

REGULATIONS OF WALLER COUNTY, TEXAS

FOR THE CONSTRUCTION OF DRIVEWAYS AND/OR CULVERTS

ON COUNTY EASEMENTS AND RIGHTS-OF-WAY

Adopted: 9/11/07

Revised: 3/10/11

TABLE OF CONTENTS

SECTION 1 – AUTHORITY -----	1
SECTION 2 – DEFINITIONS -----	1
SECTION 3 – GENERAL PROVISIONS -----	1
SECTION 4 – CONSTRUCTION & INSPECTION -----	4
SECTION 5 – ENFORCEMENT -----	5
SECTION 6 – EXCEPTIONS -----	6
SECTION 7 – RECORDS -----	6
SECTION 8 – EFFECTIVE DATE -----	6
SECTION 9 – SEVERABILITY -----	6
SECTION 10 – FEES -----	7
SECTION 11 – PROMULGATION OF FORMS -----	7
SECTION 12 – PROMULGATION OF DETAILS -----	7
FORMS	
DETAILS	

REGULATIONS OF WALLER COUNTY, TEXAS, FOR THE CONSTRUCTION OF DRIVEWAYS AND CULVERTS IN COUNTY EASEMENTS AND RIGHTS-OF-WAY

SECTION 1 – AUTHORITY

These regulations are adopted by the Commissioners' Court of WALLER County, Texas, in an effort to provide a safe environment on the county roadways. Structures built and work performed in the county rights-of-way and/or easements must be accomplished in a manner that is safe for the traveling public. Work performed shall meet at least the minimum standards outlined in this document.

SECTION 2 – DEFINITIONS

As used in these Regulations, the following words and phrases have the following meanings:

1. "County or public easements or rights-of-way" mean any right, title or interest in land acquired, claimed or maintained by Waller County for road and road drainage.
2. "Person" means any individual, corporation, partnership, limited partnership, joint venture or other entity.
3. "County Engineer" means the County Engineer of Waller County, Texas.
4. "Roadway" means the portion of the improved surface of the County or public easement or rightofway used for travel by vehicular traffic which is usually constructed of concrete, asphalt, gravel, shell or other material providing a hard surface.
5. "Driveway" means an improved surface used for vehicular access from the edge of a County roadway to the right-of-way or easement line.
6. "Culvert" means a hollow structure of concrete or high density polyethylene (HDPE), such as ADS N-12[®] pipe or equivalent, which provides waterway openings to conduct water for drainage purposes.
7. "Sidewalk" means an improved surface used for pedestrian traffic along the County rightofway or easement.
8. "Start of Construction" means the commencement of any grading, excavation, removal of concrete curb, or setting of culvert pipe on County or public easements or rights-of-way.
9. "Non-Breakaway Structure" means any structure placed in the county right-of-way and/or easement that is a hazard for the traveling public.

SECTION 3 – GENERAL PROVISIONS

Construction of driveways, sidewalks, culverts whenever applicable, or the replacement of existing driveways, sidewalks or culverts on County or public easements or rights-of-way without first securing a permit is prohibited.

Applications for permits for the construction of driveways, sidewalks and culverts on County or public easements or rights-of-way shall be made to the County Engineer prior to the start of construction.

Permits from the County are not required for the following:

- 1) The *repairs* of driveways constructed on concrete curb and gutter public streets, or
- 2) The installation, repair, or replacement of driveways / culverts on roads that are not on the County's Road and Bridge Units and Sections Log.

When an application for a driveway, with or without a culvert or sidewalk, is filed, the applicant (property owner or installer) will provide and consider the following:

- 1) The location of the driveway / culvert by staking its beginning and the end on the ground and showing the distance from the nearest property corner or intersecting street or road.
- 2) Whether the driveway / culvert will provide ultimate access to single family residential / agricultural or multi-family residential / commercial development.
- 3) The type of driveway surface and culvert material. All culverts shall be constructed of reinforced concrete or HDPE, such as ADS N-12[®] pipe or equivalent. All concrete pre-cast conduits or pipe shall be new, tongue and groove (bell ended pipe shall not be used), reinforced Class III pipe. An exception may be granted for the use of used reinforced concrete pipe for residential use only after an inspection of the pipe and the County Engineer determines that the quality of the used pipe is equivalent to new pipe.
- 4) The length of the proposed culvert based on the following standards:

	Single Family Residential / Agricultural	All Other Driveways
Minimum for walkway	One joint of pipe (8')	
Minimum for driveway	20 feet	20 feet
Maximum for driveway	40 feet	100 feet (<i>Inlets shall be spaced 50 feet or in the midpoint of any culvert over 50 feet in length</i>)

New Street Crossings or Connections to Existing Streets: Length to be determined by the County Engineer.

- 5) The location of all physical objects such as drainage inlets or catch basins within the portion of the driveway or sidewalk which is within the County or public easement or right-of-way that might conflict with the construction of the driveway. The applicant must provide the location of all manmade objects within the portion of the driveway or sidewalk which is within the County or public easement or right-of-way.
- 6) That a driveway connecting to a concrete curb and gutter street or road is designed in

accordance with Waller County Drawings and any subsequent amendments or revisions thereto as promulgated by the County Engineer.

