

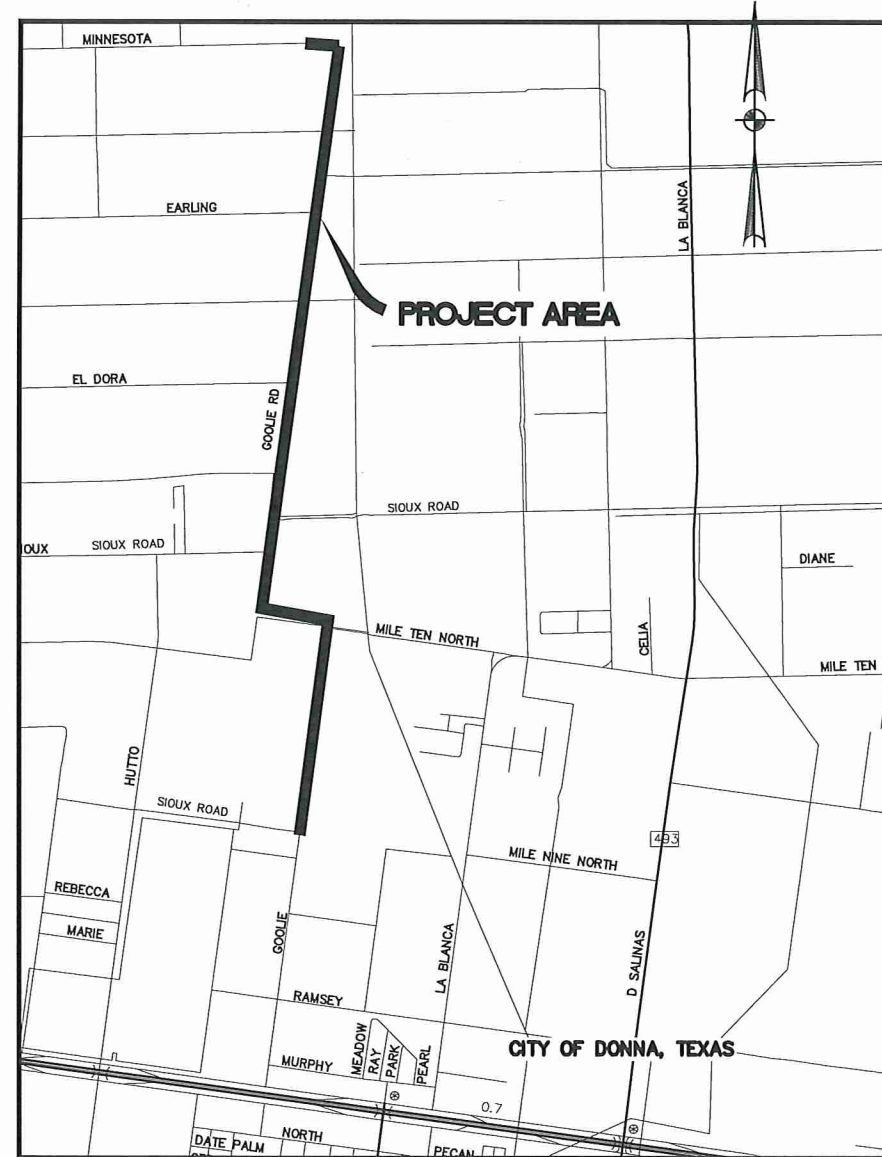
HIDALGO COUNTY PRECINCT NO. 1 STREET IMPROVEMENTS TO: GOOLIE ROAD (MILE 9 TO MINNESOTA RD.)

HIDALGO COUNTY, TEXAS



HIDALGO COUNTY OFFICIALS

RAMON GARCIA _____ COUNTY JUDGE
 A.C. CUELLAR, JR. _____ COMMISSIONER PCT. No. 1
 EDDIE CANTU _____ COMMISSIONER PCT. No. 2
 JOE M. FLORES _____ COMMISSIONER PCT. No. 3
 JOSEPH PALACIOS _____ COMMISSIONER PCT. No. 4



SCALE 1"=2000'
JUNE 2016

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Emigdio Salinas
 EMIGDIO SALINAS, P.E.

6-30-16
 DATE

LeFEVRE
 ENGINEERING &
 MANAGEMENT CONSULTING, LLC.
 Texas Registered Engineering Firm F-11722

612 Nolana, Suite 520
 McAllen, Texas 78504
 Tel. 956.687.LEMC
 Fax. 956.687-5363

Drawn	LH	Date	JUNE 2016
Checked	ES	Job No.	P194
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GENERAL

- CONTRACTOR SHALL CONTACT Lefevre Engineering & Management Consulting, LLC (LEMC) AT 956-687-5382, 72 HOURS PRIOR TO START OF ANY CONSTRUCTION WITHIN PROJECT SITE.
- CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES WITHIN THE CONSTRUCTION AREA 72 HOURS PRIOR TO EXCAVATION NEAR THEIR UTILITIES.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES (NO SEPARATE PAY). ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF Lefevre Engineering Management Consulting, LLC. IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF THIS CONSTRUCTION OPERATION WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- CONTRACTOR TO OBTAIN ALL CONSTRUCTION PERMITS NOT SUPPLIED BY OWNER AT HIS EXPENSE PRIOR TO COMMENCEMENT OF WORK. OWNER'S ENGINEER TO APPLY FOR AND PROVIDE TxDOT PERMIT TO WORK IN R.O.W. AND ANY RELATED CROSSING PERMITS.
- CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES OR RAILROADS AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN ONLY BE ISSUED TO CONTRACTOR WILL BE OBTAINED AT HIS EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE AT ALL TIMES DURING CONSTRUCTION OF PROPOSED FACILITIES. NATURAL GROUND ADJACENT TO UTILITY TRENCH EXCAVATION TO BE CLEARED AND GRUBBED PRIOR TO PLACEMENT OF EXCESS TRENCH MATERIAL (NO ADDITIONAL PAYMENT - INCLUDE IN COST OF UNDERGROUND UTILITIES CONSTRUCTION.)
- FILL TO BE PLACED IN MAXIMUM 6-INCH LIFTS AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY PER ASTM D-698, UNLESS OTHERWISE NOTED.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING MUD AND/OR DIRT TRACKED ONTO EXISTING STREETS BY HIS WORKMEN'S, SUPPLIER'S, OR SUBCONTRACTOR'S VEHICLES. STREETS MUST BE CLEANED WITHIN 2 HOURS OF WHEN THE TRACKING OCCURS. NO SEPARATE PAY.
- RETESTING OF ANY TESTING FAILURES WILL BE THE CONTRACTOR'S RESPONSIBILITY. NO SEPARATE PAY
- WHERE CONTRACTOR'S WORK AND/OR EQUIPMENT CAUSES AN OBSTRUCTION TO TRAFFIC, CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH PART 3X OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TEXAS M.U.D.C.D., MOST RECENT EDITION AS REVISED) DURING CONSTRUCTION. A WRITTEN TRAFFIC CONTROL PLAN SHALL BE SUBMITTED PRIOR TO CONSTRUCTION FOR REVIEW BY THE ENGINEER & OTHER APPROPRIATE PERSONS.
- LOCATION OF EXISTING UNDERGROUND UTILITIES AND SERVICE LINES (WATER, SEWER, GAS, TELEPHONE, ELECTRICAL, ETC.) ARE DETERMINED FROM AVAILABLE RECORDS AND ARE APPROXIMATE. CONTRACTOR TO LOCATE LINES AND/ OR OBSTRUCTIONS AHEAD OF EXCAVATION.
- ANY SOIL BORINGS THE CONTRACTOR REQUIRES ARE TO BE DONE BY THE CONTRACTOR AT HIS EXPENSE.
- OVERHEAD LINES MAY EXIST ON THE ALIGNMENTS. CLEARLY VISIBLE LINES ARE NOT MARKED, AND CONTRACTOR TO NOTE THEIR LOCATION PRIOR TO CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR OBJECTS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. CONTRACTORS ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY.
- CONTRACTOR TO MAKE ARRANGEMENTS WITH THE APPROPRIATE UTILITY COMPANY FOR SECURING POLES, IF NECESSARY, WHILE CONSTRUCTION PASSES BY POLES. COSTS OF SECURING POLES WILL BE PAID FOR BY THE CONTRACTOR, NO SEPARATE PAY.
- CONSTRUCTION STAKING (ALIGNMENT AND GRADE) TO BE PROVIDED BY THE CONTRACTOR AT NO SEPARATE PAY.
- SURPLUS EXCAVATED MATERIAL SHALL BE REMOVED AND DISPOSED OF OFF SITE AS DIRECTED BY THE ENGINEER. IF THE ENGINEER NOTIFIES THE CONTRACTOR THAT THE OWNER DOES NOT HAVE USE FOR THIS MATERIAL, THE SURPLUS MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR, AND IT IS HIS RESPONSIBILITY TO DISPOSE OF THE MATERIAL.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE LOCAL REQUIREMENTS.
- CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND FACILITIES DURING INSTALLATION OF PROPOSED WORK.
- PAVED SURFACES SHALL BE PROTECTED FROM DAMAGE FROM TRACKED EQUIPMENT. ANY REPAIRS TO DAMAGED PAVED SURFACES WILL BE PAID BY THE CONTRACTOR. NO SEPARATE PAY.
- IRON RODS DISTURBED DURING CONSTRUCTION TO BE REPLACED BY REGISTERED PUBLIC LAND SURVEYOR TO ORIGINAL PROPERTY CORNER AT NO SEPARATE PAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AN UPDATED REDLINED "AS-BUILT" SET OF PLANS ON SITE FOR INSPECTION BY THE ENGINEER, THE ENGINEER'S REPRESENTATIVE, AND THE OWNER'S REPRESENTATIVE.
- WORK PERFORMED UNDER THIS CONTRACT IS GOVERNED BY REQUIREMENTS OF SEVERAL PUBLIC, GOVERNMENTAL, AND PRIVATE ENTITIES. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF GOVERNING ENTITIES.

GENERAL CONT.

- SURVEY PERFORMED BY ARANDA & ASSOCIATES - 2016. ELEVATIONS BASED UPON STATIC GPS OBSERVATIONS; NAVD 88 HORIZ: STATE PLANE COORDINATES (NAD83) ZONE SOUTH TEXAS - 4205
- EXISTING MANHOLES LOCATED ON ROADWAYS SHALL BE ADJUSTED TO THE PROPOSED GRADE. NOT SEPARATE PAY.
- DEMOLITION, REMOVAL, & DISPOSAL OF ALL EXCESS CONCRETE, CURBS, REBAR, ETC. TO BE DONE IN A LEGAL MANNER AT CONTRACTOR'S EXPENSE.
- ALL MANHOLES AND/OR OTHER STRUCTURES TO BE ADJUSTED BY THE CONTRACTOR TO MEET FINL GRADES, A MAXIMUM OF 18 INCHES OF THROAT RINGS WILL BE ALLOWED. (NO SEPARATE PAY)
- UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL RETURN THE SITE TO ORIGINAL CONTOURS UNLESS DIFFERENT FINISHED ELEVATIONS ARE SHOWN ON PLANS. CONTRACTOR TO ASSURE NO AREAS OF PONDING ARE PRESENT.
- NO TRAFFIC SHALL BE ALLOWED ON THE FINISHED WEARING SURFACE UNTIL AT LEAST 12 HOURS AFTER COMPLETION OF ROLLING.
- HOT MIX ASPHALT CONCRETE TRANSPORT TRUCKS TO BE EQUIPPED WITH CANVAS COVERS TO BE UTILIZED DURING MATERIAL HAULING. MATERIAL DELIVERED TO SITE AT IMPROPER TEMPERATURE SHALL BE REJECTED. HOT MIX SHALL BE LAID AT A MINIMUM TEMPERATURE OF 280°F AS PER TxDOT SPECIFICATION ITEM 341.
- ANY SETTLEMENT UNDER PAVEMENT DUE TO INADEQUATE COMPACTION OF UTILITY LINE BACK FILL SHALL BE CAUSE FOR RECOMPACTION OF TRENCH AND REPLACEMENT OF PAVEMENT SECTION.
- SUBGRADE AND SUBBASE QUANTITIES (SY) ARE BASED ON SURFACE AREAS IN RELATION TO THE PROPOSED TYPICAL ROAD SECTIONS. SHOULD ANY ADDITIONAL CUT OR FILL BE REQUIRED, IT SHALL BE SUBSIDIARY TO THE BID ITEM 0280-6027 6" LIME TREAT (3%) EXIST. MATL (SUBGRADE)

TRAFFIC CONTROL NOTES:

MAINTENANCE OF WORK ZONE TRAFFIC CONTROL SERVICE:

- THOSE PORTIONS OF THE PROJECT WHICH REQUIRE CONSTRUCTION UNDER TRAFFIC WILL BE MAINTAINED IN A CONDITION ACCEPTABLE TO THE ENGINEER. THIS WORK WILL BE SUBSIDIARY TO THE VARIOUS BID ITEMS.
- AT ANYTIME DURING THE PROSECUTION OF THIS PROJECT IF OTHER SIGNS, BARRICADES, ETC. ARE DEEMED NECESSARY TO CONTROL AND PROVIDE SAFETY FOR THE TRAVELING PUBLIC, THE CONTRACTOR SHALL PROVIDE THESE ADDITIONAL TRAFFIC CONTROL DEVICES. PAYMENT FOR THIS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO BID.
- THE CONTRACTOR SHALL TAKE CARE TO ASSURE THAT ALL TRAFFIC CONTROL DEVICES AND WORK ZONE PAVEMENT MARKINGS BE KEPT IN A HIGHLY VISIBLE CONDITION (CLEAN, UPRIGHT, AND PROPER LOCATION) THE CONTRACTOR SHALL HAVE ADEQUATE REPLACEMENT TRAFFIC CONTROL DEVICES AVAILABLE, AT ALL TIMES, TO REPLACE THOSE DAMAGED.

SIGNING:

- THE CONTRACTOR SHALL COVER OR TEMPORARILY REMOVE EXISTING SIGNS THAT CONFLICT WITH THE SUGGESTED TRAFFIC CONTROL PLAN OR THE INTENT THEREOF.
- EXISTING SIGNS THAT DON NOT CONFLICT WITH THE SUGGESTED TRAFFIC CONTROL PLAN OR THE INTENT THEREOF, BUT REQUIRE RELOCATION DUE TO PHYSICAL CONFLICTS SHALL NOT BE RELOCATED UNTIL TEMPORARY SIGN SUPPORTS HAVE BEEN INSTALLED TO ALLOW FOR THE IMMEDIATE RELOCATION OF ANY SUCH SIGNS.
- THESE SIGNING MEASURES SHALL NOT BE PAID, OR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO BID.

PUBLIC ACCESS AND PEDESTRIAN SAFETY:

- ANY PORTIONS OF THIS PROJECT THAT COINCIDE WITH EXISTING PUBLIC ROADS AND/OR PRIVATE DRIVES SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES, UNLESS OTHERWISE DIRECTED OR APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN TWO-WAY TRAFFIC ON ALL PUBLIC ROADWAYS AT ALL TIMES UNLESS OTHERWISE NOTED ON THE PLANS.
- FOR PEDESTRIAN SAFETY, THE CONTRACTOR SHALL INSTALL ORANGE PLASTIC CONSTRUCTION FENCING (3 FT TALL MINIMUM) AROUND ALL OPEN EXCAVATIONS. THE PLACEMENT OF THIS FENCING SHALL NOT OBSTRUCT SIGHT LINES OF THE TRAVELING PUBLIC.
- THESE MEASURES FOR PUBLIC ACCESS AND PEDESTRIAN SAFETY WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO BID.
- INSTALLATION AND MAINTENANCE OF ALL WORK ZONE SIGNS, BARRICADES, AND PAVEMENT MARKINGS IS THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL CONFORM TO BARRICADE AND CONSTRUCTION (BC) STANDARDS AND/OR THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- CONSTRUCTION IN ANY AREA THAT IS ADVERSELY AFFECTING TRAFFIC FLOW AND SAFETY MUST BE PURSUED DILIGENTLY BY THE CONTRACTOR. IF IN THE OPINION OF THE ENGINEER, THE CONTRACTOR IS NOT DILIGENTLY PURSUING THE CONSTRUCTION IN THOSE AREAS, THE ENGINEER MAY REQUIRE THE CONTRACTOR TO CHANGE HIS WORK SCHEDULE TO EXPEDITE COMPLETION IN THOSE AREAS OF CONCERN.
- THE CONTRACTOR MAY REQUEST TO ALTER THE TRAFFIC CONTROL PLAN, BUT ANY REQUESTS MAY BE SUBMITTED TO THE ENGINEER IN WRITING. IF THE REQUEST FOR A CHANGE IN THE TRAFFIC CONTROL IS EXTENSIVE, THE ENGINEER MAY REQUIRE THE CONTRACTOR TO PROVIDE PLAN SHEET REVISIONS OUTLINING HIS CHANGE. THESE PLAN SHEET REVISIONS WILL BE PROVIDED BY THE CONTRACTOR AT HIS OWN EXPENSE. ANY CHANGES TO THE TRAFFIC CONTROL PLAN WILL BE SUBJECT TO THE ENGINEER'S WRITTEN APPROVAL.
- FLASHING WARNING LIGHTS AND/OR FLAGS SHALL BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS.
- STEADY BURN (TY D) WARNING LIGHTS SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT AS NEEDED.
- ADDITIONAL SIGNS, BARRICADES, AND/OR OTHER CHANNELIZING DEVICES MAY BE REQUIRED AND/OR ADJUSTED AS DIRECTED BY THE ENGINEER.
- WHEN CONSTRUCTION OPERATIONS RESULT IN DROP OF MORE THAN 2 INCHES NEXT TO TRAVEL WAY A 3:1 SLOPE AND 4.0 FEET BUFFER ZONE WILL BE REQUIRED DURING NON WORKING HOURS.

TRAFFIC CONTROL NOTES (CONT'D):

- FOR POSTED SPEEDS EXCEEDING 30 MPH, ADVISORY SPEED SIGNS WITH APPROPRIATE WARNING SIGNS, SHALL BE POSTED IN THE VICINITY SPECIFIC WORK ZONES WITH THE PROJECT LIMITS, UNLESS OTHER SIDE DIRECTED BY THE ENGINEER.
- LENGTH AND SPACING OF CHANNELIZING DEVICES SHALL BE AS SHOWN ON THE BC STANDARDS AND THE "T.M.U.T.C.D." OTHER SIGNS MAY BE USED IN ADDITION TO THOSE REQUIRED BY BARRICADE STANDARDS.
- ALL WORK SHALL BE DONE EXPEDITIOUSLY DURING DAYLIGHT HOURS, OR AS DIRECTED BY THE ENGINEER. NECESSARY FLAGGERS AND APPROPRIATE SIGNING TO SAFELY GUIDE TRAFFIC THROUGH THE WORK AREA WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.
- REFER TO STANDARD TRAFFIC CONTROL SHEETS FOR OTHER PERTINENT INFORMATION NOT SHOWN.
- WORK BEYOND THE PROJECT LIMITS WILL BE PERMITTED PROVIDED DRUMS ARE INSTALLED AS PER TRAFFIC CONTROL BARRIER DEVICES AND THE WORK DOES NOT CREATE A DROP OFF OF MORE THAN TWO (2) INCHES.
- CONTRACTOR TO USE A POWER BROOM FOR CLEANING ROADWAY AND TO MAINTAIN CLEAN AT ALL TIMES. THIS IS NOT A PAID ITEM.
- ROADWAY BARRELS TO BE USED WHEN WORKING OUTSIDE OF THE ROADWAY AS TO DELINEATE THE WORK AREA.
- CROSSWALKS, STOP BARS AND OTHER AFFECTED TRAFFIC MARKINGS SHALL BE REPLACED BY THE CONTRACTOR AS NEEDED AT THE CONTRACTOR'S EXPENSE.
- A STORM WATER POLLUTION PREVENTION PLAN (SW3P) IS NOT REQUIRED, DUE TO CONTRACTOR NEVER DISTURBING AREAS GREATER THAN AN 1-ACRE. THE CONTRACTOR WILL BE REQUIRED TO FOLLOW STORM WATER POLLUTION CONTROL AS PER SPECIFICATION 1570 AND PLANS.
- ACCESS TO MAIL BOXES SHALL BE PROVIDED AT ALL TIMES. ANY MAIL BOXES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AND SHALL BE AS PER TxDOT STANDARDS.

PAVING CONSTRUCTION NOTES:

- HOT MIX ASPHALT CONCRETE TO BE IN ACCORDANCE WITH TxDOT SPECIFICATION TYPE "D" ITEM 340.
- SUBGRADE EXCAVATION, MIXING OF LIME, AND RECOMPACTION TO BE INCLUDED IN PRICE BID PER SQUARE YARD FOR "LIME TREATED SUBGRADE."
- CONTRACTOR TO FILL BEHIND CURBS AND WALKS AND SHAPE TO INSURE PROPER DRAINAGE.
- CONSTRUCTION JOINTS TO EXISTING PAVEMENT SHALL BE MADE BY EITHER CUTTING BACK EXISTING TO PRODUCE A SLIGHTLY BEVELED EDGE FOR THE FULL THICKNESS OF THE WEARING COURSE OR A SUITABLE LAP JOINT SHALL BE MADE. SAW CUTTING REQUIRED.
- NO TRAFFIC SHALL BE ALLOWED ON THE FINISHED WEARING SURFACE UNTIL AT LEAST 12 HOURS AFTER COMPLETION OF ROLLING.
- HOT MIX ASPHALT CONCRETE TRANSPORT TRUCKS TO BE EQUIPPED WITH CANVAS COVERS TO BE UTILIZED DURING MATERIAL HAULING. MATERIAL DELIVERED TO SITE AT IMPROPER TEMPERATURE SHALL BE REJECTED. HOT MIX SHALL BE LAID AT A MINIMUM TEMPERATURE OF 225°F.
- WHEN TYING INTO EXISTING CURB, EXPOSE REBAR AND FORM EXPANSION JOINT PER DETAIL SHEET.
- ANY SETTLEMENT UNDER PAVEMENT DUE TO INADEQUATE COMPACTION OF UTILITY LINE BACK FILL SHALL BE CAUSE FOR RECOMPACTION OF TRENCH AND REPLACEMENT OF PAVEMENT SECTION.

STORMWATER NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE COUNTY OF HIDALGO, PLANS AND SPECIFICATIONS, EXCEPT AS NOTED HEREIN AND APPROVED BY THE COUNTY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY STANDARDS, TEXAS LAW, AND O.S.H.A. STANDARDS FOR ALL EXCAVATION IN EXCESS OF FIVE FEET IN DEPTH.
- THE LOCATION OF ALL UTILITIES LOCATED ON THESE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL PUBLIC UTILITIES MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEAN-OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE DURING CONSTRUCTION OF THE PAVING FOR THIS DEVELOPMENT.
- DRAINAGE SHOULD BE MAINTAINED AWAY FROM THE FOUNDATIONS, BOTH DURING AND AFTER CONSTRUCTION.
- BACKFILL FOR UTILITY LINES SHOULD BE CAREFULLY PLACED SO THAT THEY WILL BE STABLE. WHERE UTILITY LINES PASS THROUGH THE PARKING LOT, THE TOP 6" SHOULD BE COMPACTED SIMILARLY TO THE REMAINDER OF THE LOT. UTILITY DITCHES SHOULD BE VISUALLY INSPECTED DURING THE EXCAVATION PROCESS TO ENSURE THE UNDESIRABLE FILL IS NOT USED.
- ALL EARTHWORK OPERATIONS SHALL CONFORM TO THE RECOMMENDATIONS PER THE GEO-TECHNICAL REPORT.
- ALL PROPOSED SPOT SHOTS ARE GUTTER/TOP OF PAVEMENT/FINISHED GRADE ELEVATIONS UNLESS OTHERWISE SPECIFIED.
- ALL REINFORCED CONCRETE PIPE (RCP) TO BE CLASS IV UNLESS NOTED OTHERWISE.

LEGEND

- STORM SEWER LINE
- SPOT GRADE
- CONTOURS
- ASPHALT PAVING
- CONCRETE PAVEMENT
- CALICHE DRIVEWAY
- E --- ELECTRIC LINE
- POWER POLE
- OHE --- OVER HEAD ELECTRIC
- GAS LINE
- FENCE
- GATE VALVE & BOX
- FIRE HYDRANT
- WATER LINE
- WATER METER
- STREET SIGN
- TEL --- TELEPHONE LINE
- TELEPHONE PEDESTAL
- DRIVEWAY INDICATOR
- SHEET REFERENCE

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HIDALGO COUNTY PRECINT NO. 1		GOOLIE ROAD		
GENERAL CONSTRUCTION NOTES				



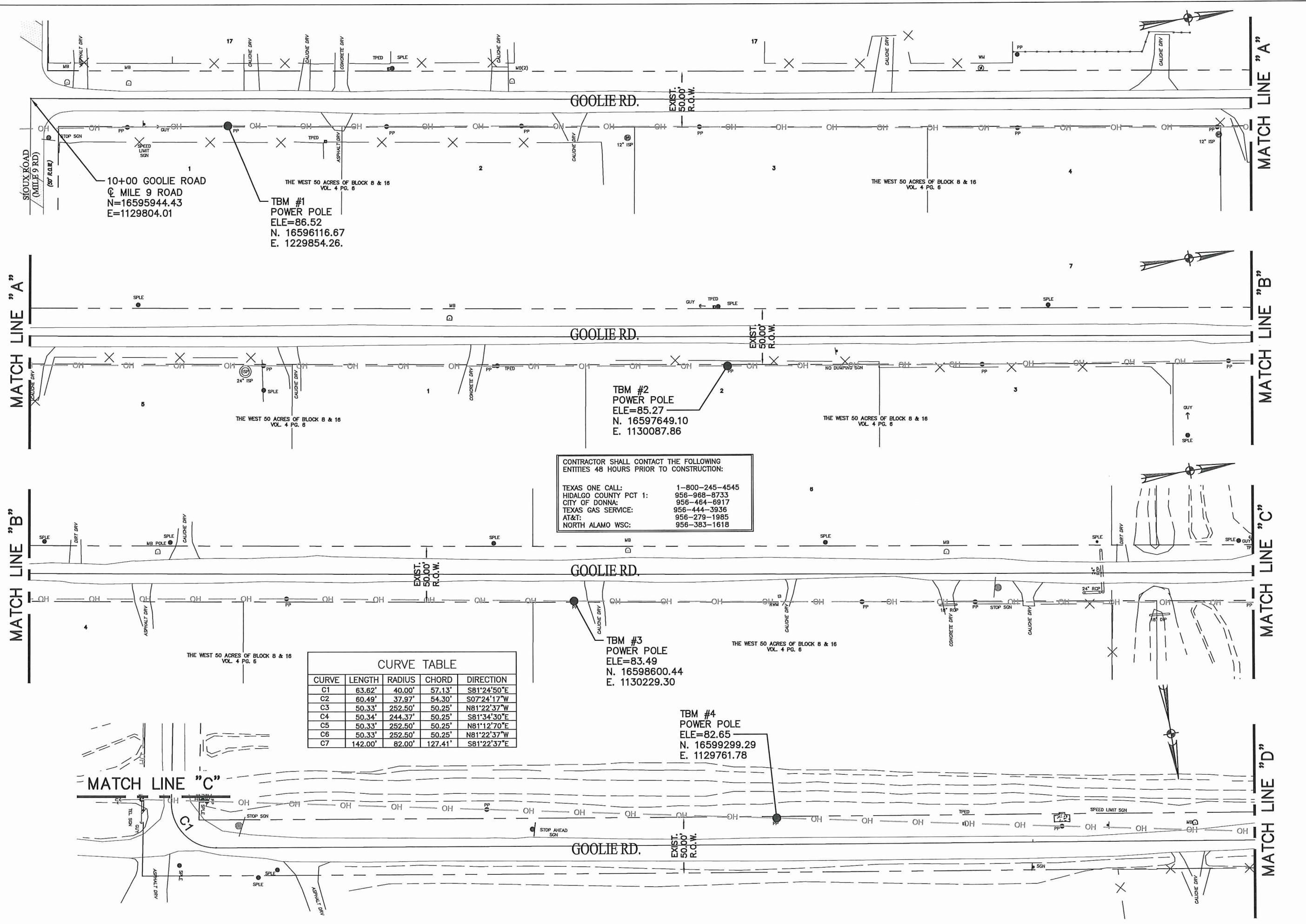
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Civil Engineering
Environmental Engineering
Planning
Project Management

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10+00 GOOLIE ROAD
 @ MILE 9 ROAD
 N=16595944.43
 E=1129804.01

TBM #1
 POWER POLE
 ELE=86.52
 N. 16596116.67
 E. 1229854.26.

