

GALVESTON COUNTY ENGINEERING DEPARTMENT

CALIFORNIA AVENUE IMPROVEMENT PROJECT (FM 517 TO 20TH STREET)

T.D.L.R. TABS2023024105

MARK HENRY
COUNTY JUDGE

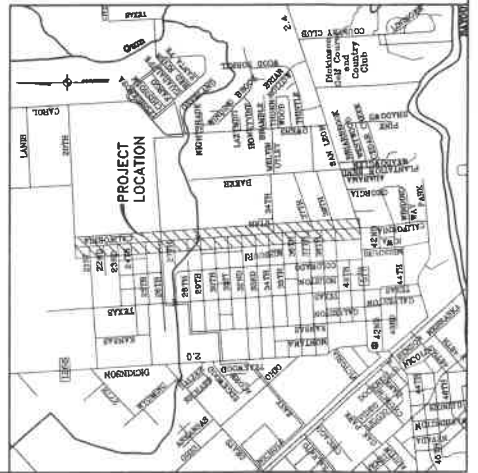
DARRELL APFFEL
COMMISSIONER, PRECINCT No. 1

JOE GIUSTI
COMMISSIONER, PRECINCT No. 2

STEPHEN D. HOLMES
COMMISSIONER, PRECINCT No. 3

ROBIN ARMSTRONG, MD
COMMISSIONER, PRECINCT No. 4

MICHAEL SHANNON
COUNTY ENGINEER



Austin P. McDaniel
9/6/2023

September 2023
Galveston County, Texas

NOTICE: FOR YOUR SAFETY, YOU ARE REQUESTED BY TEXAS LAW TO CALL 911 AT ALL TIMES. THIS INFORMATION DOES NOT TAKE THE PLACE OF A LICENSE. YOU ARE REQUESTED TO CALL 911.

VERIFICATION OF PRIVATE UTILITY LINES

DATE: _____

Completed Every/Third or Other, where Other, include date and address. The Engineer shall be responsible for the accuracy of the information.

DATE: _____

Completed Every/Third or Other, where Other, include date and address. The Engineer shall be responsible for the accuracy of the information.

DATE: _____

Completed Every/Third or Other, where Other, include date and address. The Engineer shall be responsible for the accuracy of the information.




DATE: _____

PROPOSED WATER AND SEWER UTILITY CONSTRUCTION APPROVED BY THE GALVESTON COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. 1.

GENERAL MANAGER OR HIS DESIGNER _____ DATE _____

LEGEND

<p>SURVEY</p> <ul style="list-style-type: none"> - GUY ANCHOR - POWER POLE - TELE PEDESTAL - WATER SPIGOT - LIGHT POLE - MAILBOX - STREET SIGN - FLUSH VALVE - WATER VALVE - BLOW OFF VALVE - WATER METER - OVERHEAD UTILITY LINE - BAREWIRE FENCE - WOOD FENCE - HOSWIRE FENCE - TREE - CHAINLINK FENCE 	<p>PROPOSED</p> <p>ROW</p> <p>SWALE</p> <p>STORM SEWER</p> <p>SANITARY SEWER</p> <p>WATERLINE (W/L)</p> <p>CURB</p> <p>PHONE DUCTS</p> <p>GAS LINE</p> <p>OVERHEAD POWER</p> <p>SAWCUT</p> <p>TRAFFIC SIGN</p> <p>BARRIADGE</p> <p>F.H. W/VALVE</p> <p>GATE VALVE</p> <p>GUY WIRE</p> <p>PIPELINE MARKER</p> <p>TYPE "BB" INLET</p> <p>TYPE "C" INLET</p> <p>TYPE "A" INLET</p> <p>STORM MANHOLE</p> <p>SANITARY MANHOLE</p> <p>TOP OF CURB</p> <p>FLOW LINE</p> <p>FL</p> <p>CENTER LINE</p> <p>PAVEMENT</p> <p>P/WT</p> <p>STREET LIGHT</p> <p>PROFILE GRADE LINE</p> <p>HYDRAULIC GRADE LINE</p> <p>P/L</p> <p>VERTICAL POINT OF INTERSECTION</p> <p>VPI</p> <p>POINT OF COMMENCEMENT</p> <p>PC</p> <p>LINEAL FEET</p> <p>WATER SURFACE ELEVATION</p> <p>INVERT</p> <p>WSL</p> <p>DRAINAGE BOUNDARY</p> <p>CUMULATIVE ACREAGE</p> <p>10.13</p> <p>DRAINAGE AREA ACREAGE</p> <p>1.13</p> <p>SLOPE</p>	<p>EXISTING</p> <p>ROW</p> <p>SWALE</p> <p>STORM SEWER</p> <p>SANITARY SEWER</p> <p>WATERLINE (W/L)</p> <p>CURB</p> <p>PHONE DUCTS</p> <p>GAS LINE</p> <p>OVERHEAD POWER</p> <p>SAWCUT</p> <p>TRAFFIC SIGN</p> <p>BARRIADGE</p> <p>GATE VALVE</p> <p>PIPELINE MARKER</p> <p>TYPE "BB" INLET</p> <p>TYPE "H-P" INLET</p> <p>TYPE "A" INLET</p> <p>STORM MANHOLE</p> <p>SANITARY MANHOLE</p> <p>TOP OF CURB</p> <p>IC</p> <p>FLOW LINE</p> <p>CENTER LINE</p> <p>PAVEMENT</p> <p>STREET LIGHT</p> <p>BUSINESS SIGN</p> <p>PHONE MH</p> <p>PHONE MH</p> <p>EROX</p> <p>WATER SURFACE ELEVATION</p> <p>DIRECTION OF FLOW</p> <p>GRAVEL</p> <p>SLOPE</p>
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	<p>GALVESTON COUNTY ENGINEERING DEPARTMENT</p>		<p>PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST</p>
	<p>19415 Farmington Ave., Suite 100 Houston, Texas 77057 Tel: 281-460-1100 www.mcdoug.com</p>	<p>DATE: _____</p> <p>NAME: _____</p>	<p>DATE: 7/7/2023</p> <p>SCALE: N.T.S.</p>
<p>NO. 1</p> <p>NO. 2</p> <p>NO. 3</p>	<p>REVISIONS</p>	<p>DATE</p> <p>NAME</p>	<p>LEGEND</p>

Sanitary Sewer Construction Notes:


- The entity with jurisdiction over the proposed sanitary sewer collection system is Galveston County Water Control and Improvement District No. 1. Water main construction shall be in accordance with the District's Water and Wastewater Regulations for Land Development and Standard Detail Drawings.
- Materials: Sanitary sewer lines shall be of the following materials:
 - Polyvinyl Chloride (PVC) SDR-26 heavy wall sewer pipe and fittings conforming to the latest revision of ASTM D-3034, ASTM D-2241, ASTM D-1784, S1M D-2872, having a cell classification of 12454-B, and shall have flexible elastomeric gasket joints as approved by the District.
- Construction: Sanitary sewers shall be constructed according to the latest revision of ASTM D-321 (PVC) as to trenching, bedding alignment, grade, installation, backfill, and compaction.
 - Manholes: Manholes shall be spaced a distance not to exceed 500 feet and shall conform to the District's Standard Detail Drawings, including a 32" diameter hinged ring and cover per detail.
 - Force Mains: Force mains shall be constructed of the following materials:
 - Polyvinyl chloride (PVC) DR 18 (235 PSI) conforming to the latest revision of AWWA C900 and ASTM D-2241.
 - Mechanical joint ductile iron fittings conforming to AWWA C-153, pressure rating 250 psi. Cement lining in accordance with AWWA C-104 and C-155, NSF61 approved.
 - PVC Pipe restraints shall be Megalug in accordance with District's Standard Detail Drawings.
 - Lift Stations: Lift Stations shall be designed with non-slip Flight submersible pumps manufactured by Xiamen conforming to minimum design criteria of the TCEQ. An all-weather access road, three phase electrical service and potable water service shall be provided at the proposed lift station site. All structures located above ground shall be enclosed. Pumps and controls, including SCADA, shall conform to the District's requirements.
 - Services: Sanitary sewer service lines shall be 6" SDR-26 PVC or 4" Schedule 40 PVC as specified in the District's Standard Detail Drawings. Cleanouts shall be installed for each service at the property line with a threaded plug adapter (cap) installed a minimum of two (2) feet above existing grade. All tops to the sanitary sewer main shall either be a SDR-26 PVC tee or tap saddle with stainless steel straps. A SDR to DWV adapter shall also be provided when transitioning from SDR-26 PVC to Schedule 40 PVC.
 - Grease Traps: Grease traps and or sampling well shall be installed for any commercial connection, trapping food, or on any other connection responsible for waste discharges that include, but are not limited to, grease, oil, sand, or flammable waste. Design and capacity of grease traps shall be in accordance with City of Dickinson requirements and approved by the District. Grease traps shall be subject to periodic inspections by the compliance with the District's latest Wastewater Pretreatment Ordinance.
 - Testing: All sanitary sewer lines shall be tested in accordance with the TCEQ regulations, except that allowable leakage shall not be more than 50 gallons per inch of inside diameter per mile of pipe per twenty-four hours for entire test section including manholes. The District's Standard Detail Drawings shall be used for all testing. The District's Standard Detail Drawings shall be notified twenty-four (24) hours prior to a test and shall observe all tests. All test results shall be submitted in writing to the General Manager by the Developer. All PVC sanitary sewers shall be mandrel tested for deflection and televised prior to acceptance by the District. The maximum deflection allowed for the pipe shall be 1" per joint while fittings shall be based on the pipe size (2'-4" = 6", 6" = 7", 8'-12" = 5", 14'-18" = 3.5", 18'-24" = 3", 30'-64" = 2). One year from date of installation, the Developer shall provide for the televised inspection of all sanitary sewer mains.
 - Maintain 6" minimum clearance between all storm sewers, and other parallel underground utilities unless otherwise noted. Sanitary sewer and water line separation distances to follow TCEQ design requirements.
 - Any removal of sanitary infrastructure necessary for proposed sanitary sewer lines and services is incidental to the proposed items.

Water Line Construction Notes:


- The entity with jurisdiction over the proposed water main distribution system is Galveston County Water Control and Improvement District No. 1. Water main construction shall be in accordance with the District's Water and Wastewater Regulations for Land Development and Standard Detail Drawings.
- Materials: All pipe and fittings shall be approved by the American Water Works Association for carrying potable water. Water lines shall be constructed of the following materials:
 - Polyvinyl chloride (PVC) DR 18 (235 PSI) conforming to the latest revision of AWWA C900 and ASTM D-2241.
 - Mechanical joint ductile iron fittings conforming to AWWA C-153, pressure rating 250 psi. Cement lining in accordance with AWWA C-104 and C-155, NSF61 approved.
 - PVC Pipe restraints shall be Megalug in accordance with District's Standard Detail Drawings.
 - Valves: All gate valves shall be resilient seated, non-rising stem, 2-inch square operating nut conforming to the latest revisions of AWWA C-500 and open left. Approved manufacturer is Mueller. All valves to include stainless steel bolts and shall be provided with an approved "X" Section valve box and cover. At intersections of water distribution lines, the number of valves will be one less than the number of radiating lines.
 - Hydrants: All fire hydrants shall be in accordance with District specifications. Hydrants shall be three-way with National Standard threading and include a 5" Hydrant-Storz connection coupling on the main pump nozzle. Approved manufacturers are Mueller or American Darling. Hydrants shall be located on six inch or larger lines and looped by six inch or larger lines. Hydrants shall be spaced every 300 feet along commercial corridors and every 400 feet along residential streets, in a manner acceptable to this fire department. There shall be a gate valve between the main and fire hydrant.
 - Services: Water service lines shall be polyethylene tubing, 200 PSI, with sizes as specified in the District's Standard Detail Drawings. Corporation stop shall be Ford model with compression fitting. Curb Stop shall be Ford model with locking wing nut. All taps, regardless of water line size, to use 304 stainless steel, type 354 single strap tap saddle.
 - Meters: Water meters shall be provided by and installed by the District, with sizes as specified in the District's Standard Detail Drawings. Meters shall be installed by a licensed plumber per state plumbing code and tested annually by the customer with results provided to the District.
 - Size: All water mains shall be a minimum of six (6) inches in diameter unless in specific areas approved by the District.
 - Construction: Water lines shall be constructed according to the applicable AWWA Standard Details as to trenching, bedding, alignment, approval, approval, installation, backfill and compacted. All water lines shall be installed in a trench with six-inch sand wrap backfill.
 - Testing: All water lines are to be hydrostatically tested by the Contractor at 125 PSI for 8 hours or 150 PSI for 4 hours. Bacterial analysis samples shall be taken and have 100% negative results by the District before the new water system is connected to existing district lines. All water lines shall be tested in accordance with TCEQ standards. The maximum deflection allowed for the pipe shall be 1" per joint while fittings shall be based on the pipe size (2'-4" = 6", 6" = 7", 8'-12" = 5", 14'-18" = 3.5", 18'-24" = 3", 30'-64" = 2). One year from date of installation, the Developer shall provide for the televised inspection of all sanitary sewer mains. In which L is allowable leakage, in gallons per hour; S is the length of pipeline tested; D is the nominal diameter of the pipe in inches; and P is the average test pressure during the leakage test in pounds per square inch gauge. Testing shall be in accordance with AWWA C-500, and C-551. The Developer shall provide all test equipment, including equipment prior to test and shall observe all tests. All test results shall be submitted in writing to the General Manager by the Developer. The maximum deflection allowed for the pipe shall be 1" per joint while fittings shall be based on the pipe size (2'-4" = 6", 6" = 7", 8'-12" = 5", 14'-18" = 3.5", 18'-24" = 3", 30'-64" = 2).
 - Safety Standards: The Developer and Developer's Engineer shall be responsible for relating the construction services of a reputable contractor. The installation of all water infrastructure shall comply with the District's Standard Detail Drawings. Further, said contractor shall comply with the District's confined space entry requirements.
 - Any removal of water infrastructure necessary for proposed water lines and services is incidental to the proposed items.

NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**

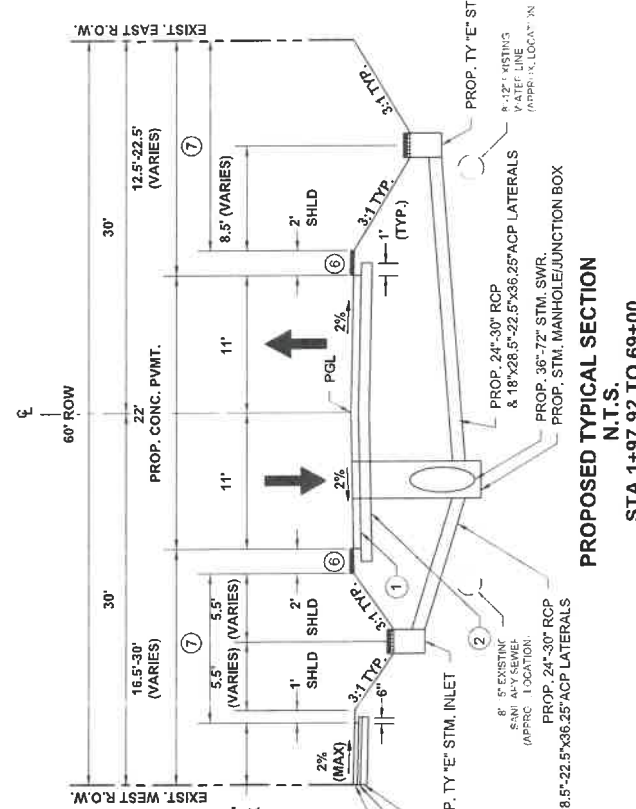
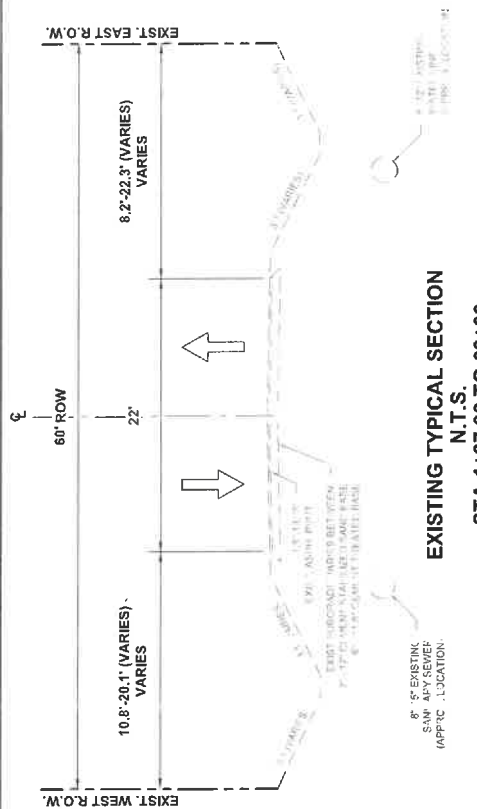


MCDONOUGH
Civil Engineer & Surveyor
1845 Elm Exposition No. 10103390
Galveston, Texas 77550
P: 409-761-9990
www.mcd.com



PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
GENERAL NOTES (2 OF 2)

DATE: 7/17/2023
SCALE: N.T.S.

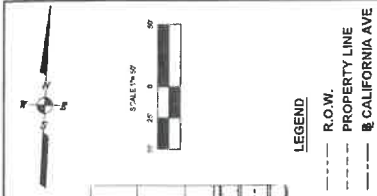


- LEGEND**
- ① 7" JOINTED REINFORCED CONCRETE PAVEMENT
 - ② 8" LIME STABILIZED SUBGRADE
 - ③ 4" REINFORCED CONCRETE SIDEWALK
 - ④ 3" CEMENT STABILIZED SAND
 - ⑤ 6" SUBBASE COMPACTED TO 95% STANDARD PROCTOR DENSITY
 - ⑥ BLOCK SOD
 - ⑦ HYDROMULCH SEEDING

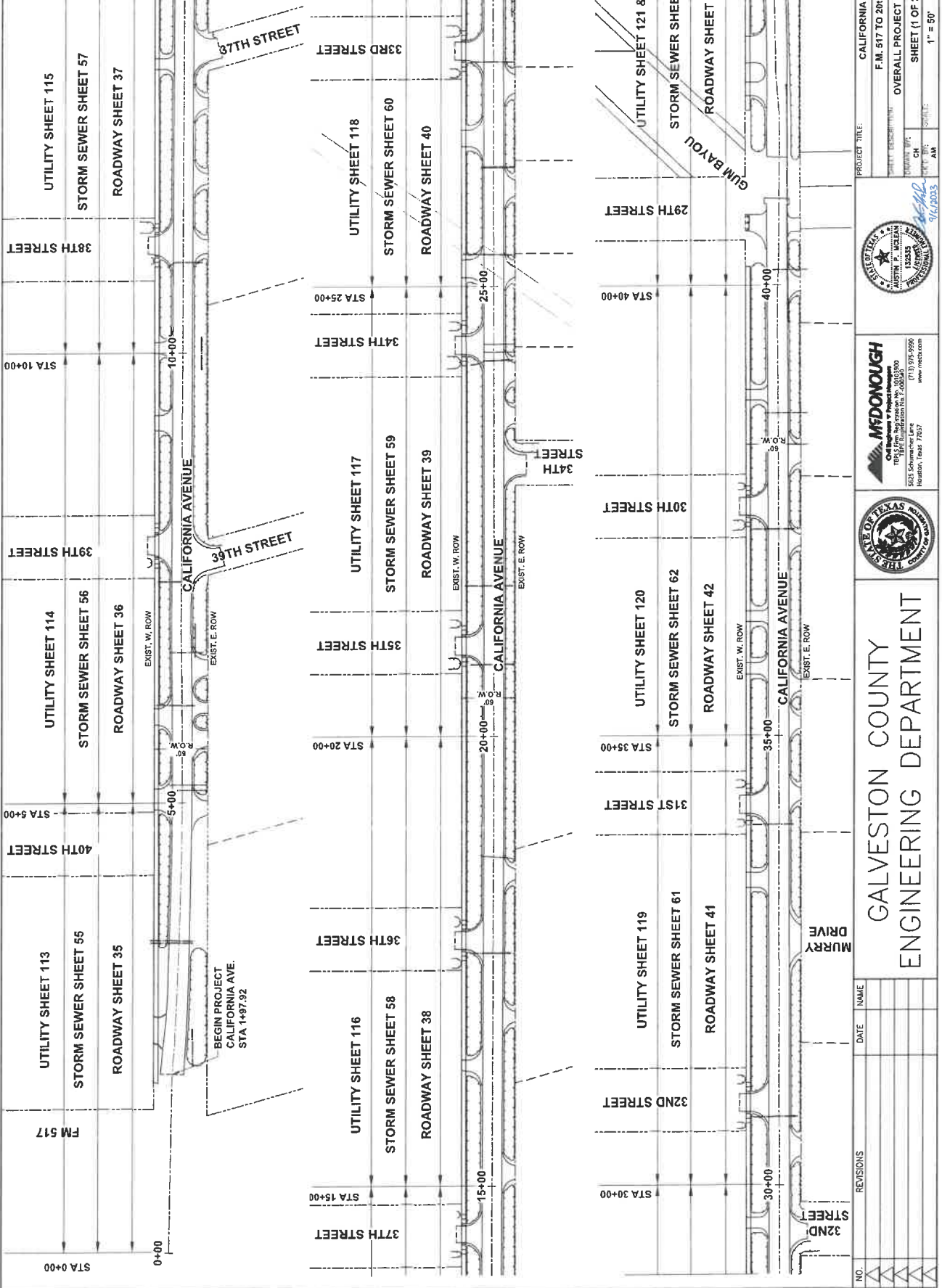
NOTE:
 1) FOR THE CULVERT CROSSING FROM STA. 40+88 TO STA. 41+37 THE PAVEMENT SECTION SHALL CONSIST OF 7" JOINTED REINFORCED CONCRETE PAVEMENT AND 8" OF CEMENT STABILIZED SAND.

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST		SHEET DESCRIPTION: TYPICAL SECTIONS	
DATE: 7/7/2023		DATE: 7/7/2023	
DRAWN BY: [Signature]		CHECKED BY: [Signature]	
SCALE: N.T.S.		SCALE: N.T.S.	



LEGEND
 - - - - - R.O.W.
 - - - - - PROPERTY LINE
 - - - - - CALIFORNIA AVE



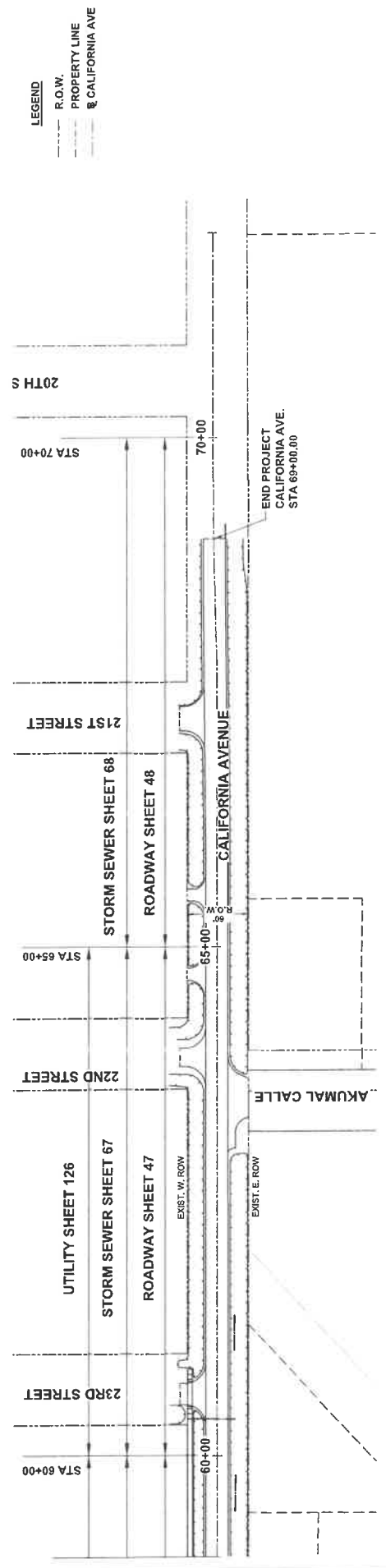
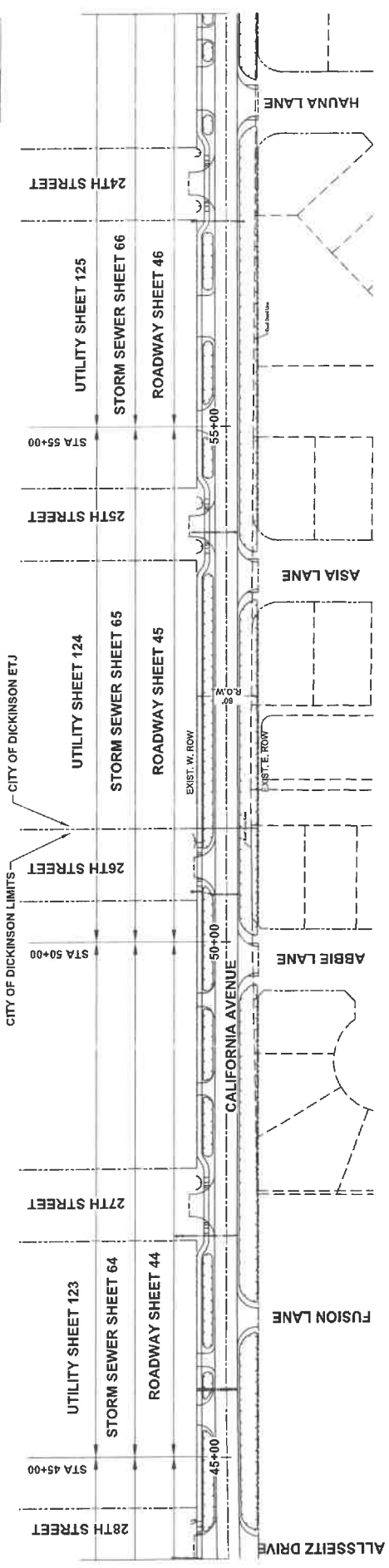
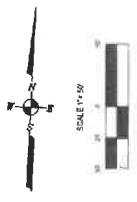
NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 OVERALL PROJECT LAYOUT
 SHEET (1 OF 2)
 DATE: 7/7/2023
 1" = 50'



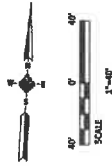
MCDONOUGH
 Civil & Mechanical Engineers
 1805 Farmington Dr., Suite 200
 Houston, Texas 77057
 (713) 975-9996
 www.mcdonough.com

**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**



NO.	REVISIONS	DATE	NAME

		GALVESTON COUNTY ENGINEERING DEPARTMENT
		McDONOUGH Civil Engineers & Surveyors 18425 West Loop South, Suite 100 Houston, Texas 77057 (713) 972-9900 www.mcdonough.com
		PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST OVERALL PROJECT LAYOUT SHEET (2 OF 2) DATE: 7/7/2023 CH: [Signature] SCALE: 1" = 50' DATE: 9/6/2023



GENERAL NOTE

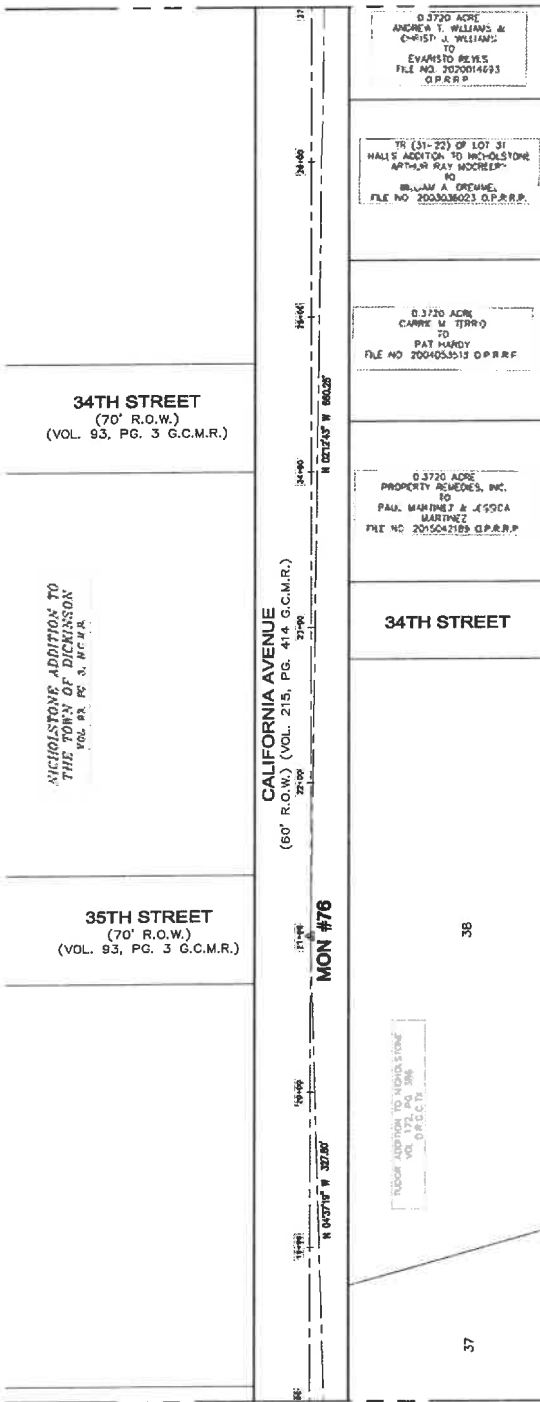
The right-of-way of California Avenue was established by the subdivision of NICHOLSTONE ADDITION and recorded in the Galveston County Deed Records on April 18, 1891, and by the subdivision of HALL'S ADDITION TO NICHOLSTONE dated and recorded in Volume 215, Page 414 of the Galveston County Deed Records on October 23, 1905. These plats establish California Avenue on a 60-foot right-of-way. The plat establishing California Avenue was recorded in Volume 2055A, Page 131 of the Deed Records of Galveston County, Texas on May 14, 2002.

The shaded area shows the receipt of the subdivisions onto California Avenue based on found monuments of the original California Avenue and monuments found for the subdivisions.

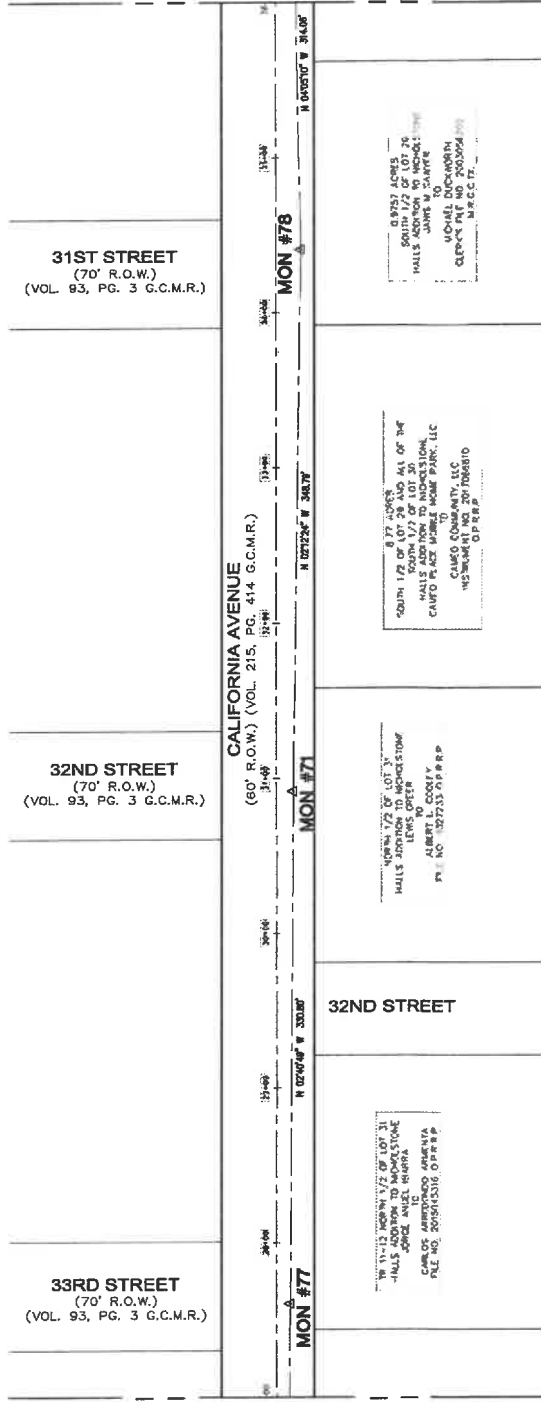
PRIMARY BENCHMARK:
 FLOODPLAIN REFERENCE MARK NUMBER 010065 IS A METAL ROD IN A SLEEVE ON THE NORTH CORNER OF THE INTERSECTION OF NEVADA DRIVE AND TERMINI DRIVE IN KEYMAP 699D IN THE CLEAR CREEK WATERSHED
 12.18 FEET NAVD 1988, 2001 ADJUSTMENT

**MATCH LINE STA. 27+00
 SEE BELOW**

**MATCH LINE STA 36+00
 SEE SHEET 3**



Point#	Station	Offset	Description	Northing	Existing	Elevation
71	31+08.92	RIGHT 18.58	CP MAGN. & WASHIER	13742328.10	3235480.59	12.70
76	21+27.25	RIGHT 7.85	CP PK NAIL	13741337.50	3235211.50	14.03
77	27+88.14	RIGHT 15.71	CP PK NAIL	13741897.66	3234964.42	13.19
78	34+67.66	RIGHT 23.62	CP PK NAIL	13745576.63	3234671.52	12.88



DATE	DATE	DATE	DATE	DATE	DATE
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION

SEAL OF GALVESTON COUNTY TEXAS
 1838

IDS
 Engineering Group

THE STATE OF TEXAS
 COUNTY OF GALVESTON

PROJECT: PAVING AND DRAINAGE IMPROVEMENTS FOR CALIFORNIA AVENUE

SURVEY CONTROL (SHEET 2 OF 4)

DATE: 05-08-2022

DATE BY: CM.G.

CHECK BY: DW.T.

DATE: 11-14-19

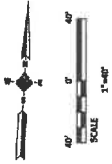
DATE: 05-08-2022

DATE BY: CM.G.

CHECK BY: DW.T.

**MATCH LINE STA. 18+00
 SEE SHEET 1**

**MATCH LINE STA 27+00
 SEE ABOVE**



GENERAL NOTE:

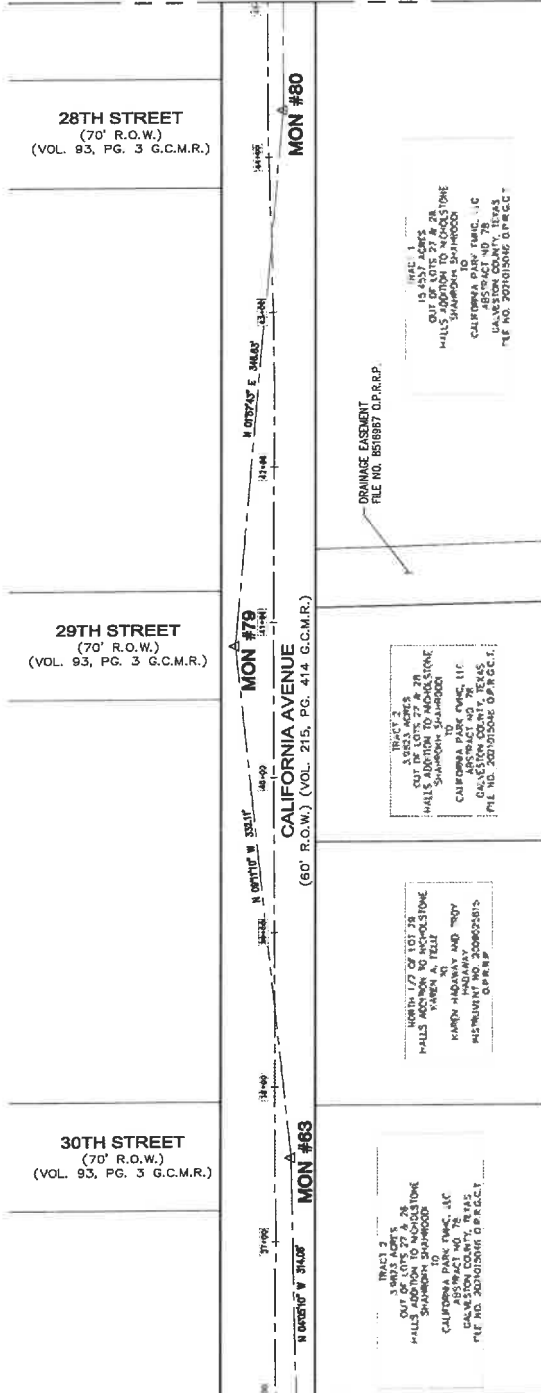
The right-of-way of California Avenue was established by the subdivision of NICHOLSTONE ADDITION recorded in Volume 83, Page 3 of the Official Public Records of Galveston County, Texas, and by the subdivision of HALLS ADDITION TO NICHOLSTONE recorded in Volume 215, Page 414 of the Galveston County Deed Records on October 23, 1989. These plats established California Avenue as a 60-foot wide right-of-way. The right-of-way was surveyed and approved by Galveston County, Texas on May 14, 2023.

The shaded area shows the overlap of the subdivisions onto California Avenue based on found monuments of the original California Avenue and monuments found for the subdivisions.

PRIMARY BENCHMARK:
 FLOODPLAIN REFERENCE MARK NUMBER 010085 IS A METAL ROD IN A SLEEVE ON THE NORTH CORNER OF THE INTERSECTION OF NEVADA DRIVE AND TERMINI DRIVE IN KEYMAP 699D IN THE CLEAR CREEK WATERSHED
 12.18 FEET NAVD 1988, 2001 ADJUSTMENT

MATCH LINE STA 36+00
 SEE SHEET 2

MATCH LINE STA 45+00
 SEE SHEET 4

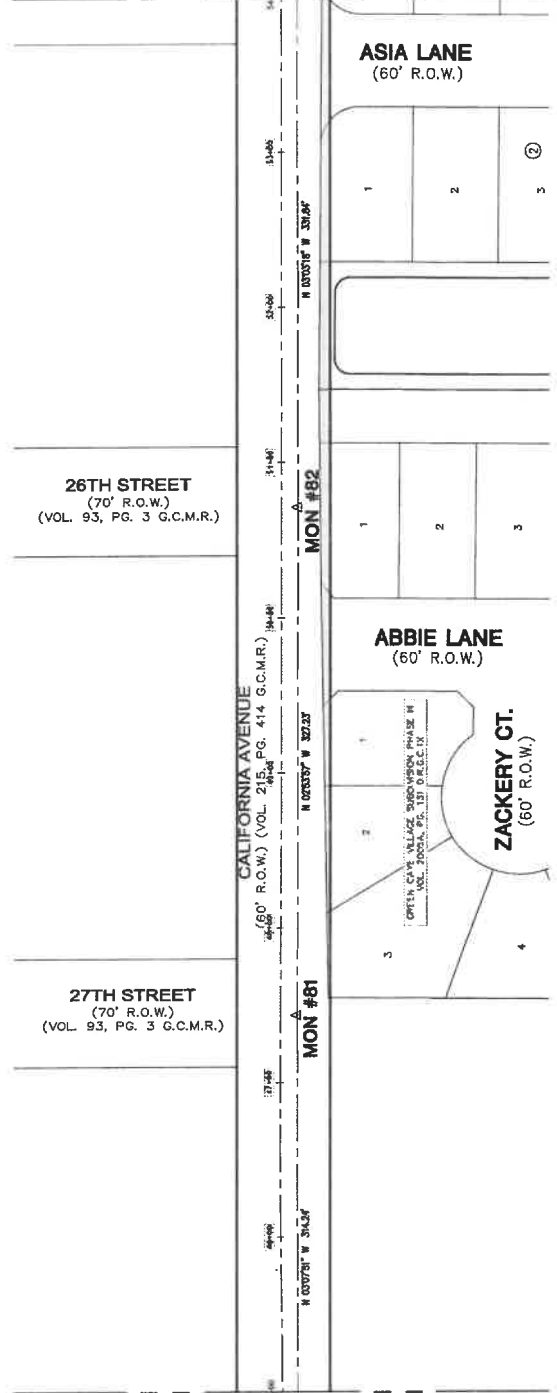


Point#	Station	Offset	Description	Northing	Easting	Elevation
69	37+85.67	RIGHT 18.30	CP MAGN & WASHER	3272945.74	3272945.74	12.77
70	41+11.81	LEFT 12.63	CP P.K. MAIL	3272882.11	3272882.11	13.54
80	44+57.03	RIGHT 12.58	CP P.K. MAIL	3272864.17	3272864.09	13.52
81	47+71.37	RIGHT 18.56	CP P.K. MAIL	3272877.24	3272866.85	13.75
82	50+58.75	RIGHT 18.27	CP P.K. MAIL	3272820.75	3272870.28	14.14

TRACT 2
 OUT OF LOTS 22 & 2A
 HALLS ADDITION TO NICHOLSTONE
 SHARROCK TO SHARROCK
 CALIFORNIA PARK TRAC, LLC
 GALVESTON COUNTY, TEXAS
 FILE NO. 2021015046 O.P.R.C.C.

TRACT 2
 OUT OF LOTS 22 & 2A
 HALLS ADDITION TO NICHOLSTONE
 SHARROCK TO SHARROCK
 CALIFORNIA PARK TRAC, LLC
 GALVESTON COUNTY, TEXAS
 FILE NO. 2021015046 O.P.R.C.C.

TRACT 2
 OUT OF LOTS 22 & 2A
 HALLS ADDITION TO NICHOLSTONE
 SHARROCK TO SHARROCK
 CALIFORNIA PARK TRAC, LLC
 GALVESTON COUNTY, TEXAS
 FILE NO. 2021015046 O.P.R.C.C.

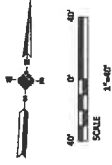


ME DESCRIPTION DATE DATE DUL

PAVING AND DRAINAGE IMPROVEMENTS
 FOR CALIFORNIA AVENUE

**SURVEY CONTROL
 (SHEET 3 OF 4)**

SHEET 11 OF 113
 Date: 05-26-2023
 Drawn by: C.M.S.
 Check by: D.W.T.



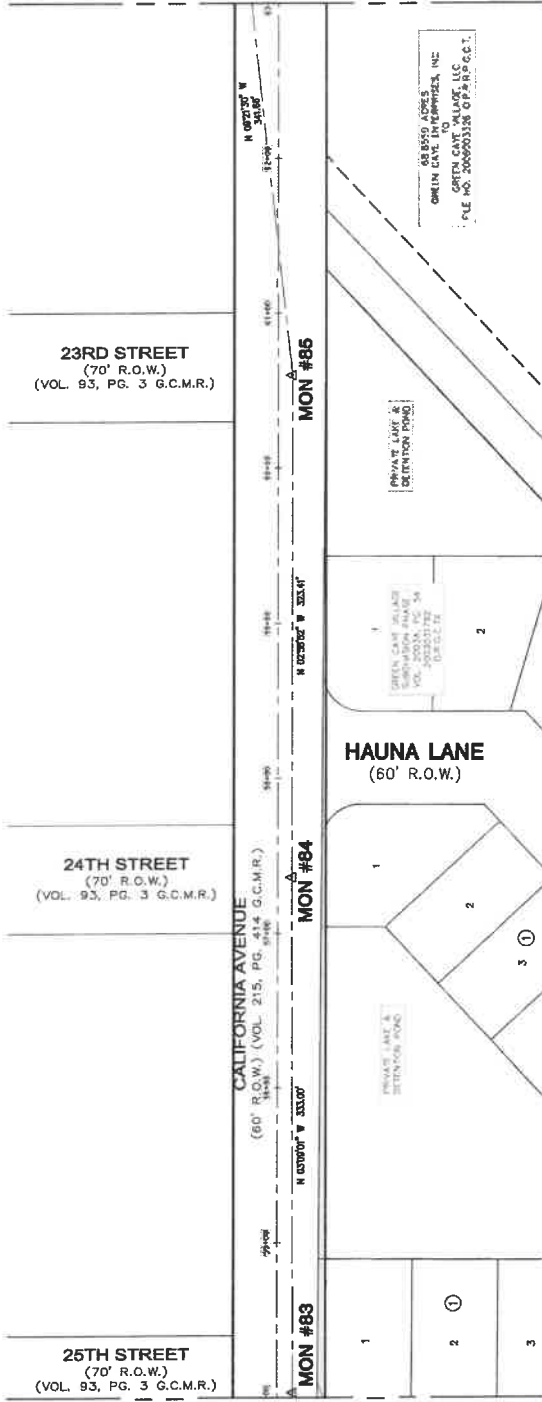
GENERAL NOTE:

The right-of-way of California Avenue was established by the subdivision of NICHOLSTONE ADDITION recorded in Volume 93, Page 3 of the Galveston County Deed Records on April 18, 1991, and by the subdivision of HALL'S ADDITION TO NICHOLSTONE dated and recorded in Volume 215, Page 414 of the Galveston County Deed Records on October 1, 2003. The right-of-way of California Avenue is shown as a 60-foot wide 1991-of-way. Green Cay Subdivision Phase II was recorded in Volume 2005A, Page 131 of the Deed Records of Galveston County, Texas on May 14, 2003.

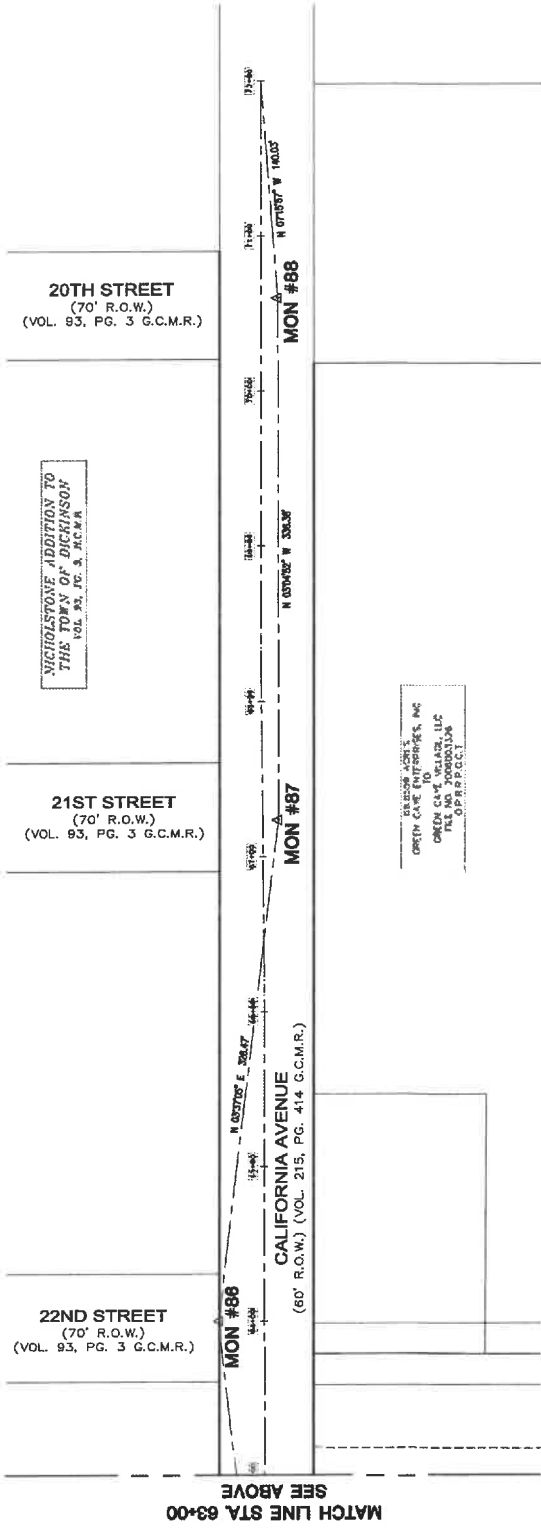
The shaded area shows the location of the subdivisions onto California Avenue based on found monuments of the original California Avenue and monuments found for the subdivisions.

PRIMARY BENCHMARK:
 FLOODPLAIN REFERENCE MARK NUMBER 010065 IS A METAL ROD IN A SLEEVE ON THE NORTH CORNER OF THE INTERSECTION OF NEVADA DRIVE AND TERMINI DRIVE IN KEYMAP 6990 IN THE CLEAR CREEK WATERSHED
 12.18 FEET NAVD 1988, 2001 ADJUSTMENT

**MATCH LINE STA. 63+00
 SEE BELOW**



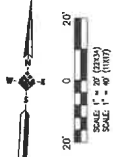
SURVEY CONTROL DATA			
Point	Station	Offset	Elevation
83	54+30.50	RIGHT 17.88	14.50
		CP PK NAIL	32744316.13 322832.59
84	57+65.50	RIGHT 16.94	15.29
		CP PK NAIL	32744682.63 322534.25
85	60+97.01	RIGHT 16.29	15.61
		CP PK NAIL	32745151.60 322531.47
86	64+26.56	LEFT 20.92	15.12
		CP PK NAIL	32745328.71 322526.92
87	67+50.89	RIGHT 17.99	15.64
		CP PK NAIL	32749524.53 322525.52
88	70+87.24	RIGHT 18.50	15.84
		CP PK NAIL	32746190.42 322524.44



1440 West Avenue
 Suite 200
 Houston, Texas 77057
 Telephone: 281.261.1370
 Fax: 281.261.1370
 Email: info@idseng.com

**PAVING AND DRAINAGE IMPROVEMENTS
 FOR CALIFORNIA AVENUE**
**SURVEY CONTROL
 (SHEET 4 OF 4)**
 Project No.: 2003-0253
 Date: 11-07
 Issue: 06-06-2003
 Drawn by: C.M.G.
 Check by: D.W.T.
 SHEET 12 OF 143

- SYMBOL LEGEND**
- (1) WATER MAIN
 - (2) WATER METER
 - (3) FIRE HYDRANT
 - (4) GAS VALVE
 - (5) GAS METER
 - (6) GAS LINE WALKER
 - (7) OVER HEAD POWER LINE
 - (8) ELECTRICAL JUNCTION BOX
 - (9) DRY WIRE
 - (10) WIRE AND TELEPHONE MANHOLE
 - (11) TELEPHONE JUNCTION BOX
 - (12) TRAFFIC LIGHT STANDARD
 - (13) STREET LIGHT STANDARD
 - (14) AREA LIGHT
 - (15) TRAFFIC SIGN
 - (16) TRAFFIC SIGN
 - (17) TYPE "A" INLET
 - (18) TYPE "B" INLET
 - (19) TYPE "C" INLET
 - (20) TYPE "D" INLET
 - (21) SANITARY SEWER MANHOLE
 - (22) SANITARY SEWER CLEAN-OUT
 - (23) CABLE TV MANHOLE
 - (24) CABLE TV JUNCTION BOX
 - (25) CABLE TV INLET
 - (26) VENT PIPE
 - (27) MAIL BOX
 - (28) CORE BORE
 - (29) CHIMNEY LINE FENCE
 - (30) WOOD FENCE
 - (31) BRICK WALL
 - (32) BARBED WIRE FENCE
 - (33) TOP OF BANK
 - (34) BOTTOM FLOW LINE
 - (35) FRESH-OPTIC LINE
 - (36) GAS LINE
 - (37) NATURAL GROUND W/LEVEL
 - (38) CIV. CONDUIT



ABBREVIATION TABLE

FIN. FOUND
 P.O.C. POINT OF COMMENCING
 P.O.B. POINT OF BEGINNING
 O.C.S. OFFICIAL RECORDS OF CALVESTON COUNTY
 O.C.P.R. OFFICIAL PUBLIC RECORDS OF REAL
 O.P.P.R. PROPERTY OF CALVESTON COUNTY TOWNS

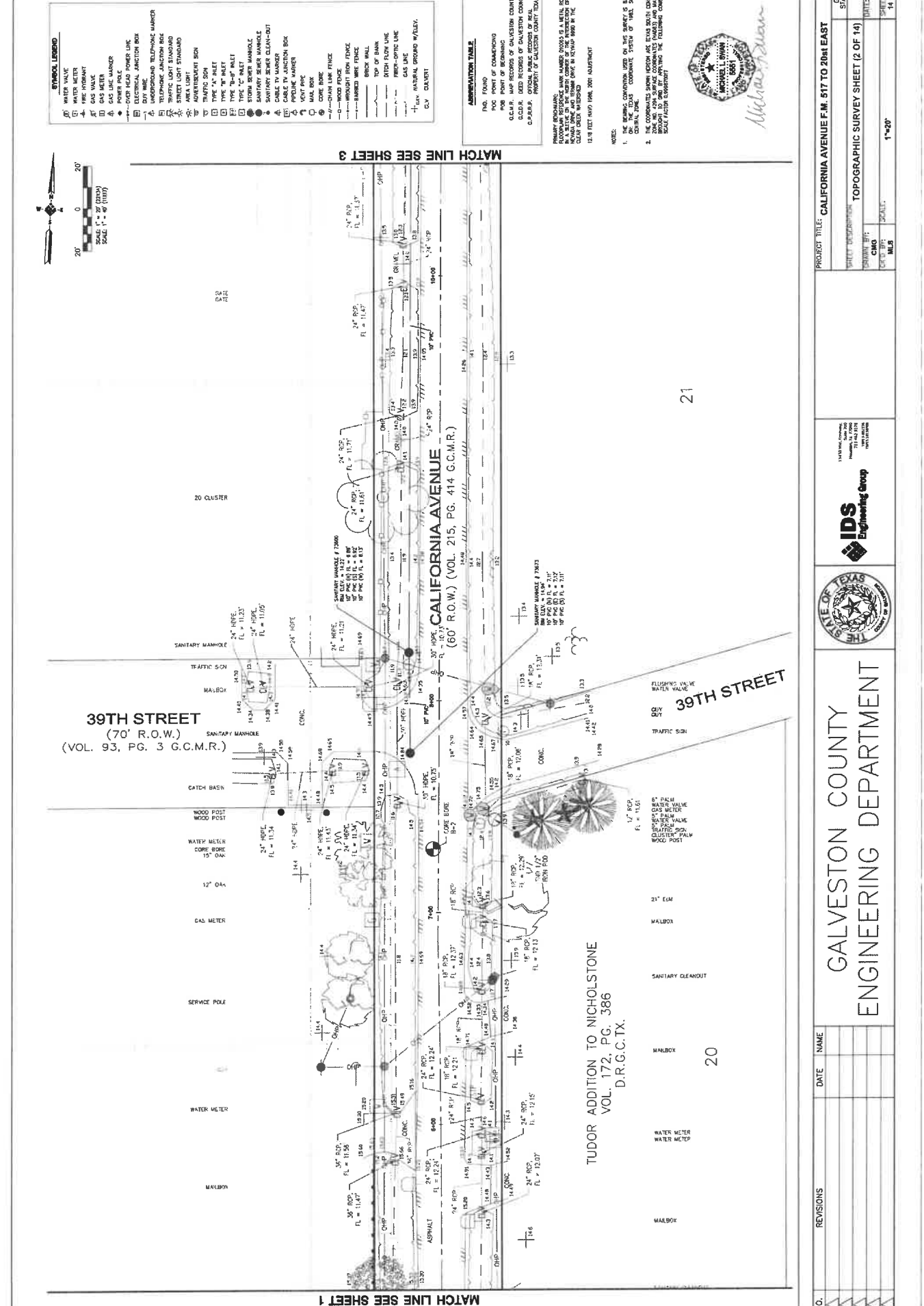
PROPERTY REQUIREMENTS:
 ELEVATIONS REFERENCED TO THE MEAN SEA LEVEL (MSL) DATUM. ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED.
 ALL DISTANCES ARE IN FEET UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.

NOTES:

1. THE RECORDS CONVENTION USED ON THIS SURVEY IS BASED ON THE NATIONAL GRID SYSTEM OF 1983.
2. THE COORDINATES SHOWN HEREON ARE BASED ON THE NATIONAL GRID SYSTEM OF 1983. THE COORDINATES SHOWN ON THIS SURVEY ARE BASED ON THE NATIONAL GRID SYSTEM OF 1983. THE COORDINATES SHOWN ON THIS SURVEY ARE BASED ON THE NATIONAL GRID SYSTEM OF 1983.



1/8" = 20'



21

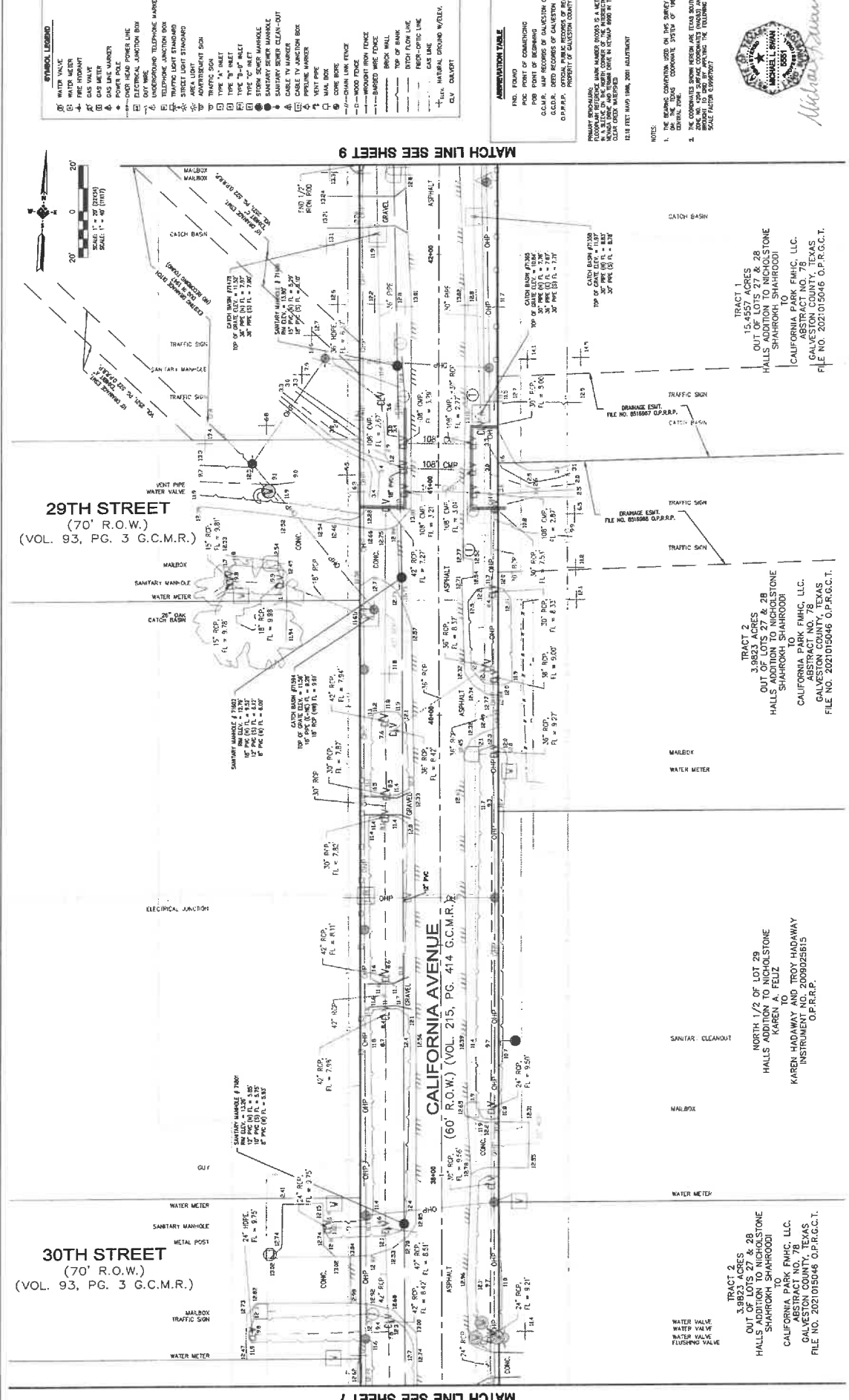
20

PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th EAST		CADD STANDARD
SHEET DESCRIPTION: TOPOGRAPHIC SURVEY SHEET (2 OF 14)		DATE:
DESIGNED BY:	CHECKED BY:	DATE:
DRAWN BY:	SCALE:	SHEET NO. 14 / 103
CHECKED BY:	SCALE:	
DRAWN BY:	SCALE:	



GALVESTON COUNTY
 ENGINEERING DEPARTMENT

NO.	REVISIONS	DATE	NAME



30TH STREET
(70' R.O.W.)
(VOL. 93, PG. 3 G.C.M.R.)

29TH STREET
(70' R.O.W.)
(VOL. 93, PG. 3 G.C.M.R.)

CALIFORNIA AVENUE
(60' R.O.W.) (VOL. 215, PG. 414 G.C.M.R.)

MATCH LINE SEE SHEET 7

MATCH LINE SEE SHEET 9

TRACT 1
15.4557 ACRES
OUT OF LOTS 27 & 28
HALLS ADDITION TO NICHOLSTONE
SHARROKH SHARROODI
TO
CALIFORNIA PARK F.M.H.C. L.L.C.
GALVESTON COUNTY, TEXAS
FILE NO. 2021015046 O.P.R.G.C.T.

TRACT 2
3.9823 ACRES
OUT OF LOTS 27 & 28
HALLS ADDITION TO NICHOLSTONE
SHARROKH SHARROODI
TO
KAREN HADAWAY AND TROY HADAWAY
INSTRUMENT NO. 0080925815
O.P.R.G.P.

TRACT 3
3.9823 ACRES
OUT OF LOTS 27 & 28
HALLS ADDITION TO NICHOLSTONE
SHARROKH SHARROODI
TO
CALIFORNIA PARK F.M.H.C. L.L.C.
GALVESTON COUNTY, TEXAS
FILE NO. 2021015046 O.P.R.G.C.T.

NOTES:
1. THE BEARING COMPUTED USED ON THIS SURVEY IS BASED ON THE ASSUMPTION THAT THE CORNER POINTS OF THE 2001 ADJUSTMENT ARE CORRECT.
2. THE COORDINATES SHOWN HEREON ARE TEXAS SOUTH CENTRAL MERIDIAN COORDINATES.
3. THE SCALE OF THIS SURVEY IS 1" = 40' (HORIZONTAL) AND 1" = 80' (VERTICAL).
4. THE SCALE FACTOR IS 0.999997.

1:24 FEBRUARY 1988, 2001 ADJUSTMENT

PROPERTY OF GALVESTON COUNTY TEXAS

FLORIAN PRODUCTIONS
FLORIAN PRODUCTIONS MAIN NUMBER 00000 IS A METRIC UNIT OF MEASUREMENT. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
CLEAR CORNER INTERSECTIONS

APPROXIMATION TABLE
P.O. POINT
P.O. POINT OF COMMERCIAL
P.O. POINT OF BEGINNING
C.C.C.R. OFFICE RECORDS OF GALVESTON COUNTY
C.C.C.R. OFFICE RECORDS OF GALVESTON COUNTY
O.P.R.G.P. OFFICIAL PUBLIC RECORDS OF TEXAS
PROPERTY OF GALVESTON COUNTY TEXAS

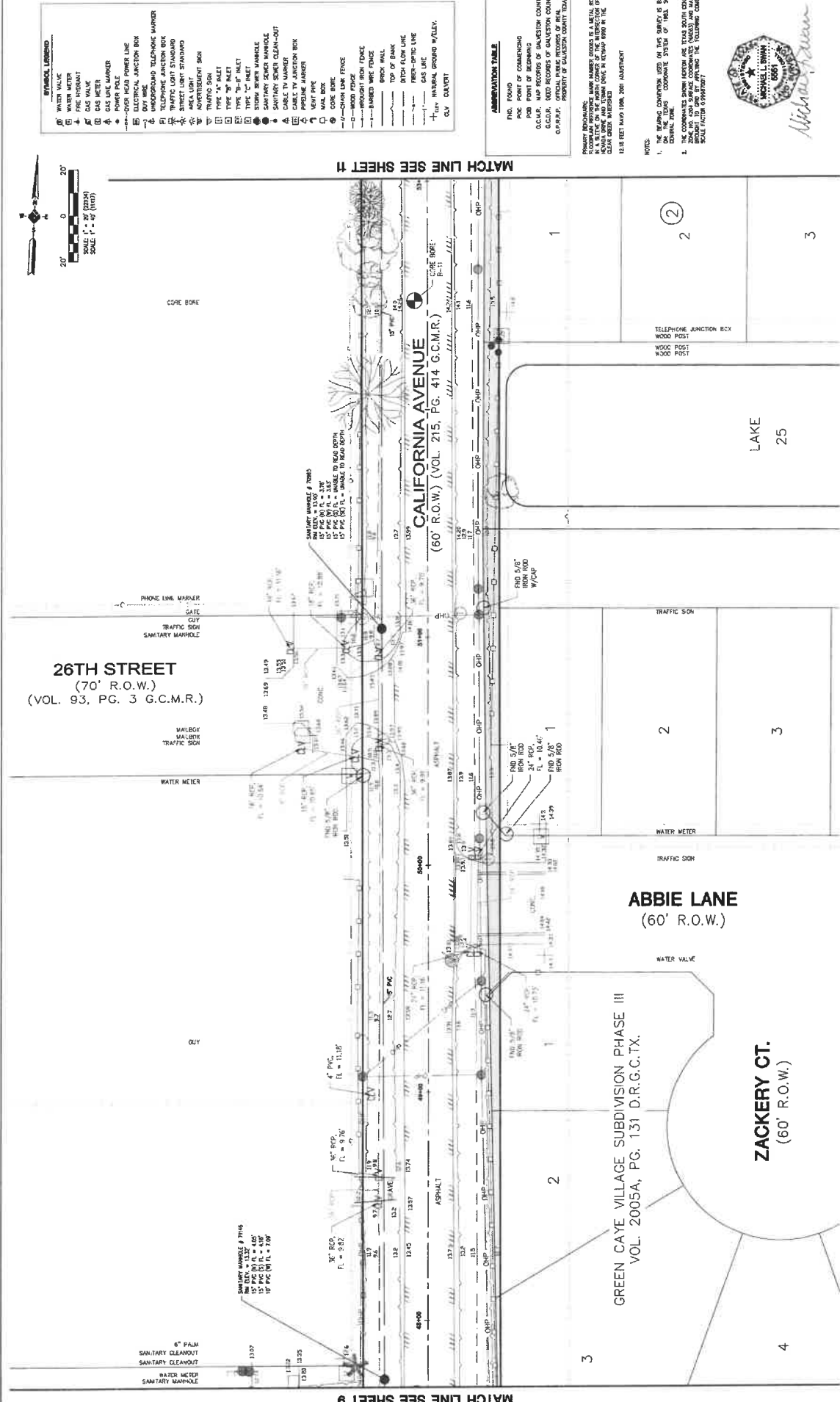
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th EAST
SHEET DESCRIPTION: TOPOGRAPHIC SURVEY SHEET (8 OF 14)
DRAWN BY: CMO
CHECKED BY: SCLT
DATE: 11/20/21
SHEET NO.: 21 / 103

IDS Engineering Group
1400 West Loop South, Suite 1000
Houston, Texas 77027
713.866.8888
www.idseng.com

GALVESTON COUNTY
ENGINEERING DEPARTMENT

STATE OF TEXAS
COUNTY OF GALVESTON

REVISIONS
DATE
NAME



STATE OF TEXAS

ENGINEERING GROUP

IDS Engineering Group

GALVESTON COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE: CALVESTON AVENUE F.M. 517 TO 20th EAST

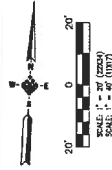
SHEET DESCRIPTION: TOPOGRAPHIC SURVEY SHEET (10 OF 14)

DATE:

SCALE: 1"=20'

NO.

NO.	REVISIONS	DATE	NAME



SYMBOL LEGEND

(1)	WATER VALVE
(2)	WATER METER
(3)	FIRE HYDRANT
(4)	GAS VALVE
(5)	GAS METER
(6)	POWER POLE
(7)	OVER HEAD POWER LINE
(8)	ELECTRICAL JUNCTION BOX
(9)	UNDERGROUND TELEPHONE MANHOLE
(10)	TELEPHONE JUNCTION BOX
(11)	TRAFIC LIGHT STANDARD
(12)	STREET LIGHT STANDARD
(13)	ADJUSTMENT SIGN
(14)	TRAFFIC SIGN
(15)	TYPE "A" INLET
(16)	TYPE "B" INLET
(17)	TYPE "C" INLET
(18)	STORM SEWER MANHOLE
(19)	SANITARY SEWER MANHOLE
(20)	SANITARY SEWER CLEAN-OUT
(21)	CABLE TV MANHOLE
(22)	TELEVISION MANHOLE
(23)	PROBING MARKED
(24)	VENT PIPE
(25)	MAIL BOX
(26)	DOOR BOX
(27)	CHALK LINE FENCE
(28)	WOODEN FENCE
(29)	BARBED WIRE FENCE
(30)	BRICK WALL
(31)	TOP OF BANK
(32)	BITUM FLOW LINE
(33)	RESURFACING LINE
(34)	ASPHALT DRIVE
(35)	PAVED DRIVE/WALKWAY
(36)	CONCRETE

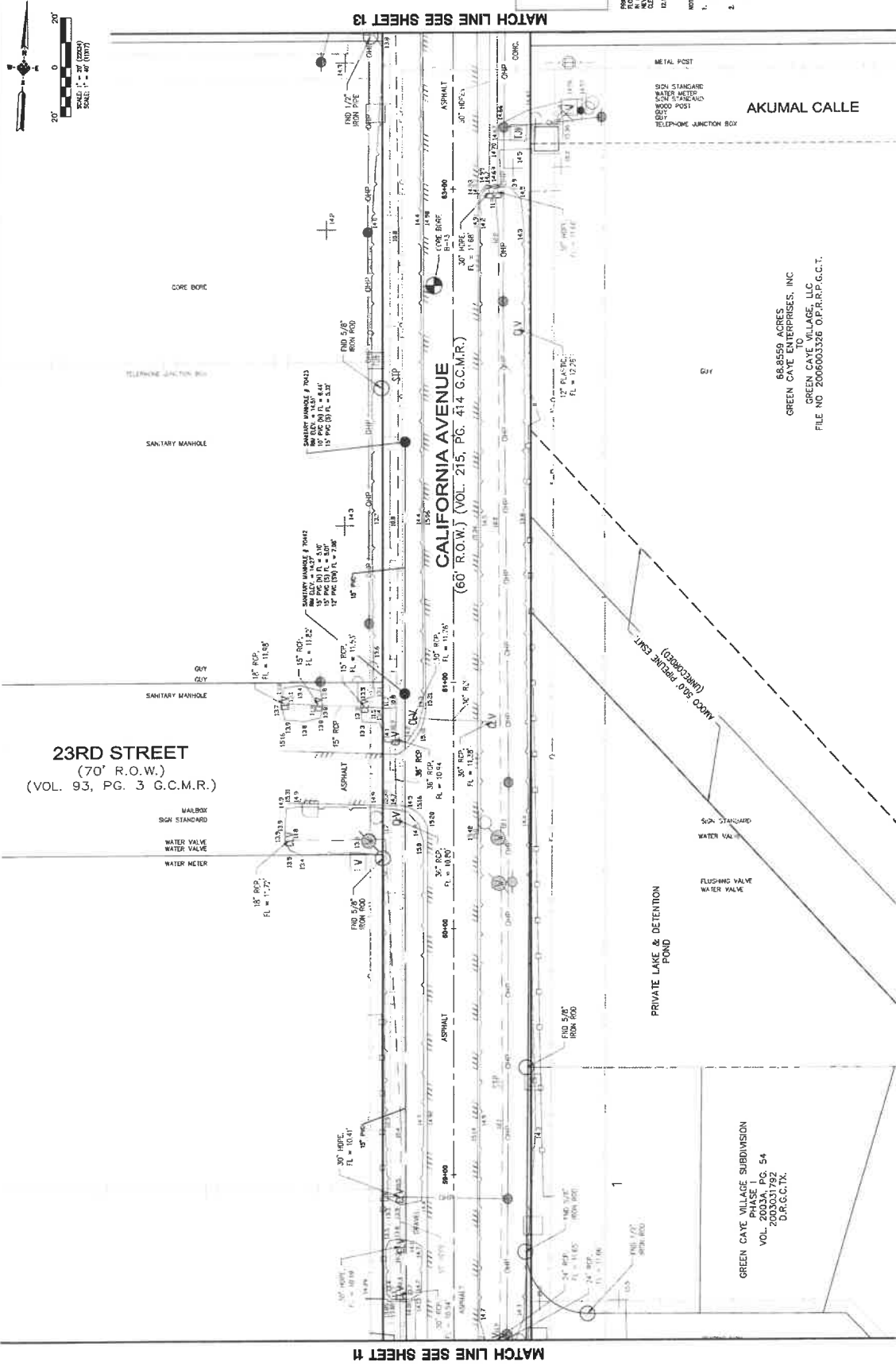
ABBREVIATION TABLE

FIN. FOUND	FIN. POINT OF COMMENCING
CHALK	CHALK MAP RECORDS OF GALVESTON COUNTY
G.C.O.R.	GRAND COUNCIL OF GALVESTON COUNTY
O.P.R.P.	OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY TEXAS

NOTES:

- THE SURVEY WAS CONDUCTED IN 1975 BY SURVEYOR MICHAEL BROWN, CENTRAL TEXAS.
- THE CORNERS SHOWN BELOW ARE BEING SURVEYED AND SHOWN TO BE IN ACCORDANCE WITH THE FOLLOWING CORNER RECORDS (SEE SCALE FACTOR COMPUTED):

PRIMARY BENCHMARK: FLOOR PLAN REFERENCE MARK NUMBER 1000 IS A METAL ROD PLACED IN THE INTERIOR OF THE BUILDING AT THE INTERSECTION OF THE MAIN LANE AND TRIM LANE IN LOT 14. THE CLEAR CENTER INTERSECTION IS 14.15 FEET FROM THE MAIN LANE AND 14.15 FEET FROM THE TRIM LANE.



