

COUNTY OF EL PASO, TEXAS

CELESTE DRIVE DRAINAGE IMPROVEMENTS



JULY 2020

EL PASO COMMISSIONER'S COURT

RICARDO A. SAMANIEGO
CARLOS LEON
DAVID STOUT
VINCENT PEREZ
CARL L. ROBINSON

COUNTY JUDGE
COMMISSIONER PRECINCT 1
COMMISSIONER PRECINCT 2
COMMISSIONER PRECINCT 3
COMMISSIONER PRECINCT 4



LOCATION MAP
SCALE: 1"=5000'

PLANNING-ENGINEERING-PROJECT MANAGEMENT

MCi Moreno
Cardenas Inc.

EL PASO • SAN ANTONIO
2505 E. Missouri Ave. El Paso, TX 79903 (915) 532-2091
9601 McAllister Freeway #207, San Antonio TX 78216 (210) 314-3553
Texas Board of Professional Engineers Registration No. F-000554



"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY OSWALD F. GARCIA, PE #109889 ON JULY 20, 2020 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF/HERSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.
2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AUTOMOBILE AND PEDESTRIAN ACCESS AT ALL TIMES, INCLUDING SATURDAY, SUNDAYS AND HOLIDAYS TO AREA RESIDENTS AND FACILITY USERS. THIS INCLUDES, BUT IS NOT LIMITED TO DRIVEWAYS, STREETS AND ALLEYS. THIS REQUIREMENT IS SUBSIDIARY TO THE VARIOUS BID ITEMS. CONTRACTOR SHALL MAINTAIN DUST CONTROL PREVENTIVE MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
3. ALL EXISTING WATER AND SANITARY SEWER MAINS (INCLUDING SERVICE CONNECTIONS) CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. RESIDENT WILL BE NOTIFIED 48 HRS PRIOR TO ANY SERVICE OUTAGE. SERVICE WILL BE RESTORED WITHIN 4 HOURS OR AS COORDINATED.
4. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING WATER AND SANITARY SEWER (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES. EXISTING WATER AND SEWER MAINS (INCLUDING SERVICE CONNECTIONS) DISTURBED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL OR BETTER CONDITION AT NO COST TO THE OWNER.
5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM WORK SO AS TO PROVIDE PROPER PASSAGE OF ANY STORM WATER DURING THE COURSE OF OPERATIONS. ALL LABOR, TOOLS, EQUIPMENT AND SUPERVISION REQUIRED TO ASSURE SUCH PROPER PASSAGE OF RUNOFF WATER AND ANY REMOVAL OR HANDLING OF WATER IN ORDER TO MAINTAIN DRY CONDITIONS SHALL BE CONSIDERED AS INCIDENTAL TO THE REMAINDER OF THE WORK AND SHALL BE AT THE EXPENSE OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THE FULL PROJECT SITE ONCE THE NOTICE TO PROCEED IS ISSUED. CONTRACTOR IS RESPONSIBLE FOR THE PROPER PASSAGE RUNOFF FOR THE FULL PROJECT SITE.
6. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH ALL UTILITIES AND ALL OTHER AFFECTED AGENCIES.
7. THE CONTRACTOR SHALL COMPLY WITH ALL THE STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, PERTAINING TO THE LOCATION OF THESE UTILITY FACILITIES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY HIS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES IN THE PLANNING AND CONDUCTING OF EXCAVATION. THE COUNTY OF EL PASO MAKES NO REPRESENTATION PERTAINING THERE TO AND ASSUMES NO RESPONSIBILITY OF LIABILITY. THEREFORE, IF THE UTILITY FACILITIES ARE DAMAGED DURING CONSTRUCTION ALL PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ETC. DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COUNTY TO ORIGINAL OR BETTER CONDITION. UNDERGROUND/OVERHEAD UTILITY FACILITIES SHOWN ON THESE DRAWINGS ARE FOR PLANNING DESIGN PURPOSES ONLY. OTHER UTILITY FACILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE DRAWINGS. THE LOCATION, DEPTH, AND SIZE OF THESE UTILITY FACILITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY AND MUST BE VERIFIED BY THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE FACILITY'S EXACT DEPTH AND LOCATION BY SAFE AND ACCEPTABLE MEANS WITHIN THE MARKED FACILITY AREA.
8. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.
9. VERTICAL CONTROL FOR THIS PROJECT IS BASED UPON NAVD 88 DATUM. TOPOGRAPHIC SURVEY WAS PERFORMED BY BARRAGAN AND ASSOCIATES INC.
10. THE BOUNDARY RIGHT-OF-WAY AND EASEMENT LINES SHOWN AREA BASED ON ACTUAL BOUNDARY SURVEY PERFORMED BY THE SURVEYOR.
11. IF THE CONTRACTOR DISTURBS ANY EXISTING COUNTY MONUMENT, IT SHALL BE REPLACED BY A REGISTERED SURVEYOR IN THE STATE OF TEXAS AT NO COST TO THE OWNER. THE CONTRACTOR'S SURVEYOR SHALL FURNISH A CERTIFIED ELEVATION AND LOCATION FOR EACH REPLACED MONUMENT.
12. REJECTED/DEFECTIVE CURB MUST BE REPLACED IN 10-FOOT LONG SECTIONS, MINIMUM AND/OR TO THE NEAREST EXPANSION JOINT.
13. EXPANSION JOINTS FOR MACHINE LAID CURBS SHALL BE PROVIDED AT CHANGES OF DIRECTION, AT ALL CURB RETURNS, WHERE CURB ABUTS OTHER MASONRY STRUCTURES, AND WHERE MACHINE STARTS AND STOPS LAYING CURB.
14. SCORED CONSTRUCTION JOINTS SHALL BE AT LEAST 1/4 THE THICKNESS OF THE CONCRETE SLAB AND SHALL BE PROVIDED EVERY 10 FEET FOR CURB AND GUTTER AND EVERY 5 FEET FOR SIDEWALKS.
15. ALL CONCRETE SHALL COMPLY WITH THE STRENGTH SPECIFIED UNDER THE TECHNICAL SPECIFICATIONS.
16. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO BE TO THE CENTER OF BARS UNLESS OTHERWISE SHOWN ON THE PLANS.
17. COST OF FIELD CUTTING AND BENDING OF REINFORCING STEEL SHALL BE INCIDENTAL TO CONSTRUCTION AND NO ADDITIONAL PAYMENT WILL BE CONSIDERED.
18. VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT.
19. THE CONTRACTOR SHALL CONTACT A NOTIFICATION CENTER OR THE PROPER UTILITY COMPANY 48 HRS. PRIOR TO PERFORMING ANY EXCAVATION.

20. CONTRACTOR IS EXPECTED TO MAINTAIN A MINIMUM CLEARANCE OF TWO FEET PLUS THE WIDTH OF THE LINE BETWEEN MARKED AND UNEXPOSED FACILITIES AND THE CUTTING EDGE OR POINT OF ANY POWER-OPERATED EXCAVATING OR EARTH-MOVING EQUIPMENT. EXCAVATION SHOULD BE PERFORMED VERY CAREFULLY WITH HAND TOOLS AND WITHOUT DAMAGE AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
21. THE CONTRACTOR/EXCAVATOR IS CAUTIONED THAT EQUIPMENT MAY DISTURB/DAMAGE FACILITIES BY ITS WEIGHT AND/OR OTHER CHARACTERISTICS.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING PERMITS (IF NECESSARY) FROM THE COUNTY OF EL PASO PRIOR TO DEMOLITION AND NEW CONSTRUCTION. THE COST OF THE PERMIT WILL BE AT THE CONTRACTOR'S EXPENSE.
23. ALL EXISTING ROADWAYS, SIDEWALKS, SIGNS, LANDSCAPING, DRAINAGE STRUCTURES, AND DRIVEWAYS NOT TO BE DISTURBED AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER BY CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
24. THE FOLLOWING LOCAL AGENCY PERSONNEL SHALL BE CONTACTED BY CONTRACTOR PRIOR TO COMMENCING WORK.

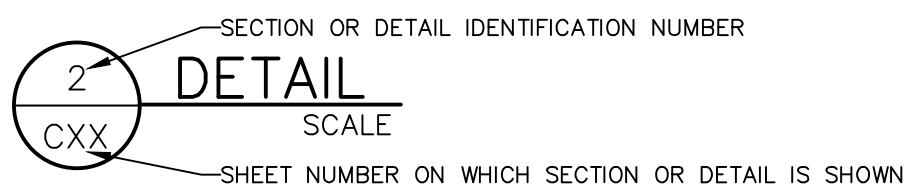
LIST OF UTILITIES AND AGENCIES		
COMPANY NAME	CONTACT PERSON	PHONE NUMBER
EL PASO ELECTRIC COMPANY (DISTRIBUTION DEPT.)	MARGARET ONTIVEROS	(915) 543-2244
EL PASO ELECTRIC COMPANY (TRANSMISSION DEPT.)	RICHARD CARRILLO	(915) 351-4224
TEXAS GAS SERVICE	FRANCISCO CAMPA	(915) 680-7275
AT&T	DIANA McKOWN	(915) 595-5142
EMERGENCIES AND HAZMAT	-	911
DIG TESS	-	(800) 344-8377

25. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PUBLIC WORKS DEPT. IN WRITING, OF ANY PROPOSED DUMP SITE(S) FOR OVERBURDEN AND ANY CONSTRUCTION DEBRIS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL OBTAIN APPROVAL OF ITS TRUCK ROUTE TO THE DUMP SITE, AS WELL AS FOR THE MATERIALS. IT SHALL BE HAULING BEFORE REMOVAL OF OVERBURDEN FROM PROJECT SITE.
26. CONTRACTOR SHALL ADJUST ALL MANHOLES, WATER VALVES ETC. TO NEW PAVEMENT ELEVATIONS.
27. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING IT'S WORK AREAS TO PREVENT ANY UNAUTHORIZED ACCESS.
28. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED ACTIVITIES TO KEEP THE TOTAL PROJECT LIMITS IN A CLEAN AND SAFE CONDITION. SEQUENCING OF WORK DOES NOT RELIEVE THE CONTRACTOR OF HOUSE KEEPING THROUGHOUT THE COMPLETE PROJECT LIMITS. TO INCLUDE, BUT NOT LIMITED TO WATER EXTRACTION, STREET SWEEPING, DEBRIS, REMOVAL ETC.
29. CONTRACTOR SHALL COORDINATE WITH THE PUBLIC WORKS DEPT. THROUGH THE PROJECT MANAGER FOR REPLACEMENT AND/OR RELOCATION OF ANY EXISTING AND/OR PROPOSED SIGNS.
30. CONTRACTOR SHALL COORDINATE AND OBTAIN PERMIT APPROVALS FROM OWNER FOR THE REMOVAL/RELOCATION OF ALL ITEMS AS SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITIES.
31. COORDINATE WITH THE PUBLIC WORKS COUNTY ENGINEER AT 915-791-4480 PRIOR TO REMOVAL/RELOCATION OF ANY EXISTING FIRE HYDRANTS, MONUMENTS, FENCES AND ROCKWALLS LOCATED WITHIN STREET ROW.
32. CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL MEASURES AS DESCRIBED ON THE GENERAL NOTES FOR TRAFFIC CONTROL PLAN (TCP) FOR CONSTRUCTION AREAS.
33. CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY RELOCATION OF ANY SURFACE STRUCTURES. CONTRACTOR SHALL ALSO COORDINATE WITH EL PASO COUNTY OR THE ADJACENT PROPERTY OWNER(S) FOR ANY RELOCATIONS.

SPECIFICATION REFERENCE

XX XX XX SERIES OF NUMBERS ON PLANS USED TO CROSS-REFERENCE THE APPLICABLE TECHNICAL SPECIFICATION SECTION.

SECTION AND DETAIL REFERENCE



GENERAL NOTES FOR TRAFFIC CONTROL PLAN FOR CONSTRUCTION AREAS

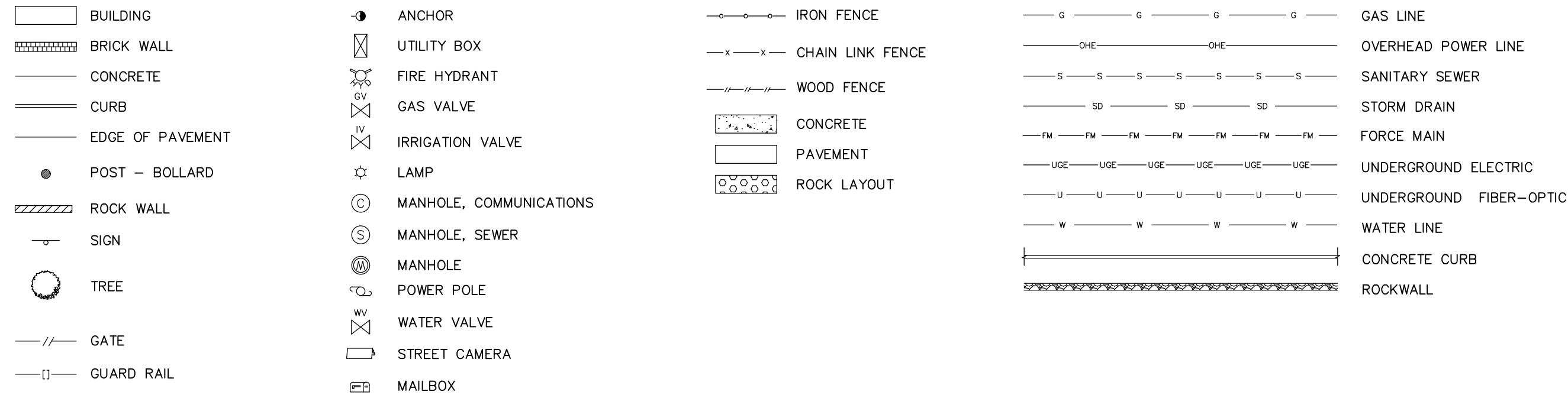
1. TRAFFIC CONTROL PLAN (TCP) FOR THE FULL PROJECT SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. SUBMIT A TRAFFIC CONTROL PLAN TO THE EL PASO COUNTY PUBLIC WORKS DEPT. FOR REVIEW AND APPROVAL 7 DAYS OR SOONER AFTER AWARD OF CONTRACT AND TO COMMENCEMENT OF WORK.
3. THE TRAFFIC CONTROL PLAN SHALL BE SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS. THE CONTRACTOR SHALL PREPARE BARRICADES AND A TRAFFIC CONTROL PLAN ACCEPTABLE TO AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.
4. ERECT PORTABLE MESSAGE SIGNS FOR A PERIOD OF SIX (6) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. SIGNS SHALL DISPLAY MESSAGE NOTIFYING TRAVELING PUBLIC OF UPCOMING CONSTRUCTION. CONTACT THE PUBLIC WORKS DEPARTMENT FOR EXACT MESSAGE TO BE DISPLAYED AND EXACT LOCATION OF SIGNS.
5. BUSINESSES, RESIDENTS, EMERGENCY FACILITIES, SCHOOLS, E.M.S., AND CITY AGENCIES SHALL BE ADVISED AND/OR CONSULTED BY THE CONTRACTOR DURING REPARATION OF TCP OF TOP AND NOTIFIED PRIOR TO THE START OF CONSTRUCTION.
6. ACCESS TO PUBLIC AND PRIVATE PROPERTY - LOCAL ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES AT ALL TIMES ON ALL STREETS DURING CONSTRUCTION AND MAINTENANCE ACTIVITIES.
7. THE TRAFFIC CONTROL PLAN SHALL SHOW THE HOURS OF THE DAY AND THE TENTATIVE TOTAL NUMBER OF DAYS IT WILL BE IN EFFECT.
8. TRAFFIC CONTROL & STREET NAME SIGNS - ALL TRAFFIC CONTROL OR STREET NAME SIGNS AND SIGN POSTS ADJACENT TO CONSTRUCTION OR MAINTENANCE WORK SITE SHALL BE PROTECTED FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING TRAFFIC CONTROL PLAN AND STREET NAME SIGNS AND SIGN POST. THE DAMAGE SHALL BE REPAIRED COMPLETELY AND TO THE SATISFACTION OF THE OWNER AND THE CITY ENGINEER WITHIN 24-HRS. AND A TEMPORARY SIGN SHALL BE PROVIDED.