TBM #2
 POWER POLE
 ELE=85.27
 N. 16597649.10
 E. 1130087.86

CONTRACTOR SHALL CONTACT THE FOLLOWING ENTITIES 48 HOURS PRIOR TO CONSTRUCTION:

TEXAS ONE CALL: 1-800-245-4545
 HIDALGO COUNTY PCT 1: 956-968-8733
 CITY OF DONNA: 956-464-6917
 TEXAS GAS SERVICE: 956-444-3936
 AT&T: 956-279-1985
 NORTH ALAMO WSC: 956-383-1618

TBM #3
 POWER POLE
 ELE=83.49
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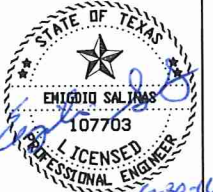
TBM #4
 POWER POLE
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CURVE TABLE				
CURVE	LENGTH	RADIUS	CHORD	DIRECTION
C1	63.62'	40.00'	57.13'	S81°24'50"E
C2	60.49'	37.97'	54.30'	S07°24'17"W
C3	50.33'	252.50'	50.25'	N81°22'37"W
C4	50.34'	244.37'	50.25'	S81°34'30"E
C5	50.33'	252.50'	50.25'	N81°12'70"E
C6	50.33'	252.50'	50.25'	N81°22'37"W
C7	142.00'	82.00'	127.41'	S81°22'37"E

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HIDALGO COUNTY PRECINT NO. 1
 GOOLIE ROAD
 PAVING IMPROVEMENTS

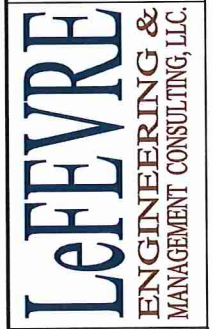
SURVEY CONTROL PLAN



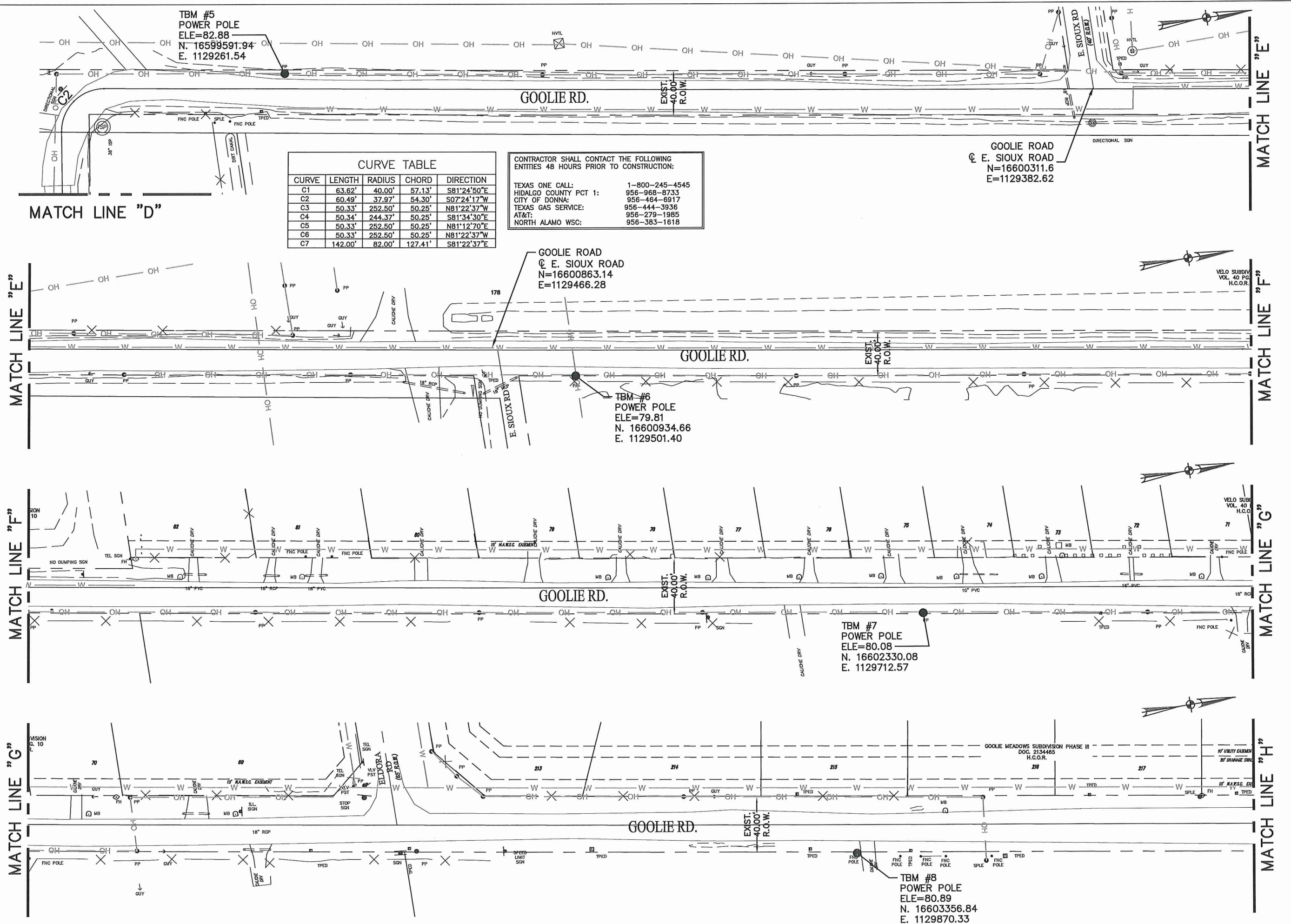
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CURVE TABLE

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C1	63.62'	40.00'	57.13'	S81°24'50"E
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C4	50.34'	244.37'	50.25'	S81°34'30"E
C5	50.33'	252.50'	50.25'	N81°12'70"E
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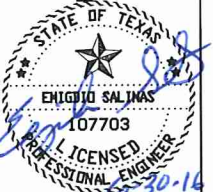
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HIDALGO COUNTY PRECINT NO. 1
GOOLIE ROAD
PAVING AND DRAINAGE IMPROVEMENTS

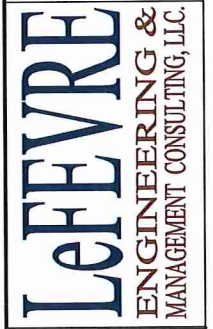
SURVEY CONTROL PLAN



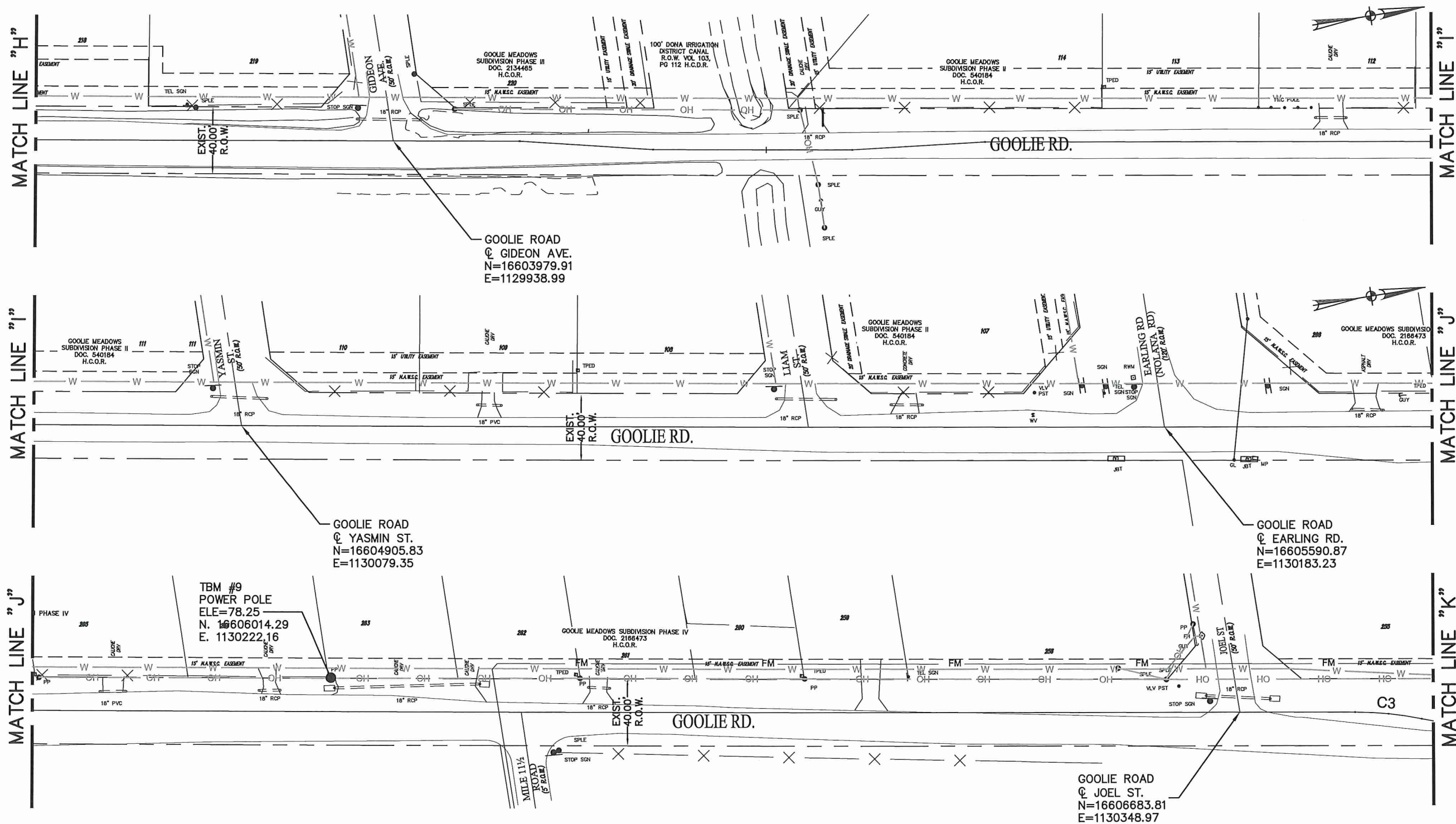
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C4	50.34'	244.37'	50.25'	S81°34'30"E
C5	50.33'	252.50'	50.25'	N81°12'70"E
C6	50.33'	252.50'	50.25'	N81°22'37"W
C7	142.00'	82.00'	127.41'	S81°22'37"E

HIDALGO COUNTY PRECINCT NO. 1		REVISION		APPROV.
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PAVING IMPROVEMENTS		1		
SURVEY CONTROL PLAN		2		
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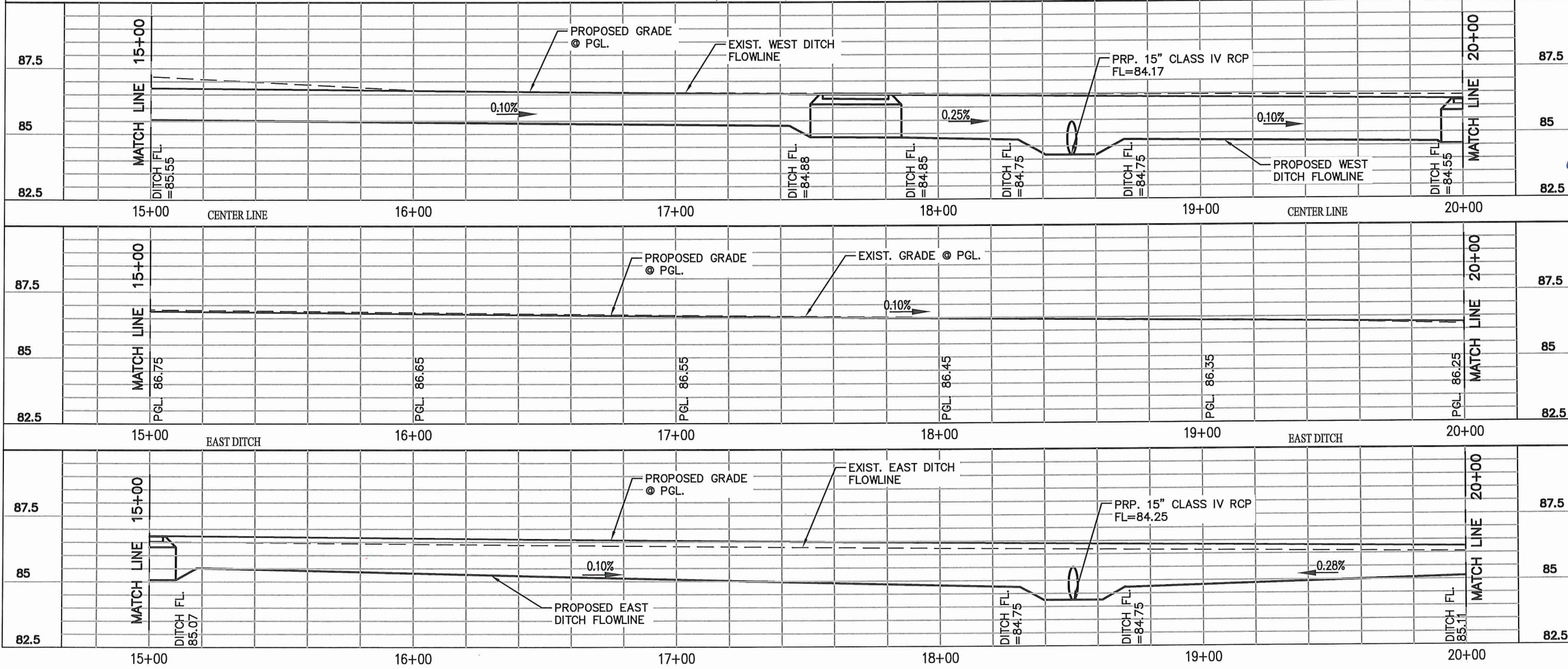
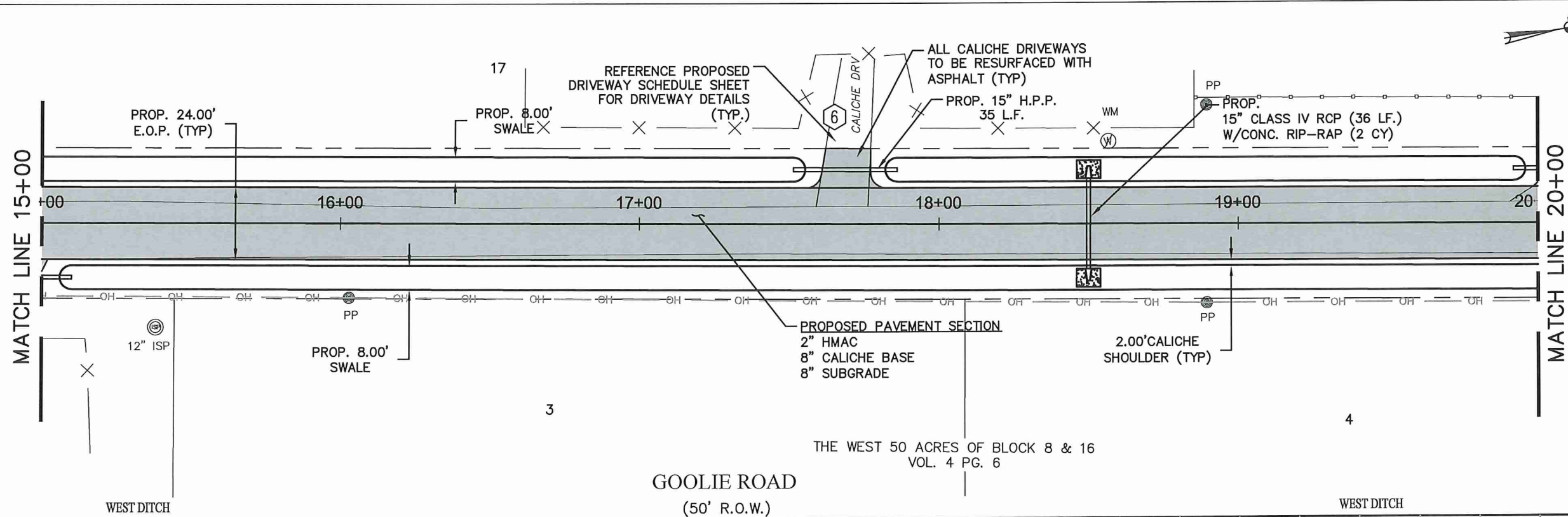
Civil Engineering
 Environmental Engineering
 Planning
 Project Management

612 Nolana, Suite 520
 Houston, TX 77004
 Tel. 956 887 5863
 Fax. 956 887 5863

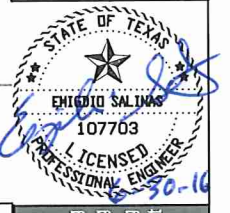
Texas Registered Engineering Firm F-11722

LEFEBVRE
ENGINEERING &
MANAGEMENT CONSULTING, LLC.

Drawn L.H.
 Scale
 Checked E.S.
 Date JUNE, 2016
 Job No. P-194
 Sheet 5 of 35



APPROV.	
REVISION	
NO.	DATE
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HIDALGO COUNTY PRECINT NO. 1	
GOOLIE ROAD	
PAVING IMPROVEMENTS	
PLAN AND PROFILE SHEET	
STA. 15+00 TO 20+00	

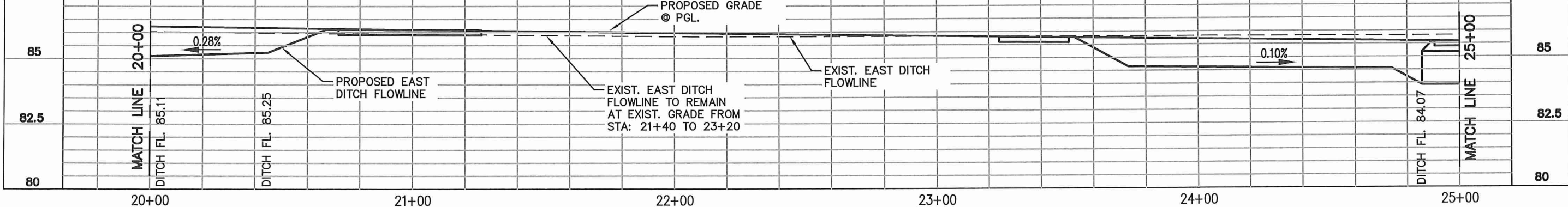
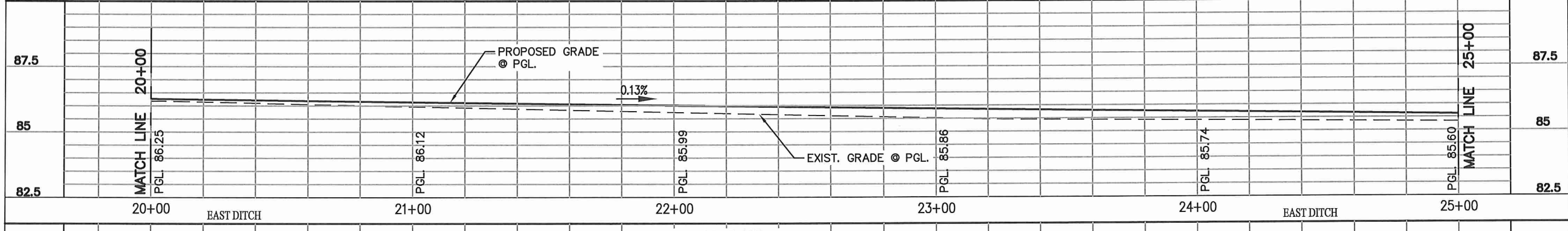
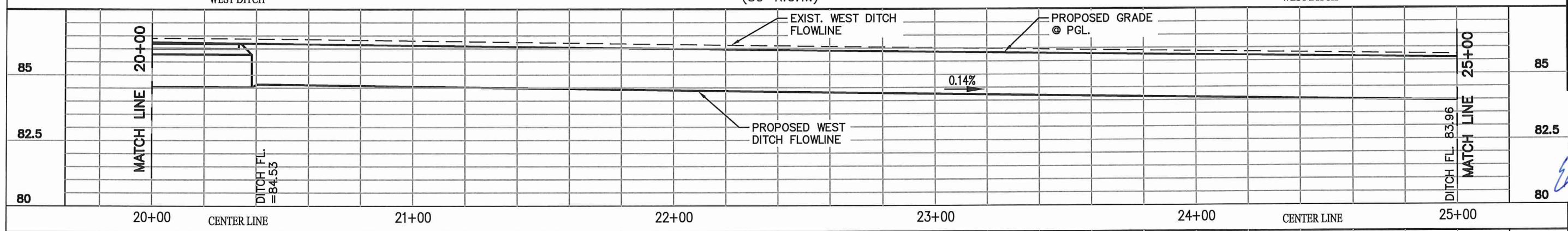
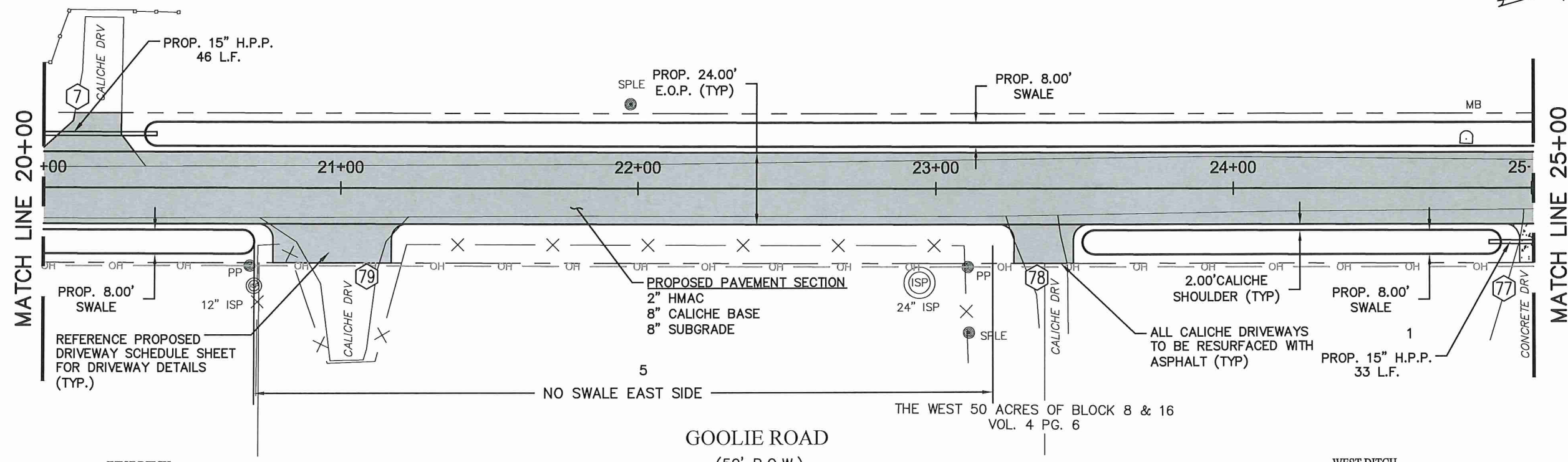


Civil Engineering
 Environmental Engineering
 Planning
 Project Management
 Texas Registered Engineering Firm F-11722

LEFEBVRE
ENGINEERING & MANAGEMENT CONSULTING, LLC.

Drawn L.H.
 Scale Horz. 1:40
 Vert. 1:5
 Checked E.S.
 Date JUNE, 2016
 Job No. P-194
 Sheet 8 of 35

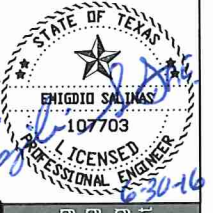
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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

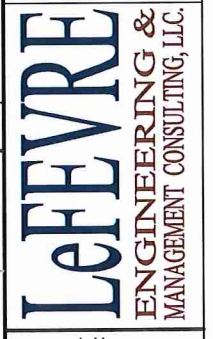
PLAN AND PROFILE SHEET
STA. 20+00 TO 25+50



Civil Engineering
Environmental Engineering
Planning
Project Management

612 Nolana, Suite 520
McAllen, TX 78504
Tel: 361.687.5343
Fax: 361.687.5303

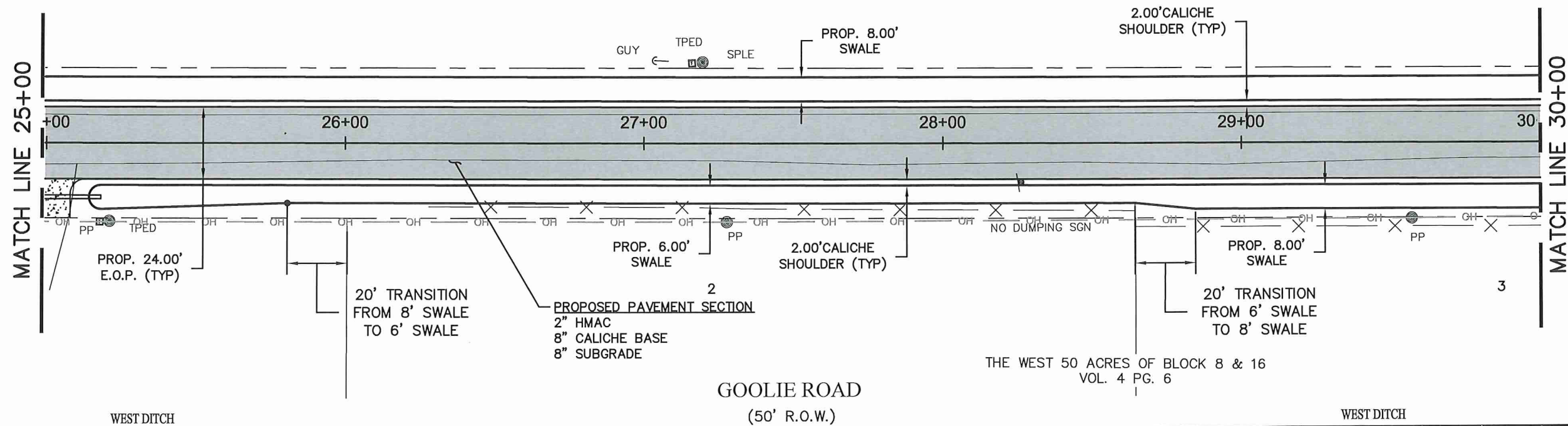
Texas Registered Professional Engineer Firm E-11722



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Scale	Horz. 1:40 Vert. 1:5
Checked	E.S.
Date	JUNE, 2016
Job No.	P-194
Sheet	9 of 35

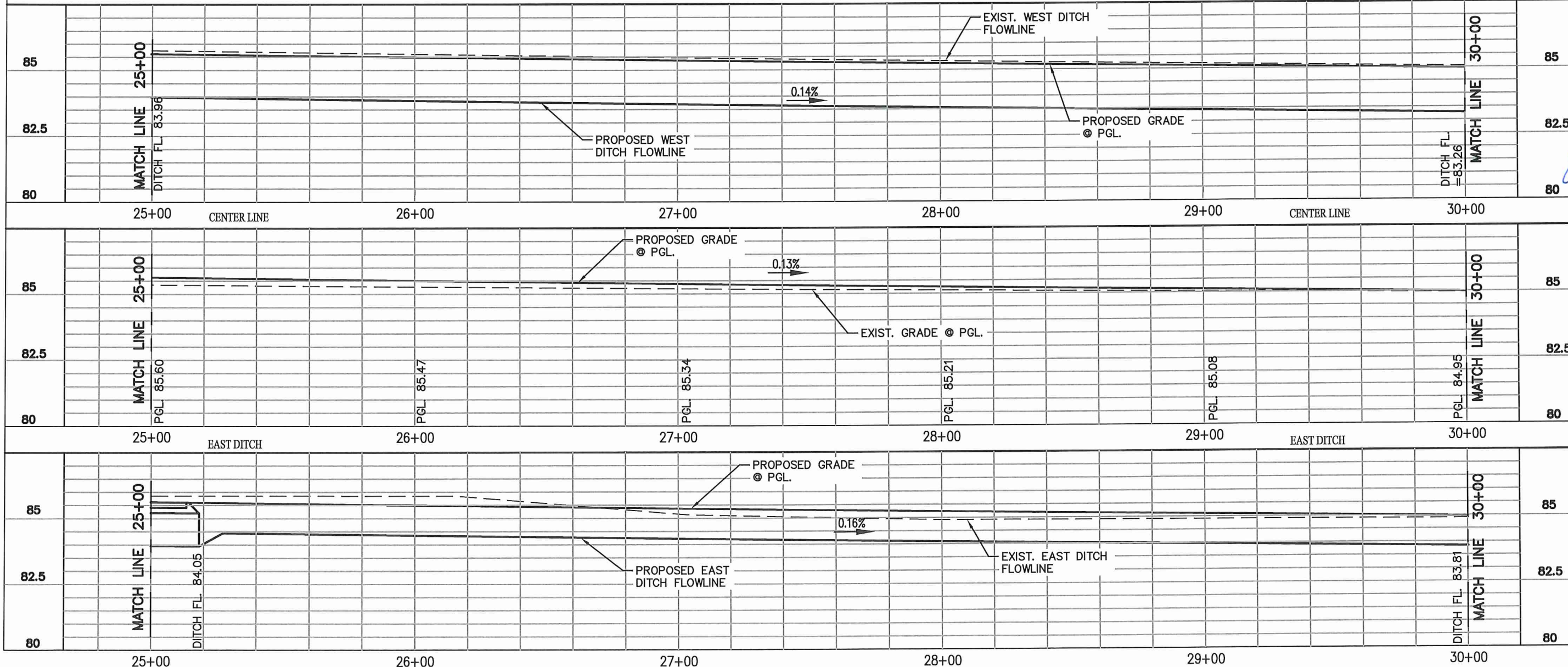
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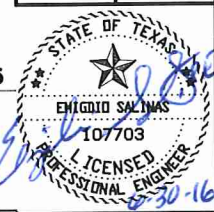


GOOLIE ROAD
(50' R.O.W.)