- 7) That a driveway constructed over a roadside ditch culvert conforms to at least the geometric requirements of the aforementioned drawings.
- 8) Safety end treatments with pipe runners are required for all pipes larger than 30”.
- 9) That an island proposed within a commercial driveway on a curb and gutter street has a maximum width of two (2) times the total width of the driveway, including the return radii, divided by eight (8). No island shall be placed inside the curb line on a concrete curb and gutter street or no closer than six feet to the edge of pavement on a street with roadside ditches. No island shall be allowed within the right-of-way of a residential street.
- 10) That driveways proposed to be located on a corner lot is not shown to be located within any portion of public street curb radii.
- 11) Whether a special design is required whenever the driveway may be proposed in a location hazardous to traffic safety.
- 12) That driveways located on the same property shall be separated by a minimum of twenty (20) feet.
- 13) That sidewalks constructed in County rights-of-way or easements be constructed in accordance with the Waller County Drawings and any subsequent amendments or revisions thereto as promulgated by the County Engineer.
- 14) That any sidewalk constructed on a corner lot shall have a wheel chair ramp constructed in accordance with the latest requirements of the Architectural Barrier Act, Article 9102 Texas Civil Statutes, if said ramp is not already in place.
- 15) The size of culvert. The minimum culvert diameter shall be fifteen (15) inches.
- 16) Commercial sites may be required to have their driveway designed by a professional engineer and submitted to the County Engineer for review.
- 17) Whether the proposed culvert conforms to all other requirements of these regulations.

If the County has need to increase the size or change the depth and grade of an existing roadside ditch or drainage easement, the County will incur the cost of the replacement for existing driveways within the work area. Driveways will be replaced with similar material. The driveway installation will only be offered to properties that exhibit signs of recent and frequent access or to properties that have existing structures such as garages or boat barns that require vehicular access.

The property owner will be responsible for the maintenance, upkeep, and repair of the culvert crossing (driveway surface and pipe opening).

Temporary culverts, culverts used for access to property used for agricultural purposes or for access to single family dwellings, are exempt from this requirement.

All permits issued by the County Engineer for the construction of driveways, sidewalks or culverts on a County or public easement or right-of-way shall require conformance with these Regulations including

Waller County Drawings and any subsequent amendments or revisions thereto as promulgated by the County Engineer.

The County Engineer shall promulgate forms to be used in the administration of these Regulations.

SECTION 4 – CONSTRUCTION & INSPECTION

Permits shall stipulate that construction pursuant to the permit will be commenced within three (3) months and be completed within six (6) months from the date of the permit and that fees collected for said permits shall not be refundable. Inspection fees may only be refunded upon written request by the permittee and after approval by Commissioners’ Court. Permit fees are not refundable.

All culverts shall be bedded and backfilled with select fill or cement stabilized sand from a point six (6) inches below the culvert to one (1) foot above the top of pipe.

Installation and inspection considerations are as follows:

Culverts

- 1) Culverts shall not be set until grade stakes are provided by Waller County.
- 2) Culverts shall not be backfilled until an inspection is conducted by Waller County to determine that the elevation and grade of the culverts have been correctly set.
- 3) Culverts shall also be inspected upon completion of the placement of backfill and prior to commencement of driveway construction.

Driveways

- 1) Driveways connecting to concrete curb and gutter roadways shall be inspected after the placement of reinforcing steel and prior to the placing of concrete, and again after the concrete placement for conformance with County standards.
- 2) Driveways connecting to asphalt roadways without curbs and gutters will be inspected after the placement of materials for conformance with the geometric requirements of these Regulations.
- 3) The installer of concrete driveways will provide an expansion joint in the concrete on either side of the drainage pipe. The expansion joint shall be provided two feet beyond the outer edge of pipe on each side of the culvert pipe, to facilitate removal of concrete as may be necessary to enlarge or re-grade pipe during future drainage improvement projects.
- 4) All driveways requiring special geometric design shall be inspected for conformance with drawings.

Sidewalks

- 1) Sidewalks will be inspected before placement of concrete while formwork and re-bar are exposed. Inspection will verify nominal thickness of concrete. Items inspected will cover location, slope and obstruction by improperly elevated manholes, water valves etc.

The County Engineer or designee may make any additional inspections deemed necessary to administer these Regulations.

SECTION 5 – ENFORCEMENT

The County Engineer shall be charged with the enforcement of these Regulations. If any person violates any provision of these Regulations the County Engineer will attempt to obtain compliance with these Regulations.

Driveways that have been installed without notification or authorization (unpermitted) by the County and have been found to hinder drainage or violate one of the above regulations will be removed and placed on the adjacent offending property following the process noted below:

- 1) A Notice of Violation (NOV) will be placed on a stake or fence post to notify the property owner or installer that a violation has been identified by the County. The NOV provides the property owner with basic information regarding the cause for violation and provides contact information for the County Engineer or his representative.
- 2) If no response is received within the ten (10) day period provided on the NOV then a letter will be mailed to the property owner noting the cause for violation along with the contact information for the County Engineer or his representative.
- 3) If any person engages in the construction of a driveway, sidewalk or culvert crossing a County easement or right-of-way without a permit, the Commissioners' Court may direct the County Attorney to file suit to enjoin the violation of these Regulations.
- 4) If any person engages in the construction of a driveway, sidewalk or culvert crossing a County easement or right-of-way without a permit, or if any person engages in the construction of a driveway or culvert in any manner except as specified in the permit issued therefore by the County Engineer, the Commissioners' Court may order the landowner to remove or repair the driveway or culvert at the landowner's expense.

[Texas Local Government Code §81.025, 1987]

When regulating driveway installations wherein a permit has been issued but the installer (property owner or contractor) has failed to:

- 1) start construction within the three (3) month period allowed,
- 2) correct the element that failed an inspection, or
- 3) complete construction within the six (6) month period allowed;

the County Engineer may so report to the Commissioners' Court and the following remedies may be pursued:

- 1) If any person engages in the construction of a driveway, sidewalk or culvert in any manner except as specified in the permit issued therefore by the County Engineer, the Commissioners' Court may direct the County Attorney to file suit to enjoin the violation of

these Regulations.

