

**CITY OF EL PASO, TEXAS
AGENDA ITEM
DEPARTMENT HEAD'S SUMMARY FORM**

AGENDA DATE: June 7, 2022

CONTACT PERSON(S) NAME AND PHONE NUMBER: Randy Garcia, 915-212-7005

DISTRICT(S) AFFECTED: 6

STRATEGIC GOAL: 7 – Enhance and Sustain El Paso's Infrastructure Network

SUBGOAL: 7.3 – Enhance a regional comprehensive transportation system

SUBJECT:

Authorize the City Manager to sign a Traffic Signal Agreement between the City of El Paso and Franklin Property Pros. whereby the City agrees to maintain the traffic signal improvements installed by Franklin Property Pros., located at the intersection of State Highway 659 (N. Zaragoza Rd) and Henry Brennan Dr.

BACKGROUND / DISCUSSION:

Franklin Property Pros. is developing Palo Verde Business Center to the west of N. Zaragoza Rd. at Henry Brennan Dr. The design and construction of the additional components to the traffic signal at this location will allow for the safe flow of vehicle and pedestrian traffic.

PRIOR COUNCIL ACTION:

- None

AMOUNT AND SOURCE OF FUNDING:

HAVE ALL AFFECTED DEPARTMENTS BEEN NOTIFIED? ☒ YES ☐ NO

PRIMARY DEPARTMENT: Streets and Maintenance

SECONDARY DEPARTMENT: N/A

*****REQUIRED AUTHORIZATION*****

DEPARTMENT HEAD:



5-26-22

(If Department Head Summary Form is initiated by Purchasing, client department should sign also)

RESOLUTION

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF EL PASO

That the City Manager be authorized to sign a Traffic Signal Agreement between the City of El Paso ("City") and Franklin Property Pros., whereby the City agrees to maintain the traffic signal improvements installed by Franklin Property Pros., located at the intersection of State Highway 659 (N. Zaragoza Rd) and Henry Brennan Dr.

Approved this _____ day of _____, 2022.

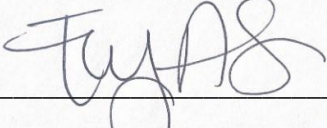
The City of El Paso:

Oscar Leeser, Mayor City of El Paso

ATTEST:


Laura D. Prine, City Clerk

APPROVED AS TO FORM:

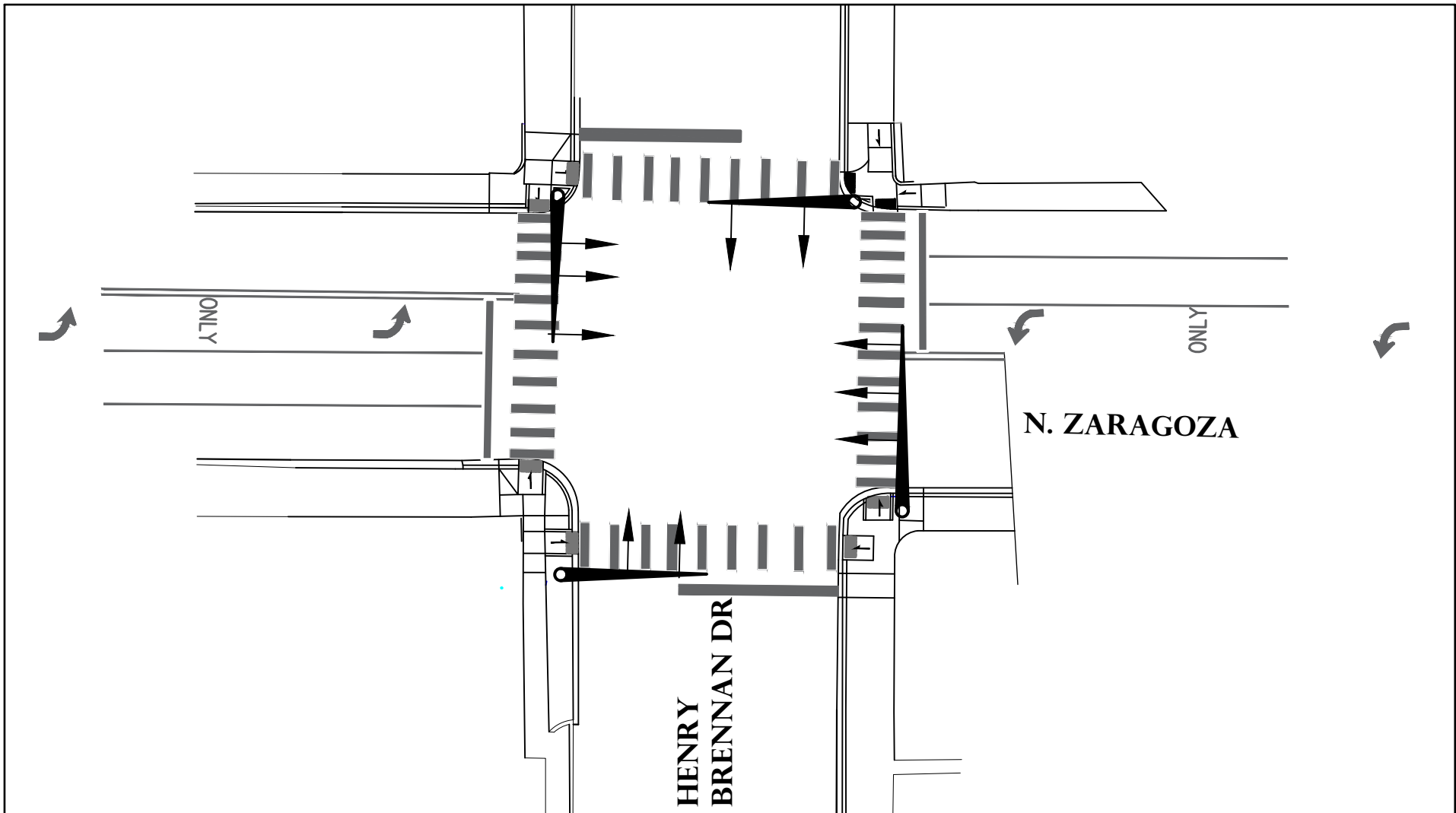


EVY A. Sotelo, Assistant City Attorney

APPROVED AS TO CONTENT:



Ellen Smyth, P.E. Chief Transit and
Field Operations Officer







NOTES:

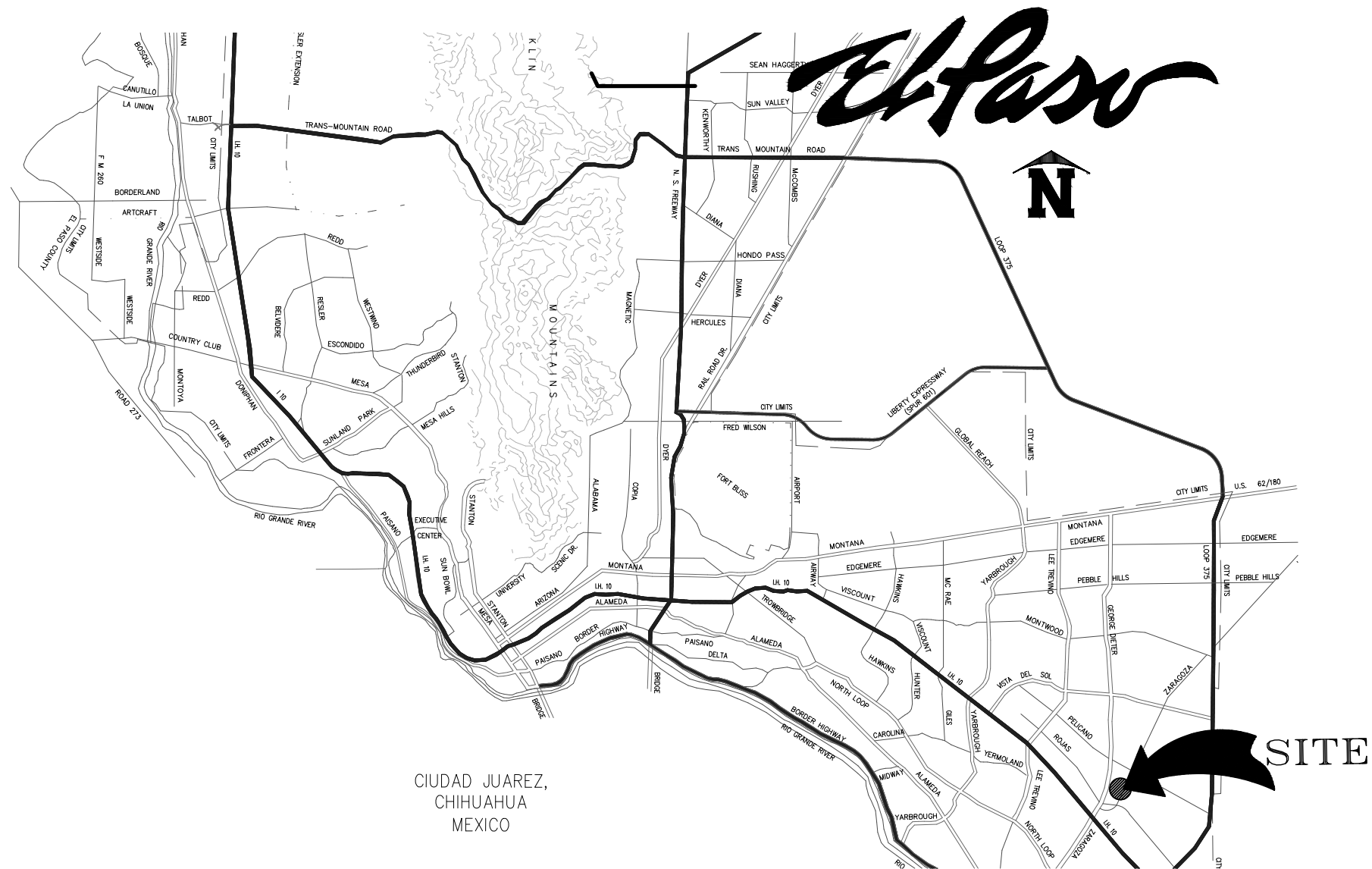
1) PROPOSED INSTALLATION OF (4) TRAFFIC SIGNAL MAST ARMS AND PEDESTRIAN BUTTON

* NOT FOR CONSTRUCTION

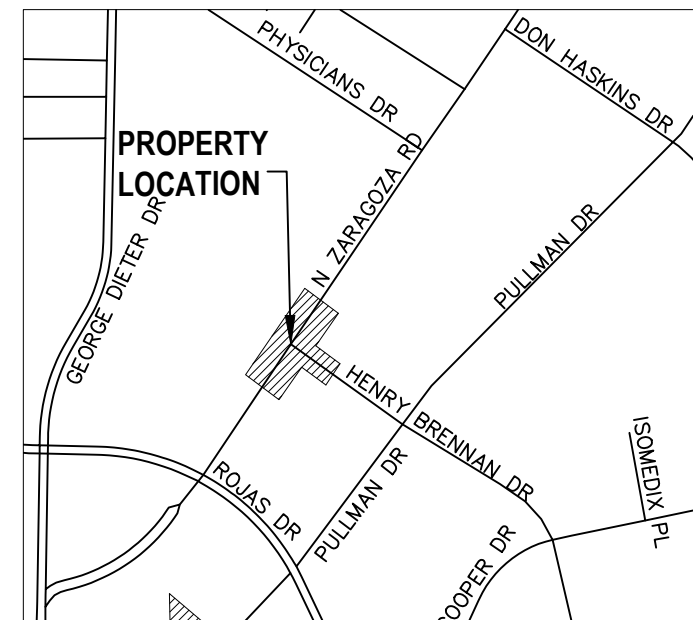
LEGEND:

-  ADA RAMP
-  TRAFFIC LIGHT MAST ARM

 STREETS AND MAINTENANCE	CONCEPTUAL DESIGN - TRAFFIC SIGNAL		Date: <u>05/24/2022</u>	Approved by: _____ Completed: _____ (Date & Signature)	
	Location: Zaragoza and Henry Brennan	Assigned To: Sign Shop <input type="checkbox"/> Signal Shop <input type="checkbox"/> Paint Shop <input type="checkbox"/> Other <input type="checkbox"/>	Prepared By: Fernie Najera		
Service Request No. _____					
SHEET <u>1</u> OF <u>1</u>					



CIUDAD JUAREZ,
CHIHUAHUA
MEXICO



LOCATION MAP

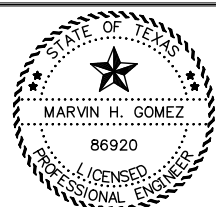
SCALE: 1"=800'

LIST OF CIVIL DRAWINGS

- C-00.0 COVER SHEET
- C-01.0 TOPOGRAPHIC SURVEY
- C-02.0 DEMOLITION PLAN
- C-03.0 PROPOSED TRAFFIC SIGNAL PLAN
- C-03.1 PROPOSED TRAFFIC CONDUIT LAYOUT
- C-03.2 PROPOSED TRAFFIC CONDUIT TABLES
- C-03.3 PROPOSED STRIPING PLAN
- C-04.0 PROPOSED SIDEWALK LAYOUT
- C-04.1 TRAFFIC SIGNAL SYSTEM STANDARD DETAILS
- C-04.2 JUNCTION BOX STANDARD DETAILS 1 OF 2
- C-04.3 JUNCTION BOX STANDARD DETAILS 2 OF 2
- C-04.4 MAST ARM STANDARD DETAILS 1 OF 3
- C-04.5 MAST ARM STANDARD DETAILS 2 OF 3
- C-04.6 MAST ARM STANDARD DETAILS 3 OF 3
- C-04.7 FOUNDATION STANDARD DETAILS
- C-04.8 PEDESTRIAN POLE STANDARD DETAILS 1 OF 2
- C-04.9 PEDESTRIAN POLE STANDARD DETAILS 2 OF 2
- C-04.10 CONCRETE CURB AND CURB AND GUTTER (CCCCG-12) 1 OF 2
- C-04.11 CONCRETE CURB AND CURB AND GUTTER (CCCCG-12) (MOD) 2 OF 2
- C-04.12 PEDESTRIAN FACILITIES CURB RAMP (PED-18) 1 OF 3
- C-04.13 PEDESTRIAN FACILITIES CURB RAMP (PED-18) 2 OF 3
- C-04.14 PEDESTRIAN FACILITIES CURB RAMP (PED-18) 3 OF 3
- C-04.15 ITS CONDUIT BORE AND STEEL CASING DETAILS ITS(28)-16
- C-05.0 SUMMARY OF LARGE SIGNS (FM659) SOLS
- C-05.1 SUMMARY OF SMALL SIGNS (FM659) SOSS
- C-06.0 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
- C-06.1 SWPPP NOTES

ENGINEER'S NOTE

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ON APRIL 12, 2021 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



Marvin H. Gomez
ENGINEER

4/15/2021
DATE

MARVIN H. GOMEZ, P.E.
(Registration No. 86920 Tx.)

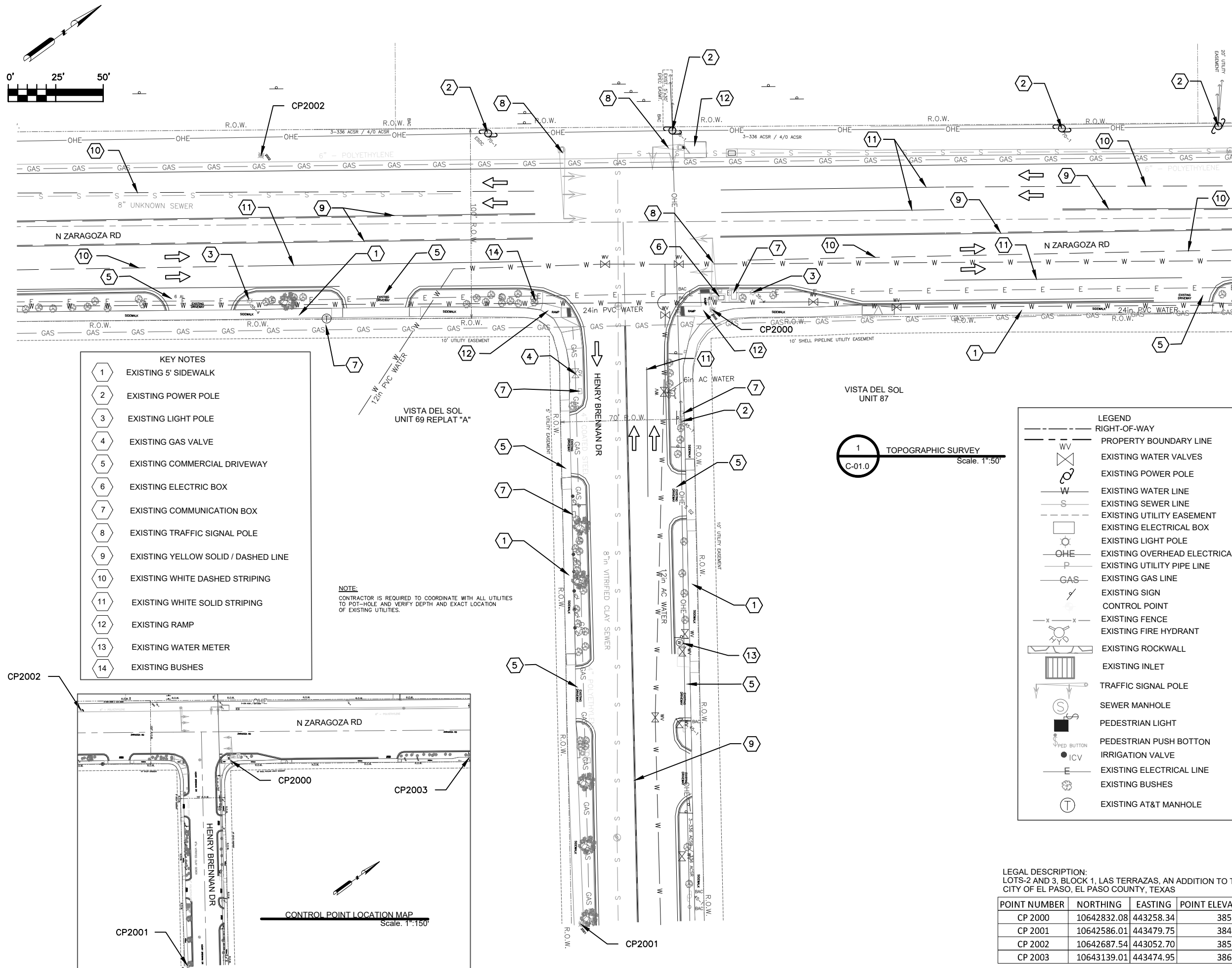


11385 James Watt Dr., Suite B-13
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPELS F#15313 TBPELS F#10194278

PROJECT NUMBER:21-004
DATE: APRIL 14, 2021

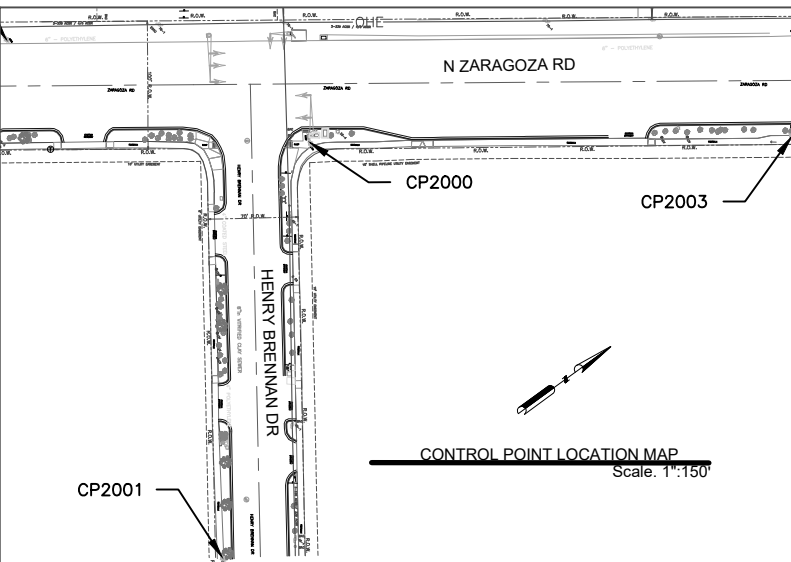
FINAL TRAFFIC SIGNAL DESIGN

N. ZARAGOZA RD & HENRY BRENNAN DR



- KEY NOTES**
- 1 EXISTING 5' SIDEWALK
 - 2 EXISTING POWER POLE
 - 3 EXISTING LIGHT POLE
 - 4 EXISTING GAS VALVE
 - 5 EXISTING COMMERCIAL DRIVEWAY
 - 6 EXISTING ELECTRIC BOX
 - 7 EXISTING COMMUNICATION BOX
 - 8 EXISTING TRAFFIC SIGNAL POLE
 - 9 EXISTING YELLOW SOLID / DASHED LINE
 - 10 EXISTING WHITE DASHED STRIPING
 - 11 EXISTING WHITE SOLID STRIPING
 - 12 EXISTING RAMP
 - 13 EXISTING WATER METER
 - 14 EXISTING BUSHES

NOTE:
CONTRACTOR IS REQUIRED TO COORDINATE WITH ALL UTILITIES TO POT-HOLE AND VERIFY DEPTH AND EXACT LOCATION OF EXISTING UTILITIES.



- LEGEND**
- RIGHT-OF-WAY
 - - - PROPERTY BOUNDARY LINE
 - WV EXISTING WATER VALVES
 - W EXISTING WATER LINE
 - S EXISTING SEWER LINE
 - - - EXISTING UTILITY EASEMENT
 - EXISTING ELECTRICAL BOX
 - EXISTING LIGHT POLE
 - OHE— EXISTING OVERHEAD ELECTRICAL LINE
 - P— EXISTING UTILITY PIPE LINE
 - GAS— EXISTING GAS LINE
 - EXISTING SIGN
 - X— EXISTING FENCE
 - EXISTING FIRE HYDRANT
 - EXISTING ROCKWALL
 - EXISTING INLET
 - EXISTING TRAFFIC SIGNAL POLE
 - EXISTING SEWER MANHOLE
 - EXISTING PEDESTRIAN LIGHT
 - EXISTING PEDESTRIAN PUSH BUTTON
 - EXISTING IRRIGATION VALVE
 - EXISTING ELECTRICAL LINE
 - EXISTING BUSHES
 - EXISTING AT&T MANHOLE

LEGAL DESCRIPTION:
LOTS-2 AND 3, BLOCK 1, LAS TERRAZAS, AN ADDITION TO THE CITY OF EL PASO, EL PASO COUNTY, TEXAS

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811 linespots@elpasotexas.gov 811
CITY OF EL PASO 1-915-212-0118
STREETS AND MAINTENANCE 1-915-594-5500
EL PASO WATER UTILITIES 1-800-700-2443
TEXAS GAS SERVICE 1-800-334-8047
EL PASO NATURAL GAS 1-800-924-9420
AT&T 1-800-252-1133
EL PASO ELECTRIC COMPANY 1-915-772-1123
SPECTRUM

NOTES

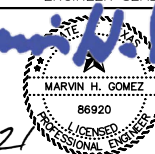
GENERAL NOTES

WARNING!
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO
7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

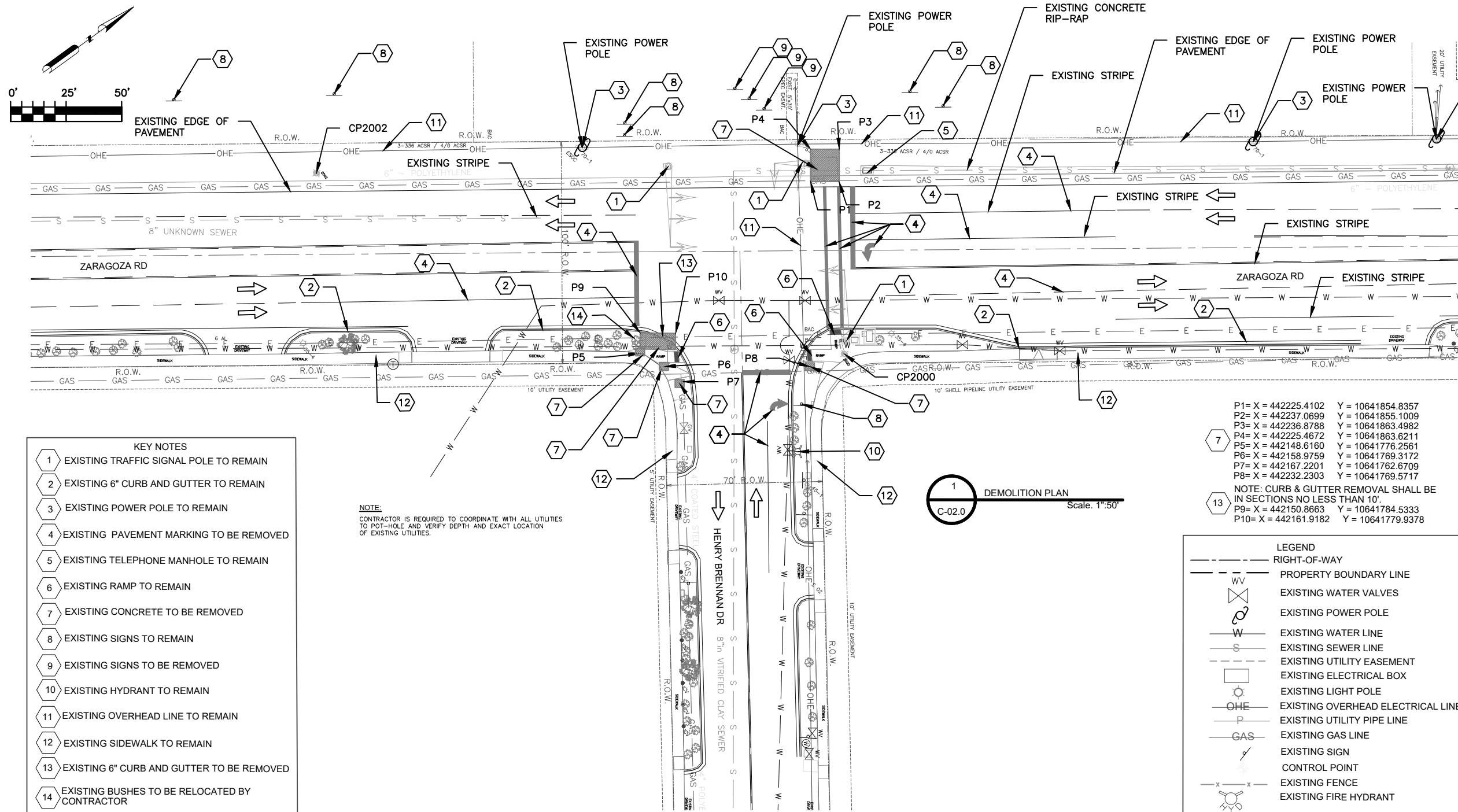
ENGINEER SEAL



"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

GRV Integrated Engineering Solutions LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD
AND HENRY BRENNAN DR
TOPOGRAPHIC SURVEY
C-01.0



- KEY NOTES**
- 1 EXISTING TRAFFIC SIGNAL POLE TO REMAIN
 - 2 EXISTING 6" CURB AND GUTTER TO REMAIN
 - 3 EXISTING POWER POLE TO REMAIN
 - 4 EXISTING PAVEMENT MARKING TO BE REMOVED
 - 5 EXISTING TELEPHONE MANHOLE TO REMAIN
 - 6 EXISTING RAMP TO REMAIN
 - 7 EXISTING CONCRETE TO BE REMOVED
 - 8 EXISTING SIGNS TO REMAIN
 - 9 EXISTING SIGNS TO BE REMOVED
 - 10 EXISTING HYDRANT TO REMAIN
 - 11 EXISTING OVERHEAD LINE TO REMAIN
 - 12 EXISTING SIDEWALK TO REMAIN
 - 13 EXISTING 6" CURB AND GUTTER TO BE REMOVED
 - 14 EXISTING BUSHES TO BE RELOCATED BY CONTRACTOR

NOTE:
CONTRACTOR IS REQUIRED TO COORDINATE WITH ALL UTILITIES TO POT-HOLE AND VERIFY DEPTH AND EXACT LOCATION OF EXISTING UTILITIES.

