

SUBJECT: PLANS AND PROPOSAL ADDENDUMS
PROJECT: STP 2022(708)HES CONTROL: 2570-01-011
COUNTY: BROWN
LETTING: 06/30/2022
REFERENCE NO: 0621

PROPOSAL ADDENDUMS

- _ PROPOSAL COVER
X BID INSERTS (SH. NO.: ALL)
_ GENERAL NOTES (SH. NO.:)
X SPEC LIST (SH. NO.: 2,3)
_ SPECIAL PROVISIONS:
_ ADDED:

DELETED:

_ SPECIAL SPECIFICATIONS:
_ ADDED:

DELETED:

X OTHER: PLAN SHEET & OTHER CHANGES

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

***** BID INSERTS *****

ADDED THE FOLLOWING BID ITEMS:
624-6006, 636-6001, 682-6003, 682-6005

***** PLAN SHEETS *****

SHEET 02 (INDEX): ADDED STANDARDS
SHEET 7A (QUANTITY SHEET): ADDED ITEMS
SHEET 08 (QUANTITY SUMMARY): ADDED ITEMS
SHEET 83 (SIGN SUMMARY): REVISED NOTES
SHEET 98A (SPRFBA(1)-13): ADDED STANDARD
SHEET 98B (TS-FD-12): ADDED STANDARD

***** SPEC LIST *****

SHEET 2: ADDED THE FOLLOWING STANDARD SPECIFICATIONS: 624, 636, 682
SHEET 3: LINES SHIFTED DUE TO THE ABOVE CHANGES

SHEET NO. DESCRIPTION GENERAL

- 1 TITLE SHEET
- 2 INDEX OF SHEETS
- 3, 3A - 3F GENERAL NOTES
- 4 PROJECT LAYOUT
- 5 - 6 TYPICAL SECTIONS
- 7, 7A ESTIMATE & QUANTITY SHEETS
- 8 - 13 QUANTITY SUMMARIES

TRAFFIC CONTROL PLAN

- 14 TCP NARRATIVE

TRAFFIC CONTROL STANDARDS

- 15 - 26 * BC(1)-21 THRU BC(12)-21
- 27 * TCP (1-1) - 18
- 28 * TCP (1-2) - 18
- 29 * TCP (2-1) - 18
- 30 * TCP (2-2) - 18
- 31 * TCP (3-1) - 13
- 32 * TCP (3-3) - 14
- 33 * TCP (7-1) - 13
- 34 * WZ(STPM) - 13
- 35 * WZ(UL) - 13
- 36 * WZ(BRK) - 13
- 37 * WZ(RS) - 22
- 38 * WZ(TD) - 17
- 39 * TREATMENT FOR VARIOUS EDGE CONDITIONS

ROADWAY DETAILS

- 40 FM 2632 HORIZONTAL AND VERTICAL CONTROL INDEX SHEET
- 41 FM 2632 HORIZONTAL AND VERTICAL CONTROL DATASHEET
- 42 HORIZONTAL ALIGNMENT DATA
- 43 - 53 FM 2632 PLAN & PROFILE
- 54 DRIVEWAY DETAILS

ROADWAY STANDARDS

- 55 - 58 * D & OM(1) - 20 THRU D & OM(4) - 20
- 59 * CCCG-21
- 60 - 62 * MB-14(2) THRU MB-14(2B)
- 63 - 66 * MB(1)-21 THRU MB(4)-21

DRAINAGE DETAILS

- 67 - 68 CULVERT LAYOUTS
- 69 BCS

DRAINAGE STANDARDS

- 70 - 71 * MC-6-16
- 72 * MC-MD
- 73 - 74 * SCC-5&6
- 75 * SCC-MD
- 76 * SCP-6
- 77 * SCP-MD
- 78 - 80 * SETB-FW-0
- 81 - 82 * SETP-CD

SIGNING & PAVEMENT MARKING

- 83 - 84 SUMMARY OF SMALL SIGNS
- 85 SIGN DETAIL SHEET
- 86 SH 279 INTERSECTION STRIPING LAYOUT
- 87 FM 2125 INTERSECTION STRIPING LAYOUT