NO GEOTECH REPORT

SURVEY ABBREVIATIONS

- AC ASBESTOS CEMENT
- ASV ANTI-SIPHON VALVE
- CATV CABLE TV PEDESTAL
- CBC CONCRETE BOX CULVERT
- CL CENTERLINE
- CMP CORRUGATED METAL PIPE
- CONC CONCRETE
- DIP DUCTILE IRON PIPE
- DIA DIAMETER
- EBX ELECTRIC BOX
- FH FIRE HYDRANT
- FM FORCE MAIN
- FOMKR FIBER OPTIC MARKER
- FT FEET
- GALV GALVANIZED
- GM GAS METER
- GV GAS VALVE
- GP GUARDPOST
- GR NATURAL GROUND
- GU GUTTER
- GV GAS VALVE
- HMAC HOT MIXED ASPHALTIC CONCRETE
- INV INVERT
- IV IRRIGATION VALVE
- LP LIGHT POLE
- LT LEFT
- MAX MAXIMUM
- MBX MAILBOX
- MIN MINIMUM
- MH MANHOLE
- NOM NOMINAL
- OC OF CENTER
- OCEW OF CENTER EACH WAY
- OD OUTSIDE DIAMETER
- OFF OFFSET
- PCL PROFILE GRADE LINE
- PL PROPERTY LINE
- PP POWER POLE
- PVC POLYVINYL CHLORIDE
- RCP REINFORCED CONCRETE PIPE
- RT RIGHT
- ROW RIGHT OF WAY
- ROE RIGHT OF ENTRY
- SCO SEWER CLEANOUT
- SS SANITARY SEWER
- SSL STAINLESS STEEL
- SP 0.2" SIGNPOST
- STA STATION
- STD STANDARD
- STRM STORM SEWER
- TBM TEMPORARY BENCHMARK
- TBX TELEPHONE PEDESTAL
- TC TOP OF CURB
- TD TOP OF DRIVEWAY
- TE TOP OF GROUND
- TMH TELEPHONE MANHOLE
- TP TOP OF PAVEMENT
- TS TOP OF SIDEWALK
- TSBX TRAFFIC SIGNAL BOX
- TW TOP OF WALL
- TYP TYPICAL
- WV WATER VALVE
- WM WATER METER

SURVEY LEGEND



SHEET INDEX

COVER SHEET.....	G0.0
GENERAL NOTES & LEGEND.....	G1.0
TOPOGRAPHIC SURVEY.....	V0.0
TRAFFIC CONTROL PLAN.....	C1.0
DEMOLITION PLAN.....	C2.0
SITE & HORIZONTAL CONTROL PLAN.....	C3.0
GRADING PLAN.....	C4.0
GRADING CROSS SECTIONS.....	C5.0
OUTFALL.....	C6.0
OVERALL WATERSHED MAP.....	C7.0
ROAD & DRAINAGE DETAILS.....	C8.0
SW3P PLAN	C9.0
SW3P GENERAL NOTES	C10.0
SW3P DETAILS TYPICAL	C11.0

PLANING-ENGINEERING-PROJECT MANAGEMENT

MCI Moreno

Cardenas Inc.

EL PASO

SAN ANTONIO

2501 E. Missouri Ave. El Paso, TX 79907 (915) 832-3991

9809 Texas Board of Professional Engineers Registration No. F-000554

ENGINEER'S SEAL

OSWALD F. GARCIA

108889

JULY 20, 2020

ENGINEER'S NOTE

"THE SEAL APPEARING ON THIS DOCUMENT WAS A COPY OF THE SEAL OF OSWALD F. GARCIA, P.E. #108889, ON JULY 20, 2020, ALTERATION OF A SEALED DOCUMENT TO WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

SCALE

Horiz. N/A

Vert. N/A

Date JULY 2020

Design by M.M./E.C.

Drawn by E.C.

Chkd. by O.G.

Appd. by R.M.

JOB No. 19-12B

P R O J E C T N A M E

CELESTE DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE

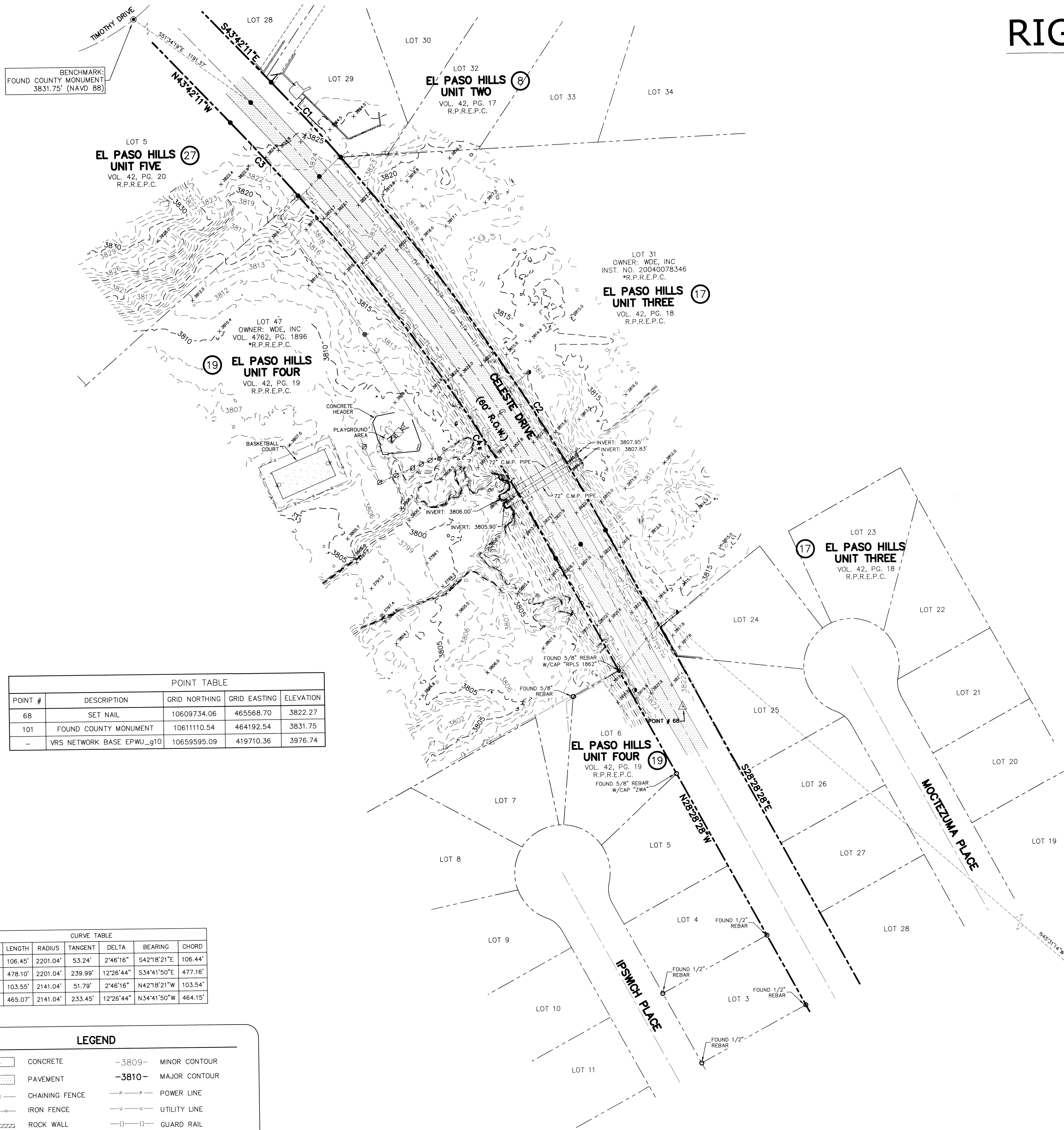
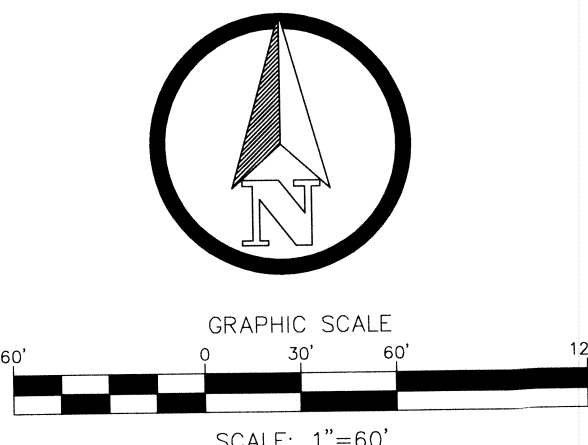
INDEX & GENERAL NOTES

SHEET G1.0

1 OF 1

RIGHT-OF-WAY & TOPOGRAPHIC SURVEY

**WITHIN LOT 47, BLOCK 19,
EL PASO HILLS UNIT FOUR,
AND LOT 31, BLOCK 17,
EL PASO HILLS UNIT THREE,
AND A PORTION OF CELESTE DRIVE.
EL PASO COUNTY, TEXAS**



POINT TABLE				
POINT #	DESCRIPTION	GRID NORTHING	GRID EASTING	ELEVATION
6B	SET NAIL	10609734.06	465568.70	3822.27
101	FOUND COUNTY MONUMENT	10611110.54	464192.54	3831.75
—	VRS NETWORK BASE EPWU_g10	10659595.09	419710.36	3976.74

CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	DELTA	BEARING
C1	106.45'	2201.04'	53.24'	2'46"16"	S42°18'21"E
C2	478.10'	2201.04'	239.99'	12°26'44"	S34°41'50"E
C3	103.55'	2141.04'	51.79'	2'46"16"	N42°18'21"W
C4	465.07'	2141.04'	233.45'	12°26'44"	N34°41'50"W

LEGEND

	CONCRETE		—3809— MINOR CONTOUR
	PAVEMENT		—3810— MAJOR CONTOUR
	CHAINING FENCE		—P—P— POWER LINE
	IRON FENCE		—U—U— UTILITY LINE
	ROCK WALL		— — — GUARD RAIL
	UTILITY POLE		—//—//— WIRED FENCE
	ANCHOR		— — — — RIGHT-OF-WAY LINE
	BASKETBALL HOOP		● CALCULATED POINT (NOT SET)
	WOODEN POST		⊙ FOUND ORIGINAL COUNTY MONUMENT

GENERAL NOTES

1. LOCATION OF ALL UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES INCLUDING UTILITIES NOT SHOWN ON PLANS. THE CONTRACTOR SHALL PROTECT ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND ANY UTILITIES NOT SHOWN THIS PLAN DURING CONSTRUCTION. THE CONTRACTOR WILL PERFORM ALL UTILITY INSTALLATION, REMOVAL AND RELOCATION'S AS PER LOCAL UTILITY CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS ON SITE AND SHALL CONTACT THE DESIGN ENGINEER AND REPORT ANY DISCREPANCIES, OMISSIONS AND/OR ERRORS ON PLANS PRIOR TO COMMENCING WORK.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF EL PASO STANDARD SPECIFICATIONS AND DETAILS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITTING NECESSARY FOR EARTHWORK OPERATIONS.
5. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING UTILITIES AND MANHOLE WITH RESPECTIVE UTILITY COMPANIES.
6. CONTRACTOR SHALL PERFORM ALL EARTHWORK REQUIREMENTS AS PER GEOTECHNICAL STUDY REPORT.
7. A CALL WAS PLACED TO TEXAS DIG SAFE NUMBER (811) TO ACQUIRE LINE-SPOTS. CONFIRMATION NUMBER IS 1975980635. AS OF 09-16-19 NO LINES WERE SPOTTED IN THE FIELD.

SURVEY NOTES

1. BEARINGS SHOWN ARE GRID BEARINGS DERIVED FROM RTK OBSERVATIONS TO THE TEXAS CO-OP NETWORK. REFERRED TO THE TEXAS COORDINATE SYSTEM (NAD 83) CENTRAL ZONE.
2. DISTANCES ARE GROUND DISTANCES AND MAY BE CONVERTED TO GRID DIVIDING BY 1.000231.
3. THESE NAVD 88 ELEVATIONS WERE DERIVED FROM THE TEXAS RTK CO-OP NETWORK. GEOID 2012A MODEL. (ACCURACY ± 0.16').
4. THIS PROPERTY MAY BE SUBJECT TO EASEMENTS WHETHER OF RECORD OR NOT. NO ADDITIONAL RESEARCH WAS PERFORMED BY B&A INC. FOR ANY RESTRICTION, BUILDING LINE, AND OR EASEMENTS WHICH MAY OR MAY NOT AFFECT SUBJECT PARCEL.
5. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

BENCHMARK

COUNTY MONUMENT AT THE INTERSECTION OF TIMOTHY DRIVE AND CELESTE DRIVE.
ELEVATION: 3831.75' (NAVD 88 DATUM)

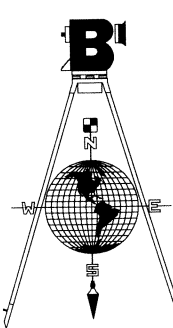
DUST AND EROSION CONTROL NOTE

CONTRACTOR SHALL MAKE PROVISIONS FOR TEMPORARY DUST AND EROSION CONTROL WHERE EXTENSIVE DIRT OR DUST OPERATIONS ARE PERFORMED. USE WATER SPRINKLING AND OTHER METHODS TO LIMIT DUST AND DIRT MIGRATION. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

BEFORE YOU DIG - CALL

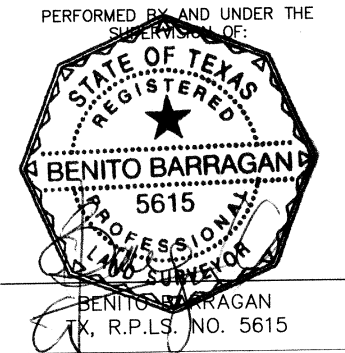
EL PASO ELECTRIC COMPANY	1-800-592-1634
AT & T	1-877-213-1053
SOUTHERN UNION GAS COMPANY	(915) 544-6300
EMERGENCY HOT LINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER&SEWER)	(915) 594-5500
SPECTRUM	1-833-267-6094
TEXAS GAS SERVICE	1-800-959-5325
TEXAS EXCAVATION SAFETY SYSTEM	811

REVISIONS		
DATE	DESCRIPTION	BY
10-30-19	ADDITIONAL TOPO	191029-17
		IB

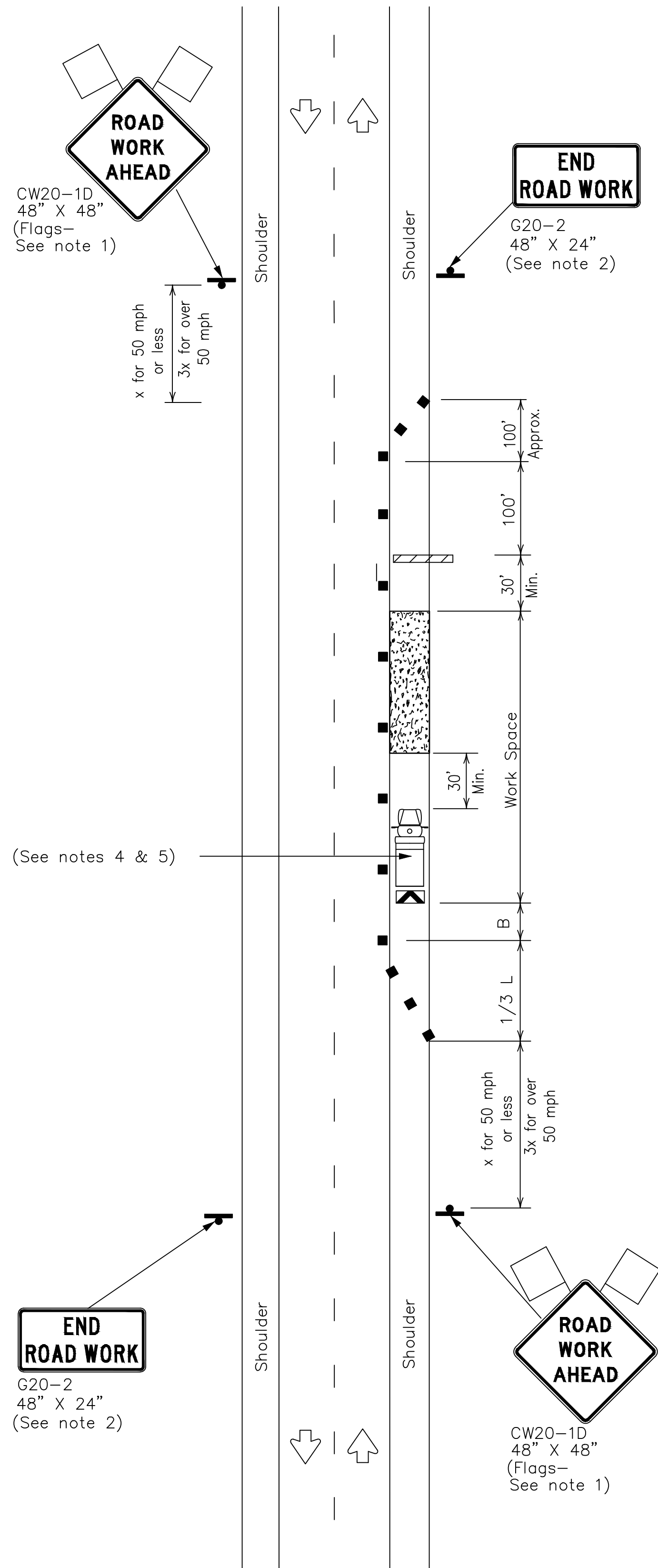


Barragan & Associates Inc.
LAND PLANNING & LAND SURVEYING
TBPELS FIRM # 10151200
10950 Pelicano Dr. Bldg. F - El Paso TX 79935
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PROJECT NAME
CELESTE DRAINAGE PROJECT



