

ERIC L. DAVIS ENGINEERING, INC.  
 F-3987  
 120 East Main Street  
 Forney, Texas 75126  
 972/564-0592 Fax 972/564-6523  
 E-Mail eric.davis@eldengineering.com

UTILITY PLAN  
 ENGINEERED FOR:  
**BENTLEY CUSTOM HOMES**

BUILDER: BENTLEY CUSTOM HOMES	PLAN: GRADING
ADDITION: 4397 WESTGROVE	ELD JOB NO.:
LOT: BLOCK: A	DRAWN BY: BW
CITY: ADDISON, TEXAS	FIRM REGISTRATION #: 3987

SCALE: 1"=20'

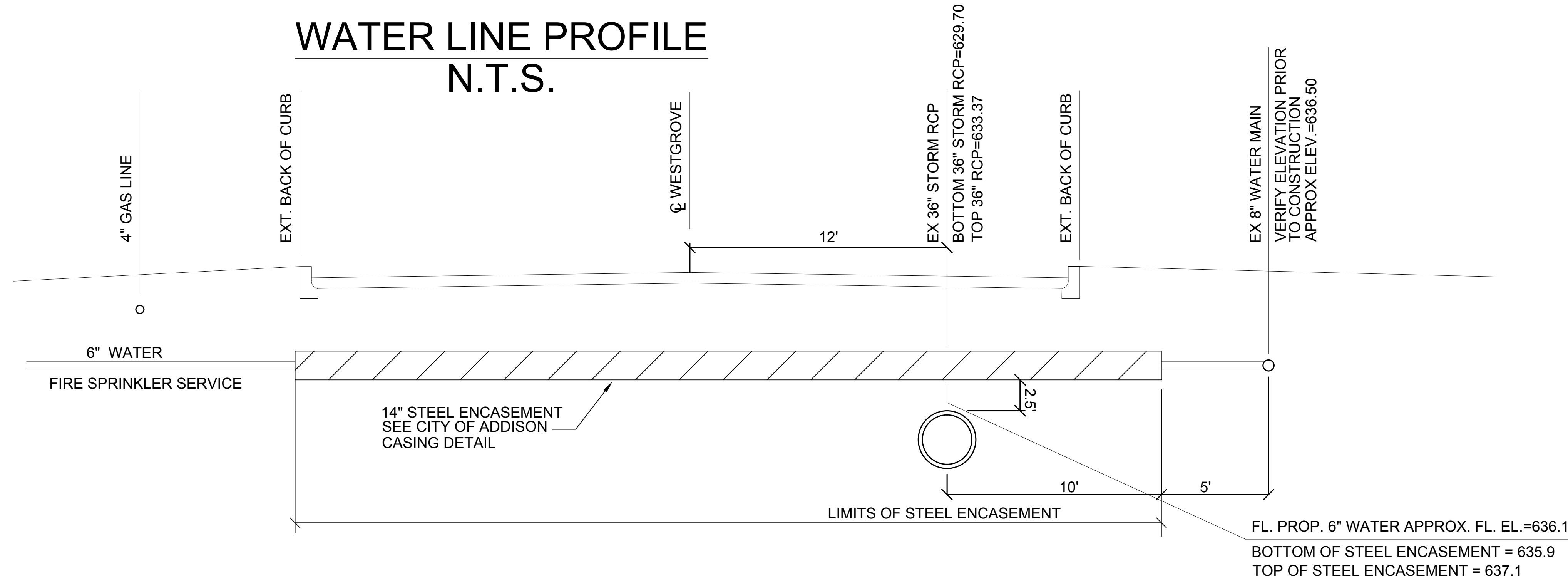
SHEET G02B

NOTE:  
 ELEVATIONS AND LOCATIONS ARE FROM BEST SOURCES AVAILABLE. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND ELEVATIONS PRIOR TO WORK. IF DISCREPANCIES ARE NOTED, CONTACT ENGINEER IMMEDIATELY.

NOTE:  
 EXISTING UTILITIES ARE FROM BEST KNOWN SOURCES. CONTRACTOR MUST VERIFY PRIOR TO START OF CONSTRUCTION.