P1= X = 442225.4102 Y = 10641854.8357
P2= X = 442237.0699 Y = 10641855.1009
P3= X = 442236.8788 Y = 10641863.4982
P4= X = 442225.4672 Y = 10641863.6211
P5= X = 442148.6160 Y = 10641776.2561
P6= X = 442158.9759 Y = 10641769.3172
P7= X = 442167.2201 Y = 10641762.6709
P8= X = 442232.2303 Y = 10641769.5717

NOTE: CURB & GUTTER REMOVAL SHALL BE IN SECTIONS NO LESS THAN 10'.
P9= X = 442150.8663 Y = 10641784.5333
P10= X = 442161.9182 Y = 10641779.9378

- LEGEND**
- RIGHT-OF-WAY
 - PROPERTY BOUNDARY LINE
 - WV EXISTING WATER VALVES
 - EXISTING POWER POLE
 - W EXISTING WATER LINE
 - S EXISTING SEWER LINE
 - EXISTING UTILITY EASEMENT
 - EXISTING ELECTRICAL BOX
 - EXISTING LIGHT POLE
 - OHE EXISTING OVERHEAD ELECTRICAL LINE
 - P EXISTING UTILITY PIPE LINE
 - GAS EXISTING GAS LINE
 - EXISTING SIGN
 - CONTROL POINT
 - EXISTING FENCE
 - EXISTING FIRE HYDRANT
 - EXISTING ROCKWALL
 - EXISTING INLET
 - TRAFFIC SIGNAL POLE
 - SEWER MANHOLE
 - PEDESTRIAN LIGHT
 - PEDESTRIAN PUSH BOTTON
 - IRRIGATION VALVE
 - EXISTING ELECTRICAL LINE
 - EXISTING BUSHES
 - EXISTING AT&T MANHOLE

NOTES:

1. CONTRACTOR SHALL INSTALL LANDSCAPE BARRIER TREATMENT AND GROUND COVER TO MATCH EXISTING SURROUNDING LANDSCAPE WITHIN DEMOLITION AREAS.
2. ALL SAWCUTS SHALL BE COMPLETE THICKNESS.
3. ALL CONCRETE (SIDEWALKS, DRIVEWAYS, CURB-AND-GUTTER) TO BE REMOVED IN FULL PANELS/SECTIONS FROM JOINT TO JOINT. ALL NECESSARY DOWELS REQUIRED TO TIE INTO EXISTING CONCRETE WILL BE CONSIDERED SUBSIDIARY TO DEMOLITION ITEM.
4. REFER TO "STRIPING PLAN" FOR EXISTING SIGNS RELOCATION AND REMOVAL.
5. CONCRETE REPAIRS ASSOCIATED WITH EXISTING SIGN REMOVAL TO BE SUBSIDIARY TO REMOVAL OF SIGNS.
6. REMOVAL OF EXISTING SIDEWALK INCLUDES GRADING TO TOP OF SUBGRADE FOR THE PLACEMENT OF THE PROPOSED IMPROVEMENTS.
7. ITEMS SHOWN "TO REMAIN" SHALL BE PROTECTED BY THE CONTRACTOR.
8. CONTRACTOR SHALL MINIMIZE DAMAGE TO EXISTING LANDSCAPE. (IN CASE OF DAMAGE, CONTRACTOR SHALL REPLACE IT).
9. OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) REGULATIONS PROHIBIT OPERATIONS THAT BRING PEOPLE OR EQUIPMENT WITHIN 10 FT. OF AN ENERGIZED ELECTRICAL LINE. WHERE WORKERS AND/OR EQUIPMENT MAY BE CLOSE TO AN ENERGIZED ELECTRICAL LINE, NOTIFY THE ELECTRICAL POWER COMPANY AND MAKE ALL NECESSARY ADJUSTMENTS TO ENSURE THE SAFETY OF WORKERS NEAR THE ENERGIZED LINE.

LEGAL DESCRIPTION:
LOTS-2 AND 3, BLOCK 1, LAS TERRAZAS, AN ADDITION TO THE CITY OF EL PASO, EL PASO COUNTY, TEXAS

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811
CITY OF EL PASO
STREETS AND MAINTENANCE
EL PASO WATER UTILITIES
TEXAS GAS SERVICE
EL PASO NATURAL GAS
AT&T
EL PASO ELECTRIC COMPANY
SPECTRUM

811
linespot@elpasotexas.gov
1-915-212-0118
1-915-594-5500
1-800-700-2443
1-800-334-8047
1-800-924-9420
1-800-252-1133
1-915-772-1123

NOTES

GENERAL NOTES

WARNING!
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO
7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



4/15/2021

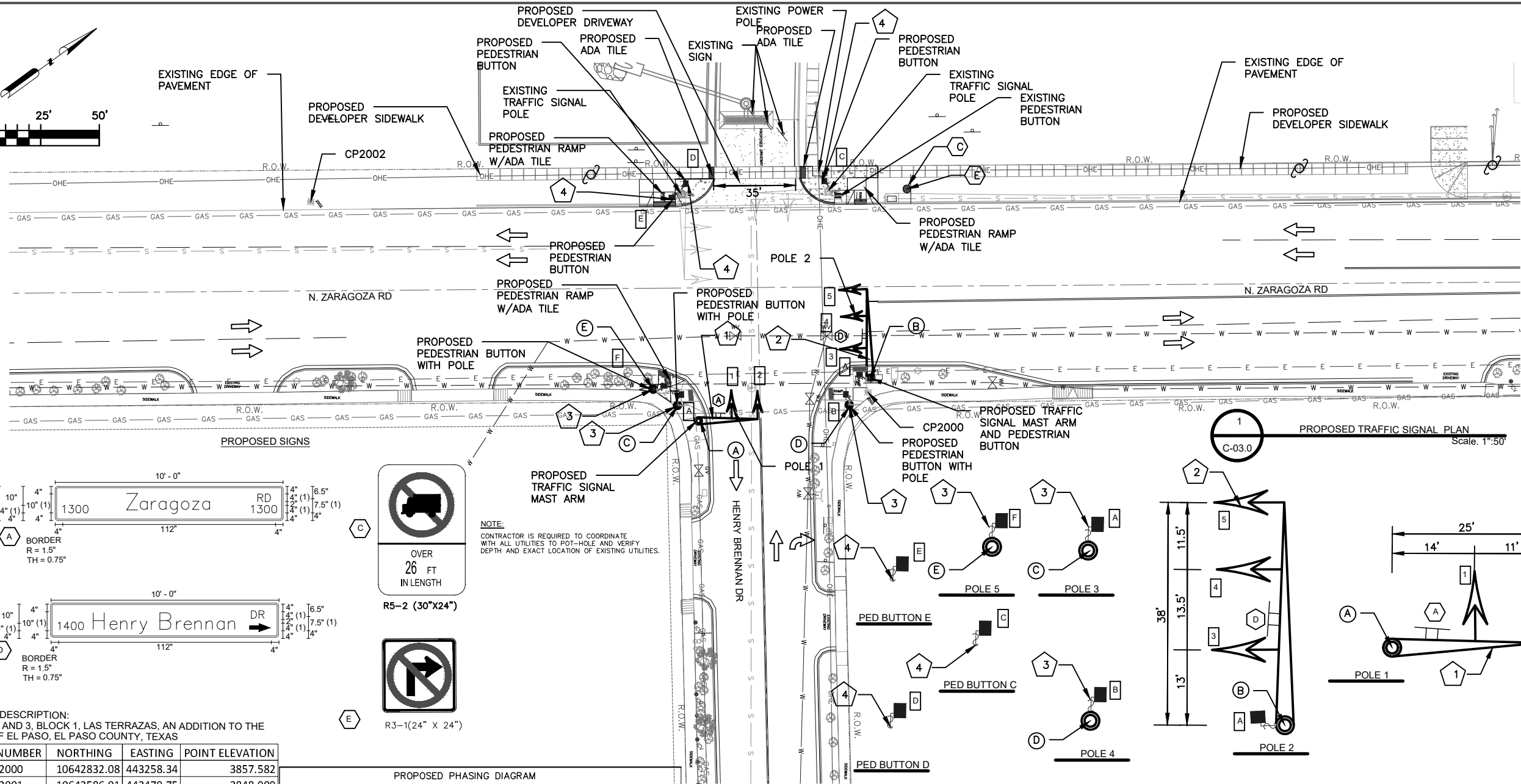
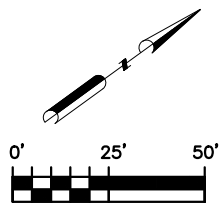
"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

DEMOLITION PLAN
C-02.0



LEGAL DESCRIPTION:
LOTS-2 AND 3, BLOCK 1, LAS TERRAZAS, AN ADDITION TO THE
CITY OF EL PASO, EL PASO COUNTY, TEXAS

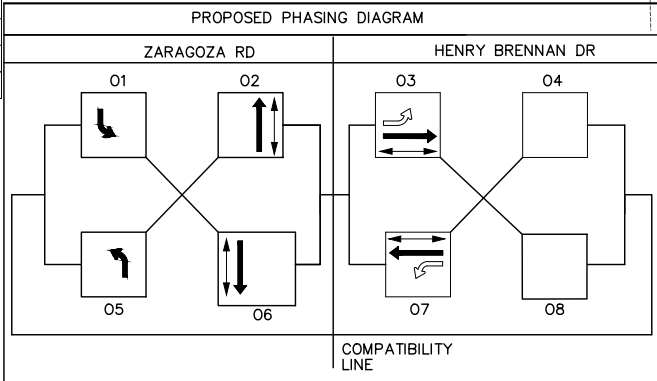
POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170

LEGEND

- PROPOSED TRAFFIC SIGNAL POLE
- PROPOSED VEHICULAR SIGNAL HEAD
- PROPOSED MAST ARM/POLE SIGN
- PROPOSED PEDESTRIAN POLE
- PROPOSED PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN AND PUSH BUTTON
- TRAFFIC FLOW

NOTE:

- ALL EXISTING AND PROPOSED SIDEWALKS, A.D.A. RAMPS, BARRIER FREE RAMPS, ACCESSIBLE PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE AMERICANS WITH DISABILITY ACT AND THE TEXAS ACCESSIBILITY STANDARDS AND SHALL COMPLY WITH LOCAL MUNICIPALITY REQUIREMENTS. EXISTING OR PROPOSED PEDESTRIAN INFRASTRUCTURE NOT COMPLYING WITH THESE REQUIREMENTS SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR TO MEET THE REQUIRED STANDARDS AT NO ADDITIONAL COST TO THE OWNER.
- PEDESTRIAN LANDINGS SHALL BE 5'X5' AND HAVE 1.5% CROSS SLOPE AND 1.5% MAXIMUM LONGITUDINAL SLOPE.
- ALL SIDEWALKS SHALL BE 5' MINIMUM WIDTH AND SHALL HAVE 1.5% CROSS SLOPE AND A MAXIMUM LONGITUDINAL SLOPE OF 5%.
- PEDESTRIAN POLES AND PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED WITHIN 16" OF THE SIDEWALK LANDING. THE CONTRACTOR SHALL ENSURE THAT ALL PUSH BUTTONS ARE LOCATED AT A MAXIMUM DISTANCE OF 16" FROM THE LANDING.
- CONTRACTOR MUST REFER TO TXDOT'S 2014 SPECIFICATIONS FOR THERMO PLASTIC PAVEMENT MARKING REQUIREMENTS.



SIGNAL HEADS	DESCRIPTION
1, 2, 3, 4	12" LED ONE WAY, HORIZONTAL 3-SECTION SIGNAL HEAD WITH BACKPLATE
5	12" LED ONE WAY, HORIZONTAL 3-SECTION SIGNAL HEAD WITH BACKPLATE
	12" LED ONE WAY, HORIZONTAL 5-SECTION SIGNAL HEAD WITH BACKPLATE

*NOTE: ALL PUSH BUTTONS SHALL BE INSTALLED NO MORE THAN 18" AWAY FROM ADA LANDING.

NOTE:
THE PROJECT WILL BE CONSIDERED COMPLETE WHEN THE CITY OF EL PASO ACCEPTS THE CONSTRUCTED IMPROVEMENTS FOR MAINTENANCE.

NOTE:
CONTRACTOR / OWNER SHALL SUBMIT COPY OF THE FINAL AS-BUILT PLANS TO STREET MAINTENANCE PROJECT MANAGER PRIOR TO FINAL INSPECTION/WALKTHROUGHS; ADDITIONAL COMMENTS MAY BE GENERATED UPON REVIEW AND FOLLOW UP INSPECTION(S) FROM AS-BUILT DRAWINGS.

KEY NOTES:

- INSTALL 25' MAST ARM WITH 30' POLE ON A TYPE-30A FOUNDATION WITH A 16" BOLT CIRCLE.
- INSTALL 38' MAST ARM (OWNER/CONTRACTOR SHALL SUBMIT THE MANUFACTURER SHOP DRAWINGS SIGNED AND SEAL BY A LICENSED ENGINEER IN THE STATE OF TEXAS FOR CONNECTING THE NEW 38' MAST ARM TO THE EXISTING POLE AND FOUNDATION.)
- INSTALL 10' PED POLE ON 24" FOUNDATION.
- INSTALL PED BUTTON ON MAST ARM WITH POLE.

NOTES:

- THE LOCATION OF THE SIGNAL POLES AND FIXTURES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS. EXACT LOCATION OF SIGN POLES, CONTROLLER, ETC. TO BE APPROVED BY THE ENGINEER IN THE FIELD.
- INTERVAL TIMING TO BE PROVIDED BY THE CITY OF EL PASO.
- PROPOSED SIGNS MOUNTED ON SIGNAL MAST ARM/POLE SHALL BE BANNED. DRILLING THROUGH MAST ARM OR POLE WILL NOT BE ACCEPTED.
- NEW TRAFFIC SIGNAL INSTALLATION SHALL INCLUDE ALL FOUNDATIONS, MAST ARMS OF THE REQUIRED LENGTHS HAVING A NOMINAL HEIGHT CLEARANCE OF 17'-6". PEDESTAL POLES WITH TRANSFORMER BASES, SIGNAL HEADS, PEDESTRIAN SIGNALS, ALL CONDUIT OF THE SIZES AND LENGTHS SHOWN, ALL TRAFFIC CONDUCTORS, ALL ELECTRICAL POWER SOURCE CONDUCTORS, AND GROUND BOXES AS SHOWN ON PLANS.
- SEE STANDARDS FOR FURTHER DETAILS ON SIGNAL POLES AND MAST ARMS.
- ALL SIGNAL HEADS AND PEDESTRIAN HEADS SHALL HAVE LED LIGHTS. ALL PEDESTRIAN HEADS SHALL BE COUNTDOWN PEDESTRIAN SIGNALS. SEE STANDARDS FOR FURTHER DETAIL.
- SALVAGED MATERIALS SHALL BE RETURNED TO STREETS AND MAINTENANCE, 7968 SAN PAULO DRIVE, EL PASO, TEXAS 79907. POINT OF CONTACT SERGIO REYES (P.E.).
- SEE MAST ARM SIGN DETAILS SHEET FOR FURTHER DETAILS ON SIGNAGE.
- PROPOSED PUSH BUTTONS SHALL BE PLACED ADJACENT TO A LEVEL LANDING AREA (2% MAX. SLOPE IN ALL DIRECTIONS), AND 16" MAX DISTANCE FROM LANDING.
- ALL TRAFFIC SIGNAL HEADS SHALL INCLUDE A 5" BACK PLATE. BACK PLATES SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. REFER TO TRAFFIC SIGNAL SYSTEM DETAILS.
- THE CLEAR WIDTH OF WALKING SURFACES SHALL BE 5 FEET MINIMUM.
- SEE "WHEEL CHAIR RAMP AND SIDEWALK DETAILS" (PED-18 1 OF 3, PED-18 2 OF 3 AND PED-18 3 OF 3) FOR RAMP IDENTIFICATION.
- OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) REGULATIONS PROHIBIT OPERATIONS THAT BRING PEOPLE OR EQUIPMENT WITHIN 10 FT. OF AN ENERGIZED ELECTRICAL LINE. WHERE WORKERS AND/OR EQUIPMENT MAY BE CLOSE TO AN ENERGIZED ELECTRICAL LINE, NOTIFY THE ELECTRICAL POWER COMPANY AND MAKE ALL NECESSARY ADJUSTMENTS TO ENSURE THE SAFETY OF WORKERS NEAR ENERGIZED LINE.

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL

Marvin H. Gomez
4/15/2021
MARVIN H. GOMEZ
86920
LICENSED ENGINEER

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



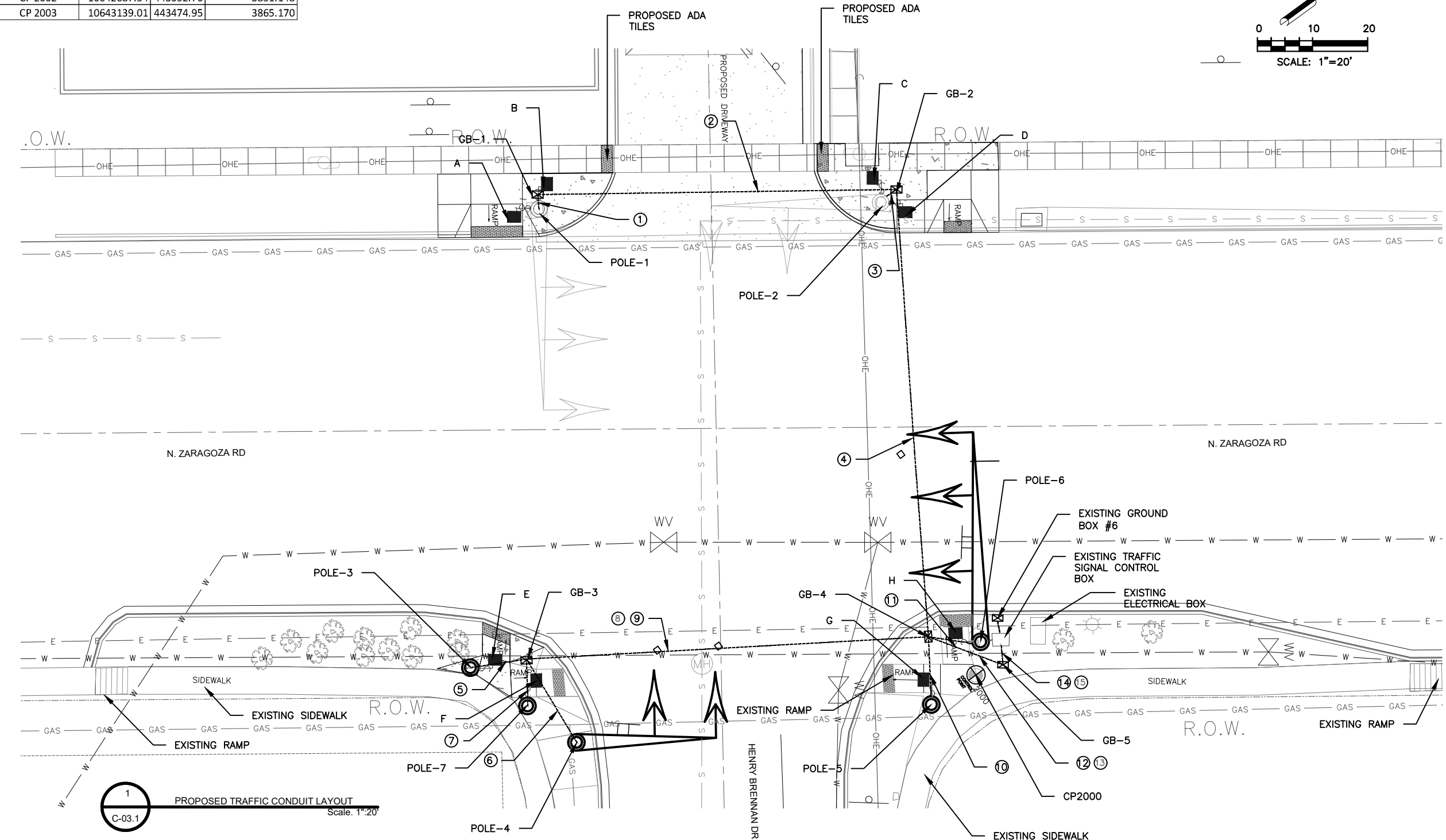
GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TSP# F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR
PROPOSED TRAFFIC
SIGNAL PLAN

C-03.0

LEGAL DESCRIPTION:
LOTS-2 AND 3, BLOCK 1, LAS TERRAZAS, AN ADDITION TO THE
CITY OF EL PASO, EL PASO COUNTY, TEXAS

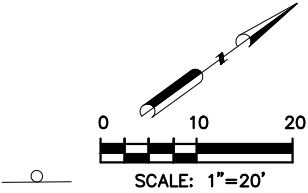
POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170



1
C-03.1
PROPOSED TRAFFIC CONDUIT LAYOUT
Scale: 1"=20'

*NOTE: NO OPEN TRENCH WILL BE ALLOWED
WERE EXISTING CONCRETE IS.
EXISTING CONCRETE SHALL BE REMOVED
AND REPLACED ENTIRELY.

LEGEND	
PROPOSED CONDUIT	---
PROPOSED CONTROLLER CABINET	[C]
PROPOSED GROUND BOX (TYPE A)	[A]
PROPOSED GROUND BOX (TYPE C)	[C]
PROPOSED GRANITE CONCRETE POLE SERVICE WITH METER AND DISCONNECT PANEL	[P]
CONDUIT RUN NUMBER	①
PROPOSED PHASE NUMBER	Ø #



WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL
EXISTING UNDERGROUND/OVERHEAD
IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!
IT SHALL BE THE RESPONSIBILITY OF THE
CONTRACTOR, WHETHER INDICATED ON THE
DRAWINGS OR NOT, TO VERIFY THE LOCATION,
DEPTH, AND CONDITION OF ALL EXISTING
UTILITIES AND SUBSTRUCTURES AND PROTECT
THEM FROM DAMAGE. THE CONTRACTOR SHALL
CONTACT ALL THE UTILITY COMPANIES AND
CONDUCT ALL NECESSARY FIELD INVESTIGATIONS
PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO
7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



4/15/2021

"THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
MARVIN H. GOMEZ, P.E. No. 86920
ALTERATION OF A SEALED DOCUMENT
WITHOUT PROPER NOTIFICATION TO
THE RESPONSIBLE ENGINEER IS AN
OFFENSE UNDER THE
TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

PROPOSED
TRAFFIC CONDUIT
LAYOUT
C-03.1

CONDUIT & CONDUCTOR RUNS										
CONDUIT RUN #	LENGTHE OF RUN (FT)	CONUIT # (BORED)	CONDUIT SIZE (INCHES) (BORED)	CONDUIT # (TRENCHED)	CONDUIT SIZE (INCHES) (TRENCHED)	ELEC CONDUCTOR (NO. 6) INSULATED GROUND	ELEC CONDUCTOR (NO. 6) INSULATED POWER	TRAF SIG CBL (TY A) (2 CONDR) (18 AWG) (PED BTN)	TRAF SIG CBL (TY A) (5 CONDR) (18 AWG)	TRAF SIG CBL (TY A) (9 CONDR) (18 AWG)
1	3			1	2	1		2	2	
2	67			1	2	1		1	1	
3	3			1	2	1		1	2	
4	83	1	2			1		3	4	
5	12			1	2	1		1	1	
6	18			1	2	1		1	1	
7	8.5			1	3	1				1
8	75	1	2			1		2	2	
9	75	1	3			1				1
10	13			1	2	1		1	1	
11	10			1	2	1		1	1	
12	16			1	2	1		8	10	
13	16			1	3	1				2
14	5			1	2	1		8	10	
15	5			1	3	1				2
16	3			1	2	1	1			
17	3			1	3	1	1			
TOTAL	415.5	233		182.5		415.5	6	696	824	125.5

NUMBER OF CONDUCTORS FROM PLE BASE TO PEDESTRIAN HEAD										
POLE ID.	PEDESTRIAN SIGNAL HEAD								SUB TOTAL (FT)	CONDUCTOR (TYPE) (NO.) (AWG)
	A	B	C	D	E	F	G	H		
POLE-1	16	16							32	(TY-A) (5 CONDR) (12 AWG)
POLE-2			16	EXIST					16	(TY-A) (5 CONDR) (12 AWG)
POLE-3					16				16	(TY-A) (5 CONDR) (12 AWG)
POLE-4									0	(TY-A) (5 CONDR) (12 AWG)
POLE-5							16		16	(TY-A) (5 CONDR) (12 AWG)
POLE-6								EXIST	0	(TY-A) (5 CONDR) (12 AWG)
POLE-7						16			16	(TY-A) (5 CONDR) (12 AWG)
TOTAL									80	

NUMBER OF CONDUCTORS FROM BASE TO SIGNAL HEAD					
POLE ID.	VEHICLE SIGNAL HEAD NO.			SUB TOTAL (FT)	CONDUCTOR (TYPE) (NO.) (12 AWG)
	1	2	3		
POLE-3	15			15	(TY - A) (9 CONDR) (12 AWG)
POLE-5		23	38	61	(TY - A) (9 CONDR) (12 AWG)
TOTAL				76	

GOUND BOX SCHEDULE					
GROUND BOX ID#	TYPE - A	TYPE - C	TYPE - 1	TYPE - 2	W/ APRON
GB-1	1				YES
GB-2	1				YES
GB-3	1				YES
GB-4	1				YES
GB-5	1				YES
GB-6	EXISTING				
TOTAL	5				

NUMBER OF CONDUCTORS FROM POLE BASE TO PEDESTRIAN ACCESSIBLE PEDESTRIAN SIGNALS PUSH BUTTON			
POLE ID.	PED PB	SUB TOTAL (FT)	CONDUCTOR (TYPE) (NO.) (SIZE)
POLE-1	10	10	(TY-A) (2 CONDR) (18 AWG)
POLE-2	5	5	(TY-A) (2 CONDR) (18 AWG)
POLE-3	5	5	(TY-A) (2 CONDR) (18 AWG)
POLE-4	5	5	(TY-A) (2 CONDR) (18 AWG)
POLE-5	5	5	(TY-A) (2 CONDR) (18 AWG)
TOTAL		30	

WARNING!

BEFORE YOU DIG

CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811

CITY OF EL PASO

STREETS AND MAINTENANCE

EL PASO WATER UTILITIES

TEXAS GAS SERVICE

EL PASO NATURAL GAS

AT&T

EL PASO ELECTRIC COMPANY

SPECTRUM

811

linespots@elpasotexas.gov

1-915-212-0118

1-915-594-5500

1-800-700-2443

1-800-334-8047

1-800-924-9420

1-800-252-1133

1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.

