

SUNFLOWER PARK SUBDIVISION

A 36.534 ACRE TRACT OF LAND OUT OF BLOCKS 10 AND 15, SECTION NO. 260, OF THE TEXAS-MEXICAN RAILWAY COMPANY'S SUBDIVISION, AS RECORDED IN VOLUME 2, PAGE 29 OF THE HIDALGO COUNTY MAP RECORDS (M.R.H.C.), TEXAS.



DRAINAGE STATEMENT HIDALGO COUNTY PRECINCT NO. 4 SUNFLOWER PARK SAN CARLOS, HIDALGO COUNTY, TEXAS

HIDALGO COUNTY PRECINCT NO. 4 SUNFLOWER PARK IS A ONE LOT, COMMERCIAL, 39.14 ACRE TRACT OUT OF LOTS 10 AND 16, SECTION 260, TEXAS-MEXICAN RAILWAY COMPANY'S SURVEY, HIDALGO COUNTY, TEXAS (VOL. 2, PG 29 HIDALGO COUNTY MAP RECORDS). THE PROPERTY IS SITUATED AT THE NORTH-WEST CORNER OF THE INTERSECTION OF STATE HIGHWAY 107 AND SUNFLOWER ROAD LOCATED IN SAN CARLOS, TEXAS.

THE PROPERTY IS CURRENTLY OPEN LAND THAT CONSISTS OF PARTS HIDALGO FINE SANDY CLAY LOAM (0 TO 1 PERCENT SLOPES), HIDALGO SANDY CLAY LOAM (0 TO 1 PERCENT SLOPES) AND HIDALGO SANDY CLAY LOAM, SALINE (0 TO 1 PERCENT SLOPES) WITH A HYDROLOGICAL GROUP DESIGNATION OF B AS PER THE ATTACHED SGS SOIL SURVEY OF HIDALGO COUNTY.

THE PROPOSED SUBDIVISION LIES IN ZONE "AH" WITH A BASE FLOOD ELEVATION (BFE) OF 73.00 AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 480334 0325 D, MAP REVISED MAY 17, 2001. EXISTING LAND USE IS OPEN LAND WITH NATURAL DRAINAGE IN A NORTH EASTERLY DIRECTION. NATURAL DRAINAGE IS BY SHEET FLOW AT A GRADE OF APPROXIMATELY 0.41 % AT THE LONGEST RUN OF APPROXIMATELY 1210-FT. THE EXISTING DRAINAGE COEFFICIENT FOR THE PROPOSED SUBDIVISION HAS BEEN DETERMINED TO BE 0.20 UTILIZING THE TXDOT HYDRAULIC MANUAL STRUCTURES THAT ARE UNDER THE BFE WILL BE DESIGNED TO MEET FEMA FLOOD PROOFING REQUIREMENTS. AS PER THE PLANS PREPARED BY LEFVRE ENGINEERING, THE RESTROOMS AND PAVILION HAVE A PROPOSED FINISHED FLOOR ELEVATION (FF) OF 70.50 WHICH IS BELOW THE BFE BUT ARE ABOVE THE HIGH WATER MARK ELEVATION (HWME) OF 67.78 RECORDED FROM THE HURRICANE DOLLY EVENT. THEY WILL HAVE ALL ELECTRICAL AND MECHANICAL COMPONENTS SET AT OR ABOVE THE BFE THE CRC BUILDING AND PICNIC SHELTER #1 ARE ABOVE THE BFE AND WILL NOT NEED TO MEET THE FLOOD PROOFING REQUIREMENTS.

HIDALGO COUNTY PRECINCT NO. 4 COMMUNITY RESOURCE CENTER AND PUBLIC PARK HAVE BEEN PROPOSED ON THIS AREA. THE FUTURE IMPROVED COEFFICIENT HAS BEEN DETERMINED TO BE C = 0.28 UTILIZING THE AFOREMENTIONED MANUAL AND CALCULATING IMPERVIOUS VS. NON-IMPERVIOUS AREAS. THE DRAINAGE FOR THIS DEVELOPMENT WILL CONSIST OF SMALL DETENTION PONDS THAT DISCHARGE INTO SWALES THAT THEN DISCHARGE INTO A LARGE DETENTION AREA WITH A STORAGE AREA OF 4.5 ACRE-FT (196,020 CUBIC FEET). WATER IN SAID DETENTION AREA WILL FLOW WEST INTO AN EXISTING DRAINAGE DITCH SYSTEM THAT IS THEN LIFTED INTO THE HIDALGO COUNTY DRAINAGE DISTRICT NO.1 SYSTEM VIA THE SAN CARLOS DRAIN. THE SAN CARLOS DRAIN THEN FLOWS NORTH INTO J02-00 WHICH RUNS EAST AND DISCHARGES INTO THE WESLACO NORTH LATERAL RUNNING NORTH THEN EAST CONNECTING TO THE MAIN FLOODWAY CHANNEL, WITH AN ULTIMATE OUTFALL IN TO THE LAGUNA MADRE.

DRAINAGE CALCULATIONS FOR A 10, 50 AND 100 YEAR FREQUENCY STORM UTILIZING THE RATIONAL METHOD COMPUTATIONAL PROCEDURE REVEALS AN EXISTING RUNOFF DISCHARGE IN CUBIC FEET PER SECOND (C.F.S.) OF 51.80 C.F.S., 64.26 C.F.S. AND 68.58 C.F.S., RESPECTIVELY. IN ACCORDANCE WITH THE COUNTY OF HIDALGO AND HCDD NO. 1 DRAINAGE POLICY FOR A 10 YEAR FREQUENCY, THE IMPROVED AREA WILL NECESSITATE THE STORAGE DETENTION OF 1.21 ACRE-FEET (52,763 CUBIC FEET) WITH A RELEASE RATE OF 21.48 C.F.S. SAID DETENTION AREA HAS BEEN CONSTRUCTED AS PART OF THE SUNFLOWER PARK PHASE 1 AND WILL PROVIDE APPROXIMATELY 4.50 ACRE-FEET (196,020 CUBIC FEET) OF DRAINAGE DETENTION FOR THE DEVELOPMENT.

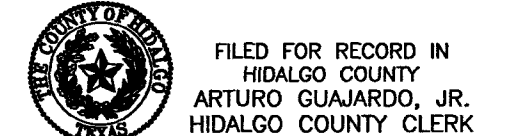
RAUL E. SESIN, P.E. NO. 86374
DATE: 10/30/14



S.H. 107
(r.o.w. width varies)

REVISION CHART

No. 1. 2ND SHEET REVISED TO SHOW SANITARY SEWER LINE. 10/17/2014



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HIDALGO COUNTY
ARTURO GUJARDO, JR.
HIDALGO COUNTY CLERK
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OF THE MAP RECORDS OF HIDALGO COUNTY, TEXAS
BY: [Signature] DEPUTY



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