F:\10126\DWG\04_10126 - C1.0.DWG_TCP_01.dwg Time: 1/20/2020 02:46pm User: jniedor



TCP (2-1b)

WORK SPACE ON SHOULDER
Conventional Roads

KEYED LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		

Posted Speed *	Formula	Minimum Desirable Taper Lengths * *			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'

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

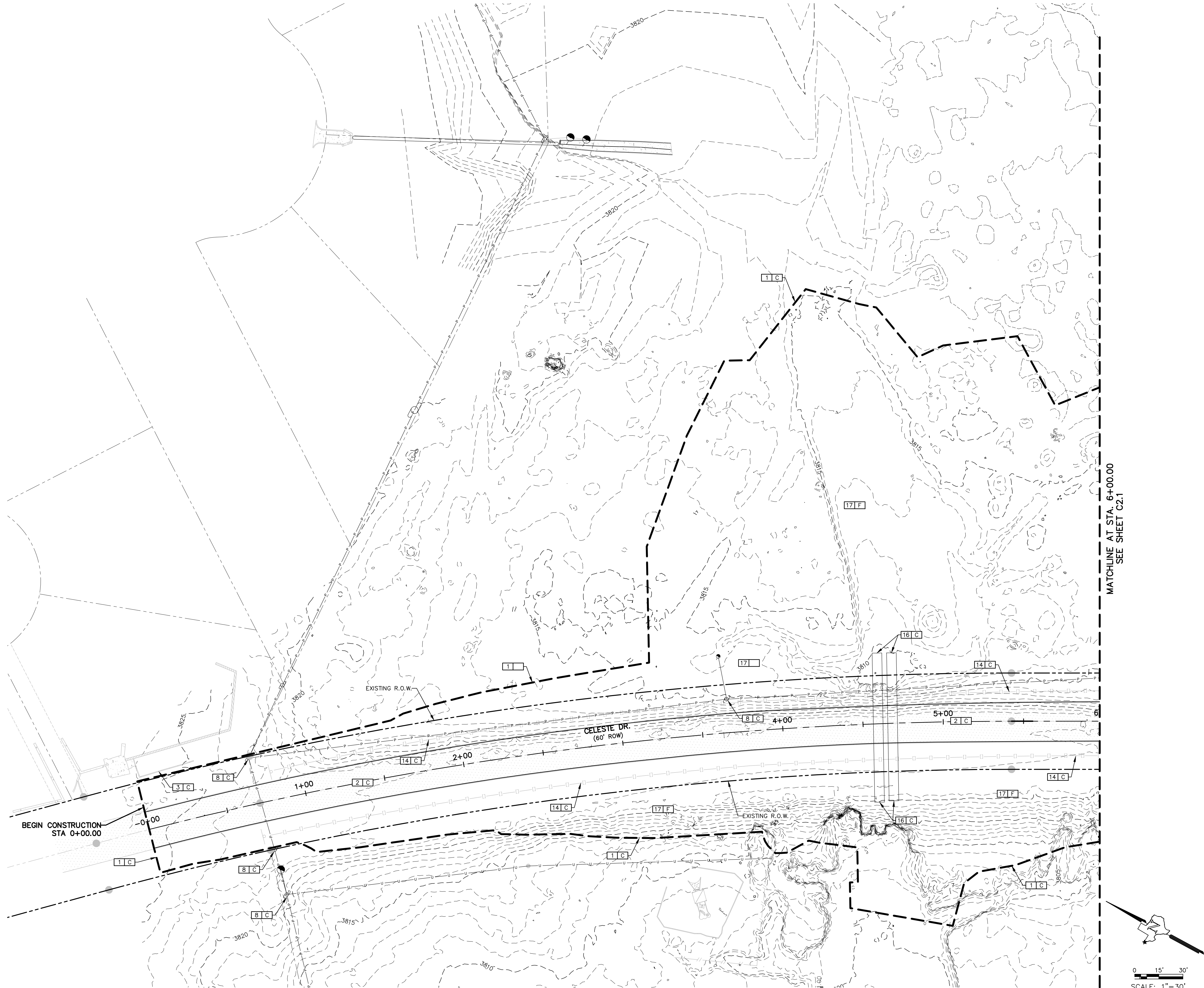
TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	✓

GENERAL NOTES

- Flags attached to signs where shown, are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated in the plans, or for routine maintenance work, when approved by the Engineer.
- Stockpiled material should be placed a minimum of 30 feet from nearest traveled way.
- Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.
- Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
- CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.
- This TCP Standard applies for both sides of the road and must follow the phasing plan.

BY					
NO.					
DATE					
REVISION					
REMARKS					
PLANNING-ENGINEERING-PROJECT MANAGEMENT					
MCI Moreno Cardenas Inc.					
SAN ANTONIO					
2501 E. MASON AVE. EL PASO, TX 79907 (951) 532-3991					
9601 Trans World of Professional Engineers Registration No. F-000554					
EL PASO					
OSWALD F. GARCIA					
108889					
JULY 20, 2020					
ON JULY 20, 2020					
ALTERATION OF A SEALED DOCUMENT					
WITHOUT PROPER NOTIFICATION TO					
THE RESPONSIBLE ENGINEER IS AN					
OFFENSE UNDER THE					
TEXAS ENGINEERING PRACTICE ACT					
SCALE					
Horiz. _____					
Vert. _____					
Date _____ JULY 2020					
Design by M.M./E.C.					
Drawn by E.C.					
Chkd. by O.G.					
Appd. by R.M.					
JOB No. 19-12B					
P R O J E C T N A M E					
CELESTE DRIVE DRAINAGE IMPROVEMENTS					
EL PASO COUNTY TEXAS					
SHEET TITLE					
TRAFFIC CONTROL PLAN					
SHEET					
C1.0					
1 OF 1					

FA10126\DWG\05-10126 - C2.0.DWG: DEMO-01.dwg Time: 11/20/2020 09:44am Engineer: gvt



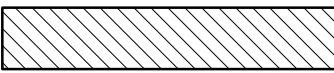
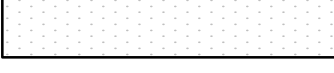




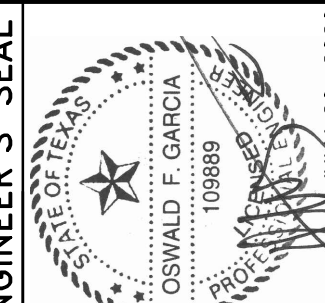

KEYED LEGEND	
	LIMITS OF DEMOLITION
	MATCHLINE
	STATIONING AND PROPOSED GRADE CENTERLINE
	EXISTING RIGHT-OF-WAY
	EXISTING PAVEMENT TO BE REMOVED
	EXISTING PAVEMENT TO BE REMAIN UNDISTURBED
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	KEYNOTE

KEYED NOTES	
1	LIMITS OF DEMOLITION, SAW-CUT EXISTING PAVEMENT/SIDEWALK
2	EXISTING CONCRETE / ASPHALT PAVEMENT STRUCTURE
3	EXISTING ROCKWALL
4	EXISTING CONCRETE WALL
5	EXISTING BRICK WALL
6	EXISTING GATE
7	EXISTING SIGN
8	EXISTING POWER POLE
9	EXISTING LIGHT POLE
10	EXISTING OVERHEAD POWER LINE
11	EXISTING GUY WIRE
12	EXISTING UNDERGROUND ELECTRICAL POWERLINE
13	EXISTING BUSH / TREE
14	EXISTING METAL GUARD RAIL
15	EXISTING CONCRETE
16	EXISTING 6" DIA. CMP PIPE
17	CLEAR AND GRUB
18	EXISTING FENCE

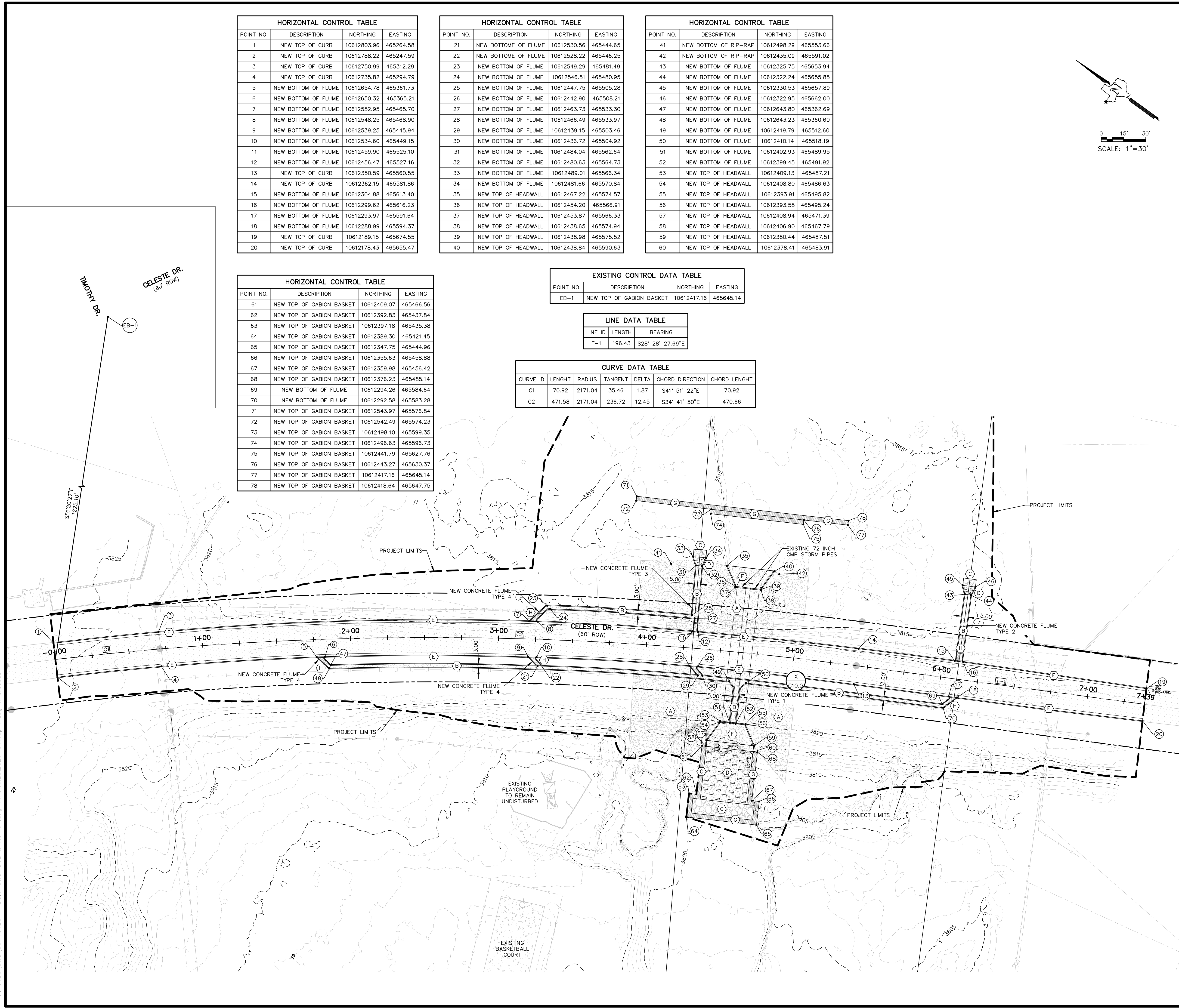
A	REMOVE AND REPLACE
B	REMOVE AND RELOCATE
C	REMAIN UNDISTURBED
D	ADJUST TO NEW GRADE
E	REMOVE AND PROPERLY DISPOSE OF
F	CLEAR AND GRUB
G	REMOVE AND SALVAGE
H	PROTECT AND COORDINATE WITH EL PASO ELECTRIC COMPANY
I	PROTECT AND COORDINATE WITH OWNER
J	REMOVE BY OTHERS

NOTES	
1.	ALL DEMOLITION WORK SHALL BE KEPT WITHIN THE EXISTING RIGHT-OF-WAY UNLESS OTHERWISE SPECIFIED ON PLANS.
2.	RIGHT OF ENTRIES WILL BE REQUIRED FOR WORK OUTSIDE THE RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE RIGHT-OF-WAY ENTRIES THROUGH COORDINATION WITH THE COUNTY OF EL PASO AND THE PROPERTY OWNER.

PLANNING-ENGINEERING-PROJECT MANAGEMENT	BY	
Mc i Cardenas Inc. EL PASO 2501 E. Missouri Ave. El Paso, TX 79907 (951) 532-3991 Texas Board of Professional Engineers Registration No. F-000554	NO.	
	DATE	
	REVISION	
	REMARKS	
ENGINEER'S SEAL	OSWALD F. GARCIA 108889 JULY 20, 2020	
ENGINEER'S NOTE	"THE SEAL APPEARING ON THIS DOCUMENT WAS ISSUED BY OSWALD F. GARCIA, P.E. #108889 ON JULY 20, 2020. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"	
SCALE	Horiz. 1" = 30' Vert. N/A	
PROJECT NAME	CELESTE DRIVE DRAINAGE IMPROVEMENTS	
SHEET TITLE	DEMOLITION PLAN	
SHEET	C2.0	
1 OF 2		

<div>----- LIMITS OF DEMOLITION</div> <div>--- MATCHLINE</div> <div>1+00 ----- STATIONING AND PROPOSED GRADE CENTERLINE</div> <div>----- EXISTING RIGHT-OF-WAY</div> <div> EXISTING PAVEMENT TO BE REMOVED</div> <div> EXISTING PAVEMENT TO BE REMAIN UNDISTURBED</div> <div>---P---P---P---P--- EXISTING OVERHEAD ELECTRIC LINE</div> <div>---USE---USE---USE---USE--- EXISTING UNDERGROUND ELECTRIC LINE</div> <div> KEYNOTE</div>		BY	REVISION	REMARKS
		NO.	DATE	
<div>KEYED NOTES</div> <div></div> <div>1 LIMITS OF DEMOLITION, SAW-CUT EXISTING PAVEMENT/SIDEWALK</div> <div>2 EXISTING CONCRETE / ASPHALT PAVEMENT STRUCTURE</div> <div>3 EXISTING ROCKWALL</div> <div>4 EXISTING CONCRETE WALL</div> <div>5 EXISTING BRICK WALL</div> <div>6 EXISTING GATE</div> <div>7 EXISTING SIGN</div> <div>8 EXISTING POWER POLE</div> <div>9 EXISTING LIGHT POLE</div> <div>10 EXISTING OVERHEAD POWER LINE</div> <div>11 EXISTING GUY WIRE</div> <div>12 EXISTING UNDERGROUND ELECTRICAL POWERLINE</div> <div>13 EXISTING BUSH / TREE</div> <div>14 EXISTING METAL GUARD RAIL</div> <div>15 EXISTING CONCRETE</div> <div>16 EXISTING 6" DIA. CMP PIPE</div> <div>17 CLEAR AND GRUB</div> <div>18 EXISTING FENCE</div> <div></div> <div>A REMOVE AND REPLACE</div> <div>B REMOVE AND RELOCATE</div> <div>C REMAIN UNDISTURBED</div> <div>D ADJUST TO NEW GRADE</div> <div>E REMOVE AND PROPERLY DISPOSE OF</div> <div>F CLEAR AND GRUB</div> <div>G REMOVE AND SALVAGE</div> <div>H PROTECT AND COORDINATE WITH EL PASO ELECTRIC COMPANY</div> <div>I PROTECT AND COORDINATE WITH OWNER</div> <div>J REMOVE BY OTHERS</div>		<div>PLANNING-ENGINEERING-PROJECT MANAGEMENT</div> <div> MCI Moreno</div> <div>EL PASO SAN ANTONIO</div> <div>2504 E. Mineral Ave. El Paso, TX 79903 (915) 532-2901</div> <div>9601 McAllister Freeway #207, San Antonio TX 78216 (210) 314-3533</div> <div>Texas Board of Professional Engineers Registration No. F-000554</div>		
		ENGINEER'S SEAL	<div>EL PASO COUNTY TEXAS</div> <div></div> <div>OSWALD T. GARCIA</div> <div>108689</div> <div>JULY 20, 2020</div>	
		ENGINEER'S NOTE	<div>"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY OSWALD T. GARCIA, PE #109869 ON JULY 20, 2020 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"</div>	
<div>NOTES</div> <div>1. ALL DEMOLITION WORK SHALL BE KEPT WITHIN THE EXISTING RIGHT-OF-WAY UNLESS OTHERWISE SPECIFIED ON PLANS.</div> <div>2. RIGHT OF ENTRIES WILL BE REQUIRED FOR WORK OUTSIDE THE RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE RIGHT-OF-WAY ENTRIES THROUGH COORDINATION WITH THE COUNTY OF EL PASO AND THE PROPERTY OWNER.</div>		SCALE	<div>Horizontal: 1" = 30'</div> <div>Vertical: N/A</div> <div>Date: JULY 2020</div> <div>Design by: M.M./E.C.</div> <div>Drawn by: E.C.</div> <div>Checked by: D.G.</div> <div>App'd. by: P.M.</div> <div>JOB No.: 19-126</div>	
		P R O J E C T N A M E	<div></div> <div>CELESTE DRIVE DRAINAGE IMPROVEMENTS</div>	
		SHEET TITLE	DEMOLITION PLAN	
		SHEET	C2.1	
		2 OF 2		