REVISIONS	CODE
1. 5/12/14 RELOCATE SAN. SEWER LINE	T
2. 1/28/16 RELOCATE SAN. SEWER LINE	T
3. 2/09/16 CITY COMMENTS	T

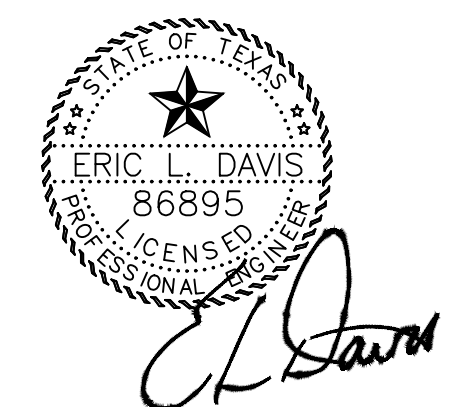
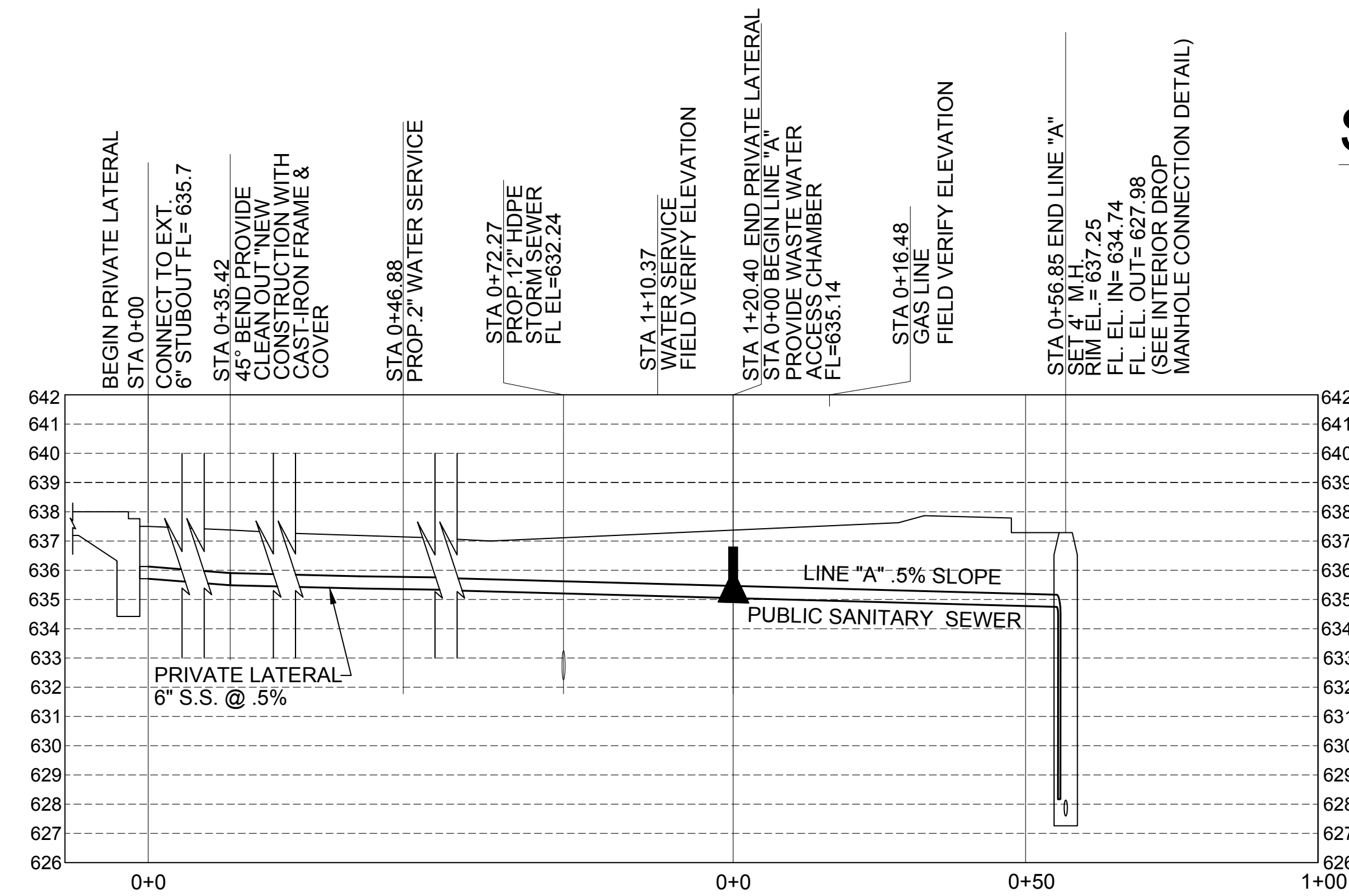
## WATER LINE PROFILE N.T.S.



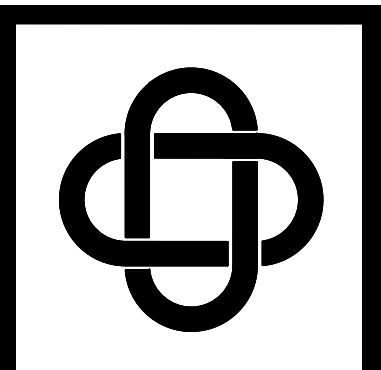
5

## SANITARY SEWER PROFILE

HORIZONTAL 1:20  
 VERTICAL



02/09/2016



ERIC L. DAVIS ENGINEERING, INC.  
 F-3987  
 120 East Main Street  
 Forney, Texas 75126  
 972/564-0592 Fax 972/564-6523  
 E-Mail ericdavis@eldengineering.com

