities that occur due to the Contractor changes in the sequence of work or the traffic control plan will not be paid.

**ITEM 752 – TREE AND BRUSH REMOVAL**

Flailing equipment is not allowed. Burning brush is not allowed in urban areas or on ROW. Use hand methods or other means of removal if doing work by mechanical methods is impractical.

Prior to begin tree pruning, send email confirmation to the Engineer that training and demonstration of work method has been provided to the employees. This work is subsidiary.



**Central Texas Regional Mobility Authority**

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**290E PARMER LANE WALL REPAIR PROJECT**

CTRMA CONTRACT NO. 25290E22702M

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**SPECIFICATION LIST**

**PREFACE:**

The "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" of the Texas Department of Transportation, 2024, as amended and augmented by the Supplemental Specifications following, shall govern the performance of the Contract. These specifications hereby are made a part of the Contract as fully and with the same effect as if set forth at length herein.

Attention is directed to the fact that any other documents printed by the Texas Department of Transportation modifying or supplementing said "Standard Specifications", such as Standard Supplemental Specifications, Special Provisions (by the Department), Notice to Bidders, etc., do not form a part of this Contract nor govern its performance, unless specifically so-stated in the Supplemental Specifications herein contained.

Attention is directed to the use of "Proposal" in standard TxDOT documents included in this contract (Standard Specifications, Special Provisions, & Special Specifications) is equivalent to "Bid" in the Mobility Authority's documents. This shall be accounted for when working contract documents prepared by the Mobility Authority with those standards prepared by TxDOT.

Attention is directed to the use of "Department" in standard TxDOT documents included in this contract (Standard Specifications, Special Provisions, & Special Specifications) is equivalent to "Mobility Authority" in the Mobility Authority's documents.

References made to specific section numbers in these Special Provisions, or in any of the various documents which constitute the complete Contract Documents, shall, unless otherwise denoted, be construed as referenced to the corresponding section of the "Standard Specifications" issued by the Texas Department of Transportation in 2024.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY  
GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

(STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS)

WHERE DISCREPANCIES OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS, THE FOLLOWING DESCENDING ORDER OF PRIORITY SHALL GOVERN: (1) SPECIAL CONDITIONS, (2) SPECIAL PROVISIONS TO SPECIAL SPECIFICATIONS, (3) SPECIAL SPECIFICATIONS, (4) SPECIAL PROVISIONS, AND (5) STANDARD SPECIFICATIONS.

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF  
TRANSPORTATION SEPTEMBER 1, 2024. STANDARD SPECIFICATIONS ARE  
INCORPORATED INTO THE CONTRACT BY REFERENCE.

ITEMS 1-9	GENERAL REQUIREMENTS AND COVENANTS
ITEM 100	PREPARING RIGHT OF WAY (103)
ITEM 104	REMOVING CONCRETE
ITEM 110	EXCAVATION (132)
ITEM 132	EMBANKMENT (100)(160)(204)(210)(216)(260)(275)(400)
ITEM 160	TOPSOIL
ITEM 164	SEEDING FOR EROSION CONTROL (162)(164)(166)
ITEM 168	VEGETATIVE WATERING
ITEM 192	LANDSCAPE PLANTING
ITEM 421	HYDRAULIC CEMENT CONCRETE (360) (361) (416)
ITEM 423	RETAINING WALLS (110) (132) (216) (400) (416) (420) (421) (424) (440) (445) (458) (556)
ITEM 427	SURFACE FINISHES FOR CONCRETE
ITEM 432	RIPRAP (247)(420)(421)(431)(440)
ITEM 438	CLEANING AND SEALING JOINTS
ITEM 500	MOBILIZATION
ITEM 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING
ITEM 503	PORTABLE CHANGEABLE MESSAGE SIGN
ITEM 506	TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS (161) (432) (556)
ITEM 512	PORTABLE TRAFFIC BARRIER
ITEM 545	CRASH CUSHION ATTENUATORS
ITEM 752	TREE AND BRUSH REMOVAL

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL PROVISION TO ITEM 000 (000---001)

SPECIAL PROVISION TO ITEM 000 (000---016)

SPECIAL PROVISION TO ITEM 000 (000---017---RMA)

SPECIAL PROVISION TO ITEM 000 (000---031)

SPECIAL PROVISION TO ITEM 000 (000---019)

SPECIAL PROVISION TO ITEM 001 (001---001---RMA)

SPECIAL PROVISION TO ITEM 002 (002---001---RMA)

SPECIAL PROVISION TO ITEM 003 (003---001---RMA)

SPECIAL PROVISION TO ITEM 004 (004---001---RMA)

SPECIAL PROVISION TO ITEM 004 (004---002---RMA)

SPECIAL PROVISION TO ITEM 005 (005---001---RMA)

SPECIAL PROVISION TO ITEM 006 (006---001---RMA)

SPECIAL PROVISION TO ITEM 007 (007---001---RMA)

SPECIAL PROVISION TO ITEM 008 (008---001)

SPECIAL PROVISION TO ITEM 008 (008---001---RMA)

SPECIAL PROVISION TO ITEM 008 (008---002---RMA)

SPECIAL PROVISION TO ITEM 008 (008---009---RMA)

SPECIAL PROVISION TO ITEM 009 (009---001---RMA)

SPECIAL SPECIFICATIONS:

SS 7002-RMA PRESTRESSED GROUND ANCHORS

GENERAL:

THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

# Special Provision to Item 000

## Nondiscrimination



### 1. DESCRIPTION

All recipients of federal financial assistance are required to comply with various nondiscrimination laws, including Title VI of the Civil Rights Act of 1964, as amended (Title VI). Title VI forbids discrimination against anyone in the United States on the grounds of race, color, or national origin by any agency receiving federal funds.

The Texas Department of Transportation, as a recipient of federal financial assistance, and under Title VI and related statutes, ensures that no person will on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment in accordance with 42 USC 2000d-3), color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

### 2. DEFINITION OF TERMS

Where the term "Contractor" appears in the following six nondiscrimination clauses, the term "Contractor" is understood to include all parties to Contracts or agreements with the Department.

### 3. NONDISCRIMINATION PROVISIONS

During the performance of this Contract, the Contractor agrees as follows.

- 3.1. **Compliance with Regulations.** The Contractor must comply with the Regulations pertinent to nondiscrimination in federally assisted programs of the United States Department of Transportation 49 CFR 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Contract.
- 3.2. **Nondiscrimination.** The Contractor, regarding the work performed during the Contract, must not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor must not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.
- 3.3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, the Contractor must notify each potential subcontractor or supplier of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 3.4. **Information and Reports.** The Contractor must provide all information and reports required by the Regulations or directives issued pursuant thereto, and must permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Recipient or the Department to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor must so certify to the Recipient, or the Department as appropriate, and must set forth what efforts it has made to obtain the information.
- 3.5. **Sanctions for Noncompliance.** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Recipient must impose such Contract sanctions as it or the Department may

determine to be appropriate, including, but not limited to actions defined in Article 7.1., "Ethics," or Article 5.1., "Authority of Engineer."

- 3.6. **Incorporation of Provisions.** The Contractor must include the provisions of Sections 3.1–3.6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor must take such action with respect to any subcontract or procurement as the Recipient or the Department may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

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# Special Provision 000

## Important Notice to Contractors

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### 1. GENERAL

In accordance with Texas Transportation Code §223.012, the Engineer will evaluate Contractor performance based on quality, safety, and timeliness of the project.

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### 2. DEFINITIONS

- 2.1. **Project Recovery Plan (PRP).** A formal, enforceable plan developed by the Contractor, in consultation with the District, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct project-specific performance deficiencies.

In accordance with 43 TAC §9.23, the District will request a PRP if the Contractor's performance on a project is below the Department's acceptable standards and will monitor the Contractor's compliance with the established plan.

- 2.2. **Corrective Action Plan (CAP).** A formal, enforceable plan developed by the Contractor, and proposed for adoption by the Construction Division or Maintenance Division, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct statewide performance deficiencies.

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### 3. CONTRACTOR EVALUATIONS

In accordance with 43 TAC §9.23, the Engineer will schedule evaluations at the following intervals, at minimum:

- interim evaluations at or within 30 days after the anniversary of the Notice to Proceed, for Contracts extending beyond 1 yr. and
- final evaluation, upon project closeout.

In case of a takeover agreement, neither the Surety nor its performing Contractor will be evaluated.

In addition to regularly scheduled evaluations, the Engineer may schedule an interim evaluation at any time to formally communicate issues with quality, safety, or timeliness. Upon request, work with the Engineer to develop a PRP to document expectations for correcting deficiencies.

Comply with the PRP as directed. Failure to comply with the PRP may result in additional remedial actions available to the Engineer under Item 5, "Control of the Work." Failure to meet a PRP to the Engineer's satisfaction may result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a PRP, including consideration of sufficient time.

Follow the escalation ladder if there is a disagreement regarding an evaluation or disposition of a PRP. The Contractor may submit additional documentation pertaining to the dispute. The District Engineer's decision on a Contractor's evaluation score and recommendation of action required in a PRP or follow-up for noncompliance is final.

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**4. DIVISION OVERSIGHT**

Upon request of the Construction Division or Maintenance Division, develop and submit for Division approval a proposed CAP to document expectations for correcting deficiencies in the performance of projects statewide.

Comply with the CAP as directed. The CAP may be modified at any time up to completion or resolution after written approval of the premise of change from the Division. Failure to meet an adopted or revised adopted CAP to the Division's satisfaction within 120 days will result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Division will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a CAP, including consideration of sufficient time and associated costs as appropriate.

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**5. PERFORMANCE REVIEW COMMITTEE**

The Performance Review Committee, in accordance with 43 TAC §9.24, will review at minimum all final evaluations, history of compliance with PRPs, any adopted CAPs including agreed modifications, any information about events outside a Contractor's control contributing to the Contractor's performance, and any documentation submitted by the Contractor and may recommend one or more of the following actions:

- take no action,
- reduce the Contractor's bidding capacity,
- prohibit the Contractor from bidding on one or more projects,
- immediately suspend the Contractor from bidding for a specified period of time, by reducing the Contractor's bidding capacity to zero, or
- prohibit the Contractor from being awarded a Contract on which they are the apparent low bidder.

The Deputy Executive Director will determine any further action against the Contractor.

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**6. APPEALS PROCESS**

In accordance with 43 TAC §9.25, the Contractor may appeal remedial actions determined by the Deputy Executive Director.

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## **Special Provision 000**

### **Certificate of Interested Parties (Form 1295)**

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Submit a Form 1295, "Certificate of Interested Parties," in the following instances:

- at contract execution for contracts awarded by the Mobility Authority;
- at any time there is an increase of \$300,000 or more to an existing contract (change orders, extensions, and renewals); or
- at any time there is a change to the information in Form 1295, when the form was filed for an existing contract.

Form 1295 and instructions on completing and filing the form are available on the Texas Ethics Commission website.



## Special Provision 000

### Schedule of Liquidated Damages



For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated Damages per Working Day
From More Than	To and including	
0	1,000,000	760
1,000,000	3,000,000	968
3,000,000	5,000,000	1107
5,000,000	15,000,000	1527
15,000,000	25,000,000	2095
25,000,000	50,000,000	3072
50,000,000	Over 50,000,000	5093

In addition to the amount shown in Table 1, the Liquidated Damages will be increased by the amount shown in Item 8 "Prosecution and Progress," of the General Notes for Road User Cost (RUC), when applicable.

# Special Provision to Item 000

## Small Business Enterprise in State-Funded Projects



### 1. DESCRIPTION

The purpose of this Special Provision is to implement the Department's policy of ensuring that SBEs have an opportunity to participate in the performance of Contracts. If the SBE goal is greater than zero, Section 2.1., "Article A—SBE Goal is Greater than Zero," will apply to this Contract; otherwise, Section 2.2., "Article B—No SBE Goal," will apply. The percentage goal for SBE participation in the work to be performed under this Contract will be in accordance with the proposal.

### 2. DEFINITIONS

A Small Business Enterprise (SBE) is a firm certified as such by the Department. Firms certified as Historically Underutilized Businesses (HUBs) by the Texas Comptroller of Public Accounts and as Disadvantaged Business Enterprises (DBEs) by the Texas Uniform Certification Program automatically qualify as SBEs.

#### 2.1. Article A—SBE Goal is Greater than Zero.

##### 2.1.1. **Policy.** The Department is committed to providing contracting opportunities for small businesses. Therefore, it is the Department's policy to develop and maintain a program to facilitate contracting opportunities for small businesses. Consequently, the requirements of the Department's SBE Program apply to this Contract as follows.

The Contractor will make a good faith effort to meet the SBE goal for this Contract.

The Contractor and any subcontractors will not discriminate on the basis of race, color, national origin, age, disability, or sex in the award and performance of this Contract. These nondiscrimination requirements must be incorporated into any subcontract and purchase order.

After a conditional award is made to the low Bidder, the Department will determine the adequacy of a Contractor's efforts to meet the Contract goal, in accordance with Section 2.1.2., "Contractor's Responsibilities." If the requirements in accordance with Section 2.1.2., "Contractor's Responsibilities," are met, the Contract will be forwarded to the Contractor for execution.

The Contractor's performance in meeting the SBE goal during the construction period of the Contract will be monitored by the Department.

##### 2.1.2. **Contractor's Responsibilities.** These requirements must be satisfied by the Contractor. An SBE Contractor may satisfy the SBE requirements by performing at least 25% of the Contract work with their own organization in accordance with Item 8, "Prosecution and Progress."

The Contractor must complete an SBE Commitment Agreement Form for each SBE-certified firm the Contractor intends to use to satisfy the SBE goal. The SBE Commitment Agreement Form must be submitted to the Department's Civil Rights Division (CIV) in Austin, Texas, no later than 5 P.M. on the 10th business day, excluding national holidays, after the conditional award of the Contract. When requested, additional time not to exceed 7 business days, excluding national holidays, may be granted based on documentation submitted by the Contractor.

A Contractor that cannot meet the Contract goal, in whole or in part, must document the good faith efforts taken to meet the SBE goal. The Department will consider as good faith efforts all documented explanations

that are submitted and that describe a Contractor's failure to meet an SBE goal or obtain SBE participation, including:

- advertising in general circulation, trade association, and minority- or women-focused media regarding subcontracting opportunities,
- dividing the Contract work into reasonable portions in conformance with standard industry practices,
- documenting reasons for rejection or meeting with the rejected SBE to discuss the rejection,
- providing qualified SBEs with adequate information pertinent to bonding, insurance, plans, Specifications, scope of work, and the requirements of the Contract,
- negotiating in good faith with qualified SBEs, not rejecting qualified SBEs that are also the lowest responsive Bidder; and
- using the services of available minorities and women; community organizations; Contractor groups; local, state, and federal business assistance offices; and other organizations that provide support services to SBEs.

The good faith effort documentation is due at the time and place in accordance with this Section. CIV will evaluate the Contractor's documentation. If it is determined that the Contractor has failed to meet the good faith effort requirements, the Contractor will be given an opportunity for reconsideration by the Department.

Should the Bidder to which the Contract is conditionally awarded refuse, neglect, or fail to meet the SBE goal or demonstrate to the Department's satisfaction sufficient efforts to obtain SBE participation, the proposal guaranty filed with the bid will become the property of the State, not as a penalty, but as liquidated damages.

The Contractor must not terminate an SBE subcontractor submitted on a commitment agreement for a Contract with an assigned goal without the prior written consent of the Department.

The Contractor must designate an SBE contact person who will administer the Contractor's SBE program and who will be responsible for submitting reports, maintaining records, and documenting good faith efforts to use SBEs.

The Contractor must inform the Department of the representative's name, title, and telephone number within 10 days of beginning work.

**2.1.3. Eligibility of SBEs.** The Department certifies the eligibility of SBEs.

Firms certified as SBEs are listed in the Department's online directory located at <https://txdot.txdotcms.com/>.

Only firms certified at the time of letting or at the time the commitments are submitted are eligible to be used in the information furnished by the Contractor in accordance with Section 2.1.2., "Contractor's Responsibilities."

Certified HUBs and DBEs are eligible as SBEs.

The Department's SBE Program is governed by 43 TAC, Chapter 9, Subchapter K, "Small Business Enterprise (SBE) Program."

**2.1.4. Determination of SBE Participation.** SBE participation will be counted toward meeting the SBE goal in this Contract in accordance with the following.

A Contractor will receive credit for all payments actually made to an SBE for work performed and costs incurred in accordance with the Contract, including all subcontracted work.

An SBE Contractor or subcontractor may not subcontract more than 75% of a Contract. The SBE must perform no less than 25% of the value of the Contract work with their own organization in accordance with Item 8.

An SBE may lease equipment consistent with standard industry practice. An SBE may lease equipment from the prime Contractor if a rental agreement, separate from the subcontract specifying the terms of the lease arrangement, is approved by the Department before the SBE starting the work in accordance with the following.

- If the equipment is of a specialized nature, the lease may include the operator. If the practice is generally acceptable with the industry, the operator may remain on the lessor's payroll. The operator of the equipment must be subject to the full control of the SBE, for a short term, and involve a specialized piece of heavy equipment readily available at the jobsite.
- For equipment that is not specialized, the SBE must provide the operator and be responsible for all payroll and labor compliance requirements.

- 2.1.5. **Records and Reports.** The Contractor must submit monthly reports of SBE payments (including payments to HUBs and DBEs) to the Area Engineer's Office after work begins. These reports will be due within 15 days after the end of a calendar month.

These reports will be required until all SBE subcontracting or supply activity is completed. The SBE Progress Report must be used for monthly reporting. Upon completion of the Contract and before receiving the final payment, the Contractor must submit the SBE Final Report to the Area Engineer's Office and a copy to the District Construction Office. These forms may be obtained from CIV and reproduced as necessary. The Department may verify the amounts being reported as paid to SBEs by randomly requesting copies of invoices and cancelled checks paid to SBEs. When the SBE goal requirement is not met, documentation supporting good faith efforts, in accordance with Section 2.1.2., "Contractor's Responsibilities," must be submitted with the SBE Final Report.

SBE subcontractors and suppliers should be identified on the monthly report by SBE certification number, name, and the amount of actual payment made to each during the monthly period. These reports are required regardless of whether SBE activity has occurred in the monthly reporting period.

All such records must be retained for 3 yr. following completion of the Contract work and be available at reasonable times and places for inspection by authorized representatives of the Department.

- 2.1.6. **Compliance of Contractor.** To ensure compliance with SBE requirements of this Contract, the Department will monitor the Contractor's efforts to involve SBEs during the performance of this Contract. This will be accomplished by a review of monthly reports submitted by the Contractor indicating their progress in achieving the SBE Contract goal and by compliance reviews conducted by the Department.

A Contractor's failure to comply with the requirements of this Special Provision will constitute a material breach of this Contract. In such a case, the Department reserves the right to employ remedies as the Department deems appropriate in the terms of the Contract.

- 2.2. **Article B—No SBE Goal.**

- 2.2.1. **Policy.** It is the Department's policy that SBEs will have an opportunity to participate in the performance of Contracts.

- 2.2.2. **Contractor's Responsibilities.** If there is no SBE goal, the Contractor must offer SBEs an opportunity to participate in the performance of Contracts and subcontracts. If an SBE is used, the requirements in accordance with Section 2.1.4., "Determination of SBE Participation," will apply.

- 2.2.3. **Prohibit Discrimination.** The Contractor and any subcontractor will not discriminate on the basis of race, color, national origin, religion, age, disability, or sex in the award and performance of Contracts. These nondiscrimination requirements must be incorporated into any subcontract and purchase order.

- 2.2.4. **Records and Reports.** The Contractor must submit annual reports pertinent to SBEs (including HUBs and DBEs) to the Area Engineer's Office by August 31 or at project completion, whichever comes first.

These reports will be required until all SBE subcontracting or supply activity is completed. The SBE Progress Report must be used for reporting. Upon completion of the Contract and before receiving the final payment, the Contractor must submit the SBE Final Report to the Area Engineer's Office and a copy to the District Construction Office. These forms may be obtained from CIV and reproduced as necessary. The Department may verify the amounts being reported as paid to SBEs by randomly requesting copies of invoices and cancelled checks paid to SBEs.

SBE subcontractors and suppliers should be identified on the report by SBE certification number, name, and the amount of actual payment made.

All such records must be retained for 3 yr. following completion of the Contract work and be available at reasonable times and places for inspection by authorized representatives of the Department.

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# Special Provision to Item 1

## Abbreviations and Responsibilities

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Item 1, "Abbreviations and Definitions," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 1.** is supplemented with the following:

### **1.0. General Statement:**

For this Contract, the Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges, September 1, 2024 (the "Texas Standard Specifications"), all documents referenced therein, and all manuals, bulletins, supplements, specifications, and similar materials issued by the Texas Department of Transportation ("TxDOT"), or any predecessor or successor thereto, which are applicable to this Contract, are hereby modified with respect to the terms cited below and no others are changed hereby.

The term "State", "State of Texas", "State Highway Agency", "State Highway Department Of Texas", "State Department of Highways and Public Transportation", "Texas State Department Of Highways and Public Transportation", "Texas Department of Transportation", "Department", "Texas Turnpike Authority", "State Department of Highways and Public Transportation Commission", "Texas Department of Transportation Commission", "Texas Transportation Commission", or "State Highway Commission", shall, in the use of The Texas Standard Specifications, Special Provisions and Special Specifications and General Notes and Specification Data pertaining thereto, and required contract provisions for Federal-Aid construction contracts, for all work in connection with Central Texas Regional Mobility Authority, projects and all extensions enlargements, expansions, improvements, and rehabilitations thereto, be deemed to mean Central Texas Regional Mobility Authority, unless the context clearly indicates a contrary meaning.

**Article 2, "Abbreviations,"** is supplemented with the following:

CTRMA Central Texas Regional Mobility Authority

**Article 3.28., "Commission",** is voided and replaced by the following:

3.28. Commission. The Central Texas Regional Mobility Authority Board or authorized representative.

**Article 3.33., "Construction Contract",** is voided and replaced by the following:

3.33. Construction Contract. The agreement between the Central Texas Regional Mobility Authority and the Contractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract Documents.

**Article 3.46., "Debar (Debarment)",** is voided and replaced by the following:

3.46 Debar (Debarment). Disqualification of an entity from bidding on or entering into a Contract with the Mobility Authority, federal government or state government, from participating as a subcontractor under a Contract with the Mobility Authority, federal government or state government, and from participating as a supplier of materials or equipment to be used under a Contract with the Mobility Authority, federal government or state government. Refer to 43 TAC 1.2, "Definitions".

**Article 3.47., "Department"**, is voided and replaced by the following:

3.47. Department. Central Texas Regional Mobility Authority, unless the context clearly indicates a contrary intent and meaning.

**Article 3.48., "Departmental Material Specifications"**, is voided and replaced by the following:

3.48. Departmental Material Specifications (DMS). Reference specifications for various materials published by the Texas Department of Transportation Materials and Tests Division (MTD).

**Article 3.55., "Engineer"**, is hereby deleted and replaced by the following:

3.55 Engineer. The Central Texas Regional Mobility Authority Coordinator or their duly authorized representative.

**Article 3.77., "Letting Official"**, is hereby deleted and replaced by the following:

3.77. Letting Official. An employee of the Central Texas Regional Mobility Authority empowered by the Central Texas Regional Mobility Authority to officially receive bids and close the receipt of bids at a letting.

**Article 3.107., "Proposal Form"**, is voided and replaced by the following:

3.107. Proposal Form. The document issued by the Central Texas Regional Mobility Authority for a proposed Contract that includes:

- the specific locations (except for non-site-specific work) and description of the proposed work;
- an estimate of the various quantities and kinds of work to be performed or materials to be furnished;
- a schedule of items for which unit prices are requested;
- the number of working days within which the work is to be completed (or reference to the requirements); and
- the special provisions and special specifications applicable to the proposed Contract.

**Article 3.113., "Referee Tests"**, is voided and replaced by the following:

3.113. Referee Tests. Tests requested to resolve differences between Contractor and Engineer test results. The referee laboratory is a mutually agreed to 3rd party commercial laboratory.

**Article 3.135., "State"**, is voided and replaced by the following:

3.135. State. Central Texas Regional Mobility Authority.

**3.163. Mobility Authority.** The Central Texas Regional Mobility Authority, an agency created under Texas Transportation Code Chapter 370 and approved by the Texas Transportation Commission, together with its members, partners, employees, agents officers, directors, shareholders, representatives, consultants, successors, and assigns. The Mobility Authority's principal office is presently located at 3300 N. I-35, Suite 300, Austin, Texas 78705.

**3.164. Bid Form.** The form provided by the Mobility Authority used by the bidder to submit a bid. Electronic bid forms for the project shall be submitted via the project's CivCast website.

**3.165. Full Completion of all Work (or to Fully Complete all Work).** The completion of all work specified under this Contract as evidenced by the Formal Acceptance thereof by the Mobility Authority.

**3.166. Standards.** Whenever the Plans and/or Specifications refer to "Standard Sheets" or "Design Details" such reference shall be construed to mean the set of drawings issued by the Design Divisions, Texas Department of Transportation, and entitled "Standard Sheets". Only those standards or standard drawings specifically referred to by number on the Plans or in the various Contract Documents are applicable to work on this Contract.

Whenever in the various Contract Documents term, "Department" or "State" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority." Similarly, the term, "Executive Director" shall be replaced by the term, "Central Texas Regional Mobility Authority Coordinator".

Whenever in the Texas Department of Transportation Specifications and Standard Drawings the term, "Department" or "Texas Department of Transportation" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority," except in references to said Texas Department of Transportation as being the author of certain Specifications and Standard Drawings, and in reference to said Department as the agency prequalifying prospective Bidders.

Whenever in the Texas Department of Transportation Specifications and Standard Drawing the term, "District Engineer" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority Coordinator".