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HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
1	NEW TOP OF CURB	10612803.96	465264.58
2	NEW TOP OF CURB	10612788.22	465247.59
3	NEW TOP OF CURB	10612750.99	465312.29
4	NEW TOP OF CURB	10612735.82	465294.79
5	NEW BOTTOM OF FLUME	10612654.78	465361.73
6	NEW BOTTOM OF FLUME	10612650.32	465365.21
7	NEW BOTTOM OF FLUME	10612552.95	465465.70
8	NEW BOTTOM OF FLUME	10612548.25	465468.90
9	NEW BOTTOM OF FLUME	10612539.25	465445.94
10	NEW BOTTOM OF FLUME	10612534.60	465449.15
11	NEW BOTTOM OF FLUME	10612459.90	465525.10
12	NEW BOTTOM OF FLUME	10612456.47	465527.16
13	NEW TOP OF CURB	10612350.59	465560.55
14	NEW TOP OF CURB	10612362.15	465581.86
15	NEW BOTTOM OF FLUME	10612304.88	465613.40
16	NEW BOTTOM OF FLUME	10612299.62	465616.23
17	NEW BOTTOM OF FLUME	10612293.97	465591.64
18	NEW BOTTOM OF FLUME	10612288.99	465594.37
19	NEW TOP OF CURB	10612189.15	465674.55
20	NEW TOP OF CURB	10612178.43	465655.47

HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
21	NEW BOTTOM OF FLUME	10612530.56	465444.65
22	NEW BOTTOM OF FLUME	10612528.22	465446.25
23	NEW BOTTOM OF FLUME	10612549.29	465481.49
24	NEW BOTTOM OF FLUME	10612546.51	465480.95
25	NEW BOTTOM OF FLUME	10612447.75	465505.28
26	NEW BOTTOM OF FLUME	10612442.90	465508.21
27	NEW BOTTOM OF FLUME	10612463.73	465533.30
28	NEW BOTTOM OF FLUME	10612466.49	465533.97
29	NEW BOTTOM OF FLUME	10612439.15	465503.46
30	NEW BOTTOM OF FLUME	10612436.72	465504.92
31	NEW BOTTOM OF FLUME	10612484.04	465562.64
32	NEW BOTTOM OF FLUME	10612480.63	465564.73
33	NEW BOTTOM OF FLUME	10612489.01	465566.34
34	NEW BOTTOM OF FLUME	10612481.66	465570.84
35	NEW TOP OF HEADWALL	10612467.22	465574.57
36	NEW TOP OF HEADWALL	10612454.20	465566.91
37	NEW TOP OF HEADWALL	10612453.87	465566.33
38	NEW TOP OF HEADWALL	10612438.65	465574.94
39	NEW TOP OF HEADWALL	10612438.98	465575.52
40	NEW TOP OF HEADWALL	10612438.84	465590.63

HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
41	NEW BOTTOM OF RIP-RAP	10612498.29	465553.66
42	NEW BOTTOM OF RIP-RAP	10612435.09	465591.02
43	NEW BOTTOM OF FLUME	10612325.75	465653.94
44	NEW BOTTOM OF FLUME	10612322.24	465655.85
45	NEW BOTTOM OF FLUME	10612330.53	465657.89
46	NEW BOTTOM OF FLUME	10612322.95	465662.00
47	NEW BOTTOM OF FLUME	10612643.80	465362.69
48	NEW BOTTOM OF FLUME	10612643.23	465360.60
49	NEW BOTTOM OF FLUME	10612419.79	465512.60
50	NEW BOTTOM OF FLUME	10612410.14	465518.19
51	NEW BOTTOM OF FLUME	10612402.93	465489.95
52	NEW BOTTOM OF FLUME	10612399.45	465491.92
53	NEW TOP OF HEADWALL	10612409.13	465487.21
54	NEW TOP OF HEADWALL	10612408.80	465486.63
55	NEW TOP OF HEADWALL	10612393.91	465495.82
56	NEW TOP OF HEADWALL	10612393.58	465495.24
57	NEW TOP OF HEADWALL	10612408.94	465471.39
58	NEW TOP OF HEADWALL	10612406.90	465467.79
59	NEW TOP OF HEADWALL	10612380.44	465487.51
60	NEW TOP OF HEADWALL	10612378.41	465483.91

HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
61	NEW TOP OF GABION BASKET	10612409.07	465466.56
62	NEW TOP OF GABION BASKET	10612392.83	465437.84
63	NEW TOP OF GABION BASKET	10612397.18	465435.38
64	NEW TOP OF GABION BASKET	10612389.30	465421.45
65	NEW TOP OF GABION BASKET	10612347.75	465444.96
66	NEW TOP OF GABION BASKET	10612355.63	465458.88
67	NEW TOP OF GABION BASKET	10612359.98	465456.42
68	NEW TOP OF GABION BASKET	10612376.23	465485.14
69	NEW BOTTOM OF FLUME	10612294.26	465584.64
70	NEW BOTTOM OF FLUME	10612292.58	465583.28
71	NEW TOP OF GABION BASKET	10612543.97	465576.84
72	NEW TOP OF GABION BASKET	10612542.49	465574.23
73	NEW TOP OF GABION BASKET	10612498.10	465599.35
74	NEW TOP OF GABION BASKET	10612496.63	465596.73
75	NEW TOP OF GABION BASKET	10612441.79	465627.76
76	NEW TOP OF GABION BASKET	10612443.27	465630.37
77	NEW TOP OF GABION BASKET	10612417.16	465645.14
78	NEW TOP OF GABION BASKET	10612418.64	465647.75

EXISTING CONTROL DATA TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
EB-1	NEW TOP OF GABION BASKET	10612417.16	465645.14

LINE DATA TABLE		
LINE ID	LENGTH	BEARING
T-1	196.43	S28° 28' 27.69"E

CURVE DATA TABLE						
CURVE ID	LENGHT	RADIUS	TANGENT	DELTA	CHORD DIRECTION	CHORD LENGHT
C1	70.92	2171.04	35.46	1.87	S41° 51' 22"E	70.92
C2	471.58	2171.04	236.72	12.45	S34° 41' 50"E	470.66

KEYED LEGEND

PROJECT LIMITS

MATCHLINE

STATIONING AND PROPOSED GRADE CENTERLINE

EXISTING RIGHT-OF-WAY

A

NEW CONCRETE RIP-RAP.....

3
C8.2

B

NEW CONCRETE FLUME.....

1
C8.1

THRU
6
C8.1

C

NEW 12 INCH MORTARED ROCK
RIP-RAP.....

1
C8.0

D

NEW CONCRETE BAFFLE BLOCKS.....

3
C8.1

2
C8.2

E

NEW TYPE II CURB & GUTTER.....

2
C8.0

F

NEW HEADWALL W/WINGWALLS.....

3
C8.0

G

NEW GABION BASKETS.....

1
C8.2

2
C8.2

H

NEW STEEL DIAMOND PLATE.....

4
C8.1

BENCHMARK

1. FOUND COUNTY MONUMENT AT THE CENTERLINE INTERSECTION OF CELESTE DRIVE AND TIMOTHY DRIVE.
ELEVATION 3831.75' (NAVD 88)

ENGINEER'S SEAL

ENGINEER'S NOTE

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SCALE

Horiz. _____
Vert. _____
Date: JULY 2020
Design by: M.M./E.C.
Drawn by: E.C.
Chkd. by: O.G.
Appd. by: R.M.
JOB No. 19-126

PROJ ECT NAME

CELESTE DRIVE
DRAINAGE
IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE

ROADWAY SITE &
HORIZONTAL
CONTROL PLAN

SHEET

C3.0

1 OF 1

PLANNING-ENGINEERING-PROJECT MANAGEMENT

NO.

DATE

REVISION

REMARKS

BY

MCi Moreno Cardenas Inc.

2501 E. Missouri Ave. El Paso, TX 79907 (951) 432-3991
9601 Texas Board of Professional Engineers Registration No. F-000554
EL PASO SAN ANTONIO

OSWALD F. GARCIA
10989
P.E.
JULY 20, 2020

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DRAINAGE AREA (RUN-OFF) COMPUTATIONS					
DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	TIME OF CONCENTRATION (3)	RUNOFF COEFF. (C) (4)	DESIGN STORM INTENSITY I -100 YR (IN/HR) (5)	100 YEAR DISCHARGE Q100-YR (CFS) (6)
DA-1	0.09	10	0.95	5.36	0.45
DA-2	0.09	10	0.95	5.36	0.44
DA-3	0.05	10	0.95	5.36	0.25
DA-4	0.05	10	0.95	5.36	0.23
DA-5	0.07	10	0.95	5.36	0.34
DA-6	0.06	10	0.95	5.36	0.33
TOTAL=					2.05

KEYED LEGEND

EXISTING RIGHT-OF-WAY/PROPERTY LINE

NEW PROPERTY LINE

PROJECT LIMITS

STREET CENTERLINE

PROPERTY LINE

3XXX

PROPOSED MAJOR CONTOUR

3XXX

PROPOSED MINOR CONTOUR

3XXX

EXISTING MAJOR CONTOUR

3XXX

EXISTING MINOR CONTOUR

HIGH POINT

LOW POINT

XXXXXX

SPOT ELEVATION

TC

TS

TP

TOP OF CURB

TC

TS

TP

TOP OF SIDEWALK

TC

TS

TP

TOP OF PAVEMENT

CROSS SECTION

DRAINAGE AREA IDENTIFICATION

FLOW DIRECTION

NOTES

1. SEE SHEET C7.0 FOR OVERALL WATERSHED AREA.

BY

NO.

DATE

REVISION

REMARKS

PLANNING-ENGINEERING-PROJECT MANAGEMENT

MCi Moreno Cardenas Inc.

EL PASO

2501 E. Missouri Ave. El Paso, TX 79907 (951) 432-3991

9800 J. Frankford Blvd. Dallas, TX 75243

Texas Board of Professional Engineers Registration No. F-000554

ENGINEER'S SEAL

OSWALD F. GARCIA

108889

JULY 20, 2020

ENGINEER'S NOTE

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SCALE

Horiz.

Vert.

Date

July 2020

Design by

M.M./E.C.

Drawn by

E.C.

Chkd. by

D.G.

Appd. by

F.M.

JOB No.

19-126

PROJECT NAME

CELESTE DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

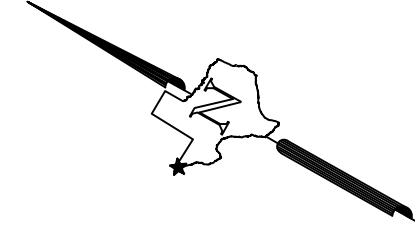
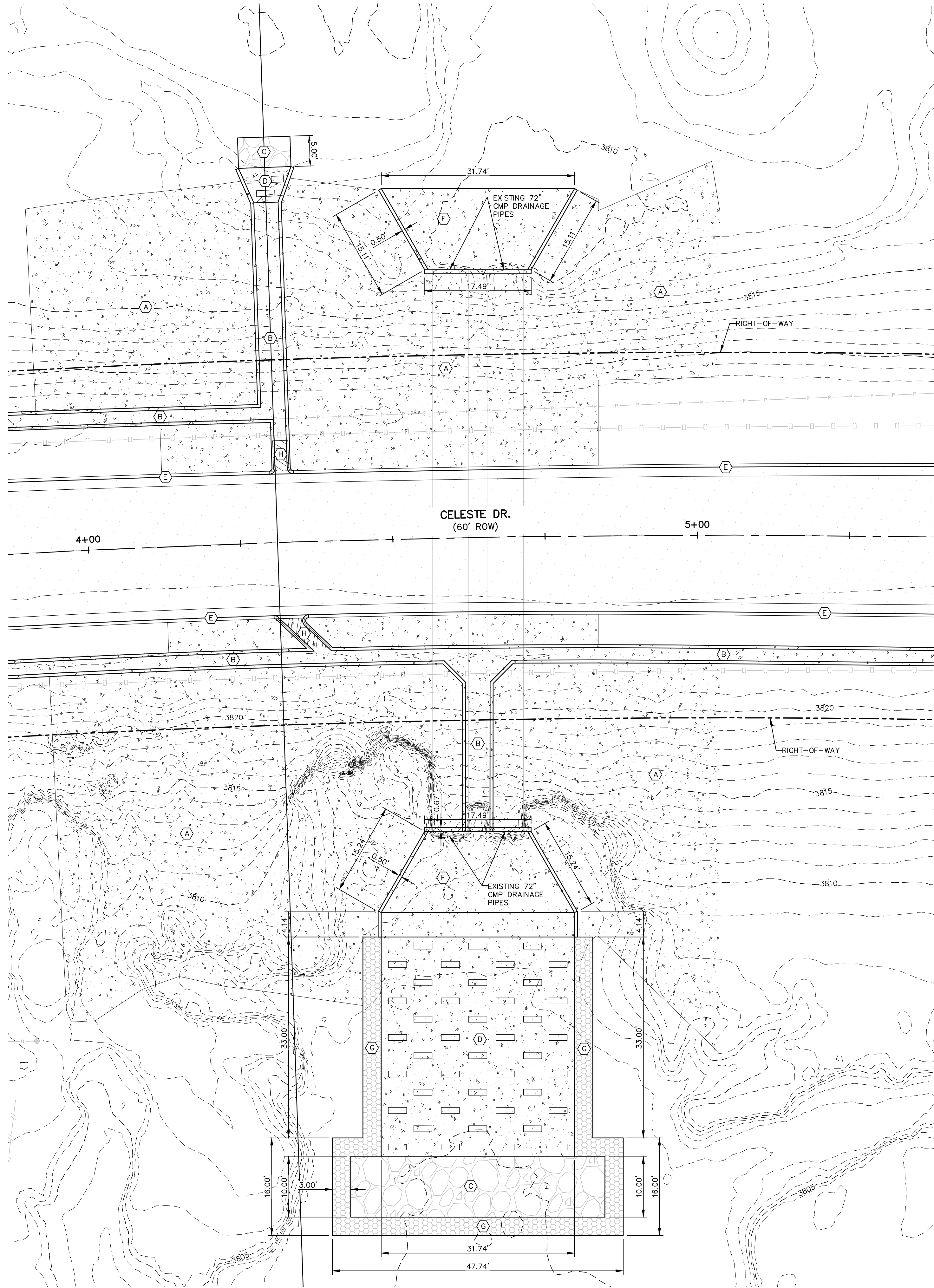
SHEET TITLE

GRADING & DRAINAGE PLAN


SHEET

C4.0

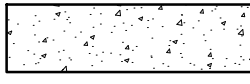
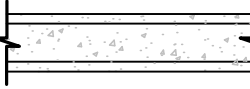
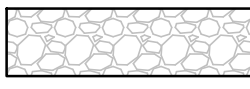
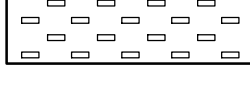

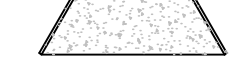

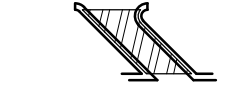
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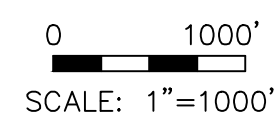


0 5' 10'



SCALE: 1"=10'

KEYED LEGEND		BY	
----- 3XXX -----	EXISTING MAJOR CONTOUR		
----- 3XXX -----	EXISTING MINOR CONTOUR		
(A) 	CONCRETE RIP--RAP.....	(3) C6.2	
(B) 	NEW CONCRETE FLUME.....	(1) C6.1	(6) C6.1
(C) 	NEW 12 INCH MORTARED ROCK RIP--RAP.....	(1) C6.0	
(D) 	NEW CONCRETE BAFFLE BLOCKS.....	(3) C6.1	(2) C6.2
(E) 	NEW TYPE II CURB & GUTTER.....	(2) C6.0	
(F) 	NEW HEADWALL W/WINGWALLS.....	(3) C6.0	
(G) 	NEW GABION BASKETS.....	(1) C6.2	(2) C6.2
(H) 	NEW 3/8" STEEL DIAMOND FLOOR PLATE.....	(4) C6.1	
<p>PLANTING AND TREE PROTECT MANAGEMENT</p> <p>MCi Moreno Cardenas Inc. SAN ANTONIO, TEXAS 5505 E. Mineral Ave. El Paso, TX 79903 (915) 532-2901 9901 McAllister Freeway #207, San Antonio TX 78216 (210) 314-3533 Texas Board of Professional Engineers Registration No. F-006554</p>		<p>EL PASO</p> <p>199889</p> <p>OSWALD T. GARCIA</p> <p>199889</p> <p>EL PASO COUNTY, TEXAS</p> <p>JULY 20, 2020</p>	
<p>ENGINEER'S SEAL</p>		<p>ENGINEER'S NOTE</p> <p>"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY OSWALD T. GARCIA, PE #199889 ON JULY 20, 2020 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"</p>	
<p>SCALE</p> <p>Horiz. _____</p> <p>Vert. _____</p> <p>Date _____ JULY 2020</p> <p>Design by M.M./E.C.</p> <p>Drawn by E.C.</p> <p>Chkd. by O.G.</p> <p>Appd. by B.M.</p> <p>JOB No. 19--126</p>		<p>P R O J E C T N A M E</p> <p>CELESTE DRIVE DRAINAGE IMPROVEMENTS</p>	
<p>SHEET TITLE</p> <p>DRAINAGE CROSSING OUTFALL LAYOUT</p>		<p>SHEET</p> <p>C6.0</p>	
<p>1 OF 1</p>			



