

Henderson County, Texas



ESTABLISHMENT OF PLANS AND SPECIFICATIONS FOR A STANDARD CATTLEGUARD TO BE USED ON COUNTY ROADS

WHEREAS, §251.003 of the Texas Transportation Code grants the Henderson County Commissioners Court the authority to make and enforce all necessary rules and orders for the construction and maintenance of public roads; and

WHEREAS, §251.009 (b) of the Texas Transportation Code requires that the Henderson County Commissioners Court establish plans and specifications for a standard cattle guard to be used on County maintained roads; and

WHEREAS, Texas Transportation Code §251.009 (a) states that the Henderson County Commissioners Court may allow a person to construct a new cattle guards on County maintained road; and

WHEREAS, Henderson County has received requests from one or more property owners proposing to construct new cattle guards or replacement cattle guards on existing County maintained roads; and

WHEREAS, Henderson County desires to have a uniform and appropriate standard for any cattle guards installed on existing county maintained roads, and

WHEREAS, the cost of installation and maintenance of such cattle guards is not deemed to be of such a nature as to constitute a public purpose, and should be the obligation of the property owner, and

WHEREAS, the property owner shall also cause to be constructed during the installation of the cattle guard, and the property owner shall maintain during the installation of the cattle guard, an all-weather detour which shall insure that the County Road remains open at all times. Any such detour route should be constructed and maintained with the advice and consent of the County Commissioner in whose precinct the cattle guard will be installed, and

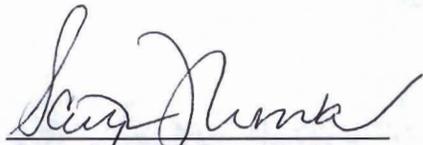
WHEREAS, all cattle guards shall be designed and constructed so that no drainage passes through the cattle guard.

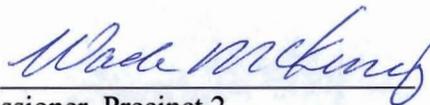
NOW, THEREFORE, IT IS ORDERED BY THE COMMISSIONERS COURT OF HENDERSON COUNTY, that the plans and specifications herein attached, shall serve as the minimum standard for construction of cattle guards on County maintained roads; and

IT IS FURTHER ORDERED BY THE COMMISSIONERS COURT OF HENDERSON COUNTY, that any person proposing to construct a cattle guard on a County maintained road may submit an alternate cattle guard design, prepared by a Registered Engineer, for consideration by the Henderson County Commissioners Court, but the use of such alternative designs, if any, is within the sole discretion of the Commissioners Court of Henderson County, and shall only be allowed if the proposed alternate design exceeds the design specifications of the standard cattle guard defined in this document.

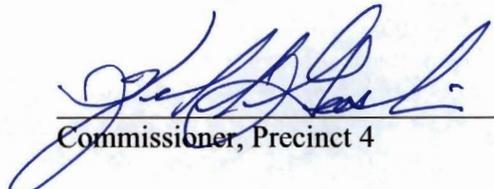
Adopted this 25th day of June, 2013.