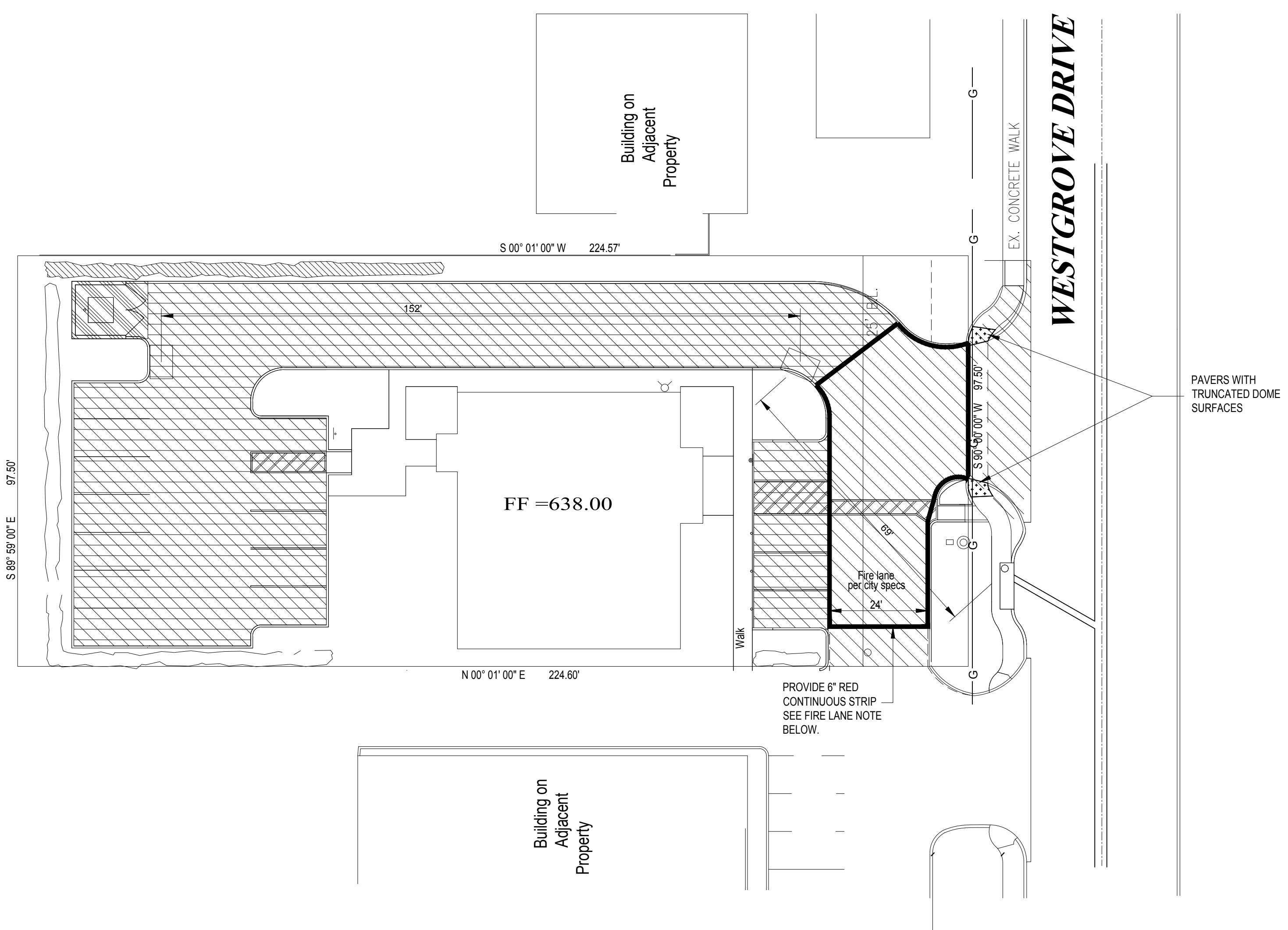
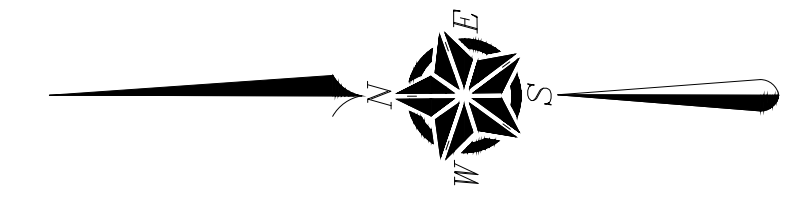
PAVING PLAN  
 ENGINEERED FOR:  
**BENTLEY CUSTOM HOMES**

PLAN: GRADING  
 ELD JOB NO.:  
 DRAWN BY: BW  
 FIRM REGISTRATION #: 3987

BUILDER: BENTLEY CUSTOM HOMES  
 ADDITION:  
 ADDRESS: 4397 WESTGROVE  
 LOT: BLOCK: A  
 CITY: ADDISON, TEXAS

SCALE: 1"=20'

SHEET G03



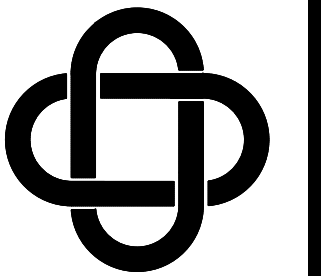
PAVING REQUIREMENTS				
SECTION	FIRE LANE	PARKING	SIDEWALK	DUMPSTER PAD
PAVING	8" - 3600 PSI 6 SACK CONC #3 BARS @ 10" OCEW	5" - 3000 PSI 6 SACK CONC #3 BARS @ 12" OCEW	4" - CONC #3 BARS @ 14" OCEW	8" - 3600 PSI 6 SACK CONC. #3 BARS @ 10" OCEW
SUBGRADE	SOIL COMPACTED TO 95% STANDARD PROCTOR	SOIL COMPACTED TO 95% STANDARD PROCTOR	2" SAND CUSHION; SOIL COMPACTED TO 95% STANDARD PROCTOR	SOIL COMPACTED TO 95% STANDARD PROCTOR

- FIRE LANE
- DRIVEWAY/PARKING
- DUMPSTER PAD

NOTE:  
 FIRE LANES SHALL BE MARKED BY 6" WIDE, DURABLE RED STRIPE RUNNING THE ENTIRE LENGTH OF THE FIRE LANE ON BOTH SIDES. THE WORDS "FIRE LANE NO PARKING" SHALL BE APPLIED IN 4" WHITE LETTERING AT 30' INTERVALS. WHENEVER POSSIBLE ALL MARKINGS WILL BE PLACED ON CURBS.