SCS CURVE NUMBER METHOD

SNYDER-PEAK DISCHARGE METHOD CALCULATION FOR AREAS GREATER THAN 200 ACRES

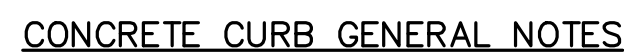
$$Q_p = \frac{640 \text{ } C_p A}{t_{IR}}$$

Q_p = PEAK DISCHARGE, IN CUBIC FEET PER SECOND
 C_p = COEFFICIENT OF PEAK DISCHARGES
 A = WATERSHED AREA, IN SQUARE MILES
 t_{IR} = ADJUSTED LAG TIME, IN HOURS

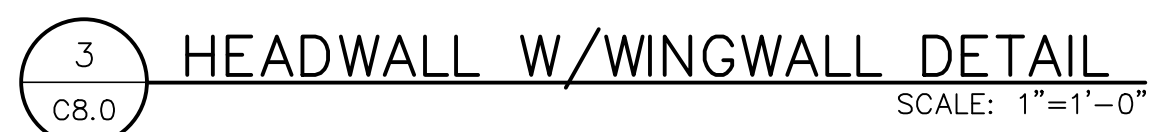
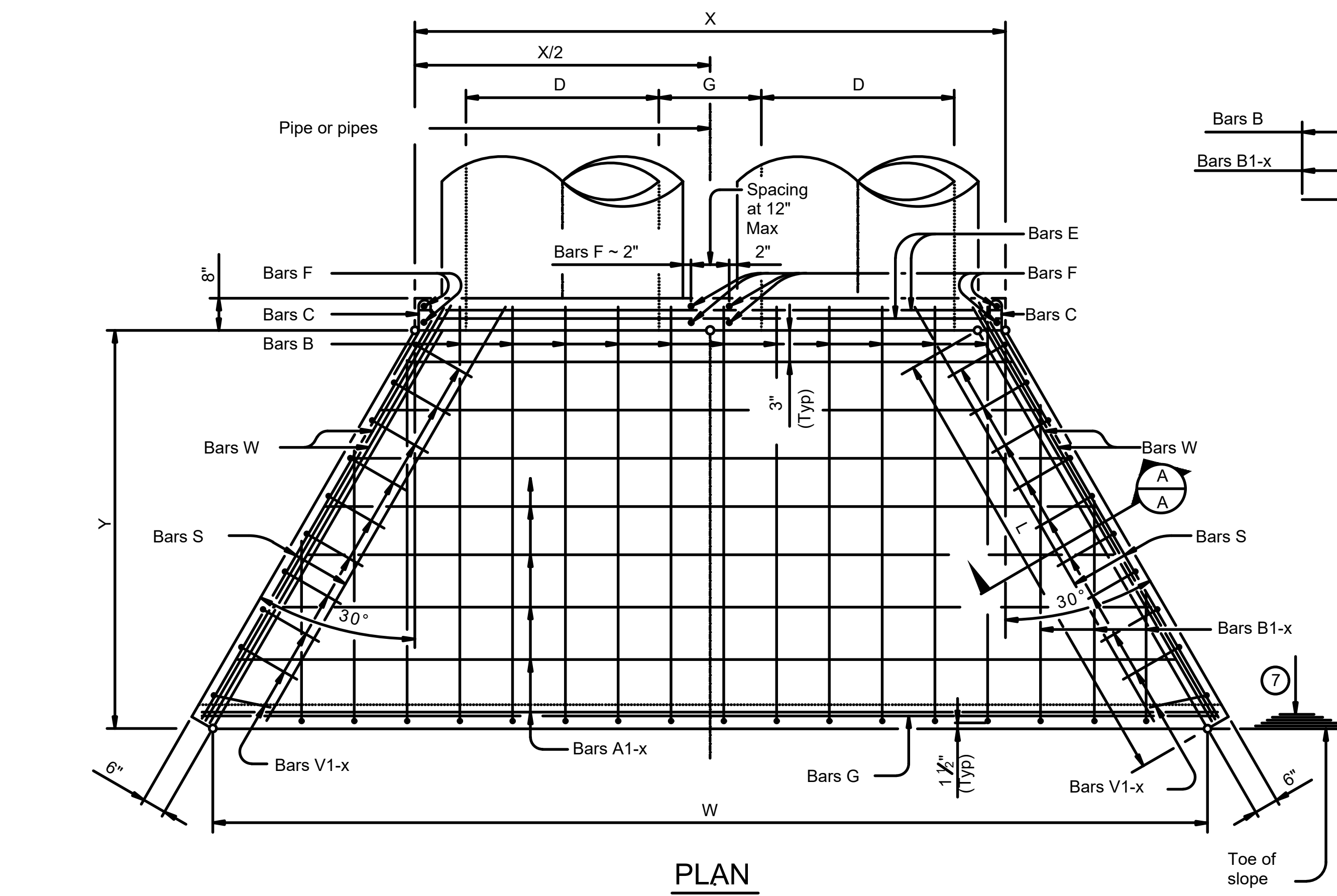
NOTES
FOR CONTRACTOR'S INFORMATION ONLY

SHEET TITLE	
OVERALL WATERSHED MAP	
SHEET	C7.0
1 OF 1	

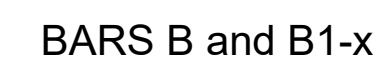
1. STONE FOR RIP-RAP SHALL BE 6" TO 8" AS NEARLY UNIFORM IN SECTION AS PRACTICABLE. STONE SHALL BE QUARRIED; FRACTURED RIVERROCK SHALL NOT BE PERMITTED.
2. REFER TO SITE PLAN FOR DIMENSIONS.



1. DUMMY JOINTS REQUIRED AT 10' O.C.
2. 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT IS REQUIRED FOR ALL CURBS RETURNS. TRIM BITUMINOUS MATERIAL 1/4" LESS THAN NEAT CURB DIMENSION.
3. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.



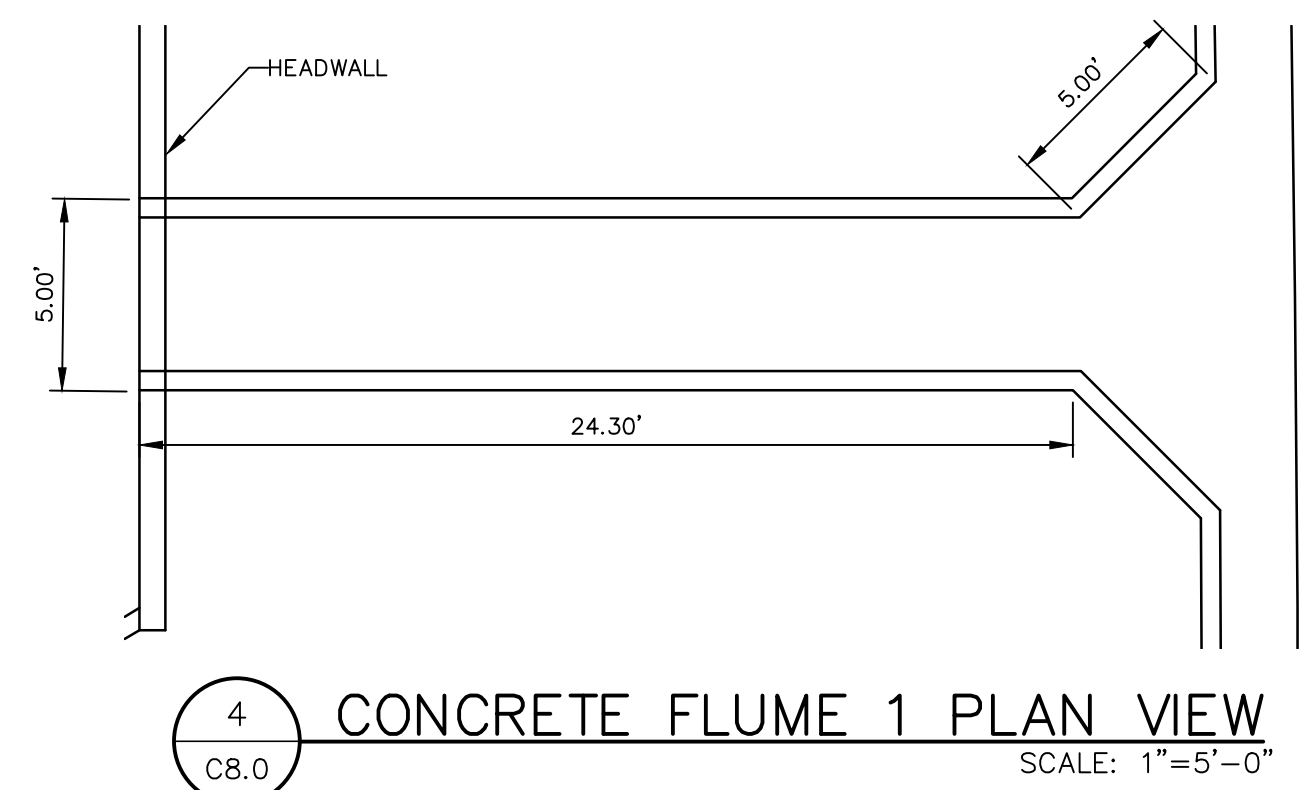
<div> <div>TABLE OF</div> <div>REINFORCING STEEL</div> <div>5</div> </div>			
Bar	Size	Spa	No.
A	#4	1' - 0"	~
B	#3	1' - 6"	~
C	#4	1' - 0"	~
D	#3	1' - 0"	~
E	#5	~	4
F	#5	~	~
G	#3	~	2
S	#4	~	6
V	#4	1' - 0"	~
W	#5	~	4

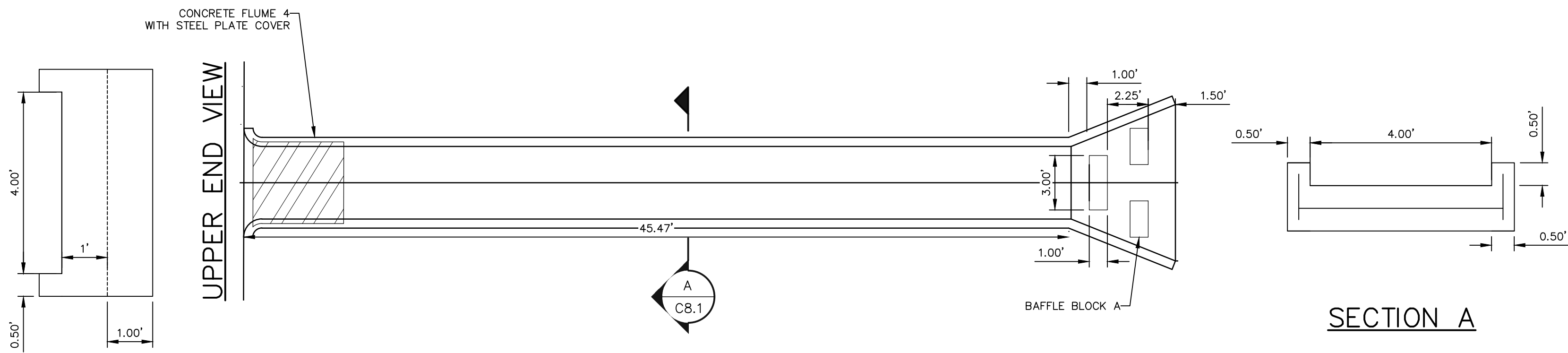


- ① Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- ② For vehicle safety, construct curbs no more than 3" above finished grade. Reduce curb heights, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- ③ Provide a 1'-0" footing as shown where required to maintain 4" minimum cover for pipes.
- ④ Dimensions shown are usual and maximum.
- ⑤ Quantities shown are for one structure end only (one headwall).
- ⑥
$$\text{Min Length} = 6' + 3'' \times \left(\frac{12 \times H - 7}{12 \times L} \right)$$
$$\text{Max Length} = 12 \times H - 3'' \times \left(\frac{12 \times H - 7}{12 \times L} \right) - 1''$$
- ⑦ Lengths of wings based on SL:1 slope along this line.

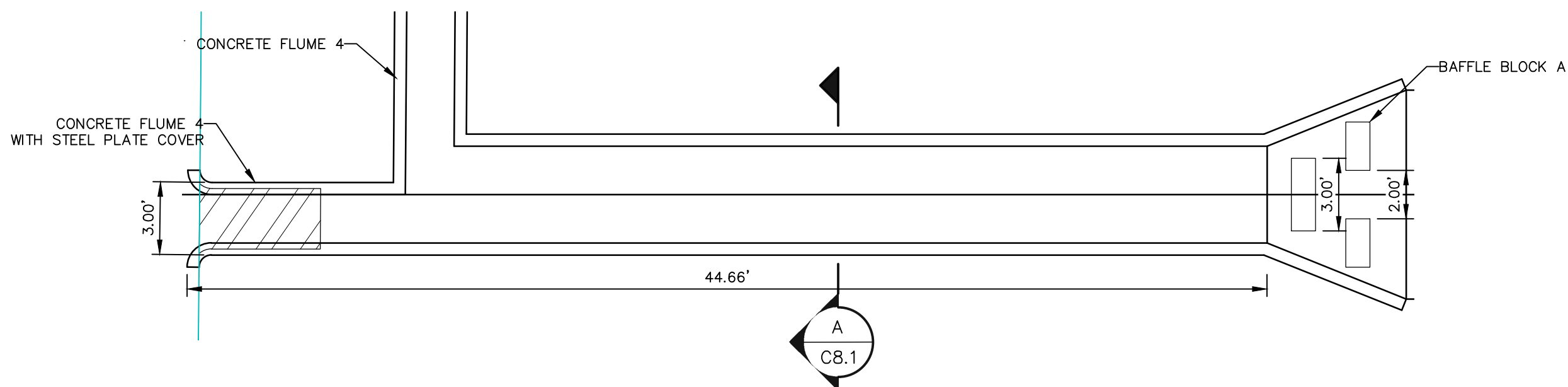
Provide Grade 60 reinforcing steel.
Provide Class C concrete ($f'_c = 3,600$ psi).

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Do not mount bridge rails of any type directly to these culvert headwalls.
This standard may not be used for wall heights, H, exceeding the values shown.