MATCH LINE SEE SHEET #

MATCH LINE SEE SHEET 13

PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th EAST
 SHEET NO. 24 / 163
 SCALE: 1"=20'

PROJECT DESCRIPTION: TOPOGRAPHIC SURVEY SHEET (12 OF 14)
 DRAWN BY: CHS
 CHECKED BY: MLS

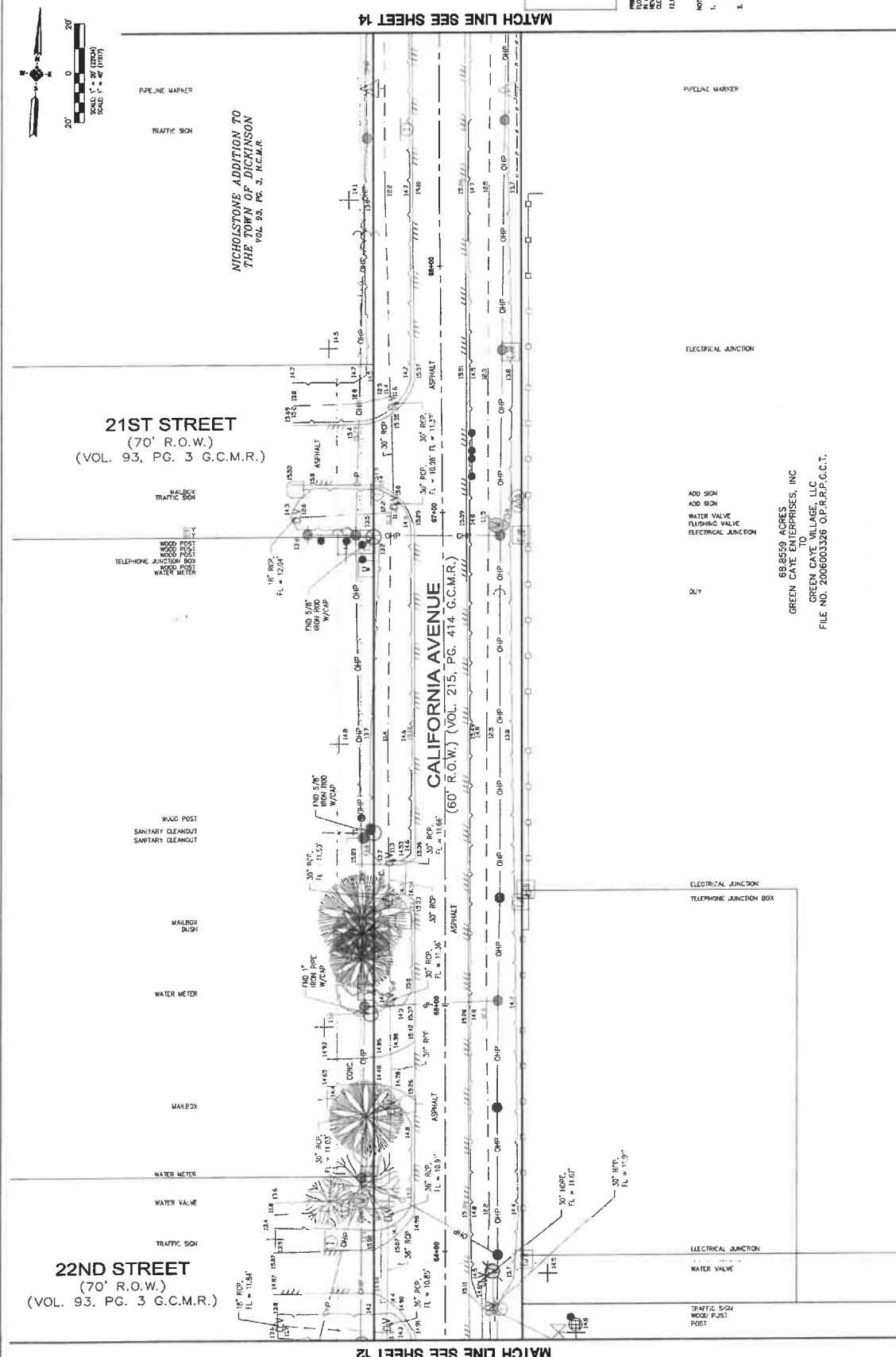


GALVESTON COUNTY
 ENGINEERING DEPARTMENT

NO.	REVISIONS	DATE	NAME

68.8559 ACRES
 GREEN CAYE ENTERPRISES, INC
 GREEN CAYE VILLAGE, LLC
 FILE NO 2006003326 O.P.R.P.G.C.T.

GREEN CAYE VILLAGE SUBDIVISION
 PHASE PG. 54
 VOL. 2003037892
 D.P.R.P.G.C.TX.



SYMBOL LEGEND

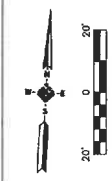
- WATER METER
- WATER VALVE
- MAIL BOX
- FIRE HYDRANT
- GAS VALVE
- GAS METER
- GAS LINE HANGER
- OUTSIDE GAS METER
- OUTSIDE GAS VALVE
- ELECTRICAL JUNCTION BOX
- TELEPHONE JUNCTION BOX
- TRAFFIC SIGN
- STREET LIGHT STANDARD
- AREA LIGHT
- TRAFFIC SIGN
- TYPE "A" SHEET
- TYPE "B" SHEET
- TYPE "C" SHEET
- TYPE "D" SHEET
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN-OUT
- CABLE TV MARKER
- CABLE TV JUNCTION BOX
- TRAFFIC SIGN
- VOTER PILE
- MAIL BOX
- CORE BORE
- WOOD FENCE
- CHAIN LINK FENCE
- BRICK WALL
- TOP OF BANK
- OTCH FLOW LINE
- FIBER-OPTIC LINE
- GAS LINE
- FLAT, NATURAL GROUND W/LEVEL
- CLV. GULCH

ABBREVIATION TABLE

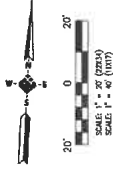
- FINO. FOUND
- POC. POINT OF COMMENCING
- POB. POINT OF BEGINNING
- CL. CENTERLINE
- CL. CL. CENTERLINE
- D.P.R.P.P. OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF GALVESTON COUNTY TEXAS

NOTES:

- THE RECORDS OF GALVESTON COUNTY, TEXAS, SHOWING THE ORIGINAL SURVEY OF THIS PROPERTY, IS BASED UPON THE CORNER OF THE SECTION 31, T.14N. R.10E. S.20E. OF GALVESTON COUNTY, TEXAS.
- THE COORDINATE SYSTEM SHOWN HEREON ARE TEXAS SOUTH CENTRAL COORDINATE SYSTEM (NAD 83) WITH THE DATUM OF 1983. THE SCALE FACTOR IS 0.999997.



NO.	REVISIONS	DATE	NAME
<p style="text-align: center;">GALVESTON COUNTY ENGINEERING DEPARTMENT</p>			
<p>68,860 ACRES, GREEN CAVE ENTERPRISES, INC. TO GREEN CAVE VILLAGE, LLC FILE NO. 2006003326 O.P.R.P.C.C.T.</p>			
<p>PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th EAST</p>			
SHEET DESCRIPTION		SHEET NO.	
TOPOGRAPHIC SURVEY SHEET (13 OF 14)		25 / 103	
DRAWN BY		DATE	
CNG			
CHECKED BY		SCALE	
MJB		1"=20'	



SYMBOL LEGEND

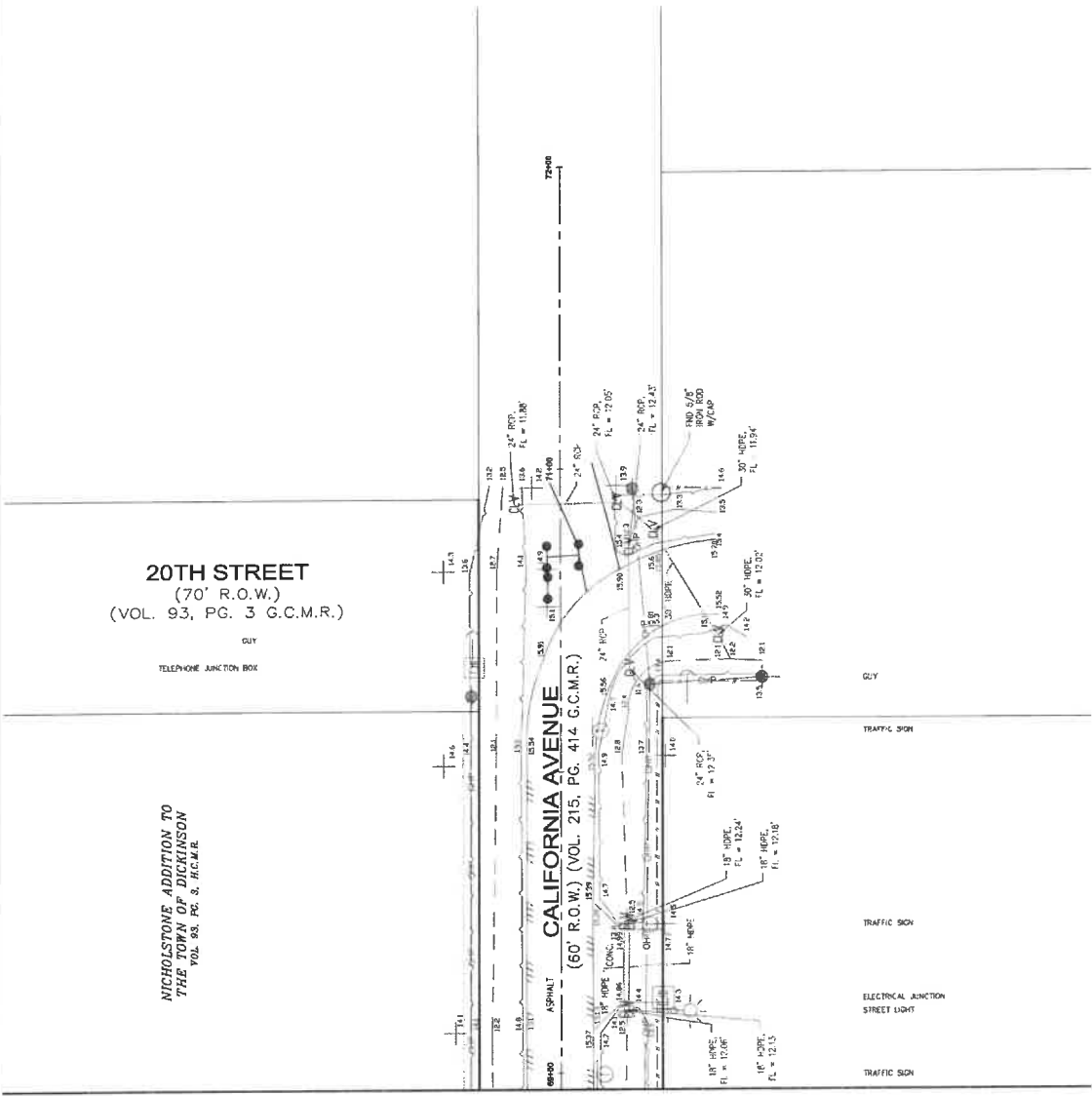
- WATER VALVE
- ⊕ WATER METER
- ⊕ FIRE HYDRANT
- GAS VALVE
- GAS METER
- ⊕ POWER POLE
- OVER HEAD POWER LINE
- ⊕ ELECTRICAL JUNCTION BOX
- ⊕ TELEPHONE JUNCTION BOX
- ⊕ TELEPHONE TELEPHONE MARKER
- ⊕ TRAFFIC LIGHT STANDARD
- ⊕ STREET LIGHT STANDARD
- ⊕ TRAFFIC SIGN
- ⊕ TRAFFIC SIGN
- ⊕ TYPE "A" INLET
- ⊕ TYPE "B" INLET
- ⊕ TYPE "C" INLET
- ⊕ STORM SEWER MANHOLE
- ⊕ STORM SEWER CLEAN-OUT
- ⊕ CABLE TV MANHOLE
- ⊕ CABLE TV JUNCTION BOX
- ⊕ PEDESTAL MARKER
- ⊕ VENT PIPE
- ⊕ MAIL BOX
- ⊕ CORE BORE
- SANDY LOAM FENCE
- WOODPOST IRON FENCE
- SHARED WIRE FENCE
- BRICK WALL
- TOP OF BANK
- DITCH FLOW LINE
- GAS LINE
- FIBER-OPTIC LINE
- TREE, NATURAL GROUND W/FLY, C.V. CLEAR

ABBREVIATION TABLE

- IND. FOUND
- POB. POINT OF BEGINNING
- POB. POINT OF BEGINNING
- C.C.R. COUNTY RECORDS OF GALVESTON COUNTY
- C.C.R. BOOK RECORDS OF GALVESTON COUNTY
- O.P.P.A.P. PROPERTY OF GALVESTON COUNTY TOOLS

PROPERTY INFORMATION:
 FLOODPLAIN REFERENCE MARK NUMBER 0008 IS A METAL ROD
 PLACED IN THE CENTER OF THE FLOODPLAIN REFERENCE MARK
 NUMBER 0008 AND TYPICAL CORNER IS PLACED IN THE
 CLEAR CORNER ADJACENT

- NOTES:**
- THE RECORDS CONTAINED HEREON ARE THE PROPERTY OF THE ENGINEER AND SHALL BE KEPT IN THE OFFICE OF THE ENGINEER.
 - THE CORRECTIONS SHOWN HEREON ARE THE PROPERTY OF THE ENGINEER AND SHALL BE KEPT IN THE OFFICE OF THE ENGINEER.





20TH STREET
 (70' R.O.W.)
 (VOL. 93, PG. 3 G.C.M.R.)

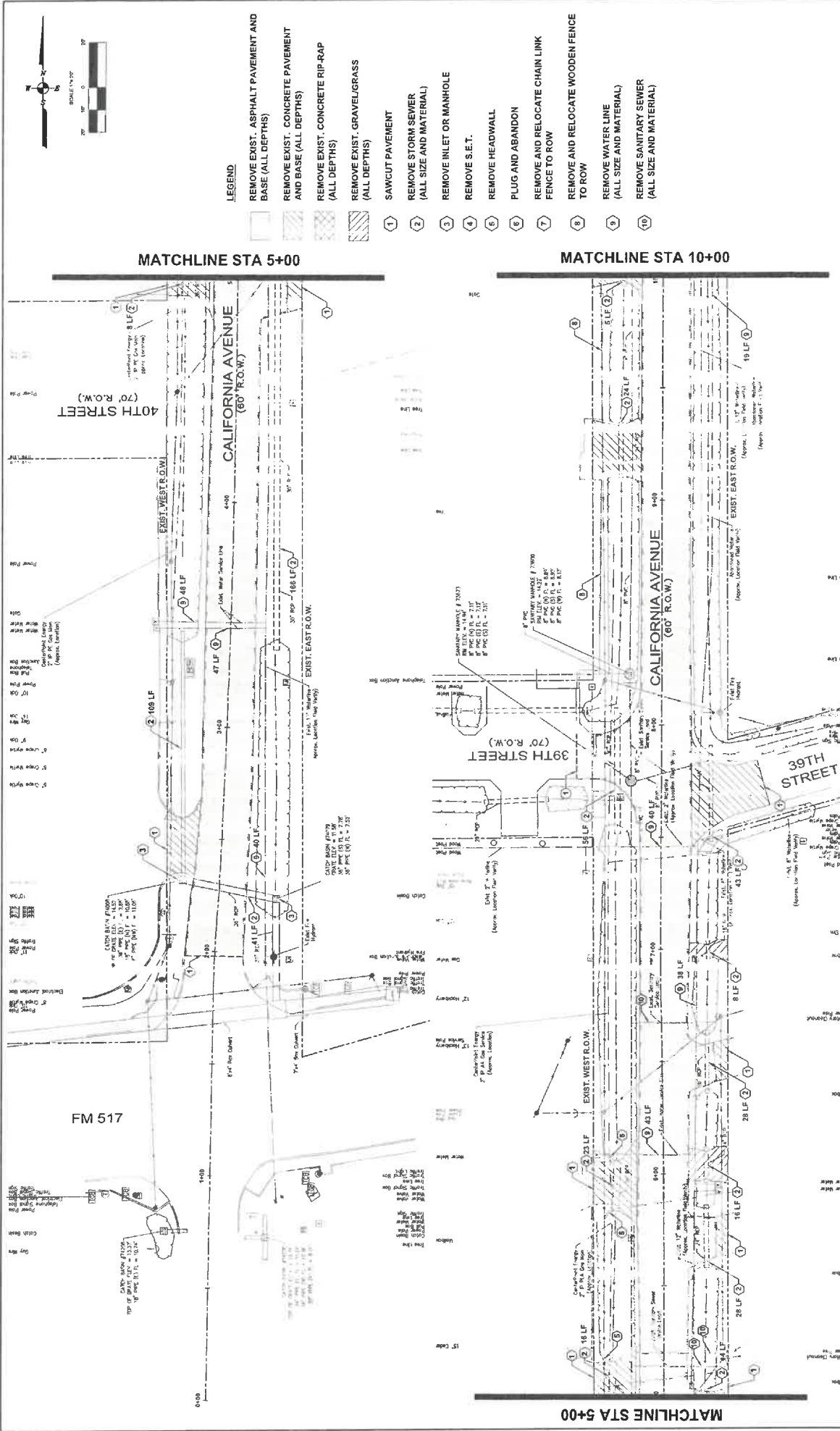
OUT
 TELEPHONE JUNCTION BOX

**NICHOLSTONE ADDITION TO
 THE TOWN OF DICKINSON**
 VOL. 83, PG. 3, R.O.W.E.

CALIFORNIA AVENUE
 (60' R.O.W.) (VOL. 215, PG. 414 G.C.M.R.)

MATCH LINE SEE SHEET 13

NO. REVISIONS	DATE NAME	 GALVESTON COUNTY ENGINEERING DEPARTMENT	 <small>1348 Hwy. 101, Suite 100 Houston, TX 77055 Phone: 713.933.1778 Fax: 713.933.1779</small>	PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th EAST SHEET DESCRIPTION: TOPOGRAPHIC SURVEY SHEET (14 OF 14) DRAWING NO.: CHG DATE: 11/20/20 SHEET NO.: 26 / 183
------------------	--------------	--	--	--



- LEGEND**
- REMOVE EXIST. ASPHALT PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE RIP-RAP (ALL DEPTHS)
 - REMOVE EXIST. GRAVEL/GRASS (ALL DEPTHS)
 - SAWCUT PAVEMENT
 - REMOVE STORM SEWER (ALL SIZE AND MATERIAL)
 - REMOVE INLET OR MANHOLE
 - REMOVE S.E.T.
 - REMOVE HEADWALL
 - PLUG AND ABANDON
 - REMOVE AND RELOCATE CHAIN LINK FENCE TO ROW
 - REMOVE AND RELOCATE WOODEN FENCE TO ROW
 - REMOVE WATER LINE (ALL SIZE AND MATERIAL)
 - REMOVE SANITARY SEWER (ALL SIZE AND MATERIAL)

PROJECT TITLE	CALIFORNIA AVENUE
SHEET NUMBER	F.M. 517 TO 20th ST. EAST
DATE	REMOVAL PLAN
SCALE	STA 0+00 TO 10+00
DATE	1" = 20'

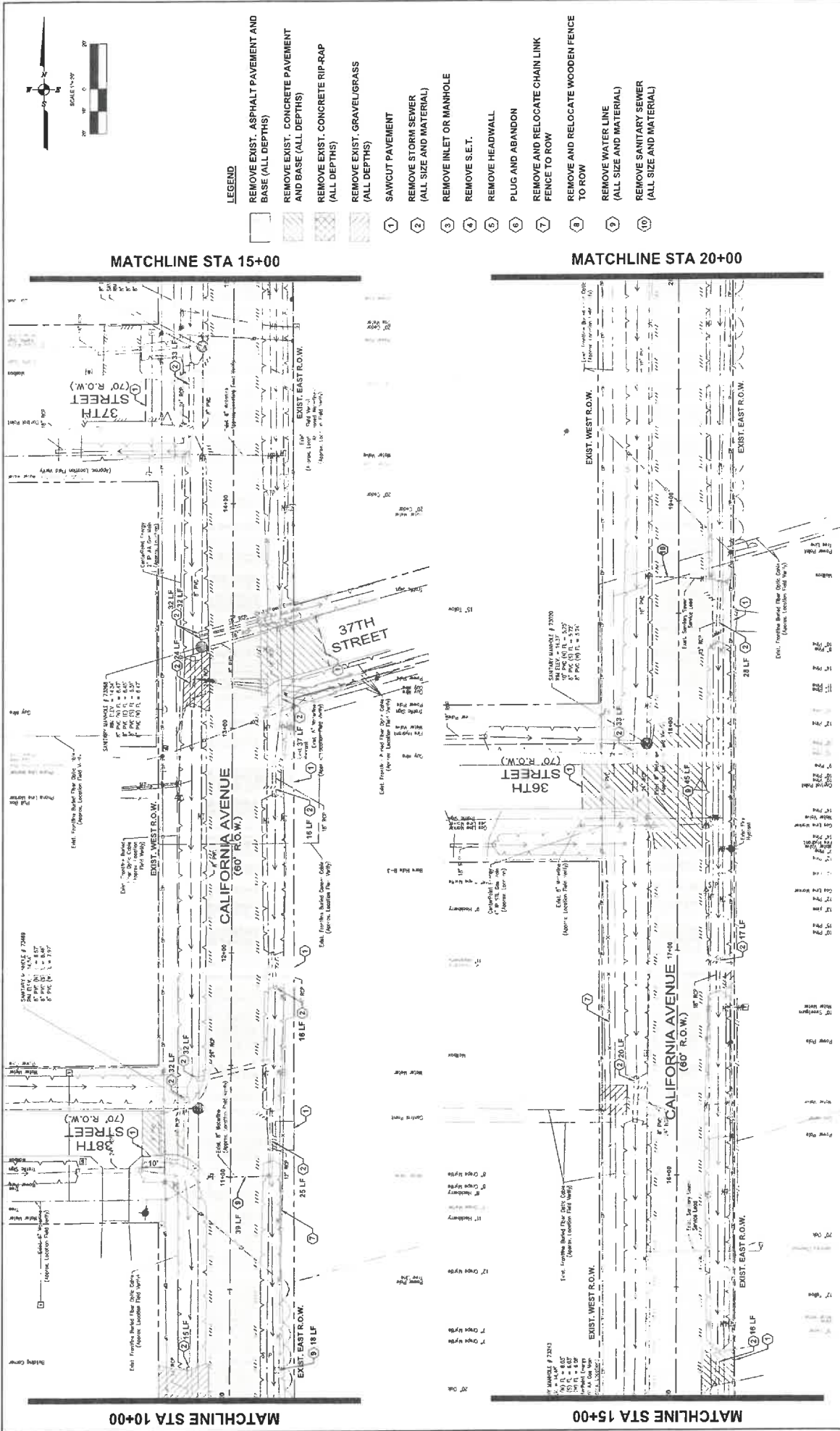


MEDONOUGH
 TDS Engineering, Inc.
 10000 S. Loop West, Suite 1000
 Houston, Texas 77047
 www.medonough.com



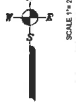
GALVESTON COUNTY ENGINEERING DEPARTMENT

NO.	REVISIONS	DATE	NAME



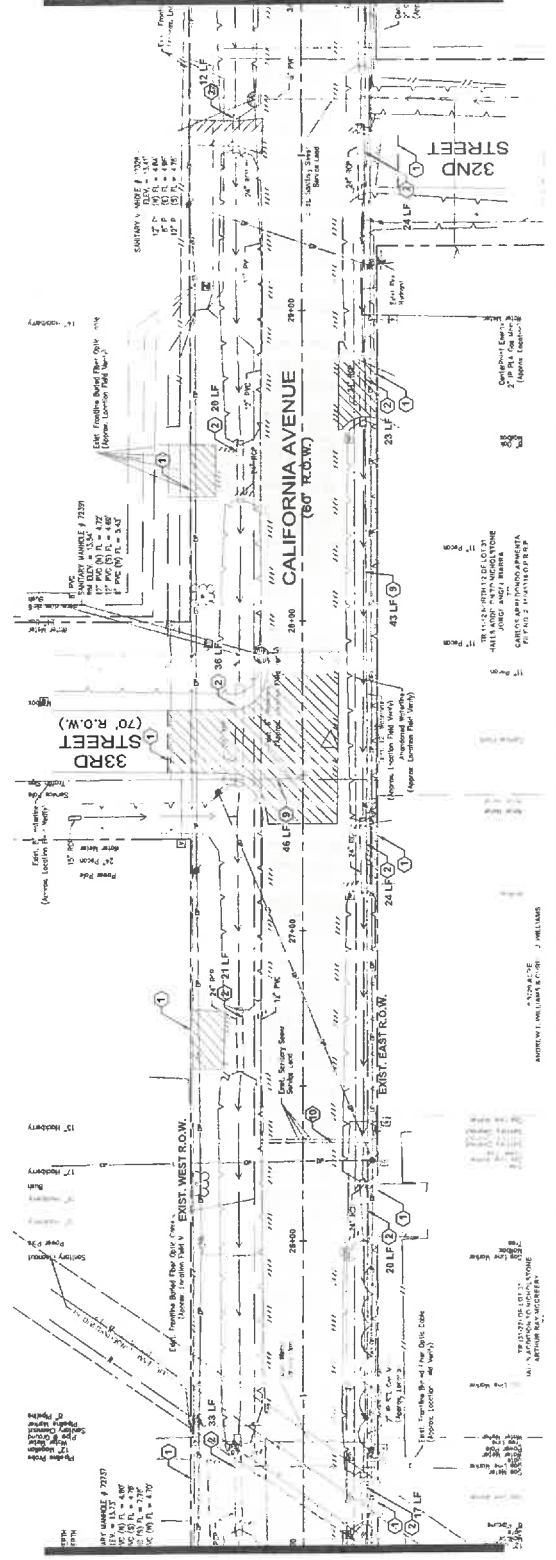
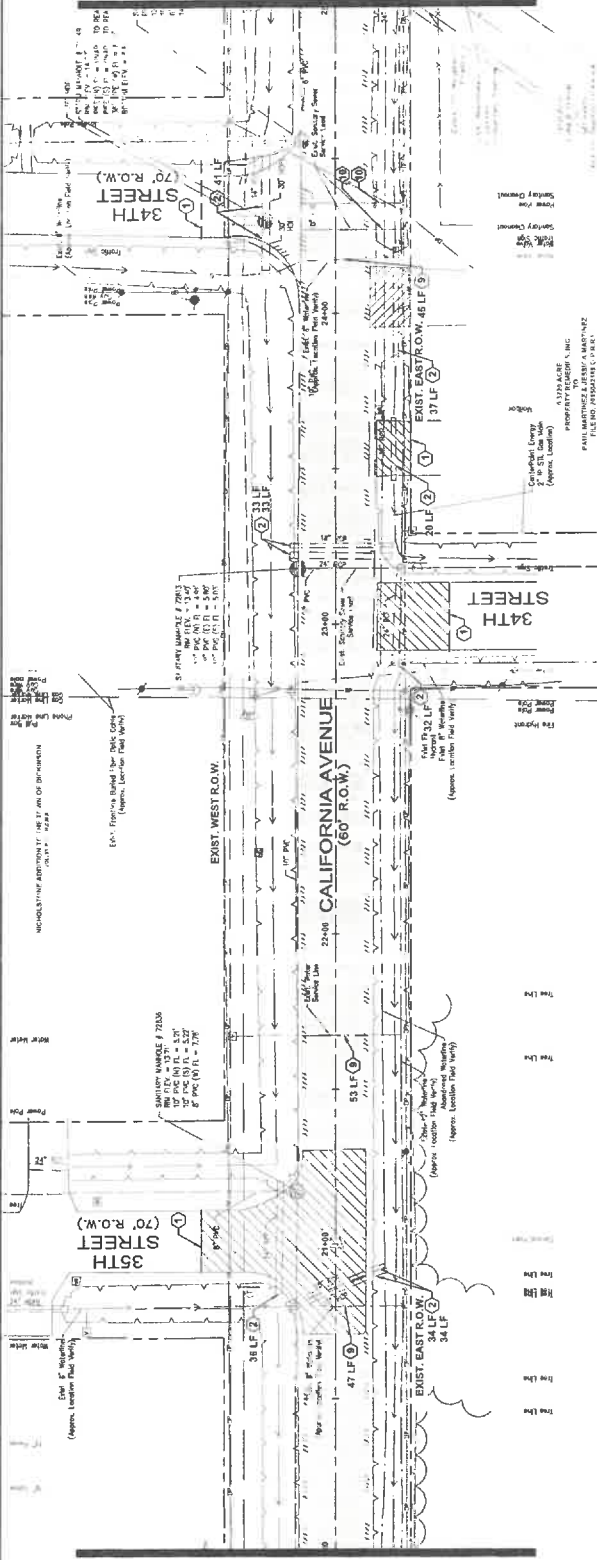
NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT			
MEDONOUGH		1915 Elm Registration No. 0103900 11015 Elm Registration No. F008347 6325 S.W. 11th Street Houston, Texas 77037 www.medonough.com	
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST REMOVAL PLAN STA 10+00 TO 20+00 1" = 20' DATE: 7/7/2023 SHEET NO.: 28 / 103			



MATCHLINE STA 25+00

MATCHLINE STA 30+00



- LEGEND**
- 1 REMOVE EXIST. ASPHALT PAVEMENT AND BASE (ALL DEPTHS)
 - 2 REMOVE EXIST. CONCRETE PAVEMENT AND BASE (ALL DEPTHS)
 - 3 REMOVE EXIST. CONCRETE RIP-RAP (ALL DEPTHS)
 - 4 REMOVE EXIST. GRAVEL/GRASS (ALL DEPTHS)
 - 5 SAWCUT PAVEMENT
 - 6 REMOVE STORM SEWER (ALL SIZE AND MATERIAL)
 - 7 REMOVE INLET OR MANHOLE
 - 8 REMOVE S.E.T.
 - 9 REMOVE HEADWALL
 - 10 PLUG AND ABANDON
 - 11 REMOVE AND RELOCATE CHAIN LINK FENCE TO ROW
 - 12 REMOVE AND RELOCATE WOODEN FENCE TO ROW
 - 13 REMOVE WATER LINE (ALL SIZE AND MATERIAL)
 - 14 REMOVE SANITARY SEWER (ALL SIZE AND MATERIAL)

NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE	
F.M. 517 TO 20th ST. EAST	
REMOVAL PLAN STA 20+00 TO 30+00	
DESIGNED BY: CH	CHECKED BY: AM
DRAWN BY: CH	DATE: 7/7/2023
SCALE: AS SHOWN	PROJECT NO: 23-183
DATE: 7/7/2023	1" = 20'

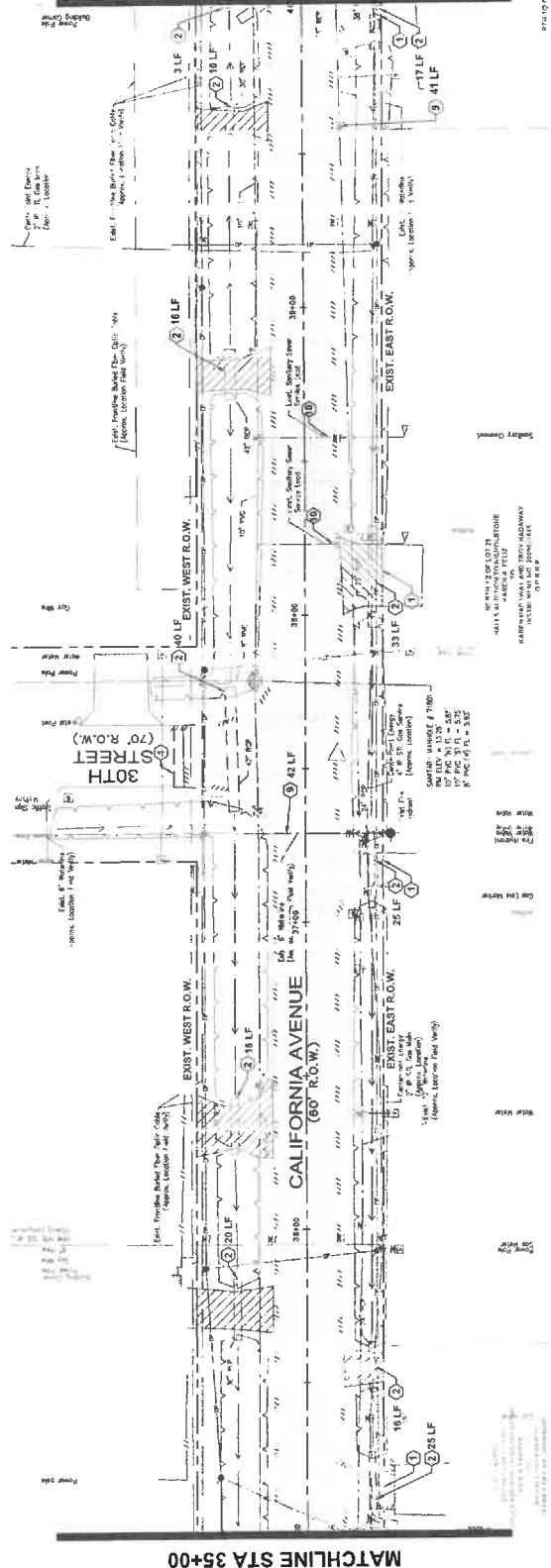
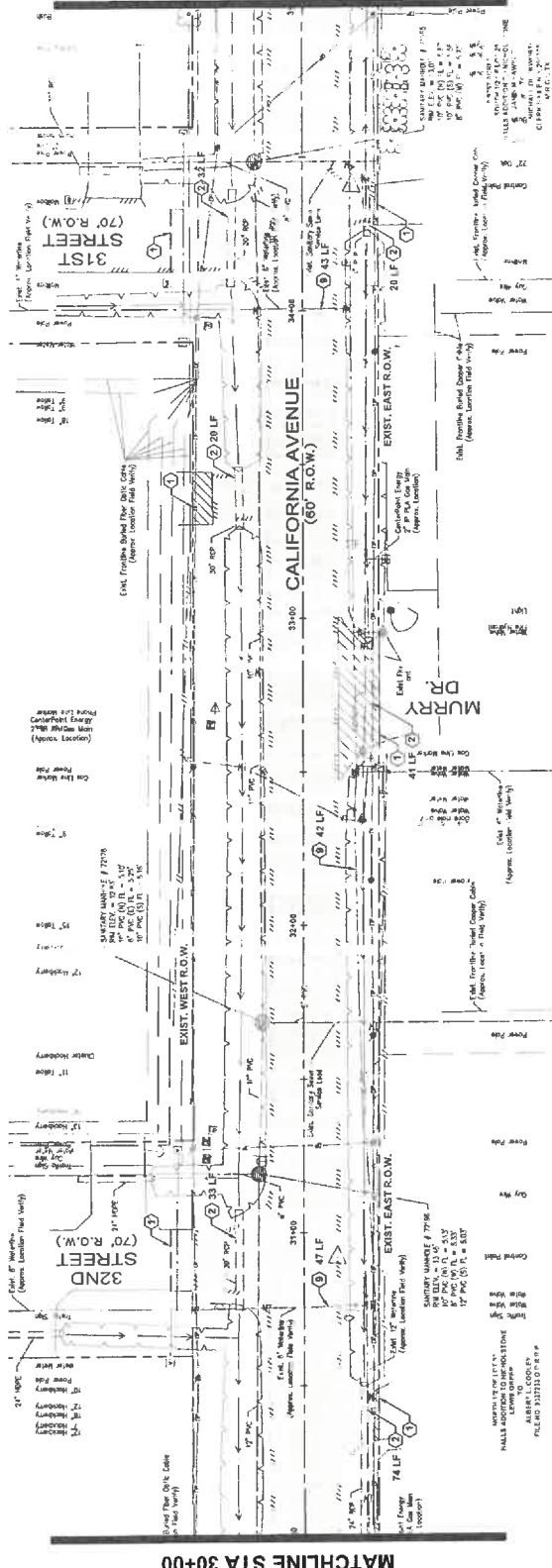


**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



MATCHLINE STA 35+00

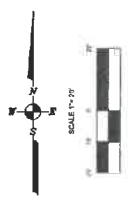
MATCHLINE STA 40+00



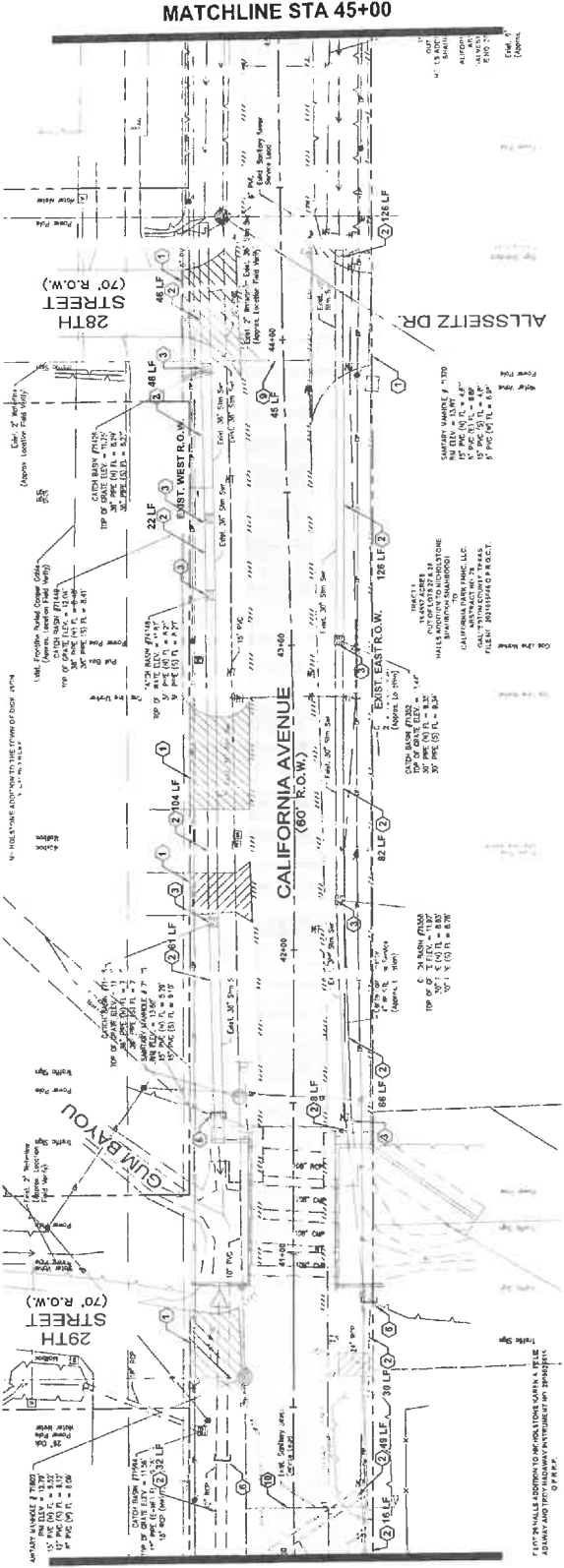
- LEGEND**
- REMOVE EXIST. ASPHALT PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE RIP-RAP (ALL DEPTHS)
 - REMOVE EXIST. GRAVEL/GRASS (ALL DEPTHS)
 - SAWCUT PAVEMENT
 - REMOVE STORM SEWER (ALL SIZE AND MATERIAL)
 - REMOVE INLET OR MANHOLE
 - REMOVE S.E.T.
 - REMOVE HEADWALL
 - PLUG AND ABANDON
 - REMOVE AND RELOCATE CHAIN LINK FENCE TO ROW
 - REMOVE AND RELOCATE WOODEN FENCE TO ROW
 - REMOVE WATER LINE (ALL SIZE AND MATERIAL)
 - REMOVE SANITARY SEWER (ALL SIZE AND MATERIAL)

NO.	REVISIONS	DATE	NAME

		GALVESTON COUNTY ENGINEERING DEPARTMENT	
		MEDONOUGH Civil Engineers & Surveyors 5625 Schramm Lane Houston, Texas 77057 Phone: (713) 915-9900 www.medonough.com	
PROJECT TITLE CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST REMOVAL PLAN STA 30+00 TO 40+00		SHEET DESCRIPTION CH	DATE 7/7/2023
DRAWN BY AM		CHECKED BY AM	DATE 9/6/2023
SCALE 1" = 20'		STANDARD CSGD	

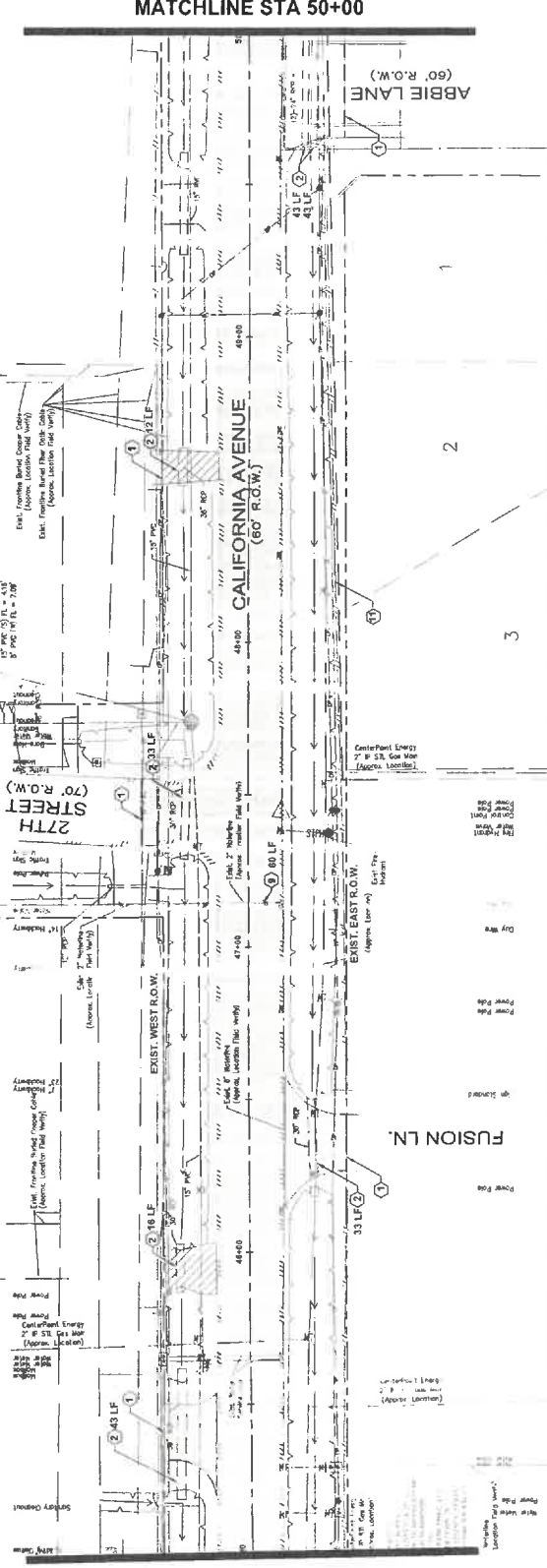


MATCHLINE STA 40+00



MATCHLINE STA 45+00

MATCHLINE STA 45+00



MATCHLINE STA 50+00

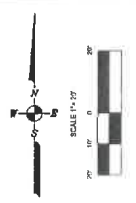
- LEGEND**
- REMOVE EXIST. ASPHALT PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE RIP-RAP (ALL DEPTHS)
 - REMOVE EXIST. GRAVEL/GRASS (ALL DEPTHS)
 - SAWCUT PAVEMENT
 - REMOVE STORM SEWER (ALL SIZE AND MATERIAL)
 - REMOVE INLET OR MANHOLE
 - REMOVE S.E.T.
 - REMOVE HEADWALL
 - PLUG AND ABANDON
 - REMOVE AND RELOCATE CHAIN LINK FENCE TO ROW
 - REMOVE AND RELOCATE WOODEN FENCE TO ROW
 - REMOVE WATER LINE (ALL SIZE AND MATERIAL)
 - REMOVE SANITARY SEWER (ALL SIZE AND MATERIAL)

NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE	
F.M. 517 TO 20th ST. EAST	
REMOVAL PLAN STA 40+00 TO 50+00	
DATE: 7/7/2023	SCALE: 1" = 20'
DESIGNED BY: CH	CHECKED BY: AM
DRAWN BY: CH	DATE: 9/16/2023

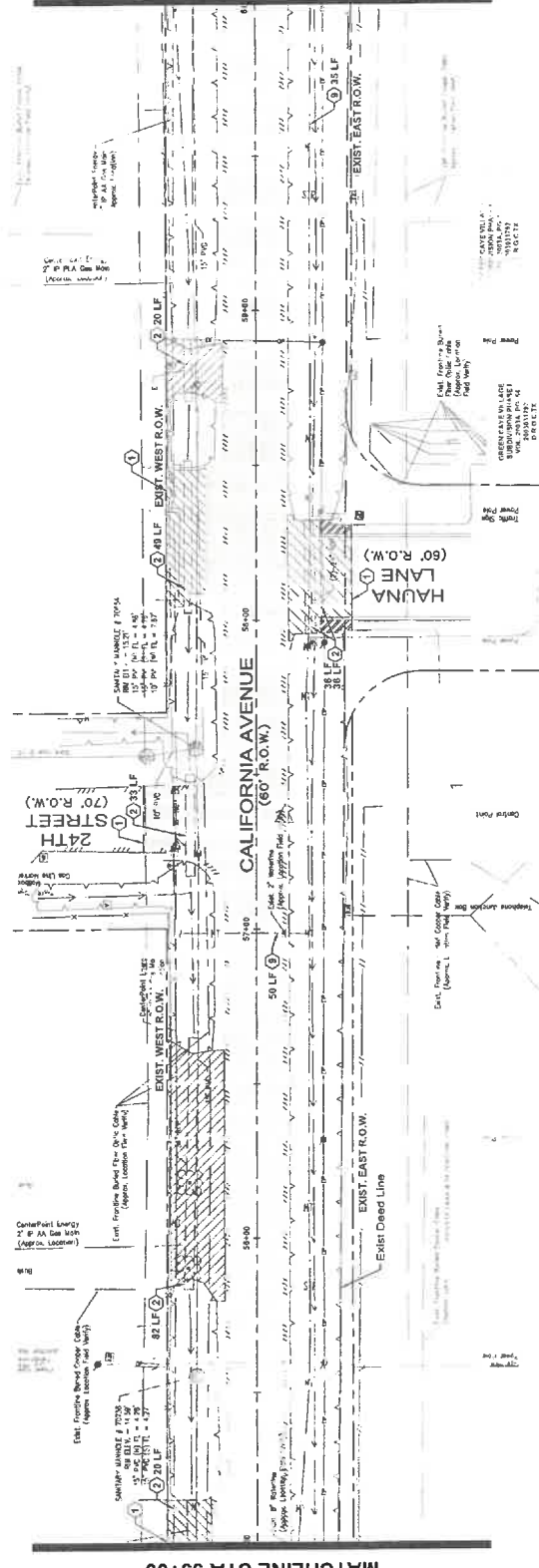
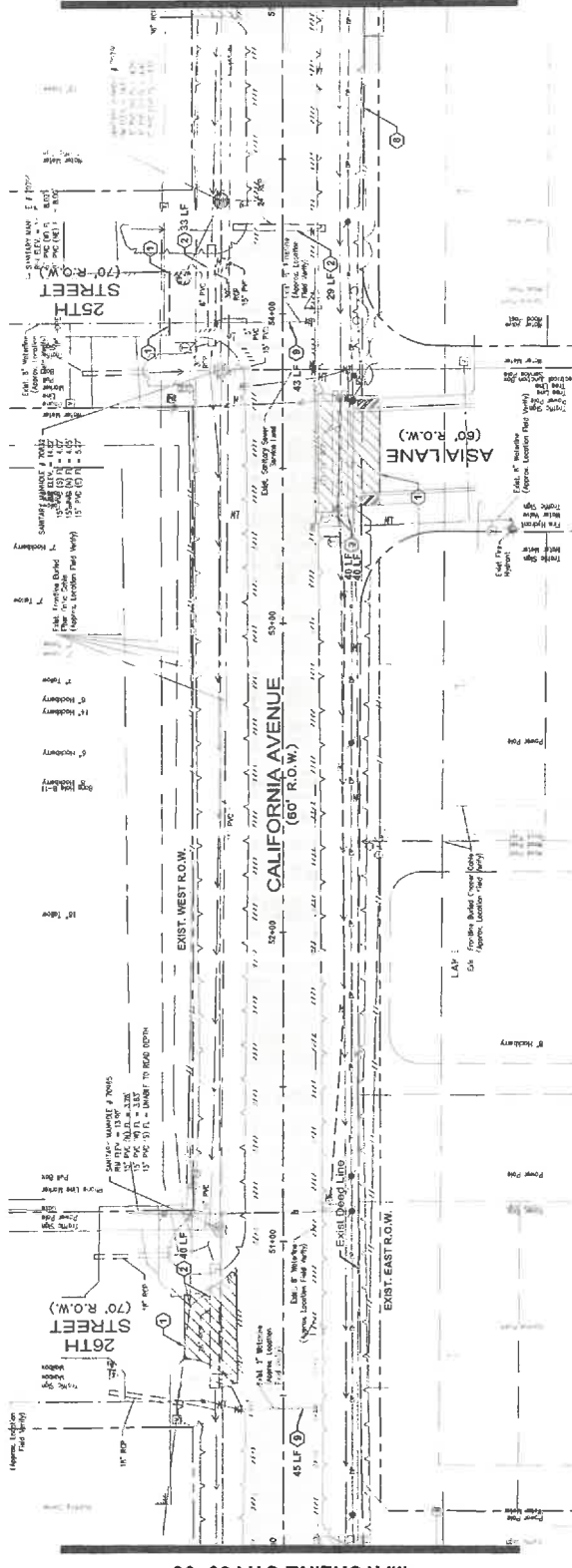
MEDONOUGH Civil, Mechanical & Electrical Engineering 10000 Spring Branch Rd., Suite 1000 Houston, Texas 77037 (713) 975-9900 www.meehan.com	

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



MATCHLINE STA 55+00

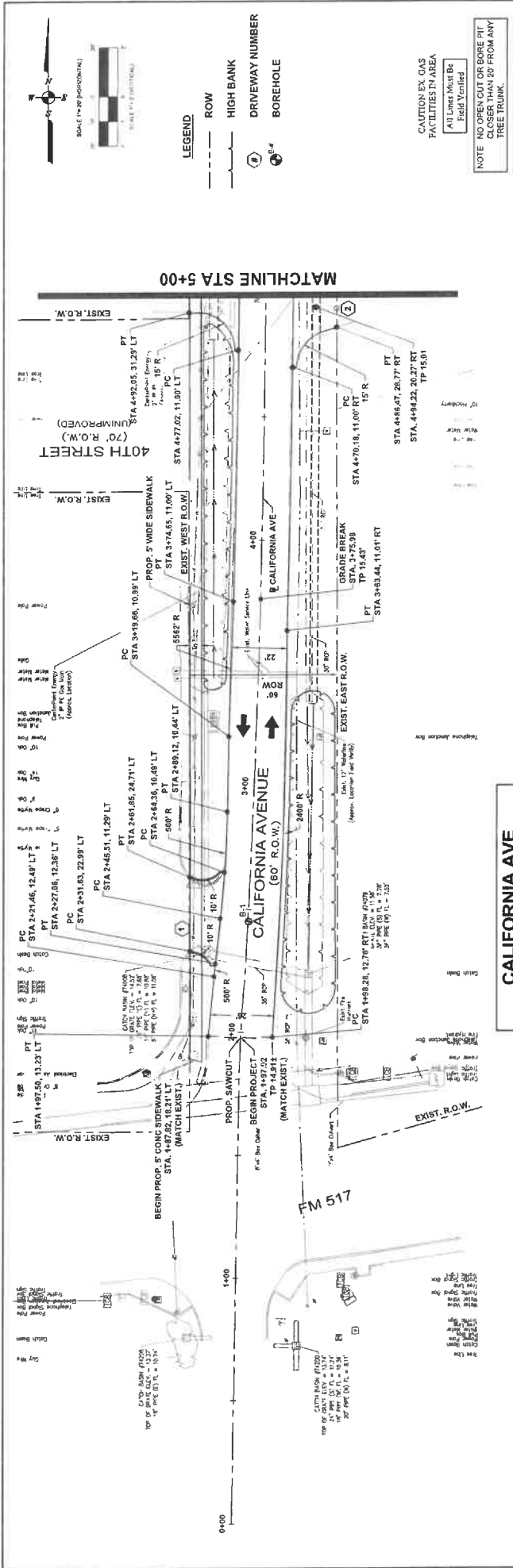
MATCHLINE STA 60+00



- LEGEND**
- REMOVE EXIST. ASPHALT PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE PAVEMENT AND BASE (ALL DEPTHS)
 - REMOVE EXIST. CONCRETE RIP-RAP (ALL DEPTHS)
 - REMOVE EXIST. GRAVEL/GRASS (ALL DEPTHS)
 - SAWCUT PAVEMENT
 - REMOVE STORM SEWER (ALL SIZE AND MATERIAL)
 - REMOVE INLET OR MANHOLE
 - REMOVE S.E.T.
 - REMOVE HEADWALL
 - PLUG AND ABANDON
 - REMOVE AND RELOCATE CHAIN LINK FENCE TO ROW
 - REMOVE AND RELOCATE WOODEN FENCE TO ROW
 - REMOVE WATER LINE (ALL SIZE AND MATERIAL)
 - REMOVE SANITARY SEWER (ALL SIZE AND MATERIAL)

NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE	
F.M. 517 TO 20th ST. EAST	
REMOVAL PLAN STA 50+00 TO 60+00	
DRAWN BY: CH	CHECKED BY: AM
DATE: 7/7/2023	SCALE: 1" = 20'



NO.	REVISIONS	DATE	NAME
18			
16			
14			
12			
10			
8			
6			
4			

CALIFORNIA AVE

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE

DATE: 7/7/2023
 DRAWN BY: CH
 CHECKED BY: AM
 SCALE: 1"=20' HORIZONTAL, 1"=2' VERTICAL

18 16 14 12 10 8 6 4

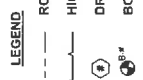
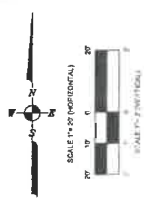
5+00 4+00 3+00 2+00 1+00

GALVESTON COUNTY ENGINEERING DEPARTMENT

MEDONOUGH
 Civil Engineering & Surveying
 12255 Schwabacher Lane
 Houston, Texas 77057
 www.medonough.com

9/6/2023

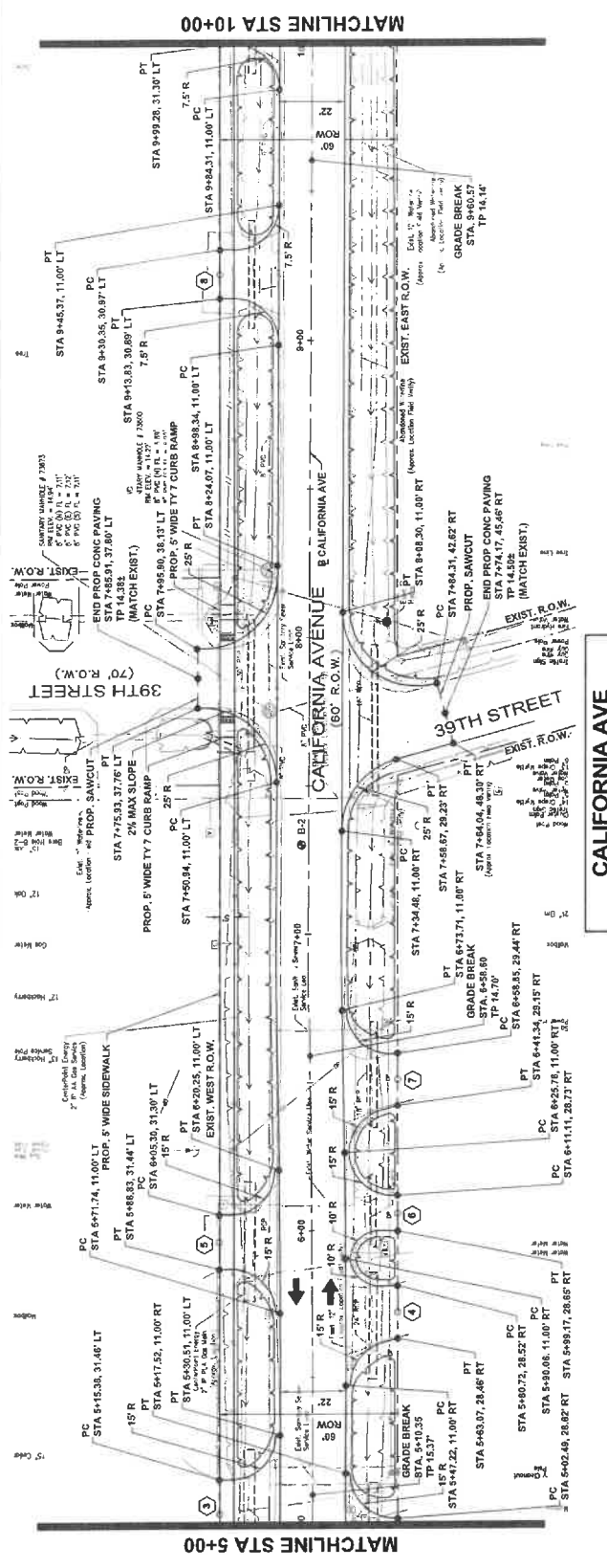
NOTE: 1) THE LOCATION OF THE EXISTING UTILITIES SHOWN IS APPROXIMATE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY DAMAGES AS A RESULT OF THE CONTRACTOR'S FAILURE TO LOCATE & PRESERVE ALL EXISTING UTILITIES.



CAUTION: EX GAS FACILITIES IN AREA

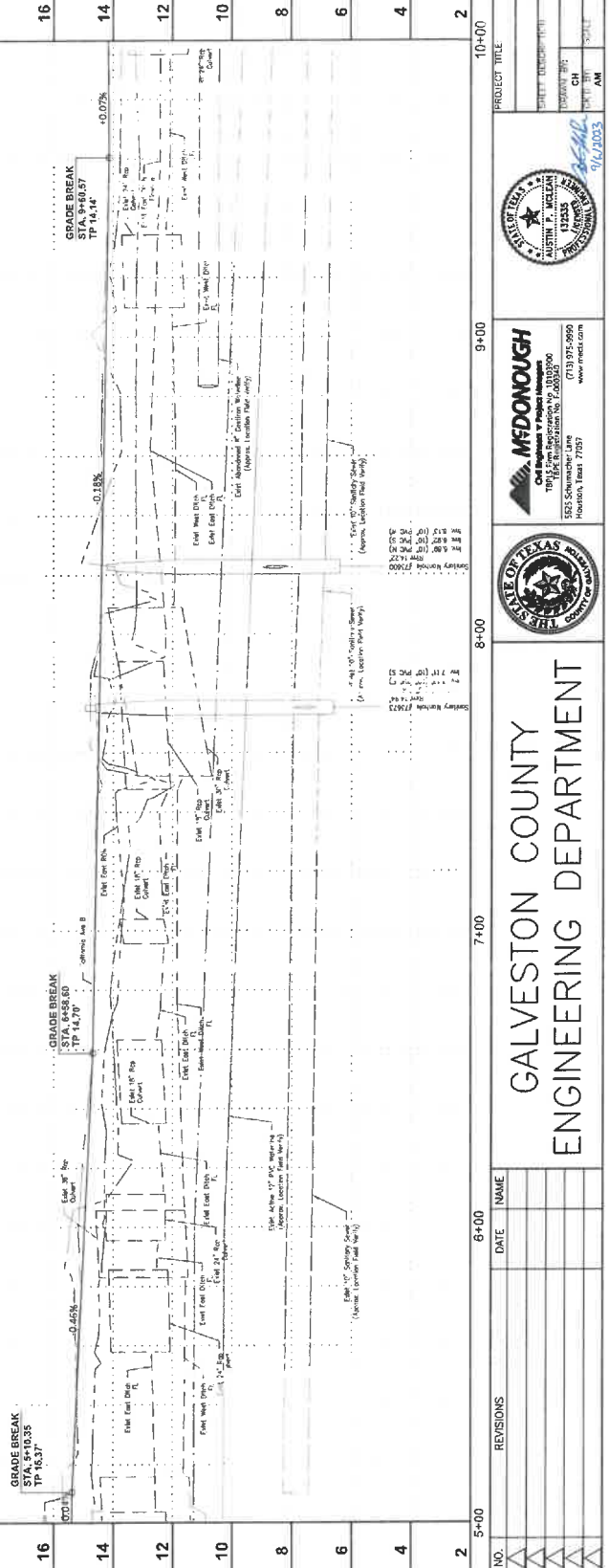
Depth Not Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



NOTE:

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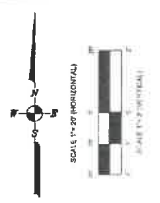
NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE
 STA 5+00 TO 10+00
 1"=20' HORIZONTAL 1"=2' VERTICAL



GALVESTON COUNTY ENGINEERING DEPARTMENT

NO.	REVISIONS	DATE	NAME



LEGEND

ROW

HIGH BANK

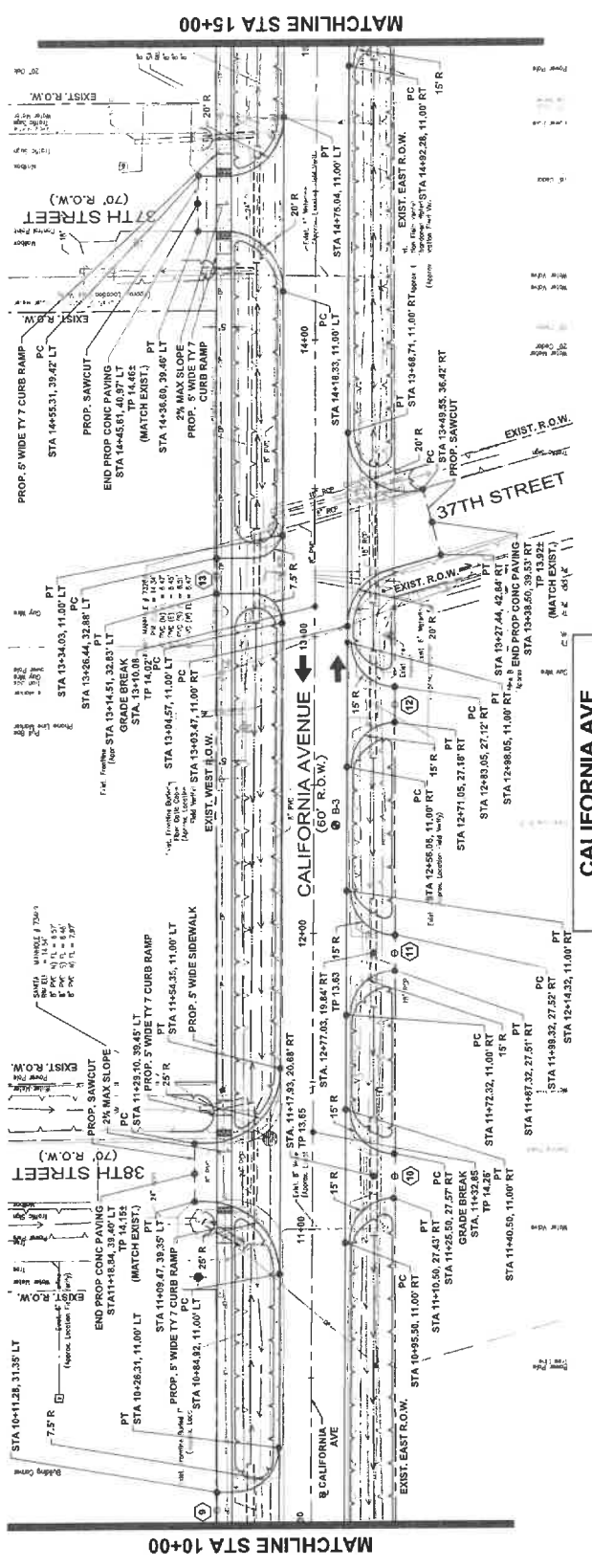
DRIVEWAY NUMBER

BOREHOLE

CAUTION EX. GAS FACILITIES IN AREA

All Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



NO.	REVISIONS	DATE	NAME
14			
12			
10			
8			
6			
4			
2			
0			

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE

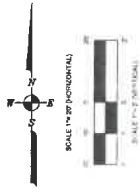
DATE: 7/7/2023
 SHEET NO: 10-00 TO 15-00
 SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL

15+00 14+00 13+00 12+00 11+00

MEDONOUGH
 1815 Shoreway, Houston, TX 77058
 281.453.8800
 www.medonough.com

GALVESTON COUNTY ENGINEERING DEPARTMENT

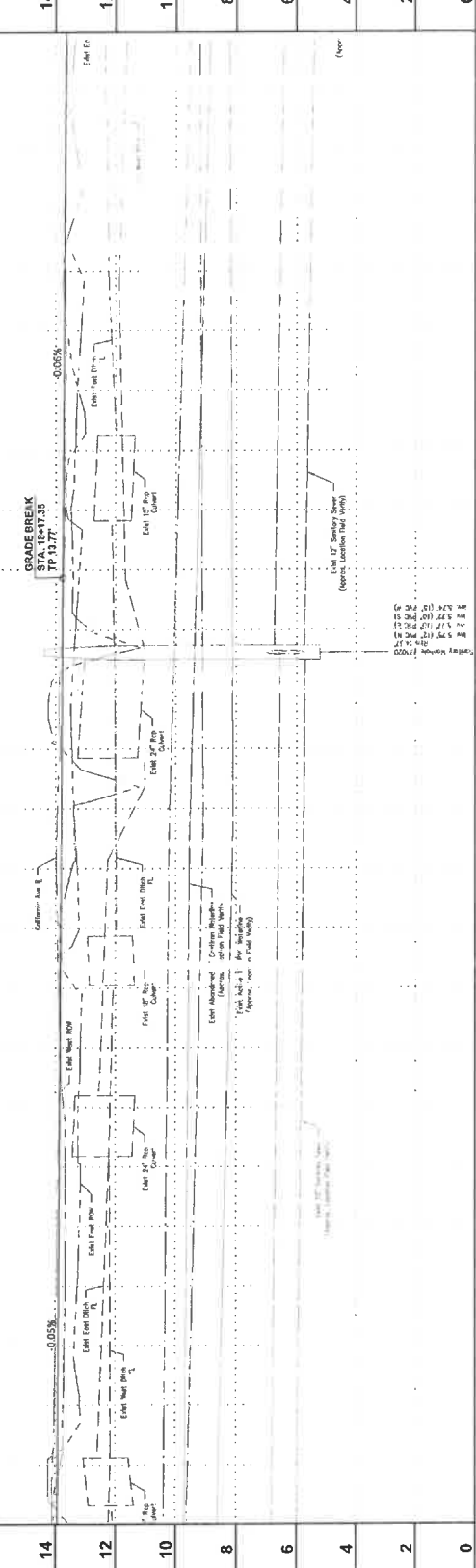
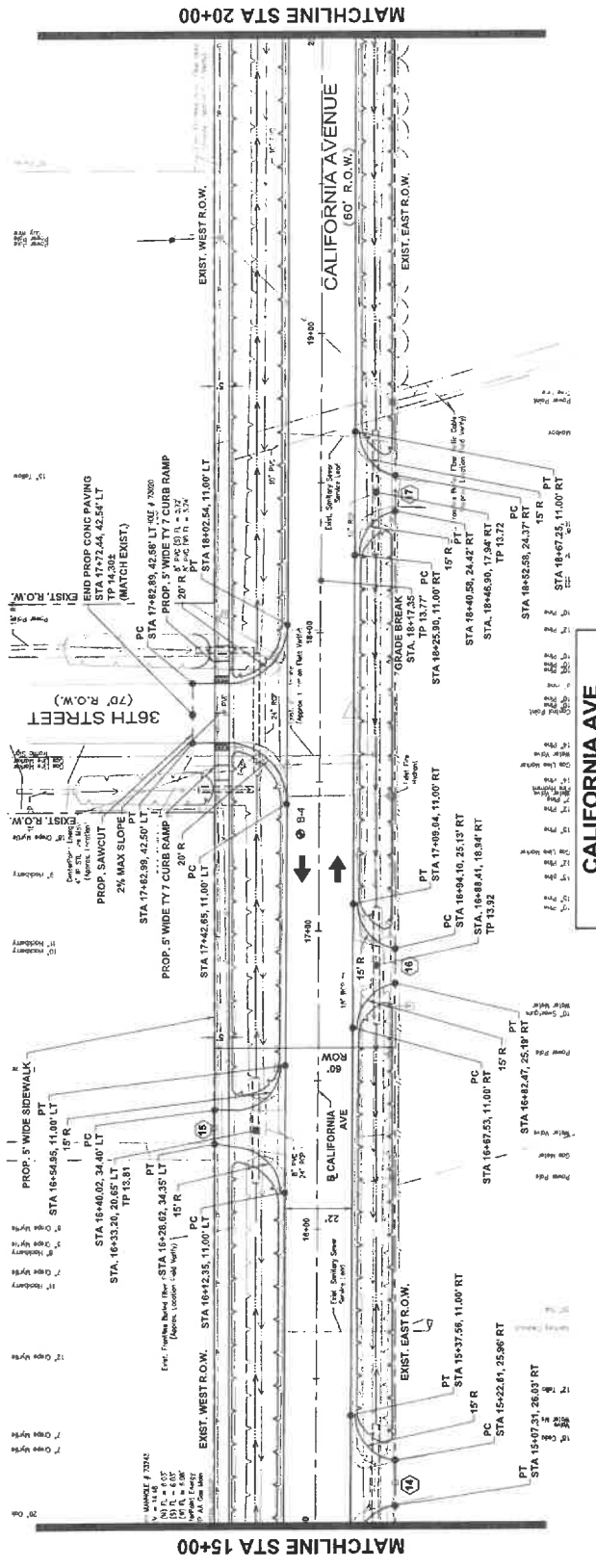
NO. DATE NAME



LEGEND
 --- ROW
 --- HIGH BANK
 --- DRIVEWAY NUMBER
 --- BOREHOLE

CAUTION EX. GAS FACILITIES IN AREA

Depth Not Field Verified
 NOTE NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



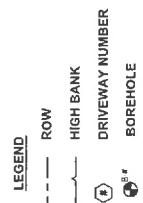
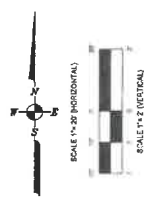
NO.	REVISIONS	DATE	NAME
14			
12			
10			
8			
6			
4			
2			
0			

NOTE:
 1) THE LOCATION OF THE EXISTING UTILITIES SHOWN IS APPROXIMATE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK. CONTRACTOR AGREES TO DAMAGES AS A RESULT OF THE CONTRACTOR'S FAILURE TO LOCATE & PRESERVE ALL EXISTING UTILITIES.

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE
 STA 15+00 TO 20+00
 DATE: 9/11/2023
 SHEET NO. 38 / 163



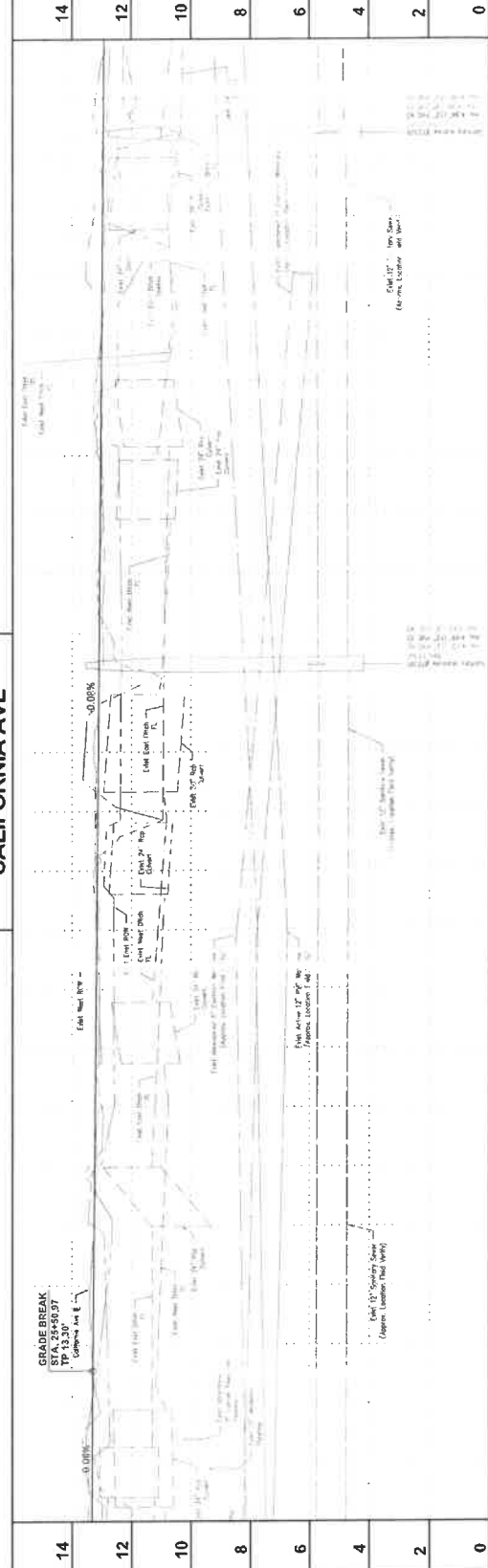
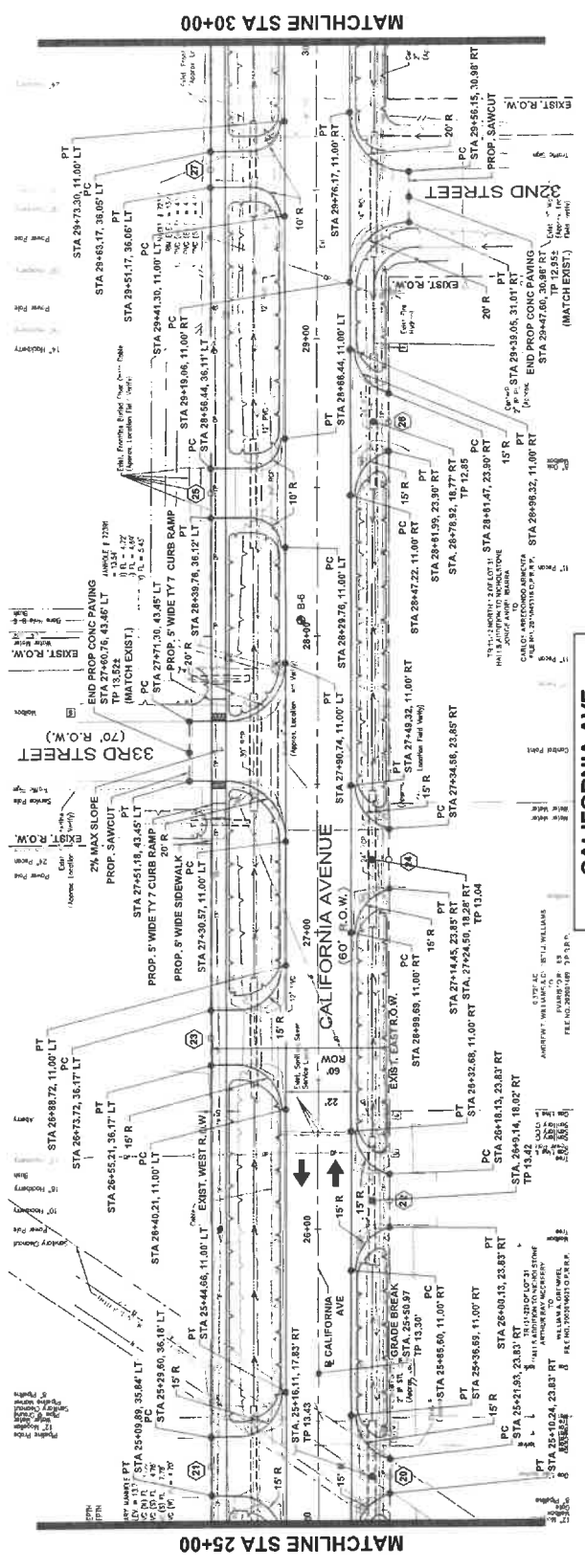
GALVESTON COUNTY ENGINEERING DEPARTMENT



CAUTION EX. GAS FACILITIES IN AREA

Depth Not Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.