CITY OF EL PASO

TEXAS

STREETS AND MAINTENANCE

CITY OF EL PASO

7968 SAN PAULO DRIVE

EL PASO, TEXAS 79907

TELE. 915.212.0118

FAX. 915.212.0119

ENGINEER SEAL

MARVIN H. GOMEZ

86920

LICENSED ENGINEER

4/15/2021

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

GRV Integrated Engineering Solutions LLC

GRV INTEGRATED ENGINEERING SOLUTIONS LLC

11385 James Watt Dr., Suite B-13,

El Paso, Texas 79936

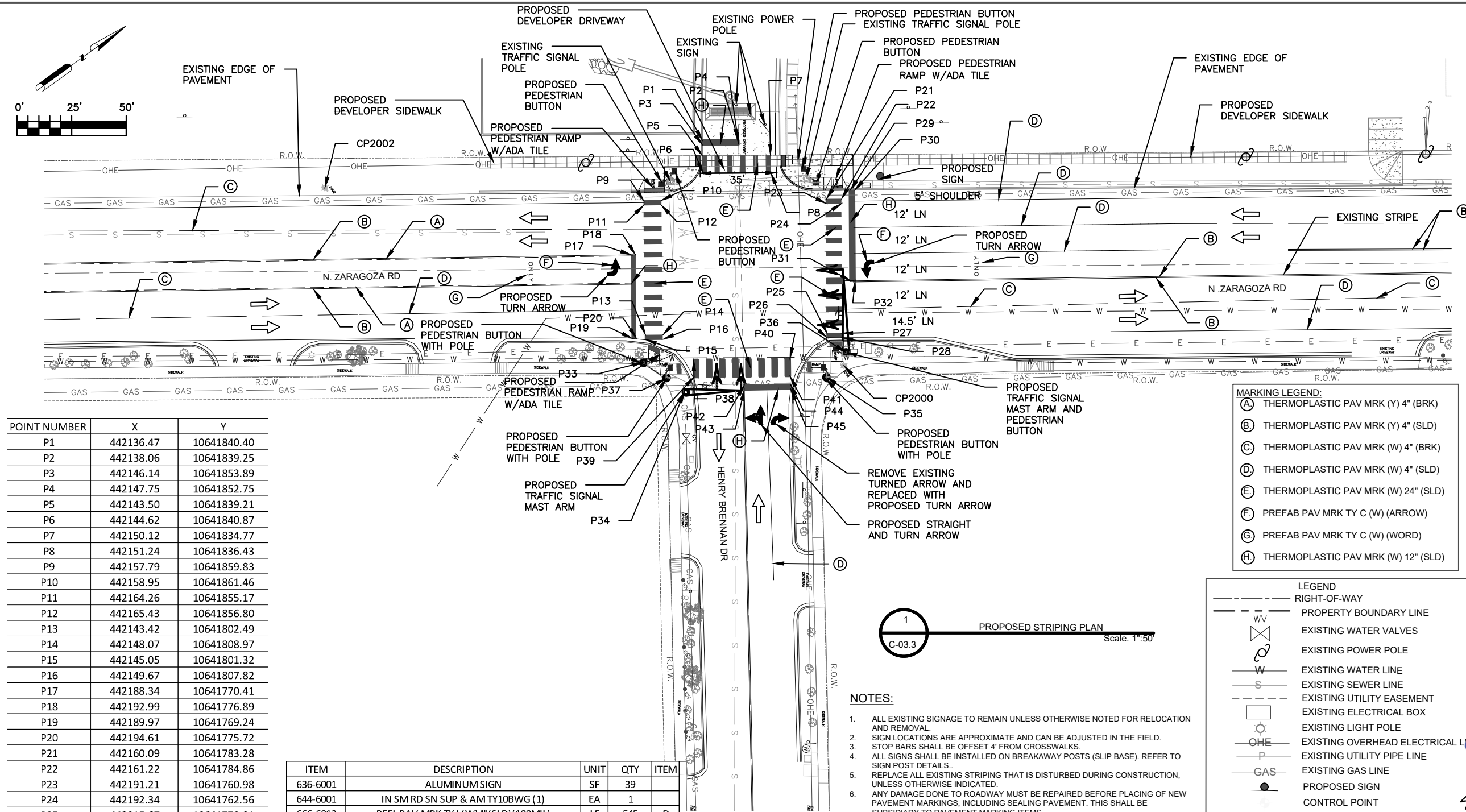
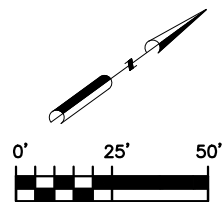
Ph: (915) 351-6701 Fax (915) 243-6010

www.integratedengineeringsolutions.com

TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

PROPOSED
TRAFFIC CONDUIT
TABLES
C-03.2



POINT NUMBER	X	Y
P1	442136.47	10641840.40
P2	442138.06	10641839.25
P3	442146.14	10641853.89
P4	442147.75	10641852.75
P5	442143.50	10641839.21
P6	442144.62	10641840.87
P7	442150.12	10641834.77
P8	442151.24	10641836.43
P9	442157.79	10641859.83
P10	442158.95	10641861.46
P11	442164.26	10641855.17
P12	442165.43	10641856.80
P13	442143.42	10641802.49
P14	442148.07	10641808.97
P15	442145.05	10641801.32
P16	442149.67	10641807.82
P17	442188.34	10641770.41
P18	442192.99	10641776.89
P19	442189.97	10641769.24
P20	442194.61	10641775.72
P21	442160.09	10641783.28
P22	442161.22	10641784.86
P23	442191.21	10641760.98
P24	442192.34	10641762.56
P25	442215.67	10641778.01
P26	442216.83	10641779.63
P27	442222.16	10641773.38
P28	442223.32	10641775.01
P29	442240.32	10641812.82
P30	442241.48	10641814.45
P31	442246.82	10641808.19
P32	442247.98	10641809.82
P33	442238.73	10641789.81
P34	442195.00	10641876.69
P35	442192.55	10641869.84
P36	442196.63	10641875.53
P37	442158.98	10641769.32
P38	442171.48	10641777.61
P39	442171.55	10641769.64
P40	442216.13	10641778.14
P41	442216.21	10641770.16
P42	442194.58	10641765.89
P43	442194.62	10641763.92
P44	442215.84	10641766.27
P45	442215.88	10641764.30

ITEM	DESCRIPTION	UNIT	QTY	ITEM
636-6001	ALUMINUM SIGN	SF	39	
644-6001	IN SM RD SN SUP & AMTY10BWG (1)	EA	1	
666-6012	REFL PAV MRK TY I (W) 4" (SLD) (100MIL)	LF	545	D
666-6042	REFL PAV MRK TY I (W) 12" (SLD) (100MIL)	LF	84	H
666-6048	REFL PAV MRK TY I (W) 24" (SLD) (100MIL)	LF	360	E
666-6054	REFL PAV MRK TY I (W) (ARROW) (100MIL)	EA	3	F
666-6057	REFL PAV MRK TY I (W) (DBL ARROW) (100MIL)	EA	1	
666-6078	REFL PAV MRK TY I (W) (WORD) (100MIL)	EA	1	G
666-6170	REFL PAV MRK TY II (W) 4" (SLD) (100MIL)	LF	545	
666-6180	REFL PAV MRK TY II (W) 12" (SLD)	LF	84	
666-6182	REFL PAV MRK TY II (W) 24" (SLD)	LF	360	
666-6184	REFL PAV MRK TY II (W) (ARROW)	EA	3	
666-6185	REFL PAV MRK TY II (W) (DBL ARROW)	EA	1	
666-6192	REFL PAV MRK TY II (W) (WORD)	EA	1	
677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	545	
677-6005	ELIM EXT PAV MRK & MRKS (12")	LF	136	
677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	84	
677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA	1	
678-6001	PAV SURF PREP FOR MRK (4")	LF	545	
678-6006	PAV SURF PREP FOR MRK (12")	LF	84	
678-6008	PAV SURF PREP FOR MRK (24")	LF	360	
678-6009	PAV SURF PREP FOR MRK (ARROW)	EA	3	
678-6010	PAV SURF PREP FOR MRK (DBL ARROW)	EA	1	
678-6016	PAV SURF PREP FOR MRK (WORD)	EA	1	

NOTES:

- ALL EXISTING SIGNAGE TO REMAIN UNLESS OTHERWISE NOTED FOR RELOCATION AND REMOVAL.
- SIGN LOCATIONS ARE APPROXIMATE AND CAN BE ADJUSTED IN THE FIELD.
- STOP BARS SHALL BE OFFSET 4' FROM CROSSWALKS.
- ALL SIGNS SHALL BE INSTALLED ON BREAKAWAY POSTS (SLIP BASE). REFER TO SIGN POST DETAILS.
- REPLACE ALL EXISTING STRIPING THAT IS DISTURBED DURING CONSTRUCTION, UNLESS OTHERWISE INDICATED.
- ANY DAMAGE DONE TO ROADWAY MUST BE REPAIRED BEFORE PLACING OF NEW PAVEMENT MARKINGS, INCLUDING SEALING PAVEMENT. THIS SHALL BE SUBSIDIARY TO PAVEMENT MARKING ITEMS.
- CROSSWALK BARS WILL BE PLACED 6' APART, CENTER-TO-CENTER.
- PROPOSED STRIPING SHALL MATCH TO EXISTING STRIPING AT END OF PROJECT LIMITS.

NOTE:

- ALL EXISTING AND PROPOSED SIDEWALKS, A.D.A. RAMPS, BARRIER FREE RAMPS, ACCESSIBLE PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE AMERICANS WITH DISABILITY ACT AN THE TEXAS ACCESSIBILITY STANDARDS AND SHALL COMPLY WITH LOCAL MUNICIPALITY REQUIREMENTS. EXISTING OR PROPOSED PEDESTRIAN INFRASTRUCTURE NOT COMPLYING WITH THESE REQUIREMENTS SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR TO MEET THE REQUIRED STANDARDS AT NO ADDITIONAL COST TO THE OWNER.
- PEDESTRIAN LANDINGS SHALL BE 5'X5' AND HAVE 1.5% CROSS SLOPE AND 1.5% MAXIMUM LONGITUDINAL SLOPE.
- ALL SIDEWALKS SHALL BE 5' MINIMUM WIDTH AND SHALL HAVE 1.5% CROSS SLOPE AND A MAXIMUM LONGITUDINAL SLOPE OF 5%.
- PEDESTRIAN POLES AND PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED WITHIN 16" OF THE SIDEWALK LANDING. THE CONTRACTOR SHALL ENSURE THAT ALL PUSH BUTTONS ARE LOCATED AT A MAXIMUM DISTANCE OF 16" FROM THE LANDING.
- CONTRACTOR MUST REFER TO TXDOT'S 2014 SPECIFICATIONS FOR THERMO PLASTIC PAVEMENT MARKING REQUIREMENTS.

MARKING LEGEND:

- (A) THERMOPLASTIC PAV MRK (Y) 4" (BRK)
- (B) THERMOPLASTIC PAV MRK (Y) 4" (SLD)
- (C) THERMOPLASTIC PAV MRK (W) 4" (BRK)
- (D) THERMOPLASTIC PAV MRK (W) 4" (SLD)
- (E) THERMOPLASTIC PAV MRK (W) 24" (SLD)
- (F) PREFAB PAV MRK TY C (W) (ARROW)
- (G) PREFAB PAV MRK TY C (W) (WORD)
- (H) THERMOPLASTIC PAV MRK (W) 12" (SLD)

LEGEND	
---	RIGHT-OF-WAY
---	PROPERTY BOUNDARY LINE
WV	EXISTING WATER VALVES
W	EXISTING WATER LINE
S	EXISTING SEWER LINE
---	EXISTING UTILITY EASEMENT
---	EXISTING ELECTRICAL BOX
---	EXISTING LIGHT POLE
OHE	EXISTING OVERHEAD ELECTRICAL LINE
P	EXISTING UTILITY PIPE LINE
GAS	EXISTING GAS LINE
---	PROPOSED SIGN
---	CONTROL POINT
---	EXISTING FIRE HYDRANT
---	EXISTING ROCKWALL
---	EXISTING INLET
---	TRAFFIC SIGNAL POLE
---	SEWER MANHOLE
---	PEDESTRIAN LIGHT
---	PEDESTRIAN PUSH BOTTON
---	IRRIGATION VALVE
---	EXISTING SIGN
---	EXISTING ELECTRICAL LINE

LEGAL DESCRIPTION:
LOTS-2 AND 3, BLOCK 1, LAS TERRAZAS, AN ADDITION TO THE CITY OF EL PASO, EL PASO COUNTY, TEXAS

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170

WARNING!
BEFORE YOU DIG

CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



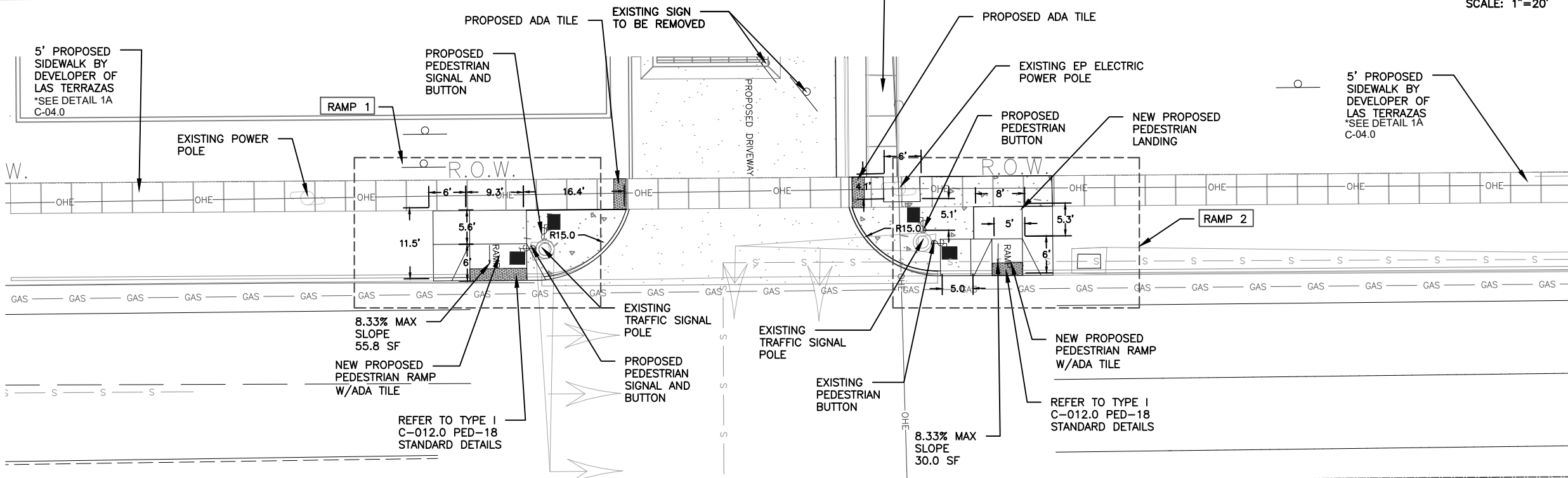
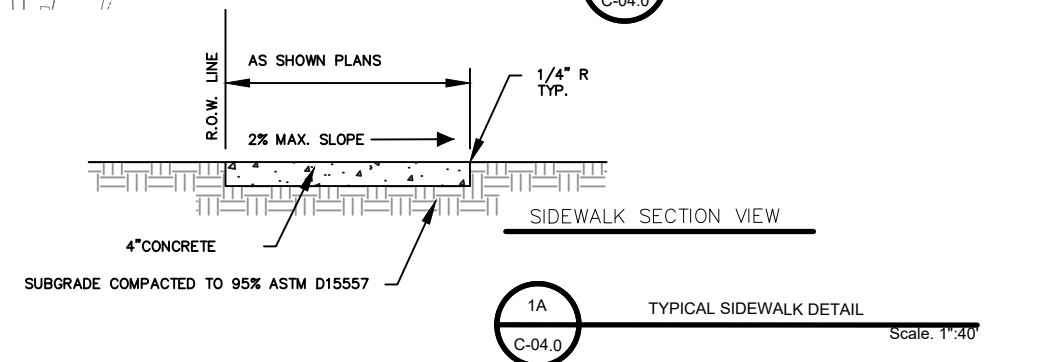
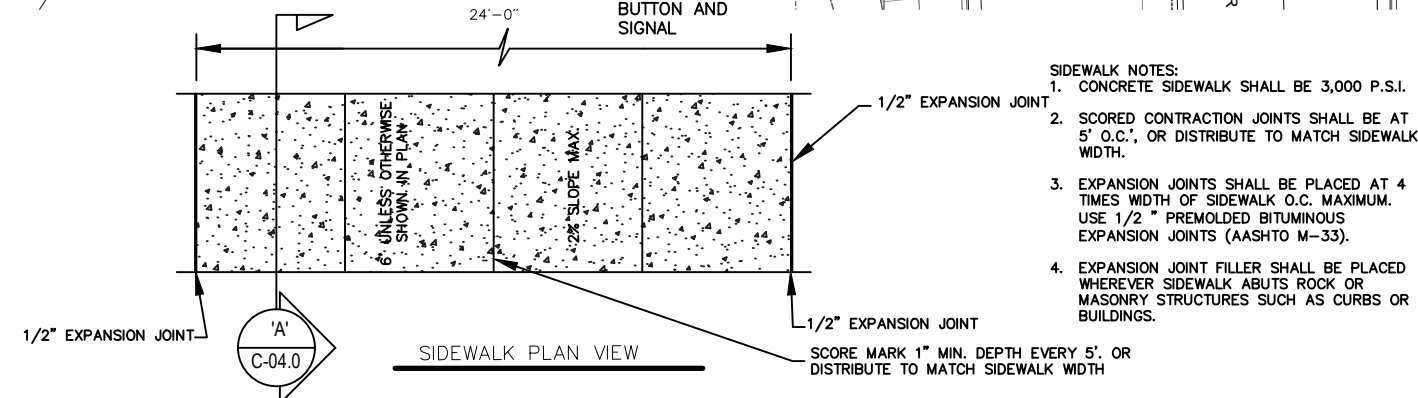
GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBP# F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

PROPOSED
STRIPING PLAN
C-03.3

1. ALL EXISTING AND PROPOSED SIDEWALKS, A.D.A. RAMPS, BARRIER FREE RAMPS, ACCESSIBLE PARKING, DRIVEWAY CROSSWALKS, DRIVEWAYS AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE AMERICANS WITH DISABILITY ACT AND THE TEXAS ACCESSIBILITY STANDARDS AND SHALL COMPLY WITH LOCAL MUNICIPALITY REQUIREMENTS. EXISTING OR PROPOSED PEDESTRIAN INFRASTRUCTURE NOT COMPLYING WITH THESE REQUIREMENTS SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR TO MEET THE REQUIRED STANDARDS AT NO ADDITIONAL COST TO THE OWNER.
2. PEDESTRIAN LANDINGS SHALL BE 5'X5' AND HAVE 1.5% CROSS SLOPE AND 1.5% MAXIMUM LONGITUDINAL SLOPE.
3. ALL SIDEWALKS SHALL BE 5' MINIMUM WIDTH AND SHALL HAVE 1.5% CROSS SLOPE AND A MAXIMUM LONGITUDINAL SLOPE OF 5%.
4. PEDESTRIAN POLES AND PEDESTRIAN PUSH BUTTONS SHALL BE LOCATED WITHIN 16" OF THE SIDEWALK LANDING. THE CONTRACTOR SHALL ENSURE THAT ALL PUSH BUTTONS ARE LOCATED AT A MAXIMUM DISTANCE OF 16" FROM THE LANDING.
5. CONTRACTOR MUST REFER TO TXDOT'S 2014 SPECIFICATIONS FOR THERMO PLASTIC PAVEMENT MARKING REQUIREMENTS.

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170

[illegible]

CONTRACTOR SHALL FIELD LOCATE ALL
EXISTING UNDERGROUND/OVERHEAD
IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SE



4/15/202

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

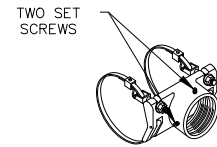
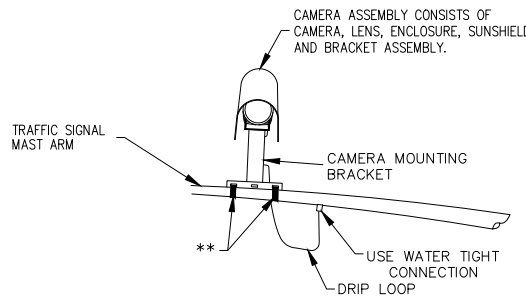
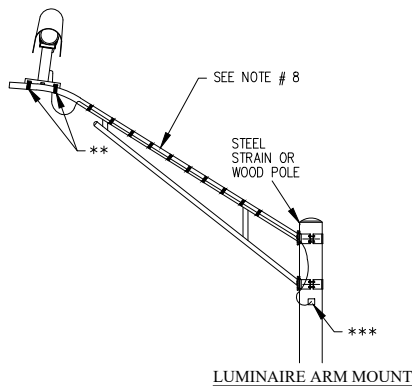
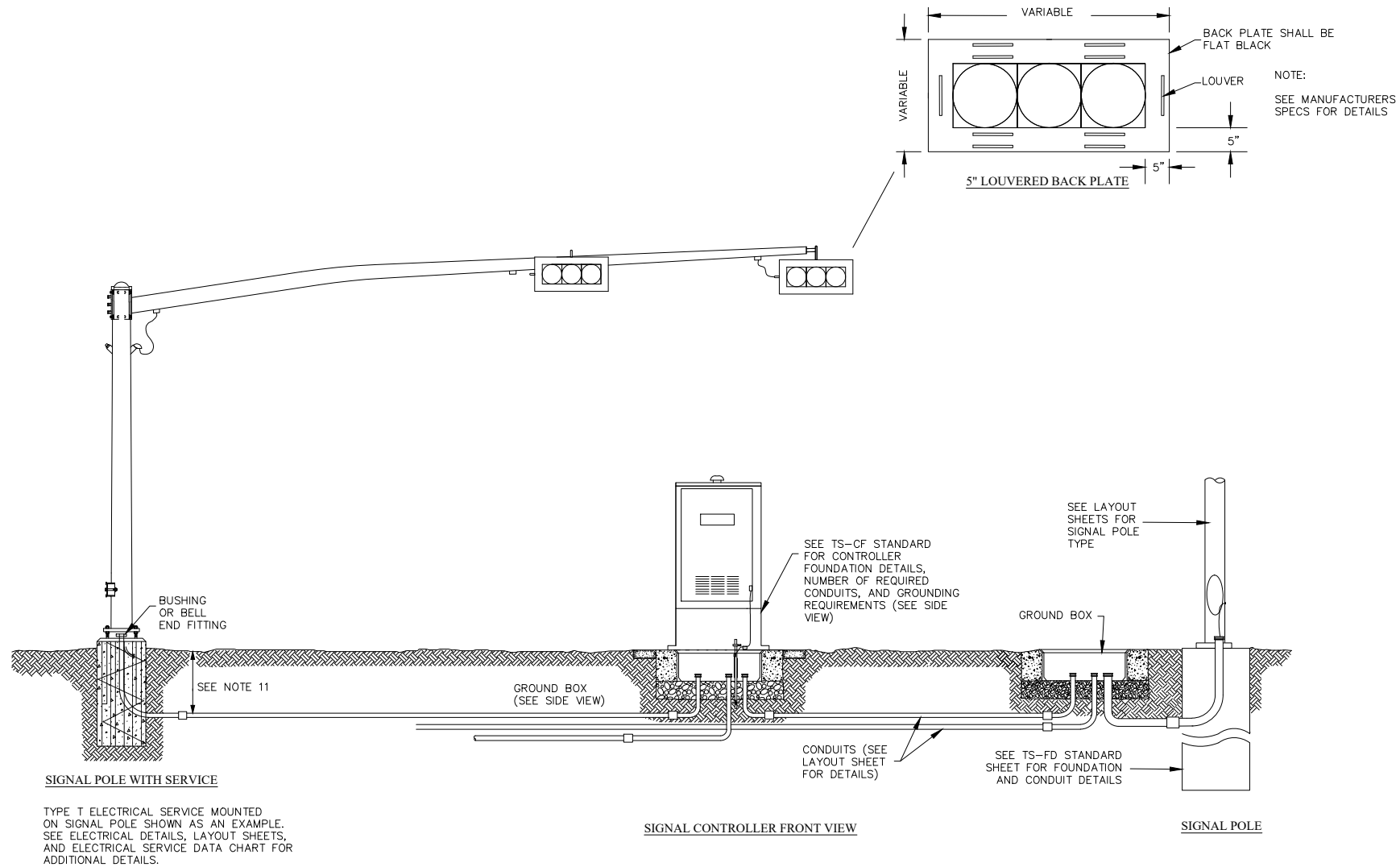
TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

PROPOSED SIDEWALK LAYOUT

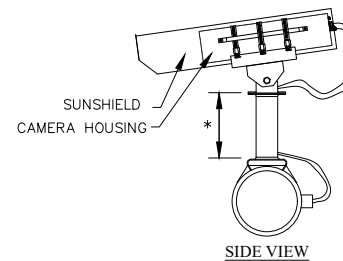
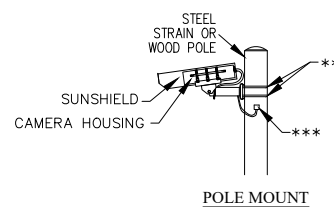
C-04.0

TRAFFIC SIGNAL NOTES

1. INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS THROUGHOUT THE ELECTRICAL SYSTEM. BOND ALL EXPOSED METAL PARTS TO THE GROUNDING CONDUCTOR.
2. IF INTERNALLY ILLUMINATED STREET NAME SIGNS ARE APPROVED FOR USE, GROUND THE FIXTURE TO THE POLE WITH A 12 AWG GREEN XHHW CONDUCTOR.
3. BOND ANCHOR BOLTS TO REBAR CAGE IN TWO LOCATIONS USING #3 BARS OR 6 AWG STRANDED COPPER CONDUCTORS. USE LISTED MECHANICAL CONNECTORS RATED FOR EMBEDMENT IN CONCRETE. SEE TxDOT STANDARD TS-FD FOR FURTHER DETAILS.
4. DRILL AND TAP SIGNAL POLES FOR 1/2 IN X 13 UNC TANK GROUND FITTING. PROVIDE AND INSTALL TANK GROUND FITTING 4 IN. TO 6 IN. DIRECTLY BELOW ELECTRICAL SERVICE ENCLOSURE. PROVIDE PROPERLY SIZED HOLE THROUGH THE BOTTOM OF THE ENCLOSURE FOR THE SERVICE GROUNDING ELECTRODE CONDUCTOR. CONNECT THE ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR TO THE TANK GROUND FITTING. ENSURE ELECTRICAL SERVICE GROUNDING ELECTRODE CONDUCTOR IS AS SHORT AND STRAIGHT AS POSSIBLE FROM THE ENCLOSURE TO THE TANK GROUND FITTING. SEE INSET A DETAIL FOR FURTHER INFORMATION. SIZE SERVICE ENTRANCE CONDUIT AND BRANCH CIRCUIT CONDUIT AS SHOWN IN THE PLANS.
5. BOND ANCHOR BOLTS TO REBAR CAGE IN TWO LOCATIONS USING #3 BARS OR 6 AWG STRANDED COPPER CONDUCTORS. USED LISTED MECHANICAL CONNECTORS RATED FOR EMBEDMENT IN CONCRETE. SEE TRAFFIC SIGNAL POLE FOUNDATION DETAILS FOR FURTHER INFORMATION.
6. CONDUCT PULL TESTS AND INSULATION RESISTANCE TESTS ON ALL POWER CONDUCTORS AS REQUIRED IN ITEM 620 "ELECTRICAL CONDUCTORS" AND ED(3). TO PREVENT ELECTRONICS DAMAGE, DO NOT CONDUCT INSULATION RESISTANCE TESTS ON TRAFFIC SIGNAL CABLES AFTER TERMINATION.
7. LOCK ALL ENCLOSURES AND BOLT DOWN ALL GROUND BOX COVERS BEFORE APPLYING POWER TO THE SIGNAL INSTALLATION.
8. TERMINATE CONDUITS ENTERING THE TOP OF ENCLOSURES WITH A CONDUIT-SEALING HUB OR THREADED BOSS SUCH AS METER HUB. INSTALL A GROUNDING BUSHING ON ALL METAL CONDUITS NOT CONNECTED TO CONDUIT-SEALING HUB OR THREADED BOSS. BOND THE GROUNDING BUSHING TO THE GROUND BUS WITH A BONDING JUMPER. SEAL ALL CONDUITS ENTERING ENCLOSURES WITH DUCT SEAL OR EXPANDING FOAM. DO NOT USE SILICONE TO SEAL CONDUIT ENDS.
9. FOR ALL CONDUITS, ENSURE THE BURIAL DEPTH IS A MINIMUM OF 18". ENSURE THE MINIMUM BURIAL DEPTH FOR CONDUIT PLACED UNDER A ROADWAY IS 24".
10. ALL PAVING CUT, OPEN CUT, BORES SHALL FOLLOW DSC AND CITY CODE RESTORATIONS.



BAND MOUNT BRACKET DETAIL



NOTES FOR VIDEO DETECTION:

1. INSTALL VIDEO DETECTION PROCESSOR UNIT INSIDE CONTROLLER CABINET.
2. INSTALL VIDEO DETECTION CAMERA & BRACKET AS DETAILED OR AS DIRECTED BY THE VIDEO DETECTION SUPPLIER.
3. MOUNT CAMERAS AS FAR OVER THE ROADWAY AS POSSIBLE.
4. USE #16 STAINLESS STEEL BANDING MATERIAL TO INSTALL CAMERA MOUNTS.
5. AIM CAMERA SO THAT HORIZON IS NOT VISIBLE IN THE FIELD OF VIEW.
6. INSTALL CAMERA ENCLOSURE ASSEMBLY SO THAT IT CAN ROTATE AFTER INSTALLATION TO PROVIDE PROPER ALIGNMENT.
7. PROVIDE WATER TIGHT CABLE ENTRY AND EXIT POINTS IN THE MAST ARM AND/OR POLES.
8. FOR VIDS COAX AND POWER CABLES ATTACHED TO LUMINAIRE ARM, PROVIDE A METAL CABLE STRAP (ALUMINUM OR STAINLESS STEEL), 3/4-IN MINIMUM WIDTH AND TWO WRAPS AT 8 IN. MAXIMUM SPACING.