SIGNING & PAVEMENT MARKING STANDARDS

- 88 * PM(1)-20
- 89 * PM(2)-20
- 90 * RS(5)-13
- 91 * SMD(GEN)-08
- 92 * SMD(SLIP-1)-08
- 93 * SMD(SLIP-2)-08
- 94 * SMD(SLIP-3)-08
- 95 * SMD(TWT)-08
- 96 * TSR(3)-13
- 97 * TSR(4)-13
- 98 * TSR(5)-13
- 98A * SPRFBA(1)-13
- 98B * TS-FD-12

SW3P

- 99 SW3P NOTES
- 100 EPIC
- 101 - 103 SW3P LAYOUT

SW3P STANDARDS

- 104 - 105 * EC(1) - 16 THRU EC(2) - 16
- 106 - 108 * EC(9)-16

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED HERE (*) HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

Quinn Maupin

QUINN MAUPIN, P. E. 06/21/2022
DATE

100% SUBMITTAL



Quinn Maupin

REV. NO.	DATE	DESCRIPTION	BY

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INDEX OF SHEETS

FED. RD. DIV. NO.	STATE	PROJECT NO.	HIGHWAY NO.		
6	TEXAS	(SEE TITLE SHEET)	FM2632		
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
BWD	BROWN	2570	01	011	2

Q.M.
 **ADDENDUM #1, 6/21/2022, REPLACE SHEET**



Estimate & Quantity Sheet

CONTROLLING PROJECT ID 2570-01-011

DISTRICT Brownwood
HIGHWAY FM 2632

COUNTY Brown

CONTROL SECTION JOB				2570-01-011		TOTAL EST.	TOTAL FINAL
PROJECT ID				A00133044			
COUNTY				Brown			
HIGHWAY				FM 2632			
ALT	BID CODE	DESCRIPTION	UNIT	EST.	FINAL		
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	300.000		300.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	900.000		900.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	900.000		900.000	
	506-6053	ROCK FILTER DAMS (INSTALL) (TY 2) (6:1)	LF	180.000		180.000	
	529-6007	CONC CURB & GUTTER (TY I)	LF	597.000		597.000	
	530-6004	DRIVEWAYS (CONC)	SY	57.000		57.000	
	530-6009	TURNOUTS (SURF TREAT)	SY	529.000		529.000	
	530-6016	DRIVEWAYS (BASE)	SY	446.000		446.000	
	560-6001	MAILBOX INSTALL-S (TWG-POST) TY 1	EA	5.000		5.000	
	624-6006	GROUND BOX TY BATTERY (162915)W/APRON	EA	2.000		2.000	
	636-6001	ALUMINUM SIGNS (TY A)	SF	20.000		20.000	
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	11.000		11.000	
	644-6007	IN SM RD SN SUP&AM TY10BWG(1)SA(U)	EA	1.000		1.000	
	644-6030	IN SM RD SN SUP&AM TYS80(1)SA(T)	EA	2.000		2.000	
	644-6068	RELOCATE SM RD SN SUP&AM TY 10BWG	EA	1.000		1.000	
	644-6076	REMOVE SM RD SN SUP&AM	EA	16.000		16.000	
	658-6047	INSTL OM ASSM (OM-2Y)(WC)GND	EA	22.000		22.000	
	662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	1,210.000		1,210.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	64.000		64.000	
	666-6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	24,535.000		24,535.000	
	666-6312	RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL)	LF	2,160.000		2,160.000	
	666-6315	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	LF	10,565.000		10,565.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	313.000		313.000	
	682-6003	VEH SIG SEC (12")LED(YEL)	EA	2.000		2.000	
	682-6005	VEH SIG SEC (12")LED(RED)	EA	2.000		2.000	
	685-6004	INSTL RDSO FLSH BCN ASSM (SOLAR PWRD)	EA	2.000		2.000	
	3076-6001	D-GR HMA TY-B PG64-22	TON	947.000		947.000	
	6001-6001	PORTABLE CHANGEABLE MESSAGE SIGN	DAY	100.000		100.000	
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	240.000		240.000	
	6185-6002	TMA (STATIONARY)	DAY	170.000		170.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY	25.000		25.000	
18		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000		1.000	
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000		1.000	

