

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 7/30/2021

Control	0273-04-048, ETC.
Project	F 2021(949)
Highway	US 183
County	WILLIAMSON

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: F 2021(949)

CONTROL: 0273-04-048

COUNTY: WILLIAMSON

LETTING: 08/04/2021

REFERENCE NO: 0720

PROPOSAL ADDENDUMS

-
- PROPOSAL COVER
 - BID INSERTS (SH. NO.: ALL)
 - GENERAL NOTES (SH. NO.: A, J, & P)

 - SPEC LIST (SH. NO.: 1-3, 3-3)
 - SPECIAL PROVISIONS:
 - ADDED:

 - DELETED:

 - SPECIAL SPECIFICATIONS:
 - ADDED: 3084

 - DELETED:

 - OTHER: SEE CHANGES OUTLINED BELOW

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

BID INSERTS:

- SHEET 1-9: ITEM 104-6022 QUANTITY IS REVISED.
- ITEM 105-6016 QUANTITY IS REVISED.
- ITEM 110-6001 QUANTITY IS REVISED.
- ITEM 132-6003 QUANTITY IS REVISED.
- ITEM 134-6001 QUANTITY IS ADDED.
- ITEM 160-6003 QUANTITY IS REVISED.
- ITEM 164-6003 QUANTITY IS REVISED.
- ITEM 164-6009 QUANTITY IS REVISED.
- ITEM 164-6011 QUANTITY IS REVISED.
- SHEET 2-9: ITEM 168-6001 QUANTITY IS REVISED.
- ITEM 216-6001 QUANTITY IS ADDED.
- ITEM 247-6366 QUANTITY IS REVISED.
- ITEM 310-6001 QUANTITY IS REVISED.
- ITEM 347-6006 QUANTITY IS REVISED.
- ITEM 351-6004 QUANTITY IS REVISED.
- ITEM 403-6001 QUANTITY IS REVISED.
- ITEM 423-6008 QUANTITY IS REVISED.
- SHEET 3-9: ITEM 432-6002 QUANTITY IS REVISED.
- ITEM 432-6030 QUANTITY IS ADDED.

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

ITEM 432-6045 QUANTITY IS REVISED.
 ITEM 460-6009 QUANTITY IS ADDED.
 ITEM 464-6003 QUANTITY IS REVISED.
 ITEM 464-6005 QUANTITY IS REVISED.
 ITEM 467-6333 QUANTITY IS ADDED.
 ITEM 467-6363 QUANTITY IS REVISED.
 ITEM 467-6395 QUANTITY IS REVISED.
 SHEET 4-9: ITEM 506-6038 QUANTITY IS REVISED.
 ITEM 506-6039 QUANTITY IS REVISED.
 ITEM 529-6008 QUANTITY IS REVISED.
 ITEM 530-6005 QUANTITY IS REVISED.
 ITEM 530-6008 QUANTITY IS REVISED.
 ITEM 540-6001 QUANTITY IS REVISED.
 SHEET 5-9: ITEM 644-6001 QUANTITY IS REVISED.
 SHEET 6-9: ITEM 644-6004 QUANTITY IS REVISED.
 ITEM 644-6007 QUANTITY IS REVISED.
 ITEM 644-6027 QUANTITY IS ADDED.
 ITEM 658-6015 QUANTITY IS ADDED.
 ITEM 658-6028 QUANTITY IS DELETED.
 ITEM 658-6046 QUANTITY IS DELETED.
 ITEM 658-6047 QUANTITY IS ADDED.
 ITEM 658-6061 QUANTITY IS DELETED.
 SHEET 7-9: ITEM 666-6036 QUANTITY IS REVISED.
 ITEM 666-6167 QUANTITY IS REVISED.
 ITEM 666-6178 QUANTITY IS REVISED.
 SHEET 8-9: ITEM 666-6205 QUANTITY IS REVISED.
 ITEM 666-6300 QUANTITY IS REVISED.
 ITEM 666-6312 QUANTITY IS REVISED.
 ITEM 672-6007 QUANTITY IS REVISED.
 ITEM 672-6009 QUANTITY IS REVISED.
 SHEET 9-9: ITEM 3076-6001 QUANTITY IS REVISED.
 ITEM 3076-6050 QUANTITY IS REVISED.
 ITEM 3076-6066 QUANTITY IS REVISED.
 ITEM 3084-6001 QUANTITY IS ADDED.
 ITEM 3085-6001 QUANTITY IS REVISED.
 SHEETS 1-9 - 9-9 INFORMATION MAY HAVE SHIFTED DUE TO THE CHANGES ABOVE.
 SHEET 10-10 ADDED DUE TO THE CHANGES ABOVE.

GENERAL NOTES:

SHEET A: TABLE IS REVISED.
 SHEET J: NOTE FOR ITEM ITEM 423, IS ADDED.
 SHEET P: NOTE FOR ITEM 3084 IS ADDED.
 SHEETS J-Q INFORMATION MAY HAVE SHIFTED DUE TO THE CHANGES ABOVE.

SPEC LIST:

SHEET 1-3: STANDARD SPECIFICATION 134 IS ADDED.
 STANDARD SPECIFICATION 216 IS ADDED.
 STANDARD SPECIFICATION 460 IS ADDED.
 SHEET 3-3: SPECIAL SPECIFICATION 3084 IS ADDED.
 SHEETS 1-3 - 3-3 INFORMATION MAY HAVE SHIFTED DUE TO THE CHANGES ABOVE.

PLAN SET:

THE FOLLOWING SHEETS HAVE BEEN REVISED.
 1 and 2.

THE FOLLOWING SHEETS HAVE BEEN REPLACED:
DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

5-10, 11, 11A-11H, 12, 12A, 12B, 13-18, 20, 21, 52-83, 99-102, 105-120,
129-149, 172-175, 176-181, AND 185-190.

THE FOLLOWING SHEETS HAVE BEEN ADDED.

12C, 104A, 127A, 128A, AND 128B.

