

Chapter 86. Overweight Vehicles and Loads¹

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86.001 Declaration of Purpose

The purpose of this Policy is to establish maximum allowable loads for the operation of vehicles on Travis County roads and bridges in order to insure the safety of the traveling public and to protect the integrity of the County's roads and bridges.

86.002 Definitions

- (a) "Manager" means the Executive Manager of Travis County Transportation and Natural Resources Department.
- (b) "County road" means a road accepted for County maintenance.
- (c) "Code" means the Texas Transportation Code.
- (d) "Vehicle" means a mechanical device by which a person or property can be transported on a County road. The term includes a motor vehicle, commercial motor vehicle, truck-tractor, trailer, or semi-trailer or any combination of such vehicles.
- (e) "Gross weight" means the combined weight of the vehicle, including trailer, and the weight of the load actually carried.

86.003 Legal Authority

A Texas county has the authority under Sections 251.153 and 621.301 of the Code to set weight limits on its roads. A Texas county may enforce its weight limits with criminal sanctions under Section 621.501, et seq., of the Code.

¹ Chapter 86 was adopted by Travis County Commissioners Court on 9/26/1995, Item 8, and amended 12/19/1995, Item 6, and May 14, 2013, Item 26A.

86.004 Statement of Policy

- (a) Overweight Operation on County Roads. A vehicle or combination of vehicles may not be operated over or on a County road, if the vehicle or combination weighs in excess of the load limit posted on the road, unless:
 - (1) the vehicle is operated under a County Overweight Permit or
 - (2) the vehicle is exempted from the operation of this Policy.
- (b) Overweight Operation on County Bridges Prohibited. A vehicle or combination of vehicles may not be operated over or on a County bridge, if the vehicle or combination weighs in excess of the load limit posted on the bridge, unless the vehicle is exempted from the operation of this Policy.

86.005 Load Limits County Roads

- (a) Operation without County Overweight Permit ("Permit"). A vehicle or combination of vehicles may not be operated on or over a County road at a weight in excess of the posted weight limit without a Permit.
- (b) Operation under Permit. A vehicle or combination of vehicles may be operated on or over a County road in excess of the posted weight limit with a Permit at the following weights:
 - (1) Maximum Gross Weight. 80,000 pounds, including vehicle and load
 - (2) Maximum Single Axle Weight. 20,000 pounds single axle load, where an axle load is defined as the total load transmitted to the road by all wheels whose centers may be included between two parallel transverse vertical planes 40 inches apart, extending across the full width of the vehicle.
 - (3) Maximum Tandem Axle Weight. 34,000 pounds tandem axle load, where a tandem axle is defined as two or more axles spaced 40 inches or more apart from center to center having at least one common point of weight suspension.
 - (4) Tire Load Limitation. Maximum tire load limitation is 650 pounds per inch of tire width. No permit will be issued that exceeds the tire load limitation of 650 pounds per inch of tire width.
- (c) County Bridges. A vehicle or combination of vehicles may not be operated on or over a County bridge at a weight in excess of the posted weight limit.
- (d) Enforcement. Any violation of the weight limits established by this Policy is an offense punishable as a misdemeanor in accordance with state law.

86.006 Load Rating Procedures

- (a) An engineering investigation of the load bearing capacity of the County road is undertaken pursuant to the Load Rating Procedures set forth in Appendix A;

- (b) A load limit is proposed based on the result of the engineering investigation;
- (c) Notice of the proposed regulation is given by the Manager in accordance with the County Policy for the Adoption of County Traffic Regulations, which allows the posting of notice at the site of the proposed regulation pursuant to Section 251.159 of the Code.
- (d) The notice is to state the name of the road, the boundaries of the proposed load limit, the load limit per type of axle configuration, and the kinds of vehicles, if any, proposed to be limited.
- (e) The notice is to state the name of the road, the boundaries of the proposed load limit, the load limit per type of axle configuration, and the kinds of vehicles, if any, proposed to be limited.
- (f) The Manager will order the weight adopted, unless a public hearing is requested before the eighth day after the date the notice is posted.
- (g) If a public hearing is timely requested, the Commissioners Court may order the weight limit be adopted after considering the information presented at the public hearing.
- (h) Weight limit signs must conform with the manual and specifications of the Texas Department of Transportation. Appendix B displays examples of signs to be used.
- (i) A copy of the order establishing a load limit will be filed with the County Clerk and a logbook of all load limits will be maintained by the Manager.
- (j) In the case of County bridges, if the Texas Department of Transportation ("TxDOT") notifies the County that a County bridge qualifies for a lower load rating under 23 C.F.R. Sections 650.301-650.311 than is currently permitted, the Manager shall post notice on the road or highway approaching the bridge indicating that traffic is restricted consistent with the lower load rating. The notice must be placed at a location that enables restricted traffic to avoid crossing the bridge.

