Figuers Drive Area Drainage Discussion - EXHIBIT E BATTLE CONSTRUCT 2 - 6' X 3' **CROSS DRAIN** 75 L.F. **GREEN ACRES** ALICIA DRIVE TO PERKINS DRIVE CONSTRUCT CONCRETE **CHANNEL IMPROVEMENT DIVERSION CHANNEL** Remove existing concrete channel. 640 L.F. Install 321 I.f. concrete channel. 2.5 feet deep 5' bottom width 3:1 side slopes 3:1 side slopes 3' bottom width 2 feet deep REPLACE EXISTING 44" X 26" RCP **CONSTRUCT DRIVEWAY** WITH 6' x 3' RCB **CROSS DRAINS** EXISTING LOS = < 2-year FUTURE LOS = < 2-year 5 each 404 PERKINS DR 1414 FIGUERS DR **PERKINS OUTLET STRUCTURE** TIE PROPOSED TOP OF CHANNEL TO EXISTING TOPOGRAPHY TO MAINTAIN EXISTING DRAINAGE. CONSTRUCT STORM 1500 FIGUERS DR SEWER INLETS TO MAINTAIN EXISTING PERKINS DRIVE TO FIGUERS DRIVE **DRAINAGE CHANNEL IMPROVEMENT** 1502 FIGUERS DR Install 341 I.f. concrete channel. CONSTRUCT STORM SEWER 5' bottom width 530 L.F. 1504 FIGUERS DR 3:1 side slopes 2 - 24" RCP 3.5 feet deep **CONSTRUCT 2 STORM** FIGUERS **SEWER INLETS TO** MAINTAIN EXISTING **DRAINAGE REPLACE EXISTING 36" CMP** WITH 36" RCP 403 FIGUERS DR **EXISTING FIGUERS** 40 L.F. DRIVE RCP TO REMAIN EXISTING LOS = < 2-year FUTURE LOS = < 2-year **DIVERSION STRUCTURE** DOWNS Legend Channel Improvement Properties with Drianage Issues Concrete Diversion Channel Study Area Streams Parcels Cross Drain Storm Sewer ource: Esri, DigitalGlobe, GeoEye SGS, AEX, Getmapping, Aerogrid Surveyed Storm Drains RECOMMENDED CITY OF FRANKLIN DRAINAGE IMPROVEMENTS FIGUERS DRIVE DRAINAGE STUDY **OPTION 2** FRANKLIN EXHIBIT 1 NOT TO SCALE TENNESSEE October, 2014

FIGUERS DRIVE - EAST					
OPTION 2 - CROSS DRAIN UPGRADES, CONCRETE CHANNEL IMPROVEMENT AND					
DIVERSION					

ADDRESS	FFE (1)	LAG	EXISTING LAG SUMBERGENCE EVENT	FUTURE LAG SUBMERGENCE EVENT
403 Figuers Drive	682.93	680.34	100-year	100-year
1504 Figuers Drive	680.16	676.49	5-year	100-year
1502 Figuers Drive	678.03	675.09	< 2-year	100-year
1500 Figuers Drive	678.16	675.09	< 2-year	100-year
1414 Figuers Drive	673.2	672.88	< 2-year	100-year
404 Perkins Drive	678.7	674.46	5-year	100-year

Drainage Improvements:

- 1) Channel improvement from Alicia Drive to Figures Drive.
- 2) Culvert Upgrades at Perkins Drive and Figuers Drive.
- 3) Diversion Storm Sewer from Figuers Dr. to Perkins Dr.
- 4) Concrete channel from Perkins Dr. to Alicia Dr.
- 5) 6x3 RCB at Alicia Dr.

Design Constraints

- 1) Can not lower right bank elevation with out increasing LAG submergence.
- 2) Match existing channel invert elevations
- 3) Channel improvement using a 5 foot bottom width and 3:1 side slopes to daylight.
- 4) Minor channel realignment required.
- 5) 5 driveway cross drains to be designed
- 6) Storm sewer inlets to be designed
- Localized grading of yards adjacent to conc. diversion channel.

Notes:

- (1) FFE is the surveyed Finished Floor Elevation
- (2) LAG submergence is based on the Low Adjacent Grade (LAG) elevation.
- (3) The information shown above is based on the hydraulic properties of the stream and cross drains.

This information does not account for nuisance flooding caused by local drainage issues from adjacent private properties.