REVISIONS	CODE
2/09/16 CITY COMMENTS	T





ERIC L. DAVIS ENGINEERING, INC.  
 F-3987  
 120 East Main Street  
 Forney, Texas 75126  
 972/564-0592 Fax 972/564-6523  
 E-Mail ericdavis@eldengineering.com

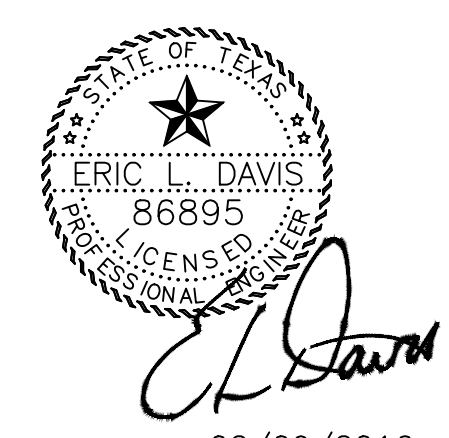
DRAINAGE AREA  
 ENGINEERED FOR  
**BENTLEY CUSTOM HOMES**

PLAN: GRADING  
 ELD JOB NO.:  
 DRAWN BY: BW  
 FIRM REGISTRATION #: 3987

BUILDER: BENTLEY CUSTOM HOMES  
 ADDITION:  
 ADDRESS: 4397 WESTGROVE  
 LOT: BLOCK: A  
 CITY: ADDISON, TEXAS

SCALE: 1"=20'

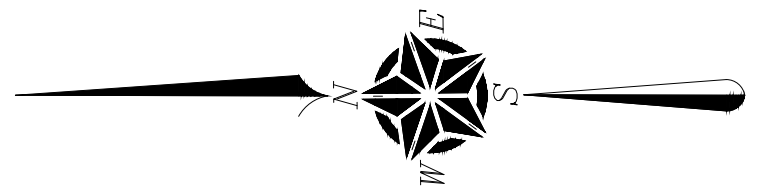
SHEET G04



02/09/2016

**LEGEND**

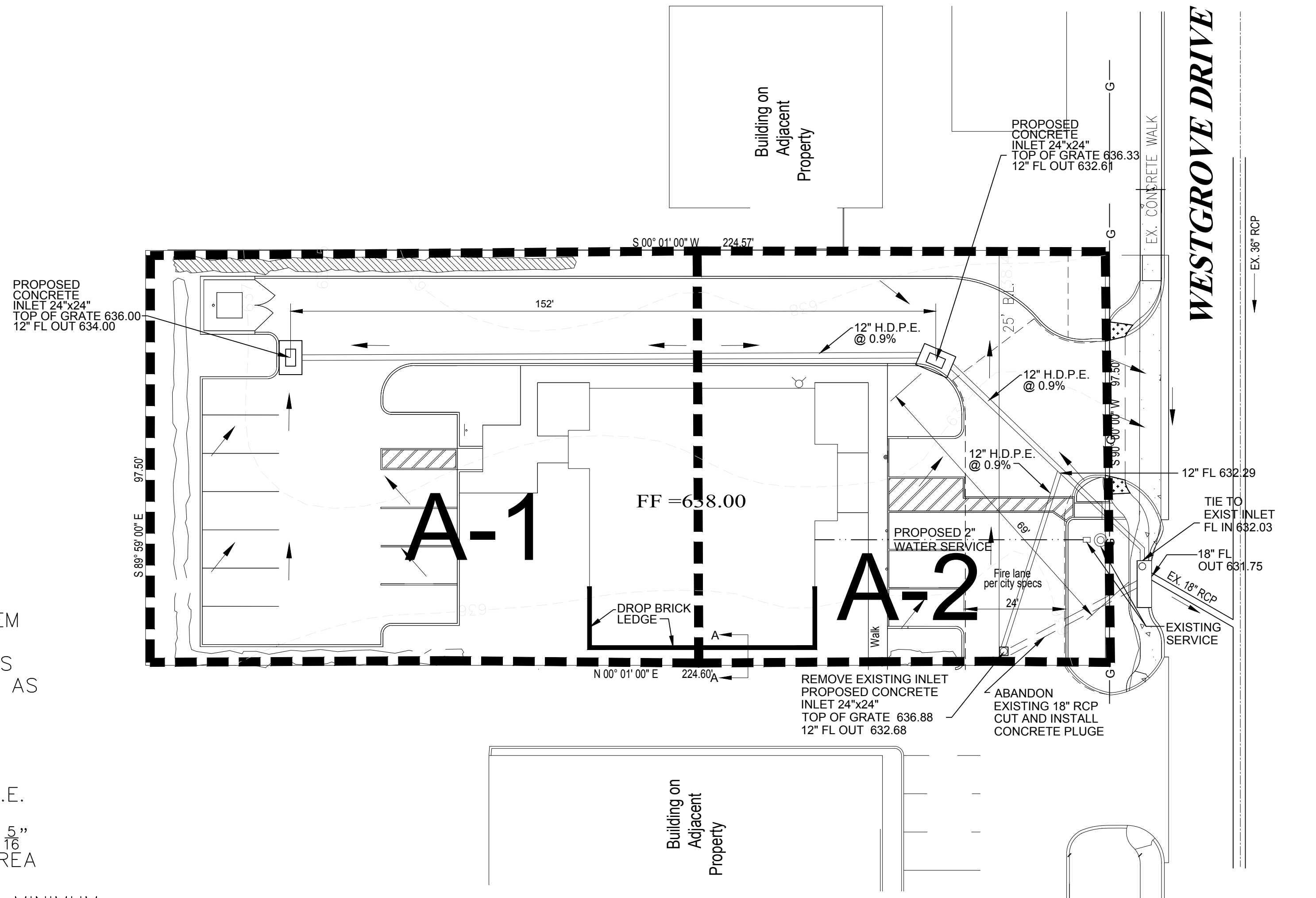
- SWALE LINE
- EXISTING CONTOURS
- PROPOSED GRADE ELEVATIONS
- PROPOSED FLOW DIRECTION
- PROPOSED CONTOURS
- DRAINAGE AREA