Printed Name of Authorized Signer: _____

Signature of Authorized Signer: _____ Date: _____

PROJECT F 2021(949)
 COUNTY WILLIAMSON

Proposal Sheet
 TxDOT
 FORM 234-B I-61-5M

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	6002		PREPARING ROW DOLLARS and CENTS	STA	121.700	1
	104	6017		REMOVING CONC (DRIVEWAYS) DOLLARS and CENTS	SY	322.000	2
	104	6022		REMOVING CONC (CURB AND GUTTER) DOLLARS and CENTS	LF	37.000	3
	104	6028		REMOVING CONC (MISC) DOLLARS and CENTS	SY	377.000	4
	104	6054		REMOVING CONCRETE(MOW STRIP) DOLLARS and CENTS	LF	428.000	5
	105	6016		REMOVING STAB BASE & ASPH PAV(16") DOLLARS and CENTS	SY	5,584.000	6
	110	6001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	19,270.000	7
	132	6003		EMBANKMENT (FINAL)(ORD COMP)(TY B) DOLLARS and CENTS	CY	7,337.000	8
	134	6001		BACKFILL (TY A) DOLLARS and CENTS	STA	9.300	9
	160	6003		FURNISHING AND PLACING TOPSOIL (4") DOLLARS and CENTS	SY	54,978.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	164	6003		BROADCAST SEED (PERM) (RURAL) (CLAY) DOLLARS and CENTS	SY	54,978.000	11
	164	6009		BROADCAST SEED (TEMP) (WARM) DOLLARS and CENTS	SY	27,489.000	12
	164	6011		BROADCAST SEED (TEMP) (COOL) DOLLARS and CENTS	SY	27,489.000	13
	168	6001		VEGETATIVE WATERING DOLLARS and CENTS	MG	1,004.000	14
	216	6001		PROOF ROLLING DOLLARS and CENTS	HR	40.000	15
	247	6366	003	FL BS (CMP IN PLC)(TY A GR 5)(FNAL POS) DOLLARS and CENTS	CY	7,924.000	16
	310	6001		PRIME COAT (MULTI OPTION) DOLLARS and CENTS	GAL	6,481.000	17
	340	6246	003	D-GR HMA (SQ) TY-D PG64_22(LEVEL-UP) DOLLARS and CENTS	TON	33.700	18
	340	6272	003	TACK COAT DOLLARS and CENTS	GAL	362.000	19
	347	6001	002	TOM (ASPHALT) PG 76-22 DOLLARS and CENTS	TON	337.000	20
	347	6002	002	TOM-C (AGGREGATE) SAC-A DOLLARS and CENTS	TON	3,089.000	21
	347	6006	002	TOM - C (AGGREGATE) SAC - B DOLLARS and CENTS	TON	2,006.000	22

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	351	6004		FLEXIBLE PAVEMENT STRUCTURE REPAIR(8") DOLLARS CENTS and	SY	9,610.000	23
	354	6002		PLAN & TEXT ASPH CONC PAV(0" TO 2") DOLLARS CENTS and	SY	34,229.000	24
	403	6001		TEMPORARY SPL SHORING DOLLARS CENTS and	SF	4,300.000	25
	423	6008		RETAINING WALL (CAST - IN - PLACE) DOLLARS CENTS and	SF	8,395.000	26
	432	6002		RIPRAP (CONC)(5 IN) DOLLARS CENTS and	CY	329.000	27
	432	6030		RIPRAP (STONE COMMON)(GROUT)(12 IN) DOLLARS CENTS and	CY	17.000	28
	432	6045		RIPRAP (MOW STRIP)(4 IN) DOLLARS CENTS and	CY	201.000	29
	460	6009		CMP AR (GAL STL DES 2) DOLLARS CENTS and	LF	320.000	30
	462	6005	002	CONC BOX CULV (4 FT X 4 FT) DOLLARS CENTS and	LF	4.000	31
	462	6017	002	CONC BOX CULV (7 FT X 6 FT) DOLLARS CENTS and	LF	21.000	32
	464	6003	001	RC PIPE (CL III)(18 IN) DOLLARS CENTS and	LF	537.000	33
	464	6005	001	RC PIPE (CL III)(24 IN) DOLLARS CENTS and	LF	602.000	34

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	466	6170		WINGWALL (FW - S) (HW=9 FT) DOLLARS and CENTS	EA	1.000	35
	467	6333		SET (TY II) (15 IN) (CMP) (6: 1) (P) DOLLARS and CENTS	EA	10.000	36
	467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	20.000	37
	467	6395		SET (TY II) (24 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	22.000	38
	496	6004		REMOV STR (SET) DOLLARS and CENTS	EA	20.000	39
	496	6005		REMOV STR (WINGWALL) DOLLARS and CENTS	EA	2.000	40
	496	6007		REMOV STR (PIPE) DOLLARS and CENTS	LF	361.000	41
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	42
	502	6001	008	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	15.000	43
	506	6002	005	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	50.000	44
	506	6011	005	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	50.000	45
	506	6038	005	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	10,306.000	46

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	6039	005	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	10,306.000	47
	529	6008		CONC CURB & GUTTER (TY II) DOLLARS and CENTS	LF	37.000	48
	530	6004		DRIVEWAYS (CONC) DOLLARS and CENTS	SY	286.000	49
	530	6005		DRIVEWAYS (ACP) DOLLARS and CENTS	SY	1,360.000	50
	530	6008		TURNOUTS (ACP) DOLLARS and CENTS	SY	82.000	51
	540	6001	001	MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	3,225.000	52
	540	6014	001	SHORT RADIUS DOLLARS and CENTS	LF	75.000	53
	540	6015	001	DRIVEWAY TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	2.000	54
	540	6016	001	DOWNSTREAM ANCHOR TERMINAL SEC- TION DOLLARS and CENTS	EA	12.000	55
	540	6017	001	MTL BM GD FEN (LONG SPAN SYSTEM) DOLLARS and CENTS	LF	150.000	56
	542	6001		REMOVE METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	1,425.000	57
	542	6002		REMOVE TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	1.000	58

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	542	6003		REMOVE DOWNSTREAM ANCHOR TERMINAL DOLLARS and CENTS	EA	5.000	59
	544	6001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	9.000	60
	544	6003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	3.000	61
	560	6001		MAILBOX INSTALL-S (TWG-POST) TY 1 DOLLARS and CENTS	EA	7.000	62
	560	6002		MAILBOX INSTALL-D (TWG-POST) TY 1 DOLLARS and CENTS	EA	3.000	63
	560	6003		MAILBOX INSTALL-M (TWG-POST) TY 1 DOLLARS and CENTS	EA	2.000	64
	644	6001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	41.000	65
	644	6004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	5.000	66
	644	6007		IN SM RD SN SUP&AM TY10BWG(1)SA(U) DOLLARS and CENTS	EA	2.000	67
	644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P) DOLLARS and CENTS	EA	1.000	68
	644	6076		REMOVE SM RD SN SUP&AM DOLLARS and CENTS	EA	39.000	69
	658	6015		INSTL DEL ASSM (D-SW)SZ (BRF)GF1 DOLLARS and CENTS	EA	17.000	70

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	658	6047		INSTL OM ASSM (OM-2Y)(WC)GND DOLLARS and CENTS	EA	20.000	71
	662	6001		WK ZN PAV MRK NON-REMOV (W)4"(BRK) DOLLARS and CENTS	LF	170.000	72
	662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD) DOLLARS and CENTS	LF	22,463.000	73
	662	6032		WK ZN PAV MRK NON-REMOV (Y)4"(BRK) DOLLARS and CENTS	LF	5,660.000	74
	662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	22,531.000	75
	662	6038		WK ZN PAV MRK NON-REMOV (Y)8"(SLD) DOLLARS and CENTS	LF	27.000	76
	662	6056		WK ZN PAV MRK REMOV (TRAF BTN) TY W DOLLARS and CENTS	EA	170.000	77
	662	6109		WK ZN PAV MRK SHT TERM (TAB)TY W DOLLARS and CENTS	EA	652.000	78
	662	6111		WK ZN PAV MRK SHT TERM (TAB)TY Y-2 DOLLARS and CENTS	EA	709.000	79
	666	6036	007	REFL PAV MRK TY I (W)8"(SLD)(100MIL) DOLLARS and CENTS	LF	2,278.000	80
	666	6048	007	REFL PAV MRK TY I (W)24"(SLD)(100MIL) DOLLARS and CENTS	LF	119.000	81
	666	6054	007	REFL PAV MRK TY I (W)(ARROW)(100MIL) DOLLARS and CENTS	EA	33.000	82