Q.M.
1 ADDENDUM #1, 6/21/2022, REPLACE SHEET

SUMMARY OF SIGNING ITEMS												
STATION		624	636	644	644	644	644	644	658	682	682	685
		6006	6001	6001	6007	6030	6068	6076	6047	6003	6005	6004
FROM	TO	GROUND BOX TY BATTERY (162915) W/APRON	ALUMINUM SIGNS (TY A)	IN SM RD SN SUP&AM TY10BWG (1) SA (P)	IN SM RD SN SUP&AM TY10BWG (1) SA (U)	IN SM RD SN SUP&AM TYS80 (1) SA (T)	RELOCATE SM RD SN SUP&AM TY 10BWG	REMOVE SM RD SN SUP&AM	INSTL OM ASSM (OM-2Y) (WC) GND	VEH SIG SEC (12") LED (YEL)	VEH SIG SEC (12") LED (RED)	INSTL RDS D FL SH BCN ASSM (SOLAR PWRD)
		EA	SF	EA	EA	EA	EA	EA	EA	EA	EA	EA
100+00	111+00	2	20	2		1		5	2	2	2	2
111+00	122+00			1				1				
122+00	133+00											
133+00	144+00								2			
144+00	155+00								2			
155+00	166+00								2			
166+00	177+00								4			
177+00	188+00											
188+00	199+00			2				2	6			
199+00	210+00			3			1	3	2			
210+00	222+76			3	1	1		5	2			
PROJECT TOTALS		2	20	11	1	2	1	16	22	2	2	2

SUMMARY OF WORKZONE TRAFFIC CONTROL ITEMS						
LOCATION		662	6001	6056	6185	6185
		6111	6001	6001	6002	6005
		WK ZN PAV MRK SHT TERM (TAB) TY Y-2	PORTABLE CHANGEABLE MESSAGE SIGN	PREFORMED IN-LANE (T RANS) RUMBLE STRIP	TMA (STATIONARY)	TMA (MOBILE OPERATION)
		EA	DAY	LF	DAY	DAY
100+00	111+00	110	50	40		
111+00	122+00	110				
122+00	133+00	110				
133+00	144+00	110				
144+00	155+00	110				
155+00	166+00	110		80		
166+00	177+00	110				
177+00	188+00	110				
188+00	199+00	110				
199+00	210+00	110				
210+00	222+76	110	50	40		
PROJECT TOTALS		1210	100	160	170	25

100% SUBMITTAL

Quinn L. Maupin

REV. NO.	DATE	DESCRIPTION	BY

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Texas Department of Transportation

FM 2632
QUANTITY SUMMARY
TCP & SIGNING

FED. RD. DIV. NO.	STATE	PROJECT NO.	HIGHWAY NO.
6	TEXAS	(SEE TITLE SHEET)	FM2632
STATE DISTRICT	COUNTY	CONTROL NO.	SECTION NO.
BWD	BROWN	2570	01
		JOB NO.	SHEET NO.
		011	8

SHEET 1 OF 6

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Q.M.

ADDENDUM #1, 6/21/2022, REPLACE SHEET

SUMMARY OF SMALL SIGNS

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of any information from any other source to the units shown on this drawing. The user of this drawing is responsible for the accuracy of the information provided.