County Judge, Henderson County, Texas


Commissioner, Precinct 1

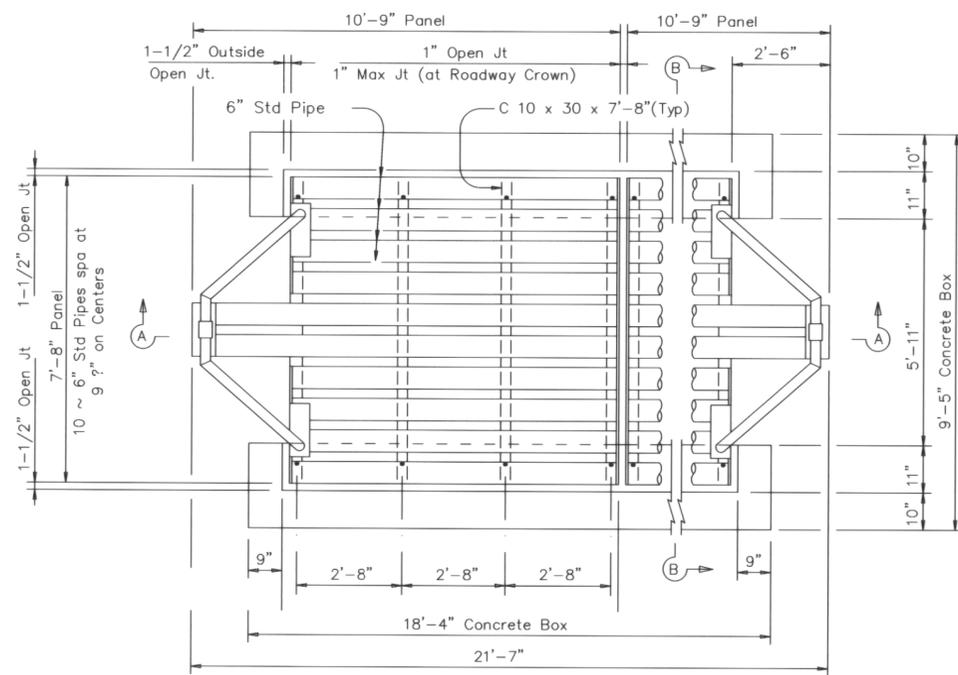

Commissioner, Precinct 2


Commissioner, Precinct 3

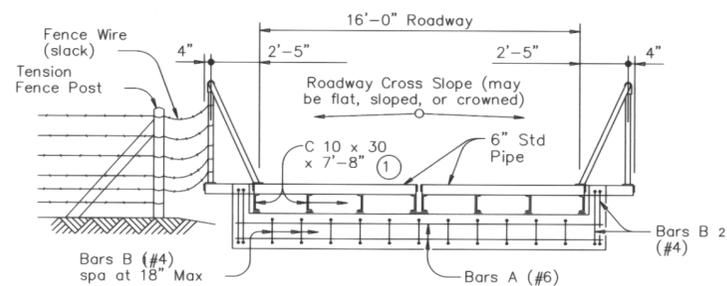

Commissioner, Precinct 4

Attest:

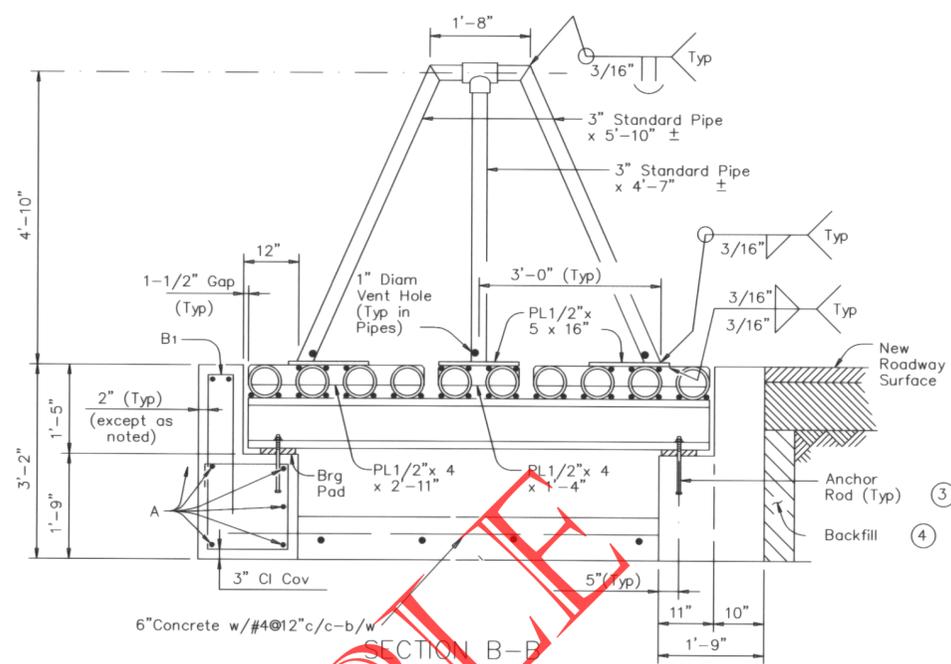

County Clerk



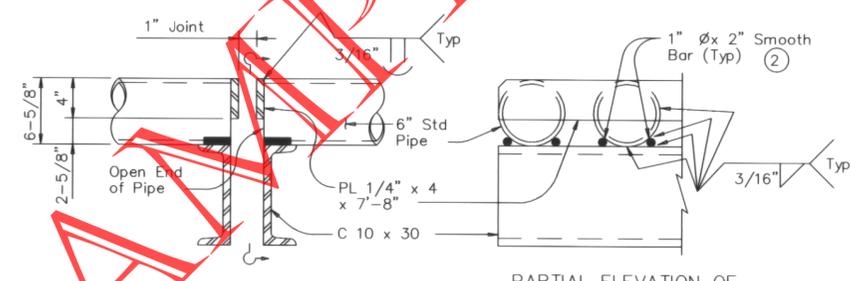
PLAN VIEW



SECTION A-A



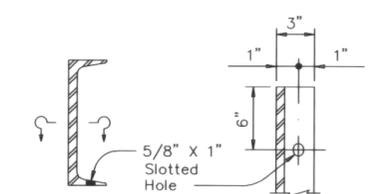
SECTION B-B



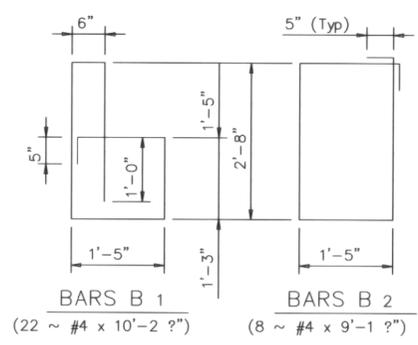
TYPICAL SECTION

PARTIAL ELEVATION OF END OF PANEL

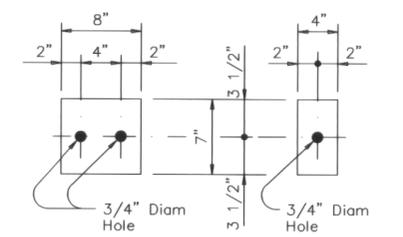
DETAILS AT END OF PANEL



TYPICAL SECTION SECTION THRU BOTTOM FLANGE
C 10 x 30 CHANNEL
END DETAILS



BAR DETAILS



AT INSIDE OPEN JT AT ALL OTHER LOCATIONS
BEARING PAD DETAILS

1/2" x 70 durometer Elastomeric Pad

BILL OF MATERIALS		
(Quantities shown are for Contractor's information only)		
Description	Length	Number
C 10 x 30	7'-8"	8
6" Std Pipe	8'-2"	16
10" Std Pipe	10'-8"	4
PL 1/2"x 4	7'-8"	2
PL 1/2"x 4	2'-11"	4
PL 1/2"x 4	1'-4"	2
PL 1/2"x 5	1'-4"	6
3" Std Pipe	5'-10"	4
3" Std Pipe	4'-7"	2
3" Std Pipe	8"	4
3" Pipe Tee	-	2
1/2" Anchor Rods	12"	16
7" Brg Pad	4"	14
7" Brg Pad	8"	2
Structural Steel	Lb	5,620
Reinforcing	Lb	580
Class "A" Concrete	CY	5.9

HL-93 LOADING

GENERAL NOTES:

Designed in accordance with current AASHTO Standard and Interim Specifications. All construction and materials shall be in accordance with Texas Department of Transportation Standard Specifications.

If rock is encountered, depth of foundation may be varied as directed by the Engineer.

Steel Plates and Channels shall conform to ASTM A36. Pipe shall conform to ASTM A500 Grade B or to ASTM A53 Grade B Types E or S, standard weight.

All steel components, except reinforcing, shall be galvanized after fabrication in accordance with Item 445, "Galvanizing". Double dip galvanizing of a complete panel will not be permitted. Anchor rods and nuts shall have Class 2A and 2B fit tolerances in accordance with ANSI B1.1. The nuts shall be tapped after galvanizing.

Anchor rods shall conform to the requirements of ASTM A307 Grade A or ASTM A36 as specified in Item 449. Nuts shall be installed to a snug fit plus 1/2 turn. After installation, burr threads to prevent back turn of nut.

Bearing Pad shall be a 7" thick 70 durometer Elastomeric Pad in accordance with Item 435.

Typical calculated weight for each Panel = 2,800 Lbs

Number, type, and location of delineators adjacent to Cattle Guard shall be as directed by the Engineer.