THE WEST 50 ACRES OF BLOCK 8 & 16
VOL. 4 PG. 6



APPROV.	
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HIDALGO COUNTY PRECINCT NO. 1	
GOOLIE ROAD	
PAVING IMPROVEMENTS	
PLAN AND PROFILE SHEET	
STA. 25+00 TO 30+00	



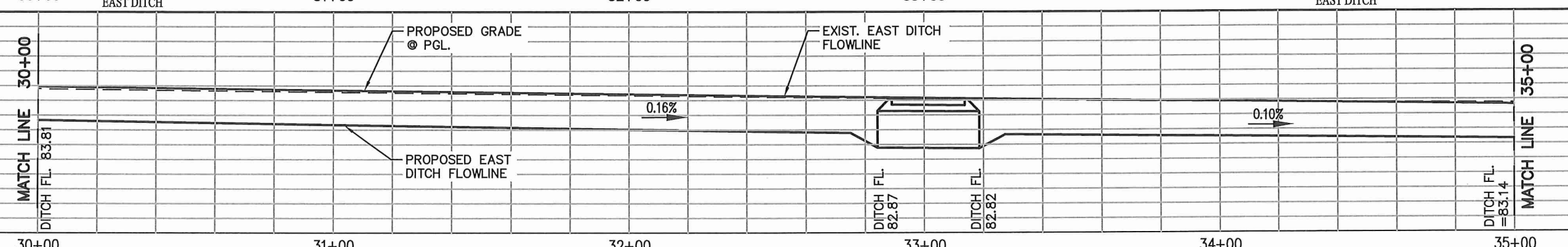
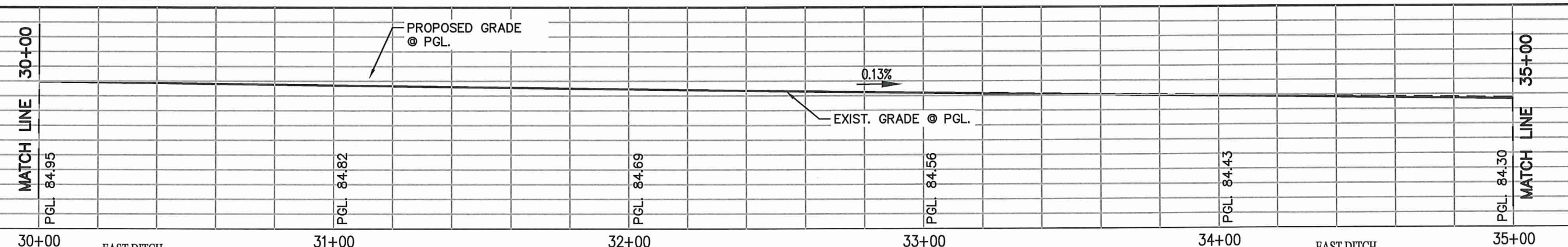
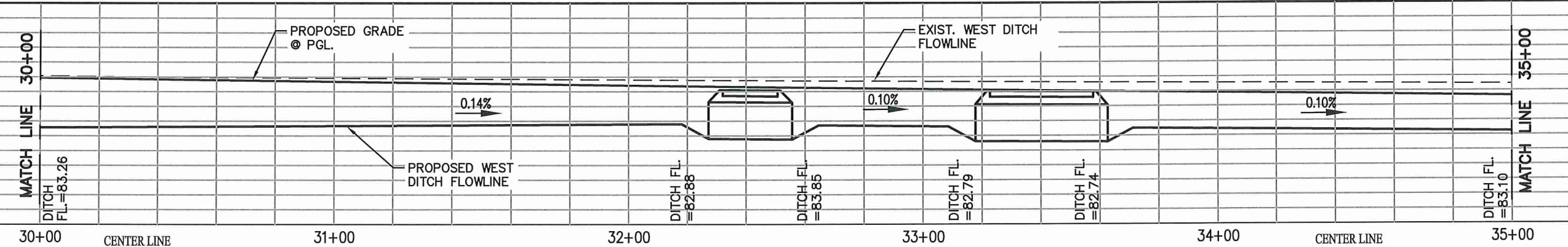
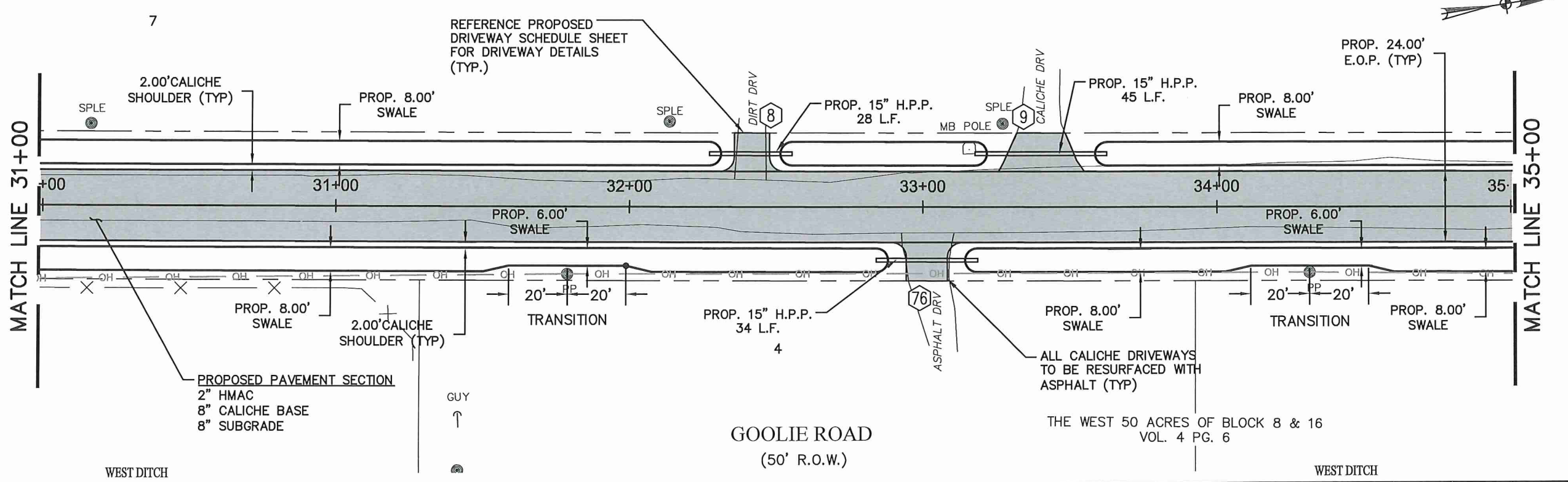
Civil Engineering
Environmental Engineering
Planning
Project Management

612 Nolana, Suite 520
McAllen, Texas 78504
Tel: 361.687.5400
Fax: 361.687.5403

Texas Registered Engineering Firm E-11722

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ENGINEERING &
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Drawn L.H.
Scale Horz. 1:40
Vert. 1:5
Checked E.S.
Date JUNE, 2016
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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 31+00 TO 35+00



612 Nolana, Suite 520
Waco, TX 76704
Tel: 956.887.1540
Fax: 956.687.5953

Civil Engineering
Environmental Engineering
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Project Management

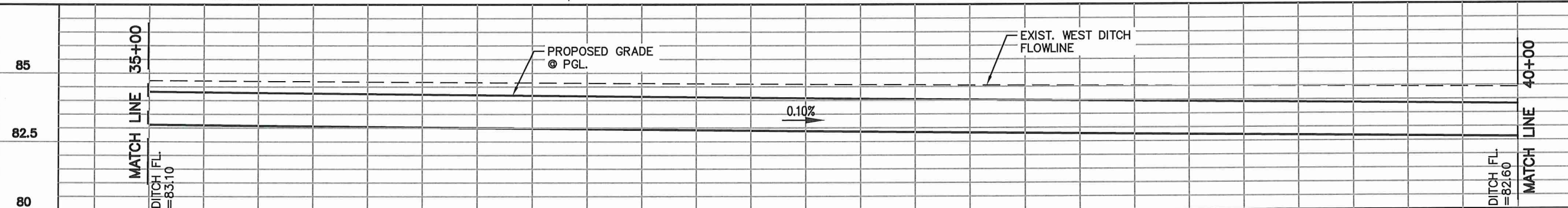
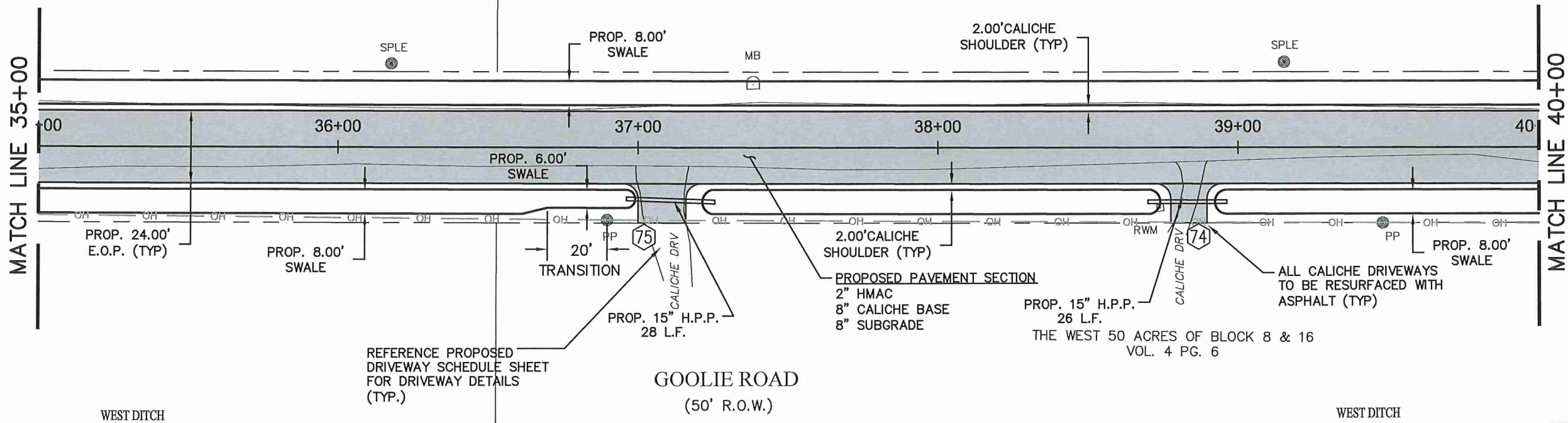
Texas Registered Professional Engineer, Firm F-11722

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ENGINEERING &
MANAGEMENT CONSULTING, LLC.

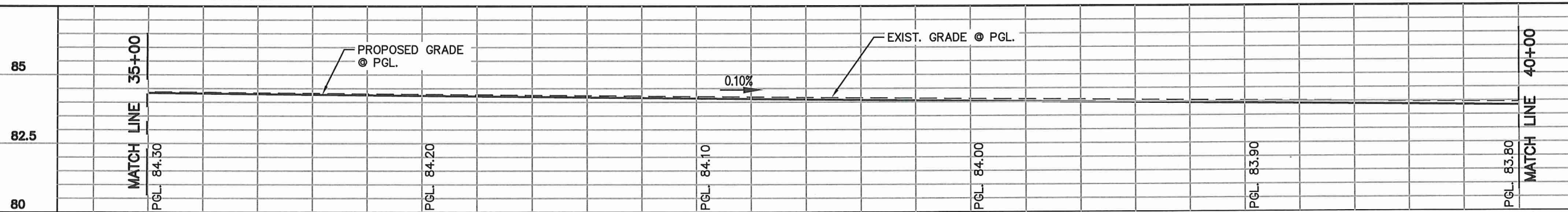
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Scale Horz. 1:40
Vert. 1:5
Checked E.S.
Date JUNE, 2016
Job No. P-194
Sheet 11 of 35

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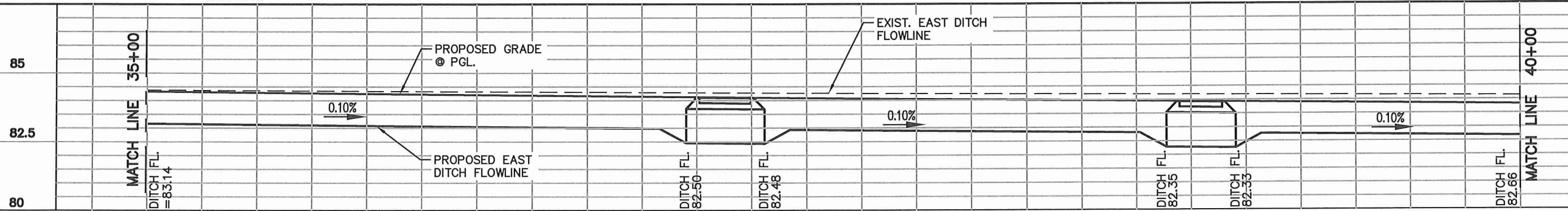
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35+00 CENTER LINE 36+00 37+00 38+00 39+00 CENTER LINE 40+00



35+00 EAST DITCH 36+00 37+00 38+00 39+00 EAST DITCH 40+00



35+00 36+00 37+00 38+00 39+00 40+00



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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 35+00 TO 40+00



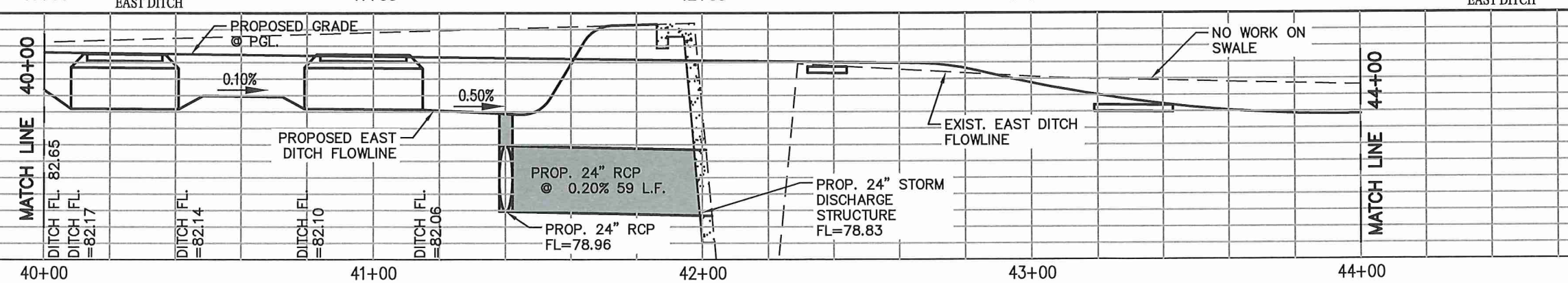
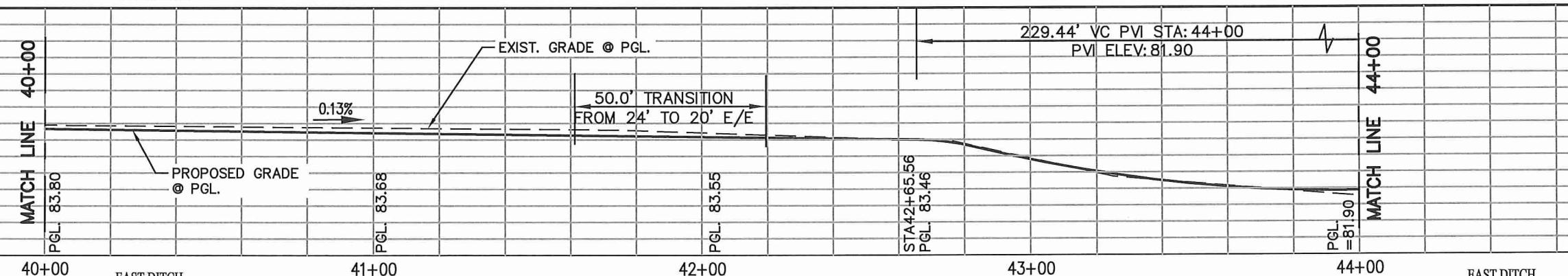
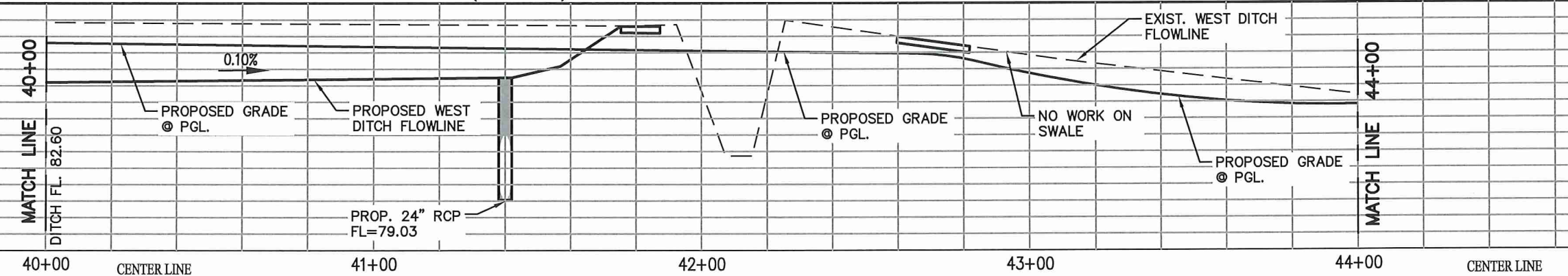
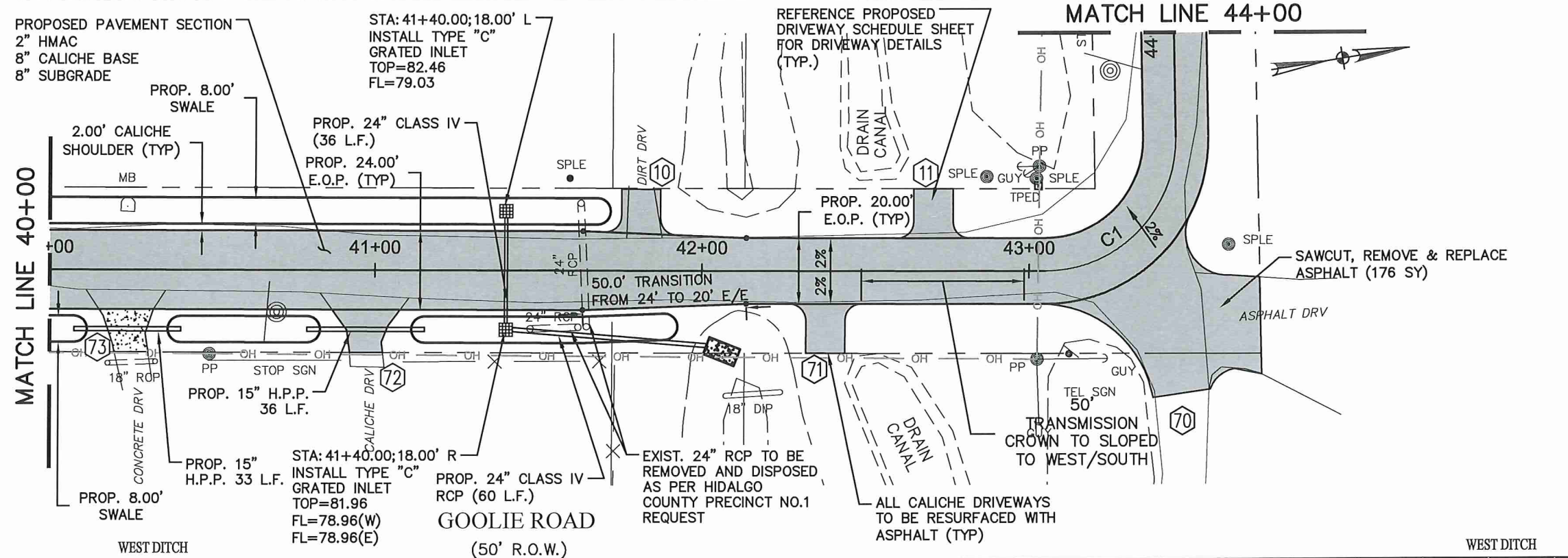
Civil Engineering
Environmental Engineering
Planning
Project Management

612 Nolana, Suite 520
McAllen, Texas 78504
Tel: 361.667.5835
Fax: 361.667.5835

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Scale Horz. 1:40
Vert. 1:5
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Date JUNE, 2016
Job No. P-194
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APPROV.				
REVISION				
NO.	1	2	3	4
DATE				
HIDALGO COUNTY PRECINCT NO. 1				
GOOLIE ROAD				
PAVING IMPROVEMENTS				
PLAN AND PROFILE SHEET				
STA. 40+00 TO 44+00				



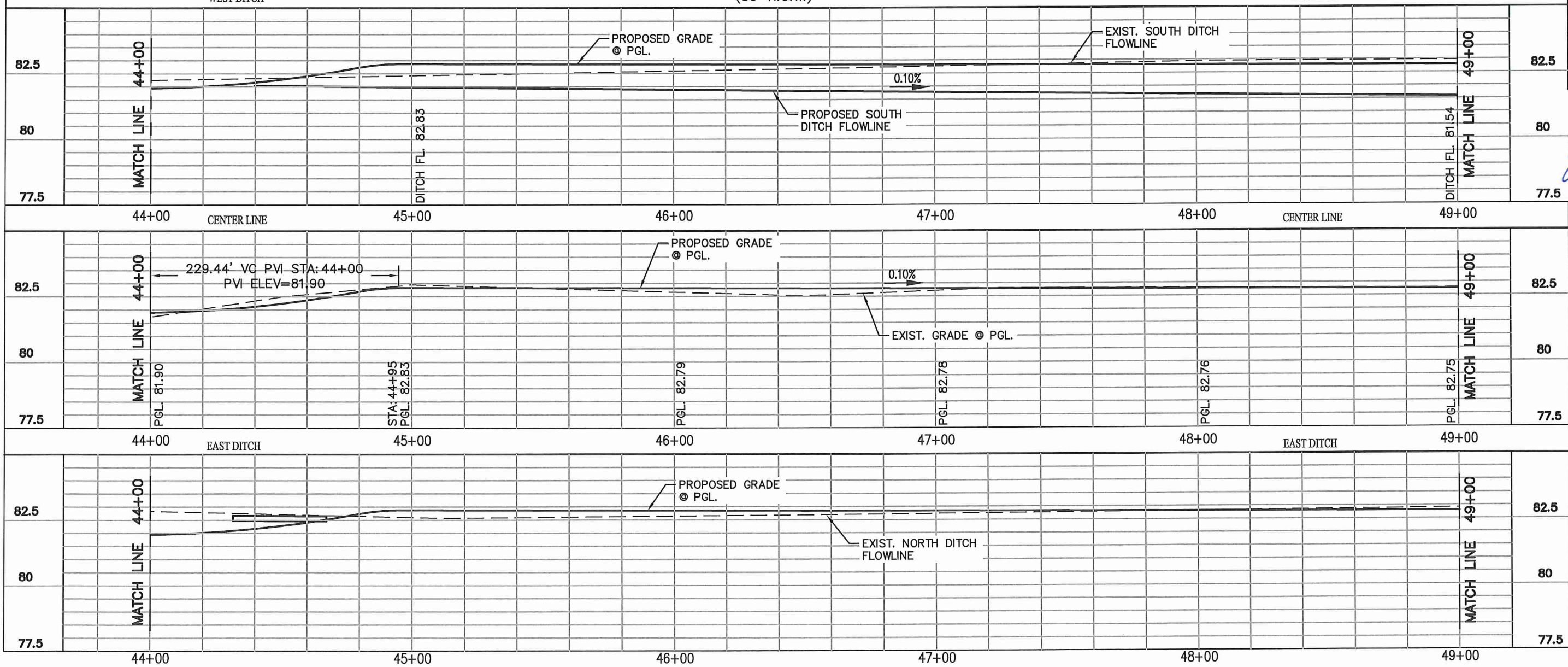
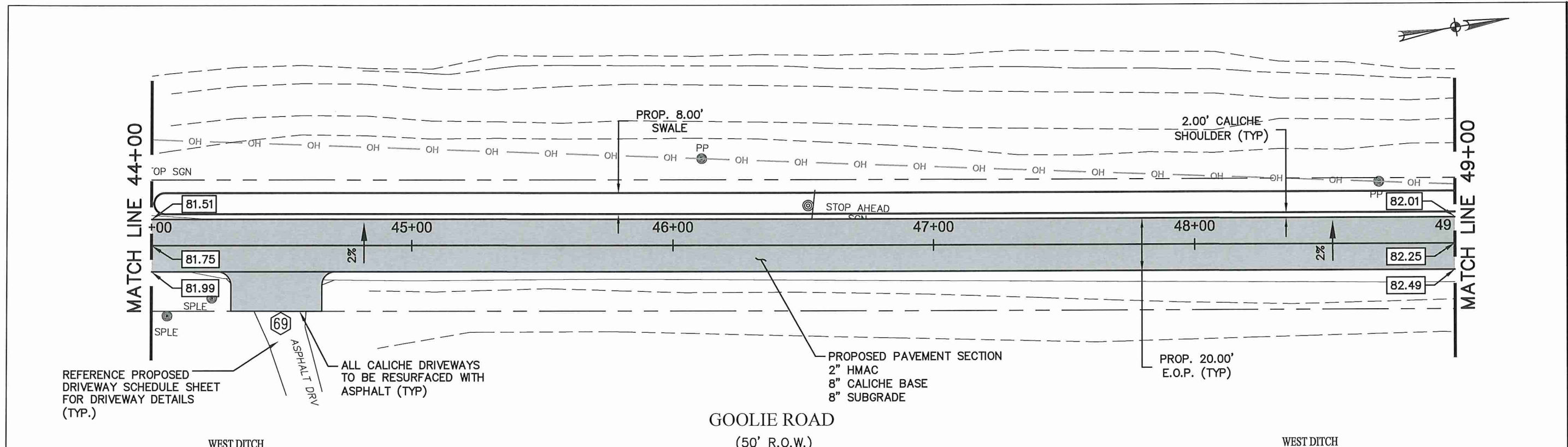
Civil Engineering
Environmental Engineering
Planning
Project Management

612 Nolana, Suite 520
McAllen, Texas 78504
Tel. 361.697.5353
Fax. 361.697.5353

Texas Registered Engineer, Firm E-11722

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MANAGEMENT CONSULTING, L.L.C.