- 2) Any person securing a permit under these Regulations must certify to Commissioners' Court that the terms, provisions and conditions of the permit will be complied with. Violation of this certification constitutes contempt of Commissioners' Court.
- 3) If the Commissioners' Court finds a person to be guilty of contempt, it may enter such orders consistent with general law as it deems appropriate to punish the person guilty of contempt, and may enter such order and further orders enforceable by civil and criminal contempt, and consistent with its authority under general law, as Commissioners' Court deems necessary to enforce and protect its jurisdiction over the matter and to uphold the integrity of these Regulations.
- 4) The procedure for contempt proceedings before Commissioners' Court will be consistent with procedures in actions before other courts in this state for enforcement of court orders, and for the protection of the jurisdiction of courts by process of contempt. Provided, however, that the person shall be given ten (10) days notice of said contempt proceeding by certified or registered mail, return receipt requested.

SECTION 6 – EXCEPTIONS

An appeal for exception to these Regulations will be considered on the following basis and only after good and sufficient cause has been demonstrated by the applicant for an exception:

- 1) Upon denial of permit, the applicant may appeal the County Engineer's decision by stating and submitting his reasons in writing to the County Engineer and within ten (10) days of the denial of said permit.
- 2) The County Engineer shall review the appeal and within fifteen (15) days of receipt of the said appeal, shall reduce his findings to writing and submit his findings and recommendation to Commissioners' Court. The applicant shall be provided with a copy of the County Engineer's recommendations and may appear before Commissioners' Court to support his appeal.

SECTION 7 – RECORDS

All applications and file copies of permits issued pursuant to these Regulations shall be maintained by the County Engineer as part of the permanent records of his office.

SECTION 8 – EFFECTIVE DATE

These revised Regulations shall become effective upon adoption by Commissioners' Court.

SECTION 9 – SEVERABILITY

The provisions of these Regulations are severable. If any word, phrase, clause, sentence, section, provision, or part of these Regulations should be held invalid or unconstitutional, it shall not affect the validity of the remaining provisions, and it is hereby declared to be the intent of the Commissioners' Court that these Regulations would have been adopted as to the remaining portions, regardless of the invalidity of any part.

SECTION 10 – FEES

Per the Fee Schedule adopted by Commissioner’s Court on March 24, 2009, fees for driveway permits and re-inspections are as follows:

	New	Modification	Re-Inspection
Single Family Residential / Agricultural	\$100	\$80	\$50
Multi-Family Residential/ Commercial	\$200	\$160	\$100

SECTION 11 – PROMULGATION OF FORMS

Forms are promulgated for use in the administration of these regulations. The County Engineer may add to these forms or may promulgate additional forms as may be needed to administer these regulations.

SECTION 12 – PROMULGATION OF DETAILS

Details (drawings) are promulgated for use in the administration of these regulations. The County Engineer may revise these details or may promulgate additional details as may be needed to administer these regulations.

DRIVEWAY/CULVERT PERMIT APPLICATION

1. OWNER/INSTALLER INFORMATION (Please print or type)

Property Owner's Name _____

Property Owner's Mailing Address _____ City _____ State _____ Zip _____

Daytime Phone _____ email _____

Installer Name _____

Installer Mailing Address _____ City _____ State _____ Zip _____

Daytime Phone _____ Fax _____ email _____

2. LOCATION OF PROPERTY: (911 Address must be obtained prior to issuance of this permit.)

Survey Name _____ Abst # _____ Tr # _____ Ac _____ Prop ID #, R _____

Subdivision _____ Section _____ Lot _____ Block _____ Reserve _____

Street Address: _____ Zip _____

3. GENERAL INFORMATION (Site Use and Proposed Construction)

Single Family Residential Multi-Family Residential/Commercial Agriculture

4. DRIVEWAY / CULVERT INFORMATION

Driveway (only) Driveway with Culvert Extension of Driveway Circle Driveway

Culvert Length _____ Driveway Width _____ Type of Surface Material _____

Name of Nearest Cross Street _____ Distance from Cross Street _____

Direction from Cross Street (circle one) N S E W

5. PERMIT TYPE

Please check application block below:

APPLICANT WILL INSTALL/PRIVATE CONTRACTOR

The permit fee is **\$100.00**. Waller County will inform you of the proper size and grade requirements prior to installation. Applicant must notify Waller County when pipe is set for inspection, before it is backfilled (before covering up). Only reinforced concrete pipe or HDPE, such as ADS N-12 ® pipe or equivalent is allowed. Culvert installations that are longer than 40 feet in length will require grate inlets be installed equally spaced along the run of pipe unless specified otherwise by the County Engineer.

All driveway construction must be completed in accordance with the Regulations of Waller County for the Construction of Driveways and/or Culverts on County Easements and Rights of Way. Construction pursuant to the permit will be commenced within three (3) months and be completed within six (6) months from the date of the permit. **Additional inspections are \$50.00 (Res./Agr.) or \$100.00 (Comm.) per visit. Permit fees are not refundable.**

WALLER COUNTY WILL INSTALL

Applicant must pay installation fee at the time this permit is issued. Fee is **\$850.00** for first 20 feet installed by the County, and **\$15.00** per linear foot thereafter up to a maximum of 40 feet. If the ditch is wide it may require a double row of culverts. Applicant will be informed of proper size reinforced concrete pipe or HDPE, such as ADS N-12 ® pipe or equivalent and is responsible for cost of pipe, delivery to work site and staking the area for culverts to be set. Applicant will notify Waller County when culverts are at the site ready for installation. Waller County will furnish all labor, materials and equipment necessary to set the pipes.

COMMERCIAL/PRIVATE CONTRACTOR

The Permit Fee is **\$200.00**. Waller County will not install commercial driveways. Commercial driveways must be permitted under the same stipulations applying for "APPLICANT WILL INSTALL/PRIVATE CONTRACTOR" and the maximum length for commercial driveways is 100 feet. Also, commercial driveways must be designed by a professional engineer as part of the civil site plans.

ADD-ON TO EXISTING DRIVEWAY

Add-ons permitted under the same stipulations as applying for "WALLER COUNTY WILL INSTALL", the add-on fee is **\$25.00** per linear foot, to a maximum length of 40 feet.