**3.167. Substantial Completion.** Substantial Completion shall be defined as occurring when all of the following conditions are met:

- All project work requiring lane or shoulder closures or obstructions is completed, and traffic is utilizing the lane arrangement as shown on the plans for the finished roadway.
- All signs, traffic control devices, and pavement markings are in their final position at this time.
- All sidewalks and shared use paths are opened for public use.

**3.168. Provisional Award.** Award given by the Mobility Authority to the Contractor after the Board of Directors approves the contract and is contingent on TxDOT approval. The Contractor is not required to provide bonds, insurance or their SBE Commitment Agreement Form.



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## Special Provision to Item 2

### Instructions to Bidders

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Item 2, "Instructions to Bidders" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 3., "Issuing Proposal Forms,"** first two sentences are replaced with the following:

Mobility Authority will issue an Official Bid Form to a prequalified Bidders. The online bid form will be made available to the prequalified bidders on the CivcastUSA website: <https://www.civcastusa.com/project/67116b82b78f622ef5ef4002/summary>

Prequalification requirements:

- Be registered with State of Texas,
- Be fully prequalified by Texas Department of Transportation (TxDOT),
- Have a bidding capacity per TxDOT prequalification system of \$1,000,000,
- Email a valid Non-Collusion Affidavit, Debarment Affidavit, , and Child Support Statement to [Barath.PasupathyNathan@atkinsrealis.com](mailto:Barath.PasupathyNathan@atkinsrealis.com) and [Beteseb.Shibikom@atkinsrealis.com](mailto:Beteseb.Shibikom@atkinsrealis.com) and include a phone number, email address and physical address for point of contact.

**Article 2.3., "Issuing Proposal Forms,"** is supplemented by the following:

The Department may not issue a proposal form if one or more of the following apply:

- The Contractor has been defaulted in accordance with Article 8.7., "Default of Contract" (a default for performance) on a previous Contract with the Department within the last 3 years
- The Contractor is not in compliance with Texas Government Code Sections 2155.089 and 2262.055.

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## Special Provision to Item 3

### Award and Execution of Contract

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Item 3, "Award and Execution of Contract" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 1, "Award of Contract,"** is deleted in its entirety and replaced with the following:

The Mobility Authority will award or reject the Contract within 60 calendar days after the opening of the proposal at the sole discretion of the Mobility Authority.

**Article 4.3., "Insurance,"** is supplemented by the following:

The Contractor shall be the named insured, and the following entities shall be endorsed as additional insureds on a primary and non- contributory basis: Central Texas Regional Mobility Authority, Texas Department of Transportation.

These entities shall be additional insureds to this policy with respect to liability arising out of the acts, errors, and omissions of any member of the Contractor and Subcontractors whether occurring on or off of the site, notwithstanding any other provisions of the Contract Documents.

The Authority Board, the Authority, Texas Department of Transportation, the State of Texas, the Commission and their respective successors, assigns, officeholders, officers, directors, commissioners, consultants and employees shall be listed as "additional insureds" with respect to any insurance for which the contractor must obtain an "additional insured" rider or amendment.

The Commercial General Liability, Automobile Liability and Excess Liability policies shall be endorsed to name CTRMA as an additional insured for any claims arising out of this project. The Contractor shall provide CTRMA with certificates of insurance from all contractors and subcontractors. The certificates shall state that each Contractor waives all rights of subrogation against the CTRMA and that coverage shall not be modified or cancelled without thirty (30) days written notice to CTRMA.

**Table 2** is deleted in its entirety and replaced with the following:

Type of Insurance	Amount of Coverage
Commercial General Liability Insurance	Including products/completed operations liability and contractual liability , in the amount of \$1,000,000 per occurrence for bodily injury and property damage
Business Automobile Policy	In the amount of \$1,000,000 per occurrence for bodily injury and property damage
Workers' Compensation	Providing statutory benefits, and Employers Liability with limits of \$1,000,000
Excess Liability Insurance	In the amount of \$5,000,000 per occurrence and aggregate

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## Special Provision to Item 4

### Scope of Work

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Item 4, "Scope of Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 4.4., "Changes in the Work,"** Delete the following two paragraphs:

"If the changes in quantities or the alternations do not significantly change the character of the work under the Contract, the altered work will be paid for at the Contract unit price. If the changes in quantities or the alterations significantly change the character of the work, the Contract will be amended by a change order. If no unit price exists, this will be considered extra work and the Contract will be amended by a change order. Provide cost justification as requested, in an acceptable format.

Payment will not be made for anticipated profits on work that is eliminated."

and replace with the following:

"The Engineer may require deviations to the Work through a written directive. Payment for the deviations and quantity overruns will be made through the Contingency Allowance. Deviations and quantity overruns will be paid for at the unit prices submitted at the bidding stage. Deviations requiring new unit prices will be negotiated and made through the Contingency Allowance. Costs exceeding the Contingency Allowance will be addressed using the change order process.

Upon completion of the Work, the total contract value will be adjusted to provide for the difference, if any, between the total amount of expenditures from the Contingency Allowance and the original amount of the Contingency Allowance. The Contractor is not entitled to all or any part of an unexpended balance of the Contingency Allowance.

When changes are made that do not fall under the Contingency Allowance, the Contract will be amended by a Change Order. Provide cost justification as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated."

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## Special Provision to Item 4

### Scope of Work

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Item 4, "Scope of Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 4.7., "Dispute or Claims Procedure,"** Delete the paragraphs under this article in their entirety and replace with the following:

"The dispute resolution policy promotes a cooperative attitude between the Engineer, Contractor, and Contractor's subcontractors working through the Contractor. Emphasis is placed on resolving issues while they are still current, at the project office, and in an informal manner with the Engineer. Open sharing of information is encouraged by all parties involved so the information provided completely and accurately reflects the issues and facts. If information is not shared, decisions may be limited to relying on the documentation that is available for review.

If the dispute cannot be resolved at the project level, initiate the Contract claims procedure by submitting a claim to the Mobility Authority's Director of Engineering.

If the claim cannot be resolved between the Contractor and the Director of Engineering, the contractor may escalate the claim by submitting the claim to the Executive Director of the Mobility Authority.

The Contractor, or subcontractor through the Contractor, will file a Contract claim request and a detailed report that provides the basis for the claim. The detailed report will include relevant facts of the claim, cost or other data supporting the claim, a description of any additional compensation requested, and documents supporting the claim.

The claim must include the following certification: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Mobility Authority is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."

If a claim has been submitted and the Contractor wishes to resume negotiations with the Engineer, notify the Director of Engineering in writing of the intent to resume negotiations at the Engineer level and request review of the claim be suspended by the Director of Engineering pending the outcome of the negotiations.

File a claim after completion of the Contract or when required for orderly performance of the Contract. For a claim resulting from enforcement of a warranty period, file the claim no later than 1 yr. after expiration of the warranty period. For all other claims, file the claim no later than 1 yr. after the date the Mobility Authority issues notice to the Contractor that they are in default, the date the Mobility Authority terminates the Contract, or the date of final acceptance of the Contract. It is the Contractor's responsibility to submit requests in a timely manner.

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## Special Provision to Item 5

### Control of the Work

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Item 5, "Control of the Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 5.12., "Final Acceptance,"** is supplemented by the following:

Contractor warrants all materials and workmanship and that the work is in conformance with the Bid Documents and Plans included in this Contract for a period of one year from the date of the Certificate of Final Acceptance of the entire project. Said warranty binds Contractor to correct any work that does not conform with such Bid Documents and Plans or defects in workmanship or materials furnished under this Contract which may be discovered within said one year period. Contractor must, at its own expense, correct any such defect within 30 days after receiving written notice of such defect from Mobility Authority by repairing the same to the condition called for in the Contract. Should Contractor fail or refuse to repair such defect within said 30-day period or to provide acceptable assurances that such repair work will be completed within a reasonable time thereafter, Mobility Authority may repair or cause to be repaired any such defect by calling the Contractor's Warranty Bond.

## Special Provision to Item 6

### Control of Materials

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Item 6, "Control of Materials," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

**Article 4., "Sampling, Testing, and Inspection,"** is supplemented by the following:

Quality Control testing of all materials, construction items, or products incorporated in the work shall be performed by the Contractor according to the contract specifications at the Contractor's expense.

Quality Assurance sampling and testing for acceptance will be performed by the Mobility Authority's Construction Representative/Observer in accordance with the Quality Control (QC) / Quality Assurance (QA) program outlined in the Quality Assurance Plan (QAP). The cost of such tests will be incurred by the Mobility Authority and coordinated by the Mobility Authority's Construction Representative/Observer through funds made available to the Construction Representative/Observer under his/her agreement with the Mobility Authority for the professional services related to construction engineering and inspection on the Project.

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## Special Provision to Item 7

### Legal Relations and Responsibilities

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Item 7, "Legal Relations and Responsibilities" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Under **Article 7.3., "Laws To Be Observed"**, **Article 7.5., "Patented Devices, Materials and Processes"**, **Article 7.12., "Responsibility For Hazardous Materials"**, and **Article 7.15., "Responsibility For Damage Claims"**, "State" is voided and replaced by "Central Texas Regional Mobility Authority and TxDOT".

**Article 7.3., "Laws To Be Observed,"** is supplemented by the following:

By entering into Contract, the Contractor agrees to provide or make available to the Mobility Authority records, including electronic records related to the Contract for a period of 3 years after the final payment. No person or entity other than TxDOT may claim third -party beneficiary status under this Contract or any of its provisions, nor may any non-party sue for personal injuries or property damage under this Contract.

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## Special Provision to Item 8

### Prosecution and Progress

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Item 8, "Prosecution and Progress," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 8.6., "Failure to Complete Work on Time,"** is supplemented by the following.

- 6.1. **Lane Closure Assessment Fees.** Monetary assessment, as shown on the plans, will be made against the Contractor for any lane closure or obstruction that overlaps into the peak-hour traffic for each time increment shown on the plans or portion thereof, per lane, regardless of the length of lane closure or obstruction.
- 6.1.1. **Definition of Terms.** For this Contract, the following definitions apply.
  - 6.1.1.1. **Time Increment.** Any continuous defined increment of time or portion thereof for a period beginning at that point when lanes are closed or obstructed by the Contractor's operations.
  - 6.1.1.2. **Assessment Fee.** The amount shown on the proposal for each defined time increment, representing the average cost of interference and inconvenience to the road user for each lane closed or obstructed during peak-hour traffic. The Engineer may allow a proportional fee assessment for closures that do not involve an entire defined time increment.
  - 6.1.1.3. **Closure or Obstruction.** When the Contractor's operations result in a reduced lane width of the travel way or shoulder less than that shown on the plans.
  - 6.1.1.4. **Peak-Hour Traffic Times.** Schedule of days and times described in the General Notes when lane closures or obstructions are not allowed.
- 6.1.2. **Fee Calculation and Collection.** The assessment fee will be deducted from the amount due to the Contractor on the monthly construction estimate, and thus retained by the Department. The Engineer will determine the time of overlap of lane closures or obstructions for calculating the assessment fee. The fee is based on road user costs and is assessed not as a penalty, but for added expense incurred by the traveling public.



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## Special Provision to Item 8

### Prosecution and Progress

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Item 8, "Prosecution and Progress," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 8.5., "Project Schedules"** is supplemented by the following

The progress schedule required for this project is the critical path method schedule (CPM schedule) as described herein. The Contractor shall prepare and submit for review and acceptance a cost loaded schedule of proposed working progress for the entire contract duration. The Engineer will provide a template with milestones from other contracts and non-construction activities for the Contractor to use in the development of their schedule. The Engineer shall also provide a Work Breakdown Structure (WBS) as well as the required report layouts for the Contractor to use to develop the progress schedule for this Contract.

Immediately after receipt of notice of award, the Division Engineer and the Contractor will establish a mutually agreeable date on which the preconstruction meeting will be held. The Contractor's project superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of the work shall attend the preconstruction conference.

After work on the project has begun, construction conferences will be held periodically. The construction conferences are to be scheduled at times that are mutually agreeable to both the project superintendent and the Resident Engineer. It shall be the superintendent's responsibility to attend the conferences.

**Section 8.5.2 "Progress Schedule"** is supplemented by the following:

The Contractor shall provide a schedule that shows the various activities of Work in sufficient detail to demonstrate a reasonable and workable plan to complete the Project by the Original Contract Completion Date and any interdependent milestones identified by the Engineer or required by Contract. Show the order and interdependence of activities and the sequence for accomplishing the Work. Describe all activities in sufficient detail so that the Engineer can readily identify the Work and measure the progress of each activity.

**Section 8.5.3 "Schedule Format"** is supplemented by the following:

The Contractor shall use a compatible version of Oracle Primavera P6 or comparable scheduling software to generate the CPM schedule. It is the Contractor's responsibility to verify with the Engineer the software and version being used for this project and shall maintain the required version for the entire contract duration. The use of Microsoft Project and Primavera Project Planner (P3) and other scheduling software is prohibited.

The progress schedule shall contain the following Administrative Identifier Information:

- (1) Project Name
- (2) Contract Number
- (3) Date of Contract
- (4) Construction Completion Date
- (5) Contractor's Name
- (6) Contractor's Contact Information

The CPM schedule must reflect the scope of work and include the following:

- (1) Clear identification of tasks to be completed based on Section or Special Provisions included in the Project Manual and as listed in Pay Items, including subcontractor work activities.
- (2) Include calculations of resources required (Cost, Labor, Equipment) for constructing all facilities within the Contract duration. Specific calculations shall be provided to show quantities, manpower / crews, and equipment to support the critical path. The Contractor shall be capable of calculating the maximum crew size anticipated if any activities become critical, so the Contractor is prepared when a critical path changes or a new path occurs.
- (3) Float for each Activity.
- (4) Activities for submittals (shop drawings).
- (5) Punchlist activities with sufficient duration for the Engineer's inspection and acceptance before the final completion date
- (6) Activities for submittal review time by the Engineer, including time range showing start and end dates.
- (7) Working and shop drawing preparation, submittal, and review for acceptance.
- (8) Material and equipment procurement, fabrication and delivery; identify any long lead items as separate activities.
- (9) Owner furnished and/or installed materials and equipment shall be identified as separate activities.
- (10) NTP / Start of construction
- (11) Required phasing
- (12) Maintenance of traffic requirements as required by the contract (if any)
- (13) Intermediate completion dates (if any)
- (14) Identified interdependent milestones (if any)
- (15) Seasonal limitation/observation periods/moratoriums
- (16) Beginning and end of each traffic control work area and road openings
- (17) Other similar activities and project milestones established in the Contract Documents.
- (18) Substantial Completion Date
- (19) Final Acceptance Date
- (20) All required Reports layouts as requested by the Engineer

**Section 8.5.4 "Activity Format"** is supplemented by the following:

Activity requirements are discussed in further detail as follows:

- (1) Activity Identification (ID) - Assign each activity a unique identification number. The format for the identification number will be provided by the Engineer. All activities must begin with the same activity ID prefix as provided by the Engineer.
- (2) Activity Description - Assign each activity an unambiguous descriptive word or phrase. For example, use "Excavate Area A," not "Start Excavation."
- (3) Activity Codes – The Engineer will provide the activity code dictionary in the template. The Contractor will assign the appropriate codes to each activity.
- (4) Activity Original Duration - Assign a planned duration in working days for each activity. Do not exceed a duration of 10 working days for any activity unless accepted by the Engineer. Each activity shall have a minimum duration of 1 working day. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities in order to meet the duration requirements of this paragraph.
- (5) Finish-to-Start Relationships - Unless allowed in writing by the Engineer, use only finish-to-start relationships with no leads or lags to link activities. All activities, except the first activity, shall have a predecessor(s). All activities, except the final activity, shall have a successor(s).
- (6) Calendars – The Engineer will provide pre-defined calendars as part of the template. The Contractor shall assign these pre-defined calendars to the appropriate activities. The Contractor may create new project specific

calendars to represent their standard work schedule using the pre-defined calendars as a basis. The Contractor may not edit pre-defined calendars.

- (7) Constraints – Unless allowed in writing by the Engineer, do not use constraints in the schedule.
- (8) Resources – Manpower and equipment shall be reflected for all activities. Incidental costs to construction shall be equally spread out across all activities. Front loaded schedules are not allowed.
- (9) The schedule shall show the total cost of performing each activity and shall include the total labor, material, equipment and general conditions.
- (10) The sum of cost for all activities shall equal the total Contract.
- (11) The summed value of that portion of the activities allocated to each Contract bid item shall equal the total value of the corresponding Contract bid item.
- (12) The Contractor shall allocate a value for unit price or lump sum contract bid items to each activity in the schedule. No Lump sum amounts should exceed \$100,000.

**Section 8.5.5.2 “Critical Path Method”** The first paragraph is voided and replaced by the following:

The Contractor shall submit to the Engineer within the timeframes specified the baseline CPM schedule in a bar chart format showing the critical path in red, using both hard copy and in electronic formats. Electronic formats shall be compatible with the Engineer’s computer systems. Also, submit the following information:

- (1) Written narrative – Explains the sequence of work, the controlling operations, intermediate completion dates, milestones, project phasing, anticipated work schedule and estimated resources. In addition, explain how permit requirements, submittal tracking and coordination with subcontractors, utility companies, railroads and other third party entities will be performed. The narrative shall itemize and describe the critical path (i.e. access limitations, constraints, shift work), and compare early and late date or Contract Milestone activities, and describe any critical resources.
- (2) CPM Schedule in a Bar Chart Format – Include the Administrative Identifier Information discussed above on the first page of the schedule. For each activity on the chart, indicate the Activity ID, Activity Description, Original Duration, Remaining Duration, Changes to Duration, Total Float, Early Start Date, Early Finish Date, and Calendar Name. Use arrows to show the relationships among activities.
- (3) Identify the critical path of the project on the bar chart. The critical path is defined as; 1) the sequence of activities that must be completed “on time” to ensure that the project finished on time. 2) the longest path of activities in the project that determines the project finish date.
- (4) No more than 10% of activities may be critical or near critical. Critical Activities will have a total float equal to zero. “Near critical” is defined as float in the range of 1 to 10 working days.
- (5) Six Week Look Ahead CPM Schedule in a Bar Chart Format – This schedule will have all the same requirements of the CPM schedule in bar chart format except that it shall be limited to those activities that have an early start or early finish within a six-week period of the data date.
- (6) Logic Diagram – Submit a diagram in PERT chart format showing the logic of the CPM schedule.
- (7) Activity ID Sort – Submit a listing of all activities included in the CPM schedule sorted by ascending Activity Identification Number.
- (8) Total Float Sort – Submit a listing of all activities included in the CPM schedule sorted by increasing total float and by early start date.
- (9) All float belongs to the Project and is a shared commodity between the Contractor and the Mobility Authority and is not for the exclusive use or benefit of either party. The Contractor shall notify the Engineer in writing for acceptance before using any float.
- (10) Detailed Predecessor/Successor Sort – Submit a listing of all activities included in the CPM schedule indicating the activities that immediately precede and immediately succeed that activity in the schedule logic.
- (11) Scheduling Statistics Report – Submit a report of CPM schedule statistics, including number of activities, number of activities on the longest path, number of started activities, number of completed activities, number of relationships, percent complete, and number and type of constraints.

- (12) A resource curves / Metric tracking reports (EVM) corresponding to the milestones and work activities established above.

**Section 8.5.5.2.2 “Baseline Schedule”** The second paragraph is voided and replaced by the following:

The Contractor shall submit a progress schedule for the entire duration of the Contract to the Engineer 30 calendar days following the contract award date. After review of the schedule the Engineer shall schedule a Baseline CPM Schedule meeting with the Contractor to review the schedule and identify any changes or corrections. Within 7 calendar days of the CPM Schedule meeting, the Contractor shall make any necessary adjustments to address all review comments and resubmit network diagrams and reports for the Engineer’s review. The complete baseline schedule shall be submitted and accepted no later than (45) forty-five days after contract award date. The complete progress schedule shall be accepted by the Engineer before any payments will be processed for the project.

**Section 8.5.5.2.3 “Progress Schedule”** is supplemented by the following

The Engineer may withhold pay estimates if the updated CPM schedule is not submitted as required by this section. For each updated CPM schedule, identify the actual start and finish dates for all completed activities, the actual start date and remaining duration for all activities in progress, the difference in duration of all activities since the last update and any exceptional reports associated with the update. Only accepted changes will be incorporated into the monthly progress schedule update. The schedule should represent the actual work performed and should be progressed with actuals for all the schedule activities. The final schedule will be utilized as the project actual “As Built” schedule.

Provide a written narrative that identifies any changes or shifts in the critical path and submit reasons for the changes or shifts in the critical path. Identify any changes in logic for the updated CPM schedule and submit reasons for changes to the schedule logic. In addition to the written narrative, submit the following with each updated CPM schedule:

- (1) CPM Schedule in Bar Chart Format
- (2) Four Week Look Ahead CPM Schedule in Bar Chart Format
- (3) Logic Diagram
- (4) Activity ID Sort
- (5) Total Float Sort
- (6) Detailed Predecessor/Successor Sort
- (7) Schedule Metrics and Earned Value (Schedule, Cost, Labor) Reports

The Contractor must submit a statement that there were no changes in the schedule logic, activity durations, or calendars since the previous update in lieu of submission of items (3), (5), and (6). Acceptance of schedule updates by the Engineer does not revise the Contract Documents.

A monthly schedule update meeting shall be held each month following Notice to Proceed to review monthly schedule update submittals, critical path items and recovery schedules. The Contractor shall be represented in the meeting by the Contractor’s scheduler, project manager and general superintendent. As necessary the Contractor may be also asked to attend a coordination meeting to discuss the schedule impacts to other contractors.

If the Project completion date changes or if the project schedule overrun is anticipated to exceed 5%, the Contractor shall submit a revised progress schedule to the Engineer for review and acceptance. If plan revisions are anticipated to change the sequence of construction in such a manner as will affect the progress, but not the completion date, then the Contractor may submit a revised progress schedule for review and acceptance. The Project completion date shall remain unchanged.

**Section 8.5.5.3 “Notice of Potential Time Impact”** is supplemented by the following

“Contractor shall not be eligible for Change Order(s) for additional compensation for additional costs, including costs for developing and executing a Recovery Schedule(s), and delay and disruption damages, or additional Days incurred directly or indirectly from the virus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease known as COVID-19, including any disruptions to, and delays or interruptions in, construction of the Project in accordance with the Contract and any approved Baseline Schedule.”

**Section 8.5.5 “Schedule Types”** is supplemented by the following:

**Section 8.5.5.5 Recovery Schedule**

If the progress schedule projects a finish date for the Project beyond the original Completion Date, the Contractor shall submit a revised schedule showing a plan to finish by the original Completion Date. The Mobility Authority will withhold Pay Estimates until the Engineer accepts the revised schedule. No additional compensation for developing and executing a recovery schedule(s) shall be reimbursed to the Contractor. The Engineer will use the schedule to evaluate time extensions and associated costs requested by the Contractor.

- (1) In the event Work or related construction activities shown on the Contractor's Progress Schedule fall behind schedule to the extent that dates established as contractual Completion Dates are in jeopardy, the Contractor shall prepare and submit to the Engineer, at no additional cost or time to the Mobility Authority, a Recovery Schedule showing intent to remedy delays and to regain originally scheduled time of completion of Work within a timely manner. This includes delays due to unforeseen conditions.
- (2) Recovery Schedule shall be submitted in such form and detail appropriate to the delay or delays, explaining and displaying how the Contractor intends to reschedule those activities and reestablish compliance with the accepted baseline Construction Progress Schedule during the immediate subsequent pay period or as permitted by Engineer. This shall include a schedule diagram comparing the original and the revised sequence of activities, identifying all affected activities.
- (3) Upon determining the requirement for a Recovery Schedule:
  - a. Within five (5) calendar days, the Contractor shall present to Engineer a proposed Recovery Schedule. The Recovery Schedule shall represent the Contractor's best judgment as to how to best reorganize the Work and achieve progress to comply with the accepted Construction Progress Schedule.
  - b. Changes to Contractor's means and methods, such as increased labor force, working hours, overtime, additional equipment and other means shall not constitute the basis for changes to the Contract Sum or Contract Time.
  - c. Recovery Schedule shall show remedies to bring Work back on schedule up-to-date within the immediate subsequent pay period.
  - d. The Recovery Schedule shall be prepared to a similar level of detail as the Construction Progress Schedule.
  - e. Five (5) calendar days prior to the expiration of the Recovery Schedule, Contractor shall document to the Engineer that the Work schedule has regained, or is on-track to regain, compliance with the Construction Progress Schedule.
- (4) Failure to submit Recovery Schedule in a timely manner may result in Termination of the Contract for Cause as determined by the Engineer.
- (5) Failure to achieve compliance with the accepted Construction Progress Schedule despite implementing Recovery Schedule may result in Termination of the Contract for Cause as determined by the Engineer.
- (6) Termination of Contract For Cause: In the event Contractor defaults on the terms of the Contract, including failure to maintain the Construction Progress Schedule, Engineer will assess the level of completion of the Work achieved by the Contractor and compare amount of available funds against anticipated costs required for the Mobility Authority to complete the Work, including anticipated Liquidated Damages resulting from delay, if any. Engineer will determine amount of payment due to Contractor for Work completed prior to date of Termination of Contract for Cause, if any. In the event available funds are not sufficient for the Mobility Authority to complete the Work, the Mobility Authority will withhold such funds from the amount due the Contractor.
- (7) If, in the opinion of the Engineer, the Contractor has sufficiently regained compliance with the Construction Progress Schedule, the use of the Construction Progress Schedule will be resumed. Contractor shall update and submit the Construction Progress Schedule clearly identifying Work to date and how the Contractor intends to achieve timely completion for the remainder of the Work in accordance with the Construction Documents.

## Special Provision to Item 8

### Prosecution and Progress

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Item 8, "Prosecution and Progress," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 8.1, "Prosecution of Work."** The first sentence of the first paragraph is voided and replaced by the following:

Begin work within 30 calendar days of Notice to Proceed. Notice to Proceed may be deferred up to 180 days from CTRMA Board award of the contract. Do not begin work before this period unless authorized in writing by the Engineer.