- * 4 FT. PIPE EXTENSION WHEN MOUNTED ON TRAFFIC SIGNAL MAST ARM.
- ** 3/4 IN. (MIN) STAINLESS STEEL BANDING 2 PLACES MIN.
- *** ENTRY INTO STEEL POLE OR CONDUIT WEATHERHEAD ON WOOD POLE

1A
C-04.1

STANDARD DETAILS

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



4/15/2021

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

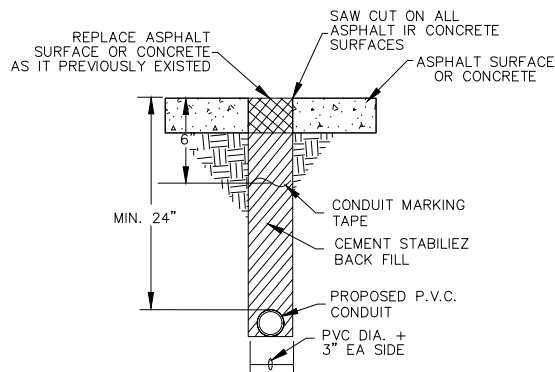


GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

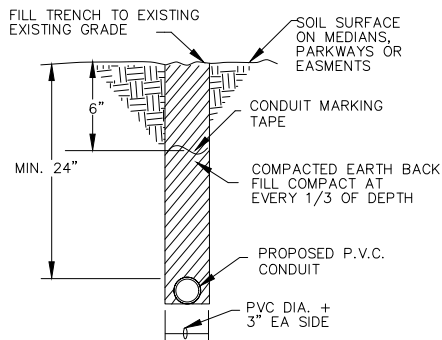
TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR
TRAFFIC SIGNAL SYSTEM
STANDARD DETAILS

C-04.1

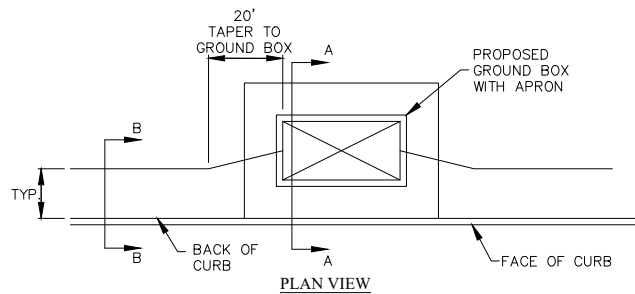
TRENCH DEPTH CHART	
SYSTEM	DEPTH (MIN)
ILLUMINATION	24 INCHES
TRAFFIC SIGNALS	24 INCHES
TRAFFIC MANAGEMENT	42 INCHES
TRAFFIC MANAGEMENT (BORED)	60 INCHES



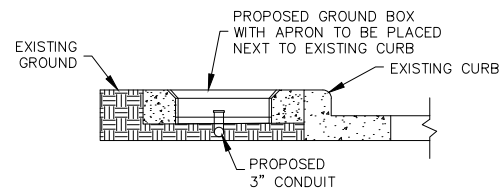
PAVEMENT CUT



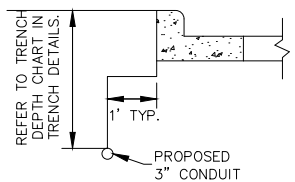
OPEN CUT TRENCH



PLAN VIEW



SECTION A-A



SECTION B-B

CONDUIT AND GROUND BOX
INSTALLATION FOR INTERCONNECT PLAN
NTS

1A
C-04.2

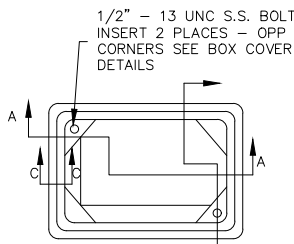
STANDARD DETAILS

NOTE:

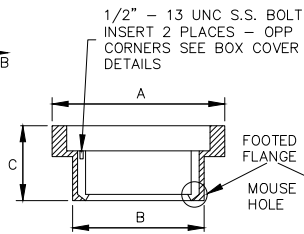
- ALL INTERCONNECT GROUND BOXES SHALL BE PLACED AS SHOWN IN THE DETAILS AND PLANS. WHERE PROPOSED GROUND BOX LOCATIONS ARE WITHIN A DRIVEWAY OR CROSS STREET, THE GROUND BOX SHALL BE PLACED AT LEAST 30 FEET FROM THE DRIVEWAY OR CROSS STREET, AND AT MOST 500 FEET FROM ADJACENT INTERCONNECT GROUND BOXES.
- PLACING INTERCONNECT GROUND BOXES WITHIN SIDEWALKS OR RAMPS IS PROHIBITED.

NOTE:

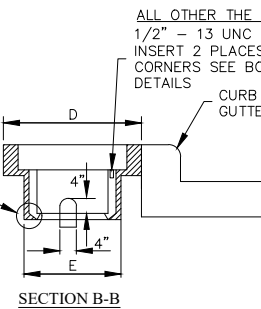
SAW CUT CONCRETE AND PATCH WHEN BOX IS PLACED ON SIDEWALK.



SECTION C-C



SECTION A-A



SECTION B-B

COMPOSITE CONCRETE (RMC) JUNCTION BOX DETAIL

GROUND BOX NOTES:

NTS

- GROUND BOXES SHALL BE MANUFACTURED FROM REINFORCED POLYMER CONCRETE (RMC) COMPOSED OF BAROSILICATE GLASS FIBER, A CATALYZED POLYESTER RESIN AND AN AGGREGATE. SIDEWALLS SHALL BE FIBER REINFORCED POLYMER.
- MINIMUM INSIDE DIMENSION SHALL BE AS FOLLOWS (WIDTH X LENGTH X DEPTH)

TYPE AA SHALL BE 9 INCHES X 16 INCHES X 10 INCHES
TYPE A SHALL BE 11.5 INCHES X 21 INCHES X 10 INCHES
TYPE B SHALL BE 11.5 INCHES X 21 INCHES X 20 INCHES
TYPE C SHALL BE 15.25 INCHES X 28.25 INCHES X 10 INCHES
TYPE D SHALL BE 15.25 INCHES X 28.25 INCHES X 20 INCHES
TYPE E SHALL BE 11.25 INCHES X 21 INCHES X 16 INCHES

- BOTTOM EDGE OF BOX SHALL BE FOOTED WITH A MINIMUM 1-1/4" FLANGE.
- GROUND BOX SHALL HAVE OPEN BOTTOM.
- GROUND BOXES SHALL WITHSTAND A TEST LOADING OF 20,000 LBS. OVER A 10 INCH BY 10 INCH AREA CENTERED ON THE LID AND A 600 LBS. PER SQ.FT. APPLIED OVER THE ENTIRE SIDE WALL. THE MODEL OF GROUND BOX SHALL HAVE BEEN TESTED TO MEET LOADING REQUIREMENTS BY A TESTING LABORATORY. THE LABORATORY SHALL BE INDEPENDENT OF THE MANUFACTURER AND CERTIFICATION OF SUCH TESTS SHALL BE SUBMITTED TO THE DEPUTY DIRECTOR FOR STREETS OR HIS DESIGNATED REPRESENTATIVE FOR APPROVAL.
- COVERS SHALL BE 2 INCH (NOMINAL) THICK POLYMER CONCRETE. COVER SHALL BE SECURED WITH 1/2 INCH STAINLESS STEEL BOLTS. BOLTS SHALL BE CAPTIVE AND SHALL WITHSTAND A MINIMUM OF 70 FT-LBS TORQUE. AND SHALL HAVE A MINIMUM 750 LBS. STRAIGHT PULL STRENGTH. COVERS SHALL BE SKID RESISTANT, MINIMUM 0.5 COEFFICIENT OF FRICTION. COVERS, EXCEPT AA, SHALL BE INTERCHANGEABLE BETWEEN MANUFACTURERS AND SHALL CONFORM TO THE DIMENSIONS SHOWN ABOVE. COVER SHALL BE LEGIBLY IMPRINTED WITH THE WORDS "TRAFFIC SIGNAL" AND "DANGER HIGH VOLTAGE" IN MINIMUM 1 INCH LETTERS.

GROUND BOX COVER DIMENSIONS						
GROUND BOX TYPE	DIMENSIONS (INCHES)					
	H	I	J	K	L	M
AA	18-1/8	14-5/8	11-1/4	7-3/4	1-3/4	1-3/4
A, B, E	23-1/4	19-3/4	13-3/4	10-1/4	2	1-3/4
C, D	30-1/2	26-1/2	17-1/2	13-1/2	2	2
1	36	-	24	-	3	-

GROUND BOX DIMENSIONS					
GROUND BOX TYPE	DIMENSIONS (INCHES)				
	A	B	C	D	E
AA	20-1/4	17-3/4	12	13-3/8	10-7/8
A	25	21-3/4	12	15-1/2	12-1/4
B	25	21-3/4	21-13/16	15-1/2	12-1/4
C	32-1/4	29-1/4	12	19-1/4	16-1/4
D	32-1/4	28-3/4	24	19-1/4	15-3/4
E	25	21-3/4	18	15-1/2	12-1/4

AGGREGATE GRADATION REQUIREMENTS (CUMULATIVE% RETAINED)		
SIEVE	GRADE	
	3S	4S
1"	-	-
7/8"	-	-
3/4"	0	-
5/8"	0-5	0
1/2"	55-85	0-5
3/8"	95-100	60-85
1/4"	-	-
#4	-	95-100
#8	99-100	98-100

NOTES:

- ROUND TEST RESULTS TO NEAREST WHOLE NUMBER.
- SINGLE-SIZE GRADATION.

APRON FOR GROUND BOX

- UNIFORMLY SPACE ENDS OF CONDUITS WITHIN THE GROUND BOX. POSITION ENDS OF CONDUITS SO THAT GROUND BOX WALLS DO NOT INTERFERE WITH THE INSTALLATION OF GROUNDING BUSHINGS OR BELL END FITTINGS.
- MAINTAIN SUFFICIENT SPACE BETWEEN CONDUITS TO ALLOW FOR PROPER INSTALLATION OF BUSHING.
- PLACE AGGREGATE UNDER THE BOX, NOT IN THE BOX. AGGREGATE SHOULD NOT ENCRONCH ON THE INTERIOR VOLUME OF THE BOX.
- INSTALL A GROUNDING BUSHING ON THE UPPER END OF ALL RMC TERMINATING IN A GROUND BOX. GROUND RMC ELBOWS WHEN ANY PART OF THE ELBOW IS LESS THAN 18 IN. BELOW THE BOTTOM OF THE GROUND BOX. INSTALL A PVC BUSHING OR BELL END FITTING ON THE UPPER END OF ALL PVC CONDUITS TERMINATING IN A GROUND BOX.

WARNING! BEFORE YOU DIG

CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811 CITY OF EL PASO STREETS AND MAINTENANCE EL PASO WATER UTILITIES TEXAS GAS SERVICE EL PASO NATURAL GAS AT&T EL PASO ELECTRIC COMPANY SPECTRUM	811 1-915-212-0118 1-915-594-5500 1-800-700-2443 1-800-334-8047 1-800-924-9420 1-800-252-1133 1-915-772-1123
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



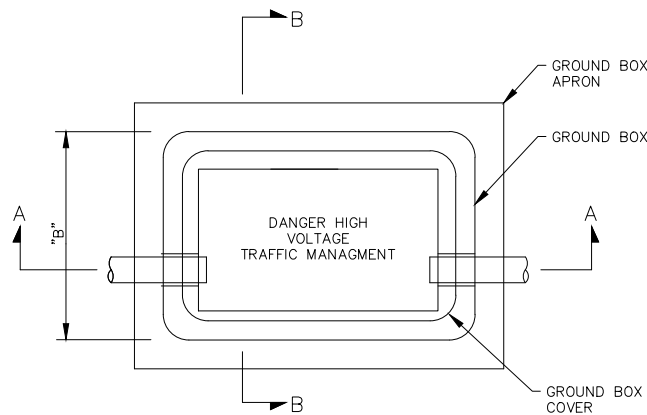
"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



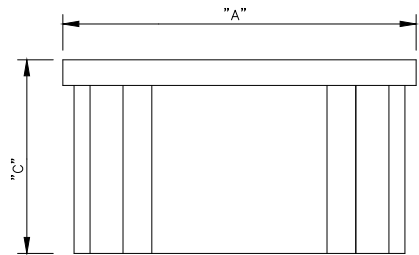
GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBP# F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN N. ZARAGOZA RD AND HENRY BRENNAN DR

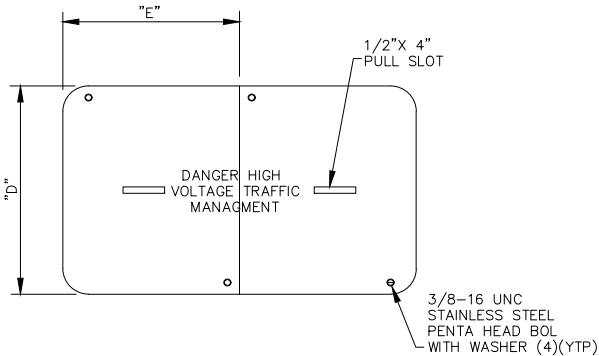
JUNCTION BOX STANDARD DETAILS 1 OF 2 C-04.2



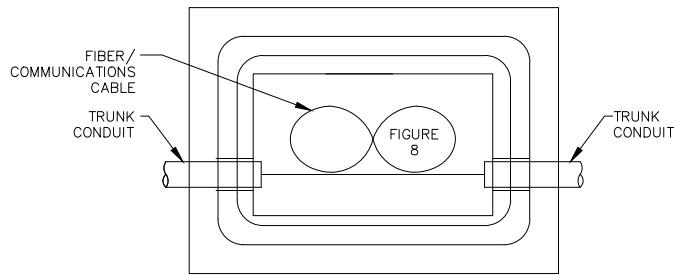
PLAN VIEW
N.T.S.



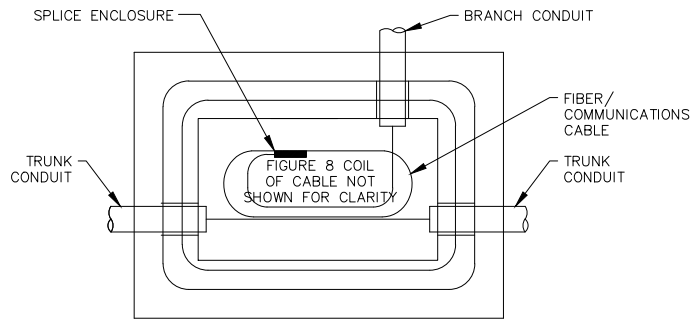
TYPICAL GROUND BOX
N.T.S.



COVER
N.T.S.



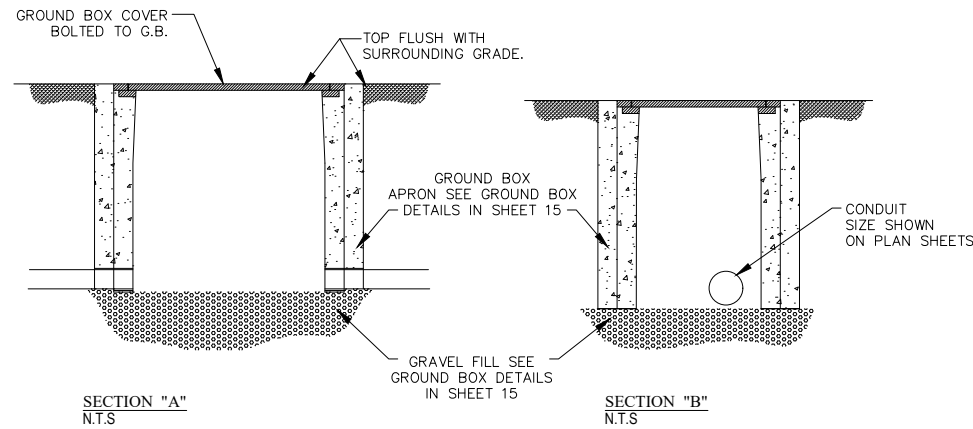
TYPICAL CABLE CONFIGURATION INSIDE GROUND BOX
N.T.S.



TY 2 GROUND BOX WITH SPLICE
N.T.S.

GROUND BOX COVER DIMENSIONS				
GROUND BOX TYPE	DIMENSIONS (INCHES)			
	D	E	F	G
1	28	23	46	3
2	34	29	58	3

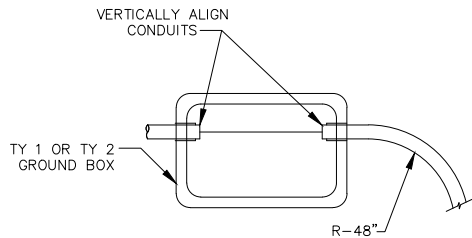
GROUND BOX SCHEDULE			
GROUND BOX TYPE	"A" LENGTH (INCHES)	"B" LENGTH (INCHES)	"C" LENGTH (INCHES)
1	48	30	48
2	60	36	48



SECTION "A"
N.T.S.

SECTION "B"
N.T.S.

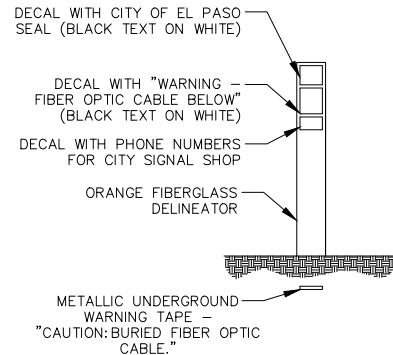
NOTES



CONDUIT BENDS
N.T.S.

NOTES

- SEE GROUND BOX DETAIL IN SHEET 15 FOR CONCRETE APRON DETAILS AND ADDITIONAL GROUND BOX REQUIREMENTS.
- CONDUIT SHOWN IS FOR EXAMPLE ONLY. ADDITIONAL CONDUITS MAY BE REQUIRED AS SHOWN ON THE PLAN SHEETS.
- GROUND BOX AND GROUND BOX COVERS SHALL BE POLYMER CONCRETE.
- TY 2 GROUND BOXES SHALL BE USED AS SHOWN ON THE PLANS WHEN SPLICE ENCLOSURES ARE REQUIRED.
- A MINIMUM BEND RADIUS OF 48" SHALL BE MAINTAINED ON ALL CONDUITS CONTAINING FIBER OPTIC CABLE. FOR COMMUNICATIONS CABLE, THE BEND RADIUS SHALL BE SIX TIMES THE CONDUIT DIAMETER.
- ALL BENDS SHALL BE FACTORY BENDS.
- CONTRACTOR SHALL ADAPT CONDUITS STUB OUTS IF REQUIRED ON THE PLAN LAYOUT SHEETS.
- ADDITIONAL CONDUIT ENTRANCES SHALL BE PROVIDED AS SHOWN ON THE PLAN LAYOUT SHEETS.
- SLACK OF 50 FEET FOR THE 12 STRAND PIG TAIL SHALL BE PROVIDED AT GROUND BOX TYPE 2 WHERE SPLICING OCCURS.



FLEXIBLE POST MARKING FIBER OPTIC CABLE LOCATION
N.T.S.

NOTES

- CONTRACTOR SHALL COORDINATE WITH THE CITY OF EL PASO STREET AND MAINTENANCE DEPARTMENT FOR INFORMATION TO BE INCLUDED ON FIBER OPTIC CABLE ROAD MARKERS.
- SPACE FIBER OPTIC CABLE ROAD MARKERS AT MAXIMUM 1000 FT. INTERVALS OR AT SIGNIFICANT CHANGES IN DIRECTION SUCH AS A 90 DEGREE TURN.

1A
C-04.3

STANDARD DETAILS

WARNING! BEFORE YOU DIG

CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

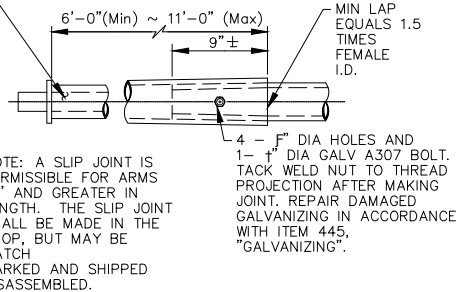
JUNCTION BOX
STANDARD DETAILS
2 OF 2
C-04.3

ARM LENGTH	ROUND POLES					POLYGONAL POLES					FOUNDATION TYPE
	D _B	D ₁₉	D ₂₄	D ₃₀	① THK	D _B	D ₁₉	D ₂₄	D ₃₀	① THK	
FT	IN.	IN.	IN.	IN.	IN.	IN.	IN.	IN.	IN.	IN.	
20	10.5	7.8	7.1	6.3	.179	11.5	8.5	7.7	6.8	.179	30-A
25	11.5	8.8	8.1	7.3	.179	12.5	9.5	8.7	7.8	.179	30-A
30	12.5	9.8	9.1	8.3	.179	12.0	9.0	8.2	7.3	.239	30-A
35	12.0	9.3	8.6	7.8	.239	12.5	9.5	8.7	7.8	.239	30-A
40	12.0	9.3	8.6	7.8	.239	13.5	10.5	9.7	8.8	.239	36-A
48	13.0	10.3	9.6	8.8	.239	15.0	12.0	11.2	10.3	.239	36-A

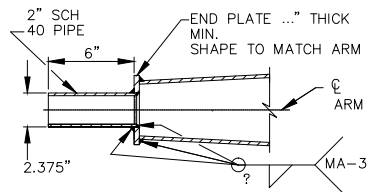
ARM LENGTH	ROUND ARMS					POLYGONAL ARMS				
	L ₁	D ₁	D ₂	① THK	RISE	L ₁	D ₁	② D ₂	① THK	RISE
FT	ft.	in.	in.	in.		ft.	in.	in.	in.	
20	19.1	6.5	3.8	.179	1'-9"	19.1	7.0	3.5	.179	1'-8"
25	27.1	8.0	4.2	.179	1'-11"	27.1	8.0	3.5	.179	1'-10"
30	31.0	9.0	4.7	.179	2'-1"	31.0	9.0	3.5	.179	2'-0"
35	35.0	9.5	4.6	.179	2'-4"	35.0	10.0	3.5	.179	2'-1"
40	39.0	9.5	4.1	.239	2'-8"	39.0	9.5	3.5	.239	2'-3"
48	47.0	10.5	4.1	.239	3'-4"	47.0	11.0	3.5	.239	2'-9"

D_B = POLE BASE O.D.
D₁₉ = POLE TOP O.D. WITH NO LUMINAIRE AND NO ILSN
D₂₄ = POLE TOP O.D. WITH ILSN W/OUT LUMINAIRE
D₃₀ = POLE TOP O.D. WITH LUMINAIRE
D₁ = ARM BASE O.D.
① THICKNESS SHOWN ARE MINIMUMS, THICKER MATERIALS MAY BE USED.
② D₂ MAY BE INCREASED BY UP TO 1" FOR POLYGONAL ARMS.

.179" THICKNESS IS PERMISSIBLE FOR TIP SECTION



SLIP JOINT DETAIL

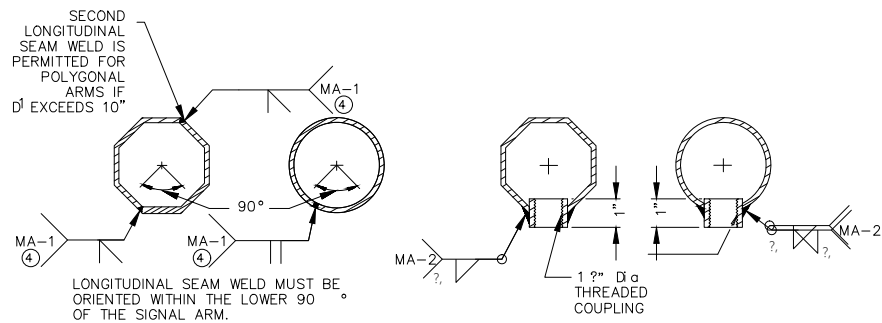


TENON DETAIL

STRUCTURE ASSEMBLY

STAINLESS STEEL BANDS (OR CABLES) AND CAST BRACKET AS IN "ASTRO-BRAC", "SKY BRACKET" OR "EASY BRACKET" WITH 1" DIA THREADED COUPLING.

BRACKET ASSEMBLY



ARM WELD DETAIL

ARM COUPLING DETAILS

④ 60% MIN. PENETRATION 100% PENETRATION WITHIN 6" OF CIRCUMFERENTIAL BASE WELDS.



VIBRATION WARNING

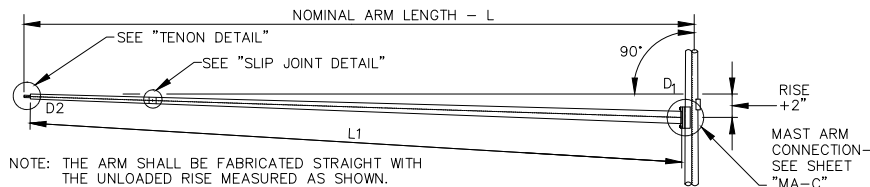
MAST ARMS OF SMA AND DMA STRUCTURES AND CLAMP-ON ARMS OF LMA STRUCTURES OF APPROXIMATELY 40 FT OR LONGER ARE SUBJECT TO HARMONIC VERTICAL VIBRATIONS IN LIGHT WIND CONDITIONS DUE TO THE AEROLASTIC CHARACTERISTICS OF A FEW OF THE MYRIADS OF POSSIBLE COMBINATIONS OF THE FOLLOWING: SIGNAL NUMBERS, WEIGHTS AND POSITIONS; EXISTENCE/SOLIDITY OF BACKPLATES; PRESENCE OF ADDITIONAL ATTACHMENTS TO THE ARM, SUCH AS SIGNS AND CAMERAS; ARM-WIND ORIENTATION; AND ARM-POLE STIFFNESS.

SUCH VIBRATIONS MAY CAUSE FATIGUE DAMAGE TO THE STRUCTURE AND MAY LEAD TO GALLOPING IN MODERATE WIND CONDITIONS WHICH MAY FURTHER DAMAGE THE STRUCTURE AND ALARM THE PUBLIC. TESTS HAVE INDICATED THAT WHEN WIND IS BLOWING TOWARD THE BACK SIDE OF SIGNAL HEADS HAVING UN-VENTED BACKPLATES ATTACHED THE PROBABILITY OF UNACCEPTABLE HARMONIC VIBRATION AND/OR GALLOPING IS RATHER HIGH.

IF BACKPLATES ARE NOT REQUIRED FOR IMPROVED VISIBILITY THEY SHOULD NOT BE APPLIED TO THE SIGNAL HEADS OR, IF THEY MUST BE APPLIED, THEY SHOULD BE VENTED AS A FIRST AND INEXPENSIVE MEASURE TO MITIGATE VIBRATIONS.

THE TRAFFIC SIGNAL MAST ARMS SHALL BE VISUALLY INSPECTED IN 5 TO 20 MPH WIND CONDITIONS AFTER INSTALLATION OF SIGNAL HEADS AND ANY ATTACHMENTS, INCLUDING ANY REQUIRED BACKPLATES. IF VERTICAL MOVEMENTS WITH A TOTAL EXCURSION (MAXIMUM UPWARD EXCURSION TO MAXIMUM DOWNWARD EXCURSION) OF MORE THAN APPROXIMATELY 8" ARE OBSERVED AT THE ARM TIP, A DAMPING PLATE SHALL BE FITTED TO THE ARM. SEE "DAMPING PLATE MOUNTING DETAILS" ON STANDARD SHEET, MA-DPD-10.