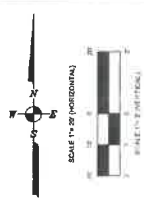


NO.	REVISIONS	DATE	NAME
14			
12			
10			
8			
6			
4			
2			
0			

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE
 STA 25+00 TO 30+00
 1"=20' HORIZONTAL 1"=2' VERTICAL



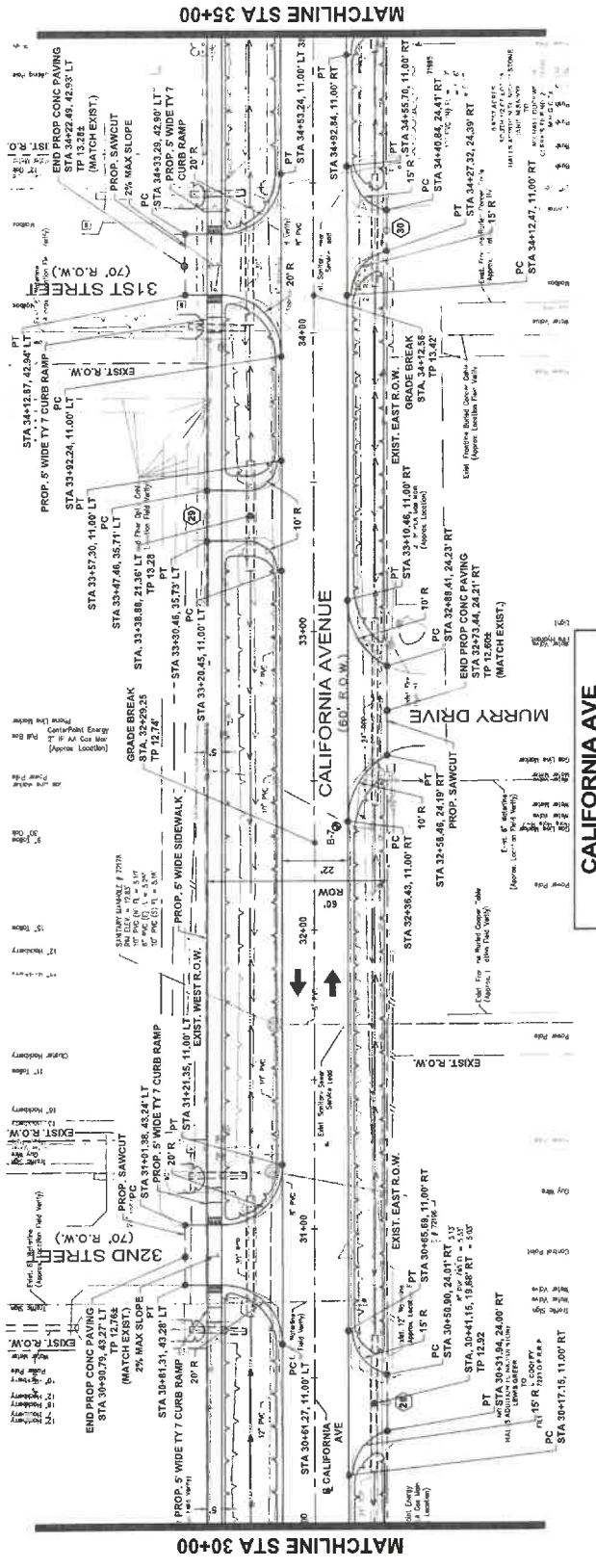
GALVESTON COUNTY
 ENGINEERING DEPARTMENT



- LEGEND**
- ROW
 - HIGH BANK
 - DRIVEWAY NUMBER
 - BOREHOLE

CAUTION EX. GAS FACILITIES IN AREA
All Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



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14	12	10	8	6	4	2	0

NO.	REVISIONS	DATE	NAME

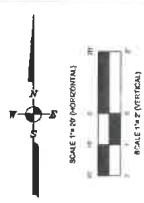
31+00 32+00 33+00 34+00 35+00

GALVESTON COUNTY ENGINEERING DEPARTMENT

MEDONOUGH
Civil, Mechanical, Electrical, and Surveying Engineers
1815 Elm Registration No. 0000000
5625 Schwabacher Lane
Houston, Texas 77057
www.medonough.com

STATE OF TEXAS
Professional Engineer
Austin, P. No. 12345
18335
9/6/2023

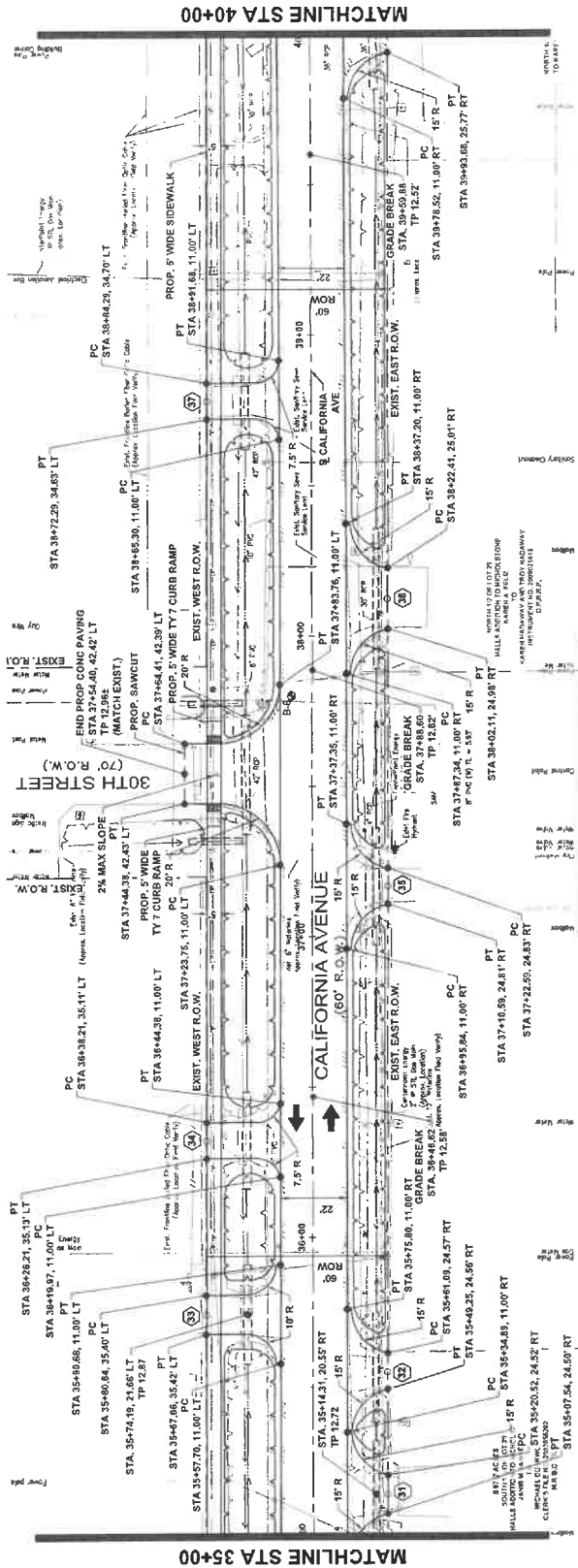
PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
ROADWAY PLAN AND PROFILE
DATE: 7/7/2023
SCALE: STA 30+00 TO 35+00
SHEET: 1 OF 2
VERTICAL: 1"=2'-0" HORIZONTAL: 1"=40'-0"



- LEGEND**
- ROW
 - HIGH BANK
 - DRIVEWAY NUMBER
 - BOREHOLE

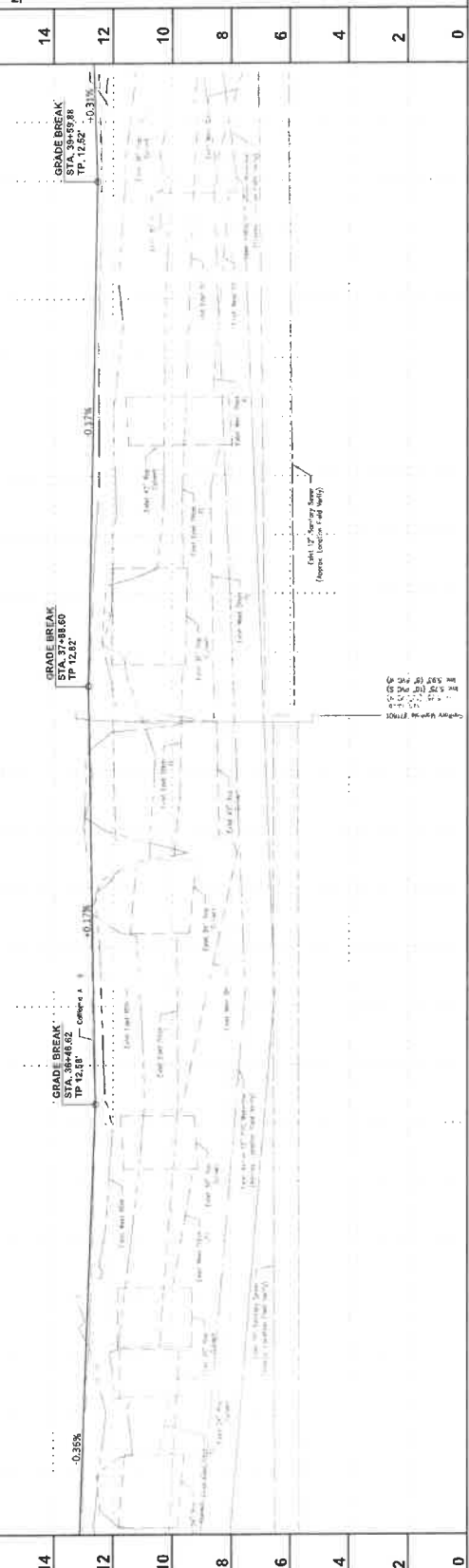
CAUTION EX. GAS FACILITIES IN AREA

NOTE NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



CALIFORNIA AVE

14	0
12	2
10	4
8	6
6	8
4	10
2	12
0	14



NO.	REVISIONS	DATE	NAME

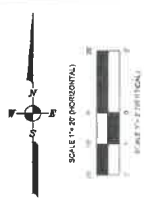
35+00 37+00 39+00 40+00

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE
 STA 35+00 TO 40+00

DATE: 9/17/2023
 CH: [Signature]
 SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL

STATE OF TEXAS
 ENGINEERING EXAMINER
 AUSTIN P. HOLLAND
 12325
 5625 Schmale Lane
 Houston, Texas 77057
 www.mecdot.com
 9/16/2023

GALVESTON COUNTY ENGINEERING DEPARTMENT

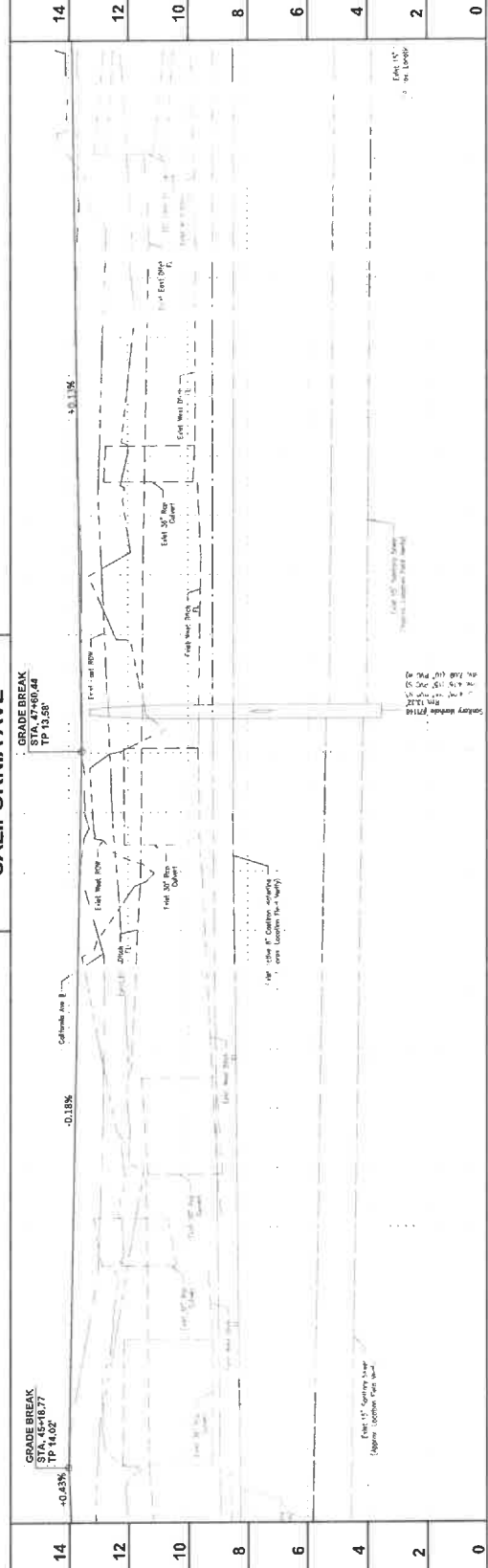
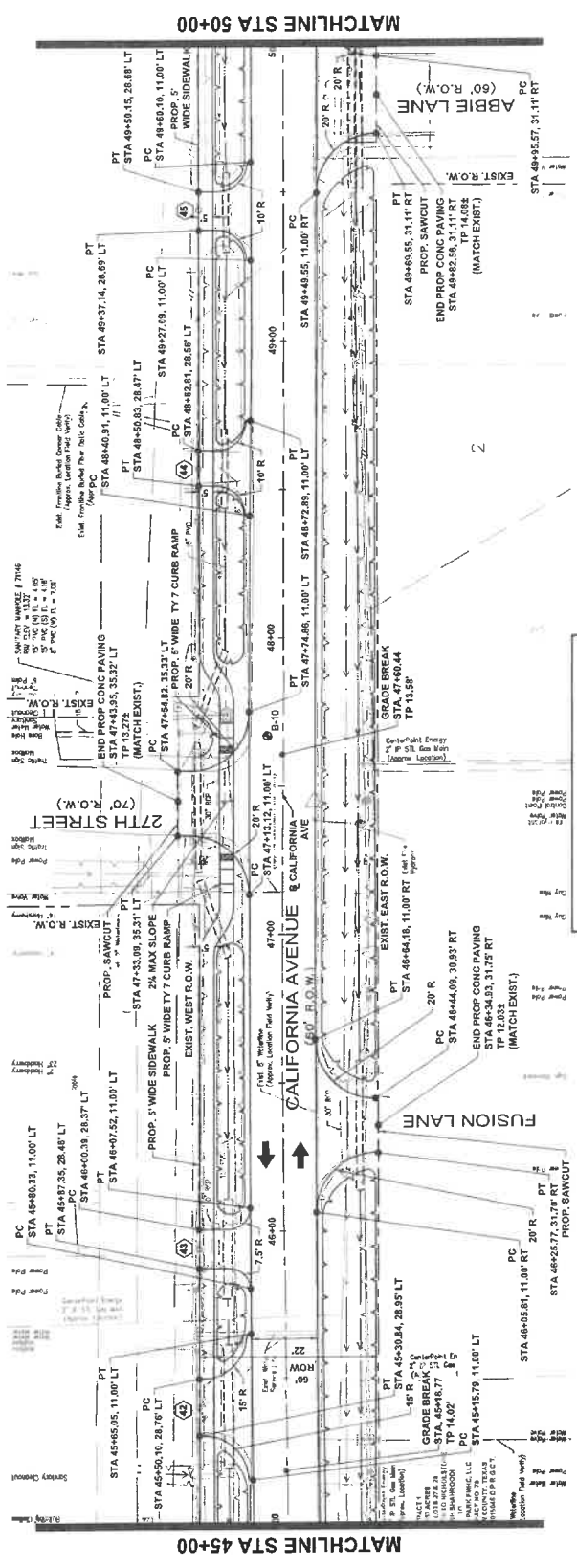


SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL

LEGEND
 --- ROW
 --- HIGH BANK
 --- DRIVEWAY NUMBER
 --- BOREHOLE

CAUTION: EXISTING GAS FACILITIES IN AREA
 All Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



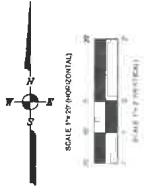
NO.	REVISIONS	DATE	NAME
14			
12			
10			
8			
6			
4			
2			
0			

PROJECT TITLE:	CALIFORNIA AVENUE
PROJECT NUMBER:	F.M. 517 TO 20th ST. EAST
DRAWN BY:	ROADWAY PLAN AND PROFILE
CHECKED BY:	STA 45+00 TO 50+00
DATE:	7/7/2023
SCALE:	1"=20' HORIZONTAL 1"=2' VERTICAL
DATE:	7/7/2023
BY:	AM

STATE OF TEXAS	SEAL OF THE STATE ENGINEER
AUSTIN, TEXAS	133335
522 SCHACHTER LANE	MOUSTON, TEXAS 75057
TEL: 713.972.9900	WWW.MEDONOUGH.COM

GALVESTON COUNTY ENGINEERING DEPARTMENT

NOTE: THE LOCATION OF THE EXISTING UTILITIES SHOWN IS APPROXIMATE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES AS A RESULT OF THE CONTRACTOR'S FAILURE TO LOCATE & PRESERVE ALL EXISTING UTILITIES.



LEGEND

ROW

HIGH BANK

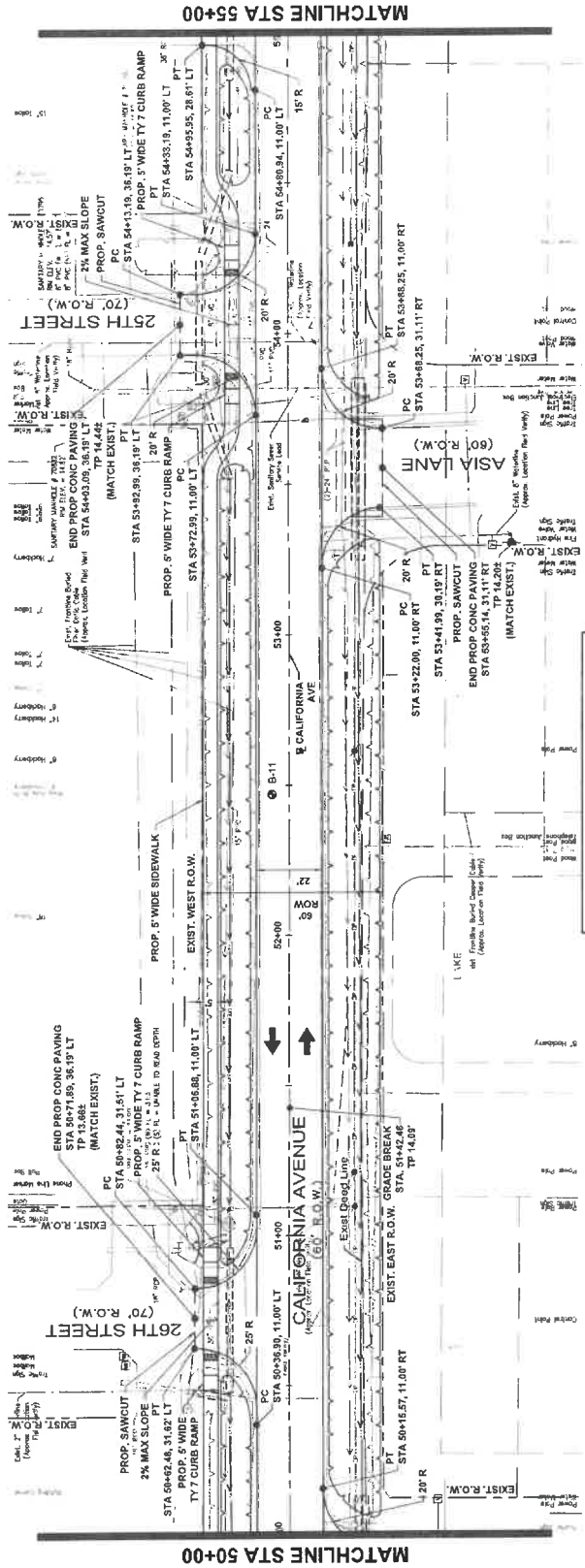
DRIVEWAY NUMBER

BOREHOLE

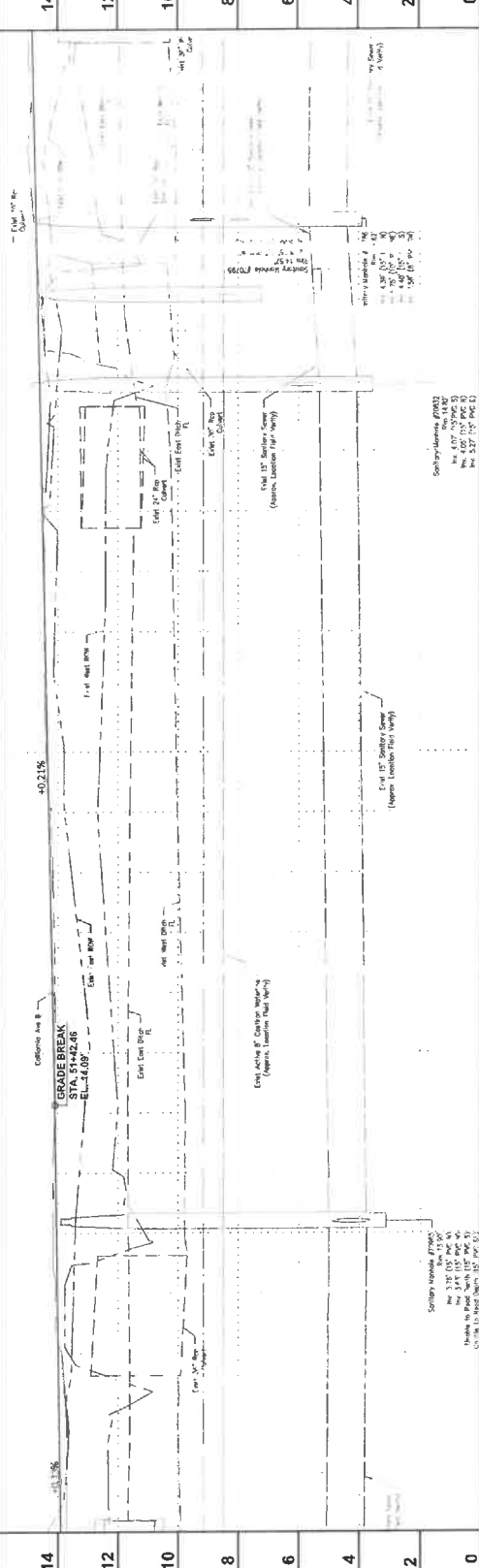
CAUTION EX. GAS FACILITIES IN AREA

All Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK



CALIFORNIA AVE



NOTE:

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NO.	REVISIONS	DATE	NAME
14			
12			
10			
8			
6			
4			
2			
0			

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 ROADWAY PLAN AND PROFILE
 STA 50+00 TO 55+00
 1"=20' HORIZONTAL 1"=2' VERTICAL

DATE: 7/7/2023
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]

SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL

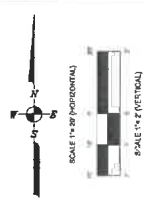
PROJECT NO.: 132533

DATE: 9/16/2023

STATE OF TEXAS ENGINEERING PROFESSIONAL SEAL
 AUSTIN P. MCGEE
 LICENSE NO. 132533

MEDONOUGH ENGINEERING & ARCHITECTURE
 10000 S. W. 10th Street, Suite 100
 Fort Worth, TX 76116
 Phone: 817.335.8800
 www.medonough.com

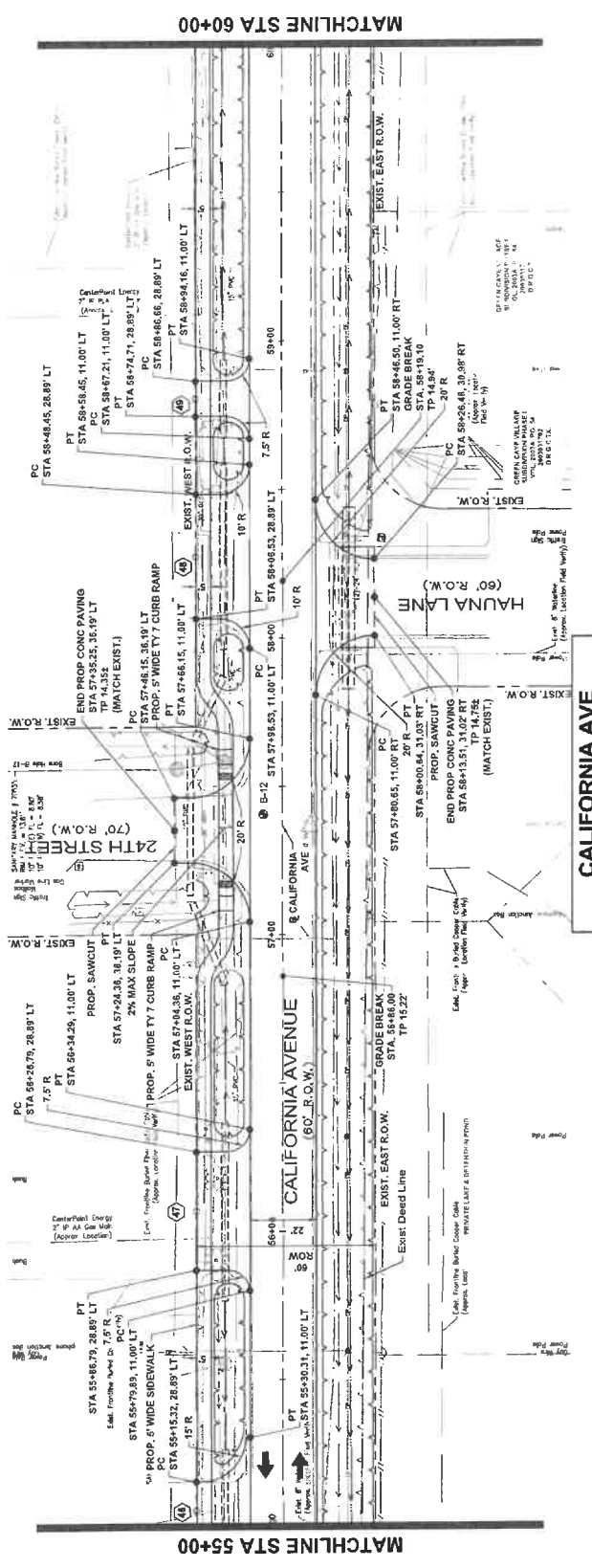
GALVESTON COUNTY ENGINEERING DEPARTMENT



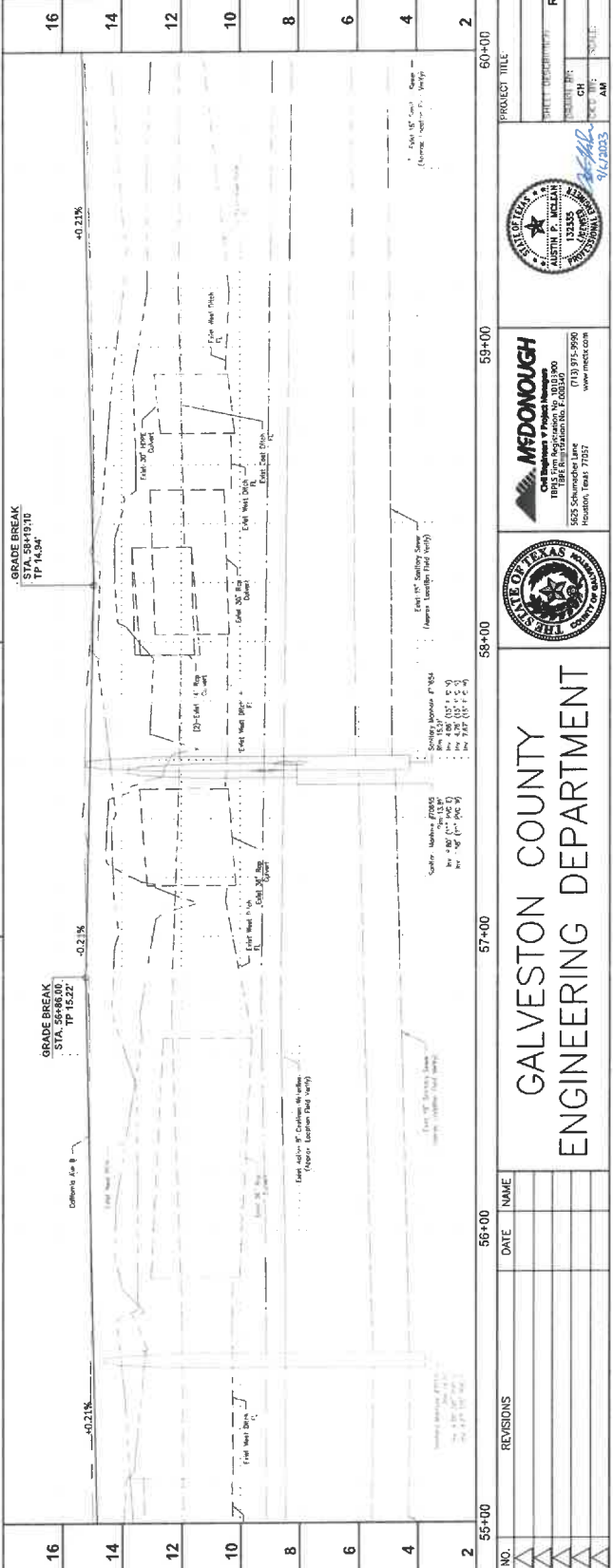
LEGEND
 --- ROW
 --- HIGH BANK
 --- DRIVEWAY NUMBER
 --- BOREHOLE

CAUTION EX. GAS FACILITIES IN AREA
 ALL Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



NO.	REVISIONS	DATE	NAME
16			
14			
12			
10			
8			
6			
4			
2			



NOTE: THE LOCATION OF THE EXISTING UTILITIES SHOWN IS APPROXIMATE BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES TO UTILITIES AS A RESULT OF THE CONTRACTOR'S FAILURE TO LOCATE & PRESERVE ALL EXISTING UTILITIES.

PROJECT TITLE	CALIFORNIA AVENUE
SHEET NUMBER	F.M. 517 TO 20th ST. EAST
DATE	7/21/2023
SCALE	STA 55+00 TO 60+00 1"=20' HORIZONTAL 1"=2' VERTICAL



MEDONOUGH
 Civil & Mechanical
 5625 Schwabacher Lane
 Houston, Texas 77057
 www.medonough.com

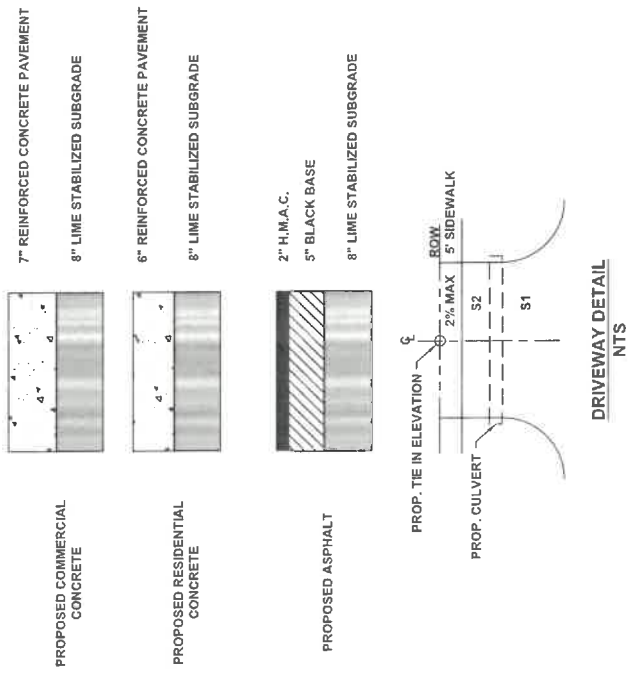


GALVESTON COUNTY ENGINEERING DEPARTMENT

NO.	REVISIONS	DATE	NAME
16			
14			
12			
10			
8			
6			
4			
2			

EXISTING CALIFORNIA AVE PAVEMENT THICKNESS			
Boring No.	Asphalt (inches)	Base	Total (inches)
B-1	13.75	N/A	13.75
B-2	7	6" Cement Treated Base & 8" Cement Stabilized Sand Base	16
B-3	1.5	8.5" Cement Treated Base & 10" Cement Stabilized Sand Base	28
B-4	2	10" Cement Treated Base	12
B-5	2.5	10.5" Cement Treated Base & 12" Cement Stabilized Sand Base	25
B-6	2.5	8" Cement Treated Base & 8" Cement Stabilized Sand Base	18.5
B-7	2	11.5" Cement Treated Base	13.5
B-8	2.5	10" Cement Treated Base	12.5
B-9	2	8" Crushed Gravel Base	10
B-10	3	8" Crushed Gravel Base	11
B-11	2	6" Cement Treated Base	8
B-12	6	8" Cement Stabilized Base	14
B-13	8	3" Cement Stabilized Sand Base	11
B-14	7.5	2" Cement Stabilized Sand Base	9.5

PROPOSED DRIVEWAY SECTIONS



DRIVEWAY NO.	PROPOSED STATION AND OFFSET	PROPOSED TIE-IN ELEV.	ADDRESS (#)	ADDRESS (STREET)	EXIST. DRIVEWAY TYPE	PROP. DRIVEWAY TYPE	EXISTING DRIVEWAY WIDTH (FT)	PROPOSED DRIVEWAY WIDTH (FT)	PROPOSED DRIVEWAY AREA (SQ. FT)	COMMERCIAL/RESIDENTIAL	SLOPE	
											S1 (%)	S2 (%)
1	STA. 2+46.74, 23.87 LT	16.2	4921	FM 577	CONCRETE	CONCRETE	36.1	58.3	49.2	C	7.09	-
2	STA. 4+94.23, 28.70 RT	14.8	3909	CALIFORNIA AVE	ASPHALT	ASPHALT	47.4	47.4	50.1	R	3.60	3.00
3	STA. 5+03.72, 31.17 LT	18.7	3908	CALIFORNIA AVE	CONCRETE	CONCRETE	37.3	53.4	68.2	R	1.85	-
4	STA. 5+71.89, 28.49 RT	14.6	3907	CALIFORNIA AVE	ASPHALT	ASPHALT	25.1	48.3	47.8	R	2.11	-
5	STA. 6+36.07, 31.38 LT	15.6	3906	CALIFORNIA AVE	CONCRETE	CONCRETE	37.5	48.4	57.1	R	4.20	-
6	STA. 6+05.14, 28.69 RT	14.3	3905	CALIFORNIA AVE	GRASS	GRASS	14.7	35.8	35.2	R	3.33	-
7	STA. 6+00.10, 29.29 RT	14.2	3906	CALIFORNIA AVE	ASPHALT	ASPHALT	23.7	48.4	53.0	R	2.50	-
8	STA. 9+22.08, 30.99 LT	14.3	4919	38TH STE	GRASS	GRASS	28.1	31.5	39.6	R	0.00	-
9	STA. 10+06.27, 31.33 LT	13.7	4920	38TH STE	GRASS	GRASS	23.1	27.0	30.1	R	1.40	-
10	STA. 11+18.00, 27.91 RT	13.3	3700	CALIFORNIA AVE	ASPHALT	ASPHALT	19.8	45.0	43.8	C	3.81	5.63
11	STA. 11+93.32, 27.55 RT	13.6	3701	CALIFORNIA AVE	ASPHALT	ASPHALT	12.5	42.0	37.8	R	3.20	0.74
12	STA. 12+77.06, 27.15 RT	13.3	3702	CALIFORNIA AVE	ASPHALT	ASPHALT	10.3	42.0	37.2	R	3.63	-
13	STA. 13+20.46, 32.86 LT	14	4922	37TH STE	GRASS	GRASS	28.9	26.9	31.9	R	1.02	-
14	STA. 15+14.96, 26.00 RT	14.2	3909	CALIFORNIA AVE	CONCRETE	CONCRETE	19.7	42.6	41.1	R	3.47	-
15	STA. 16+34.00, 34.37 LT	13.7	3902	CALIFORNIA AVE	ASPHALT	ASPHALT	14.9	42.6	48.2	R	1.30	0.82
16	STA. 16+88.29, 25.15 RT	13.7	3901	CALIFORNIA AVE	ASPHALT	ASPHALT	16.1	41.5	33.8	R	4.46	2.88
17	STA. 16+46.56, 24.40 RT	13.6	3901	CALIFORNIA AVE	ASPHALT	ASPHALT	28.1	41.4	32.6	R	5.67	1.50
18	STA. 23+95.45, 23.65 RT	13.2	3311	CALIFORNIA AVE	CONCRETE	CONCRETE	18.2	41.5	35.9	R	2.91	1.97
19	STA. 24+04.90, 23.64 RT	13.5	3311	CALIFORNIA AVE	GRAVEL	GRAVEL	19.7	48.8	42.4	R	2.46	-
20	STA. 25+16.09, 23.62 RT	13.1	3309	CALIFORNIA AVE	ASPHALT	ASPHALT	16.4	41.2	31.6	R	8.17	4.71
21	STA. 25+19.64, 36.18 LT	13.5	4915	34TH STE	ASPHALT	ASPHALT	26.2	49.9	71.4	R	1.60	-
22	STA. 26+09.13, 23.63 RT	13.4	3305	CALIFORNIA AVE	ASPHALT	ASPHALT	22.8	47.1	40.0	R	6.50	0.29
23	STA. 26+64.47, 36.17 LT	13.1	4916	33RD STE	ASPHALCONC	CONCRETE	23.5	48.5	67.5	R	0.48	-
24	STA. 27+24.81, 23.87 RT	12.9	3301	CALIFORNIA AVE	ASPHALT	ASPHALT	20.8	49.6	43.7	R	1.11	3.50
25	STA. 28+46.10, 35.11 LT	13	4917	33RD STE	ASPHALCONC	CONCRETE	24.9	35.7	64.6	R	0.84	-
26	STA. 29+71.62, 23.90 RT	12.9	3206	CALIFORNIA AVE	CONCRETE	CONCRETE	28.2	49.1	43.0	R	0.51	0.97
27	STA. 29+67.17, 35.05 LT	13	4916	32ND STE	GRASS	GRASS	11.3	32.0	41.6	R	0.97	-
28	STA. 30+41.42, 24.00 RT	12.9	3103	CALIFORNIA AVE	ASPHALT	ASPHALT	29	48.5	42.4	R	3.57	0.33
29	STA. 33+38.96, 38.72 LT	12.8	4916	31ST STE	ASPHALT	ASPHALT	23.2	36.8	54.6	R	2.83	4.75
30	STA. 34+34.06, 24.40 RT	12.5	3017	CALIFORNIA AVE	ASPHALT	ASPHALT	21.5	43.2	35.3	R	4.76	-
31	STA. 35+14.12, 24.51 RT	12.5	3017	CALIFORNIA AVE	ASPHALT	ASPHALT	17.3	42.0	34.4	R	1.20	7.33
32	STA. 35+55.09, 24.57 RT	12	3017/3015	CALIFORNIA AVE	GRAVEL	GRAVEL	12.3	40.9	32.8	R	5.00	-
33	STA. 35+74.16, 35.41 LT	13.2	4913	31ST STE	ASPHALT	ASPHALT	15.1	33.0	43.3	R	2.78	3.29
34	STA. 35+83.21, 35.12 LT	12.6	4914	30TH STE	GRASS	GRASS	19.4	27.0	35.1	R	0.52	-
35	STA. 37+16.59, 24.52 RT	12.6	3015	CALIFORNIA AVE	ASPHALT	ASPHALT	24.9	41.5	33.4	R	0.88	-
36	STA. 38+12.26, 24.59 RT	12.3	4915	CALIFORNIA AVE	CONCRETE	CONCRETE	25.7	48.9	46.6	R	1.86	-
37	STA. 38+76.29, 34.59 LT	11.8	4915	30TH STE	GRASS	GRASS	16.8	27.0	34.4	R	3.95	-
38	STA. 40+00.32, 25.81 RT	12.8	2911	CALIFORNIA AVE	ASPHALT	ASPHALT	35.6	48.4	40.2	C	2.60	-
39	STA. 40+66.54, 25.13 RT	11.8	NA	CALIFORNIA AVE	ASPHALT	ASPHALT	9.3	25.0	28.1	C	6.20	-
40	STA. 42+17.46, 34.32 LT	12.3	2900	CALIFORNIA AVE	GRAVEL	CONCRETE	19.7	39.7	51.3	C	1.95	-
41	STA. 42+61.96, 34.32 LT	12.6	2900	CALIFORNIA AVE	GRAV/CONC	CONCRETE	36.4	54.6	88.9	C	0.39	-
42	STA. 45+40.47, 20.85 LT	12.9	2716	CALIFORNIA AVE	GRAV/ASPH	ASPHALT	33.9	49.3	64.0	C	7.38	-
43	STA. 45+93.37, 28.81 RT	12.2	4922	27TH STE	GRASS	GRASS	16.2	28.1	28.0	R	11.30	-
44	STA. 48+56.82, 28.51 LT	13.2	4923	CALIFORNIA AVE	GRAVEL	GRAVEL	9.6	32.0	31.5	R	1.71	-
45	STA. 49+44.05, 26.67 LT	13	4920	CALIFORNIA AVE	CONCRETE	CONCRETE	25.0	33.0	33.4	R	5.60	-
46	STA. 55+05.63, 28.89 LT	14	4917	28TH STE	CONCRETE	CONCRETE	28.2	48.4	54.2	R	4.00	-
47	STA. 56+06.79, 28.89 LT	14.4	4916	24TH STE	GRASS	GRASS	81.2	86.3	144.4	R	4.23	-
48	STA. 59+27.49, 28.89 LT	14.2	4917	24TH STE	CONCRETE	CONCRETE	41.1	67.9	88.1	R	6.38	-
49	STA. 58+80.69, 28.89 LT	13.6	4917	24TH STE	GRAVEL	GRAVEL	16.8	27.0	26.4	R	12.83	-
50	STA. 64+72.84, 28.89 LT	14.7	2114	CALIFORNIA AVE	CONCRETE	CONCRETE	23.8	49.0	39.6	R	1.97	-
51	STA. 65+60.34, 28.89 LT	14.8	2112	CALIFORNIA AVE	CONCRETE	CONCRETE	17.3	32.0	31.9	R	1.47	-
52	STA. 43+81.28, 42.20 LT	12.8	2800	CALIFORNIA AVE	CONCRETE	CONCRETE	16.9	16.9	39.1	C	3.05	-

DRIVEWAY DETAIL NTS

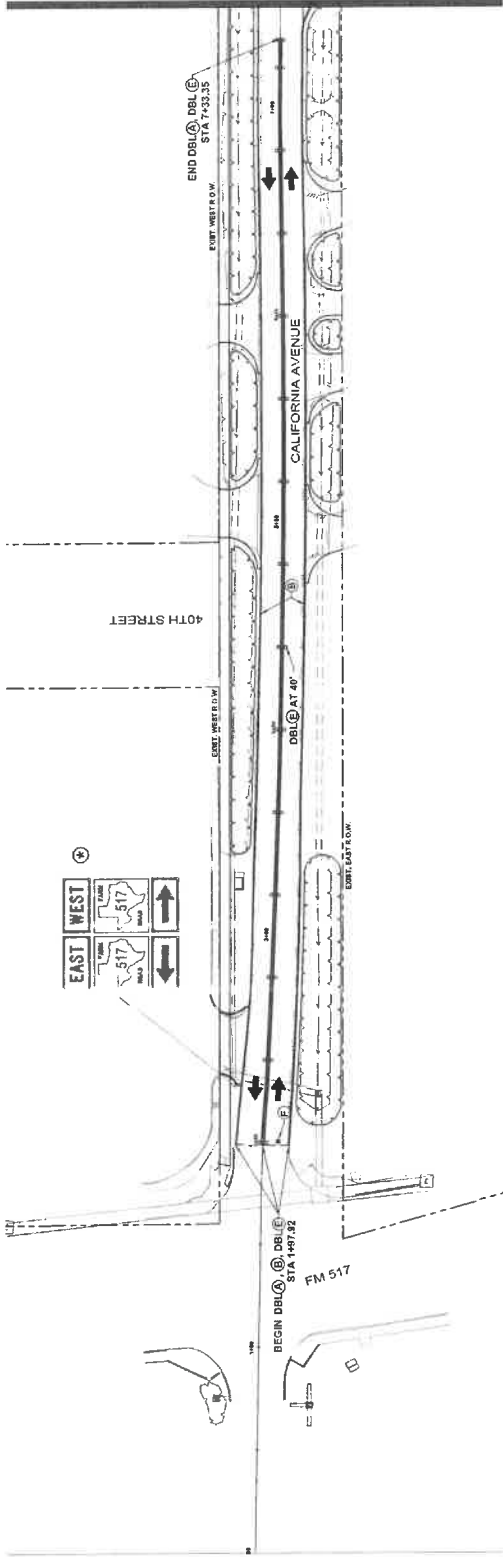
NO.	REVISIONS	DATE	NAME	<p>GALVESTON COUNTY ENGINEERING DEPARTMENT</p>		<p>MCDONOUGH Civil, Mechanical & Project Management 19914 Jones Freeway, Suite 100, Houston, TX 77057 713.975.9600 www.mcdonough.com</p>		PROJECT TITLE	CALIFORNIA AVENUE
									SHEET NO. OF TOTAL SHEETS
								PAVEMENT THICKNESS	
								DATE	9/16/2023
								SCALE	AS SHOWN
								DATE	4/1/16



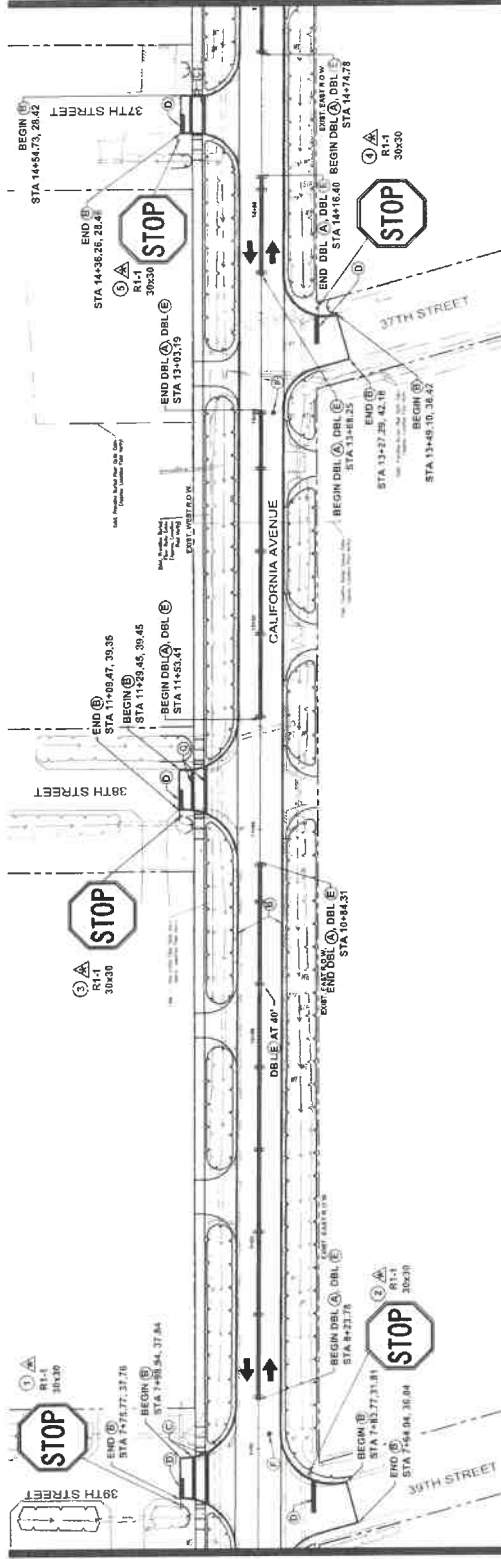
LEGEND:

- (A) PROP PAV MKR TY (T) (47) (SLD)
- (B) PROP PAV MKR TY (W) (47) (SLD)
- (C) PROP PAV MKR TY (M) (47) (SLD)
- (D) PROP PAV MKR TY (N) (247) (SLD)
- (E) PROP PAV MKR TY (N) (247) (SLD)
- (F) PROP 4" SQ 3-WAY REFL YELLOW RAISED PAVEMENT MARKERS (TYPE II-A-4)
- (G) PROP 4" SQ 2-WAY REFL BLUE PAVEMENT MARKERS
- (H) REMOVE EXISTING SMALL SIGN
- (I) RELOCATE EXISTING SMALL SIGN
- (J) EXISTING SIGN TO REMAIN
- (K) PROPOSED SMALL SIGN NO.
- (L) PROPOSED LANE DIRECTION
- (M) PROP TRAFFIC SIGN
- (N) PROP TYPE II BARRICADE

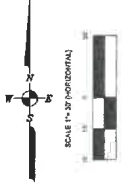
MATCHLINE STA 7+50



MATCHLINE STA 15+00

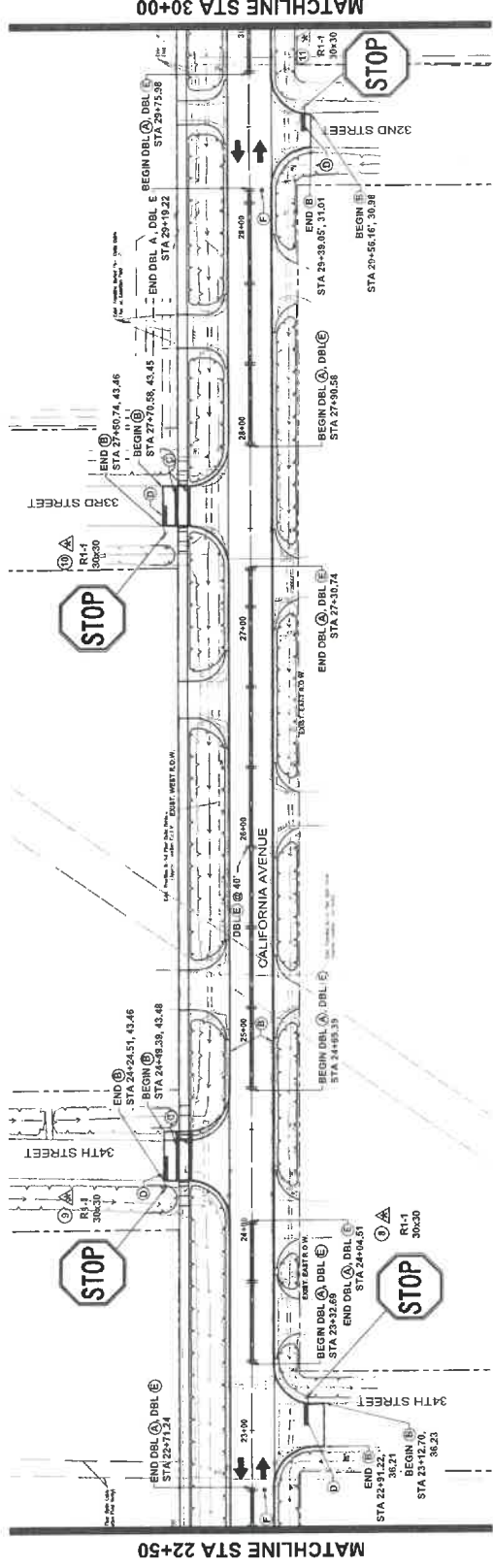
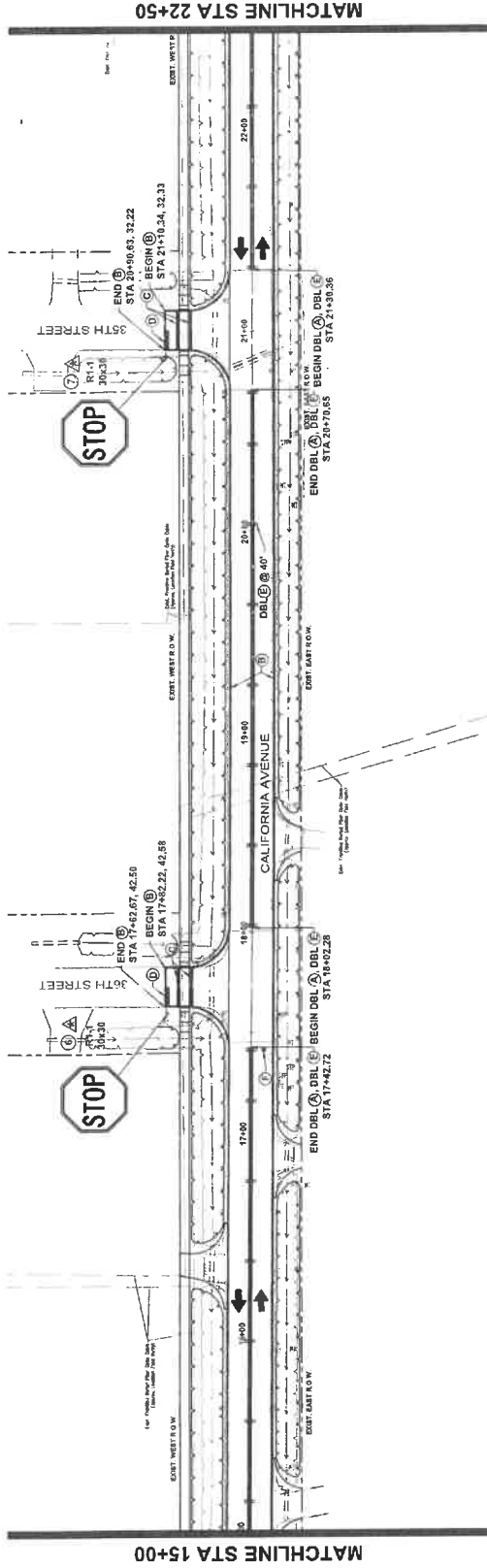


NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
MEDONOUGH Civil Engineers & Surveyors Texas State Registration No. 00000000 5205 Schumacher Lane Houston, Texas 77057 www.medonough.com Tel: 281-291-1333 Fax: 281-291-1334			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST SHEET DESCRIPTION: SIGNING AND PAVEMENT MARKING PLAN DRAWING NO.: 152335 DATE: 7/21/2023 STA. 0+00 TO 15+00 SCALE: 1"=30' SHEET NO.: 50 OF 163			



LEGEND:

- (A) PROP PAV MKK TY (1Y) (4") (SLD)
- (B) PROP PAV MKK TY (1M) (4") (SLD)
- (C) PROP PAV MKK TY (1M) (15") (SLD)
- (D) PROP PAV MKK TY (1M) (24") (SLD)
- (E) PROP 4" SG 2-WAY REFL YEL RWY RAISED PAVEMENT MARKERS (TYPE I(A-N))
- (F) PROP 4" SG 2-WAY REFL BLUE PAVEMENT MARKERS
- (G) REMOVE EXISTING SMALL SIGN
- (H) RELOCATE EXISTING SMALL SIGN
- (I) EXISTING SIGN TO REMAIN
- (J) PROPOSED SMALL SIGN NO.
- (K) PROPOSED LANE DIRECTION
- (L) PROP TRAFFIC SIGN
- (M) PROP TYPE III BARRICADE



NO.	REVISIONS	DATE	NAME

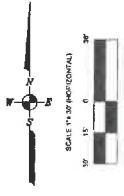
**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



MEDONOUGH
Civil Engineers & Surveyors
1815 Storm Reporters Ave., Suite 1000
525 Schramm Lane
Houston, Texas 77057
www.medonough.com

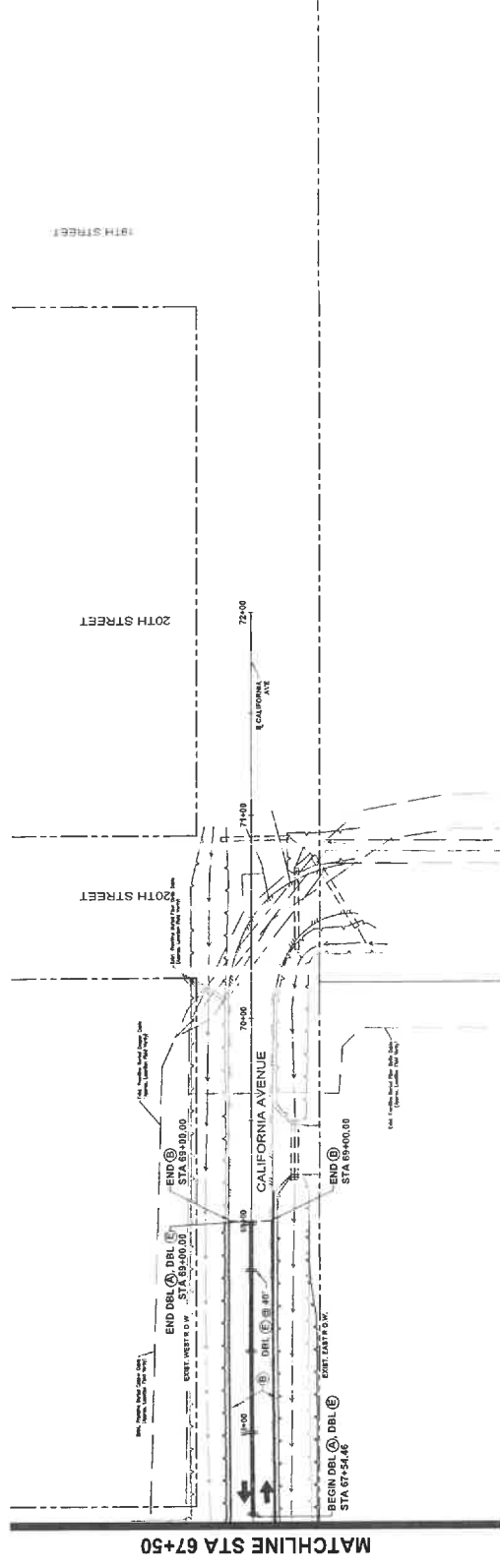
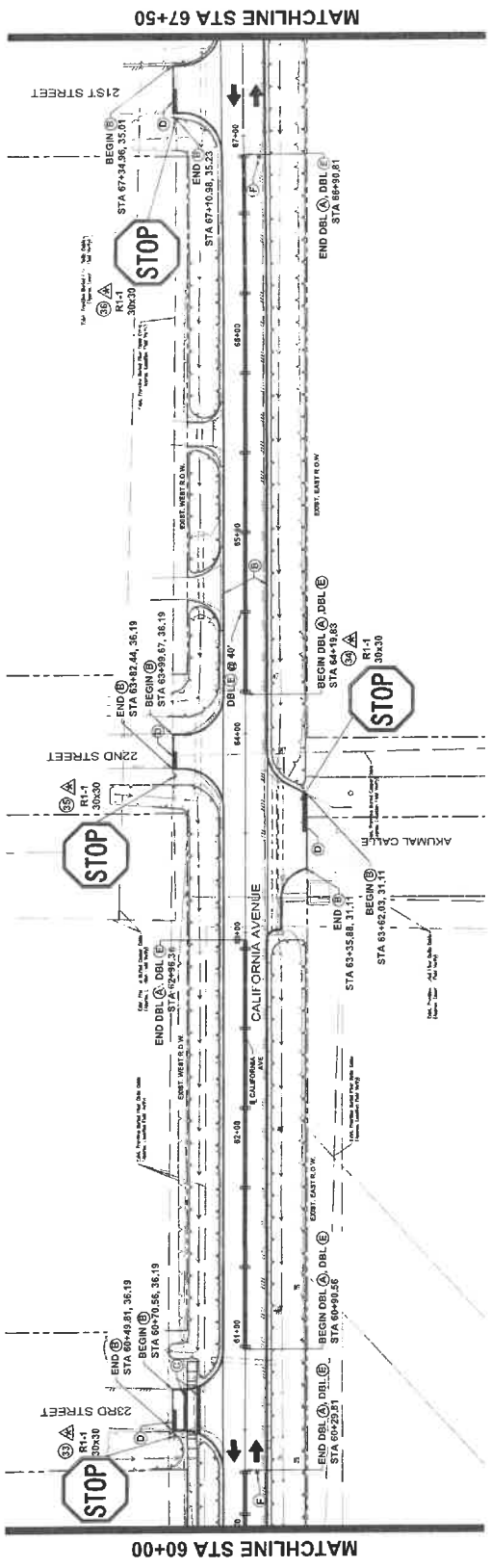


PROJECT TITLE	CALIFORNIA AVENUE
STREET DESCRIPTION	F.M. 517 TO 20th ST. EAST
DATE	7/2/2023
CH	STA 15+00 TO 30+00
SCALE	1"=30'
AM	51 / 163

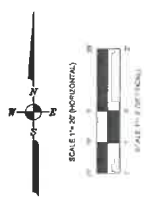


LEGEND:

- (A) PROP PAV MKR TY (W) (47) (SLD)
- (B) PROP PAV MKR TY (W) (47) (SLD)
- (C) PROP PAV MKR TY (W) (127) (SLD)
- (D) PROP PAV MKR TY (W) (247) (SLD)
- (E) PROP. 4' SO. 2-WAY REFL. YELLOW RAISED PAVEMENT MARKERS (TYPE II-A4)
- (F) PROP. 4' SO. 2-WAY REFL. BLUE PAVEMENT MARKERS
- (G) REMOVE EXISTING SMALL SIGN
- (H) RELOCATE EXISTING SMALL SIGN
- (I) EXISTING SIGN TO REMAIN
- (J) PROPOSED SMALL SIGN NO.
- (K) PROPOSED LANE DIRECTION
- (L) PROP TRAFFIC SIGN
- (M) PROP TYPE III BARRICADE



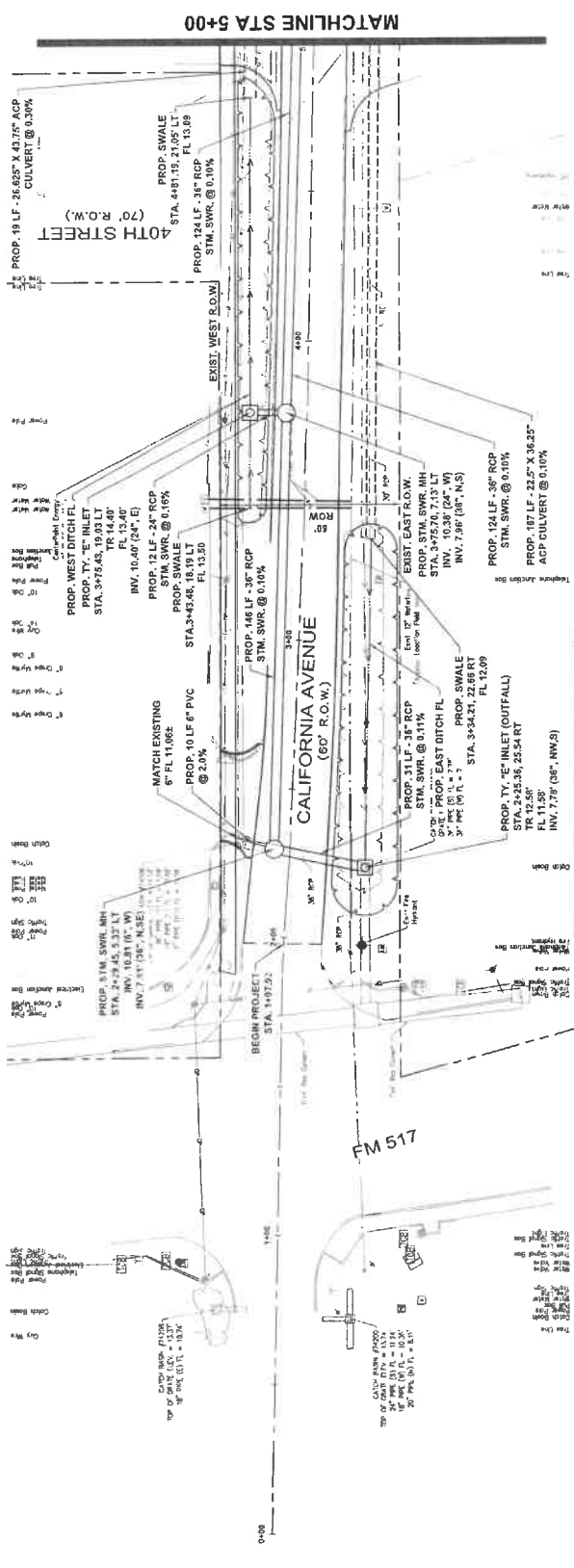
NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
12353 S.W. 10th Street, Suite 100 Houston, Texas 77057 www.mcdonough.com		PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST SIGNING AND PAVEMENT MARKING PLAN SHEET NO.: 177/2023 DATE: 9/16/2023 DRAWN BY: [Signature] CHECKED BY: [Signature] SCALE: 1"=40' STA 60+00 TO END	



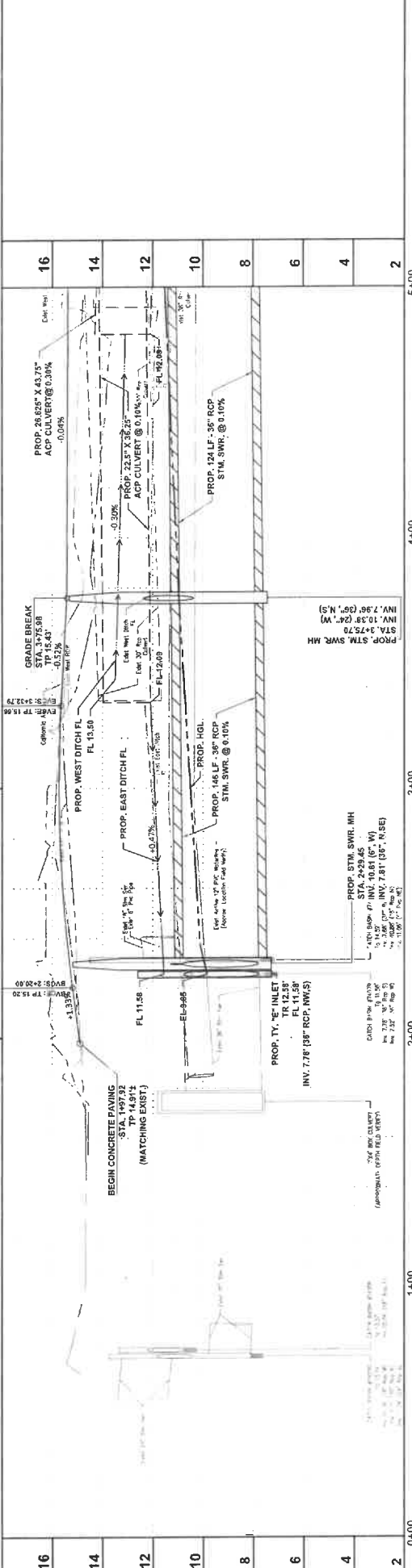
LEGEND
 --- EXISTING
 --- PROPOSED

CAUTION EX. GAS FACILITIES IN AREA
 All Lines Must Be Field Verified

NOTE NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



CALIFORNIA AVE



NO.	REVISIONS	DATE	NAME
16			
14			
12			
10			
8			
6			
4			
2			

PROJECT TITLE	CALIFORNIA AVENUE
STATIONING	F.M. 517 TO 20th ST. EAST
DATE	7/7/2023
SCALE	1"=20' HORIZONTAL 1"=4' VERTICAL
PROJECT NO.	9162023
DESIGNED BY	AM
CHECKED BY	AM
DATE	9/6/2023

STATE OF TEXAS	REGISTERED PROFESSIONAL ENGINEER
NO. 13353	AUSTIN, P. MCGEE
5625 Sawdust Creek Lane	Houston, Texas 77057
www.mecp.com	

PROJECT TITLE	CALIFORNIA AVENUE
STATIONING	F.M. 517 TO 20th ST. EAST
DATE	7/7/2023
SCALE	1"=20' HORIZONTAL 1"=4' VERTICAL
PROJECT NO.	9162023
DESIGNED BY	AM
CHECKED BY	AM
DATE	9/6/2023

**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**

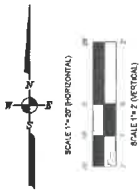


MCDONOUGH
 1901 S. Loop West, Suite 1000
 Houston, Texas 77057
 www.mecp.com



**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**

NO.	REVISIONS	DATE	NAME
16			
14			
12			
10			
8			
6			
4			
2			



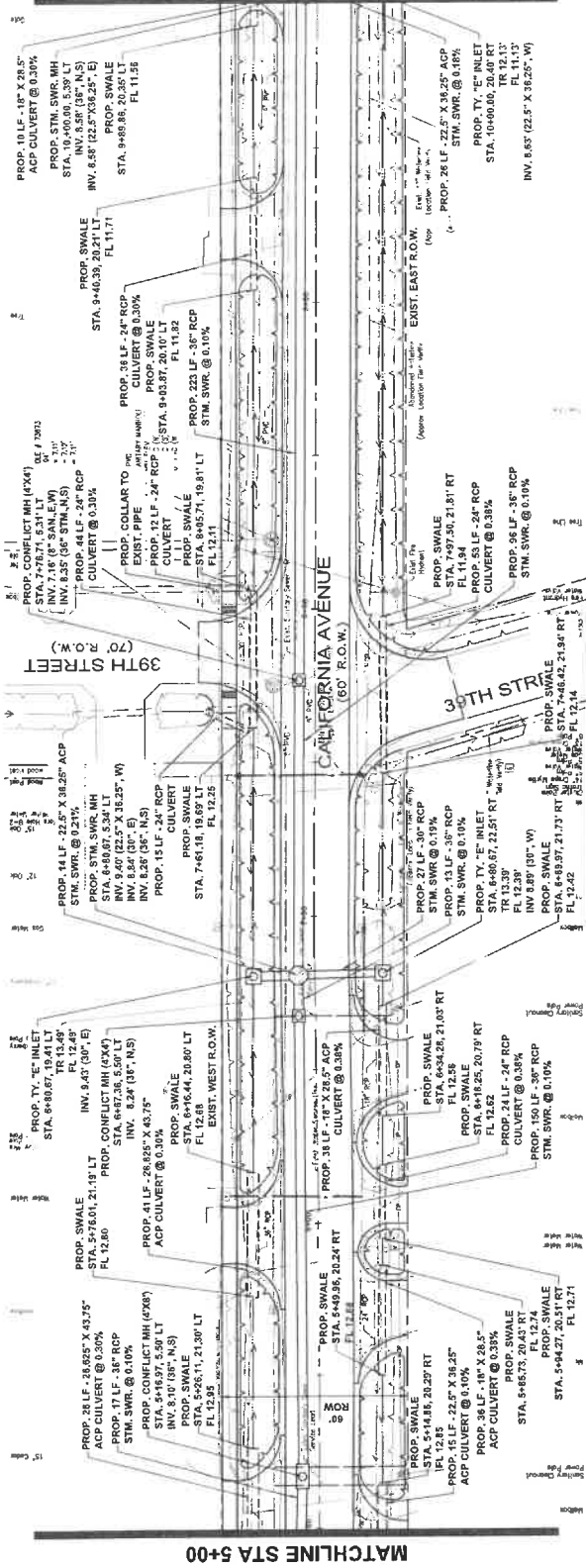
LEGEND
 EXISTING
 PROPOSED

CAUTION EX GAS
 FACILITIES IN AREA

All Lines Must Be
 Field Verified

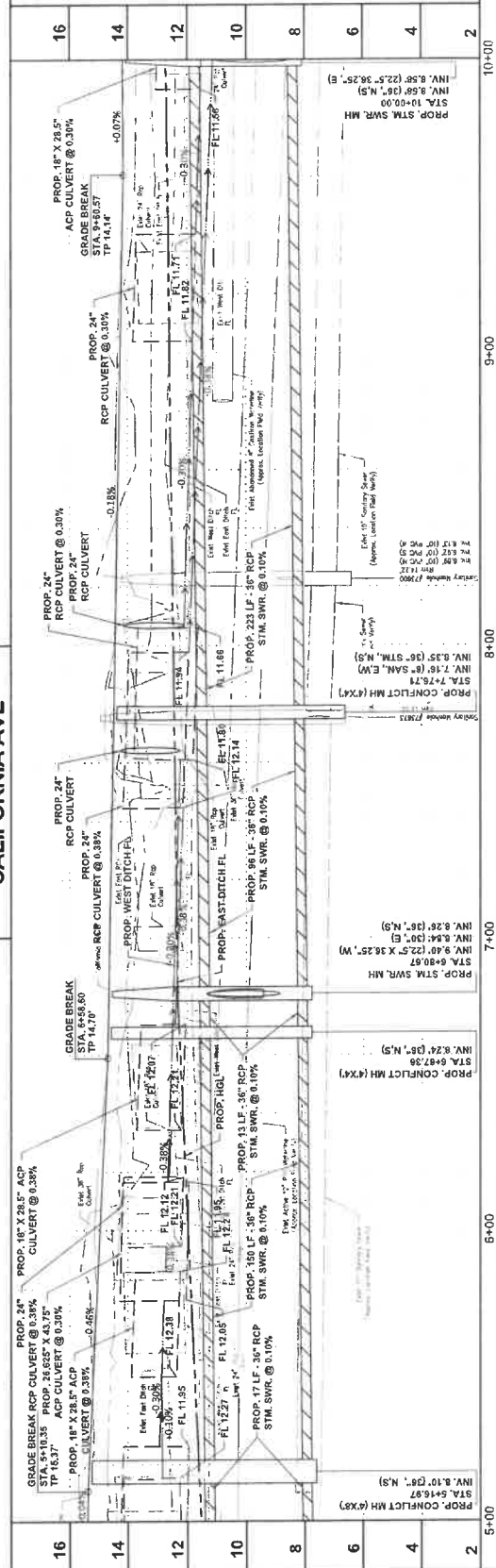
NOTE: NO OPEN CUT OR BORE PIT
 CLOSER THAN 20' FROM ANY
 TREE TRUNK.