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6078	007	REFL PAV MRK TY I (W)(WORD)(100MIL) DOLLARS and CENTS	EA	11.000	83
	666	6167	007	REFL PAV MRK TY II (W) 4" (BRK) DOLLARS and CENTS	LF	5,940.000	84
	666	6170	007	REFL PAV MRK TY II (W) 4" (SLD) DOLLARS and CENTS	LF	23,520.000	85
	666	6178	007	REFL PAV MRK TY II (W) 8" (SLD) DOLLARS and CENTS	LF	2,278.000	86
	666	6182	007	REFL PAV MRK TY II (W) 24" (SLD) DOLLARS and CENTS	LF	119.000	87
	666	6184	007	REFL PAV MRK TY II (W) (ARROW) DOLLARS and CENTS	EA	33.000	88
	666	6192	007	REFL PAV MRK TY II (W) (WORD) DOLLARS and CENTS	EA	11.000	89
	666	6205	007	REFL PAV MRK TY II (Y) 4" (BRK) DOLLARS and CENTS	LF	5,270.000	90
	666	6207	007	REFL PAV MRK TY II (Y) 4" (SLD) DOLLARS and CENTS	LF	24,187.000	91
	666	6300	007	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL) DOLLARS and CENTS	LF	5,940.000	92
	666	6312	007	RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL) DOLLARS and CENTS	LF	5,270.000	93
	666	6342	007	REF PROF PAV MRK TY I(W)4"(SLD)(100MIL) DOLLARS and CENTS	LF	23,520.000	94

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6345	007	REF PROF PAV MRK TY I(Y)4"(SLD)(100MIL) DOLLARS and CENTS	LF	24,187.000	95
	672	6007		REFL PAV MRKR TY I-C DOLLARS and CENTS	EA	413.000	96
	672	6009		REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	689.000	97
	677	6001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	39,614.000	98
	677	6003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	765.000	99
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	5.000	100
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	5.000	101
	685	6004		INSTL RDS D FLSH BCN ASSM (SOLAR PWRD) DOLLARS and CENTS	EA	2.000	102
	685	6006		REMOV RDS D FLSH BCN AM (SOLAR PWRD) DOLLARS and CENTS	EA	2.000	103
	3076	6001		D-GR HMA TY-B PG64-22 DOLLARS and CENTS	TON	8,759.000	104
	3076	6048		D-GR HMA TY-D PG76-22 DOLLARS and CENTS	TON	3,113.000	105
	3076	6050		D-GR HMA TY-D SAC-B PG76-22 DOLLARS and CENTS	TON	113.000	106

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	3076	6066		TACK COAT DOLLARS and CENTS	GAL	5,260.000	107
	3084	6001		BONDING COURSE DOLLARS and CENTS	GAL	407.000	108
	3085	6001		UNDERSEAL COURSE DOLLARS and CENTS	GAL	18,671.000	109
	6001	6002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	4.000	110
	6185	6002	002	TMA (STATIONARY) DOLLARS and CENTS	DAY	270.000	111
	6185	6003	002	TMA (MOBILE OPERATION) DOLLARS and CENTS	HR	150.000	112
	7251	6001		SUBSURFACE UTIL LOCATE (OUTSIDE RDBED) DOLLARS and CENTS	EA	4.000	113

Project Number:
County: Williamson
Highway: US 183

Sheet: 11
Control: 0273-04-048, etc.

GENERAL NOTES: Version: January 11, 2021

BASIS OF ESTIMATE:

Item	Description	**Rate
247	Flexible Base (CMP IN PLC)	132 LB/CF
310	Prime Coat	0.20 GAL/SY
340/3078,341/3076, 344/3077	Dense-Graded Hot-Mix Asphalt and Superpave	110 LB/SY/IN
347/3081	Thin Overlay Mixtures (TOM) - Surface Asphalt Aggregate (SAC B) Aggregate (SAC A)	7.0 LB/SY/IN 106.0 LB/SY/IN 109.0LB/SY/IN
3084	Bonding Course	0.09 GAL/SY
3085	UnderSeal Course	0.20 GAL/SY
	Tack Coat	0.08 GAL/SY

** For Informational Purposes Only

The following standard detail sheet or sheets have been modified: NONE

GENERAL

Contractor questions on this project are to be addressed to the following individual(s):

Georgetown Jason.Hudson@txdot.gov

Georgetown John.Peters@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals.

All contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to TxDOT's Public FTP at the following Address:

<https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/>

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name.

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.

The roadbed will be free of organic material prior to placing any section of the pavement structure.

Project Number:
County: Williamson
Highway: US 183

Sheet: 11
Control: 0273-04-048, etc.

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

Intelligent Transportation Systems (ITS) Infrastructure may exist within the limits of this project and that the system must remain operational throughout construction. The exact location of ITS Infrastructure is not known. Contact the TxDOT Area Engineer's or Inspection Team's Office for the location(s) at least 48 hours before commencing any work that might affect present ITS Infrastructure. Use caution if working in these areas to avoid damaging or interfering with existing facilities. Repair any damage to this system within 8 hours of occurrence at no cost to the Department. In the event of system damage, notify TxDOT/CTECC at (512) 974-0883 within one hour of occurrence. Failure of the Contractor to repair damage to any infrastructure that conveys any corridor information to TxDOT/CTECC will result in the Contractor being billed for the full cost of emergency repairs.

Provide a smooth, clean sawcut along the existing asphalt or concrete pavement structure, as directed. Consider subsidiary to the pertinent Items.

Construct all manholes/valves to final pavement elevations prior to the placement of final surface. If the manholes/valves are going to be exposed to traffic, place temporary asphalt around the manhole/valve to provide a 50:1 taper. The asphalt taper is subsidiary to the ACP work.

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.

ITEM 5 – CONTROL OF THE WORK

Place construction stakes at intervals of no more than 100 ft. This work is subsidiary.

Provide a 72 hour advance email notice to AUS_Locate@TxDOT.gov to request illumination, traffic signal, ITS, or toll equipment utility locates. Provide AUS_Locate@TxDOT.gov an electronic pdf of as-builts within 21 calendar days of illumination, traffic signal, ITS, or toll equipment being placed into operation. As-built shall include GPS coordinates of manholes and junction boxes. Include final version of RFI's and revised plan sheets.

Project Number:
County: Williamson
Highway: US 183

Sheet: 11
Control: 0273-04-048, etc.

Precast Alternate Proposals.

When a precast or cast-in-place concrete element is included in the plans, a precast concrete alternate may be submitted in accordance with “Standard Operating Procedure for Alternate Precast Proposal Submission” found online at <https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design>. Acceptance or denial of an alternate is at the sole discretion of the Engineer. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

Electronic Shop Drawing Submittals.