## Special Provision to Item 9

### Measurement and Payment

Item 9, "Measurement and Payment," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

**Article 9.5., "Progress Payments,"** Delete this section of the Specifications in its entirety and substitute with the following:

Partial payments will be made once each month covering work performed and materials complete-in-place in accordance with the Contract. The invoice form to be submitted each month will be provided to the Contractor in Microsoft Excel format. The Contractor must be able to use Microsoft Excel to complete the invoice form. Partial payments will be made on the value of work performed based on approximate estimates prepared by the Engineer, provided, however, that no estimate shall be certified or payment made where the net amount receivable by the Contractor is less than Five-hundred Dollars (\$500.00).

The Engineer will review the partial payment estimate with the Contractor's representative prior to each partial payment.

Total Contract value shall be considered to mean the original amount of the Contract, except when the Contract is increased or decreased by a supplemental agreement in which case the adjusted total shall be used.

The Mobility Authority reserves the right to withhold the payment of any partial or final estimate voucher or any sum or sums thereof from such vouchers in the event of the failure of the Contractor to promptly make payment to all persons supplying equipment, tools or materials, or for any labor used by the Contractor in the prosecution of the work provided for in the Contract, and for any other cause as determined by the Mobility Authority in its sole discretion, including overpayment on previous partial payments.

**Article 9.8., "Retainage,"** is supplemented with the following:

The Mobility Authority shall not withhold funds from payments to be made to Contractor for the Work until such time as 95% of the Adjusted Contract Price has been paid to the Contractor. Following completion of and payment for 95% of the Adjusted Contract Price, the Mobility Authority shall withhold, the remaining 5% of the Adjusted Contract Price pursuant to the terms described below.

The remaining 5% for the Work, subject to reduction as specified below, shall be held by the Mobility Authority until Final Acceptance. At such time, and provided the Contractor is not in breach or default hereunder, the Mobility Authority shall release to Contractor all withheld in connection with the Work other than amounts applied to the payment of Losses or which the Mobility Authority deems advisable, in its sole discretion, to retain to cover any existing or threatened claims. The Contractor must further warrant, to the satisfaction of the Mobility Authority, that there are no outstanding claims or liens by any subcontractors or other parties with respect to the Work.

The prime contractor shall make full payment of amounts due to subcontractors within 10 calendar days following the satisfactory completion of the subcontractor's work. Satisfactory completion of the subcontractor's work shall be defined as approval, acceptance, and payment for the subcontractor's work by the Mobility Authority including the submittal and acceptance of all information, deliverables or other documents required by the contract.

Prior to the release of the remaining 5% by the Mobility Authority pursuant to the terms hereof, such amounts shall be held by the Mobility Authority. Upon the release of the remaining 5%, the Contractor shall not be entitled to any interest income that has accrued upon the amounts of the remaining 5% released to Contractor.

**Article 9.9., “Payment Provisions for Subcontractors,”** is supplemented with the following:

The Mobility Authority may pursue actions against the Contractor, including withholding of estimates and suspending the work, for noncompliance with the subcontract requirements of this Section upon receipt of written notice with sufficient details showing the subcontractor has complied with contractual obligations as described in this Article.

These requirements apply to all tiers of subcontractors. Incorporate the provisions of this Article into all subcontract or material purchase agreements.



# Special Specification 7002-RMA

## Prestressed Ground Anchors

### 1. DESCRIPTION

Install post-tensioned permanent ground anchors in place, with grouting as required in accordance with the plans and these specifications. Ensure the ground anchors provide the load carrying capacities that will develop the load as required in the plans and the approved working drawings and in accordance with the testing requirements of this specification.

The Contractor has the option of furnishing any type of post-tensioning system and choose anchor diameter to develop the required load and meeting the requirements of these specifications. The Contractor may also propose to use proprietary systems, which do not conform to all provisions of this specification, if the concept is approved by the Engineer. The system selected must provide the magnitude and distribution of design prestressing force and minimum ultimate strength required by the plans without exceeding allowable temporary stresses. If Contractor cannot provide the load carrying capacities in accordance with the plans, additional anchors shall be installed. The Contractor has the option to change the anchoring procedure with the approval of the Engineer as long as the required load carrying capacity is achieved. Ensure design procedures, coefficients, and allowable stresses are in accordance with the latest Standard AASHTO Specifications for Highway Bridges.

### 2. MATERIALS

Provide materials required for use under this Item conforming to Table 1:

**Table 1**

**Materials**

<b>Material</b>	<b>Conform to Item</b>
Structural Steel	Item 441 and 442
Prestressing Steel	Item 426
Hydraulic Cement Concrete	Item 421

Provide prestressing steel conforming to one of the following types:

- Seven wire strand conforming to ASTM Designation A416: or.
- High-tensile strength alloy bars conforming to the requirements of ASTM designation A722.

Bars with greater minimum ultimate strength, but otherwise produced and tested in accordance with ASTM Designation A722, may be used provided they have no properties which make them less satisfactory than the specified material.

Wire or strand with greater ultimate strength but otherwise produced and tested in accordance with ASTM designation A416 and A421, and the requirements of this specification, are permitted provided the physical properties as outlined in the applicable specification are shown on the shop drawings and provided they have no properties which make them less satisfactory than the specified material.

Each ground anchor tendon is either a single bar or group of strands having a common end anchorage used to apply a stressing force to the structural member. Provide coated (unbonded) tendons except the portion which is established as the anchorage length. Coat the tendons a minimum of the unbonded length shown in

the plans. Ensure the anchorage length is bare and completely free of grease or other contaminants. Provide the minimum acceptable anchorage lengths shown in the plans.

Provide end anchorages and tendon couplers that develop at least 100% of the required ultimate strength of the tendon with a minimum elongation of 2%.

Use material for coating unbonded tendons that is non-volatile, low friction mineral oil base grease, with a rust preventing additive having a relatively uniform viscosity in a temperature range of 20 F to 120 F. Provide a protective sheathing around the tendon throughout the coated length consisting of 0.04 in. minimum thickness polyethylene or polyvinyl chloride tubing capable of maintaining the tendon tightly bundled and containing the lubricant.

Provide grout for ground anchors that is a neat cement or sand cement mixture, with a 7-day compressive strength of 3500 psi. Determine grout strengths by testing 2-in. cubes in accordance with Test Method TEX-307-D or 3 in. diameter by 6 in. high cylinders in accordance with Test Method TEX-418-A. Determine the grout strength by testing the initial grout batch. Additional testing is necessary if the grout mixture is modified or if required by the Engineer. If allowed by the Engineer, test results from previous projects using an identical grout mix may be accepted.

Identify the tendons by heat number, or reel number in the case of seven-wire strand, and tag them for identification. Identify anchorage assemblies in a like manner. At the request of the Engineer, furnish specimens for test purposes in accordance with Test Method TEX-710-I. Provide mill test reports for tendons used in permanent anchors.

Test complete tendons for compliance with the requirements of this specification at no expense to the Department and certify the results in writing. In addition, furnish for testing, one specimen of each size of prestressing tendon with end fittings attached at each end for ultimate strength tests only.

Provide a specimen 5 ft. in clear length measured between the ends of the fittings. If the results of the test indicate the necessity of check tests, furnish additional specimens at no cost to the Department. For prestressing systems previously tested and approved on Department projects, complete tendon samples need not be furnished provided there is no change in the material, design, or details previously approved. For the shop drawings or prestressing details, identify the project on which approval was obtained, otherwise sampling will be necessary. For prefabricated ground anchor assemblies, notify the Engineer at least 10 days before installing the end fittings or heading the wires so that sampling and testing may be arranged.

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### **3. PACKAGING, STORING, AND HANDLING**

Protect the prestressing steel against physical damage and corrosion from the time of manufacture to grouting or encasing in concrete.

Rust on prestressing steel, which can be removed by light rubbing, is acceptable. Streaks or spots, which may remain after rust removal, are acceptable if no pitting is present. Tight mill scale is acceptable but remove loose mill scale.

Protect prefabricated ground anchor assemblies from moisture by taping, wrapping, or by other acceptable means.

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### **4. EQUIPMENT**

Furnish suitable equipment to drill the holes to the diameter, depth, and line as specified in this specification or on the approved working drawings.

Furnish suitable hydraulic jacks for stressing the tendons. Equip jacks with gauges graduated to read directly to one percent of the total load applied, and calibrated to measure accurately the stress induced in the steel.

Provide jacks with a stroke of adequate length so that the stressing, including temporary overstress, can be done in one movement. Equip them with proper ports or windows for adequate visual examination and measurement of tendon movement. Ensure they are also capable of slow release of stress to allow relaxation from overstress to the proper seating force.

Furnish a grout mixer and pump of sufficient capacity to properly place grout in the quantities required.

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## 5. WORKING DRAWINGS

Submit working drawings (i.e. shop drawings) for the ground anchors a minimum of one month prior to the installation of the ground anchors. Provide the details containing the necessary information for construction including:

- 5.1. **Prestressing Details.** On the drawings show details of type, size, number of units per ground anchor, ground anchor diameter, inclination, forces applied per anchor, end anchorage systems, grouting and venting ports, grouting procedure, acceptable elongation, temporary overstress, and other information necessary to properly complete the work.

On these details show the method of support for the ground anchors to insure that the proper location in the center of the hole can be maintained.

- 5.2. **Anchor Layout.** Provide drawings showing the layout of the anchors and required load.

Electronically submit working drawings formatted to fit standard 11x17 sheets in accordance with TxDOT's "Guide to Electronic Shop Drawing Submittals".

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## 6. CONSTRUCTION

- 6.1. **General.** Before stressing the anchors, furnish certified copies of load calibration curves on the jacks and gauge systems to be used in the work. Recalibrate the stressing systems when required by the Engineer.

- 6.2. **Drilling.** Drill the hole within +/- 3 degrees from the line specified on the approved working drawings.

- 6.3. **Grouting.** Clear the hole of debris before placing the tendon. Insert the tendon in the hole and use supports to ensure that the tendon is centered in the hole with a maximum 1 in. of sag between the supports. Provide a grouting pipe that allows placing the grout from the bottom of the hole. Before beginning to pump the grout, check the grout tubes to ensure they are clear. When the tendon is grouted through the center of a hollow auger, no grout tube or centralizers are required as long as grout pressure is maintained while withdrawing the auger.

Grout the anchors immediately after placing them in the hole. Pump the grout from the bottom of the hole toward the top, continuously under pressure, until the grout is within approximately one foot of the top of the hole. Grout the hole full length in one stage with clearance provided between the grout and the tendon anchorage.

If the grout level in the hole cannot be maintained, withdraw the tendon and redrill the hole after at least 24 hours have passed.

Record the data shown in Table 2 concerning the grouting:

**Table 2**  
**Grouting Data to Record**

Water-cement ratio  
Types of additives  
Types of cement  
Volume of grout  
Type of Mixer

- 6.4. **Corrosion Protection.** The Contractor shall provide "Double Corrosion Protection", in which the post-tensioned strand or bar is encapsulated in a corrugated plastic sheath (>40 mil) and cement grout annulus. This detail will be submitted to the Engineer for review and approval.
- 6.5. **Post-Tensioning.** Do not begin post-tensioning until the concrete in the associated structural members has reached the design strength specified.

Provide suitable means for measuring the movement of the anchor head to the nearest 0.001 in.

Indicate on the prestressing details, a sequence of post-tensioning that prevents overstressing the structural member.

Ensure the prestressing details submitted reflect the following general tensioning procedure modified as required for each particular installation, unless otherwise required by the plans.

- Tendons in the sequence designated in the Prestressing Details.
- Perform initial tensioning to take the slack out of the tendons at 10% of the maximum tensioning load unless otherwise shown on the approved Prestressing Details.
- After the initial tensioning, set up an independent reference to measure the anchor movement.

Ensure the movement measured between the maximum proof load and the lock-off load is within the following limits:

- Determine the minimum movement limit based on the elastic elongation calculated using 80% of the unbonded length.
- Determine the maximum movement limit based on the elastic elongation calculated using the entire unbonded length plus 50% of the bonded length.

If the movement measured is not within the above specified limits, the anchor will be rejected. In that case, install a replacement anchor at no cost to the Department.

- Proof load every anchor to not less than 133 percent of its design loading. During the proof loading operation, the prestressing force shall not be more than 80 percent of the guaranteed ultimate strength of the prestressing steel. The duration of the proof loading shall be 2 minutes. Successively apply and record total movements for the following load increments to the test load: 0.25DL, 0.50DL, 0.75DL, 1.00DL, 1.20DL, 1.33DL (i.e., the test load). Hold the test load for 2 min. and record the movement. If the anchor movement exceeds 0.02 in. during the 2 min. hold, proceed as described in the performance test section with the test load held for a total of 60 min. The prestressing force must be transferred (locked-off) at a level of between 10 and 70 percent of its guaranteed ultimate tensile strength as required to provide the design loads shown on the plans.
- Performance testing of 5 percent or a minimum of 3 anchors, whichever is greater, shall be performed in accordance with the following procedures

The performance test shall be made by incrementally loading and unloading the anchor in accordance with the following schedule. All loads except the maximum test load need only be held long enough to obtain the movement reading.

**Performance Test Schedule**

AL	AL
0.25 DL	0.25 DL
AL	0.50 DL
0.25 DL	0.75 DL
0.50 DL	1.00 DL
AL	1.20 DL
0.25 DL	AL
0.50 DL	0.25 DL
0.75 DL	0.50 DL
AL	0.75 DL
0.25DL	1.00 DL
0.50 DL	1.20 DL
0.75 DL	1.33 DL Maximum Test Load
1.00 DL	AL

AL - Alignment Load; DL - Design Load

The maximum test load will be held for 10 min. Record the anchor movement with respect to a fixed reference at 1, 2, 3, 4, 5, and 10 min. If the movement between 1 min. and 10 min. exceeds 0.04 in., the test will be continued for an additional 50 min. If the test is extended, record the movement at 15, 20, 30, and 60 min. Measure time after reaching the 1.33 DL increment. If the movement exceeds 0.08 in. during the 50 min. hold (i.e. from 10 min. to 60 min.) the anchor will be rejected and considered a failure.

- If anchor fails at a certain pre-assigned location, the Contractor has the option to offset the anchor location at a distance of 3 times the sleeve diameter. The Contractor will submit shop drawings for additional locations for the approval by the Engineer.
- Prior to final grouting, perform lift off tests 48 hr. after the initial tensioning on the first permanent ground anchor and on the same anchors for which performance testing was carried out on. Ensure the lift off load within 10% of the lock off load.
- Perform final grouting of the anchor plate area as indicated on the plans within 3 days after tensioning and lift off tests for an anchor have been completed.

Ground anchors will be considered acceptable if the anchor movement in any testing does not exceed the 0.08 in per log cycle of time. The anchor movements must also fall within the limits stated in Article 6.E.3 above.

Anchors which fail to attain the maximum test load required as stated above may be incorporated into the anchorage system at a load capacity equal to one half their failure loads. The failure load is the load indicated by the pressure gauge 10 min. after failure occurs. Install additional anchors to replace or supplement the failed anchor. The Contractor is responsible for the entire cost of installing any required additional anchors, or changes in the original anchor design.

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**7. MEASUREMENT**

This Item will be measured by linear foot of fully acceptable anchors complete in place.

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**8. PAYMENT**

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Prestressed Ground Anchors." This price is full compensation for work performed, materials furnished, labor, tools, equipment, and incidentals. Prestressed ground anchor tests are subsidiary to this item.

**MEETING OF THE BOARD OF DIRECTORS  
OF THE  
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

**RESOLUTION NO. 25-004**

**ACCEPT THE UNAUDITED FINANCIAL STATEMENTS FOR NOVEMBER 2024  
AND DECEMBER 2024**

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) is empowered to procure such goods and services as it deems necessary to assist with its operations and to study and develop potential transportation projects, and is responsible to insure accurate financial records are maintained using sound and acceptable financial practices; and

WHEREAS, close scrutiny of the Mobility Authority's expenditures for goods and services, including those related to project development, as well as close scrutiny of the Mobility Authority's financial condition and records is the responsibility of the Board and its designees through procedures the Board may implement from time to time; and

WHEREAS, the Board has adopted policies and procedures intended to provide strong fiscal oversight and which authorize the Executive Director, working with the Mobility Authority's Chief Financial Officer, to review invoices, approve disbursements, and prepare and maintain accurate financial records and reports; and


WHEREAS, the Executive Director, working with the Chief Financial Officer, has reviewed and authorized the disbursements necessary for the month of November 2024 and has caused financial statements to be prepared and attached to this resolution as Exhibit A; and

WHEREAS, the Executive Director, working with the Chief Financial Officer, has reviewed and authorized the disbursements necessary for the month of December 2024 and has caused financial statements to be prepared and attached to this resolution as Exhibit B.

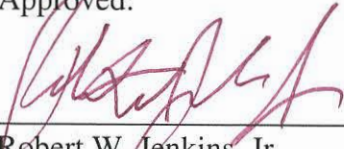
NOW THEREFORE, BE IT RESOLVED, that the Board of Directors accepts the unaudited financial statements for November 2024 and December 2024, attached hereto as Exhibit A and Exhibit B, respectively.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January 2025.

Submitted and reviewed by:

  
\_\_\_\_\_  
James M. Bass  
Executive Director

Approved:

  
\_\_\_\_\_  
Robert W. Jenkins, Jr.  
Chairman, Board of Directors

**Exhibit A**

Financial Statements for November 2024



**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending November 30, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
<b>REVENUE</b>				
<b>Operating Revenue</b>				
Toll Revenue	178,100,000	73,892,217	41.49%	65,844,503
Video Tolls	67,500,000	23,951,648	35.48%	23,506,818
Fee Revenue	13,200,000	6,095,697	46.18%	5,187,986
<b>Total Operating Revenue</b>	<b>258,800,000</b>	<b>103,939,562</b>	<b>40.16%</b>	<b>94,539,308</b>
<b>Other Revenue</b>				
Interest Income	43,025,800	12,982,767	30.17%	16,146,736
Grant Revenue	595,467	595,467	100.00%	82,466
Misc Revenue	100,000	7,812	7.81%	6,517
Unrealized Gain/Loss	-	123,484	-	-
<b>Total Other Revenue</b>	<b>43,721,267</b>	<b>13,709,529</b>	<b>31.36%</b>	<b>16,235,719</b>
<b>TOTAL REVENUE</b>	<b>302,521,267</b>	<b>117,649,092</b>	<b>38.89%</b>	<b>110,775,027</b>
<b>EXPENSES</b>				
<b>Salaries and Benefits</b>				
Salary Expense - Regular	4,994,532	1,752,442	35.09%	1,706,611
Salary Reserve	80,000	-	-	-
TCDRS	1,142,301	316,155	27.68%	304,884
FICA	257,234	76,228	29.63%	72,177
FICA MED	72,421	25,098	34.66%	24,526
Health Insurance Expense	586,073	205,755	35.11%	192,846
Life Insurance Expense	3,249	1,158	35.66%	1,407
Auto Allowance Expense	10,200	3,995	39.17%	4,420
Other Benefits	204,671	53,687	26.23%	40,487
Unemployment Taxes	5,760	-	-	-
<b>Total Salaries and Benefits</b>	<b>7,356,441</b>	<b>2,434,520</b>	<b>33.09%</b>	<b>2,347,357</b>
<b>Administrative</b>				
<b>Administrative and Office Expenses</b>				
Accounting	9,500	3,675	38.69%	3,449
Auditing	270,000	195,315	72.34%	96,617
Financial Advisors	200,000	62,100	31.05%	72,000
Human Resources	100,000	8,924	8.92%	991
Legal	60,000	13,092	21.82%	4,750
IT Services	365,000	132,596	36.33%	74,878
Software Licenses	1,573,150	1,378,581	87.63%	800,156
Cell Phones	34,900	7,050	20.20%	12,431
Local Telephone Service	2,200	1,043	47.39%	851
Overnight Delivery Services	200	17	8.65%	-
Copy Machine	15,300	6,360	41.57%	6,360
Repair & Maintenance-General	10,000	-	-	9,010
Meeting Facilities	2,500	-	-	-
Community Meeting / Events	-	-	-	5,050
Meeting Expense	13,750	5,074	36.90%	2,188
Toll Tag Expense	3,000	400	13.33%	200
Parking / Local Ride Share	2,500	194	7.76%	47
Mileage Reimbursement	4,600	398	8.65%	337
Insurance Expense	1,301,000	403,950	31.05%	245,617
Rent Expense	992,200	231,063	23.29%	156,865
Building Parking	3,500	1,057	30.19%	336
Total Legal Services	458,000	49,056	10.71%	91,848
<b>Total Administrative and Office Expenses</b>	<b>5,421,300</b>	<b>2,499,945</b>	<b>46.11%</b>	<b>1,583,981</b>

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending November 30, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
<b>Office Supplies</b>				
Books & Publications	5,250	1,490	28.38%	1,598
Office Supplies	5,250	505	9.62%	202
Misc Office Equipment	4,500	-	-	989
Computer Supplies	201,850	13,076	6.48%	35,912
Copy Supplies	750	-	-	-
Other Reports - Printing	500	-	-	43
Office Supplies - Printed	3,500	2,177	62.19%	832
Postage Expense	900	149	16.51%	463
<b>Total Office Supplies</b>	<b>222,500</b>	<b>17,397</b>	<b>7.82%</b>	<b>40,039</b>
<b>Communications and Public Relations</b>				
Print Production	75,000	-	-	-
Website Maintenance	240,000	28,472	11.86%	189,001
Research Services	210,000	11,900	5.67%	-
Communications and Marketing	500,000	137,568	27.51%	27,450
Media Planning and Placement	1,225,000	519,834	42.44%	166,260
Direct Mail Production	60,000	-	-	-
TV and Video Production	250,000	34,771	13.91%	-
Photography	25,000	850	3.40%	885
Radio Production	50,000	-	-	-
Other Public Relations	20,000	13,000	65.00%	-
Promotional Items	20,000	-	-	1,166
Printing	80,000	-	-	-
Other Communication Expenses	15,000	29,813	198.75%	-
<b>Total Communications and Public Relations</b>	<b>2,770,000</b>	<b>776,208</b>	<b>28.02%</b>	<b>384,762</b>
<b>Employee Development</b>				
Subscriptions	1,250	139	11.12%	139
Agency Memberships	88,300	1,064	1.20%	41,091
Continuing Education	14,800	775	5.24%	500
Professional Development	21,400	3,285	15.35%	2,289
Other Licenses	2,000	375	18.75%	-
Seminars and Conferences	70,300	6,575	9.35%	4,215
Travel	107,000	25,455	23.79%	24,727
<b>Total Employee Development</b>	<b>305,050</b>	<b>37,668</b>	<b>12.35%</b>	<b>72,961</b>
<b>Financing and Banking Fees</b>				
Trustee Fees	75,000	29,000	38.67%	36,000
Bank Fee Expense	6,500	2,678	41.20%	2,671
Continuing Disclosure	10,000	2,700	27.00%	-
Arbitrage Rebate Calculation	16,500	15,400	93.33%	16,105
Rating Agency Expense	50,000	33,500	67.00%	45,000
<b>Total Financing and Banking Fees</b>	<b>158,000</b>	<b>83,278</b>	<b>52.71%</b>	<b>99,776</b>
<b>Total Administrative</b>	<b>8,876,850</b>	<b>3,414,497</b>	<b>38.47%</b>	<b>2,181,519</b>
<b>Operations and Maintenance</b>				
<b>Operations and Maintenance Consulting</b>				
GEC-Trust Indenture Support	1,568,659	488,163	31.12%	384,738
GEC-Financial Planning Support	300,000	120,625	40.21%	108,083
GEC-Toll Ops Support	1,142,136	878,904	76.95%	327,287
GEC-Roadway Ops Support	1,515,000	345,179	22.78%	302,509

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending November 30, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
GEC-Technology Support	804,962	261,962	32.54%	413,800
GEC-Public Information Support	200,000	88,396	44.20%	75,211
GEC-General Support	2,226,000	572,210	25.71%	409,964
General System Consultant	2,307,274	799,920	34.67%	436,956
Traffic Modeling	125,000	-	-	-
Traffic and Revenue Consultant	1,200,000	373,857	31.15%	150,107
<b>Total Operations and Maintenance Consulting</b>	<b>11,389,031</b>	<b>3,929,215</b>	<b>34.50%</b>	<b>2,608,654</b>
<b>Roadway Operations and Maintenance</b>				
Roadway Maintenance	4,169,031	906,317	21.74%	1,274,556
Landscape Maintenance	3,249,260	887,463	27.31%	1,154,350
Signal & Illumination Maint	25,000	-	-	-
Maintenance Supplies-Roadway	400,000	17,423	4.36%	-
Tools & Equipment Expense	-	1,197	-	20
Gasoline	30,000	6,147	20.49%	8,328
Repair & Maintenance - Vehicles	10,000	6,292	62.92%	1,579
Natural Gas	7,500	4,158	55.44%	8,777
Electricity - Roadways	300,000	105,086	35.03%	109,099
<b>Total Roadway Operations and Maintenance</b>	<b>8,190,791</b>	<b>1,934,083</b>	<b>23.61%</b>	<b>2,556,709</b>
<b>Toll Processing and Collection Expense</b>				
Image Processing	3,300,000	842,123	25.52%	1,039,041
Tag Collection Fees	12,675,000	4,997,591	39.43%	4,569,970
Court Enforcement Costs	160,000	-	-	-
PBM Incentive	500,000	-	-	-
<b>Total Processing and Collection Expense</b>	<b>16,635,000</b>	<b>5,839,714</b>	<b>35.10%</b>	<b>5,609,011</b>
<b>Toll Operations Expense</b>				
Generator Fuel	3,000	523	17.44%	-
Fire & Burglar Alarm	500	206	41.12%	206
Refuse	2,360	863	36.57%	823
Telecommunications	100,000	71,770	71.77%	62,034
Water - Irrigation	7,500	4,152	55.37%	4,492
Electricity	750	379	50.51%	357
ETC Spare Parts Expense	150,000	57,255	38.17%	118,576
Repair & Maintenance Toll Equip	100,000	-	-	-
Law Enforcement	725,000	200,680	27.68%	197,254
ETC Maintenance Contract	6,450,000	951,869	14.76%	1,549,489
Transaction Processing Maintenance Contract	2,000,000	705,000	35.25%	672,480
ETC Toll Management Center System Operation	1,338,822	203,196	15.18%	280,302
ETC Development	456,000	-	-	65,823
ETC Testing	50,000	-	-	-
<b>Total Toll Operations Expense</b>	<b>11,383,932</b>	<b>2,195,893</b>	<b>19.29%</b>	<b>2,951,836</b>
<b>Total Operations and Maintenance</b>	<b>47,598,754</b>	<b>13,898,904</b>	<b>29.20%</b>	<b>13,726,210</b>
<b>Other Expenses</b>				
<b>Special Projects and Contingencies</b>				
HERO	711,621	51,601	7.25%	41,838
Special Projects	50,000	-	-	-
Disbursement Other Government - Travis County Road	-	131,692	-	-
71 Express Interest Expense	6,750,000	721,716	10.69%	787,820