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)				BRIDGE MOUNT CLEARANCE SIGNS (See Note 2)	
							POST TYPE	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION		
										PREFABRICATED		1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels
			Q.M. ADDENDUM #1, 6/21/2022, REPLACE SHEET									
1	1	R1-1 W4-4P	STOP SIGN CROSS TRAFFIC DOES NOT STOP	36" X 36" 24" X 12"	X X							
1	2	M3-1 M1-6F	NORTH FM RD 2632	24" X 12" 24" X 24"	X X		10BWG	1	SA	P		
1	3	R2-1	SPEED LIMIT 60	30" X 36"	X		10BWG	1	SA	P		
1	4	D1-2	BROWNWOOD ← CROSS PLAINS →	102" X 30"	X		S80	1	SA	T		
1	5	W3-1	STOP AHEAD	36" X 36"	X							
2	1	M2-1 M1-6T	JCT 279 TEXAS	21" X 15" 24" X 24"	X X		10BWG	1	SA	P		
9	1	M3-3 M1-6F	SOUTH FM RD 2632	24" X 12" 24" X 24"	X X		10BWG	1	SA	P		
9	2	M2-1 M1-6F	JCT FM RD 2125	21" X 15" 24" X 24"	X X		10BWG	1	SA	P		
10	1	W1-2L W13-1	CURVE LEFT ADVISORY SPEED 55	36" X 36" 18" X 18"	X X		10BWG	1	SA	P		
10	2	R2-1	SPEED LIMIT 60	30" X 36"	X		10BWG	1	SA	P		
10	3		PUBLIC BOAT RAMP → (RELOCATE)				10BWG	1	SA	P		
10	4	M3-3 M1-6F	SOUTH FM RD 2632	24" X 12" 24" X 24"	X X		10BWG	1	SA	P		

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080"
7.5 to 15	0.100"
Greater than 15	0.125"

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.
<http://www.txdot.gov/>

- NOTE:**
- Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.
 - For installation of bridge mount clearance signs, see Bridge Mounted Clearance Sign Assembly (BMCS) Standard Sheet.
 - For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).



SUMMARY OF SMALL SIGNS

SOSS

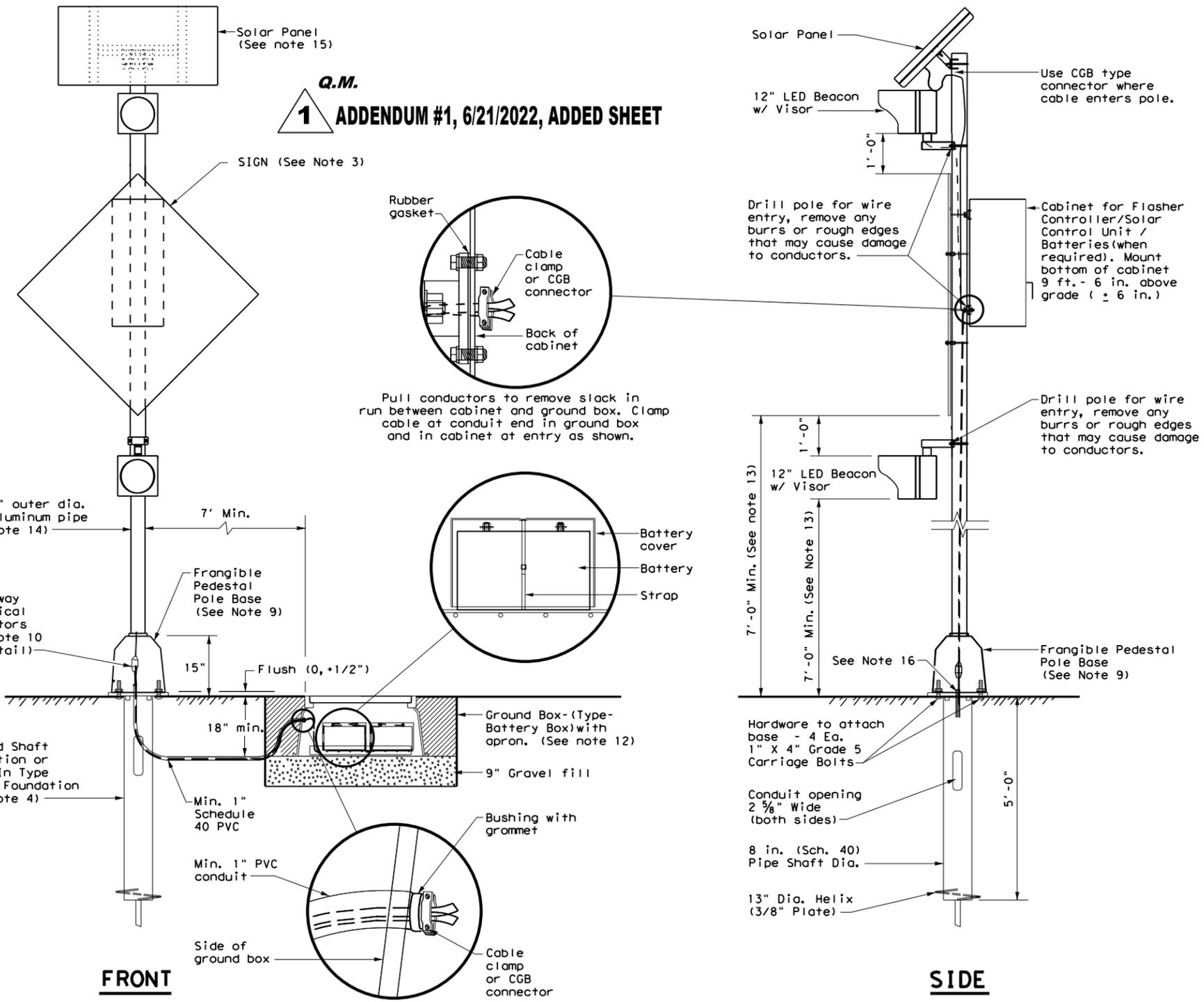
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© TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	2570	01	011	FM2632
4-16	DIST	COUNTY	SHEET NO.	
8-16	BWD	BROWN	83	