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Scale Horz. 1:40
Vert. 1:5
Checked E.S.
Date JUNE, 2016
Job No. P-194
Sheet 13 of 35



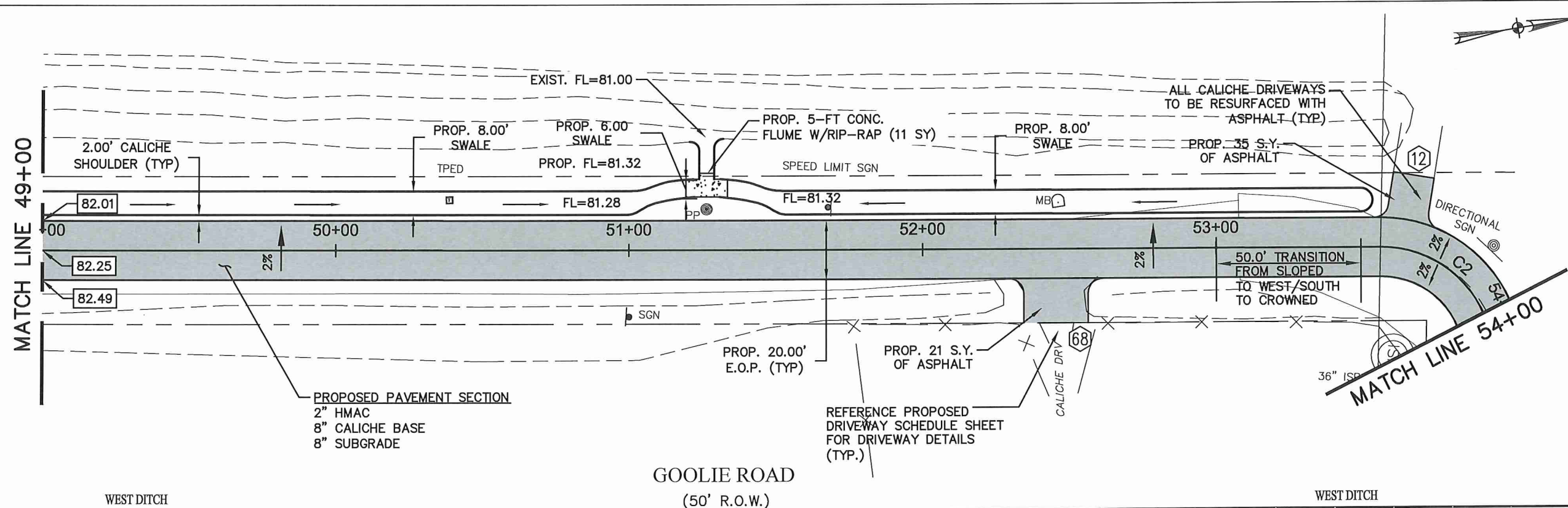
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PLAN AND PROFILE SHEET STA. 44+00 TO 49+00	



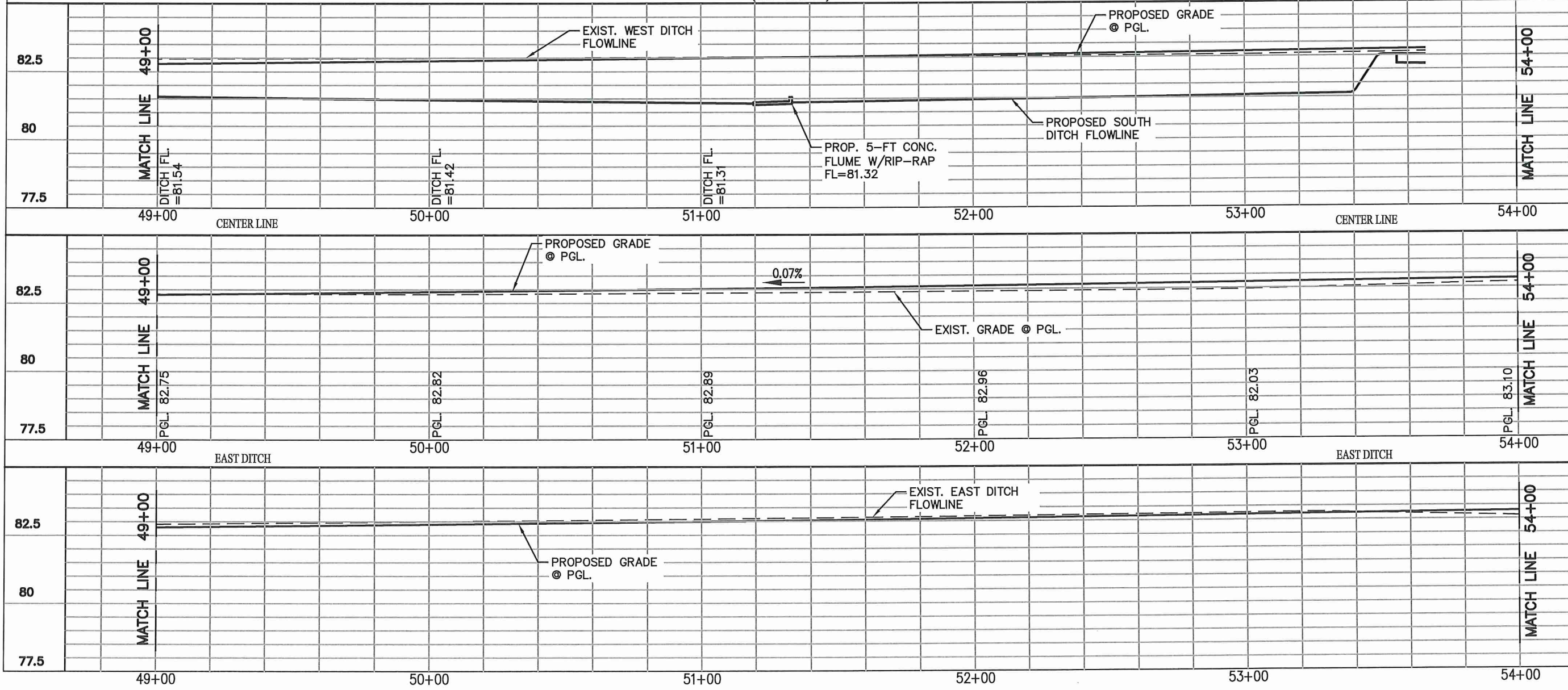
Civil Engineering
Environmental Engineering
Planning
Project Management
Texas Registered Engineering Firm E-11722

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ENGINEERING &
MANAGEMENT CONSULTING, LLC.

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Scale	Horz. 1:40 Vert. 1:5
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GOOLIE ROAD
(50' R.O.W.)



APPROV.				
REVISION				
DATE				
NO.	1	2	3	4
HIDALGO COUNTY PRECINCT NO. 1				
GOOLIE ROAD				
PAVING IMPROVEMENTS				
PLAN AND PROFILE SHEET				
STA. 49+00 TO 54+00				



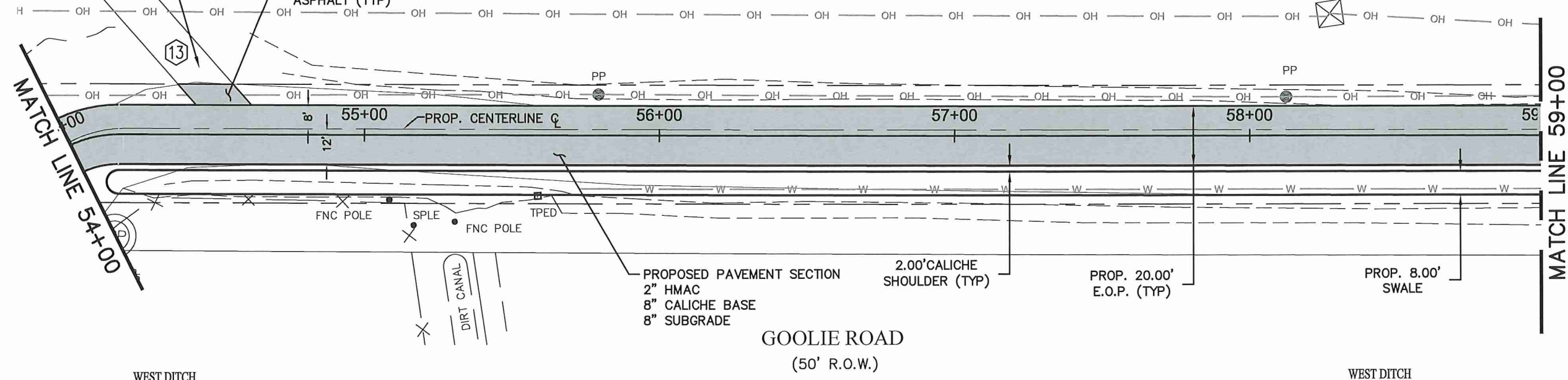
Civil Engineering
Environmental Engineering
Planning
Project Management
Texas Registered Professional Engineer, ERM 11722

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ENGINEERING &
MANAGEMENT CONSULTING, LLC.

Drawn	L.H.
Scale	Horz. 1:40 Vert. 1:5
Checked	E.S.
Date	JUNE, 2016
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REFERENCE PROPOSED DRIVEWAY SCHEDULE SHEET FOR DRIVEWAY DETAILS (TYP.)

ALL CALICHE DRIVEWAYS TO BE RESURFACED WITH ASPHALT (TYP)



PROPOSED PAVEMENT SECTION
2" HMAC
8" CALICHE BASE
8" SUBGRADE

2.00' CALICHE SHOULDER (TYP)

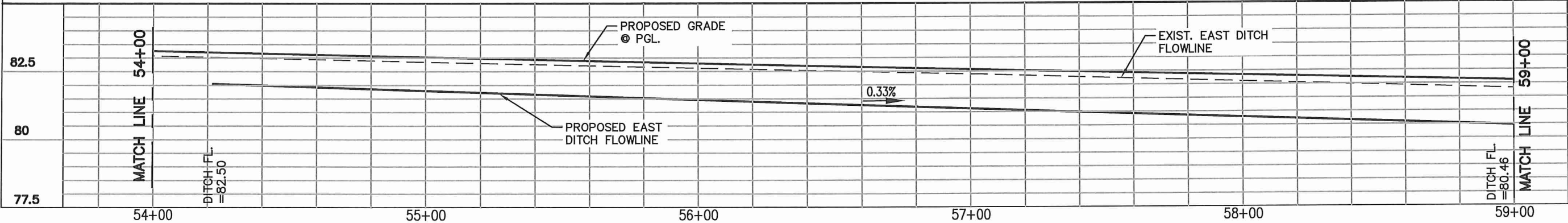
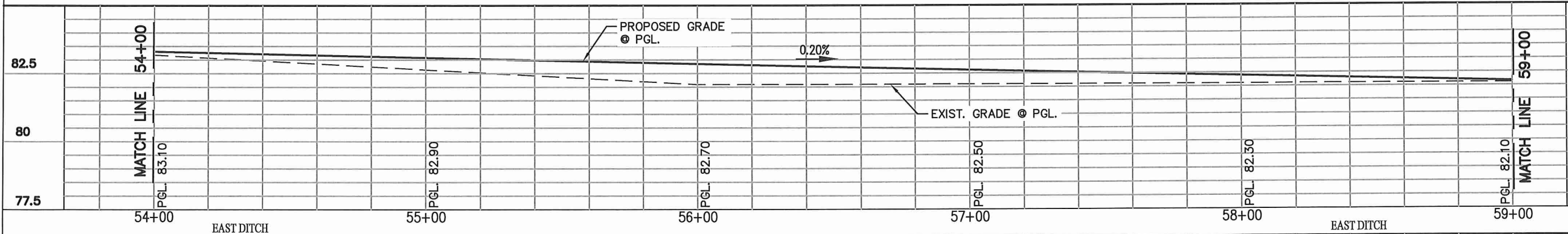
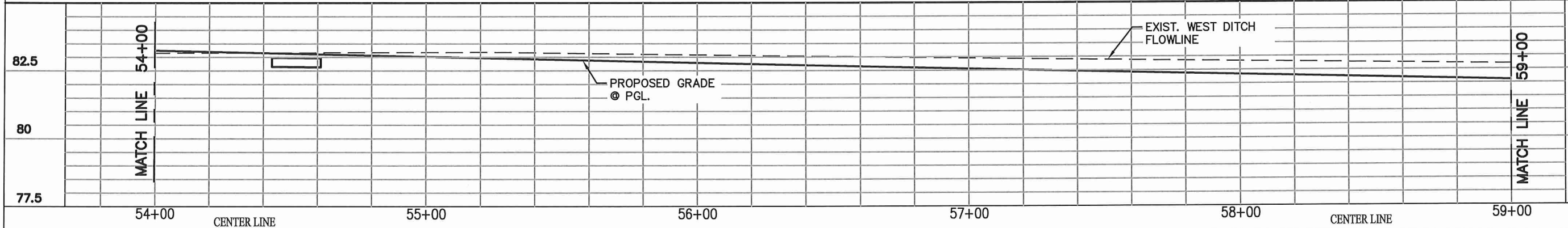
PROP. 20.00' E.O.P. (TYP)

PROP. 8.00' SWALE

GOOLIE ROAD
(50' R.O.W.)

WEST DITCH

WEST DITCH



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HIDALGO COUNTY PRECINCT NO. 1	
GOOLIE ROAD	
PAVING IMPROVEMENTS	
PLAN AND PROFILE SHEET	
STA. 54+00 TO 59+00	



612 Nolana, Suite 520
McAllen, Texas 78504
Tel. 361.687.1544
Fax. 361.687.1583

Civil Engineering
Environmental Engineering
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Project Management

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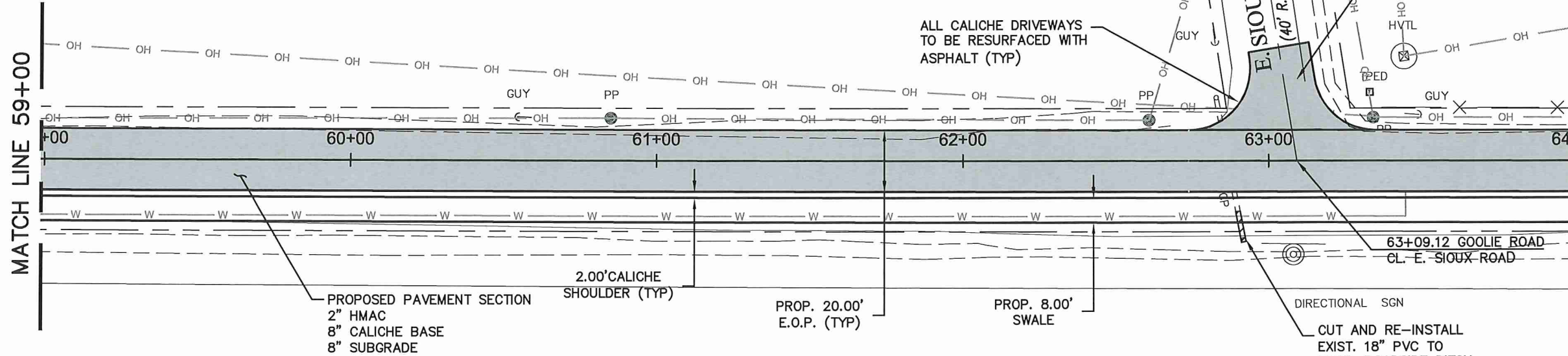
LEFEVRE
ENGINEERING &
MANAGEMENT CONSULTING, LLC.

Drawn L.H.
Scale Horz. 1:40
Vert. 1:5
Checked E.S.
Date JUNE, 2016
Job No. P-194
Sheet 16 of 35

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MATCH LINE 59+00

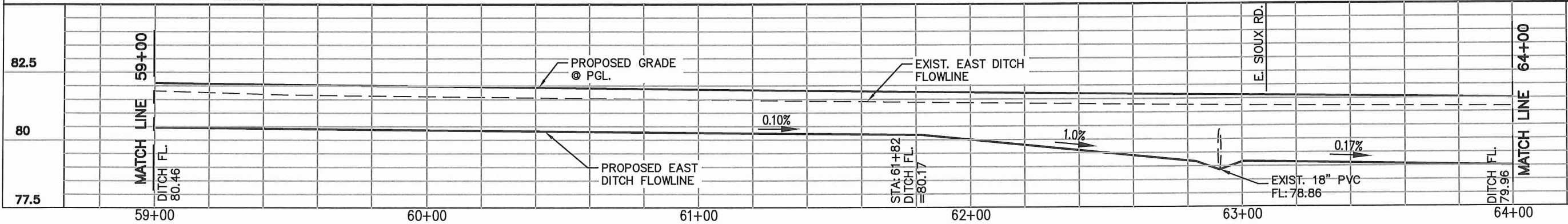
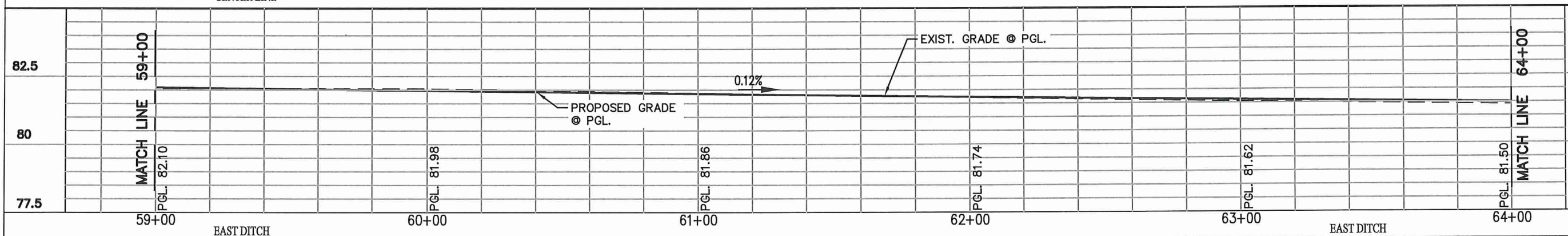
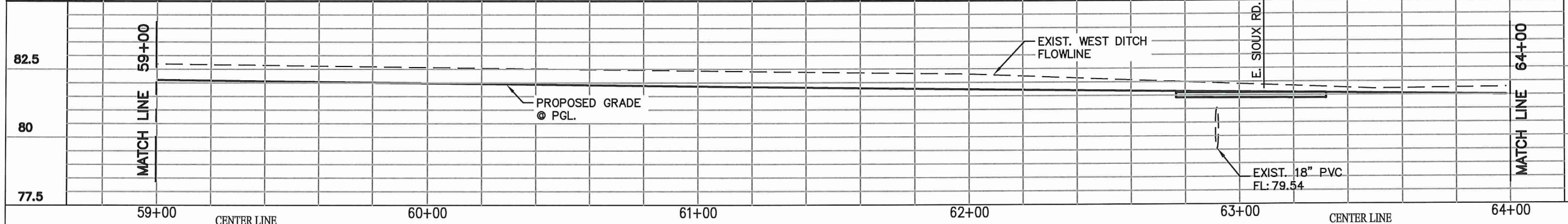
MATCH LINE 64+00



GOOLIE ROAD
(40' R.O.W.)

WEST DITCH

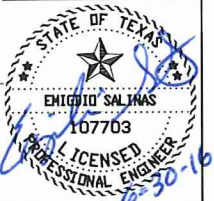
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NO.	DATE	REVISION	APPROV.
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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 59+00 TO 64+00



Civil Engineering
Environmental Engineering
Planning
Project Management

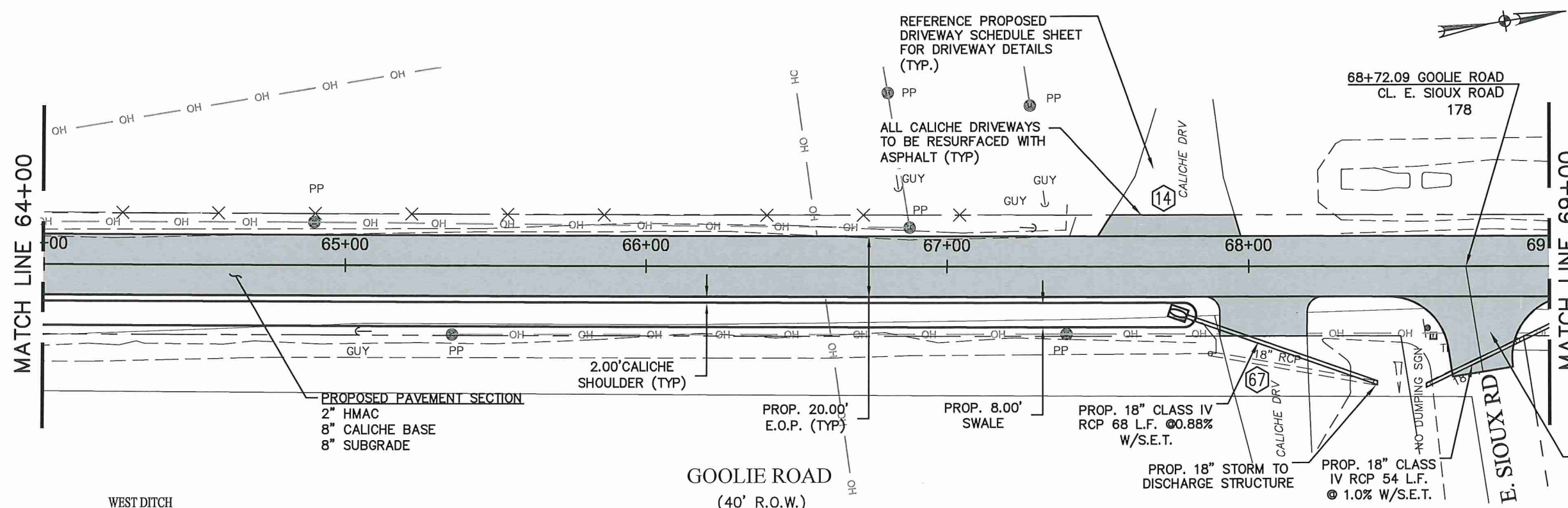
612 Nolana, Suite 520
McAllen, Texas 78504
Tel. 956.687.1510
Fax. 956.687.5365

Texas Registered Engineering Firm #11722

LEFEBVRE
ENGINEERING &
MANAGEMENT CONSULTING, LLC.