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending November 30, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Customer Relations	10,000	-	-	-
Technology Initiatives	100,000	-	-	-
Other Contractual Svcs	390,000	64,000	16.41%	72,500
Contingency	200,000	-	-	-
<b>Total Special Projects and Contingencies</b>	<b>8,211,621</b>	<b>969,009</b>	<b>11.80%</b>	<b>902,158</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>72,043,666</b>	<b>20,716,929</b>	<b>28.76%</b>	<b>19,157,244</b>
<b>Non Cash Expenses</b>				
<b>Amortization Expense</b>				
Amortization Expense - Intangible Software	13,000,000	613,940	4.72%	-
Amortization Expense - Software	-	-	-	8,466
Amortization Expense - Right to Use Asset - Leases	515,000	214,480	41.65%	42,896
Amortization Expense - Refundings	6,600,000	2,751,316	41.69%	2,560,591
<b>Subtotal Amortization Expense</b>	<b>20,115,000</b>	<b>3,579,737</b>	<b>17.80%</b>	<b>2,611,953</b>
<b>Depreciation Expense</b>				
Dep Expense - Equipment	-	-	-	259,461
Dep Expense - Autos & Trucks	31,000	12,671	40.87%	12,671
Dep Expense - Buidng & Toll Fac	180,000	73,645	40.91%	73,645
Dep Expense - Highways & Bridges	53,500,000	21,884,615	40.91%	21,427,398
Dep Expense - Toll Equipment	13,640,000	1,413,413	10.36%	1,265,692
Dep Expense - Signs	1,830,000	451,597	24.68%	503,731
Dep Expense - Land Improvements	545,000	225,968	41.46%	253,550
Undevelopable Projects	-	-	-	(1,570)
<b>Subtotal Depreciation Expense</b>	<b>69,726,000</b>	<b>24,061,908</b>	<b>34.51%</b>	<b>23,794,577</b>
<b>Total Non Cash Expenses</b>	<b>89,841,000</b>	<b>27,641,645</b>	<b>30.77%</b>	<b>26,406,529</b>
<b>Non Operating Expenses</b>				
Interest Expense - Debt Obligations	109,112,756	41,347,718	37.89%	32,436,443
CAMPO RIF Payment	10,000,000	10,000,000	100.00%	6,000,000
Community Initiatives	600,000	139,027	23.17%	-
<b>Total Non Operating Expenses</b>	<b>119,712,756</b>	<b>51,486,745</b>	<b>43.01%</b>	<b>38,436,443</b>
<b>TOTAL EXPENSES</b>	<b>281,597,422</b>	<b>99,845,319</b>	<b>35.46%</b>	<b>84,000,216</b>
<b>Net Income</b>	<b>20,923,845</b>	<b>17,803,772</b>		<b>26,774,811</b>

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of November 30, 2024**

		as of 11/30/2024	as of 11/30/2023
<b>ASSETS</b>			
<b>Current Assets</b>			
<b>Cash</b>			
Regions Operating Account		188,635	53,691
Cash in TexStar		1,727,418	1,060,718
Regions Payroll Account		160,625	163,057
<b>Restricted Cash</b>			
Goldman Sachs FSGF 465		321,738,455	540,219,521
Restricted Cash - TexSTAR		33,825,427	62,000,965
Treasury SLGS		198,248,826	-
<b>Total Cash and Cash Equivalents</b>		<b>555,889,386</b>	<b>603,497,952</b>
<b>Accounts Receivables</b>			
Accounts Receivable - Net		5,984,664	5,270,407
Due From Other Agencies		385,448	232,999
Due From TTA		-	678,583
Due From NTTA		2,109,157	1,575,748
Due From HCTRA		7,786,430	4,927,698
Due From TxDOT		10,172,160	701,516
Due From Other Funds		2,183,361	-
Interest Receivable		870,387	576,951
<b>Total Receivables</b>		<b>29,491,606</b>	<b>13,963,902</b>
<b>Short Term Investments</b>			
Treasuries		163,106,750	118,543,252
Agencies		250,712,604	339,998,036
<b>Total Short Term Investments</b>		<b>413,819,354</b>	<b>458,541,288</b>
<b>Total Current Assets</b>		<b>999,200,346</b>	<b>1,076,003,142</b>
<b>Construction in Progress</b>		<b>563,137,175</b>	<b>417,830,712</b>
<b>Capital Assets (Net of Depreciation and Amortization)</b>			
<b>Depreciable Assets</b>			
Equipment		-	1,141,627
Autos and Trucks		61,701	34,211
Buildings and Toll Facilities		4,266,093	4,156,316
Highways and Bridges		1,659,112,574	1,703,623,654
Toll Equipment		21,912,898	16,796,979
Signs		11,038,810	11,255,653
Land Improvements		4,518,461	5,060,785
Right of way		88,149,606	88,149,606

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of November 30, 2024**

	as of 11/30/2024	as of 11/30/2023
<b>Intangible Assets</b>		
Intangible Software	5,361,733	-
<b>Right to Use Assets</b>		
Leases	729,233	1,243,985
<b>Total Fixed Assets</b>	<b>1,795,151,110</b>	<b>1,831,462,815</b>
<b>Other Assets</b>		
Intangible Assets-Net	159,984,058	166,253,142
Prepaid Insurance	810,298	594,908
Deferred Outflows (pension related)	2,384,338	2,738,023
Pension Asset	-	1,046,634
<b>Total Other Assets</b>	<b>163,178,694</b>	<b>170,632,707</b>
<b>Total Assets</b>	<b>3,520,667,324</b>	<b>3,495,929,377</b>
<b>LIABILITIES</b>		
<b>Current Liabilities</b>		
Accounts Payable	7,572,574	19,704,733
Construction Payable	-	9,772,837
Interest Payable	45,333,679	32,719,920
Due to other Funds	2,183,361	-
Deferred Compensation Payable	5,461	6,403
TCDRS Payable	129,637	119,754
Due to other Agencies	11,695	(3,811)
Due to TTA	300,361	645,742
Due to HCTRA	528,394	168,169
Due to Other Entities	-	88,584
71E TxDOT Obligation - ST	1,429,374	5,409,145
<b>Total Current Liabilities</b>	<b>57,494,535</b>	<b>68,631,475</b>
<b>Long Term Liabilities</b>		
Compensated Absences	222,277	240,954
Right to Use Obligations - Lease	949,904	1,286,881
Deferred Inflows (pension related)	1,192,688	1,378,935
Pension Liability	1,971,627	-
<b>Long Term Payables</b>	<b>4,336,496</b>	<b>2,906,771</b>

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of November 30, 2024**

	as of 11/30/2024	as of 11/30/2023
<b>Bonds Payable</b>		
<b>Senior Lien Revenue Bonds:</b>		
Senior Lien Revenue Bonds 2010	104,915,100	97,374,233
Senior Lien Revenue Bonds 2011	10,059,367	16,631,117
Senior Lien Revenue Bonds 2015	10,000,000	10,000,000
Senior Lien Refunding Revenue Bonds 2016	47,045,000	59,340,000
Senior Lien Revenue Bonds 2018	44,345,000	44,345,000
Senior Lien Revenue Bonds 2020A	50,265,000	50,265,000
Senior Lien Refunding Bonds 2020B	54,305,000	54,970,000
Senior Lien Refunding Bonds 2020C	133,210,000	138,435,000
Senior Lien Revenue Bonds 2020E	167,160,000	167,160,000
Senior Lien Revenue Bonds 2021B	255,075,000	255,075,000
Senior Lien Refunding Bonds 2021D	273,650,000	274,150,000
Senior Lien Refunding Bonds 2021E	329,545,000	332,585,000
Senior Lien Premium 2016 Revenue Bonds	5,898,213	6,859,087
Sn Lien Revenue Bond Premium 2018	2,505,572	2,772,146
Senior Lien Revenue Bond Premium 2020A	10,820,209	11,075,958
Senior Lien Refunding Bond Premium 2020B	10,478,557	11,013,632
Senior Lien Revenue Bonds Premium 2020E	21,710,405	23,425,791
Senior Lien Revenue Bonds Premium 2021B	52,116,597	52,710,516
Senior Lien Refunding Bonds Premium 2021D	43,212,839	44,107,695
<b>Total Senior Lien Revenue Bonds</b>	<b>1,626,316,860</b>	<b>1,652,295,176</b>
<b>Sub Lien Revenue Bonds:</b>		
Sub Lien Refunding Bonds 2016	69,055,000	71,435,000
Sub Lien Refunding Bonds 2020D	93,430,000	97,440,000
Subordinated Lien BANS 2020F	110,875,000	110,875,000
Subordinate Lien Refunding Bonds 2020G	61,570,000	61,570,000
Subordinated Lien BANS 2021C	244,185,000	244,185,000
Sub Refunding 2016 Prem/Disc	3,949,873	4,667,144
Subordinated Lien BANS 2020F Premium	333,572	4,336,437
Subordinated Lien Refunding Bonds Premium 2020G	6,191,954	6,595,926
Sub Lien BANS 2021C Premium	15,857,661	23,469,338
<b>Total Sub Lien Revenue Bonds</b>	<b>605,448,060</b>	<b>624,573,845</b>

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of November 30, 2024**

	as of 11/30/2024	as of 11/30/2023
<b>Other Obligations</b>		
TIFIA Note 2021 - 183S	322,354,437	321,375,414
TIFIA Note 2021 - 290E	41,088,581	40,963,792
71E TxDOT Obligation - LT	47,253,089	49,983,470
Regions 2022 MoPac Loan	22,490,900	23,765,900
<b>Total Other Obligations</b>	<b>433,187,007</b>	<b>436,088,576</b>
<b>Total Long Term Liabilities</b>	<b>2,669,288,423</b>	<b>2,715,864,367</b>
<b>Total Liabilities</b>	<b>2,726,782,958</b>	<b>2,784,495,842</b>
<b>NET ASSETS</b>		
Contributed Capital	-	121,462,104
Net Assets Beginning	776,080,594	563,196,620
Current Year Operations	17,803,772	26,774,811
<b>Total Net Assets</b>	<b>793,884,367</b>	<b>711,433,535</b>
<b>Total Liabilities and Net Assets</b>	<b>3,520,667,324</b>	<b>3,495,929,377</b>



**Central Texas Regional Mobility Authority****Statement of Cash Flow****as of November 2024****Cash flows from operating activities:**

Receipts from toll revenues	106,563,933
Receipts from other sources	726,762
Payments to vendors	(63,663,921)
Payments to employees	(2,438,956)
Net cash flows provided by (used in) operating activities	<u>41,187,819</u>

**Cash flows from capital and related financing activities:**

Payment on Intangible assets	(2,751,316)
Interest Expense	(39,848,731)
Payments on bonds / loans	(5,260,962)
RIF Contribution	(10,000,000)
Acquisition of capital assets - non project	(2,440,606)
Acquisitions of construction in progress	(49,843,369)
Net cash flows provided by (used in) capital and related financing activities	<u>(110,144,983)</u>

**Cash flows from investing activities:**

Interest income	12,773,524
Purchase of investments	(176,115,962)
Net cash flows provided by (used in) investing activities	<u>(163,342,438)</u>

Net increase (decrease) in cash and cash equivalents	(232,299,602)
Cash and cash equivalents at beginning of period	<u>817,680,594</u>
Cash and cash equivalents at end of period	<u><u>585,380,992</u></u>

**Reconciliation of change in net assets to net cash provided by operating activities:**

Operating income	17,803,772
Adjustments to reconcile change in net assets to net cash provided by operating activities:	
Depreciation and amortization	27,641,645
Changes in assets and liabilities:	
Decrease in accounts receivable	2,624,371
Increase in prepaid expenses and other assets	(568,871)
Decrease in accrued expenses	(34,817,077)
Decrease in Interest expense	41,486,745
Increase in interest receivable	(12,982,767)
Total adjustments	<u>23,384,047</u>
Net cash flows provided by (used in) operating activities	<u><u>\$ 41,187,819</u></u>

**Reconciliation of cash and cash equivalents:**

Unrestricted cash and cash equivalents	229,817,110
Restricted cash and cash equivalents	<u>355,563,882</u>
Total	<u><u>585,380,992</u></u>

**CTRMA INVESTMENT REPORT**

**Month Ending November 30, 2024**

	Balance 11/1/2024	Accrued Interest	Additions	Cash Transfers	Withdrawals	Balance 11/30/2024	Rate November '24
<b>Amount in Trustee TexStar</b>							
2011 Sr Lien Financial Assist Fund	16.94	0.04				16.98	4.71%
2013 Sub Lien Debt Service Reserve	618,976.68	2,396.84				621,373.52	4.71%
General Fund	10,260,544.65	39,731.27				10,300,275.92	4.71%
Trustee Operating Fund	20,674,522.21	75,066.03		5,000,000.00	6,000,000.00	19,749,588.24	4.71%
Renewal and Replacement	8.70					8.70	4.71%
TxDOT Grant Fund	506,887.49	1,962.80				508,850.29	4.71%
Senior Lien Debt Service Reserve Fund	430,824.59	1,668.25				432,492.84	4.71%
2015 Senior Series B Project	390,171.40	1,510.84				391,682.24	4.71%
2015C TIFIA Project acct	775,136.96	3,001.52				778,138.48	4.71%
2018 290E III Senior Project	1,038,976.71	4,023.17				1,042,999.88	4.71%
	34,696,066.33	129,360.76	-	5,000,000.00	6,000,000.00	33,825,427.09	

<b>Amount in TexStar Operating Fund</b>	271,708.50	5,709.11	6,000,000.00		4,550,000.00	1,727,417.61	4.71%
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**Goldman Sachs**

Operating Fund	4,911,411.85	20,286.60	1,921.50	-	5,021.27	4,928,598.68	4.62%
2020A Senior Lien Debt Service Account	845,589.33	2,972.28		209,437.50		1,057,999.11	4.62%
2020B Senior Lien Debt Service Fund	1,469,739.87	5,361.07		276,837.50		1,751,938.44	4.62%
2020C Senior Lien Debt Service Fund	5,551,206.80	20,944.16		734,488.33		6,306,639.29	4.62%
2020D Sub Lien Debt Service Fund	4,413,294.30	16,657.80		580,855.71		5,010,807.81	4.62%
2020D Sub Debt Service Reserve Fund	1,110,639.60	4,518.78				1,115,158.38	4.62%
2020E Sr Lien Project	83,776,661.98	358,109.98			610,251.92	83,524,520.04	4.62%
2020E Sr Ln Project Cap I	8,420,689.60	34,260.65				8,454,950.25	4.62%
2020F Sub Lien Debt Service Fund	2,007,797.02	7,136.42		461,979.17		2,476,912.61	4.62%
2020G Sub Lien Debt Service Acct	858,625.59	3,017.99		212,716.67		1,074,360.25	4.62%
2020G Sub Debt Service Reserve Fund	470,518.38	1,914.36				472,432.74	4.62%
2021A TIFIA Sub Lien Debt Serv Reserve	1,984,484.60	8,074.13				1,992,558.73	4.62%
2021A TIFIA Sub Lien Debt Service Acct	529,984.26	2,156.31				532,140.57	4.62%
2021B Senior Lien Cap I Project Fund	26,290,461.17	106,966.10				26,397,427.27	4.62%
2021B Senior Lien Project	1,115,944.04	2,921.36	9,400,000.00		9,451,987.42	1,066,877.98	4.62%
2021B Senior Lien Cap I Debt Service Acct	9,515.04	38.68				9,553.72	4.62%
2021C Sub Lien Cap I Project Fund	1,482.47	6.03				1,488.50	4.62%
2021C Sub Lien Project	15,253,679.59	47,753.41				15,301,433.00	4.62%
2021C Sub Lien Debt Service Fund	4,106,706.24	14,434.62		1,017,437.50		5,138,578.36	4.62%
2021D Senior Lien Debt Service Fund	4,200,396.15	14,911.77		974,500.00		5,189,807.92	4.62%
2021E Senior Lien Debt Service Fund	5,951,036.07	21,811.21		1,074,393.20		7,047,240.48	4.62%
2011 Sr Financial Assistance Fund	145.15	0.59				145.74	4.62%
2010 Senior DSF	7,169,979.73	27,731.02		646,171.30		7,843,882.05	4.62%
2011 Senior Lien Debt Service Acct	6,024,001.95	23,268.56		556,403.31		6,603,673.82	4.62%
2013 Senior Lien Debt Service Fund	44,597.07	181.47				44,778.54	4.62%
2013 Sub Debt Service Reserve Fund	249,161.22	1,013.88				250,175.10	4.62%
2013 Subordinate Debt Service Fund	35,099.31	142.83				35,242.14	4.62%
2015A Sr Lien Debt Service	5,485,569.00	21,855.90		208,333.33		5,715,758.23	4.62%
2015B Project	4,895,414.98	19,939.53			50,339.41	4,865,015.10	4.62%
2015C TIFIA Project	1,151,033.14	4,683.76				1,155,716.90	4.62%
2016 Sr Lien Rev Refunding Debt Service	8,878,410.29	36,127.81				8,914,538.10	4.62%
2016 Sub Lien Rev Refunding Debt Service	3,381,497.58	12,663.62		490,271.88		3,884,433.08	4.62%
2016 Sub Lien Rev Refunding DSR	851,407.90	3,464.53				854,872.43	4.62%
2018 Senior Debt Service Fund 290E III	1,588,951.52	5,865.62		268,104.17		1,862,921.31	4.62%
2018 290E III Senior Project	11,533,892.77	46,948.84			940,565.42	10,640,276.19	4.62%
TxDOT Grant Fund	533,172.11	2,169.57				535,341.68	4.62%
Renewal and Replacement	9.68	0.05		43,440.00	43,444.22	5.51	4.62%
Revenue Fund	11,750,048.86	43,880.49	15,647,325.83	(22,254,317.68)		5,186,937.50	4.62%
General Fund	37,267,668.39	140,743.57		6,942,257.81	587,012.36	43,763,657.41	4.62%
Senior Lien Debt Service Reserve Fund	3,429,660.65	13,955.89				3,443,616.54	4.62%
71E Revenue Fund	10,826,024.68	41,920.04	348,292.85	869,117.54	213,236.72	11,872,118.39	4.62%
MoPac Revenue Fund	102,157.94	3,605.00	440,627.13	(546,390.07)		-	4.62%
MoPac General Fund	12,584,396.43	47,869.93		1,656,370.83		14,288,637.19	4.62%
MoPac Operating Fund	3,208,589.06	11,928.20		400,000.00	520,106.85	3,100,410.41	4.62%
MoPac Loan Repayment Fund	740,659.28	2,453.63		177,592.00		920,704.91	4.62%
	305,011,412.64	1,206,668.04	25,838,167.31	(5,000,000.00)	12,421,965.59	314,634,282.40	

**Amount in Fed Agencies and Treasuries**

Amortized Principal	413,819,353.93	-	-	-	-	413,819,353.93
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**Certificates of Deposit**

<b>Total in Pools - TxStar</b>	34,967,774.83	135,069.87	6,000,000.00	5,000,000.00	10,550,000.00	35,552,844.70
<b>Total in GS FSGF</b>	305,011,412.64	1,206,668.04	25,838,167.31	(5,000,000.00)	12,421,965.59	314,634,282.40
<b>Total in Treasury SLGS</b>	245,000,000.00	4,648,826.16	-	-	51,400,000.00	198,248,826.16
<b>Total in Fed Agencies and Treasuries</b>	413,819,353.93	-	-	-	-	413,819,353.93
<b>Total Invested</b>	998,798,541.40	5,990,564.07	31,838,167.31	-	74,371,965.59	962,255,307.19

All Investments in the portfolio are in compliance with the CTRMA's Investment policy and the relevant provisions of the Public Funds Investment Act Chapter 2256.023

**José Hernández, CFO**

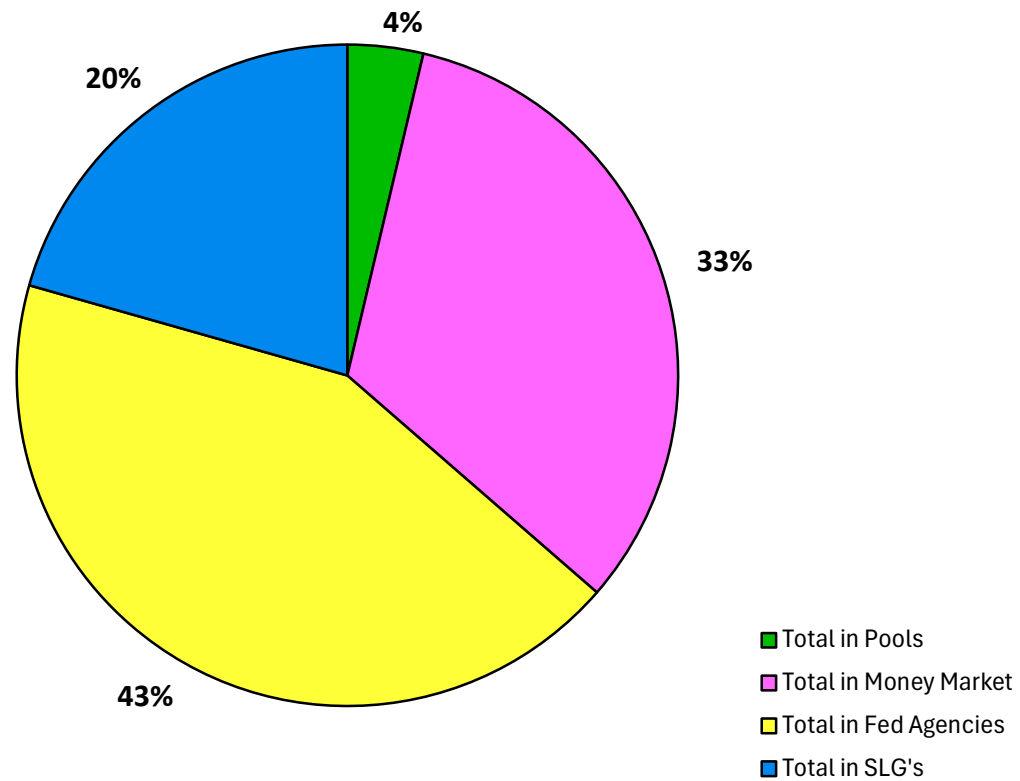
**Ann Zigmund, Controller**

## Investments by Fund

Fund	TexSTAR	TexSTAR-Trustee	Goldman Sachs	Agencies / Treasuries / SLGS	Balance
Renewal and Replacement Fund	8.70		5.51		14.21
Grant Fund	508,850.29		535,341.68	10,000,000.00	11,044,191.97
Senior Debt Service Reserve Fund	432,492.84		3,443,616.54	114,051,334.25	117,927,443.63
2010 Senior Lien Debt Service			7,843,882.05		7,843,882.05
2011 Sr Debt Service t			6,603,673.82		6,603,673.82
2013 Sr Debt Service t			44,778.54		44,778.54
2013 Sub Debt Service			35,242.14		35,242.14
2013 Sub Debt Service Reserve Fund	621,373.52		250,175.10		871,548.62
2015 Sr Debt Service			5,715,758.23		5,715,758.23
2016 Sr Lien Rev Refunding Debt Service			8,914,538.10		8,914,538.10
2016 Sub Lien Rev Refunding Debt Service			3,884,433.08		3,884,433.08
2016 Sub Lien Rev Refunding DSR			854,872.43	6,825,843.85	7,680,716.28
Operating Fund	19,749,588.24	1,727,417.61	4,928,598.68		26,405,604.53
Revenue Fund			5,186,937.50		5,186,937.50
General Fund	10,300,275.92		43,763,657.41	182,098,391.72	236,162,325.05
71E Revenue Fund			11,872,118.39	29,639,926.50	41,512,044.89
MoPac General Fund			14,288,637.19		14,288,637.19
MoPac Operating Fund			3,100,410.41		3,100,410.41
MoPac Loan Repayment Fund			920,704.91		920,704.91
2015B Project	391,682.24		4,865,015.10		5,256,697.34
2015 TIFIA Project	778,138.48		1,155,716.90	40,000,000.00	41,933,855.38
2011 Sr Financial Assistance Fund	16.98		145.74		162.72
2018 Sr Lien Debt Service			1,862,921.31		1,862,921.31
2018 Sr Lien Project	1,042,999.88		10,640,276.19		11,683,276.07
2020A Senior Lien Debt Service			1,057,999.11		1,057,999.11
2020B Senior Lien Debt Service			1,751,938.44		1,751,938.44
2020C Senior Lien Debt Service			6,306,639.29		6,306,639.29
2020D Sub Lien Debt Service			5,010,807.81		5,010,807.81
2020D Sub Debt Service Reserve Fund			1,115,158.38	7,800,964.40	8,916,122.78
2020E Senior Lien Project			83,524,520.04		83,524,520.04
2020E Senior Lien Project Cap Interest			8,454,950.25		8,454,950.25
2020F Sub Lien Deb Service			2,476,912.61		2,476,912.61
2020G Sub Lien Debt Service			1,074,360.25		1,074,360.25
2020G Sub Lien Debt Service Reserve			472,432.74	3,900,482.20	4,372,914.94
2021A Sub Lien Debt Service Reserve			1,992,558.73	19,502,411.01	21,494,969.74
2021A Sub Debt Service			532,140.57		532,140.57
2021B Senior Lien Cap I Project Fund			26,397,427.27		26,397,427.27
2021B Senior Lien Project			1,066,877.98	192,434,590.23	193,501,468.21
2021B Senior Lien Cap I Debt Service Acct			9,553.72		9,553.72
2021C Sub Lien Cap I Project Fund			1,488.50	5,814,235.93	5,815,724.43
2021C Sub Lien Project			15,301,433.00		15,301,433.00
2021C Sub Lien Debt Service			5,138,578.36		5,138,578.36
2021D Senior Lien Debt Service			5,189,807.92		5,189,807.92
2021E Senior Lien Debt Service			7,047,240.48		7,047,240.48
<b>Totals</b>	<b>33,825,427.09</b>	<b>1,727,417.61</b>	<b>314,634,282.40</b>	<b>612,068,180.09</b>	<b>962,255,307.19</b>