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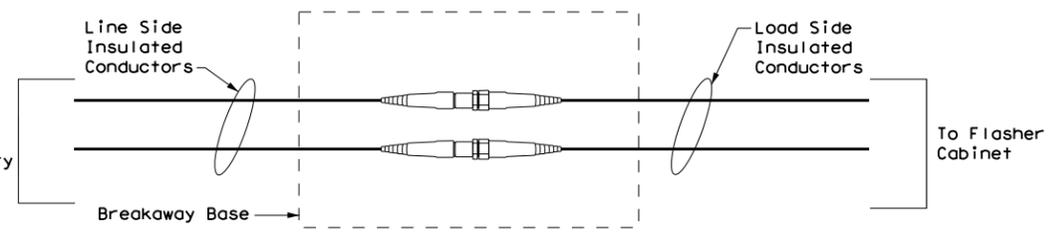
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 FILE: F:\Projects\2019\11004.TxDOT_5x5_PS&E\04_Brownwood\ENG\500-USTN\509-PS&E\04_Brownwood\SPRFBAS\SPRFBAS.dwg

GENERAL NOTES:

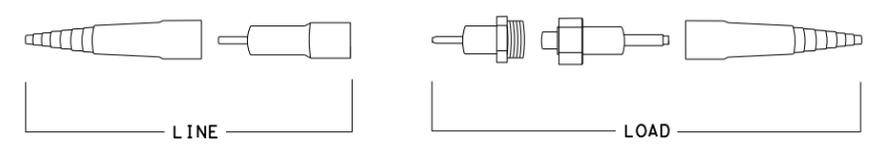
- Details show a typical warning sign with two flashing beacon heads, other arrangements are possible. When only one beacon is required, install the upper beacon.
- See Item 685, "Roadside Flashing Beacon Assemblies" for further requirements.
- See SMD standard sheets for lateral and vertical clearances and sign mounting details. Install signs as shown on the sign layout sheets.
- Use either a Screw-In Type Anchor Foundation or a Drilled Shaft Foundation as shown elsewhere in the plans. When plans require a Drilled Shaft Foundation, see standard sheet TS-FD. Install the Screw-In Type Anchor Foundation as per manufacturer's recommendations. On a slope, install one edge at ground level. Screw-In/Drilled Shaft Foundation is subsidiary to Item 685. Installation of a ground rod is not required for solar powered flashing beacon assemblies.
- When used, provide Screw-In Type Anchor Foundations as shown on TxDOT's Material Producer List (MPL) in the file "Highway Traffic Signals".
- Use materials specifically designed for attaching cabinets, beacon heads, solar panels, etc., to poles.
- Install beacon heads as shown here, as shown elsewhere on the plans, or as directed. Use hardware specifically designed for mounting beacon heads on poles.
- Conduit in foundation and within 6 in. of foundation is subsidiary to the Item 685, "Roadside Flashing Beacon Assemblies."
- Per manufacturer's recommendations, engage all threads on the pedestal pole base and pipe unless the pipe is fully seated into base. In high winds, use a pole and base collar assembly to add strength and prevent loosening on connection.
- Provide single pole non-fused watertight breakaway electrical connectors for frangible pedestal pole bases, as shown on TxDOT's MPL in the file "Roadway Illumination and Electrical Supplies." Approved models are listed under Item 685. For ungrounded (hot) conductors, install a breakaway connector with a dummy fuse slug. For grounded (neutral) conductors, install a breakaway connector with a white colored marking and a permanently installed dummy fuse (slug).
- Install the batteries in a battery box. Place the batteries on a 3/16" thick plastic sheet and connect together. Place a plastic cover (battery bell jar) over the top of each battery and secure the battery bell jar to the battery with a strap. The batteries, bell jars, straps and 3/16" plastic sheet are subsidiary to the Item 685, "Roadside Flashing Beacon Assemblies." When required, install batteries in the flasher cabinet. Wire batteries according to manufacturers recommendations. Provide the number of batteries as required by the manufacturer.