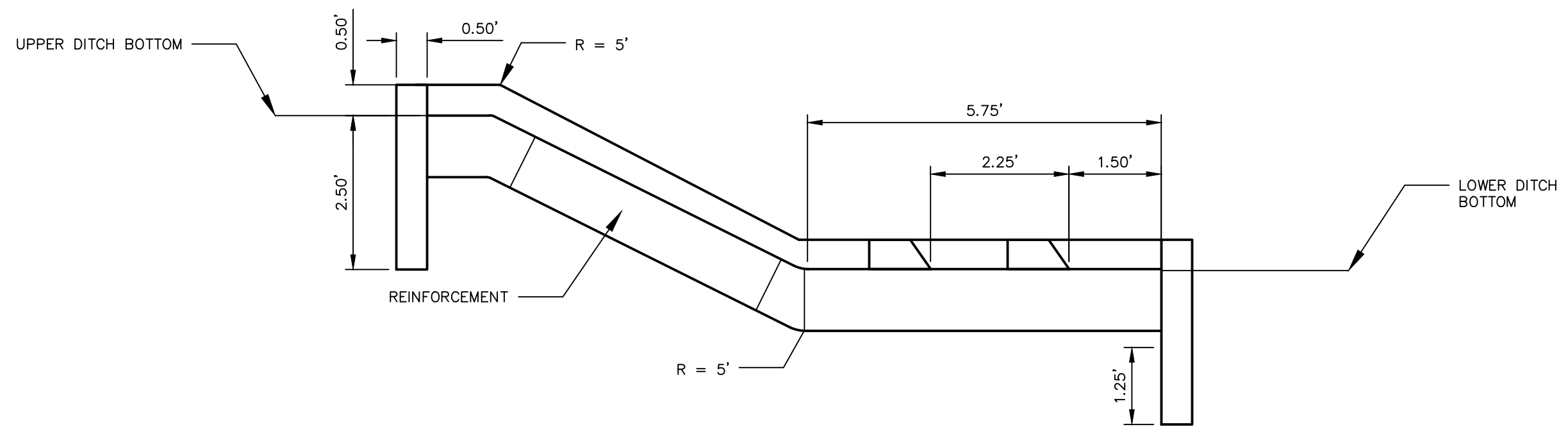




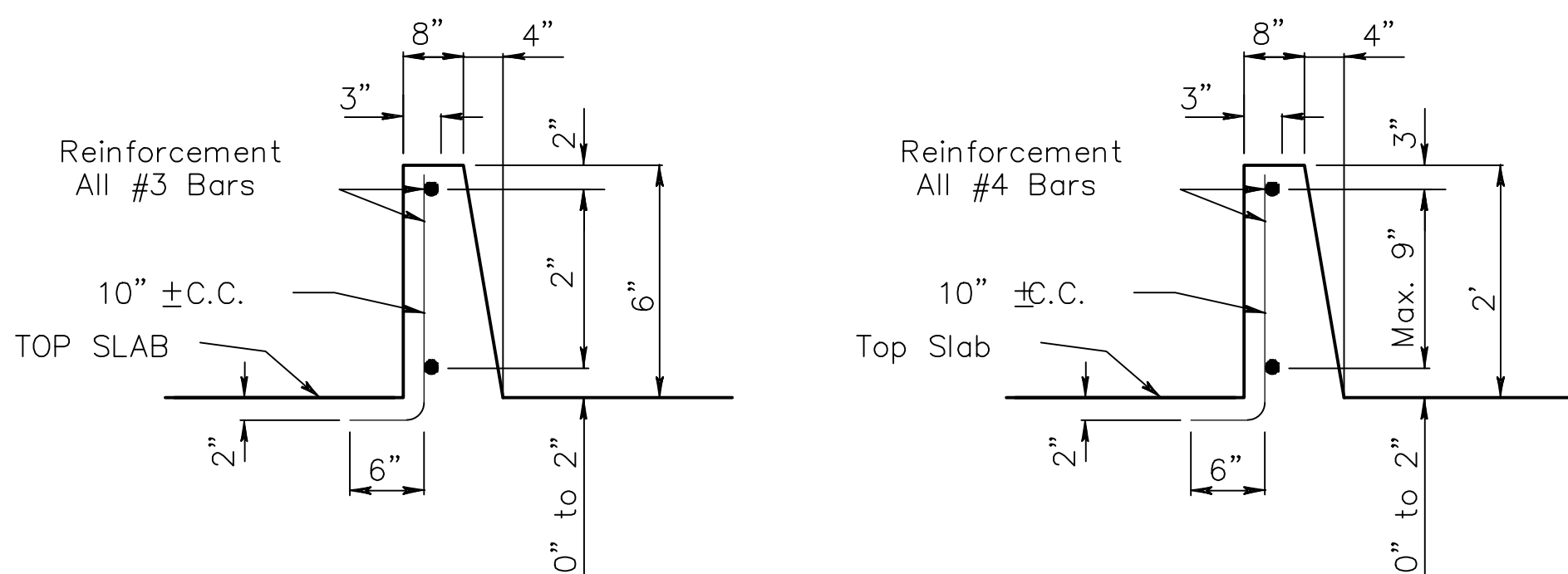
1 CONCRETE FLUME 2 PLAN VIEW
SCALE: 1"=5'-0"



1 CONCRETE FLUME 3 PLAN VIEW
SCALE: 1"=5'-0"



2 CONCRETE FLUME 2-3 ELEVATION VIEW
C8.1

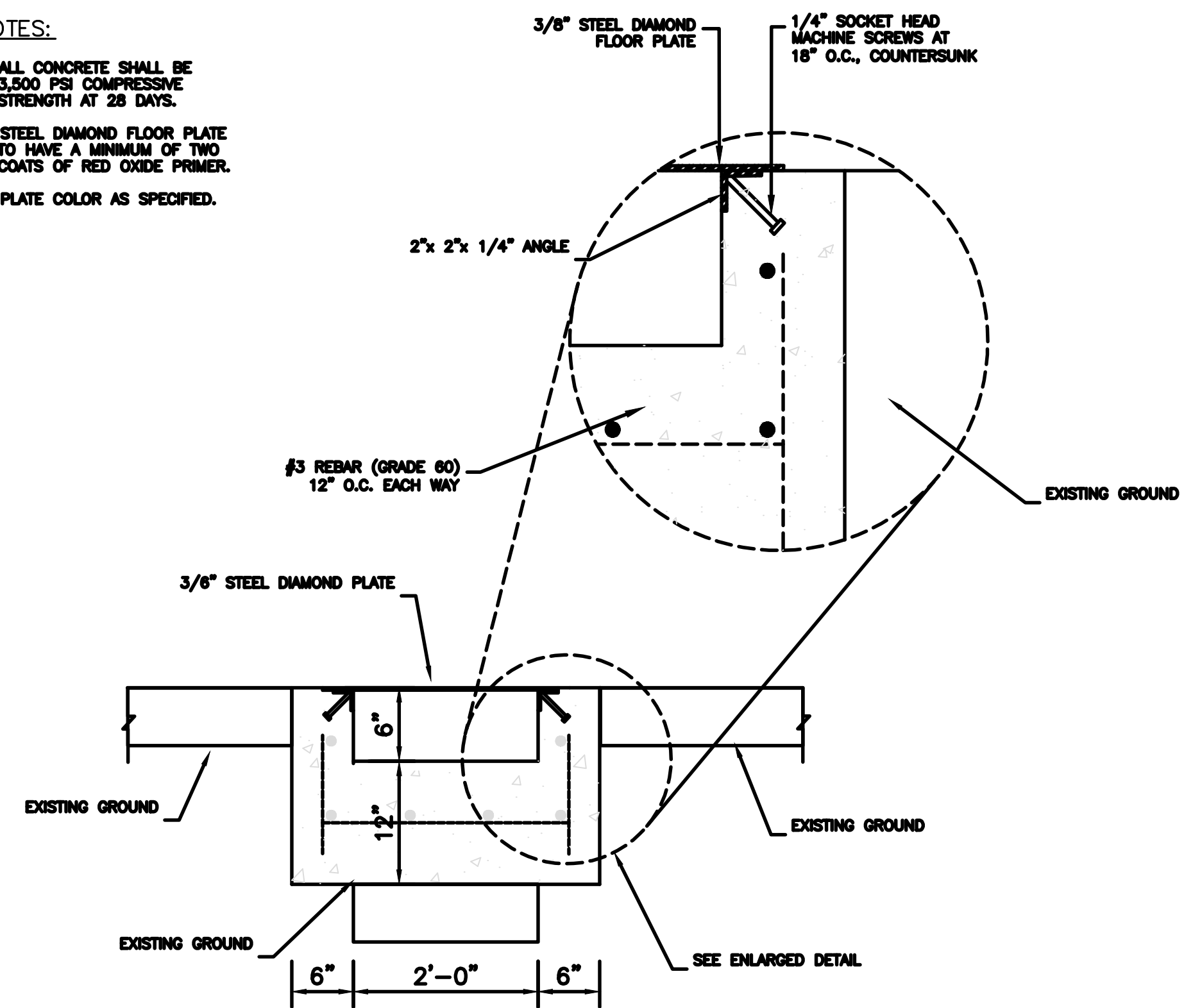


BAFFLE BLOCK A BAFFLE BLOCK B

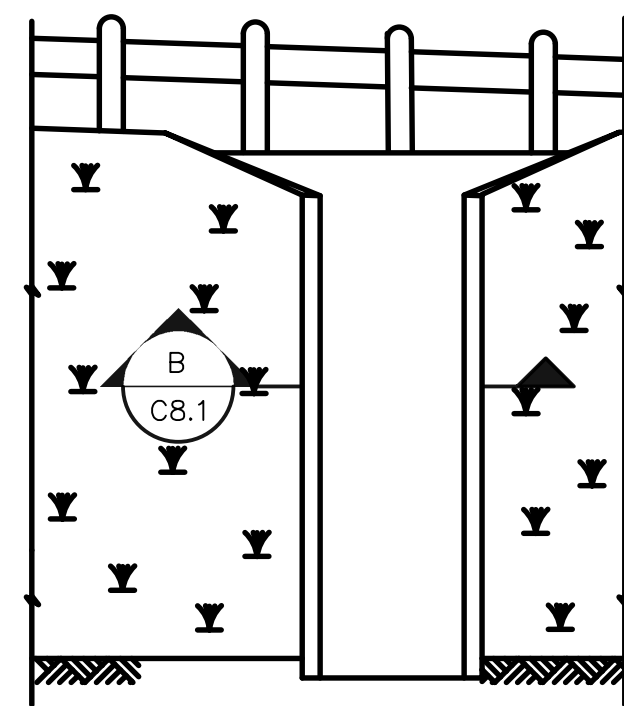
3 BAFFLE BLOCK DETAILS
C8.1

SECTION A

- NOTES:
1. ALL CONCRETE SHALL BE 3,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
 2. STEEL DIAMOND FLOOR PLATE TO HAVE A MINIMUM OF TWO COATS OF RED OXIDE PRIMER.
 3. PLATE COLOR AS SPECIFIED.

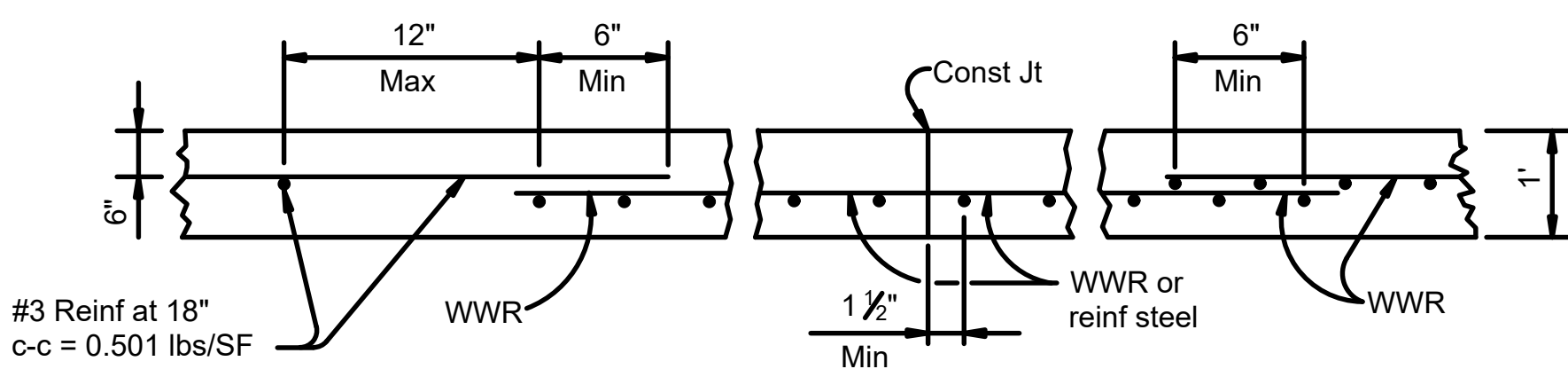


4 CONCRETE FLUME 4
WITH STEEL PLATE COVER
SCALE: 1/2"=1'-0"



SECTION B
SHOULDER DRAIN

5 CONCRETE FLUME 4 DETAIL
C8.1



6 FLUME REINFORCEMENT DETAIL
C8.1

1. LIMITS AND CONFIGURATION OF DRAINS AND DEPRESSIONS ARE AS SHOWN ELSEWHERE IN PLANS OR AS DIRECTED BY THE ENGINEER.
2. PROVIDE INTERMEDIATE TOEWALL ONLY WHEN DESIGNATED ELSEWHERE IN THE PLANS OR INCLUDED IN THE SPECIFICATIONS.
3. PROVIDE LOWER LEVEL OF 2" DIA WEEP HOLES AT 10' C-C BACKED BY 1' OF PACKET OF GRAVEL AND GALVANIZED HARDWARE CLOTH AT ALL LOCATIONS UNLESS DIRECTED BY THE ENGINEER TO ELIMINATE.
4. WALL EXTENSION MAY BE REDUCED OR MODIFIED IF APPROVED BY THE ENGINEER. INCREASE WALL EXTENSION TO 1'-6" WHENEVER THE OPTIONAL INTERMEDIATE TOEWALL IS CALLED FOR IN THE PLANS.
5. TOP OF CAP TO TOP OF RIPRAP DIMENSION VARIES AS DIRECTED BY THE ENGINEER. SHOULD BE 9" MIN FOR BEAM/SLAB TYPE BRIDGES AND 1'-6" FOR SLAB SPAN, BOX BEAM, OR SLAB BEAM BRIDGES.
6. PROVIDE SEALING OPTION FOR JOINT BETWEEN THE FACE OF CAP AND RIPRAP AS DESIGNATED BY THE ENGINEER OR AS SHOWN ELSEWHERE ON PLANS.
7. FLASHING (SHOWN IN CAP OPTION A) MAY BE USED AT WINGWALL IN ADDITION TO EXP JT MAT'L IF SHOWN ON PLANS OR DIRECTED BY THE ENGINEER.
8. PROVIDE #3 REINFORCING BARS AT 18" SPA C-C. PROVIDE WELDED WIRE REINFORCEMENT (WWR) AS 6x6-D2.9xD2.9 OR D3xD3. COMBINATIONS OF WWR AND REINFORCING BARS MAY BE USED IF BOTH ARE PERMITTED. USE LAP SPLICES OF A MINIMUM 6 INCHES, MEASURED FROM THE TRANSVERSE WIRE OF WWR, AND THE ENDS OF REINFORCING BARS.
9. 2"x18 GAGE GALV SHEET METAL.
10. PROVIDE WWR OR #3 BARS, WITH 1'-9" EXTENSION INTO SLOPE.
11. WWR OR REINFORCING STEEL IS CONTINUOUS THROUGH RIPRAP CONSTRUCTION JOINTS. PROVIDE WWR OR REINFORCING STEEL THAT EXTENDS 1'-1" MINIMUM INTO ADJACENT RIPRAP ON EACH SIDE OF CONSTRUCTION JOINT EVEN IF SYNTHETIC REINFORCING FIBER IS UTILIZED.

REINFORCEMENT DETAILS GENERAL NOTES

1. PROVIDE CLASS "B" CONCRETE (F'C = 2000 PSI) UNLESS NOTED ELSEWHERE IN PLANS.
2. PROVIDE GRADE 60 REINFORCING STEEL.
3. PROVIDE DEFORMED WELDED WIRE REINFORCEMENT (WWR) MEETING ASTM A1064 UNLESS OTHERWISE SHOWN.
4. PROVIDE REINFORCING BARS, DEFORMED WWR, OR ANY SUITABLE COMBINATION OF BOTH TYPES FOR RIPRAP REINFORCING, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
5. OPTIONALLY SYNTHETIC FIBERS MAY BE USED IF APPROVED BY THE ENGINEER. PROVIDE SYNTHETIC FIBERS LISTED ON THE "FIBERS FOR CONCRETE" MATERIAL PRODUCER LIST (MPL) IN LIEU OF STEEL REINFORCING IN RIPRAP CONCRETE.
6. INSTALL CONSTRUCTION JOINTS OR GROOVED JOINTS EXTENDING THE FULL SLANT SLOPE HEIGHT AT INTERVALS OF APPROXIMATELY 20 FEET UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
7. HARDWARE CLOTH, LOOSE GRADE STONE BEHIND WEEP HOLES, FLASHING, OR OTHER SEALING MATERIAL ARE SUBSIDIARY TO THE BID ITEM "RIPRAP".
8. SEE LAYOUT FOR LIMITS OF RIPRAP.
9. RRB IS TO BE USED ON STREAM CROSSINGS, RRB IS TO BE USED ON OTHER EMBANKMENTS.

NO.	DATE	REVISION	REMARKS	BY

PLANNING-ENGINEERING-PROJECT MANAGEMENT

McI Moreno Cardenas Inc.