Submit electronic shop drawing submittals according to the current [Guide to Electronic Shop Drawing Submittal](https://www.txdot.gov/business/resources/specifications/shop-drawings.html) <https://www.txdot.gov/business/resources/specifications/shop-drawings.html> (TxDOT.gov Business > Resources - General > Shop Drawings). Pre-approved producers can be found online at TxDOT.gov > Business > Resources - Material Producer List. Use the following contact list for all submittals that are not required to be sent to Bridge Division and to copy the Engineer for all submittals to the Bridge Division.

Submittal Contact List

Georgetown Ruben.Carrasco@txdot.gov AUS_GE-ShopReview@txdot.gov

Alignment and Profile.

Unless shown in the plans, profile and alignment data for roadways being overlaid or widened are for design verification only. Provide survey and construct the roadway in accordance with the typical section. Bid items and data may be provided to adjust cross slope and super elevations.

ITEM 6 - CONTROL OF MATERIALS

Give a minimum of 1 business day notice for materials, which require inspection at the Plant.

The area designated as the potential habitat for the Houston Toad will not be allowed as a source for embankment unless approved by the Engineer. The general area is Bastrop County north of the Colorado River and east of SH 95 unless provided in the plans.

For removal, tie, or tap of asbestos concrete (AC) pipe, contact TxDOT and the local utility company 60 days prior to performing the work. Expose the AC pipe to provide a minimum of 1 ft. of clearance around the top and sides. A minimal amount of soil may remain around the AC pipe to avoid disturbance. The local utility company will be responsible for the demo notice to DSHS and removal of the AC pipe. Tie or tap into existing AC pipe may require removing an entire section of pipe from collar to collar and replacement of pipe with new pipe using existing bid items.

ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES

TxDOT will coordinate with TDLR regarding pedestrian elements and sidewalks. The contractor will procure and provide all permits, licenses, and inspections; pay all charges, fees, and taxes regarding TDLR rules governing industrialized housing and buildings.

Roadway closures during key dates and/or special events are prohibited. See notes for Item 502 for the key dates and/or special events.

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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 exceeding 14 calendar days. Track all exposed soil, stockpiles, and slopes. Tracking consists of operating a tracked vehicle 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.

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.

Suspend all activities near any significant recharge features, such as sinkholes, caves, or any other subterranean openings that are discovered during construction or core sampling. Do not proceed until the designated Geologist or TCEQ representative is present to evaluate and approve remedial action.

Locate aboveground storage tanks kept on-site for construction purposes in a contained area as to not allow any exposure to soils. The containment will be sized to capture 150% of the total capacity of the storage tanks.

PSL in Edwards Aquifer Recharge and Contributing Zone.

Obtain written approval from the Engineer for all on or off right of way PSLs not specifically addressed in the plans. Provide a signed SW3P sketch of the location 30 business days prior to use of the PSL. Include a list of materials, equipment and portable facilities that will be stored at the PSL.

PSL in USACE Jurisdictional Area.

Do not initiate activities in a PSL associated with a U.S. Army Corps of Engineers (USACE) jurisdictional area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The jurisdictional area includes all waters of the U.S. including wetlands or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Consult with the USACE regarding activities, including PSLs that have not been previously evaluated by the USACE. Provide the Department with a copy of all USACE coordination and approvals before initiating activities.

Proceed with activities in PSLs that do not affect a USACE jurisdictional area if self-determination has been made that the PSL is non-jurisdictional or proper clearances have been obtained in USACE jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. Document any determinations that PSL activities do not affect a USACE jurisdictional area. Maintain copies of PSL determinations for review by the Department or any regulatory agency. The Contractor must document and coordinate with the USACE, if required, before any excavation material hauled from or embankment material hauled into a USACE jurisdictional area by either (1) or (2) below.

1. **Restricted Use of Materials for the Previously Evaluated Permit Areas.** When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:
 - a. suitable excavation of required material in the areas shown on the plans and cross sections as specified in Standard Specification Item 110, Excavation is used for permanent or temporary fill within a USACE jurisdictional area;
 - b. suitable embankment from within the USACE jurisdictional area is used as fill within a USACE evaluated area;
 - c. Unsuitable excavation or excess excavation that is disposed of at an approved location within a USACE evaluated area.

2. **Contractor Materials from Areas Other than Previously Evaluated Areas.** Provide the Department with a copy of all USACE coordination and approvals before initiating any activities in a jurisdictional area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:
 - a. Standard Specification Item 132, Embankment is used for temporary or permanent fill within a USACE jurisdictional area;
 - b. Unsuitable excavation or excess excavation that is disposed of outside a USACE evaluated area.

Work over or near Bodies of Water (Lakes, Rivers, Ponds, Creeks, etc.).

Keep on site a universal spill kit adequate for the body of water and the work being performed. Debris is not allowed to fall into the ordinary high water level (OHWL). Debris that falls into the OHWL must be removed at the end of each work day. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event. Install and maintain traffic control devices to maintain a navigable corridor for water traffic, except during bridge demo and beam placement. This work is subsidiary.

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. Prevention shall include all areas within 25 ft. of proposed work. All methods used for the removal of old nesting areas and the prevention of re-nesting must be submitted to TxDOT 30 business days prior to begin work. This work is subsidiary.

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If active nests are encountered on-site during construction, all construction activity within 25 ft. of the nest must stop. Contact the Engineer to determine how to proceed.

Tree and Brush Trimming and Removal.

Work will be conducted September 16 thru February 28. Work conducted outside this timeframe will require a bird survey. Submit a survey request to TxDOT 30 business days prior to begin work.

No extension of time or compensation will be granted for a delay or suspension due to the above bird, bat and tree/brush requirements.

Law Enforcement Personnel.

Submit charge summary and invoices using the Department 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. A minimum number of hours is not guaranteed. Payment is for work performed. 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 hotmix or seal coat operations. This is subsidiary.

ITEM 8 – PROSECUTION AND PROGRESS

Electronic versions of schedules will be saved in Primavera P6 format.

Working days will be charged in accordance with 8.3.1.1, "5 Day Workweek."

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The 90 day delay provided in Special Provision 008-003 is for contractor convenience.

A CPM schedule in Primavera format and a PSSR is required. Use software fully compatible with Primavera P6.

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.

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: sidewalks, paths, guard fence, rails, signs, object markers, and structures. Trim to provide a minimum of 14 ft. vertical clearance under all trees. This work is subsidiary.

ITEM 105 – REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT

Contractor retains ownership of the material.

ITEM 110 – EXCAVATION

The Engineer will define unsuitable material.

ITEM 132 – ALL EMBANKMENT

The Engineer will define unsuitable material. Material which the Contractor might deem to be unsuitable due to moisture content will not be considered unsuitable material.

Prior to begin embankment of existing area, correct or replace unstable material to a depth of 6 in. below existing grade. Embankment areas will be inspected prior to beginning work.

Rock or broken concrete produced by the project is allowed in earth embankments. The size of the rock or broken concrete will not exceed the layer thickness requirements in Section 132.3.4., "Compaction Methods." The material will not be placed vertically within 5 ft. of the finished subgrade elevation.