- UTILITY NOTES;
- 1) MAINTAIN 10'-0" HORIZONTAL CLEARANCE BETWEEN WATER & SANITARY SEWER STRUCTURES AND SERVICES.
  - 2) REFER TO THE TOWN OF ADDISON PUBLIC WORKS MANUAL FOR SPECIFICATIONS AND DETAILS FOR THE FOLLOWING:
    - A) WATER, FIRE AND IRRIGATION TAP AND METERS
    - B) SANITARY SEWER TAP AND SERVICE.
    - C) PAVEMENT CUT, REMOVAL AND REPLACEMENT
    - D) DRIVE WAY CONNECTION AND CURB RETURN DETAILS
    - E) STORM SEWER CONNECTION DETAILS
  - 3) ENGINEER OF RECORD ASSUMES NO RESPONSIBILITY FOR UNDERSIZED FIRE SERVICES. INTERNAL DIMENSIONS HAVE BEEN TAKEN FROM PLANS BY OTHERS. FIRE SERVICE I.D. & METER I.D. ULTIMATELY DETERMINED BY FINAL FIRE SYSTEM DESIGN. ENGINEER OF RECORD HAS NOT PERFORMED AN ANALYSIS FOR THE SIZING OF DOMESTIC, FIRE & IRRIGATIONS TAPS, METERS & SERVICE LINES. ALL INTERNAL DIMENSIONS AS SPECIFIED BY OWNER AND OTHER CONTRACTORS.

- SITE NOTES:
- 1) PRIVATE STORM DRAIN PIPE TO BE CONSTRUCTED OF H.D.P.E. ADS-N12 OR EQUAL
  - 2) ALL GRATE INLETS TO 12"x12" SQUARE LOW PROFILE WITH 5/16" OR GREATER GRATE OPENINGS WITH A MINIMUM SURFACE AREA OPENING OF 0.30 FT OR 43 IN
  - 3) 24"x24" GRATE INLET TO BE SQUARE LOW PROFILE WITH A MINIMUM OF 3/8" GRATE OPENING WITH A MINIMUM SURFACE AREA OPENING OF 1.2FT OR 172 IN.
  - 4) ALL ROOF DOWN SPOUTS SHALL CONNECT DIRECTLY TO PRIVATE STORM SEWER SYSTEM

24" GRATE INLET  
 $Q=(CO)A(2gd)^{.5}$   
 Where:  
 Q= INLET CAPACITY  
 Co= ORFICE CAPACITY=0.69  
 A= CLEAR OPENING AREA OF GRATE (Ft )  
 g= 32.2 Ft/S  
 d= DEPTH OF WATER ABOVE TOP OF GRATE (Ft)  
 $Q_{3in} = .67(1.2)(2*32.2*.25)^{.5} = 3.21cfs$   
 $Q_{6in} = .67(1.2)(2*32.2*.5)^{.5} = 4.6cfs$

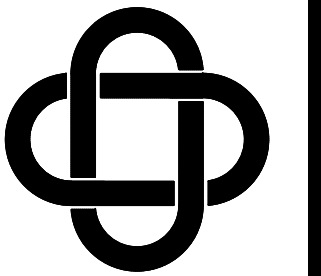


EXISTING DRAINAGE CALCULATIONS

Drainage Area No.	Impervious Area	Pervious Area	Total Area (Acres)	"c" Impervious	"c" Pervious	"CW"	"TC" (min)	1100	Q <sub>100</sub> (cfs)
A-1	0.24	0.04	0.28	1.0	0.25	0.89	10	9.27	2.31
A-2	0.24	0.02	0.26	1.0	0.25	0.94	10	9.27	2.27

PROPOSED DRAINAGE CALCULATIONS

Drainage Area No.	Impervious Area	Pervious Area	Total Area (Acres)	"c" Impervious	"c" Pervious	"CW"	"TC" (min)	1100	Q <sub>100</sub> (cfs)
A-1	0.22	0.06	0.28	1.0	0.25	0.84	10	9.27	2.18
A-2	0.23	0.03	0.26	1.0	0.25	0.91	10	9.27	2.19



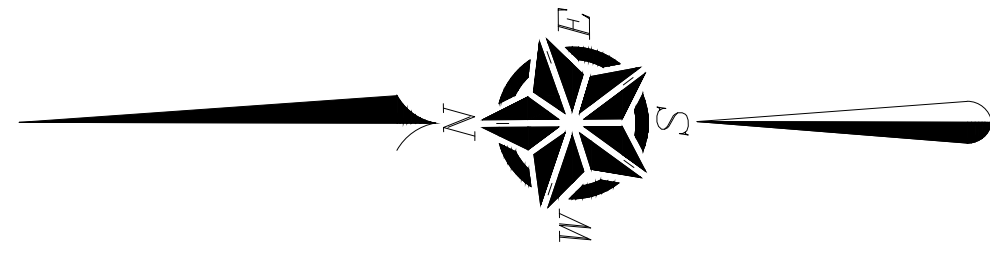
ERIC L. DAVIS ENGINEERING, INC.  
 F-3987  
 120 East Main Street  
 Forney, Texas 75126  
 972/564-0592 Fax 972/564-6523  
 E-Mail ericdavis@eldengineering.com