2501 E. Missouri Ave. El Paso, TX 79907 (951) 432-3991
9601 E. Missouri Ave. El Paso, TX 79907 (951) 432-3991
Texas Board of Professional Engineers Registration No. F-000554

EL PASO SAN ANTONIO

ENGINEER'S SEAL

OSWALD F. GARCIA
108889
JULY 20, 2020

ENGINEER'S NOTE

"THE SEAL APPEARING ON THIS DOCUMENT WAS ADOPTED BY OSWALD F. GARCIA, P.E. #108889 ON JULY 20, 2020 ALTERNATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

SCALE

Horiz. JULY 2020
Vert. JULY 2020
Date by M.M./E.C.
Design by M.M./E.C.
Drawn by E.C.
Chkd. by E.C.
Appd. by R.M.
JOB No. 19-12B

PROJECT NAME

CELESTE DRIVE
DRAINAGE
IMPROVEMENTS

EL PASO COUNTY
TEXAS

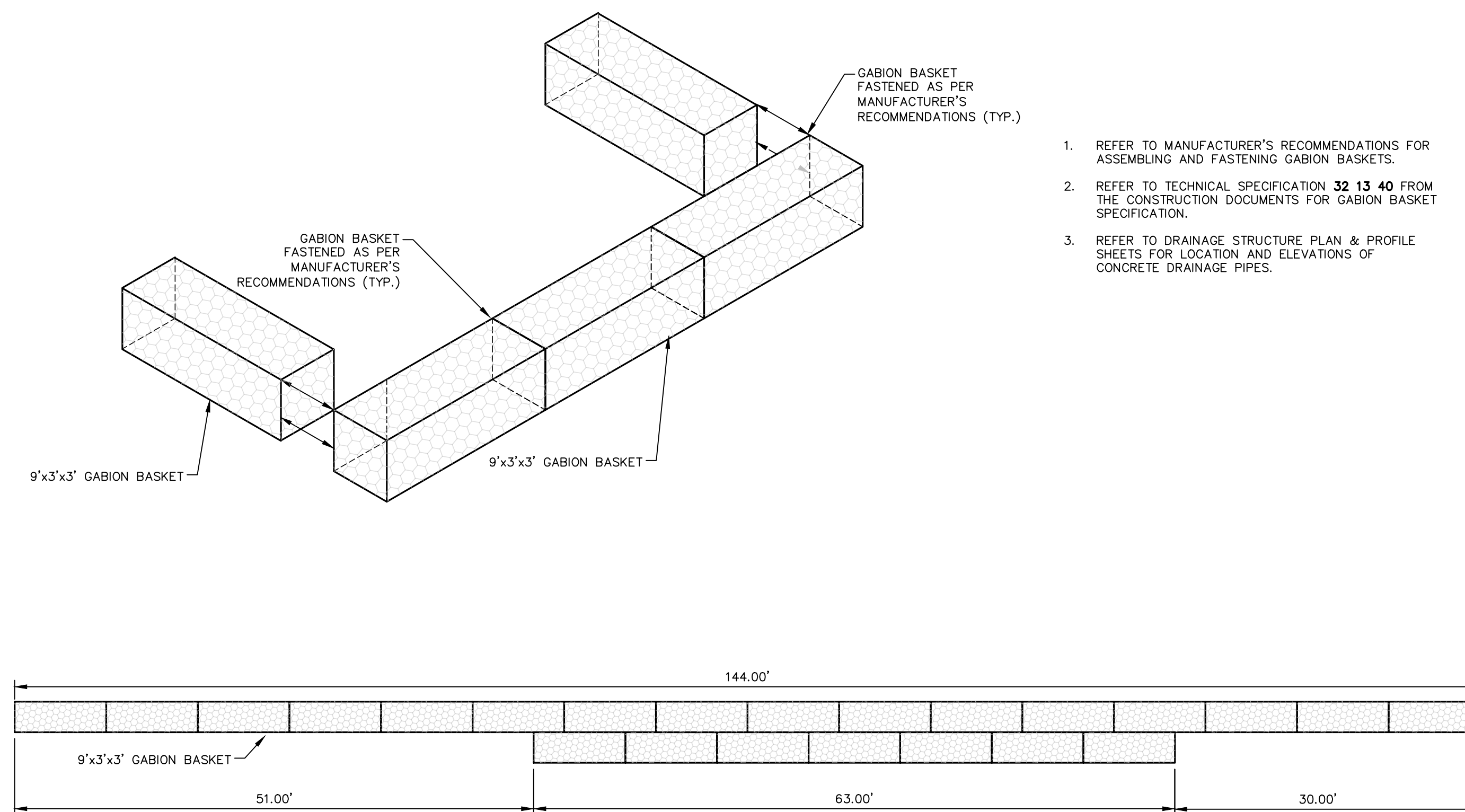
SHEET TITLE

ROAD & DRAINAGE
DETAILS

SHEET

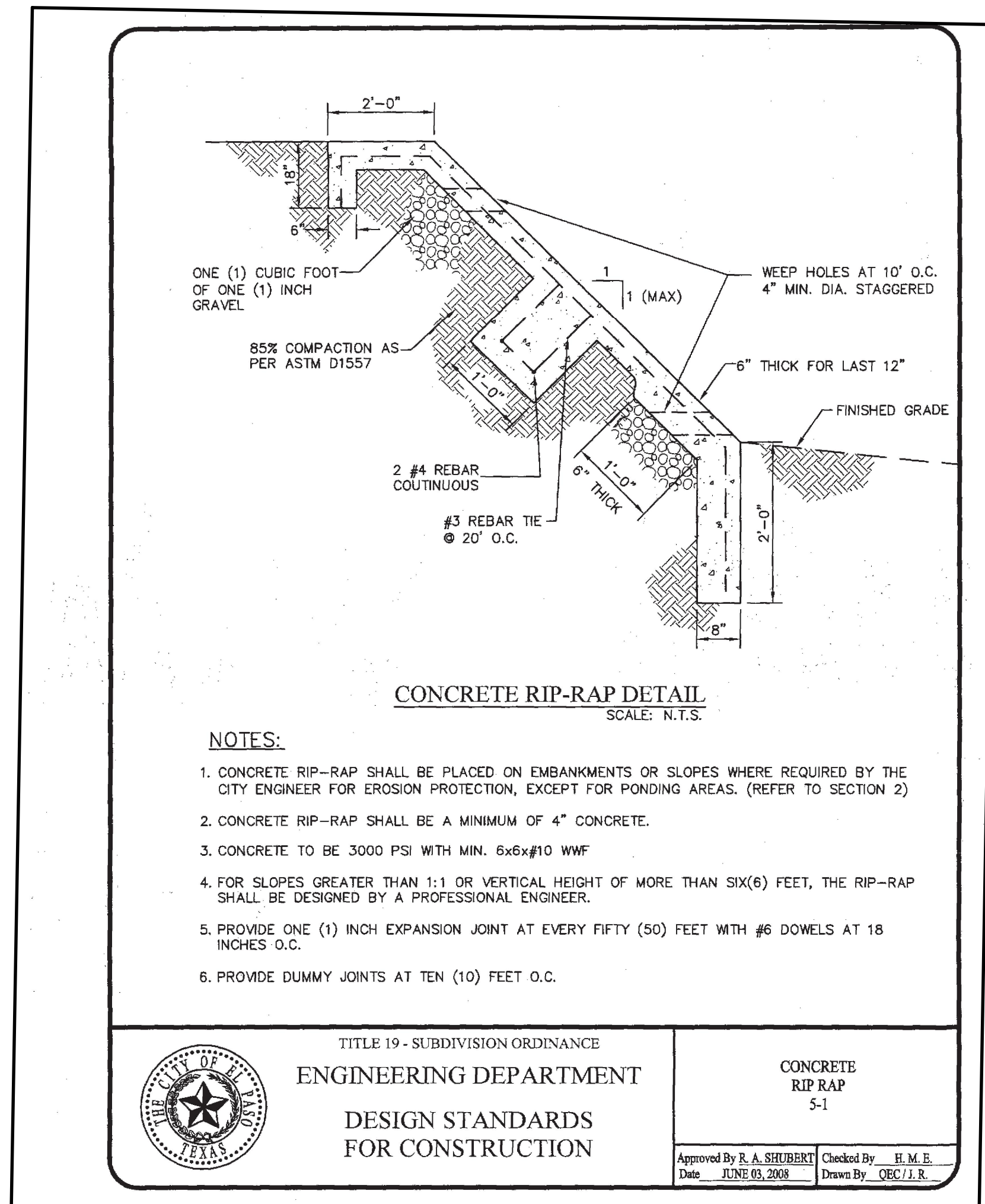
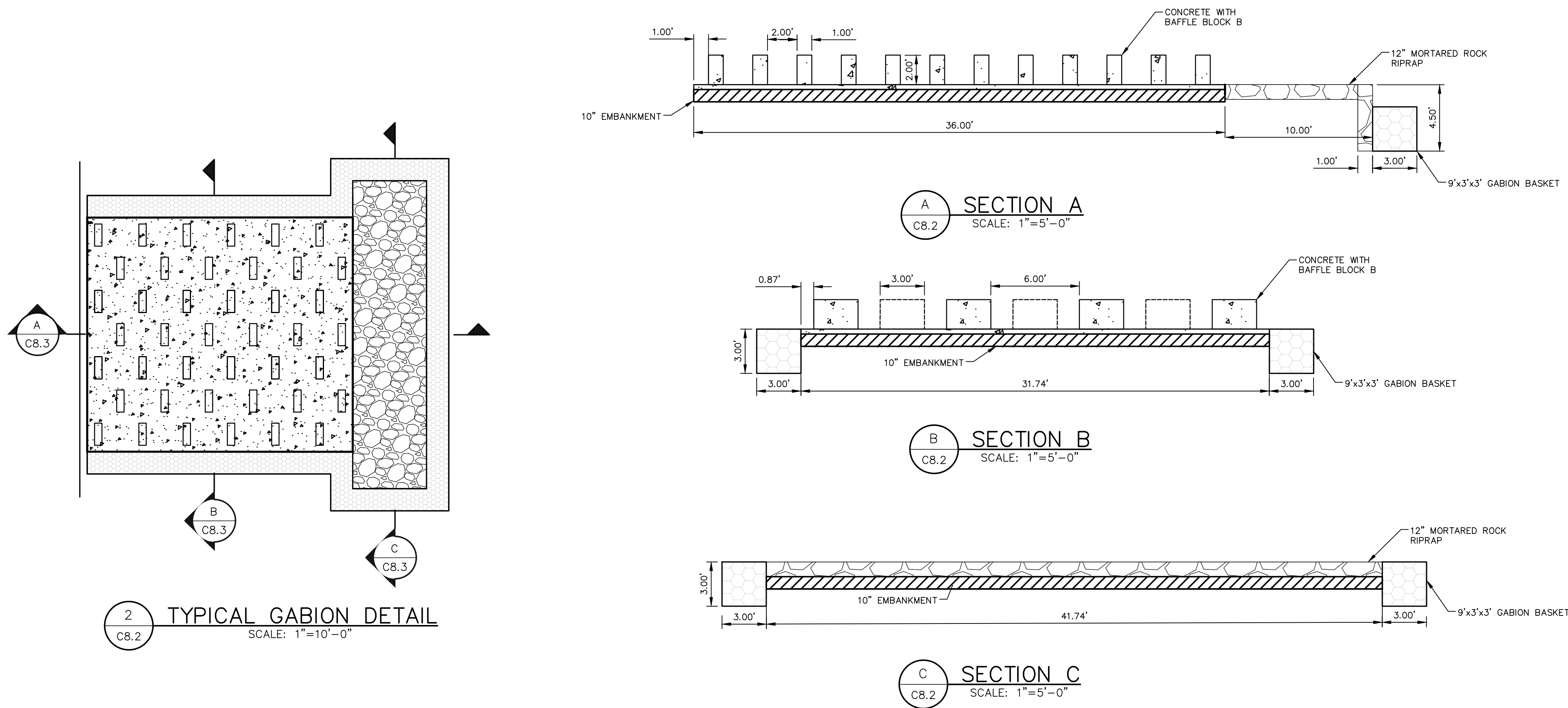
C8.1

2 OF 3



1. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR ASSEMBLING AND FASTENING GABION BASKETS.
2. REFER TO TECHNICAL SPECIFICATION **32 13 40** FROM THE CONSTRUCTION DOCUMENTS FOR GABION BASKET SPECIFICATION.
3. REFER TO DRAINAGE STRUCTURE PLAN & PROFILE SHEETS FOR LOCATION AND ELEVATIONS OF CONCRETE DRAINAGE PIPES.

1 GABION STRUCTURES
C8.2





- NOTES:**
1. CONCRETE RIP-RAP SHALL BE PLACED ON EMBANKMENTS OR SLOPES WHERE REQUIRED BY THE CITY ENGINEER FOR EROSION PROTECTION, EXCEPT FOR PONDING AREAS. (REFER TO SECTION 2)
 2. CONCRETE RIP-RAP SHALL BE A MINIMUM OF 4" CONCRETE.
 3. CONCRETE TO BE 3000 PSI WITH MIN. 6x6x#10 WWF
 4. FOR SLOPES GREATER THAN 1:1 OR VERTICAL HEIGHT OF MORE THAN SIX(6) FEET, THE RIP-RAP SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER.
 5. PROVIDE ONE (1) INCH EXPANSION JOINT AT EVERY FIFTY (50) FEET WITH #6 DOWELS AT 18 INCHES O.C.
 6. PROVIDE DUMMY JOINTS AT TEN (10) FEET O.C.

TITLE 19 - SUBDIVISION ORDINANCE
ENGINEERING DEPARTMENT
DESIGN STANDARDS
FOR CONSTRUCTION

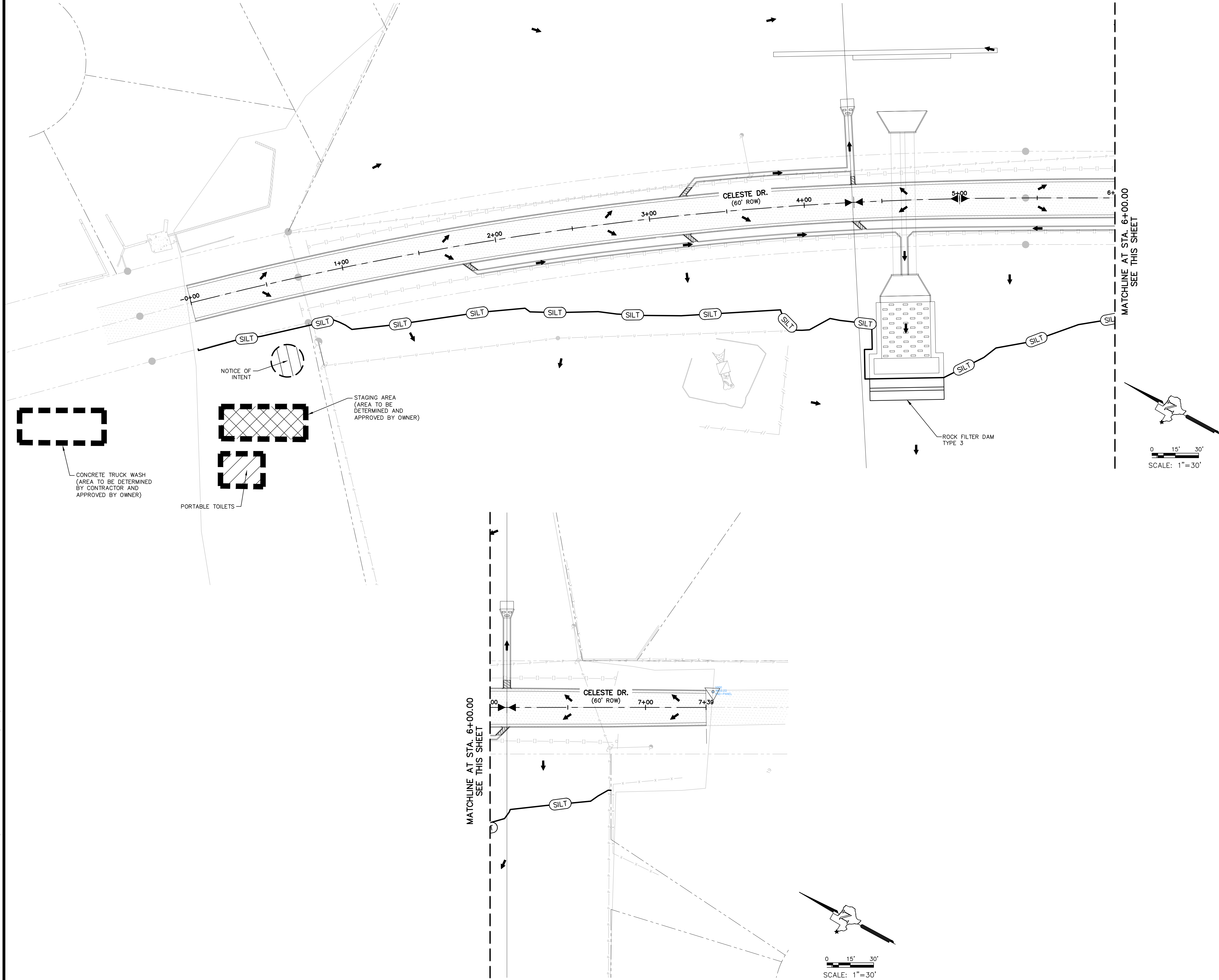
CONCRETE
RIP RAP
5-1

Approved By R. A. SHUBERT Checked By H. M. F.
Date JUNE 03, 2008 Drawn By QEC / J. R.