OR

Add-ons permitted under the same stipulations as applying for "APPLICANT WILL INSTALL/PRIVATE CONTRACTOR", will be assessed the **\$80.00** permit fee, to a maximum length of 40 feet.

6. ACKNOWLEDGEMENTS

The Waller County Road and Bridge Department will set a culvert on the above-mentioned location and hereby authorizes you to construct a driveway on the County right of way for access to your property in adjoining County maintained road _____, provided you agree to and comply with the following conditions:

- All culverts shall be new reinforced concrete pipe or HDPE, such as ADS N-12 ® pipe or equivalent of size determined by Waller County, and to be purchased by the Owner. The purchase price should include delivery. **THE COUNTY DOES NOT SELL OR PICK UP CULVERTS.**
- Maintenance of driveways constructed hereafter shall be the responsibility of the PROPERTY OWNER. Any future changes, required by the PROPERTY OWNER, will be at the owner's expense, either by private contractor or county fee structure. Waller County Road and Bridge Department reserves the right to require changes, maintenance or repairs as may be necessary to provide protection of life or property on or adjacent to the County road. These changes shall be the responsibility of the County.
- The property owner shall hold harmless Waller County and it's duly appointed agents and employees from any action or personal injury or property damage sustained in the installation of this driveway.
- Mark the driveway on each side with a stake provided by Waller County R&B, Owner name will be written on stake.
- Purchasing new approved culverts and all delivery fees.
- Payment of fees.
- Circular Driveways: fees double.
- Minimum culvert length: 20 feet.
- Safety end treatments with pipe runners are required for all pipes larger than 30".
- Once concrete is placed over the culvert the maintenance of this culvert and concrete becomes the full and total responsibility of the property owner. If at any time Waller County must remove the culvert it will be the responsibility of the owner to replace all concrete that was removed.
- The property owner shall keep the culverts open and free flowing.
- No alteration of the driveway (including pavement) shall be made without prior approval from Waller County.

The applicant (Owner/Installer) understands and agrees that the County Engineer may make scheduled or unscheduled inspections of the property upon the issuance of the permit. If the permit applicant is a corporation, partnership or other legal entity other than a natural person, then the undersigned acting as the authorized representative of said entity will be responsible for ensuring the entity's compliance with all provisions, conditions and requirements of the development and driveway permit.

The applicant (Owner/Installer) hereby acknowledges and agrees to be strictly bound to Commissioners' Court of Waller County in ensuring that all provisions, conditions and requirements attached to the issuance of the driveway permit(s) under the Regulations of Waller County for the Construction of Driveways and/or Culverts on Easements and Rights of Way will be faithfully complied with.

I, _____, the undersigned, have carefully reviewed this application and my answers to all questions. To the best of my knowledge, the answers are all true and correct.

CALL BEFORE YOU DIG – 811

SIGNATURE of Applicant (Owner/Installer) _____ Date _____

<i>THIS SECTION FOR OFFICE USE ONLY:</i>		
<i>Permit No:</i> _____	<i>Date Application Rec'd.:</i> _____	<i>Rec'd. by:</i> _____
<i>Culvert Length:</i> _____	<i>Culvert Diameter:</i> _____	<i>Driveway Width:</i> _____
<i>Plan Checker:</i> _____	<i>Payment Method: Ck.# _____ Cash _____</i>	
<i>Notified Office of Culvert Size</i> _____	<i>Notified Owner of Size:</i> _____	
<i>Office Notified of Culverts on Site by Owner</i> _____		<i>Completion Date:</i> _____
<i>PRIVATE INSTALLATIONS Inspection Log: (provide date)</i>		
<i>Sized and Staked</i> _____	<i>Bedding & Pipe Grade Checked</i> _____	
<i>Backfill Checked</i> _____	<i>Surface Checked</i> _____	<i>Application Rejected (explain)</i> _____
<i>Notes:</i> _____		

**ACKNOWLEDGEMENT OF UNDERSTANDING
DRIVEWAY/CULVERT PERMITTING-INSPECTION PROCESS**

(must be submitted along with application in order to obtain permit for construction)

Installer Name _____

Permit No. _____

The Installer hereby acknowledge and agree to be strictly bound to Commissioner's Court of Waller County in ensuring that all provisions, conditions and requirements attached to the issuance of the driveway permit(s) under the Regulations of Waller County for the Construction of Driveways and/or Culverts on County Easements and Rights of Way will be faithfully and fully complied with.

**Construction pursuant to the permit must be commenced within three (3) months and
be completed within six (6) months from the date of the permit.**

Step 1 _____ *(initial)*

Complete permit application and pay appropriate fee. Use stakes to identify desired location for driveway.

Step 2 _____ *(initial)*

County Inspector will determine culvert size (if needed) and establish grades.

Step 3 _____ *(initial)*

Installer begins construction: install bedding and pipes at established grade.

Installer calls Inspector to arrange inspection after installation of bedding and pipes at grade.

Step 4 _____ *(initial)*

Upon successful inspection of bedding and pipe grades, Installer to place backfill.

Installer calls Inspector to arrange inspection after installation of backfill.

Step 5 _____ *(initial)*

Upon successful inspection of backfill, Installer to place surface material.

If concrete is used, an inspection is required after formwork and prior to pouring the concrete.

Installer calls Inspector to arrange inspection of surface material to close permit.

Step 6 _____ *(initial)*

Upon successful inspection of surface material, permit will be closed.

The Installer understands and agrees that the County Engineer or Inspector may make unscheduled inspection of the construction activities upon issuance of the permit. The Installer acknowledges that the driveway construction must be inspected as noted above.