**STORM WATER POLLUTION PREVENTION PLAN**  
**BENTLEY CUSTOM HOMES**

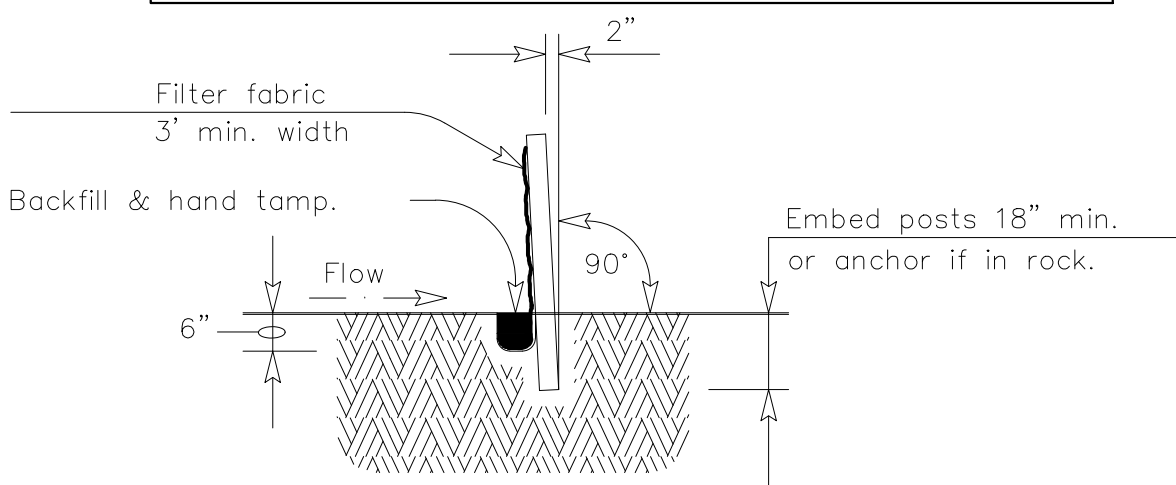
PLAN: GRADING	BUILDER: BENTLEY CUSTOM HOMES
ELD JOB NO.:	ADDRESS: 4397 WESTGROVE
DRAWN BY: BW	LOT: BLOCK: A
FIRM REGISTRATION #: 3987	CITY: ADDISON, TEXAS

SCALE: 1"=20'