MATCHLINE STA 10+00



MATCHLINE STA 5+00

CALIFORNIA AVE



NO.	REVISIONS	DATE	NAME
2			
4			
6			
8			
10			
12			
14			
16			

PROJECT TITLE
 CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 STORM SEWER PLAN AND PROFILE

DATE: 7/20/23
SCALE: 1\"/>

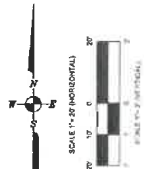
STATE OF TEXAS
 ENGINEERING EXAMINER
 JUSTIN P. MCGEE
 132355
 9/6/2023

MEDCONOUGH
 Civil & Mechanical Engineering
 10000 Katy Freeway, Suite 1000
 Houston, Texas 77025
 (713) 974-9900
 www.medconough.com

STATE OF TEXAS
 PROFESSIONAL SEAL

**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**

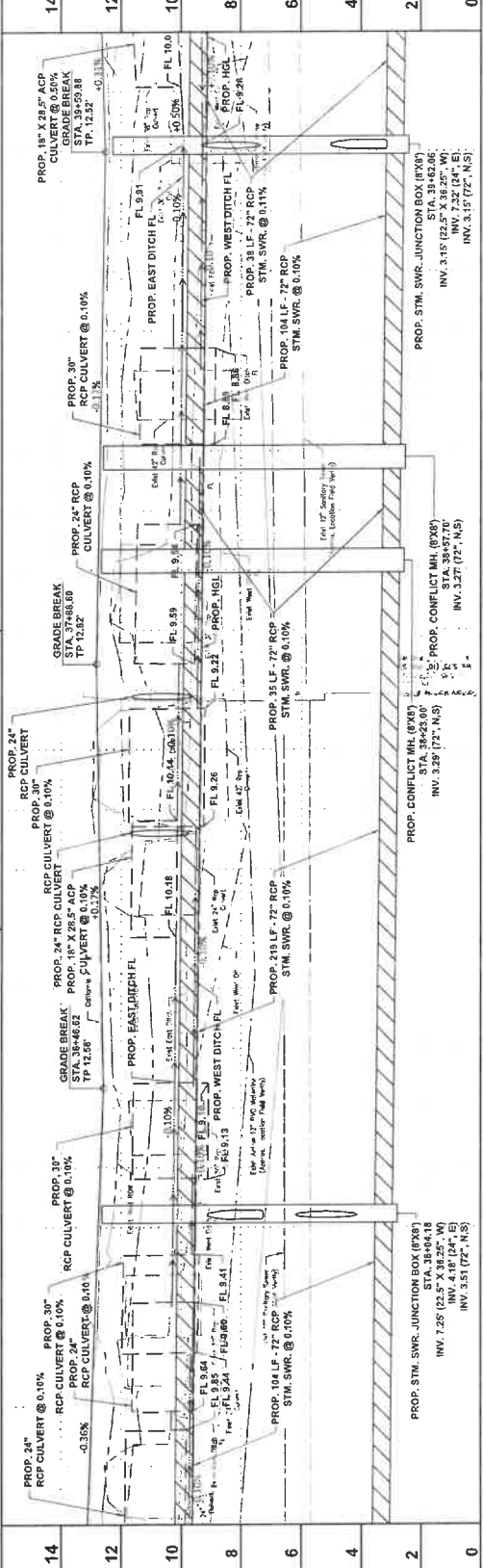
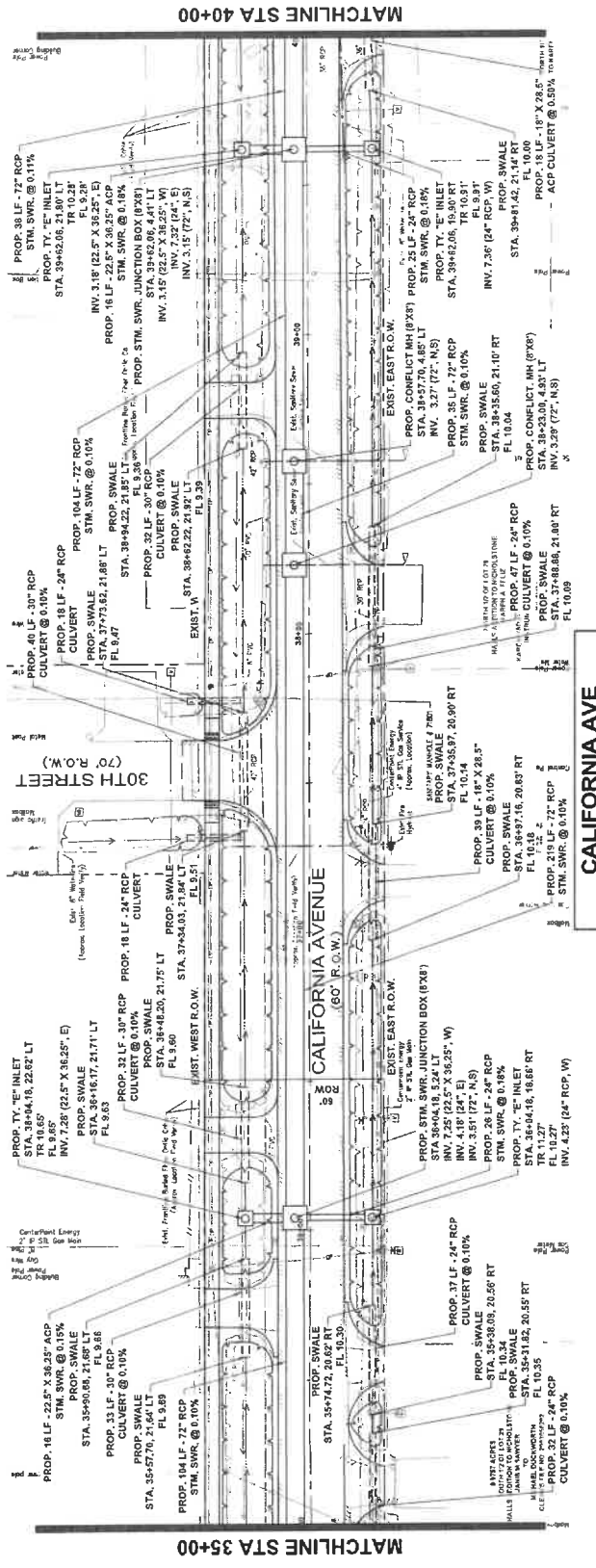
NO.	REVISIONS	DATE	NAME
2			
4			
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8			
10			
12			
14			
16			



LEGEND
 EXISTING
 PROPOSED

CAUTION: EX. GAS FACILITIES IN AREA
 All Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



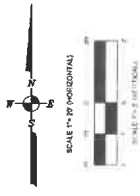
NO.	REVISIONS	DATE	NAME
14			
12			
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8			
6			
4			
2			
0			

35+00	37+00	39+00	40+00
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PROJECT TITLE		CALIFORNIA AVENUE
STREET DESCRIPTION		F.M. 517 TO 20th ST. EAST
DRAWING NO.		STORM SEWER PLAN AND PROFILE
DATE		STA. 35+00 TO STA. 40+00
SCALE		1"=20' HORIZONTAL 1"=2' VERTICAL
DESIGNED BY	13335	
CHECKED BY	AM	
DATE	9/6/2023	
PROJECT NO.	87	183

McDONOUGH Civil, Mechanical & Electrical Engineers 5625 Schwabacher Lane Houston, Texas 77057 www.mcdonough.com T 281.486.8000 F 281.486.8000	

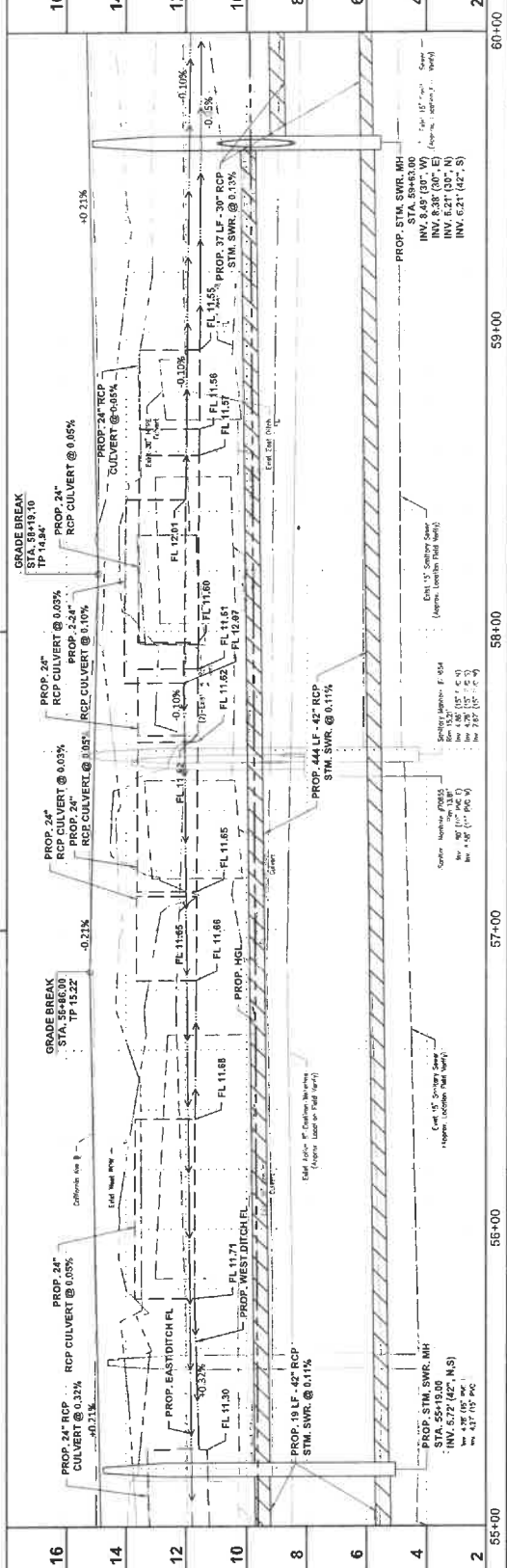
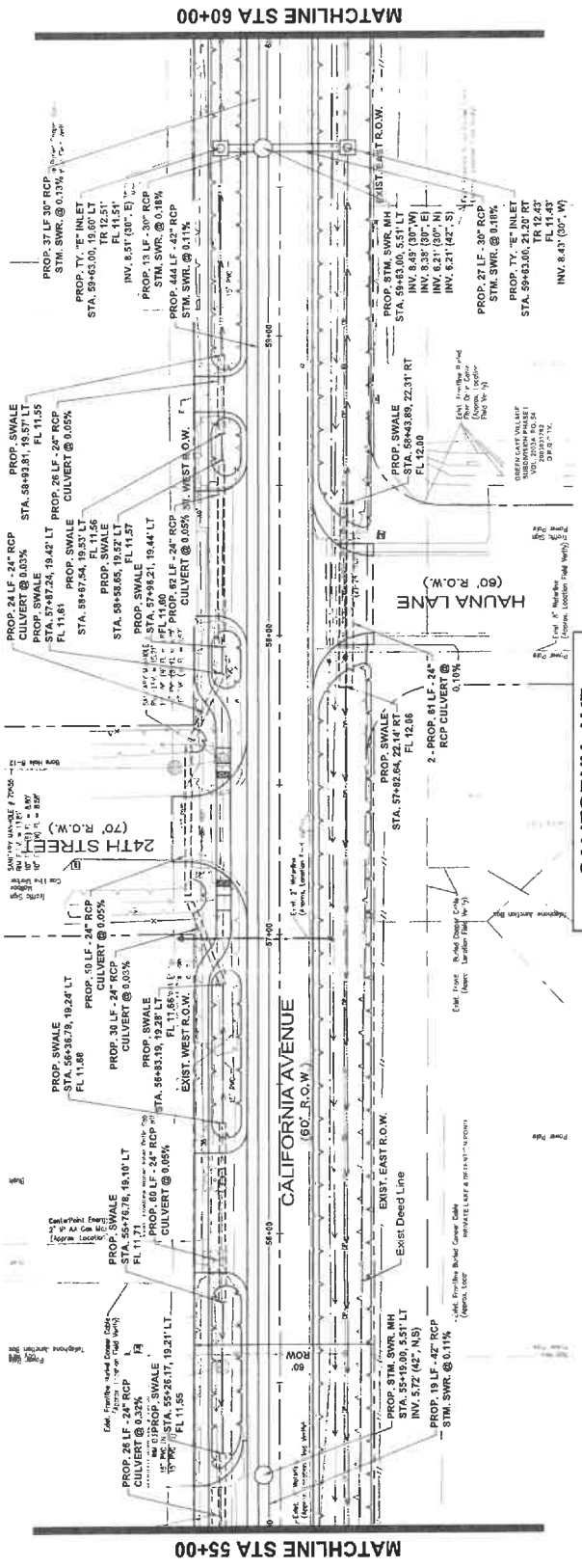
GALVESTON COUNTY ENGINEERING DEPARTMENT



LEGEND
 --- EXISTING
 --- PROPOSED

CAUTION EX. GAS FACILITIES IN AREA
 All Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORING CLOSER THAN 20' FROM ANY TREE TRUNK.



NO.	REVISIONS	DATE	NAME
2			
4			
6			
8			
10			
12			
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16			

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 547 TO 20th ST. EAST
 STORM SEWER PLAN AND PROFILE
 STA. 55+00 TO STA. 60+00
 1"=20' HORIZONTAL 1"=2' VERTICAL

DATE: 9/16/2023
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 SCALE: AS SHOWN

DESIGNED BY: [Signature]
 PROJECT NO.: 123253
 SHEET NO.: 55-00
 TOTAL SHEETS: 60

STATE OF TEXAS
 ENGINEERING EXAMINER
 GALVESTON COUNTY
 ENGINEERING DEPARTMENT

9/16/2023

123253
 1515 17th Street
 Houston, Texas 77057
 www.mcdough.com



DRAINAGE AREA ACRES: OS-XXXX
 PROP. FLOW ARROW:

 TxDOT PROP. DRAINAGE AREA FROM CSJ: 0051-03-049

- NOTES:
- CURRENT PROPOSED DRAINAGE PATTERNS ARE MATCHING PROPOSED DRAINAGE PATTERNS FROM CSJ: 0051-03-049 THEREFORE NO ADVERSE IMPACT TO TxDOT FACILITIES IS ANTICIPATED
 - PROP. DRAINAGE AREAS TO TxDOT OUTFALL: OS-E1W, OS-E2W, OS-E3E TOTAL 35.03 ACRES WITHIN DRAINAGE AREA FROM CSJ:0051-0-049
 - THE PROP. DRAINAGE AREA TO BE REMOVED FROM TxDOT TOTALS 19.07 ACRES FROM OS-C1SW, OS-C1SE, OS-C2SE, AND OS-C3SE.

NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
MEDONOUGH <small>Professional Engineering Services, Inc. 10100900 5205 Schwabacher Lane Houston, Texas 77054 www.medonough.com 281.313.9713</small>			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST OVERALL DRAINAGE AREA MAP			
CREATED: 7/7/2023 DATE: 8/1/23		SCALE: 1" = 300' DATE: 8/1/23	

LINK COMPUTATIONS (5 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNING'S "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
FM 517																
TRUNK LINE																
E1	E2	8.78	8.58	177.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	19.69	21.06	14.15	14.00	2.98
E2	E3	8.58	8.28	319.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	34.90	21.09	14.00	13.12	2.98
E3	E4	8.28	7.98	304.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	56.25	21.09	13.12	10.96	2.98
E4	E5	7.98	7.81	148.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	59.19	21.09	11.86	10.81	2.98
E5	Outfall	7.81	7.78	31.00	0.11	1.00	CIRCULAR	N/A	36.00	0.013	0	58.55	22.12	11.02	10.78	3.13
LATERALS																
E1W	E1	8.80	8.76	15.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	19.78	20.51	14.18	14.15	4.18
E2W	E2	8.65	8.59	27.00	0.23	1.00	CIRCULAR	N/A	30.00	0.013	0	19.49	19.67	14.21	14.15	4.01
E3W	E3	8.29	8.26	14.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	11.61	17.40	14.01	14.00	3.55
E3E	E3	8.31	8.28	27.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	14.32	17.40	14.03	14.00	3.55
E3W	E5	7.98	7.96	12.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	8.04	9.60	11.99	11.96	3.06

LINK COMPUTATIONS (6 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNING'S "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
Gulf Bayou South																
TRUNK LINE																
C1S	C2S	5.71	5.17	412.00	0.13	1.00	CIRCULAR	N/A	42.00	0.013	0	27.77	36.28	11.57	11.25	3.77
C2S	C3S	5.17	4.71	418.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	51.50	65.22	11.25	10.98	4.10
C3S	C4S	4.71	4.64	78.00	0.10	1.00	CIRCULAR	N/A	66.00	0.013	0	78.81	106.19	10.98	10.92	4.47
C4S	34th St.	4.71	4.71	18.00	0.11	1.00	CIRCULAR	N/A	36.00	0.013	0	28.78	0.00	10.92	10.92	0.00
C5S	C6S	4.64	4.59	39.00	0.11	1.00	BOX	66.00	66.00	0.013	0	78.53	22.12	10.92	10.40	3.13
C6S	C7S	4.59	4.32	274.00	0.10	1.00	CIRCULAR	N/A	66.00	0.013	0	78.40	106.19	10.40	10.25	4.47
C7S	C8S	4.32	3.89	390.00	0.11	1.00	CIRCULAR	N/A	66.00	0.013	0	109.34	111.38	10.25	9.63	4.69
C8S	C9S	3.89	3.51	384.00	0.10	1.00	CIRCULAR	N/A	72.00	0.013	0	125.42	131.80	9.63	9.49	4.87
C9S	C10S	3.51	3.08	368.00	0.10	1.00	CIRCULAR	N/A	72.00	0.013	0	131.03	133.93	9.49	9.14	4.74
C10S	C11S	3.08	3.03	46.00	0.11	1.00	CIRCULAR	N/A	72.00	0.013	0	136.14	140.48	9.14	8.08	4.87
C11S	Outfall	3.03	3.00	26.00	0.11	1.00	CIRCULAR	N/A	72.00	0.013	0	136.82	140.48	8.08	8.03	4.87
LATERALS																
C1SE	C1S	5.71	5.71	25.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	17.07	17.40	8.25	8.21	3.55
C1SW	C1S	5.75	5.71	15.00	0.28	1.00	CIRCULAR	N/A	30.00	0.013	0	12.03	21.70	8.22	8.21	4.42
C2SE	C2S	5.22	5.17	23.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	7.58	17.40	7.68	7.67	3.55
C2SW	C2S	5.21	5.17	16.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	19.75	20.51	7.71	7.67	4.18
C3SE	C3S	3.55	3.51	24.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	16.98	17.40	6.05	6.01	3.55
C3SW	C3S	3.59	3.51	16.00	0.28	1.00	CIRCULAR	N/A	30.00	0.013	0	20.68	20.71	6.05	6.01	4.22
C4SE	C4S	3.15	3.15	26.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	4.64	9.60	5.16	5.15	3.06
C4SW	C4S	3.18	3.15	18.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	15.35	17.40	5.67	5.65	3.55
C5SE	C5S	3.13	3.08	26.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	4.55	9.60	5.09	5.08	3.06
C5SW	C5S	3.11	3.08	18.00	0.15	1.00	CIRCULAR	N/A	30.00	0.013	0	7.10	15.89	5.59	5.58	3.24
C6SE	C6S	3.09	3.03	28.00	0.25	1.00	CIRCULAR	N/A	24.00	0.013	0	11.00	11.31	5.09	5.03	3.60
C6SW	C6S	3.08	3.03	17.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	12.31	17.40	5.54	5.53	3.55

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY
ENGINEERING DEPARTMENT



MEDONOUGH
 1015 S. Loop West, Suite 100, Houston, TX 77030
 P.O. Box 1000, Houston, TX 77001
 www.medonough.com



PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 DRAINAGE CALCULATIONS 5-YR
 SHEET (1 OF 2)
 DATE: 7/7/2023
 DRAWN BY: N.T.S.
 CHECKED BY: AM


CSDE STANDARD
 777223
 70 / 183

LINK COMPUTATIONS (5 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNINGS "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
Gum Bayou North																
TRUNK LINE																
C20N	C20N	6.41	6.21	157.00	0.13	1.00	CIRCULAR	N/A	30.00	0.013	0	11.45	14.79	10.15	10.03	3.01
C19N	C20N	6.21	5.72	444.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	24.69	33.37	10.03	9.76	3.47
C18N	C19N	5.72	5.48	219.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	23.75	33.37	9.76	9.64	3.47
C17N	C18N	5.48	5.22	238.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	32.03	33.37	9.64	9.40	3.47
C16N	C17N	5.22	4.96	254.00	0.10	1.00	CIRCULAR	N/A	48.00	0.013	0	31.97	45.42	9.40	9.27	3.61
C15N	C16N	4.96	4.73	237.00	0.10	1.00	CIRCULAR	N/A	48.00	0.013	0	42.55	45.42	9.27	9.07	3.61
C14N	C15N	4.73	4.39	334.00	0.10	1.00	CIRCULAR	N/A	54.00	0.013	0	47.65	62.19	9.07	8.87	3.91
C13N	C14N	4.39	4.32	68.00	0.10	1.00	CIRCULAR	N/A	54.00	0.013	0	53.12	62.19	8.87	8.82	3.91
C12N	C13N	4.32	4.29	30.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	61.94	65.22	8.82	8.79	4.10
C21N	C12N	4.29	4.28	10.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	61.85	65.22	8.79	8.78	4.10
LATERALS																
C14NE	C14N	7.23	7.18	27.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	6.25	9.60	9.20	9.18	3.06
C14NW	C14N	7.21	7.18	17.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	8.55	9.60	9.20	9.18	3.06
C15NE	C15N	7.25	7.18	31.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	3.78	10.37	9.19	9.18	3.30
C15NW	C15N	7.21	7.18	14.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	7.18	10.37	9.19	9.18	3.30
C16NE	C16N	8.53	8.48	30.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	0.60	9.60	10.46	10.46	3.06
C16NW	C16N	8.52	8.48	14.00	0.29	1.00	CIRCULAR	N/A	30.00	0.013	0	21.26	22.09	11.02	10.98	4.50
C18NE	C18N	8.54	8.48	29.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	1.55	10.37	10.48	10.48	3.30
C18NW	C18N	8.51	8.48	14.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	14.75	17.40	11.00	10.98	3.55
C20NE	C20N	8.53	8.48	28.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	0.44	17.40	10.98	10.98	3.55
C20NW	C20N	8.52	8.48	14.00	0.28	1.00	CIRCULAR	N/A	30.00	0.013	0	20.26	21.70	11.01	10.98	4.42
C21NE	C21N	8.53	8.48	29.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	3.35	17.40	10.98	10.98	3.55
C21NW	C21N	8.52	8.48	17.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	24.51	20.51	11.04	10.98	4.18

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT




MEDONOUGH
One Stop Engineering & Surveying
 5625 Sawdust Creek Lane
 Houston, Texas 77057
 www.medonough.com
 This is not a legal document. No. 10039000
 132353
 013.975.9939

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 28th ST. EAST
 DRAINAGE CALCULATIONS 5-YR
 SHEET NO. CH
 DATE: 7/7/18
 7772023
 SHEET (2 OF 2)
 N.T.S.

LINK COMPUTATIONS (25 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNINGS "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
Gum Bayou North																
TRUNK LINE																
C20N		6.41	6.21	157.00	0.13	1.00	CIRCULAR	N/A	30.00	0.013	0	23.77	14.79	13.05	12.53	3.01
C20N		6.21	5.72	444.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	43.21	33.37	12.53	11.71	3.47
C18N		5.72	5.48	219.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	41.89	33.37	11.71	11.33	3.47
C18N		5.48	5.22	238.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	54.10	33.37	11.33	10.64	3.47
C17N		5.22	4.96	234.00	0.10	1.00	CIRCULAR	N/A	48.00	0.013	0	66.26	45.42	10.64	10.07	3.61
C16N		4.96	4.73	237.00	0.10	1.00	CIRCULAR	N/A	48.00	0.013	0	69.65	45.42	10.07	9.51	3.61
C15N		4.73	4.39	334.00	0.10	1.00	CIRCULAR	N/A	54.00	0.013	0	77.21	62.19	9.51	8.89	3.81
C14N		4.39	4.32	66.00	0.10	1.00	CIRCULAR	N/A	54.00	0.013	0	85.33	62.19	8.99	8.87	3.81
C13N		4.32	4.29	30.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	88.35	65.22	8.87	8.79	4.10
C12N		4.29	4.28	10.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	98.21	65.22	8.80	8.78	4.10
LATERALS																
C14NE		7.23	7.18	27.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	8.90	9.60	9.22	9.18	3.06
C14NW		7.21	7.18	17.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	0.00	9.60	9.18	9.18	3.06
C15N		7.25	7.18	31.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	0.00	10.37	9.18	9.18	3.30
C15NW		7.21	7.18	14.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	10.23	10.37	9.21	9.18	3.30
C16NE		8.55	8.48	30.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	1.13	9.60	10.48	10.48	3.06
C16NW		8.52	8.48	14.00	0.29	1.00	CIRCULAR	N/A	30.00	0.013	0	30.26	22.09	11.06	10.96	4.50
C16NE		8.54	8.48	29.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	2.20	10.37	10.48	10.48	3.30
C18NW		8.51	8.48	14.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	20.98	17.40	11.02	10.98	3.55
C20NE		8.53	8.48	28.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	0.63	17.40	10.98	10.98	3.55
C20NW		8.52	8.48	14.00	0.28	1.00	CIRCULAR	N/A	30.00	0.013	0	29.10	21.70	11.05	10.98	4.42
C21NE		8.53	8.48	29.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	4.78	17.40	10.98	10.98	3.55
C21NW		8.52	8.48	17.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	35.92	20.51	11.11	10.98	4.18

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY
ENGINEERING DEPARTMENT



MEDONOUGH
Civil & Mechanical Engineering
Texas State Registration No. 0001900
133355
5425 Sawmiller Lane
Houston, Texas 77057
www.mecet.com



PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
DRAINAGE CALCULATIONS 25-YR
SHEET (2 OF 2)
DATE: 7/7/2023
DRAWN BY: CH
CHECKED BY: AM
SCALE: N.T.S.

DESIGN STANDARD
DATE: 7/7/2023
SHEET: 2 OF 2
SCALE: N.T.S.

LINK COMPUTATIONS (100 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNING'S "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
FW 517																
TRUNK LINE																
E1	E2	8.78	6.59	177.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	37.59	21.09	22.65	22.09	2.98
E2	E3	8.58	8.28	319.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	66.70	21.09	22.09	18.90	2.98
E3	E4	8.28	7.88	304.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	107.78	21.09	18.80	10.86	2.88
E4	E5	7.88	7.81	146.00	0.10	1.00	CIRCULAR	N/A	36.00	0.013	0	113.68	21.09	15.06	10.81	2.88
E5	Outfall	7.81	7.78	31.00	0.11	1.00	CIRCULAR	N/A	36.00	0.013	0	112.58	22.12	11.68	10.78	3.13
LATERALS																
E1W	E1	8.80	8.78	15.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	37.69	20.51	22.78	22.85	4.18
E2W	E2	8.85	8.58	27.00	0.23	1.00	CIRCULAR	N/A	30.00	0.013	0	38.40	19.67	22.88	22.85	4.01
E3W	E3	8.29	8.28	14.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	22.15	17.40	22.13	22.09	3.55
E3E	E3	8.31	8.28	27.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	28.75	17.40	22.20	22.09	3.55
E5W	E5	7.68	7.68	12.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	14.48	9.60	#REF!	#REF!	3.08

LINK COMPUTATIONS (100 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNING'S "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
Gum Bayou South																
TRUNK LINE																
C2S	C2S	5.71	5.17	412.00	0.13	1.00	CIRCULAR	N/A	42.00	0.013	0	52.20	38.28	18.45	15.34	3.77
C2S	C2S	5.17	4.71	418.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	97.15	65.22	15.34	14.32	4.10
C3S	C4S	4.71	4.94	78.00	0.10	1.00	CIRCULAR	N/A	66.00	0.013	0	123.44	108.19	14.32	14.22	4.47
C4S	34th St.	8.50	4.71	16.00	0.11	1.00	CIRCULAR	N/A	36.00	0.013	0	28.78	0.00	14.22	14.22	0.00
C5S	C4S	4.84	4.59	38.00	0.11	1.00	BOX	96.00	36.00	0.013	0	122.96	22.12	14.22	12.93	3.13
C5S	C6S	4.32	4.59	274.00	0.10	1.00	CIRCULAR	N/A	66.00	0.013	0	122.74	108.19	12.93	12.56	4.47
C6S	C7S	4.32	3.89	390.00	0.11	1.00	CIRCULAR	N/A	66.00	0.013	0	181.56	111.38	12.56	11.42	4.89
C7S	C8S	3.89	3.51	394.00	0.10	1.00	CIRCULAR	N/A	72.00	0.013	0	212.47	131.90	11.42	10.43	4.87
C8S	C9S	3.51	3.15	358.00	0.10	1.00	CIRCULAR	N/A	72.00	0.013	0	223.53	133.83	10.43	9.43	4.74
C9S	C10S	3.15	3.08	80.00	0.11	1.00	CIRCULAR	N/A	72.00	0.013	0	236.38	140.46	9.43	8.24	4.87
C10S	C11S	3.03	3.03	48.00	0.11	1.00	CIRCULAR	N/A	72.00	0.013	0	238.81	140.46	9.24	9.06	4.97
C11S	Outfall	3.03	3.00	28.00	0.11	1.00	CIRCULAR	N/A	72.00	0.013	0	239.37	140.46	8.09	8.00	4.97
LATERALS																
C1S	C1S	5.75	5.71	25.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	32.06	17.40	6.36	8.21	3.55
C1S	C1S	5.75	5.71	15.00	0.28	1.00	CIRCULAR	N/A	30.00	0.013	0	22.39	21.70	8.25	8.21	4.42
C2S	C2S	5.22	5.17	23.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	14.24	17.40	7.70	7.67	3.55
C2S	C2S	5.21	5.17	16.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	38.77	20.51	7.80	7.67	4.18
C6S	C6S	3.55	3.51	24.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	30.78	17.40	6.14	6.01	3.55
C6S	C6S	3.55	3.51	16.00	0.26	1.00	CIRCULAR	N/A	30.00	0.013	0	38.22	20.71	6.15	6.01	4.22
C7S	C7S	3.20	3.15	28.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	8.42	9.60	5.19	5.15	3.06
C7S	C7S	3.18	3.15	16.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	28.08	17.40	5.73	5.65	3.55
C8S	C8S	3.18	3.08	26.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	9.25	9.60	5.12	5.06	3.06
C8S	C8S	3.11	3.08	16.00	0.15	1.00	CIRCULAR	N/A	30.00	0.013	0	13.01	15.69	5.60	5.58	3.24
C8S	C8S	3.10	3.03	28.00	0.25	1.00	CIRCULAR	N/A	24.00	0.013	0	19.78	11.31	5.23	5.03	3.60
C9S	C9S	3.06	3.03	17.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	22.11	17.40	5.98	5.53	3.55

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY
ENGINEERING DEPARTMENT



MCDONOUGH
Civil Engineers & Surveyors
10035 Farm Registration Rd., Suite 100
Houston, Texas 77036
(713) 975-9900
www.mcdonough.com



PROJECT TITLE: CALIFORNIA AVENUE
SHEET NUMBER: F.M. 517 TO 20th ST. EAST

DRAINAGE CALCULATIONS 100-YR
DATE: 7/7/2023
SHEET (1 OF 2)




DATE: 7/7/2023
SHEET (1 OF 2)
N.T.S. 74 / 163

LINK COMPUTATIONS (100 YR) ATLAS 14

U.S. NODE	D.S. NODE	U.S. INVERT (FT)	D.S. INVERT (FT)	ACTUAL LENGTH	SLOPE	NO. OF BARRELS	SHAPE	DIMENSION		MANNINGS "n" VALUE	JUNCTION LOSS	DISCHARGE (CFS)	CAPACITY (CFS)	U.S. HGL (FT)	D.S. HGL (FT)	VELOCITY (FPS)
								SPAN (IN)	RISE (IN)							
Gum Bayou North																
TRUNK LINE																
C20N	C20N	6.41	6.21	157.00	0.13	1.00	CIRCULAR	N/A	30.00	0.013	0	36.36	14.79	17.39	16.16	3.01
C19N	C19N	5.72	5.72	444.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	62.16	33.37	16.16	14.46	3.47
C18N	C18N	5.72	5.48	219.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	60.49	33.37	14.46	13.67	3.47
C17N	C17N	5.48	5.22	236.00	0.11	1.00	CIRCULAR	N/A	42.00	0.013	0	76.74	33.37	13.67	12.29	3.47
C16N	C16N	5.22	4.96	254.00	0.10	1.00	CIRCULAR	N/A	48.00	0.013	0	90.71	45.42	12.29	11.27	3.61
C15N	C15N	4.96	4.73	237.00	0.10	1.00	CIRCULAR	N/A	48.00	0.013	0	97.51	45.42	11.27	10.18	3.61
C14N	C14N	4.73	4.39	334.00	0.10	1.00	CIRCULAR	N/A	54.00	0.013	0	107.62	62.19	10.18	9.18	3.91
C13N	C13N	4.39	4.32	66.00	0.10	1.00	CIRCULAR	N/A	54.00	0.013	0	118.50	62.19	9.18	8.93	3.91
C12N	C12N	4.32	4.29	30.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	135.65	65.22	8.93	8.79	4.10
C12N	Outfall	4.29	4.28	10.00	0.11	1.00	CIRCULAR	N/A	54.00	0.013	0	135.68	65.22	8.83	8.78	4.10
LATERALS																
C14NE	C14N	7.23	7.18	27.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	11.48	9.60	9.25	9.18	3.06
C14NW	C14N	7.21	7.16	17.00	0.18	1.00	CIRCULAR	N/A	24.00	0.013	0	0.00	9.60	9.18	9.18	3.06
C15NE	C15N	7.25	7.18	31.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	0.00	10.37	9.18	9.18	3.30
C15NW	C15N	7.21	7.18	14.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	13.18	10.37	9.23	9.18	3.30
C16NE	C16N	8.53	8.48	30.00	0.16	1.00	CIRCULAR	N/A	24.00	0.013	0	1.46	9.60	10.46	10.46	3.06
C16NW	C16N	8.52	8.48	14.00	0.29	1.00	CIRCULAR	N/A	30.00	0.013	0	39.01	22.09	11.11	10.98	4.30
C18NE	C18N	8.54	8.48	29.00	0.21	1.00	CIRCULAR	N/A	24.00	0.013	0	2.83	10.37	10.48	10.48	3.30
C18NW	C18N	8.51	8.48	14.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	27.03	17.40	11.04	10.98	3.55
C20NE	C20N	8.53	8.48	29.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	0.82	17.40	10.98	10.98	3.55
C20NW	C20N	8.52	8.48	14.00	0.28	1.00	CIRCULAR	N/A	30.00	0.013	0	37.80	21.70	11.10	10.98	4.42
C21NE	C21N	8.53	8.48	29.00	0.18	1.00	CIRCULAR	N/A	30.00	0.013	0	5.17	17.40	10.98	10.98	3.55
C21NW	C21N	8.52	8.48	17.00	0.25	1.00	CIRCULAR	N/A	30.00	0.013	0	47.59	20.51	11.21	10.98	4.18

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
DRAINAGE CALCULATIONS 100-YR
SHEET (2 OF 2)

DATE: 7/7/2023
DATE: 7/7/2023
DATE: 7/7/2023
DATE: 7/7/2023

M.H. From	M.H. To	Area (Acres)	Runoff Coeff C	Sum of C * A	Intensity INHR	Sum of Flows CFS	Time of Conc. (MIN.)
10 YR Existing Flow Condition to TxDOT Atlas 14							
Overall Area		54.1	0.62	28.13	4.04	113.75	48.01
10 YR Proposed Flow Condition TxDOT Atlas 14							
Overall Area		35.03	0.54	18.92	4.13	78.14	48.30

- NOTES:
- CURRENT PROPOSED DRAINAGE PATTERNS ARE MATCHING PROPOSED DRAINAGE PATTERNS FROM CSJ: 0051-03-049 THEREFORE NO ADVERSE IMPACT TO TxDOT FACILITIES IS ANTICIPATED
 - PROP. DRAINAGE AREAS TO TxDOT OUTFALL: OS-E1W, OS-E2W, OS-E3E TOTAL 35.03 ACRES WITHIN DRAINAGE AREA FROM CSJ:0051-0-049
 - PROP. DRAINAGE AREA TO BE REMOVED FROM TxDOT TOTALS 18.07 ACRES FROM OS-C1SW, OS-C1SE, OS-C2SE, AND OS-C3SE.

TxDOT Tracking number (TR#)	Highway	FM 0517
TxDOT frontage		60 FT
TxDOT Area (the strip of site within 150-ft frontage)		21 AC
Total tract area based on submitted survey map		35.03 AC
Proposed disturbed area		.13 AC
Project contributing drainage area to TxDOT		35.03 AC
Off-site contributing drainage area (if applicable)		N/A AC
Increased impervious area		.13 AC
10-yr required detention volume		0 ACF
10-yr proposed detention volume		0 ACF
10-yr design W.S.E.		0 FT
10-yr Pre-developed peak flow		113.75 CFS
10-yr Post-developed peak flow (Before detention/restrictor)		69.92 CFS
10-yr Proposed discharge to TxDOT R.O.W. (With detention/restrictor)		69.92 CFS
100-yr required detention volume		0 ACF
100-yr proposed detention volume		0 ACF
100-yr design W.S.E.		0 FT
100-yr Pre-developed peak flow		145.76 CFS
100-yr Post-developed peak flow (Before detention/restrictor)		112.89 CFS
100-yr Proposed discharge to TxDOT R.O.W. (With detention/restrictor)		112.89 CFS
TxDOT as-built or calculated allowable discharge		78.15 CFS
Primary tie-in/outfall structure size		36 inch
Primary restrictor size		Exist. 36 inch
Primary restrictor maximum discharge		0 CFS
Secondary outfall device size (if applicable)		N/A CFS
Secondary outfall discharge (if applicable)		N/A CFS
Maximum combined pumped discharge (if applicable)		N/A GPM (CFS)
% Pumped discharge volume (if applicable)		N/A ACF
Effective gravity discharge elevation (if applicable)		N/A FT
B.F.E. per effective FIRM (if applicable)		N/A ACF
Proposed fill below B.F.E. (if applicable)		N/A ACF
Proposed cut below B.F.E. (if applicable)		N/A ACF

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT



MEDONOUGH
Civil & Survey Engineering
1815 Gessner Road, Suite 100
Houston, Texas 77057
(713) 975-9000
www.medonough.com



PROJECT TITLE
CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
DRAINAGE SUMMARY TABLE AND
EXISTING CONDITIONS

DATE: 7/7/2023
PAGE: 71 / 103

NOTES:

PHASE 1:

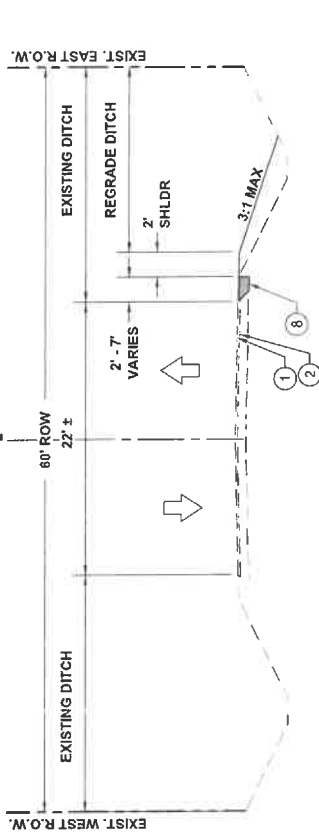
1. THE CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE APPROVED TRAFFIC CONTROL PLANS.
2. ALL ADVANCED WARNING SIGNS TO BE SET PRIOR TO START OF CONSTRUCTION ACTIVITIES AND TO REMAIN IN PLACE UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY HARRIS COUNTY. THE CONTRACTOR WILL COORDINATE WITH THE HARRIS COUNTY PUBLIC INFRASTRUCTURE DEPARTMENT ENGINEERING DIVISION IN ESTABLISHING TRAFFIC ROUTES AND LOCATION OF SIGNS.
3. ADVANCED SIGNING SHALL BE PLACED A MINIMUM OF TWO WEEKS IN ADVANCE TO INFORM THE PUBLIC OF POSSIBLE DELAY. CONTRACTOR SHALL OBTAIN APPROVAL FROM THE HARRIS COUNTY ENGINEERING DEPARTMENT AT LEAST TWO WEEKS PRIOR TO ANY CONSTRUCTION.
4. SIGN R20-3 IS REQUIRED IN ADVANCE OF PROJECT LIMITS.

PHASE 2:

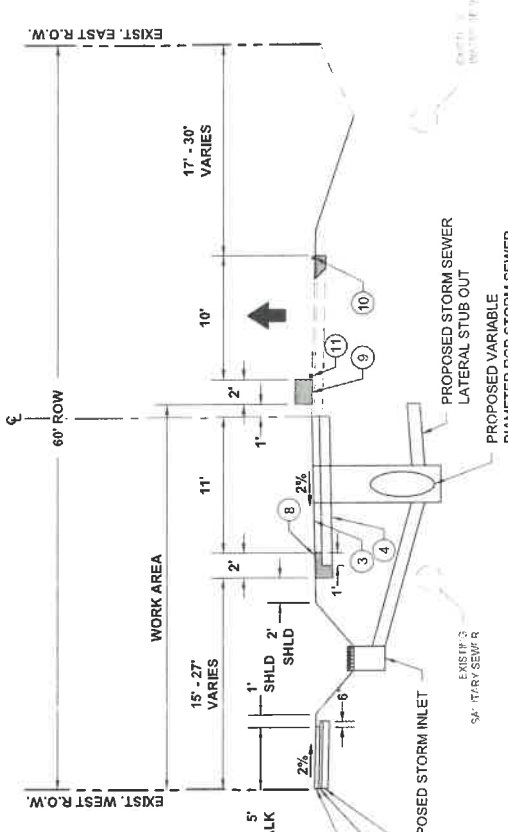
1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS. TEMPORARY PAVEMENT MARKINGS AS SHOWN IN THE TRAFFIC CONTROL PLAN.
2. CONSTRUCT STORM SEWER TRUNK LINE, OUTFALLS, INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
3. MAINTAIN PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS.
5. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
6. CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
7. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.

PHASE 3:

1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS. TEMPORARY PAVEMENT MARKINGS AS SHOWN IN TRAFFIC CONTROL PLAN.
2. CONSTRUCT STORM SEWER INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
3. CONSTRUCT PERMANENT CONCRETE PAVEMENT ON EAST SIDE.
4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
5. CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
6. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



TRAFFIC CONTROL PLAN PHASE 1 STEP 1
STA. 1+95.92 TO 8+34.00, STA. 11+63.76 TO 18+02.54,
STA. 22+61.06 TO 51+16.88, STA. 57+76.15 TO 69+42.13



TRAFFIC CONTROL PLAN PHASE 2 STEP 1
STA. 1+95.92 TO 8+34.00, STA. 11+63.77 TO 18+02.55, STA. 22+61.06 TO 39+74.25
STA. 42+43.00 TO 51+16.88, STA. 57+76.15 TO 69+42.13

LEGEND:

- 1 1.5" - 13.75" EXISTING ASPHALT PAVEMENT
 - 2 VARIES BETWEEN 2" - 12" EXISTING CEMENT STABILIZED SAND BASE AND 6" - 11.5" CEMENT TREATED BASE
 - 3 7" JOINTED REINFORCED CONCRETE PAVEMENT
 - 4 8" LIME STABILIZED SUBGRADE
 - 5 4" REINFORCED CONCRETE SIDEWALK
 - 6 3" CEMENT STABILIZED SAND
 - 7 8" SUBBASE COMPACTED TO 95% STANDARD PROCTOR DENSITY
 - 8 8" BLACKBASE TEMPORARY ASPHALT
 - 9 LOW PROFILE CONCRETE BARRIER
 - 10 4" WHITE SOLID NON-REMOVABLE
 - 11 4" YELLOW SOLID NON-REMOVABLE
 - 12 4" WHITE SOLID REMOVABLE
 - 13 4" YELLOW SOLID REMOVABLE
- EXISTING TRAFFIC DIRECTION PROPOSED TRAFFIC DIRECTION

NO.	REVISIONS	DATE	NAME

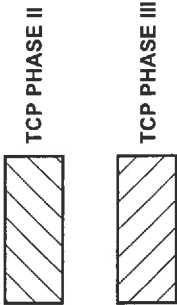
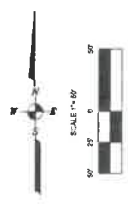
PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 TRAFFIC CONTROL PLAN TYPICAL SECTION (1 OF 2)

DATE: 7/7/2023
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 9/16/2023

STATE OF TEXAS
 ENGINEERING EXAMINER
 AUSTIN R. MCLANE
 123335
 www.mecp.com
 5625 S. AUSTIN ROAD
 HOUSTON, TEXAS 77057

GALVESTON COUNTY
 ENGINEERING DEPARTMENT

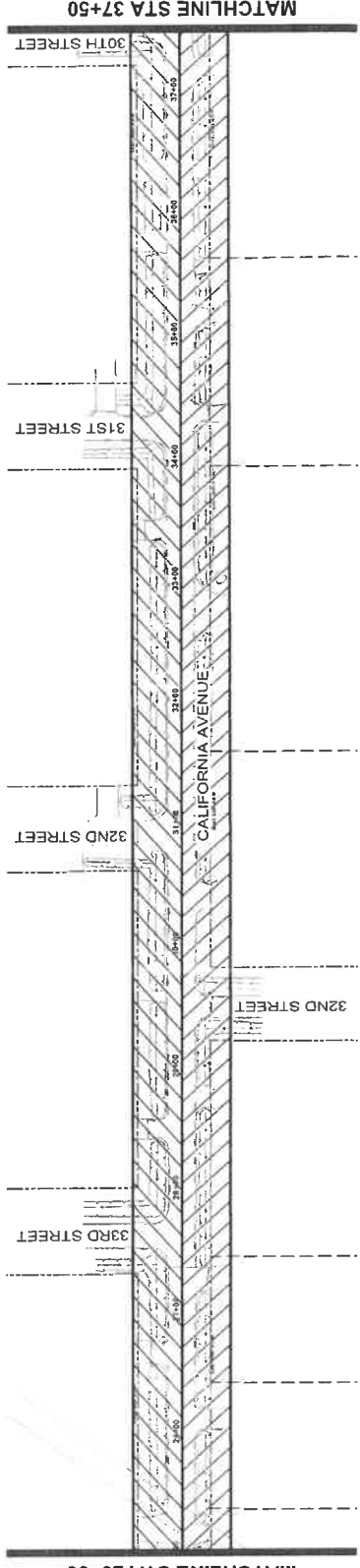
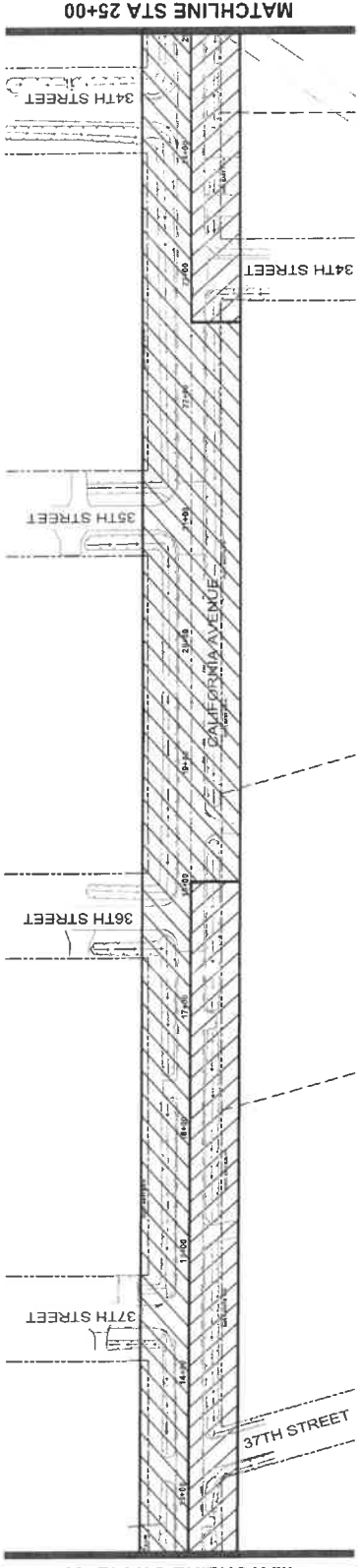
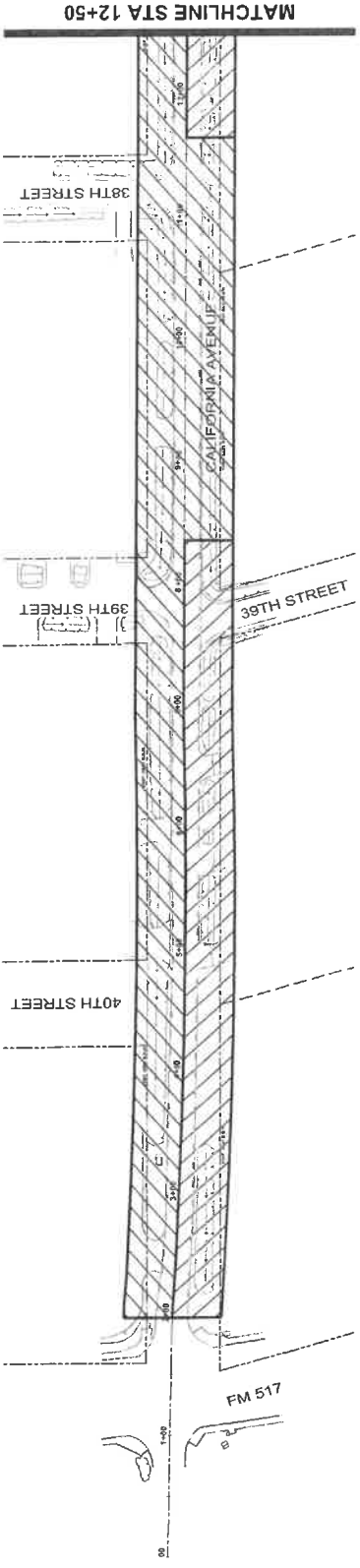
N.T.S.



- NOTES:**
- PHASE I**
- CONSTRUCT TEMPORARY ASPHALT PAVEMENT AND DRAINAGE ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THIS PLAN. THE CONTRACTOR SHALL MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.

- PHASE 2**
- SET LOW PROFILE CONCRETE BARRIER AND CONSTRUCTION SIGNS AND BARRICADES AS SHOWN IN THE TRAFFIC CONTROL PLAN.
 - CONSTRUCT STORM SEWER TRUNK LINE, DUTY LATERALS, INLET LATERALS, AND CONCRETE PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
 - MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAILS.
 - CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN THIS PLAN.
 - CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.

- PHASE 3**
- SET LOW PROFILE CONCRETE BARRIER AND CONSTRUCTION SIGNS AND BARRICADES AS SHOWN IN TRAFFIC CONTROL PLAN.
 - CONSTRUCT STORM SEWER INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
 - CONSTRUCT PERMANENT CONCRETE PAVEMENT ON EAST SIDE.
 - MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
 - CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



NO.	REVISIONS	DATE	NAME

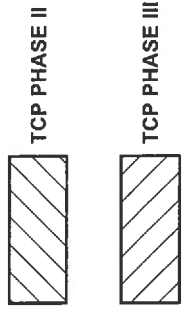
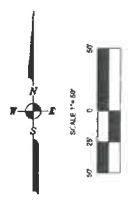
**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



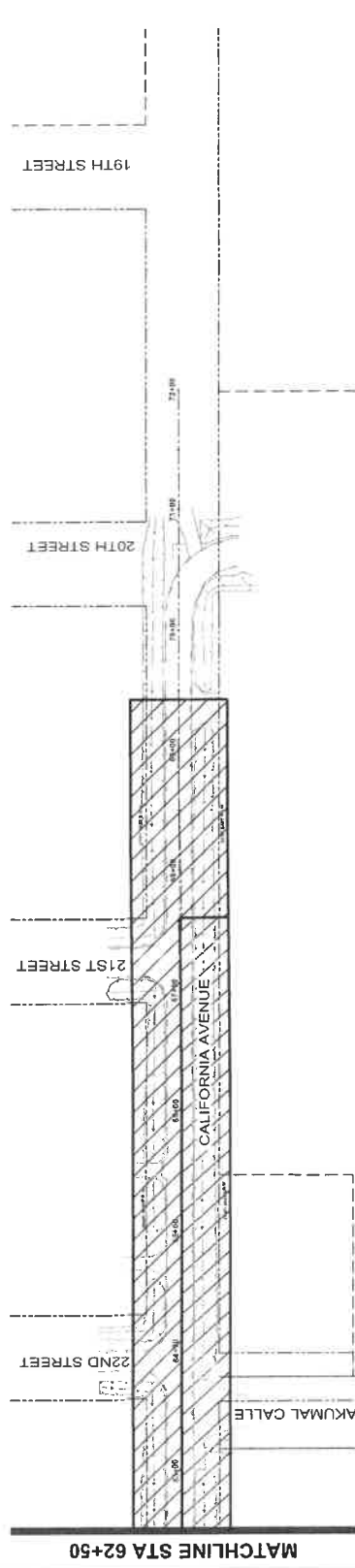
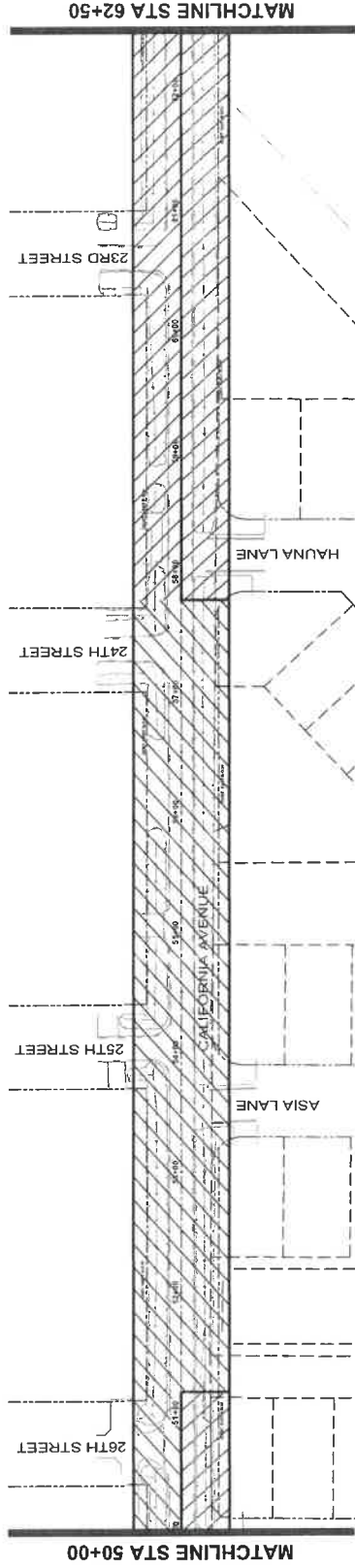
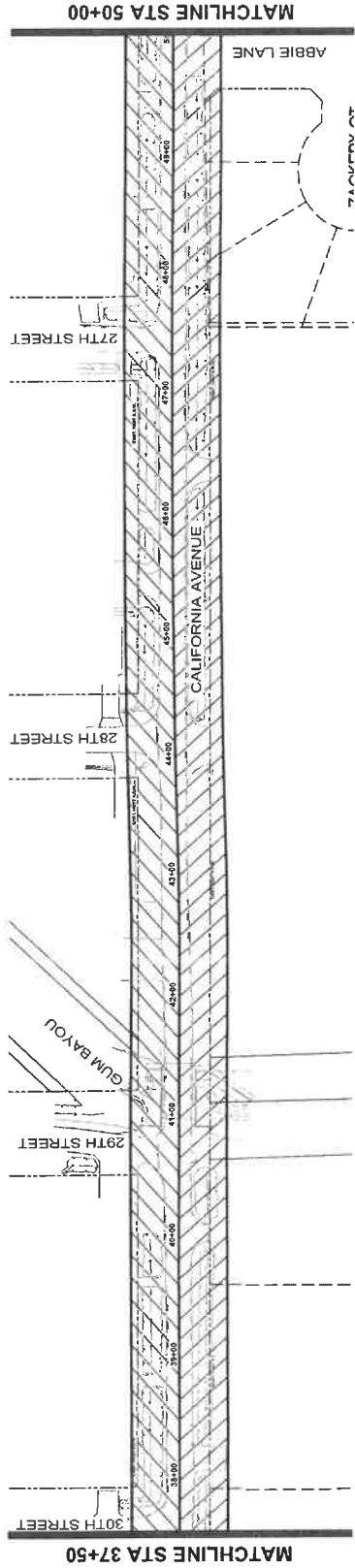
MCDONOUGH
 10000
 5625 Sawdust Creek
 Houston, Texas 77057
 (713) 975-9099
 www.mcdco.com



PROJECT TITLE	CALIFORNIA AVENUE
SHEET DESCRIPTION	F.M. 517 TO 20th ST. EAST
TRAFFIC CONTROL PLAN	TRAFFIC CONTROL PLAN
DATE	7/7/2023
PHASING LAYOUTS (1 OF 2)	PHASING LAYOUTS (1 OF 2)
SCALE	1"=50'
DATE	7/7/2023
SHEET NO.	19
TOTAL SHEETS	193



- NOTES:**
- PHASE 1**
- CONSTRUCT TEMPORARY ASPHALT PAVEMENT AND CRUSHED LIMESTONE FOR DRIVEWAY ACCESS AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1.
 - CONTRACTOR TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.
- PHASE 2**
- SET LOW PROFILE CONCRETE BARRIER AND MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAILS.
 - CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN THIS PHASE.
 - CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.
- PHASE 3**
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 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**

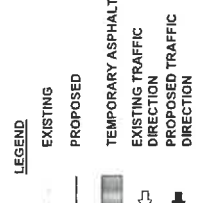
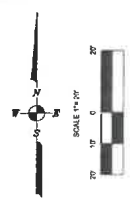


MEDONOUGH
 Civil Engineering
 1703 Spring Registration No. 00019000
 5625 Shawnee Lane
 Houston, Texas 77027
 (713) 974-9900
 www.medonough.com



PROJECT TITLE
 CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
TRAFFIC CONTROL PLAN
 PHASING LAYOUTS (2 OF 2)
 SCALE: 1"=50'

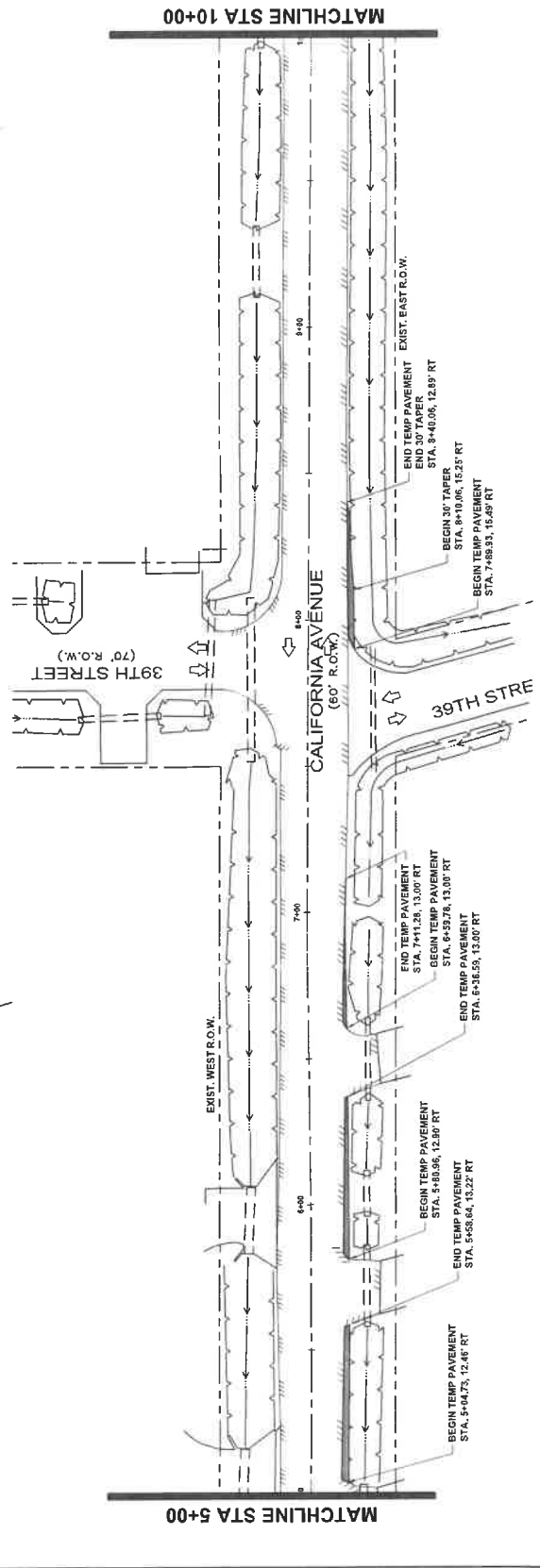
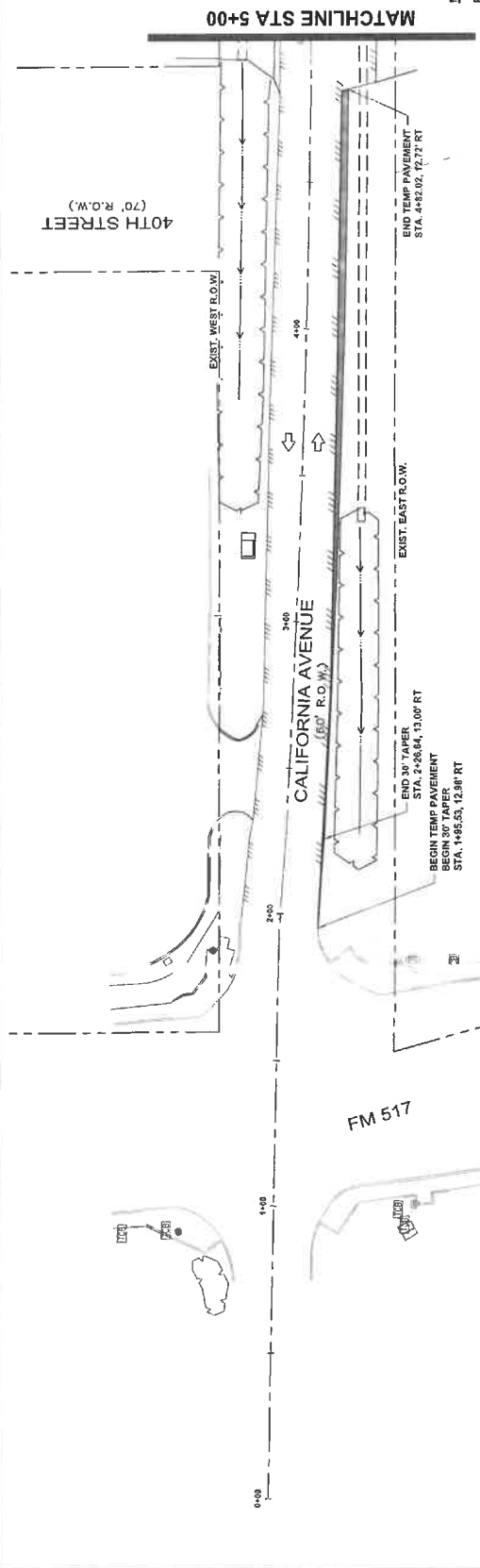
CORD STANDARD	DATE	BY
	7/7/2023	



NOTES:

PHASE 1

1. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1.
2. CONTINUE TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.



NO.	REVISIONS	DATE	NAME

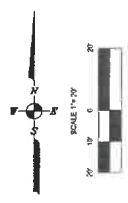
**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



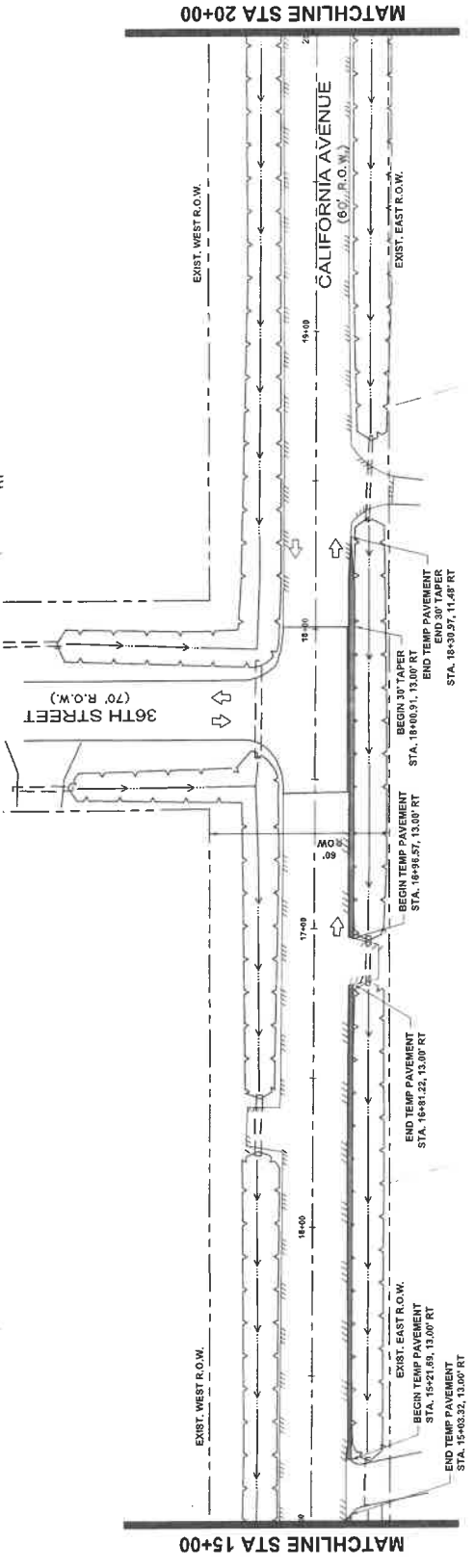
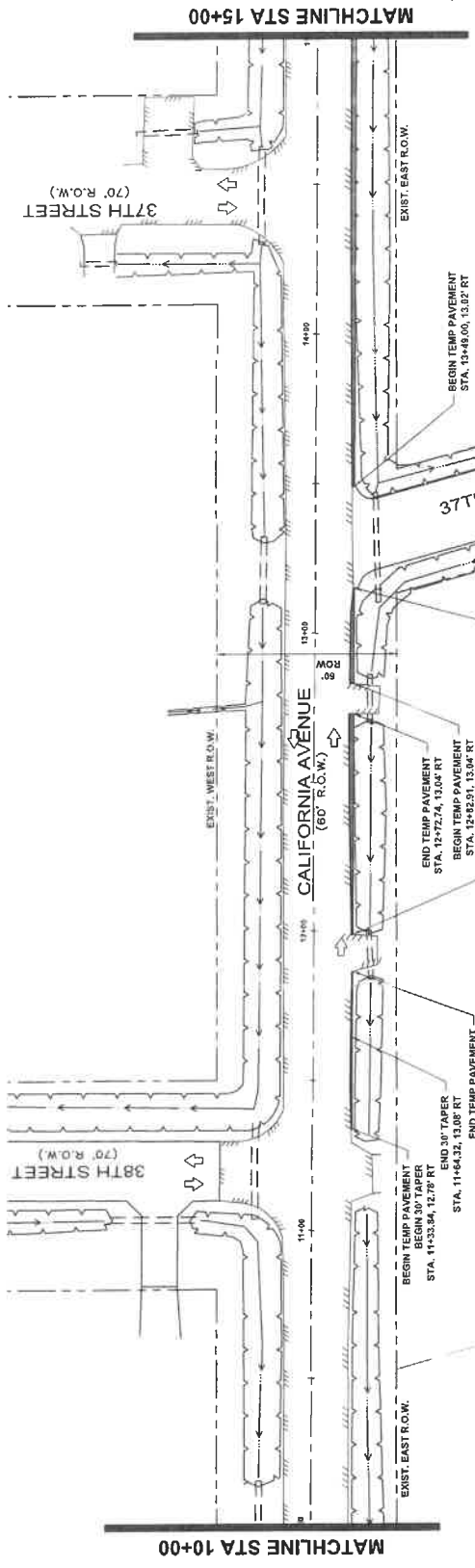
MCDONOUGH
 1915 Farmington Rd., #1010
 Houston, Texas 77057
 www.mcdonough.com



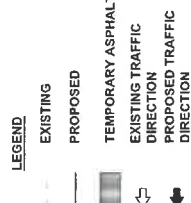
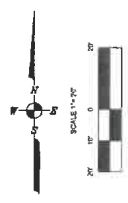
PROJECT TITLE: CALIFORNIA AVENUE		CSD STANDARD
F.M. 517 TO 20th ST. EAST		DATE: 7/7/2023
TRAFFIC CONTROL PLAN PHASE 1		SHEET NO: 81 / 163
DATE: 7/7/2023	STA 0+00 TO 10+00	
CH	DATE	
AM	DATE	



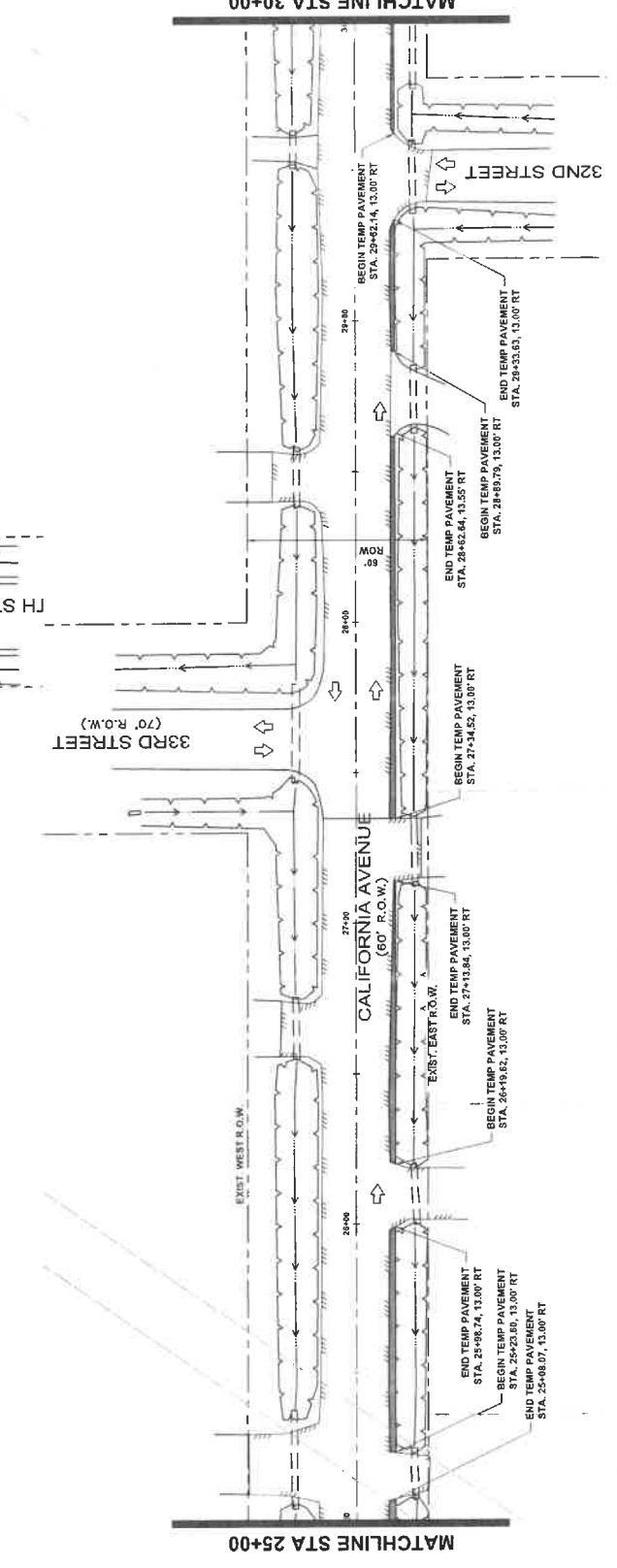
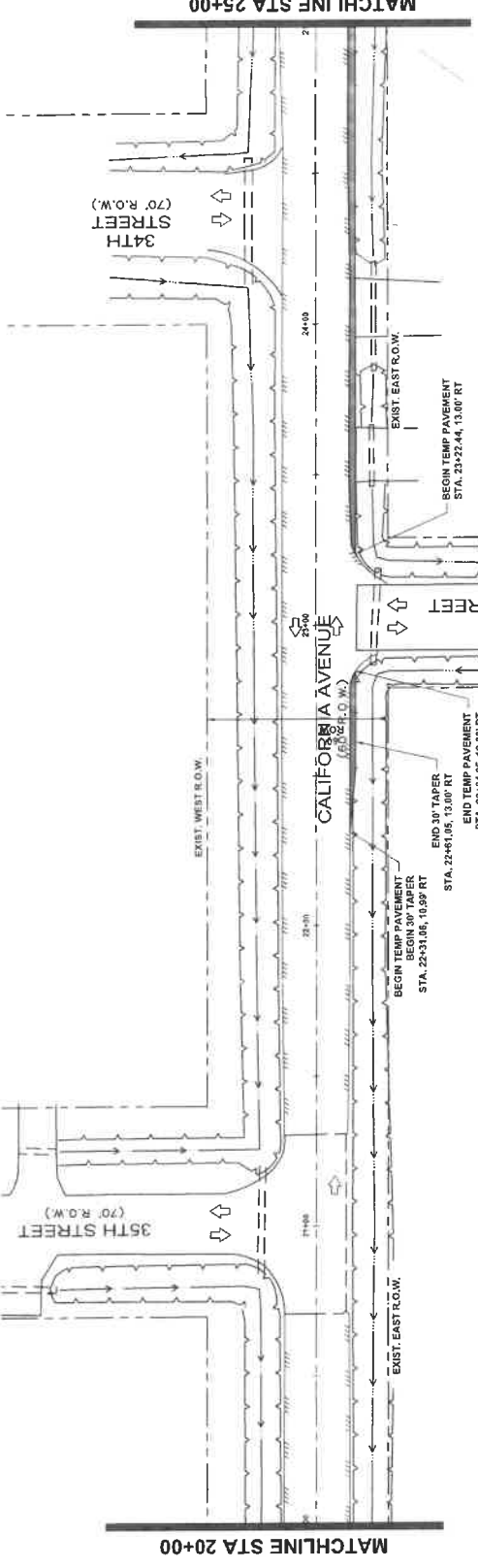
- NOTES:**
PHASE I
- CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE I.
 - CONDUCTOR TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.



NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
MEDONOUGH <small>Professional Engineering Services, Inc. 5255 Sawcreek Lane Houston, Texas 77057 www.medonough.com (713) 975-9900</small>			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 577 TO 20th ST. EAST TRAFFIC CONTROL PLAN PHASE 1 STA 10+00 TO 20+00 DATE: 7/7/2023 SHEET NO.: 103 OF: 103			



- NOTES:**
- PHASE 1**
- CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1.
 - CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 2.



NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**

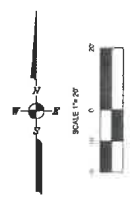
PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
TRAFFIC CONTROL PLAN PHASE 1

DATE: 7/7/2023
SCALE: STA 20+00 TO 30+00
1" = 20'

CSDE STANDARD

DATE: 7/7/2023
SHEET: 05 / 103

MCDONOUGH
TRAFFIC ENGINEERING
1505 S. WILSON BLVD., SUITE 100
HOUSTON, TEXAS 77057
www.mcdoug.com

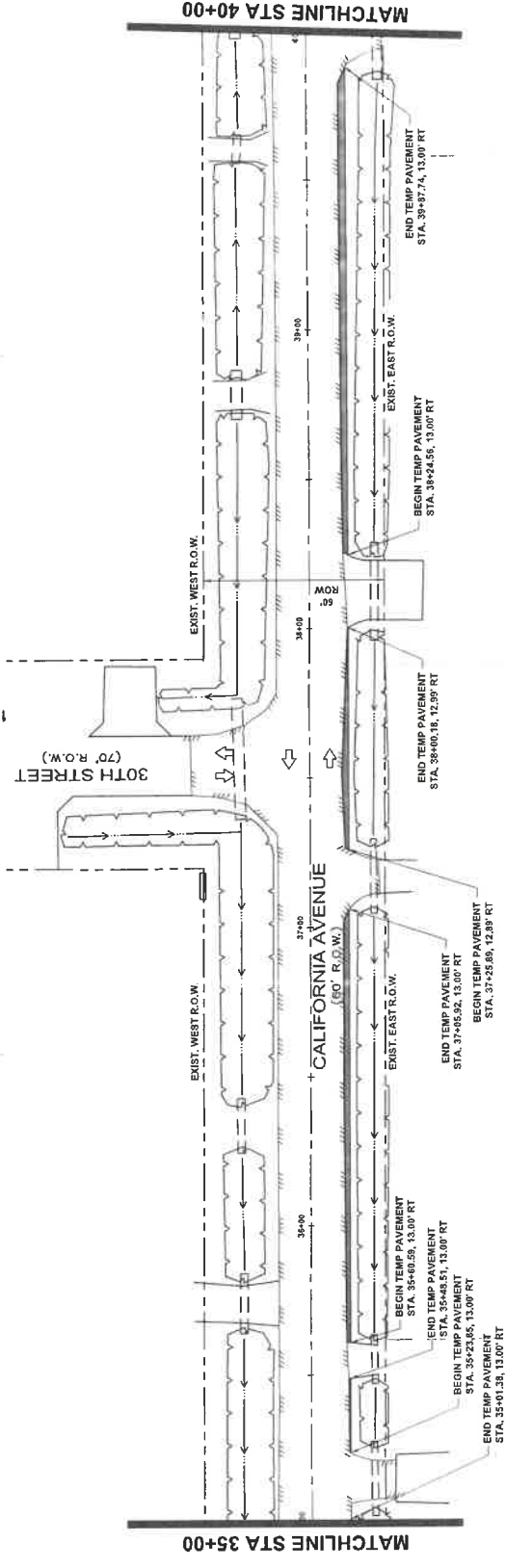
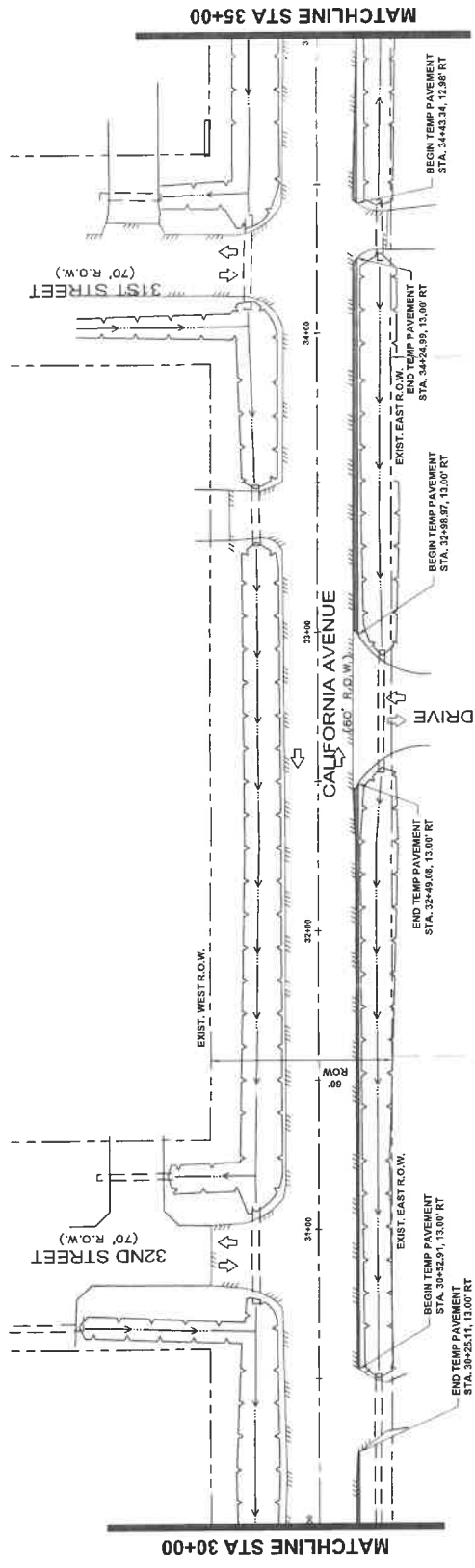


LEGEND

EXISTING
 PROPOSED

TEMPORARY ASPHALT
 EXISTING TRAFFIC DIRECTION
 PROPOSED TRAFFIC DIRECTION

- NOTES:**
- PHASE 1**
1. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1. FACTORS TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.



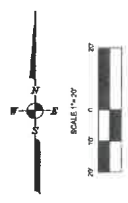
NO.	REVISIONS	DATE	NAME	PROJECT TITLE	CALIFORNIA AVENUE	
					F.M. 517 TO 20H ST. EAST	CADD STANDARD
				TRAFFIC CONTROL PLAN PHASE 1		DATE: 7/7/2023
				STA 30+00 TO 40+00		SHEET NO.: 84 / 183



MCDONOUGH
 ENGINEERS
 10015 Katy Freeway, Suite 1000
 Houston, Texas 77057
 Tel: 281.452.8800
 Fax: 281.452.8805
 www.mcdoug.com



**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**



LEGEND

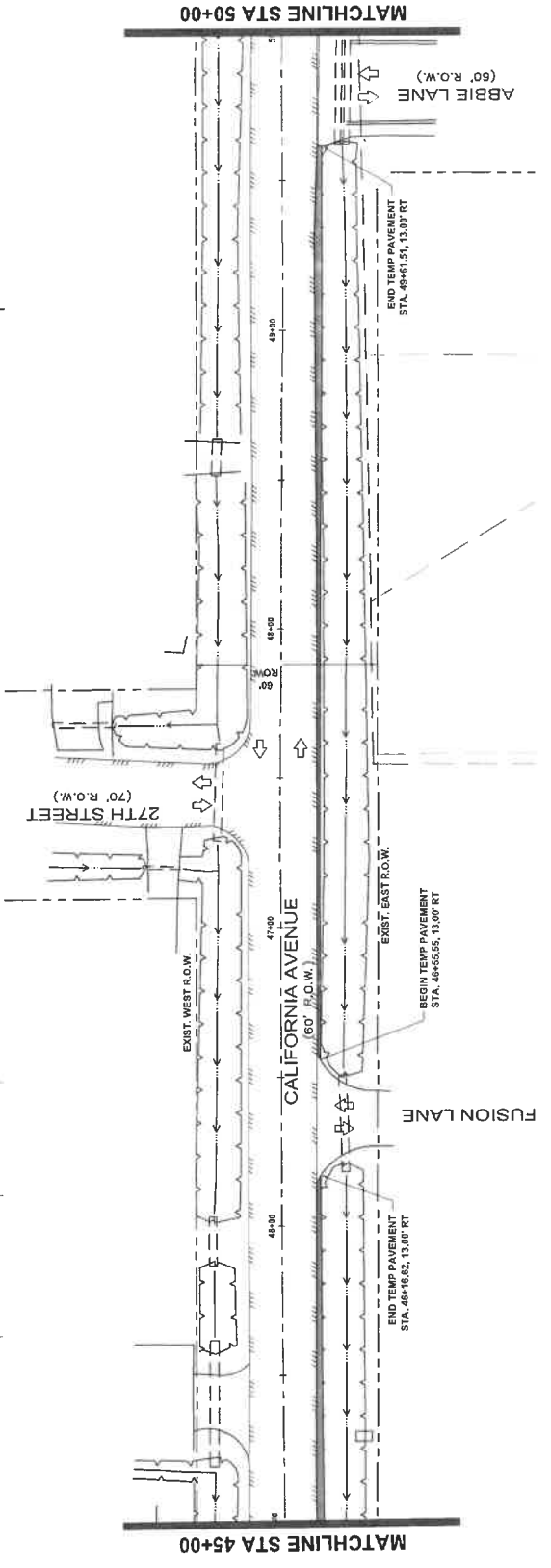
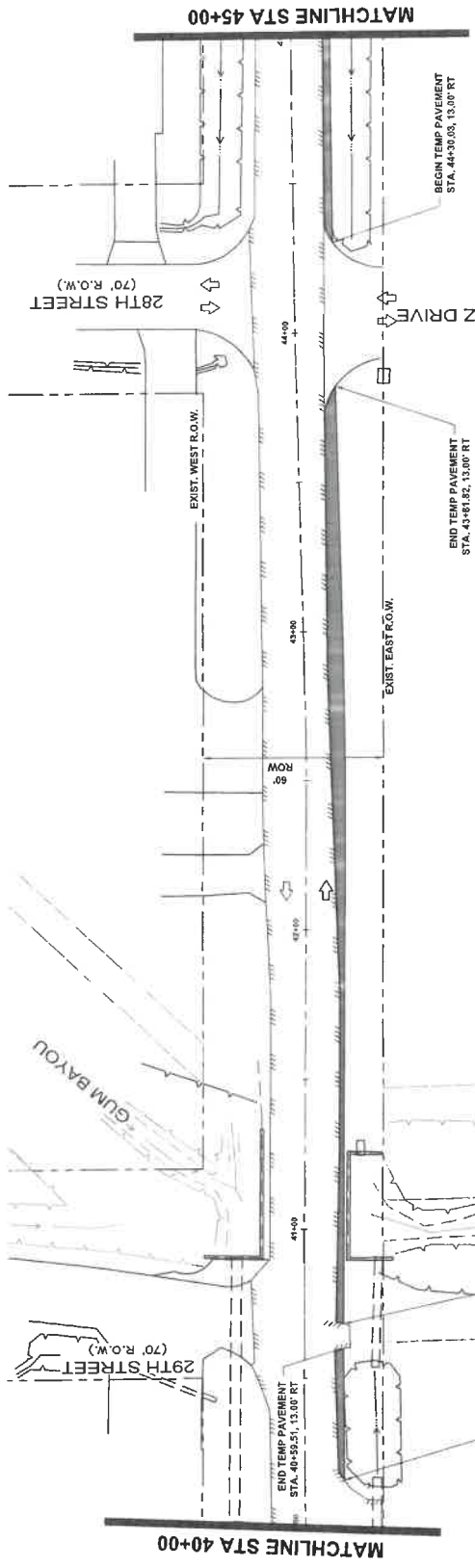
EXISTING
 PROPOSED

TEMPORARY ASPHALT
 EXISTING TRAFFIC
 DIRECTION
 PROPOSED TRAFFIC
 DIRECTION

NOTES:

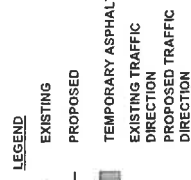
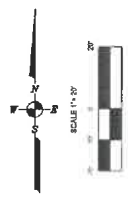
PHASE 1

1. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1. CONDUCTORS TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.



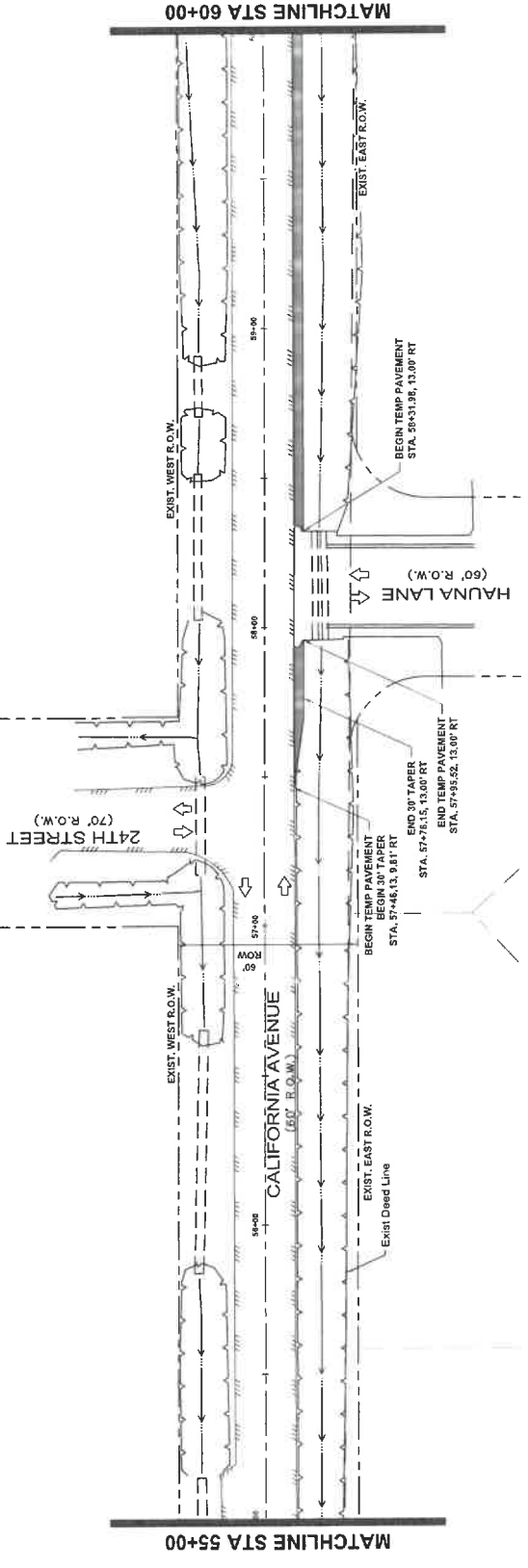
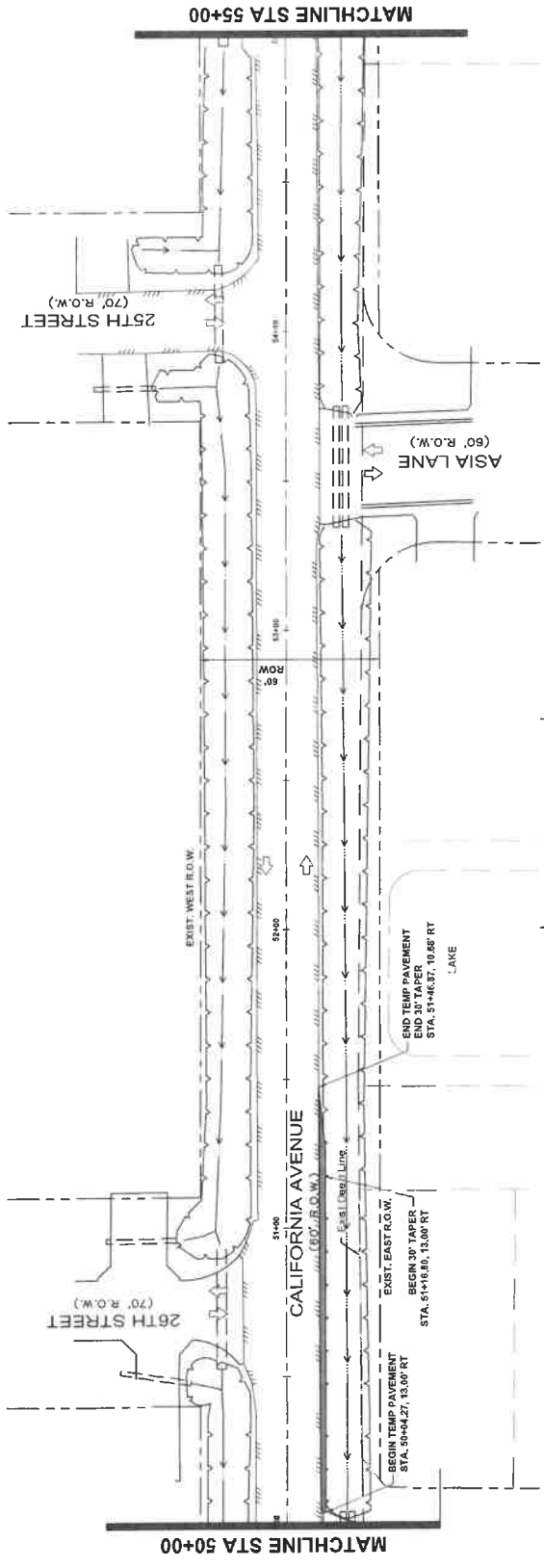
NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT			
PROJECT TITLE CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST TRAFFIC CONTROL PLAN PHASE 1		DATE 7/7/2023	SCALE 1" = 20'
DESIGNED BY CH		CHECKED BY AM	DATE 8/1/2023
PROJECT NO. STA 40+00 TO 50+00		SCALE 1" = 20'	



NOTES:
PHASE 1

1. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1. LOCATOR TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.

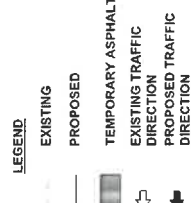
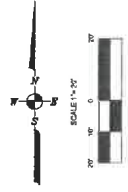
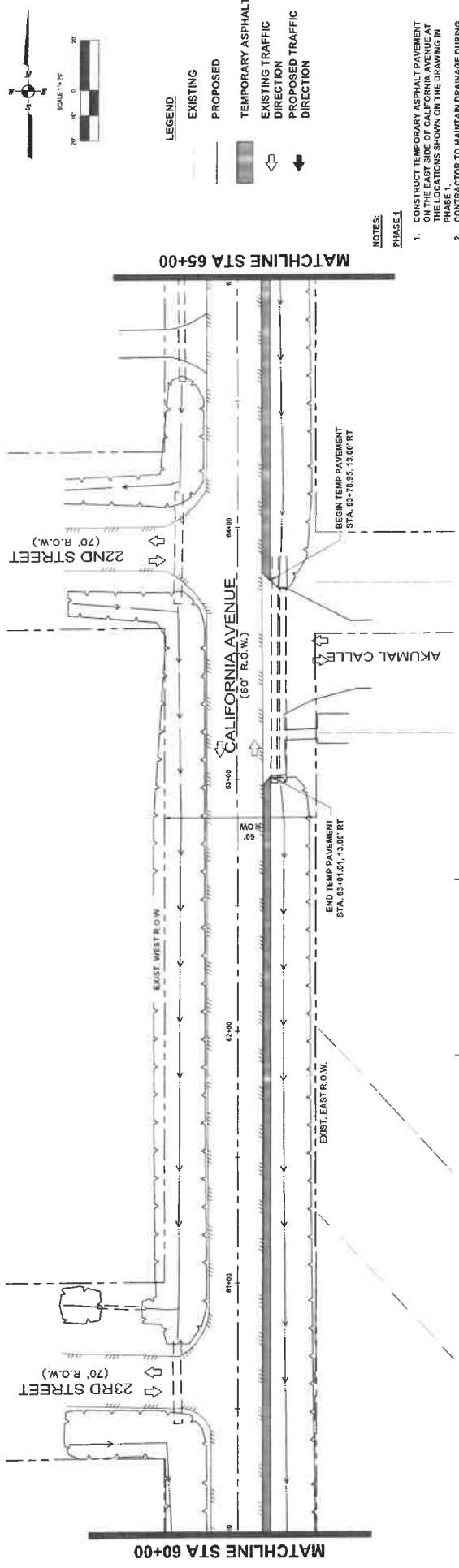


NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**

McDONOUGH
 1805 S. Loop West, Suite 100, Houston, TX 77057
 (713) 875-9900
 www.mcdonough.com

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
TRAFFIC CONTROL PLAN PHASE 1
 STA 50+00 TO 60+00
 DATE: 7/7/2023
 SCALE: 1" = 20'
 SHEET NO.: 163



- NOTES:**
- PHASE 1**
- CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE EAST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS SHOWN ON THE DRAWING IN PHASE 1. CONDUCTOR TO MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION.

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

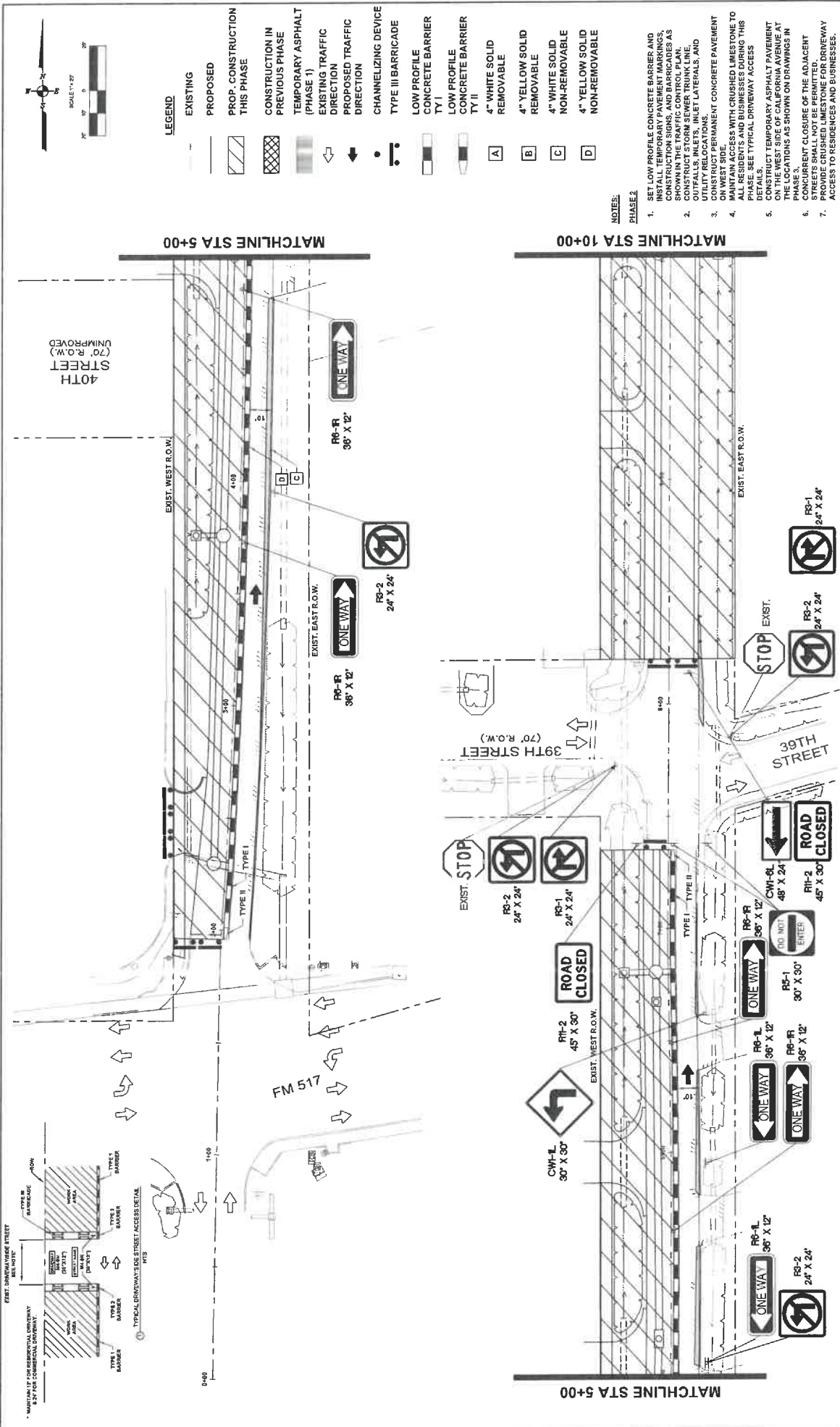
THE STATE OF TEXAS REGISTERED PROFESSIONAL ENGINEER

MEDONOUGH
 Civil & Mechanical Engineering
 1715 J Street, Suite 100
 Houston, Texas 77002
 Phone: (713) 975-8900
 www.medonough.com

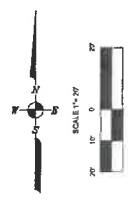
PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 TRAFFIC CONTROL PLAN PHASE 1

DATE: 7/7/2023
SCALE: 1" = 20'

DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DATE: 9/6/2023



NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST TRAFFIC CONTROL PLAN PHASE 2 STEP 1 DATE: 7/21/2023 SCALE: 1" = 20' STA 0+40 TO 10+00 9/16/2023			

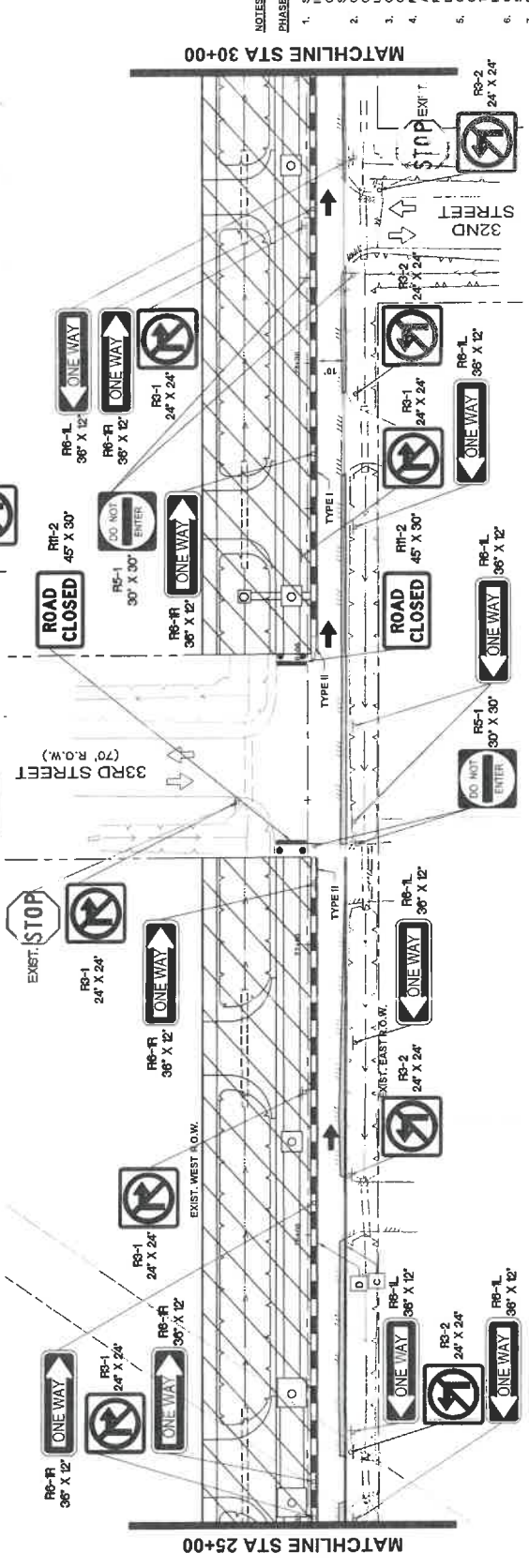
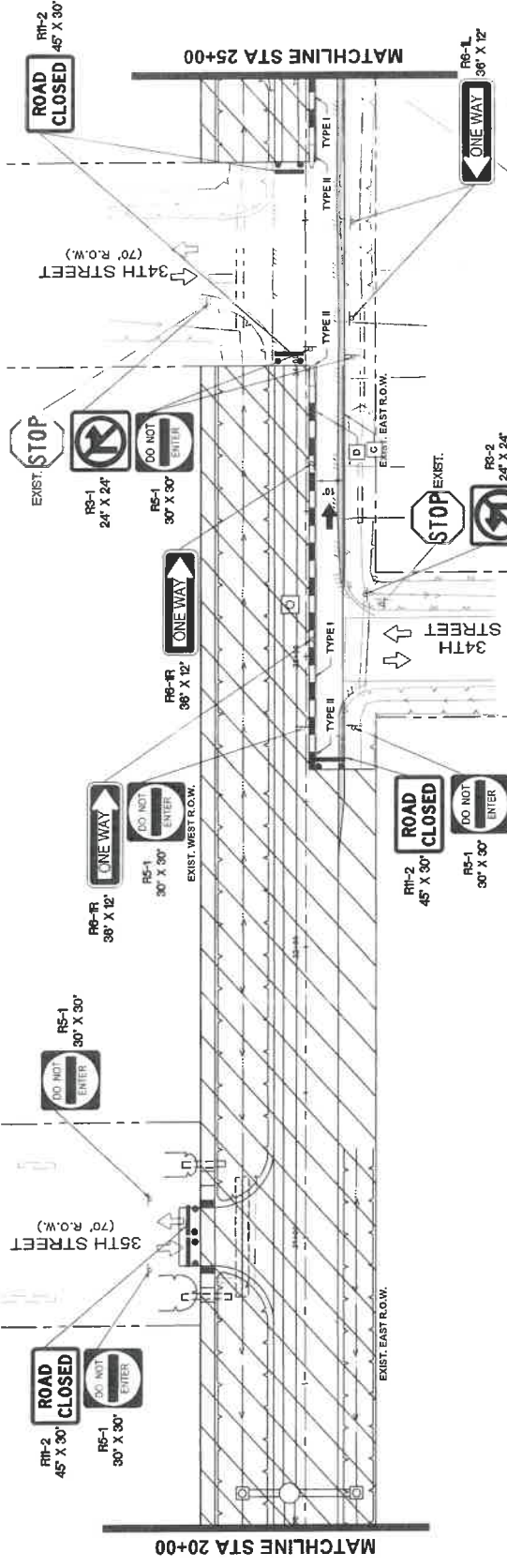


LEGEND

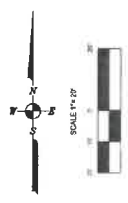
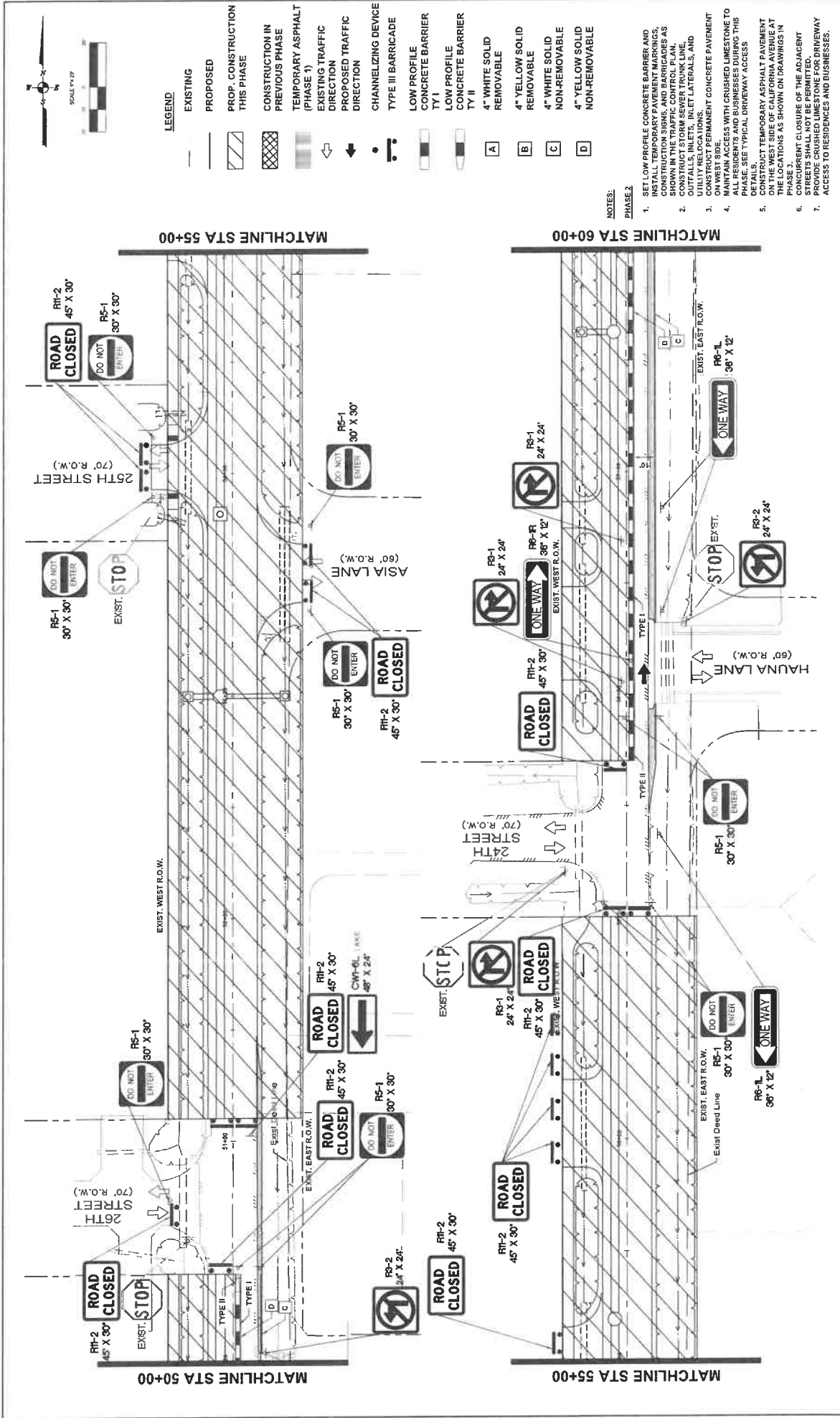
- EXISTING
- PROPOSED
- PROP. CONSTRUCTION THIS PHASE
- CONSTRUCTION IN PREVIOUS PHASE
- TEMPORARY ASPHALT (PHASE 1)
- EXISTING TRAFFIC DIRECTION
- PROPOSED TRAFFIC DIRECTION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- LOW PROFILE CONCRETE BARRIER TY I
- LOW PROFILE CONCRETE BARRIER TY II
- 4" WHITE SOLID REMOVABLE
- 4" YELLOW SOLID REMOVABLE
- 4" WHITE SOLID NON-REMOVABLE
- 4" YELLOW SOLID NON-REMOVABLE

NOTES:

- PHASE 2**
- SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES AND TRAFFIC SIGNS AS SHOWN IN THE TRAFFIC CONTROL PLAN.
 - CONSTRUCT STORM SEWER TRUNK LINE, UTILITY RELOCATIONS, INLET LATERALS, AND OUTFALLS, INLETS, AND LATERALS, AND UTILITY RELOCATIONS.
 - CONSTRUCT PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
 - MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DRAWING.
 - CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY STREET CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - ACCESS TO RESIDENCES AND BUSINESSES.



NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST TRAFFIC CONTROL PLAN PHASE 2 STEP 1 SHEET NO. 77/2623 STA 20+00 TO 30+00 SCALE: 1" = 20' DATE: 9/16/2023			



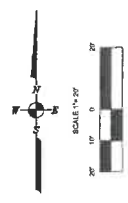
- LEGEND**
- EXISTING
 - PROPOSED
 - PROP. CONSTRUCTION THIS PHASE
 - CONSTRUCTION IN PREVIOUS PHASE
 - TEMPORARY ASPHALT (PHASE 1)
 - EXISTING TRAFFIC DIRECTION
 - PROPOSED TRAFFIC DIRECTION
 - CHANNELIZING DEVICE
 - TYPE III BARRICADE
 - LOW PROFILE CONCRETE BARRIER T I
 - LOW PROFILE CONCRETE BARRIER T Y II
 - A 4" WHITE SOLID REMOVABLE
 - B 4" YELLOW SOLID REMOVABLE
 - C 4" WHITE SOLID NON-REMOVABLE
 - D 4" YELLOW SOLID NON-REMOVABLE

NOTES:

PHASE 2

1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES AND SIGNS AS SHOWN IN THE TRAFFIC CONTROL PLAN.
2. CONSTRUCT STORM SEWER TRUNK LINE, OUTFALLS, INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
3. MAINTAIN EXISTING CONCRETE PAVEMENT ON WEST SIDE.
4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DRAWING.
5. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
6. CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
7. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.

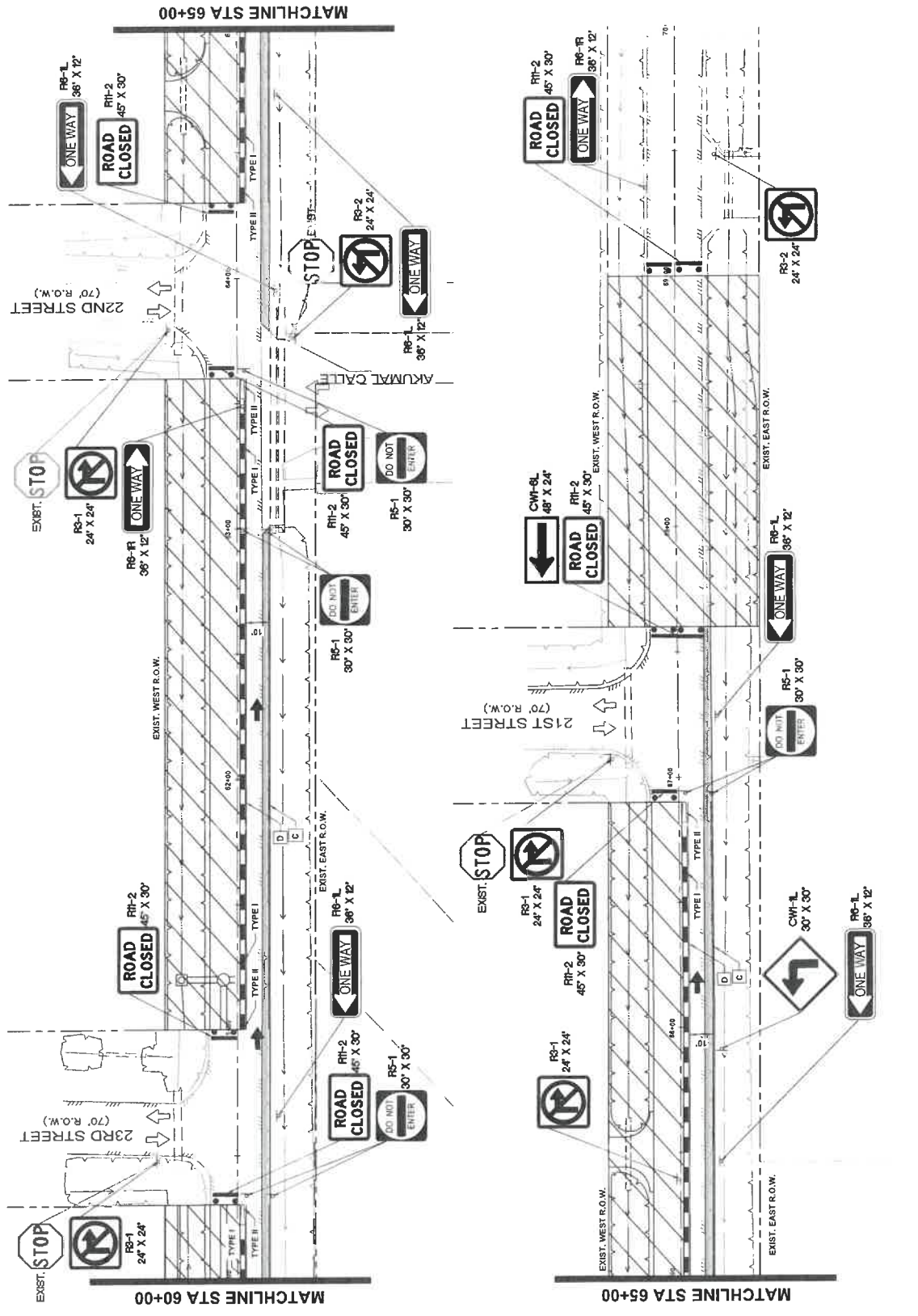
NO.	REVISIONS	DATE	NAME
<p>GALVESTON COUNTY ENGINEERING DEPARTMENT</p>			
<p>PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST TRAFFIC CONTROL PLAN PHASE 2 STEP 1 STA 50+00 TO 60+00 DATE: 7/7/2023 1" = 20'</p>			
<p>DATE: 9/6/2023</p>			



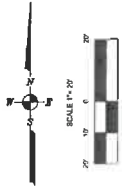
LEGEND

	EXISTING
	PROPOSED
	PROP. CONSTRUCTION THIS PHASE
	CONSTRUCTION IN PREVIOUS PHASE
	TEMPORARY ASPHALT (PHASE 1)
	EXISTING TRAFFIC DIRECTION
	PROPOSED TRAFFIC DIRECTION
	CHANNELIZING DEVICE
	TYPE III BARRICADE
	LOW PROFILE CONCRETE BARRIER
	LOW PROFILE CONCRETE BARRIER TYPE II
	4" WHITE SOLID REMOVABLE
	4" YELLOW SOLID REMOVABLE
	4" WHITE SOLID NON-REMOVABLE
	4" YELLOW SOLID NON-REMOVABLE

- NOTES:**
- PHASE 2**
1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES AS SHOWN IN THE TRAFFIC CONTROL PLAN.
 2. CONSTRUCT STORM SEWER TRUNK LINE, DUTIFALLS, INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
 3. MAINTAIN PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
 4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS.
 5. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
 6. PRESENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 7. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



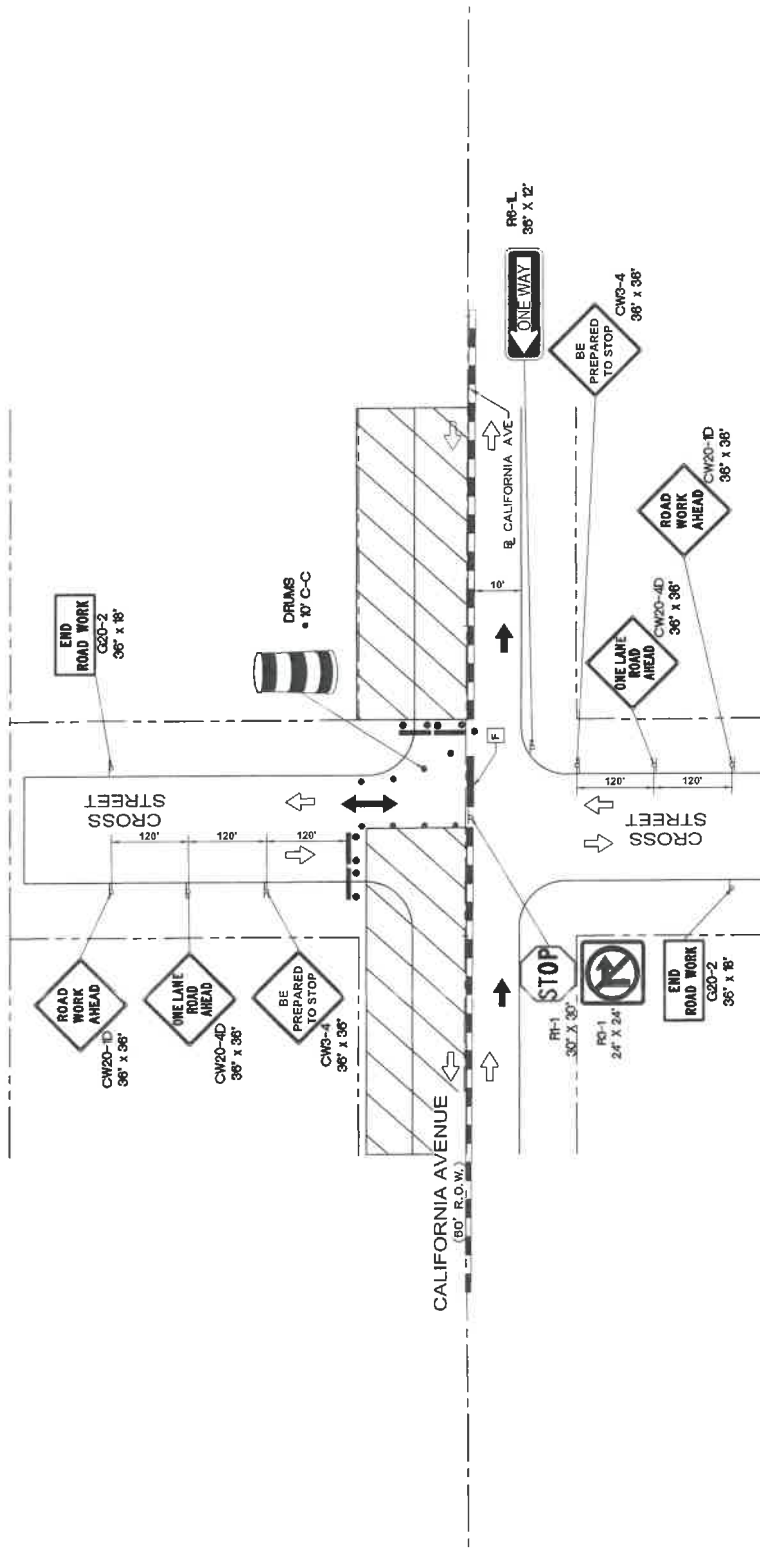
NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
PROJECT TITLE: CALIFORNIA AVENUE			
F.M. 517 TO 20th ST. EAST			
TRAFFIC CONTROL PLAN PHASE 2 STEP 1			
DATE:	CH:	SCALE:	DATE:
9/16/2023	AM	1" = 20'	7/7/2023
5425 S.W. Freeway, Suite 100, Houston, Texas 77057 Tel: 281.471.0900 Fax: 281.471.0905 www.medonough.com			



- LEGEND**
- EXISTING
 - PROPOSED
 - PROP. CONSTRUCTION THIS PHASE
 - CONSTRUCTION IN PREVIOUS PHASE
 - TEMPORARY ASPHALT (PHASE 1)
 - EXISTING TRAFFIC DIRECTION
 - PROPOSED TRAFFIC DIRECTION
 - CHANNELIZING DEVICE
 - TYPE III BARRICADE
 - LOW PROFILE CONCRETE BARRIER T1
 - LOW PROFILE CONCRETE BARRIER T2
 - 4" YELLOW SOLID REMOVABLE
 - 4" YELLOW SOLID REMOVABLE
 - 4" WHITE SOLID NON-REMOVABLE
 - 4" YELLOW SOLID NON-REMOVABLE
 - 24" WHITE SOLID REMOVABLE

NOTES:

- PHASE 2**
1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS. PROVIDE TRAFFIC CONTROL DEVICES AS SHOWN IN THE TRAFFIC CONTROL PLAN.
 2. CONSTRUCT STORM SEWER TRUNK LINE, OUTFALLS, INLETS, INLET LATERALS, AND JUNCTIONS.
 3. CONSTRUCT PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
 4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
 5. CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
 6. CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 7. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



NO.	REVISIONS	DATE	NAME

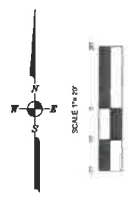
PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 TRAFFIC CONTROL PLAN PHASE 2 STEP 2
 TYPICAL DEAD END CROSS STREET HALF CLOSURE

MEDONOUGH
 Traffic Control Registration No. 10039000
 5225 S.A. McLean, Houston, Texas 77057
 (713) 974-0900
 www.medonough.com



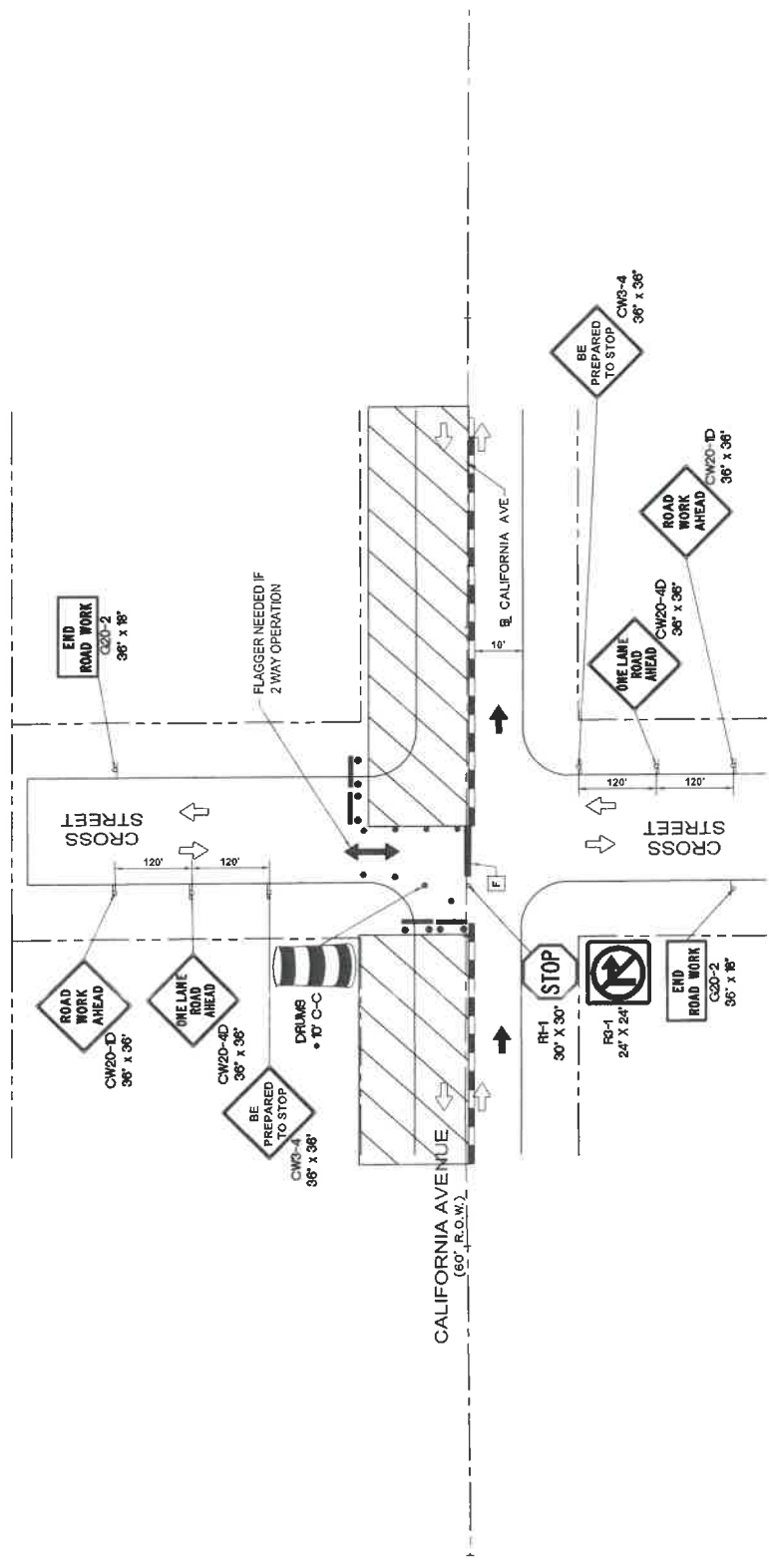
**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**

DATE	NAME



- LEGEND**
- EXISTING
 - PROPOSED
 - PROP. CONSTRUCTION THIS PHASE
 - CONSTRUCTION IN PREVIOUS PHASE
 - TEMPORARY ASPHALT (PHASE 1)
 - EXISTING TRAFFIC DIRECTION
 - PROPOSED TRAFFIC DIRECTION
 - CHANNELIZING DEVICE
 - TYPE III BARRICADE
 - LOW PROFILE CONCRETE BARRIER TY I
 - LOW PROFILE CONCRETE BARRIER TY II
 - 4" WHITE SOLID REMOVABLE
 - 4" YELLOW SOLID REMOVABLE
 - 4" WHITE SOLID NON-REMOVABLE
 - 4" YELLOW SOLID NON-REMOVABLE
 - 24" WHITE SOLID REMOVABLE

- NOTES:**
- PHASE 1**
- SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, TRAFFIC CONTROL DEVICES AS SHOWN IN THE TRAFFIC CONTROL PLAN.
 - CONSTRUCT STORM SEWER TRUNK LINE, OUTFALLS, INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
 - INSTALL PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
 - MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS.
 - CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
 - PERMIT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.
- PHASE 2**
- SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, TRAFFIC CONTROL DEVICES AS SHOWN IN THE TRAFFIC CONTROL PLAN.
 - CONSTRUCT STORM SEWER TRUNK LINE, OUTFALLS, INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
 - INSTALL PERMANENT CONCRETE PAVEMENT ON WEST SIDE.
 - MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS.
 - CONSTRUCT TEMPORARY ASPHALT PAVEMENT ON THE WEST SIDE OF CALIFORNIA AVENUE AT THE LOCATIONS AS SHOWN ON DRAWINGS IN PHASE 1.
 - PERMIT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



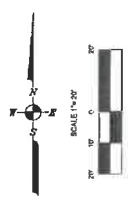
NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 TRAFFIC CONTROL PLAN PHASE 2 STEP 3
 HALF CLOSURE (2 OF 2)



MCDONOUGH
 1015 First Impression No. 1010900
 653 Co. Type Identification No. L200340
 Houston, Texas 77057
 www.mcdonough.com

**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**

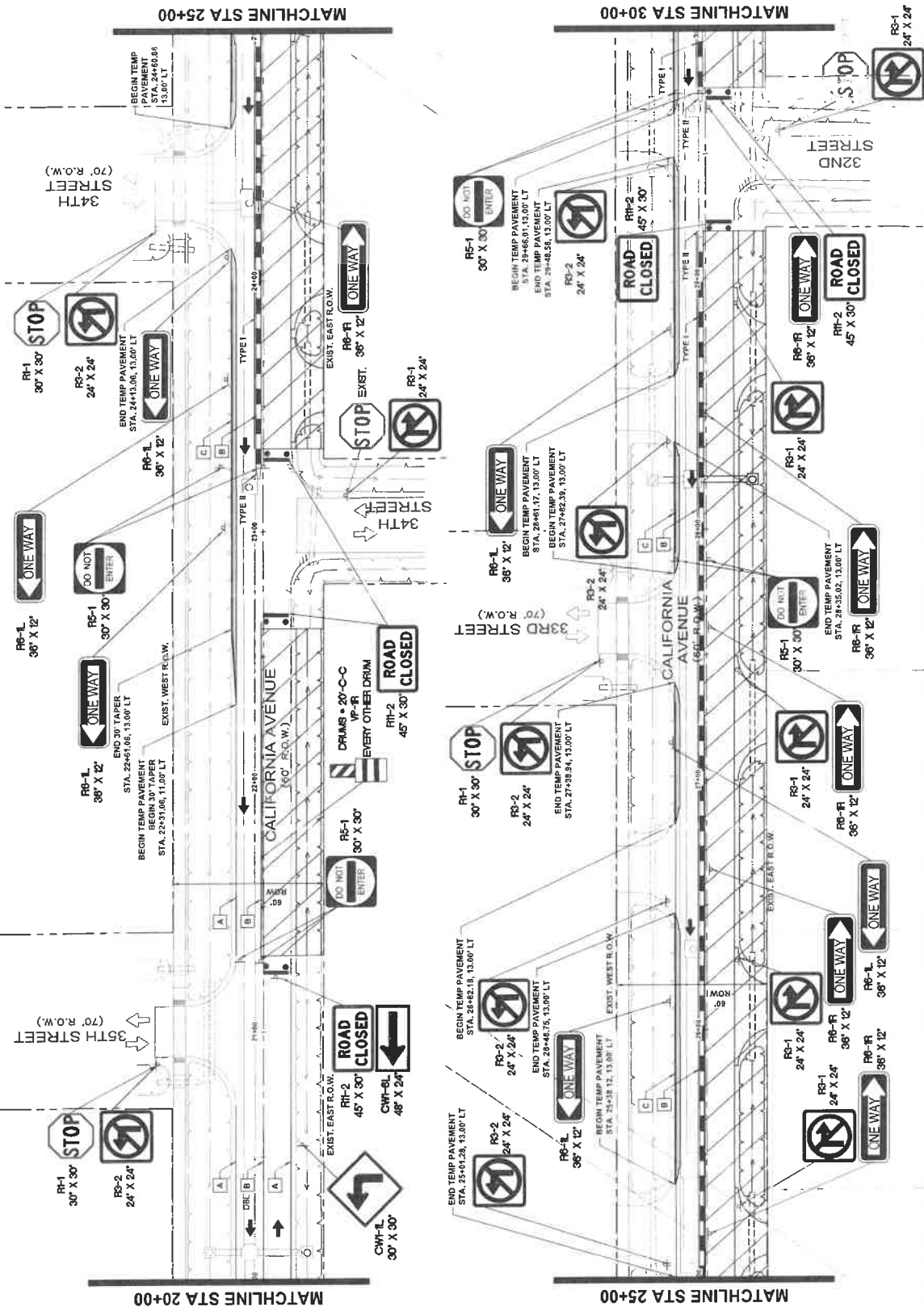


LEGEND

- EXISTING
- PROPOSED
- PROP. CONSTRUCTION THIS PHASE
- TEMPORARY ASPHALT
- EXISTING TRAFFIC DIRECTION
- PROPOSED TRAFFIC DIRECTION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- LOW PROFILE CONCRETE BARRIER TYP
- LOW PROFILE CONCRETE BARRIER TYP
- 4" WHITE SOLID REMOVABLE
- 4" YELLOW SOLID REMOVABLE
- 4" WHITE SOLID NON-REMOVABLE
- 4" YELLOW SOLID NON-REMOVABLE

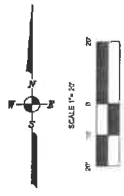
NOTES:

- PHASE 3**
1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, INCLUDING TRAFFIC CONTROL PLAN PHASE 3 AS SHOWN IN TRAFFIC CONTROL PLAN.
 2. CONSTRUCT STORM SEWER INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
 3. CONSTRUCT PERMANENT CONCRETE PAVEMENT COURSE OVER EXISTING ASPHALT.
 4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
 5. CONSTRUCTION SHALL BE SEQUENCED TO AVOID CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 6. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT			
1815 Lane Houston, Texas 77057 www.medonough.com		PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST TRAFFIC CONTROL PLAN PHASE 3 STEP 1 DATE: 7/7/2023 DRAWN BY: 1307/103 CHECKED BY: 1307/103 DATE: 7/7/2023	

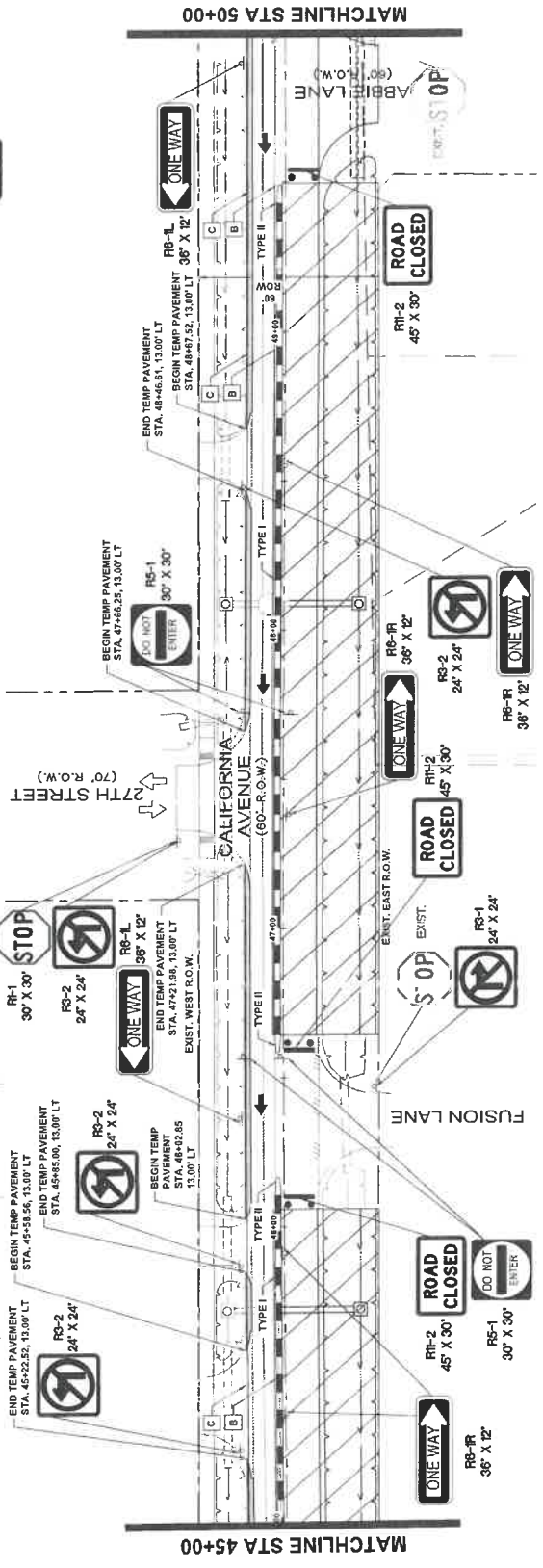
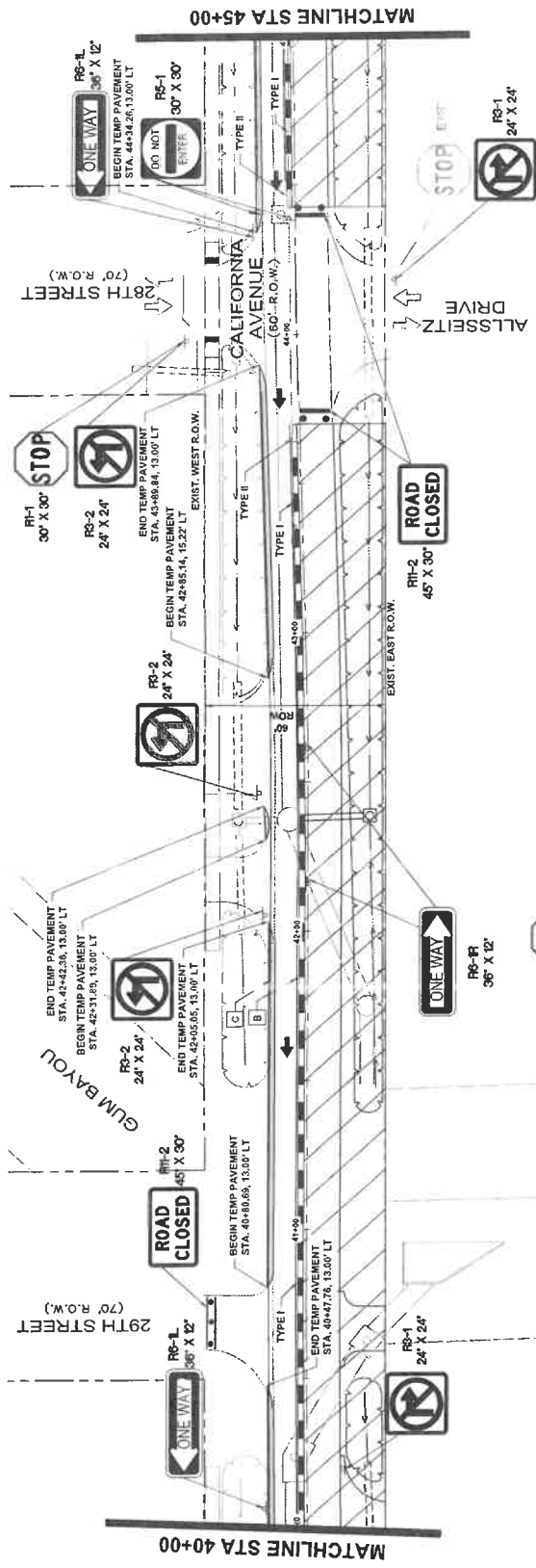


LEGEND

- EXISTING
- PROPOSED
- PROP. CONSTRUCTION THIS PHASE
- TEMPORARY ASPHALT
- EXISTING TRAFFIC DIRECTION
- PROPOSED TRAFFIC DIRECTION
- CHANNELIZING DEVICE
- TYPE III BARRICADE
- LOW PROFILE CONCRETE BARRIER T11
- LOW PROFILE CONCRETE BARRIER T11
- 4" WHITE SOLID REMOVABLE
- 4" YELLOW SOLID REMOVABLE
- 4" WHITE SOLID NON-REMOVABLE
- 4" YELLOW SOLID NON-REMOVABLE

NOTES:

- PHASES**
- SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, CONSTRUCTION SIGNS AND BARRICADES AS SHOWN.
 - CONSTRUCT STORM SEWER, INLETS, LATERALS, AND UTILITY RELOCATIONS.
 - CONSTRUCT PERMANENT CONCRETE PAVEMENT.
 - MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
 - CONTRACTOR TO MAINTAIN DRAINAGE DURING CONSTRUCTION.
 - CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
 - PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.

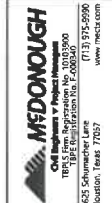
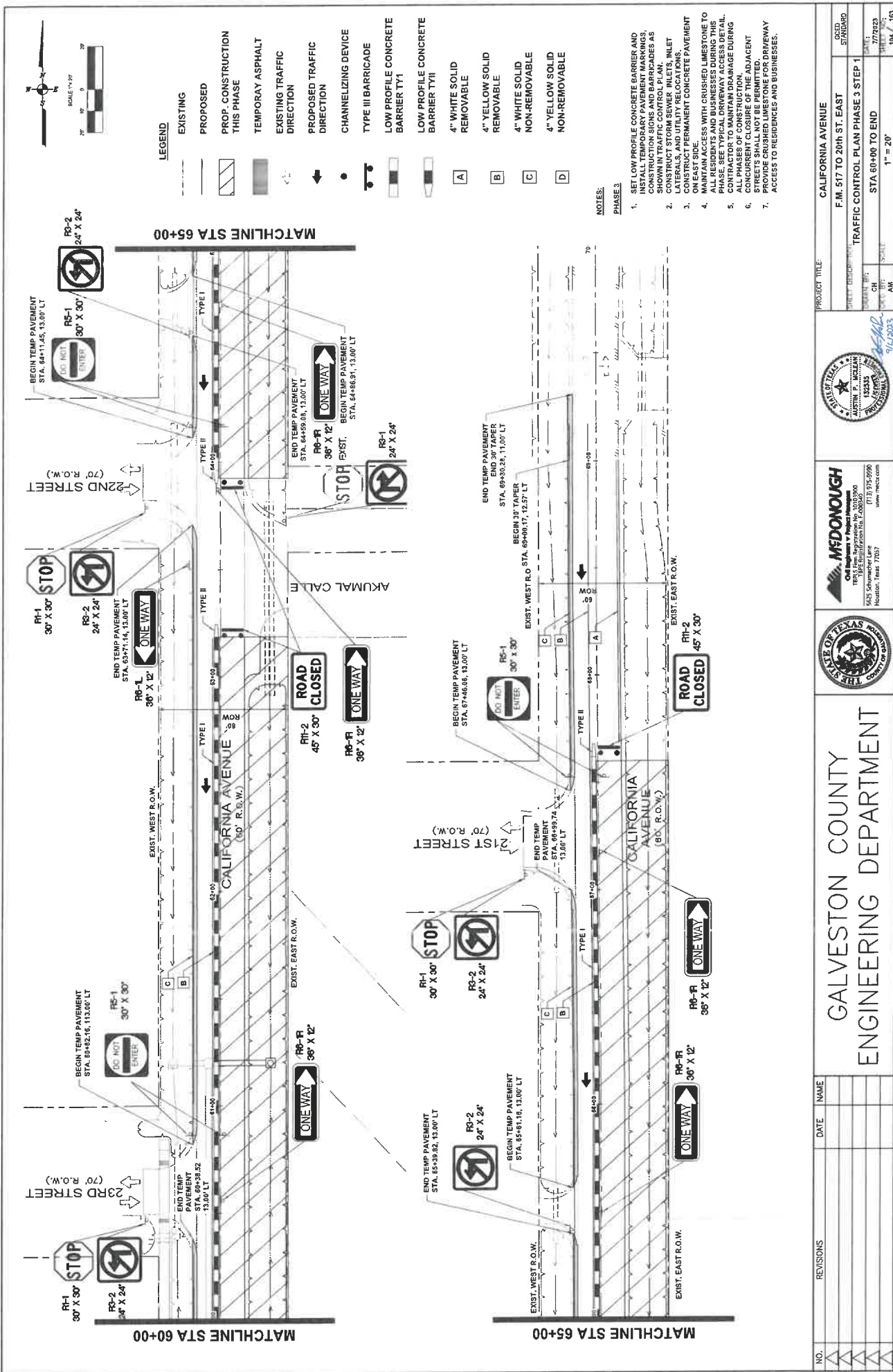


NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



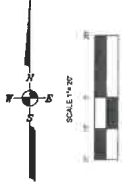
PROJECT TITLE:	CALIFORNIA AVENUE
DATE:	9/16/2023
SCALE:	1" = 20'
PROJECT NO.:	F.M. 517 TO 20th ST. EAST
DATE:	7/7/2023
PROJECT NO.:	TRAFFIC CONTROL PLAN PHASE 3 STEP 1
DATE:	STA 40+00 TO 50+00
PROJECT NO.:	
DATE:	
PROJECT NO.:	
DATE:	



NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**

PROJECT TITLE:	CALIFORNIA AVENUE
DATE:	F.M. 517 TO 20th ST. EAST
SCALE:	TRAFFIC CONTROL PLAN PHASE 3 STEP 1
NO.:	STA 60+00 TO END
DATE:	7/7/2023
SCALE:	1" = 20'
NO.:	104 / 163

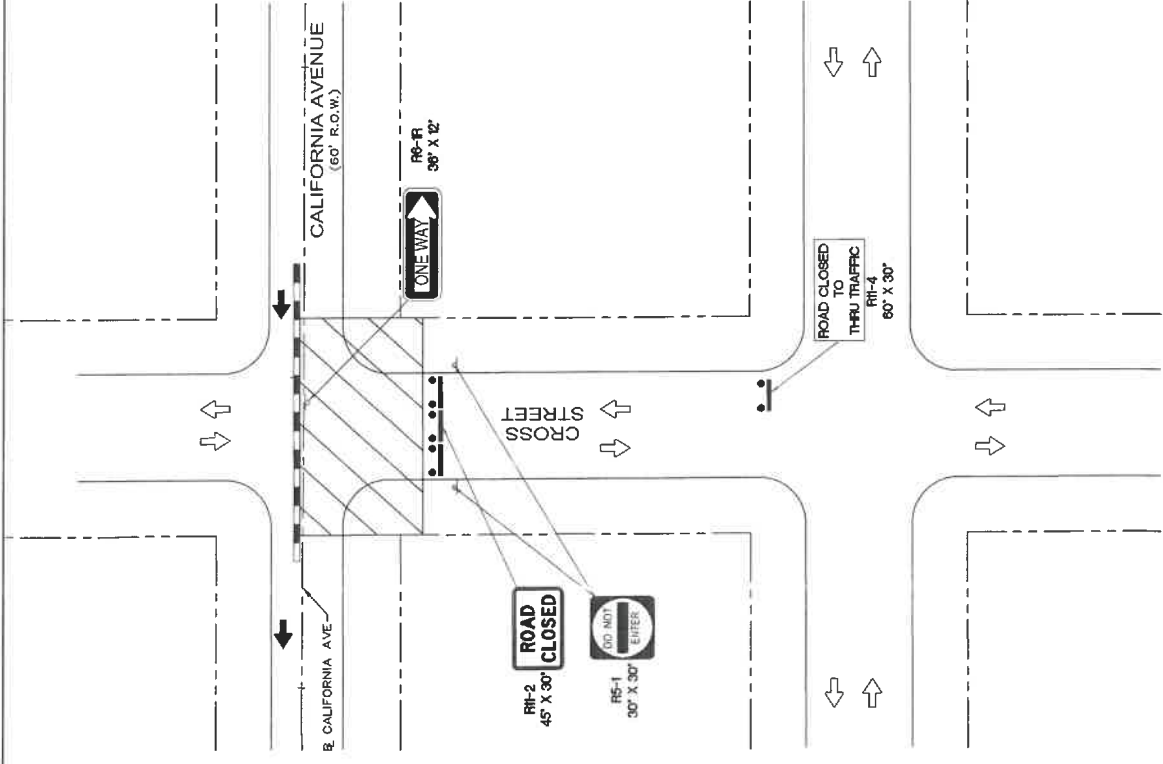


- LEGEND**
- EXISTING
 - PROPOSED
 - PROP. CONSTRUCTION THIS PHASE
 - TEMPORARY ASPHALT
 - EXISTING TRAFFIC DIRECTION
 - PROPOSED TRAFFIC DIRECTION
 - CHANNELIZING DEVICE
 - TYPE III BARRICADE
 - LOW PROFILE CONCRETE BARRIER TYI
 - LOW PROFILE CONCRETE BARRIER TYII
 - 4" WHITE SOLID REMOVABLE
 - 4" YELLOW SOLID REMOVABLE
 - 4" WHITE SOLID NON-REMOVABLE
 - 4" YELLOW SOLID NON-REMOVABLE
 - 24" WHITE SOLID REMOVABLE
 - 24" WHITE SOLID NON-REMOVABLE

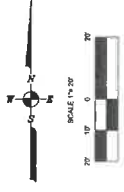
NOTES:

PHASE 3

1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS, CHANNELIZING DEVICES AS SHOWN IN TRAFFIC CONTROL PLAN.
2. CONSTRUCT STORM SEWER INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
3. MAINTAIN PERMANENT CONCRETE PAVEMENT ON EAST SIDE.
4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
5. CONCURRENT CLOSURE OF ADJACENT STREETS SHALL NOT BE PERMITTED.
6. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.