CALL BEFORE YOU DIG -- 811

Re-inspection Fees: Residential/Agricultural - \$50 or Commercial - \$100

SIGNATURE of Installer

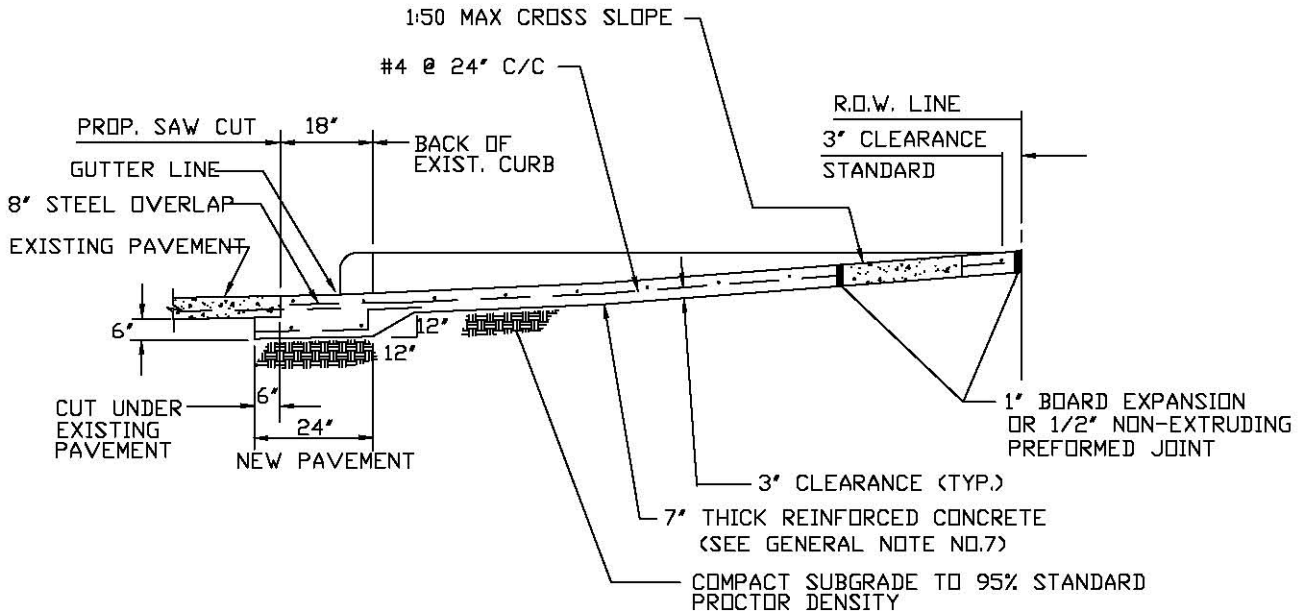
Date



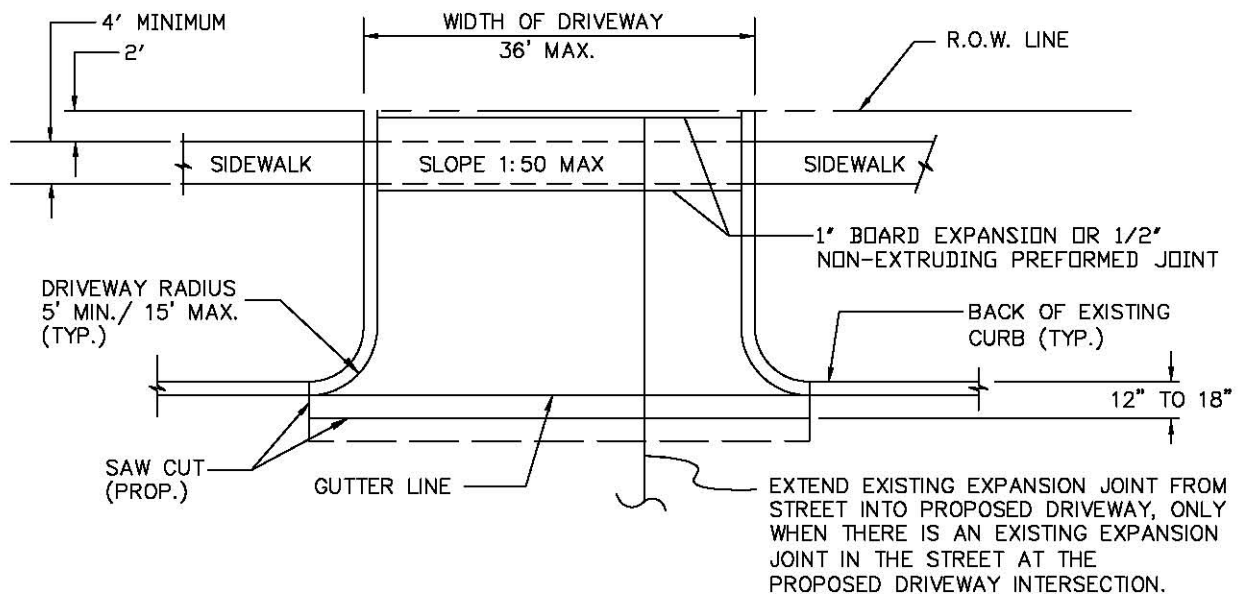
WHEN A COMMERCIAL DRIVEWAY OR CURB & GUTTER IS CONSTRUCTED,
RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT OF WAY

USE THE FOLLOWING:

A – USE FOR ALL PROPOSED DRIVES ON CURBED TYPE STREETS:



B – USE FOR ALL PROPOSED CURB REMOVAL FOR DRIVEWAYS



WALLER COUNTY • ROAD AND BRIDGE DEPARTMENT • HEMPSTEAD, TEXAS

DRIVEWAY ON CURBED
CONCRETE OR ASPHALT STREETS
COMMERCIAL AREA

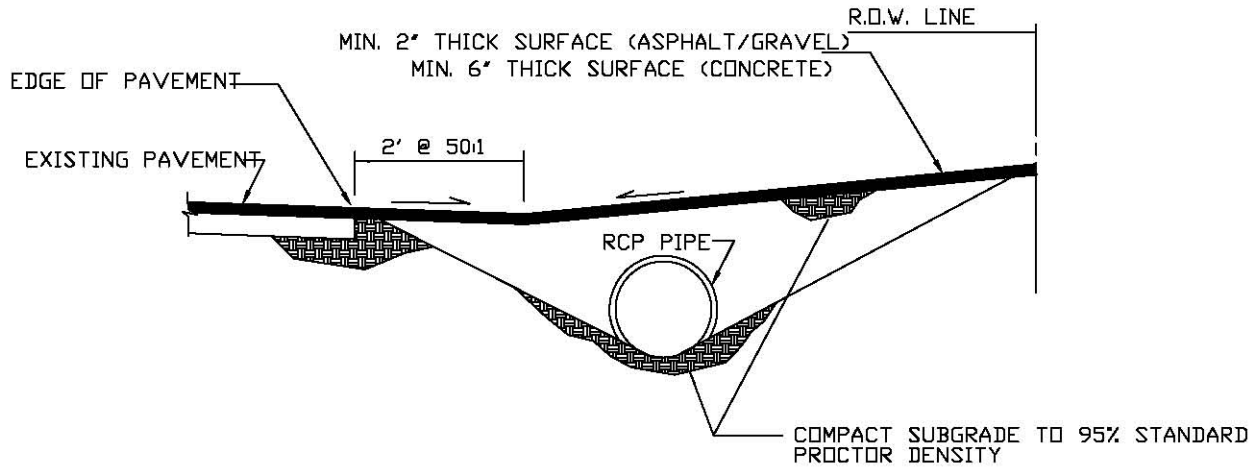
DW-1

NOT TO SCALE



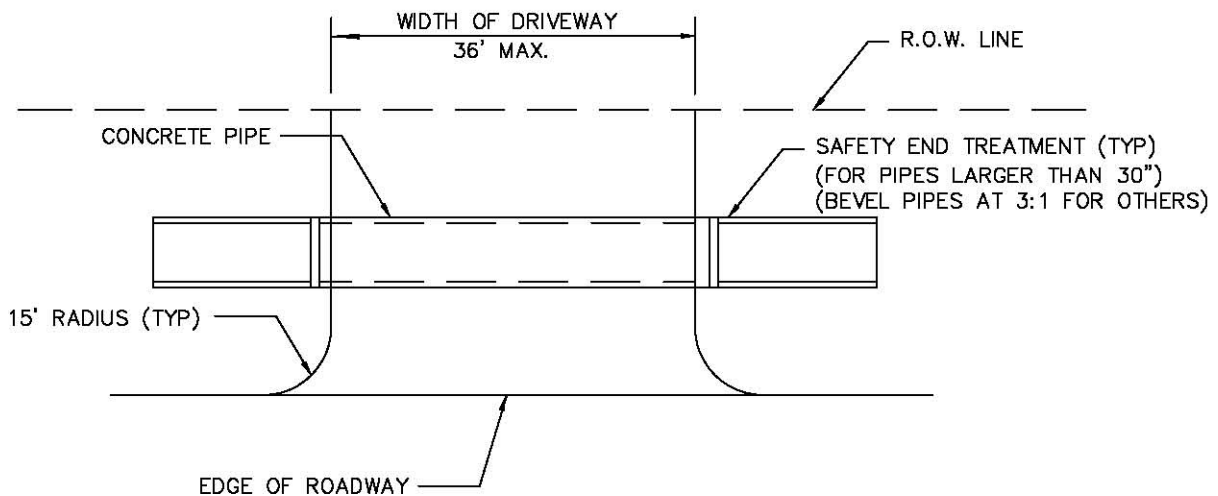
WHEN A RESIDENTIAL DRIVEWAY IS CONSTRUCTED,
RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT OF WAY
USE THE FOLLOWING:

A – USE FOR ALL PROPOSED DRIVES ON RURAL TYPE STREETS:



NOTES:

- 1) THIS DRAWING DEPICTS A GENERAL LAYOUT. DUE TO SITE SPECIFIC CONDITIONS, ADDITIONAL WORK MAY BE REQUIRED.
- 2) THE COUNTY WILL ESTABLISH THE ELEVATION AND PIPE SIZE.
- 3) SAFETY END TREATMENTS ARE REQUIRED FOR PIPE SIZES LARGER THAN 30" AND WILL REQUIRE PIPE RUNNERS.