86.007 Enforcement Guidelines

- (a) **Weighing Procedure.** A county traffic officer, the Sheriff, a sheriff's deputy, a constable, or a deputy constable (the "Officer") is authorized to weigh a vehicle to ascertain whether the vehicle weighs in excess of the load limits established in this Policy. The Officer shall use portable or stationary scales furnished or approved by the Department of Public Safety to weigh the vehicle or require the vehicle to be weighed by a public weigher. The Officer may require that the vehicle be driven to the nearest available scales.
- (b) **Unloading Overweight Vehicles.** If the gross weight or axle weight of the vehicle exceeds the applicable weight limit of the road or bridge or is in excess of the weight allowed under an overweight permit, plus a tolerance allowance of five percent (5%) of that weight, the Officer shall require the

vehicle be unloaded or rearranged as necessary to decrease the gross weight or axle weight of such vehicle to the maximum authorized plus the tolerance allowance.

- (c) Exceptions. Anything which may pose a threat to public health and safety or the environment may not be unloaded on the County right-of-way or adjacent property without the written permission of the adjacent property owners. The following items are specifically excepted from the requirement of unloading on the County right-of-way:
 - (1) Livestock (intrastate destination)
 - (2) Timber, Pulpwood, or Agricultural products in their natural state being transported from the place of production to the place of marketing or first processing
- (d) Other items which may pose a threat to public health and safety or to the environment, including but not limited to:
 - (1) Solid Waste
 - (2) Milk
 - (3) Sand, Gravel, and Asphalt
 - (4) Gasoline and other Petroleum Products

must be off-loaded onto another means of transport in a manner and at a location designated by the Officer, unless the Operator secures a One-Trip Permit as provided in section 86.008.

86.008 Permits

- (a) A Permit may be issued authorizing the operation of a vehicle or combination of vehicles at an axle or gross weight in excess of the posted County road weight limits. The Permit authorizes the operation of a vehicle on County roads at the weight limits set forth in Section 86.005(b) of this policy. To be eligible for a Permit, a vehicle must be registered for the maximum gross weight applicable to the vehicle, not to exceed 80,000 pounds in total gross weight. Unless specifically provided in the Permit, a Permit does not authorize the overweight operation on any County bridge with a lower posted weight limit than the permitted vehicle and load.
- (b) Ninety Day Permit (Road Only). A Permit may be issued for a term of up to ninety days from the date of issuance.
- (c) Single Trip Permit (Road and Bridge Specific). A single trip Permit may be issued for a vehicle and load, which cannot be reasonably dismantled and which exceeds 80,000 pounds gross weight. To the extent feasible, the load of a vehicle for which a single trip Permit is sought shall be distributed equally over the load carrying axles. If the weight of the vehicle and load can be

reduced or reasonably dismantled to comply with County weight limits, a Permit will not be issued.

(d) Application Process

- (1) The applicant must submit a written application for a 90 day or single trip Permit in the forms attached as Appendix C to the Manager at the Travis County Transportation and Natural Resources Department, 411 West 13th Street, Austin, Texas 78701. (The form may be subsequently modified with the approval of the County Attorney's Office.)
- (2) In order to ensure timely processing, an application must be received ten working days prior to the proposed overweight operation.
- (3) The applicant must submit the following supporting documents, fees, and information:
 - (A) a copy of the current registration receipt of the power unit vehicle showing that the vehicle is currently registered for the maximum gross weight applicable to the vehicle;
 - (B) a non-refundable fee in accordance with the Fee Schedule in Appendix D, in the form of a cashier's check or money order made payable to Travis County;
 - (C) In the case of a single trip permit, a complete list of the roads and bridges in Travis County on which the overweight vehicle will be operated with beginning and ending limits and beginning and ending times when the overweight operation will occur. (Vehicles operating under Overweight Permits may be allowed night movement.)
- (4) The Manager will issue a permit for operations in compliance with this Policy. It will be within the reasonable discretion of the Manager, limited by sound engineering practices and principles of sound financial management, to grant a permit for the operation of a superheavy load or for the operation of a vehicle on a County bridge in excess of the posted weight limit. The decision of the Manager in such a case may be appealed to the Commissioners Court.
- (5) If a permit is granted, it is non-transferable and the permit fee is non-refundable. The Permit may be mailed to the applicant at the address contained in the application or may be picked up. A Permit terminates on the sale of the permitted vehicle. If the information provided in support of the application for the Permit immaterially changes (eg., change of address, etc.) an amended Permit may be issued for the remainder of the Permit term with no additional fee required.