THIS VISUAL INSPECTION SHALL BE REPEATED AFTER EACH MODIFICATION OF THE STRUCTURE THAT COULD AFFECT ITS AEROLASTIC RESPONSE. EXCESSIVE VIBRATIONS SHALL NOT BE ALLOWED TO CONTINUE FOR MORE THAN TWO DAYS.



TRAFFIC SIGNAL ARM
(FIXED MOUNT)

DESIGN CONFORMS TO 1994 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS AND INTERIM SPECIFICATIONS THERETO. DESIGN WIND SPEED EQUALS 80 MPH PLUS A 1.3 GUST FACTOR.

SEE STANDARD SHEET "MA-D" FOR POLE DETAILS, "MA-C" FOR TRAFFIC SIGNAL ARM CONNECTION DETAILS, "MA-C (ILSN)" FOR INTERNALLY LIGHTED STREET NAME SIGN ARM CONNECTION DETAILS, "LUM-A" FOR LUMINAIRE ARM AND CONNECTION DETAILS, "SNS" FOR INTERNALLY LIGHTED STREET NAME SIGN DETAILS, AND "TS-FD" FOR ANCHOR BOLT AND FOUNDATION DETAILS. SEE "MA-C" FOR MATERIAL SPECIFICATIONS.

FABRICATION SHALL BE IN ACCORDANCE WITH ITEM 686, "TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)" AND WITH THE DETAILS, DIMENSIONS, AND WELD PROCEDURES SHOWN HEREIN. WELD REFERENCES CALL FOR PREAPPROVED WELD PROCEDURES WHICH THE FABRICATOR MUST OBTAIN PRIOR TO FABRICATION. MATERIALS, FABRICATION TOLERANCES, AND SHIPPING PRACTICES SHALL MEET THE REQUIREMENTS OF THIS SHEET AND ITEM 686, "TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL)".

UNLESS OTHERWISE NOTED, ALL PARTS SHALL BE GALVANIZED IN ACCORDANCE WITH ITEM 445, "GALVANIZING", AFTER FABRICATION.

DEVIATION FROM THE DETAILS AND DIMENSIONS SHOWN HEREIN REQUIRE SUBMISSION OF SHOP DRAWINGS IN ACCORDANCE WITH ITEM 441, "STEEL STRUCTURES". ALTERNATE DESIGNS ARE NOT ACCEPTABLE.

SHIPPING PARTS LIST

SHIP EACH POLE WITH THE FOLLOWING ATTACHED: ENLARGED HAND HOLE, POLE CAP, FIXED-ARM CONNECTION BOLTS AND WASHERS AND ANY ADDITIONAL HARDWARE LISTED IN THE TABLE.

NOMINAL ARM LENGTH	30' POLES WITH LUMINAIRE		24' POLES WITH ILSN		19' POLES WITH NO LUMINAIRE AND NO ILSN	
	ABOVE HARDWARE PLUS: ONE (OR TWO IF ILSN ATTACHED) SMALL HAND HOLE, CLAMP-ON SIMPLEX		ABOVE HARDWARE PLUS ONE SMALL HAND HOLE		SEE NOTE ABOVE	
FT	DESIGNATION	QUANTITY	DESIGNATION	QUANTITY	DESIGNATION	QUANTITY
20	20L-80		20S-80		20-80	
25	25L-80		25S-80		25-80	1
30	30L-80		30S-80		30-80	
35	35L-80		35S-80		35-80	
40	40L-80		40S-80		40-80	
48	48L-80		48S-80		48-80	

TRAFFIC SIGNAL ARMS (1 PER POLE)

SHIP EACH ARM WITH THE LISTED EQUIPMENT ATTACHED

NOMINAL ARM LENGTH	TYPE I ARM (1 SIGNAL)		TYPE II ARM (2 SIGNALS)		TYPE III ARM (3 SIGNALS)	
	1 CGB CONNECTOR		1 BRACKET ASSEMBLY AND 2 CGB CONNECTORS		2 BRACKET ASSEMBLIES AND 3 CGB CONNECTORS	
FT	DESIGNATION	QUANTITY	DESIGNATION	QUANTITY	DESIGNATION	QUANTITY
20	20I-80					
25	25I-80		25II-80	1		
30			30II-80		30III-80	
35			35II-80		35III-80	
40					40III-80	
48					48III-80	

LUMINAIRE ARMS (1 PER 30' POLE)

NOMINAL ARM LENGTH	QUANTITY
8' ARM	

ILSN ARM (MAX. 2 PER POLE) SHIP WITH CLAMPS, BOLTS AND WASHERS

NOMINAL ARM LENGTH	QUANTITY
7' ARM	NA
9' ARM	NA

ANCHOR BOLT ASSEMBLIES (1 PER POLE)

ANCHOR BOLT CIRCLE	ANCHOR BOLT DIAMETER	ANCHOR BOLT LENGTH	QUANTITY	EACH ANCHOR BOLT ASSEMBLY CONSISTS OF THE FOLLOWING: TOP AND BOTTOM TEMPLATES, 4 ANCHOR BOLTS, 8 NUTS, 8 FLAT WASHERS, AND 4 NUT ANCHOR DEVICES (TYPE 2) PER STANDARD DRAWING "TS-FD". TEMPLATES MAY BE REMOVED FOR SHIPMENT.
16"	1-1/2"	3'-4"	1	
19"	1-3/4"	3'-10"		
21"	2"	4'-3"		

WARNING! BEFORE YOU DIG

CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

4/15/2021 ENGINEER SEAL
Marvin H. Gomez



"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN ZARAGOZA RD. AND HENRY BRENNAN DR.

MAST ARM
STANDARD DETAILS
1 OF 3
C-04.4

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL
EXISTING UNDERGROUND/OVERHEAD
IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!
IT SHALL BE THE RESPONSIBILITY OF THE
CONTRACTOR, WHETHER INDICATED ON THE
DRAWINGS OR NOT, TO VERIFY THE LOCATION,
DEPTH, AND CONDITION OF ALL EXISTING
UTILITIES AND SUBSTRUCTURES AND PROTECT
THEM FROM DAMAGE. THE CONTRACTOR SHALL
CONTACT ALL THE UTILITY COMPANIES AND
CONDUCT ALL NECESSARY FIELD INVESTIGATIONS
PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO
7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL



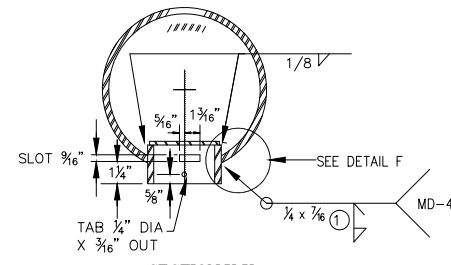
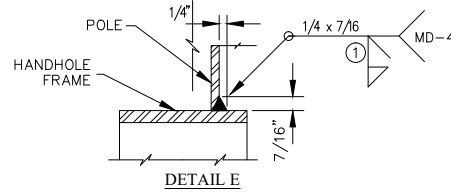
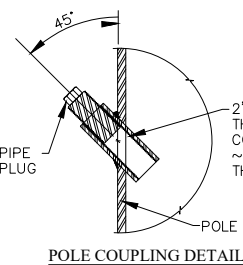
"THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
MARVIN H. GOMEZ, P.E. No. 86920
ALTERATION OF A SEALED DOCUMENT
WITHOUT PROPER NOTIFICATION
TO THE RESPONSIBLE ENGINEER IS AN
OFFENSE UNDER THE
TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

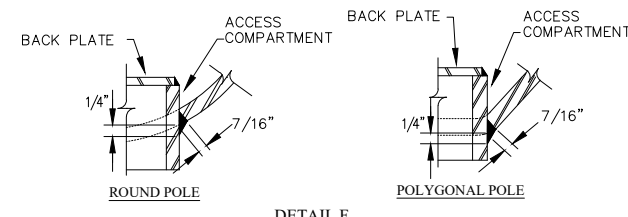
TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

MAST ARM
STANDARD DETAILS
2 OF 3
C-04.5

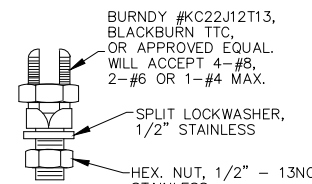
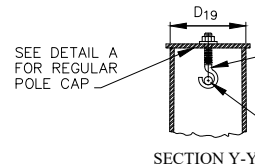
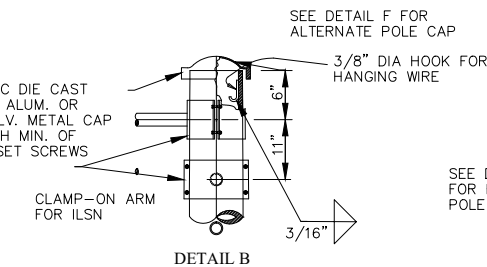
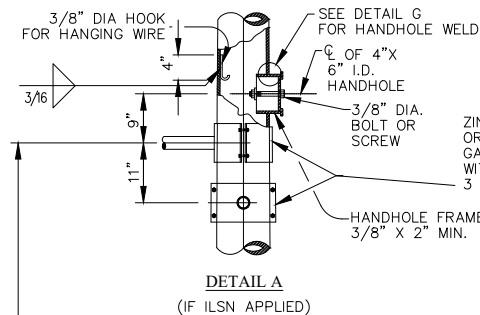


SECTION X-X

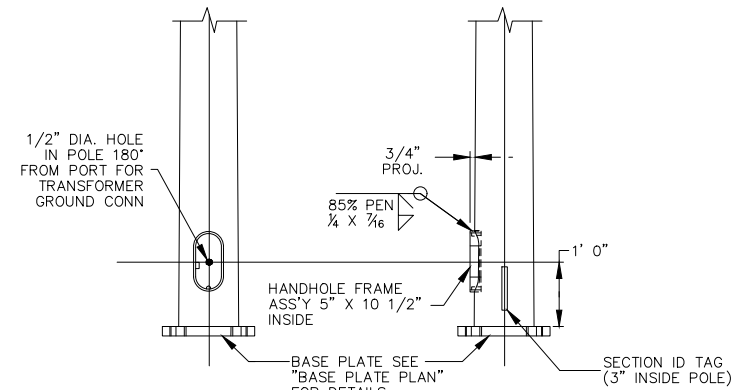
OPENING FOR ACCESS COMPARTMENT SHALL
BE NO MORE THAN 1/16 INCH WIDER THAN
THE ACCESS COMPARTMENT ITSELF.



DETAIL F



COPPER GROUND
CONNECTOR

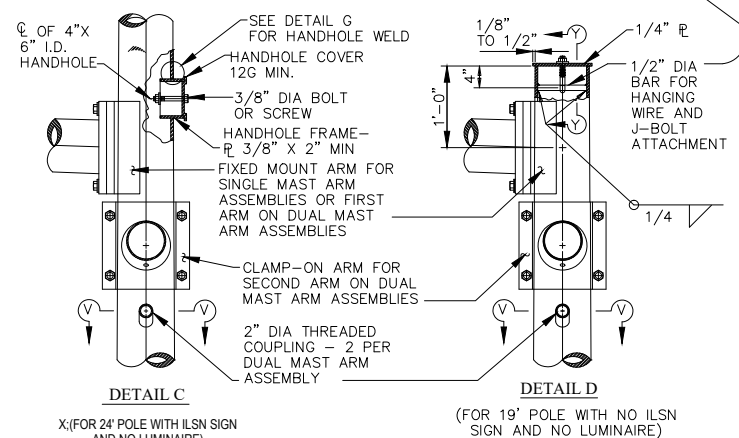


SECTION ID TAG

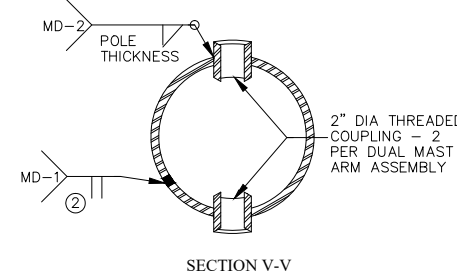
INSIDE POLE SHAFT = 12-0044-PAA-99G-"X"
"X" = NEXT TRAVELER SEQUENCE

NOTE:

1. ALL WELDING TO MEET OR EXCEED AWS D1.1.
2. COMPONENTS GALVANIZED PER ASTM A123.
3. HARDWARE GALVANIZED PER ASTM A-153.
4. STRUCTURE DETAILED IN ACCORDANCE WITH CITY OF EL PASO STANDARD DRAWINGS.
5. ALL THREATS TO BE PROTECTED DURING GALVANIZED AND CLEANED AND RE-TAPPED IF REQ'D. PLUGS TO BE INSTALLED BEFORE SHIPMENT AND MUST BE ABLE TO BE REMOVED WITHOUT THE USE OF EXCESSIVE FORCE, SPECIAL TOOLS OR HEAT.
6. ALL MATERIAL UP TO 2" THK TO BE CHAPPY V-NOTCH. TESTED TO 15FT-LBS @70 DEG F.
7. 16" BOLT CIRCLE DIAMETER FOR BASE PLATE SHALL APPLY FOR 30-A TRAFFIC SIGNAL ONLY.
8. TRAFFIC SIGNAL FOUNDATION 30-A SHALL APPLY FOR 20' TO 35' MAST ARM LENGTHS AND 16' HIGH POLE.
9. TRAFFIC SIGNAL JOINT FIX MOUNT ARM ANGLE OF 90° MUST BE USED FOR 36" MAST ARM LENGTHS AND HIGHER.

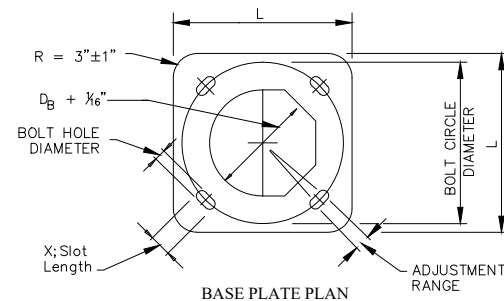


DETAIL D
(FOR 19' POLE WITH NO ILSN
SIGN AND NO LUMINAIRE)

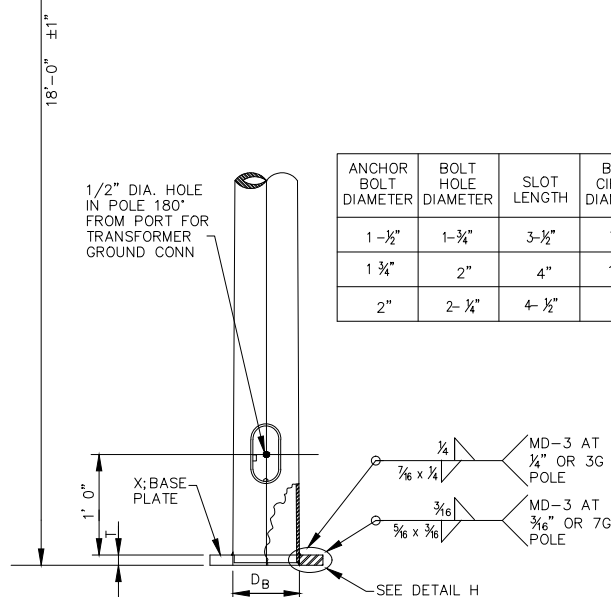


SECTION V-V

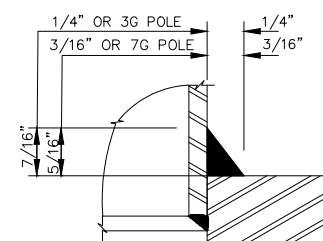
ANCHOR BOLT DIAMETER	BOLT HOLE DIAMETER	SLOT LENGTH	BOLT CIRCLE DIAMETER	BASE PLATE DIM. L X T	ADJUST. RANGE
1-1/2"	1-3/4"	3-1/2"	16"	18" x 1-3/4"	13.4"
1 3/4"	2"	4"	19"	20" x 1-3/4"	13.5"
2"	2-1/4"	4-1/2"	21"	22" x 2"	13.6"



BASE PLATE PLAN



POLE ELEVATION



DETAIL H

- ① 85% MIN. PENETRATION
- ② 60% MIN. PENETRATION
100% PENETRATION WITHIN
6" OF CIRCUMFERENTIAL
BASE WELDS.

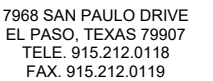
1A
C-04.5
STANDARD DETAILS

CONTRACTOR SHALL FIELD LOCATE ALL
EXISTING UNDERGROUND/OVERHEAD
IMPROVEMENTS IN PROJECT AREA

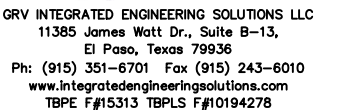
EXAS 811	811
CITY OF EL PASO	linespot@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
EL PASO GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
EL PASO T&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
EL PASO SPECTRUM	1-915-772-1123

GENERAL NOTES

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

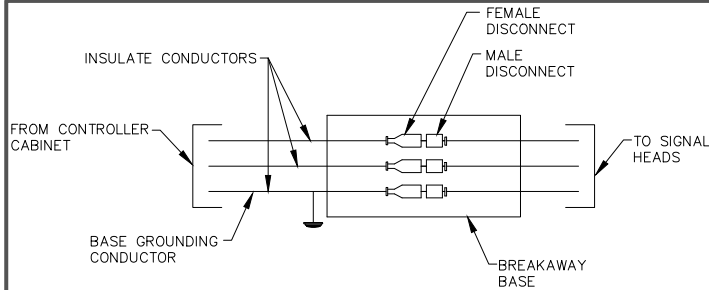


MAST ARM
STANDARD DETAILS
3 OF 3
C-04.6

SECTION ID TAG
INSIDE POLE SHAFT= 12-0044-PAA-99G-"X"
"X" - NEXT TRAVELER SEQUENCE

1. ALL WELDING TO MEET OR EXCEED AWS D11.
2. COMPONENTS GALVANIZED PER ASTM A123.
3. HARDWARE GALVANIZED PER ASTM A-153.
4. STRUCTURE DETAILED IN ACCORDANCE WITH CITY OF EL PASO STANDARD DRAWINGS.
5. ALL THREADS TO BE PROTECTED DURING GALVANIZING, CLEANED AND RE-TAPPED IF REQ'D. PLUGS TO BE INSTALLED BEFORE SHIPMENT AND MUST BE ABLE TO BE REMOVED WITHOUT THE USE OF EXCESSIVE FORCE, SPECIAL TOOLS OR HEAT.
6. ALL MATERIAL UP TO 2" THK TO BE CHARPY V-NOTCH TESTED TO 15 FT-LBS @ 70 DEG. F.
7. 16" BOLT CIRCLE DIAMETER FOR BASE PLATE SHALL APPLY FOR 30-A TRAFFIC SIGNAL FOUNDATION ONLY.
8. TRAFFIC SIGNAL FOUNDATION 30-A SHALL APPLY FOR 20' TO 35' MAST ARM LENGTHS AND 16' HIGH POLE.
9. TRAFFIC SIGNAL JOINT FIXED MOUNT ARM ANGLE OF 90 DEGREES MUST BE USED FOR 35' MAST ARM LENGTHS AND HIGHER.

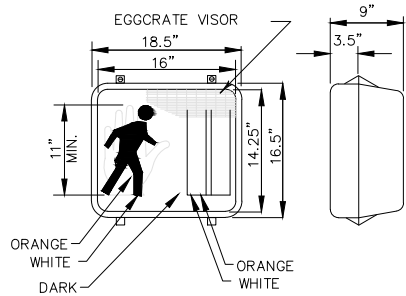




BREAKAWAY ELECTRICAL CONNECTORS
NTS

NOTES

1. PROVIDE NO-FUSED WATER TIGHT BREAKAWAY ELECTRICAL CONNECTOR FOR BREAKAWAY POLES. (BUSSMAN HET, LITTLE FUSE LET, FERRAS - SHAW - MUT FEBIN, OR APPROVED EQUAL.
2. TYPICAL FOR ALL ELECTRICAL CONDUCTORS IN A BREAKAWAY BASE.

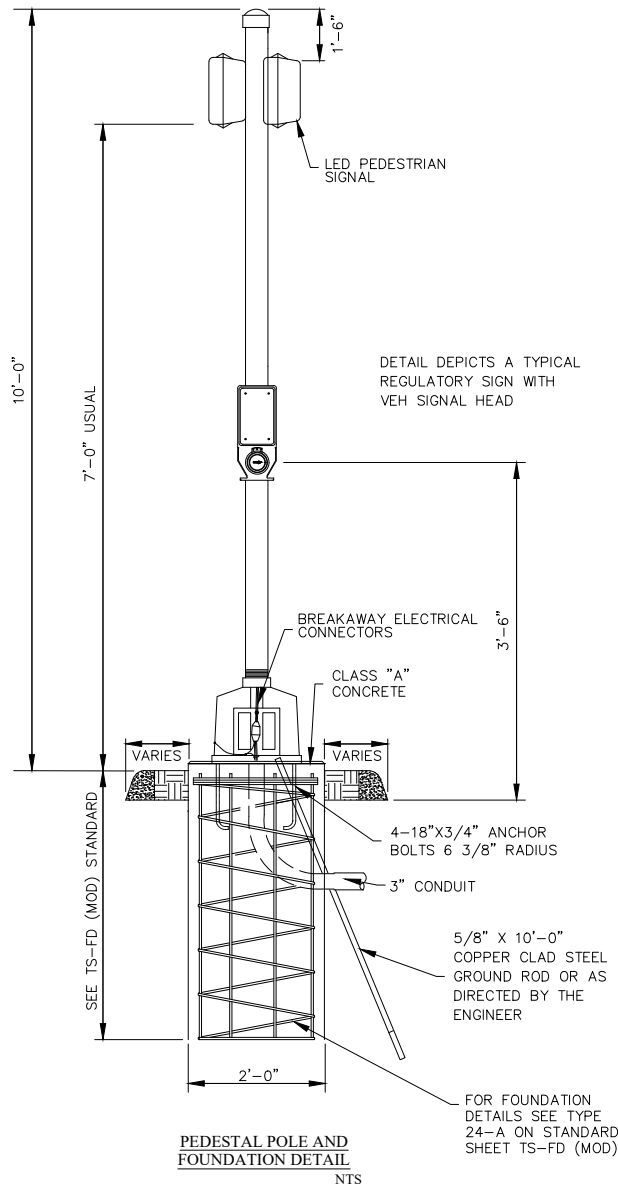


NOTE:
PEDESTRIAN SIGNAL HEADS SHALL BE EQUIPPED WITH EGGRATE VISORS AND SHALL COMPLY WITH MATERIAL SPECIFICATION TO-7062. BOTH SYMBOLIC PEDESTRIAN SIGNAL INDICATIONS SHALL BE SOLID. OUTLINED INDICATIONS ARE NOT ACCEPTABLE.

COUNTDOWN PEDESTRIAN
SIGNAL HEAD
NTS

NOTES

1. ALL SIGNAL HEADS SHALL BE OF THE SAME MANUFACTURER AND ALL OF THESE SHALL BE INTERCHANGEABLE WITH OTHER UNITS OF THE SAME TYPE.
2. PUSH BUTTON AND SIGN SHALL BE INSTALLED IN FRONT OF THE TRAFFIC SIGNAL POLE OR PEDESTRIAN POLE IN THE DIRECTIONAL PATH OF PEDESTRIANS.
3. ACCESSIBLE PEDESTRIAN SIGNAL PUSH BUTTON SHALL COMPLY WITH THE MUTCD.
4. THE COMBINATION PUSH BUTTON AND SIGN IS SHOWN AS AN EXAMPLE. SIGNS AND BUTTONS OF OTHER DESIGNS MAY BE USED WITH APPROVAL BY THE ENGINEER.
5. REFER TO SPECIFICATIONS FOR LATERAL AND VERTICAL CLEARANCES AND SIGN MOUNTING DETAILS.
6. PER CITY OF EL PASO STANDARDS, THE DISTANCE FROM THE PUSH BUTTON TO THE LANDING SHALL NOT EXCEED 16 INCHES.
7. ALL APS UNITS SHALL BE DELIVERED TO CITY OF EL PASO STREETS AND MAINTENANCE DEPARTMENT FOR VOICE PROGRAMMING.



PEDESTAL POLE AND
FOUNDATION DETAIL
NTS

GENERAL NOTES

1.

SIGN SUPPORT	# OF POST	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

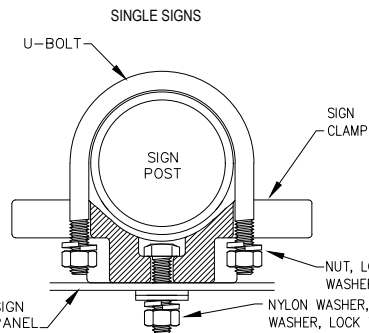
2. THE ENGINEER MAY REQUIRED THAT A SCHEDULE 80 POST BE USED IN PLACE OF A 10 BWG WHERE A SIGN HEIGHT IS ABNORMALLY HIGH DUE TO A FILL SLOPE.
3. SIGN SUPPORTS SHALL NOT BE SPLICED EXCEPT WHERE SHOWN. SIGN SUPPORT POSTS SHALL NOT BE SPLICED.
4. ALUMINUM SIGN BLANKS SHALL CONFORM TO DEPARTMENT MATERIAL SPECIFICATIONS DMS- 7110 AND SHALL HAVE THE FOLLOWING MINIMUM THICKNESSES: 0.080 FOR SIGNS LESS THAN 7.5 SQ. FT., 0.100 FOR SIGNS 7.5 TO 15 SQ. FT., AND 0.125 FOR SIGNS GREATER THAN 15 SQ. FT.
5. FOR HORIZONTAL RECTANGULAR SIGNS FABRICATED FROM FLAT ALUMINUM. T - BRACKETS ARE USED FOR SIGNS 24 INCHES OR LESS IN HEIGHT. U - BRACKETS ARE USED FOR SIGNS OF GREATER HEIGHT.
6. WHEN TWO RECTANGULAR SLIPBASE SUPPORTS ARE USED TO SUPPORT A SINGLE SIGN. THEY SHALL NOT BE "RIGIDLY"CONNECTED TO EACH OTHER EXCEPT THROUGH THE SIGN PANEL. THIS WILL ALLOW EACH SUPPORT TO ACT INDEPENDENTLY WHEN IMPACTED BY AN ERRANT VEHICLE.
7. EXCESS PIPE OR WINDBEAM SHALL BE CUT OFF SO THAT IT DOES NOT EXTEND BEYOND THE SIGN PANEL (I.E. EXCESS SUPPORT SHALL NOT BE VISIBLE WHEN THE SIGN IS VIEWED FROM THE FRONT.) REPAIR GALVANIZED COATING AT CUT SUPPORT ENDS PER ITEM 445, "GALVANIZING."
8. ADDITIONAL ROUTE MARKERS MAY BE ADDED VERTICALLY, PROVIDED THE TOTAL SIGN AREA DOES NOT EXCEED THE MAXIMUM ALLOWABLE AMOUNT PER NOTE 1.
9. POST OPEN ENDS SHALL BE FITTED WITH FRICTION CAPS.
10. SIGN BLANKS SHALL BE THE SIZES AND SHAPES SHOWN ON THE PLANS.

SIGNS SHALL BE MOUNTED USING THE FOLLOWING CONDITION THAT RESULTS IN THE GREATEST SIGN ELEVATION:

1. A MINIMUM OF 7 TO A MAXIMUM OF 7.5 FEET ABOVE THE EDGE OF THE TRAVEL LANE OR
2. A MINIMUM OF 7 TO A MAXIMUM OF 7.5 FEET ABOVE THE GRADE AT THE BASE OF THE SUPPORT WHEN SIGN IS INSTALLED ON THE BACKSLOPE.

THE MAXIMUM VALUES MAY BE INCREASED WHEN DIRECTED BY THE ENGINEER.

WHEN A SUPPLEMENTAL PLAQUE OR SECONDARY SIGN IS USED, THE 7 FT. SIGN HEIGHT IS MEASURED TO THE BOTTOM OF THE SUPPLEMENTAL PLAQUE OR SECONDARY SIGN.