- See standard sheet Electrical Details (ED) for additional requirements regarding the installation of ground boxes/battery boxes, conduit, and cabinets.
- Provide clearance as shown above the sidewalk or pavement grade at the edge of the road. When a bottom beacon is not used, mount the bottom of the sign at least 7 ft. above the sidewalk or pavement grade at the edge of the road.
- Unless otherwise shown on the plans, pole shaft shall be one piece, Schedule 40 Aluminum pipe, ASTM B429 or B221 (Alloy 6061-T6 only). Aluminum conduit will not develop the necessary strength and will not be allowed.
- Orient solar panel for optimum exposure to sunlight (face to the south). Prior to installation, check the location to ensure there is no overhead obstruction that would block the solar panel from receiving full sunlight. Unless specified elsewhere, mount a minimum of 14' above grade.
- Ensure height of conduit is below top of anchor bolts.



Q.M.
1 ADDENDUM #1, 6/21/2022, ADDED SHEET



NON-FUSED BREAKAWAY ELECTRICAL CONNECTORS



**NON-FUSED BREAKAWAY ELECTRICAL CONNECTORS
 EXPLODED VIEW**

SOLAR POWERED ROADSIDE FLASHING BEACON ASSEMBLY DETAILS
SPRFBA (1) - 13

FILE: spb1-13.dgn	DW: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT May 2003	CONT: 2570	SECT: 01	JOB: 011	HIGHWAY: FM2632
12-04	DIST: BWD	COUNTY: BROWN	SHEET NO. 98A	

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DATE: 6/21/2022 3:15:19 PM
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FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		EMBEDDED DRILLED SHAFT LENGTH-ft (4), (5), (6)			ANCHOR BOLT DESIGN (1)			FOUNDATION DESIGN LOAD (2)		TYPICAL APPLICATION	
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N Blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft		SHEAR Kips
				10	15	40							
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	3/4"	36	12 3/4"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 1/2"	55	17"	2	87	3	Mast arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 3/4"	55	19"	2	131	5	Mast arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Mast arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 1/4"	55	23"	2	271	9	Mast arm assembly. (see Selection Table)

NOTES:

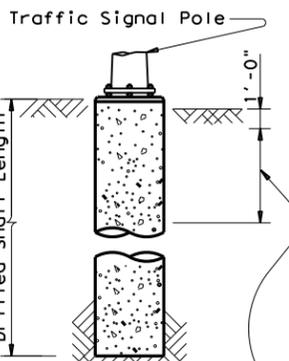
- Anchor bolt design develops the foundation capacity given under Foundation Design Loads.
- Foundation Design Loads are the allowable moments and shears at the base of the structure.
- Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.
- Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.
- If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.
- Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

FOUNDATION SUMMARY TABLE (3)

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH (6) (FEET)				
				24-A	30-A	36-A	36-B	42-A
STA 100+44	10	24A	1	6				
STA 109+70	10	24A	1	6				
TOTAL DRILLED SHAFT LENGTHS								