11/30/2024

## Allocation of Funds





Bank	Fund	Cost	Cummulative Amortization	Book Value	Maturity Value	Interest Income	
						Accrued Interest	Interest Earned
6180000120	GENERAL	40,000,000.00		40,000,000.00	40,000,000.00		
6180000120	GENERAL	9,960,128.90		9,960,128.90	10,000,000.00	27,777.78	527,777.78
6180000120	GENERAL	9,960,128.90		9,960,128.90	10,000,000.00	27,777.78	527,777.78
6180000120	GENERAL	41,501,020.00		41,501,020.00	43,000,000.00		
6180000059	SENLINDSR	9,651,400.00		9,651,400.00	10,000,000.00		
6180000120	GENERAL	48,794,377.50		48,794,377.50	50,000,000.00		
6180006366	2016SUBDSR	6,825,843.85		6,825,843.85	7,000,000.00		
1001017484	2020D DSRF	7,800,964.40		7,800,964.40	8,000,000.00		
1001021540	2020G DSRF	3,900,482.20		3,900,482.20	4,000,000.00		
1001021543	2021A DSRF	19,502,411.01		19,502,411.01	20,000,000.00		
6180000059	SENLINDSR	30,228,737.05		30,228,737.05	31,000,000.00		
6180000059	SENLINDSR	34,171,197.20		34,171,197.20	35,000,000.00		
6180000059	SENLINDSR	20,000,000.00		20,000,000.00	20,000,000.00	22,222.22	1,022,222.22
6146001086	71E REVENU	15,000,000.00		15,000,000.00	15,000,000.00		
6146001086	71E REVENU	14,639,926.50		14,639,926.50	14,670,000.00	97,800.00	366,750.00
6180000120	GENERAL	11,882,736.42		11,882,736.42	12,000,000.00	113,036.99	288,340.12
6180000120	GENERAL	20,000,000.00		20,000,000.00	20,000,000.00		954,000.00
6180000059	SENLINDSR	20,000,000.00		20,000,000.00	20,000,000.00		954,000.00
6180005349	2015TIFIAP	10,000,000.00		10,000,000.00	10,000,000.00		104,430.56
6180000157	TXDOTGRANT	10,000,000.00		10,000,000.00	10,000,000.00		104,430.56
6180005349	2015TIFIAP	30,000,000.00		30,000,000.00	30,000,000.00		
		413,819,353.93	-	413,819,353.93	419,670,000.00	288,614.77	4,745,298.46

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**Goldman Sachs County Road Escrow Funds**

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	<b>Balance</b>	<b>Accrued</b>			<b>Balance</b>
	<b>11/1/2024</b>	<b>Interest</b>	<b>Additions</b>	<b>Withdrawals</b>	<b>11/30/2024</b>
Travis County Escrow Fund - Elroy Road	3,137,313.07	12,766.28			3,150,079.35
Travis County Escrow Fund - Ross Road	338,747.51	1,378.24		3,157.87	336,967.88
Travis County Escrow Fund - Old San Antonio Road	115,379.43	469.44		2,278.10	113,570.77
Travis County Escrow Fund - Old Lockhart Road	265,265.15	1,079.26		4,698.25	261,646.16
Travis County Escrow Fund - County Line Road	2,646,078.11	10,765.91		85,633.07	2,571,210.95
Travis County Escrow Fund - South Pleasant Valley Road	253,091.96	1,029.74			254,121.70
Travis County Escrow Fund - Thaxton Road	200,725.41	816.68		3,518.10	198,023.99
Travis County Escrow Fund - Pearce Lane Road	219,658.06	893.71			220,551.77
	<b>7,176,258.70</b>	<b>29,199.26</b>	<b>-</b>	<b>99,285.39</b>	<b>7,106,172.57</b>

State and Local Government Series as of 11/30/24											
Bank	Fund	Agency	Arbitrage Yield	CUSIP	Yield	Purchased Date	Purchase Value	Beginning	Accrued Interest	Withdrawals	End Value
1001021281	2021CPROJ	State and Local Government Series (SLGS)	1.831%	99SLA1060	4.18%	4/23/2024	35,000,000.00	35,000,000.00	314,235.93	29,500,000.00	5,814,235.93
1001021273	2021BPROJ	State and Local Government Series (SLGS)	1.831%	99SLA1078	4.18%	4/23/2024	210,000,000.00	210,000,000.00	4,334,590.23	21,900,000.00	192,434,590.23
							245,000,000.00	245,000,000.00	4,648,826.16	51,400,000.00	198,248,826.16



# TexSTAR

## MONTHLY NEWSLETTER

### NOVEMBER 2024



## PERFORMANCE

### As of November 30, 2024

Current Invested Balance	\$ 10,166,178,873.71
Weighted Average Maturity (1)	35 Days
Weighted Average Life (2)	94 Days
Net Asset Value	1.000189
Total Number of Participants	1071
Management Fee on Invested Balance	0.06%*
Interest Distributed	\$ 41,058,451.42
Management Fee Collected	\$ 514,772.18
% of Portfolio Invested Beyond 1 Year	6.15%
Standard & Poor's Current Rating	AAAm

Rates reflect historical information and are not an indication of future performance.

### November Averages

Average Invested Balance	\$ 10,467,318,493.26
Average Monthly Yield, on a simple basis	4.7112%
Average Weighted Maturity (1)	29 Days
Average Weighted Life (2)	89 Days

#### Definition of Weighted Average Maturity (1) & (2)

(1) This weighted average maturity calculation uses the SEC Rule 2a-7 definition for stated maturity for any floating rate instrument held in the portfolio to determine the weighted average maturity for the pool. This Rule specifies that a variable rate instruction to be paid in 397 calendar days or less shall be deemed to have a maturity equal to the period remaining until the next readjustment of the interest rate.  
(2) This weighted average maturity calculation uses the final maturity of any floating rate instruments held in the portfolio to calculate the weighted average maturity for the pool.

The maximum management fee authorized for the TexSTAR Cash Reserve Fund is 12 basis points. This fee may be waived in full or in part in the discretion of the TexSTAR co-administrators at any time as provided for in the TexSTAR Information Statement.

## NEW PARTICIPANTS

We would like to welcome the following entities who joined the TexSTAR program in November:

- \* Cass County
- \* City of Collinsville
- \* City of Honey Grove
- \* City of Lone Star
- \* Galveston County Municipal Utility District No. 36
- \* Harris County Municipal Utility District No. 478
- \* Harris County Municipal Utility District No. 525
- \* Lago Bello Municipal Utility District No. 1A

## HOLIDAY REMINDER

In observance of the **Christmas holiday, TexSTAR will be closed Wednesday, December 25, 2024.** All ACH transactions initiated on Tuesday, December 24th will settle on Thursday, December 26th. Please plan accordingly for your liquidity needs.

In observance of the **New Year's Day holiday, TexSTAR will be closed Wednesday, January 1, 2025.** All ACH transactions initiated on Tuesday, December 31st will settle on Thursday, January 2nd.

Notification of any early transaction deadlines on the business day preceding the holiday will be sent by email to the primary contact on file for all TexSTAR participants.

## ECONOMIC COMMENTARY

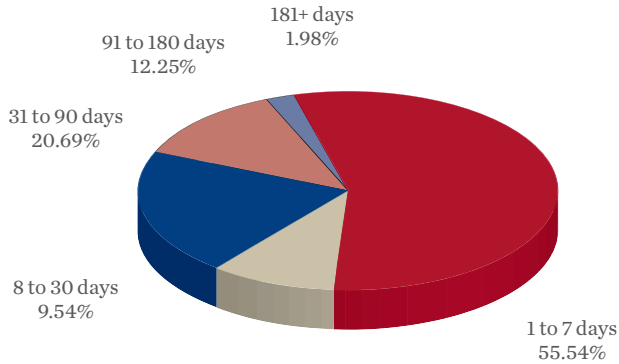
### Market review

November was a month of notable developments across both the economic and political arenas. It began with the October jobs report, which, despite recent distortions, underscored a resilient labor market. The U.S. elections resulted in a Republican sweep, and the Federal Open Market Committee (FOMC) opted for a second rate cut, while inflation data showed a slight but expected uptick for October. The U.S. economy added a modest 12,000 jobs in October, a figure likely skewed by the impact of hurricanes and strikes. Downward revisions further dampened the outlook, removing 112,000 jobs from the prior two months. However, other indicators were more encouraging: the unemployment rate held steady at 4.1%, while wages, likely influenced by weather conditions, rose by a solid 0.4% month-over-month (m/m). Despite the weaker-than-expected report, the broader data indicated that the labor market, while cooling, remains solid. The following week, former President Donald Trump won the presidential election, securing both the electoral college and popular vote, alongside Republican majorities in the House and Senate. This outcome has set the stage for potential policy changes that could impact inflation and market dynamics, with key agenda items including tax cuts, higher tariffs, reduced immigration, and deregulation across various sectors.

(continued page 4)

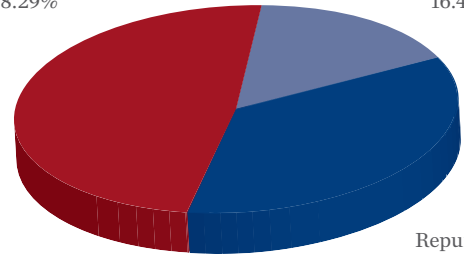
## INFORMATION AT A GLANCE

### PORTFOLIO BY TYPE OF INVESTMENT AS OF NOVEMBER 30, 2024



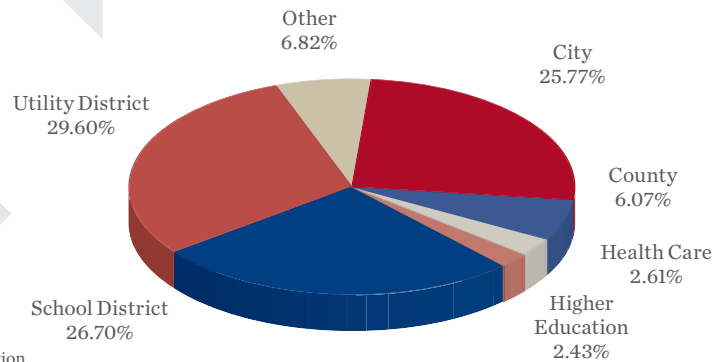
Treasuries  
48.29%

Agencies  
16.40%



Repurchase  
Agreements  
35.31%

### PORTFOLIO BY MATURITY AS OF NOVEMBER 30, 2024 (1)



Other  
6.82%

City  
25.77%

County  
6.07%

Health Care  
2.61%

Higher  
Education  
2.43%

Utility District  
29.60%

School District  
26.70%

### DISTRIBUTION OF PARTICIPANTS BY TYPE AS OF NOVEMBER 30, 2024

(1) Portfolio by Maturity is calculated using WAM (1) definition for stated maturity. See page 1 for definition

## HISTORICAL PROGRAM INFORMATION

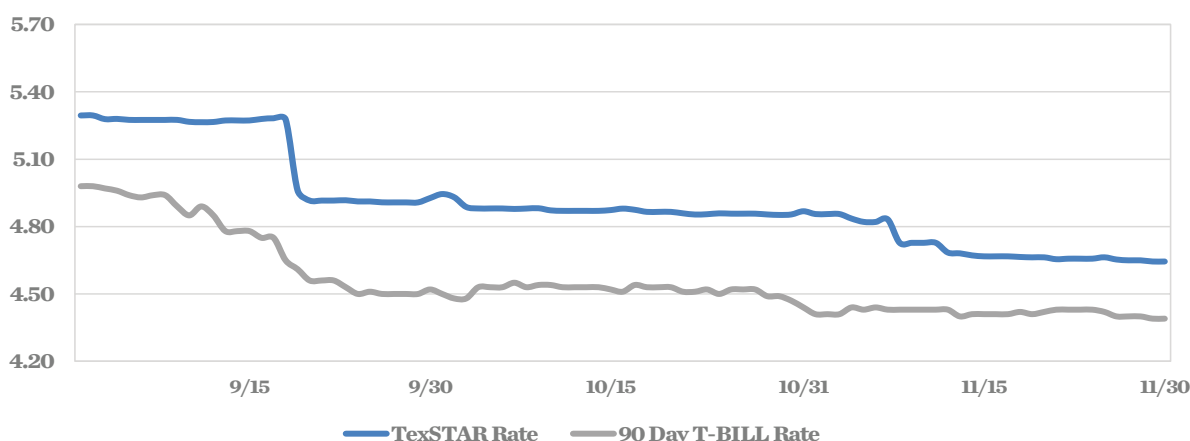
MONTH	AVERAGE RATE	BOOK VALUE	MARKET VALUE	NET ASSET VALUE	WAM (1)	WAL (2)	NUMBER OF PARTICIPANTS
Nov 24	4.7112%	\$10,166,178,873.71	\$10,168,700,798.41	1.000189	29	89	1071
Oct 24	4.8722%	10,685,059,311.14	10,687,382,798.75	1.000217	26	70	1063
Sep 24	5.1324%	10,713,994,849.49	10,717,808,636.16	1.000355	26	66	1056
Aug 24	5.2939%	10,960,587,143.65	10,963,170,866.05	1.000150	31	61	1048
Jul 24	5.3131%	11,614,008,231.39	11,614,697,399.72	1.000059	33	64	1043
Jun 24	5.3126%	10,696,510,063.51	10,695,858,054.79	0.999939	36	66	1040
May 24	5.3078%	10,946,135,253.27	10,946,064,280.53	0.999895	37	67	1037
Apr 24	5.3057%	11,388,285,240.44	11,386,977,182.36	0.999885	35	65	1031
Mar 24	5.2986%	11,373,415,394.49	11,372,687,872.41	0.999936	36	68	1025
Feb 24	5.3035%	11,928,691,803.89	11,927,911,436.19	0.999934	36	69	1024
Jan 24	5.3200%	11,483,316,119.03	11,483,741,551.85	1.000037	42	77	1024
Dec 23	5.3378%	10,557,076,424.02	10,557,101,303.24	0.999972	44	85	1037

## PORTFOLIO ASSET SUMMARY AS OF NOVEMBER 30, 2024

	BOOK VALUE	MARKET VALUE
Uninvested Balance	\$ 288,236.67	\$ 288,236.67
Accrual of Interest Income	11,875,448.38	11,875,448.38
Interest and Management Fees Payable	(41,040,636.55)	(41,040,636.55)
Payable for Investment Purchased	(197,097,722.20)	(197,097,722.20)
Repurchase Agreement	3,669,401,999.97	3,669,401,997.97
Government Securities	6,722,751,547.44	6,725,273,472.14
<b>TOTAL</b>	<b>\$ 10,166,178,873.71</b>	<b>\$ 10,168,700,798.41</b>

Market value of collateral supporting the Repurchase Agreements is at least 102% of the Book Value. The portfolio is managed by J.P. Morgan Chase & Co. and the assets are safekept in a separate custodial account at the Federal Reserve Bank in the name of TexSTAR. The only source of payment to the Participants are the assets of TexSTAR. There is no secondary source of payment for the pool such as insurance or guarantee. Should you require a copy of the portfolio, please contact TexSTAR Participant Services.

# TEXSTAR VERSUS 90-DAY TREASURY BILL



This material is for information purposes only. This information does not represent an offer to buy or sell a security. The above rate information is obtained from sources that are believed to be reliable; however, its accuracy or completeness may be subject to change. The TexSTAR management fee may be waived in full or in part at the discretion of the TexSTAR co-administrators and the TexSTAR rate for the period shown reflects waiver of fees. This table represents historical investment performance/return to the customer, net of fees, and is not an indication of future performance. An investment in the security is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the issuer seeks to preserve the value of an investment of \$1.00 per share, it is possible to lose money by investing in the security. Information about these and other program details are in the fund's Information Statement which should be read carefully before investing. The yield on the 90-Day Treasury Bill ("T-Bill Yield") is shown for comparative purposes only. When comparing the investment returns of the TexSTAR pool to the T-Bill Yield, you should know that the TexSTAR pool consists of allocations of specific diversified securities as detailed in the respective Information Statements. The T-Bill Yield is taken from Bloomberg Finance L.P. and represents the daily closing yield on the then current 90-Day T-Bill. The TexSTAR yield is calculated in accordance with regulations governing the registration of open-end management investment companies under the Investment Company Act of 1940 as promulgated from time to time by the federal Securities and Exchange Commission.

## DAILY SUMMARY FOR NOVEMBER 2024

DATE	MNY MKT FUND EQUIV. [SEC Std.]	DAILY ALLOCATION FACTOR	INVESTED BALANCE	MARKET VALUE PER SHARE	WAM DAYS (1)	WAL DAYS (2)
11/1/2024	4.8554%	0.000133024	\$10,734,339,827.16	1.000229	26	85
11/2/2024	4.8554%	0.000133024	\$10,734,339,827.16	1.000229	26	85
11/3/2024	4.8554%	0.000133024	\$10,734,339,827.16	1.000229	26	85
11/4/2024	4.8352%	0.000132471	\$10,749,966,986.60	1.000245	25	84
11/5/2024	4.8206%	0.000132072	\$10,727,117,042.74	1.000247	26	87
11/6/2024	4.8202%	0.000132061	\$10,673,871,901.93	1.000247	26	87
11/7/2024	4.8319%	0.000132381	\$10,689,244,875.03	1.000245	25	87
11/8/2024	4.7273%	0.000129515	\$10,756,340,866.60	1.000211	26	86
11/9/2024	4.7273%	0.000129515	\$10,756,340,866.60	1.000211	26	86
11/10/2024	4.7273%	0.000129515	\$10,756,340,866.60	1.000211	26	86
11/11/2024	4.7273%	0.000129515	\$10,756,340,866.60	1.000211	26	86
11/12/2024	4.6840%	0.000128328	\$10,727,272,299.56	1.000210	28	88
11/13/2024	4.6805%	0.000128232	\$10,694,785,937.34	1.000237	29	88
11/14/2024	4.6714%	0.000127984	\$10,521,944,501.21	1.000220	30	89
11/15/2024	4.6671%	0.000127866	\$10,426,974,492.91	1.000212	29	88
11/16/2024	4.6671%	0.000127866	\$10,426,974,492.91	1.000212	29	88
11/17/2024	4.6671%	0.000127866	\$10,426,974,492.91	1.000212	29	88
11/18/2024	4.6643%	0.000127789	\$10,378,612,914.91	1.000214	30	88
11/19/2024	4.6626%	0.000127742	\$10,315,261,150.47	1.000215	31	91
11/20/2024	4.6627%	0.000127744	\$10,261,685,750.30	1.000205	32	92
11/21/2024	4.6543%	0.000127515	\$10,232,880,447.88	1.000189	32	92
11/22/2024	4.6567%	0.000127580	\$10,130,283,251.87	1.000190	31	91
11/23/2024	4.6567%	0.000127580	\$10,130,283,251.87	1.000190	31	91
11/24/2024	4.6567%	0.000127580	\$10,130,283,251.87	1.000190	31	91
11/25/2024	4.6628%	0.000127748	\$10,196,817,598.68	1.000179	32	89
11/26/2024	4.6530%	0.000127480	\$10,273,588,036.78	1.000191	34	93
11/27/2024	4.6493%	0.000127377	\$10,171,995,712.40	1.000190	35	93
11/28/2024	4.6493%	0.000127377	\$10,171,995,712.40	1.000190	35	93
11/29/2024	4.6441%	0.000127235	\$10,166,178,873.71	1.000189	35	94
11/30/2024	4.6441%	0.000127235	\$10,166,178,873.71	1.000189	35	94
Average	4.7112%	0.000129075	\$10,467,318,493.26		29	89



## *ECONOMIC COMMENTARY (cont.)*

In its penultimate 2024 meeting, FOMC unanimously voted to cut the federal funds rate by 25 basis points (bps) to a range of 4.50%-4.75%. During the press conference, Chair Powell cited progress on disinflation and employment data as factors the decision, although changes to the statement language suggest the Fed acknowledges disinflationary progress has somewhat stalled above 2%. With high levels of uncertainty, Powell provided limited forward guidance, leaving markets uncertain about the pace and destination of future cuts.

While inflation has been moving closer to the Fed's 2% target this year, the October CPI report showed a slight but anticipated uptick. Headline CPI rose 0.2% m/m, which, partly due to base effects, pushed the annual increase to 2.6%, while core inflation rose 0.3% m/m and 3.3% year-over-year (y/y). Food prices continued to climb, while energy prices remained flat. Apparel prices experienced their softest print since 2020 at -1.5% m/m, likely due to unseasonably warm weather. In more welcome news, auto insurance prices fell modestly, although this was offset by a rise in airfares. In October, headline PCE grew 0.2% m/m, bringing the yearly figure to 2.3%, a modest increase from the previous month.

The month concluded with the second estimate of Q3 GDP, which remained unchanged at 2.8% annualized, marking a second consecutive quarter of above-trend growth. Consumer spending continued to drive the economy forward, rising a downwardly revised but still strong 3.5%, while government spending also looked strong. Overall, the economy remained solid. Front end Treasury bill yields declined, while longer Treasury yields remained elevated throughout most of the month before ending lower, as economic data continued to weaken the case for aggressive rate cut. Three-month Treasury bill yields declined by 6 bps to 4.49%, while six-month Treasury bill yields fell by 1 bp to 4.45%. One-year Treasury yields ticked up slightly by 2 bps to 4.29%, while two-year Treasury yields edged lower by 2 bps to 4.15%.

## **Outlook**

Despite a cumulative 75 bp reduction in rates over the last two meetings, the Fed believes its current policy stance is still restrictive. However, with its data-dependent approach, the Fed's outlook for further easing hinges on the overall health of its dual mandate. With inflation nearing its target, the unemployment rate close to full employment, slowing wage growth, and a moderate pace of payroll expansion, we anticipate the Fed will continue to normalize the policy rate with an additional 25 bp cut in December, moving closer to a neutral stance.

As we look ahead to 2025, the committee appears inclined to further reduce rates to alleviate restrictive pressures on the economy, while being cautious not to stoke inflation. Although proposed tariff policies could exert upward pressure on prices, short- to medium-term disinflationary forces remain in place. If improvements in auto insurance and shelter inflation, along with wage pressures, persist, inflation should remain on a favorable path. This would provide the Fed with the flexibility to implement additional rate cuts next year, supporting a soft landing for the economy.

This information is an excerpt from an economic report dated November 2024 provided to TexSTAR by JP Morgan Asset Management, Inc., the investment manager of the TexSTAR pool.