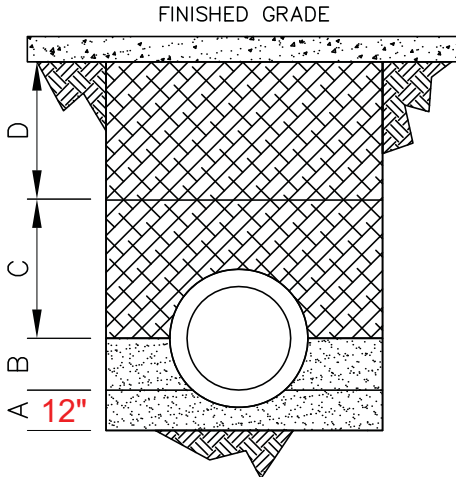


DRIVEWAY ON CURBED
CONCRETE OR ASPHALT STREETS
RESIDENTIAL AREA

DW-2

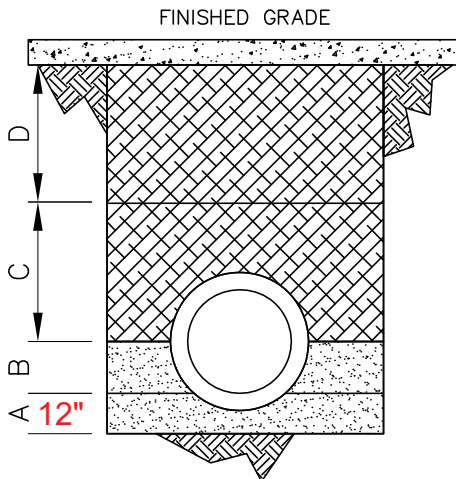
NOT TO SCALE





- A. **12"** OF CEMENT-STABILIZED SAND PLACED BEFORE PIPE IS LAID. SHAPE SAND TO CONFORM TO BOTTOM OF PIPE. MAINTAIN **6"** MIN. THICKNESS OF SAND BELOW PIPE.
- B. CEMENT-STABILIZED SAND PLACED AFTER PIPE IS LAID TO BE THOROUGHLY RODDED AND BROUGHT TO PIPE SPRINGLINE.
- C. R.C.P. PIPE
CEMENT-STABILIZED SAND THOROUGHLY RODDED AND BROUGHT TO 12" ABOVE PIPE.
- D. R.C.P. PIPE
IF SECONDARY BACKFILL IS LESS THAN ONE FOOT USE CEMENT-STABILIZED SAND FOR ENTIRE DEPTH. OTHERWISE USE SELECT BACKFILL* PLACED IN 8" LOOSE LIFTS AND COMPACT BY LIFTS TO 95% OF THE MODIFIED PROCTOR DENSITY.

BEDDING AND BACKFILL DETAIL FOR DRIVEWAY CULVERTS - COMMERCIAL



- A. SHAPE SOIL TO CONFORM TO BOTTOM OF PIPE. USE SELECT BACKFILL* PLACED IN 8" LOOSE LIFTS AND COMPACT BY LIFTS TO 95% OF THE MODIFIED PROCTOR DENSITY.
- B. SELECT BACKFILL* PLACED IN 8" LOOSE LIFTS AND COMPACT BY LIFTS TO 95% OF THE MODIFIED PROCTOR DENSITY.
- C. R.C.P. PIPE
USE SELECT BACKFILL* PLACED IN 8" LOOSE LIFTS AND COMPACT BY LIFTS TO 95% OF THE MODIFIED PROCTOR DENSITY.
- D. R.C.P. PIPE
USE SELECT BACKFILL* PLACED IN 8" LOOSE LIFTS AND COMPACT BY LIFTS TO 95% OF THE MODIFIED PROCTOR DENSITY.

BEDDING AND BACKFILL DETAIL FOR DRIVEWAY CULVERTS - RESIDENTIAL

*** SELECT BACKFILL IS DEFINED AS CLAYEY GRAVEL, SAND, OR LEAN CLAY; OR LIME TREATED CLAYEY SOILS, WITH A PLASTICITY INDEX BETWEEN 7 AND 20.**

DRIVEWAY ON CURBED
CONCRETE OR ASPHALT STREETS
BEDDING DETAILS

DW-3

NOT TO SCALE



GENERAL NOTES:

1. PROPOSED DRIVEWAY, SIDEWALK, CURB, GUTTER LINE AND GRADE SHALL MATCH EXISTING STREET.
2. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, 4-1/2 SACK CEMENT PER CUBIC YARD, 4-1/2 INCHES THICK AND 4 FEET MINIMUM WIDTH. SEE DRAWING NO.3 FOR ADDITIONAL INFORMATION AND DETAILS.
3. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, 5 SACK CEMENT PER CUBIC YARD, 7 INCHES THICK, FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE (PROPERTY LINE).
4. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED SPACED AT 24 INCHES C.C., EACH WAY, WITH 10 INCHES MINIMUM LAP (6"x12" W5xW4 AS ALTERNATE) FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE.
5. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM LAP OF 8 INCHES.
6. PROPOSED GUTTER LINE IS TO BE MAINTAINED AT FACE OF EXISTING CURB.
7. SAW CUT EXISTING CURB AT EACH END AND KNOCK OUT CURB FROM BEGINNING TO END OF PROPOSED DRIVEWAY.
8. SAW CUT EXISTING PAVEMENT A MINIMUM OF 12 INCHES AWAY FROM FACE OF CURB (GUTTER LINE) AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.
9. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE, COMPACT TO 95% OF STANDARD PROCTOR DENSITY (+/- 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
10. IF MORE THAN ONE PROPOSED DRIVEWAY IS BUILT ON THE SAME PROPERTY, SAID DRIVEWAYS SHALL BE SEPARATED BY A MINIMUM DISTANCE OF 20 FEET (ROADWAYS WITH CURBS AND SIDEWALKS).
11. REINFORCING STEEL TO BE ELEVATED A MINIMUM OF 3" ABOVE SUBGRADE. (3 INCHES MANUFACTURED CHAIRS ARE REQUIRED WITH MAXIMUM SPACING OF 72 INCHES C/C EACH WAY).