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Vert. 1:5
Checked E.S.
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Sheet 17 of 35

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68+72.09 GOOLIE ROAD
CL. E. SIOUX ROAD
178

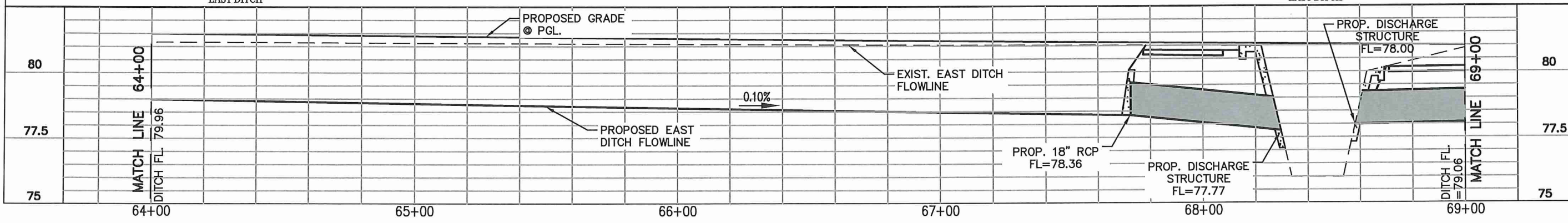
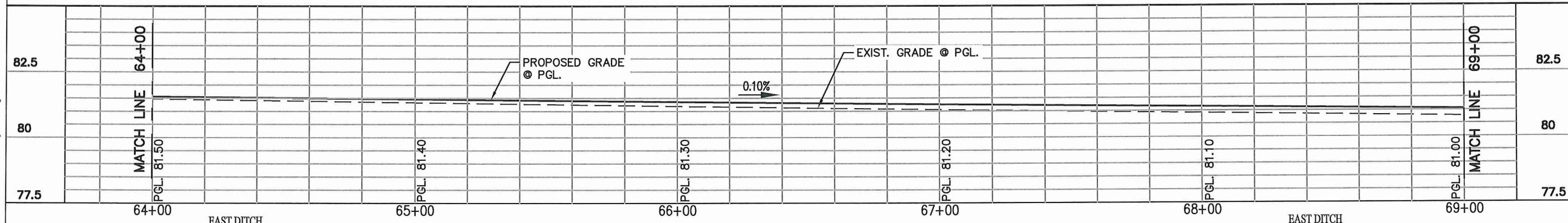
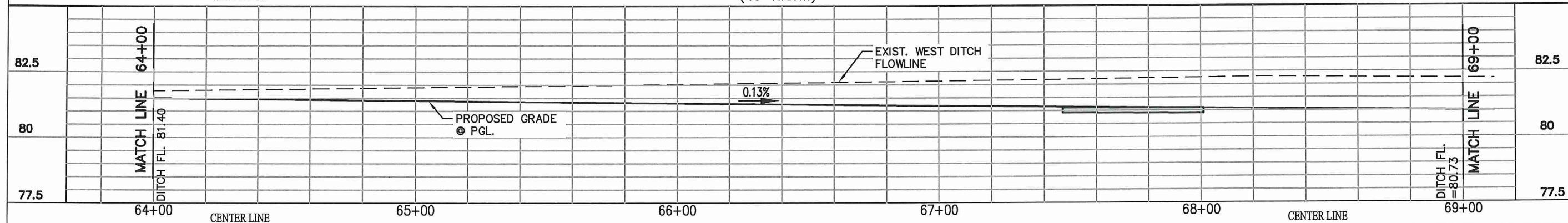
E. SIOUX RD

PROF. 76 S.Y.
OF ASPHALT

NO.	DATE	REVISION	APPROV.
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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 64+00 TO 69+00



Civil Engineering
Environmental Engineering
Planning
Project Management

Enrique Salinas
107703
Professional Engineer

Enrique Salinas, Suite 504
9224 N. Loop West, Suite 504
Tel. 956.687.1543
Fax. 956.687.5363

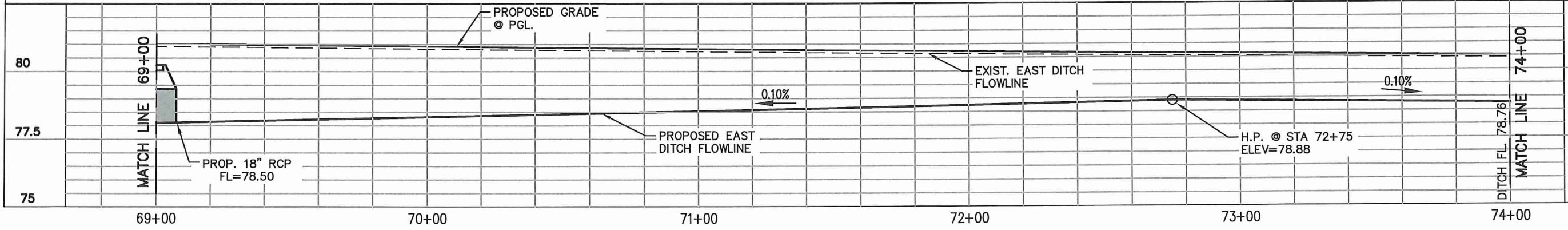
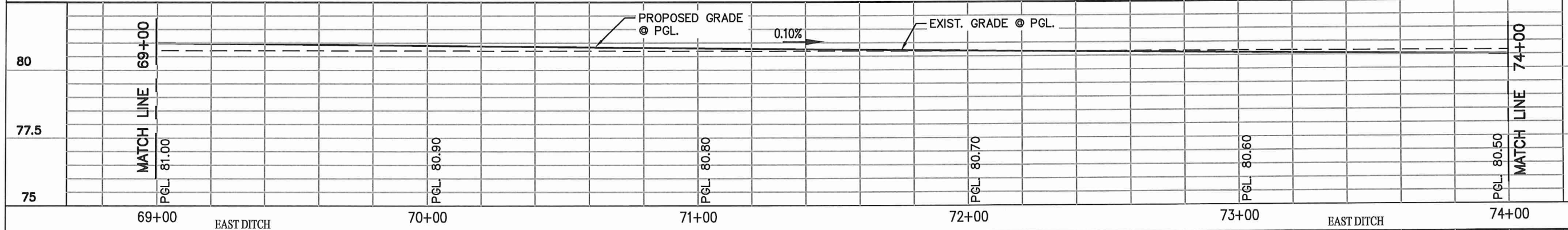
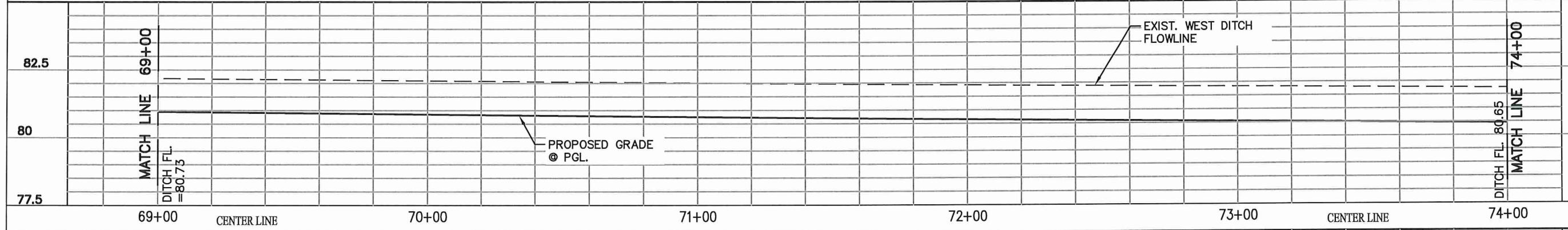
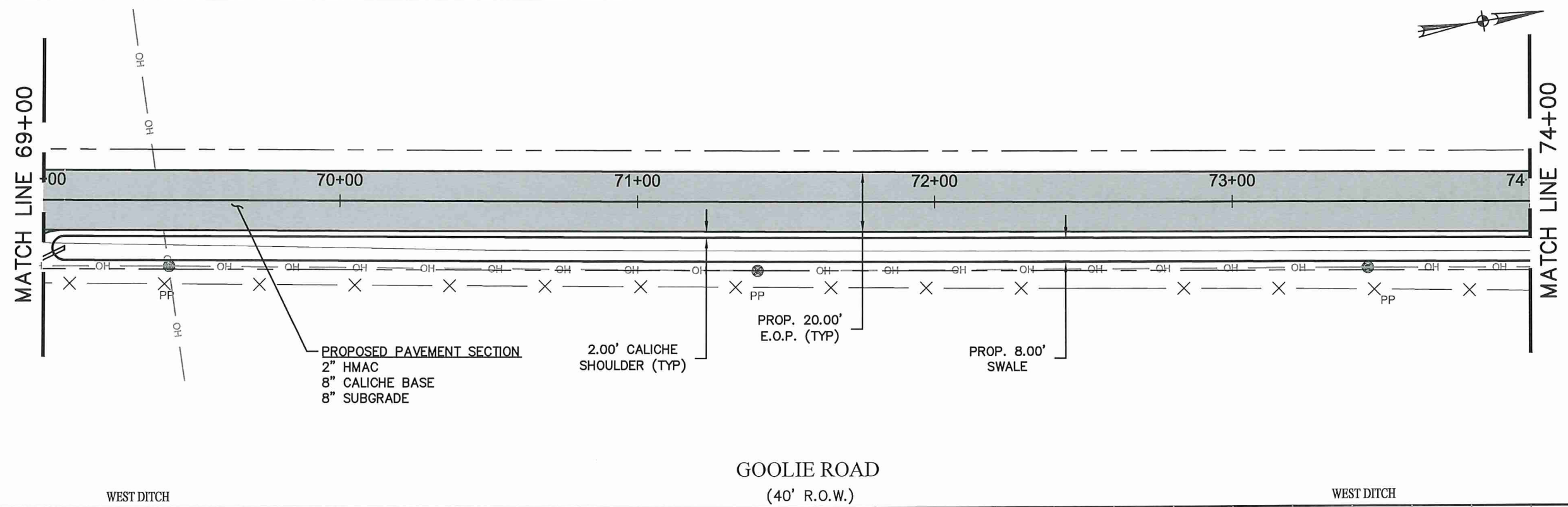
Texas Registered Engineering Firm E-14722

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Scale Horz. 1:40
Vert. 1:5

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Date JUNE, 2016
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HIDALGO COUNTY PRECINT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 69+00 TO 74+00



612 Nolana, Suite 520
Dallas, TX 75204
Tel. 956.987.1500
Fax. 956.667.5953

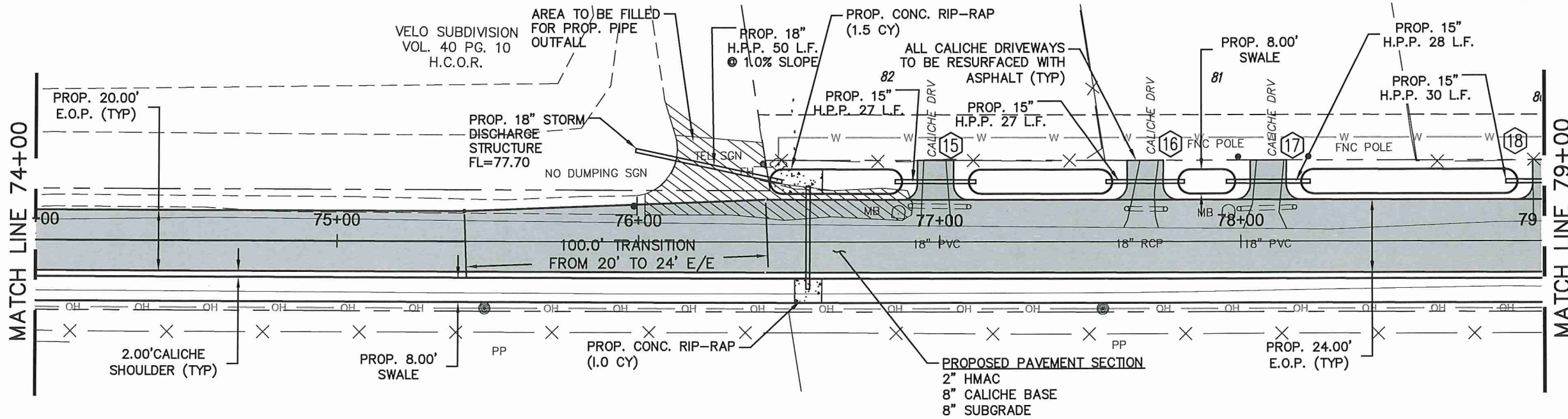
Civil Engineering
Environmental Engineering
Planning
Project Management

Texas Registered Engineering Firm F-11722

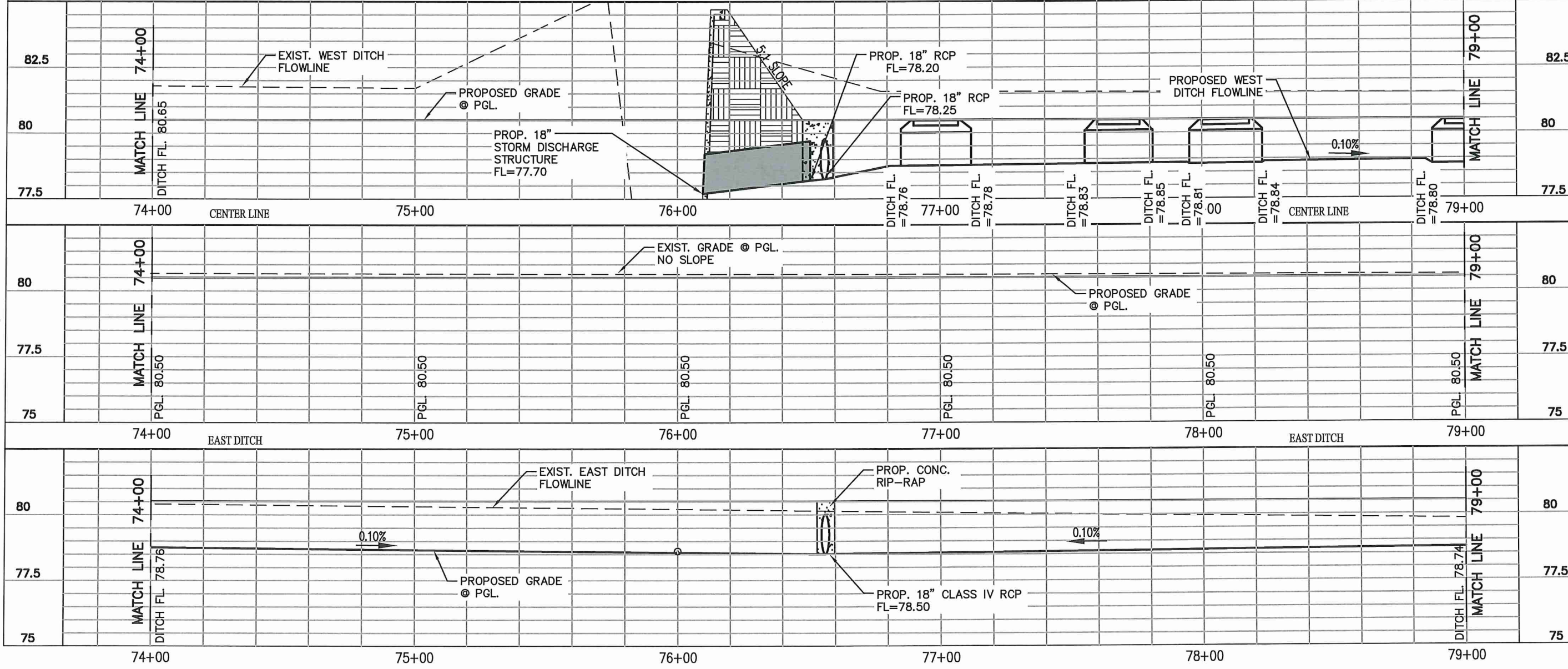
LEFEBVRE
ENGINEERING &
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Drawn L.H.
Scale Horz: 1:40
Vert: 1:5

Checked E.S.
Date JUNE, 2016
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GOOLIE ROAD
(50' R.O.W.)



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HIDALGO COUNTY PRECINCT NO. 1 GOOLIE ROAD PAVING IMPROVEMENTS PLAN AND PROFILE SHEET STA. 74+00 TO 79+00	



612 Notina, Suite 520
 1404 W. Loop West, Suite 520
 Tel. 956.687.1504
 Fax. 956.687.5953

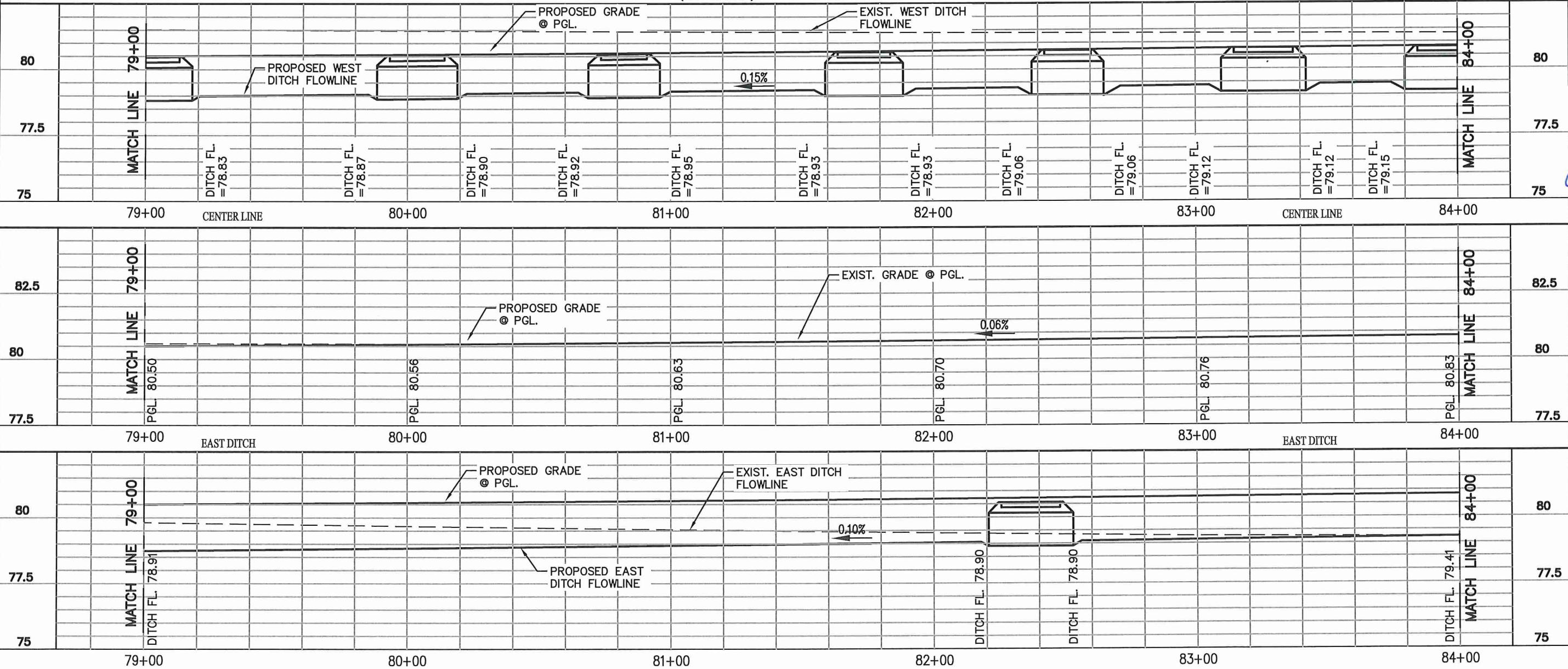
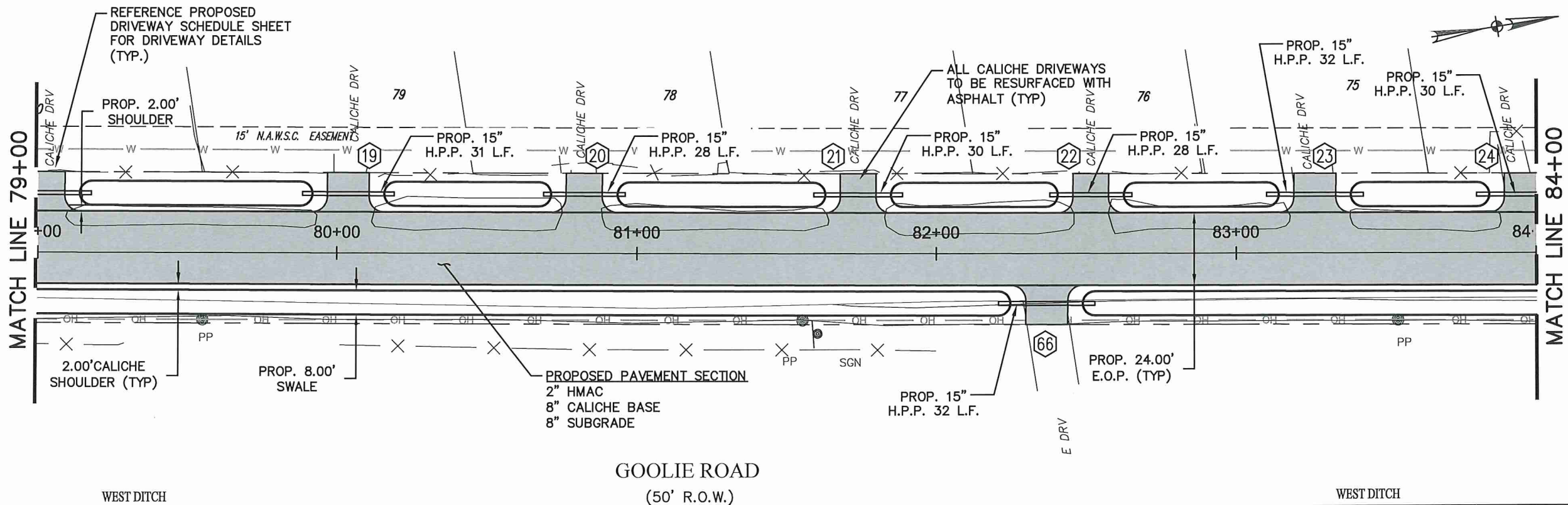
Civil Engineering
 Environmental Engineering
 Planning
 Project Management

Texas Registered Engineering Firm F-1722



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Scale	Horz. 1:40 Vert. 1:5
Checked	E.S.
Date	JUNE, 2016
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NO.	DATE
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HIDALGO COUNTY PRECINT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 79+00 TO 84+00



612 Nolana, Suite 520
McAllen, Texas 78504
Tel: 956.687.5395
Fax: 956.687.5395

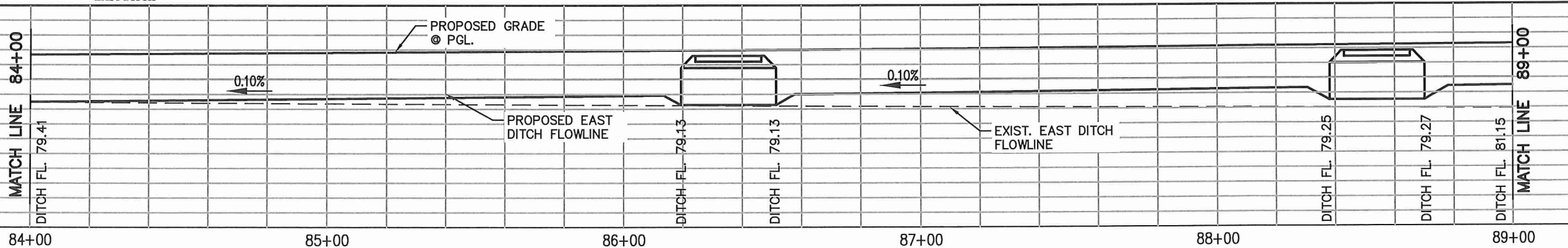
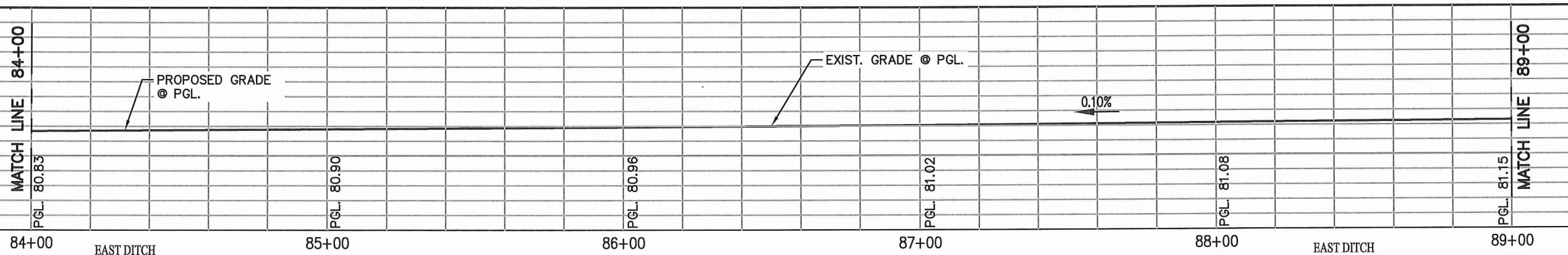
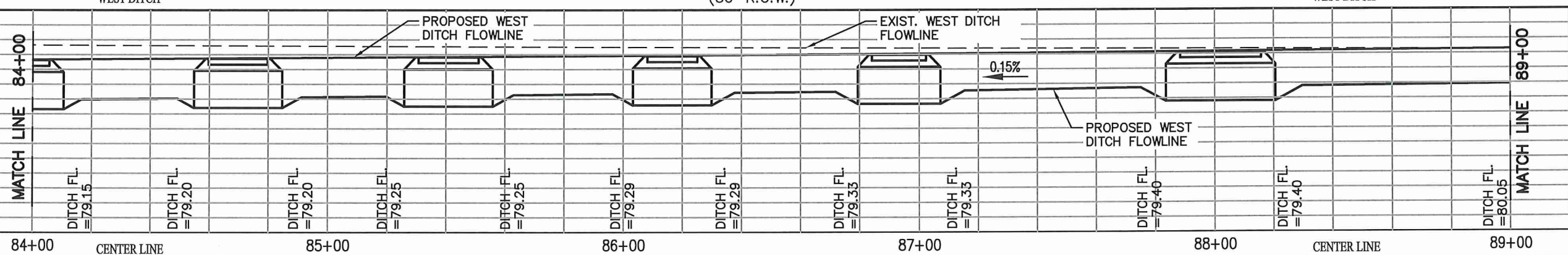
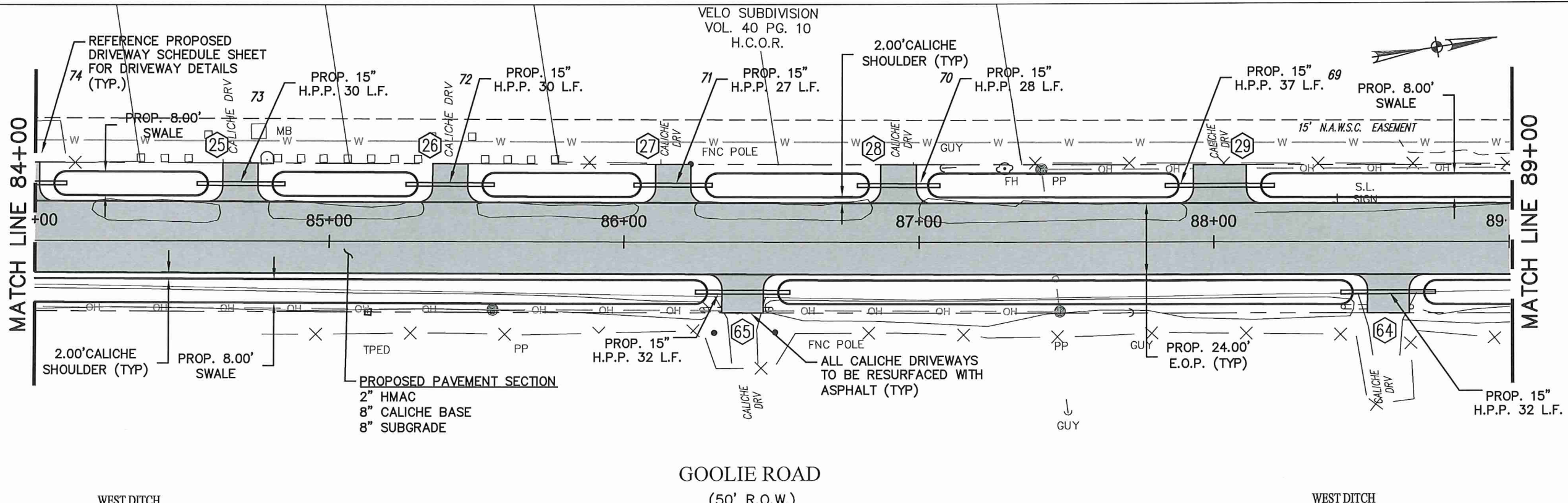
Civil Engineering
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Planning
Project Management

Texas Registered Engineering Firm E-11722



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Date JUNE, 2016
Job No. P-194
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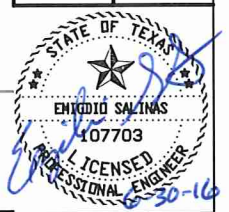
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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 84+00 TO 89+00



Civil Engineering
Environmental Engineering
Planning
Project Management

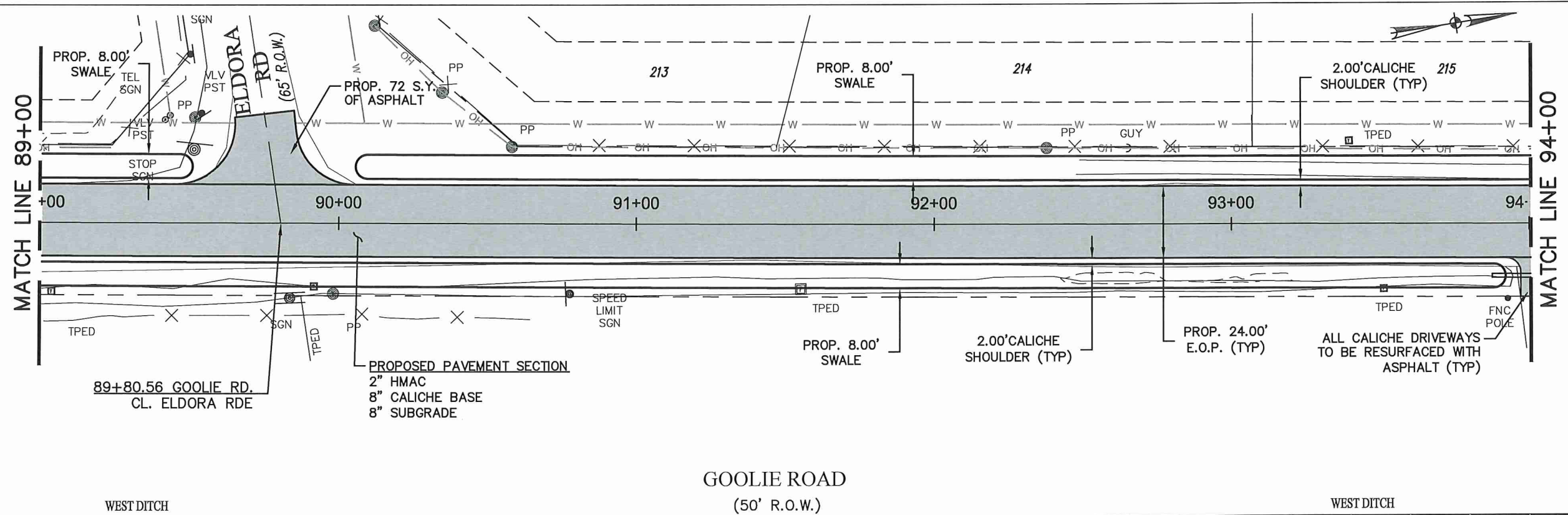
612 Nolana, Suite 650
Dallas, TX 75204
Tel. 956.887.1818
Fax. 956.687.5363