NO.	REVISIONS	DATE	NAME	
GALVESTON COUNTY ENGINEERING DEPARTMENT				
<p>MEDONOUGH <small>ONE MEDONOUGH DRIVE 1965 Spring Branch, Suite 100, Houston, TX 77057 281.488.8800 www.medonough.com</small></p>				
PROJECT TITLE:		CALIFORNIA AVENUE		
TRAFFIC CONTROL PLAN PHASE 3 STEP 2		F.M. 517 TO 20th ST. EAST		
DATE:	CH	SCALE:	DRAWN BY:	CHECKED BY:
7/17/2023	AM	1" = 20'	9/2/2023	105 / 183



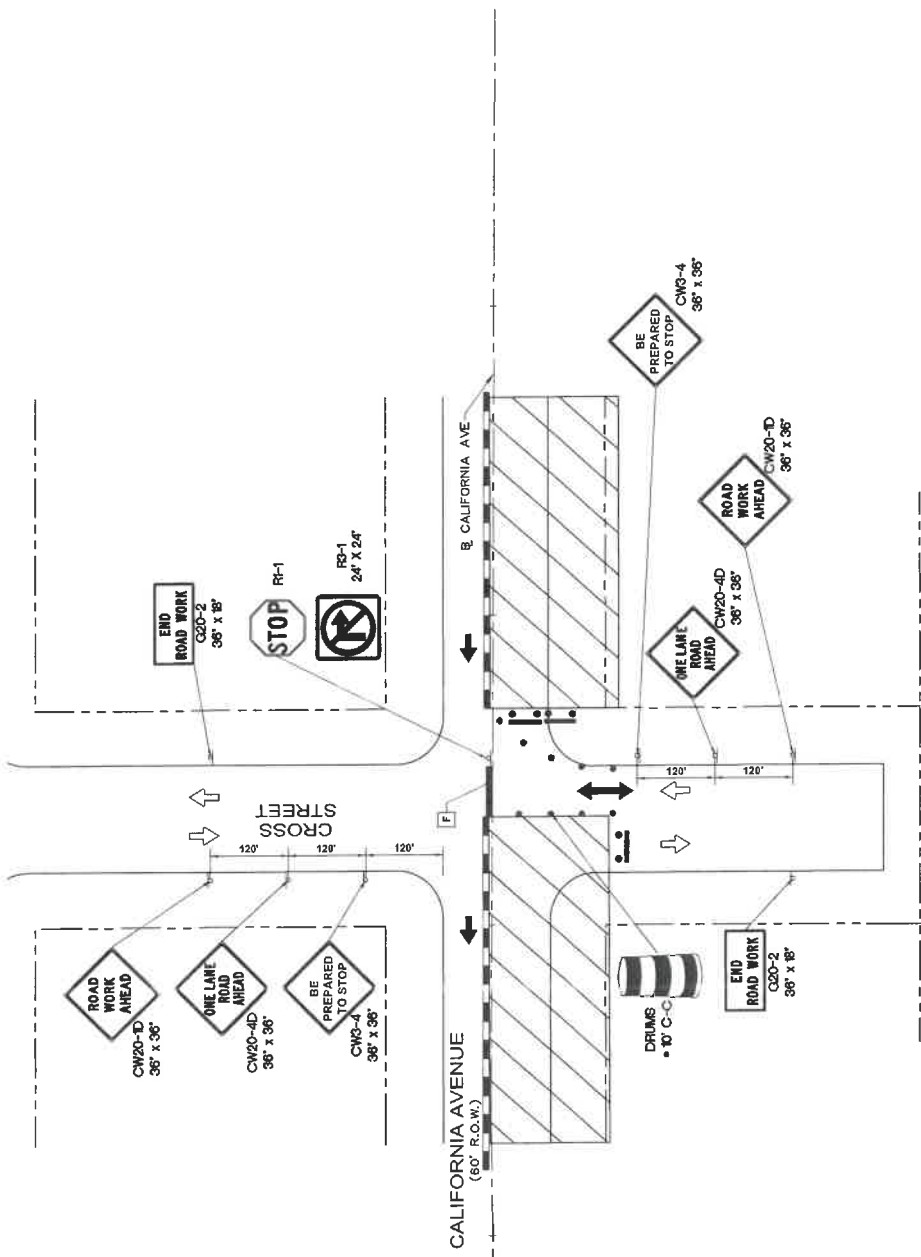
- LEGEND**
- EXISTING
 - PROPOSED
 - PROP. CONSTRUCTION THIS PHASE
 - TEMPORARY ASPHALT
 - EXISTING TRAFFIC DIRECTION
 - PROPOSED TRAFFIC DIRECTION
 - CHANNELIZING DEVICE
 - TYPE III BARRICADE
 - LOW PROFILE CONCRETE BARRIER TY1
 - LOW PROFILE CONCRETE BARRIER TY11

- A 4" WHITE SOLID REMOVABLE
- B 4" YELLOW SOLID REMOVABLE
- C 4" WHITE SOLID NON-REMOVABLE
- D 4" YELLOW SOLID NON-REMOVABLE
- E 24" WHITE SOLID REMOVABLE
- F 24" WHITE SOLID NON-REMOVABLE

NOTES:

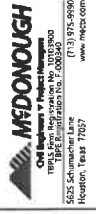
PHASE 3:

1. SET LOW PROFILE CONCRETE BARRIER AND INSTALL TEMPORARY PAVEMENT MARKINGS. ALL PAVEMENT MARKINGS TO BE SHOWN IN TRAFFIC CONTROL PLAN PHASE 3 STEP 2.
2. CONSTRUCT STORM SEWER INLETS, INLET LATERALS, AND UTILITY RELOCATIONS.
3. CONSTRUCT PERMANENT CONCRETE PAVEMENT LAYERS.
4. MAINTAIN ACCESS WITH CRUSHED LIMESTONE TO ALL RESIDENTS AND BUSINESSES DURING THIS PHASE. SEE TYPICAL DRIVEWAY ACCESS DETAIL.
5. CONTRACTOR TO MAINTAIN DRAINAGE DURING CONSTRUCTION.
6. CONCURRENT CLOSURE OF THE ADJACENT STREETS SHALL NOT BE PERMITTED.
7. PROVIDE CRUSHED LIMESTONE FOR DRIVEWAY ACCESS TO RESIDENCES AND BUSINESSES.

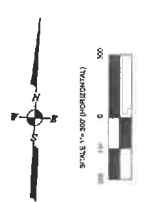


NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



PROJECT TITLE:	CALIFORNIA AVENUE
SHEET DESCRIPTION:	F.M. 517 TO 20th ST. EAST
TRAFFIC CONTROL PLAN PHASE 3 STEP 2	
TYPICAL DRIVEWAY ACCESS DETAIL	
DATE:	1.05.20
SCALE:	1" = 20'
DESIGNED BY:	
CHECKED BY:	
DATE:	9/16/2023
PROJECT NO.:	772223
DRAWN BY:	
CHECKED BY:	
DATE:	9/16/2023
SCALE:	1" = 20'

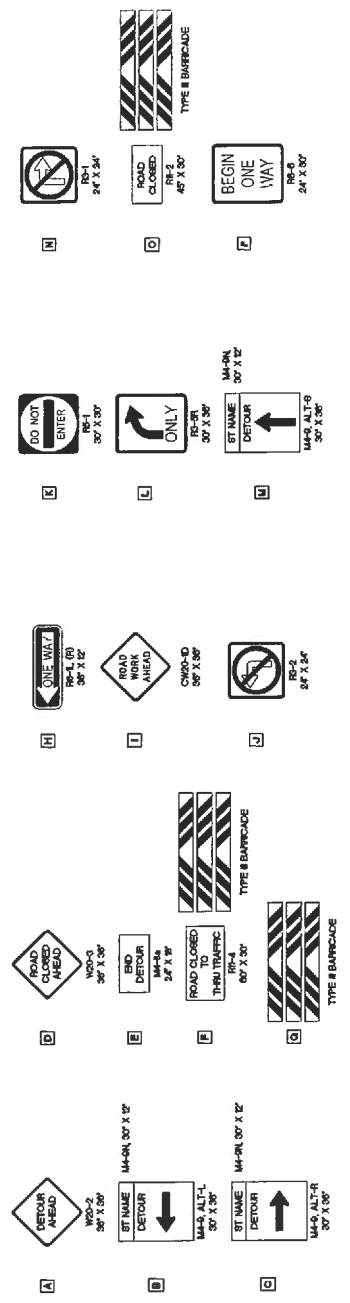


LEGEND

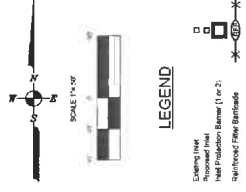
PROF. TRAFFIC FLOW →

EXIST. TRAFFIC FLOW ←

WORK AREA [Hatched Box]

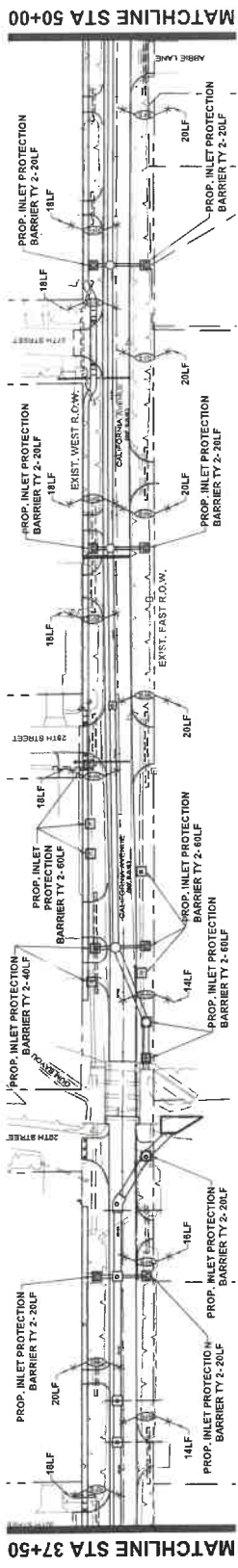


NO.	REVISIONS	DATE	NAME
GALVESTON COUNTY ENGINEERING DEPARTMENT			
THE STATE OF TEXAS			
Professional Engineer			
MEDONOUGH			
California Professional Engineer TPE 01476 Registration No. 0007000 1605 Schwabacher Lane Houston, Texas 77057 (713) 975-9000 www.medonough.com			
STATE OF TEXAS			
Professional Engineer			
AUSTIN P. MCELROY			
Registration No. 13333 CH 7/7/2023 9/6/2023			
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST PHASE 3 DETOUR PLAN SHEET NO. CH DATE: 7/7/23 109 / 163 1" = 300'			

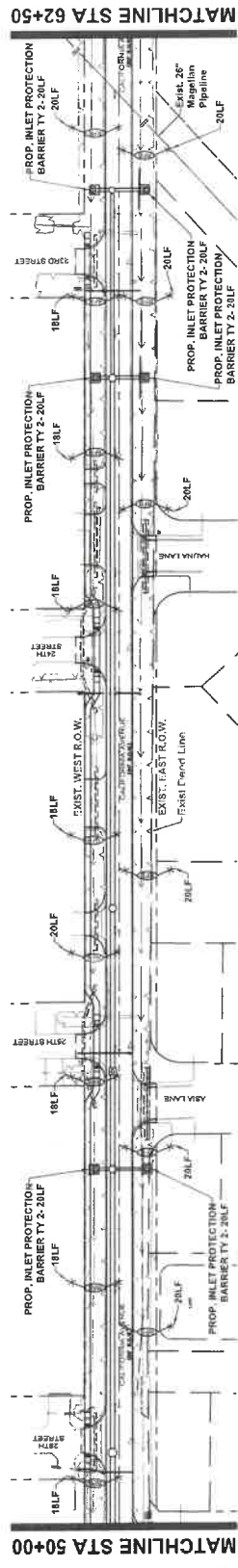


LEGEND

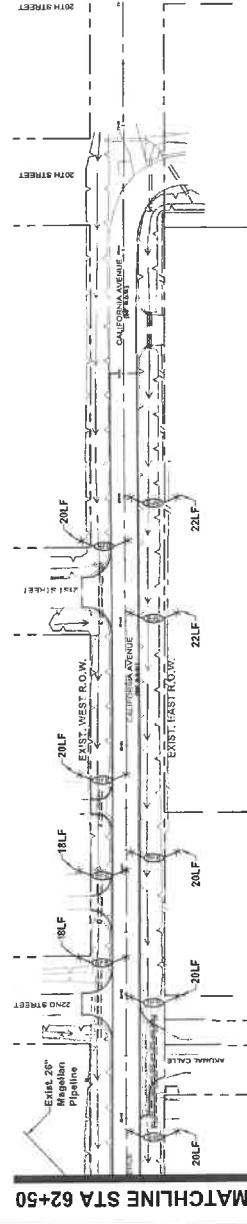
- Existing Road
- Proposed Road
- Final Protection Barrier (1 or 2)
- Signposted Fire Barriers



MATCHLINE STA 37+50





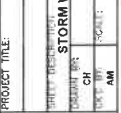
MATCHLINE STA 50+00

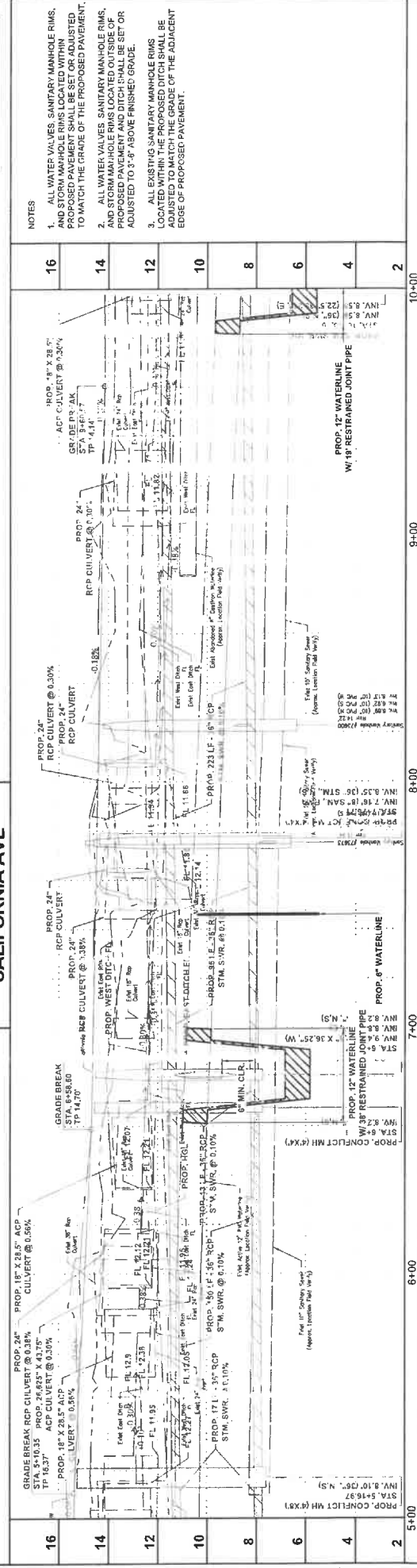
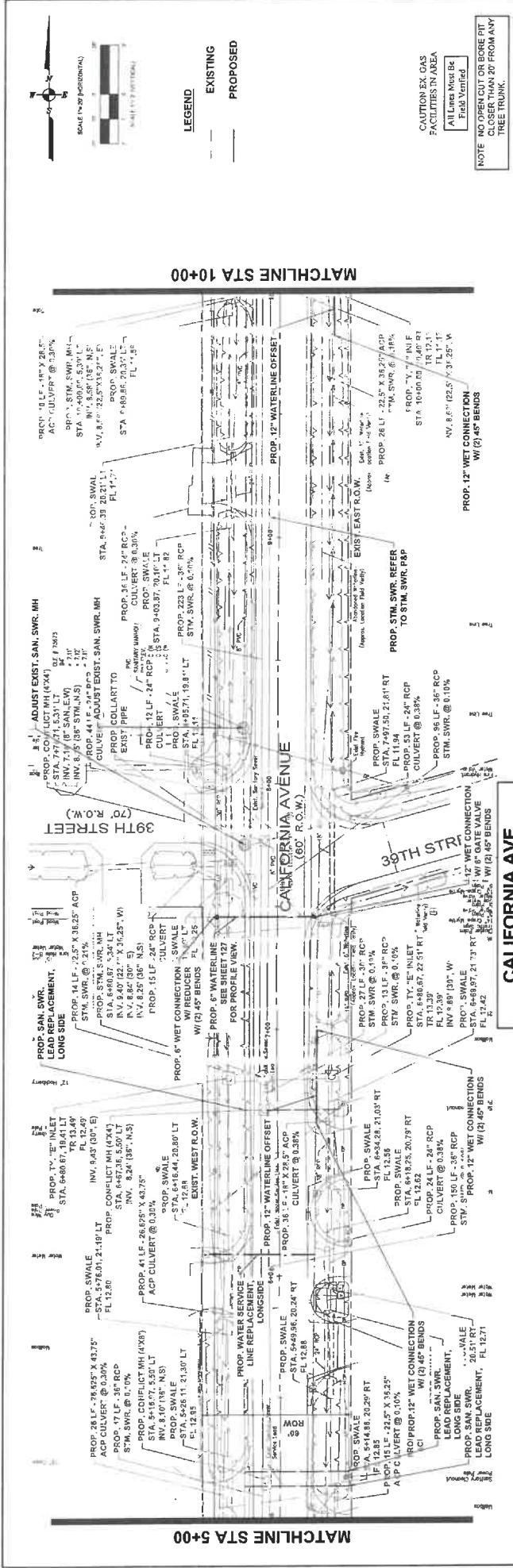


MATCHLINE STA 62+50

STANDARD SWPPP PLAN SHEET NOTES:

1. THE PLACEMENT OF HYDROMULCH SEEDING AND EROSION CONTROL MATS SHALL BE FOUND ON THE ROADWAY TYPICAL SECTION SHEET T.
2. THE LOCATION OF CONSTRUCTION SUPPORT MATERIALS SHALL BE SHOWN ON THE FILLS AND EQUIPMENT STORAGE AREA WILL BE SHOWN ON THE PLANS ONCE ESTABLISHED BY THE CONTRACTOR. THIS SITE WILL BE INCLUDED IN THE INSPECTION REPORT.
3. THE LOCATION OF VEHICLE WASH AREA INCLUDING CONCRETE WASHOUTS SHALL BE SHOWN ON THE PLANS ONCE ESTABLISHED BY THE CONTRACTOR. THIS SITE WILL BE INCLUDED IN THE INSPECTION REPORT.
4. THE FOLLOWING RECORDS WILL BE MAINTAINED BY THE CONTRACTOR AND WILL BE MADE READILY AVAILABLE UPON REQUEST TO PARTIES LISTED IN ARTICLE 10.04 OF THE TPDES GENERAL PERMIT TXR148000:
 - A. DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
 - B. ALL DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE;
 - C. THE DATES WHEN STABILIZATION (BOTH TEMPORARY AND/OR PERMANENT) MEASURE ARE INITIATED;
 - D. CHECK LIST TO BE ON ALL SWPPP SHEETS.

	GALVESTON COUNTY ENGINEERING DEPARTMENT		 1905 Fm 1905 Station Sp. 1800900 SEE CALIFORNIA REGISTRATION NO. 26033 Houston, Texas 77057 www.mcd.com		
PROJECT TITLE: CALIFORNIA AVENUE		PROJECT NO.: F.M. 517 TO 20th ST. EAST		SHEET NO.: 111 / 113	
DATE: 9/16/2023		CH: AM		DATE: 7/7/2023	
SCALE: 1"=50'		STA 37+50 TO END		SHEET NO.: 111 / 113	

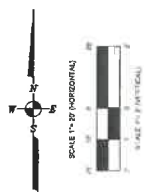


NO.	REVISIONS	DATE	NAME

6+00	7+00	8+00	9+00	10+00
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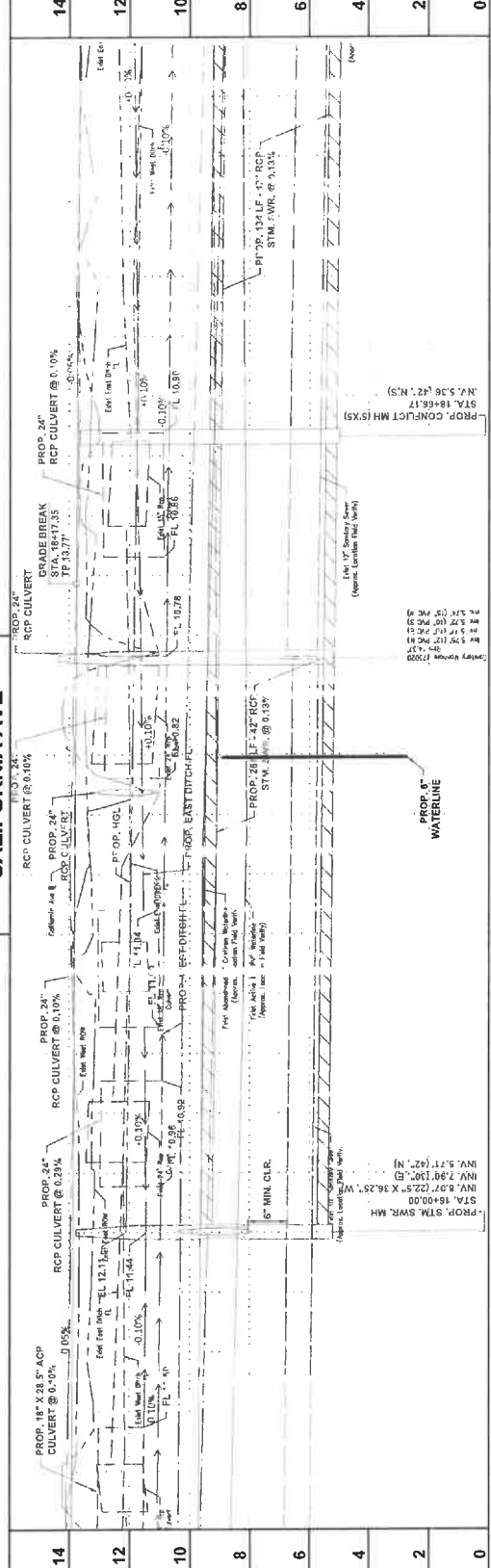
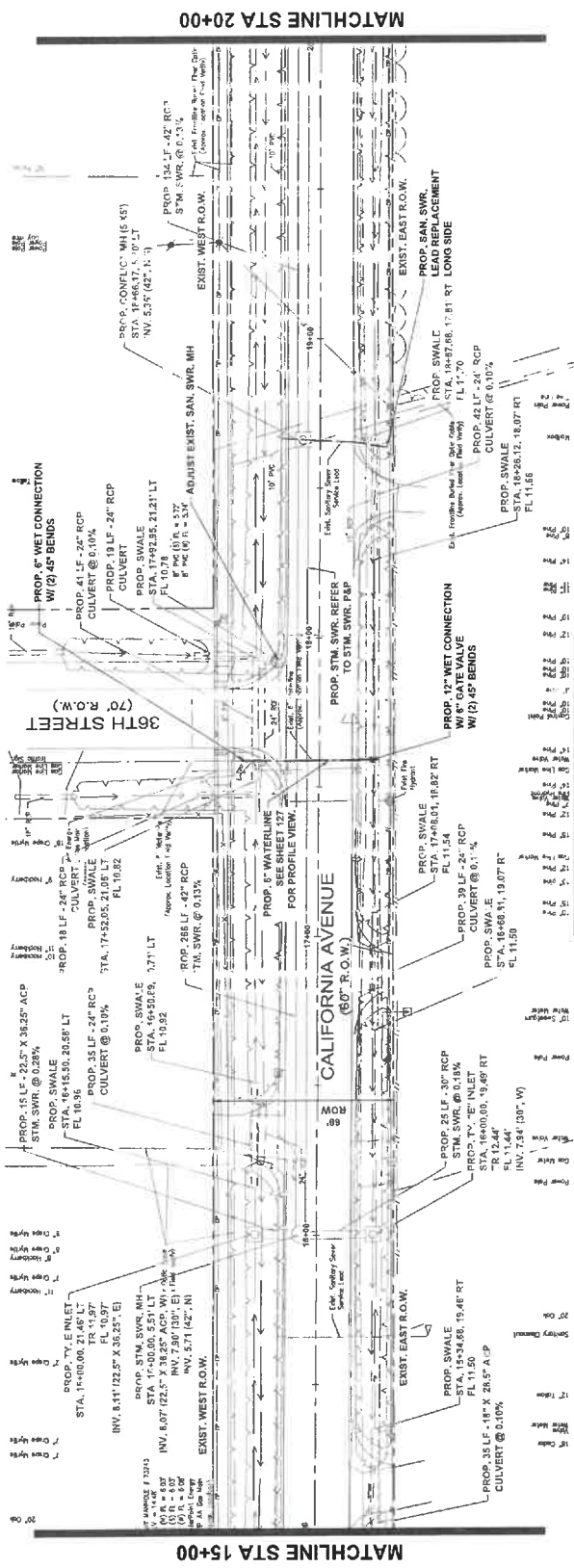
PROJECT TITLE		CALIFORNIA AVENUE	
SHEET IDENTIFICATION		F.M. 517 TO 20th ST. EAST	
DRAWING NO.		UTILITY PLAN AND PROFILE STA.	
DATE	CH	DATE	CH
7/7/2023	AN	7/7/2023	AN
SCALE		1"=20' HORIZONTAL 1"=2' VERTICAL	

100% from Registration No. 000000 6526 Calhoun, Houston, Texas 77057 www.mcdonough.com	



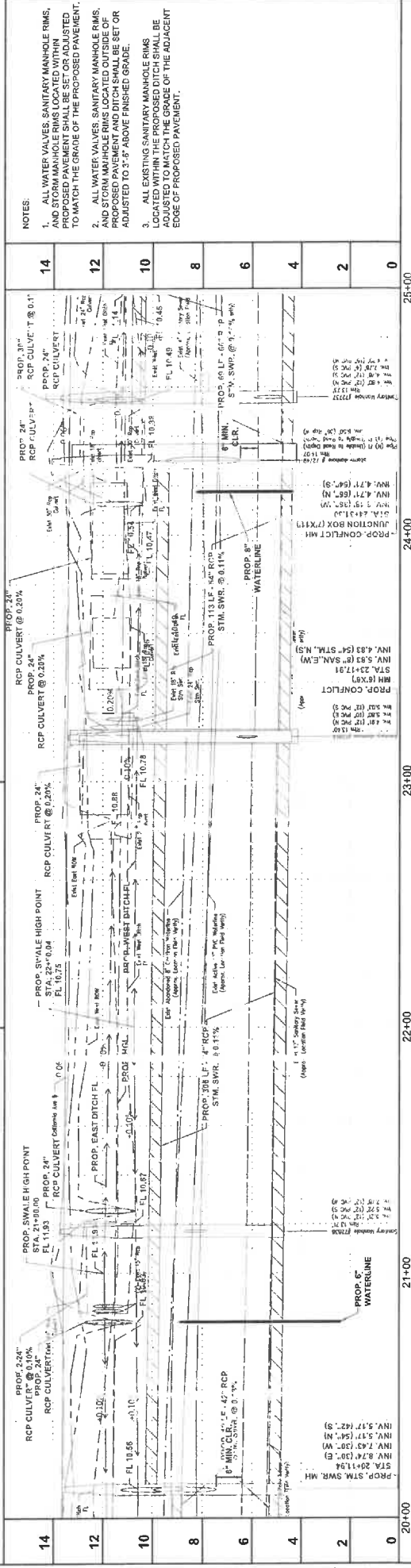
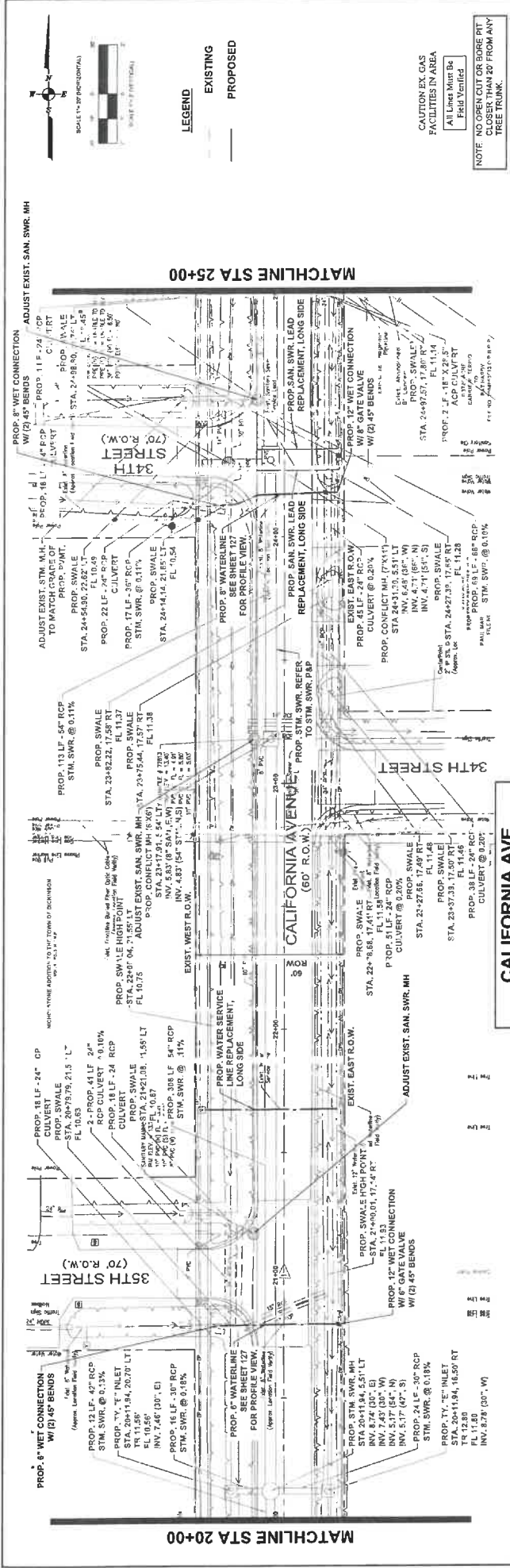
LEGEND
 --- EXISTING
 --- PROPOSED

CAUTION EX. GAS FACILITIES IN AREA
 All Lines Must Be Field Verified
 NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



NO.	REVISIONS	DATE	NAME	15+00		17+00		19+00		20+00	
				CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST UTILITY PLAN AND PROFILE STA. 15+00 TO STA. 20+00 1"-20" HORIZONTAL 1"-2" VERTICAL							
				PROJECT TITLE: CALIFORNIA AVENUE SHEET DESCRIPTION: UTILITY PLAN AND PROFILE STA. 15+00 TO STA. 20+00 DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 7/21/2023 SHEET NO.: 116 / 163							

NOTES:
 1. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND GAS VALVES SHALL BE SET OR ADJUSTED TO MATCH THE GRATE OF THE PROPOSED PAVEMENT.
 2. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND GAS VALVES SHALL BE SET OR ADJUSTED TO 3'-0" ABOVE FINISHED GRADE.
 3. ALL EXISTING SANITARY MANHOLE RIMS SHALL BE ADJUSTED TO MATCH THE GRADE OF THE ADJACENT EDGE OF PROPOSED PAVEMENT.



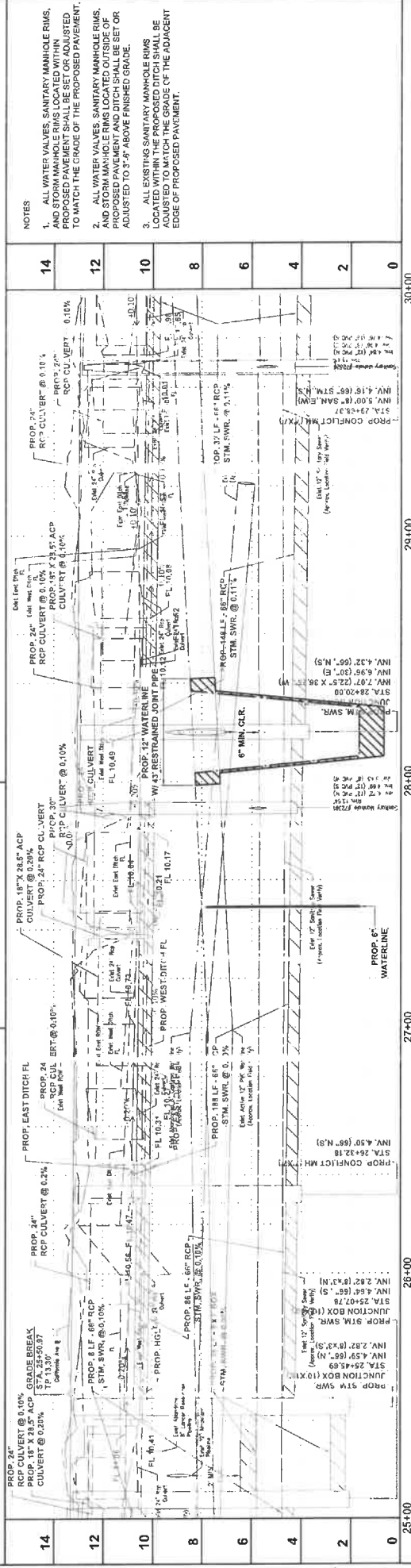
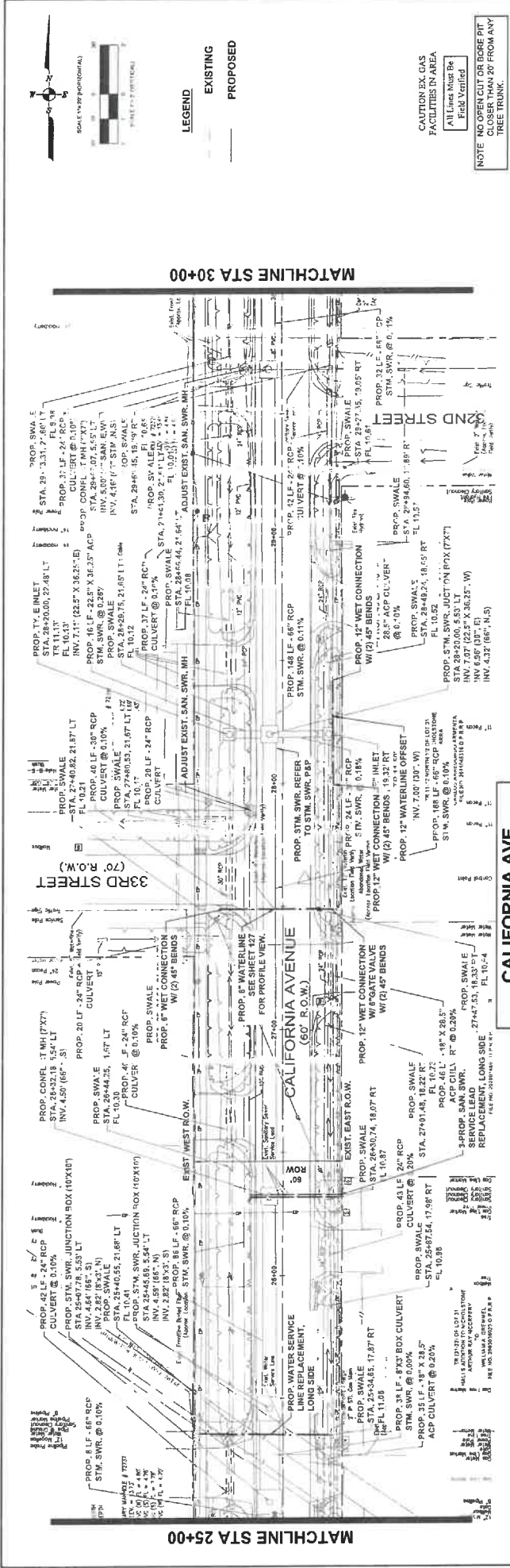
NO.	REVISIONS	DATE	NAME
14	PROP. 24" RCP CULVERT @ 0.10% STA 21+00.00		
12	PROP. SWALE HIGH POINT STA 22+04.04		
10	PROP. EAST DITCH FL 10.56		
8	PROP. 308 LF. 4" RCP STM. SWR. @ 0.11%		
6	PROP. 113 LF. 16" RCP STM. SWR. @ 0.11%		
4	PROP. 113 LF. 16" RCP STM. SWR. @ 0.11%		
2	PROP. 308 LF. 4" RCP STM. SWR. @ 0.11%		
0	PROP. 308 LF. 4" RCP STM. SWR. @ 0.11%		

PROJECT TITLE:		CALIFORNIA AVENUE	
PROJECT LOCATION:		F.M. 517 TO 20th ST. EAST	
UTILITY PLAN AND PROFILE STA.		20+00 TO STA. 25+00	
DATE:	7/7/2023	DRAWN BY:	AM
CHECKED BY:		SCALE:	1"=20' HORIZONTAL 1"=2' VERTICAL
PROJECT NO.:	25-00	SHEET NO.:	17 / 18

MCDONOUGH
 1905 Spinnaker Lane, Suite 200
 Houston, Texas 77057
 281.468.8888
 www.mcdonough.com

STATE OF TEXAS
 PROFESSIONAL ENGINEER
 No. 12345
 Austin P. McDaniel



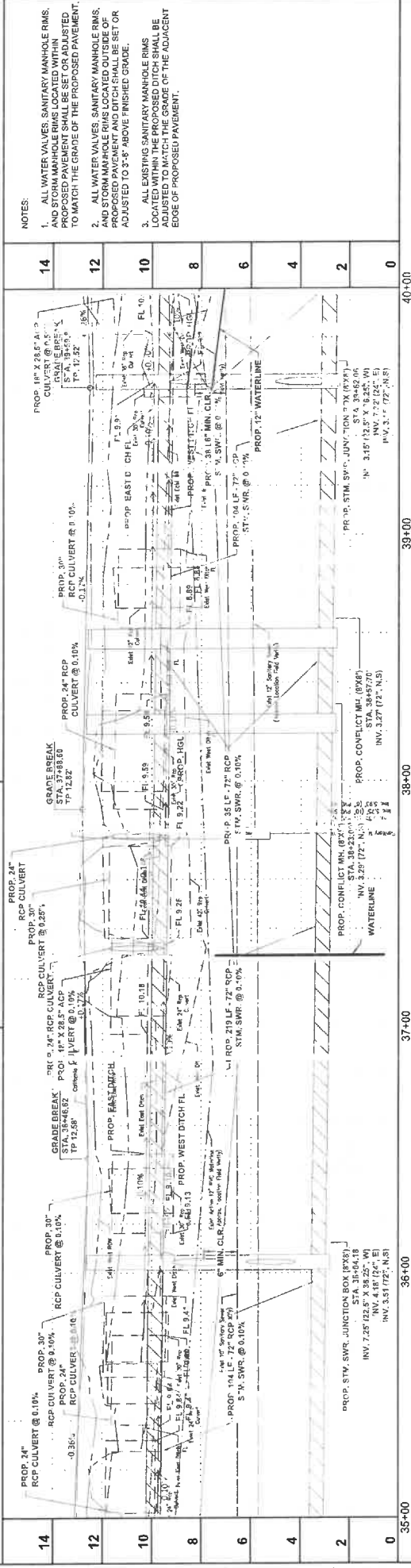
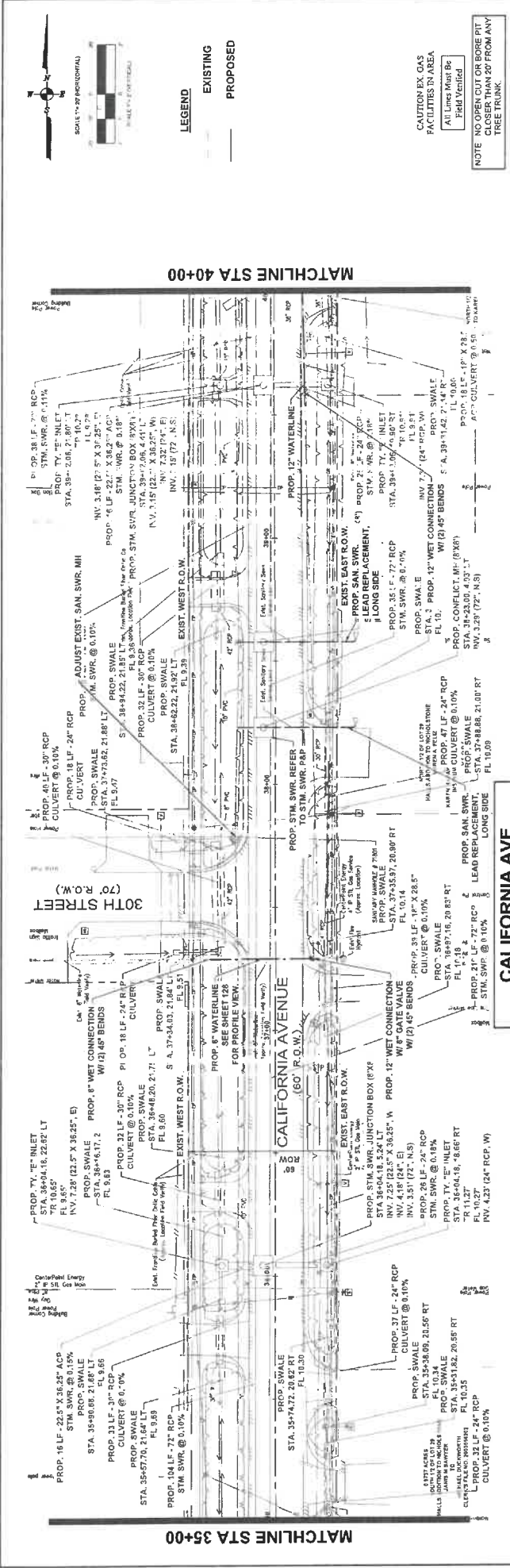


NO.	REVISIONS	DATE	NAME
14			
12			
10			
8			
6			
4			
2			
0			

PROJECT TITLE:		CALIFORNIA AVENUE	
SHEET NO.:		F.M. 517 TO 20th ST. EAST	
DATE:		UTILITY PLAN AND PROFILE STA.	
DRAWN BY:		25+00 TO STA. 30+00	
CHECKED BY:		1"=20' HORIZONTAL 1"=2' VERTICAL	
SCALE:		AS SHOWN	

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	1905 Farm Road, Suite 100 Houston, Texas 77057 (713) 775-9999 mfdonough.com
--	--



NO.	REVISIONS	DATE	NAME
0			
1			
2			
3			
4			
5			
6			
7			
8			
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10			
11			
12			
13			
14			

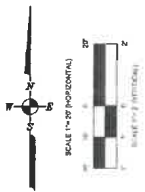
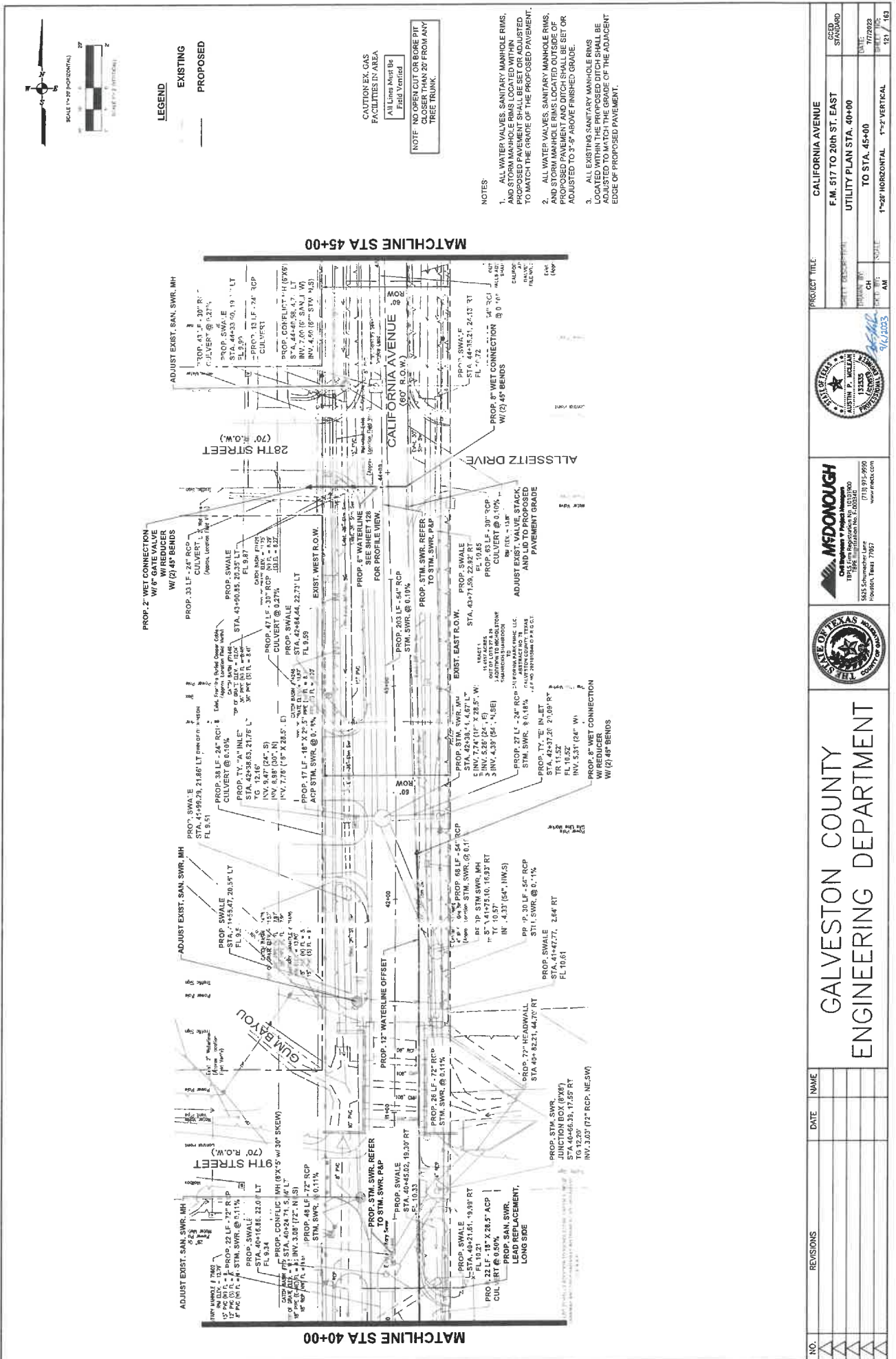
PROJECT TITLE	CALIFORNIA AVENUE
PROJECT NO.	40+00
DATE	9/2/2023
SCALE	1"=20' HORIZONTAL 1"=2' VERTICAL
PROJECT LOCATION	F.M. 577 TO 20th ST. EAST
PROJECT DESCRIPTION	UTILITY PLAN & PROFILE STA. 35+00 TO STA. 40+00
DATE	7/17/2023
PROJECT NO.	40+00
PROJECT TITLE	40+00

NO.	35+00	36+00	37+00	38+00	39+00	40+00
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DESIGNED BY	CH
CHECKED BY	AM
DATE	9/2/2023
PROJECT NO.	40+00
PROJECT TITLE	CALIFORNIA AVENUE
PROJECT DESCRIPTION	F.M. 577 TO 20th ST. EAST
UTILITY PLAN & PROFILE STA.	35+00 TO STA. 40+00
DATE	7/17/2023
PROJECT NO.	40+00
PROJECT TITLE	40+00



MCDONOUGH
 ENGINEERING
 18055 Farm Registration No. 100990
 5255 Seawall, Houston, Texas 77057
 www.mcdonough.com



LEGEND
 --- EXISTING
 --- PROPOSED

CAUTION: EX. GAS FACILITIES IN AREA
 ALL Lines Must Be Field Verified

NOTE: NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.

NOTES

1. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND STORM MANHOLE RIMS LOCATED WITHIN PROPOSED PAVEMENT SHALL BE SET OR ADJUSTED TO MATCH THE GRADE OF THE PROPOSED PAVEMENT.
2. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND STORM MANHOLE RIMS LOCATED OUTSIDE OF PROPOSED PAVEMENT AND DITCH SHALL BE SET OR ADJUSTED TO 3'-6" ABOVE FINISHED GRADE.
3. ALL EXISTING SANITARY MANHOLE RIMS LOCATED WITHIN THE PROPOSED DITCH SHALL BE ADJUSTED TO MATCH THE GRADE OF THE ADJACENT EDGE OF PROPOSED PAVEMENT.

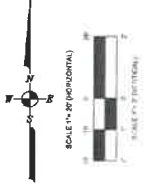
PROJECT TITLE:	CALIFORNIA AVENUE
UTILITY PLAN STA. 40+00	
TO STA. 45+00	
1"-20" HORIZONTAL	1"-2" VERTICAL
DATE:	1/17/2023
DRAWN BY:	AM
CHECKED BY:	AM
SCALE:	
DATE:	1/17/2023
SCALE:	



MCDONOUGH
 CIVIL ENGINEERING
 1945 Elm Registration No. 001390
 6503 S. Main Street, Suite 100
 Houston, Texas 77057
 281.485.2209
 www.mcdonough.com



GALVESTON COUNTY ENGINEERING DEPARTMENT		NO.	DATE	NAME
		REVISIONS		



LEGEND
 ——— EXISTING
 - - - - - PROPOSED

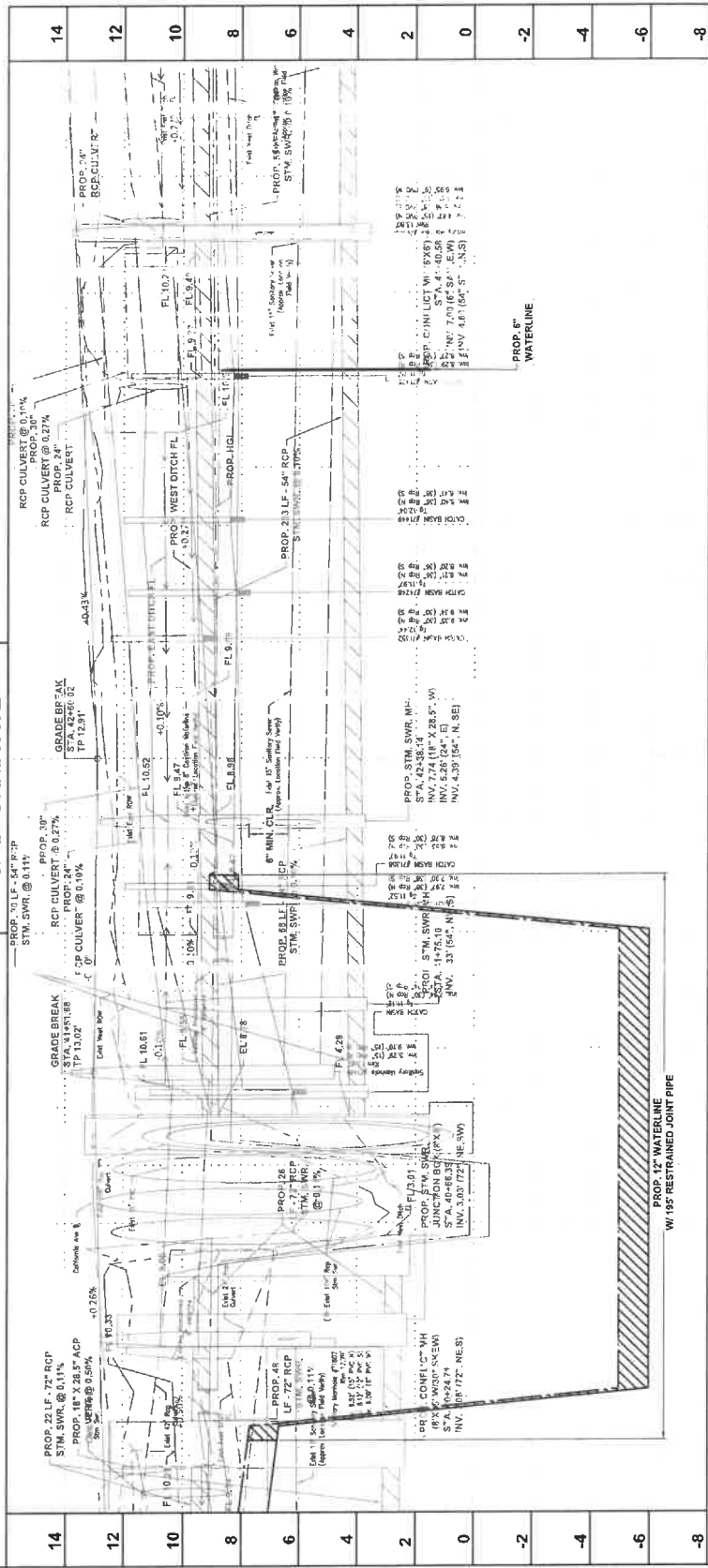
CAUTION EX GAS FACILITIES IN AREA
 All Lines Must Be Field Verified

NOTE NO OPEN CUT OR BORE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.

NOTES

1. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND STORM MANHOLE RIMS LOCATED WITHIN THE PROPOSED DITCH SHALL BE LISTED TO MATCH THE GRADE OF THE PROPOSED PAVEMENT.
2. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND STORM MANHOLE RIMS LOCATED OUTSIDE OF THE PROPOSED DITCH SHALL BE LISTED OR ADJUSTED TO 0'-6" ABOVE FINISHED GRADE.
3. ALL EXISTING SANITARY MANHOLE RIMS LOCATED WITHIN THE PROPOSED DITCH SHALL BE LISTED TO MATCH THE GRADE OF THE ADJACENT EDGE OF PROPOSED PAVEMENT.

CALIFORNIA AVE



NO.	REVISIONS	DATE	NAME

40+00 41+00 42+00 43+00 44+00 45+00

GALVESTON COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE
 CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 UTILITY PROFILE STA. 40+00 TO STA. 45+00

SCALE
 1"=20' HORIZONTAL 1"=2' VERTICAL

DATE 9/1/2003

BY [Signature]

CHECKED [Signature]

APPROVED [Signature]

PROJECT NO. 132333

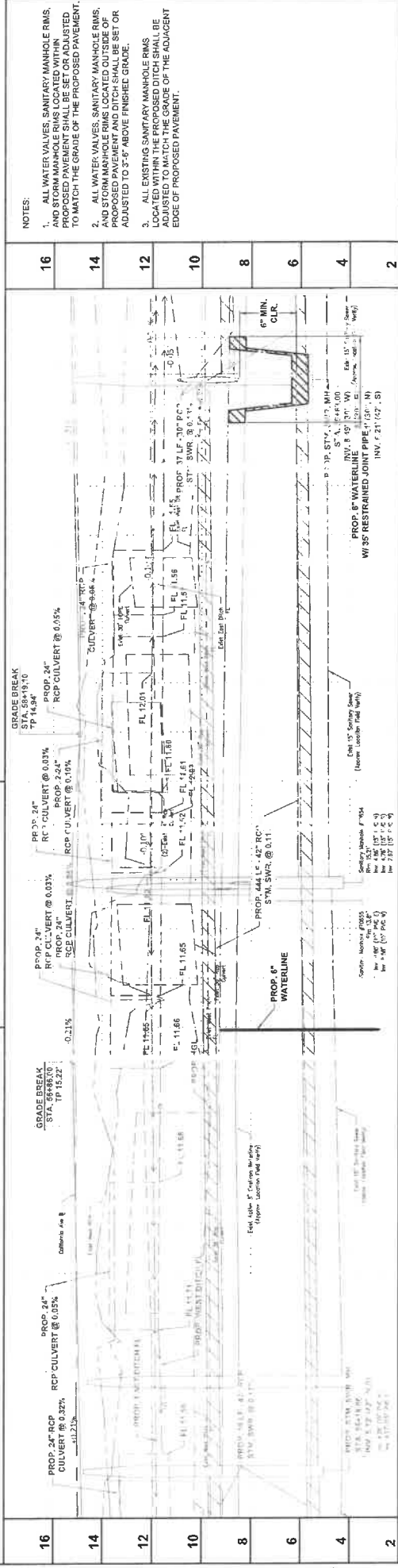
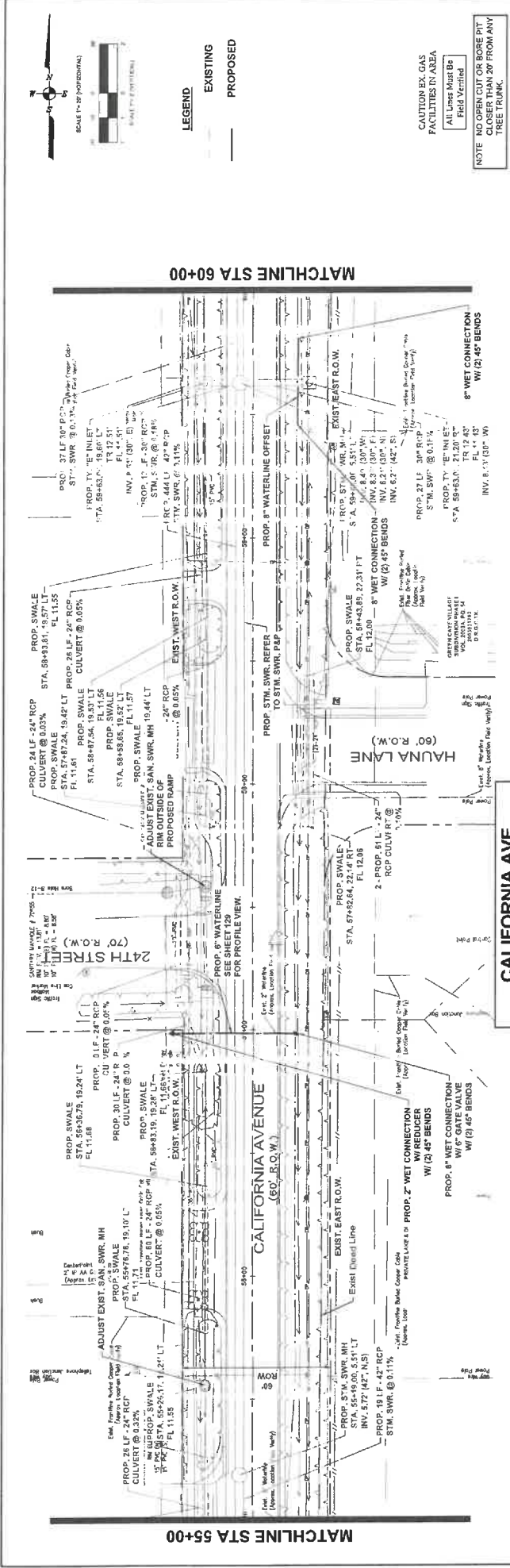
DATE 7/27/02

SCALE 1"=20' HORIZONTAL 1"=2' VERTICAL



MCDONOUGH
 11953 Farm Inspection Rd. #100 0000
 6225 S. Commerce, Houston, Texas 77057
 www.mcdonough.com

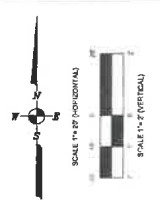




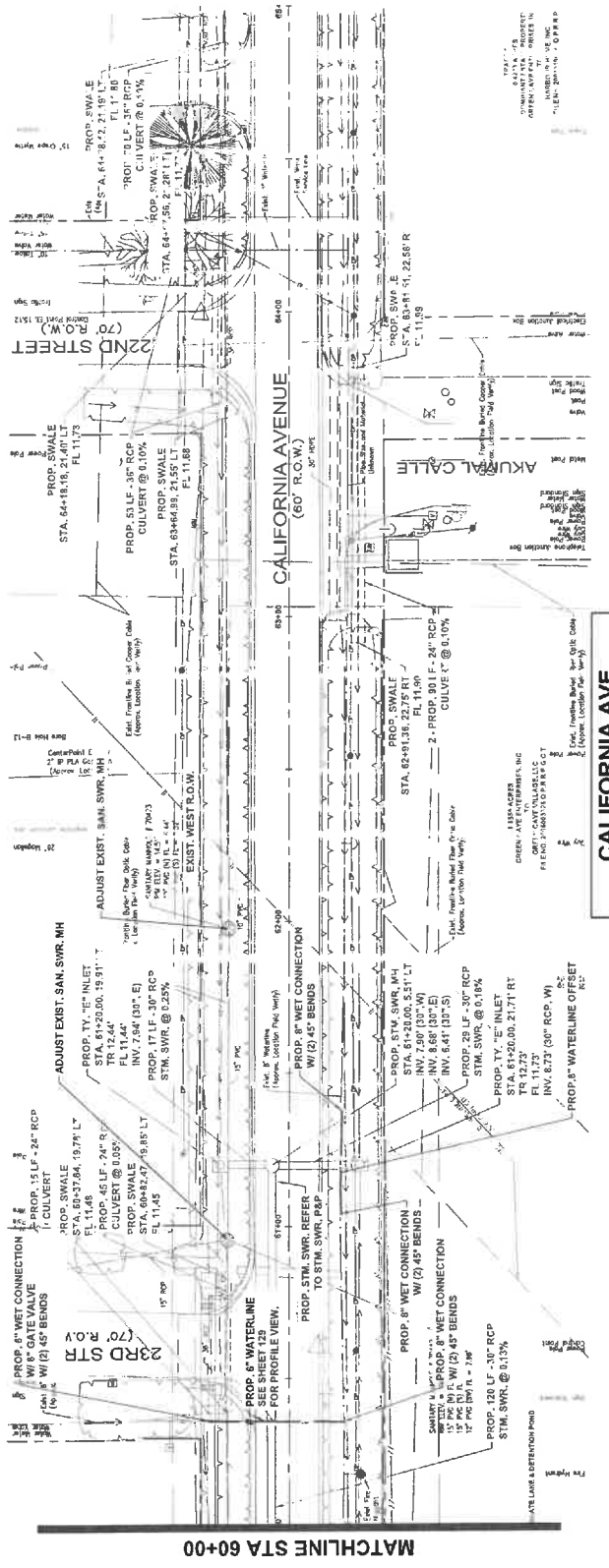
NO.	REVISIONS	DATE	NAME
16	PROP. 24" RCP CULVERT @ 0.05% CULVERT @ 0.32%		
14	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		
12	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		
10	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		
8	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		
6	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		
4	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		
2	PROP. 24" RCP CULVERT @ 0.03% RCP CULVERT @ 0.10%		

55+00		58+00	59+00	60+00
PROJECT TITLE: CALIFORNIA AVENUE				
F.M. 517 TO 20th ST. EAST				
UTILITY PLAN AND PROFILE STA.				
55+00 TO STA. 60+00				
1"=20' HORIZONTAL 1"=2' VERTICAL				

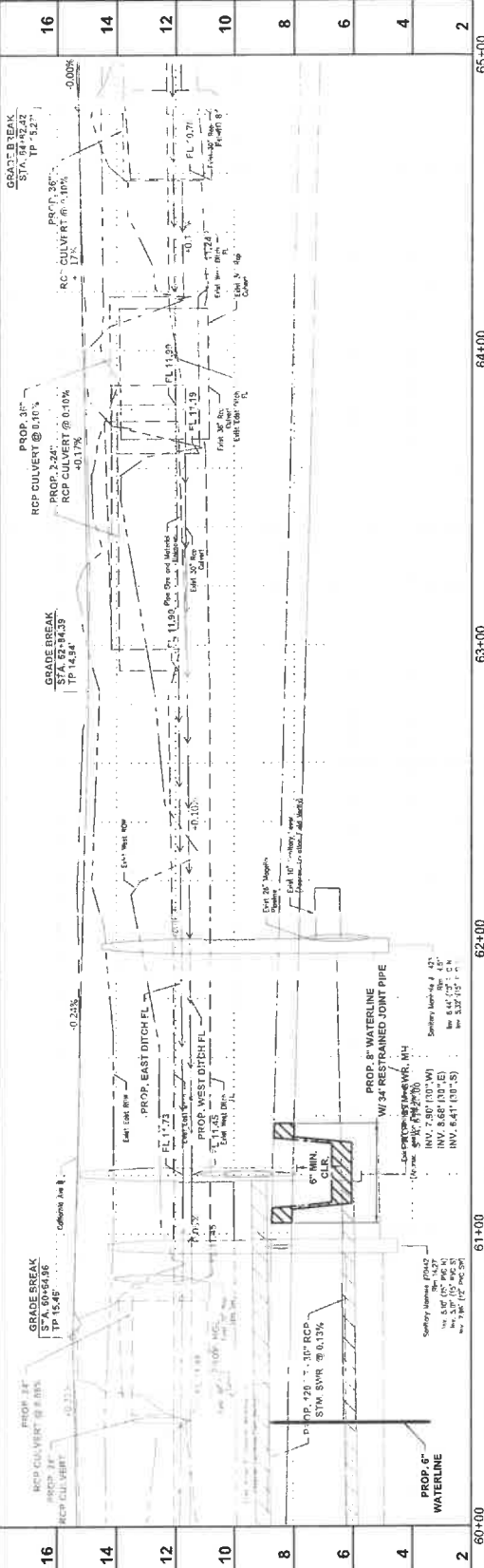
DESIGNED BY	CH	DATE	7/17/2023
CHECKED BY	AM	DATE	9/12/2023
SCALE	AS SHOWN		



CAUTION EX. GAS FACILITIES IN AREA
 All Lines Must Be Field Verified
 NOTE: NO OPEN CUT OR ROSE PIT CLOSER THAN 20' FROM ANY TREE TRUNK.



NOTES:
 1. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND STORM MANHOLE RIMS LOCATED WITHIN PROPOSED PAVEMENT SHALL BE SET OR ADJUSTED TO MATCH THE GRADE OF THE PROPOSED PAVEMENT.
 2. ALL WATER VALVES, SANITARY MANHOLE RIMS, AND STORM MANHOLE RIMS LOCATED OUTSIDE OF PROPOSED PAVEMENT AND DITCH SHALL BE SET OR ADJUSTED TO 3'-0\"/>



NO.	DATE	NAME	REVISIONS
16			
14			
12			
10			
8			
6			
4			
2			

PROJECT TITLE:		CALIFORNIA AVENUE	
SHEET NO.:		F.M. 517 TO 20th ST. EAST	
SHEET TOTAL:		UTILITY PLAN AND PROFILE STA.	
DATE:		6/10/2023	
DRAWN BY:		CH	
CHECKED BY:		AM	
SCALE:		1"=20' HORIZONTAL 1"=2' VERTICAL	
PROJECT NO.:		177223	
SHEET NO.:		178 / 183	

PROJECT TITLE:		CALIFORNIA AVENUE	
SHEET NO.:		F.M. 517 TO 20th ST. EAST	
SHEET TOTAL:		UTILITY PLAN AND PROFILE STA.	
DATE:		6/10/2023	
DRAWN BY:		CH	
CHECKED BY:		AM	
SCALE:		1"=20' HORIZONTAL 1"=2' VERTICAL	
PROJECT NO.:		177223	
SHEET NO.:		178 / 183	

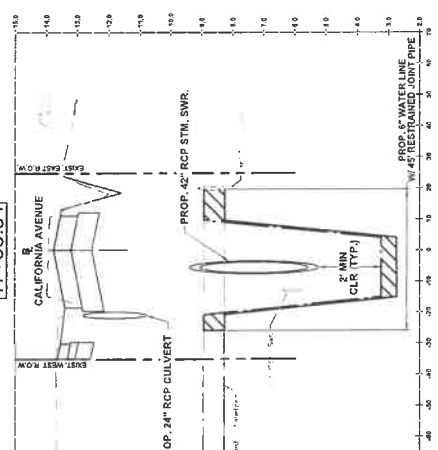
PROJECT TITLE:		CALIFORNIA AVENUE	
SHEET NO.:		F.M. 517 TO 20th ST. EAST	
SHEET TOTAL:		UTILITY PLAN AND PROFILE STA.	
DATE:		6/10/2023	
DRAWN BY:		CH	
CHECKED BY:		AM	
SCALE:		1"=20' HORIZONTAL 1"=2' VERTICAL	
PROJECT NO.:		177223	
SHEET NO.:		178 / 183	



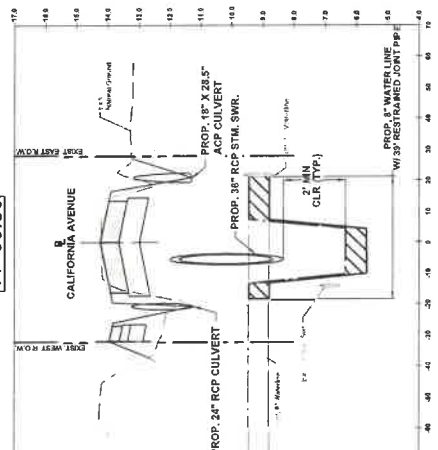
GALVESTON COUNTY ENGINEERING DEPARTMENT

NO.	DATE	NAME	REVISIONS
16			
14			
12			
10			
8			
6			
4			
2			

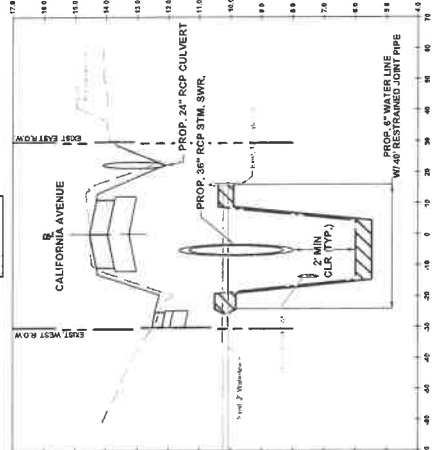
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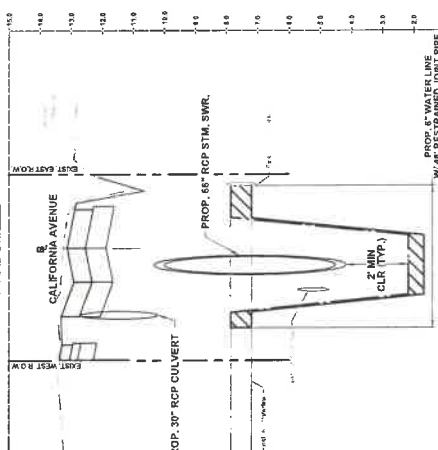
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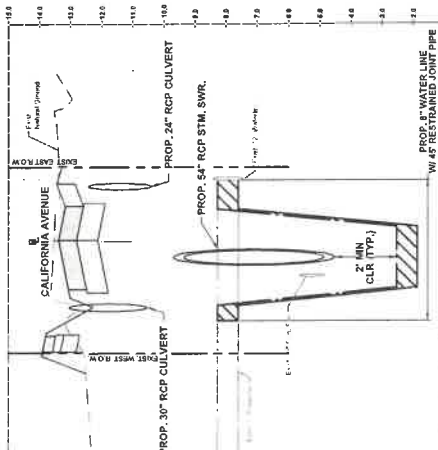
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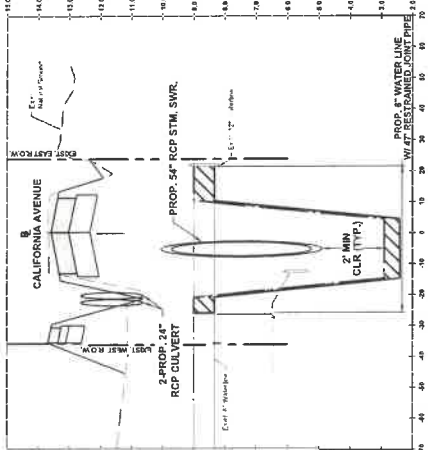
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24+17.47



27+48.91



NO.	REVISIONS	DATE	NAME

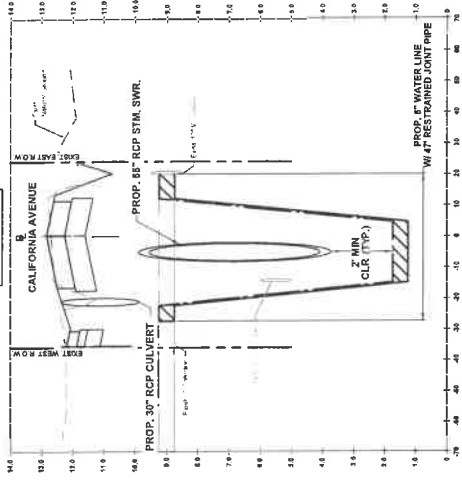


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 Houston, Texas 77058
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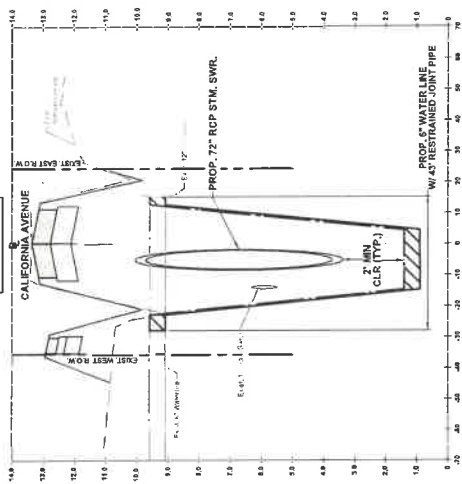
PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 577 TO 20th ST. EAST
 WATER LINE CROSS SECTION
 DATE: 7/7/2023
 1 OF 3
 1"=20' HORIZONTAL 1"=2' VERTICAL
 127 / 163

CSER STANDARD
 DATE: 7/7/2023
 SHEET NO. 127 / 163

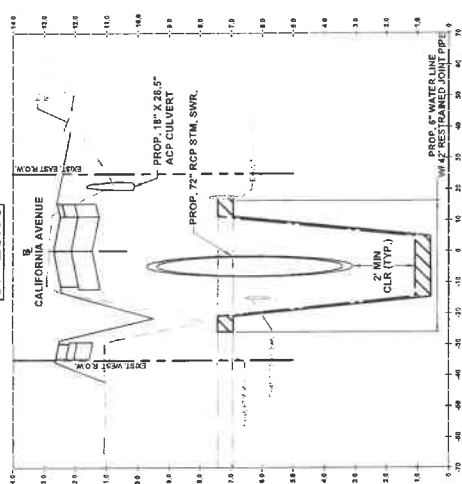
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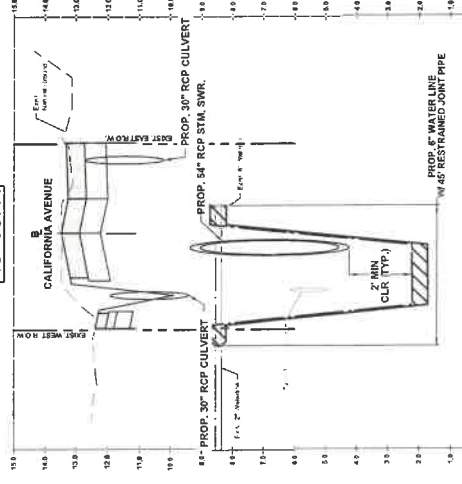
34+00.69



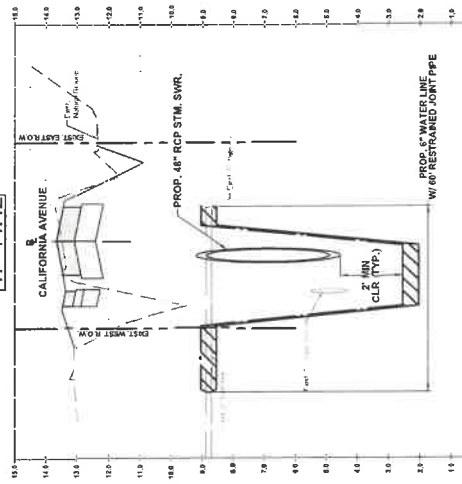
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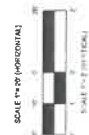
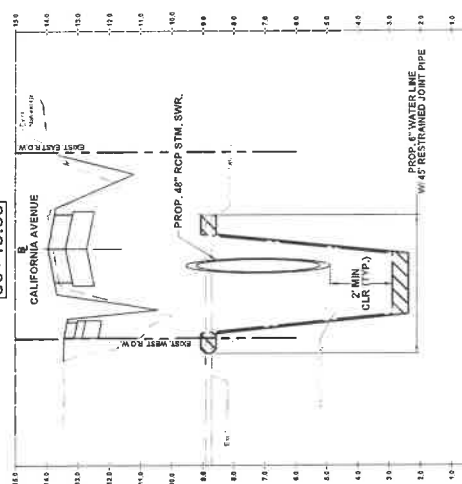
43+93.41



47+14.42



50+45.69



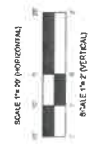
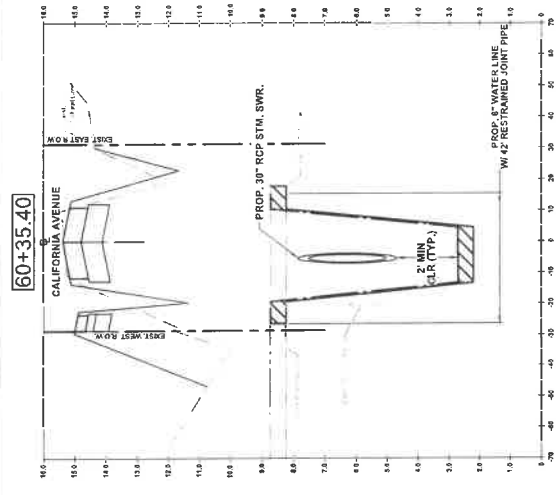
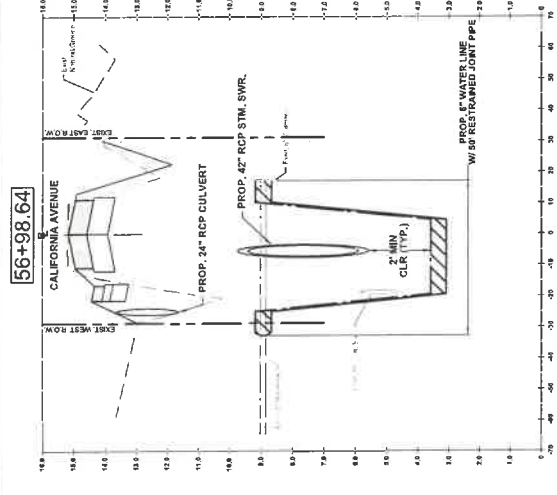
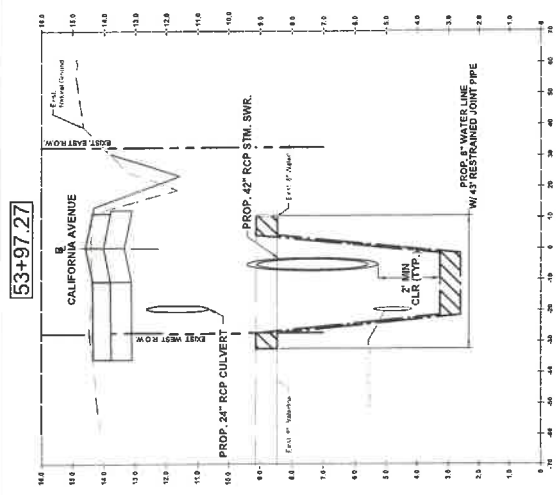
NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

MCDONOUGH
Civil Engineering
1945 Farm Registration No. 0103190
Professional Engineering No. F-005518
Houston, Texas 77067
www.mcd.com

STATE OF TEXAS
Professional Engineer
Austin P. McLean
12345
Professional Seal

PROJECT TITLE	CALIFORNIA AVENUE
DATE	F.M. 517 TO 20th ST. EAST
CH	WATER LINE CROSS SECTION
DATE	11/17/2023
SCALE	1"=20' HORIZONTAL 1"=2' VERTICAL
SHEET NO.	2 OF 3
TOTAL SHEETS	13 / 13



NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

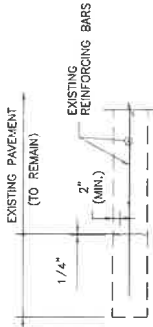


MCDONOUGH
 Civil & Mechanical Engineering
 18945 Farm Registration No. 0009900
 1895 Registration No. 2500000
 5525 Solomons, Houston, Texas 77057
 (713) 875-5906
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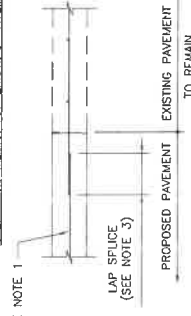


PROJECT TITLE: CALIFORNIA AVENUE	
F.M. 517 TO 20th ST. EAST	
WATER LINE CROSS SECTION	
SHEET NO.:	3 OF 3
DATE:	7/7/2023
DRAWN BY:	AN
CHECKED BY:	AN
DATE:	9/2/2023
SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL	
DESIGNER:	TR / AS

EXISTING PAVEMENT (TO BE REMOVED)
(SEE NOTE 2)



STEP 1. DEMOLITION OF EXISTING PAVEMENT



STEP 2. CONSTRUCTION OF NEW PAVEMENT

CONCRETE TO CONCRETE STANDARD PAVEMENT TIE-IN
SCALE: 1" = 1'-6"

- NOTES FOR STANDARD PAVEMENT TIE-IN:**
1. REINFORCING CENTERED IN PROPOSED PAVEMENT, 3" CLEAR AT EDGES.
 2. ONLY FULL DEPTH SAWCUTS WILL BE ALLOWED.
 3. 3/8" BAR DIAMETER LAP SPICE OR WELD, IF DIRECTED.
 4. IF NO EXPOSED REINFORCING STEEL EXISTS, HORIZONTAL DOWELS SHALL BE 3/4" LONG DRILLED AND EMBEDDED 150% INTO THE CENTER OF THE EXISTING CONCRETE SLAB WITH EPOXY OR APPROVED EQUAL.
 5. SIZE OF DOWEL BARS SHALL CONFORM TO TABLE 1. DOWELS SHALL BE PLACED 24" CENTER TO CENTER.
 6. ALTERNATIVELY, THE CONTRACTOR MAY CHOOSE TO USE FULL DEPTH SAWCUT WITH DRILLED IN DOWELS (AS SHOWN IN THE DETAIL) OR FULL DEPTH SAWCUT WITH DRILLED IN DOWELS. IF THE CONTRACTOR SO CHOOSES, THE SAWCUTTING AND DOWELS WILL BE AT HIS OWN EXPENSE (THESE ITEMS WILL ONLY BE PAID FOR IF THE COUNTY REQUIRES THE FULL DEPTH SAWCUT AND DOWELS).
 7. ALL PAVEMENT CONCRETE SHALL BE 5/8" SACK PER CY, 3500, PSI AT 28 DAYS.