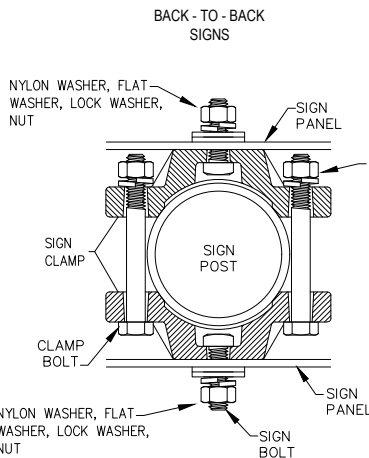


BOLTS USED TO MOUNT SIGN PANELS TO THE CLAMP

ARE 5/16-18 UNC GALVANIZED SQUARE HEAD WITH NUT, NYLON WASHER, FLAT WASHER AND LOCK WASHER. THE BOLT LENGTH IS 1 INCH FOR ALUMINUM.

WHEN TWO SIGN CLAMPS ARE USED TO MOUNT SIGNS BACK-TO-BACK, USE A 5/16-18 UNC GALVANIZED HEX HEAD PER ASTM A307 WITH NUT AND HELICAL-SPRING LOCK WASHER. THE APPROXIMATE BOLT LENGTHS FOR VARIOUS POST SIZES AND SIGN CLAMP TYPES ARE GIVEN IN THE TABLE AT RIGHT. THE BOLT LENGTH MAY NEED TO BE ADJUSTED DEPENDING UPON FIELD CONDITIONS.

SIGN CLAMPS MAY BE EITHER THE SPECIFIC SIZE CLAMP OR THE UNIVERSAL CLAMP.



PIPE DIAMETER	APPROXIMATE BOLT LENGTH	
	SPECIFIC CLAMP	UNIVERSAL CLAMP
2" NOMINAL	3"	3 OR 3 1/2"
2 1/2" NOMINAL	3 or 3 1/2"	3 1/2 OR 4"
3" NOMINAL	3 1/2 OR 4"	4 1/2"

TYPICAL SIGN ATTACHMENT DETAIL

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811
CITY OF EL PASO
STREETS AND MAINTENANCE
EL PASO WATER UTILITIES
TEXAS GAS SERVICE
EL PASO NATURAL GAS
AT&T
EL PASO ELECTRIC COMPANY
SPECTRUM

811
linespots@elpasotexas.gov
1-915-212-0118
1-915-594-5500
1-800-700-2443
1-800-334-8047
1-800-924-9420
1-800-252-1133
1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL

Marvin H. Gomez
4/15/2021
MARVIN H. GOMEZ
P.E. No. 86920
LICENSED ENGINEER

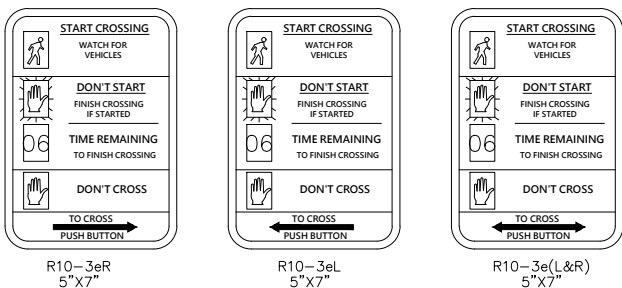
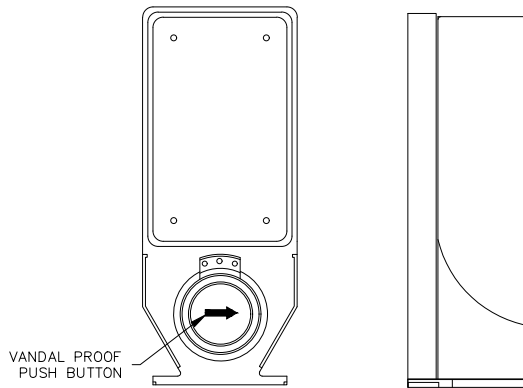
"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



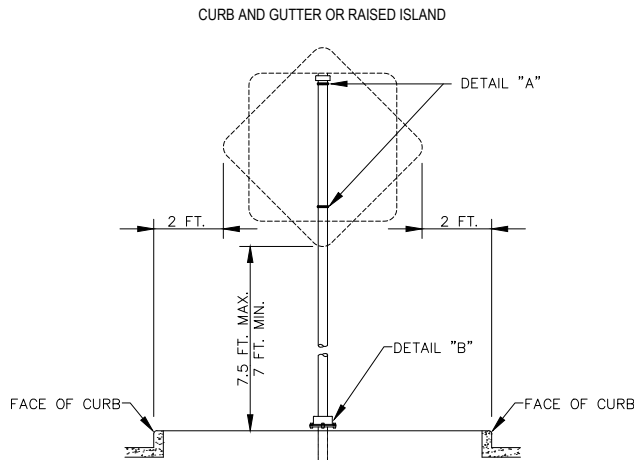
GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBP# F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

PEDESTRIAN POLE
STANDARD DETAILS
1 OF 2
C-04.8



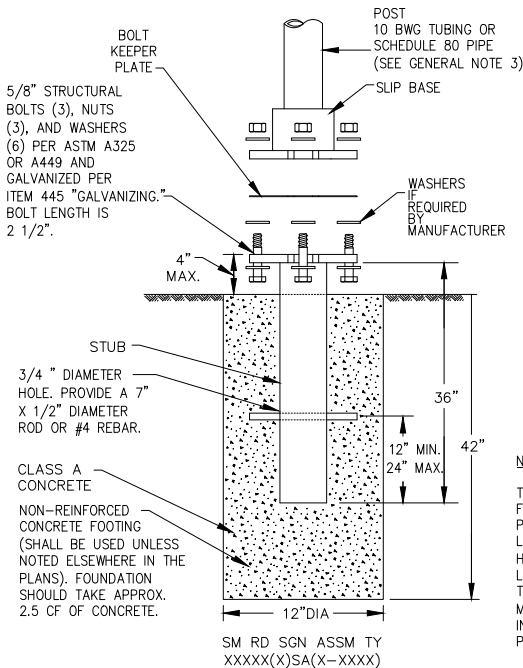
APS PEDESTRIAN PUSH BUTTON UNIT
WITH MOUNTABLE SIGNS
NTS



SIGN MOUNTING AND ASSEMBLY DETAIL
NTS

NOTES

- SLIP BASE SHALL BE PERMANENTLY MARKED TO INDICATE MANUFACTURER, METHOD, DESIGN, AND LOCATION OF MARKING ARE SUBJECT TO APPROVAL OF THE EL PASO TRAFFIC ENGINEER.
- MATERIAL USED AS POST WITH THIS SYSTEM SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 - 10 BWG TUBING (2.875" OUTSIDE DIAMETER)
 - 0.134" NOMINAL WALL THICKNESS
 - SEAMLESS OR ELECTRICAL-RESISTANCE WELDED STEEL TUBING OR PIPE
 - STEEL SHALL BE HSLAS GR 55 PER ASTM A1011 OR ASTM A1008
 - OTHER STEEL MAY BE USED IF THEY MEET THE FOLLOWING:
 - a. 55,000 PSI MINIMUM YIELD STRENGTH
 - b. 70,000 PSI MINIMUM TENSILE STRENGTH
 - c. 20% MINIMUM ELONGATION IN 2"
 - WALL THICKNESS (UNCOATED) SHALL BE WITHIN THE RANGE OF 0.122" TO 0.138"
 - OUTSIDE DIAMETER (UNCOATED) SHALL BE WITHIN THE RANGE OF 2.867" TO 2.883"
 - GALVANIZATION PER ASTM A123 OR ASTM A653 G210. FOR PRECOATED STEEL TUBING (ASTM A 653). RECOAT TUBE OUTSIDE DIAMETER WELD SEAM BY METALLIZING WITH ZINC WIRE PER ASTM B833. SIGN SUPPORTS SHALL NOT BE SPLICED EXCEPT WHERE SHOWN. SIGN SUPPORT POSTS SHALL NOT BE SPLICED.
- SIGN SUPPORTS SHALL NOT BE SPLICED EXCEPT WHERE SHOWN, SIGN SUPPORT POSTS SHALL NOT BE SPLICED.



NOTE

THERE ARE VARIOUS DEVICES APPROVED FOR THE TRIANGULAR SLIPBASE SYSTEM. PLEASE REFERENCE THE MATERIAL PRODUCER LIST FOR APPROVED SLIP BASE SYSTEMS. HTTP://WWW.TXDOT.GOV/BUSINESS/PRODUCER LIST.HTM THE DEVICES SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS. INSTALLATION PROCEDURES SHALL BE PROVIDED TO THE ENGINEER BY CONTRACTOR.

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

SUMMARY OF SIGNS		
INTERSECTION		
	5"x7"	5
	5"x7"	
	5"x7"	

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL
EXISTING UNDERGROUND/OVERHEAD
IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.



STREETS AND MAINTENANCE
CITY OF EL PASO

7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL

4/15/2021
MARVIN H. GOMEZ
P.E. No. 86920
LICENSED ENGINEER

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"



GRV INTEGRATED ENGINEERING SOLUTIONS LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

PEDESTRIAN POLE
STANDARD DETAILS
2 OF 2
C-04.9

SIGNS SHALL BE MOUNTED USING THE FOLLOWING CONDITION THAT RESULTS IN THE GREATEST SIGN ELEVATION:

- A MINIMUM OF 7 TO A MAXIMUM OF 7.5 FEET ABOVE THE EDGE OF THE TRAVEL LANE OR
- A MINIMUM OF 7 TO A MAXIMUM OF 7.5 FEET ABOVE THE GRADE AT THE BASE OF THE SUPPORT WHEN SIGN IS INSTALLED ON THE BACKSLOPE.

THE MAXIMUM VALUES MAY BE INCREASED WHEN DIRECTED BY THE ENGINEER.

WHEN A SUPPLEMENTAL PLAQUE OR SECONDARY SIGN IS USED, THE 7 FT. SIGN HEIGHT IS MEASURED TO THE BOTTOM OF THE SUPPLEMENTAL PLAQUE OR SECONDARY SIGN.

ASSEMBLY PROCEDURE

FOUNDATION

1. PREPARE 12-INCH DIAMETER BY 42-INCH DEEP HOLE. IF SOLID ROCK IS ENCOUNTERED, THE DEPTH OF THE FOUNDATION MAY BE REDUCED SUCH THAT IT IS EMBEDDED A MINIMUM OF 18 INCHES INTO THE SOLID ROCK.

2. THE ENGINEER MAY PERMIT BATCHES OF CONCRETE LESS THAN 2 CUBIC YARDS TO BE MIXED WITH A PORTABLE, MOTOR-DRIVEN CONCRETE MIXER. FOR SMALL PLACEMENTS LESS THAN 0.5 CUBIC YARDS, HAND MIXING IN A SUITABLE CONTAINER MAY BE ALLOWED BY ENGINEER. CONCRETE SHALL BE CLASS A.

3. PUSH THE PIPE END OF THE SLIP BASE STUB INTO THE CENTER OF THE CONCRETE. ROTATE THE STUB BACK AND FORTH WHILE PUSHING IT DOWN INTO THE CONCRETE TO ASSURE GOOD CONTACT BETWEEN THE CONCRETE AND STUB. CONTINUE TO WORK THE STUB INTO THE CONCRETE UNTIL IT IS BETWEEN 2 TO 4 INCHES ABOVE THE GROUND.

4. PLUMB THE STUB. ALLOW A MINIMUM OF 4 DAYS TO SET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

5. THE TRIANGULAR SLIPBASE SYSTEM IS MULTIDIRECTIONAL AND IS DESIGNED TO RELEASE WHEN STRUCK FROM ANY DIRECTION.

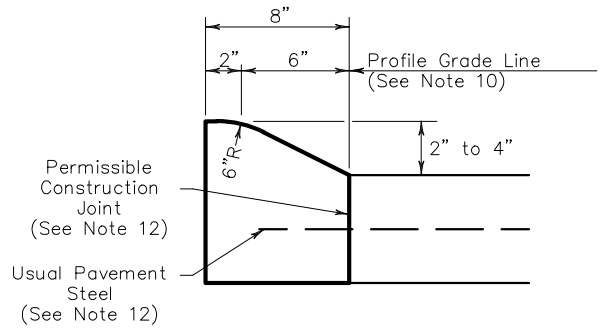
SUPPORT

1. CUT SUPPORT SO THAT THE BOTTOM OF THE SIGN WILL BE 7 TO 7.5 FEET ABOVE THE EDGE OF THE TRAVELWAY (I.E., EDGE OF THE CLOSEST LANE) WHEN SLIP PLATE IS BELOW THE EDGE OF PAVEMENT OR 7 TO 7.5 FEET ABOVE SLIP PLATE WHEN THE SLIP PLATE IS ABOVE THE EDGE OF THE TRAVELWAY. THE CUT SHALL BE PLUMB AND STRAIGHT.

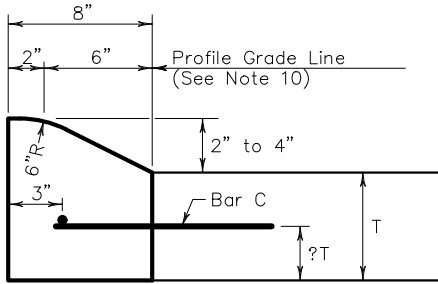
2. ATTACH SIGN TO SUPPORT USING CONNECTIONS SHOWN. WHEN MULTIPLE SIGNS ARE INSTALLED ON THE SAME SUPPORT, ENSURE THE MINIMUM CLEARANCE BETWEEN EACH SIGN IS MAINTAINED. SEE SMD(SLIP-2) FOR CLEARANCES BASED ON SIGN TYPES.

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

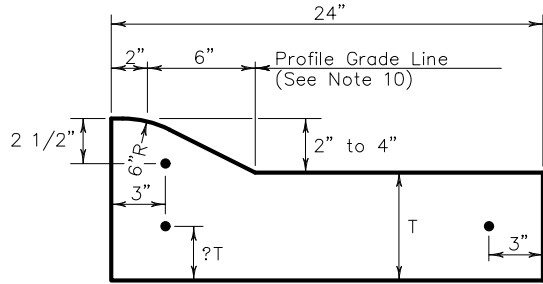
DATE: FILE:



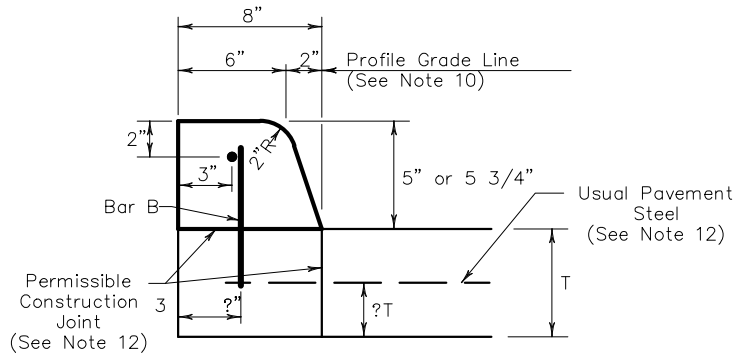
TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



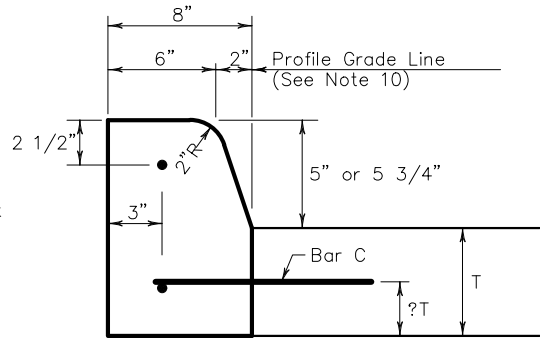
TYPE I CURB
2" - 4" HEIGHT



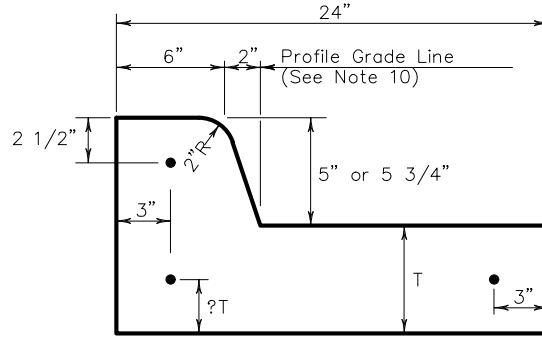
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



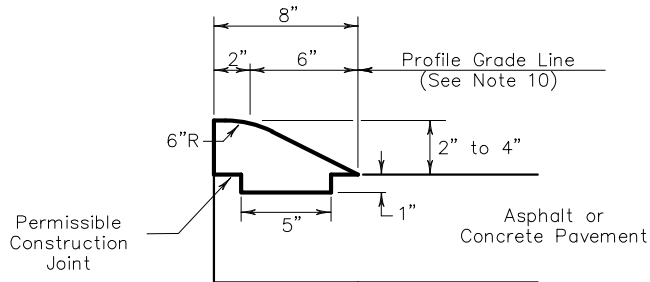
TYPE II CURB (MONOLITHIC)
5" - 5 3/4" HEIGHT



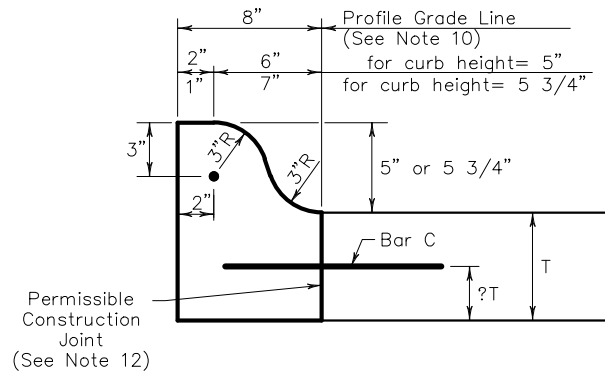
TYPE II CURB
5" - 5 3/4" HEIGHT



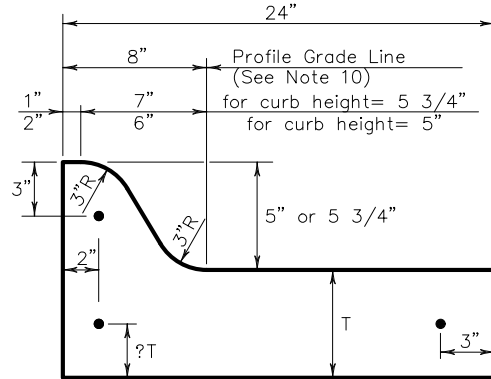
TYPE II CURB AND GUTTER
5" - 5 3/4" HEIGHT



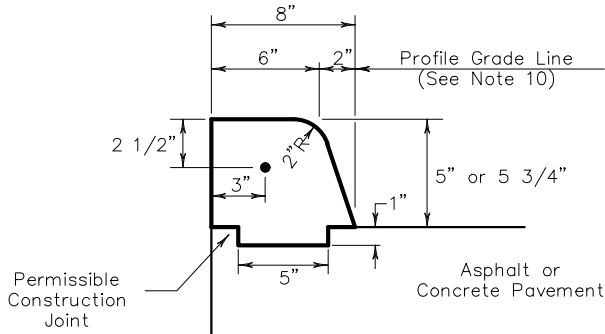
TYPE III CURB (KEYED)
2" - 4" HEIGHT



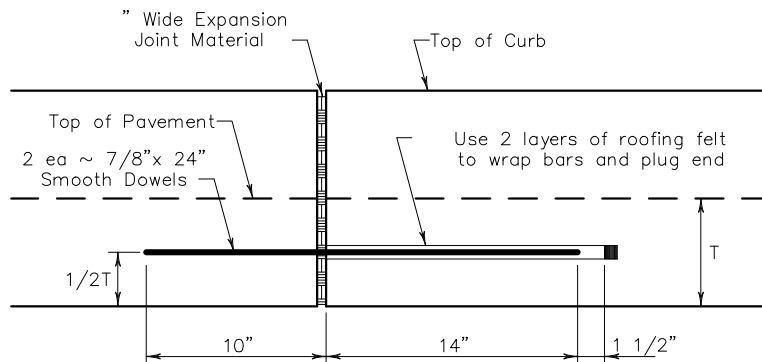
TYPE IIa CURB
5" - 5 3/4" HEIGHT



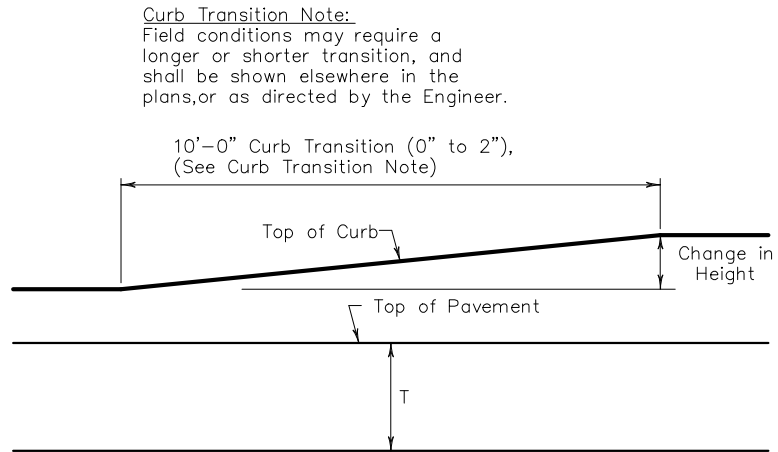
TYPE IIa CURB AND GUTTER
5" - 5 3/4" HEIGHT



TYPE IV CURB (KEYED)
5" - 5 3/4" HEIGHT



EXPANSION JOINT DETAIL

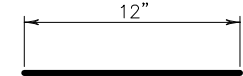
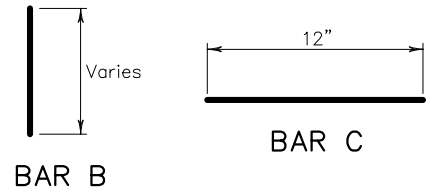


CURB TRANSITION

Note: To be paid for as Highest Curb

General Notes

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Producer List (MPL), maintained by TxDOT, Construction Division.
4. Round exposed sharp edges with a rounding tool, to a minimum radius of 1/4 inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C~C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When vertical permissible construction joints are used, resulting in a longitudinal construction joint in the pavement, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans for longitudinal construction joints. Reinforcing steel for curb section shall then conform to that required for concrete curb.



BAR C

BAR B

Curb Transition Note:

Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.

10'-0" Curb Transition (0" to 2"),
(See Curb Transition Note)

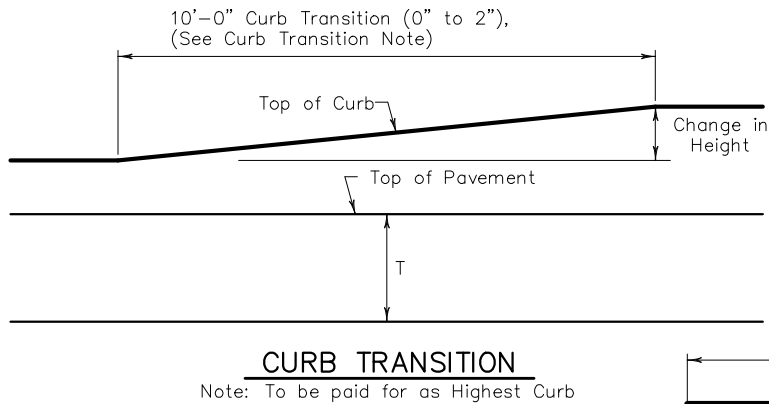
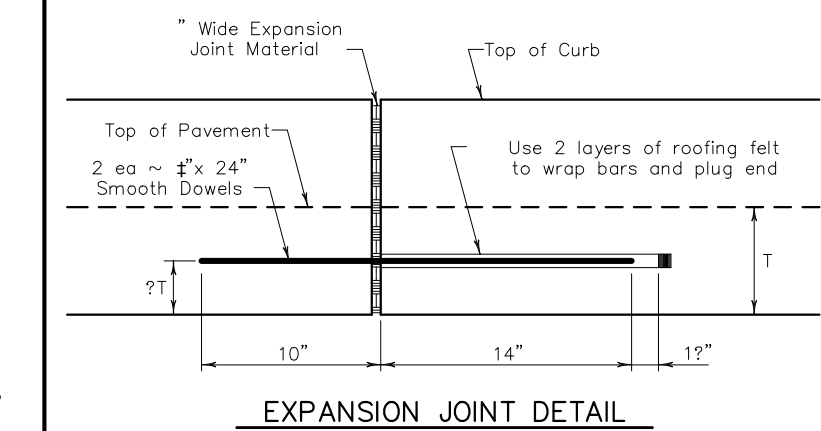


CONCRETE CURB AND GUTTER

(CCCG-12) 1 OF 2

FILE: cccg12.dgn	DN: TxDOT	CK: AM	DW: VP	CK: VP
©TxDOT: 1995	CONT	SECT	JOB	HIGHWAY
REVISIONS				
UPDATED 2012 - VP	DIST	COUNTY	SHEET NO.	C-04.10

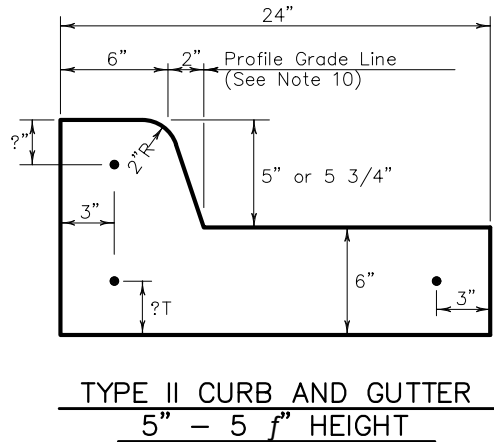
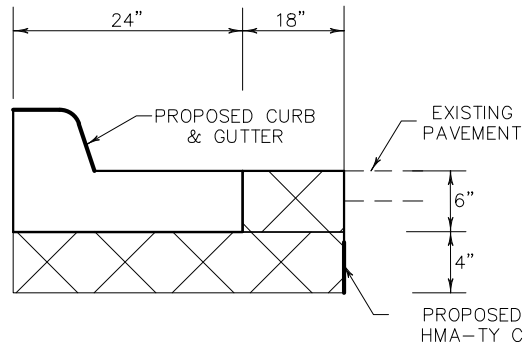
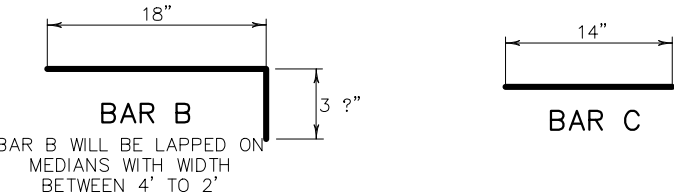
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



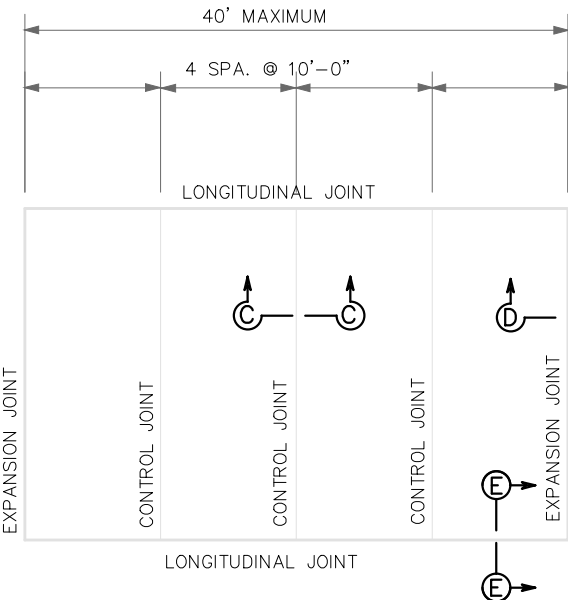
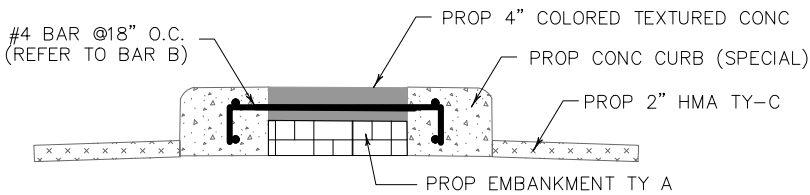
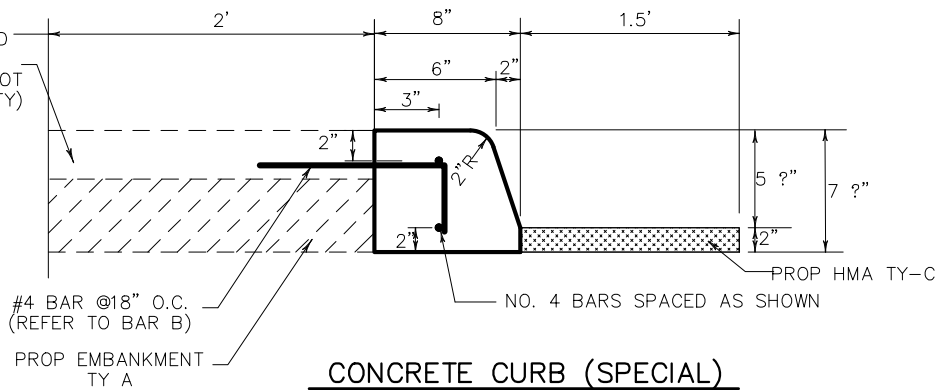
Curb Transition Note:
Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.