FOUNDATION SELECTION TABLE FOR STANDARD MAST ARM PLUS ILSN SUPPORT ASSEMBLIES (ft)

80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
		24' x 24'			
MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	28' x 28'				
	32' x 28'				
	36' x 36'				
	40' x 36'				
100 MPH DESIGN WIND SPEED	44' x 28'				
	44' x 36'				
	24' x 24'				
	28' x 28'				
MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	32' x 24'				
	32' x 32'				
	36' x 36'				
	40' x 24'				
MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	40' x 36'				
	44' x 36'				
	40' x 36'				
	44' x 36'				



Use average N value over the top third of the embedded shaft. Ignore the top 1' of soil.

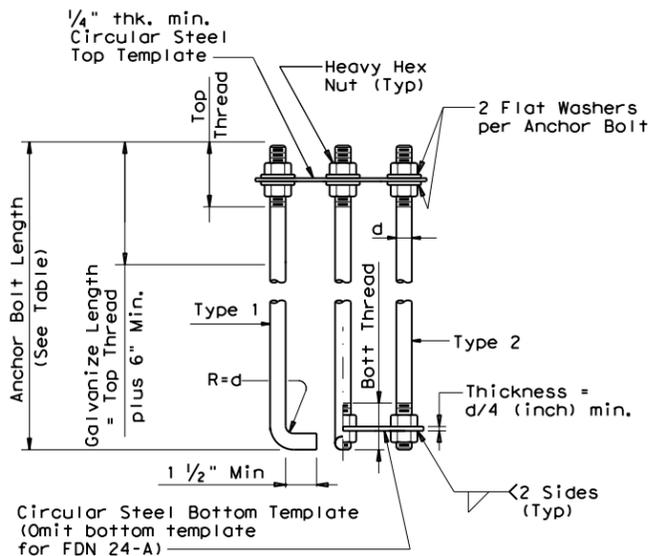
ANCHOR BOLT & TEMPLATE SIZES

BOLT DIA IN.	(7) BOLT LENGTH	TOP THREAD	BOTTOM THREAD	BOLT CIRCLE	R2	R1
3/4"	1'-6"	3"	—	12 3/4"	7 1/8"	5 5/8"
1 1/2"	3'-4"	6"	4"	17"	10"	7"
1 3/4"	3'-10"	7"	4 1/2"	19"	11 1/4"	7 3/4"
2"	4'-3"	8"	5"	21"	12 1/2"	8 1/2"
2 1/4"	4'-9"	9"	5 1/2"	23"	13 3/4"	9 1/4"

(7) Min dimensions given, longer bolts are acceptable.

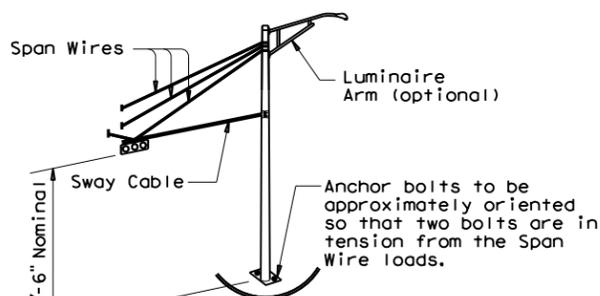
EXAMPLE:

- For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
- For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.