(e) Operation under Permit. The permit shall be carried in the vehicle at all times during operations on weight restricted County roads.

- (f) Void Permit. A Permit is void and a vehicle may not be operated under such a Permit, if:
- (1) the information or documentation in support of the permit application is false or incorrect;
 - (2) the vehicle is operated in violation of this Policy or the terms and conditions of the Permit; or
 - (3) the Permit has been changed or altered.

An Officer, who has reason to believe that a Permit is void, shall seize the Permit and deliver it to the Manager for a determination of compliance with this Policy.

- (g) Exceptions. Vehicles with a "2060/5B" TxDOT permit issued under the authority of section 623.011 of the Code. This policy does not affect a law that authorizes or provides for special permits for a weight heavier than the maximum weight provided by law. If a vehicle has a permit under section 623.011, the County may not issue a permit under this Policy, or charge an additional fee for or otherwise regulate or restrict the operation of the vehicle because of weight. In addition, the County may not require the owner or operator under a section 263.011 permit to execute or comply with a road use agreement or indemnity agreement, to make a filing or application, or to provide a bond or letter of credit in addition to that specified in Section 623.012.

Vehicles delivering groceries or farm products to a destination requiring travel over a road for which the maximum is set.

Vehicles loaded with timber, pulpwood, woodchips, cotton, or agricultural products in their natural state may exceed the applicable axle load by up to 12 percent.

Vehicles hauling livestock may exceed the applicable axle load limit by up to 25 percent.

Capital Metro must obtain permits for its transit buses, but is exempt from all permit fees for its buses operating within Precinct Two of the County so long as its "Build Greater Austin" Program provides funding for County road maintenance activities. The Capital Metro permits will automatically renew for four successive 90 day periods.

All independent school districts operating buses within Travis County must obtain permits for their buses, but are exempt from all permit fees. The school districts permits will automatically renew for four successive 90 day periods.

Fire Department vehicles may exceed the County's weight limitations, but may not be heavier than the manufacturer's gross vehicle weight capacity or axle design rating.

The County may enter into Road Use Agreements with major overweight vehicle operators in lieu of the Permit process.

Nothing in this Policy is intended to either limit or authorize the operation of vehicles at lower or higher weight limits than the weight limits specifically set forth by Texas law.

86.009 Effective Date

This policy will become effective on December 1, 1995.

86.010 Appendix "A" Load Rating Procedure²

(a) Analysis Parameters for Roads. The strength of a roadway is dependent upon two parameters, the thickness of the better material over the subgrade, and the strength of the underlying natural in-situ soil (subgrade material). Improved layers of asphalt, base and subbase materials will distribute the wheel load over a large area before transmitting it to the soil layers, resulting in a stronger pavement. In addition, the stronger the underlying soil layer, the more weight one can exert on the pavement before permanently damaging it.

Some estimation of the thickness of the overlying pavement layers and the strength of the underlying soil is therefore needed before one can determine the allowable wheel load on the pavement.

(1) Determination of Pavement Layer Thickness. The basic purpose of a pavement surface is to prevent the applied wheel loads from causing the underlying soil to exceed its bearing capacity. Hence, it is very important to obtain a fairly accurate estimate of the depth of cover, i.e., the thickness of better material over the subgrade.

This thickness may be available in record form at the respective county agency for newly constructed or rehabilitated roads. However, for roadways for which such information is unavailable, or for older roads, an on-site investigation will be necessary.

The on-site testing shall be done using a Dynamic Cone Penetrometer as described below.

The Dynamic Cone Penetrometer (henceforth referred to as P), consists of a steel rod with a cone at one end, which is driven into the pavement or the subgrade by means of a sliding hammer while measuring the material resistance to penetration in terms of millimeters per blow. The cone is 30 degree angled, with a larger diameter of 20 mm. The hammer weighs 8 kg and the dropping sliding height is 575 mm. The DCP was originally designed and used for determination of the strength profile of the flexible pavement structure and subgrade.

² Appendix A was amended 12/19/1995, Item 6.