Texas Registered Engineering Firm E-11722

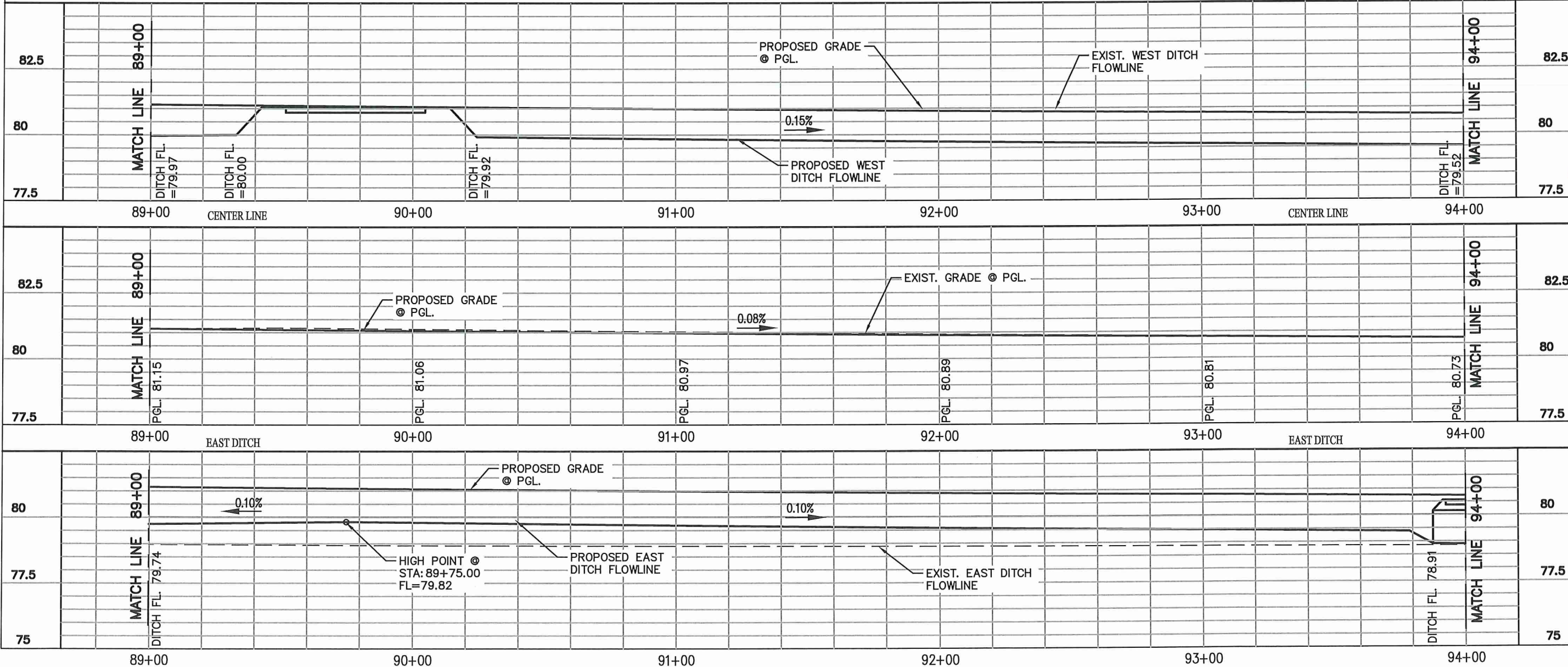
LEFEBVRE
ENGINEERING &
MANAGEMENT CONSULTING, LLC.

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Job No. P-194
Sheet 22 of 35

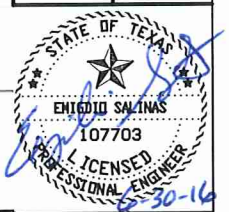
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GOOLIE ROAD
(50' R.O.W.)



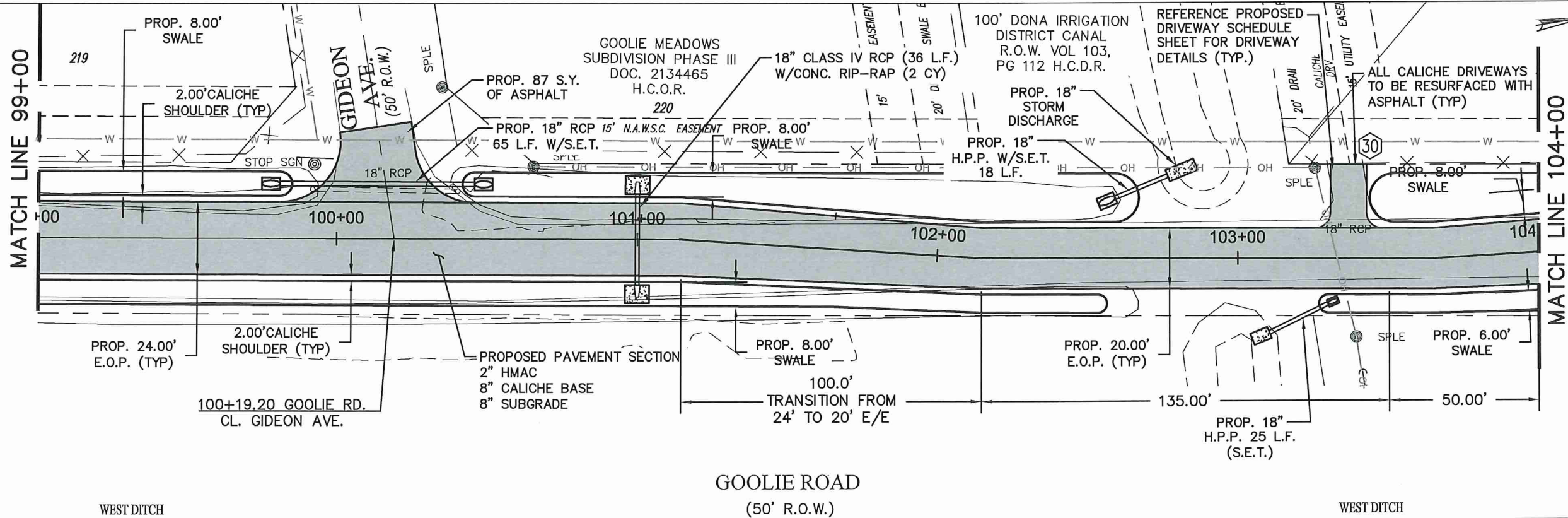
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GOOLIE ROAD				
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PLAN AND PROFILE SHEET				
STA. 89+00 TO 94+00				



Civil Engineering
Environmental Engineering
Planning
Project Management
Texas Registered Engineering Firm F-11722

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ENGINEERING &
MANAGEMENT CONSULTING, LLC.

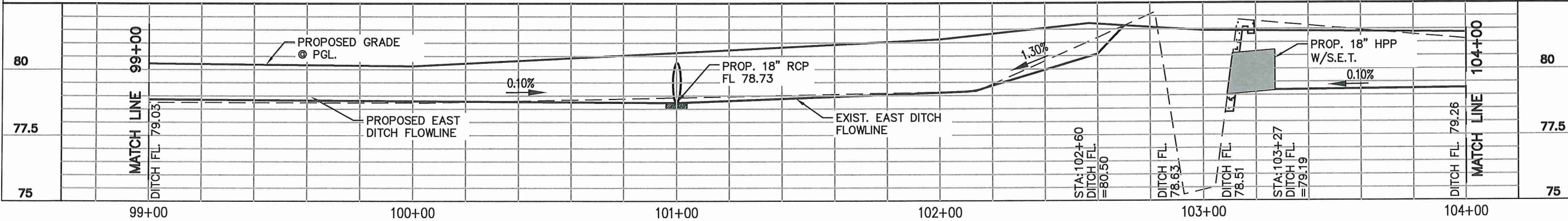
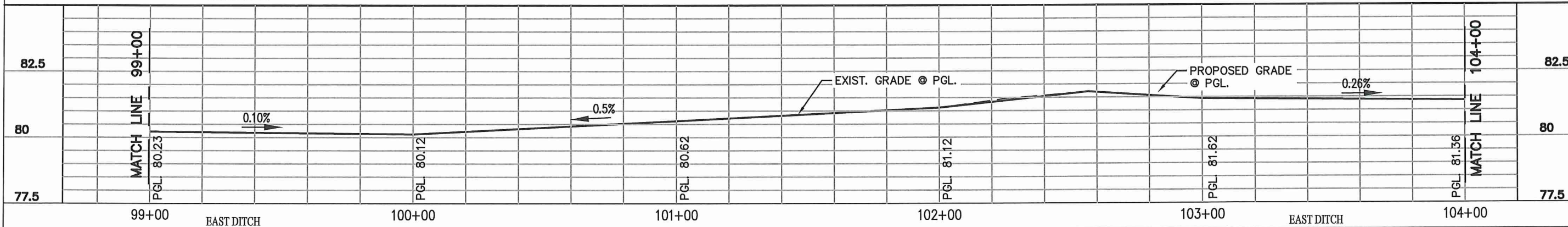
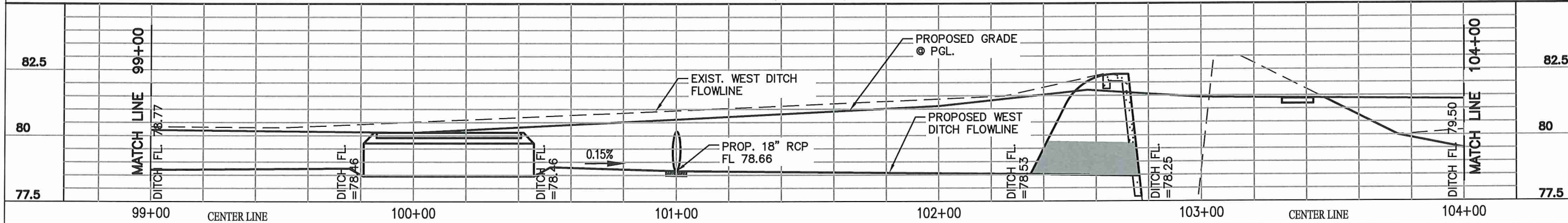
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Date JUNE, 2016
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WEST DITCH

GOOLIE ROAD
(50' R.O.W.)

WEST DITCH



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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 99+00 TO 104+00



672 Nolana, Suite 550
Dallas, TX 75204
Tel: 956.887.1500
Fax: 956.667.5353

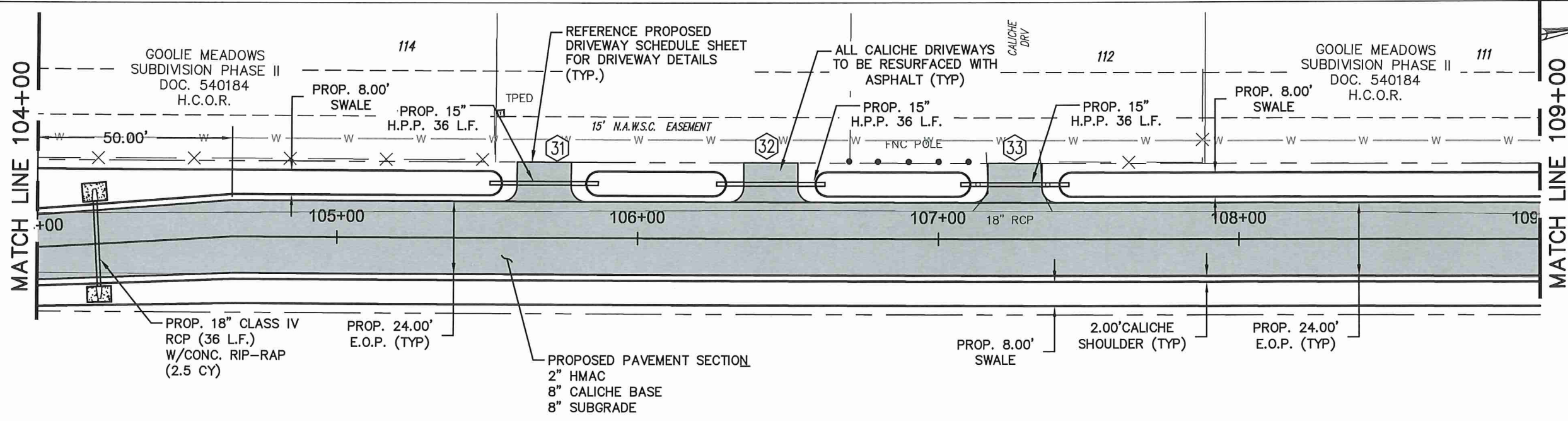
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Project Management

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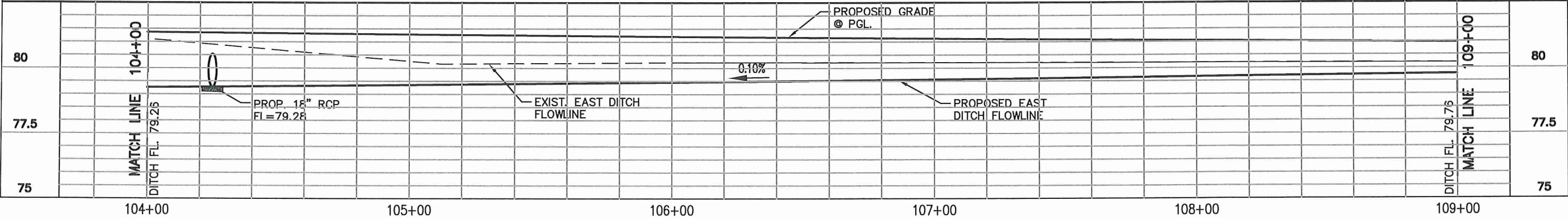
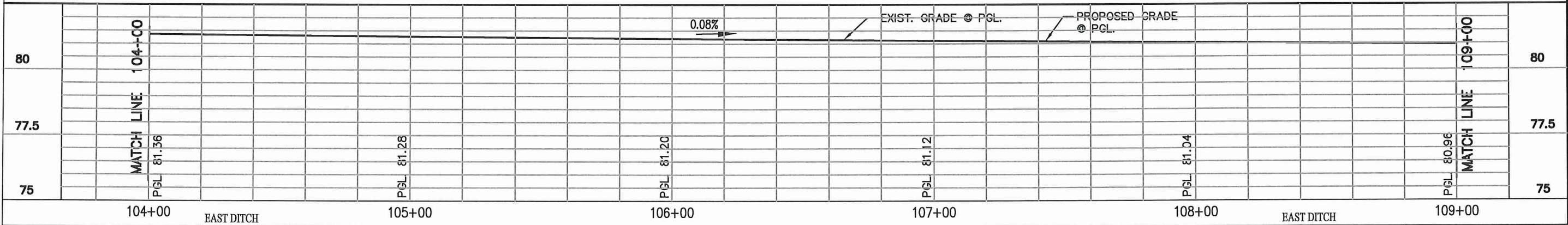
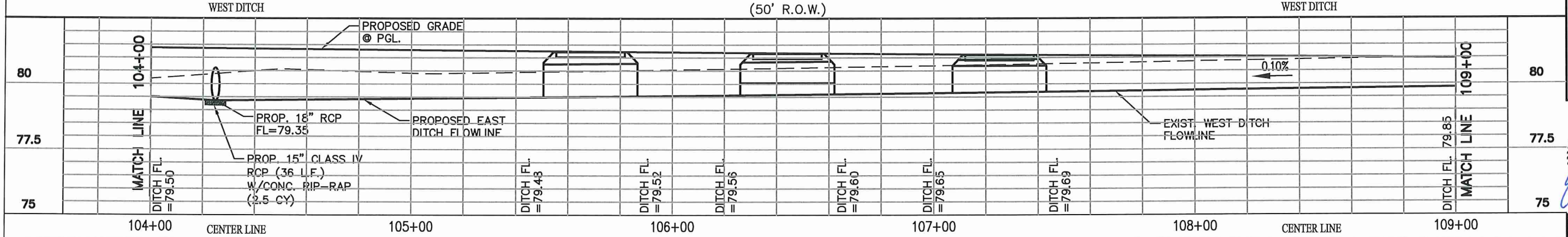
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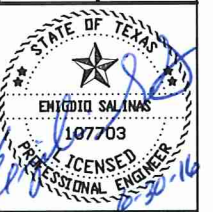
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GOOLIE ROAD
(50' R.O.W.)



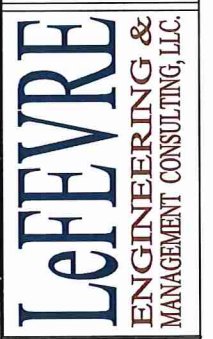
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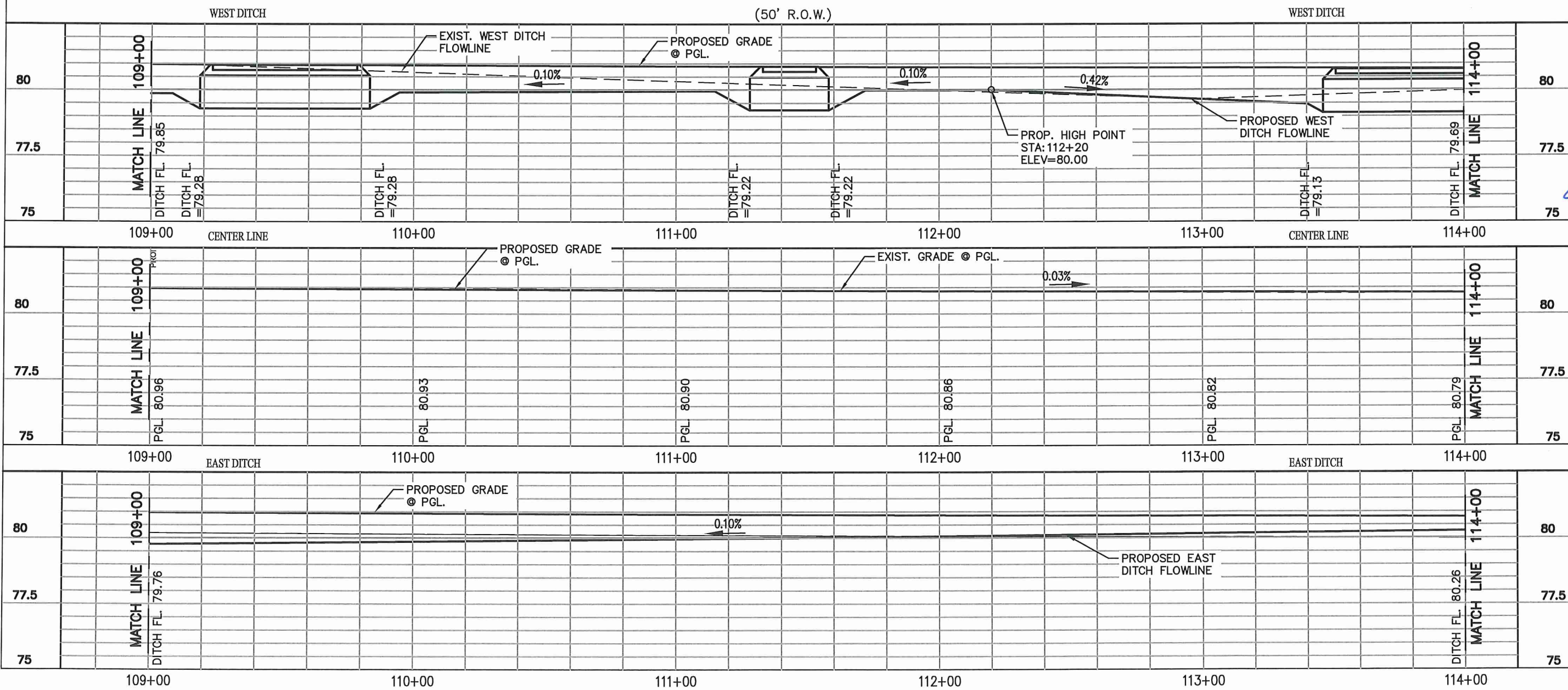
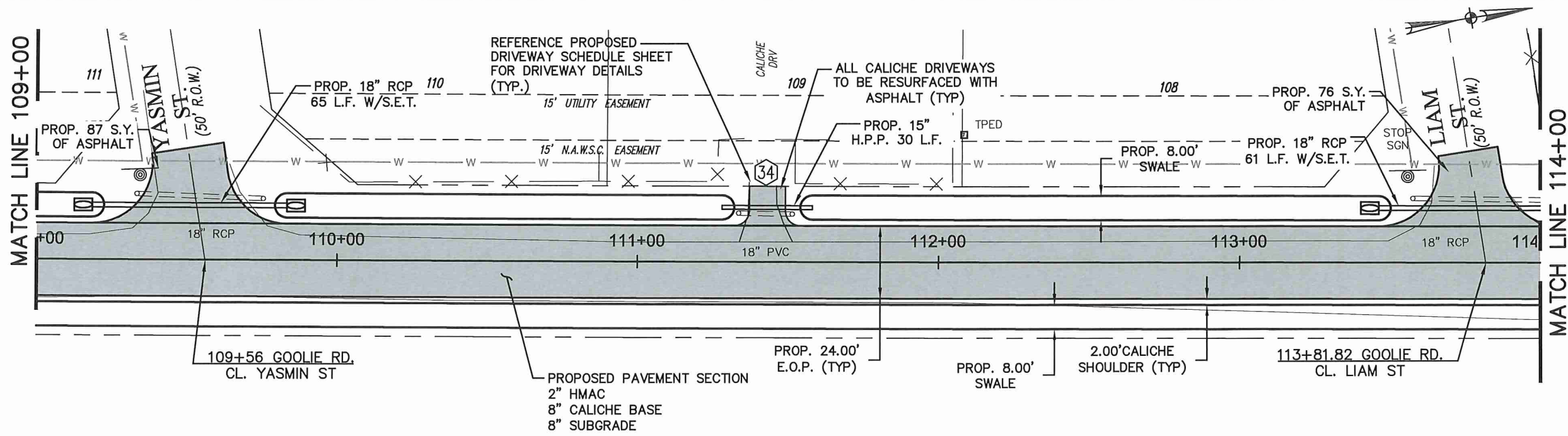
Civil Engineering
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Project Management

672 Nolana, Suite 650
Dallas, TX 75204
Tel. 956.887.1500
Fax. 956.667.5363

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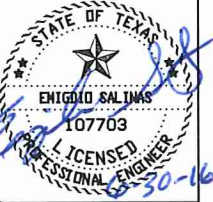
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HIDALGO COUNTY PRECINCT NO. 1
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672 Nolana, Suite 520
Dallas, TX 75244
Tel. 956.887.1544
Fax. 956.687.5953

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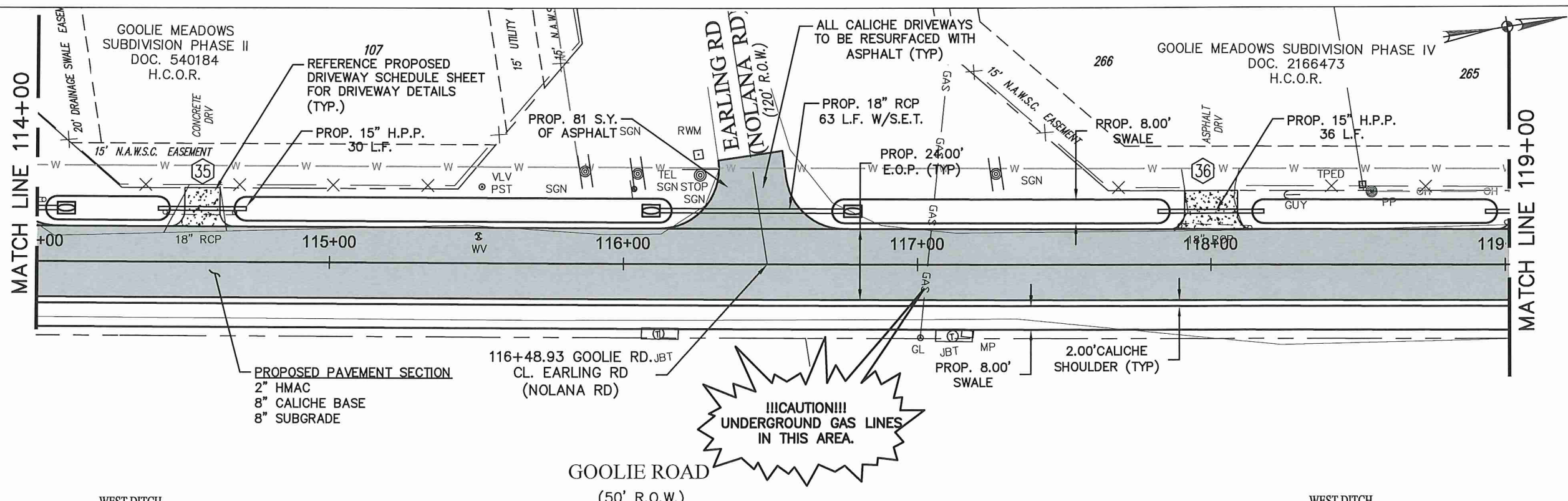
Texas Registered Engineer, Firm F-1722