Embankment placed vertically within 5 ft. of the finished subgrade elevation or within the edges of the subgrade and treated with lime, cement, or other calcium based additives must have a sulfate content less than 3000 ppm. Allow 5 business days for testing. Treatment of sulfate material 3000 ppm to 7000 ppm requires 7 days of mellowing and continuous water curing, in accordance TxDOT guidelines for Treatment of Sulfate-Rich Soils and Bases in Pavement Structures (9/2005). Material over 7000 ppm is not allowed.

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ITEM 134 - BACKFILLING PAVEMENT EDGES

For all backfill, compact using a light pneumatic roller, install at 3:1 slope to tie into existing terrain, and apply at rate of 0.12 GAL/SY a typical erosion control material per Item 300. If seal coat is final surface, install backfill prior to placing seal coat.

For TY A backfill, furnish flexible base meeting the requirement for any type or grade, except Grade 4, in accordance with Item 247. Compressive strengths and wet ball mill for flexible base are waived for this item. In lieu of flexible base, RAP may be supplied and must be 100% passing a 2.5 in. sieve in accordance to Tex-110-E.

ITEM 160 - TOPSOIL

Off-site topsoil will have a minimum PI of 25.

No Sandy Loam allowed.

Obtain approval of the actual depth of the topsoil sources for both on-site and off-site sources. Construct topsoil stockpiles of no more than five (5) feet in height.

It is permissible to use topsoil dikes for erosion control berms within the right of way, as directed.

Seed or track slopes within 14 days of placement.

Salvage topsoil from sites of excavation and embankment. Maximum salvage depth is 6 inches.

Windrowing of topsoil obtained from the Right of Way (ROW) is not allowed.

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.

Vegetative watering rates and quantities are based on ¼ inch of watering per week over a 3-month watering cycle. The actual rates used and paid for will be as directed and will be based on prevailing weather conditions to maintain the seedbed.

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.

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ITEM 216 - PROOF ROLLING

Correct and perform “Proof Rolling” retest at the Contractor’s expense, to the satisfaction of the Engineer, when initial “Proof Rolling” yields a failing result.

ITEM 247 - FLEXIBLE BASE

The lift thickness will be 4” to 6” unless shown in the plans. When compacted in multiple lifts, the density of the bottom and middle lifts will be 95% and 98% of the maximum dry density, respectively.

Correction of subgrade soft spots is subsidiary.

Complete all subgrade, ditches, slopes, and place all drainage structures to conform to required lines, grades, and cross-sections, as shown and directed, prior to the placement of Flex Base.

Do not use a vibratory roller to compact the material directly over a box culvert.

ITEM 300s – SURFACE COURSES AND PAVEMENTS

Asphalt season is May 1 thru September 15. Emulsified Asphalt season is April 1 thru October 15. The latest work start date for asphalt season is August 1.

If an under seal is not provided, furnish a tack coat. Apply tack coat at 0.08 GAL/SY (residual). Apply non-tracking tack coat using manufacturer recommend rates.

ITEM 310 – PRIME COAT

Apply blotter material to all driveways and intersections. This work is subsidiary.

When Multi Option is allowed, provide MC 30, EC 30 or AE-P.

Rolling to ensure penetration is required.

ITEM 320 - EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT

Use of motor grader is allowed for placement of mixtures greater than 10 inches from the riding surface, when hotmix is used in lieu of flexbase, or as allowed.

ITEM 340/3078 & 341/3076 - DENSE-GRADED HOT-MIX ASPHALT

Use the SGC for design and production testing of all mixtures. Design all Dense-Graded Type D mixtures as a surface mix, maximum 15% RAP and no RAS.

When using substitute binders, mold specimens for mix design and production at the temperature required for the substitute binder used to produce the HMA.

The Hamburg Wheel minimum number of passes for PG 64 or lower is reduced to 7,000. The Engineer may accept Hamburg Wheel test results for production and placement if no more than 1 of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.

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ITEMS 347/3081 - THIN OVERLAY MIXTURES (TOM)

For SAC A, blending SAC B aggregate with an RSSM greater than the SAC A rating or 10, whichever is greater, is prohibited.

When using a Thermal Imaging System follow the Weather Condition requirements for When Not Using a Thermal Imaging System.

Produce mixture with a Department approved WMA additive or process to facilitate compaction when the haul distance is greater than 40 miles or when the air temperature is 70°F and falling. WMA processes such as water or foaming processes are not allowed under these circumstances.

ITEM 351 – FLEXIBLE PAVEMENT STRUCTURE REPAIR

Use HMA D-GR Type B PG 64-22 SAC B for repairs 3 in. or greater and HMA D-GR Type C PG 64-22 SAC B for repairs less than 3 in. unless otherwise shown on the plans.

ITEM 354 - PLANING AND TEXTURING PAVEMENT

Contractor retains ownership of salvaged materials.

Mill and fill the work area during each shift unless otherwise shown on the plans.

Taper permanent transverse faces 50 ft. per 1 in. Taper temporary transverse faces 25 ft. per 1 in. Taper permanent longitudinal faces 6 ft. per 1 in. HMA may be used as temporary tapers. Provide minimum 1 in. butt joints at bridge ends and paving ends. This work is subsidiary.

ITEM 400 - EXCAVATION AND BACKFILL FOR STRUCTURES

Unless shown on the plans, the following backfill will apply to cutting and restoring flexible pavement. Backfill with cement-stabilized backfill. The cement-stabilized backfill is subsidiary. Cap the backfill with Type B hot-mix to a depth equal to the adjacent hot-mix. At locations where the backfill surface is final, place 1-1/2 in. Type D for the surface. The minimum hot-mix depth will be 4 in.

Saw-cut the pavement at the edge of the excavation. This work is subsidiary.

ITEM 423 - RETAINING WALLS

Filter material (Type C) and underdrain will be as per TxDOT Standard “Retaining Wall Miscellaneous Details – RW 2”.

Mow strip shall be 2 ft. 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. Mow strip for cable barrier may be placed monolithically with the barrier foundations if using concrete in accordance with Item 543. Fiber reinforcement is not allowed except in mow strip for cable barrier if foundation and mow strip are placed monolithically.

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.

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For cement-stabilized riprap, provide Type A Grade 5 flexible base. Compressive strengths for Item 247 are waived.

SGT approach taper, paid using mow strip item, shall be installed using concrete, flexible base coated with SS-1 at a rate of 0.12 GAL/SY, or HMA Type B/C/D. Placement shall be ordinary compaction and does not require placement using an asphalt paver.

ITEM 466 - HEADWALLS AND WINGWALLS

Remove all loose formwork and materials from the waterway at the end of each work week or prior to a rain event. Debris that falls into the waterway must be removed at the end of each work day. Upon completion of the structure, stencil the National Bridge Inventory (NBI) number (structure number) using black paint and 4 in. tall numbers at 4 locations designated by TxDOT. This work is subsidiary.

ITEM 467 - SAFETY END TREATMENT

Field adjust pipe end to maintain the necessary slope. Field cutting of pipe end is allowed. Coat all metal field cuts or exposed reinforcement with asphalt paint.