Adjacent fences shall not be attached directly to the Outside Panel end pipes. Pipe assembly is not designed for the tension of the fence wires.

- Centerlines of Channel and Anchor Holes shall be field determined with the fabricated cattleguard assembly on site. Epoxy dowel rods in place after confirming layout.
- At all locations where a flat steel plate is to be welded to a rounded pipe surface, a 1" x 2" Smooth Bar (placed as shown in the detail) shall be included in the weld joint to provide additional support.
- Anchor Bolts shall be 1/2" Diam x 10" Rod, each with one (1) Hex Nut and one (1) Beveled Washer. Bolts shall project 2" minimum from the concrete (embedded 7" minimum).
- The unclassified structural excavation shall be backfilled with Cement Stabilized Backfill prior to installation of metal Cattle Guard members.
- The Cattle Guard shall be installed perpendicular to flow of traffic.

REVISION

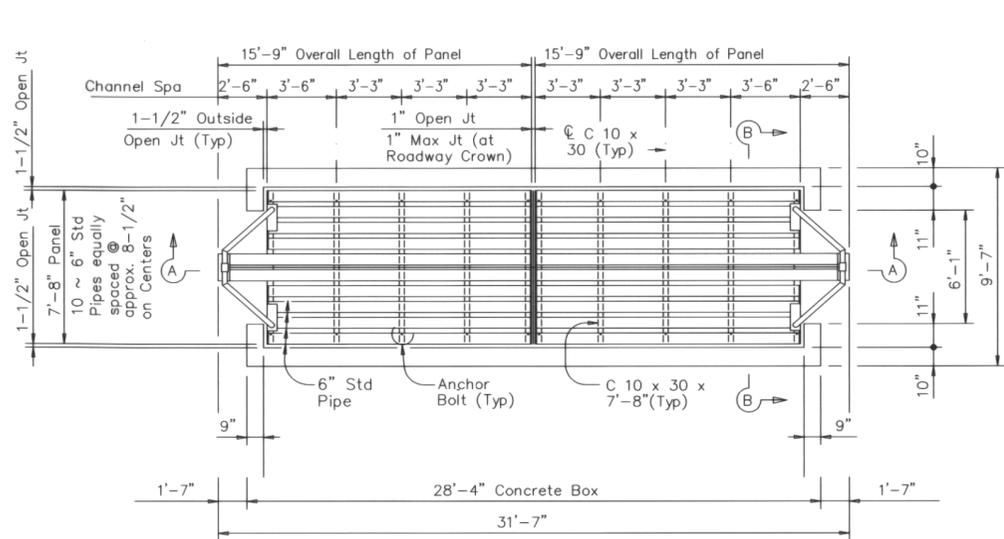
PREPARED FOR
PRO-TECH ENGINEERING GROUP, INC.
BY
STRUCTURAL DESIGN CONSULTING
FIRM REG. NO. 4888
JACK HARRISON, P.E. 85472
100 PARK ROAD SOUTH
WIMBERLEY, TEXAS 78676
PH 830-935-2640