Type Mono Curb II Note:
Hole size, hole cleaning and other installation requirements shall conform to manufacturer's recommendation.

*4 deformed bar (1/2") with adhesive anchor (ty iii cl 9 epoxy). min pullout tensile strength of 12,000 lbs each anchor, estimated required embankment depth is 6".

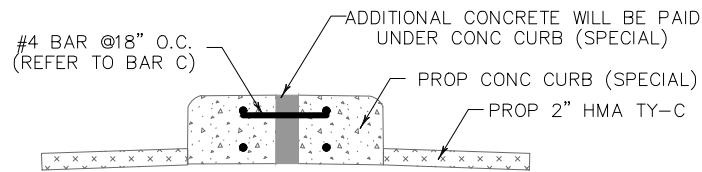
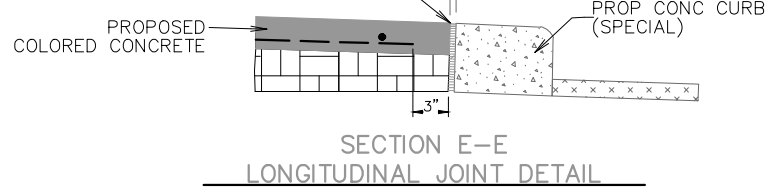


PROP 4" COLORED TEXTURED CONC (REINFORCEMENT NOT SHOWN FOR CLARITY)



COLORED TEXTURED CONCRETE PATTERN: LONDON COBBLE STONE
COLORS: "SLATE GREEN AND DESERT TAN"

FOR PROPOSED LONGITUDINAL JOINT USE 1" FIBER BOARD AND SEALER AS PER DMS-6310 (TYP) SEE NOTES 4 & 5.




Colored Textured Concrete Notes:

1. Prepare existing subgrade and embankment material 4" below top of curb.
2. Use class "A" concrete for colored textured concrete.
3. Install patterns per manufacturer's specifications. Orient patter to median center line. Use colored textured concrete pattern shown or as directed.
4. Place control, longitudinal & expansion joints as shown or directed. Materials and labor are subsidiary to item 528.
5. See general notes for colored concrete pattern and color dedicated for the project area. Refer to "Median Layout" sheets for colored concrete location, quantity and pay items.
6. See "Median Layout" sheets for colored concrete, and loose aggregate layout, pay items and quantities. Refer to general notes for additional information.

General Notes

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Producer List (MPL), maintained by TxDOT, Construction Division.
4. Round exposed sharp edges with a rounding tool, to a minimum radius of 1/4 inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C~C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When vertical permissible construction joints are used, resulting in a longitudinal construction joint in the pavement, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans for longitudinal construction joints. Reinforcing steel for curb section shall then conform to that required for concrete curb.

SCALE: N.T.S.



Design Division Standard

CONCRETE CURB AND CURB AND GUTTER
(CCCG-12 MOD) 2 OF 2

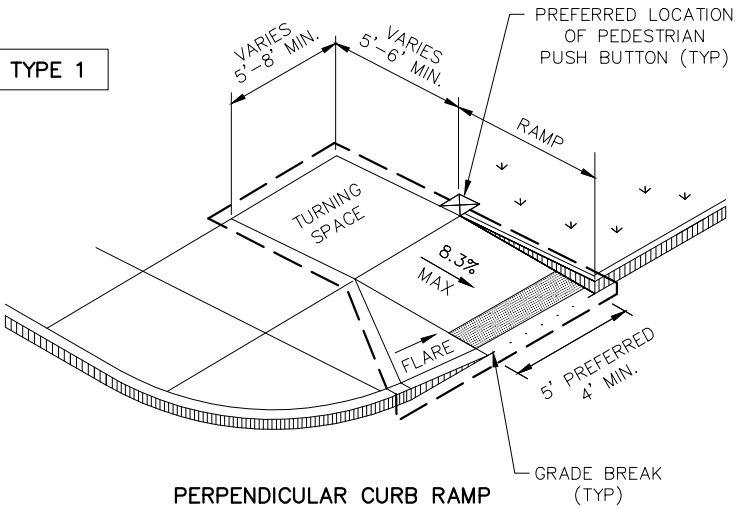
FILE: cccg12.dgn	DN: TxDOT	CK: AM	DW: VP	CK: VP
©TxDOT: 1995	CONT	SECT	JOB	HIGHWAY
UPDATED 2012 - VP	DIST	COUNTY	SHEET NO.	
				C-04.11

DATE: FILE:

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

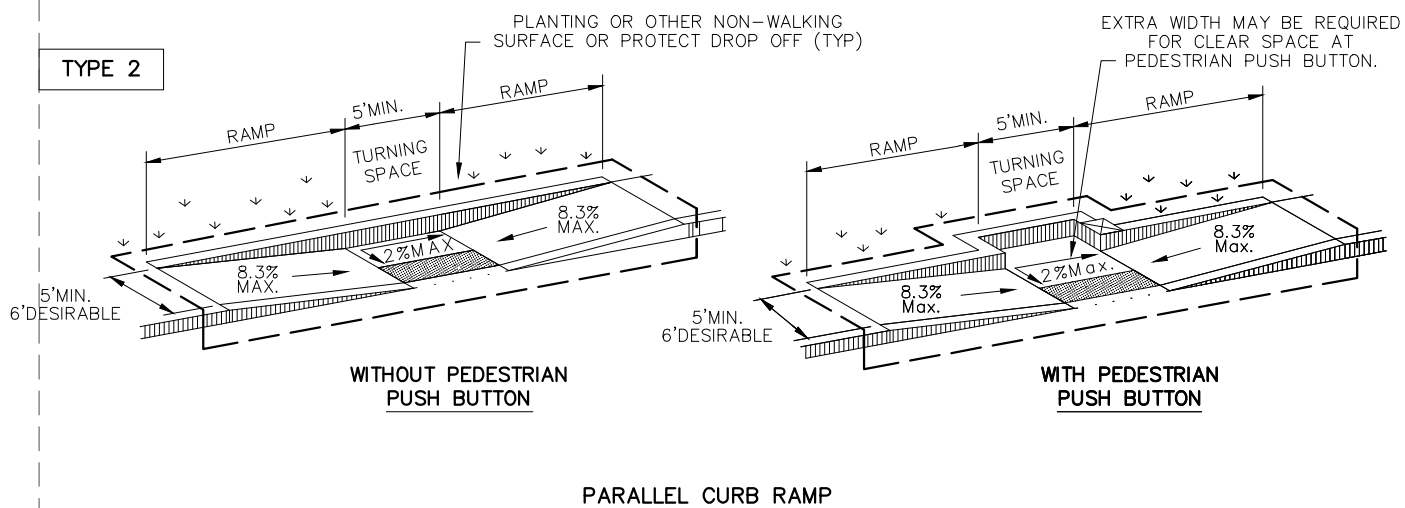
DATE: _____
FILE: _____

TYPE 1



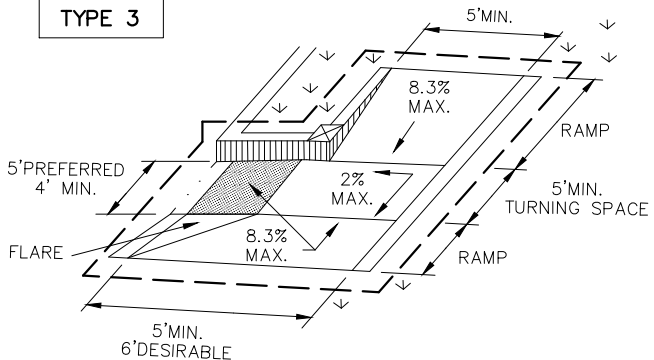
PERPENDICULAR CURB RAMP

TYPE 2



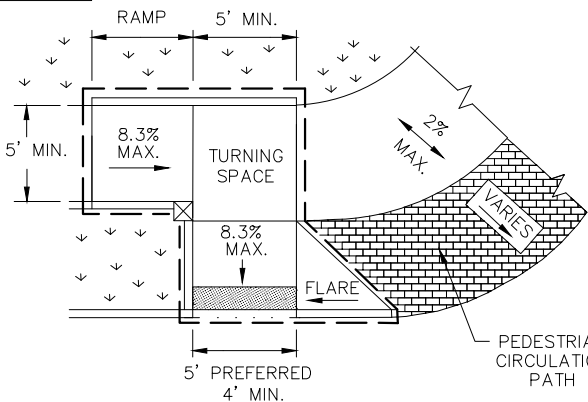
PARALLEL CURB RAMP

TYPE 3

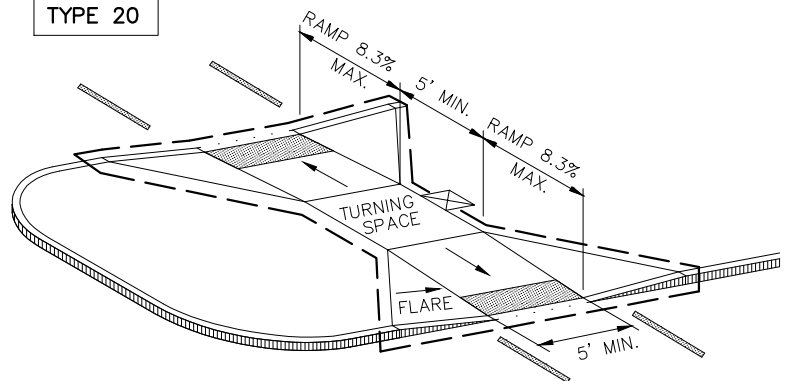


COMBINATION CURB RAMPS

TYPE 6

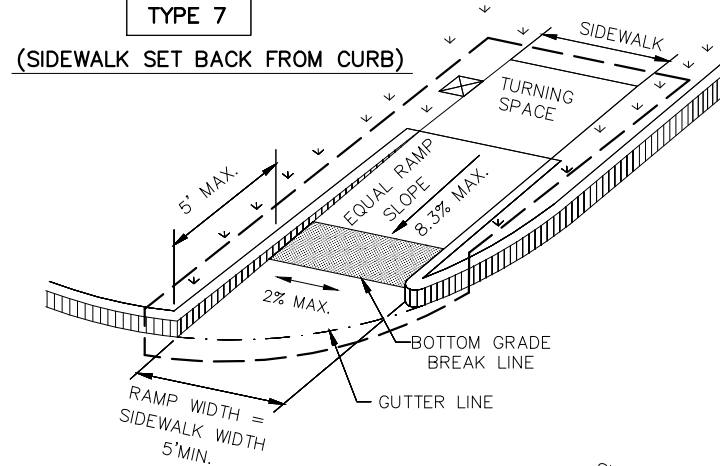


TYPE 20

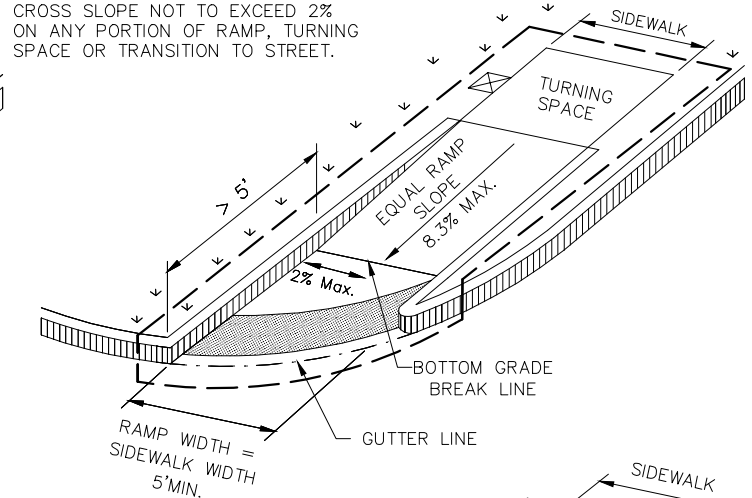


CURB RAMPS AT MEDIAN ISLANDS

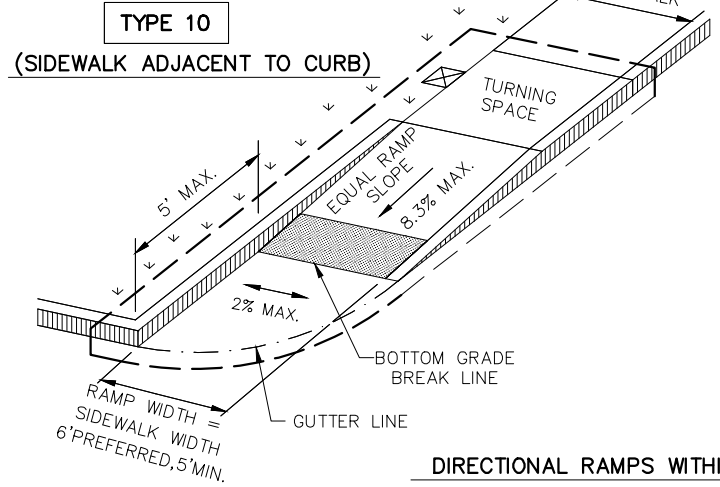
TYPE 7



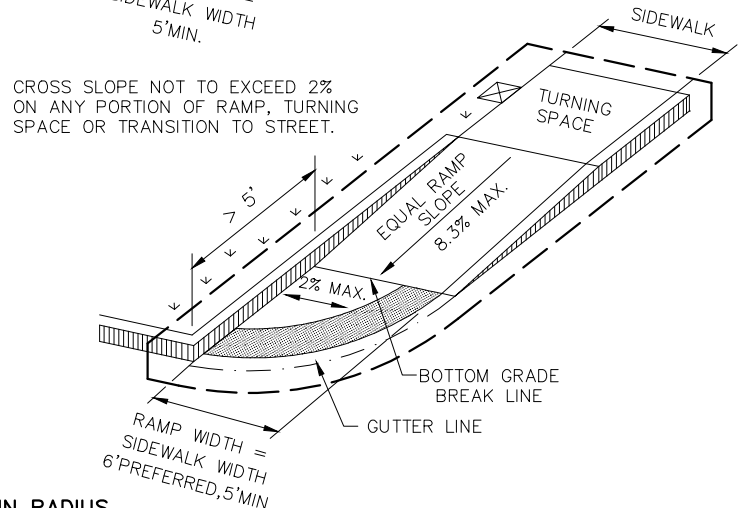
(SIDEWALK SET BACK FROM CURB)



TYPE 10

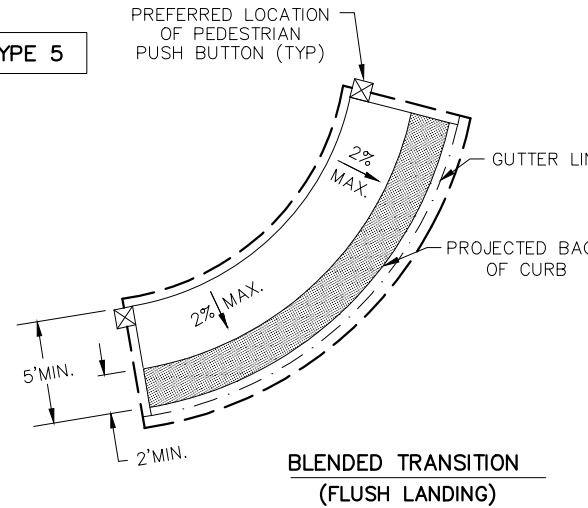


(SIDEWALK ADJACENT TO CURB)



DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 5



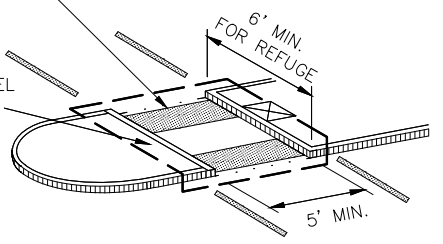
BLENDED TRANSITION
(FLUSH LANDING)

INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP WITH A MINIMUM 2' USUAL SIDEWALK SURFACE BETWEEN. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.

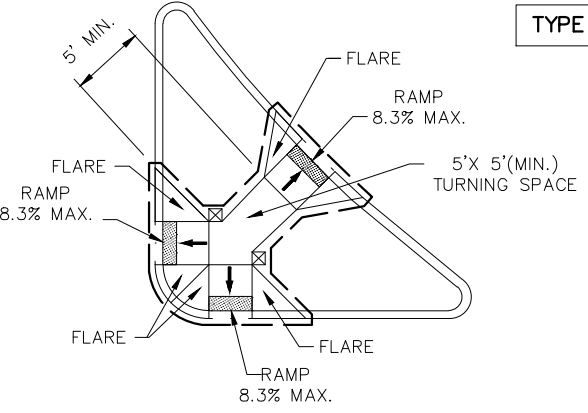
ALIGN CURB PARALLEL WITH CROSSWALK.

NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 21

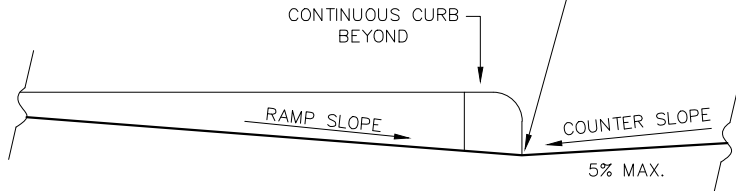


TYPE 22



COMBINATION ISLAND RAMPS

BOTTOM GRADE BREAK OF CURB RAMP WILL NORMALLY BE AT GUTTER LINE. SURFACE SLOPES AT GRADE BREAKS SHALL BE FLUSH.



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.



GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT



Design Division Standard

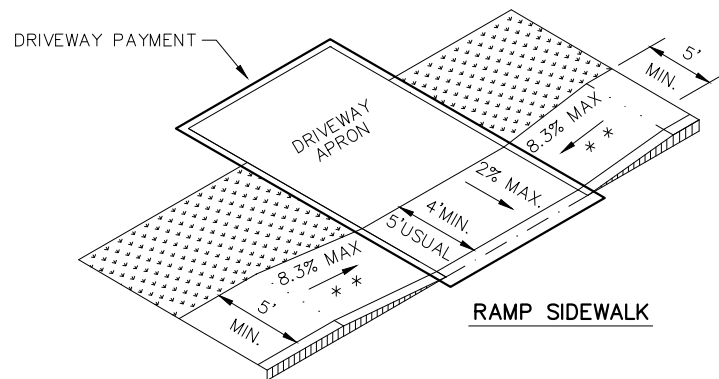
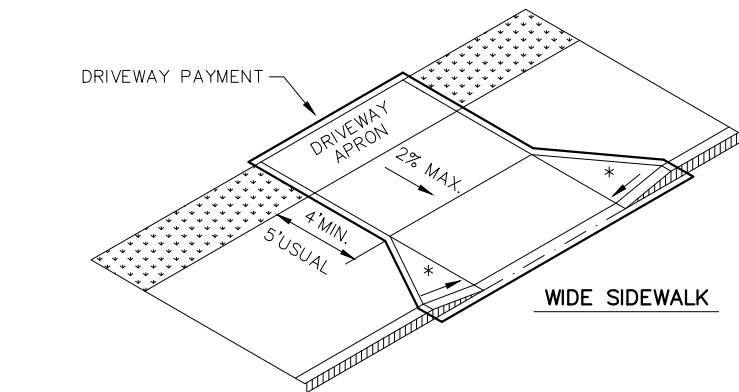
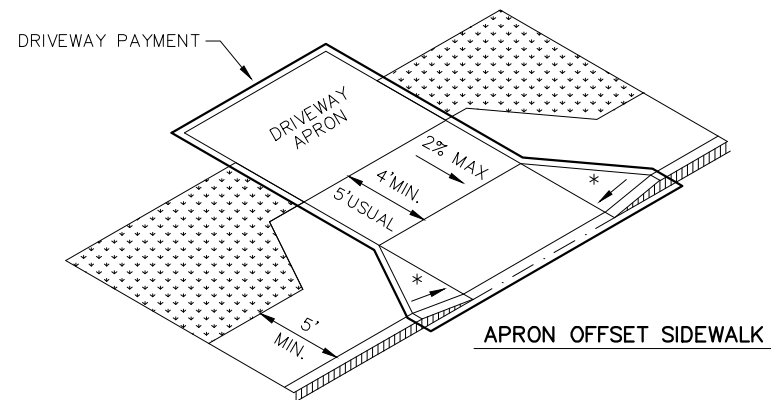
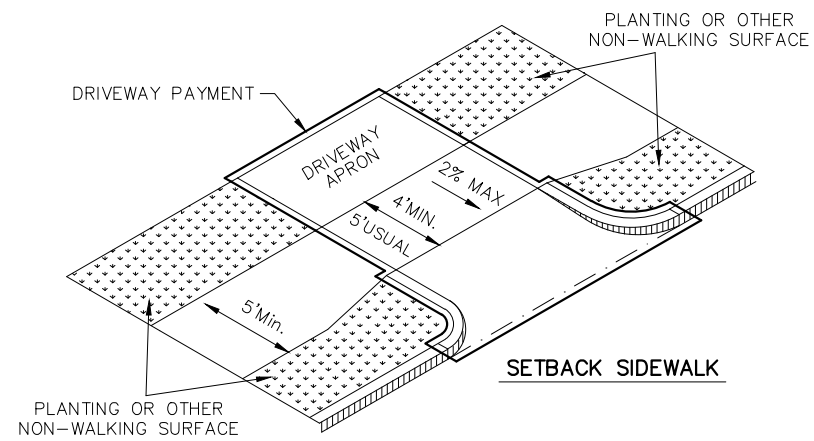
PEDESTRIAN FACILITIES
CURB RAMPS
(PED-18) 1 OF 3

FILE: ped18		DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002		CONT	SECT	JOB		HIGHWAY
REVISIONS						
REVISED 08, 2005						
REVISED 06, 2012						
REVISED 01, 2018						
		DIST	COUNTY			SHEET NO.
						C-04.12

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

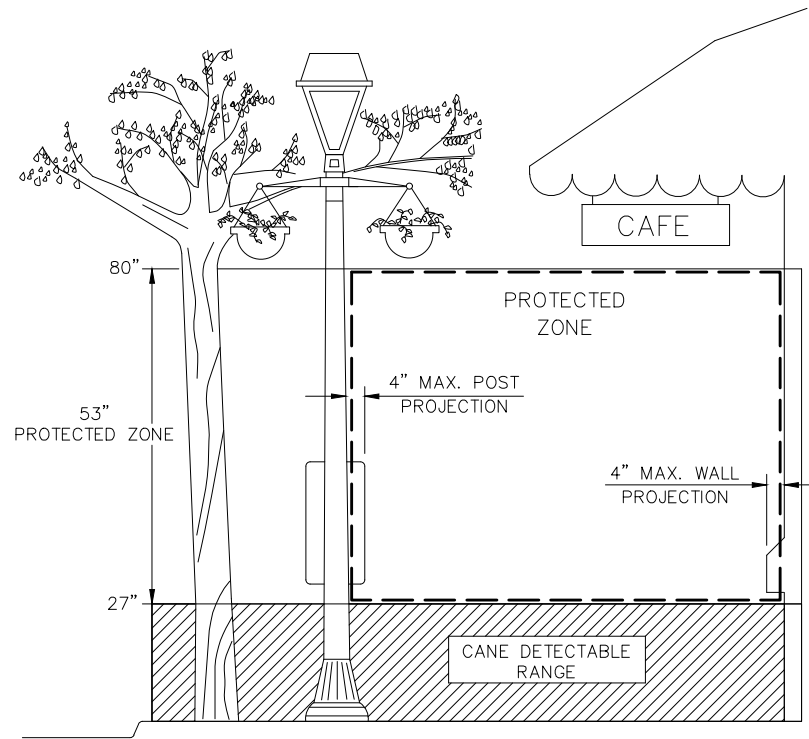
DATE:
FILE:

SIDEWALK TREATMENT AT DRIVEWAYS



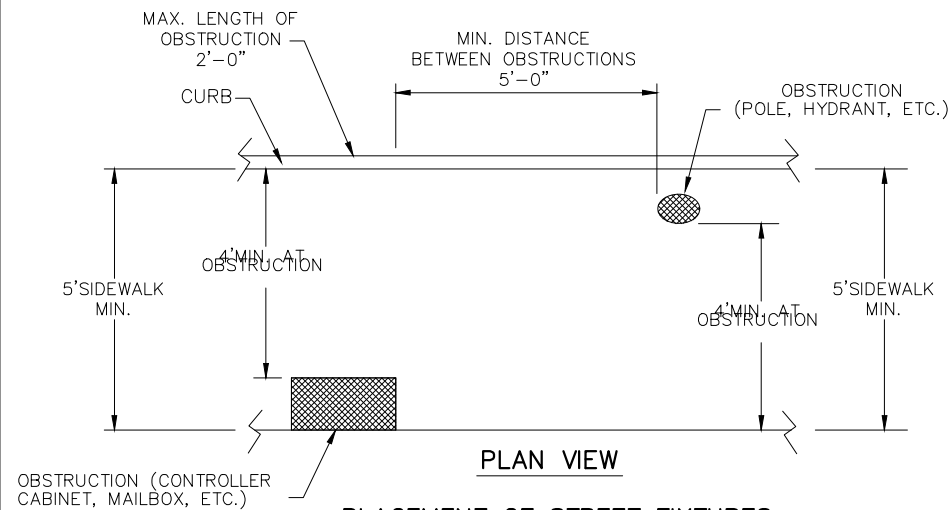
NOTES:

- * WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.
- * * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



PROTECTED ZONE

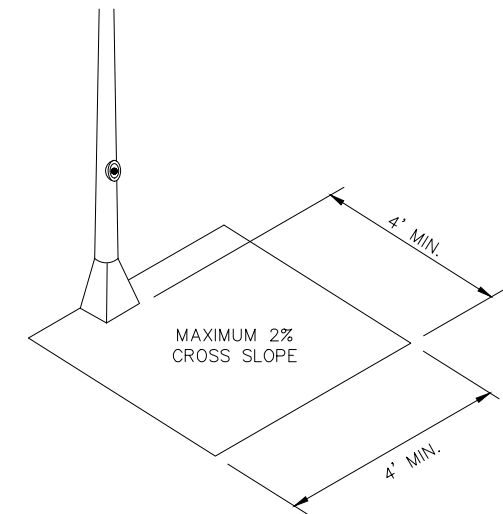
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



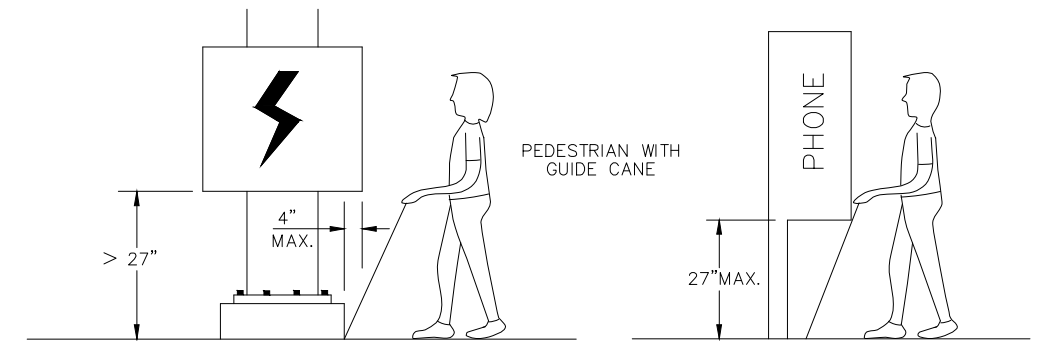
PLAN VIEW

OBSTRUCTION (CONTROLLER CABINET, MAILBOX, ETC.)