ITEM 496 - REMOVING STRUCTURES

Submit a demolition plan to the Engineer. Have the plan signed and sealed by a licensed professional engineer when the structure will continue to accommodate traffic after removal has begun and the removal impacts any part of the structure below the deck or riding surface. If applicable, the plan must detail requirements for meeting the U.S. Army Corps of Engineers' Section 404 Permit. The demolition plan must detail handling of roadway and waterway traffic. Waterway traffic must be maintained at all times unless a closure is approved by the Engineer.

No debris is allowed to fall into a body of water. Debris that falls into the water must be removed at the end of each work day. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event.

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

Table 1

<u>Roadway</u>	<u>Limits</u>	<u>Allowable Closure Time</u>
All	Within 200' of a signalized intersection	9 P to 5 A
All	All (Full Closure, see allowable work below)	11 P to 4 A

Table 3 (Mobile Operations)

<u>Roadway</u>	<u>Allowable Sun Night thru Fri Noon</u>	<u>Allowable Sat thru Sun Morn</u>
Outside Austin City Limits	9 A to 3 P and 7 P to 7 A	6 P to 11 A

For roadways without defined allowable closure times, nighttime lane closures will be allowed from 7 P to 6 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.

No closures will be allowed on the weekends, working day prior, and working day after the National Holidays defined in the Standard Specifications, Good Friday, and Easter weekend. Closures the Sunday of the Super Bowl will not be allowed from 1 P to 11 P. No closures will be allowed on Friday and the weekends for projects within 20 miles of Formula 1 at COTA,

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ACL Fest, SXSW, ROT Rally, UT home football games (includes games not on a Friday or weekend), sales tax holiday, Dell Match Play (includes Thursday) 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.

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 TxDOT. The email will be submitted in the format provided. 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.

For roadways listed in Table 1: Submit the request 96 hours prior to implementation.

For roadways not listed in Table 1: 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 168 hours prior to implementation. Submit request for nighttime work 96 hours to implementation date.

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.

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.

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.

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 the queue becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures. Do not set up traffic control when the pavement is wet.

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Place a 28-inch cone, meeting requirements of BC (10), on top of foundations that have protruding studs. This work is subsidiary.

Edge condition treatment types must be in accordance with the TxDOT standard. Installation and removal of a safety slope is subsidiary.

To determine a speed limit or an advisory speed limit, submit a request to TxDOT 60 business days prior to manufacture of the sign.

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

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.

ITEM 530 – INTERSECTIONS, DRIVEWAYS, AND TURNOUTS

Notify property owners a minimum of 48 hr. in advance of beginning work on their driveway. Provide a list of each notification and contact prior to each closure. Only close driveways for reconstruction if duration and alternate access are approved. Install and maintain material across a work zone as temporary access. Temporary access must not have grade breaks that exceed 8%. This work is subsidiary.

Grade breaks must not exceed 8%. Sidewalk crossing slope will be 1.5% and 5 ft. wide with width reduction in approved locations.

For ACP or SURF TREAT, the pavement structure will match the adjacent roadway unless detailed on the plans. HMA, including surface, may use a maximum allowable amount of 40% RAP and 5% RAS for private driveways, public driveways for 2-lane roadways or smaller, and turnouts. Blending of 2 or more sources is allowed. Furnish base meeting the requirement for any type or grade in accordance with Item 247. Compressive strengths for flexible base are waived. Base must be placed using ordinary compaction.

For CONC, the pavement structure will be 6 in. thick and have 3 in. base bedding unless detailed on the plans. Furnish base meeting ACP or SURF TREAT requirements. Class A concrete is required and may use Coarse Aggregate Grades 1-8. Expansion joints will be placed every 20 ft.

Expansion joints will be constructed as detailed in the latest TxDOT Concrete Curb and Curb and Gutter Standard. Reinforcement will be in accordance with concrete riprap for Item 432.3.1., unless specified on the plans.

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ITEM 540, 542, & 544 - METAL BEAM GUARD FENCE AND GUARDRAIL END TREATMENTS

Furnish round timber posts for guard fence. Steel posts for low fill culverts are subsidiary. Stake the locations for approval prior to installation. Adjust the limits of the fence to meet field conditions. Install delineators before opening the road to traffic.

Retain all materials. Contractor may reuse all existing materials that are structurally sound and dent free. All reused material shall be from this project 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. 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 current standard.

Remove, replace, and install mow strip block out material. Construct new block outs and backfill unused block outs with class B concrete. This work is subsidiary.

Repair of mow strip damage, not caused by contractor negligence, and installation of new mow strip will be paid with appropriate bid items. Backfill and shoulder up of area around fence and mow strip will be paid using embankment item.

ITEM 585 - RIDE QUALITY FOR PAVEMENT SURFACES

Use Surface Test Type B Pay Schedule 3 to evaluate ride quality of travel lanes, including service roads.

ITEM 600s & 6000s – ITS, LIGHTING, SIGNING, MARKINGS, AND SIGNALS

Meet the requirements of the NEC, Texas MUTCD, TxDOT standards, and TxDOT Standard Specifications. Notify the Engineer if existing elements to remain do not meet code or specification.

ITEM 644 – SMALL ROADSIDE SIGN ASSEMBLIES

Triangular slip base that use set screws to secure the post will require 1 of the set screws to penetrate the post by drilling a hole in the post at the location of the screw. All set screws shall be treated with anti-seize compound.

ITEM 658 – DELINEATOR AND OBJECT MARKER ASSEMBLIES

Installation and maintenance of portable CTB reflectors will be subsidiary to the barrier.

ITEM 662 - WORK ZONE PAVEMENT MARKINGS

Notify the Engineer at least 24 hours in advance of work for this item.

Maintain removable and short-term markings daily. Remove within 48 hours after permanent striping has been completed.

Item 668 is not allowed for use as Item 662.

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ITEM 666 - RETROREFLECTORIZED PAVEMENT MARKINGS

Notify the Engineer at least 24 hr. before beginning work.

Use of temporary flexible reflective roadway marker tabs is subsidiary and at the Contractor's option. Replace missing or damaged tabs nightly. If using tabs, place longitudinal markings weekly by 5 AM Friday for all weekday work and by 5 AM Monday for all weekend work. Failure to maintain tabs or place longitudinal markings by deadline will require nightly placement of longitudinal markings.

Place longitudinal markings no later than 7 calendar days after placement of the surface for roadways with AADT greater than 20,000.

When the raised portion of a profile marking is placed as a separate operation from the pavement marking, the raised portion must be placed first then covered with TY I.

ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS

Dispose of removed materials and debris at locations off the right of way.

Elimination using a pavement marking will not be allowed in lieu of methods listed in specification.

Remove pavement markings on concrete surfaces by a blasting method. Flail milling will be allowed when total quantity of removal on concrete surfaces is less than 1000 ft.

Strip seal is only method allowed on seal coat surface unless project includes placement of a new surface. If total quantity of removal on a seal coat surface is less than 2000 ft., elimination using a pavement marking is allowed if a test section is approved by the Engineer. Test section shall demonstrate the thermo marking color matches the existing pavement color.

Remove pavement markings outside the limits of the new surface by a blasting method.