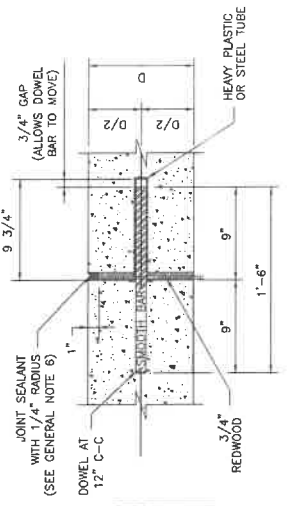
GENERAL NOTES:

1. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCING, REFER TO THE GOVERNING SPECIFICATION ITEM 560 "CONCRETE PAVEMENT".
2. THE CHAIRS USED TO SUPPORT THE BAR MATS SHALL BE OF SUFFICIENT STRUCTURAL QUALITY AND NUMBER TO HOLD THE MAT WITHIN THE PLACEMENT CHAIRS AND SHALL BE OF A TYPE APPROVED BY THE ENGINEER. SPACING OF BAR SUPPORT CHAIRS SHALL BE 3'-0" MAXIMUM.
3. ALL DOWELS SHALL BE PLACED AT THE CENTER OF LONGITUDINAL JOINTS. WHEREVER MORE THAN ONE LANE WITHIN A LANE IS USED, LONGITUDINAL KEYED CONSTRUCTION JOINTS SHALL BE USED AT ALL OTHER JOINTS.
4. ALL SAW CUTTING SHOWN ON THIS DETAIL SHALL BE INCIDENTAL TO ITEM 360 "CONCRETE PAVEMENT".
5. D = THICKNESS OF CONCRETE PAVEMENT.
6. FOR DEVELOPMENT PROJECTS SEE REGULATIONS OF FORT BEND COUNTY, TEXAS FOR THE APPROVAL AND ACCEPTANCE OF INFRASTRUCTURE.
7. JOINT SEALANT SHALL CONFORM TO THE REQUIREMENTS OF ITEM 360 "CONCRETE PAVEMENT".
8. NO TRAFFIC ON CONCRETE PAVEMENT UNTIL 7 DAYS CURE TIME AND 3,500 PSI HAS BEEN REACHED.

TABLE 1
(CONSTRUCTION JOINT DOWELS)

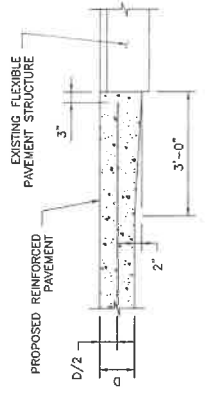
DOWEL SIZE	PAVEMENT DEPTH
#5 BAR	7"
#6 BAR	≥ 9"

DOWEL SHALL BE DRILLED INTO PAVEMENT WITH MIN. 10" MAX. 12" AND EXPOSED. (SEE ITEM 361.3)



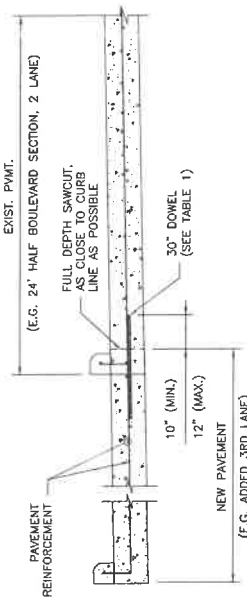
DOWEL TYPE EXPANSION JOINT
SCALE: 1" = 6"

- NOTES FOR DOWEL EXPANSION JOINT:**
1. EXPANSION JOINT SHALL BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 60 FEET.
 2. CENTER DOWEL HORIZONTALLY ON JOINT.
 3. EXPANSION JOINT BARS SHALL BE HELD PARALLEL TO THE FINISHED CONCRETE SURFACE.

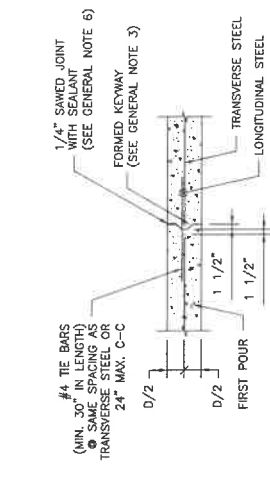


TYPICAL PAVING HEADER
SCALE: 1" = 1'-6"

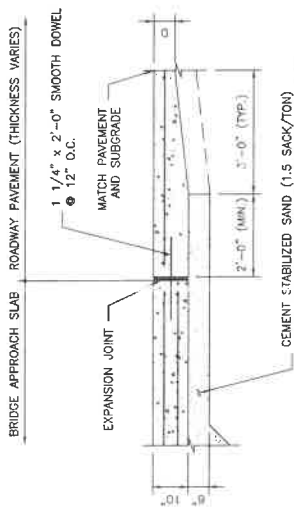
- NOTES FOR PAVING HEADER:**
1. ADDITIONAL CONCRETE FOR PAVING HEADER SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAVING BID ITEMS.
 2. DISTURBED MATERIAL IN THE FLEXIBLE PAVEMENT WILL BE BACKFILLED WITH ASPHALT CONCRETE PAVEMENT (ACP). THE ACP WILL BE CONSIDERED INCIDENTAL TO VARIOUS PAVING BID ITEMS.



TYPICAL CONCRETE ROADWAY WIDENING DETAIL
SCALE: 1" = 1'-6"



LONGITUDINAL CONSTRUCTION JOINT
SCALE: 1" = 1'-6"



TYPICAL SECTION PAVING TIE-IN TO BRIDGE APPROACH SLAB
SCALE: 1" = 1'-6"

- NOTE FOR CONTRACTION JOINT:**
1. 20'-0" MAXIMUM SPACING BETWEEN JOINTS.

NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
CONCRETE PAVEMENT
DETAILS (1 OF 2)

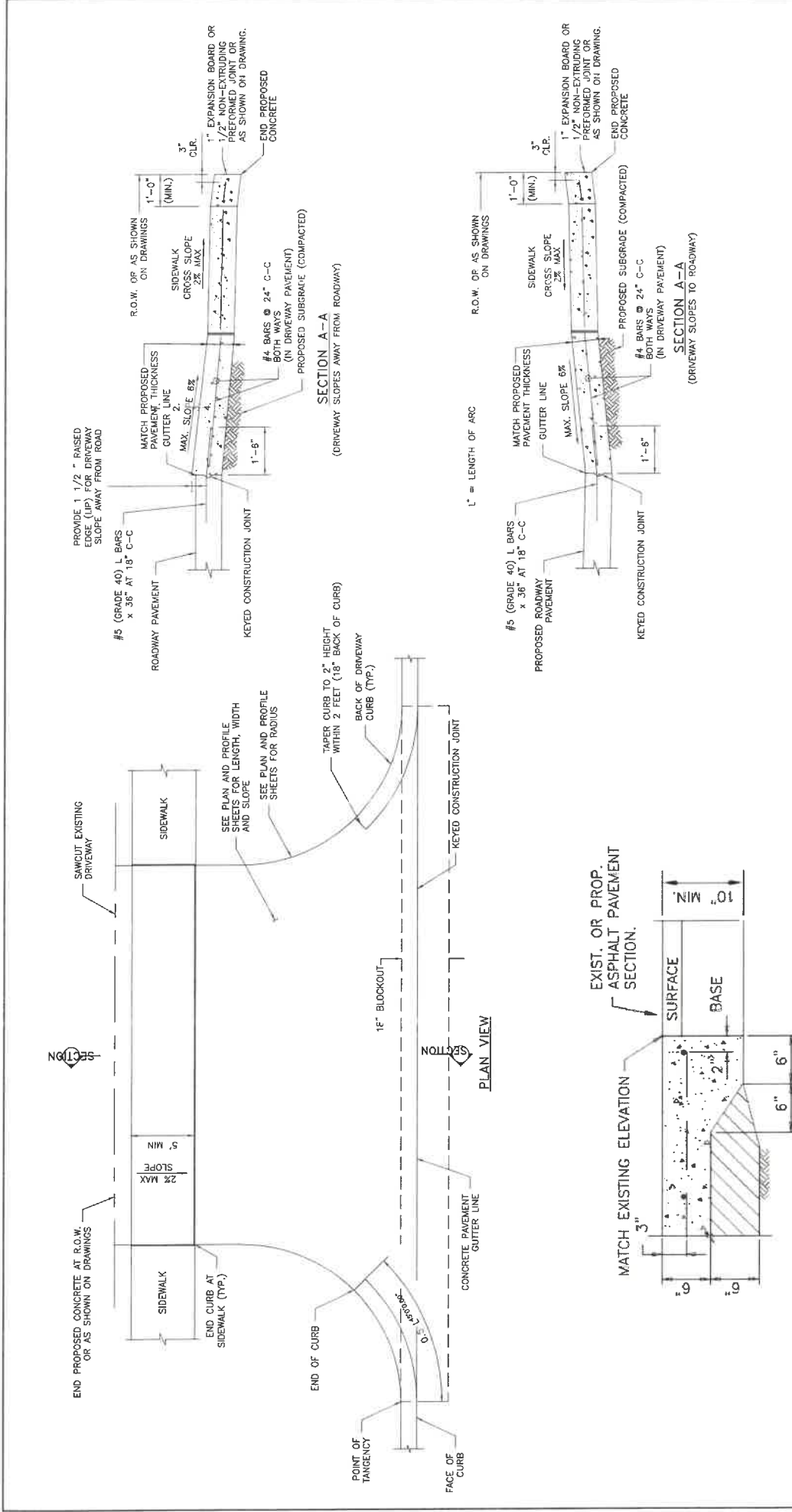
DATE: 9/12/2023

SCALE: 1" = 1'-6"

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GALVESTON COUNTY ENGINEERING DEPARTMENT



CONCRETE TO ASPHALT TYPE II PAVING HEADER

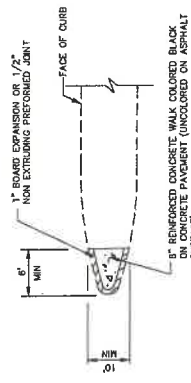
NOTES:
 SAWCUT EXISTING DRIVEWAY AT R.O.W. LINE OR AS SHOWN ON DRAWING AND REMOVE EXISTING DRIVEWAY TO SAWCUT LINE. IF THERE IS EXISTING CURB ON DRIVEWAY, CONNECT PROPOSED CURB TO EXISTING CURB. MATCH EXISTING DRIVEWAY TO PROPOSED DRIVEWAY. SEE PAVING DETAIL SHEET FOR CONCRETE CURB REINFORCEMENT. THIS DRIVEWAY INSTALLATION IS GOVERNED BY ITEM 360.

NO.	REVISIONS	DATE	NAME

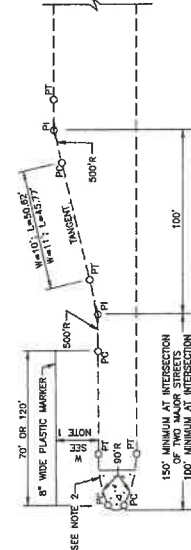
PROJECT TITLE		CALIFORNIA AVENUE	
PROJECT NUMBER		F.M. 517 TO 20th ST. EAST	
SHEET NUMBER		MAJOR ROADWAY CONSTRUCTION	
DRAWN BY		DRIVEWAY DETAILS / PAVING HEADER	
DATE	9/2/2023	SCALE	N.T.S.
DRAWN BY	AM	CHECKED BY	AM
DATE	9/2/2023	SCALE	N.T.S.

6525 Cal. Street, Houston, Texas 77037 281.461.2208 www.mcdonough.com	

02772-01



ESPLANADE NOSE



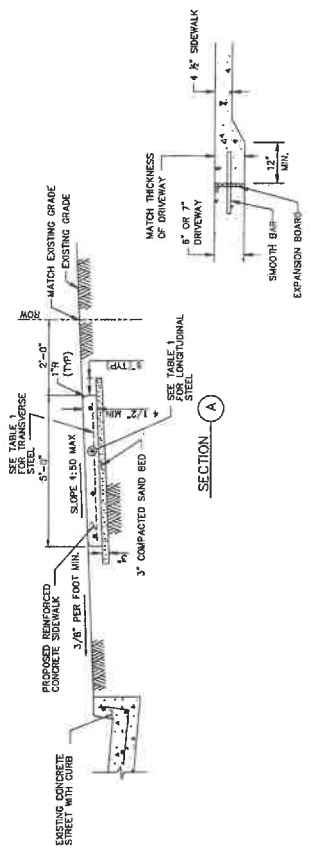
DETAIL OF LEFT TURN LANE

CURVE DATA

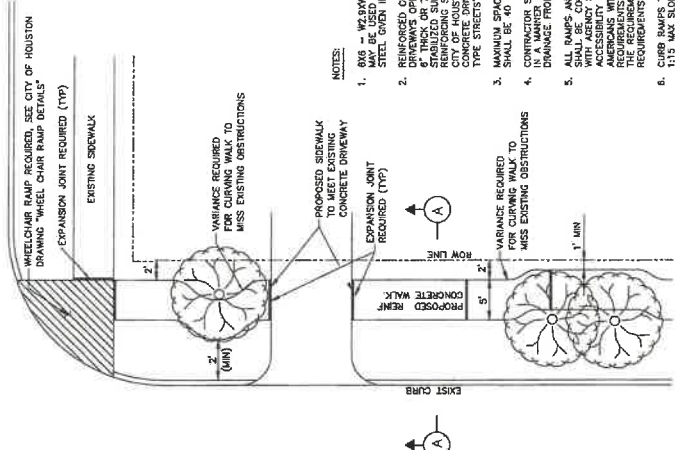
W=10'	M=11'
$\Delta = 50^\circ 42' 38.14''$	$\Delta = 616' 30.27'$
L = 46.85'	L = 54.78'
T = 24.54'	T = 27.42'

- NOTES
1. 10 FT FOR 80 FT ROK, 11 FT FOR 100 FT ROK.
 2. FOR MEDIANS WITH BULLET NOSE CONFIGURATION, THE BULLET NOSE SHALL BE PLACED 80 FT R. FOR MEDIANS WITHOUT BULLET NOSE, THE BULLET NOSE SHALL BE PLACED 30 FT BACK OF PC/PT.

02775-01



SECTION A



DRIVEWAY/SIDEWALK HEADER DETAIL

TABLE 1

REINFORCING STEEL INFORMATION FOR 4\"/>

ROW	THICKNESS (IN)	WIDTH (FT)	NUMBER OF BARS	END BAR SPACING (IN)	3 BARS SPACING (IN)	TRANSVERSE STEEL SPACING (IN)
4.5	4	6	4	22	3	48
4.5	4	8	4	22	3	48

- NOTES
1. ALL BARS WELDED WIRE FABRIC MAY BE USED IN THE REINFORCING STEEL GIVEN IN TABLE 1.
 2. REINFORCED CONCRETE SIDEWALKS THRU DRIVEWAY OPENINGS SHALL BE EITHER REINFORCED OR CAST ON A STABILIZED SUBGRADE. FOR THE REINFORCING STEEL REQUIREMENTS, SEE CITY OF HOUSTON STANDARD CONCRETE DRIVEWAY DETAILS ON CURB TYPE STREETS.
 3. MAXIMUM SPACING FOR EXPANSION JOINTS SHALL BE 40 FEET.
 4. CONTRACTOR SHALL CONSTRUCT SIDEWALK IN A MANNER NOT TO BLOCK THE NATURAL DRAINAGE FROM ADJACENT PROPERTY.
 5. ALL USE AND PROJECT REQUIREMENTS SHALL BE IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS A&M UNIVERSITY TRANSPORTATION AND ACCESSIBILITY STANDARDS AND ACCESSIBILITY STANDARDS (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN REQUIREMENTS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
 6. CURB RAILS THAT ARE STRONGER THAN A 1:1.5 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02772-01 THROUGH 02775-01

APPROVED BY: [Signature]
CITY ENGINEER

APPROVED BY: [Signature]
DEPUTY DIRECTOR

DETECTIVE DATE: JUL-01-2020
FOR CITY OF HOUSTON USE ONLY

NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
STREET PAVING AND SIDEWALK

DESIGNED BY: [Signature]
DATE: 7/7/2023

CH: [Signature]
AM: [Signature]

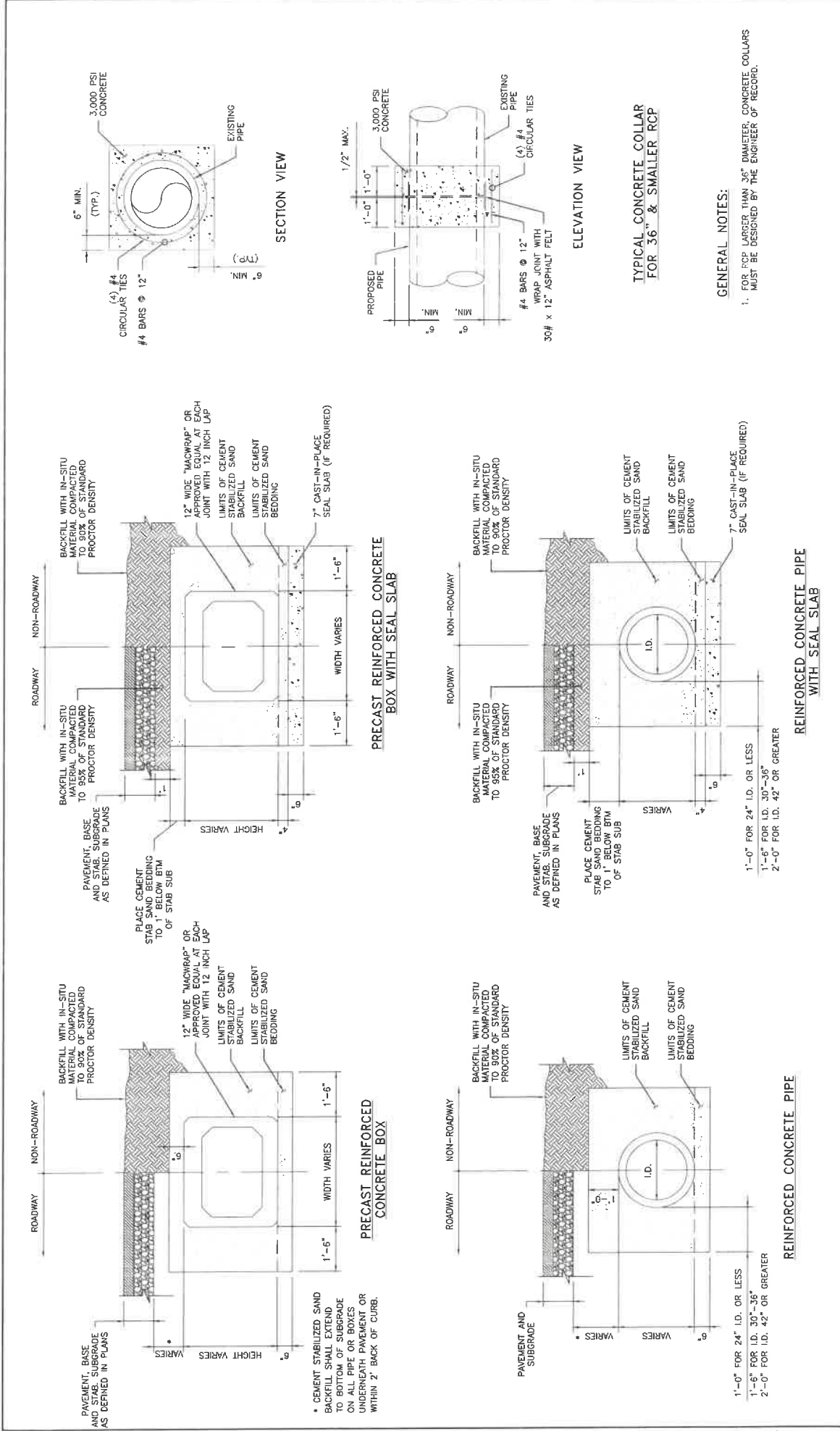
9/6/2023

STATE OF TEXAS
SEAL OF THE STATE ENGINEER
12355
HOUSTON, TEXAS 77057

MCDONOUGH
Civil Engineering
1915 Fm 1400, Houston, TX 77060
SESS Schwachner LLC (713) 975-9900
Houston, Texas 77057
www.mcd.com

GALVESTON COUNTY
ENGINEERING DEPARTMENT

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NO.	REVISIONS	DATE	NAME



PROJECT TITLE: CALIFORNIA AVENUE
F.M. 517 TO 20th ST. EAST
STORM SEWER CONSTRUCTION

DATE: 7/7/2023
SCALE: N.T.S.

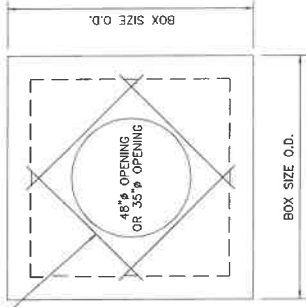


MCDONOUGH
1045 Elmwood Dr., Suite 100
Houston, TX 77024
(713) 755-8998
mcdonough.com

GALVESTON COUNTY ENGINEERING DEPARTMENT

BOX SIZE I.D.	MAX. OPENING SIZE	FLAT SLAB THK.	MIN. WALL THK.	MIN. BASE THK.
4'x4'	48"	8"	6"	6"
5'x5'	60"	10"	6"	8"
6'x6'	72"	10"	6"	8"
7'x7'	84"	10"	8"	8"
8'x8'	96"	10"	8"	8"

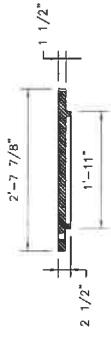
DIAGONAL REBAR REQUIRED AT OPENING



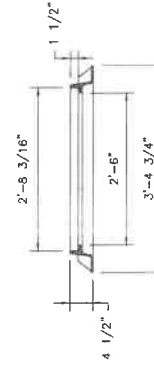
PLAN VIEW
FLAT SLAB WITH OPENING
SCALE: 1"=1'-6"



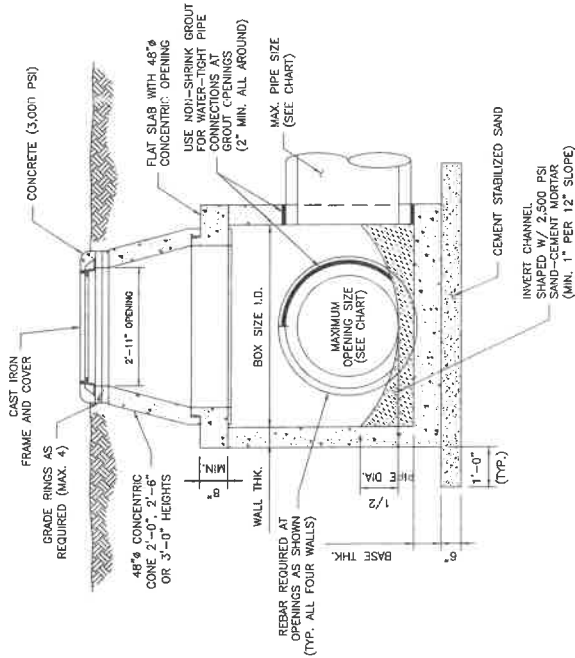
PLAN VIEW
FRAME AND COVER
SCALE: 1"=1'-0"



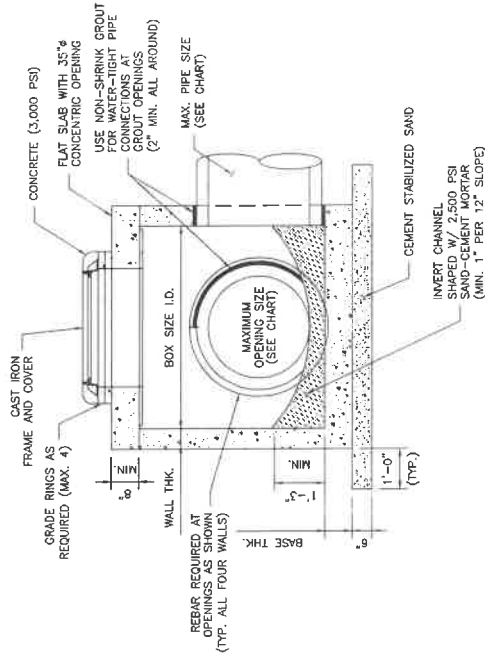
COVER SECTION A-A
SCALE: 1"=1'-0"



FRAME SECTION A-A
SCALE: 1"=1'-0"



JUNCTION BOX/MANHOLE
WITH CONCENTRIC CONE
SCALE: 1"=1'-8"



JUNCTION BOX/MANHOLE
WITH FLAT SLAB
SCALE: 1"=1'-8"

GENERAL NOTES:

- CONSTRUCTION AND MATERIALS SHALL MEET REQUIREMENTS OF ITEM 471 "PRECAST CONCRETE MANHOLES AND JUNCTION BOXES"
- CONCRETE FOR JUNCTION BOX: MINIMUM 4,000 PSI IN 28 DAYS
- CONCRETE FOR COVER: MINIMUM 4,000 PSI IN 28 DAYS
- JOINT SEALANT: RAM-NEK GASKET MATERIAL
- FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS MODEL V-1423 OR APPROVED EQUAL
- ALL MANHOLE INSTALLATIONS SHALL BE SUBMITTED FOR ENGINEER'S APPROVAL

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY
ENGINEERING DEPARTMENT



MCDONOUGH
Professional Engineer
No. 13255
Houston, Texas 77027
Tel: 281.355.8986
www.mcdonough.com

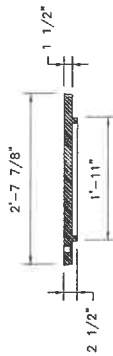


PROJECT TITLE:	CALIFORNIA AVENUE F. M. 517 TO 20th ST. EAST
DESIGN STANDARD:	PRECAST CONCRETE JUNCTION BOX
DATE:	7/7/2023
DRAWN BY:	CH
CHECKED BY:	SCALE
DATE:	9/12/2023
SCALE:	N.T.S.

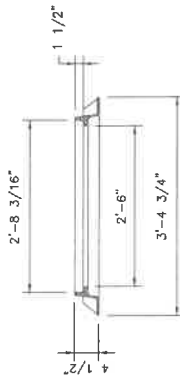


**PLAN VIEW
FRAME AND COVER**
SCALE: 1" = 1'-0"

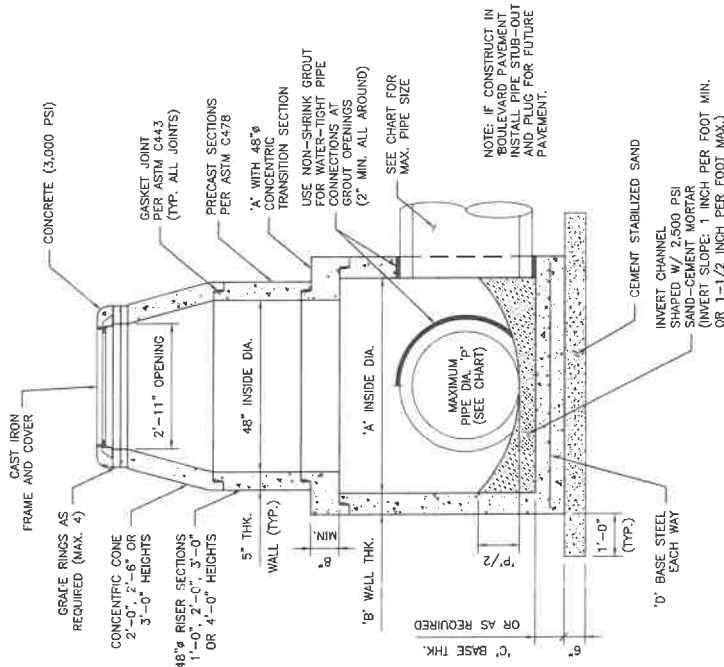
NOTE: IF PROJECT IS WITHIN A CITY ETJ
USE CITY'S STD MANHOLE COVER



COVER SECTION A-A
SCALE: 1" = 1'-0"

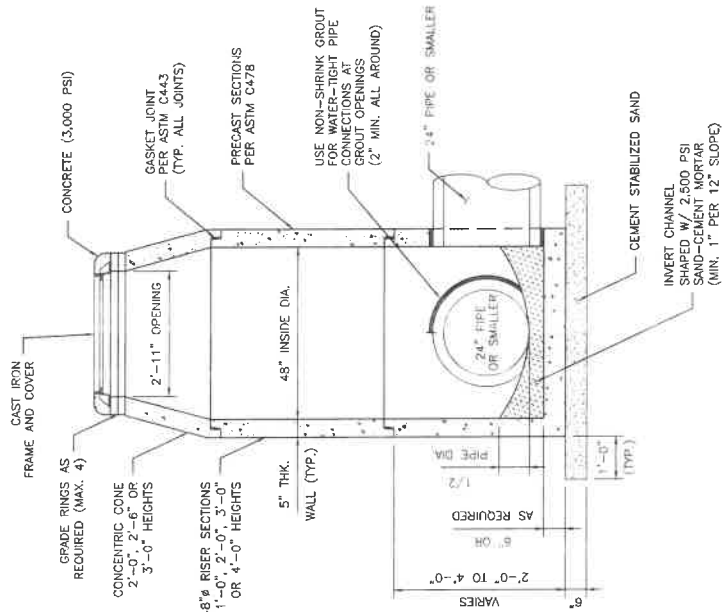


FRAME SECTION A-A
SCALE: 1" = 1'-0"



**PRECAST CONCENTRIC MANHOLE
FOR PIPE SIZES GREATER THAN 24"**
SCALE: 1" = 1'-6"

MAXIMUM PIPE DIA. "P"	INSIDE DIA. "A"	WALL THICKNESS "B"	BASE THICKNESS "C"	BASE STEEL "D"
30"	5'-0"	6"	8"	#5 @ 8"
42"	6'-0"	7"	8"	#5 @ 8"
54"	7'-0"	8"	10"	#6 @ 12" (2 LAYERS)
60"	8'-0"	9"	10"	#6 @ 12" (2 LAYERS)

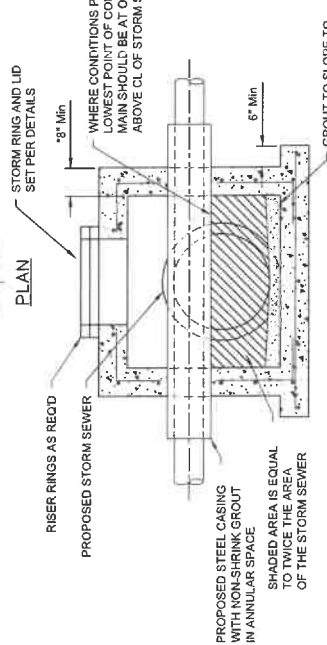
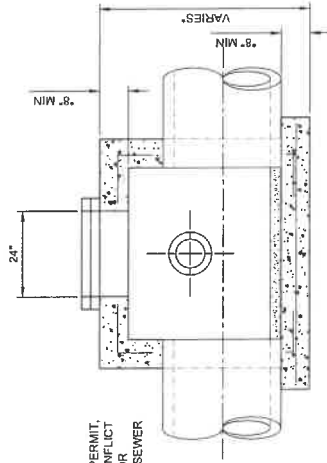
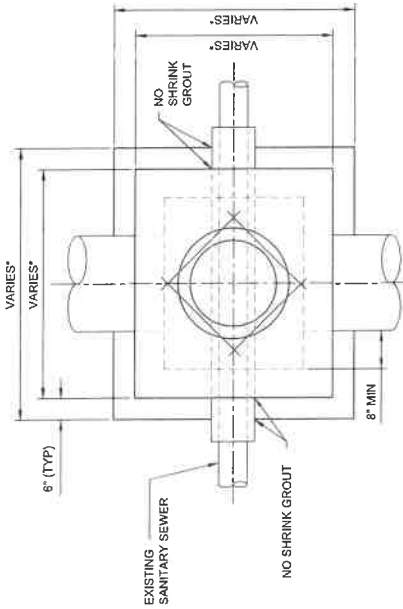


**48"Ø PRECAST CONCENTRIC MANHOLE
FOR PIPE SIZES 24" OR SMALLER**
SCALE: 1" = 1'-6"

GENERAL NOTES:

1. CONSTRUCTION AND MATERIALS SHALL MEET REQUIREMENTS OF ITEM 471, PRECAST CONCRETE MANHOLES.
2. CONCRETE OR MANHOLE MINIMUM 4,000 PSI IN 28 DAYS.
3. ASTM C478 REQUIREMENTS.
4. GASKET JOINT: PER ASTM C443
5. FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS MODEL V-1420 OR APPROVED EQUAL.
6. ALL DRAWINGS AND MANUFACTURER'S CERTIFICATION SHALL BE SUBMITTED FOR ENGINEER'S APPROVAL.

NO. _____ REVISIONS _____ DATE _____ NAME _____	<h1 style="margin: 0;">GALVESTON COUNTY ENGINEERING DEPARTMENT</h1>	<p style="text-align: center;">STATE OF TEXAS</p> <p style="text-align: center;">REGISTERED PROFESSIONAL ENGINEER</p> <p style="text-align: center;">AUSTIN T. WICKEN 123456 9/12/2023</p>
PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST PRECAST CONCRETE MANHOLE DETAILS		SHEET NO: _____ CH: _____ DATE: 1/7/2023 SHEET NO: 33 / 45



SECTION
ELEVATION
PLAN

CONFLICT MANHOLE DETAIL
NTS
4-2012

NOTES:

1. CONFLICT MANHOLE WILL BE ALLOWED ONLY WHERE DESIGN PROBLEMS AND ECONOMICS PROVE THEM TO BE THE ONLY VIABLE SOLUTION AS APPROVED BY THE GOVERNING ENTITY.
2. CONFLICT MANHOLES WILL NOT BE ALLOWED FOR WATER MAINS CROSSING GRAVITY WASTE WATER SYSTEMS.
3. ANY CONSTRUCTION WITHIN A ROAD SHALL BE RATED FOR H20 LOADING.
4. THIS OR ANY OTHER DESIGN SHALL HAVE NO IMPACT ON THE STORM SEWERS DESIGN FLOW.
5. SEE PRECAST CONCRETE JUNCTION BOX MANHOLE DETAILS FOR BOX SIZE WHERE * APPEARS.

NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



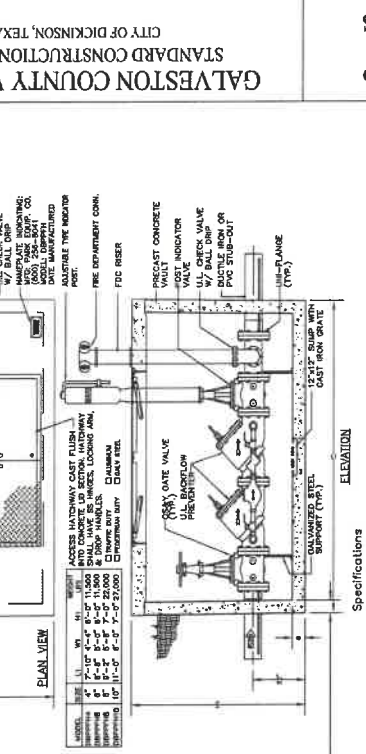
MCDONOUGH
 Civil Engineering
 1905 S. Loop West, Suite 100
 Houston, Texas 77057
 www.mcdonough.com



PROJECT TITLE:	CALIFORNIA AVENUE F. M. 517 TO 20th ST. EAST	GRID STANDARD	
DATE:	9/12/2012	DATE:	7/7/2012
CH		CH	
AM		AM	
CONFLICT MANHOLE DETAILS		SCALE:	N.T.S.
		SHEET NO.	19 / 18

GALVESTON COUNTY W.C.I.D. #1
STANDARD WATER DETAILS

CITY OF DICKINSON, TEXAS



ELEVATION

Specifications:
 CONCRETE: Cast in place with design strength of 4000 psi. All reinforcement shall be placed in accordance with the specifications of ACI 308.1R-03. All reinforcement shall be placed in accordance with the specifications of ACI 308.1R-03. All reinforcement shall be placed in accordance with the specifications of ACI 308.1R-03.



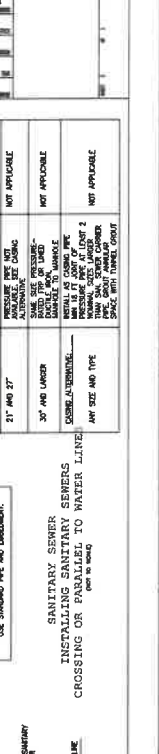
PLAN VIEW



METER RISER AND DUAL CHECK BACKFLOW PREVENTER DETAIL



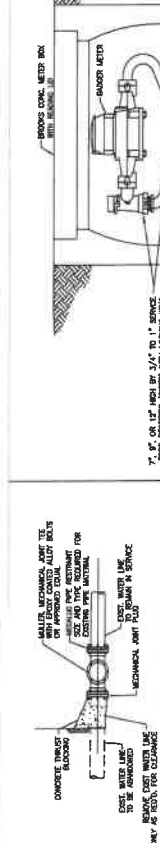
UNIT-FLANGE RESTRAINT USED ON ALL ROAD CROSSINGS



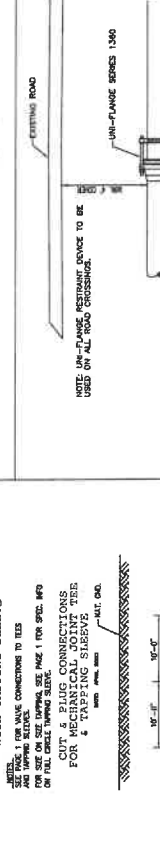
SPECIAL WATER LINE CONSTRUCTION AT SEWER LINE CROSSING



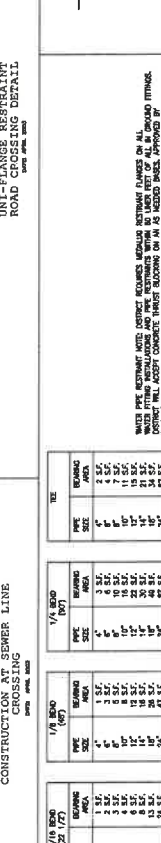
THRUST BLOCK DETAILS



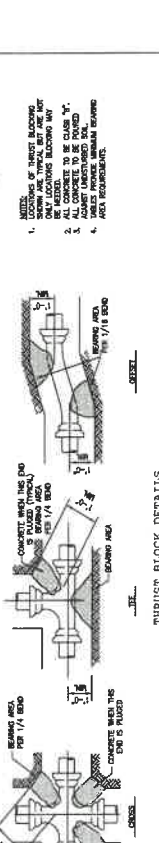
CUT AND PLUG WET CONNECTION WITH TAPPING SLEEVE



CUT AND PLUG DRY CONNECTION WITH TAPPING SLEEVE



SPECIAL WATER LINE CONSTRUCTION AT SEWER LINE CROSSING



THRUST BLOCK DETAILS

NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST WATER DETAIL (2 OF 2)

DATE: 11/18/23

DESIGNER: J. BALDWIN

CHECKER: J. BALDWIN

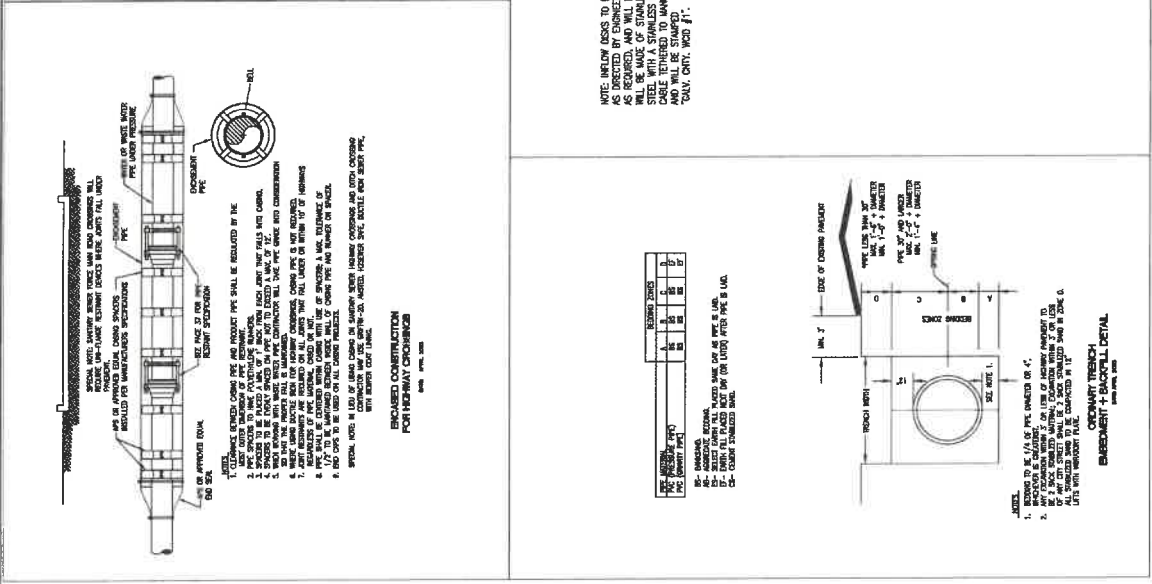
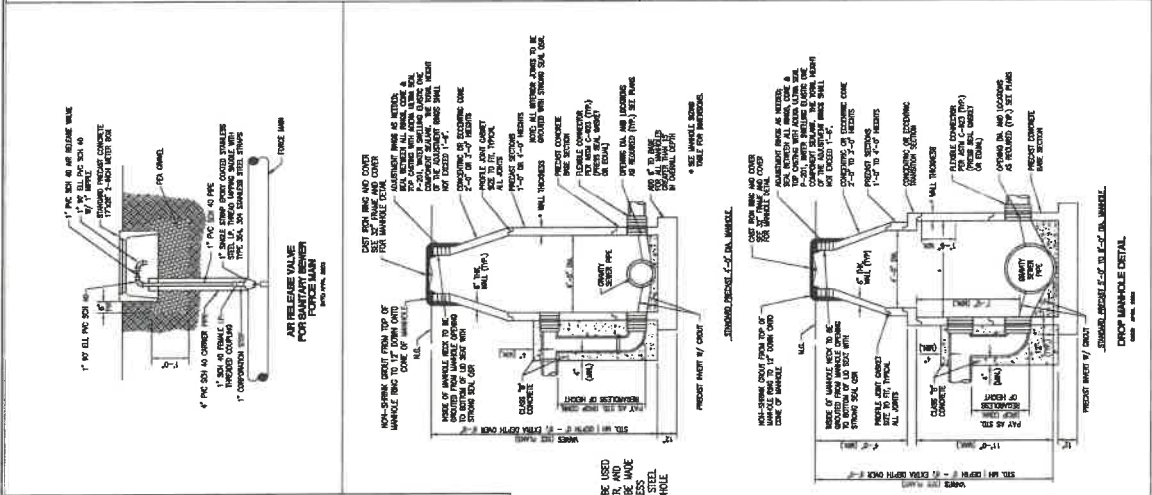
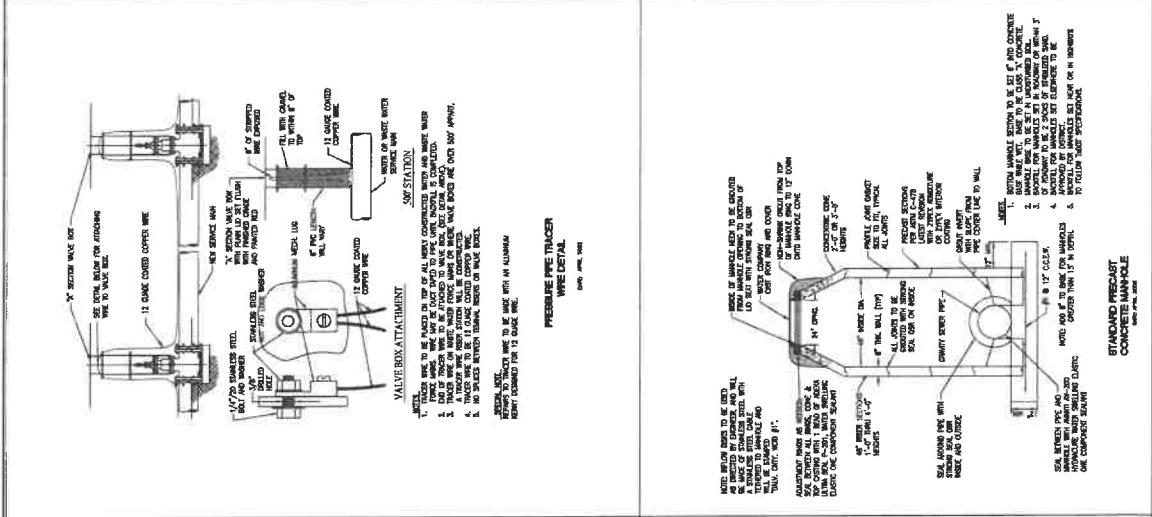
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PROJECT NO: 23033

DATE: 11/18/23

PROJECT NO: 23033

DATE: 11/18/23



NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST SANITARY SEWER DETAIL (1 OF 2)

DATE: 7/7/03

BY: J. B. ...

CHECKED BY: ...

APPROVED BY: ...

SCALE: AS SHOWN

PROJECT NO.: 03-001

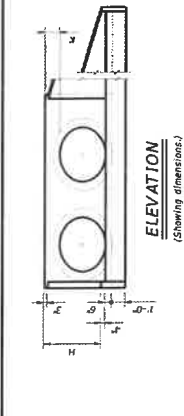
DATE: 7/7/03

TIME: 10:00 AM

142 / 163

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL

Slope	Values for one Pipe				Values for two Pipes		Reinf. Conc. (Lbs) (1)	Reinf. Conc. (CY) (2)
	W	X	Y	L	X and W	Y and W		
1:1	2-3 3/4	0-0	2-10 5/8	119 0/8	2-5 3/8	28 0/2	28 0/2	119 0/8
1 1/2:1	2-10 5/8	0-0	6-6 1/8	135 1/2	3-0 3/8	32 0/4	32 0/4	135 1/2
2:1	10-11 1/2	0-0	2-10 5/8	167 1/2	3-9 3/8	48 0/2	48 0/2	167 1/2
3:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
4:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
5:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
6:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
7:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
8:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
9:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
10:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
11:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
12:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
13:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
14:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
15:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
16:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
17:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
18:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
19:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
20:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
21:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
22:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
23:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
24:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
25:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
26:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
27:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
28:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
29:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
30:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
31:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
32:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
33:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
34:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
35:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
36:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
37:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
38:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
39:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
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44:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
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46:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
47:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
48:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
49:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
50:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
51:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
52:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
53:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
54:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
55:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
56:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
57:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
58:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
59:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
60:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
61:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
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65:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
66:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
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88:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
89:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
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99:1	12-6 3/4	3-3 3/8	0-0	116 0/8	4-4 3/8	54 0/6	54 0/6	116 0/8
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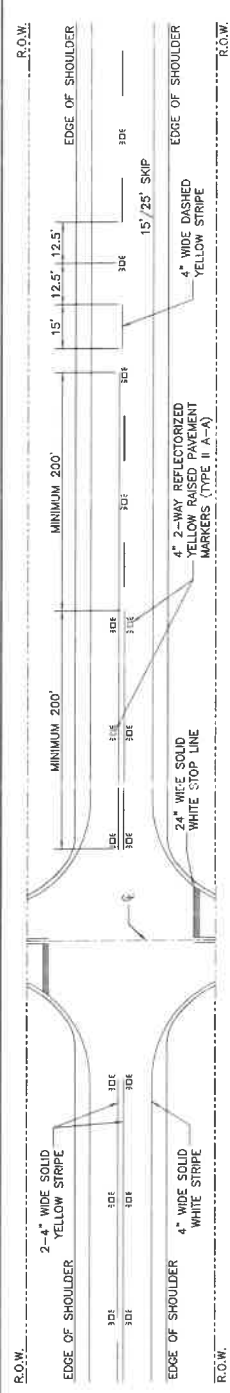
- Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- For vehicle safety, construct curb no more than 3" above finished grade. Reduce curb requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- Provide 1/2" of minimum cover for pipes to maintain a minimum cover for pipes.
- Dimensions shown are usual and maximum.
- Quantities shown are for one structure end only (one headwall).
- Min length = $6' + 3' \times \left(\frac{12 \times H \times Z}{L} \right) = 1'$
- Length of wings based on 5:1 slope along this line.

TABLE OF VARIABLE DIMENSIONS

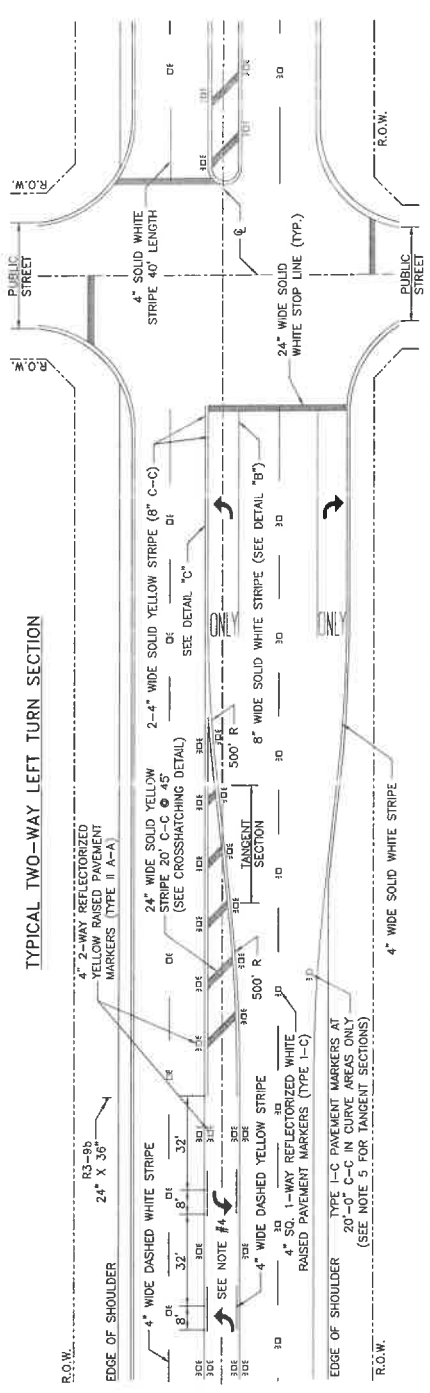
Bar	Size	Spa	No.
A	#4	1'-0"	2
B	#3	1'-0"	2
C	#4	1'-0"	2
D	#3	1'-0"	2
E	#5	1'-0"	2
F	#3	1'-0"	2
G	#3	1'-0"	2
H	#3	1'-0"	2
I	#3	1'-0"	2
J	#3	1'-0"	2
K	#3	1'-0"	2
L	#3	1'-0"	2
M	#3	1'-0"	2
N	#3	1'-0"	2
O	#3	1'-0"	2
P	#3	1'-0"	2
Q	#3	1'-0"	2
R	#3	1'-0"	2
S	#3	1'-0"	2
T	#3	1'-0"	2
U	#3	1'-0"	2
V	#3	1'-0"	2
W	#3	1'-0"	2
X	#3	1'-0"	2
Y	#3	1'-0"	2
Z	#3	1'-0"	2

TABLE OF CONSTANT DIMENSIONS

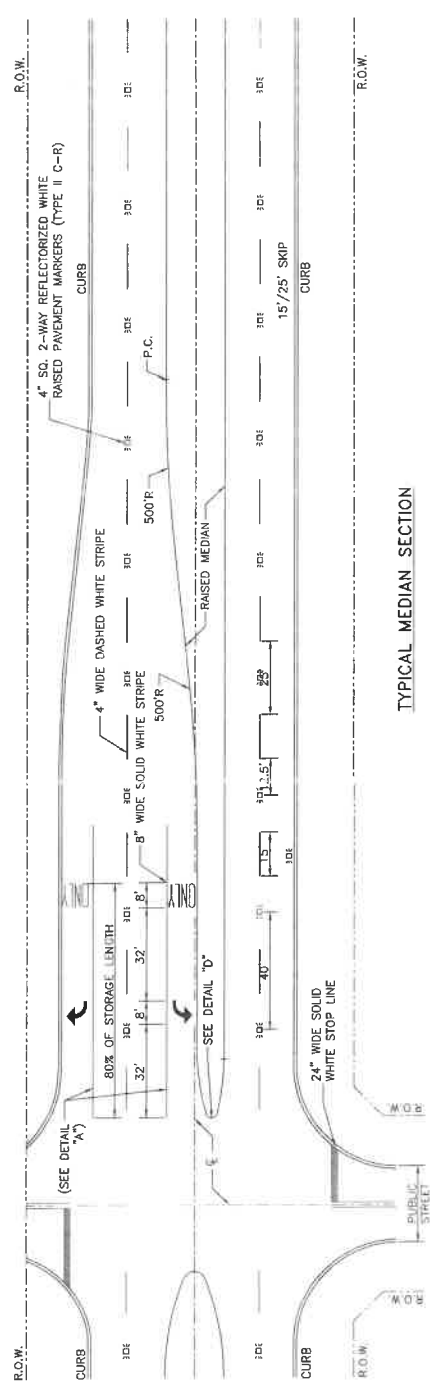
Bar	Size	Spa	No.
A	#4	1'-0"	2
B	#3	1'-0"	2
C	#4	1'-0"	2
D	#3	1'-0"	2
E	#5	1'-0"	2
F	#3	1'-0"	2
G	#3	1'-0"	2
H	#3	1'-0"	2
I	#3	1'-	



TYPICAL TWO LANE TWO-WAY ROAD



TYPICAL TWO-WAY LEFT TURN SECTION

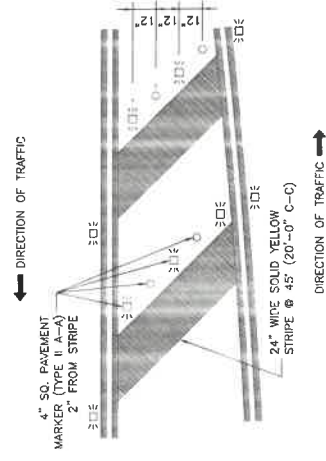


TYPICAL MEDIAN SECTION

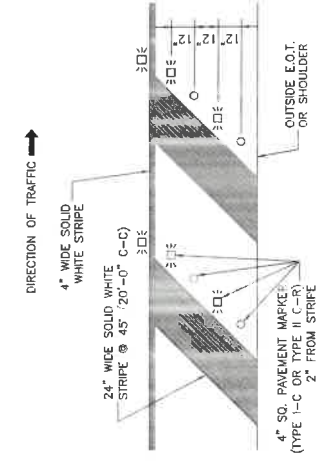
NOTES:

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD).
2. ALL TRAFFIC BUTTONS AND MARKERS SHALL BE INSTALLED ADJACENT TO STRIPES (APPROXIMATELY 2').
3. REPEAT ARROWS AT APPROXIMATELY 1000' INTERVALS WITHIN TWO-WAY LEFT TURN SECTION.
4. TYPE I-C C-C PAVEMENT MARKERS SHALL BE PLACED AT 40' C-C ON ROADWAYS WITHOUT CURBS AND GUTTERS.
5. WHEN PAVEMENT MARKINGS EXTEND INTO OR CONTINUE THROUGH INTERSECTION AREAS, THEY SHALL BE THE SAME COLOR AND AT LEAST THE SAME WIDTH AS THE MARKINGS ON THE ADJACENT SCHOOL ZONE AREA. CONTINENTAL TYPE MARKINGS SHALL BE USED.
6. ADDITIONAL SET OF "WORD" AND "ARROW" PAVEMENT MARKINGS SHALL BE USED WHEN TURN LANE STORAGE LENGTH IS 160 FEET OR GREATER.

CROSSHATCHING DETAIL



OUTSIDE EDGE CROSSHATCHING DETAIL



NO.	REVISIONS	DATE	NAME

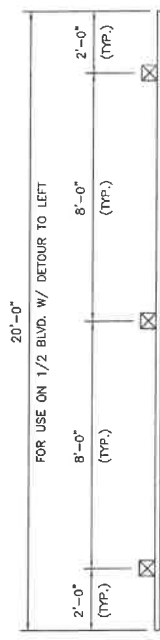
**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



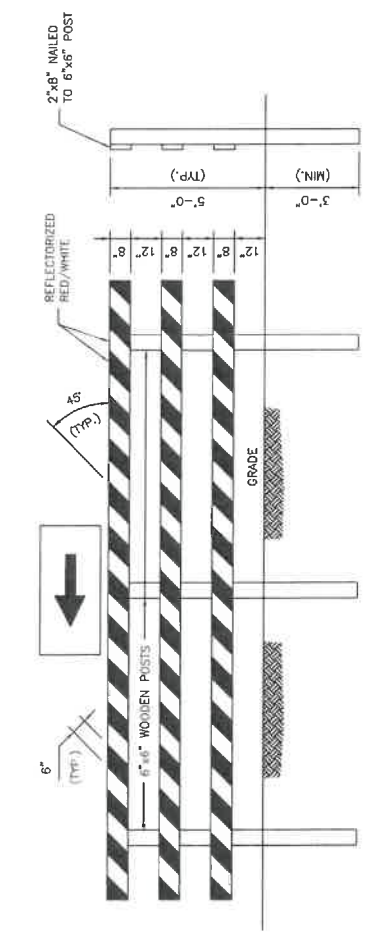
MCDONOUGH
CONSULTING ENGINEERS
1915 Sam Houston Ave., Suite 300
Houston, Texas 77057
(713) 975-9990
www.mcd.com



PROJECT TITLE:	CALIFORNIA AVENUE
LOCATION:	F.M. 517 TO 20th ST. EAST
DATE:	7/1/2023
SCALE:	N.T.S.
DRAWN BY:	CH
CHECKED BY:	AM
DATE:	9/14/2023
PROJECT NO.:	446 / 183

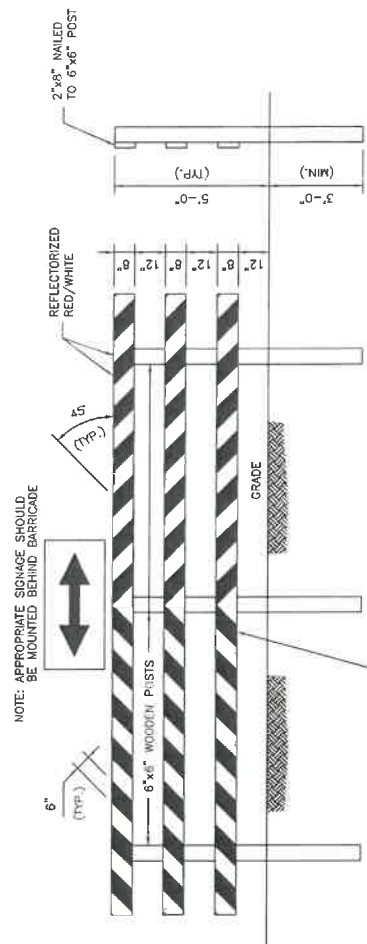


PLAN VIEW



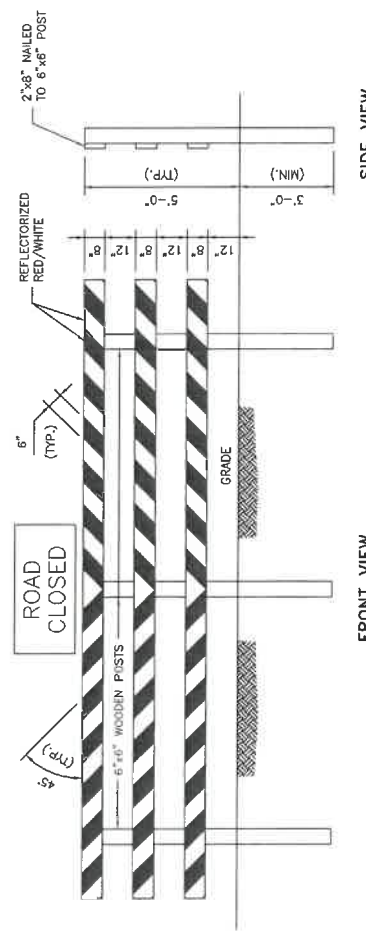
**FRONT VIEW
DETOUR ROUTE**

SIDE VIEW



**FRONT VIEW
T-INTERSECTION**

SIDE VIEW



**FRONT VIEW
ROAD CLOSED - NO OUTLET**

SIDE VIEW

APPLICATION: PERMANENT AND SEMI-PERMANENT CLOSURE OF ROADWAY OR ROADWAY TERMINATION

NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



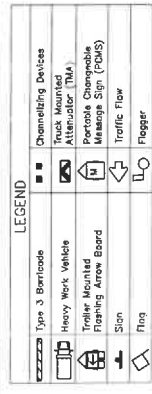
MCDONOUGH
 Civil Engineers & Surveyors
 1845 Schumacher Lane
 Houston, Texas 77056
 (713) 973-9999
 www.mcdonough.com



PROJECT TITLE:	CALIFORNIA AVE. FROM F.M. 517 TO 20th STREET
STAFFING:	STANDARD
SHEET NUMBER:	T3B
DATE:	8/18/17
DESIGNED BY:	JDZ
CHECKED BY:	BSH
SCALE:	1" = 2'-0"
SHEET NO.:	147 / 163

TRAFFIC CONTROL PLAN SECTION SHALL BE COMPLETED BY ENGINEER

ROADWAY	POSTED SPEED	TAPER LENGTH	CHANNELIZING DEVICES	SIGN SPACING	BUFFER SPACE
CALIFORNIA	30 MPH	180'	30'	60'	120'
					90'

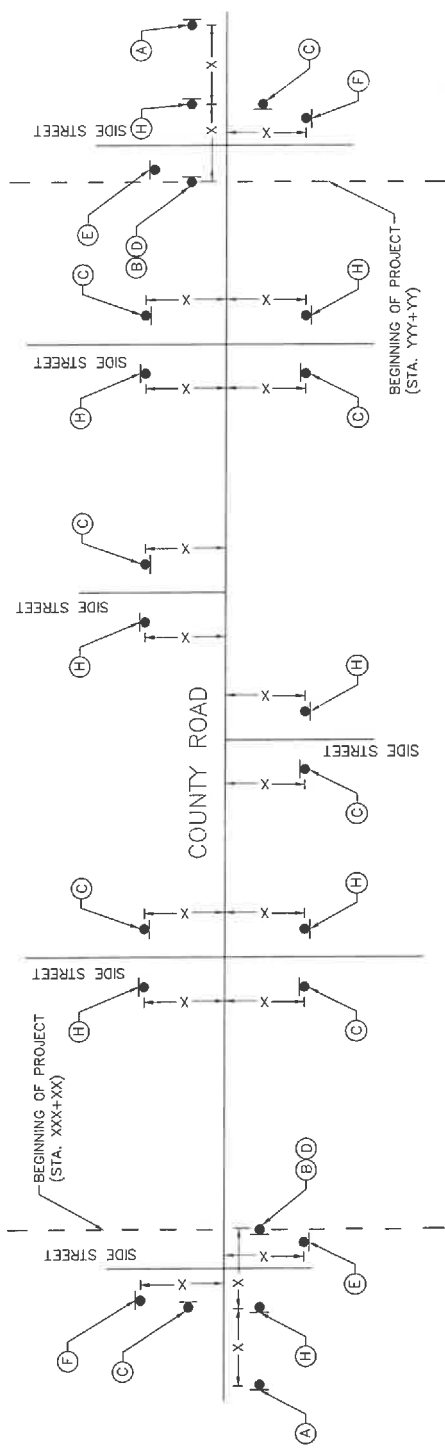


Posted Speed	Minimum Taper Length "L"	Minimum Spacing "S"	Minimum Spacing "S" On On-Side	Minimum Spacing "S" On Opposite	Minimum Spacing "S" On Tangent	Suggested Longitudinal Buffer Space "B"
30	$L = \frac{V^2}{20}$	10'	11'	13'	30'	90'
35		150'	185'	180'	30'	120'
40		205'	225'	245'	35'	160'
45		265'	285'	320'	40'	240'
50		350'	350'	400'	45'	300'
55		450'	485'	540'	50'	390'
60		550'	605'	660'	55'	400'
65		660'	680'	720'	60'	500'
70		770'	770'	840'	65'	550'
75		825'	825'	900'	70'	600'
80		900'	900'	960'	75'	660'

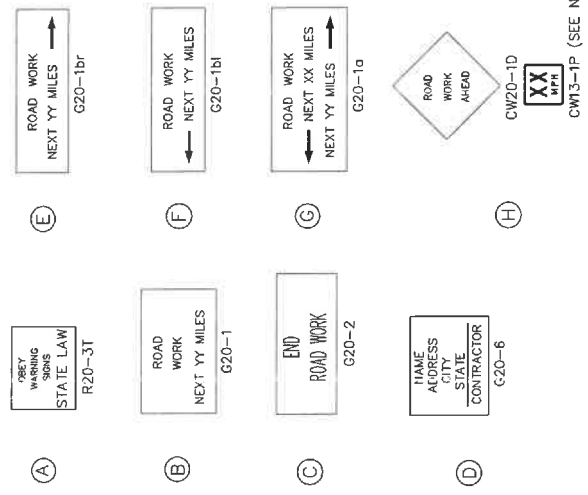
* Conventional Roads Only
 ** Taper lengths have been rounded off.
 L=Length of Taper(FT) W=Width or Offset(FT) S=Posted Speed(MPH)

GENERAL NOTES

- These sketches to show where signs should be placed with the triangles symbol are OPTIONAL.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol are OPTIONAL.
- Right-of-way line and not parked on the paved shoulder.
- Shadow Vehicle with a TMA should be used anytime it can be stationed 30 feet from the work zone. If work zone is less than 300 feet long, one shadow vehicle is required. If work zone is longer than 300 feet, one shadow vehicle is required for every 300 feet of work zone. Other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved shoulder to provide additional protection for the work zone.
- Contractor shall provide and install traffic control devices in conformance with part VI of Texas Manual on Uniform Traffic Control Devices (TMUTCD - Latest Edition).
- No work shall be blocked from 7am to 8am and 4pm to 6:30pm Monday thru Friday.
- When police officers/flaggers are assigned to a work zone, they shall be available to the project within 400 feet from a signalized intersection. The Contractor shall contact the City of Galveston and the Texas Local Maintenance Office Supervisor a minimum of 72 hours prior to commencing any work.