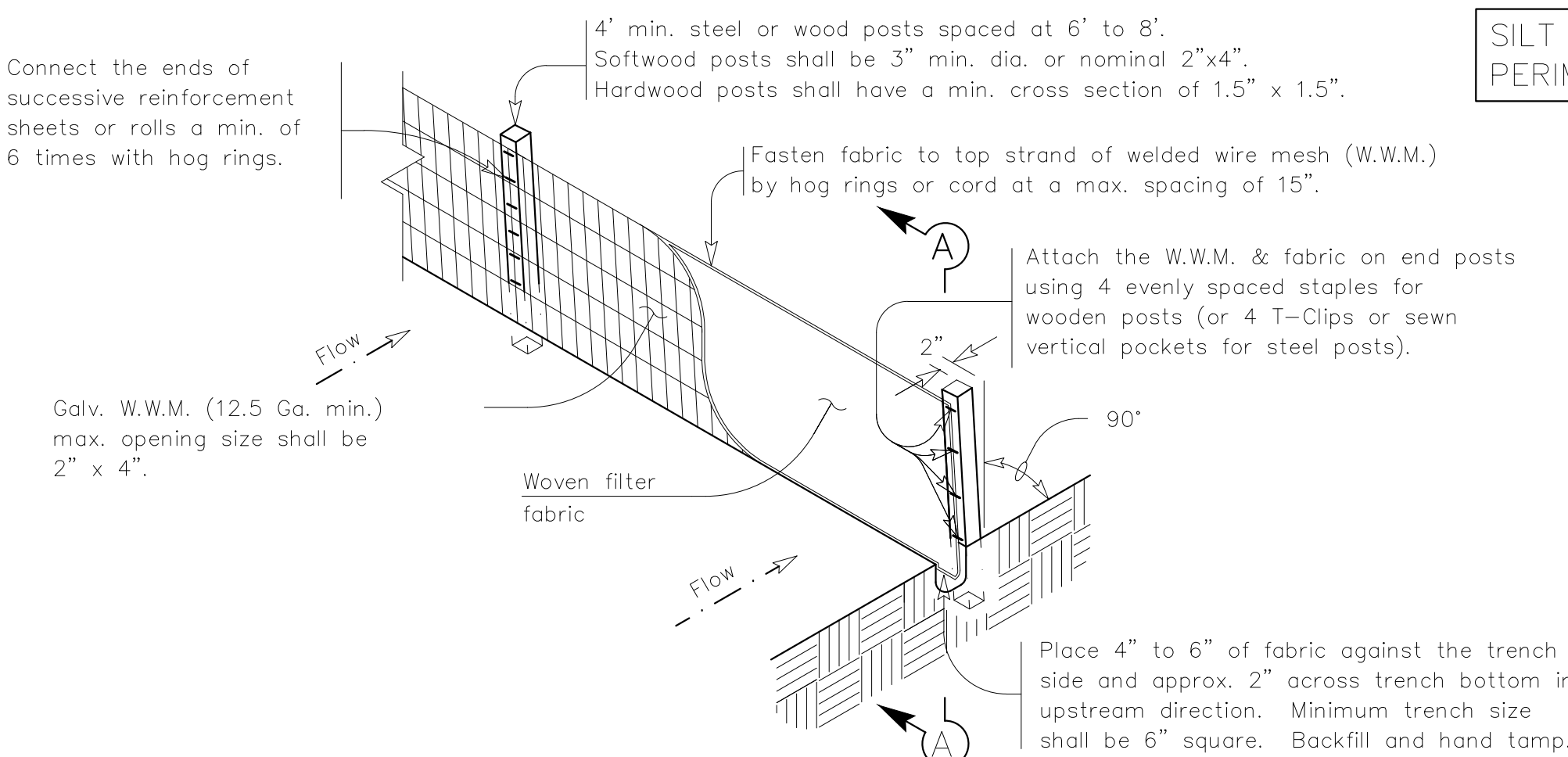
SHEET G05



**PLAN SHEET LEGEND**



**SECTION A-A**



**TEMPORARY SEDIMENT CONTROL FENCE**

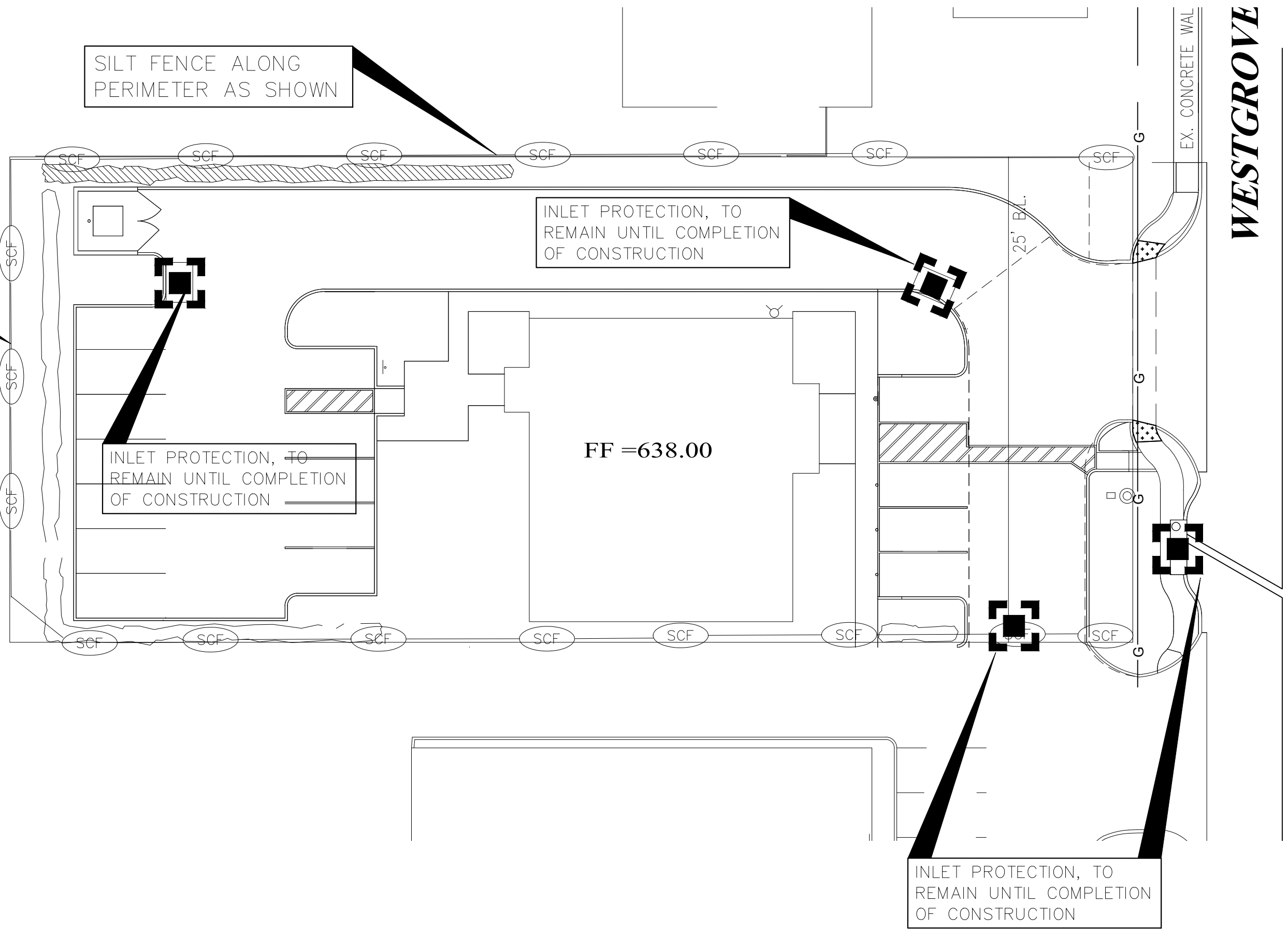
**GENERAL NOTES**

1. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

**SEDIMENT CONTROL FENCE USAGE GUIDELINES**

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a max. flow through rate of 100 GPM/FT. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.



**I GENERAL:**

Each Contractor shall have a designated area in which to stage his construction for this project. This site will be designated by the Contractor and shall be approved by the Owner. It will be the Contractor's responsibility to construct berms around its site so as to minimize the possibility of run-off water being exposed to pollutants and to detain any water that might potentially be exposed to pollutants. It shall also be the responsibility of each Contractor to install dikes around any diesel, gasoline or oil tanks, as well as any other hazardous chemicals stored on site, in order to contain any possible contamination to the smallest area should a leak or spill occur. If a leak or spill should occur, the Contractor responsible for such an accident is required to report it to the Owner immediately.