Use a TRAIL or a non-retroreflective paint to cover stripe remnants that remain after elimination. The test requirements for these materials are waived. The paint color shall be adjusted to resemble the existing pavement color. Installation and maintenance is subsidiary.

ITEM 685 – ROADSIDE FLASHING BEACON ASSEMBLIES

Installation includes all components in the assembly, signs, signal heads, and conductors in the foundation and within 6 in. of the foundation to provide a fully operational assembly.

Test period for the assembly shall be in accordance with item 680.3.1.8.

ITEM 752 – TREE AND BRUSH REMOVAL

Follow Item 752.4 Work Methods and Item 752 general notes when removing or working on or near trees and brush even if Item 752 is not included as a pay item.

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 methods has been provided to the employees. This work is subsidiary.

Shredded vegetation may be blended, at a rate not to exceed 15 percent by volume, with Item 160 if the maximum dimension is not greater than 2 in.

ITEM 3084 – BONDING COURSE

The minimum application rates are listed in Table BC. The target shear bond strengths are listed in Table BCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course, bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

Table BC

Material	Minimum Application Rate (gal. per square yard)
TRAIL – Emulsified Asphalt	0.06
TRAIL – Hot Asphalt	0.12
Spray Applied Underseal Membrane	0.10

Table BCS
(For
Informatio
nal Tests)

Material	Target Shear Bond Strength (Tex-249-F psi)
SMA – Stone-Matrix Asphalt	60.0
PFC – Permeable Friction Course	N/A
All Other Materials	40.0

ITEM 3085 – UNDERSEAL COURSE

The minimum application rates are listed in Table UC. The target shear bond strengths are listed in Table UCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course, bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

Table UC

Project Number:
County: Williamson
Highway: US 183

Sheet: 11
Control: 0273-04-048, etc.

Material	Minimum Application Rate (gal. per square yard)
TRAIL – Hot Asphalt	0.15
Spray Applied Underseal Membrane	0.20
Seal Coat – Tier II emulsion	0.25
Seal Coat – Tier II asphalt	0.23

Table UCS

Material	Minimum Shear Strength (psi)
SMA – Stone-Matrix Asphalt	60.0
PFC – Permeable Friction Course	40.0
All Other Materials	40.0

ITEM 6001 – PORTABLE CHANGEABLE MESSAGE SIGN

Provide [4](#) PCMS. Provide a replacement within 12 hours. PCMS will be available for traffic control, event notices, roadway conditions, service announcements, etc.

Place PCMS 10 calendar days prior to begin work stating “Road Work Begin Soon, Contact 832-7000 For Info”.

Place PCMS at time of LCN request. Place the PCMS at the expected end of queue caused by the closure. When the closure is active, revise the message to reflect the actual condition during the closure, such as “RIGHT LN CLOSED XXX FT”.

ITEM 6185 – TRUCK MOUNTED ATTENUATOR AND TRAILER ATTENUATOR

The TMA/TA used for installation/removal of traffic control for a work area will be subsidiary to the TMA/TA used to perform the work.

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 work. TMA/TAs paid by the day is full compensation for all worksite locations during an entire day.

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

ITEM 7251 – SUBSURFACE UTILITY LOCATE (OUTSIDE ROADBED)

Locations of Pot Holing to be identified by the Engineer during construction.

CONTROL : 0273-04-048, ETC
PROJECT : F 2021(949)
HIGHWAY : US 183
COUNTY : WILLIAMSON

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

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

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF
----- TRANSPORTATION NOVEMBER 1, 2014.
STANDARD SPECIFICATIONS ARE INCORPORATED
INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 100 PREPARING RIGHT OF WAY
ITEM 104 REMOVING CONCRETE
ITEM 105 REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
ITEM 110 EXCAVATION
ITEM 132 EMBANKMENT
ITEM 134 BACKFILLING PAVEMENT EDGES (162) (166) (168) (300) (314)
ITEM 160 TOPSOIL (168)
ITEM 164 SEEDING FOR EROSION CONTROL (166) (168)
ITEM 168 VEGETATIVE WATERING
ITEM 216 PROOF ROLLING (210)
ITEM 247 FLEXIBLE BASE (105) (204) (210) (216) (520)
ITEM 310 PRIME COAT (300) (316)
ITEM 340 DENSE-GRADED HOT-MIX ASPHALT (SMALL QUANTITY) (300) (301)
(320) (520) (585)
ITEM 347 THIN OVERLAY MIXTURES (TOM)
ITEM 351 FLEXIBLE PAVEMENT STRUCTURE REPAIR (132) (204) (247) (310)
(316) (334) (340)
ITEM 354 PLANING AND TEXTURING PAVEMENT
ITEM 403 TEMPORARY SPECIAL SHORING (423)
ITEM 423 RETAINING WALLS (110) (132) (216) (400) (420) (421) (440) (445)
ITEM 432 RIPRAP (421) (431) (440)
ITEM 460 CORRUGATED METAL PIPE (400) (402) (403) (445) (467) (476)
ITEM 462 CONCRETE BOX CULVERTS AND DRAINS (400) (402) (403) (420)
(421) (424) (440) (464) (476)
ITEM 464 REINFORCED CONCRETE PIPE (400) (402) (403) (467) (476)
ITEM 466 HEADWALLS AND WINGWALLS (400) (420) (421) (432) (440) (464)
ITEM 467 SAFETY END TREATMENT (400) (420) (421) (432) (440) (464)
ITEM 496 REMOVING STRUCTURES
ITEM 500 MOBILIZATION

- ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
- ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS (432) (556)
- ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER (360) (420) (421) (440)
- ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS
- ITEM 540 METAL BEAM GUARD FENCE (421) (441) (445)
- ITEM 542 REMOVING METAL BEAM GUARD FENCE
- ITEM 544 GUARDRAIL END TREATMENTS
- ITEM 560 MAILBOX ASSEMBLIES
- ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES
- ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)
- ITEM 662 WORK ZONE PAVEMENT MARKINGS (666) (668) (672) (677)
- ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS (316) (502) (662) (677) (678)
- ITEM 672 RAISED PAVEMENT MARKERS (677) (678)
- ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300) (302) (316)
- ITEM 685 ROADSIDE FLASHING BEACON ASSEMBLIES (441) (442) (445) (449) (610) (618) (620) (621) (622) (656) (682) (684)

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

REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS
 (FORM FHWA 1273, MAY, 2012)

WAGE RATES

- SPECIAL PROVISION "NONDISCRIMINATION" (000---002)
- SPECIAL PROVISION "CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT"
 (000---003)
- SPECIAL PROVISION "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO
 ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE
 ORDER 11246" (000---004)
- SPECIAL PROVISION "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
 CONSTRUCTION CONTRACT SPECIFICATIONS" (000---005)
- SPECIAL PROVISION "ONTHEJOB TRAINING PROGRAM" (000---006)
- SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)"
 (000--1019)
- SPECIAL PROVISION "IMPORTANT NOTICE TO CONTACTORS" (000--1118)
- SPECIAL PROVISION "CARGO PREFERENCE ACT REQUIREMENTS IN FEDERAL AID
 CONTRACTS" (000---241)
- SPECIAL PROVISION "DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL AID
 CONTRACTS" (000---394)
- SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---658)
- SPECIAL PROVISION "NOTICE OF CONTRACTOR PERFORMANCE EVALUATIONS"
 (000---659)
- SPECIAL PROVISIONS TO ITEM 2 (002---009) (002---011) (002---013)
- SPECIAL PROVISIONS TO ITEM 3 (003---011) (003---013)
- SPECIAL PROVISIONS TO ITEM 5 (005---002) (005---003)
- SPECIAL PROVISIONS TO ITEM 6 (006---001) (006---012)
- SPECIAL PROVISIONS TO ITEM 7 (007---004) (007---008) (007---010)