The testing consists of the following basic steps:

- (A) Find a testing position, preferably on road at cracked or potholed area, alternatively, at edge of pavement.
- (B) Chip away the pavement and place DCP vertically. Manually push it into the soil until narrow part of tip is beneath the base/soil. Although the asphalt concrete or Portland Cement Concrete pavement is not tested by the DCP, its existing thickness is added to that of the lower layers.
- (C) Record initial height reading from bottom of 2" nut to the soil.
- (D) Do 5 blows (A blow is done by throwing the weight up so it lightly hits the double nut [and falls back by gravity onto the 2" nut]) .
- (E) Record tape reading.
- (F) Repeat steps D and E until the DCP is about 500 mm into the soil.

Note 1: For strong soils increase the blows in step 4 to get approximately 20 - 40 mm displacement; for weak soils decrease the blows accordingly.

Note 2: If you hit a rock (not bed rock) or encounter an object, redo the test at another location.

Note 3: If construction as-built plans are available for thickness determination, they are preferred and shall be used instead of performing any in-field tests.

- (2) Determination of Soil Type. This procedure uses the Texas Triaxial Classification (TTC) value to characterize the strength of the subgrade soil underneath the pavement. A digitized map showing the boundaries of the different soil types within Travis County is available, and should be used to determine the soil type and the Texas Triaxial value(s) for the road in question. If the roadway crosses two soil types, the soil type with the highest Triaxial value (lowest strength) should be used.

(b) Engineering Analysis for Roads. A brief description of the procedure to be used by the engineer in load zoning is given below:

- (1) The engineer shall obtain the data sheets from the onsite investigation performed as described in (a)(1) above and enter the information into an analysis spreadsheet, an example of which is shown in Figure 2.

- (2) The "DCP [Dynamic Cone Penetrometer) value" which is defined as the slope of the blows vs. depth curve (in mm per blow), at a given linear depth segment (see Figure 3) is determined.

TRAVIS COUNTY PAVEMENT EVALUATION AUSTIN RESEARCH ENGINEERS							
DCP RESULTS							
STREET NAME	SPRINKLE CUTOFF			DATE	12/02/94		
EST No				STREET CODE			
DIRECTION				SIDE			
INITIAL READING OF DCP	875.00						
No blows	Summ of Blows	Penelrat. Reading	Penelrat. in mm	SLOPE	AVERAGE SLOPE	CBR VALUE	THICKNES IN INCHES
10.00	10.00	820.00	55.00	5.50			
10.00	20.00	780.00	95.00	4.00			
10.00	30.00	740.00	135.00	4.00			
5.00	35.00	705.00	170.00	7.00	5.13		6.69
3.00	38.00	860.00	215.00	15.00			
5.00	43.00	595.00	280.00	13.00			
5.00	48.00	521.00	354.00	14.80			
5.00	53.00	450.00	425.00	14.20			
3.00	56.00	402.00	473.00	16.00			
3.00	59.00	370.00	505.00	10.87			

Figure 2 Example Spreadsheet for Depth of Cover

Since the slope will change with material type, and the principle of a flexible pavement design is the use of progressively better or stronger material over the subgrade, the point where the subgrade was reached can be noted very easily.

Therefore, using engineering judgment, the total depth of cover, i.e., thickness of better material over the subgrade can be determined. When the pavement depth is determined, add the thickness of the surface layer as well as an extra 1.5 inches to obtain the "depth of cover". The depth of cover is the value used to estimate the allowable wheel loads for the road.

- (3) Since some materials used as bases in Travis County are stabilized (improved with chemical additives such as lime, Portland Cement or asphalt, it is also important to determine which ones are stabilized. For this, the engineer has to consult the as built records at the County. In the case that the information is not available, the following formula may be used to correlate the DCP value obtained in the field to California Bearing Ration (CBR).

$$\log \text{CBR} = 2.46 - 1.12 (\log \text{DCP})$$

The engineer may then use the CBR value thus obtained to edge if the base is stabilized, and the type of stabilized material.

- (4) If the base is unstabilized, Figure 4 which provides the allowable wheel load as a function of the depth of cover and the Texas Triaxial class of the underlying soil shall be used. The depth of cover is represented on the left side of the chart on the vertical axis. It ranges from 0 to 35 inches and increases from the top of the chart to the bottom. The curved lines situated within the chart represent the Texas Triaxial classes. The lines divide the chart into classes ranging from 1 to 6.5. The allowable wheel load is represented at the top of the chart on the horizontal axis. There are two scales represented, one for the roads which are intended to last 10 years. For the 20 - 30 year road life, the scale ranges from 0 to 24,000 lb wheel loads. For the 10 year road life, the scale ranges from 0 to 48,000 lbs. Since most of the roads in Travis County are designed to last 20 years, the upper scale must be used in the determination of load limits.