This shall also be the designated area for equipment maintenance and repair. All maintenance will take place inside this area and any repairs to equipment should be performed here, if possible. Should the equipment not be able to be moved to this location, special care will be taken to prevent pollutants (oil, diesel, hydraulic fluid, etc.) from entering, either directly or indirectly, into the storm sewer, runoff of waterways.

Solid waste receptacles for trash and other debris such as soft drink cans or bottles, wrapping paper, metal or plastic banding strips and all other waste products shall be provided by the Contractor and shall be maintained during its tenure and removed at the end of his portion of the work. Contractor shall police the Project and maintain the cleanest site possible. An adequate number and properly maintained sanitary facilities (such as Chem-Cans) shall be supplied by Contractor for, and is to be used by, its employees.

**A. Storage of Material on Site**

Materials shall be stored in the designated staging area whenever feasible to do so. When materials are to be stored outside this area, it should be done in such a way as to prevent as much exposure as possible. Sand and rock should be stored in a location that will prevent the flow of run-off storm water from coming into contact with it. Any time diesel, gasoline, oil or other hazardous materials are stored outside the staging area (even if overnight), a retention dike is to be immediately constructed.

**B. Entering and Exiting Project**

It is the responsibility of Contractor to make sure that all vehicles either owned or employed by him are free of soils which could be tracked onto any adjacent roadways. In the event that soils are tracked onto a roadway, clean up of this soils to be performed immediately, and in such a manner as not to contaminate offsite storm drainage facilities.

**1. Equipment Wash Down Areas:**

Equipment Wash Down areas are not a mandatory part of the Plan unless a Contractor wishes to wash his equipment or other vehicles on site. If a Contractor wishes to do so, he may elect to use the stabilized construction entrance as a Wash Down area, or he may build a similar structure inside the Project which will retain all water produced by the washing of equipment. It will not be acceptable to wash any equipment on adjacent roadways or property.

**C. Paving:**

Paving should be done in a manner as to ensure that the sediment controls are in place above and below where the construction is taking place and not to leave a waterway open so that the sediment laden water is allowed to leave the site without being filtered.

**D. Dust Control:**

During construction, water trucks will be used by each contractor to reduce dust as needed. After construction, the site will be re-vegetated to reduce dust.

**II MAINTENANCE AND REPORTING PROCEDURES**

**A. Maintenance and Repair:**

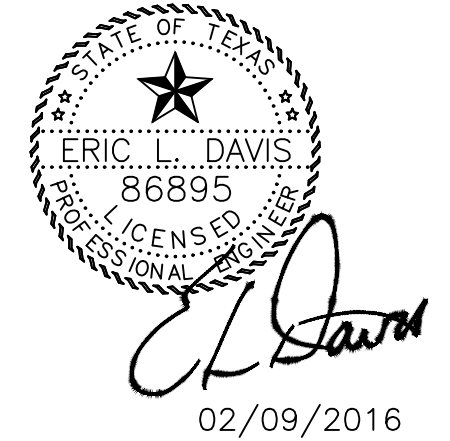
Inspections are to be performed by a qualified person provided by discharger, and are to be performed a minimum of once every fourteen (14) calendar days and within twenty-four hours of any storm event of greater than 0.5 inches. Please note that an inspection required after a "storm event" does not replace the required bi-monthly inspection and is to be in addition to monthly scheduled inspections. Written reports shall be given to owner and appropriate inspector.

When damage repair to the erosion or sediment controls are needed, the work shall be performed within five (5) days of written notice from the Owner. If requested repairs are not performed within such five day period, the Owner shall employ a contractor to make the required repairs and will deduct such amount from the Contractor that damaged the controls.

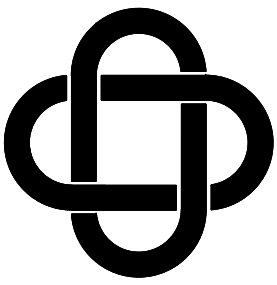
Maintenance of controls shall be performed within five (5) days of written notice from the Owner to the Contractor responsible for the maintenance of such control.

**III RE-VEGETATION**

- A. At the completion of the paving and final grading the entire disturbed area shall be re-vegetated with seeds and rates approved by the Owner.
- B. All silt fence shall remain in place until re-vegetation has been completed.
- C. Prior to final paving, each Contractor shall be responsible for removing any mud or silt that collects on the existing pavement as a result of their operations. After the installation of the new paving and prior to acceptance by the appropriate authority, the paving Contractor shall be responsible for removing any mud or silt that collects on the existing and new pavement. After acceptance by the appropriate authority, the Owner shall be responsible for removal of the mud or silt that collects on the pavement.







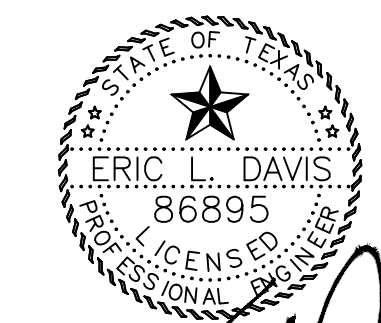
ERIC L. DAVIS ENGINEERING, INC.  
 120 East Main Street  
 Forney, Texas 75126  
 972/564-0592 Fax 972/564-6523  
 E-Mail erlcv@eidengineering.com

DETAILS  
 CATCH BASIN  
**BENTLEY CUSTOM HOMES**

PLANNING: GRADING  
 ELD JOB NO.:  
 DRAWN BY: BW  
 FIRM REGISTRATION #: 3987  
 CITY: ADDISON, TEXAS

SCALE: N.T.S.

SHEET 007



02/09/2016