(007---011)

SPECIAL PROVISIONS TO ITEM	8	(008---003)	(008---030)	(008---033)
SPECIAL PROVISIONS TO ITEM	9	(009---010)	(009---011)	
SPECIAL PROVISION TO ITEM	247	(247---003)		
SPECIAL PROVISION TO ITEM	300	(300---017)		
SPECIAL PROVISION TO ITEM	302	(302---003)		
SPECIAL PROVISION TO ITEM	314	(314---001)		
SPECIAL PROVISION TO ITEM	316	(316---002)		
SPECIAL PROVISION TO ITEM	340	(340---003)		
SPECIAL PROVISION TO ITEM	347	(347---002)		
SPECIAL PROVISION TO ITEM	421	(421---009)		
SPECIAL PROVISION TO ITEM	440	(440---004)		
SPECIAL PROVISION TO ITEM	441	(441---002)		
SPECIAL PROVISION TO ITEM	442	(442---001)		
SPECIAL PROVISION TO ITEM	449	(449---002)		
SPECIAL PROVISION TO ITEM	462	(462---002)		
SPECIAL PROVISION TO ITEM	464	(464---001)		
SPECIAL PROVISION TO ITEM	502	(502---008)		
SPECIAL PROVISION TO ITEM	506	(506---005)		
SPECIAL PROVISION TO ITEM	520	(520---002)		
SPECIAL PROVISION TO ITEM	540	(540---001)		
SPECIAL PROVISION TO ITEM	666	(666---007)		
SPECIAL PROVISION TO SPECIAL SPECIFICATION ITEM	6185	(6185--002)		

SPECIAL SPECIFICATIONS:

ITEM 3076 DENSE-GRADED HOT-MIX ASPHALT
 ITEM 3084 BONDING COURSE
 ITEM 3085 UNDERSEAL COURSE
 ITEM 6001 PORTABLE CHANGEABLE MESSAGE SIGN
 ITEM 6185 TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)
 ITEM 7251 SUBSURFACE UTILITY LOCATE (132) (334) (340) (400) (421) (700)

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 SPECIFI-
 CATIONS FOR THIS PROJECT.

Special Specification 3084

Bonding Course

1. DESCRIPTION

Construct a bonding course where improved bonding is needed using a Tracking-Resistant Asphalt Interlayer (TRAIL) or a Spray Applied Underseal Membrane, applied before the placement of a new hot-mix asphalt concrete pavement.

2. MATERIALS

2.1. Furnish the materials for one of the following two options:

2.1.1. **TRAIL.** Furnish asphalt material described as “tack” for typical use in the TRAIL Material Producer List. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

2.1.2. **Spray Applied Underseal Membrane.** Furnish asphalt material meeting the requirements of Special Specification 3002, “Spray Applied Underseal Membrane.” Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

2.2. Furnish the material for applying tack coat to all miscellaneous contact surfaces when approved by the Engineer:

2.2.1. **Miscellaneous Tack.** Furnish TRAIL asphalt, CSS-1H, SS-1H, or a PG binder with a minimum high-temperature of PG 58 for tack coat binder in accordance with Item 300, “Asphalts, Oils, and Emulsions.” Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

2.3. **Sampling.** The Engineer will witness the collection of at least one sample of each asphalt binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, “Asphalts, Oils, and Emulsions” or Special Specification 3002, “Spray Applied Underseal Membrane.”

3. EQUIPMENT

3.1. **TRAIL.** Provide the equipment recommended by the producer.

3.2. **Spray Applied Underseal Membrane.** Provide in accordance with Special Specification 3002, “Spray Applied Underseal Membrane.”

4. CONSTRUCTION

4.1. **Preparation.** Remove existing raised pavement markers. Repair any damage incurred by removal as directed. Remove dirt, dust, or other harmful material before sealing. When shown on the plans, remove vegetation and blade pavement edges. When approved by the Engineer, apply a thin, uniform coating of Miscellaneous Tack to all miscellaneous contact surfaces such as curbs, structures, and manholes. Prevent splattering of the tack coat when placed adjacent to curb, gutter, and structures.

4.2. **Test Strips.** When required by the Engineer, perform a test strip of TRAIL at a location on or near the project as directed. Allow the strip to cure for a maximum of 30 min. Drive over the test strip with equipment used during laid-down construction to simulate the effect of paving equipment. There should be no evidence of tracking or picking up of the TRAIL material on the wheels of the equipment.

- 4.3. **TRAIL.** Perform the following construction methods when applying a TRAIL for a bonding course:
- 4.3.1. **Placement.** Uniformly apply the TRAIL material to all areas where mix will be placed, including joints, at the rate shown on the plans or as directed, within 15°F of the approved temperature, and not above the maximum allowable temperature. Unless otherwise directed, uniformly apply the TRAIL material at a minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.4. **Spray Applied Underseal Membrane.** Place in accordance with Special Specification 3002, "Spray Applied Underseal Membrane."
- 4.4.1. **Placement.** Do not allow any loose mixture onto the prepared surface before application of the membrane. Unless otherwise directed, uniformly apply the membrane to all areas where mix will be placed, including joints, at the rate shown on the plans. Unless otherwise directed, uniformly apply the membrane at the minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.5. **Informational Shear Test.** Obtain one set of full depth core specimens per project in accordance with Tex-249-F within one working day of the time the lot placement is completed. The Engineer will select the core locations. Provide the cores to the Engineer in a container labeled with the Control-Section-Job (CSJ) and lot number. The district will determine the shear bond strength between the two bonded pavement layers in accordance with Tex-249-F. Results from these tests will not be used for specification compliance.
- 4.6. **Quality Control.** Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.

The Engineer may perform independent tests to confirm contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may stop the application and require construction of test strips at the Contractor's expense if any of the following occurs:

- Non-uniformity of application continues after corrective action;
- Evidence of tracking or picking up of the TRAIL;
- In 3 consecutive shots, application rate differs by more than 0.02 gal. per square yard from the rate directed; or
- Any shot differs by more than 0.04 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until surface treatment application meets specification requirements.

5. MEASUREMENT

- 5.1. **Volume.** The asphalt material, including all components, will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All asphalt material, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine the asphalt volume used and application rate if the device is accurate to within 1.5% of the strapped volume.

6. 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 "Bonding Course." These prices are full compensation

for all materials, Miscellaneous Tack used for miscellaneous contact surfaces, equipment, labor, tools, and incidentals necessary to complete the work.

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