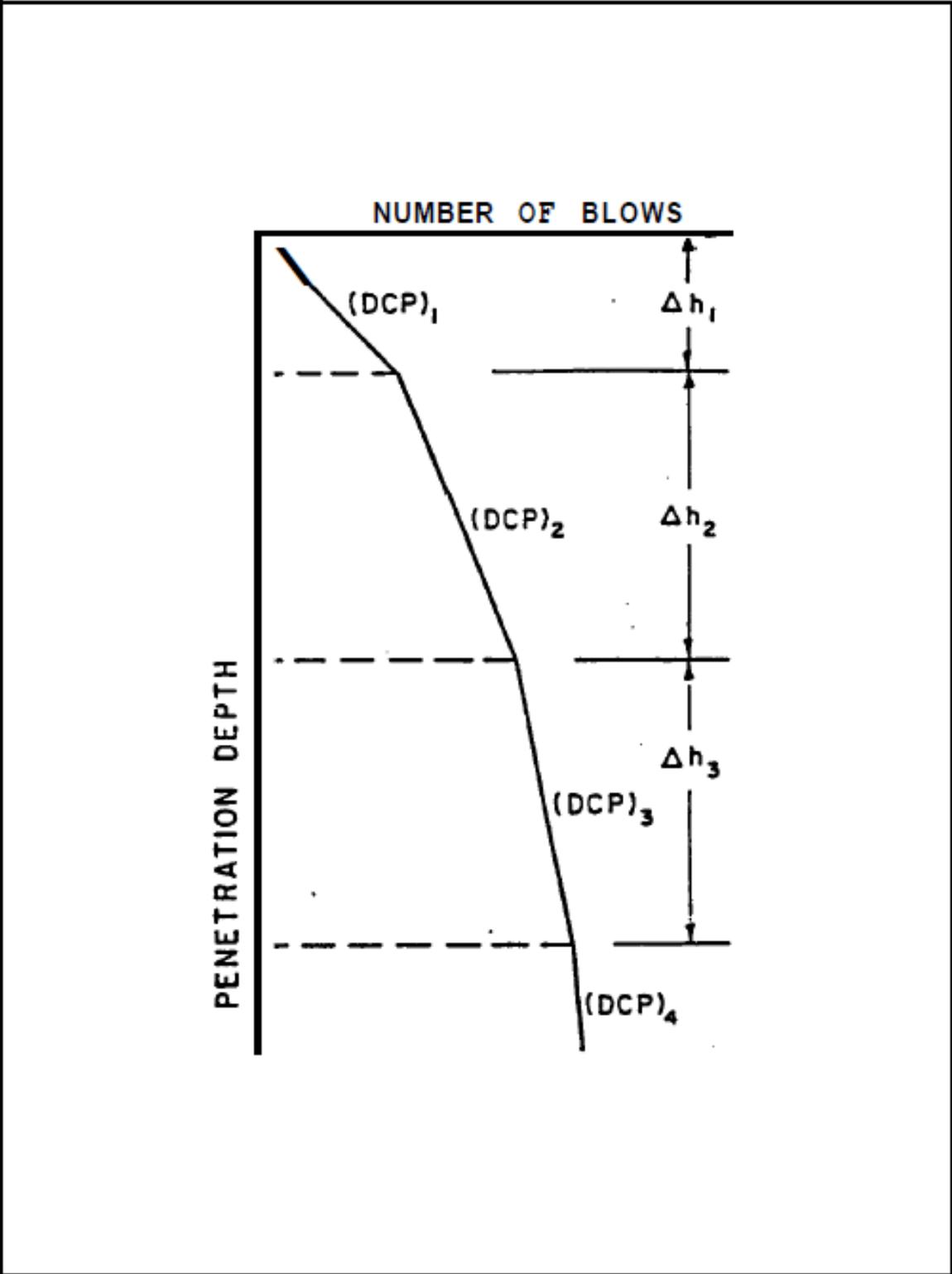


Figure 3 Schematic description of DCP test output

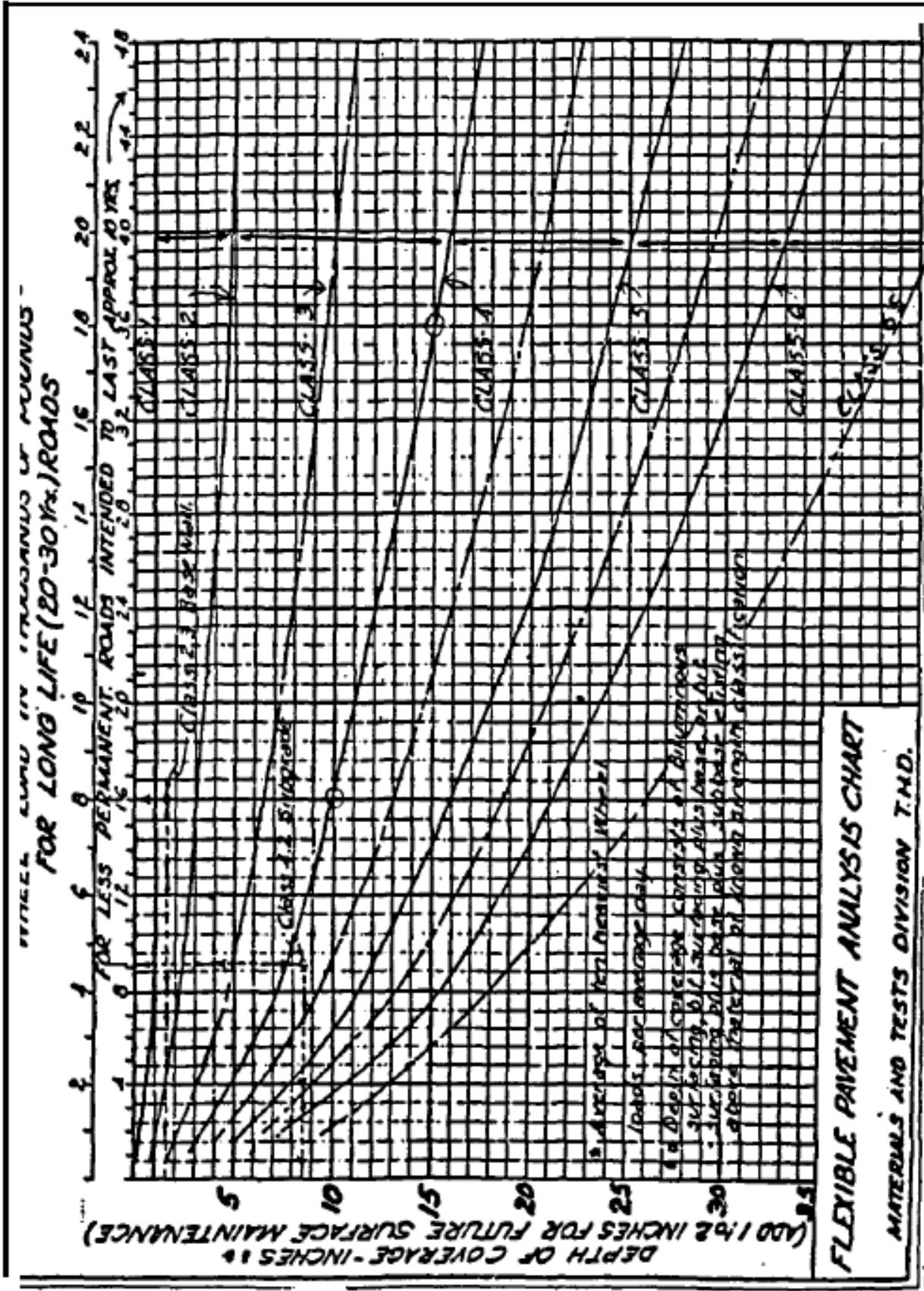


Figure 4 Maximum wheel load for Triaxial Soil Classes

To use the chart, first locate the depth of cover on the left axis. For example, let's say that the depth of cover is 8.5". Slide down the left side of the chart to the 0.5" depth of coverage. This location is shown on the chart by a dashed line. Let's assume that the Triaxial class of the underlying soil is 4.2. Turn 90 degrees and move up to the top of the graph. Note that the line intersects the wheel load scale at 4,600 lbs. for a road life of 20 - 30 years. This is the maximum allowable wheel load for this road.

It is customary to load zone roadways by axle weight. To multiply the wheel load by the number of wheels per axle.