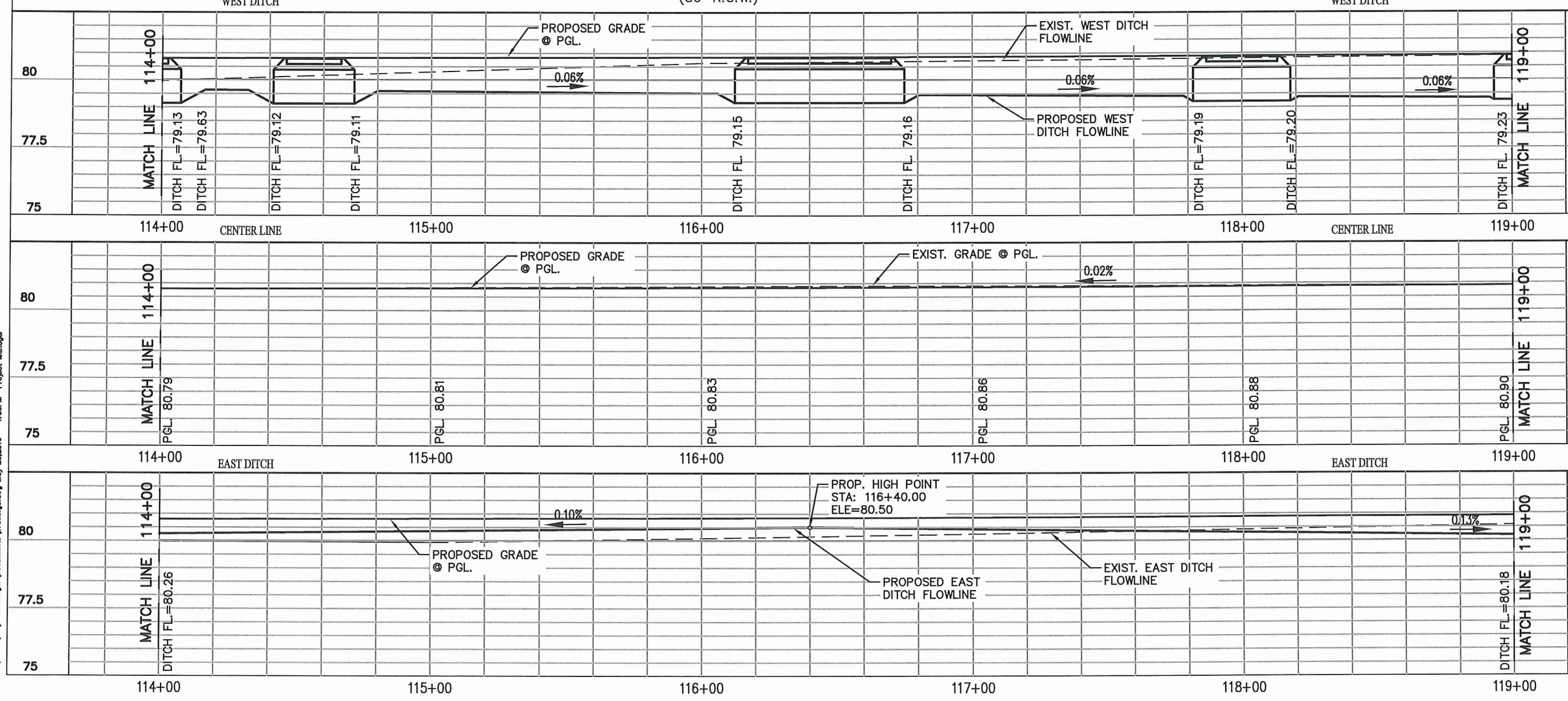
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Date JUNE, 2016
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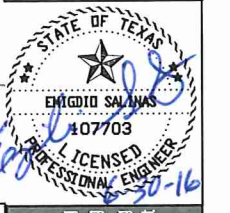
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**!!!CAUTION!!!
UNDERGROUND GAS LINES
IN THIS AREA.**



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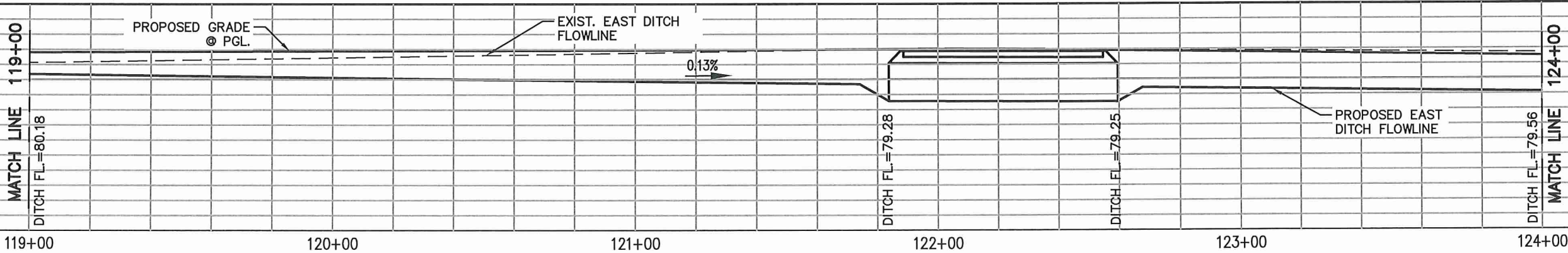
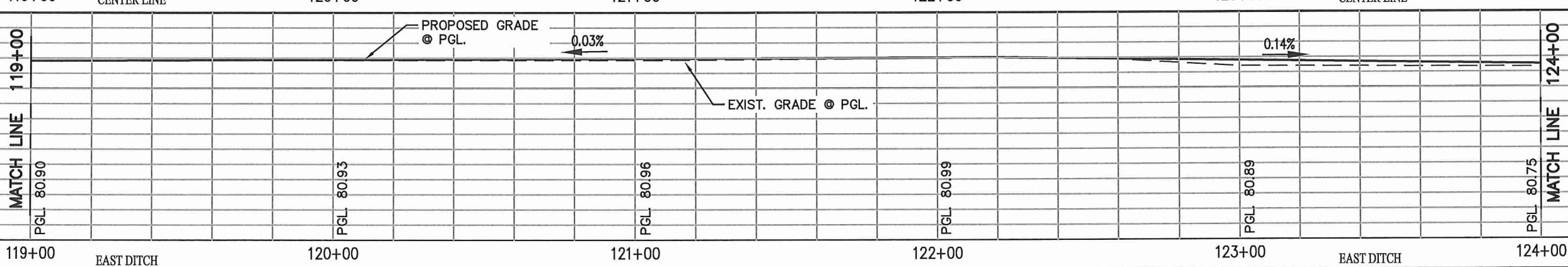
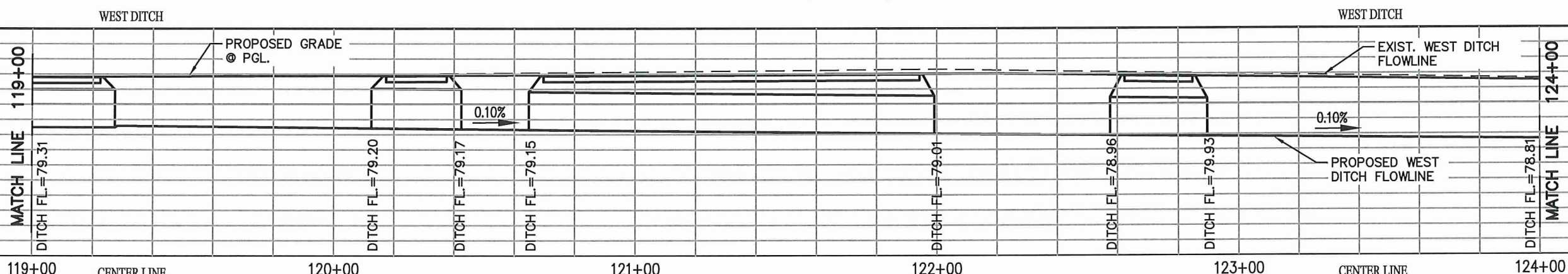
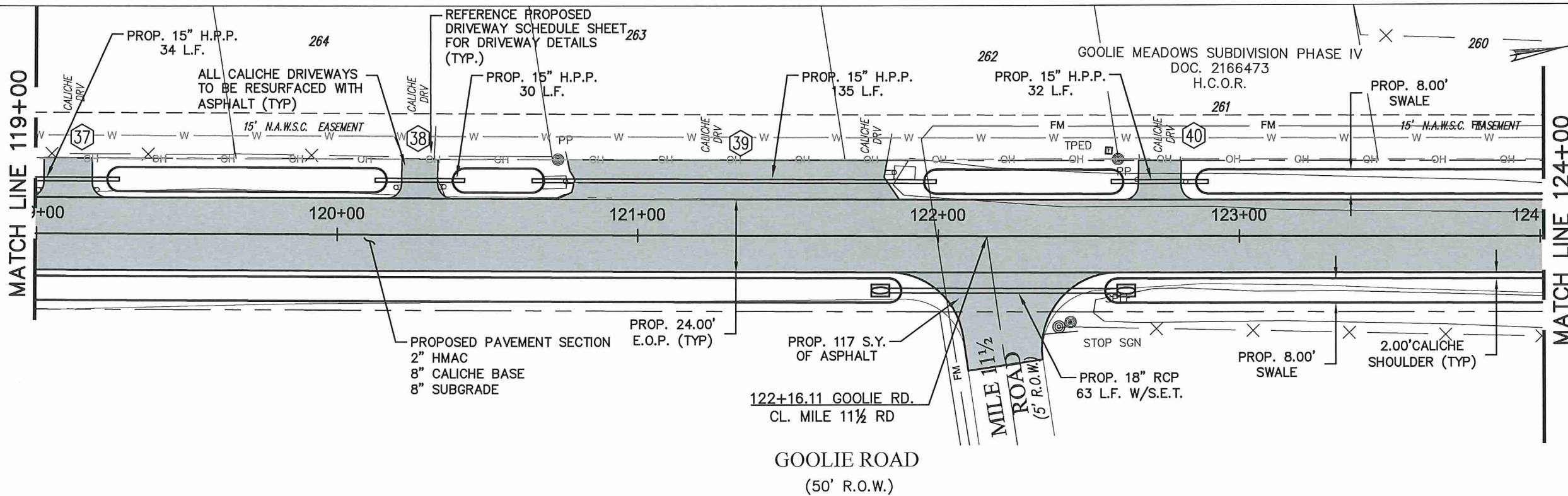
612 Nolana, Suite 520
McAllen, Texas 78504
Tel. 956.687.1500
Fax. 956.687.3355

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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
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PLAN AND PROFILE SHEET
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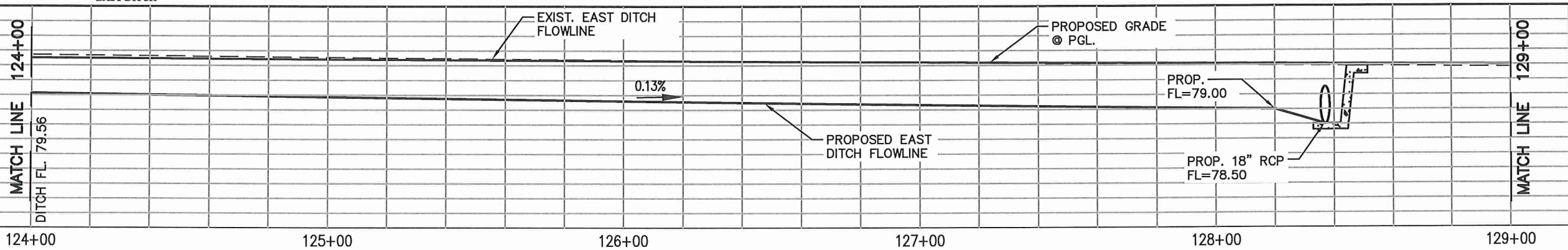
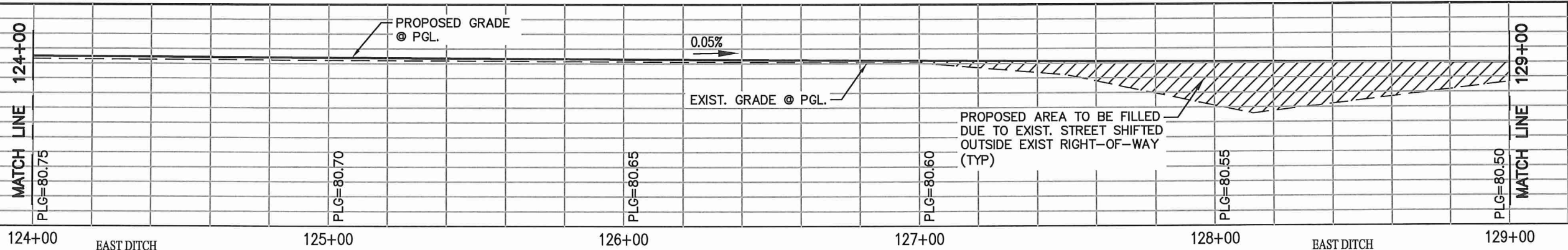
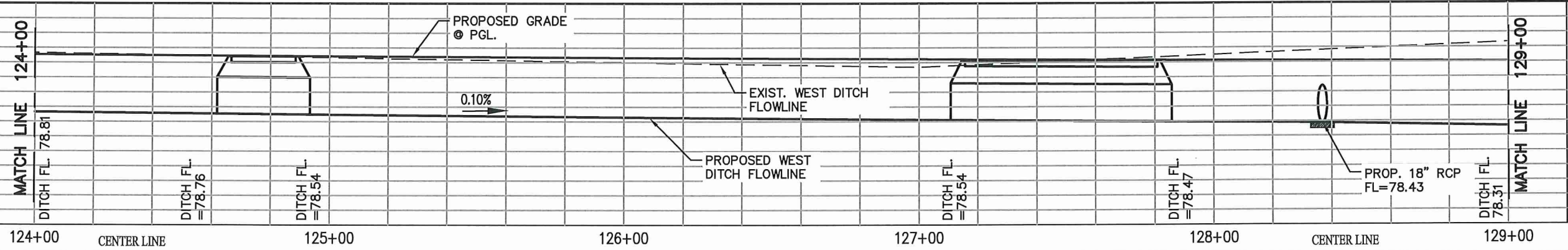
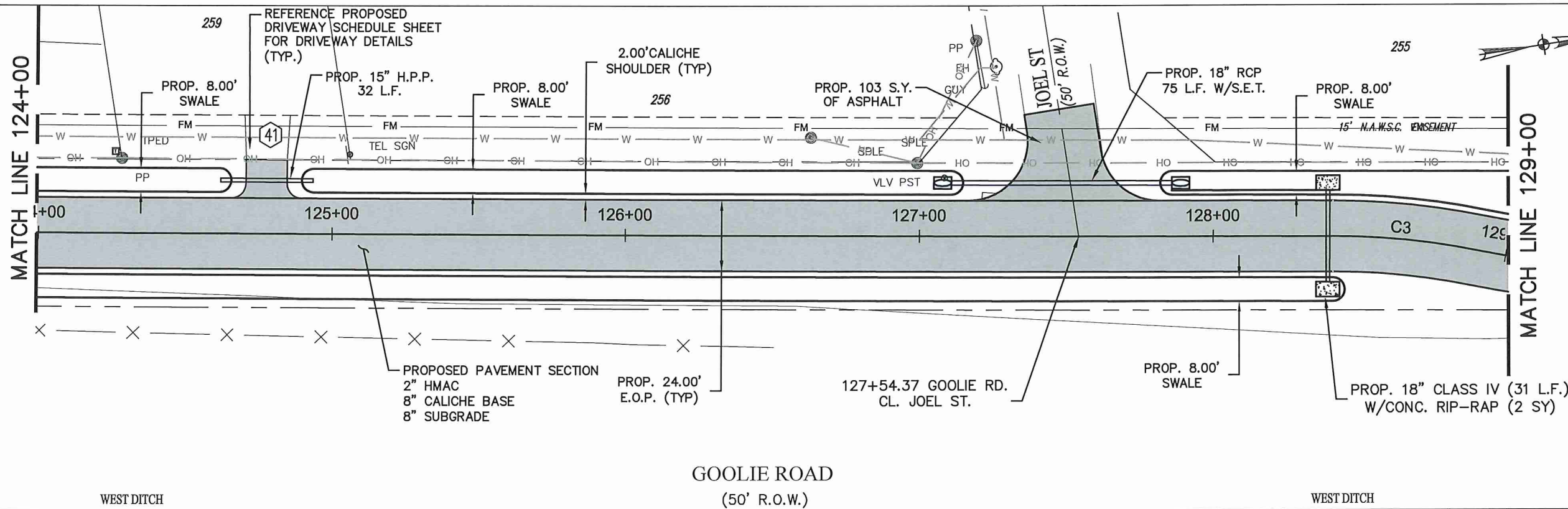
650 Nichols Suite 650
McAllen, Texas 78504
Tel. 956.687.1500
Fax. 956.687.5353

Civil Engineering
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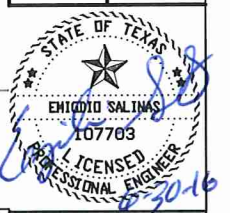
Texas Registered Engineering Firm F-1722

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612 N. Main, Suite 520
McAllen, Texas 78504
Tel. 956.687.1543
Fax. 956.687.5365

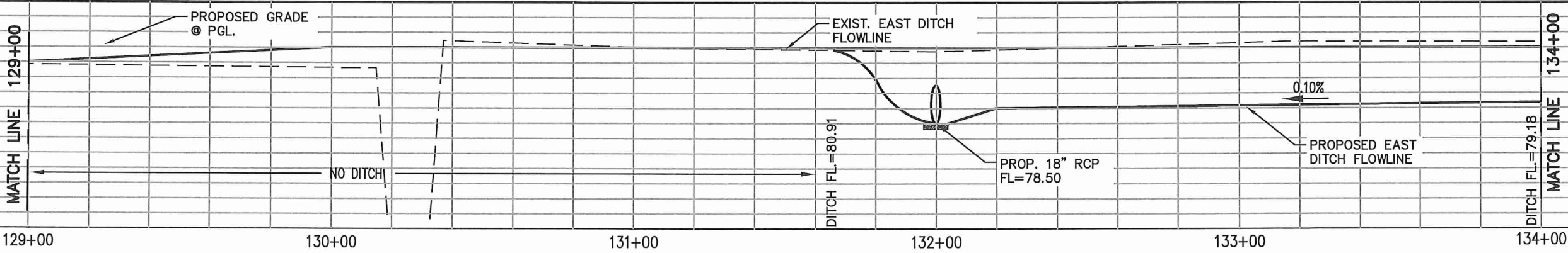
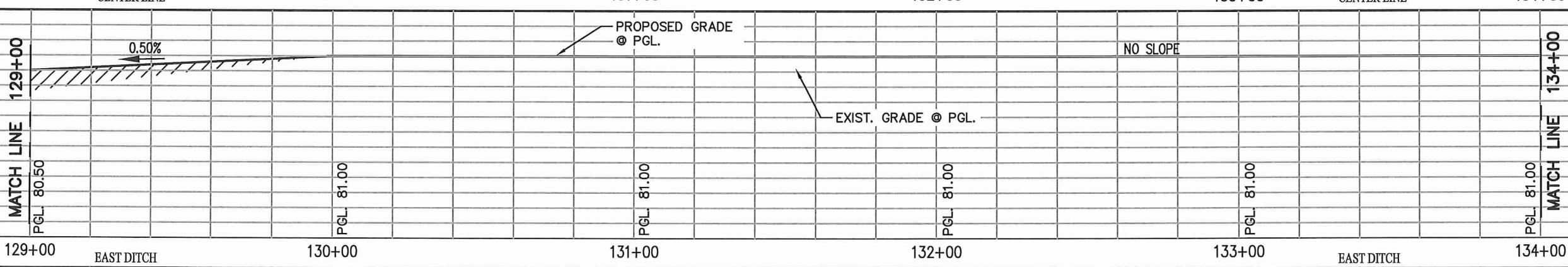
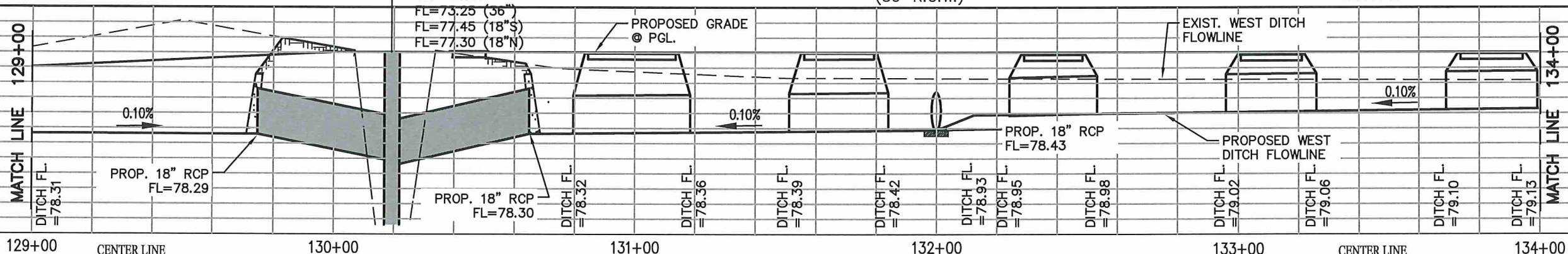
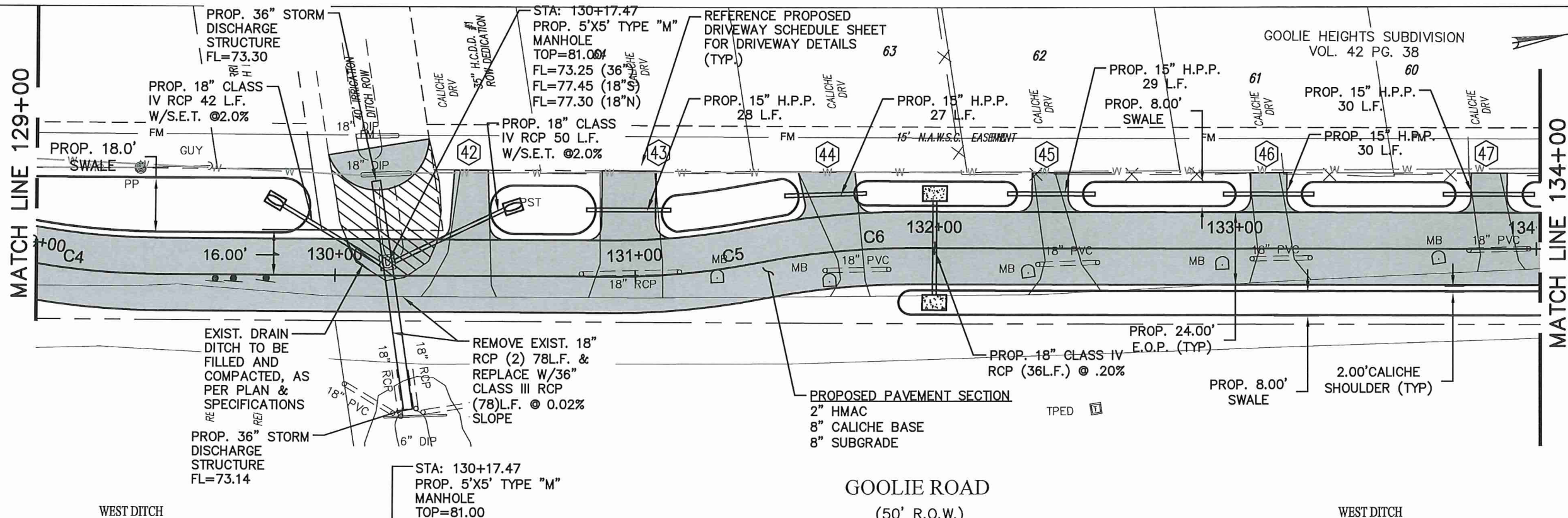
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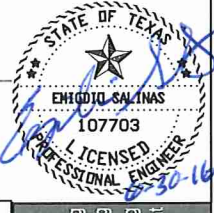
LEFEBVRE
ENGINEERING &
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HIDALGO COUNTY PRECINCT NO. 1	
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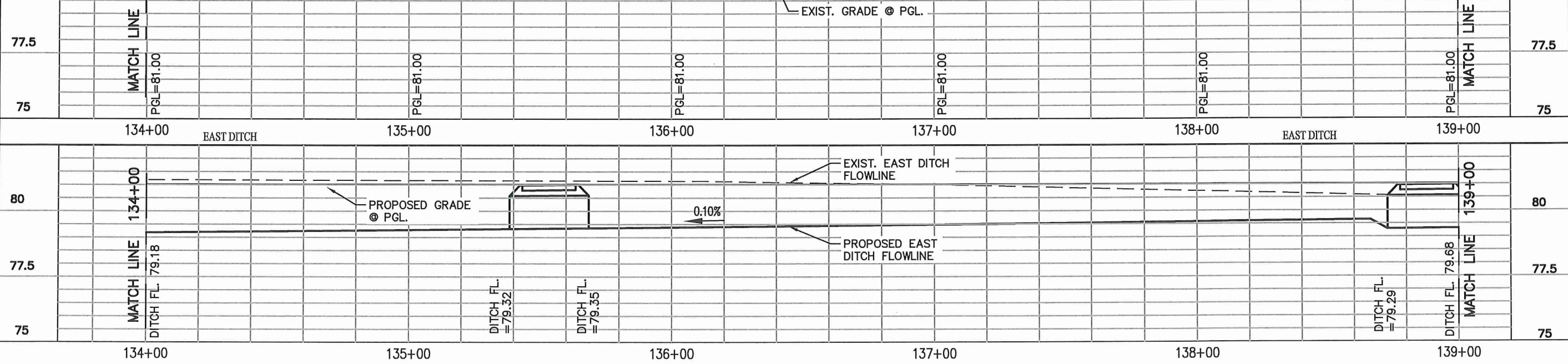
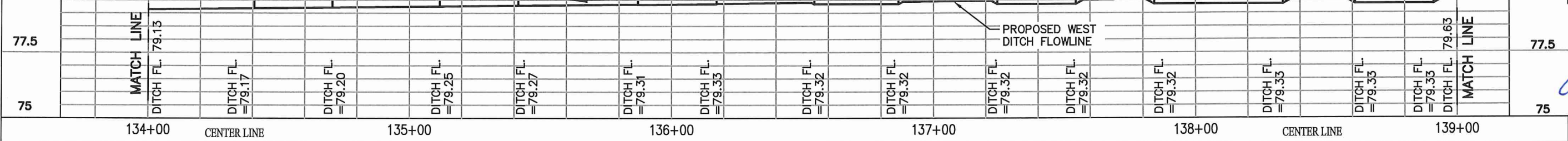
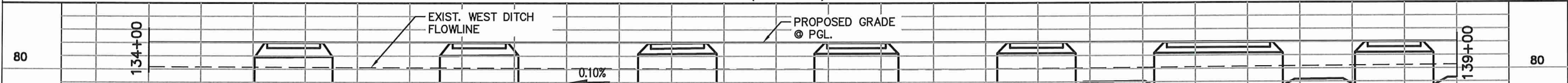
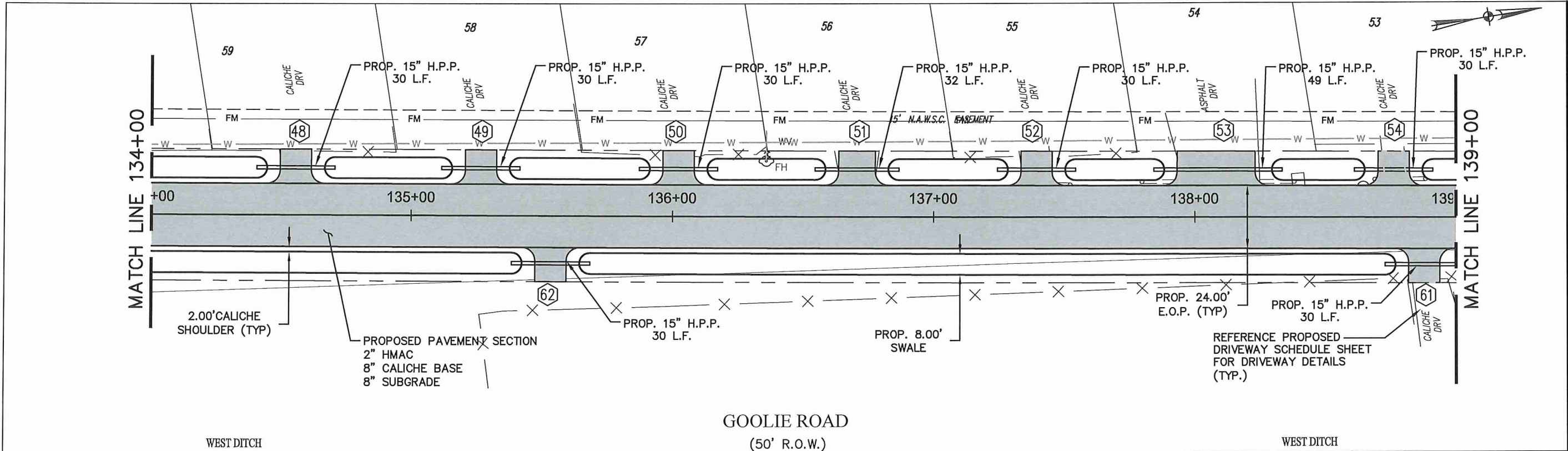