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**Exhibit B**

Financial Statements for December 2024

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending December 31, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
<b>REVENUE</b>				
<b>Operating Revenue</b>				
Toll Revenue	178,100,000	88,225,885	49.54%	77,893,952
Video Tolls	67,500,000	29,591,139	43.84%	28,196,456
Fee Revenue	13,200,000	7,322,177	55.47%	6,137,580
<b>Total Operating Revenue</b>	<b>258,800,000</b>	<b>125,139,201</b>	<b>48.35%</b>	<b>112,227,987</b>
<b>Other Revenue</b>				
Interest Income	43,025,800	24,697,560	57.40%	24,572,837
Grant Revenue	595,467	595,467	100.00%	-
Misc Revenue	100,000	10,937	10.94%	7,559
Gain/Loss on Investments	-	79,742	-	-
Unrealized Gain/Loss	-	123,484	-	-
<b>Total Other Revenue</b>	<b>43,721,267</b>	<b>25,507,189</b>	<b>58.34%</b>	<b>24,580,397</b>
<b>TOTAL REVENUE</b>	<b>302,521,267</b>	<b>150,646,390</b>	<b>49.80%</b>	<b>136,808,384</b>
<b>EXPENSES</b>				
<b>Salaries and Benefits</b>				
Salary Expense - Regular	4,994,532	2,095,984	41.97%	2,047,606
Salary Reserve	80,000	-	-	-
TCDRS	1,142,301	619,069	54.19%	1,078,946
FICA	257,234	85,817	33.36%	81,857
FICA MED	72,421	30,026	41.46%	29,702
Health Insurance Expense	586,073	246,250	42.02%	230,486
Life Insurance Expense	3,249	1,346	41.43%	1,700
Auto Allowance Expense	10,200	4,845	47.50%	4,845
Other Benefits	204,671	63,865	31.20%	54,559
Unemployment Taxes	5,760	-	-	-
<b>Total Salaries and Benefits</b>	<b>7,356,441</b>	<b>3,147,202</b>	<b>42.78%</b>	<b>3,529,702</b>
<b>Administrative</b>				
<b>Administrative and Office Expenses</b>				
Accounting	9,500	4,262	44.86%	4,100
Auditing	270,000	195,713	72.49%	96,617
Financial Advisors	200,000	75,600	37.80%	82,800
Human Resources	100,000	8,968	8.97%	1,115
Legal	60,000	13,830	23.05%	8,437
IT Services	365,000	239,643	65.66%	96,467
Software Licenses	1,573,150	1,378,845	87.65%	979,875
Cell Phones	34,900	8,055	23.08%	13,261
Local Telephone Service	2,200	1,271	57.79%	1,056
Overnight Delivery Services	200	17	8.65%	-
Copy Machine	15,300	7,632	49.88%	7,632
Repair & Maintenance-General	10,000	-	-	10,339
Meeting Facilities	2,500	-	-	-
Community Meeting / Events	-	-	-	5,050
Meeting Expense	13,750	6,073	44.17%	2,959
Toll Tag Expense	3,000	400	13.33%	300
Parking / Local Ride Share	2,500	207	8.27%	56
Mileage Reimbursement	4,600	484	10.51%	455
Insurance Expense	1,301,000	484,980	37.28%	292,967
Rent Expense	992,200	358,275	36.11%	225,203
Building Parking	3,500	1,057	30.19%	370
Total Legal Services	458,000	78,700	17.18%	252,988
<b>Total Administrative and Office Expenses</b>	<b>5,421,300</b>	<b>2,864,011</b>	<b>52.83%</b>	<b>2,082,047</b>

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending December 31, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
<b>Office Supplies</b>				
Books & Publications	5,250	1,788	34.06%	1,917
Office Supplies	5,250	895	17.05%	286
Misc Office Equipment	4,500	-	-	989
Computer Supplies	201,850	13,792	6.83%	39,682
Copy Supplies	750	-	-	-
Other Reports - Printing	500	-	-	43
Office Supplies - Printed	3,500	2,177	62.19%	1,595
Postage Expense	900	149	16.51%	463
<b>Total Office Supplies</b>	<b>222,500</b>	<b>18,800</b>	<b>8.45%</b>	<b>44,975</b>
<b>Communications and Public Relations</b>				
Print Production	75,000	-	-	-
Website Maintenance	240,000	40,059	16.69%	229,204
Research Services	210,000	11,900	5.67%	-
Communications and Marketing	500,000	158,645	31.73%	28,220
Media Planning and Placement	1,225,000	519,834	42.44%	182,260
Direct Mail Production	60,000	-	-	-
TV and Video Production	250,000	34,771	13.91%	-
Photography	25,000	850	3.40%	885
Radio Production	50,000	-	-	-
Other Public Relations	20,000	13,421	67.11%	5,000
Promotional Items	20,000	2,248	11.24%	2,867
Printing	80,000	-	-	-
Other Communication Expenses	15,000	31,216	208.10%	-
<b>Total Communications and Public Relations</b>	<b>2,770,000</b>	<b>812,944</b>	<b>29.35%</b>	<b>448,436</b>
<b>Employee Development</b>				
Subscriptions	1,250	139	11.12%	139
Agency Memberships	88,300	43,109	48.82%	41,577
Continuing Education	14,800	775	5.24%	500
Professional Development	21,400	3,350	15.65%	2,289
Other Licenses	2,000	537	26.85%	197
Seminars and Conferences	70,300	6,575	9.35%	4,215
Travel	107,000	26,628	24.89%	27,317
<b>Total Employee Development</b>	<b>305,050</b>	<b>81,113</b>	<b>26.59%</b>	<b>76,233</b>
<b>Financing and Banking Fees</b>				
Trustee Fees	75,000	38,000	50.67%	36,000
Bank Fee Expense	6,500	3,226	49.63%	3,188
Continuing Disclosure	10,000	2,700	27.00%	6,403
Arbitrage Rebate Calculation	16,500	15,400	93.33%	16,105
Rating Agency Expense	50,000	46,000	92.00%	45,000
<b>Total Financing and Banking Fees</b>	<b>158,000</b>	<b>105,326</b>	<b>66.66%</b>	<b>106,696</b>
<b>Total Administrative</b>	<b>8,876,850</b>	<b>3,882,194</b>	<b>43.73%</b>	<b>2,758,387</b>



**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending December 31, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
<b>Operations and Maintenance</b>				
<b>Operations and Maintenance Consulting</b>				
GEC-Trust Indenture Support	1,568,659	544,445	34.71%	397,054
GEC-Financial Planning Support	300,000	135,420	45.14%	132,409
GEC-Toll Ops Support	1,142,136	996,877	87.28%	401,396
GEC-Roadway Ops Support	1,515,000	402,433	26.56%	349,731
GEC-Technology Support	804,962	321,466	39.94%	468,955
GEC-Public Information Support	200,000	109,631	54.82%	93,133
GEC-General Support	2,226,000	668,508	30.03%	512,047
General System Consultant	2,307,274	967,025	41.91%	436,956
Traffic Modeling	125,000	-	-	-
Traffic and Revenue Consultant	1,200,000	440,926	36.74%	193,614
<b>Total Operations and Maintenance Consulting</b>	<b>11,389,031</b>	<b>4,586,731</b>	<b>40.27%</b>	<b>2,985,296</b>
<b>Roadway Operations and Maintenance</b>				
Roadway Maintenance	4,169,031	1,468,248	35.22%	1,018,997
Landscape Maintenance	3,249,260	1,127,720	34.71%	1,083,620
Signal & Illumination Maint	25,000	-	-	-
Maintenance Supplies-Roadway	400,000	17,423	4.36%	908
Tools & Equipment Expense	-	1,260	-	20
Gasoline	30,000	7,274	24.25%	9,293
Repair & Maintenance - Vehicles	10,000	6,566	65.66%	3,066
Natural Gas	7,500	4,987	66.49%	9,643
Electricity - Roadways	300,000	137,749	45.92%	126,843
<b>Total Roadway Operations and Maintenance</b>	<b>8,190,791</b>	<b>2,771,227</b>	<b>33.83%</b>	<b>2,252,390</b>
<b>Toll Processing and Collection Expense</b>				
Image Processing	3,300,000	1,240,579	37.59%	1,292,295
Tag Collection Fees	12,675,000	5,961,886	47.04%	5,401,622
Court Enforcement Costs	160,000	-	-	-
PBM Incentive	500,000	-	-	-
<b>Total Processing and Collection Expense</b>	<b>16,635,000</b>	<b>7,202,464</b>	<b>43.30%</b>	<b>6,693,917</b>
<b>Toll Operations Expense</b>				
Generator Fuel	3,000	523	17.44%	-
Fire & Burglar Alarm	500	247	49.34%	247
Refuse	2,360	1,038	43.98%	1,163
Telecommunications	100,000	80,805	80.80%	69,312
Water - Irrigation	7,500	4,858	64.78%	5,054
Electricity	750	379	50.51%	404
ETC Spare Parts Expense	150,000	112,845	75.23%	118,576
Repair & Maintenance Toll Equip	100,000	-	-	41,649
Law Enforcement	725,000	240,432	33.16%	236,991
ETC Maintenance Contract	6,450,000	1,346,395	20.87%	1,549,489
Transaction Processing Maintenance Contract	2,000,000	885,000	44.25%	847,480
ETC Toll Management Center System Operation	1,338,822	268,141	20.03%	361,002
ETC Development	456,000	-	-	65,823
ETC Testing	50,000	-	-	-
<b>Total Toll Operations Expense</b>	<b>11,383,932</b>	<b>2,940,663</b>	<b>25.83%</b>	<b>3,297,190</b>
<b>Total Operations and Maintenance</b>	<b>47,598,754</b>	<b>17,501,085</b>	<b>36.77%</b>	<b>15,228,792</b>

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**For the Period Ending December 31, 2024**

	Budget Amount FY 2025	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
<b>Other Expenses</b>				
<b>Special Projects and Contingencies</b>				
HERO	711,621	86,001	12.09%	41,838
Special Projects	50,000	-	-	-
Disbursement Other Government - Travis County Road	-	190,249	-	-
71 Express Interest Expense	6,750,000	866,997	12.84%	947,444
Customer Relations	10,000	-	-	-
Technology Initiatives	100,000	-	-	-
Other Contractual Svcs	390,000	80,000	20.51%	88,500
Contingency	200,000	-	-	-
<b>Total Special Projects and Contingencies</b>	<b>8,211,621</b>	<b>1,223,247</b>	<b>14.90%</b>	<b>1,077,782</b>
<b>TOTAL OPERATING EXPENSE</b>	<b>72,043,666</b>	<b>25,753,728</b>	<b>35.75%</b>	<b>22,594,664</b>
<b>Non Cash Expenses</b>				
<b>Amortization Expense</b>				
Amortization Expense - Intangible Software	13,000,000	733,178	5.64%	-
Amortization Expense - Software	-	-	-	8,466
Amortization Expense - Right to Use Asset - Leases	515,000	257,376	49.98%	85,792
Amortization Expense - Refundings	6,600,000	3,301,580	50.02%	3,072,709
<b>Subtotal Amortization Expense</b>	<b>20,115,000</b>	<b>4,292,134</b>	<b>21.34%</b>	<b>3,166,967</b>
<b>Depreciation Expense</b>				
Dep Expense - Equipment	-	-	-	311,353
Dep Expense - Autos & Trucks	31,000	15,205	49.05%	15,205
Dep Expense - Building & Toll Fac	180,000	88,374	49.10%	88,374
Dep Expense - Highways & Bridges	53,500,000	26,261,537	49.09%	25,786,403
Dep Expense - Toll Equipment	13,640,000	1,696,096	12.43%	1,518,757
Dep Expense - Signs	1,830,000	508,916	27.81%	604,477
Dep Expense - Land Improvements	545,000	271,162	49.75%	298,744
Undevelopable Projects	-	-	-	(1,570)
<b>Subtotal Depreciation Expense</b>	<b>69,726,000</b>	<b>28,841,290</b>	<b>41.36%</b>	<b>28,621,742</b>
<b>Total Non Cash Expenses</b>	<b>89,841,000</b>	<b>33,133,424</b>	<b>36.88%</b>	<b>31,788,709</b>
<b>Non Operating Expenses</b>				
Interest Expense - Debt Obligations	109,112,756	49,617,261	45.47%	38,805,259
CAMPO RIF Payment	10,000,000	10,000,000	100.00%	6,000,000
Community Initiatives	600,000	145,845	24.31%	5,000
<b>Total Non Operating Expenses</b>	<b>119,712,756</b>	<b>59,763,106</b>	<b>49.92%</b>	<b>44,810,259</b>
<b>TOTAL EXPENSES</b>	<b>281,597,422</b>	<b>118,650,258</b>	<b>42.13%</b>	<b>99,193,631</b>
<b>Net Income</b>	<b>20,923,845</b>	<b>31,996,132</b>		<b>37,614,753</b>

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of December 31, 2024**

		as of 12/31/2024	as of 12/31/2023
ASSETS			
Current Assets			
Cash			
Regions Operating Account		211,034	109,407
Cash in TexStar		1,911,151	381,265
Regions Payroll Account		115,770	153,162
Restricted Cash			
Goldman Sachs FSGF 465		602,811,973	563,894,105
Restricted Cash - TexSTAR		35,447,558	62,075,413
Treasury SLGS		197,830,598	-
Total Cash and Cash Equivalents		838,328,084	626,613,352
Accounts Receivables			
Accounts Receivable - Net		5,984,664	5,270,407
Due From Other Agencies		620,231	215,863
Due From TTA		-	551,418
Due From NTTA		1,961,807	1,398,065
Due From HCTRA		15,638,598	2,057,071
Due From TxDOT		9,905,402	945,339
Due From Other Funds		2,804,402	-
Interest Receivable		835,809	576,951
Total Receivables		37,750,913	11,015,114
Short Term Investments			
Treasuries		11,882,736	103,459,127
Agencies		119,639,927	339,998,036
Total Short Term Investments		131,522,663	443,457,162
Total Current Assets		1,007,601,660	1,081,085,628
Construction in Progress		583,845,813	422,976,723
Capital Assets (Net of Depreciation and Amortization)			
Depreciable Assets			
Equipment		-	1,089,735
Autos and Trucks		59,166	31,677
Buildings and Toll Facilities		17,270,964	4,141,587
Highways and Bridges		1,654,735,651	1,699,404,882
Toll Equipment		24,668,356	16,544,053
Signs		10,981,491	11,158,179

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of December 31, 2024**

	as of 12/31/2024	as of 12/31/2023
Land Improvements	4,473,268	5,015,591
Right of way	88,149,606	88,149,606
<b>Intangible Assets</b>		
Intangible Software	5,242,495	-
<b>Right to Use Assets</b>		
Leases	686,337	1,201,089
<b>Total Fixed Assets</b>	<b>1,806,267,334</b>	<b>1,826,736,399</b>
<b>Other Assets</b>		
Intangible Assets-Net	159,433,795	165,741,024
Prepaid Insurance	730,211	545,877
Deferred Outflows (pension related)	2,384,338	2,738,023
Pension Asset	-	1,046,634
<b>Total Other Assets</b>	<b>162,548,344</b>	<b>170,071,558</b>
<b>Total Assets</b>	<b>3,560,263,151</b>	<b>3,500,870,308</b>
<b>LIABILITIES</b>		
<b>Current Liabilities</b>		
Accounts Payable	23,756,455	7,421,326
Construction Payable	-	9,757,318
Interest Payable	54,400,415	39,096,534
Due to other Funds	2,804,402	-
TCDRS Payable	79,305	106,800
Due to other Agencies	14,515	6,774
Due to TTA	-	586,607
Due to HCTRA	1,065,447	140,130
Due to Other Entities	-	74,681
71E TxDOT Obligation - ST	1,574,654	5,983,758
<b>Total Current Liabilities</b>	<b>83,695,194</b>	<b>63,173,928</b>
<b>Long Term Liabilities</b>		
Compensated Absences	222,277	222,277
Right to Use Obligations - Lease	949,904	1,286,881
Deferred Inflows (pension related)	1,192,688	1,378,935
Pension Liability	1,971,627	-
<b>Long Term Payables</b>	<b>4,336,496</b>	<b>2,888,093</b>

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of December 31, 2024**

	<b>as of 12/31/2024</b>	<b>as of 12/31/2023</b>
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**Bonds Payable**

**Senior Lien Revenue Bonds:**

Senior Lien Revenue Bonds 2010	105,559,190	97,972,003
Senior Lien Revenue Bonds 2011	10,111,845	16,716,872
Senior Lien Revenue Bonds 2015	10,000,000	10,000,000
Senior Lien Refunding Revenue Bonds 2016	47,045,000	59,340,000
Senior Lien Revenue Bonds 2018	44,345,000	44,345,000
Senior Lien Revenue Bonds 2020A	50,265,000	50,265,000
Senior Lien Refunding Bonds 2020B	54,305,000	54,970,000
Senior Lien Refunding Bonds 2020C	133,210,000	138,435,000
Senior Lien Revenue Bonds 2020E	167,160,000	167,160,000
Senior Lien Revenue Bonds 2021B	255,075,000	255,075,000
Senior Lien Refunding Bonds 2021D	273,650,000	274,150,000
Senior Lien Refunding Bonds 2021E	329,545,000	332,585,000
Senior Lien Premium 2016 Revenue Bonds	5,849,756	6,920,208
Sn Lien Revenue Bond Premium 2018	2,483,358	2,749,931
Senior Lien Revenue Bond Premium 2020A	10,797,375	11,057,690
Senior Lien Refunding Bond Premium 2020B	10,433,967	10,969,043
Senior Lien Revenue Bonds Premium 2020E	21,567,456	23,282,842
Senior Lien Revenue Bonds Premium 2021B	52,047,972	52,650,625
Senior Lien Refunding Bonds Premium 2021D	43,129,580	44,050,619
<b>Total Senior Lien Revenue Bonds</b>	<b>1,626,580,500</b>	<b>1,652,694,834</b>

**Sub Lien Revenue Bonds:**

Sub Lien Refunding Bonds 2016	69,055,000	71,435,000
Sub Lien Refunding Bonds 2020D	93,430,000	97,440,000
Subordinated Lien BANS 2020F	110,875,000	110,875,000
Subordinate Lien Refunding Bonds 2020G	61,570,000	61,570,000
Subordinated Lien BANS 2021C	244,185,000	244,185,000
Sub Refunding 2016 Prem/Disc	3,890,583	4,602,059
Subordinated Lien BANS 2020F Premium	-	4,002,865
Subordinated Lien Refunding Bonds Premium 2020G	6,158,290	6,562,262
Sub Lien BANS 2021C Premium	15,223,355	22,835,032
<b>Total Sub Lien Revenue Bonds</b>	<b>604,387,228</b>	<b>623,507,217</b>

**Central Texas Regional Mobility Authority**  
**Balance Sheet**  
**as of December 31, 2024**

	as of 12/31/2024	as of 12/31/2023
<b>Other Obligations</b>		
TIFIA Note 2021 - 183S	322,354,437	321,960,064
TIFIA Note 2021 - 290E	41,088,581	41,038,313
71E TxDOT Obligation - LT	47,253,089	49,568,481
Regions 2022 MoPac Loan	22,490,900	23,765,900
<b>Total Other Obligations</b>	<b>433,187,007</b>	<b>436,332,758</b>
<b>Total Long Term Liabilities</b>	<b>2,668,491,231</b>	<b>2,715,422,902</b>
<b>Total Liabilities</b>	<b>2,752,186,425</b>	<b>2,778,596,831</b>
<b>NET ASSETS</b>		
Contributed Capital	-	121,462,104
Net Assets Beginning	776,080,594	563,196,620
Current Year Operations	31,996,132	37,614,753
<b>Total Net Assets</b>	<b>808,076,727</b>	<b>722,273,477</b>
<b>Total Liabilities and Net Assets</b>	<b>3,560,263,151</b>	<b>3,500,870,308</b>

**Central Texas Regional Mobility Authority**  
**Statement of Cash Flow**  
**as of December 2024**

**Cash flows from operating activities:**

Receipts from toll revenues	119,469,687.78
Receipts from other sources	809,629.23
Payments to vendors	(50,768,565.51)
Payments to employees	(3,157,099.73)
Net cash flows provided by (used in) operating activities	<u>66,353,651.77</u>

**Cash flows from capital and related financing activities:**

Payment on Intangible assets	(3,301,579.78)
Interest Expense	(39,051,538.46)
Payments on bonds / loans	(6,058,154.16)
RIF Contribution	(10,000,000.00)
Acquisition of capital assets - non project	(18,498,345.98)
Acquisitions of construction in progress	(70,552,006.69)
Net cash flows provided by (used in) capital and related financing activities	<u>(147,461,625.07)</u>

**Cash flows from investing activities:**

Interest income	24,453,739.37
Purchase of investments	115,052,637.17
Net cash flows provided by (used in) investing activities	<u>139,506,376.54</u>

Net increase (decrease) in cash and cash equivalents	58,398,403.24
Cash and cash equivalents at beginning of period	817,680,594.31
Cash and cash equivalents at end of period	<u>876,078,997.55</u>

**Reconciliation of change in net assets to net cash provided by operating activities:**

Operating income	31,996,132.24
Adjustments to reconcile change in net assets to net cash provided by operating activities:	
Depreciation and amortization	33,133,423.73
Changes in assets and liabilities:	
Decrease in accounts receivable	(5,669,513.31)
Increase in prepaid expenses and other assets	(488,783.22)
Decrease in accrued expenses	(17,683,153.76)
Decrease in Interest expense	49,763,105.90
Increase in interest receivable	(24,697,559.81)
Total adjustments	34,357,519.53
Net cash flows provided by (used in) operating activities	<u>66,353,651.77</u>

**Reconciliation of cash and cash equivalents:**

Unrestricted cash and cash equivalents	237,819,466.62
Restricted cash and cash equivalents	638,259,530.92
Total	<u>876,078,997.54</u>

**CTRMA INVESTMENT REPORT**  
**Month Ending December 31, 2024**

	Balance 12/1/2024	Accrued Interest	Additions	Cash Transfers	Withdrawals	Balance 12/31/2024	Rate December '24
<b>Amount in Trustee TexStar</b>							
2011 Sr Lien Financial Assist Fund	16.98				16.98	-	4.56%
2013 Sub Lien Debt Service Reserve	621,373.52	2,408.40				623,781.92	4.56%
General Fund	10,300,275.92	39,922.94				10,340,198.86	4.56%
Trustee Operating Fund	19,749,588.24	67,591.72		1,500,000.00		21,317,179.96	4.56%
Renewal and Replacement	8.70					8.70	4.56%
TxDOT Grant Fund	508,850.29	1,972.24				510,822.53	4.56%
Senior Lien Debt Service Reserve Fund	432,492.84	1,676.30				434,169.14	4.56%
2015 Senior Series B Project	391,682.24	1,518.11				393,200.35	4.56%
2015C TIFIA Project acct	778,138.48	3,015.99				781,154.47	4.56%
2018 290E III Senior Project	1,042,999.88	4,042.57				1,047,042.45	4.56%
	<b>33,825,427.09</b>	<b>122,148.27</b>	<b>-</b>	<b>1,500,000.00</b>	<b>16.98</b>	<b>35,447,558.38</b>	

<b>Amount in TexStar Operating Fund</b>	<b>1,727,417.61</b>	<b>8,733.48</b>		<b>3,500,000.00</b>	<b>3,325,000.00</b>	<b>1,911,151.09</b>	<b>4.56%</b>
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**Goldman Sachs**

Operating Fund	4,928,598.68	18,704.94	268,797.67	-	4,600.84	5,211,500.45	4.62%
2020A Senior Lien Debt Service Account	1,057,999.11	3,637.61		194,988.28		1,256,625.00	4.62%
2020B Senior Lien Debt Service Fund	1,751,938.44	6,149.12		250,437.44		2,008,525.00	4.62%
2020C Senior Lien Debt Service Fund	6,306,639.29	22,606.11		630,184.59		6,959,429.99	4.62%
2020D Sub Lien Debt Service Fund	5,010,807.81	17,966.09		498,860.39		5,527,634.29	4.62%
2020D Sub Debt Service Reserve Fund	1,115,158.38	4,230.42	8,000,000.00			9,119,388.80	4.62%
2020E Sr Lien Project	83,524,520.04	317,802.03			3,323,145.93	80,519,176.14	4.62%
2020E Sr Ln Project Cap I	8,454,950.25	32,074.39				8,487,024.64	4.62%
2020F Sub Lien Debt Service Fund	2,476,912.61	8,567.00		111,161,395.39		113,646,875.00	4.62%
2020G Sub Lien Debt Service Acct	1,074,360.25	3,693.79		198,245.96		1,276,300.00	4.62%
2020G Sub Debt Service Reserve Fund	472,432.74	1,792.20	4,000,000.00			4,474,224.94	4.62%
2021A TIFIA Sub Lien Debt Serv Reserve	1,992,558.73	7,558.90	20,000,000.00			22,000,117.63	4.62%
2021A TIFIA Sub Lien Debt Service Acct	532,140.57	2,018.71		4,014,482.23		4,548,641.51	4.62%
2021B Senior Lien Cap I Project Fund	26,397,427.27	100,140.33				26,497,567.60	4.62%
2021B Senior Lien Project	1,066,877.98	3,805.36	1,000,000.00		1,811,412.57	259,270.77	4.62%
2021B Senior Lien Cap I Debt Service Acct	9,553.72	36.24				9,589.96	4.62%
2021C Sub Lien Cap I Project Fund	1,488.50	5.65				1,494.15	4.62%
2021C Sub Lien Project	15,299,433.00	58,045.74				15,357,478.74	4.62%
2021C Sub Lien Debt Service Fund	5,138,578.36	17,667.06		948,379.58		6,104,625.00	4.62%
2021D Senior Lien Debt Service Fund	5,189,807.92	17,938.48		901,753.60		6,109,500.00	4.62%
2021E Senior Lien Debt Service Fund	7,047,240.48	24,805.44		966,813.29		8,038,859.21	4.62%
2011 Sr Financial Assistance Fund	145.74	0.52	16.99	(163.25)		-	4.62%
2010 Senior DSF	7,843,882.05	28,607.15		1,127,510.80		9,000,000.00	4.62%
2011 Senior Lien Debt Service Acct	6,603,673.82	24,061.74		827,264.44		7,455,000.00	4.62%
2013 Senior Lien Debt Service Fund	44,778.54	169.94				44,948.48	4.62%
2013 Sub Debt Service Reserve Fund	250,175.10	949.45				251,124.55	4.62%
2013 Subordinate Debt Service Fund	35,242.14	133.75				35,375.89	4.62%
2015A Sr Lien Debt Service	5,715,758.23	21,317.67		(2,639,318.83)		3,097,757.07	4.62%
2015B Project	4,865,015.10	18,530.27			28,026.92	4,855,518.45	4.62%
2015C TIFIA Project	1,155,716.90	4,386.12	938,100.00			2,098,203.02	4.62%
2016 Sr Lien Rev Refunding Debt Service	8,914,538.10	33,832.03		(2,498,588.23)		6,449,781.90	4.62%
2016 Sub Lien Rev Refunding Debt Service	3,884,433.08	13,860.69		428,337.48		4,326,631.25	4.62%
2016 Sub Lien Rev Refunding DSR	854,872.43	3,244.37	7,000,000.00			7,858,116.80	4.62%
2018 Senior Debt Service Fund 290E III	1,862,921.31	6,585.82		239,117.87		2,108,625.00	4.62%
2018 290E III Senior Project	10,640,276.19	40,976.34			2,820,426.74	7,860,825.79	4.62%
TxDOT Grant Fund	535,341.68	2,031.70	257,500.00			794,873.38	4.62%
Renewal and Replacement	5.51	0.02		374,031.15	374,034.75	1.93	4.62%
Revenue Fund	5,186,937.50	33,685.82	12,147,820.36	(12,979,446.68)		4,388,997.00	4.62%
General Fund	43,763,657.41	154,072.85	155,033,969.80	(111,249,031.15)	13,422,559.50	74,280,109.41	4.62%
Senior Lien Debt Service Reserve Fund	3,443,616.54	13,069.05	96,977,000.00			100,433,685.59	4.62%
71E Revenue Fund	11,872,118.39	43,557.38	467,064.32	625,140.85	78,369.15	12,929,511.79	4.62%
MoPac Revenue Fund	-	4,085.30	577,223.67	(460,259.28)		121,049.69	4.62%
MoPac General Fund	14,288,637.19	48,747.34		862,272.08		15,199,656.61	4.62%
MoPac Operating Fund	3,100,410.41	11,319.40	262,225.70	400,000.00	139,427.03	3,634,528.48	4.62%
MoPac Loan Repayment Fund	920,704.91	2,907.69		177,592.00		1,101,204.60	4.62%
	<b>314,632,282.40</b>	<b>1,179,378.02</b>	<b>306,929,718.51</b>	<b>(5,000,000.00)</b>	<b>22,002,003.43</b>	<b>595,739,375.50</b>	