COMAL COUNTY, TEXAS
CATTLEGUARD REPLACEMENTS

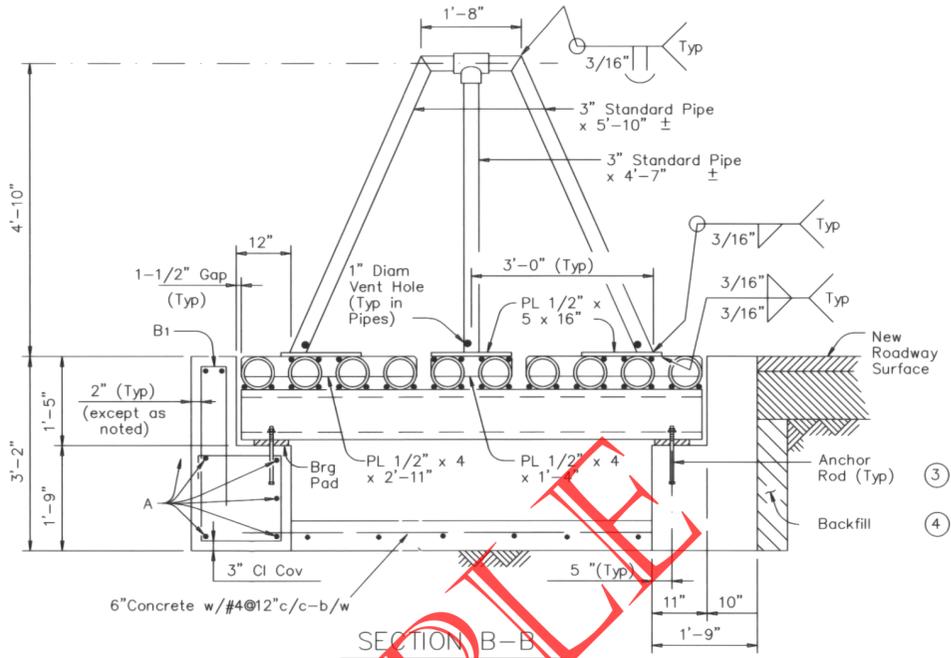
16' CATTLEGUARD DETAILS

<p>PRO-TECH ENGINEERING GROUP INCORPORATED Reg. No. F-1501 100 E. San Antonio St., Suite 100 San Marcos, TX. 78666 (512) 353-3335</p>	<p>JACK HARRISON 85472 LICENSED PROFESSIONAL ENGINEER</p>				
		DATE	JANUARY 20, 2012		
E.O.	14867	SCALE	NTS	SHEET	OF

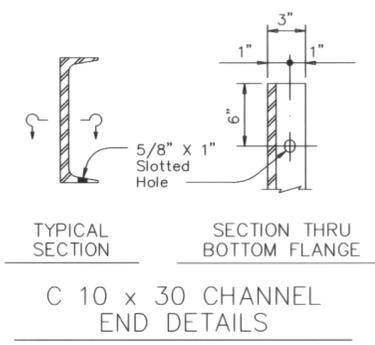
These details are suitable for use with level or single slope roadways only.
RECOMMENDED MAXIMUM SPEED LIMIT 30 MPH