WORK ZONE SIGNS

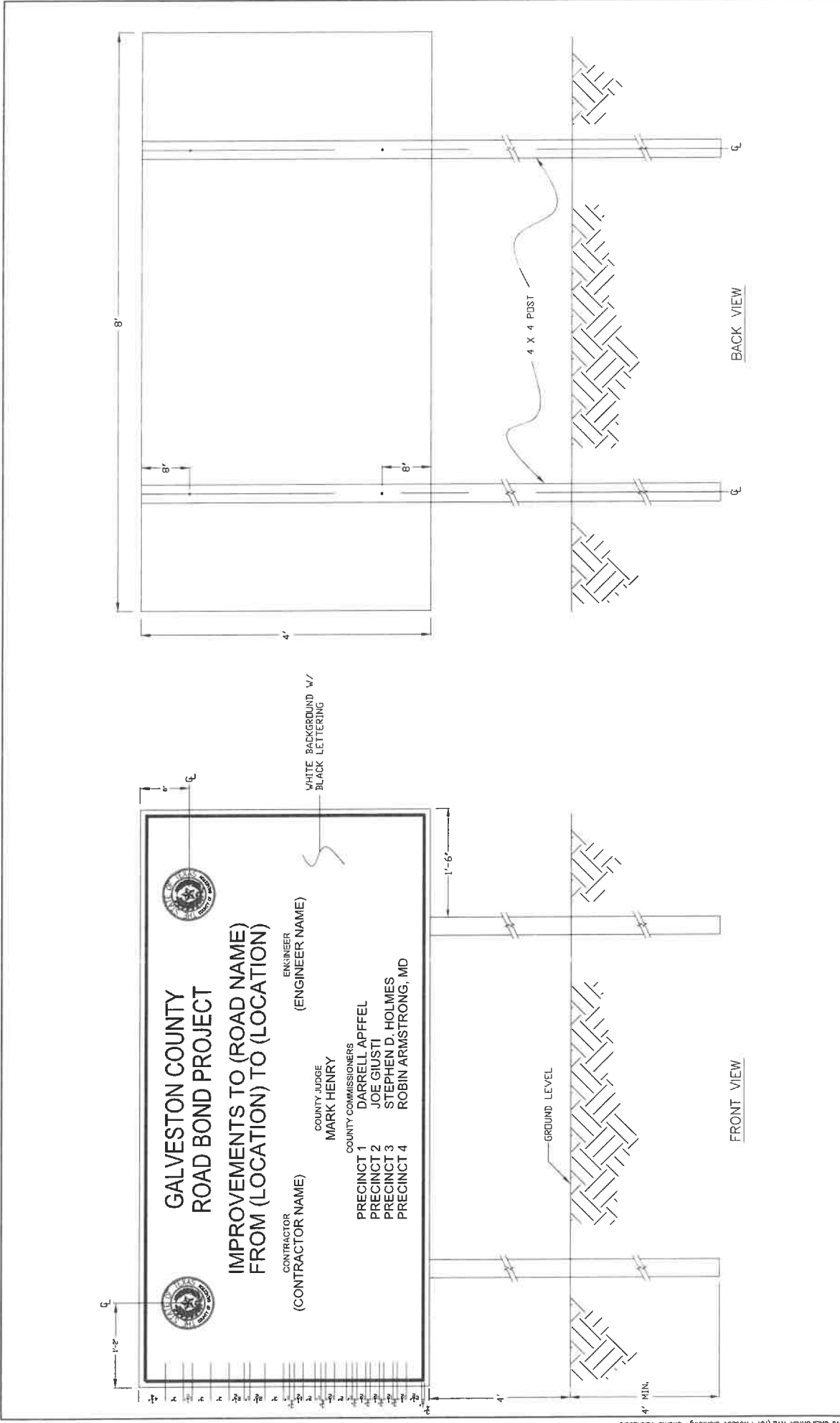


PROJECT TITLE:	CALIFORNIA AVE. FROM E.M. 517 TO 20th STREET	
DESIGN STANDARD:	TCP-PAS	
DATE:	8/9/19	
PROJECT APPROACH SIGNING:		
NO.	DATE	NAME

MDONOUGH
 1943 Farm Road, Suite 100, Houston, TX 77058
 (713) 275-2996
 mdonough.com

STATE OF TEXAS
 AUSTIN, TEXAS
 LICENSE NO. 132355
 EXPIRES 09/01/2023

GALVESTON COUNTY ENGINEERING DEPARTMENT

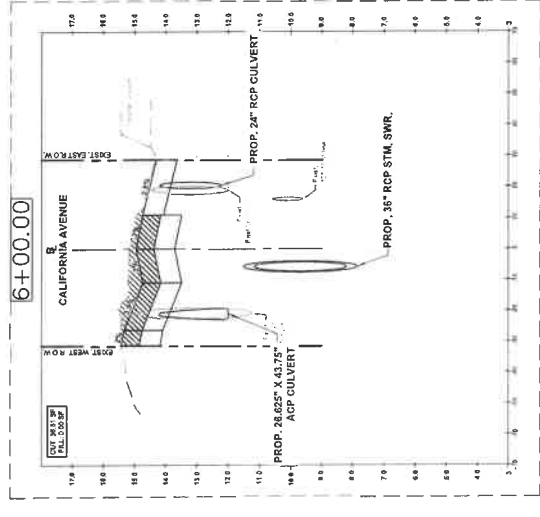
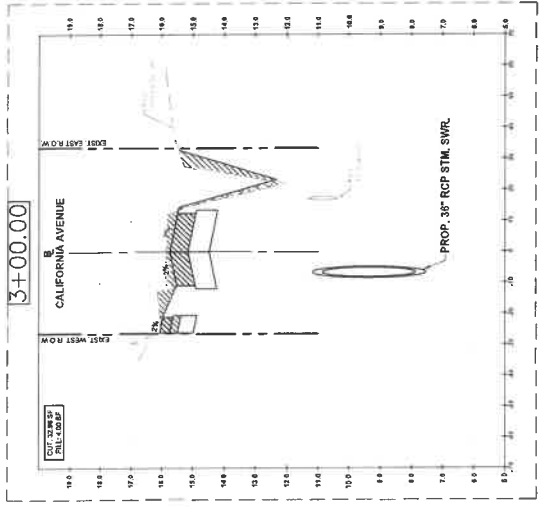
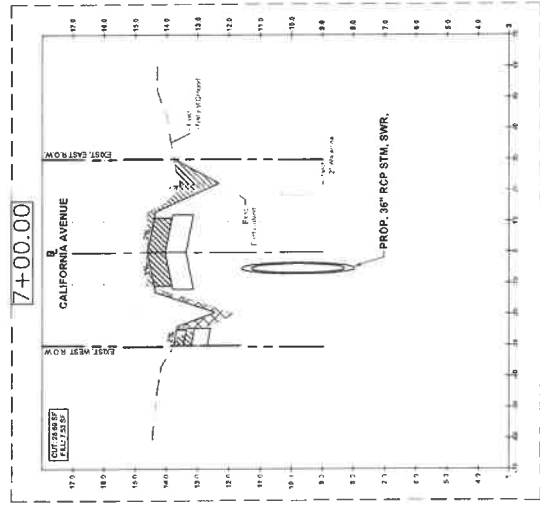
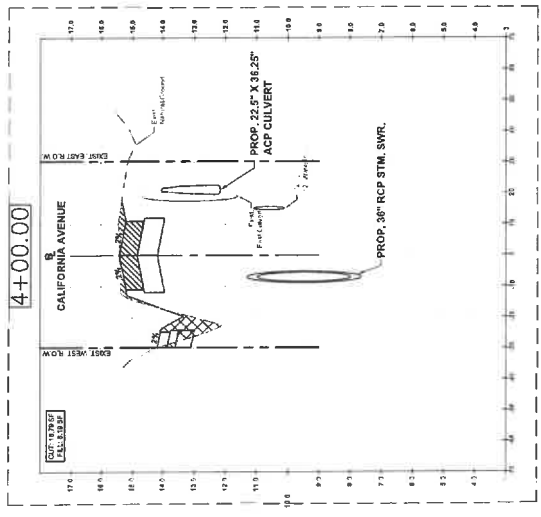
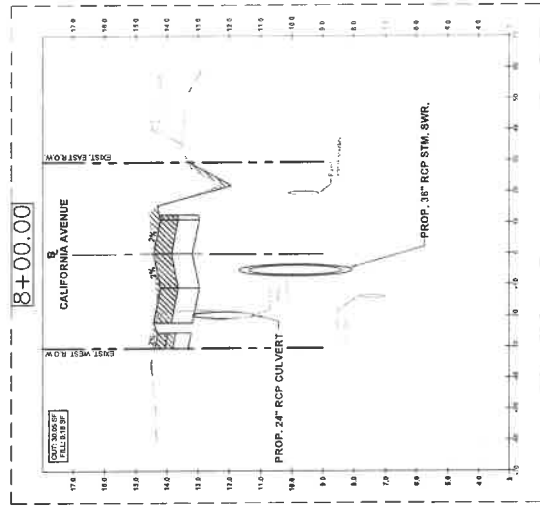
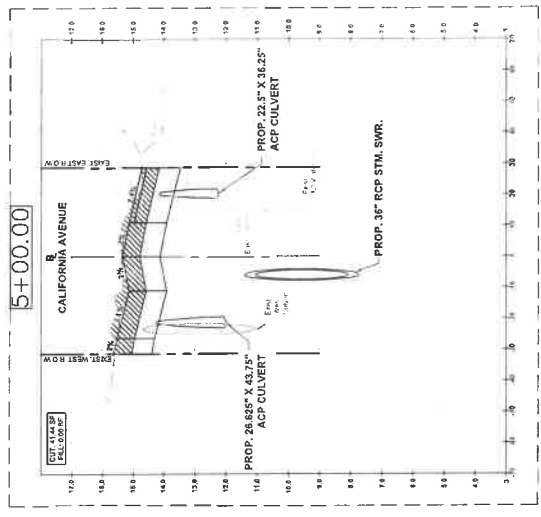
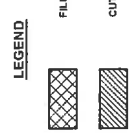
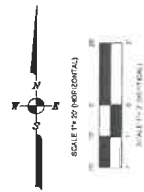


NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE		DATE: 8/6/2023
F.M. 517 TO 20th ST. EAST		SCALE: N.T.S.
PROJECT SIGN		151 / 153
DESIGNED BY: CH	CHECKED BY: AM	DATE: 8/6/2023

5025 Schwabacher Blvd Houston, Texas 77057 (713) 975-8999 www.medonough.com	1845 Spring Registration No. 10163860 Austin, TX License No. F-10163860

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



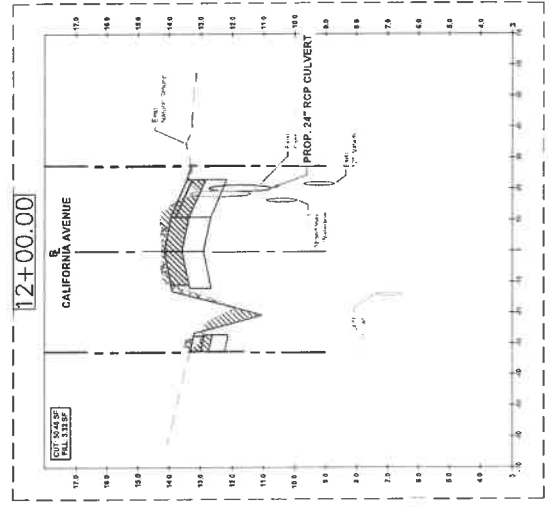
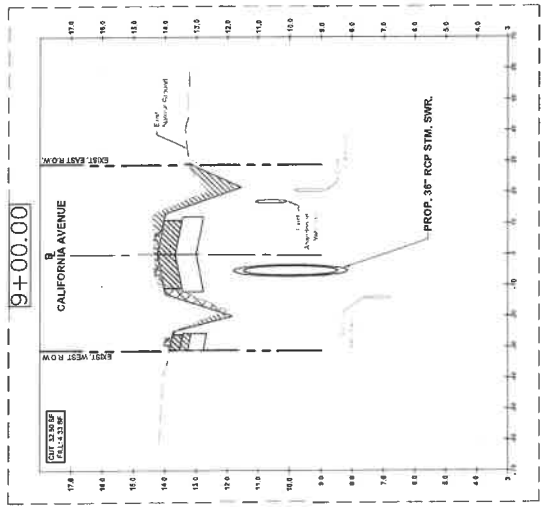
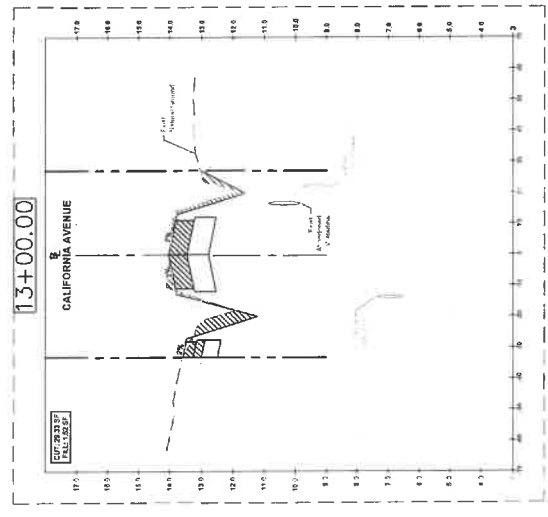
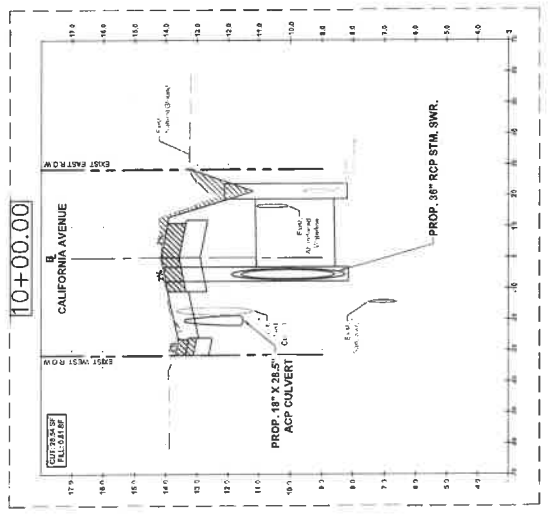
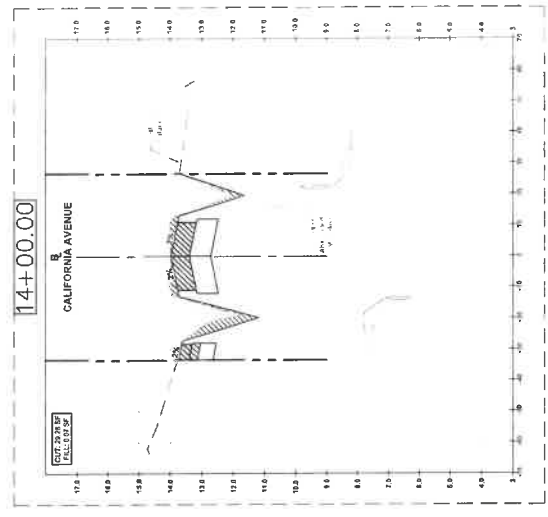
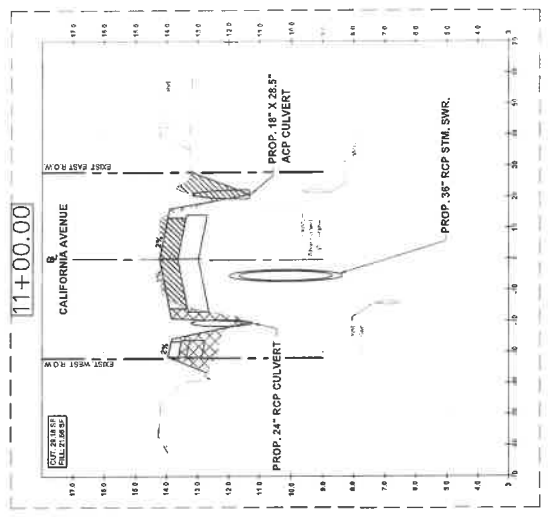
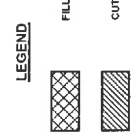
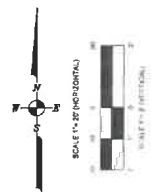
NO.	REVISIONS	DATE	NAME	PROJECT TITLE: CALIFORNIA AVENUE	
				F.M. 517 TO 20th ST. EAST	
				CROSS SECTION 3+00 TO 8+00	
				DATE: 7/1/2023	SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL
				9/1/2023	19 / 103



MCDONOUGH
 Civil & Mechanical
 1815 Sam Houston Ave. #1000
 Houston, Texas 77057
 (713) 971-9900
 www.mcdonough.com



GALVESTON COUNTY ENGINEERING DEPARTMENT

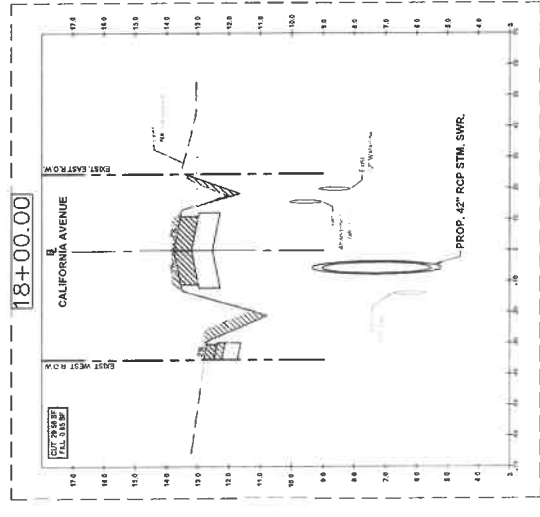
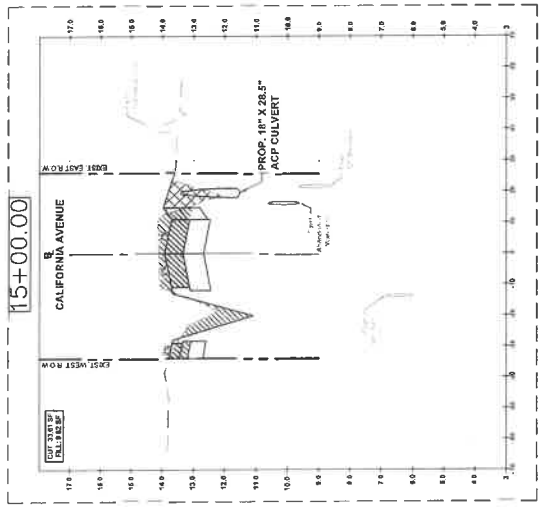
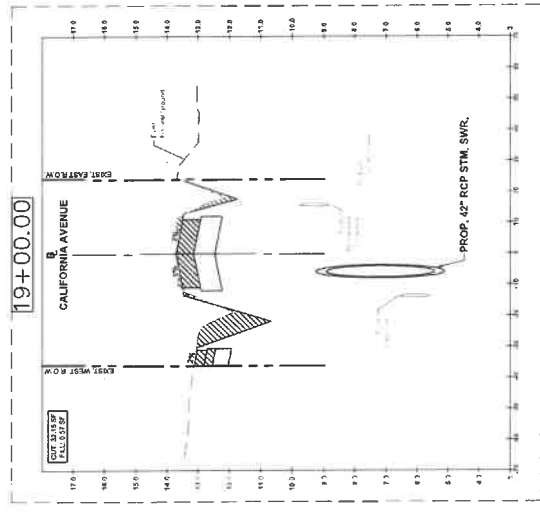
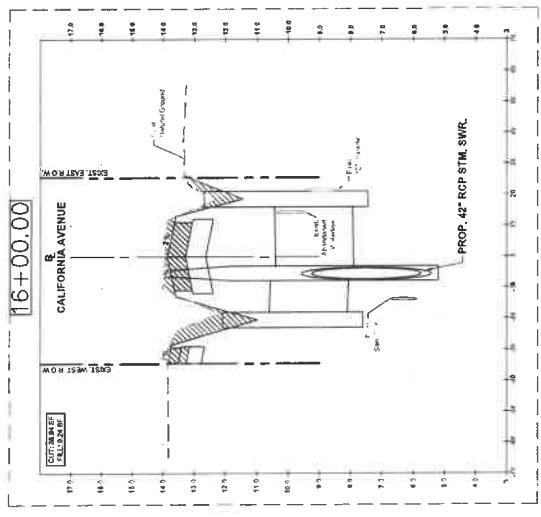
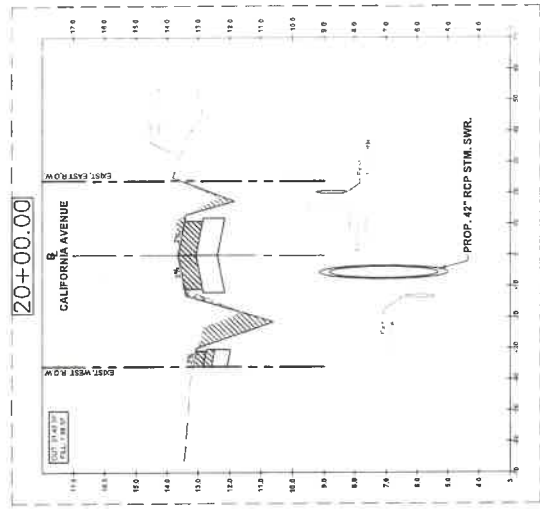
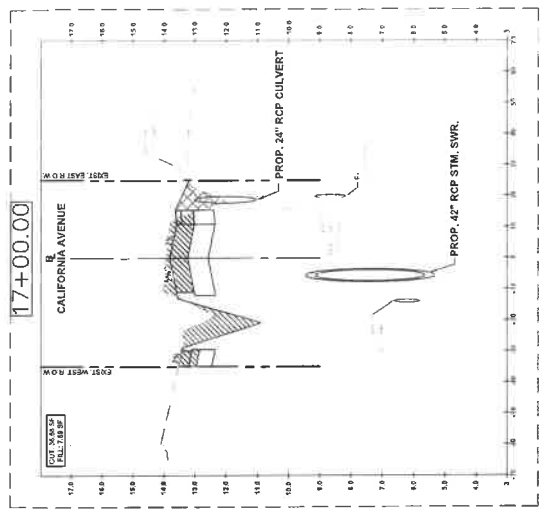
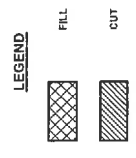
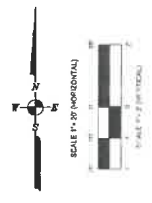


NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE		CS&S STANDARD
F.M. 517 TO 20th ST. EAST		
CROSS SECTION 9+00 TO 14+00		
PROJECT NO.: CH	DATE: 7/7/2023	SCALE: 1"=2'-0"
PROJECT: 10-11	DATE: 9/12/2023	SCALE: 1"=2'-0"
PROJECT: 10-11	DATE: 9/12/2023	SCALE: 1"=2'-0"

MDONOUGH	STATE OF TEXAS
1825 Schumaker Lane Houston, TX 77057 713.975.9999 www.mdonough.com	REGISTERED PROFESSIONAL ENGINEER No. 12345 EXPIRES 12/31/2024

GALVESTON COUNTY ENGINEERING DEPARTMENT

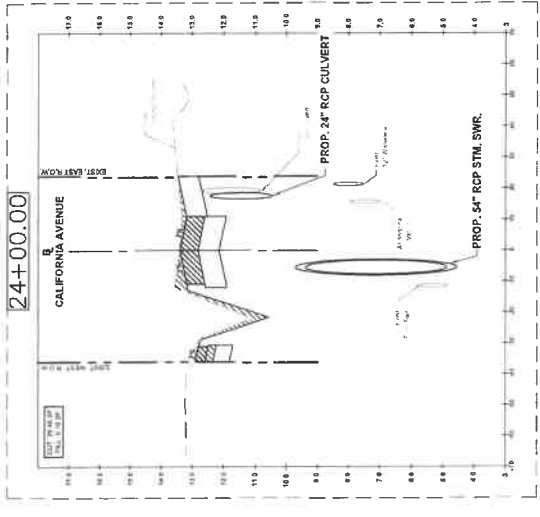
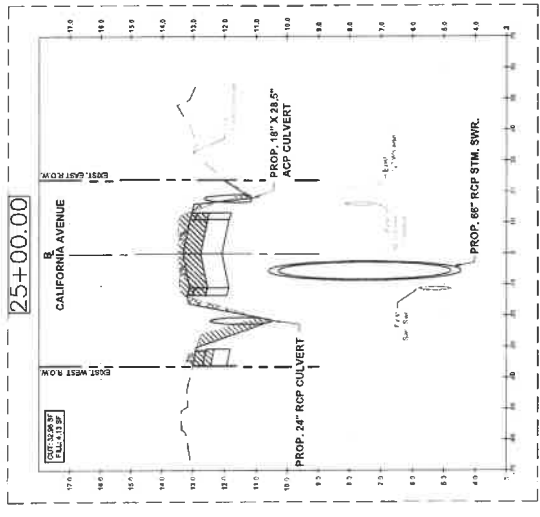
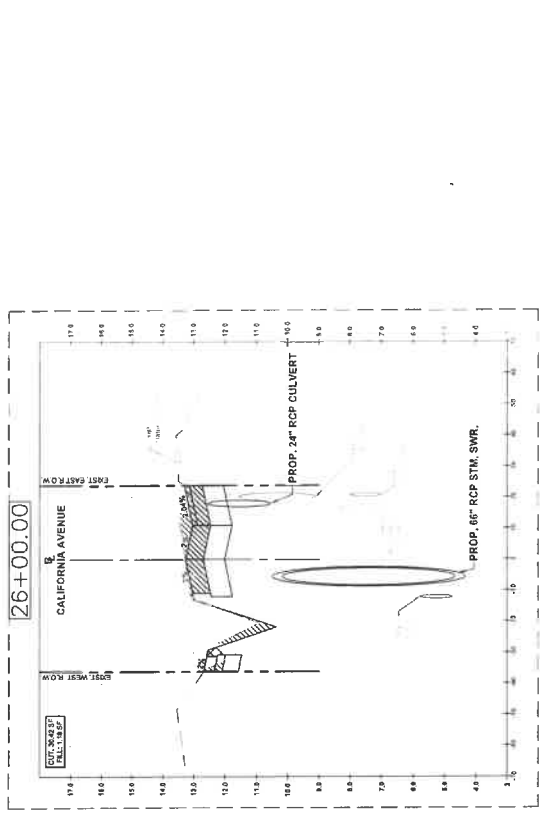
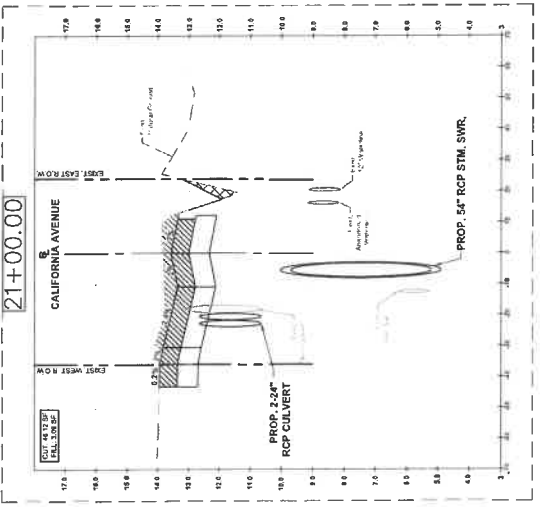
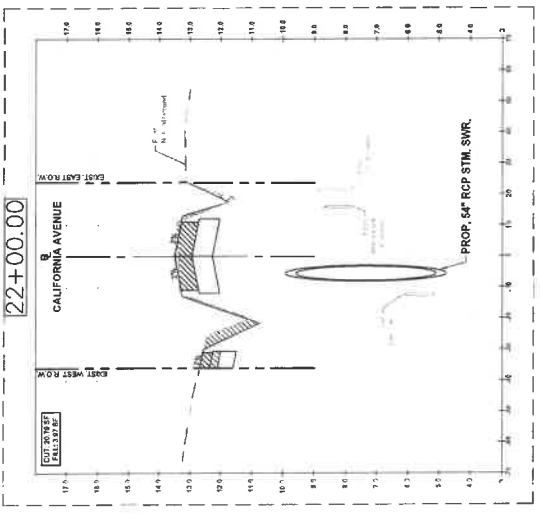
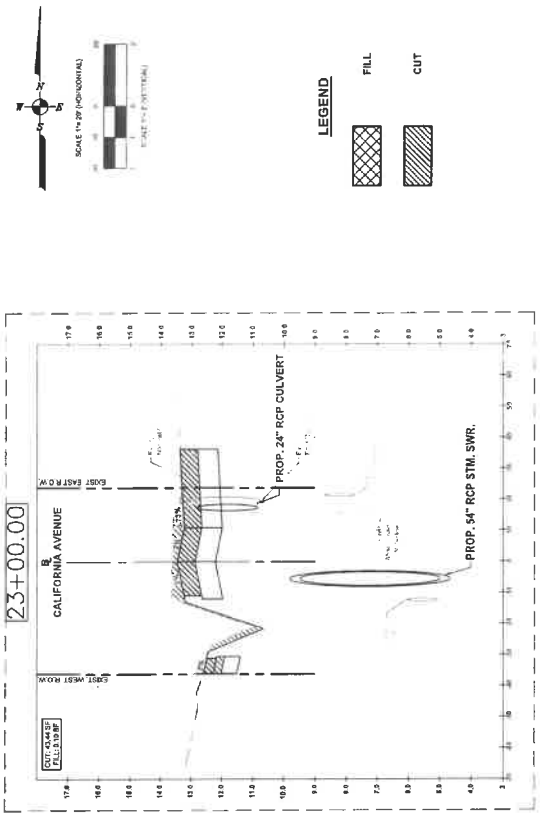


NO.	REVISIONS	DATE	NAME	PROJECT TITLE	
				CALIFORNIA AVENUE	
				CROSS SECTION 15+00 TO 20+00	
				DATE:	1/17/2023
				SCALE:	1"=25' HORIZONTAL 1"=2' VERTICAL
				SHEET NO.:	154 / 163

MCDONOUGH
INCORPORATED
 1955 Elm Registration No. 0101960
 5555 Southwest Registration No. 5-0101960
 Houston, Texas 77057

STATE OF TEXAS
 PROFESSIONAL ENGINEER
 123233
 AUSTIN T. MCGINN
 9/6/2023

GALVESTON COUNTY ENGINEERING DEPARTMENT



SCALE 1" = 20' (HORIZONTAL)
1" = 4' (VERTICAL)

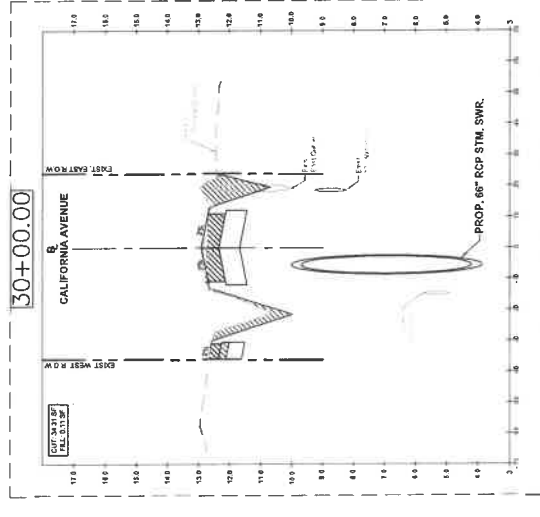
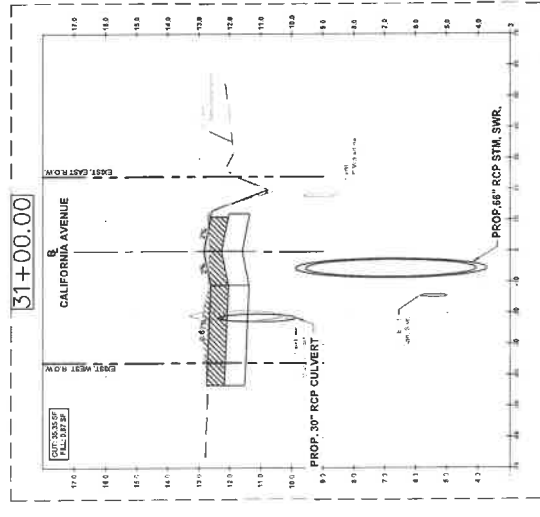
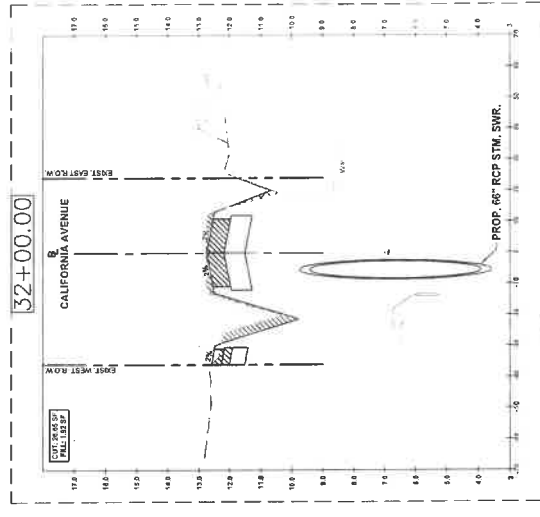
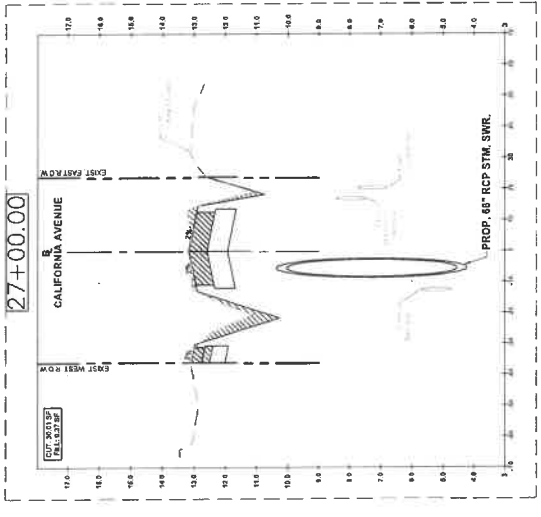
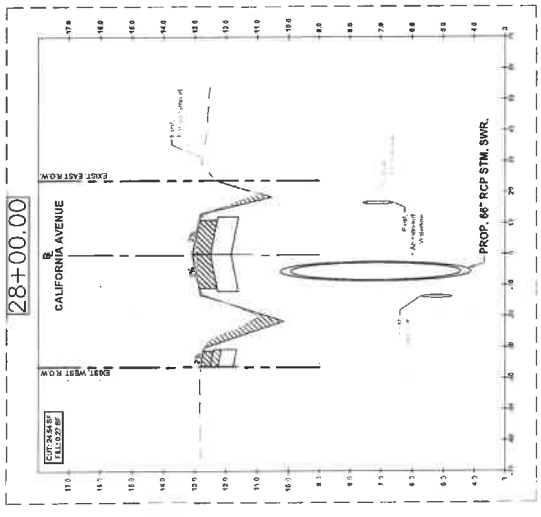
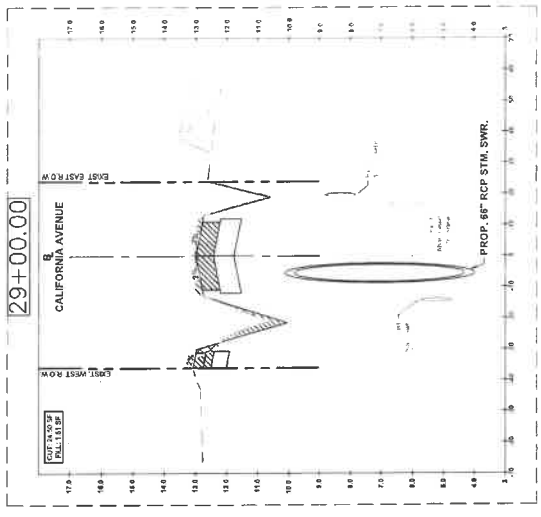
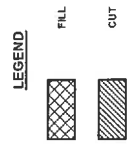
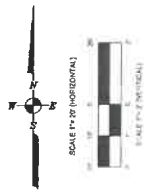
LEGEND

FILL

CUT

NO.	REVISIONS	DATE	NAME

		GALVESTON COUNTY ENGINEERING DEPARTMENT	
		McDONOUGH ENGINEERING 18055 S. Highway 101, Suite 100 Houston, Texas 77058 (713) 775-9999 www.mcdonough.com	
		PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST CROSS SECTION 21+00 TO 26+00 SHEET NO.: 777023 DATE: 9/2/2023 DRAWN BY: CH CHECKED BY: [Signature] AM	
		1"=20' HORIZONTAL	1"=4' VERTICAL
		155	163

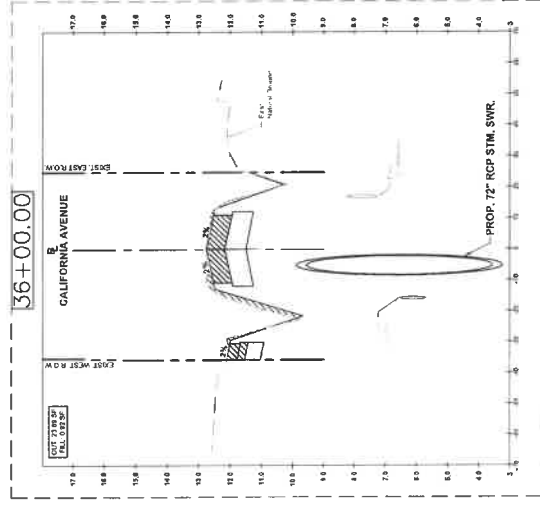
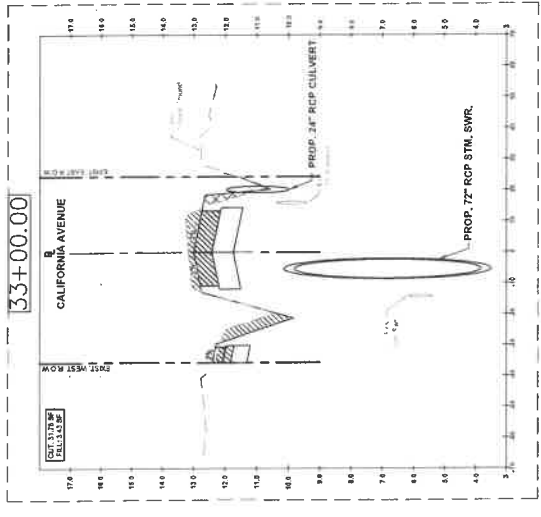
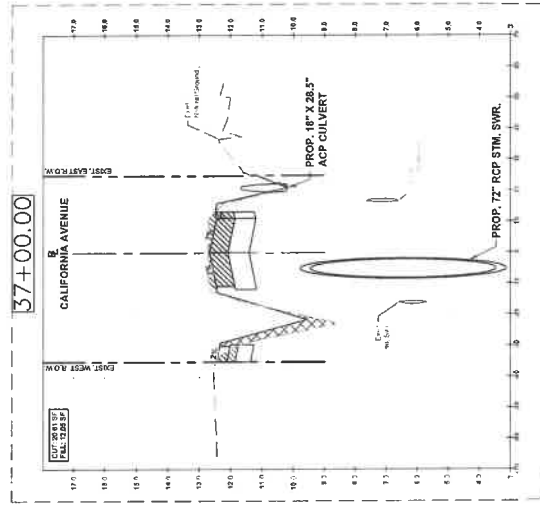
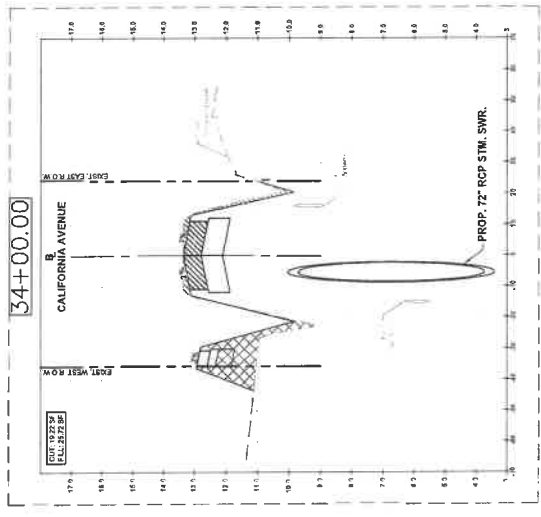
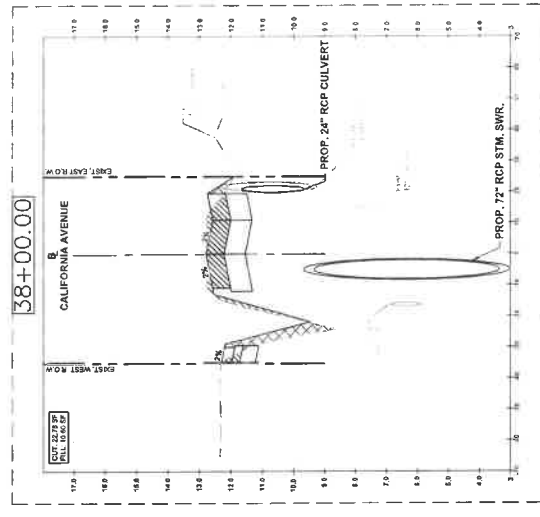
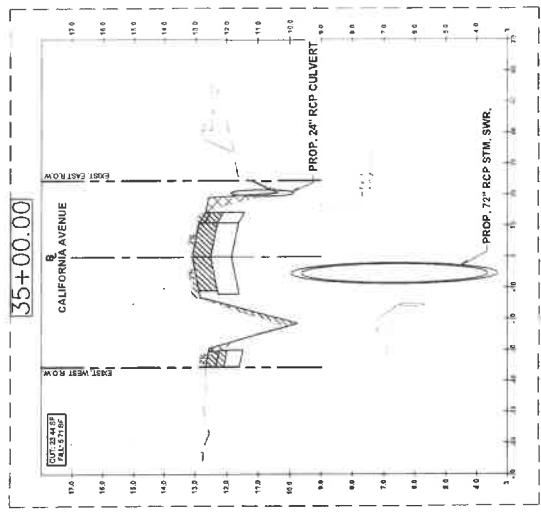
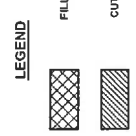
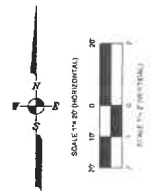


NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

MCDONOUGH
 1705 Elm Registration No. 01010300
 6055 Cal. Hwy. 101
 Houston, Texas 77057
 www.mcdonough.com

PROJECT TITLE:	CALIFORNIA AVENUE
SHEET DESCRIPTION:	F.M. 517 TO 20th ST. EAST
DATE:	7/7/2013
CROSS SECTION:	CROSS SECTION 27+00 TO 32+00
SCALE:	1"=20' HORIZONTAL 1"=2' VERTICAL
PROJECT NO.:	186 / 183



NO.	REVISIONS	DATE	NAME

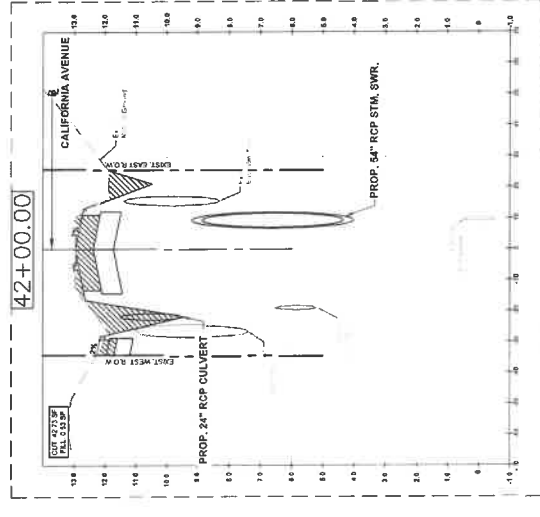
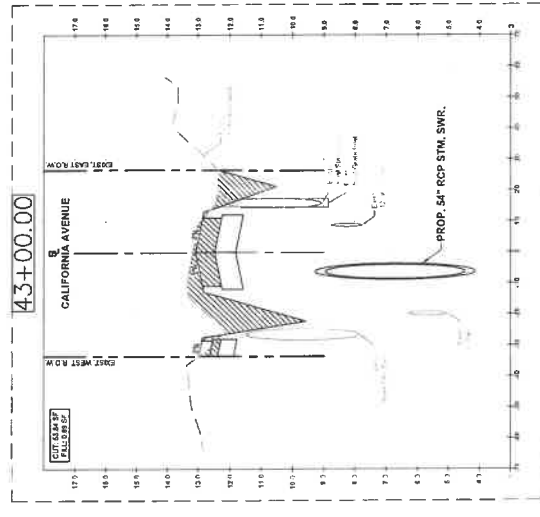
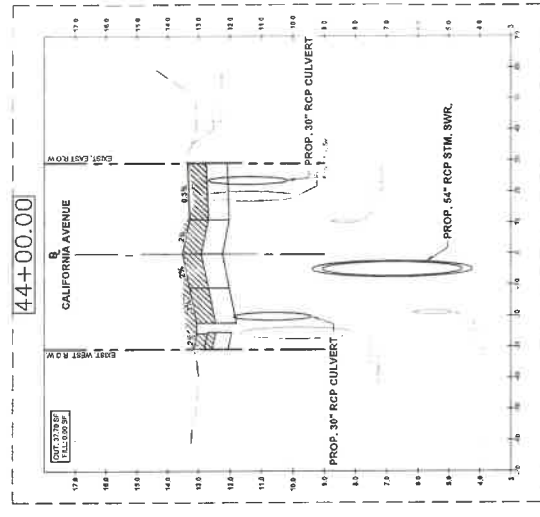
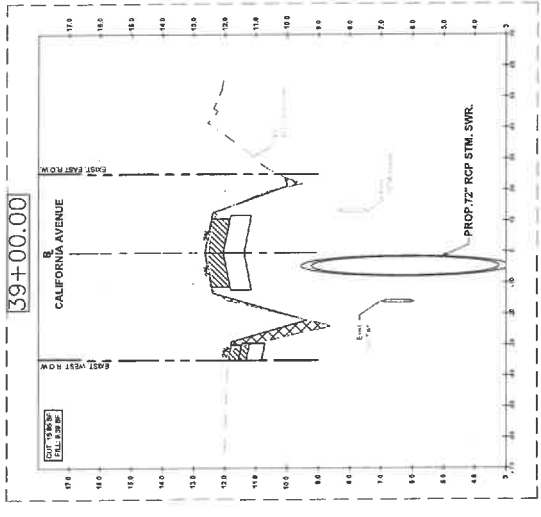
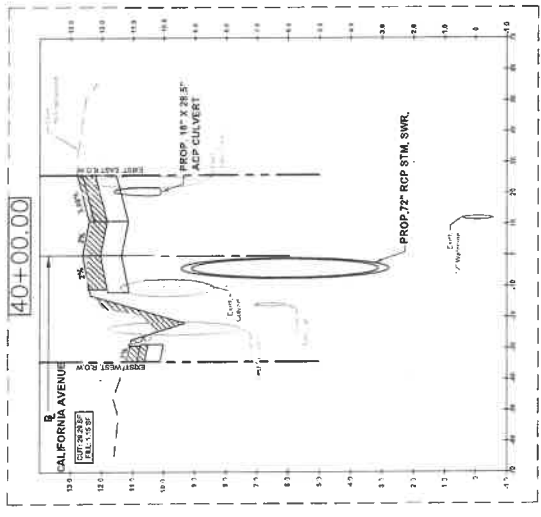
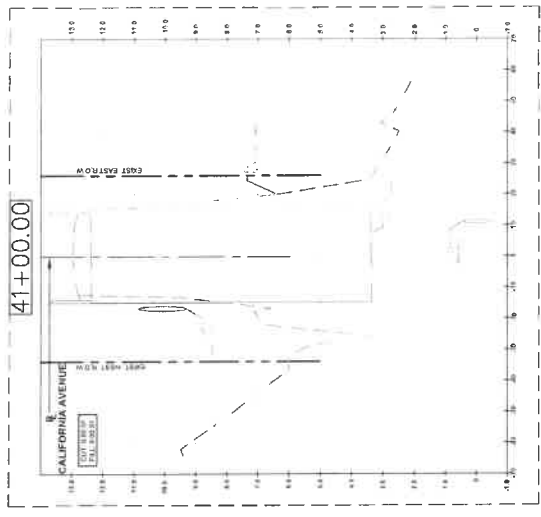
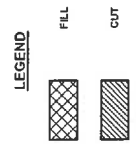
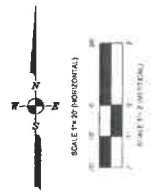
GALVESTON COUNTY ENGINEERING DEPARTMENT



McDONOUGH
 ENGINEERS
 17845 Farmington No. 01155990
 SCS, Suite 100, Houston, Texas 77057
 www.mcdonough.com



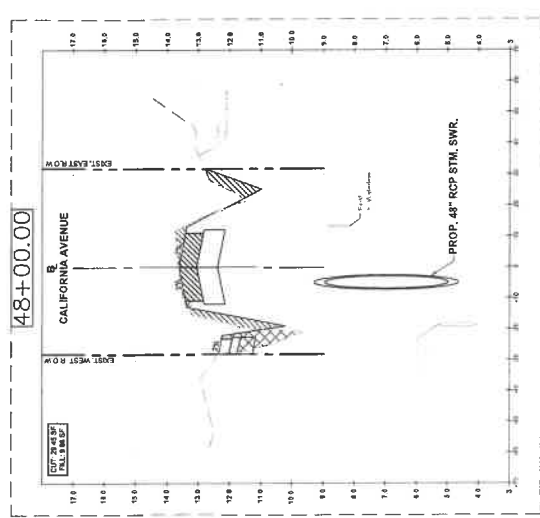
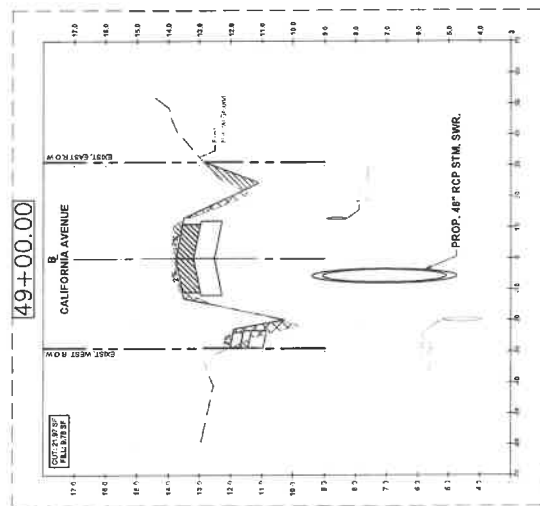
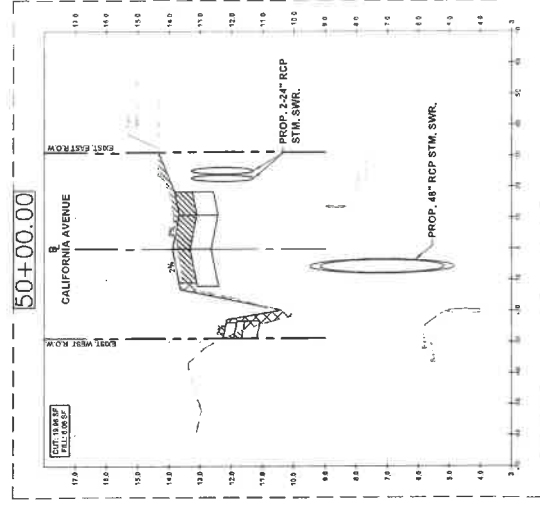
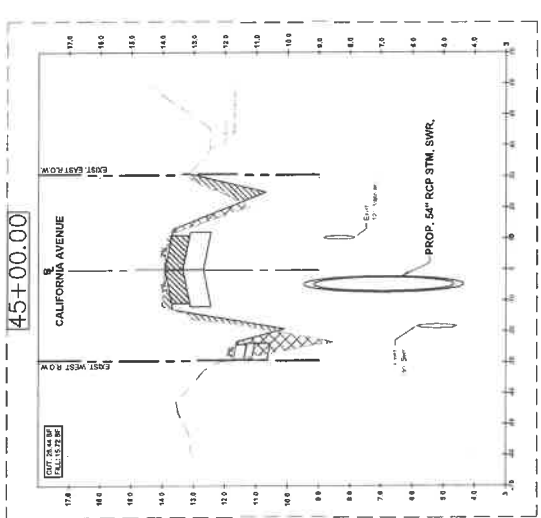
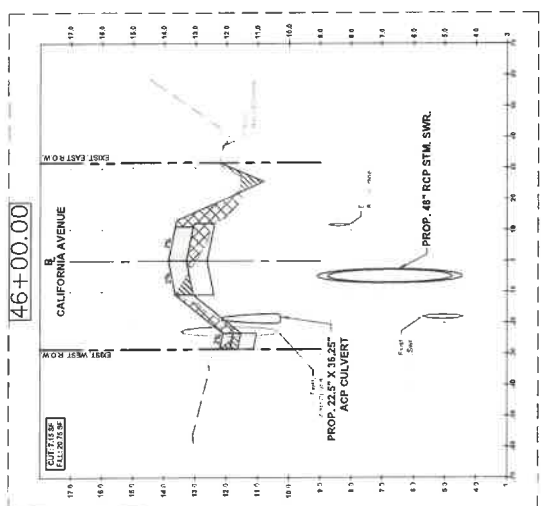
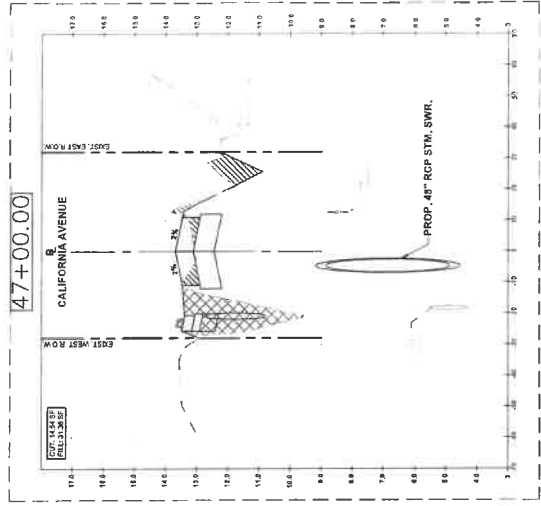
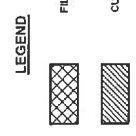
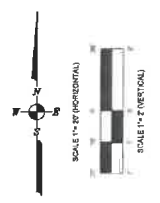
PROJECT TITLE: CALIFORNIA AVENUE	
F.M. 517 TO 20th ST. EAST	
CROSS SECTION 33+00 TO 38+00	
DATE: 7/7/2013	DRAWN BY: J. McLaughlin
CHECKED BY: J. McLaughlin	SCALE: 1"=20' HORIZONTAL, 1"=2' VERTICAL
SHEET NO.: 137	TOTAL SHEETS: 148



NO.	REVISIONS	DATE	NAME

		PROJECT TITLE: CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST CROSS SECTION 39+00 TO 44+00
CLIENT: GALVESTON COUNTY PROJECT NO.: 18033000 DATE: 7/11/2023	DESIGNER: CH CHECKER: AM DATE: 9/12/2023	SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL SHEET NO.: 188 / 183

		GALVESTON COUNTY ENGINEERING DEPARTMENT
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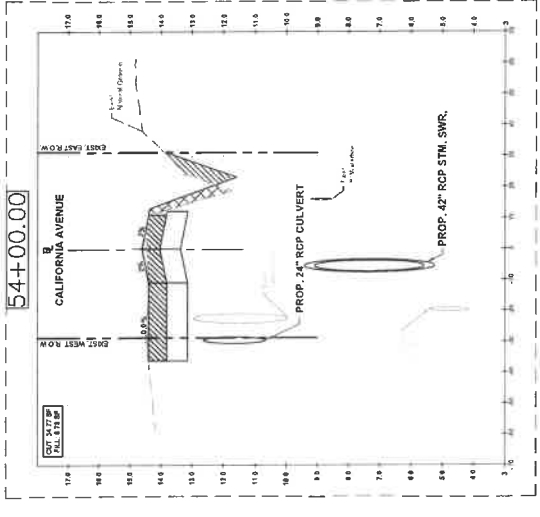
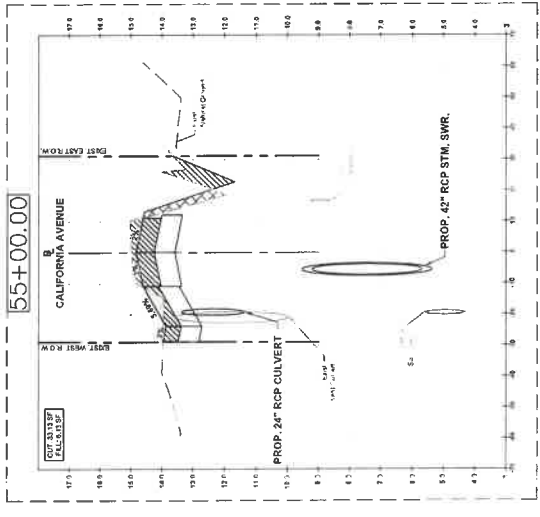
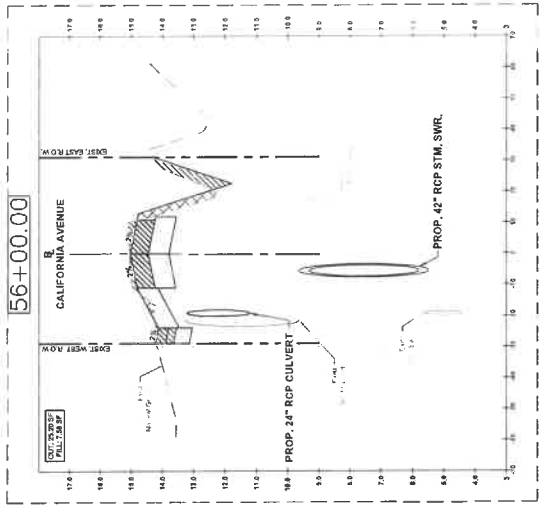
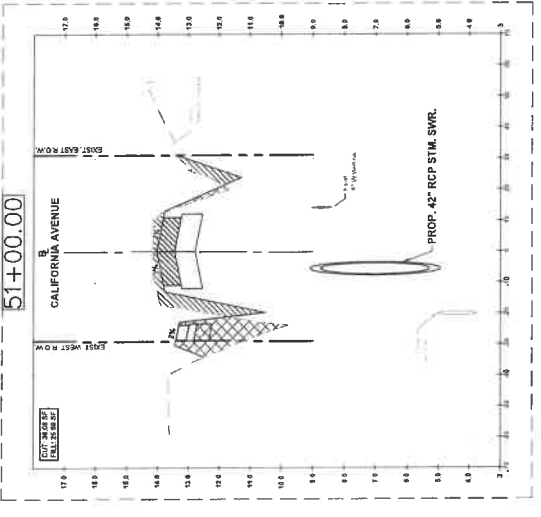
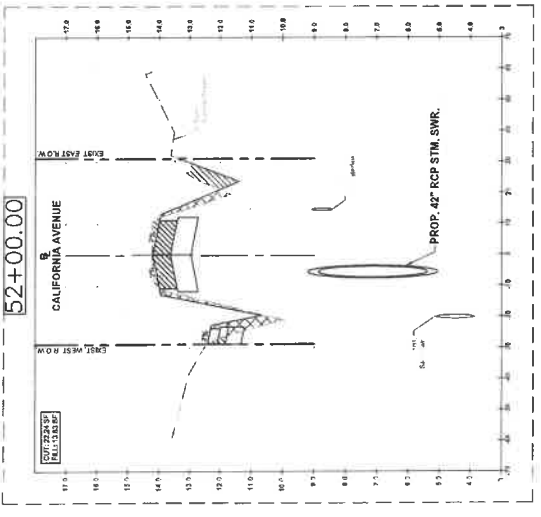
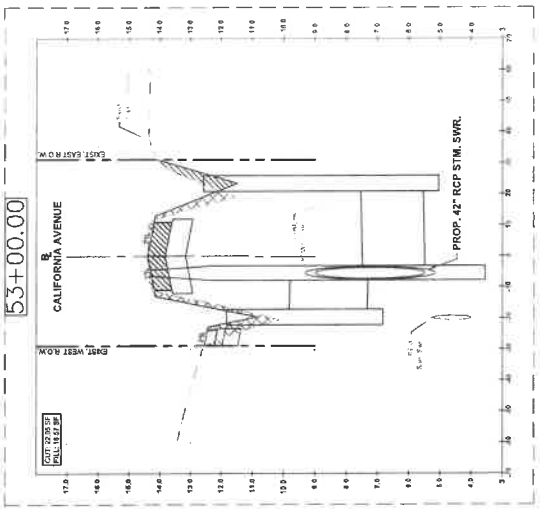
NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

MEDONOUGH
 1815 Lone Star Registration No. 01010000
 6235 Shawnee Blvd., Suite 100
 Houston, Texas 77057
 www.medonough.com



PROJECT TITLE: CALIFORNIA AVENUE	
F.M. 577 TO 20th ST. EAST	
CROSS SECTION 45+00 TO 50+00	CSD STANDARD
DATE: 7/7/2023	SHEET NO: 183
SCALE: 1"=20' HORIZONTAL	1"=2' VERTICAL



SCALE 1"=20' (HORIZONTAL)

SCALE 1"=2' (VERTICAL)

LEGEND

FILL

CUT

NO.	REVISIONS	DATE	NAME

PROJECT TITLE: CALIFORNIA AVENUE
 F.M. 517 TO 20th ST. EAST
 CROSS SECTION 51+00 TO 56+00

DATE: 1/17/2023
 SHEET NO.: 180 / 183

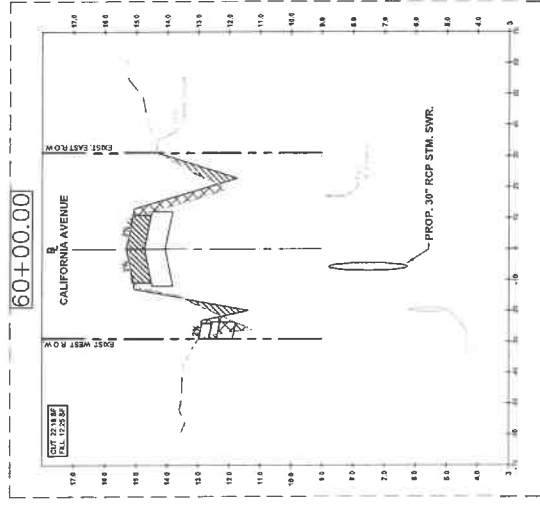
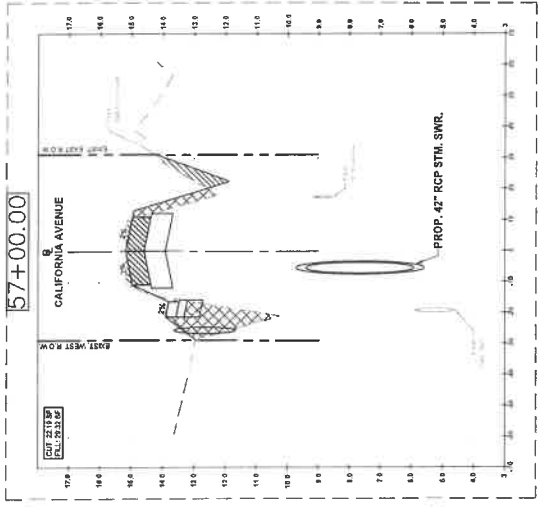
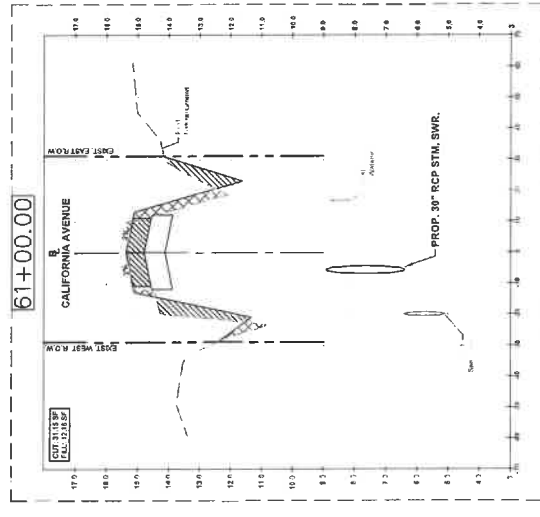
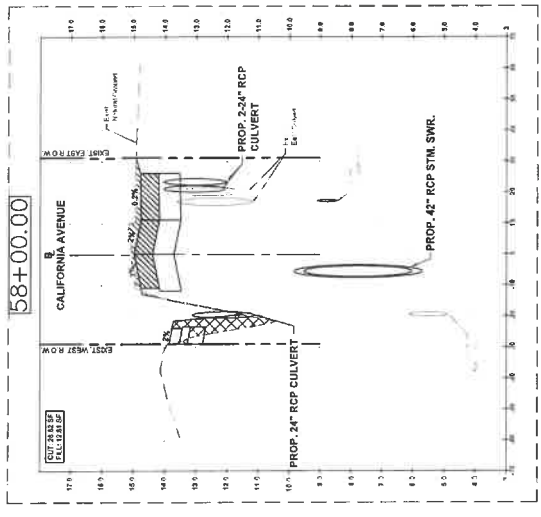
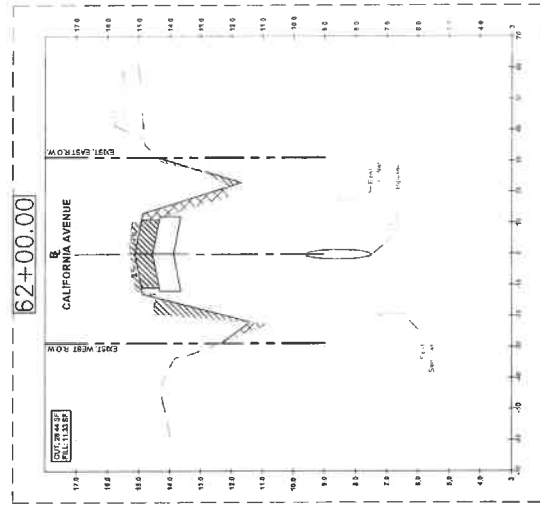
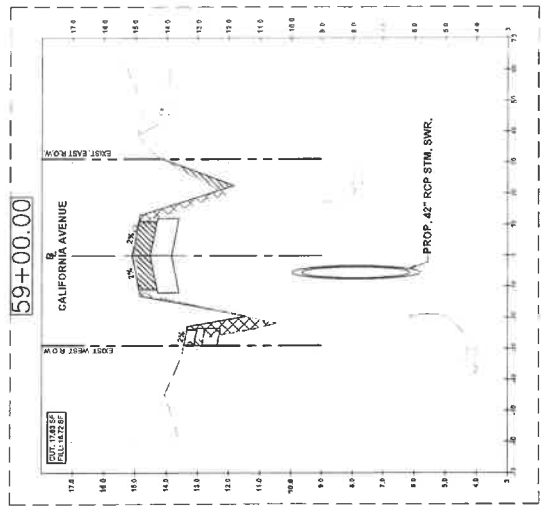
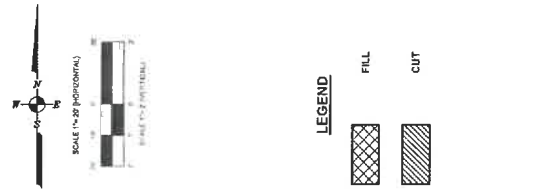
PROWAT: CH
 DUCT: AM
 SCALE: 1"=20' HORIZONTAL 1"=2' VERTICAL

9/12/2023

MCDONOUGH
 3045 Glen Rose Road, Suite 100
 Houston, Texas 77057
 (713) 965-6699
 www.mcdonough.com

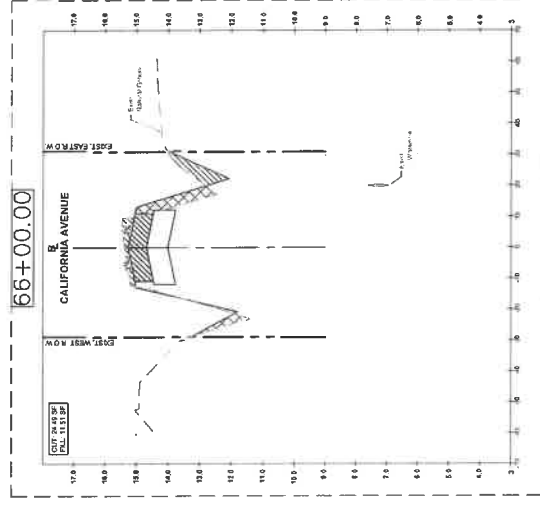
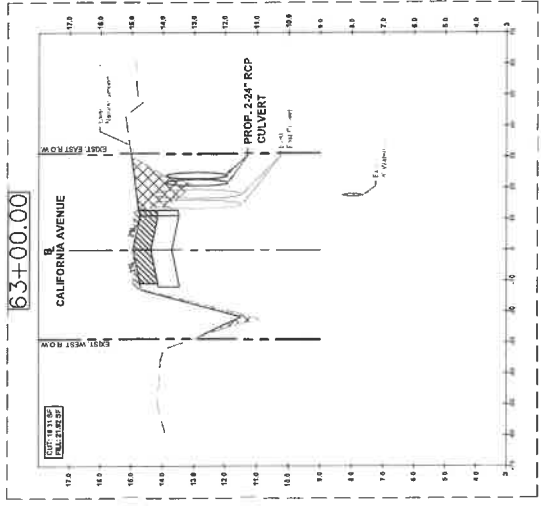
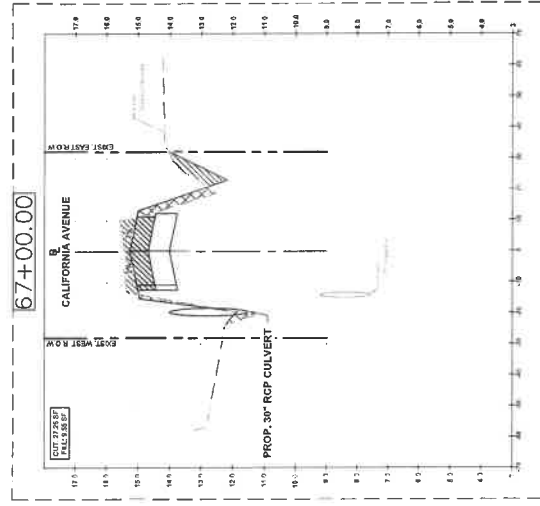
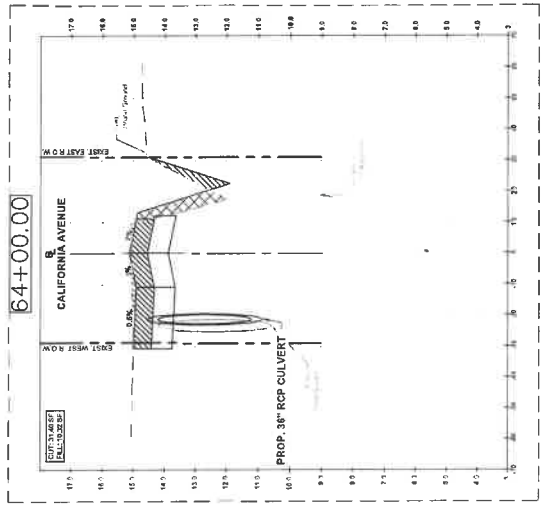
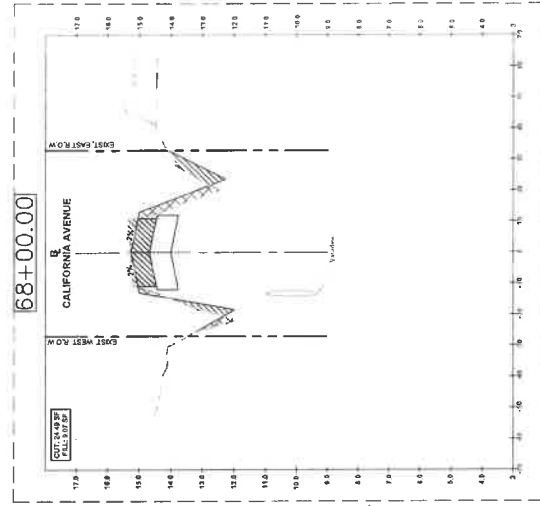
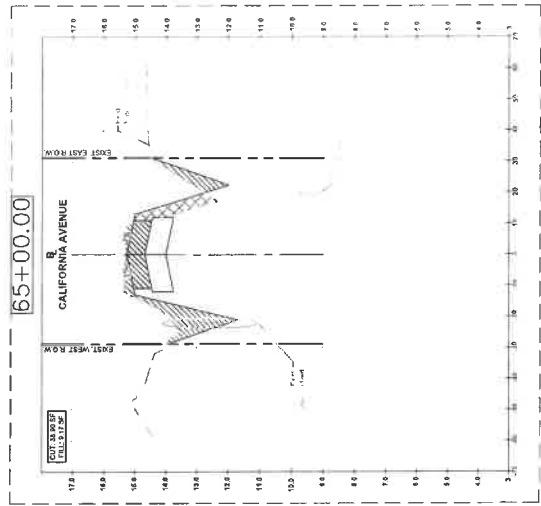
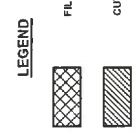
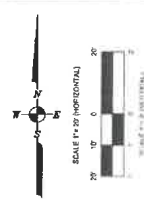
STATE OF TEXAS
 ENGINEERING EXAMINER
 AUSTIN T. MCDONOUGH
 LICENSE NO. 13353

**GALVESTON COUNTY
 ENGINEERING DEPARTMENT**



NO.	REVISIONS	DATE	NAME

		GALVESTON COUNTY ENGINEERING DEPARTMENT	
		PROJECT TITLE CALIFORNIA AVENUE F.M. 517 TO 20th ST. EAST CROSS SECTION 57+00 TO 62+00	
222, Shimmering Way Houston, TX 77057 (713) 915-9596 mfdonough.com		SHEET NO.: CH PROJECT NO.: 177923 DATE: 9/16/2023 DRAWN BY: [Signature] CHECKED BY: [Signature]	
SCALE: 1"=20' (HORIZONTAL) SCALE: 1"=2' (VERTICAL)		CROSS SECTION STANDARD DATE: 1/7/92 SHEET NO.: 181 / 163	



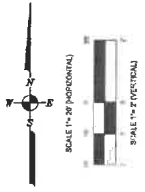
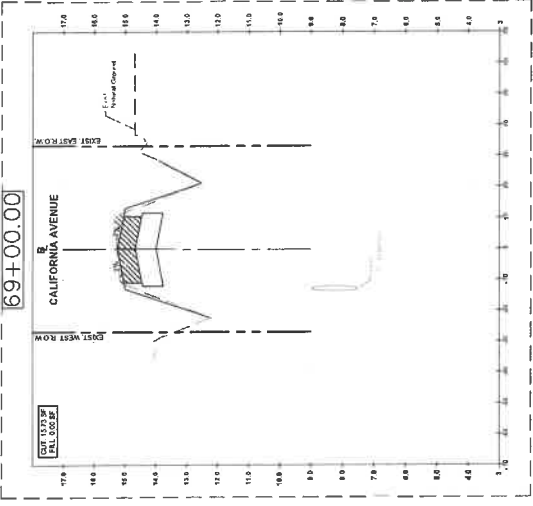
NO.	REVISIONS	DATE	NAME

GALVESTON COUNTY ENGINEERING DEPARTMENT

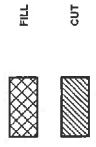


McDONOUGH
 1005 S. Houston Ave.
 Houston, TX 77059
 (713) 975-9990
 www.mcdonough.com

PROJECT TITLE:	CALIFORNIA AVENUE
CROSS SECTION:	F.M. 517 TO 20th ST. EAST
CROSS SECTION:	CROSS SECTION 63+00 TO 68+00
DATE:	11/20/23
SCALE:	1"=20' HORIZONTAL 1"=2' VERTICAL
SHEET NO.:	162 / 163



LEGEND



NO.	REVISIONS	DATE	NAME

**GALVESTON COUNTY
ENGINEERING DEPARTMENT**



MCDONOUGH
 CIVIL ENGINEERING
 1945 Elm Ridge Road, #1010
 2825 Calhoun Street
 Houston, Texas 77057
 (713) 867-8888
 www.mcdonough.com



9/2/2023

PROJECT TITLE: CALIFORNIA AVENUE		CSD STANDARD
F.M. 517 TO 20th ST. EAST		
CROSS SECTION 89+00		
DRAWN BY: CH	CHECKED BY: AM	TITLE: 7772023
DATE: 9/2/2023		SHEET NO.: 188 / 183