**Amount in Fed Agencies and Treasuries**

Amortized Principal	413,819,353.93	-	-	-	282,296,691.01	131,522,662.92
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**Certificates of Deposit**

<b>Total in Pools - TxStar</b>	35,552,844.70	130,881.75	-	5,000,000.00	3,325,016.98	37,358,709.47
<b>Total in GS FSGF</b>	314,632,282.40	1,179,378.02	306,929,718.51	(5,000,000.00)	22,002,003.43	595,739,375.50
<b>Total in Treasury SLGS</b>	245,000,000.00	5,230,597.95	-	-	52,400,000.00	197,830,597.95
<b>Total in Fed Agencies and Treasuries</b>	413,819,353.93	-	-	-	282,296,691.01	131,522,662.92
<b>Total Invested</b>	<b>1,009,004,481.03</b>	<b>6,540,857.72</b>	<b>306,929,718.51</b>	<b>-</b>	<b>360,023,711.42</b>	<b>962,451,345.84</b>

All Investments in the portfolio are in compliance with the CTRMA's Investment policy and the relevant provisions of the Public Funds Investment Act Chapter 2256.023

José Hernández, CFO

Ann Zigmond, Controller

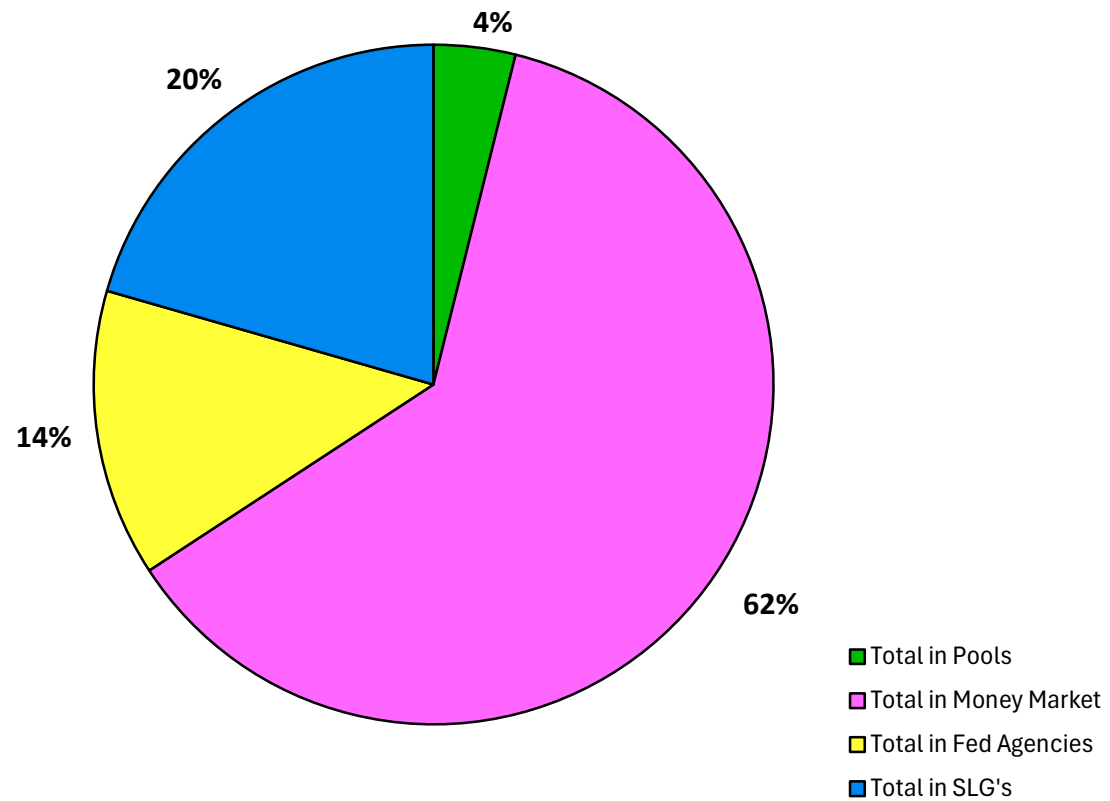


## Investments by Fund

Fund	Agencies / Treasuries /				Balance
	TexSTAR	TexSTAR-Trustee	Goldman Sachs	SLGS	
Renewal and Replacement Fund	8.70		1.93		10.63
Grant Fund	510,822.53		794,873.38	10,000,000.00	11,305,695.91
Senior Debt Service Reserve Fund	434,169.14		100,433,685.59	20,000,000.00	120,867,854.73
2010 Senior Lien Debt Service			9,000,000.00		9,000,000.00
2011 Sr Debt Service			7,455,000.00		7,455,000.00
2013 Sr Debt Service			44,948.48		44,948.48
2013 Sub Debt Service			35,375.89		35,375.89
2013 Sub Debt Service Reserve Fund	623,781.92		251,124.55		874,906.47
2015 Sr Debt Service			3,097,757.07		3,097,757.07
2016 Sr Lien Rev Refunding Debt Service			6,449,781.90		6,449,781.90
2016 Sub Lien Rev Refunding Debt Service			4,326,631.25		4,326,631.25
2016 Sub Lien Rev Refunding DSR			7,858,116.80	-	7,858,116.80
Operating Fund	21,317,179.96	1,911,151.09	5,211,500.45		28,439,831.50
Revenue Fund			4,388,997.00		4,388,997.00
General Fund	10,340,198.86		74,280,109.41	31,882,736.42	116,503,044.69
71E Revenue Fund			12,929,511.79	29,639,926.50	42,569,438.29
MoPac Revenue Fund			121,049.69		121,049.69
MoPac General Fund			15,199,656.61		15,199,656.61
MoPac Operating Fund			3,634,528.48		3,634,528.48
MoPac Loan Repayment Fund			1,101,204.60		1,101,204.60
2015B Project	393,200.35		4,855,518.45		5,248,718.80
2015 TIFIA Project	781,154.47		2,098,203.02	40,000,000.00	42,879,357.49
2018 Sr Lien Debt Service			2,108,625.00		2,108,625.00
2018 Sr Lien Project	1,047,042.45		7,860,825.79		8,907,868.24
2020A Senior Lien Debt Service			1,256,625.00		1,256,625.00
2020B Senior Lien Debt Service			2,008,525.00		2,008,525.00
2020C Senior Lien Debt Service			6,959,429.99		6,959,429.99
2020D Sub Lien Debt Service			5,527,634.29		5,527,634.29
2020D Sub Debt Service Reserve Fund			9,119,388.80	-	9,119,388.80
2020E Senior Lien Project			80,519,176.14		80,519,176.14
2020E Senior Lien Project Cap Interest			8,487,024.64		8,487,024.64
2020F Sub Lien Deb Service			113,646,875.00		113,646,875.00
2020G Sub Lien Debt Service			1,276,300.00		1,276,300.00
2020G Sub Lien Debt Service Reserve			4,474,224.94	-	4,474,224.94
2021A Sub Lien Debt Service Reserve			22,000,117.63	-	22,000,117.63
2021A Sub Debt Service			4,548,641.51		4,548,641.51
2021B Senior Lien Cap I Project Fund			26,497,567.60		26,497,567.60
2021B Senior Lien Project			259,270.77	191,999,874.24	192,259,145.01
2021B Senior Lien Cap I Debt Service Acct			9,589.96		9,589.96
2021C Sub Lien Cap I Project Fund			1,494.15	5,830,723.71	5,832,217.86
2021C Sub Lien Project			15,357,478.74		15,357,478.74
2021C Sub Lien Debt Service			6,104,625.00		6,104,625.00
2021D Senior Lien Debt Service			6,109,500.00		6,109,500.00
2021E Senior Lien Debt Service			8,038,859.21		8,038,859.21
<b>Totals</b>	<b>35,447,558.38</b>	<b>1,911,151.09</b>	<b>595,739,375.50</b>	<b>329,353,260.87</b>	<b>962,451,345.84</b>

12/31/2024

## Allocation of Funds





						Interest Income	
Bank	Fund	Cost	Cummulative Amortization	Book Value	Maturity Value	Accrued Interest	Interest Earned
6146001086	71E REVENU	15,000,000.00		15,000,000.00	15,000,000.00		
6146001086	71E REVENU	14,639,926.50		14,639,926.50	14,670,000.00	97,800.00	366,750.00
6180000120	GENERAL	11,882,736.42		11,882,736.42	12,000,000.00	113,036.99	288,340.12
6180000120	GENERAL	20,000,000.00		20,000,000.00	20,000,000.00		954,000.00
6180000059	SENLINDSR	20,000,000.00		20,000,000.00	20,000,000.00		1,431,000.00
6180005349	2015TIFIAP	10,000,000.00		10,000,000.00	10,000,000.00		361,930.56
6180000157	TXDOTGRANT	10,000,000.00		10,000,000.00	10,000,000.00		361,930.56
6180005349	2015TIFIAP	30,000,000.00		30,000,000.00	30,000,000.00		680,600.00
		131,522,662.92	-	131,522,662.92	131,670,000.00	210,836.99	4,444,551.24

### Goldman Sachs County Road Escrow Funds

	Balance	Accrued			Balance
	12/1/2024	Interest	Additions	Withdrawals	12/31/2024
Travis County Escrow Fund - Elroy Road	3,150,079.35	11,955.03		400.55	3,161,633.83
Travis County Escrow Fund - Ross Road	336,967.88	1,285.56		4,930.73	333,322.71
Travis County Escrow Fund - Old San Antonio Road	113,570.77	436.07			114,006.84
Travis County Escrow Fund - Old Lockhart Road	261,646.16	1,003.35			262,649.51
Travis County Escrow Fund - County Line Road	2,571,210.95	9,962.22		30,264.18	2,550,908.99
Travis County Escrow Fund - South Pleasant Valley Road	254,121.70	964.03		5,620.07	249,465.66
Travis County Escrow Fund - Thaxton Road	198,023.99	759.29		1,475.52	197,307.76
Travis County Escrow Fund - Pearce Lane Road	220,551.77	836.68		21,086.71	200,301.74
	<b>7,106,172.57</b>	<b>27,202.23</b>	<b>-</b>	<b>63,777.76</b>	<b>7,069,597.04</b>

State and Local Government Series as of 12/31/24											
Bank	Fund	Agency	Arbitrage Yield	CUSIP	Yield	Purchased Date	Purchase Value	Beginning	Accrued Interest	Withdrawals	End Value
1001021281	2021CPROJ	State and Local Government Series (SLGS)	1.831%	99SLA1060	4.18%	4/23/2024	35,000,000.00	35,000,000.00	330,723.71	29,500,000.00	5,830,723.71
1001021273	2021BPROJ	State and Local Government Series (SLGS)	1.831%	99SLA1078	4.18%	4/23/2024	210,000,000.00	210,000,000.00	4,899,874.24	22,900,000.00	191,999,874.24
							245,000,000.00	245,000,000.00	5,230,597.95	52,400,000.00	197,830,597.95

# TexSTAR

## MONTHLY NEWSLETTER

### DECEMBER 2024



## PERFORMANCE

### As of December 31, 2024

Current Invested Balance	\$ 11,011,396,681.51
Weighted Average Maturity (1)	35 Days
Weighted Average Life (2)	95 Days
Net Asset Value	1.000229
Total Number of Participants	1075
Management Fee on Invested Balance	0.06%*
Interest Distributed	\$ 41,447,900.89
Management Fee Collected	\$ 536,417.87
% of Portfolio Invested Beyond 1 Year	7.19%
Standard & Poor's Current Rating	AAAm

Rates reflect historical information and are not an indication of future performance.

### December Averages

Average Invested Balance	\$ 10,555,127,058.51
Average Monthly Yield, on a simple basis	4.5642%
Average Weighted Maturity (1)	36 Days
Average Weighted Life (2)	93 Days

#### Definition of Weighted Average Maturity (1) & (2)

(1) This weighted average maturity calculation uses the SEC Rule 2a-7 definition for stated maturity for any floating rate instrument held in the portfolio to determine the weighted average maturity for the pool. This Rule specifies that a variable rate instruction to be paid in 397 calendar days or less shall be deemed to have a maturity equal to the period remaining until the next readjustment of the interest rate.  
(2) This weighted average maturity calculation uses the final maturity of any floating rate instruments held in the portfolio to calculate the weighted average maturity for the pool.

The maximum management fee authorized for the TexSTAR Cash Reserve Fund is 12 basis points. This fee may be waived in full or in part in the discretion of the TexSTAR co-administrators at any time as provided for in the TexSTAR Information Statement.

## NEW PARTICIPANTS

We would like to welcome the following entities who joined the TexSTAR program in December:

- \* Harris County Municipal Utility District No. 539
- \* Town of Weston
- \* Cibolo Canyons Special Improvement District
- \* Lubbock Housing Finance Corporation

## HOLIDAY REMINDER

In observance of **Martin Luther King Jr. holiday**, **TexSTAR will be closed Monday, January 20, 2025**. All ACH transactions initiated on Friday, January 17th will settle on Tuesday, January 21st.

## ECONOMIC COMMENTARY

### Market review

Despite uncertainties arising from the U.S. election, evolving monetary policy, and heightened geopolitical tensions, 2024 emerged as a remarkable year for the economy and financial markets. The economy is on track for a year of above-trend growth, driven by a resilient consumer base, while the labor market has stabilized in a relatively healthy state. Simultaneously, moderating inflation has enabled the Federal Reserve (Fed) to begin easing policy after a prolonged pause.

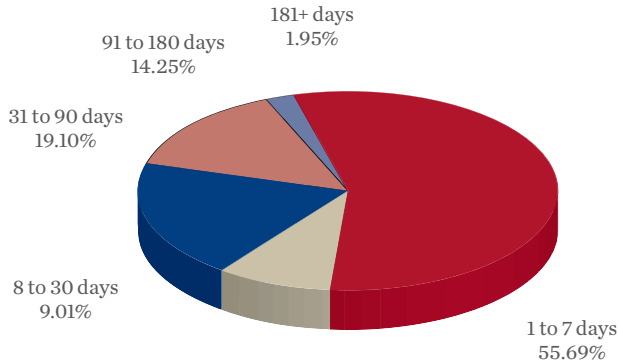
In 2024, the economy exhibited unexpectedly robust growth, despite still restrictive interest rates and higher prices for goods and services. The third estimate for third-quarter GDP revealed an upward revision to an annualized rate of 3.1%. This increase was largely fueled by a surge in exports and strong consumer spending, although it was partially offset by reduced private inventory investment and higher imports. Over the first three quarters, the average annualized growth rate was 2.6%, with consumer spending playing a pivotal role, contributing approximately 75% of the overall GDP growth.

The labor market showed resilience in November, rebounding from disruptions caused by strikes and hurricanes in the previous month. Nonfarm payrolls increased by a solid 227,000, surpassing expectations, with upward revisions adding 56,000 jobs to the prior two months. The private sector accounted for 85% of this job growth, with health care and leisure and hospitality sectors adding 72,000 and 53,000 jobs, respectively. Elsewhere, wages rose 0.4% month-over-month (m/m) and 4.0% year-over-year (y/y), while the unemployment rate edged up to 4.2%. Overall, the labor market remains robust, although the stability in wages and the slight increase in the unemployment rate shifted the expectation toward a December rate cut.

*(continued page 4)*

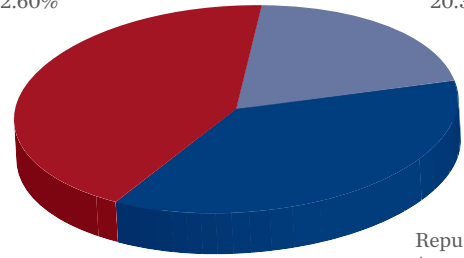
## INFORMATION AT A GLANCE

### PORTFOLIO BY TYPE OF INVESTMENT AS OF DECEMBER 31, 2024



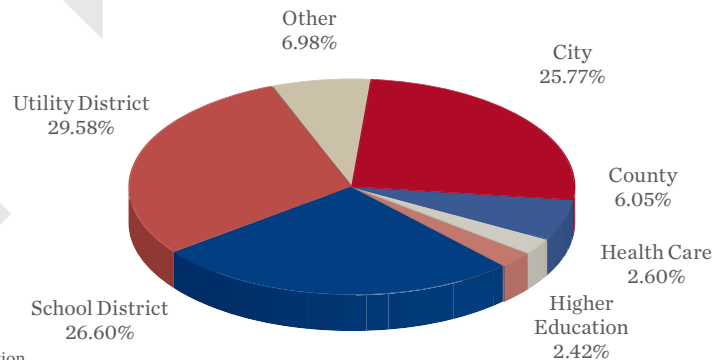
Treasuries  
42.60%

Agencies  
20.33%



Repurchase  
Agreements  
37.07%

### PORTFOLIO BY MATURITY AS OF DECEMBER 31, 2024 (1)



Other  
6.98%

### DISTRIBUTION OF PARTICIPANTS BY TYPE AS OF DECEMBER 31, 2024

(1) Portfolio by Maturity is calculated using WAM (1) definition for stated maturity. See page 1 for definition

## HISTORICAL PROGRAM INFORMATION

MONTH	AVERAGE RATE	BOOK VALUE	MARKET VALUE	NET ASSET VALUE	WAM (1)	WAL (2)	NUMBER OF PARTICIPANTS
Dec 24	4.5642%	\$11,011,396,681.51	\$11,014,513,690.84	1.000229	36	93	1075
Nov 24	4.7112%	10,166,178,873.71	10,168,700,798.41	1.000189	29	89	1071
Oct 24	4.8722%	10,685,059,311.14	10,687,382,798.75	1.000217	26	70	1063
Sep 24	5.1324%	10,713,994,849.49	10,717,808,636.16	1.000355	26	66	1056
Aug 24	5.2939%	10,960,587,143.65	10,963,170,866.05	1.000150	31	61	1048
Jul 24	5.3131%	11,614,008,231.39	11,614,697,399.72	1.000059	33	64	1043
Jun 24	5.3126%	10,696,510,063.51	10,695,858,054.79	0.999939	36	66	1040
May 24	5.3078%	10,946,135,253.27	10,946,064,280.53	0.999895	37	67	1037
Apr 24	5.3057%	11,388,285,240.44	11,386,977,182.36	0.999885	35	65	1031
Mar 24	5.2986%	11,373,415,394.49	11,372,687,872.41	0.999936	36	68	1025
Feb 24	5.3035%	11,928,691,803.89	11,927,911,436.19	0.999934	36	69	1024
Jan 24	5.3200%	11,483,316,119.03	11,483,741,551.85	1.000037	42	77	1024

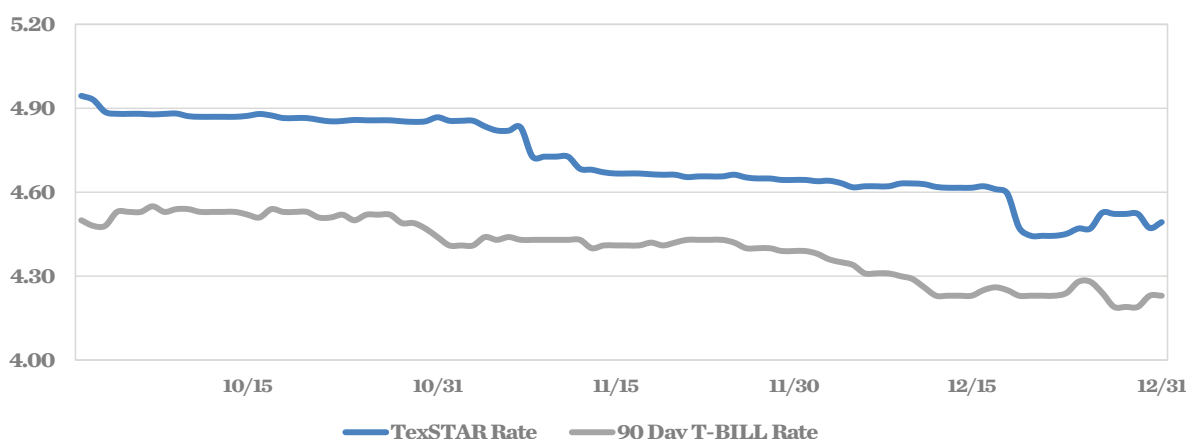
## PORTFOLIO ASSET SUMMARY AS OF DECEMBER 31, 2024

	BOOK VALUE	MARKET VALUE
Uninvested Balance	\$ 444.93	\$ 444.93
Accrual of Interest Income	14,766,559.09	14,766,559.09
Interest and Management Fees Payable	(40,916,607.53)	(40,916,607.53)
Payable for Investment Purchased	(275,805,068.47)	(275,805,068.47)
Repurchase Agreement	4,193,636,000.00	4,193,636,000.00
Government Securities	7,119,715,353.49	7,122,832,362.82
<b>TOTAL</b>	<b>\$ 11,011,396,681.51</b>	<b>\$ 11,014,513,690.84</b>

Market value of collateral supporting the Repurchase Agreements is at least 102% of the Book Value. The portfolio is managed by J.P. Morgan Chase & Co. and the assets are safekept in a separate custodial account at the Federal Reserve Bank in the name of TexSTAR. The only source of payment to the Participants are the assets of TexSTAR. There is no secondary source of payment for the pool such as insurance or guarantee. Should you require a copy of the portfolio, please contact TexSTAR Participant Services.



## TEXSTAR VERSUS 90-DAY TREASURY BILL



This material is for information purposes only. This information does not represent an offer to buy or sell a security. The above rate information is obtained from sources that are believed to be reliable; however, its accuracy or completeness may be subject to change. The TexSTAR management fee may be waived in full or in part at the discretion of the TexSTAR co-administrators and the TexSTAR rate for the period shown reflects waiver of fees. This table represents historical investment performance/return to the customer, net of fees, and is not an indication of future performance. An investment in the security is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the issuer seeks to preserve the value of an investment of \$1.00 per share, it is possible to lose money by investing in the security. Information about these and other program details are in the fund's Information Statement which should be read carefully before investing. The yield on the 90-Day Treasury Bill ("T-Bill Yield") is shown for comparative purposes only. When comparing the investment returns of the TexSTAR pool to the T-Bill Yield, you should know that the TexSTAR pool consists of allocations of specific diversified securities as detailed in the respective Information Statements. The T-Bill Yield is taken from Bloomberg Finance L.P. and represents the daily closing yield on the then current 90-Day T-Bill. The TexSTAR yield is calculated in accordance with regulations governing the registration of open-end management investment companies under the Investment Company Act of 1940 as promulgated from time to time by the federal Securities and Exchange Commission.

### DAILY SUMMARY FOR DECEMBER 2024

DATE	MNY MKT FUND EQUIV. [SEC Std.]	DAILY ALLOCATION FACTOR	INVESTED BALANCE	MARKET VALUE PER SHARE	WAM DAYS (1)	WAL DAYS (2)
12/1/2024	4.6441%	0.000127235	\$10,166,178,873.71	1.000189	35	94
12/2/2024	4.6395%	0.000127109	\$10,396,663,122.46	1.000179	37	93
12/3/2024	4.6412%	0.000127155	\$10,423,929,322.67	1.000225	37	94
12/4/2024	4.6326%	0.000126921	\$10,446,765,158.68	1.000244	37	93
12/5/2024	4.6179%	0.000126517	\$10,452,008,233.43	1.000231	37	95
12/6/2024	4.6214%	0.000126615	\$10,580,530,815.85	1.000243	35	92
12/7/2024	4.6214%	0.000126615	\$10,580,530,815.85	1.000243	35	92
12/8/2024	4.6214%	0.000126615	\$10,580,530,815.85	1.000243	35	92
12/9/2024	4.6312%	0.000126882	\$10,605,437,220.96	1.000232	36	92
12/10/2024	4.6314%	0.000126889	\$10,622,573,204.02	1.000236	36	91
12/11/2024	4.6290%	0.000126821	\$10,689,926,862.68	1.000257	36	93
12/12/2024	4.6193%	0.000126557	\$10,352,651,009.61	1.000288	37	97
12/13/2024	4.6162%	0.000126472	\$10,430,606,494.54	1.000255	36	95
12/14/2024	4.6162%	0.000126472	\$10,430,606,494.54	1.000255	36	95
12/15/2024	4.6162%	0.000126472	\$10,430,606,494.54	1.000255	36	95
12/16/2024	4.6215%	0.000126617	\$10,524,802,221.89	1.000260	35	93
12/17/2024	4.6111%	0.000126331	\$10,509,962,344.00	1.000266	35	94
12/18/2024	4.5959%	0.000125916	\$10,479,827,489.56	1.000236	36	94
12/19/2024	4.4737%	0.000122567	\$10,616,984,651.75	1.000270	36	92
12/20/2024	4.4446%	0.000121769	\$10,546,337,417.79	1.000242	37	94
12/21/2024	4.4446%	0.000121769	\$10,546,337,417.79	1.000242	37	94
12/22/2024	4.4446%	0.000121769	\$10,546,337,417.79	1.000242	37	94
12/23/2024	4.4517%	0.000121964	\$10,556,878,019.28	1.000256	36	93
12/24/2024	4.4706%	0.000122483	\$10,608,410,014.76	1.000239	36	92
12/25/2024	4.4706%	0.000122483	\$10,608,410,014.76	1.000239	36	92
12/26/2024	4.5268%	0.000124023	\$10,588,388,696.76	1.000233	37	92
12/27/2024	4.5227%	0.000123909	\$10,727,130,792.45	1.000233	35	89
12/28/2024	4.5227%	0.000123909	\$10,727,130,792.45	1.000233	35	89
12/29/2024	4.5227%	0.000123909	\$10,727,130,792.45	1.000233	35	89
12/30/2024	4.4725%	0.000122533	\$10,693,929,109.50	1.000250	36	89
12/31/2024	4.4933%	0.000123105	\$11,011,396,681.51	1.000229	35	95
Average	4.5642%	0.000125045	\$10,555,127,058.51		36	93



## *ECONOMIC COMMENTARY (cont.)*

Meanwhile, the November Consumer Price Index (CPI) report indicated that progress on disinflation had stalled, yet underlying details suggested positive momentum persists. Headline CPI rose 0.3% m/m, with base effects pushing the annual increase to 2.7%, while core inflation remained steady at 0.3% m/m and 3.3% y/y. Inflation appeared most pronounced in sectors aligned with resilient mid-to-upper income consumption, such as autos, travel, leisure, and recreational services. However, many of these segments are volatile and do not appear to be on an upward trend. In more welcome news, inflation in shelter and auto insurance eased, rising by 0.3% and 0.1%, respectively. On the other hand, headline and core Personal Consumption Expenditures (PCE) came in slightly below expectations, rising 2.4% and 2.8% y/y, respectively. As base effects become more favorable and core services disinflation continues, inflation may resume its steady decline toward 2%.