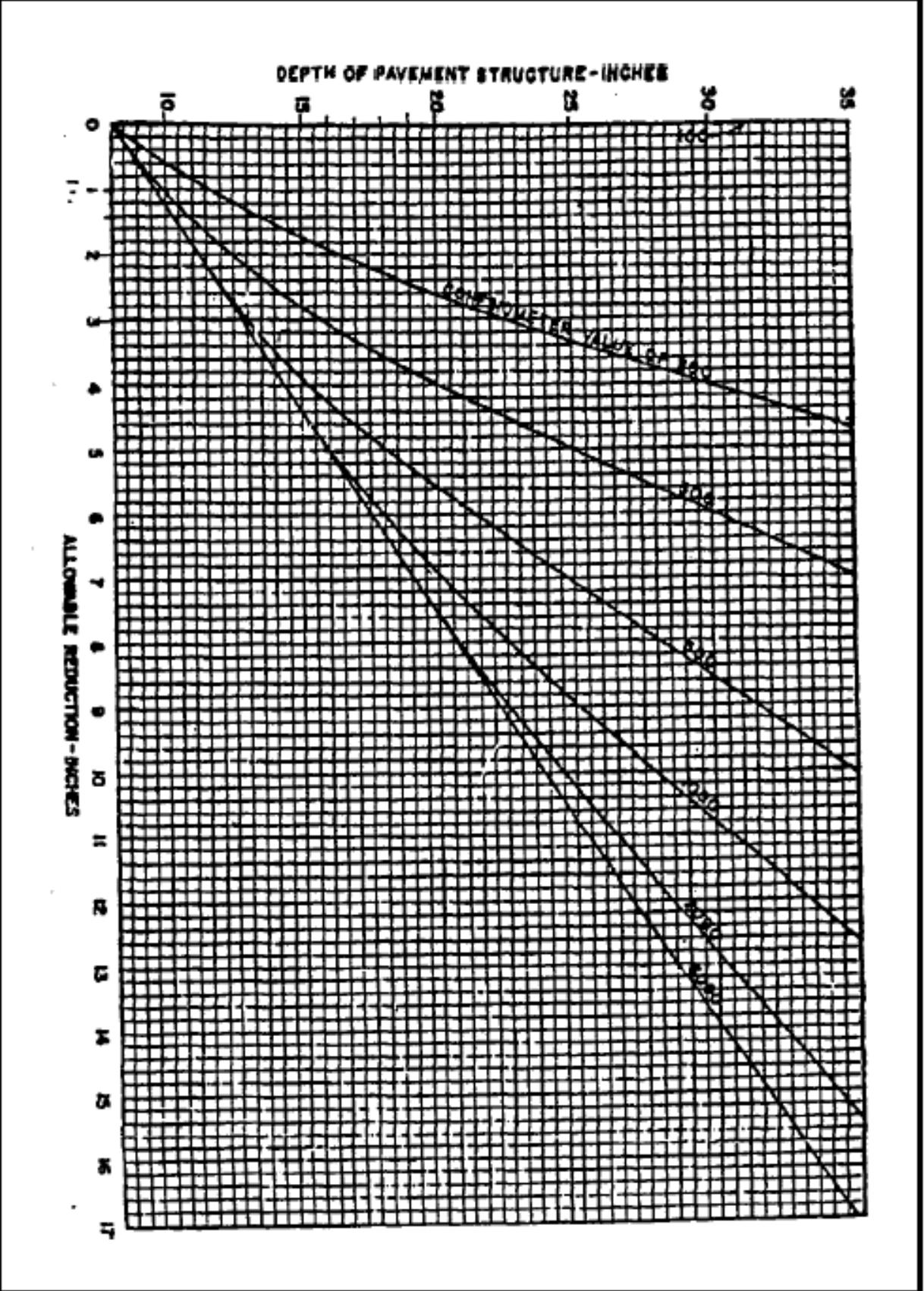
- (5) If the base is stabilized, a modification to the procedure described in (4) above is desired. Once the thickness and type of stabilized material is determined as described in (3) above, Figure 17 of Test Method Texas 117-E may be used to convert the thickness of the stabilized layer to an equivalent unstabilized layer. This figure is included herewith as Figure 5. Once this is accomplished, step (4) must be repeated to obtain the maximum allowable wheel load on the roadway.
- (6) Bridge Load Rating. In the case that there is a bridge on the road section being load rated, the load rating value of the bridge shall be obtained from the Texas Department of Transportation. This will help establish another threshold value for the section being load rated.

It must be noted that if upon completion of load rating, the road section is rated at a higher load than the load carrying capacity of a bridge on the same section of road, the section should be limited to the load capacity of the bridge. The vice versa will be valid when the road section is rated at a load capacity lower than the bridge load rate.