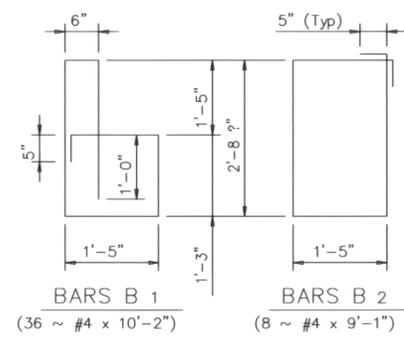
PLAN VIEW
HL-93 LOADING



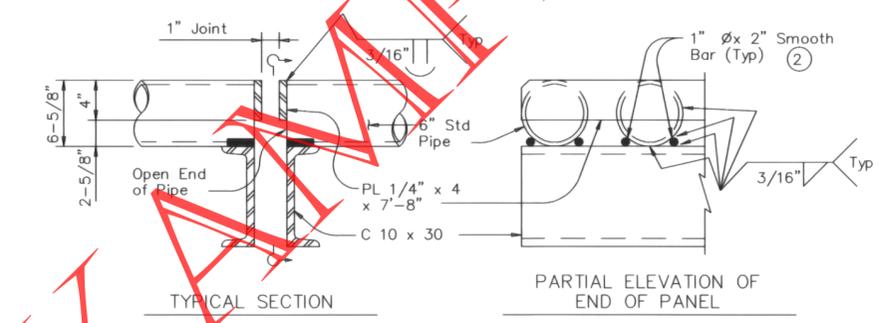
SECTION B-B



TYPICAL SECTION SECTION THRU BOTTOM FLANGE
C 10 x 30 CHANNEL END DETAILS

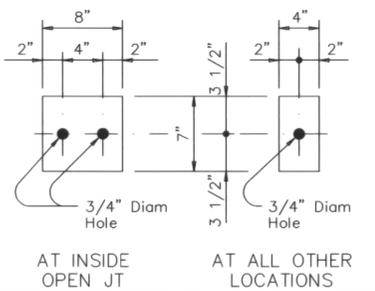


BAR DETAILS



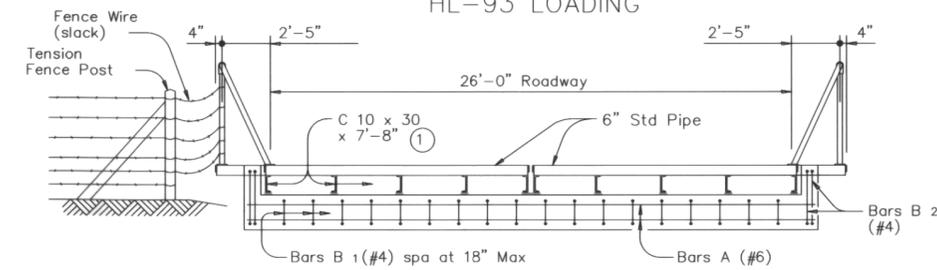
TYPICAL SECTION PARTIAL ELEVATION OF END OF PANEL

DETAILS AT END OF PANEL



BEARING PAD DETAILS

1/2" x 70 durometer Elastomeric Pad



SECTION A-A
HL-93 LOADING

- ① Centerlines of Anchor Holes shall be field determined with the fabricated cattleguard assembly on site. Epoxy dowel rods in place after confirming layout.
- ② At all locations where a flat steel plate is to be welded to a rounded pipe surface, a 1" x 2" long Smooth Bar (placed as shown in the detail) shall be included in the weld joint to provide additional support.
- ③ Anchor Rods shall be 1/2" Diam x 10" Rod, each with one (1) Hex Nut and one (1) Beveled Washer. Bolts shall project 2" minimum from the concrete (embedded 5" minimum).
- ④ The unclassified structural excavation shall be backfilled with Cement Stabilized Backfill prior to installation of metal Cattle Guard members.
- ⑤ The Cattle Guard shall be installed perpendicular to flow of traffic.

GENERAL NOTES:

Designed in accordance with current AASHTO Standard and Interim Specifications. All construction and materials shall be in accordance with Texas Department of Transportation Standard Specifications.

If rock is encountered, depth of foundation may be varied as directed by the Engineer.

Steel Plates and Channels shall conform to ASTM A36. Pipe shall conform to ASTM A500 Grade B or to ASTM A53 Grade B Types E or S, standard weight.

All steel components, except reinforcing, shall be galvanized after fabrication in accordance with Item 445, "Galvanizing". Double dip galvanizing of a complete panel will not be permitted. Anchor rods and nuts shall have Class 2A and 2B fit tolerances in accordance with ANSI B1.1. The nuts shall be tapped after galvanizing.

Anchor rods shall conform to the requirements of ASTM A307 Grade A or ASTM A36 as specified in Item 449. Nuts shall be installed to a snug fit plus 1/2 turn. After installation, burr threads to prevent back turn of nut.

Bearing Pad shall be a 1/2" thick 70 durometer Elastomeric Pad in accordance with Item 435.

Typical calculated weight for each Panel = 3,540 Lbs

Number, type, and location of delineators adjacent to Cattle Guard shall be as directed by the Engineer.

Adjacent fences shall not be attached directly to the Outside Panel end pipes. Pipe assembly is not designed for the tension of the fence wires.

BILL OF MATERIALS		
(Quantities shown are estimations for Contractor's information only)		
Description	Length	Number
C 10 x 30	7'-8"	10
6" Std Pipe	13'-2"	16
6" Std Pipe	15'-8"	4
PL 1/2" x 4	7'-8"	2
PL 1/2" x 4	2'-11"	4
PL 1/2" x 4	1'-4"	2
PL 1/2" x 5	1'-4"	6
3" Std Pipe	5'-10"	4
3" Std Pipe	4'-7"	2
3" Std Pipe	8"	4
3" Pipe Tee	-	2
1/2" Anchor Rods	10"	20
7" Brg Pad	4"	18
7" Brg Pad	8"	2
Structural Steel	Lb	7,080
Reinforcing	Lb	950
Class "A" Concrete	CY	10.1

RECOMMENDED MAXIMUM SPEED LIMIT 30 MPH

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**COMAL COUNTY, TEXAS
CATTLEGUARD REPLACEMENTS**

26' CATTLEGUARD DETAILS

**PRO-TECH
ENGINEERING
GROUP**
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San Marcos, TX 78666
(512) 353-3335

REVISED: JANUARY 20, 2012
DATE: OCTOBER 12, 2011
SHEET: 5 OF 7

E.O. 14867 SCALE NTS