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.

PROTRUDING OBJECTS OF A HEIGHT 27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.



PEDESTRIAN FACILITIES CURB RAMPS (PED-18) 3 OF 3

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISED 08, 2005	REVISIONS			
REVISED 06, 2012	DIST	COUNTY		SHEET NO.
REVISED 01, 2018				C-04.14

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

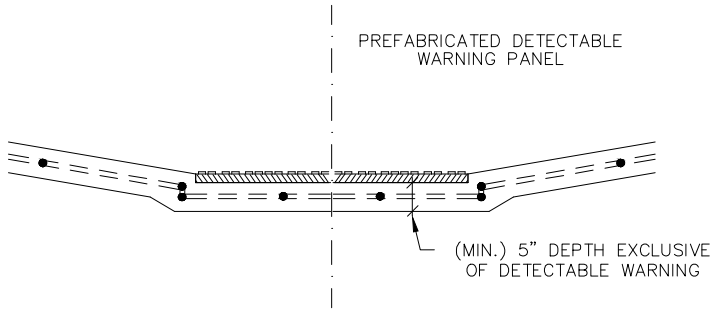
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

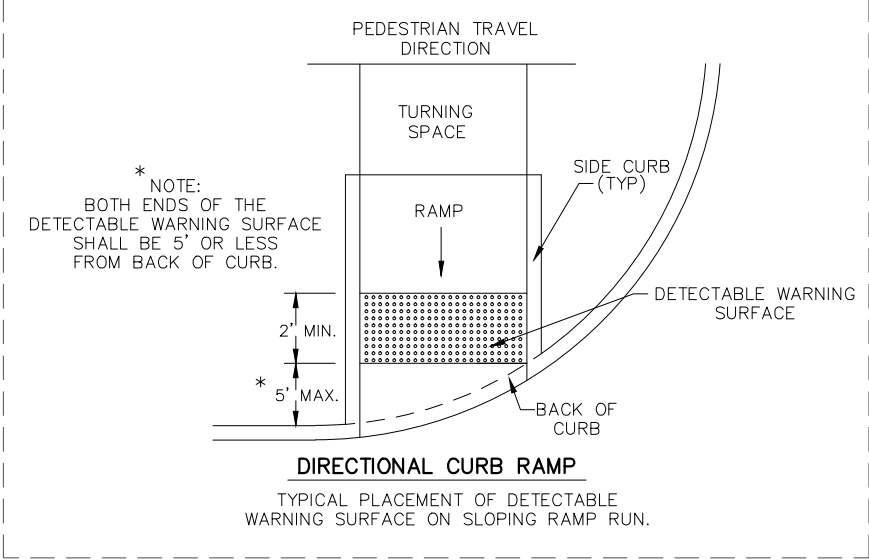
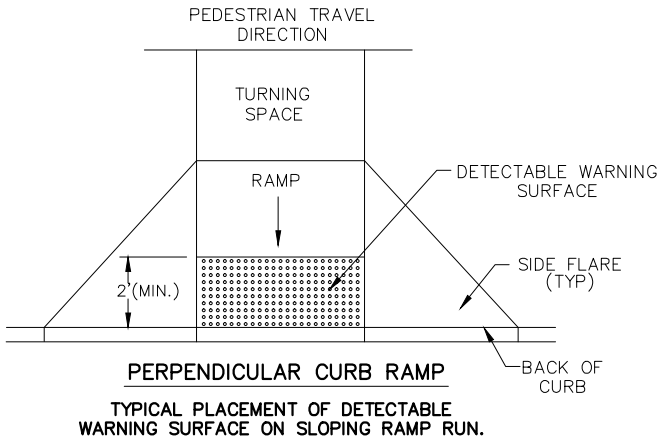
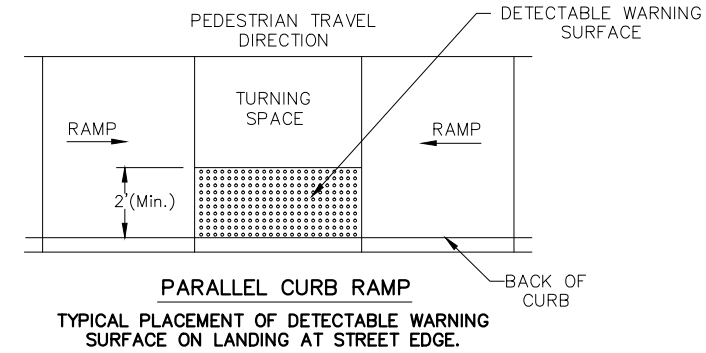
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.




SECTION VIEW DETAIL
CURB RAMP AT DETECTABLE WARNINGS

DETECTABLE WARNING SURFACE DETAILS



NOTE:
THE PROJECT WILL BE CONSIDERED COMPLETE WHEN THE CITY OF EL PASO ACCEPTS THE CONSTRUCTED IMPROVEMENTS FOR MAINTENANCE.

NOTE:
SUBMIT COPY OF THE FINAL AS-BUILT PLANS TO STREET MAINTENANCE PROJECT MANAGER PRIOR TO FINAL INSPECTION/WALKTHROUGHS; ADDITIONAL COMMENTS MAY BE GENERATED UPON REVIEW AND FOLLOW UP INSPECTION(S) FROM AS-BUILT DRAWINGS .

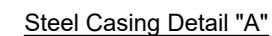
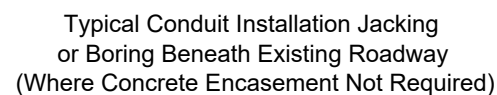
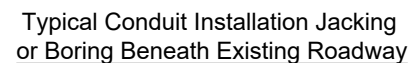


Design
Division
Standard

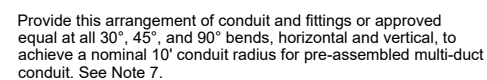
PEDESTRIAN FACILITIES
CURB RAMPS
(PED-18) 2 OF 3

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY		SHEET NO. C-04.13

DATE: _____
FILE: _____



1. Typical conduit installation details for jacking or boring beneath existing roadway is diagrammatic in nature. Roadway cross-slopes may vary for each crossing.
2. Jack or bore in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box" except for measurement and payment.
3. Furnishing and installation of pressure grouting will not be paid for directly but considered incidental to Special Specification "ITS Multi-Duct Conduit" or Item 618, "Conduit."
4. When boring under pavement shallower than 48 inches from finished grade to top of conduit, provide Schedule 40 steel casing under pavement to encase the conduit system. Provide steel casing of a size to accommodate ITS conduit and electrical conduit as shown in the plans. Provide a minimum 20 percent void space around all conduits. Steel casing will not be paid for directly but considered incidental to Special Specification, "ITS Multi-Duct Conduit" or Item 618, "Conduit."
5. When a depth greater than 48 inches can be achieved from finished grade to top of conduit, provide Schedule 80 PVC. No steel casing required unless otherwise directed.
6. Ensure all conduit bends are in conformance with the latest edition of the National Electrical Code.
7. Provide GPS coordinate points to the District for all ground boxes installed, and shifts or deviations of the conduit alignment from the plans required to avoid obstructions or utilities. Take GPS coordinate points at the start of the transition, at the point of curvature, and at the end of the transition at the point of tangency. Document the turnout radius and installed depth. Provide GPS coordinate points in NAD83 coordinate system and be accurate to 5 feet.



Sheet Details
Not to Scale

SHEET 1 OF 1

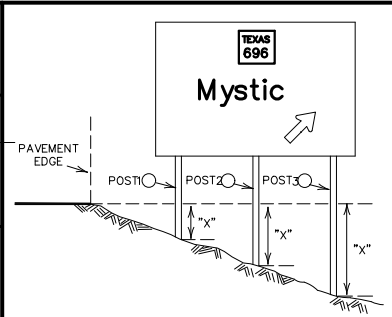


**Traffic
Operations
Division
Standard**

ITS CONDUIT
BORE AND STEEL CASING
DETAILS
ITS(28)-16

FILE: its(28)-16.dgn	DN: _TxDOT_	CK: TxDOT	DW: _TxDOT_	CK: TxDOT
© TxDOT FEBRUARY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY	SHEET NO.	
			C-04.15	

SUMMARY OF LARGE SIGNS

[illegible]

• The "X" dimension is the elevation difference at the post between the ground and the edge of pavement or top of curb.

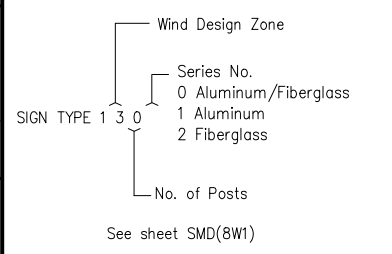
Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.

The post lengths listed here are approximations. The corrected post lengths will be furnished by the Contractor after the stud posts are placed.

Tower heights shall be verified with the Engineer before fabrication.

* This column is for aluminum Type A and not direct apply. Direct apply is subsidiary to the sign.

SIGN TYPE



SUMMARY OF
LARGE SIGNS
(FM 659)
SOLS

© TxDOT May_1987			
DN:-- TxDOT	11-93		REVISIONS
OK:-- TxDOT	8-95		1-04
DW:-- TxDOT	5-01		9-08
OK:-- TxDOT			
	CONT	SECT	JOB
			HIGHWAY
			FM 659
	DIST	COUNTY	SHEET NO.
	ELP	ELP	C-05.0

DISCLAIMER:

DATE: _____
FILE: _____

SUMMARY OF SMALL SIGNS

[illegible]

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080"
7.5 to 15	0.100"
Greater than 15	0.125"

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

<http://www.txdot.gov/>

NOTE:

1. Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.

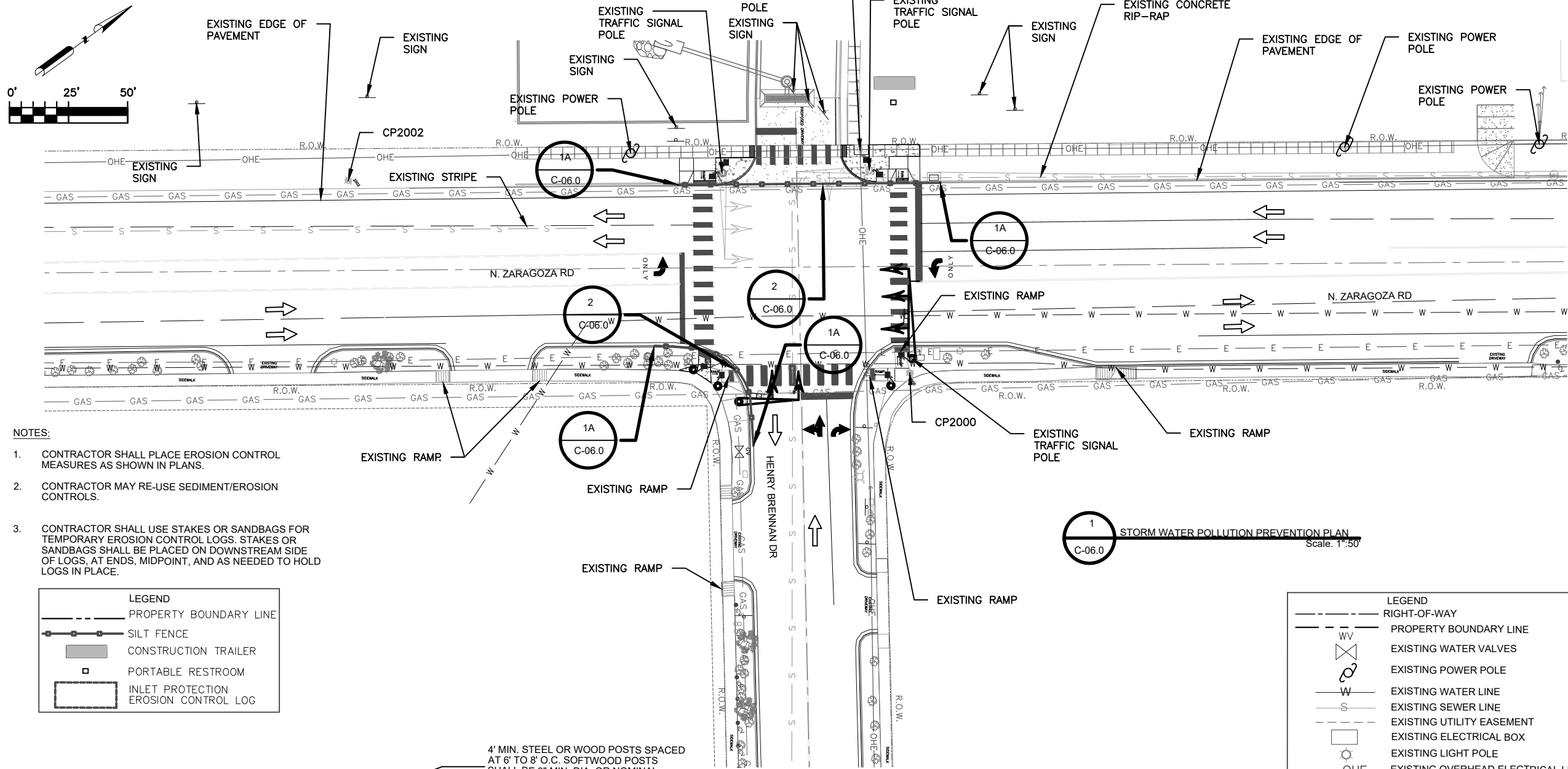


**Traffic
Operations
Division
Standard**

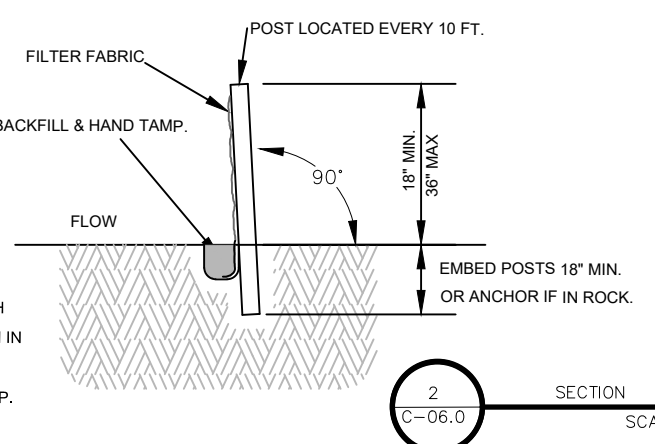
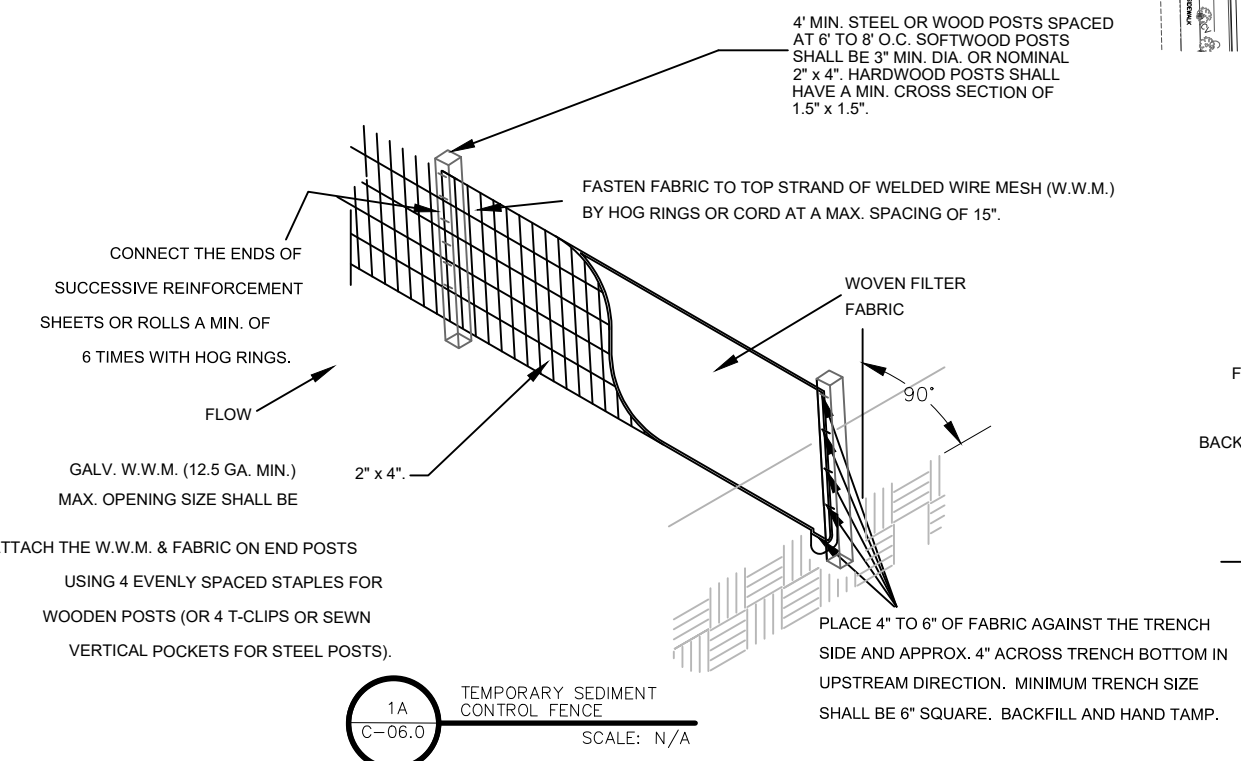
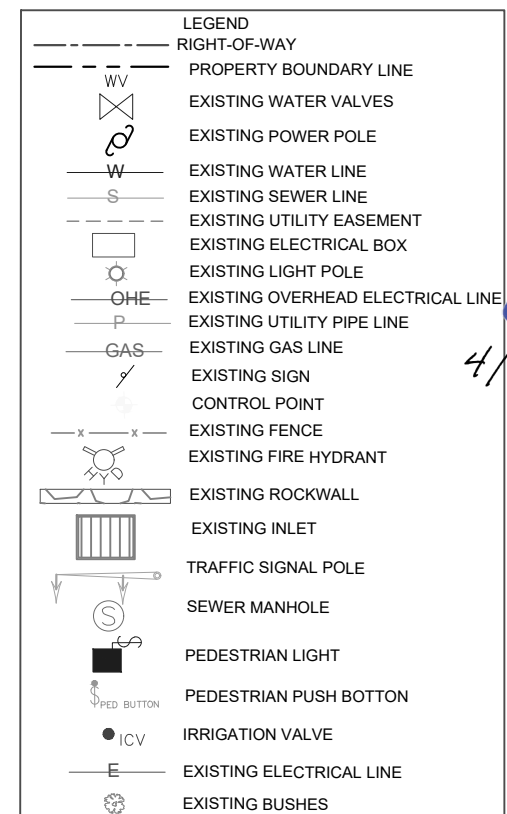
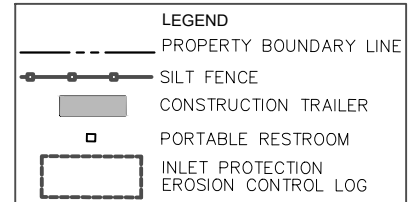
SUMMARY OF SMALL SIGNS (FM 659)

SOSS

FILE: sums16.dgn	DN: _TxDOT_	CK: TxDOT	DW: _TxDOT_	CK: TxDOT
©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS				FM 659
	DIST	COUNTY		SHEET NO.
	ELP	EL PASO		C—05.1



- NOTES:**
1. CONTRACTOR SHALL PLACE EROSION CONTROL MEASURES AS SHOWN IN PLANS.
 2. CONTRACTOR MAY RE-USE SEDIMENT/EROSION CONTROLS.
 3. CONTRACTOR SHALL USE STAKES OR SANDBAGS FOR TEMPORARY EROSION CONTROL LOGS. STAKES OR SANDBAGS SHALL BE PLACED ON DOWNSTREAM SIDE OF LOGS, AT ENDS, MIDPOINT, AND AS NEEDED TO HOLD LOGS IN PLACE.



LEGAL DESCRIPTION:
LOTS-2 AND 3, BLOCK 1, LAS TERRAZAS, AN ADDITION TO THE CITY OF EL PASO, EL PASO COUNTY, TEXAS

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION
CP 2000	10642832.08	443258.34	3857.582
CP 2001	10642586.01	443479.75	3848.909
CP 2002	10642687.54	443052.70	3851.148
CP 2003	10643139.01	443474.95	3865.170

WARNING!
BEFORE YOU DIG
CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UNDERGROUND/OVERHEAD IMPROVEMENTS IN PROJECT AREA

UTILITY LOCATOR SERVICES

TEXAS 811	811
CITY OF EL PASO	linespots@elpasotexas.gov
STREETS AND MAINTENANCE	1-915-212-0118
EL PASO WATER UTILITIES	1-915-594-5500
TEXAS GAS SERVICE	1-800-700-2443
EL PASO NATURAL GAS	1-800-334-8047
AT&T	1-800-924-9420
EL PASO ELECTRIC COMPANY	1-800-252-1133
SPECTRUM	1-915-772-1123

NOTES

GENERAL NOTES

WARNING!
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHETHER INDICATED ON THE DRAWINGS OR NOT, TO VERIFY THE LOCATION, DEPTH, AND CONDITION OF ALL EXISTING UTILITIES AND SUBSTRUCTURES AND PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL CONTACT ALL THE UTILITY COMPANIES AND CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION.

STREETS AND MAINTENANCE
CITY OF EL PASO
7968 SAN PAULO DRIVE
EL PASO, TEXAS 79907
TELE. 915.212.0118
FAX. 915.212.0119

ENGINEER SEAL
Marvin H. Gomez
4/15/2021
MARVIN H. GOMEZ
P.E. No. 86920
LICENSED PROFESSIONAL ENGINEER
"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARVIN H. GOMEZ, P.E. No. 86920 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

GRV Integrated Engineering Solutions LLC
11385 James Watt Dr., Suite B-13,
El Paso, Texas 79936
Ph: (915) 351-6701 Fax (915) 243-6010
www.integratedengineeringsolutions.com
TBPE F#15313 TBPLS F#10194278

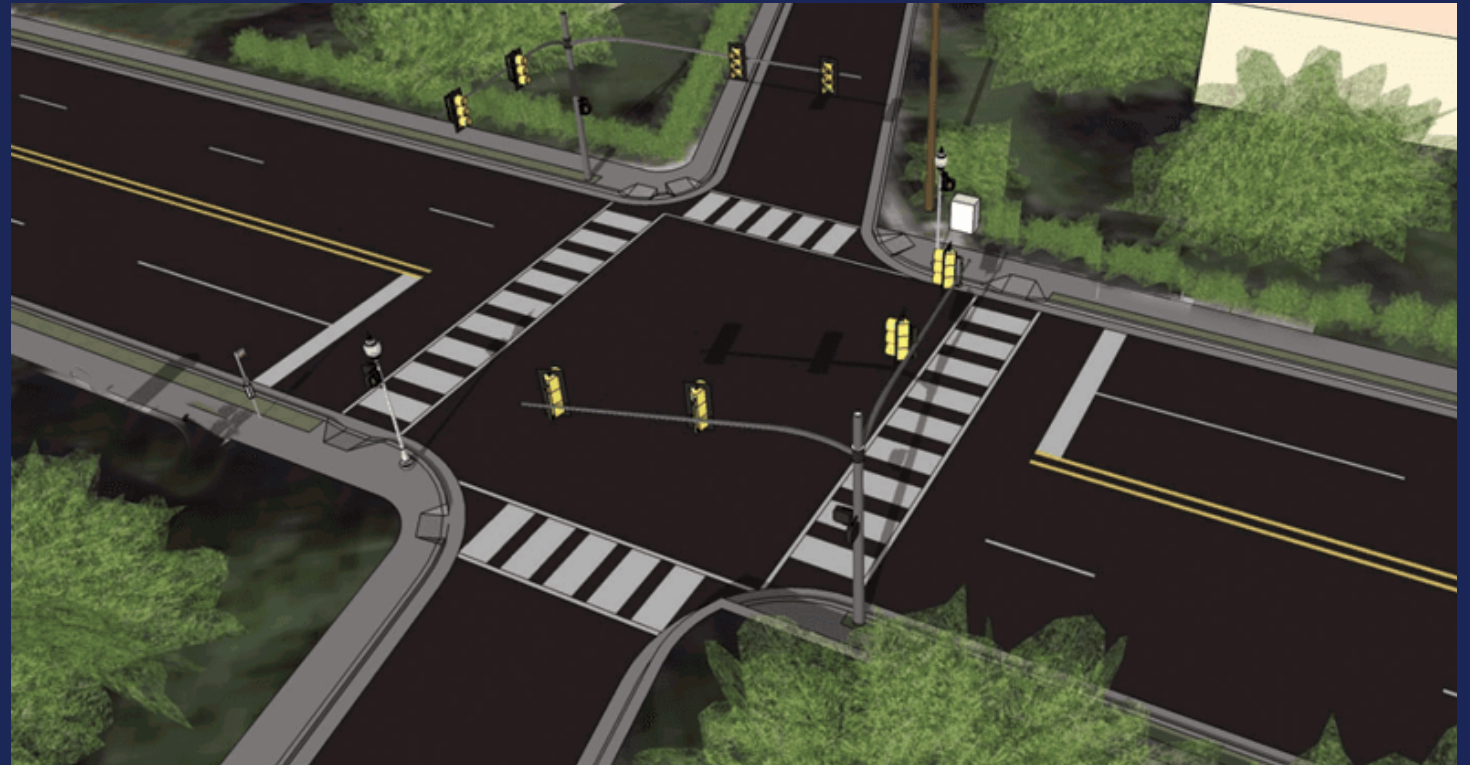
TRAFFIC SIGNAL DESIGN
N. ZARAGOZA RD AND
HENRY BRENNAN DR

STORM WATER POLLUTION
PREVENTION PLAN
C-06.0



Traffic Signal Agreement

Zaragoza & Henry Brennan
District: 6



Strategic Plan Goal

- 7 – Enhance and Sustain El Paso's Infrastructure Network
 - 7.3 – Enhance a regional comprehensive transportation system

No prior council history.

Purpose of Agreement

Purpose of Agreement

Authorize City Manager to sign Traffic Signal Agreement for the maintenance of a new signalized intersection

Location

N. Zaragoza Rd. and Henry Brennan Dr.

- New development of Palo Verde Business Center

Franklin Properties Pros.

- Design and construction of traffic signal modifications
- Responsible for 100% of cost
- *(Estimated cost of \$109,782.17)*

City of El Paso

Maintain traffic signal improvements



Project Scope



Location	N. Zaragoza Rd. and Henry Brennan Dr.
Existing Conditions	Three-way traffic signal intersection
Proposed Conditions	Four-way traffic signal intersection
Work to be completed	<ul style="list-style-type: none">• Replacement of one traffic signal pole• Adding one traffic signal mast arm pole• Adding pedestrian and mast arm pole• Audible pedestrian signal push buttons• ADA curb ramps and sidewalk connectivity• Video detection with conduit and cable• Striping and signage
City of El Paso	Maintain traffic signal improvements
Term	Work to be completed within 45 days from the date of the Notice to Proceed

Existing Conditions



Proposed Conditions



Requested Council Action

That the City Manager be authorized to sign a Traffic Signal Agreement between the City of El Paso ("City") and Franklin Property Pros., whereby the City agrees to maintain the traffic signal improvements to be installed by Franklin Property Pros., located at the intersection of State Highway 659 (N. Zaragoza Rd.) and Henry Brennan Dr.



Mission

Deliver exceptional services to support a high quality of life and place for our community



Values

Integrity, **R**espect, **E**xcellence,
Accountability, **P**eople



Vision

Develop a vibrant regional economy, safe and beautiful neighborhoods and exceptional recreational, cultural and educational opportunities powered by a high performing government



Misión

Brindar servicios excepcionales para respaldar una vida y un lugar de alta calidad para nuestra comunidad

Valores

Integridad, **R**espeto, **E**xcelencia,
Responsabilidad, **P**ersonas

Visión

Desarrollar una economía regional vibrante, vecindarios seguros y hermosos y oportunidades recreativas, culturales y educativas excepcionales impulsadas por un gobierno de alto desempeño