Civil Engineering
 Environmental Engineering
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 8120 Nebraska, Suite 602
 McAllen, Texas 78504
 Tel. 956.687.1500
 Fax. 956.687.5363



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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS

PLAN AND PROFILE SHEET
STA. 134+00 TO 139+00

STATE OF TEXAS
ENRIQUE SALINAS
167703
LICENSED PROFESSIONAL ENGINEER
5-30-16

Civil Engineering
Environmental Engineering
Planning
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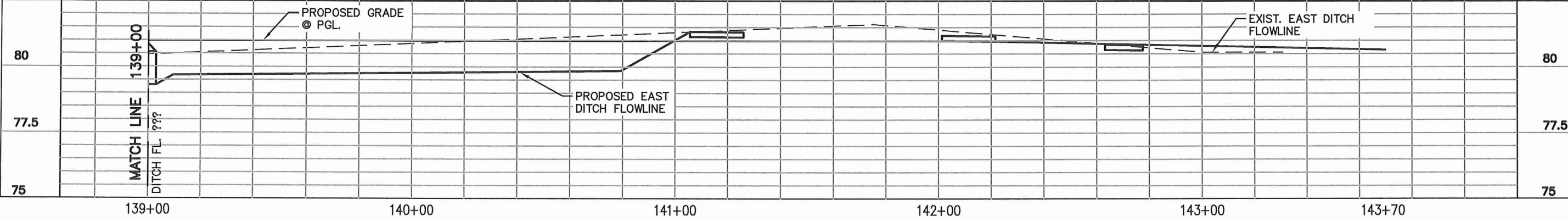
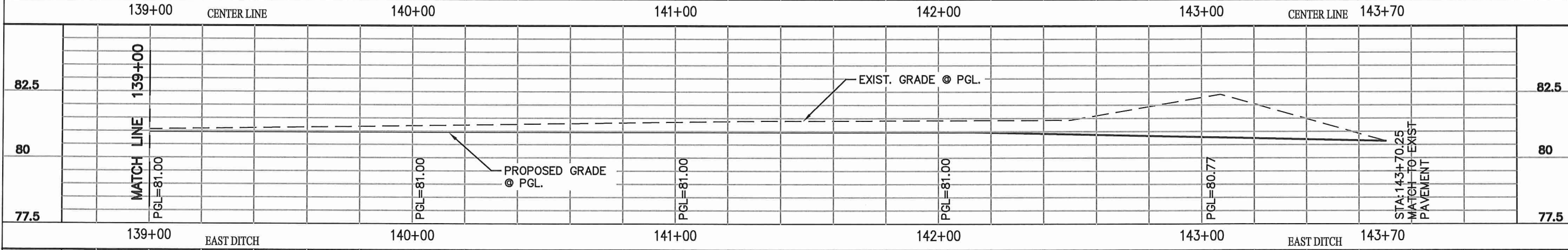
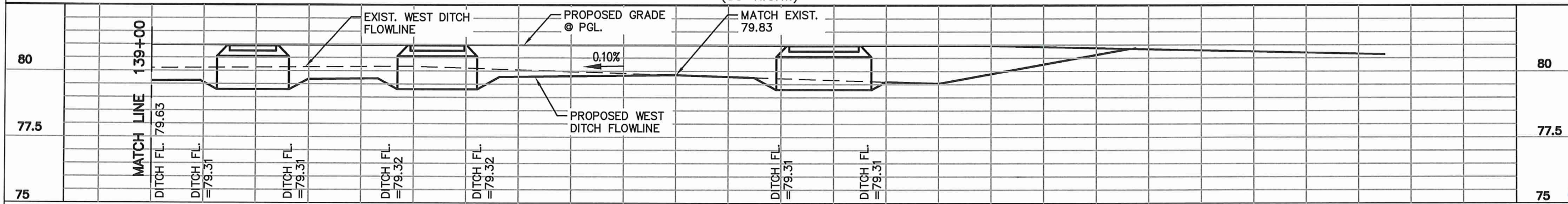
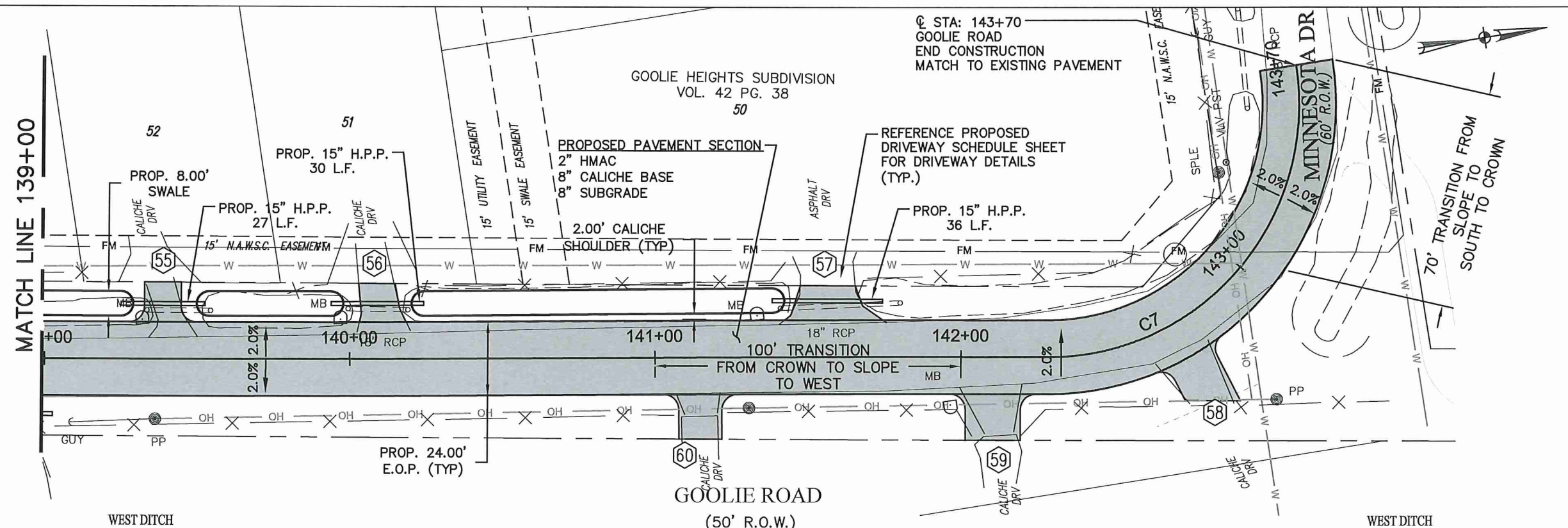
160 Main Street, Suite 201
McAllen, Texas 78504
Tel. 956.687.1540
Fax. 956.687.5363

Texas Registered Engineering Firm F-11722

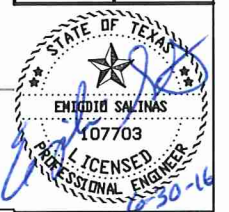
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HIDALGO COUNTY PRECINCT NO. 1	
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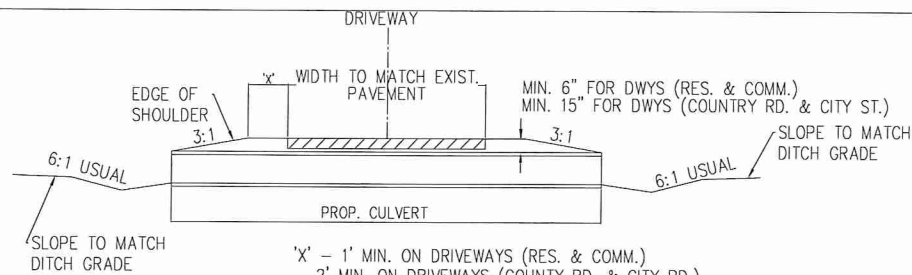


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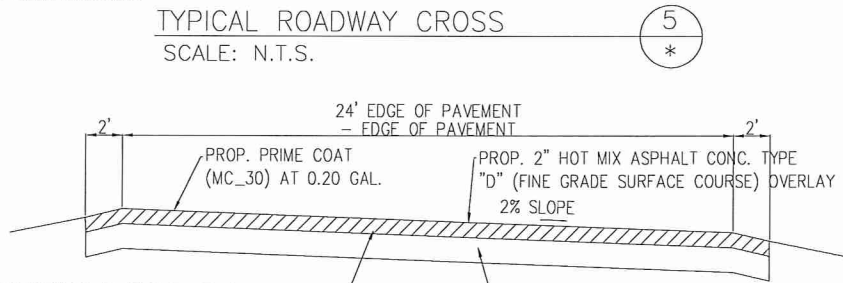
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Date JUNE, 2016
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TYPICAL DRIVEWAY PROFILE DETAIL 1
SCALE: N.T.S.

8" FLEXIBLE BASE (SALVAGED USE OF FLEXIBLE PAVEMENT AND SALVAGED CALICHE WILL REQUIRE LIME TREATMENT WHERE AS THE ADDITIONAL CALICHE NEEDED WILL NOT). THE SALVAGED MATERIAL SHALL BE TREATED WITH THE ADDITION OF 3% LIME BY DRY WEIGHT OF SAVLAGED MATERIAL. THE SALVAGED MATERIAL SHALL BE COMPACTED TO A MINIMUM 98 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD MOISTURE DENSITY RELATION (ASTM D698) AT MOISTURE CONTENTS RANGING BETWEEN (-3) AND (+3) PERCENTAGE POINTS FROM OPTIMUM MOISTURE.



TYPICAL ROADWAY CROSS 5
SCALE: N.T.S.

NOTE:
PAVEMENT SECTION RECOMMENDATIONS AS PER:
MEG ENGINEERS GEOTECH REPORT NO.
MEG PROJECT NO. XX-XX-XXXX

NOTES:

ALL ENTRANCES CONSTRUCTED ON THIS PROJECT ARE SUBJECT TO CONCURRENCE WITH EXISTING GOVERNING REGULATIONS AS SET OUT BY THE STATE HIGHWAY COMMISSION.

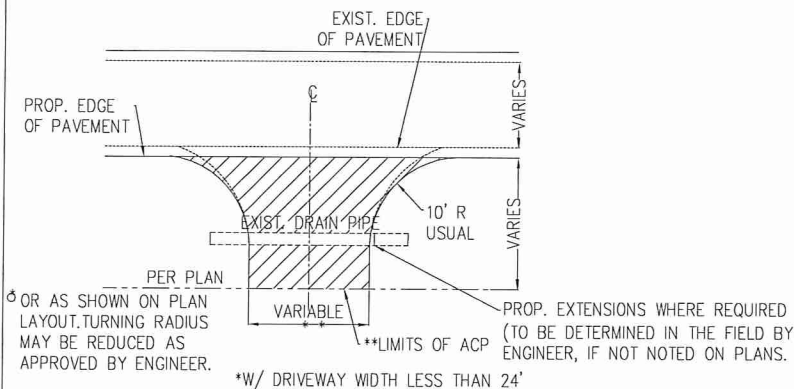
ENTRANCE'S BASE AND SURFACING MAY BE EXTENDED BEYOND R.O.W. LINE AS REQUIRED TO MEET EXISTING GRADE IN THE SATISFACTORY MANNER OF WHICH NO STEEPER THAN 12:1 SLOPE WILL BE CONSTRUCTED.

ALL FLEXIBLE BASE USED FOR PRIVATE DRIVES & COMMERCIAL DRIVES WILL NOT REQUIRE LIME TREATMENT.

EXACT LOCATIONS, DIMENSIONS, AND TYPE TO BE ESTABLISHED DURING CONSTRUCTION BY THE ENGINEER.

PROP. WIDTH OF DRIVEWAYS TO MATCH EXISTING WIDTH AT R.O.W. LINE.

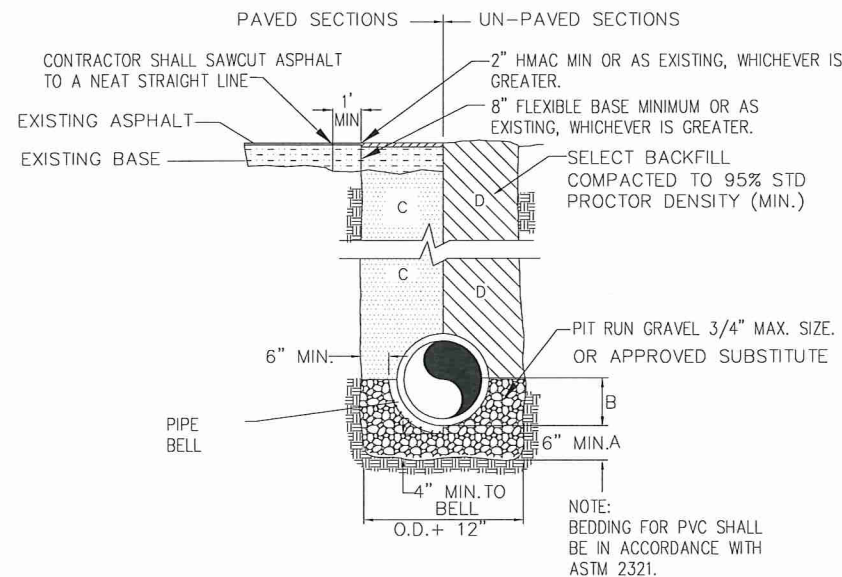
SIDE DRAINS TO BE INSTALLED WITH A MINIMUM OF 6" COVER BY PROPOSED RESIDENTIAL & COMMERCIAL MATERIAL OR 15" COVER OF PROPOSED COUNTY RD. & CITY STREET ROADWAY MATERIAL.



PLAN FOR PRIVATE DRIVEWAYS 2
SCALE: N.T.S.

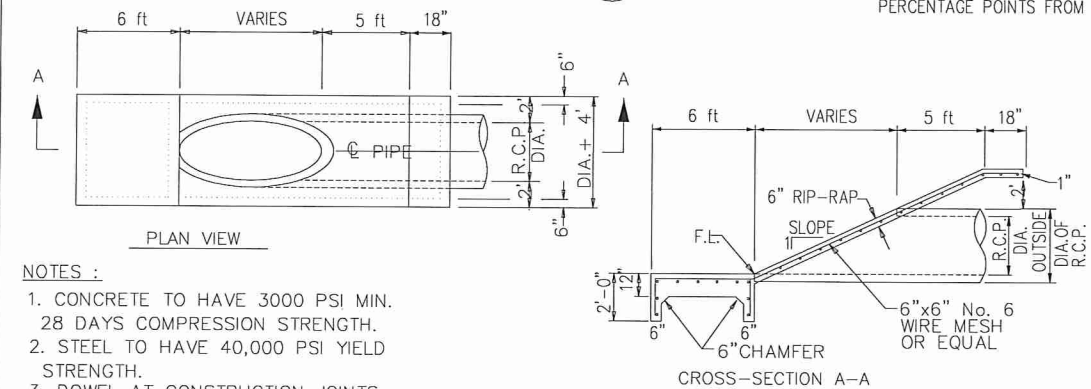
8" FLEXIBLE BASE (SALVAGED USE OF FLEXIBLE PAVEMENT AND SALVAGED CALICHE WILL REQUIRE LIME TREATMENT WHERE AS THE ADDITIONAL CALICHE NEEDED WILL NOT). THE SALVAGED MATERIAL SHALL BE TREATED WITH THE ADDITION OF 3% LIME BY DRY WEIGHT OF SAVLAGED MATERIAL. THE SALVAGED MATERIAL SHALL BE COMPACTED TO A MINIMUM 98 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD MOISTURE DENSITY RELATION (ASTM D698) AT MOISTURE CONTENTS RANGING BETWEEN (-3) AND (+3) PERCENTAGE POINTS FROM OPTIMUM MOISTURE.

SUPER ELEVATED ROADWAY CROSS SECTION C-C 6
SCALE: N.T.S.



- A. GRAVEL BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE (MIN. THICKNESS=6") PIT RUN GRAVEL 3/4" MAX. SIZE.
- B. GRAVEL PLACED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO THE SPRING LINE. PIT RUN GRAVEL 3/4" MAX. SIZE OR APPROVED SUBSTITUTE.
- C. CITY STREETS PARKING AREA, DRIVEWAYS: SELECT EXCAVATED BACK FILL COMPACTED 95% STD, 8" LIFTS, MECHANICAL COMPACTION.
- D. STATE MAINTAINED ROADWAYS: COMPACTED SAND/CEMENT STABILIZED BACK FILL 7% PORTLAND CEMENT COMPACTED AS PER ASTM D-4253 AND ASTM D-698.
- E. SELECT EARTH BACKFILL COMPACTED TO 95% STD. PROCTOR DENSITY (12" LIFTS, MECHANICAL COMPACTION) FOUNDATION PREPARATION (WELLPOINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE. BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO 95% STD. PROCTOR DENSITY (USE RELATIVE DENSITY TEST PER ASTM D-4253 & ASTM D-698). THE THICKNESS OF EACH LOOSE LAYER SHALL NOT EXCEED 8". STRUCTURE BACK FILL MATERIAL SHALL BE SAND, EXCAVATED MATERIAL, OR OTHER APPROVED SUBSTITUTE.

TYPICAL STORM SEWER PIPE BEDDING DETAIL 8
SCALE: N.T.S.



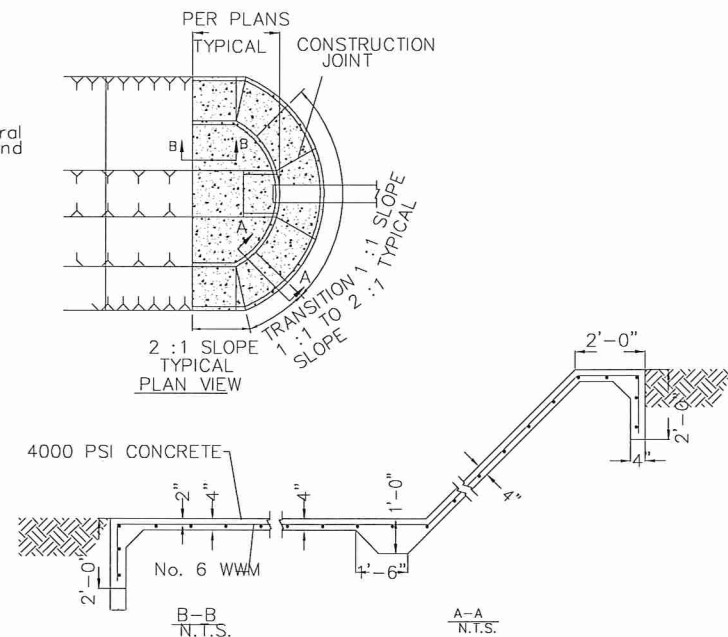
SLOPED END SECTION 3
SCALE: N.T.S.

Notes:

- 1. Concrete to have 3000 PSI Min. 28 days compression strength.
- 2. All reinforced steel shall be Grade 60.

"W" = O.D. of proposed pipe + 8ft (4ft on each side)
Top View

TYPICAL DISCHARGE STRUCTURE DETAIL 4
SCALE: N.T.S.



TYPICAL CONCRETE RIP-RAP SLOPE PROTECTION DETAIL 7
SCALE: N.T.S.

NO.	DATE	REVISION	APPROV.
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2			
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HIDALGO COUNTY PRECINCT NO. 1
GOOLIE ROAD
PAVING IMPROVEMENTS
DRIVEWAY AND ROAD DETAILS

612 Nolana, Suite 620
McAllen, Texas 78504
Tel. 361.687.5583
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Civil Engineering
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Planning
Project Management

STATE OF TEXAS
EMIGDIO SALINAS
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30-16

Texas Registered Engineering Firm F-41722

LEFEVRE
ENGINEERING &
MANAGEMENT CONSULTING, L.L.C.

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Scale	Horz. 1:40 Vert. 1:5
Checked	E.S.
Date	JUNE, 2016
Job No.	P-194
Sheet	34 of 35

GOOLIE ROAD DRIVEWAY INDEX (WEST SIDE)									
ID	STA.	WIDTH (LF)	LENGTH (LF)	MATERIAL	AREA (SY)	CULVERT (LF)	PIPE DIAMTER (INCHES)	PIPE MATERIAL	
1	10+44.55	12	13	2" H.M.A.C.	19.0	N/A	N/A	N/A	
2	11+99.06	14	13	2" H.M.A.C.	21.0	32	15	H.P.P.	
3	12+47.37	12	13	2" H.M.A.C.	19.0	61	15	H.P.P.	
4	12+79.95	12	13	6" CONC.	19.0	0	15	H.P.P.	
5	14+23.08	15	13	2" H.M.A.C.	23.0	33	15	H.P.P.	
6	17+69.68	15	13	2" H.M.A.C.	24.0	35	15	H.P.P.	
7	20+18.27	16	13	2" H.M.A.C.	31.0	46	15	H.P.P.	
8	32+41.72	12	13	2" H.M.A.C.	19.0	28	15	H.P.P.	
9	33+40.06	17	13	2" H.M.A.C.	32.0	45	15	H.P.P.	
10	41+81.33	12	13	2" H.M.A.C.	19.0	N/A	N/A	N/A	
11	42+70.79	12	15	2" H.M.A.C.	21.0	N/A	N/A	N/A	
12	53+62.84	14	15	2" H.M.A.C.	25.0	N/A	N/A	N/A	
13	54+52.18	18	7	2" H.M.A.C.	15.0	N/A	N/A	N/A	
14	67+74.77	47	7	2" H.M.A.C.	34.0	N/A	N/A	N/A	
15	76+98.54	12	13	2" H.M.A.C.	19.0	27	15	H.P.P.	
16	77+68.16	12	13	2" H.M.A.C.	19.0	27	15	H.P.P.	
17	78+09.12	12	13	2" H.M.A.C.	19.0	28	15	H.P.P.	
18	79+02.83	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	
19	80+03.65	14	13	2" H.M.A.C.	21.0	31	15	H.P.P.	
20	80+82.48	12	13	2" H.M.A.C.	19.0	28	15	H.P.P.	
21	81+73.89	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	
22	82+51.46	12	13	2" H.M.A.C.	19.0	28	15	H.P.P.	
23	83+26.31	14	13	2" H.M.A.C.	21.0	32	15	H.P.P.	
24	83+95.47	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	
25	84+70.71	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	
26	85+40.00	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	

GOOLIE ROAD DRIVEWAY INDEX (WEST SIDE)									
ID	STA.	WIDTH (LF)	LENGTH (LF)	MATERIAL	AREA (SY)	CULVERT (LF)	PIPE DIAMTER (INCHES)	PIPE MATERIAL	
27	86+16.63	12	13	2" H.M.A.C.	19.0	27	15	H.P.P.	
28	86+93.05	12	13	2" H.M.A.C.	19.0	28	15	H.P.P.	
29	88+02.05	18	13	2" H.M.A.C.	27.0	37	15	H.P.P.	
30	103+36.62	12	21	2" H.M.A.C.	30.0	N/A	N/A	N/A	
31	105+68.76	18	13	2" H.M.A.C.	27.0	36	15	H.P.P.	
32	106+44.23	18	13	2" H.M.A.C.	27.0	36	15	H.P.P.	
33	107+25.37	18	13	2" H.M.A.C.	27.0	36	15	H.P.P.	
34	111+42.99	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	
35	114+56.37	12	13	6" CONC.	19.0	30	15	H.P.P.	
36	117+99.97	8	13	6" CONC.	27.0	36	15	H.P.P.	
37	119+10.25	16	13	2" H.M.A.C.	24.0	34	15	H.P.P.	
38	120+27.37	12	13	2" H.M.A.C.	19.0	30	15	H.P.P.	
39	121+29.65	106	13	2" H.M.A.C.	147.0	135	15	H.P.P.	
40	122+73.56	14	13	2" H.M.A.C.	21.0	32	15	H.P.P.	
41	124+77.58	14	13	2" H.M.A.C.	21	32	15	H.P.P.	
42	130+45.10	11	23	2" H.M.A.C.	33	40	18	RCP	
43	130+98.56	18	22	2" H.M.A.C.	47	28	15	H.P.P.	
44	131+67.62	14	13	2" H.M.A.C.	30	27	15	H.P.P.	
45	132+38.31	12	13	2" H.M.A.C.	19	29	15	H.P.P.	
46	133+11.01	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
47	133+84.23	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
48	134+55.62	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
49	135+26.57	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
50	136+02.22	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
51	136+70.67	14	13	2" H.M.A.C.	21	32	15	H.P.P.	
52	137+39.48	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
53	138+08.12	30	13	2" H.M.A.C.	45	49	15	H.P.P.	
54	138+76.05	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
55	139+38.79	12	13	2" H.M.A.C.	19	27	15	H.P.P.	
56	140+08.85	12	13	2" H.M.A.C.	18	30	15	H.P.P.	
57	141+56.27	18	13	2" H.M.A.C.	24	36	15	H.P.P.	

GOOLIE ROAD DRIVEWAY INDEX (EAST SIDE)									
ID	STA.	WIDTH (LF)	LENGTH (LF)	MATERIAL	AREA (SY)	CULVERT (LF)	PIPE DIAMTER (INCHES)	PIPE MATERIAL	
58	142+70.48	12	12	2" H.M.A.C.	17	N/A	N/A	N/A	
59	142+11.45	12	15	2" H.M.A.C.	17	N/A	N/A	N/A	
60	141+15.84	12	13	2" H.M.A.C.	21	N/A	N/A	N/A	
61	138+87.82	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
62	135+53.38	12	13	2" H.M.A.C.	19	30	15	H.P.P.	
63	94+03.19	12	13	2" H.M.A.C.	19	32	15	H.P.P.	
64	88+59.12	14	13	2" H.M.A.C.	21.0	32	15	H.P.P.	
65	86+40.31	14	13	2" H.M.A.C.	21.0	32	15	H.P.P.	
66	82+36.75	14	13	2" H.M.A.C.	21.0	32	15	H.P.P.	
67	68+04.96	29	13	2" H.M.A.C.	43.0	68	18	RCP	
68	52+45.45	12	15	2" H.M.A.C.	21.0	N/A	N/A	N/A	
69	44+49.55	20	15	2" H.M.A.C.	35.0	N/A	N/A	N/A	
70	43+32.06	24	N/A	2" H.M.A.C.	155.0	N/A	N/A	N/A	
71	42+37.78	12	15	2" H.M.A.C.	21.0	N/A	N/A	N/A	
72	40+97.45	20	15	2" H.M.A.C.	19.0	36	15	H.P.P.	
73	40+25.60	17	15	6" CONC.	18.0	33	15	H.P.P.	
74	38+83.63	12	13	2" H.M.A.C.	18.0	26	15	H.P.P.	
75	37+08.15	12	13	2" H.M.A.C.	18.0	28	15	H.P.P.	
76	33+01.43	14	13	2" H.M.A.C.	21.0	34	15	H.P.P.	
77	25+02.01	12	13	6" CONC.	19.0	33	15	H.P.P.	
78	23+37.36	12	13	2" H.M.A.C.	21.0	N/A	N/A	N/A	
79	21+01.29	24	13	2" H.M.A.C.	36.0	N/A	N/A	N/A	
80	14+87.62	18	13	2" H.M.A.C.	34.0	48	15	H.P.P.	
81	12+77.97	13	13	2" H.M.A.C.	30.0	45	15	H.P.P.	
82	10+46.34	12	13	2" H.M.A.C.	18.0	N/A	N/A	N/A	

APPROV.				
REVISION				
DATE				
NO.	1	2	3	4
HIDALGO COUNTY PRECINT NO. 1				
GOOLIE ROAD				
PAVING IMPROVEMENTS				
DRIVEWAY INDEX SHEET				



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Civil Engineering
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Project Management

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Scale	Horz. 1:40 Vert. 1:5
Checked	E.S.
Date	JUNE, 2016
Job No.	P-194
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