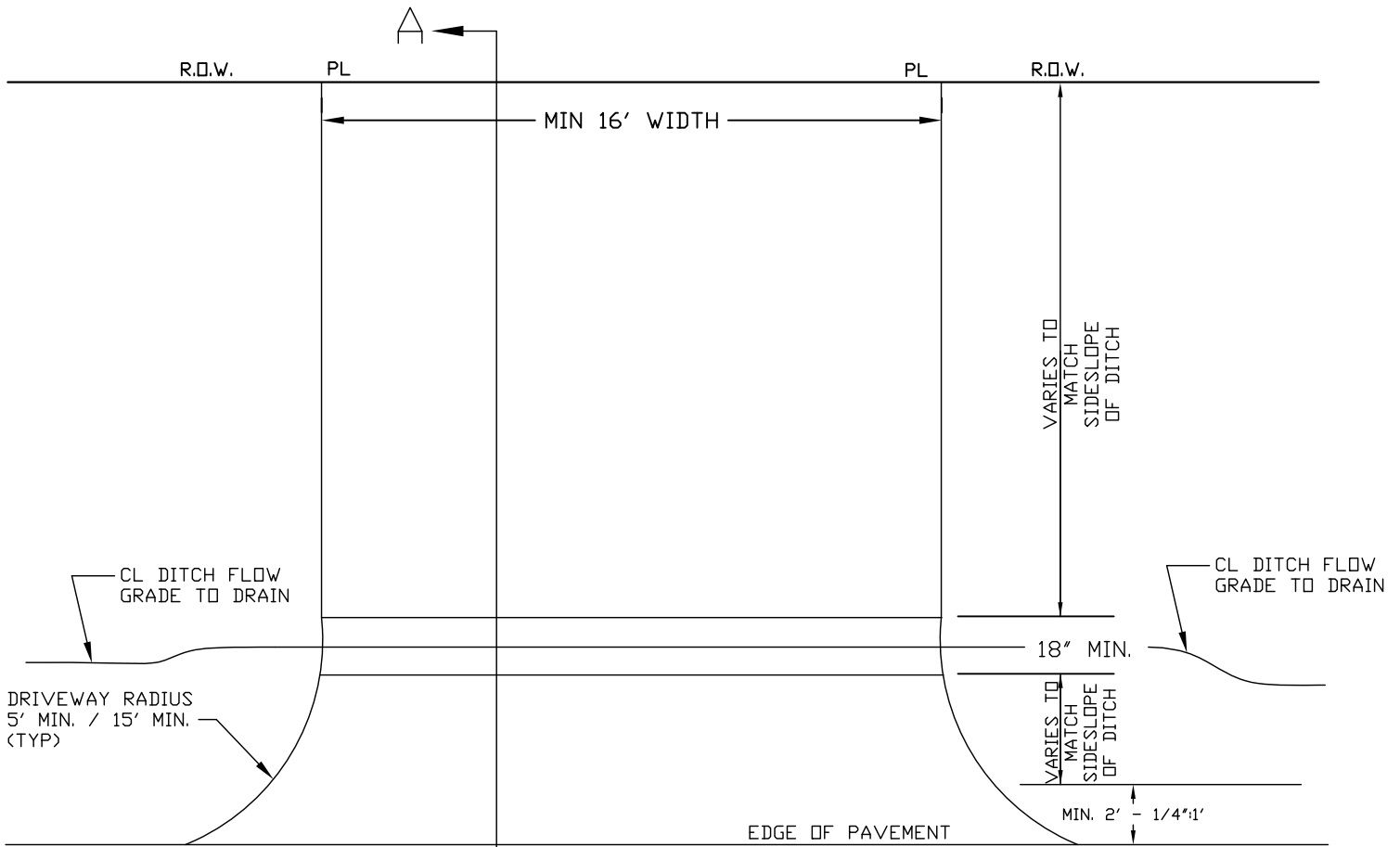
CONSTRUCTION NOTES FOR SIDEWALKS
& DRIVEWAYS ON CURBED TYPE STREETS,

DW-4

NOT TO SCALE

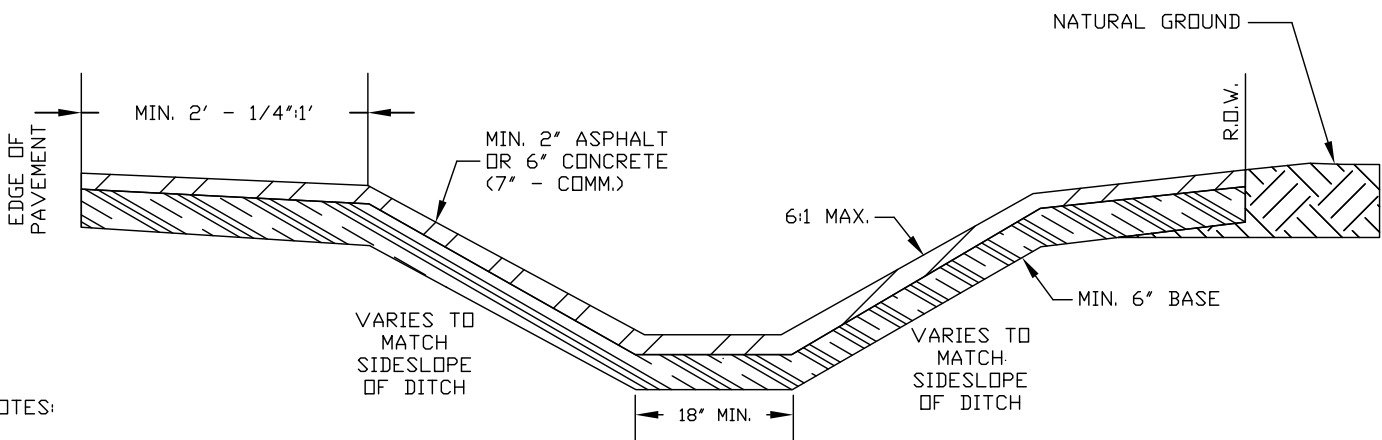


WHEN A RESIDENTIAL OR COMMERCIAL DRIVEWAY IS CONSTRUCTED, RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT-OF-WAY AND THE PROFILE CANNOT SUPPORT A CULVERT USE THE FOLLOWING:



PLAN VIEW

N.T.S.



SECTION A-A

N.T.S.

NOTES:

- 1) MIN. DEPTH OF 6" BASE AND EITHER 6" CONCRETE (7" COMM.) OR 2" ASPHALT.
- 2) 18" MIN. CENTER WIDTH ALIGNED WITH FLOWLINE.
- 3) TOP OF DIP SECTION TO MATCH DITCH FLOWLINE ELEVATION.
- 4) THIS DRAWING DEPICTS A GENERAL LAYOUT. SITE SPECIFIC CONDITIONS MAY WARRANT ADDITIONAL WORK.
- 4) ENGINEERED DRAWINGS MUST BE SUBMITTED FOR COMMERCIAL DRIVEWAYS.

WALLER COUNTY	
DIP-STYLE DRIVEWAY	
EFF. DATE: 02-23-10	DW-5