At its final meeting, the Federal Open Market Committee (FOMC) reduced the federal funds rate by 0.25% to a target range of 4.25%-4.50%, completing a total reduction of 100 basis points (bps) in 2024. The statement took a more hawkish turn, changing the language from “considering additional adjustments” to “considering the extent and timing of additional adjustments” to the target range, suggesting the Fed may pause rate cuts at its next meeting, maintaining flexibility based on evolving data.

The updated Summary of Economic Projections (SEP) also leaned hawkish. It acknowledged resilient economic growth, reduced downside risks to the labor market, and slower progress on disinflation. The SEP projected higher growth and lower unemployment for 2025, along with increased inflation forecasts for 2025 and 2026. Additionally, it suggested a more cautious approach to rate cuts, with the committee expecting just two rate cuts for 2025, compared to four in the September SEP. Notably, a few members considered potential fiscal policies and tariffs into their estimates. The pace of rate cuts is expected to be more gradual and will remain contingent on the evolution of economic data.

With the Federal Reserve’s policy rate reduction in December, yields on U.S. Treasury bills declined. In contrast, longer-term Treasury yields rose, influenced by heightened long-term growth and inflation expectations under the new administration. Three-month and six-month Treasury bill yields both fell by 17 bps to 4.32% and 4.27%, respectively. One-year Treasury yields decreased by 14 bps to 4.15%, while two-year Treasury yields increased by 9 bps to 4.24%.

## **Outlook**

As we transition into 2025, uncertainty continues to loom over the markets. In the wake of the election, there is considerable speculation about the policies the incoming administration might implement and their potential economic impacts. With Donald Trump’s re-election as president and the Republican sweep of Congress, significant policy shifts are anticipated, adding a layer of complexity to the economic outlook. Trump’s agenda focuses on four major policies: tax cuts, increased tariffs, reduced immigration, and deregulation across various sectors. Extending the Tax Cut & Jobs Act, set to expire at the end of 2025, along with pursuing deregulation, is generally seen as supportive for growth. However, proposed tariffs and immigration policies could drive up prices, pushing inflation higher. However, the timing and scale of these policies remain uncertain, making their impacts difficult to predict. That said, none of the proposed policies appear to spell trouble for the economy, at least in the short run; and 2025 should be another year of expansion, likely at a trend-like pace.

Meanwhile, with inflation trending lower and the labor market normalizing, the Fed cut interest rates by 100 bps since September 2024. Although the Fed still views its current policy stance to be restrictive, it is notably less so than before, and it maintains a bias toward easing the policy rate until reaching a neutral stance. However, resilient economic activity and inflationary policies, if passed, could complicate this goal. A more gradual path of policy easing is likely, limiting any significant downward movement in rates. Until there is more clarity on President Trump’s policy agenda, the pace of rate cuts will continue to depend on incoming economic data. We anticipate that the Fed will implement up to two additional cuts in 2025 to further alleviate restrictive pressures on the economy, while remaining vigilant to avoid reigniting inflation.

This information is an excerpt from an economic report dated December 2024 provided to TexSTAR by JP Morgan Asset Management, Inc., the investment manager of the TexSTAR pool.



TEXSTAR BOARD MEMBERS

Monte Mercer	North Central TX Council of Government	Governing Board President
David Pate	Richardson ISD	Governing Board Vice President
David Medanich	Hilltop Securities	Governing Board Secretary
Andrew Linton	J.P. Morgan Asset Management	Governing Board Asst. Sec./Treas
Brett Starr	City of Irving	Advisory Board
Sandra Newby	Qualified Non-Participant	Advisory Board
Ron Whitehead	Qualified Non-Participant	Advisory Board

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**GENERAL MEETING OF THE BOARD OF DIRECTORS  
OF THE  
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

**RESOLUTION NO. 25-005**

**AUTHORIZING THE EXECUTIVE DIRECTOR TO NEGOTIATE AND EXECUTE  
AN AGREEMENT TO ACQUIRE CERTAIN PROPERTY IN  
TRAVIS COUNTY FOR THE 183 SOUTH / BERGSTROM EXPRESSWAY PROJECT  
(PARCEL 129E)**

WHEREAS, pursuant to and under the authority of Subchapter E, Chapter 370, Texas Transportation Code and other applicable law, the Central Texas Regional Mobility Authority ("Mobility Authority") hereby finds and determines that to promote the public safety, to facilitate the safety and movement of traffic, and to preserve the financial investment of the public in its roadways and the roadways of the State of Texas, public convenience and necessity requires acquisition of a drainage easement, as that drainage easement is described by metes and bounds in Exhibit A to this Resolution (the "Property"), owned by RIC (Austin) LLC (the "Owner"), located adjacent to the US Hwy 183S in Travis County, for the construction, reconstruction, maintaining, widening, straightening, lengthening, and operating of the US 183 South / Bergstrom Expressway Project (the "Project"), as a part of the improvements to the Project; and

WHEREAS, an independent, professional appraisal report of the Property has been submitted to the Mobility Authority, and an amount has been established to be just compensation for the property rights to be acquired; and

WHEREAS, the Court appointed Special Commissioners who convened a hearing and entered an Award (the "Commissioners' Award"); and

WHEREAS the landowner filed objections to the Award; and

WHEREAS, the Mobility Authority has already paid consideration of \$610,000 for the right of possession of the Property, pursuant to a Possession and Use Agreement and in satisfaction of the Commissioners' Award; and


WHEREAS, the landowner has made an offer of settlement for consideration that is reasonable, feasible, and practical in all respects, and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors that the Executive Director is specifically authorized to negotiate and execute, if possible, an agreement to acquire the Property for total consideration of \$2,050,000.00, with a credit of \$610,000 already paid pursuant to a Possession and Use Agreement and the Commissioners' Award, and with said Settlement Amount

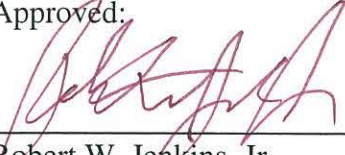
and total consideration inclusive of any applicable pre-judgment and post-judgment interest.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of January 2025.

Submitted and reviewed by:

  
\_\_\_\_\_  
James M. Bass  
Executive Director

Approved:

  
\_\_\_\_\_  
Robert W. Jenkins, Jr.  
Chairman, Board of Directors

**Exhibit A**

EXHIBIT \_\_\_\_\_

County: Travis  
Highway: U.S. 183  
Limits: From: East of US 290 To: SH 71  
RCSJ: 0151-09-039  
Station: 391+92.38 to 393+89.31

**PARCEL 129(E)  
DRAINAGE EASEMENT DESCRIPTION**

DESCRIPTION OF A 3.874 ACRE (168,750 SQ. FT.) PARCEL OF LAND LOCATED IN THE JESSE C. TANNEHILL LEAGUE, ABSTRACT NO. 22 IN THE CITY OF AUSTIN, TRAVIS COUNTY, TEXAS, AND BEING PART OF LOT 1A-B, MOTOROLA, INC. ED BLUESTEIN FACILITY, AS DESCRIBED IN DOCUMENT NO. 200900045 OF THE OFFICIAL RECORDS OF TRAVIS COUNTY, TEXAS (O.R.T.C.TX.), BEING DESCRIBED IN A DEED TO MFBD ED BLUESTEIN, LLC, RECORDED IN DOCUMENT NO. 2012132395 OF THE OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS (O.P.R.T.C.TX.), SAID 3.874 ACRE (168,752 SQ. FT.) TO BE USED AS A DRAINAGE EASEMENT, AS SHOWN ON THE ACCOMPANYING SKETCH PREPARED BY SAM, INC. FOR THIS PARCEL, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

**BEGINNING** at a ½-inch iron rod with a Texas Department of Transportation (TxDOT) aluminum cap set 203.54 feet left of Engineer's Centerline Station (E.C.S.) 391+92.38, being in the existing east right-of-way line of U.S. Highway 183 as conveyed to the State of Texas and recorded in Volume 2876, Page 93 of the Deed Records of Travis County, Texas (D.R.T.C.TX.), and being in the west line of said Lot 1A-B, said ½-inch iron rod with a TxDOT aluminum cap set being the northwest corner of the parcel described herein, from which a TxDOT Type I monument found 188.87 feet left of E.C.S. 384+96.30 in the existing east right-of-way line of said U.S. Highway 183 bears the following two (2) courses and distances lettered A-B:

- A) N 11°29'43" E, a distance of 136.18 feet to a ½-inch iron rod found, and
- B) N 09°45'17" E, a distance of 566.02 feet;

**THENCE**, departing the existing east right-of-way line of said U.S. Highway 183, through the interior of said Lot 1A-B, the following ten (10) courses and distances numbered 1-10:

- 1) S 82°53'18" E, a distance of 339.19 feet to a ½-inch iron rod with a TxDOT aluminum cap set 541.43 feet left of E.C.S. 391+63.24,
- 2) N 12°38'27" W, a distance of 298.23 feet to a ½-inch iron rod with a TxDOT aluminum cap set 418.26 feet left of E.C.S. 388+97.18,
- 3) S 83°09'39" E, a distance of 225.83 feet to a ½-inch iron rod with a TxDOT aluminum cap set 643.38 feet left of E.C.S. 388+79.63,
- 4) S 13°56'36" E, a distance of 148.75 feet to a ½-inch iron rod with a TxDOT aluminum cap set 707.38 feet left of E.C.S. 390+10.08,
- 5) S 03°30'47" E, a distance of 70.95 feet to a ½-inch iron rod with a TxDOT aluminum cap set 726.10 feet left of E.C.S. 390+76.45,
- 6) S 20°39'04" W, a distance of 69.28 feet to a ½-inch iron rod with a TxDOT aluminum cap set 715.62 feet left of E.C.S. 391+42.85,

EXHIBIT \_\_\_\_\_

County: Travis  
Highway: U.S. 183  
Limits: From: East of US 290 To: SH 71  
RCSJ: 0151-09-039  
Station: 391+92.38 to 393+89.31

**PARCEL 129(E)  
DRAINAGE EASEMENT DESCRIPTION**

- 7) S 42°08'36" W, a distance of 344.73 feet to a ½-inch iron rod with a TxDOT aluminum cap set 544.57 feet left of E.C.S. 394+34.17,
  - 8) S 57°13'50" W, a distance of 83.13 feet to a ½-inch iron rod with a TxDOT aluminum cap set 486.41 feet left of E.C.S. 394+92.26,
  - 9) N 30°36'08" W, a distance of 122.83 feet to a ½-inch iron rod with a TxDOT aluminum cap set 402.02 feet left of E.C.S. 394+04.70, and
  - 10) N 72°46'11" W, a distance of 195.96 feet to a ½-inch iron rod with a TxDOT aluminum cap set 206.68 feet left of E.C.S. 393+89.31, being in said existing east right-of-way line of said U.S. Highway 183, said ½-inch iron rod with a TxDOT aluminum cap set being the southwest corner of the parcel described herein, from which a TxDOT Type I monument found bears, S 11°29'43" W, with the existing east right-of-way line of said U.S. Highway 183, a distance of 64.58 feet;
- 11) **THENCE**, N 11°29'43" E, with the existing east right-of-way line of said U.S. Highway 183, being the west line of said Lot 1A-B, a distance of 198.71 feet to the **POINT OF BEGINNING**, and containing 3.874 acres (168,750 sq. ft.) of land more or less.

This property description is accompanied by a plat of even date.

All bearings are based on the Texas Coordinate System, Central Zone, NAD 83(93).

THE STATE OF TEXAS

§  
§  
§

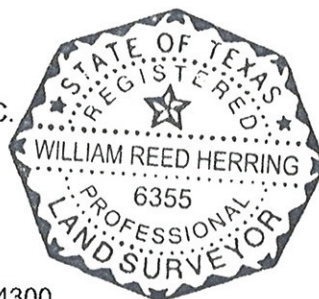
KNOW ALL MEN BY THESE PRESENTS:


COUNTY OF TRAVIS

That I, William Reed Herring, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the property described herein was determined by a survey made on the ground under my direction and supervision.

WITNESS MY HAND AND SEAL at Austin, Travis County, Texas this the 31<sup>st</sup> day of December 2014 A.D.

SURVEYING AND MAPPING, INC.  
4801 Southwest Parkway  
Building Two, Suite 100  
Austin, Texas 78735  
(512) 447-0575  
Fax.: (512) 326-3029  
Texas Firm Registration No. 10064300

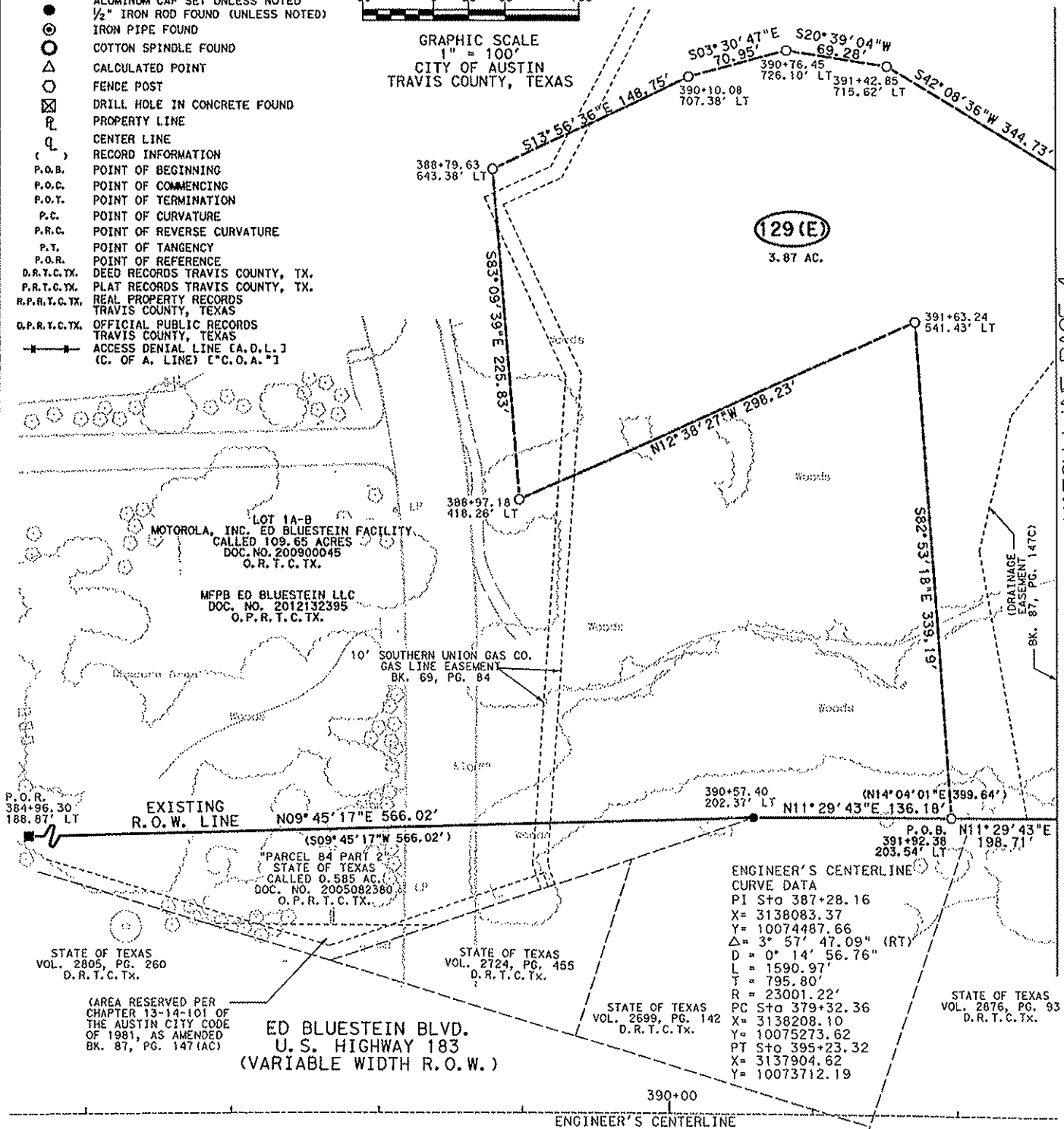
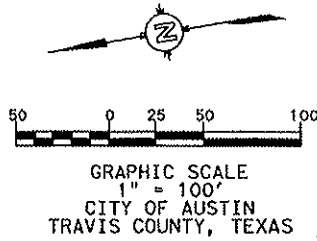


  
William Reed Herring  
Registered Professional Land Surveyor  
No. 6355 - State of Texas



JESSE C. TANNEHILL LEAGUE,  
ABSTRACT NO. 22

- LEGEND
- TYPE I CONCRETE MONUMENT FOUND
  - TYPE II CONCRETE MONUMENT FOUND (UNLESS NOTED)
  - TYPE II CONCRETE MONUMENT SET
  - 1/2" IRON ROD SET WITH TXDOT ALUMINUM CAP SET UNLESS NOTED
  - 1/2" IRON ROD FOUND (UNLESS NOTED)
  - IRON PIPE FOUND
  - COTTON SPINDLE FOUND
  - △ CALCULATED POINT
  - FENCE POST
  - ⊗ DRILL HOLE IN CONCRETE FOUND
  - PROPERTY LINE
  - CENTER LINE
  - (L) RECORD INFORMATION
  - P.O.B. POINT OF BEGINNING
  - P.O.C. POINT OF COMMENCING
  - P.O.T. POINT OF TERMINATION
  - P.C. POINT OF CURVATURE
  - P.R.C. POINT OF REVERSE CURVATURE
  - P.T. POINT OF TANGENCY
  - P.O.R. POINT OF REFERENCE
  - D.R.T.C.TX. DEED RECORDS TRAVIS COUNTY, TX.
  - P.R.T.C.TX. PLAT RECORDS TRAVIS COUNTY, TX.
  - R.P.R.T.C.TX. REAL PROPERTY RECORDS TRAVIS COUNTY, TEXAS
  - O.P.R.T.C.TX. OFFICIAL PUBLIC RECORDS TRAVIS COUNTY, TEXAS
  - ACCESS DENIAL LINE (A.D.L.) (C. OF A. LINE) C.C.O.A. #1



MATCH LINE PAGE 4

NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. RECORD INFORMATION ON THIS DRAWING IS BASED ON A PUBLIC RECORDS SEARCH BY THE SURVEYOR AND MAY NOT INCLUDE ALL EASEMENTS OR INSTRUMENTS PERTAINING TO THIS PROPERTY.
2. ALL BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NAD 83(93) HARN, ALL DISTANCES AND COORDINATES ARE ADJUSTED TO SURFACE USING THE PROJECT SURFACE ADJUSTMENT FACTOR OF 1.00011.
3. IMPROVEMENTS SHOWN HEREON ARE BASED UPON TXDOT AERIAL SURVEY DIGITAL FILES.
4. THIS PLAT IS ACCOMPANIED BY A PROPERTY DESCRIPTION OF EVEN DATE.

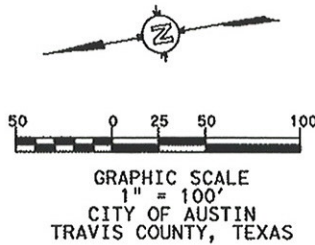
12/31/2014  
PAGE 3 OF 4



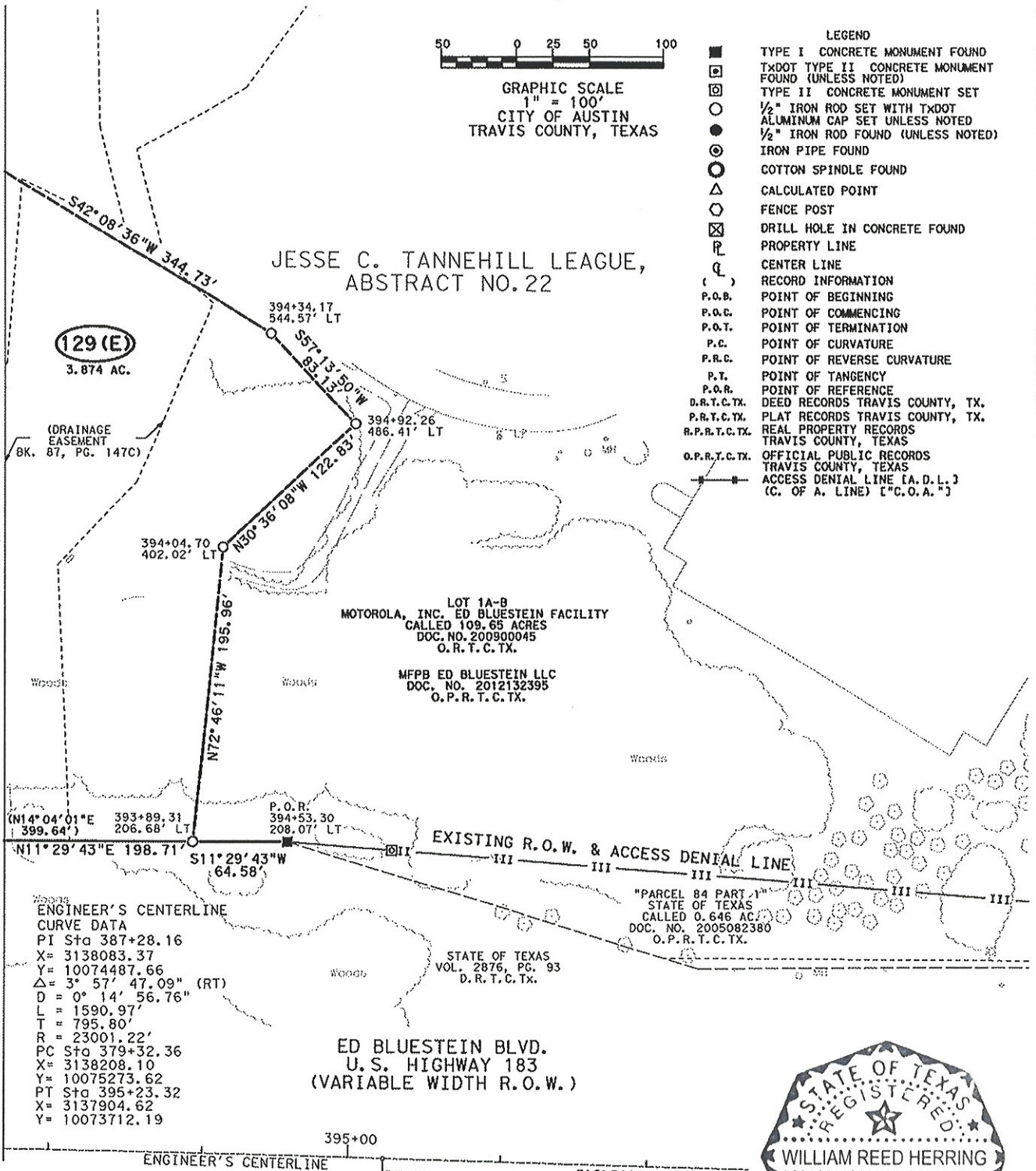
4801 Southwest Parkway  
Building Two, Suite 100  
Austin, Texas 78735  
(512) 447-0575  
Fax: (512) 326-3029  
Texas Firm Registration No. 10064300

DRAINAGE EASEMENT SKETCH  
SHOWING PARCEL 129(E)  
3.874 AC. (168,750 SQ. FT.)  
RCSJ NO. 0151-09-039

MATCH LINE PAGE 3



- LEGEND**
- TYPE I CONCRETE MONUMENT FOUND
  - TYPE II CONCRETE MONUMENT FOUND (UNLESS NOTED)
  - TYPE II CONCRETE MONUMENT SET
  - 1/2" IRON ROD SET WITH TXDOT ALUMINUM CAP SET UNLESS NOTED
  - 1/2" IRON ROD FOUND (UNLESS NOTED)
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  - O.P.R.T.C.TX. OFFICIAL PUBLIC RECORDS TRAVIS COUNTY, TEXAS
  - ACCESS DENIAL LINE [A.D.L.] (C. OF A. LINE) [C.O.A.]



I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION AND THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*William Reed Herring*

WILLIAM REED HERRING  
REGISTERED PROFESSIONAL LAND SURVEYOR  
NO. 6355, STATE OF TEXAS

12/31/2014  
DATE



12/31/2014  
PAGE 4 OF 4



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