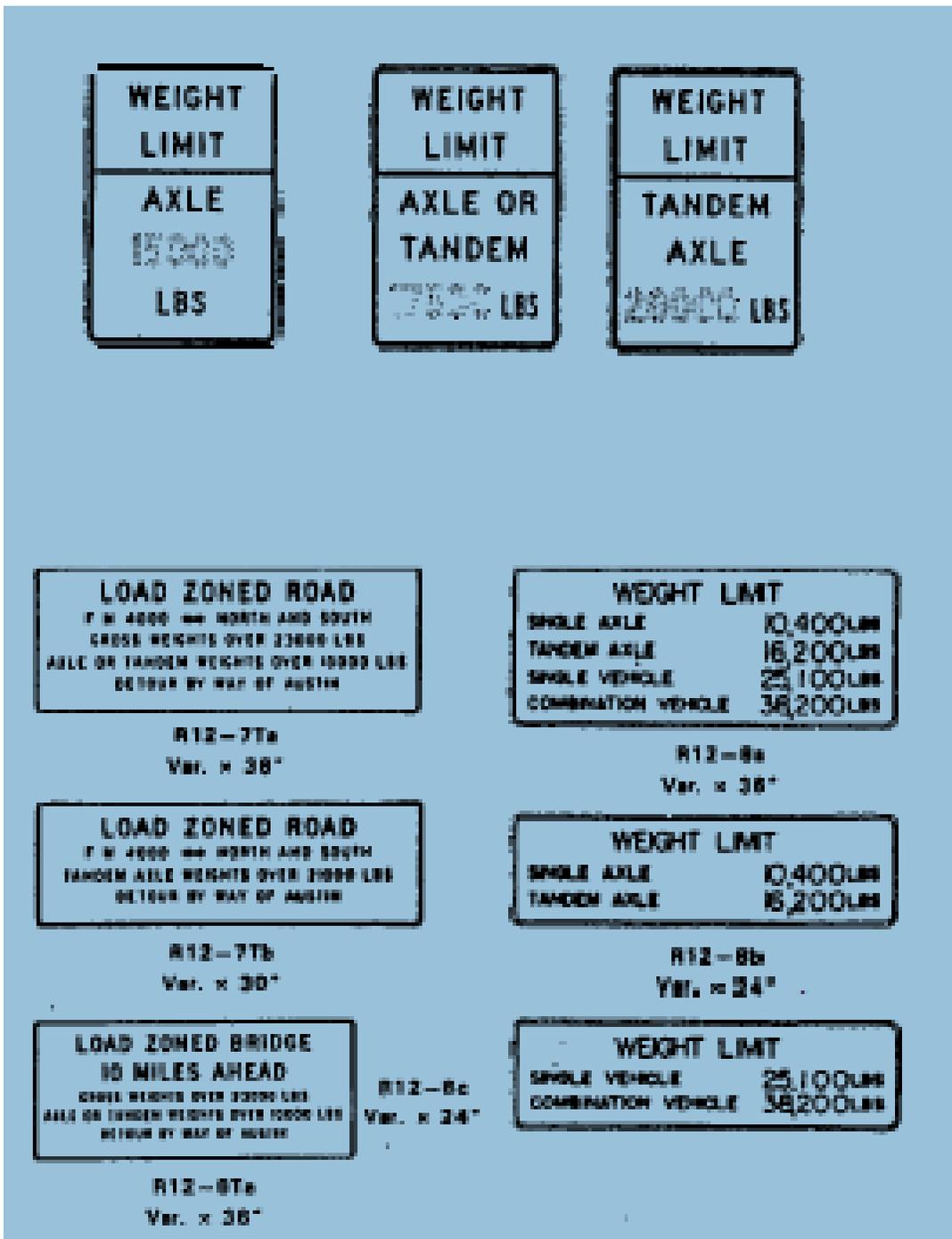
It must also be noted that the procedure outlined here is intended to aid the county in load restricting its roads, If the recommended axle loads arrived at using this procedure result in the continuous deterioration of the roadway surface, the load restrictions should be revised to some lower value.

- (c) Bridges. Travis County shall use the BRINSAP (Bridge Inventory and Appraisal Program) procedure used by the Texas Department of Transportation to determine the overall rating and the recommended allowable loads for Travis County bridges.

RECOMMENDED MINIMUM STABILIZED LAYERS



86.011 Appendix "B" [Example Signage]



86.012 – 86.013 [Repealed]³

³ Section 86.012 (Appendix C) and 86.013 (Appendix D) were repealed May 14, 2013, Item 26A.