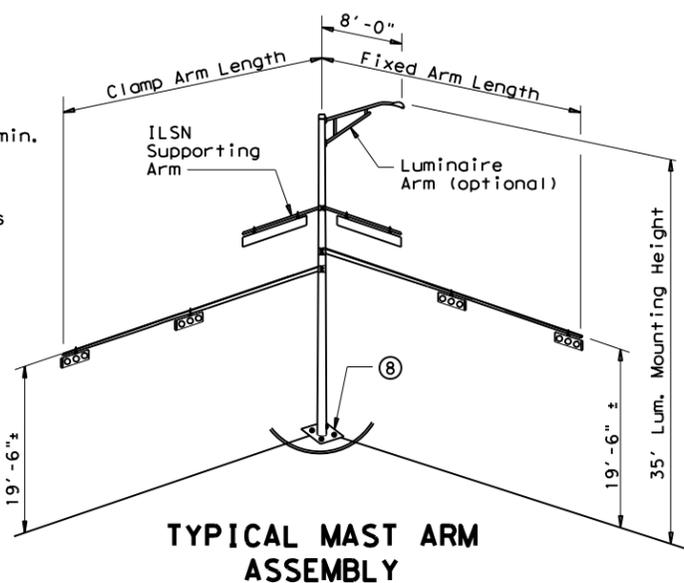


ANCHOR BOLT ASSEMBLY

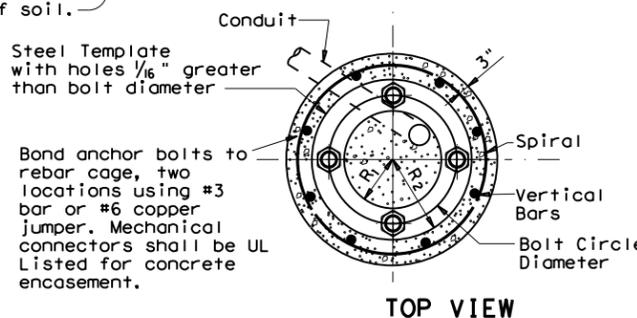
(8) Orient anchor bolts orthogonal with the fixed arm direction to ensure that two bolts are in tension under dead load.



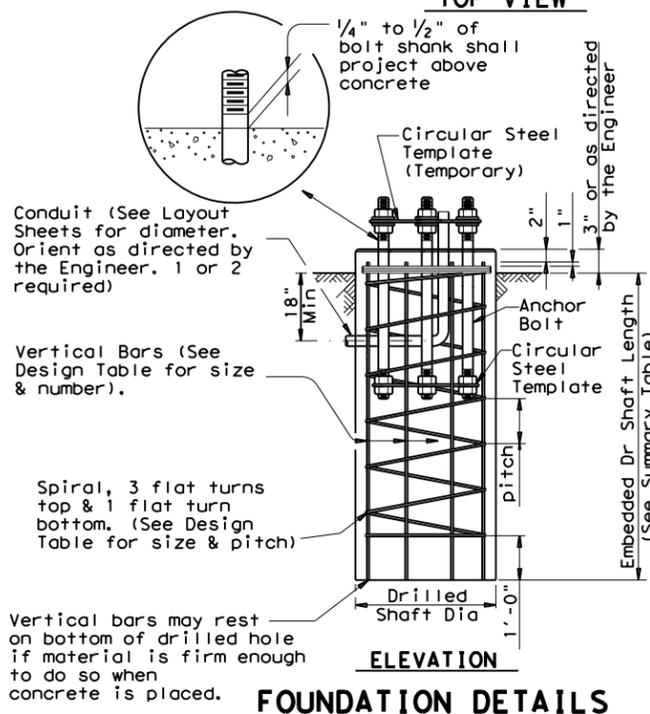
TYPICAL STRAIN POLE ASSEMBLY



TYPICAL MAST ARM ASSEMBLY



TOP VIEW



ELEVATION FOUNDATION DETAILS

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and interim revisions thereto.

Reinforcing steel shall conform to Item 440, "Reinforcing Steel".

Concrete shall be Class "C".

Threads for anchor bolts and nuts shall be rolled or cut threads of 8UN series up to 2" in diameter or UNC series for all sizes. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are larger than 1" in diameter shall conform to "alloy steel" or "medium-strength mild steel" per Item 449, "Anchor Bolts". Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Galvanize a minimum of the top end thread length plus 6" for all anchor bolts unless otherwise noted. Exposed washers and exposed nuts shall be galvanized. All galvanizing shall be in accordance with Item 445, "Galvanizing".

Templates and embedded nuts need not be galvanized. Lubricate and tighten anchor bolts when erecting the structure in accordance with Item 449, "Anchor Bolts".

Q.M.

1 ADDENDUM #1, 6/21/2022, ADDED SHEET



Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

TS-FD-12

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REVISONS	CONT	SECT	JOB	HIGHWAY	
	2570	01	011	FM2632	
DIST	COUNTY		SHEET NO.		
BWD	BROWN		98B		