3 CONCRETE RIP-RAP DETAIL

SHEET		C8.2		3 OF 3	
ROAD & DRAINAGE DETAILS		SHEET TITLE			
		<p>P R O J E C T N A M E</p> <p>CELESTE DRIVE DRAINAGE IMPROVEMENTS</p>			
<p>Scale: _____</p> <p>Verf. _____</p> <p>Date _____ JULY 2020</p> <p>Design by M.M./E.C.</p> <p>Drawn by E.G.</p> <p>Chkd. by O.G.</p> <p>Appd. by R.M.</p> <p>JOB No. _____ 19-126</p>		<p>ENGINEER'S NOTE</p> <p>"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY OSWALD GARCIA, PE #109869 FOR THE ALTERATION OF A SEALER DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"</p>		<p>ENGINEER'S SEAL</p> <p>  </p>	
<p>PLANNING-ENGINEERING-PROJECT MANAGEMENT</p> <p>McGraw-Hill Construction</p> <p>EL PASO TEXAS 79901</p> <p>2501 E. Mansard Ave. El Paso, TX 79903 (915) 582-2991</p> <p>9601 N. Loop West, Suite 1000 El Paso, TX 79907 (915) 582-3535</p> <p>Trans. Board of Professional Engineers Registration No. F-000554</p>		<p>NO.</p> <p>DATE</p> <p>REVISION</p> <p>REMARKS</p>		<p>BY</p>	

F:\10126\DWG\12_10126 - C9.0_DWG_SWPPP_01.dwg Time: 1/20/2020 - 3:11:11pm Lajincedor



FLOOD ZONE "A"		BY	
AREAS OF MINIMAL FLOODING			
FIRM - FLOOD INSURANCE RATE MAP FOR EL PASO COUNTY, TX.			
PANEL 239 OF 375, COMMUNITY - PANEL NUMBER 480212 0239 B			
EFFECTIVE DATE: SEPTEMBER 4, 1991			
LEGEND		NO.	
[Symbol] SILT		DATE	
[Symbol] FLOW DIRECTION		REVISION	
[Symbol] STABILIZED CONSTRUCTION ENTRANCE/ EXIT		REMARKS	
[Symbol] CONCRETE TRUCK WASH OUT			
[Symbol] NOTICE OF INTENT			
[Symbol] PORTABLE TOILETS			
[Symbol] STAGING AREA			
STAGING AREA		ENGINEER'S SEAL	
CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN AREA TO BE USED FOR STAGING.		OSWALD F. GARCIA 108889 PE JULY 20, 2020	
NOTES		ENGINEER'S NOTE	
1. STABILIZED CONSTRUCTION EXITS TO BE PLACED AT ACCESS POINTS COORDINATED WITH AND APPROVED BY THE STREET DEPARTMENT.		"THE SEAL APPEARING ON THIS DOCUMENT WAS ISSUED BY OSWALD F. GARCIA, PE #108889 ON JULY 20, 2020. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT."	
2. SW3P SIGN SHALL BE LOCATED WITHIN ON-SITE OFFICE.		SCALE	
3. CONTRACTOR TO POST T.C.E.Q. CONSTRUCTION SITE NOTICE ON THE JOB SITE.		Horiz. _____	
4. SEDIMENT CONTROL FENCE AND ROCK FILTER DAMS TO BE LOCATED DOWNSTREAM ROW LINE OR AT PROPOSED GRADING LIMITS OR AS PER DIRECTION OF THE ENGINEER.		Vert. _____	
5. LOCATION OF CONSTRUCTION EXITS ARE PRELIMINARY AND ARE TO BE LOCATED AS PER DIRECTION OF THE ENGINEER.		Date _____ JULY 2020	
6. CONTRACTOR SHALL PROTECT EXISTING MAILBOXES, TELECOMMUNICATION, GAS AND ELECTRICAL UTILITIES DURING TRENCH EXCAVATION ACTIVITIES.		Design by M.M./E.C.	
7. FOLLOW TRAFFIC CONTROL PLAN PLAN ON SHEET C1.0.		Drawn by _____	
		Chkd. by _____	
		Appd. by _____	
		JOB No. 19-126	
P R O J E C T N A M E		EL PASO COUNTY TEXAS	
CELESTE DRIVE DRAINAGE IMPROVEMENTS		SHEET TITLE	
		STORMWATER POLLUTION PREVENTION PLAN	
		SHEET	
		C9.0	
		1 OF 1	

SITE DESCRIPTION

PROJECT NAME AND LIMITS: CELESTE DRIVE DRAINAGE IMPROVEMENTS

LOCATED IN EAST EL PASO COUNTY, TEXAS, THE PROJECT LIES NEAR THE RESIDENTIAL AREA KNOWN AS EL PASO HILLS, APPROXIMATELY 400 FEET SOUTH OF MITCHELL DRIVE TO CALLENDER CIRCLE.

PROJECT DESCRIPTION: THE PROPOSED PROJECT CONSISTS OF THE REPAIR AND IMPROVEMENT OF THE EXISTING DRAINAGE CROSSING UNDER CELESTE DRIVE.

EXISTING CONDITIONS: THE EROSION CONSISTS OF TWO CORRUGATED METAL PIPES (CMPs) LAID ALONG A NATURAL ARROYO. THE UPSTREAM OPENING OF THE CMPs LIE DIRECTLY ON THE GROUND AND CONVEY THE WATER ACROSS CELESTE DRIVE. AT THE DOWNSTREAM END, THE CMPs EXTEND BEYOND THE ROADWAY EARTHEN EMBANKMENT WITHOUT ANY HEADWALLS AND/OR RIP RAP THUS RESULTING IN EROSION OF THE EMBANKMENT AND UNDERMINING THE CMPs. CELESTE DRIVE DOES NOT HAVE ANY CURB OR GUTTER AND CONTRIBUTES TO THE EROSION OF THE EMBANKMENT AND LOSS OF SUBSOILS AT RUNOFF CONCENTRATION POINTS.

MAJOR SOIL DISTURBING ACTIVITIES: MAJOR SOIL DISTURBING ACTIVITIES WILL CONSIST OF GRADING ALONG THE EMBANKMENTS ON BOTH SIDES OF CELESTE DRIVE.

TOTAL PROJECT AREA: 4.02 ACRES

TOTAL AREA TO BE DISTURBED: 3.52 ACRES

WEIGHTED RUNOFF COEFFICIENT
(AFTER CONSTRUCTION): 0.33

EXISTING CONDITION OF SOIL AND VEGETATIVE

COVER AND % OF EXISTING VEGETATIVE COVER: _____
WUECO-WINK ASSOCIATION PER NRCS (EL PASO COUNTY). NEARLY LEVEL AND GENTLY SLOPING SOILS THAT
 HAVE A FINE SANDY LOAM SUBSOIL AND ARE MODERATELY DEEP OVER CALICHE.

NAME OF RECEIVING WATERS:

MESA SPUR DRAIN TO SALATRAL LATERAL AND ULTIMATELY TO THE RIO GRANDE.

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

_____ TEMPORARY SEEDING

_____ PERMANENT PLANTING, SODDING, OR SEEDING

_____ MULCHING

_____ SOIL RETENTION BLANKET

_____ BUFFER ZONES

_____ PRESERVATION OF NATURAL RESOURCES

OTHER:

STRUCTURAL PRACTICES:

<input checked="" type="checkbox"/>	SILT FENCES
<input type="checkbox"/>	HAY BALES
<input checked="" type="checkbox"/>	ROCK BERMS
<input type="checkbox"/>	DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
<input type="checkbox"/>	DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
<input type="checkbox"/>	DIVERSION DIKE AND SWALE COMBINATION
<input type="checkbox"/>	PIPE SLOPE DRAINS
<input checked="" type="checkbox"/>	CONCRETE FLUMES
<input checked="" type="checkbox"/>	ROCK BEDDING AT CONSTRUCTION EXIT (TEMPORARY)
<input type="checkbox"/>	TIMBER MATTING AT CONSTRUCTION EXIT
<input type="checkbox"/>	CHANNEL LINERS
<input type="checkbox"/>	SEDIMENT TRAPS
<input checked="" type="checkbox"/>	SEDIMENT BASINS
<input type="checkbox"/>	STORM INLET SEDIMENT TRAP
<input type="checkbox"/>	STONE OUTLET STRUCTURES
<input checked="" type="checkbox"/>	CURBS AND GUTTERS
<input checked="" type="checkbox"/>	STORM DRAINS
<input checked="" type="checkbox"/>	VELOCITY CONTROL DEVICES
<input type="checkbox"/>	VEGETATED SWALES & NATURAL DEPRESSIONS

OTHER:

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS (e.g. SILT FENCE AND/OR STABILIZED CONSTRUCTION ENTRANCE).
2. CLEARING, DEMOLITION AND EXCAVATION OF PROJECT AREA,
3. SUBGRADE PREPARATION,
4. NEW CURB AND GUTTER, HEADWALLS WITH WING WALLS, GABION BASKETS,
5. WHEN ALL CONSTRUCTION ACTIVITY RELATED IN DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN 1. ABOVE
BEGIN DATE: 10-2020 (APPROXIMATE)
END DATE: 03-2021 (APPROXIMATE)

BEST MANAGEMENT PRACTICES CONTROLS

WASTE MATERIALS:

ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE AND REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE:

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TNRC.

III. SANITARY WASTE:

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION:

THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

V. GOOD HOUSEKEEPING:

A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB

B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER

C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER

D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER

E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING OF THE CONTAINER

F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

VI. HAZARDOUS PRODUCTS:

PRACTICES USED TO REDUCE RISKS:

- A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
- B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
- C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

VII. PETROLEUM PRODUCTS:

ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

VIII. SPILL CONTROL PRACTICES:

- A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
- B. MATERIALS AND EQUIPMENT NECESSARY FOR CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE:
- C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
- D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN:
- E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
- F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

IX. MAINTENANCE AND INSPECTION PROCEDURES:

ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE A MONTH OR WITHIN 24-HOURS PRIOR TO ANTICIPATED STORM EVENT AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED MONTHLY, BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY.

X. REMARKS:

DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FLEAWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

XI. OFFSITE VEHICLE TRACKING:

IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:

- HAUL ROADS SHALL BE DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPAULIN
- EXCESS DIRT ON ROAD SHALL BE REMOVED IMMEDIATELY
- STABILIZED CONSTRUCTION ENTRANCE
- OTHER: _____

PROJECT NAME
**CELESTE DRIVE
DRAINAGE
IMPROVEMENTS**



SHEET TITLE

**STORMWATER
POLLUTION
PREVENTION
PLAN**

SHEET C10.0

1 OF 1

ENGINEER'S NOTE

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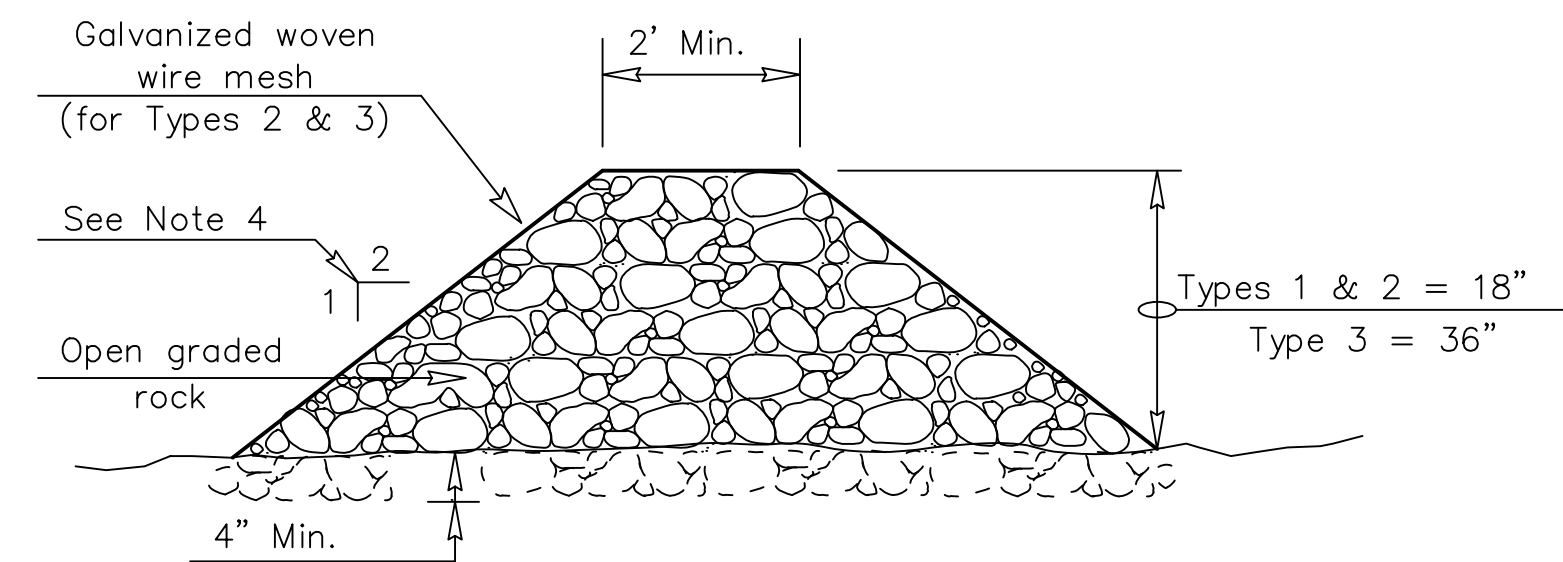
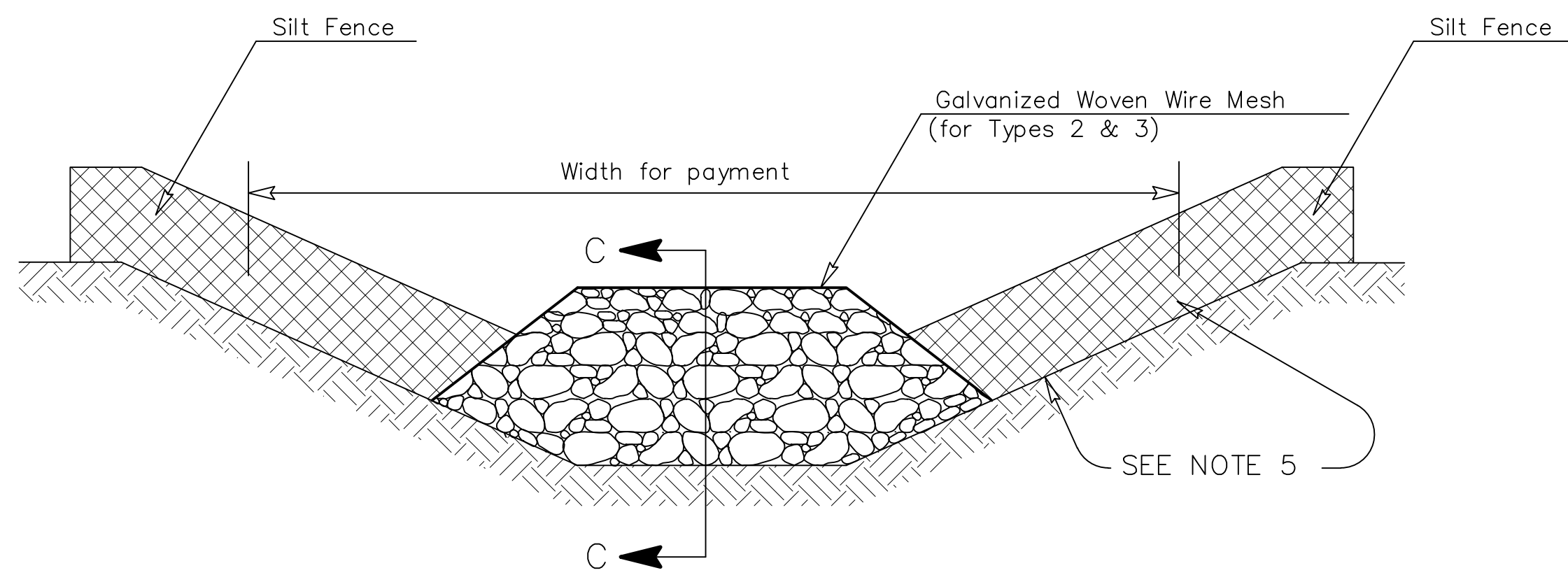
SCALE	
Horiz. _____	Date <u>JULY 2020</u>
Vert. _____	Design by <u>M.M./E.C.</u>
	Drawn by <u>E.G.</u>
	Chkd. by <u>O.G.</u>
	Appd. by <u>R.M.</u>
	JOB No. <u>19-126</u>

Mc²**i** **Moreno**
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Texas Board of Professional Engineers Registration No. F-000554



FILTER DAM AT CHANNEL SECTIONS



GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Filter dams should be embedded a minimum of 4" into existing ground.
6. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
7. Rock filter dam type 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
8. Sack Gabions should be staked down with f'' dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2" x 3",
9. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
10. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

ROCK FILTER DAM USAGE GUIDELINES



Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT² of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximately 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materials approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

SHEET C11.0		SHEET TITLE STORMWATER POLLUTION PREVENTION PLAN DETAILS		EL PASO COUNTY TEXAS		P R O J E C T N A M E CELESTE DRIVE DRAINAGE IMPROVEMENTS		SCALE Horiz. _____ Vert. _____		ENGINEER'S NOTE "THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY OSWALDO GARCIA, PE #109889 ON JULY 20, 2020 . ANY REUSE OF THIS DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"		ENGINEER'S SEAL  OSWALDO F. GARCIA PE License No. 109889 STATE OF TEXAS		PLANNING-ENGINEERING-PROJECT MANAGEMENT		NO. DATE REVISION REMARKS BY	
1 OF 1												 MCI Moreno Cardenas Inc. SAN ANTONIO EL PASO 2505 E. Missouri Ave., El Paso, TX 79903 (915) 552-2091 9601 McMiller Freeway #207, San Antonio, TX 78216 (210) 485-5533 Texas Institute of Professional Engineers - #1406544					